

5

5. Design Controls & Criteria

5.1 Design Controls

The FDOT Context Classification (February 2022) guidebook provides detailed criteria to determine the context classification along state roadways. The 2023 FDOT Design Manual (FDM) design criteria are based on context classification, functional classification, and design speed. The 2018 Florida Greenbook was used for design criteria for non-state roads. The study team followed these criteria for the development of design geometry as it applies to the access roads leading to the truck parking sites. Specifically, the development of access driveways was guided by the 2023 FDM and the 2018 Florida Greenbook.

The context classification evaluation results are shown in **Table 5-1** for context, as context classification is used to determine many design decisions within the FDM.

Table 5-1: Summary of Context Classification Evaluation

County	Site	Access Road	Context Classification	Context Classification Description
Osceola	1	CR 532	C3R*	Mostly residential uses within large blocks and a disconnected or sparse roadway network.
Orange	1	Sand Lake Road	C3C	Mostly non-residential uses with large building footprints and large parking lots within large blocks and a disconnected or sparse roadway network.
	2	Landstreet Road	C3C*	
	4	Landstreet Road	C3C*	
Seminole	1B	US 17/92	C3C	
		School Street	C3C*	
Volusia	1A	I-4 Eastbound	C2*	Sparsely settled lands, may include agricultural land, grassland, woodland, and wetlands.
	1B	I-4 Westbound	C2*	

*FDOT does not define a context classification for these roads, therefore a context classification was determined based on a desktop review of the surrounding area.

5.2 Design Criteria

5.2.1 Roadway Design Criteria

For four of the seven viable sites, new construction or improvements are proposed for the access roads to the sites. **Table 5-2** summarizes the access roads to each viable site, if any improvements are proposed, and which design guideline is used for the site.

Table 5-2: Viable Sites Access and Design Guidelines

Viable Site	Osceola County Site 1	Orange County Site 1	Orange County Site 2	Orange County Site 4	Seminole County Site 1B	Volusia County Site 1A	Volusia County Site 1B
Access Road	CR 532	Sand Lake Road/ John Young Parkway Ramp	West Landstreet Road	West Landstreet Road	School Street	I-4 Eastbound	I-4 Westbound
Access Road Improvements	Add left and right turn lane into site	None	Minor striping modifications	None	Widen School Street	Add on-ramps and off-ramps	Add on-ramps and off-ramps
Design Guideline Used	2018 Florida Greenbook	N/A	2009 MUTCD	N/A	2018 Florida Greenbook	2023 FDOT FDM	2023 FDOT FDM

The design criteria determined by the assigned context classification are provided in **Table 5-3**, as defined in the 2023 FDM, 2018 Florida Greenbook, and 2009 Manual on Uniform Traffic Control Devices (MUTCD). Note that **Table 5-3** only lists the roadways where roadway improvements are proposed; Sand Lake Road and West Landstreet Road are not shown below for this reason. All criteria are subject to change, and only the most current criteria will be used during the final Design phase.

Table 5-3: 2023 FDOT Design Manual Design Criteria by Context Classification

Design Control	CR 532 (Osceola County Site 1)	School Street (Seminole County Site 1B)	I-4 Ramps (Volusia County Site 1A)	I-4 Ramps (Volusia County Site 1B)	Source
Design Guideline	2018 Florida Greenbook	2018 Florida Greenbook	2023 FDOT FDM	2023 FDOT FDM	Selected by Study
Context Classification	C3C	C3C	N/A - Limited Access Facility	N/A - Limited Access Facility	Selected by Study
Functional Classification	Minor Arterial-Urban	Local Urban	Principal Arterial-Interstate Rural	Principal Arterial-Interstate Rural	FDOT Straight Line Diagram/ Selected by Study
Allowable Design Speed Range	35 – 55 mph	35 – 55 mph	50 (Direct Connection)	50 (Direct Connection)	Florida Greenbook Table 3-1 and FDM Table 201.5.2
Design Speed	45 mph	25 mph	50 mph	50 mph	Selected by Study
Lane Widths (Travel and Auxiliary)	12 ft	12 ft	15 ft	15 ft	Florida Greenbook Table 3-20 and FDM Section 211.2.1
Minimum Border Width	N/A	N/A	94 ft	94 ft	FDM Section 211.6
Minimum Clear Zone	18 ft	6 ft	14 ft	14 ft	Florida Greenbook Table 4-1 and FDM Table 215.2.1
On-Street Parking	N/A	N/A	N/A	N/A	Florida Greenbook Chapter 1 Section C.7.h and FDM Section 210.2.3
Standard Sidewalk Width	5 ft	5 ft	N/A	N/A	Florida Greenbook Chapter 8 Section B.1 and FDM Table 222.2.1
Curb & Gutter Type	Type F Curb and Gutter (Outside only)	Type F Curb and Gutter (Outside only)	N/A	N/A	Florida Greenbook Chapter 3 Section C.7.g and FDM Section 210.5

Table 5-4 provides additional design criteria not controlled by the context classification for each of the project segments.

Table 5-4: 2023 FDOT Design Manual Design Criteria Additional Standards

Design Control	CR 532 (Osceola County Site 1)	School Street (Seminole County Site 1B)	I-4 Ramps (Volusia County Site 1A)	I-4 Ramps (Volusia County Site 1B)	Source
Typical Section Type	Urban	Local	Interstate	Interstate	Selected by Study
Access Management Classification	N/A	N/A	1 – Freeway	1 – Freeway	FDOT Straight Line Diagram/Selected by Study
Access Class - Connection Spacing	N/A	N/A	Interchange Spacing Area Type 3 – 3 miles	Interchange Spacing Area Type 3 – 3 miles	FDM Table 201.4.1
Access Class – Median Opening Spacing	“Frequent median openings should be avoided”	“Frequent median openings should be avoided”	N/A	N/A	Florida Greenbook Chapter 3 Section C.8.b.2 and FDM Table 201.4.2
Access Class – Signal Spacing	N/A	N/A	N/A	N/A	FDM Table 201.3.2
Pavement Cross Slope	0.015 (minimum) 0.02 (recommended)	0.015 (minimum) 0.02 (recommended)	0.02	0.02	Florida Greenbook Chapter 3 Section C.7.b.2 and FDM Figure 211.2.1
Paved Shoulder Width	4 ft (to accommodate bicyclists)	5 ft	4 ft outside without shoulder gutter 2 ft inside without shoulder gutter	4 ft outside without shoulder gutter 2 ft inside without shoulder gutter	Florida Greenbook Chapter 9 Section B.5 and FDM Table 211.4.1
Unpaved Shoulder Width	N/A	N/A	2 ft outside without shoulder gutter 4 ft inside without shoulder gutter	2 ft outside without shoulder gutter 4 ft inside without shoulder gutter	FDM Table 211.4.1
Roadside Front Slopes	1:4 (minimum) 1:6 (recommended)	1:4 (minimum) 1:6 (recommended)	1:6	1:6	Florida Greenbook Chapter 4 Section B.1.a and FDM Table 215.2.3
Max Deflection Without a Curve	0°45'00"	2°00'00"	0°45'00"	0°45'00"	Florida Greenbook Chapter 3 Section C.4.b and FDM Section 211.7.1
Max Deflection for Through Lanes Through Intersections	N/A	11°00'00"	N/A	N/A	Florida Greenbook Chapter 3 Section C.4.b and FDM Table 212.7.1

Table 5-4: 2023 FDOT Design Manual Design Criteria Additional Standards (continued)

Design Control	CR 532 (Osceola County Site 1)	School Street (Seminole County Site 1B)	I-4 Ramps (Volusia County Site 1A)	I-4 Ramps (Volusia County Site 1B)	Source
Maximum Curvature	6°30'	34°18'18"	8°15'	8°15'	Florida Greenbook Tables 3-10 and 3-12 and FDM Table 210.9.1
Min Length of Curve	825 ft (Desirable) 400 ft (Minimum)	N/A	1500 ft (Desirable) 750 ft (Minimum)	1500 ft (Desirable) 750 ft (Minimum)	Florida Greenbook Table 3-8 and FDM Table 211.7.1
Max Profile Grade	5%	7%	5%	5%	Florida Greenbook Table 3-16 and FDM Table 211.9.1
Max Change in Grade w/o Vertical Curve	0.50	1.10	0.60	0.60	Florida Greenbook Table 3-17 and FDM Table 210.10.2
Minimum Grade	N/A	N/A	N/A	N/A	FDM Section 210.10.1.1
Min Sight Distance	495 ft (level profile)	155 ft (level profile)	495 ft (<2% downgrade and upgrade profile grade)	495 ft (<2% downgrade and upgrade profile grade)	Florida Greenbook Table 3-4 and FDM Table 211.10.1
Min Crest Vertical Curve (K)	114	12	136	136	Florida Greenbook Table 3-18 and FDM Table 210.10.3
Min Sag Vertical Curve (K)	115	26	96	96	Florida Greenbook Table 3-18 and FDM Table 210.10.3

5.2.2 Stormwater Management Criteria

The design criteria shown below is based on the *South Florida Water Management District (SFWMD) Environmental Resource Permit Applicant's Handbook, Volume II (2010)*, *St John's River Water Management District (SJRWMD) Permit Information Manual (2018)*, and the *FDOT Drainage Design Guide (2018)*.

SFWMD Criteria:

1. Flood Control/Water Quantity:
 - a. For a project or portion of a project located within an open drainage basin, the allowable discharge is either:
 - i. 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
 - ii. Amounts determined in previous District permit actions relevant to the project

Offsite discharge and peak stages for the existing and proposed conditions shall be computed using the SFWMD's 25-year/72-hour rainfall maps and the NRCS Type II Florida Modified 24-hour rainfall distribution with an Antecedent Moisture Condition (AMC) II. SFWMD Orlando Office allows the County rainfall criteria to be substituted in place of the

SFWMD 25-year/75-hour rainfall event, and Orange County requires discharges computed using the 25-year/72-hour rainfall event.

2. Stormwater Quality:

- a. For wet detention ponds, treatment will be provided for the greater of one inch of runoff over the drainage area or 2.5 inches of runoff from the impervious area (excluding water bodies).
 - i. An outfall control structure shall be designed to drawdown a maximum of 0.5 inches of the detention volume in 24 hours.
- b. For dry retention ponds, treatment will be provided 50% of the volume provided for wet detention: equal to the greater of 0.5 inches over the drainage area or 1.25 inches of runoff from the impervious area (excluding water bodies).
 - i. Dry retention areas shall have mechanisms for returning the groundwater level in the area to the control elevation. The bleed-down rate for these systems is a maximum of 0.5 inches of the detention volume in 24 hours.
- c. When a project or portion of a project is located within a basin that discharges to an OFW, the required treatment volume shall be increased by 50%. SFWMD requires all projects that discharge to the Lake Okeechobee BMAP to meet OFW criteria.

The project traverses three WBIDs with SFWMD: 3170C – Reedy Creek Above Lake Russell, 3169A – Shingle Creek, and 3168B – Boggy Creek; of which none are impaired for nutrients (Chlorophyll-a) according to the current FDEP 303(d) list of impaired water bodies. However, a pre versus post nutrient loading analysis is required for this study due to these WBIDs discharging to the Lake Okeechobee BMAP.

SJRWMD Criteria:

1. Flood Control/Water Quantity:

- a. For a project or portion of a project located within an open drainage basin, the post-development peak discharge shall be at or below pre-development peak discharge for the 25-year/24-hour and mean annual storms.
 - i. Offsite discharges and peak stages for the existing and proposed conditions shall be computed using the SJRWMD 25-year/24-hour rainfall depth and the NRCS Type II Florida Modified 24-hour rainfall distribution with an AMC II.

2. Stormwater Quality:

- a. For wet detention ponds, treatment will be provided for the greater of 1 inch of runoff over the drainage area or 2.5 inches of runoff from the impervious area (excluding water bodies). The drainage area for this project is considered to be the total area of the site plus any additional required access roads or modifications to them.
 - i. An orifice should be set at the Average Wet Seasonal Water Elevation (AWSWE) and sized to drawdown one-half of the required treatment volume within 24 to 30 hours, but no more than one-half of this volume will be discharged within the first 24 hours.
- b. When a project or portion of a project is located within a basin that discharges to an OFW, the required treatment volume shall be increased by 50%.

FDOT Criteria:

1. Pond Configuration:

- a. Side Slopes of 1 (vertical) to 4 (horizontal) or flatter. Conserve established slope vegetation, where possible.

- b. Refer to the Drainage Manual for minimum widths and slopes for maintenance berms (15-foot minimum with a side slope of 1:8 or flatter). For ponds with permanent pools, keep the lowest point of the maintenance berm at least one foot above the top of the treatment volume.
- c. Use a radius of 30 feet or larger for the inside edge of the maintenance berm.
- d. Have a benchmark constructed near or in all ponds to check critical elevations or the pond and outlet control structure.
- e. Provide permanent pool volume based on Water Management District requirements.
- f. At least 1.0 foot of freeboard is required above the maximum design stage of the pond below the front of the maintenance berm.

5.2.3 Site Design

For the design of all the viable truck parking sites, consistent site design criteria were used, and are summarized in **Table 5-5** below. The design vehicle was decided to be WB-67 as it requires more off tracking than the WB-62FL and was determined to provide more room for error for truck drivers that normally come into this facility at the end of a shift.

Table 5-5: Truck Parking Site Design Guidelines

Design Control	Value	Source
Design Vehicle	WB-67	Selected by Study
WB-67 Parking Spot Width	15 ft	Selected by Study
WB-67 Parking Spot Length	90 ft	Selected by Study
WB-67 Parking Spot Angle	45°	Selected by Study
Oversize Vehicle Parking Spot Width	20 ft	Selected by Study
Oversize Vehicle Parking Spot Length	125 ft	Selected by Study
Oversize Vehicle Parking Spot Angle	Parallel Parking	Selected by Study
One-way Interior Lane Width	45 ft	Selected by Study
Two-way Interior Lane Width	22.5 ft	Selected by Study
Two-way Exterior Lane Width	25 ft	Selected by Study
Truck Parking Site Driveway Lane Width	15 ft	Selected by Study
Truck Parking Site Driveway Striped Median Width	10 ft	Selected by Study
Sidewalk Width	8 ft	Selected by Study

**Note: Design control values vary per site as needed to accommodate for design vehicle movements*

6

6. Alternatives Analysis

The objective of the alternatives analysis process is to identify feasible truck parking site alternatives which meet the needs of the project, are cost effective, and minimize environmental and community impacts. This chapter describes the alternatives considered during this study.

6.1 No-Build Alternative

The No-Build Alternative, carried as a viable option throughout the PD&E Study process, assumes no construction of a new freight parking facility and no additional freight parking capacity along I-4 within the Osceola, Orange, Seminole, and Volusia Counties because of this project. No public truck parking facilities are programmed or included in the No-Build Alternative. The No-Build Alternative includes programmed intersection improvements and roadway widening within the vicinity of the seven viable trucking parking sites, as documented in Section 6.3.3. The advantages of the No-Build Alternative include no additional ROW acquisition, no impacts to the environment from construction, no disruption of traffic during construction, and no project cost. The disadvantages of the No-Build Alternative are the purpose and need for the project are not satisfied: existing and future freight parking demand is not accommodated, safety for truck drivers is not improved, and freight mobility is not increased to support better movement of goods for the local communities.

6.2 Transportation Systems Management and Operations

Transportation Systems Management and Operations (TSM&O) alternatives focus on maximizing the capacity, safety, security, and reliability of the existing transportation facility by implementing a variety of short-term projects and services. As part of the study, the existing and planned intelligent transportation systems (ITS) infrastructure was identified based on available data.

The prior *FDOT District Five Truck Parking Study* determined that TSM&O alternatives alone would not adequately meet the project purpose and need, and additional parking capacity was needed. However, as part of the development of Build Alternatives, various TSM&O strategies were considered and identified in support of those Build Alternatives and the surrounding transportation network.

6.2.1 Existing and Planned ITS Infrastructure

FDOT has developed and deployed TPAS at freight parking facilities across the State to address the need for parking information management. The TPAS program was delivered in three stages: implementation of technology at state owned facilities to accurately assess and disseminate the availability of truck parking; development of predictive analysis for future parking availability; and incorporation of private parking locations for systemwide resource utilization. The information that is provided by TPAS assists truck drivers in identifying available parking locations where the technology is deployed.

FDOT Fiber Optic lines run adjacent to all sites with exception of the Osceola County site. During the proposed widening of CR 532, fiber optic lines will be installed.

6.2.2 Supportive TSM&O Deployments

The following are ITS devices that have recently been installed along I-4 as part of the TPAS program:

- Along I-4
 - Freight Parking Availability signs along I-4 (live parking space info connected to sites)
- At freight parking sites
 - Parking detection, cell modem, and other equipment needed to collect and communicate parking space availability for trucks traveling along I-4.

6.2.3 Electric Vehicle Charging Station Considerations

In July 2021, FDOT published the *Electric Vehicle Infrastructure Master Plan*, in compliance with Florida Statute 339.287, to establish a plan for installing EV charging stations along Florida's State Highway System (SHS). In August 2022, FDOT published *Florida's Electric Vehicle Infrastructure Deployment Plan* as a framework for implementing the National Electric Vehicle Infrastructure (NEVI) program and investing funds toward EV infrastructure improvements that address existing charging gaps within the State.

While neither document identifies specific locations for deployment along Florida's SHS, the viable truck parking sites discussed in this PD&E Study were examined as potential locations for freight-supportive EV charging stations. The standard EV charging station generates approximately 150 kilowatts (kW) of power. However, heavy-duty freight vehicles require heavy-duty EV charging equipment operating at more than 150 kW, up to 350 kW of power. Deploying heavy-duty EV charging equipment would require additional planning, design, and construction of supportive infrastructure at each site.

Various EV adoption projections are available for the national and global retail markets. However, there is less information available regarding heavy-duty freight EV adoption. More information regarding the future EV market is needed to determine the viability of heavy-duty EV charging stations at the viable truck parking sites discussed in this PD&E Study. Further coordination with FDOT Central Office is recommended during the Design phase. The PD&E concepts assumed subsurface infrastructure (conduit) to support shore power and EV charging stations.

6.3 Build Alternatives

During the PD&E Study, an initial screening analysis was conducted to identify potential sites. After further alternatives screening, 12 initial sites were identified for more detailed alternatives screening. As a result, seven viable sites were identified and detailed site concepts were developed for each of these seven viable sites. Further engineering and environmental analyses were completed and resulted in five preferred sites. Environmental features considered in the development of the Build Alternatives include wetlands, floodplains, threatened and endangered species, contamination sites, historical/archaeological resources, noise sensitive areas, and social environment factors (parcels, ROW, and relocations).

As the study progressed and sites were further analyzed, the number of parking spaces and sizes of each proposed site was refined. Further discussion of the five preferred sites can be found in **Section 6.6**. The alternatives screening, evaluation of the Build Alternatives, and the identification of the Preferred Alternative for the seven viable truck parking sites are documented within the following sections.

6.3.1 Initial Site Screening

Using the primary site selection criteria and methodology identified in Chapter 2, there were 5 criteria used to identify sites along the I-4 corridor within the study limits. The criteria included land use, zoning, size of parcel, proximity to I-4, and access. After identifying sites that met these criteria, the list was refined based on proximity to residential areas, if the parcel was already developed, if the site had significant environmental constraints, etc. Also, sites that were publicly owned took precedence over privately owned sites to reduce ROW impacts and project costs.

In support of the primary site selection criteria, local agency input was collected, and additional consideration was given to publicly owned properties, industrial clusters, and properties with access to connected major highways to help identify additional sites in Osceola and Orange Counties. As a result of the screening process (primary and secondary), 12 initial sites were identified as initial sites for further review during the PD&E process. **Figure 6-1** is a regional map indicating each site's location within Central Florida.

6.3.2 Initial Sites

As previously mentioned, over 77,000 parcels were screened for potential viability as truck parking sites near the I-4 corridor within Osceola, Orange, Seminole, and Volusia counties. After completing the initial screening of this portion of the I-4 corridor, 12 initial sites were identified and are briefly summarized in the sections below. **Figure 6-2** through **Figure 6-12** are detailed maps of each initial site.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 is located approximately 3.87 miles east of the I-4 interchange with CR 532 along the south side of CR 532. This site is immediately east of the planned PPE. The potential site is approximately 35.1 acres.

Osceola County Site 2 – CR 532 – Northside

Osceola County Site 2 is located approximately 4.06 miles east of the I-4 interchange with CR 532 along the north side of CR 532. This site is immediately west of the Duke Energy Florida site on CR 532. The potential site is approximately 24.3 acres.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Orange County Site 1 is located along Sand Lake Road approximately 2.90 miles east of I-4. The site is located immediately west of the limited access facility Florida's Turnpike. The site is approximately 36.70 acres.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

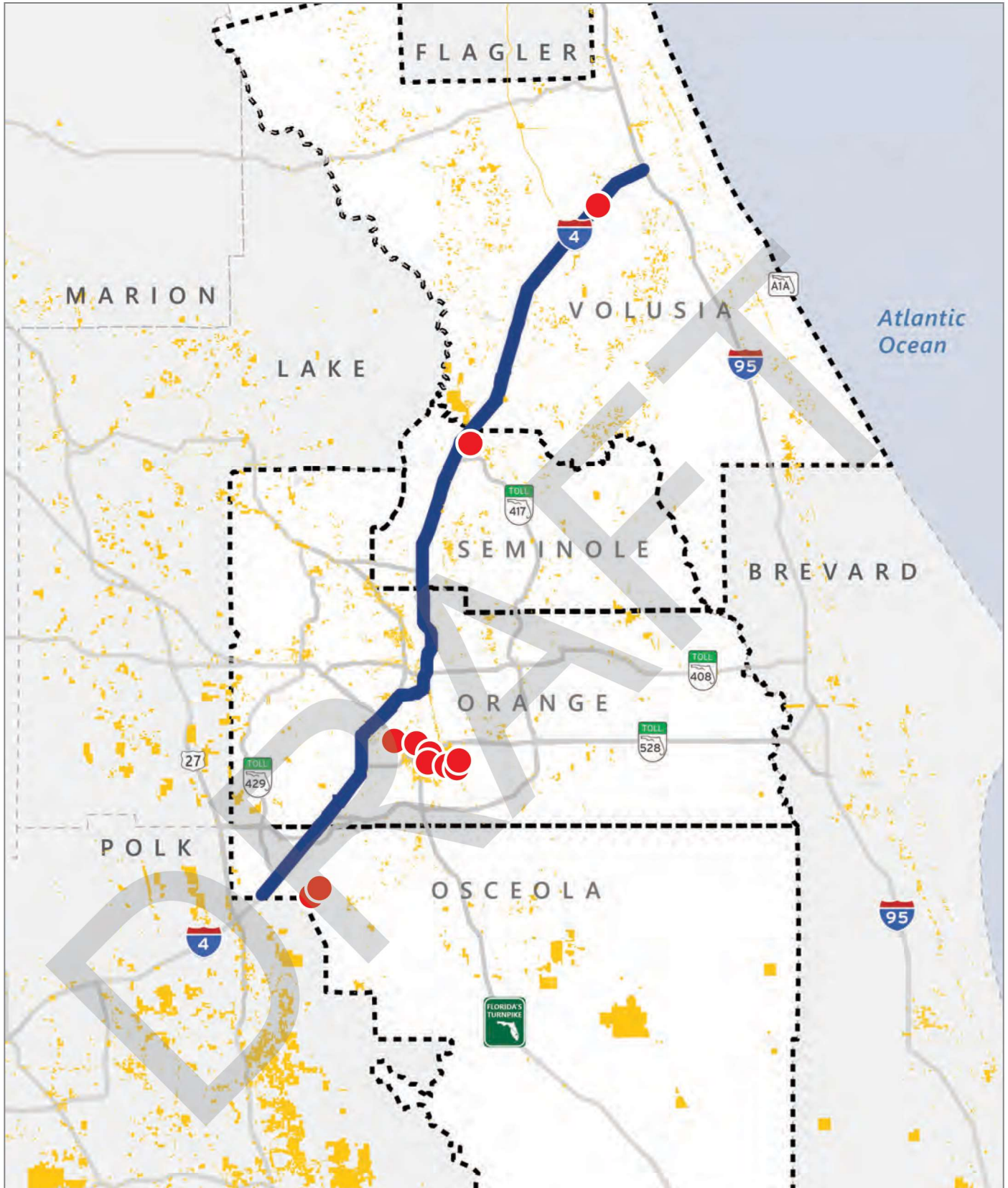
Orange County Site 2 is located in a heavy industrial area along West Landstreet Road, adjacent to the SR 528 interchange. The site is approximately 4.86 miles east of I-4. The site is approximately 6.80 acres.

Orange County Site 3 – West Landstreet Road, East of SR 528 - Southside

Orange County Site 3 is in a heavy industrial area along the south side of West Landstreet Road, near the Parkers Landing intersection. The site is approximately 5.95 miles east of I-4. This site is owned by FDOT, who plans to reconfigure the site in the future. The site is approximately 9.90 acres.

Orange County Site 4 – West Landstreet Road, East of SR 528 - Northside

Orange County Site 4 is in a heavy industrial area along the north side of West Landstreet Road, near the Trussway Boulevard intersection. The site is approximately 6.03 miles east of I-4. Many local truck drivers store their vehicles at this site when the vehicles are not in use. The site is approximately 4.86 acres.



