Florida Department of Transportation

US 301 (SR 35) PD&E Study

CR 470 E to State Road 44 in Sumter County, FL

Preliminary Engineering Report

FDOT Office
District Five

Authors
HDR

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Financial Management No. 430132-1-22-01
ETDM No. 13955

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

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

TECHNICAL REPORT COVERSHEET

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ENVIRONMENTAL
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Limits of Project: CR 470 E to State Road 44

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CHAPTER 1

Project Summary & Introduction

1.0 Project Summary & Introduction

FDOT is conducting a Project Development and Environment (PD&E) study for an approximately 8.0 mile portion of US 301 between CR 470 East and SR 44 in Sumter County. Within these limits, US 301 (SR 35) travels through the Cities of Coleman and Wildwood. While mostly a north-south route, US 301 travels in an east-west direction through the City of Coleman where it has the local road name Warm Springs Avenue. Florida's Turnpike (SR 91) crosses US 301 with an interchange to the south of the northern US 301 project limit, and I-75 runs parallel to the study corridor on the west of US 301 through Sumter County.

1.1 Project Description & Purpose

The PD&E study will analyze design alternatives that widen US 301; improve the US 301 interchange at Florida's Turnpike; and consider a new corridor for US 301 around the City of Coleman. The improvements will seek to provide additional capacity for future traffic growth. US 301 is projected to carry more than 14,000 vehicles per day by 2022 and increase to more than 24,000 per day by 2042. Based on existing 2014 conditions analysis, US 301 carried up to 9,600 vehicles per day on a two-lane segment south of the Turnpike operating with a Level of Service of D.

Within the project limits, US 301 begins as a two-lane undivided roadway at CR 470 East with turn lanes at some intersections; makes a sharp 90° turn through the City of Coleman (Warm Springs Avenue/Commercial Street) and then curves to the north at CR 468. It then continues north as an undivided roadway until it reaches the Florida's Turnpike interchange where a median is added. North of the interchange, the roadway is a four-lane divided facility. It has a short urban curb and gutter section approaching SR 44.

The purpose of this project is to increase the capacity of US 301 (SR 35) to respond to future travel demand from the intersection of CR 470 East, north through the City of Coleman, to SR 44 in the City of Wildwood. The project will also improve safety and provide multi-modal facilities for pedestrian and bicyclists, and evaluate improvements to the US 301 interchange with the Florida's Turnpike.

This study will evaluate all viable alternatives to widen US 301 on the existing project corridor as well as a potential realignment for US 301 from near CR 525 to CR 468 to minimize potential environmental impacts to the City of Coleman.

Figure 1-1 shows the study corridor and the potential realignment area. The likely diverging point for a potential realignment of US 301 is CR 525 and where US 301 turns northward near CR 468 outside Coleman. If the realignment alternative is selected as the preferred option, Sumter County will take ownership and maintain old US 301/SR 35.

Figure 1-1 | Project Location Map

1.2 Project Need

The primary need for this project results from a variety of issues, including:

- Need for increased capacity to accommodate projected traffic growth;
- Deficiencies relative to projected capacity of an arterial based on the land use context of the City of Coleman;
- Limited alternative routes for the high volume of existing and projected truck traffic;
- Safety and enhancement concerns; and
- Social and economic opportunities related to proposed and ongoing development.

1.2.1 Deficiencies

The need for increased capacity is based on projected growth in traffic volumes resulting primarily from two (2) approved Developments of Regional Impact (DRIs) and a planned mega-industrial site, which are all located within one mile of the project corridor and directly impact the project corridor. These developments are identified below and shown on Figure 1-2:

- **Village of Fenney DRI (formerly known as Wildwood Springs)**

  Village of Fenney is located on CR 468 east of US 301. The proposed development includes approximately 3,000 dwelling units, 215,000 square feet of retail space, and 10,000 square feet of office space. In 2016, construction began on the Village of Fenney.

- **Monarch Ranch Industrial Site**

  Monarch Ranch is located south of the Florida's Turnpike, east of I-75, west of US 301, and adjacent to the CSX "S" rail line. The proposed development includes approximately 16,335,000 square feet of industrial space. Monarch Ranch is poised to be developed as an intermodal logistics center.

- **The Villages Industrial (former Wade Industrial Site)**

  The Villages Industrial is located on CR 525 east of US 301. The proposed development includes approximately 1,900,000 square feet of industrial space.

- **The Villages of Southerland Oaks Site**

  The Villages of Southerland Oaks is located on CR 468 near the Florida's Turnpike, east of US 301. The proposed development includes approximately 11,000 residential dwelling units, 80,000 square feet of office space, and 248,000 square feet of retail.

- **Cresswind Site**

  Cresswind is located east of US 301 and just east of the Florida's Turnpike. The proposed development includes approximately 675 residential dwelling units.

Currently, US 301 carries an average 9,900 vehicles per day, with the lowest volume from CR 470 East and Warm Springs Avenue (6,500 vehicles) and highest volume from Florida's Turnpike to SR 44 (15,300 vehicles). Based on existing 2014 conditions analysis, the existing operating level of service of US 301 is:

- CR 470 East to Warm Springs Avenue – Level of Service C
- Warm Springs Avenue to Florida's Turnpike – Level of Service D
- Florida's Turnpike to SR 44 – Level of Service B

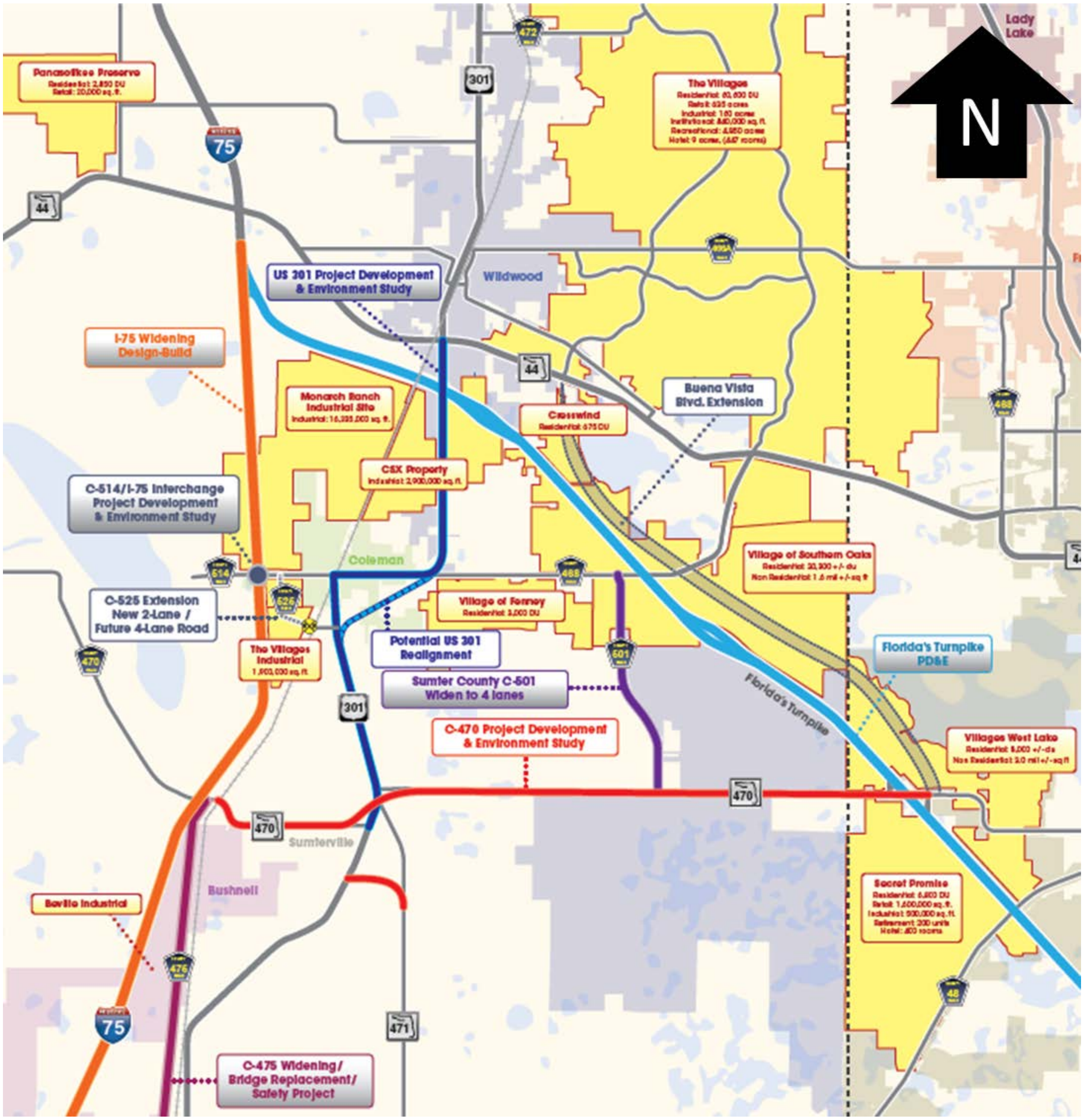
US 301 is projected on average to carry 14,000 vehicles per day by 2022 and increase to an average of 24,000 per day by 2042. Without improvements, the anticipated future (2042) operating level of service of US 301 is:

- CR 470 East to Warm Springs Avenue – Level of Service E
- Warm Springs Avenue to Florida's Turnpike – Level of Service E
- Florida's Turnpike to SR 44 - Level of Service B

This represents US 301 operating at deficient levels of service.

Sumter County is also one of the fastest growing counties in the state. According to the University of Florida Bureau of Economic and Business Research (BEBR), Sumter County's estimated population for the year 2016 is 118,577. Using BEBR medium-growth projections, this population is expected to increase to 230,461 by the year 2040, a 94% increase over the next 24 years.

Figure 1-2 | Regional Overview



1.2.2 System Linkages and Alternative Routes for Truck Volume

US 301 provides a critical link through Sumter County and is part of the state's freight mobility network. There are limited north-south parallel roadways that traverse the length of the county other than I-75 and Florida's Turnpike. US 301 provides connectivity to regionally significant roadways such as I-75, Florida's Turnpike, SR 44, CR 470, and CR 468.

US 301 carries a significant volume of truck traffic. Within the US 301 project limits, the percentage of truck traffic ranges from 12% to 16% of the total daily traffic. In addition, the current alignment of US 301 through the City of Coleman subjects the residential properties that front US 301 to the impacts of significant truck traffic. Other than I-75 or Florida's Turnpike, there are not sufficient alternative routes for truck traffic to divert away from the residential properties in Coleman.

1.2.3 Safety and Enhancement Concerns

US 301 is designated by the Florida Division of Emergency Management as a hurricane evacuation route in Sumter County. Given Sumter County's location in Central Florida, evacuations and evacuees from the west coast, in addition to local residents in low lying areas or living in manufactured homes, may need to travel through or to Sumter County in advance of a storm event. During emergencies and natural disasters (i.e. hurricane evacuations), US 301 would be a primary facility to move traffic through Sumter County providing connections, or an alternative route, to I-75, Florida's Turnpike, SR 44, and SR 471.

Crash data provided by the Florida Department of Transportation Crash Analysis Reporting (CAR) program for the US 301 corridor from 2011 to 2013, and data at the interchange of US 301 and the Florida's Turnpike from 2009 to 2013, indicated that there were a total of 136 crashes in the study area, with an average of 45.3 crashes per year. Of the 136 total crashes, 63 injury crashes (46.3%) occurred during the study period. The most prevalent crash types were rear end (29.4%), followed by fixed object (22.8%), and angle (20.6%). Many of the injury crashes were non-severe, which involves no visible injury but complaints of pain or momentary unconsciousness. Of the 63 injury crashes, 48 were non-severe and 15 crashes were severe. Two of the crashes resulted in one or more occupant fatalities (0.3%). Both fatal crashes occurred at the US 301 and Florida's Turnpike interchange.

While some areas in the cities of Coleman and Wildwood have sidewalks, in general, sidewalks are not present in the study limits. All study segments have four- to six- foot paved shoulders that provide minimal support for pedestrians and bicyclists travel needs. The cities of Coleman and Wildwood and the unincorporated community of Sumterville expressed desires for pedestrian and bicycle facilities, turn lanes at select locations, and sidewalks to improve safety.

1.2.4 Consistency with Regional and Transportation Planning

Table 1-1 demonstrates the consistency of this project with regional and local transportation planning efforts.

Table 1-1 | Consistency with Regional and Transportation Planning

Transportation Planning Entity	Applicable Standard	Consistent with Project
Florida Department of Transportation	5-Year Work Program – FY 2017 to FY 2021: Preliminary Engineering for widening for US 301 (Project No. 430132-1).	Yes
Lake-Sumter Metropolitan Planning Organization	2040 Long Range Transportation Plan: Cost feasible to widen to four-lanes US 301 from CR 470 W to SR 44 and intersection improvements to US 301 and CR 525E and US 301 and Florida's Turnpike. Transportation Improvement Program FY 2017 to FY 2021: Widening US 301 from CR 470 north to SR 44.	Yes
Sumter County	Adopted in the Lake-Sumter Metropolitan Planning Organization Long Range Transportation Plan as County's long range transportation plan.	Yes
City of Wildwood	Adopted the Lake-Sumter Metropolitan Planning Organization Long Range Transportation Plan as City's long range transportation plan.	Yes
City of Coleman	Traffic Circulation Element of Comprehensive Plan – Policy 1-4 states the City shall notify the Florida Department of Transportation that the City prefers capacity enhancements to US 301 that by-pass the city.	Yes (with implementation of realignment alternative)

1.2.5 Other Related Studies and Designs

Other transportation studies and design projects are currently planned or in process within or adjacent to the US 301 PD&E project corridor as of April 2018, including:

- **CR 470** – PD&E Study in process to evaluate the widening of CR 470 from Florida's Turnpike to I-75. Significant issue of the project is to eliminate the off-set of CR 470 W and CR 470 E. This project is adjacent to the US 301 PD&E Study at CR 470W. The US 301 PD&E Study is closely coordinated with the CR 470 PD&E Study.

- **CR 468** – Widening of CR 468 to four-lanes and re-alignment of intersection with US 301. Design is complete. Construction began in fiscal year (FY) 2017 and is scheduled to end in 2018. This project intersects with the US 301 corridor within the PD&E study area. The US 301 PD&E Study is closely coordinated with the CR 468 widening project.
- **CR 525 E** – Two-lane, with ability to expanded to four-lanes, extension of CR 525E from CR 525 to CR 514. CR 525E intersects the US 301 corridor within the PD&E study area. The realignment will connect to CR 525E. Final design is complete and construction is scheduled for completion in late 2018.
- **I-75/CR 514** – New interchange proposed for I-75 and CR 514. The proposed new interchange was approved through an Interchange Justification Report (IJR). It is anticipated that the interchange, when developed, will connect to the CR 525 E extension described above. The PD&E Study of this interchange began in November 2017.
- **Florida's Turnpike Widening PD&E Study** – Widening of Florida's Turnpike from four to six lanes. The PD&E study limits are from SR 50 in Lake County to I-75. The study is being finalized in 2017/2018.
- **SR 44 Improvements** – Improvements to the US 301 & SR 44 intersection. The improvements have been constructed.

These projects were shown on Figure 1-2. US 301 is an important aspect for each of these related transportation studies and designs.

1.3 Commitments

The project commitments are as follows:

1. The most recent U.S. Fish and Wildlife Service (USFWS) Sta*ndard Protection Measures for the Eastern Indigo Snake* will be adhered to during the construction of the proposed project.
2. During permitting, all potential burrowing owl habitat that could be impacted by the project will be systematically surveyed for the presence of this species. If burrowing owls are located and cannot be avoided, coordination and permitting with the FWC will be performed.
3. During permitting, a survey for the Southeastern American kestrel will be performed using the most current survey guidelines and in coordination with the FWC.
4. Prior to construction, any potential sandhill crane nesting habitat that will be impacted during the nesting season (January-August) will be surveyed for active nest sites to avoid impacts to this species. If a nest is found, coordination will occur with the FWC.
5. FDOT will adhere to the stipulations included in the 2019 Memorandum of Agreement between FDOT and SHPO signed on January 11, 2019.
6. During the design phase, FDOT will continue coordination with CSX to evaluate the impacts of the preferred alternative and discuss mitigation strategies, including the possible use of a flagger at the abandoned rail line.
7. Coordination with the Florida's Turnpike Enterprise (FTE) and the City of Wildwood will be continued during the design phase to develop the project implementation strategy for the proposed interchange configuration, and to further discuss aesthetic and landscaping improvements on US 301 from Florida's Turnpike to SR 44.

1.4 Description of Preferred Alternative

Based upon engineering analysis, stakeholder input, and public comments received, the preferred alternative for the US 301 PD&E is Alternative 2, as shown in Figure 1-3. The suburban typical section in Figure 1-4 is applied to the roadway between CR 470 E to CR 525 E, along the proposed realignment to CR 468, and ends just south of the Turnpike interchange. The urban typical section in Figure 1-5 is applied to US 301 from just south of the Turnpike interchange to SR 44. Roundabouts are proposed for the two intersections of US 301 with CR 525 East and US 301 with Warm Springs Avenue/CR 468. The Diverging Diamond Interchange (DDI) is proposed as the final configuration of the interchange for the Florida's Turnpike and US 301.

Chapter 6.0 provides detailed information about the features and design of the preferred alternative and its components. The preferred alternative concept plans are provided in Appendix B.

Figure 1-3 | Preferred Alternative Route: Alternative 2 – US 301 Widening with Coleman Realignment

Figure 1-4 | Proposed Suburban Typical Section

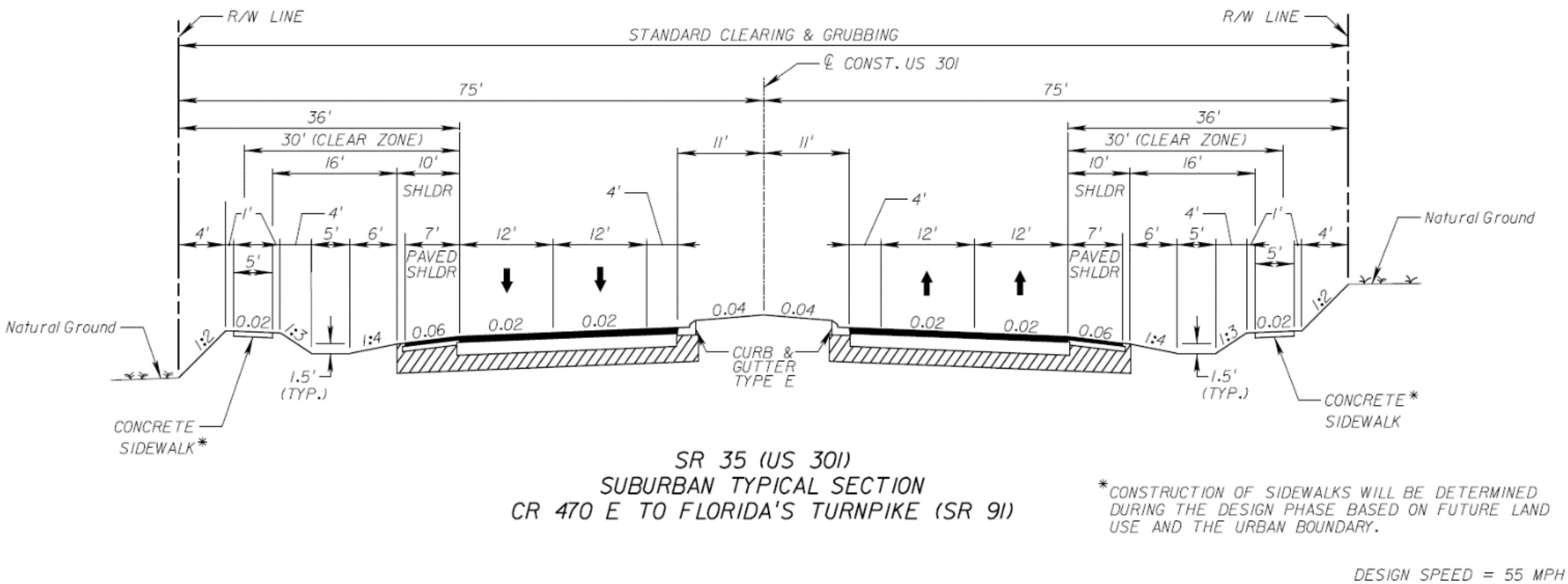
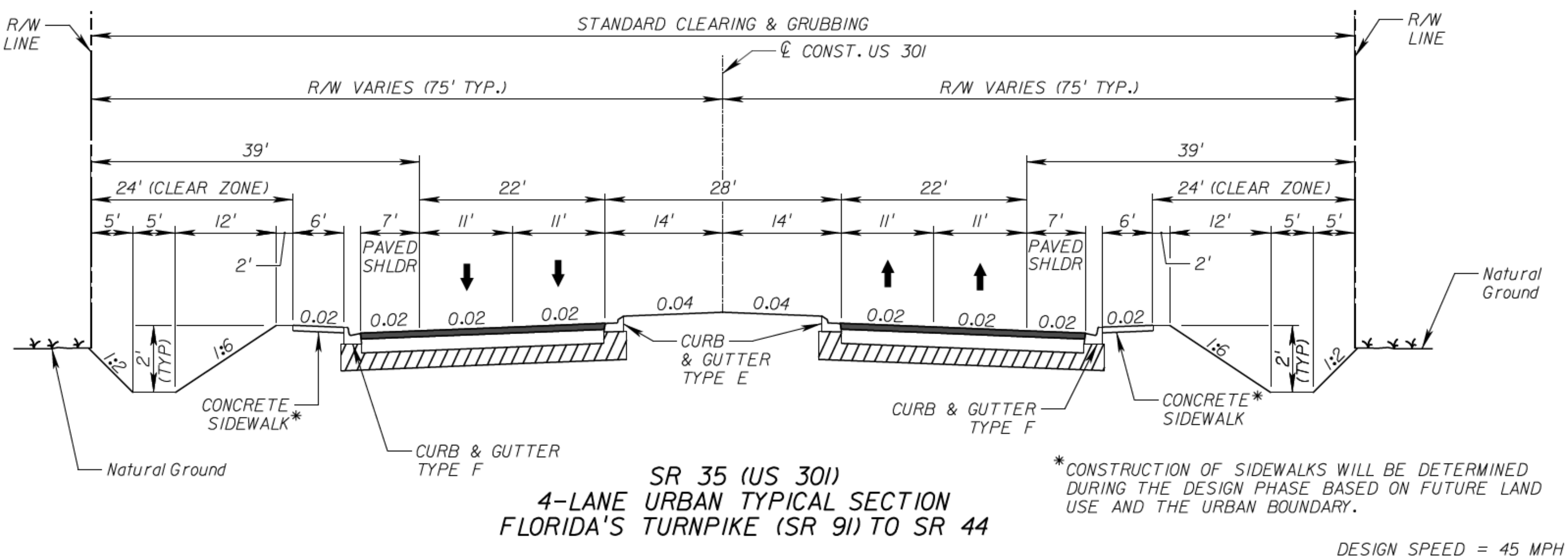


Figure 1-5 | Proposed Urban Typical Section



CHAPTER 2

Existing Conditions

2.0 Existing Conditions and Evaluation

The existing (2015) study area conditions for the US 301/State Road (SR) 35 corridor from south of County Road (CR) 470 E to SR 44 were evaluated by performing a review of existing plans and documents, coordination with regulatory agencies, and field reconnaissance. The following sections provide a description of the existing roadway and bridge conditions, and the social and environmental characteristics for the study area. This section also describes regional aspects that are adjacent to the study area.

2.1 Existing Roadway Features

The study corridor has been broken down into six general segments based on changes in roadway characteristics and adjacent land uses. These segments, shown on Figure 2-1, will be referred to as follows:

Segment 1 – South of CR 470 East to Shady Brook Drive
Segment 1 extends north from south of CR 470 E (MP 14.53) to Shady Brook Drive (MP 14.83), and is approximately 0.3 miles in length.

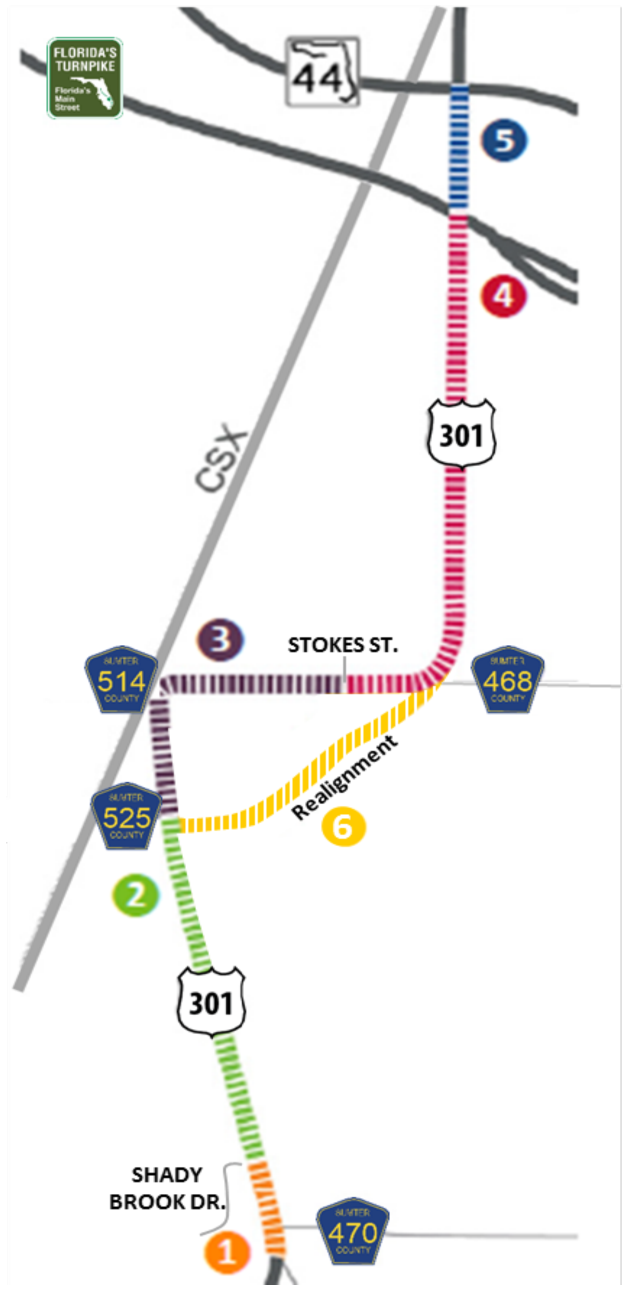
Segment 2 – Shady Brook Drive to CR 525 East
Segment 2 extends north from Shady Brook Drive (MP 14.83) to CR 525 E (MP 16.991), including the Shady Brook Bridge, and is approximately 2.2 miles in length.

Segment 3 – CR 525 East to Stokes Street
Segment 3 extends north from CR 525 E (MP 16.991), follows Warm Springs Avenue as it curves through the City of Coleman, and extends to Stokes Street (MP 18.706). The segment is approximately 1.7 miles in length.

Segment 4 – Stokes Street to Florida's Turnpike
Segment 4 extends east from Stokes Street (MP 18.706) to Florida's Turnpike (MP 21.663) and is approximately 3.0 miles in length.

Segment 5 –Florida's Turnpike to SR 44
Segment 5 extends north from Florida's Turnpike (MP 21.663) to just south of SR 44 (MP 22.395) and is approximately 0.7 miles in length.

Figure 2-1 | SR 35 (US 301) Existing Roadway Segments



Segment 6 – US 301 Realignment

The realignment, or truck route, alternatives being considered require completely new roadway construction over current non-roadway property. The realignment shall be covered in detail in Chapter 4.0 Alternatives Analysis.

2.1.1 Typical Sections

Segment 1 – South of CR 470 East to Shady Brook Drive

US 301 from just south of CR 470 East to Shady Brook Drive consists of a two-lane typical section comprised of one 12-foot travel lane in each direction and a 12-foot left turn lane into the Shady Brook Golf & RV Resort. Each side of the roadway has a 6-foot shoulder, of which 4 feet is paved and 2 feet is unpaved. The existing typical section does not include dedicated bicycle lanes. This segment includes open drainage to roadside swales and is illustrated in Figure 2-2**.**

Segment 2 – Shady Brook Drive to CR 525 East

US 301 from Shady Brook Drive to CR 525 East is comprised of a two-lane rural typical section. It consists of two 12-foot travel lanes and 8-foot shoulders, of which 4 feet are paved. The existing typical section does not include dedicated bicycle lanes. This segment includes open drainage to roadside swales and is illustrated in Figure 2-3.

Segment 3 – CR 525 East to Stokes Street

Segment 3 includes the entirety of US 301 through the City of Coleman. It has three different typical sections, though the 12-foot travel lanes remain consistent. Along US 301 from CR 525 East to Anderson Road, the typical section is consistent with Segment 2, as shown in Figure 2-3. From Anderson Road to Warm Springs Avenue, the typical section changes slightly (Warm Springs Avenue is the east-west portion of US 301) to remove the paved shoulder. There is a 4-foot unpaved shoulder on each side of the roadway, as well as a 5-foot sidewalk on the east side. This segment includes open drainage to roadside swales and is illustrated in Figure 2-4.

US 301 runs east-west along Warm Springs Avenue through the City of Coleman. Between Commercial Street (north-south segment of US 301) and Stokes Street, the travel way consists of one 12-foot lane in each direction. Each side of the roadway includes a 6-foot minimum unpaved shoulder that extends as far as 18 feet in some areas on the north side. A 6-foot sidewalk also runs north of the unpaved shoulder for the length of Segment 3. This segment includes open drainage with minimal roadside swales and is illustrated in Figure 2-5.

Segment 4 – Stokes Street to Florida's Turnpike

US 301 from Stokes Street to Florida's Turnpike consists of two 12-foot travel lanes (one in each direction) and 8-foot shoulders (4-foot paved, 4-foot unpaved) on either side of the roadway. This segment also includes open drainage to roadside swales and is illustrated in Figure 2-6.

Segment 5 –Florida's Turnpike to SR 44

Segment 5, which runs from north of Florida's Turnpike (Turnpike) to SR 44, contains multiple sections. Between Florida's Turnpike and Clay Drain Road, US 301 does not generally follow a typical section due to the ramp connections and turn lanes within the Turnpike interchange. Between Clay Drain Road and Spring Lake Road, US 301 begins as a four-lane divided roadway that includes a 22-foot curbed median with left turn lanes. The outside shoulders begin as 12-feet wide, of which 5 feet are paved, and transitions to 6-feet wide at Mile Post 22.238, of which 4 feet are paved. This portion of the segment includes open drainage to roadside swales. This typical section is illustrated in Figure 2-7. Past Spring Lake Road, stormwater runoff is collected in a closed system consisting mostly of FDOT Type 'F' curb and gutter and curb inlets. Sidewalk is also introduced on the eastern side of the roadway.

Figure 2-2 | Existing Typical Section – Segment 1 (South of CR 470 E to Shady Brook Drive)

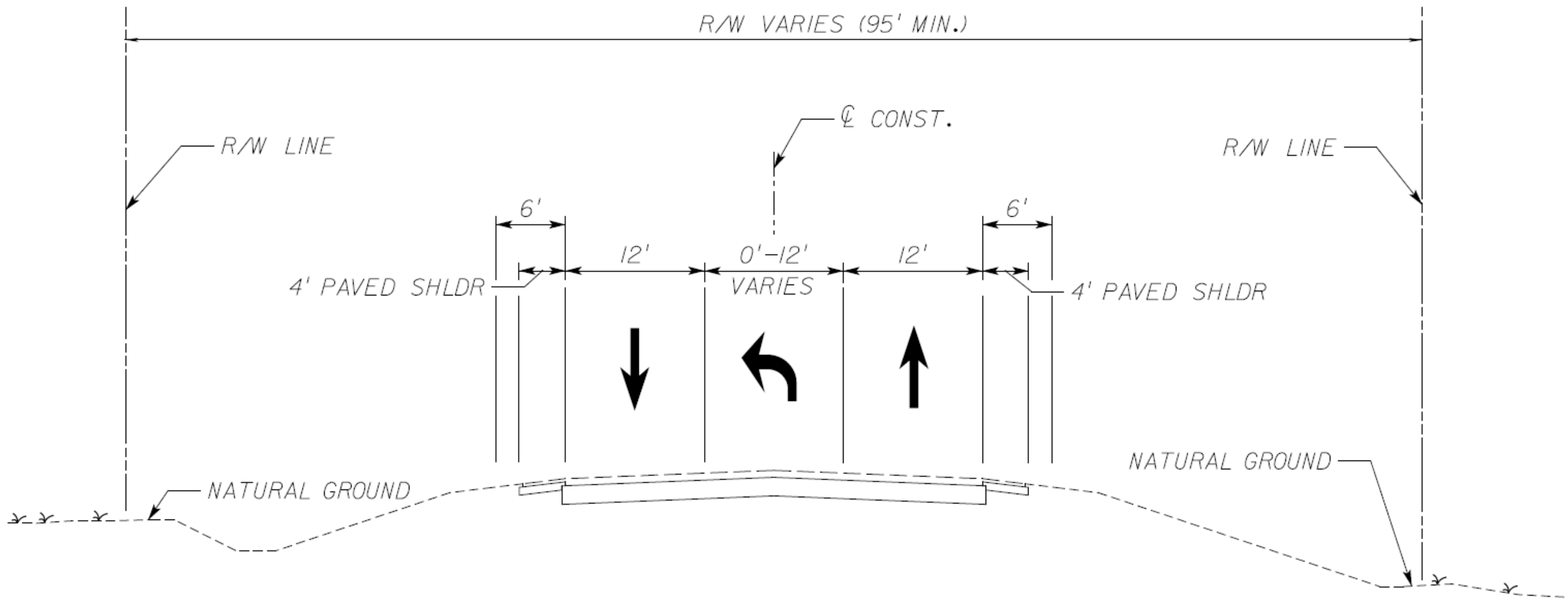


Figure 2-3 | Existing Typical Section – Segment 2 (Shady Brook Drive to CR 525 E) and Segment 3 (CR 525 E to Anderson Road)

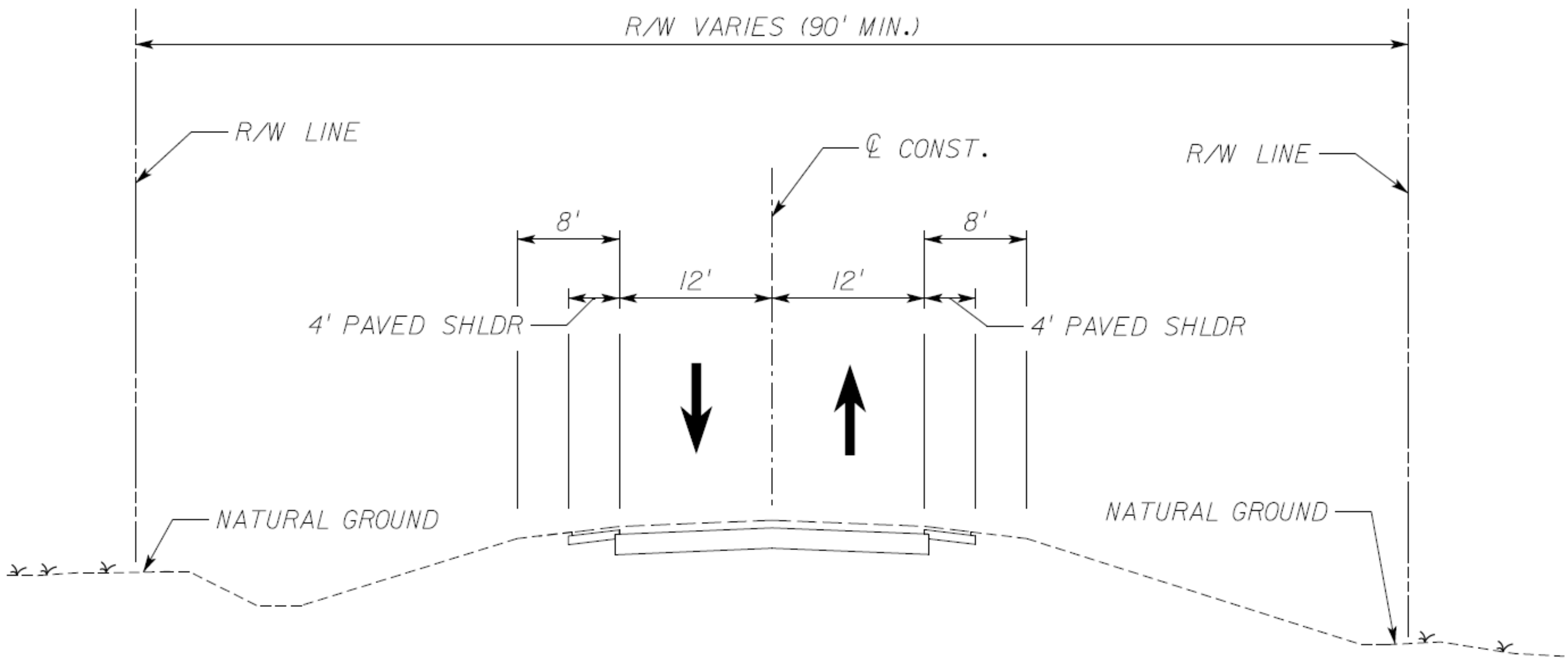


Figure 2-4 | Existing Typical Section – Segment 3 (Anderson Road to Warm Springs Avenue)

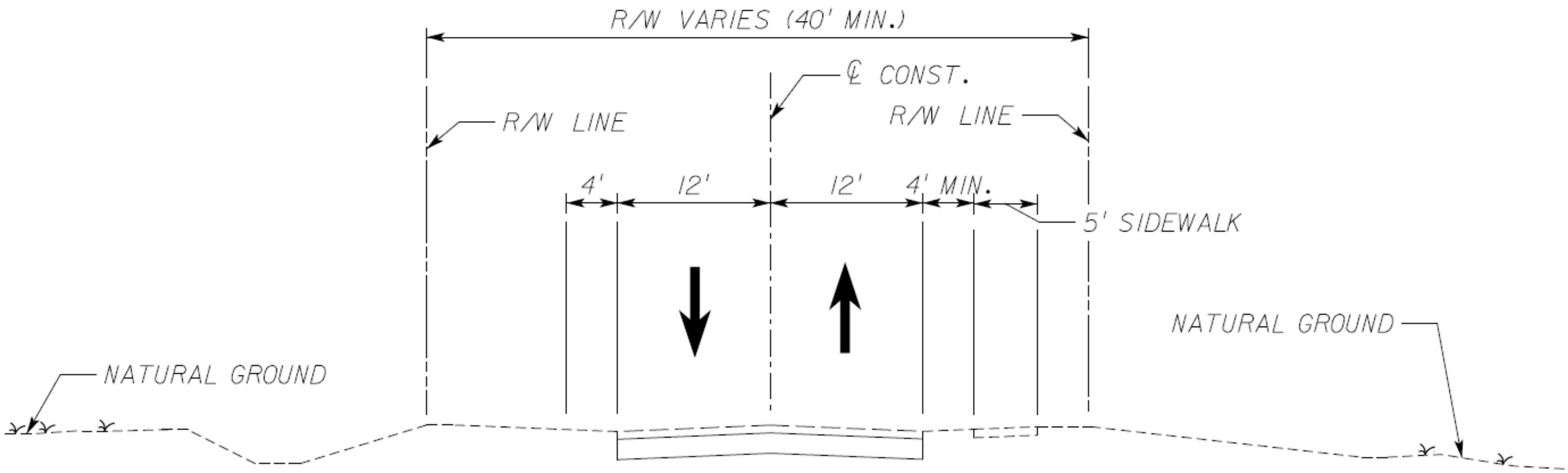


Figure 2-5 | Existing Typical Section – Segment 3 (Commercial Street to Stokes Street)

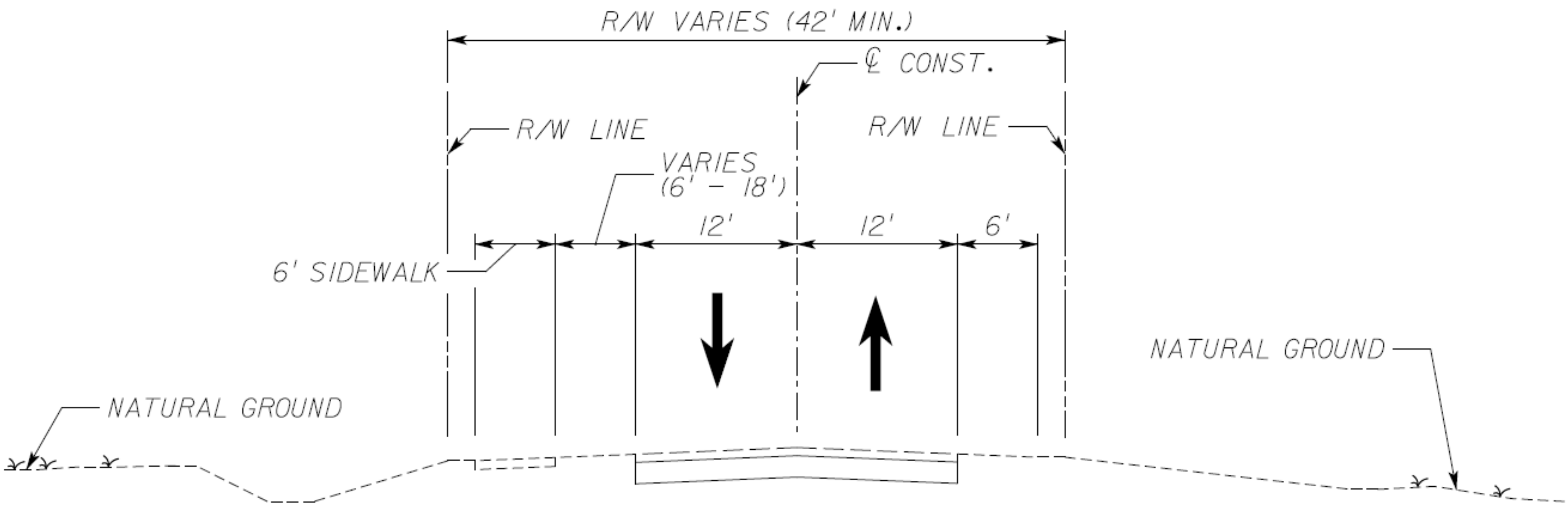


Figure 2-6 | Existing Typical Section – Segment 4 (Stokes Street to Florida's Turnpike)

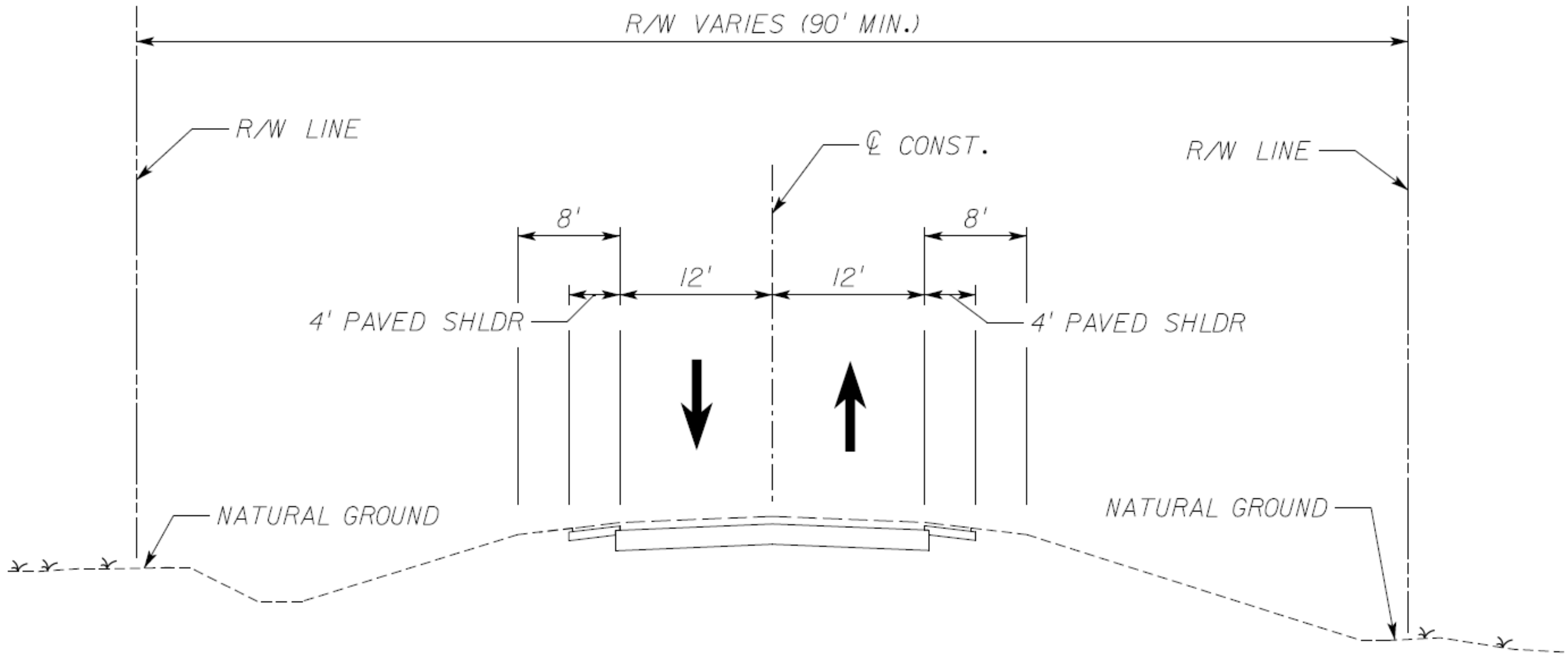
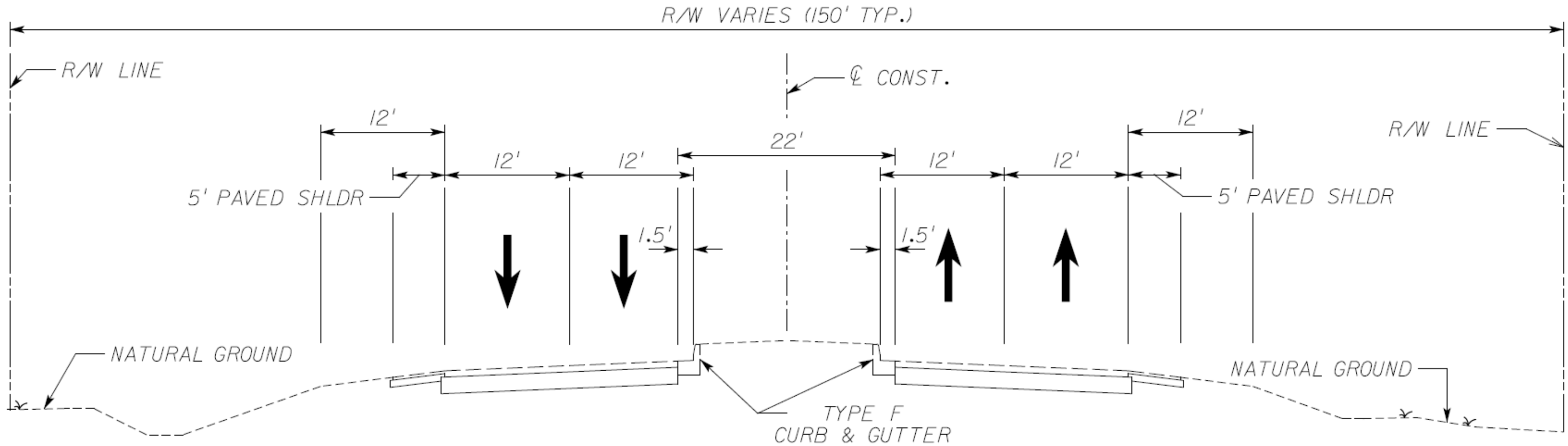


Figure 2-7 | Existing Typical Section – Segment 5 (Clay Drain Road to Spring Lake Road)



2.1.2 Right-of-Way

The existing US 301 right-of-way is generally between 90 and 110 feet in width along Segments 1 and 2. Throughout the area of Coleman the right-of-way width is typically 50 feet, with a minimum right-of-way of 40 feet. Segment 4 has a right-of-way width of 100 feet, while segment 5 has an approximately 150 foot right-of-way width. Along Florida's Turnpike, the right-of-way is variable, but has a minimum of 300 feet. The concept plans in Appendix A and Appendix B provide the existing right-of-way along the corridor.

2.1.3 Functional Classification

This section of US 301 is classified by the Florida Department of Transportation (FDOT) as a two-lane rural principal arterial from CR 470 E to just north of NE 19th Road at (MP 16.695) and a two-lane urban principal arterial from north of NE 19th Road to SR 44. US 301 within the project limits is part of the State Highway System and is a designated Evacuation Route. It serves as a crucial link for Sumter County by providing a connection between CR 470 E, CR 468, Florida's Turnpike, and SR 44 in northern Sumter County as well as connecting several communities within Sumter County, including the City of Coleman, City of Bushnell, City of Wildwood, and The Villages community. US 301 continues further north in Sumter County to the city of Oxford and on to Marion County.

This section of the Florida's Turnpike (Turnpike), SR 91, is classified by the Florida Department of Transportation (FDOT) as an Urban Freeway Expressway. The Turnpike is both a Florida Intrastate Highway System (FIHS) and Strategic Intermodal System (SIS) facility. The Turnpike within the project limits is also designated as an evacuation route.

2.1.4 Property Owners

The existing property lines were collected from the Sumter County GIS system and are shown on the concept plans in Appendix A and B. The property owner data is provided in Appendix C.

2.1.5 Horizontal Alignment

The existing centerline horizontal alignments for US 301 and the Turnpike were obtained from resurfacing plans from 1992. Table 2-1 lists the horizontal curvature within the project corridor.

Table 2-1 | Existing Horizontal Curvature

Curve	Curve Direction	Curve Length (ft)	Design Speed (MPH)	Existing Superelevation (ft/ft)
Segment 1 – South of CR 470 E to Shady Brook Drive				
1	Left	945	50	0.074
Segment 2 – Shady Brook Drive to CR 525 E				
2	Right	560	55	0.026
Segment 3 – CR 525 E to Stokes Street				
3	Right	1293	55	0.083
4	Right	290	45	0.061
Segment 4 – Stokes Street to Florida's Turnpike				
5	Left	2297	55	0.082
Florida's Turnpike				
6	Left	1480	70	

2.1.6 Vertical Alignment

Existing vertical alignment information is unavailable.

2.1.7 Pedestrian and Bicycle Facilities

Sidewalk facilities are largely absent throughout most of the project corridor. A five-foot sidewalk is located about 850 feet south of Clark Avenue on the east side of US 301 and continues on the north side as a six-foot sidewalk after the Warm Springs intersection terminating at Stokes Street. Short segments of six-foot sidewalk are also present along the west side of US 301 for approximately 75 feet south of the SR 44 intersection and on the east side of US 301 from Spring Lake Road to the end of the project limits at SR 44. There are no additional sidewalks or other pedestrian facilities along the corridor.

Paved shoulders serve as bicycle facilities for the length of the project, on both sides of the corridor. No other facilities connect or are planned along the corridor.

2.1.8 Lighting

Highway lighting exists within the right-of-way of US 301 south of the intersection with Clark Avenue continuing north and east for about one mile within the Coleman city limits and also around the US 301 interchange with the Turnpike. No other highway lighting is present within the existing right-of-way of US 301. As it relates to the Turnpike, lighting is also present along the northbound (NB) on ramp and southbound (SB) off ramp.

2.1.9 Intersections and Signalization

There are twenty-seven (27) intersections through the US 301 study area. Of these, seven (7) are identified as existing major intersections within the project corridor, shown on Table 2-2. Three existing intersections are signalized (CR 470 E, Warm Springs Avenue, and SR 44), with the remaining intersections unsignalized (CR 525E, CR 468, Northbound and Southbound Florida's Turnpike ramps).

Table 2-2 | Existing Major Intersections

Intersecting Street	Milepost	Signalized (Yes/No)
Segment 1 – South of CR 470 E to Shady Brook Drive		
CR 470 E	14.673	Yes
Segment 2 – Shady Brook Drive to CR 525E		
CR 525 E	16.991	No
Segment 3 – CR 525 E to Stokes Street		
Warm Springs Avenue	17.732	Yes
Segment 4 – Stokes Street to Florida's Turnpike		
CR 468	19.066	No
SB Florida's Turnpike Ramp	21.665	No
Segment 5 – Florida's Turnpike to SR 44		
NB Florida's Turnpike Ramp	21.797	No
SR 44	22.395	Yes

2.1.10 Pavement Conditions

Pavement condition assessments for US 301 have not yet been completed and provided by FDOT and are based on field reconnaissance and records review. The roadway was constructed in 1966, with multiple widening and resurfacing projects as recent as 1993. However, some of the original construction remains untouched in Segment 3. The field survey conducted in May 2011 verified that the existing roadway is in good condition.

2.1.11 Design and Posted Speed

Based on the existing plans, the existing design speed for US 301 is 55 miles per hour (MPH) for all segments except the section from CR 468 to the CR 470 E intersection which was designed at 50 MPH. The posted speed limit is 35 MPH for Segment 3 through Coleman. The posted speed and design speed limit for Segment 3 outside of the city is 45 MPH. Within Segment 5, the posted speed limit is 40 MPH near SR 44, increasing to 45 MPH near the Turnpike. The posted speed limit is 55 MPH for Segment 2 and Segment 4. The posted speed and design speed for the Turnpike is 70 MPH.

2.1.12 Railroad

CSX Transportation operates on freight tracks located west of the US 301 alignment, locally known as the "S" line. US 301, within the project limits, does not cross the operating railroad tracks. An abandoned railroad track bed is located to the east of US 301, crossing to the west of US 301 just north of the CR 525E/US 301 intersection.

2.1.13 Existing Traffic Data and /Traffic Operations

Existing traffic volumes were obtained from two sources: turning movement counts on US 301 at the twenty-seven study intersections and pneumatic tube counts on US 301 within the study area. Two-hour AM and PM peak period intersection turning movement counts at study intersections were collected and aggregated every 15 minutes to develop peak hour traffic volume. The tube counts were collected with vehicle counting technology that does not require axle adjustments.

These field-collected traffic data were adjusted using a seasonal adjustment factor obtained from 2013 Florida Traffic Online per FDOT procedures, to determine 2014 turning movement volumes and estimate 2014 Average Annual Daily Traffic (AADT). The seasonally adjusted volumes were used for analysis. Existing AADTs within the study area are illustrated in Figure 2-8 through Figure 2-10. Existing turning movement volumes for all intersections are displayed in Figure 2-11 and Figure 2-12.

Figure 2-8 | Existing 2014 AADT – CR 470 to Anderson Road

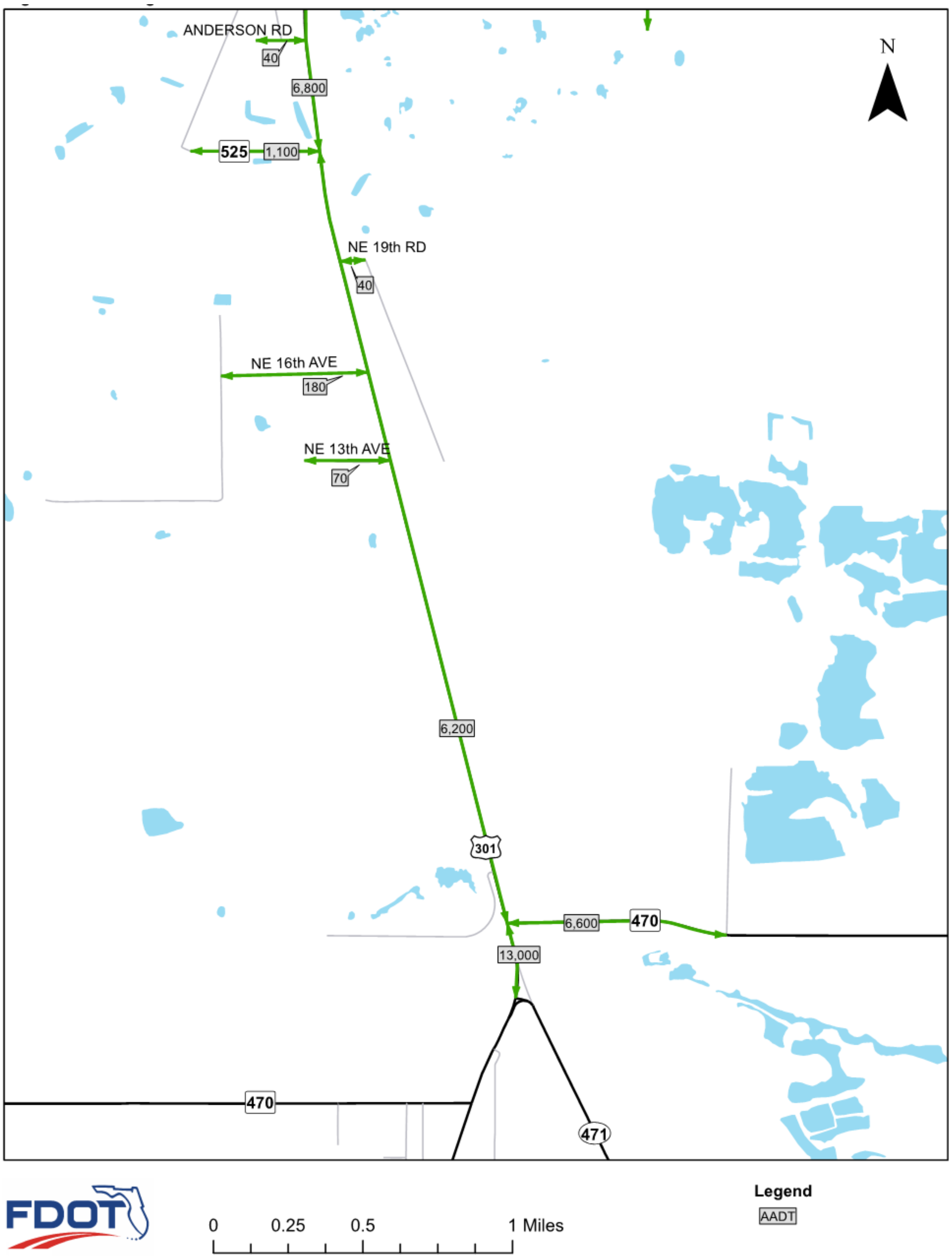


Figure 2-9 | Existing 2014 AADT – Anderson Road to NE 37th Place

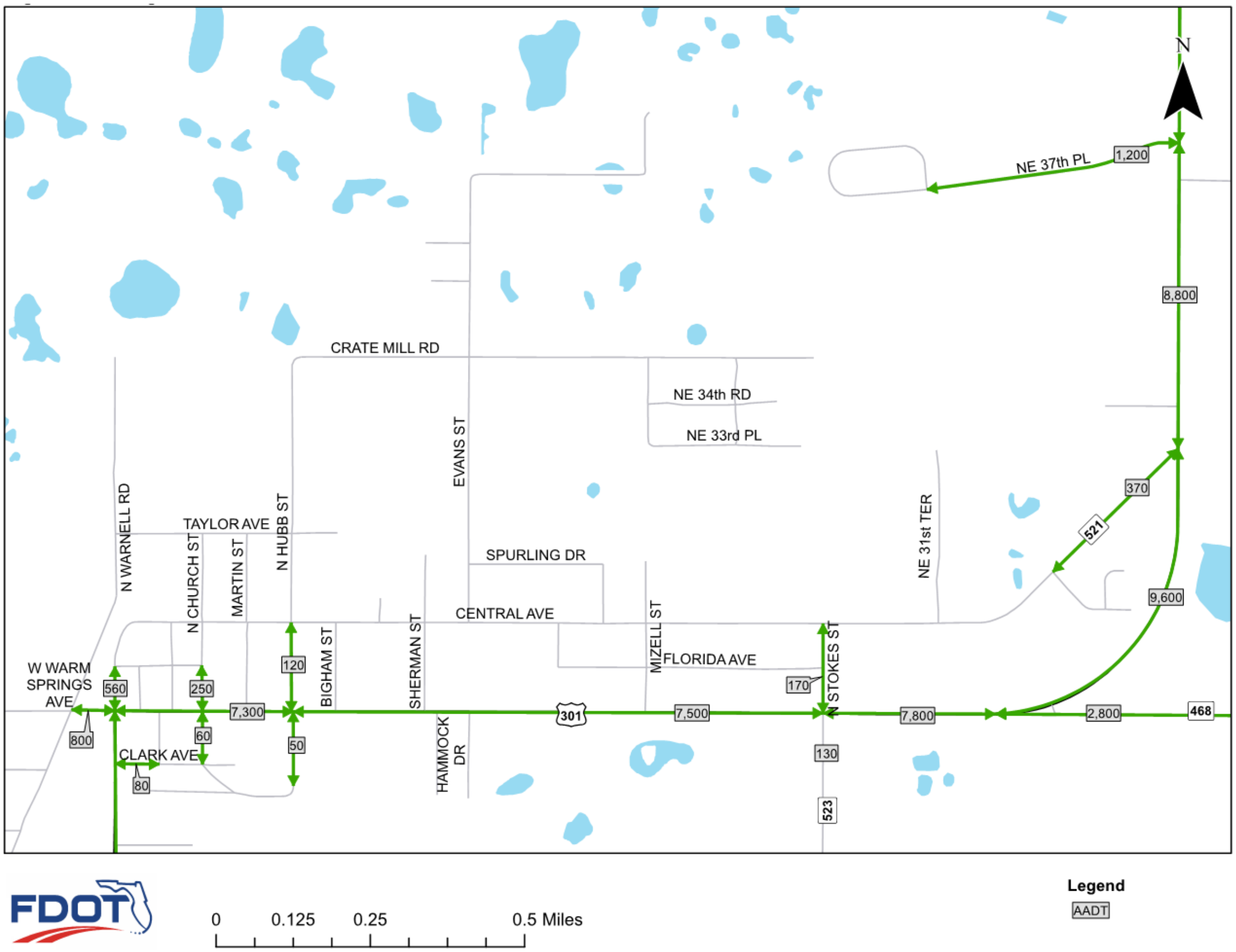


Figure 2-10 | Existing 2014 AADT – NE 37th Place to SR 44

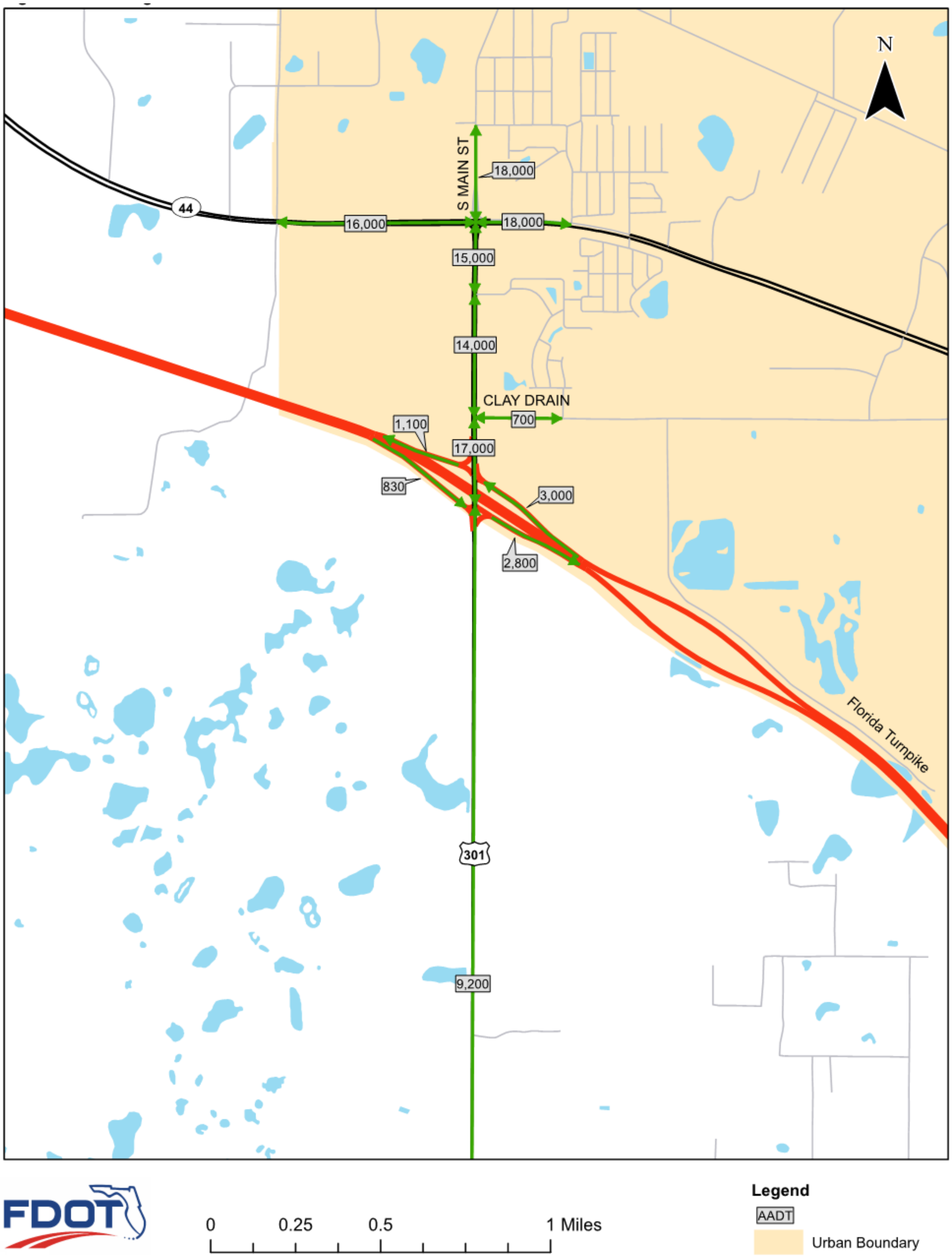


Figure 2-11 | Existing AM/PM Peak-Hour Volumes – Part A

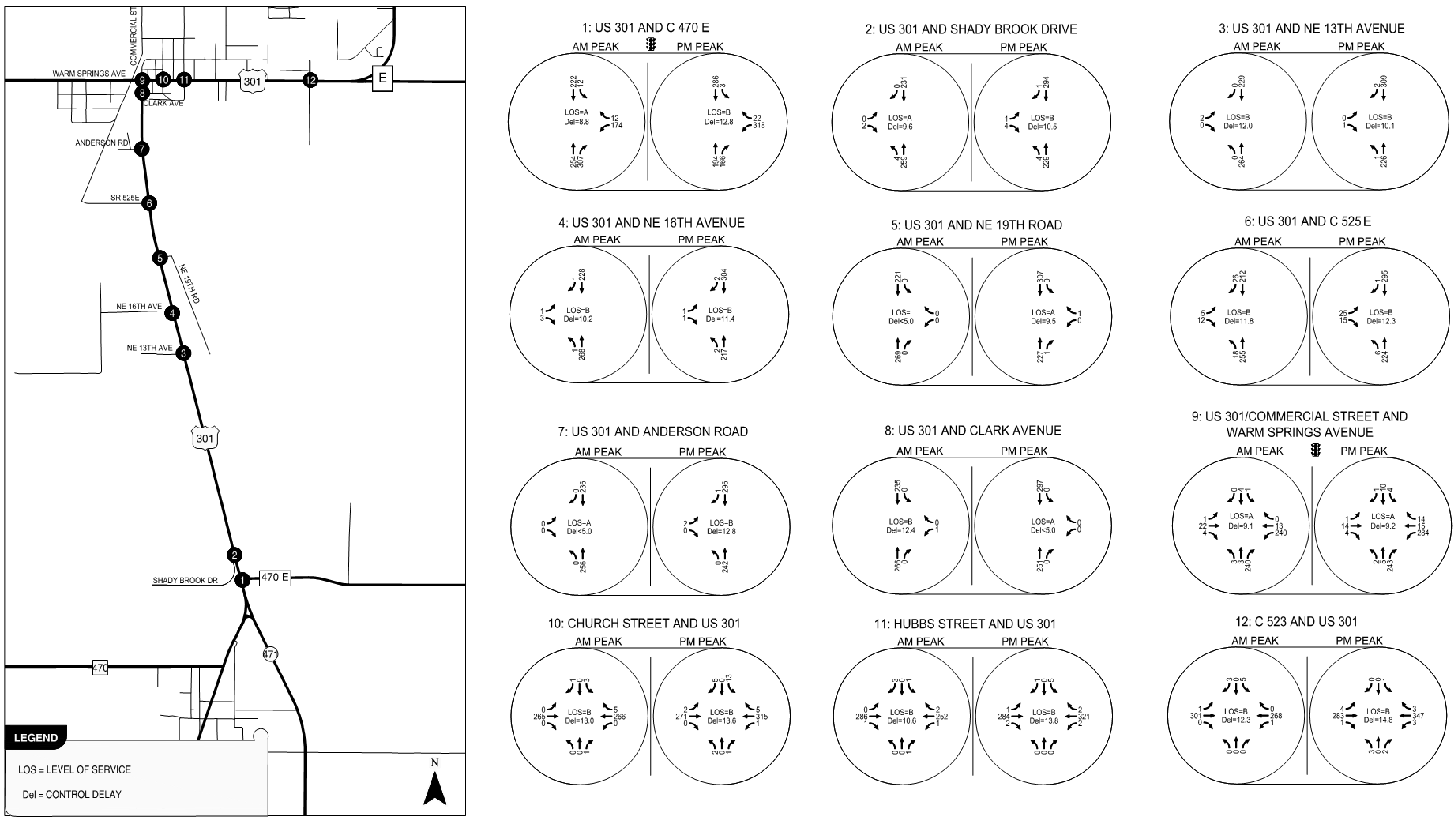
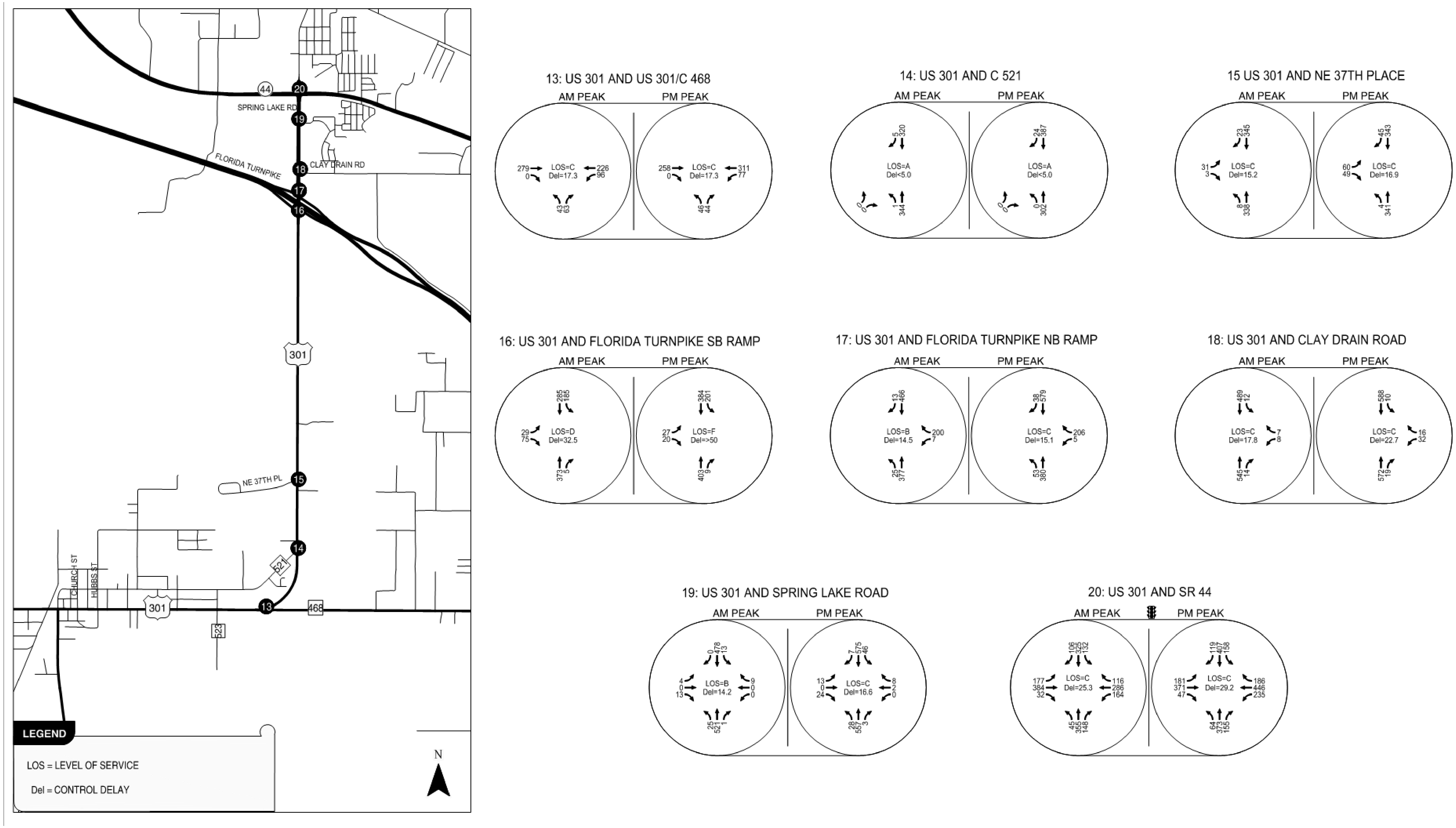


Figure 2-12 | Existing AM/PM Peak Hour Volumes – Part B



HCS 2010 was used to analyze the study segments. For the existing conditions segment analysis procedure, the 11 roadway segments were condensed into the following four segments based on highway class and truck percentages:

- CR 470 E (MP 14.663) to Warm Springs Avenue (MP 17.732)
- Warm Springs Avenue (MP 17.732) to CR 521 (MP 19.501)
- CR 521 (MP 19.501) to Florida's Turnpike (MP 21.668)
- Florida's Turnpike (MP 21.668) to SR 44 (MP 22.395)

The segments between CR 470 (E) and the Florida's Turnpike were analyzed using HCS 2010 two-lane segment analysis. The analysis results are provided in Table 2-3, showing the segments of US 301 between CR 470 (E) and Florida's Turnpike operate within the LOS standard of C (CR 470 (E) to Warm Springs Avenue) or D (Warm Springs Avenue to Florida's Turnpike) for rural roadway facilities.

Table 2-3 | Existing 2014 Two-Lane Segment LOS

Two-Lane Segments	Dir.	LOS Standard	AM			PM		
			ATS (mi/h)	PTSF (%)	LOS	ATS (mi/h)	PTSF (%)	LOS
CR 470 (E) to Warm Springs Avenue	NB	C	54.3	52.1	C	54.0	51.3	C
	SB	C	55.1	51.3	C	54.4	57.5	C
Warm Springs Avenue to CR 521	NB	D	42.3	63.3	D	42.4	57.4	D
	SB	D	41.5	59.8	D	41.1	66.5	D
CR 521 to Florida's Turnpike	NB	D	51.5	70.7	D	50.8	72.4	D
	SB	D	51.7	68.4	D	50.7	73.6	D

ATS: Average Travel Speed
PTSF: Percent Time Spent Following

Operations on the segment between the Florida's Turnpike and SR 44 are metered by the signal at SR 44 in the northbound direction and are uninterrupted in the southbound direction. Therefore, the northbound segment was analyzed using HCS 2010 Streets to account for the metering effect of the signal, the southbound segment was using HCS 2010 multi-lane highway analysis to account for the uninterrupted flow conditions. Table 2-4 and Table 2-5 provide a summary of segment LOS results for the segment between Florida's Turnpike and SR 44 along US 301. The segment of US 301 from Florida's Turnpike to SR 44 meets the LOS standard of D for urban roadway facilities during existing conditions in either direction. Detailed HCS reports are in the Design Traffic Technical Memorandum (DTTM) under separate cover.

Table 2-4 | Existing 2014 Signalized Segment LOS

Segments	Dir.	No. of Lanes	Base Free Flow Speed (BFFS) (mph)	AM		PM	
				%BFFS	LOS	%BFFS	LOS
Florida's Turnpike to SR 44	NB	2	43	67.3	B	67.3	B

Table 2-5 | Existing 2014 Multi-Lane Segment LOS

Segments	Dir.	AM		PM	
		Density (pc/mi/in)	LOS	Density (pc/mi/in)	LOS
Florida's Turnpike to SR 44	SB	6.1	A	7.9	A

Traffic operations analysis results for intersections along with peak hour turning volumes are summarized in Table 2-6. All intersection level-of-service (LOS) analyses described in this report were performed using Synchro 9.1 and reported using the 2010 Highway Capacity Manual (HCM) Output Reports. Detailed Synchro reports are in the DTTM under separate cover.

Table 2-6 | Summary of Existing AM and PM Delay and Level of Service

#	Intersection	Control	Peak Hour	Delay[1]	LOS[1]
1	US 301 & CR 470 E	Signalized	AM	8.8	A
			PM	12.8	B
2	US 301 & Shady Brook Dr	TWSC	AM	9.6	A
			PM	10.5	B
3	US 301 & NE 13th Ave	TWSC	AM	12	B
			PM	10.1	B
4	US 301 & NE 16th Ave	TWSC	AM	10.2	B
			PM	11.4	B
5	US 301 & NE 19th Rd	TWSC	AM	<5.0	A
			PM	9.5	A
6	US 301 & CR 525 E	TWSC	AM	11.8	B
			PM	12.3	B
7	US 301 & Anderson Rd	TWSC	AM	<5.0	A
			PM	12.8	B
8	US 301 & Clark Ave	TWSC	AM	12.4	B
			PM	<5.0	A
9	Commercial St & Warm Springs Ave	Signalized	AM	9.1	A
			PM	9.2	A
10	Church St & US 301	TWSC	AM	13	B

Table 2-6 | Summary of Existing AM and PM Delay and Level of Service

#	Intersection	Control	Peak Hour	Delay[1]	LOS[1]
			PM	13.6	B
11	Hubbs St & US 301	TWSC	AM	10.6	B
			PM	13.8	B
12	Stokes St/CR 523 & US 301	TWSC	AM	12.3	B
			PM	14.8	B
13	US 301 & CR 468	TWSC	AM	13.3	B
			PM	13.8	B
14	US 301 & CR 521	TWSC	AM	13.3	B
			PM	15.1	C
15	US 301 & NE 37th Pl	TWSC	AM	15.2	C
			PM	16.9	C
16	US 301 & Florida's Turnpike SB Ramps	TWSC	AM	15.4	C
			PM	32.8	D
17	US 301 & Florida's Turnpike NB Ramps	TWSC	AM	14.4	B
			PM	14.9	B
18	US 301 & Clay Drain Rd	TWSC	AM	16.6	C
			PM	21.1	C
19	US 301 & Spring Lake Rd	TWSC	AM	15	C
			PM	18.4	C
20	US 301 & SR 44	Signalized	AM	25.3	C
			PM	29.2	C

[1] *Control delays and LOS for unsignalized intersections are for worst approach*

2.1.14 Crash Analysis

The information used in the following section has been summarized from the *Crash Analysis Report*. Please refer to this report for more detailed information.

A comprehensive review of the reported crash information was performed to identify high-crash areas and road features on the US 301 corridor. Crash data was from the Florida Department of Transportation (FDOT) Crash Analysis Reporting (CAR) program for the US 301 corridor from CR 470 E to SR 44 for a three-year period, from January 1, 2011 through December 31, 2013. This database also provided crash data over a five-year period from July 1, 2009 through December 31, 2013 for the interchange of US 301 and Florida's Turnpike.

The crash data was also reviewed to identify locations along US 301 that may benefit from traffic safety related improvements. The collision histories for the entire corridor are summarized in Table 2-7, which identifies the crash types, conditions at the time of the crash, and resulting injury severity, if injuries occurred.

Table 2-7 | Collision Types on US 301 from CR 470 to SR 44

Characteristic	Total	Average Crashes/Year	Percentage of Total Crashes
Crash Type			
Rear End	40	13.3	29.4%
Fixed Object	31	10.3	22.8%
Angle	28	9.3	20.6%
Other	11	3.7	8.1%
Sideswipe/Same	10	3.3	7.4%
Overturn	7	2.3	5.1%
Unknown	4	1.3	2.9%
Head On	2	0.7	1.5%
Pedestrian/Bicycle	2	0.7	1.5%
Sideswipe/opposite	1	0.3	0.7%
Total	136	45.3	100.0%
Injury			
Fatal	2	0.3	1.5%
Non-Severe	48	16.0	35.3%
Severe	15	5.0	11.0%
Roadway Condition			
Wet	21	7.0	15.4%
Dry	115	38.3	84.6%
Lighting Condition			
Daylight	93	31.0	68.4%
Dark-Unlit	23	7.7	16.9%
Dark-Lit	14	4.7	10.3%
Dusk	3	1.0	2.2%
Dawn	3	1.0	2.2%
Economic			
PDO Economic Loss	$142,000	$47,333	-
Injury Economic Loss	$6,426,000	$2,142,000	-
Fatality Economic Loss	$5,200,000	$1,733,333	-
Total	$11,768,000	$3,922,666	-

Table 2-8 shows that the highest number of reported crashes along US 301 roadway segments during the 3-year period occurred between CR 468 and SR 44. The vicinity to Florida's Turnpike (SR 91) is a contributing factor to the high crash rates in Segments 4 and 5.

Table 2-8 | Crashes by Study Segment

Segment	Total No. of Crashes	Average Crashes/Year
Segment 1	4	1.3
Segment 2	1	0.3
Segment 3	8	2.7
Segment 4	64	21.3
Segment 5	59	19.7
Total	136	45.3

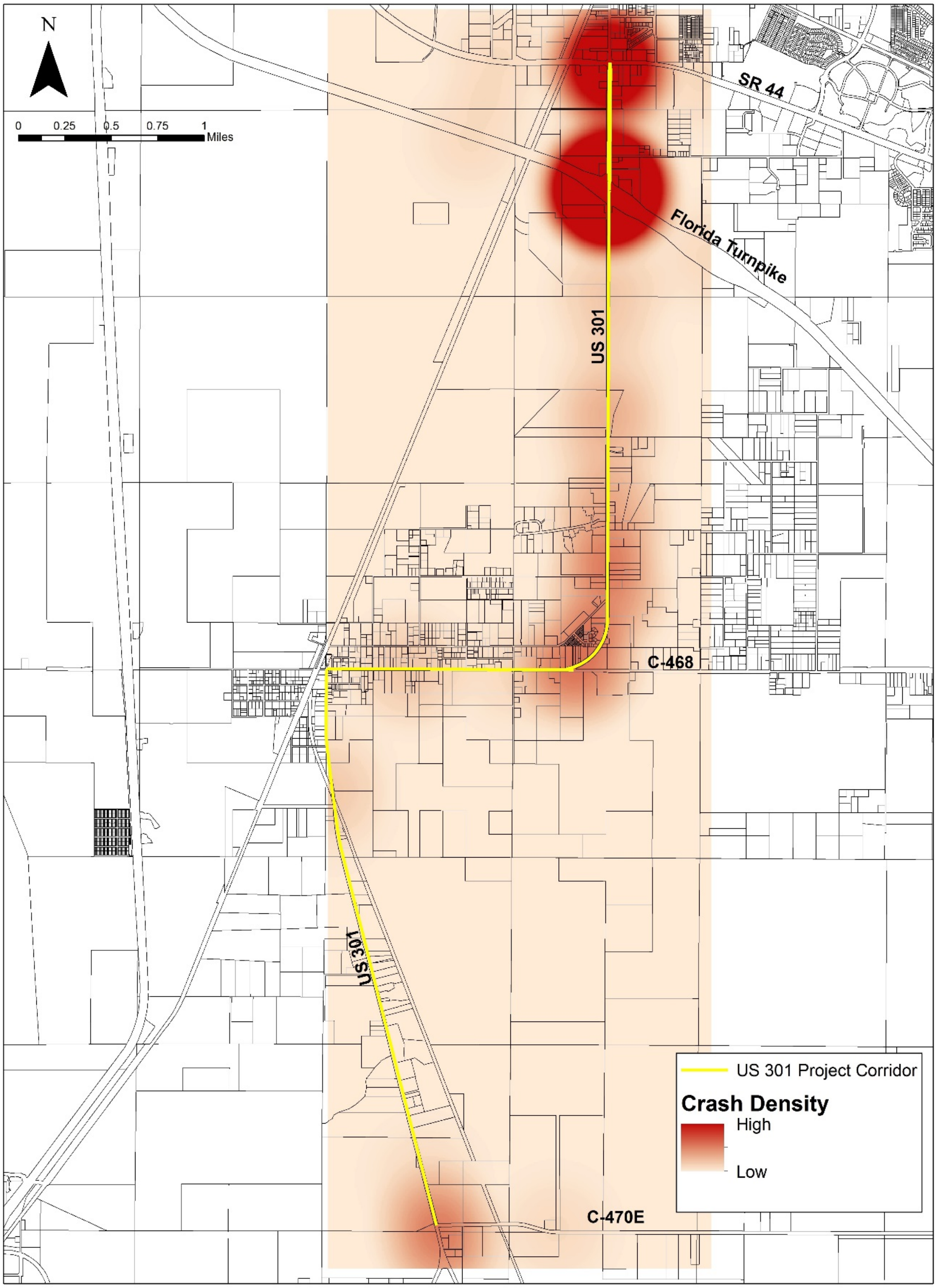
Shown in Table 2-9 are the crashes that occurred within 250 feet of the intersections on US 301 during the study period. These crashes occurred on the mainline (US 301) within 250 feet of the intersecting roadway; crashes occurring on the side streets were not included in the data set. The intersection with the highest number of crashes per year is the intersection of US 301 and Florida's Turnpike, as shown in Figure 2-13.

The crash data was analyzed to identify any trends or patterns relating to vehicle safety concerns along US 301 segments and at the 14 intersections. Based on the analysis, intersection improvements are needed at the US 301/ Florida's Turnpike intersection. Specifically, the merging tapers are not adequate for the eastbound Turnpike off ramp onto southbound US 301, and for the westbound Turnpike off ramp onto northbound US 301.

Table 2-9 | Crashes by Intersection with US 301

Intersection	Total Number of Crashes	Average Crashes/Year
Florida's Turnpike	37	12.3
SR-44	14	4.7
County Road 470	4	1.3
County Road 468	4	1.3
County Road 521	2	0.7
NE 37th Road	2	0.7
Clay Drain Road	2	0.7
SR-471	2	0.7
County Road 525 East	1	0.3
County Road 523	1	0.3
Brooks Street	1	0.3
NE 37th Place	1	0.3
NE 34th Avenue	1	0.3
Sherman Street	1	0.3
Total	73	24.3

Figure 2-13 | Crash Heat Map



2.1.15 Utilities

The existing utilities located within approximately 300 feet of the existing right-of-way were identified for the study area. The preliminary utility coordination and investigation was conducted through available construction plans and field reconnaissance. A list of existing utility owners was provided by the Sunshine State One Call major utilities within the project corridor and is summarized in Table 2-10. Table 2-11 summarizes the major utilities within or crossing the corridor.

Table 2-10 | Utility Company and Contacts

Utility Company	Contact	Address	Phone Number	E-Mail Address
CenturyLink	Mike Fitzgerald	5908-A Hampton Oaks Parkway Tampa, FL 33610	(813) 630-2605	Mike.Fitzgerald@CenturyLink.com
CenturyLink	David Detmer	319 SE Broadway St. Ocala, FL 34471	(352) 368-8862	David.Detmer@CenturyLink.com
Sabal Trail Transmission Line	Andrea D. Grover	400 Colonial Center Parkway, Suite 300	(321) 249-8606	ADGrover@SpectraEnergy.com
City of Wildwood	Mark O'Dell	1290 Industrial Dr. Wildwood, FL 34785	(352) 330-1346	modell@wildwood-fl.gov
City of Wildwood (Kimley Horn Consulting Engineers)	Gene Losito	1823 SE Ft King Street Suite 2 Ocala, FL 34471	(352) 438-3000	Gene.Losito@kimley-horn.com
CSX	Steve Price	4500 Salisbury Road Suite 400 Jacksonville, FL 32216	(904) 571-1526	Steve_Price@CSX.com
CSX	Jacob Smith		(904) 359-1650	Jacob_Smith@csx.com
Duke Energy	Yani Mikedis	4359 SE Maricamp Rd. Ocala, FL 34480	(352) 694-8811	Yani.Mikedis@duke-energy.com
Duke Energy	Sharon Dear	452 E. Crown Pointe Rd. Winter Garden, FL 33787	(407) 905-3321	Sharon.Dear@duke-energy.com
FGE Engineering, Inc./ TECO Peoples Gas	Gerry Moliere	P.O. BOX 280 Dade City, FL 33526	(352) 834-0350	Gmoliere@flgascontractors.com
Level 3	Robert Quay	1025 Eldorado Blvd. Broomfield, CO 80021	(813) 376-6975	Robert.Quay@Level3.com
MCI/Verizon	John Bachelder	2400 North Glenville Richardson, TX 75082	(972) 729-6322	John.Bachelder@verizon.com Investigations@verizon.com
Spectrum (Bright House Networks)	Dwayne Leachman	730 S. Main Street Wildwood, FL 34785	(352) 861-3206	Dwayne.Leachman@mybrighthouse.com
Sumter Electric Cooperative (SECO)	Danny Boyett	330 South US Highway 301 Sumterville, FL 33585	(352) 569-9882	Danny.Boyett@secoenergy.com
Sumter Electric Cooperative (SECO)	Alan Kimbley	330 South US Highway 301 Sumterville, FL 33585	(352) 569-9644	Alan.Kimbley@secoenergy.com

Table 2-10 | Utility Company and Contacts

Utility Company	Contact	Address	Phone Number	E-Mail Address
TECO Peoples Gas	Bruce Stout	600 W. Robinson St. Orlando, FL 32801	(407) 420-2678	bstout@tecoenergy.com
TransCore	Steve Cordell	2416 Lake Orange Dr. Suite 100 Orlando, FL 32837	(407) 448-2819	
TransCore	Rafael Sena			Rafael.Sena@dot.state.fl.us

Table 2-11 | Major Utilities Within or Crossing the Corridor

Type of Utility	Utility Owner	Facility Type	Limits	Offset/Side	Potential Impacts
Gas	TECO Peoples Gas (TECO)	Underground 4" PVC gas main.	Florida's Turnpike to south of SR 44.	West	No
		Proposed underground gas main.	CR 470E to east west section of US 301 through downtown Coleman	West/North	No
Communications	Centurylink	Two buried fiber optic cables.	CR 470E to downtown Coleman	East/West	Yes
		Two buried copper cables.	CR 470E to downtown Coleman	East	Yes
		Buried fiber optic cable.	Downtown Coleman to CR 468	South	Yes
		Buried copper cables.	Downtown Coleman to CR 468	North	Yes
		Buried copper and buried fiber optic cables.	CR 468 to SR 44	West	Yes
	Brighthouse Networks (Spectrum)	Overhead lines	CR 470E to Shady Oaks	West	Yes
		Underground fiber lines.	Shady Oaks north approximately 1,000 feet	West	Yes
		Overhead lines	To CR 525E	West	Yes
		Overhead lines	CR 525E to Anderson Rd.	East	Yes

Table 2-11 | Major Utilities Within or Crossing the Corridor

Type of Utility	Utility Owner	Facility Type	Limits	Offset/Side	Potential Impacts
		Overhead lines	Anderson Rd. to downtown Coleman	West	Yes
		Overhead lines	Downtown Coleman for two blocks	North	Yes
		Overhead lines	To CR 523	South	Yes
		Overhead lines	CR 523 to CR 468	North	Yes
		Underground fiber lines.	Beginning curve to mid-point of curve.	North	Yes
		Overhead lines	CR 468 to South of Turnpike	South/East	Yes
		Overhead lines	South of Turnpike to exit ramp of Turnpike	West	No
		Underground fiber lines.	At Turnpike to Entrance Ramp	West	No
		Overhead Lines	Turnpike Entrance Ramp to Spring Lake Road	West	Yes
		Overhead Lines	Turnpike Entrance Ramp to SR 44	East	Yes
Communications	Level 3 Communications	Two 2-inch HDPE underground fiber optic lines.	CR 468 to SR 44	South/West	Yes
	TransCore	Underground fiber optic lines, 6-inch casing and 2-inch pvc conduit	South side of Turnpike, crossing US 301	East/West Crossing	No
	MCI/Verizon	Underground fiber optic lines.	Crossing US 301 from east to west at CSX right-of-way removed tracks, new CR 525	East/West Crossing	Yes

Table 2-11 | Major Utilities Within or Crossing the Corridor

Type of Utility	Utility Owner	Facility Type	Limits	Offset/Side	Potential Impacts
Electric/Power	Sumter Electric Cooperative (SECO)	Overhead line	CR 470E to CR 470W	East/West	No
		Underground line	CR 470E to CR 470W	East/West	No
	Duke Energy	Overhead Line	CR 470E to 507 S. US 301	West	Yes
		Overhead Line	507 S. US 301 to 623 S. US 301	East	Yes
		Overhead Line	623 S. US 301 to 2063 US 301 (South of CR 525)	West	Yes
Electric/Power	Duke Energy	Overhead Line	2063 US 301 to Coleman City Limit Sign	East	Yes
		Overhead Line	Coleman City Limit Sign to downtown Coleman	West	Yes
		Overhead Line	Downtown Coleman to Church Street	North	Yes
		Overhead Line	Church Street to Stokes Street	South	Yes
		Overhead Line	Stokes Street to CR 468	North	Yes
		Overhead Line	CR 468 to middle of curve	East	Yes
		Overhead Line	Middle of Curve to north end of Curve	West	Yes
		Overhead Line	North end of Curve to south of Turnpike	East/West	Yes
		Overhead Line	North of Turnpike to SR 44	East/West	No

Table 2-11 | Major Utilities Within or Crossing the Corridor

Type of Utility	Utility Owner	Facility Type	Limits	Offset/Side	Potential Impacts
Water/Wastewater	City of Wildwood	Gravity sewer line, 8-inch.	Clay Drain Road to SR 44	East	Yes
		Forcemain, 16-inch.	Clay Drain Road to SR 44	West/Center	Yes
		Forcemain, 3-inch	Clay Drain Road to Main Street South (Liftstation)	West	No
		Forcemain, 8-inch	Main Street South (Liftstation) to SR 44	West	No
		Watermain, 12-inch	CR 468 to SR 44	East	Yes
Water/Wastewater	City of Wildwood	Watermain, 8-inch	CR 521 to Industrial Area	West	No
		Watermain, 8-inch	Crossing US 301 at NE 37th Place	West to East	Yes
		Watermain, 8-inch	Crossing US 301 at Clay Drain Road	East to West	Yes
		Watermain, 6-inch	Crossing US 301 at Clay Drain Road, south side	West to East	Yes
Gas	Sabal Trail Transmission Natural Gas	Proposed Underground 36-inch gas main	Crossing US 301 just north of Duke Energy Transmission Line, south of Turnpike	Crossing US 301	No

2.2 Existing Bridge Features

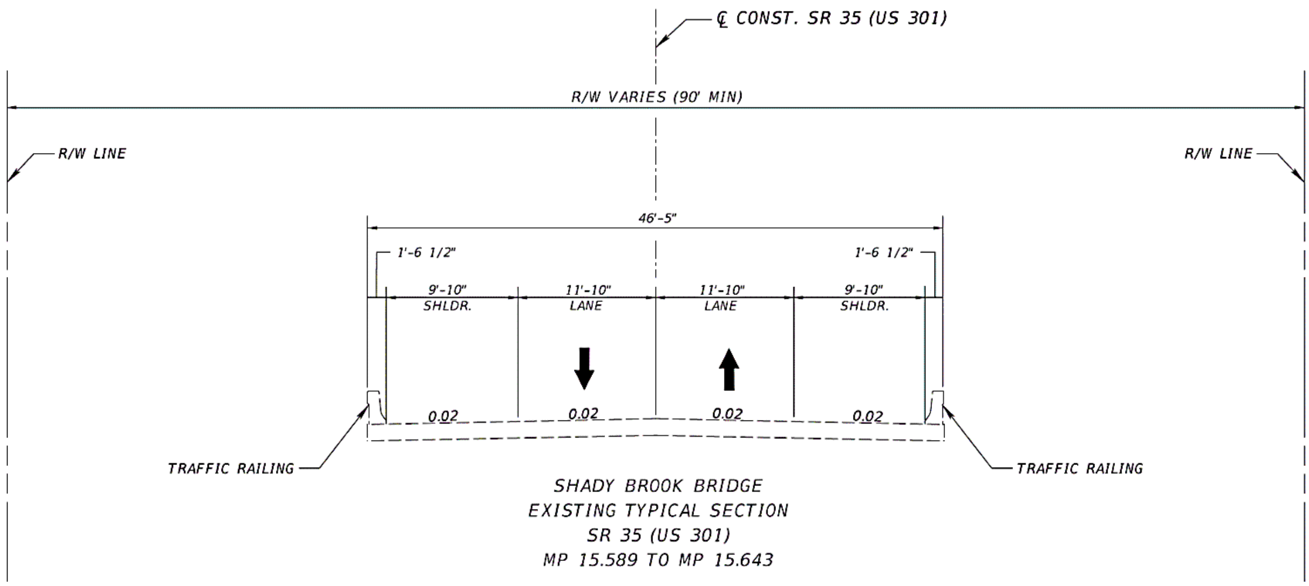
The existing US 301 bridge structure information was obtained using FDOT's Bridge Management System (BMS) Comprehensive Inventory Data Report and reviewing the existing construction drawings. There is one existing bridge structure on US 301 that crosses Shady Brook (Bridge no. 180073). Additionally, there are two existing bridge structures for Florida's Turnpike (SR 91) over US 301 (SR 35): Bridge nos. 180009 and 180058.

2.2.1 US 301 Over Shady Brook Bridge

2.2.1.1 Typical Section

The existing bridge typical section for US 301 over Shady Brook (Bridge No. 180073) is a crowned section. It consists of two 11.81 ft travel lanes and 9.84 ft outside shoulders with a concrete traffic railing on both sides, as shown in Figure 2-14. The overall bridge width is 46.42 ft.

Figure 2-14 | Existing Typical Section – Shady Brook Bridge



2.2.1.2 Type of Structure

The existing US 301 bridge over Shady Brook consists of a cast-in-place reinforced concrete flat slab superstructure supported on intermediate concrete pile bents.

2.2.1.3 Current Conditions and Year of Construction

The US 301 bridge over Shady Brook was built in 1999. Bridge information, shown in Table 2-12, was obtained from existing construction plans, the FDOT's *Structural Inventory Detail Report,* and the most current bridge inspection reports from January 2017. The bridge has a Sufficiency Rating of 90.1 and no major defects were noted in the inspection report. The sufficiency rating is derived from a formula that methodically evaluates factors that are indicative of the structure's ability to remain in service. A rating of 100 would represent an entirely sufficient bridge and a rating of zero would represent an entirely deficient bridge. The Federal Highway Administration (FHWA) guidelines state that structures with a sufficiency rating of 80 or less require some rehabilitation and those less than 50 require replacement. The existing Shady Brook Bridge has a sufficiency rating of 90.1 and is structurally sufficient.

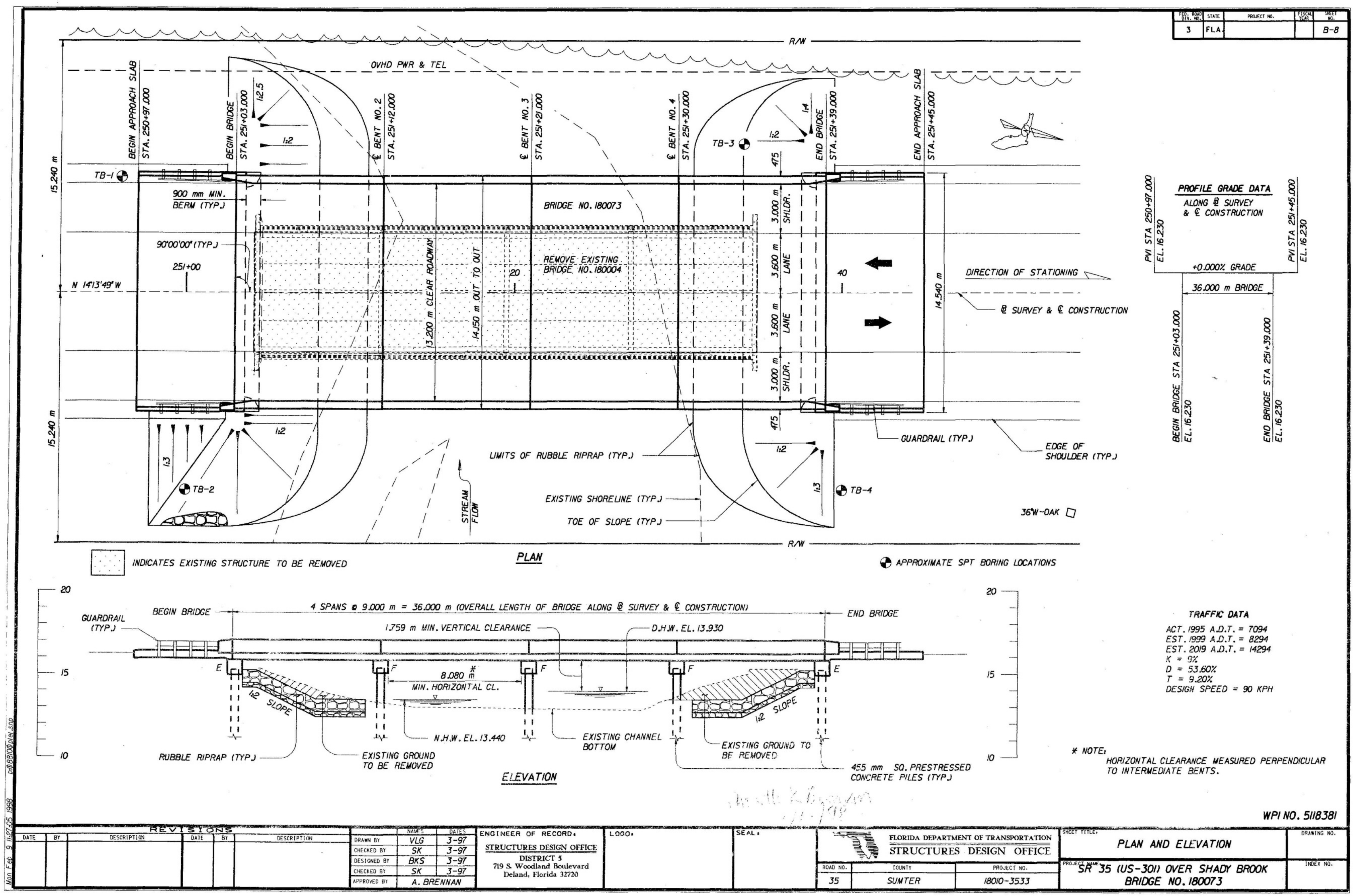
Table 2-12 | Shady Brook Bridge Structure Condition and Year of Construction

Description	Bridge No.	Sufficiency Rating	Overall NBI Rating				Year Built	Year Replaced/ Widened
			Deck	Superstructure	Substructure	Channel		
US 301 over Shady Brook	180073	90.1	7	7	7	8	1999	N/A

2.2.1.4 Horizontal and Vertical Clearance

According to the existing bridge plans, the high water elevation was Elevation (EL.) +44.1 feet in January 1996 based on the National Geodetic Vertical Datum of 1929 (NGVD-1929). The existing vertical clearance above the high water elevation is 7.5 feet. The US Coast Guard (USCG) determined during the Efficient Transportation Decision Making (ETDM) screening in May 2013 that Shady Brook is not a navigable waterway and therefore does not require a USCG Bridge Permit. A higher vertical clearance is not required by the USCG. The existing bridge plan and elevation is illustrated in Figure 2-15.

Figure 2-15 | Existing Bridge Plan & Elevation



2.2.1.5 Span Arrangement

The bridge over Shady Brook has an overall length of 118.11 ft (36.0 m) and consists of four equal spans each measuring 29.53 ft (9.0 m).

2.2.1.6 Historical Significance

Review of the Florida Master Site File (FMSF) and the NRHP indicated that the bridge is not historic based on the age of the structure. The facility has never been previously documented as eligible for listing in the NRHP. Based on required eligibility criteria, US 301 over Shady Brook was evaluated and did not meet the necessary eligibility criteria.

2.2.1.7 Channel Dimensions

The US Coast Guard (USCG) has determined that Shady Brook is not a navigable waterway. Therefore, channel dimensions are not applicable.

2.2.1.8 Bridge Openings

There are no moveable bridges within the study area. Therefore, bridge openings are not applicable.

2.2.1.9 Ship Impact Data

There are no navigable waterways crossed within the study area. Therefore, ship impact data is not applicable.

2.2.2 Florida's Turnpike (SR 91) Over US 301

2.2.2.1 Typical Section

The existing bridge typical section for NB Florida's Turnpike over US 301 (Bridge No. 180058) and SB Florida's Turnpike over US 301 (Bridge No. 180009) consists of two 12-foot travel lanes, with a 6-foot inside shoulder and 10-foot outside shoulder with a concrete traffic railing on either side.

2.2.2.2 Type of Structure

The existing Turnpike bridges over US 301 have superstructure types consisting of cast-in-place reinforced concrete decks on AASHTO concrete beams. These are supported on substructure elements consisting of multi-column piers and pile end bents.

2.2.2.3 Current Conditions and Year of Construction

The Florida's Turnpike bridges over US 301 were built in 1964 and widened in 1992. Bridge information was obtained from existing construction plans, FDOT's *Structural Inventory Detail Report*, and the most current bridge inspection reports from November 2013. Based on condition ratings in the November 2013 inspection report, the bridges are structurally sufficient. However, they are categorized as functionally obsolete due to insufficient vertical clearance, as described in Section 2.2.2.4.

Table 2-13 | Florida's Turnpike Bridges Structure Condition and Year of Construction

Description	Bridge No.	Sufficiency Rating	Overall NBI Rating				Year Built	Year Replaced/ Widened
			Deck	Superstructure	Substructure	Channel		
Turnpike NB over US 301 (SR 35)	180058	88.1	7	6	7	N/A	1964	1992
Turnpike (SB) over US 301 (SR 35)	180009	77.0	7	5	7	N/A	1964	1992

2.2.2.4 Horizontal and Vertical Clearance

The Turnpike spans over US 301 and according to the 1992 bridge widening plans, the existing minimum vertical clearance between US 301 and the bridge structures is 14.78'. This does not meet current FDOT Design Manual (FDM) Part 2, Table 260.6.1 and is part of the reason these bridges are categorized as functionally obsolete.

Insufficient horizontal clearance from the existing bridge piers was addressed as part of the 1992 widening project by installing concrete barrier wall in front of the piers to protect traffic.

2.2.2.5 Span Arrangement

Both NB and SB Turnpike bridges over US 301 are comprised of 3 spans. Span 1 is 41.5 feet in length, Span 2 is 76.75 feet in length, and Span 3 is 44.75 feet in length. The total length of each bridge is 163 feet and the total width of each bridge is 43.1 feet.

2.2.2.6 Historical Significance

There is a separate on-going PD&E Study for the Turnpike that covers the interchange at US 301. Based on initial coordination with Florida's Turnpike Enterprise, this study calls for full replacement of the existing Turnpike bridges. Although the bridges were originally constructed in 1964, they were widened in 1992 and are effectively modern structures. They are also exempt from Section 106 evaluation under the 2012 Program Comment for Common Post-1945 Concrete and Steel Bridges.

2.2.2.7 Channel Dimensions

There is no navigable waterway underneath the Turnpike over US 301. Therefore, channel dimensions are not applicable.

2.2.2.8 Bridge Openings

There are no moveable bridges within the study area. Therefore, bridge openings are not applicable.

2.2.2.9 Ship Impact Data

There are no navigable waterways crossed within the study area. Therefore, ship impact data is not applicable.

