Concept, Feasibility, & Mobility Study
Interim Report

Osceola/Brevard County Connectors
From Nova Road to I-95
Osceola, Brevard, and Orange Counties, Florida

CFX Project Number: 599-229

Prepared for:

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

AUGUST 2021

Prepared by:

Kimley-Horn and Associates, Inc.

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- APPENDICES -
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APPENDIX A

Northeast Connector Expressway Extension
CF&M Study Report, Section 3: Existing Conditions,
July 2019

3. Existing Conditions

This section addresses the existing conditions within the study area.

3.1 Existing Road Network

Due to the rural and mostly undeveloped nature of the study area, the existing roadway network has a limited number of roads. The existing roadway evaluation for this study focused on arterial and collector roadways within the study area. The roadways evaluated include East Colonial Drive (SR 50), SR 520, Martin Andersen Beachline Expressway (SR 528), US 192 (SR 500), Deer Park Road (CR 419), Nova Road (CR 532), and Taylor Creek Road. The existing roadway network was evaluated to determine the classifications of each roadway for their functional, access management, and context classifications.

3.1.1 Functional Classification

The existing functional classifications for the existing major roadways within the study area are shown in Table 3.1. Functional classification is the assignment of roadways into systems according to the character of service they provide in relation to the total roadway network. The assignments of the roadways were interpreted from the Straight Line Diagrams for each road (Appendix 2), and the FDOT District 5, 2010 Urban Area Boundary & Federal Functional Classification Maps for Orange and Osceola counties (Appendix 3).

Table 3.1: Existing Roadway Functional Classification

Roadway		Functional Classification
From	To	
E Colonial Dr (SR 50)		
SR 520	Taylor Creek Rd	Rural Principal Arterial - Other
SR 520		
SR 50	Maxim Pkwy	Rural Principal Arterial - Other
Maxim Pkwy	Taylor Creek Rd	Rural Principal Arterial - Other
Taylor Creek Rd	SR 528	Rural Principal Arterial - Other
SR 528	Nova Rd (CR 532)	Rural Principal Arterial - Other
Martin Andersen Beachline Expressway (SR 528)		
Dallas Blvd	SR 520	Rural Principal Arterial - Expressway
US 192 (SR 500)		
Arthur J Gallagher Blvd	Holopaw Rd (SR 15)	Rural Principal Arterial - Other
Holopaw Rd (SR 15)	Deer Park Rd (SR 419)	Rural Principal Arterial - Other
Deer Park Rd (CR 419)		
US 192	Nova Rd (CR 532)	Rural Major Collector
Nova Rd (CR 532)		
US 192	SR 520	Rural Minor Arterial
Taylor Creek Rd		
SR 520	SR 50	Rural Major Collector

3.1.2 Access Classification

The existing access management classifications for the roadways within the study area are shown in Table 3.2. The classifications of the roadways on the State Highway System (SHS) were interpreted from the Straight Line Diagrams provided in Appendix 2, while the classifications of the local government controlled roadways were determined based on the observed use and interpretation from the FDOT Access Management Classification System. The access control classifications system and access management standards are set forth by Chapter 14-97, Florida Administrative Code in accordance with the State Highway System Access Management Act of 1988. There are seven access classes arranged from the most restrictive to the least restrictive class. Within the study area there are only three access classifications for the existing road network. The FDOT Access Management Classification system for the applicable access classes are described below:

- Access Class 1: limited-access facilities, roadways do not provide direct property connections. Access to the road only via interchanges. Interchange spacing is 2 miles for urbanized areas, 3 miles for transitioning areas, and 6 miles for rural areas.
- Access Class 3: controlled access facilities where direct access to abutting land is controlled to maximize the operation of through traffic movement. Spacing for full median opening is 2,640 ft, spacing for directional median opening is 1,320 ft, spacing for connections is 660 ft for more than 45 mph posted speed limit, and 440 ft for 45 mph or lower speed limits.
- Access Class 4: control access facilities roadways where direct access to abutting land is controlled to maximize the operation of through traffic movement. The land adjacent to these roadways is generally not extensively developed and/or the probability of significant lane use change exists.

Table 3.2: Existing Roadway Access Management Classification

Roadway		Access Management Classification
From	To	
E Colonial Dr (SR 50)		
SR 520	Taylor Creek Rd	3
SR 520		
SR 50	Maxim Pkwy	3
Maxim Pkwy	Taylor Creek Rd	3
Taylor Creek Rd	SR 528	3
SR 528	Nova Rd (CR 532)	3
Martin Andersen Beachline Expressway (SR 528)		
Dallas Blvd	SR 520	1
US 192 (SR 500)		
Arthur J Gallagher Blvd	Holopaw Rd (SR 15)	3
Holopaw Rd (SR 15)	Deer Park Rd (CR 419)	3
Deer Park Rd (CR 419)		

Table 3.2: Existing Roadway Access Management Classification (continued)

Roadway		Access Management Classification
From	To	
US 192	Nova Rd (CR 532)	4
Nova Rd (CR 532)		
US 192	SR 520	4
Taylor Creek Rd		
SR 520	SR 50	4

3.1.3 Context Classification

The existing context classifications of the major roadways within the study area are shown in Table 3.3. The context classifications shown do not consider any future developments within the study area. The FDOT context classification system broadly identifies the various built environments existing in Florida. The system describes the general characteristics of the surrounding land use, development patterns, roadway connectivity along a roadway, and the intended uses of the roadway. The context classification system is composed of eight context classifications. The FDOT Context Classification Handbook, August 2017 was used for guidance to determine the context classifications of the roadways within the study area. Only two of the eight context classifications were identified within the study area, which are described below:

- C2-Rural: Sparsely settled lands; may include agricultural land, grassland, woodland, and wetlands.
- C3R-Suburban Residential: Mostly residential uses within large blocks and a disconnected or sparse roadway network.

Table 3.3: Existing Roadway Context Classification

Roadway		Context Classification
From	To	
E Colonial Dr (SR 50)		
SR 520 (MP 20.000)	Taylor Creek Rd (MP 24.148)	C2
SR 520		
SR 50 (MP 0.000)	Macon Pkwy (MP 1.862)	C2
Macon Pkwy (MP 1.862)	Maxim Pkwy (MP 2.218)	C3R
Maxim Pkwy (MP 2.218)	CR 532 (MP 15.122)	C2
Martin Andersen Beachline Expressway (SR 528)		
MP 23.000	SR 520 (MP 30.320)	C2
US 192 (SR 500)		
Arthur J. Gallagher Blvd (MP 18.446)	Harmony Square Dr (MP 19.022)	C3R
Harmony Square Dr (MP 19.022)	CR 419 (MP 35.839)	C2
Deer Park Rd (CR 419)		
US 192	Nova Rd (CR 532)	C2
Nova Rd (CR 532)		
US 192	SR 520	C2
Taylor Creek Rd		
SR 520	SR 50	C2

3.2 Existing Roadway Characteristics

3.2.1 Typical Sections

The number of lanes and lane widths for the major roadways within the study area are shown in Table 3.4, and the shoulder widths are shown in Table 3.5. The widths for the roadways on the SHS were interpreted from the FDOT Straight Line Diagrams for each roadway (Appendix 2). Local government road widths were determined based on Google Earth aerial views from 2018. The minimum shoulder width required is based on the 2018 FDOT Design Manual, Chapter 210, Table 210.4.1 "Standard Shoulder Widths" (Appendix 4).

Table 3.4: Roadway Laneage

Roadway		Number of Lanes and Width (ft)	Total Lane Width (ft)
From	To		
E Colonial Dr (SR 50)			
SR 520 (MP 20.000)	Taylor Creek Rd (MP 24.148)	4 – 12 ft	48 ft
SR 520*			
MP 0.500	CR 532 (MP 15.122)	4 – 12 ft	48 ft
Martin Andersen Beachline Expressway (SR 528)			
MP 23.000	SR 520 (MP 30.320)	4 – 12 ft	48 ft
US 192 (SR 500)			
Arthur J. Gallagher Blvd (MP 18.446)	CR 419 (MP 35.839)	4 – 12 ft	48 ft
Deer Park Rd (CR 419)			
US 192	Nova Rd (CR 532)	2 – 12 ft	24 ft
Nova Rd (CR 532)			
US 192	SR 520	2 – 12 ft	24 ft
Taylor Creek Rd			
SR 520	SR 50	2 – 12 ft	24 ft

* SR 520 N to SR 50 W ramp from MP 0.000 to MP 0.500

Table 3.5: Shoulder Widths

Roadway		Total Shoulder (ft)		Paved Shoulder (ft)	
From	To	Left	Right	Left	Right
E Colonial Dr (SR 50)					
SR 520 (MP 20.000)	MP 20.082	8 [1]	8 [1]	6	6
MP 20.082	Taylor Creek Rd (MP 24.148)	12	12	4 [2]	4 [2]
SR 520 (SR 500)					
SR 50 (MP 0.000)	MP 0.113	12	12	4 [2]	5
MP 0.113	MP 0.500	10	12	10	5
MP 0.500	SR 528 (MP 8.811)	12	12	5	5
SR 528 (MP 8.811)	MP 8.859	12	10	5	10

Table 3.5: Shoulder Widths (continued)

Roadway		Total Shoulder (ft)		Paved Shoulder (ft)	
From	To	Left	Right	Left	Right
MP 8.859	MP 8.963	10	12	10	4 [2]
MP 8.963	MP 9.111	12	12	5	5
MP 9.111	MP 9.310	10	10	10	10
MP 9.310	MP 10.190	12	12	5	5
MP 10.190	MP 10.467	10	10	10	10
MP 10.467	CR 532 (MP 15.122)	12	12	5	5
Martin Andersen Beachline Expressway (SR 528)					
MP 23.000	MP 25.311	12	12	10	10
MP 25.311	MP 25.357	12	12	10	12
MP 25.357	MP 25.734	12	12	12	12
MP 25.734	MP 25.766	12	12	12	10
MP 25.766	SR 520 (MP 30.320)	12	12	10	10
US 192 (SR 500)					
Arthur J. Gallagher Blvd (MP 18.446)	MP 18.585	12	12	5	5
MP 18.585	MP 18.867	11	11	8	8
MP 18.867	Holopaw Rd (MP 24.463)	12	12	5	5
Holopaw Rd (MP 24.463)	MP 28.976	12	5 [1]	5	5
MP 28.976	MP 29.222	11	11	8	8
MP 29.222	MP 31.448	12	5 [1]	5	5
MP 31.448	MP 31.488	12	0 [1]	5	0 [2]
MP 31.488	MP 33.426	12	12	5	5
MP 33.426	MP 33.427	12	8 [1]	5	3 [2]
MP 33.427	MP 33.433	10	8 [1]	5	3 [2]
MP 33.433	MP 33.443	10	7 [1]	5	5
MP 33.443	MP 33.446	7 [1]	7 [1]	5	5
MP 33.446	MP 33.483	7 [1]	12	5	5
MP 33.483	CR 419 (MP 35.839)	12	12	5	5

[1] Does not meet minimum 10 ft total shoulder width specified in Table 210.4.1 of the 2018 FDOT Design Manual

[2] Does not meet minimum 5 ft paved shoulder width specified in Table 210.4.1 of the 2018 FDOT Design Manual

The minimum shoulder width required for Deer Park Rd, Nova Rd, and Taylor Creek Rd is 2 feet according to Table 3-11 of the 2016 FDOT Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Florida Greenbook).

3.2.2 Design and Posted Speed

The design and posted speed for the roadways in the study area are shown in Table 3.6. The posted speed for each road was found on the FDOT Straight Line Diagrams (Appendix 2) and verified using Google Maps street view images from 2016. The design speeds were determined using Table 201.4.1 of the 2018 FDOT Design Manual (Appendix 5) and based on Context Classification.

Table 3.6: Roadway Design and Posted Speed

Roadway		Posted Speed (mph)	Design Speed (mph)
From	To		
E Colonial Dr (SR 50)			
SR 520 (MP 20.000)	MP 20.500	55	65
MP 20.500	Taylor Creek Rd (MP 24.148)	60	65
SR 520			
SR 50 (MP 0.000)	MP 1.830	55	65
MP 1.830	MP 2.418	55 [1]	50
MP 2.418	MP 7.882	65	65
MP 7.882	MP 9.400	55	65
MP 9.400	CR 532 (MP 15.122)	65	65
Martin Andersen Beachline Expressway (SR 528)			
MP 23.000	SR 520 (MP 30.320)	70	70
US 192 (SR 500)			
Arthur J. Gallagher Blvd (MP 18.446)	MP 19.297	55 [1]	50
MP 19.297	MP 24.259	65	65
MP 24.259	MP 24.652	55	65
MP 24.652	CR 419 (MP 35.839)	65	65

[1] Posted speed greater then design speed

3.2.3 Right-of-Way

The total roadway pavement widths and right-of-way widths for the roadways on the SHS within the study area are shown in Table 3.7. The width data were interpreted from the FDOT Straight Line Diagrams (Appendix 2) for the combined mainline and paved shoulder widths and right-of-way maps for the right-of-way widths. Right-of-way maps for the local government roadways were not available.

Table 3.7: Roadway Total and Right-of-Way Widths

Roadway		Total Roadway Width (ft)	R/W Width (ft)
From	To		
E Colonial Dr (SR 50)			
SR 520 (MP 20.000)	MP 20.082	60	200
MP 20.082	MP 20.470	56	200
MP 20.470	Taylor Creek Rd (MP 24.148)	60	200
SR 520			
SR 50 (MP 0.000)	MP 0.500	24 (WB Ramp)	N/A
MP 0.500	MP 0.605	62	226
MP 0.605	MP 2.218	62	223
MP 2.218	MP 7.750	62	239

Table 3.7: Roadway Total and Right-of-Way Widths (continued)

Roadway		Total Roadway Width (ft)	R/W Width (ft)
From	To		
MP 7.750	MP 8.048	62	223
MP 8.048	MP 8.107	65	223
MP 8.107	MP 8.149	68	223
MP 8.149	MP 8.200	65	223
MP 8.200	MP 8.811	62	223
MP 8.811	MP 8.918	71	200
MP 8.918	MP 8.963	66	200
MP 8.963	MP 9.111	62	200
MP 9.111	MP 9.310	72	200
MP 9.310	MP 10.190	62	200
MP 10.190	MP 10.467	72	200
MP 10.467	CR 532 (MP 15.122)	62	200
Martin Andersen Beachline Expressway (SR 528)			
MP 23.000	MP 25.311	76	300
MP 25.311	MP 25.357	78	300
MP 25.357	MP 25.734	80	300
MP 25.734	MP 25.766	78	300
MP 25.766	SR 520 (MP 30.320)	76	300
US 192 (SR 500)			
Arthur J. Gallagher Blvd (MP 18.446)	MP 18.585	62	200
MP 18.585	MP 18.867	68	200
MP 18.867	MP 28.976	62	200
MP 28.976	MP 29.222	68	200
MP 29.222	MP 31.448	62	200
MP 31.448	MP 31.488	62	200
MP 31.488	MP 33.426	62	232
MP 33.426	MP 33.433	60	200
MP 33.433	CR 419 (MP 35.839)	62	200

3.2.4 Border Width

The border width for the roadways within the study area are shown in Table 3.8. The width data were interpreted from the FDOT Straight Line Diagrams (Appendix 2) and right-of-way maps for the respective roadways. The minimum border width required is based on the 2018 FDOT Design Manual, Chapter 210, Table 210.7.1 "Minimum Border Widths" (Appendix 7).

Table 3.8: Border Widths

Roadway		Border width (ft)
From	To	
E Colonial Dr (SR 50)		
SR 520 (MP 20.000)	MP 20.082	58.5
MP 20.082	MP 20.687	50.5
MP 20.687	Taylor Creek Rd (MP 24.148)	40
SR 520		
MP 0.605	MP 2.218	50.5
MP 2.218	MP 7.750	58.5
MP 7.750	MP 8.811	50.5
MP 8.811	MP 8.859	42.5
MP 8.859	MP 8.693	43
MP 8.693	MP 9.111	39
MP 9.111	MP 9.310	46
MP 9.310	MP 10.190	39
MP 10.190	MP 10.467	46
MP 10.467	CR 532 (MP 15.122)	39
Martin Andersen Beachline Expressway (SR 528)		
MP 23.000	MP 24.891	83
MP 24.891	MP 25.311	79
MP 25.311	MP 25.357	84
MP 25.357	MP 25.734	89
MP 25.734	MP 25.766	84
MP 25.766	MP 26.238	79
MP 26.238	SR 520 (MP 30.320)	83
US 192 (SR 500)		
Arthur J. Gallagher Blvd (MP 18.446)	MP 18.585	39
MP 18.585	MP 18.867	45
MP 18.867	MP 24.463	39
MP 24.463	MP 28.976	42.5
MP 28.976	MP 29.222	45
MP 29.222	MP 31.448	42.5
MP 31.448	MP 31.488	47.5
MP 31.488	MP 33.426	55
MP 33.426	MP 33.427	43.5
MP 33.427	MP 33.433	47
MP 33.433	MP 33.443	47.5
MP 33.443	MP 33.446	49
MP 33.446	MP 33.483	44
MP 33.484	CR 419 (MP 35.839)	39

3.2.5 Pavement Conditions

The pavement conditions for the existing roadways within the study area are shown in Table 3.9. The pavement condition data were obtained from the Florida Department of Transportation "All System Pavement Condition Forecast" for Orange and Osceola County in August 2018 (Appendix 6).

Table 3.9: Roadway Pavement Conditions

Roadway		Surface Type	Year	Cracking		Ride	
From	To			Left	Right	Left	Right
E Colonial Dr (SR 50)							
MP 20.000	MP 24.148	FC5	2018	7.5	7.5	8.1	8.2
SR 520							
SR 50 (MP 0.000)	MP 0.409	OGFC	2018	9.0	9.0	7.4	7.8
MP 0.409	MP 8.231	FC5	2018	6.5	4.5 [1]	8.0	7.7
MP 8.231	MP 16.072	FC5	2018	7.5	6.5	8.0	8.0
Martin Andersen Beachline Expressway (SR 528)							
MP 23.000	MP 24.815	OGFC	2018	9.0	9.0	8.3	8.4
MP 24.815	MP 26.290	OGFC	2018	9.0	9.0	7.6	7.7
MP 26.290	MP 29.825	OGFC	2018	9.0	9.0	8.5	8.4
MP 29.825	MP 30.300	OGFC	2018	9.0	7.0	7.8	7.6
US 192 (SR 500)							
MP 18.446	MP 19.298	FC5	2018	6.5	5.5 [1]	7.5	6.8
MP 19.298	MP 31.600	FC125/FC5M	2018	9.5	9.5	8.2	8.2
MP 31.600	MP 35.839	FC5	2018	9.0	9.0	8.0	8.0

[1] Became deficient in 2017

3.2.6 Horizontal Alignment

The horizontal alignments for the major roadways within the study area are shown in Table 3.10. The curve data were interpreted from the FDOT Straight Line Diagrams (Appendix 2) for the respective roadways on the SHS. Horizontal data was not available for the local government roadways. The minimum curve length is established based on the 2018 FDOT Design Manual, Chapter 210, Table 210.8.1 "Length of Horizontal Curve" (Appendix 8).

Table 3.10: Roadway Horizontal Alignment

Roadway					
PC (MP)	PI (MP)	PT (MP)	Δ	D	LC (ft)
E Colonial Dr (SR 50) – MP 20.000 to 24.148					
22.129	22.246	22.370	6°21'30.00"	0°30'00.00"	1272
22.668	22.776	22.873	11°13'10.00"	1°00'00.00"	1082
23.749	23.798	23.830	4°22'30.00"	1°00'00.00"	428 [1]
SR 520 – MP 0.000 to 16.072					
0.000	0.019	0.111	19°44'15.00"	2°00'00.00"	586 [1]

Table 3.10: Roadway Horizontal Alignment (continued)

Roadway					
PC (MP)	PI (MP)	PT (MP)	Δ	D	LC (ft)
0.000	0.314	0.625	11°01'30.00"	0°20'00.00"	3300
0.474	0.568	0.661	19°44'15.00"	2°00'00.00"	987
1.855	1.016	2.169	4°00'00.00"	0°15'00.00"	1658
4.162	4.272	4.374	11°37'00.00"	1°00'00.00"	1119
5.545	5.658	5.771	11°52'00.00"	1°00'00.00"	1193
7.463	7.561	7.659	10°17'00.00"	1°00'00.00"	1035
8.607	8.629	8.724	6°30'00.18"	0°39'00.59"	618 [1]
8.724	5.851	8.977	13°26'00.26"	0°59'26.00"	1336
9.053	9.105	9.153	1°56'00.26"	0°20'00.00"	528 [1]
11.047	11.177	11.295	13°26'00.59"	1°00'00.00"	1309
13.224	13.620	14.007	41°21'00.20"	1°00'00.00"	4134
US 192 (SR 500) – MP 18.446 to 35.839					
19.431	19.752	20.055	33°09'38.00"	1°00'00.00"	3295
20.452	20.665	20.872	22°24'52.00"	1°00'00.00"	2218
22.430	22.714	22.996	15°03'35.00"	0°30'00.00"	2988
23.446	23.771	24.060	31°35'28.0"	1°00'00.00"	3242
24.100	24.218	24.336	6°16'24.00"	0°30'00.00"	1246
24.566	24.646	25.115	5°14'37.00"	0°29'00.00"	2899
28.164	28.391	28.618	5°00'14.00"	2°15'03.00"	2397
30.115	30.286	30.457	4°30'05.00"	2°14'57.00"	1806
30.501	30.589	30.676	2°09'47.00"	0°14'00.00"	924 [1]
33.574	33.730	33.885	16°25'51.00"	1°00'00.00"	1642
35.657	35.781	35.904	3°15'27.00"	0°15'00.00"	1304

[1] Does not meet minimum length of curve specified in Table 210.8.1 of the 2018 FDOT Design Manual

3.2.7 Vertical Alignment

For this level of study, no topographic survey is readily available to assess the existing vertical alignment geometry. However, the existing vertical alignments of the roadways within the study area appear to be in relative conformance with accepted standards.

3.2.8 Structures

The structures present on the SHS roadways within the study area are shown in Table 3.11. The structures data were interpreted from the FDOT Straight Line Diagrams (Appendix 2) for the respective roadways.

Table 3.11: Existing Roadway Structures

Roadway		Structure Type
From	To	
E Colonial Dr (SR 50)		
MP 20.039	MP 20.045	Underpass
SR 520		

Table 3.11: Existing Roadway Structures (continued)

Roadway		Structure Type
From	To	
MP 0.322	MP 0.368	Underpass
MP 8.145	MP 8.153	Box Culvert
MP 8.878	MP 8.886	Underpass
MP 8.895	MP 8.906	Underpass
MP 9.222	MP 9.251	Bridge
MP 10.274	MP 10.317	Bridge
MP 14.684	MP 14.695	Box Culvert
Martin Andersen Beachline Expressway (SR 528)		
MP 23.281	MP 23.296	Bridge
MP 27.442	MP 27.437	Bridge
MP 30.042	MP 30.053	Box Culvert
US 192 (SR 500)		
MP 21.300	MP 21.304	Box Culvert
MP 29.100	MP 29.130	Bridge
MP 30.093	MP 30.097	Box Culvert
MP 33.395	MP 33.422	Bridge

3.2.9 Identification of Controlling Design Elements

The controlling design elements for high speed roadways (design speed ≥ 50 mph) were studied for the existing roadways within the study area. Design elements that are below the FDOT and AASHTO's criteria will require design exceptions.

- Design Speed: all major existing roadways within the study area conform to the minimum criteria.
- Lane width: all major existing roadways within the study area conform to the minimum criteria.
- Shoulder width: roadways below the minimum design criteria are identified in Table 3.5.
- Horizontal curve radius: roadways below the minimum design criteria are identified in Table 3.10.

3.3 Geotechnical Data

The geography and current land uses in the study area vary from pine flatwoods to cypress swamps, and cattle pastureland to stands of ancient oak trees. The key geotechnical issue will be identifying the potential for deep, highly compressible, organic soils (**bold in list below**) that could impact the expressway alignment and cost. Further, shallow groundwater levels will be a major factor in determining expressway grades, stormwater pond sizes and construction cost estimates.

The Natural Resources Conservation Service (NRCS) Soil Surveys for Orange and Osceola and counties indicate predominant soil types within the study area include:

Orange County Soils

- Arents, nearly level
- Basinger fine sand, frequently ponded, 0 to 1 percent slopes
- Felda fine sand, 0 to 2 percent slopes
- Felda fine sand, 0 to 2 percent slopes, occasionally flooded
- Felda fine sand, 0 to 2 percent slopes, frequently flooded
- Floridana fine sand, 0 to 2 percent slopes, frequently flooded
- **Floridana mucky fine sand**, frequently ponded, 0 to 1 percent slopes
- Immokalee fine sand
- Malabar fine sand
- Ona fine sand, 0 to 2 percent slopes
- Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes
- Pinellas fine sand, 0 to 2 percent slopes
- Pits
- Pomello fine sand, 0 to 5 percent slopes
- **Samsula muck**, frequently ponded, 0 to 1 percent slopes
- Samsula-Hontoon-Basinger association, depressional
- **Sanibel muck**
- Seffner fine sand, 0 to 2 percent slopes
- Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes
- Zolfo fine sand, 0 to 2 percent slopes

Osceola County Soils

- Adamsville sand, 0 to 2 percent slopes
- Arents, 0 to 5 percent slopes
- Basinger fine sand, 0 to 2 percent slopes
- Basinger fine sand, depressional, 0 to 1 percent slopes
- Cassia fine sand, 0 to 2 percent slopes
- Delray loamy fine sand, depressional
- Floridana fine sand, frequently ponded, 0 to 1 percent slopes
- **Hontoon muck**, frequently ponded, 0 to 1 percent slopes
- Immokalee fine sand, 0 to 2 percent slopes
- **Kaliga muck**, frequently ponded, 0 to 1 percent slopes
- Malabar fine sand, 0 to 2 percent slopes

- Malabar fine sand, frequently ponded, 0 to 1 percent slopes
- Malabar-Pineda complex
- Myakka fine sand, 0 to 2 percent slopes
- **Nittaw** muck
- Ona fine sand, 0 to 2 percent slopes
- Pits
- Placid fine sand, frequently ponded, 0 to 1 percent slopes
- Placid variant fine sand
- Pomello fine sand, 0 to 5 percent slopes
- Pompano fine sand, 0 to 2 percent slopes
- Pompano fine sand, frequently ponded, 0 to 1 percent slopes
- Riviera fine sand, 0 to 2 percent slopes
- Riviera fine sand, frequently ponded, 0 to 1 percent slopes
- **Samsula muck**, frequently ponded, 0 to 1 percent slopes
- Smyrna fine sand, 0 to 2 percent slopes
- Tavares fine sand, 0 to 5 percent slopes
- Wauchula fine sand
- Placid-Riviera-Samsula complex, frequently flooded

3.3.1 Sand and Groundwater

The NRCS Soil Survey map predominantly depicts soils made up of fine sand (A-3) to silty fine sand (A-2-4) with shallow groundwater levels. These materials are generally suitable for roadway construction and are classified by FDOT as Select material. However, the sands are poorly drained and sensitive to moisture compact during compaction efforts. The seasonal high water table (SHWT) is typically within 3 feet of the natural ground surface. Sands with shallow groundwater are highlighted in blue on the NRCS Study Area Map on Figure 3.1. As shown on Figure 3.1, almost the entire study area is characterized by shallow groundwater levels. Sands with deeper groundwater are highlighted in yellow on Figure 3.1.

3.3.2 Muck and Water Features

The NRCS Soil Survey also depicts Hontoon, Kaliga, Samsula, Nittaw, and Sanibel muck, predominantly in wetlands along the study area perimeter. Muck soils are highlighted in green on Figure 3.1 and consist of highly decomposed organic material to a depth of more than 65 inches. Muck is classified as A-8 in the AASHTO system and has severe limitations for roadway construction. It is generally unsuitable for embankment support and typically requires removal and replacement with engineered fill. The NRCS soil survey predicts the seasonal high groundwater levels for these soil types to be from 2.0 feet above ground surface to natural ground surface. Water features, highlighted in purple on Figure 3.1, can also contain muck deposits that are not identified on the NRCS maps.

3.3.3 Relic Sinkholes

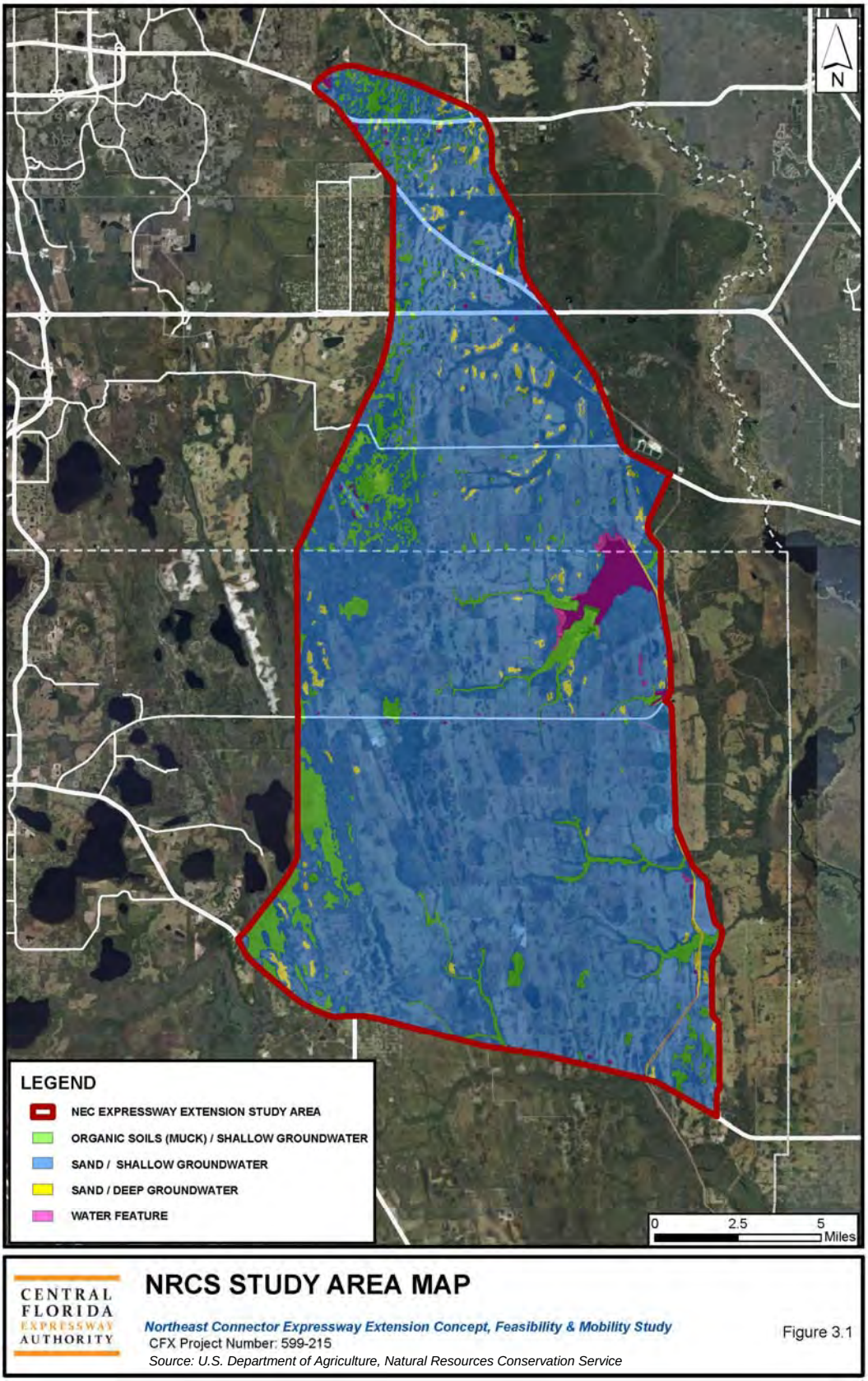
The critical geologic hazard to roadway development in the study area is the presence of relic sinkholes within the wetland and water features that can contain muck to depths greater than 100

feet. Avoidance of these relic sinkholes is the most effective way to reduce project risk. If avoidance is impractical, the muck would have to be mitigated during construction by its removal or improvement, or a combination thereof. When alignment alternatives are available, the geologic risk for each alternative will be assessed based on the extent each alternative coincides with wetlands and water features that could contain relic sinkholes.

3.3.4 Subsurface Drainage

The soils present within the project corridor are generally identified by NRCS as a dual hydrologic soil group A/D; however, Group D soils are predominant. Group A soils are used to identify drained areas and Group D soils represent undrained areas. Group A soils possess low runoff potential due to their sandy, permeable nature. Group D soils have high runoff potential due to a shallow groundwater table and/or impervious near-surface silt, clay or organic fines. Group A soils can be conducive to stormwater infiltration and design of dry retention ponds. Group D soils indicate poor infiltration characteristics and are more conducive to design of wet detention ponds. Knowledge of geotechnical conditions within the study area, as well as published sources of geotechnical data, will be used to identify soil/groundwater conditions that could impact the feasibility of the concept alternatives.

Figure 3.1: NRCS Study Area Map



3.4 Water Resources

3.4.1 Surface Water

The Federal Water Pollution Control Act, as amended by the Clean Water Act (CWA, 33 United States Code 1251), provides the authority to establish water control standards, control discharges into surface waters and subsurface waters, develop waste treatment management plans and practices, and issue permits for discharges and for dredging and or filling in surface waters. Section 303 of the CWA requires states to establish water quality standards for waters within their boundaries that are subject to CWA jurisdiction. Florida is authorized to administer its CWA program and has U.S. Environmental Protection Agency (EPA)-approved water quality standards, which are contained in Florida Administrative Code (FAC) Chapter 62-302. Section 303(d) of the CWA requires states to develop a list of waters not meeting water quality standards or not supporting their designated use classifications. Section 303(d) of the CWA and Florida Statutes Section 403.067 define impaired waters as those not meeting applicable water quality standards, which include:

- Designated uses;
- Water quality criteria;
- The Florida antidegradation policy; and
- Moderating provisions.

In 2001, the Florida Department of Environmental Protection (FDEP) adopted the "Impaired Waters Rule" for the purpose of interpreting existing water quality criteria and evaluating attainment of established designated uses. FAC Chapter 62-303 establishes the methodology used to identify state surface waters that will be included in the state's planning list of waters that will be assessed. Chapter 62-303 also identifies impaired waters based on representative data that are included on the state's verified list of impaired waters. The FDEP calculates the Total Maximum Daily Loads (TMDLs) for identified state impaired waters, pursuant to Florida Statutes subsection 403.067(4). Additionally, the list of impaired waters is submitted to the EPA as mandated by Section 303(d)(1) of the CWA. Once a TMDL is established for a basin, it is removed from the impaired waters list and the process of developing a Basin Management Action Plan (BMAP) to improve surface water quality within the basin commences. The BMAP involves coordination with state agencies, county and local governments, private and non-governmental organizations, and other stakeholders within the basin to identify projects and assist with the development of regulations that will improve the water quality.

Water quality indicator data (e.g., TMDL, adopted BMAPs, number of impaired water bodies, etc.) were evaluated for the study area and are summarized in Table 3.12. The study area contains five impaired water bodies, eight TMDL parameters of concern, and three approved BMAPs.

Table 3.12: Summary of Impaired Waters Within the Project Study Area

Basin Name	FDEP Group	Water Body Identification Number (WBID)	Impaired Water Body	TMDL Parameter(s)	Approved BMAP
Jim Creek	3	3042	Yes	Fecal Coliform	No
Lake Winder	3	2893Y1	Yes	Iron	No
Econlockhatchee River	2	2991	Yes	Fecal Coliform	No
St. John River Above Puzzle Lake	3	2893I	Yes	Ag, DO, TP, BOD, TN	Yes
St. John River Above Puzzle Lake (South Segment)*	3	28935	Yes	Fecal Coliform and Ag	No
Long Branch	2	3030	Not Listed	Fecal and DO	Yes
Wolf Creek	3	3075	Not Listed	TP, BOD, Total TN	No
Crabgrass Creek	3	3073	Not Listed	TP, BOD, TN	No
Jane Green Creek	3	3084	Not Listed	TP, BOD, TN	No
Lake Okeechobee	1	3212A, 3212B, 3212C, 3212D, 3212E, 3212F, 3212G, 3212H, 3212I	Not Listed	TP	Yes

Source:
2018 FDEP Website:
Basin Management Action Plan (BMAP) https://floridadep.gov/dear/water-quality-restoration/content/basin-management-action-plans-bmaps
Total Maximum Daily Loads (TMDL) https://floridadep.gov/dear/water-quality-evaluation-tmdl/content/total-maximum-daily-loads-tmdl-program
TMDL Parameters:
Ag – Silver, BOD – Biological Oxygen Demand, DO – Dissolved Oxygen, TP – Total Phosphorus, TN – Total Nitrogen,
* St. John River Above Puzzle Lake (South Segment) is south of SR 50

3.4.2 Existing Drainage

The study area is mostly undeveloped and is primarily located in the central region of the Upper St. Johns River Watershed. Ninety-one percent (91%) of the study area falls within the St. Johns River Water Management District (SJRWMD), and the remaining 9% of the study area falls within the South Florida Water Management District (SFWMD). The region has a relatively flat topography and a high surface water table. The area is characterized by gently rolling hills, agricultural lowlands, and forested and herbaceous wetlands.

Most of the land drains naturally into a series of creeks that flow eastward towards the St. Johns River. Drainage is augmented in some areas with ditching that interconnects a mosaic of natural depressions and sloughs. Several large swamps are present on the western side of the study area including Jug Creek, Cat Island, John H. Bay, Islet Pond, and Bee Tree. The existing Taylor Creek

Reservoir and proposed Pennywash/Wolf Creek Reservoir are envisioned to provide water supply to the North Ranch Planning Area during and after development. The Taylor Creek Reservoir is an area consisting of 7,104 acres (approximately 3,191 acres of wetlands and 3,913 acres of surface water). The proposed Pennywash/Wolf Creek Reservoir is 5,548 acres (approximately 3,838 acres of uplands, 1,632 acres of wetlands and 78 acres of surface water). The major creeks, reservoirs, and water bodies are labeled on Figure 3.4.

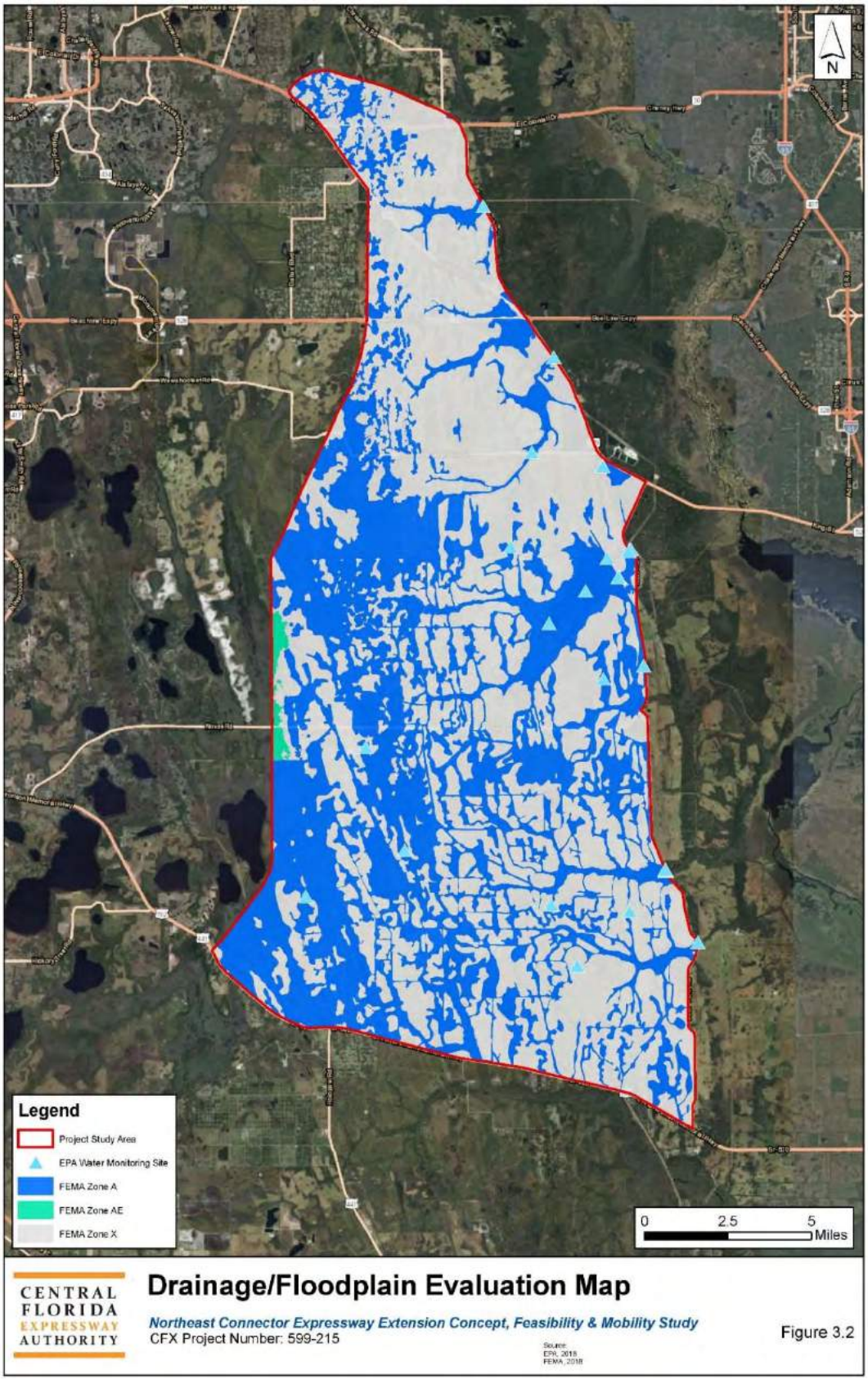
The study area is split between the Orange County and Osceola County jurisdiction for floodplain impacts as well as SJRWMD, SFWMD, and FDOT District 5 jurisdictions for stormwater management. According to the FDEP, there is currently no BMAP for the majority of the study area. A small section in the southwest corner falls within the Lake Okeechobee BMAP and a small section in the northwest corner is located within the Long Branch BMAP. The SFWMD will require the regulation of total phosphorus (TP) discharge for Lake Okeechobee and SJRWMD will require the regulation of the fecal and dissolved oxygen (DO) for Long Branch. Additional protective measures, such as pollutant loading analysis and additional 50% water quality treatment volume will be reviewed to comply with Lake Okeechobee and Long Branch BMAP criteria.

3.4.3 Floodplains

The 2009 (Orange County) and 2013 (Osceola County) Federal Emergency Management Agency (FEMA) flood maps identify the general location of the 100-year floodplains within the study area with primarily Zone A and a small segment of Zone AE. Approximately 75,800 acres (or 45%) of the 169,700-acre study area is classified as a Zone A or Zone AE FEMA floodplain. The Zone AE designations have established Base Flood Elevations (BFEs) and are limited to the upper reach of the Econlockhatchee River Swamp. The Zone A designations do not have established BFEs and are typically located in the tributaries and wetlands.

There are three United States Geological Survey (USGS) monitoring stations within the study area that provide daily stage data. This data can be used to check the expected stages for 10-year, 50-year, 100-year, and 500-year storms. Figure 3.2 shows the location of the FEMA flood zones and surface water monitoring stations within the study area.

Figure 3.2: Drainage/Floodplain Evaluation Map



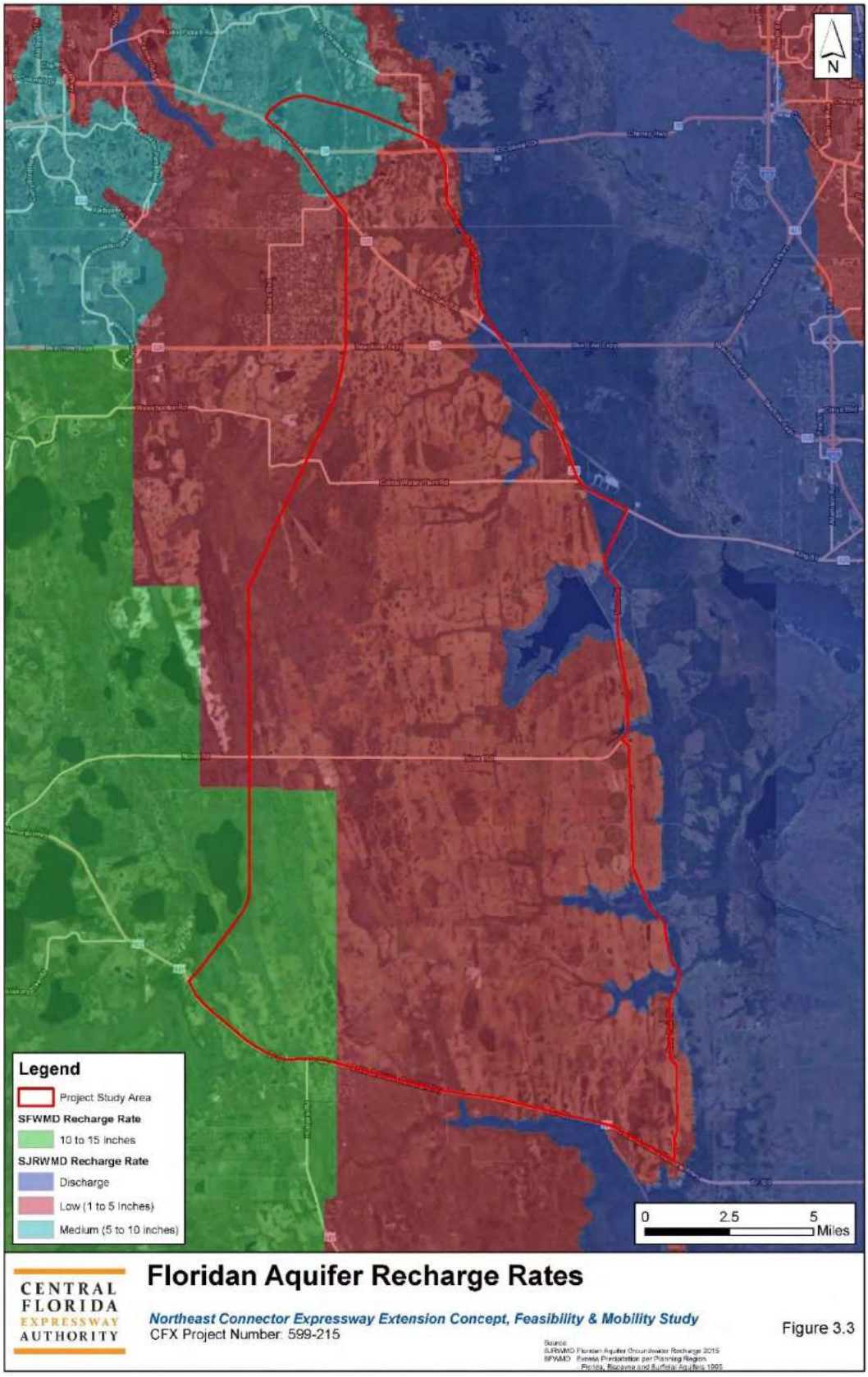
3.4.4 Groundwater

In east Orange and Osceola counties, groundwater is the primary water supply source for commercial and residential development in the region. Groundwater within the study area comes from three aquifer systems: the surficial aquifer, intermediate aquifer, and the Floridan aquifer, which are discussed below.

- The surficial aquifer is composed of sand, silt, clay, and shell that are unconfined. It is directly replenished by rainfall percolation from surface water bodies and is limited by seasonal fluctuations of the water table. Typically, water from the surficial aquifer is used for live-stock and domestic purposes that do not require large volumes of water.
- The intermediate aquifer consists of the unconsolidated sand, silt, clay and shell and consolidated beds of shell, limestone, and dolomite. The Hawthorne Formation comprises most of the thickness within the study area that separates the three aquifers. The immediate aquifer is recharged by the surficial aquifer and discharges into the Floridan aquifer when the water table is low. In many areas, the intermediate and Floridan aquifers are separated by thin layers and in some cases directly intermingle. The immediate aquifer is used for individual residential, commercial, and agricultural areas that need large water volumes for potable use, landscaping, manufacturing, crops and live-stock.
- The Floridan aquifer consists of interbedded limestone, dolomite, and dolomitic limestone in which the amount of primary and secondary porosity is highly variable. This system is the deepest of the aquifer systems and recharge for this aquifer is almost exclusively from downward seepage from the surficial aquifer system. The Floridan aquifer is the main water supply for municipalities in the region. For example, the City of Cocoa Beach has groundwater wells located on the north side of Cocoa Water Plant Road that draws from the Floridan aquifer.

The SJRWMD Upper Florida Aquifer Groundwater Recharge (2015) Geographic Information Systems (GIS) data indicates that most of the study area is located within a low recharge area with a rate of 1 to 5 inches per year (Figure 3.3). The northern portion of the study area is located within a medium recharge area with a rate 5 to 10 inches per year and groundwater from the eastern boundary discharges directly into surface waters, such as the St. Johns River and its tributaries. However, groundwater in the southwestern portion of the study area recharges at a rate of 10 to 15 inches a year (SFWMD Excess Precipitation – Florida, Biscayne and Surficial Aquifers GIS data).

Figure 3.3: Floridan Aquifer Recharge Rates



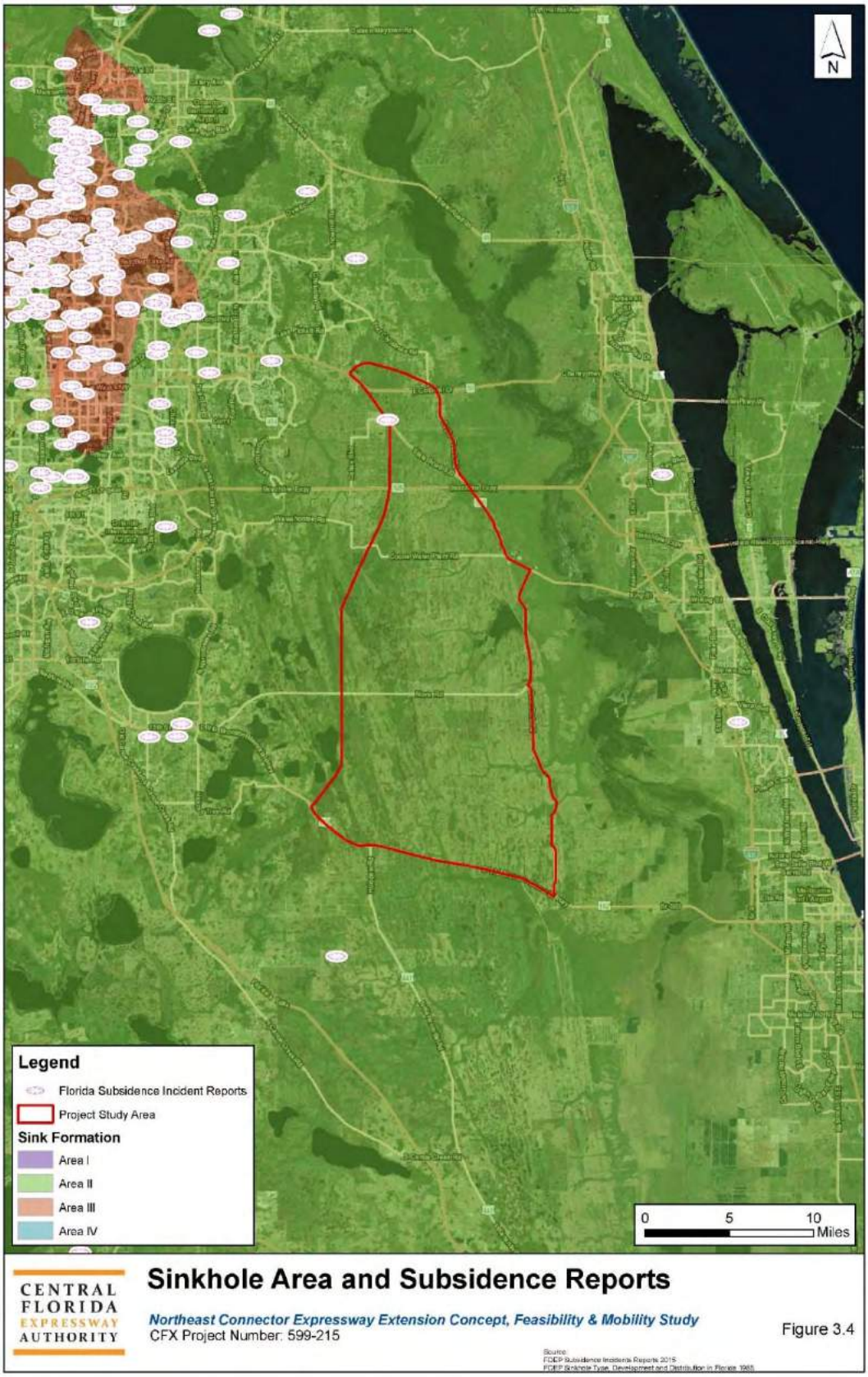
3.4.5 Sinkholes

In 1985, the US Geological Survey (USGS) and FDEP developed the "Sinkhole Type, Development, and Distribution in Florida" map, which identifies four Area classifications that have sinkhole formation potential and describes three types of sinkholes based on the geological formation and position of the aquifers in Florida. These sinkhole Area classifications are described below:

- Area 1 –Sinkholes are few, generally shallow and broad, develop gradually. Solution sinkholes dominate (usually fill in with water and become small ponds and lakes).
- Area 2 – Consist mainly of incohesive and permeable sand. Sinkholes are few, shallow, small in diameter, and develop gradually. Cover-subsidence sinkholes dominate.
- Area 3 – Consist of cohesive clayey sediments of low permeability. Sinkholes are numerous, varying size, and develop abruptly. Cover-collapse sinkholes dominate.
- Area 4 – Consist of cohesive sediments interlayered with discontinuous carbonate beds. Sinkholes are very few, but are large in diameter and deep. Cover-collapse sinkholes dominate.

According to the FDEP Florida Sinkhole Type and Subsidence Incident Report data, the entire study area is located within Area 2 (sinkholes few, shallow, and develop gradually). When considering the subsidence and sinkhole formation data, the likelihood of sinkhole subsidence development within the study area is low. Figure 3.4 depicts the location of the subsidence incidents and sinkhole type within the project study area.

Figure 3.4: Sinkhole Area and Subsidence Reports



3.5 Natural Environment

3.5.1 Wetlands

Activities in, on or over Waters of the United States (WOTUS), including wetlands, are regulated at the state and federal level. Executive Order 11990, Protection of Wetlands, mandates that all federal agencies take action to minimize the destruction, loss, or degradation of wetlands, and preserve or enhance their natural value. The USACE has jurisdictional authority over activities in WOTUS under the CWA of 1972, as amended. In addition, Florida Statue 373.016 requires the preservation of natural resources, such as wetlands and other surface waters, for fish and wildlife. If activities in, on or over wetlands or surface waters cannot be avoided by an activity, it is subject to the conditions set forth in FAC 62-330. The USACE, SJRWMD, and SFWMD have jurisdictional authority over wetlands and surface waters within the study area.

A preliminary assessment of wetlands and surface waters was conducted within the study area utilizing the 2014 SJRWMD Florida Land Use, Cover, and Forms, Classification System (FLUCFCS), 2014 SFWMD FLUCFCS, and 2013 Osceola County National Wetland Inventory (NWI) GIS datasets. The study area contains large forested wetlands systems, composed of cypress (Taxodium sp.) and other hardwoods, such as bays, gums, and maples. Smaller wetland systems are composed of herbaceous communities of submerged and emergent wetland plants. Based on a review of recent and historical aerial photography, these forested and herbaceous systems are potentially hydrologically connected during the wet season and, therefore, fall under the jurisdiction of the SJRWMD, SFWMD, and USACE. Qualitative field reviews were not conducted within the study area; however, based on aerial interpretation, it is anticipated that these wetlands are medium to high quality due to the large intact wetland systems that are hydrologically connected throughout and the undeveloped characteristics of the study area. A map depicting the SJRWMD and SFWMD wetland land use types within the study area is presented on Figure 3.5. Figure 3.6 depicts the areas mapped as wetlands according to the NWI data.

3.5.2 Soil Classifications

Multiple upland and wetland soil types occur within the study area based on 2017 Natural Resources Conservation Service (NRCS) soils GIS data. For the purpose of this study, soil data was used to assist with the determination of wetland and upland areas and to identify soils that are protected under Farmland Project Policy Act (FPPA) of 1981. Figure 3.7 depicts the NRCS hydric soil types within the study area. The following section discusses the prime and unique farmlands.

Figure 3.5: SFWMD and SJRWMD Wetlands and Surface Waters

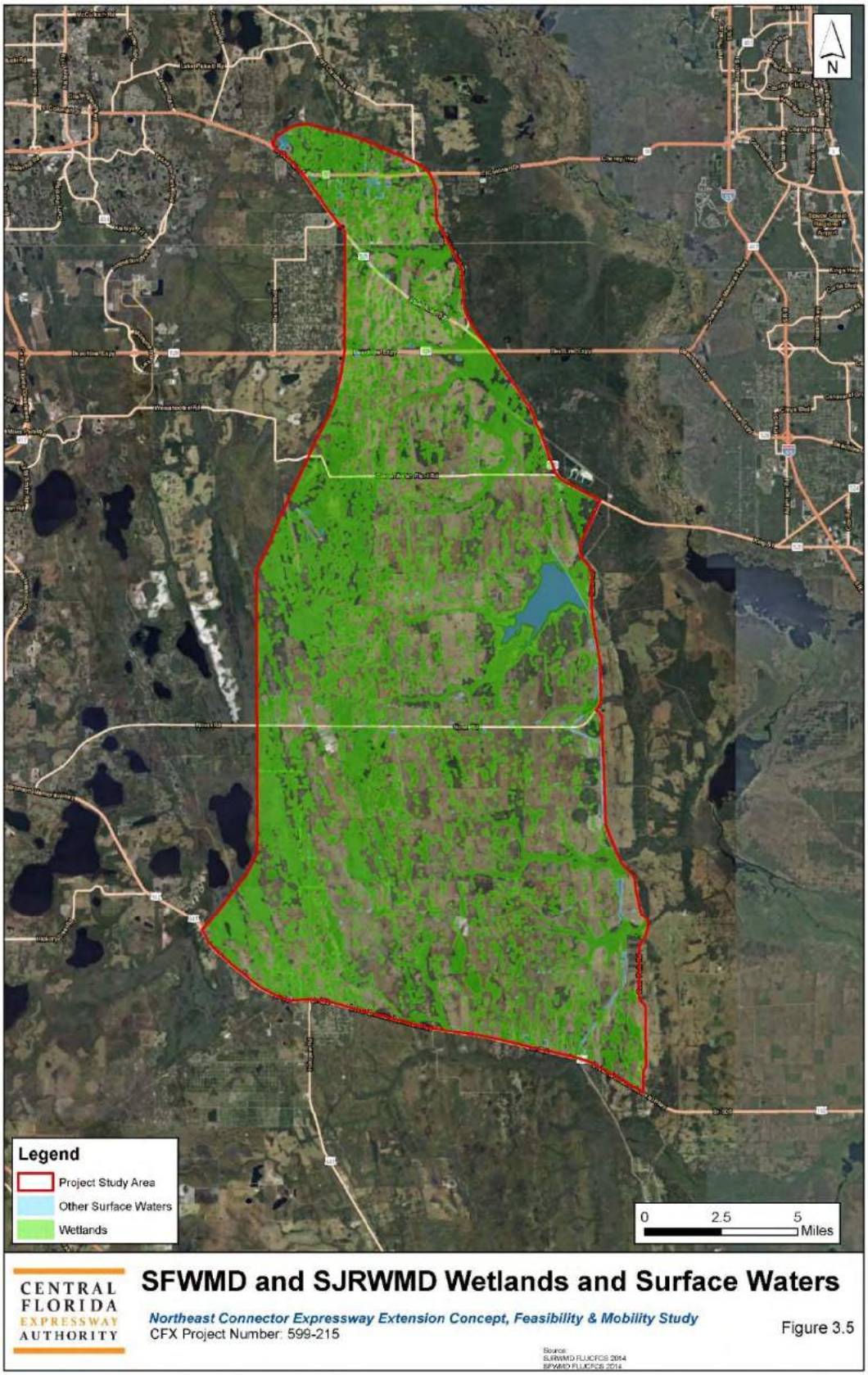


Figure 3.6: USFWS National Wetland Inventory

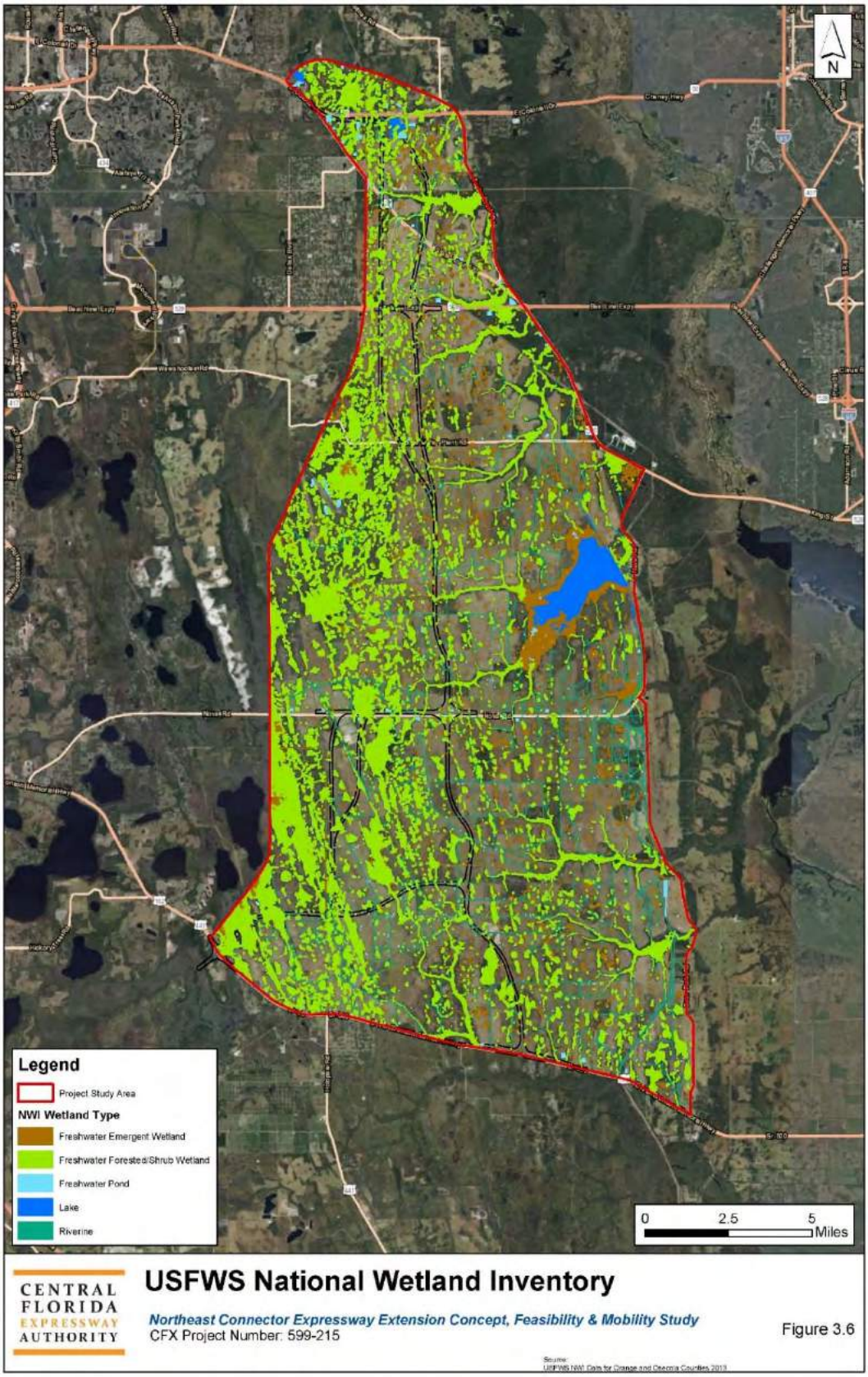
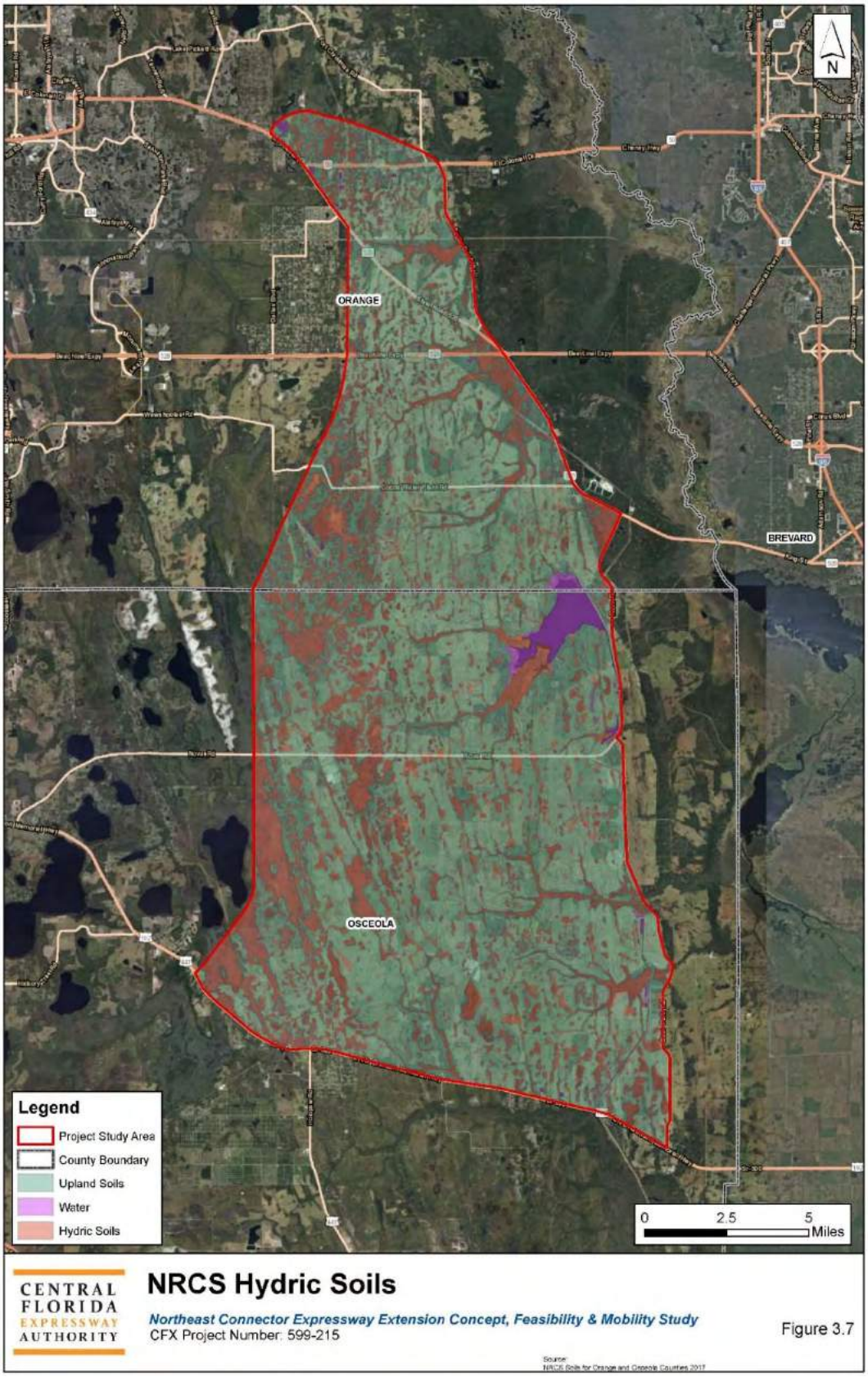


Figure 3.7: NRCS Hydric Soils



3.5.3 Farmlands

In 1981, the U.S. Congress passed the Agriculture and Food Act containing the FPPA and the final regulation was promulgated in 1994. The FPPA gave the NRCS jurisdiction over farmlands and requires consultation for projects that are federally funded and will convert farmland to permanent non-agricultural uses. The consultation with NRCS determines whether the farmland is classified as "prime" or "unique." If an area is considered prime or unique the FPPA requires a complete site assessment based on length of time farmed, evaluation of surrounding farmland, level of local farm support services, and the level of urban land in the area.

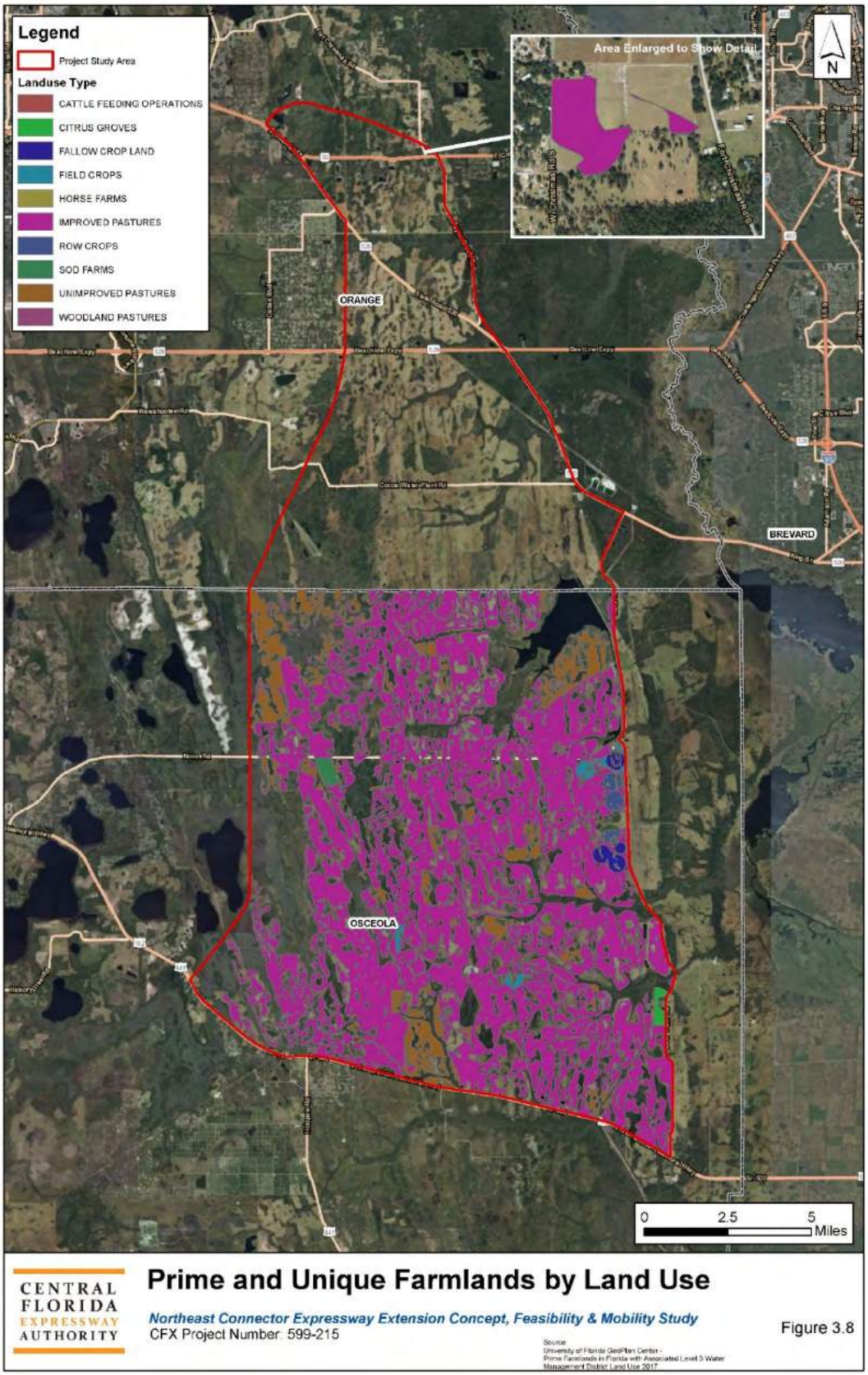
A further analysis of the prime farmland was conducted by the University of Florida GeoPlan Center in 2018 and this analysis identifies prime farmland using 2017 NCRS soils data and cross-references it with the Florida Land Use, Cover and Forms Classification Systems (FLUCFCS) that are developed by the state water management districts.

Based on a review of the "University of Florida's Prime Farmlands in Florida with associated Level 3 Water Management District Land Use Descriptions" data, most of the prime or unique farmland occurs within the Osceola County portion of the study area, with a small isolated area within Orange County in the extreme northeast section of the study area. Improved pastures are the dominant land use type associated with prime farmland, comprising almost one third of the study area (Table 3.13). Figure 3.8 depicts the prime farmlands in the study area.

Table 3.13: Prime Farmland Land Use within the Project Study Area

Land Use Type	Acres	Percentage (%) of Project study area
Cattle Feeding Operations	7	0.003
Citrus Groves	218	0.1
Fallow Crop Land	478	0.3
Field Crops	468	0.3
Horse Farms	6	0.003
Improved Pastures	54,543	32
Row Crops	379	0.2
Sod Farms	237	0.1
Unimproved Pastures	7,358	4
Woodland Pastures	734	0.4
Total	**64,428**	**37.4**

Figure 3.8: Prime and Unique Farmlands by Land Use



3.5.4 Threatened and Endangered Species

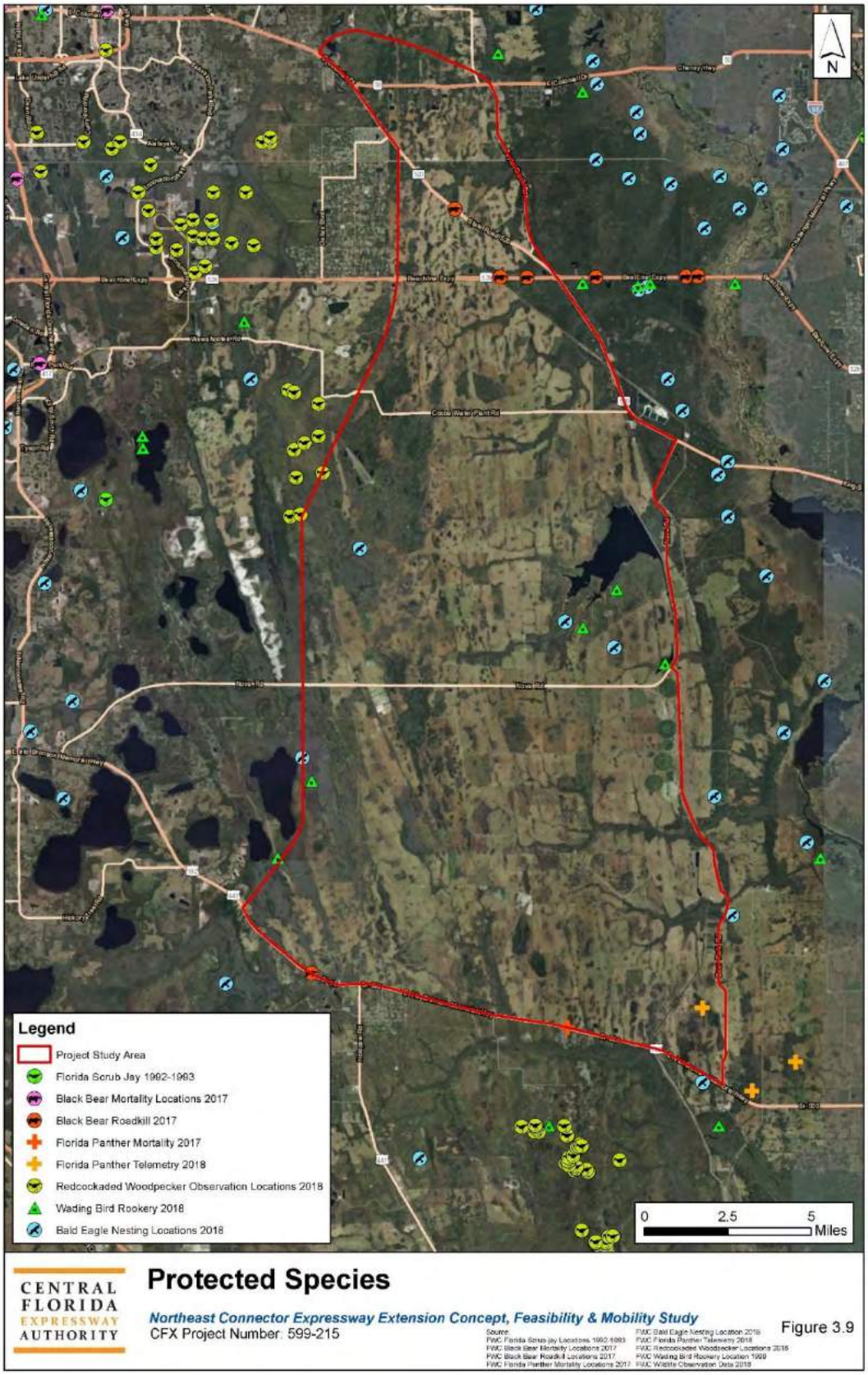
The U.S. Fish and Wildlife Service (USFWS) and Florida Fish and Wildlife Conservation Commission (FWC) have authority under the U.S. Endangered Species Act of 1973 (ESA) and the State of Florida's Endangered and Threatened Species Act (Florida Statute 379.2291) to provide comments and recommendations concerning protected species. The ESA requires federal agencies ensure that actions are not likely to jeopardize the continued existence of listed species or impact critical habitats of those species. If actions may affect federally or state-protected species or critical habitats, then coordination with USFWS and FWC will be required. The following information and datasets were reviewed to determine the likelihood of state and federally-protected species occurring within the study area:

- True color aerial photography (Environmental Science Research Institute's (ESRI) Online Database);
- USGS topographic (ESRI Online Database);
- U.S. Department of Agriculture NRCS soils GIS data for Orange and Osceola Counties (2017);
- SJRWMD Land Use data (2014);
- SFWMD Land Use Data (2014)
- USFWS NWI data (2013);
- "Federal Listed Species in Orange and Osceola Counties, Florida" USFWS (October 2018);
- Endangered & Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12;
- "Notes on Florida's Endangered and Threatened Plants," FDACS (2010), and 5B-40 FAC;
- Florida Natural Areas Inventory (FNAI) database of listed species known to occur in Orange and Osceola Counties (2018);
- USFWS Wood Stork Key for South Florida (revised 2010)
- USFWS Wood Stork Florida Nesting Colonies and Core Foraging Areas Active 2008-2017 (2018);
- "Florida's Endangered and Threatened Species," FWC (May 2016);
- FWC listed species occurrence data (2017);
- FWC Gopher Tortoise Permitting Guidelines (2017);
- Osceola County - North Ranch Sector Plan Long-Term Master Plan, Peer Review of the Environmental Plan (April 2015)
- USFWS Consultation Areas and Critical Habitat Maps (2018)

Based on the data review, there are numerous state- and federally-protected species documented to occur within and adjacent to the study area (Figure 3.9). Additionally, the study area is located completely within the USFWS Consultation Areas for crested caracara, everglades snail kite, Florida scrub-jay, and red-cockaded woodpecker. The study area also partially occurs within Florida grasshopper sparrow consultation area, which begins south of SR 528 and extends to the southern boundary of the study area. No USFWS designated critical habitat occurs within the study area.