County Boundary



Freight Facilities

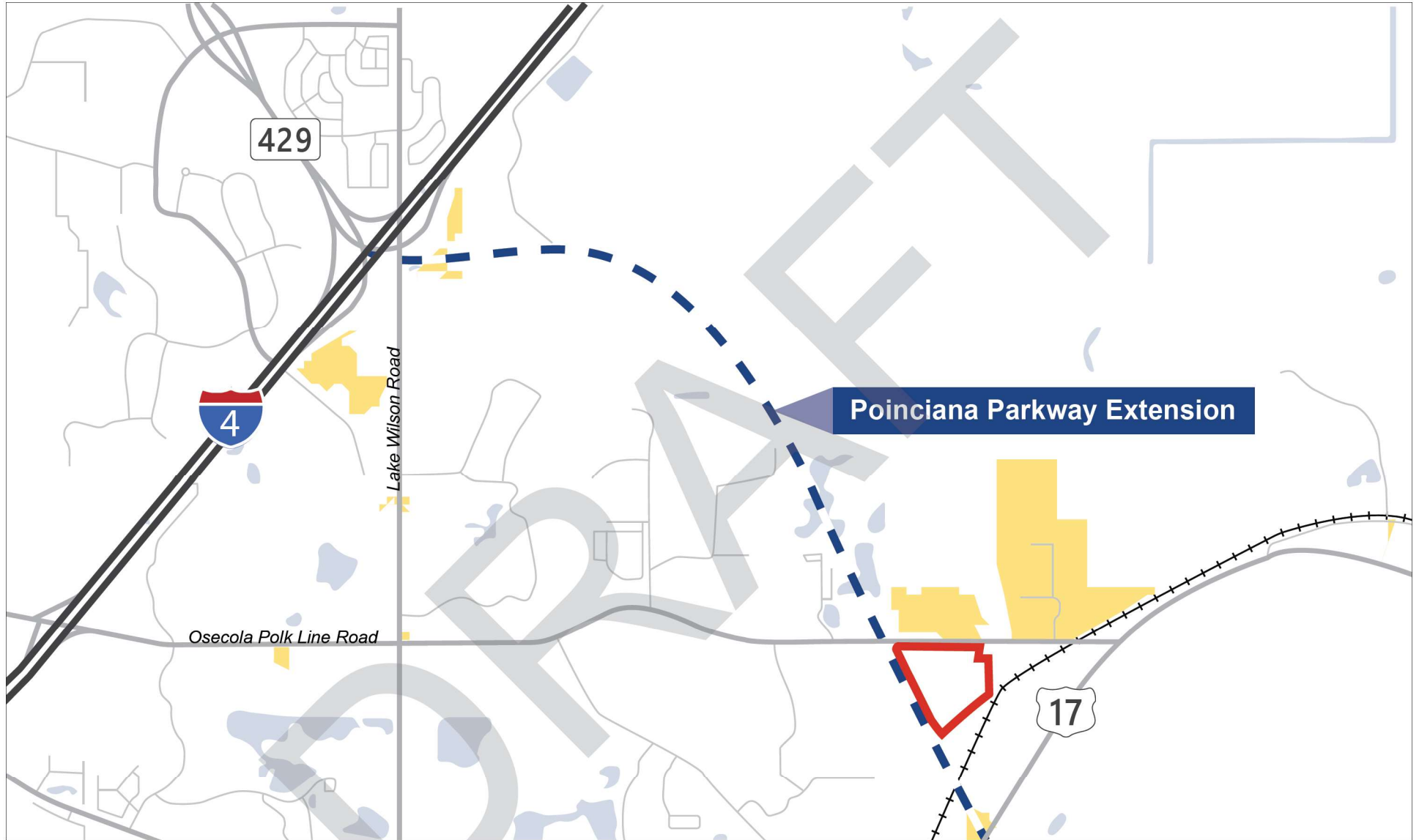


Site Location



Figure 6-1

Regional Map of Initial Sites
Preliminary Engineering Report



Potential Site

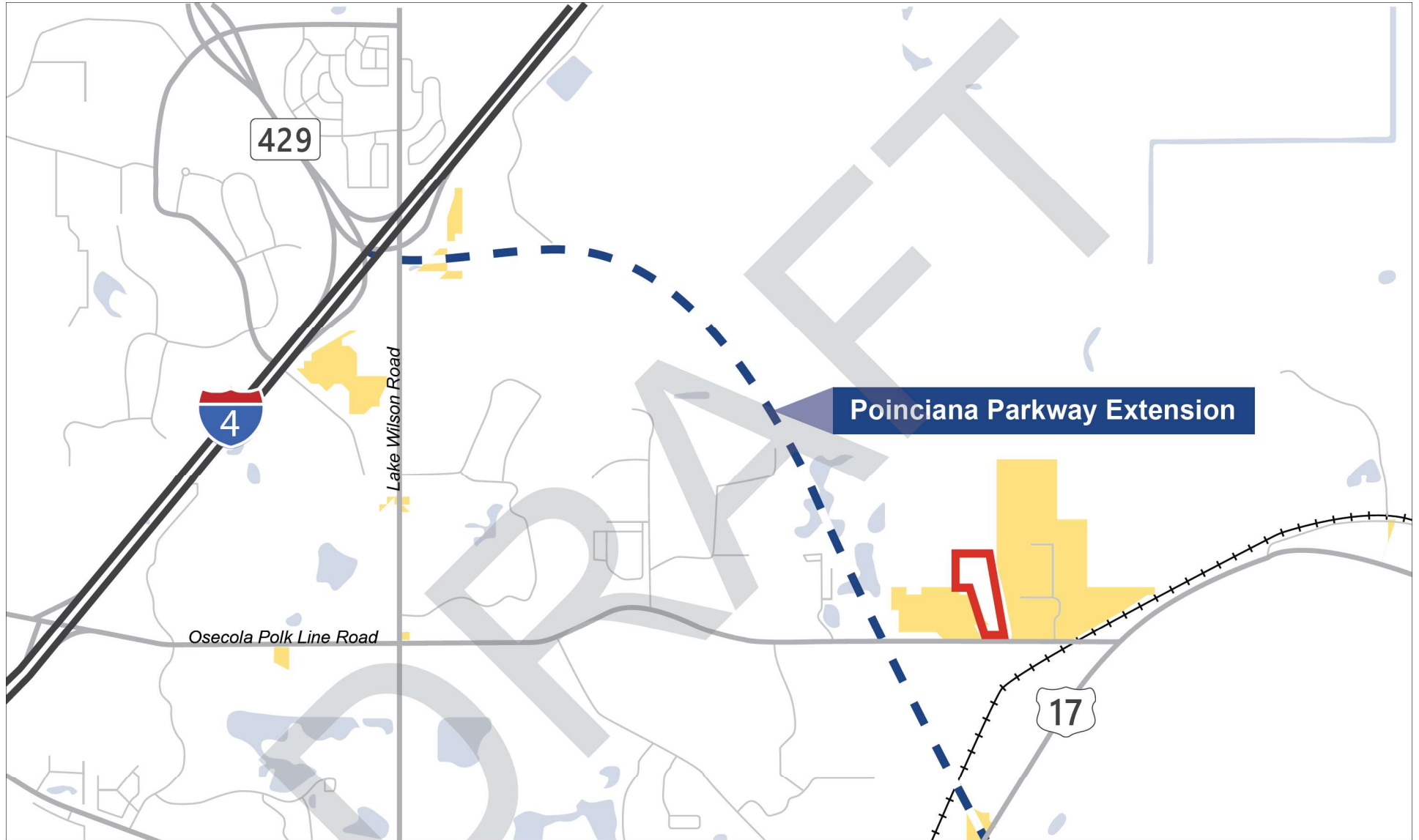


Freight Facilities



Figure 6-2

**Osceola County Site 1
CR 532 and Poinciana Parkway Extension
Preliminary Engineering Report**



Potential Site



Freight Facilities



Figure 6-3

Osceola County Site 2

CR 532 - Northside

Preliminary Engineering Report

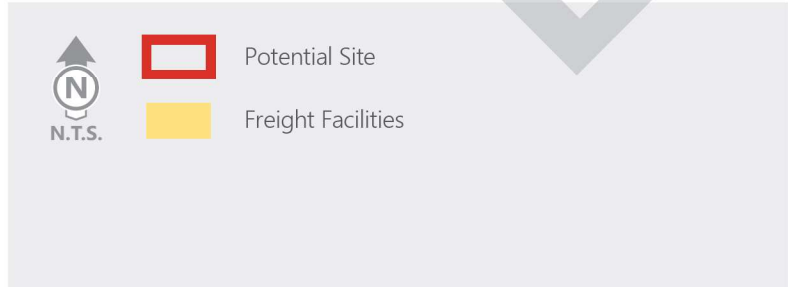
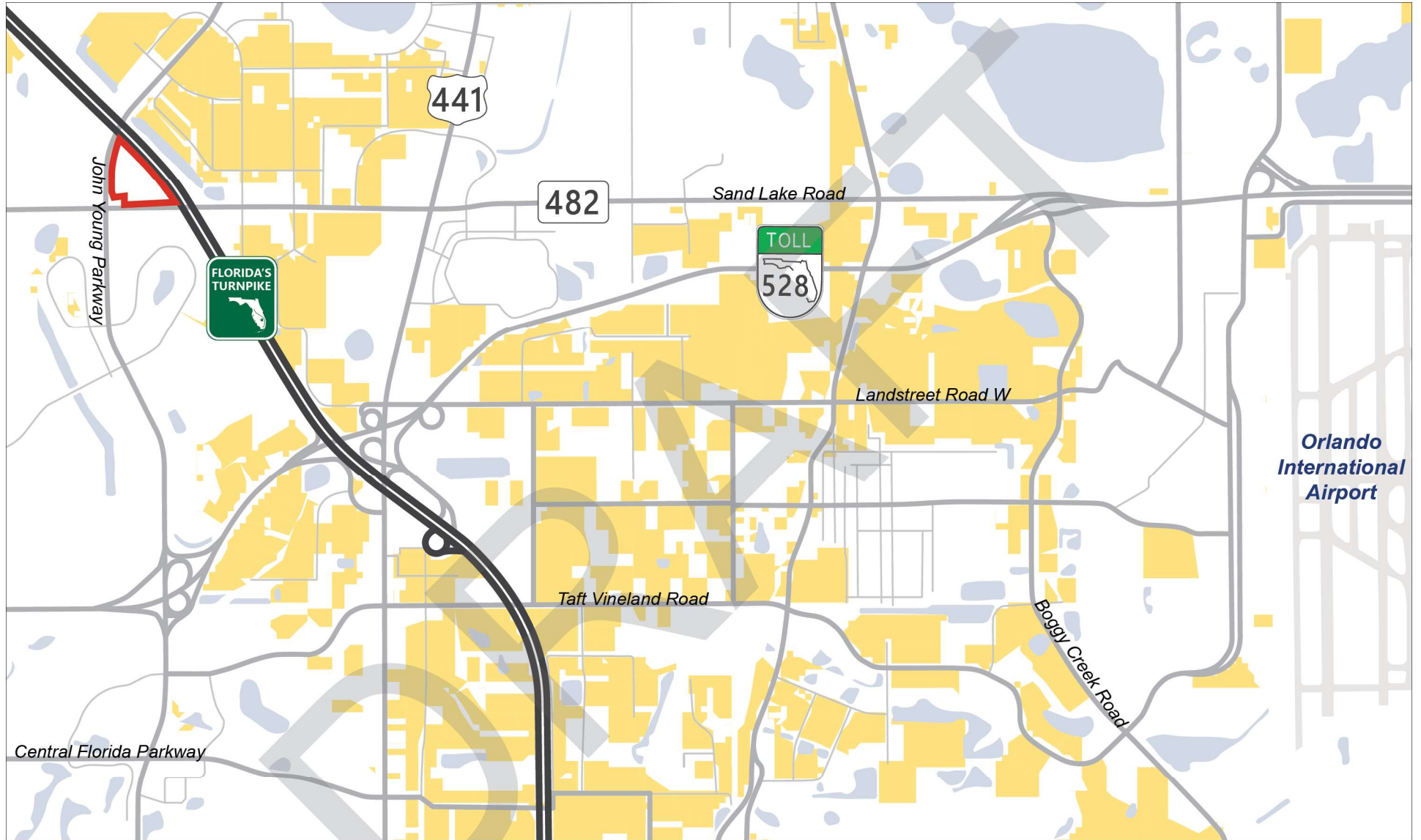


Figure 6-4
Orange County Site 1
Sand Lake Road at John Young Parkway
Preliminary Engineering Report

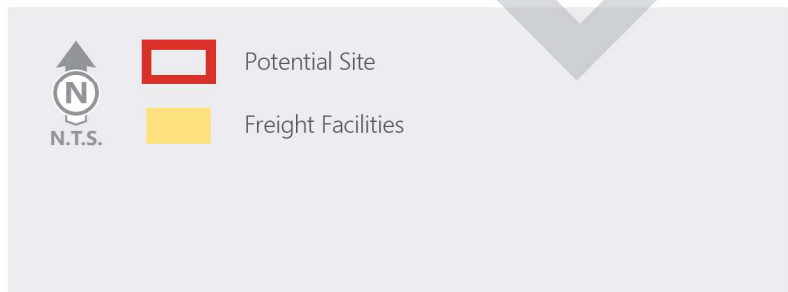
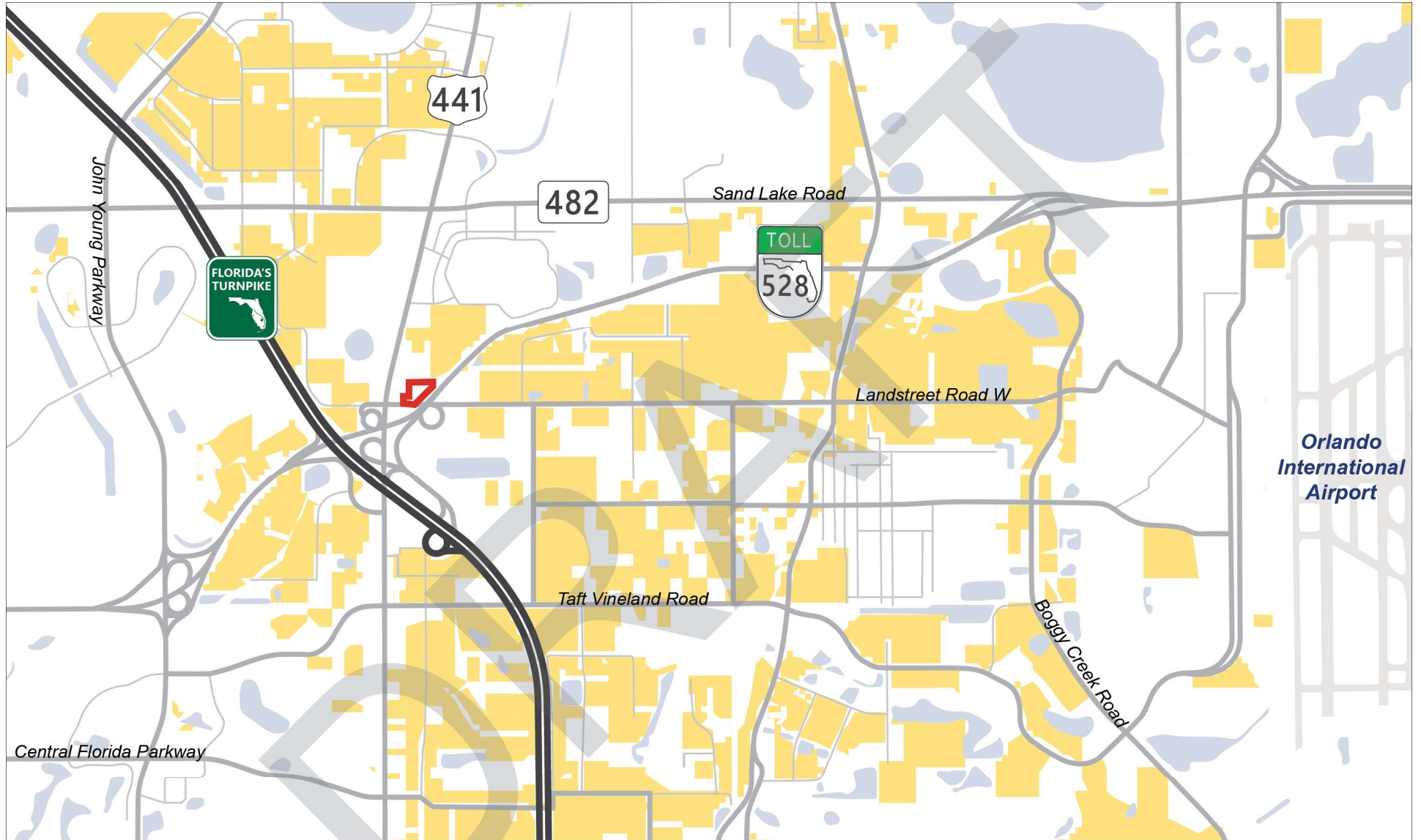


Figure 6-5

Orange County Site 2
West Landstreet Road, Adjacent to SR 528
Preliminary Engineering Report

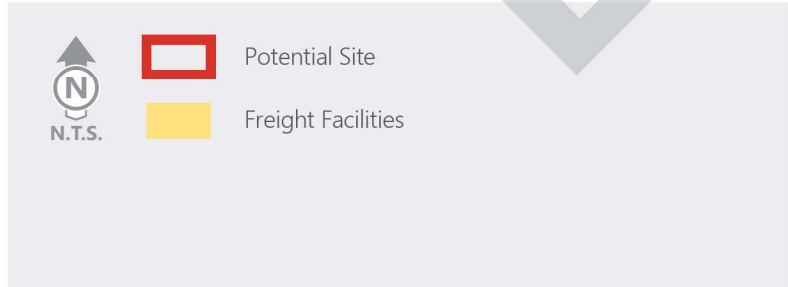
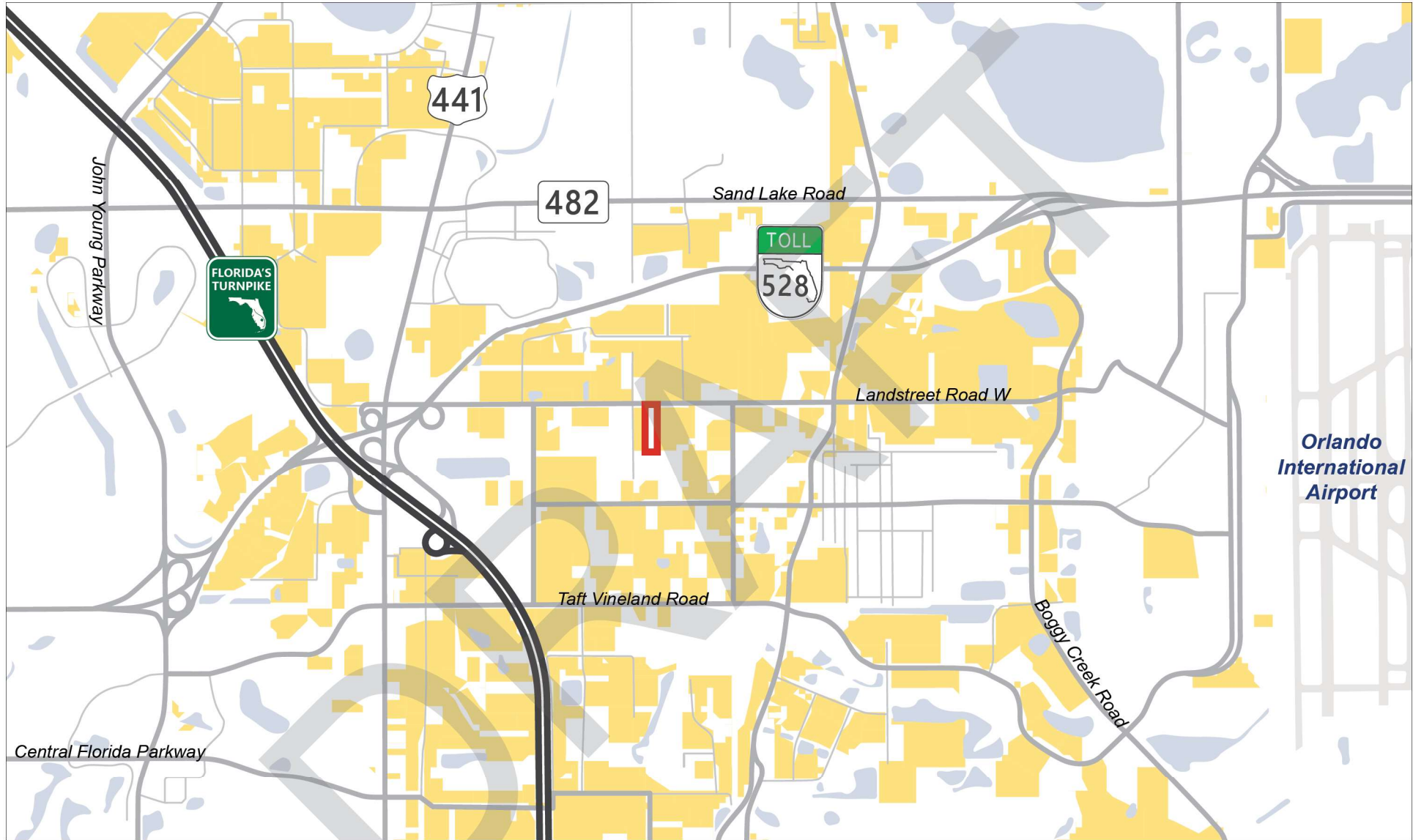


Figure 6-6

Orange County Site 3
West Landstreet Road, East of SR 528 -
Southside
Preliminary Engineering Report

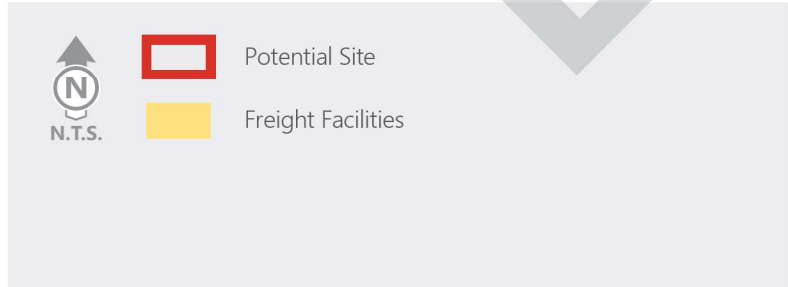
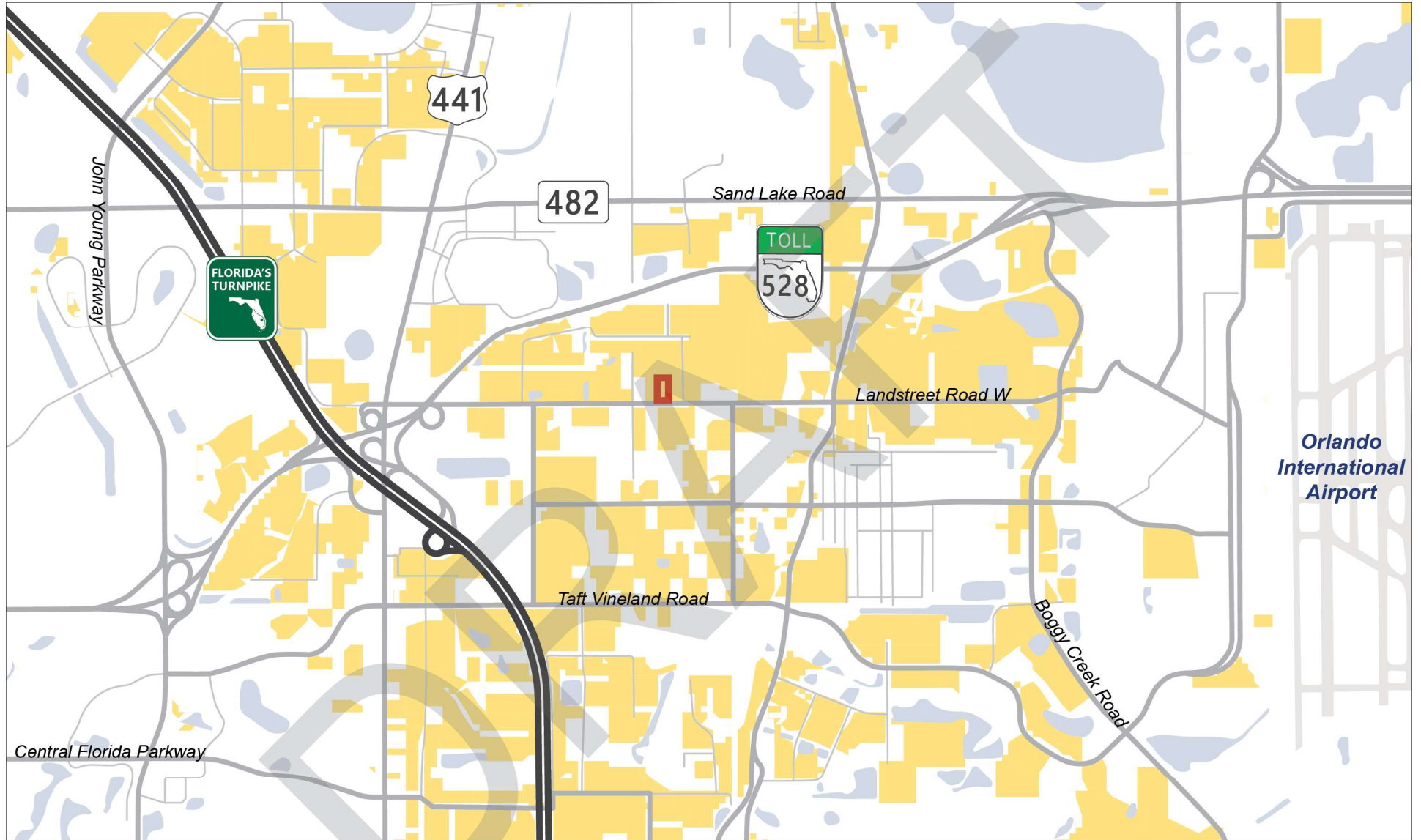


Figure 6-7

Orange County Site 4
West Landstreet Road, East of SR 528 -
Northside
Preliminary Engineering Report

Orange County Site 5 – Tradeport Drive, West of Central Port Drive - Southside

Orange County Site 5 is in a heavy industrial area along the south side of Tradeport Drive, just east of the South Orange Avenue intersection. The site is approximately 6.81 miles east of I-4. The site is approximately 16.30 acres.

Orange County Site 6 – Tradeport Drive, East of Central Port Drive - Southside

Orange County Site 6 is in a heavy industrial area along the south side of Tradeport Drive, on the south leg of the Ringhaver Drive intersection. The site is approximately 7.74 miles east of I-4. The site is approximately 25.30 acres.

Orange County Site 7 – Tradeport Drive, East of Ringhaver Drive - Northside

Orange County Site 7 is in a heavy industrial area along the north side of Tradeport Drive, just east of the Ringhaver Drive intersection. The site is approximately 8.04 miles east of I-4. The site is 12.40 acres.

Seminole County Site 1 – I-4 at US 17/92

Seminole County Site 1 is located near the planned I-4 BtU improvement at US 17/92, providing access to I-4 through a reconfigured ramp adjacent to the site. The site is approximately 0.32 miles southeast of I-4. The site is approximately 26.2 acres.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

At the Public Information Meeting, the initial Volusia County Site 1 was presented as one alternative encompassing both Volusia County Site 1A and Volusia County Site 1B. Volusia County Site 1A is located along I-4 approximately 4.50 miles southwest of the I-95 interchange. The truck parking facility would have immediate access to I-4 with construction of on- and off-ramps. The I-4 Eastbound truck parking site is located at the previous Volusia County rest area and is approximately 73.3 acres.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1B is located along I-4 approximately 4.50 miles southwest of the I-95 interchange. The truck parking facility would have immediate access to I-4 with construction of on- and off-ramps. The I-4 Westbound site is 116.8 acres.

These initial sites were presented to the public at the first round of public meetings, with the goal of obtaining feedback and public input about these sites.

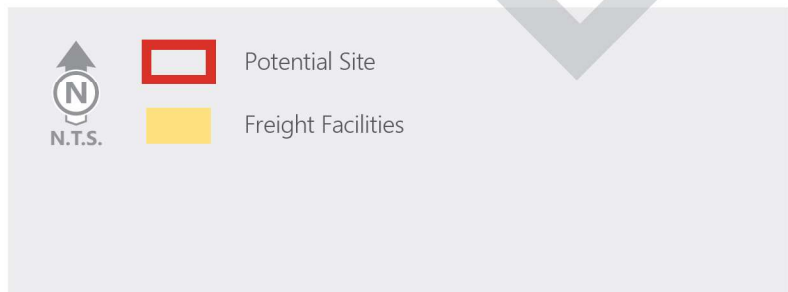
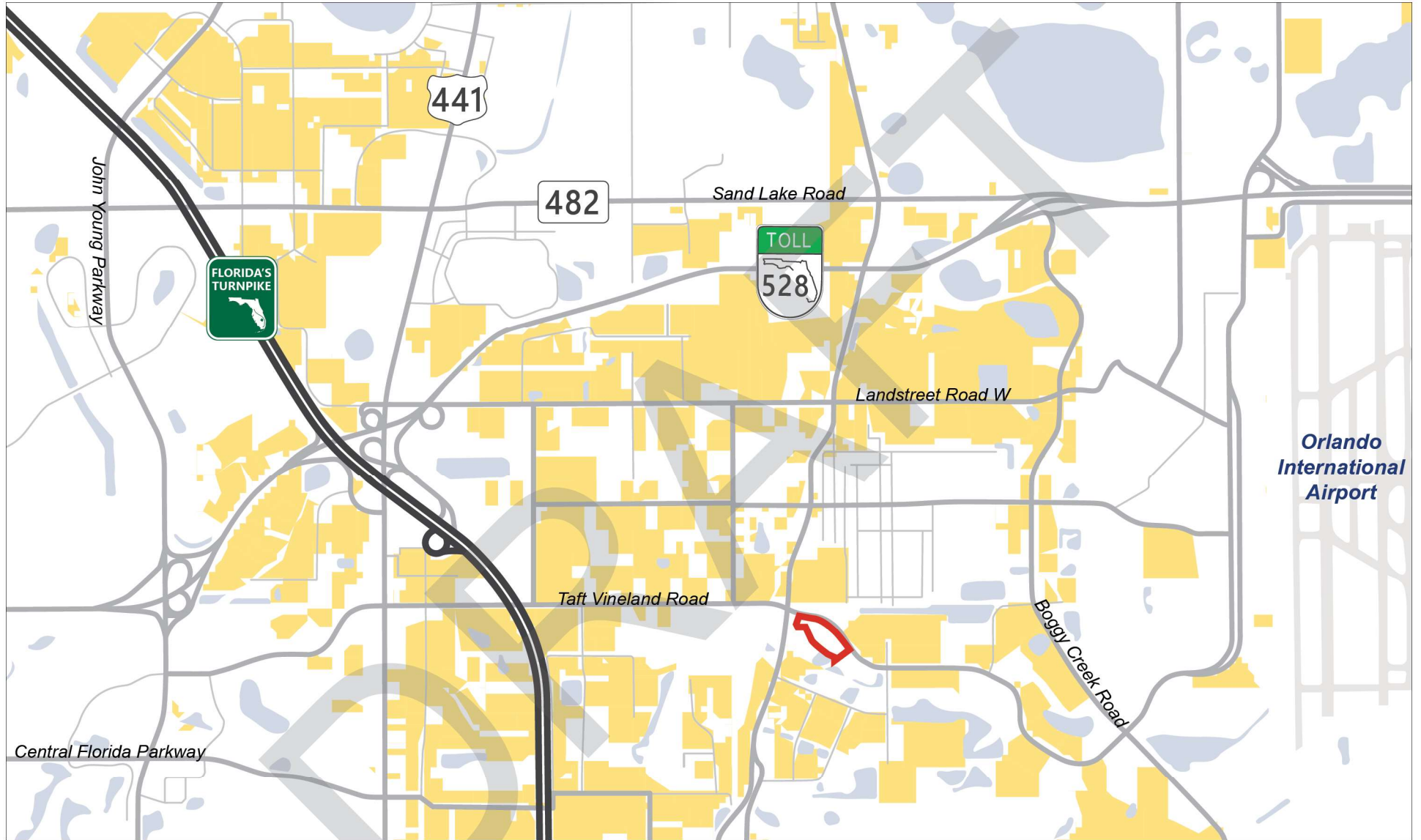
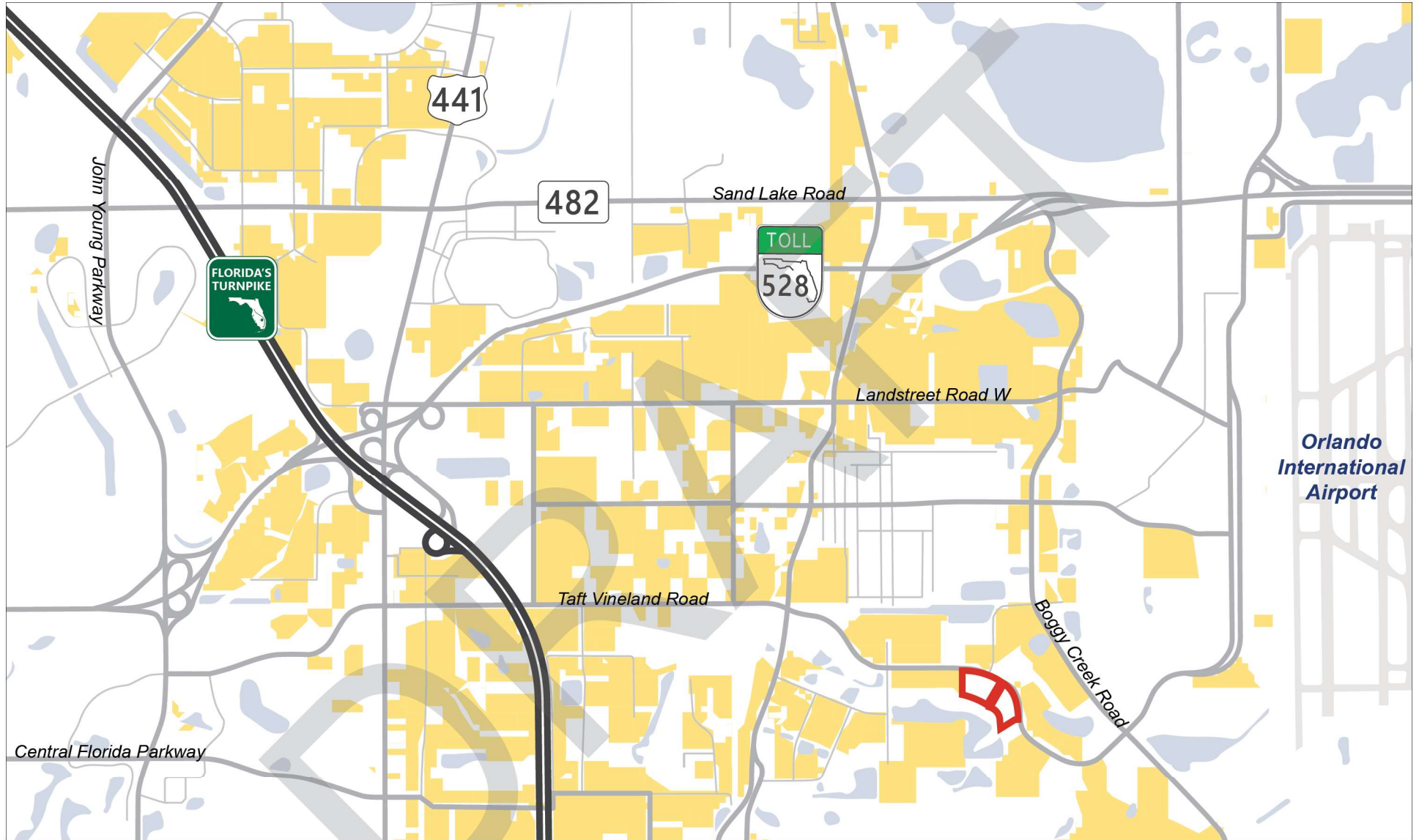