2.3 Existing Environmental Resources

2.3.1 Social and Economic

2.3.1.1 Existing and Future Land Use

The US 301 project traverses the cities of Coleman and Wildwood as well as the surrounding areas of unincorporated Sumter County between CR 470 E to SR 44. The existing land use maps and aerials, and adopted Future Lane Use Maps (FLUM) of these jurisdictions were reviewed to determine the existing uses adjacent to the study corridor, as well as the potential future uses. The full Sociocultural Evaluation is available under separate cover.

2.3.1.1.1 Existing Land Use

City of Coleman

The current city limits generally extend along both sides of US 301 from just west of the CR 468/US 301 intersection to just south of Anderson Road. Existing land uses along the corridor are largely developed residential with some vacant residential, developed commercial, and municipal. Furthermore, Coleman City Hall and the United Methodist Church of Coleman sit along the corridor. The area immediately south of the city limits along US 301 is agricultural and other undeveloped parcels. The existing developed residential contains largely single family homes along the corridor.

City of Wildwood

The current city limits generally extend along both sides of US 301 from beyond SR 44 through CR 468. This area of the corridor contains some unincorporated parcels along both sides of the roadway. The existing land use in the city south of Florida's Turnpike consist primarily of agricultural with some light and heavy industrial, and two developed and two undeveloped residential areas. North of the Turnpike, continuing to the SR 44 intersection, the uses are primarily commercial with one RV and mobile home park near the intersection with Clay Drain Road. Commercial uses include multiple gas stations, restaurants, offices, and the Sumter Crossings shopping center.

Sumter County

Existing land uses in unincorporated Sumter County south of the Turnpike and north of the City of Coleman are largely agricultural and residential, consisting of a mix of single family and mobile homes. There is a partially developed subdivision (Village of Fenney) northeast of the CR 468/US 301 intersection and Trinity Baptist church sits directly south of the same intersection. South of the City of Coleman until the study limits also contains a similar mix of agricultural and residential uses. Near the intersection with CR 470 E is the Shady Brook Golf & RV Resort and the Sumterville Cemetery.

2.3.1.1.2 Future Land Use

City of Coleman

It should be noted that US 301 serves as the "main street" of the City of Coleman. The City of Coleman's comprehensive plan and community redevelopment plan both call for the realignment and widening of US 301 to go around the community and preserve the two-lane configuration of US 301 through Coleman with enhancements related to pedestrian/bicyclists, aesthetics, and maintain appropriate business access. See Figure 2-16 for the City of Coleman Future Land Use Map, as of January 2017. However, the City of Coleman is currently proposing a revised Future Land Use Map (FLUM) proposed for adoption. This revised map was used to identify future land uses along the corridor in the City of Coleman, shown in Figure 2-17. The future land use along the corridor consists primarily of residential and mixed use designations. There are two public building designations along the corridor. Most of the area around the intersection with Warm Springs Avenue and stretching south from the intersection is zoned commercial. Figure 2-18 shows information from the City's Redevelopment Area Plan including a proposed future cross-section of Warm Springs Avenue/US 301 through the City.

Figure 2-16 | City of Coleman Future Land Use Map (as of January 2017)

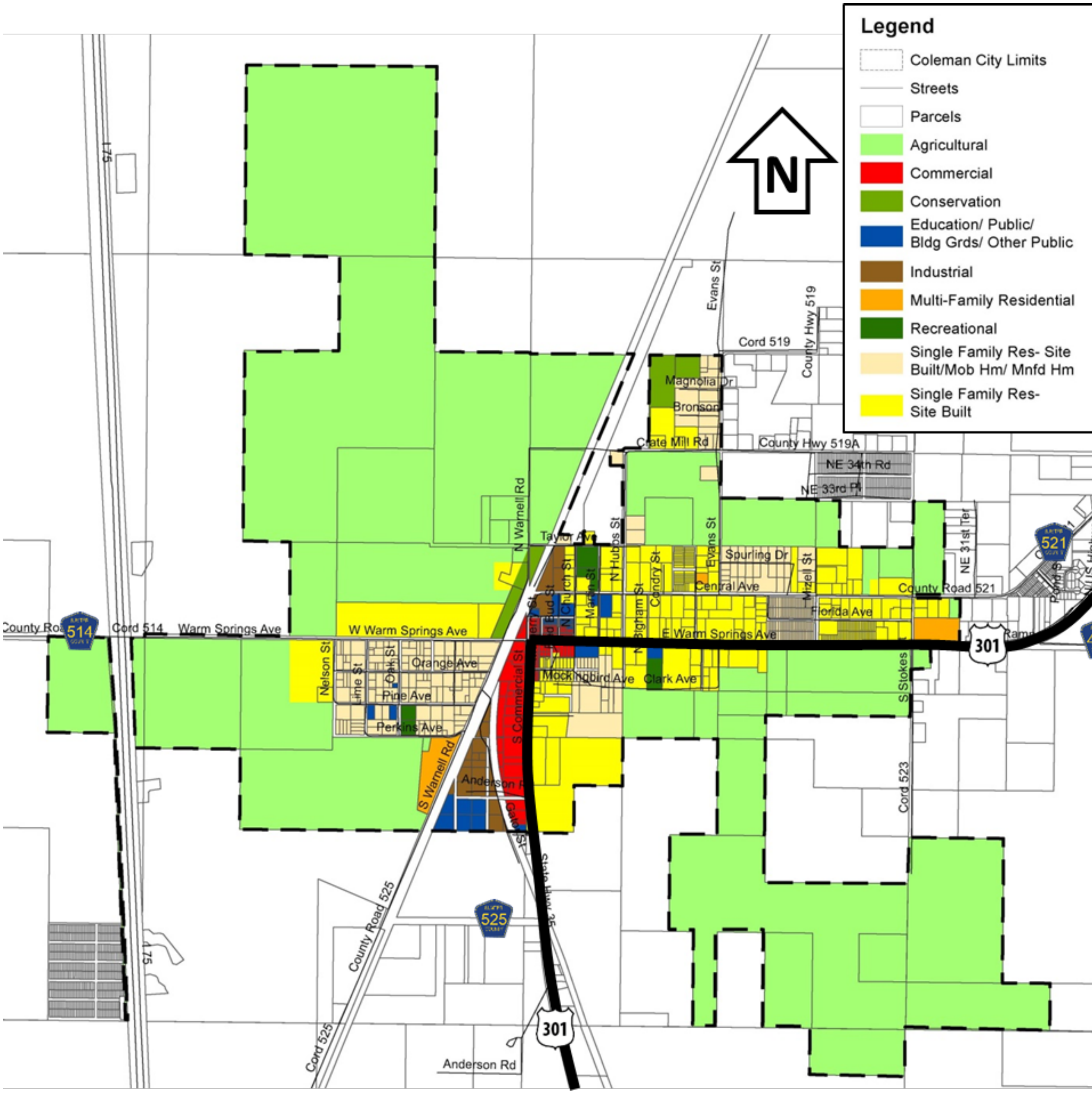


Figure 2-17 | Future Land Use Map– City of Coleman (Proposed for Adoption)

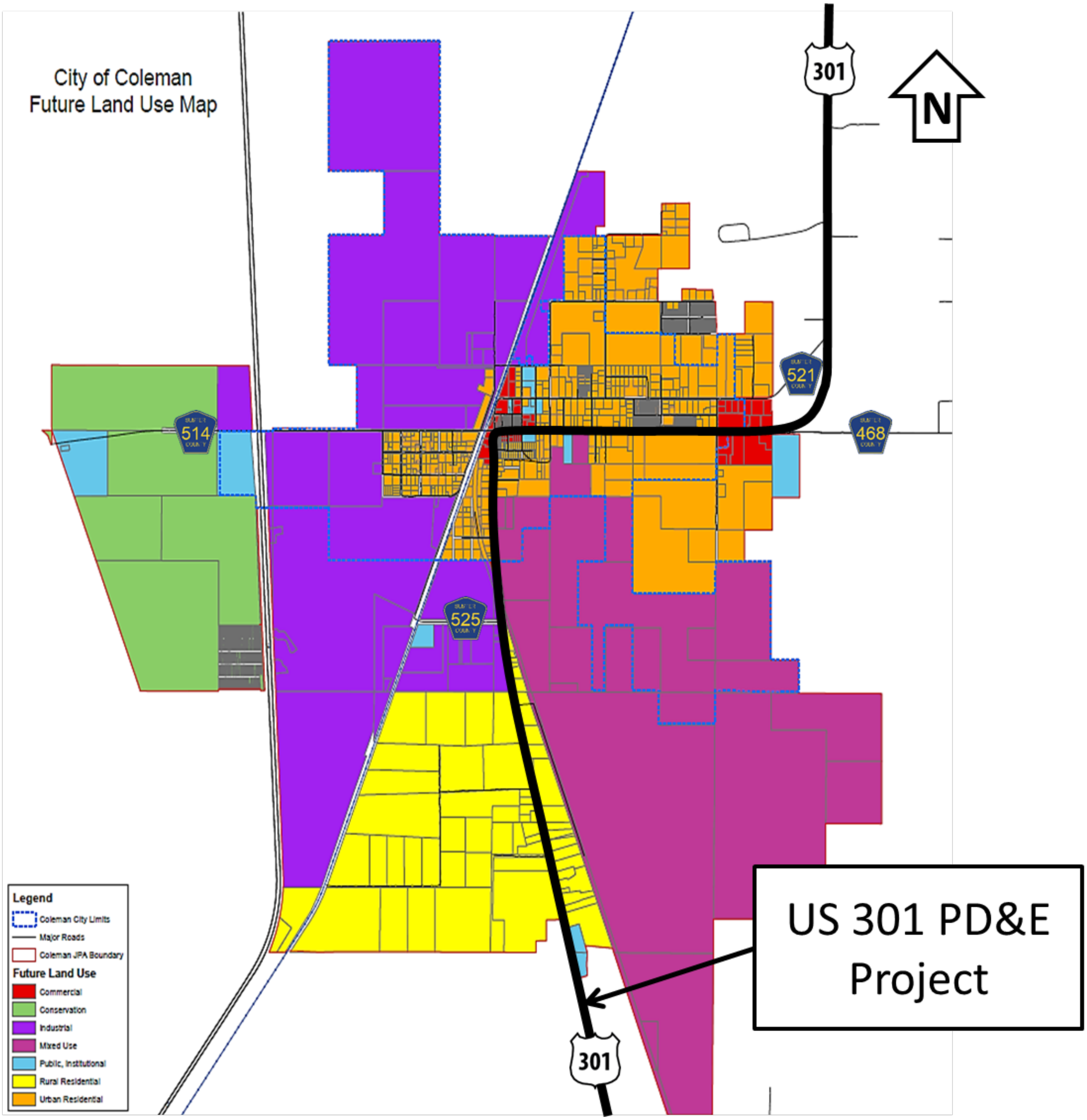
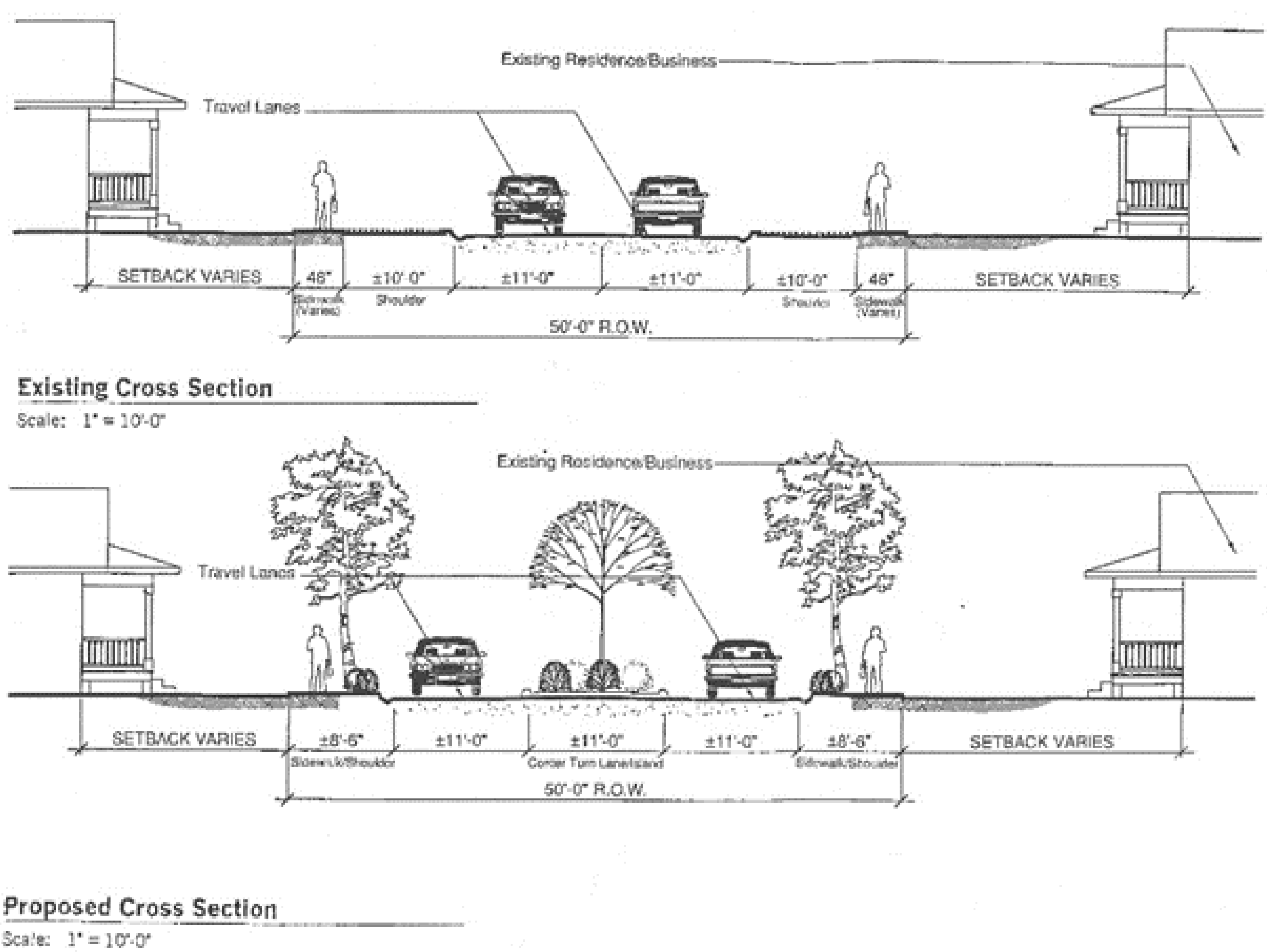


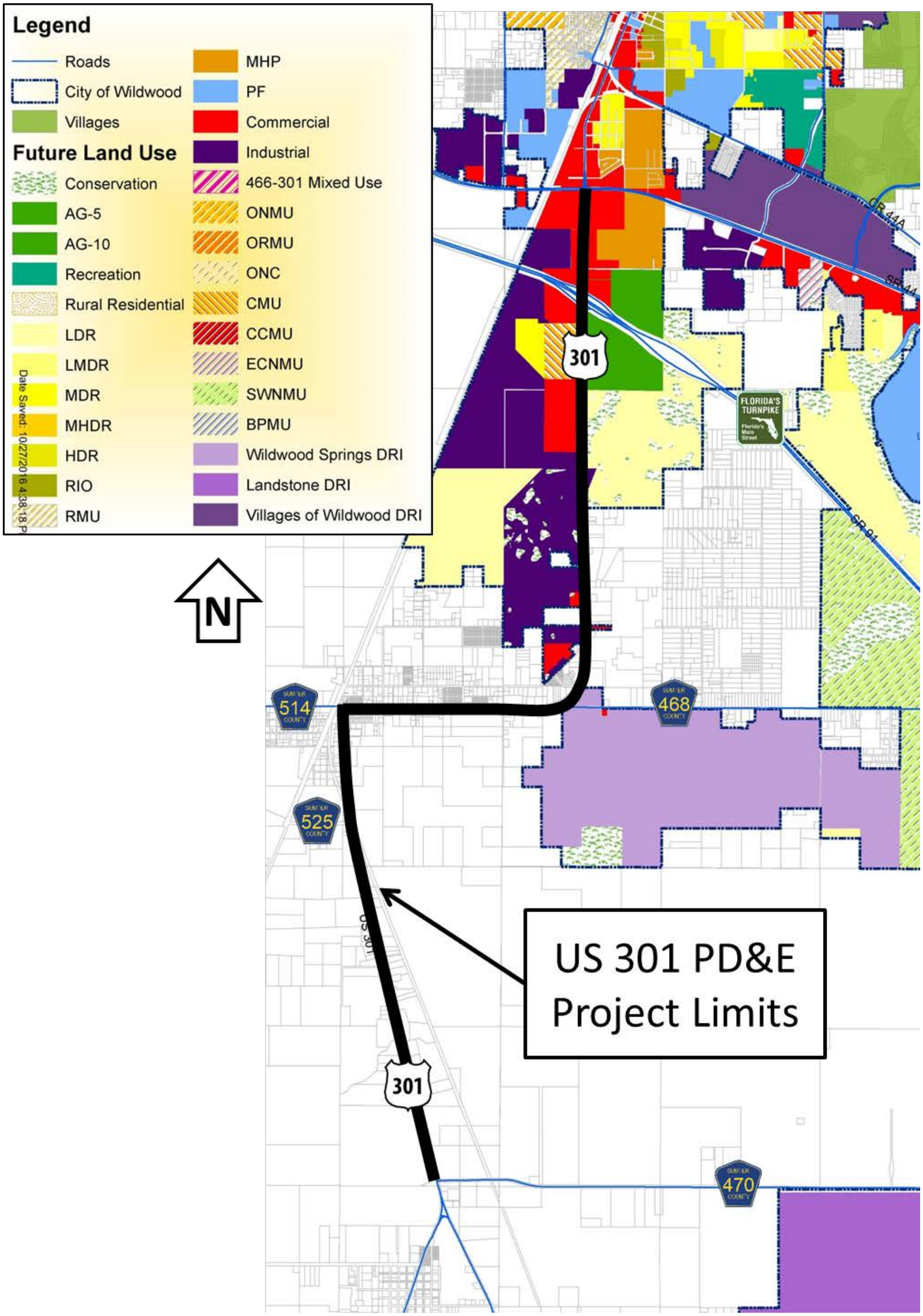
Figure 2-18 | Coleman Redevelopment Area Plan: Warm Springs Avenue/US 301 Cross-Section



City of Wildwood

The adopted Future Land Use Map (FLUM) was used to identify future land uses along the corridor in the City of Wildwood, shown on Figure 2-19. The future land use designation along the corridor north of the CR 468/US 301 intersection up to SR 44 is primarily commercial and industrial. Near the Turnpike there is agricultural, commercial, and commercial mixed use. Furthermore, about halfway between the SR 44 and CR 468 intersections is a low density residential use.

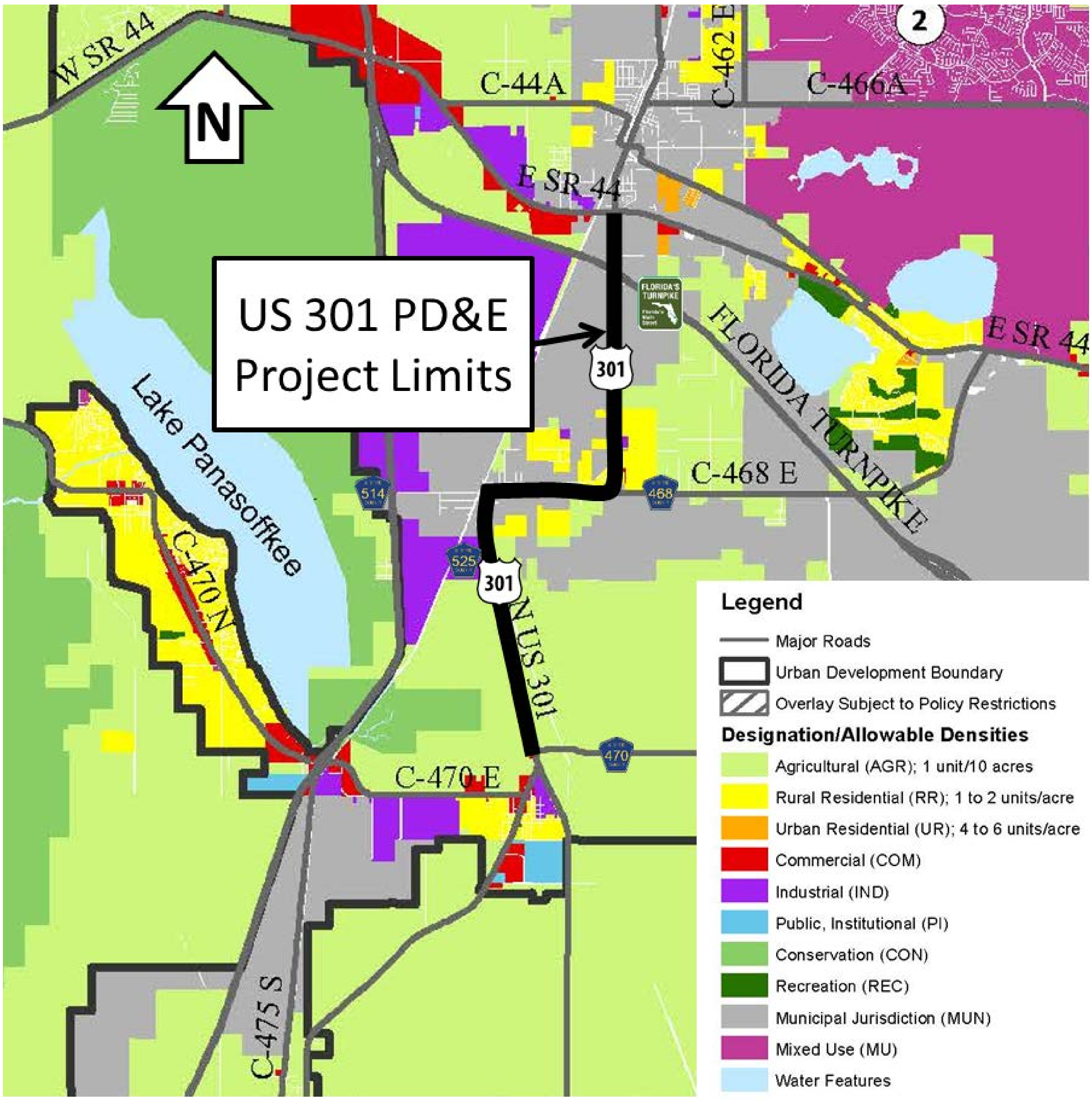
Figure 2-19 | Future Land Use Map Excerpt – City of Wildwood



Sumter County

The adopted Future Land Use Map (FLUM) was used to identify future land uses along the corridor in Sumter County, and is shown in Figure 2-20. The future land use designations along the corridor south of the Turnpike and east of the City of Coleman are agricultural, rural residential, and a few instances of industrial and commercial. South of Coleman and north of CR 470 E the land use is similarly distributed with most parcels designated as agricultural or single-family residential. Just south of the intersection with CR 470 E is a vacant service station.

Figure 2-20 | Sumter County Future Land Use Map Excerpt



2.3.1.2 Community Services

Community service facilities provide a gathering place for community members as well as serve the needs of people from surrounding areas. For the purpose of this study, community facilities include parks and recreational facilities, public and private schools, churches and other religious institutions, and public buildings and facilities such as fire stations, libraries, medical centers, and cemeteries. The community service facilities that are located within or near the study area are discussed below and shown in Figure 2-21.

2.3.1.2.1 Parks and Recreational Facilities

Parks and recreational facilities in the study area consist of the Shady Brook Park (1015 N. US 301, Coleman) and the Coleman City Hall (3502 Warm Springs Avenue, Coleman).

2.3.1.2.2 Schools

No schools are located within the study area.

2.3.1.2.3 Churches and Religious Institutions

Churches and religious institutions in the study area consist of:

- Shady Brook Freewill Baptist Church (1469 US 301 North, Sumterville)
- Trinity Baptist Church (3305 CR 468, Wildwood)
- Coleman First Assembly of God (505 Mulberry Street, Coleman)
- First Baptist Church (2112 Central Avenue, Coleman)
- United Methodist Church (1902 E Warm Springs Avenue, Coleman)

2.3.1.2.4 Fire and Police

One fire station (3290 CR 521, Wildwood) and no police stations are located within the study area:

2.3.1.2.5 Medical and Emergency Operation Facilities

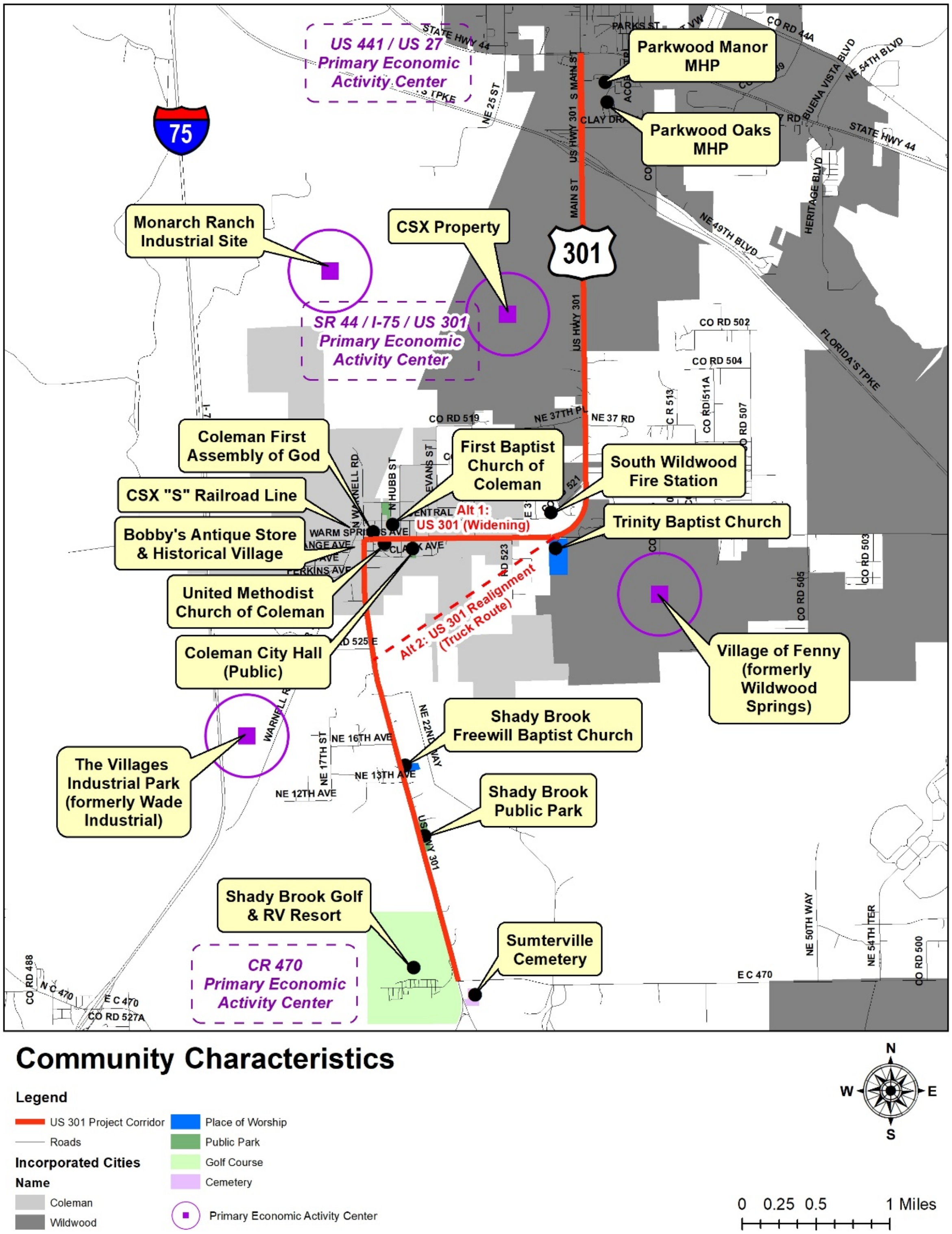
There are no major medical or emergency operation facilities located within the community services study area.

2.3.1.2.6 Other Public Buildings and Facilities

There are two public buildings and/or facilities located near the study area:

- Post Office (1109 Florida Avenue, Coleman)
- Coleman City Hall (3502 E Warm Springs Avenue, Coleman)

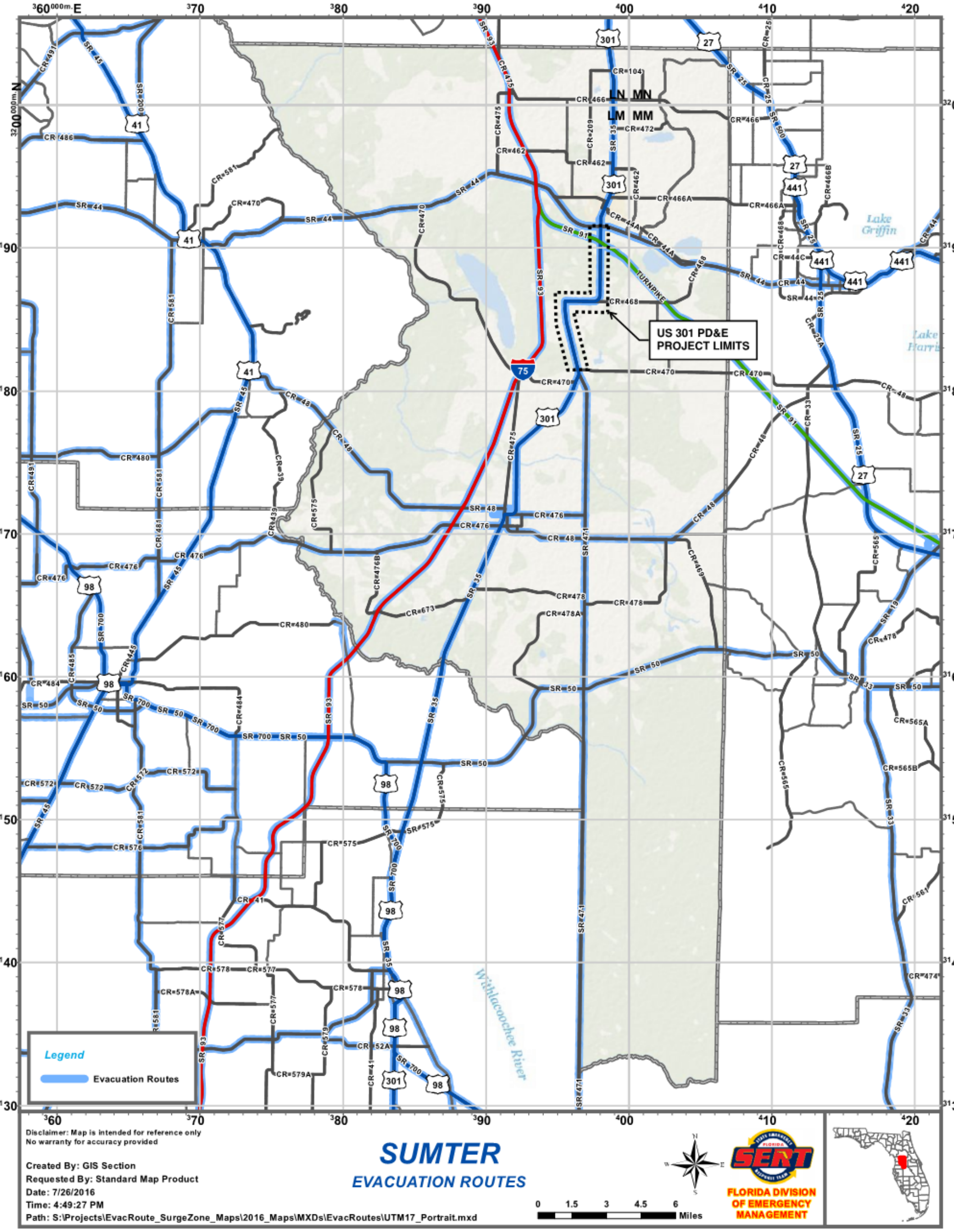
Figure 2-21 | Community Characteristics



2.3.1.2.7 Evacuation Routes and Emergency Services Facilities

US 301 is a designated evacuation route according to maps provided by the Florida Division of Emergency Management, shown in Figure 2-22. The only emergency services facility located within the community services study area is the previously mentioned fire station located at 3290 CR 521, Wildwood.

Figure 2-22 | US 301 Evacuation Route



2.3.1.3 Potential 4(f)

The G. B. Tompkins Park, also known as Shady Brook Park, is a newly recorded historic park in Sumter County at 1015 US 301, just north of Shady Brook on the east side of US 301. Impacts to this park may result in potential Section 4(f) evaluation.

2.3.1.4 Farmland

An evaluation of Prime Farmland and Important (Unique) Farmland during the ETDM screening determined that there are no Prime, Unique, or Locally Important Farmland soils within the study area. The U.S. Department of Agriculture, Natural Resource Conservation Service concurred with the results of the ETDM screening in May 2013.

2.3.2 Cultural & Archaeological

A cultural resources assessment survey (CRAS) was performed over the project Area of Potential Effect (APE). The APE was defined as the existing and proposed US 301 right-of-way and was extended to the back or side property lines of adjacent parcels, or a distance of no more than 100 meters (330 feet) from the existing or proposed right-of-way for the US 301 mainline and the realignment alternatives. The archaeological survey was conducted within the existing and proposed right-of-way. The architectural history survey included the entire APE. The full CRAS for the roadway and pond sites are available under separate cover.

The archaeological survey included the excavation of shovel tests throughout the US 301 PD&E APE and proposed pond locations. Several shovel tests were positive for cultural material, resulting in the identification of thirteen new archaeological sites and seven archaeological occurrences. All seven archaeological occurrences and ten of the archaeological sites are recommended ineligible for the National Register of Historic Places (NRHP). Insufficient information was available to determine if two of the remaining archaeological sites were eligible for NRHP. However, the Study Team has eliminated impacts to these two locations. The last archaeological site is recommended as eligible for the NRHP, as a higher concentration of artifacts were found during shovel tests in the area. The project will have an adverse effect on this site, and consultation to minimize and/or mitigate the adverse effect is ongoing. The consultation will result in a memorandum of agreement (MOA) between the State Historic Preservation Officer (SHPO) and FDOT. No additional archaeological work is recommended for the remainder of the US 301 PD&E APE.

The architectural survey resulted in the identification and evaluation of 124 historic resources within the US 301 APE, which included five previously recorded resources and 119 newly recorded resources. Of these resources, the Coleman City Jail, Coleman Historic District, and 7102 E. Warm Springs Avenue are recommended individually eligible for listing in the NRHP. Two additional resources on Warm Springs Avenue near Commercial Drive are also recommended as contributors to the Coleman Historic District.

The remaining 121 resources lack the architectural distinction and significant historical association necessary to be considered for individual listing in the NRHP; however, 27 of these resources are recommended eligible as contributors to the Coleman Historic District. The remaining 94 historic resources within the US 301 APE lack the architectural distinction and significant historical associations necessary to be considered for listing in the NRHP, either individually or as contributors to a resource group or district. No further architectural history survey is recommended.

G. B. Tompkins Park, alternately known as Shady Brook Park, is a newly recorded historic park in Sumter County at 1015 US 301 within the US 301 APE. G. B. Tompkins Park is a roadside or wayside park for the use of vehicles traveling on US 301 and covers approximately 7.3 acres. The park is bounded by privately-owned parcels to the north, south, and east, and US 301 to the west. The Shady Brook stream bisects the park, separating the southern section from the rest of the park.

2.3.3 Natural Resources

2.3.3.1 Wetlands & Surface Waters

Wetland communities found within the US 301 corridor study area consist of cypress wetlands, stream and lake swamps, forested mixed wetlands, freshwater marshes, wet prairies, emergent herbaceous wetlands and ditches. The ecosystem structure of the wetland communities and the corresponding wetlands identified within the project corridor are described below. Additional detailed information on the wetland communities is available in the Natural Resources Evaluation Technical Memorandum available under separate cover.

Within the project corridor the wetland habitat is bordered by agricultural lands, large lot residential, commercial and industrial developments, and pastures. The indications of wildlife utilization include use by avian species including black vulture, pileated woodpecker, sandhill cranes, and small/medium-sized mammals including deer, pig, coyotes, raccoon, and opossum.

A detailed description and mapped locations of the identified wetlands and surface water ponds are included in Appendix D.

2.3.3.1.1 Aquatic Preserves/Outstanding Florida Waters

Shady Brook is a part of the Withlacoochee River System and is designated as an Outstanding Florida Waters (OFW). US 301 crosses Shady Brook with a 118.1-foot bridge within a permitted easement.

2.3.3.1.2 Wild and Scenic Rivers

The US 301 PD&E Study has no involvement with Florida's Wild and Scenic Rivers.

2.3.3.1.3 Drainage and Floodplains

The topography of the project area is relatively flat, however roadway elevations on US 301 range between 72 feet and 52 feet NAVD 88. The project area traverses five (5) water bodies: Little Jones Creek, Lake Panasoffkee Drain, Lake Panasoffkee Drain, Shady Brook, and Walled Sink Ditch. There are fourteen (14) existing cross drains and one (1) bridge within the project limits allowing for conveyance of offsite and onsite runoff to flow beneath US 301 toward Lake Panasoffkee and the Withlacoochee River. The size and geometry of all cross drains and bridges have been verified from the FDOT Straight Line Diagrams (SLDs), 1-foot LiDAR contours, existing plans, as well as during field reconnaissance. Table 2-14 presents a summary of existing cross drains and bridges.

Table 2-14 | Existing Cross Drains and Bridges

Structure No.	FDOT Milepost	Station	Description	Remarks
CD-01	14.601	-	Double 7' x 6' CBC	
CD-02	15.282	132+36	Single 24" RCP	
Bridge-1	15.621 - 15.643	150+18 – 151+12	116.2' Bridge	Shady Brook
CD-03	16.355	190+21	Single 24" RCP	
CD-04	16.577	201+95	Double 24" RCP	
CD-05	17.203	10026+41	Single 15" RCP	
CD-06	17.375	10035+49	Single 24" RCP	
CD-07	18.481	10092+84	Single 42" RCP	
CD-08	18.990	10118+73	Single 30" RCP	
CD-09	19.334	1100+06	Single 2' x 2' CBC	
CD-10	19.533	1110+74	Single 30" RCP	
CD-11	20.457	540+60	Single 36" RCP	
CD-12	20.907	564+49	Single 36" RCP	
CD-13	21.529	-	Double 8' x 5' CBC	
CD-14	21.971	-	Single 9' x 3' CBC	

According to the Federal Emergency Management Agency (FEMA) the relevant Flood Insurance Rate Map (FIRM) panel numbers are 12119C0143D, 1211C0139D, 12119C0137D, 12119C0141D, 12119C0133D, 12119C0131D for Sumter County, dated September 27, 2013. According to the FEMA FIRMs, much of the project is within Zone X of the 100-year floodplain, which is determined to be outside the 0.2% annual chance of flooding. However, portions of the project will impact small pockets of the 100-year floodplain which lie within Zone A. These areas are associated with small depression areas or wetlands and have a 1% probability of flooding every year, and where predicted flood water elevations have not been established. The 100-year flood zone west of US 301 at the bridge over Shady Brook is designated as Zone AE with a base flood elevation of 44.30 feet NAVD. There are no federally regulated floodways within the project limits. Please refer to Figure 2-23 for the FEMA Floodplains Map.

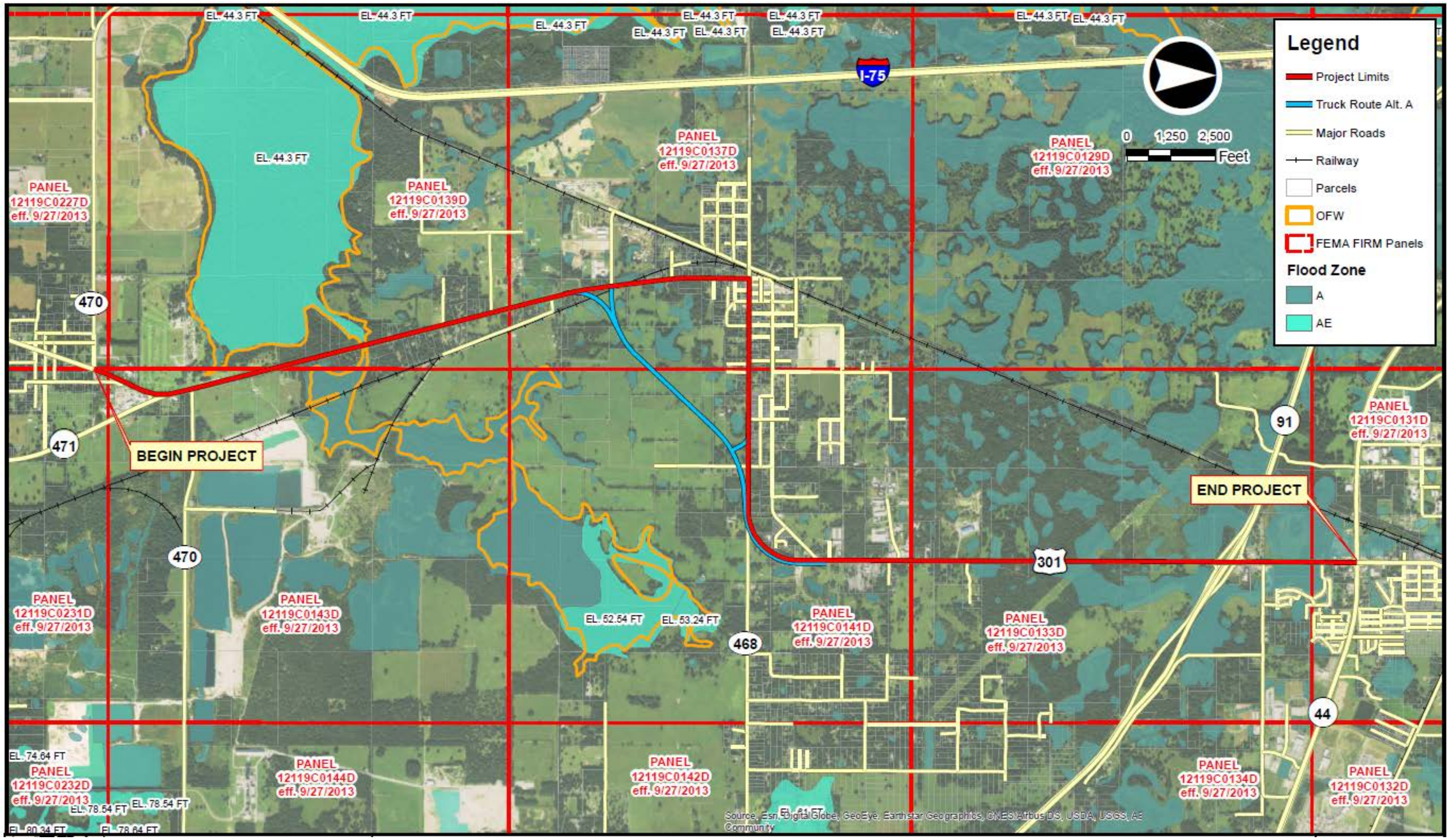
2.3.3.1.4 Coastal Zone Consistency/Coastal Barrier Resources

Sumter County is not subject to the Coastal Zone Management program.

2.3.3.2 Protected Species Habitat

The United States Fish and Wildlife Service (USFWS), through the Endangered Species Act (ESA) and other regulatory instruments, and the Florida Fish and Wildlife Conservation Commission (FWC) regulate activities that may affect protected species. Information regarding the occurrence, or likelihood of occurrence, for any threatened or endangered species was gathered for this project area to comply with agency regulations.

Figure 2-23 | FEMA Floodplains Map



The project area was evaluated during numerous site surveys in November and December 2016 for the PD&E study alternative analysis to address the occurrence or potential occurrence of wildlife and plant species listed as threatened, endangered, and species of special concern (listed species), according to methodology outlined by the USFWS, FWC, and/or Florida Natural Areas Inventory (FNAI). Wildlife species identification was accomplished mainly through visual observation, but tracks and aural indicators were also noted. The FNAI, USFWS, and FWC databases were consulted regarding current state and federally-listed wildlife species, species of special concern and eagle nests that are known or have the potential to occur within certain habitats found in the region.

2.3.3.2.1 Wildlife Species

A table of listed wildlife species and wetland dependent wildlife species known to occur in representative habitat types similar to that found within the US 301 Project and their potential for occurrence within the project limits is provided below.

Table 2-15 | Wildlife and their Potential for Occurrence

Wildlife Species	Potential for Occurrence	Federal or State Listing	Protection Status
Florida scrub-jay	No	Both	Threatened
Florida burrowing owl	Moderate	State	Threatened
Eastern indigo snake	Moderate	Both	Threatened
Little blue heron	Moderate	State	Threatened
Tricolor heron	Moderate	State	Threatened
American kestrel	High	State	Threatened
Gopher tortoise	High	State	Threatened
Florida sandhill crane	Moderate	State	Threatened
Bald eagle	Low	Federal	Managed*
Short tailed snake	Low	State	Threatened
Red cockaded woodpecker	Low	Both	Endangered
Wood stork	Low	Both	Threatened
Florida pine snake	Low	State	Special Concern
Snail kite	Low	Both	Endangered
Sherman's fox squirrel	Low	State	Special Concern
Florida black bear	Low	State	Managed**

Bald and Golden Eagle Protection Act, 16 U.S.C. 668-668c

*****Florida's Endangered and Threatened Specials Rule, 68A-27, F.A.C.***

2.3.3.2.2 Plant Species

Available data indicates that portions of the study area appear to be located within potential habitat for thirteen rare flora (plant) species (see Table 2-16), but habitats in the corridor consist of maintained upland areas used for maintenance access and wetland ditches and swales.

Table 2-16 | Listed Plants and their Potential for Occurrence

Plant Species	Potential for Occurrence	Federal or State Listing	Protection Status
Auricled spleenwort	Low	State	Endangered
Modest spleenwort	Low	State	Endangered
Sand butterfly pea	Low	State	Endangered
Longspurred mint	Low	Both	Endangered
Cooley's water-willow	Low	Both	Endangered
Florida spiny-pod	Low	State	Endangered
Plume polypody	Low	State	Endangered
Swamp plume polybody	Low	State	Endangered
Terrestrial peperomia	Low	State	Endangered
Giant orchid	Low	State	Endangered
Pinkroot	Low	State	Endangered
Florida filmy fern	Low	Both	Endangered
Craighead's nodding caps	Low	State	Endangered

2.3.3.3 Essential Fish Habitat

Impacts to Essential Fish Habitat are not anticipated in conjunction with this project. Coordination with the National Marine Fisheries Service (NMFS) during the ETDM screening phase indicated that listed species under the purview of the NMFS will not be impacted with this project and that no further consultation related to the Magnuson-Stevens Act is necessary.

2.3.3.4 Soils

A preliminary geotechnical investigation reviewed readily available published literature regarding anticipated geotechnical conditions within the study area. The information reviewed for this report included the Sumter County Soil Survey, published by the United States Department of Agriculture (USDA) – Natural Resources Conservation Services (NRCS).

The US 301 corridor, as shown in Figure 2-24 and Figure 2-25, primarily consists of sandy soils to depths of 80 inches below the natural ground surface with areas of organic soil, plastic soil and shallow rock. In general, these soils are suitable for supporting proposed roadway embankments after proper subgrade preparation and removal of unsuitable materials. Detailed descriptions of the soil types are included in the Geotechnical Soils Report, which was published under separate cover.

Figure 2-24 | US 301 Soils Map – Frame 1

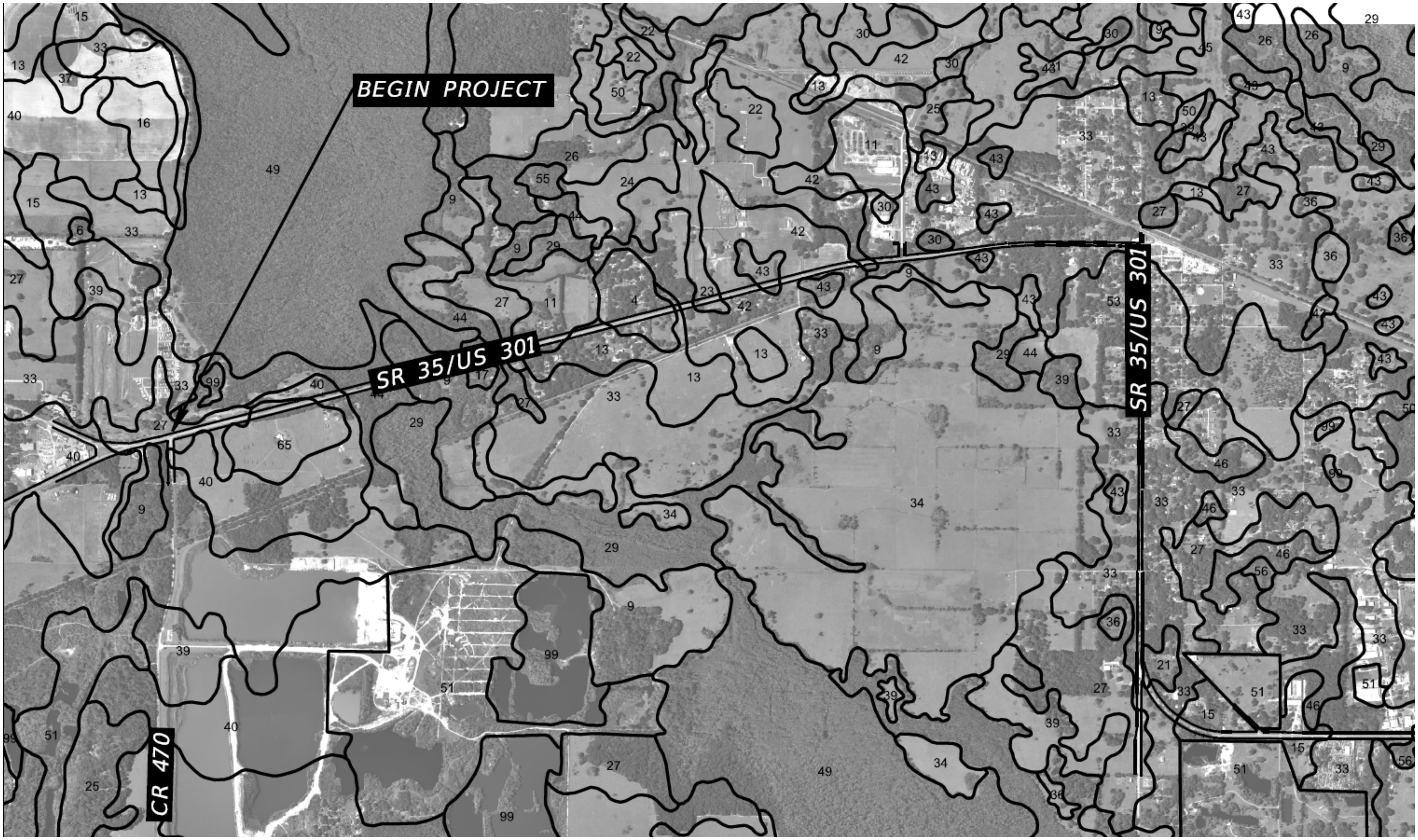
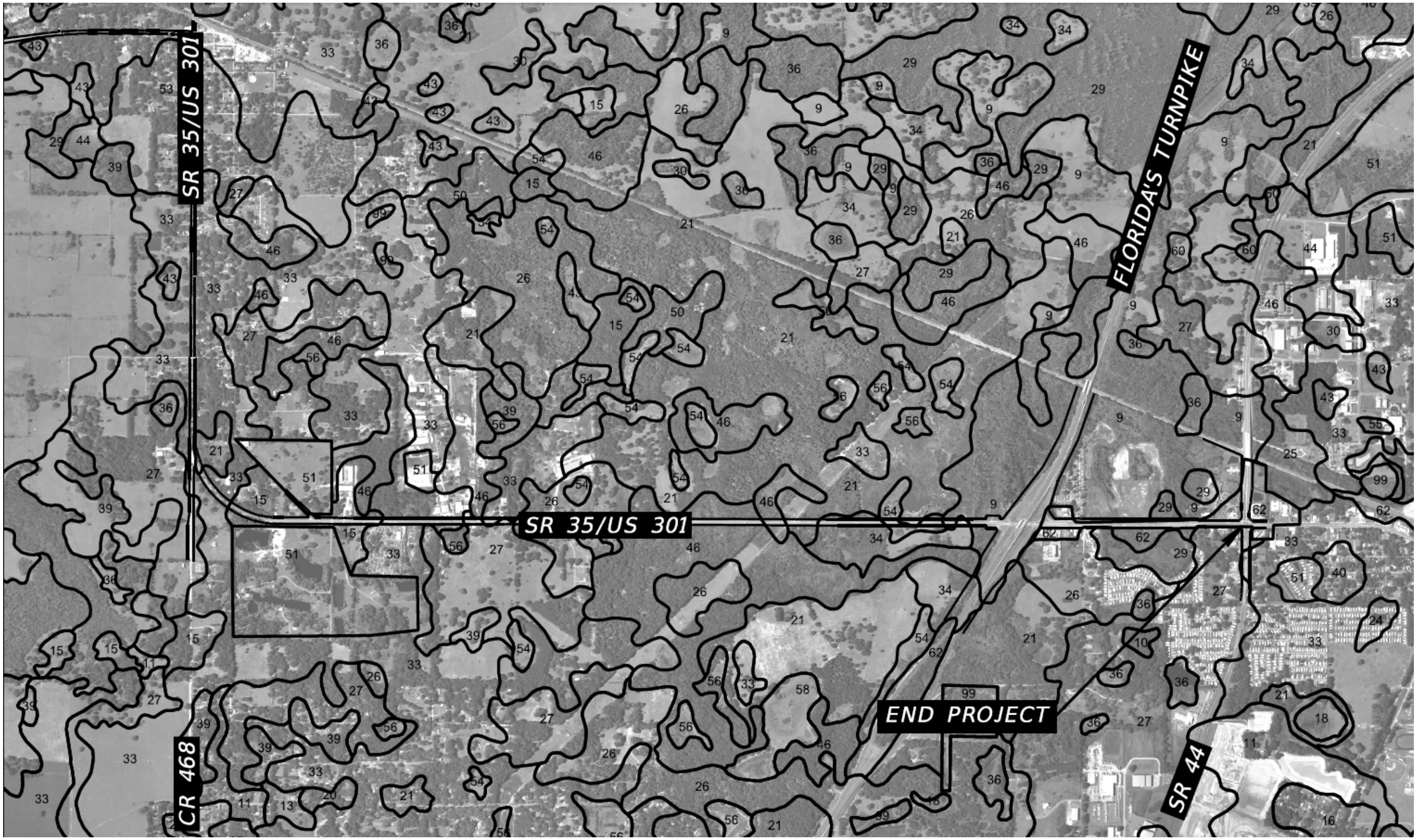


Figure 2-25 | US 301 Soils Map – Frame 2



2.3.4 Physical

2.3.4.1 Air Quality

Sumter County is currently designated as being in attainment for the following Clean Air Act National Ambient Air Quality Standards (NAAQS): ozone, nitrogen dioxide, particulate matter (2.5 microns in size and 10 microns is size), sulfur dioxide, carbon monoxide (CO), and lead.

2.3.4.2 Noise Sensitive Sites

The FHWA Traffic Noise Model (TNM) version 2.5 was used to predict traffic noise levels for this project following guidelines set forth in the *Traffic Noise Modeling and Analysis Practitioners Handbook* (FDOT, January 2016). This program estimates the traffic noise level from a series of roadway segments (the source) at a noise sensitive site (the receptor). The TNM program uses noise-influencing variables that include the volume and types of vehicles traveling the roadway, vehicular speed, roadway geometry, and the presence of existing barriers between the road and receptor, such as berms and building rows, to measure traffic noise.

The study area was divided into ten noise sensitive areas (NSA) for analysis. The number of noise sensitive sites identified within each NSA is shown in Table 2-17. The full summary of existing noise sensitive sites, including specific locations in relation to the study area, is included in the Noise Study Report under separate cover.

Table 2-17 | Comparison of Noise Sensitive Sites

Noise Sensitive Area	Number of Noise Sensitive Sites
NSA 1: Shady Brook Golf and RV Resort	5
NSA 2: E. of US 301 from CR 470 East to CR 525 East	20
NSA 3: W. of US 301 from CR 470 East to CR 525 East	10
NSA 4: E. of New Alignment/ S. of CR 468	3
NSA 5: W. of New Alignment/ S. of CR 468	1
NSA 6: W. of US 301 between CR 468 and CR 521	5
NSA 7: E. of US 301 between CR 468 and CR 521	1
NSA 8: E. of US 301 between CR 521 and Florida's Turnpike	14
NSA 9: E. of US 301 between Florida's Turnpike and SR 44	5
NSA 10: W. of US 301 between Florida's Turnpike and SR 44	14
Total Study Area	78

2.3.4.3 Contamination

The US 301 study area was assessed for potential contamination sites. Research materials included existing file and regulatory documents, local and state historical land use reviews, field reconnaissance, interviews with site/facility owners, nearby businesses and residents where possible. Forty-eight (48) locations were identified that may present the potential for finding petroleum contamination or hazardous materials. Specific details for each site are identified with their locations as presented in Table 2-18.

Table 2-18 | Potential Contamination Sites Summary

Site No.	Mainline Site Name & Address	Sumter County Parcel No.	Concern(s)	EDM Map ID No.	EDM Regulatory Listing	Facility ID	Risk Ranking
1	Sumter Electric Corporation (SECO) 225 & 330 S. US 301 Sumterville, FL 33585	J13-007	Petroleum Products Hazardous Waste Heavy Metals PCB's	2, 3	LUST, TANKS, NONTSD	FACID 8516868 9803079 EPAID FLD007975345	LOW
2	Shady Brook Golf & RV Resort 178 N. US 301 Sumterville, FL 33585	J13-012	Herbicides Pesticides	N/A	N/A	N/A	MEDIUM
3	Sumterville Cemetery 147 SR 471 Sumterville, FL 33585	J13-066	Formaldehyde Arsenic	N/A	N/A	N/A	MEDIUM
4	Dawson's Auto Former Service Station 89 SR 471 Sumterville, FL 33585	J13-005	Petroleum Products Hazardous Waste	N/A	N/A	UKN	MEDIUM
5	Truck Spill 1237 N. US 301 Sumterville, FL 33585	J01-030	Petroleum Products	4	TANKS	FACID 9800507	LOW
6	Row-crops, Diversified Land Marketing Group 1988 N. US 301 Sumterville, FL 33585	J01-031 F36-048	Herbicides Pesticides	N/A	N/A	N/A	HIGH
7	Webber Warehouse TDST, LLC 1935 CR 525 E. Sumterville, FL 33585	F35-042	Petroleum Products Hazardous Waste	N/A	N/A	EPAID	LOW

Table 2-18 | Potential Contamination Sites Summary

Site No.	Mainline Site Name & Address	Sumter County Parcel No.	Concern(s)	EDM Map ID No.	EDM Regulatory Listing	Facility ID	Risk Ranking
8	Historical Railroad Crossing/Corridor US 301 & CR 525 Sumterville, FL 33585	F35RR001	Herbicides Pesticides Arsenic Creosote	N/A	N/A	N/A	HIGH
9	Morris Auto Sales 2444 N. US 301 Sumterville, FL 33585	F36-057	Petroleum Products	N/A	N/A	UKN	MEDIUM
10	Wells of Salvation Church 152 S. Commercial Street (US 301) Coleman, FL 33521	F35D005	UKN	N/A	N/A	N/A	NONE
11	Former Service Station, Kathryn Childers 105 S. Commercial Street (US 301) Coleman, FL 33521	F36A003	Petroleum Products	5	LUST, TANKS	FACID 8942604	MEDIUM
12	Antique Store 100 & 102 S. Commercial Street (US 301) Coleman, FL 33521	F35C001	UKN	N/A	N/A	N/A	NONE
13	D&C Mart & BBQ, Convenience Store 100 & 101 N. Commercial Street Coleman, FL 33521	F26-014	Petroleum Products	N/A	N/A	UKN	NONE
14	Shell-Coleman 101 E. Warm Spring Ave (US 301) Coleman, FL 33521	F25B001	Petroleum Products Hazardous Waste	6	STCERC, LUST, TANKS, NONTSD	FACID 8516879 EPAID FLR000202747	HIGH
15	Former Auto Sales aka "Bobby's Trucks" Robert E. Caruthers Property 302 E. Warm Spring Ave (US 301) Coleman, FL 33521	F36A016 F36A026 F36-025	Petroleum Products	N/A	N/A	UKN	LOW

Table 2-18 | Potential Contamination Sites Summary

Site No.	Mainline Site Name & Address	Sumter County Parcel No.	Concern(s)	EDM Map ID No.	EDM Regulatory Listing	Facility ID	Risk Ranking
16	McDaniel Auto Sales & U-Haul aka "McDaddy Motors" 503 Mulberry Street Coleman, FL 33521	F25B010	Petroleum Products	N/A	N/A	UKN	LOW
17	Dollar General E. Warm Spring Ave (US 301) & S. Church Street Coleman, FL 33521	F36A033	Hazardous Waste	N/A	N/A	N/A	NONE
18	Methodist Church 1902 E. Warm Spring Ave (US 301) Coleman, FL 33521	F36-023	UKN	N/A	N/A	N/A	NONE
19	Coleman City Hall 3502 E. Warm Spring Ave (US 301) Coleman, FL 33521	F36-018	UKN	N/A	N/A	N/A	NONE
20	Messner's Salvage 3802 E. Warm Spring Ave (US 301) Coleman, FL 33521	F36-016	Petroleum Products Hazardous Waste	N/A	N/A	UKN	MEDIUM
21	Former Plant Nursery 7102 E. Warm Spring Ave (US 301) Coleman, FL 33521	F36-080	Herbicides Pesticides	N/A	N/A	UKN	MEDIUM
22	Tolson Llamas 2962 & 2969 CR 523 Coleman, FL 33521	G31-025	UKN	N/A	N/A	N/A	LOW
23	Trinity Baptist Church 3305 E. CR 468 Wildwood, FL 34785	G31-004	UKN	N/A	N/A	N/A	NONE
24	Anderson Property 3086 & 3118 N. US 301 Wildwood, FL 34785	G30-031 G30-054	Petroleum Products	N/A	N/A	UKN	LOW

Table 2-18 | Potential Contamination Sites Summary

Site No.	Mainline Site Name & Address	Sumter County Parcel No.	Concern(s)	EDM Map ID No.	EDM Regulatory Listing	Facility ID	Risk Ranking
25	Graham Trucking Lines, Inc. 3145 & 3251 N. US 301 Wildwood, FL 34785	G30-057 G30-090	Petroleum Products	N/A	N/A	UKN	MEDIUM
26	Davis Garage 3260 N. US 301 Wildwood, FL 34785	G30-022	Petroleum Products Hazardous Waste	8	TANKS	FACID 8734493	MEDIUM
27	Revis Towing 3475 CR 521 Wildwood, FL 34785	G30-021	Petroleum Products	N/A	N/A	UKN	LOW
28	Nash Fabrication & Plumbing George J. Nash, Inc. 3488 & 3494 N. US 301 Wildwood, FL 34785	G30-082 G30-083	Hazardous Waste	9	TANKS	FACID 9046135	LOW
29	Undercover Motorsports 3384 NE 34th Avenue Wildwood, FL 34785	G30-014	Petroleum Products Hazardous Waste	N/A	N/A	UKN	LOW
30	BS Auto Salvage 3561 & 3637 N. US 301 Wildwood, FL 34785	G30-005 G30-078	Petroleum Products Hazardous Waste	10	SLDWST NONTSD	SWF 00098898 EPAID FLR000061929	MEDIUM
31	Wildwood Auto Mart 3409 NE 37th Place Wildwood, FL 34785	G30D001	N/A	N/A	N/A	N/A	NONE
32	NDI Office Furniture 3403 NE 37th Place Wildwood, FL 34785	G30D001	N/A	N/A	N/A	N/A	NONE
33	VFP Composites Contractor & Safety Supplies 3402 NE 37th Place Wildwood, FL 34785	G30D001	Hazardous Waste	11	NONTSD	EPAID FLR00035931	LOW

Table 2-18 | Potential Contamination Sites Summary

Site No.	Mainline Site Name & Address	Sumter County Parcel No.	Concern(s)	EDM Map ID No.	EDM Regulatory Listing	Facility ID	Risk Ranking
34	T&D Distribution 3400 NE 37th Place Wildwood, FL 34785	G30D001	N/A	N/A	N/A	N/A	NONE
35	Down to Earth Landscaping 3970 N. US 301 Wildwood, FL 34785	G30-080 G30-110	Herbicides Pesticides	N/A	N/A	UKN	LOW
36	Wildwood Off Road Park 4222 N. US 301 Wildwood, FL 34785	G19-011	Petroleum Products	N/A	N/A	N/A	NONE
37	Jennings Parkway Exxon, King-Orange Petroleum-Marathon 1230 & 1232 S. Main Street (US 301) Wildwood, FL 34785	G18-028	Petroleum Products Hazardous Waste	12	STCERC, LUST, TANKS, NONTSD	FACID 8516842 EPAID FLD984176578 FLD984185538 FLMTP9002563	HIGH
38	Sleep Inn & Woody's BBQ 1220 & 1224 S. Main Street (US 301) Wildwood, FL 34785	G18-036	Petroleum Products	13	LUST, TANKS	FACID 9808844	MEDIUM
39	Sunshine Food Mart, Exxon-Mobil 1221 & 1223 S. Main Street (US 301) Wildwood, FL 34785	G18-031	Petroleum Products Hazardous Waste	14	LUST, TANKS	FACID 8731713	MEDIUM
40	Cherokee Trading Post, EFuel EFN Corp. 1212 S. Main Street (US 301) Wildwood, FL 34785	G18-029	Petroleum Products Hazardous Waste	15	SRCERC	FACID 8516887	HIGH

Table 2-18 | Potential Contamination Sites Summary

Site No.	Mainline Site Name & Address	Sumter County Parcel No.	Concern(s)	EDM Map ID No.	EDM Regulatory Listing	Facility ID	Risk Ranking
41	Former Raceway #946/RaceTrac #211, OWC LTD 1200 S. Main Street (US 301) Wildwood, FL 34785	G18-034	Petroleum Products Hazardous Waste	16	STCERC, LUST, TANKS	FACID 8516849	HIGH
42	Wildwood Auto Repair & Wrecker 300 Clay Drain Road Wildwood, FL 34785	G18-027	Petroleum Products Hazardous Waste	17	SLDWST, NONTSD	SWF 00096360 EPAID FLR000096362	MEDIUM
43	Lift Station 1101 S. Main Street (US 301) Wildwood, FL 34785	N/A	Sewage	N/A	N/A	N/A	LOW
44	Zimmer Building, Strickland Store, Pat's Treasures SR 44 & US 301 1010 S. Main Street (US 301) Wildwood, FL 34785	G07-078	Petroleum Products	20	TANKS	FACID 8944605	HIGH
45	Advance Auto Parts 100 E. Gulf-Atlantic Highway Wildwood, FL 34785	G07-109	Petroleum Products	N/A	N/A	N/A	NONE
46	Shell-Circle K, Lil Champ Food Store 1001 S. Main Street (US 301) Wildwood, FL 34785	G07-268	Petroleum Products	18	TANKS	FACID 9800899	MEDIUM
47	Former BP-Macs, CVS Pharmacy 901 S. Main Street (US 301) Wildwood, FL 34785	G07-058	Petroleum Products Hazardous Waste	21	STCERC, LUST, TANKS, NONTSD	FACID 8516836 EPAID FLR000187062	HIGH
48	Sonoco # 2609 900 S. Main Street (US 301) Wildwood, FL 34785	G07-080	Petroleum Products Hazardous Waste	22	STCERC, LUST, TANKS, NONTSD	FACID 8837864 EPAID FLR000016303	HIGH

CHAPTER 3

Design Controls

3.0 Design Controls

3.1 Roadway Design Criteria

The US 301 PD&E Study incorporates project elements with various design requirements. Table 3-1, below, summarizes the roadway design criteria for each design element. All FDM citations are from the January 1, 2018 edition.

Table 3-1 | Roadway Design Criteria

Design Element	C4 Four-Lane Urban (DS = 45 mph)	C3 Four-Lane Suburban (Flush Shoulder) (DS = 50 mph)	C3 Four-Lane Suburban (Flush Shoulder) (DS = 55 mph)	C2 Four-Lane Rural (DS = 55 mph)	Source
Functional Classification		Rural Other Principal Arterial			FDOT Straight Line Diagram
Design Vehicle	WB-62FL	WB-62FL	WB-62FL	WB-62FL	FDM Part 2, Section 201.5
Design Year	2042	2042	2042	2042	FDOT Scope of Services
Design Speed	45 mph	50 mph	55 mph	55 mph	FDM Part 2, Section 201.4
Minimum Clear Zone Width (Recoverable Terrain)	24 ft	24 ft	30 ft	30 ft	FDM Part 2, Section 215.2.3
Minimum Border Width	12 ft (from lip of gutter)	29 ft (from outside edge of traveled way)	35 ft (from outside edge of traveled way)	40 ft (from shoulder point)	FDM Part 2, Section 210.7
Length of Horizontal Curve					
Desired length based on design speed only	675 ft	750 ft	825 ft	825 ft	FDM Part 2, Table 210.8.1
Desired Length based on deflection angle	3°	2°	1°	1°	
Minimum	400 ft	400 ft	400 ft	400 ft	
Maximum Deflection without Horizontal Curves	1° 00' 00"	0° 45' 00"	0° 45' 00"	0° 45' 00"	FDM Part 2, Section 210.8.1
Maximum Degree of Horizontal Curvature (D)	8° 15'	2° 33' 11"	2° 05'	6° 30'	FDM Part 2, Table 210.9.1, Table 210.9.2
Minimum Curve Radius					
Normal Crown	2,083 ft	8,337 ft	9,949 ft	9,949 ft	FDM Part 2, Table 210.9.1, Table 210.9.2
Reverse Crown	955 ft	6,171 ft	7,372 ft	7,372 ft	
@ Maximum Superelevation	694 ft	2,244 ft	2,750 ft	881 ft	
Maximum Superelevation	0.05	0.05 (based on emax10)	0.05 (based on emax10)	0.10	FDM Part 2, Section 210.9
Superelevation Transition Slope Rate	1:200	1:200	1:225	1:225	FDM Part 2, Section 210.9.1

Table 3-1 | Roadway Design Criteria

Design Element	C4 Four-Lane Urban	C3 Four-Lane Suburban (Flush Shoulder)		C2 Four-Lane Rural	Source
	(DS = 45 mph)	(DS = 50 mph)	(DS = 55 mph)	(DS = 55 mph)	
Maximum Profile Grade	6%	6%	5%	4%	FDM Part 2, Section 210.10.1
Maximum Change in Grade without Vertical Curve	0.70%	0.60%	0.50%	0.50%	FDM Part 2, Table 210.10.2
Crest Vertical Curves					
K =	98	136	185	185	FDM Part 2, Table 210.10.3 and Table 2.10.10.4
Minimum Length	135 ft	300 ft	350 ft	350 ft	
Sag Vertical Curves					
K =	79	96	115	115	FDOT FDM Part 2, Table 210.10.3 And Table 210.10.4
Minimum Length	135 ft	200 ft	250 ft	250 ft	
Minimum Lane Width					
Minimum Median Width	22 ft	30 ft	30 ft	40 ft	FDM Part 2, Table 210.3.1
Travel Lane	11 ft	12 ft*	12 ft*	12 ft*	FDM Part 2, Table 210.2.1 **11 ft within 1 mile of an urban area and adjacent to buffered bike lanes*
Auxiliary	11 ft	12 ft	12 ft	12 ft	FDM Part 2, Table 210.2.1
Bicycle Facility	7 ft (buffered bike lane)	7 ft (paved shoulder)*	7 ft (paved shoulder)*	7 ft (paved shoulder)*	FDM Part 2, Section 210.4.1. **7 ft within 1 mile of an urban area and when bicyclist pavement markings are on shoulder*
Shoulder Width					
Inside Full Width	N/A	4 ft	4 ft	8 ft	FDM Part 2, Table 210.4.1 FDM Part 2, Section 210.5.1
Inside Paved	N/A	4 ft	4 ft	0 ft	
Outside Full Width	N/A	10 ft	10 ft	10 ft	FDM Part 2, Table 210.4.1 **7 ft if designated bike lane*
Outside Paved	N/A	5 ft*	5 ft*	5 ft*	
Bridge Shoulder Width					
Inside	2.5 ft	6 ft	6 ft	6 ft	FDM Part 2, Section 260.3
Outside	8 ft (long bridge)	10 ft	10 ft	10 ft	
Standard Pavement Cross Slopes	2.0%	2.0%	2.0%	2.0%	FDM Part 2, Section 260.4
Shoulder Cross Slope					
Outside/Right Shoulder	N/A	6.0%	6.0%	6.0%	FDM Part 2, Section 210.4.1
Median/Left Shoulder	N/A	2.0% (up)	2.0% (up)	5.0%	FDM Part 2, Section 210.4.1
Minimum Stopping Sight Distance					
Standard (grades < 2%)	360 ft	425 ft	495 ft	495 ft	FDM Part 2, Table 210.11.1
Minimum Decision Sight Distance	930 ft	890 ft	980 ft	865 ft	AASHTO Greenbook, (2011) Table 3-3 p. 3-7

Table 3-1 | Roadway Design Criteria

Design Element	C4 Four-Lane Urban	C3 Four-Lane Suburban (Flush Shoulder)		C2 Four-Lane Rural	Source
	(DS = 45 mph)	(DS = 50 mph)	(DS = 55 mph)	(DS = 55 mph)	
Minimum Vertical Clearance					
Overhead Sign Structures	17' 6"	17' 6"	17' 6"	17' 6"	FDM Part 2, Section 210.10.3
Signals	17' 6"	17' 6"	17' 6"	17' 6"	FDM Part 2, Section 210.10.3
Bridge (Road over Road)	16’ 6”	16’ 6”	16’ 6”	16’ 6”	FDM Part 2, Table 260.6.1

3.2 Drainage Design Criteria

The design of the stormwater management facilities for the project is governed by the rules set forth by the Southwest Florida Water Management District (SWFWMD) and FDOT. Water treatment and attenuation requirements will comply with the guidelines as defined in Chapter 40D-4 of the Florida Administrative Code (F.A.C) and the SWFWMD Environmental Resource Permit (ERP) manual.

Wet detention and dry retention ponds will provide for water quality improvements as well as water quantity attenuation for the project runoff. The stormwater ponds are designed and sized for the most conservative typical section for each segment. Please refer to the summary below for the water quality, water quantity, and detention pond facilities configuration criterion used for the project:

- **Water Quality** – An on-line treatment system will be utilized for this project. Treatment for the on-line treatment system is defined in the SWFWMD Environmental Resource Permit Applicant’s Handbook VOL. II (section 4.1.c). Treatment will be provided for the first one inch (1”) of rainfall over the Directly Connected Impervious Areas (DCIA) or 0.5” over DCIA with drainage areas less than 100 acres in size. Total treatment volume shall again be available within 72 hours, however, only that volume which can be available within 36 hours may be counted as part of the volume required for water quantity storage. An outfall control structure shall be designed to drawdown a maximum of one-half inch (0.5”) of the detention volume in 24 hours. The project traverses five (5) water bodies:
    - Little Jones Creek
    - Lake Panasoffkee Drain
    - Lake Panasoffkee Drain
    - Shady Brook
    - Walled Sink Drain

  None of which water bodies are impaired according to the current FDEP 303(d) list of impaired water bodies. Therefore, a pre versus post pollutant loading analysis is not required. In addition, Shady Brook is considered an Outstanding Florida Water (OFW), so direct discharges to this water body will require an additional 50% water quality treatment.

- **Water Quantity** – For a project or portion of a project located within an open drainage basin, the allowable discharge is:
  - Historic discharge, which is the peak rate at which runoff leaves the parcel of land by gravity under existing site conditions, or the legally allowable discharge at the time of permit application; or
  - Amounts determined in previous District permit actions relevant to the project.

  Offsite discharges and peak stages for the existing and proposed conditions shall be computed using the SWFWMD's 25-year/24-hour rainfall maps and the Natural Resources Conservation Service (NRCS) Type II Florida Modified 24-hour rainfall distribution with and antecedent moisture condition II.

- **Detention Pond Facilities Configuration** – The proposed ponds shall have a minimum area of 0.5 acre and 100 feet minimum width for linear areas in excess of 200 feet length (measured at the control elevation). Ponds will include a 20-foot minimum maintenance berm width, minimum 1:4 (Vertical:Horizontal) for pond side slopes and tie up/down slope to existing ground, and a minimum 1-foot freeboard from the inside maintenance berm to the Design High Water (DHW) stage.

CHAPTER 4

Alternatives Analysis

4.0 Alternatives Analysis

The US 301 PD&E Study identified improvements to an approximate 8 mile section of US 301 and a potential realignment that would reroute traffic around the City of Coleman. In addition to the No-Build Alternative and Transportation System Management and Operation (TSM&O) alternatives, the project team analyzed two build alternatives. Alternative 1 (Widening through Coleman) includes widening along the existing US 301 corridor and Alternative 2 (Widening with Coleman Realignment) includes widening along the corridor at the north and south ends with a realignment corridor south of the City of Coleman. A separate analysis of options to reconfigure the US 301 and Florida's Turnpike Interchange is also included.

4.1 No-Build Alternative

The No-Build Alternative would result in no changes being made to the existing US 301 study corridor. Though the No-Build Alternative does not solve any of the project deficiencies, it does provide baseline, or benchmark, information by which other project alternatives can be compared throughout the project alternative selection process.

Under the No-Build Alternative, US 301 remains as a two-lane facility, with projections to carry more than 14,000 vehicles per day by 2022 and increase to more than 24,000 per day by 2042. Based on existing 2014 conditions analysis, US 301 carried up to 9,600 vehicles per day south of the Turnpike operating with a Level of Service (LOS) of D.

The primary advantage of the No-Build Alternative is that the existing horizontal and vertical geometry would be retained. It does not require any capital, or expenditure of state/federal transportation trust funds (aside from maintenance), and it does not produce direct environmental impacts. Also, no purchase of additional land or mitigation would be needed under the No-Build Alternative.

The disadvantages of the No-Build Alternative are numerous when compared to the Build Alternatives.

- The increased projected traffic is expected to result in increased traffic congestion.
- Safety issue concerns with potential increases in motor vehicle crashes, property damage and injuries/fatalities resulting from increased traffic congestion.
- Emergency vehicle response times and hurricane evacuation clearance times would degrade.
- Increased user costs due to traffic congestion.

The No-Build Alternative will be carried forward through the Public Hearing, but could be eliminated due to not fulfilling the study's purpose and need.

4.2 Development of Build Alternatives

The Study utilized a tiered approach to develop the build alternatives for the project, first considering the mainline corridor widening, then the realignment options and third potential typical sections. The Study also considered and analyzed the Shady Brook Bridge, drainage, access management, and intersection options. The steps taken and specific analysis areas in this process are summarized below.

4.2.1 Roadway Widening Analysis

The development of the alternative widening alignments was conducted with analyses performed per the study segments identified previously:

- Segment 1 – South of CR 470 E to Shady Brook Drive - MP 14.53 to MP 14.83
- Segment 2 – Shady Brook Drive to CR 525 E - MP 14.83 to MP 16.991
- Segment 3 – CR 525 E to Stokes Street including Warm Springs Avenue - MP 16.991 to MP 18.706
- Segment 4 – Stokes Street to Florida's Turnpike - MP 18.706 to MP 21.663
- Segment 5 – North of Florida's Turnpike to SR 44 - MP 21.663 to MP 22
- Segment 6 –US 301 Realignment (truck route) – new roadway construction with 150 feet right-of-way, south of the City of Coleman, to be compared to the widening alternative through Coleman (generally Segment 3)

4.2.1.1 Initial Right and Left Widening Alternatives

With the consideration of the existing right-of-way, the development of initial alignment alternatives for comparative purposes was initiated using a 200 foot right-of-way width for Segments 1, 2 and 4. The right-of-way width for Segment 3 was initially assessed at 150 feet. Segment 5 will mostly utilize the existing right-of-way and divided typical section with any proposed improvements and right-of-way needs in this segment being more minor in nature to accommodate turn lanes and facilities for pedestrians and bicyclists. These needs will be detailed in the further development of the preferred alternative.

With a very wide range of right-of-way widths for initial comparative purposes, a right-of-way width of 200 feet was developed for Segments 1, 2, and 4 to identify potential impacts holding the west/north right-of-way line for a Left Alternative Alignment and holding the east/south right-of-way line for a Right Alternative Alignment. Within the City of Coleman, Segment 3, the right-of-way width analyzed was reduced to 150 feet, as this section of the corridor would only be evaluated for an urban typical section. Right-of-Way exhibits depicting the Left and Right Impact limits were completed and displayed for public comment at the first Alternatives Public Meeting. Plan sheets showing this depiction are included in Appendix E.

The preliminary, or initial, analysis of the Right and Left Alternatives considered a number of comparative factors including:

- Social and Economic considerations including relocation potential, community services, community cohesion and agricultural land use,
- Cultural including historic and archaeological sites, recreation areas and potential Section 4(f) impacts,
- Natural environment including wetlands, floodplains, wildlife and water quality impacts,
- Physical environment including air quality, construction, contamination, aesthetics, bicycle paths, and utilities, and
- Right-of-Way Acquisition, the number of impacted parcels, potential acreage impacts for the roadway and drainage considerations.

The evaluation considerations identified above are presented in Table 4-1. With the need for acquisition of right-of-way for any potential widening alternative, widening to both sides of the alignment with a centerline alternative was deemed not feasible with the significant increase of parcels that would be affected under this scenario.

4.2.1.2 Best Fit Widening Alternative

From the analysis of the Right and Left Widening Alternatives, a third alternative alignment was developed as a Best Fit Alternative. This alternative took the assessment of the Right and Left Alternative Alignments for each Segment of the corridor and identified the Best Fit Alternative that minimized the social, physical and natural environmental impacts. Based on the analysis presented in Table 4-1, the Best Fit Alternative is identified as the following by alignment Segment:

- Segment 1 – Right Alternative Alignment
- Segment 2 – Right Alternative Alignment until Shady Brook Park, then transition to Left Alternative Alignment for the remainder of the segment
- Segment 3 – Right Alternative Alignment, and
- Segment 4 – Right Alternative Alignment.

Segment 5 is currently a four-lane roadway, so impacts are only anticipated near the intersection of US 301 and SR 44 in order to accommodate additional/lengthened turn lanes.

Table 4-1 | Preliminary Widening Assessment Matrix

Evaluation Criteria	Segment 1		Segment 2		Segment 3		Segment 4		Segment 5	
	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right
Social & Economic										
Land Use Changes	High	High	Medium	Medium	High	High	Medium	Medium	Low	Low
Community Cohesion	Medium	Medium	Medium	Low	High	High	Medium	Medium	Low	Low
Relocation Potential: Structural Impacts	0	1	4	6	34	18	10	5	-	-
Community Services	0	0	1	1	1	2	0	1	0	0
Nondiscrimination Considerations	Low	Low	Low	Low	Medium	Medium	Low	Low	Low	Low
Controversy Potential	Low	Low	Low	Low	High	High	Low	Low	Low	Low
Involvement with Agricultural Land Use	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
Cultural										
Section 4(f)	0	0	0	1	0	0	0	0	0	0
Historic Sites/Districts	0	0	0	0	16	11	0	0	0	0
Archaeological Sites	1	1	0	0	0	0	0	0	0	0
Recreation Areas	No	No	No	Yes	No	No	No	No	No	No
Natural										
Wetlands Impacts (Acres)	0	0	0.5	0.4	0.1	0.1	2.3	3.8	-	-
Aquatic Preserves	0	0	0	0	0	0	0	0	0	0
Water Quality	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Floodplains Impacts (Acres)	0	0	0.4	0.6	0	0.3	8.8	8.7	-	-

Table 4-1 | Preliminary Widening Assessment Matrix

Evaluation Criteria	Segment 1		Segment 2		Segment 3		Segment 4		Segment 5	
	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right
Wildlife and Habitat	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Essential Fish Habitat	0	0	0	0	0	0	0	0	0	0
Physical										
Air Quality	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Construction	Low	Low	Low	Low	Medium	Medium	Low	Low	Low	Low
Contamination (Potential Sites)	1	1	1	1	6	10	7	6	5	10
Aesthetic Impacts	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Bike and Pedestrian Accommodation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Utilities and Railroads Involvement	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Right-of-Way Acquisitions										
Roadway Right-of-Way Required (Acres)*	3.4	3.2	26.6	26.7	13.8	13.9	33.7	34.1	-	-
Pond Right-of-Way Required (Acres)	1.7	1.7	10.6	10.6	8.4	8.4	13.6	13.6	-	-

Notes:
** Assumes 200' Right-of-Way in Segments 1, 2, and 4; 150' in Segment 3*

4.2.2 US 301 Realignment (Truck Route) Concept Analysis

4.2.2.1 Identification of US 301 Realignment Corridor

US 301 serves as the "main street" of the City of Coleman with the local street name of Warm Springs Avenue. The City of Coleman's comprehensive plan and community redevelopment plan both call for the widening of US 301 to go around the community and to preserve the two-lane configuration of Warm Springs Avenue through Coleman with enhancements related to pedestrian, bicyclists, aesthetics and maintaining business access. The City of Coleman's Future Land Use Map and the City's Redevelopment Area Plan are provided in Chapter 2.0 of this report.

Multiple evaluations for the placement of the US 301 realignment were analyzed, with the full analysis being located in Appendix F, beginning with the consideration of whether the realignment area would be north or south of Warm Springs Avenue around the City of Coleman. An analysis was conducted using geographic information system (GIS) mapping. This analysis identified the potential sociocultural impacts to the City of Coleman resulting from the development of a new corridor. Two potential corridors around the City of Coleman were assessed; one corridor north of Warm Springs Avenue and a second corridor south of Warm Springs Avenue. A northern corridor, generally beginning at the intersection of CR 514 with US 301, would traverse north of Warm Springs Avenue on a new alignment to CR 519A and then follow CR 519A east to reconnect with US 301 north of CR 468. A southern corridor was identified generally from the intersection at CR 525E to the northeast, on new alignment, to the US 301/CR 468 intersection The analysis suggested that a new roadway north of Warm Springs Avenue would result in a level of impact similar to widening along Warm Springs Avenue. Compared to a new roadway in the area south of Warm Springs Avenue, the realignment north of Warm Springs Avenue would potentially affect more than six times as many parcels. Additionally, a new roadway north of Warm Springs Avenue had the potential to impact a substantial number of single family homes, similar to residential areas along Warm Springs Avenue.

Based on this analysis, it was recommended that the potential realignment corridor would be south of Warm Springs Avenue. The purpose of the realignment will be to identify an alternative that will minimize potential impacts compared to the widening along Warm Springs Avenue (Segment 3). Additional information regarding this decision is documented in the US 301 Realignment Alternative Memorandum, available under separate cover.

4.2.2.2 Realignment Corridors

The development of the US 301 realignment corridors included a significant level of public participation, as summarized in Section 5.0. At each major decision point in identifying a preferred alignment corridor, input from public coordination was provided. Public participation assisted the Project Team in developing six (6) initial realignment (truck route) corridors. The corridors all considered a right-of-way width of 250 feet in order to allow flexibility for the specific alignment within the corridor. Of the six (6) developed corridors, three (3) were recommended for further evaluation and presented to the public for further comment and concurrence. The corridors recommended for further study are presented in Figure 4-1. The remaining three (3) were recommended for elimination, and are shown in Figure 4-2.

Figure 4-1 | Realignment Corridors for Further Consideration

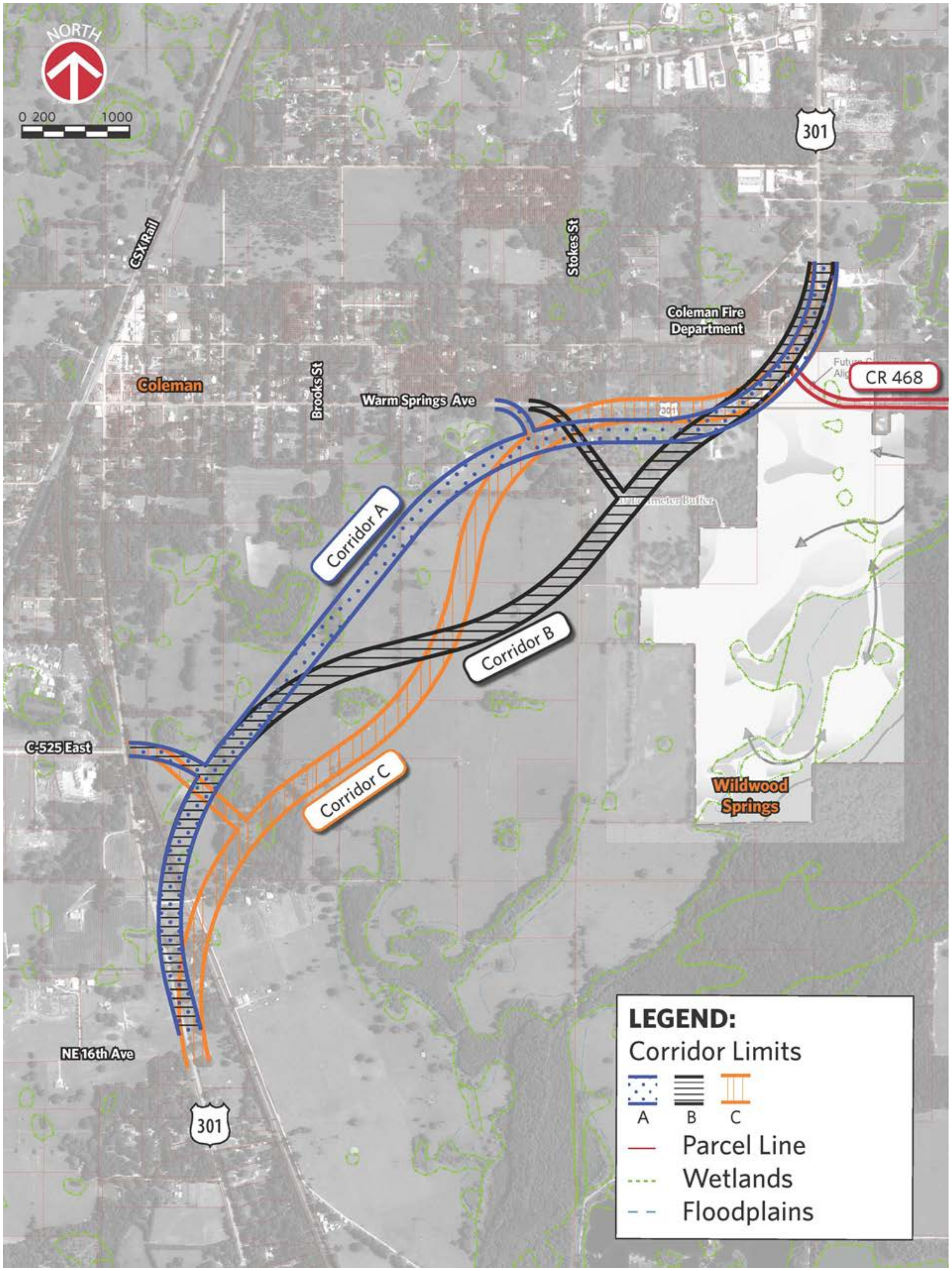


Figure 4-2 | Realignment Corridors Eliminated from Further Study

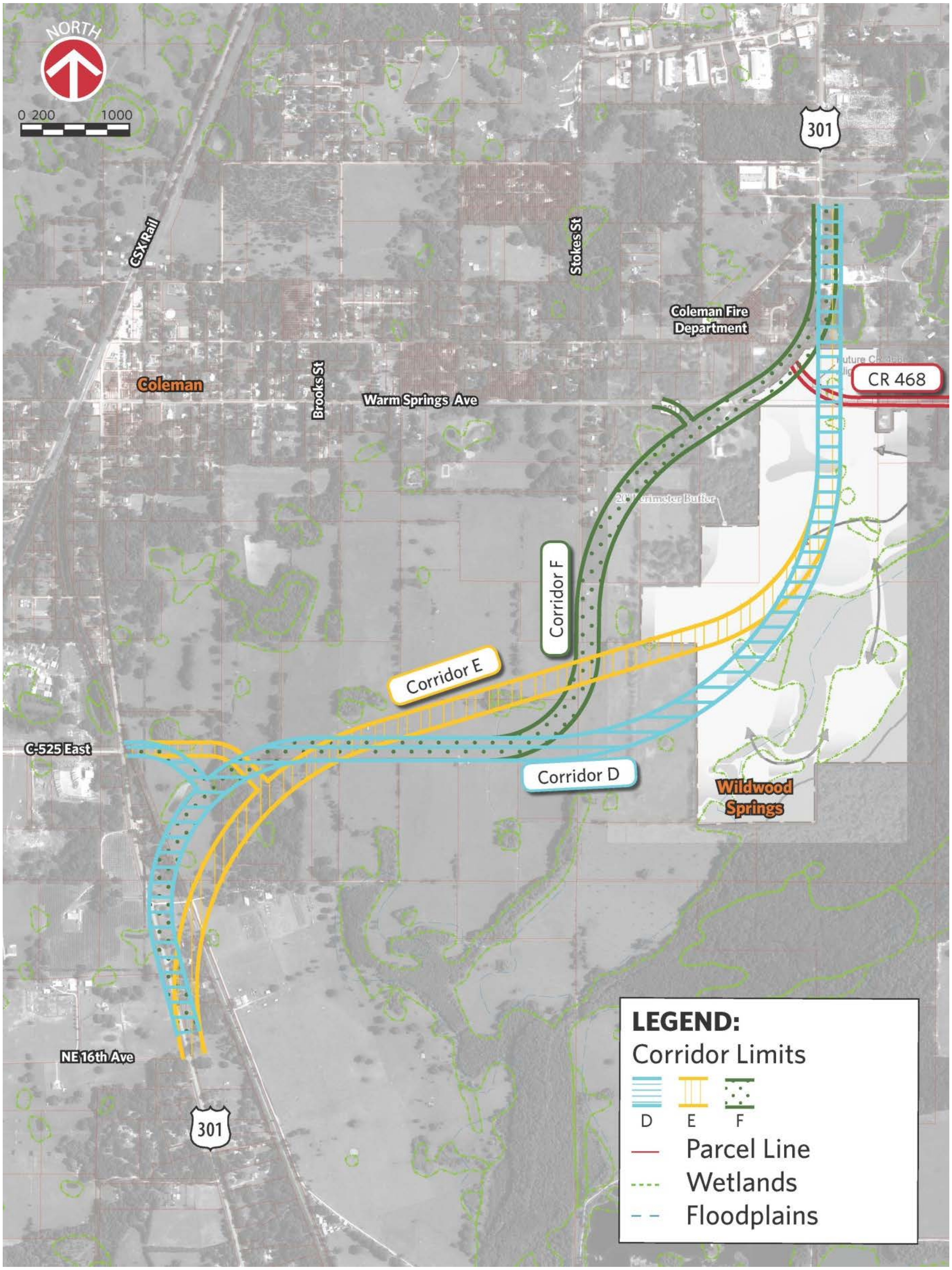


Figure 4-3 shows the three refined potential realignment corridors. The corridors were further refined relating to minor geometric changes to further avoid impacts to the number of parcels, wetlands, and floodplains while still meeting required design criteria for the horizontal alignment. The reconfiguration included one four-way intersection at CR 525 E. This change was made in order to accommodate a heavier east-west flow of traffic from CR 525 E to the US 301 realignment rather than from the existing US 301 south of CR 525 E to the proposed US 301 realignment. The reconfiguration will facilitate fewer intersections and safer, more direct travel for a greater number of motorists. These three corridors, titled Corridor A, B, and C, respectively, all provide viable corridors for vehicular traffic between CR 525 E and CR 468.

Corridor A

Corridor A is the most direct route between CR 525 E and CR 468. The corridor alignment is designed with a 45 mph design speed using the criteria of FDOT's suburban typical section, and connects to Warm Springs Avenue prior to reaching CR 468. It includes a northbound slip ramp at CR 525 E and an access point to westbound Warm Springs Avenue west of Stokes Street. It follows the existing US 301 alignment around the curve at CR 468.

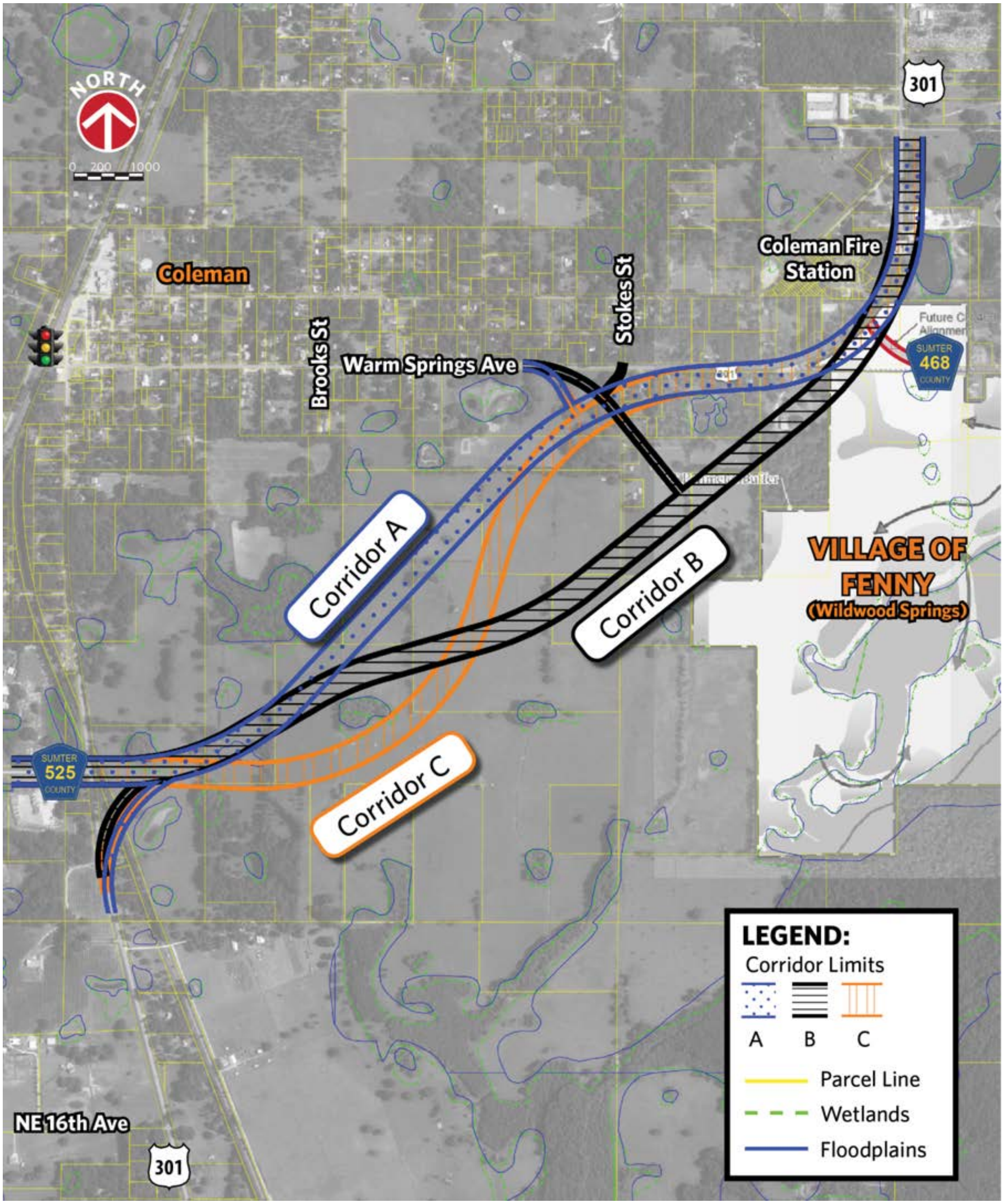
Corridor B

Corridor B is a diagonal connection between CR 525E and CR 468. The corridor alignment is designed with a 55 mph design speed using the criteria of FDOT's suburban typical section. It includes a northbound slip ramp at CR 525 E and an access point east of CR 523 that allows for connections northbound to Stokes Street and westbound to Warm Springs Avenue. The primary corridor does not rejoin Warm Springs Avenue, instead realigning with US 301 near the proposed terminus of CR 468.

Corridor C

Corridor C is a predominantly north-south connection between CR 525 E and Warm Springs Avenue. The corridor alignment is designed with a 45 mph design speed using the criteria of FDOT's suburban typical section. It includes a northbound slip ramp at CR 525 E and an access point to westbound Warm Springs Avenue west of Stokes Street. It also follows the existing US 301 alignment around the curve at CR 468.

Figure 4-3 | Refined Realignment Corridors



4.2.2.3 Comparative Analysis

A comprehensive impact evaluation was completed for each of the realignment corridors. The evaluation was based on five major categories: Social & Economic, Cultural, Natural, Physical, and Roadway/Traffic. The evaluation of criteria where differences could be identified among the corridors is presented in a matrix format as shown in Table 4-2 below with a descriptive summary and recommendations following the table. The following criteria were categorized by Low, Medium, or High, with some instances ranging between multiple, such as Medium-High. These categories represent the level of impact the evaluation criteria are anticipated to have on the corridor. Low indicates low potential impact, whereas High indicates a high potential for impacts from the proposed corridor.

Table 4-2 | US 301 Realignment Corridor Evaluation Matrix

Criteria	Corridor A	Corridor B	Corridor C
Social & Economic			
Potential Relocations	5	2	5
Follows Existing US 301 Curve	Yes	No	Yes
Preserves Community Integrity / Cohesiveness	Medium	Medium-High	Medium
Promotes Travel / Connectivity to the City of Coleman	Medium-High	Medium	Medium-High
Public Support	Medium	Medium-High	Medium
Impact to Future Commercial Land Use	Medium	Low	Medium
Cultural			
Impacts to Archaeological, Recreation, Parks, or Historic Sites	Low	Low	Low
Natural			
Wetland Impacts - # and (Acres)	4 (1.9 AC)	1 (1.3 AC)	5 (1.4 AC)
Floodplain Impacts - # and (Acres)	3 (1.0 AC)	2 (0.8 AC)	3 (0.2 AC)
Physical			
Parcel Impacts - # and (Acres)	32 (55.6 AC)	29 (58.2 AC)	32 (58.5 AC)
Roadway			
Maintains 55 mph Design Speed at CR 468 for Suburban Typical Section	No	Yes	No
Driveway spacing between Stokes St and CR 468 meets requirements	No	Yes	No

4.2.2.3.1 Social & Economic

US 301 Realignment Corridors A and C have the potential to impact five (5) buildings that may result in relocations. Corridor B has two such impacts. Additionally, Corridors A and C would each follow the existing alignment of US 301 along the CR 468 intersection curve, whereas Corridor B would require a completely new alignment in the vicinity of CR 468. Maintaining the alignment of the existing CR 468 curve allows more parcels on the north side of the curve that currently have frontage along US 301 to maintain this frontage. However, in order to maintain the design speed required for a suburban typical section, parcels on the south or outside of the curve are impacted. This would make it difficult for parcels on the south side to maintain their economic viability.

During the end of the process, the City of Coleman entered into an interlocal agreement with Sumter County related to planning and land use decisions. The interlocal agreement resulted in a new future land use map for the City of Coleman that created a commercial node south of US 301 between CR 468 and Stokes Street. Based on this land use map, Corridor B has the least impact to the viability of this future commercial land use.

4.2.2.3.2 Cultural

None of the potential corridors would significantly impact any identified archaeological, recreation, parks, or historic sites within the project area.

4.2.2.3.3 Natural

Each of the realignment corridors have a relatively minor impact to the environmental criteria of floodplains and wetlands. The corridors all have relatively the same impact related to the environmental criteria.

4.2.2.3.4 Physical

Each of the realignment corridors impacts approximately the same number of parcels and requires approximately the same amount of acreage. As with the analysis of natural impacts, it was determined that impacts in terms of the number and acreage of parcels is relatively the same for the three corridors.

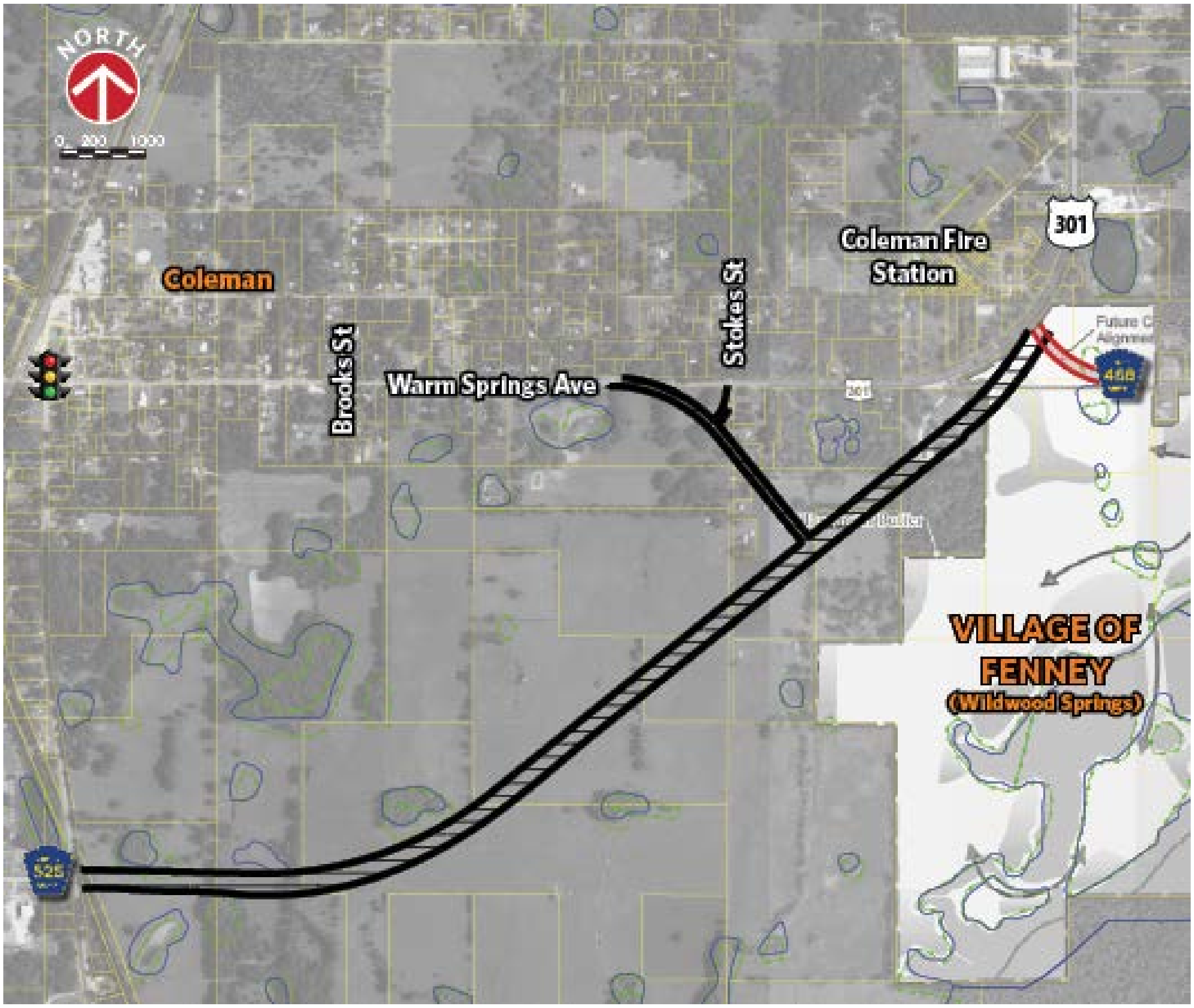
4.2.2.3.5 Roadway/Traffic

US 301 realignment Corridors A and C each connect to Warm Springs Avenue prior to the CR 468 intersection and follow the existing US 301 curvature at CR 468. Corridor B would rely on new geometry that would allow for a 55 mph suburban typical section at the CR 468 intersection. Corridor B is expected to meet access management driveway spacing standards between Stokes Street and CR 468. Access management spacing issues in Corridors A and C would need to be addressed by introducing frontage roads along the respective routes.