The bald eagle was removed from the threatened and endangered list; however, it is still afforded protection under the Migratory Bird Treaty Act of 1918 and Bald and Golden Eagle Protection Act of 1940. According to FWC Bald Eagle Nesting data, three bald eagle nests are located within the study area: two nests are located in the eastern central portion of the study area north and east of Nova Road, and the third nest is located in the western central portion of the study area.

Figure 3.9: Protected Species



A review of the FWC Wading Bird Rookery data was conducted and four historical rookeries were identified within the study area. Three of the wading bird rookeries are located in the eastern central portion of the study area, north and west of Nova Road. The other is located in the southeastern corner of the study area and west of Lake Conlin. In addition, the study area is within 11 wood stork nesting colony core foraging areas. Given the undeveloped nature of the study area, and species occurrence data, it is anticipated that multiple state- and federally-protected species may occur within the study area. Upland areas within the study area have the potential to contain habitat suitable for the federally-protected Florida scrub-jay and red-cockaded woodpecker and the state-protected gopher tortoise, Sherman's fox squirrel, southeastern American kestrel and burrowing owl. Wetlands contain suitable habitat for the federally-protected crested caracara, wood stork, and everglade snail kite along with numerous state-protected wading birds. In addition, the diversity of the wetland and upland habitats increases the likelihood of federally-protected plants and eastern indigo snake occurring within the study area.

3.5.5 Essential Fish Habitat

A review of the National Marine Fisheries Service (NMFS) essential fish habitat (EFH) GIS data and literature was conducted and it was determined that the study area does not contain EFH. Should revised EFH GIS data and literature become available, a further analysis will be conducted during the Project Development and Environment (PD&E) study.

3.5.6 Conservation and Mitigation Areas

According to the FNAI Florida Conservation Lands GIS data, there are five areas that are identified as conservation lands within the study area. These areas are within and adjacent to the study area and are located on the northern, western, and southwestern border of the study area. Listed below are conservation lands within and adjacent to the study area and these areas are depicted on Figure 3.10. Mitigation banks are required to have conservation easements with the State of Florida or the federal government identified as the easement holders; therefore, mitigation banks are classified as public lands in the database.

- TM-Econ Mitigation Bank
- Lake X Mitigation Bank
- Savage/Christmas Creek Preserve
- Holopaw State Forest
- Hal Scott Preserve Conservation Easement

The FNAI Florida Forever Board of Trustees (FFBOT) GIS data indicates that the Big Bend Swamp/Holopaw Ranch and Conlin Lake X, which occur within the study area, have been approved for acquisition by the State of Florida's Acquisition and Restoration Council as of August 24, 2018. These areas are located in the southwest corner of the study area and north of US 192. The conservation lands and mitigation banks within the study area are summarized in Table 3.14.

Based on the review of the North Ranch Long-Term Master Plan/Sector Plan, several areas have been identified within the study area as potential mitigation sites for wetlands and state- and federally-protected species. However, no areas, including those areas south of the Osceola/Orange County line, have currently been authorized for mitigation or conservation lands to offset impacts to wetlands or protected species.

Table 3.14: Conservation Lands and Mitigation Banks within the Project Study Area

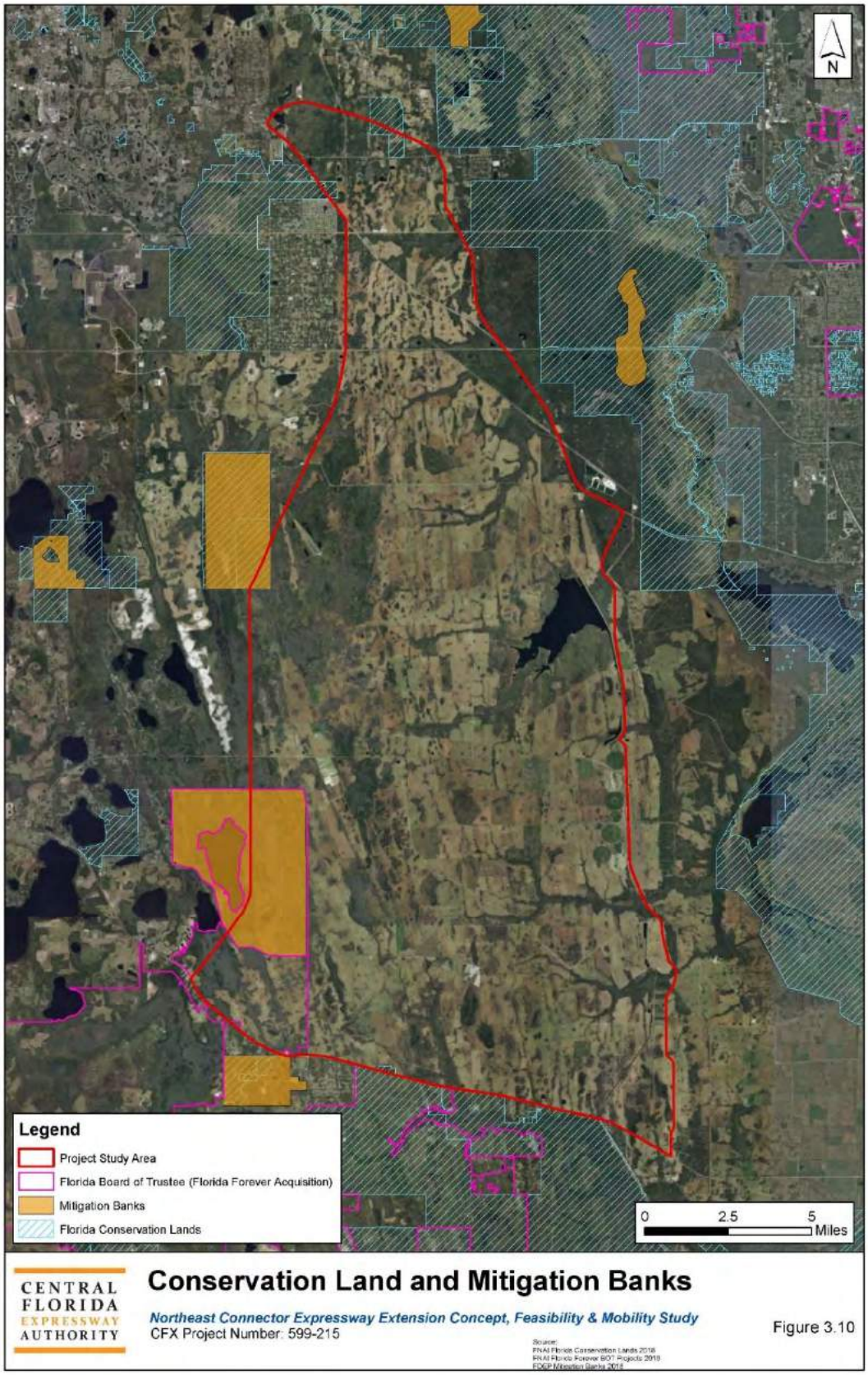
Conservation Land/ Mitigation Bank Name	Agency/Management Responsibility	Acres	Percentage (%) of Project Study Area
Big Bend Swamp/Holopaw Ranch Florida Forever BOT Project	FFBOT	5,166	3.1%
Conlin Lake X*	FFBOT	5,777	3.4%
TM-Econ Mitigation Bank	Orange County/Holland Properties	270	0.2%
Lake X Mitigation Bank	Lake X Holdings	468	0.3%
Savage/Christmas Creek Preserve	Orange County	328	0.2%
Holopaw State Forest	BOT and Florida Forest Service	57	0.03%
Hal Scott Preserve Conservation Easement	Orange County/SJRWMD	379	0.2%
	Total	**12,445**	**7.3%**
*According the FFBOT data, this area has been identified for acquisition and is a part of the Lake X Mitigation Bank			

3.5.7 Prescribed Burn Areas

Many of Florida's natural communities have been fire-suppressed historically and have become a danger to the public due to the amount of fuel accumulation. In recent years, controlled burns have been conducted on public lands to reduce this danger and improve habitat for wildlife. Most upland and some wetland habitats are fire-dependent for seed dispersal and germination.

On August 7, 2018, TM-Econ Mitigation bank conducted a controlled burn in accordance with its management plan. The SFWMD permit (Permit Number 49-0004-M) for the Lake X Mitigation Bank indicates a burn regime for management of the property, but no records were found confirming burns were conducted. In addition, prescribed burning is one of the management techniques discussed in the North Ranch Long-Term Master Plan/Sector Plan for the management of mitigation sites and conservation lands. Controlled burns produce smoke that may affect roadway visibility as well as negatively affect public safety during these activities. No areas within North Ranch are actively managed with prescribed fire; however, as management plans for these areas are implemented, they will be taken into consideration and re-evaluated during the PD&E.

Figure 3.10: Conservation Land and Mitigation Banks



3.6 Human Environment

3.6.1 Existing Land Use

A review of GIS data provided by the SJRWMD and SFWMD was performed in order to assess the existing land use within the project area. Land cover determination was based on the Florida Land Use, Cover, and Forms Classification System (FLUCFCS). Land types found within the project area are predominantly classified as Agriculture and Wetlands. Figure 3.11 displays the existing land use for the project area.

3.6.2 Future Land Use

Future Land Use classification of the project area was determined based on GIS data from Osceola County (September 2018) and Orange County (last amended November 2017). In the year 2030, the project area land use will largely consist of Rural/Agricultural in Orange County and in the year 2025, the land use will largely consist of Mixed Use in Osceola County. The future land use of the project area is displayed on Figure 3.12.

Figure 3.11: Existing Land Use Map

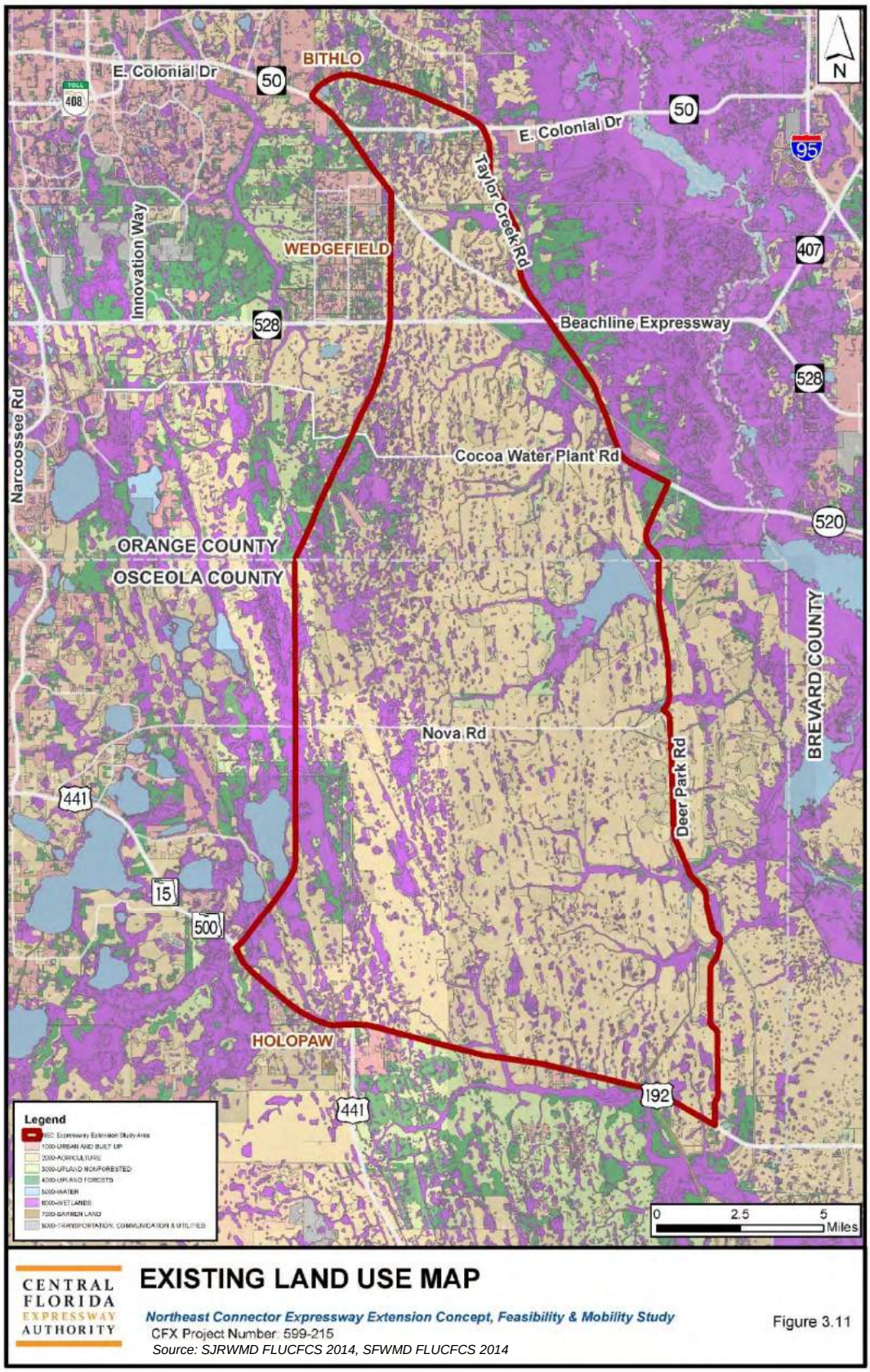
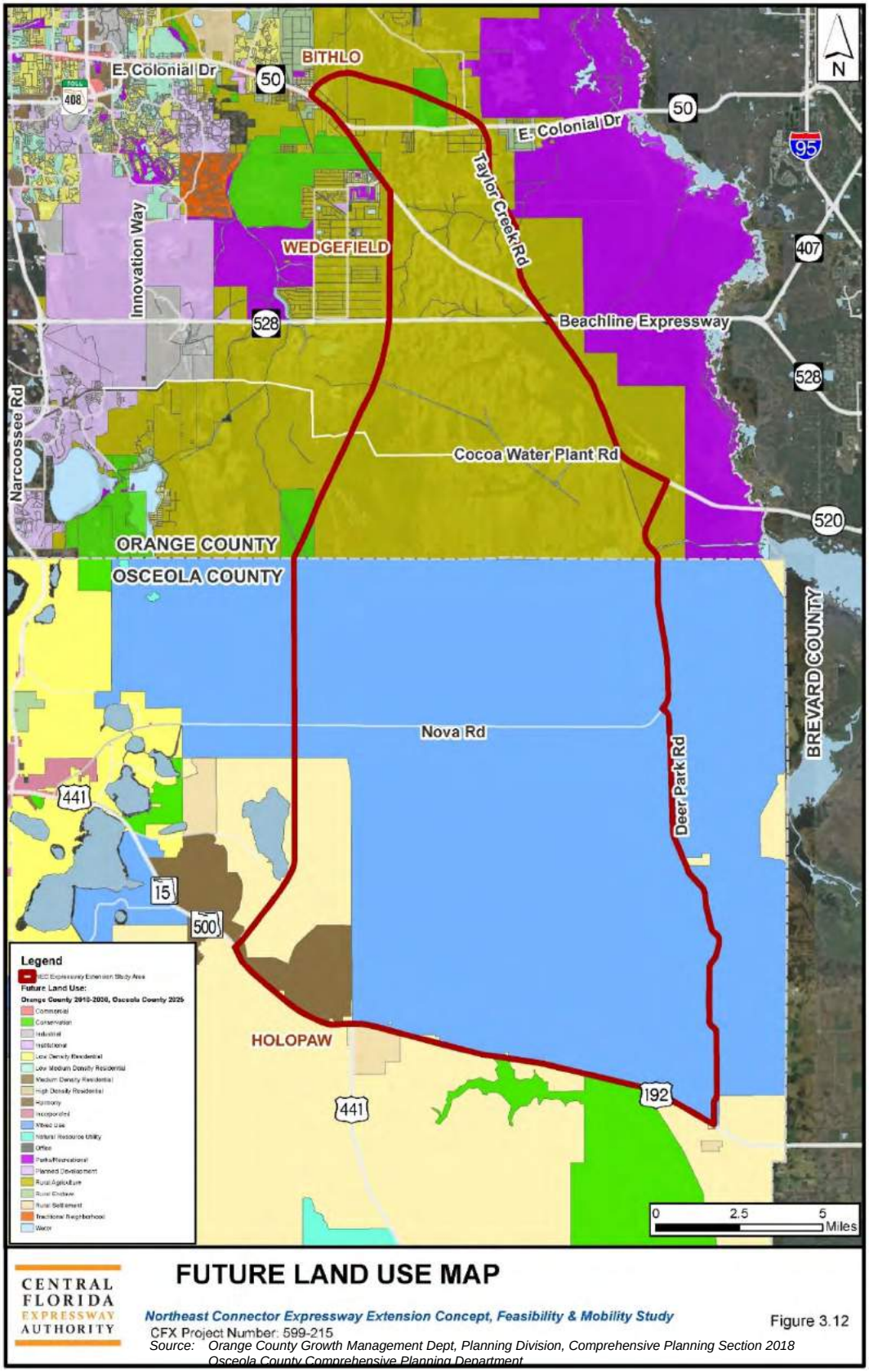


Figure 3.12: Future Land Use Map



3.6.3 Community and Neighborhood Features

A GIS evaluation of community features within the study area was performed to identify existing police stations, religious facilities, daycares, schools, fire stations, cemeteries, government buildings, cultural centers, and hospitals. A total of four existing places of worship occur within the project area and are listed in Table 3.15.

Table 3.15: Community Features

Site Name	Location	Type of Facility
Pine Grove Missionary Baptist	766 Christmas School House Road. Christmas, FL 32709	Religious
Fort Christmas Baptist Church	23600 E. Colonial Drive. Christmas, FL 32709	Religious
Refuge House of Praise Church of God	20875 E. Colonial Dr. Christmas, FL 32709	Religious
Christmas Church of God	24313 E. Colonial Drive. Christmas, FL 32709	Religious

3.6.4 Development Plans

3.6.4.1 Orange County

Review of the Orange County Comprehensive Plan showed no future development plans within the Orange County portion of the study area.

3.6.4.2 Osceola County

The Osceola County portion of the study area contains three future development plans adopted into the Osceola County Comprehensive Plan (Figure 3.13): Harmony, the Northeast District Sector Plan and the North Ranch Master Plan. Each plan will provide the opportunity to integrate the study area into an overall vision of the future.

3.6.4.3 Northeast District

A portion of the Northeast District Conceptual Master Plan (NED Plan) occurs within the study area. The NED Plan, adopted into the Osceola County Comprehensive Plan in August 2010, encompasses more than 19,000 undeveloped acres northeast of St. Cloud consisting of a regional employment center, residential communities, commercial services, and natural areas.

3.6.4.4 North Ranch Master Plan

The North Ranch Master Plan was adopted into the Osceola County Comprehensive Plan in September 2015. Development of the North Ranch Master Plan is anticipated to begin after 2045 with a complete build-out by 2080. The NRSP encompasses 133,000 acres to include urban centers, employment centers, residential neighborhoods, transportation, trails and conservation lands to serve an anticipated 500,000 residents within the NRSP.

3.6.4.5 Harmony

A portion of the Harmony mixed-use community occurs in the southwest portion of the study area. Located along US 192 in eastern Osceola County, the Harmony Development of Regional Impact (DRI) is an approximately 11,000-acre master planned project, designed as a Traditional Neighborhood Development consisting of residential units, light industrial space, commercial space, office space, and recreation areas.

Figure 3.13: Planned Development Map



3.6.5 Cultural Resources

Previously recorded cultural resources that occur within or near the study area are shown on Figure 3.14.

3.6.5.1 Historical

Review of the October 2018 Florida Master Site File (FMSF) GIS data indicates that eight historic structures have been recorded within the study area. Of these, three (8OR05972, 8OR06224, and 8OR10295) have been determined not eligible for listing in the National Register of Historic Places (NRHP) by the Florida State Historic Preservation Officer (SHPO), while the remaining five (8OR08099, 8OR08101, 8OR08102, 8OR08103, and 8OR08106) have not been evaluated. Additionally, three historic bridges (8OR10054, 8OR10056, and 8OR10059) have been recorded within the study area, but have not been evaluated by the SHPO. Finally, one historic highway (8OR01804) has been recorded and determined not eligible, while one historic railroad spur (8OR10979) has not been evaluated.

3.6.5.2 Archaeological

The archaeological background research indicated that 12 archaeological sites have been recorded within the study area (Table 3.16). Of these, five have been determined not eligible for listing in the NRHP by the SHPO. The remaining seven have not been evaluated regarding NRHP eligibility. Corridors developed as part of this study will be analyzed further in a future PD&E Study to determine archaeological significance.

Figure 3.14: Previously Recorded Cultural Resources Map

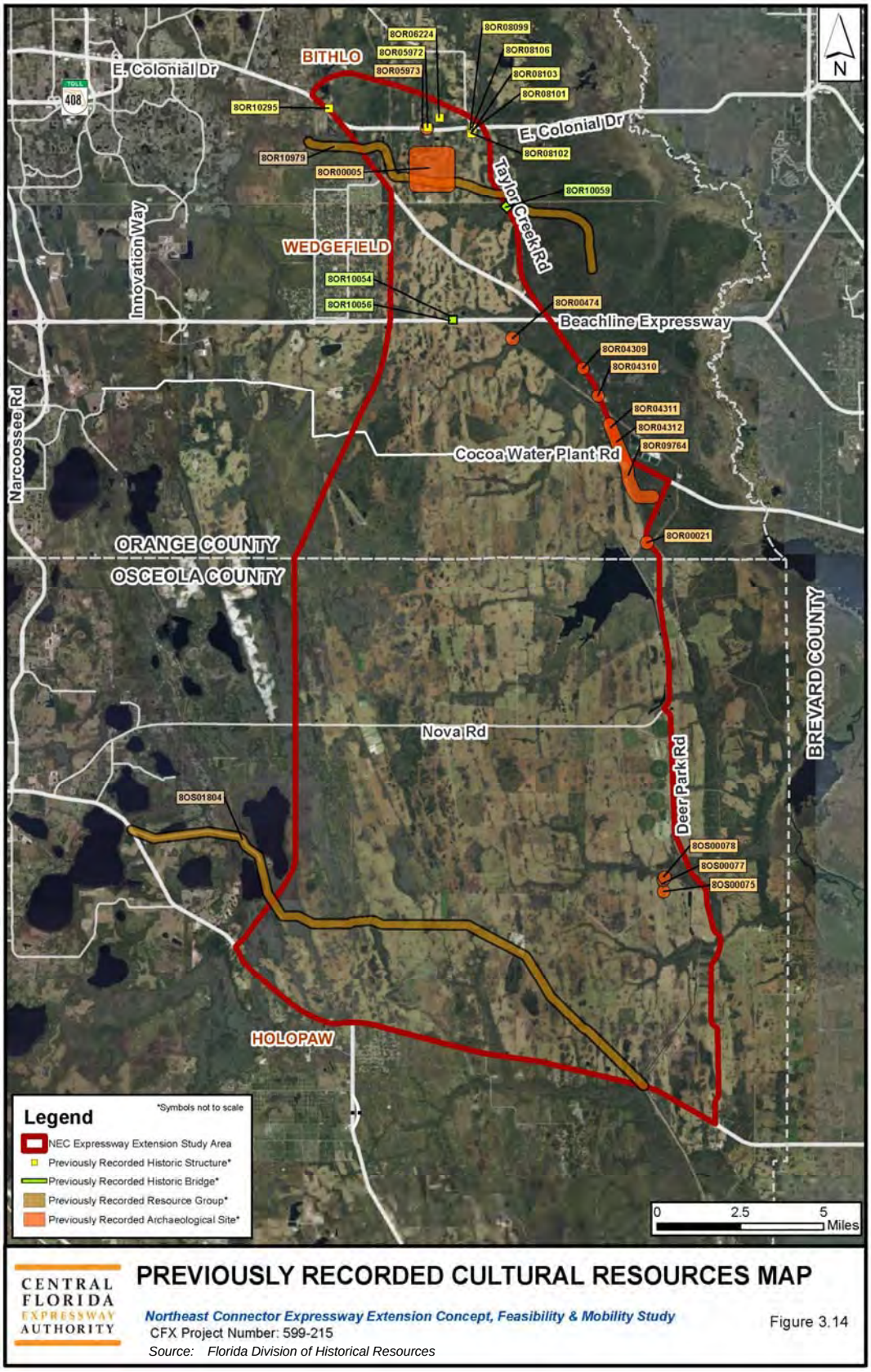


Table 3.16: Previously Recorded Archaeological Sites Near the Project Area

FMSF #	Site Name	Site Type	Culture	SHPO Evaluation
8OR00005	NN	Prehistoric mound(s)	Prehistoric	Not Evaluated by SHPO
8OR00021	Fort McNeil	Historic fort	American Acquisition/Territorial Development 1821-45	Not Evaluated by SHPO
8OR00474	Second Creek Mound	Prehistoric mound(s)	St. Johns, 700 B.C.-A.D. 1500	Not Evaluated by SHPO
8OR04309	Bored Boar	Campsite (prehistoric)	Prehistoric lacking pottery	Ineligible for NRHP
8OR04310	Nowhere	Single artifact or isolated find	Prehistoric lacking pottery	Ineligible for NRHP
8OR04311	Rock Knocker	Single artifact or isolated find	Prehistoric lacking pottery	Ineligible for NRHP
8OR04312	Ground Score	Campsite (prehistoric)	Prehistoric lacking pottery	Ineligible for NRHP
8OR05973	Christmas Creek	Farmstead	Twentieth century American, 1900-present	Ineligible for NRHP
8OR09764	Fort Christmas To Fort McNeil Military Trail	Historic road segment	American Acquisition/Territorial Development 1821-45	Not Evaluated by SHPO
8OS00075	Cold Field	Single artifact or isolated find	Twentieth century American, 1900-present	Not Evaluated by SHPO
8OS00077	Wolf Branch	Single artifact or isolated find	Prehistoric	Not Evaluated by SHPO
8OS00078	Orange Swamp	Single artifact or isolated find	Prehistoric	Not Evaluated by SHPO

3.6.6 Demographics Characteristics

The study area consists of seven population ranges. Information regarding the study area census tracts and block groups is provided on Figure 3.15. Area demographics, household income, and employment status related to each 2015 US Census tract were obtained through 2015 US Census data. This information is located in Table 3.17, Table 3.18, and Table 3.19.

Figure 3.15: 2015 United States Census Bureau Tracts

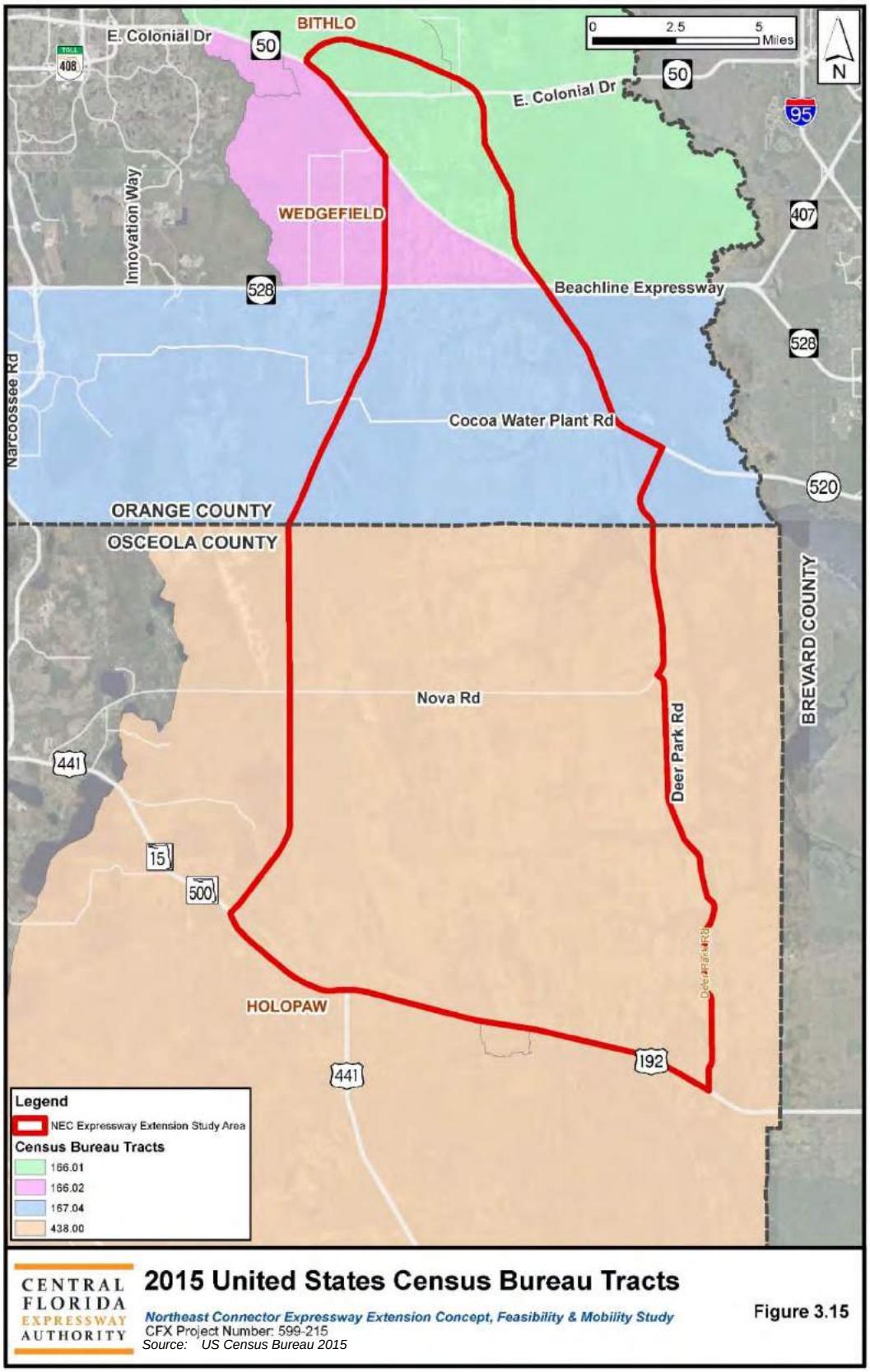


Table 3.17: Project Area Demographics

Geography	Census Block Group	2015 Population	Percent White	Percent Black	Percent Other	Total Hispanic Population
Study Area (including entire Block Group)	-	44,951	80%	8%	44%	31%
Census Tract 166.01	1	6,752	76%	10%	6%	28%
Census Tract 166.01	2	4,124	84%	2%	8%	17%
Census Tract 166.02	2	8,743	75%	15%	2%	20%
Census Tract 167.04	1	18,630	78%	8%	5%	44%
Census Tract 438.00	1	3,739	92%	5%	1%	22%
Census Tract 438.00	2	816	95%	0%	0%	1%
Census Tract 438.00	4	2,144	89%	0%	9%	15%

Table 3.18: Project Area Household Income Characteristics

Geography	Census Block Group	Percentage of population Above Poverty Level	Percentage of Population Below Poverty Level
Study Area (including entire Block Group)	-	89%	11%
Census Tract 166.01	1	15%	18%
Census Tract 166.01	2	8%	16%
Census Tract 166.02	2	19%	25%
Census Tract 167.04	1	44%	19%
Census Tract 438.00	1	9%	6%
Census Tract 438.00	2	2%	3%
Census Tract 438.00	4	4%	13%

Table 3.19: Project Area Employment Status

Geography	Census Block Group	Percentage of Employed Population 16 Years Old + in Labor Force	Percentage Unemployed Population in 16 Years Old + in Labor Force
Study Area (including entire Block Group)	-	48%	52%
Census Tract 166.01	1	15%	15%
Census Tract 166.01	2	9%	9%
Census Tract 166.02	2	19%	20%
Census Tract 167.04	1	44%	40%
Census Tract 438.00	1	8%	9%
Census Tract 438.00	2	2%	2%
Census Tract 438.00	4	3%	6%

3.6.7 Aesthetic Features

The study area has a relatively flat topography and high surface water table. The area contains large lakes, gently rolling hills, agricultural lowlands, and forested wetlands. In the North Ranch Master Plan, according to the FLUCFCS, the area is also comprised of a mixture of upland and wetland community types, including agricultural lands, rangeland, upland forests, wetlands, and surface waters.

3.6.8 Transit Facilities

A segment of SR 520 in the northwest portion of the study area is served by The Bithlo Circulator operated by LYNX as shown on Figure 3.16. Referred to as NeighborLink 621, the route runs along SR 520 from SR 50 and provides service to/from Waterford Lakes Town Center, Bithlo Health Center and Wedgefield communities. The frequency, span of service, and average monthly ridership of LYNX NeighborLink 621 is shown in Table 3.20. Paratransit options (e.g., ACCESS, LYNX) exist and are assumed to use the existing roadway network.

Table 3.20: Existing Transit Service

Route	Frequency (min.)	Average Monthly Ridership (2013)	Weekday Span of Service	Saturday Span of Service
621 NeighborLink Bithlo	90 (Mon-Fri) 90 (Sat)	1,524	5:25am – 7:10pm	5:25am – 7:10pm

Source: LYNX Comprehensive Operations Analysis, 2014 (pg. 1-27).

3.6.9 Freight and Intermodal Centers

There are no intermodal centers located within the study area.

3.6.10 Pedestrian and Bicycle Facilities

A portion of an existing trail from the Florida Greenways and Trails System and proposed portions of the Florida National Scenic Trail (FNST), All Aboard Florida Trail and East Orange Trails are located within the study area (see Figure 3.17). It is anticipated that the Office of Greenways and Trails will approve these portions in the near future.

Figure 3.16: Existing Transit Facilities

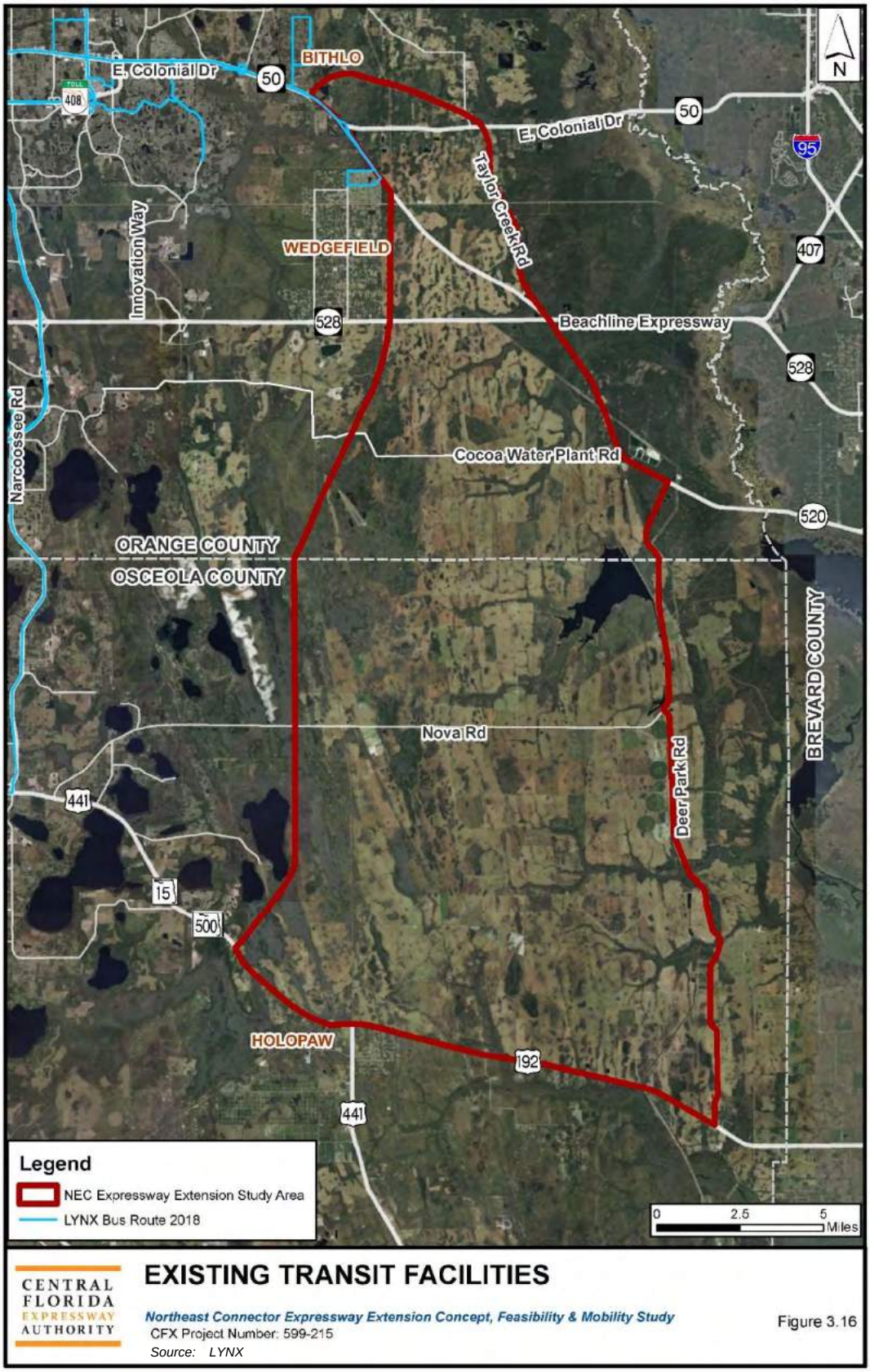
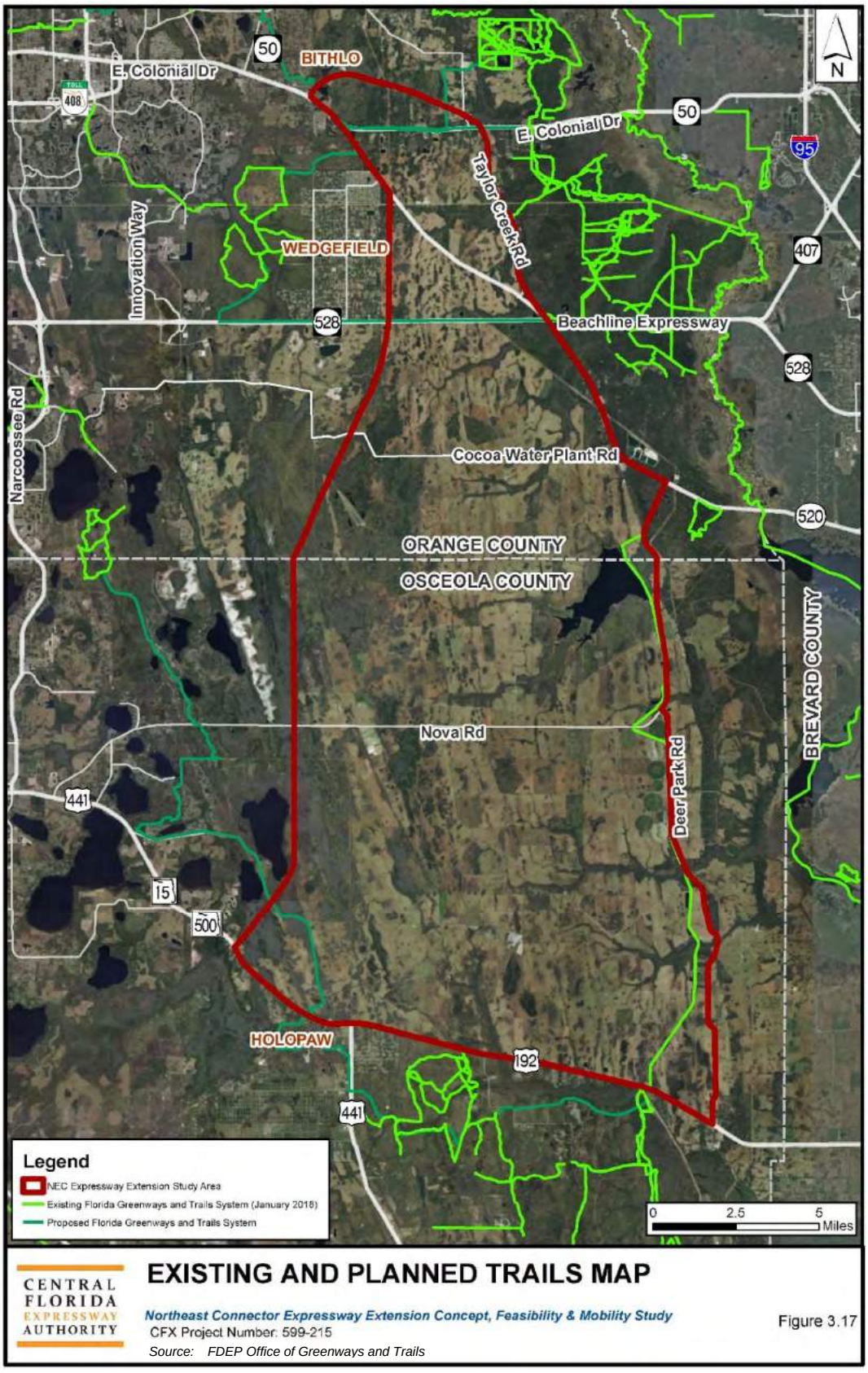


Figure 3.17: Existing and Planned Trails Map



3.6.11 Transportation Plans

Existing land use and transportation plans, studies and policies were reviewed to understand the extent to which local and regional plans are supportive of the proposed expressway extension and to ensure that the project is consistent with those plans. The following documents are relevant to the study area:

- Brightline Phase II, Final Environmental Impact Statement, 2015
- Central Florida Expressway Authority (CFX) 2040 Master Plan
- Central Florida Expressway Authority (CFX) Strategic Plan
- East Central Florida Corridor Task Force Final Report, 2014
- LYNX Comprehensive Operations Analysis (COA), 2014
- LYNX Ten-Year Transit Development Plan (TDP), Major Update 2018-2027
- MetroPlan Orlando 2040 Long Range Transportation Plan (LRTP)
- MetroPlan Orlando Regional Transit Study, 2018
- Northeast District Conceptual Master Plan, 2011
- North Ranch Sector Plan, 2015
- Orange County Comprehensive Plan-Destination 2030
- Osceola County Comprehensive Plan 2025
- Osceola County Expressway Authority (OCX) 2040 Master Plan

Most of these plans and future programs share a common message for more mixed-use, dense, walkable multimodal environments that support transit, increased connectivity, and enhanced regional economic competitiveness. Another common theme is the coordination of development projects and co-location of transportation facilities in the eastern portions of Osceola County to promote social and economic diversity.

Brightline Phase II, Final Environmental Impact Statement (FEIS), 2015

All Aboard Florida – Operations LLC (AAF) has plans to construct a privately-owned and operated intercity passenger railroad system to connect Orlando and Miami, with intermediate stops in Fort Lauderdale and West Palm Beach, Florida. Phase I from Miami to West Palm Beach is constructed and operations began in 2018. In Phase II, AAF proposes to extend the existing service from West Palm Beach to Orlando, which will include construction of approximately 35 miles of dedicated rail corridor parallel to SR 528 connecting Florida East Coast (FEC) Railway's North-South Corridor in Brevard County to Orlando International Airport (OIA) in Orange County.

Beyond the FEIS report, Brightline Phase II service to OIA is expected to open in 2021. OIA has dedicated space to accommodate dual tracks for Brightline at the new OIA South Terminal

Facility. In June 2018 Orange County Board of County Commissioner approved a Conservation Area Impact Permit to allow AAF to convert over 100 acres of wetlands to lay tracks along SR 528. In September 2018, the State of Florida approved $1.75 billion in tax free bonds to start laying tracks north to Brevard and Orange counties. In November 2018, Brightline announced their partnership with the Virgin Group and will rebrand as Virgin Trains USA sometime in 2019.

Central Florida Expressway Authority (CFX) 2040 Master Plan

The 2040 Master Plan is CFX's visionary blueprint for system improvements and new projects. The Master Plan defines the policies CFX follows when evaluating projects for future mobility needs and it identifies specific near- and long-term projects that CFX reevaluates annually as the Five-Year Work Plan is developed. The Master Plan explains CFX's expanded roles; including an expanded geographic extent - from a system entirely in Orange County - to now include Lake, Osceola, Seminole and Brevard counties; its ability to participate in the development of feeder roads up to one mile beyond the tolled system; and its ability to partner or lead multimodal and intermodal projects. The Master Plan identifies an estimated $9.7 to $12.2 billion in potential regional project needs through the year 2040, including $6.5 to $9 billion for twelve new projects and approximately $2 billion in capacity and operating improvements to the existing system.

The Master Plan provides an overview of the Osceola Parkway Extension, Southport Connector Expressway and Northeast Connector Expressway, including status and estimated cost of each project; and the developments that would potentially be served, such as the Northeast District and North Ranch Planning Area in Osceola County.

East Central Florida Corridor Task Force Final Report, 2014

In 2013, then-Governor Rick Scott issued Executive Order 13-319, which created the East Central Florida Corridor Task Force (Task Force). The Task Force was charged with developing recommendations on future transportation corridors serving established and emerging activity centers in portions of Brevard, Orange, and Osceola counties.

With the Task Force's 21 recommended Guiding Principles as a basis, the Task Force's Action Plan includes nine (9) recommendations with the fourth recommendation being to "Conduct one or more Evaluation Studies of potential new north-south corridors in eastern Orange and Osceola counties". The recommendations include a new multimodal corridor to serve planned population centers within the North Ranch, also referred to as "Corridor I".

LYNX Comprehensive Operations Analysis (COA), 2014

The Central Florida Regional Transportation Authority's (d/b/a LYNX) Comprehensive Operations Analysis (COA) was completed in 2014. The COA primarily focuses on implementing operational efficiencies to existing services but also calls for the creation of new fixed route services and express services. The COA proposed service enhancements along US 192 and services to Lake Nona but does not propose any new services to or near the NECEE study area.

LYNX Transit Development Plan, Major Update 2018-2027

LYNX finalized its ten-year Transit Development Plan (TDP) in 2018. The TDP guides operating and capital improvements for fiscal years 2018 to 2027. The TDP service improvements remained fairly consistent with the previous TDP and propose a number of improvements to existing services, but also recognizes the need to enhance feeder bus services to further support SunRail. The TDP is different than past TDP updates in that it is ongoing with a strategic initiative known as "LYNX Forward". LYNX Forward focuses on optimizing and reimagining the existing fixed-route network, creating frequent core services, creating new express services to provide more direct services throughout Central Florida and ultimately guiding the update to the LYNX Vision 2030 plan. LYNX Forward also looks to develop new flexible service models to meet customer demand in areas that do not currently support fixed route services. The TDP and LYNX Forward do not currently propose transit services to connect to or operate within the NECEE study area.

MetroPlan Orlando 2040 Long Range Transportation Plan

The 2040 LRTP emphasizes the need for more travel choices but recognizes the continued need for new roads in Central Florida, including the integral role toll roads play in the regions' future. The 2040 LRTP mentions the 57-mile ring of expressway segments identified in the Osceola County Expressway Authority 2040 Master Plan, which includes the Northeast Connector Expressway. MetroPlan Orlando's most recent Transportation Improvement Program (TIP) also includes the NECEE Study in 2018/19.

MetroPlan Orlando Regional Transit Study, 2018

The Regional Transit Study (RTS) Final Report, finalized in October 2018, is in direct response to the East Central Florida Corridor Task Force's recommendation to "Develop a regional transit study to identify and set priorities for long-term transit investments in the three study area counties and the broader Central Florida region." The RTS provides an overview of existing transit services, recommendations for improved local and regional coordination for cross-jurisdictional services and facilities, develops a Regional Transit Vision Framework, and recommendations for short-term high priority regional transit investments. The study states that the key to advancing the Regional Transit Vision Framework is the extension of the Brightline intercity rail service to OIA. The study also adds that the potential for a future Brightline station along SR 528 could serve the North Ranch and Northeast District developments, and might also support commuter rail service along SR 528 to Brevard County, if warranted. The study included an analysis of regional travel patterns and incorporated Deseret Ranches networks and socio-economic data into the Central Florida Regional Planning Model.

Northeast District Conceptual Master Plan, 2015

The Northeast District (NED) Conceptual Master Plan guides the growth for over 19,000 undeveloped acres located west of the North Ranch Sector Plan area and along Osceola County's northern boundary. The Master Plan and Osceola County's Comprehensive Plan 2025, establish a Multimodal Transportation District (MMTD) for the purpose of promoting walking, bicycling, and reducing automobile dependence. The Master Plan also emphasizes developing a dense and interconnected street network and local transit facilities that will support a streetcar system and regional transit corridors. The Master Plan proposes a Jobs to Housing Ratio of 1.5 to 1 and is projected to reach 44,000 jobs at buildout. The Master Plan identifies regional roadway connections including the Osceola Parkway Extension and the Northeast Connector Expressway as vital linkages to provide access to the region and support growth through development of its Urban, Community and Neighborhood Centers.

North Ranch Master Plan, 2015

The North Ranch Master Plan, developed by Osceola County and Farmland Reserve (Deseret Ranches), involves approximately 133,000 acres of property owned by Deseret Ranches and extends east and south from the Northeast District to US 192 and the Osceola/Brevard County line. In 2015, the UGB was expanded to include all of the property within the North Ranch Planning Area through Comprehensive Plan Amendment 14-0005 (Appendix 1). The North Ranch Comprehensive Plan Element calls for development to be consistent with Mixed-Use District regulations and the North Ranch Planning Area to consist of seven place types including urban center, employment center, neighborhoods, community center, neighborhood center, and special district.

Orange County Comprehensive Plan - Destination 2030

Orange County's Comprehensive Plan policies promote the development of safe, accessible, convenient, and efficient mobility options. To enhance land use and transportation integration, Orange County encourages infill development in the County and promotes the use of alternative modes of transportation. Orange County commits to promoting compact, transit-oriented development within the Urban Service Area (USA) boundary. Within Orange County, the NECEE study area is within the Rural Service Area and the Econlockhatchee River Protection Area. The NECEE study area is also near the Innovation Way Multimodal Transportation District.

Osceola County Comprehensive Plan 2025

The study area within Osceola County has a future land use classification of *Mixed Use District* and is within the County's UGB. As noted above, the study area also includes the Northeast District Conceptual Master Plan and the North Ranch Master Plan. Through the Northeast District Element and the North Ranch Master Plan Element, Comprehensive Plan 2025 proposes significant growth in this area contingent upon identified transportation improvements and

enhancements. Both the Northeast District and North Ranch Master Plan rely on and commit to limited-access transportation facilities such as the Osceola Parkway Extension and the Northeast Connector be constructed before specific stages of development can occur. The Comprehensive Plan also commits the County and the landowner to coordinate with regional partners to create these improvements. Through these various elements, the Comprehensive Plan also calls for the creation of Multimodal Transportation Districts (MMTDs) and regional transit corridors to create complete communities that reduce automobile dependence.

OCX 2040 Master Plan

The Osceola County Expressway Authority (OCX) Master Plan focused on developing a long-range master plan that identifies policies, direction and capital projects that represented OCX's vision and objectives. While OCX is no longer active, in 2016 the CFX Board approved an interlocal agreement with Osceola County and OCX to transfer the lead for OCX Master Plan development to CFX. The Northeast Connector Expressway was one of the projects that CFX agreed to study to determine viability.

The Master Plan states that "The OCX 2040 system is structured on a series of expressways that ring the interior of the County's Urban Growth Boundary; connecting existing and emerging cities and centers." The Northeast District is recognized to be strategically located to play a key role in the County's transition from primarily service jobs to a greater mix of employment sectors. The Master Plan also states that the expressway system plays a complementary role in the diversification of transportation choices and support for the development of multimodal corridors and dedicated transit lanes connecting urban centers throughout Osceola County.

3.7 Contamination

Contamination concerns in the study area include cattle grazing operations that may have incorporated cattle dip vats (arsenic) and citrus groves (herbicides/pesticides/heating oil). However, the majority of the contamination concerns are located along SR 50 in Bithlo, at the north end of the study area (see Figure 3.18). The Bithlo portion of the study area is characterized by light industrial development comprised of numerous auto repair and auto salvage operations that often generate contamination impacts to soil and/or groundwater. Utilizing aerial photographs, a Google Earth railroad map, and FDEP's Map Direct website, the following potential contamination concerns were identified in the study area that will be considered in the evaluation of alignment alternatives:

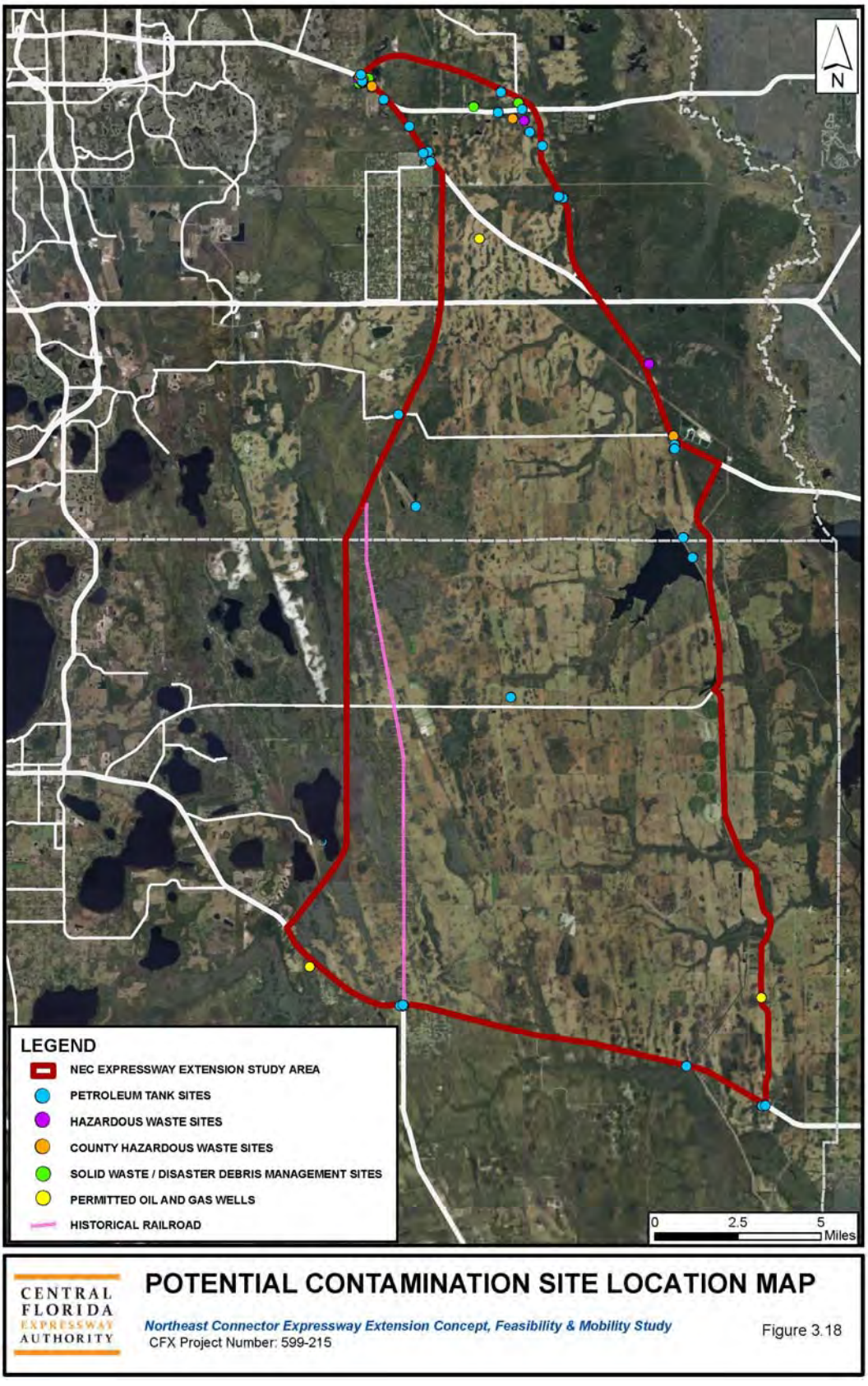
- Cattle grazing
- Citrus Groves
- 29 petroleum tank sites
  - 4 have documented contamination impacts
- 5 hazardous waste sites

- 7 county hazardous waste sites
- 5 solid waste / disaster debris management sites
- 1 solid waste facility/landfill/recycling center that has institutional controls
- 1 solid waste facility/recycling center
- 1 solid waste facility/landfill that has a Brownfield status
- 3 permitted oil and gas wells
- 1 historic railroad
- No CERCLA or Superfund sites were found within one mile

The predominant indicator of potential contamination in the study area is the 29 petroleum tank sites. Petroleum storage tanks are prone to leakage and spills, causing contaminated soil and/or groundwater. The presence of petroleum contamination can impact highway construction activities including soil excavation and dewatering. Construction in petroleum-impacted areas typically has to be performed by a Contamination and Remediation (CAR) contractor and project costs increase due to the requirement for special handling and treatment of contaminated material.

The presence of non-petroleum contaminated environmental media (soil, groundwater, surface water, and sediment) can also have a significant negative impact on the cost and schedule to complete a roadway development project. The purpose of this preliminary contamination site evaluation will be the early identification of potential contamination sites that could impact this project and to provide valuable input for the design, right-of-way acquisition, and construction phases.

Figure 3.18: Potential Contamination Site Location Map



3.8 Utilities

Thirteen Utility Agencies/Owners (UAOs) have been identified within the project study area by obtaining a Sunshine 811 Design Ticket and through contacts as part of our initial utility coordination efforts. These utilities are described in the following sections and depicted on Figure 3.19.

3.8.1 Electrical

Three electric UAOs have been identified within the project study area, including transmission and distribution facilities. Table 3.21 identifies these UOA and provides a general description of their facilities located on the project.

Table 3.21: Existing Electrical Utilities in the Study Area

Utility Company	Facility	Description
Duke Energy	Electric Transmission	• 69 kV overhead transmission lines running east to west along south side of Cocoa Water Plant Road. • 230 kV overhead transmission lines from the power substation on the north side of US 192 just west of Turn Around Bay Road, then traverses northeasterly to CR 419 and Cocoa Water Plant Road
Duke Energy	Electric Distribution	Electric distribution service throughout the study area, particularly at the following locations where proposed routes cross: • Duke Energy overhead distribution lines with tenant attachments on the north side of US 192 • Duke Energy overhead distribution lines with tenant attachments on the south side of Nova Road • Duke Energy overhead distribution lines with tenant attachments on the south side of SR 520 • Duke Energy overhead distribution lines with tenant attachments on the south side of SR 50
Orlando Utilities Commission	Electric Transmission	• 69 kV overhead transmission lines with distribution underbuilt along the north side of US 192 from western study limits to the substation on the north side of US 192 just west of Turn Around Bay Road • 115 kV overhead transmission pole line and a 230 kV overhead transmission lines on steel tower structures in an easement traversing east and west across undeveloped land approximately 3.5 miles north of and parallel to SR 528
Florida Power & Light	Electric Transmission	• 69 kV overhead transmission lines crosses SR 50 just west of Bithlo and traverses southeasterly to the Orange-Brevard County Line, crossing over SR 528 and SR 520 • 69 kV overhead transmission lines running north to south along the east side of eh Wedgefield subdivision

3.8.2 Natural Gas

Florida Gas Transmission Company (FGT) and Transtate Industrial Pipeline Systems have been identified as having pipelines within the project study area. Table 3.22 provides a general description of their facilities.

Table 3.22: Existing Natural Gas Utilities in the Study Area

Utility Company	Facility	Description
Florida Gas Transmission	Natural Gas Transmission	• 26" transmission main in an easement running east and west approximately 1.66 miles south of SR 528. • 20" and 30" gas transmission pipelines in an easement running along the north side and nearly parallel to US 192.
Transtate Industrial Pipeline Systems	Natural Gas Transmission	• 12" transmission main crosses US 192 on the west side of US 441 and connects to FGT pipe line on the north side of US 192.

3.8.3 Other Utilities

Seven other UAOs have been identified as having facilities within the project study area, including existing cable television (CATV), telecommunications and proposed water and wastewater utilities. Table 3.23 identifies these UOAs and provides a general description of their facilities located on the project.

Table 3.23: Existing and Proposed Utilities in the Study Area

Utility Company	Facility	Description
AT&T Corporation	Long Distance Fiber Optic Cable	• Fiber optic cable in conduit along the north LA right-of-way line of SR 520
AT&T Florida	Telephone / Fiber Optic Cable	• 24 count fiber optic cable on Duke Energy distribution poles along the north side of US 192.
CFX	Fiber Optic and Electrical Cable	• ITS duct bank on the north and south sides of SR 528 containing fiber optic and electrical cables
Sprint Nextel	Fiber Optic Cable	• Fiber optic cable in a leased duct within the CFX ITS duct bank along the north side of SR 528
Charter Communications and Level 3 Communications	CATV / Telephone Fiber Optic Cable	• Aerial and buried fiber optic cable along the north side of US 192 • Aerial fiber optic cable on Duke Energy distribution poles on the south side of SR 50 • Aerial fiber optic cable on Duke Energy distribution poles on the south side of SR 520

Table 3.23 Existing and Proposed Utilities in the Study Area (continued)

Utility Company	Facility	Description
City of Cocoa Water Utilities	Water Transmission	• 36" and 42" water transmission pipes along the north side of Cocoa Water Plant Road between Dallas Blvd. and SR 520. • Pipes interconnect the City of Cocoa's Wewahootie and Clyde Dyal water treatment plants.

3.8.4 Utility Mitigation and Cost

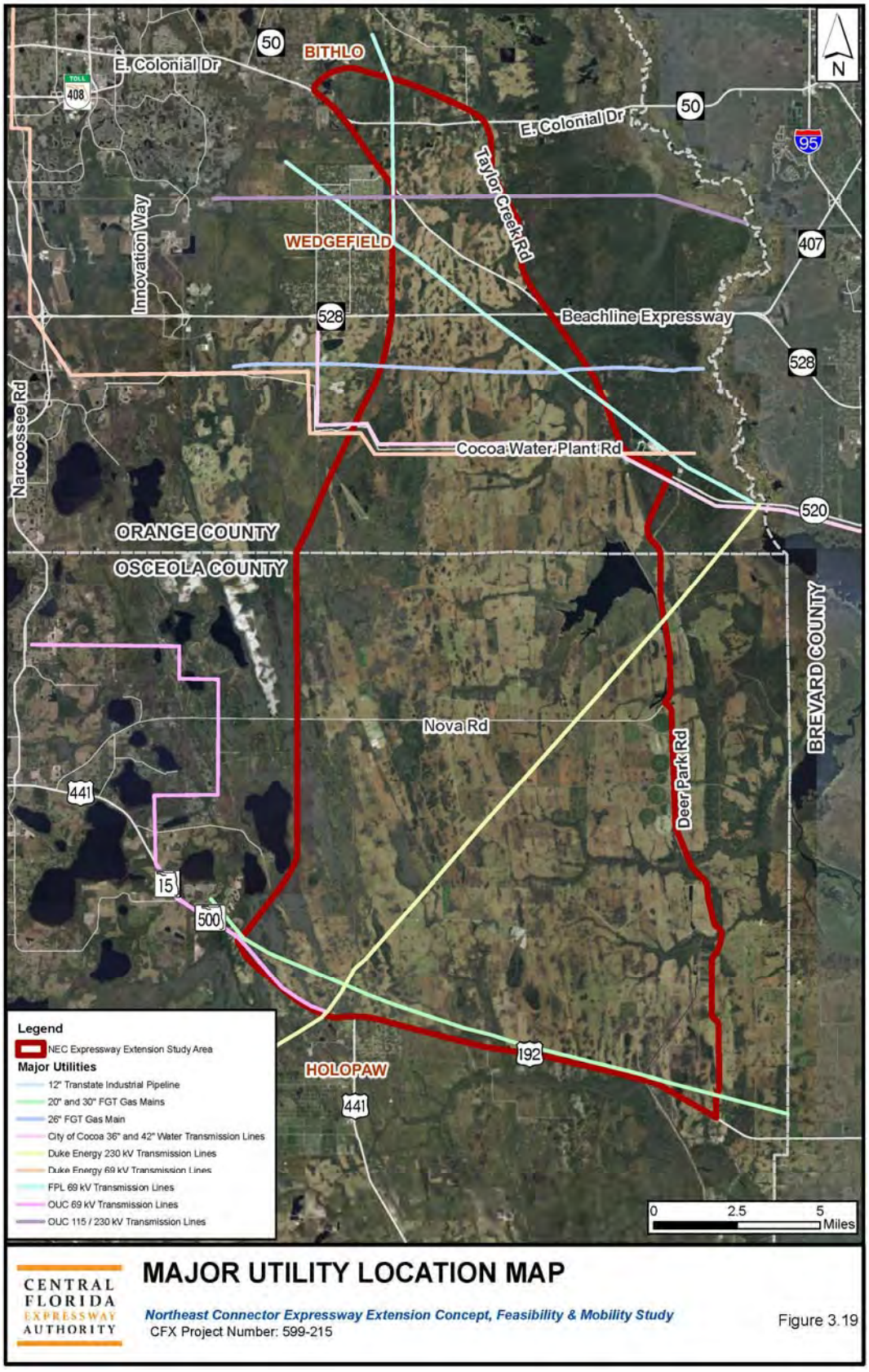
Due to the nature of the existing conditions throughout the study area, it is anticipated that the alternative corridor alignments for the Northeast Connector will impact a number of utility facilities on the project. Major utility facilities that could be potentially impacted include natural gas pipelines owned and operated by FGT and Transtate Industrial Pipeline Systems. In addition, Duke Energy, Florida Power & Light and Orlando Utilities Commission collectively have four transmission substations and various high voltage transmission lines throughout the project study area. The substations are located on fee simple parcels owned by the respective electric utility companies.

The roadway design planning should be completed to maintain the minimum clearance form power lines per Table A of the OSHA Rule 29 CFR Part 1926. The cost for raising overhead transmission lines to provide the required clearances could be in the range of $400,000 (2019 dollars) per pole for a minimum of four poles for standard transmission poles. H-tower structures would be significantly costlier to replace or relocate.

During the project design, mitigation measures should be taken to avoid conflicts with existing utilities wherever possible to minimize costs to the project. If impacts are unavoidable, design alternatives would be reviewed to allow for relocation of impacted facilities to eliminate conflicts with the new improvements, minimize disruptions of service and to provide adequate accessibility for future maintenance.

Relocations of facilities located in easements and on private property would likely be eligible for reimbursement. Crossings over FGT pipeline easements would require an easement encroachment agreement between FGT and CFX. Such agreements stipulate specific design requirements within the limits of the easements. All measures will be taken to avoid impacting the existing utility facilities identified in easements or located on privately-owned parcels. Though relocation of other facilities within the existing right-of-way are anticipated, all efforts will be made during the study to minimize impacts to existing pipelines, substations, and transmission facilities, to the greatest extent possible.

Figure 3.19: Major Utility Location Map



3.9 Railroads

There are no existing railroads or crossings within the study area.

APPENDIX B

East Central Florida Corridor Evaluation Study
Existing Conditions Data Report, Section 5: Corridor E - US 192,
February 2018









EAST CENTRAL FLORIDA

CORRIDOR EVALUATION STUDY

Existing Conditions Data Report

February 2018

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Appendix B: Project Advisory Group (PAG)
Appendix C: Project Stakeholders
Appendix D: Literature Review
Appendix E: Historic and Cultural Resources

5

Corridor E: US 192

5.1 General Corridor Overview

Corridor E, US 192 (E Irlo Bronson Memorial Highway) is a multimodal highway corridor serving commuter, tourist, commercial, and goods mobility. This corridor serves a high percentage of tourism–related traffic as it accesses the attractions in and around southern Orlando, as well as the high-tech industries clustering in and around southern Brevard and Orange counties. This corridor also serves nearby agricultural and commercial land uses.

As shown in Figure 5.1-1, US 192 is the major corridor connecting southern Brevard County to Orange and Osceola counties today. It serves as a high-tech corridor for workforce commuting between Palm Bay and Medical City. The existing facility runs from US 27 in Lake County through northern Osceola and southern Brevard counties to SR A1A in Indianatlantic. Currently, US 192 from Kissimmee and St. Cloud to Melbourne is the only corridor directly connecting Osceola County and southern Brevard County. It is state highway-owned and operated by FDOT and there is no limited-access connection from Orange County to southern Brevard County.

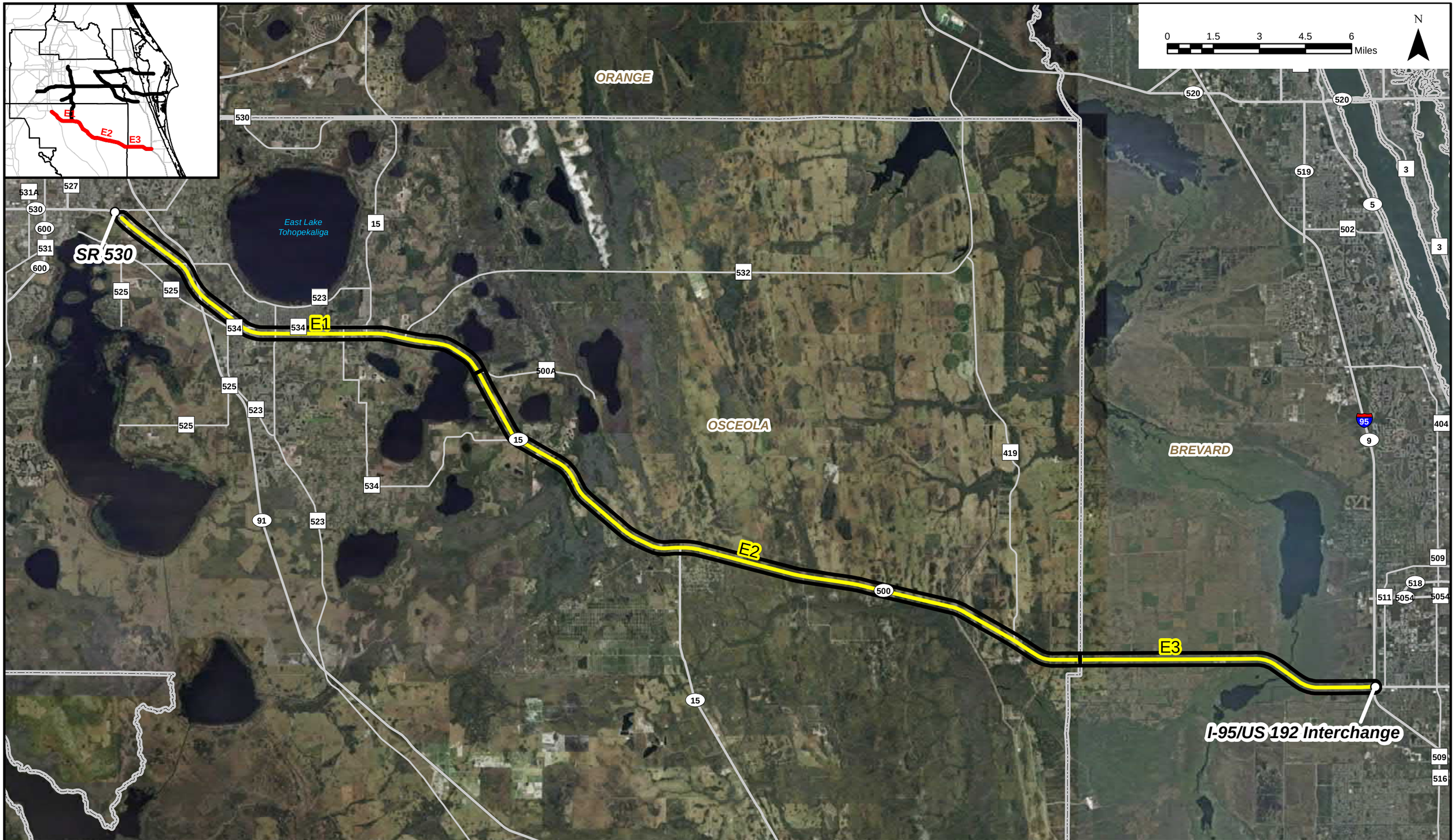
Corridor E runs from CR 530 in Osceola County to the I-95 interchange in Brevard County. Corridor E is divided into three segments: E1, E2, and E3. Segment E1 spans the northernmost portion of the corridor, in the urban area of Osceola County from CR 530 to Old Melbourne Highway/CR500A. Segment E2 constitutes "rural" roadway in Osceola County running from Old Melbourne Highway to the Osceola/Brevard County line. Segment E3 constitutes the entirety of "rural" roadway in Brevard County from the Osceola/Brevard County line to the I-95 interchange. The lengths of Corridor E segments are listed in Table 5.1-1.

Table 5.1-1: Corridor E Segment Lengths

Segment	Length (miles)
E1	13.6
E2	22.8
E3	9.9
Corridor E	*46.3*

Throughout the Existing Conditions Analysis, the Study Team met with the PAG and stakeholders as part of an extensive coordination process to collect the appropriate available data and inventory physical characteristics of transportation facilities and the natural environment within the corridor. These discussions provided the Study Team with a greater understanding of the community characteristics to help identify potential issues and opportunities in the region. The major issues and opportunities identified are directly related to effectively accommodating a coastal evacuation for southern Brevard County. US 192 is the primary evacuation route in that area and a potential reliever when SR 528 and SR 520 are congested. In addition, the following issues/opportunities were discussed.

- Upon buildout of the Northeast District Master Plan and the North Ranch Sector Plan, US 192 will serve commuters from these developments. According to the *Florida 2070: Mapping Florida's Future – Alternative Patterns of Development in 2070* (2016), US 192 will be vital in providing the necessary connections for significant job growth in the region from these anticipated developments.
- Agriculture is still a major contributor of services and freight in the region, producing truck traffic along the corridor.
- PAG members envision US 192 as a multimodal corridor, including local and commuter transit that connects major urban centers in the North Ranch and Northeast District.
- Major interchange improvement at Ellis Road/I-95 will alter traffic in the area.
- US 192 is a primary evacuation route for southern Brevard County.