Figure 6-8

**Orange County Site 5
Tradeport Drive, West of Central
Port Drive - Southside**
Preliminary Engineering Report



Potential Site



Freight Facilities



Figure 6-9

Orange County Site 6
Tradeport Drive, East of Central
Port Drive - Southside
Preliminary Engineering Report

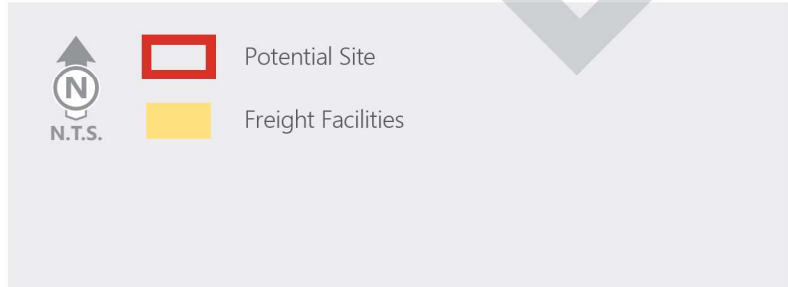
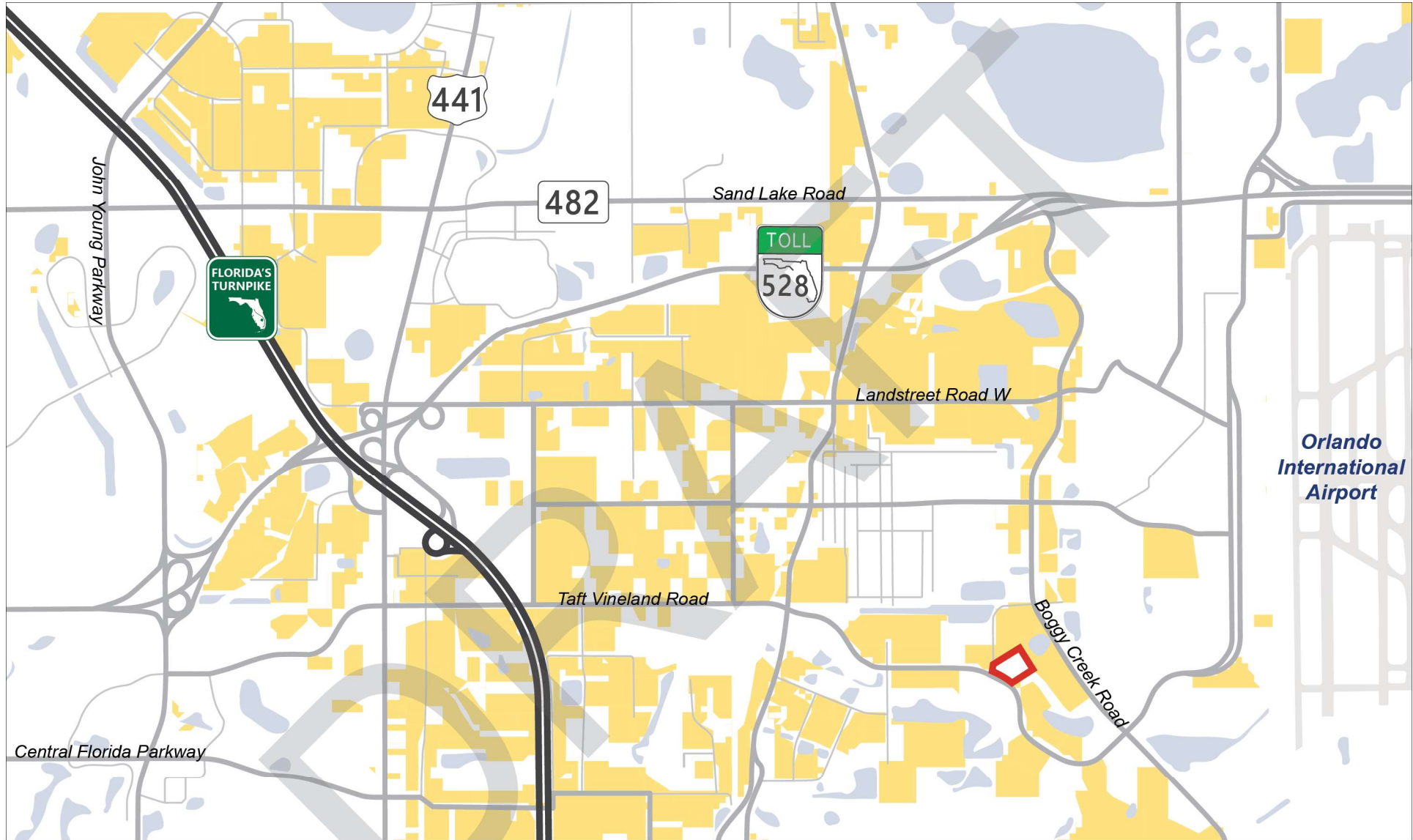
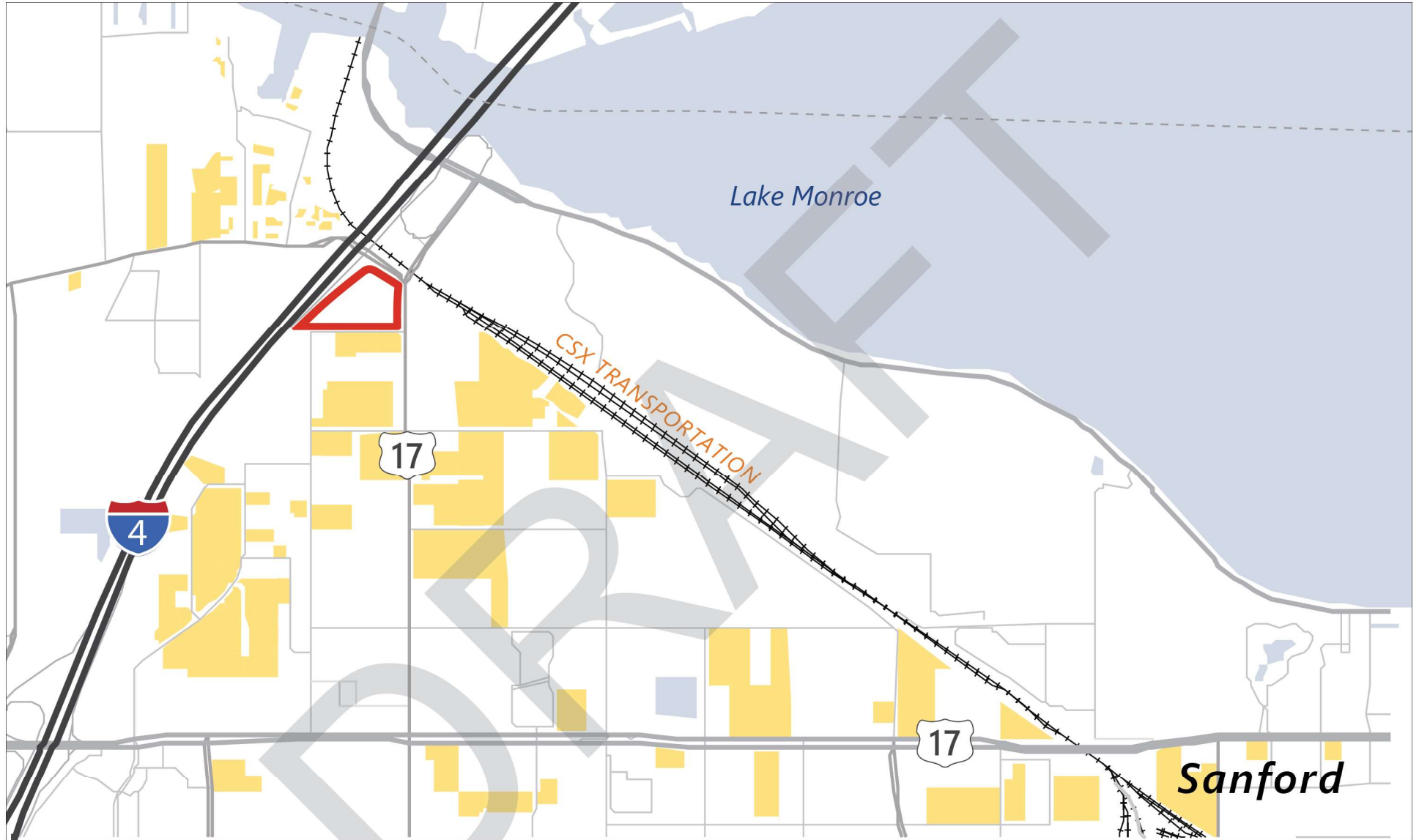


Figure 6-10

Orange County Site 7
Tradeport Drive, East of Ringhaver Drive -
Northside
Preliminary Engineering Report



Potential Site



Freight Facilities

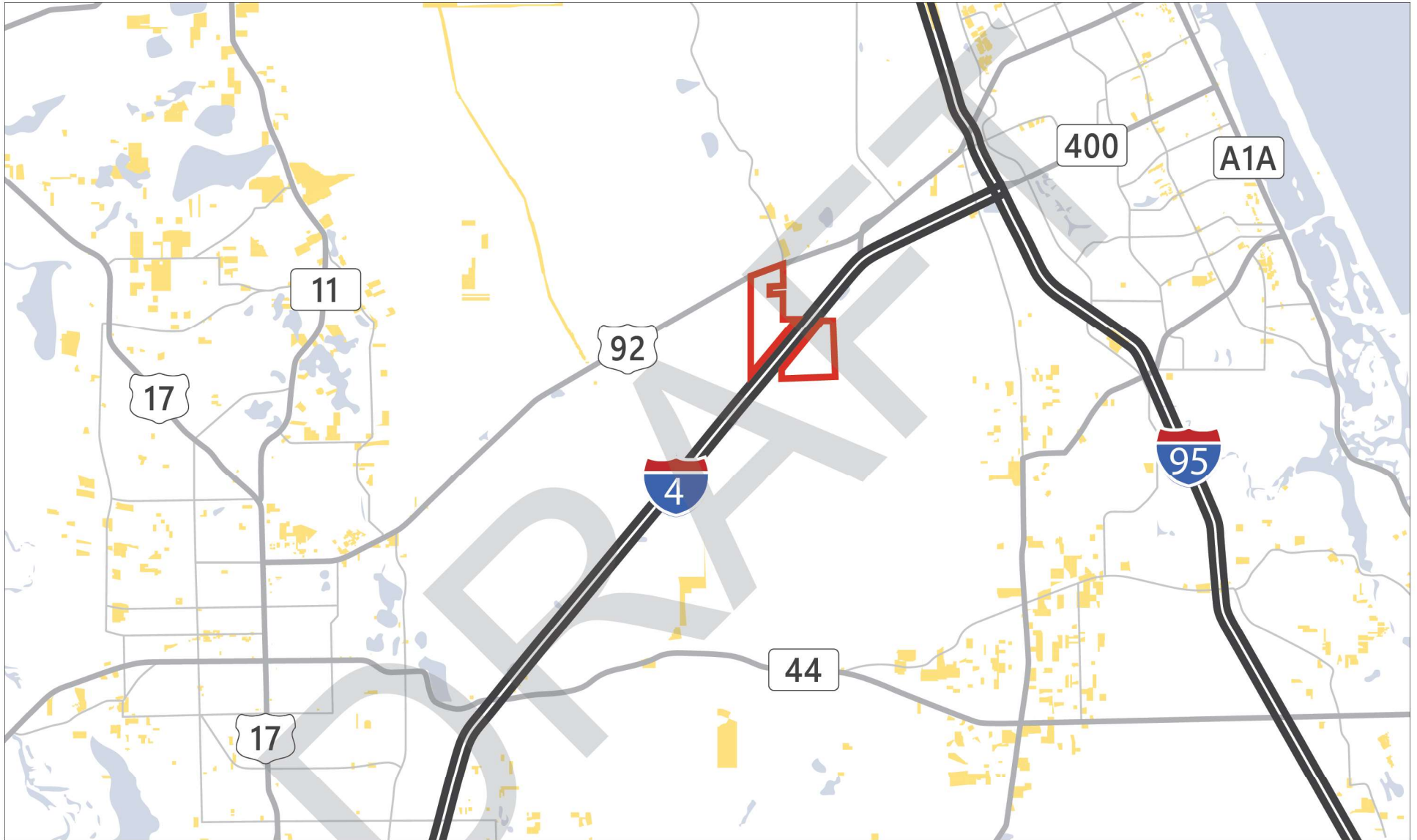


Figure 6-11

Seminole County Site 1

I-4 at US 17/92

Preliminary Engineering Report



Potential Site



Freight Facilities



Figure 6-12

Volusia County Site 1A & Site 1B
I-4 Direct Access, 4.5 miles west of I-95
Preliminary Engineering Report

6.3.3 Viable Sites

After presenting the 12 initial sites to the public and obtaining feedback at a Public Information Meetings, additional desktop screening analysis was completed on the sites. As a result of the screening analysis and public/agency input, seven of the 12 initial sites were selected as viable sites. The engineering and environmental screening analysis was summarized in an evaluation matrix and presented to the public for input at the Alternatives Public Meetings.



The key reasons for the selection of the viable sites, changes that occurred at the sites between the initial site stage and viable site stage, and the reasons for eliminating the non-viable sites from further consideration, are described below. The alternatives evaluation of the Build Alternatives at each of these seven sites, in comparison to the No-Build Alternative, is further documented in Section 6.4 of this report.

Osceola County

Osceola County Site 2 was eliminated from further consideration as the site configuration did not provide adequate truck parking capacity compared to Osceola Site 1. Osceola County Site 2 has a 50-foot Duke Energy Florida easement that has several large transmission poles in the middle of the site. To avoid impacting these transmission poles, the number of potential truck parking spots becomes greatly reduced. While both sites are approximately four miles away from I-4, Osceola County Site 1 is immediately east of the proposed PPE and will provide improved freight connectivity.

Between the initial site stage and the viable site stage of this project, Osceola County Site 1 increased in size from 35.1 acres to 40.1 acres. The net addition of 5.0 acres was due to the addition of several parcels on the east end of the site (06-26-28-4785-0001-0120, 06-26-28-4785-0001-0130, 06-26-28-4785-0001-0140, and 06-26-28-4785-0001-0150), and the removal of parcel 06-26-28-0000-0071-0000, which is to be used for SR 538 Pond 100 in the PPE project. See **Table 6-1** below for a summary of the Osceola County site alternatives evaluation matrix.

Table 6-1: Osceola County Site Alternatives Evaluation Matrix

Osceola County Alternatives Evaluation Matrix	NO BUILD	SITE 1	SITE 2
Evaluation Criteria			
Purpose & Need			
Accommodates Truck Parking Needs	No	Yes	Yes
Number of Truck Parking Spaces	0	257	71
Potential Community Impacts			
Parcels Impacted	0	19	3
Residential Parcels Impacted (occupied/vacant)	0 / 0	0 / 19	0 / 2
Relocations	0	0	0
Right-of-Way Required (acres)	0.0	40.1	24.3
Potential Environmental Impacts			
Wetlands (acres)	0.0	8.5	5.7
Floodplains (acres)	0.0	0.0	0.0
Threatened & Endangered Species	None	High	High
Contamination Sites	None	Moderate	Moderate
Historic/Archaeological Impacts	None	Moderate	Moderate
Noise Sensitive Areas within 500 feet	0	6	9
Estimated Project Cost			
Total Estimated Project Costs*	\$0	\$33.3M	\$21.8M

*Cost includes Design, Right of Way, and Construction

Orange County

Based on the screening analysis, Orange County Sites 3, 5, 6, and 7 were not selected as viable truck parking sites. Orange County Site 3 only allows for 26 total parking spaces and is not cost effective. Orange County Sites 5, 6, and 7 provide adequate parking capacity. However, the total estimated project cost of these sites is higher than other comparable sized truck parking sites. Additionally, these sites are farther from the I-4 corridor than Orange County Sites 1, 2 and 4.

Between the initial site stage and the viable site stage of this project, Orange County Site 1 decreased in size from 36.7 acres to 21.5 acres. This was due to the discovery of a large, existing floodplain compensation area located at the northeast side of the site, adjacent to Florida’s Turnpike. No changes were made to Orange County Site 2 or Orange County Site 4 during viable alternatives development. See **Table 6-2** below for a summary of the Orange County site alternatives evaluation matrix.

Table 6-2: Orange County Site Alternatives Evaluation Matrix

Orange County Alternatives Evaluation Matrix	NO BUILD	SITE 1 	SITE 2 	SITE 3 	SITE 4 	SITE 5 	SITE 6 	SITE 7 
Evaluation Criteria								
Purpose & Need								
Accommodates Truck Parking Needs	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Truck Parking Spaces	0	109	59	26	48	114	177	88
Potential Community Impacts								
Parcels Impacted	0	2	1	1	1	2	2	2
Residential Parcels Impacted (occupied/vacant)	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
Relocations	0	0	0	0	1	0	0	0
Right-of-Way Required (acres)	0.0	21.5	6.8	2.4	4.9	16.3	25.3	12.4
Potential Environmental Impacts								
Wetlands (acres)	0	8.2	0.0	0.0	0.0	1.0	0.2	0.0
Floodplains (acres)	0	21.5	0.0	9.9	4.8	0.0	1.6	0.0
Threatened & Endangered Species	None	Moderate	Low	Low	Low	Moderate	Moderate	Moderate
Contamination Sites	None	Moderate	High	High	High	Moderate	Moderate	Moderate
Historic/Archaeological Impacts	None	Low	Moderate	Low	Low	Moderate	Low	Low
Noise Sensitive Areas within 500 feet	0	0	1	0	0	0	0	0
Estimated Project Cost								
Total Estimated Project Costs*	\$0	\$12.5M	\$19.0M	\$4.6M	\$12.4M	\$28.4M	\$44.0M	\$22.5M



*Cost includes Design, Right of Way, and Construction

Seminole County

After the Public Information Meeting, a second alternative for the Seminole County site (Seminole County Site 1B) was designed and evaluated. Seminole County Site 1B only requires approximately 18.3 acres of ROW, and provides 157 parking spaces. This site is located on the northernmost portion of Seminole County Site 1A.

Seminole County Site 1A is a larger site and therefore, provides additional parking capacity. However, Seminole County Site 1B was selected as a viable site due to reduced project costs, community impacts, and potential environmental impacts. See **Table 6-3** below for a summary of the Seminole County alternatives evaluation matrix.

Table 6-3: Seminole County Site Alternatives Evaluation Matrix

Seminole County Alternatives Evaluation Matrix	NO BUILD	SITE 1A 	SITE 1B 
Evaluation Criteria			
Purpose & Need			
Accommodates Truck Parking Needs	No	Yes	Yes
Number of Truck Parking Spaces	0	219	157
Potential Community Impacts			
Parcels Impacted	0	25	9
Residential Parcels Impacted (occupied/vacant)	0 / 0	5 / 2	2 / 1
Relocations	0	8	4
Right-of-Way Required (acres)	0.0	26.0	18.3
Potential Environmental Impacts			
Wetlands (acres)	0.0	4.8	4.4
Floodplains (acres)	0.0	0.0	0.0
Threatened & Endangered Species	None	Moderate	Moderate
Contamination Sites	None	Moderate	Moderate
Historic/Archaeological Impacts	None	Moderate	Moderate
Noise Sensitive Areas within 500 feet	0	7	4
Estimated Project Cost			
Total Estimated Project Costs*	\$0	\$54.3M	\$25.6M

*Cost includes Design, Right of Way, and Construction


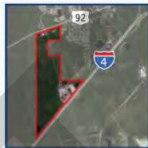
Volusia County

One initial site concept for Volusia County was identified and analyzed (Volusia County Site 1), with a parking site on each side of I-4: Volusia County Site 1A (eastbound direction), and Volusia County Site 1B (westbound direction). Both sites were recommended as viable sites due to direct I-4 access, regional freight connectivity, and they provide a significant number of parking capacity (528 total spaces). Volusia County Site 1A provides 253 parking spaces, while Volusia County Site 1B provides 275 parking spaces.

Between the initial site stage and the viable site stage of this project, Volusia County Site 1 increased in size from 107.7 acres to 190.1 acres (73.3 Acres for Volusia County Site 1A and 116.8 acres for Volusia County Site 1B). This was due to the desire to maintain the existing, dedicated wildlife corridor within the

ROW of Volusia County Site 1A and Volusia County Site 1B, connecting the existing wildlife crossing underneath I-4. This results in additional ROW than the minimum needed purely for the construction of the site. See **Table 6-4** below for a summary of the Volusia County site alternatives evaluation matrix.

Table 6-4: Volusia County Site Alternatives Evaluation Matrix

Volusia County Alternatives Evaluation Matrix	NO BUILD	SITE 1A	SITE 1B
Evaluation Criteria			
Purpose & Need			
Accommodates Truck Parking Needs	No	Yes	Yes
Number of Truck Parking Spaces	0	275	253
Potential Community Impacts			
Parcels Impacted	0	3	1
Residential Parcels Impacted (occupied/vacant)	0 / 0	0 / 0	0 / 0
Relocations	0	0	0
Right-of-Way Required (acres)	0.0	73.3	116.8
Potential Environmental Impacts			
Wetlands (acres)	0.0	35.5	34.3
Floodplains (acre-ft)	0.0	17.5	59.0
Threatened & Endangered Species	None	High	High
Contamination Sites	None	Low	Low
Historic/Archaeological Impacts	None	Low	Low
Noise Sensitive Areas within 500 feet	0	0	0
Estimated Project Cost			
Total Estimated Project Costs*	\$0	\$83.8M	\$92.4M

**Cost includes Design, Right of Way, and Construction*

6.4 Comparative Alternatives Evaluation

Based on the identification of viable sites presented in Section 6.3.3, the following Build Alternatives were identified:

- Osceola County Site 1 – CR 532 and PPE
- Orange County Site 1 – Sand Lake Road at John Young Parkway
- Orange County Site 2 – West Landstreet Road, Adjacent to SR 528
- Orange County Site 4 – West Landstreet Road, East of SR 528
- Seminole County Site 1B – I-4 at US 17/92
- Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95
- Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Detailed concept plans were developed for each of the Build Alternatives for comparison to the No-Build Alternative. A preliminary evaluation of the No-Build Alternative and the Build Alternatives was completed to evaluate purpose and need, potential environmental impacts and project costs. The environmental analysis was based on desktop analysis and screening. Based on this alternatives analysis, the Build

Alternatives were further refined during the PD&E Study as documented in Section 6.6 of this report. More detailed engineering and environmental evaluations were conducted for the Preferred Alternative as documented in Section 8.

Osceola County – Site 1

The Build Alternative for Osceola County Site 1 proposes 257 truck parking spaces to provided needed parking capacity. The No-Build Alternative does not meet the purpose and need and results in no environmental impacts or project costs. Osceola County Site 1 impacts 19 parcels, one of which contains an abandoned structure in a deteriorated state, the rest of which are truly vacant. Therefore no relocations are anticipated. Approximately 40.1 acres of ROW impacts are anticipated for this site. The Build Alternative involves potential wetland impacts and wildlife species and habitat involvement. See **Table 6-5** below for a summary of the Osceola County alternatives evaluation matrix.

Table 6-5: Osceola County Alternatives Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Build Alternative <i>Osceola County – Site 1</i>
<i>Purpose and Need</i>		
Number of Truck Parking Spaces	0	257
Accommodates Truck Parking Needs	No	Yes
<i>Social Environment</i>		
Parcels Impacted (Total)	0	19
Potential Relocations	0	0
Parks and Recreational Impacts	None	None
Residential Parcels Impacted	0	0
ROW impacts (acres)	0	40.1
<i>Cultural Environment</i>		
Historic Potential	None	None
Archaeological Potential	None	High
<i>Natural Environment</i>		
Potential Wetland Impacts (acres)	0	8.5
Threatened & Endangered Species Potential Involvement	No	Yes
Potential Floodplain Impacts (acres)	0	None
<i>Physical Environment</i>		
Contamination Involvement	None	Low
<i>Estimated Project Cost</i>		
Total Estimated Project Costs	None	\$33.3M

Cost includes Design, Right of Way, and Construction. No special designations or bridge involvement.

Orange County – Site 1, Site 2, and Site 4

The Build Alternatives for Orange County provides a total of 216 truck parking spaces to provide needed parking capacity. The No-Build Alternative does not meet the purpose and need and results in no environmental impacts or project costs. The Orange County Build Alternatives involve no residential impacts or relocations. Orange County Site 1 involves potential wetland impacts and wildlife habitat and species involvement. There are ‘No’ to ‘minimal’ potential environmental impacts associated with Orange County Site 2 and 4. While Orange County Site 2 and Orange County Site 4 are viable alternate sites, these sites are not moving forward as a Preferred Alternative at this time due to funding constraints. See **Table 6-6** below for a summary of the Orange County alternatives evaluation matrix.

Table 6-6: Orange County Alternatives Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Build Alternative <i>Orange County – Site 1</i>	Build Alternative <i>Orange County – Site 2</i>	Build Alternative <i>Orange County – Site 4</i>
<i>Purpose and Need</i>				
Accommodates Truck Parking Needs	No	Yes	Yes	Yes
Number of Truck Parking Spaces	0	109	59	48
<i>Social Environment</i>				
Parcels Impacted (Total)	0	2	1	1
Residential Parcels Impacted	0	0	0	0
Potential Relocations	0	0	0	1
ROW impacts (acres)	0	21.5	6.8	4.9
Parks and Recreational Impacts	None	None	None	None
<i>Cultural Environment</i>				
Historic Potential	None	Low	Potential	Low
Archaeological Potential	None	Low	Low	Low
<i>Natural Environment</i>				
Threatened & Endangered Species Potential Involvement	No	Yes	No	No
Potential Wetland Impacts (acres)	0	9.5	0	0
Potential Floodplain Impacts (acres)	0	21.5	0	0
<i>Physical Environment</i>				
Contamination Involvement	None	Low	Medium	Medium
<i>Estimated Project Cost</i>				
Total Estimated Project Costs	None	\$12.5M	\$19.0M	\$12.4M

Cost includes Design, Right of Way, and Construction. No special designations or bridge involvement.

Seminole County – Site 1B

The Build Alternative for Seminole County Site 1B proposes 157 truck parking spaces to provided needed parking capacity. The No-Build Alternative does not meet the purpose and need and results in no environmental impacts or project costs. Seminole County Site 1B impacts 9 parcels, three of which are residential, and involves four potential relocations. Approximately 18.3 acres of ROW impacts are anticipated for this site. The Build Alternative involves potential wetland impacts and wildlife species and habitat involvement. See **Table 6-7** below for a summary of the Seminole County alternatives evaluation matrix.