4.2.2.4 Realignment Alternative

Based upon the input received, engineering analysis, and environmental screenings, the realignment corridor to be incorporated into the Study's Build Alternative 2 is shown in Figure 4-4. The Study Team combined the preferred attributes of Corridors B and C to minimize negative environmental impacts while meeting the purpose and need of the overall study. The full analysis is included in Appendix F. The final realignment corridor, refined based on the results of the analyses detailed in this chapter, is described in Chapter 6.0 Preferred Alternative, and shown in the concept plans in Appendix A and B.

Figure 4-4 | Preferred US 301 Realignment Alternative Corridor (Corridor B/C)



4.3 Alternatives Analysis

The Transportation Systems Management and Operations (TSM&O) Alternatives are comprised of minor improvement options and are usually generated to achieve the maximum use and energy efficiency of the existing facility. The TSM&O Alternatives include activities designed to optimize the performance and utilization of the existing infrastructure through implementation of systems, services and projects to preserve the capacity and improve security, safety and reliability of the roadway system. With US 301 being predominantly a rural, two-lane facility with limited signalization and no transit, the investigation explored the alternative of upgrading the existing facility by means of improving high crash spots and segments, improving intersections and signalization, signing, pavement markings and delineation. The following TSM&O Alternatives are identified and discussed:

- Provide access management controls at areas of safety and crash concerns in the corridor – minor safety and operational benefits to the roadway (between the curve at CR 468 to NW 37th Place) at the expense of reduced access, though this will not provide sufficient increases in capacity to meet future travel demand.
- Intersection widening and turning lane storage – would provide short term benefits at intersections of concern (CR 470 E, Florida's Turnpike ramps and SR 44); the project corridor would be restricted to the current configuration; certain safety benefits could be achieved at intersections with a potential of reducing traffic service.
- Provide roundabouts – generally used to reduce high vehicular speeds and potentially divert non-local traffic; does not meet corridor deficiencies and address capacity constraints.
- Improved/Modified signalization – some improvement attainable with signal timing/tripping; would not provide capacity to meet future corridor demand.
- Improved signing, markings and delineations – slight improvements in guidance and possible safety; would not alleviate other existing deficiencies.

The TSM&O Alternatives will alleviate some of the existing deficiencies along the project corridor. However, these TSM&O improvements will not alleviate all of the intersection and safety deficiencies along the existing facility. Since their implementation alone would not suffice to meet all project needs and objectives throughout the corridor, the project team concluded during the initial stages of the study that in addition to the TSM&O solutions, major reconstruction alternatives (e.g. – widening of the corridor and intersection improvements, consideration of a realignment of US 301 around the City of Coleman) would be required to meet the future needs of the study corridor. The TSM&O Alternatives will be further considered as valuable components of an integrated final recommendation.

4.3.1 Typical Section Analysis

Various typical section components, including the number of lanes, lane widths, inside/outside shoulder widths, pedestrian and bicycle accommodations, and structure configuration, were evaluated. The components were evaluated with regards to functionality, safety, constructability and public input/comments. The following provides an evaluation summary of each typical section component, and the process of evaluating the typical section combinations.

4.3.1.1 Number of Lanes

The number of lanes recommended for a roadway segment is dependent upon the capacity and configuration requirements for both the existing and anticipated future needs. Traffic volumes are projected to increase due to planned residential, commercial and industrial developments near the study corridor. Per the results of the Design Traffic Technical Memorandum, the evaluation focused on the need to widen US 301 from a two-lane roadway to a four-lane roadway. Given this information, *a four-lane typical section is recommended* throughout the entire project corridor.

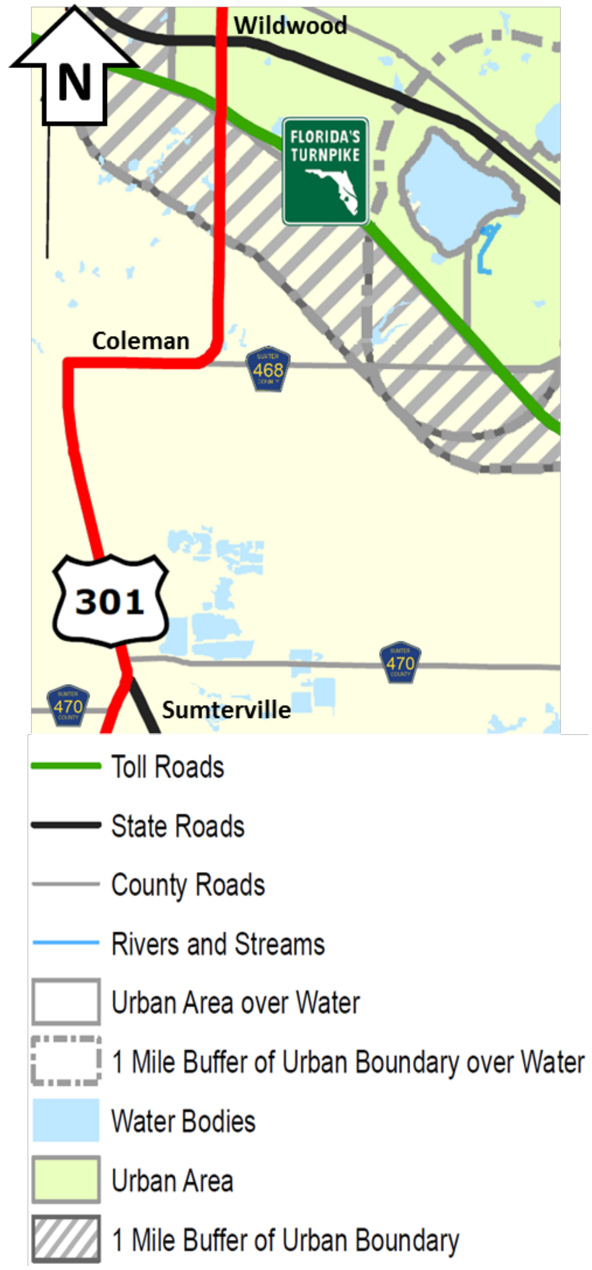
4.3.1.2 Lane Width

The project team compared the use of 11-foot travel lanes versus 12-foot travel lanes throughout the corridor, and identified that a portion of the project is within one mile of an urban area, as depicted in Figure 4-5.

Based upon the urban boundary and design criteria discussed in Chapter 3.0, the lane width recommendations are as follows:

- 11-foot travel lanes through Segment 1 if utilizing an urban typical section; otherwise, 12-foot travel lanes
- 12-foot travel lanes through Segment 2 where suburban and rural sections are being considered
- 11-foot travel lanes through the City of Coleman (Segment 3)
- 12-foot travel lanes between Coleman and Florida's Turnpike
- 11-foot travel lanes north of Florida's Turnpike to SR 44 (Segment 5)

Figure 4-5 | Sumter County 1 Mile Buffer of Urban Boundary



4.3.1.3 Shoulder Width

The FDOT design criteria for standard shoulder widths are discussed in Chapter 3.0, and given these factors, the shoulder width recommendations are as follows:

- 7-foot outside paved shoulders for urban typical section
- 8-foot outside, 4-foot inside shoulders for suburban sections
- 10-foot outside, 8-foot inside shoulders for rural sections
- Full bridge shoulder width (10-foot outside, 6-foot minimum inside) at Shady Brook Bridge

4.3.1.4 Intermodal Considerations

The Study evaluated the need and functionality of providing pedestrian and bicycle facilities as a part of the project. Consideration was given to requirements provided in the FDM with special attention related to connectivity and logical termini.

The FDM requires that pedestrian and bicycle traffic be considered within the roadway right-of-way. For pedestrian traffic, the FDM requires that accommodations be made on both sides of the roadway when an urban typical section is utilized or within one mile of an urban area for all typical section types (FDM Section 222). Pedestrian accommodations may include either sidewalks or shared use paths. Furthermore, current FDOT standard plans dictate that buffered paved areas for bicycles are provided for both new construction and reconstruction projects within one mile of an urban area (FDM Section 223).

All of Segment 5 and half of Segment 4 are within the urbanized area boundary, therefore these segments are required to have sidewalks and buffered paved areas for bicycles. Consistent with guidance in the FDM and the context of the surrounding area, consideration was given to providing connectivity among existing and future land uses along with logical termini to other existing/planned facilities. Review of land uses and facilities identified several locations that warranted bicycle and pedestrian connectivity within the vicinity of the study corridor. These include:

- Village of Fenney (Wildwood Springs) – mixed use development with retail and residential adjacent to the intersection of CR 468 and US 301; existing sidewalk along Warm Springs Avenue
- City of Coleman – residential and retail land uses surrounding Warm Springs Avenue; existing sidewalk along Warm Springs Avenue
- Monarch Ranch, The Villages Industrial (formerly Wade Industrial) and other development along CR 525 E – employees and additional potential retail support uses are also anticipated in this area
- Shady Brook Park – connecting the park with active/recreational transportation
- Shady Brook Golf and RV Resort – development contains a golf course and over 120 RV units
- Sumter Electric Cooperative (SECO) complex and surrounding Sumterville Area – The area contains multiple existing intensive employment uses and future commercial land uses.
- CR 470 E: CR 470 PD&E project is recommending sidewalks and buffered paved areas or bicycle lanes where it intersects US 301

Consideration was also given to a shared-use path for bicycle and pedestrian access. Two items within the FDM stand out as pertinent in considering shared-use paths for the US 301 corridor:

- Shared use paths are not replacements for on-street bicycle paved areas or lanes. Within a roadway right-of-way, bicycle lanes are the safest, most efficient bicycle facility. When paths are located immediately adjacent to roadways, some operational problems are likely to occur (FDM Section 224.1.2).
- Typically, widths range from 10-14 feet, with the wider values applicable to areas with high use and/or a wider variety of users (bicyclists, pedestrians, joggers, and skaters) (FDM Section 224.4).

With these considerations in mind, the Study evaluated the advantages versus disadvantages of a shared-use path. Among the most consequential factors was the need to take additional right-of-way to accommodate any potential shared use paths. In a corridor with a limited amount of right-of-way available, additional widening of any proposed typical section could prove to be prohibitive in the ultimate development of the project. Additionally, the frequency of access points and roadways crossings of the potential path could increase crash rates. It is also important to note the Lake~Sumter MPO Trail Plan was reviewed in an effort to identify how this corridor could provide trail connectivity within the region. No existing or future trail facilities are identified that would benefit from a trail being place on any portion of this corridor. Furthermore, the addition of bicycle lanes or paved shoulders for bicyclists, as required by FDOT standard plans, provides accommodation for bicyclists.

As it relates to the type of on street bicycle facility, it is recommended that a 7-foot buffered paved area for bicycles or bicycle lane be provided in urban areas and buffered shoulders for bicycles throughout suburban sections. This will provide connectivity for the network and will help to mitigate for the high presence of truck traffic along the corridor. According to the Design Traffic Technical Memorandum, the percent trucks, or T factor, ranges from 12% to 16%. Frequent heavy truck traffic without the additional buffer would impact the comfort of the cyclist and possibly deter the use of this alternate mode of transportation.

Given these considerations, the intermodal recommendations are as follows:

- Sidewalk (5-foot minimum) from CR 468 through the northern termini of the study area. Provisions for sidewalks should be made for the segments south of CR 468, which will allow for their installation at any time in the future. Construction of sidewalks south of CR 468 as a part of the FDOT initial construction project will be determined by FDOT during the design phase based on future land use and urban boundary.
- 7-foot paved areas with buffering striping for bicycles throughout

4.3.1.5 Typical Sections

This evaluation process investigated various elements and typical section combinations with respect to functionality, safety, constructability, and public preference. Based on the evaluation, the following elements are recommended:

- Four (4) through travel lanes
- 11-foot wide lanes for urban typical sections; 12-foot wide lanes for suburban sections
- Curb and gutter in urban typical sections; 10-foot outside shoulder for suburban typical
- Full (10-foot outside, 6-foot inside) shoulders at Shady Brook Bridge
- Sidewalk
- 7-foot buffered shoulders or bicycle lanes in all sections

As a result of the typical section evaluation, three typical sections, as shown in Figure 4-6 through Figure 4-8 were carried forward to the segment analysis.

Figure 4-6 | Urban Typical Section – Coleman

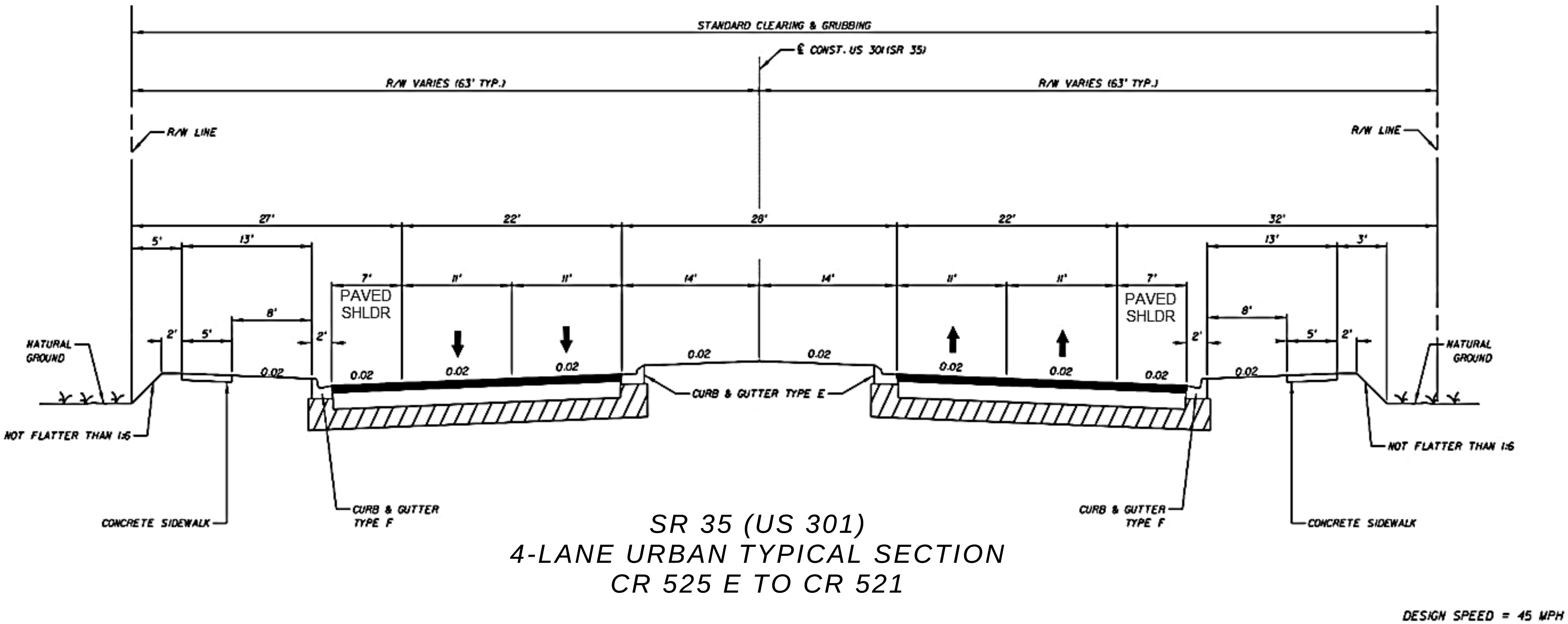


Figure 4-7 | Urban Typical Section – Segment 5

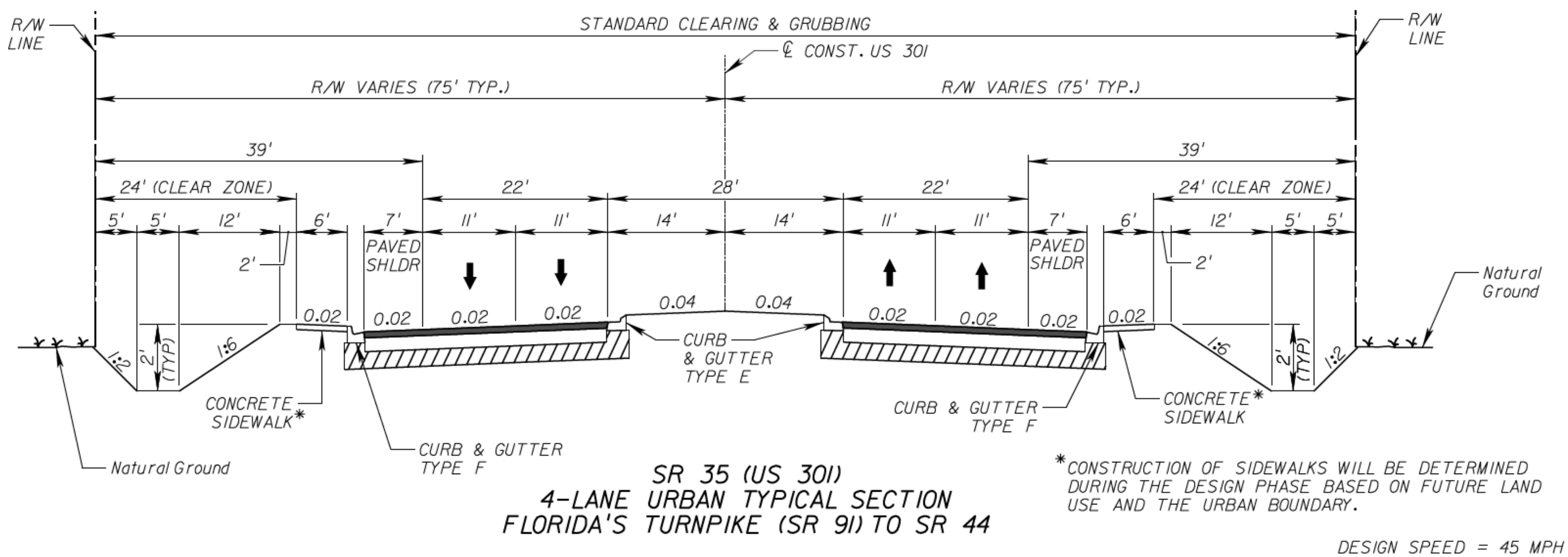
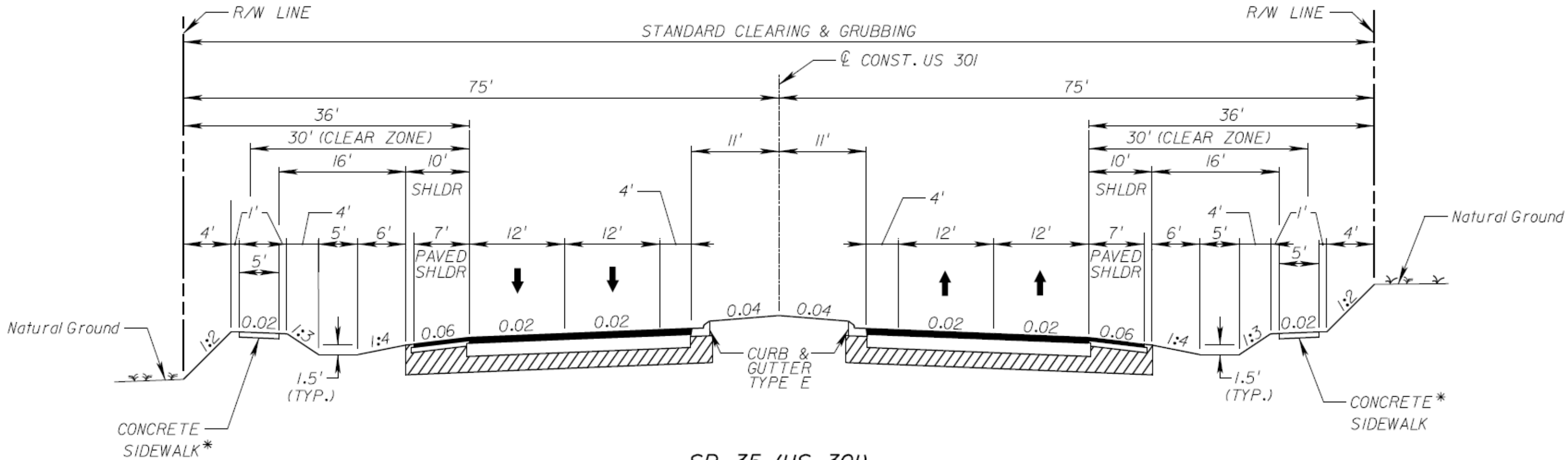


Figure 4-8 | Suburban Typical Section



SR 35 (US 301)
SUBURBAN TYPICAL SECTION
CR 470 E TO FLORIDA'S TURNPIKE (SR 91)

*CONSTRUCTION OF SIDEWALKS WILL BE DETERMINED DURING THE DESIGN PHASE BASED ON FUTURE LAND USE AND THE URBAN BOUNDARY.

DESIGN SPEED = 55 MPH

4.3.1.6 Segment Analysis & Recommendations

Following the development of the three typical sections, a proposed typical section was assigned to each segment of US 301. See Table 4-3 for the typical sections recommended in each study segment.

Table 4-3 | Typical Sections Proposed By Segment

Typical Section	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6
Urban		X	X		X	
Suburban	X	X		X		X

4.3.1.6.1 Segment 1 – South of CR 470 East to Shady Brook Drive

Coordination with the CR 470 E project team revealed the need to provide robust intersection laneage while also minimizing impacts to adjacent properties. Due to the intersection geometry and property development in the area, a narrower typical section that allows for more roadside development is advantageous. A suburban typical section counterbalances right-of-way needs with attainable and realistic design speeds, and is therefore recommended as the primary Segment 1 typical section. ***Recommendation: Suburban***

4.3.1.6.2 Segment 2 – Shady Brook Drive to CR 525 East

In an effort to maintain the existing posted speed of 55 mph, only rural and suburban typical sections were considered. A suburban typical section allows for continued use of the 55 mph posted speed while minimizing potential environmental impacts. ***Recommendation: Suburban***

4.3.1.6.3 Segment 3 – CR 525 East to Stokes Street

Due to the severe constraints along Warm Springs Avenue and the presence of the community of Coleman, only an urban typical section was considered for this segment. The typical section developed for this segment includes a varying median, which provides enough width for a dual left-turn lane where applicable. ***Recommendation: Urban***

4.3.1.6.4 Segment 4 – Stokes Street to Florida's Turnpike

The existing and future land use context of the corridor is mostly auto oriented development consistent with the suburban typical section. A suburban section allows for continued use of the 55 mph posted speed in the tangent portions of the segment north of CR 468 while minimizing impacts to properties, wetlands, and floodplains. The suburban typical section is also reflective of and compatible with the impending development near the CR 468 curve at the Village of Fenney. ***Recommendation: Suburban***

4.3.1.6.5 Segment 5 – Florida's Turnpike to SR 44

In contrast to Segments 1 through 4, Segment 5 is already predominantly a four-lane divided roadway. Improvements to the existing roadway would be relatively minor compared to the other segments, as the roadway base and sub-base could potentially be used in the development of improvements. The extent to which the existing roadway base and sub-base could be retained will be identified during the design phase once surveys are completed. As US 301 approaches a signalized intersection at SR 44, it is not necessary to increase speed beyond 40-45 mph at this location. An urban section may only require relatively minor potential environmental impacts. ***Recommendation: Urban***

4.3.1.6.6 Segment 6 – US 301 Realignment

The US 301 realignment will connect the development planned near CR 525 E, the Villages Industrial (formerly Wade Industrial Park) and Monarch Ranch, with the Village of Fenney at CR 468. The realignment also has the potential for further development considering its proximity to these areas and the City of Coleman. Should the realignment be selected, it should also play a role in the network of discouraging excessive truck traffic on Warm Springs Avenue. Therefore, a section that can accommodate through trucks and potential development should be selected, which is the suburban typical section. The suburban typical section would also reduce the amount of right-of-way required for the realignment, while still providing flexibility for a potential relatively higher design speed of 55 mph for some of the alignments.

It is important to note that the portion of the realignment segment between CR 468 and the connection back to Warm Springs Avenue should be reviewed closely as it relates to the design speed and context. This portion of the segment will also serve as an important connection between Warm Springs Avenue and the core of the City of Coleman and the proposed Village of Fenney. Therefore, it could see slightly more pedestrian activity and crossings compared to other parts of the corridor, while still being less than the activity along Warm Springs Avenue in the City of Coleman. ***Recommendation: Suburban***

4.3.2 Design Year Traffic

This section provides a summary of the traffic analysis conducted to support the US 301 PD&E Study. The full Design Traffic Technical Memorandum (DTTM) is provided under separate cover. The traffic presented in the PER is for the design year (2042). Results of the opening year and interim year analyses are available in the DTTM.

4.3.2.1 Traffic Forecasting Methodology

As part of the effort to develop future volume forecasts to support future year (Design Year: 2042) analysis, a subarea of the current Central Florida Regional Planning Model (CFRPM) v5.01 was prepared and validated by FDOT District Five. The subarea model used a base year of 2010 and a horizon year of 2040. The Model Output Conversion Factor (MOCF) was used to convert the model volumes into Average Annual Daily Traffic (AADT) volumes. From the model AADT volumes, linear growth rates were calculated. Historical growth rates were determined using FDOT's Florida Transportation Information (FTI) database. Model and historical growth rates were used to determine applied annual growth rates for the future No-Build and Build alternatives analysis.

The future AADT for the roadway segments are summarized in Table 4-4. The AADTs were converted to Directional Design Hour Volumes (DDHVs) though the application of the recommended K and D factors shown in Table 4-5. Table 4-5 includes the recommended Truck percentage factor for the daily and peak hour time periods. To better retain accuracy of the data, the DDHV calculations used the unrounded AADT values. Future peak hour intersection turning movement volumes for all the alternatives were developed following procedures described in the National Cooperative Highway Research Program (NCHRP) 255. This method is consistent with acceptable tools described in FDOT's Project Traffic Forecasting Handbook (2014).

Table 4-4 | Future AADTs

Location	Existing 2014 AADT	Future No-Build AADT 2042	Future Build AADT(Four-Lane) 2042	Future Build AADT (Realignment) 2042
US 301 south of CR 470 (E)	13,000	38,000	39,000	40,000
US 301 between CR 470 (E) and CR 525	6,200	26,000	28,000	30,000
US 301 between CR 525 E and Warm Springs Ave.	6,800	22,000	22,000	8,700
US 301 between Warm Springs Ave. and Hubbs St.	7,300	22,000	22,000	9,300
US 301 between Hubbs St. and CR 523	7,500	22,000	22,000	9,600
US 301 between CR 523 and CR 468	7,800	23,000	21,000	10,000
US 301 between CR 468 and CR 521	9,600	24,000	25,000	26,000
US 301 between CR 521 and NE 37th Pl.	8,800	21,000	22,000	23,000
US 301 between NE 37th Pl. and Florida Turnpike	9,200	20,000	22,000	23,000
US 301 between Florida Turnpike and Clay Drain Rd	17,000	28,000	33,000	34,000
US 301 between Clay Drain Rd and Spring Lake Rd	14,000	25,000	30,000	31,000
US 301 between Spring Lake Rd and SR 44	15,000	26,000	31,000	32,000
CR 470 east of US 301	6,600	30,000	32,000	32,000
NE 13th Ave. west of US 301	70	90	90	90
NE 16th Ave. west of US 301	180	230	230	230
NE 19th Rd east of US 301	40	50	50	50
CR 525 west of US 301	1,100	28,000	27,000	28,000
Anderson Rd west of US 301	40	50	50	50
Clark Ave. east of US 301	80	100	100	100
Warm Springs Ave. west of US 301	800	3,400	2,900	2,700
Commercial St. north of US 301	560	720	720	720
Church St. north of US 301	250	320	320	320
Church St. south of US 301	60	80	80	80
Hubbs St. north of US 301	120	150	150	150
Hubbs St. south of US 301	50	60	60	60
CR 523 north of US 301	170	220	220	220
CR 523 south of US 301	130	170	170	170
CR 468 east of US 301	2,800	17,000	17,000	19,000
CR 521 west of US 301	370	470	470	470
NE 37th Pl. west of US 301	1,200	4,700	4,700	4,700
Florida Turnpike NB On Ramp	1,100	1,400	2,400	2,400
Florida Turnpike NB Off Ramp	3,000	4,100	5,050	5,050
Florida Turnpike SB On Ramp	2,800	4,700	5,050	5,050
Florida Turnpike SB Off Ramp	830	1,700	2,400	2,400
Clay Drain Rd east of US 301	700	900	900	900
SR 44 west of US 301	16,000	42,000	43,000	43,000
SR 44 east of US 301	18,000	48,000	49,000	49,000
S Main St. north of SR 44	18,000	23,000	24,000	25,000
Monarch Ranch N of Warm Springs Ave	0	5,800	5,700	5,600

Table 4-4 | Future AADTs

Location	Existing 2014 AADT	Future No-Build AADT 2042	Future Build AADT(Four-Lane) 2042	Future Build AADT (Realignment) 2042
Monarch Ranch S of Warm Springs Ave	0	1,300	1,600	1,700
Realignment East of US 301	-	-	-	22,000

Table 4-5 | Recommended K, D, T24, and DHT Values

US 301 Segment Description	K	D	T_{24}	DHT
1. CR 470 (E) to Warm Springs Avenue	9.5	53.5%	16.0%	8.0%
2. Warm Springs Avenue to CR 521	9.5	53.5%	14.0%	7.0%
3. CR 521 to Florida's Turnpike	9.5	53.5%	12.0%	6.0%
4. Florida's Turnpike to SR 44	9.0	53.5%	14.0%	7.0%
Turnpike Ramp Terminals	9.0	100%	n/a	n/a
CR 470 (E) and CR 468	9.5	55%	n/a	n/a
SR 44	9.0	55%	n/a	n/a
All Other Cross Streets	9.5	60%	n/a	n/a

4.3.2.2 Future No-Build Operational Analysis

The No-Build alternative assumes the same geometric configurations as existing conditions. This section describes traffic operations for the design (2042) analysis year. The analysis includes evaluation of segments along US 301, as well as intersections within the study area, for the No-Build alternative. Detailed LOS reports are provided under separate cover in the DTTM.

4.3.2.2.1 Future No-Build Intersection Analysis

For the future No-Build alternative, the intersection geometry is consistent with the existing intersection geometry, and with one exception at the intersection of US 301 and CR 468. Sumter County is currently working to redesign the intersection of US 301 at CR 468 to be a three-leg T-intersection with a traffic signal. The intersection lane configurations of future No-Build alternative are shown in Figure 4-9.

Table 4-6 provides a summary of the intersection LOS analysis results for 2042 under the No-Build conditions. Intersection peak hour turning movement volumes and LOS results are illustrated in Figure 4-10 and Figure 4-11. The analysis includes evaluation of segments along US 301, as well as intersections within the study area, for the no-build alternative. Detailed LOS reports are provided in the DTTM under separate cover.

Table 4-6 | Intersection LOS Summary - No-Build Alternative

Intersection ID #	Intersection	Control	Peak Hour	2042	
				Delay[1]	LOS[1]
1	US 301 & CR 470 E	Signalized	AM	>80	F
			PM	>80	F
2	US 301 & Shady Brook Dr	TWSC	AM	39.1	E
			PM	41.9	E
3	US 301 & NE 13th Ave	TWSC	AM	>50	F
			PM	24.5	C
4	US 301 & NE 16th Ave	TWSC	AM	>50	F
			PM	>50	F
5	US 301 & NE 19th Rd	TWSC	AM	>50	F
			PM	20.9	C
6	US 301 & CR 525	TWSC	AM	>50	F
			PM	>50	F
7	US 301 & Anderson Rd	TWSC	AM	>50	F
			PM	>50	F
8	US 301 & Clark Ave	TWSC	AM	>50	F
			PM	>50	F
9	Commercial St & Warm Springs Ave	Signalized	AM	>80	F
			PM	>80	F
10	Church St & US 301	TWSC	AM	>50	F
			PM	>50	F
11	Hubbs St & US 301	TWSC	AM	>50	F
			PM	>50	F
12	Stokes St/CR 523 & US 301	TWSC	AM	>50	F
			PM	>50	F
13	US 301 & CR 468	Signalized	AM	>50	F
			PM	>50	F
14	US 301 & CR 521	TWSC	AM	>50	F
			PM	49.3	E
15	US 301 & NE 37th Pl	TWSC	AM	>50	F
			PM	>50	F
21	US 301 & Median Opening 1	TWSC	AM	>50	F
			PM	>50	F
22	US 301 & Median Opening 2	TWSC	AM	>50	F
			PM	>50	F
23	US 301 & Median Opening 3	TWSC	AM	>50	F
			PM	>50	F
16	US 301 & Florida's Turnpike SB Ramps	TWSC	AM	>50	F
			PM	>50	F
17	US 301 & Florida's Turnpike NB	TWSC	AM	>50	F

Table 4-6 | Intersection LOS Summary - No-Build Alternative

Intersection ID #	Intersection	Control	Peak Hour	2042 Delay[1]	2042 LOS[1]
	Ramps		PM	>50	F
18	US 301 & Clay Drain Rd	TWSC	AM	>50	F
			PM	>50	F
19	US 301 & Spring Lake Rd	TWSC	AM	>50	F
			PM	>50	F
20	US 301 & SR 44	Signalized	AM	>80	F
			PM	>80	F

[1] Control delays and LOS for unsignalized intersections are for worst approach

Figure 4-9 | No-Build Scenario – Intersection Lane Configuration

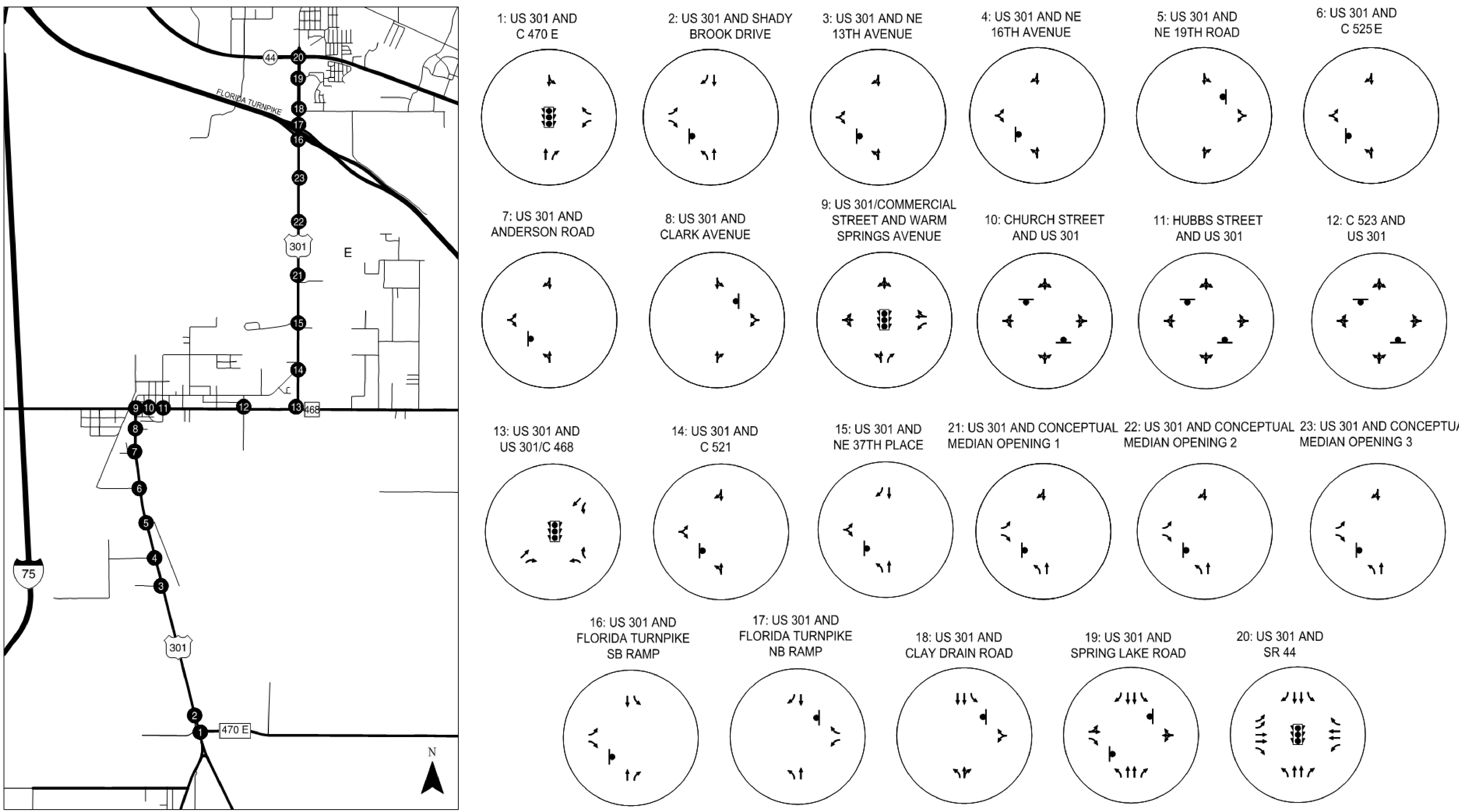


Figure 4-10 | 2042 No-Build Scenario – AM/PM Peak-Hour Volumes and LOS – Part A

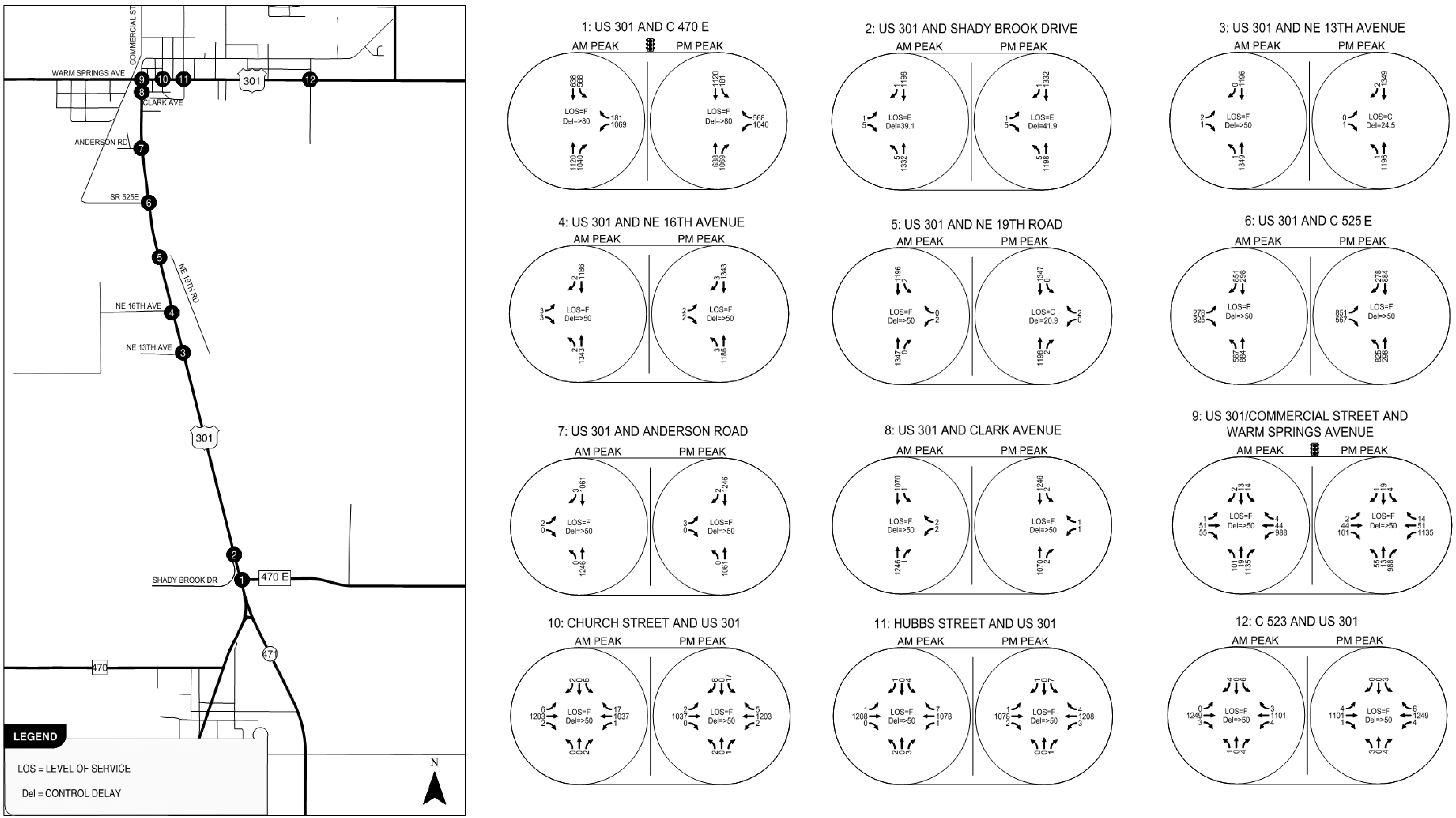
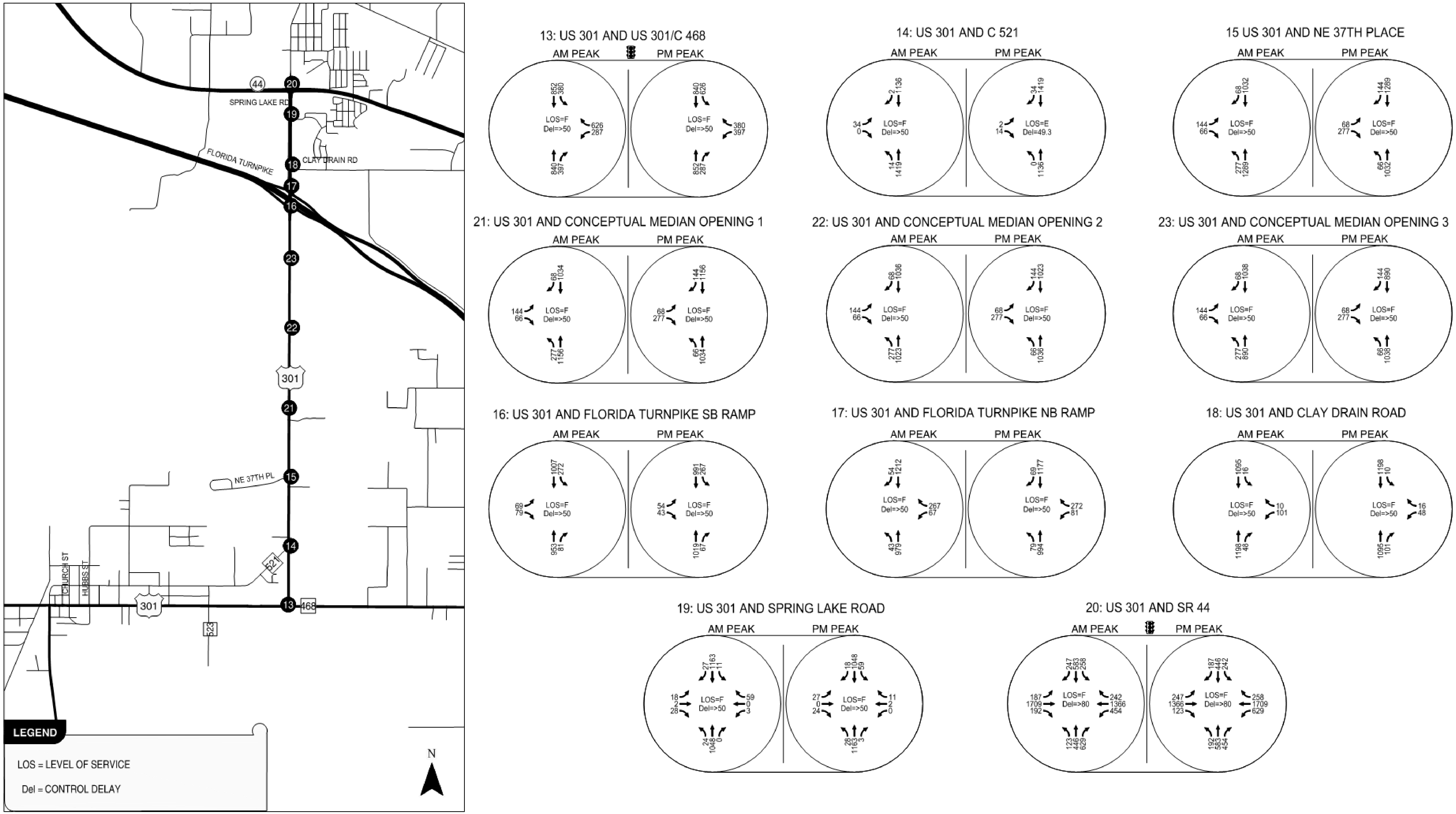


Figure 4-11 | 2042 No-Build Scenario – AM/PM Peak-Hour Volumes and LOS – Part B



4.3.2.2.2 Future No-Build Segment Analysis

Four segments were analyzed for the No-Build alternative:

- CR 470 East to Warm Springs Avenue
- Warm Springs Avenue to CR 468
- CR 468 to Florida's Turnpike
- Florida's Turnpike to SR 44

The segments from CR 470 East to Warm Springs Avenue and from CR 468 to Florida's Turnpike were analyzed using HCS 2010 two-lane segment analysis. The segment between Warm Springs Avenue and CR 468 was analyzed using a combination of Synchro 9.1, to determine the average segment speed, and the HCM, to determine LOS based on percent of base free flow speed. This methodology was used because the segment is controlled by signalized intersections at both the upstream and downstream locations in future years, correlating to interrupted flow. Operations on the segment between Florida's Turnpike and SR 44 are metered by the signal at SR 44 in the northbound direction and are uninterrupted in the southbound direction. Therefore, the segment was analyzed using HCS 2010 Streets in the northbound direction, and using HCS 2010 multilane highway analysis in the southbound direction. Table 4-7 through Table 4-9 summarize the results from the segment analysis under No-Build conditions; LOS, Average Travel Speed (ATS), Percent Time Spent Following (PTSF), Density, and Base Free Flow Speed (BFFS) are listed for each segment for both AM and PM hours. Detailed HCS and Synchro reports are provided in the DTTM under separate cover.

The segments of US 301 from CR 470 East to Warm Springs Avenue and from CR 468 to Florida's Turnpike do not meet the LOS standard of C for rural roadway facilities for future year (2042) for the No-Build alternative. The segment from Florida's Turnpike to SR 44 meets the LOS standard of D for urban roadway facilities in the future year for the No-Build alternative.

Table 4-7 | No-Build Alternative Two-Lane Uninterrupted Flow Segment LOS

Two-Lane Segments	Dir.	2042		
		ATS (mi/h) AM (PM)	PTSF (%) AM (PM)	LOS AM (PM)
CR 470 (E) to Warm Springs Ave	NB	41.0 (41.0)	91.0 (89.5)	E (E)
	SB	41.8 (41.8)	89.5 (91.0)	E (E)
CR 468 to Florida's Turnpike	NB	43.3 (43.3)	90.7 (88.6)	E (E)
	SB	43.1 (43.0)	88.6 (90.7)	E (E)

Table 4-8 | No-Build Alternative Signalized Segment LOS

Segments	Dir.	No. of Lanes	Base Free Flow Speed (mph)	2042 %BFFS AM (PM)	2042 LOS AM (PM)
Warm Springs Ave to CR 468	EB	1	44	67.7 (48.4)	C (F)
	WB	1	44	28.4 (26.4)	F (F)
Florida Turnpike to SR 44	NB	2	43	63.5 (64.7)	C (C)

Table 4-9 | No-Build Alternative Multi-Lane Segment LOS

Segments	Dir.	2042 Density (pc/mi/in) AM (PM)	2042 LOS AM (PM)
Florida's Turnpike to SR 44	SB	14.4 (15.6)	B (B)

4.3.2.3 Alternative 1 Build Operational Analysis

This section describes traffic operations for the opening (2022), interim (2032), and design (2042) analysis years of the four-lane build alternative (Alternative 1 – US 301 Widening) that includes the widening of US 301 to four lanes for the length of the study area. The analysis includes evaluation of segments along US 301, as well as intersections within the study area, for Alternative 1.

4.3.2.3.1 Alternative 1 Intersection Analysis

Alternative 1 assumes US 301 within the study corridor to be four lanes, while keeping the same alignment as the future No-Build Alternative. The intersection lane configuration of Alternative 1 is shown in Figure 4-12. The following assumptions of intersection lane configurations were made to accommodate the future four-lane widening project:

- The intersection of US 301 and CR 470 East was analyzed with dual turn lanes for SBL, NBR, WBL, and WBR movements;
- The intersection of US 301 and CR 525 East was analyzed with dual turn lanes for SBR, NBL, EBR, and EBL movements;

- The intersection of US 301 and Commercial Street was analyzed with dual left-turn lanes in the westbound approach and dual right-turn lanes in the northbound approach to serve the US 301 through traffic;
- The intersection of US 301 and CR 468 was analyzed with dual turn lanes for SBL and WBR to serve the high travel demand between US 301 and CR 468;
- The intersection of US 301 and SR 44 was analyzed with dual turn lanes for WBL, NBL, EBL, and SBL, single turn lanes for WBR, NBR, EBR, and SBR, and
- All the other unsignalized intersections were considered to have left-turn lanes from the mainline approaches where applicable.

Table 4-10 provides a summary of the intersection LOS analysis results for 2042 under the four-lane build conditions described above. Intersection peak hour turning movement volumes and LOS results are illustrated in Figure 4-13 and Figure 4-14.

Table 4-10| Intersection LOS Analysis Summary

#	Intersection	Control	Peak Hour	2042	
				Delay[1]	LOS[1]
1	US 301 & CR 470 East	Signalized	AM	>80	F
			PM	22.9	C
2	US 301 & Shady Brook Dr	TWSC	AM	22.1	C
			PM	25.6	D
3	US 301 & NE 13th Ave	TWSC	AM	49.4	E
			PM	14.7	B
4	US 301 & NE 16th Ave	TWSC	AM	40.3	E
			PM	47.8	E
5	US 301 & NE 19th Rd	TWSC	AM	>50	F
			PM	13	B
6	US 301 & CR 525 E	Signalized	AM	19.1	B
			PM	22.7	C
7	US 301 & Anderson Rd	TWSC	AM	47.4	E
			PM	>50	F
8	US 301 & Clark Ave	TWSC	AM	34	D
			PM	30.2	D
9	Commercial St & Warm Springs Ave	Signalized	AM	15.1	B
			PM	14.4	B
10	Church St & US 301	TWSC	AM	>50	F
			PM	>50	F
11	Hubbs St & US 301	TWSC	AM	>50	F
			PM	>50	F
12	Stokes St/CR 523 & US 301	TWSC	AM	39.9	E
			PM	>50	F

Table 4-10| Intersection LOS Analysis Summary

#	Intersection	Control	Peak Hour	2042	
				Delay[1]	LOS[1]
13	US 301 & CR 468	Signalized	AM	17.6	B
			PM	23.5	C
14	US 301 & CR 521	TWSC	AM	>50	F
			PM	>50	F
15	US 301 & NE 37th Pl	Signalized	AM	9.5	A
			PM	8.8	A
21	US 301 & Median Opening 1	Signalized	AM	10.4	B
			PM	10.0	B
22	US 301 & Median Opening 2	Signalized	AM	11.1	B
			PM	9.5	A
23	US 301 & Median Opening 3	Signalized	AM	11.4	B
			PM	9.1	A
16	US 301 & Florida's Turnpike SB Ramps	Signalized	AM	22.8	C
			PM	14.4	B
17	US 301 & Florida's Turnpike NB Ramps	Signalized	AM	11.4	B
			PM	23.9	C
18	US 301 & Clay Drain Rd	TWSC	AM	>50	F
			PM	>50	F
19	US 301 & Spring Lake Rd	TWSC	AM	>50	F
			PM	>50	F
20	US 301 & SR 44	Signalized	AM	>80	F
			PM	72.7	E

[1] Control delays and LOS for unsignalized intersections are for worst approach

Figure 4-12 | Alternative 1 – Intersection Lane Configuration

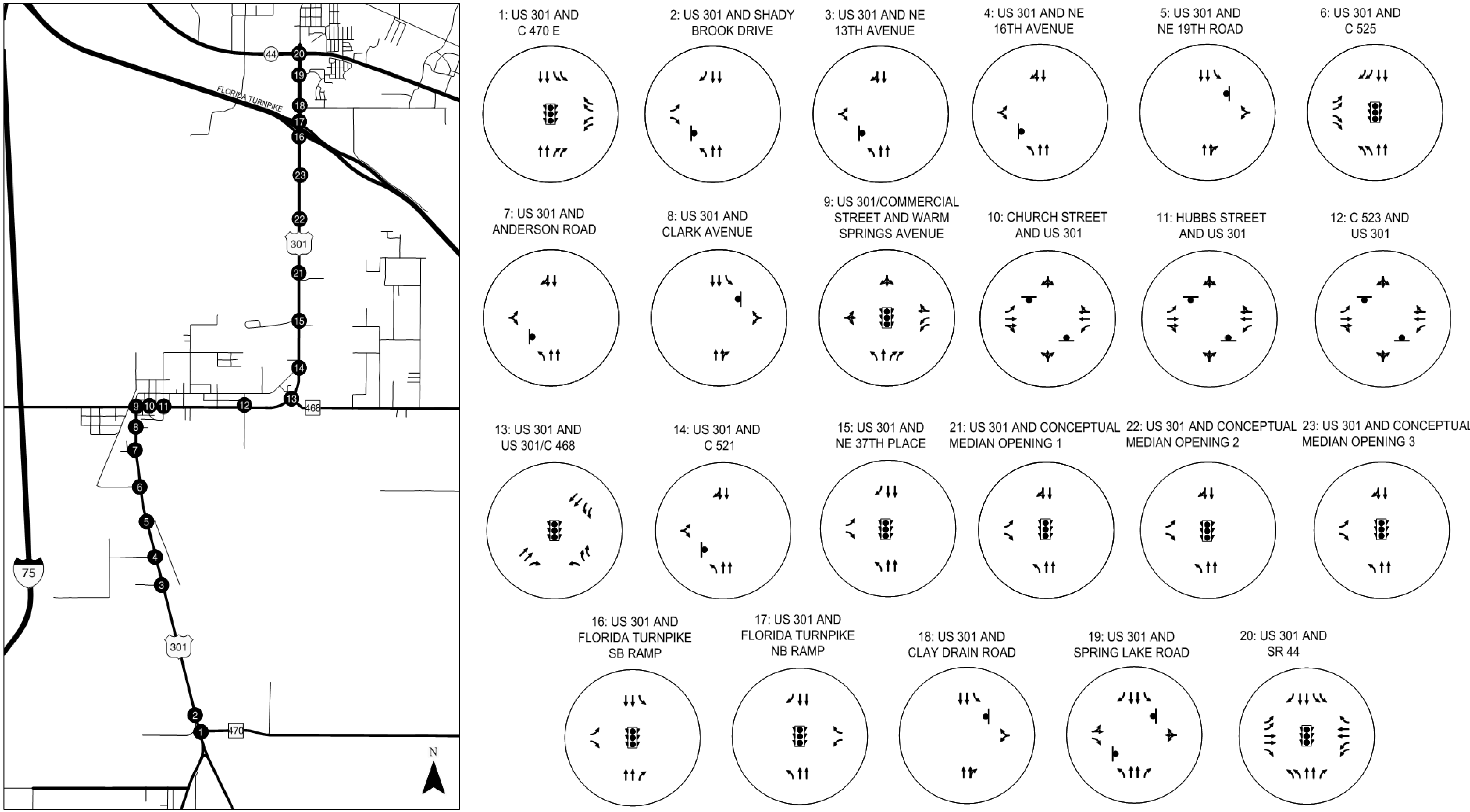


Figure 4-13 | 2042 Alternative 1 – AM/PM Peak-Hour Volumes and LOS – Part A

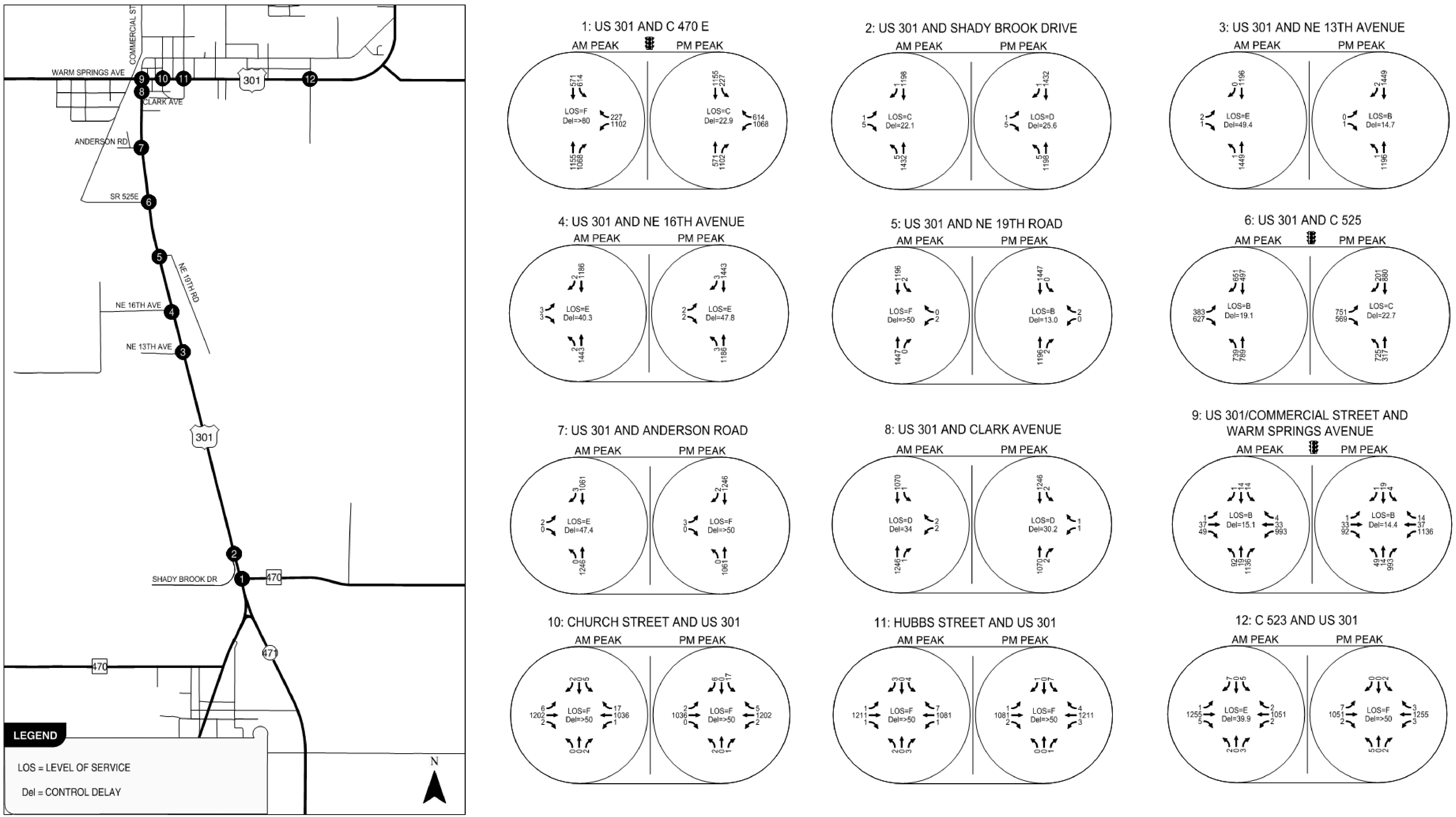
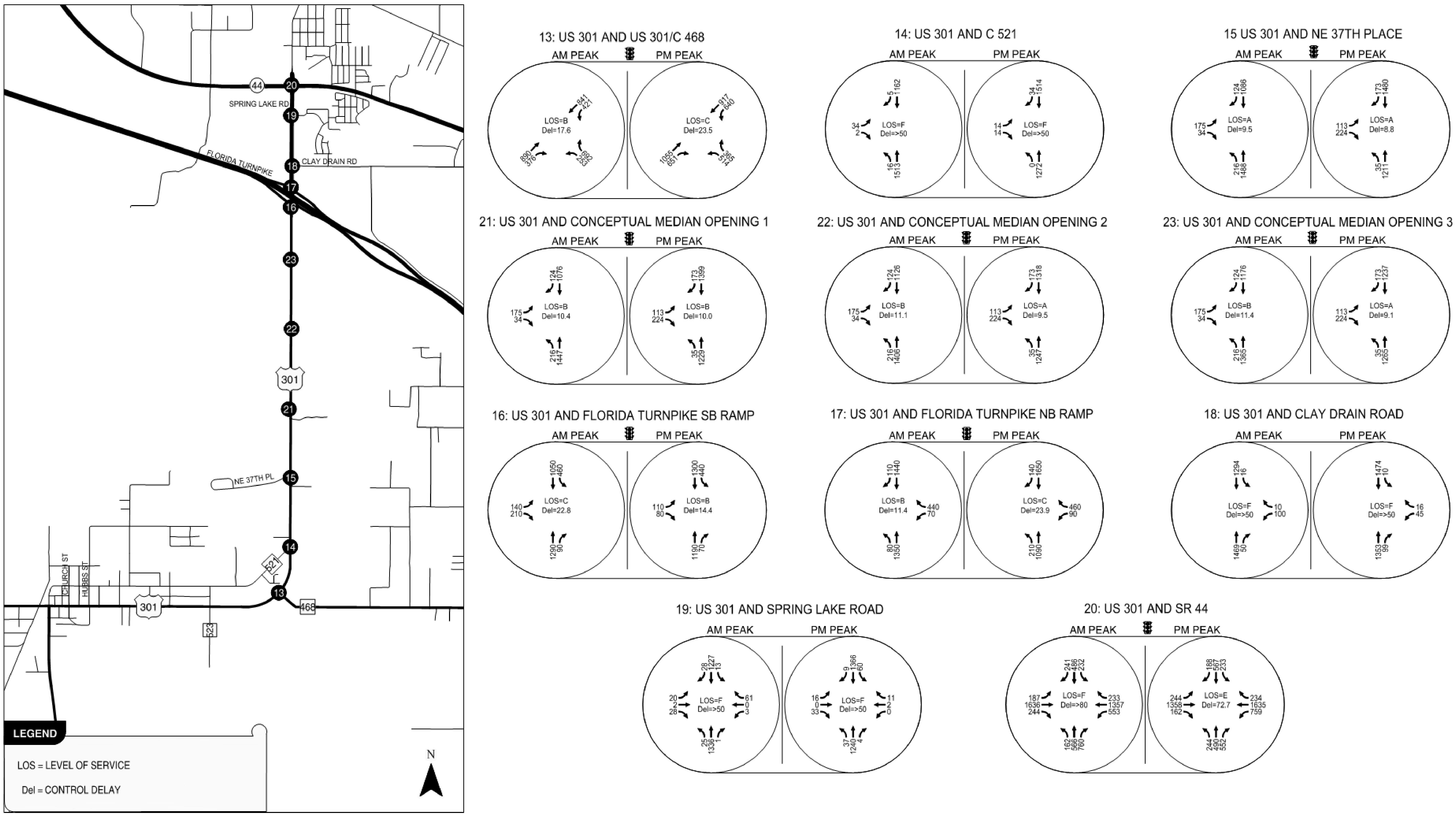


Figure 4-14 | 2042 Alternative 1 – AM/PM Peak-Hour Volumes and LOS – Part B



4.3.2.3.2 Alternative 1 Build Segment Analysis

The eleven roadway segments were condensed into the following ten segments based on highway class, truck percentages, and proposed signalization at intersections:

- CR 470 East to CR 525 East
- CR 525 East to Warm Springs Ave.
- Warm Springs Ave. to CR 468
- CR 468 to NE 37th Place
- NE 37th Place to Median Opening 1
- Median Opening 1 to Median Opening 2
- Median Opening 2 to Median Opening 3
- Median Opening 3 to Florida's Turnpike southbound ramps
- Florida's Turnpike southbound ramps to Florida's Turnpike northbound ramps
- Florida's Turnpike northbound ramps to SR 44

The segment from CR 470 East to CR 525 was analyzed using HCS 2010 multi-lane uninterrupted flow segment analysis. All other segments were analyzed using a combination of Synchro 9.1 to determine the average segment speed, and the HCM to determine LOS based on percentage of the calculated base free flow speed. Table 4-11 and Table 4-12 summarize the results from the segment analysis under four-lane conditions. Detailed HCS and Synchro reports are provided in the DTTM under separate cover.

The segment of US 301 from CR 470 East to CR 525 East is expected to meet the LOS standard of C for rural roadway facilities for all future years for the four-lane build alternative. All rural segments are expected to meet LOS standards for all future years for the four-lane build alternative, except the southbound segment of US 301 between CR 525 East and Warm Springs Avenue in 2042 and the northbound segment of US 301 between Median Opening 3 and Florida's Turnpike northbound ramps in 2042. The segment from Florida's Turnpike northbound ramps to SR 44 is not expected to meet the LOS standard of D for urban roadway facilities for the 2042 future year. In the northbound direction, this is primarily due to the approach LOS at the SR 44 intersection.

Table 4-11| Alternative 1 Signalized Segment LOS

Segments	Dir.	No. of Lanes	BFFS (mph)	2042	
				%BFFS AM (PM)	LOS AM (PM)
CR 525 East to Warm Springs Ave	NB	2	51	52.4 (50.6)	C (C)
	SB	2	51	48.0 (49.6)	D (D)
Warm Springs Ave to CR 468	NB/EB	2	46	81.3 (76.1)	B (B)
	SB/WB	2	46	88.3 (88.3)	A (A)
CR 468 to NE 37th Pl	NB	2	51	94.1 (94.7)	A (A)
	SB	2	51	95.5 (91.6)	A (A)

Table 4-11| Alternative 1 Signalized Segment LOS

Segments	Dir.	No. of Lanes	BFFS (mph)	2042	
				%BFFS AM (PM)	LOS AM (PM)
NE 37th Place to Median Opening 1	NB	2	52	64.0 (64.6)	C (C)
	SB	2	52	75.6 (68.3)	B (B)
Median Opening 1 to Median Opening 2	NB	2	51	63.9 (63.3)	C (C)
	SB	2	51	73.3 (65.9)	B (C)
Median Opening 2 to Median Opening 3	NB	2	51	66.5 (64.9)	C (C)
	SB	2	51	76.5 (69.0)	B (B)
Median Opening 3 to Florida's Turnpike SB ramps	NB	2	51	43.5 (47.1)	D (D)
	SB	2	51	76.9 (70.4)	B (B)
Florida's Turnpike SB to NB ramps	NB	2	47	66.0 (68.1)	C (B)
	SB	2	47	71.9 (69.6)	B (B)
Florida's Turnpike NB ramps to SR 44	NB	2	46	50.4 (40.2)	C (D)
	SB	2	46	57.4 (40.7)	C (D)

Table 4-12 | Alternative 1 Multi-Lane Segment LOS

Segments	Dir.	2042	
		Density (pc/mi/in) AM (PM)	LOS AM (PM)
CR 470 (E) to CR 525	NB	14.3 (11.9)	B (B)
	SB	12.3 (14.3)	B (B)

4.3.2.4 Alternative 2 Build Operational Analysis

This section evaluates traffic operations for the opening (2022), interim (2032), and design (2042) analysis years of the four-lane US 301 alternative with a realignment around the City of Coleman (Alternative 2). It assumes US 301 within the study corridor to be four-lane and keeping the same alignment as the future no-build alternative south of CR 525 and north of CR 468. The realignment is planned to be a four-lane divided highway between the intersection at CR 525 and intersection at CR 468. The analysis includes evaluations of segments along US 301 and realignment, as well as intersections within the study area, for Alternative 2.

4.3.2.4.1 Alternative 2 Intersection Analysis

In this Build alternative, the south leg of CR 525 intersection and the east leg of CR 523 intersection would become cul-de-sacs, and two new "T" intersections near CR 525 and CR 523 along the realignment are expected to serve the traffic from/to the City of Coleman and CR 525. The key intersection lane configurations of Alternative 2 are shown in Figure 4-15. A separate analysis of the US 301 and CR 525 intersection was performed as a "plus" intersection with four approaches, and is shown in Section 4.3.2.4.3.

The following assumptions of intersection lane configurations were made to accommodate the future US 301 four-lane widening project:

- The intersection of US 301 and CR 470 E was analyzed with dual turn lanes for SBL, NBR, WBL, and WBR movements;
- The intersection of US 301 and CR 525 was analyzed with dual turn lanes for SBL movements, single turn lane for EBL and WBR, one shared lane for SBT and SBR, one shared lane for NBL, NBT and NBR;
    - An additional analysis of this intersection was performed with four approaches, with dual lanes for EBT, EBR, NBL, and WBL, and then one dedicated WBT lane with an additional shared lane for WBT and WBR.
- The new intersection of the US 301 Realignment and CR 525 was analyzed with dual turn lanes for SBR, NBL, EBL, and EBR movements;
- The new intersection of the US 301 Realignment and Stokes Street was analyzed with single turn lanes for SBR, NBL, and EBL movements, one shared lane for EBL and EBR movements;
- The intersection of US 301 and CR 468 was analyzed with dual turn lanes for SBL and WBL to serve the high travel demand between US 301 and CR 468, single turn lane for NBR and WBR;
- The intersection of US 301 and SR 44 was analyzed with dual turn lanes for WBL, NBL, EBL, and SBL, single turn lanes for WBR, NBR, EBR, and SBR; and
- All the other unsignalized intersections were analyzed with left-turn lanes from the mainline approaches if applicable.

Table 4-13 provides a summary of the intersection LOS analysis results for 2042 under the realignment build alternative described above. Intersection peak hour turning movement volumes and LOS results are illustrated in Figure 4-16 and Figure 4-17.

Table 4-13 | Intersection LOS Summary – Realignment Build Alternative

#	Intersection	Control	Peak Hour	2042	
				Delay[1]	LOS[1]
1	US 301 & C 470 (E)	Signalized	AM	>80	F
			PM	23.2	C
2	US 301 & Shady Brook Dr	TWSC	AM	25	D
			PM	29.1	D
3	US 301 & NE 13th Ave	TWSC	AM	>50	F
			PM	15.5	C
4	US 301 & NE 16th Ave	TWSC	AM	50	F
			PM	>50	F
5	US 301 & NE 19th Rd	TWSC	AM	>50	F
			PM	13.7	B
6	US 301 & C 525	Signalized	AM	17.4	B
			PM	20.4	C
7	US 301 & Anderson Rd	TWSC	AM	15.9	C
			PM	17.6	C
8	US 301 & Clark Ave	TWSC	AM	13.3	B
			PM	14.2	B
9	Commercial St & Warm Springs Ave	Signalized	AM	9.9	A
			PM	10.9	B
10	Church St & US 301	TWSC	AM	16.6	C
			PM	17.9	C
11	Hubbs St & US 301	TWSC	AM	18.1	C
			PM	19.4	C
12	Stokes St/C 523 & US 301	TWSC	AM	21.1	C
			PM	25.6	D
13	US 301 & C 468	Signalized	AM	20.3	C
			PM	22.1	C
14	US 301 & C 521	TWSC	AM	>50	F
			PM	>50	F
15	US 301 & NE 37th Pl	Signalized	AM	11.1	B
			PM	9.0	A
21	US 301 & Median Opening 1	Signalized	AM	11	B
			PM	10.1	B
22	US 301 & Median Opening 2	Signalized	AM	11.2	B
			PM	9.6	A
23	US 301 & Median Opening 3	Signalized	AM	12.1	B
			PM	9.4	A
16	US 301 & Florida's Turnpike SB Ramps	Signalized	AM	23	C
			PM	15.3	B
17	US 301 & Florida's Turnpike NB Ramps	Signalized	AM	8.4	A
			PM	19.4	B
18	US 301 & Clay Drain Rd	TWSC	AM	>50	F
			PM	>50	F
19	US 301 & Spring Lake Rd	TWSC	AM	>50	F
			PM	>50	F
20	US 301 & SR 44	Signalized	AM	>80	F
			PM	72.3	E

Table 4-13 | Intersection LOS Summary – Realignment Build Alternative

#	Intersection	Control	Peak Hour	2042	
				Delay[1]	LOS[1]
24	C 523 & Truck Route	Signalized	AM	14.8	B
			PM	12.8	B
25	C 525 & Truck Route	Signalized	AM	31.5	C
			PM	28.3	C

[1]Control delays for unsignalized intersections are for worst approach

Figure 4-15 | Alternative 2 – Lane Configuration

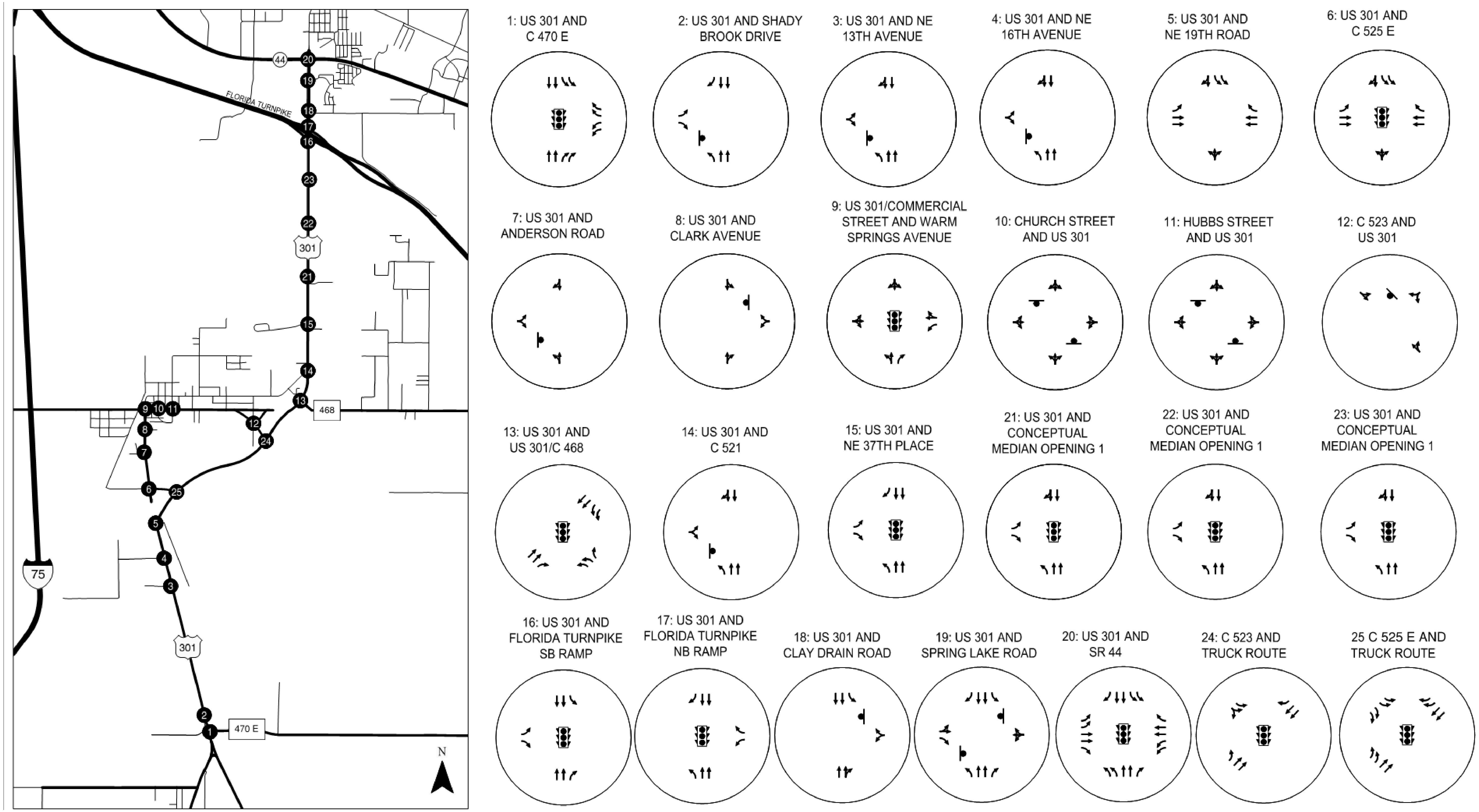


Figure 4-16 | 2042 Alternative 2 – AM/PM Peak-Hour Volumes and LOS – Part A

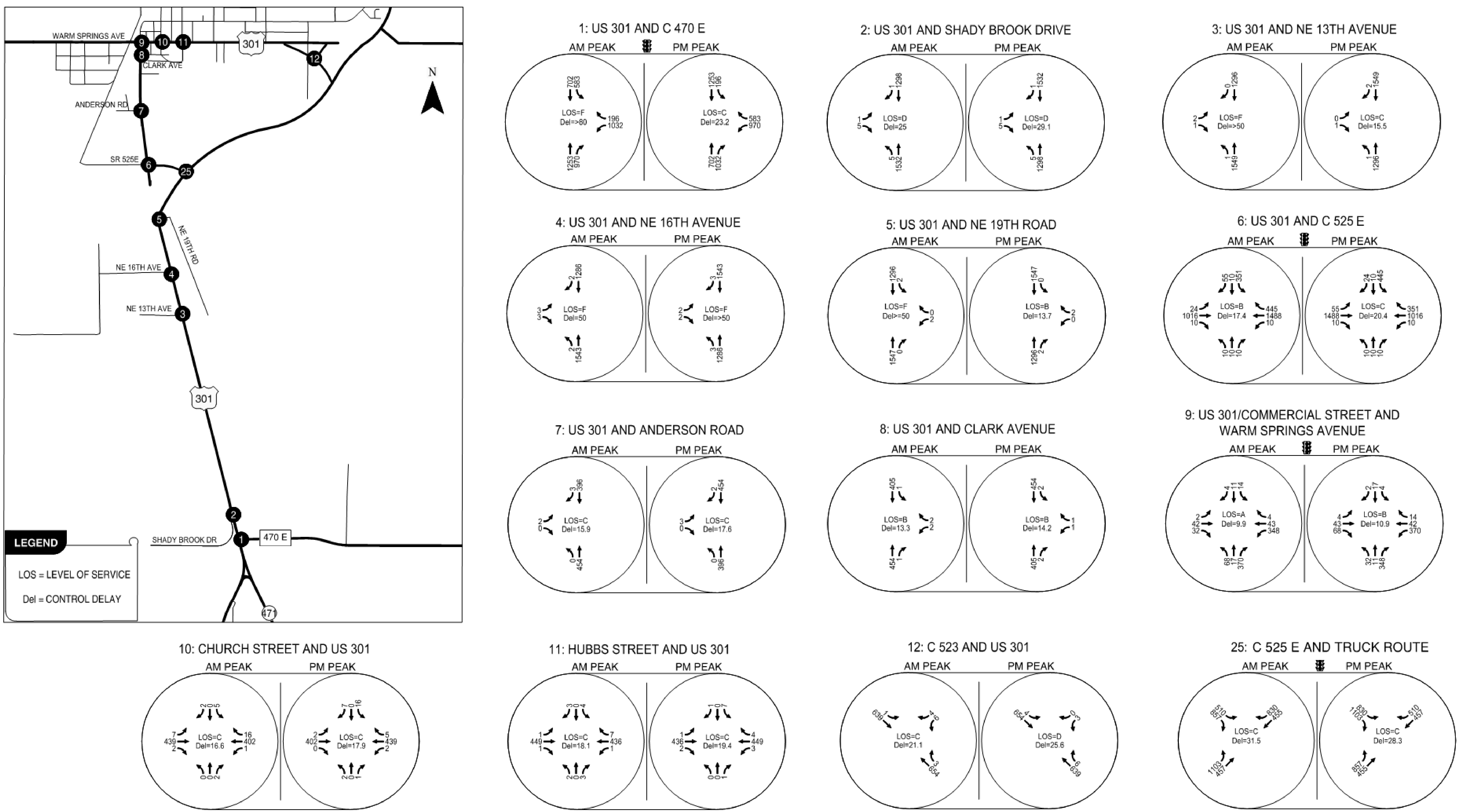
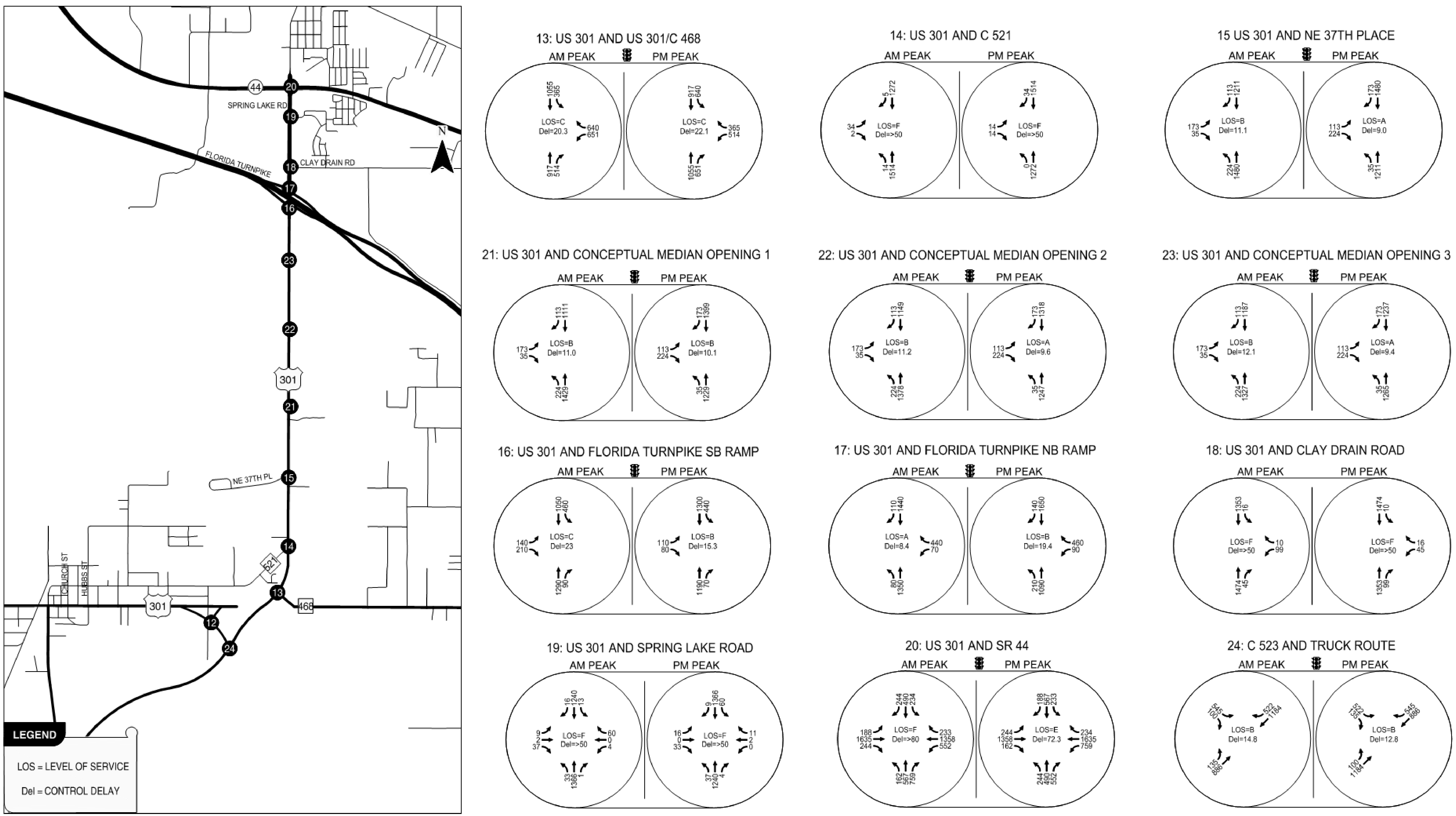


Figure 4-17 | 2042 Alternative 2 – AM/PM Peak-Hour Volumes and LOS – Part B



4.3.2.4.2 Alternative 2 Build Segment Analysis

Eleven roadway segments were analyzed, including the same ten segments analyzed as the previous alternative along US 301, with a new realignment segment south of the City of Coleman:

- CR 470 East to CR 525 East
- CR 525 East to Warm Springs Ave.
- Warm Springs Ave. to the proposed Realignment (US 301)
- CR 468 to NE 37th Place
- NE 37th Place to Median Opening 1
- Median Opening 1 to Median Opening 2
- Median Opening 2 to Median Opening 3
- Median Opening 3 to Florida's Turnpike southbound ramps
- Florida's Turnpike southbound ramps to Florida's Turnpike northbound ramps
- Florida's Turnpike northbound ramps to SR 44
- CR 525 East to CR 468 (realignment)

The segment from CR 470 East to CR 525 East was analyzed using HCS 2010 multi-lane segment analysis. All other segments were analyzed using a combination of Synchro 9.1 to determine the average segment speed, and the HCM to determine LOS based on percent of base free flow speed. Table 4-14 and Table 4-15 summarize the results from the segment analysis for Alternative 2. Detailed HCS and Synchro reports are provided in the DTTM under separate cover. An addendum detailing updated analysis to the segment of Florida's Turnpike northbound ramps to SR 44 is included as an attachment to the DTTM under separate cover.

All rural segments are expected to meet LOS standards for all future years for the truck route build alternative, with the exception of the northbound segment of Median Opening 3 to Florida's Turnpike southbound ramps in 2042. Additionally, the northbound segment from Florida's Turnpike northbound ramps to SR 44 is not expected to meet LOS standards in 2042. However, these LOS deficiencies could be addressed through improvements outside the scope of this study.

Table 4-14 | Realignment Build Alternative Multi-Lane Segment LOS

US 301 Segments	Dir.	2042 Density (pc/mi/in) AM (PM)	2042 LOS AM (PM)
C 470 (E) to C 525	NB	15.3 (12.9)	B (B)
	SB	13.3 (15.3)	B (B)

Table 4-15 | Realignment Build Alternative Multi-Lane Segment LOS

Segments	Dir.	No. of Lanes	BFFS (mph)	2042	
				%BFFS AM (PM)	LOS AM (PM)
Realignment* CR 525 to CR 468	NB	2	47	82.3 (79.4)	B (B)
	SB	2	47	59.6 (61.9)	C (C)
CR 525 to Warm Springs Ave	NB	1	50	72.0 (71.8)	B (B)
	SB	1	50	61.2 (57.4)	C (C)
Warm Springs Ave to Realignment	NB/EB	1	44	70.2 (73.0)	B (B)
	SB/WB	1	44	75.0 (74.5)	B (B)
CR 468 to NE 37th Place	NB	2	51	94.9 (93.3)	A (A)
	SB	2	51	85.5 (93.1)	A (A)
NE 37th Place to Median Opening 1	NB	2	52	64.4 (63.3)	C (C)
	SB	2	52	75.0 (67.9)	B (B)
Median Opening 1 to Median Opening 2	NB	2	51	64.3 (62.2)	C (C)
	SB	2	51	73.3 (65.1)	B (C)
Median Opening 2 to Median Opening 3	NB	2	51	67.5 (64.1)	B (C)
	SB	2	51	76.7 (68.6)	B (B)
Median Opening 3 to Florida's Turnpike SB ramps	NB	2	51	40.6 (47.5)	D (D)
	SB	2	51	77.8 (70.2)	B (B)
Florida's Turnpike SB to NB ramps	NB	2	47	64.7 (66.6)	C (C)
	SB	2	47	68.1 (66.6)	B (C)
Florida's Turnpike NB ramps to SR 44	NB	2	46	41.5 (40.2)	D (D)
	SB	2	46	65.9 (40.7)	C (D)

*The proposed Realignment was evaluated at a corridor level using the weighted average of all the sub-segments.

4.3.2.4.3 CR 525 East Intersection

With the analysis of Alternative 2 – US 301 Realignment, the intersection of CR 525 E would be designed as a plus intersection. This would result in all turning movements to be available at all four intersection approaches, as shown in Figure 4-18. The 2042 peak hour turning movement volumes were developed for this configuration of the CR 525 E intersection only, as all other intersections have the same volumes. The intersection was then analyzed to identify the future operating conditions. The future operating conditions are shown in Figure 4-19.

The CR 525 E intersection is expected to operate at LOS D during both peak hours with these lane configurations. The 95th percentile queues and recommended queue lengths are presented in Table 4-16. Detailed Synchro outputs are available in the DTTM under separate cover.

Figure 4-18 | CR 525 E Intersection Lane Configuration

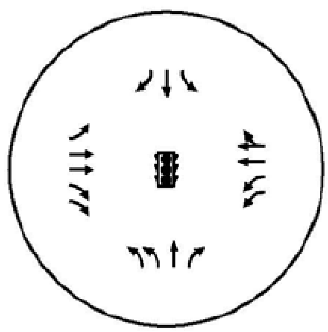


Figure 4-19 | CR 525 E Intersection AM/PM Peak Hour Volumes and Operating Conditions

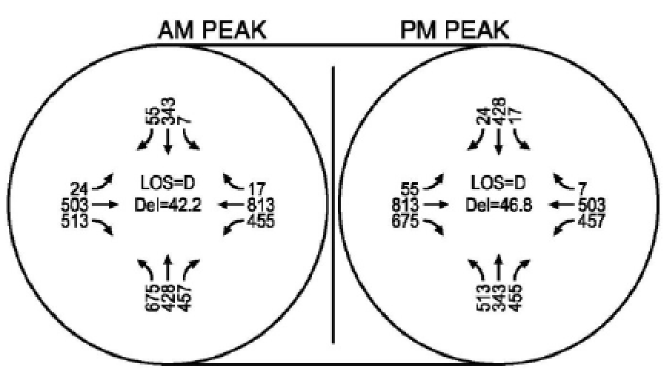


Table 4-16 | Summary of 2042 Design Year 95th Percentile Queuing Analysis – CR 525 Intersection

Segment	Intersection	Movement	95th Percentile Queue (ft)		Recommended Storage Length (ft)
			AM Peak	PM Peak	
US 301	CR 525 E	EBL	73	103	125
		EBR	338	410	425
		WBL	300	343	350
		NBL	428	375	450
		NBR	355	415	425
		SBL	10	25	25
		SBR	65	30	75

4.3.2.5 Intersection Options Analysis (Roundabout Evaluations)

This section summarizes the findings of the intersection options analysis and identifies the intersections where roundabouts were considered as opposed to standard signalized intersections. Additional information and specific analysis results are available in the Roundabout Screening Report available under separate cover.

4.3.2.5.1 Step 1 Screening

The following five intersections were evaluated for a Step 1 Roundabout Screening using the Florida Intersection Design Guide:

- No. 6 – CR 525 E
- No. 9 – Commercial Street/Warm Springs Avenue
- No. 13 – CR 468
- No.16 – SB Florida Turnpike Ramp
- No. 17 – NB Florida Turnpike Ramp

The Florida Intersection Design Guide describes the Step 1 Roundabout Screening as a checklist of screening criteria which are used to identify site specific conditions that are inconsistent with installation or operations of a roundabout. Each of the five identified intersections was evaluated on six criteria, summarized below, to determine if the intersection was consistent with the installation or operation of a roundabout:

1. Physical topography
2. Substantial volume bias to US 301 (greater than 90%)
3. Presence of pedestrians with special needs that would have difficulty crossing the road
4. Located within a coordinated signal network
5. Located in proximity of a signal where a downstream queue would back into the circulating roadway
6. Impacts that would preclude a Type I Categorical Exclusion or Non-Major State Action

Table 4-17 summarizes the intersections and Step 1 screening results:

Table 4-17 | Step 1 Roundabout Screening Summary

Intersection No.	Cross Street	Existing Traffic Control	Advance to Step 2
6	CR 525 E	2-Way Stop	**Yes**
9	Commercial Street and Warm Springs Avenue	Signal	No
13	CR 468	2-Way Stop	**Yes**
16	SB Florida Turnpike Ramp	2-Way Stop	**Yes**
17	NB Florida Turnpike Ramp	2-Way Stop	**Yes**

4.3.2.5.2 Step 2 Screening

The Step 2 Roundabout Screening is a benefit cost based analysis to compare the life cycle cost of a roundabout to a more traditional traffic control method such as signalization or stop control. For US 301, each intersection was evaluated assuming that a complete intersection reconstruction would be needed for either a roundabout or a signal to be put into place. Stop control was not considered an option for any of the four intersections.

FDOT has developed a Benefit/Cost Evaluation Spreadsheet tool which facilitates consistent Step 2 analyses. This spreadsheet blends planned information from the specific project with typical Florida values. The spreadsheet assigns values for the blended information for the following metrics:

- Safety Improvements
- Vehicular Delay (when available)
- Operations Improvements
- Maintenance Cost
- Design Cost
- Construction Cost
- Utility Relocation
- Right-of-Way Cost

A summary of the benefit cost ratios is shown in Table 4-18 along with the results of the Step 2 screening. The full analysis is included in the Roundabout Screening Report available under separate cover.

A detailed interchange analysis was performed to evaluate the roundabouts at either end of the Turnpike interchange (intersection no. 16 and 17). Although the north ramp terminal scored favorably in the benefit cost ratio, the interchange would require both intersections to operate acceptably together. Delay associated with a roundabout at the south ramp terminal (intersection no. 16) caused considerable cost increases leading to an unfavorable benefit cost of less than one, which results in neither the north or south ramp terminals advancing to the Step 3 Roundabout Screening.

Table 4-18 | Step 2 Roundabout Screening Summary

Intersection No.	Main Street	Cross Street	Existing Traffic Control	Benefit Cost Ratio of Roundabout Alternative	Advance to Step 3
6	US 301	CR 525 E	2-Way Stop	3.6	**Yes**
13	US 301	CR 468	2-Way Stop	3.2	**Yes**
16	Florida's Turnpike Southbound Ramps	US 301	2-Way Stop	< 1	No
17	Florida's Turnpike Northbound Ramps	US 301	2-Way Stop	8.5	No

4.3.2.5.3 Step 3 Screening

The Step 3 Roundabout Screening is a preliminary design review of a roundabout alignment, geometry and lane requirements. The preliminary design must meet sight distance criteria, accommodate all turning movements of the design vehicle, and control the operating speed of entering, circulating and exiting traffic. An operational analysis determines if the roundabout will accommodate projected traffic volumes at an acceptable level of service. Table 4-19 summarizes the results of the Step 3 screening results for design year 2042 without bypass lanes. The operational analysis with bypass lanes passes LOS criteria, as summarized in the Roundabout Screening Report available under separate cover.

Table 4-19 | Step 3 Roundabout Screening Summary

	US 301 & CR 525 E (No. 6)	US 301 & CR 468 (No. 13)
Operational Analysis Results		
North Approach Control Delay: AM (PM)	13.4 (12.7) s	16.6 (13.8) s
East Approach Control Delay: AM (PM)	213.6 (28.8) s	63.9 (12.7) s
South Approach Control Delay: AM (PM)	15.8 (27.6) s	17.4 (202.9) s
West Approach Control Delay: AM (PM)	7.8 (58.8) s	150.4 (129.4) s
North Approach LOS: AM (PM)	B (B)	B (B)
East Approach LOS: AM (PM)	F (C)	E (B)
South Approach LOS: AM (PM)	B (C)	B (F)
West Approach LOS: AM (PM)	A (E)	F (F)
Geometric Performance Check Results		
Swept Path of Design Vehicle Accommodated	Yes	Yes
Intersection Sight Distance Satisfied	Yes	Yes
Fastest Path Entry Speed between 20 and 25 mph for single lane entries and between 25 and 30 mph for two lane entries	Yes	Yes

Note: The operational and geometric analyses were performed for design year 2042 conditions without bypass lanes. The operational analysis with bypass lanes passes LOS criteria, as reported in the Roundabout Screening Report (under separate cover).

4.3.2.5.4 Roundabout Recommendations

Of the locations evaluated, the intersections of US 301 & CR 525 East and US 301 & CR 468 are recommended to be constructed as roundabouts with the selection of either build alternative. The full analysis is included in the Roundabout Screening Report available under separate cover. The design of both roundabouts are shown in the concept plans in Appendix A and Appendix B.

4.3.3 Engineering Analysis

4.3.3.1 Access Management

Access management will be implemented due to the addition of the median. The access management criteria address the spacing of driveways and intersections along the corridor. The full evaluation is included in the Access Management Report under separate cover.

4.3.3.1.1 Access Management Classification

The access classification should be consistent with the facility design features of the improved roadway along with existing and future development. It is proposed to have Access Management criteria based on implementation of the main two alternatives: the Widening through Coleman and Widening with Realignment South of Coleman. Based on this approach for the purpose of Access Management, the project can be divided into four sections, with two alternatives for Section 2:

- Section 1. CR 470 E to CR 525 E: Widening from two-lanes to four-lanes as a divided roadway on the existing alignment. This is the same improvement for both Alternatives. The existing and proposed posted speed is 55 mph. The existing Access Class is 4 and the recommended Access Class is 3.
- Section 2A. Widening through Coleman (CR 525 E to CR 521): Widening from two-lanes to four-lanes as a divided roadway on the existing alignment of US 301. The existing speed varies from 35 to 45 mph, and the proposed speed is the same. The existing Access Class is 4 and the recommended Access Class is 5.
- Section 2B. Coleman Realignment (CR 525 E to CR 521): US 301 Realignment as a four-lane divided roadway. The proposed posted speed is 55 mph and the recommended Access Class is 3.
- Section 3. CR 521 to Florida’s Turnpike: Widening from two-lanes to four-lanes as a divided roadway on the existing alignment. The existing and proposed posted speed is 55 mph. The existing Access Class is 4 and the recommended Access Class is 3.
- Section 4. Florida’s Turnpike to SR 44: Improved four-lane divided roadway on the existing alignment. The existing and proposed posted speed limits have portions that are 40 and 45 mph and the existing and recommended Access Class is 5.

Considering the facility design features, proposed speed limits, and existing land uses adjoining the roadway, it is recommended to implement Access Management Class 3 for Sections 1, 2B, and 3, and Access Class 5 for Sections 2A and 4. The access management classifications and standards are defined in Table 4-20.

Table 4-20 | Arterial Access Management Classifications and Standards

Access Class	Medians	Connection Spacing (feet)		Median Opening Spacing		Signal Spacing (feet)
		> 45 MPH	≤ 45 MPH	Directional	Full	
3	Restrictive**	660	440	1320	2640	2640
5	Restrictive**	440	245	660	*2640/1320	*2640/1320

2640 feet for > 45 MPH, 1320 feet for ≤ 45 MPH
*****Restrictive – physically prevent vehicle crossing***

4.3.3.1.2 Access Management Changes

On the following pages, the recommended median opening locations are tabulated in Table 4-21 for the entire existing alignment and in Table 4-22 for the section where the realignment is proposed between CR 525 E and CR 521. Median opening locations indicated with an ✖ represent a deviation from FDOT Access Management Standards. Each median opening has been assigned a unique identification number for reference, and they are shown on a series of maps in Appendix G.

It is important to note that the proposed median openings account for both needs related to existing driveways and roadway connections to the US 301 project corridor, and for potential future median openings to account for future development opportunities. These potential future median openings are subject to adjustment based on actual future development activities within the US 301 project corridor and are subject to future permitting by FDOT.

Table 4-21 | Proposed Median Openings & Spacing – Existing Alignment

Posted Speed (mph)	Access Class	Median Opening ID #	Description	Mile Post	Median Opening Type (Full or Directional)	Spacing Evaluation			
						Directional		Full	
						Distance Between Openings (ft)	Satisfies Spacing Criteria (+/- 10%)	Distance Between Full Openings (ft)	Satisfies Spacing Criteria (+/- 10%)
55	3	1	CR 470 E	14.672	Full	-		-	
						829*	×		
		2	Shady Brook Dr.	14.829	2-Way Dir.			2,577	✓
						1,746	✓		
		3	Driveway (Cowart Ranch)	15.160	Full				
						1,517	✓		
		4	Future Median Opening	15.447	2-Way Dir.			3,490	✓
						1,973	✓		
		5	Shady Brook Park, City of Coleman	15.821	Full				
						1,286	✓		
		6	NE 13th Ave.	16.065	2-Way Dir.			2,688	✓
						1,399	✓		
		7	NE 16th Ave.	16.330	Full				
						1,764	✓		
		8	NE 19th Rd.	16.664	2-Way Dir.			3,490	✓
						1,727	✓		
		9	CR 525 E	16.991	Full				
						1,727	✓	1,727	✓
45	5	10	Anderson Rd.	17.318	Full				
						875	✓		
		11	Driveway	17.483	2-Way Dir.				
						620	✓	2,328	✓
		12	Driveway	17.603	2-Way Dir.				
35						600	✓		
		13	Commercial St. / Warm Springs Ave. (Realignment)	17.759	Full				
						506	×		
		14	Church St.	17.855	2-Way Dir.			1,188	✓
						680	✓		
		15	S. Hubbs St.	17.984	Full				

Posted Speed (mph)	Access Class	Median Opening ID #	Description	Mile Post	Median Opening Type (Full or Directional)	Spacing Evaluation: Directional – Distance Between Openings (ft)	Spacing Evaluation: Directional – Satisfies Spacing Criteria (+/- 10%)	Spacing Evaluation: Full – Distance Between Full Openings (ft)	Spacing Evaluation: Full – Satisfies Spacing Criteria (+/- 10%)
						401	×		
35		16	City Hall Driveway	18.060	WB Dir.			982	×
						580	×		
		17	Sherman St.	18.170	Full				
						920	✓		
		18	Future Median Opening	18.344	2-Way Dir.			1,637	✓
						720	✓		
		19	Mizell St.	18.480	Full				
	5					1,336	✓	1,336	✓
		20	Stokes St. / CR 523	18.733	Full				
45						1,350	✓		
		21	Driveway (Trinity Baptist Church)	18.989	2-Way Dir.			2,418	✓
						1,066	✓		
		22	CR 468 (Relocated)	19.191	Full				
						1,653	✓	1,653	✓
		23	CR 521	19.504	Full				
						1,375	✓		
		24	Driveway (D&S Salvage)	19.764	2-Way Dir.			2,318	×
						947	×		
		25	NE 37th Pl.	19.943	Full				
						1,635	✓		
		26	Driveway (Wildwood Off Road Park)	20.253	NB Dir.				
55	3					1,933	✓		
		27	NE 41st Ln.	20.308	SB Dir.				
						1,640	✓		
		28	Potential Future Median Opening	20.619	SB Dir. NB Dir.**			6,209	✓
						1,320	✓		
		29	Potential Future Median Opening	20.869	2-Way Dir.				
						1,320	✓		

Posted Speed (mph)	Access Class	Median Opening ID #	Description	Mile Post	Median Opening Type (Full or Directional)	Spacing Evaluation			
						Directional		Full	
						Distance Between Openings (ft)	Satisfies Spacing Criteria (+/- 10%)	Distance Between Full Openings (ft)	Satisfies Spacing Criteria (+/- 10%)
55	3	30	Potential Future Median Opening	21.119	Full				
						1,320	✓	2,640	✓
		31	Potential Future Median Opening	21.369	SB Dir. NB Dir.***				
						1,320	✓		
45	5	32	SB Florida's Turnpike Ramp	21.619	Full (Ramp)				
								775	×
		33	NB Florida's Turnpike Ramp	21.766	Full (Ramp)				
						575	✓	1,663	✓
		34	Driveway (Villager RV Park)	21.875	NB Dir.				
						685	✓		
		35	Clay Drain Rd.	21.896	SB Dir.				
						976	✓		
		36	Driveway	22.081	Full				
						686	✓	1,658	✓
40		37	Spring Lake Rd.	22.211	2-Way Dir.				
						972	✓		
		38	SR 44	22.395	Full				

** The distance between Shady Brook Drive and CR 470 increases to 1,774 feet with the implementation of the CR 470 realignment that is proposed as a part of the CR 470 PD&E*

*** For the first median opening north of 41St Ln, the northbound directional is conceptual only. The southbound directional provides access to an existing residential home.*

****For the first median opening south of the interchange, the northbound directional is Potential Future only. The southbound provides for U-turns south of the interchange.*

Table 4-22 | Proposed Median Openings & Spacing – Realignment Section

Posted Speed (mph)	Access Class	Median Opening ID #	Description	Mile Post	Median Opening Type (Full or Directional)	Spacing Evaluation			
						Directional		Full	
						Distance from Previous Opening (ft)	Satisfies Spacing Criteria (+/- 10%)	Distance from Previous Full Opening (ft)	Satisfies Spacing Criteria (+/- 10%)
55	3					1,727	✓	3,491	✓
		9	CR 525 E*	16.991	Full				
								3,910	✓
		39	Future Median Opening		Full**				
								2,640	✓
		40	Future Median Opening		Full**				
						1,450	✓	3,400	✓
		41	Potential Future Median Opening		2-Way Dir.				
						1,950	✓		
		42	CR 468 Relocated		Full				
								1,784	×
		23	CR 521***		Full				

**Measurements to preceding mainline US 301 median openings.*

***To be constructed as Full Openings in order to allow access and U-turns to adjacent residences south of the new alignment. Left turn lanes do not need to be constructed initially just to serve these individual residences.*

****Full median opening provided at CR 521 to provide emergency access for the Fire Station located at 3290 CR 521, Wildwood.*

4.3.3.2 Shady Brook Bridge

4.3.3.2.1 Typical Section Analysis

The Shady Brook Bridge is located within roadway Segment 2 of the US 301 study. The Best Fit Alternative alignment through this segment of the project holds the existing east right-of-way line and widens US 301 to the left. The primary factor contributing to the Left Alternative alignment recommendation was avoidance of impacts to Shady Brook Park located immediately east of the bridge. Based on the Best Fit alignment, three typical section alternatives were evaluated for the Shady Brook Bridge.

Bridge Alternative 1 – New Single Structure

This alternative replaces the existing bridge in its entirety with a new wider structure. The proposed bridge typical section is median barrier separated featuring four 12 ft lanes, 6 ft inside shoulders, 10 ft outside shoulders and barrier separated 5 ft sidewalks on both sides of the bridge. The section is crowned at the centerline with 2% cross slopes to each side and has a total width of 96.67 ft which is illustrated in Figure 4-20.

Bridge Alternative 2 – New Dual Structures

This alternative replaces the existing bridge in its entirety with new twin structures that carry northbound and southbound traffic independently. The typical section for each bridge features two 12 ft lanes, 6 ft inside shoulder, 10 ft outside shoulder and a barrier separated 5 ft sidewalk for a total width of 48.67 ft. The bridges are set 20 ft apart as illustrated in Figure 4-21.

Bridge Alternative 3 – Widen Existing Structure & Build New Southbound Structure

This alternative widens the existing northbound bridge, and constructs a new bridge for southbound traffic. The typical section for each bridge will consist of two 12 ft lanes, 6 ft inside shoulder, 10 ft outside shoulder and a barrier separated 5 ft sidewalk for a total width of 48.67 ft. The bridges are set 20 ft apart as illustrated in Figure 4-22.

It is noted that FDM Section 260.4 requires bridges with one-way traffic to have a single uniform cross slope. This requirement cannot be satisfied when widening the existing bridge because it has a crowned typical section. Through discussion with the FDOT District Five staff, it was clarified that the language in Section 260.4 is intended for newly constructed bridges. Since the existing crowned bridge is functionally and structural adequate, the District will support retaining and widening the existing structure as part of the four-laning without requiring it to meet the constant cross slope criteria. A separate Design Memo has been prepared to document the evaluation of the existing bridge and substantiate the widening.