East Central Florida Corridor Evaluation Study

FDOT

Corridor E

US 192

FIGURE 5.1-1

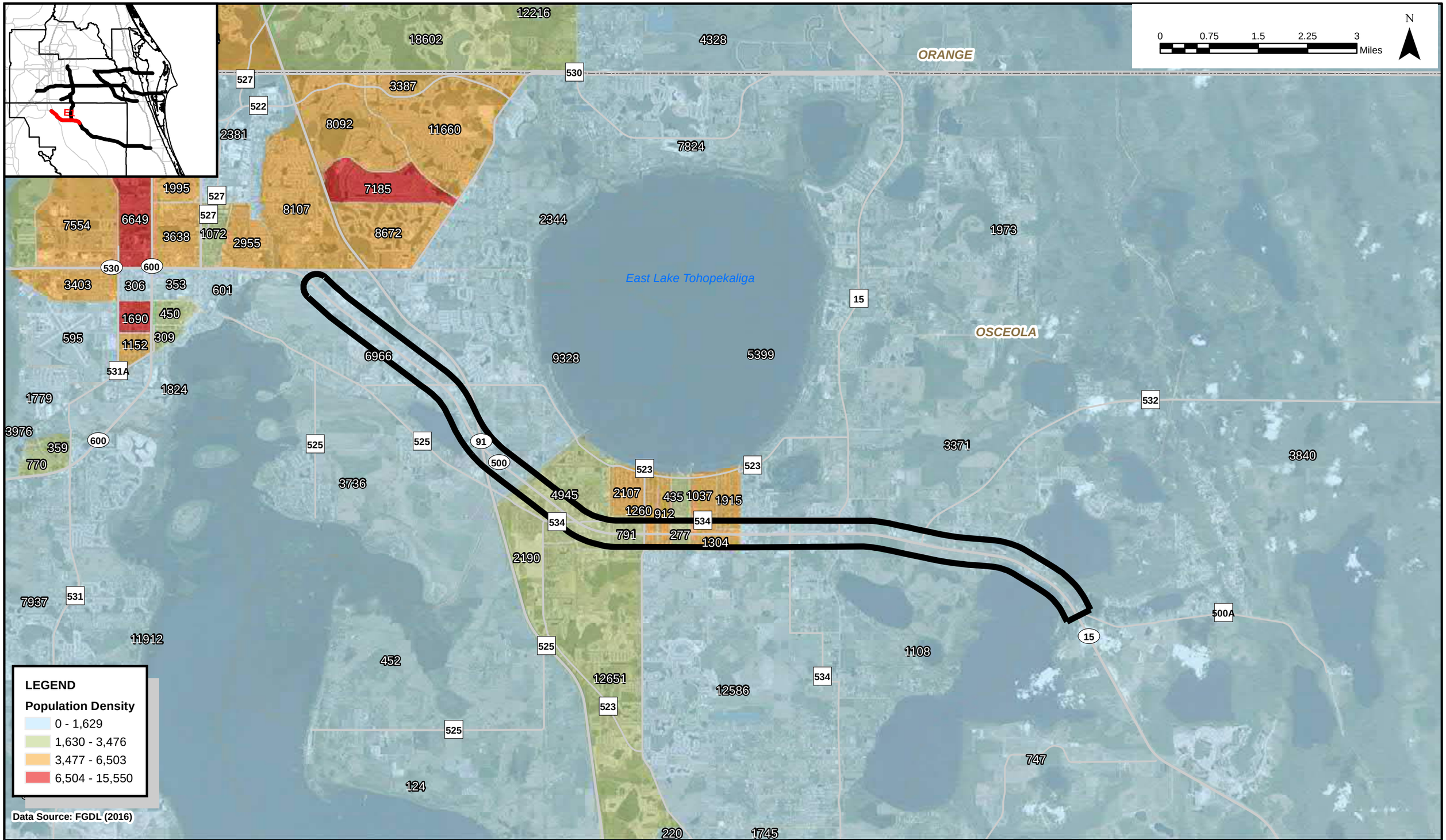
5.2 Community Characteristics

5.2.1 Demographics

The total population for all Census Block Groups in the Corridor E is 68,137. The majority of census block groups for Segment E1 have population densities above the Florida average of 346.16 people per square mile. The poverty rates for Corridor E block groups ranged between 2.1% and 34.9%. Each segment includes at least one block group with a poverty rate higher than the statewide average of 11.97%, and the majority of block groups in Segments E1 and E2 are above the statewide average. The percent of population identifying as minority for block groups in Corridor E range from 7.9% to 73.3%. Percent of the population with limited English proficiency (LEP) in block groups for Corridor E range from 0.0% to 11.0%. A minority of census block groups in Segments E1 and E2 have LEP population percentages above the statewide average of 6.4%. Demographics data can be found in Table 5.2-1 and Figure 5.2-1, Figure 5.2-2, Figure 5.2-3 and Figure 5.2-4 below.

Table 5.2-1: Corridor E Demographics

Segment	Block Group	Population				Median Age	Percent Poverty	Median HH Income	Percent Disabled	No Vehicle	LEP Percent
		Total	Density	Minority	5-17 & 65 and Over						
E1	12-097-0436001	5,399	404.42	1,317	1,906	41	12.2%	$ 53,635	15.1%	1.6%	0.6%
	12-097-0437002	3,371	256.74	898	1,471	41	18.8%	$ 51,491	13.4%	6.8%	5.6%
	12-097-0434001	912	3,965.22	258	278	31	31.1%	$ 45,431	5.2%	10.4%	2.1%
	12-097-0433021	12,586	1,095.39	4,760	3,853	38	9.5%	$ 55,597	12.2%	3.4%	5.3%
	12-097-0432031	4,945	3,169.87	2,375	1,932	41	16.8%	$ 42,351	10.4%	5.1%	4.2%
	12-097-0432041	2,190	1,990.91	817	711	34	38.7%	$ 40,188	3.0%	6.4%	1.4%
	12-097-0435004	1,304	4,075.00	270	322	48	26.2%	$ 29,254	28.4%	17.1%	1.0%
	12-097-0435002	277	1,978.57	28	78	34	12.1%	$ 75,489	8.2%	15.2%	0.0%
	12-097-0438001	3,840	13.89	875	1,422	41	8.6%	$ 66,833	14.0%	4.9%	1.4%
	12-097-0435005	1,915	5,471.43	474	479	36	25.4%	$ 40,711	12.2%	12.0%	3.9%
	12-097-0438002	747	3.85	112	167	41	15.3%	$ 70,577	0.0%	0.0%	8.0%
	12-097-0429001	9,328	1,039.91	6,834	3,347	35	21.1%	$ 47,085	2.8%	7.0%	11.0%
	12-097-0429002	6,966	1,329.39	4,364	1,941	29	18.1%	$ 40,179	6.3%	6.3%	6.4%
	12-097-0434004	791	2,929.63	177	211	47	19.6%	$ 50,114	12.7%	3.3%	1.5%
	12-097-0434002	1,260	5,040.00	213	416	29	10.6%	$ 57,500	8.8%	0.0%	0.0%
	12-097-0433011	1,108	105.62	87	406	54	11.3%	$ 41,971	8.2%	4.1%	0.0%
	Total	**56,939**	**1,416.47**	**23,859**	**18,940**	**37.5**	**16.4%**	**$ 49,127**	**10.0%**	**5.4%**	**5.0%**
E2	12-009-0713012	2,956	10.03	747	1,234	49	2.1%	$ 77,297	6.7%	3.9%	1.2%
	12-097-0438001	3,840	13.89	875	1,422	41	8.6%	$ 66,833	14.0%	4.9%	1.4%
	12-097-0438002	747	3.85	112	167	41	15.3%	$ 70,577	0.0%	0.0%	8.0%
	12-097-0438004	2,268	10.78	332	609	47	34.9%	$ 35,428	29.0%	1.8%	1.3%
	Total	**56,939**	**1,416.47**	**23,859**	**18,940**	**37.5**	**16.4%**	**$ 49,127**	**10.0%**	**5.4%**	**5.0%**
E3	12-009-0650011	1,285	829.03	105	419	51	12.2%	$ 47,829	5.9%	4.4%	0.0%
	12-009-0713011	1,603	341.06	129	530	46	4.1%	$ 95,188	5.5%	1.7%	0.7%
	12-009-0713012	2,956	10.03	747	1,234	49	2.1%	$ 77,297	6.7%	3.9%	1.2%
	12-009-0646011	3,086	1,881.71	606	989	39	4.5%	$ 45,050	15.9%	1.4%	0.0%
	Total	**8,930**	**40.19**	**1,587**	**3,172**	**45.3**	**4.7%**	**$ 63,434**	**9.5%**	**2.7%**	**0.5%**



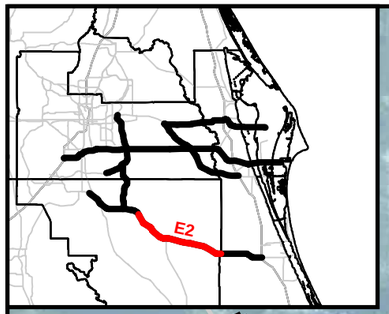
East Central Florida Corridor Evaluation Study

Corridor E

Population Density

FIGURE 5.2-1

SEGMENT E1



0 0.75 1.5 2.25 3 Miles

N

1108

500A

534

15

3840

OSCEOLA

419

747

15

2268

500

2956

LEGEND

Population Density

- 0 - 1,629
- 1,630 - 3,476
- 3,477 - 6,503
- 6,504 - 15,550

Data Source: FGDL (2016)

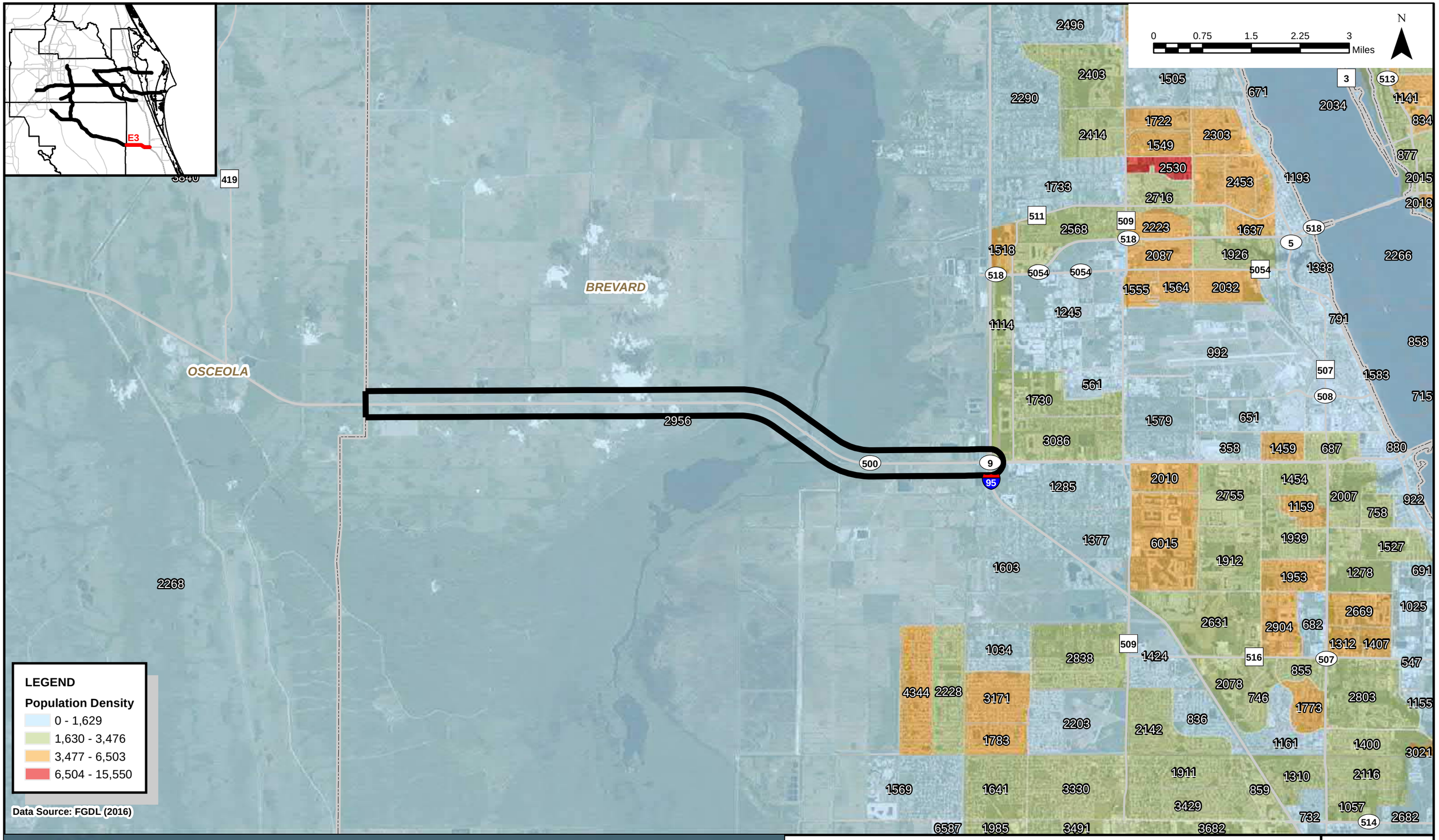
East Central Florida Corridor Evaluation Study

Corridor E

Population Density

FIGURE 5.2-1

SEGMENT E2



LEGEND

Population Density

- 0 - 1,629
- 1,630 - 3,476
- 3,477 - 6,503
- 6,504 - 15,550

Data Source: FGDL (2016)

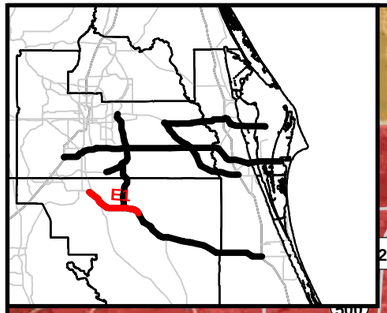
East Central Florida Corridor Evaluation Study

Corridor E

Population Density

FIGURE 5.2-1

SEGMENT E3



0 0.75 1.5 2.25 3 Miles

N

ORANGE

OSCEOLA

East Lake Tohopekaliga

527 522 530 27 500 527 530 531A 600 531 600 525 525 91 500 523 534 523 534 15 532 531 525 525 523 534 500A 15

LEGEND

Poverty Rates

- 0% - 2.8%
- 2.9% - 6.1%
- 6.2% - 12%
- 12.1% - 72%

Data Source: FGDL (2016)

East Central Florida Corridor Evaluation Study

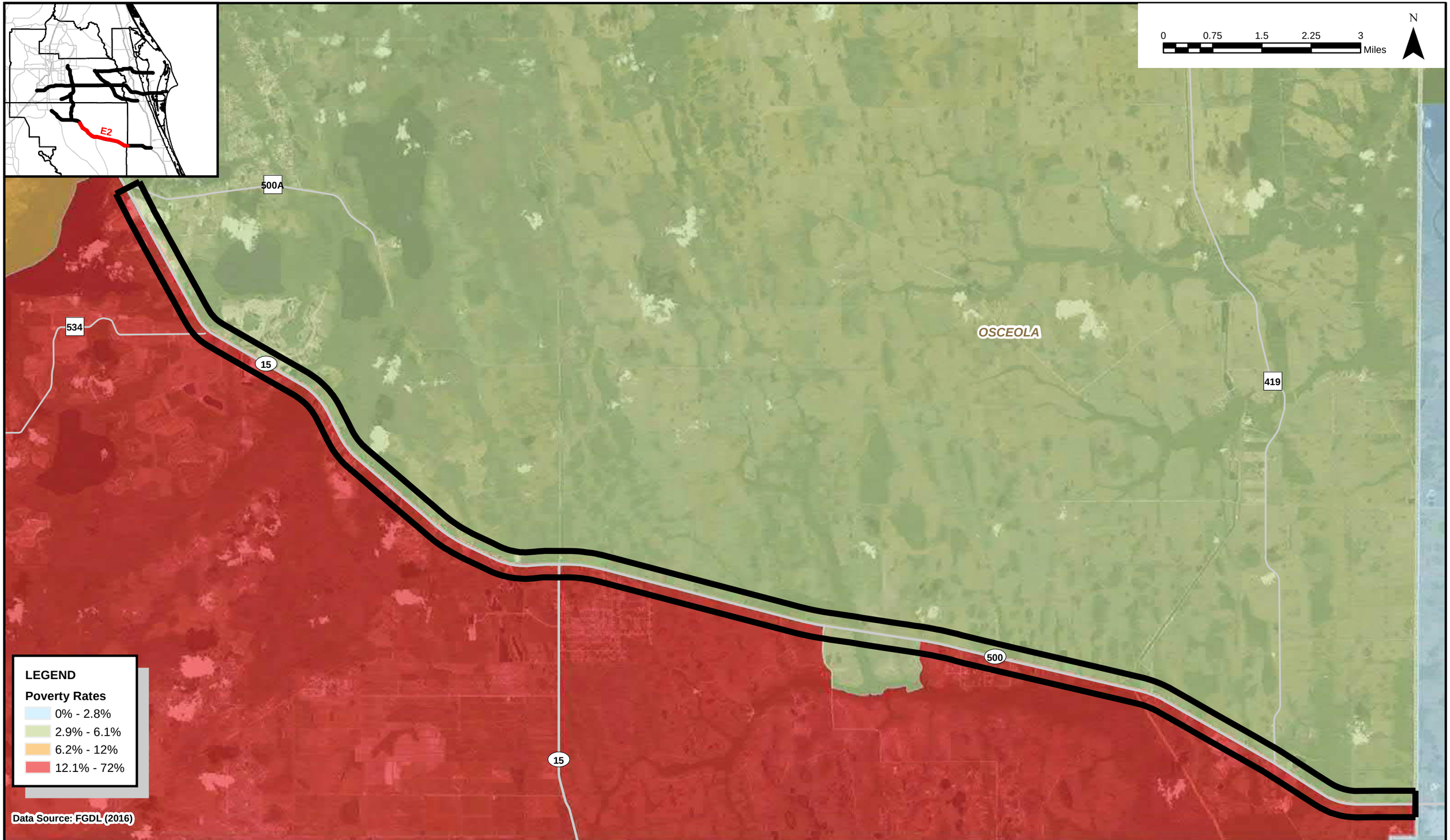
FDOT

Corridor E

Household Poverty Rates

FIGURE 5.2-2

SEGMENT E1



East Central Florida Corridor Evaluation Study

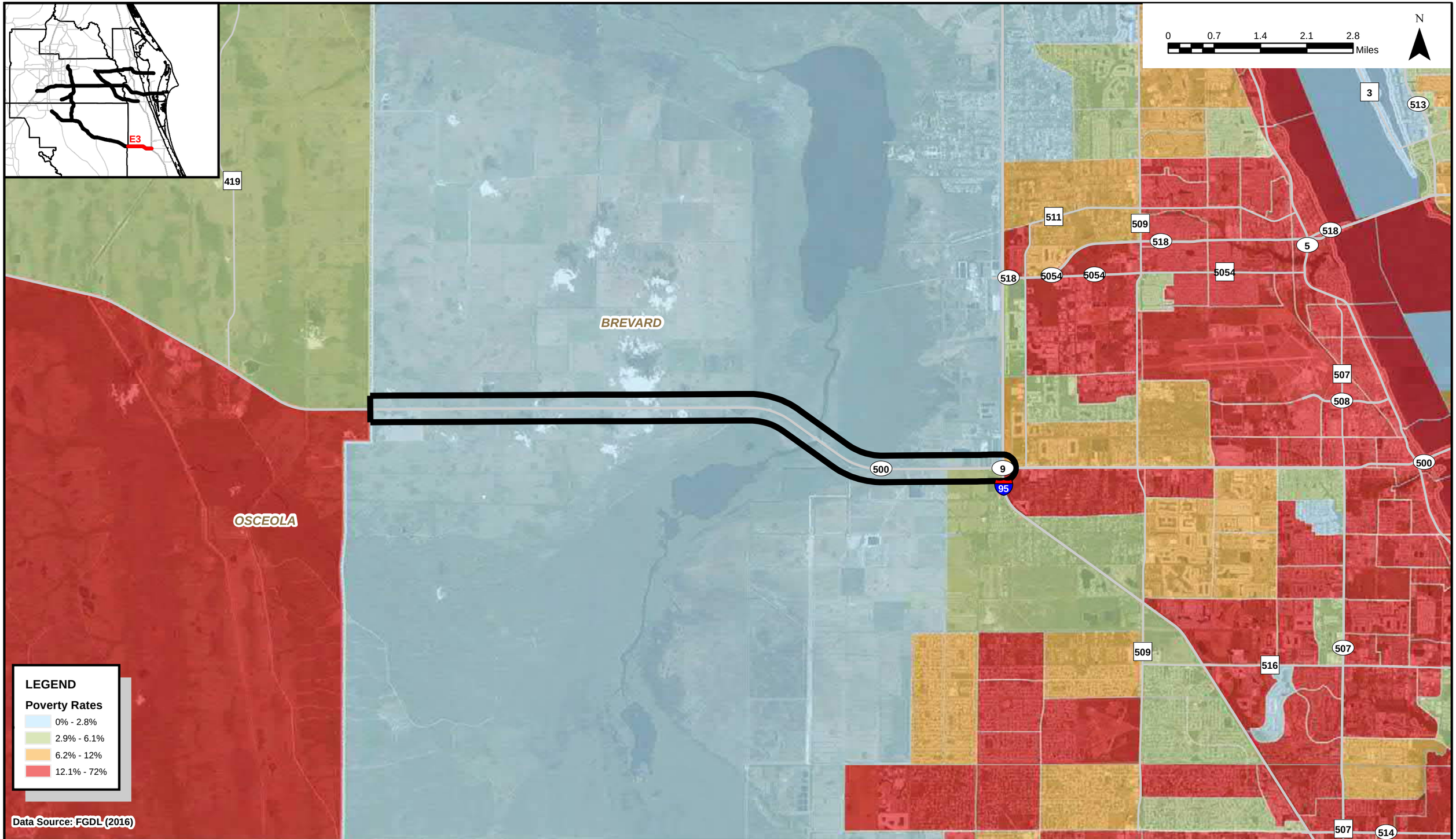
FDOT

Corridor E

Household Poverty Rates

FIGURE 5.2-2

SEGMENT E2



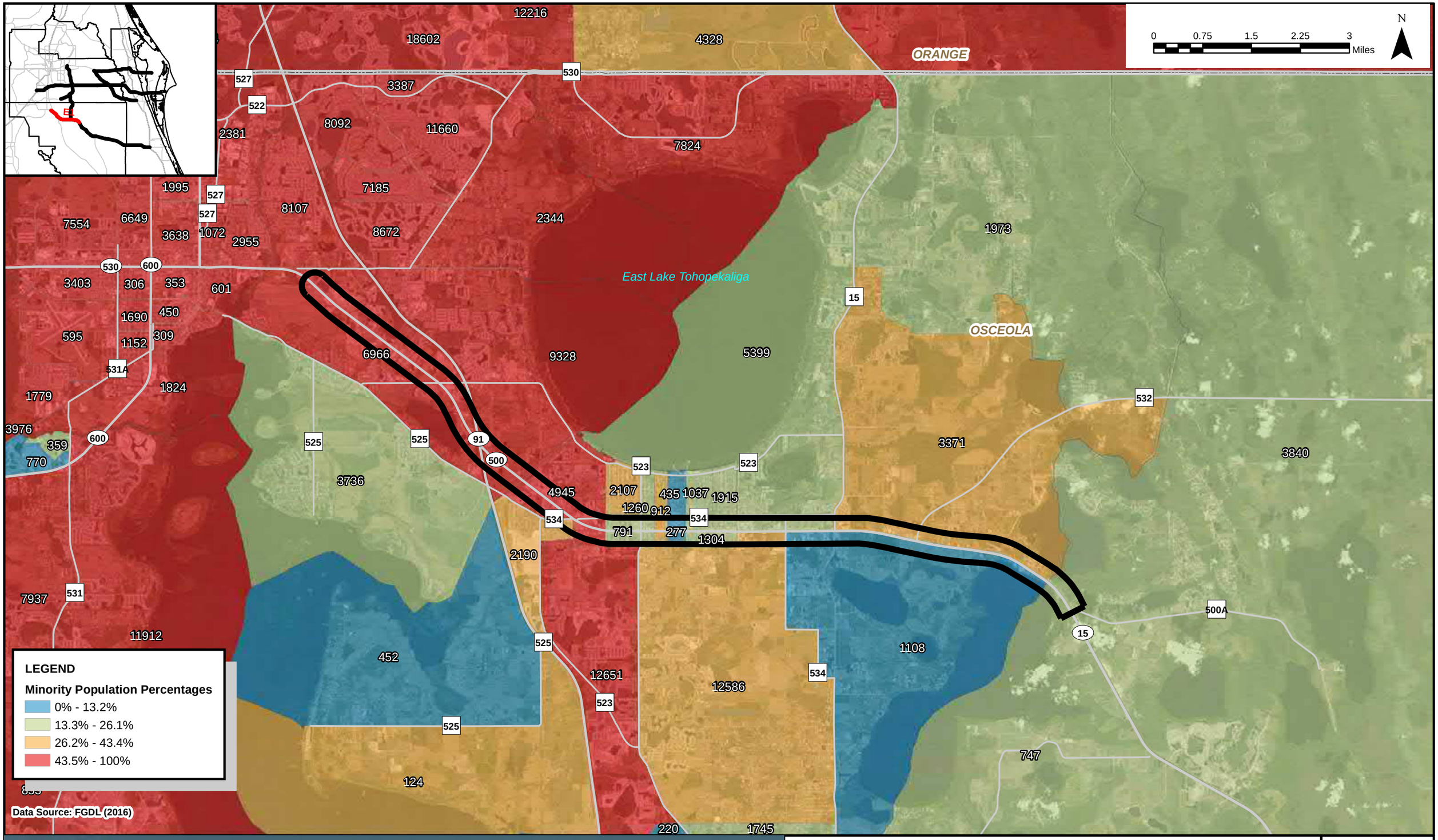
East Central Florida Corridor Evaluation Study

FDOT

Corridor E
Household Poverty Rates

FIGURE 5.2-2

SEGMENT E3



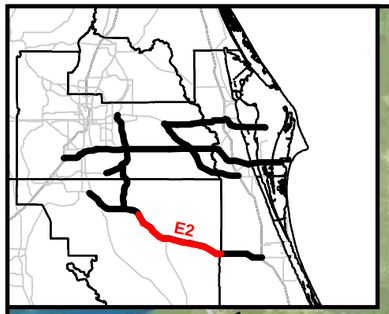
East Central Florida Corridor Evaluation Study

Corridor E

Minority Population

FIGURE 5.2-3

SEGMENT E1





1108
500A
534
15
3840
OSCEOLA
419
747
15
2268
500
2956

LEGEND

Minority Population Percentages

- 0% - 13.2%
- 13.3% - 26.1%
- 26.2% - 43.4%
- 43.5% - 100%

Data Source: FGDL (2016)

East Central Florida Corridor Evaluation Study

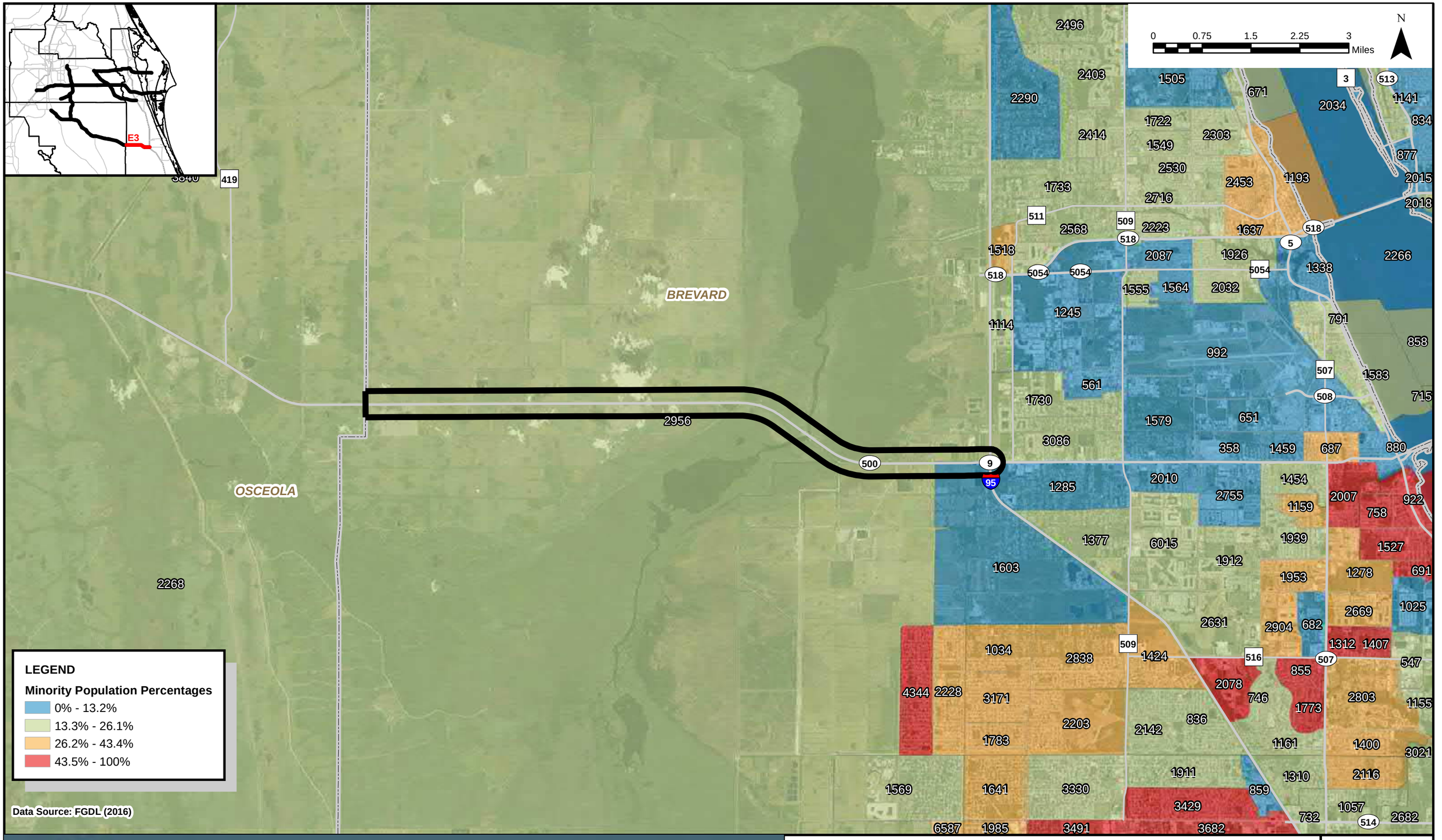
FDOT

Corridor E

Minority Population

FIGURE 5.2-3

SEGMENT E2



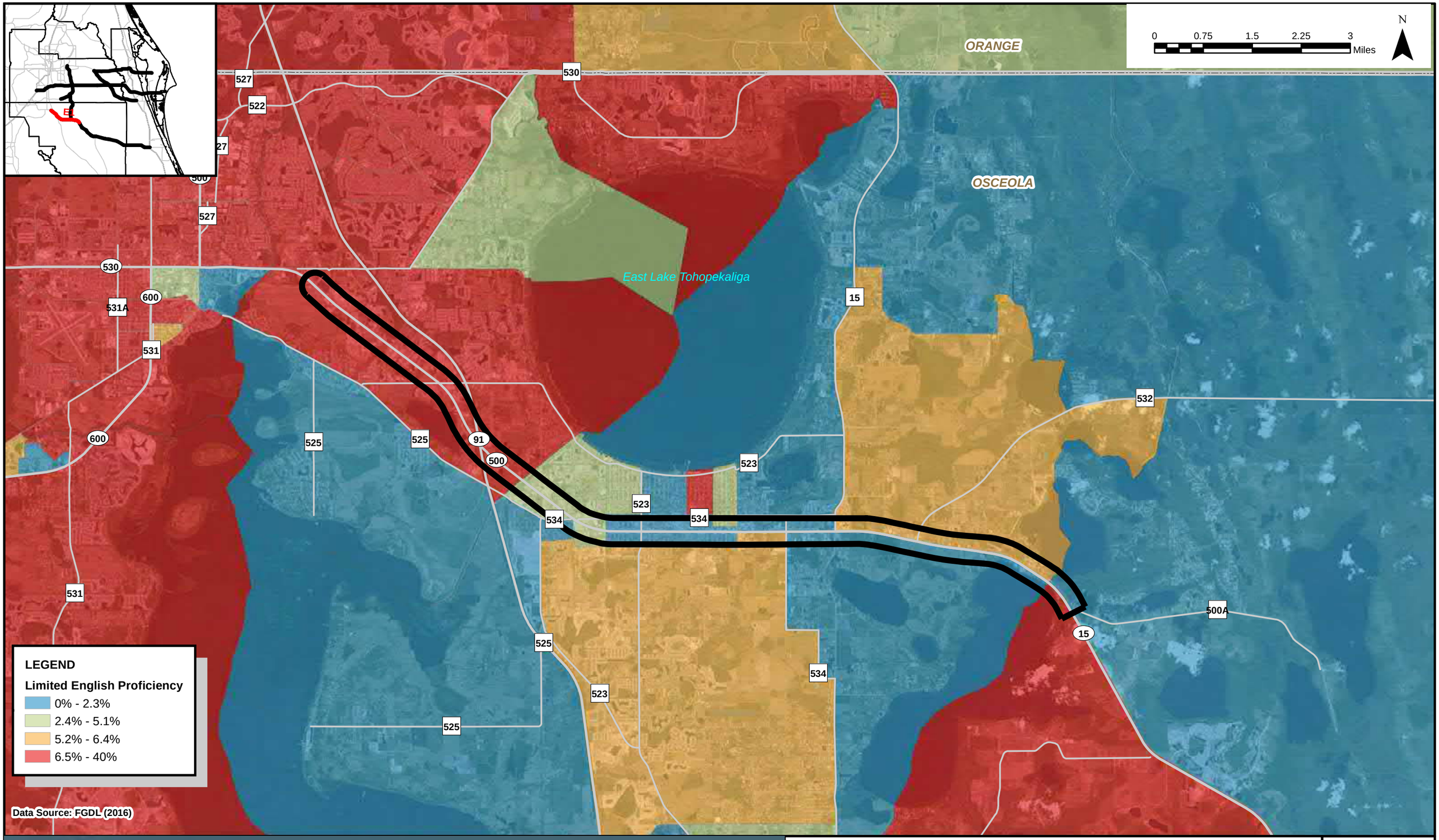
East Central Florida Corridor Evaluation Study

Corridor E

Minority Population

FIGURE 5.2-3

SEGMENT E3



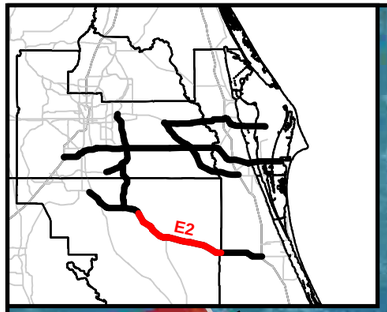
East Central Florida Corridor Evaluation Study

Corridor E

Limited English Proficiency

FIGURE 5.2-4

SEGMENT E1



0 0.75 1.5 2.25 3 Miles

N

500A

534

15

OSCEOLA

419

500

15

LEGEND

Limited English Proficiency

- 0% - 2.3%
- 2.4% - 5.1%
- 5.2% - 6.4%
- 6.5% - 40%

Data Source: FGDL (2016)

East Central Florida Corridor Evaluation Study

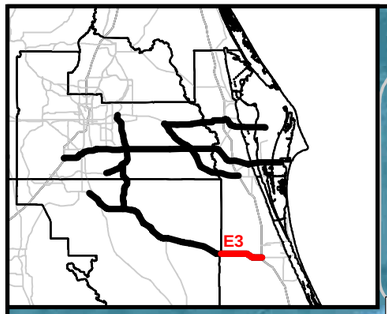
FDOT

Corridor E

Limited English Proficiency

FIGURE 5.2-4

SEGMENT E2



0 0.75 1.5 2.25 3 Miles

N

419

BREVARD

OSCEOLA

500

9

95

3

513

511

509

518

5

5054

507

508

516

514

LEGEND

Limited English Proficiency

- 0% - 2.3%
- 2.4% - 5.1%
- 5.2% - 6.4%
- 6.5% - 40%

Data Source: FGDL (2016)

East Central Florida Corridor Evaluation Study

Corridor E

Limited English Proficiency

FIGURE 5.2-4

SEGMENT E3

5.2.2 Land Use

As shown in Figure 5.2-5, existing land use along Corridor E is mostly agricultural (46.8%) and vacant/unclassified (29%). No other land use category broke above 10%; however these uses are not representative of Segment E1. Although vacant/unclassified land use still makes up the highest percentage of land use along Corridor E, there are many intensive uses around the center of the City of St. Cloud, including low density residential, and heavy commercial (Table 5.2-2).

Table 5.2-2: Corridor E Land Use

Segment	Land Use	Acres	Percent
Corridor E	Vacant/Unclassified	1,241.07	28.6%
	Low Density Residential	298.70	6.9%
	Medium Density Residential	6.16	0.1%
	High Density Residential	15.45	0.4%
	Mixed Use	38.63	0.9%
	Light Commercial	109.05	2.5%
	Heavy Commercial	193.49	4.5%
	Light Industrial	39.53	0.9%
	Heavy Industrial	2.97	0.1%
	Institutional	317.26	7.3%
	Transportation/Utilities	24.18	0.6%
	Recreation/Conservation	42.47	1.0%
	Agricultural	2,005.18	46.3%
	Water	1.22	0.0%
	Total	**4,335.36**	**100.0%**
E1	Vacant/Unclassified	284.82	23.1%
	Low Density Residential	177.63	14.4%
	Medium Density Residential	6.16	0.5%
	High Density Residential	10.89	0.9%
	Mixed Use	32.40	2.6%
	Light Commercial	101.69	8.2%
	Heavy Commercial	190.38	15.4%
	Light Industrial	39.53	3.2%
	Heavy Industrial	2.97	0.2%
	Institutional	169.81	13.8%
	Transportation/Utilities	14.49	1.2%
	Recreation/Conservation	7.57	0.6%
	Agricultural	194.03	15.7%
	Water	1.22	0.1%
	Total	**1,233.59**	**100.0%**
E2	Vacant/Unclassified	3.92	0.2%
	Vacant/Unclassified	656.00	30.3%
	Low Density Residential	119.22	5.5%
	High Density Residential	4.56	0.2%
	Mixed Use	6.23	0.3%
	Light Commercial	0.78	0.0%
	Heavy Commercial	1.26	0.1%
	Institutional	71.19	3.3%
	Transportation/Utilities	9.25	0.4%
	Recreation/Conservation	33.28	1.5%
	Agricultural	1,262.35	58.2%
	Total	**2,168.04**	**100.0%**
E3	Vacant/Unclassified	296.33	31.7%
	Low Density Residential	1.85	0.2%
	Light Commercial	6.58	0.7%
	Heavy Commercial	1.85	0.2%
	Institutional	76.26	8.2%
	Transportation/Utilities	0.44	0.0%
	Recreation/Conservation	1.62	0.2%
	Agricultural	548.80	58.8%
	Total	**933.73**	**100.0%**

5.2.3 Community Features

Segment E2 crosses multiple community features east of US 441, including the Triple N Ranch and the Herky Huffman Bull Creek Wildlife Management Areas on the south side of the corridor, the Holopaw State Forest on the north side of the corridor, and six existing trails on either side of the corridor (Table 5.2-3). Segment E3 crosses recreational areas associated with the St. Johns River, including the Sweetwater Boat Ramp park boundary east of the river.

Additionally, field verification identified Harmony High School and Harmony Community Church near the south side of the buffer in the Harmony community east of Arthur J. Gallagher Boulevard. The E2 buffer crosses multiple recreational features east of US 441, including the Triple N Ranch and the Herky Huffman Bull Creek Wildlife Management Areas on the south side of the corridor, the Holopaw State Forest on the north side of the corridor, and six existing trails on either side of the corridor (Table 5.2-3 and Figure 5.3-1). The E3 buffer crosses recreational areas associated with the St. Johns River, including the Sweetwater Boat Ramp park boundary east of the river.

Table 5.2-3: Corridor E Community Features

Segment	Type	Name
E1	Florida Managed Areas	Lake Lizzie Conservation Area
	Parks	Sexton Boat Ramp
	Parks	Veterans Memorial Park
	School Parcels	School District Of Osceola County
	School Parcels	School District Of Osceola County
	School Parcels	School District Of Osceola County
	School Parcels	School District Of Osceola County
	School Parcels	School District Of Osceola County
	School Parcels	Williams Garfield
	School Parcels	1207 Vermont LLC
	Park Bounds	Sexton Boat Ramp
	Park Bounds	Veterans Memorial Park
E2	Existing Trails	Bull Creek Wildlife Management Area Trail
	Existing Trails	Triple N Ranch Wildlife Management Area Trail
	Existing Trails	Deseret Ranch Trail
	Existing Trails	County 419 Trail To Bull Creek Wildlife Management Area Connector
	Existing Trails	Deseret Ranch Trail
	Existing Trails	Bull Creek Trail
	Florida Forever	Osceola Pine Savannas Florida Forever Bot Project
	Florida Forever	Big Bend Swamp/Holopaw Ranch Florida Forever Bot Project
	Florida Managed Areas	Holopaw State Forest
	Florida Managed Areas	Herky Huffman/Bull Creek Wildlife Management Area
	Florida Managed Areas	Triple N Ranch Wildlife Management Area
	FFWCC Management Areas	Bull Creek WMA
	FFWCC Management Areas	Triple N Ranch WMA
	School Parcels	School District Of Osceola County
	School Parcels	School District Of Osceola County
E3	Florida Managed Areas	River Lakes Conservation Area
	Florida Managed Areas	Three Forks Conservation Area
	Florida Managed Areas	Kempfer Property Flowage Easement
	FFWCC Management Areas	Upper St. Johns River Marsh WMA
	FFWCC Management Areas	Upper St. Johns River Marsh WMA
	Parks	Sweetwater Boat Ramp (Brevard Airboat Association)
	Parks Bounds	Sweetwater Boat Ramp (Brevard Airboat Association)

Segment E1 in urban Osceola County includes a large number of community services and recreational areas. There are 11 churches, 5 civic centers, the St. Cloud Chamber of Commerce, 17 health care facilities, 1 assisted living facility, 6 schools, 5 mobile home parks, 2 culture centers, and 2 parks. Additionally, there are 663 residential parcels, which are located on either side of the road. Community features are densely populated and spread throughout the corridor, many of which border the roadway directly.

5.2.4 Context Zone Classification

Corridor E includes nearly every type of context zone along its 46.3 mile stretch between CR 530 and I-95. It includes 13.6 miles of urban and suburban land uses as it passes through portions of Kissimmee and St Cloud before becoming more rural and natural the reminder of the corridor. Segment E1 is wholly contained in the urban and suburban areas of Kissimmee and St. Cloud. As shown in Table 5.2-4, the context zones within this segment include suburban commercial (C3C) and residential (C3R) as well as general urban residential (C4) and urban center (C5) uses.

Table 5.2-4: Corridor E Context Zones

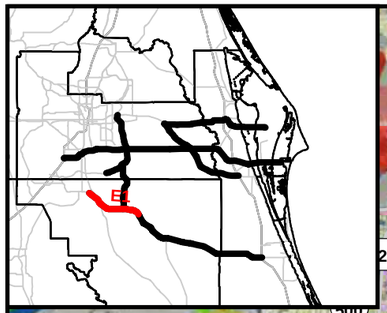
Corridor	**US 192**				
From	**CR 530**				
To	**I-95**				
Distance	**46.3 miles**				
Segment	**Sub-Segment**	**From**	**To**	**Distance (Miles)**	**Context Zones**
					Existing
E1	1	SR 530	Partin Settlement Road	2.7	C5
	2	Partin Settlement Road	Neptune Road	2.8	C3C
	3	Neptune Road	Hickory Tree Road	4.1	C4
	4	Hickory Tree Road	Old Melbourne Highway	4.0	C3R
E2-1	1	Old Melbourne Highway	Hickory Tree Road	2.5	C2
	2	Hickory Tree Road	.2 mi E of Harmony Square Road	1.4	C3R
	3	.2 mi E of Harmony Square Road	1 mi W of Crab Grass Road	8.4	C2
E2-2	1	1 mi W of Crab Grass Road	Brevard County Line	10.5	C2
E3	1	Brevard County Line	5.7 mi E of Brevard County Line	5.8	C2
	2	5.7 mi E of Brevard County Line	Sweetwater Drive	1.8	C1
	3	Sweetwater Drive	I-95	2.3	C2

5.2.5 Major Developments

As shown in Table 5.2-5, there is one major development along Corridor E, Harmony, for a total of 456.16 acres The Vacant/Unclassified land use mostly occurs in Segment E2 and coincides with Harmony. Based on Harmony documents, the future land use of this area will be mostly low density residential, conservation/recreation and office commercial. Overall there will be an intensification of use in the central part of Segment E2. All DRIs are shown in Figure 5.3-1.

Table 5.2-5: Corridor E Major Developments

Segment	Name	Acres
E2	Harmony	456.16



0 0.75 1.5 2.25 3 Miles

N

ORANGE

OSCEOLA

East Lake Tohopekaliga

LEGEND

Existing Land Use

- Vacant / Unclassified
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Mixed Use
- Light Commercial
- Heavy Commercial
- Light Industrial
- Heavy Industrial
- Institutional
- Transportation / Utilities
- Recreation / Conservation
- Agricultural
- Water

Data Sources:
COUNTY GOVERNMENTS: ORANGE CO, OSCEOLA CO, BREVARD CO (2016)

LOCAL GOVERNMENTS: CITIES OF ST. CLOUD; BELLE ISLE, TITUSVILLE, MELBOURNE, COCOA, WEST MELBOURNE (2016)

East Central Florida Corridor Evaluation Study

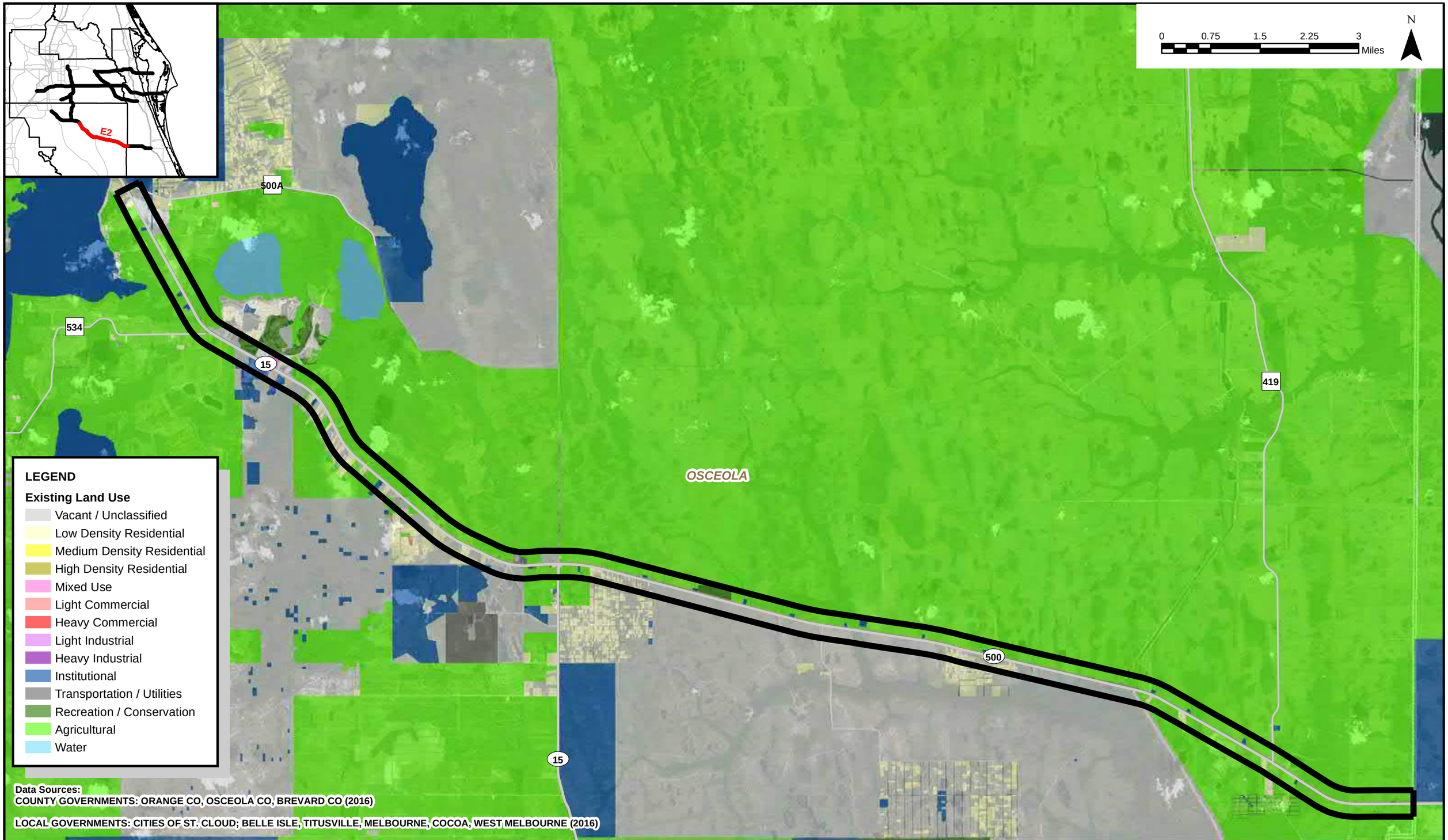
FDOT

Corridor E

Land Use

FIGURE 5.2-5

SEGMENT E1



East Central Florida Corridor Evaluation Study

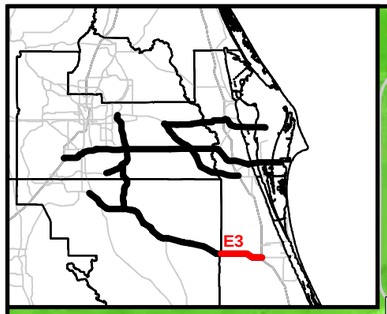
FDOT

Corridor E

Land Use

FIGURE 5.2-5

SEGMENT E2



0 0.75 1.5 2.25 3 Miles

N

OSCEOLA

BREVARD

LEGEND

Existing Land Use

- Vacant / Unclassified
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Mixed Use
- Light Commercial
- Heavy Commercial
- Light Industrial
- Heavy Industrial
- Institutional
- Transportation / Utilities
- Recreation / Conservation
- Agricultural
- Water

Data Sources:
COUNTY GOVERNMENTS: ORANGE CO, OSCEOLA CO, BREVARD CO (2016)

LOCAL GOVERNMENTS: CITIES OF ST. CLOUD; BELLE ISLE, TITUSVILLE, MELBOURNE, COCOA, WEST MELBOURNE (2016)

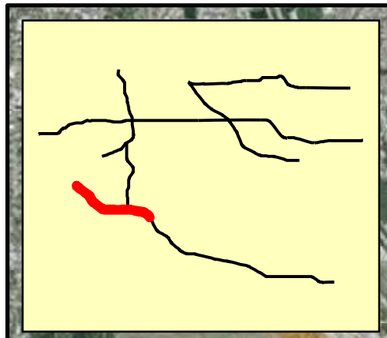
East Central Florida Corridor Evaluation Study

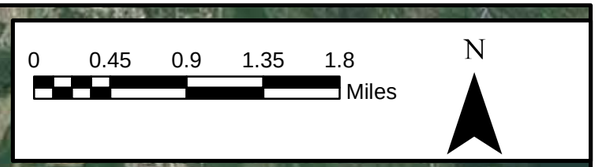
Corridor E

Land Use

FIGURE 5.2-5

SEGMENT E3





East Lake Tohopekaliga

Legend

Land Use Class/Zone

- C3C--Suburban Commercial
- C3R--Suburban Residential
- C4--General Urban Residential
- C5--Urban Center

East Central Florida Corridor Evaluation Study

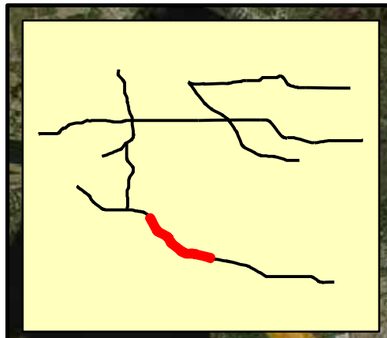
FDOT

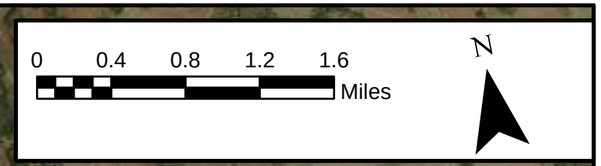
Corridor E

Context Zone

FIGURE 5.2-6

SEGMENT E1





Legend

Land Use Class/Zone

- C2--Rural
- C3R--Suburban Residential

East Central Florida Corridor Evaluation Study

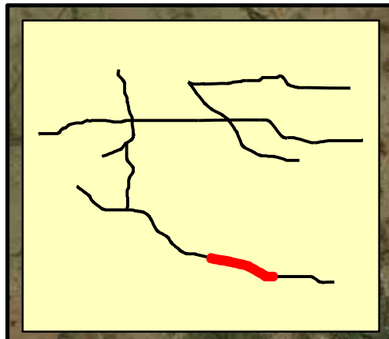
FDOT

Corridor E

Context Zone

FIGURE 5.2-6

SEGMENT E2-1



0 0.35 0.7 1.05 1.4
Miles

N

Legend

Land Use Class/Zone

C2--Rural

East Central Florida Corridor Evaluation Study

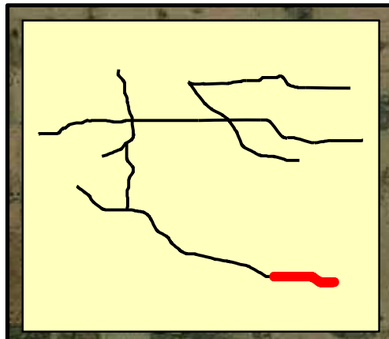
FDOT

Corridor E

Context Zone

FIGURE 5.2-6

SEGMENT E2-2



0 0.35 0.7 1.05 1.4
Miles

N

Legend

Land Use Class/Zone

C1--Natural

C2--Rural

East Central Florida Corridor Evaluation Study

FDOT

Corridor E

Context Zone

FIGURE 5.2-6

SEGMENT E3

5.3 Roadway Characteristics/Operations

5.3.1 Jurisdiction and Classification

Corridor E is owned and operated by the Florida Department of Transportation and is designated at the federal level as part of the National Highway System (NHS). Roadway Functional Classification is primarily Principal Arterial-other with a major portion of the corridor designated as Rural from Old Melbourne Highway in Osceola County to just West of I-95 in Brevard County.

5.3.2 Typical Section and Posted Speed

The entire Corridor E is a 200-foot right-of-way. Segment E1 is 6 lanes from CR 530 to the Florida's Turnpike. Remaining of Segment E1 and Segment E3 consists of four 12-foot lanes, a 40-foot median (20 feet between edges of curbs sloped at 1:6 to a ditch, with an eight-foot paved inside shoulder on each side), and 10-foot paved outside shoulders. The typical section of Segment E2 differs, with a narrower minimum right-of-way width at 120 feet and six 12-foot through lanes. The median is 24 feet wide, generally consisting of turn lanes and raised cement median strips, and there are outside shoulders present, with 10-foot widths.

The Maximum speed on Corridor E varies between 40 mph and 65 mph. Segment E1 has speed limit from 40 mph to 60 mph. Segment E2 starts at 60 mph and reaches 65 mph. Segment E3 from CR 519 starts at 55 mph and reaches 65 mph approaching I-95.

5.3.3 Traffic Volumes

Annual Average Daily Traffic (AADT) and Level of Service (LOS) 2015 on all three segments of Corridor E are shown on Table 5.3-1 and Figure 5.3-1.

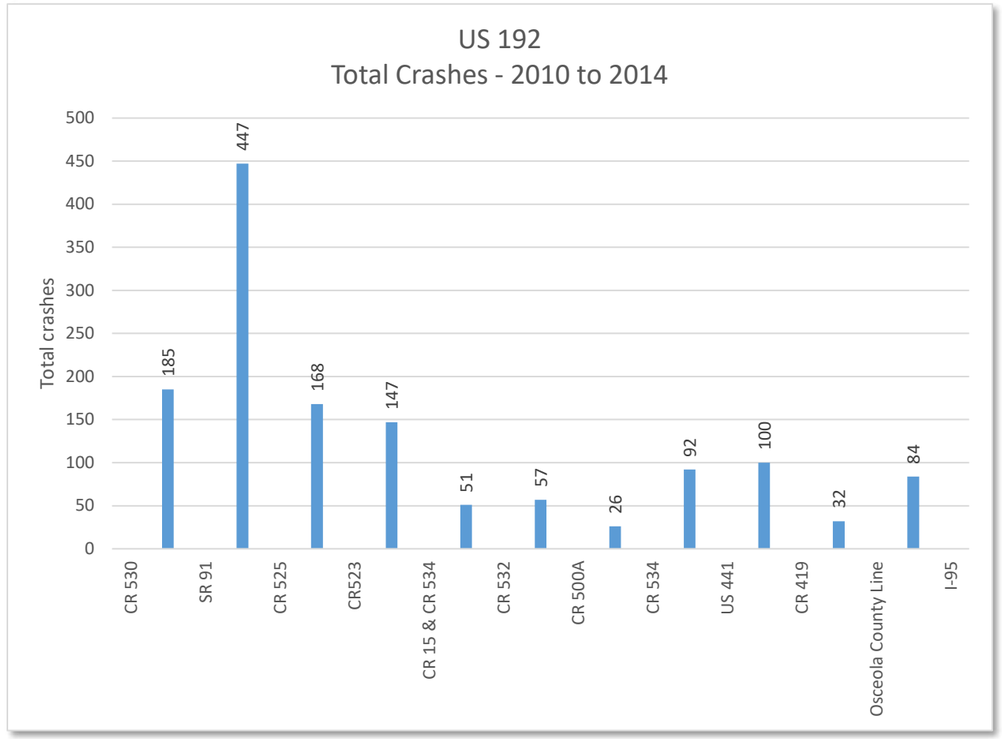
Table 5.3-1: Corridor E Annual Average Daily Traffic and Level of Service 2015

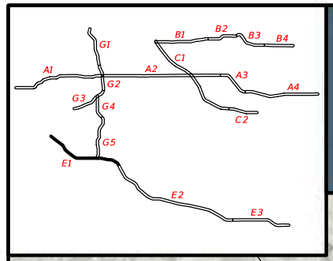
Roadway	Corridor Section	Count Location	AADT	LOS	Speed
US 192	E1	CR 530 – SR 91 (Florida's Turnpike)	45,000	C	50-55
	E1	SR 91 (Florida's Turnpike) - CR 525	36,500	C	45-55
	E1	CR 525 - CR 523	45,000	F	40-45
	E1	CR 523 - CR 15/534	43,000	C	40-55
	E1	CR 15/534 - CR 532	23,500	B	55
	E1	CR 532 - CR 500A	18,800	D	55-60
	E2	CR 500A - CR 534	13,200	B	60
	E2	CR 534 – SR 15	9,614	B	55-65
	E2	SR 15 - CR 419	6,000	B	65
	E2/E3	CR 419 - I-95	8,100	B	55-65

5.3.4 Safety and Crash Data

The following bar chart summarizes the total crashes for US 192 for the five-year period between 2010 and 2014. As shown, the highest number of crashes occurred on the four segments between CR 530 and CR 15/CR 534. This is likely due to the higher concentration of population within this area of the corridor. The most crashes take place between Florida's Turnpike and CR 525. The highest concentration of accidents occurred at or close to the interchange of US 192 and the On/Off Ramp for Florida's Turnpike at Shady Lane. At this interchange there were 218 accidents occurring within 1,800 feet of this intersection. Within those collisions: 140 were rear ends; 42 were angles; 16 were sideswipes; three were head on; and the rest are unknown. The second highest concentration of collisions occurred within the same limits of the Florida's Turnpike and CR 525. The second area to note is at the interchange of I-95 and US 192. There were a total of 84 collisions between two vehicles of which: 24 were rear ends; five head on collisions; 33 angle crashes; 10 sideswipes; and the rest are unknown.

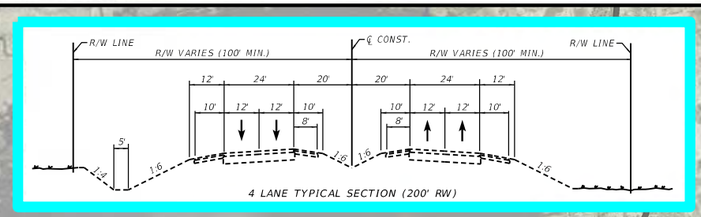
Corridor E – US 192 Total Crashes – 2010 to 2014

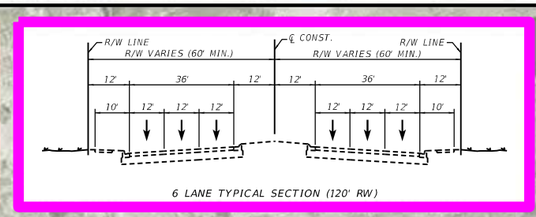




MAJOR DRI'S

1. Toho Preserve
2. Tohoqua
3. Edgewater
4. Center Lake
5. Harmony





0 0.25 0.5 1 1.5 2 Miles

N

441 192

TOLL 91

530 COUNTY

15 COUNTY

532 COUNTY

500A COUNTY

525 COUNTY

523 COUNTY

534 COUNTY

534 COUNTY

E1

E2

G5

C.R. 530

S.R. 91 - FLORIDA'S TURNPIKE

C.R. 525

C.R. 523

C.R. 15 & C.R. 534

C.R. 532

C.R. 500A

	RW-200'	RW-200'	RW-200'	RW-200'	RW-200'	RW-200'
	AADT 34,000	AADT 36,500	AADT 45,000	AADT - 41,000	AADT 23,500	AADT - 18,800
	LOS - B	LOS - B	LOS - C	LOS - C	LOS - B	LOS - B

LEGEND

- Number of Lanes
- DRI's
- Preservation Areas

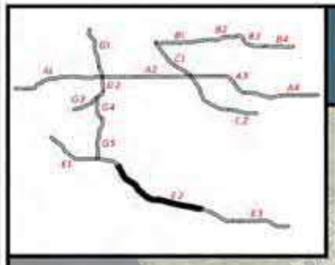
East Central Florida Corridor Evaluation Study

FDOT

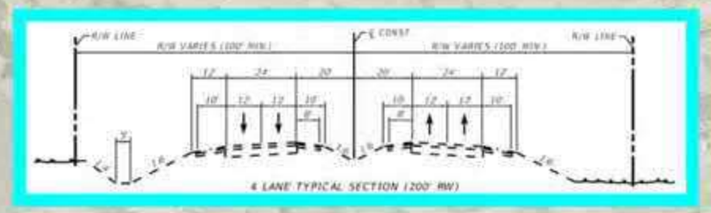
Corridor E
Roadway Characteristics

FIGURE 5.3-1

SEGMENT E1



MAJOR DRI'S
1 Harmony



0 0.25 0.5 1 1.5 2 Miles

N

E1

500A

441

4

192

534

1

4

192

E2

C.R. 500A

C.R. 534

U.S. 441

RW-200'
AADT 13,200
LOS - B

RW-200'
AADT - 9,614
LOS - B

RW-200'
AADT - 6,000
LOS - B

BULL CREEK WILDLIFE MANAGEMENT AREA

441

LEGEND
- 4 Number of Lanes
- DRI's
- Preservation Areas

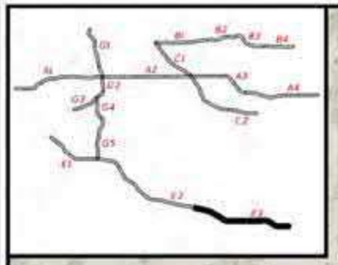
East Central Florida Corridor Evaluation Study

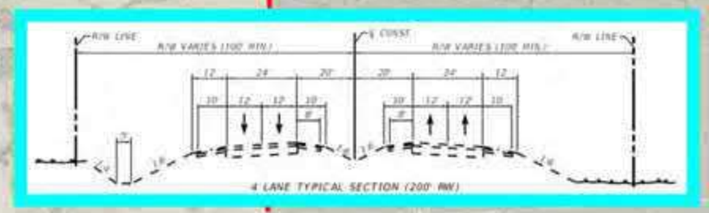
FDOT

Corridor E
Roadway Characteristics

FIGURE 5.3-1

SEGMENT E2





TOSOHATCHEE STATE PRESERVE

0 0.250.5 1 1.5 2 Miles

N

95

419

192

4

E2

4

E3

192

95

BULL CREEK WILDLIFE MANAGEMENT AREA

OSCEOLA COUNTY
BREVARD COUNTY

C.R. 419

I-95

RW-200'
AADT - 6,000
LOS - B

RW-200'
AADT - 8,100
LOS - B

LEGEND
- Number of Lanes
- DRI's
- Preservation Areas

East Central Florida Corridor Evaluation Study

FDOT

Corridor E
Roadway Characteristics

FIGURE 5.3-1

SEGMENT E3

5.4 Railroad Crossings

There are no rail facilities that cross the corridor right-of-way.

5.5 Engineering and Site Characteristics

As noted previously, one of the key benefits of this phase of the study is that it provides an opportunity to plan on a holistic, system-level, while also providing an opportunity to collect data, conduct analyses, and develop packages of projects and strategies to move into future project development. Engineering analyses and documentation of site characteristics is a required step in the PD&E process. The following section provides the results of the ECFCES Engineering and Site Characteristics analyses.

5.5.1 Structures

Corridor E has 11 crossings with bridges or underpasses. At these various locations, there are 19 structures. This section focuses on underpasses only. Corridor B underpasses SR 91(Florida's Turnpike) and I-95. Information was collected from FDOT Straight Line Diagrams, FDOT Bridge Reports, and Google Maps.

US 192 Underpass at SR 91 (Structure #s 920134, 920078)

- Two structures at the interchange
- Structure #920134 has a vertical clearance of 15.9 feet
- Structure #920078 has a vertical clearance of 16.4 feet

This interchange is being reconfigured as part of the US 192 widening project.





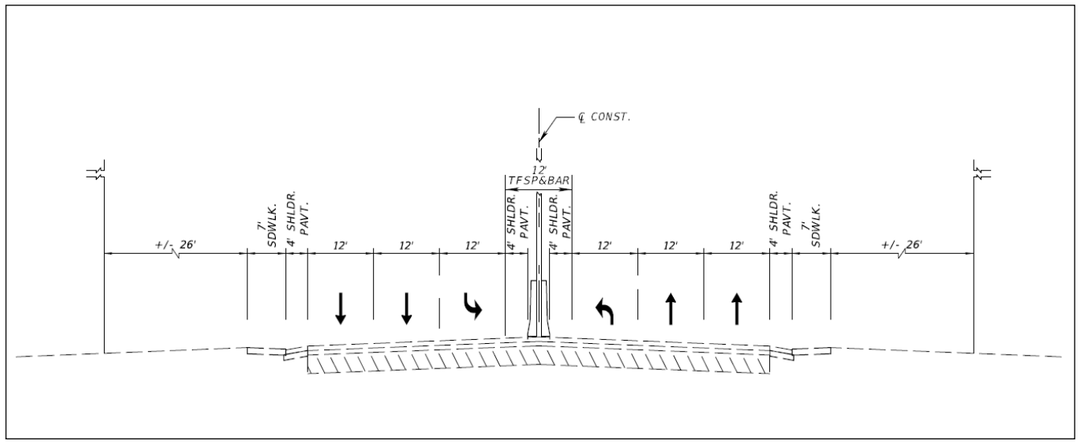
US 192 Underpass at I-95 (Structure #700209)

- One structure at the interchange
- Structure #700209 has a vertical clearance of 17.4 feet





Figure 5.5-1: Typical Section at US 192 Underpass at I-95 (Structure #700209)



Sufficiency Rating for Bridges

Sufficiency Rating is essentially an overall rating of a bridge's fitness for the duty that it performs based on factors derived from over 20 NBI data fields. Ratings reported in this report are based on the FDOT's 2017 3rd Quarter Bridge Information Report. The designation of a bridge as Structurally Deficient (SD) or Functionally Obsolete (FO) has impact on decisions for bridge maintenance, rehabilitation or replacement. According to the FHWA Highway Bridge Replacement and Rehabilitation Program (23 CFR 650.409), highway bridges are considered eligible for rehabilitation or replacement with a sufficiency rating of less than 50.0. Highway bridges with a sufficiency rating of 80.0 or less will be eligible for rehabilitation. Ratings are on a scale of 1 to 100, with 100 considered as an entirely sufficient bridge, usually new. The Sufficiency Rating for each bridge along Corridor E is identified on Table 5.5-1.

Table 5.5-1: Corridor E Sufficiency Ratings for Bridges

Roadway Name	County	Roadway ID	Interchange/Intersection	Structure #	Sufficiency Rating (%)
US 192	Osceola	92030000	SR 91/Florida Turnpike	920134 920078	98.2 97.2
US 192	Osceola	92030000	St. Cloud Canal	920011 920118	97 97
US 192	Osceola	92030000	Alligator Creek	920190 920191	95.4 95.4
US 192	Osceola	92030000	Unnamed (W. of Cypress Creek Ranch)	920197	77.2
US 192	Osceola	92030000	Crabgrass Creek	920178 920179	92.7 92.7
US 192	Osceola	92030000	Unnamed (W. of Osceola Drive)	920150	77.2
US 192	Osceola	92030000	C 57 Canal	920014 920148	79.4 83.7
US 192	Brevard	70050000	Sawgrass Creek	700212 700018	99.7 99.7
US 192	Brevard	70050000	St. Johns Relief	700023 700213	99.7 99.7
US 192	Brevard	70050000	St. Johns River	700214 700215	88.3 88.3
US 192	Brevard	70050000	I-95	700209	98

5.5.2 Drainage

In Osceola County, Corridor E extends through two major surface water management basins as defined by the Florida Department of Environmental Protection (FDEP): the Kissimmee River Basin and the Upper St. Johns River Basin. Stormwater in the Kissimmee River Basin generally flows southward through a chain of lakes and into the Kissimmee River. Stormwater in the Upper St. Johns River Basin generally flows east to the St. Johns River. There are 30 major (greater than five-foot diameter pipe equivalent opening) drainage crossings, including four bridges, five bridge culverts, 20 box culvert crossings, and one large diameter pipe combination within the Orange County portion of the corridor. These drainage crossings are noted in Figure 5.5-2. Table 5.5-2 denotes impaired drainage basins, as defined by FDEP, through which the corridor passes.

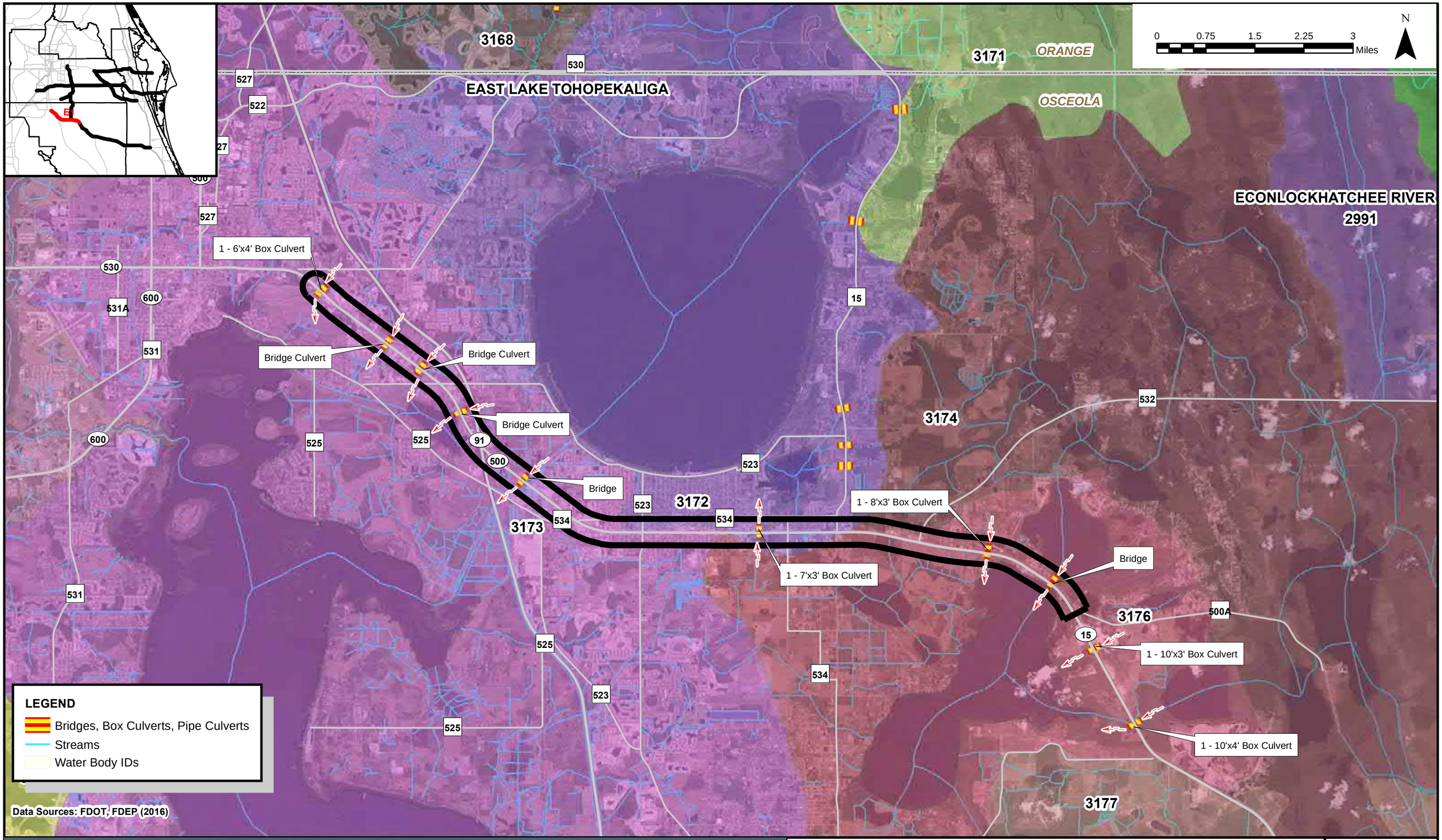
Table 5.5-2: Corridor E Osceola County, Impaired Waterbodies

Waterbody Name	Group Name	Water Body ID	Impairment Parameter
Alligator Lake	Kissimmee River	3176	Mercury
Jane Green Creek	Upper St. Johns River	3073	Nutrients
St. Johns River West of Sawgrass Lake	Upper St. Johns River	28936	Mercury

Corridor E in Brevard County lies entirely within the FDEP-defined Upper St. Johns River Basin. Stormwater in the Upper St. Johns River Basin flows generally flows west into the St. Johns River. The Brevard County portion of corridor C includes six major drainage crossings, including three bridges and three box culvert crossings. Figure 5.5-2 depicts the drainage crossing locations. Table 5.5-3 denotes impaired drainage basins, as defined by FDEP, through which the corridor passes.