Table 6-7: Seminole County Alternatives Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Build Alternative <i>Seminole County – Site 1B</i>
<i>Purpose and Need</i>		
Accommodates Truck Parking Needs	No	Yes
Number of Truck Parking Spaces	0	157
<i>Social Environment</i>		
Parcels Impacted (Total)	0	9
Residential Parcels Impacted	0	3
Potential Relocations	0	4
ROW impacts (acres)	0	18.3
Parks and Recreational Facility Impacts	None	None
<i>Cultural Environment</i>		
Historic Potential	None	None
Archaeological Potential	None	High
<i>Natural Environment</i>		
Threatened & Endangered Species Potential Involvement	No	Yes
Potential Wetland Impacts (acres)	0	4.4
Potential Floodplain Impacts (acres)	0	0
<i>Physical Environment</i>		
Contamination Involvement	None	High
<i>Estimated Project Cost</i>		
Total Estimated Project Costs		\$40.1M

Cost includes Design, Right of Way, and Construction. No special designations or bridge involvement.

Volusia County – Site 1A and Site 1B

The Build Alternatives for Volusia County propose a total of 528 truck parking spaces to provide needed parking capacity. The No-Build Alternative does not meet the purpose and need and results in no environmental impacts or project costs. Volusia County Site 1A and Volusia County Site 1B impact four parcels, all of which are vacant non-residential, and no relocations are anticipated. Approximately 190.1 acres of ROW impacts are anticipated for these sites. The Build Alternative involves potential wetland impacts, floodplain involvement and wildlife species and habitat involvement. See **Table 6-8** below for a summary of the Volusia County alternatives evaluation matrix.

Table 6-8: Volusia County Alternatives Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Build Alternative <i>Volusia County – Site 1A</i>	Build Alternative <i>Volusia County – Site 1B</i>
<i>Purpose and Need</i>			
Accommodates Truck Parking Needs	No	Yes	Yes
Number of Truck Parking Spaces	0	275	253
<i>Social Environment</i>			
Parcels Impacted (Total)	0	3	1
Residential Parcels Impacted	0	0	0
Potential Relocations	0	0	0
ROW impacts (acres)	0	73.3	116.8
Parks and Recreational Facility Impacts	None	None	None
<i>Cultural Environment</i>			
Historic Potential	None	Low	Low
Archaeological Potential	None	Low	Low
<i>Natural Environment</i>			
Threatened & Endangered Species Potential Involvement	No	Yes	Yes
Potential Wetland Impacts (acres)	0	35.5	34.3
Potential Floodplain Impacts (acre-feet)	0	17.5	59.0
<i>Physical Environment</i>			
Contamination Involvement	None	Low	Low
<i>Estimated Project Cost</i>			
Total Estimated Project Costs		\$83.8M	\$92.4M

6.5 Future Traffic Operations (Build Alternative)

This section describes future traffic operations for the Build Alternatives. Future traffic operations related to the No-Build Alternative are provided in Section 4.4. The future traffic volumes presented in this section are for design year 2045. Future traffic volumes for the interim year 2025 are provided in the PTAR, in the project file.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

The AM and PM peak period projected future volumes in the year 2045 AM and PM future volumes for the Osceola County Site 1 Build condition are shown in **Figure 6-13**. Future intersection geometry for the study intersections is depicted in **Figure 6-14**. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

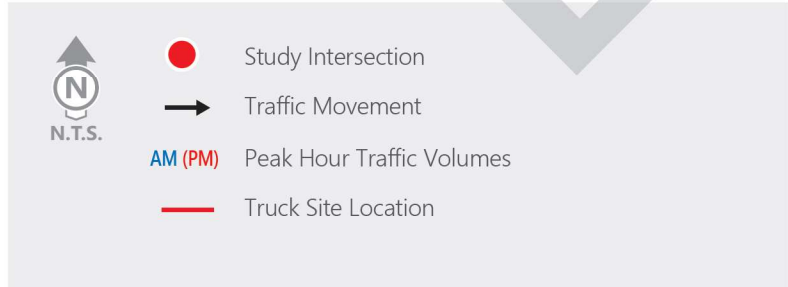
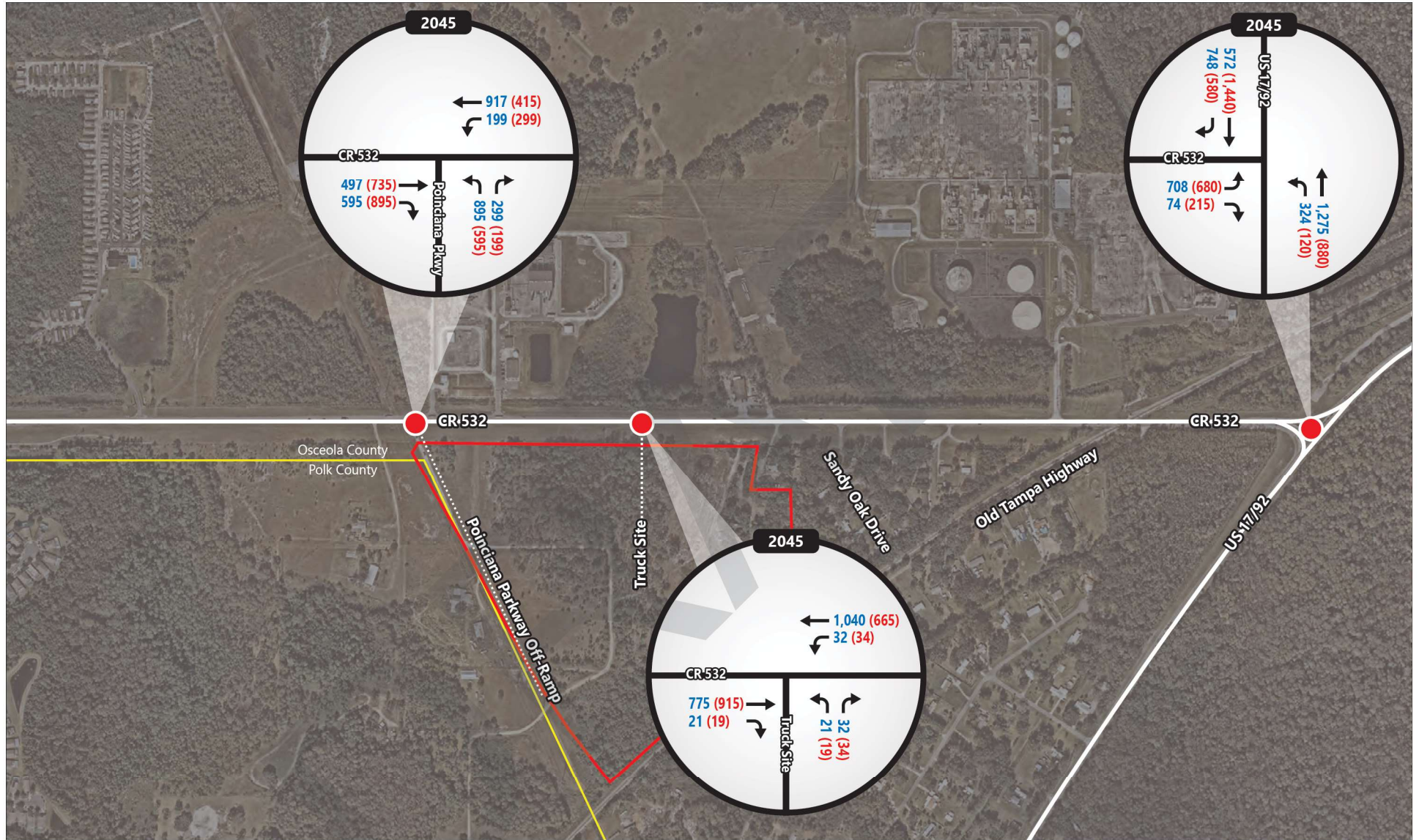
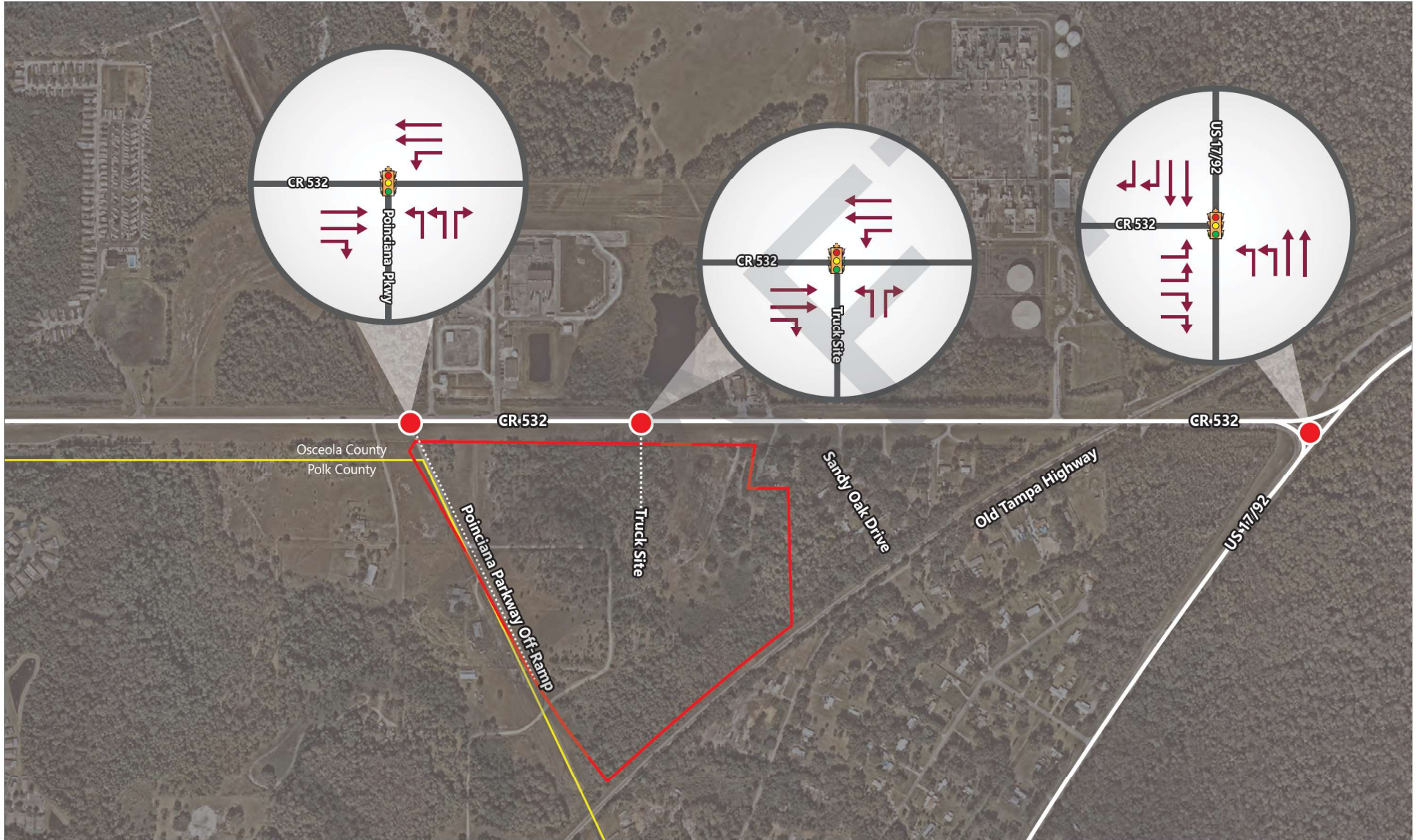


Figure 6-13
Future Build Turning Movement Counts
Osceola County Site 1
 Preliminary Engineering Report



- Study Intersection
- Truck Site Location
- ➔ Future Lane Geometry



Figure 6-14
Future Build Geometry
Osceola County Site 1
Preliminary Engineering Report

Build Intersection LOS Analysis

Table 6-9 shows the projected operations for the years 2025 and 2045 for the Osceola County Site 1 Build condition. In the Build conditions, the study intersections, CR 532 at US 17/92, and CR 532 at PPE off-ramp, are projected to operate similar to No-Build conditions (LOS C) with a slight increase in overall intersection delays.

A signal is recommended for the truck parking site intersection on CR 532 because of the number of parking spaces, proximity to the proposed PPE off-ramp intersection, and future four-lane widening of CR 532. With a stop-control at the truck parking site, the northbound left movement is expected to have high delays for the design year 2045.

Table 6-9: Build Intersection LOS Analysis - Osceola County Site 1

Study Intersection	2045 Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-CR 532 at US 17/92	28.4	C	25.1	C
2-CR 532 at Potential Truck Parking Site	5.8	A	7.1	A
3-CR 532 at PPE off-ramp	29.8	C	34.9	C

95th Queue Length Analysis

95th percentile queues for the year 2045 at the study intersections were used to recommend the queue lengths. **Table 6-10** shows the recommended queue lengths for the 2045 conditions.

The specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. The actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

Table 6-10: Recommended Queue Lengths for Turn Lanes - Osceola County Site 1

Intersections on CR 532	Turn Lane Queue Length (feet)							
	CR 532				Side Streets			
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
1-CR 532 at US 17/92	425	100	-	-	225	600	775	175
2-CR 532 at Potential Truck Parking Site	-	100	100	-	100	100	-	-
3-CR 532 at PPE off-ramp	-	675	400	-	450	175	-	-

Note: A minimum queue length of 100 feet is assumed

Future Safety Analysis

A Highway Safety Manual (HSM) safety analysis was conducted for the No-Build and Build alternatives using predictive crash methods. With the inclusion of the Osceola County Site 1 intersection in the Build alternative, the number of crashes in the year 2045 for the study corridor is expected to increase by 1 crash per year, from roughly 11 to 12 crashes. This increase in the number of crashes for the year 2045 is not significant.

Orange County Site 1 – Sand Lake Road at John Young Parkway

The AM and PM peak hour projected future volumes in the years 2025 and 2045 Orange County Site 1 for Build conditions are shown in **Figure 6-15**. Future intersection geometry for the study intersections is depicted in **Figure 6-16**. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

Build Intersection LOS Analysis

Table 6-11 shows the projected operations for the years 2025 and 2045 Orange County Site 1 Build conditions.

All the study intersections are projected to operate similar to the No-Build conditions with only a slight increase in overall intersection delays, after introducing the potential truck parking site intersection.

The right-in/right-out at Sand Lake Road and potential truck parking site intersection is not expected to have significant movement delay for the southbound right movement by the year 2045.

Table 6-11: Build Intersection LOS Analysis - Orange County Site 1

Study Intersection	2045 Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-Sand Lake Road at John Young Parkway	53.9	D	82.5	F
2-Sand Lake Road at Potential Truck Parking Site*	12.3/0.0	B/A	13.2/0.0	B/A
3-Sand Lake Road at Presidents Drive	46.0	D	155.2	F
4-Sand Lake Road at Turnpike SB Off-Ramp	72.0	E	96.5	F
5-Sand Lake Road at Turnpike NB Ramps	136.7	F	81.8	F
6-John Young Parkway at Potential Truck Parking Site*	14.1/0.0	B/A	14.2/0.0	B/A

*Note: * Minor/major street worst delays are reported for the stop-control*

95th Queue Length Analysis

95th percentile queues for the year 2045 at the study intersections were used to recommend the queue lengths. **Table 6-12** shows the recommended queue lengths for the 2045 conditions.

The specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. The actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

Table 6-12: Recommended Queue Lengths for Turn Lanes - Orange County Site 1

Intersections on Sand Lake Road	Turn Lane Queue Length (feet)							
	Sand Lake Road				Side Streets			
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
1-Sand Lake Road at John Young Parkway	450	100	575	100	925	1,625	550	350
2-Sand Lake Road at Potential Truck Parking Site	-	-	-	100	-	-	-	100
3-Sand Lake Road at Presidents Drive	425	-	150	150	500	-	450	350
4-Sand Lake Road at Turnpike SB Off-Ramp	-	150	450	-	-	1,525	475	1,025
5-Sand Lake Road at Turnpike NB Ramps	250	100	550	100	1,200	625	-	-

Note: A minimum queue length of 100 feet is assumed

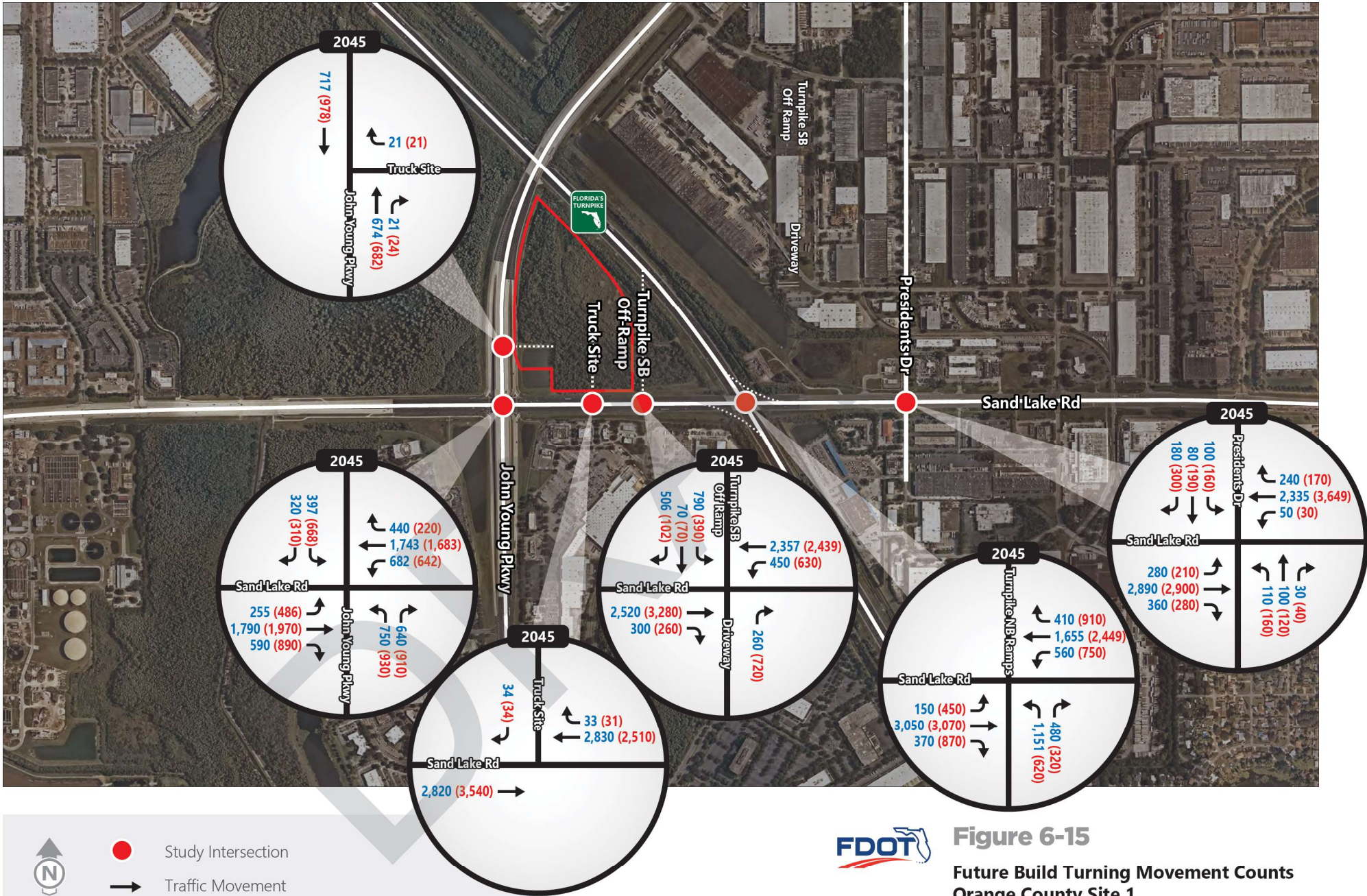
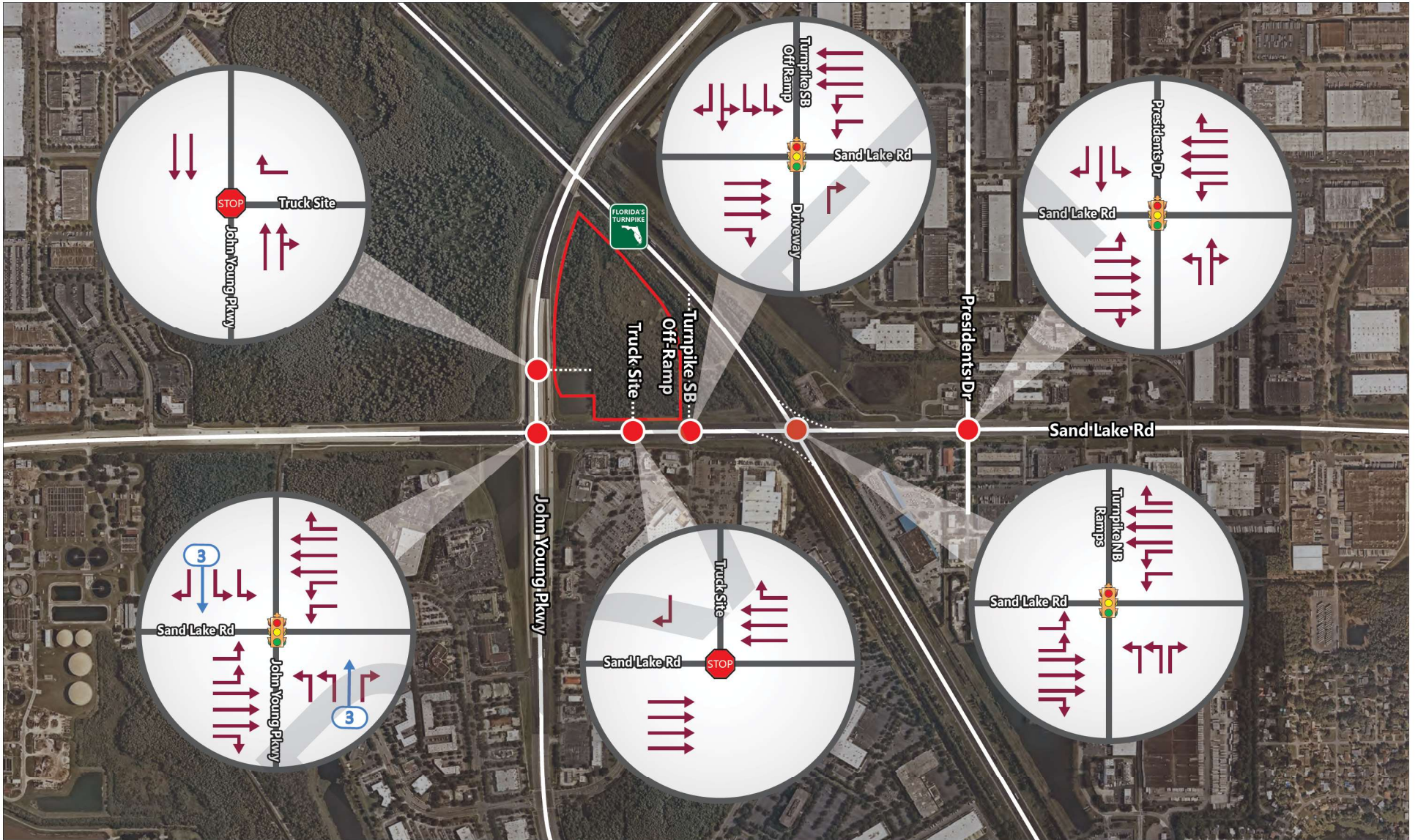


Figure 6-15
Future Build Turning Movement Counts
Orange County Site 1
 Preliminary Engineering Report



- Study Intersection
- Truck Site Location
- ➔ Future Lane Geometry
- 3 ➔ John Young Parkway Overpass Lanes



Figure 6-16
Future Build Geometry
Orange County Site 1
 Preliminary Engineering Report

Future Safety Analysis – Orange County Site 1

An HSM safety analysis was conducted for the No-Build and Build alternatives using predictive crash methods. With the inclusion of the Orange County Site 1 intersection in the Build alternative, the number of crashes in the year 2045 for the study corridor is expected to increase by 2 crashes from roughly 59 to 61 crashes per year. This increase in the number of crashes for the year 2045 is not significant.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

The AM and PM peak period projected volumes in the years 2025 and 2045 Orange County Site 2 Build conditions are shown in **Figure 6-17**. Future intersection geometry for the study intersections is depicted in **Figure 6-18**. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

Build Intersection LOS Analysis

Table 6-13 shows the projected operations for the year 2045 Orange County Site 2 Build conditions.

All the study intersections are projected to operate similar to No-Build conditions, with only a slight increase in intersection delays after introducing the potential truck parking site intersection.

The stop control at Landstreet Road and the potential truck parking site intersection is not expected to have significant movement delay for the southbound right movement by the year 2045.

Table 6-13: Build Intersection LOS Analysis - Orange County Site 2

Study Intersection	2045 Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
2-Landstreet Road at US 441	130.9	F	266.7	F
3-Landstreet Road at Truck Parking Site	34.5/23.4	D/C	77.2/41.5	F/E

Note: 1) * Minor/major street worst delays are reported for the stop-control; 2) Synchro results are not available for Landstreet Road and SR 528 EB on-ramp because there is no stop control on the side street

95th Queue Length Analysis

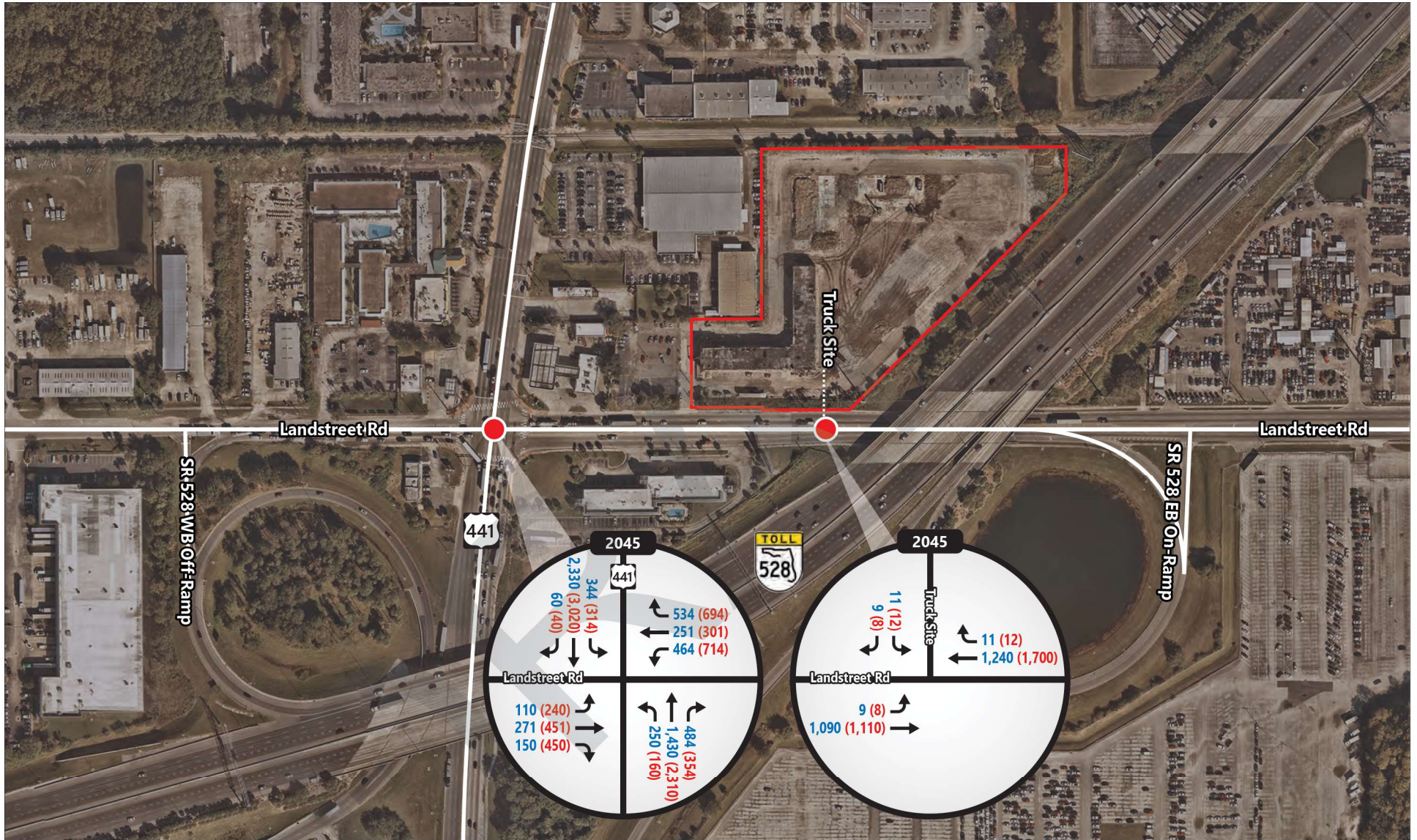
95th percentile queues for the year 2045 at the study intersections were used to recommend the queue lengths. **Table 6-14** shows the recommended queue lengths for the 2045 conditions.

The specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. The actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

Table 6-14: Recommended Queue Lengths for Turn Lanes - Orange County Site 2

Intersections on Landstreet Road	Turn Lane Queue Length (feet)							
	Landstreet Road				Side Streets			
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
2-Landstreet Road at US 441	525	750	1,125	1,200	625	450	800	-
3-Landstreet Road at Truck Parking Site	100	-	-	-	-	-	-	-

Note: A minimum queue length of 100 feet is assumed



● Study Intersection

→ Traffic Movement

AM (PM) Peak Hour Traffic Volumes

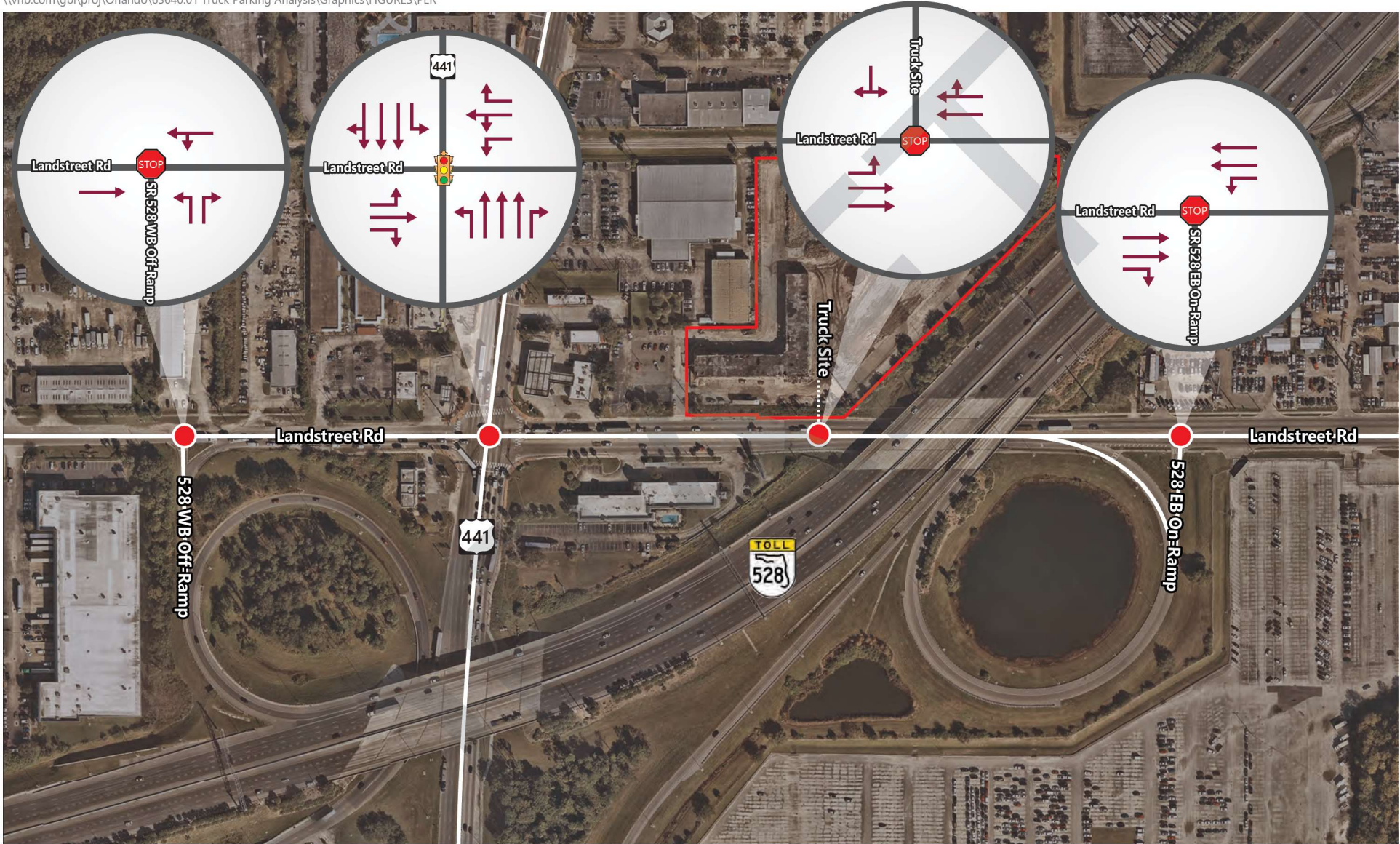
— Truck Site Location



Figure 6-17

**Future Build Turning Movement Counts
Orange County Site 2**

Preliminary Engineering Report



- Study Intersection
- Truck Site Location
- ➔ Future Lane Geometry



Figure 6-18
Future Build Geometry
Orange County Site 2
Preliminary Engineering Report

Future Safety Analysis – Orange County Site 2

An HSM safety analysis was conducted for the No-Build and Build alternatives using predictive crash methods. With the inclusion of the Orange County Site 2 intersection in the Build alternative, the number of crashes in the year 2045 for the study corridor is expected to increase by 1 crash from roughly 18 to 19 crashes per year. This increase in the number of crashes for the year 2045 is not significant.

Orange County Site 4 – West Landstreet Road, East of SR 528

The AM and PM peak period in the years 2025 and 2045 Orange County Site 4 Build conditions are shown in **Figure 6-19**. Future intersection geometry for the study intersections is depicted in **Figure 6-20**. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

Build Intersection LOS Analysis

Table 6-15 shows the projected operations for the year 2045 Orange County Site 4 Build conditions.

All the study intersections were projected to operate similar to the No-Build conditions, after introducing the potential truck parking site intersection.

The stop-control at Landstreet Road at the potential truck parking site intersection is not expected to show significant delays with LOS C or better by the year 2045.

Table 6-15: Build Intersection LOS Analysis - Orange County Site 4

Study Intersection	2045 Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-Landstreet Road at Parkers Landing*	19.7/10.6	C/B	24.7/10.8	C/B
2-Landstreet Road at Potential Truck Parking Site*	32.8/18.0	D/C	29.3/15.1	D/C
3-Landstreet Road at Sidney Hayes Road	18.6	B	26.7	C

Note: * Minor/major street worst delays are reported for the stop-control

95th Queue Length Analysis

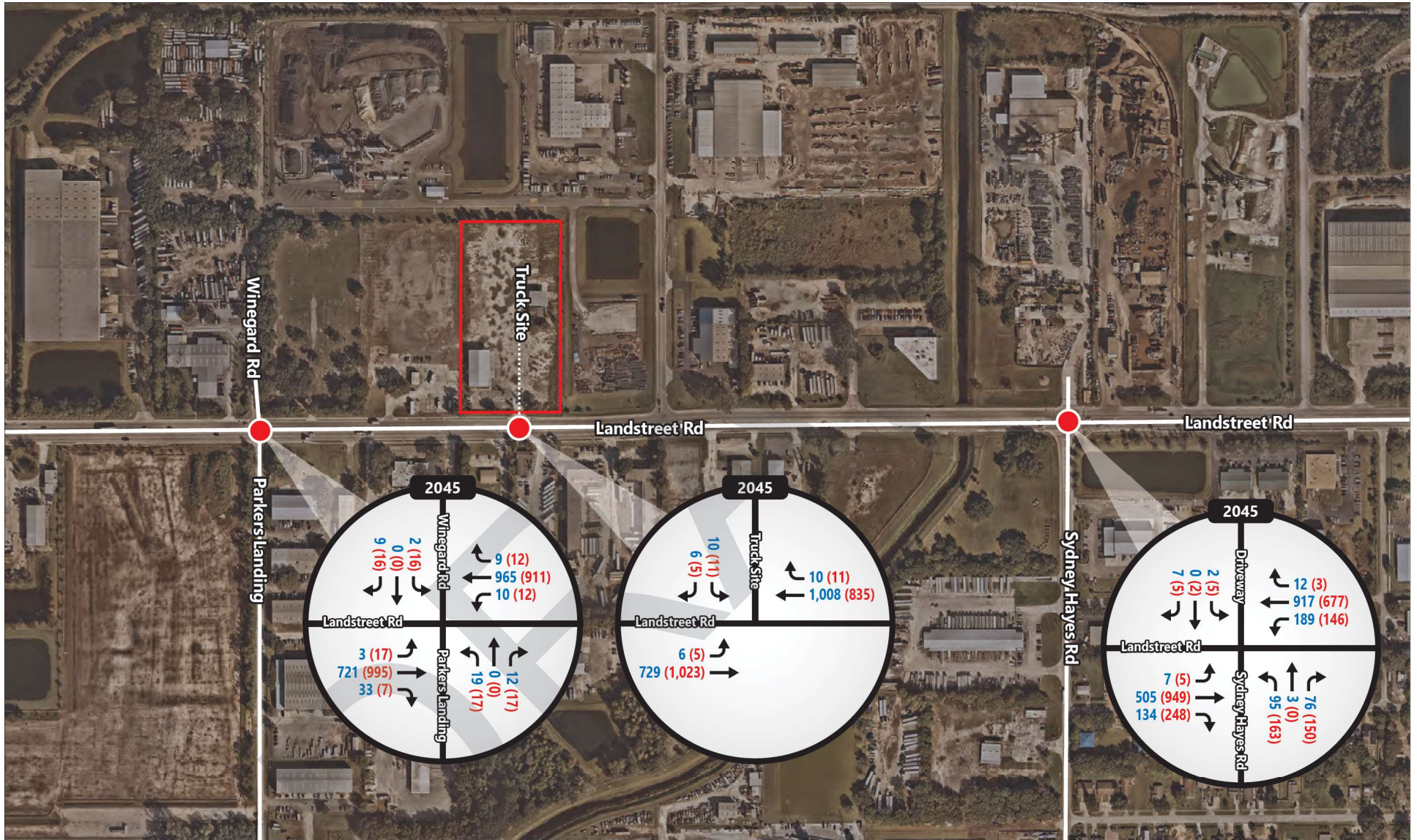
95th percentile queues for the year 2045 at the study intersections were used to recommend the queue lengths. **Table 6-16** shows the recommended queue lengths for the 2045 conditions.

The specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. The actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

Table 6-16: Recommended Queue Lengths for Turn Lanes - Orange County Site 4

Intersections on Landstreet Road	Turn Lane Queue Length (feet)							
	Landstreet Road				Side Streets			
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
1-Landstreet Road at Parkers Landing	100	-	100	-	-	-	-	-
2-Landstreet Road at Potential Truck Parking Site	100	-	-	-	-	0	-	-
3-Landstreet Road at Sidney Hayes Road	100	-	250	-	225	-	-	-

Note: A minimum queue length of 100 feet is assumed



● Study Intersection

→ Traffic Movement

AM (PM) Peak Hour Traffic Volumes

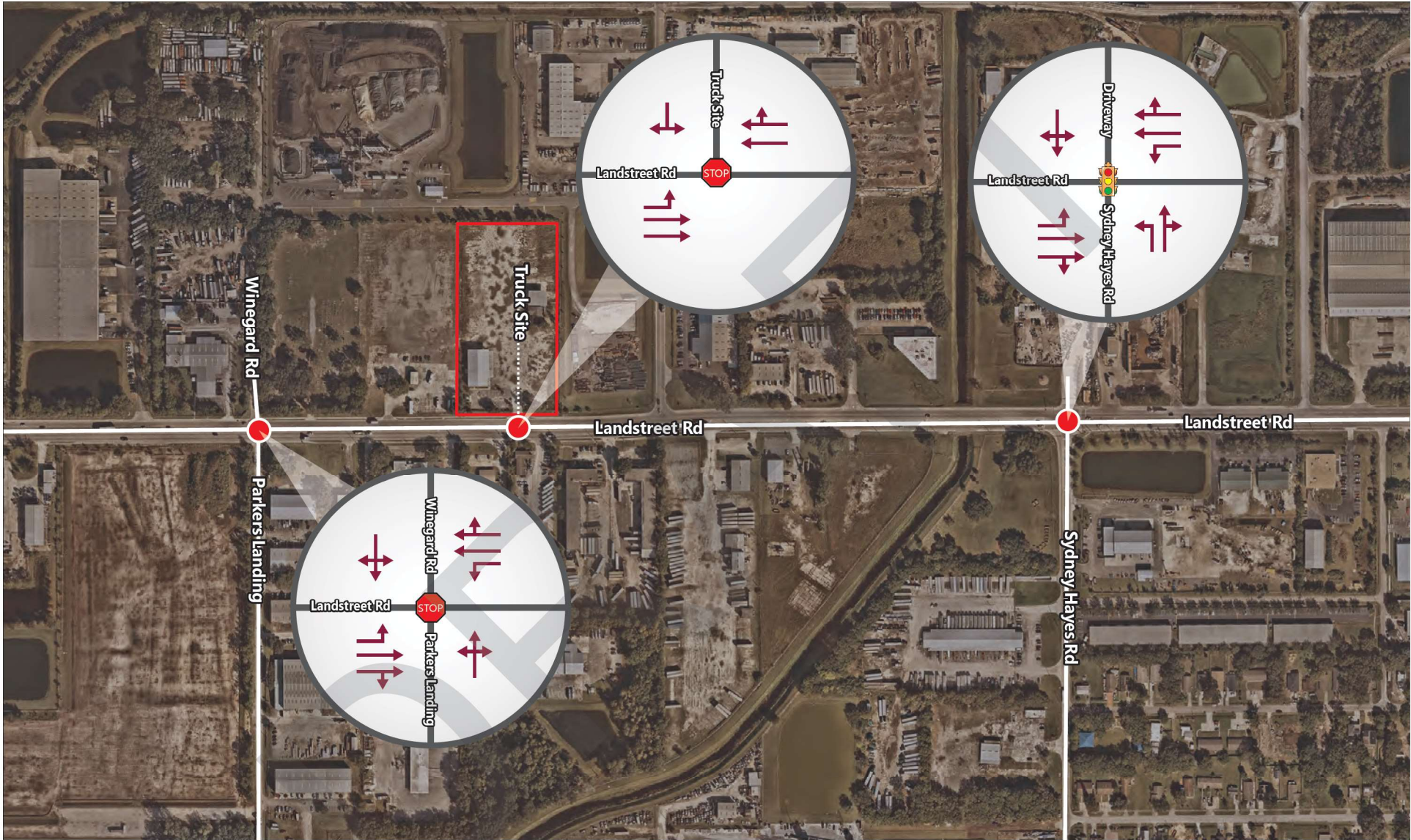
— Truck Site Location



Figure 6-19

**Future Build Turning Movement Counts
Orange County Site 4**

Preliminary Engineering Report



- Study Intersection
- Truck Site Location
- ➔ Future Lane Geometry



Figure 6-20
Future Build Geometry
Orange County Site 4
 Preliminary Engineering Report

Future Safety Analysis – Orange County Site 4

An HSM safety analysis was conducted for the No-Build and Build alternatives using predictive crash methods. With the inclusion of the Orange County Site 4 intersection in the Build alternative, the number of crashes in the year 2045 for the study corridor is expected to increase by 1 crash from roughly 4 to 5 crashes per year. This increase in the number of crashes for the year 2045 is not significant.

Seminole County Site 1B – I-4 at US 17/92

Two future scenarios were evaluated for this site: one with the existing I-4 and US 17/92 interchange configuration (existing configuration scenario) and one with the proposed I-4 BtU configuration at the I-4 and US 17/92 interchange (I-4 BtU configuration scenario). For this site, the only difference between No-Build and Build conditions at this location will be the presence of the Seminole County Site 1B. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

The AM and PM peak period projected future volumes in the year 2045 for the Seminole County Site 1B Build conditions for the existing conditions scenario and the I-4 BtU configuration scenario are shown in **Figure 6-21** and **Figure 6-22**, respectively. The future intersection geometry for the existing configuration and I-4 BtU configuration scenarios are depicted in **Figure 6-23** and **Figure 6-24**, respectively.

Existing Configuration Scenario

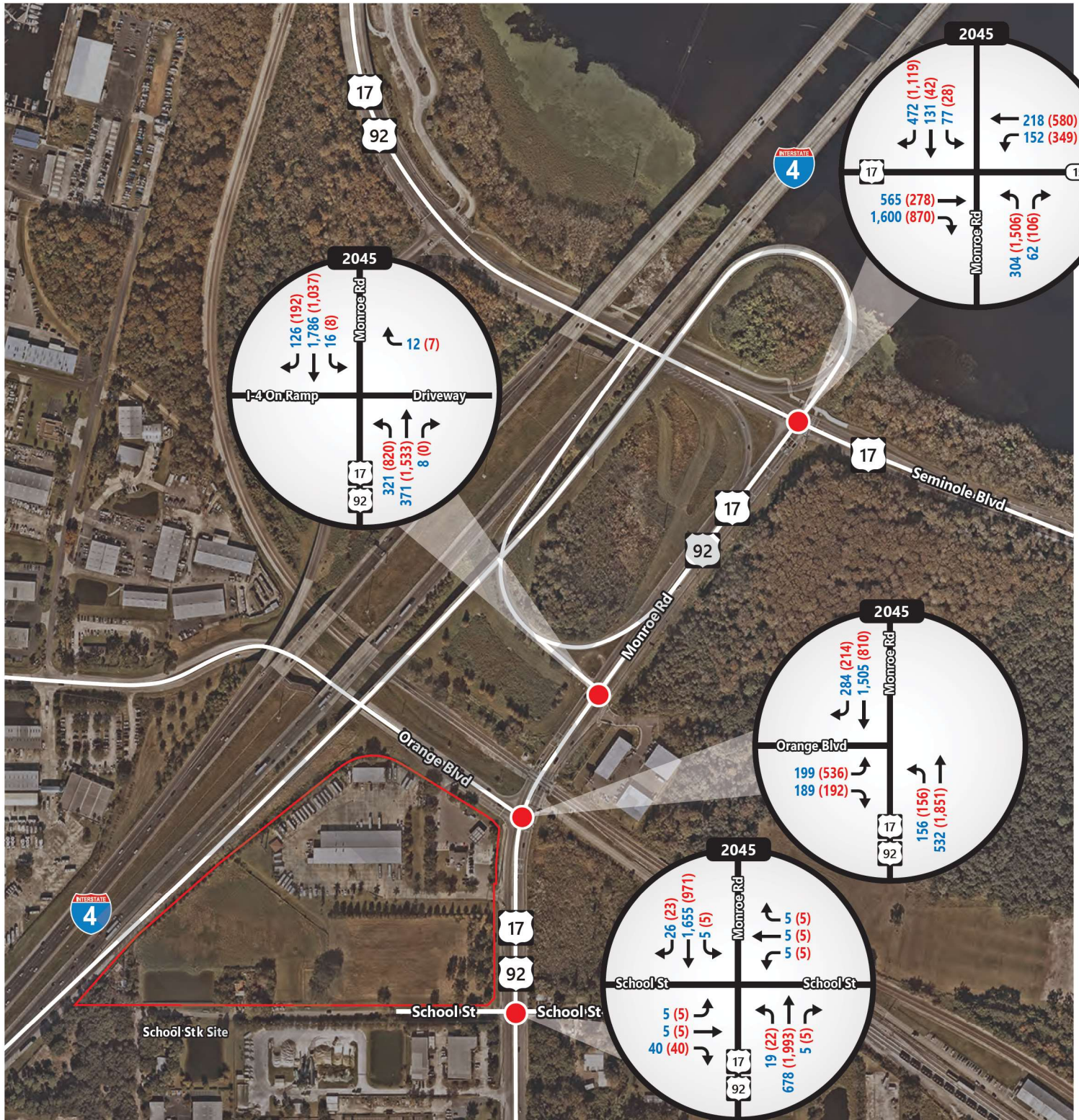
Build Intersection LOS Analysis

Table 6-17 shows the projected operations for the year 2045 Seminole County Site 1B existing configuration scenario. All the study intersections were projected to operate the same as No-Build conditions, with only a slight increase in delays after introducing the potential truck parking site intersection.

Table 6-17: Build Intersection LOS Analysis (with Existing Configuration)- Seminole County Site 1B

Study Intersection	2045 Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-US 17/92 / Monroe Road at Seminole Blvd	47.2	D	50.0	D
2-US 17/92 / Monroe Road at I-4 EB On-ramp*	9.5/113.7	A/F	16.2/197.2	B/F
3-US 17/92 / Monroe Road at Orange Blvd	24.7	C	33.9	C/F
4-US 17/92 / Monroe Road at School Street*	52.7/44.4	E/D	78.8/19.0	F/C

Note: * Minor/major street worst delays are reported for the stop-control

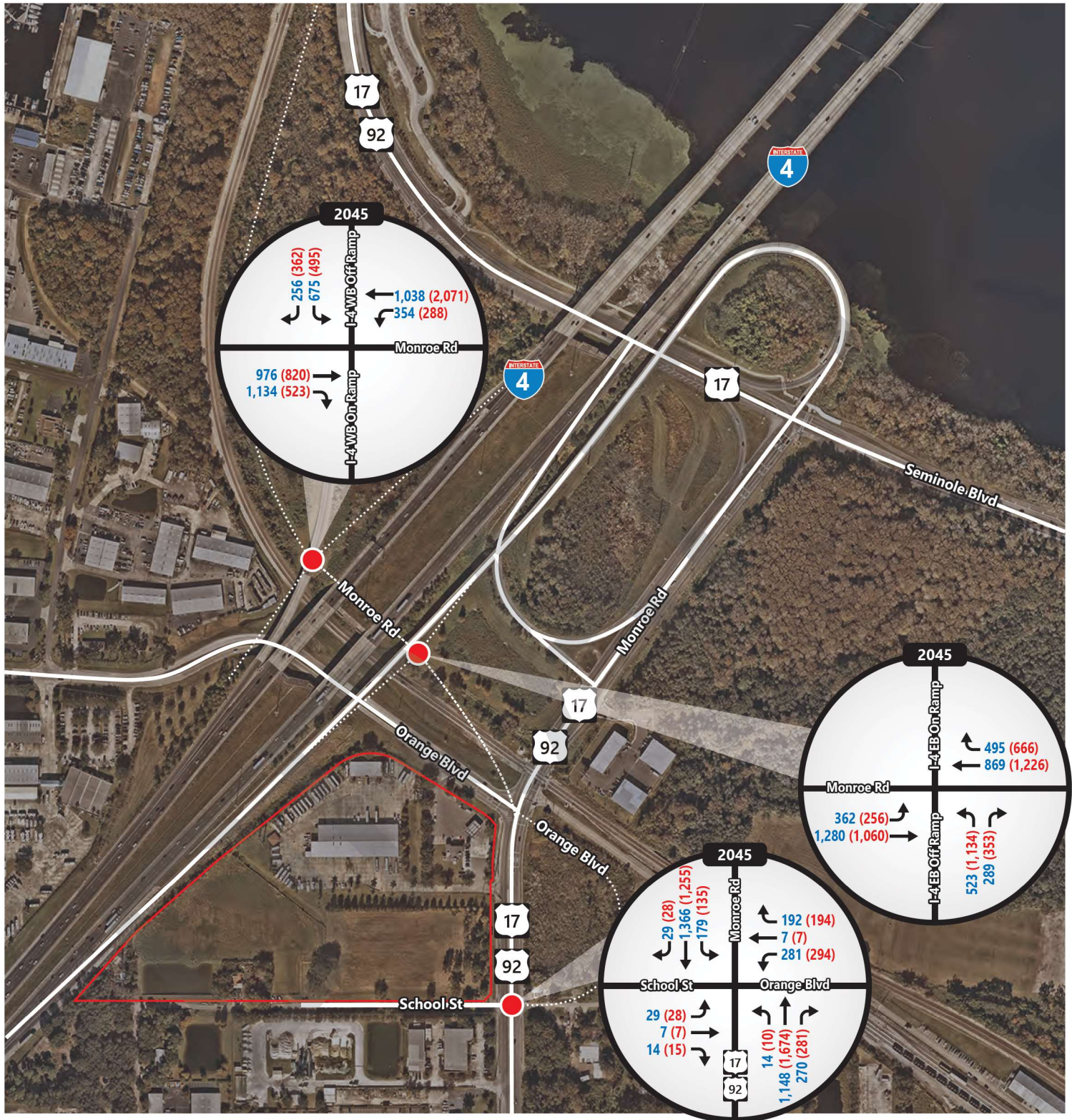


- Study Intersection
- Traffic Movement
- AM (PM) Peak Hour Traffic Volumes
- Truck Site Location



Figure 6-21

**Future Build Turning Movement Counts
Seminole County Site 1B
(with Existing Configuration)
Preliminary Engineering Report**

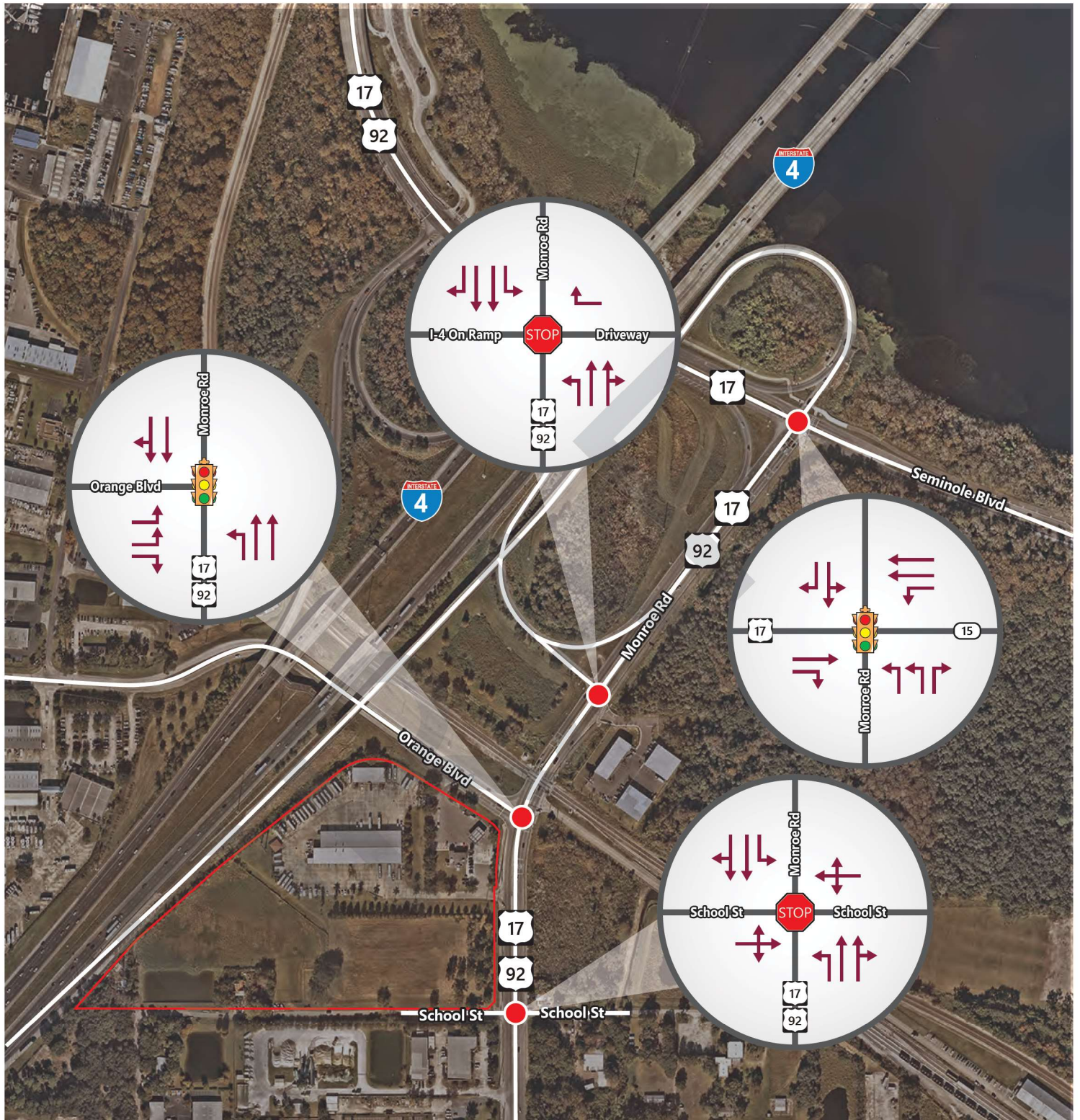


- Study Intersection
- Traffic Movement
- AM (PM) Peak Hour Traffic Volumes
- Truck Site Location



Figure 6-22

**Future Build Turning Movement Counts
Seminole County Site 1B
(with I-4 BtU Configuration)
Preliminary Engineering Report**

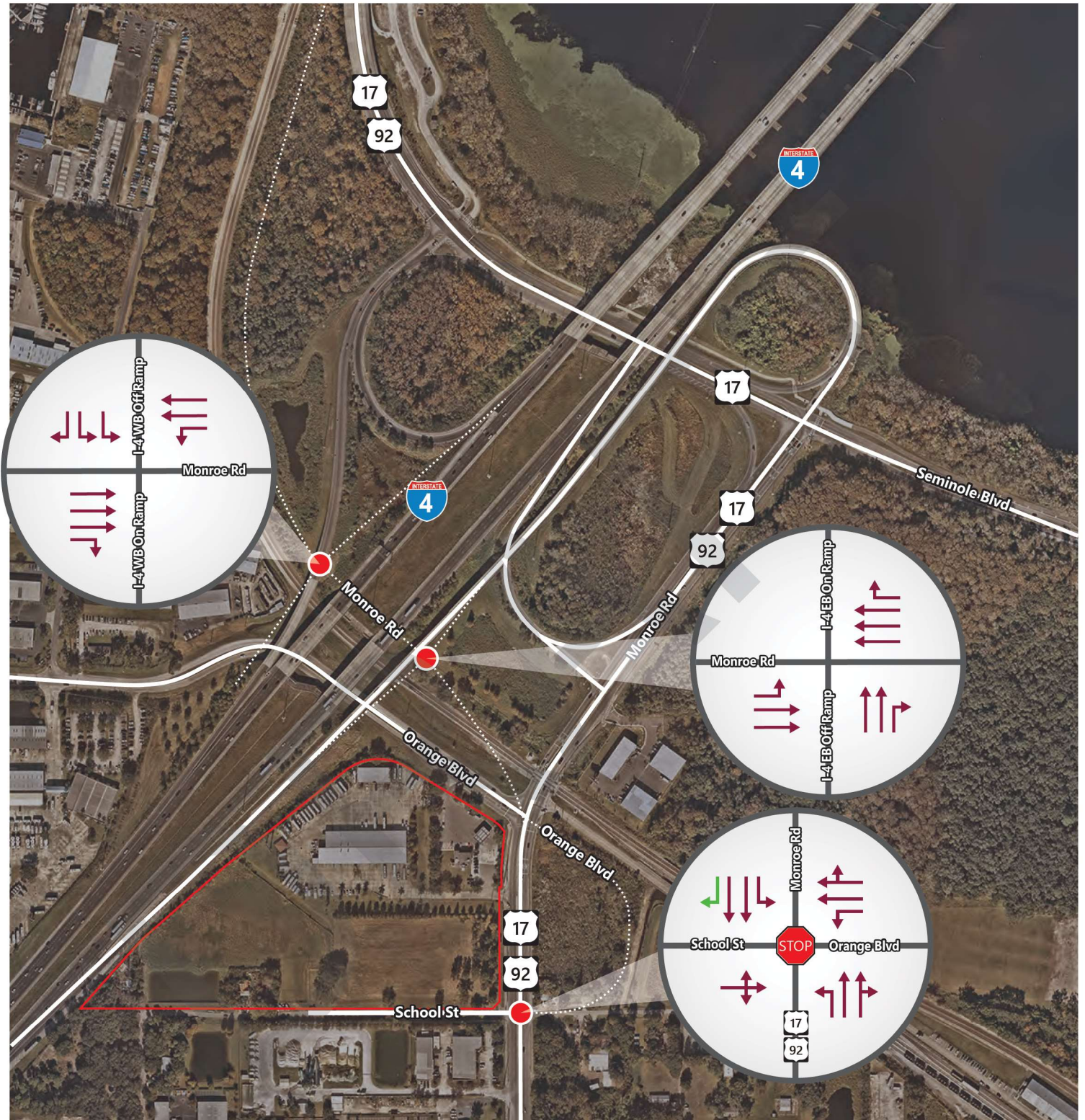


- Study Intersection
- Truck Site Location
- ➔ Future Lane Geometry



Figure 6-23

**Future Geometry
Seminole County Site 1B
(with Existing Configuration)**
Preliminary Engineering Report



- Study Intersection
- Truck Site Location
- ➔ Future Lane Geometry
- ➔ Future Lane Geometry - Build Only



Figure 6-24

**Future Geometry
Seminole County Site 1B
(with I-4 BtU Configuration)**
Preliminary Engineering Report

95th Queue Length Analysis

95th percentile queues for the year 2045 at the study intersections were used to recommend the queue lengths. **Table 6-18** shows the 2045 recommended queue lengths for the existing configuration scenario.