Figure 4-20 | Bridge Alternative 1 – Typical Section

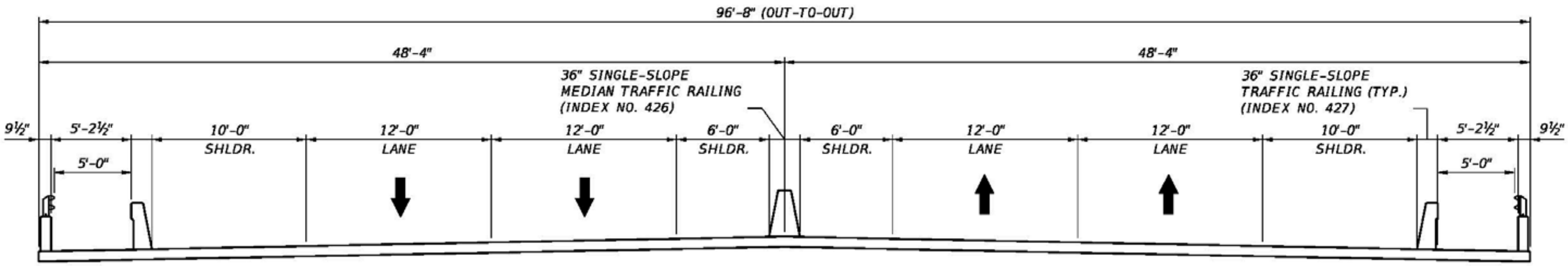


Figure 4-21 | Bridge Alternative 2 – Typical Section

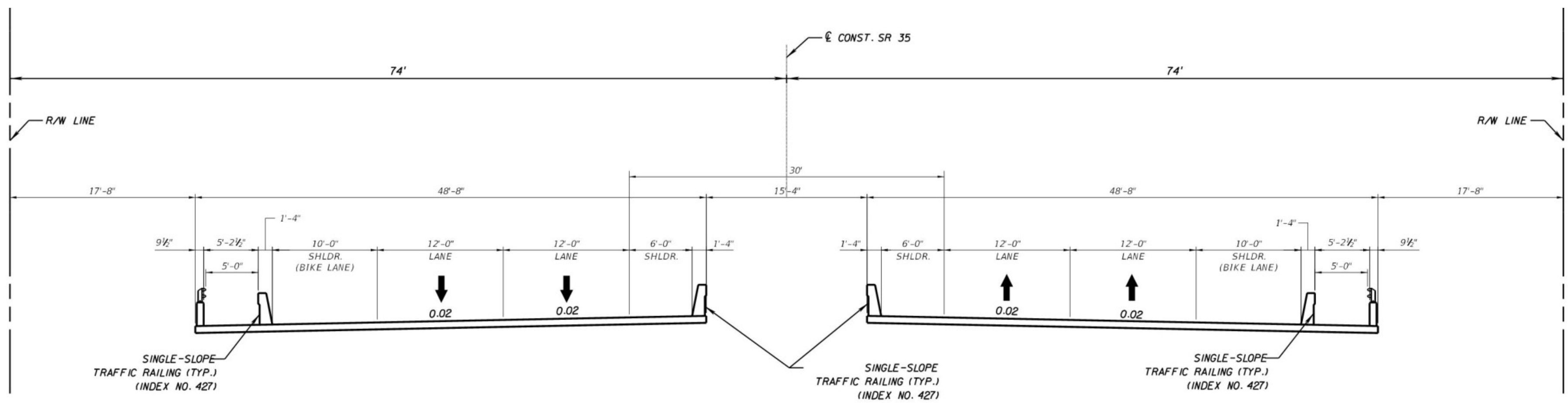
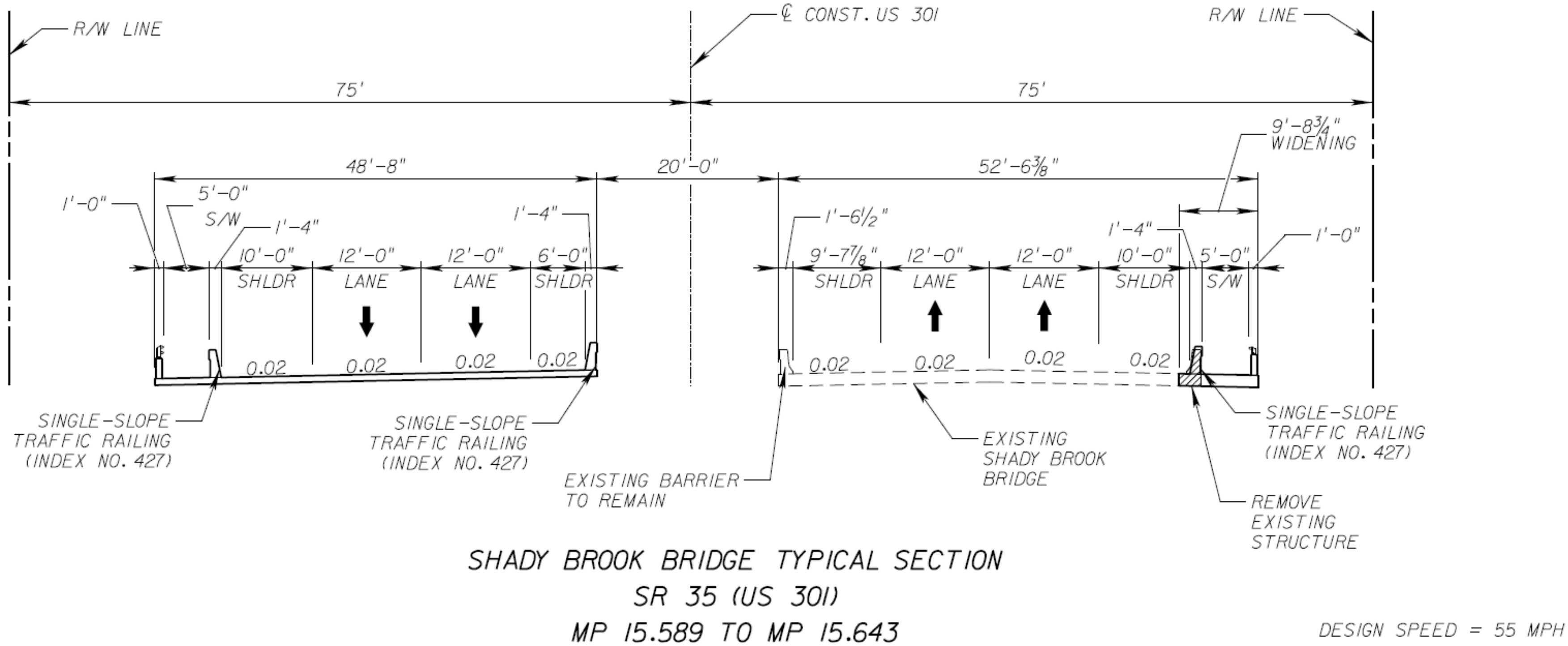


Figure 4-22 | Bridge Alternative 3 – Typical Section



4.3.3.2.2 Shady Brook Structure Recommendation

Selection of a proposed Shady Brook Bridge alternative is based on an evaluation of the three alternatives presented in Section 4.2.1 with respect to functionality, constructability, maintenance and construction cost.

Functionality: All three alternatives will accommodate the 4-laning of US 301 over Shady Brook providing the requisite shoulder widths and barrier separated 5'-0" sidewalks. However, the dual structure configuration of Alternatives 2 and 3 will provide better access for future inspection between northbound and southbound structures. Additionally, separate northbound and southbound structures can be aligned with the proposed roadway approaches without need for reverse curve realignment shifts at the bridges. It is noted that Alternative 3 will require a Design Memo to substantiate the conversion of an existing crowned two-way section to a one-way dual lane section.

Constructability: The dual structure configuration of Alternatives 2 and 3 offers two advantages over the single structure configuration of Alternative 1. These advantages include simplified phasing with independent construction of northbound and southbound bridges proving less disruption to existing traffic pattern due to simplified construction phasing.

Maintenance: All three alternatives will have the same superstructure type (CIP reinforced concrete slab) and substructure type (pile bents) therefore long term maintenance requirements will be the same for all three alternatives.

Cost: Bridge cost is a function of structure type and total bridge area. Since the same superstructure and substructure type are proposed for all three alternatives, the differentiating cost factor is total bridge area. The following is a breakdown of total new bridge area for each alternative:

- Alternative 1 = 11,417 sq ft
- Alternative 2 = 11,496 sq ft
- Alternative 3 = 6,916 sq ft

Alternative 3 provides the clear advantage in the cost category with approximately 40% less new bridge to construct and minimal demolition/reconstruction of the existing bridge.

The comparative evaluation of the structural alternatives shows the dual bridge configuration of Alternatives 2 and 3 provides clear advantages in constructability and functionality versus the single bridge configuration of Alternative 1. Furthermore, Alternative 3 was shown to be the most economical solution of the three options from a total bridge area perspective. Therefore Alternative 3 is the proposed configuration for the Shady Brook Bridge 4-laning.

A conventional three-phase construction sequence can be expected to complete the 4-laning of the Shady Brook Bridge. Using the proposed Alternative 3 bridge typical section, the phasing would be as follows:

- Phase 1: Construct new southbound bridge offset to the left of existing bridge while maintaining northbound and southbound traffic on existing bridge.
- Phase 2: Shift southbound traffic onto new southbound bridge and widen existing bridge.
- Phase 3: Final configuration with second northbound lane on widened existing bridge opened to traffic.

4.3.3.2.3 Aesthetics

A Level One aesthetic is recommended for the Shady Brook Bridge given it is a low-level water crossing in a rural location.

4.3.3.3 Interchange Alternative Analysis

In coordination with FDOT District Five and the Florida's Turnpike Enterprise (FTE), the Florida's Turnpike interchange at US 301 is being analyzed as part of this US 301 PD&E Study. For this analysis the interchange concepts incorporated a four-lane typical section on US 301 and an eight lane typical section on the Turnpike. The interchange configurations that are assessed, in coordination with both agencies, include:

- No-Build
- Tight Urban Diamond Interchange (TUDI)
- Diverging Diamond Interchange (DDI)

A calibrated existing conditions model and a future year VISSIM model for each alternative was developed and each alternative was run 10 times for results comparison. The traffic analysis for the development of the interchange alternatives is available under separate cover.

4.3.3.3.1 Proposed Lane Geometry

The proposed lane geometry for the TUDI and DDI Alternative is shown in Figure 4-23 and Figure 4-24. The analysis did not show that exclusive turn bays are required for the northbound and southbound right turn movements. The 100-foot storage bays are provided for safety purposes.

The following is a preliminary review of the requirements for each alternative from a design perspective:

- No-Build Concept
  - Two-way stop control, with the ramps stopping and arterial movements being free
  - Left turns yield to oncoming traffic
- Tight Urban Diamond Interchange (TUDI)
  - Signal is controlled with dual left turns.
  - Requires replacement of the existing Turnpike bridges.
  - Significantly easier Maintenance of Traffic (MOT) during construction than the other alternatives.
- Diverging Diamond Interchange (DDI)
  - Signal controlled with single left turns
  - Requires replacement of the existing Turnpike bridges.

Figure 4-23 | Tight Urban Diamond Interchange Configuration

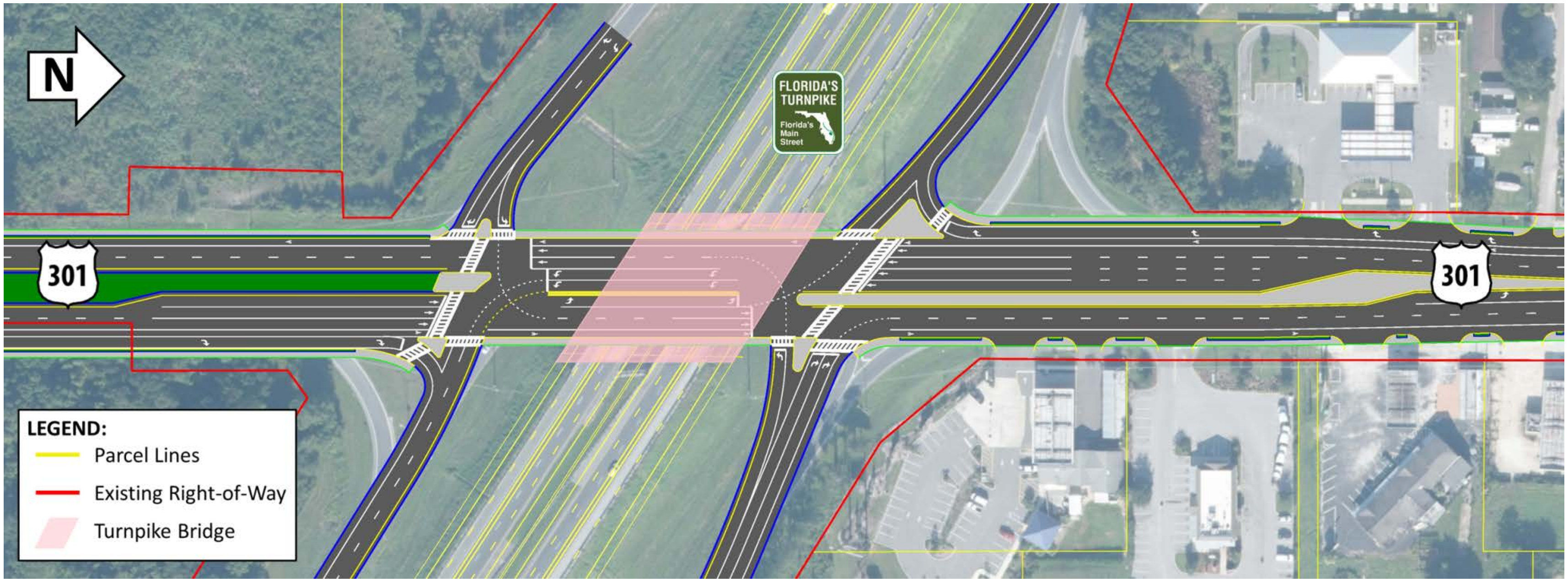
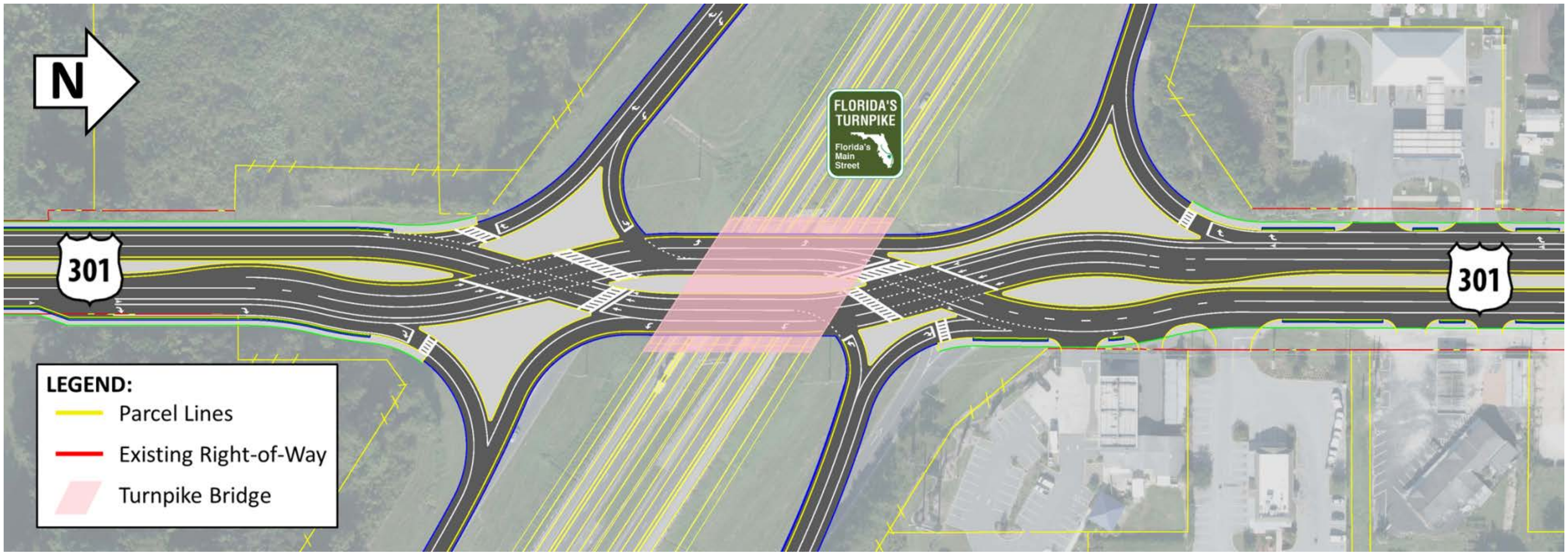


Figure 4-24 | Diverging Diamond Interchange Configuration



4.3.3.3.2 Interchange Traffic Operations

The traffic operations analysis was performed using Synchro (Version 8) and VISSIM (Version 9) software. Synchro was primarily used to estimate initial lane geometry requirements, optimize signal timing and determine Level of Service (LOS). VISSIM, a microsimulation program that takes into consideration vehicle and network elements interactions, was further used to verify the geometry and to estimate travel time, delay and speed for the overall network, freeway segments and intersections. The VISSIM network model included US 301 ramp terminal interactions and Turnpike mainline. The VISSIM model was first developed for the 2014 base year to model existing peak period conditions. The No-Build and Build alternatives were then evaluated for both 2042 AM and PM peak period conditions.

The VISSIM LOS and delay is presented in Table 4-23 and Table 4-24. Results show that traffic operations at the ramp terminal intersections would be unacceptable (LOS E) in 2042 design year under No-Build interchange conditions assuming unsignalized intersections. When the intersections are signalized, operations would be within acceptable levels (LOS D or better) for both TUDI and DDI.

Table 4-23 | 2042 VISSIM Intersection Performance - AM

Intersection	No Build		TUDI		DDI	
	Delay	LOS	Delay	LOS	Delay	LOS
Florida Turnpike @ 301 N Terminal	68.2	E	11.6	B	30.4	C
Florida Turnpike @ 301 S Terminal	18.3	B	24.5	C	20.5	C

Table 4-24 | 2042 VISSIM Intersection Performance - PM

Intersection	No Build		TUDI		DDI	
	Delay	LOS	Delay	LOS	Delay	LOS
Florida Turnpike @ 301 N Terminal	68.0	E	17.8	B	29.4	C
Florida Turnpike @ 301 S Terminal	50.4	D	21.3	C	19.3	B

The VISSIM network performance measures for the worst 30 minute periods 2042 design year are summarized in Table 4-**25** and Table 4-26. Network statistics were also captured for the existing conditions, future no-build, and future build alternatives. The results of this analysis are shown in Table 4-27 and Table 4-28.

Table 4-25 | 2042 AM Peak Hour VISSIM Intersection Performance

Intersection	Northbound			Southbound			Eastbound			Westbound			Overall
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Input Volumes (Demand)													
US 301 & TPK NB Ramps	80	1,350	-	-	1,440	110	-	-	-	70	-	440	3,490
US 301 & TPK SB Ramps	-	1,290	90	460	1,050	-	140	-	210	-	-	-	3,240
TUDI													
Percent Served													
US 301 & TPK NB Ramps	101%	100%	-	-	100%	98%	-	-	-	103%	-	99%	100%
US 301 & TPK SB Ramps	-	100%	100%	99%	101%	-	101%	-	100%	-	-	-	100%
Average Delay (Seconds) for the worst 30 minute period													
US 301 & TPK NB Ramps	28	2	-	-	19	14	-	-	-	44	-	10	12
US 301 & TPK SB Ramps	-	35	18	46	4	-	46	-	13	-	-	-	25
Average and (Maximum) Queue in Feet for the worst 30 minute period													
US 301 & TPK NB Ramps	16	16	-	-	24	0	-	-	-	22	-	25	17
	(151)	(151)	-	-	(395)	(33)	-	-	-	(212)	-	(311)	(426)
US 301 & TPK SB Ramps	-	126	2	84	84	-	54	-	6	-	-	-	54
	-	(754)	(82)	(346)	(346)	-	(384)	-	(192)	-	-	-	(756)
DDI													
Percent Served													
US 301 & TPK NB Ramps	103%	100%	-	-	100%	97%	-	-	-	103%	-	99%	100%
US 301 & TPK SB Ramps	-	100%	100%	99%	101%	-	101%	-	99%	-	-	-	100%
Average Delay (Seconds) for the worst 30 minute period													
US 301 & TPK NB Ramps	1	9	-	-	63	24	-	-	-	21	-	14	32
US 301 & TPK SB Ramps	-	43	26	3	4	-	28	-	10	-	-	-	21
Average and (Maximum) Queue in Feet for the worst 30 minute period													
US 301 & TPK NB Ramps	40	40	-	-	302	0	-	-	-	9	-	37	77
	(238)	(238)	-	-	(1089)	(44)	-	-	-	(154)	-	(341)	(1089)
US 301 & TPK SB Ramps	-	174	3	12	12	-	26	-	8	-	-	-	44
	-	(774)	(76)	(113)	(113)	-	(276)	-	(163)	-	-	-	(774)

- Not applicable

Table 4-26 | 2042 PM Peak Hour VISSIM Intersection Performance

Intersection	Northbound			Southbound			Eastbound			Westbound			Overall
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Input Volumes (Demand)													
US 301 & TPK NB Ramps	210	1,090	-	-	1,650	140	-	-	-	90	-	460	3,640
US 301 & TPK SB Ramps	-	1,190	70	440	1,300	-	110	-	80	-	-	-	3,190
TUDI													
Percent Served													
US 301 & TPK NB Ramps	100%	98%	-	-	99%	99%	-	-	-	101%	-	98%	99%
US 301 & TPK SB Ramps	-	98%	99%	98%	99%	-	103%	-	105%	-	-	-	99%
Average Delay (Seconds) for the worst 30 minute period													
US 301 & TPK NB Ramps	48	2	-	-	27	16	-	-	-	53	-	8	18
US 301 & TPK SB Ramps	-	28	16	57	3	-	54	-	12	-	-	-	22
Average and (Maximum) Queue in Feet for the worst 30 minute period													
US 301 & TPK NB Ramps	72	72	-	-	71	0	-	-	-	33	-	19	37
	(311)	(311)	-	-	(715)	(51)	-	-	-	(246)	-	(285)	(715)
US 301 & TPK SB Ramps	-	71	1	103	103	-	45	-	2	-	-	-	42
	-	(571)	(58)	(371)	(371)	-	(256)	-	(80)	-	-	-	(577)
DDI													
Percent Served													
US 301 & TPK NB Ramps	99%	99%	-	-	99%	99%	-	-	-	100%	-	98%	99%
US 301 & TPK SB Ramps	-	99%	99%	98%	100%	-	104%	-	105%	-	-	-	100%
Average Delay (Seconds) for the worst 30 minute period													
US 301 & TPK NB Ramps	2	14	-	-	52	25	-	-	-	23	-	9	30
US 301 & TPK SB Ramps	-	45	22	3	3	-	20	-	9	-	-	-	20
Average and (Maximum) Queue in Feet for the worst 30 minute period													
US 301 & TPK NB Ramps	53	53	-	-	261	1	-	-	-	13	-	19	69
	(227)	(227)	-	-	(1118)	(71)	-	-	-	(130)	-	(292)	(1118)
US 301 & TPK SB Ramps	-	147	1	10	10	-	13	-	3	-	-	-	34
	-	(596)	(69)	(124)	(124)	-	(142)	-	(89)	-	-	-	(596)

- Not applicable

Table 4-27 | 2042 AM and PM Peak Period VISSIM Network Wide Statistics - AM

Parameter	Existing	No Build	TUDI	DDI
Total Travel Time (hr)	515	4,717	1,299	1,341
Total Delay Time (hr)	6	3659	108	140
Average Delay Time (sec/veh)	2	248	17	22
Latent Delay Time (hr)	0	2466	0	0
Number of Arrived Vehicles	10,213	22,320	25,042	25,046
Latent Vehicles	0	5823	0	0
Total Delay + Latent Delay (hr)	6	6125	108	140
Average Network Delay/Vehicle (sec/veh)	2	577	14	18

Table 4-28 | 2042 AM and PM Peak Period VISSIM Network Wide Statistics - PM

Parameter	Existing	No Build	TUDI	DDI
Total Travel Time (hr)	943	6,318	1,462	1,495
Total Delay Time (hr)	26	5,508	136	157
Average Delay Time (sec/veh)	6	357	18	22
Latent Delay Time (hr)	0	9,450	0	0
Number of Arrived Vehicles	18,075	16,526	27,795	27,792
Latent Vehicles	0	23,674	0	0
Total Delay + Latent Delay (hr)	26	14,958	136	157
Average Network Delay/Vehicle (sec/veh)	5	999	16	18

The results from Table 4-23 through Table 4-28 indicate the following:

1. Existing Year:
   a. With existing traffic, both ramp terminal intersections operate adequately with the stop controlled ramps. The critical movement ramp left turns have adequate gaps to turn and enter onto US 301.
2. Design Year No Build:
   a. The critical movement is the ramp lefts for both intersections. The ramp volume does not have adequate gaps and the left turn movements fail. The south ramp terminal intersection ramp approach backs up onto the freeway and off of the VISSIM network.
   b. The No Build alternative fails for both ramp terminal intersections due to low percent traffic served and long queues that spillback onto the freeway.
3. Design Year Tight Urban Diamond Interchange:
   a. At least 99% of traffic is served for both peak periods.
   b. The overall intersection operations for the AM and PM peaks (worst 30 minute period) for both ramp terminal intersections are at 25 seconds of delay or less per vehicle.

c. The EBL and SBL movements (critical movements) for both AM and PM peak hours are less than 57 seconds of delay per vehicle during the worst 30 minute period.

4. Design Year Diverging Diamond Interchange:
    a. At least 99% of traffic is served for both peak periods.
    b. The overall intersection delays are less than 32 seconds per vehicle in both the AM and PM peak hours during the worst 30 minute period.
    c. The movements with the most delay are the SBT and the NBT for both AM and PM peak hours and are less than 63 seconds of delay per vehicle during the worst 30 minute period.

4.3.3.3.3 Interchange Bridge Structures

The existing northbound and southbound Turnpike bridges over US 301 are recommended for replacement in the FTE commissioned preliminary engineering report for the Turnpike Widening from SR 50 to I-75. The replacement is proposed as a single combined northbound/southbound structure with an overall width of 157.08 ft. The length of the new bridge will depend on the final interchange configuration selected for this location. The two alternatives analyzed as part of the US 301 PD&E Study consist of a Tight Urban Diamond Interchange (TUDI) and a Diverging Diamond Interchange (DDI). The overall bridge length required to accommodate the TUDI option is approximately 170.0 ft. The overall bridge length required to accommodate the DDI option is approximately 162.0 ft.

Table 4-29 | Turnpike Bridge Over US 301

Interchange Alternative	Roadway Width (ft)	Clear Zone (ft)	Wall Offset (ft)	Total Bridge Length (ft)
DDI	112.00	18.00	7.00	162.00
TUDI	120.00	18.00	7.00	170.00

Both span lengths can be achieved with a single span structure consisting of either concrete Florida-I beams or steel plate girders. Historically a concrete superstructure is the most cost effective solution both in initial capital as well as for long term maintenance when compared to steel. However, final selection of a superstructure type will be determined by FTE.

4.3.3.3.4 Interchange Comparative Analysis & Recommendation

An evaluation matrix comparing the no-build alternative with the two build alternatives is shown below in Table 4-30. The differentiating factor between the two interchange alternatives is the potential reduction in crashes and their severity. National Cooperative Highway Research Program (NCHRP) research that is due to be published shows that DDIs have 39% fewer crashes than TDIs. The crashes that do occur have also been found to be less severe. This is due to the fact that DDIs have fewer vehicle conflict points, and the conflicts that do occur have fewer right angles.

All other comparative criteria are relatively equivalent. Each interchange alternative was designed within approximately the same footprint and staying within the existing right-of-way, thereby avoiding any additional environmental impacts within the area.

Based upon the analysis, the Diverging Diamond Interchange is proposed.

Table 4-30 | Interchange Alternatives Evaluation Matrix

Criteria	No-Build	TUDI	DDI
Design Year Traffic (2042) & Safety			
Potential Crash Reduction	Low	Medium – Low	Medium
Average Network Delay per Vehicle (sec/vehicle) AM/PM	577 / 999	14 / 16	18 / 18
US 301 & North Ramps Intersection LOS (AM / PM)	E / E	B / B	C / C
US 301 & South Ramps Intersection LOS (AM / PM)	B / D	C / C	C / B
US 301 NB Approach Average Delay (sec) & Maximum Queue Length (ft) – AM	F / 7495	C / 754	D / 774
US 301 NB Approach Average Delay (sec) & Maximum Queue Length (ft) – PM	F / 6925	C / 571	D / 596
Other			
Minimum Distance from a Ramp to Nearest Driveway (ft)	20	100	100
Parcel / Business Impacts	0 / 0	0 / 0	0 / 0
Bridge Length (ft)	N/A	170	162
US 301 Design Speed Through Interchange	45	45	35
Estimated Cost	-	$8,545,000	$8,531,000

4.3.3.4 ITS Technology

Intelligent transportation system (ITS) components and active management techniques may be incorporated into either build alternative under evaluation. Design elements recommended include:

- Fiber-optic connections between all roadway systems including but not limited to traffic signals, data collection locations and dynamic message signs
- Signal system hardware and software compatible with both Ethernet and fiber-optic communications
- Closed Circuit Television surveillance cameras along the corridor
- Dynamic Message Signs (DMS) to coordinate with the Turnpike and I-75 approaches for incident management
- Data collection devices such as microwave vehicle detection systems
- Speed warning systems

Selected technology will be implemented based on the technology available at the time of construction.

4.3.3.5 Lighting

A Lighting Justification Report was published, under separate cover, to analyze the lighting needs for US 301 using operational, environmental, and crash data with the cost-benefit analysis. US 301 from CR 470 East to SR 44 was analyzed for lighting justification based on the FDOT *Manual on Uniform Traffic Studies* benefit-cost ratio which requires a benefit-cost value greater than 1.0 for the roadway to be justified for lighting.

Lighting for Alternative 1: Widening through Coleman would be warranted through the City of Coleman, with the use of the Urban Typical Section, throughout the interchange of US 301 with Florida's Turnpike, and along the urban section of US 301 from the Turnpike to SR 44.

Lighting for Alternative 2: Widening with Coleman Realignment would be warranted at the interchange of US 301 with Florida's Turnpike and along the urban section of US 301 from the Turnpike to SR 44.

4.3.4 Environmental Analysis

4.3.4.1 Drainage

The following is a summary of the findings documented in the Location Hydraulics Report and the Pond Siting Report, each under separate cover. These documents contain more detailed information regarding the drainage along the project corridor.

The project traverses twenty-three (23) drainage basins; maps of which are included in the Pond Siting Report's Appendix B. Three (3) pond alternatives for each basin were analyzed, with the exception of Basin 18 (located between SR 44 and the Florida's Turnpike), where the proposed roadway improvements are minor, consisting of safety related improvements and therefore, stormwater pond alternatives have not been considered. The ponds were sized on the assumption that offsite runoff would be drained through the pond site alternative towards its historical path, and then upsized by twenty percent (20%) for contingency purposes. The following parameters were considered in the sizing of the potential pond sites:

- Hydrologic and hydraulic factors such as existing ground elevations, soil types, estimated seasonal high water (ESHW), stormwater conveyance feasibility, allowable hydraulics grade line (HGL)
- Environmental resource impacts including wetlands and threatened or endangered species
- Floodplain impacts
- Major utility conflict potential
- Parcel descriptions and land usage
- Impacts to cultural resources

All of the pond sites evaluated are detailed in the Pond Siting Report. Preferred pond sites for the selected alternative are described in Chapter 6.

Floodplain encroachments areas, as identified in the Location Hydraulic Report, would be required with either project build alternative. The majority of the project encroachments occur within Zone A of the 100-year floodplain. However, the 100-year flood zone west of US 301 at the bridge over Shady Brook is designated as Zone AE with a base flood elevation of 44.30 feet. There are no federally regulated floodways within the project limits. It was estimated that 10.65 ac-ft of floodplain would be impacted with Alternative 1, and 10.55 ac-ft would be impacted with Alternative 2. Due to the isolated nature of the majority of the flood zones, it was determined that the floodplain encroachment for either build alternative was classified as "minimal."

4.3.4.2 Cultural & Archaeological Resources

A Cultural Resource Assessment Survey identified the potential impacts to archaeological sites and/or historic resources by each of the alternatives within the study area. One archaeological site was identified at the southern end of the study area. This site is potentially impacted by both build alternatives. Two additional archaeological sites were identified; however, insufficient information was available to provide a recommendation for eligibility in the NRHP. The Study Team has eliminated impacts to these two locations for both build alternatives.

The Coleman City Jail, Coleman Historic District, and 7102 E. Warm Springs Avenue were identified as historic resources eligible for registration with the NRHP. The majority of historic resources are located within the City of Coleman's Historic District, which explains the significant difference in potential impacts shown in Table 4-31.

Table 4-31 | Comparison of Cultural Resource Impacts Eligible for the NRHP

Cultural Resource	No Build Alternative	Alternative 1: US 301 Widening through Coleman	Alternative 2: US 301 Widening with Coleman Realignment
Archaeological Site	0	1	1
Historic Resources	0	12	0

4.3.4.3 Contamination Screening

Of the 48 sites investigated along US 301, as described in Section 2.3.4.3, Table 2-18, and the Contamination Screening Evaluation Report provided under separate cover, the following risk rankings have been applied: nine (9) "High" ranking sites, fourteen (14) "Medium" ranking sites, thirteen (13) "Low" ranking sites, and twelve (12) sites ranked "None" for no potential contamination concerns.

For the sites ranked "None" for potential contamination, no further action is recommended. These sites have been evaluated and determined not to have any potential environmental risk to the study area at this time. For sites ranked "Low" for potential contamination, no further action is required at this time. For those locations with a risk ranking of "Medium" or "High", that have not been previously assessed, Level 2 field screening should be conducted should these sites be impacted by the proposed improvements.

4.3.4.4 Noise Sensitive Areas

The FHWA Traffic Noise Model (TNM) version 2.5 was used to predict traffic noise levels for this project following guidelines set forth in the *Traffic Noise Modeling and Analysis Practitioners Handbook* (FDOT, January 2016). This program estimates the traffic noise level from a series of roadway segments (the source) at a noise sensitive site (the receptor). The TNM program uses noise-influencing variables that include the volume and types of vehicles traveling the roadway, vehicular speed, roadway geometry, and the presence of existing barriers between the road and receptor, such as berms and building rows, to measure traffic noise.

Noise sensitive sites were identified for each of the three study alternatives, as shown in Table 4-32.

Table 4-32 | Comparison of Noise Sensitive Sites

No Build Alternative	Alternative 1: US 301 Widening through Coleman	Alternative 2: US 301 Widening with Coleman Realignment
40	185	50

In accordance with FDOT's traffic noise study requirements, noise barriers were considered for all noise sensitive receptor sites where design year (2042) traffic noise levels were predicted to equal or exceed the FHWA Noise Abatement Criteria (NAC).

Four of the impacted sites are isolated receptors that inherently cannot meet the minimum noise requirement at *two* impacted receptors. Twenty-eight (28) impacted sites have accessibility constraints (i.e. numerous driveways) that negate the effectiveness of a noise barrier. Seven (7) noise barriers were evaluated to abate eighteen (18) impacted receptors. None of these barriers are considered reasonable and feasible. Additional information regarding the noise analysis is available under separate cover in the Noise Study Report.

4.3.4.5 Air Quality

Sumter County is currently designated as being in attainment for the following Clean Air Act National Ambient Air Quality Standards (NAAQS): ozone, nitrogen dioxide, particulate matter (2.5 microns in size and 10 microns is size), sulfur dioxide, carbon monoxide (CO), and lead. Due to the County's attainment, the Clean Air Act conformity requirements do not apply to this project. Additional details, including detailed analyses using CO Florida 2012, U.S. Environmental Protection Agency software MOVES, model predictions are included in the Air Quality Technical Memorandum, January 2017, under separate cover.

4.3.5 Project Cost Evaluation

Construction cost estimates were prepared for each alternative, including the proposed interchange alternative, using FDOT's Long Range Estimating (LRE) system. Detailed reports of each LRE are included in Appendix H. Right of way costs were also prepared for each alternative. Wetland mitigation costs were estimated using a unit cost of $114,669 per acre of wetland impact, per the Environmental Mitigation Payment Processing Handbook published by the FDOT Environmental Management Office (EMO). Design costs were estimated to be 10% of the construction cost, and CEI costs were estimated as 15% of the construction cost. The project cost in 2017 dollars for each of the alternatives is summarized in Table 4-33.

Table 4-33 | Project Cost Evaluation Matrix

Category	No-Build Alternative	Alternative 1 US 301 Widening	Alternative 2 US 301 Realignment
Construction Cost Estimate (in millions)*	$0	$77.6	$69.4
Right-of-Way (in millions)	$0	$26	$27.5
Wetland Mitigation (in thousands)	$0	$308	$320
Design (in millions)**	$0	$7.6	$7.2
CEI (in millions)***	$0	$9.3	$8.1
TOTAL (in millions)****	$0	$120	$112

**Construction Cost is the LRE total including the proposed interchange option (DDI).*
***Design Cost is estimated as 10% of the total construction cost.*
****CEI cost is estimated as 15% of the total construction cost.*
*****Does not include utility relocation cost. Final utility relocation costs will be determined in the Design Phase of the project.*

4.4 Summary of Build Alternatives

Based on the analysis process, two main alternatives have been identified for the study segment of US 301 between CR 470 E and SR 44. The analysis and options for the US 301 and Florida's Turnpike Interchange are being reviewed as a separate component of this overall study.

Figure 4-25 | Alternative 1 US 301 Widening through Coleman

4.4.1 Alternative 1 – Widening through Coleman

US 301 is proposed to be widened to four lanes from CR 470 E through the interchange at Florida's Turnpike along its current or original alignment as shown in Figure 4-25. The widening includes five foot sidewalks on both sides of the roadway along with 7 foot buffered bicycle lanes or shoulders. A 55 mph design speed suburban typical section (in a 150 foot right-of-way) with a raised median and outside open drainage swales is proposed between CR 470 E and CR 525 E and between CR 521 to just south of the Turnpike. An urban typical section (in a 126 foot right-of-way) with a raised median and curb and gutter on the outside is proposed between CR 525 E and Stokes Street. The design speed is 45 mph for this segment. Stormwater ponds are proposed to support the improvements throughout the corridor.

The widening, begins as an east or right side widening at CR 470 E and transitions to a west or left side widening south of Shady Brook Park. This transition avoids any impacts to the park itself, which is classified as a Section 4(f) property. It continues as a left side widening until north of CR 525 E where it transitions to a right side widening along with the change to an urban typical section. Continuing along the right side through the curve at CR 468 it transitions back to a suburban typical section north of CR 521. The suburban typical section with a 55 mph design speed and a right side widening continues to the Turnpike where it transitions back to an urban typical section and a 45 mph design speed. This Best Fit alignment was developed to minimize environmental impacts, as described in Section 4.2.1, along each project segment. A summary comparison of the potential impacts of this alternative is provided in Section 4.5.

North of the Turnpike, improvements are proposed to the typical section to incorporate 6 foot sidewalks and 7 foot buffered shoulder to accommodate bicycles throughout. Turn lane improvements at the SR 44 consist of additional NB left and WB left turn lanes (resulting in dual lefts for these approaches) and the extension of the existing NB right turn lane.

4.4.2 Alternative 2 – Widening with Coleman Realignment

Alternative 2 retains many of the components of Alternative 1 with the major change being the location of the realignment relative to the City of Coleman, as shown in Figure 4-26. The footprint of the improvement is identical to Alternative 2 in the segments south of the CR 525 E intersection influence area and north of the CR 521 intersection influence area. The major change of this improvement from Alternative 1 is that US 301 is proposed to be realigned to the south of the City of Coleman between CR 525 E and CR 521. The US 301 improvement will rejoin or coincide with the Alternative 1 alignment just north of CR 521 and just south of CR 525 E. The proposed realignment segment will maintain a 55 mph design speed suburban typical section within a 150 foot right-of-way providing continuity with the segments north of CR 521 and south of CR 525 E. The existing US 301 alignment between CR 525 E and CR 468 will remain as a two-lane roadway. If implemented, this section of US 301 is proposed to be transferred to Sumter County and the new roadway segment connecting between CR 525 E and the CR 468 will be designated as US 301.

Figure 4-26 | Alternative 2: US 301 Widening with Coleman Realignment

4.5 Alternatives Evaluation

Three alternatives for the project are under analysis: Alternative 1 – Widening through Coleman, Alternative 2 – Widening with Coleman Realignment, and the No-Build Alternative. The No-Build Alternative will be used as the base-line for comparison between Alternatives 1 and 2 and will remain a viable alternative through the Public Hearing.

A comprehensive impact evaluation was completed for each of the realignment alternatives. The evaluation was based on six major categories: Social & Economic, Cultural, Natural, Physical, Roadway/Traffic and Project Cost. The evaluation of criteria where differences could be identified among the alternatives is presented in a matrix format as shown in Table 4-34 below with a summary and recommendations following the table. Detailed information regarding the potential impacts of the alternatives is reported in Section 4.3.

Table 4-34 | US 301 Alternatives Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Alternative 1 - Widening through Coleman	Alternative 2 - Widening with Coleman Realignment
Social & Economics			
Consistency with Existing & Future Land Use	**No**	**No**	**Yes**
Preserves Community Integrity / Cohesiveness	**Medium**	**Low**	**High**
Roadway Right-of-Way (Parcels/acres)	0/0	116/45.4	87/67.4
Pond Right-of-Way (Parcels/acres)	0/0	28/50.4	20/51.1
Potential Relocations - (Business and Institutional Structures Impacted)	0	**11**	**2**
Potential Relocations (Residential Structures Impacted)	0	**20**	**4**
Community Service Impacts	0	2	1
Environmental Justice Concerns	No	No	No
Controversy Potential	**Medium**	**High**	**Low**
Potential Agricultural Land Uses	No	Yes	Yes

Table 4-34 | US 301 Alternatives Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Alternative 1 - Widening through Coleman	Alternative 2 - Widening with Coleman Realignment
Cultural			
Potential Section 4(f) Impacts (includes parks, recreation or conservation areas, eligible or listed historic resources)	N/A	High	Low
Historic Resources Eligible for NRHP	N/A	12	1
Archaeologically Eligible Sites within the APE	N/A	1	1
Recreation Area Impacts	N/A	0	0
Natural			
Wetlands & Surface Water Impacts (Acres)	0	9.38	7.11
Outstanding Florida Waters	1	1	1
Floodplains Impacts (acre-ft)	0	10.65	10.55
Potential Wildlife and Habitat Impact	Low	Low	Low
Physical			
Noise Sensitive Sites	40	185	50
Air Quality Impacts	Low	Low	Low
Constructability Issues	None	High	Medium
Potential Contamination Sites (Low/Medium/High)	N/A	(13/14/9)	(10/10/8)
Aesthetic Impacts	None	Medium	Low
Bike and Pedestrian Accommodation*	Low	Medium	High
Utility & Railroad Impacts	None	High	Medium
Roadway/Traffic			
2042 LOS– Pk Hour/ Peak Dir US 301 - Turnpike to SR 44	C	D	D
US 301 - CR 521 to Turnpike	E	D	D
Realigned - CR 525 E to CR 521	---	---	C
Existing - CR 525 E to CR 521	F	D	C
US 301 - CR 470 E to CR 525E	E	B	B

Table 4-34 | US 301 Alternatives Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Alternative 1 - Widening through Coleman	Alternative 2 - Widening with Coleman Realignment
Project Costs			
Design*	-	$6,210,000	$5,400,000
Construction**	-	$62,100,000	$53,800,000
Right-of-way	-	$26,070,000	$27,500,000
Wetland Mitigation	-	$308,000	$320,000
CEI***	-	$9,315,000	$8,100,000
Total**	**-**	**$104 Million**	**$95 Million**

****Design Cost is estimated as 10% of the total construction cost.***
*****Construction Cost is the Long Range Estimate (LRE) total.***
******CEI cost is estimated as 15% of the total construction cost.***
*******Does not include utility relocation cost. Final utility relocation costs will be determined in the Design Phase of the project.***

4.5.1 Social & Economic

The social and economic impact of each alternative was determined based on various categories relating to land use, community cohesion, connectivity, and public involvement. Although Alternative 1 follows the existing US 301 curve, public support is low as four businesses and seventeen residential properties will potentially be relocated. On the other hand, Alternative 2 has moderate public support and would only require two businesses and eight residential properties to be relocated. Alternative 2 does not follow the existing US 301 curve and has moderate controversy potentially, not preserving community integrity and cohesiveness.

4.5.2 Cultural

Both of the proposed build alternatives would adversely affect an archaeological site located on the southern end of the US 301 project area. However, Alternative 1 would impact 12 historic resources within the City of Coleman, while Alternative 2 would have a de minimus impact to one historic resource. Alternative 1 would also have a higher risk of impacting properties that are potentially covered by Section 4(f). See Section 4.3.4.2 for additional information regarding the potential impacts of each alternative.

4.5.3 Natural

Each of the realignment alternatives has minor to moderate impacts to the environmental criteria of floodplains and wetlands. The alternatives all have relatively low impacts on wildlife and habitat. The wood stork and eastern indigo snake species, as identified in the Natural Resources Evaluation, may be affected but will not be adversely affected by the build alternatives. A determination of no effect was identified for the scrub jay, snail kite, bald eagle, and the red cockaded woodpecker.

4.5.4 Physical

The physical environment potentially affected by the project includes air quality, construction, contamination of potential sites, aesthetic impacts, bicycle and pedestrian accommodations, and utilities and railroad involvement. Air quality impacts are low for both build alternatives. Whereas Alternative 1 has high aesthetic impacts that would primarily impact downtown Coleman, those associated with Alternative 2 are moderate in direct comparison. Similarly, potential contamination site impacts for Alternative 1 are higher than would be impacted with Alternative 2. Bicycle and pedestrian accommodations as well as utilities and railroad involvement are included for both build alternatives.

4.5.5 Roadway/Traffic

Level of Service (LOS) measures the travel delay of vehicles and provides a "grade" based on the delay. If the No Build alternative is selected, traffic congestion is expected to increase and result in LOS values of E and F on several segments. Alternatives 1 and 2 both provide relief for the projected congestion, but Alternative 2 provides the best traffic conditions to meet local standards. Refer to Section 4.3.2 for detailed Future Traffic Analysis. Roadway characteristics for each segment are included in the Typical Sections from Section 4.3.1.

4.6 Value Engineering Study

A Value Engineering (VE) Study was held during June 2017 using the VE methodology to evaluate the initially preferred alternative for the US 301 PD&E Study. The VE Team used the *Concept Plans* (June 2017) and other study documents available at the time of the VE Study to develop design suggestions for the project. The final report documenting the proposals and design suggestions of the VE Study was issued in July 2017.

During this process, the VE Team developed 25 Design Alternatives as recommendations for the PD&E Team to consider. The VE Team also developed 24 Design Suggestions and 32 creative ideas, which were each thoroughly explored until it was found that they were neither cost effective nor technically feasible. The cost results for the various alternatives may not be added together as some of the alternatives are mutually exclusive. One of the goals of the VE Team was to identify opportunities through which cost savings might be realized while indicating ways in which the resulting savings might be invested back into the project to realize added value.

Details about the workshop, design alternatives, and final recommendations are included in the Value Engineering Report under separate cover.

CHAPTER 5

Public & Stakeholder Input

5.0 Public and Stakeholder Input

The public engagement process utilized to develop the preferred project alternative was comprised of four primary outreach strategies: 1) Stakeholder meetings, 2) Project Advisory Group meetings, 3) Alternatives Public meetings, and 4) a Public Hearing. As further described below, the level of public engagement has been significant and highly responsive. Detailed descriptions of the public engagement methods, as well as detailed meeting summaries, can be found in the US 301 PD&E Public Involvement Plan.

5.1 Agency and Stakeholder Meetings

The project team reached out to specific stakeholders who had a significant interest in the PD&E Study or specifically requested a meeting. The following table provides an account for the stakeholder meetings held through November 30, 2018:

Table 5-1 | Agency and Stakeholder Meetings

Name	Organization	Date	Summary
Mayor Milton Hill	City of Coleman	02/01/2016	Agreed that realignment alternative would be a good potential alternative to consider as opposed to widening US 301 through the City of Coleman. Did not offer an opinion on a particular route.
Council President Richard Huff	City of Coleman	02/01/2016	Agreed that a realignment alternative would be a good potential alternative to consider as opposed to widening US 301 through the City of Coleman. Did not offer an opinion on a particular route.
Melanie Peavy, Development Services Director	City of Wildwood	02/01/2016	No objection to a realignment alternative other than avoiding significant impact to the Village of Fenney (aka Wildwood Springs).
Dean Barberree	Village of Fenney	02/01/2016	Village of Fenney is starting construction and does not support a realignment alternative that splits the project but is OK with a realignment alternative that simply needs frontage along existing US 301.
Bradley Arnold, County Administrator	Sumter County	02/02/2016	Discussion during FDOT partnering meeting. County has no objection to a realignment alternative other than avoiding significant impact to the Village of Fenney.
Pastor Mark Reichard	Trinity Baptist Church	2/17/2016	Pastor Mark Reichard indicated that the preference was for the realignment alternatives to either stay as far from the church buildings as possible or to fully impact the structure so that it would be relocated. This was preferred to alternatives that left it too close to the buildings.
Marra Family	Property Owner	4/11/2016	Met with Mr. & Mrs. Marra to discuss potential realignment alternatives and impacts to their property on US 301. They did not express an opinion on a realignment

Table 5-1 | Agency and Stakeholder Meetings

Name	Organization	Date	Summary
Akiko Teagle, Financial Manager	City of Coleman	8/12/2016	Met with Ms. Teagle to discuss City's comprehensive plan and related amendments. It was identified that the City's Comprehensive Plan, Policy 1-4, calls for the City to notify the Florida Department of Transportation that the City prefers that capacity improvements to US 301 by-pass the City, and the City's Community Redevelopment Area master plan shows the existing US 301 alignment through the City to be maintained as a two-lane facility with enhancements. No opinion provided on a particular realignment alternative.
Melanie Peavy & Jason McHugh	City of Wildwood	8/24/2016	No objection to potential realignment alternatives other than avoiding significant impact to Village of Fenney.
Gary Moyer & Gary Lester	Developer of the Villages - Purchasing parts of the Village of Fenney	8/24/2016	Met to review potential realignment alternatives. Village of Fenney is starting construction and does not support a realignment alternative that splits the project but is OK with a realignment alternative that simply needs frontage along US 301.
Coleman City Council	City of Coleman	9/12/2016	Presentation by Project Team to City Council of potential realignment alternatives and preliminary widening assessment. City Council expressed concern regarding impacts the realignment alternatives would have on the development potential of "downtown" Coleman (i.e. existing alignment of US 301). City Council did not specially support any particular alternative. However, there most of the Commissioners supported the realignment over the widening through Coleman and seemed to prefer realignment alternatives A or C due to the closer proximity to "downtown" Coleman.
Pastor Mark Reichard	Trinity Baptist Church	9/23/2016 teleconference	Spoke with Pastor Mark Reichard after he had a meeting with church leadership on 9/21/2016 to review potential realignment alternatives. He indicated that the church would work with whichever alternative was selected. He also indicated that he believed that alternatives closer in proximity to the City of Coleman would be better for the community.
Mayor Milton Hill	City of Coleman	12/13/2016	Continues to support the realignment of US 301 south of the City of Coleman. If the realignment is selected as the final alternative and Warm Springs Avenue is transferred to local jurisdiction, then he desires the corridor to be enhanced with landscaping, street lights, etc. He sees opportunities to redevelop Warm Springs Avenue with a mix of businesses, offices, and residential.

Table 5-1 | Agency and Stakeholder Meetings

Name	Organization	Date	Summary
Council President Richard Huff	City of Coleman	12/13/2016	Continues to support the realignment of US 301 south of the City of Coleman. If the realignment is selected as the final alternative and Warm Springs Avenue is transferred to local jurisdiction, then he desires the corridor to be enhanced with landscaping, street lights, etc. He sees opportunities to redevelop Warm Springs Avenue with a mix of businesses, offices, and residential.
Bradley Arnold, County Administrator	Sumter County	12/15/2016	Continues to support the realignment of US 301 with alignment "B." As part of an inter-local agreement between the City of Coleman and Sumter County, the County shall provide staff planning services to the city.
Jason McHugh and Melanie Peavey	City of Wildwood	12/15/2016	They do not object to the realignment alternative and understand the methodology for the preferred alignment "B." Primary interests are the potential impacts to the Village of Fenney.
TJ Fish and Michael Woods	Lake~Sumter MPO	12/15/2016	Prefer the US 301 Realignment Alternative and support alignment "B." The PD&E project is consistent with the MPO Long Range Transportation Plan and Transportation Improvement Program.
Pastor Mark Reichard	Trinity Baptist Church	12/15/2016	He and the church community are aware of the potential loss of the building if the realignment is selected. They are not opposed to the realignment and understand the engineering and land planning benefits. The church sees this as a potential opportunity to rebuild a new, larger facility on the remaining property.
Technical Advisory Committee	Lake~Sumter MPO	4/12/2017	The committee discussed the recent announcement of The Villages expansion plans south of SR 44. The Lake~Sumter MPO requested continued coordination with the MPO as the study progresses.
Citizens' Advisory Committee (CAC)	Lake~Sumter MPO	4/12/2017	The CAC asked a few questions regarding the land uses, historic resources, and impact of the proposed US 301 realignment with the City of Coleman.
Bicycle/ Pedestrian Advisory Committee (BPAC)	Lake~Sumter MPO	4/13/2017	THE BPAC asked questions regarding if a bicycle lane would be provided as a separate facility and not on the actual roadway. The proposed bicycle lane on US 301 is a seven foot buffered bicycle lane.

Table 5-1 | Agency and Stakeholder Meetings

Name	Organization	Date	Summary
Pastor Mark Reichard	Trinity Baptist Church	4/17/2017	He stated that the church does not object to the proposed realignment of US 301 that would impact the existing church buildings. The church plans on rebuilding on property they own to the south of the proposed US 301 realignment. Pastor Reichard expressed his appreciation for the level of communication and cooperation with FDOT regarding this project.
Gary Lester and Gary Moyer	Village of Fenney	4/17/2017	They confirmed the planned expansions south of SR 44 and the acquisitions of the Southern Oaks Development of Regional Impact (DRI) and the Wade Industrial Park. The planned expansions include approximately 14,000 new homes along CR 468 from SR 44 south to the Village of Fenney. They were supportive of the realignment, and are greatly interested in the timing of the construction of the project.
City of Wildwood City Commission	City of Wildwood	4/24/2017	The City Commission did not have any comments or questions regarding the US 301 project.
Governing Board	Lake~Sumter MPO	4/26/2017	The Governing Board did not have any questions or comments regarding the project.
City of Coleman City Council	City of Coleman	4/26/2017	The City Council discussed the need to coordinate with the new future land use map and comprehensive plan under development for the city. The realignment (Alternative 2) is consistent with the draft comprehensive plan and future land use map. Questions regarding the connection of Warm Springs Avenue to the realignment of US 301 were raised, though the meeting consensus was that the realignment of US 301 was preferable to widening along the existing alignment through the city.
Bradley Arnold and Richard Baier	Sumter County	5/31/2017	A meeting was held to provide an update on the US 301 PD&E project and to specifically discuss options for roundabouts at the intersections of US 301 with CR 468 and CR 525 East. Locations of the roundabouts were discussed, as well as the City of Coleman's desire for a direct connection from Warm Springs Avenue to the US 301 realignment. The inclusion of sidewalks on the suburban typical section was also discussed.
City of Coleman City Council	City of Coleman	7/13/2017	The City Council held a public workshop related to the US 301 PD&E project and the City's draft new future land use map and comprehensive plan. The discussion focused primarily on maintaining connectivity between the eastern end of Warm Springs Avenue to CR 468 and the proposed realignment of US 301 through the use of a roundabout. It was clearly expressed that the workshop participants and Council Members are fully supportive of maintaining full access from the east end of Warm Springs Avenue to the US 301 realignment and CR 468.

Table 5-1 | Agency and Stakeholder Meetings

Name	Organization	Date	Summary
Perry Vogler	City of Coleman Resident	12/19/2017	Representatives of the US 301 PD&E Project Team, I-75/CR 514 Interchange PD&E Project Team, and CR 525E Extension project met with Perry Vogler, owner of 112 S. Commercial Street (US 301) in Coleman, Florida. The purpose of the meeting was to obtain information from Mr. Vogler regarding concepts he developed regarding US 301 and connectivity to the proposed new interchange at I-75 and CR 514. In addition, the meeting provided the Florida Department of Transportation, Sumter County, and representatives of the three (3) major transportation projects (US 301 PD&E, I-75/CR 514 Interchange PD&E, and CR 525E Extension) the opportunity to present information to Mr. Vogler to clarify the required analysis and provide general information regarding the applicable shaping influences for the development of the preferred alternatives in the PD&E projects and for the construction of the CR 525E extension.
City of Coleman City Council	City of Coleman	11/12/2018	The City of Coleman had questions regarding the section of Warm Springs Avenue from C.R. 525 E to C.R. 468. If the preferred alternative is constructed, the afore mentioned segment of Warm Springs Avenue would undergo a jurisdictional transfer to Sumter County. Any improvements or changes to Warm Springs Avenue from C.R. 525 E to C.R. 468 would be planned, programmed, and/or constructed by the County after the jurisdictional transfer is complete.
City of Wildwood City Commission	City of Wildwood	11/26/2018	The City Commission did not have any comments or questions regarding the US 301 project.
Governing Board	Lake~Sumter MPO	11/30/2018	The Governing Board did not have any comments or questions regarding the US 301 project.

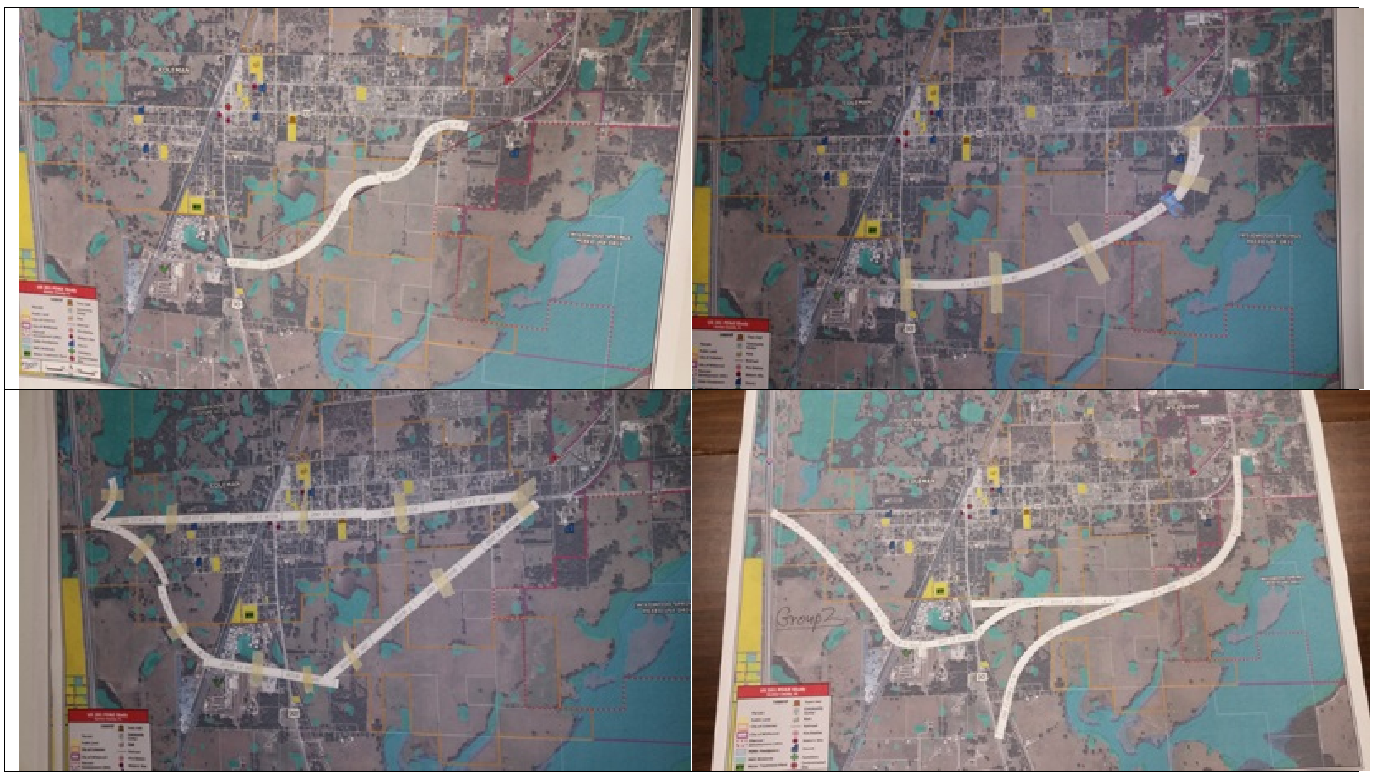
5.2 Project Advisory Group Meetings

To assist the Project Team in the development and assessment of potential realignment (truck route) alternatives, a Project Advisory Group (PAG) was assembled. The PAG is comprised of property owners and stakeholders that are within the vicinity of the US 301 corridor through Coleman as well as the properties that could be potentially impacted by the proposed realignment alternatives. Two PAG meetings focusing on the potential realignment were held. The first PAG meeting was on July 9, 2015, and the second PAG meeting was held on April 5, 2016. Both PAG meetings were held at the Trinity Baptist Church Fellowship Hall at 3305 C-468, Wildwood, FL 34785.

5.2.1 Project Advisory Group Meeting #1

Forty-five (45) interested parties attended the first PAG meeting on July 9, 2015. The purpose of the meeting was to provide an overview of the US 301 PD&E process and to obtain information regarding their concepts for a potential realignment of US 301 around the City of Coleman. To facilitate the discussion of identifying the potential alternatives, small groups were given road width and curve templates to place on a map. Each small group developed a conceptual alignment for the realignment. Generally, the conceptually alignments were consistent with a corridor running south of the existing US 301 alignment near the City of Coleman. The starting and ending points of the different alignments somewhat deviated between the individual maps. Images of the maps generated by the small groups are shown in Figure 5-1.

Figure 5-1 | Potential Realignment Corridors Generated by PAG



The comments received at the first PAG meeting followed four primary themes:

1. Concern about impacts to existing homes and the character of the City of Coleman;
2. Concern about impacts to environmental resources (i.e. wetlands, springs, etc.);
3. Support for a realignment corridor south of the existing US 301 alignment; and
4. Need for coordination with other road projects in the area.

5.2.2 Project Advisory Group Meeting #2

Forty-three (43) interested parties attended the second PAG meeting on April 5, 2016. At the second PAG meeting, the Project Team presented six (6) initial realignment alternatives that were evaluated and considered. The realignment alternatives all considered a right-of-way width of 250 feet in order to allow flexibility for the specific alignment within the corridor. Of the six (6) developed alignments, three (3) alternatives were recommended for further evaluation, as shown in Figure 5-2. The alignments recommended for elimination from the study are presented in Figure 5-3. The Project Team received input from meeting participants regarding the three (3) alternatives recommended for further study.

Figure 5-2 | Realignment Alternatives for Further Consideration

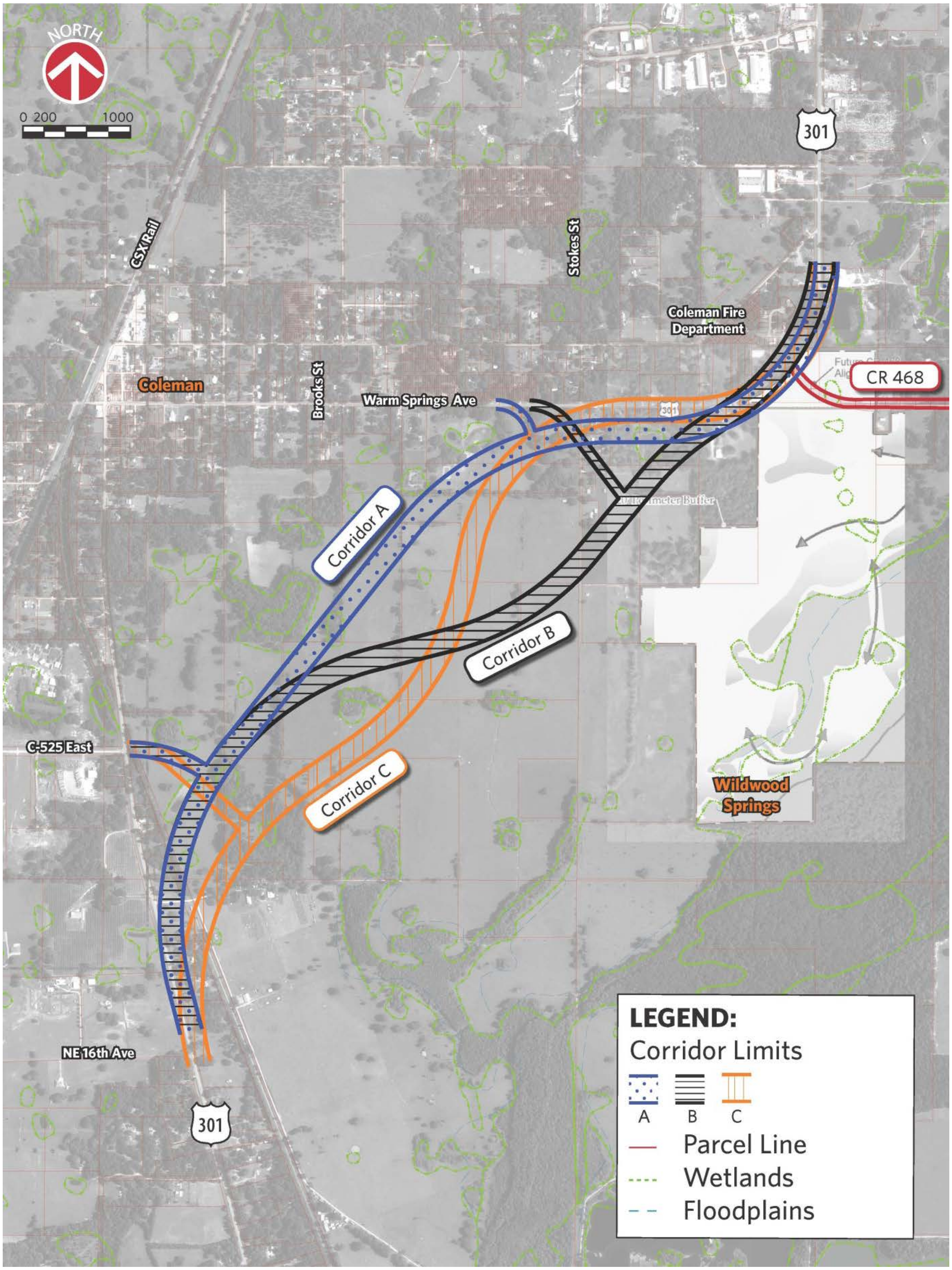
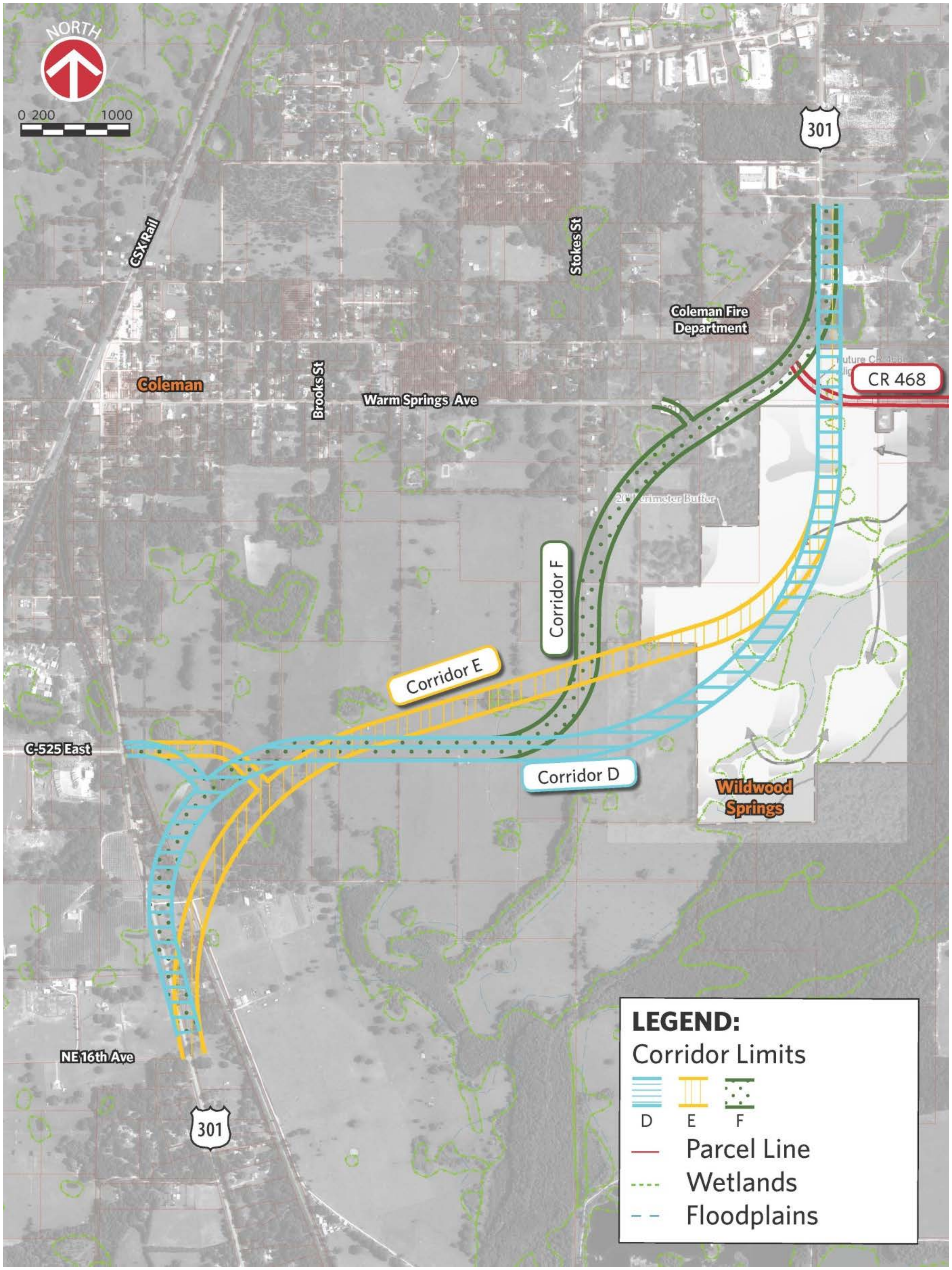


Figure 5-3 | Realignment Alternatives Eliminated from Further Study

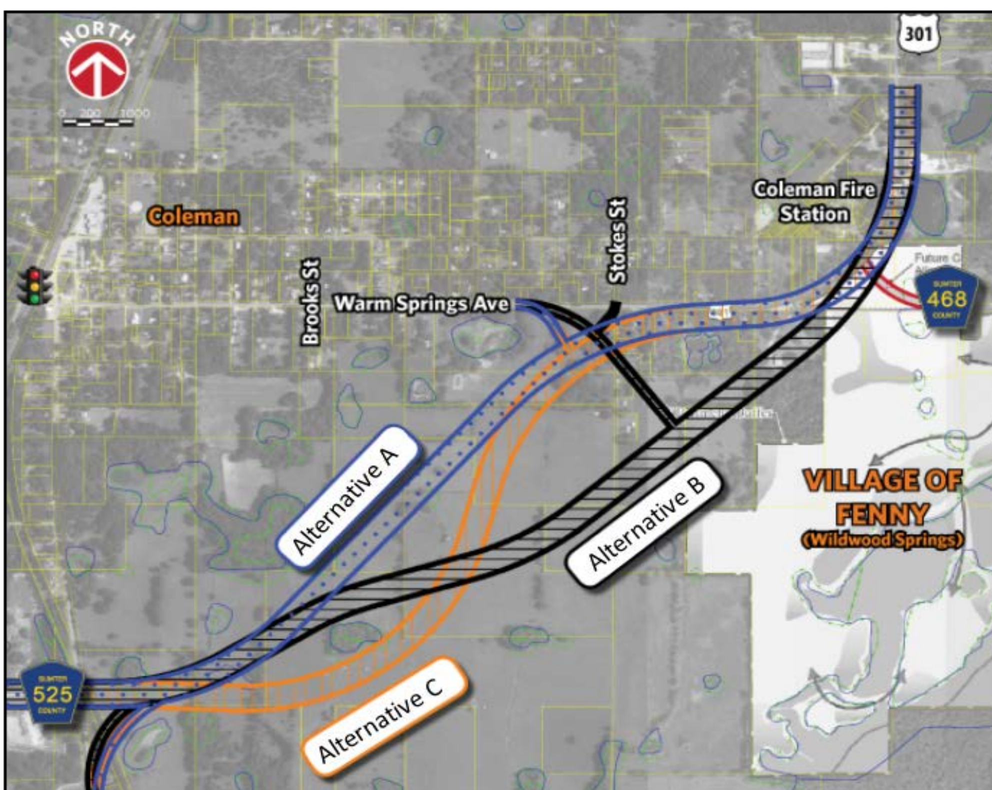


5.3 Alternatives Public Meeting #1

On September 20, 2016, the first Alternatives Public Meeting was held. Notification for the public meeting was mailed to approximately 500 properties within the US 301 project corridor and potential realignment location as well as e-mailed to interested citizens and stakeholders. Notification was also provided to applicable governmental agencies and elected and appointed officials. On September 8, 2016, the public meeting advertisement was published in the Sumter County Times. Additionally, to assure extensive outreach to low-income areas, public notifications were posted or made available at the US Post Office in Coleman, Coleman Community Center, Coleman Enrichment Center, Coleman City Hall, and Coleman City Park.

Ninety (90) interested parties attended the public meeting. The public meeting was organized as an open house with a continuous looping PowerPoint presentation in a separate room. The purpose of the meeting was to present information regarding the three (3) potential realignment alternatives; an evaluation of these corridors; and a preliminary evaluation of left vs. right side widening impacts for the entire project corridor. Figure 5-4 shows the three refined potential realignment corridors. The corridors were refined from the previous PAG meetings to incorporate a revised configuration for the proposed intersection at CR 525 E. The reconfiguration included one four-way plus intersection at CR 525 E. This change was made in order to accommodate a heavier east-west flow of traffic from CR 525 E to the US 301 realignment rather than from the existing US 301 south of CR 525 E to the proposed realignment. The reconfiguration will facilitate fewer intersections and safer, more direct travel for a greater number of motorists.

Figure 5-4 | Refined US 301 Realignment Alternatives

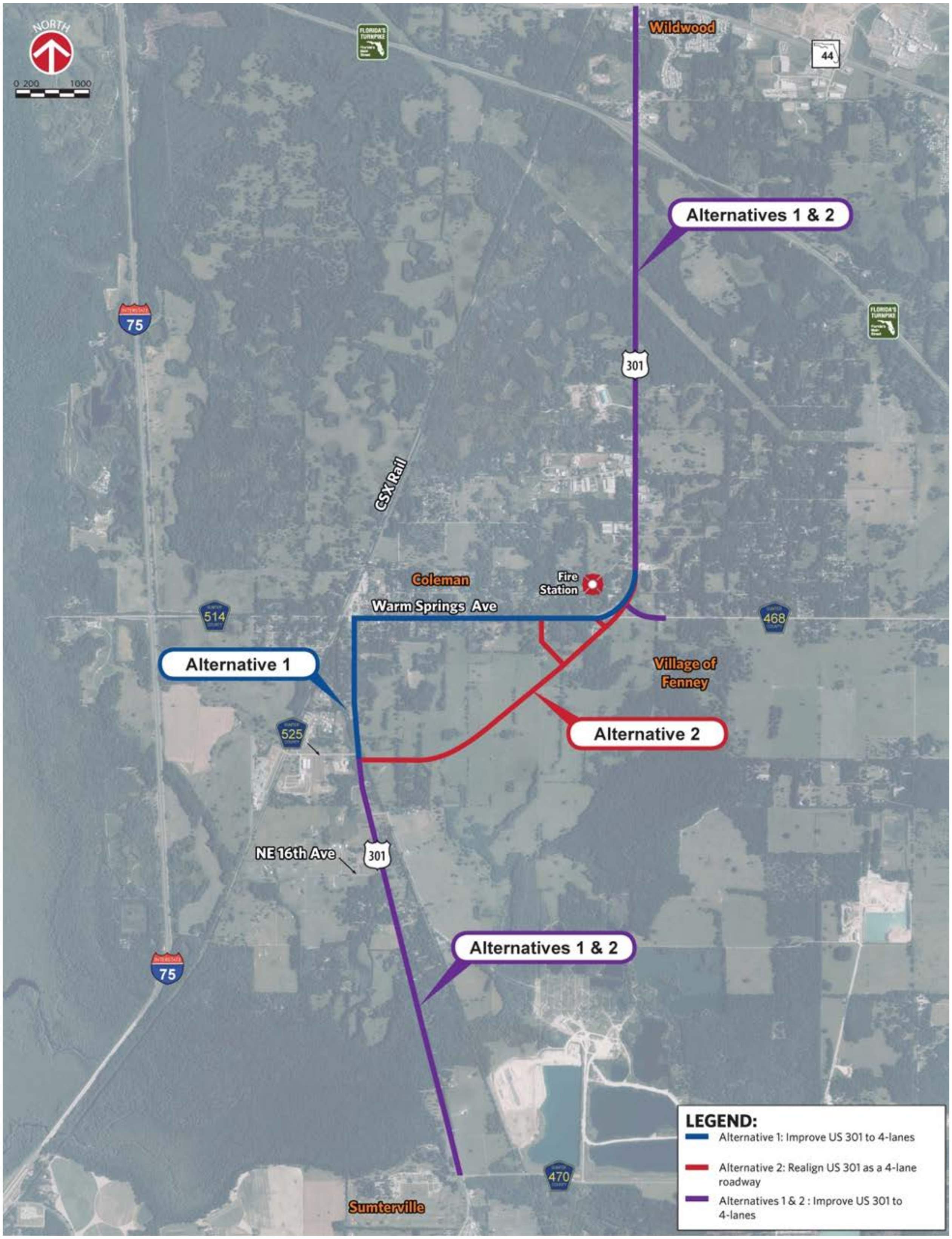


5.4 Alternatives Public Meeting #2

On May 2, 2017, the second Alternatives Public Meeting was held. Notification for the public meeting was mailed to approximately 500 properties within the US 301 project corridor and potential realignment location as well as e-mailed to interested citizens and stakeholders. Notification was also provided to applicable governmental agencies and elected and appointed officials. On April 20, 2017, the public meeting advertisement was published in the Sumter County Times. Additionally, to assure extensive outreach to low-income areas, public notifications were posted or made available at the US Post Office in Coleman, Coleman Community Center, Coleman Enrichment Center, Coleman City Hall, and Coleman City Park.

Nearly one hundred (100) interested parties attended the public meeting. The public meeting was organized as an open house with a continuous looping PowerPoint presentation in a separate room. The purpose of the meeting was to present preliminary design alternatives to widen US 301 from a two-lane roadway to a four-lane roadway, to realign a portion of US 301 south of the City of Coleman, and to reconstruct the Florida's Turnpike Interchange at US 301. The study alternatives are shown in Figure 5-5.

Figure 5-5 | US 301 Build Alternatives



5.5 Public Hearing

The Public Hearing was held on December 3, 2018 at the Trinity Baptist Church-Fellowship Hall, 3305 E. C.R. 468, Wildwood, FL 34785. Notification for the Public Hearing was mailed to approximately 500 properties within the US 301 project corridor and potential realignment location as well as e-mailed to interested citizens and stakeholders. Notification was also provided to applicable governmental agencies and elected and appointed officials. On November 15 and 22, 2018, the public hearing advertisement was published in the Sumter County Times. Additionally, to assure extensive outreach to low-income areas, public notifications were posted or made available at the US Post Office in Coleman, Coleman Community Center, Coleman Enrichment Center, Coleman City Hall, and Coleman City Park.

The Public Hearing began at 5:30 p.m. as an information open house with project display boards for review and staff available to discuss the project and answer questions. Display boards included a regional transportation overview, aerial views of the preferred alternative, typical sections, and intersection layouts. A formal presentation was given at 6:00 p.m. followed by an official comment period. A court reporter was available the entire hearing (including during the open house) to accept official statements on the record. No members of the public elected to speak during the official comment period. In addition to making an oral statement, members of the public had the options to leave a written comment, mail in a written comment, or email a comment within 10 days of the Public Hearing.

The purpose of the meeting was to present the preferred alternative (Figure 6-1), the benefits and impacts of the preferred alternative, and to provide members of the public with an opportunity to express their opinions regarding the project. Approximately 115 interested parties attended the public hearing. Twelve written comments were received at the Public Hearing or via mail or email during the 10-day review period following the in-person meeting. The majority of the comments expressed concern over property access. FDOT responded to each commenter that their concern will be considered and their input sought during the design phase. The Public Hearing Transcript and written comments are attached to the Type II Categorical Exclusion.

CHAPTER 6

Preferred Alternative

6.0 Preferred Alternative

After considering input from the public and stakeholder engagement, and considering engineering, environmental, and constructability factors, Alternative 2: Widening with Coleman Realignment, has been identified as the preferred alternative. The following individual components were identified to comprise the preferred alternative:

- Suburban Typical Section in Segments 1, 2, 4, and 6
- Urban Typical Section in Segment 5
- Realignment of US 301 south of the City of Coleman
- Roundabout at intersection of US 301 & CR 525 East
- Roundabout at intersection of US 301 & CR 468
- Diverging Diamond Interchange at the intersection of US 301 and Florida's Turnpike

The preferred alternative is shown in Figure 6-1, and detailed concept plans are provided in Appendix B.

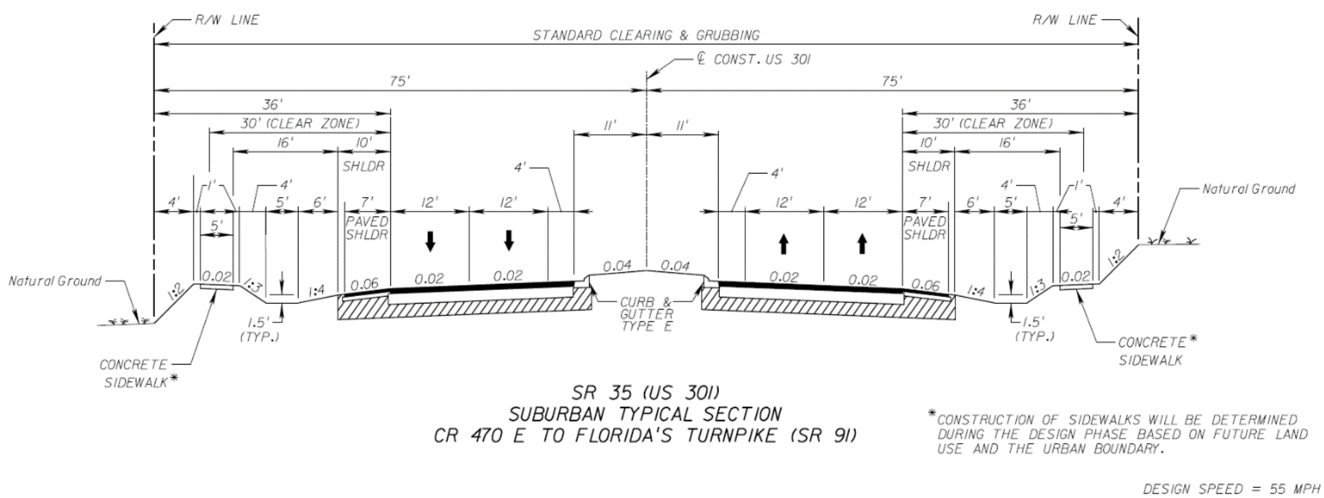
Figure 6-1 | Preferred: Alternative 2 – Widening with Coleman Realignment

6.1 Typical Sections

The preferred alternative consists of two typical sections, which are fully detailed in the Typical Section Package available under separate cover, and included in Appendix B.

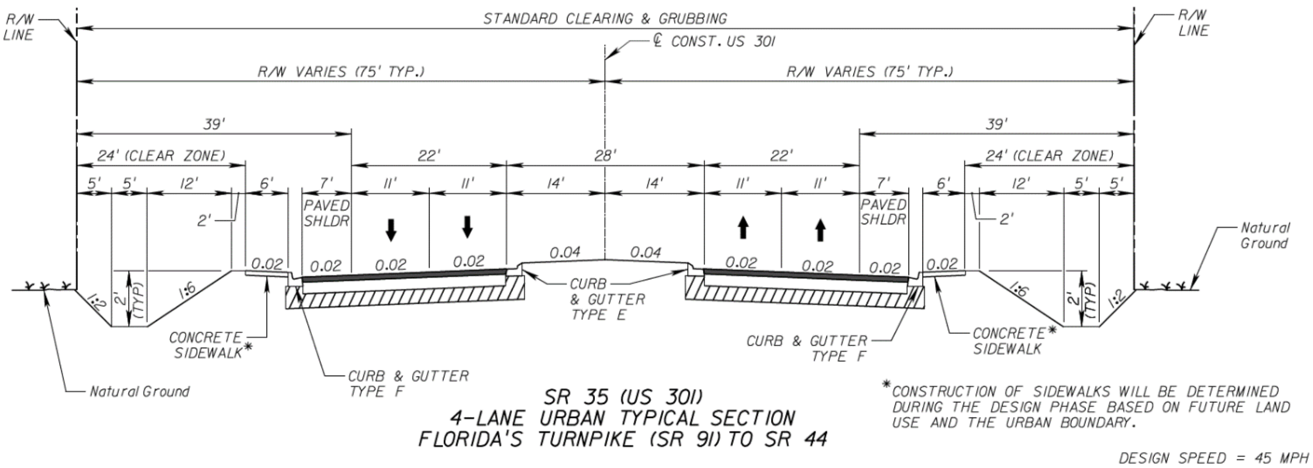
The first typical section provides a divided suburban roadway beginning at CR 470 East and extends to CR 525 East (Segment 1 and 2), through the realignment south of the City of Coleman (Segment 6), and then from CR 468 to the Florida's Turnpike (Segment 4). The suburban typical section, shown in Figure 6-2, consists of four 12-foot travel lanes, 7-foot paved shoulders (buffered for bicycle use), a 22-foot raised median along with 4-foot inside paved shoulders, and space for 5-foot sidewalks. Stormwater runoff is collected in roadside swales and is conveyed to stormwater ponds located along the proposed alignment. The design speed is 55 MPH.

Figure 6-2 | Proposed Suburban Typical Section



The second typical section provides a divided urban roadway beginning at the Florida's Turnpike through SR 44 (Segment 5). The urban typical section, shown in Figure 6-3, consists of four 11-foot travel lanes, 7-foot paved shoulders (buffered bicycle lanes), a 28-foot median, and six-foot sidewalks. The design speed is 45 MPH.

Figure 6-3 | Proposed Urban Typical Section



6.2 Project Traffic Volumes

Future traffic conditions for the preferred alternative are evaluated in full in the Design Traffic Technical Memorandum and are summarized in Table 6-1. While traffic is expected to grow, the Level of Service (LOS) will continue to meet local standards.

Table 6-1 | Projected Traffic and Level of Service

US 301 Roadway Segment	Projected Average Daily Traffic (2042)	Projected LOS (2042)
Florida's Turnpike to SR 44	34,000	D
CR 521 to Florida's Turnpike	23,000	D
Realignment – CR 525 E to CR 521	22,000	C
CR 470 E to CR 525 E	30,000	B

6.3 Horizontal and Vertical Alignment

The preferred alternative horizontal alignment is shown in detailed concept plans are provided in Appendix B. The horizontal curve data can be found in the Table 6-2. The vertical alignment has not been established for the PD&E Study. However, the profile will generally follow the existing terrain.

Table 6-2 | Preferred Alternative Alignment Horizontal Curve Data

CURVE NO.	PC	PI	PT	DELTA	DEGREE	LENGTH (ft)	RADIUS (ft)	e	DESIGN SPEED (mph)
C1	125+80.20	128+91.15	132+01.92	3°27'05.90"	0°33'18.64"	622	10320	NC	55
C2	134+83.45	137+90.51	140+97.30	4°08'16.18"	0°40'26.64"	614	8500	NC	55
C3	208+72.50	215+76.82	222+55.61	26°40'23.08"	1°55'42.56"	1383	2971	0.047	55
C4	234+78.86	245+47.53	255+26.93	40°23'40.07"	1°58'20.34"	2048	2905	0.048	55
C5	300+70.91	314+86.76	326+86.76	54°03'46.74"	2°03'52.97"	2618	2775	0.050	55
C6	333+67.50	335+79.33	337+91.06	3°02'00.55"	0°42'58.31"	424	8000	NC	55

6.4 Roundabout Concepts

The preferred alternative includes roundabouts at two intersections: CR 525 East and CR 468 and their proposed layouts are shown in Figure 6-4 and Figure 6-5, respectively. The layouts allow for potential expansions of the roundabouts to add right turn lanes in order to accommodate future traffic. Detailed roundabouts concepts are included in the Concept Plans located in Appendix B, and the full analysis is included in the Roundabout Evaluation Report (available under separate cover).

Figure 6-4 | Roundabout Concept – US 301 and CR 525 East

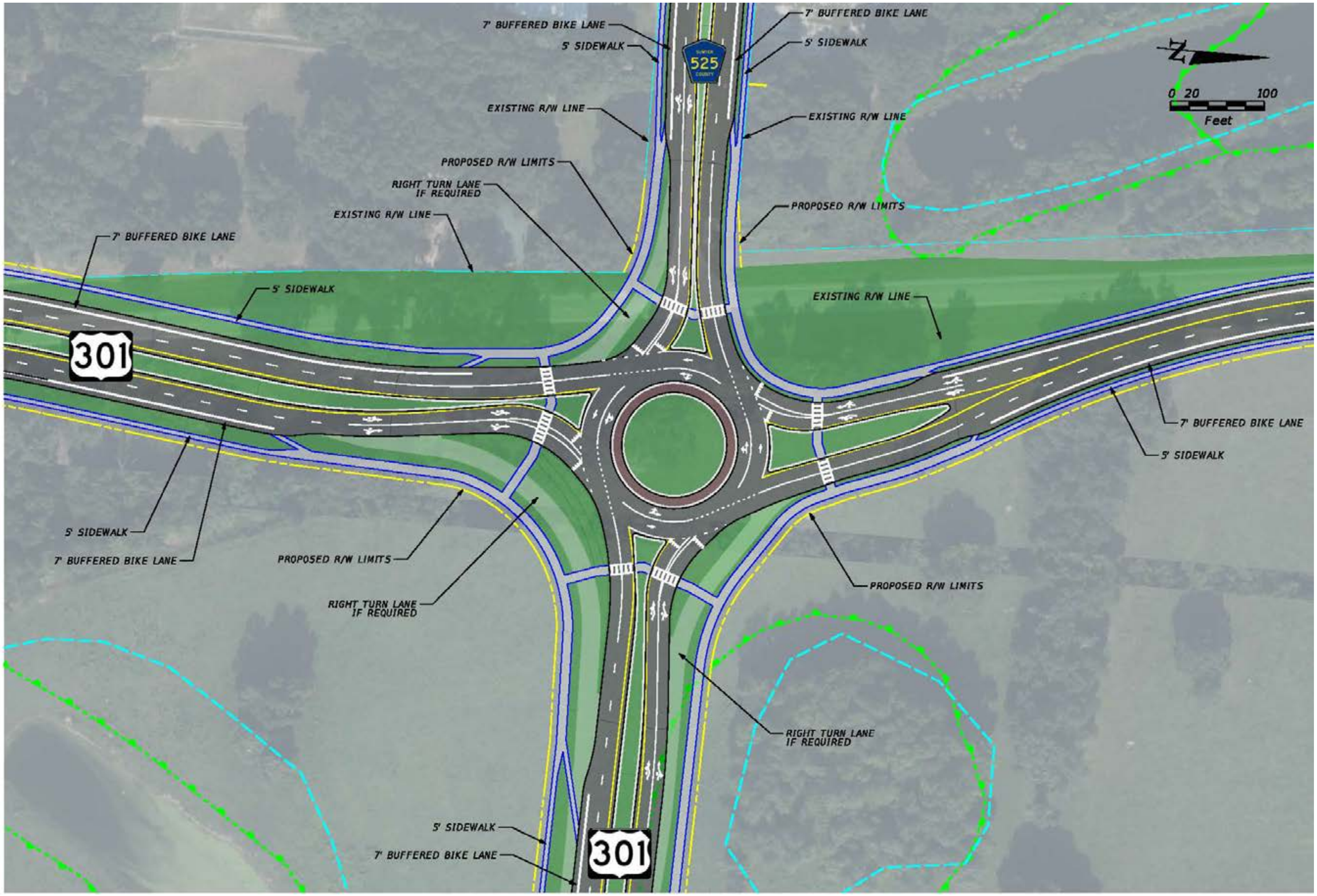
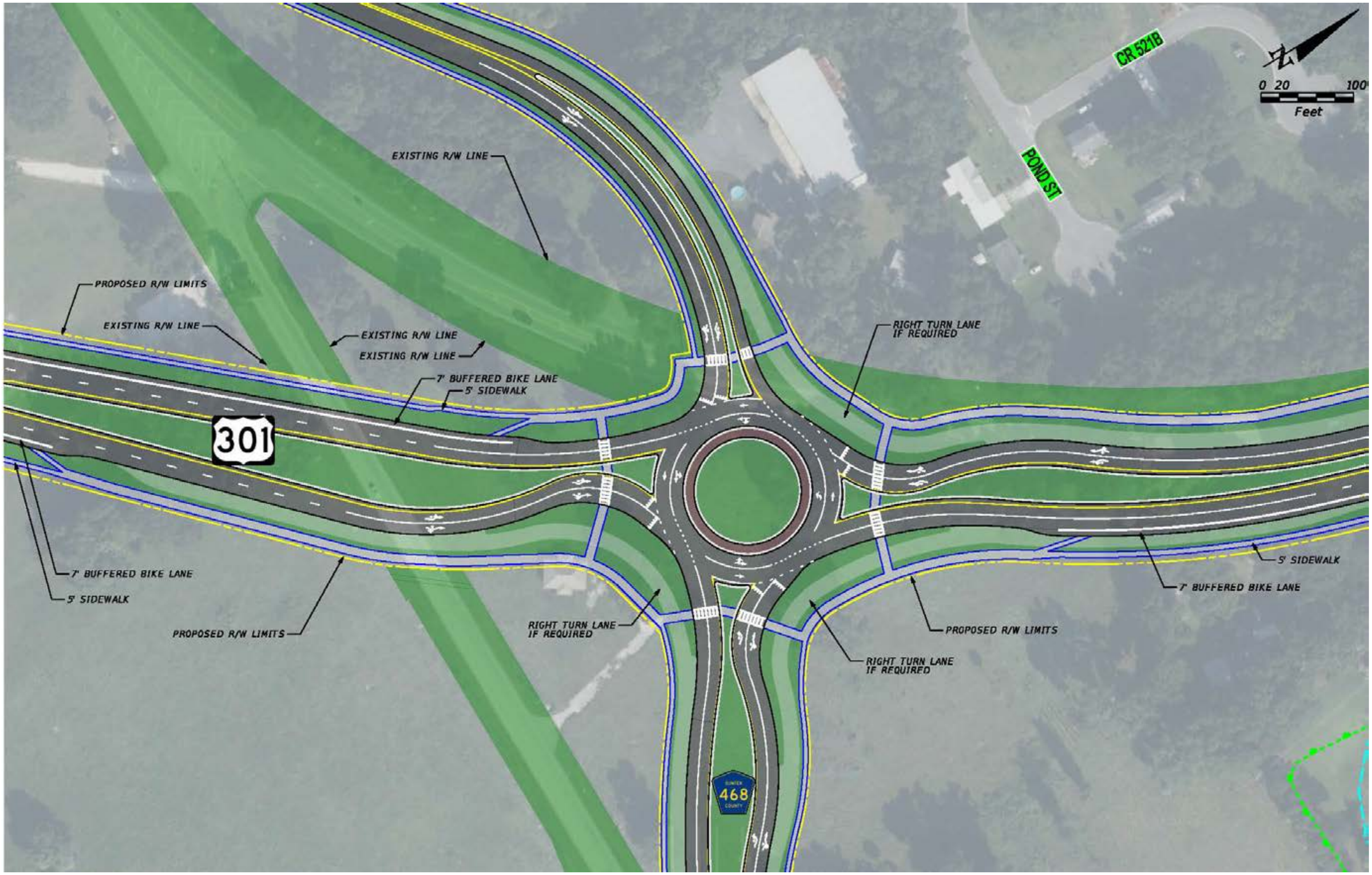


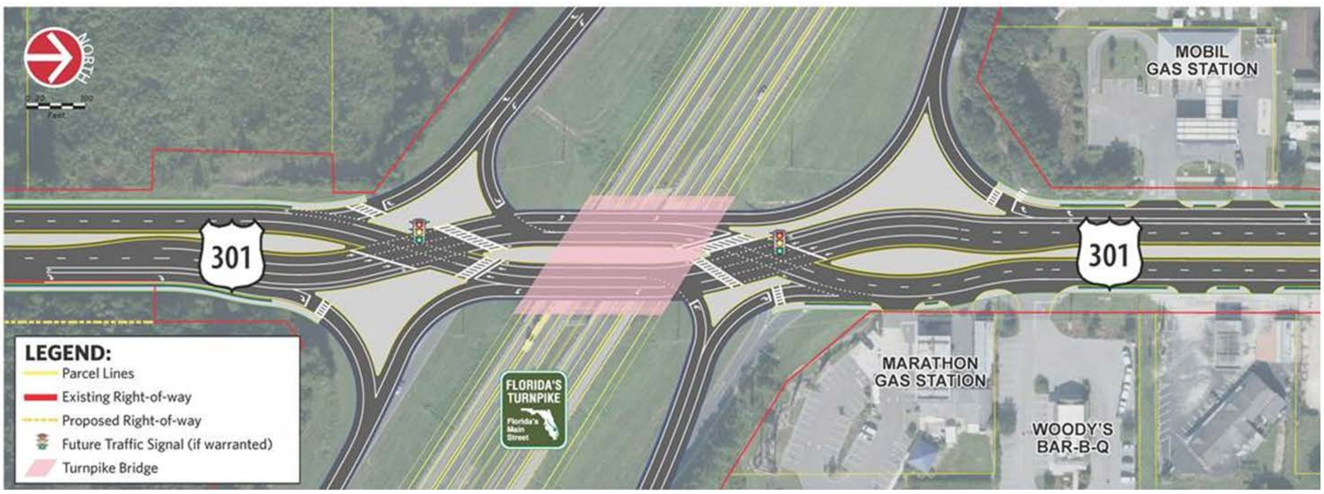
Figure 6-5 | Roundabout Concept – US 301 and CR 468



6.5 Diverging Diamond Interchange

A diverging diamond interchange is included as part of the preferred alternative at the interchange of US 301 with the Florida's Turnpike. The DDI will consist of the lane geometry as shown in Figure 6-6, and the full design is shown in Appendix A. The DDI provides the highest potential for reduction of crashes and their severity at the interchange of all the alternatives studied. A detailed analysis of the interchange operations is available under separate cover in the Interchange Analysis Report.

Figure 6-6 | Diverging Diamond Interchange

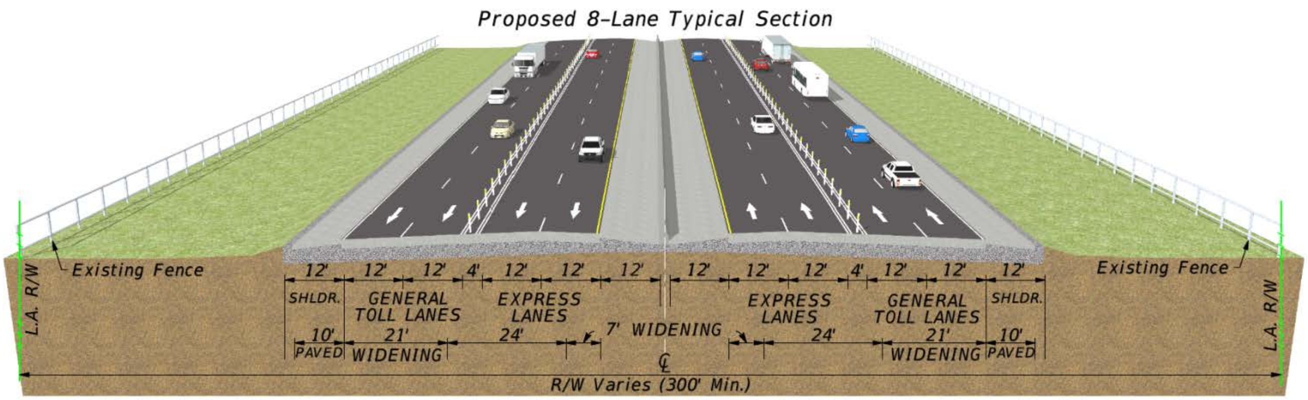


6.6 Structures

6.6.1 Interchange Bridge Structures

The preferred alternative will involve the replacement of the existing northbound and southbound Turnpike bridges over US 301. The replacement not only accommodates future traffic growth on US 301, but also accommodates the preferred alternative from the Turnpike Widening PD&E study. The replacement is proposed as a single combined northbound/southbound structure with an overall width of 157 feet and a length of 162 feet. It will include MSE walls. Concept plans of the interchange are included in Appendix B, and the Turnpike Widening PD&E's proposed typical section is shown in Figure 6-7. The final design, including detailed substructure and superstructure information, and costs for the structure will be determined cooperatively with the Florida Department of Transportation and the Florida's Turnpike Enterprise during the design phase.

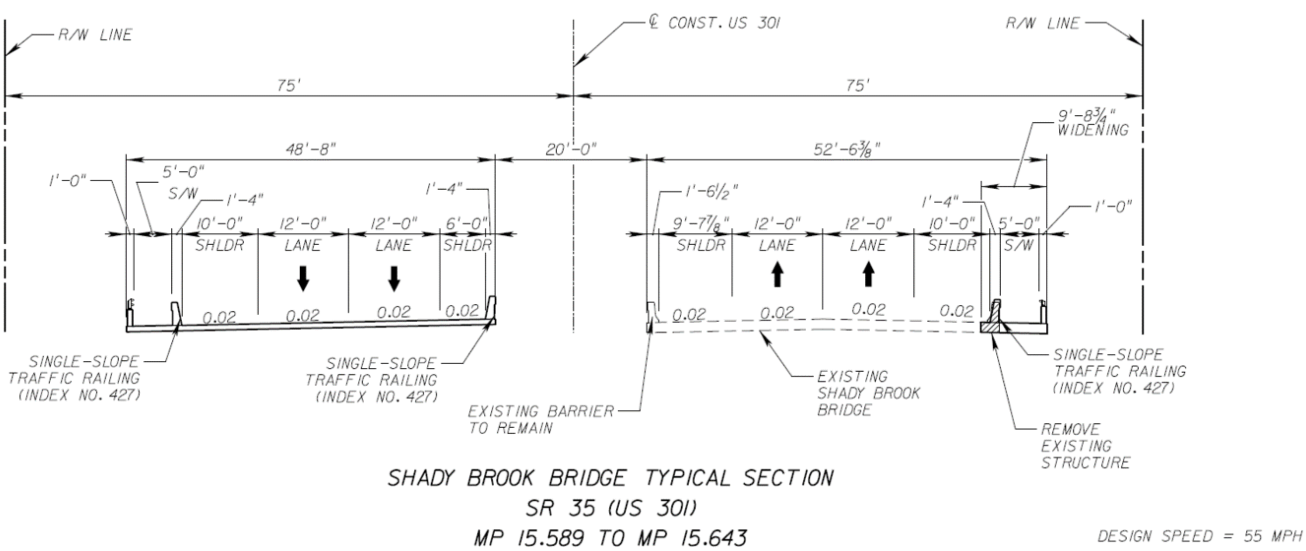
Figure 6-7 | Florida Turnpike Widening PD&E Study – Proposed Typical Section near US 301 Interchange



6.6.2 Shady Brook Bridge Structure

The proposed structure at Shady Brook Bridge would include maintaining the existing bridge structure to carry two lanes of northbound traffic and widening it to the east to accommodate a barrier separated sidewalk. A new bridge would be constructed to the west of the existing structure to carry southbound traffic. The typical section of the proposed structure is shown in Figure 6-8.

Figure 6-8 | Proposed Shady Brook Bridge Structure Typical Section



The substructure and superstructure for the Shady Brook Bridge will be determined in the design phase, though a preliminary construction cost for the recommendation is shown in Table 6-3.

Table 6-3 | Shady Brook Bridge Construction Cost Estimates

Bridge Section	Total Bridge Length (ft)	Bridge Width (ft)	Total Area (ft^2)	Unit Cost/SF	Total Cost
Widen Existing Bridge (NB)	118.11	9.89	1,168.11	$ 150	$175,217
New Bridge (SB)	118.11	48.67	5,748.02	$150	$862,203
				Total:	$1,037,419

6.7 Access Management

The preferred alternative is planned to have two FDOT Access Management Classifications throughout the study corridor. Segments 1, 2, and 6 were developed to meet Access Management Class 3 standards, which is a change from the original Access Class 4. Segments 4 and 5 were developed to meet Access Management Class 5 standards, which is a change for Segment 4 from an original Access Class 4. The access management classifications and standards are defined in Table 6-4.

Table 6-4 | Arterial Access Management Classifications and Standards

Access Class	Medians	Connection Spacing (feet)		Median Opening Spacing		Signal Spacing (feet)
		> 45 MPH	≤ 45 MPH	Directional	Full	
3	Restrictive**	660	440	1320	2640	2640
5	Restrictive**	440	245	660	*2640/1320	*2640/1320

2640 feet for > 45 MPH, 1320 feet for ≤ 45 MPH
*****Restrictive – physically prevent vehicle crossing***

Full median openings and directional median openings are included at key locations in the preferred alternative, as shown in the Concept Plans in Appendix B. A total of 29 median openings are proposed, with fifteen (15) as full openings, and fourteen (14) as directional or dual directional openings. Table 6-5 provides the access management plan for opening year construction along with spacing and spacing requirements. It also notes where potential future openings could be placed as development occurs in the future (i.e. not recommended for immediate construction), and these locations are identified as *Potential Future Median Openings* in Table 6-5.

Table 6-5 | Proposed Access Management

Posted Speed (mph)	Access Class	Median Opening ID #	Description	Mile Post	Median Opening Type (Full or Directional)	Spacing Evaluation			
						Directional		Full	
						Distance Between Openings (ft)	Satisfies Spacing Criteria (+/- 10%)	Distance Between Full Openings (ft)	Satisfies Spacing Criteria (+/- 10%)
		1	CR 470 E	14.672	Full	-		-	
						829[1]	×[1]		
		2	Shady Brook Dr.	14.829	2-Way Dir.			2,577	✓
						1,746	✓		
		3	Driveway (Cowart Ranch)	15.160	Full				
						1,517	✓		
		4	Median Opening	15.447	2-Way Dir.			3,490	✓
						1,973	✓		
		5	Shady Brook Park, City of Coleman	15.821	Full				
						1,286	✓		
		6	NE 13th Ave.	16.065	2-Way Dir.			2,688	✓
						1,399	✓		
		7	NE 16th Ave.	16.330	Full				
						1,764	✓		
55	3	8	NE 19th Rd.	16.664	2-Way Dir.			3,490	✓
						1,727	✓		
		9	CR 525 E	16.991	Full				
						1,727	✓	3,910	✓
		39	Median Opening	-	Full[2]				
								2,640	✓
		40	Median Opening	-	Full[2]				
						1,450	✓		
		41	Potential Future Median Opening	-	2-Way Dir.			3,400	✓
						1,950	✓		
		42	CR 468 Relocated	-	Full				
								1,784	×
		23	CR 521[3]	19.504	Full				
						1,375	✓		
		24	Driveway (D&S Salvage)	19.764	2-Way Dir.			2,318	×
						947	×		
		25	NE 37th Pl.	19.943	Full				
						1,635	✓	6,209	✓

Posted Speed (mph)	Access Class	Median Opening ID #	Description	Mile Post	Median Opening Type (Full or Directional)	Spacing Evaluation: Directional – Distance Between Openings (ft)	Directional – Satisfies Spacing Criteria (+/- 10%)	Full – Distance Between Full Openings (ft)	Full – Satisfies Spacing Criteria (+/- 10%)
		26	Driveway (Wildwood Off Road Park)	20.253	NB Dir.				
						1,933	✓		
		27	NE 41st Ln.	20.308	SB Dir.				
						1,640	✓		
55	3	28	Potential Future Median Opening	20.619	SB Dir. NB Dir.[4]				
						1,320	✓		
		29	Potential Future Median Opening	20.869	2-Way Dir.				
						1,320	✓		
		30	Potential Future Median Opening	21.119	Full				
						1,320	✓		
		31	Potential Future Median Opening	21.369	SB Dir. NB Dir.[5]			2,640	✓
						1,320	✓		
		32	SB Florida's Turnpike Ramp	21.619	Full (Ramp)				
								775	✗
		33	NB Florida's Turnpike Ramp	21.766	Full (Ramp)				
						575	✓		
45		34	Driveway (Villager RV Park)	21.875	NB Dir.			1,663	✓
	5					685	✓		
		35	Clay Drain Rd.	21.896	SB Dir.				
						976	✓		
		36	Driveway	22.081	Full				
						686	✓		
		37	Spring Lake Rd.	22.211	2-Way Dir.			1,658	✓
40						972	✓		
		38	SR 44	22.395	Full				

[1]The distance between Shady Brook Drive and CR 470 increases to 1,774 feet with the implementation of the CR 470 realignment that is proposed as a part of the CR 470 PD&E.
[2]To be constructed as Full Openings in order to allow left turns and U-turns to adjacent residences south of the new alignment. Left turn lanes do not need to be constructed initially just to serve these individual residences.
[3]Full median opening provided at CR 521 to provide emergency access for the Fire Station located at 3290 CR 521, Wildwood, FL.
[4]For the first median opening north of 41St Ln, the northbound directional is conceptual only. The southbound directional provides access to an existing residential home.
[5]For the first median opening south of the interchange, the northbound directional is Potential Future only. The southbound provides for U-turns south of the interchange.