Table 5.5-3: Corridor E Brevard County, Impaired Waterbodies

Waterbody Name	Group Name	Water Body ID	Impairment Parameter
St. Johns River West of Sawgrass Lake	Upper St. Johns River	28936	Mercury
St. Johns River above Lake Washington	Upper St. Johns River	2893P	Dissolved Oxygen
Sawgrass Lake	Upper St. Johns River	28931	Dissolved Oxygen
Melbourne-Tillman (C-1) Canal	Upper St. Johns River	3090	Fecal Coliform

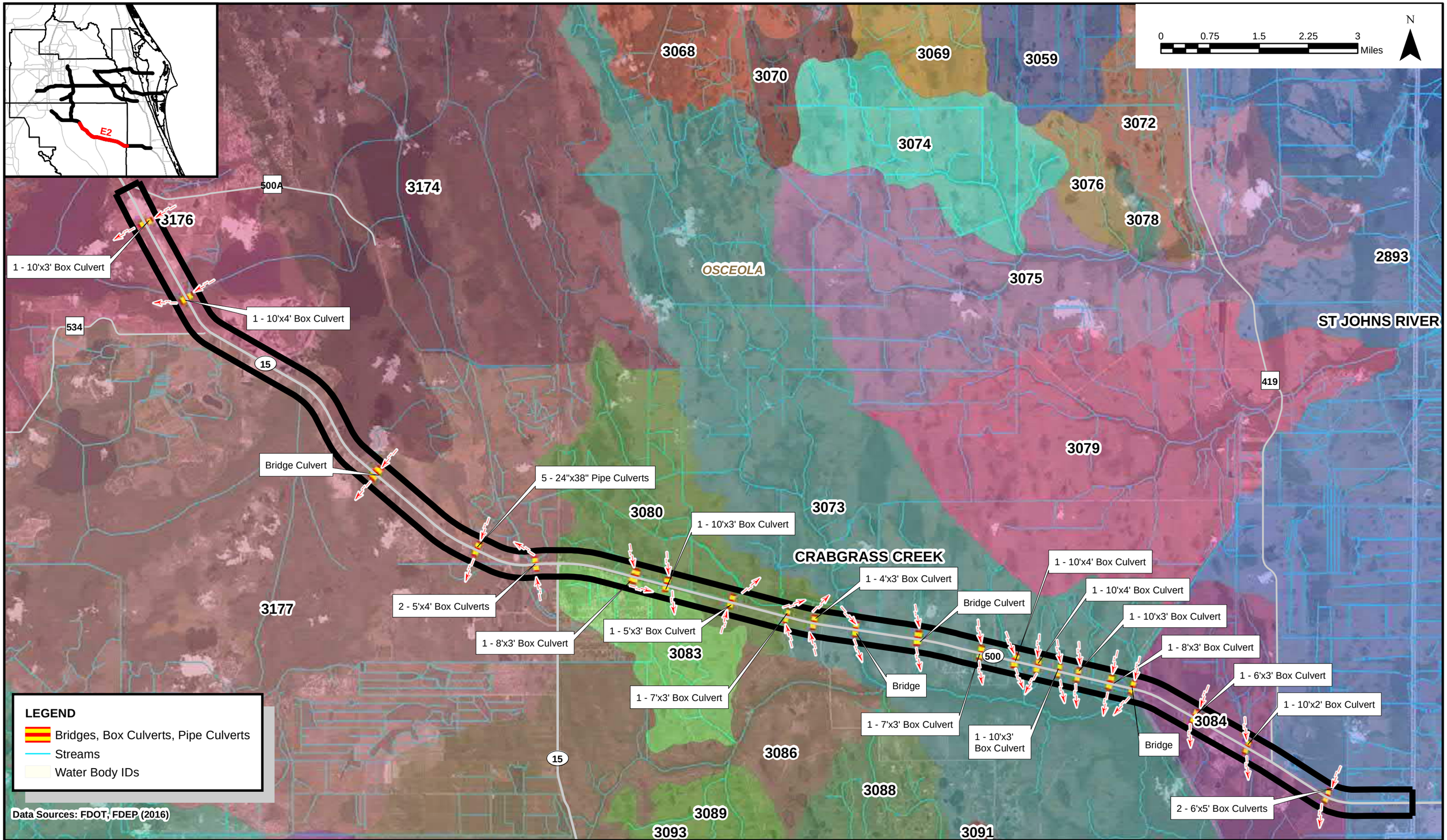


East Central Florida Corridor Evaluation Study

Corridor E
Existing Drainage Conditions

FIGURE 5.5-3

SEGMENT E1



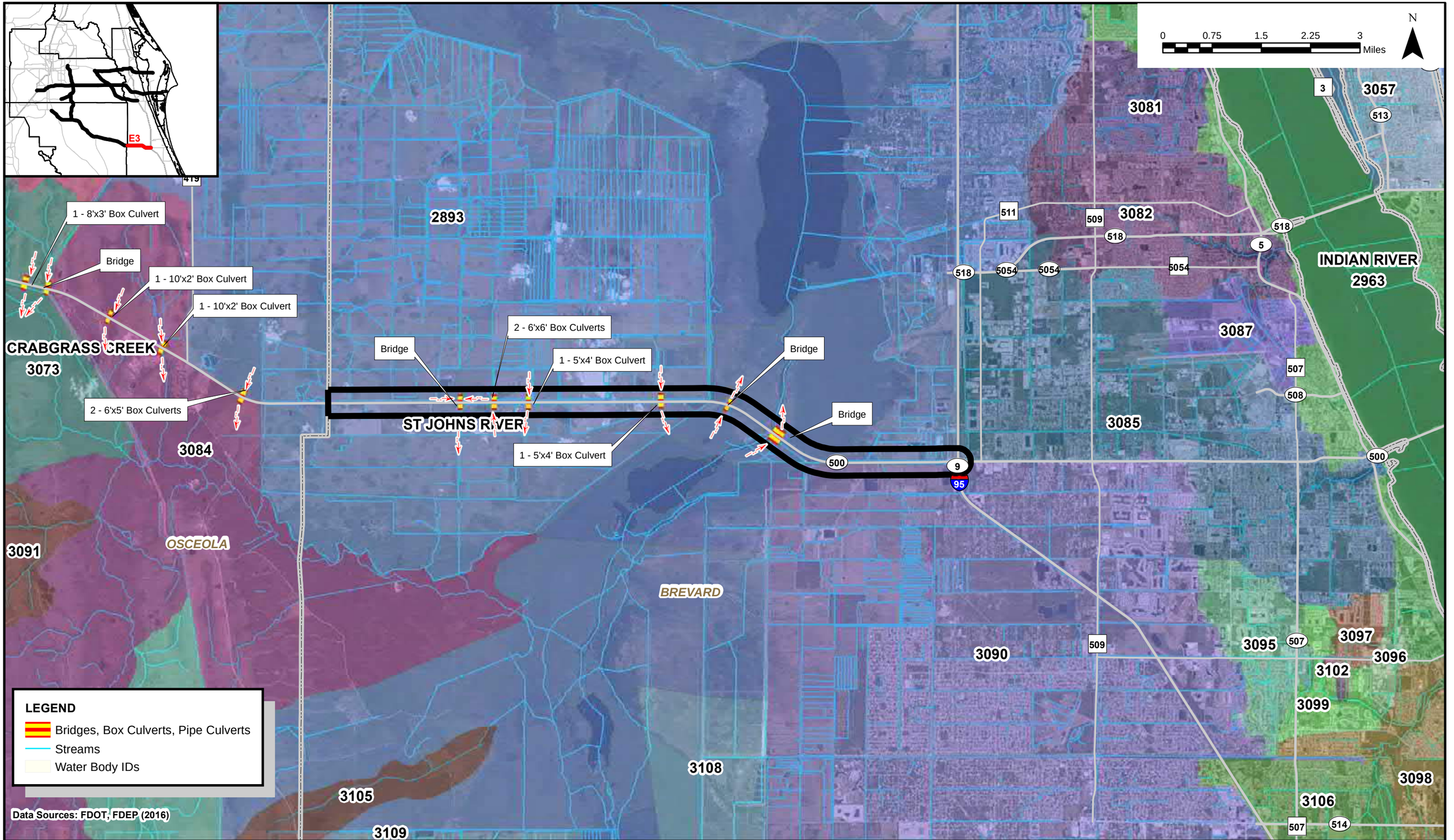
East Central Florida Corridor Evaluation Study

Corridor E

Existing Drainage Conditions

FIGURE 5.5-3

SEGMENT E2



East Central Florida Corridor Evaluation Study

Corridor E
Existing Drainage Conditions

FIGURE 5.5-3

SEGMENT E3

5.5.3 Utilities



Beginning at I-95, very little utilities are present on US 192 as it crosses a rural area in the eastern segment. Those that prevail include some electric, communications and gas transmission lines as well as occasional minor distribution lines to serve the small pockets of development. As the corridor progresses west, the number of significant utilities within the right-of-way increases as it approaches the municipalities of St. Cloud and Kissimmee. The transmission lines give way to primarily distribution networks for electric, communications, gas, water and sewer.

The most common types of utilities include:

- Electric transmission and distribution, primarily aerial.
- Potable Water and sanitary sewer mains from local municipalities.
- Communications lines are located throughout in various forms. This includes aerial and underground transmission and distribution lines for telephone, cable television and internet services. Fiber optic cables, mainly underground, are attributed to multiple communications and internet providers. In many instances, several communications lines would appear in a particular segment of the corridor in different aspects and locations.
- Gas transmission pipelines appear in the corridor at a few locations.

The initial listing of utilities within the corridors were obtained employing the Sunshine State One-Call system. Those utilities having a major presence in the study areas were contacted to verify the location and configuration of their facilities. The significant utilities are summarized for each of the corridor's counties.

The following table lists the primary utilities acknowledging a presence in Osceola County as well as their general locations:

Table 5.5-4: Corridor E Osceola County, Primary Utilities

Utility Name	Utility Type	Parallel or Crossing	Highway of Corridor	Cross Road/Extent
AT&T	COMM/Fiber	Crossing	US 192	SR 91
CenturyLink	Fiber Optic	Parallel	US 192	Multiple locations throughout County
CenturyLink	Phone (copper)	Parallel	US 192	Multiple locations throughout County
Duke Energy	Electric - OH	Crossing	US 192	West of US 441
Florida Gas Transmission	Gas	Parallel	US 192	Length of corridor
Florida Power & Light	Electric - OH	Crossing	US 192	Between CR 419 & County Line
Level 3 Communications	Fiber	Parallel	US 192	SR 91 to Arizona Ave.
Orlando Utilities Commission	Electric - OH	Crossings (3)	US 192	Narcoossee Rd, Eastern Ave, 10th St
Orlando Utilities Commission	Electric - OH	Parallel	US 192	Hickory Tree Rd west to Eastern Ave
Orlando Utilities Commission	Electric - UG	Crossing	US 192	Wisconsin Ave

The following table lists the primary utilities acknowledging a presence in Brevard County as well as their general locations:

Table 5.5-5: Corridor E Brevard County, Primary Utilities

Utility Name	Utility Type	Parallel or Crossing	Roadway	Cross Road/Extent
Charter Communications	Internet/CATV /Phone/Fiber	Parallel	US 192	County Line to I-95
Florida Gas Transmission	Gas	Crossing	US 192	West of I-95
Florida Power & Light	Electric - OH	Crossing	US 192	West of I-95

5.6 Environmental Characteristics

5.6.1 Wetlands

Wetlands are most prevalent in Segments E2 and E3 (Table 5.6-1 and Figure 5.6-1). E2 wetlands are dispersed throughout the corridor due to the presence of swamps, while wetlands in Segment E3 are primarily around the St. Johns River.

Table 5.6-1: Corridor E Wetlands

Segment	Wetland Type	Acres
E1	Freshwater Emergent Wetland	37.56
	Freshwater Forested/Shrub Wetland	24.17
	Freshwater Pond	4.69
	Lake	15.54
	Riverine	1.93
E2	Freshwater Emergent Wetland	49.55
	Freshwater Forested/Shrub Wetland	302.10
	Freshwater Pond	25.04
	Riverine	3.32
	Mitigation Bank, Quickdraw	20.65
E3	Freshwater Emergent Wetland	205.65
	Freshwater Forested/Shrub Wetland	112.00
	Freshwater Pond	8.69
	Riverine	9.86

5.6.2 Floodplains

As shown in Figure 5.6-2, all three segment buffers traverse wetlands and the 100-year floodplain. Flood zone acres are high in Segment E2, which has large sections of swamp land, and Segment E3, which goes over the St. Johns River and is near both Sawgrass Lake and Lake Washington (Table 5.6-2).

Table 5.6-2: Corridor E Flood Zones

Segment	Flood Zone	Acres
E1	A	21.49
	AE	129.52
E2	A	1,043.32
E3	A	5.6

5.6.3 Historic and Cultural Resources

Historic resources in Corridor E include 275 historic structures, six resource groups, four archaeological sites and 46 recorded surveys. Segment E1 features many historic structures clustered in the city of St. Cloud (Figure 5.6-3). These structures occur on both sides of and within close proximity to the existing roadway. Two archaeological sites exist on the west end of Segment E1, on both sides of the existing roadway between the Florida Turnpike and Partin Settlement Road, however the southern of the two sites contains no definite artifacts. Two other archaeological sites are located at the eastern end of Segment E1 and the western end of Segment E2. Both sites are on the north/east side of the existing roadway on either side of the intersection with Old Melbourne Road. Due to the large number of historical features, the corresponding table can be found in Appendix E.

5.6.4 Threatened and Endangered Species

Corridor E goes through consultation areas for the Caracara, Florida grasshopper sparrow, Lake Wales Ridge plants (Segments E1 and E2), red-cockaded woodpecker, scrub jay, and snail kite (Figure 5.6-4). Corridor E also notably crosses through wood stork core foraging area and critical habitat for the West Indian Manatee (Segment E3). One black bear nuisance report (Segment E1) and one black bear road kill (Segment E2) have been reported in the corridor buffer (Table 5.6-3).

Table 5.6-3: Corridor E Biological Evaluation

Feature	Acres		
	E1	E2	E3
Atlantic Coast Plants Consultation Area	0	0	0
Audubon's Crested Caracara Occurrences in Florida (1992-2009)	0	1	2
Bald Eagle Nesting Territories	0	0	0
Black Bear Range	0	0	0
Black Bear Road Kills	0	1	0
Caracara Consultation Area	1,641.28	2,770.46	1208.03
Critical Habitat for the Reticulated Flatwoods Salamander and Frosted Flatwoods	0	0	0
Critical Habitat in Florida for the West Indian Manatee - 2005	0	0	2.94
Crocodile Consultation Area	0	0	0
Ecosystem Management Areas	1,641.28	2,770.46	1,208.02
FWC 1999 Wading Bird Rookery Surveys	0	2	0
FWC Black Bear Nuisance Reports	1	0	0
Final Designation of Critical Habitat in Florida for the Elkhorn and Staghorn Corals - 2009	0	0	0
Final Designation of Critical Habitat in Florida for the Smalltooth Sawfish - 2009	0	0	0
Florida Forever BOT Projects	0	359.33	0
Florida Grasshopper Sparrow Consultation Area	1,641.28	2,770.46	1,208.03
Florida Managed Areas	12.03	374.19	156.68
Florida National Wildlife Refuges	0	434.97	0
Florida Panther Mortality (1972 through August 2010)	0	1	0

Feature	Acres		
	E1	E2	E3
Florida Sand Skink and Blue-tailed (Bluetail) Mole Skink Suitability	0	0	0
Florida State Parks	0	0	0
Freshwater Mussels Critical Habitat	0	0	0
Gopher Tortoise Relocation Permit Recipient Sites in Florida	0	0	0
Gulf Sturgeon Critical Marine Habitat	0	0	0
Gulf Sturgeon Critical Riverine Habitat	0	0	0
Lake Wales Ridge Plants Consultation Area	1,641.28	1,723.98	0
Manatee Consultation Area	0	0	0
National Park Projects	0	0	0
National Parks and Seashores	0	0	0
Okeechobee Gourd Consultation Area	0	0	0
Panther Consultation Area	0	0	0
Panther Zones	0	0	0
Piping Plover Locations	0	0	0
Piping Plover Consultation Area	0	0	0
Piping Plover Critical Habitat	0	0	0
Public Land	12.07	373.62	156.35
Rare and Imperiled Fish	0	0	0
Red-Cockaded Woodpecker Consultation Area	1,641.28	2,624.70	25.42
Red-cockaded Woodpecker Active and Inactive Occurrences in Florida - 2005	0	0	0
Sand Skink Consultation Area	0	0	0
Scrub Jay Consultation Area	1,642.56	2,772.67	1,208.98
Scrub Jay Occurrences in Florida (1992-1993)	0	0	0
Short-Tailed Hawk and Swallow-Tailed Kite Nests	0	0	0
Snail Kite Consultation Area	1,641.28	2,770.46	1,208.03
Snail Kite Critical Habitat	0	0	0
Snail Kite Priority Management Zones	0	0	0
Snowy Plover Nest Locations 2006	0	0	0
TNC Ecological Resource Conservation Areas	1,641.28	1,541.21	769.54
Wood Stork Core Foraging Areas	1,641.28	2,770.46	1,208.03
Wood Stork Nests	0	0	0

5.6.5 Noise Evaluation

Segment E1 in urban Osceola County includes a large number of potential noise sensitive receptors (Figure 5.6-5). There are 11 churches, 5 civic centers, the St. Cloud Chamber of Commerce, 17 health care facilities, 1 assisted living facility, 6 schools, 5 mobile home parks, 2 culture centers, and 2 parks (Table 5.6-4). Segments E2 and E3 have fewer community features and potential noise sensitive features than Segment E1, as they are entirely in rural portions of Osceola and Brevard counties.

Table 5.6-4: Corridor E Potential Noise Sensitive Receptors

Segment	Type	Name	Count
E1	Florida Managed Area	Lake Lizzie Conservation Area	
	Health Care Facility	Dreyer, Lizzette D.M.D.	
	Health Care Facility	Osceola Women & Family Medicine Specialists	
	Health Care Facility	Best Health Medical Clinic	
	Health Care Facility	Night Light Pediatrics Center LLC	
	Health Care Facility	All Florida Family and Sports Medicine	
	Health Care Facility	Mid Florida Dermatology Associates	
	Health Care Facility	Park Place Behavioral Health Care	
	Health Care Facility	Take Care Health Services	
	Health Care Facility	Hyderabad Medical Services PLLC d/b/a Hyde Medical	
	Health Care Facility	Avante at St. Cloud	
	Health Care Facility	USA Medical Care	
	Health Care Facility	JSA Medical Group - St. Cloud	
	Health Care Facility	St. Cloud Family Medicine	
	Health Care Facility	Little Angels Pediatrics	
	Health Care Facility	Tropical Medspa	
	Health Care Facility	Basharat Hussain MD PA	
	Health Care Facility	Physician Group, LLC	
	Community Center	Chamber of Commerce - Saint Cloud	
	Assisted Housing	Saint Cloud Village	
	Culture Center	St. Cloud Gift Gallery	
	Culture Center	Veterans Memorial Library - St. Cloud Branch	
	Park	Sexton Boat Ramp	
	Park	Veterans Memorial Park	
	Laser Facility	Saint Cloud Veterinary Center	
	Group Care	St. Thomas Acquinas Catholic School	
	Group Care	Teenage Parenting Center	
	Group Care	City Of Life Christian Academy	
	Group Care	Christ Centered Academics	
	Group Care	Zenith High School	
	School	City of Life Christian Academy	
	School	Tele-Tots Childcare Learning Center	
	School	Christ Centered Academics	
	School	Faith Christian Academy Of St. Cloud	
	School	Florida Christian College, Inc.	
	School	Ross E. Jeffries Elementary School	
	Housing Parcels	Single-Family Residential	592
	Housing Parcels	Mobile Homes	8
	Housing Parcels	Multi-Family Residential	37
	Housing Parcels	Condominiums	24
	Housing Parcels	Retirement Homes	2

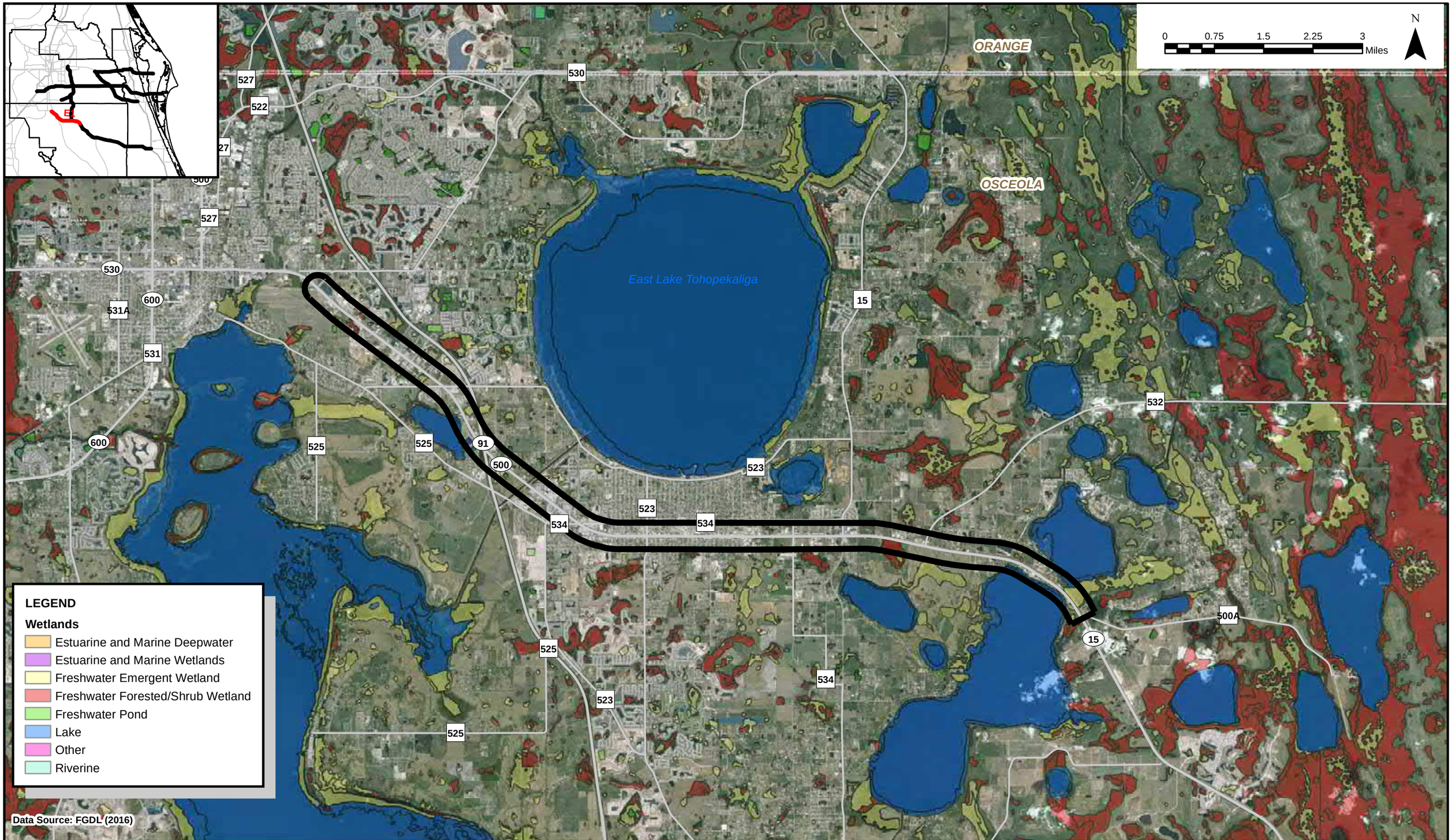
Segment	Type	Name	Count
E2	National Wildlife Refuge Boundary	Everglades Headwaters National Wildlife Refuge	
	Florida Managed Areas	Holopaw State Forest	
	Florida Managed Areas	Herky Huffman/Bull Creek Wildlife Management Area	
	Florida Managed Areas	Triple N Ranch Wildlife Management Area	
	Housing Parcels	Single Family Residential	27
	Housing Parcels	Mobile Homes	45
	Housing Parcels	Condominiums	60
E3	Florida Managed Areas	River Lakes Conservation Area	
	Florida Managed Areas	Three Forks Conservation Area	
	Florida Managed Areas	Kempfer Property Flowage Easement	
	Park	Sweetwater Boat Ramp (Brevard Airboat Association)	
	Housing Parcels	Single-Family Residential	2

5.6.6 Contamination

The density of potential sources of contamination sites is greatest in the urban area, Segment E1 (Table 5.6-5 and Figure 5.6-6). It is an area that is notable for high-density commercial activity and thus lends itself to the inclusion of some DEP cleanup site clusters (mostly fuel stations/convenience stores), four small quantity generators spread throughout, and two solid waste facilities in the automotive industry. Potential contamination sources are limited and sparsely distributed along Segments E2 and E3.

Table 5.6-5: Corridor E Potential Sources of Contamination

Segment	Type	Name	Acres
E1	DEP Cleanup Site	D&N Trucking Ber 08-7I-38441	
	DEP Cleanup Site	Super Mini Mart	
	DEP Cleanup Site	Chevron #42078-Turnpike	
	DEP Cleanup Site	Kisselback Ford (Former Poffenbaugh Ford)	
	DEP Cleanup Site	St. Cloud Trailer Park	
	DEP Cleanup Site	Sunrise Food Mart #152	
	DEP Cleanup Site	Texaco #17	
	DEP Cleanup Site	7-Eleven Store #35613	
	DEP Cleanup Site	Jiffy Food Store #2483	
	DEP Cleanup Site	7-Eleven Food Store #32645	
	DEP Cleanup Site	Citgo-Bronson #349	
	DEP Cleanup Site	Sunshine Food Mart #144	
	DEP Cleanup Site	7-Eleven Food Store #19392-01	
	DEP Cleanup Site	Circle K #2708967	
	DEP Cleanup Site	Extreme Motor Works	
	DEP Cleanup Site	Circle K #2721236	
	NPDES Facility	Chili's Restaurant	
	NPDES Facility	The Oaks Shopping Center	
	Small Quantity Generator	Kisselback Ford	
	Small Quantity Generator	Gentronics Company, Inc.	
	Small Quantity Generator	Holiday Chevrolet Oldsmobile LLC	
	Small Quantity Generator	The Recovery Room of Central Florida, Inc.	
	Solid Waste Facility	Tire Kingdom LLC #216	
	Solid Waste Facility	Joes Auto Service Center, Inc.	
	Waste Cleanup OPEN Responsible Party Site	Kisselback Ford (Former Poffenbaugh Ford)	
	Waste Cleanup CLOSED Responsible Party Site	Goodyear Dealer Expansion #1806	
E2	DEP Cleanup Site	Island Food Store #510	
	DEP Cleanup Site	Sunrise Food Mart #129	
	DEP Cleanup Site	Holopaw Restaurant	
	NPDES Facility	SR 500	
	Waste Cleanup CLOSED Responsible Party Site	Holopaw Dithane Spill	
	Waste Cleanup CLOSED Responsible Party Site	Progress Energy Sarap Holopaw Substation	
E3	DEP Cleanup Site	Reb Oil #638	
	NPDES Facility	Chuck E Cheese's	
	Solid Waste Facility	US 192 Debris Staging Area	



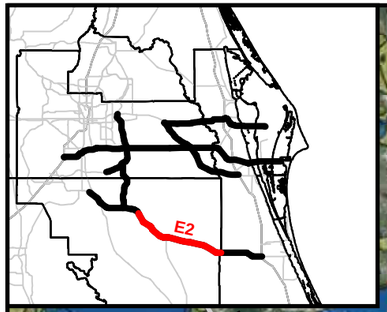
East Central Florida Corridor Evaluation Study

Corridor E

Wetlands

FIGURE 5.6-1

SEGMENT E1



0 0.75 1.5 2.25 3 Miles

N

500A

534

15

OSCEOLA

419

500

15

LEGEND

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetlands
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Data Source: FGDL (2016)

East Central Florida Corridor Evaluation Study

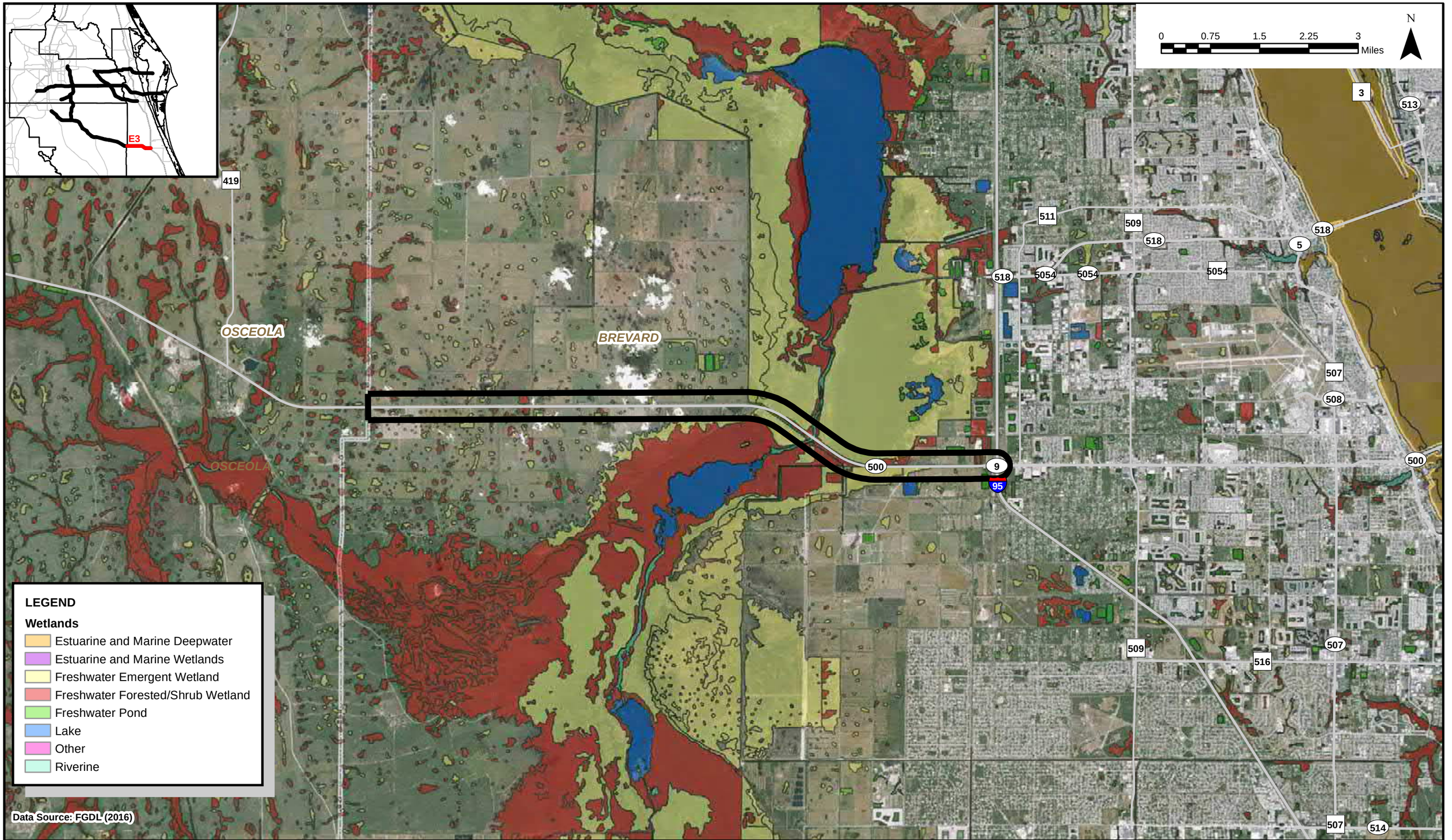
FDOT

Corridor E

Wetlands

FIGURE 5.6-1

SEGMENT E2



East Central Florida Corridor Evaluation Study

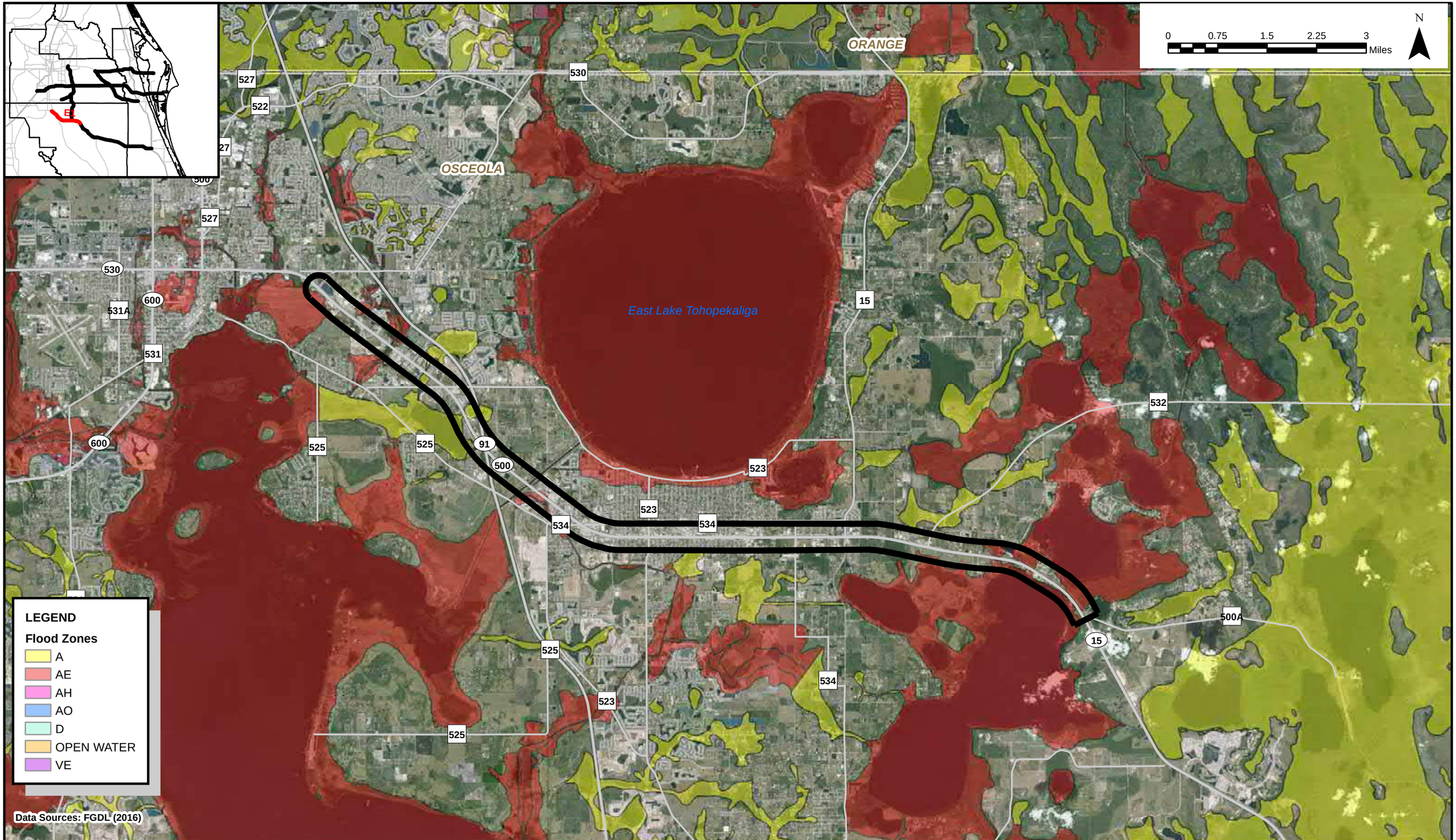
FDOT

Corridor E

Wetlands

FIGURE 5.6-1

SEGMENT E3



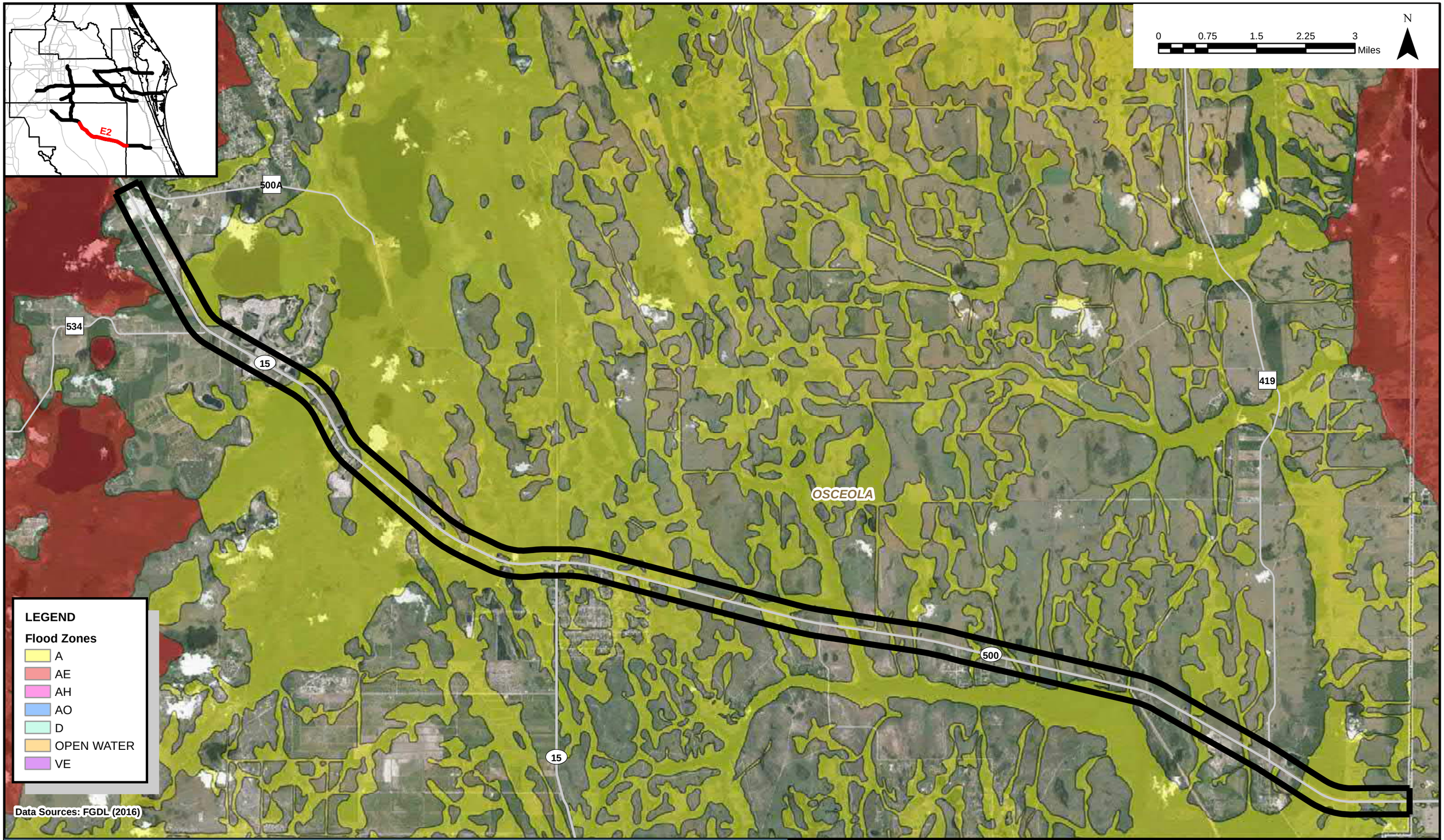
East Central Florida Corridor Evaluation Study

FDOT

Corridor E
Flood Zones

FIGURE 5.6-2

SEGMENT E1



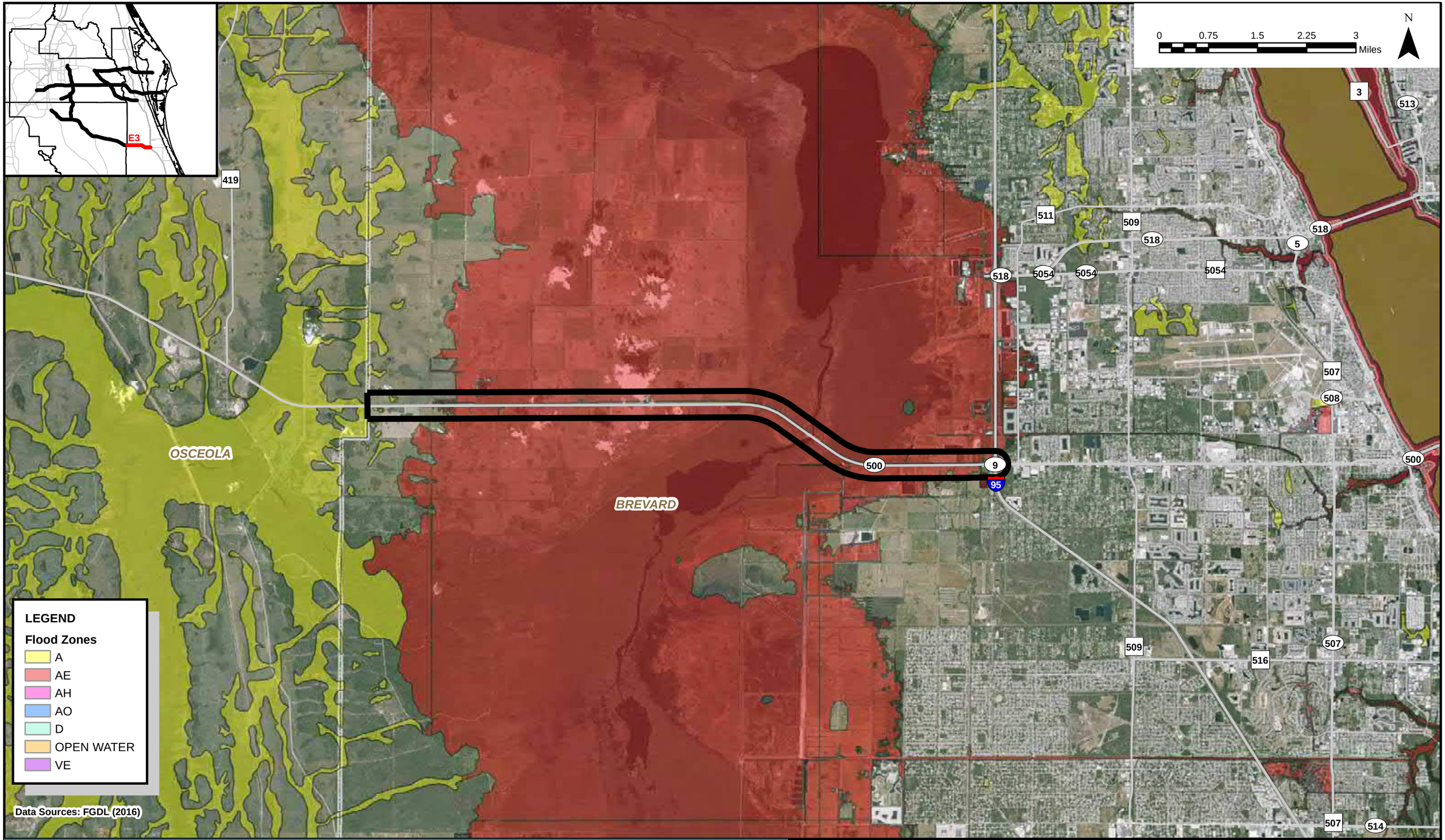
East Central Florida Corridor Evaluation Study

Corridor E

Flood Zones

FIGURE 5.6-2

SEGMENT E2



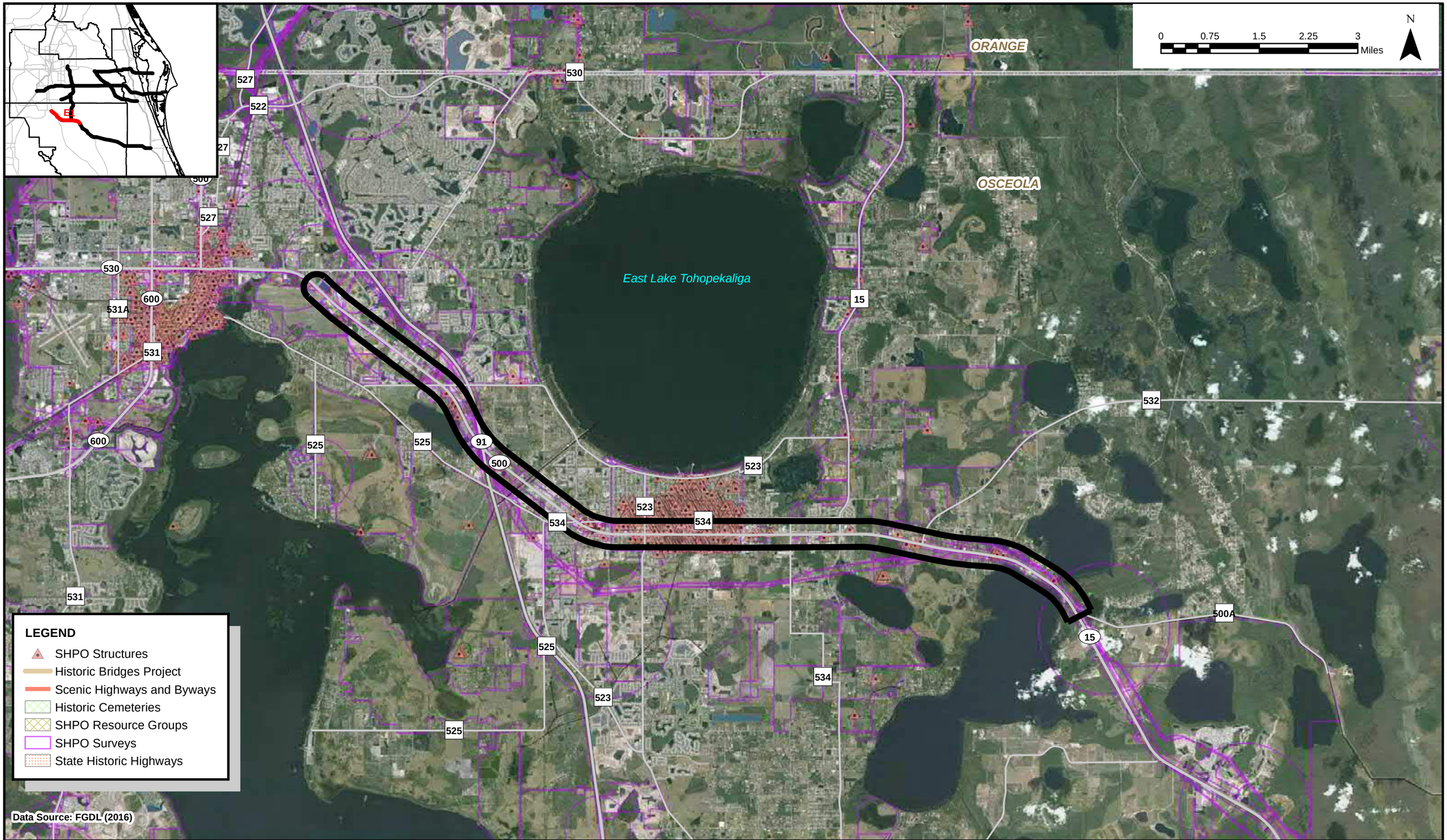
East Central Florida Corridor Evaluation Study

Corridor E

Flood Zones

FIGURE 5.6-2

SEGMENT E3



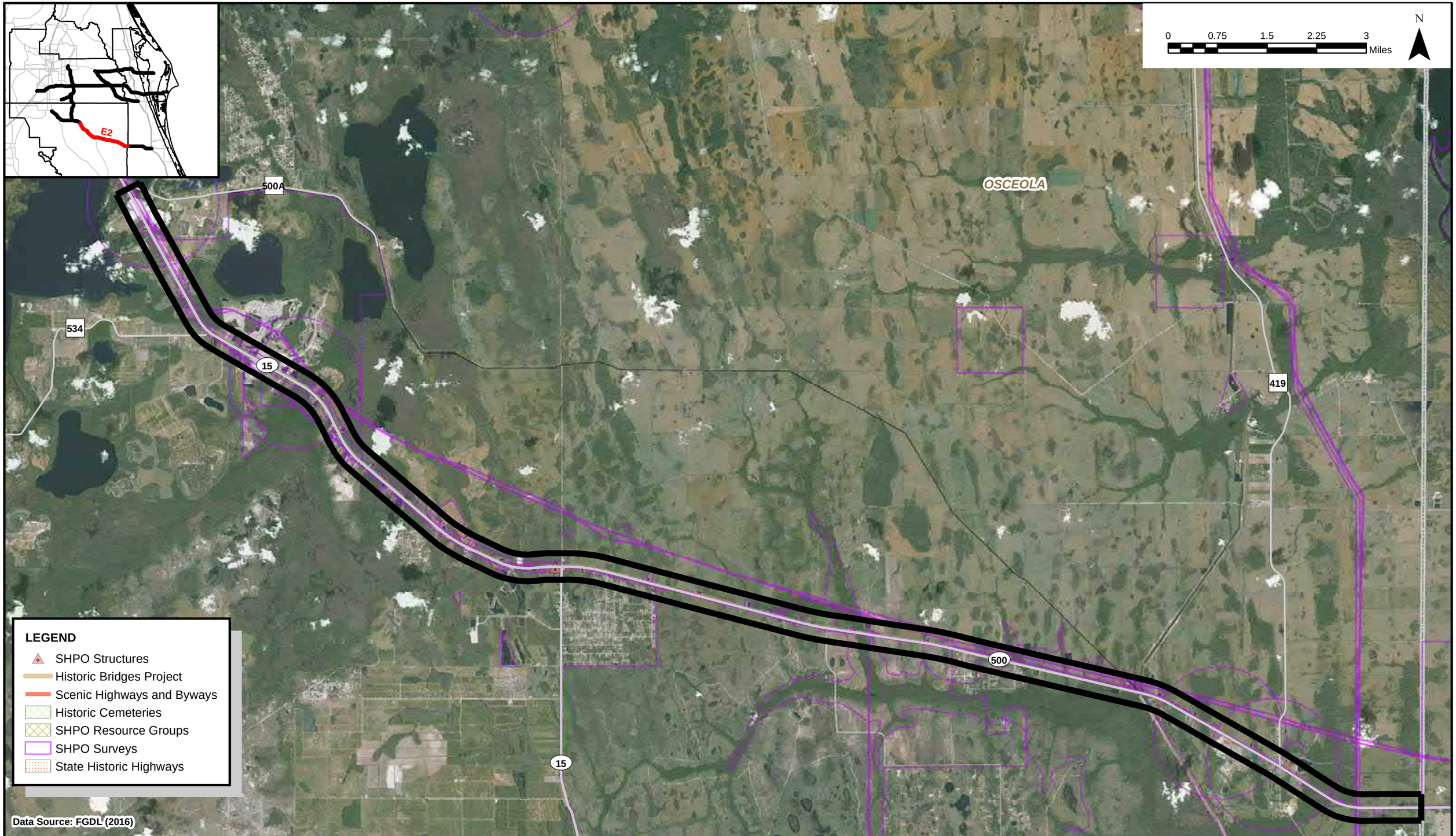
East Central Florida Corridor Evaluation Study

Corridor E

Historic and Cultural Resources

FIGURE 5.6-3

SEGMENT E1



East Central Florida Corridor Evaluation Study

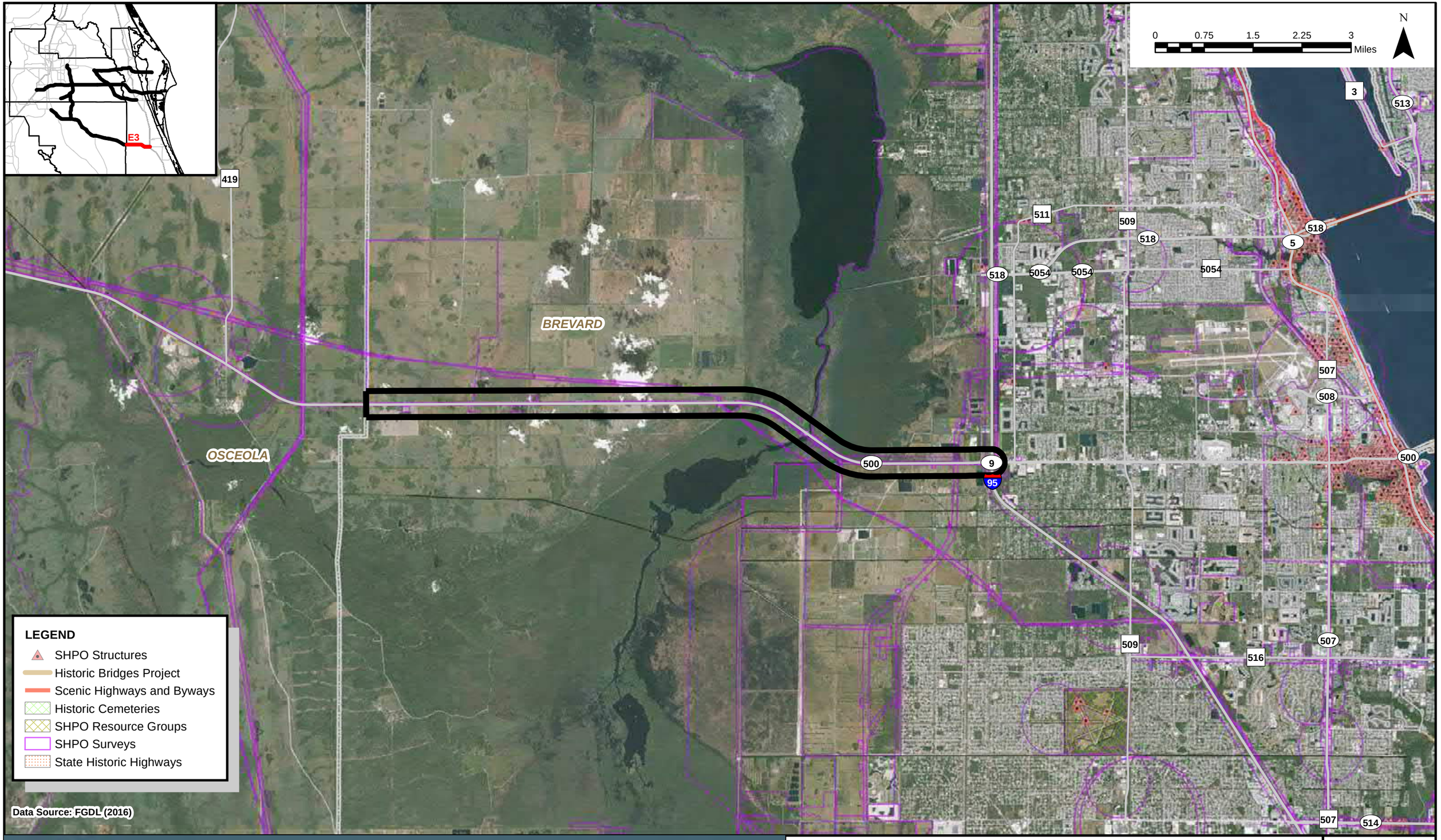
FDOT

Corridor E

Historic and Cultural Resources

FIGURE 5.6-3

SEGMENT E2



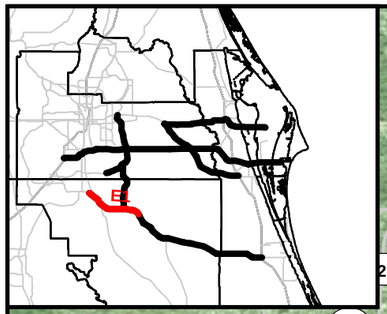
East Central Florida Corridor Evaluation Study

Corridor E

Historic and Cultural Resources

FIGURE 5.6-3

SEGMENT E3



0 0.75 1.5 2.25 3 Miles

N

ORANGE

OSCEOLA

East Lake Tohopekaliga

527 522 530 500 527 530 531A 600 531 600 525 525 91 500 523 534 523 534 15 532 531 525 523 534 500A 15 525

LEGEND

Lake Wales Ridge Plants Consultation Area

Data Sources: FWS (2016)

East Central Florida Corridor Evaluation Study

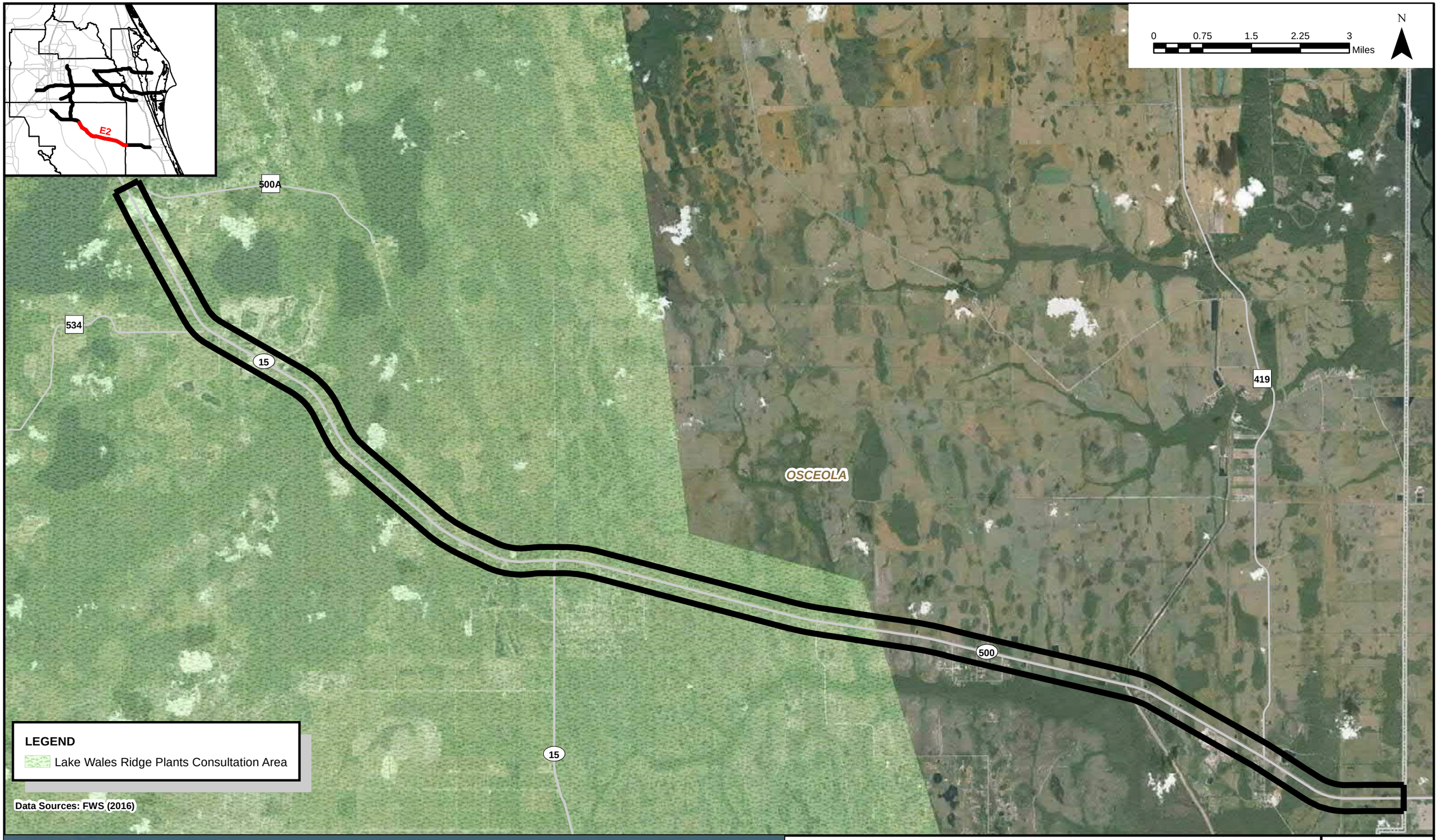
FDOT

Corridor E

Threatened and Endangered Species (Plants)

FIGURE 5.6-4

SEGMENT E1



East Central Florida Corridor Evaluation Study

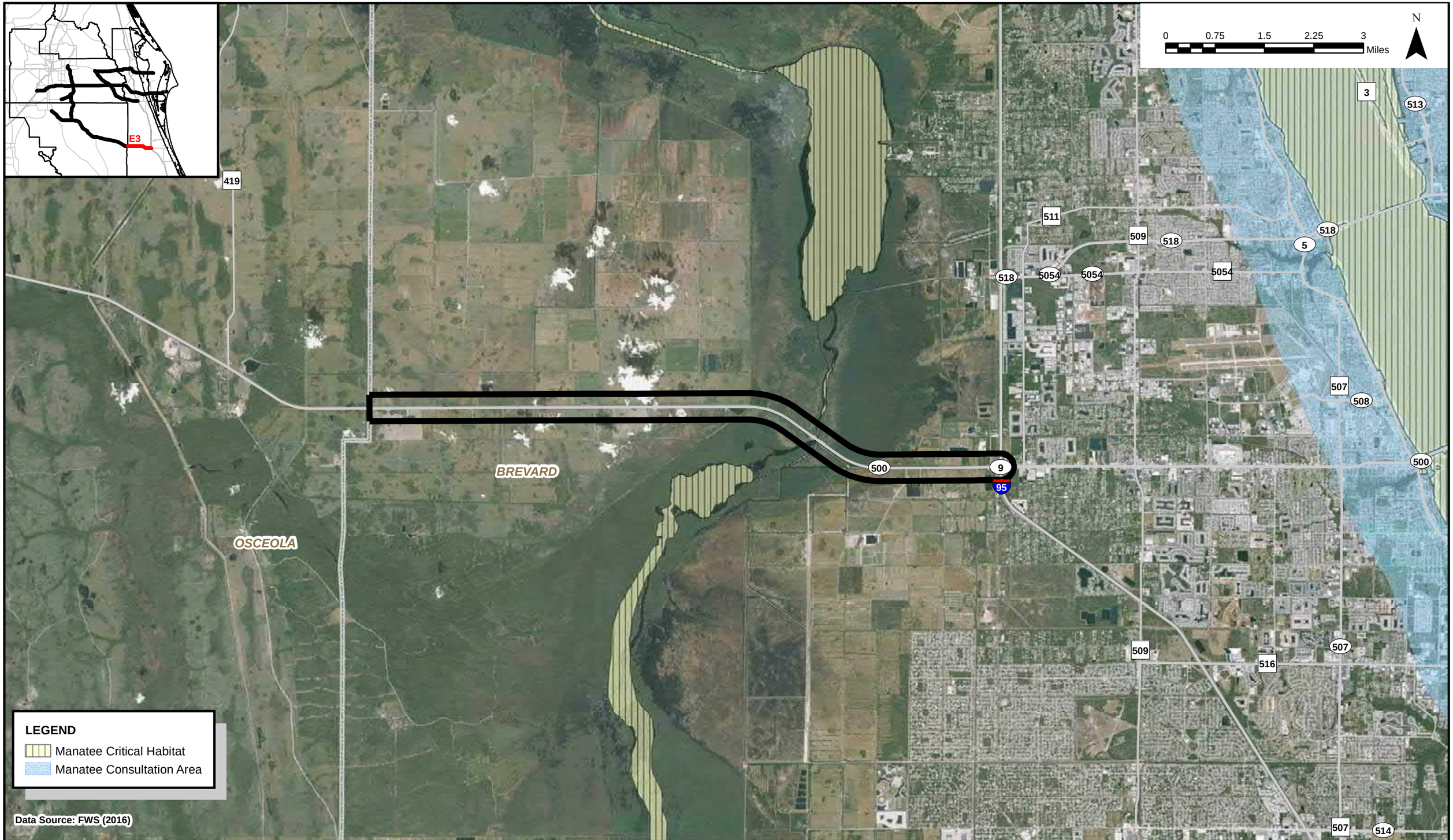
FDOT

Corridor E

Threatened and Endangered Species (Plants)

FIGURE 5.6-4

SEGMENT E2



East Central Florida Corridor Evaluation Study

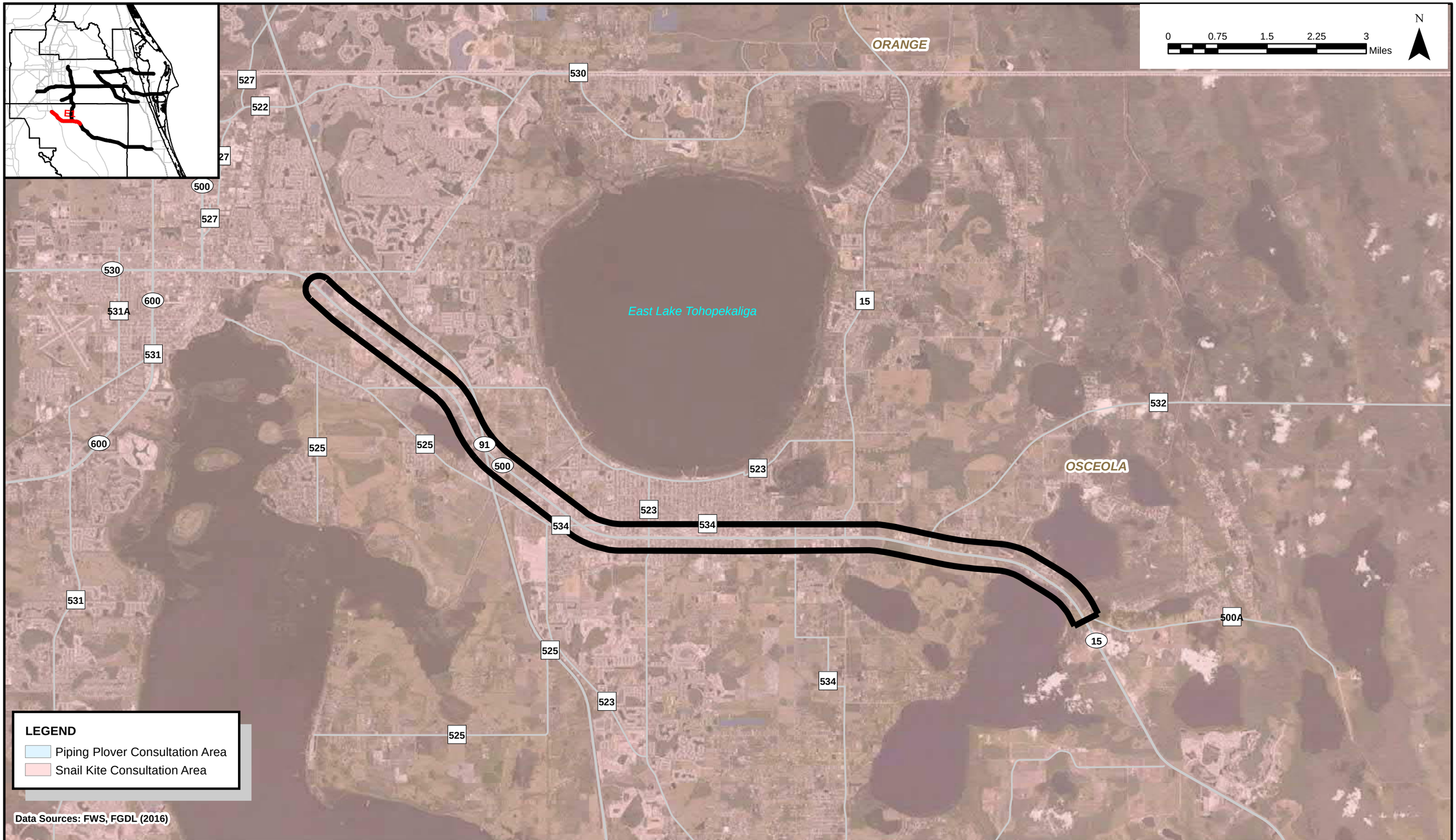
FDOT

Corridor E

Threatened and Endangered Species (Manatee)

FIGURE 5.6-4

SEGMENT E3



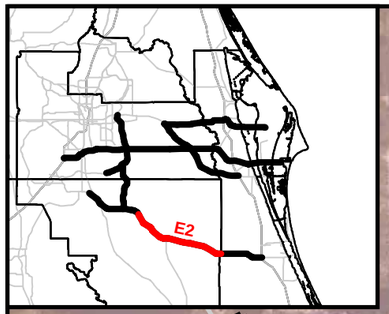
East Central Florida Corridor Evaluation Study

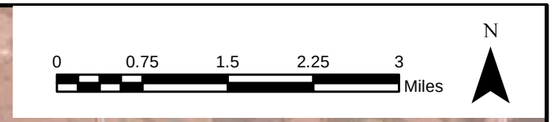
FDOT

Corridor E
Threatened and Endangered Species
(Piping Plover and Snail Kite)

FIGURE 5.6-4

SEGMENT E1





500A

534

15

419

OSCEOLA

500

15

LEGEND

Piping Plover Consultation Area

Snail Kite Consultation Area

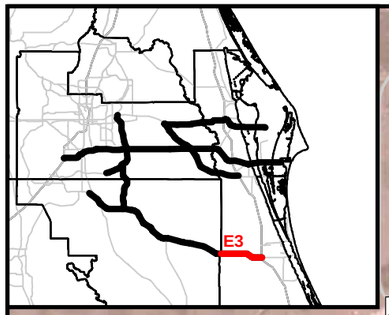
Data Sources: FWS, FGDL (2016)

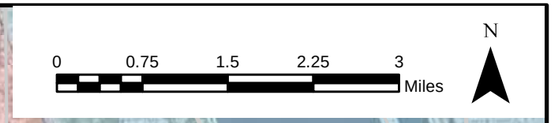
East Central Florida Corridor Evaluation Study

Corridor E
Threatened and Endangered Species (Piping Plover and Snail Kite)

FIGURE 5.6-4

SEGMENT E2





LEGEND

- Piping Plover Consultation Area
- Snail Kite Consultation Area

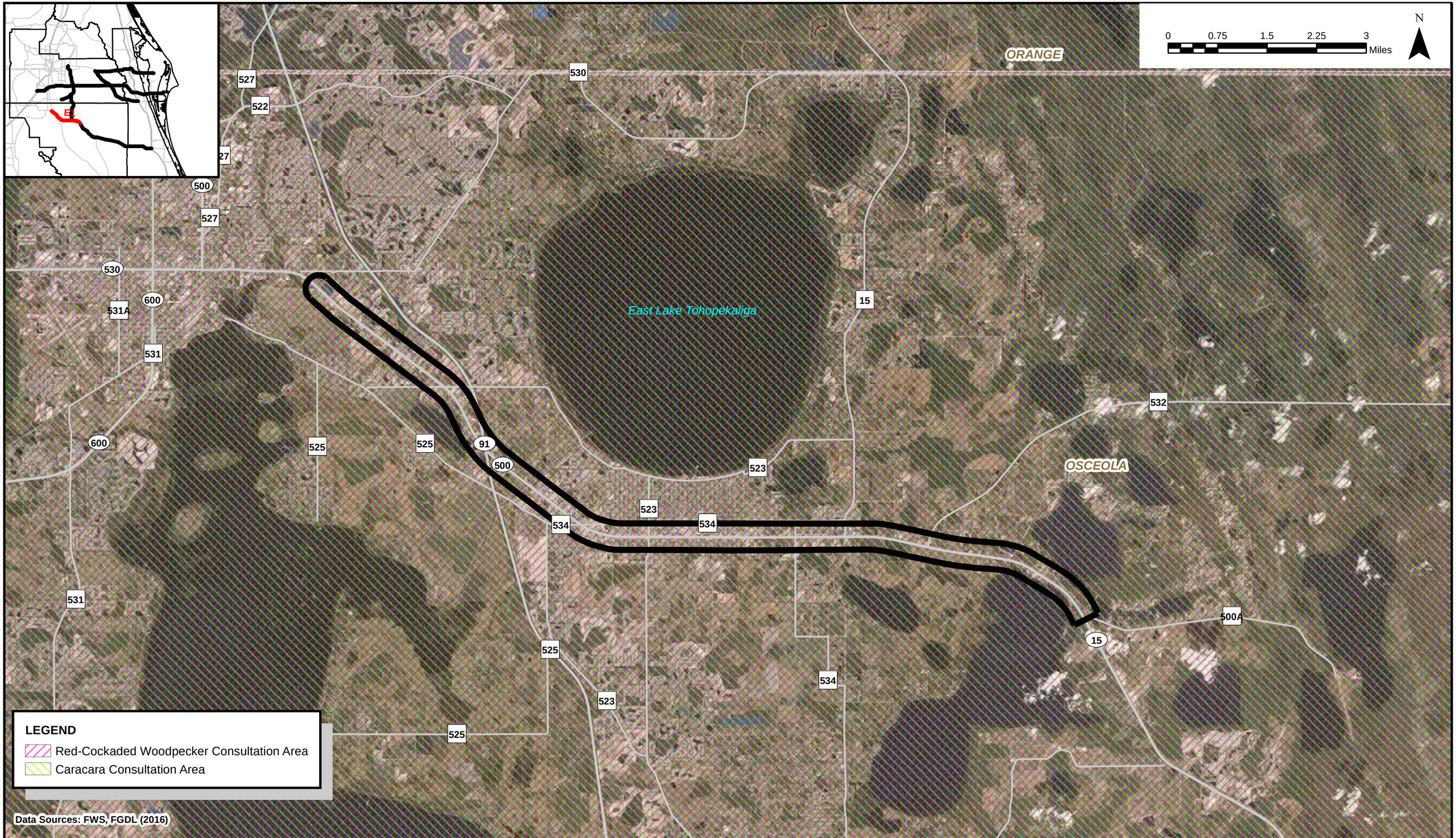
Data Sources: FWS, FGDL (2016)

East Central Florida Corridor Evaluation Study

Corridor E
Threatened and Endangered Species (Piping Plover and Snail Kite)

FIGURE 5.6-4

SEGMENT E3



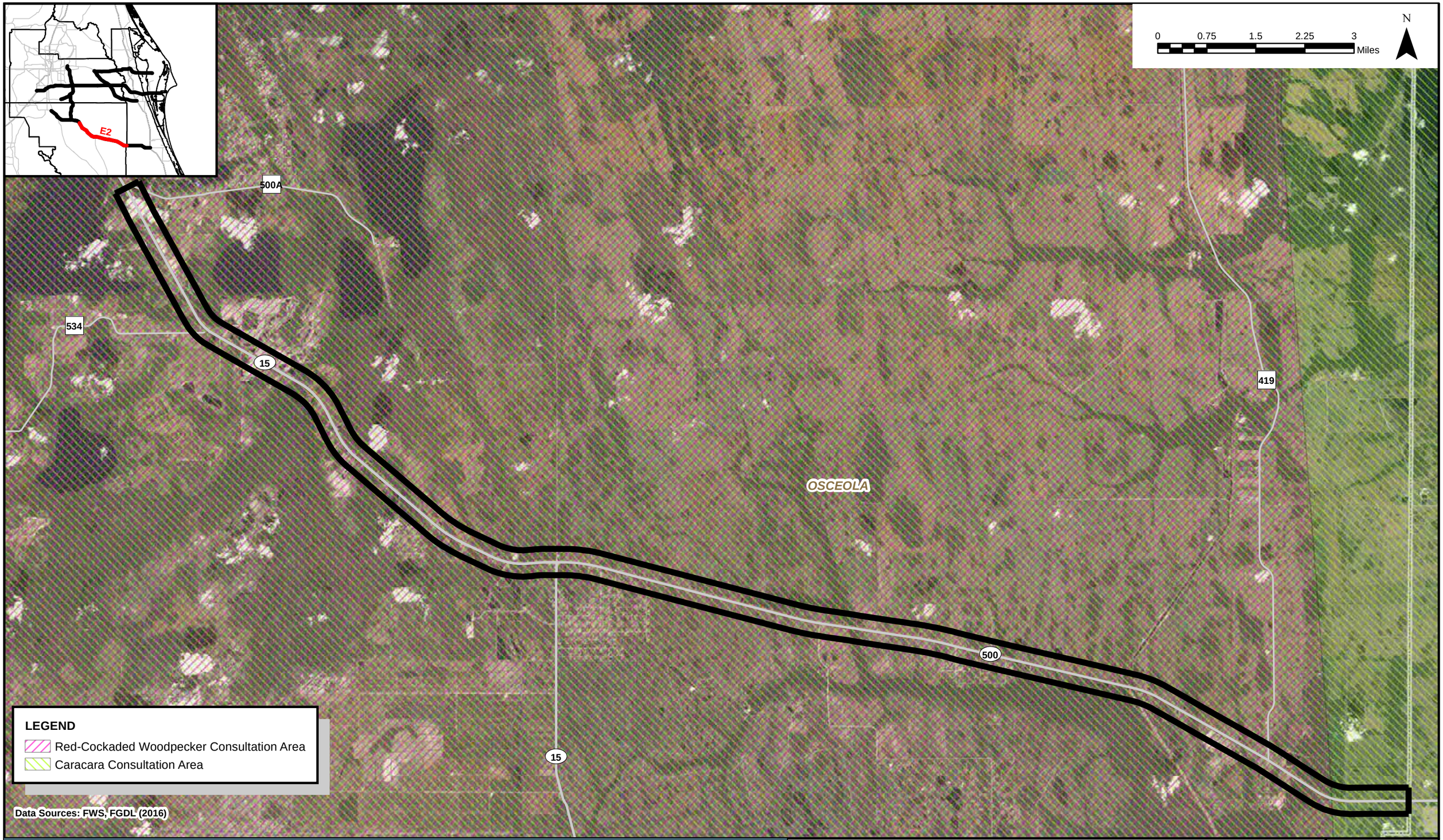
East Central Florida Corridor Evaluation Study

FDOT

Corridor E
Threatened and Endangered Species
(Red-Cockaded Woodpecker and Caracara)

FIGURE 5.6-4

SEGMENT E1

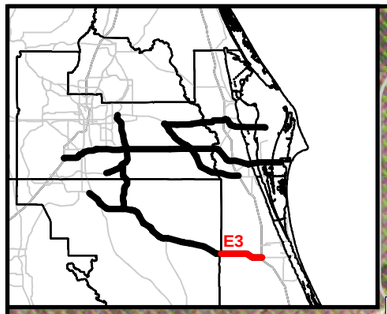


East Central Florida Corridor Evaluation Study

Corridor E
Threatened and Endangered Species (Red-Cockaded Woodpecker and Caracara)

FIGURE 5.6-4

SEGMENT E2



0 0.75 1.5 2.25 3 Miles

N

419

BREVARD

OSCEOLA

3 513 511 509 518 5 518 518 5054 5054 5054 507 508 500 9 95 500 509 516 507 507 514