Table 6-18: Recommended Queue Lengths for Turn Lanes (with Existing Configuration) - Seminole County Site 1B

Intersections on US 17/92 / Monroe Road	Turn Lane Queue Length (feet)							
	Side Streets				US 17/92 / Monroe Road			
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
1-US 17/92 / Monroe Road at Seminole Boulevard	-	-	625	-	1,050	-	-	100
2-US 17/92 / Monroe Road at I-4 EB On-ramp	-	-	-	-	950	-	-	-
3-US 17/92 / Monroe Road at Orange Blvd	350	100	-	-	250	-	-	-
4-US 17/92 / Monroe Road at School Street (with Potential Truck Parking Site)	-	-	-	-	100	-	100	-

Note: A minimum queue length of 100 feet is assumed

The specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. The actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

I-4 BtU Configuration Scenario Build Intersection LOS Analysis

Table 6-19 shows the projected operations for the 2045 Seminole County Site 1B I-4 BtU configuration scenario.

All the study intersections were projected to operate the same as No-Build conditions, with only a slight increase in delays after introducing the potential truck parking site intersection.

Table 6-19: Build Intersection LOS Analysis (with I-4 BtU Configuration) - Seminole County Site 1B

Study Intersection	2045 Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-US 17/92 / Monroe Road at I-4 WB Ramps	33.7	C	54.7	D
2-US 17/92 / Monroe Road at I-4 EB Ramps	24.0	C	49.7	D
3-US 17/92 / Monroe Road at School Street (with potential Truck Parking Site)	26.0	C	43.9	D

Note: A signal is recommended at the intersection of US 17/92 / Monroe Road at School Street in the I-4 BtU Study

95th Queue Length Analysis

95th percentile queues for the year 2045 at the study intersections were used to recommend the queue lengths.

Table 6-20 shows the 2045 recommended queue lengths for the I-4 BtU configuration scenario.

The specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. The actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

Table 6-20: Recommended Queue Lengths for Turn Lanes (with I-4 BtU Configuration) - Seminole County Site 1B

Intersections on US 17/92 / Monroe Road	Turn Lane Queue Length (feet)							
	Side Streets				US 17/92 / Monroe Road			
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
1-US 17/92 / Monroe Road at I-4 WB Ramps	-	-	425	500	425	-	-	100
2-US 17/92 / Monroe Road at I-4 EB Ramps	475	325	-	-	-	100	475	-
3-US 17/92 / Monroe Road at School Street (with Potential Truck Parking Site)	-	-	475	200	100	-	275	100

Note: A minimum queue length of 100 feet is assumed

Future Safety Analysis

An HSM safety analysis was conducted for the No-Build and Build alternatives using predictive crash methods for both the existing configuration and the proposed I-4 BtU configuration scenarios.

With the existing configuration, the Build alternative resulted in a slight increase in crashes in the year 2045 for the study corridor. With the inclusion of the Seminole County Site 1B intersection, the number of crashes in the year 2045 for the study corridor is expected to increase by 1 crash from roughly 21 to 22 crashes per year. This increase in the number of crashes for the year 2045 is not significant.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

The AM and PM peak period existing volumes for Volusia County Site 1A are shown in **Figure 6-25**. The AM and PM peak period projected future volumes in the year 2045 Volusia County Site 1A Build conditions are shown in **Table 6-21**. Information relating to volume development, data collection, and HCS7 reports can be found in the PTAR in the project file.

Build LOS Analysis

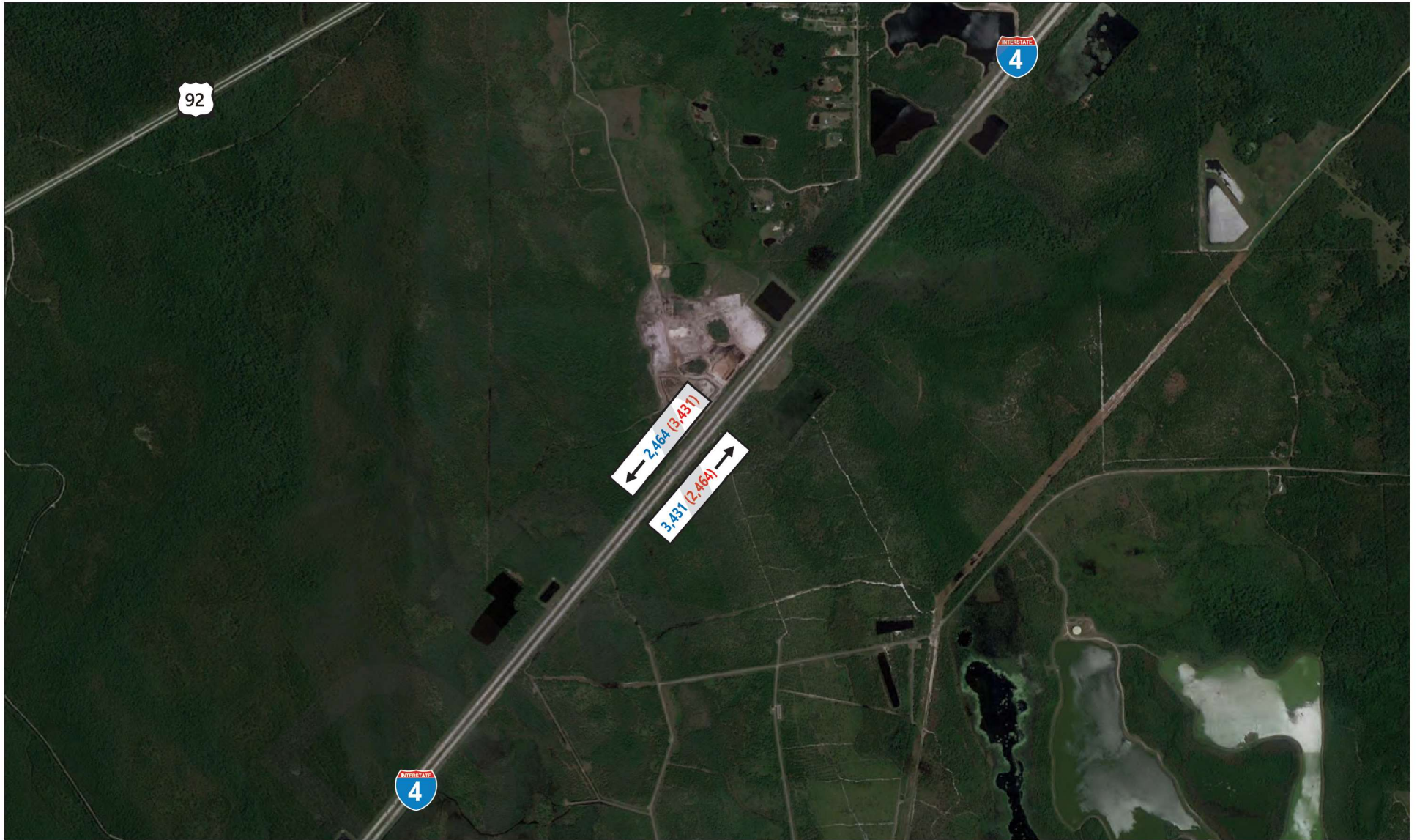
Density and estimated LOS based on HCM metrics are provided for the freeway segment analysis as shown in **Figure 6-25** for the year 2045. As part of the Build condition, an EB off-ramp to the Volusia County Site 1A will be added.

The analysis indicates that all freeway segments are expected to operate at LOS D or better through the year 2045 conditions, similar to the No-Build conditions.

Based on the Build analysis, the assumed deceleration/acceleration lengths for the off- and on-ramps should be adequate for the year 2045 traffic conditions.

Table 6-21: 2045 Build Freeway LOS Analysis – Volusia County Site 1A

Segment	AM Peak Hour		PM Peak Hour	
	Density (pc/mi/h)	LOS	Density (pc/mi/h)	LOS
I-4 Between SR 44 and EB Off-ramp to Truck Site	29.6	D	19.8	C
EB Off-ramp to Truck Site (Diverge)	30.3	D	21.9	C
I-4 Between EB Off-Ramp to Truck Site to EB On-ramp from Truck Site	28.8	D	19.3	C
EB On-ramp from Truck Site (Merge)	31.6	C	22.2	C
I-4 Between EB On-Ramp from Truck Site to US 92	29.6	D	19.8	C



→ Traffic Movement

AM (PM) Peak Hour Traffic Volumes



Figure 6-25

**Existing Peak Hour Volumes
Volusia County Site 1A & Site 1B**
Preliminary Engineering Report

Future Safety Analysis

An HSM Safety analysis was conducted for the No-Build and Build alternatives using the Enhanced Interchange Safety Analysis Tool (ISATe). The results of this analysis are presented in **Table 6-22**.

With the inclusion of the Volusia County Truck Site 1A intersections in the Build alternative, total crashes including fatal injury and property damage only in the year 2045 for the study corridor are expected to increase. However, fatal and incapacitating (KA) crashes are not anticipated to increase significantly. Due to the limitations of ISATe for the ramp deceleration and acceleration lengths (the sheet will not accept more than 1,600 feet), the number of crashes in the Build condition may be overestimated. As such, when the truck parking site is constructed, additional safety measures must be considered at this truck site to make it as safe as possible.

Table 6-22: Predicted Average Crash Frequency (Crashes/Year) for 2045 - Volusia County Site 1A and Site 1B

Study Intersection	Fatal/Injury (KA)		All Severities (Including PDO)	
	No-Build	Build	No-Build	Build
I-4 Freeway Segments	1.4	2.0	54.2	73.8
I-4 Ramp Segments	-	-	-	0.5
Total	1.4	2.0	54.2	74.3
Difference (Build minus No-Build)	0.6		20.1	

Notes: K-Fatal, A-Incapacitating

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

The AM and PM peak period existing volumes for Volusia County Site 1B are shown in **Figure 6-25**. The AM and PM peak period projected future volumes in the year 2045 Volusia County Site 1B Build conditions are shown in **Table 6-23**. Information relating to volume development, data collection, and HCS7 reports can be found in the PTAR in the project file.

Build LOS Analysis

Density and estimated LOS based on HCM metrics are provided for the freeway segment analysis as shown in **Table 6-23** for the year 2045. As part of the Build condition, a WB on-ramp from the Volusia County Site 1B will be added.

The analysis indicates that all freeway segments are expected to operate at LOS D or better through the year 2045 conditions, similar to the No-Build conditions.

Based on the Build analysis, the assumed deceleration/acceleration lengths for the off- and on-ramps should be adequate for the year 2045 traffic conditions.

Table 6-23: 2045 Build Freeway LOS Analysis – Volusia County Site 1B

Segment	AM Peak Hour		PM Peak Hour	
	Density (pc/mi/h)	LOS	Density (pc/mi/h)	LOS
I-4 Btw US 92 44 and WB Off-ramp to Truck Site	20.0	C	29.9	D
WB Off-ramp to Truck Site (Diverge)	22.0	C	30.6	D
I-4 Btw WB Off-Ramp to Truck Site to WB On-ramp from Truck Site	19.5	C	29.2	D
WB On-ramp from Truck Site (Merge)	22.3	C	31.9	D
I-4 Btw WB On-Ramp from Truck Site to SR 44	20.0	C	29.9	D

Future Safety Analysis

An HSM Safety analysis was conducted for the No-Build and Build alternatives using the ISATe. The results of this analysis are presented in **Table 6-22**.

With the inclusion of the Volusia County Truck Site 1B intersections in the Build alternative, total crashes including fatal/ injury and property damage only in the year 2045 for the study corridor are expected to increase. However, fatal and incapacitating (KA) crashes are not anticipated to increase significantly. Due to the limitations of ISATe for the ramp deceleration and acceleration lengths (the sheet will not accept more than 1,600 feet), the number of crashes in the Build condition may be overestimated. As such, when the truck parking site is constructed, additional safety measures must be considered at this truck site to make it as safe as possible.

6.6 Selection of Preferred Sites

After analyzing the Build Alternatives from a purpose and need, engineering feasibility, potential environmental impact, and economic perspective, the Build Alternatives were further refined to minimize impacts where feasible and incorporate public and stakeholder feedback as summarized below. Engineering analysis and potential environmental impacts of the Preferred Alternative are documented in Section 8 of this report and included in the concept plans provided in **Appendix A**. The preferred sites are identified as follows:

- Osceola County Site 1 – CR 532 and PPE
- Orange County Site 1 – Sand Lake Road at John Young Parkway
- Seminole County Site 1B – I-4 at US 17/92 (*separate project*)
- Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95
- Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

As a result of the engineering and environmental analyses completed during this study, and the comprehensive public engagement plan, two of the seven viable sites (Orange County Site 2 and Orange County Site 4) are not being advanced for project development and final design phases. While not being advanced, these two sites are still considered viable. No refinements were made to the two viable sites. As discussed previously, Seminole County Site 1B is being developed as part of a separate project as a PD&E Study Reevaluation for the *I-4 BtU Segment 3* project (FPID: 242592-4). As of March 2024, 60% of the Design phase has been completed for Seminole Site 1B, and further refinements to the site design have been made based on additional engineering analysis.

A VE Study was conducted in July 2023, which led to further refinements, including a modified site layout for Volusia County Site 1B.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Based on stakeholder input at the Alternatives Public Meeting, refinements were made to this site. A 300-foot landscaping buffer between the truck parking site and the nearest residential parcel was provided to reduce potential visual and aesthetic effects. Additionally, based on information received from utility companies, the site design was modified to maximize the number of spaces in the available ROW while maintaining existing utility easements. These refinements resulted in a reduced number of impacted parcels; from 19 to 18, and a reduced number of truck parking spaces. Approximately 230 standard-size parking spaces and 4 oversize parking spaces are provided in the Preferred Alternative for a total of 234 spaces.

Orange County Site 1 – Sand Lake Road at John Young Parkway

During the development of this site concept, FDOT and FTE coordinated concept development due to adjacent interchange design and stormwater management and floodplain compensation needs located within the footprint of the identified truck parking site. During the refinement of preferred Orange County site 1, FTE updated design plans to include a larger pond on the east end of Orange County Site 1 than what was originally used in the design of the site. This reduced the site size from 21.5 acres to 16.3 acres, and due to FDOT already owning a 1.7-acre parcel on the proposed site, the total ROW acquisition required for the preferred site was reduced to 14.6 acres.

Coordination with FTE led to modified ponds for the truck parking site. This resulted in a decrease of 16 parking spaces for the truck parking site, and Orange County Site 1 is proposed to contain 93 parking spaces. Orange County Site 1 will still maintain the right-in/right-out driveways at Sand Lake Road and John Young Parkway.

Seminole County Site 1B – I-4 at US 17/92

Coordination with Seminole County resulted in refinements to the site on the northeast corner to minimize potential visual and aesthetic effects from the site. Landscaping buffers were incorporated along Orange Boulevard within the truck parking site. Additional evaluation of stormwater management needs resulted in refinements to the site layout and configuration.

During the concurrent Design phase, additional refinements were made to the site to minimize relocation impacts. The parcel occupied by the Circle K gas station has been identified as a potential relocation for the I-4 BtU project, therefore this parcel is not considered impacted by Seminole County Site 1B. The number of parcel impacts and relocations for the site decreased from eight parcels and four relocations to seven parcels and three relocations. The Preferred Alternative for the site is consistent with the refined design for the site. The design plans used for the Preferred Alternative as of February 2024, are the 60% design plans, included in the project file. The design phase for Seminole County Site 1B is underway and is subject to further refinements. Based on the most recent design plans, the site is approximately 17.4 acres and will accommodate 132 truck parking spaces.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Between the viable site stage and selection of preferred sites, Volusia County Site 1 was divided into Volusia County Site 1A (I-4 Eastbound) and Volusia County Site 1B (I-4 Westbound), as the sites will be implemented independently as funding is programmed for construction. An existing wildlife crossing on I-4 is located under both the eastbound and westbound travel lanes within the vicinity of the preferred Volusia County Site 1A location. Based on stakeholder coordination, the westbound access ramp to the preferred site was modified to avoid impacts to the existing wildlife crossing. Additionally, enhanced features to the site including proposed wildlife fencing and conservation areas were incorporated into the site concept. Volusia County Site 1A involves 275 truck parking spaces and 10 maintenance vehicle spaces.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Between the viable site stage and selection of preferred sites, Volusia County Site 1 was divided into Volusia County Site 1A (I-4 Eastbound) and Volusia County Site 1B (I-4 Westbound), in order to advance the construction timeline. An existing wildlife crossing on I-4 is located under both the eastbound and westbound travel lanes within the vicinity of the preferred Volusia County Site 1B location. Additionally, enhanced features to the site including proposed wildlife fencing and conservation areas were incorporated into the site concept.

As a result of the VE Study recommendations, the previous layout of Volusia County Site 1B was rotated 90 degrees, the two restroom facilities at either end of the truck parking site were consolidated to a large, centralized restroom facility, the length of Pond 1 was decreased, and the existing I-4 Pond I at the south side of the site was expanded to maximize use of the existing stormwater management area. These changes led to a wider wildlife corridor. Volusia County Site 1B involves 253 truck parking spaces and 10 maintenance vehicle spaces.

DRAFT

7. Project Coordination and Public Involvement

This chapter documents the public involvement activities accomplished throughout this PD&E Study. All materials for the various public involvement activities, including meeting agendas, comments received, and coordination records are included in the Comments and Coordination Report, in the project file.

7.1 Agency Coordination

The following agency coordination meetings took place over the course of the study. Meeting summaries are available in the project files.

7.1.1 Local Agency Meetings

- Seminole County Local Agency Meeting (December 16, 2021): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, Seminole County, MetroPlan Orlando, and the study team.
- City of Sanford Local Agency Meeting (December 16, 2021): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, City of Sanford, MetroPlan Orlando, and the study team.
- Osceola County Local Agency Meeting (January 14, 2022): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, Osceola County, MetroPlan Orlando, and the study team.
- City of Orlando Local Agency Meeting (February 1, 2022): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, City of Orlando, MetroPlan Orlando, and the study team.
- Orange County Local Agency Meeting (February 4, 2022): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, Orange County, MetroPlan Orlando, and the study team.
- FTE Coordination Meeting (March 17, 2022): The purpose of this meeting was to discuss the viability of using the Sand Lake Road and John Young Parkway site as a location for truck parking. The meeting was attended by representatives of FDOT District 5, FTE, and the study team.
- CFX Coordination Meeting (March 18, 2022): The purpose of this meeting was to discuss the status and schedule of the PPE project and the CR 532 widening; and make the CFX aware that a site adjacent to the PPE and CR 532 widening was being looked at as a potential site. The meeting was attended by representatives of FDOT District 5, CFX, and the study team.

- Volusia County, City of Daytona Beach, and City of Port Orange Local Agency Meeting (March 25, 2022): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, Volusia County, City of Daytona Beach, City of Port Orange, and the study team.
- R2C TPO Local Agency Meeting (April 26, 2022): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, R2C TPO, and the study team.
- Florida Highway Patrol (July 21, 2022): The purpose of this meeting was to give a background of the study and discuss potential site locations and security needs. The meeting was attended by representatives of FDOT District 5, Florida Highway Patrol, and the study team.

7.1.2 Local Agency Update Meetings

- City of Sanford Local Agency Meeting #2 (May 3, 2022): The purpose of this meeting was to provide a project update, discuss the alternatives of the potential site locations, and gather input prior to the next public meeting. The meeting was attended by representatives of FDOT District 5, City of Sanford, and the study team.
- City of Orlando Local Agency Meeting #2 (May 5, 2022): The purpose of this meeting was to provide a project update, discuss the alternatives of the potential site locations, and gather input prior to the next public meeting. The meeting was attended by representatives of FDOT District 5, City of Orlando, and the study team.
- Orange County Local Agency Meeting #2 (May 5, 2022): The purpose of this meeting was to provide a project update, discuss the alternatives of the potential site locations, and gather input prior to the next public meeting. The meeting was attended by representatives of FDOT District 5, Orange County, MetroPlan Orlando, and the study team.
- Seminole County Local Agency Meeting #2 (May 6, 2022): The purpose of this meeting was to provide an update on the alternative analysis of the potential site locations and gather input prior to the next public meeting. The meeting was attended by representatives of FDOT District 5, Seminole County, and the study team.
- Osceola County Local Agency Meeting #2 (May 10, 2022): The purpose of this meeting was to provide a project update, discuss the alternatives of the potential site locations, and gather input prior to the next public meeting. The meeting was attended by representatives of FDOT District 5, Osceola County, and the study team.
- FTE Coordination Meeting (May 18, 2022): The purpose of this meeting was to discuss the conceptual layout and traffic operations assessment for the potential site in the northwest quadrant of FTE's new interchange at Sand Lake Road and Florida's Turnpike. The meeting was attended by representatives of FDOT District 5, FTE, and the study team.
- FTE Coordination Meeting (November 11, 2022): The purpose of this meeting was to discuss the stormwater management needs and conceptual drainage design for the potential site in the northwest quadrant of FTE's new interchange at Sand Lake Road and Florida's Turnpike. The meeting was attended by representatives of FDOT District 5, FTE, and the study team.
- Seminole County Board of County Commissioners Meeting (August 8, 2023): The purpose of this presentation was to update the Board on the current project status.

7.1.3 Local Advisory Group Presentations

- R2C TPO Citizens' Advisory Committee (CAC) Presentation (June 21, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.

- R2C TPO Technical Coordinating Committee (TCC) Presentation (June 21, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- R2C TPO Board Presentation (June 22, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- MetroPlan Orlando CAC Presentation (June 22, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- MetroPlan Orlando Technical Advisory Committee (TAC) Presentation (June 24, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- MetroPlan Orlando TSM&O Presentation (June 24, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- MetroPlan Orlando Municipal Advisory Committee (MAC) Presentation (July 7, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- MetroPlan Orlando Board Presentation (July 27, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- R2C TPO Presentation (August 2, 2023): The purpose of this presentation was to provide a project update and present the final recommendations of the study.
- Seminole County Presentation (August 8, 2023): The purpose of this presentation was to provide a project update and present the final recommendations of the study.
- R2C TPO TCC Presentation #2 (August 15, 2023): The purpose of this presentation was to provide a project update and present the final recommendations of the study.
- R2C TPO CAC Presentation #2 (August 15, 2023): The purpose of this presentation was to provide a project update and present the final recommendations of the study.
- R2C TPO Board Presentation (August 23, 2023): The purpose of this presentation was to provide a project update and present the final recommendations of the study.

7.1.4 Public Private Partnership (P3) Meeting

- Unsolicited P3 Applicant Coordination Meeting (January 31, 2023): The purpose of the meeting was to coordinate with the potential unsolicited P3 applicant to help them understand the purpose and locations of the preferred truck parking sites. Also, information was requested to help the study team understand the potential P3 applicant's current truck parking operations and locations. The goal of the meeting was to begin the coordination with this potential applicant to inform them of the high-level approach to P3 unsolicited bid. The meeting was attended by representatives of FDOT District 5, FDOT Central Office, the potential P3 applicant, and the study team.

7.2 Public Involvement

7.2.1 Public Involvement Program

A PIP, in the project file, was developed at the beginning of this study and followed throughout the study. The purpose of the PIP was to provide information to and receive information from concerned citizens, agencies, private groups, organizations, governmental agencies, and elected and appointed officials. The PIP helped ensure that the study maintained the values and needs of the community it is intended to benefit. The general approach to the public involvement, including the contact persons, media outlets, agencies and project stakeholders, and the means used to involve them in the process is all documented in the PIP, in the project file.

7.2.2 Public Information Meetings

A Public Information Meeting was conducted in each county (Osceola, Orange, Seminole, and Volusia) to introduce the Potential Truck Parking Sites, explain the PD&E process, and provide an opportunity for input from the public and stakeholders. Each meeting was conducted as a hybrid meeting presenting the same information and presentation across all counties from 5:30 pm – 7:00 pm. In-person attendees could view a looping narrated presentation, project displays, and ask questions with available FDOT staff and members of the study team. Those attending virtually, using GoToWebinar, were able to log-in to the meeting starting at 5:30 pm. Online attendees were shown a looping narrated presentation (shown during the in-person meetings) and were encouraged to submit their comments and questions via the online meeting’s chat-box throughout the presentation. A handout and several materials were on display at each meeting, including:

- Welcome Board
- Title VI Board
- Study Location Board
- Study Schedule Board
- Interpretive Services Poster
- Osceola County Potential Truck Parking Site 1 Board
- Osceola County Potential Truck Parking Site 2 Board
- Orange County Potential Truck Parking Site 1 – 7 Boards
- Seminole County Potential Truck Parking Site Board
- Volusia County Potential Truck Parking Site Board

Eight comments were received during this round of public meetings. The following lists the general subjects of the comments received:

- Support for Osceola County Site 2, and Orange County Sites 3, 4, and 6
- Request for more information on traffic analysis results for the potential truck parking sites and anticipated impacts to Tradeport Drive in Orange County
- Requirements of truck drivers who will use the potential truck parking sites
- Concern for future land use plans in Osceola County
- Concern for State funding allocation plans for potential truck parking sites
- Alternative suggestion to utilize land in Polk County for potential truck parking site

All comments were responded to in writing immediately following the public comment period for each public meeting. The following Public Information Meetings were held over the course of the study. Sign in sheets, comments, comment responses, and display materials are in the project file.

Seminole County

A Public Information Meeting was held in Seminole County on March 3, 2022. Approximately 28 members of the public, 15 FDOT staff members, and 9 members of the study team attended the meeting. Additionally, five Seminole County representatives and staff members, two City of Sanford staff members, one MetroPlan Orlando staff member, and one Volusia County staff member attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

Orange County

A Public Information Meeting was held in Orange County on April 5, 2022. Approximately nine members of the public, eight FDOT staff members, and eight members of the study team attended the meeting. Additionally, three Greater Orlando Aviation Authority staff members, one Orange County staff member, one Volusia County staff member, one Florida Department of State staff member, and one Yardco Representative attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

Osceola County

A Public Information Meeting was held in Osceola County on April 12, 2022. Approximately five members of the public, three FDOT staff members, two Osceola County staff members, one MetroPlan Orlando staff member, and seven members of the consultant study team attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

Volusia County

A Public Information Meeting was held in Volusia County on April 28, 2022. Approximately 31 members of the public, 10 FDOT staff members, and 9 members of the study team attended the meeting. Additionally, three Orange City Council members, one Port Orange staff member, and one Daytona Beach staff member attended the meeting. No comments were received during the public comment period. A Public Meeting Summary Report was prepared and is in the project file.