6.8 Design Exception and Variation

The suburban (flush shoulder) typical section with 150-foot right of way may require a design variation, or other documentation, for a border width of 30 feet from 40 feet, per Table 210.7.1 of the FDM.

6.9 Right-of-Way Needs and Relocation

There are 106 parcels that are anticipated to be impacted as a result of the preferred alternative, with 118 acres of right-of-way needed for the roadway and stormwater ponds. Of the impacted parcels, there are ten (10) anticipated relocations associated with implementing the preferred alternative. The relocations include four (4) residences, two (2) businesses (including one landlord business), one (1) not-for-profit organization, and three (3) personal property only moves.

The relocatees do not appear to have special needs that would prevent the successful relocation of the potential residential and business displacees. Nor does this project appear to have any business displacements that provide services to the elderly, handicapped, non-driver, transit-dependent, or to minority groups. In order to minimize the unavoidable effects of right-of-way acquisition and displacement of people, the Florida Department of Transportation will carry out a Right-of-Way and Relocation Program in accordance with Florida Statute 339.09 and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646 as amended by Public Law 100-17). Additional information is available in the Conceptual Stage Relocation Plan which is available under separate cover.

6.10 Utilities & Lighting

6.10.1 Utilities

The preliminary utility coordination and investigation was conducted through available construction plans and field reconnaissance. A list of existing utility owners was provided by the Sunshine State One Call system. Table 6-6 provides a list of the utility companies and contact information (same information as in Table 2-10). Utilities with the potential to be impacted by the preferred alternative are listed on the next page, immediately following Table 6-6.

Table 6-6 | Utility Company and Contacts

Utility Company	Contact	Address	Phone Number	E-Mail Address
CenturyLink	Mike Fitzgerald	5908-A Hampton Oaks Parkway Tampa, FL 33610	(813) 630-2605	Mike.Fitzgerald@CenturyLink.com
CenturyLink	David Detmer	319 SE Broadway St. Ocala, FL 34471	(352) 368-8862	David.Detmer@CenturyLink.com
Sabal Trail Transmission Line	Andrea D. Grover	400 Colonial Center Parkway, Suite 300	(321) 249-8606	ADGrover@SpectraEnergy.com
City of Wildwood	Mark O'Dell	1290 Industrial Dr. Wildwood, FL 34785	(352) 330-1346	modell@wildwood-fl.gov

Table 6-6 | Utility Company and Contacts

Utility Company	Contact	Address	Phone Number	E-Mail Address
City of Wildwood (Kimley Horn Consulting Engineers)	Gene Losito	1823 SE Ft King Street Suite 2 Ocala, FL 34471	(352) 438-3000	Gene.Losito@kimley-horn.com
CSX	Steve Price	4500 Salisbury Road Suite 400 Jacksonville, FL 32216	(904) 571-1526	Steve_Price@CSX.com
CSX	Jacob Smith		(904) 359-1650	Jacob_Smith@csx.com
Duke Energy	Yani Mikedis	4359 SE Maricamp Rd. Ocala, FL 34480	(352) 694-8811	Yani.Mikedis@duke-energy.com
Duke Energy	Sharon Dear	452 E. Crown Pointe Rd. Winter Garden, FL 33787	(407) 905-3321	Sharon.Dear@duke-energy.com
FGE Engineering, Inc./ TECO Peoples Gas	Gerry Moliere	P.O. BOX 280 Dade City, FL 33526	(352) 834-0350	Gmoliere@flgascontractors.com
Level 3	Robert Quay	1025 Eldorado Blvd. Broomfield, CO 80021	(813) 376-6975	Robert.Quay@Level3.com
MCI/Verizon	John Bachelder	2400 North Glenville Richardson, TX 75082	(972) 729-6322	John.Bachelder@verizon.com Investigations@verizon.com
Spectrum (Bright House Networks)	Dwayne Leachman	730 S. Main Street Wildwood, FL 34785	(352) 861-3206	Dwayne.Leachman@mybrighthouse.com
Sumter Electric Cooperative (SECO)	Danny Boyett	330 South US Highway 301 Sumterville, FL 33585	(352) 569-9882	Danny.Boyett@secoenergy.com
Sumter Electric Cooperative (SECO)	Alan Kimbley	330 South US Highway 301 Sumterville, FL 33585	(352) 569-9644	Alan.Kimbley@secoenergy.com
TECO Peoples Gas	Bruce Stout	600 W. Robinson St. Orlando, FL 32801	(407) 420-2678	bstout@tecoenergy.com
TransCore	Steve Cordell	2416 Lake Orange Dr. Suite 100 Orlando, FL 32837	(407) 448-2819	
TransCore	Rafael Sena			Rafael.Sena@dot.state.fl.us

The major utilities located within or crossing the corridor with the potential to be impacted are listed below, and are described in the Utilities Assessment Report (available under separate cover).

- TECO People's Gas – underground gas mains
- Centurylink – underground fiber optic cables; underground copper cables
- Spectrum (Brighthouse Networks) – overhead fiber optic lines; underground fiber optic lines
- Level 3 Communications – underground fiber optic lines

- TransCore – underground fiber optic lines
- MCI/Verizon – underground fiber optic lines
- Sumter Electric Cooperative (SECO) – overhead power lines; underground power lines
- Duke Energy – overhead power lines
- City of Wildwood – watermains; forcemains; sewer lines
- Sabal Trail Transmission Natural Gas – underground gas mains

The extent of utility impacts will be determined during the final design phase of this project. Additional coordination with the known utility companies during the final design phase will assist in minimizing relocation adjustments and disruptions of service to the public.

6.10.2 Lighting

A Lighting Justification Report was prepared and is available under separate cover. The preferred alternative warrants lighting at the interchange of US 301 with Florida's Turnpike and along the urban section of US 301 from the Turnpike to SR 44 (Segment 5).

6.11 Transportation Management Plan

The Transportation Management plan during construction of the preferred alternative will follow the *FDOT Standard Plans for Road Construction (102 series)*. Construction of segments along the existing US 301 corridor can be phased to maintain existing traffic and access to residents and businesses. Temporary pavement, detours, and diversions may be required, particularly at the recommended roundabout locations. Existing pedestrian and bicycle access must be maintained throughout construction. Construction along the realignment can be performed with minimal traffic impacts.

To complete the 4-laning of the Shady Brook Bridge, a conventional three-phase construction sequence can be expected. The anticipated phasing would be as follows:

- Phase 1: Construct new southbound bridge offset to the left of existing bridge while maintaining northbound and southbound traffic on existing bridge.
- Phase 2: Shift southbound traffic onto new southbound bridge and widen existing bridge.
- Phase 3: Final configuration with second northbound lane on widened existing bridge opened to traffic.

At the diverging diamond interchange with Florida's Turnpike, the phasing is expected to be four phases:

- Phase 1: Construct new Turnpike bridges.
- Phase 2: Shift northbound and southbound traffic to the west onto temporary pavement. Construct northbound lanes.
- Phase 3: Shift northbound and southbound traffic to the east on newly constructed lanes. Construct southbound lanes.
- Phase 4: Place final striping and begin opposite side traffic flow.

6.12 Bicycle and Pedestrian Accommodation

The preferred alternative includes 7-foot paved shoulders (buffered for bicycle use) and space for 5-foot sidewalks along both sides of US 301 from CR 470 E to Florida's Turnpike, following the proposed realignment south of the City of Coleman. North of the Florida's Turnpike, the preferred alternative maintains the 7-foot pave shoulder (buffered for bicycle use) and includes 6-foot sidewalks on the east and west sides of US 301.

Bicycle and pedestrian accommodations are also included at both roundabout locations and the diverging diamond interchange at the Florida's Turnpike. Crosswalks are located at pedestrian crossings, and pedestrian islands/refuge areas are also present. Specific crosswalk and pedestrian island locations are shown in detail in Appendix B.

6.13 Preliminary Drainage Analysis

The preferred alternative includes open drainage conveyance for stormwater runoff throughout the corridor, with closed drainage from SR 44 to the Florida's Turnpike. Proposed cross drains along the proposed realignment are required to allow the offsite water flow to mimic pre-development conditions. There are six (6) proposed cross drains which will allow stormwater runoff to flow beneath the US 301 realignment (Segment 6) along its historical path. The proposed cross drains are summarized in Table 6-7, with additional information provided in the Location Hydraulics Report available under separate cover.

Table 6-7 | Proposed Cross Drains

Structure No.	Station	Description
CD-15	317+30	Double 42" RCP
CD-16	325+15	Double 24" RCP
CD-17	350+05	Double 36" RCP
CD-18	359+95	Single 24" RCP
CD-19	375+20	Single 30" RCP
CD-20	381+50	Single 24" RCP

The preferred alternative traverses fifteen (15) drainage basins. Three (3) pond alternatives for each basin were analyzed. The ponds were sized on the assumption that offsite runoff would be drained through the pond site alternative towards its historical path using either dry detention or wet detention, and then upsized by twenty percent (20%) for contingency purposes. The following parameters were considered in the sizing of the potential pond sites:

- Hydrologic and hydraulic factors such as existing ground elevations, soil types, estimated seasonal high water (ESHW), stormwater conveyance feasibility, allowable hydraulics grade line (HGL)
- Impacts to Shady Brook, an Outstanding Florida Water, which requires additional water quality treatment for direct discharges to this water body
- Environmental resource impacts including wetlands and threatened or endangered species
- Floodplain impacts

- Major utility conflict potential
- Parcel descriptions and land usage
- Impacts to cultural resources

Fourteen (14) pond sites are included in the preferred alternative, as shown in Table 6-8. The preferred pond sites are identified in Appendix B and detailed in the Pond Siting Report.

Table 6-8 | Proposed Stormwater Pond & Floodplain Compensation Sites

Basin	Preferred Pond Alternative (detention ponds)	Pond Access Easement Area (ac)	Pond Right-of-Way Area (ac)	Total Required Right-of-Way Area (ac)	Arch./ Historical Impact Potential	Hazardous Materials & Contamination Potential
1	Pond 1B (dry)	0.00	1.02	1.02	High	None
2	Pond 2A (wet)	0.00	1.93	1.93	Low	None
3	Pond 3B (wet)	0.26	2.48	2.74	Low	None
4	Pond 4B (wet)	0.00	2.16	2.16	Low	Medium
5/19	Pond 19A (wet)	0.76	7.17	7.93	Low	High
13	Pond 13C (wet)	0.00	3.18	3.18	Low	Low
14	Pond 14C (wet)	0.30	2.10	2.40	Low	None
15	Pond 15B (wet)	0.00	1.60	1.60	Low	None
16	Pond 16A (wet)	0.00	1.27	1.27	Low	None
17	Pond 17B (wet)	0.61	5.36	5.97	Low	Medium
20	Pond 20C (wet)	0.00	1.88	1.88	Low	None
21	Pond 21A (wet)	0.00	3.40	3.40	Low	None
22	Pond 22C (wet)	0.00	2.91	2.91	Low	None
23	Pond 23A-1 (wet) & Pond 23A-2 (wet)	0.00	3.58	3.58	Low	None
			Totals:	**41.9**		

6.14 Floodplain Analysis

Floodplain encroachments areas, as identified in the Location Hydraulic Report, will be required with the preferred alternative. The majority of the project encroachments occur within Zone A of the 100-year floodplain. However, the 100-year flood zone west of US 301 at the bridge over Shady Brook is designated as Zone AE with a base flood elevation of 44.30 feet. There are no federally regulated floodways within the project limits. Due to the isolated nature of the majority of the flood zones, it was determined that the floodplain encroachment for either build alternative was classified as "minimal."

A total of five (5) floodplain compensation sites are included in the preferred alternative, as shown in Table 6-9. The preferred floodplain compensation sites are identified in Appendix B and detailed in the Location Hydraulic Report and the Pond Siting Report.

Table 6-9 | Proposed Stormwater Pond & Floodplain Compensation Sites

Preferred FPC Alternative	Access Easement Area (ac)	Right-of-Way Area (ac)	Total Required Right-of-Way Area (ac)	Arch./ Historical Impact Potential	Hazardous Materials & Contamination Potential
FPC 1	0.00	0.56	0.56	Moderate	None
FPC 4	0.00	2.25	2.25	Low	None
FPC 5	0.00	5.17	5.17	Low	None
FPC 6	0.00	0.56	0.56	Low	None
FPC 7	0.00	1.26	1.26	Low	None
		Totals:	**9.8**		

6.15 Special Features

There are no special features associated with the preferred alternative.

6.16 Cost Estimates

The preferred alternative has a total project cost of $95 million (in 2017 dollars), which includes costs for construction, right-of-way, wetland mitigation, design, and CEI as shown in Table 6-10. Utility relocation and contamination mitigation costs will be determined during the Design Phase. The construction cost estimate was prepared for using FDOT's Long Range Estimating (LRE) system. A copy of the LRE is included in Appendix H. Design costs were estimated as ten percent (10%) of the construction cost. CEI costs were estimated as fifteen percent (15%) of the construction cost. Wetland mitigation costs were estimated using a unit cost of $114,669 per acre of wetland impact, per the Environmental Mitigation Payment Processing Handbook published by the FDOT Environmental Management Office (EMO).

Table 6-10 | Preferred Alternative Cost Estimate Summary

Category	Alternative 2 US 301 Realignment
Construction Cost Estimate (in millions)*	$69.4
Right-of-Way (in millions)	$27.5
Wetland Mitigation (in thousands)	$320
Design (in millions)**	$7.2
CEI (in millions)***	$8.1
TOTAL (in millions)****	$112

Construction Cost is the LRE total including the preferred interchange option (DDI).
*****Design Cost is estimated as 10% of the total construction cost.***
******CEI cost is estimated as 15% of the total construction cost.***
*******Does not include utility relocation nor contamination mitigation costs. Final costs will be determined in the Design Phase of the project.***

6.17 Project Implementation Strategy

The preferred alternative is comprised of several unique roadway segments, which creates opportunities to divide the preferred alternative's construction into multiple projects if funding or partnerships allow the advancement of an individual segment. In terms of priority based on the results of the traffic analysis, all segments of the corridor are projected to exceed level of service standards by 2032 except for Segment 5 (US 301 north of the Florida's Turnpike to SR 44).

It is important to note that the widening of US 301 under the Florida's Turnpike and the development of the preferred interchange cannot be constructed without the replacement of the Florida's Turnpike bridge. Coordination with FTE should be performed during the design phase to develop the preferred project implementation strategy.

In terms of advancing individual segments with logical termini, the following segments are recommended. Each could be advanced separately.

- Segments 1 and 2 (CR 470 E to CR 525 E)
- Segment 4 (CR 468 to Florida's Turnpike)
- Segment 5 (North of Florida's Turnpike to SR 44)
- Segment 6 (realignment of US 301) with roundabouts at the intersections with CR 525 E and CR 468)
- Diverging Diamond Interchange and tie-ins to Segments 4 and 5 (cannot be completed without replacement of the Florida's Turnpike bridge)

6.18 Schedule and Planning Consistency

The project is currently adopted by the Lake~Sumter Metropolitan Planning Organization (Lake~Sumter MPO) 2040 Transportation Plan. The next phase of project development (Design/Preliminary Engineering) is funded for Fiscal Year 2021/2022. The FDOT State Transportation Improvement Plan (STIP) identifies the next phase of project development, Preliminary Engineering, in Fiscal Year 2020. The Lake~Sumter MPO is in the process of updating the funding source to Fiscal Year 2019/2020 consistent with the FDOT STIP. A copy of the programmed funding and the planning consistency form is included in the Type II Categorical Exclusion which is available under separate cover.

CHAPTER 7

List of Technical Reports Completed for the Project

7.0 List of Technical Reports Completed for the Project

Companion reports and documentation published for this Preliminary Engineering Report are listed below. Each contains detailed information regarding its respective component of the engineering or environmental analysis.

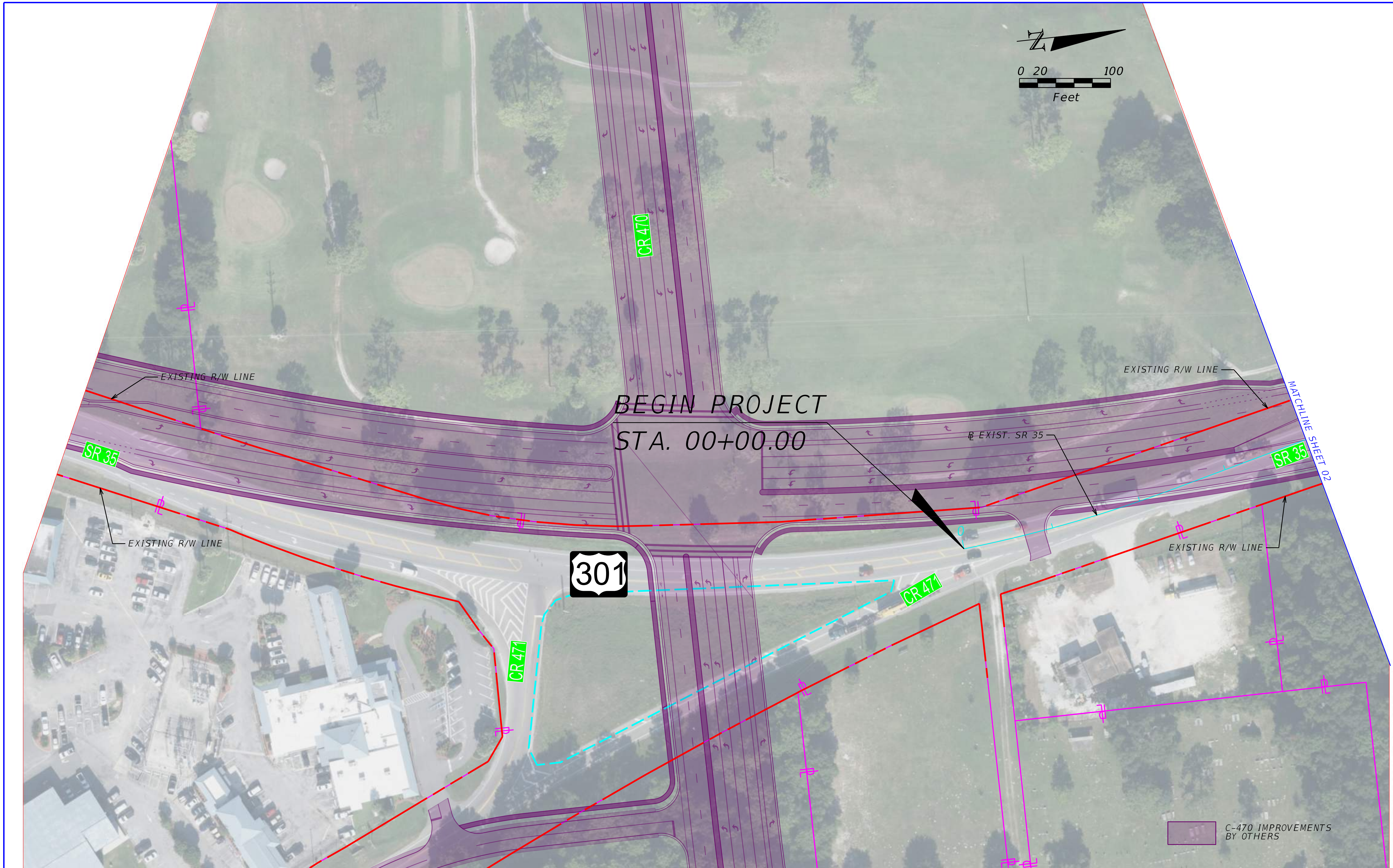
- Access Management Report
- Air Quality Technical Memorandum
- Contamination Screening Evaluation Report
- Cultural Resources Assessment Survey
- Design Traffic Technical Memorandum
- Geotechnical Soils Report
- Intelligent Transportation Systems Technical Memorandum
- Interchange Analysis Report
- Lighting Justification Report
- Location Hydraulics Report
- Natural Resources Evaluation Report
- Noise Study Report
- Pavement Type Selection Report
- Pond Siting Report
- Public Involvement Plan
- Roundabout Screening Report
- Section 4(f) Screening
- Sociocultural Effects Evaluation Report
- Structural Design Memorandum: Shady Brook Bridge
- US 301 Realignment Alternative Memorandum
- Utilities Assessment Package
- Value Engineering Report

CHAPTER 8

Appendix

APPENDIX A

Draft Alternatives 1 & 2 Concept Plans



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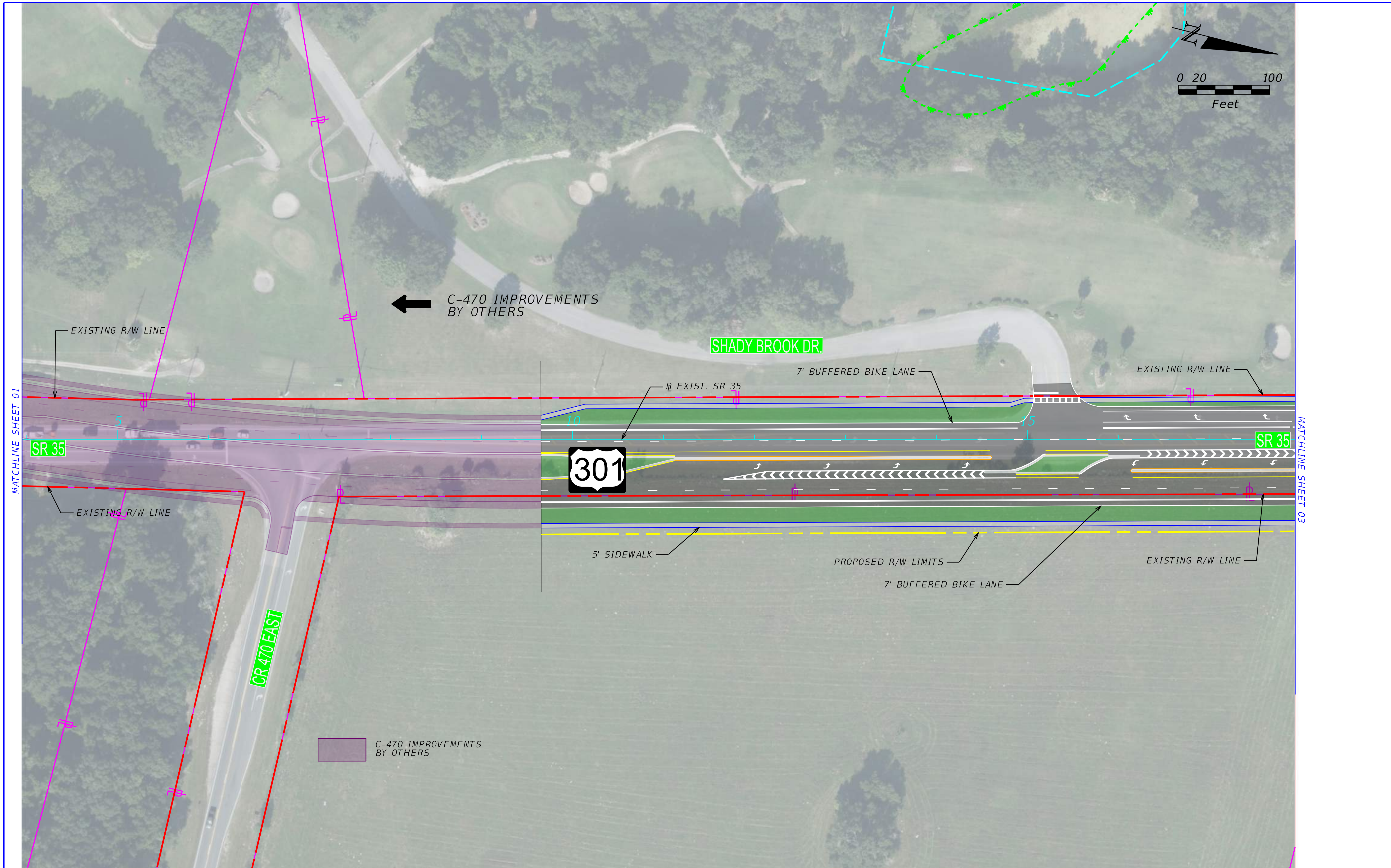

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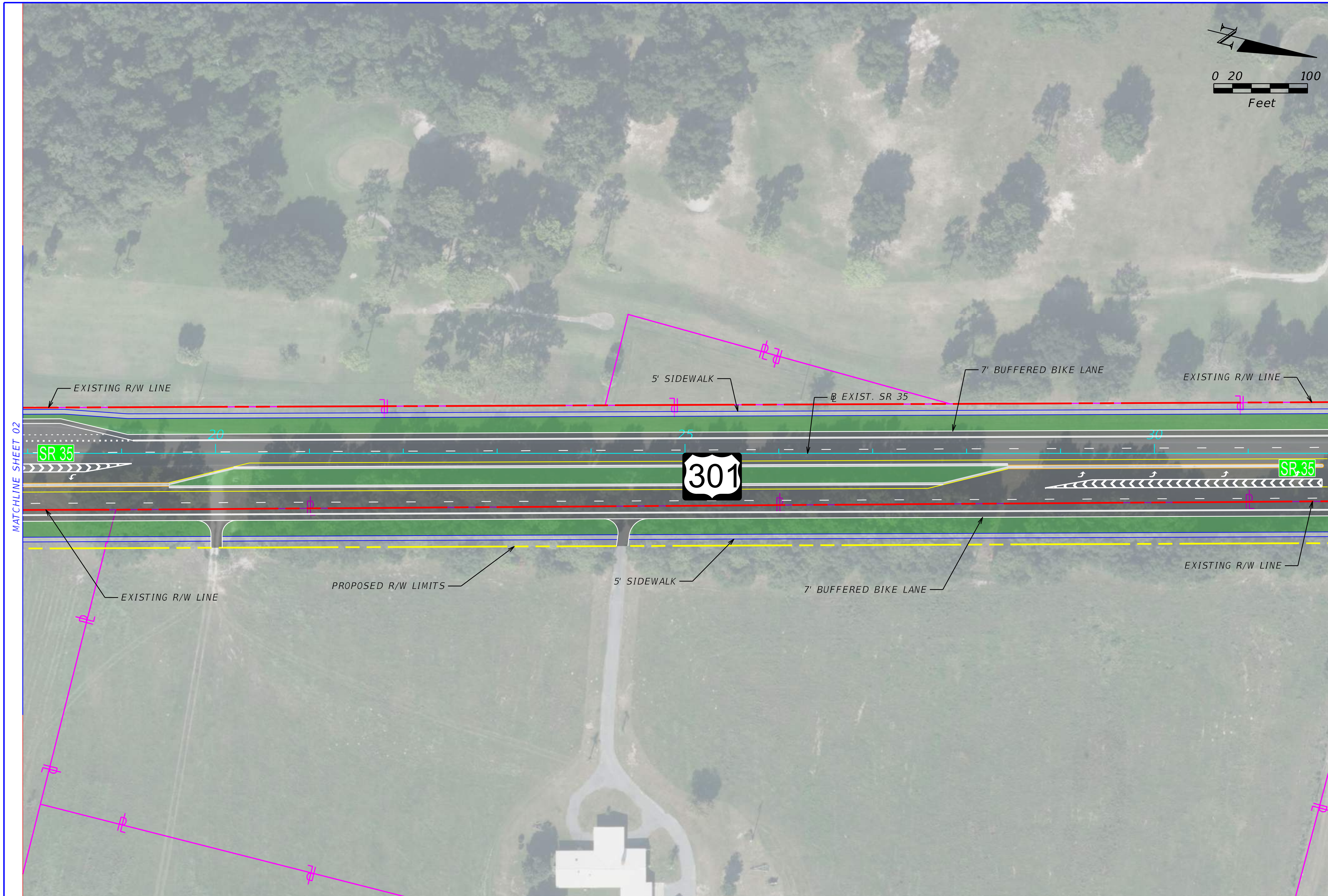

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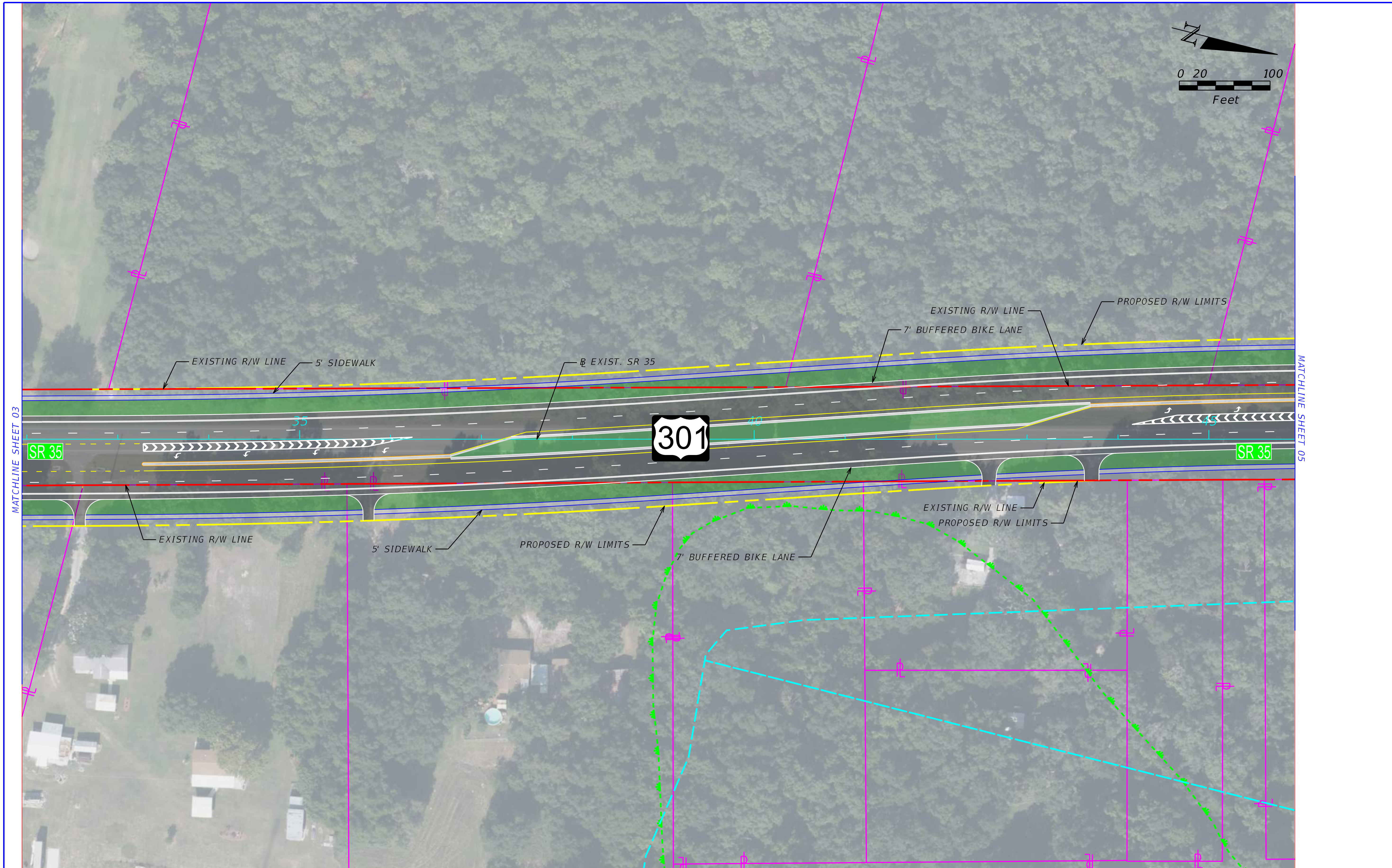

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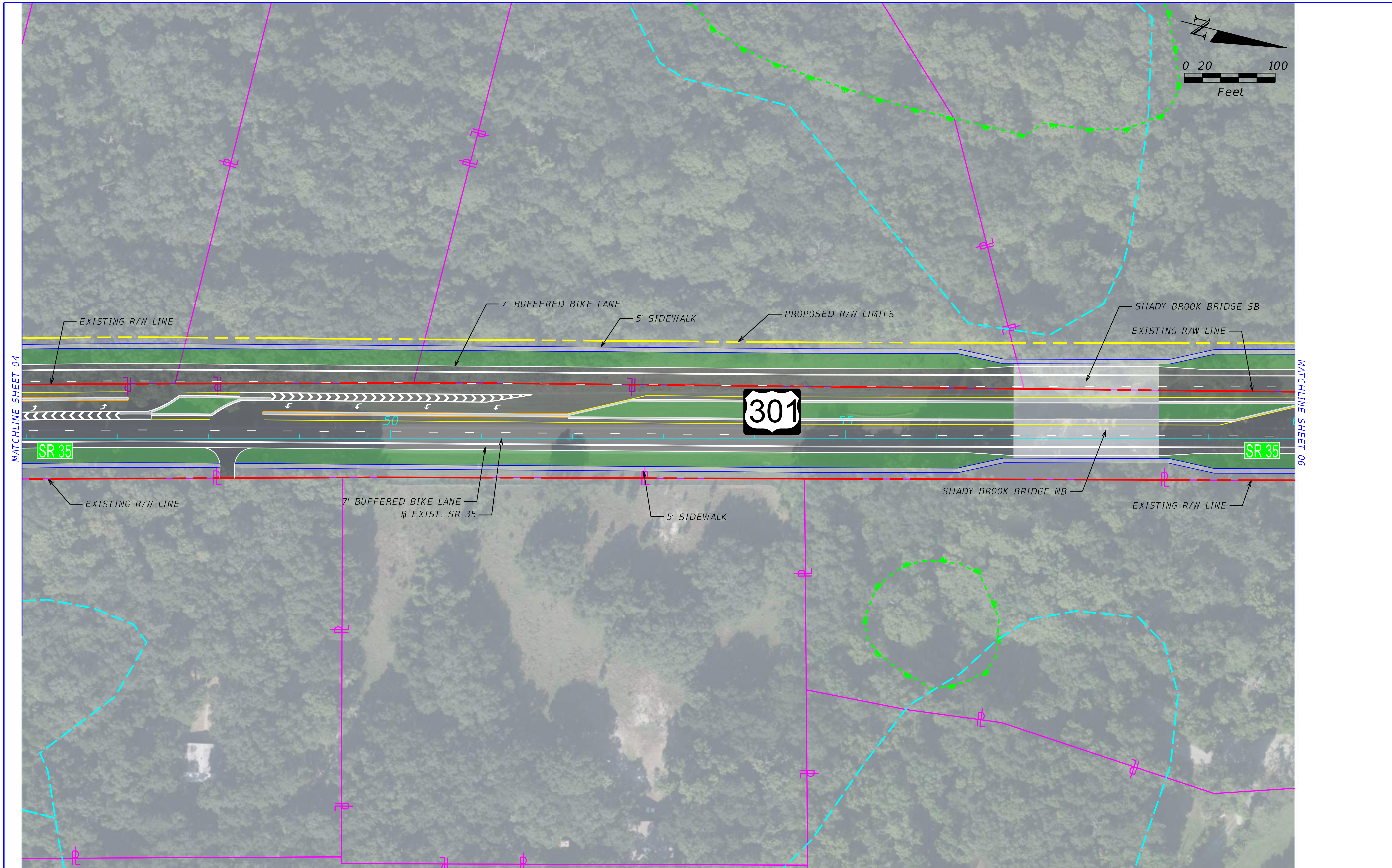

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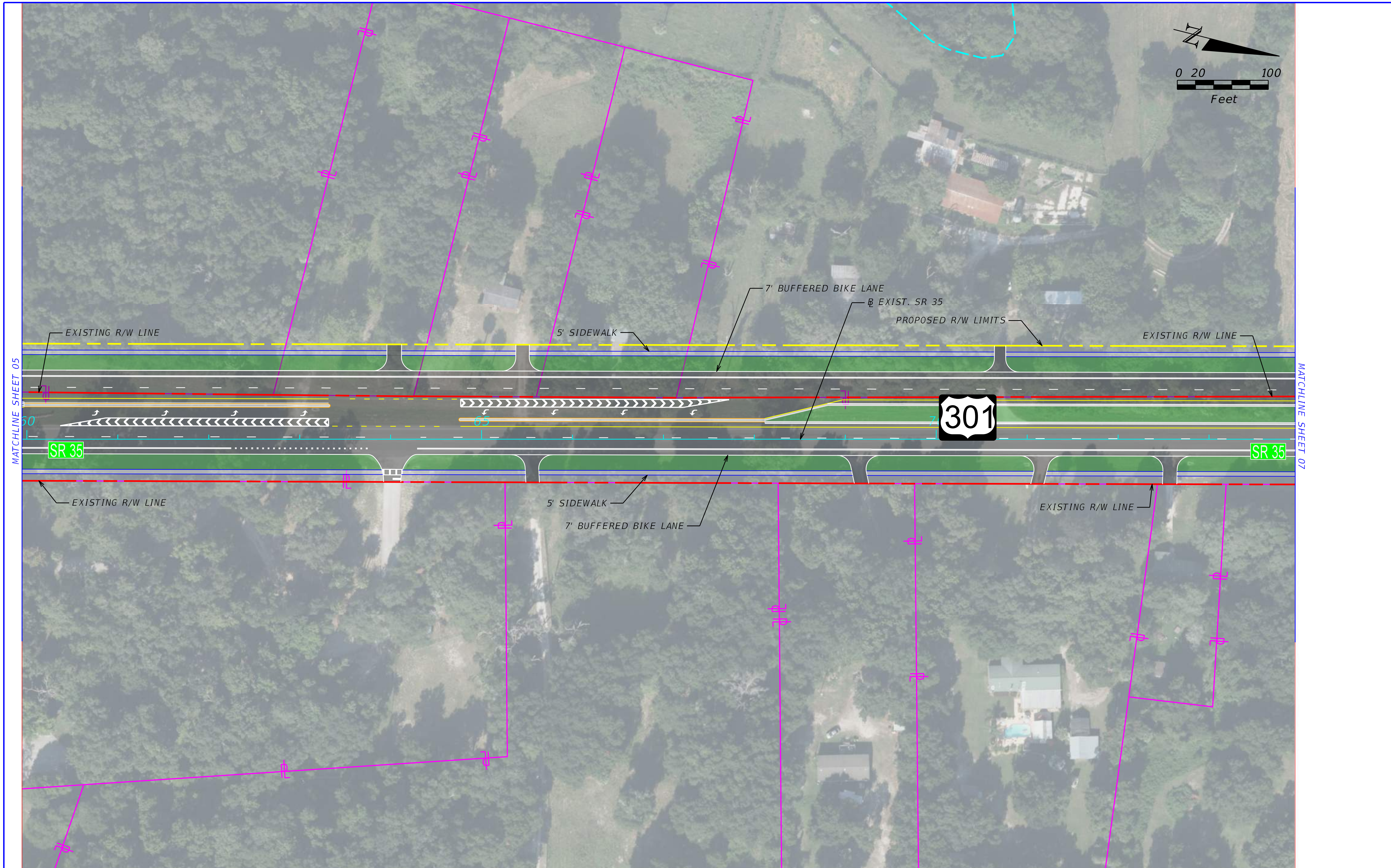

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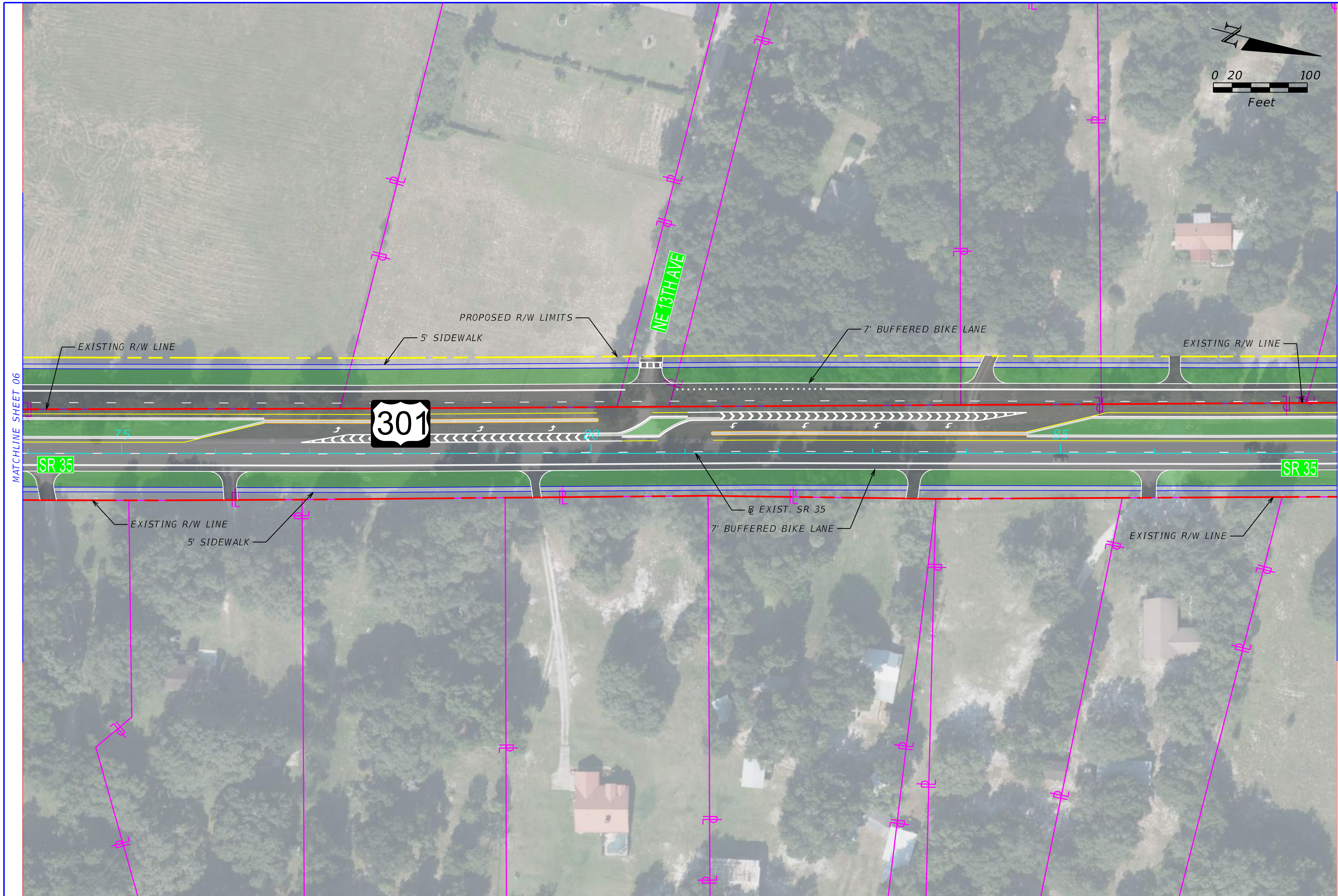

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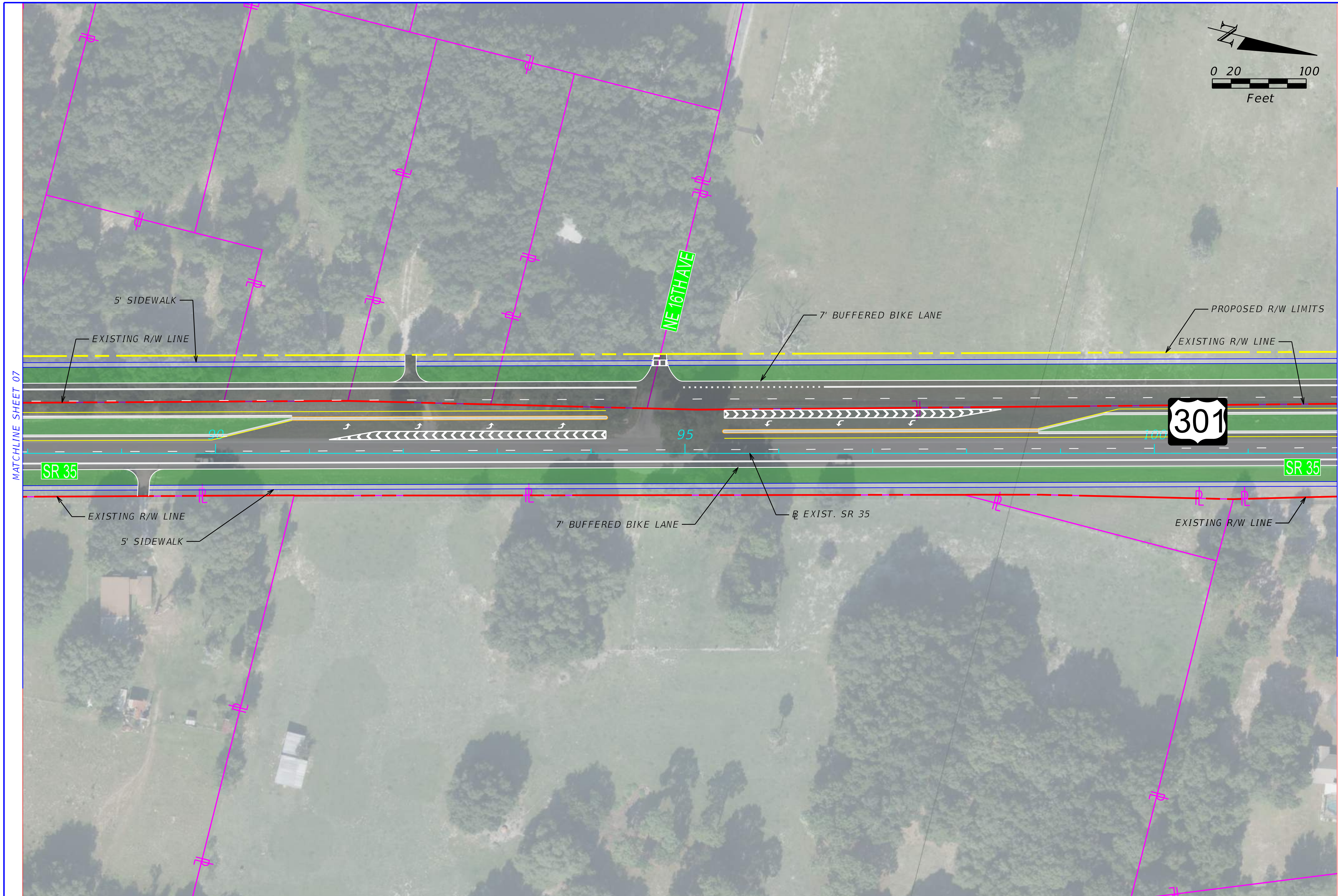

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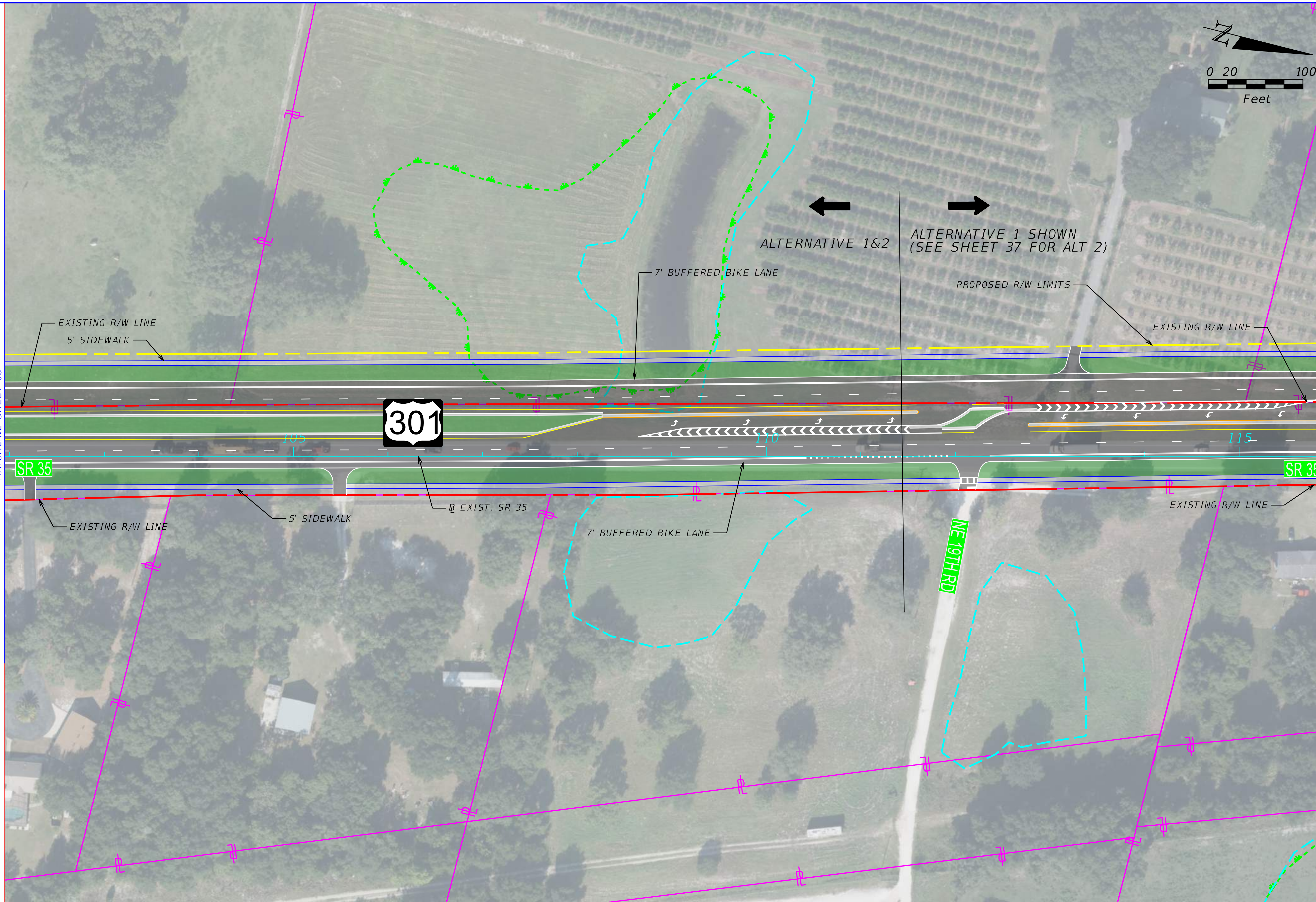

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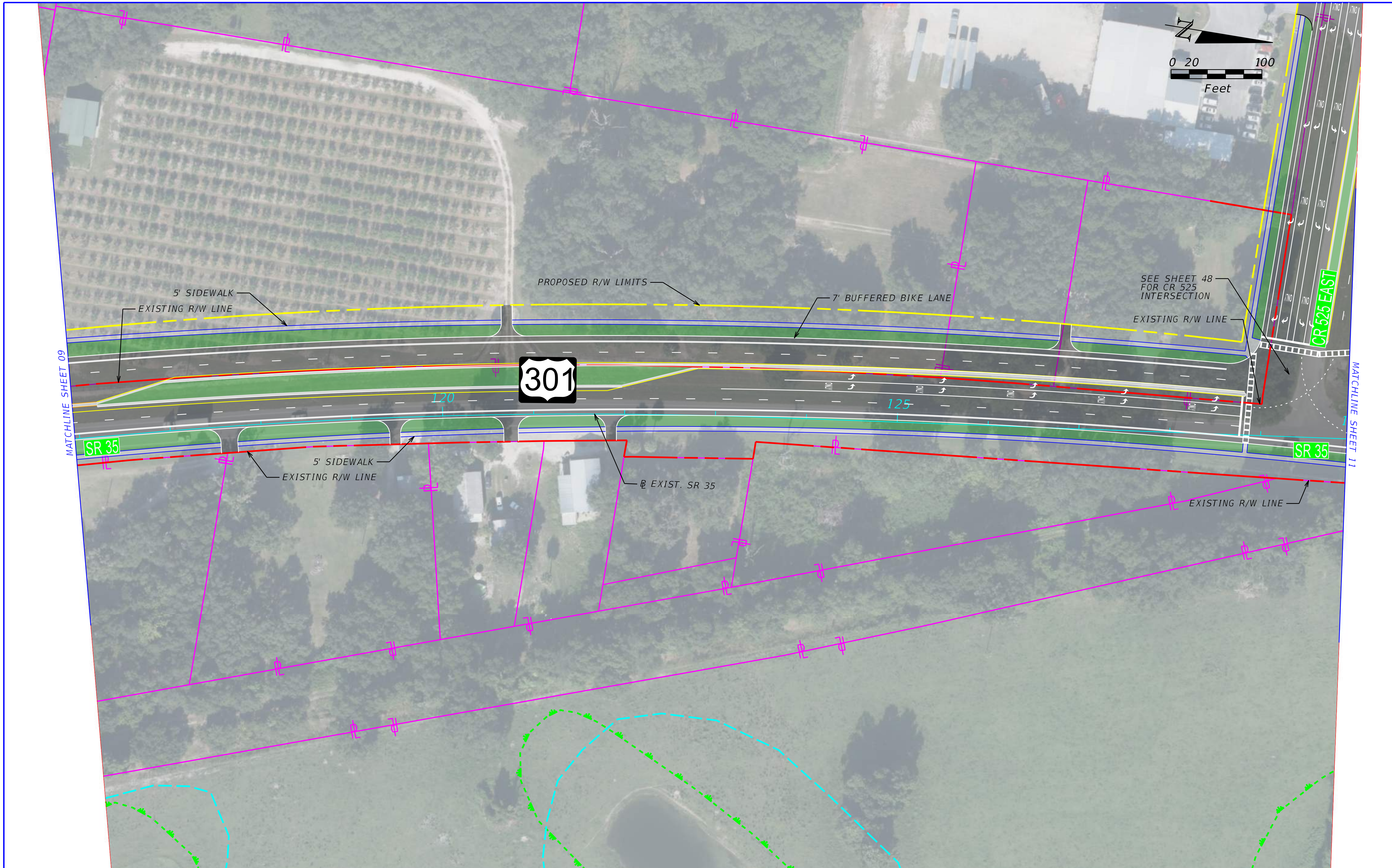

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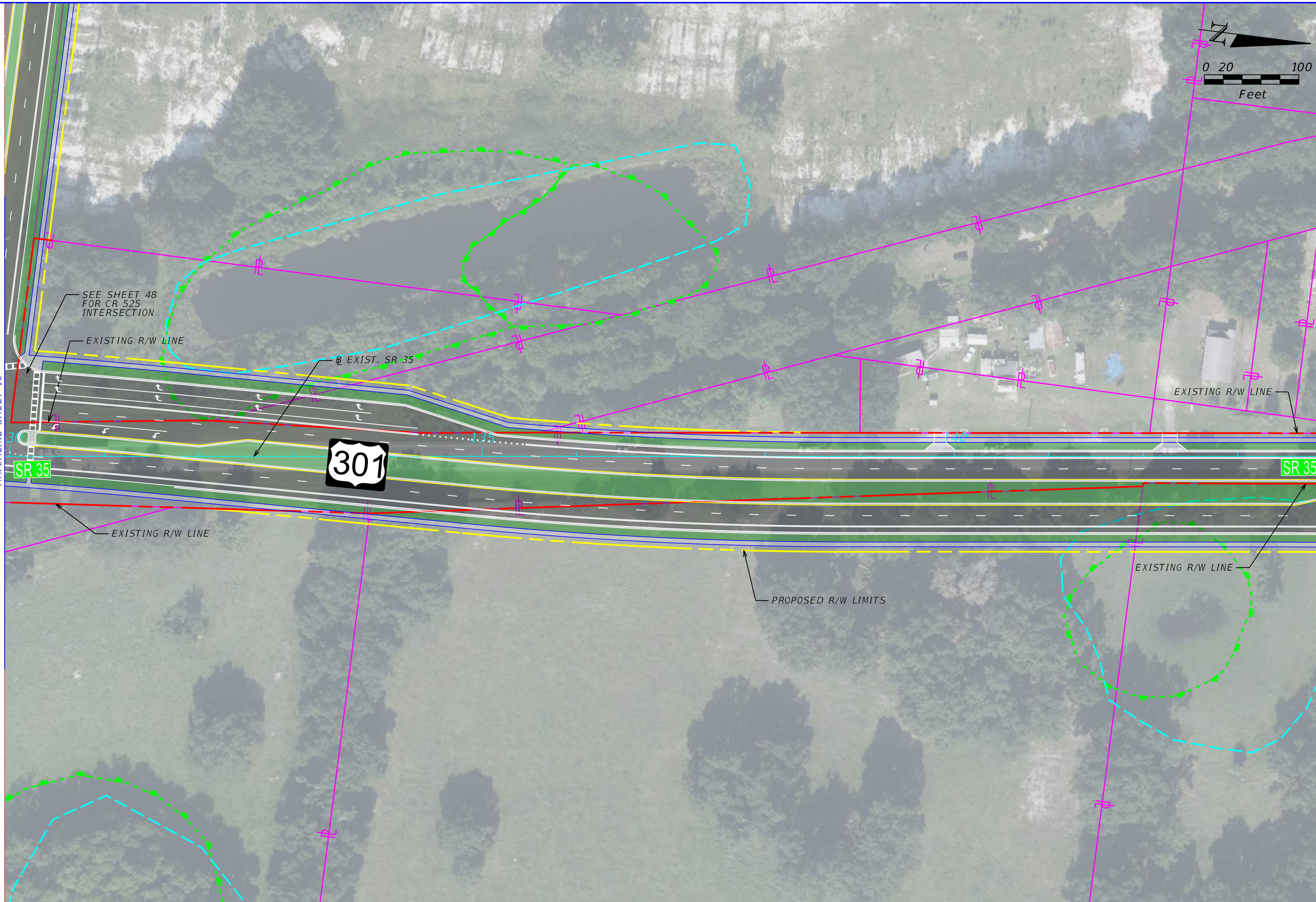

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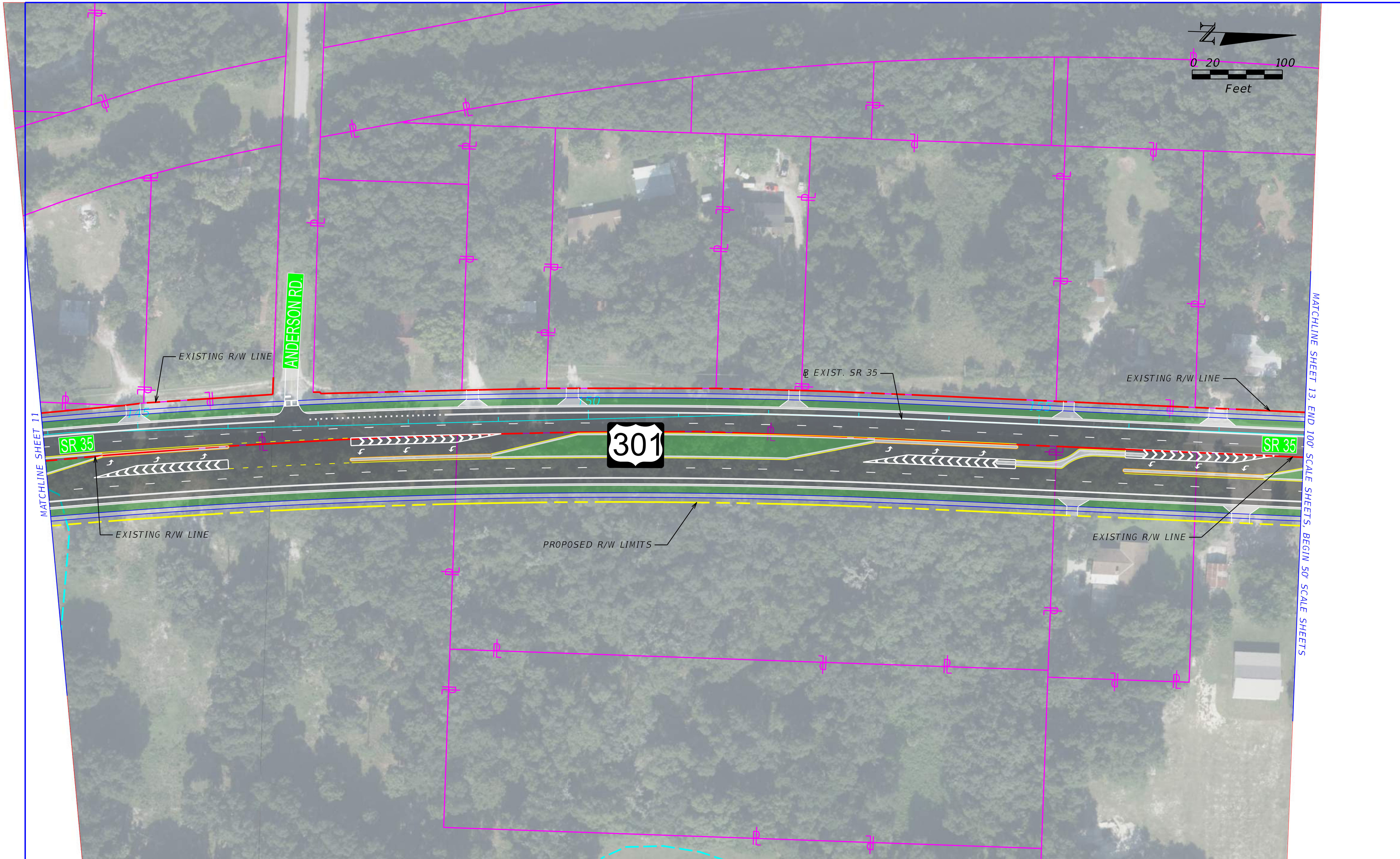

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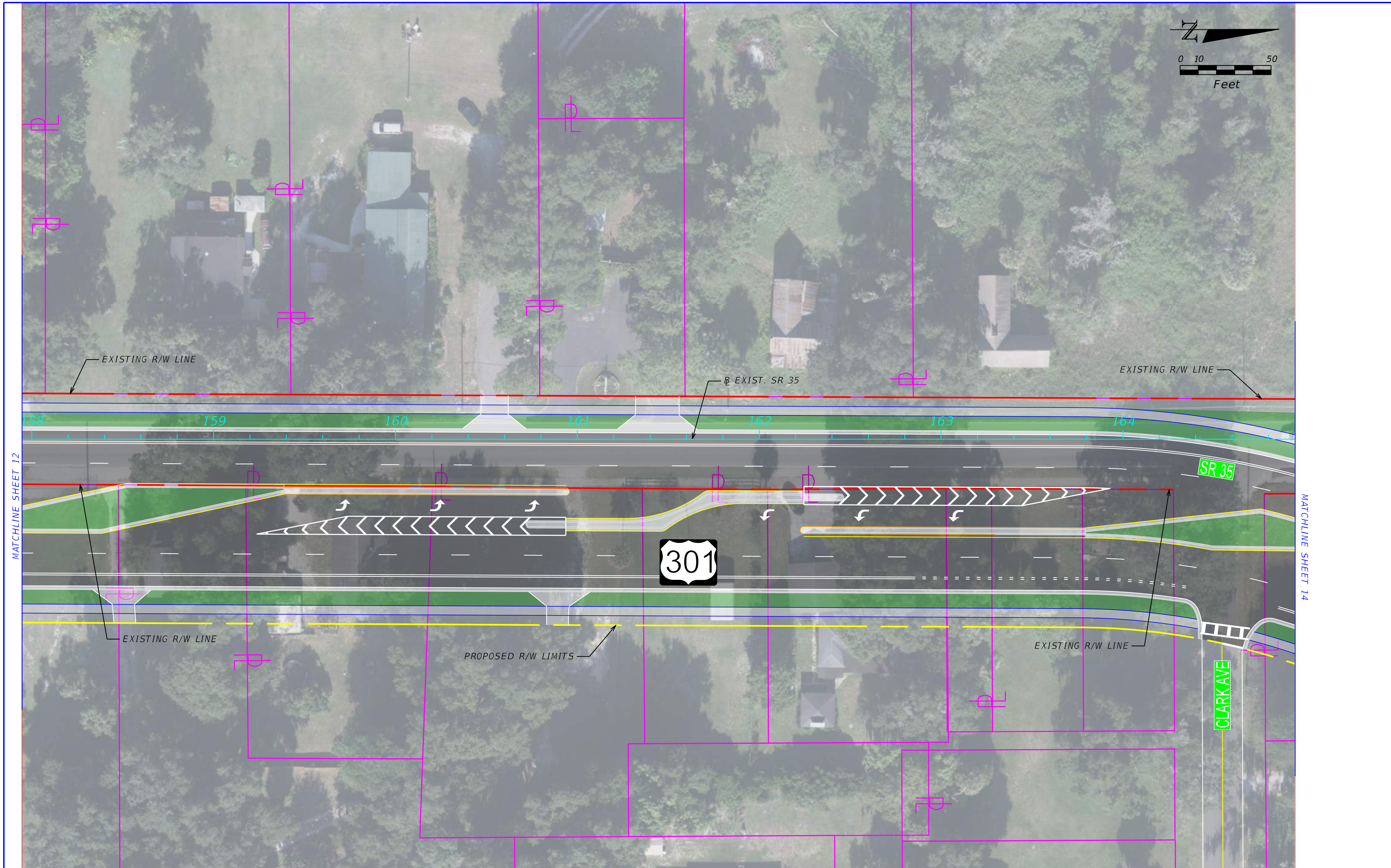

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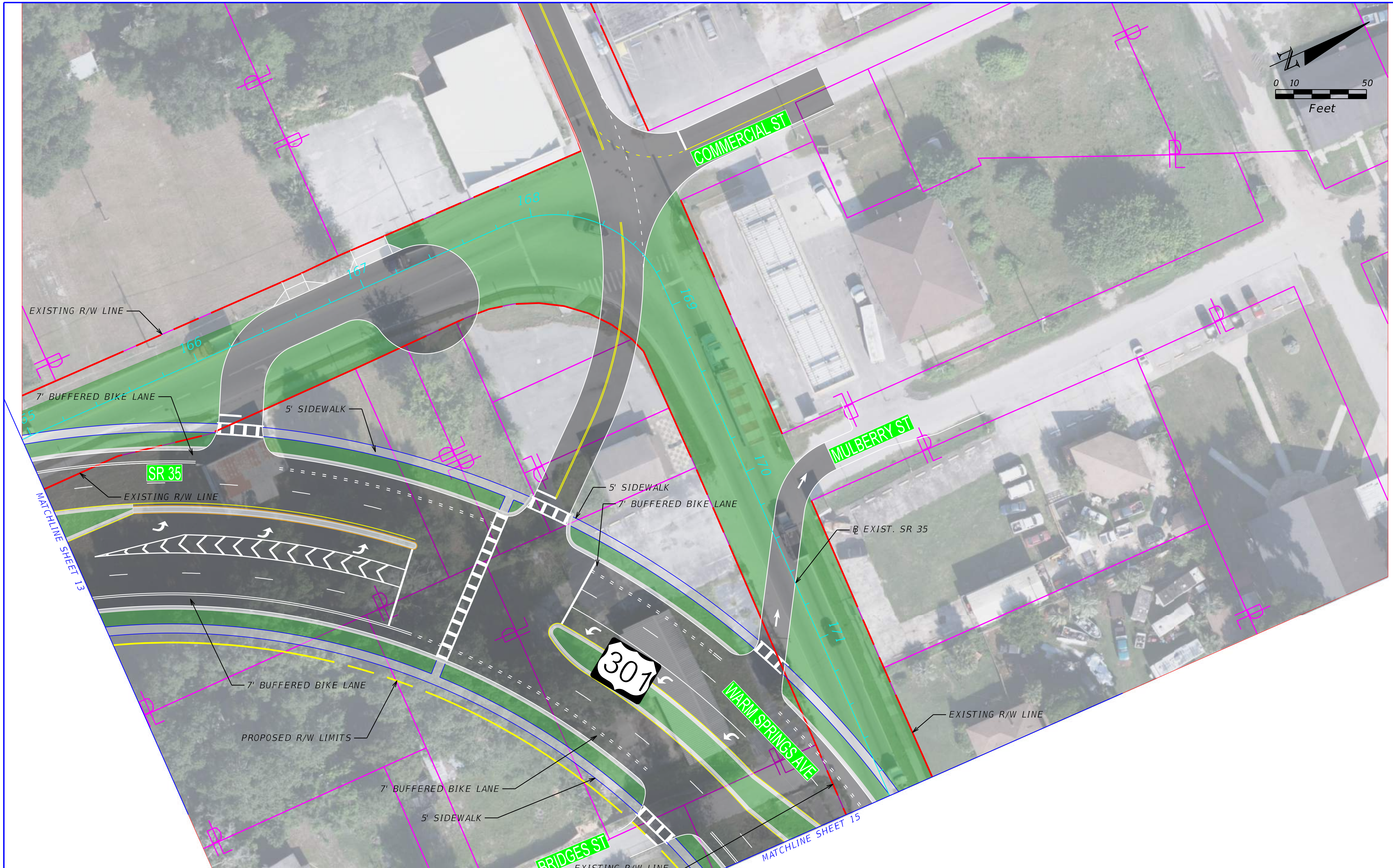

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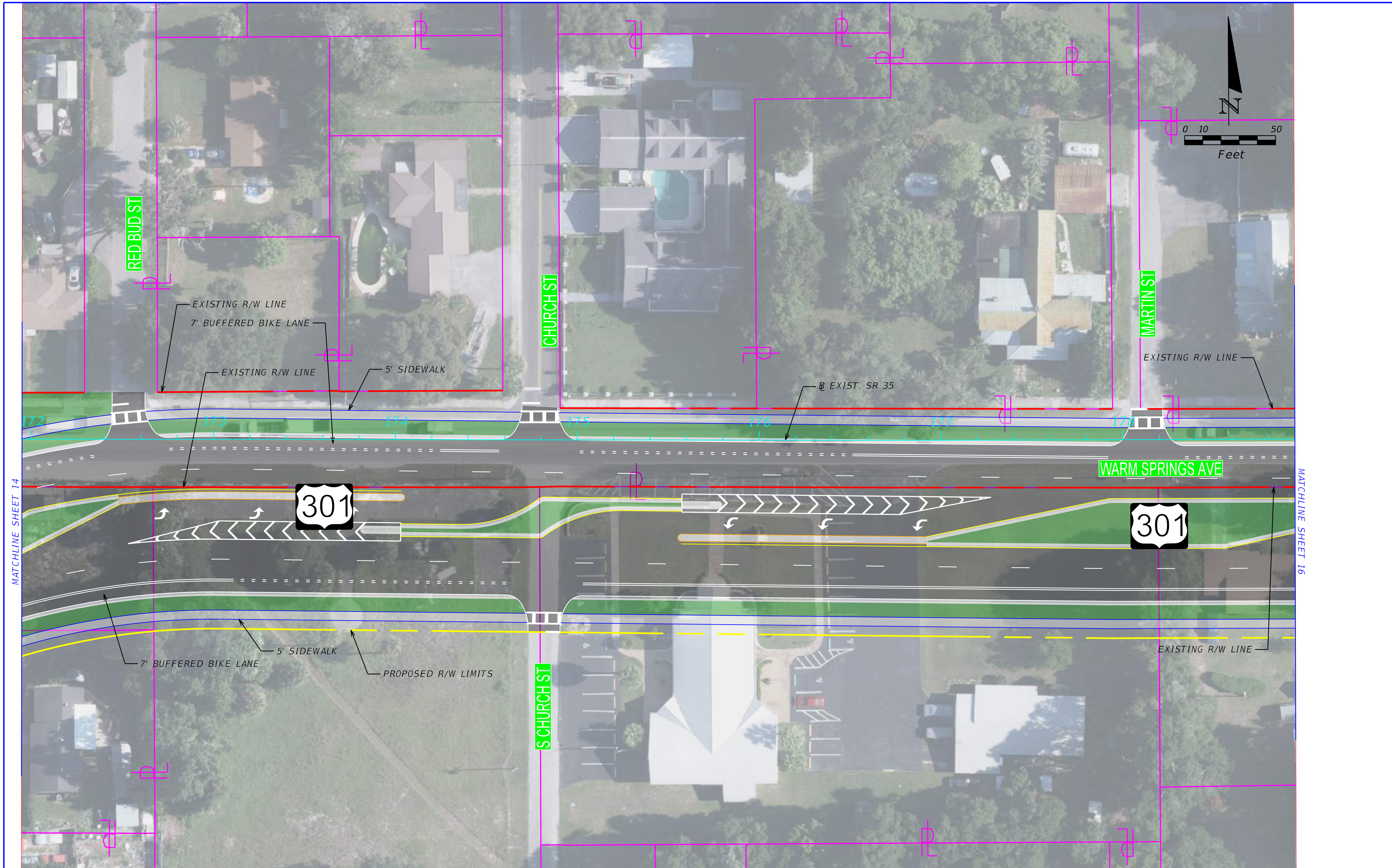

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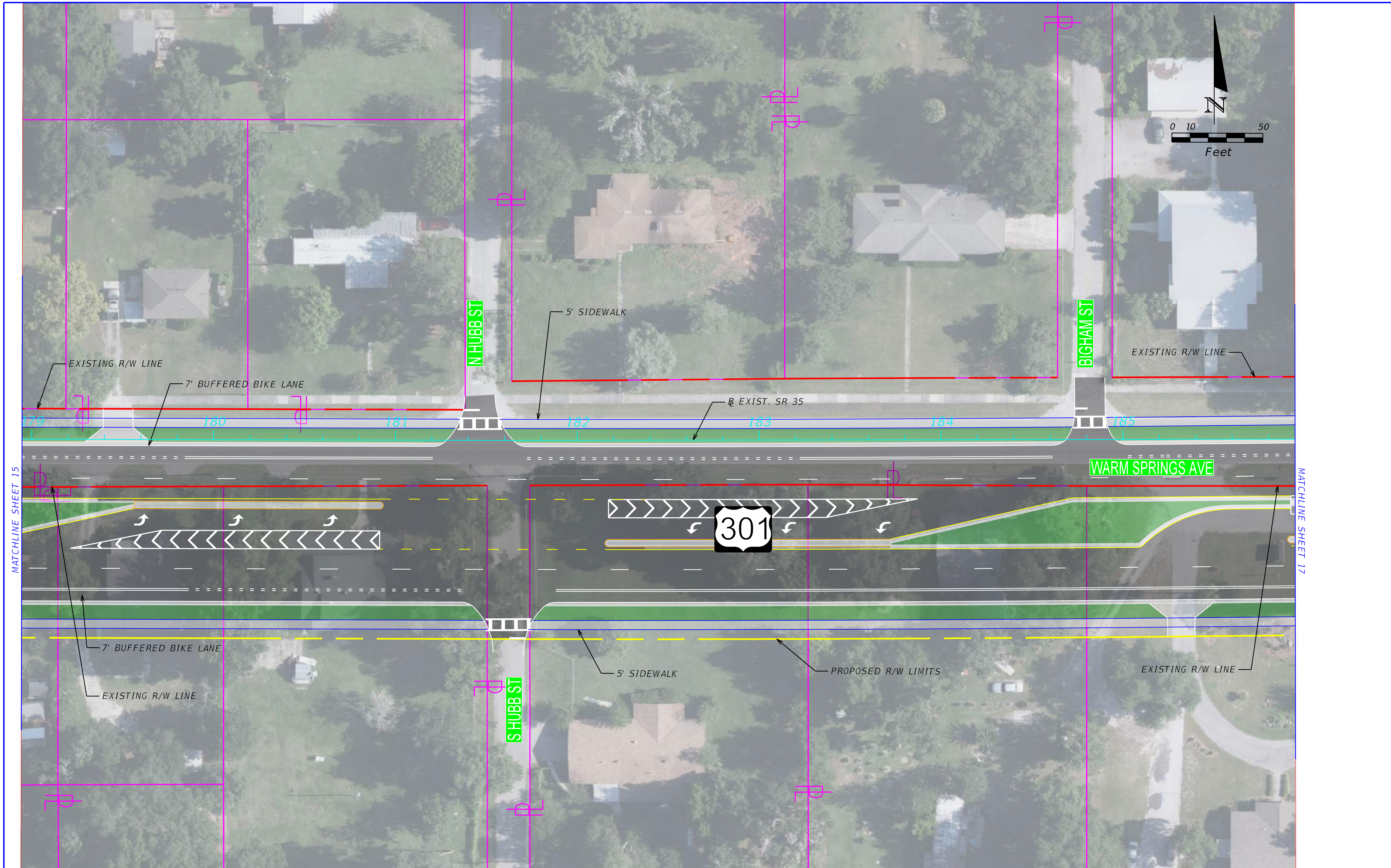

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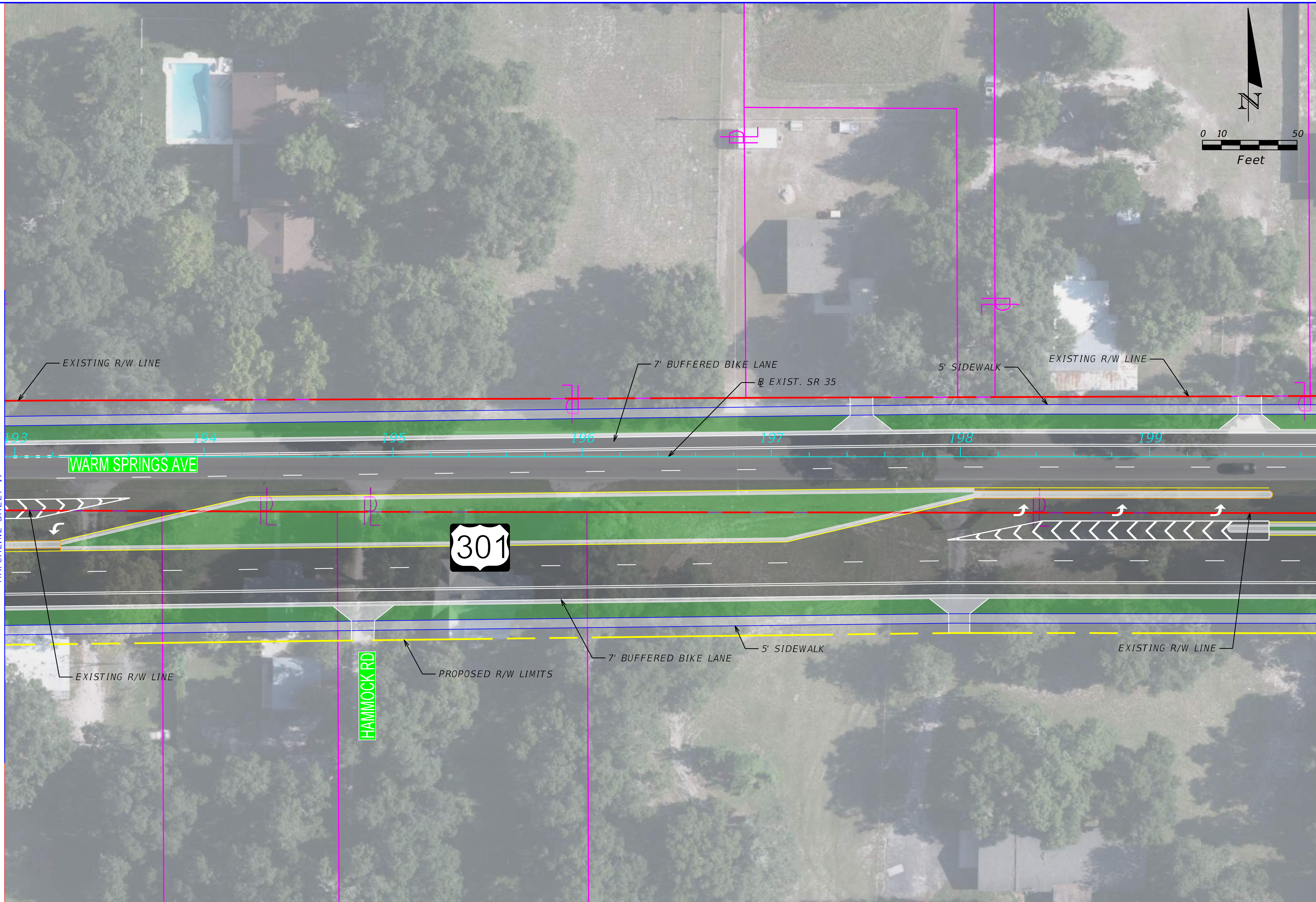

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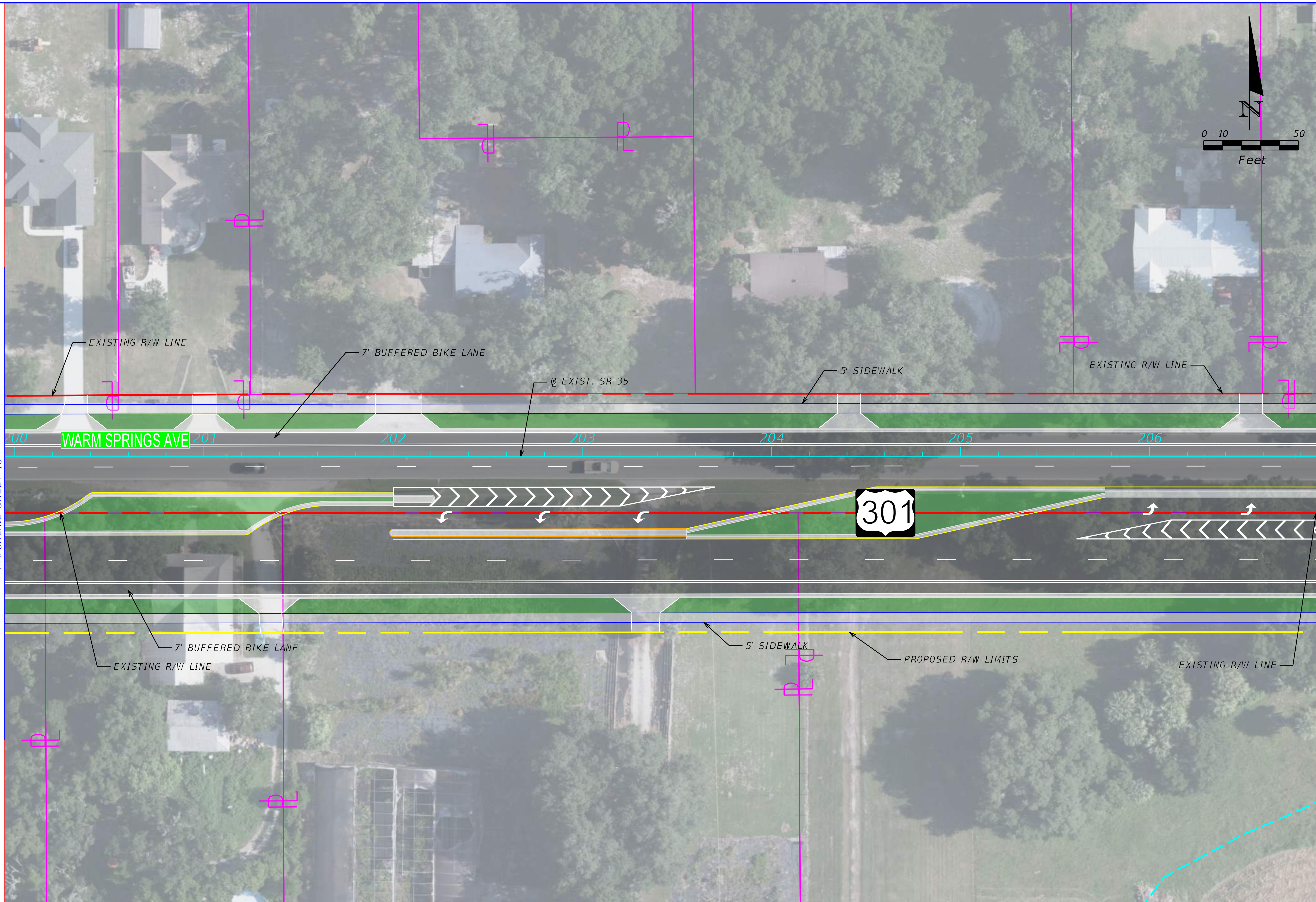

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 1

SHEET NO.
19

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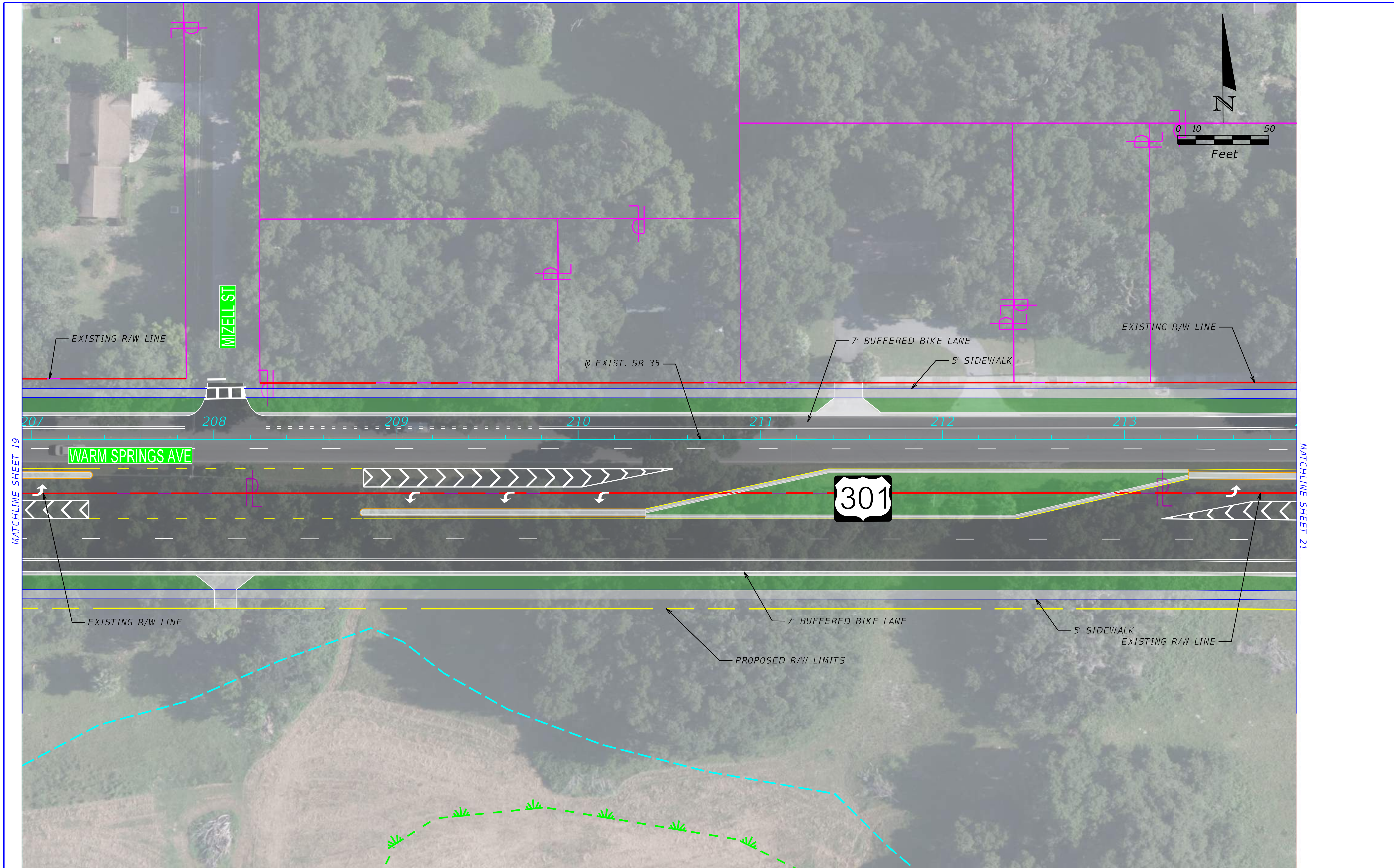

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 1

SHEET NO.
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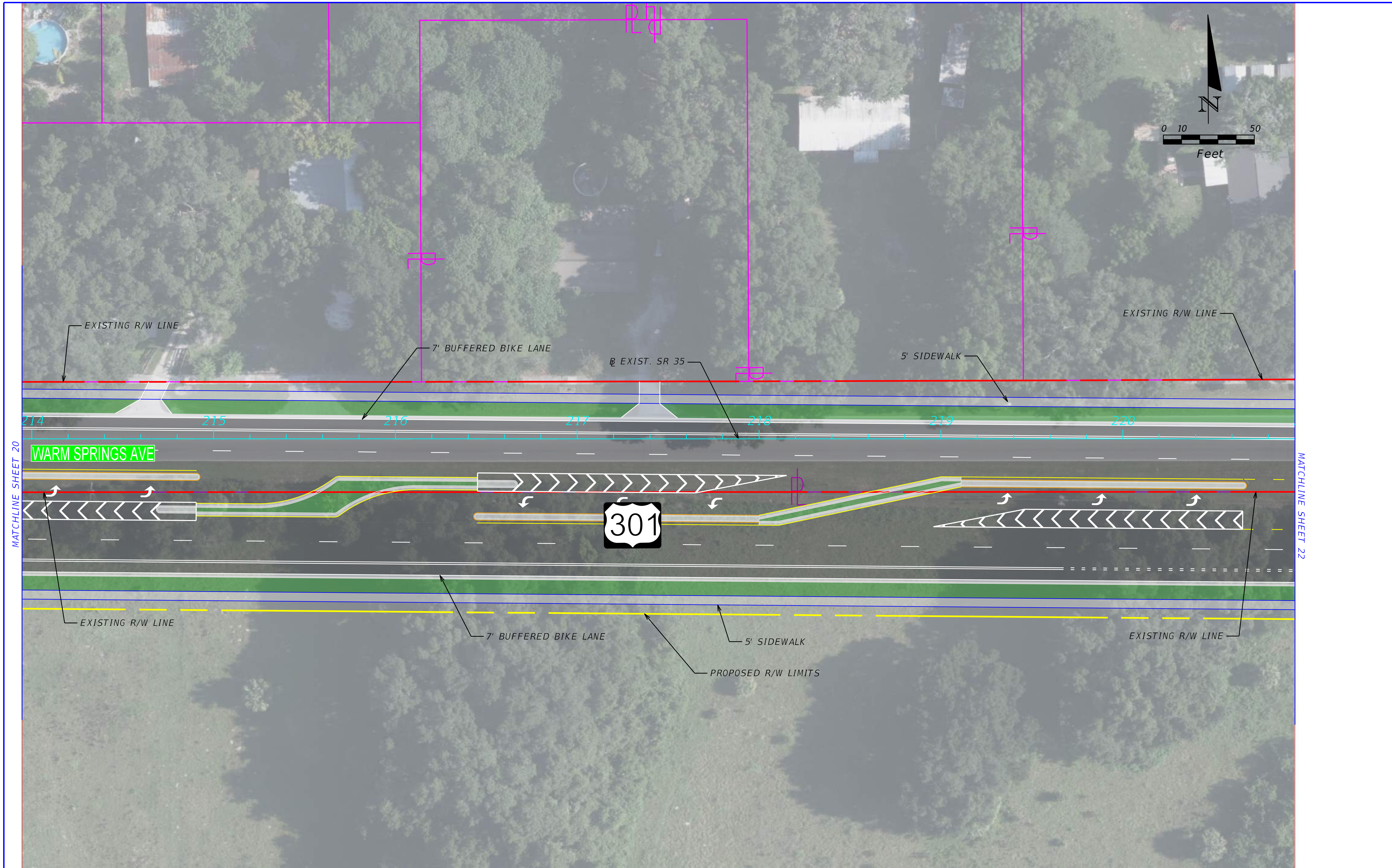

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 1

SHEET NO.
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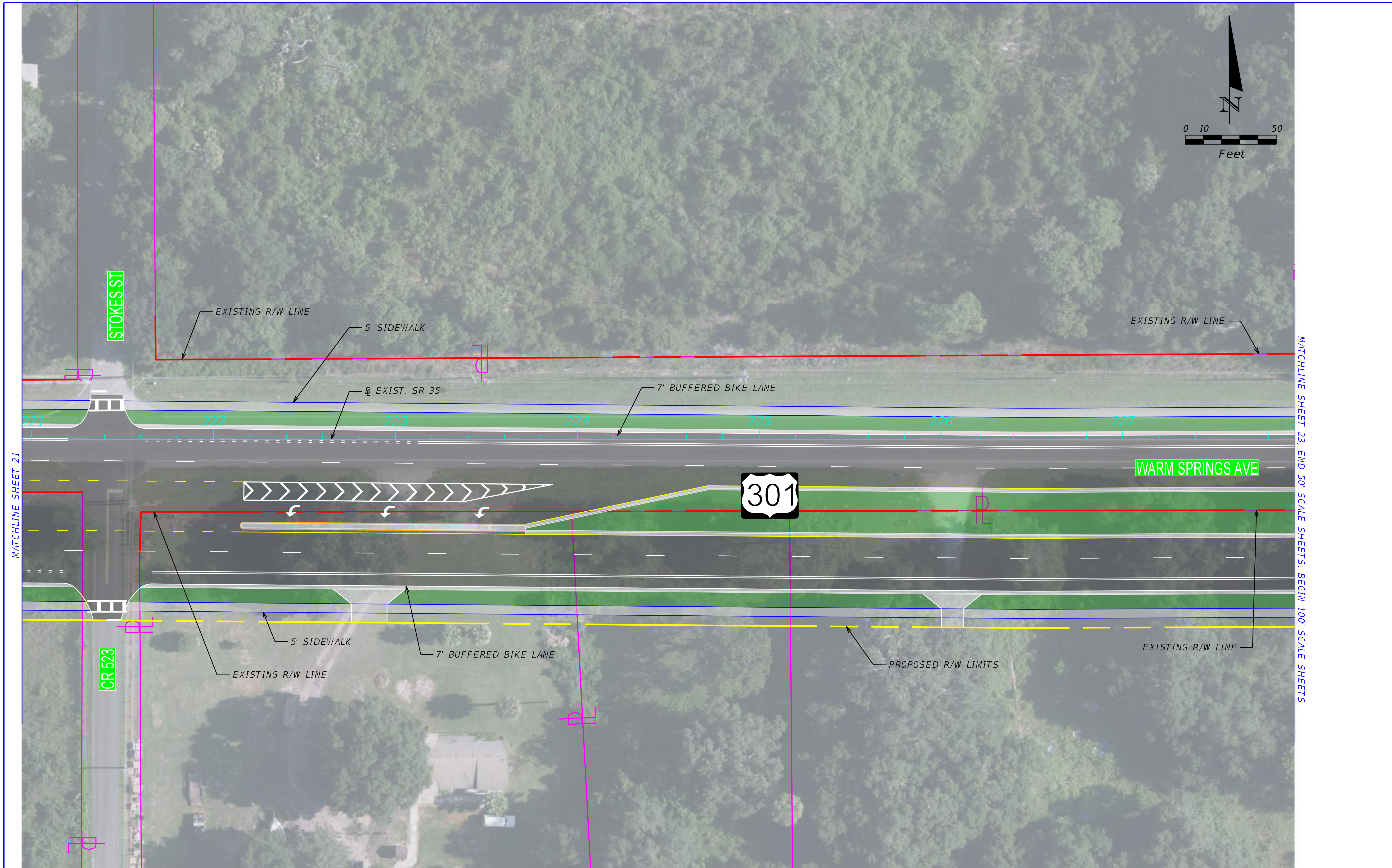


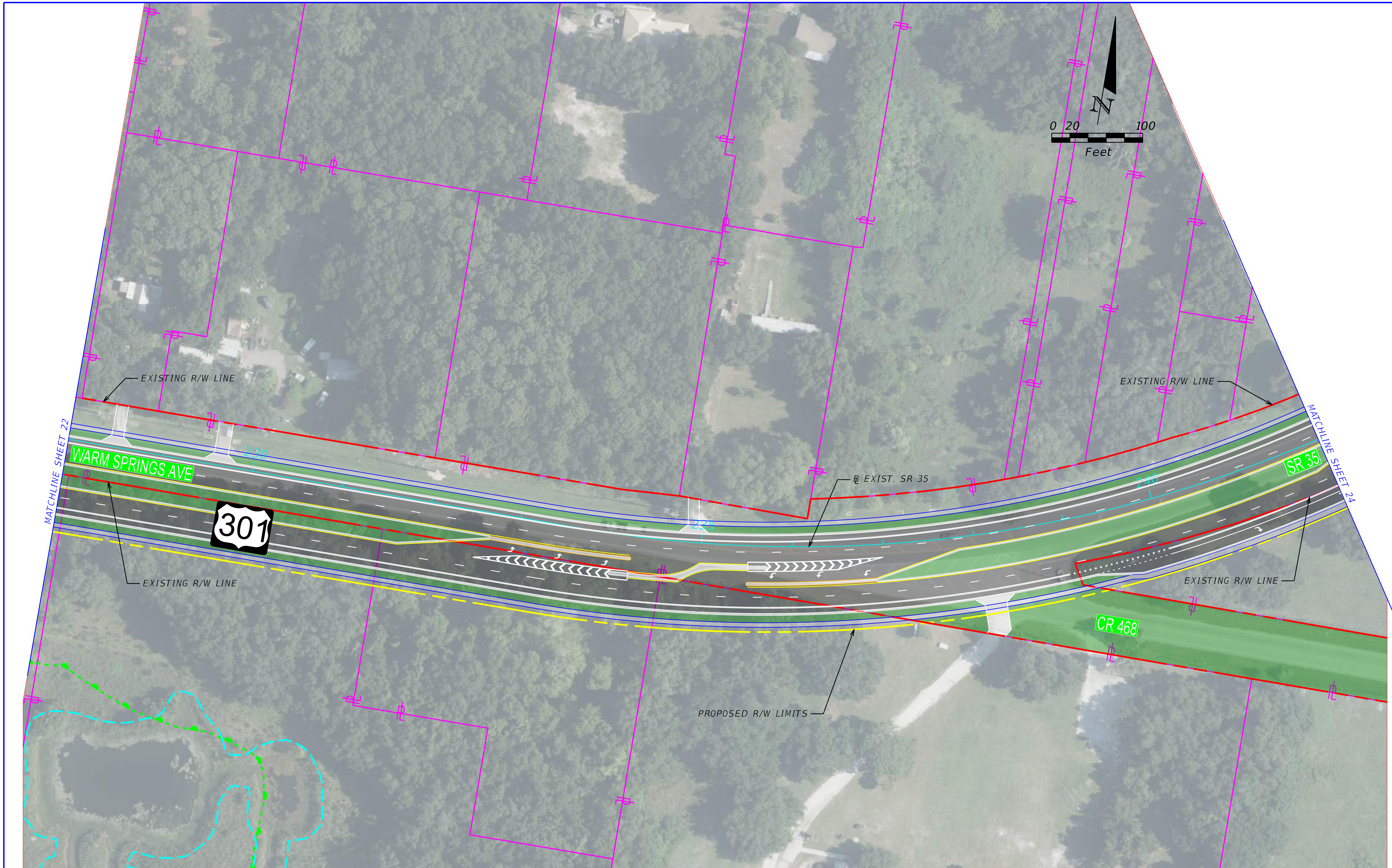
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 1

SHEET NO.
22



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 1

SHEET NO.
23

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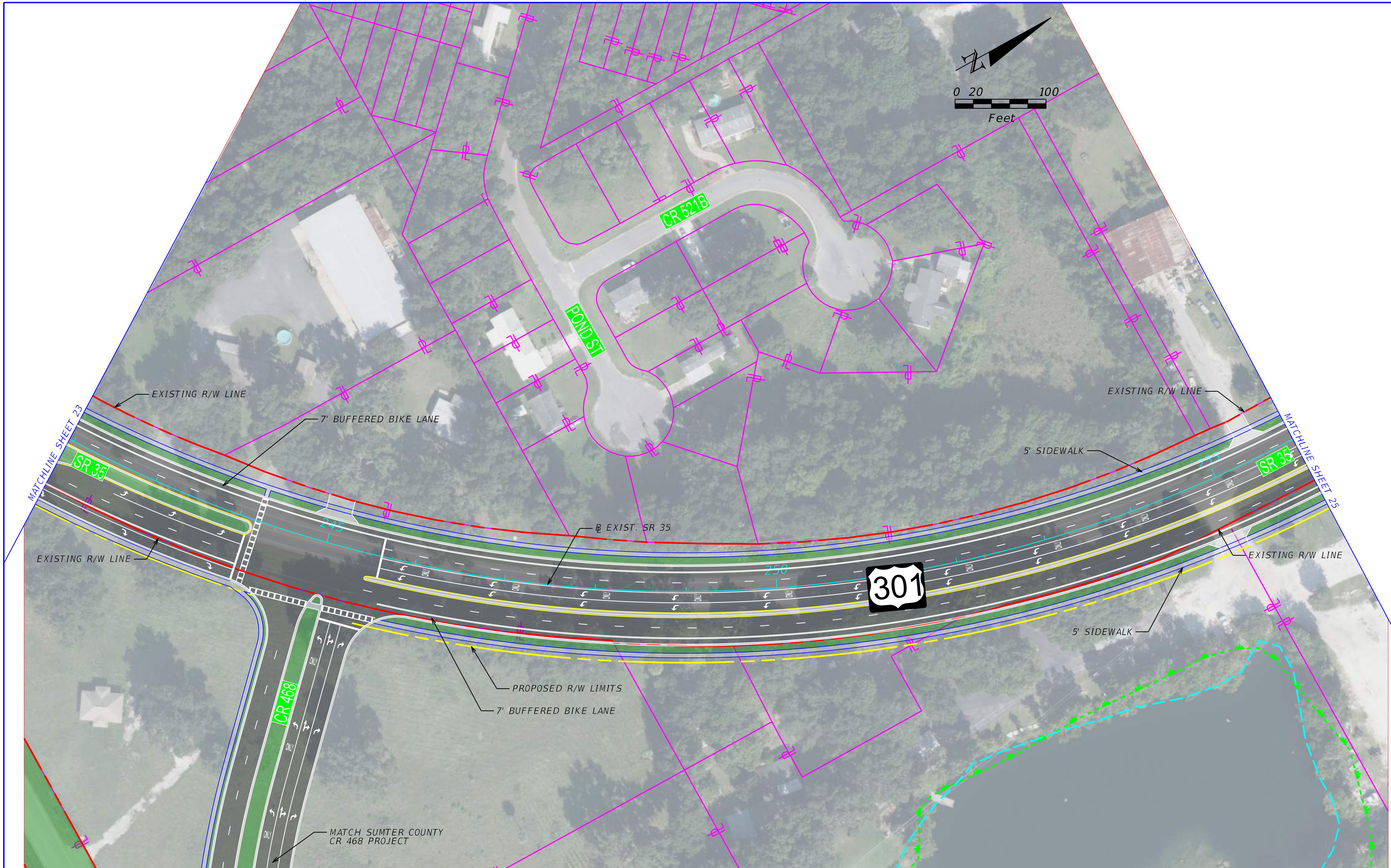

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 1

SHEET NO.
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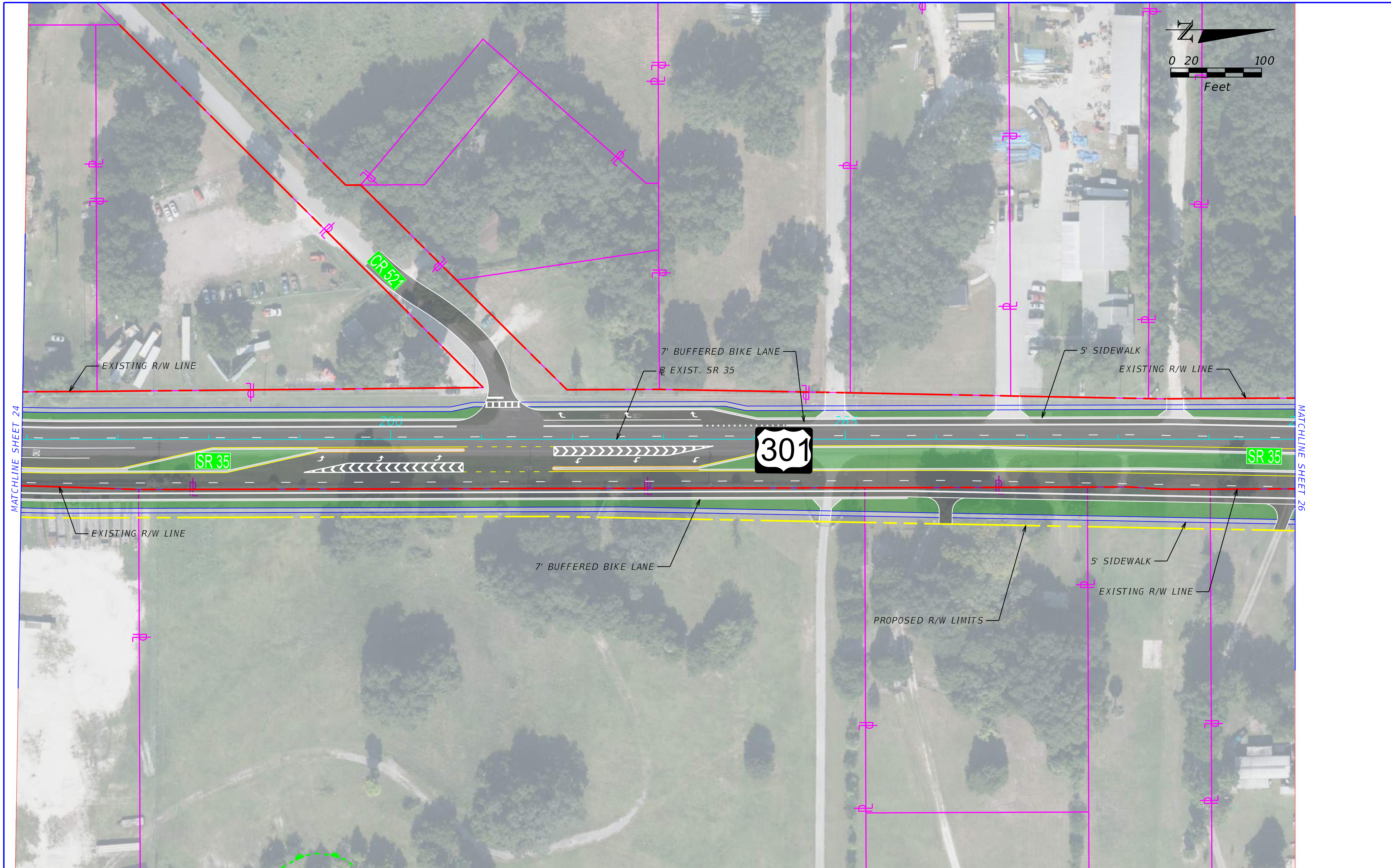