LEGEND

Red-Cockaded Woodpecker Consultation Area

Caracara Consultation Area

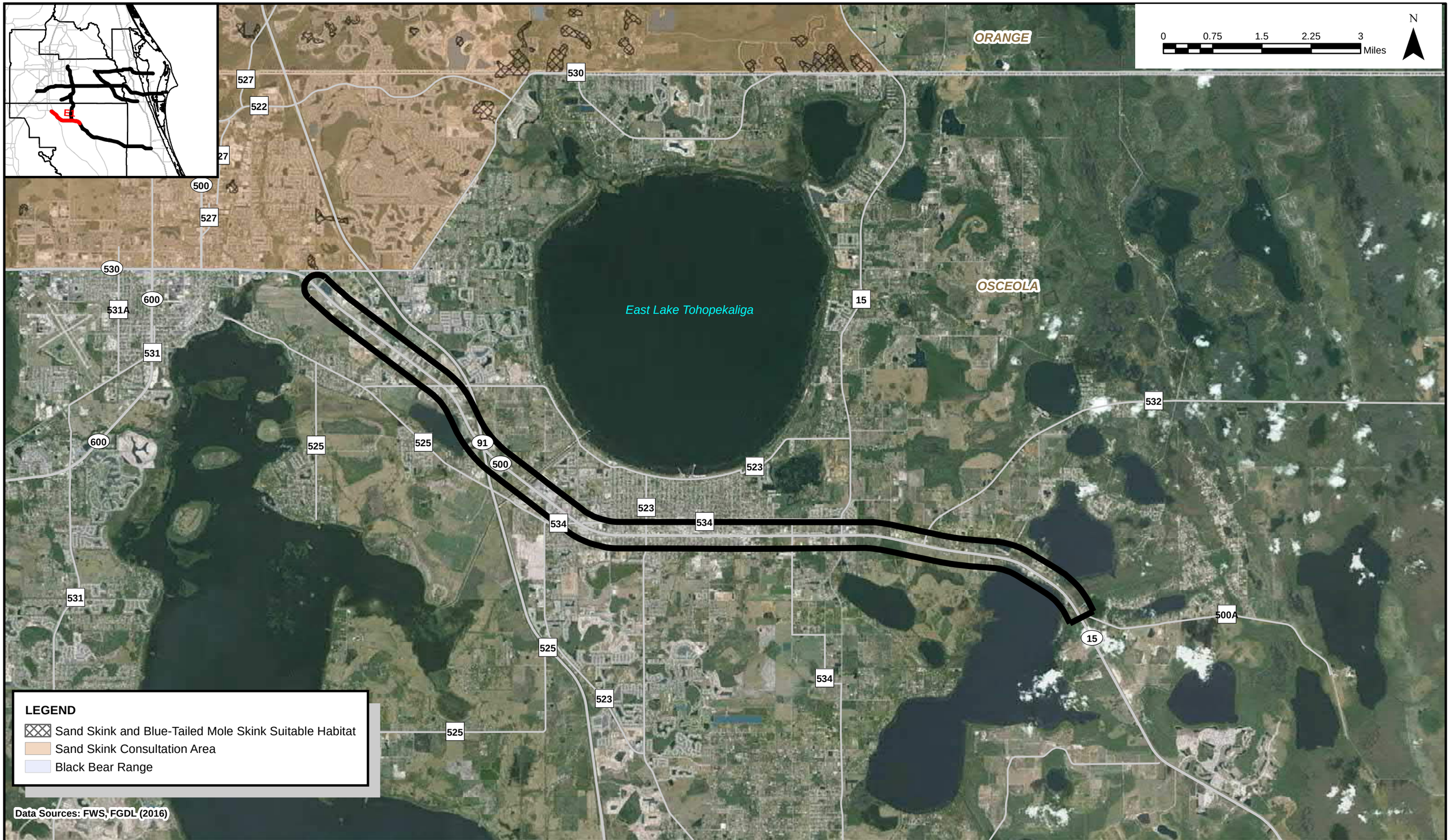
Data Sources: FWS, FGDL (2016)

East Central Florida Corridor Evaluation Study

Corridor E
Threatened and Endangered Species
(Red-Cockaded Woodpecker and Caracara)

FIGURE 5.6-4

SEGMENT E3



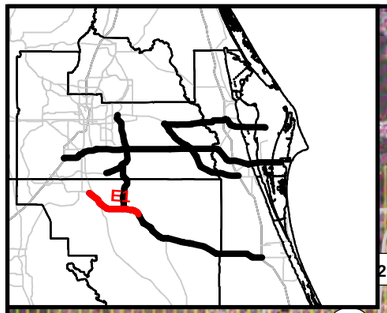
East Central Florida Corridor Evaluation Study

FDOT

Corridor E
Threatened and Endangered Species
(Sand Skink, Blue-Tailed Mole Skink and Black Bear)

FIGURE 5.6-4

SEGMENT E1



N

0 0.75 1.5 2.25 3 Miles

ORANGE

OSCEOLA

East Lake Tohopekaliga

LEGEND

Florida Grasshopper Sparrow Consultation Area

Scrub Jay Consultation Area

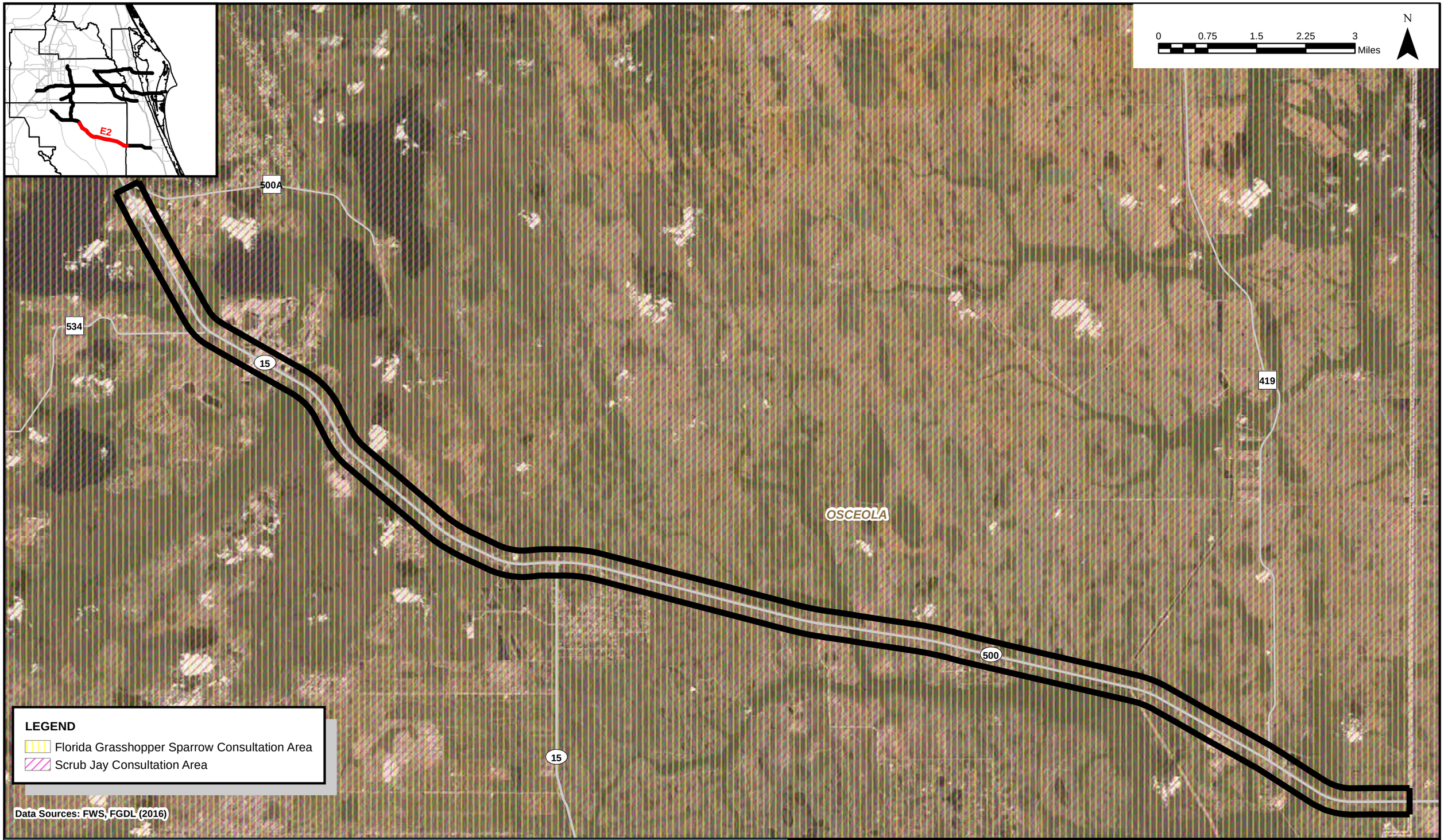
Data Sources: FWS, FGDL (2016)

East Central Florida Corridor Evaluation Study

Corridor E
Threatened and Endangered Species (Grasshopper Sparrow and Scrub Jay)

FIGURE 5.6-4

SEGMENT E1

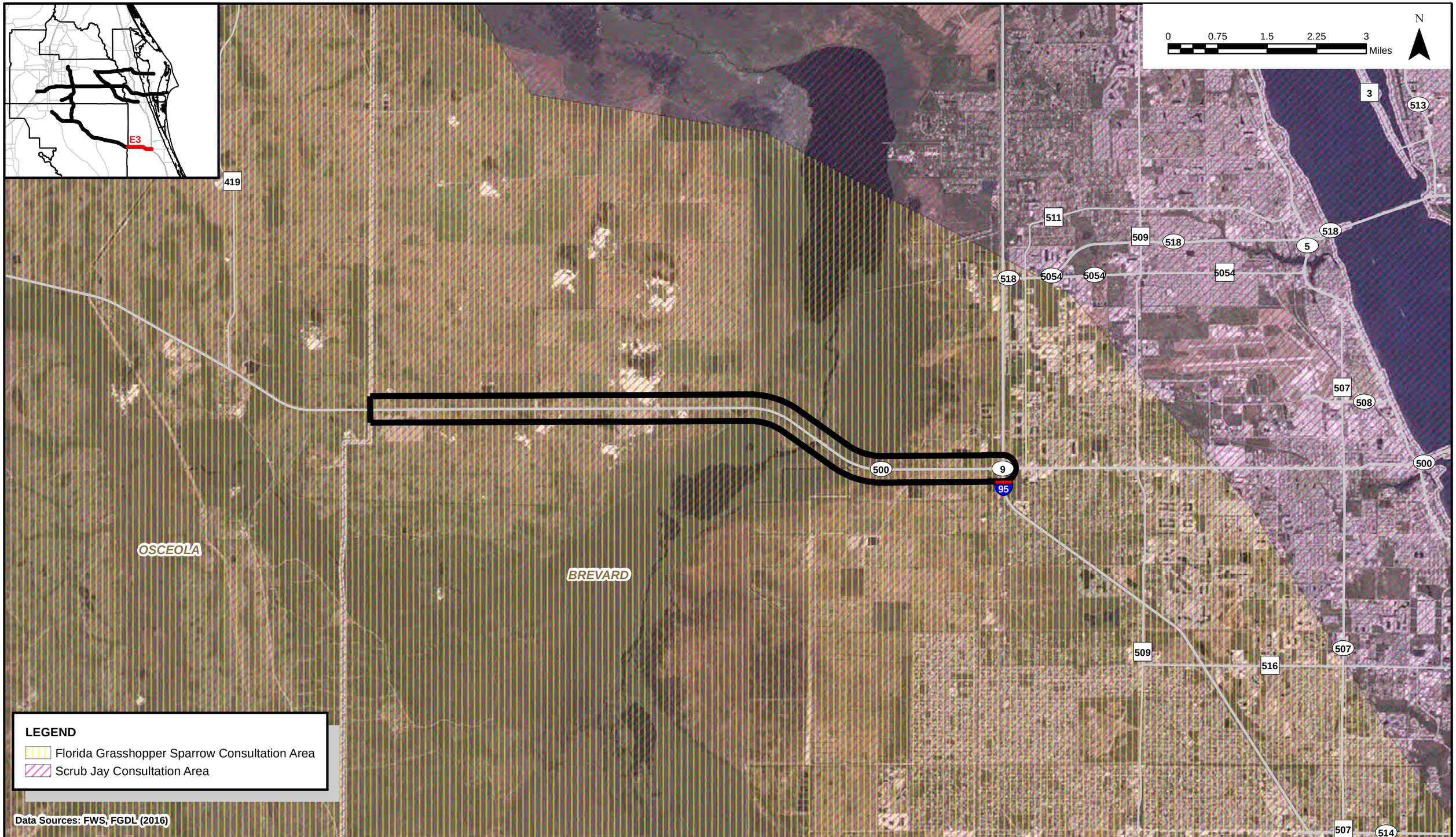


East Central Florida Corridor Evaluation Study

Corridor E
Threatened and Endangered Species (Grasshopper Sparrow and Scrub Jay)

FIGURE 5.6-4

SEGMENT E2



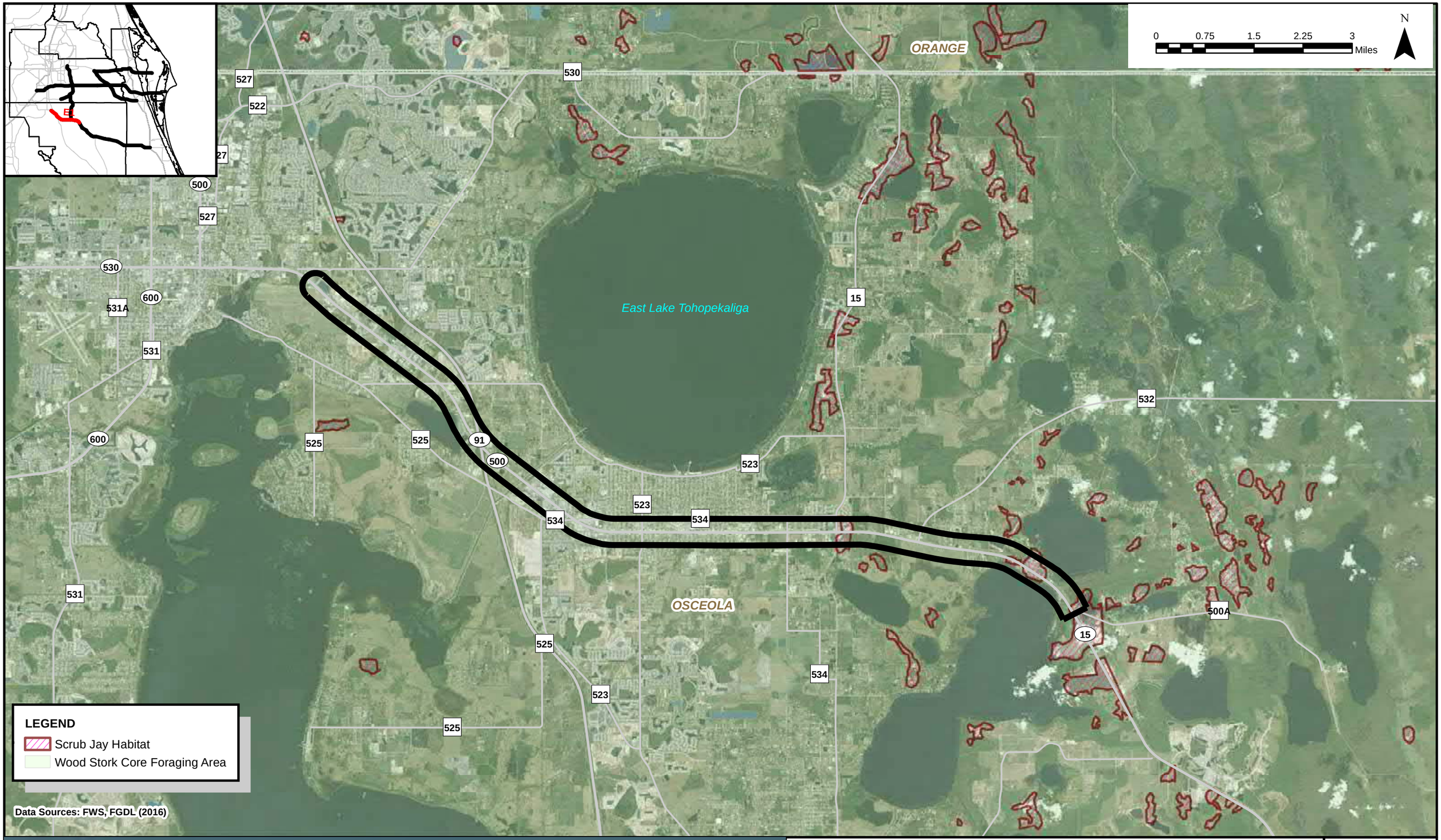
East Central Florida Corridor Evaluation Study

FDOT

Corridor E
Threatened and Endangered Species
(Grasshopper Sparrow and Scrub Jay)

FIGURE 5.6-4

SEGMENT E3

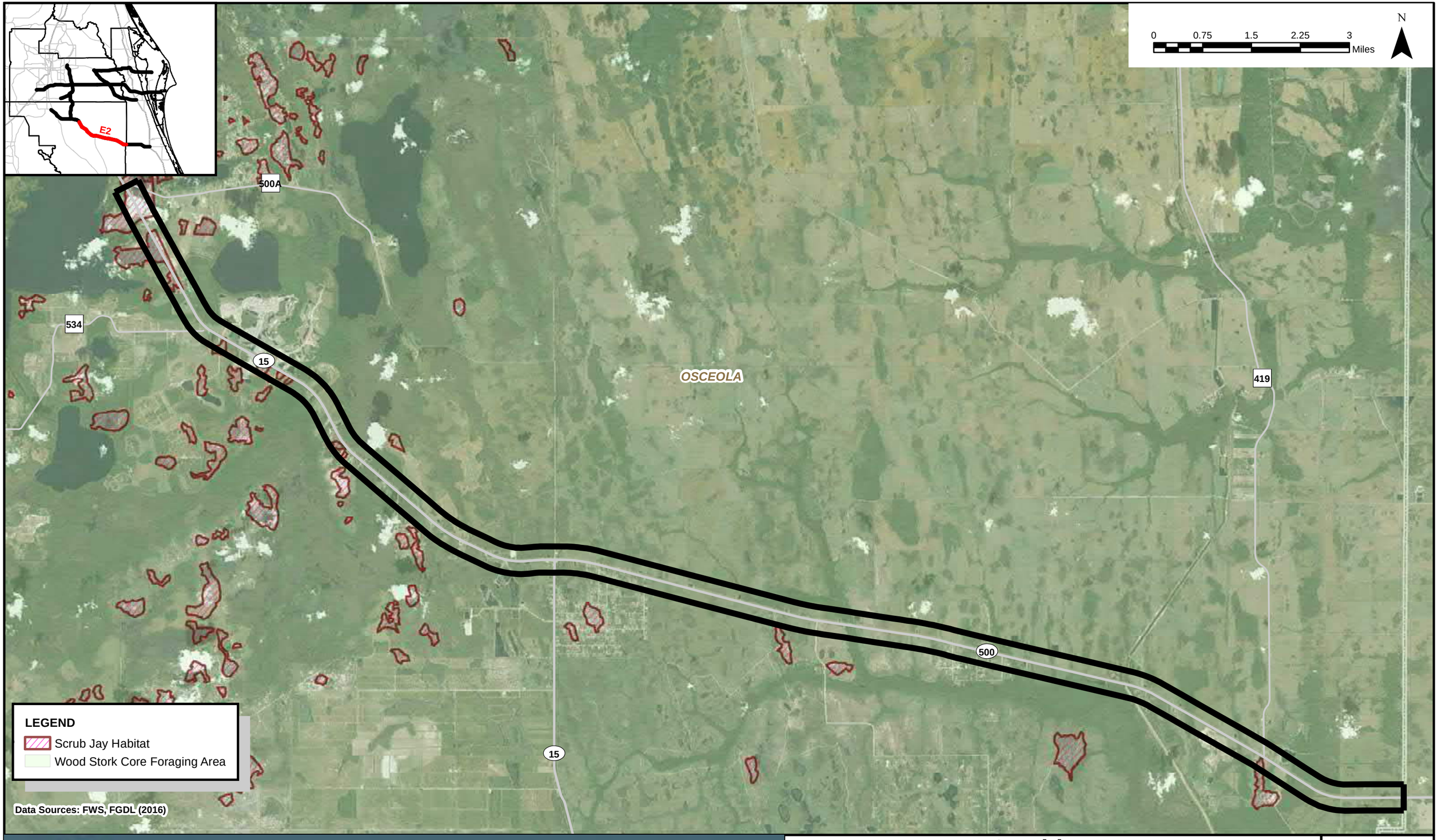


East Central Florida Corridor Evaluation Study

Corridor E
Threatened and Endangered Species (Scrub Jay and Wood Stork)

FIGURE 5.6-4

SEGMENT E1

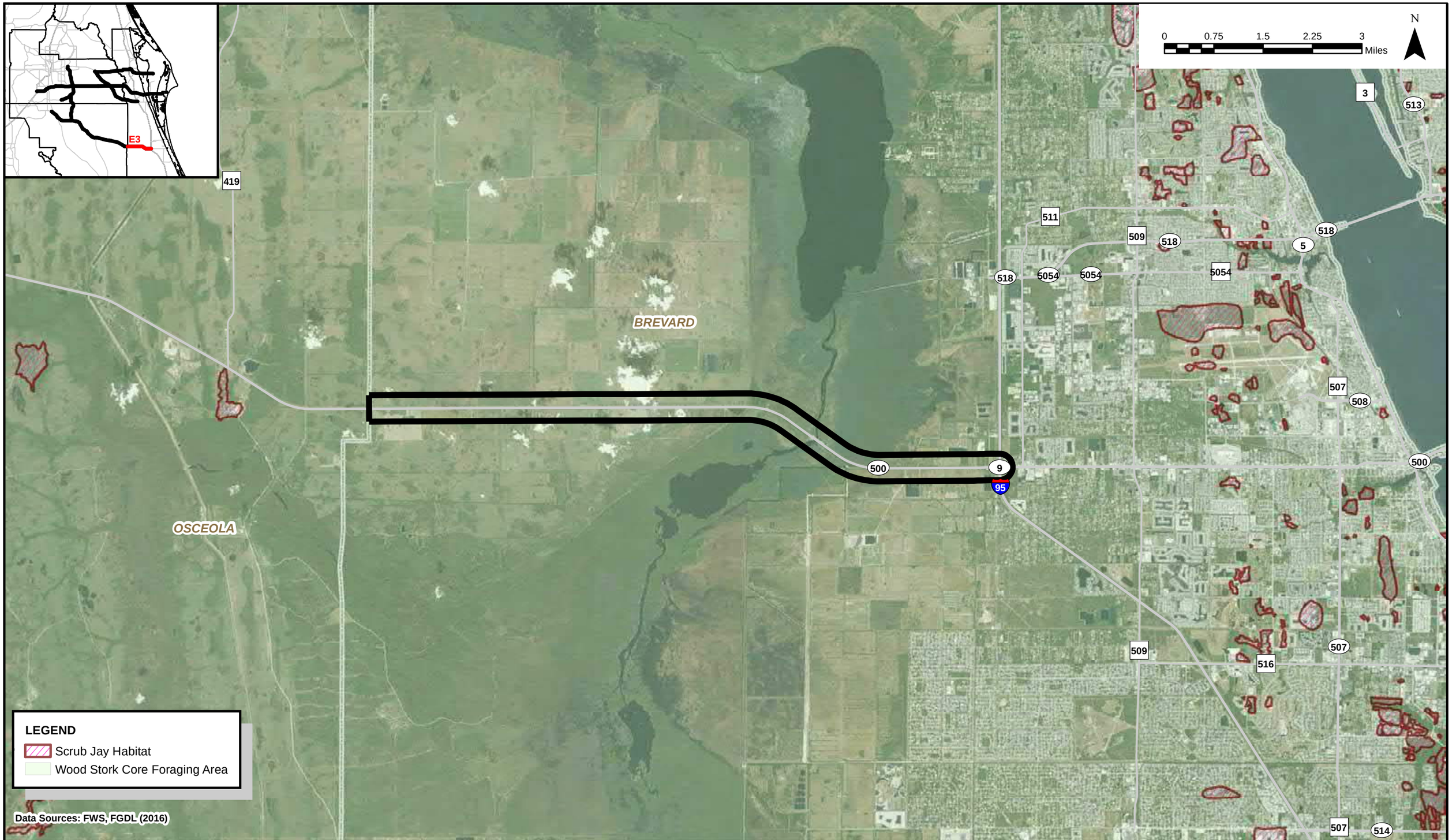


East Central Florida Corridor Evaluation Study

Corridor E
Threatened and Endangered Species (Scrub Jay and Wood Stork)

FIGURE 5.6-4

SEGMENT E2



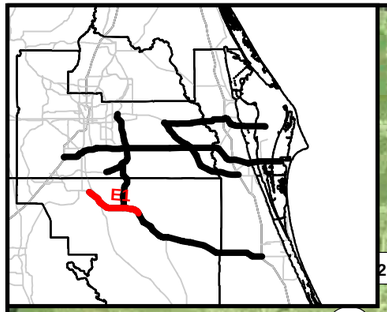
East Central Florida Corridor Evaluation Study

FDOT

Corridor E
Threatened and Endangered Species (Scrub Jay and Wood Stork)

FIGURE 5.6-4

SEGMENT E3



0 0.75 1.5 2.25 3 Miles

N

ORANGE

OSCEOLA

East Lake Tohopekaliga

LEGEND

- Bear Nuisances
- Bear Road Kills
- Eagle Nests
- Gopher Tortoise Relocations
- Panther Mortalities
- Red-Cockaded Woodpecker Occurrences
- Scrub Jay Occurrences
- Wood Stork Colonies
- Florida Forever BOT
- TNC Conservation Area
- Caracara Observations
- Rare and Imperiled Fish

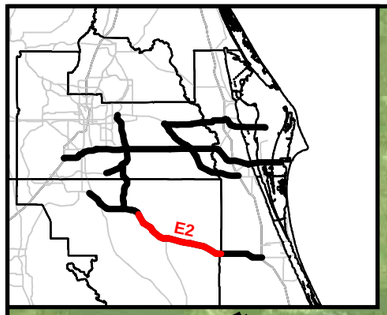
Data Sources: FWS, FGDL (2016)

East Central Florida Corridor Evaluation Study

Corridor E
Threatened and Endangered Species (Additional Features)

FIGURE 5.6-4

SEGMENT E1



0 0.75 1.5 2.25 3 Miles

N

500A

534

15

OSCEOLA

419

500

15

LEGEND

- Bear Nuisances
- Bear Road Kills
- Eagle Nests
- Gopher Tortoise Relocations
- Panther Mortalities
- Red-Cockaded Woodpecker Occurrences
- Scrub Jay Occurrences
- Wood Stork Colonies
- Florida Forever BOT
- TNC Conservation Area
- Caracara Observations
- Rare and Imperiled Fish

Data Sources: FWS, FGDL (2016)

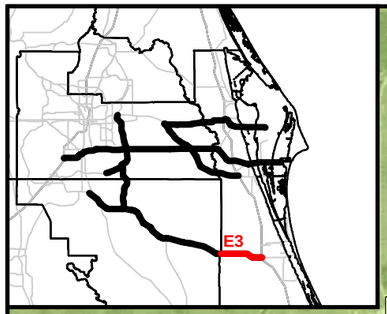
East Central Florida Corridor Evaluation Study

FDOT

Corridor E
Threatened and Endangered Species (Additional Features)

FIGURE 5.6-4

SEGMENT E2



LEGEND

- Bear Nuisances
- Bear Road Kills
- Eagle Nests
- Gopher Tortoise Relocations
- Panther Mortalities
- Red-Cockaded Woodpecker Occurrences
- Scrub Jay Occurrences
- Wood Stork Colonies
- Florida Forever BOT
- TNC Conservation Area
- Caracara Observations
- Rare and Imperiled Fish

Data Sources: FWS, FGDL (2016)

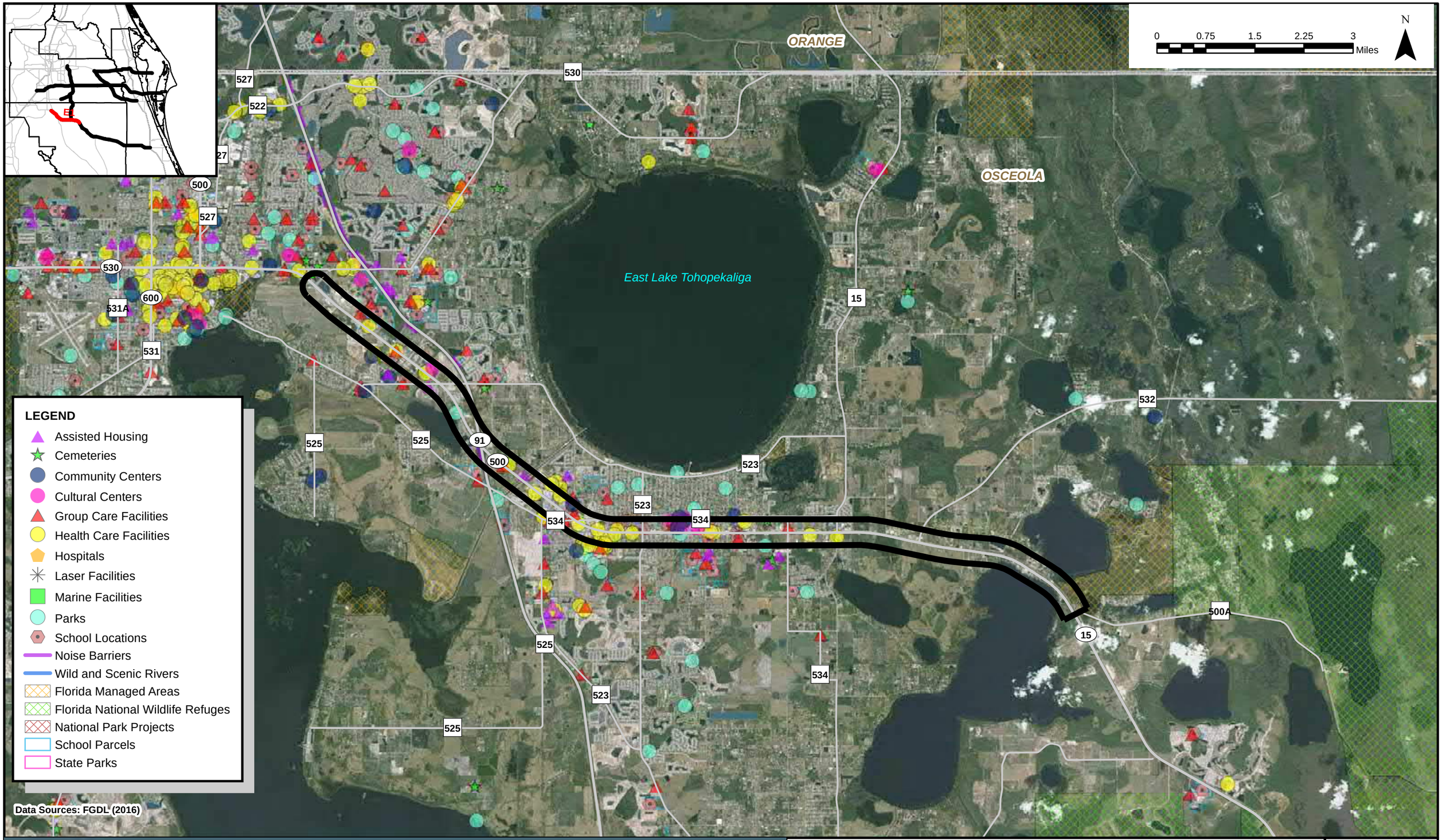
East Central Florida Corridor Evaluation Study

FDOT

Corridor E
Threatened and Endangered Species (Additional Features)

FIGURE 5.6-4

SEGMENT E3



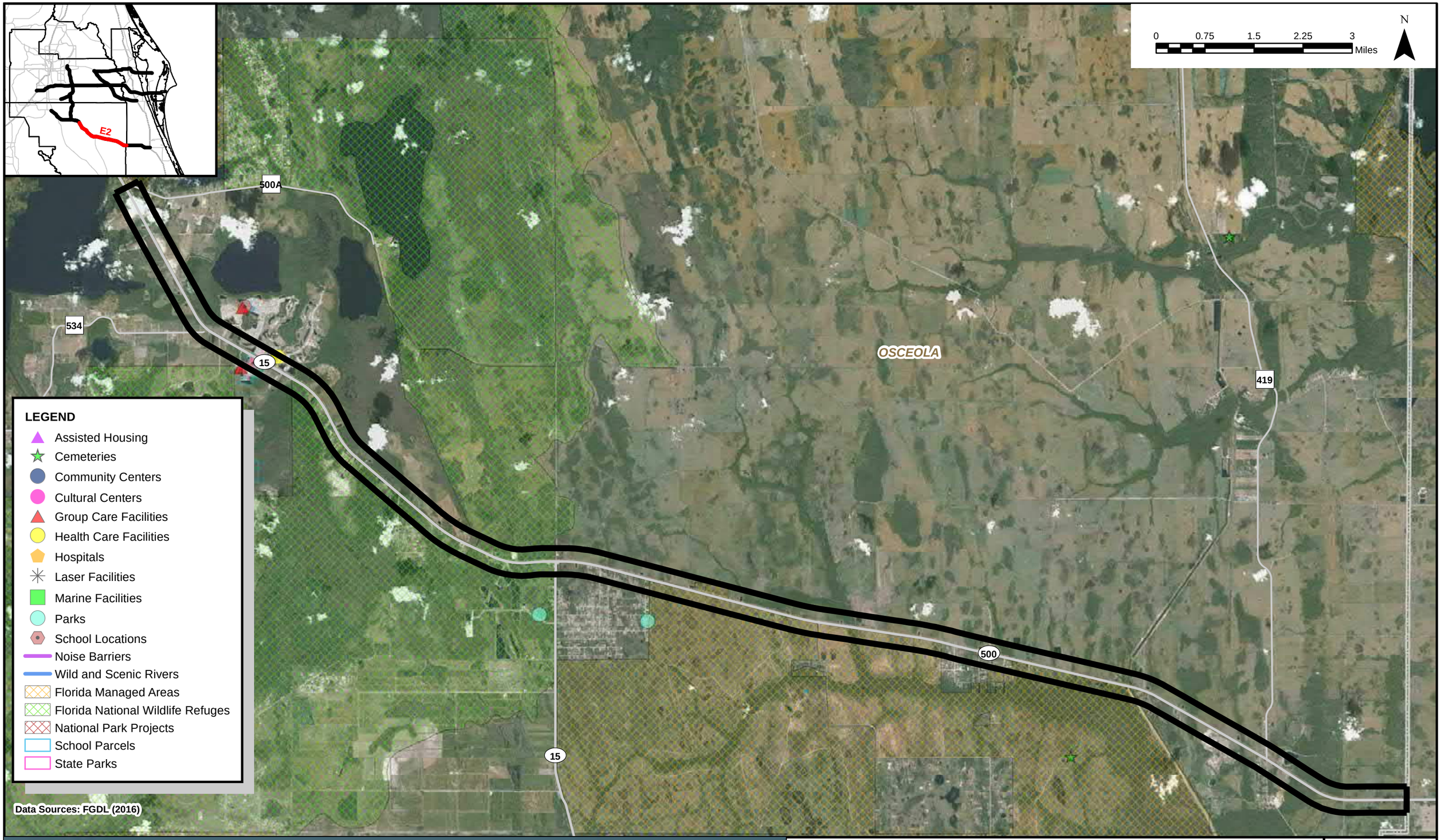
East Central Florida Corridor Evaluation Study

Corridor E

Noise Evaluation

FIGURE 5.6-5

SEGMENT E1



East Central Florida Corridor Evaluation Study

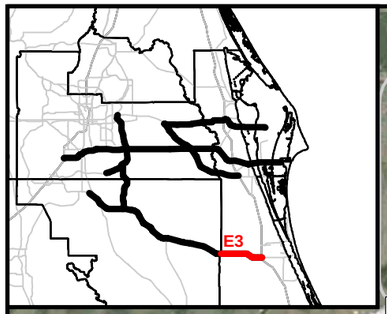
FDOT

Corridor E

Noise Evaluation

FIGURE 5.6-5

SEGMENT E2



0 0.75 1.5 2.25 3 Miles

N

OSCEOLA

BREVARD

OSCEOLA

419 3 513 511 509 518 518 5 518 5054 5054 5054 500 9 95 500 507 508 509 516 507 507 514

LEGEND

- Assisted Housing
- Cemeteries
- Community Centers
- Cultural Centers
- Group Care Facilities
- Health Care Facilities
- Hospitals
- Laser Facilities
- Marine Facilities
- Parks
- School Locations
- Noise Barriers
- Wild and Scenic Rivers
- Florida Managed Areas
- Florida National Wildlife Refuges
- National Park Projects
- School Parcels
- State Parks

Data Sources: FGDL (2016)

East Central Florida Corridor Evaluation Study

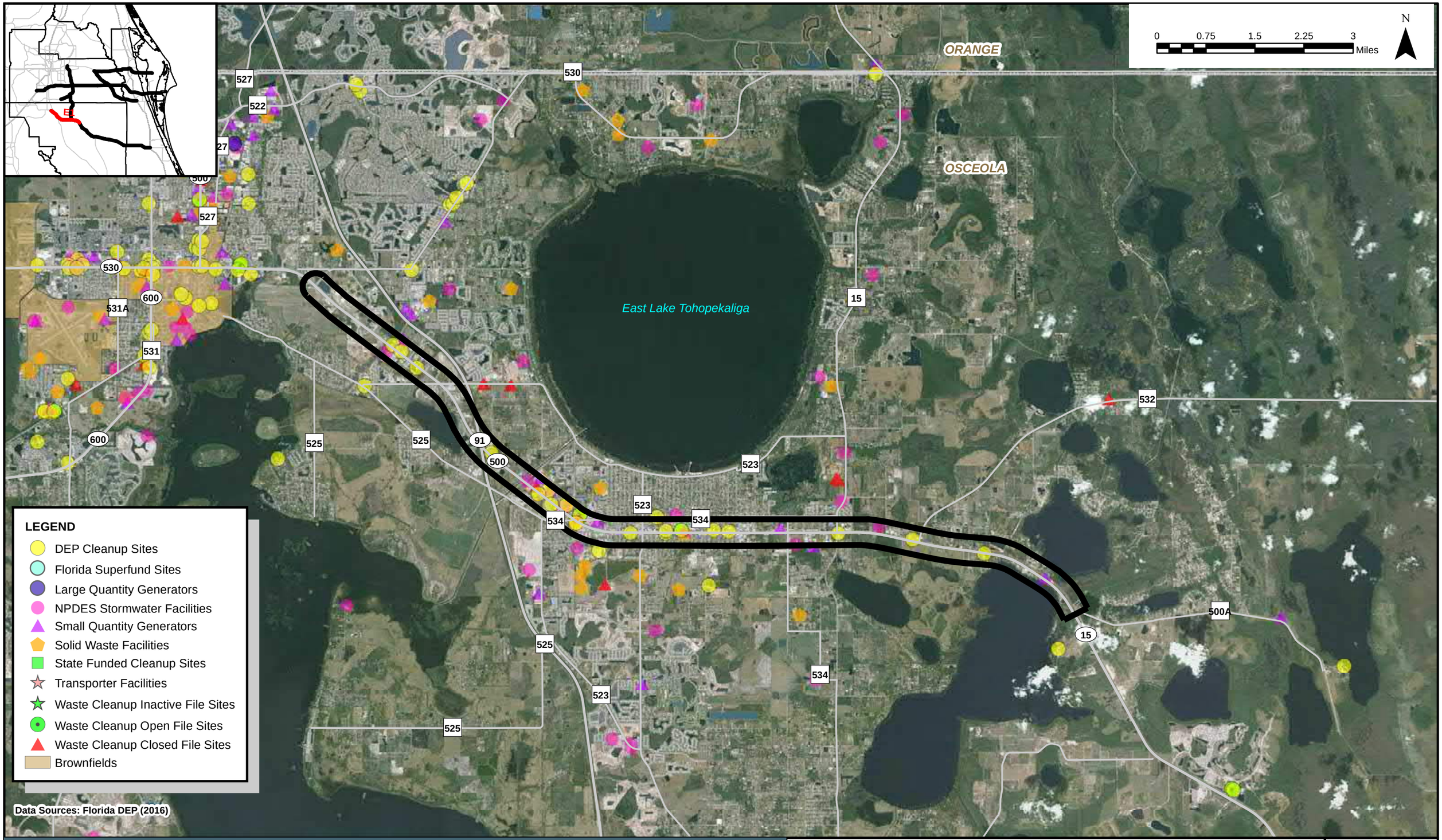
FDOT

Corridor E

Noise Evaluation

FIGURE 5.6-5

SEGMENT E3



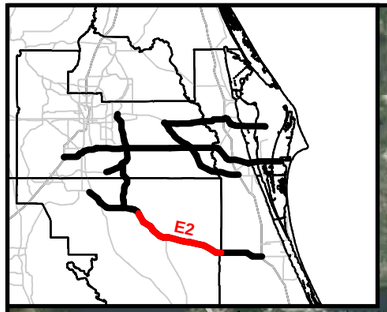
East Central Florida Corridor Evaluation Study

Corridor E

Potential Sources of Contamination

FIGURE 5.6-6

SEGMENT E1



0 0.75 1.5 2.25 3 Miles

N

500A

534

15

419

OSCEOLA

500

15

LEGEND

- DEP Cleanup Sites
- Florida Superfund Sites
- Large Quantity Generators
- NPDES Stormwater Facilities
- Small Quantity Generators
- Solid Waste Facilities
- State Funded Cleanup Sites
- Transporter Facilities
- Waste Cleanup Inactive File Sites
- Waste Cleanup Open File Sites
- Waste Cleanup Closed File Sites
- Brownfields

Data Sources: Florida DEP (2016)

East Central Florida Corridor Evaluation Study

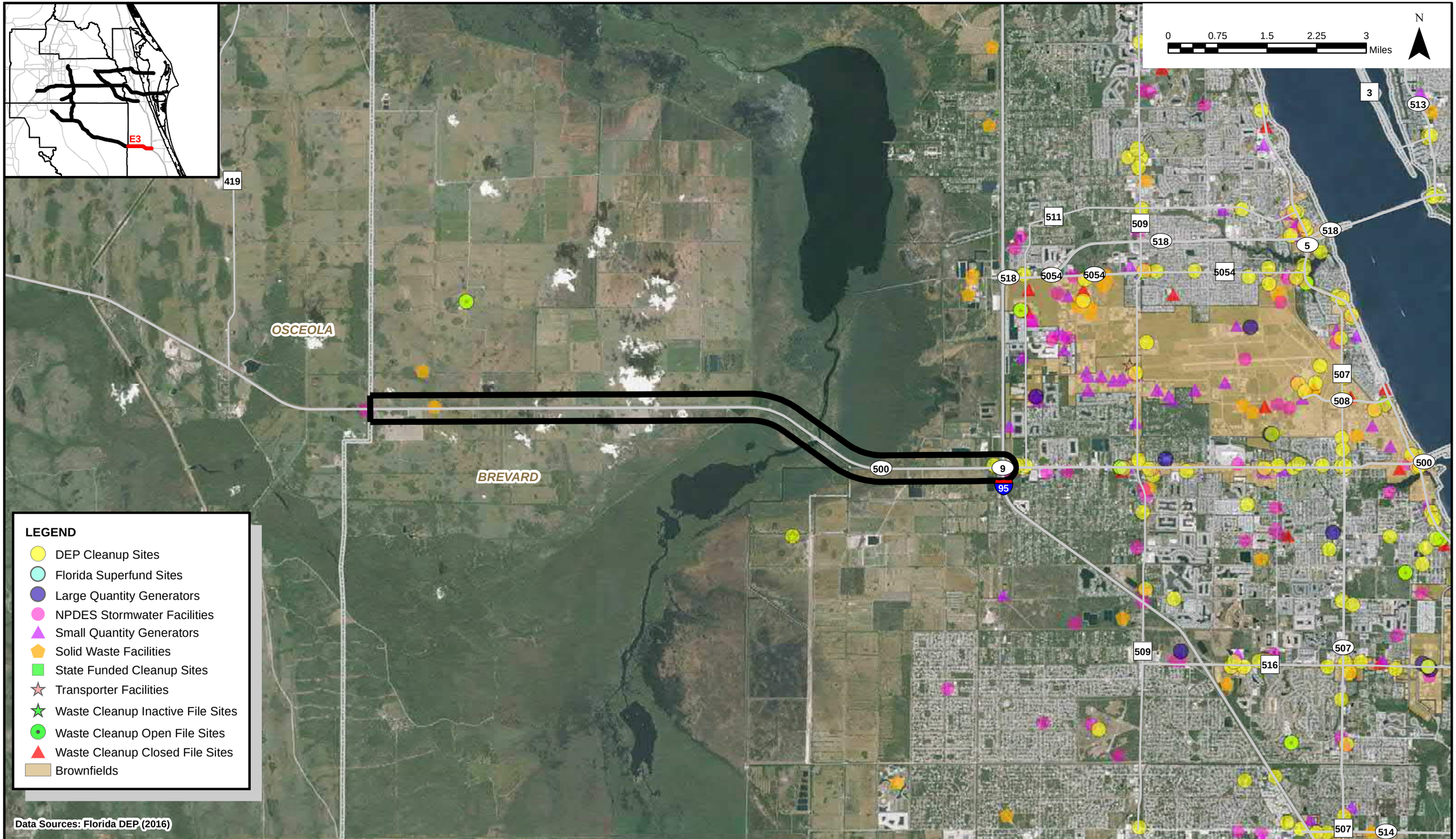
FDOT

Corridor E

Potential Sources of Contamination

FIGURE 5.6-6

SEGMENT E2



East Central Florida Corridor Evaluation Study

FDOT

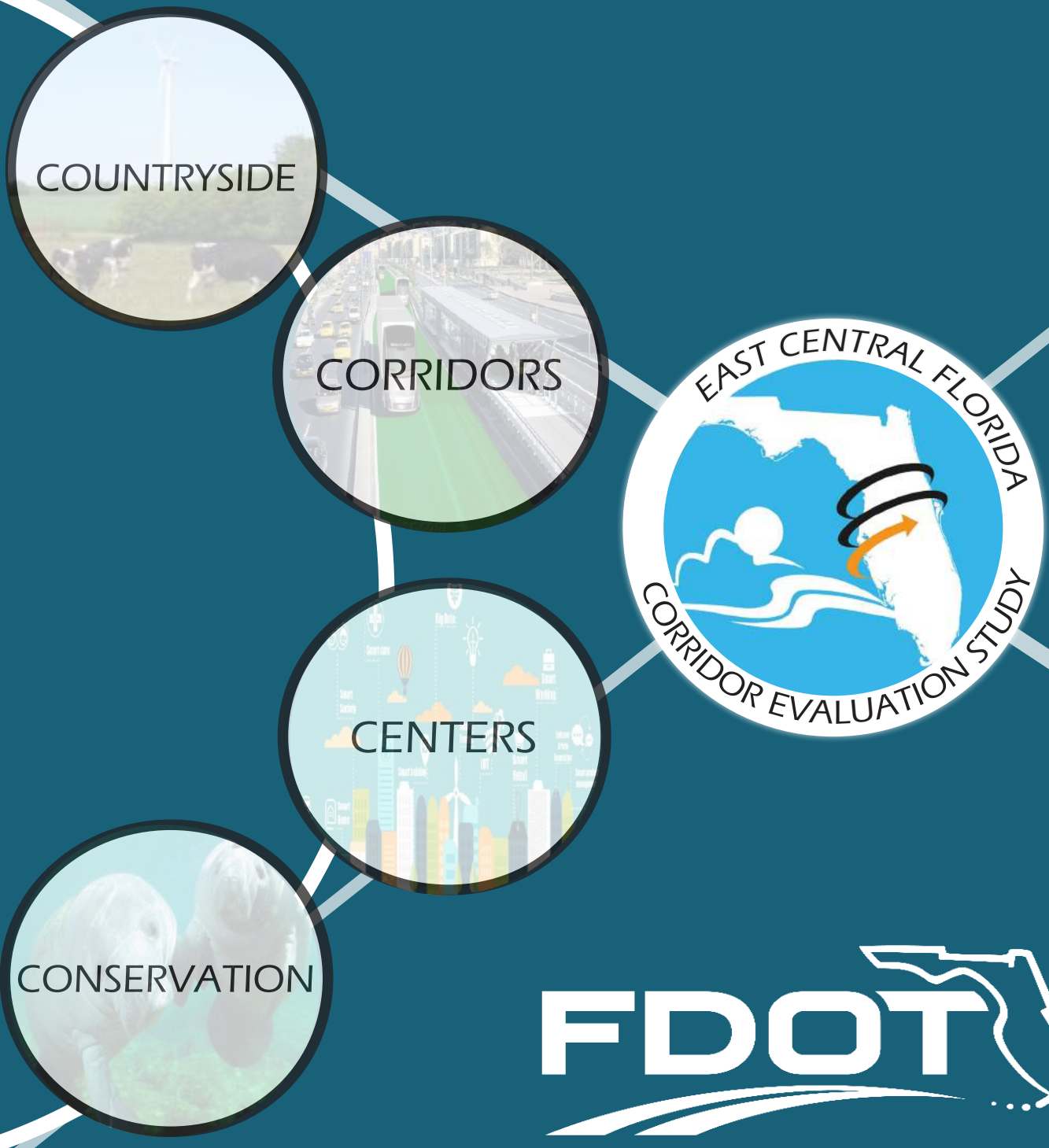
Corridor E

Potential Sources of Contamination

FIGURE 5.6-6

SEGMENT E3

Existing Conditions Data Report
Technical Appendices
February 2018



E

Historic and Cultural Resources

Segment	Type	Count	Name
		11	Cultural Resource Assessment Survey of State Road 50 From Chuluota Road to State Road 520 Orange County, Florida
		12	Cultural Resource Assessment Report for The All Aboard Florida Passenger Rail Project from Orlando To West Palm Beach
C2	Surveys	1	A Cultural Resource Assessment Survey of SR 520 Bridge Replacement at The St. Johns River at The Orange/Brevard County Line, Florida
		2	Archaeological Assessment of Six Selected Areas in Brevard County: A First-Generation Model
		3	A Survey and Evaluation of Historic Properties Within the One-Mile Area of Potential Effect of The Proposed Cocoa Telecommunications Site, Brevard County, Florida
		4	Cultural Resource Assessment Survey for The Interstate 95 PD&E Study from State Road 514 To State Road 50, Brevard County, Florida
E1	Resource Groups	1	Brick Road / Old Melbourne Hwy
		2	Alligator Canal C-32G
		3	St. Cloud Canal
		4	The Mark Mobile Home Park
		5	Friendly Village Inn Motel and Rentals
		6	St. Cloud & Sugar Belt Railway
	Historic Structures	1	1201 Delaware Ave
		2	1208 Delaware Ave
		3	1215 Delaware Ave
		4	1422 Delaware Ave
		5	1202 Carolina Ave

Segment	Type	Count	Name
		6	1206 Carolina Ave
		7	1208 Carolina Ave
		8	1209 Maryland Ave
		9	1401 Maryland Ave
		10	1409 Maryland Ave
		11	1521 Maryland Ave
		12	1601 Maryland Ave
		13	Jones, Elmore J Residence
		14	1201 Virginia Ave
		15	1202 Virginia Ave
		16	1205 Virginia Ave
		17	1206 Virginia Ave
		18	1209 / 1211 Virginia Ave
		19	1210 Virginia Ave
		20	Burroughs, Ralph Residence
		21	415 12Th St
		22	1112 12Th St
		23	1321 12Th St
		24	1615 12Th St
		25	1623 12Th St
		26	1815 12Th St
		27	St Cloud Trailer Park Office
		28	St Cloud Trailer Park Laundry
		29	Veteran's Memorial Park
		30	1830 13Th St
		31	1918 13Th St
		32	Beauchamo, Rev N W Residence
		33	1010 14Th St
		34	1311 14Th St

Segment	Type	Count	Name
		35	1308 Virginia Ave
		36	1317 Virginia Ave
		37	Bond, F H Residence
		38	1400 Virginia Ave
		39	1401 Virginia Ave
		40	1409 Virginia Ave
		41	1120 Michigan Ave
		42	1123 Michigan Ave
		43	1200 Michigan Ave
		44	1201 Michigan Ave
		45	Blood Residence
		46	1207 Michigan Ave
		47	1214 Michigan Ave
		48	Widrig, Robert G Residence
		49	1216 Michigan Ave
		50	1220 Michigan Ave
		51	1400 Michigan Ave
		52	1409 Michigan Ave
		53	1412 Michigan Ave
		54	5825 US 192
		55	5835 US 192 #1
		56	5835 US 192 #2
		57	5835 US 192 #3
		58	1121 Illinois Ave
		59	1207 Illinois Ave
		60	1215 Illinois Ave
		61	1318 Illinois Ave
		62	1401 Illinois Ave
		63	1407 Illinois Ave

Segment	Type	Count	Name
		64	1411 Illinois Ave
		65	5835 US 192 #6
		66	5835 US 192 #4 & 5
		67	5855 US 192
		68	6261 Lake Lizzie Dr
		69	1314 Indiana Ave
		70	1318 Indiana Ave
		71	1322 Indiana Ave
		72	1323 Indiana Ave
		73	1400 Indiana Ave
		74	1401/1403 Indiana Ave
		75	1309 Ohio Ave
		76	1315 Ohio Ave
		77	1316 Ohio Ave
		78	1323 Ohio Ave
		79	1324 Ohio Ave
		80	1400 Ohio Ave
		81	1401 Ohio Ave
		82	Ide, Elmer Residence
		83	1416 Ohio Ave
		84	1420 Ohio Ave
		85	Swartz, P Janette Residence
		86	1216 Florida Ave
		87	Ellis, Robert Residence
		88	McDonald, Samuel G Residence
		89	1315 Florida Ave
		90	1319 Florida Ave
		91	1322 Florida Ave
		92	Armour, P A Residence

Segment	Type	Count	Name
		93	Kenney, Fred B Residence
		94	1401 Florida Ave
		95	1406 Florida Ave
		96	1407 Florida Avenue
		97	1408 Florida Ave
		98	Howlett, Edward Residence
		99	1400 Pennsylvania Ave
		100	1403 Pennsylvania Ave
		101	1416 Pennsylvania Ave
		102	1135 New York Ave
		103	First National Bank Bldg #1
		104	1210 New York Ave
		105	1212 New York Ave
		106	1222 New York Ave
		107	Young's Service Station
		108	1322 New York Ave
		109	1406 New York Ave
		110	1407/1411 New York Ave
		111	1412 New York Ave
		112	Samering, Charles Residence
		113	St Cloud Post Office
		114	1200 Massachusetts Ave
		115	Penn, George W Residence
		116	Shambow, Levi Residence
		117	Rankin, Mrs M T Residence
		118	1211 Massachusetts Ave
		119	Drake, Hiram T Residence
		120	1214 Massachusetts Ave
		121	1217 Massachusetts Ave

Segment	Type	Count	Name
		122	1218 Massachusetts Ave
		123	Cary, L M Residence
		124	1315 Massacusetts Ave
		125	1319 Massacusetts Ave
		126	1320 Massacusetts Ave
		127	1322 Massacusetts Ave
		128	1323 Massacusetts Ave
		129	1400 Massacusetts Ave
		130	1403 Massacusetts Ave
		131	1406 Massacusetts Ave
		132	Sunnyside Villa
		133	1410 Massachusetts Ave
		134	1200 Kentucky Ave
		135	1203 Kentucky Ave
		136	1204 Kentucky Ave
		137	Gessford, Bert E Residence
		138	Coyle, Jerome Residence
		139	1408 Kentucky Ave
		140	1411 Kentucky Ave
		141	1201 Minnesota Ave
		142	1316 Minnesota Ave
		143	Blanch, Mrs Anna Residence
		144	1401 Minnesota Ave
		145	1406 Minnesota Ave
		146	1410 Minnesota Ave
		147	1411 Minnesota Ave
		148	1200 Connecticut Ave
		149	1209 Connecticut Ave
		150	1211 Connecticut Ave

Segment	Type	Count	Name
		151	1215 Connecticut Ave
		152	1400 Connecticut Ave
		153	1406 Connecticut Ave
		154	1410 Connecticut Ave
		155	Godwin, H Lilburn Residence
		156	1107 Missouri Ave
		157	1110 Missouri Ave
		158	Wheeler, S S Residence
		159	1210 Missouri Ave
		160	1211 Missouri Ave
		161	Cummings, F C Residence
		162	Lehman, Peter Residence
		163	1205 Wisconsin Ave
		164	1211 Wisconsin Ave
		165	Evans, A C Residence
		166	1219 Wisconsin Ave
		167	1223 Wisconsin Ave
		168	1202 Jersey Ave
		169	Ford, R B Residence
		170	Williams, F P Residence
		171	1314 Jersey Ave
		172	1315 Jersey Ave
		173	1319 Jersey Ave
		174	Worthington, W R Residence
		175	1123 Oregon Ave
		176	1310 Oregon Ave
		177	1409 Oregon Ave
		178	1121 Wyoming Ave
		179	1214 Wyoming Ave

Segment	Type	Count	Name
		180	1216 Wyoming Ave
		181	1119 Delaware Ave
		182	Russell, W C House
		183	West End Public School
		184	1201 Vermont Ave
		185	1410 Dakota Ave
		186	1423 Dakota Ave
		187	1320 California Ave
		188	1422 California Ave
		189	1406 Alabama Ave
		190	2510 E. Irlo Bronson Memorial Highway
		191	2550 E. Irlo Bronson Memorial Highway
		192	2550 E. Irlo Bronson Memorial Highway
		193	2550 E. Irlo Bronson Memorial Highway
		194	2550 E. Irlo Bronson Memorial Highway
		195	2550 E. Irlo Bronson Memorial Highway
		196	2568 E. Irlo Bronson Memorial Highway
		197	2570 E. Irlo Bronson Memorial Highway
		198	2567 Oak Street
		199	2580 E. Irlo Bronson Memorial Highway
		200	2584 E. Irlo Bronson Memorial Highway
		201	2579 Oak Street
		202	2600 E. Irlo Bronson Memorial Highway
		203	2802 E. Irlo Bronson Memorial Highway
		204	2804 E. Irlo Bronson Memorial Highway
		205	2844 E. Irlo Bronson Memorial Highway
		206	2835 City Of Life Way
		207	3201 13Th Street
		208	1301 Kansas Avenue

Segment	Type	Count	Name
		209	1000 Robinson Avenue
		210	3200 13Th Street
		211	1022 Arizona Avenue
		212	1016 Arizona Avenue
		213	1010 Arizona Avenue
		214	1006 Arizona Avenue
		215	1009 Cedar Avenue
		216	3200 13Th Street
		217	3200 13Th Street
		218	1019 Cedar Avenue
		219	1021 Cedar Avenue
		220	3200 13Th Street
		221	1007 Magnolia Avenue
		222	1019 Magnolia Avenue
		223	1021 Magnolia Avenue
		224	1020 Magnolia Avenue
		225	1012 Magnolia Avenue
		226	1010 Magnolia Avenue
		227	1004 Magnolia Avenue
		228	1001 Maple Avenue
		229	1003 Maple Avenue
		230	1005 Maple Avenue
		231	1009 Maple Avenue
		232	1011 Maple Avenue
		233	1013 Maple Avenue
		234	1019 Maple Avenue
		235	1012 Maple Avenue
		236	1008 Maple Avenue
		237	1006 Maple Avenue

Segment	Type	Count	Name
		238	1004 Maple Avenue
		239	1011 Walnut Avenue
		240	1012 Walnut Avenue
		241	1006 Walnut Avenue
		242	1001 Pine Avenue
		243	1007 Pine Avenue
		244	1009 Pine Avenue
		245	1013 Pine Avenue
		246	1010 Pine Avenue
		247	1008 Pine Avenue
		248	1006 Pine Avenue
		249	1002 Pine Avenue
		250	1001 Elm Avenue
		251	1005 Elm Avenue
		252	1002 Elm Avenue
		253	1001 Elm Court
		254	1003 Elm Court
		255	1005 Elm Court
		256	510 Brown Chapel Road
		257	2839 E. Irlo Bronson Memorial Highway
		258	175 E. 13Th Street
		259	4810 E. Irlo Bronson Memorial Highway
		260	5300 E. Irlo Bronson Memorial Highway
		261	5340 E. Irlo Bronson Memorial Highway
		262	5355 E. Irlo Bronson Memorial Highway
		263	5285 E. Irlo Bronson Memorial Highway
		264	5285 E. Irlo Bronson Memorial Highway
		265	4960 Bernetti Place
		266	4821 E. Irlo Bronson Memorial Highway

Segment	Type	Count	Name
		267	716 E. 13Th Street
		268	614 E. 13Th Street
		269	340 E. 13Th Street
		270	320 E. 13Th Street
		271	1000 Maple Avenue
		272	1200 Louisiana Ave
		273	1122 Michigan Ave
		274	1214 Kentucky Ave
	Surveys	1	State Project No. 92090-1519 And 92030-1518, SR 530/Us 192
		2	A Cultural Resource Assessment Survey Of S.R. 500 (U.S. 192) From C.R. 531 (Michigan Avenue) To Shady Lane Osceola County, Florida
		3	Cultural Resource Survey And Assessment Of The Turnpike/U.S. 192 Alternative Interchange Project Area, Osceola County, Florida
		4	Phase I Cultural Resources Investigation Of The Proposed 30 In O.D. Mainline Loop South Portion In The Florida Gas Transmission Company Phase III Expansion Project [Draft Report]
		5	An Archaeological And Historical Survey Of The 201 Facilities Plan Project, Kissimmee, St. Cloud, Osceola County
		6	Proposed Multilaning Of Existing Two-Lane US 192 From CR 532, Near St Cloud, To I 95, In Osceola & Brevard Counties, Florida
		7	Historical And Architectural Survey City Of St. Cloud Project Report

Segment	Type	Count	Name
		8	A Cultural Resource Assessment Survey Of Proposed Pond Locations Along SR 500 (US 192), Osceola And Brevard Counties, Florida
		9	Reevaluation Of SR 500/US 192 Widening From CR 532 To US 441 Osceola County, Florida
		10	Survey And Evaluation Of Historic Properties Within The One-Mile Area Of Potential Effects Of The Proposed Osceola Substation #29 Telecommunications Tower, Osceola County, Florida
		11	A Cultural Resource Assessment Survey Of The Cobblestone Apartment Complex Project Site In Osceola County, Florida
		12	Cultural Resource Survey Of Replacement Cell Tower Site: Boggy Creek & 192 Site #FL 2109-C; Kissimmee, Osceola County, Florida
		13	An Archaeological And Historical Survey Of The Proposed Fennel Slough Tower Location In Osceola County, Florida
		14	Cultural Resource Survey: Proposed Replacement Cell Tower #FL-3113 A Nextel-St. Cloud, Osceola County, Florida
		15	An Archaeological And Historical Survey Of The Proposed Heritage Park 2 Tower Location In Osceola County, Florida
		16	An Archaeological And Historical Assessment For The Proposed Heritage Park, Kissimmee Cellular Tower (ID# 248-C), Osceola County, Florida

Segment	Type	Count	Name
		17	Identification And Evaluation Of Historic Properties Within The One Mile Area Of Potential Effects Of The Existing 300-Foot Osceola County--Simpson Road Telecommunications Tower (Verizon Wireless 081724-1), Osceola County, Florida
		18	Cultural Resource Assessment Survey Of Florida's Turnpike Mainline PD&E Study From US 192 To SR 50 (Clermont), Orange And Osceola Counties
		19	Cultural Resource Survey And Assessment, Judge Farms, Osceola County, Florida
		20	An Archaeological And Historical Survey Of The Proposed Valencia CC South Tower Location In Osceola County, Florida
		21	A Phase I Cultural Resource Assessment Survey Of Twenty-Four Proposed Pond Locations Along State Road 500 (US 192/US 441) Between Aeronautical Lane And Nova Road, Osceola County, Florida
		22	A Phase 1 Cultural Resource Survey Of The Live Oak Lake Propery, Osceola County, Florida
		23	Phase I Archaeological Survey Of The Proposed Florida Gas Transmission St. Cloud Warehouse
		24	A Cultural Resource Assessment Survey Of The Lancaster Park Tract, Osceola County, Florida
		25	Cultural Resources Assessment Survey For The Proposed New Rainbow Park Cellular Tower, Osceola County, Florida

Segment	Type	Count	Name
		26	Cultural Resource Assessment Survey Along State Road 500 From Aeronautical Drive To Budinger Road And From Eastern Avenue To Nova Road, Osceola County, Florida
E2	Resource Groups	1	Brick Road/Old Melbourne Hwy
	Historic Structures	1	8872 US 192
		2	8866 US 192
		3	8864 US 192
	Surveys	1	Cultural Resource Assessment Survey Of The Birchwood Project Tract (Phase I), Osceola County, Florida
		2	Lake Poinsett-Midway 500 KV Transmission Line Project, Archaeological And Historical Survey Assessment
		3	Reconnaissance Survey In The Upper St. Johns River Flood Control Project, Osceola, Brevard And Indian River Counties, Florida.
		4	Phase I Cultural Resources Investigation Of Proposed Access Roads Within The Florida Portion Of The Proposed Florida Gas Transmission Company Phase III Expanson Project Pipeline Corridor [Draft Report]
		5	Phase I Cultural Resources Investigation Of The Proposed 30 In O.D. Mainline Loop South Portion In The Florida Gas Transmission Company Phase III Expansion Project [Draft Report]
		6	An Archaeological Assessment Of The Triple N Ranch Wildlife Management Area, Osceola County, Florida

Segment	Type	Count	Name
		7	Proposed Multilaning Of Existing Two-Lane US 192 From CR 532, Near St Cloud, To I 95, In Osceola & Brevard Counties, Florida
		8	A Cultural Resource Assessment Survey Of Proposed Pond Locations Along SR 500 (US 192), Osceola And Brevard Counties, Florida
		9	An Archaeological And Historical Survey Of The West Holopaw Tower Site In Osceola County, Florida
		10	Reevaluation Of SR 500/US 192 Widening From CR 532 To US 441 Osceola County, Florida
		11	Survey And Evaluation Of Historic Properties Within The One-Mile Area Of Potential Effects Of The Proposed Osceola Substation #29 Telecommunications Tower, Osceola County, Florida
		12	Identification And Evaluation Of Historic Properties Within The One Mile Area Of Potential Effects Of The Proposed 250-Foot Sanderson-Deer Park Wireless Telecommunications Tower, Osceola County, Florida
		13	Survey And Evaluation Of Historic Properties Within The One-Mile Area Of Potential Effects Of The Proposed AT&T/ Deer Park (82541-2) Telecommunications Tower, Osceola County, Florida
		14	An Archaeological And Historical Survey Of The Proposed Florida Power And Light Company. Poinsett/Martin/Midway 500KV Transmission Line In Orange, Osceola, Indian Rover And St. Lucie Counties, Florida

Segment	Type	Count	Name
		15	A Reconnaissance-Level Cultural Resources Assessment Of The Harmony Equestrian Center Tract, Osceola County, Florida
		16	Cultural Resource Assessment Survey Report, US 192 Solid Waste Management Facility, Brevard County, Florida
E3	Surveys	1	Reconnaissance Survey In The Upper St. Johns River Flood Control Project, Osceola, Brevard And Indian River Counties, Florida.
		2	Phase I Cultural Resources Investigation Of The Proposed 30 In O.D. Mainline Loop South Portion In The Florida Gas Transmission Company Phase III Expansion Project [Draft Report]
		3	Proposed Response To Future Area Development For GDC's West Malabar Tract, Brevard County, Florida
		4	Proposed Multilaning Of Existing Two-Lane US 192 From CR 532, Near St Cloud, To I 95, In Osceola & Brevard Counties, Florida
		5	A Cultural Resource Assessment Survey Of Proposed Pond Locations Along SR 500 (US 192), Osceola And Brevard Counties, Florida
		6	Archaeological Assessment Of Six Selected Areas In Brevard County: A First Generation Model
		7	Cultural Resource Assessment Survey Of The Palm Bay Parkway PD&E Study From Malabar Road To Ellis Road, Brevard County
		8	Phase I Archaeological Survey Of A Possible Reroute At Mile Post 730, Brevard County, Florida

Segment	Type	Count	Name
		9	Cultural Resource Assessment Survey For The Interstate 95 PD&E Study From State Road 514 To State Road 50, Brevard County, Florida
		10	Cultural Resource Assessment Survey Report, US 192 Solid Waste Management Facility, Brevard County, Florida
G1	Historic Structures	1	Curry Ford Road Barn
		2	1903 S. Econlockhatchee Trl
	Surveys	1	Cultural Resources Survey Of The Proposed Orlando-Orange County Expresssway Extension And Retention Basin.
		2	Cultural Resource Assessment Curry Ford Road Improvement Project, Orange County, Florida
		3	Cultural Resources Survey And Assessment Weber Lakes, Orange County, Florida
		4	Proposed Cellular Tower Site: Harrell Road
		5	Cultural Resource Assessment Survey Of The Econ Landing Property, Orange County, Florida
		6	Phase I Cultural Resource Assessment Survey Of The Rio Pinar - Narcoossee Transmission Line Rebuild, Orange County, Florida
G2	Surveys	1	Cultural Resource Assessment Survey Of The Orlando-Orange County Expressway Authority's Southern Connector, Orange County, Florida.
		2	An Archaeological And Historical Survey Of The Proposed Curtis H. Stanton Energy Center Railroad
		3	An Archaeological, Architectural, And Historical Survey Of The Lake Hart Development Property Orange County, Florida

APPENDIX C

Natural Resources Conservation Service (NRCS)
Soil Units Identification Summary

Osceola County NRCS Soil Units Summary

Unit No.	Soil Name	Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
1	Adamsville sand, 0 to 2 percent slopes	0 - 4	Sand	SP-SM, SC-SM	A-2-4, A-3	1.5 - 3.5	A
		4 - 33	Sand, fine sand	SP-SM, SC-SM	A-2-4, A-3		
		33 - 80	Fine sand, sand	SP, SP-SM, SC-SM	A-2-4, A-3		
2	Adamsville variant fine sand, 0 to 5 percent slopes	0 - 5	Fine sand	SP, SP-SM	A-3	2.0 - 3.5	A
		5 - 33	Fine sand, sand	SP, SP-SM	A-3		
		33 - 49	Muck	PT	A-8		
		49 - 80	Fine sand, sand	SP, SP-SM	A-3		
4	Arents, 0 to 5 percent slopes	0 - 10	Gravelly sand	SP, SP-SM	A-1-b, A-2-4, A-3	1.5 - 3.0	A
		10 - 60	Sand, fine sand	SP, SP-SM	A-2-4, A-3		
5	Basinger fine sand, 0 to 2 percent slopes	0 - 2	Fine sand	SP-SM, SM	A-2-4, A-3	0.0 - 1.0	A/D
		2 - 18	Fine sand	SP-SM, SM	A-3, A-2-4		
		18 - 36	Fine sand	SP-SM, SM	A-2-4, A-3		
		36 - 80	Fine sand	SP-SM, SM	A-3, A-2-4		
6	Basinger fine sand, depressional, 0 to 1 percent slopes	0 - 3	Fine sand	SP-SM	A-2-4	0.0 - 1.0	A/D
		3 - 24	Fine sand	SP, SP-SM	A-2-4, A-3		
		24 - 80	Fine sand	SP, SP-SM	A-3		
9	Cassia fine sand, 0 to 2 percent slopes	0 - 5	Fine sand	SM, SP-SM	A-2-4, A-3	1.5 - 3.5	A
		5 - 26	Fine sand	SM, SP-SM	A-3, A-2-4		
		26 - 42	Loamy sand, sand, fine sand	SM, SP-SM	A-2-4		
		42 - 80	Sand, fine sand	SP-SM, SM	A-2-4, A-3		
10	Delray loamy fine sand, depressional	0 - 14	Loamy fine sand	SC-SM, SM, SP-SM	A-2-4, A-3	0.0	A/D
		14 - 44	Fine sand	SP-SM	A-2-4, A-3		
		44 - 62	Fine sandy loam, sandy clay loam	SC, SC-SM, SM	A-2-4, A-2-6		
		62 - 80	Loamy fine sand, fine sandy loam	SC-SM, SM, SP-SM	A-2-4, A-3		
12	Floridana fine sand, frequently ponded, 0 to 1 percent slopes	0 - 19	Fine sand	SP-SM, SM	A-3, A-2-4	0.0	C/D
		19 - 25	Sand, fine sand	SM, SP-SM	A-2-4, A-3		
		25 - 80	Fine sandy loam, sandy clay loam, sandy loam	SC, CL, SC-SM	A-7-6, A-2-4, A-4		

Osceola County NRCS Soil Units Summary

Unit No.	Soil Name	Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
13	Gentry fine sand	0 - 24	Fine sand	SM, SP, SP-SM	A-2-4, A-3	0.0	C/D
		24 - 64	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM, SM	A-2-4, A-2-6		
		64 - 80	Fine sand, loamy fine sand, fine sandy loam	SM, SP-SM	A-2-4, A-3		
14	Holopaw fine sand, 0 to 2 percent slopes	0 - 6	Fine sand	SM, SP-SM	A-2-4 A-3	0.3 - 1.5	A/D
		6 - 42	Fine sand	SP-SM, SM	A-3, A-2-4		
		42 - 60	Fine sandy loam	SC, SM	A-2-4, A-6, A-4		
		60 - 80	Loamy sand	SM	A-2-4		
15	Hontoon muck, frequently ponded, 0 to 1 percent slopes	0 - 5	Mucky peat	PT	A-8	0.0	A/D
		5 - 65	Muck	PT	A-8		
16	Immokalee fine sand, 0 to 2 percent slopes	0 - 54	Fine sand	SP-SM, SM	A-3, A-2-4	0.5 - 1.5	B/D
		54 - 80	Fine sand, loamy fine sand, sand	SM, SP-SM	A-2-4, A-3		
17	Kaliga muck, frequently ponded, 0 to 1 percent slopes	0 - 25	Muck	PT	A-8	0.0	C/D
		25 - 35	Sandy clay loam, fine sandy loam, loamy sand	SM, SC	A-2-4, A-7-6, A-4		
		35 - 60	Sandy clay loam, loam, fine sandy loam	CL, SC-SM	A-6, A-4		
		60 - 80	Sandy clay loam, fine sandy loam, loam	SC, CL, SM	A-4, A-6		
19	Malabar fine sand, 0 to 2 percent slopes	0 - 5	Fine sand	SM, SP-SM	A-2-4, A-3	0.3 - 1.5	A/D
		5 - 17	Fine sand	SM, SP-SM	A-3, A-2-4		
		17 - 42	Fine sand, sand	SM, SP-SM	A-2-4, A-3		
		42 - 59	Fine sandy loam, sandy clay loam, sandy loam	SC-SM, SC, CL	A-2-4, A-6, A-4		
		59 - 80	Loamy fine sand, fine sand, sand	SM	A-4, A-2-4		

Osceola County NRCS Soil Units Summary

Unit No.	Soil Name		Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
21	Malabar-Pineda complex	Malabar	0 - 4	Fine sand	SP, SP-SM	A-3	0.0 - 1.0	A/D
			4 - 12	Fine sand, sand	SP, SP-SM	A-3		
			12 - 30	Fine sand, sand	SP-SM, SP	A-2-4, A-3		
			30 - 50	Fine sand, sand	SP, SP-SM	A-3		
			50 - 80	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM, SM	A-2, A-4, A-6		
		Pineda	0 - 31	Fine sand	SP, SP-SM	A-3		C/D
			31 - 35	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM, SM	A-2, A-4, A-6		
			35 - 80	Sandy clay loam, fine sandy loam, sandy loam	SC, SC-SM, SM	A-2, A-4, A-6		
22	Myakka fine sand, 0 to 2 percent slopes		0 - 6	Fine sand	SP-SM, SM	A-3, A-2-4	0.5 - 1.5	A/D
			6 - 20	Fine sand, sand	SP-SM, SM	A-3, A-2-4		
			20 - 36	Fine sand, sand	SP-SM, SM	A-2-4, A-3		
			36 - 80	Fine sand, sand	SP-SM, SM	A-3, A-2-4		
24	Narcoossee fine sand, 0 to 2 percent slopes		0 - 5	Fine sand	SM, SP-SM	A-2-4	2.0 - 3.5	A
			5 - 22	Fine sand	SP-SM, SM	A-2-4		
			22 - 26	Fine sand	SP-SM, SM	A-2-4, A-3		
			26 - 80	Fine sand	SP-SM, SM	A-2-4		
25	Nittaw muck		0 - 7	Muck	PT	A-8	0.0	C/D
			7 - 15	Sand, fine sand, mucky fine sand	SM, SP-SM	A-2-4, A-3		
			15 - 64	Sandy clay, clay	CH, CL	A-7		
			64 - 76	Sand, fine sand, fine sandy loam	SC-SM, SM, SP, SP-SM	A-2-4, A-3		
27	Ona fine sand, 0 to 2 percent slopes		0 - 4	Fine sand	SP-SM, SM	A-2-4, A-3	0.5 - 1.5	B/D
			4 - 22	Fine sand, sand	SM, SP-SM	A-2-4, A-3		
			22 - 80	Fine sand, sand	SP-SM, SM	A-2-4, A-3		