7.2.3 Alternatives Public Meetings

A second public meeting was held in each county noted above to present the alternatives considered and the Preferred Alternative and receive feedback from the community. Each Alternatives Public Meeting was conducted as a hybrid meeting presenting the same information and presentation across all counties from 5:30 pm – 7:00 pm. In-person attendees could view a looping narrated presentation, project displays (including concept plans for all seven viable site alternatives) and ask questions with available FDOT staff and members of the study team. Those attending virtually using GoToWebinar were able to log-in to the meeting starting at 5:30 pm. Online attendees were shown a looping narrated presentation (shown during the in-person meetings) and were encouraged to submit their comments and questions via the online meeting's chat-box throughout the presentation. Several materials were on display at each meeting, including:

- Welcome Board
- Title VI Board
- Viable Site Locations Board
- Study Schedule Board
- Interpretive Services Poster
- Orange County Viable Truck Parking Site Option 1 Board
- Orange County Viable Truck Parking Site Option 2 Board
- Orange County Viable Truck Parking Site Option 3 Board

- Orange County Evaluation Matrix Board
- Osceola County Viable Truck Parking Site Board
- Osceola County Evaluation Matrix Board
- Seminole County Potential Truck Parking Site Board
- Seminole County Evaluation Matrix Board
- Volusia County Viable Truck Parking Site – Eastbound Board
- Volusia County Viable Truck Parking Site – Westbound Board
- Volusia County Evaluation Matrix Board

Two comments were received during this round of public meetings. The following lists the general subject of the comment received:

- Request for more information about the chosen site for design and the timeline for implementing a truck parking site in Volusia County
- Request for information regarding the site that has been funded to advanced

All comments were responded to in writing immediately following the public comment period for each public meeting. The following Alternatives Public Meetings were held over the course of the study. All meeting information, sign in sheets, and display materials are in the project file.

Seminole County

An Alternatives Public Meeting was held in Seminole County on May 19, 2022. Approximately 7 members of the public, 12 FDOT staff members, and 7 members of the study team attended the meeting. Additionally, one MetroPlan Orlando staff member, one Seminole County staff member, and one EPA representative attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

Orange County

An Alternatives Public Meeting was held in Orange County on June 14, 2022. Approximately one member of the public, one FDOT staff member, and seven members of the study team attended the meeting. Additionally, one Florida House Staffer and one MetroPlan Orlando staff member attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

Osceola County

An Alternatives Public Meeting was held in Osceola County on June 23, 2022. Approximately two members of the public, two FDOT staff members, and five members of the study team attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

Volusia County

An Alternatives Public Meeting was held in Volusia County on June 30, 2022. Approximately 12 members of the public, 4 FDOT staff members, and 7 members of the study team attended the meeting. Additionally, one Volusia County staff member, two City of Daytona Beach staff members, one City of Port Orange staff member, one City of Deland staff member, and one press member from the West Volusia Beacon attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

7.2.4 Additional Communication

Additional communication with the public made throughout the study, but not during meeting comment periods, were also documented and are summarized in Table 7-1. This includes communication by mail, telephone, email, and through the website.

Table 7-1: Additional Public Communication

Name	Date	Method	Subject
Art Brent	4/8/2022	Email	Owns property adjacent to proposed Osceola County Site
Art Kratka	4/8/2022	Email	Osceola Site criteria and zoning
Ronnie	4/15/2022	Email	Rest Areas used for Extended Parking
Alissa Torres	4/20/2022	Email	Orange County Potential Sites
Rick Werbiskis	6/29/2022	Email	City of Deland questions Re: Volusia Sites
Eric Ryder, Policastro Law Group	7/7/2022	Email	Status of Seminole County Alternative 1A/1B
Amber Crooks, Conservancy of Southwest Florida	4/24/2023	Email	Volusia County Sites 1A/1B and impact on existing wildlife crossings

Truck Parking Championship Survey

Additional communication with the public was made at the Florida Truck Driving Championships hosted by the Florida Trucking Association. The event took place June 9-11, 2022 and June 15-17, 2023, in Daytona Beach, Florida. Over the course of each event, two FDOT staff members attended and conducted a survey via QR code. The survey, prepared by FDOT, was designed to gain a better understanding of truck driver’s needs and preferences for potential truck parking site concepts along the I-4 corridor. The surveys elicited 66 responses during the 2022 event and 32 responses during the 2023 event. Of the survey responses, feedback indicated that security, restrooms, and parking space design were a top priority as they received the highest favor. Results from the survey are summarized in **Table 7-2** and **Table 7-3**.

Table 7-2: June 2022 Truck Parking Championships Survey Feedback

Potential Truck Parking Site Concept Preferences	Favor
Security	25
Restrooms	24
Design/Parking Spaces	24
Quiet Parking (away from cars to rest)	15
Vending Machines	14
Other Food Sources (food court)	12
Showers	12
Dog Area	6
Lighting	4
Trash/Garbage Cans	4

Table 7-3: June 2023 Truck Parking Championships Survey Feedback

Potential Truck Parking Site Concept Preferences	Favor
Restrooms	27
Pull Through Spaces	23
Security	22
Enhanced Lighting	20
Vending Machines	18
Trash/Garbage Cans	13
TPAS	11
Pet Amenities (Dog Walk area)	9
Back-in Spaces	6
Generator Plug Ins	2

7.3 Public Hearing

A Notice of Opportunity for Public Hearing is anticipated to be sent out to the relevant stakeholders for Volusia County Site 1A and Volusia County Site 1B. No public hearing is required for the preferred sites in Osceola, Orange, or Seminole County.

8

8. Preferred Alternative

This section discusses the results of the preliminary engineering analysis and environmental evaluation conducted for the Preferred Alternative. The Preferred Alternative for the *Truck and Freight Site Analysis PD&E Study* includes five sites: Osceola County Site 1, Orange County Site 1, Seminole County Site 1B, Volusia County Site 1A (Eastbound), and Volusia County Site 1B (Westbound). This section documents the Preferred Alternative for the *Truck and Freight Alternative Site Analysis PD&E Study*.

The conceptual design features of the Preferred Alternative at each of the five preferred sites are summarized in this section. The Preferred Alternative was presented and compared to the No-Build Alternative at Public Meetings held in Summer 2022 (one public meeting held in each of the four counties between May 19, 2022, and June 30, 2022).

8.1 Truck Parking Site Design

8.1.1 Site Concepts

Preliminary site concepts were prepared during the PD&E Study including parking layouts, site access, proposed sidewalks, stormwater management, restroom facilities and landscaping/greenspace areas to identify the proposed ROW needs shown on the concepts provided in **Appendix A**. During the Design phase for each site, the site configuration within the proposed ROW will be re-evaluated based on further engineering and site analysis.

The Preferred Alternative includes five preferred site locations for truck parking within Osceola, Orange, Seminole, and Volusia Counties. The Osceola County site is accessible to the I-4 corridor and other high freight corridors including the PPE, CR 532, and US 17/92. The Orange County site is located in a heavily industrialized area serving existing freight origin-destinations that are experiencing truck parking shortages based on known parking on road shoulders and undesignated parking. The Orange County site provides regional connectivity to I-4, Florida’s Turnpike and SR 528. The Seminole County site is adjacent to I-4 near the US 17/92 interchange with significant freight activity. The Volusia County sites are located along the I-4 corridor, providing direct interstate access and regional freight connectivity.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 is located approximately 3.87 miles east of the I-4 interchange with CR 532 along the south side of CR 532. The preferred site is immediately east of the planned PPE, which is in the Design phase as of March 2024. This site would be bordered by the PPE, CR 532, and US 17/92, providing access to I-4 as well as other high freight corridors including the PPE, CR 532, and US 17/92. The site is planned to be developed around a proposed pond for the PPE.

The preferred site will be approximately 40.1 acres, supplying 234 truck parking spaces. Four of the 234 parking spaces are 125-foot extra length spaces, which can accommodate oversize load trucks. The PD&E site concept assumes a restroom facility at the front of the parking site, along with a second restroom

facility at the back of the parking site due to the large site. Based on the VE Study (conducted in July 2023) recommendations, FDOT will modify the site layout during the Design phase to centralize the restroom for Osceola County Site 1. Per the VE Study, this will minimize walking distance to the restroom, reduce the utility and maintenance costs, and centralize the security area.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Orange County Site 1 is located along Sand Lake Road approximately 2.90 miles east of I-4. The site is proposed on the northeast corner of Sand Lake Road and John Young Parkway immediately west, and adjacent to the limited access Florida's Turnpike facility. As part of a separate project, Florida's Turnpike is adding a new interchange with Sand Lake Road, which will increase access to this truck parking site.

The preferred site is approximately 16.3 acres and is anticipated to require approximately 14.6 acres of ROW, accommodating 93 truck parking spaces. A restroom facility is assumed at the back of the parking site.

Seminole County Site 1B – I-4 at US 17/92

Seminole County Site 1B is located adjacent to eastbound I-4 and southeast of the I-4 and US 17/92 interchange in unincorporated Seminole County, immediately outside the Sanford city limits. In the existing condition, the site can access I-4 via US 17/92 (0.45 miles) and via SR 46 (1.85 miles). Additionally, there are planned I-4 BtU improvements at the I-4 and US 17/92 interchange, which will modify access to I-4 through a reconfigured ramp adjacent to the site. Following the I-4 BtU construction, the distance to I-4 via US 17/92 will be shortened to 0.25 miles.

The preferred site is approximately 17.4 acres, accommodating 132 truck parking spaces. A restroom facility is assumed in the center of the truck parking site. A large, raised berm at the northeast corner of the site along Orange Boulevard is proposed to decrease the visibility of the site to nearby properties. Also, one of the ponds was proposed along the eastern portion of the truck parking site to provide a visual buffer adjacent to US 17/92.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1A is located along I-4 Eastbound approximately 4.5 miles southwest of the I-95 interchange (approximate Milepost (MP) 23.112). An on-ramp and off-ramp will be provided on I-4 Eastbound for direct access to and from Volusia County Site 1A. The truck parking site is located at a former Volusia County rest area and is approximately 73.3 acres, accommodating 275 truck parking spaces. The PD&E site concept includes a large restroom facility at the front of the truck parking site, and a small restroom facility at the back of the truck parking site. Based on the VE Study (conducted in July 2023) recommendations, FDOT will modify the site layout during the Design phase to centralize the restroom for Volusia County Site 1A. Per the VE Study, this will minimize walking distance to the restroom, reduce the utility and maintenance costs, and centralize the security area. Wildlife fencing and wildlife sensitive lighting will be provided at the site due to the proximity of the existing wildlife crossing at MP 22.583. The site will include a 31-acre wildlife conservation area east of the truck parking area to remain as existing (undeveloped) with no site clearing. A conservation easement over the conservation area will be coordinated in the Design and ROW phases for the project.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1B is located along I-4 Westbound approximately 4.5 miles southwest of the I-95 interchange (approximate Milepost (MP) 22.161). An on-ramp and off-ramp will be provided on I-4 Westbound for direct access to and from Volusia County Site 1B. The truck parking site is 116.8 acres, supporting 253 truck parking spaces. The site includes a large restroom facility in the center of the truck

parking site. Wildlife fencing and wildlife sensitive lighting will be provided at the site due to the proximity of the existing wildlife crossing at MP 21.523. The proposed ROW for the site includes a proposed conservation area and contiguous wildlife corridor, for a total of approximately 79.7 acres, extending from the existing I-4 wildlife crossing to the western boundary of the site to remain as existing (undeveloped) with no site clearing.

8.1.2 Site Access

Access to and from each preferred truck parking site varies based on site location and surrounding existing roadways and is described below.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 is located along CR 532 approximately 0.66 miles west of the intersection with US 17/92. A new signalized entrance at CR 532 is proposed for access to the site. An eastbound right turn lane and a westbound left turn lane are proposed at the signalized intersection. The PPE project, which is in the Design phase as of March 2024, proposes to add a new interchange with CR 532 approximately 0.26 miles (1,350 feet) west of the site entrance, which will further increase access to this truck parking site.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Two unsignalized driveways (right-in/right-out) are proposed at John Young Parkway and Sand Lake Road to provide site access. The new driveway on Sand Lake Road is located approximately 480 feet west of the proposed Turnpike off-ramp to Sand Lake Road. The new driveway on the west side of the site connects to the John Young Parkway northbound off-ramp (frontage road) and is located approximately 440 feet north of the John Young Parkway and Sand Lake Road intersection.

Seminole County Site 1B – I-4 at US 17/92

A stop-controlled entrance at School Street is proposed for site access. The *I-4 BtU Segment 3* (FPID 242592-4) will reconfigure the interchange of I-4 and US 17/92. The existing signalized intersection with US 17/92 and Orange Boulevard will be removed and Orange Boulevard will be routed under US 17/92 and loop back and connect to US 17/92 at School Street at a future signalized intersection. The signal will be implemented as part of the I-4 BtU construction, but construction is not programmed at this time.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

An on-ramp and off-ramp will be provided on I-4 Eastbound to Volusia County Site 1A for direct access to the eastbound facility. No local road access is provided to the site or located nearby.

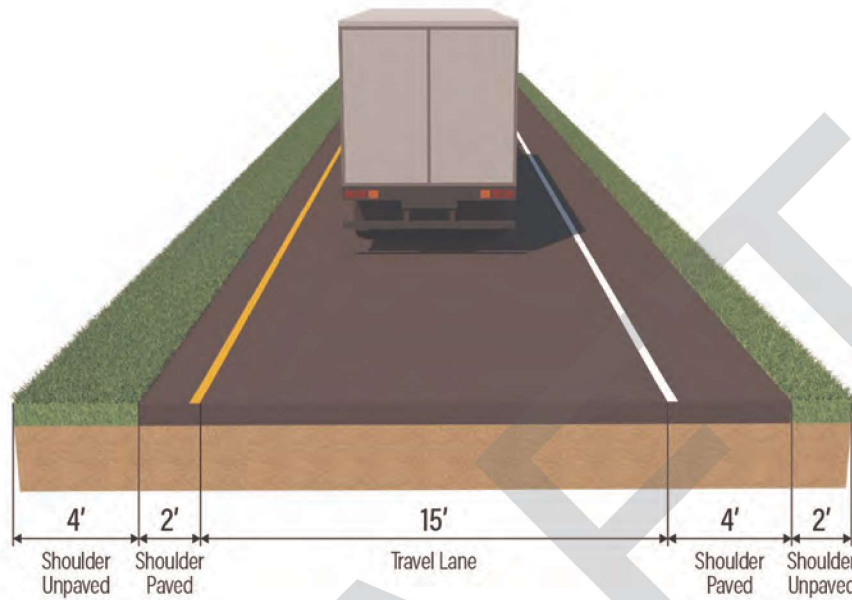
Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

An on-ramp and off-ramp will be provided on I-4 Westbound to Volusia County Site 1B for direct access to the westbound facility. No local road access is provided to the site or located nearby.

8.2 Typical Sections

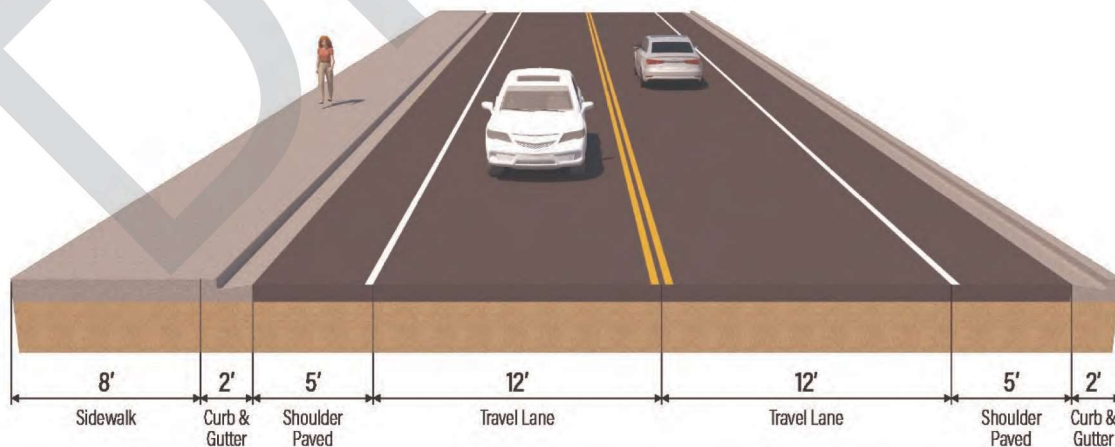
The existing typical section on local roadways adjacent to the proposed truck parking sites will be maintained for all sites except Seminole County Site 1B. Access to both Volusia County Site 1A and Volusia County Site 1B from I-4 Eastbound and I-4 Westbound will be accommodated via one-lane on- and off-ramps. The typical section for these ramps, depicted in **Figure 8-1**, includes a 15-foot travel lane, and a 6-foot inside and outside shoulder. The inside shoulder is two-foot paved and four-foot unpaved, while the outside shoulder is four-foot paved and two-foot unpaved.

Figure 8-1: Volusia County Site 1A and Site 1B – Ramp Typical Section



Additionally, School Street will be widened to provide easier access for trucks to reach Seminole County Site 1B. The proposed typical section for School Street, depicted in **Figure 8-2**, will be an undivided local road, with one 12-foot-wide travel lane, a 5-foot paved shoulder, and a Type F curb and gutter in each direction. The typical sections from the 60% design plans are included in **Appendix A**. Additionally, an eight-foot-wide sidewalk is proposed alongside the north side of School Street to provide pedestrian access between Seminole County Site 1B and the existing sidewalk along US 17/92. The total typical section width is 46 feet with ROW varying from 59 to 75 feet wide.

Figure 8-2: Seminole County Site 1B – School Street Typical Section



8.3 Access Management

Access management and/or median modifications are anticipated for several of the preferred truck parking sites and are further detailed below.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

In the No-Build Alternative, the *CR 532/Osceola Polk Line Road Capacity Improvements* project will include a divided median on CR 532. As part of the Preferred Alternative for Osceola County Site 1, a new signalized entrance at CR 532 (new median opening) is proposed for access to the site. To access the site, a westbound CR 532 left turn lane and eastbound CR 532 right turn lane are proposed. This will increase the capacity of truck traffic entering the site without slowing down traffic on the two through lanes in each direction on CR 532.

The new signal meets Osceola County access management standards by providing 1,375 feet between the closest signal located at the proposed PPE northbound off-ramp. This exceeds the minimum signal spacing requirement of 1,320 feet. The No-Build Alternative includes a full median opening at the Sabal Trail Gas Company proposed for the *CR 532/Osceola Polk Line Road Capacity Improvements* project. Access management standards for the full median opening spacing requirement between the proposed truck parking entrance and the proposed Sabal Trail Gas Company entrance will not be met in the proposed condition. Based on discussions with Osceola County staff, this median opening west of the truck parking entrance will be very low volume and is needed for large trucks to enter and exit.

Orange County Site 1 – Sand Lake Road at John Young Parkway

One unsignalized driveway (right-in/right-out) is proposed at both John Young Parkway and Sand Lake Road to provide site access from surrounding roadways. No median modifications are proposed on either Sand Lake Road or John Young Parkway to accommodate the Preferred Alternative for this truck parking site. These driveways meet the minimum connection spacing requirements of 245 feet.

Seminole County Site 1B – I-4 at US 17/92

A median island on School Street just west of the site entrance is proposed to prevent trucks leaving the site from heading westbound on School Street and ultimately, traveling on the narrower Elder Road. This median modification will still allow passenger vehicles to travel on School Street from US 17/92 to Elder Road. The median island will guide trucks to turn east out of the site and take the shorter and quicker access to US 17/92 and I-4.

In the existing condition, there is a center bi-directional turn lane and no median on US 17/92 at School Street. This access will not be modified or changed from its current configuration. For the Preferred Alternative, signage will direct trucks leaving the site on eastbound School Street to turn right onto southbound US 17/92 which allows access to the I-4 and SR 46 interchange. This will reduce potential conflicts and delays at the US 17/92 and School Street intersection and improve safety. As part of the future I-4 BtU project, the intersection of School Street and US 17/92 is proposed as a signalized intersection, with trucks traveling on eastbound School Street able to make a left turn onto US 17/92.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

As part of this site, an on-ramp and off-ramp is proposed to provide direct access from I-4.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

As part of this site, an on-ramp and off-ramp is proposed to provide direct access from I-4.

8.4 Right of Way

The total amount of ROW required for the Preferred Alternative is 262.2 acres. The Preferred Alternative is anticipated to require ROW from 31 parcels. **Table 8-1** summarizes the ROW impacts and potential relocations for the Preferred Alternative for each independent site. Many of the sites were located on vacant parcels. Therefore, no relocations are anticipated at Osceola County Site 1, Orange County Site 1, Volusia County Site 1A, or Volusia County Site 1B. The Seminole County Site 1B is anticipated to require three relocations, these are detailed in the CSRP, in the project file.

The site concepts shown in **Appendix A** provide an overview of the anticipated ROW impacts for the Preferred Alternative.

Table 8-1: Preferred Alternative ROW Impacts

Preferred Site	Impact (acres)	Parcels Impacted	Relocations
Osceola County Site 1	40.1	18	0
Orange County Site 1	14.6	2	0
Seminole County Site 1B	17.4	7	3
Volusia County Site 1A	73.3	3	0
Volusia County Site 1B	116.8	1	0

FDOT will carry out a ROW 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). FDOT provides several brochures that describe, in detail, the FDOT’s Relocation Assistance Program and ROW acquisition program including the “Residential Relocation Under the Florida Relocation Assistance Program”, and “Relocation Assistance Program Personal Property Moves”.

8.5 Design Variations and Design Exceptions

No design variations or design exceptions are anticipated with the construction of any of the truck parking facilities.

8.6 Multimodal Accommodations

Overall, the preferred truck parking sites seek to maintain or improve the existing multimodal accommodations and are further detailed below. Osceola County Site 1, Orange County Site 1, and Seminole County Site 1B provide sidewalk connections to the existing sidewalk of the adjacent roadway. As Volusia County Site 1A and Volusia County Site 1B are located along the limited access I-4, no external sidewalk connection is necessary. No bicycle or transit facilities were improved or impacted for any of the preferred sites.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

As part of the CR 532 widening project (Construction programmed for FY 2025 to FY 2026), a six-foot sidewalk is proposed to the south side of CR 532. Osceola County Site 1 has a proposed driveway to access the site that will intersect this sidewalk. Curb ramps are proposed at the new CR 532 sidewalk to allow pedestrians to cross the driveway. Additionally, an eight-foot sidewalk surrounding the truck parking area is proposed. This sidewalk will allow pedestrians to safely walk from their individual truck parking spot to restroom facilities. Additionally, a sidewalk connection from the site to the sidewalk along CR 532 is proposed.

Orange County Site 1 – Sand Lake Road at John Young Parkway

As part of the Florida’s Turnpike interchange project at Sand Lake Road, a six-foot sidewalk is planned for the north side of Sand Lake Road. Orange County Site 1 has a proposed driveway to access the site that will intersect this sidewalk. Curb ramps are proposed at the new sidewalks to allow pedestrians to cross the driveway. Additionally, an eight-foot sidewalk surrounding the truck parking area is proposed. This sidewalk will allow pedestrians to safely walk from their individual truck parking spot to the restroom facility. Additionally, a sidewalk connection from the site to the sidewalk along Sand Lake Road is proposed.

Seminole County Site 1B – I-4 at US 17/92

As of March 2024, there are not any sidewalks that run along School Street near the entrance of Seminole County Site 1B. To increase accessibility to this site, an eight-foot sidewalk is proposed to the north of School Street from the future entrance of Seminole County Site 1B east to the existing sidewalk that runs on the west side of US 17/92. Additionally, a five-foot sidewalk surrounding the truck parking site is proposed. This sidewalk will allow pedestrians to safely walk from their individual truck parking spot to the restroom facility.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

As the site is located immediately off I-4, there are no existing multimodal accommodations. However, Volusia County Site 1A will have an eight-foot sidewalk surrounding the truck parking site to allow pedestrians to safely walk from their individual truck parking spot to restroom facilities within the site.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

As the site is located immediately off I-4, there are no existing multimodal accommodations. However, Volusia County Site 1B will have an eight-foot sidewalk surrounding the truck parking site to allow pedestrians to safely walk from their individual truck parking spot to restroom facilities within the site.

8.7 Intersection Concepts

The intersections and any proposed changes for each truck parking site are described below. The concept plans for each preferred site are included in **Appendix A**.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

The site is located at the southeast corner of the future interchange of CR 532 and PPE. The entrance to this site is located about 1,350 feet east of this future interchange. As previously mentioned, a left turn lane for westbound traffic is proposed at this intersection, along with a right turn lane for eastbound traffic. Additionally, this intersection is proposed to be signalized as part of the Preferred Alternative.

Orange County Site 1 – Sand Lake Road at John Young Parkway

The site is located at the northeast corner of the intersection of Sand Lake Road and John Young Parkway. No intersection changes are proposed at this intersection.

Seminole County Site 1B – I-4 at US 17/92

The entrance to this site is located just east of the intersection of US 17/92 and School Street. No intersection changes are proposed at this intersection.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

This site is located immediately off I-4; therefore, there are no intersections for this site.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

This site is located immediately off I-4; therefore, there are no intersections for this site.

8.8 Intelligent Transportation System and TSM&O Strategies

Across all five preferred sites, several ITS and TSM&O strategies are proposed for further consideration during the Design phase for each site. These strategies are based on the existing site conditions and industry best practices for freight parking and described below.

Parking Detection Equipment

Several options exist for parking detection solutions and are summarized below.

- The VADE Camera Detection System, which has been successfully implemented at multiple Florida rest stops to monitor real time parking spaces
- The Pebble vehicle sensor, which does not rely on a camera system. This has not been as thoroughly tested as the VADE Camera system
- BlueBand offers a mat-based sensor which can be deployed at the entrance of each parking site to track vehicle occupancy

Communications

FDOT prefers to connect the parking detection system to fiber optic cabling. Orange County Site 1, Seminole County Site 1B, Volusia County Site 1A and Volusia County Site 1B have fiber adjacent to the sites. Osceola County Site 1 will have fiber optic cable installed during the widening of CR 532.

Additional On-site Camera Coverage

In addition to the sensor or camera-based detection system, secondary CCTV cameras are recommended at each parking site for safety purposes and to verify parking availability.

Additional Merging-Lane Camera Coverage

For Volusia County Site 1A and B, CCTV cameras are recommended to be deployed to cover the merging lanes onto I-4. The ability for FDOT traffic operations to assess the merge condition in real time can improve response time when issues are presented.

Dynamic Message Signs (DMS) on I-4

Dynamic Message Signs are recommended to be deployed on I-4 upstream of freight parking sites. According to the National Coalition on Truck Parking, best practice established by other state DOTs is to deploy Dynamic Message Signs (DMS) on the mainline approximately 15-30 miles prior to the freight parking site. Typically, these DMS include the total number of available spaces for the next two to three freight parking sites.

DMS On-site

For larger truck parking sites, DMS is recommended to be deployed within the site to indicate to drivers which aisles have available parking spaces.

Electric Vehicle Charging Stations

Additional coordination with FDOT Central Office is recommended during the Design Phase of this project, to determine if, and to what extent, heavy-duty EV charging equipment should be installed at the preferred freight parking sites. Per FDOT District Five, the Design phase will assume that 15% of parking spaces have

conduit infrastructure to support future EV charging stations or shore power for a minimum 10% EV compatibility.

SunGuide and FL 511

Data collected from each parking site is recommended to be automatically uploaded to SunGuide and FL 511, and to be available for any third-party traveler information systems via an application programming interface (API).

8.9 Landscape

Landscaping will be provided at each of the truck parking sites. In the Design phase, landscaping plans will be prepared based on site configurations. Landscaping concepts at each of the sites are described below.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 will have landscaping installed around the perimeter of the truck parking site. Additionally, greenspace areas surrounding restroom facilities and within parking islands will be included at this site.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Orange County Site 1 will have landscaping installed around the perimeter of the truck parking site. Additionally, greenspace areas surrounding restroom facilities and within parking islands will be included at this site.

Seminole County Site 1B – I-4 at US 17/92

Seminole County Site 1B will have landscaping installed around the perimeter of the truck parking site. Additionally, greenspace areas will be included at this site. Additionally, a raised berm is proposed at the northeast corner of the site in order to maintain a visual barrier between the truck parking site and Orange Boulevard.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1A will have landscaping installed around the perimeter of the truck parking site. Additionally, greenspace areas will be included at this site.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1B will have landscaping installed around the perimeter of the truck parking site. Additionally, greenspace areas will be included at this site.

8.10 Lighting

Conventional lighting is proposed at all truck parking sites, but will need to be further evaluated in the Design phase for all truck parking sites. As part of a VE Study recommendation, high mast lighting will be considered for Orange County Site 1. Additionally, wildlife sensitive lighting will be provided around the preferred Volusia County sites due to the proximity of the existing wildlife crossing.

8.11 Wildlife Crossings

No wildlife crossings exist within the vicinity of Osceola County Site 1, Orange County Site 1, or Seminole County Site 1B. However, there are two wildlife crossings in the vicinity of Volusia County Site 1A and Volusia County Site 1B. The first wildlife crossing is located underneath I-4, 500 feet to the southwest of

the Eastbound I-4 off-ramp to Volusia County Site 1A, and 900 feet to the northeast of the Westbound I-4 off-ramp to Volusia County Site 1B. The second wildlife crossing is located underneath I-4, 1,600 feet to the southwest of the Westbound I-4 on-ramp from Volusia County Site 1B.

The Volusia County wildlife crossings facilitate the movement of wildlife between Tiger Bay Wildlife Management Area on the north side of I-4 to South Tomoka Wildlife Management Area on the south side of I-4. The construction of Volusia County Site 1A and Volusia County 1B are not anticipated to affect the existing wildlife crossings due to the preservation of a wildlife corridor along the east side of Volusia Site 1B at the location of the existing crossing. However, Volusia Site 1A will impact an existing jump-out location, therefore this jump-out is proposed to be relocated approximately 2,700 feet further east. In addition to the two existing wildlife crossings, a wildlife corridor is proposed at Volusia County Site 1B. This 38.6-acre wildlife corridor will be located along the east parcel line of the site and will allow wildlife to safely travel from the existing wildlife crossing underneath I-4 to Tiger Bay Wildlife Management Area.