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 1

SHEET NO.
25

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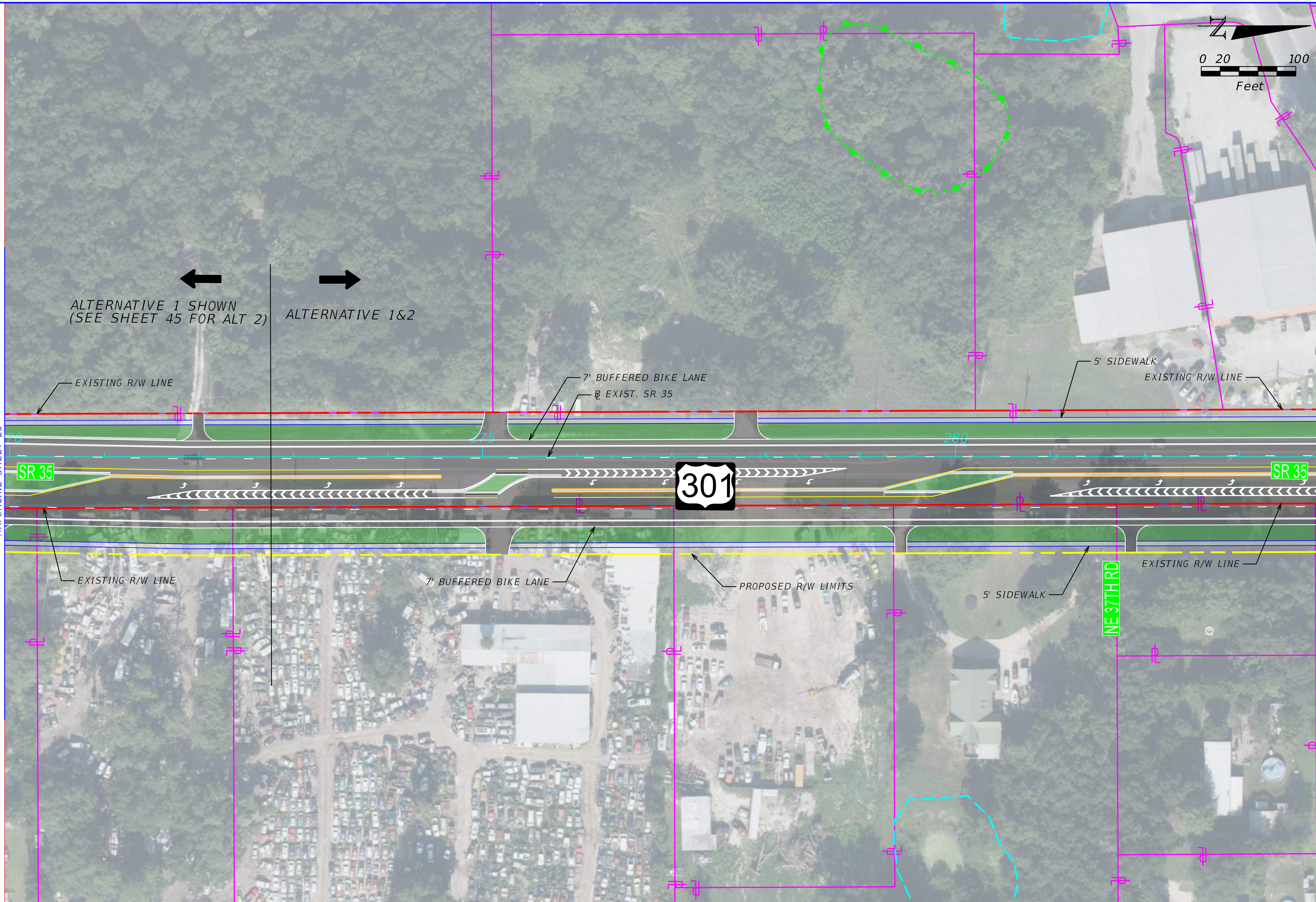
MATCHLINE SHEET 25



MATCHLINE SHEET 27

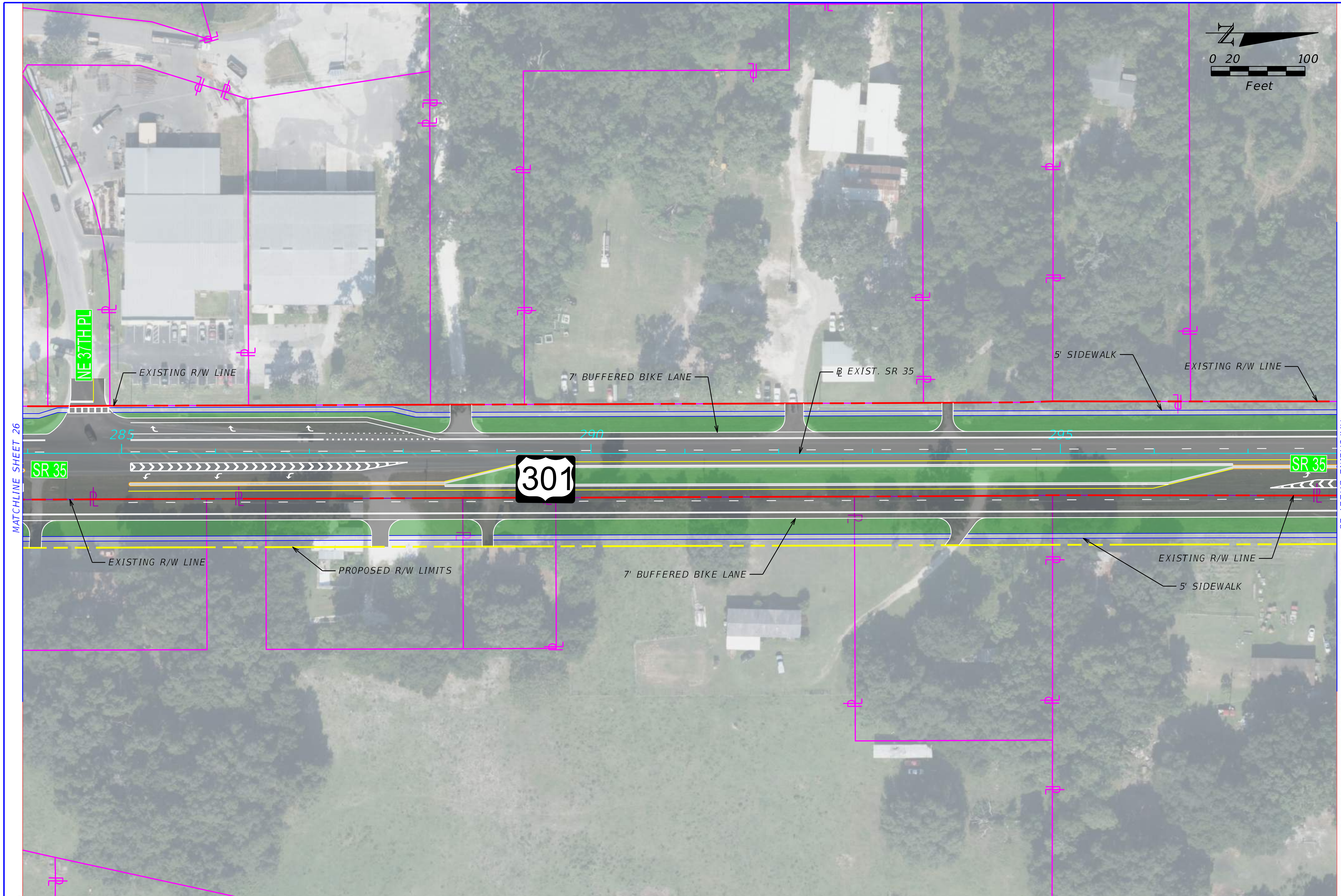
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVES 1 & 2

SHEET NO.
26



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVES 1 & 2

SHEET NO.
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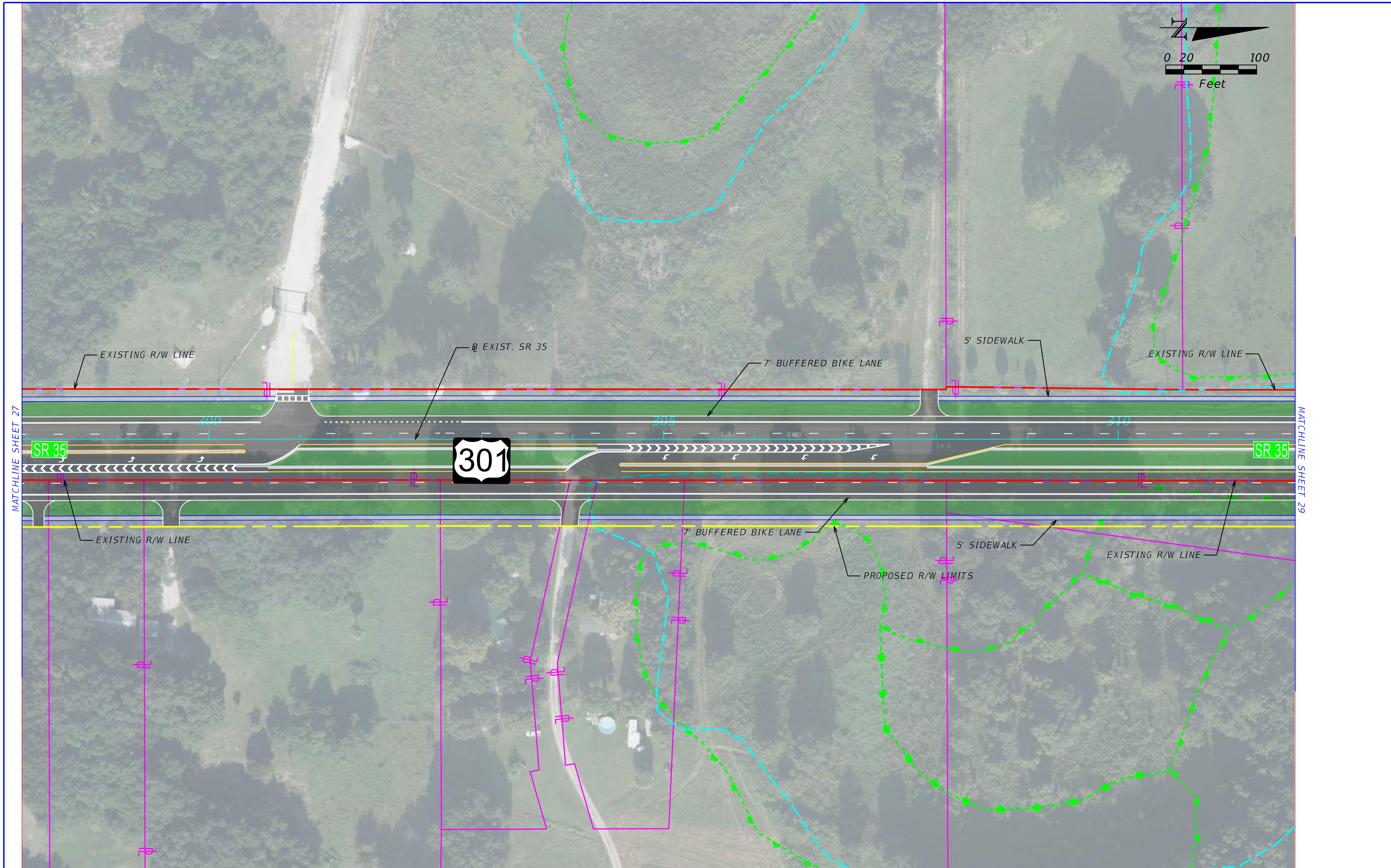


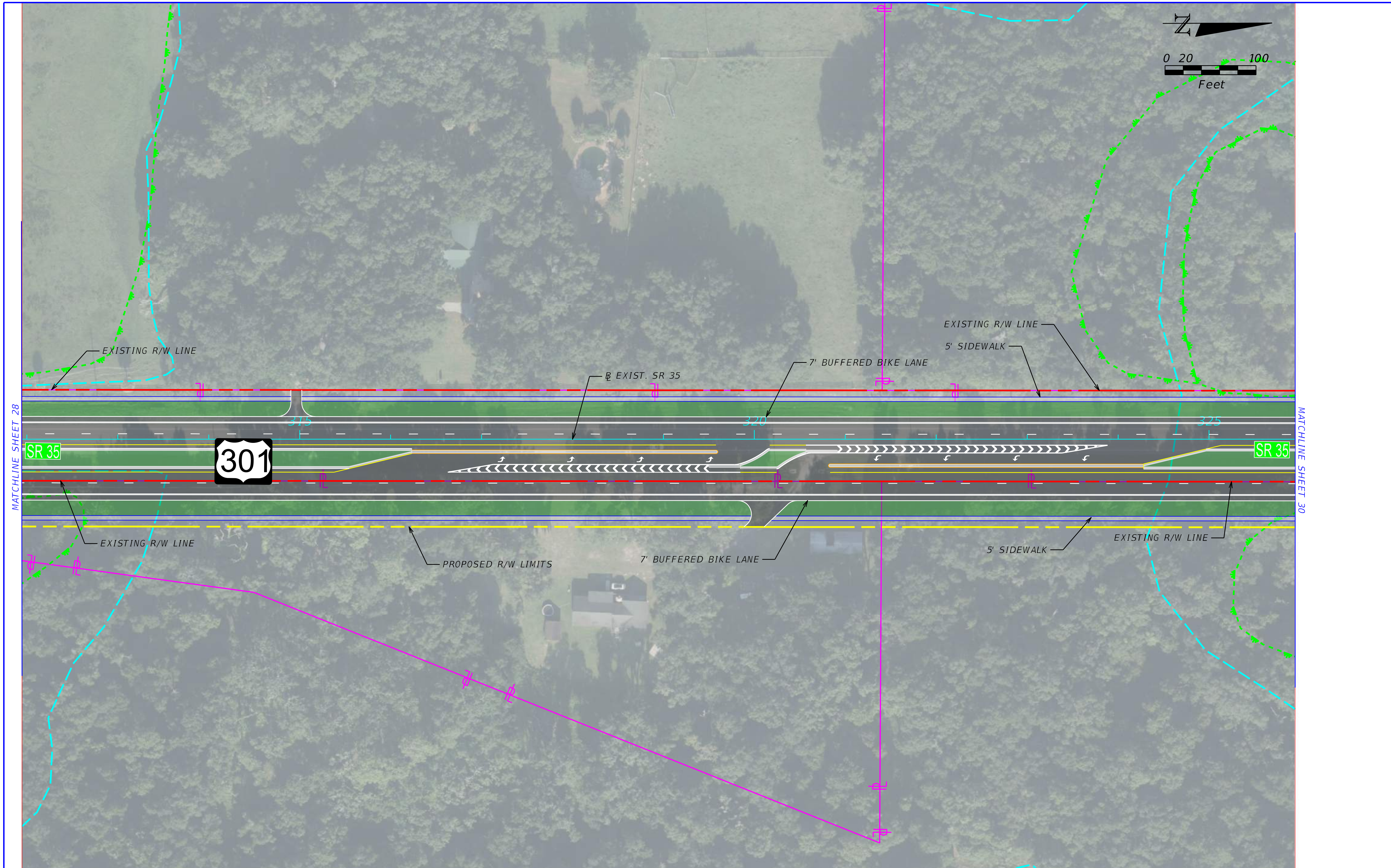
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVES 1 & 2

SHEET NO.
28



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVES 1 & 2

SHEET NO.
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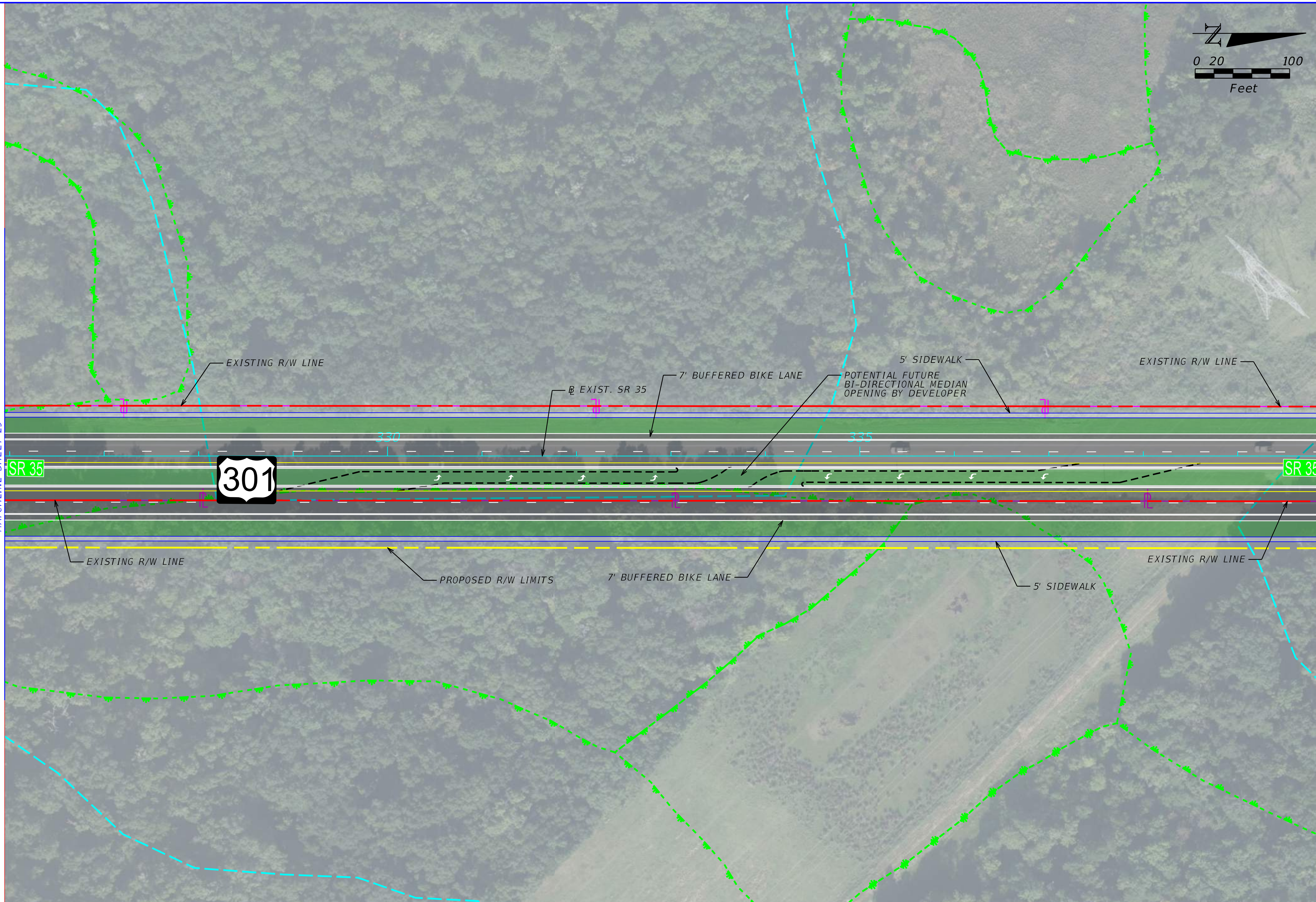

MATCHLINE SHEET 29

MATCHLINE SHEET 31

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVES 1 & 2

SHEET NO.
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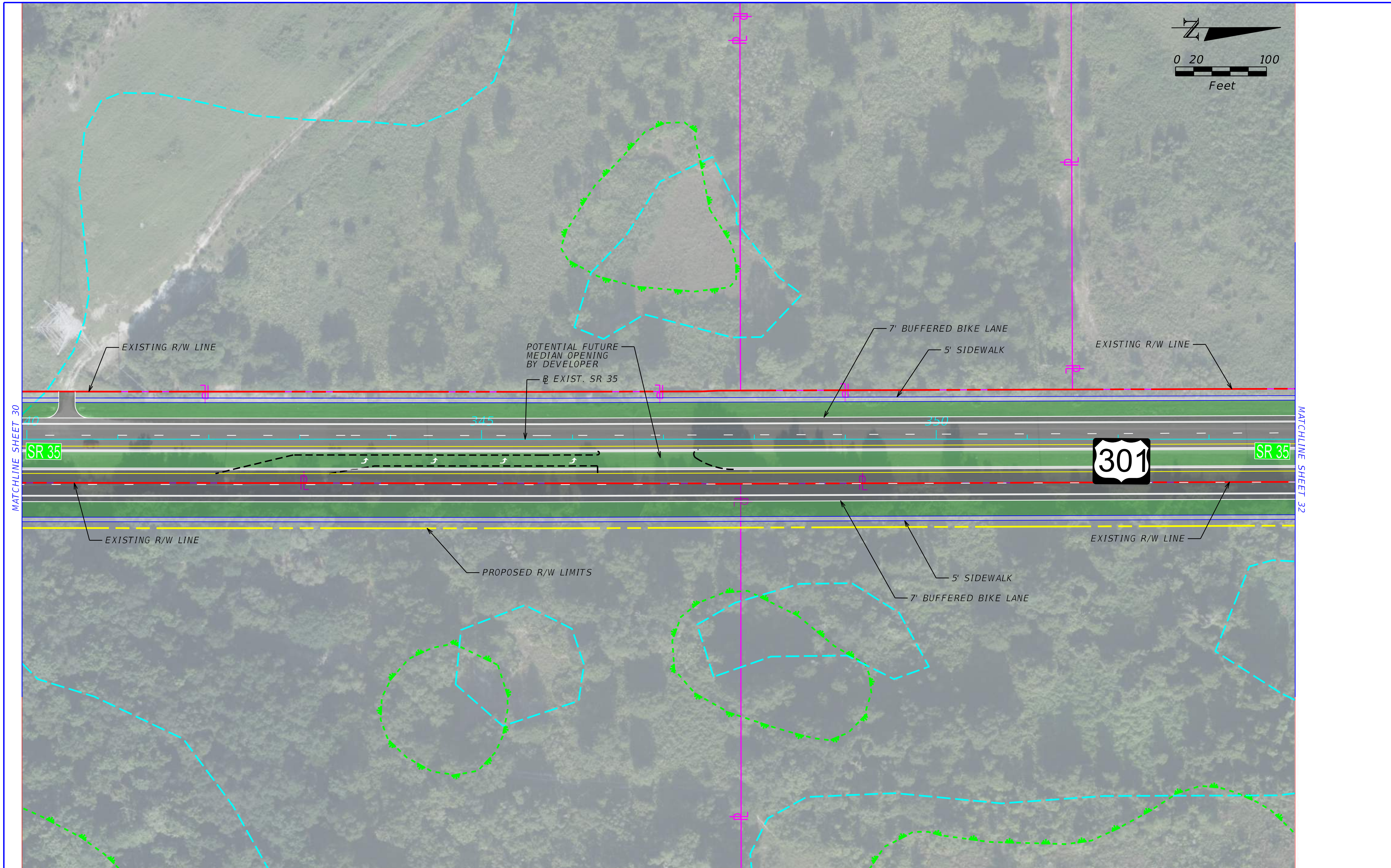

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVES 1 & 2

SHEET NO. 31

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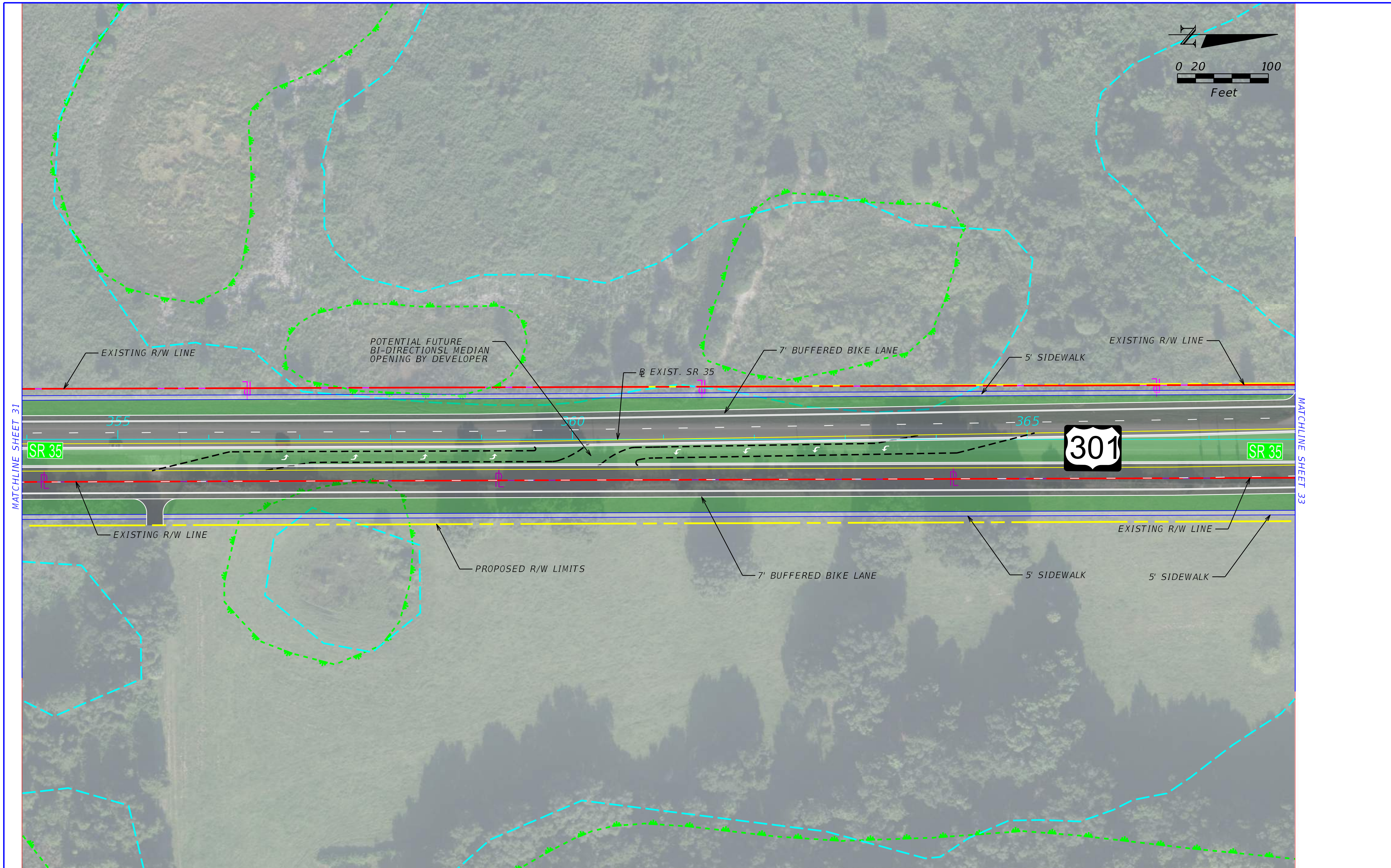


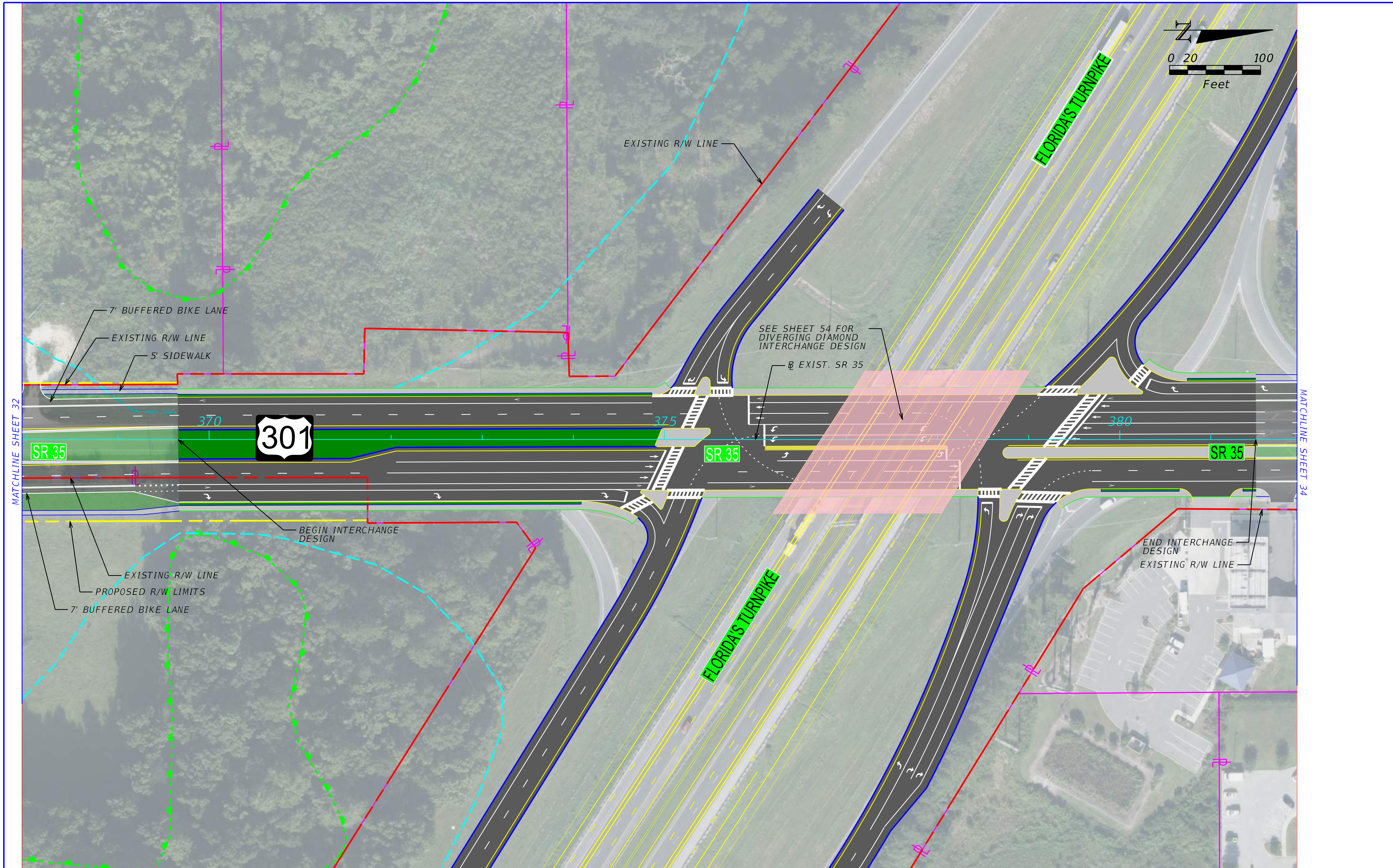
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVES 1 & 2

SHEET NO. 32



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

US 301 PD&E STUDY
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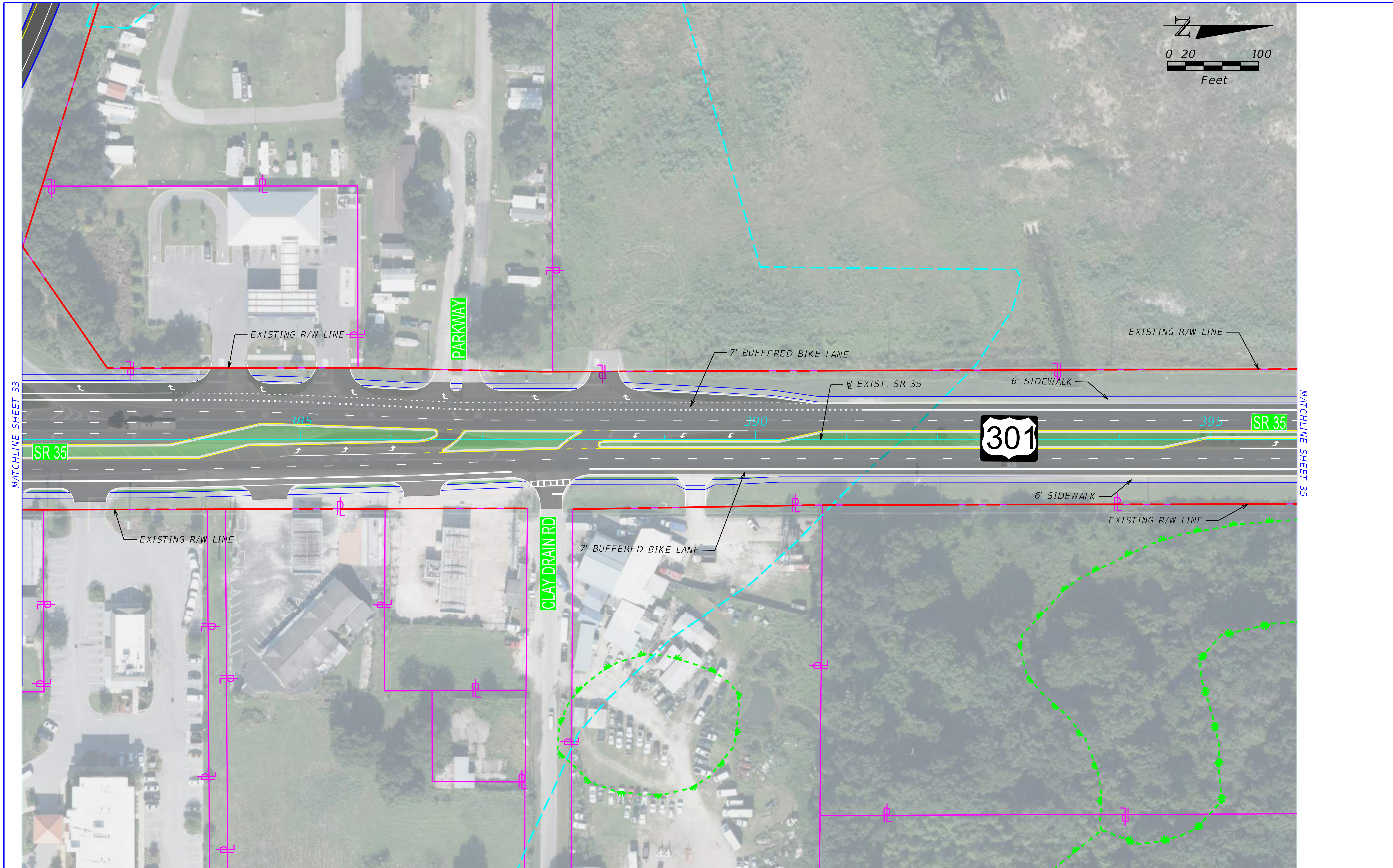
SHEET NO.

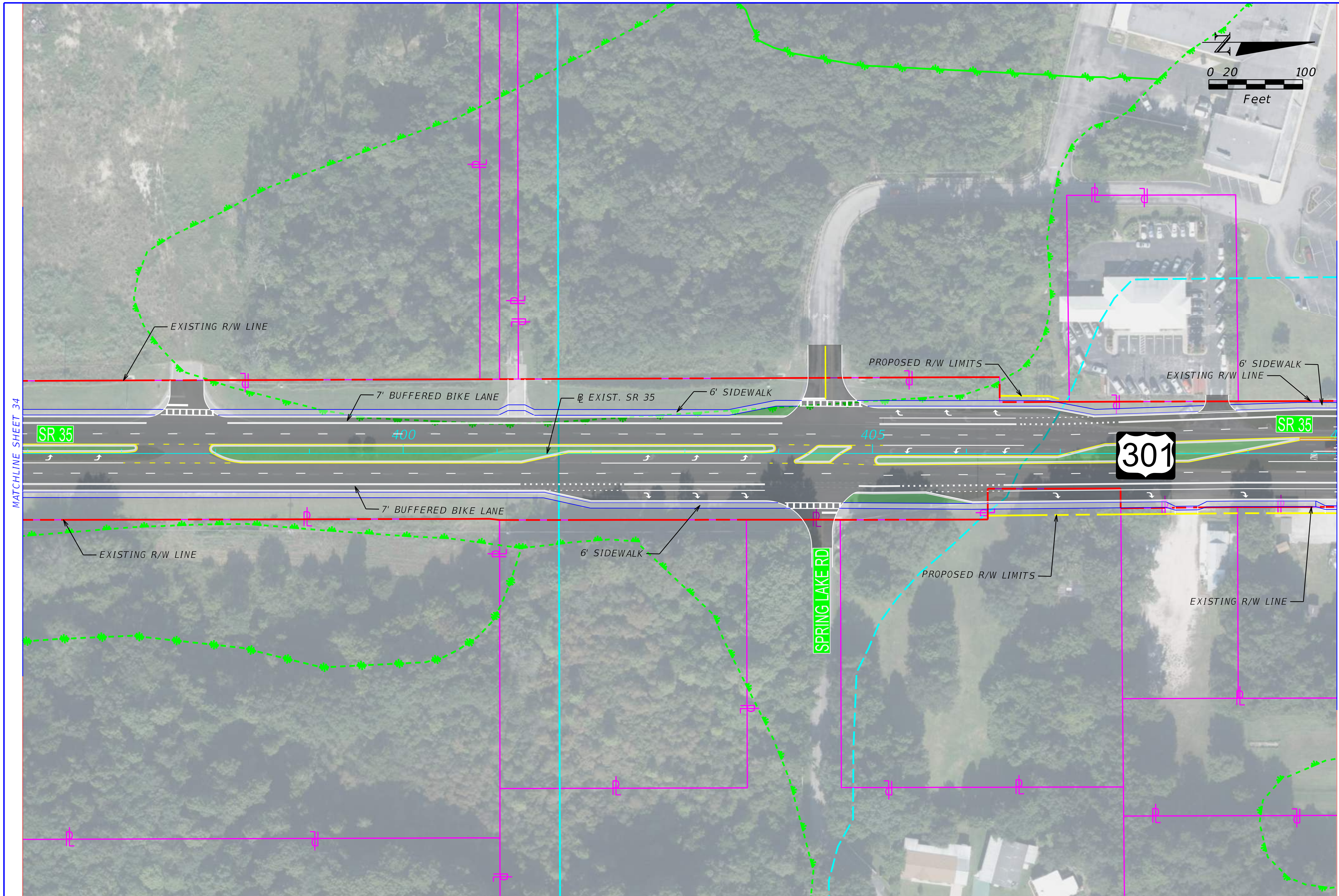


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVES 1 & 2

SHEET NO.
34



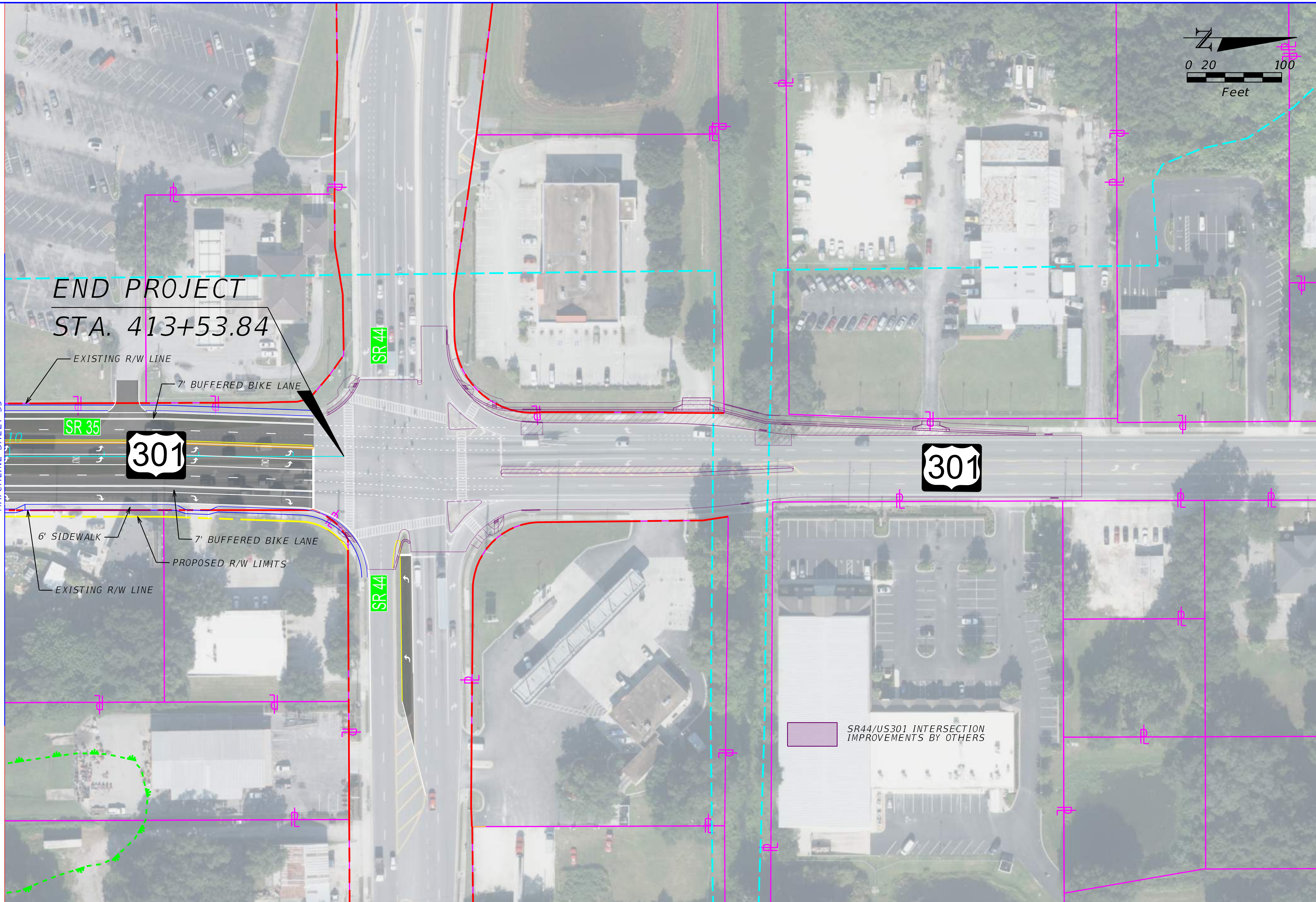
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVES 1 & 2

SHEET NO.
35



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVES 1 & 2

SHEET NO.
36

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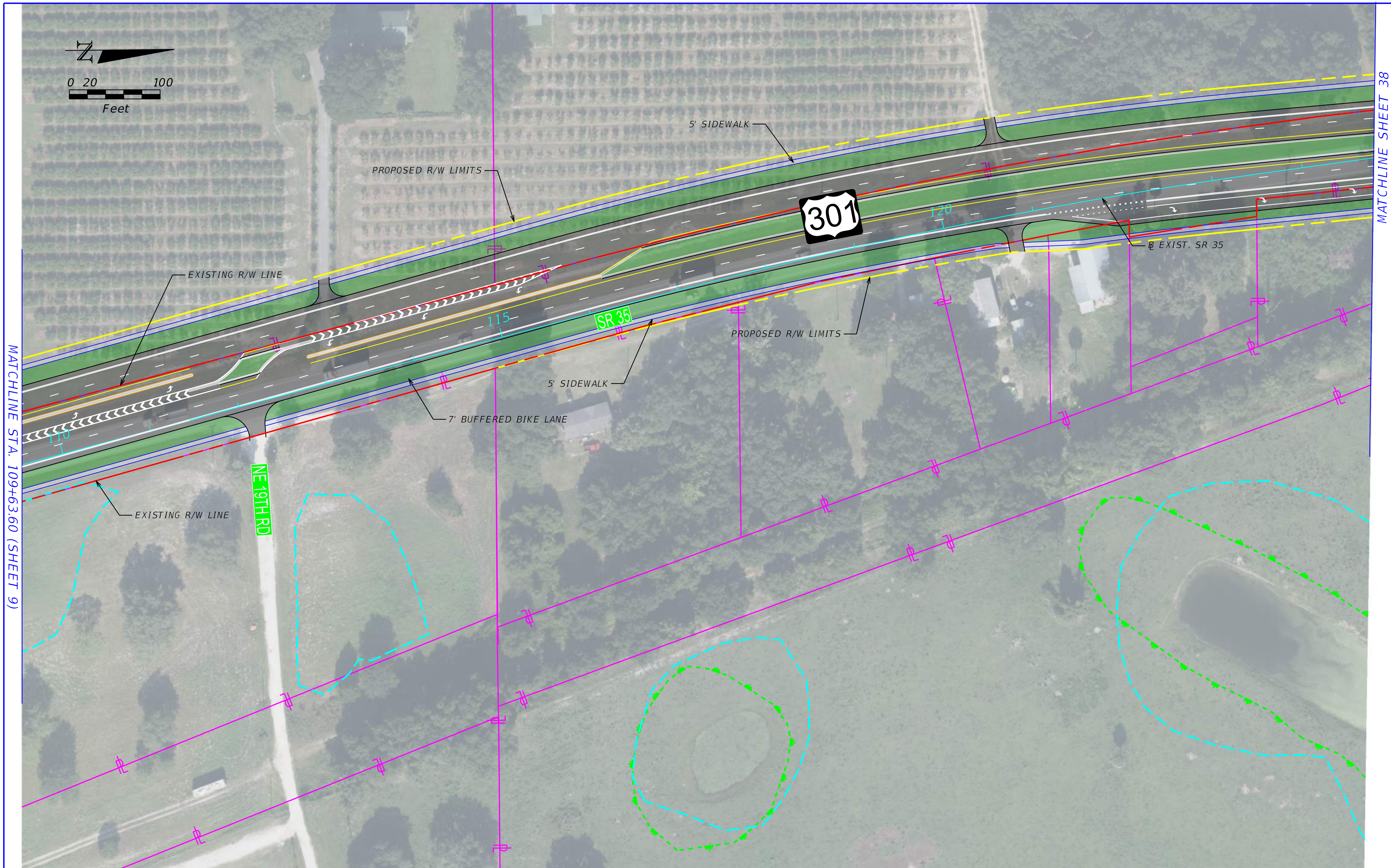

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 2

SHEET NO.
37

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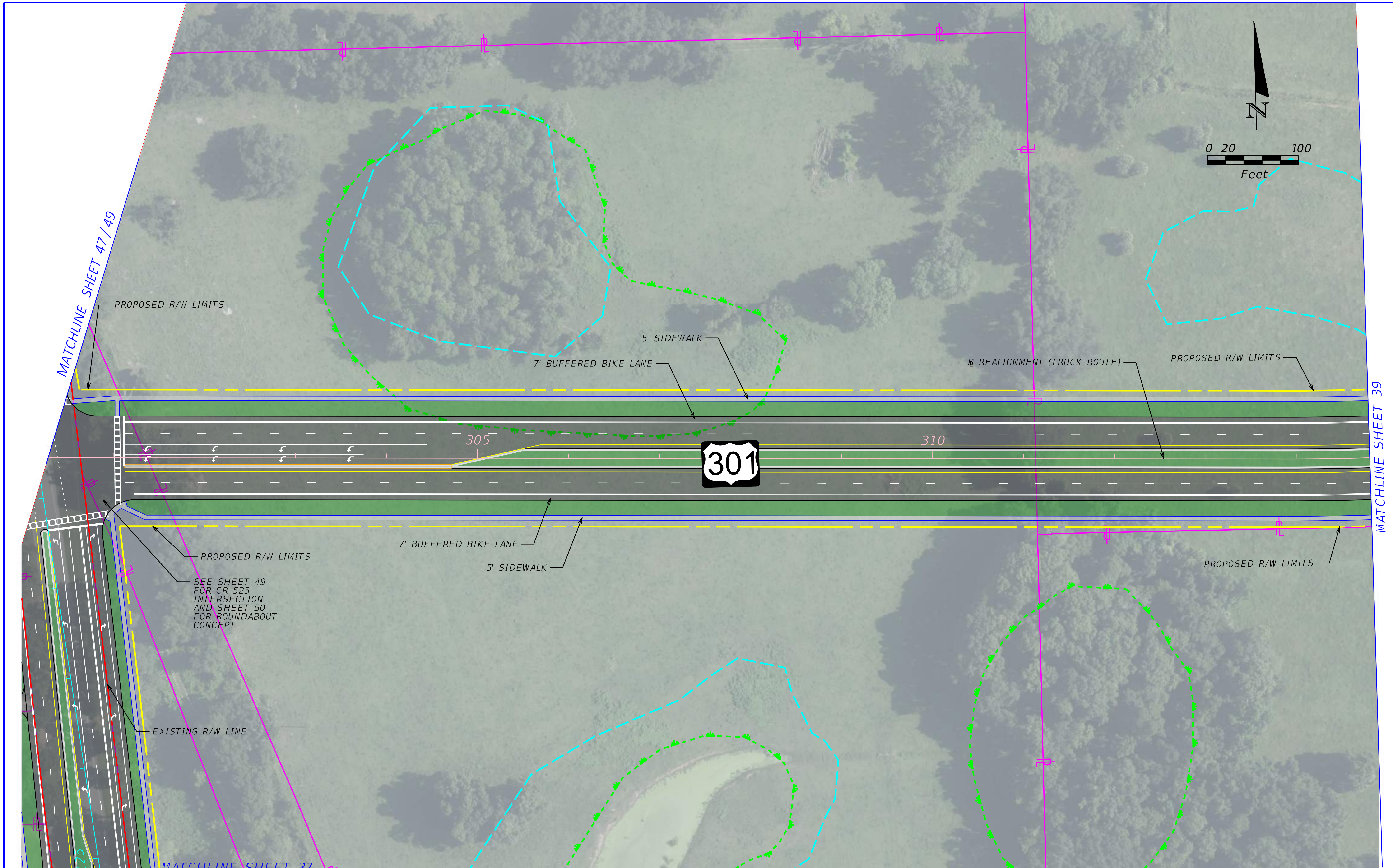


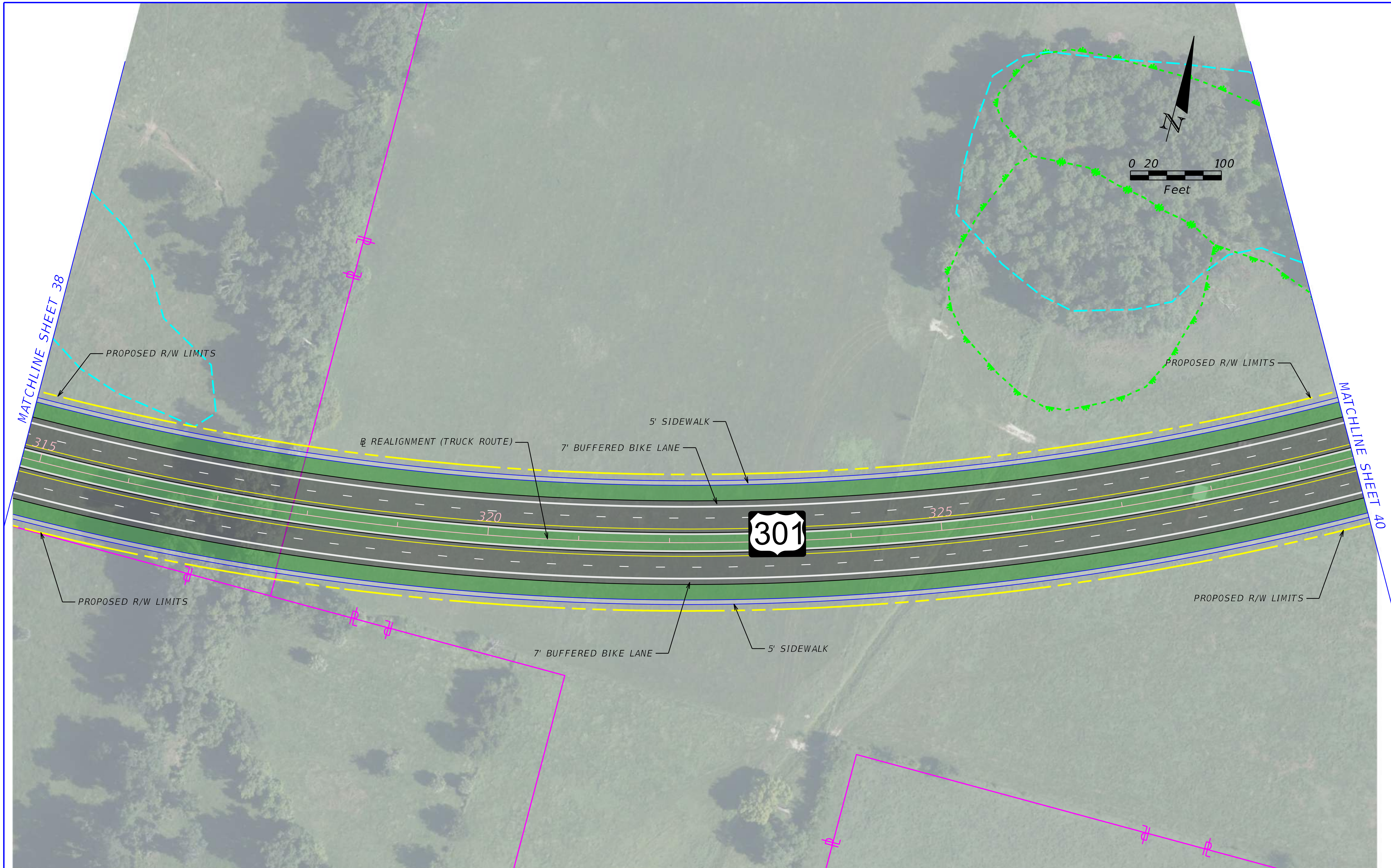
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 2

SHEET NO.
38



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
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US 301 PD&E STUDY
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SHEET NO.
39

REVISIONS			
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US 301 PD&E STUDY
ALTERNATIVE 2

SHEET NO.
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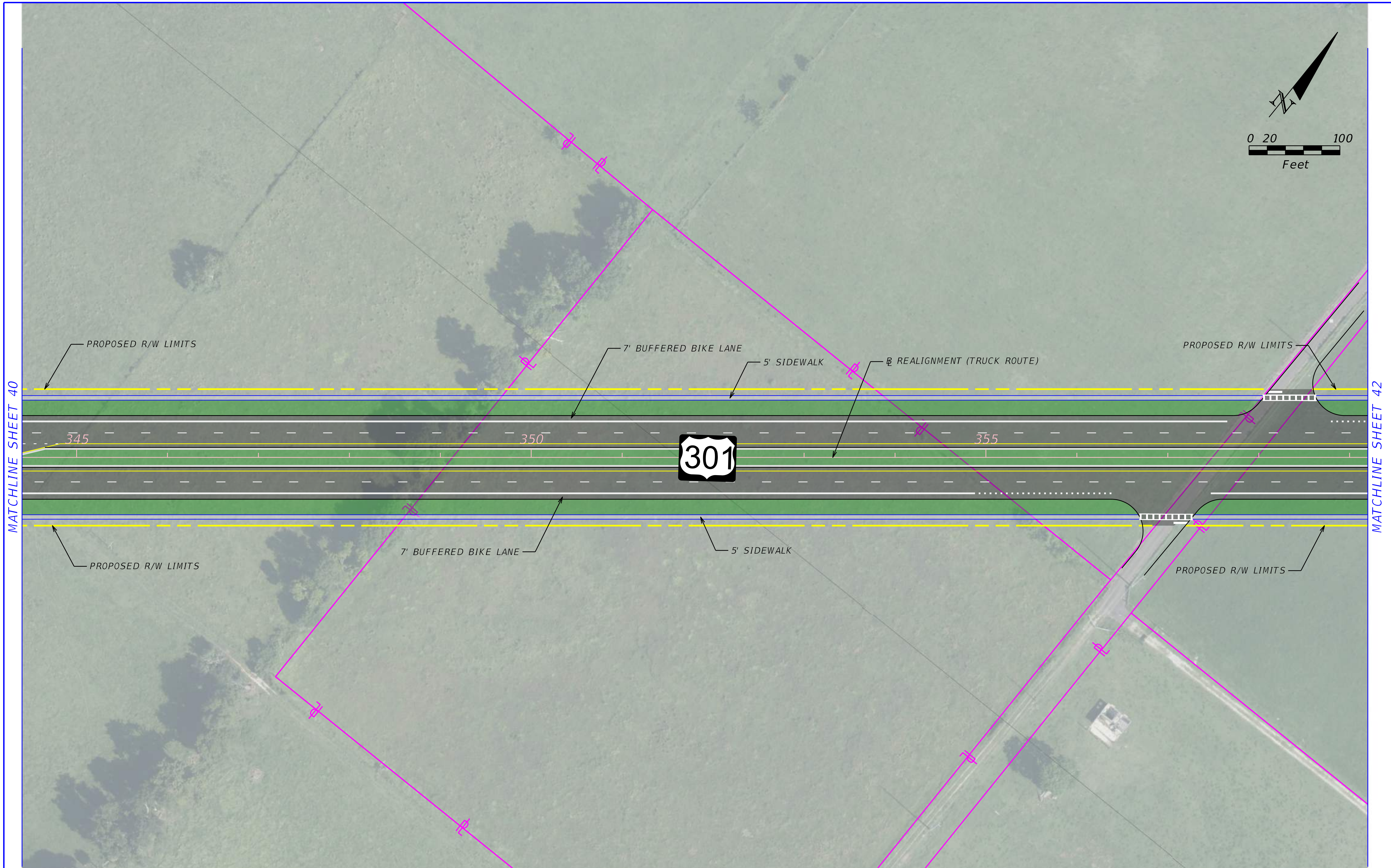

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 2

SHEET NO.
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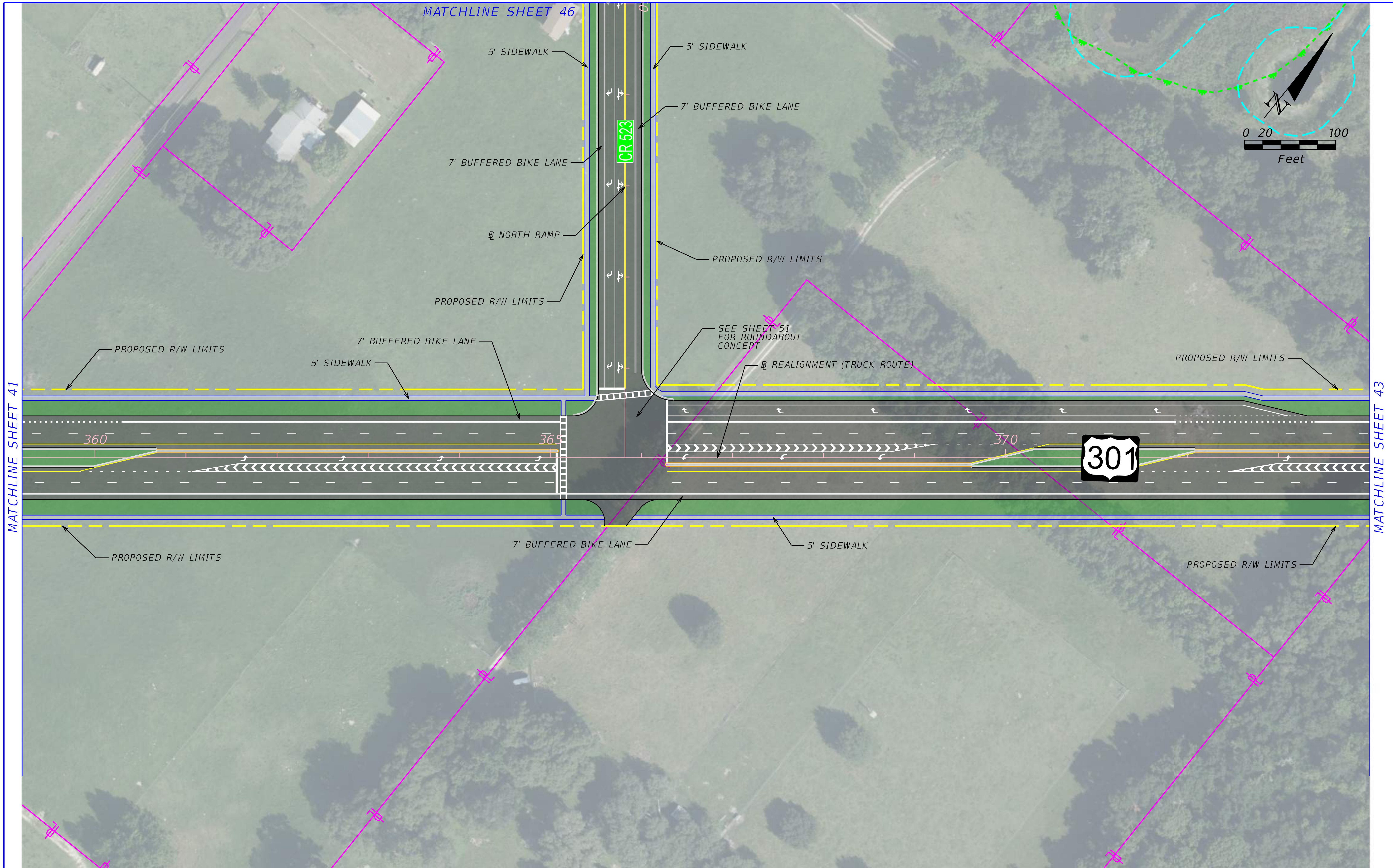


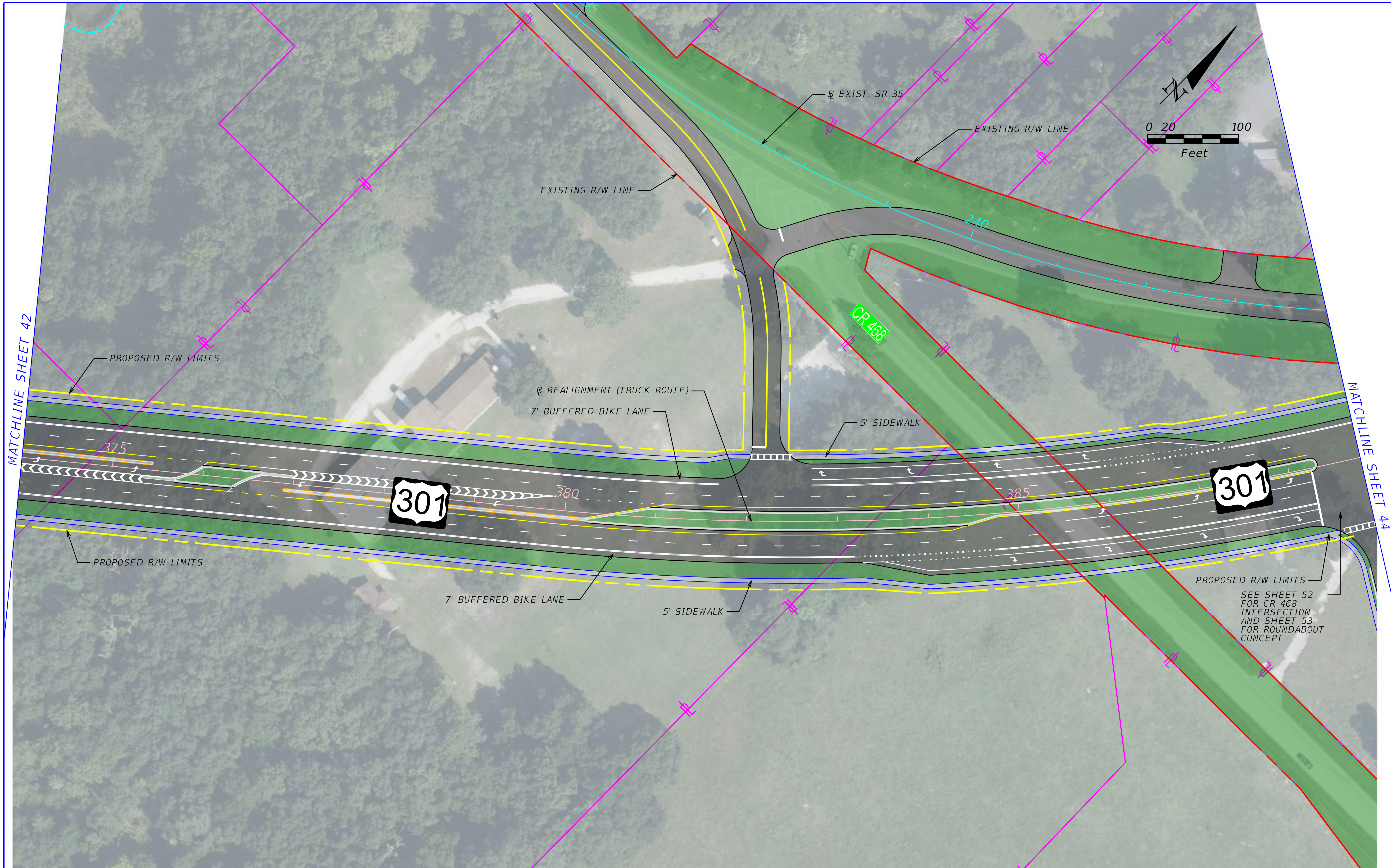
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 2

SHEET NO.
42



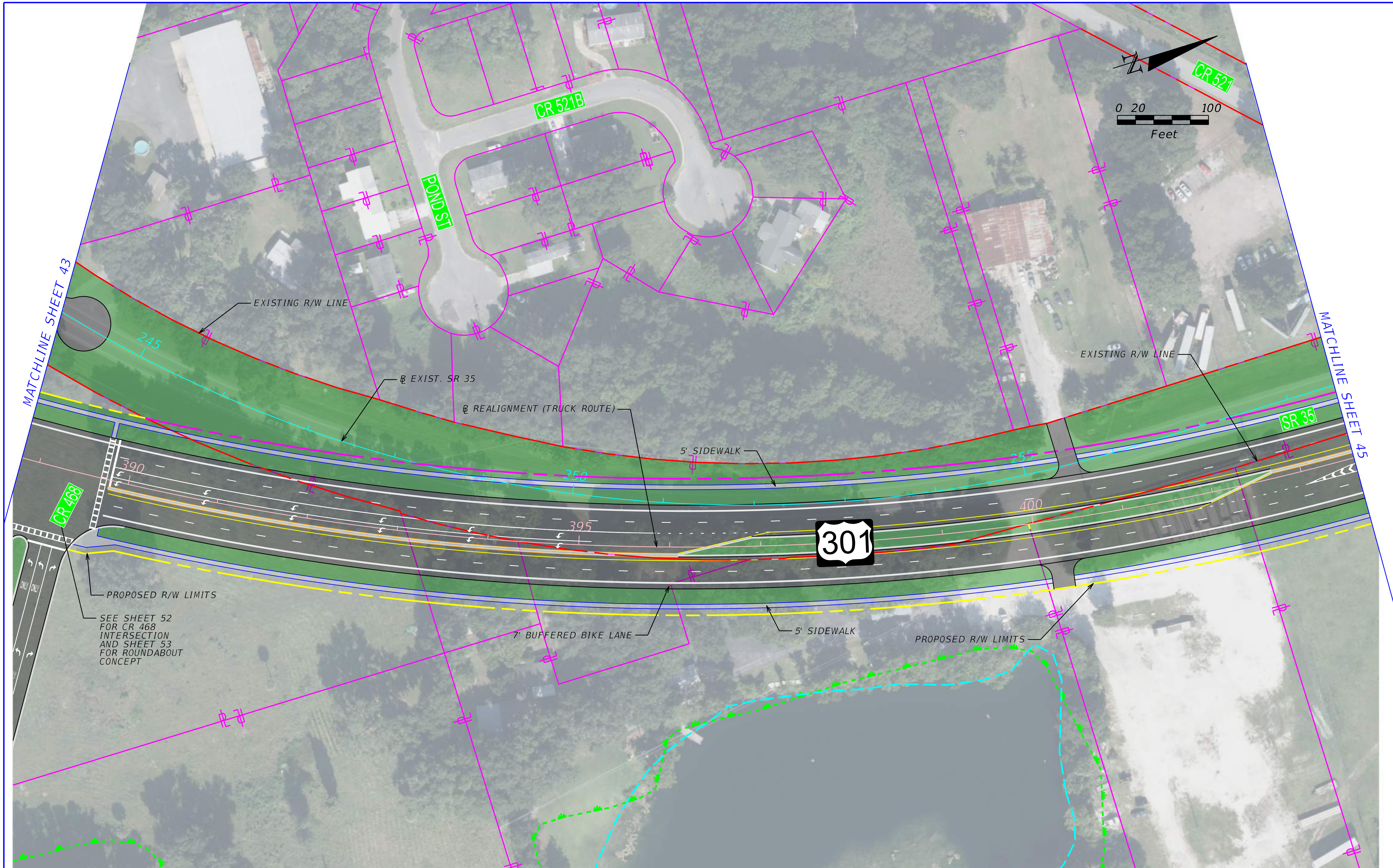
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 2

SHEET NO.
43



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 2

SHEET NO.
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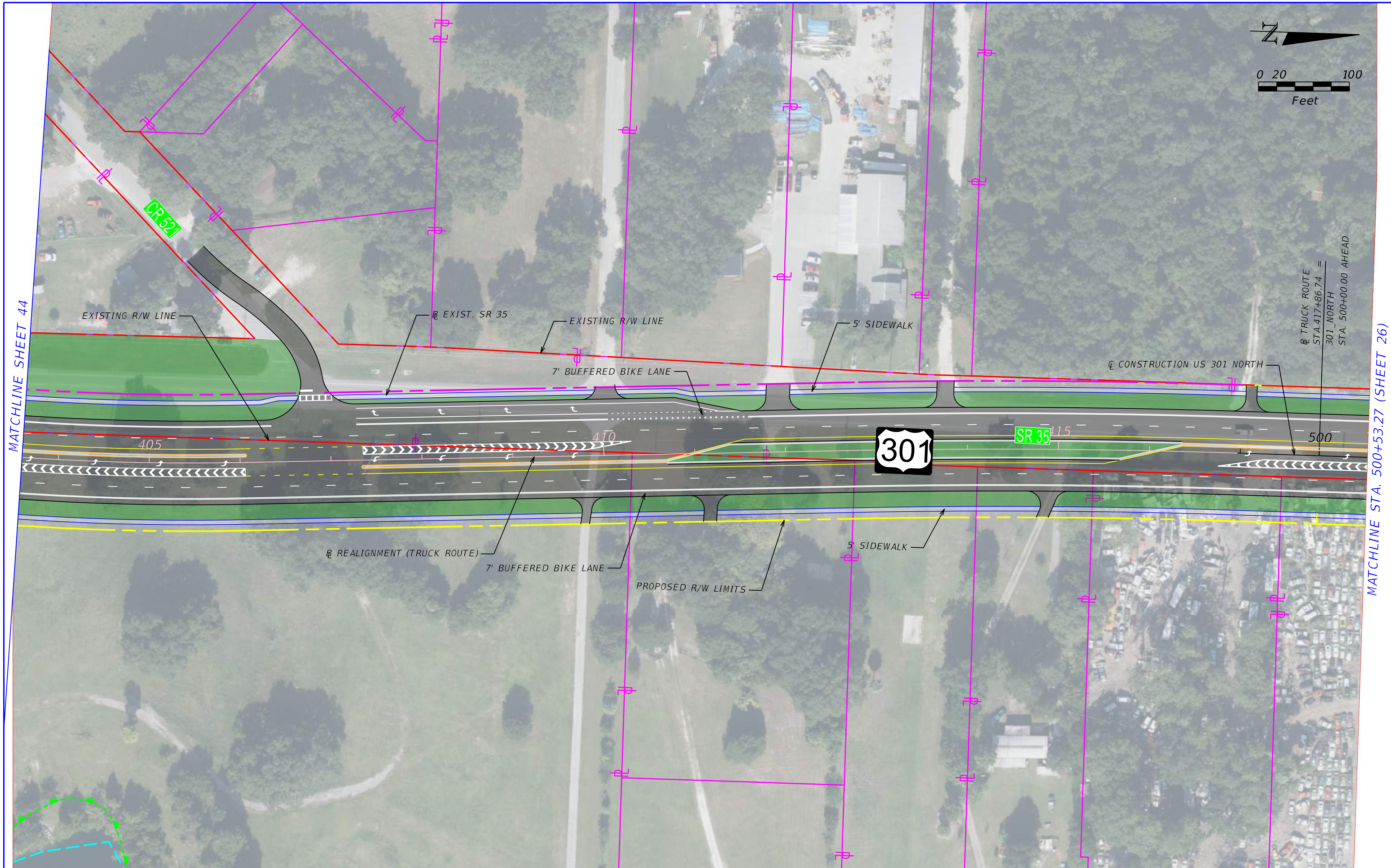

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 2

SHEET NO.
45

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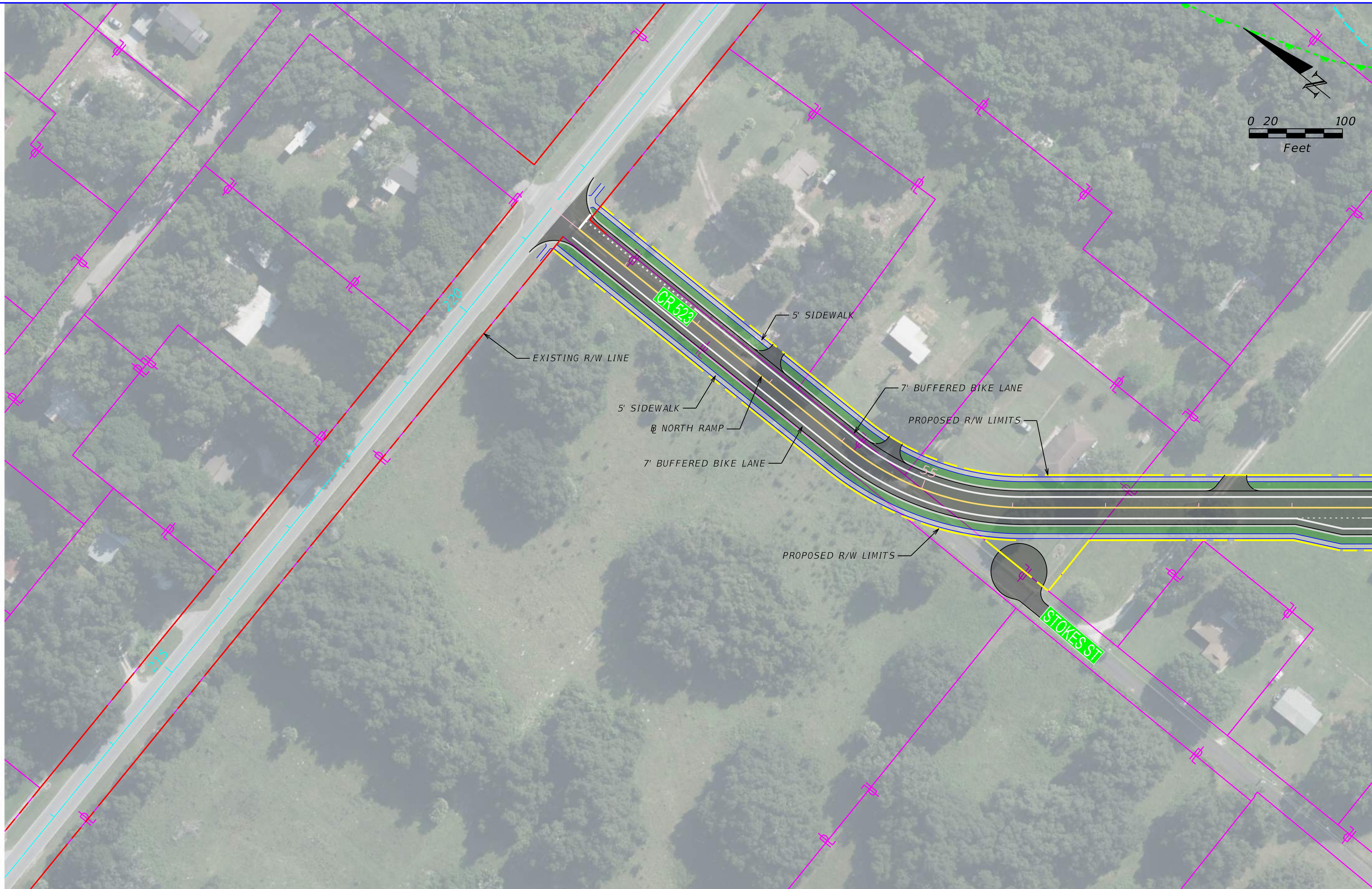

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 2

SHEET NO.
46

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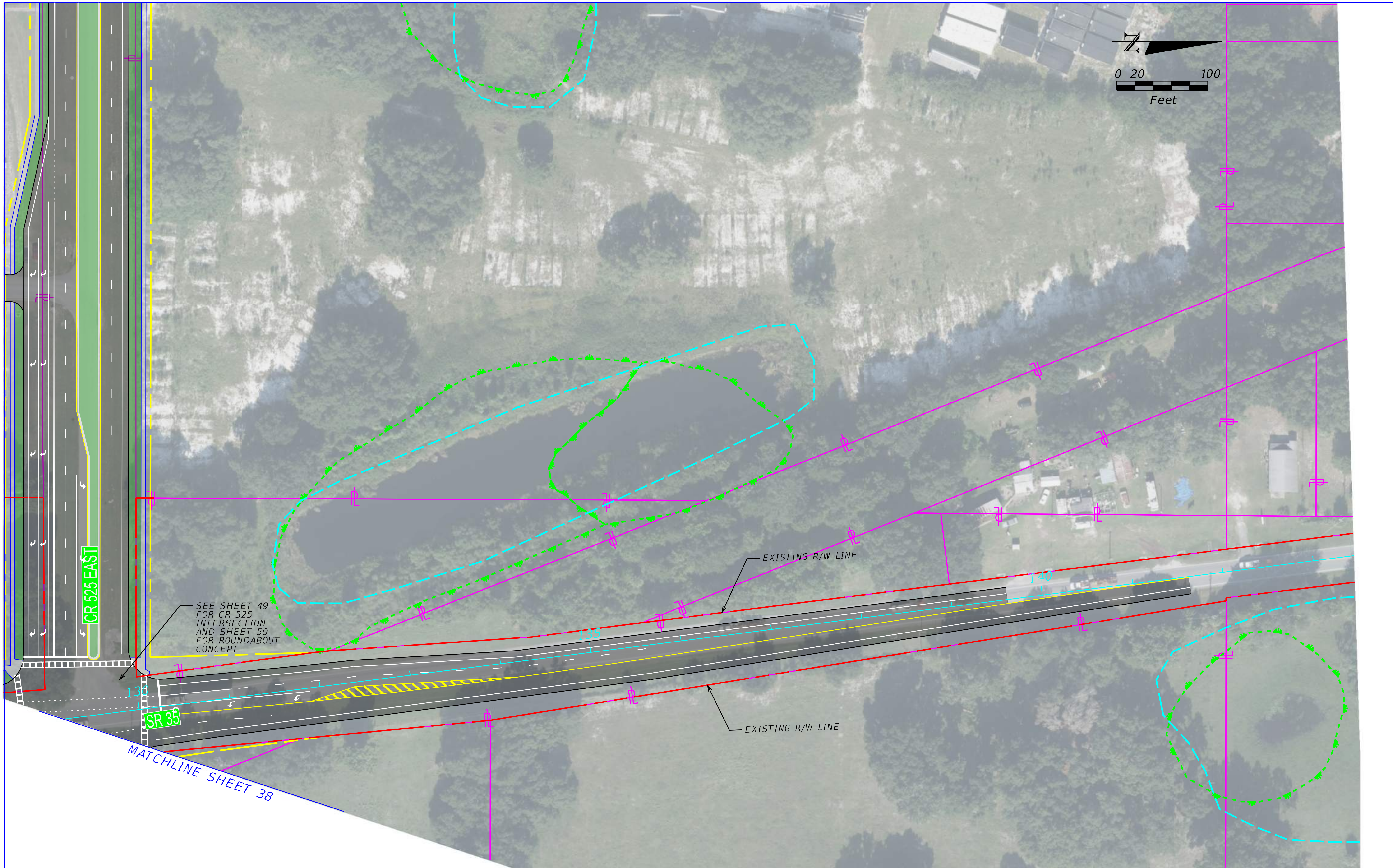

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 PD&E STUDY
ALTERNATIVE 2

SHEET NO.
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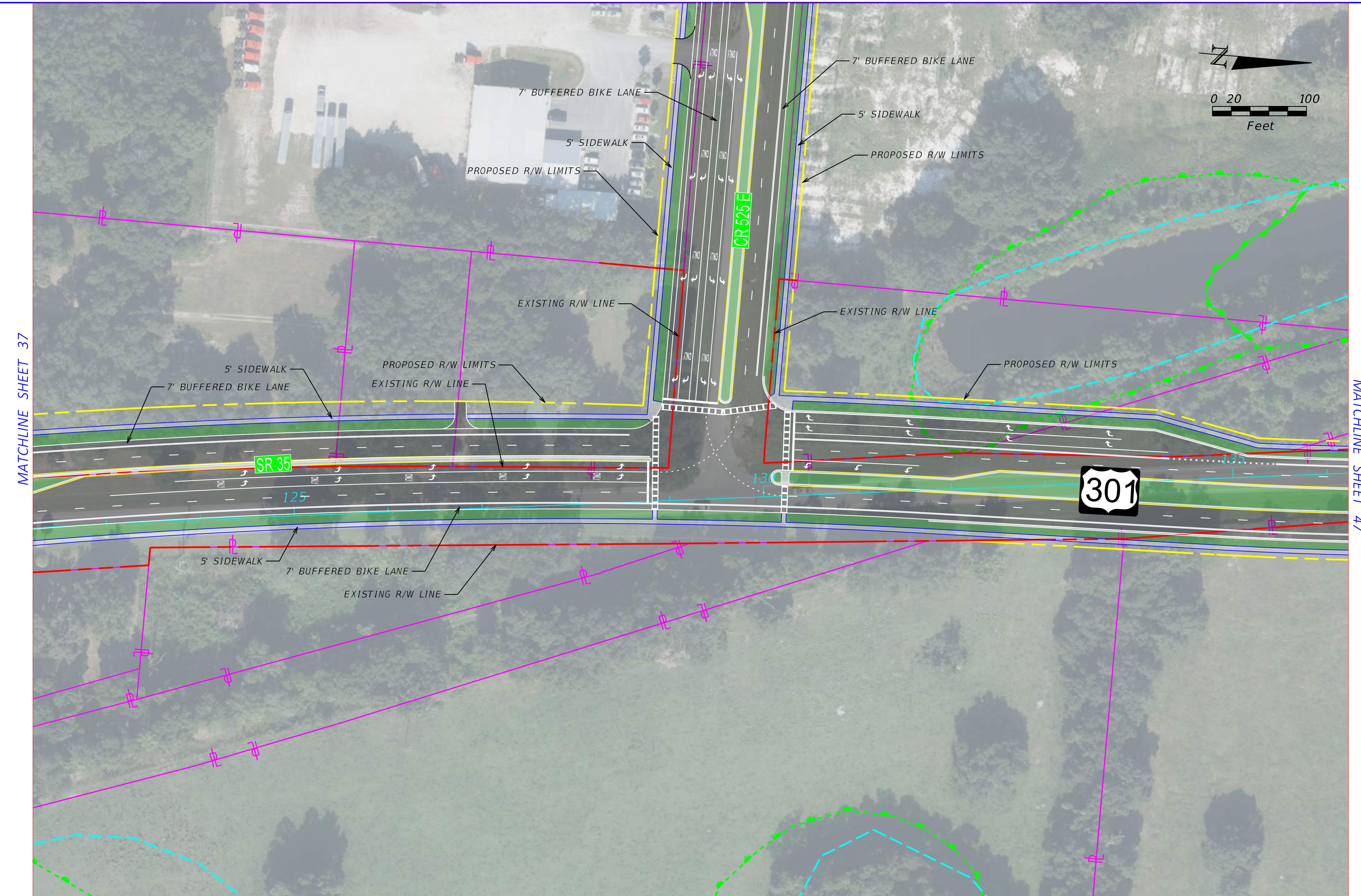


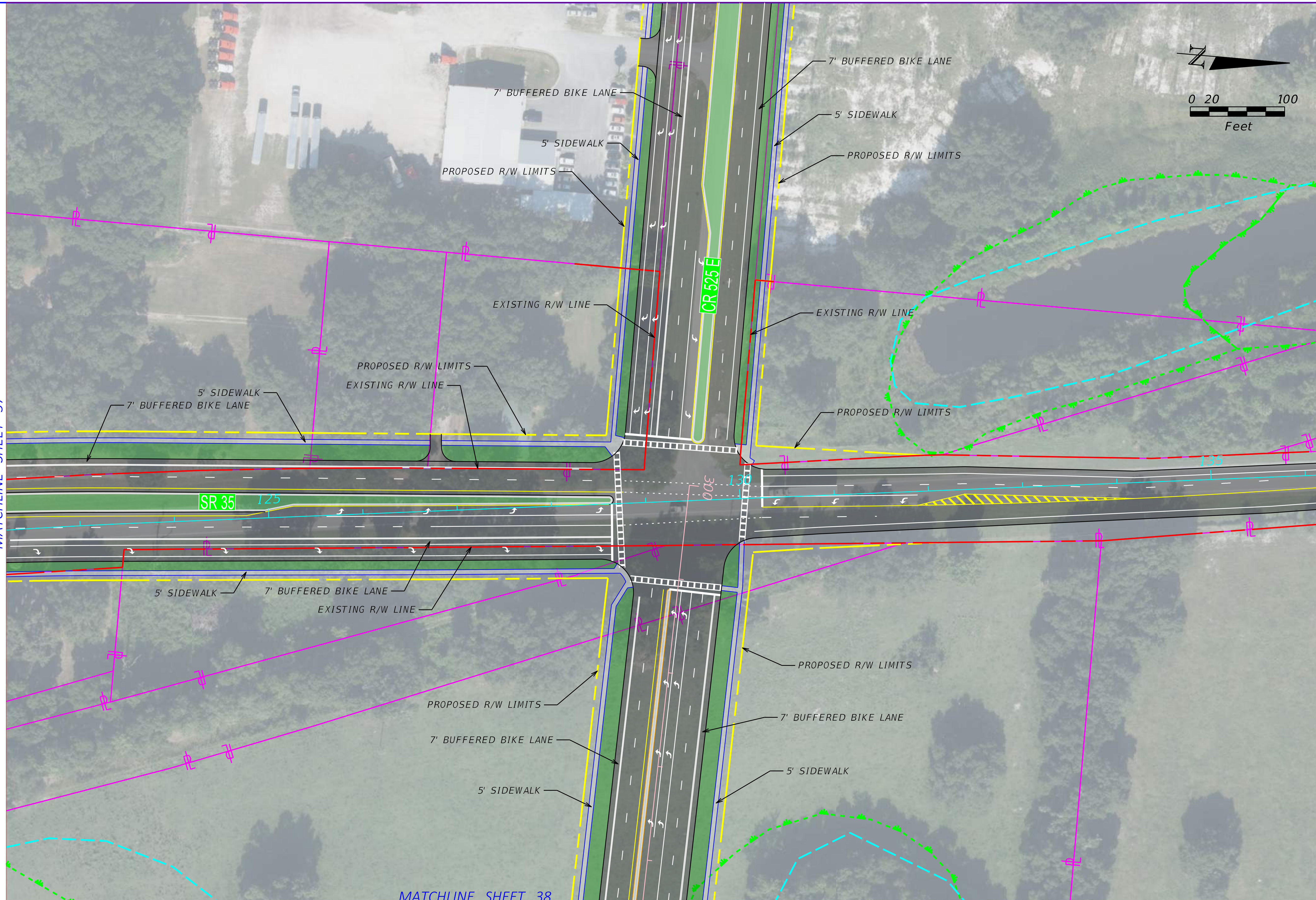
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 WIDENING
CR 525 E INTERSECTION

SHEET NO.
48



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 REALIGNMENT
CR 525 E INTERSECTION

SHEET NO.
49

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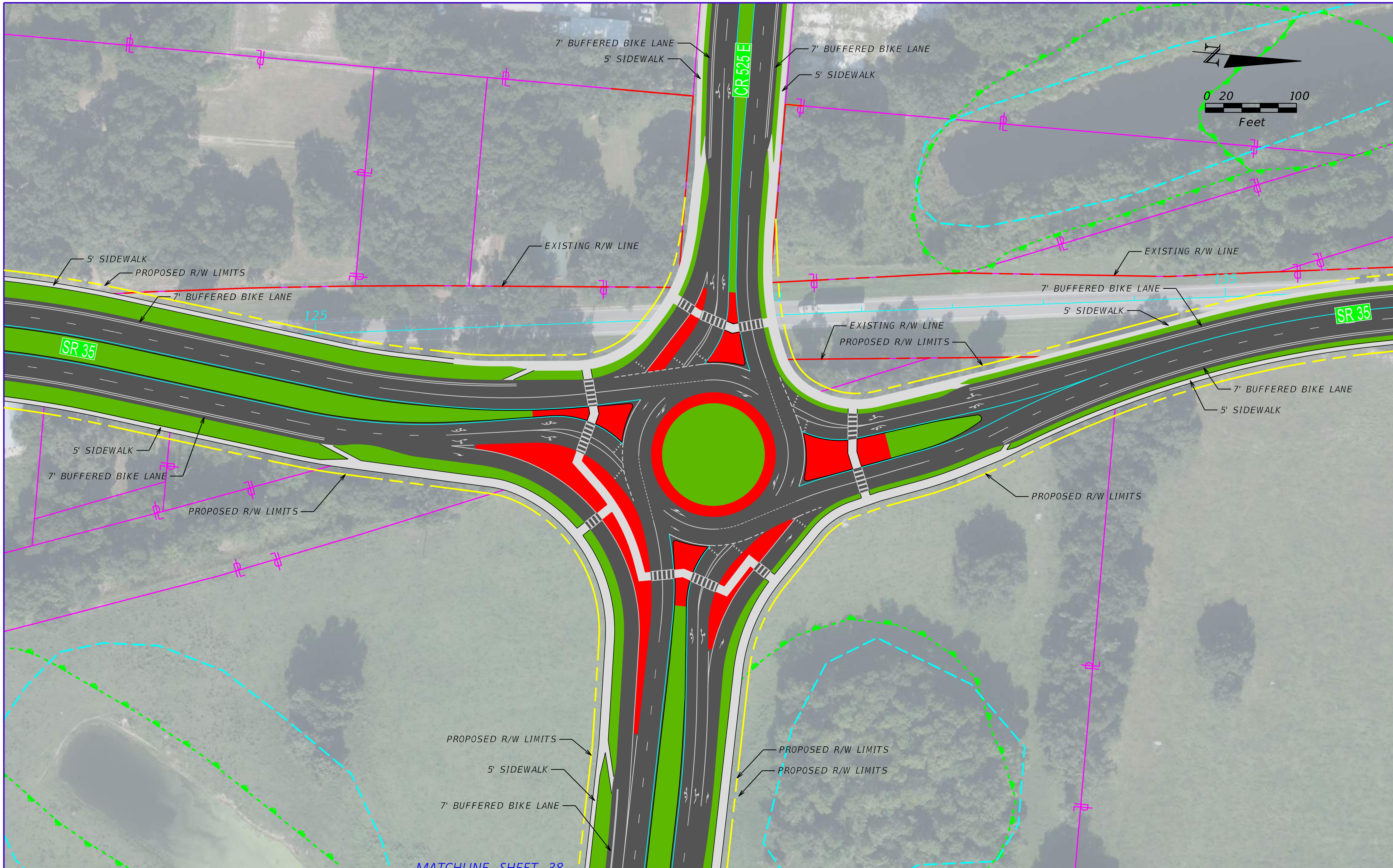

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 REALIGNMENT
CR 525 E ROUNDABOUT

SHEET NO.
50

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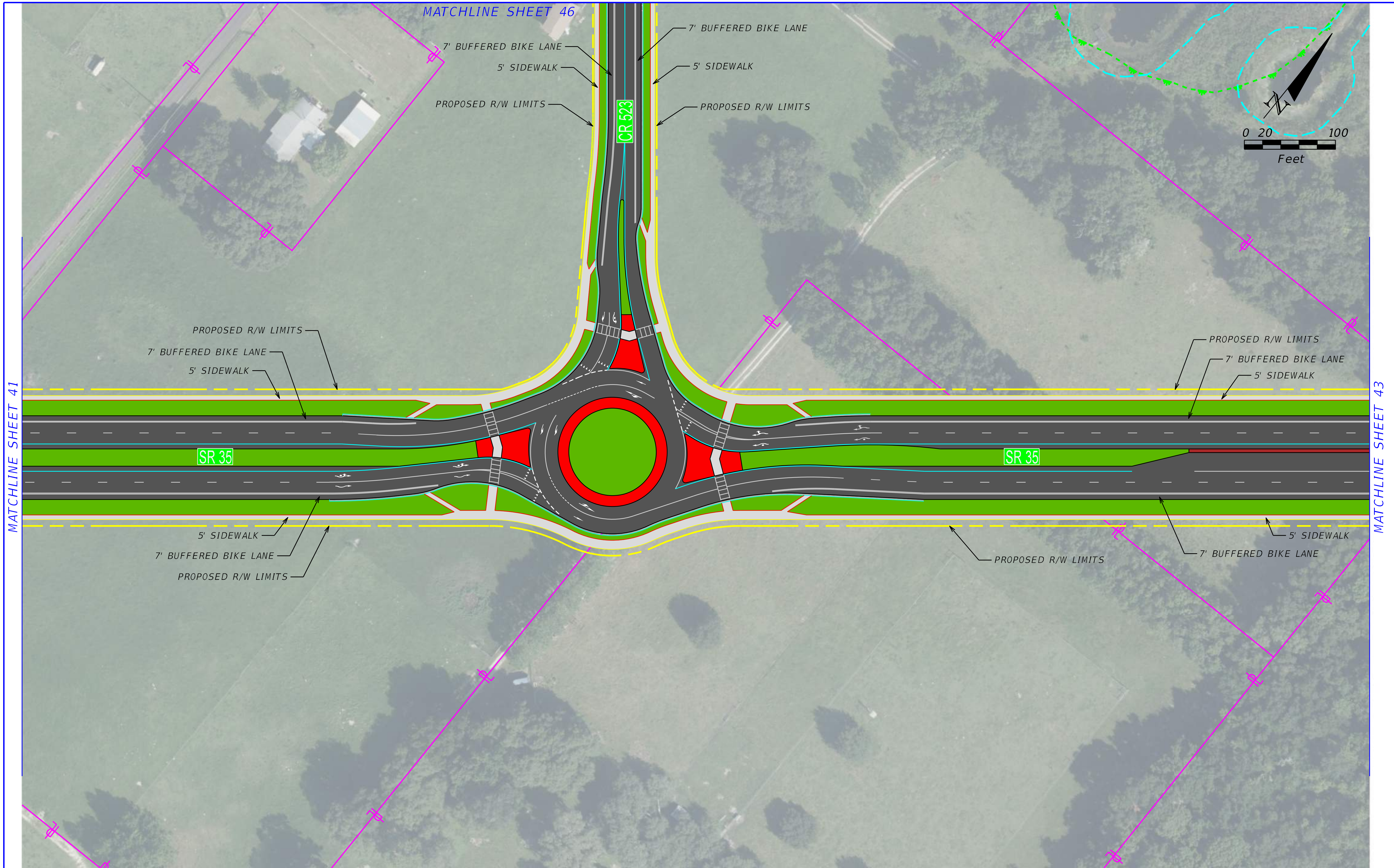

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 REALIGNMENT
CR 523 ROUNDABOUT

SHEET NO.
51

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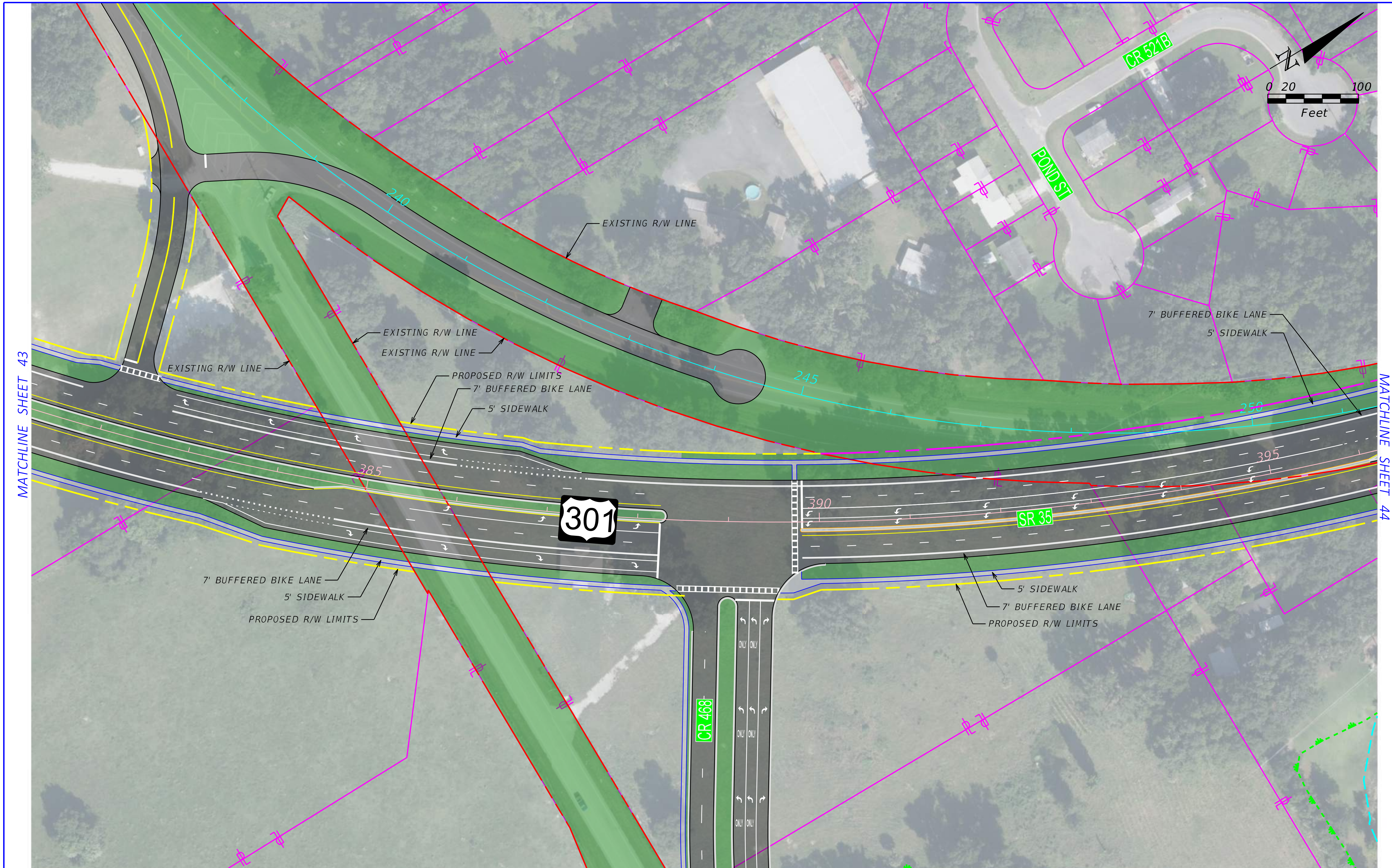

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 REALIGNMENT
CR 468 INTERSECTION

SHEET NO.
52

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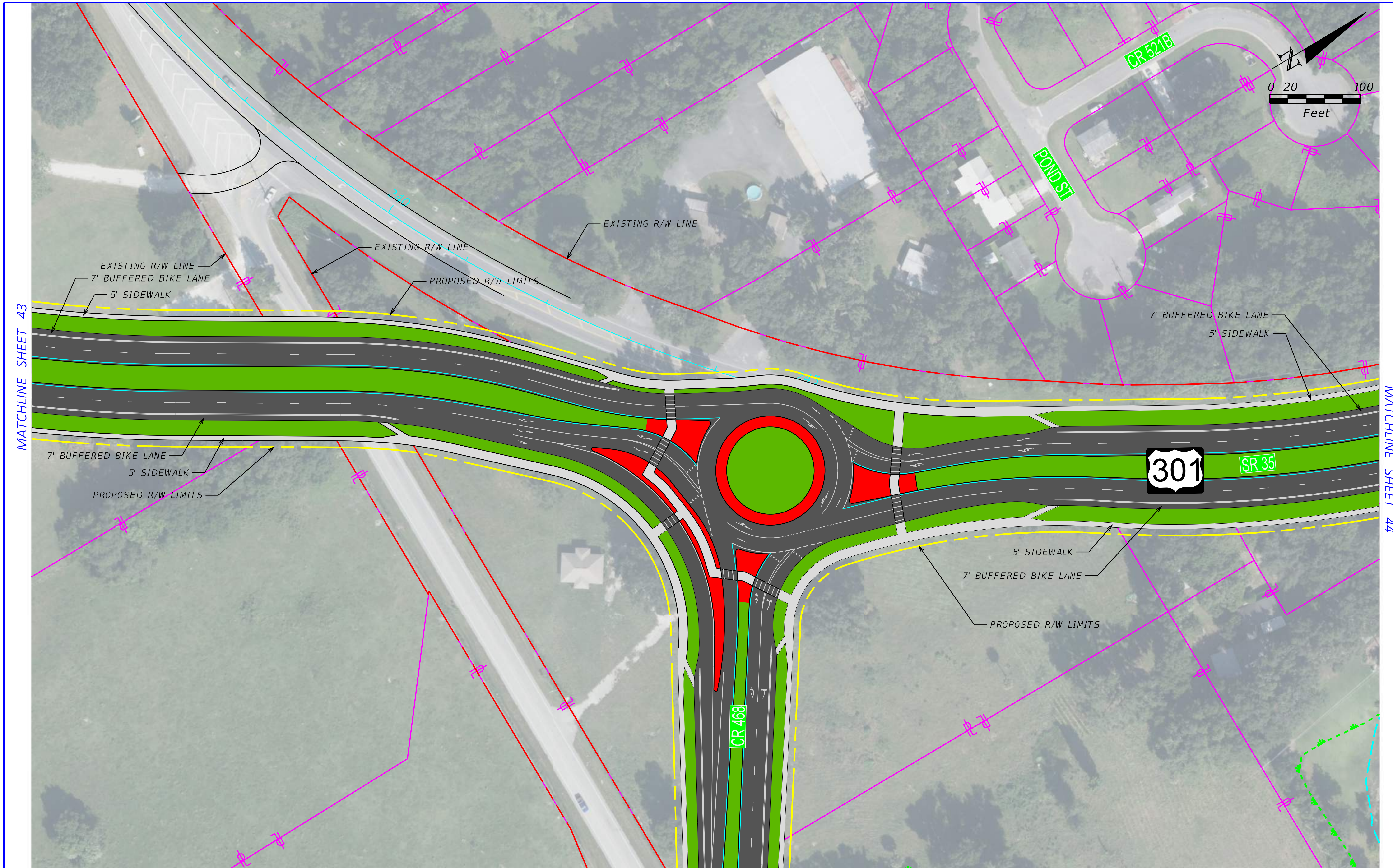

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 REALIGNMENT
CR 468 ROUNDABOUT

SHEET NO.
53

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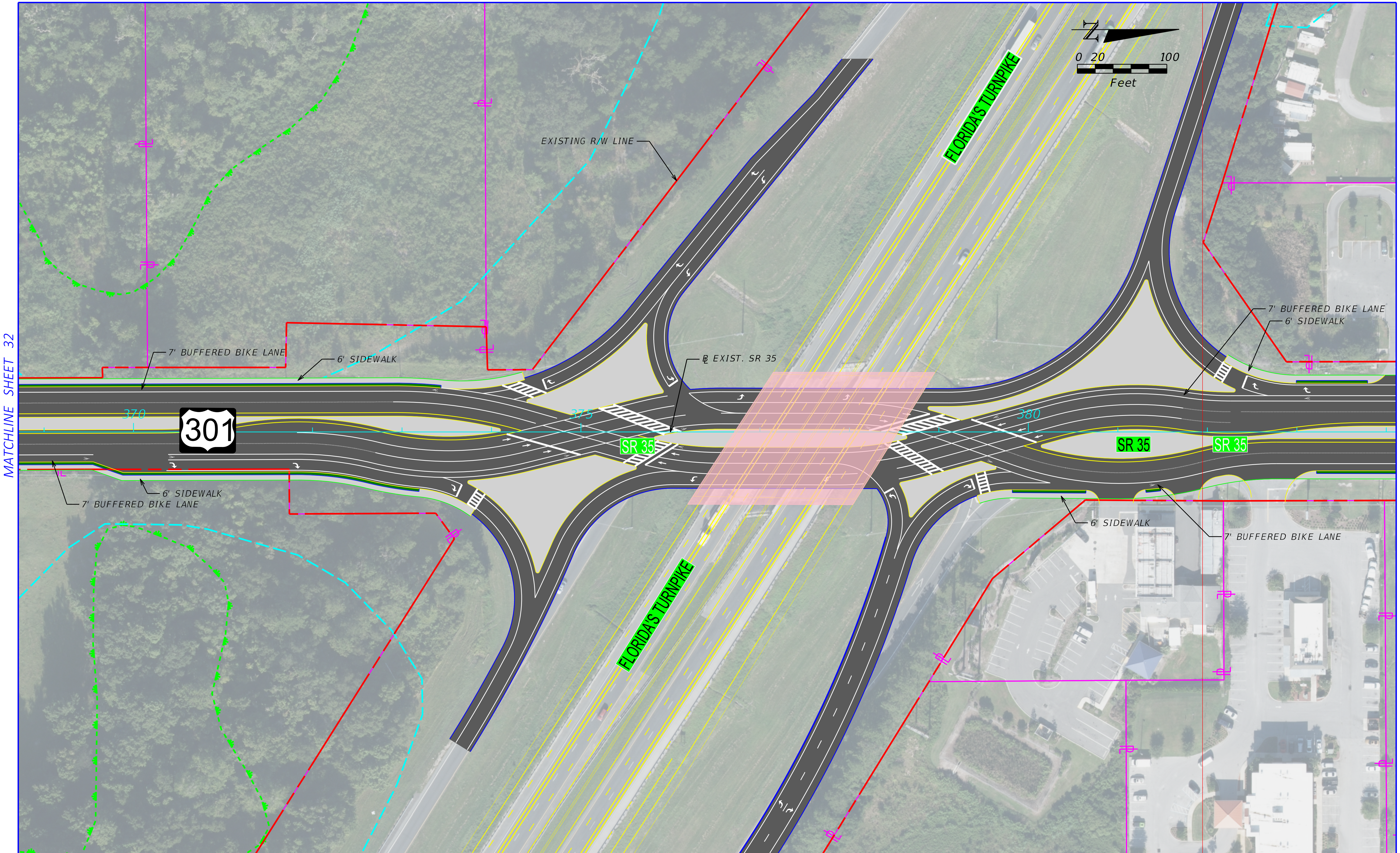


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

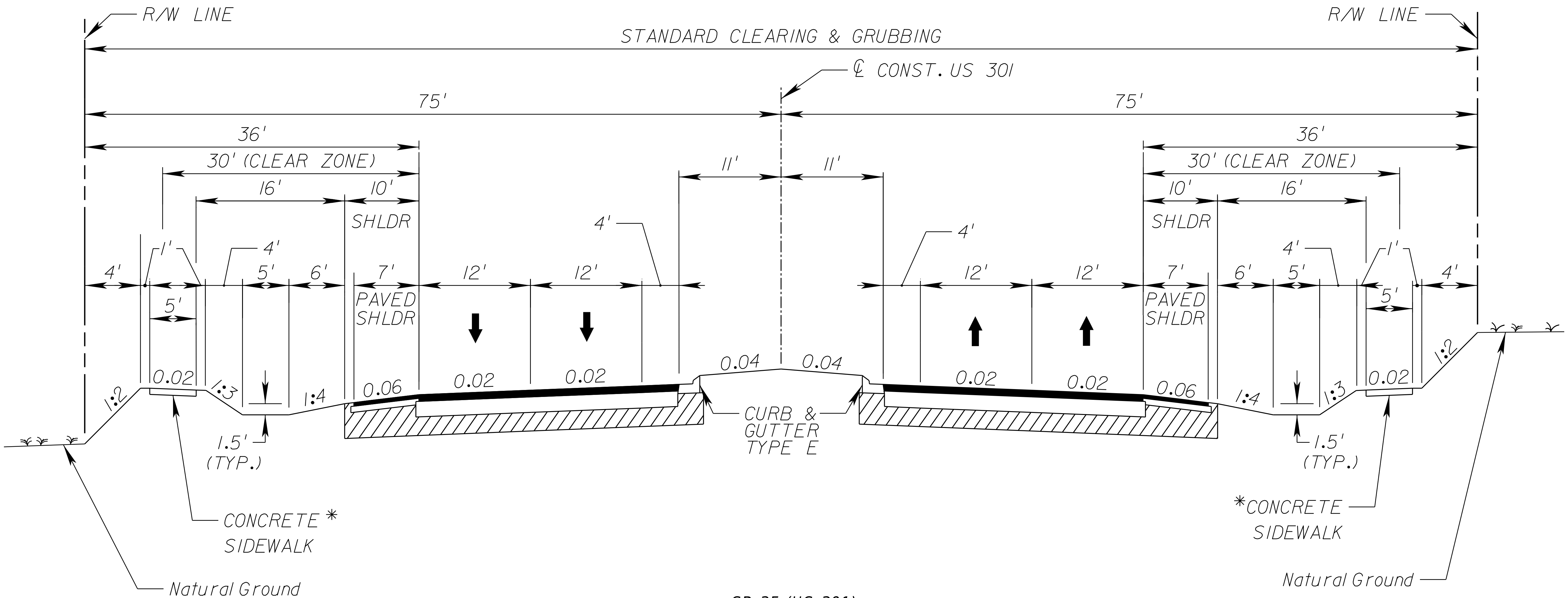
ROAD NO.	COUNTY	FINANCIAL PROJECT ID

TURNPIKE INTERCHANGE
[redacted]

SHEET NO.