Osceola County NRCS Soil Units Summary

Unit No.	Soil Name		Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
30	Pineda-Pineda, wet fine sand, 0 to 2 percent slopes	Pineda	0 - 1	Fine sand	SP-SM, SM	A-3, A-2-4	0.5 - 1.5	A/D
			1 - 5	Fine sand	SM, SP-SM	A-3, A-2-4		
			5 - 36	Fine sand	SM, SP-SM	A-2-4, A-3		
			36 - 54	Fine sandy loam, sandy clay loam	CL, SC, SC-SM	A-4, A-2-4, A-6		
			54 - 80	Fine sand, sand	SP-SM, SM	A-2-4, A-3		
		Pineda, wet	0 - 1	Fine sand	SM, SP-SM	A-2-4, A-3	0.0	
			1 - 5	Fine sand	SP-SM, SM	A-2-4, A-3		
			5 - 36	Fine sand	SM, SP-SM	A-2-4, A-3		
			36 - 54	Sandy clay loam, fine sandy loam	CL, SC, SC-SM	A-4, A-2-4, A-6		
			54 - 80	Fine sand, sand	SP-SM, SM	A-2-4, A-3		
32	Placid fine sand, frequently ponded, 0 to 1 percent slopes		0 - 24	Fine sand	SP-SM, SM	A-3, A-2-4	0.0	A/D
			24 - 80	Fine sand, sand	SM, SP-SM	A-3, A-2-4		
34	Pomello fine sand, 0 to 5 percent slopes		0 - 47	Fine sand	SP-SM	A-3	2.0 - 3.5	A
			47 - 58	Fine sand	SP-SM	A-2-4		
			58 - 65	Fine sand	SP-SM	A-3		
			65 - 80	Fine sand	SP	A-3		
36	Pompano fine sand, 0 to 2 percent slopes		0 - 4	Fine sand	SP-SM, SM	A-2-4, A-3	0.3 - 1.5	A/D
			4 - 80	Fine sand, sand	SM, SP-SM	A-3, A-2-4		
37	Pompano fine sand, frequently ponded, 0 to 1 percent slopes		0 - 80	Fine sand	SP-SM, SM	A-3, A-2-4	0.0	A/D
38	Riviera fine sand, 0 to 2 percent slopes		0 - 6	Fine sand	SM, SP-SM	A-2-4, A-3	0.3 - 1.5	A/D
			6 - 28	Fine sand, sand	SM, SP-SM	A-2-4, A-3		
			28 - 32	Fine sandy loam, sandy clay loam	SC-SM, SC, SM	A-4, A-2-4, A-6		
			32 - 42	Sandy loam, sandy clay loam	CL, SC-SM	A-6, A-4, A-7-6		
			42 - 80	Sand, fine sand, loamy sand	SP-SM, SM	A-3, A-2-4		
39	Riviera fine sand, frequently ponded, 0 to 1 percent slopes		0 - 4	Fine sand	SP-SM, SM	A-2-4, A-3	0.0	A/D
			4 - 36	Fine sand, sand	SP-SM, SM	A-2-4, A-3		
			36 - 42	Fine sandy loam, sandy clay loam	CL, SC-SM, SM	A-6, A-4, A-2-4		
			42 - 80	Sand, fine sand	SM, SP-SM	A-3, A-2-4		

Osceola County NRCS Soil Units Summary

Unit No.	Soil Name	Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
40	Samsula muck, frequently ponded, 0 to 1 percent slopes	0 - 32	Muck	PT	A-8	0.0	A/D
		32 - 35	Sand, fine sand	SM, SP-SM	A-3, A-2-4		
		35 - 44	Sand, fine sand	SP-SM, SM	A-2-4, A-3		
		44 - 80	Sand, fine sand	SM, SP-SM	A-2-4, A-3		
42	Smyrna fine sand, 0 to 2 percent slopes	0 - 4	Fine sand	SP-SM, SM	A-3, A-2-4	0.5 - 1.5	A/D
		4 - 13	Fine sand, sand	SP-SM, SM	A-3, A-2-4		
		13 - 49	Fine sand, sand	SP-SM, SM	A-2-4, A-3		
		49 - 80	Fine sand, sand	SP-SM, SM	A-3, A-2-4		
43	St. Lucie fine sand, 0 to 5 percent slopes	0 - 80	Fine sand	SP-SM, SP	A-3, A-2-4	---	A
45	Wabasso fine sand, 0 to 2 percent slopes	0 - 4	Fine sand	SP-SM, SM	A-2-4, A-3	0.5 - 1.5	A/D
		4 - 32	Fine sand	SM, SP-SM	A-2-4, A-3		
		32 - 48	Fine sandy loam, sandy clay loam	SC-SM, SC, CL	A-2-4, A-6, A-4		
		48 - 80	Fine sandy loam, loamy fine sand, fine sand	SM	A-4, A-2-4		
47	Winder loamy fine sand	0 - 3	Loamy fine sand	SM, SP-SM	A-2-4	0.0 - 1.0	C/D
		3 - 14	Loamy fine sand, fine sand	SP-SM	A-2-4, A-3		
		14 - 34	Sandy clay loam, fine sandy loam	SC	A-2-4, A-2-6		
		34 - 52	Loamy fine sand, fine sandy loam	SM	A-2-4		
		52 - 80	Loamy fine sand, sandy loam, sandy clay loam	SC, SC-SM, SM	A-2-4		

Osceola County NRCS Soil Units Summary

Unit No.	Soil Name		Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
48	Placid-Riviera-Samsula complex, frequently flooded	Placid, frequently flooded	0 - 14	Fine sand	SM, SP, SP-SM	A-2-4, A-3	0.0	A/D
			14 - 80	Loamy fine sand, fine sand, sand	SM, SP, SP-SM	A-2-4, A-3		
		Riviera, frequently flooded	0 - 2	Fine sand	SP, SP-SM	A-2-4, A-3		C/D
			2 - 22	Fine sand, sand	SP, SP-SM	A-2-4, A-3		
			22 - 32	Sandy clay loam, sandy loam, fine sandy loam	SC, SC-SM, SM	A-2-4		
			32 - 37	Fine sandy loam, sandy loam, sandy clay loam	SC, SC-SM	A-2-4, A-2-6		
			37 - 80	Sand, fine sand, loamy sand	SP, SP-SM	A-2-4, A-3		
		Sansula, frequently flooded	0 - 37	Muck	PT	A-8		A/D
			37 - 80	Sand, fine sand	SM, SP, SP-SM	A-2-4, A-3		

Brevard County NRCS Soil Units Summary

Unit No.	Soil Name	Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
2	Anclote sand, frequently ponded, 0 to 1 percent slopes	0 - 22	Sand	SP-SM, SM	A-3, A-2-4	0.0	A/D
		22 - 40	Sand	SP, SP-SM	A-3, A-2-4		
		40 - 80	Sand	SP-SM, SP	A-2-4, A-3		
3	Anclote sand, frequently flooded	0 - 19	Sand	SP, SP-SM	A-3	0.0	A/D
		19 - 72	Sand, fine sand, loamy fine sand	SP, SP-SM	A-3		
6	Basinger sand, depressional	0 - 2	Sand	SP, SP-SM	A-3	0.0	A/D
		2 - 80	Fine sand, sand	SP, SP-SM	A-3		
7	Basinger sand	0 - 2	Sand	SP	A-3	0.0 - 1.0	A/D
		2 - 80	Sand, fine sand	SP, SP-SM	A-2-4, A-3		

Brevard County NRCS Soil Units Summary

Unit No.	Soil Name	Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
10	Canaveral-Urban land complex	0 - 12	Sand	SP	A-3	2.5 - 5.0	A
		12 - 80	Fine sand, sand, coarse sand	SP	A-3		
11	Canova mucky peat, undrained	0 - 9	Muck	PT	A-8	0.0	B/D
		9 - 20	Sand	SP, SP-SM	A-3		
		20 - 60	Sandy clay loam, sandy loam	SC-SM, SC	A-2, A-6		
12	Chobee sandy loam, frequently flooded	0 - 14	Sandy loam	SM, SC-SM	A-2	0.0	B/D
		14 - 38	Sandy loam, sandy clay loam	SC, SC-SM	A-2, A-6		
		38 - 66	Sandy clay loam, sandy loam, loamy sand	SC, SM, SC-SM	A-2, A-6		
13	Chobee mucky loamy fine sand, depressional	0 - 14	Mucky loamy fine sand	SM, SP-SM	A-3, A-2	0.0	B/D
		14 - 38	Loamy sand, sandy loam, sandy clay loam	SM, SP-SM, SC, SC-SM	A-2-4, A-2-6, A-6		
		38 - 66	Sandy clay loam, sandy loam, loamy sand	SC, SM, SC-SM	A-2, A-6		

Brevard County NRCS Soil Units Summary

Unit No.	Soil Name		Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
16	Copeland-Bradenton-Wabasso complex, limestone substratum	Copeland	0 - 15	Loamy fine sand	SM	A-3	0.0 - 0.5	C/D
			15 - 22	Sandy loam, sandy clay loam	SC, SC-SM	A-2		
			22 - 30	Silt loam, marl	SC-SM, SC	A-2-4		
			30 - 34	Unweathered bedrock	---	---		
		Bradenton	0 - 12	Fine sand	SP-SM, SP	A-3, A-2	0.5 - 1.5	
			12 - 34	Sandy clay loam, sandy loam	SC	A-2-6, A-2-4		
			34 - 38	Unweathered bedrock	---	---		
		Wabasso	0 - 23	Sand	SP, SP-SM	A-3	0.5 - 1.5	
			23 - 34	Sand, fine sand	SP-SM	A-3		
			34 - 50	Sandy clay loam, sandy loam	SC, SC-SM	A-2		
			50 - 54	Unweathered bedrock	---	---		
17	EauGallie sand, 0 to 2 percent slopes		0 - 22	Sand	SP-SM, SP	A-3, A-2-4	0.5 - 1.5	A/D
			22 - 58	Sand, fine sand	SP-SM, SM	A-3, A-2-4		
			58 - 80	Sandy loam, fine sandy loam	SC-SM, CL, SC	A-4, A-2-4		
19	Riviera sand, 0 to 2 percent slopes		0 - 2	Sand	SP-SM, SM	A-2-4, A-3	0.3 - 1.5	C/D
			2 - 28	Sand	SP-SM, SM, SP	A-3, A-2-4		
			28 - 39	Sandy loam, sandy clay loam	SC, SC-SM, SM	A-2-4, A-4, A-6		
			39 - 55	Sandy loam, fine sandy loam, sandy clay loam	SC, SM	A-2-4, A-4, A-6		
			55 - 80	Sandy loam, sandy clay loam	CL, SC-SM	A-4, A-6		

Brevard County NRCS Soil Units Summary

Unit No.	Soil Name		Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
22	Floridana sand, frequently ponded, 0 to 2 percent slopes		0 - 21	Sand	SP-SM, SM	A-3, A-2-4	0.0	C/D
			21 - 25	Sand, fine sand	SP-SM, SM	A-3, A-2-4		
			25 - 60	Fine sandy loam, sandy clay loam, sandy loam	CL, SC-SM	A-6, A-7-6, A-4		
			60 - 80	Sandy loam, fine sandy loam, sandy clay loam	CL, SC-SM	A-6, A-7-6, A-4		
23	Floridana sand, 0 to 2 percent slopes, frequently flooded		0 - 29	Sand	SM, SP-SM	A-2-4, A-3	0.0	B/D
			29 - 43	Sandy clay loam, sandy loam	SC-SM, SC	A-2-4, A-7-6, A-6		
			43 - 62	Sandy loam, sandy clay loam	SC-SM, SC	A-2-4, A-7-6, A-6		
24	Floridana, Chobee, and Felda soils, frequently flooded	Floridana, flooded	0 - 12	Sand	SP-SM	A-3	0.0	B/D
			12 - 29	Sand	SP, SP-SM	A-3		
			29 - 43	Sandy clay loam, sandy loam	SC, SC-SM	A-2		
			43 - 62	Sandy loam, sandy clay loam	SC-SM, SC	A-2		
		Chobee, flooded	0 - 14	Sandy loam	SM, SC-SM	A-2	0.0	B/D
			14 - 66	Sandy clay loam	SC	A-2-6, A-2-7, A-6		
		Felda, flooded	0 - 30	Sand	SP, SP-SM	A-3	0.0 - 0.5	A/D
			30 - 63	Sandy clay loam, sandy loam, loamy sand	SC, SC-SM, SM	A-2-4, A-2-6		

Brevard County NRCS Soil Units Summary

Unit No.	Soil Name	Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
26	Holopaw sand, 0 to 2 percent slopes	0 - 5	Sand	SM, SP, SP-SM	A-2-4, A-3	0.3 - 1.5	A/D
		5 - 48	Sand	SP, SP-SM	A-2-4, A-3		
		48 - 65	Sandy clay loam, fine sandy loam, sandy loam	CL, SC	A-6, A-4, A-7-6		
		65 - 80	Fine sandy loam, sandy loam	SC, SC-SM	A-4, A-6, A-2-4		
27	Holopaw sand, frequently ponded, 0 to 1 percent slopes	0 - 5	Sand	SM, SP, SP-SM	A-2-4, A-3	0.0	A/D
		5 - 48	Sand	SP-SM, SP	A-3, A-2-4		
		48 - 65	Sandy clay loam, fine sandy loam, sandy loam	CL, SC	A-6, A-4, A-7-6		
		65 - 80	Sandy loam, fine sandy loam	SC, SC-SM	A-4, A-6, A-2-4		
28	Immokalee sand, 0 to 2 percent slopes	0 - 9	Sand	SP-SM	A-3, A-2-4	0.5 - 1.5	B/D
		9 - 36	Sand	SP, SP-SM	A-2-4, A-3		
		36 - 55	Fine sand, sand	SP-SM, SM	A-3, A-2-4		
		55 - 80	Fine sand, sand	SM, SP-SM	A-2-4, A-3		
29	Malabar sand, high	0 - 45	Sand	SP	A-3	0.5 - 1.5	A/D
		45 - 54	Sandy clay loam, fine sandy loam, clay loam	SC-SM, SC	A-2, A-6		
		54 - 61	Sandy loam, sandy clay loam	SC-SM, SC	A-2, A-6		
		61 - 65	Sand, fine sand, loamy fine sand	SP-SM	A-2, A-3		

Brevard County NRCS Soil Units Summary

Unit No.	Soil Name	Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
30	Malabar sand, 0 to 2 percent slopes	0 - 5	Sand	SP, SP-SM	A-3, A-2-4	0.3 - 1.5	A/D
		5 - 15	Sand	SP-SM, SP, SM	A-3, A-2-4		
		15 - 35	Sand, fine sand	SP-SM, SP, SM	A-2-4, A-3		
		35 - 45	Sand, fine sand	SP-SM, SP, SM	A-3, A-2-4		
		45 - 65	Sandy clay loam, fine sandy loam, sandy loam	SC, SC-SM, CL	A-2-4, A-4, A-6		
		65 - 80	Sand, fine sand, loamy sand	SM	A-2-4		

Brevard County NRCS Soil Units Summary

Unit No.	Soil Name		Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
31	Malabar, Holopaw, and Pineda soils	Malabar	0 - 45	Sand	SP	A-3	0.0 - 1.0	A/D
			45 - 54	Sandy clay loam, fine sandy loam, clay loam	SC-SM, SC	A-2, A-6		
			54 - 61	Sandy loam, sandy clay loam	SC-SM, SC	A-2, A-6		
			61 - 65	Sand, fine sand, loamy fine sand	SP-SM	A-2, A-3		
		Holopaw	0 - 7	Sand	SP, SP-SM	A-3		
			7 - 45	Fine sand, sand	SP, SP-SM	A-3		
			45 - 62	Sandy loam, sandy clay loam, fine sandy loam	SC-SM, SM	A-2		
			62 - 71	Loamy sand, loamy fine sand, fine sand	SM, SP-SM	A-2, A-3		
		Pineda	0 - 5	Sand	SP, SP-SM	A-3		
			5 - 35	Sand, fine sand	SP, SP-SM	A-3		
			35 - 38	Loamy sand, sandy loam	SM, SP-SM	A-2		
			38 - 60	Sandy loam, sandy clay loam, fine sandy loam	SC, SC-SM, SM	A-2		
			60 - 65	Loamy sand, sand, sandy loam	SM, SP-SM	A-3, A-2		
33	Micco mucky peat, frequently flooded		0 - 30	Mucky peat	PT	A-8	0.0	A/D
			30 - 38	Sand, loamy sand, sandy loam	SP-SM, SP, SM	A-3, A-2		
			38 - 55	Sandy loam, sandy clay loam	SC-SM, SC	A-2		

Brevard County NRCS Soil Units Summary

Unit No.	Soil Name	Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
35	Everglades mucky peat, frequently flooded	0 - 54	Mucky peat	PT	A-8	0.0	A/D
		54 - 61	Sand, loamy sand	SP-SM	A-3		
		61 - 77	Sandy clay loam, sandy loam	SC, SC-SM, SM	A-2, A-6		
36	Myakka sand, 0 to 2 percent slopes	0 - 6	Sand	SP-SM	A-3	0.5 - 1.5	A/D
		6 - 20	Sand, fine sand	SP-SM	A-3		
		20 - 36	Fine sand, loamy fine sand, sand	SP-SM	A-2-4		
		36 - 80	Sand, fine sand	SP-SM	A-3		
38	Myakka sand, depressional	0 - 22	Sand	SP, SP-SM	A-3	0.0	B/D
		22 - 35	Sand	SM, SP-SM	A-3, A-2		
		35 - 46	Sand	SM, SP-SM	A-2, A-3		
		46 - 63	Sand	SP, SP-SM	A-3		
39	Myakka-Urban land complex	0 - 22	Sand	SP, SP-SM	A-3	0.5 - 1.5	B/D
		22 - 35	Sand	SM, SP-SM	A-3, A-2		
		35 - 46	Sand	SM, SP-SM	A-2, A-3		
		46 - 63	Sand	SP, SP-SM	A-3		
40	Oldsmar sand, 0 to 2 percent slopes	0 - 6	Sand	SP-SM, SM	A-3, A-2-4	0.5 - 1.5	A/D
		6 - 38	Sand	SM, SP-SM	A-2-4, A-3		
		38 - 50	Sand, fine sand, loamy fine sand	SP-SM, SM	A-2-4, A-3		
		50 - 80	Fine sandy loam, sandy loam, sandy clay loam	SC, CL, SC-SM	A-4, A-7-6, A-6		

Brevard County NRCS Soil Units Summary

Unit No.	Soil Name	Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
47	Pineda sand, 0 to 2 percent slopes	0 - 5	Sand	SM, SP-SM	A-3, A-2-4	0.3 - 1.5	C/D
		5 - 19	Sand	SP, SP-SM, SM	A-2-4, A-3		
		19 - 35	Sand	SM, SP-SM	A-3, A-2-4		
		35 - 38	Sandy clay loam, sandy loam	SC, CL, SC-SM	A-2-4, A-6, A-4		
		38 - 60	Sandy clay loam, sandy loam	SC, SC-SM	A-2-4, A-6, A-4		
		60 - 80	Sandy loam, sand, loamy sand	SM	A-2-4		
48	Delray sand, occasionally flooded	0 - 15	Sand	SP, SP-SM	A-3	0.0	A/D
		15 - 40	Fine sand, sand	SP, SP-SM	A-3		
		40 - 52	Sandy loam, sandy clay loam, fine sandy loam	SC, SC-SM, SM	A-2		
		52 - 60	Loamy sand, fine sandy loam, sandy clay loam	SC, SC-SM, SM	A-2		
49	Pomello sand, 0 to 5 percent slopes	0 - 4	Sand	SM, SP-SM	A-2-4, A-3	1.5 - 3.5	A
		4 - 56	Sand, fine sand, coarse sand	SP, SP-SM	A-2-4, A-3		
		56 - 62	Sand, fine sand, coarse sand	SM, SP-SM	A-2-4, A-3		
		62 - 80	Sand, fine sand, coarse sand	SP, SM, SP-SM	A-2-4, A-3		
51	Pompano sand, 0 to 2 percent slopes	0 - 80	Sand	SP, SP-SM	A-2-4, A-3	0.3 - 1.5	A/D
52	Quartzipsamments, smoothed	0 - 80	Sand	SP, SP-SM	A-3	2.0 - 5.0	A
54	St. Johns sand, 0 to 2 percent slopes	0 - 11	Sand	SP-SM	A-3, A-2-4	0.0 - 0.5	B/D
		11 - 24	Sand	SP-SM	A-3		
		24 - 36	Sand	SP-SM	A-2-4, A-3		
		36 - 60	Sand	SP-SM	A-3, A-2-4		

Brevard County NRCS Soil Units Summary

Unit No.	Soil Name	Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
64	Terra Ceia muck, frequently flooded	0 - 70	Muck	PT	A-8	0.0	A/D
67	Tomoka muck, frequently ponded, 0 to 1 percent slopes	0 - 34	Muck	PT	A-8	0.0	A/D
		34 - 39	Sand, fine sand, loamy sand	SM, SP-SM	A-3, A-2-4		
		39 - 80	Sandy clay loam, fine sandy loam, sandy loam	SC-SM, SC, CL	A-6, A-2-4		
68	Tomoka muck, drained, frequently ponded, 0 to 1 percent slopes	0 - 27	Muck	PT	A-8	0.0 - 0.5	A/D
		27 - 35	Sand, fine sand, loamy sand	SP-SM, SM	A-3, A-2-4		
		35 - 80	Sandy loam, sandy clay loam, fine sandy loam	SC, CL, SC-SM	A-4, A-2-4, A-6		
70	Valkaria sand	0 - 80	Sand	SP, SP-SM	A-3	0.0 - 1.0	A/D
71	Wabasso sand, 0 to 2 percent slopes	0 - 6	Sand	SP-SM, SM	A-3, A-2-4	0.5 - 1.5	C/D
		6 - 25	Sand	SP-SM, SP	A-3, A-2-4		
		25 - 30	Sand	SP-SM, SM	A-3, A-2-4		
		30 - 58	Sandy clay loam	CL, SC	A-6, A-7-6		
		58 - 80	Loamy sand, sandy loam	SM, SC	A-2-4, A-2-6		
73	Winder loamy sand	0 - 12	Loamy sand	SM	A-2	0.0 - 1.0	B/D
		12 - 17	Sandy loam, loamy sand, fine sandy loam	SM	A-2		
		17 - 65	Sandy clay loam	SC, SC-SM	A-2, A-6		
90	Terra Ceia muck, drained, frequently ponded, 0 to 1 percent slopes	0 - 80	Muck	PT	A-8	0.0	A/D
91	Anclote sand	0 - 19	Sand	SP, SP-SM	A-3	0.0 - 0.5	A/D
		19 - 72	Sand, fine sand, loamy fine sand	SP, SP-SM	A-3		

Orange County NRCS Soil Units Summary

Unit No.	Soil Name		Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
1	Arents, nearly level		0 - 80	Sand	SP, SP-SM	A-3	2.0 - 3.0	A
3	Basinger fine sand, frequently ponded, 0 to 1 percent slopes		0 - 5	Fine sand	SP, SP-SM	A-2-4, A-3	0.0	A/D
			5 - 36	Fine sand	SP, SP-SM	A-3, A-2-4		
			36 - 80	Fine sand, sand	SP, SP-SM	A-3, A-2-4		
11	Floridana and Chobee soils, frequently flooded	Floridana	0 - 14	Fine sand	SM, SP-SM	A-2-4, A-3	0.0 - 0.5	C/D
			14 - 28	Fine sand, sand	SP, SP-SM	A-3		
			28 - 53	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM	A-2-4, A-2-6		
			53 - 80	Sand, loamy fine sand	SC, SC-SM, SM, SP-SM	A-2-4, A-2-6, A-6		
		Chobee	0 - 12	Fine sandy loam	SM, SP-SM	A-2-4		
			12 - 56	Sandy clay loam, fine sandy loam	SC	A-2-6, A-2-7, A-6		
			56 - 80	Loamy fine sand, fine sand	SC, SC-SM, SM, SP-SM	A-2-4, A-2-6, A-6		
13	Felda fine sand, 0 to 2 percent slopes		0 - 4	Fine sand	SP-SM, SM	A-3, A-2-4	0.3 - 1.5	A/D
			4 - 35	Fine sand	SM, SP-SM	A-3, A-2-4		
			35 - 43	Fine sandy loam, sandy clay loam, sandy loam	SC, CL	A-7-6, A-6, A-2-4		
			43 - 80	Extremely paragravelly fine sand, extremely paragravelly loamy sand, extremely paragravelly sand	SM, SP-SM	A-2-4, A-3		
16	Floridana fine sand, 0 to 2 percent slopes, frequently flooded		0 - 13	Fine sand	SP-SM, SM	A-2-4, A-3	0.0	C/D
			13 - 28	Fine sand	SM, SP-SM	A-2-4, A-3		
			28 - 80	Fine sandy loam, sandy clay loam	SC, CL, SC-SM	A-6, A-2-4		
17	Floridana mucky fine sand, frequently ponded, 0 to 1 percent slopes		0 - 4	Mucky fine sand	SM, SP-SM	A-3, A-2-4	0.0	C/D
			4 - 15	Fine sand	SP-SM, SM	A-2-4, A-3		
			15 - 32	Sand, fine sand	SM, SP-SM	A-3, A-2-4		
			32 - 44	Sandy loam, fine sandy loam, sandy clay loam	CL, SC, SC-SM	A-7-6, A-6, A-4		
			44 - 80	Sandy clay loam, sandy loam, fine sandy loam	SC, CL, SC-SM	A-7-6, A-2-4, A-4		

Orange County NRCS Soil Units Summary

Unit No.	Soil Name		Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
20	Immokalee fine sand	Immokalee, non-hydric	0 - 5	Fine sand	SP, SP-SM	A-3	0.5 - 1.0	B/D
			5 - 35	Fine sand, sand	SP, SP-SM	A-3		
			35 - 67	Fine sand, sand	SM, SP-SM	A-2-4, A-3		
			67 - 80	Fine sand, sand	SP, SP-SM	A-3		
		Immokalee, hydric	0 - 5	Fine sand	SP, SP-SM	A-3		
			5 - 35	Fine sand, sand	SP, SP-SM	A-3		
			35 - 67	Fine sand, sand	SM, SP-SM	A-2-4, A-3		
			67 - 80	Fine sand, sand	SP, SP-SM	A-3		
23	Malabar fine sand	Malabar, hydric	0 - 3	Fine sand	SP, SP-SM	A-3	0.0 - 1.0	A/D
			3 - 18	Sand, fine sand	SP, SP-SM	A-3		
			18 - 30	Sand, fine sand	SP, SP-SM	A-2-4, A-3		
			30 - 42	Sand, fine sand	SP, SP-SM	A-3		
			42 - 58	Sandy clay loam, fine sandy loam, sandy loam	SC, SC-SM, SM	A-2, A-4, A-6		
			58 - 80	Loamy fine sand, fine sand, loamy sand	SM, SP-SM	A-2-4, A-3		
		Malabar, non-hydric	0 - 3	Fine sand	SP, SP-SM	A-3	0.5 - 1.5	
			3 - 18	Sand, fine sand	SP, SP-SM	A-3		
			18 - 30	Sand, fine sand	SP, SP-SM	A-2-4, A-3		
			30 - 42	Sand, fine sand	SP, SP-SM	A-3		
			42 - 58	Sandy clay loam, fine sandy loam, sandy loam	SC, SC-SM, SM	A-2, A-4, A-6		
			58 - 80	Loamy fine sand, fine sand, loamy sand	SM, SP-SM	A-2-4, A-3		
26	Ona fine sand, 0 to 2 percent slopes		0 - 4	Fine sand	SP-SM, SM	A-2-4, A-3	0.5 - 1.5	B/D
			4 - 22	Fine sand, sand	SM, SP-SM	A-2-4, A-3		
			22 - 80	Fine sand, sand	SP-SM, SM	A-2-4, A-3		

Orange County NRCS Soil Units Summary

Unit No.	Soil Name		Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
30	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	Pineda	0 - 1	Fine sand	SP-SM, SM	A-3, A-2-4	0.5 - 1.5	A/D
			1 - 5	Fine sand	SM, SP-SM	A-3, A-2-4		
			5 - 36	Fine sand	SM, SP-SM	A-2-4, A-3		
			36 - 54	Fine sandy loam, sandy clay loam	CL, SC, SC-SM	A-4, A-2-4, A-6		
			54 - 80	Fine sand, sand	SP-SM, SM	A-2-4, A-3		
		Pineda, wet	0 - 1	Fine sand	SM, SP-SM	A-2-4, A-3	0.0	
			1 - 5	Fine sand	SP-SM, SM	A-2-4, A-3		
			5 - 36	Fine sand	SM, SP-SM	A-2-4, A-3		
			36 - 54	Sandy clay loam, fine sandy loam	CL, SC, SC-SM	A-4, A-2-4, A-6		
			54 - 80	Fine sand, sand	SP-SM, SM	A-2-4, A-3		
32	Pinellas fine sand, 0 to 2 percent slopes		0 - 5	Fine sand	SP-SM, SM	A-2-4, A-3	0.5 - 1.5	B/D
			5 - 18	Fine sand, sand	SP-SM, SM	A-3, A-2-4		
			18 - 34	Sand, fine sand	SM, SP-SM	A-2-4, A-3		
			34 - 46	Fine sandy loam, sandy loam	SC, SC-SM	A-2-4, A-4, A-6		
			46 - 80	Paragravelly fine sand, paragravelly sand	SM, SP-SM	A-2-4, A-3, A-1-b		
33	Pits		---	---	---	---	---	---
34	Pomello fine sand, 0 to 5 percent slopes		0 - 47	Fine sand	SP-SM	A-3	2.0 - 3.5	A
			47 - 58	Fine sand	SP-SM	A-2-4		
			58 - 65	Fine sand	SP-SM	A-3		
			65 - 80	Fine sand	SP	A-3		
37	St. Johns fine sand	St. johns, non-hydric	0 - 12	Fine sand	SP, SP-SM	A-3	0.5 - 1.0	B/D
			12 - 24	Sand, fine sand	SP, SP-SM	A-3		
			24 - 44	Sand, fine sand	SM, SP-SM	A-2-4, A-3		
			44 - 80	Sand, fine sand	SP, SP-SM	A-3		
		St. johns, hydric	0 - 12	Fine sand	SP, SP-SM	A-3	0.0 - 1.0	
			12 - 24	Sand, fine sand	SP, SP-SM	A-3		
			24 - 44	Sand, fine sand	SM, SP-SM	A-2-4, A-3		
			44 - 80	Sand, fine sand	SP, SP-SM	A-3		

Orange County NRCS Soil Units Summary

Unit No.	Soil Name		Depth (inches)	Soil Description	Unified Soil Classification Symbol	AASHTO Soil Classification Symbol	Depth to Seasonal High Groundwater (feet)	Hydrologic Group
42	Sanibel muck	Sanibel, undrained	0 - 11	Muck	PT	A-8	0.0	A/D
			11 - 15	Sand, fine sand, mucky fine sand	SP, SP-SM	A-3		
			15 - 80	Sand fine sand	SP, SP-SM	A-3		
		Sanibel, drained	0 - 11	Muck	PT	A-8	0.0 - 0.5	
			11 - 15	Sand, fine sand, mucky fine sand	SP, SP-SM	A-3		
			15 - 80	Fine sand, sand	SP, SP-SM	A-3		
44	Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes	Smyrna, non-hydric	0 - 4	Fine sand	SP, SM, SP-SM	A-2-4	0.5 - 3.5	A/D
			4 - 17	Fine sand	SP, SP-SM	A-3, A-2-4		
			17 - 27	Loamy fine sand, fine sand	SP-SM, SM	A-2-4		
			27 - 80	Fine sand	SP, SP-SM	A-3, A-2-4		
		Smyrna, hydric	0 - 4	Fine sand	SP, SM, SP-SM	A-2-4	0.0 - 0.5	
			4 - 17	Fine sand	SP, SP-SM	A-3, A-2-4		
			17 - 27	Fine sand, loamy fine sand	SM, SP-SM	A-2-4		
			27 - 80	Fine sand	SP, SP-SM	A-3, A-2-4		

Notes:

1. '---' indicates no information shown in the NRCS database

APPENDIX D

Traffic Demand Model Development

OSCEOLA/BREVARD COUNTY CONNECTOR

Traffic for Concept, Feasibility and Mobility Study

May 2021

CDM Smith

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1. Project Overview

1.1 Project Background and Description

The Concept, Feasibility & Mobility Study (CF&M) for the Osceola/Brevard County Connector (OBCC) will evaluate transportation alternative corridors between Osceola County and I-95 in Brevard County. The CF&M Study will consider project alternatives from an engineering and environmental standpoint. In 2013, Governor Rick Scott signed an executive order creating the East Central Florida Corridor Task Force (ECFCTF). The task force was part of a broader statewide Future Corridors effort by FDOT to coordinate transportation infrastructure with future land uses for a 50-year horizon. The charge of the three county ECFCTF was to identify anticipated future development patterns and associated mobility and connectivity needs in Brevard, Orange and Osceola Counties. In 2014, the task force completed its study and presented the Governor with its findings including a recommendation to preserve and enhance five existing corridors (SR 528, US 192, SR 50, Narcoossee Road, and SR 520) and the recommendation of two new north-south corridors (Corridors I and H) and two new east-west corridors (Corridors D and F). This study considers the two new east-west corridors from the ECFCTF study.

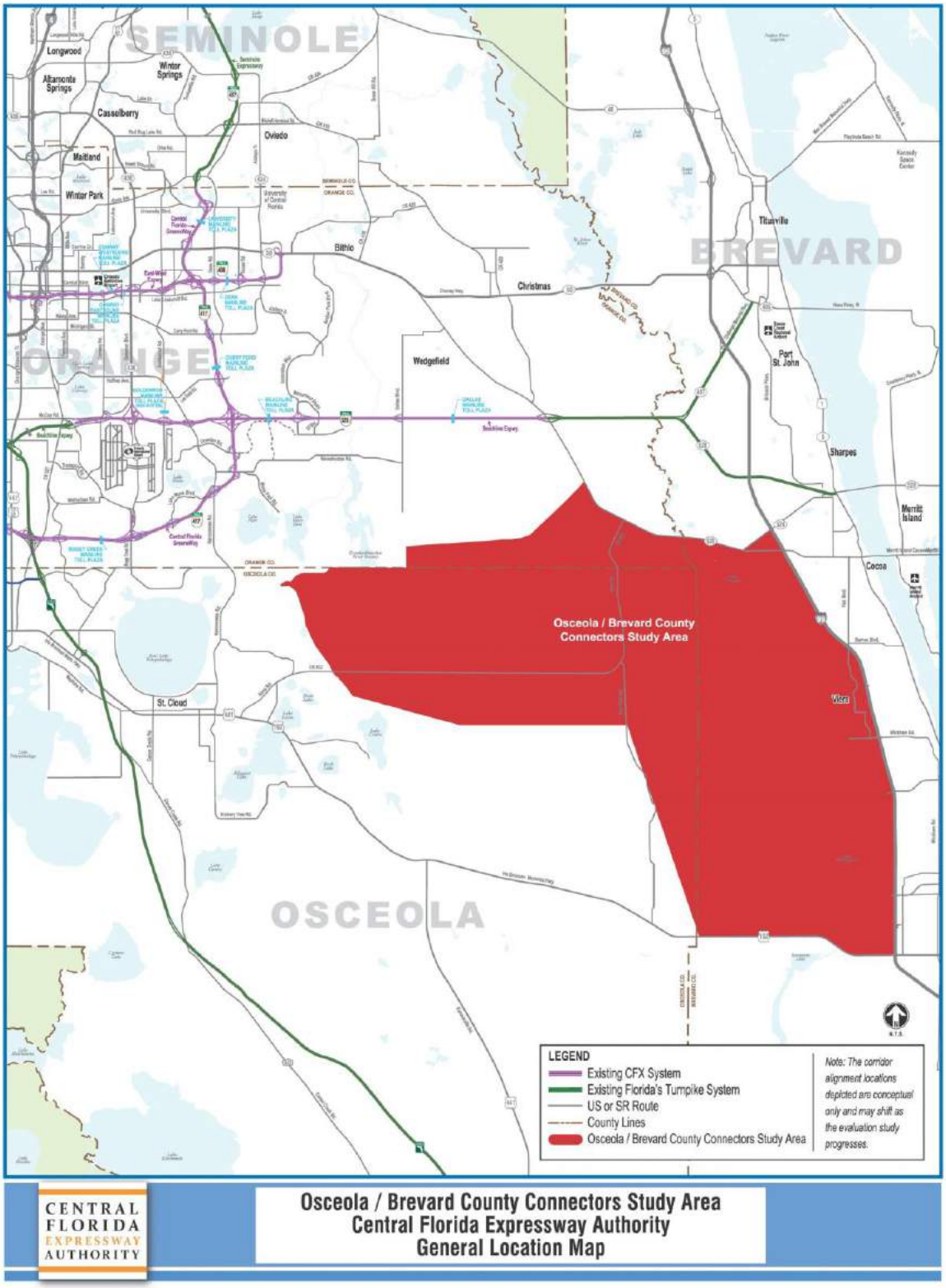
The study area is bound by the planned Osceola Parkway Extension Expressway in the west and Interstate 95 (I-95) in the east, a distance of approximately 30 miles. The northern study area boundary, starting on the west, extends along the Osceola and Orange County line, then enters Orange County to intersect with SR 520, west of Nova Road. The southern boundary, starting on the west, runs approximately 2.5 miles south of existing Nova Road eastward to Deer Park Road for approximately 15 miles before it turns south to US 192. The study area boundaries are presented in Figure 1.1.

1.2 Purpose and Need

The goals of the OBCC Study include:

- Identify transportation mobility options.
- Enhance mobility for the area's growing population and economy.
- Provide consistency with local plans and policies.
- Promote regional connectivity between:
  - -Osceola County and northern Brevard County
  - -Osceola County and central/southern Brevard County
- Improve resiliency and enhance evacuation routes.
- Fulfill the ECFCTF recommendation on corridors evaluation.

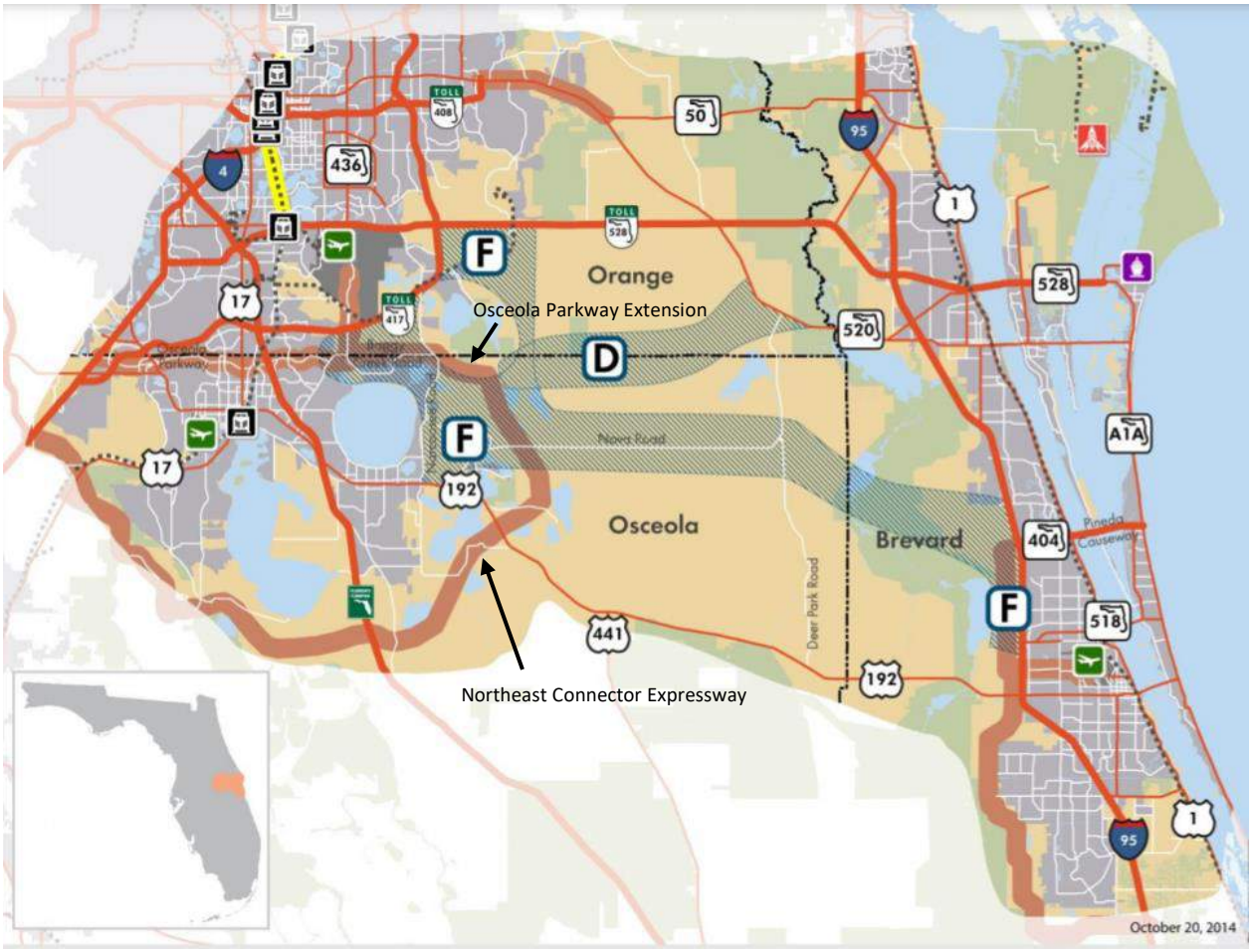
Figure 1.1 Study Area



1.3 *Alternatives Considered*

The OBCC Study involves an evaluation of the ECFCTF Corridors D and F, so the alternatives developed follow along those corridors identified in **Figure 1.2.** Corridor D originates at the planned terminus of the Osceola Parkway Extension on the west and extends to the east to connect at SR 520, with an alternative terminus at I-95. Corridor F originates at the planned Phase 1 of the Northeast Connector Expressway and extends east terminating at I-95. The CF&M Study consultant considered several alignments for each of the corridors.

Figure 1.2 ECFCTF Study Area



2. *Existing Conditions*

2.1 *Historical and Current Traffic*

Osceola, Orange and Brevard Counties have experienced significant growth over the past two decades. According to the U.S. Census, the population in Osceola County grown more than two and a half times from 1990 to 2019, from 110,000 to 375,750 residents, a 242% increase; Orange County doubled in population from 684,000 to 1,393,000 residents, a 104% increase; and Brevard County has grown by 50% from 403,000 to 602,000 residents. A majority of the

growth has happened in the fringes of the urban areas, with developments like Lake Nona, Medical City, the Narcoossee corridor, and Viera. In addition, new developments are planned and existing developments are continuing to expand within the Northeast District and the North Ranch developments in Osceola County, as well as future phases of the Viera development and infill development in Palm Bay along the planned St. Johns Heritage Parkway in Brevard County.

The Florida Traffic Online (2019) website was used to identify count stations with historical traffic data in the study area. The results are summarized in Table 2.1 showing the locations, 2019 annual average daily traffic (AADT), the historical straight-line growth rate, years of traffic data considered, the R-squared value of historical count data and the FDOT count station identification number. To measure growth rates, data from 5 to 10 years was pulled from the traffic databases and an R-squared value was determined. R-squared is a statistical measure of goodness of fit for a linear relation in the annual counts. A value closer to 100% indicates a straight line or consistent rate of growth, while a lower percentage reflects a less consistent growth pattern. Average growth rates in the study area are low between one and five percent, except for limited access facilities, such as SR 528, SR 407 and I-95, and sections of local roads including Stadium Parkway, Wickham Road and Eau Gallie Blvd. which have higher annual growth rates.

Table 2.1 Existing Traffic Conditions

Roadway		2019 AADT	Historical Growth	Years of Data	R^2	Count Station ID
From	To					
East Colonial Drive (SR 50)						
SR 520	Taylor Creek Rd.	12,400	1.0%	10	52%	751008
Taylor Creek Rd.	I-95	12,600	1.7%	10	58%	700383
SR 520						
E Colonial Drive (SR 50)	Beachline Expwy (SR 528)	18,000	1.5%	10	87%	751009
Beachline Expwy (SR 528)	SR 524	19,800	4.0%	10	76%	700367
SR 524	I-95	24,500	3.4%	10	80%	700385
Martin Andersen Beachline Expressway (SR 528)						
SR 417	**Dallas Blvd**	**64,000**	**6.67%**	**10**	**84%**	**750618**
Dallas Blvd.	SR 520	56,500	4.9%	10	91%	750336
SR 520	SR 407	48,700	39.1%	5	68%	970402
SR 407	I-95	41,000	34.6%	5	61%	970399
US 192 (SR 500)						
Nova Rd. (CR 532)	CR 500A/Old Melbourne Hwy	17,800	0.3%	10	23%	920302
CR 500A/Old Melbourne Hwy	Hickory Tree Rd	16,800	4.3%	10	80%	920304
Hickory Tree Rd	Holopaw Rd (SR15/US441)	11,600	4.8%	10	97%	920065
Holopaw Rd (SR15/US441)	Deer Park Rd. (CR 419)	7,400	3.7%	10	82%	921008
Deer Park Rd. (CR 419)	I-95	7,700	2.9%	10	60%	700090
Deer Park Rd. (CR 419)						
US 192	Nova Rd. (CR 532)	350	4.2%	7	75%	928069
Nova Rd. (CR 532)						
US 192	Sun Grove Ln.	3,900	3.8%	10	89%	927041
Sun Grove Ln.	SR 520	1,550	3.6%	9	83%	928050
Taylor Creek Rd.						
SR 520	E Colonial Drive (SR 50)	600	12.5%	5	75%	758089
SR 407						
SR 528	I-95	9,800	41.7%	5	79%	702042
SR 524						
SR 528	I-95	5,900	5.7%	10	89%	700425
Interstate I-95						
SR 407	SR 528	48,500	3.9%	5	39%	700401
Port St. Johns Pkwy	SR 528	46,500	22.4%	5	7%	700439
SR 528	SR 524	69,000	5.3%	5	58%	700368
SR 524	SR 520	52,000	7.5%	5	97%	707037
SR 520	Pluckebaum Rd	85,500	15.7%	5	83%	700365
Pluckebaum Rd	SR 519	88,700	3.8%	5	94%	709919
SR 519	SR 404	86,000	10.5%	5	96%	700388
SR 404	SR 518	94,000	4.0%	5	98%	700415
SR 518	US 192	84,500	23.6%	5	84%	700372

Roadway		2019 AADT	Historical Growth Rate	Years of Data	R^2	Count Station ID
From	To					
Stadium Parkway/Fiske Blvd.						
Wickham Rd	I-95	**19,300**	**15.1%**	6	83%	**708155**
I-95	Roy Wall Blvd	**26,500**	**1.6%**	6	46%	**700431**
Viera Boulevard						
Powerline Road	I-95	18,900	6.0%	10	95%	264536
Wickham Road						
Powerline Road	Lake Andrew Drive	14,500	9.1%	6	96%	513392
Lake Andrew Drive	I-95	45,500	17.1%	6	78%	707071
Pineda Causeway (SR 404)						
I-95	St Andrews Blvd	32,100	9.4%	8	96%	416570
Eau Gallie Boulevard (SR 518)						
I-95	N John Rodes Blvd	42,500	10.1%	10	77%	700419
Ellis Road						
John Rodes Blvd	Wickham Rd	15,200	7.1%	9	98%	322322

2.2 Roadway Operational Conditions

Table 2.2 summarizes the existing roadway operating conditions within the study area. All of the roadways are currently operating with a volume to capacity (v/c) ratio of less than one (1) which indicates sufficient capacity and no congestion, except for Eau Gallie Blvd. from I-95 to N. John Rodes Blvd., which is operating just over 1.0 v/c ratio. The capacities were based on the FDOT Quality/Level of Service Handbook (2020) Generalized Tables. According to FDOT Policy 000-525-006, the level of service target for the State Highway System is LOS D in urbanized areas and LOS C for rural areas for peak hour travel, but these LOS targets were considered for daily volumes for this analysis. All of the facilities in the study area operate at acceptable levels.

Table 2.2 Existing Operational Analysis

Roadway		# of Lanes	Type	Area Type	2019 AADT	2019 v/c
From	To					
East Colonial Drive (SR 50)						
SR 520	Taylor Creek Rd.	4	Uninterrupted Highway	Rural	12,400	0.28
Taylor Creek Rd.	I-95	4	Uninterrupted Highway	Rural	12,600	0.28
SR 520						
E Colonial Drive (SR 50)	Beachline Expwy (SR 528)	4	Uninterrupted Highway	Rural	18,000	0.40
Beachline Expwy (SR 528)	SR 524	4	Uninterrupted Highway	Rural	19,800	0.44
SR 524	I-95	4	Uninterrupted Highway	Rural	24,500	0.55
Martin Andersen Beachline Expressway (SR 528)						
SR 417	Dallas Blvd	4	Limited Access Roadway	Transitioning	64,000	0.91
Dallas Blvd	SR 520	4	Limited Access Roadway	Transitioning	56,500	0.80
SR 520	SR 407	4	Limited Access Roadway	Transitioning	48,700	0.69
SR 407	I-95	4	Limited Access Roadway	Transitioning	41,000	0.58
US 192 (SR 500)						
Nova Road	CR 500 A – Old Melbourne Hwy	4	Uninterrupted Highway	Rural	17,800	0.40
CR 500 A – Old Melbourne Hwy	Hickory Tree Road	4	Uninterrupted Highway	Rural	16,800	0.37
Hickory Tree Road	Holopaw Road (SR15)/ US441	4	Uninterrupted Highway	Rural	11,600	0.26
Holopaw Road (SR15)/ US441	Deer Park Rd. (CR 419)	4	Uninterrupted Highway	Rural	7,400	0.16
Deer Park Rd. (CR 419)	I-95	4	Uninterrupted Highway	Rural	7,700	0.17
Deer Park Rd. (CR 419)						
US 192	Nova Rd. (CR 532)	2	Uninterrupted Highway	Rural	350	0.04
Nova Road (CR 532)						
US 192	Sun Grove Ln.	2	Uninterrupted Highway	Rural	3,900	0.45
Sun Grove Ln.	SR 520	2	Uninterrupted Highway	Rural	1,550	0.18
Taylor Creek Road						
SR 520	E Colonial Drive (SR 50)	2	Uninterrupted Highway	Rural	600	0.07
SR 407						
SR 528	I-95	2	Uninterrupted Highway	Transitioning	9,800	0.42
I-95						
SR 407	Port St. Johns Pkwy	6	Limited Access Roadway	Urban	48,500	0.39
Port St. Johns Pkwy	SR 528	6	Limited Access Roadway	Urban	46,500	0.38
SR 528	SR 524	6	Limited Access Roadway	Urban	69,000	0.56
SR 524	SR 520	6	Limited Access Roadway	Urban	52,000	0.42
SR 520	Rest Area	6	Limited Access Roadway	Urban	85,500	0.69
Rest Area	SR 519	6	Limited Access Roadway	Urban	88,700	0.72
SR 519	SR 404	6	Limited Access Roadway	Urban	86,000	0.70
SR 404	SR 518	6	Limited Access Roadway	Urban	94,000	0.76
SR 518	US 192	6	Limited Access Roadway	Urban	84,500	0.68

Roadway		# of Lane	Type	Area Type	2019 AADT	2019 v/c
From	To					
Stadium Parkway/Fiske Blvd.						
Wickham Rd	I-95	2/4	Urban Minor Arterial	Urban	19,300	0.48
I-95	Roy Wall Blvd	4	Urban Principal Arterial	Urban	26,500	0.67
Viera Boulevard						
Powerline Road	I-95	2/4	Urban Minor Arterial	Urban	18,900	0.47
Wickham Road						
Powerline Road	Lake Andrew Drive	2/4	Urban Minor Arterial	Urban	14,500	0.36
Lake Andrew Drive	I-95	4	Urban Principal Arterial – Other	Urban	45,500	1.40
Pineda Causeway (SR 404)						
I-95	St Andrews Blvd	4	Urban Principal Arterial – Other	Urban	32,100	0.81
Eau Gallie Boulevard (SR 518)						
I-95	N John Rodes Blvd	4	Urban Principal Arterial – Other	Urban	42,500	1.07
Ellis Road						
John Rodes Blvd	Wickham Rd	2	Urban Minor Arterial	Urban	15,200	0.86

3. *Travel Demand Modeling*

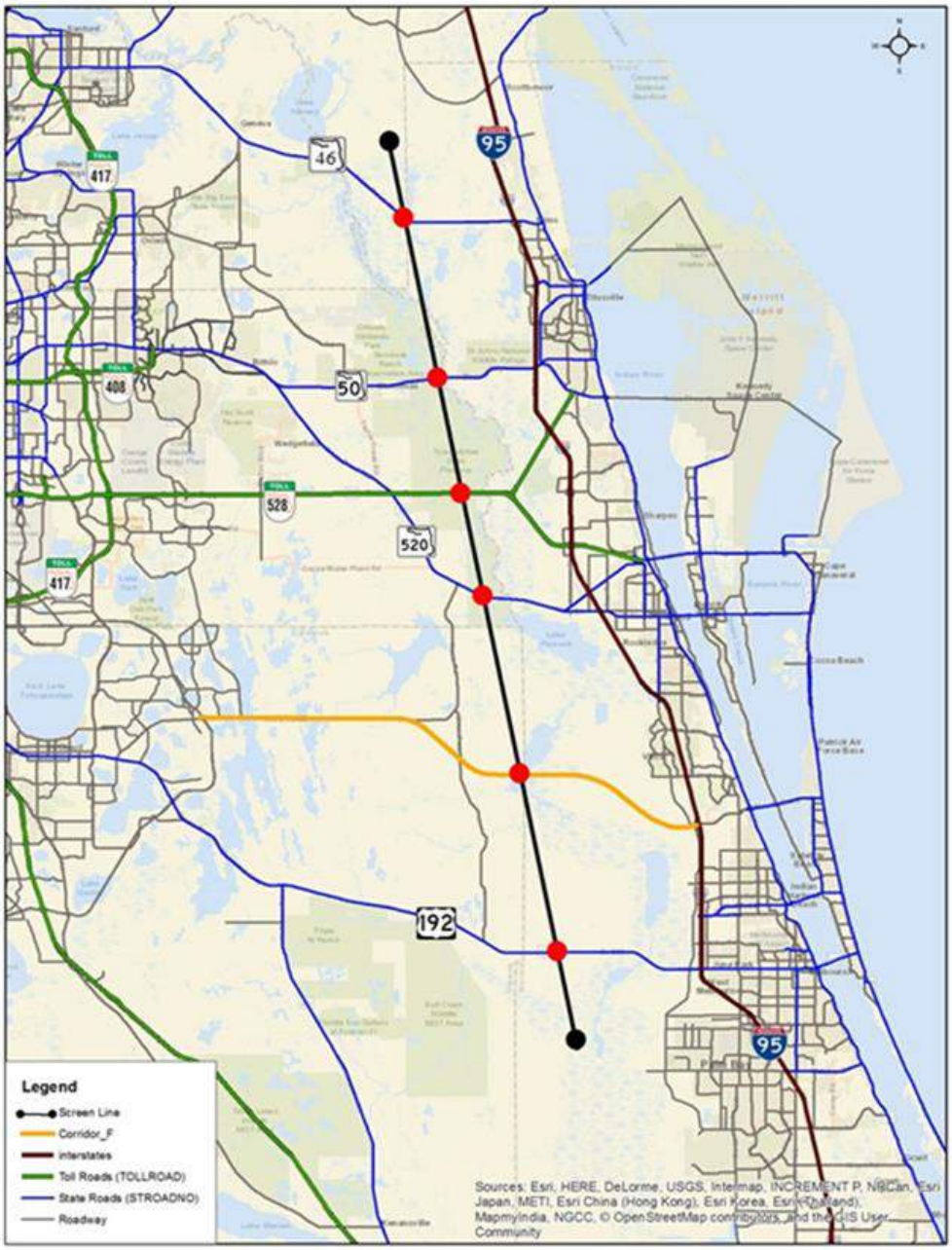
The traffic forecasts used to analyze the OBCC Project for the CF&M Study are based on an updated and improved travel demand model created specifically for the OCX Master Plan Projects. The new project-specific model was used to estimate the expected traffic based on input data such as socio-economic data (i.e., land use, population, employment) and transportation network data (e.g., number of lanes, facility types, trip rates). The primary forecasting tool used over the last 30 years in Florida has been the Florida Standard Urban Transportation Model Structure (FSUTMS), using the Cube Voyager operating system. Within the FSUTMS, toll modeling originated by establishing specific toll amounts for appropriate network links and a coefficient to convert tolls to travel time impedance, based on the value of travel time savings.

CDM Smith, the General Traffic and Earnings Consultant, had developed a daily model for the Central Florida region due to expansion of the CFX jurisdictional area and the need to study the OCX Master Plan projects in this expanded area. This model, the CFX Model 3.0, is based on the Central Florida Regional Planning Model (CFRPM) version 6.1, in Cube Voyager, because of the larger study area and updated socio-economic data sets. The development of this model was documented under separate cover for the CFM Final Reports for each of the four OCX projects. A project specific model was developed from CFX Model 3.0 to evaluate the Osceola Parkway Extension (OPE) project. For the evaluation of the OBCC project, the project-specific model that was used to analyze OPE was the starting point. The following documents the model assumptions made for the OPE model and additional changes for the OBCC project specific model.

3.1 Base Year Model (2015)

For this model, an important measure of success in base year validation is the volume of traffic crossing a screenline, or cut line, within the study area. The critical screenline for the study area is the St. Johns River screenline that runs north south through the study area between Orange, Seminole and Osceola Counties and Brevard County. Five east-west running highways cross this screenline: SR 46, SR 50, SR 528, SR 520, and US 192. The screenline and a representative OBCC corridor are shown in **Figure 3.1**.

Figure 3.1 Screenline for OBCC Project



The initial base year model did not replicate 2015 traffic counts along the screenline, so several changes to the model were tested including network changes (speed/capacity checks on I-95, SR 520, US 192, and SR 528), global K-factor adjustments, and select link K-factor adjustments for specific corridors. The base year (2015) screenline results with the different model changes are shown in Table 3.1. This table contains a summary of 2015/2016 traffic counts, the original 2015 base year model volumes, and the 2015 model-predicted traffic volumes for each of the facilities at the St. Johns River crossing location with the different model tests. The base year K-factor adjustment of 3.5 on select links was selected as the best representative base year model for this study analysis.

Table 3.1 Screenline Counts and Forecasts

	Counts (2015/ 2016)	Original Base 2015	Base 2015 (with 95 Capacity change)	Base 2015 (K Factor Change 0.5)	Base 2015 (K Factor Change 2)	Base 2015 (K Factor Change 4 Select Link Analysis)	Base 2015 (K Factor Change 4 SLA)	Base 2015 (K Factor Change 3 SLA)	Base 2015 (K Factor Change 3.5 SLA)
Corridor F / D	0	-	-	-	-	-	-	-	-
SR 46	7,100	9,800	9,800	10,000	10,400	10,200	10,100	10,000	10,000
SR 50	10,300	9,500	9,400	6,100	14,400	9,400	8,200	8,200	8,100
SR 528	42,600	32,000	33,400	22,400	53,700	68,600	60,200	57,100	58,800
SR 520	16,400	400	400	300	600	1,600	10,600	4,700	8,700
SR 192/Space Coast	8,100	8,500	6,900	4,600	4,200	4,000	5,400	7,900	7,800
Total Screenline	**84,500**	**60,200**	**59,900**	**43,400**	**83,300**	**93,800**	**94,500**	**87,900**	**93,400**

3.2 CFX Model 3.0 Future Year Model (2045/2060)

The CFM study is considering the OBCC as a future corridor with a design year of 2060, since it is not anticipated that the Northeast District will be fully developed in that timeframe, and the North Ranch Sector Plan will not start development until 2060. Even though the OBCC project is anticipated outside the 2045 horizon year, the 2045 model was used because it is the best available model for planning purposes. By starting with the OPE project-specific model, the 2045 future year model retains all the updates and enhancements created for the CFX Model 3.0 and OPE Future Year Models. To create a 2060 model several features of the 2045 model were modified to replicate a 2060 condition. These include zone disaggregation and additional roadway network in the North Ranch area, as well as additional socio-economic (SE) data in the North Ranch area and adjustments to the SE data in Brevard County. These changes are described in the following sections.

3.2.1 Zonal Structure

Given that the study area is rural in nature, specifically the North Ranch Sector Plan area, the traffic analysis zones (TAZ) were rather large. Disaggregation was needed for the OBCC model to accommodate the project alignments and supporting road network. As part of the study, 148 zones were added to the OPE Model to incorporate the SE data and local roadway network proposed in the North Ranch Sector Plan. The zone disaggregation allows for the SE data to be distributed in multiple zones and distribution of traffic on the network. No additional zone disaggregation was needed for the OBCC project.

3.1.2 Socio-Economic Data

The modelwide socio-economic data forecast for 2045 was based on the CFX Model 3.0 which included the independent socio-economic data forecast for Orange and Osceola Counties developed by Fishkind & Associates for the OCX Master Plan projects.

Additional development was added to the 2045 data set to address potential population and employment in the study area anticipated in 2060. This approach included two additions to the data set for the North Ranch Sector Plan in Osceola County and the potential development along the St. Johns Heritage Parkway Corridor in Brevard County. For the North Ranch Sector Plan approximately 20% of the SE data, provided by representatives from the North Ranch, was incorporated into the model as the OBCC alternatives are expected to serve this future development. The North Ranch Sector Plan is a very large development, with an expected build out of nearly 500,000 population.

The planned St. Johns Heritage Parkway is a 22-mile arterial road around the western boundary of the City of Palm Bay, providing needed access to platted lands in this area. The St. Johns Heritage Parkway will connect I-95 at a new interchange south to US 192 and the new I-95/Ellis Road interchange on the north. A portion of the St. Johns Heritage Parkway is constructed from US 192 to Malabar Road, approximately 6 miles, as well as the I-95 interchange with another 1.5-

mile portion. The 14-mile gap in the St. Johns Heritage Parkway is currently under an Alternatives Corridor Evaluation study to be completed in Spring of 2022. The changes to the SE data set for this area were based on the environmentally protected lands and the platted lots in the City of Palm Bay. The data changes assumed an average of densities and intensities for this area of Brevard County from the existing SE data set. These densities averaged 2 dwelling units/acre and 2 persons per household for ZDATA1, and the intensities averaged a Floor Area Ratio of 15% and 1 employee per 1,000 sq feet for ZDATA 2. The increase in 2060 population, dwelling units and employment for both the North Ranch Sector Plan and the Brevard Co./St. Johns Heritage Parkway area are shown in **Table 3.2.** A total of 28,246 dwelling units were added for the North Ranch and 25,087 were added for the Brevard Co./St. Johns Heritage Parkway area, equaling a population of 67,700 and 62,544 respectively. The employment adjustments for the North Ranch equaled 24,306 employees and for the Brevard Co./St. Johns Heritage Parkway equaled 3,372 employees.

Table 3.2 SE Data Adjustment to Model for 2060

Regional SE Data Set	Total 2060 Population	Total 2060 Dwelling Units	Total 2060 Employment
CFX 3.0 Model	7,296,879	3,290,319	3,759,610
Increases for 20% of North Ranch Sector Plan	67,700	28,246	24,306
Increases for Brevard County/St. John's Heritage Pkwy Changes	62,544	25,087	3,372
CFX 3.0 Model with additional SE data	**7,427,123**	**3,343,652**	**3,787,288**

The distribution of the SE data set from the North Ranch Sector Plan is consistent with the Year 2060 SE data sets from the sector plan model. As stated above, 20% of the SE data for Osceola County was included in the North Ranch study area for the OBCC analysis. The distribution of the North Ranch and Brevard County population is shown in **Figure 3.2** and the distribution of employment is shown in **Figure 3.3.** The red dots represent the 2045 SE data set from the CFX 3.0/OPE model, and the blue dots represent the added SE data to represent 2060 conditions in the study area.

Figure 3.2 Distribution of SE data for Population in the North Ranch and Brevard Study Areas

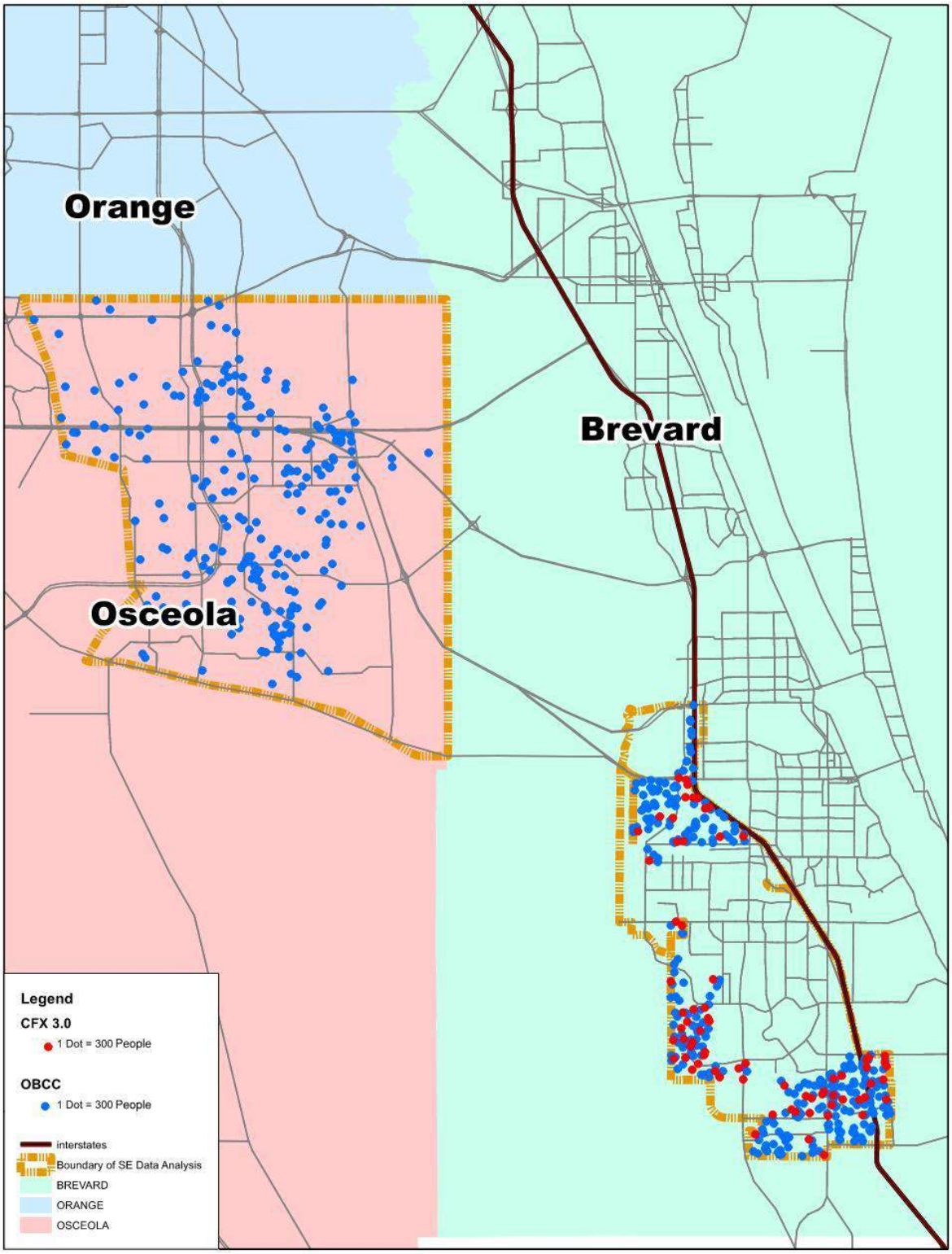
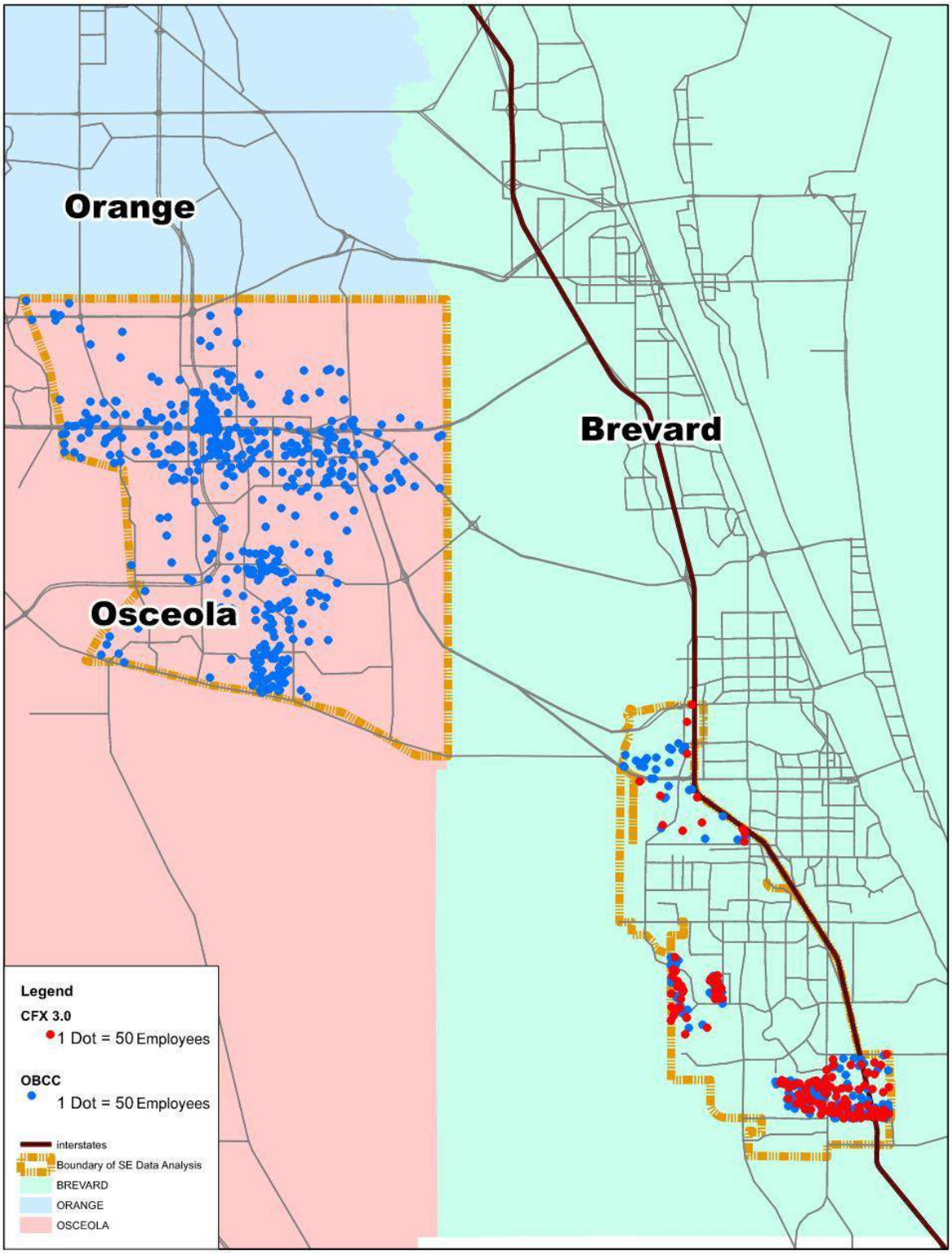


Figure 3.3 Distribution of SE Data for Employment in the North Ranch and Brevard Study Areas



3.1.3 Highway Network - Design Network (2045/2060)

The 2045 future year network for the CFX Model contained the transportation improvements identified in the CFX, FDOT and county work programs, as well as the improvements included in the CFX 2040 Master Plan and the 2040 cost feasible plans from the Metroplan Orlando and Space Coast TPO's. Since the transportation plans do not extend to 2060, these plans we used to create a future 2060 network. The major planned transportation improvements from these plans are listed below:

- SR 528 Widening from SR 436 to Innovation Way: 6 to 8 lanes
- SR 528 Widening from Innovation Way to SR 520: 4 to 6 lanes
- Poinciana Parkway from Cypress Parkway to Ronald Reagan Parkway: 2-4 lanes
- Poinciana Parkway Extension from Ronald Reagan Parkway to CR 532: new 4-lane expressway
- Poinciana Parkway Extension from CR 532 to I-4: new 4-lane expressway
- Southport Connector Expressway from Poinciana Parkway to Florida's Turnpike: New 4-lane Expressway
- Northeast Connector Expressway from Florida's Turnpike to US 192: new 4-lane expressway
- Northeast Connector Expressway from SR 417 to Nova Road: new 4-lane expressway
- Corridor I from US 192 to SR 520: new 4-lane expressway
- Network Streets in North Ranch Sector Planning Area
- St. Johns Heritage Parkway from US 192 to I-95
- SR 524 Widening from I-95 Interchange to South Industry Road: 2-4 lanes
- Washingtonia Extension from Ellis Road to Pineda Causeway: New 4 lane road parallel and west of I-95
- Malabar Road Widening from St. Johns Heritage Pkwy. to Minton Road: 2-4 lanes
- Babcock Street Widening from St. Johns Heritage Pkwy. to Malabar Road: 2-4 lanes
- US 1 from Pineda Causeway to Park Avenue: Widen to 6 lanes and intersection improvements at Pineda (SR 404)
- US 1 Widening from Malabar Road to RJ Conlan Blvd.: 4-6 lanes
- St. Johns Heritage Parkway from Babcock Street to I-95 Interchange (South): new 4 lane road parallel and west of I-95
- Babcock St. Widening from Indian River County Line to St. Johns Heritage Pkwy.: 2-4 lanes
- US 192 Widening from St. Johns Heritage Pkwy to Wickham Road: 4-6 lanes
- US 192 Widening from Wickham Road to Dairy Road: 4-6 lanes
- SR 405 (South Street) Widening from existing 4 lane section to SR 50: 2-4 lanes

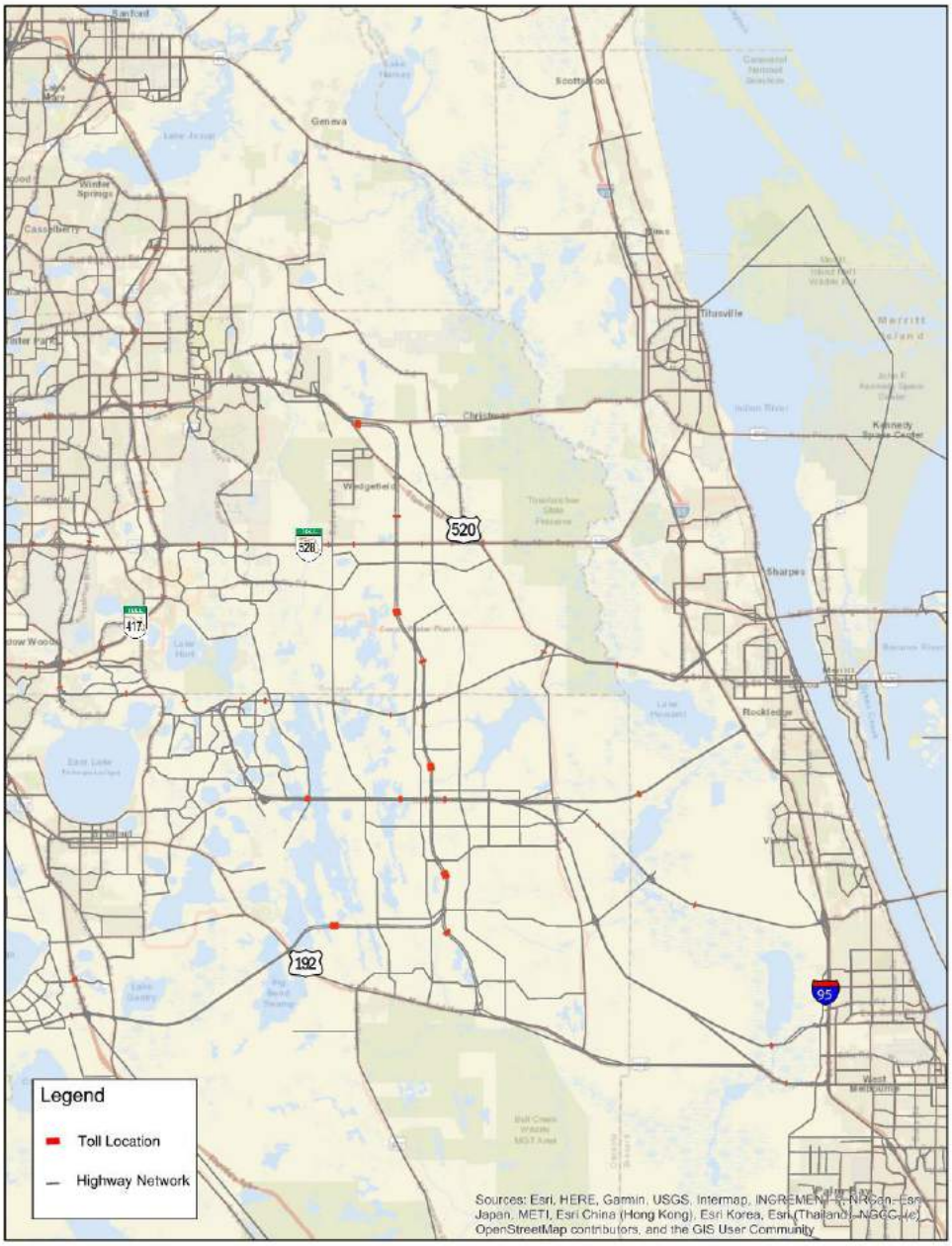
The traffic forecasts used for design traffic are developed so that the projects will be adequately sized to serve customers through their useful life. As such, the design network was developed to constrain the potential competitor facilities so future local road improvements in Osceola County

were limited to the 2025 LRTP network. In addition, a few additional improvements were removed for the design network, including:

- Boggy Creek Road from Simpson Road to Narcoossee Road: 2 to 4 lanes
- Cyrils Road from Narcoossee Road to Absher Road: 2 to 4 lanes
- Simpson Road from Osceola Parkway to Boggy Creek Road: 2 to 4 lanes
- Lakeshore Blvd. from Boggy Creek Road to Narcoossee Road: 2 to 4 lanes
- US 192 from Partin Settlement to Brown Chapel Road: 4 to 6 lanes
- Narcoossee Road from Boggy Creek Road to US 192: 4 to 6 lanes
- Lake Wilson Road from Sinclair Road to Osceola Polk Line Road (CR 532): 2 to 4 lanes

To ensure proper loading and distribution of trips on the OBCC study alternatives, there was additional collector roads from the Northeast District Sector Plan and North Sector Plan Area were added to the travel demand model 2045 to replicate a 2060 network. The highway network for the OBCC study area is shown in Figure 3.4. The network shows each of the alternatives with the toll points, between interchanges, shown as red dots.