8.12 Permits

The environmental permits anticipated for each of the preferred sites are summarized in **Table 8-2**. Permits will be further coordinated in the Design phase for each site.

Table 8-2: Anticipated Permits

Site	Permit Jurisdiction	Permit
Osceola County Site 1	State	DEP or WMD Environmental Resource Permit (ERP)
		National Pollutant Discharge Elimination System Permit (NPDES)
		FWC Gopher Tortoise Relocation Permit
		State 404 Permit
	FDEP	Dewatering Permits
Orange County Site 1	State	WMD ERP
		National Pollutant Discharge Elimination System Permit
		FWC Gopher Tortoise Relocation Permit
		State 404 Permit
	FDEP	Dewatering Permits
Seminole County Site 1B	State	WMD ERP
		NPDES Permit
		FWC Gopher Tortoise Relocation Permit
		State 404 Permit
Volusia County Site 1A	State	DEP or WMD ERP
		NPDES
		FWC Gopher Tortoise Relocation Permit
		State 404 Permit
	FDEP	Dewatering Permits
Volusia County Site 1B	State	WMD ERP
		NPDES
		FWC Gopher Tortoise Relocation Permit
		State 404 Permit
	FDEP	Dewatering Permits

8.13 Drainage and Stormwater Management Facilities

The PD&E Study included an assessment of potential stormwater treatments to accommodate each preferred truck parking site. The stormwater runoff from each site will be collected and conveyed to the recommended ponds at or near the same location the runoff in existing conditions discharges from each site. For detailed site plans, see **Appendix A**. The proposed ponds have been sized to achieve the required water quality treatment and water quantity attenuation in accordance with SFWMD, SJRWMD, and FDOT criteria. A summary of the drainage facilities for each site is described below.

For further information on proposed drainage conditions, see the Conceptual Drainage Report, in the project file.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

The preferred Osceola County Site 1 will include two wet detention stormwater ponds, with a combined pond area of 11.38 acres. Pond 1 is located along the east parcel line of the site and is 7.95 acres. Pond 2 is located in the southwest corner of the site and is 3.43 acres. The site is located within an open basin and discharges to an adjacent wetland to the south. The CR 532 widening project is in design (not yet permitted) adjacent to the site and includes construction of a new wet detention stormwater pond on the truck parking site. Since this pond will need to be removed to accommodate the preferred site, compensation has been provided for the lost pond volume as a joint use pond (shared).

Orange County Site 1 – Sand Lake Road at John Young Parkway

The preferred Orange County Site 1 will include two wet detention stormwater ponds, with a combined pond area of 5.01 acres. Pond 1 is located in the northern portion of the site along John Young Parkway and is a 3.91 acre wet detention pond. Pond 2 is located on the southern edge of the site along Sand Lake Road and is a 1.10 acre linear wet detention pond. The site is located within an open basin and discharges to wetlands associated with Shingle Creek via three cross drains beneath John Young Parkway.

As of March 2024, an existing wet detention pond “John Young Pond 4” is serving as the stormwater management system for portions of John Young Parkway and Sand Lake Road. The existing pond will be removed with the construction of the preferred Orange County Site 1; therefore, treatment and attenuation volumes must be replaced in kind, and the proposed stormwater ponds will serve as a joint-use stormwater management facility between the preferred site and John Young Parkway and Sand Lake Road.

This site is adjacent to a new proposed off-ramp from Florida’s Turnpike to Sand Lake Road (FPID #433663-1: Sand Lake Road and SR 91 Interchange), with construction letting scheduled for March 2024, which includes construction of stormwater treatment ponds (“Pond 1A” and “Pond 1B”) on both sides of the off-ramp. The 5.62-acre pond proposed as a part of the Turnpike project was re-configured as part of the Preferred Alternative for Orange County Site 1 to optimize the number of truck parking spaces. The future pond modification will be verified during the Design phase of Orange County Site 1.

Based on coordination with FDOT and FTE, further evaluation of this area is needed once the subsequent Design phase for the truck parking site is initiated allowing more detailed design of the site plan which will facilitate further drainage analysis. As both projects move forward, more coordination will need to occur between both design teams, FDOT District 5 and FTE, to ensure that enough treatment and attenuation volume is provided to meet the requirements for both projects.

Seminole County Site 1B – I-4 at US 17/92

The preferred Seminole County Site 1B will include two stormwater ponds (one wet detention and one dry retention), with a combined pond area of 3.73 acres. This site has been divided into two basins to account for different control elevations in each pond and to better analyze the volumes on the site. Within Basin 1, Pond 100 is located in the west side of the site and is a 2.55-acre wet pond. Within Basin 2, Pond 200 is located along the eastern parcel line and is a 1.18-acre dry retention pond. The site is located within an open basin and discharges to Lake Monroe via a ditch within FDOT ROW.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

The preferred eastbound Volusia County Site 1A will include one wet detention stormwater pond. Pond 1 is located along the southeast parcel line and is 7.15 acres. The site is located within an open basin and discharges to surrounding wetlands toward the Tomoka River OFW.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

The preferred westbound Volusia County Site 1B will include two wet detention stormwater ponds, with a combined pond area of 10.17 acres. Pond 1 is located along the northeast parcel line and is a 3.45 acre wet detention pond. Additionally, an existing wet detention stormwater pond (I-4 Pond I) intersects the southwest corner of the site. This pond is part of the I-4 widening project (Permit No. 64105-12). The proposed freight parking will impact this pond, which is proposed to be expanded to the southwest to jointly service both I-4 and the freight parking site in conjunction with Pond 1. The expanded Pond I will be a 6.72 acre wet detention pond. The site is located within an open basin and discharges to the Tiger Bay OFW.

8.14 Floodplain Analysis

Floodplain analysis for each site is described below. For further information on floodplain analysis, see the Conceptual Drainage Report and LHR, in the project file.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

The FEMA FIRM for Osceola County, Community Panel Number 12097C0045G, dated June 18, 2013, indicate that the entire Osceola County Site 1 lies within Zone X of the 100-year floodplain, which are areas outside the 100-year floodplain and higher than the elevation of the 0.2 percent-annual-chance flood. There are no anticipated floodplain impacts associated with this site; therefore, no floodplain compensation is necessary. There are no federally regulated floodways within the site limits.

Orange County Site 1 – Sand Lake Road at John Young Parkway

The FEMA FIRM for Orange County, Community Panel Number 12095C0410F, dated September 25, 2009, indicates portions of Orange County Site 1 lie within Zone AE of the 100-year floodplain, which are areas that have a 1% chance of flooding every year. The site was determined to have 19.22 acre-foot (ac-ft) of floodplain impacts. Additionally, construction of the site will remove 5.40 ac-ft of floodplain compensation volume provided by the existing John Young Parkway and Sand Lake Road pond resulting in a total of 24.62 ac-ft of floodplain impacts.

Floodplain compensation volume will be provided within the stormwater ponds as they will be hydraulically connected to the 100-year floodplain, for a total of 10.30 ac-ft of provided compensation volume. Remaining floodplain impacts can be compensated for in multiple ways during the Design phase

of the site. A preliminary estimate of the potential rise of the BFE was performed to show that there will be an insignificant rise in the floodplain elevation given the large extent of the floodplain boundary.

There are no federally regulated floodways within the site limits.

Seminole County Site 1B – I-4 at US 17/92

The FEMA FIRM for Seminole County, Community Panel Number 12117C0055F, dated September 28, 2007, indicate that the Seminole County Site 1B lies within Zone X of the 100-year floodplain, which are areas outside the 100-year floodplain and higher than the elevation of the 0.2 percent-annual-chance flood. There are no anticipated floodplain impacts associated with this site; therefore, no floodplain compensation is necessary. There are no federally regulated floodways within the site limits.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

The FEMA FIRM for Volusia County, Community Panel Number 12127C0500H, dated February 19, 2014, indicate portions of the eastbound Volusia County Site 1A lie within Zone A of the 100-year floodplain, which are areas that have a 1% chance of flooding every year with predicted flood water elevations that have not been established. The site was determined to have 17.48 ac-ft of floodplain impacts.

Floodplain compensation volume will be provided within the stormwater pond as it will be hydraulically connected to the 100-year floodplain, for a total of 4.26 acres of provided floodplain compensation. Additionally, two separate dedicated Floodplain Compensation Areas (FPCAs) were identified within the site. FPCA 1 and FPCA 2 provide 0.91 ac-ft and 1.00 ac-ft of compensation, respectively. The total compensation available within the site is 6.17 acres. The remaining floodplain impacts can be compensated for in multiple ways during the Design phase of the project. A preliminary estimate of the potential rise of the BFE was performed to show that there will be an insignificant rise in the floodplain elevation given the large extent of the floodplain boundary.

There are no federally regulated floodways within the site limits.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

The FEMA FIRM for Volusia County, Community Panel Number 12127C0500H, dated February 19, 2014, indicate the entire westbound Volusia County Site 1B lies within Zone A of the 100-year floodplain, which are areas that have a 1% chance of flooding every year with predicted flood water elevations that have not been established. The site was determined to have 62.75 ac-ft of floodplain impacts.

Floodplain compensation volume will be provided within the stormwater pond as it will be hydraulically connected to the 100-year floodplain, for a total of 13.53 acres of provided floodplain compensation between the pond and two additional FPCAs. The remaining floodplain impacts can be compensated for in multiple ways during the Design phase of the project. A preliminary estimate of the potential rise of the BFE was performed to show that there will be an insignificant rise in the floodplain elevation given the large extent of the floodplain boundary.

There are no federally regulated floodways within the site limits.

8.15 Transportation Management Plan

As the preferred sites become further refined in the Design phase of this project, a detailed transportation management plan will be developed for each site. Because the construction of each site is not expected to impact the traffic on adjacent roadways, no phasing is anticipated for the construction of each site.

8.16 Constructability

Overall, each of the truck parking sites are anticipated to have few constructability issues, as most of the sites are located on vacant parcels. Constructability will be further evaluated in the Design phase. Further details about constructability for each site are described below.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 is located on vacant parcels and the majority of the construction will be on-site. Temporary lane closures along CR 532 may be needed in order to construct the eastbound right turn lane, westbound left turn lane, and driveway connection to the site.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Orange County Site 1 is located on vacant parcels and the majority of the construction will be on-site. Temporary lane closures along the outer lanes of westbound Sand Lake Road and the northbound John Young Parkway on-ramp may be needed in order to construct the driveway connections to the site. Ramp access will be maintained during construction of the truck parking site. As there are no other improvements to either Sand Lake Road or John Young Parkway, no detours are anticipated.

Seminole County Site 1B – I-4 at US 17/92

Seminole County Site 1B is located on developed and undeveloped (vacant) parcels and the majority of the construction will be on-site. School Street will be modified in the vicinity of the truck parking site as discussed in Section 8.2. Temporary lane closures along School Street may be needed in order to construct the driveway connection to the site.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1A is located on vacant parcels and the majority of the construction will be on-site. Temporary lane closures along the outer lane on eastbound I-4 may be needed in order to construct the on-ramp and off-ramp to the site.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1B is located on vacant parcels, and as such, no phasing of construction is necessary. Temporary lane closures along the outer lane on westbound I-4 may be needed in order to construct the on-ramp and off-ramp to the site. Additionally, I-4 Pond I will need to be modified in order to increase the storage volume for both I-4 and Volusia County Site 1B.

8.17 Construction Impacts

Overall, each of the truck parking sites are anticipated to have few impacts resulting from the construction of each of the sites, as the sites are primarily located on vacant parcels. Construction impacts will be further evaluated in the Design phase. Further details about construction impacts for each site are described below.

8.17.1 Air Quality

The air quality analysis performed for all five preferred sites is documented in the AQTM, in the project file. All five preferred truck parking sites have been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and have not been linked with any special mobile source air toxic

(MSAT) concerns. An air quality screening was completed for all five preferred truck parking sites in accordance with the FDOT PD&E Manual. The No-Build and proposed Build conditions for the preferred truck parking sites were subject to a carbon monoxide (CO) screening model. Based on the results from the screening model, the highest project-related CO one-hour and eight-hour levels are predicted to be below the NAAQS. As such, the project "passes" the CO screening.

During the construction of each truck parking site, particulate emissions associated with construction activity are anticipated to temporarily increase. Construction activities may cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts will be minimized by adherence to applicable state regulations and to applicable FDOT Standard Specifications for Road and Bridge Construction.

8.17.2 Noise and Vibration

A noise analysis was conducted for the five preferred truck parking sites and is documented in the NSTM, in the project file. The National Cooperative Highway Research Program (NCHRP) guidance for stationary sources (*Supplemental Guidance on the Application of FHWA's Traffic Noise Model*) states that in locations where there are existing highways with moving traffic, these roadways will dominate noise levels and therefore detailed modeling is not needed for the stationary source.

Orange County Site 1 is surrounded by and separated from noise sensitive sites by Florida's Turnpike, John Young Parkway, and Sand Lake Road. Therefore, mainline traffic noise on the surrounding roadways is expected to dominate the noise environment near Orange County Site 1. Per NCHRP guidance for stationary sources, no noise analysis was conducted for this location.

Due to the undeveloped nature of the surrounding land, no noise sensitive sites with areas of frequent human use are located within 1,000-feet of Volusia County Site 1A and Volusia County Site 1B. For this reason, no noise analysis was conducted for the two sites. Additionally, the two sites are located directly adjacent to I-4 and traffic noise levels on this roadway is expected to be similar to existing traffic noise levels, which dominate the noise environment in the vicinity of the two sites.

For Osceola County Site 1, 19 noise sensitive sites were modeled for future noise levels using the methodology detailed in the NCHRP guidance document for stationary sources. No noise impacts are anticipated at any of the receptors analyzed for Osceola County Site 1.

For Seminole County Site 1B, five noise sensitive sites were modeled for future noise levels using the methodology detailed in the NCHRP guidance document for stationary sources. Noise levels are anticipated to increase for three noise sensitive sites in both the No-Build and Build conditions, by a maximum of 2.1 dB(A). Noise barriers were evaluated for these three noise sensitive sites, but were found to not provide a 5 dB(A) reduction for any receptor. The predominant noise sources for the three noise sensitive sites were found to be the adjacent I-4 and US 17/92, therefore no noise barriers constructed for Seminole County Site 1B would be effective at blocking the noise from the roadways. For this reason, noise barriers are not a reasonable or feasible option for noise abatement.

During the construction of each truck parking site, noise and vibration associated with construction activity are anticipated to temporarily increase. It is anticipated that the application of the FDOT Standard Specifications for Road and Bridge Construction will minimize or eliminate most of the potential construction noise and vibration impacts. However, should unanticipated noise or vibration issues arise during the construction process, the project manager, in concert with the District Noise Specialist and the Contractor will investigate additional methods of controlling these impacts.

8.17.3 Contamination

The potential for construction contamination impacts varies among the preferred sites and is documented in detail in each of the CSERs, located in each site's project file. At Osceola County Site 1, the overall site risk for contamination is low, with one medium risk property and no high risk properties. The medium risk property is the CSX Rail whose ROW borders the site ROW and presents the potential for petroleum and pesticide contamination. During the construction phase, additional groundwater and soil sampling is recommended along the southeastern boundary of Osceola County Site 1, particularly near proposed stormwater facilities bordering the rail corridor to ensure the prevention of contamination on-site.

At Orange County Site 1, the overall site risk for contamination is low, with one medium risk property and no high risk properties. The medium risk property is an active Marathon gas station located across Sand Lake Road south of the truck parking site. During the Level I contamination screening, no records were found which indicated a release or a threat of release of contaminants, however due to its proximity to the truck parking site, final plans should be reviewed to evaluate the potential project impacts and need for a Level II Impact to Construction Assessment (ICA).

At Seminole County Site 1B, the overall site risk for contamination is high, with three medium risk properties and one high risk property. The medium risk sites are the North River Fisheries parcels located on the south boundary of the project site; historical agricultural land uses located in the southwest corner of the project site; and the Donnie Myers Luxury Coach parcel located in the center of the project site. The high risk site is the Circle K gas station located in the northeast corner of the project site. Due to the presence of these sites, final plans should be reviewed to evaluate the potential project impacts and need for Level II ICAs.

At Volusia County Sites 1A and 1B, the overall site risk for contamination is low, with no medium risk or high risk properties due to the sites being located on undeveloped forested tracts. As such, while the potential for encountering impacted soils does exist at these sites, no additional investigation is recommended for the design phase.

8.17.4 Water Quality Protection

FDOT stormwater impacts associated with transportation projects are addressed through permitting of stormwater management systems. In accordance with Chapter 62-330.301, F.A.C., to obtain an approval of an ERP, FDOT must provide reasonable assurance that the construction, alternation, operation, maintenance, removal, or abandonment of a project will not adversely affect the quality of receiving waters such that the state water quality standards will be violated.

8.17.5 Species and Habitat Protection

Based on the environmental analysis, the construction of the preferred parking sites may impact protected species at each site. For federally listed species these impacts are classed as "may affect, but is not likely to adversely affect" and for state listed species the impacts are classed as "no adverse effect is anticipated". The potentially impacted species are as follows:

- Osceola County Site 1:
 - Eastern Indigo Snake – Federally listed
 - Florida Panther – Federally listed
 - Sand and Blue-tailed Mole Skink – Federally listed
 - Wood Stork – Federally listed
 - Florida Burrowing Owl – State listed
 - Little Blue Heron – State listed
 - Tricolored Heron – State listed

- Florida Pine Snake – State listed
- Florida Sandhill Crane – State listed
- Gopher Tortoise – State listed
- Southeastern American Kestrel – State listed
- Roseate Spoonbill – State listed
- Tricolored Bat – Other, candidate species for federal listing
- Orange County Site 1:
 - Eastern Indigo Snake – Federally listed
 - Wood Stork – Federally listed
 - Little Blue Heron – State listed
 - Tricolored Heron – State listed
 - Florida Sandhill Crane – State listed
 - Gopher Tortoise – State listed
 - Southeastern American Kestrel – State listed
 - Roseate Spoonbill – State listed
 - Tricolored Bat – Other, candidate species for federal listing
- Seminole County Site 1B:
 - Little Blue Heron – State listed
 - Tricolored Heron – State listed
 - Eastern Indigo Snake – Federally listed
 - Wood Stork – Federally listed
 - Florida Burrowing Owl – State listed
 - Florida Sandhill Crane – State listed
 - Roseate Spoonbill – State listed
 - Gopher Tortoise – State listed
- Volusia County Site 1A:
 - Eastern Indigo Snake – Federally listed
 - Wood Stork – Federally listed
 - Rugel’s Pawpaw – Federally listed
 - Little Blue Heron – State listed
 - Tricolored Heron – State listed
 - Florida Pine Snake – State listed
 - Florida Sandhill Crane – State listed
 - Gopher Tortoise – State listed
 - Leafless Beaked Orchid – State listed
 - Tricolored Bat – Other, candidate species for federal listing
 - Florida Black Bear – Other
- Volusia County Site 1B:
 - Eastern Indigo Snake – Federally listed
 - Wood Stork – Federally listed
 - Little Blue Heron – State listed
 - Tricolored Heron – State listed
 - Florida Pine Snake – State listed
 - Florida Sandhill Crane – State listed
 - Gopher Tortoise – State listed
 - Hooded Pitcher Plant – State listed
 - Tricolored Bat – Other, candidate species for federal listing
 - Florida Black Bear – Other

To prevent impacts to protected species and habitat during construction, the following commitments will be kept:

- Osceola County Site 1
 - FDOT will utilize the most recent version of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* during project construction.
 - FDOT will provide mitigation for impacts to wetlands and to wood stork SFH within the Service Area of the Service-approved wetland mitigation bank and/or wood stork conservation bank.
 - If the listing status of the tri-colored bat is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, FDOT commits to initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the tri-colored bat.
- Orange County Site 1
 - The most recent version of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* will be utilized during construction.
 - FDOT will provide mitigation for impacts to wood stork SFH within the Service Area of the Service-approved wetland mitigation bank or wood stork conservation bank.
 - If the listing status of the tri-colored bat is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, FDOT commits to initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the tri-colored bat.
- Seminole County Site 1B
 - The most recent version of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* will be utilized during construction.
 - FDOT will provide mitigation for impacts to wood stork SFH within the Service Area of the Service-approved wetland mitigation bank or wood stork conservation bank.
 - If the listing status of the tri-colored bat is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, FDOT commits to initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the tri-colored bat.
- Volusia County Site 1A
 - FDOT will utilize the most recent version of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* during project construction.
 - Lighting provided for the truck parking areas will be directed inward with shields to minimize light pollution into adjacent natural areas.
 - ROW acquisition will include a wildlife conservation area, as shown in the concept plans as the remaining area outside of the limits of construction but within the proposed ROW, to provide an enhanced natural buffer. This area will be placed under a conservation easement. The dimensions of the conservation area located outside the fenced truck parking will be coordinated further with regulatory agencies during the Design phase.
 - FDOT will require contractors to remove garbage daily from the construction site or use bear proof containers for securing of food and other debris from the project work area to prevent these items from becoming an attractant for the Florida black bear (*Ursus americanus floridanus*). Any interaction with nuisance bears will be reported to the FWC Wildlife Alert hotline 888-404-FWCC (3922).
 - The existing wildlife jump-out within the limits of the proposed truck parking site will be relocated approximately 2,500 feet northeast, along the existing FDOT ROW, from the tie in

- from the proposed eastbound on ramp. Additionally, the exclusionary fencing will be extended to accommodate the new jump-out location.
- The existing wildlife jump-out within the limits of the proposed truck parking site will be relocated approximately 2,500 feet northeast, along the existing FDOT ROW, from the tie in from the proposed eastbound on ramp. Additionally, the exclusionary fencing will be extended to accommodate the new jump-out location.
 - A survey for listed plant species, Rugel's pawpaw, and leafless beaked orchid will be performed during the Design phase and coordination with Florida Department of Agriculture and Consumer Services (FDACS) and USFWS will occur if impacts to the species are anticipated.
 - If the listing status of the tri-colored bat is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, FDOT commits to re-initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the tri-colored bat.
 - Volusia County Site 1B
 - The most recent version of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* will be utilized during construction.
 - The FDOT will provide mitigation for impacts to wood stork SFH within the Service Area of a Service-approved wetland mitigation bank or wood stork conservation bank.
 - Lighting provided for the truck parking areas will be directed inward with shields to minimize light pollution into adjacent natural areas.
 - ROW acquisition will include a wildlife corridor and a wildlife conservation area, as shown in the concept plans, that will maintain wildlife movement via the existing wildlife crossing on I-4 adjacent to the truck parking facility. This area will be placed under a conservation easement. Natural buffers around truck parking areas will be maintained to reduce potential light, vibration, and noise impacts to adjacent natural areas. The dimensions of the wildlife corridor and conservation area located outside the fenced truck parking will be coordinated further with regulatory agencies during the Design and ROW phases.
 - FDOT will require contractors to remove garbage daily from the construction site or use bear proof containers for securing of food and other debris from the project work area to prevent these items from becoming an attractant for the Florida black bear (*Ursus americanus floridanus*). Any interaction with nuisance bears will be reported to the FWC Wildlife Alert hotline 888-404-FWCC (3922).
 - A survey for the State listed plant species, Hooded pitcher plant (*Sarracenia minor*) will be performed during the Design phase and coordination with FDACS will occur if impacts to the species are anticipated.
 - If the listing status of the tri-colored bat is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, FDOT commits to re-initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the tri-colored bat.

8.17.6 Maintenance of Traffic and Access

Temporary lane closures along adjacent existing roadways may be needed in order to construct the connections to the sites. These adjacent roadways include CR 532 for Osceola County Site 1, Sand Lake Road and John Young Parkway for Orange County Site 1, School Street for Seminole County Site 1B, and I-4 for both Volusia County Site 1A and Volusia County Site 1B. Additionally, pedestrian traffic may be rerouted near each site connection.

A maintenance of traffic plan shall be established in order to ensure businesses and residences located adjacent to each of the sites can maintain access to the local roadway system during the construction phase of each site.

8.17.7 Safety Considerations

The construction of the site shall adhere to applicable state regulations and to applicable FDOT Standard Specifications for Road and Bridge Construction. Traffic laws shall be enforced within the work zone area in order to decrease the number of crashes within the work zone area.

8.17.8 Public Involvement and Community Interaction

To combat crashes in work zone areas, a communication program shall be established to increase public awareness of the construction of each site, in addition to education regarding work zone safety.

8.18 Special Features

Overall, the preferred truck parking sites have many common features with each other and other truck parking spots across the county. However, some of the preferred truck parking sites have unique features at their sites and are described below. Typical restroom facilities at each site are 7,500 square feet and will have similar bathroom features to other FDOT rest stop restrooms. Security will be provided at each site and will be further evaluated in future phases. In general, aesthetics, lighting, landscaping buffers, and noise will be further evaluated in the Design phase.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 has four oversize parking spaces. These spaces are 125-feet long and 20-feet wide, which is significantly bigger than the rest of the truck parking spots in this site, which are 90-feet long and 15-feet wide. Additionally, Osceola County Site 1 has a 300-foot buffer between any pavement for this site and Osceola County parcel 06-26-28-0000-0080-0000, which is the nearest residential parcel. This buffer is in place to minimize any noise coming from the truck parking site. Based on the VE Study recommendations, FDOT will modify the site layout during the Design phase to centralize the restroom for Osceola County Site 1.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Orange County Site 1 has two right-in/right-out entrances, which increases accessibility to and from the site. The first entrance is located along westbound Sand Lake Road, and the second entrance is located on the northbound John Young Parkway on-ramp from Sand Lake Road. A restroom facility is assumed at the back of the parking site.

Seminole County Site 1B – I-4 at US 17/92

In the northeast corner of Seminole County Site 1B, a large, raised berm is proposed along Orange Boulevard to decrease the visibility of the site to nearby properties. Also, one of the ponds was proposed along the eastern portion of the truck parking site to provide a visual buffer adjacent to US 17/92.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1A has a larger, 27,000 square foot restroom facility at the front of the site, along with the standard 7,500 square foot restroom facility at the back of the site. Additionally, the site has ten passenger vehicle parking spots. These are located between the larger restroom facility and the main truck

parking sites and are intended for maintenance vehicles. Based on the VE Study recommendations, FDOT will modify the site layout during the Design phase to centralize the restroom for Volusia County Site 1A.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1B has a larger, 27,000 square foot restroom facility located in the center of the truck parking facility. Additionally, the site has ten passenger vehicle parking spots. These are located adjacent to the restroom facility and are intended for maintenance vehicles.

8.19 Utilities

Existing utilities information was gathered regarding type and location, as described in Section 3.15. All the site location alternatives were developed to minimize utility impacts. Utilities will be verified during the Design phase and coordination with UAOs will occur to avoid and minimize utility relocations as feasible. If utilities eligible for reimbursement are located during the Design phase, all measures will be taken to avoid impacting facilities identified in lands of compensable interest. Details about potential utility impacts are described in the UAPs, in the project file.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Due to the nature of the existing conditions throughout the project area, it is not anticipated that Osceola County Site 1 will impact utilities within easements or lands of compensable interests. At the date of contact, relocations of facilities owned by CenturyLink Local were identified to be in easements near the residential properties just west of Sandy Oak Drive. Measures will be taken during the Design phase to avoid impacts to facilities within this easement. If relocation is determined necessary for the utility within this easement, they will be eligible for reimbursement.

Additionally, the preferred truck parking site is anticipated to be designed around the 50-foot natural gas easement on the west side of the site owned by Florida Southeast Connection, LLC and the private pipeline easement on the north side of CR 532 owned by Gulfstream Natural Gas/Williams.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Due to the nature of the existing conditions throughout the project area, it is not anticipated that Orange County Site 1 will impact any utilities. A potential utility easement was identified on the southeast corner of the site where overhead electric enters the property outside of the ROW. Measures will be taken during the Design phase to avoid impacts to facilities within this easement.

Seminole County Site 1B – I-4 at US 17/92

Due to the nature of the existing conditions throughout the project area, it is anticipated that Seminole County Site 1B will impact utilities within easements or lands of compensable interests. At the date of contact, relocations of facilities owned by Bright House Networks/Charter, Florida Power and Light Distribution, and Seminole County Environmental Services were identified as located in easements. Measures will be taken during the Design phase to avoid impacts to facilities within these easements. If relocation is determined necessary for any of the utilities within these easements, they will be eligible for reimbursement.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Due to the nature of the existing conditions throughout the project area, it is anticipated that Volusia County Site 1A will not impact any utilities. At the date of contact, no relocations of facilities located in easements were identified.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Due to the nature of the existing conditions throughout the project area, it is anticipated that Volusia County Site 1B will not impact any utilities. At the date of contact, no relocations of facilities located in easements were identified.

8.20 Cost Estimates

The five preferred sites have a total project cost of \$318.6 million which includes costs for final design, ROW acquisition, and construction. **Table 8-3** provides a summary of the Preferred Alternative cost estimates by site.

The detailed construction cost estimates are included in **Appendix D**. Note that the construction cost component of the total costs shown in the table below are higher than what is shown in the LREs. A 15% construction cost contingency was included in the table below.

Table 8-3: Preferred Sites Cost Estimates Summary

Preferred Site	Estimated Total Cost (millions)
Osceola County Site 1	\$62.3
Orange County Site 1	\$27.7
Seminole County Site 1B	\$55.1
Volusia County Site 1A (EB)	\$82.3
Volusia County Site 1B (WB)	\$91.2

Notes:
 Project Costs are in 2024 dollars.

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