APPENDIX B

Preferred Alternative (Alternative 2) Concept Plans



SR 35 (US 301)
SUBURBAN TYPICAL SECTION
CR 470 E TO FLORIDA'S TURNPIKE (SR 91)

*CONSTRUCTION OF SIDEWALKS WILL BE DETERMINED DURING THE DESIGN PHASE BASED ON FUTURE LAND USE AND THE URBAN BOUNDARY.

DESIGN SPEED = 55 MPH

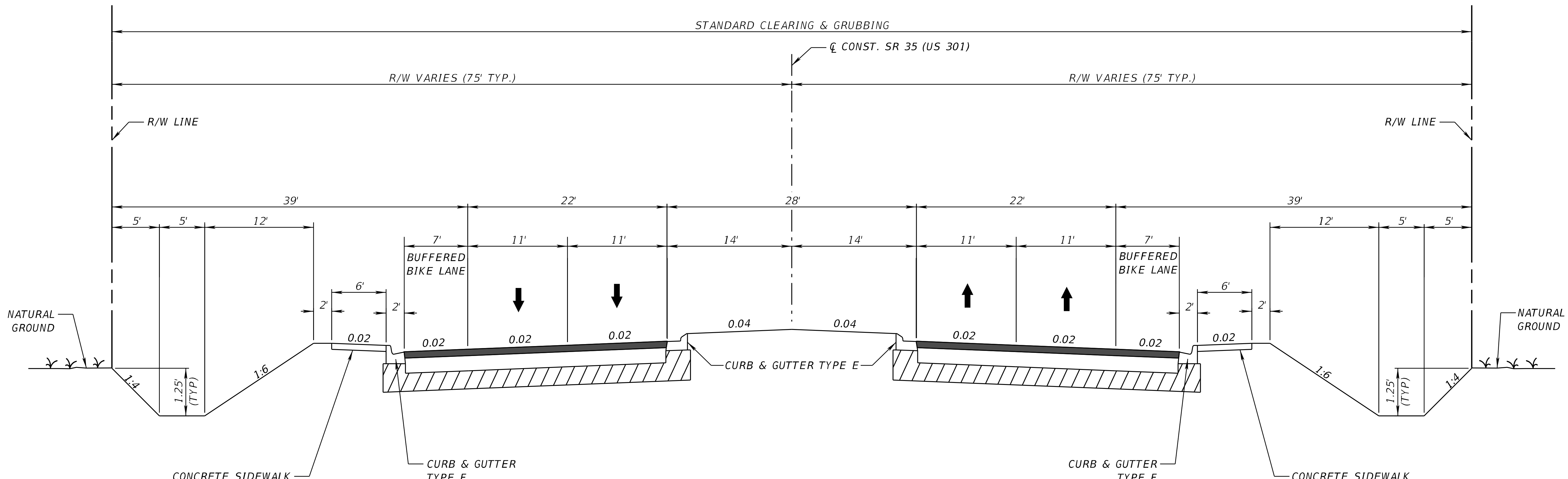
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
TYPICAL SECTIONS

SHEET NO.
TYP-1



SR 35 (US 301)
4-LANE URBAN TYPICAL SECTION
FLORIDA'S TURNPIKE (SR 91) TO SR 44

DESIGN SPEED = 45 MPH

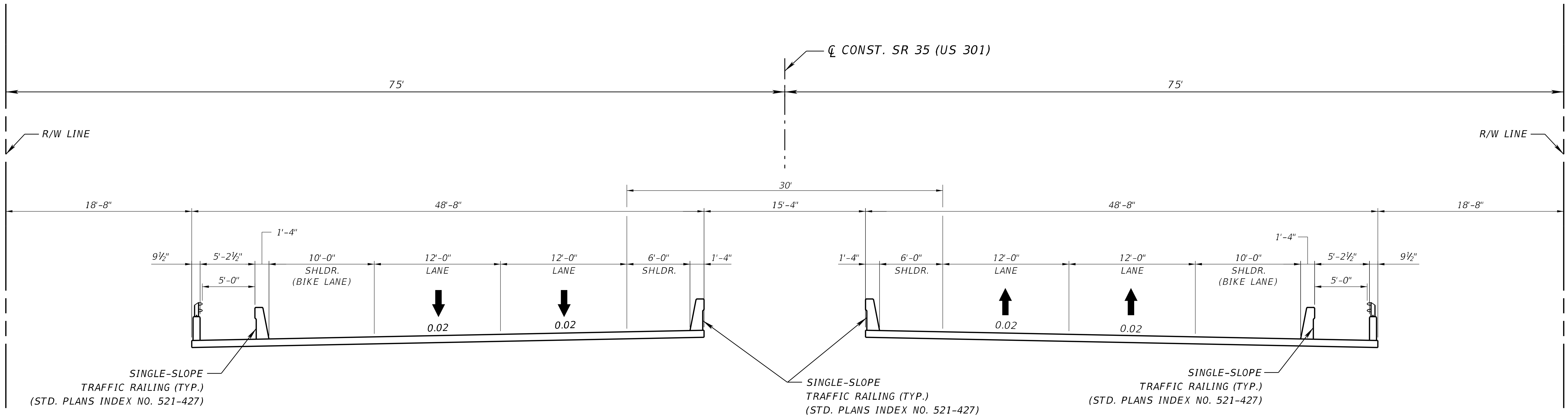
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
TYPICAL SECTIONS

SHEET NO.
TYP-2



SHADY BROOK BRIDGE TYPICAL SECTION
SR 35 (US 301)
MP 15.589 TO MP 15.643

DESIGN SPEED = 55 MPH

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
TYPICAL SECTIONS

SHEET NO.
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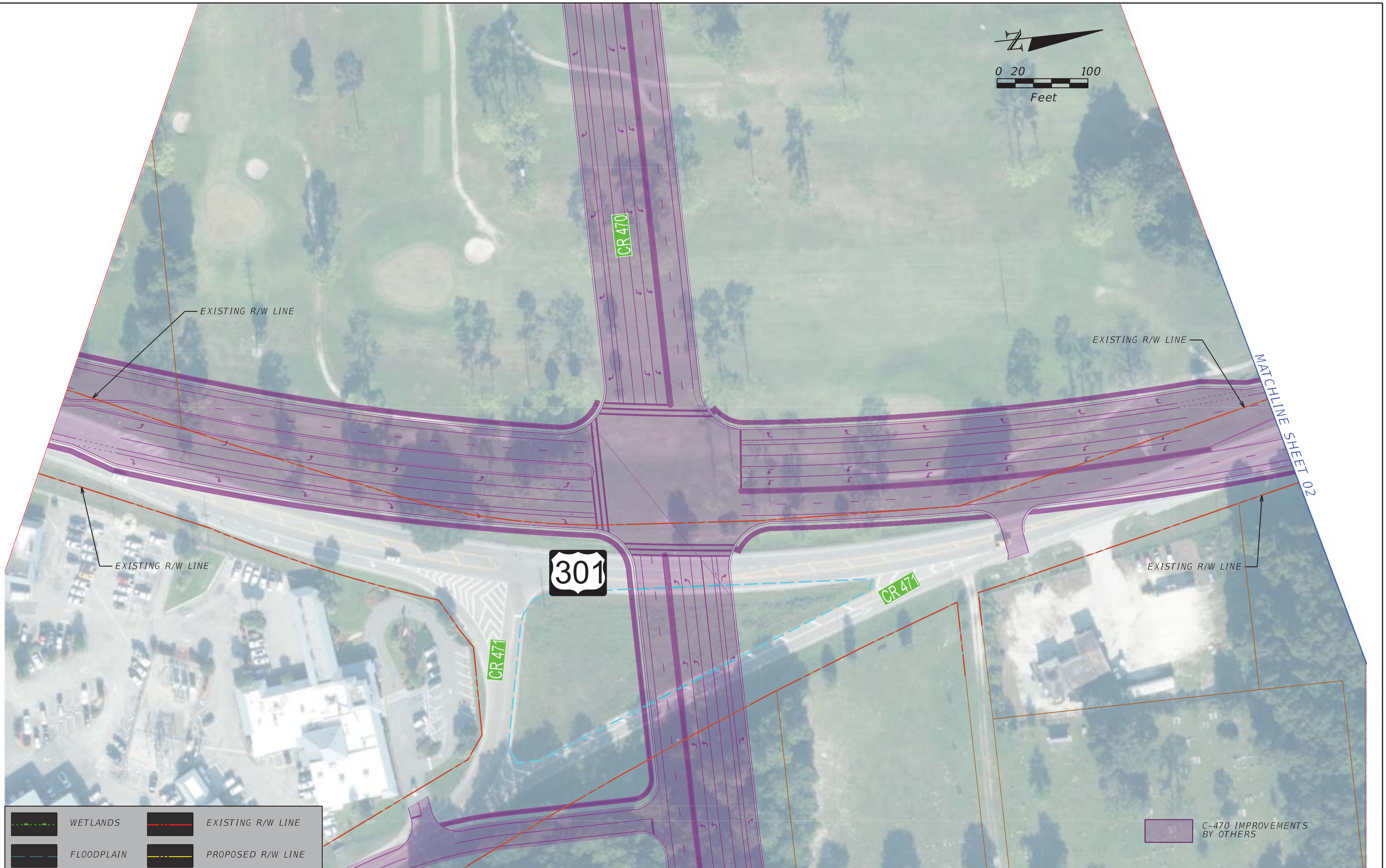

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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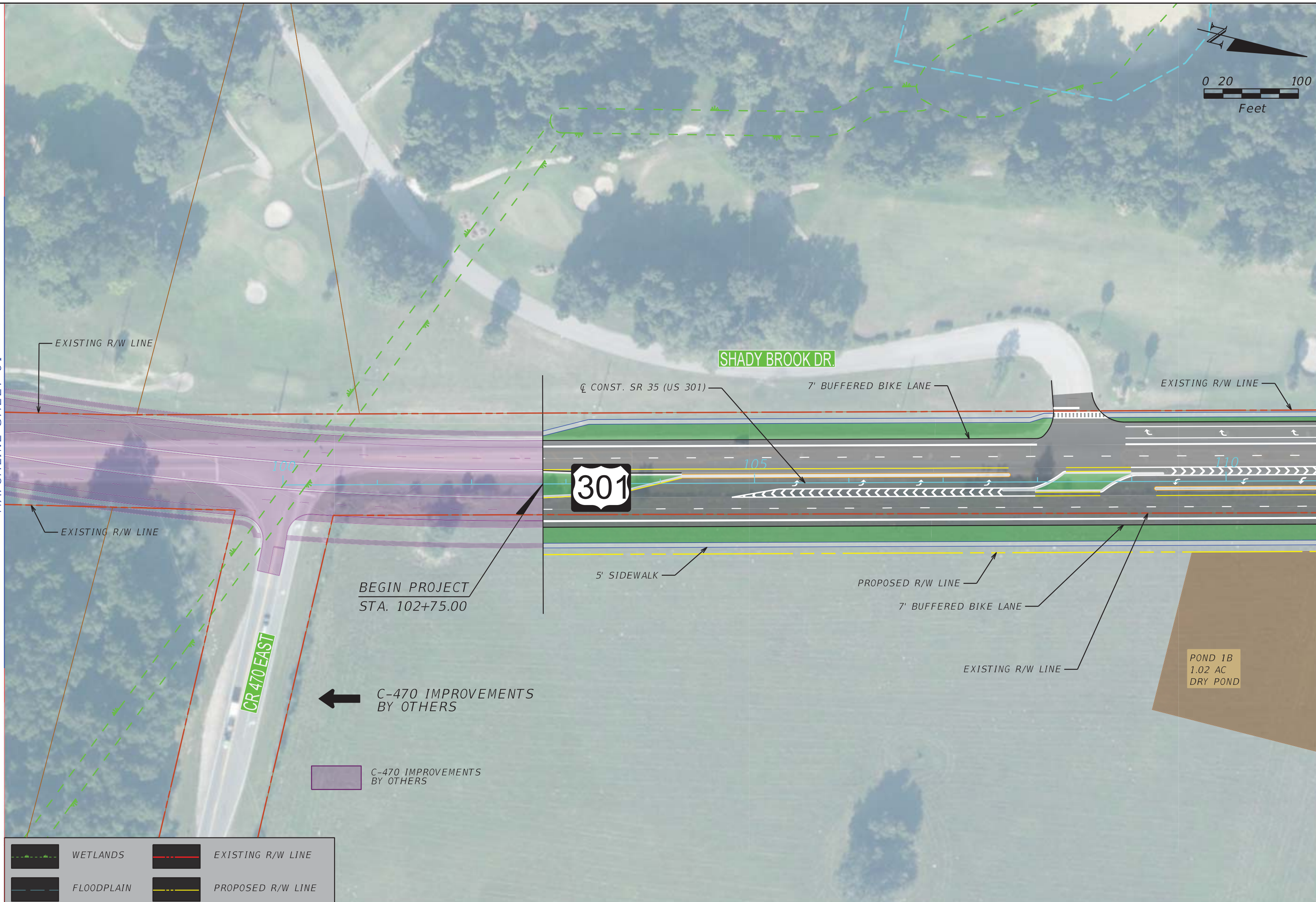

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
3

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REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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REVISIONS			
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO. 8

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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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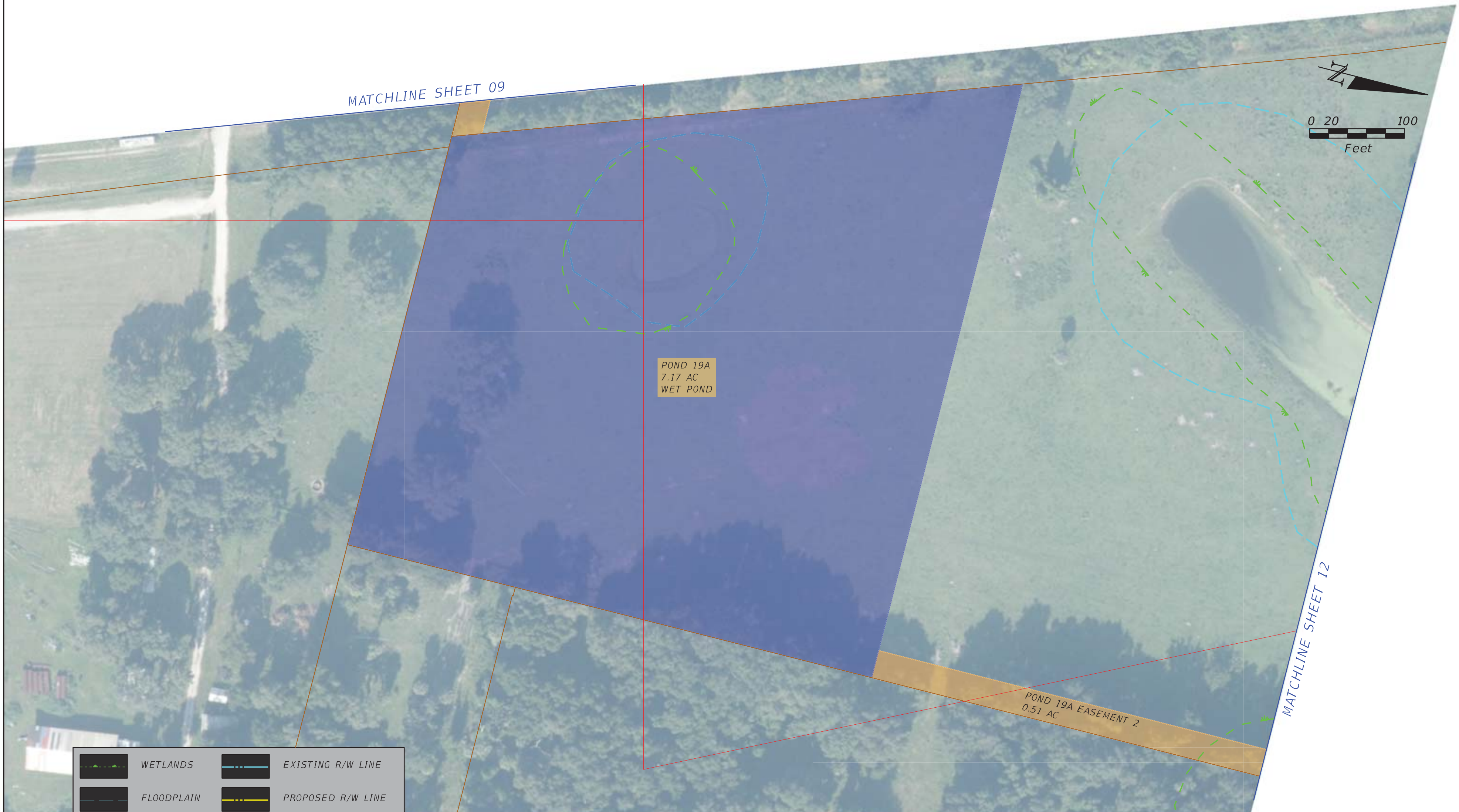

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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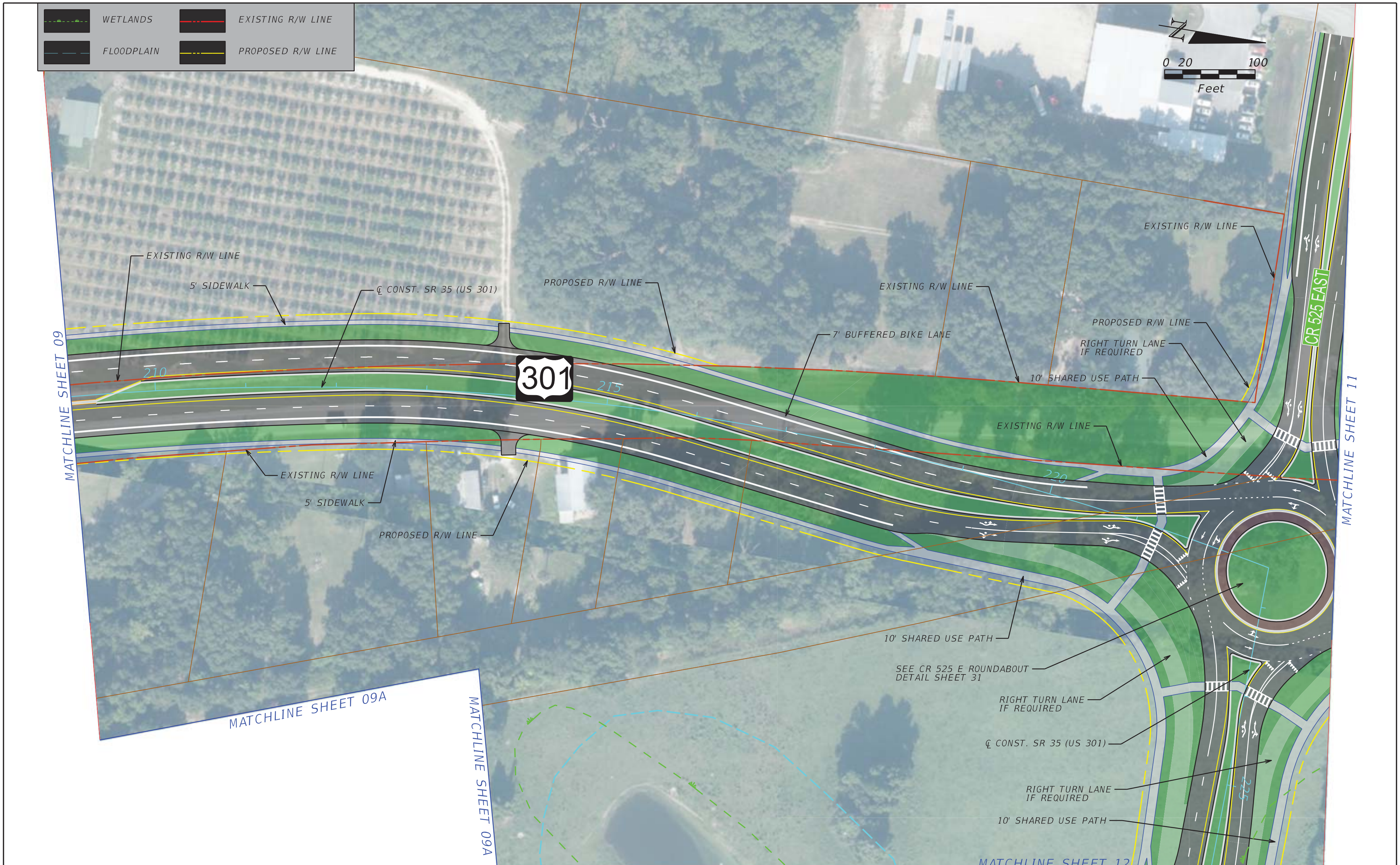

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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

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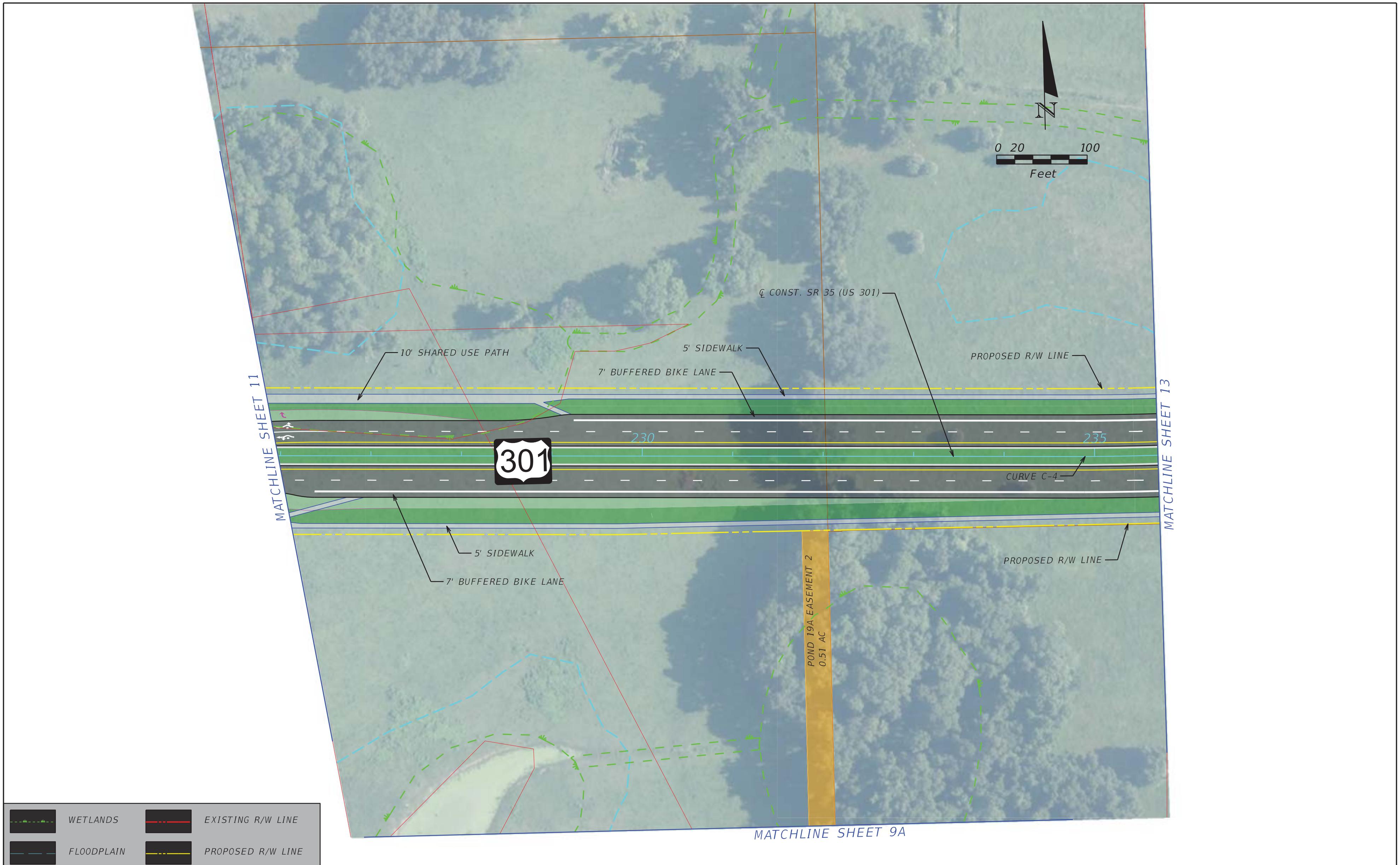

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO. 12

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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

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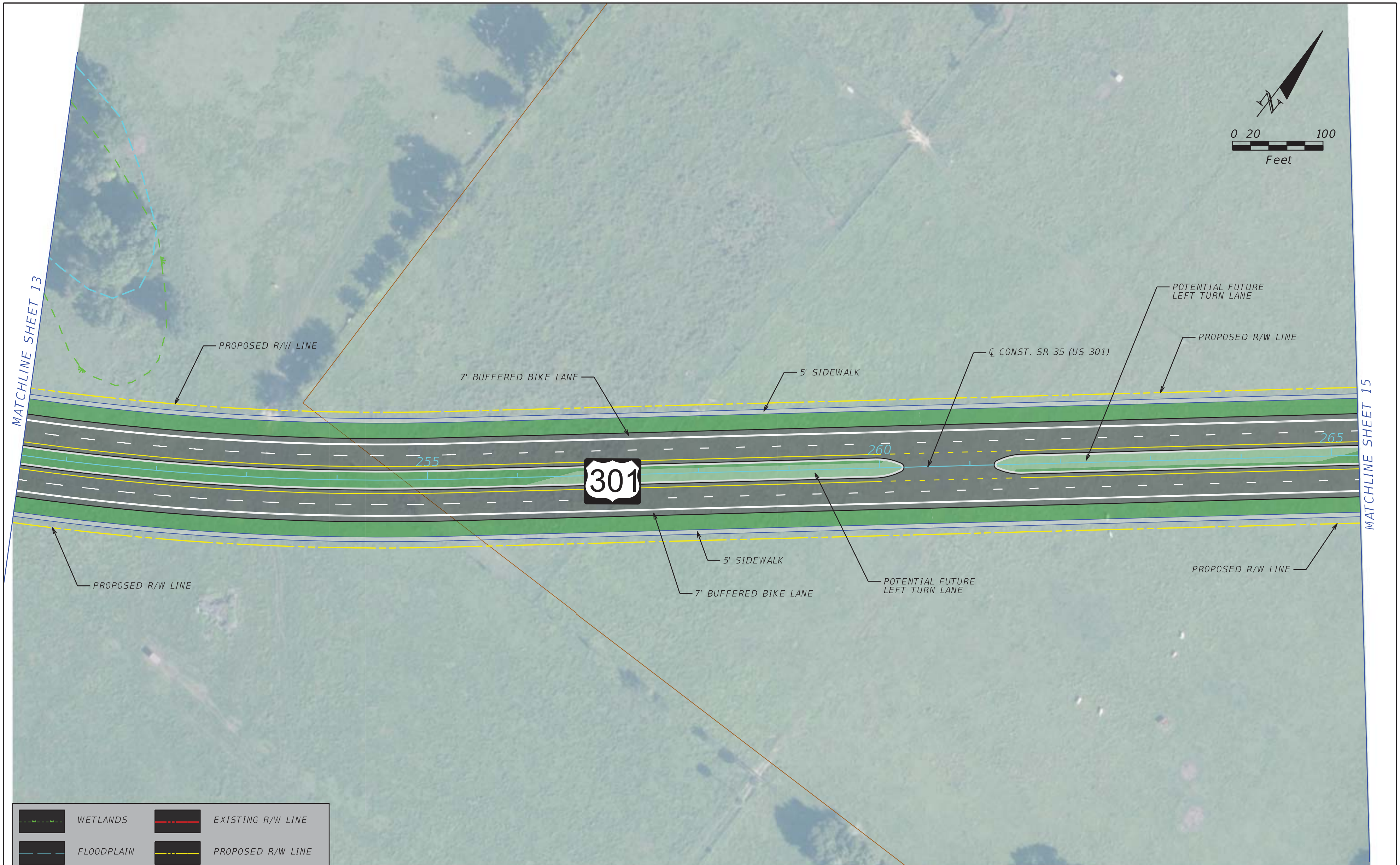

REVISIONS			
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO. 15

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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO. 16

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
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SHEET NO. 17

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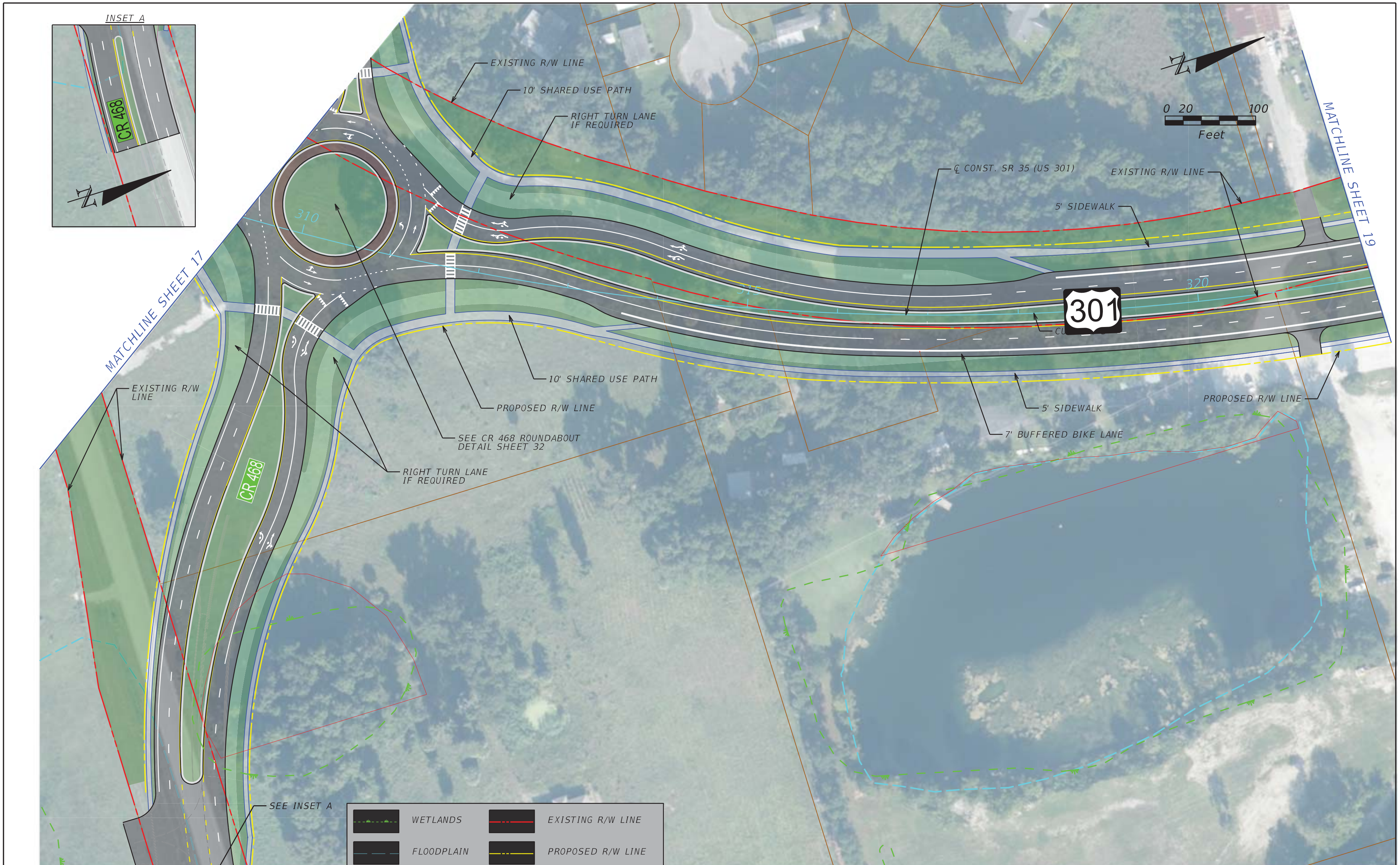

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
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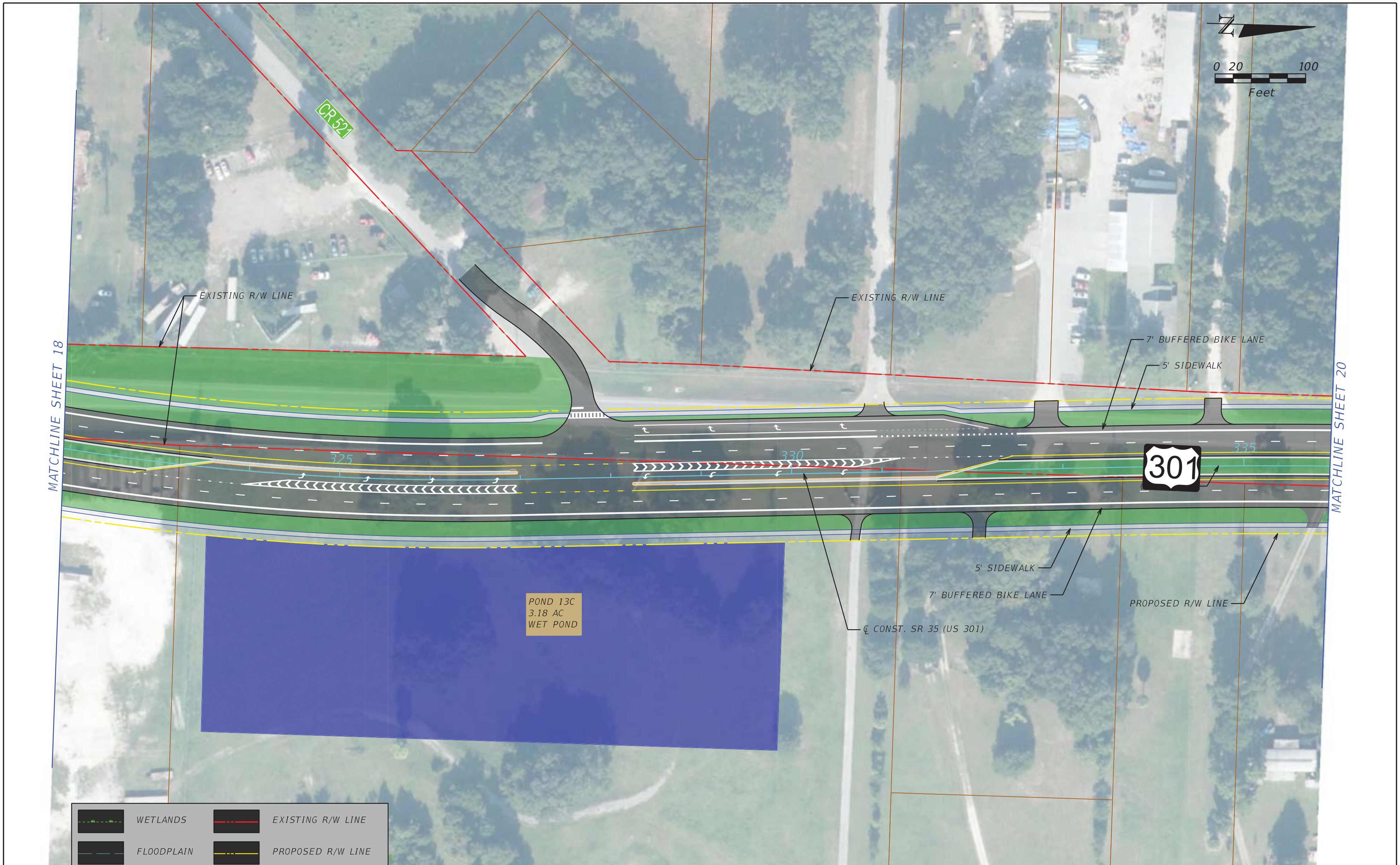

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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
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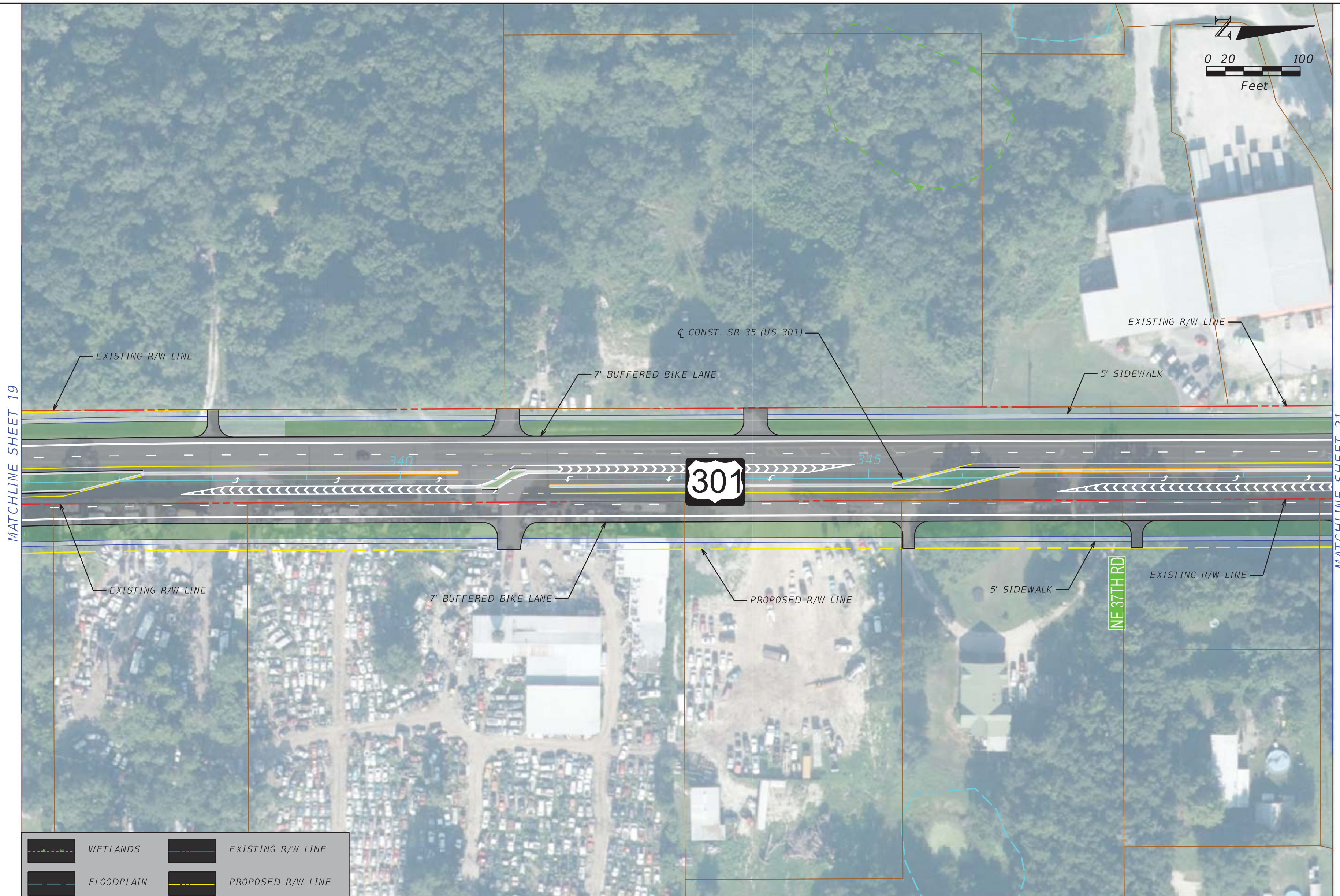

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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

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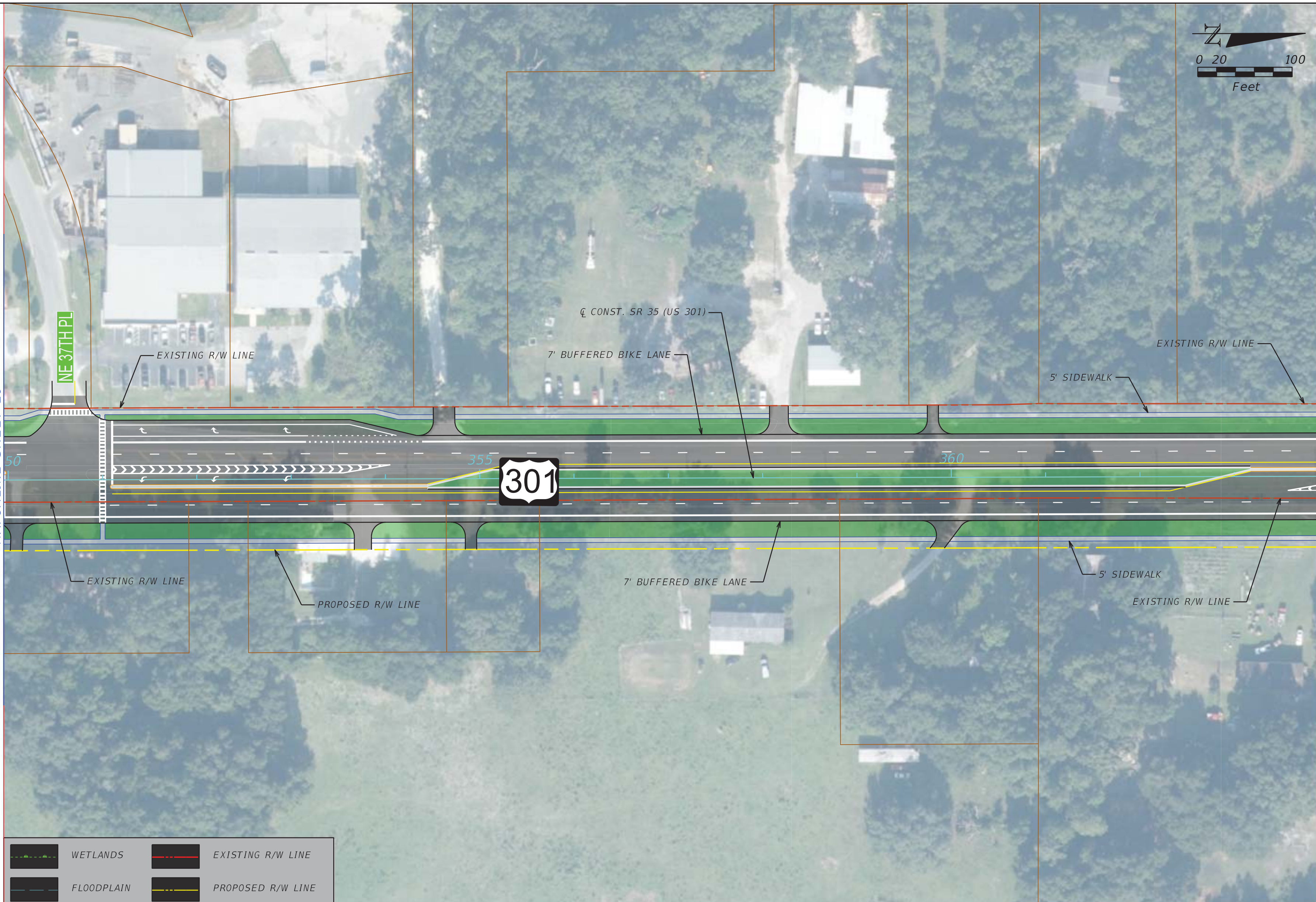

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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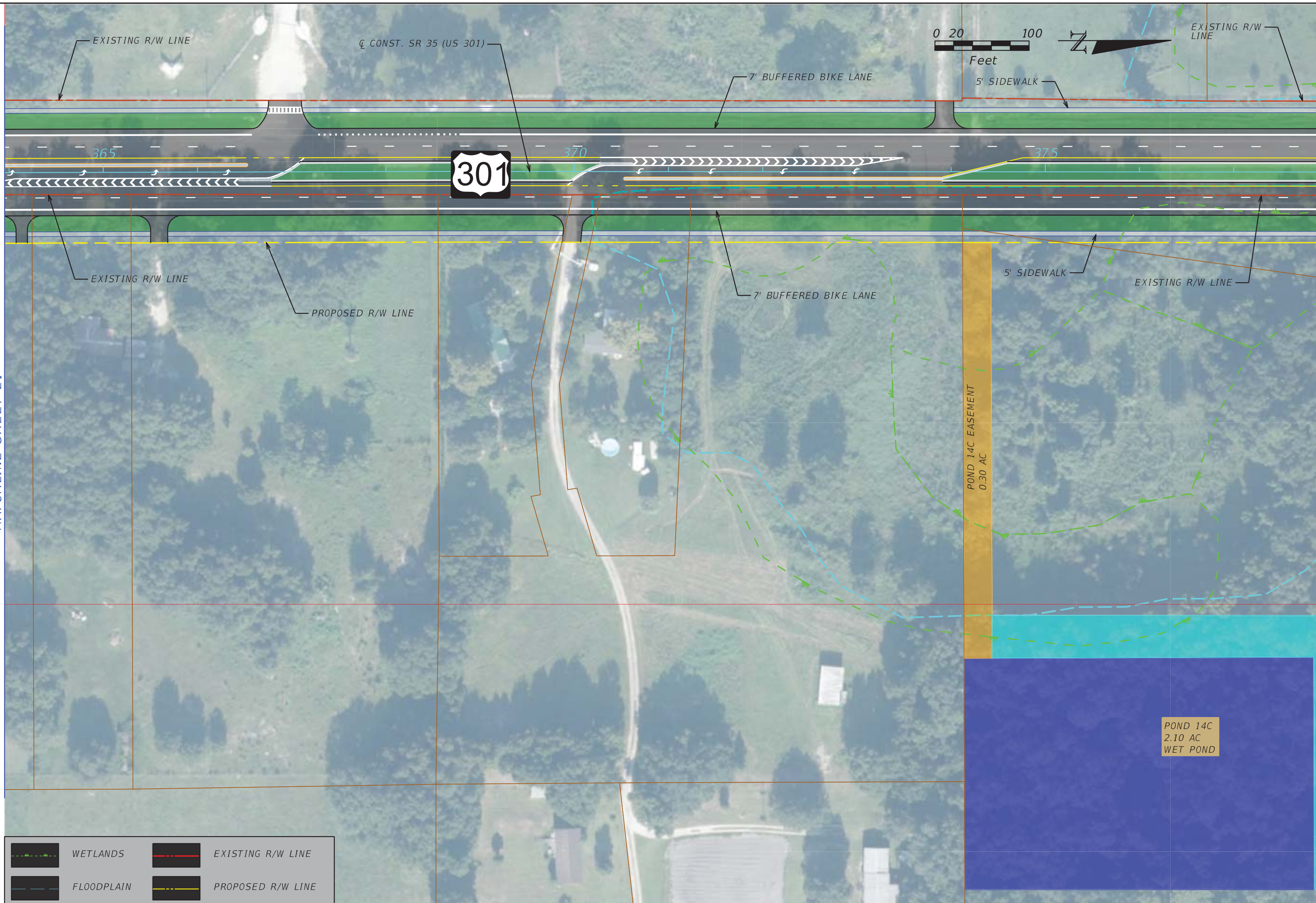

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
22

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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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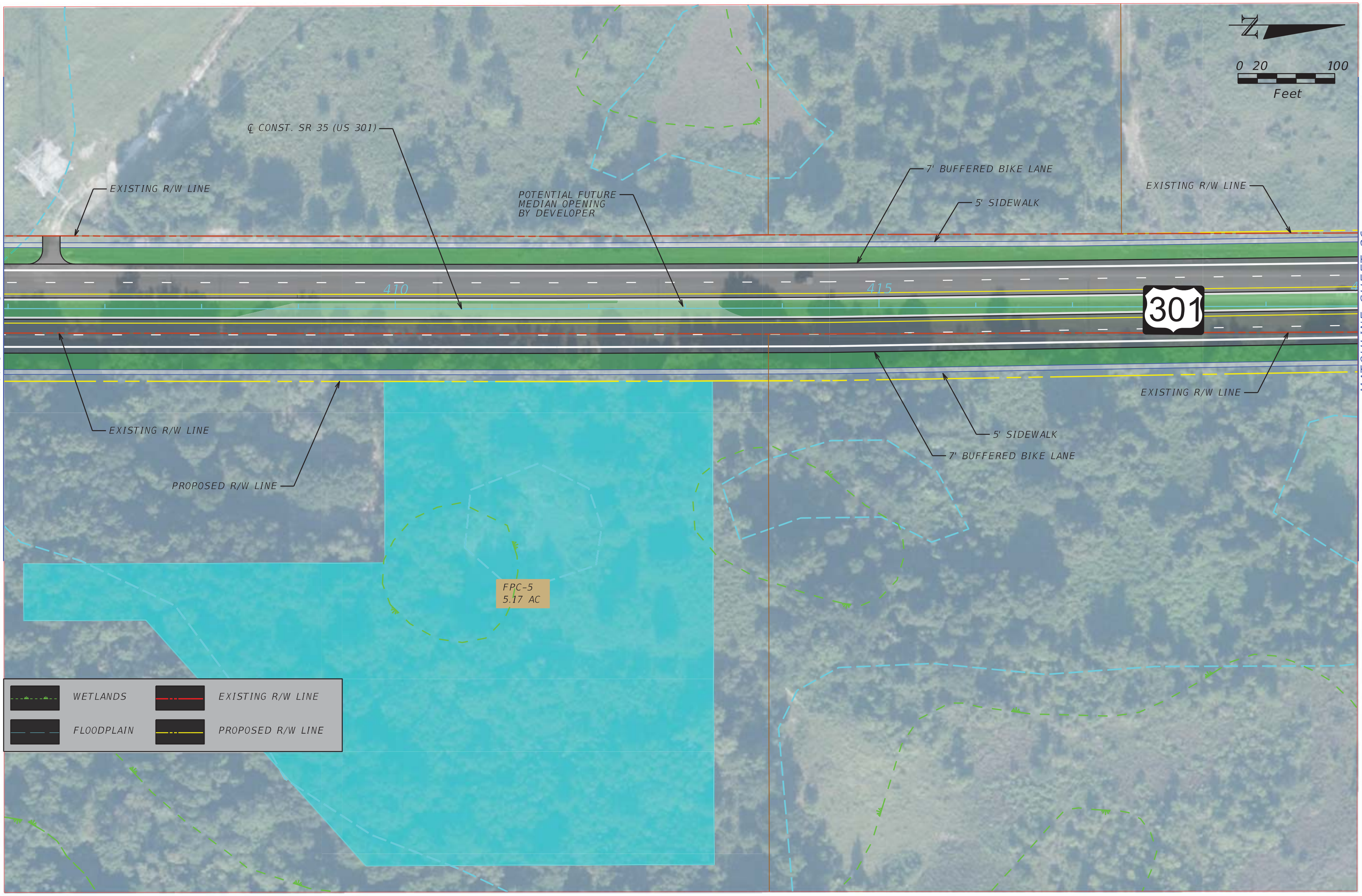

REVISIONS			
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STATE OF FLORIDA
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO. 25

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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO. 26

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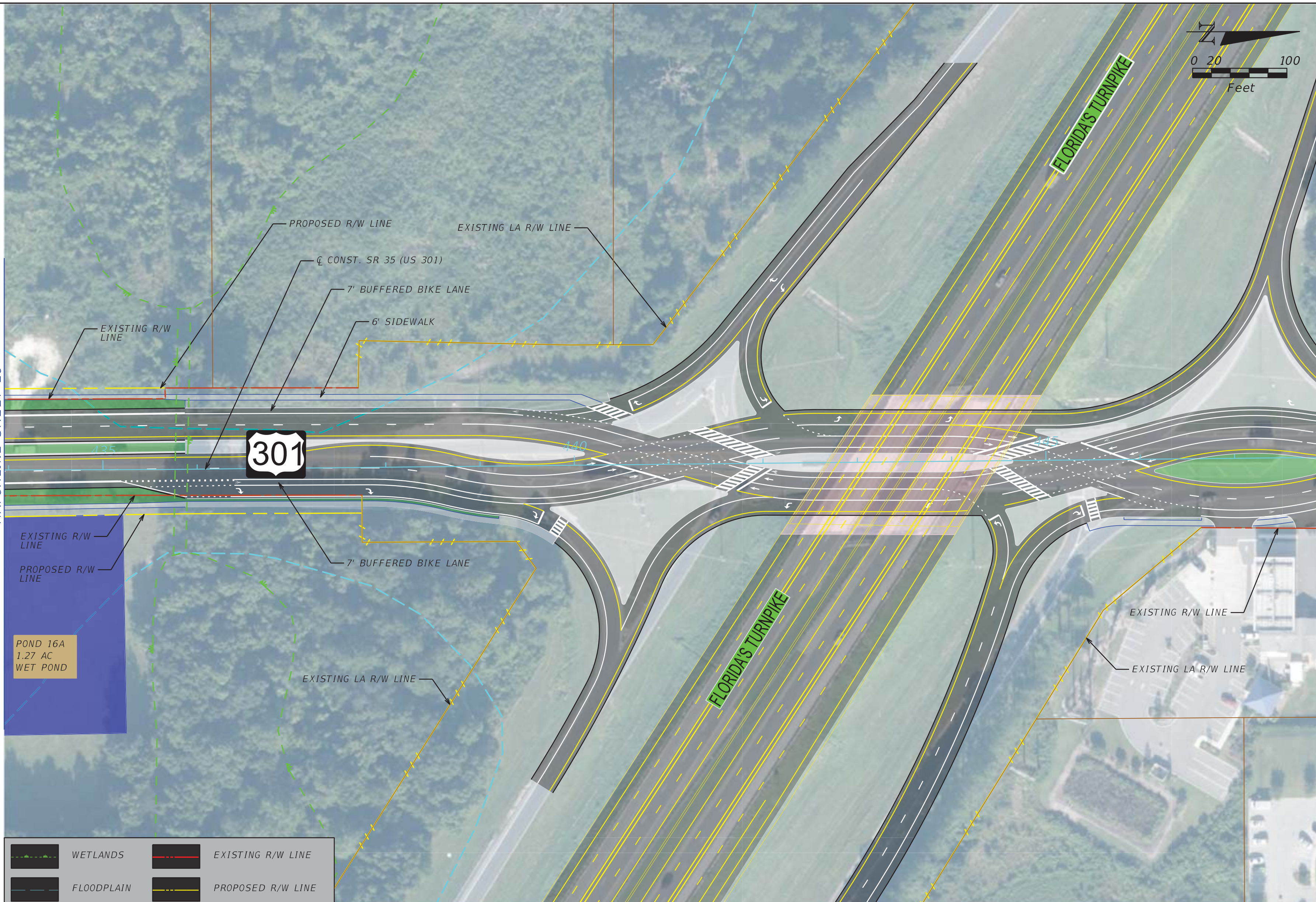

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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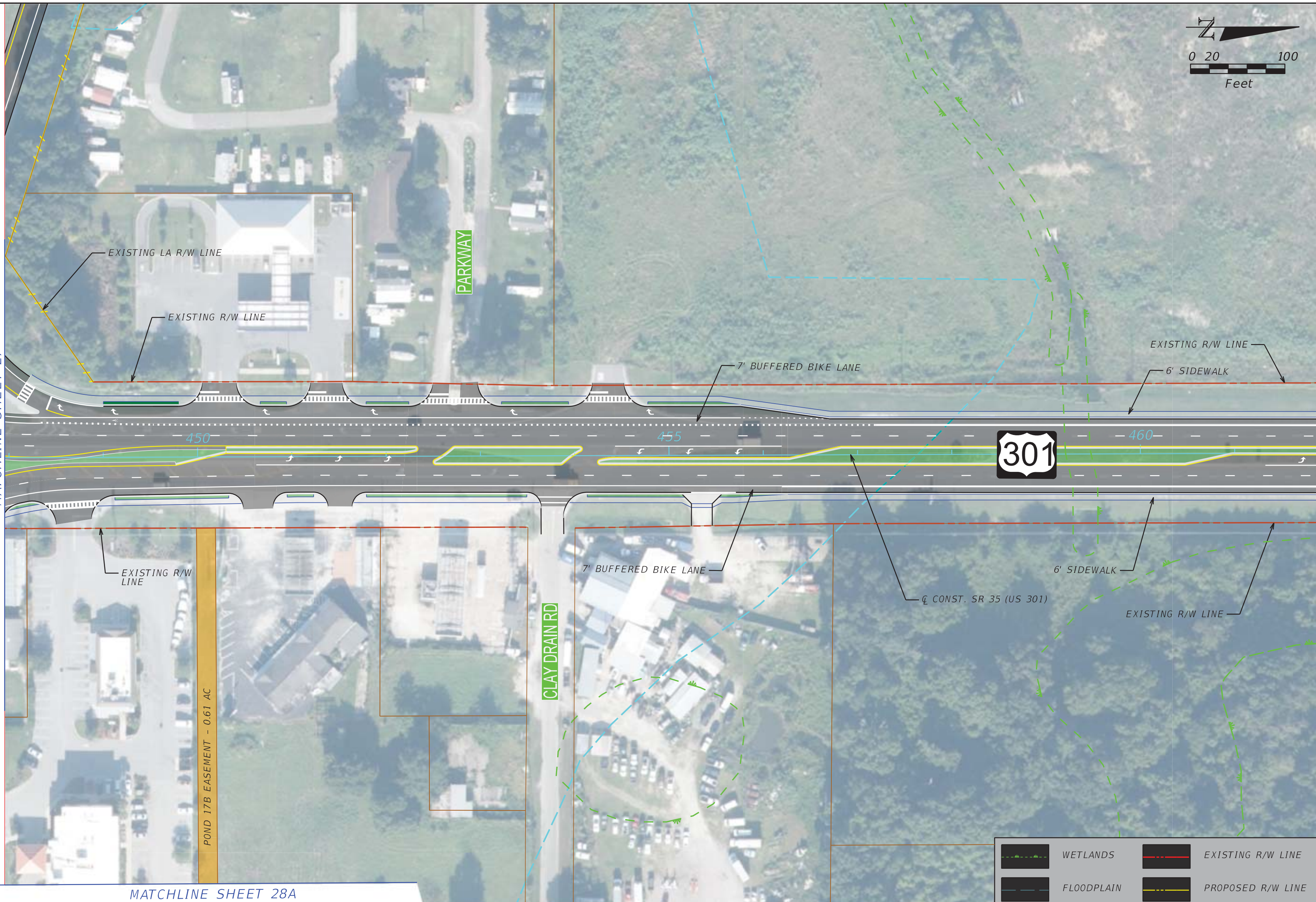

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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO. 28

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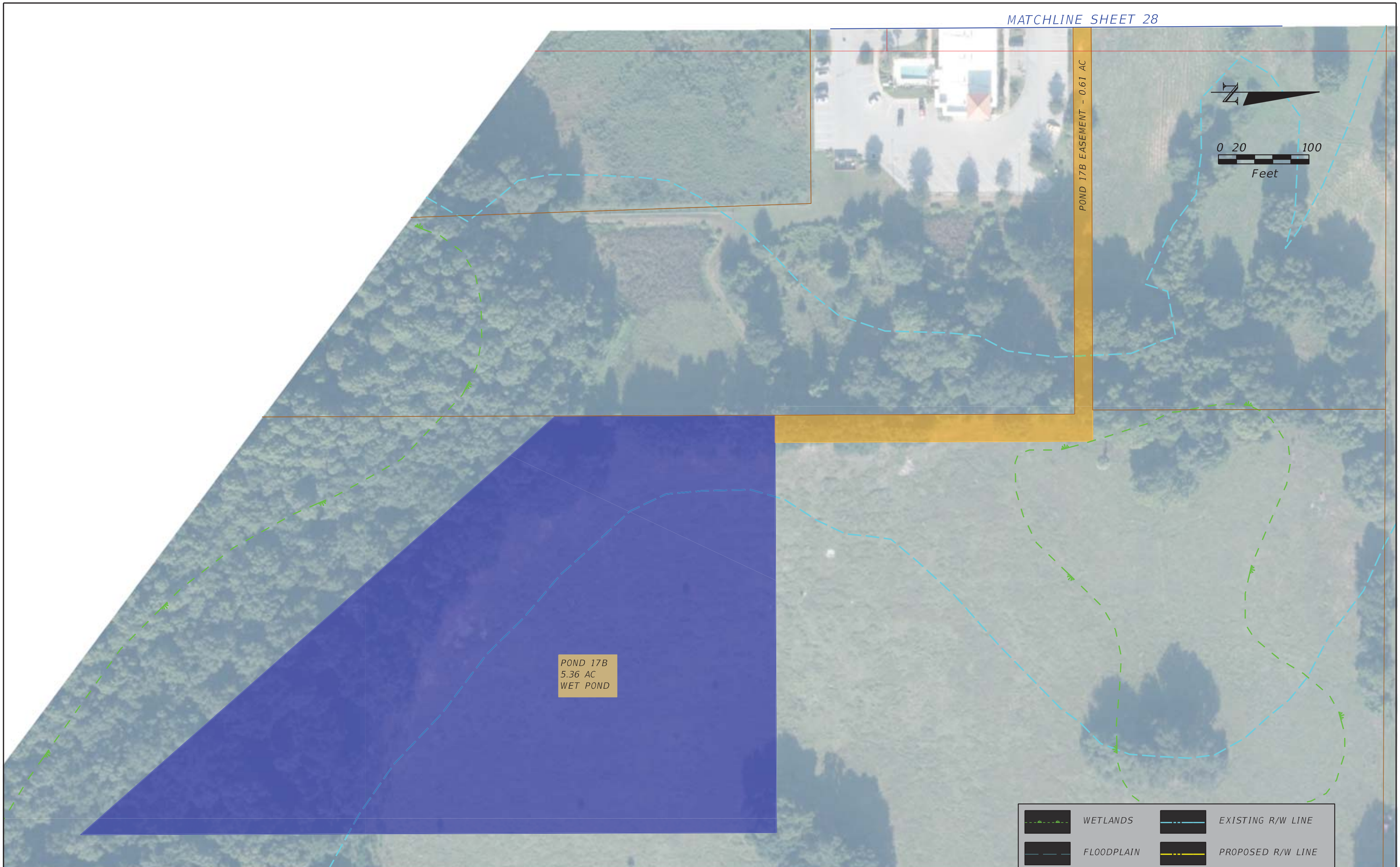

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DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

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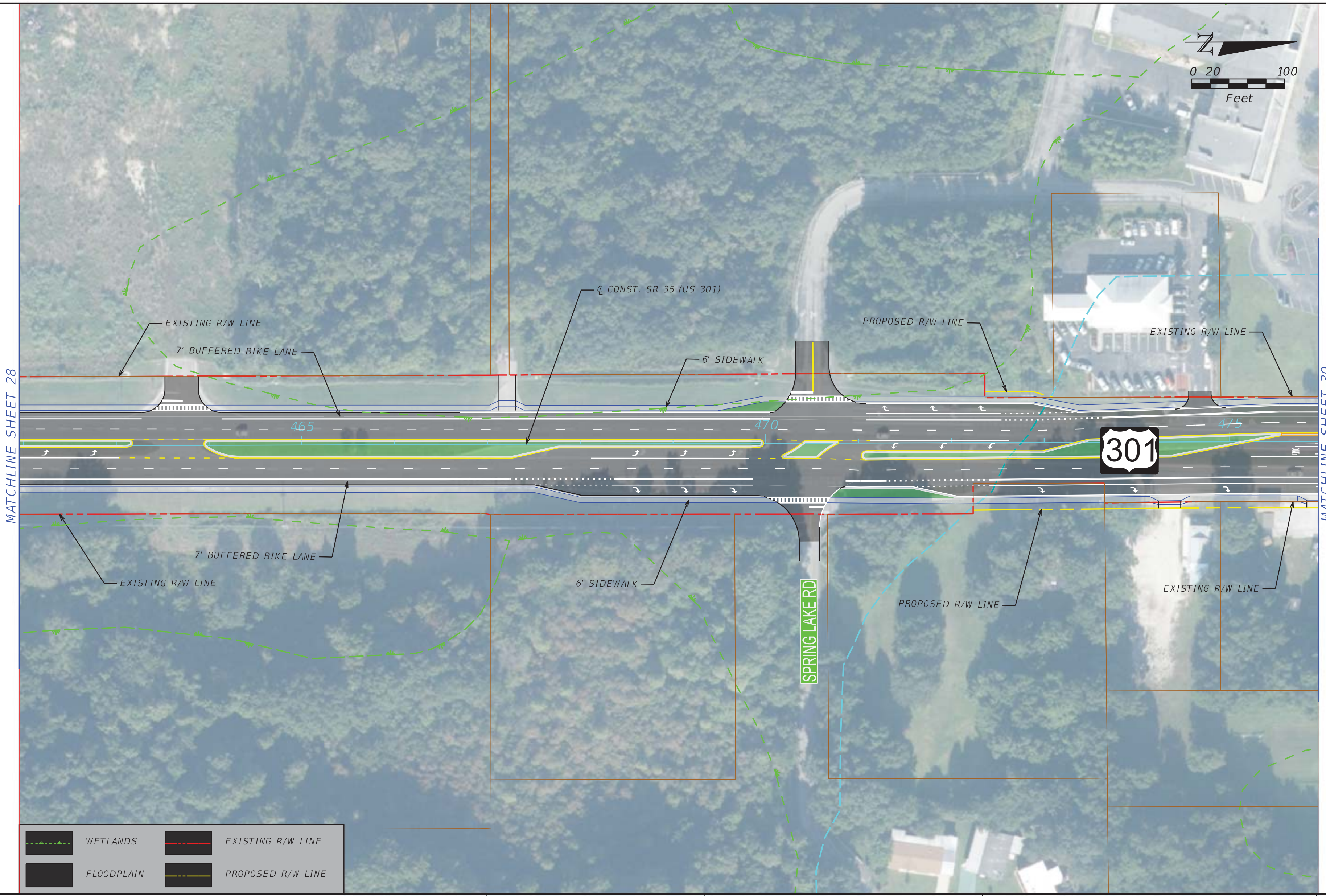

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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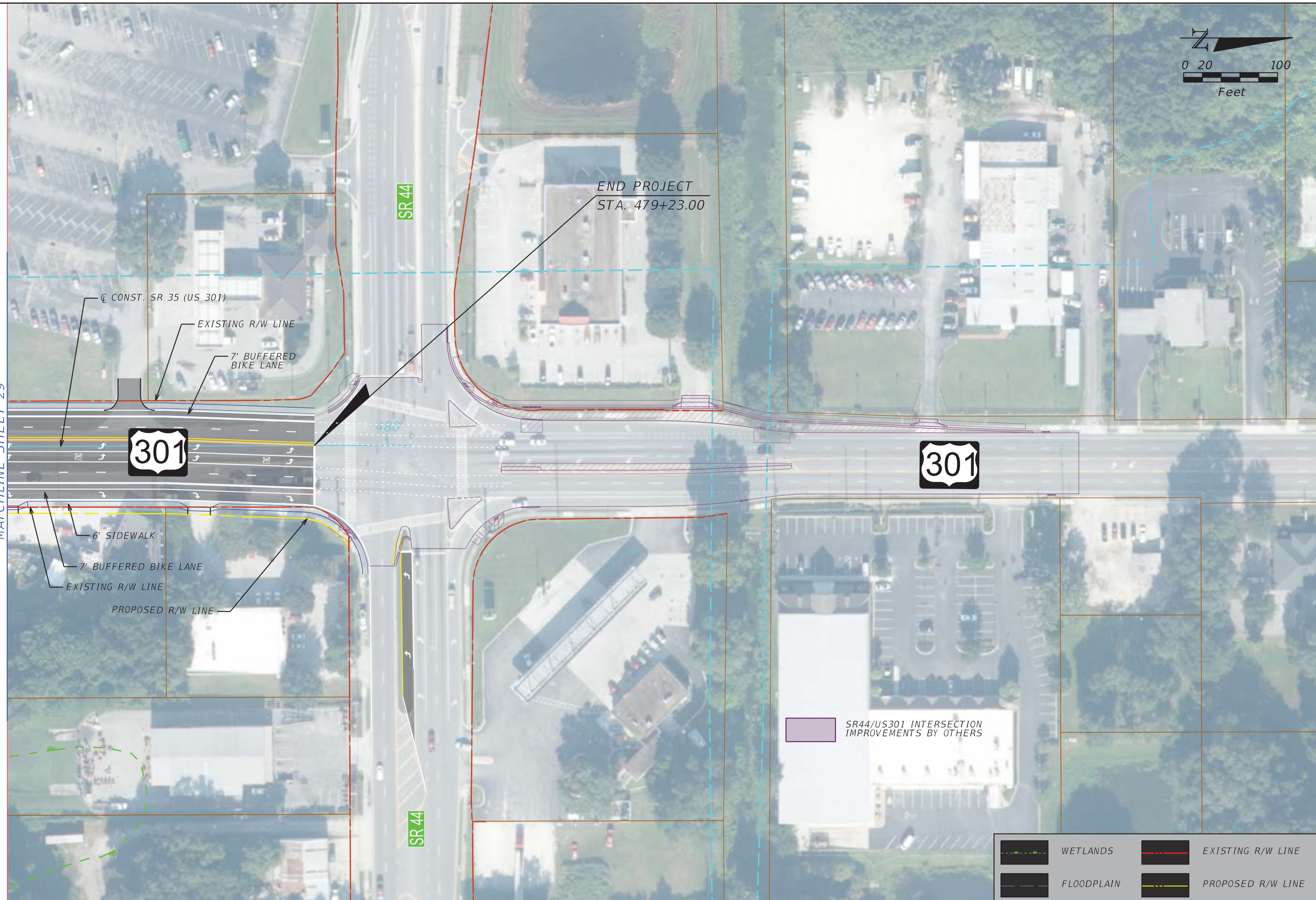

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-22-01

US 301 PD&E STUDY
PREFERRED ALTERNATIVE

SHEET NO.
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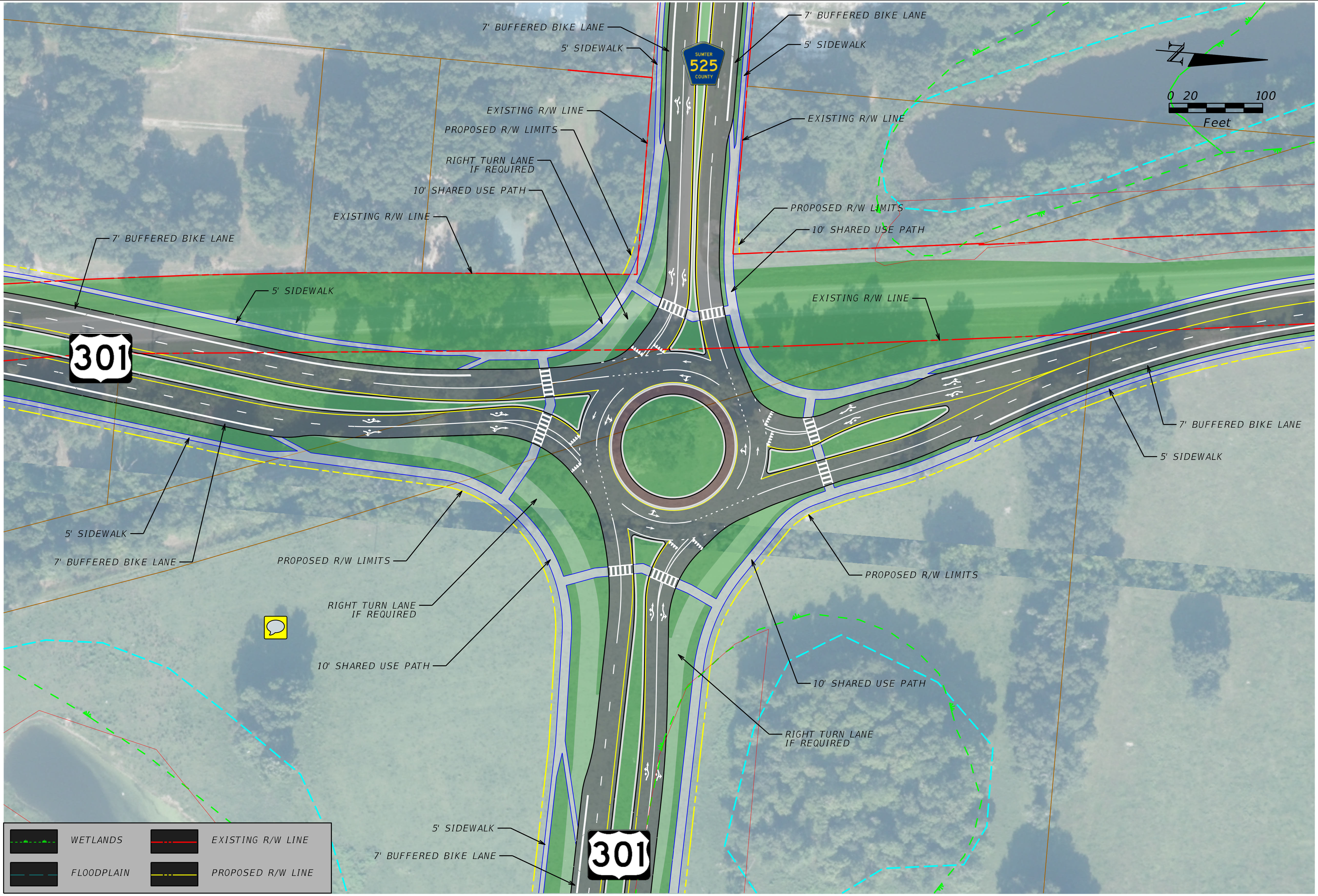

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 REALIGNMENT
CR 525 E INTERSECTION

SHEET NO. 31

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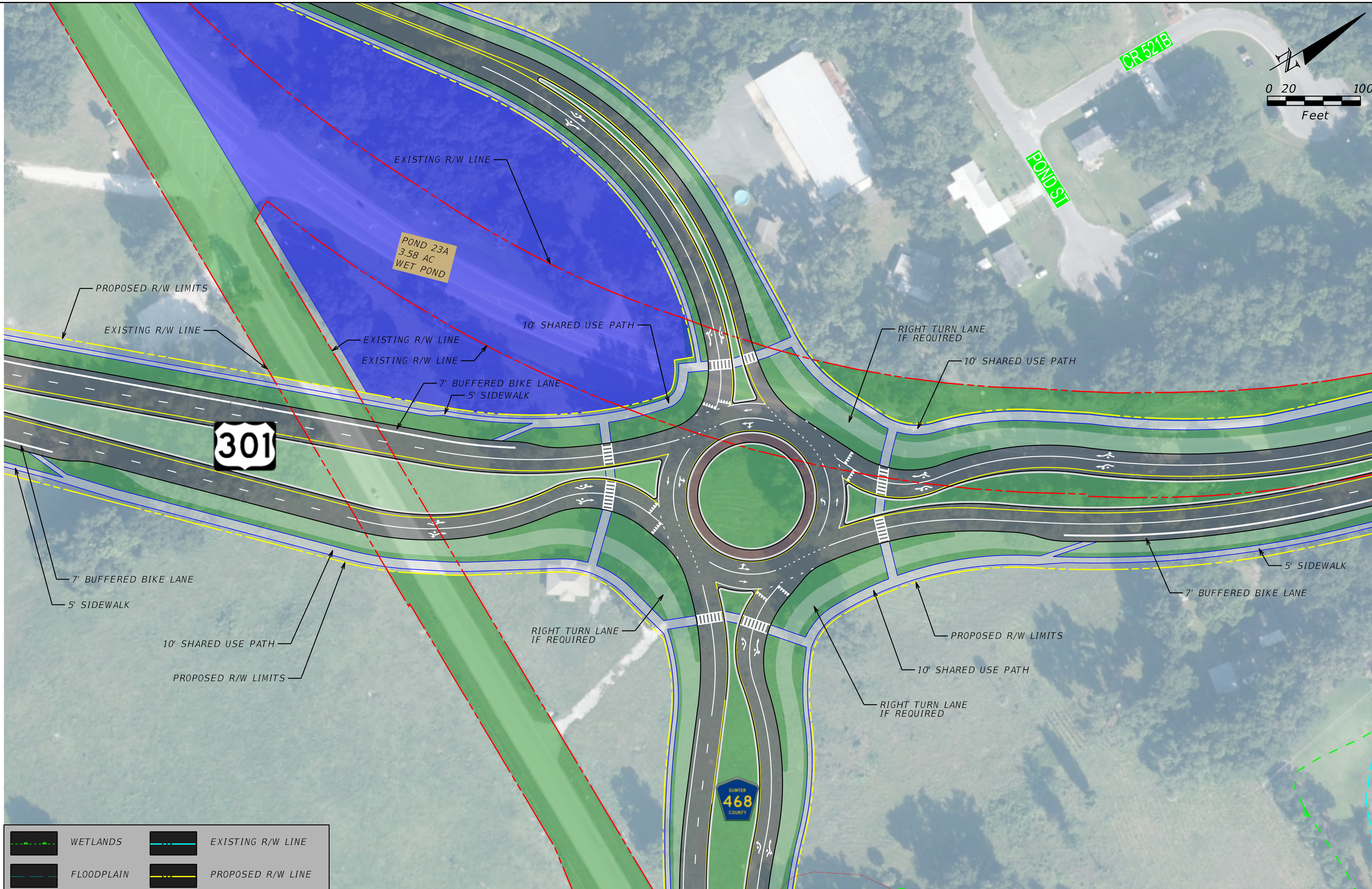


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 35	SUMTER	430132-1-52-01

US 301 REALIGNMENT
CR 468 INTERSECTION

SHEET NO.
32

APPENDIX C

Property Owner Data

PIN	OWNER NAME	OWNER ADDRESS	OWNER CITY	OWNER STATE	ACRES PARENT TRACT
J12-009	470 LAND, LLC	2915 MARION COUNTY RD	WEIRSDALE	FL	21.40
J12-017	CENTER HILL LLC	355 N US HIGHWAY 301	SUMTERVILLE	FL	27.09
J12-015	MASON SARAH H	PO BOX 53	COLEMAN	FL	13.28
J12-012	HALL JUDITH A	603 N US HIGHWAY 301	SUMTERVILLE	FL	9.82
J12-021	DOWLING MARY WRIGHT	13525 MARIA DR	HUDSON	FL	37.87
J12-007	HALL JUDITH	603 N US 301	SUMTERVILLE	FL	2.03
J12-014	FERNANDO JEFFREY R & BARBARA J	11920 NE 10TH AVE	BISCAYNE PARK	FL	1.38
J12-020	STEWART DIANE R	135 15TH AVE N	ST PETERSBURG	FL	14.25
J12-022	STEWART ROBERT D & DIANE R	16830 JAGUAR AVE	LAKEVILLE	MN	5.71
J12-018	REISCHMANN MICHAEL & DEBORAH	1895 IRMA RD	EUSTIS	FL	5.27
J12-019	REISCHMANN DEBORAH R TRUSTEE	1895 IRMA RD	EUSTIS	FL	7.33
J12-004	REVELS ALICE M	5265 VENETIAN BLVD NE	ST PETERSBURG	FL	14.51
J01-027	WILLIAMS KENNETH A & CYNTHIA L	440 CR 416S	LAKE PANASOFFKEE	FL	1.54
J01-068	YARBROUGH CHRISTOPHER & AMANDA	2867 CR 546A	BUSHNELL	FL	1.24
J01-024	FONTANEZ FELIX	9181 SE HWY C-42	SUMMERFIELD	FL	1.28
J01-021	TAQUERAL CORP	1196 N US 301	SUMTERVILLE	FL	48.29
J01-052	MITCHELL BIRDIE	1368 N US HIGHWAY 301	SUMTERVILLE	FL	8.75
J01-022	PATTERSON CHARLIE VAN & PAMELA	5421 MAGNOLIA RIDGE RD	FRUITLAND PARK	FL	8.02
J01-056	CROZIER TERRY W & MARLA K	1382 N US 301	SUMTERVILLE	FL	3.42
J01-055	CAMPBELL JEANETTE	1456 N US 301	SUMTERVILLE	FL	1.46
J01-028	COTTRELL TERRY A & GAIL LEA	PO BOX 434	SUMTERVILLE	FL	2.71
J01-018	LABARR LOIS M TRUSTEE	C/O RICHARD LABARR	SORRENTO	FL	1.65
J01-008	LABARR LOIS	32226 AVINGTON RD	SORRENTO	FL	1.31
J01-005	BURLESON ANDREW & KATHLEEN	1816 NE 16TH AVE	SUMTERVILLE	FL	22.99
J01-031	NORTHUP LEONARD JR & MARY HELE	1988 N US 301	SUMTERVILLE	FL	13.91
F36-053	GREEN PHYLLIS 1/2 INT & GREGOR	2031 N US 301	SUMTERVILLE	FL	1.68
F36-048	NORTHUP LEONARD JR	1988 N US 301	SUMTERVILLE	FL	7.59
F36-052	GRIFFIN MALCOLM H & LESLIE D	13228 CORKWOOD LN	ASTATULA	FL	1.34
F36-051	COLLEY PAUL F & MARIE ROGERS (	2099 N US HIGHWAY 301	SUMTERVILLE	FL	0.50
F36-050	BURNS THOMAS H & SANDRA	6527 CR 154B	WILDWOOD	FL	0.40
F36-049	STATE: STATE OF FLORIDA DEPT O	719 S WOODLAND BLVD	DELAND	FL	0.41
F36-047	NORTHUP LEONARD JR & ERIC LEON	1988 N US 301	SUMTERVILLE	FL	1.10
F36-045	NORTHUP LEONARD JR & LEONARD E	1988 N US 301	SUMTERVILLE	FL	1.15
F35RR001	SAL RR CO. % TAX DEPT FAMILY L	500 WATER ST RM 1208	JACKSONVILLE	FL	3.02

PIN	OWNER NAME	OWNER ADDRESS	OWNER CITY	OWNER STATE	ACRES PARENT TRACT
F36-054	PINKSTAFF K RAY TRUSTEE	PO BOX 31408	KNOXVILLE	TN	33.71
F36-086	CARTER DARYL M TRUSTEE	PO BOX 568821	ORLANDO	FL	60.90
F36-059	BIGHAM MARY AZALEE	PO BOX 154	COLEMAN	FL	111.63
F36-009	HILL B H & ROBERT D & SHARON L	3820 E CR 466	OXFORD	FL	60.00
F36-002	STREET APRIL L	2769 CR 523	WILDWOOD	FL	35.32
G31-027	VEIT JOAN M ESTATE OF	PO BOX 1945	WILDWOOD	FL	7.71
G31-004	CHURCH: TRINITY BAPTIST	OF WILDWOOD INC	WILDWOOD	FL	19.60
G30-030	WILDWOOD SPRINGS, LLC	5850 T.G. LEE BLVD	ORLANDO	FL	6.46
G30-035	BIGHAM PROPERTIES LLC	1104 S 8TH ST	LEESBURG	FL	0.32
G30-034	GRAHAM WILLIAM B & DONNA	PO BOX 25	COLEMAN	FL	0.47
G30-057	GRAHAM WILLIAM B & DONNA	PO BOX 25	COLEMAN	FL	9.59
G30-090	GRAHAM WILLIAM B & DONNA M	PO BOX 25	COLEMAN	FL	4.98
G30-009	CHILDERS RICHARD D & SHELIA A	PO BOX 1180	WILDWOOD	FL	39.95
G30-081	WATTS UP LLC	3637 US HWY 301	WILDWOOD	FL	2.01
G30-008	HACKER FREDERICK HENRY & KIMBE	PO BOX 208	SUMTERVILLE	FL	2.75
G30-007	JONES PERRY A & BERTHA G & COR	3509 N US HIGHWAY 301	WILDWOOD	FL	1.34
G30-078	WATTS PHILLIP DALE	PO BOX 68	WILDWOOD	FL	4.12
G30-005	WATTS P DALE	PO BOX 68	WILDWOOD	FL	9.45
G30-070	WATTS PHILLIP D JR	1199 E CR 466	OXFORD	FL	2.15
G30-004	NOELL ANNIE M	3731 N US 301	WILDWOOD	FL	7.35
G30-125	COLE CYNTHIA DARLENE	3528 NE 37TH RD	WILDWOOD	FL	0.77
G30-139	SUGGS CYNTHIA DENISE	3528 NE 37TH RD	WILDWOOD	FL	0.77
G30-003	LANIER MARVIN	3865 N US 301	WILDWOOD	FL	0.77
G30-002	LANIER MARVIN	3865 N US HWY 301	WILDWOOD	FL	0.36
G30-126	COLE DENNIS W	3987 N US 301	WILDWOOD	FL	1.26
G19-007	WARFIELD MARY ANN ETAL	4051 N US 301	WILDWOOD	FL	4.84
G19-012	BRINDAC ANTHONY F & DIANE A	4069 N US HIGHWAY 301	WILDWOOD	FL	1.52
G19-006	COLE VERNON V,MARY C SANDERS,	2274 CR 505	WILDWOOD	FL	4.69
G19-023	LEGGETT KATHY	3539 NE 41ST LN	WILDWOOD	FL	0.99
G19-022	COLE VIRGIL	5144 CR 125	WILDWOOD	FL	6.00
G19-001	HICKMAN ANDRE FRANCOIS & HAROL	PO BOX 1618	MAITLAND	FL	233.17
G19-004	FARKUS DEBORAH TRUSTEE	PO BOX 1032	WILDWOOD	FL	5.28
G18-008	HICKMAN ANDRE FRANCOIS & MILLE	PO BOX 1618	MAITLAND	FL	107.57

PIN	OWNER NAME	OWNER ADDRESS	OWNER CITY	OWNER STATE	ACRES PARENT TRACT
F36-058	FARKUS DEBORAH TRUSTEE	PO BOX 1032	WILDWOOD	FL	5.28
F36-062	SAL RR CO. % TAX DEPT FAMILY L	500 WATER ST RM 1208	JACKSONVILLE	FL	28.91
J01-067	SHROCK SHERRIE	881 N US HWY 301	SUMTERVILLE	FL	4.98
J01-011	ALDERMAN BRUCE J & BORGA	1105 N US 301	SUMTERVILLE	FL	13.42
J01-006	HOLKO DONALD E OR JANE	720 SCENIC ST	LEESBURG	FL	11.16
G31-040	LEE CAPITAL LIMITED PARTNERSHI	1403 E SR 44	WILDWOOD	FL	0.22
G30-036	TOLSON JOHN F & CATHLEEN	2635 CR 523	WILDWOOD	FL	23.26
G19-002	FARKUS WILLIAM D & DEBBIE	PO BOX 507	WILDWOOD	FL	45.42
G18-052	U JOINT ACQUISITIONS, LLC	CSX TAX DEPT	JACKSONVILLE	FL	157.48
G30-033	HICKMAN ANDRE FRANCOIS & MILLE	PO BOX 1618	MAITLAND	FL	182.98
G30-031	FARLEY LINDA & JUDE REBECCA (J	84 FARLEY LN	MCCARR	KY	5.59
F36-001	Existing ROW				0.00
G31-020	HILL B H & ROBERT D & SHARON L	3820 E CR 466	OXFORD	FL	9.81
G31-003	TOLSON JOHN JR & CATHLEEN	2635 CR 523	WILDWOOD	FL	15.00
G07-057	RP FENNEY LLC	5850 TG LEE BLVD STE 200	ORLANDO	FL	197.49
G07-114	RSS GSMS 2012CJ9-FL SCP	790 NW 107 AVE STE 400	MIAMI	FL	32.47
G07-077	MCCORMIC DANIEL C	4923 CR 306A	LAKE PANASOFFKEE	FL	3.80
G07-078	NOELL ANNA MARIE	3731 N US HIGHWAY 301	WILDWOOD	FL	0.58
G07-109	STRICKLAND PATRICIA A	PO BOX 1683	WILDWOOD	FL	1.28
G30-092	ADVANCE STORES CO INC #9153	PO BOX 2710	ROANOKE	VA	0.90
G30-054	MAHAN SUE	12100 E WARM SPRINGS AVE	WILDWOOD	FL	1.00
J01-066	ANDERSON RICHARD W JR & LAURIE	3086 N US HIGHWAY 301	WILDWOOD	FL	0.95

APPENDIX D

Wetlands & Surface Waters

4.0 Wetland and Surface Water Features

The jurisdictional extent of wetland and other surface water systems within the study corridor was approximated through the review of aerial photography, National Wetland Inventory (NWI) data, U.S. Geological Survey Topographic Maps (**Figure 3**), Soils Maps (**Figure 4**), Land Use Maps (**Figure 5**), and ground-truthing activities. All figures can be found in the Attachments Section of the report. The wetland limits were identified in general accordance with the United States Army Corps of Engineers' (USACE) Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (November 2010) and the state of Florida's Delineation of the Landward Extent of Wetlands and Surface Waters (Chapter 62-340, Florida Administrative Code). In the event wetland boundaries differed between the two methods, the more landward extent was used to define that particular wetland system's boundary.

Each system observed was classified using the Southwest Florida Water Management District (SWFWMD) Florida Land Use, Cover Classification System (FLUCCS, FDOT, 1999) and further categorized using the Classification of Wetlands and Deepwater Habitats of the United States, (Cowardin, et. al., 1979) as adopted by the USFWS and the NWI. Photographic documentation was used to capture the current condition of each wetland system and Uniform Mitigation Assessment Method (UMAM, Chapter 62-345 F.A.C.) was used to quantify each system's condition.

Wetland communities found within the US 301 corridor study area consists of cypress wetlands, stream and lake swamps, forested mixed wetlands, freshwater marshes, wet prairies, emergent herbaceous wetlands and ditches, which are protected under Executive Order 11990: Protection of Wetlands. The ecosystem structure of the wetland communities and the corresponding wetlands identified within the project corridor are described below and presented in **Figure 6**. Photographs of identified wetland communities can be found in Appendix A.

Within the project corridor the wetland habitat is bordered by agricultural lands, large lot residential, commercial and industrial developments, and pastures. The indications of wildlife utilization include use by avian species including black vulture (*Coragyps atratus*), pileated woodpecker (*Dryocopus pileatus*), sandhill cranes, small and medium-sized mammals including deer (*Odocoileus virginianus*), wild boar (*Sus scrofa*), coyotes (*Canis latrans*), raccoon (*Procyon lotor*) and opossum (*Didelphis virginiana*), and herpetofauna.

The table **(Table 5)** below is a brief depiction of the wetlands and surface waters found within the US 301 corridor, including their FLUCCS code, size and UMAM functional value. The location of each wetland or surface water impacts are depicted on **Figure 6**.

Table 5 | Summary of Wetlands and UMAM Assessment

Wetland ID No.	FLUCCS	NWI Code	Impact (acres)	Impact Delta	Functional Loss
WL-1	615	PFO6	0.87	0.77	0.67
WL-2	615	PFO6	0.47	0.77	0.36
WL-3	630	PFO6	0.45	0.77	0.35
WL-6	615	PFO6	0.22	0.77	0.17
WL-7	615	PFO6	0.50	0.77	0.39
WL-7A	643	PEM1	0.07	0.63	0.04
WL-9	615	PFO6	1.67	0.77	1.29
WL-9A	615	PFO6	0.14	0.77	0.11
WL-11	641	PEM2	0.24	0.63	0.15
WL-12	641	PEM2	0.31	0.63	0.20
WL-13	615	PFO6	0.12	0.77	0.09
WL-14	615	PFO6	0.25	0.77	0.19
WL-21	641	PEM2	0.28	0.63	0.18
WL-22	615	PFO6	0.49	0.77	0.38
WL-23	630	PFO6	0.47	0.77	0.36
WL-25	630	PFO6	0.41	0.77	0.31
WL-26	630	PFO6	0.06	0.77	0.04
SW-1	530	L2EM2	0.09	-	-
TOTALS			**7.11**		**5.28**

Wetland 1

Wetland 1 (WL-1) is located at the named creek, Shady Brook, and consists of a large stream and lake swamp associated with the creek. The forested wetland canopy contains red maple, live oak, water hickory, and sweetgum. Groundcover is sparse consisting of saw palmetto, grapevine, and cabbage palm. Soils are sandy and saturated with no standing water.

Surrounding land uses include pastures and agricultural lands to the east and public lands owned by the SWFWMD to the west. Wetland functions include water storage, water conveyance, and vegetative cover for denning and foraging habitat for wetland dependent species.

Wetland 2

Wetland 2 (WL-2) is north of and contiguous to WL-1. The forested wetland canopy contains red maple, live oak, water hickory, and sweetgum. Groundcover is sparse consisting of saw palmetto, grapevine, and cabbage palm. Soils are sandy and saturated but with no standing water.

Surrounding land uses include pastures and agricultural lands to the east and public lands owned by the SWFWMD to the west. Wetland functions include water storage, water conveyance, and vegetative cover for denning and foraging habitat for wetland dependent species.

Wetland 3

Wetland 3 (WL-3) is located approximately 500 feet east of US 301 and CR 525 East intersection. The wetland canopy consists mainly of water tupelo (*Nyssa aquatic*). Ground cover is very sparse due to grazing by cattle. The wetland is connected to other wetland areas via a small swale that is seasonally inundated. Soils are sandy with no standing water observed during the field review, but staining on trees indicated that standing water is present during the wet season.

The surrounding land use is pasture. Wetland functions include water storage and foraging areas for wetland dependent species.

Wetland 6

Wetland 6 (WL-6) is located on the north side of CR 468, just east of the intersection with US 301. The wetland canopy consists mainly of water tupelo with a very sparse groundcover of pasture grasses. Soils are sandy and no standing water observed during the field visit, but staining on trees indicated that standing water is present during the wet season.

The surrounding land use is pasture. Wetland functions include water storage and foraging areas for wetland dependent species.

Wetland 7

Wetland 7 (WL-7) is located east side of US 301 north of NE 41st Lane. The wetland is a freshwater marsh with scattered red maple and laurel oak along the outer edges and spikerush (*Eleocharis* spp.), chalky blue stem (*Andropogon capillipes*), and pickerelweed (*Pontederia cordata*) in the lower areas of the marsh. The wetland appears to be mowed on a regular basis.

The surrounding land use is pasture. Wetland functions include water storage and foraging areas for wetland dependent species.

Wetland 7A

Wetland 7A (WL-7A) is located on the west side of US 301 across from WL-7. The wetland is a freshwater marsh with scattered red maple and laurel oak along the outer edges and spike rush, chalky blue stem, and pickerelweed in the lower areas of the marsh. The wetland appears to be mowed on a regular basis. Soils are sandy and standing water was observed during the field reviews.

The surrounding land use is pasture. Wetland functions include water storage and foraging areas for wetland dependent species.

Wetland 9

Wetland 9 (WL-9) is located on the east side of US 301 south of the electrical transmission easement. This forested wetland contains a mix of red maple, sweetgum, slash pine, laurel oak, and water hickory. Soils are sandy and saturated but with no standing water.

Surrounding land uses include upland hardwood and conifer forest. Wetland functions include water storage, foraging and denning for wetland dependent species, and water conveyance.

Wetland 9A

Wetland 9A (WL-9A) is located on the west side of US 301 south of the electrical transmission easement. This forested wetland contains a mix of red maple, sweetgum, slash pine, laurel oak, and water hickory. Soils are sandy and saturated but with no standing water.

Surrounding land uses include upland hardwood and conifer forest. Wetland functions include water storage, foraging and denning for wetland dependent species, and water conveyance.

Wetland 11

Wetland 11 (WL-11) is located on the east side of US 301 approximately 500 feet south of the Florida's Turnpike. This isolated freshwater marsh contains pickerelweed, spike rush and Carolina willow along the outer edge of the wetland. The marsh appears to be isolated from other marshes in the immediate vicinity. Soils are sandy and standing water was observed during the field reviews.

Surrounding land uses include pastures. Wetland functions include water storage, foraging areas for wading birds, and stormwater conveyance.

Wetland 12

Wetland 12 (WL-12) is located on the west side of US 301 across from WL-11. This large freshwater marsh contains cattail (*Typha* spp.), Carolina willow, salt bush (*Baccharis halimifolia*), pickerelweed, wax myrtle (*Myrica cerifera*), chalky bluestem, and cabbage palm. Soils are sandy and standing water was observed during the field reviews. The wetland appears to be connected to a larger forested system that drains north towards the Florida Turnpike.

Surrounding land uses include upland shrub and brush lands. Wetland functions include water storage, foraging areas for wading birds, and stormwater conveyance.

Wetland 13

Wetland 13 (WL-13) is located on the east side of US 301 just south of the Florida's Turnpike. This forested area consists of red maple, sweetgum, slash pine, laurel oak and saw palmetto. Soils are sandy and saturated but with no standing water. The wetland is connected to a larger system to the west via a culvert under US 301.

Surrounding land uses include pastures. Wetland functions include water storage, foraging areas for wading birds, and stormwater conveyance.

Wetland 14

Wetland 14 (WL-14) is located on the west side of US 301 just south of Florida Turnpike. The wetland contains both marsh and forested components. The vegetation is consistent with WL-13, however there is a section of the wetland that was previously cleared and has started to regenerate. Soils are sandy and saturated but with no standing water.

Surrounding land use includes upland forests that were cleared but have been left to regenerate. Wetland functions include water storage, foraging areas for wading birds, and stormwater conveyance.

Wetland 21

Wetland 21 (WL-21) is located within Pond 5A. This freshwater marsh is seasonally inundated and heavily grazed by cattle. Vegetation is very limited with various pasture grasses along the perimeter. Soils are sandy and saturated but with no standing water observed during the field review.

Surrounding land use is pastures. Wetland functions include water storage and foraging habitat for wading birds.

Wetland 22

Wetland 22 (WL-22) is located within FPC5. The pond site includes three areas of forested wetlands that extend off-site to the east. The forested wetlands contain a mix of red maple, sweetgum, slash pine, laurel oak, and water hickory. Soils are sandy and saturated but with no standing water.

Surrounding land uses include upland hardwood and conifer forest. Wetland functions include water storage, foraging and denning for wetland dependent species, and water conveyance.

Wetland 23

Wetland 23 (WL-23) is located within Pond 17B. The wetland appears to be connected to wetlands south of the Florida's Turnpike. The pond site is a forested mix of red maple, sweetgum, laurel oak, water hickory and saw palmetto. Soils are sandy and saturated but with no standing water.

Surrounding land use is pastures. Wetland functions include water storage and foraging habitat for wading birds.

Wetland 25

Wetland 25 (WL-25) is located east side of US 301 north of NE 41st Lane. The wetland is a hardwood forest with red maple, sweetgum and laurel oak. Groundcover is sparse consisting of saw palmetto, grapevine, and cabbage palm. Soils are sandy and saturated but with no standing water.

The surrounding land use is pasture. Wetland functions include water storage and foraging areas for wetland dependent species.

Wetland 26

Wetland 26 (WL-26) is located approximately 2,400 feet east of US 301 and CR 525 East intersection. Ground cover is very sparse due to grazing by cattle. The onsite portion of this wetland consists of a swale that is seasonally inundated. Soils are sandy with no standing water observed during the field review, but staining on vegetation indicated that standing water is present during the wet season.

The surrounding land use is pasture. Wetland functions include water storage and foraging areas for wetland dependent species.

Surface Water 1

Surface Water 1 (SW-1) is a small agricultural pond along the west side of US 301 just south of NE 19th Way. Standing water was present during the field review and maintenance trimming/mowing was evident in the pond.

Surrounding land uses include pastures to the south and peach (*Prunus persica*) orchards to the north. Wetland functions include water storage, water conveyance, and foraging habitat for wading birds.

4.1 Assessment of Potential Impacts

Avoidance and Minimization Strategies (Quality Enhancement Strategies)

The avoidance and minimization of wetland impacts during the PD&E phase of the project include the study of multiple widening options within the five segments of existing roadway, three alignment options within the segment of new right-of-way associated with the realignment, and multiple alternatives for each proposed pond site; for which the full alternative analysis can be found in the Alternatives section of the PER.

The recommended alignment for widening of each segment is described as follows:

- Segment 1 will be widened to the right of the existing roadway and will require approximately 3.2 acres of new right of way. No wetland impacts are anticipated in this segment of the corridor.
- Segment 2 will be widened to the left of the existing roadway and will require 26.6 acres of new right of way. Segment 2 will impact 0.5 acres of wetlands associated with Shady Brook. Since Shady Brook crosses the corridor alignment, the impacts are unavoidable for all widening options. However, clearing of wetlands would be required for construction and long-term shading impacts will occur from the bridge.

APPENDIX E

Preliminary Widening Assessment

PRELIMINARY WIDENING ASSESSMENT MATRIX

One of the first steps in identifying alternatives is analyzing potential impacts if the corridor were widened entirely to the left or right side of the existing roadway. Below you will find a preliminary assessment of potential impacts, summarized by Study Segment. For additional information, including visual representations of each segment, please visit us on the web at www.us301sumter.com.

Evaluation Criteria	Segment 1		Segment 2		Segment 3		Segment 4		Segment 5	
	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right
Social & Economic										
Land Use Changes	High	High	Medium	Medium	High	High	Medium	Medium	Low	Low
Community Cohesion	Medium	Medium	Medium	Low	High	High	Medium	Medium	Low	Low
Potential Relocations (Parcel/Building Impacts)	3/0	4/1	27/4	37/6	62/34	40/18	42/10	37/5	TBD	TBD
Community Facilities	0	0	1	1	1	2	0	1	0	0
Potential Environmental Justice Impacts	Low	Low	Low	Low	Medium	Medium	Low	Low	Low	Low
Controversy Potential	Low	Low	Low	Low	High	High	Low	Low	TBD	TBD
Scenic Highways	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Involvement with Farmlands	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
Cultural										
Section 4(f)	0	0	0	1	0	0	0	0	0	0
Historic Sites/Districts	0	0	0	0	16	11	0	0	0	0
Archaeological Sites	1	1	0	0	0	0	0	0	0	0
Recreation Areas	No	No	No	Yes	No	No	No	No	No	No
Natural										
Wetlands Impacts (Acres)	0	0	0.5	0.4	0.1	0.1	2.3	3.8	TBD	TBD
Water Quality	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Outstanding FL Waters	0	0	1	1	0	0	0	0	0	0
Floodplains Impacts (Acres)	0	0	0.4	0.6	0	0.3	8.8	8.7	TBD	TBD
Wildlife and Habitat	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Physical										
Noise Sensitive Sites	2	2	36	39	122	115	35	32	TBD	TBD
Air Quality	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Constructability Issues	Low	Low	Low	Low	Medium	Medium	Low	Low	Low	Low
Contamination (Potential Sites)	1	1	1	1	6	10	7	6	5	10
Aesthetic Impacts	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Bike and Pedestrian Accommodation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Utilities and Railroads Involvement	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

September 20, 2016

Preliminary Widening Comparison – Board 1

LEGEND

Existing Right-of-Way Line	Floodplain Boundary
Potential Right Side Widening Right-of-Way Limit	Parcel Lines
Potential Left Side Widening Right-of-Way Limit	Wetlands Boundary
Segment Boundary	Existing Traffic Signal

NOTES

All right-of-way needs are preliminary and are subject to change. Right-of-way needed for stormwater ponds and drainage has yet to be determined and is not shown.

Preliminary Widening Comparison – Board 2

LEGEND

Existing Right-of-Way Line	Floodplain Boundary
Potential Right Side Widening Right-of-Way Limit	Parcel Lines
Potential Left Side Widening Right-of-Way Limit	Wetlands Boundary
Segment Boundary	Existing Traffic Signal

NOTES

All right-of-way needs are preliminary and are subject to change. Right-of-way needed for stormwater ponds and drainage has yet to be determined and is not shown.

Preliminary Widening Comparison – Board 3

LEGEND

- Existing Right-of-Way Line
- Potential Right Side Widening Right-of-Way Limit
- Potential Left Side Widening Right-of-Way Limit
- Floodplain Boundary
- Parcel Lines
- Wetlands Boundary
- New CR 468 Roadway Alignment
- Segment Boundary
- Traffic Signal

NOTES

All right-of-way needs are preliminary and are subject to change. Right-of-way needed for stormwater ponds and drainage has yet to be determined and is not shown.

Preliminary Widening Comparison – Board 4

LEGEND

- Existing Right-of-Way Line
- Potential Right Side Widening Right-of-Way Limit
- Potential Left Side Widening Right-of-Way Limit
- Floodplain Boundary
- Parcel Lines
- Wetlands Boundary
- Segment Boundary
- Existing Traffic Signal

NOTES

All right-of-way needs are preliminary and are subject to change. Right-of-way needed for stormwater ponds and drainage has yet to be determined and is not shown.

Preliminary Widening Comparison – Board 5

LEGEND

- Existing Right-of-Way Line
- Potential Right Side Widening Right-of-Way Limit
- Potential Left Side Widening Right-of-Way Limit
- Floodplain Boundary
- Parcel Lines
- Wetlands Boundary
- Segment Boundary
- Existing Traffic Signal

NOTES

1. Interchange Alternatives are being developed. Right-of-way requirements in the vicinity of the interchange have yet to be be determined.

All right-of-way needs are preliminary and are subject to change. Right-of-way needed for stormwater ponds and drainage has yet to be determined and is not shown.

APPENDIX F

US 301 Realignment (Truck Route) Analysis

Florida Department of Transportation

US 301 (SR 35) PD&E Study

US 301 Realignment (Truck Route)
Technical Memorandum

FDOT Office
District Five

Authors
HDR

Date of Publication
May 2017

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

1.0 Introduction

1.1 Purpose of this Memorandum

The purpose of this memorandum is to: (1) document the various realignment (truck route) alternatives evaluated by the project team; (2) summarize public and stakeholder input regarding the various alignment alternatives; and (3) discuss the process and criteria used to identify a realignment alternative recommended for further detailed analysis.

1.2 Project Description

FDOT is conducting a Project Development and Environment (PD&E) study for an approximately 8.0 mile portion of US 301 between CR 470 East and SR 44 in Sumter County. Within these limits, US 301 travels through the cities of Coleman and Wildwood, and also overlaps State Road 35. While mostly a north-south route, US 301 travels in an east-west direction through the City of Coleman where it has the local road name Warm Springs Avenue. The Florida's Turnpike (SR 91) crosses US 301 with an interchange to the south of the northern project limit, and I-75 runs parallel to the study corridor on the west of US 301 through Sumter County.

The PD&E study will analyze design alternatives that widen US 301; improve the US 301 interchange at Florida's Turnpike; and consider a new corridor for US 301 south of the City of Coleman. The improvements will seek to provide additional capacity for future traffic growth. US 301 is projected to carry more than 14,000 vehicles per day by 2022 and increase to more than 24,000 per day by 2042. Based on existing 2014 conditions analysis, US 301 carried up to 9,600 vehicles per day on a 2-lane segment south of the Turnpike operating with a Level of Service of D.

Within the project limits, US 301 begins as a two-lane undivided roadway at CR 470 East with turn lanes at some intersections; makes a sharp 90° turn through the City of Coleman (Warm Springs Avenue) and then curves to the north at CR 468. It then continues north as an undivided roadway until it reaches the Florida's Turnpike interchange where a median is added. North of the interchange the roadway is a four-lane divided, rural typical section facility. It has a short urban curb and gutter section approaching SR 44.

The purpose of this project is to increase the capacity of US 301, to respond to future travel demand from the intersection of CR 470 East, north through the City of Coleman to SR 44 in the City of Wildwood. The project will also improve safety and provide multi-modal facilities for pedestrian and bicyclists, and evaluate improvements to the US 301 interchange with the Florida's Turnpike.

This study will evaluate all viable alternatives to widen US 301 on the existing project corridor as well as a potential realignment for US 301 from near CR 525 to CR 468 to minimize potential environmental impacts to the City of Coleman. Figure 1 shows the study corridor and potential realignment (truck route) area.