Figure 3.4 Future Design Network



3.1.4 Toll Rates

Future year toll rates in the project model reflect current toll amounts and agency policies concerning future toll rate adjustments. For the OBCC alternatives, the toll rate was set at $0.18 per mile in 2018 dollars consistent with the toll rate established for all projects under CF&M studies. Toll rates were escalated at 1.5% per year according to CFX's Customer First Toll Policy. Tolls were applied to each alternative on a per segment basis with one assumed gantry location between each access point or interchange. These projects will be operated as all-electronic facilities.

3.1.5 Select Link Analysis

Another check of the model is to run a select link analysis (SLA) of the 2045/2060 future year model for the no build condition to determine reasonable distribution of average daily traffic on selected links. For this project, SR 50 and US 192 were chosen for the SLA, mainly to determine where traffic using these corridors was originating along I-95. In **Figure 3.5** the SR 50 SLA shows that traffic from I-95 north uses the SR 50 Corridor to travel into the UCF area and the Metro Orlando area. **Figure 3.6** shows the US 192 SLA which shows that traffic from I-95 south uses US 192 to access the North Ranch area and Osceola County. These were determined by the project team to be reasonable results for this project.

Figure 3.5 SR 50 Select Link Analysis

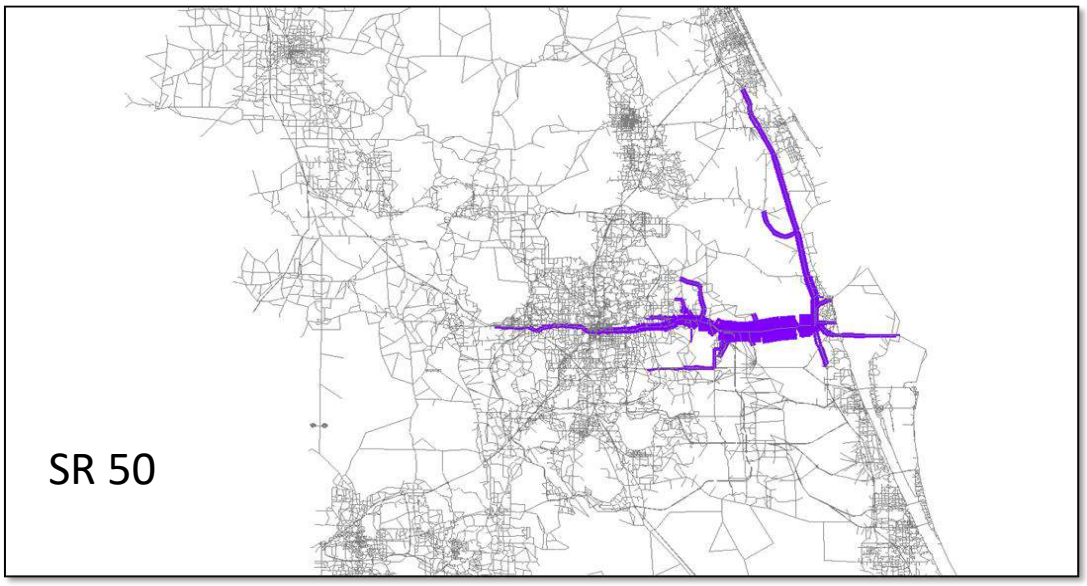
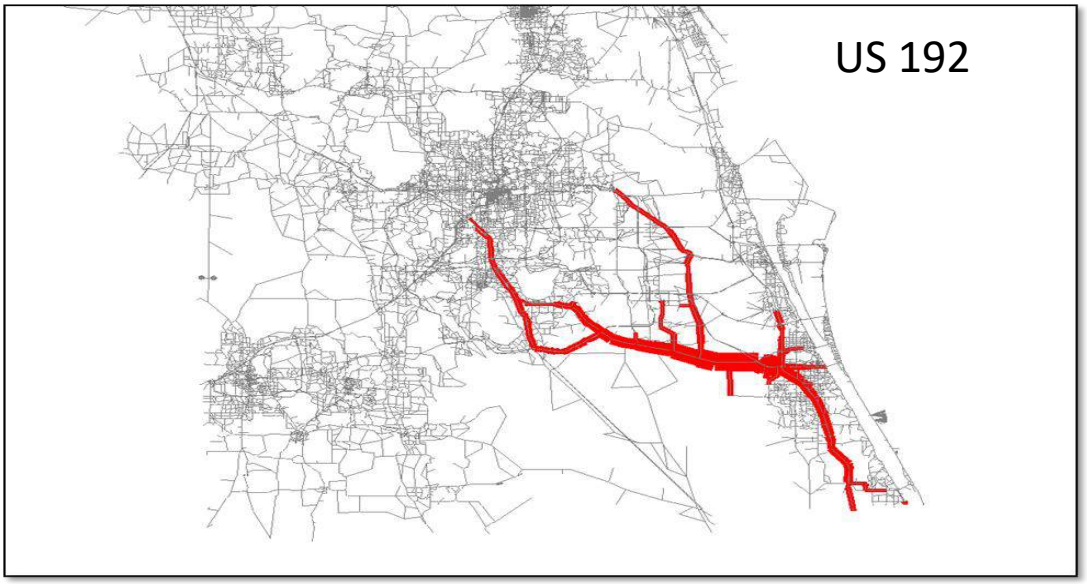


Figure 3.6 US 192 Select Link Analysis

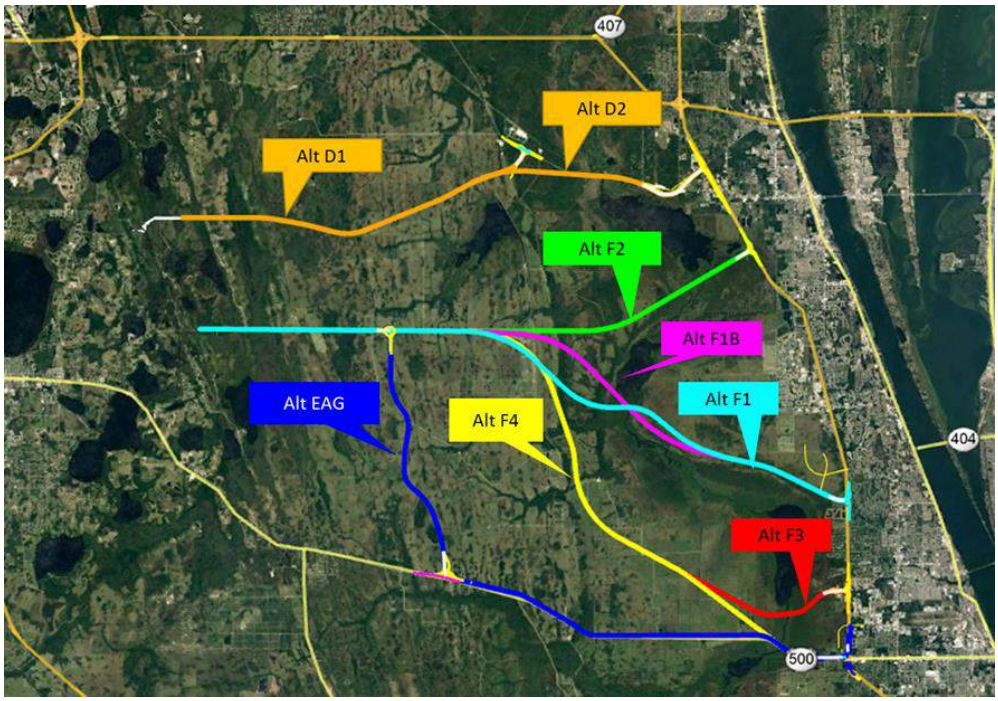


3.3 Future Year Daily Traffic

The future year daily traffic was run for each alternative including Alternatives D1, D2, F1, F2, F3, F4 and the EAG alternative. The project alternatives are shown in Figure 3-7.

Figure 3.7 Project Alternatives

Using the screenline analysis, the alternative results can be compared against the base year and



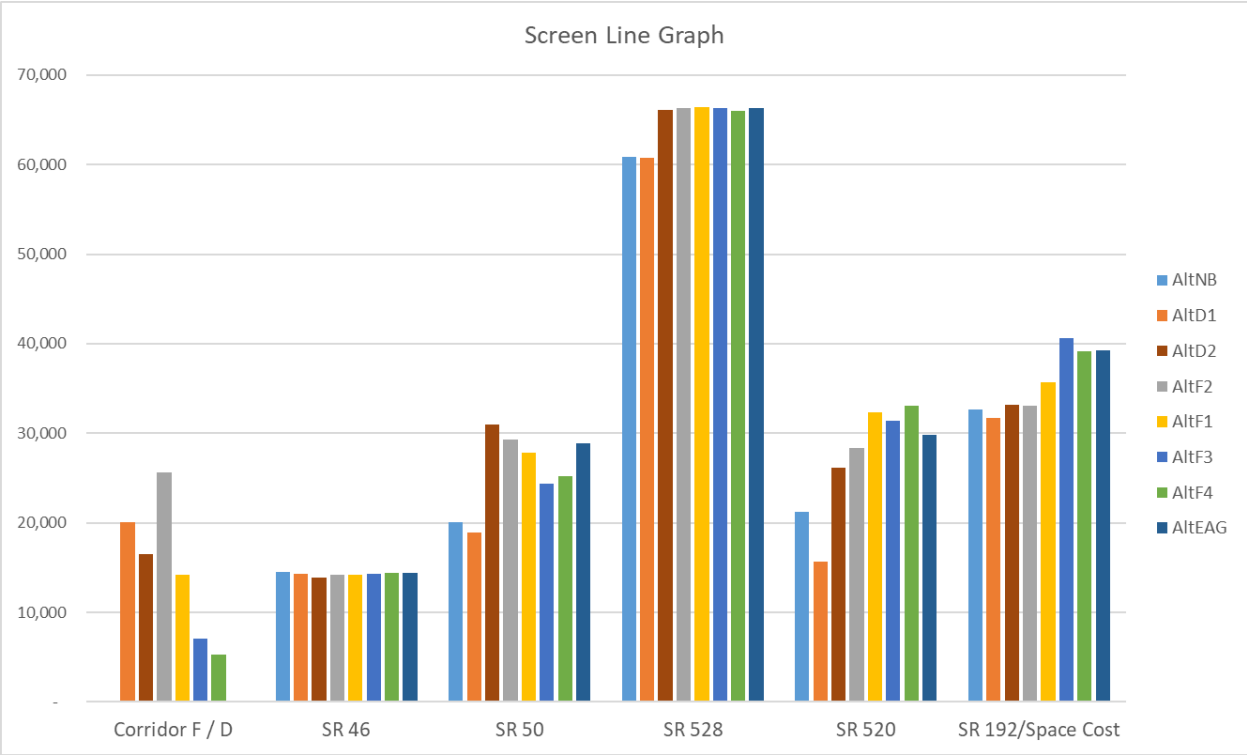
the No Build and checked for reasonableness. The results of the future year (2060) alternatives with the Base year and No Build results are shown in Table 3.3.

Table 3.3 Future Year (2045/2060) Daily Volumes for the St. Johns River Screenline

Corridor	**Counts 2015/2016**	**AltNB**	**AltD1**	**AltD2**	**AltF2**	**AltF1**	**AltF3**	**AltF4**	**AltEAG**
Corridor F / D			20,100	16,500	25,600	14,200	7,100	5,300	
SR 46	7,100	14,500	14,300	13,900	14,200	14,200	14,300	14,400	14,400
SR 50	10,300	20,100	18,900	31,000	29,300	27,800	24,400	25,200	28,900
SR 528	42,600	60,900	60,800	66,100	66,300	66,400	66,300	66,000	66,300
SR 520	16,400	21,200	15,700	26,100	28,400	32,300	31,400	33,100	29,800
SR 192/Space Cost	8,100	32,600	31,700	33,200	33,100	35,700	40,600	39,100	39,300
Screenline Total	**84,500**	**149,300**	**161,500**	**186,800**	**196,900**	**190,600**	**184,100**	**183,100**	**178,700**

A full model run was completed for each alternative corridor as the origin and terminus locations of each corridor are geographically different and cause different trip patterns. The total volume crossing the St. Johns River varies slightly. The traffic distribution along the screenline is consistent between the No Build, and the Build Scenarios, as shown in **Figure 3.8**. Most of the traffic diversion to Corridor D1 and D2 are from SR 520 and SR 528. There is little diversion from SR 46 in any of the alternatives, and little diversion from SR 528 in the F Corridor alternatives. The results also show that with the F Alternatives, more traffic is attracted from US 192 and SR 520 because these are no toll options with capacity parallel to the tolled expressway. The EAG alternative has very little volume/demand as It mainly runs parallel to non-toll routes including US 192 and North Ranch arterials.

Figure 3.8. Future Year (2045/2060) Screenline for OBCC Alternative



3.4 Future Year Average Weighted ADT by Alternative

The evaluation of corridor performance between the alternatives was completed using the weighted average daily traffic. This is calculated as the sum-product of segment ADT and length (miles) divided by the length of the corridor. The average weighted ADT by alternative, the number of tolling points and length of the corridor are presented in **Table 3.4**. The corridor lengths may not be consistent with the PD&E design sections, as the lengths presented in this section are measurements from the travel demand model. Using Average Weighted ADT,

Alternative F2 has highest volumes at 22,600 and Alt EAG has the lowest volumes at 2,800. Alternative EAG has the longest length at 32.59 miles.

Table 3.4 Average Weighted 2045/2060 ADT

Project Alt	Alt D1	Alt D2	Alt F2	Alt F1/F1b	Alt F3	Alt F4	Alt EAG
Weighted ADT	**17,000**	**14,900**	**22,600**	**12,400**	**9,100**	**7,100**	**2,800**
Number of Toll Points	5	6	4	7	7	7	4
Alt Length	16.27	23.94	23.5	28.33	30.75	31.19	32.59

3.5 Future Year Traffic using Alternative D1 Plus F Alternatives

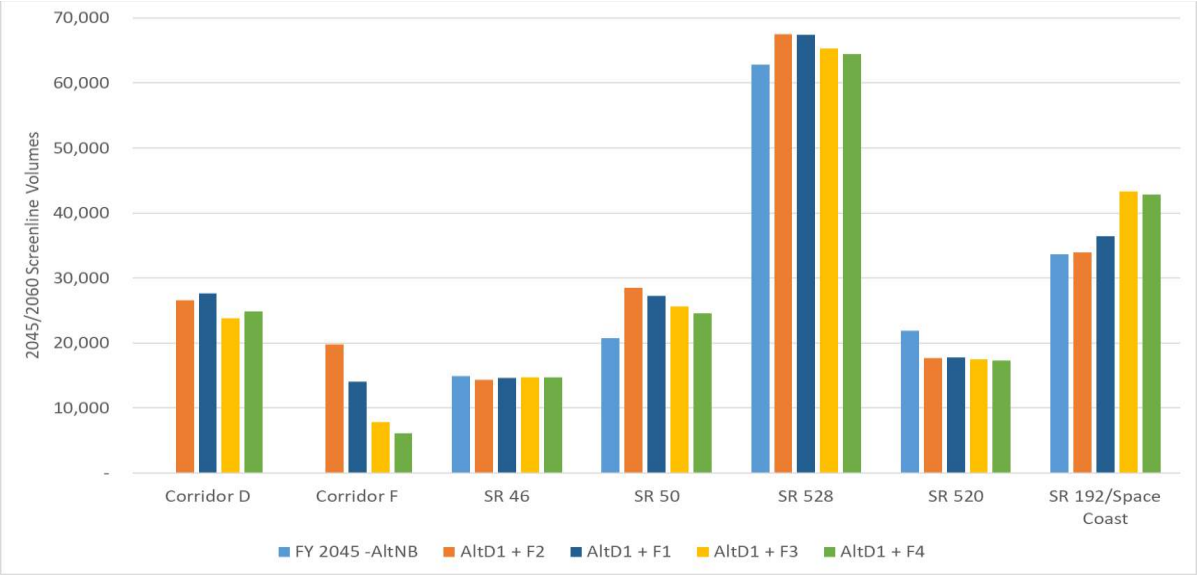
In addition to evaluating each of the alternatives separately, the study team was interested in how Corridors D and F performed together. Alternative D1 was run in the model with each of the F Alternatives in the 2045/2060 model to evaluate future traffic demand for the corridors. The results of the daily volumes on the St. Johns River Screenline are presented in Table 3.5. Alternative D1 plus F2 had the highest volumes with 45,000 daily traffic combined, with Alternative D1 plus F1 having just over 40,000 daily volume at the St. Johns River screenline.

Table 3.5 Future Year (2045/2060) Screenline Results by D1 Plus F Alternatives

Corridor	Alt NB	AltD1 + F2	AltD1 + F1	AltD1 + F3	AltD1 + F4
Corridor D	-	25,800	26,800	23,100	24,100
Corridor F	-	19,200	13,600	7,600	5,900
Both Corridors		**45,000**	**40,400**	**30,700**	**30,000**
SR 46	14,500	13,900	14,200	14,300	14,300
SR 50	20,100	27,600	26,400	24,800	23,900
SR 528	60,900	65,500	65,400	63,300	62,500
SR 520	21,200	17,200	17,300	17,000	16,800
SR 192/Space Coast	32,600	32,900	35,300	42,000	41,500
Screenline Total	**149,300**	**202,100**	**199,000**	**192,100**	**189,000**

This information is also presented graphically in Figure 3.9. This graph shows that the Alternative D1 plus F2 and Alternative D1 plus F1 divert traffic mainly from US 192 and SR 520 and increase traffic on SR 528.

Figure 3.9. Future Year (2045/2060) Screenline Analysis for D1 Plus F Alternatives



3.6 Future Year Average Weighted ADT By D1 and F Alternative

Again, the evaluation of corridor performance between the Alternative D1 Plus F alternatives was completed using the weighted average daily traffic. The average weighted ADT in 2045/2060 by each corridor and combined are presented in Table 3.6. Consistent with the individual alternatives, the D1 plus F2 Alternative has the highest average weighted volume of 19,700 combined with the D1 plus F1 Alternative at 15,200 Average Weighted ADT.

Table 3.6 Future Year (2045/2060) Average Weighted ADT by Corridor for D1+F Alternatives

Segments	Osceola Brevard County Connector			
	D1 + F2	D1 + F1	D1 + F3	D1 + F4
Corridor D	22,800	22,600	19,100	19,800
Corridor F	17,400	11,100	8,600	6,800
Average ADT	**19,700**	**15,200**	**12,100**	**10,000**

3.7 ECFCTF – Analysis

As described earlier in the report, the study follows the two east west corridors from the conclusion of the ECFCTF Study. Future year (2060) volumes published in the *ECFCTF Future Conditions Data Report*, dated March 2020, for the existing corridors were compared with the 2060 of the volumes for this study. In Table 3.7, the No Build and Build volumes were compared for the existing corridors: US 192 (Corridor E), SR 520 (Corridor C), SR 528 (Corridor A) and SR 50 (Corridor B) as well as corridor alternative. While the travel demand models and the SE data were different, the ECFCTF corridor volumes were much greater, for the No Build condition over

100% greater for the screenline, the alternative Build volumes were similar, with the ECFCTF Build at 28,190 ADT and the OBCC F2 Build alternative of 26,800 ADT.

Table 3.7 Comparison of 2060 ECFCTF and OBCC Forecasts (AADT)

ECFCTF				**CFX Screenline**	
Facility	Corridor	NB	Build	No Build	Build F2
Alternative		-	28,190	-	26,800
SR 50	B	53,459	44,154	20,700	30,200
SR 528	A	63,510	55,729	62,800	68,200
SR 520	C	76,354	83,649	21,900	29,000
US 192	E	113,966	85,776	33,600	34,100
Screenline		**307,289**	**297,498**	**139,000**	**188,300**
% Higher than OBCC		109%	54%		

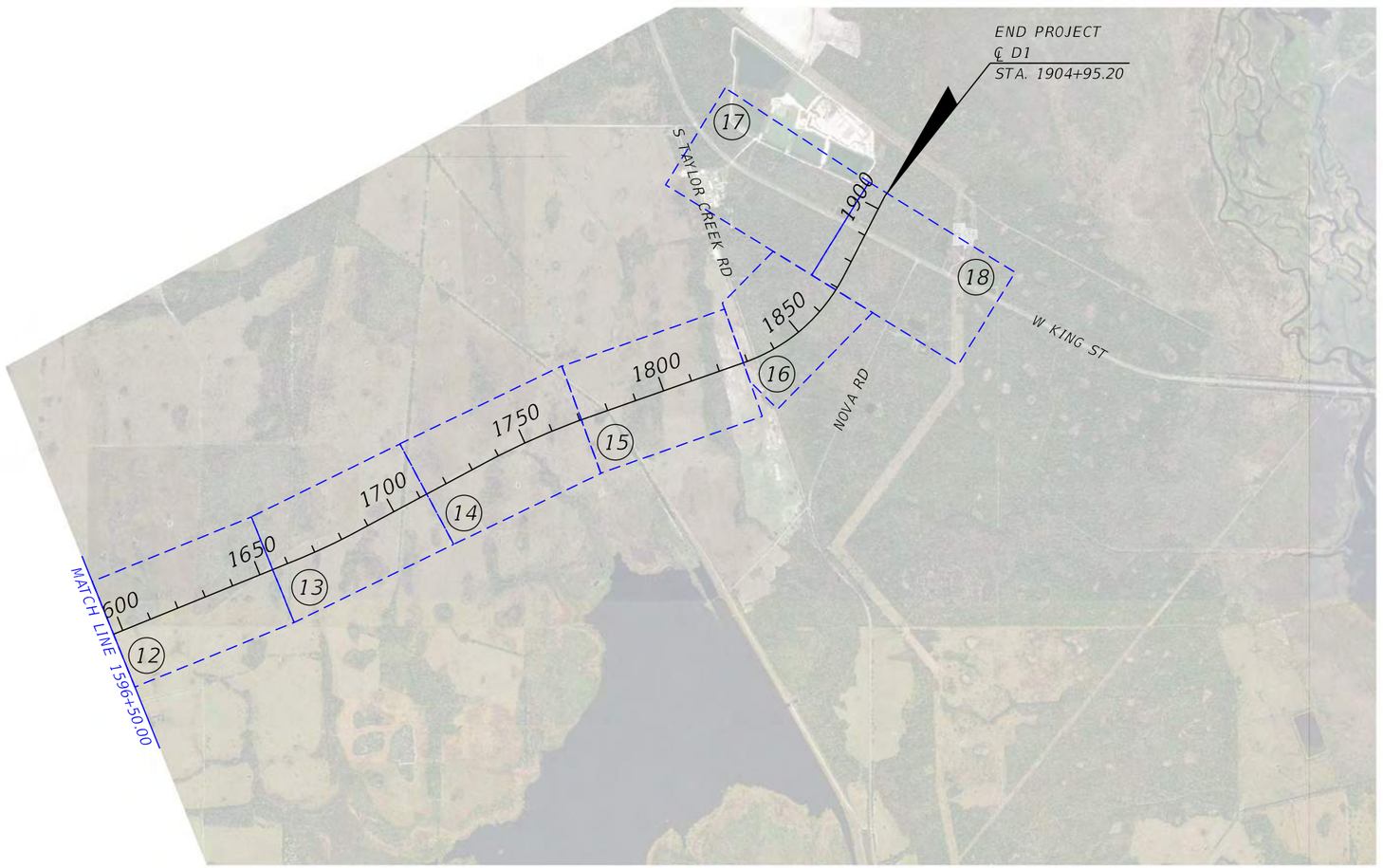
APPENDIX E

Concept Plans for Alternative D1



ALTERNATIVE D1

REVISIONS					CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (1)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					ALT. D1	ORANGE OSCEOLA			



N

0 1000 5000

Feet

ALTERNATIVE D1

REVISIONS					CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (2)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					ALT. D1	ORANGE OSCEOLA			

MATCH LINE (SEE SHEET 19)

EXIST. R/W

INTERCHANGE A BRIDGE D1-2

INTERCHANGE A BRIDGE D1-3

PROP. R/W

INTERCHANGE A BRIDGE D1-4

PROP. R/W

EXIST. R/W

EXIST. ROAD

PROP. R/W

℄ D1-1

1000 1005 1010 1015 1020

BEGIN PROJECT
℄ D1
STA. 1000+00.00

℄ D1

PROP. R/W

PC STA. 1013+24.63

MATCH LINE 1025+00.00

0 100 400
Feet

CURVE DATA CL D1-1
PI STA. = 1024+32.63
Δ = 42° 41' 38" (RT)
D = 2° 01' 16"
T = 1,108.00
L = 2,112.50
R = 2,835.00
PC STA. = 1013+24.63
PT STA. = 1034+37.13

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- EXIST. ROADWAY
- EXIST. R/W
- PROP. BRIDGE

ALTERNATIVE D1

MATCH LINE (SEE SHEET 20)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

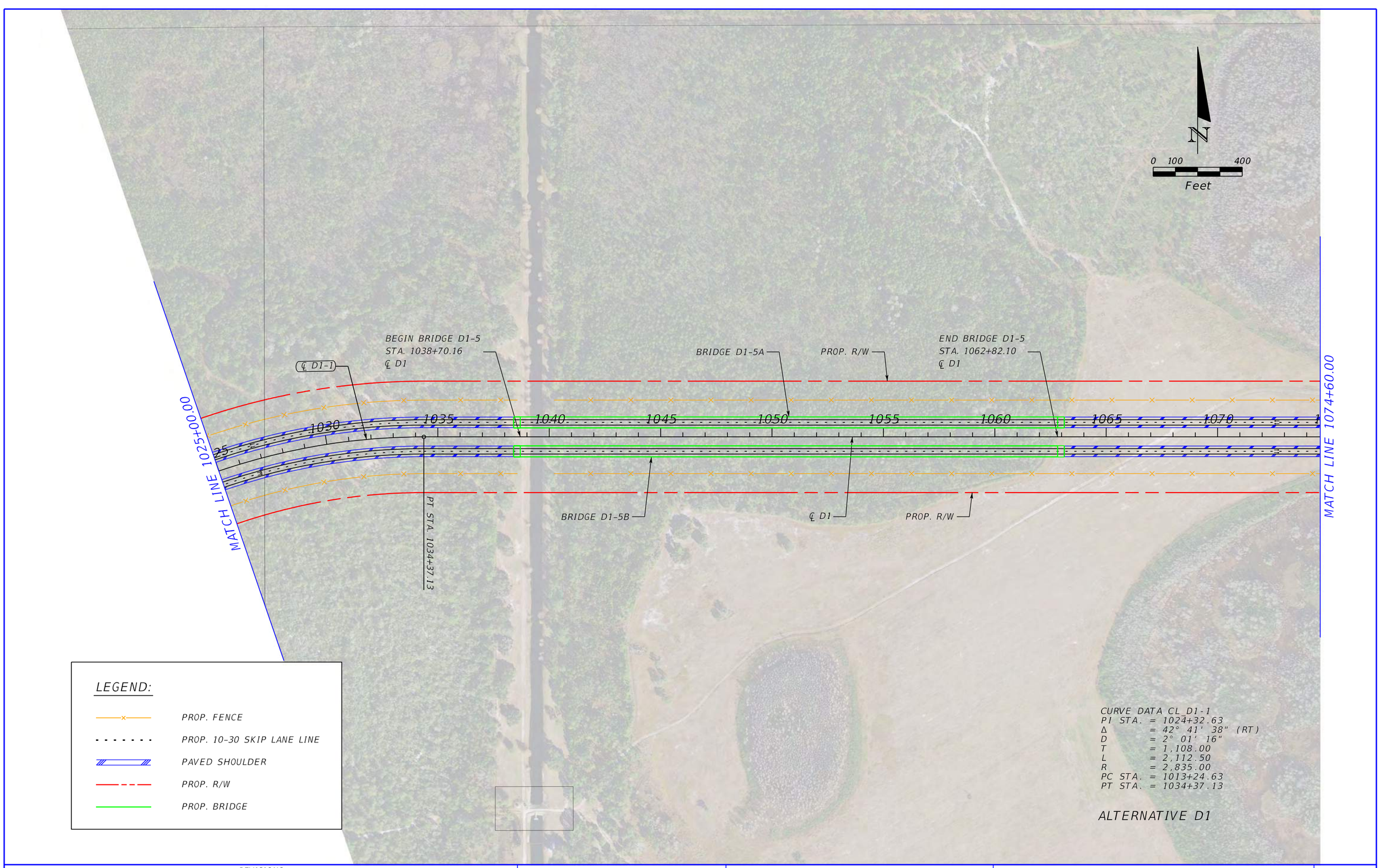
CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (01)

SHEET NO.

Michael.Hunter 3/4/2021 8:47:29 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - D1\Plan Sheets\PLANRD01.dgn



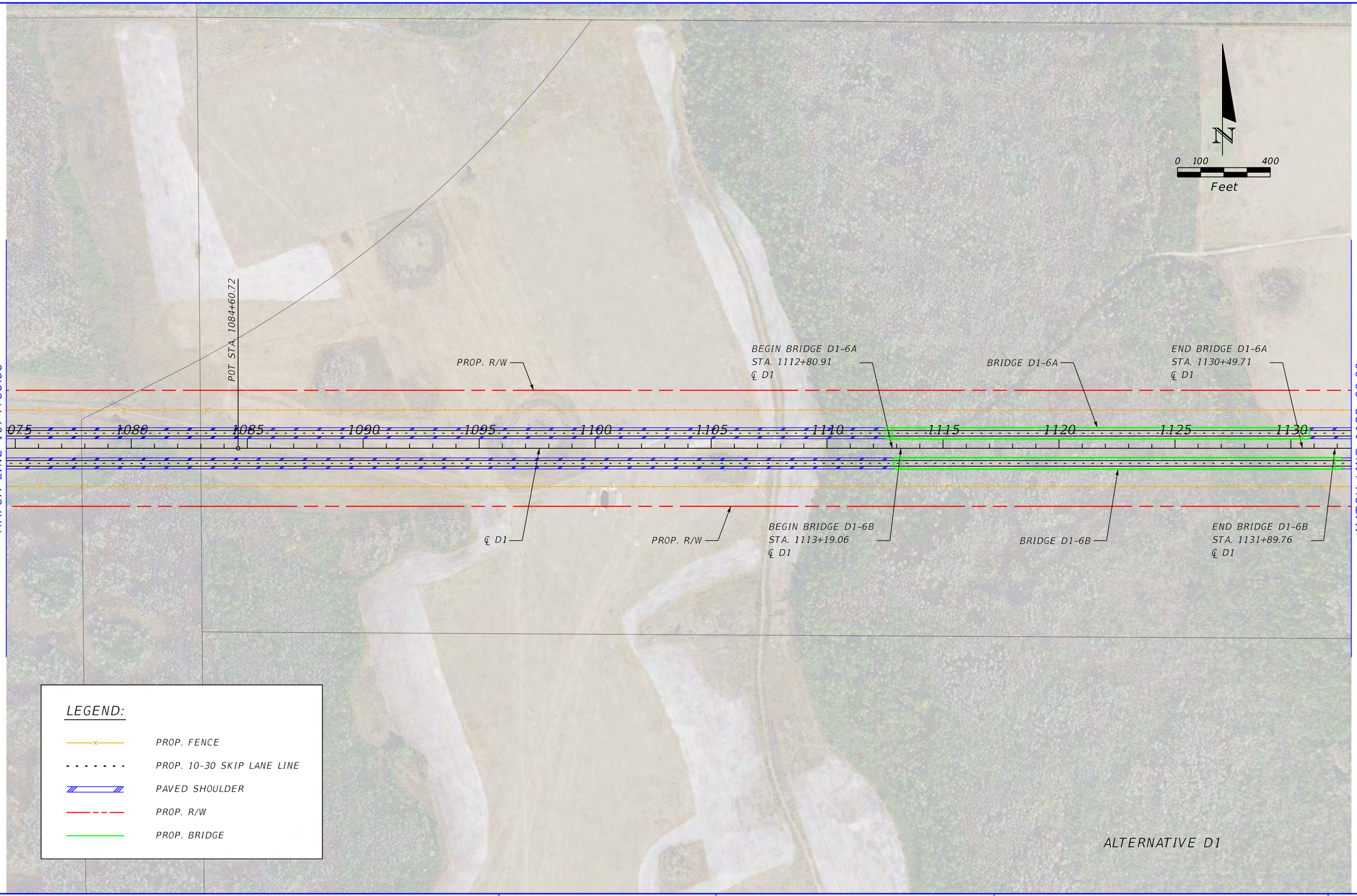
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (02)

SHEET NO.



REVISIONS				CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (03)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				ALT. D1	ORANGE OSCEOLA			

N

0 100 400

Feet

BEGIN BRIDGE D1-7A
STA. 1137+66.03
℄ D1

BRIDGE D1-7A

END BRIDGE D1-7A
STA. 1138+43.20
℄ D1

BEGIN BRIDGE D1-8A
STA. 1144+55.25
℄ D1

BRIDGE D1-8A

END BRIDGE D1-8A
STA. 1157+29.35
℄ D1

PROP. R/W

1135 1140 1145 1150 1155 1160 1165 1170 1175 1180 1185 1190

MATCH LINE 1132+60.00

MATCH LINE 1190+60.00

END BRIDGE D1-7B
STA. 1138+57.23
℄ D1

BEGIN BRIDGE D1-8B
STA. 1143+87.77
℄ D1

BRIDGE D1-8B

END BRIDGE D1-8B
STA. 1156+91.27
℄ D1

PROP. R/W

℄ D1

BRIDGE D1-7B

BEGIN BRIDGE D1-7B
STA. 1137+80.05
℄ D1

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

ALTERNATIVE D1

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (04)

SHEET NO.



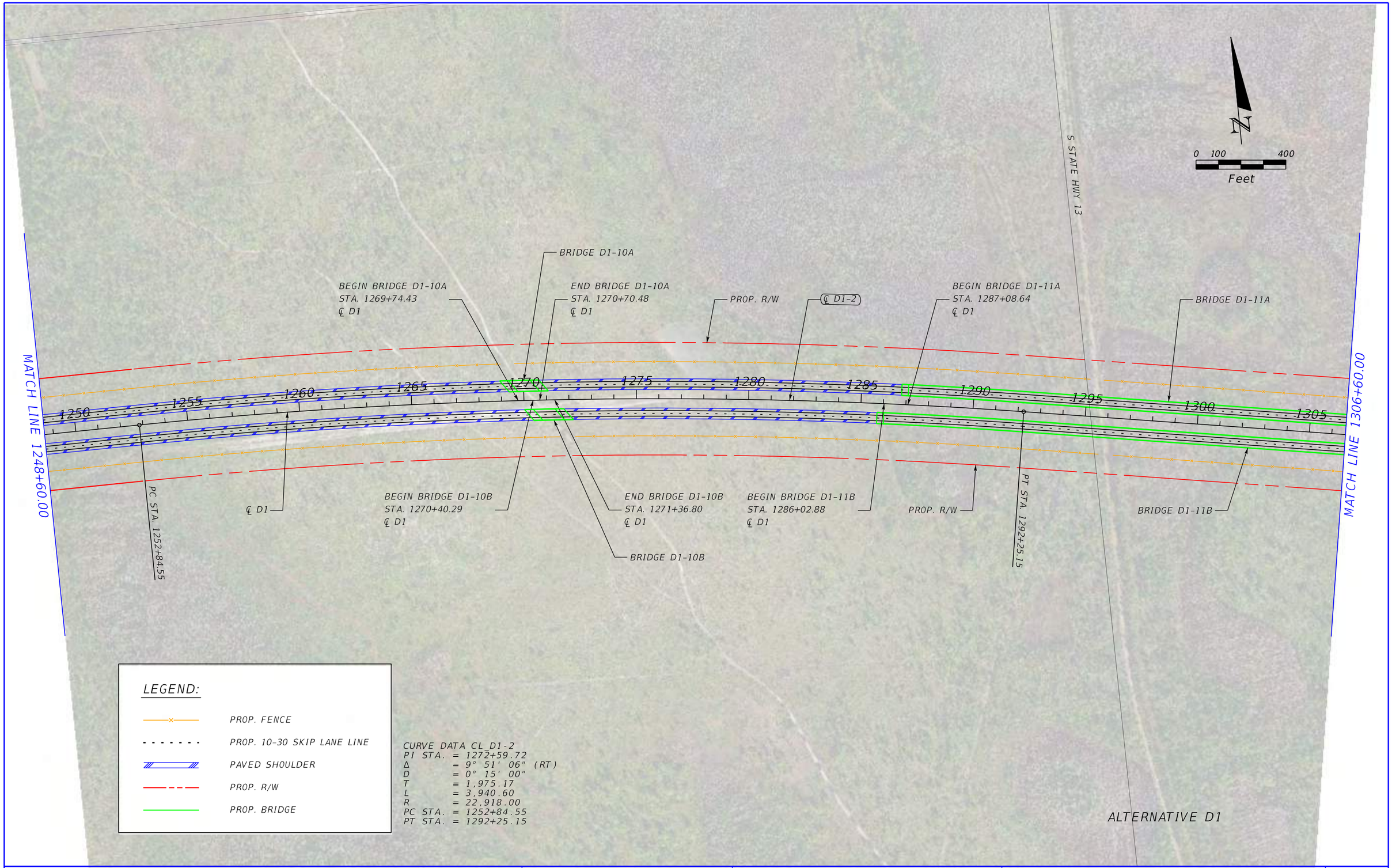
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (05)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (06)

SHEET NO.

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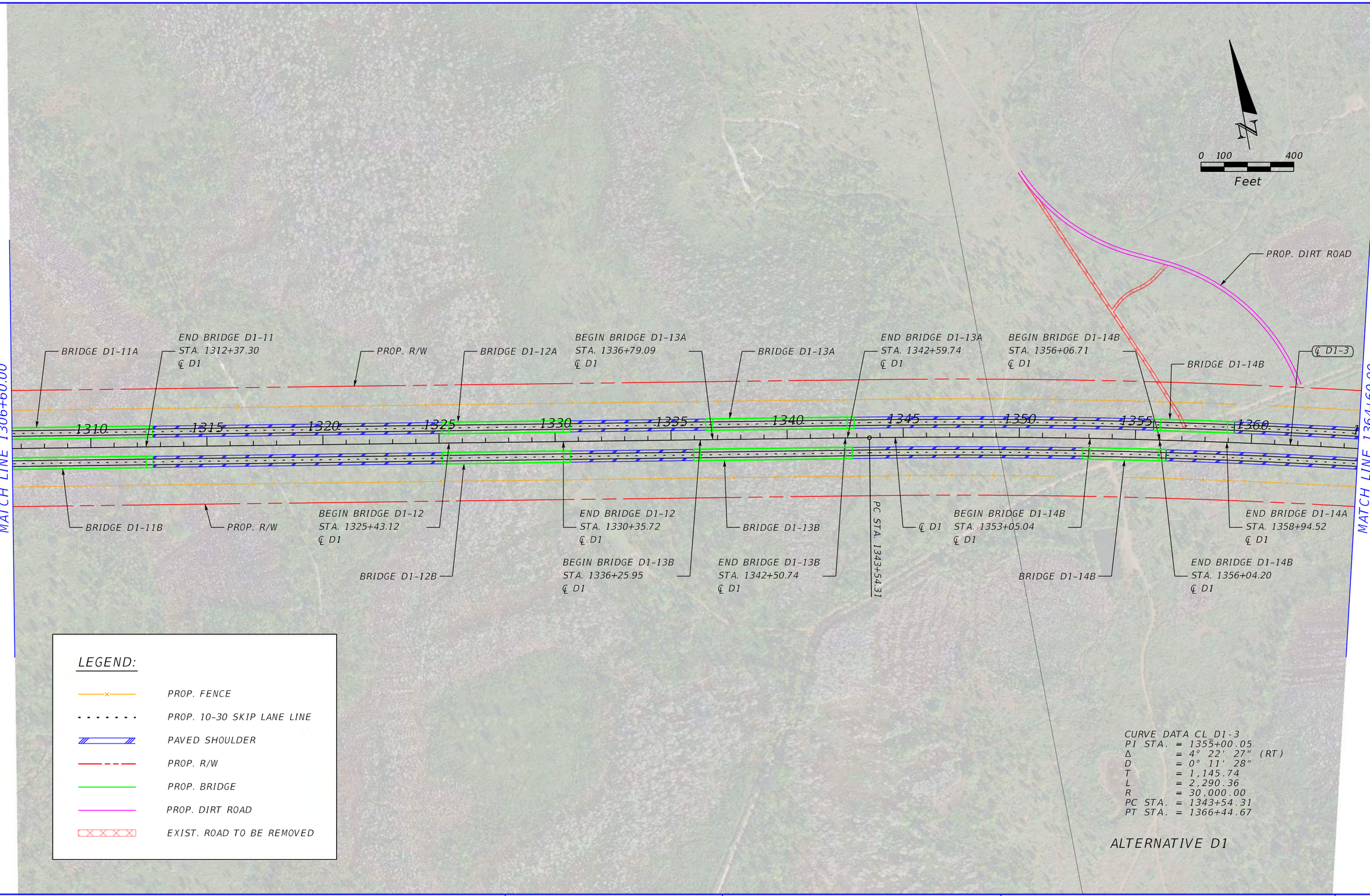


LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE
- PROP. DIRT ROAD
- EXIST. ROAD TO BE REMOVED

CURVE DATA CL_D1-3
PI STA. = 1355+00.05
Δ = 4° 22' 27" (RT)
D = 0° 11' 28"
T = 1,145.74
L = 2,290.36
R = 30,000.00
PC STA. = 1343+54.31
PT STA. = 1366+44.67

ALTERNATIVE D1

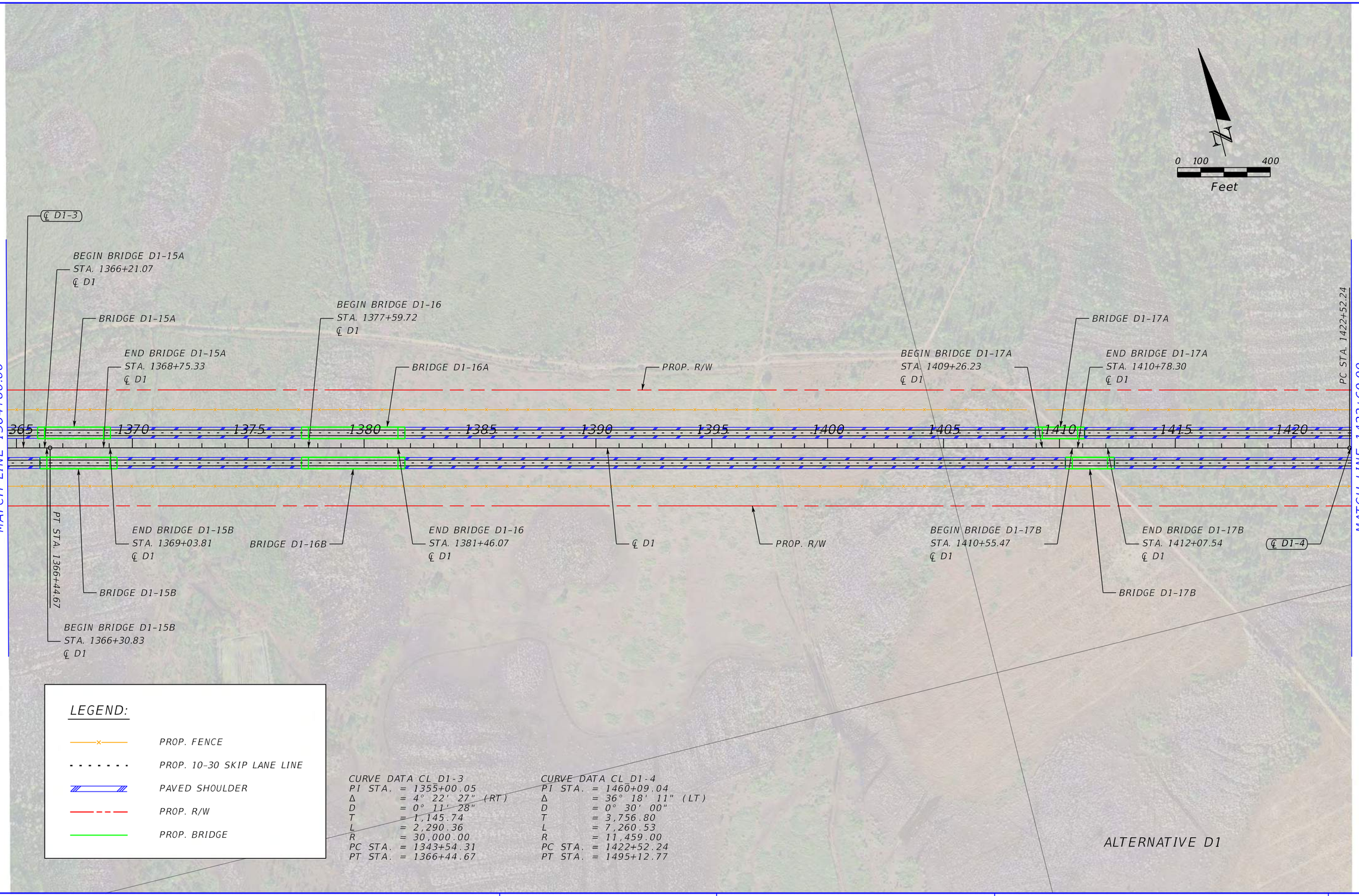
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (07)

SHEET NO.



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL D1-3
PI STA. = 1355+00.05
Δ = 4° 22' 27" (RT)
D = 0° 11' 28"
T = 1,145.74
L = 2,290.36
R = 30,000.00
PC STA. = 1343+54.31
PT STA. = 1366+44.67

CURVE DATA CL D1-4
PI STA. = 1460+09.04
Δ = 36° 18' 11" (LT)
D = 0° 30' 00"
T = 3,756.80
L = 7,260.53
R = 11,459.00
PC STA. = 1422+52.24
PT STA. = 1495+12.77

ALTERNATIVE D1

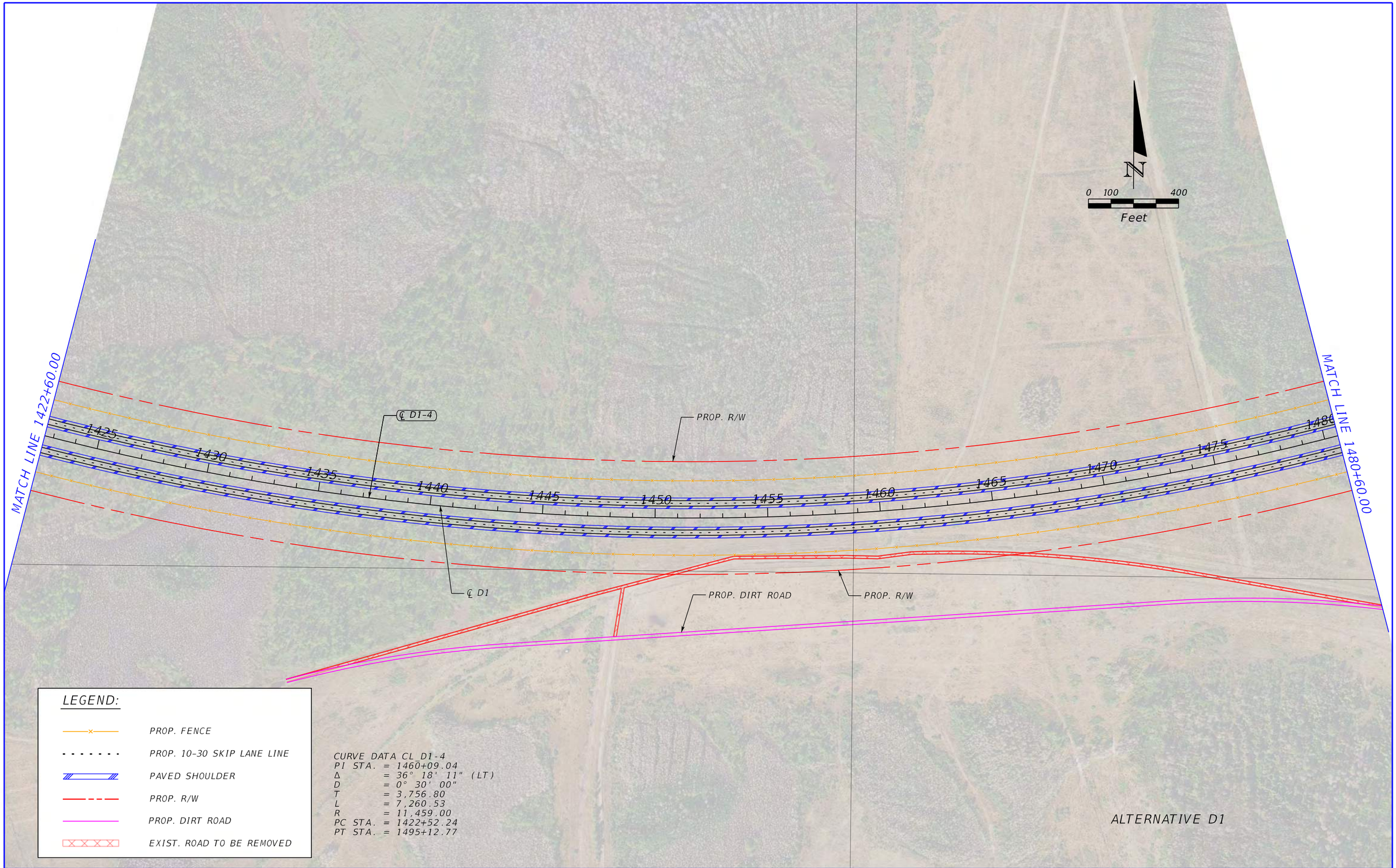
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (08)

SHEET NO.



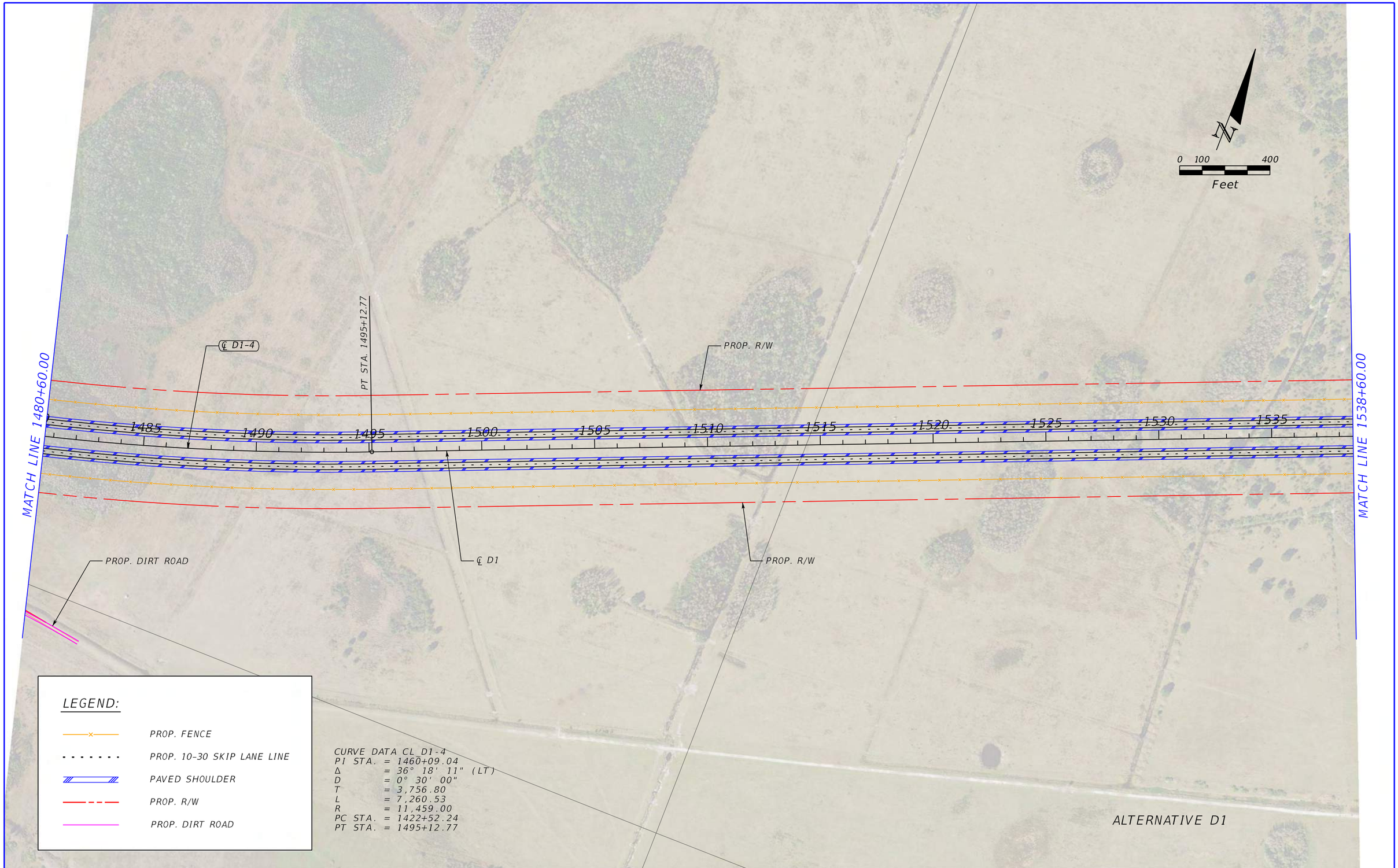
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (09)

SHEET NO.



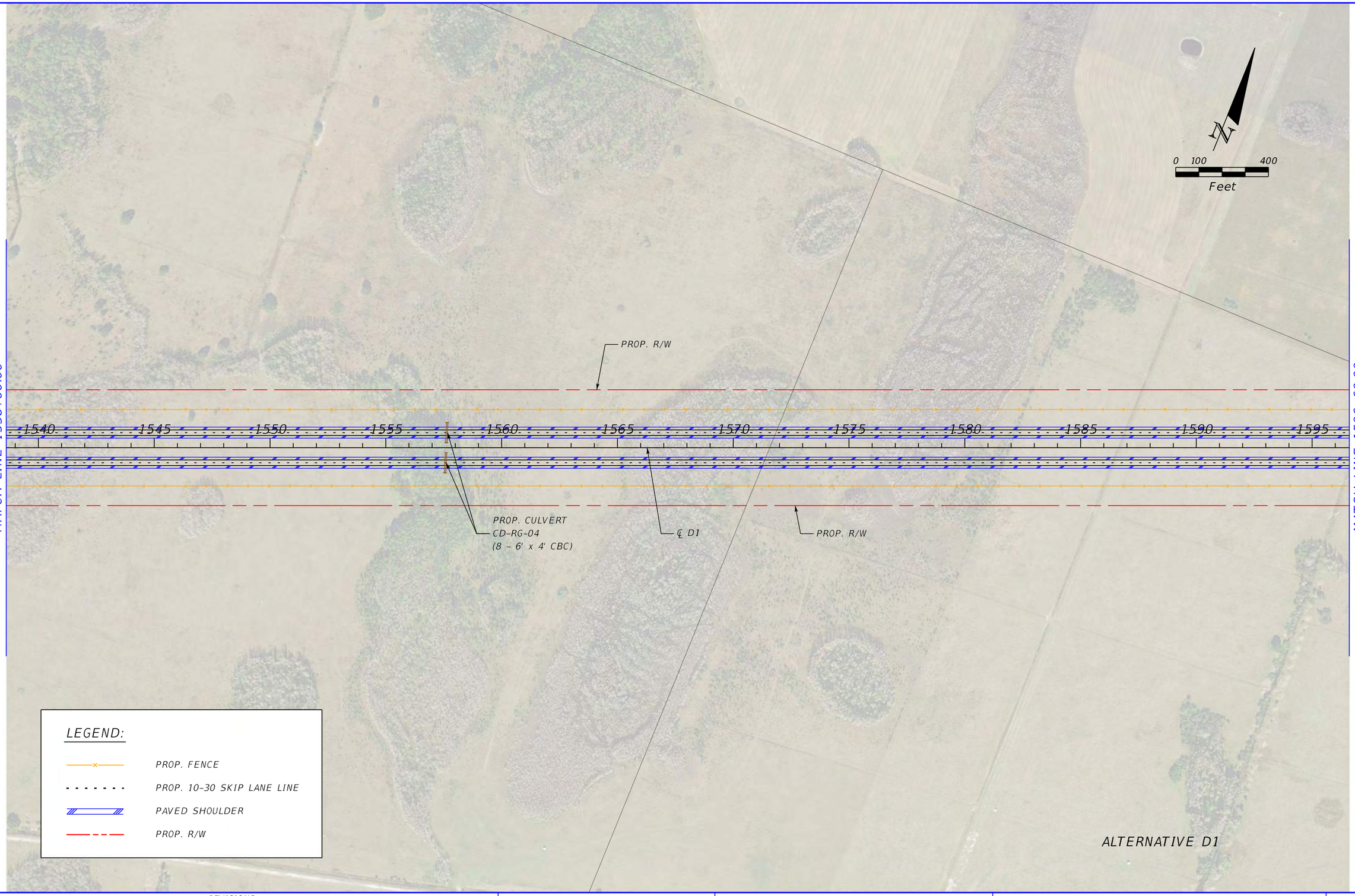
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (10)

SHEET NO.



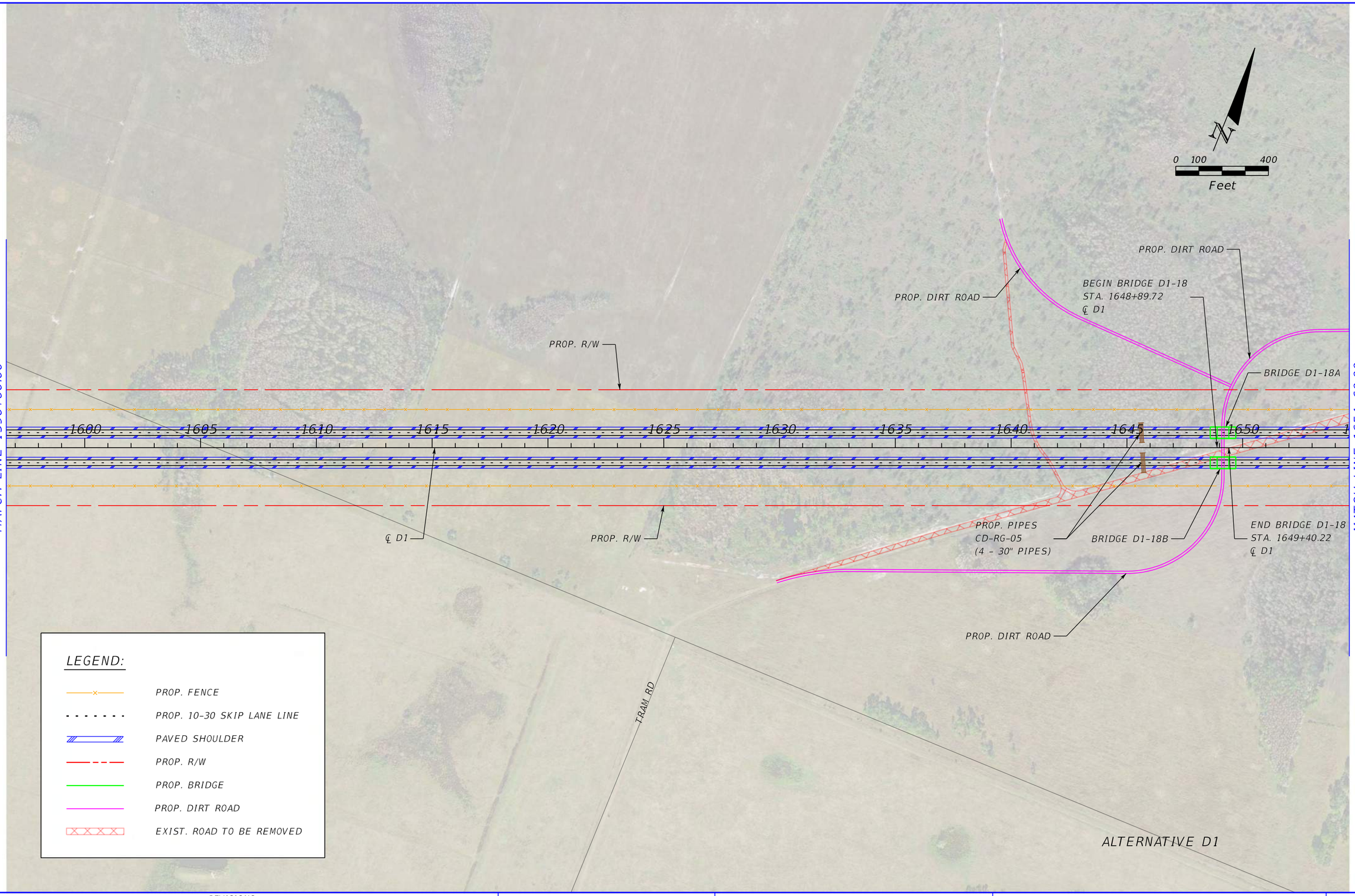
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (11)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

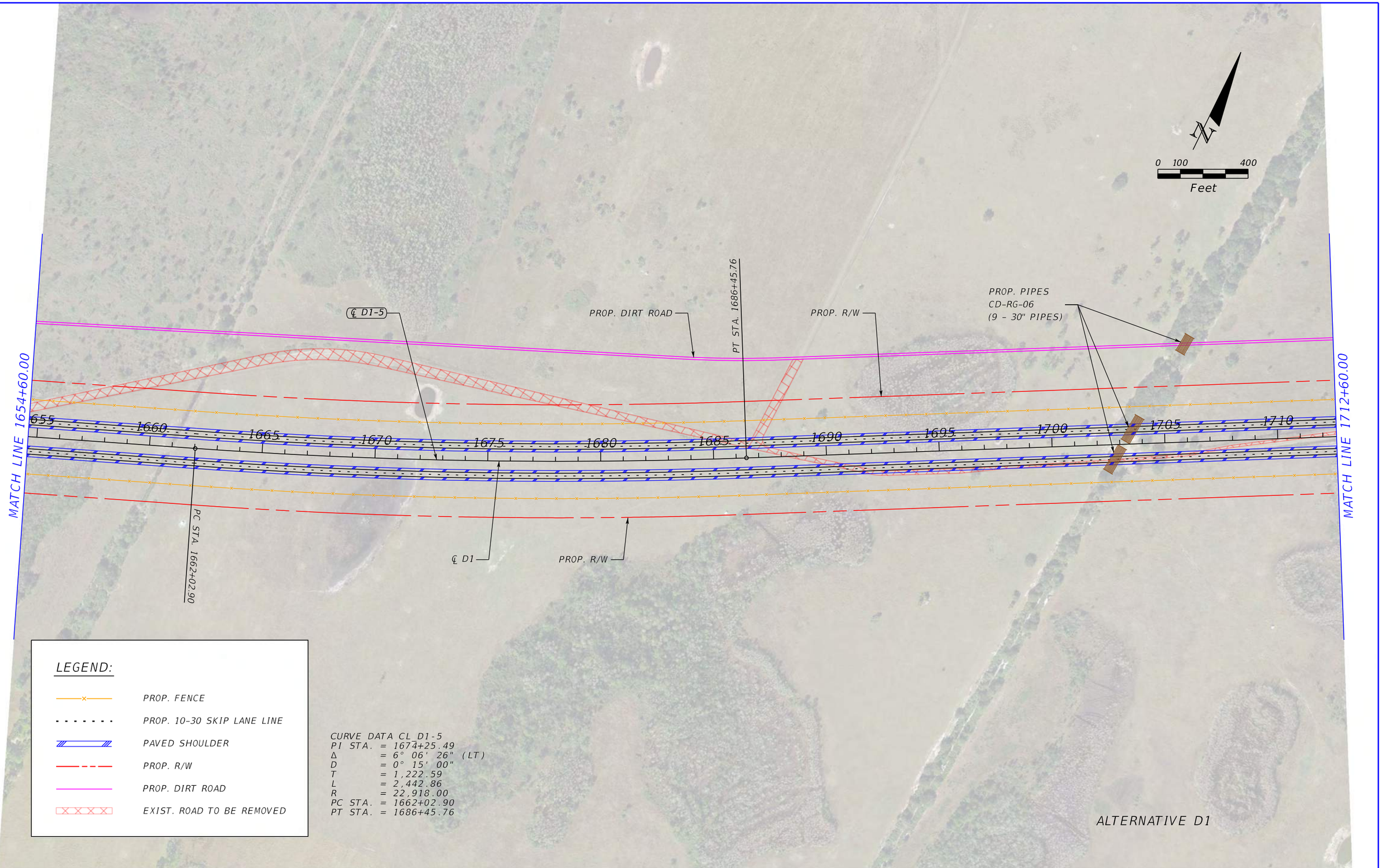
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (12)

SHEET NO.

Michael.Hunter 3/4/2021 8:34:28 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - D1\Plan Sheets\PLANRD012.dgn



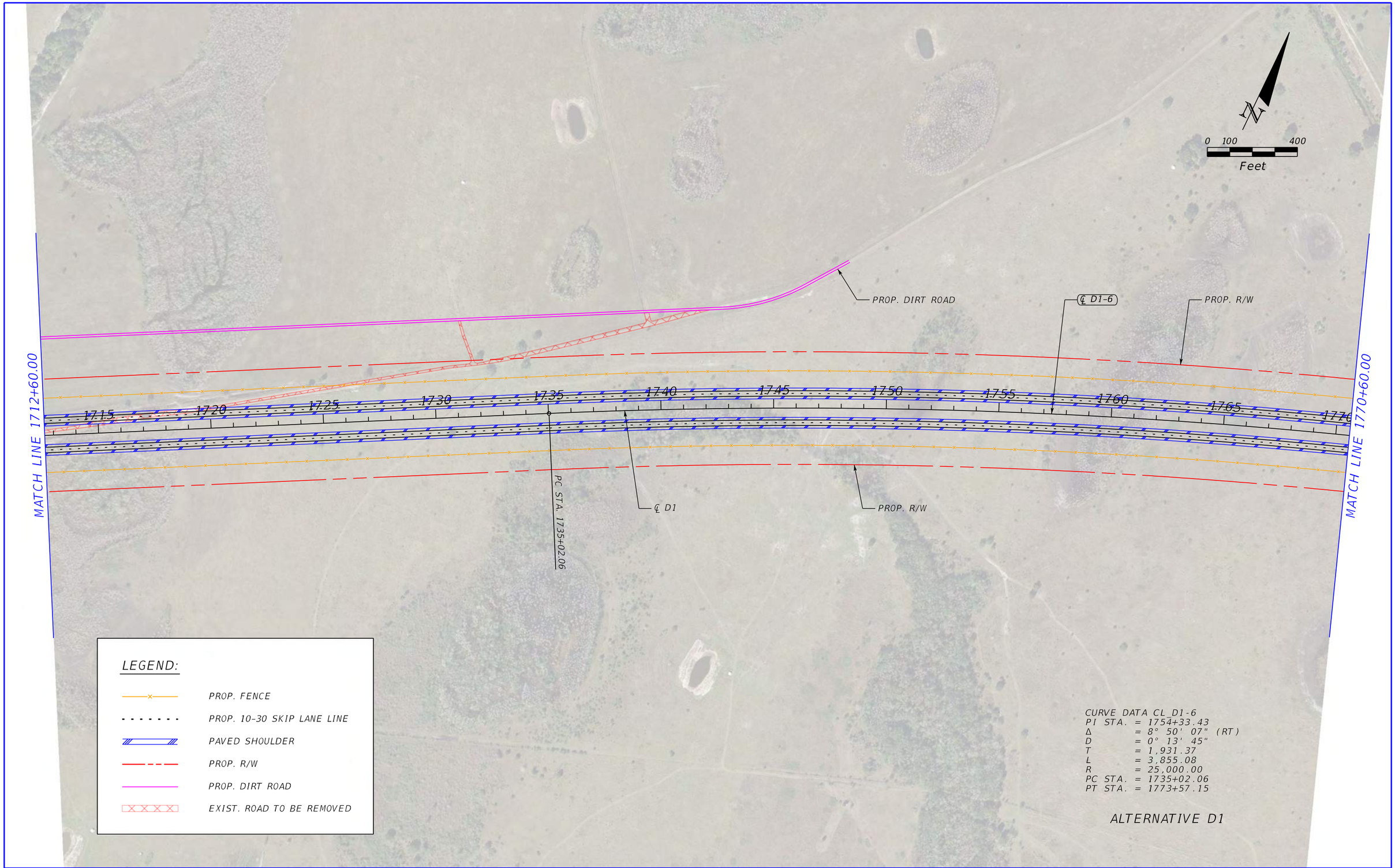
LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. DIRT ROAD
- EXIST. ROAD TO BE REMOVED

CURVE DATA CL D1-5
PI STA. = 1674+25.49
Δ = 6° 06' 26" (LT)
D = 0° 15' 00"
T = 1,222.59
L = 2,442.86
R = 22,918.00
PC STA. = 1662+02.90
PT STA. = 1686+45.76

ALTERNATIVE D1

REVISIONS					CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (13)	SHEET NO.
DATE	DESCRIPTION		DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					ALT. D1	ORANGE OSCEOLA			



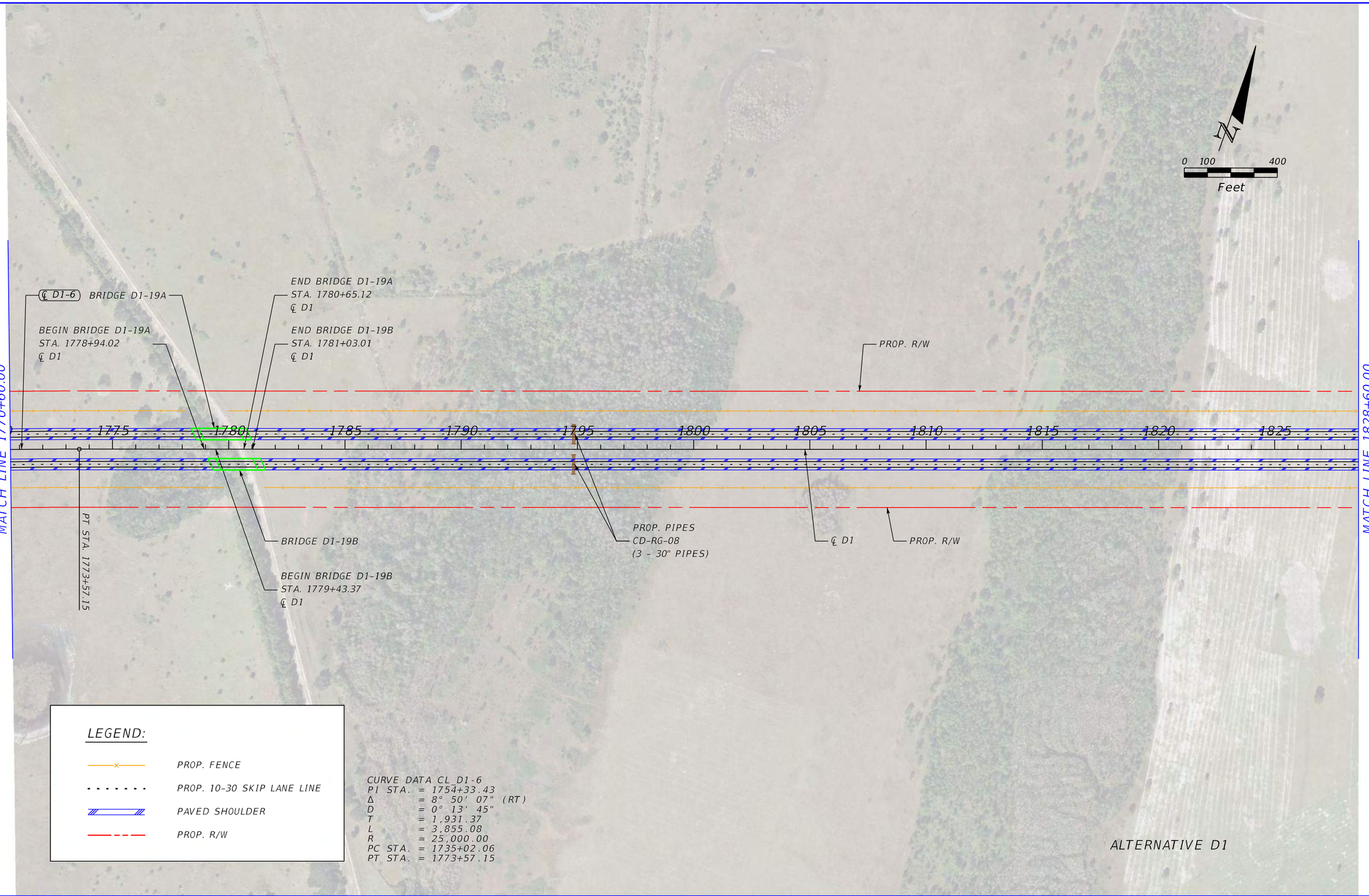
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (14)

SHEET NO.



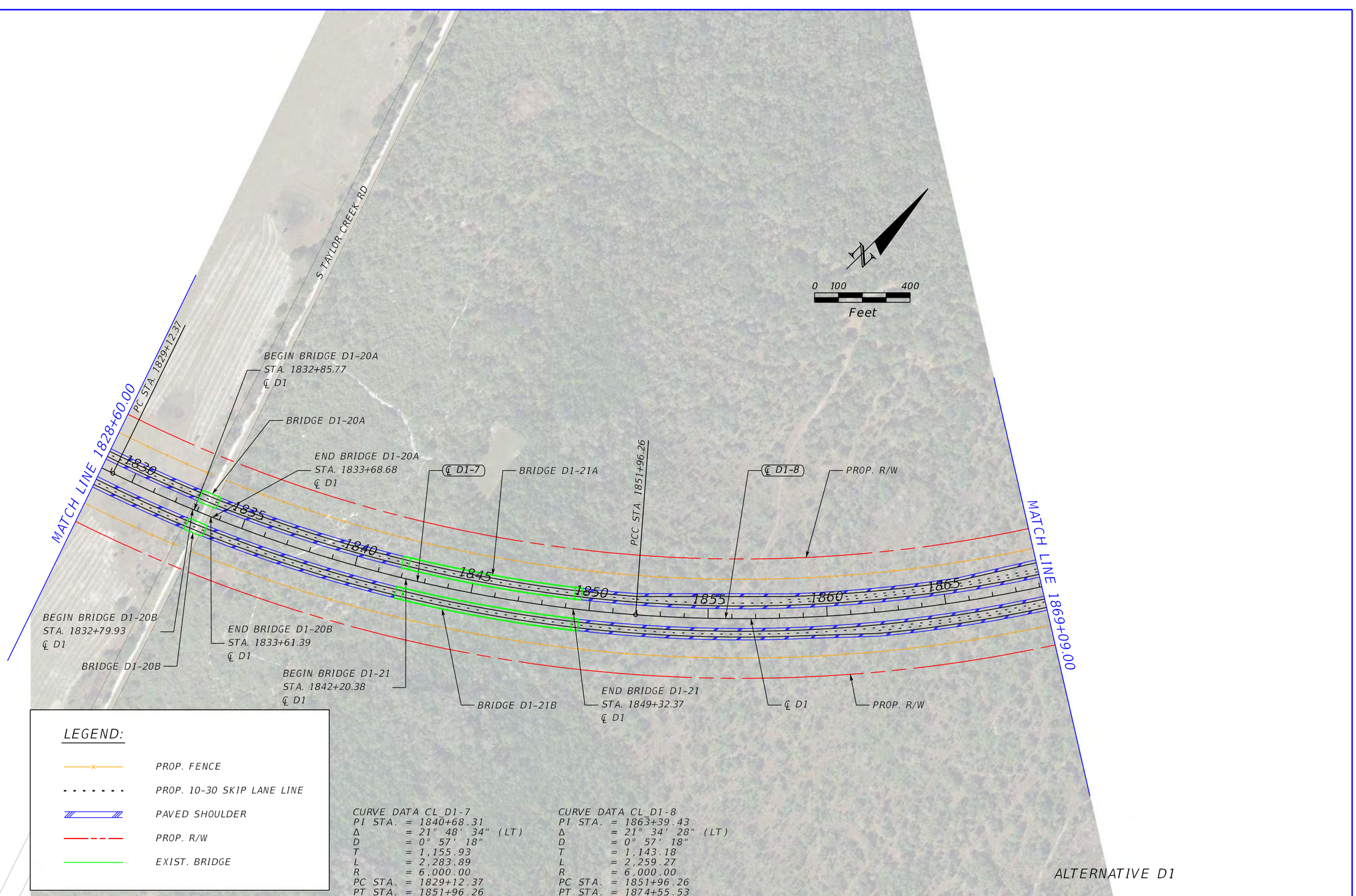
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (15)

SHEET NO.