Figure 1 | Project Location

1.3 Identification of Realignment Area

Prior to the initiation of the PD&E study, FDOT conducted an environmental screening called an Area of Potential Impact analysis for a realignment considering areas north and south of Warm Springs Avenue in the City of Coleman. The analysis is included in **Appendix A** and consisted of using geographic information system mapping of potential resource impacts.

The analysis showed that a realignment north of Warm Springs Avenue would result in a level of impact similar to widening Warm Springs Avenue. The analysis showed far fewer potential impacts for the southern realignment. An example of this was demonstrated by the northern route being projected to impact potentially six times as many parcels as the southern route. The northern realignment also had the potential to impact a substantial number of single family homes, similar to the residential areas along Warm Springs Avenue. Based on this analysis, it was recommended that only a new realignment south of Warm Springs Avenue be investigated further.

2.0 Public Engagement

The public engagement process utilized to develop the recommended realignment corridor was comprised of three primary outreach strategies: 1) Stakeholder meetings, 2) Project Advisory Group meetings, and 3) an Alternatives Public Meeting. As further described below, the level of public engagement has been significant and highly responsive.

2.1 Stakeholder Meetings

The project team reached out to specific stakeholders who had a significant interest in the PD&E or specifically requested a meeting. The following table provides an account for the stakeholder meetings held through April 2017:

Table 1 | Stakeholder Comments

Name	Organization	Date	Summary
Mayor Milton Hill	City of Coleman	02/01/2016	Agreed that a realignment alternative would be a good potential alternative to consider as opposed to widening US 301 through the City of Coleman. Did not offer an opinion on a particular route.
Council President Richard Huff	City of Coleman	02/01/2016	Agreed that a realignment alternative would be a good potential alternative to consider as opposed to widening US 301 through the City of Coleman. Did not offer an opinion on a particular route.
Melanie Peavy	City of Wildwood	02/01/2016	No objection to a realignment alternative other than avoiding significant impact to the Village of Fenney (aka Wildwood Springs).
Dean Barberree	Village of Fenney	02/01/2016	Village of Fenney is starting construction and does not support a realignment alternative that splits the project but is OK with a realignment alternative that simply needs frontage along existing US 301.

Name	Organization	Date	Summary
Bradley Arnold	Sumter County	02/02/2016	Discussion during FDOT partnering meeting. County has no objection to a realignment alternative other than avoiding significant impact to the Village of Fenney.
Pastor Mark Reichard	Trinity Baptist Church	2/17/2016	Pastor Mark Reichard indicated that the preference was for the realignment alternatives to either stay as far from the church buildings as possible or to fully impact the structure so that it would be relocated. This was preferred to alternatives that left it too close to the buildings.
Marra Family	Property Owner	4/11/2016	Met with Mr. & Mrs. Marra to discuss potential realignment alternatives and impacts to their property on US 301. They did not express an opinion on a realignment
Akiko Teagle	City of Coleman	8/12/2016	Met with Ms. Teagle to discuss City's comprehensive plan and related amendments. It was identified that the City's Comprehensive Plan, Policy 1-4, calls for the City to notify the Florida Department of Transportation that the City prefers that capacity improvements to US 301 by-pass the City, and the City's Community Redevelopment Area master plan shows the existing US 301 alignment through the City to be maintained as a two-lane facility with enhancements. No opinion provided on a particular realignment alternative.
Melanie Peavy & Jason McHugh	City of Wildwood	8/24/2016	No objection to potential realignment alternatives other than avoiding significant impact to Village of Fenney.
Gary Moyer & Gary Lester	Developer of the Villages - Purchasing parts of the Village of Fenney	8/24/2016	Met to review potential realignment alternatives. Village of Fenney is starting construction and does not support a realignment alternative that splits the project but is OK with a realignment alternative that simply needs frontage along US 301.
Coleman City Council	City of Coleman	9/12/2016	Presentation by Project Team to City Council of potential realignment alternatives and preliminary widening assessment. City Council expressed concern regarding impacts the realignment alternatives would have on the development potential of "downtown" Coleman (i.e. existing alignment of US 301). City Council expressed a preference for realignment alternatives A or C due to the closer proximity to "downtown" Coleman.
Pastor Mark Reichard	Trinity Baptist Church	9/23/2016 teleconference	Spoke with Pastor Mark Reichard after he had a meeting with church leadership on 9/21/2016 to review potential realignment alternatives. He indicated that the church would work with whichever alternative was selected..
Mayor Milton Hill	City of Coleman	12/13/2016	Continues to support the realignment of US 301 south of the City of Coleman. If the realignment is selected as the final alternative and Warm Springs Avenue is transferred to local jurisdiction, then he desires the corridor to be enhanced with landscaping, street lights, etc. He sees opportunities to redevelop Warm Springs Avenue with a mix of businesses, offices, and residential.

Name	Organization	Date	Summary
Council President Richard Huff	City of Coleman	12/13/2016	Continues to support the realignment of US 301 south of the City of Coleman. If the realignment is selected as the final alternative and Warm Springs Avenue is transferred to local jurisdiction, then he desires the corridor to be enhanced with landscaping, street lights, etc. He sees opportunities to redevelop Warm Springs Avenue with a mix of businesses, offices, and residential.
Bradley Arnold	Sumter County	12/15/2016	Continues to support the realignment of US 301 with alignment "B." As part of an inter-local agreement between the City of Coleman and Sumter County, the County shall provide staff planning services to the city.
Jason McHugh and Melanie Peavey	City of Wildwood	12/15/2016	They do not object to the realignment alternative and understand the methodology for the preferred alignment "B." Primary interests are the potential impacts to the Village of Fenney.
TJ Fish and Michael Woods	Lake~Sumter MPO	12/15/2016	Prefer the US 301 Realignment Alternative and support alignment "B." The PD&E project is consistent with the MPO Long Range Transportation Plan and Transportation Improvement Program.
Pastor Mark Reichard	Trinity Baptist Church	12/15/2016	He and the church community are aware of the potential loss of the building if the realignment is selected. They are not opposed to the realignment and understand the engineering and land planning benefits. The church sees this as a potential opportunity to rebuild a new, larger facility on the remaining property.
Technical Advisory Committee	Lake~Sumter MPO	4/12/2017	The committee discussed the recent announcement of The Villages expansion plans south of SR 44. The Lake~Sumter MPO requested continued coordination with the MPO as the study progresses.
Citizens' Advisory Committee	Lake~Sumter MPO	4/12/2017	The CAC asked a few questions regarding the land uses, historic resources, and impact of the proposed US 301 realignment with the City of Coleman.
Bicycle/ Pedestrian Advisory Committee	Lake~Sumter MPO	4/13/2017	THE BPAC asked questions regarding if a bicycle lane would be provided as a separate facility and not on the actual roadway. The proposed bicycle lane on US 301 is a seven foot buffered bicycle lane.
Pastor Mark Reichard	Trinity Baptist Church	4/17/2017	He stated that the church does not object to the proposed realignment of US 301 that would impact the existing church buildings. Pastor Reichard expressed his appreciation for the level of communication and cooperation with FDOT regarding this project.

Name	Organization	Date	Summary
Gary Lester and Gary Moyer	Village of Fenney	4/17/2017	They confirmed the planned expansions south of SR 44 and the acquisitions of the Southern Oaks Development of Regional Impact (DRI) and the Wade Industrial Park. The planned expansions include approximately 14,000 new homes along CR 468 from SR 44 south to the Village of Fenney. They were supportive of the realignment, and are greatly interested in the timing of the construction of the project.
City of Wildwood	City of Wildwood	4/24/2017	The City Commission did not have any comments or questions regarding the US 301 project.
Governing Board	Lake~Sumter MPO	4/26/2017	The Governing Board did not have any questions or comments regarding the project.
City of Coleman	City of Coleman	4/26/2017	The City Council discussed the need to coordinate with the new future land use map and comprehensive plan under development for the city. The realignment (Alternative 2) is consistent with the draft comprehensive plan and future land use map. Questions regarding the connection of Warm Springs Avenue to the realignment of US 301 were raised, though the meeting consensus was that the realignment of US 301 was preferable to widening along the existing alignment through the city.

The consensus from the stakeholder meetings was for a realignment alternative that minimized the impact to the Village of Fenney while also maintaining the character and integrity of the City of Coleman.

2.2 Project Advisory Group Meetings

To assist the Project Team in the development and assessment of potential realignment alternatives, a Project Advisory Group (PAG) was assembled. The PAG is comprised of property owners and stakeholders that are within the vicinity of the US 301 corridor through Coleman as well as the properties that could be potentially impacted by the proposed realignment alternatives. Two PAG meetings focusing on the potential realignment were held. The first realignment (truck route) focused PAG meeting was on July 9, 2015, and the second realignment focused PAG meeting was held on April 6, 2016. Both PAG meetings were held at the Trinity Baptist Church Fellowship Hall at 3305 C-468, Wildwood, FL 34785.

2.2.1 Project Advisory Group Meeting #1

Forty-five (45) interested parties attended the first PAG meeting on July 9, 2015. The purpose of the meeting was to provide an overview of the US 301 PD&E process and to obtain information regarding their concepts for a potential realignment around the City of Coleman. To facilitate the discussion of identifying the potential realignment alternatives, small groups were given road width and curve templates to place on a map. Each small group developed a conceptual alignment for a realignment.

Generally, the conceptually alignments were consistent with a realignment running south of the existing US 301 alignment near the City of Coleman. The starting and ending points of the different alignments somewhat deviated between the individual maps. Images of the maps generated by the small groups are shown in **Figure 2**.

Figure 2 | Potential Realignments Generated by PAG

The comments received at the first PAG meeting followed four primary themes:

1. Concern about impacts to existing homes and the character of the City of Coleman;
2. Concern about impacts to environmental resources (i.e. wetlands, springs, etc.);
3. Support for a realignment south of the existing US 301 alignment; and
4. Need for coordination with other road projects in the area.

2.2.2 Project Advisory Group Meeting #2

Forty-three (43) interested parties attended the second PAG meeting on April 5, 2016. At the second PAG meeting, the Project Team presented six (6) initial realignment alternatives that were evaluated and considered. The realignment alternatives all considered a right-of-way width of 250 feet in order to allow flexibility for the specific alignment within the corridor. A graphical summary of the six (6) alternatives is shown in **Figure 3**.

Of the six (6) developed realignments, three (3) realignment alternatives were recommended by the study team for further evaluation. The realignments recommended for further study are presented in **Figure 4**.

The Project Team received input from meeting participants regarding the three (3) potential realignments. There was not a clear consensus on a preferred realignment alternative.

Figure 3 | Preliminary Truck Route Alternatives

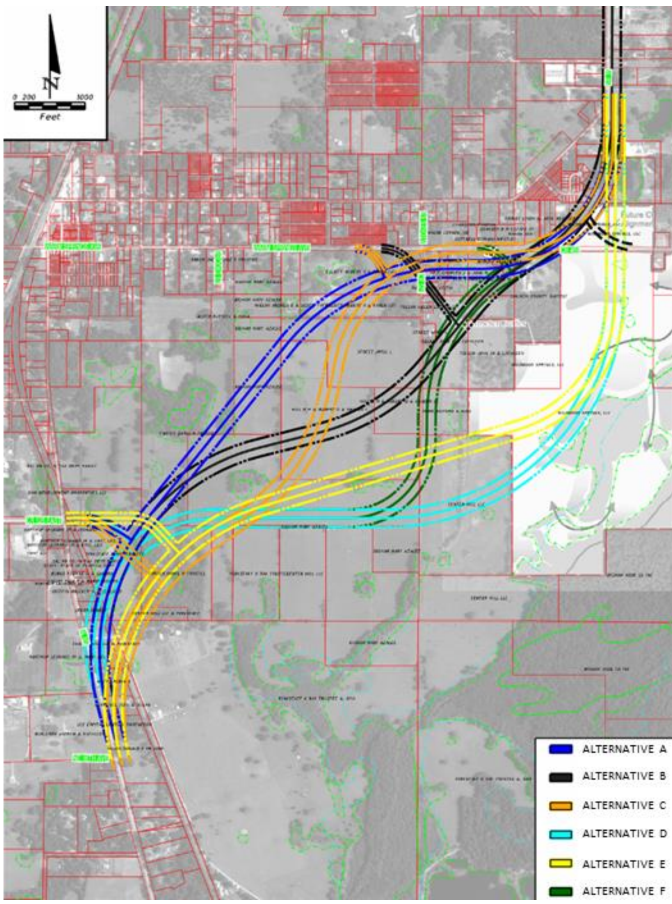
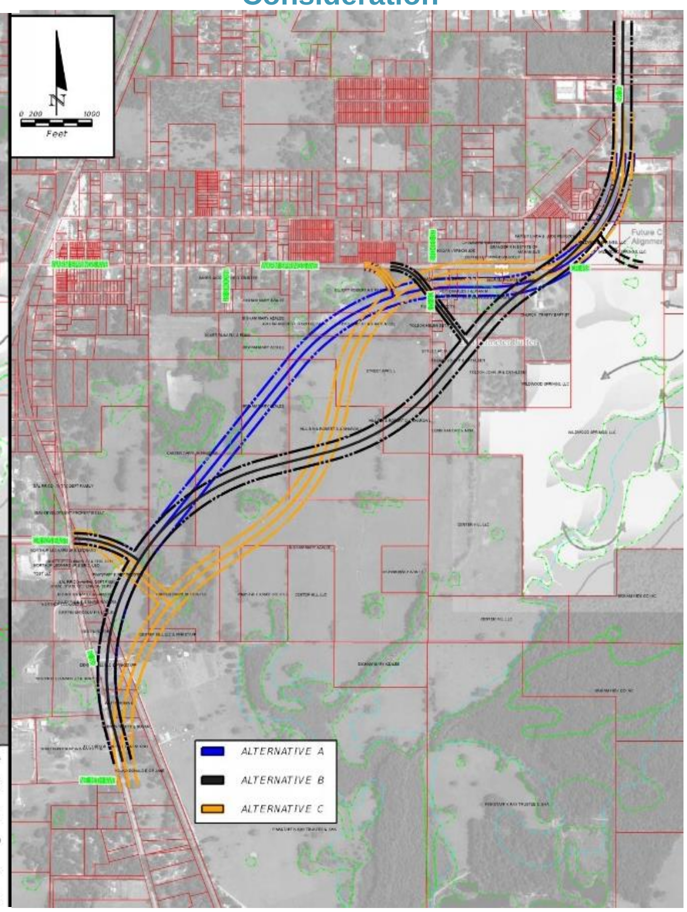


Figure 4 Truck Route Alternatives for Further Consideration

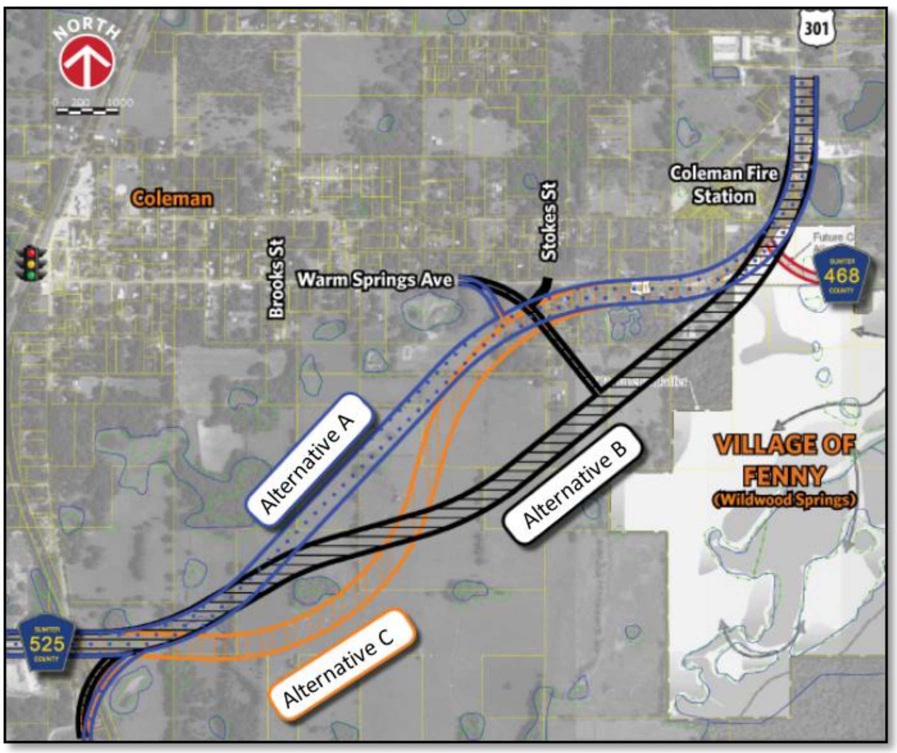


2.3 Alternatives Public Meeting 1

On September 20, 2016, the first Alternatives Public Meeting was held. Notification for the public meeting was mailed to approximately 500 properties within the US 301 project corridor and potential realignment location as well as e-mailed to interested citizens and stakeholders. Notification was also provided to applicable governmental agencies and elected and appointed officials. On September 8, 2016, the public meeting advertisement was published in the Sumter County Times. Additionally, to assure extensive outreach to low-income areas, public notifications were posted or made available at the US Post Office in Coleman, Coleman Community Center, Coleman Enrichment Center, Coleman City Hall, and Coleman City Park.

Ninety (90) interested parties attended the public meeting. The public meeting was organized as an open house with a continuous looping PowerPoint presentation in a separate room. The purpose of the meeting was to present information regarding the three (3) potential realignment alternatives corridors; an evaluation of these corridors; and a preliminary evaluation of left vs. right side widening impacts for the entire project corridor. **Figure 5** shows the three refined potential realignment corridors. The realignment corridors were refined from the previous PAG meetings to incorporate a revised configuration for the proposed intersection at CR 525. The reconfiguration included one four-way "plus" intersection at CR 525. This change was made in order to accommodate a heavier east-west flow of traffic from CR 525 to the US 301 realignment rather than from the existing US 301 south of CR 525 to the proposed realignment. The reconfiguration will facilitate fewer intersections and safer, more direct travel for a greater number of motorists.

Figure 5 | Refined Realignment Alternatives



Regarding the realignment alternatives, the consensus communicated to the Project Team by the public was a preference for both Alternative B and Alternative C. It was also identified that there is concern about potential realignment alternatives or the US 301 mainline widening impacting the Coleman Oaks subdivision community well and septic system located on the west side of US 301, north of the CR 468 intersection.

3.0 Realignment Alternatives

Figure 6 shows the entirety of the Realignment Study Process. The figure demonstrates how the meetings served a key role in development and refinement of the realignment alternatives.

Figure 6 | Realignment Study Process

PAG Meeting #1 focused on defining the realignment area and a discussion of the initial realignment corridors. A total of six (6) realignment options were presented at the second PAG Meeting in April of 2016, and three were recommended for further study. The final three (3) realignment alternatives were further refined before being subjected to final evaluation and analysis. The additional refinement related to minor geometric changes to further avoid impacts to the number of parcels, wetlands, and floodplains while still meeting required design requirements for the horizontal alignment. The ultimate configuration of the three alternatives is shown in **Figure 7** below. These three alternatives, titled Alternative A, B, and C, respectively, all provide viable corridors for vehicular traffic between County Road 525 East and County Road 468. Based upon the analysis completed and the comments from the public and stakeholders, a single realignment is selected as a build alternative for US 301 PD&E Study.

3.1 Alternative A

Alternative A, shown in **Figure 8**, is the most direct route between CR 525 and CR 468. It connects to Warm Springs Avenue prior to reaching CR 468. It includes a northbound slip ramp at CR 525 and an access point to westbound Warm Springs Avenue west of Stokes Street. It follows the existing US 301 alignment around the curve at CR 468.

3.2 Alternative B

Alternative B, shown in **Figure 9**, is a diagonal connection between CR 525 and CR 468. It meets a 55 mph design speed for all typical section. It includes a northbound slip ramp at CR 525 and an access point east of CR 523 that allows for connections northbound to Stokes Street and westbound to Warm Springs Avenue. The primary corridor does not connect to Warm Springs Avenue, instead realigning with US 301 near the proposed terminus of CR 468.

3.3 Alternative C

Alternative C, shown in **Figure 10**, is a predominantly north-south connection between CR 525 and Warm Springs Avenue. It includes a northbound slip ramp at CR 525 and an access point to westbound Warm Springs Avenue west of Stokes Street. It also follows the existing US 301 alignment around the curve at CR 468.

Figure 7 | Final Realignment Alternatives

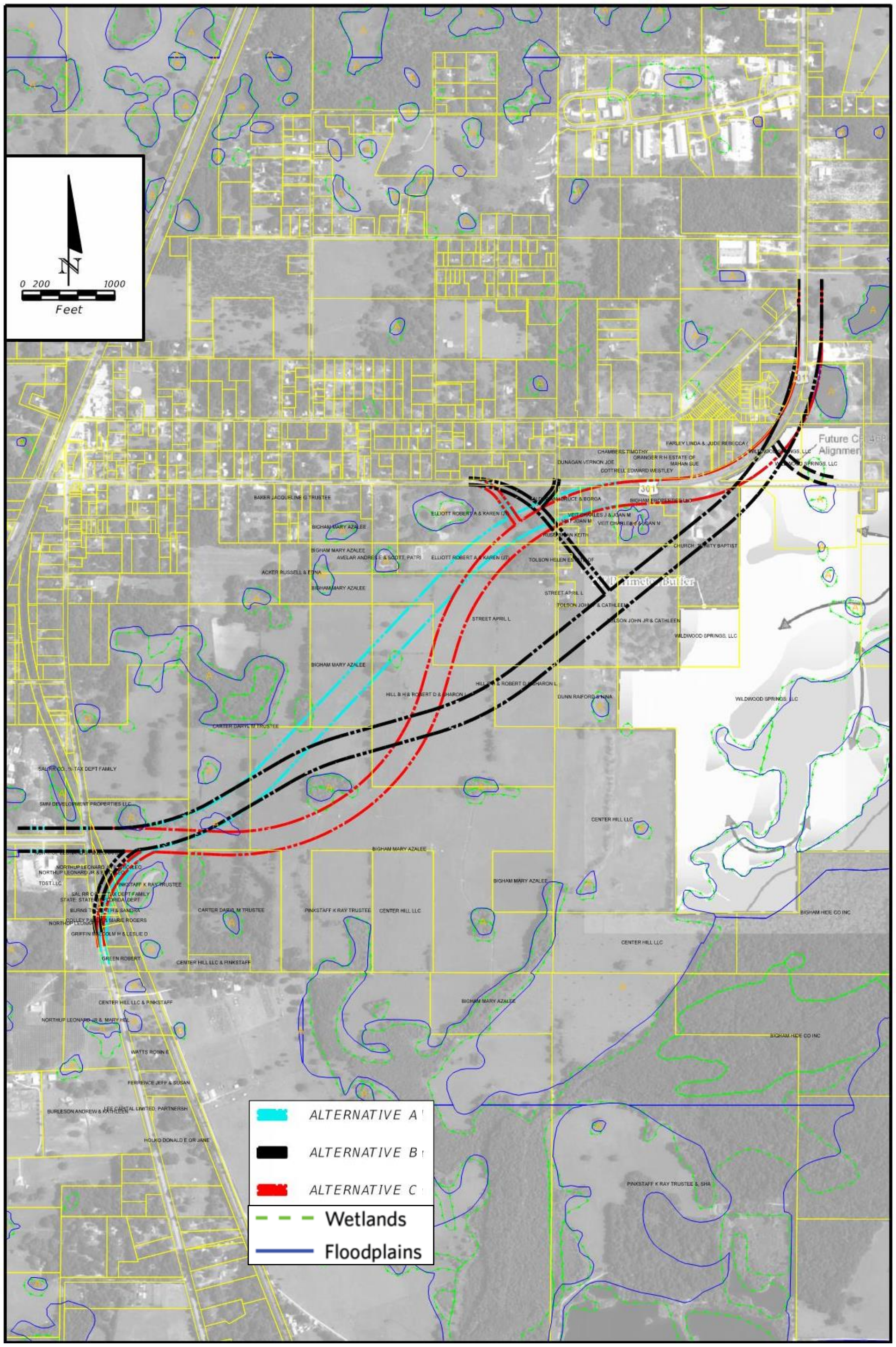


Figure 8 | Realignment Alternative A

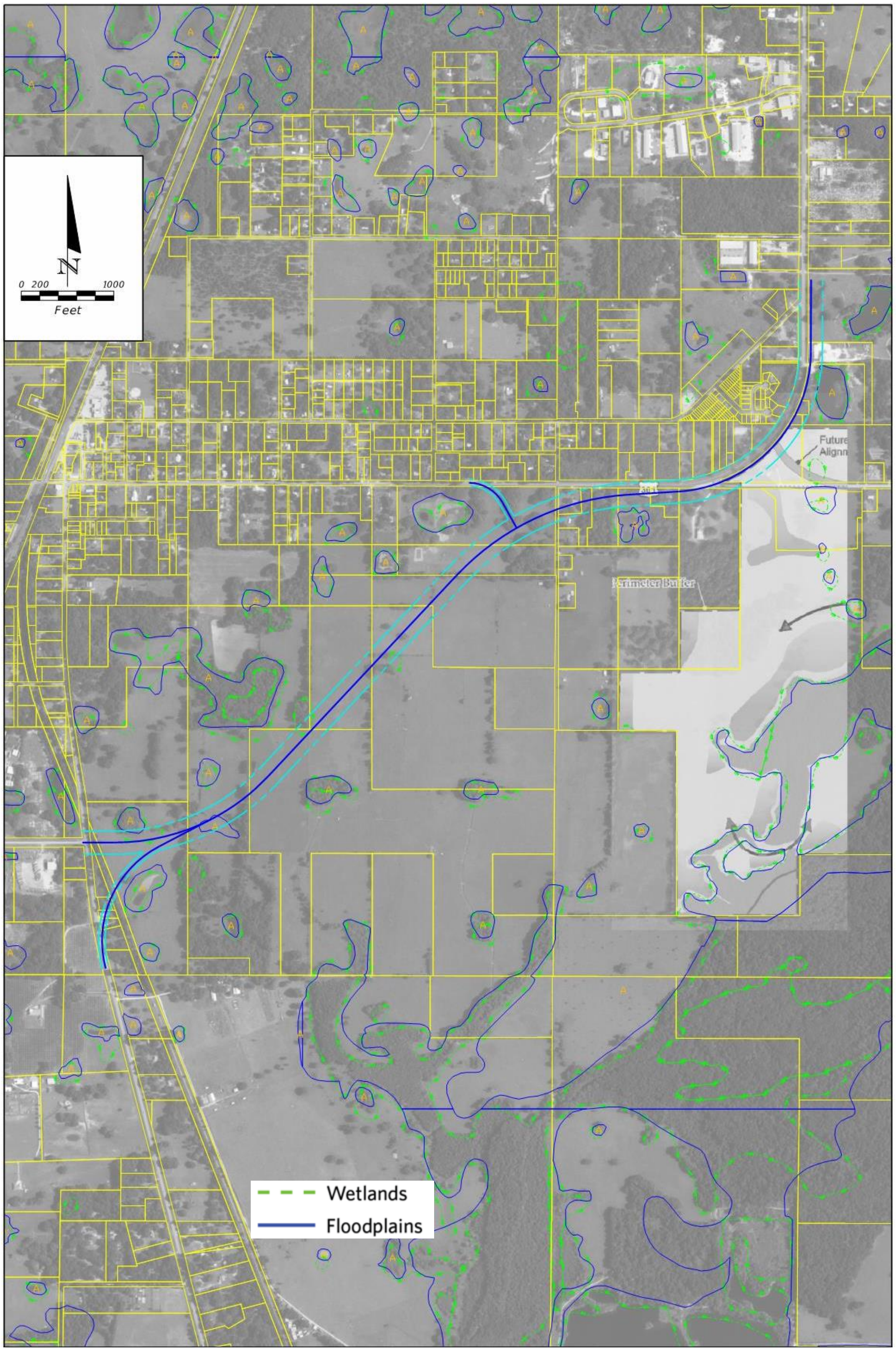


Figure 9 | Realignment Alternative B

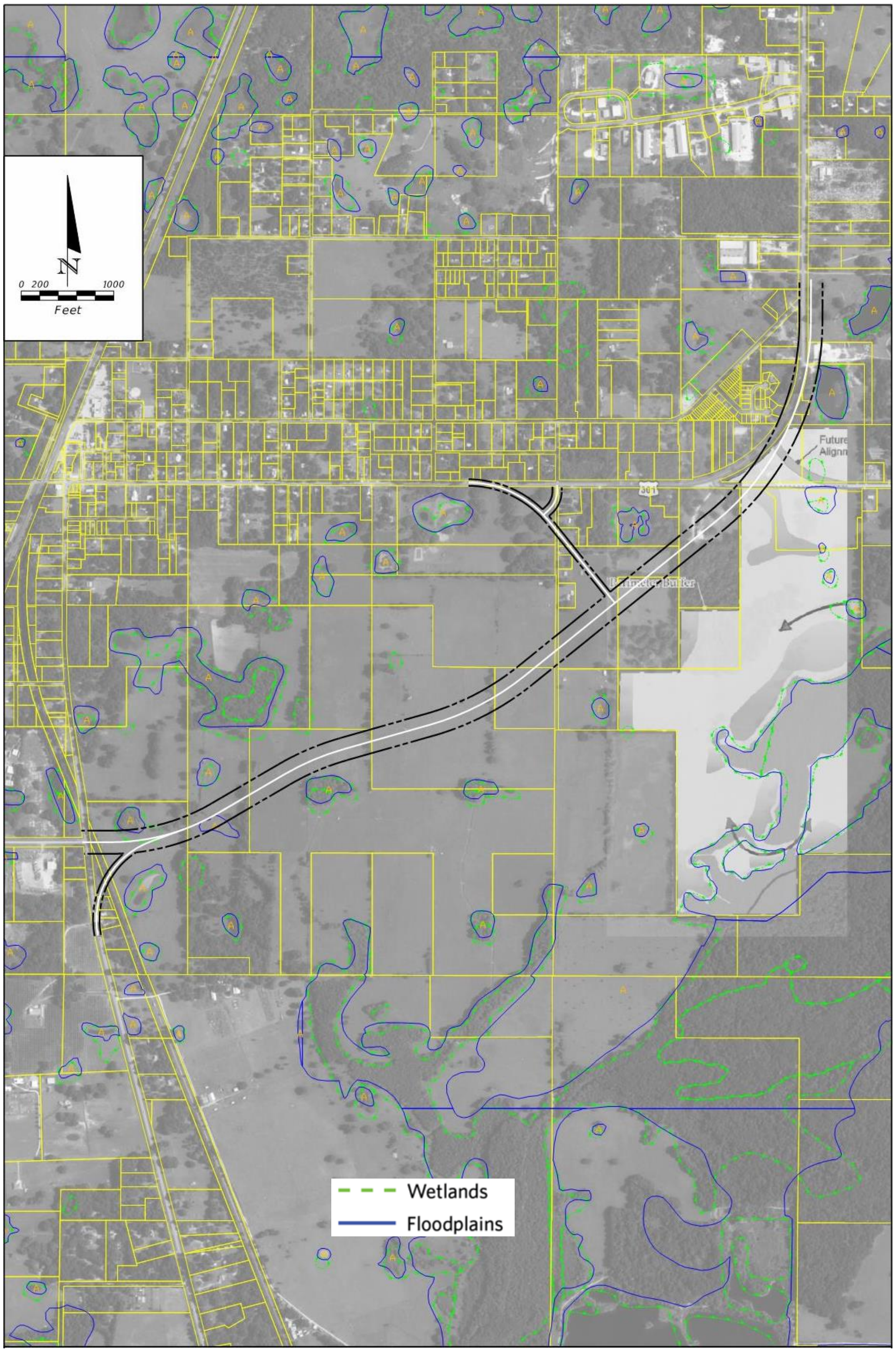
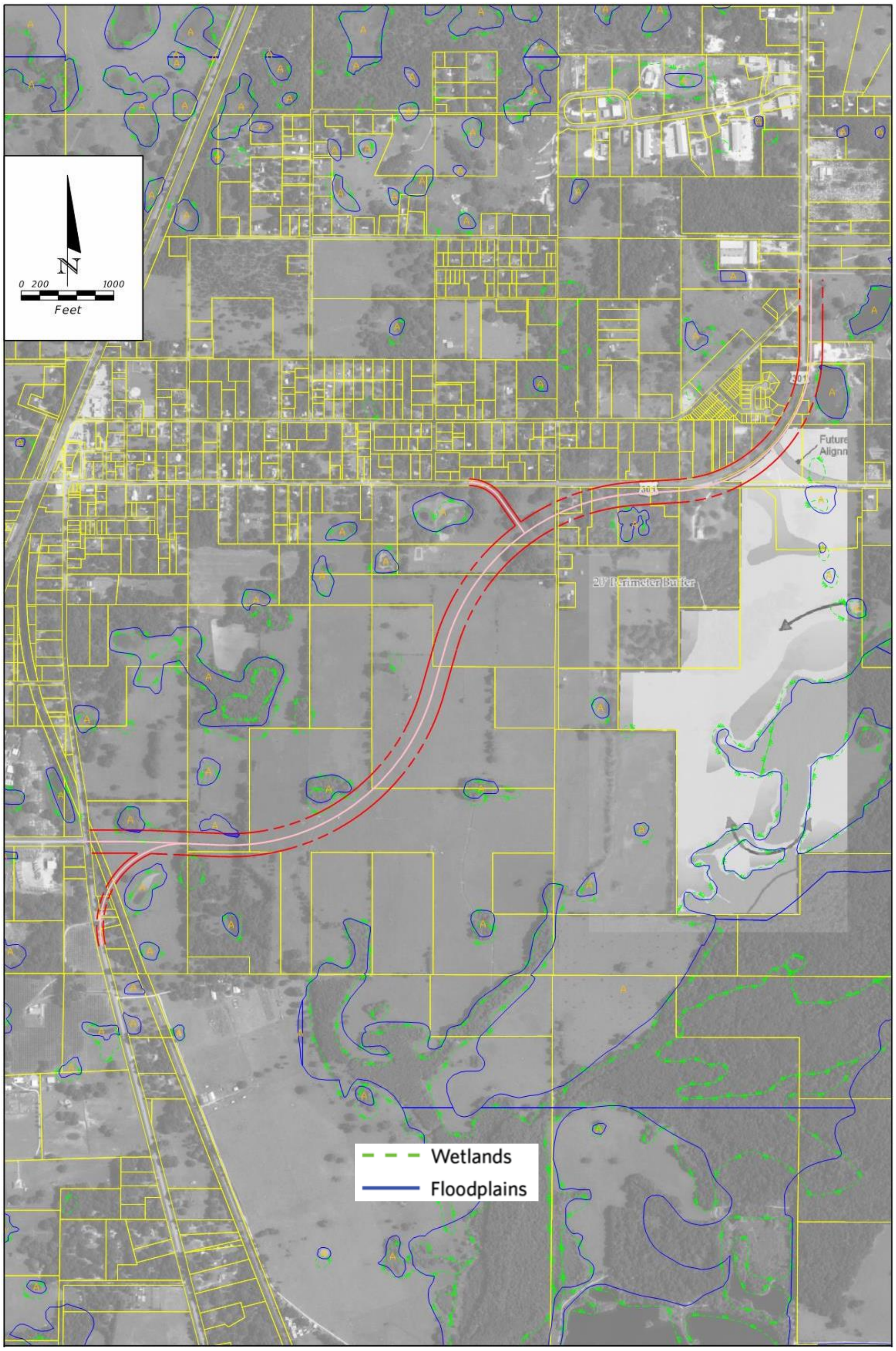


Figure 10 | Realignment Alternative C



4.0 Realignment Alternatives Analysis

Each of the realignment alternatives underwent a comprehensive impact evaluation based on five major categories: Social & Economic, Cultural, Natural, Physical, and Roadway/Traffic. The evaluation of criteria where differences could be identified among the alternatives (based on a 200 ft. corridor) is presented in a matrix format and is shown in **Table 2** below.

Table 2 | Realignment Alternatives Evaluation Matrix

Criteria	Alternative A	Alternative B	Alternative C
Social & Economic			
Potential Relocations	5	2	5
Follows Existing US 301 Curve	Yes	No	Yes
Preserves Community Integrity / Cohesiveness	High	Medium	Medium-High
Promotes Travel / Connectivity to the City of Coleman	High	Medium	Medium-High
Public Support	High	Medium	Medium-High
Cultural			
Impacts to Archaeological, Recreation, Parks, or Historic Sites	Low	Low	Low
Natural			
Wetland Impacts - # and (Acres)	4 (1.9 AC)	1 (1.3 AC)	5 (1.4 AC)
Floodplain Impacts - # and (Acres)	3 (1.0 AC)	2 (0.8 AC)	3 (0.2 AC)
Physical			
Parcel Impacts - # and (Acres)	32 (55.6 AC)	29 (58.2 AC)	32 (58.5 AC)
Roadway			
Maintains 55 mph Design Speed at CR 468 for All Typical Sections	No	Yes	No
Driveway spacing between Stokes St and CR 468 meets requirements	No	Yes	No

4.1 Social & Economic

Realignment Alternatives A and C have the potential to impact five (5) building structures that may result in relocations. Alternative B has two such impacts. Additionally, Alternatives A and C would each follow the existing alignment of US 301 along the CR 468 intersection curve, whereas Alternative B would require a completely new alignment in the vicinity of CR 468. Maintaining the alignment of the existing CR 468 curve allows more parcels that currently have frontage along US 301 to maintain this frontage and thus minimizes the number of parcels that could see a potential change in their commercial viability.

As previously discussed in Section 2, there was a high degree of public support for Alternative A due to its close proximity to the existing core of the City of Coleman along Warm Springs Avenue. Residents expressed concern that Alternative B would be far enough away to discourage motorists and pedestrians from accessing businesses and community facilities along Warm Springs Avenue, which would be detrimental to the long-term economic potential of Coleman.

4.2 Cultural

None of the potential realignments would significantly impact any identified archaeological, recreation, parks, or historic sites within the project area.

4.3 Natural

Each of the realignment alternatives only has a relatively minor impact to the environmental criteria of floodplains and wetlands. The alternatives all have relatively the same impact related to the environmental criteria.

4.4 Physical

Each of the realignment alternatives impacts approximately the same number of parcels and requires approximately the same amount of acreage. As with the analysis of natural impacts, it was determined that impacts in terms of the number and acreage of parcels is relatively the same for the three alternatives.

4.5 Roadway

Realignment alternatives A and C each connect to Warm Springs Avenue prior to the CR 468 intersection and follow the existing US 301 curvature at CR 468. Alternative B is based on a less curvilinear alignment that would allow for a 55 mph design speed for all typical sections at the CR 468 intersection.

FDOT has established standards for the spacing of driveway and intersections. The spacing standards are based upon the classification or type of roadway and the speed of the roadway. Alternatives A and C would result in a greater number of parcels fronting the alignment between Stokes Street and CR 468 that would be legally allowed to have access to the roadway network. Due to the greater number of parcels fronting the alignment in this distance, these Alternatives may not meet the established driveway spacing standards without the potential use of frontage roads, Alternative B does not front the same parcels between Stokes Street and CR 468. Due to the lesser number of parcels fronting Alternative B in this segment it should be able to comply with FDOT driveway spacing standards without the use of frontage roads.

While Alternative B provides for roadway and traffic benefits of a higher design speed and less curvature, Alternatives A and C provides the opportunity for a design that will assist in reducing the design speed in an area where there is a greater potential need for context sensitivity. The alignment and curvature between CR 468 and the proposed connector road to Warm Springs Avenue represents a segment of corridor that is likely to have more bicycles and pedestrians interacting between the core of the City of Coleman along Warm Springs Avenue and the proposed mixed use site (with retail and residential) at the Village of Fenney. This lower design speed will have a positive effect on how bicycles and pedestrians interact with vehicular traffic.

5.0 Recommendations

Various realignment alternatives were developed and screened with input from stakeholders and the public. The alternatives were refined and narrowed to three distinct alternatives. A comprehensive impact evaluation and assessment of the three showed there are not major significant quantitative differences among the three. While the alternatives are all approximately the same across the five categories of Social & Economic, Cultural, Natural, Physical and Roadway, the most notable overall differences were in the categories of Social & Economic and Roadway.

The metrics with noticeable differences within the Social & Economic category are mostly qualitative and relate to how the alternative will impact or change the community of Coleman and how the community felt about the alternative. If it moves forward, the US 301 project will be one of the most significant changes to the City of Coleman. A realignment of US 301 to create the realignment would significantly reduce the impacts of truck traffic on the City and allow for fewer impacts to the core of the community. However the realignment will also modify the access and travel to the City. Alternatives B and C received the most support from this active community. Alternative B was preferred due to the more cohesive driving experience while traveling along US 301. Alternative C was preferred because it kept more of the realigned US 301 in closer proximity to the City while avoiding the full impact of a widening along all of Warm Springs Avenue.

As it relates to the evaluation of the roadway criteria, it is important to consider that each of the alternatives will carry the same amount of traffic and will provide travels times that are also approximately the same. All three can also be designed to meet established standards for the safe operation of traffic. The most notable relatively minor difference in this category is related to the design speed that can be accommodated through the CR 468 curve. Alternative B offers a straighter alignment and can meet the design speed of 55 MPH for all standard FDOT typical sections. This could offer a slight decrease in travel time to the traffic along US 301, but it could also potentially encourage higher speeds in an area of the corridor that is likely to have the most pedestrian and bicycle activity in the future because it is the confluence of the Village of Fenney and City of Coleman. This is an area where a context sensitive approach should be considered and a lower design speed is not altogether a negative. As far as the driveway spacing standards, Alternatives A and C make use of a frontage road system if necessary in order to provide a safe spacing of the access along US 301, so this metric is good for a comparison but is not a deciding factor.

Based upon the analysis and public input received, the Study Team recommends advancing Alternative B/C, which combines the preferred features of both Alternatives B and C, for further detailed analysis. The alignment of Alternative B/C is shown in **Figure 11** and the impacts are shown in **Table 3**. Alternative B/C leaves fewer remnant parcels along the edges of the roadway corridor, lessening impacts to local property owners. This Alternative also promotes regional connectivity along US 301 by completing a major thoroughfare with a focus on mobility, particularly for freight travel.

Each of the alternatives considered have approximately the same impacts, so by creating Alternative B/C this generates an alternative with the most community support, offers the most potential for a context sensitive approach and provides substantive qualitative community and economic benefits.

With the recommendation to move Realignment Alternative B/C forward for additional study, the realignment is still subject to future revisions based on engineering analysis and public involvement.

Figure 11 | Realignment Alternative B/C

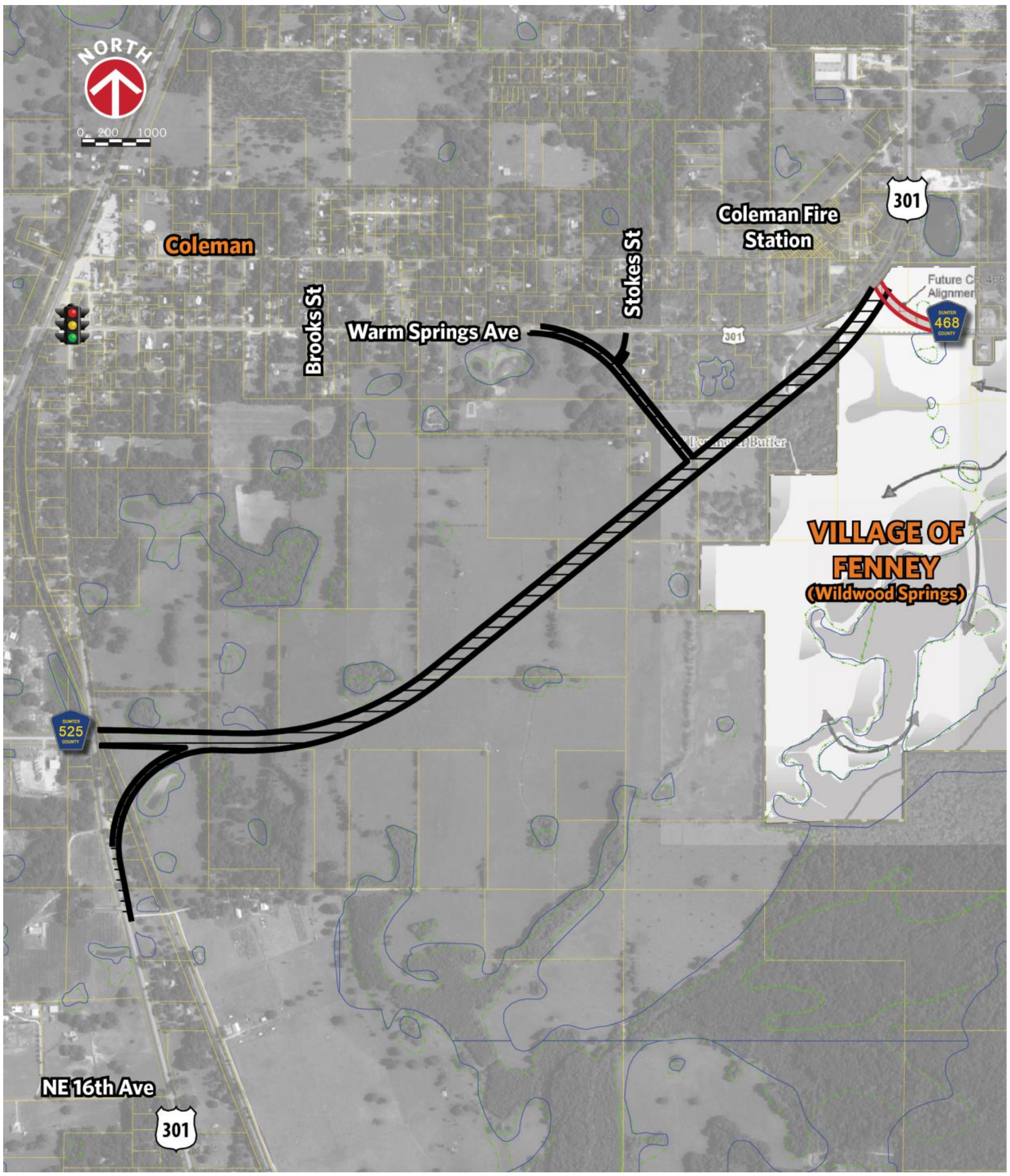


Table 3 | Realignment Alternative B/C Impacts Comparison (150 foot corridor width)

Criteria	Alternative A	Alternative B	Alternative C	Alternative B/C
Social & Economic				
Potential Relocations	4	6	4	6
Follows Existing US 301 Curve	Yes	No	Yes	Yes
Preserves Community Integrity / Cohesiveness	High	Medium	Medium	Medium
Promotes Travel / Connectivity to the City of Coleman	High	Medium	Medium	Medium
Promotes Regional Travel / Connectivity	Medium	Medium	Medium	High
Consistency with Existing and Future Land Use	Yes	Yes	Yes	Yes
Aesthetic Impacts	Medium	Low	Medium	Low
Public Support	Medium	Medium	Medium-High	High
Cultural				
Impacts to Archaeological, Recreation, Parks, or Historic Sites	Low	Low	Low	Low
Natural				
Wetland Impacts - # and (Acres)	3 (0.8 AC)	1 (0.8 AC)	2 (0.5 AC)	1 (0.4 AC)
Floodplain Impacts - # and (Acres)	2 (0.6 AC)	1 (0.5 AC)	0	1 (<0.1 AC)
Physical				
Parcel Impacts - # and (Acres)	32 (37.6 AC)	30 (40.5 AC)	31 (40.9 AC)	31 (41.7 AC)
Roadway				
Maintains 55 mph Design Speed at CR 468 for All Typical Sections	No	Yes	No	Yes
Driveway spacing between Stokes St and CR 468 meets requirements	No	Yes	No	Yes
Right-of-Way Corridor Cost Estimates	$20,442,000	$23,404,500	$20,694,500	$23,181,500

APPENDIX G

Proposed Median Opening Locations

Figure 2 | Proposed Median Opening Locations Map - Frame 1

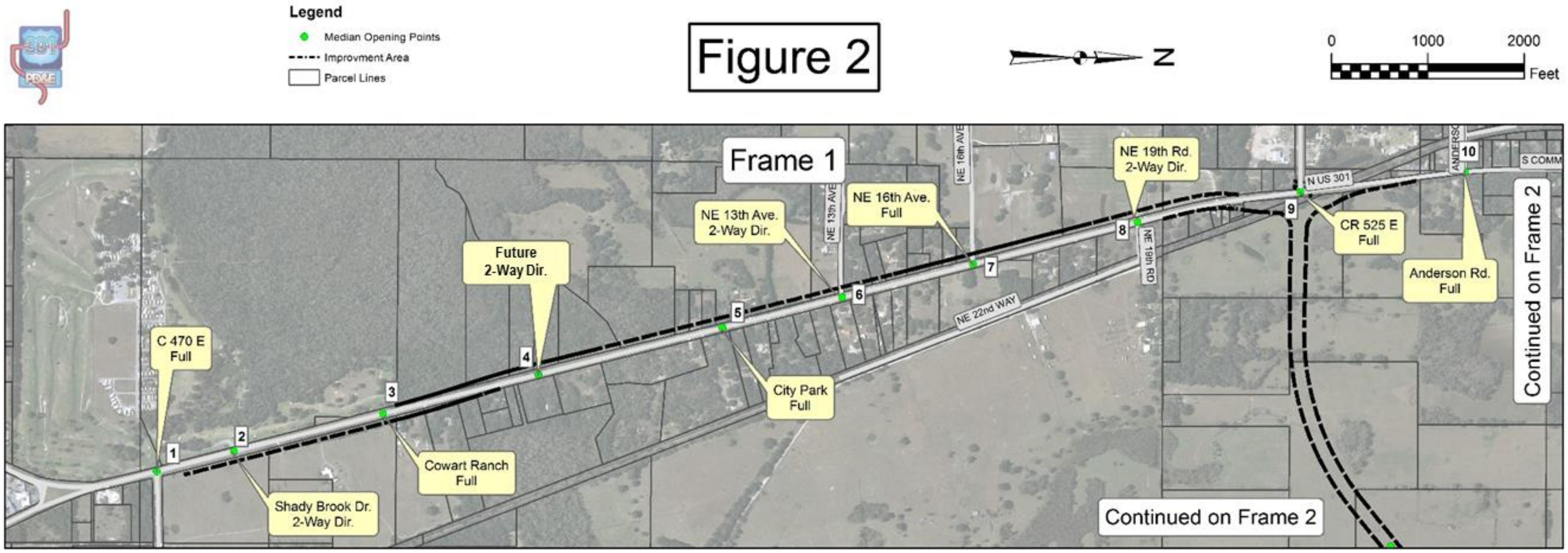
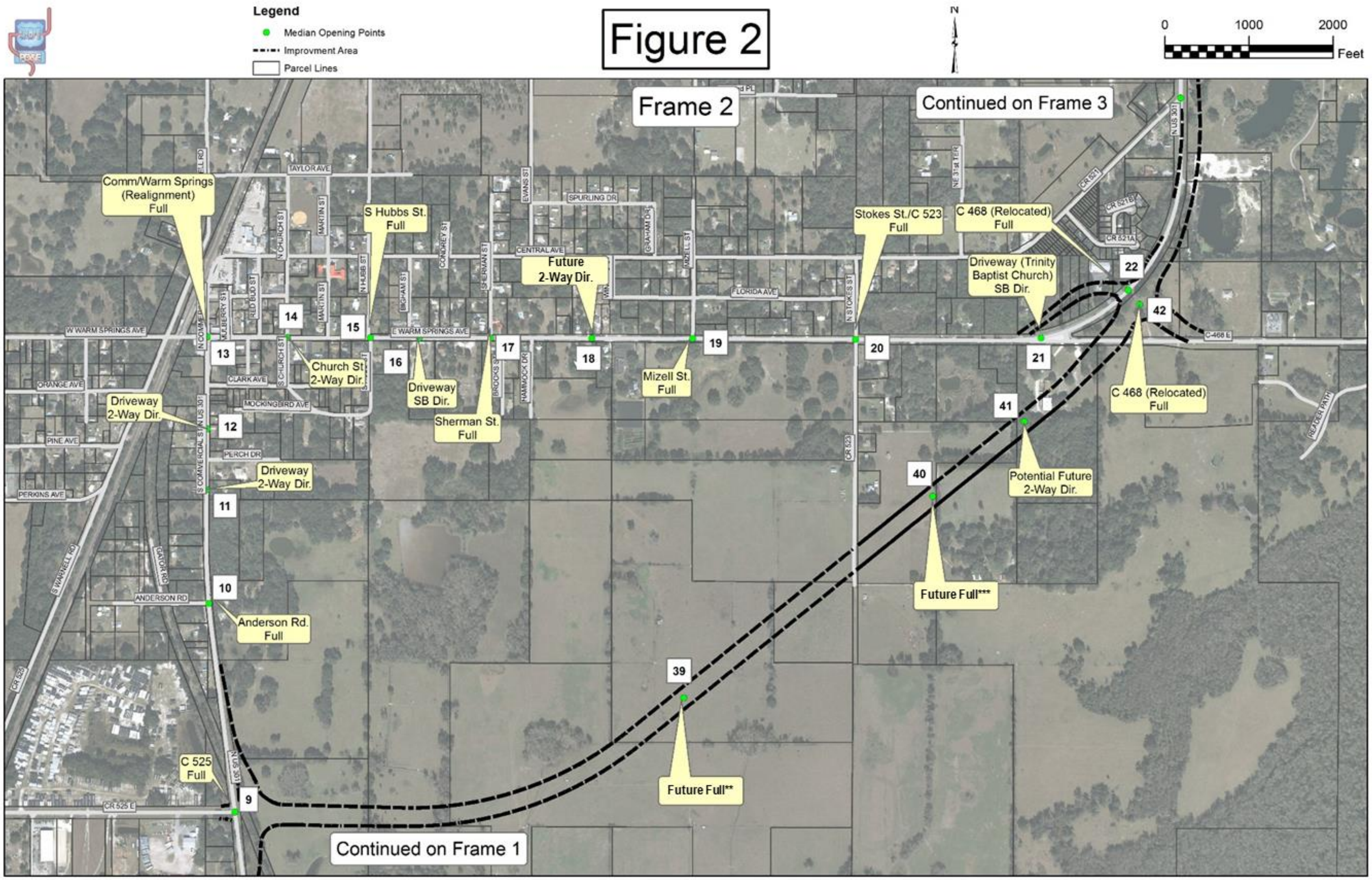
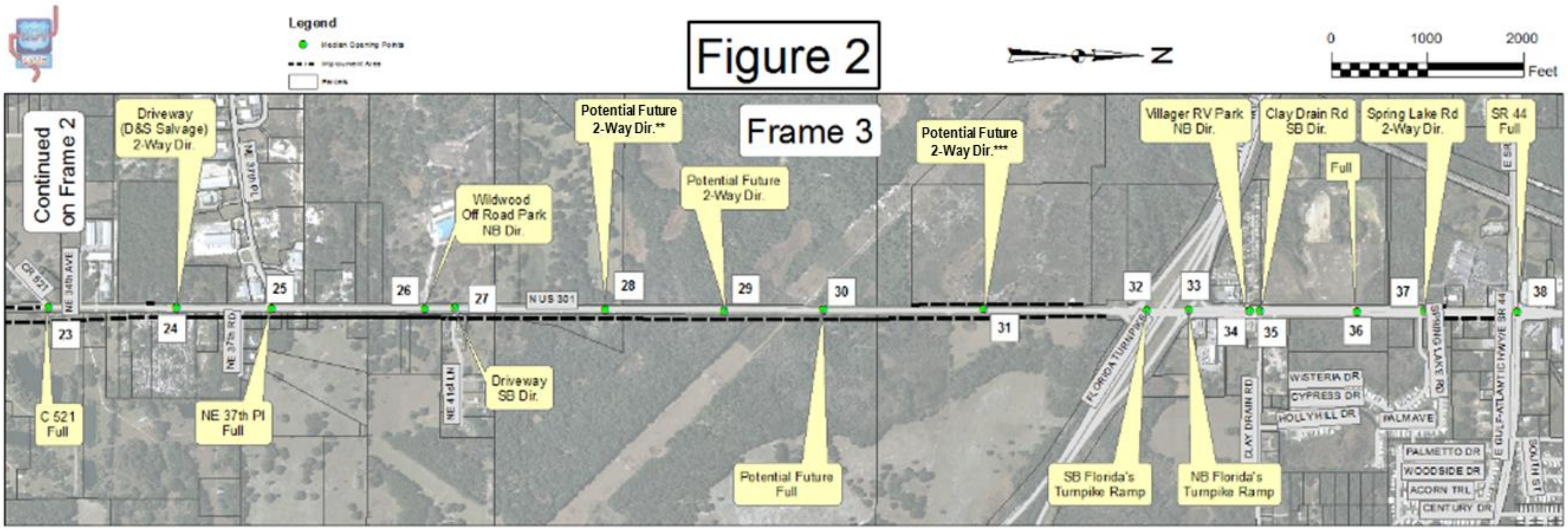


Figure 2 | Proposed Median Opening Locations Map – Frame 2



***To be constructed as Full Openings in order to allow access and U-turns to adjacent residences south of the new alignment. Left turn lanes do not need to be constructed initially just to serve these individual residences.*
****Full median opening provided at CR 521 to provide emergency access for the Fire Station located at 3290 CR 521, Wildwood.*

Figure 2 | Proposed Median Opening Locations Map – Frame 3



*** For the first median opening north of 41St Ln, the northbound directional is conceptual only. The southbound directional provides access to an existing residential home.*
****For the first median opening south of the interchange, the northbound directional is Potential Future only. The southbound provides for U-turns south of the interchange.*

APPENDIX H

Long Range Estimates

Date: 8/13/2018 11:54:47 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 430132-1-52-01 **Letting Date:** 01/2099

Description: SR 35 (US 301) from CR 470 to SR 44

District: 05 **County:** 18 SUMTER **Market Area:** 07 **Units:** English
Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 7.702 MI

Project Manager: JJH

Version 3 Project Grand Total **$69,361,560.52**
Description: SR 35 (US 301) from C-470 West to SR 44 (Truck Route Alternative) with DDI Alternative (Preferred Alternative)

Sequence: 2 NDU - New Construction, Divided, Urban **Net Length:** 0.606 MI
3,200 LF

Description: Urban Typical Section

EARTHWORK COMPONENT

User Input Data

Description	**Value**
Standard Clearing and Grubbing Limits L/R	62.75 / 62.75
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.606
Top of Structural Course For Begin Section	103.00
Top of Structural Course For End Section	103.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	9.22 AC	$23,625.82	$217,830.06
120-6	EMBANKMENT	38,429.34 CY	$4.73	$181,770.78
	Earthwork Component Total			$399,600.84

ROADWAY COMPONENT

User Input Data

Description	**Value**
Number of Lanes	4
Roadway Pavement Width L/R	29.00 / 29.00
Structural Spread Rate	330
Friction Course Spread Rate	110

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	24,293.13 SY	$3.61	$87,698.20
285-709	OPTIONAL BASE,BASE GROUP 09	20,623.56 SY	$12.50	$257,794.50
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	3,402.89 TN	$88.97	$302,755.12
337-7-82	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	1,134.30 TN	$346.79	$393,363.90

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	20.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,858.63 SY	$3.61	$17,539.65
285-709	OPTIONAL BASE,BASE GROUP 09	4,124.71 SY	$12.50	$51,558.88
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	680.58 TN	$88.97	$60,551.20
337-7-82	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	226.86 TN	$346.79	$78,672.78

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE/RAISED PAVEMENT MARKERS	245.00 EA	$3.40	$833.00
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.42 GM	$927.86	$2,245.42
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.21 GM	$367.95	$445.22
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	2.42 GM	$4,345.49	$10,516.09
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	1.21 GM	$1,090.56	$1,319.58
	Roadway Component Total			$1,265,293.53

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	13.25 / 13.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	6.00 / 6.00

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	3,200.21 LF	$15.97	$51,107.35
520-1-10	CONCRETE CURB & GUTTER, TYPE F	3,200.21 LF	$15.97	$51,107.35
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	4,266.94 SY	$39.30	$167,690.74
570-1-2	PERFORMANCE TURF, SOD	3,555.79 SY	$2.72	$9,671.75

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	367.00 SY	$40.66	$14,922.22

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	6,400.42 LF	$1.14	$7,296.48
104-11	FLOATING TURBIDITY BARRIER	151.52 LF	$9.91	$1,501.56
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	151.52 LF	$3.81	$577.29
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$2,717.31	$2,717.31
104-18	INLET PROTECTION SYSTEM	31.00 EA	$92.68	$2,873.08
107-1	LITTER REMOVAL	15.43 AC	$39.14	$603.93
107-2	MOWING	15.43 AC	$49.96	$770.88
	Shoulder Component Total			$310,839.94

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	27.50
Performance Turf Width	23.00

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	6,400.42 LF	$28.02	$179,339.77
570-1-2	PERFORMANCE TURF, SOD	8,178.31 SY	$2.72	$22,245.00
	Median Component Total			$201,584.77

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	10.91 CY	$1,511.58	$16,491.34
425-1-351	INLETS, CURB, TYPE P-5, <10'	22.00 EA	$4,448.79	$97,873.38
425-1-451	INLETS, CURB, TYPE J-5, <10'	7.00 EA	$6,678.91	$46,752.37
425-1-521	INLETS, DT BOT, TYPE C, <10'	4.00 EA	$2,191.21	$8,764.84
425-2-41	MANHOLES, P-7, <10'	4.00 EA	$2,932.82	$11,731.28
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,608.00 LF	$71.64	$115,197.12
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	144.00 LF	$106.45	$15,328.80
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	3,032.00 LF	$159.77	$484,422.64
570-1-1	PERFORMANCE TURF	184.25 SY	$1.98	$364.82

Retention Basin 1

Description	Value
Size	1.5 AC
Multiplier	5
Depth	7.25
Description	Basin 1, 11, 12, 15 and 16

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	7.50 AC	$23,625.82	$177,193.65
120-1	REGULAR EXCAVATION	87,725.00 CY	$9.59	$841,282.75
400-2-2	CONC CLASS II, ENDWALLS	56.50 CY	$1,511.58	$85,404.27
425-1-541	INLETS, DT BOT, TYPE D, <10'	5.00 EA	$3,196.32	$15,981.60
425-2-71	MANHOLES, J-7, <10'	5.00 EA	$4,927.18	$24,635.90
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	280.00 LF	$130.60	$36,568.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	1,000.00 LF	$241.40	$241,400.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	5,125.00 LF	$11.82	$60,577.50
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	5.00 EA	$3,854.76	$19,273.80
570-1-1	PERFORMANCE TURF	18,150.00 SY	$1.98	$35,937.00

Retention Basin 2

Description	Value
Size	2.5 AC
Multiplier	7
Depth	6.75
Description	Basins 2, 3, 4, 13, 14, 19, 20

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	17.50 AC	$23,625.82	$413,451.85
120-1	REGULAR EXCAVATION	190,575.00 CY	$9.59	$1,827,614.25
400-2-2	CONC CLASS II, ENDWALLS	79.10 CY	$1,511.58	$119,565.98
425-2-71	MANHOLES, J-7, <10'	7.00 EA	$4,927.18	$34,490.26
430-175-142	PIPE CULV, OPT MATL, ROUND,	392.00 LF	$130.60	$51,195.20

	42"S/CD			
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	1,400.00 LF	$241.40	$337,960.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	9,345.00 LF	$11.82	$110,457.90
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	7.00 EA	$3,854.76	$26,983.32
570-1-1	PERFORMANCE TURF	42,350.00 SY	$1.98	$83,853.00

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
425-1-541	INLETS, DT BOT, TYPE D, <10'	7.00 EA	$3,196.32	$22,374.24

Retention Basin 3

Description		Value
Size		5 AC
Multiplier		1
Depth		13.00
Description	Basin 17	

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00 AC	$23,625.82	$118,129.10
120-1	REGULAR EXCAVATION	62,920.00 CY	$9.59	$603,402.80
400-2-2	CONC CLASS II, ENDWALLS	11.30 CY	$1,511.58	$17,080.85
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00 EA	$3,196.32	$3,196.32
425-2-71	MANHOLES, J-7, <10'	2.00 EA	$4,927.18	$9,854.36
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00 LF	$130.60	$7,313.60
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	400.00 LF	$241.40	$96,560.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,860.00 LF	$11.82	$21,985.20
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00 EA	$3,854.76	$3,854.76
570-1-1	PERFORMANCE TURF	12,100.00 SY	$1.98	$23,958.00

Retention Basin 4

Description		Value
Size		1 AC
Multiplier		5
Depth		4.00
Description	FPC 1, 3, 4, 6, 7	

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00 AC	$23,625.82	$118,129.10
120-1	REGULAR EXCAVATION	32,266.65 CY	$9.59	$309,437.17
570-1-1	PERFORMANCE TURF	24,200.00 SY	$1.98	$47,916.00

Retention Basin 5

Description	Value
Size	5 AC

Multiplier		1
Depth		4.00
Description	FPC 5	

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00 AC	$23,625.82	$118,129.10
120-1	REGULAR EXCAVATION	32,266.60 CY	$9.59	$309,436.69
570-1-1	PERFORMANCE TURF	24,200.00 SY	$1.98	$47,916.00
	Drainage Component Total			$7,219,426.11

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	15.00 AS	$270.62	$4,059.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00 AS	$735.40	$1,470.80
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	2.00 AS	$4,613.93	$9,227.86
700-2-16	MULTI- POST SIGN, F&I GM, 101-200 SF	2.00 AS	$9,222.96	$18,445.92
	Signing Component Total			$33,203.88

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,200.21	LF	$11.13	$35,618.34
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	635.19	LF	$24.21	$15,377.95
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$682.81	$15,021.82
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	11,688.03	LF	$2.57	$30,038.24
715-4-13	LIGHT POLE COMPLETE, F&I-STD, 40'	22.00	EA	$5,665.14	$124,633.08
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	22.00	EA	$622.31	$13,690.82
	Subcomponent Total				$234,380.24
	Lighting Component Total				$234,380.25

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	1.00
Component Detail	N

Landscaping Component Total	$95,966.40
Sequence 2 Total	$9,760,295.72

Sequence: 3 NDS - New, Divided, Suburban (Urban In/Rural Out) **Net Length:** 5.818 MI
30,720 LF

Description: Suburban Typical Section

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	75.00 / 75.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	5.818
Top of Structural Course For Begin Section	103.00
Top of Structural Course For End Section	103.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	10 to 1 / 10 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	105.78 AC	$23,625.82	$2,499,139.24
120-6	EMBANKMENT	263,114.27 CY	$4.73	$1,244,530.50
	Earthwork Component Total			$3,743,669.74

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	28.00 / 28.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	263,373.62 SY	$3.61	$950,778.77
285-709	OPTIONAL BASE,BASE GROUP 09	195,652.88 SY	$12.50	$2,445,661.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	31,539.30 TN	$88.97	$2,806,051.52
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	7,645.89 TN	$150.13	$1,147,877.47

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	20.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	N

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	52,674.72 SY	$3.61	$190,155.74
285-709	OPTIONAL BASE,BASE GROUP 09	39,130.58 SY	$12.50	$489,132.25
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	6,307.86 TN	$88.97	$561,210.30

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE/RAISED PAVEMENT MARKERS	2,356.00 EA	$3.40	$8,010.40
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	23.27 GM	$927.86	$21,591.30
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	11.64 GM	$367.95	$4,282.94
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	23.27 GM	$4,345.49	$101,119.55
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	11.64 GM	$1,090.56	$12,694.12
	Roadway Component Total			$8,738,565.36

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	1.00 / 1.00
Paved Outside Shoulder Width L/R	7.00 / 7.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	50,039.62 SY	$77.28	$3,867,061.83
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	5,256.55 TN	$88.97	$467,675.25
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,911.47 TN	$150.13	$286,968.99
570-1-2	PERFORMANCE TURF, SOD	6,826.69 SY	$2.72	$18,568.60

EX-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
522-1	4" SIDEWALK CONCRETE	38,444.40 SY	$39.30	$1,510,864.92
	Comment: 5' Wide Sidewalk on both sides of Suburban Typical			

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	79,872.25 LF	$1.14	$91,054.36
104-11	FLOATING TURBIDITY BARRIER	1,454.55 LF	$9.91	$14,414.59
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	1,454.55 LF	$3.81	$5,541.84
104-15	SOIL TRACKING PREVENTION DEVICE	6.00 EA	$2,717.31	$16,303.86
104-18	INLET PROTECTION SYSTEM	47.00 EA	$92.68	$4,355.96
107-1	LITTER REMOVAL	104.32 AC	$39.14	$4,083.08
107-2	MOWING	104.32 AC	$49.96	$5,211.83
	Shoulder Component Total			$6,292,105.12

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.00
Performance Turf Width	17.50

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	61,440.19 LF	$28.02	$1,721,554.12
570-1-2	PERFORMANCE TURF, SOD	59,733.52 SY	$2.72	$162,475.17
	Median Component Total			$1,884,029.29

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	104.73 CY	$1,511.58	$158,307.77
425-1-551	INLETS, DT BOT, TYPE E, <10'	47.00 EA	$4,020.83	$188,979.01
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	2,424.00 LF	$71.64	$173,655.36
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	1,376.00 LF	$106.45	$146,475.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	47.00 EA	$1,328.61	$62,444.67
570-1-1	PERFORMANCE TURF	2,234.19 SY	$1.98	$4,423.70
	Drainage Component Total			$734,285.71

INTERSECTIONS COMPONENT

Intersection 1

Description	Value
Mainline No. of Left Turn Lanes	2
Mainline No. of Right Turn Lanes	0
Mainline Design Speed	55
Cross Street Thru Lanes	2
Cross Street No. of Left Turn Lanes	0
Cross Street No. of Right Turn Lanes	0
Cross Street Design Speed	45
T-Intersection?	Y
Multiplier	17
Description	17 Intersections - Accounts for Left Turn Lanes

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	10.71	AC	$23,625.82	$253,032.53
120-6	EMBANKMENT	42,187.71	CY	$4.73	$199,547.87
160-4	TYPE B STABILIZATION	31,620.00	SY	$3.61	$114,148.20
160-4	TYPE B STABILIZATION	16,831.70	SY	$3.61	$60,762.44
285-704	OPTIONAL BASE,BASE GROUP 04	3,551.13	SY	$77.28	$274,431.33
285-709	OPTIONAL BASE,BASE GROUP 09	31,620.00	SY	$12.50	$395,250.00
285-709	OPTIONAL BASE,BASE GROUP 09	13,280.57	SY	$12.50	$166,007.12
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	5,217.30	TN	$88.97	$464,183.18
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	2,386.63	TN	$88.97	$212,338.47
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,264.80	TN	$150.13	$189,884.42
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	673.37	TN	$148.60	$100,062.78
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	3,551.13	SY	$39.30	$139,559.41
570-1-1	PERFORMANCE TURF	1,896.35	SY	$1.98	$3,754.77
	Intersections Component Total				$2,572,962.75

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	140.00	AS	$270.62	$37,886.80
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	12.00	AS	$735.40	$8,824.80
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	12.00	AS	$4,090.38	$49,084.56
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	12.00	AS	$4,613.93	$55,367.16
	Signing Component Total				$151,163.32

SIGNALIZATIONS COMPONENT

Signalization 1

Description	**Value**
Type	4 Lane Mast Arm
Multiplier	1
Description	1 Signalized Intersections - 37th Place

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00 LF	$11.13	$8,347.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00 LF	$24.21	$6,052.50
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00 PI	$7,722.59	$7,722.59
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00 EA	$682.81	$10,924.96
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00 AS	$2,119.80	$2,119.80
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00 LF	$3.47	$208.20
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00 EA	$42,496.22	$169,984.88
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00 AS	$2,069.90	$24,838.80
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00 AS	$679.37	$5,434.96
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00 EA	$187.21	$2,246.52
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00 AS	$920.06	$11,040.72
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00 EA	$170.81	$1,366.48
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00 AS	$20,749.60	$20,749.60
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00 EA	$147.47	$589.88
	Signalizations Component Total			$271,627.39

BRIDGES COMPONENT

Bridge 123456

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	118.11
Width (LF)	48.67
Type	Medium Level
Cost Factor	1.04
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$140.40
Final Cost per SF	**$149.95**

Basic Bridge Cost	**$807,077.28**
Description	NEW SB SHADY BROOK BRIDGE

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	108.16 CY	$381.42	$41,254.39
415-1-9	REINF STEEL- APPROACH SLABS	18,928.00 LB	$0.72	$13,628.16
	Bridge 123456 Total			$861,959.83

Bridge 987654

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	118.11
Width (LF)	9.89
Type	Medium Level
Cost Factor	1.04
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$140.40
Final Cost per SF	**$149.95**
Basic Bridge Cost	**$164,002.35**
Description	WIDENING OF THE EXISTING BRIDGE FOR NB TRAFFIC

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	21.98 CY	$381.42	$8,383.61
415-1-9	REINF STEEL- APPROACH SLABS	3,846.50 LB	$0.72	$2,769.48
	Bridge 987654 Total			$175,155.44
	Bridges Component Total			$1,037,115.27

RETAINING WALLS COMPONENT

Retaining Wall 2

Description	**Value**
Length	115.00
Begin height	18.00
End Height	18.00
Multiplier	2

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	4,140.00 SF	$29.13	$120,598.20

Retaining Wall 3

Description	Value
Length	100.00
Begin height	5.00
End Height	18.00
Multiplier	4

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	4,600.00 SF	$29.13	$133,998.00
	Retaining Walls Component Total			$254,596.20

Sequence 3 Total $25,680,120.15

Sequence: 4 MIS - Miscellaneous Construction **Net Length:** 0.796 MI
4,200 LF

Description: DDI with Bridge

ROADWAY COMPONENT

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	18,076.00 SY	$3.61	$65,254.36
285-709	OPTIONAL BASE,BASE GROUP 09	17,686.00 SY	$12.50	$221,075.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	2,918.20 TN	$88.97	$259,632.25
337-7-82	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	972.70 TN	$346.79	$337,322.63
	Roadway Component Total			$883,284.24

SHOULDER COMPONENT

User Input Data

Description	Value

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,753.00 LF	$15.97	$27,995.41
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	1,714.00 SY	$39.30	$67,360.20
570-1-2	PERFORMANCE TURF, SOD	641.00 SY	$2.72	$1,743.52
	Shoulder Component Total			$97,099.13

MEDIAN COMPONENT

User Input Data

Description	Value

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-70	CONCRETE TRAFFIC SEPARATOR, SP- VAR WIDT	5,125.00 SY	$80.13	$410,666.25
	Median Component Total			$410,666.25

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-1	CONC CLASS II, CULVERTS	7.16 CY	$766.86	$5,490.72
425-1-551	INLETS, DT BOT, TYPE E, <10'	3.00 EA	$4,020.83	$12,062.49
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	168.00 LF	$71.64	$12,035.52

430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	96.00 LF	$106.45	$10,219.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	3.00 EA	$1,328.61	$3,985.83
570-1-1	PERFORMANCE TURF	153.00 SY	$1.98	$302.94
	Drainage Component Total			$44,096.70

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	5.00 AS	$270.62	$1,353.10
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00 AS	$735.40	$1,470.80
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00 AS	$4,090.38	$8,180.76
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	2.00 AS	$4,613.93	$9,227.86
	Signing Component Total			$20,232.52

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	6 Lane Mast Arm
Multiplier	2
Description	

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,400.00 LF	$11.13	$15,582.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	600.00 LF	$24.21	$14,526.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	2.00 PI	$7,722.59	$15,445.18
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	44.00 EA	$682.81	$30,043.64
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	2.00 AS	$2,119.80	$4,239.60
639-2-1	ELECTRICAL SERVICE WIRE, F&I	120.00 LF	$3.47	$416.40
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	2.00 EA	$1,121.60	$2,243.20
649-1-10	STEEL STRAIN POLE, F&I, PEDESTAL	2.00 EA	$1,505.77	$3,011.54
649-21-21	STEEL MAST ARM ASSEMBLY, F&I, 78'	12.00 EA	$43,505.68	$522,068.16
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	40.00 AS	$2,069.90	$82,796.00
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	16.00 AS	$679.37	$10,869.92
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	40.00 EA	$187.21	$7,488.40

660-2-106	LOOP ASSEMBLY, F&I, TYPE F	40.00	AS	$920.06	$36,802.40
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	16.00	EA	$170.81	$2,732.96
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	2.00	AS	$20,749.60	$41,499.20
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	8.00	EA	$147.47	$1,179.76

Interconnect Subcomponent

Description	Value
Type	U
Length of Fiber Run	500.00
Number of Intersections	2
Percentage of Underpavement Conduit	90.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-1-12	CONDUIT, F& I, UNDERGROUND	50.00	LF	$6.81	$340.50
630-1-13	CONDUIT, F&I, UNDER EXIST PAVT	450.00	LF	$17.15	$7,717.50
635-1-16	PULL & JUNCTION BOX, F&I, SPECIAL	2.00	EA	$2,093.08	$4,186.16
660-2-102	LOOP ASSEMBLY, F&I, TYPE B	8.00	AS	$824.73	$6,597.84
	Signalizations Component Total				$809,786.36

LIGHTING COMPONENT

High Mast Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	6

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,000.00	LF	$11.13	$33,390.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	12.00	EA	$682.81	$8,193.72
715-1-12	LIGHTING CONDUCTORS, F&I, INSUL,NO.8-6	3,000.00	LF	$1.49	$4,470.00
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	9,000.00	LF	$2.57	$23,130.00
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	1.00	EA	$12,338.89	$12,338.89
715-19-13	HIGH MAST LIGHT POLE, F&I, 120'	6.00	EA	$60,000.00	$360,000.00
715-500-2	POLE CABLE DISTRIBUTION SYS, HIGH MAST	6.00	EA	$371.25	$2,227.50
	Subcomponent Total				$443,750.11
	Lighting Component Total				$443,750.11

BRIDGES COMPONENT

Bridge 654321

Description	Value
Estimate Type	SF Estimate

Primary Estimate	YES
Length (LF)	162.00
Width (LF)	149.08
Type	Medium Level
Cost Factor	1.02
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$137.70
Final Cost per SF	**$144.66**
Basic Bridge Cost	**$3,325,587.19**
Description	

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	331.29 CY	$381.42	$126,360.63
415-1-9	REINF STEEL- APPROACH SLABS	57,975.75 LB	$0.72	$41,742.54
	Bridge 654321 Total			$3,493,690.36
	Bridges Component Total			$3,493,690.36

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	155.00
Begin height	18.00
End Height	18.00
Multiplier	2

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	5,580.00 SF	$29.13	$162,545.40

Retaining Wall 2

Description	Value
Length	100.00
Begin height	5.00
End Height	18.00
Multiplier	4

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	4,600.00 SF	$29.13	$133,998.00
	Retaining Walls Component Total			$296,543.40

Sequence 4 Total	$6,499,149.07

Sequence: 5 NUR - New Construction, Undivided, Rural **Net Length:** 0.147 MI 775 LF

Description: Single Lane Ramp (NW)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.147
Top of Structural Course For Begin Section	103.00
Top of Structural Course For End Section	103.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.78	AC	$23,625.82	$42,053.96
120-6	EMBANKMENT	2,683.79	CY	$4.73	$12,694.33
	Earthwork Component Total				$54,748.29

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	7.50 / 7.50
Structural Spread Rate	275
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,325.31	SY	$3.61	$8,394.37
285-709	OPTIONAL BASE,BASE GROUP 09	1,348.68	SY	$12.50	$16,858.50
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	177.63	TN	$88.97	$15,803.74
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	51.67	TN	$150.13	$7,757.22

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.29	GM	$927.86	$269.08
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.29	GM	$3,715.13	$1,077.39
	Roadway Component Total				$50,160.30

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	2.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-701	OPTIONAL BASE,BASE GROUP 01	573.58	SY	$13.16	$7,548.31
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	56.84	TN	$88.97	$5,057.05
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	20.67	TN	$150.13	$3,103.19
570-1-1	PERFORMANCE TURF	516.74	SY	$1.98	$1,023.15

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
550-10-150	TYPE A FENCING (8.1'-10')	750.00	LF	$10.00	$7,500.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,015.27	LF	$1.14	$2,297.41
104-11	FLOATING TURBIDITY BARRIER	36.70	LF	$9.91	$363.70
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	36.70	LF	$3.81	$139.83
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,717.31	$2,717.31
107-1	LITTER REMOVAL	1.78	AC	$39.14	$69.67
107-2	MOWING	1.78	AC	$49.96	$88.93
	Shoulder Component Total				$29,908.55

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	2.64	CY	$1,511.58	$3,990.57
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	120.00	LF	$62.38	$7,485.60
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	24.00	LF	$106.45	$2,554.80
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	6.00	EA	$1,328.61	$7,971.66
570-1-1	PERFORMANCE TURF	103.35	SY	$1.98	$204.63
	Drainage Component Total				$22,207.26

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$270.62	$270.62
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$735.40	$2,206.20
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$4,090.38	$4,090.38
	Signing Component Total				$6,567.20

Sequence 5 Total $163,591.60

Sequence: 6 NUR - New Construction, Undivided, Rural **Net Length:** 0.388 MI 2,050 LF

Description: Two Lane Ramp (NE, SW and SE)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.388
Top of Structural Course For Begin Section	103.00
Top of Structural Course For End Section	103.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.70	AC	$23,625.82	$111,041.35
120-6	EMBANKMENT	8,553.45	CY	$4.73	$40,457.82
	Earthwork Component Total				$151,499.17

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	275
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	10,023.32	SY	$3.61	$36,184.19
285-709	OPTIONAL BASE,BASE GROUP 09	5,617.61	SY	$12.50	$70,220.12
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	751.75	TN	$88.97	$66,883.20
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	218.69	TN	$150.13	$32,831.93

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE/RAISED PAVEMENT MARKERS	52.00	EA	$3.40	$176.80
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.78	GM	$927.86	$723.73
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.39	GM	$395.58	$154.28
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.78	GM	$3,715.13	$2,897.80
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.39	GM	$1,259.71	$491.29
	Roadway Component Total				$210,563.34

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-701	OPTIONAL BASE,BASE GROUP 01	3,339.59	SY	$13.16	$43,949.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	350.82	TN	$88.97	$31,212.46
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	127.57	TN	$150.13	$19,152.08
570-1-1	PERFORMANCE TURF	1,366.82	SY	$1.98	$2,706.30

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
550-10-150	TYPE A FENCING (8.1'-10')	2,050.00	LF	$10.00	$20,500.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	5,330.58	LF	$1.14	$6,076.86
104-11	FLOATING TURBIDITY BARRIER	97.07	LF	$9.91	$961.96
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	97.07	LF	$3.81	$369.84
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,717.31	$2,717.31
107-1	LITTER REMOVAL	4.71	AC	$39.14	$184.35
107-2	MOWING	4.71	AC	$49.96	$235.31

	Shoulder Component Total				
					$128,065.47

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	6.99	CY	$1,511.58	$10,565.94
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	312.00	LF	$62.38	$19,462.56
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	72.00	LF	$106.45	$7,664.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	16.00	EA	$1,328.61	$21,257.76
570-1-1	PERFORMANCE TURF	273.36	SY	$1.98	$541.25
	Drainage Component Total				$59,491.91

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$270.62	$270.62
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	8.00	AS	$735.40	$5,883.20
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$4,090.38	$4,090.38
	Signing Component Total				$10,244.20

Sequence 6 Total $559,864.09

Sequence: 7 MIS - Miscellaneous Construction **Net Length:** 0.114 MI
600 LF

Description: Roundabout at CR 525

ROADWAY COMPONENT

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	24,722.00	SY	$3.61	$89,246.42
285-709	OPTIONAL BASE,BASE GROUP 09	22,706.00	SY	$12.50	$283,825.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	3,747.00	TN	$88.97	$333,370.59
337-7-82	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	1,249.00	TN	$346.79	$433,140.71
	Roadway Component Total				$1,139,582.72

SHOULDER COMPONENT

User Input Data

Description	Value

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
350-3-12	PLAIN CEMENT CONC PAVT, 11.5"	415.00	SY	$76.92	$31,921.80
520-1-7	CONCRETE CURB & GUTTER, TYPE E	6,575.00	LF	$28.02	$184,231.50
520-1-10	CONCRETE CURB & GUTTER, TYPE F	342.00	LF	$15.97	$5,461.74
520-2-8	CONCRETE CURB, TYPE RA	417.00	LF	$31.98	$13,335.66
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	4,755.00	SY	$39.30	$186,871.50
570-1-2	PERFORMANCE TURF, SOD	11,783.00	SY	$2.72	$32,049.76
	Shoulder Component Total				$453,871.96

Sequence 7 Total $1,593,454.68

Sequence: 8 MIS - Miscellaneous Construction **Net Length:** 0.284 MI
1,500 LF

Description: Roundabout at CR 468

ROADWAY COMPONENT

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	24,368.00	SY	$3.61	$87,968.48
285-709	OPTIONAL BASE,BASE GROUP 09	22,218.00	SY	$12.50	$277,725.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	3,666.00	TN	$88.97	$326,164.02
337-7-82	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	1,222.00	TN	$346.79	$423,777.38
	Roadway Component Total				$1,115,634.88

SHOULDER COMPONENT

User Input Data

Description	Value

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
350-3-12	PLAIN CEMENT CONC PAVT, 11.5"	428.00	SY	$76.92	$32,921.76
520-1-7	CONCRETE CURB & GUTTER, TYPE E	6,337.00	LF	$28.02	$177,562.74
520-1-10	CONCRETE CURB & GUTTER, TYPE F	355.00	LF	$15.97	$5,669.35
520-2-8	CONCRETE CURB, TYPE RA	430.00	LF	$31.98	$13,751.40
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	2,900.00	SY	$39.30	$113,970.00
570-1-2	PERFORMANCE TURF, SOD	16,075.00	SY	$2.72	$43,724.00
	Shoulder Component Total				$387,599.25

Sequence 8 Total $1,503,234.13

Date: 8/13/2018 11:54:49 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 430132-1-52-01 **Letting Date:** 01/2099

Description: SR 35 (US 301) from CR 470 to SR 44

District: 05	**County:** 18 SUMTER	**Market Area:** 07	**Units:** English
Contract Class: 1	**Lump Sum Project:** N	**Design/Build:** N	**Project Length:** 7.702 MI

Project Manager: JJH

Version 3 Project Grand Total **$69,361,560.52**

Description: SR 35 (US 301) from C-470 West to SR 44 (Truck Route Alternative) with DDI Alternative (Preferred Alternative)

Project Sequences Subtotal **$45,759,709.44**

102-1	Maintenance of Traffic	10.00 %	$4,575,970.94
101-1	Mobilization	10.00 %	$5,033,568.04

Project Sequences Total **$55,369,248.42**

Project Unknowns	25.00 %	$13,842,312.10

Justification for high %: Project Unknowns determined by Risk assessment evaluating uncertainty and event risks, dated 8/10/18.

Design/Build	0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$150,000.00	$150,000.00

Project Non-Bid Subtotal **$150,000.00**

Version 3 Project Grand Total **$69,361,560.52**

Date: 4/4/2017 8:56:11 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 430132-1-52-01 **Letting Date:** 01/2099

Description: SR 35 (US 301) from CR 470 to SR 44

District: 05 **County:** 18 SUMTER **Market Area:** 07 **Units:** English

Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 7.702 MI

Project Manager: JJH

Version 4 Project Grand Total **$62,324,169.28**

Description: SR 35 (US 301) from C-470 West to SR 44 (Coleman Alternative) with TDI Alternative (Alternative 1 with TDI)

Sequence: 2 NDU - New Construction, Divided, Urban **Net Length:** 3.144 MI 16,600 LF

Description: Urban Typical Section

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	62.75 / 62.75
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	3.144
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	47.83 AC	$23,625.82	$1,130,022.97
120-6	EMBANKMENT	391,128.13 CY	$4.73	$1,850,036.05
	Earthwork Component Total			$2,980,059.03

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	29.00 / 29.00
Structural Spread Rate	330
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount

160-4	TYPE B STABILIZATION	126,010.87 SY	$3.61	$454,899.24
285-709	OPTIONAL BASE,BASE GROUP 09	106,976.44 SY	$12.50	$1,337,205.50
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	17,651.11 TN	$88.97	$1,570,419.26
337-7-42	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	8,825.56 TN	$189.36	$1,671,208.04

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	10.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	12,601.09 SY	$3.61	$45,489.93
285-709	OPTIONAL BASE,BASE GROUP 09	10,697.64 SY	$12.50	$133,720.50
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,765.11 TN	$88.97	$157,041.84
337-7-42	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	882.56 TN	$189.36	$167,121.56

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	1,273.00 EA	$3.40	$4,328.20
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	25.15 GM	$927.86	$23,335.68
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	12.58 GM	$367.95	$4,628.81
	Roadway Component Total			$5,569,398.56

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	16,599.79 LF	$15.97	$265,098.65

520-1-10	CONCRETE CURB & GUTTER, TYPE F	16,599.79 LF	$15.97	$265,098.65
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	18,444.21 SY	$39.30	$724,857.45
570-1-2	PERFORMANCE TURF, SOD	18,444.21 SY	$2.72	$50,168.25

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	33,199.58 LF	$1.14	$37,847.52
104-11	FLOATING TURBIDITY BARRIER	785.98 LF	$10.15	$7,977.70
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	785.98 LF	$3.55	$2,790.23
104-15	SOIL TRACKING PREVENTION DEVICE	4.00 EA	$2,717.31	$10,869.24
104-18	INLET PROTECTION SYSTEM	161.00 EA	$92.68	$14,921.48
107-1	LITTER REMOVAL	80.01 AC	$39.14	$3,131.59
107-2	MOWING	80.01 AC	$49.96	$3,997.30
	Shoulder Component Total			$1,386,758.06

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	27.50
Performance Turf Width	23.00

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	33,199.58 LF	$28.02	$930,252.23
570-1-2	PERFORMANCE TURF, SOD	42,421.69 SY	$2.72	$115,387.00
	Median Component Total			$1,045,639.23

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	56.59 CY	$1,511.58	$85,540.31
425-1-351	INLETS, CURB, TYPE P-5, <10'	114.00 EA	$4,448.79	$507,162.06
425-1-451	INLETS, CURB, TYPE J-5, <10'	32.00 EA	$6,544.95	$209,438.40
425-1-521	INLETS, DT BOT, TYPE C, <10'	16.00 EA	$2,191.21	$35,059.36
425-2-41	MANHOLES, P-7, <10'	16.00 EA	$2,932.82	$46,925.12
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	8,320.00 LF	$71.64	$596,044.80
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	744.00 LF	$106.45	$79,198.80
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	15,720.00 LF	$159.77	$2,511,584.40
570-1-1	PERFORMANCE TURF	955.75 SY	$1.98	$1,892.38

Retention Basin 1

Description	Value
Size	1.5 AC
Multiplier	8
Depth	6.00
Description	Basin 1, 7, 8, 9, 11, 12, 15 and 16

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	12.00 AC	$23,625.82	$283,509.84
120-1	REGULAR EXCAVATION	116,160.00 CY	$9.02	$1,047,763.20
400-2-2	CONC CLASS II, ENDWALLS	144.00 CY	$1,511.58	$217,667.52
425-1-541	INLETS, DT BOT, TYPE D, <10'	8.00 EA	$3,196.32	$25,570.56
425-2-71	MANHOLES, J-7, <10'	8.00 EA	$4,927.18	$39,417.44
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	448.00 LF	$130.60	$58,508.80
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	1,600.00 LF	$237.33	$379,728.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	8,200.00 LF	$11.82	$96,924.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	8.00 EA	$2,099.76	$16,798.08
570-1-1	PERFORMANCE TURF	58,080.00 SY	$1.98	$114,998.40

Retention Basin 2

Description	Value
Size	2.5 AC
Multiplier	8
Depth	6.00
Description	Basins 2, 3, 4, 5, 6, 10, 13, 14

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	20.00 AC	$23,625.82	$472,516.40
120-1	REGULAR EXCAVATION	193,600.00 CY	$9.02	$1,746,272.00
400-2-2	CONC CLASS II, ENDWALLS	144.00 CY	$1,511.58	$217,667.52
425-1-361	INLETS, CURB, TYPE P-6, <10'	8.00 EA	$4,513.05	$36,104.40
425-2-71	MANHOLES, J-7, <10'	8.00 EA	$4,927.18	$39,417.44
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	448.00 LF	$130.60	$58,508.80
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	1,600.00 LF	$237.33	$379,728.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	10,680.00 LF	$11.82	$126,237.60
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	8.00 EA	$2,099.76	$16,798.08
570-1-1	PERFORMANCE TURF	96,800.00 SY	$1.98	$191,664.00

Retention Basin 3

Description	Value
Size	5 AC
Multiplier	1
Depth	6.00
Description	Basin 17

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00 AC	$23,625.82	$118,129.10
120-1	REGULAR EXCAVATION	48,400.00 CY	$9.02	$436,568.00
400-2-2	CONC CLASS II, ENDWALLS	30.00 CY	$1,511.58	$45,347.40
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00 EA	$3,196.32	$3,196.32
425-2-71	MANHOLES, J-7, <10'	2.00 EA	$4,927.18	$9,854.36
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00 LF	$130.60	$7,313.60
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	400.00 LF	$237.33	$94,932.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,860.00 LF	$11.82	$21,985.20
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	2.00 EA	$2,099.76	$4,199.52
570-1-1	PERFORMANCE TURF	24,200.00 SY	$1.98	$47,916.00

Retention Basin 4

Description	Value
Size	1 AC
Multiplier	6
Depth	6.00
Description	FPC 1, 2, 3, 4, 6, 7

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	6.00 AC	$23,625.82	$141,754.92
120-1	REGULAR EXCAVATION	58,080.00 CY	$9.02	$523,881.60
400-2-2	CONC CLASS II, ENDWALLS	108.00 CY	$1,511.58	$163,250.64
425-1-541	INLETS, DT BOT, TYPE D, <10'	6.00 EA	$3,196.32	$19,177.92
425-2-71	MANHOLES, J-7, <10'	6.00 EA	$4,927.18	$29,563.08
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	336.00 LF	$130.60	$43,881.60
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	1,200.00 LF	$237.33	$284,796.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	5,040.00 LF	$11.82	$59,572.80
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	6.00 EA	$2,099.76	$12,598.56
570-1-1	PERFORMANCE TURF	29,040.00 SY	$1.98	$57,499.20

Retention Basin 5

Description	Value
Size	5 AC
Multiplier	1
Depth	6.00
Description	FPC 5

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00 AC	$23,625.82	$118,129.10
120-1	REGULAR EXCAVATION	48,400.00 CY	$9.02	$436,568.00

400-2-2	CONC CLASS II, ENDWALLS	30.00 CY	$1,511.58	$45,347.40
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00 EA	$3,196.32	$3,196.32
425-2-71	MANHOLES, J-7, <10'	2.00 EA	$4,927.18	$9,854.36
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00 LF	$130.60	$7,313.60
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	400.00 LF	$237.33	$94,932.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,860.00 LF	$11.82	$21,985.20
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	2.00 EA	$2,099.76	$4,199.52
570-1-1	PERFORMANCE TURF	24,200.00 SY	$1.98	$47,916.00
	Drainage Component Total			$12,553,505.03

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	76.00 AS	$270.62	$20,567.12
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	7.00 AS	$735.40	$5,147.80
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	7.00 AS	$4,666.93	$32,668.51
700-2-16	MULTI- POST SIGN, F&I GM, 101-200 SF	7.00 AS	$9,382.01	$65,674.07
	Signing Component Total			$124,057.50

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	1.00
Component Detail	N

Landscaping Component Total	$227,124.00
Sequence 2 Total	$23,886,541.41

Sequence: 3 NDS - New, Divided, Suburban (Urban In/Rural Out) **Net Length:** 4.432 MI
23,400 LF

Description: Suburban Typical Section

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	74.00 / 74.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	4.432
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	79.51	AC	$23,625.82	$1,878,488.95
120-6	EMBANKMENT	411,631.55	CY	$4.73	$1,947,017.23
	Earthwork Component Total				$3,825,506.18

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	28.00 / 28.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	200,615.18	SY	$3.61	$724,220.80
285-709	OPTIONAL BASE,BASE GROUP 09	149,031.39	SY	$12.50	$1,862,892.38
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	24,023.90	TN	$88.97	$2,137,406.38
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	5,823.98	TN	$150.13	$874,354.12

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	10.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	N

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

160-4	TYPE B STABILIZATION	20,061.52 SY	$3.61	$72,422.09
285-709	OPTIONAL BASE,BASE GROUP 09	14,903.14 SY	$12.50	$186,289.25
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	2,402.39 TN	$88.97	$213,740.64

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	1,795.00 EA	$3.40	$6,103.00
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	35.45 GM	$927.86	$32,892.64
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	17.73 GM	$367.95	$6,523.75
	Roadway Component Total			$6,116,845.05

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	1.00 / 1.00
Paved Outside Shoulder Width L/R	7.00 / 7.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	38,115.84 SY	$77.28	$2,945,592.12
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	4,003.98 TN	$88.97	$356,234.10
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,455.99 TN	$150.13	$218,587.78
570-1-2	PERFORMANCE TURF, SOD	5,199.98 SY	$2.72	$14,143.95

EX-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
522-1	4" SIDEWALK CONCRETE **Comment:** 5' Wide Sidewalk on both sides of Suburban Typical	26,000.00 SY	$39.30	$1,021,800.00

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	60,839.75 LF	$1.14	$69,357.32
104-11	FLOATING TURBIDITY BARRIER	1,107.95 LF	$10.15	$11,245.69
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	1,107.95 LF	$3.55	$3,933.22
104-15	SOIL TRACKING PREVENTION DEVICE	5.00 EA	$2,717.31	$13,586.55
104-18	INLET PROTECTION SYSTEM	36.00 EA	$92.68	$3,336.48
107-1	LITTER REMOVAL	79.46 AC	$39.14	$3,110.06
107-2	MOWING	79.46 AC	$49.96	$3,969.82
	Shoulder Component Total			$4,664,897.09

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.00
Performance Turf Width	17.50

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	46,799.81 LF	$28.02	$1,311,330.68
570-1-2	PERFORMANCE TURF, SOD	45,499.81 SY	$2.72	$123,759.48
	Median Component Total			$1,435,090.16

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	79.77 CY	$1,511.58	$120,578.74
425-1-551	INLETS, DT BOT, TYPE E, <10'	36.00 EA	$3,562.87	$128,263.32
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,848.00 LF	$71.64	$132,390.72
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	1,048.00 LF	$106.45	$111,559.60
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	36.00 EA	$1,457.55	$52,471.80
570-1-1	PERFORMANCE TURF	1,701.81 SY	$1.98	$3,369.58
	Drainage Component Total			$548,633.76

INTERSECTIONS COMPONENT

Intersection 1

Description	Value
Mainline No. of Left Turn Lanes	2
Mainline No. of Right Turn Lanes	2
Mainline Design Speed	55
Cross Street Thru Lanes	2
Cross Street No. of Left Turn Lanes	2
Cross Street No. of Right Turn Lanes	2

Cross Street Design Speed	45
T-Intersection?	N
Multiplier	8
Description	8 Major Intersections (Signalized)

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	15.52 AC	$23,625.82	$366,672.73
120-6	EMBANKMENT	72,838.96 CY	$4.73	$344,528.28
160-4	TYPE B STABILIZATION	25,525.36 SY	$3.61	$92,146.55
160-4	TYPE B STABILIZATION	34,003.28 SY	$3.61	$122,751.84
285-704	OPTIONAL BASE,BASE GROUP 04	4,906.64 SY	$77.28	$379,185.14
285-709	OPTIONAL BASE,BASE GROUP 09	25,525.36 SY	$12.50	$319,067.00
285-709	OPTIONAL BASE,BASE GROUP 09	29,096.64 SY	$12.50	$363,708.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	4,211.68 TN	$88.97	$374,713.17
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	5,070.80 TN	$88.97	$451,149.08
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,021.04 TN	$150.13	$153,288.74
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,360.08 TN	$150.13	$204,188.81
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	4,906.64 SY	$39.30	$192,830.95
570-1-1	PERFORMANCE TURF	2,620.16 SY	$1.98	$5,187.92
	Intersections Component Total			$3,369,418.24

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	107.00 AS	$270.62	$28,956.34
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	9.00 AS	$735.40	$6,618.60
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	9.00 AS	$3,937.00	$35,433.00
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	9.00 AS	$4,666.93	$42,002.37
	Signing Component Total			$113,010.31

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	4 Lane Strain Pole
Multiplier	8
Description	8 Signalized Intersections

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	6,000.00 LF	$11.13	$66,780.00

630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	1,600.00 LF	$24.21	$38,736.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	8.00 PI	$7,722.59	$61,780.72
634-4-143	SPAN WIRE ASSEMBLY, F&I, SINGLE PT, BOX	8.00 PI	$2,310.94	$18,487.52
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	112.00 EA	$682.81	$76,474.72
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	8.00 AS	$2,119.80	$16,958.40
639-2-1	ELECTRICAL SERVICE WIRE, F&I	240.00 LF	$3.47	$832.80
641-2-16	PREST CNC POLE,F&I,TYP P-VI	32.00 EA	$13,262.00	$424,384.00
650-1-14	TRAFFIC SIGNAL,F&I ALUMINUM, 3 S 1 W	96.00 AS	$2,069.90	$198,710.40
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	64.00 AS	$679.37	$43,479.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	96.00 EA	$176.09	$16,904.64
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	96.00 AS	$918.52	$88,177.92
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	64.00 EA	$170.81	$10,931.84
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	8.00 AS	$20,749.60	$165,996.80
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	32.00 EA	$156.45	$5,006.40
	Signalizations Component Total			$1,233,641.84

BRIDGES COMPONENT

Bridge 123456

Description		Value
Estimate Type		SF Estimate
Primary Estimate		YES
Length (LF)		118.11
Width (LF)		97.33
Type		Medium Level
Cost Factor		1.04
Structure No.		
Removal of Existing Structures area		0.00
Default Cost per SF		$135.00
Factored Cost per SF		$140.40
Final Cost per SF		**$149.98**
Basic Bridge Cost		**$1,613,988.74**
Description	SHADY BROOK BRIDGE	

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	216.29 CY	$346.67	$74,981.25
415-1-9	REINF STEEL- APPROACH SLABS	37,850.75 LB	$0.93	$35,201.20
	Bridge 123456 Total			$1,724,171.19

Bridge 654321

Description	Value

Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	170.00
Width (LF)	149.08
Type	Medium Level
Cost Factor	1.02
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$137.70
Final Cost per SF	**$144.36**
Basic Bridge Cost	**$3,489,813.72**
Description	TDI BRIDGE

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	331.29 CY	$346.67	$114,848.30
415-1-9	REINF STEEL- APPROACH SLABS	57,975.75 LB	$0.93	$53,917.45
	Bridge 654321 Total			$3,658,579.47
	Bridges Component Total			$5,382,750.66

Sequence 3 Total	$26,689,793.29

Sequence: 4 NUR - New Construction, Undivided, Rural **Net Length:** 0.147 MI 775 LF

Description: Single Lane Ramp (NW)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.147
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.78	AC	$23,625.82	$42,053.96
120-6	EMBANKMENT	6,643.93	CY	$4.73	$31,425.79
	Earthwork Component Total				$73,479.75

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	7.50 / 7.50
Structural Spread Rate	275
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,325.31	SY	$3.61	$8,394.37
285-709	OPTIONAL BASE,BASE GROUP 09	1,348.68	SY	$12.50	$16,858.50
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	177.63	TN	$88.97	$15,803.74
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	51.67	TN	$150.13	$7,757.22

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.59 GM	$927.86	$547.44
	Roadway Component Total			$49,361.27

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	2.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-701	OPTIONAL BASE,BASE GROUP 01	573.58 SY	$13.16	$7,548.31
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	56.84 TN	$88.97	$5,057.05
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	20.67 TN	$150.13	$3,103.19
570-1-2	PERFORMANCE TURF, SOD	516.74 SY	$2.72	$1,405.53

EX-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
550-10-150	TYPE A FENCING (8.1'-10')	750.00 LF	$10.00	$7,500.00

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,015.27 LF	$1.14	$2,297.41
104-11	FLOATING TURBIDITY BARRIER	36.70 LF	$10.15	$372.50
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	36.70 LF	$3.55	$130.28
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$2,717.31	$2,717.31
107-1	LITTER REMOVAL	1.78 AC	$39.14	$69.67
107-2	MOWING	1.78 AC	$49.96	$88.93
	Shoulder Component Total			$30,290.19

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price

				Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	2.64 CY	$1,511.58	$3,990.57
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	120.00 LF	$68.03	$8,163.60
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	24.00 LF	$106.45	$2,554.80
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	6.00 EA	$1,457.55	$8,745.30
570-1-1	PERFORMANCE TURF	103.35 SY	$1.98	$204.63
	Drainage Component Total			$23,658.90

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00 AS	$270.62	$270.62
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00 AS	$735.40	$735.40
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00 AS	$3,937.00	$3,937.00
	Signing Component Total			$4,943.02

Sequence 4 Total $181,733.13

Sequence: 5 NUR - New Construction, Undivided, Rural **Net Length:** 0.388 MI
2,050 LF

Description: Two Lane Ramps (NE, SW and SE)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.388
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.70 AC	$23,625.82	$111,041.35
120-6	EMBANKMENT	20,984.90 CY	$4.73	$99,258.58
	Earthwork Component Total			$210,299.93

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	275
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	10,023.32 SY	$3.61	$36,184.19
285-709	OPTIONAL BASE,BASE GROUP 09	5,617.61 SY	$12.50	$70,220.12
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	751.75 TN	$88.97	$66,883.20
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	218.69 TN	$150.13	$32,831.93

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	52.00 EA	$3.40	$176.80
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.55 GM	$927.86	$1,438.18
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.78 GM	$367.95	$287.00
	Roadway Component Total			$208,021.42

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-701	OPTIONAL BASE,BASE GROUP 01	3,339.59 SY	$13.16	$43,949.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	350.82 TN	$88.97	$31,212.46
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	127.57 TN	$150.13	$19,152.08
570-1-2	PERFORMANCE TURF, SOD	1,366.82 SY	$2.72	$3,717.75

EX-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
550-10-150	TYPE A FENCING (8.1'-10')	2,050.00 LF	$10.00	$20,500.00

Erosion Control

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	5,330.58 LF	$1.14	$6,076.86
104-11	FLOATING TURBIDITY BARRIER	97.07 LF	$10.15	$985.26
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	97.07 LF	$3.55	$344.60
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$2,717.31	$2,717.31
107-1	LITTER REMOVAL	4.71 AC	$39.14	$184.35
107-2	MOWING	4.71 AC	$49.96	$235.31
	Shoulder Component Total			$129,074.98

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	6.99 CY	$1,511.58	$10,565.94
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	312.00 LF	$68.03	$21,225.36
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	72.00 LF	$106.45	$7,664.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	16.00 EA	$1,457.55	$23,320.80
570-1-1	PERFORMANCE TURF	273.36 SY	$1.98	$541.25
	Drainage Component Total			$63,317.75

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	3.00 AS	$270.62	$811.86
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00 AS	$735.40	$2,206.20
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	3.00 AS	$3,937.00	$11,811.00
	Signing Component Total			$14,829.06

Sequence 5 Total $625,543.14

Date: 4/4/2017 8:56:14 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 430132-1-52-01 **Letting Date:** 01/2099

Description: SR 35 (US 301) from CR 470 to SR 44

District: 05	**County:** 18 SUMTER	**Market Area:** 07	**Units:** English
Contract Class: 1	**Lump Sum Project:** N	**Design/Build:** N	**Project Length:** 7.702 MI

Project Manager: JJH

Version 4 Project Grand Total **$62,324,169.28**

Description: SR 35 (US 301) from C-470 West to SR 44 (Coleman Alternative) with TDI Alternative (Alternative 1 with TDI)

Project Sequences Subtotal			**$51,383,610.97**
102-1	Maintenance of Traffic	10.00 %	$5,138,361.10
101-1	Mobilization	10.00 %	$5,652,197.21
Project Sequences Total			**$62,174,169.28**
Project Unknowns		25.00 %	$15,543,542.32
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$150,000.00	$150,000.00
Project Non-Bid Subtotal					**$150,000.00**

Version 4 Project Grand Total $77,867,711.60