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- EXIST. BRIDGE

CURVE DATA CL D1-7
PI STA. = 1840+68.31
Δ = 21° 48' 34" (LT)
D = 0° 57' 18"
T = 1,155.93
L = 2,283.89
R = 6,000.00
PC STA. = 1829+12.37
PT STA. = 1851+96.26

CURVE DATA CL D1-8
PI STA. = 1863+39.43
Δ = 21° 34' 28" (LT)
D = 0° 57' 18"
T = 1,143.18
L = 2,259.27
R = 6,000.00
PC STA. = 1851+96.26
PT STA. = 1874+55.53

ALTERNATIVE D1

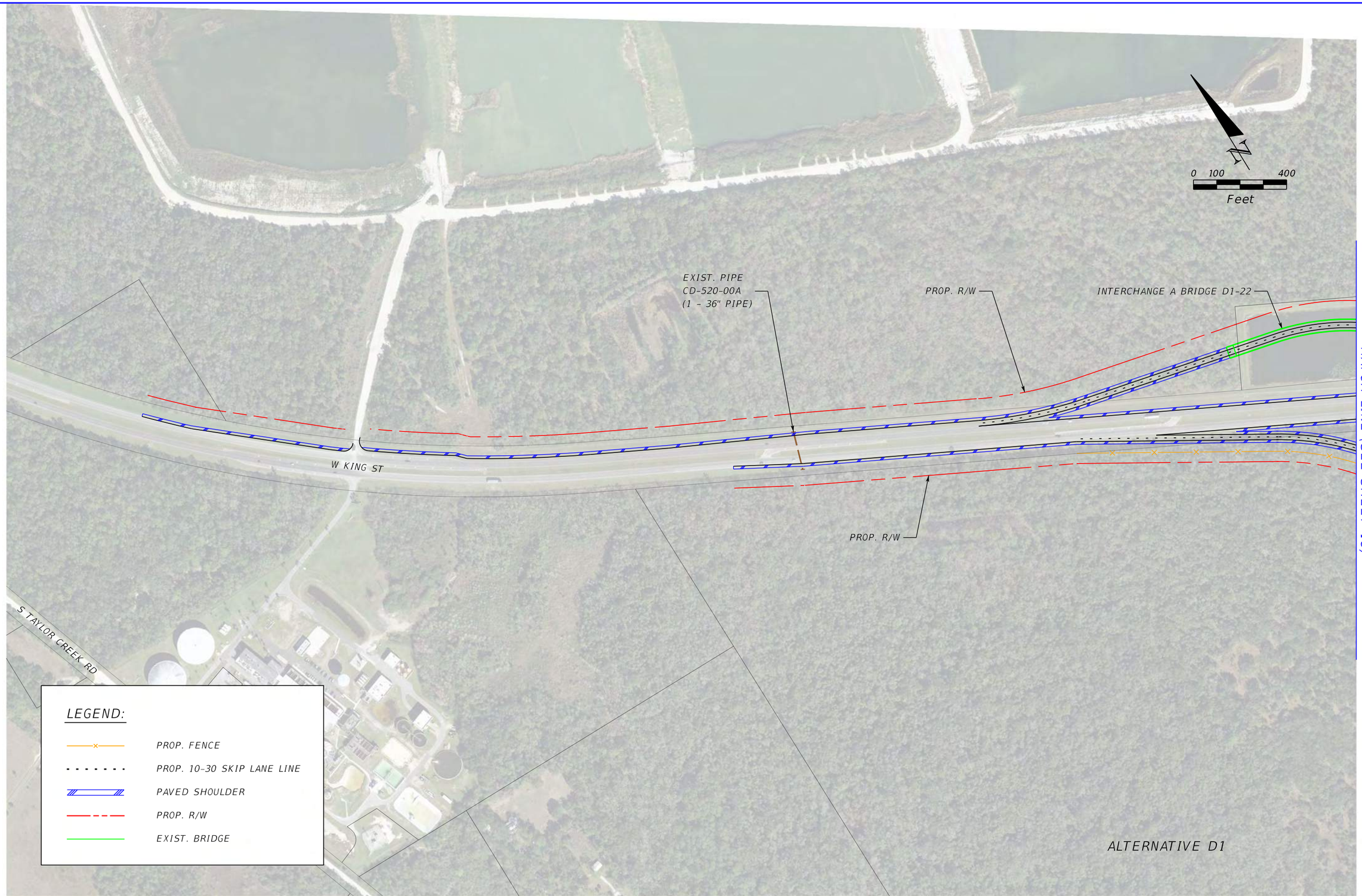
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (16)

SHEET NO.



MATCH LINE (SEE SHEET 18)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (17)

SHEET NO.

POT STA. 1904+95.20

℄ D1

END PROJECT
℄ D1
STA. 1894+64.66

1900

1895

EXIST. CULVERTS
CD-520-00B
(3 - 10' x 4' CBC)

EXIST. PIPE
CD-520-01
(1- 36" PIPE)

INTERCHANGE A BRIDGE D1-23

PROP. R/W

EXIST. CULVERT
CD-520-02
(1 - 10' x 3' CBC)

W KING ST

0 100 400
Feet

MATCH LINE (SEE SHEET 17)

1890

1885

INTERCHANGE A BRIDGE D1-22

NOVA RD

RELOCATED NOVA ROAD

1880

PROP. R/W

PROP. R/W

POT STA. 1875+88.81

PT STA. 1874+55.53

1875

℄ D1-8

1870

CURVE DATA CL_D1-8
PI STA. = 1863+39.43
Δ = 21° 34' 28" (LT)
D = 0° 57' 18"
T = 1,143.18
L = 2,259.27
R = 6,000.00
PC STA. = 1851+96.26
PT STA. = 1874+55.53

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- EXIST. BRIDGE
- EXIST. ROAD TO BE REMOVED

ALTERNATIVE D1

MATCH LINE 1869+09.00

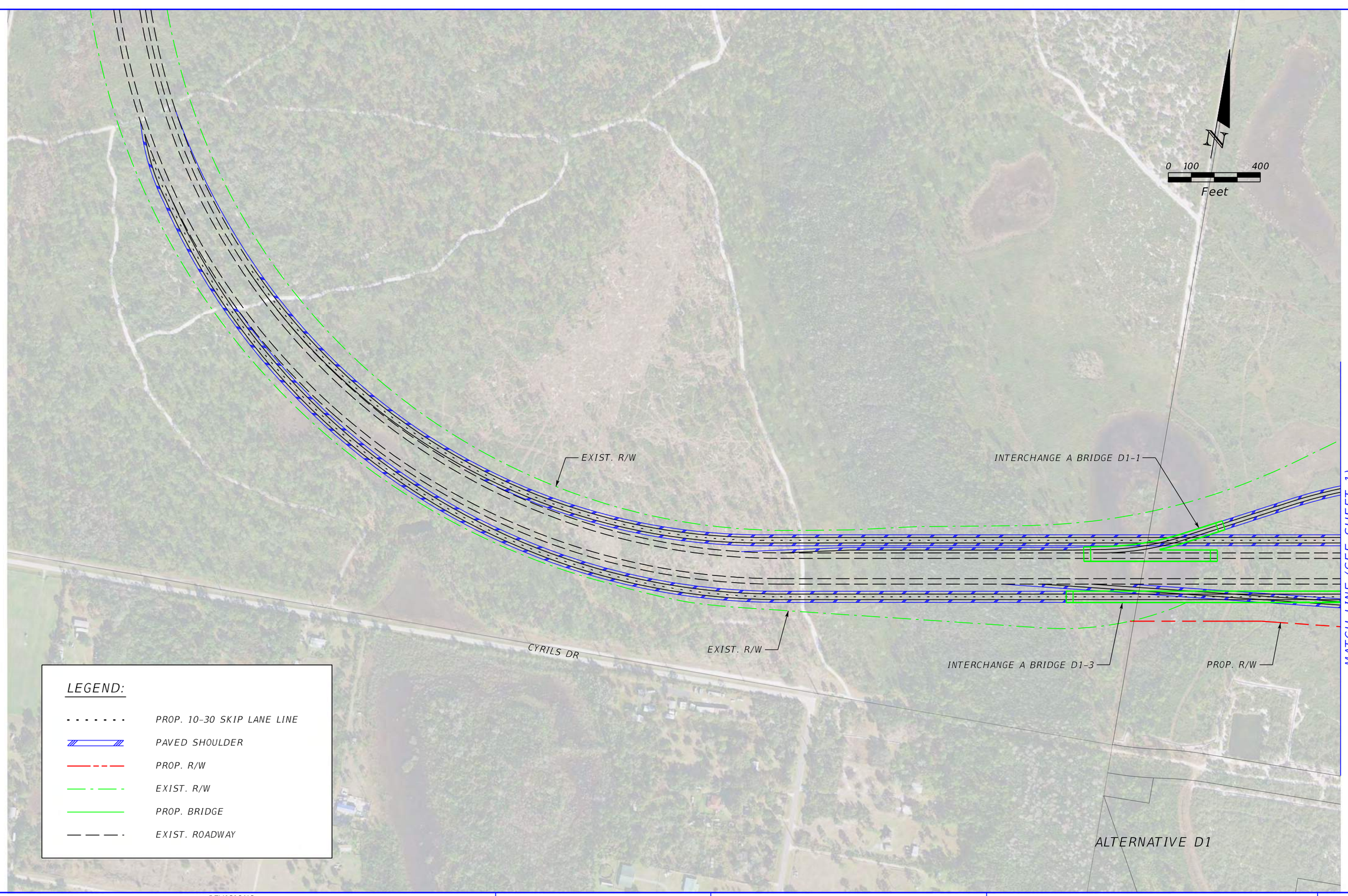
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (18)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D1	ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (19)

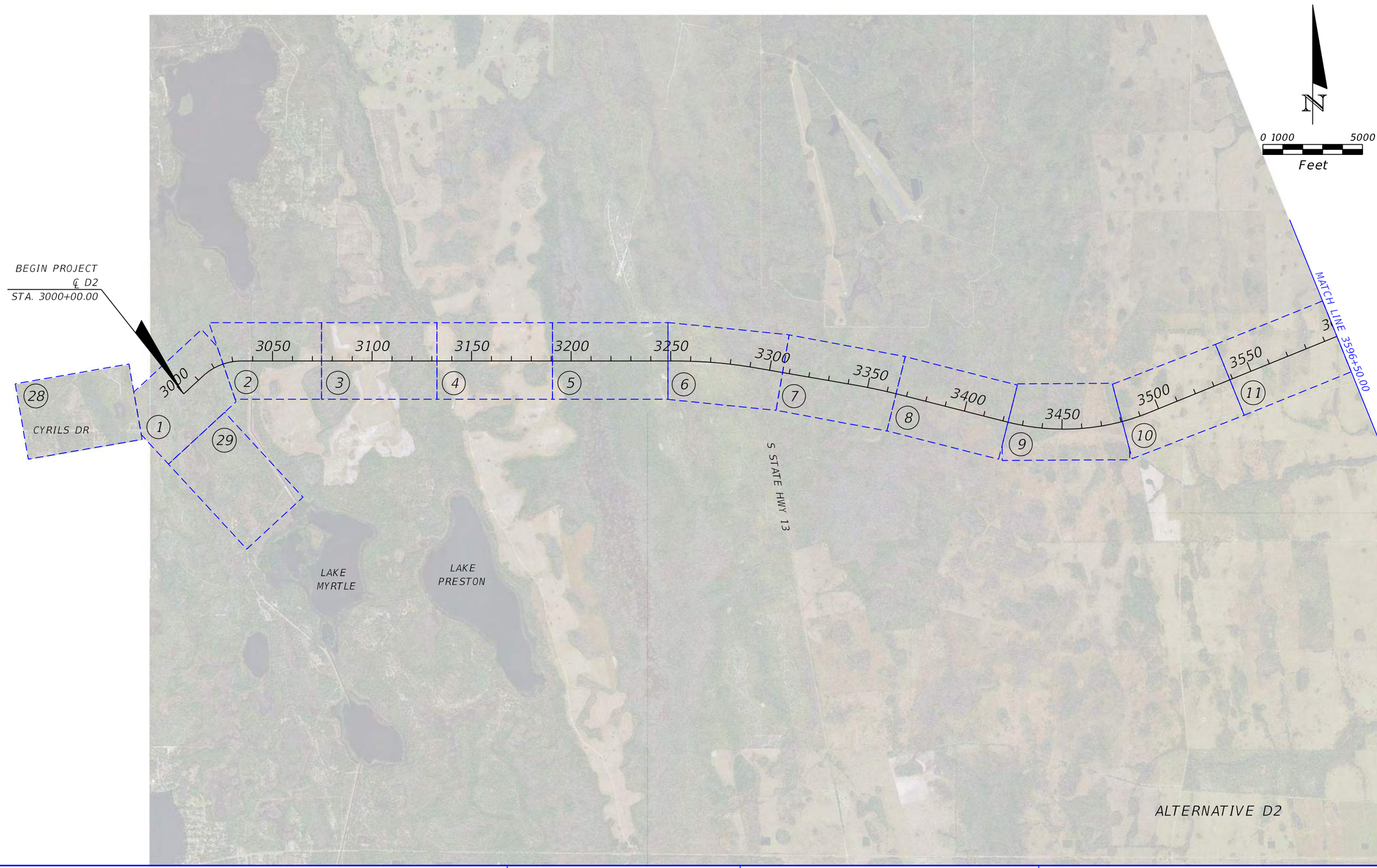
SHEET NO.



REVISIONS					CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (20)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					ALT. D1	ORANGE OSCEOLA			

APPENDIX F

Concept Plans for Alternative D2



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (1)

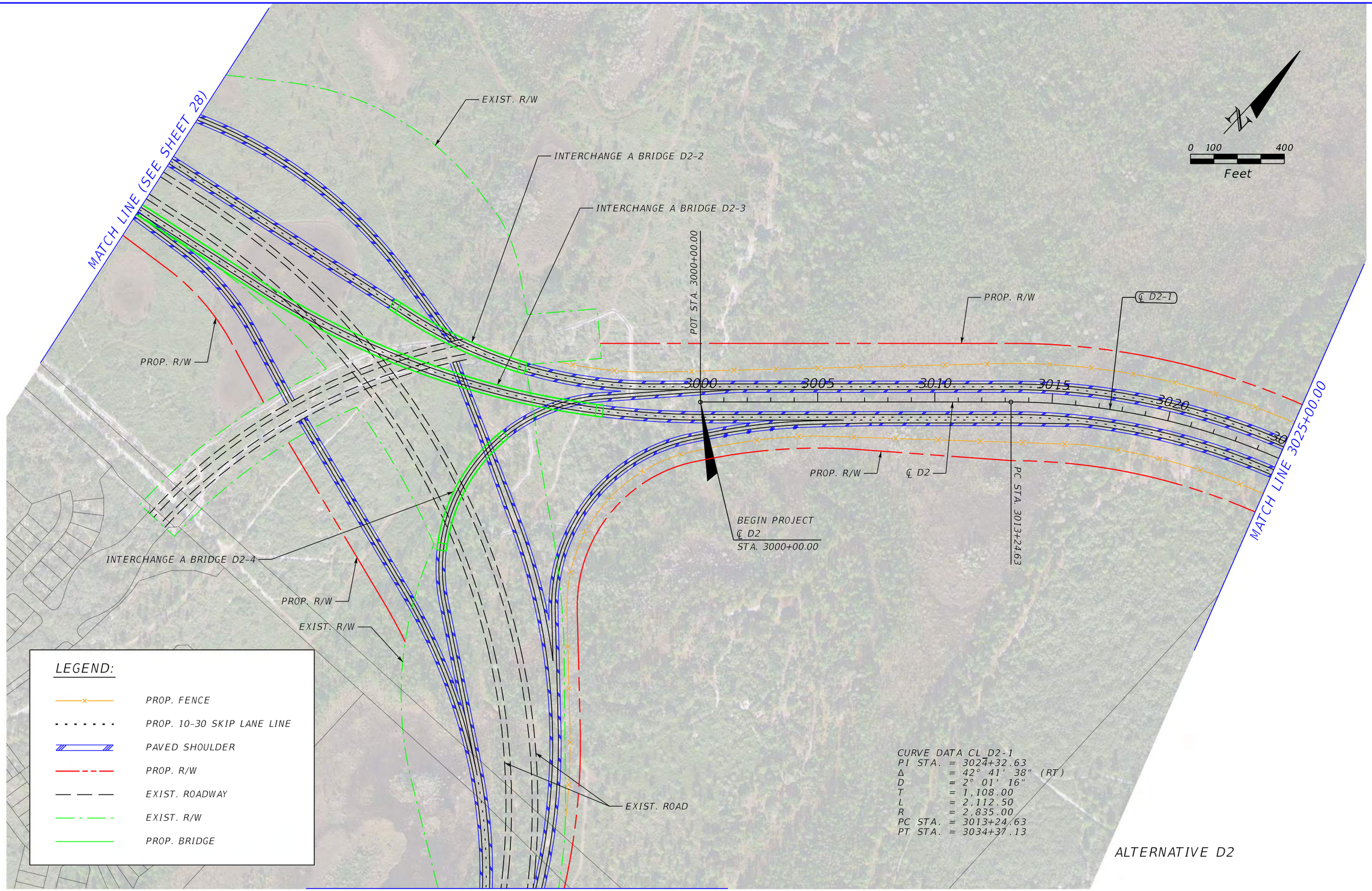
SHEET NO.

Michael.Hunter 3/8/2021 5:27:38 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - D2\Plan Sheets\PLAYRD01.dgn



ALTERNATIVE D2

REVISIONS				CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (2)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				ALT. D2	BREVARD ORANGE OSCEOLA			



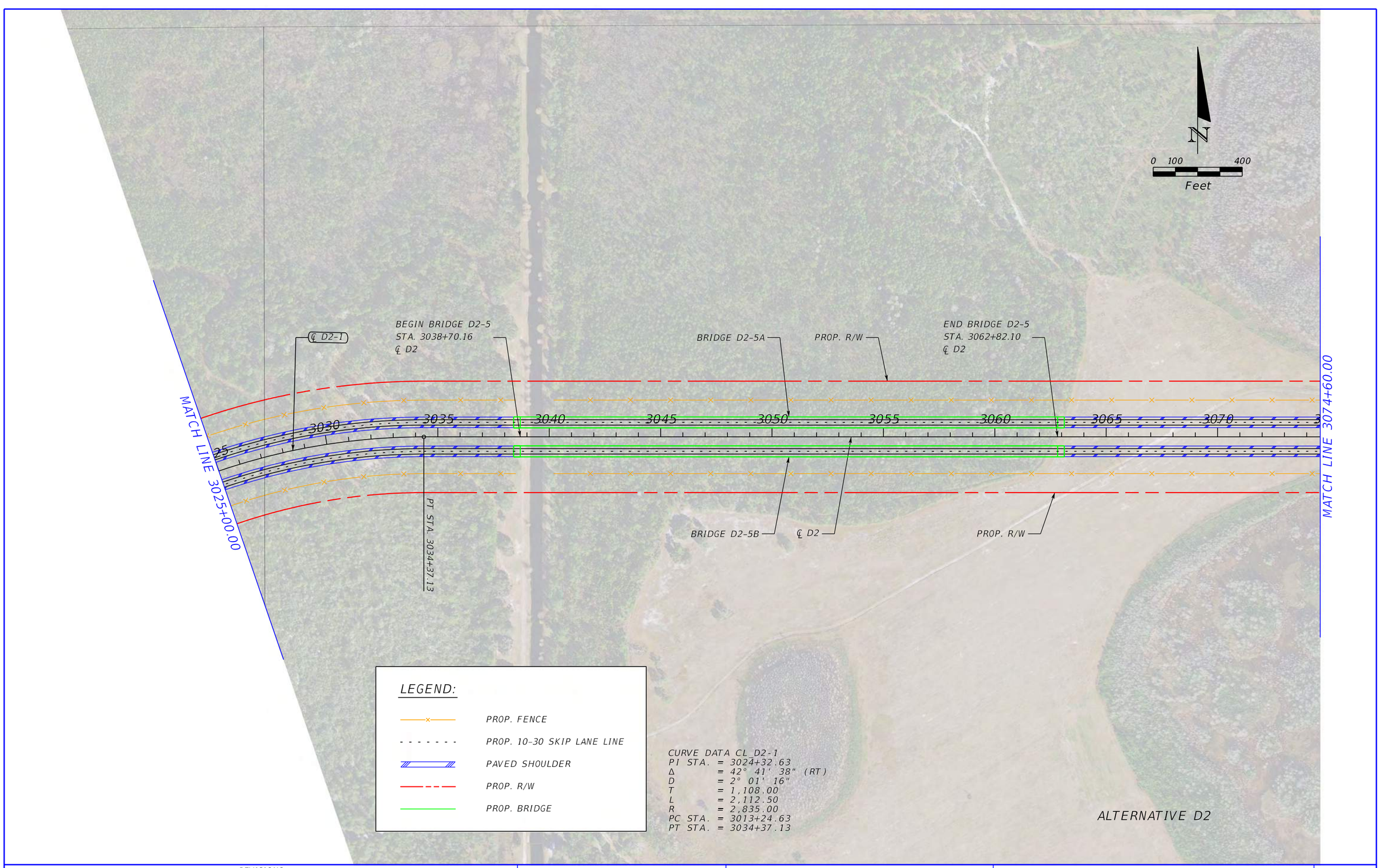
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (01)

SHEET NO.



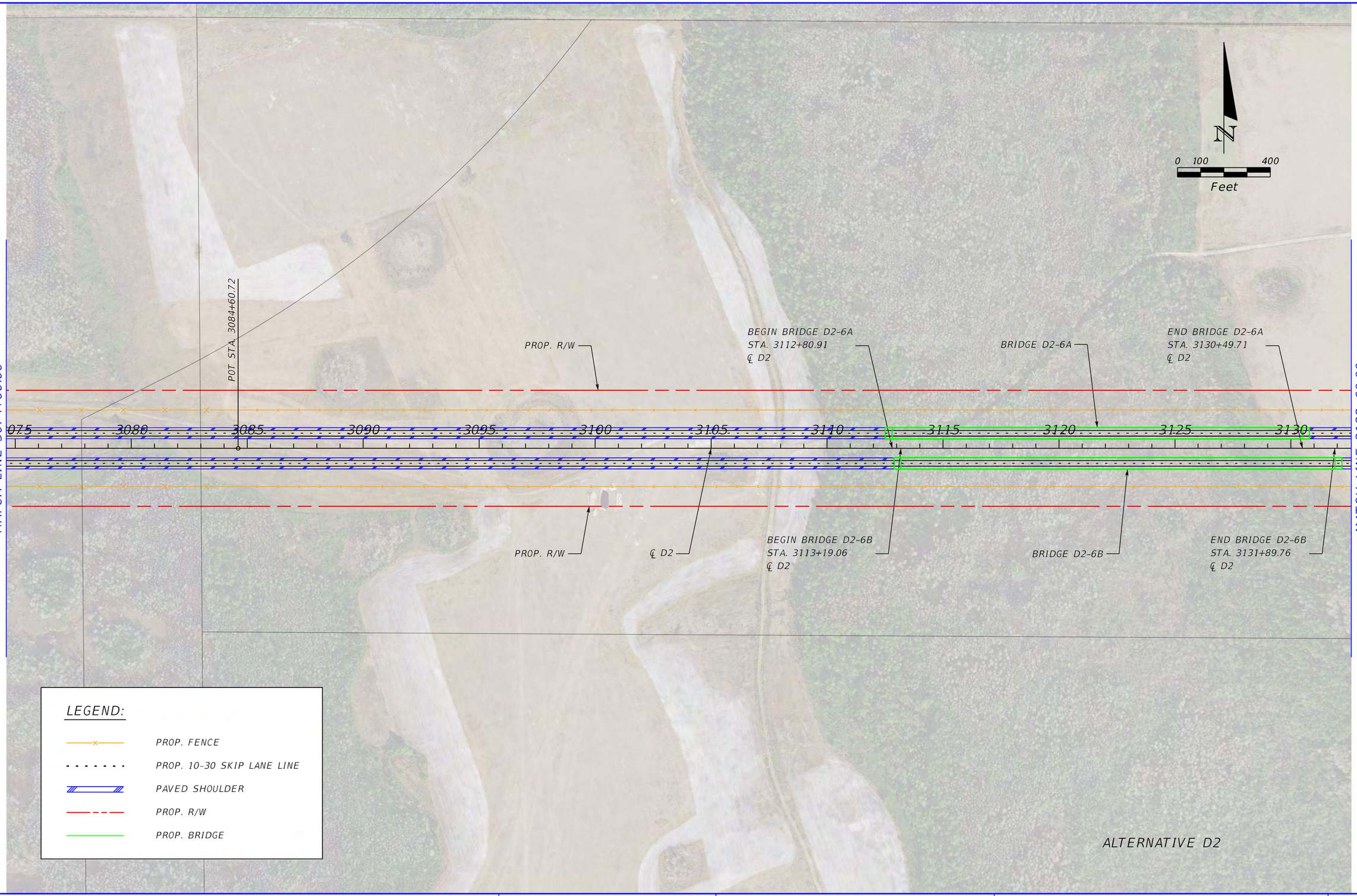
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (02)

SHEET NO.



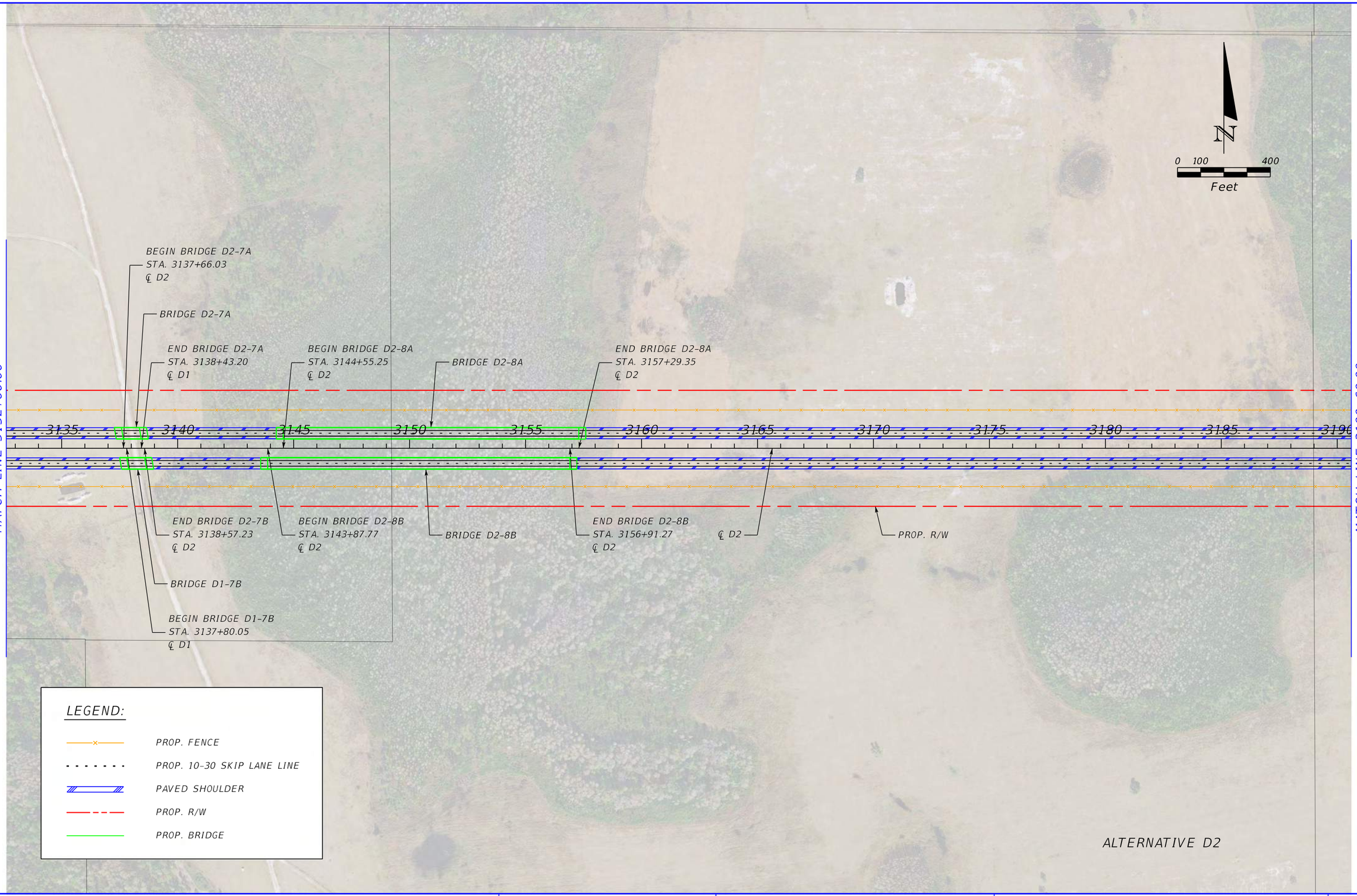
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (03)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

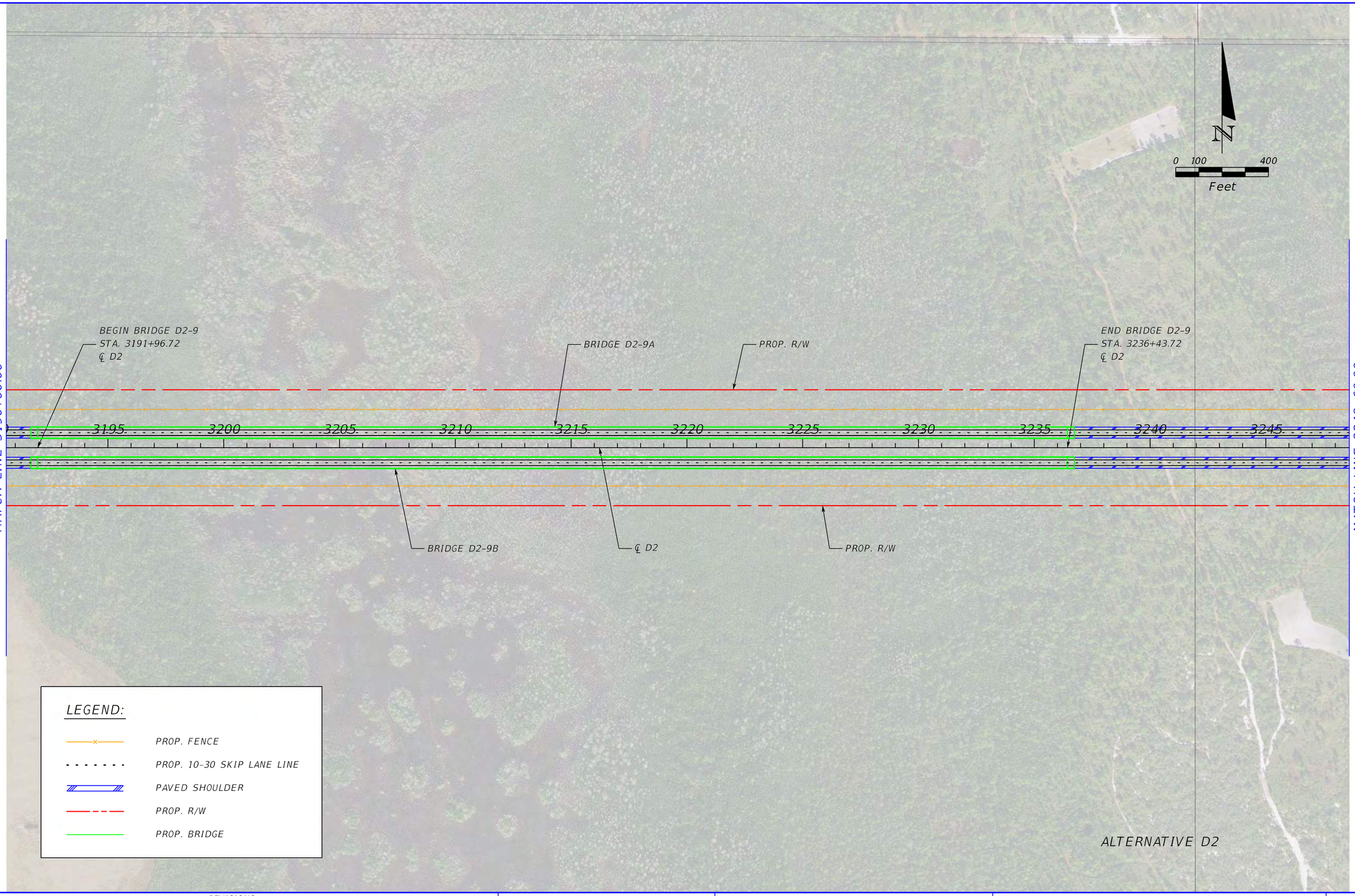
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (04)

SHEET NO.

Michael.Hunter 3/8/2021 5:29:04 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - D2\Plan Sheets\PLANRD04.dgn



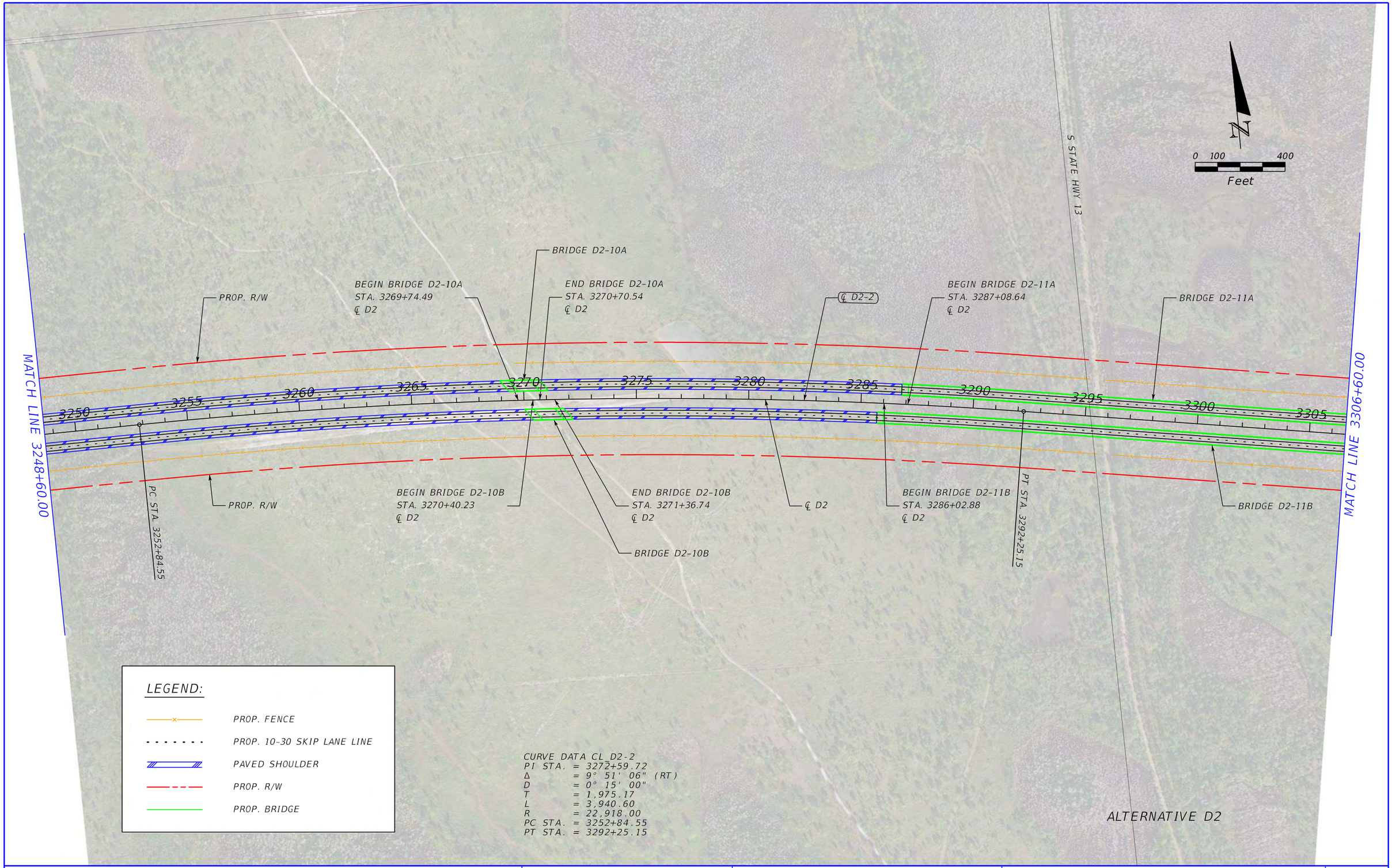
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (05)

SHEET NO.



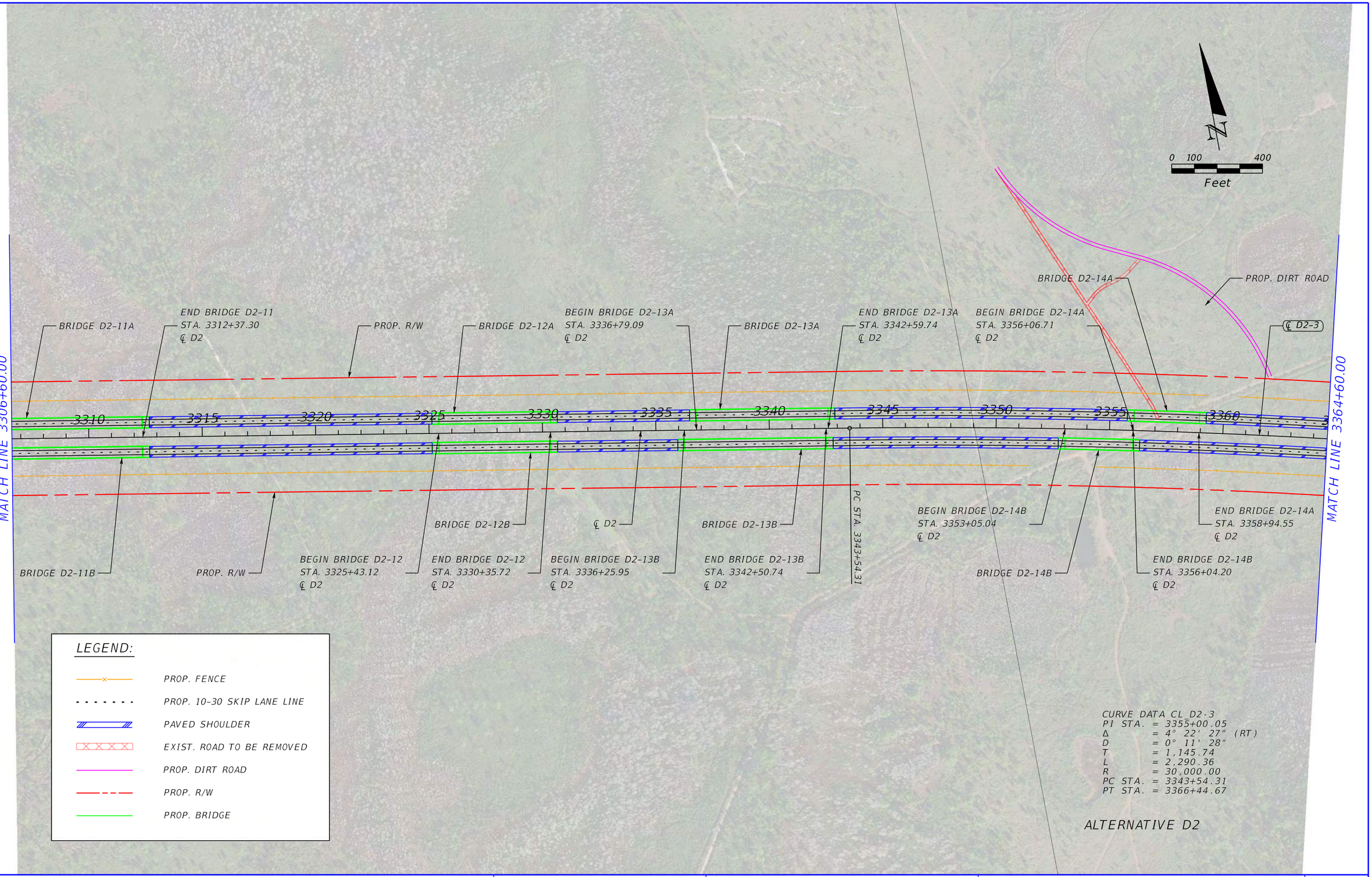
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (06)

SHEET NO.



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. DIRT ROAD
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL D2-3
PI STA. = 3355+00.05
Δ = 4° 22' 27" (RT)
D = 0° 11' 28"
T = 1,145.74
L = 2,290.36
R = 30,000.00
PC STA. = 3343+54.31
PT STA. = 3366+44.67

ALTERNATIVE D2

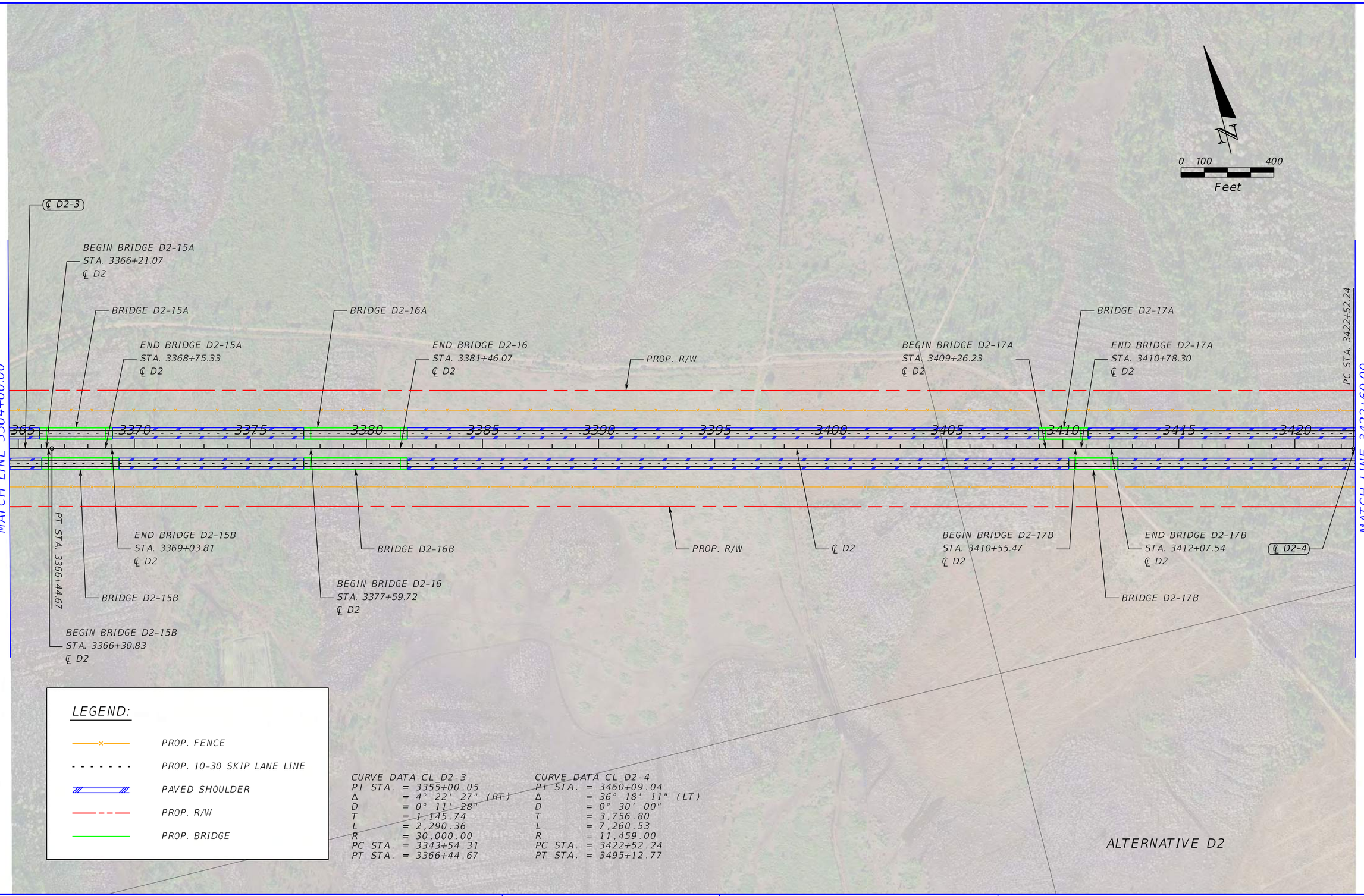
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (07)

SHEET NO.



LEGEND:

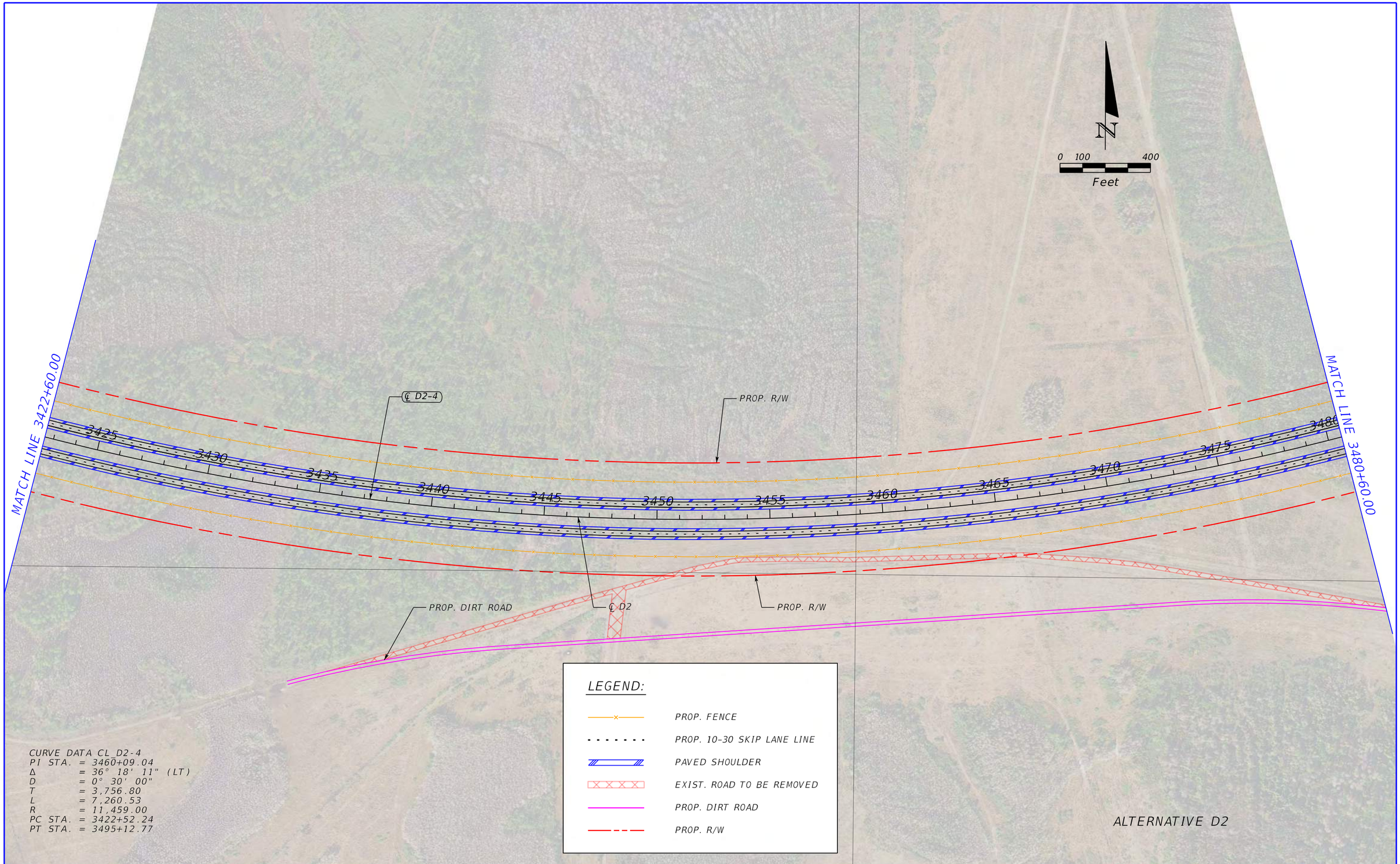
- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL D2-3
PI STA. = 3355+00.05
Δ = 4° 22' 27" (RT)
D = 0° 11' 28"
T = 1,145.74
L = 2,290.36
R = 30,000.00
PC STA. = 3343+54.31
PT STA. = 3366+44.67

CURVE DATA CL D2-4
PI STA. = 3460+09.04
Δ = 36° 18' 11" (LT)
D = 0° 30' 00"
T = 3,756.80
L = 7,260.53
R = 11,459.00
PC STA. = 3422+52.24
PT STA. = 3495+12.77

ALTERNATIVE D2

REVISIONS				CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (08)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				ALT. D2	BREVARD ORANGE OSCEOLA			



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

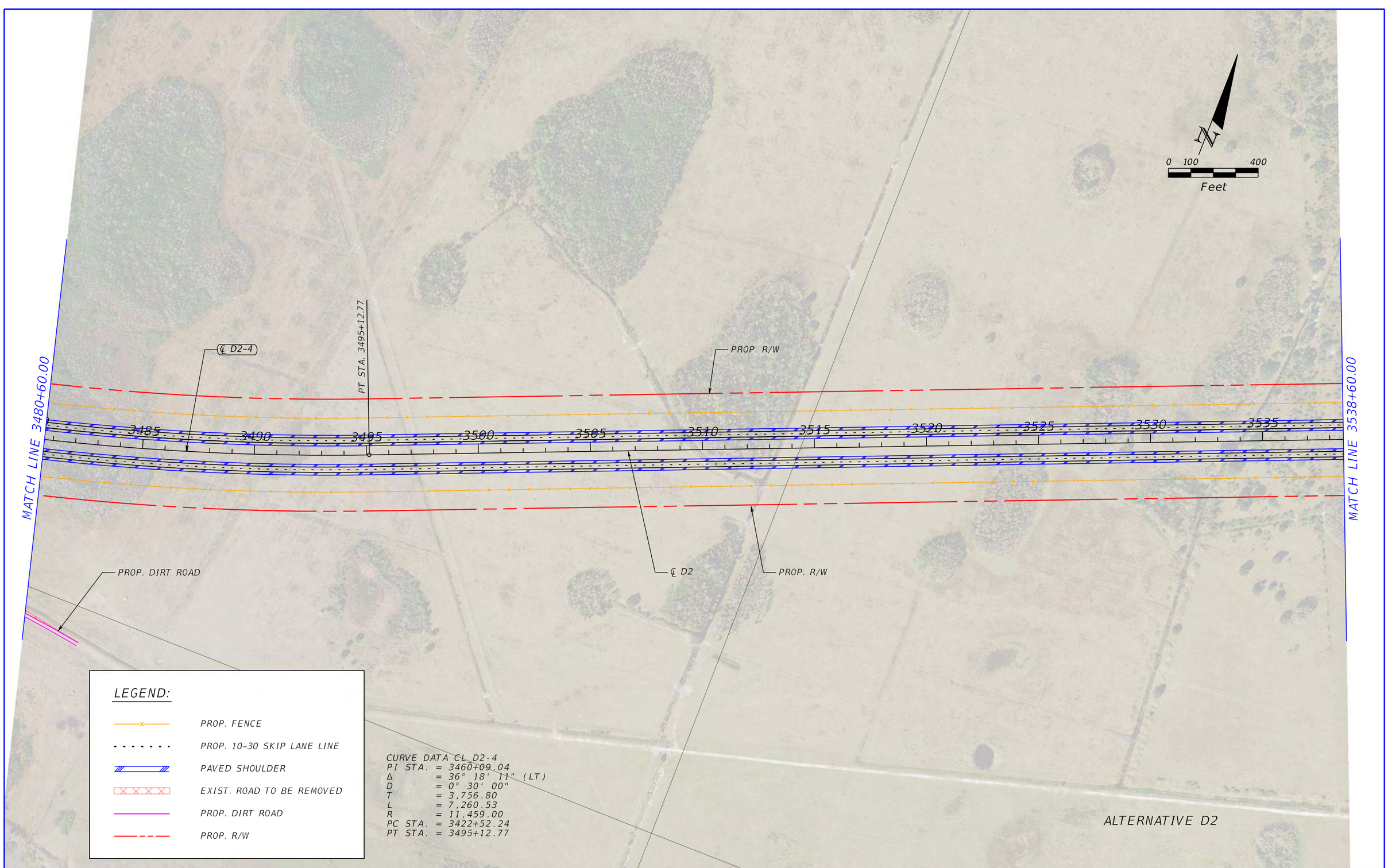
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (09)

SHEET NO.

Michael.Hunter 3/8/2021 5:30:57 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - D2\Plan Sheets\PLANRD09.dgn



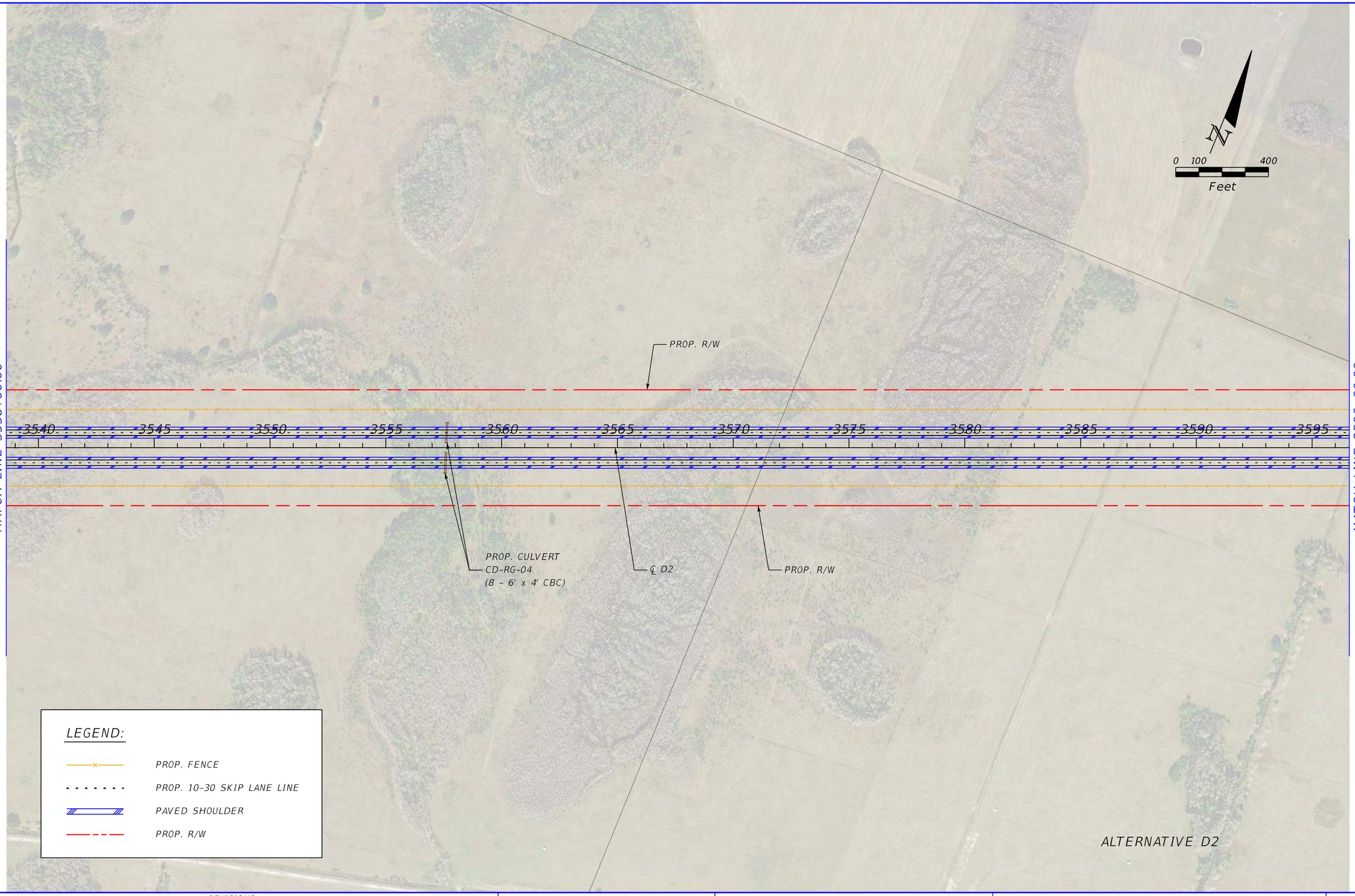
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (10)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

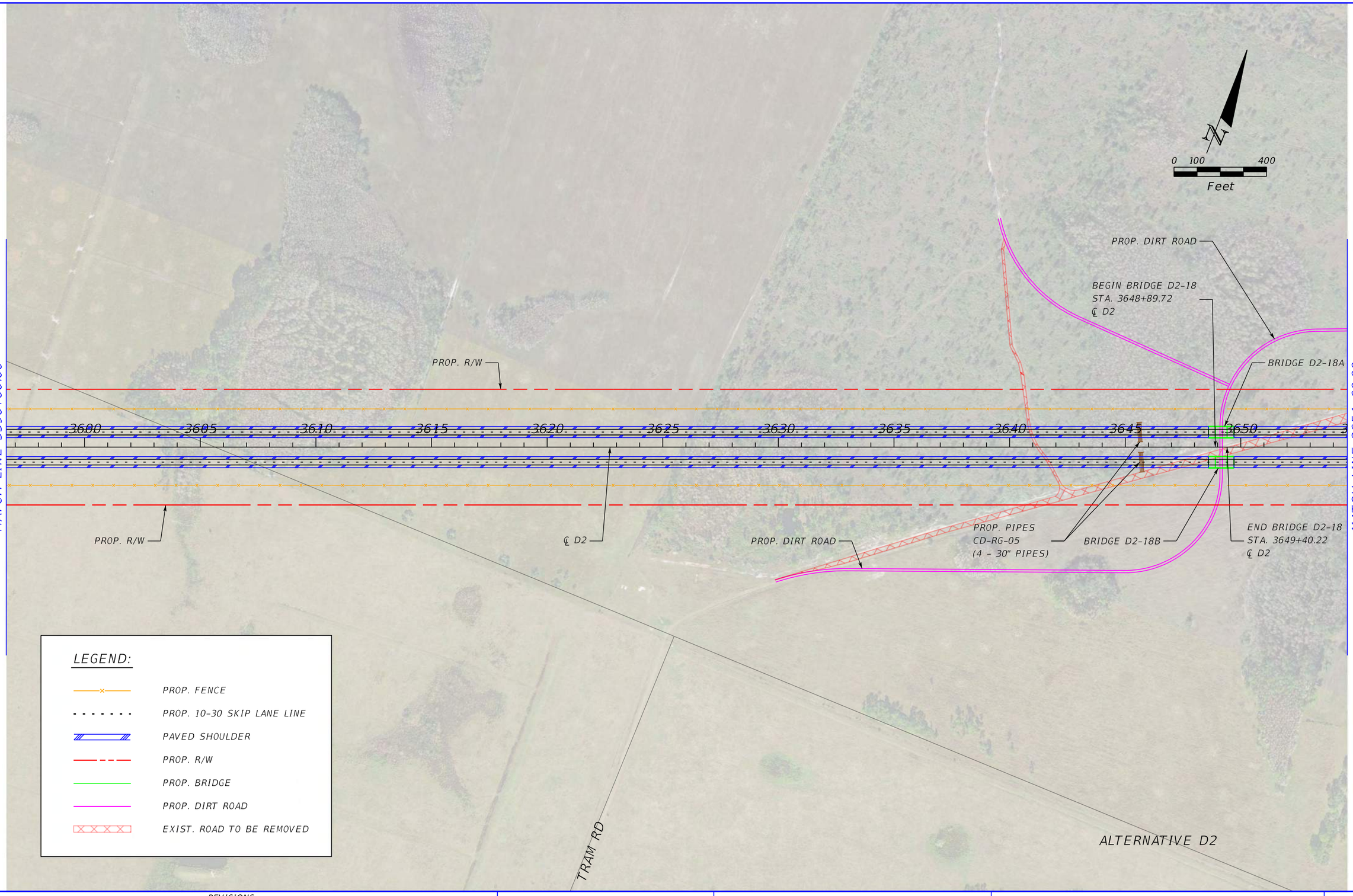
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (11)

SHEET NO.

Michael.Hunter 3/8/2021 5:31:41 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - D2\Plan Sheets\PLANRD011.dgn



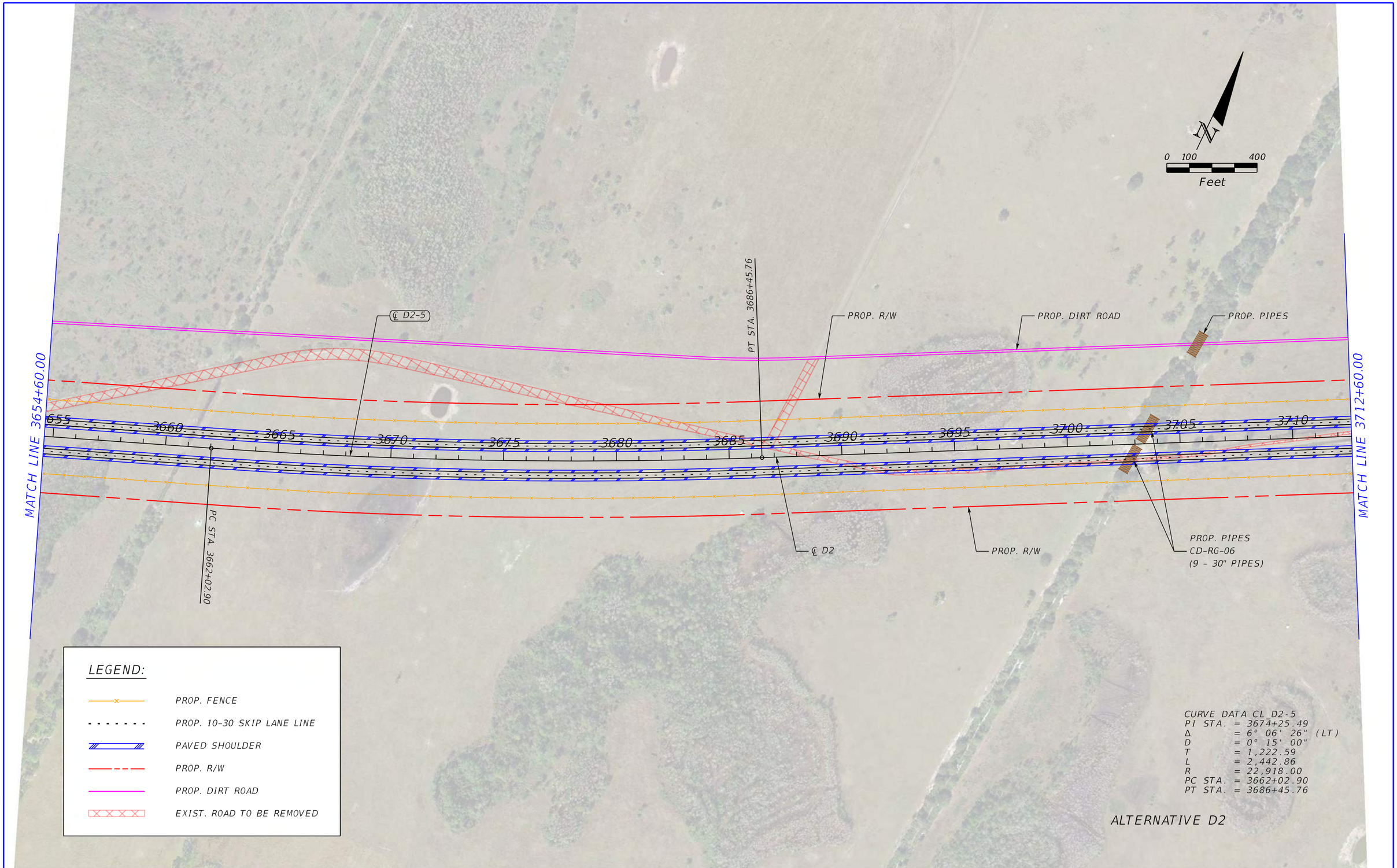
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (12)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

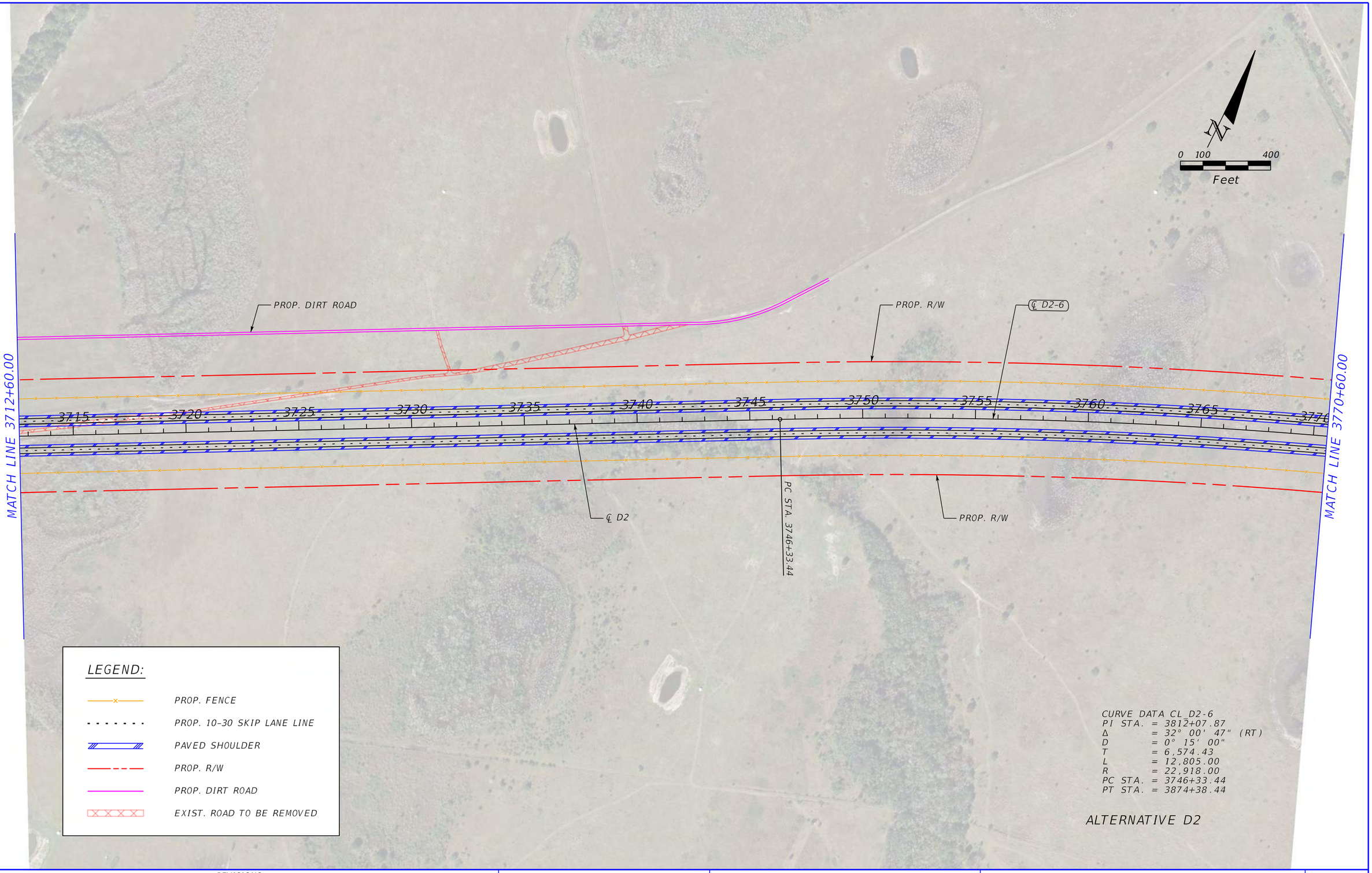
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (13)

SHEET NO.

Michael.Hunter 3/8/2021 5:32:27 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - D2\Plan Sheets\PLANRD013.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (14)

SHEET NO.

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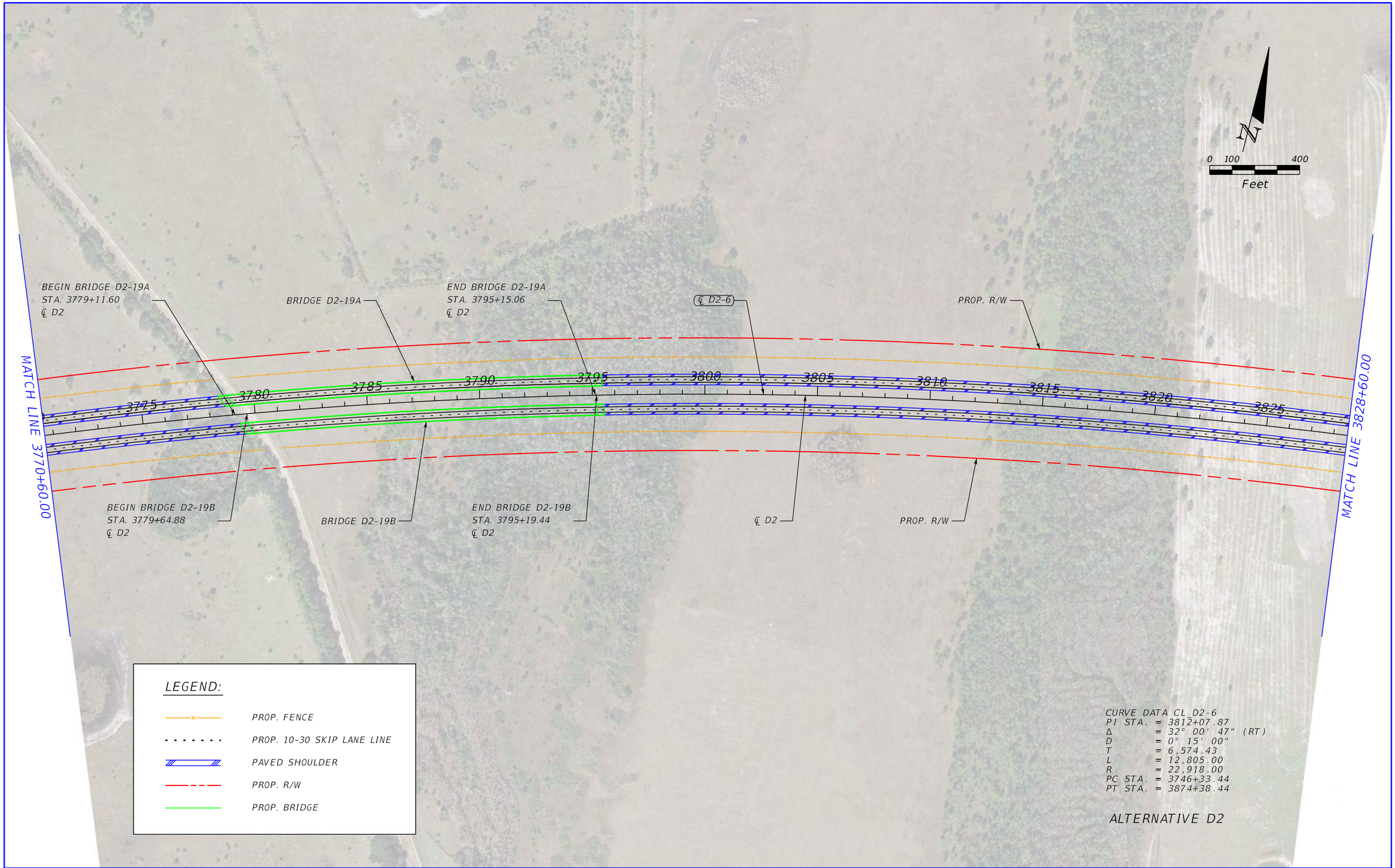


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (15)

SHEET NO.

S TAYLOR CREEK RD

MATCH LINE 3828+60.00

MATCH LINE 3886+60.00

BEGIN BRIDGE D2-20A
STA. 3833+25.80
℄ D2

BRIDGE D2-20A

END BRIDGE D2-20A
STA. 3834+09.64
℄ D2

℄ D2-6

PROP. R/W

BEGIN BRIDGE D2-21A
STA. 3869+23.84
℄ D2

BRIDGE D2-21A

END BRIDGE D2-21A
STA. 3870+38.27
℄ D2

3830 3835 3840 3845 3850 3855 3860 3865 3870 3875 3880 3885

END BRIDGE D2-20B
STA. 3834+27.38
℄ D2

BRIDGE D2-20B

PROP. R/W

℄ D2

BEGIN BRIDGE D2-21B
STA. 3868+90.88
℄ D2

BRIDGE D2-21B

PT STA. 3874+38.44

BEGIN BRIDGE D2-20B
STA. 3833+43.24
℄ D2

END BRIDGE D2-21B
STA. 3870+05.77
℄ D2

NOVA RD

0 100 400
Feet

N

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL_D2-6
PI STA. = 3812+07.87
Δ = 32° 00' 47" (RT)
D = 0° 15' 00"
T = 6,574.43
L = 12,805.00
R = 22,918.00
PC STA. = 3746+33.44
PT STA. = 3874+38.44

ALTERNATIVE D2

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

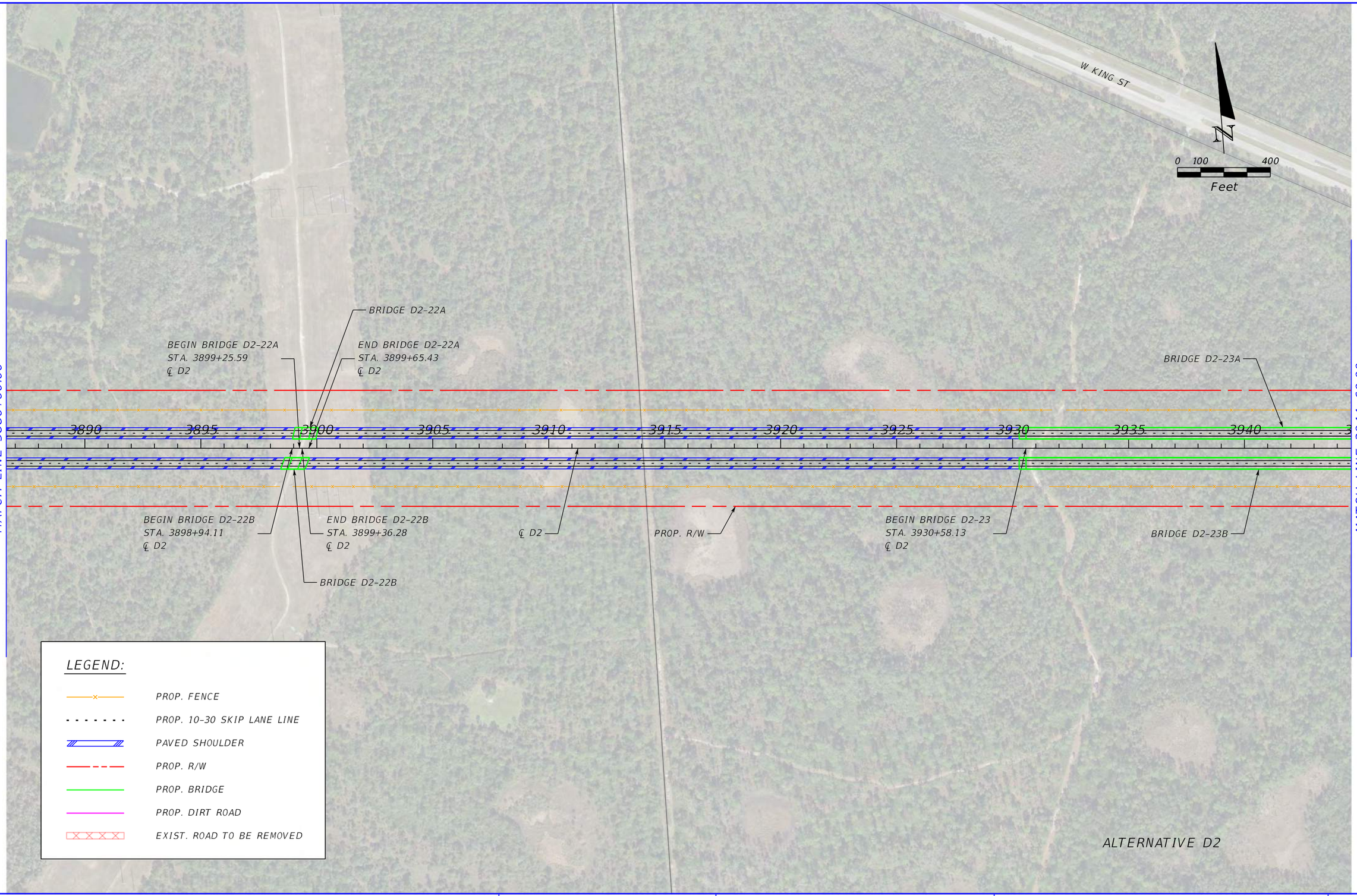
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (16)

SHEET NO.

Michael.Hunter 3/8/2021 5:33:33 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - D2\Plan Sheets\PLANRD016.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

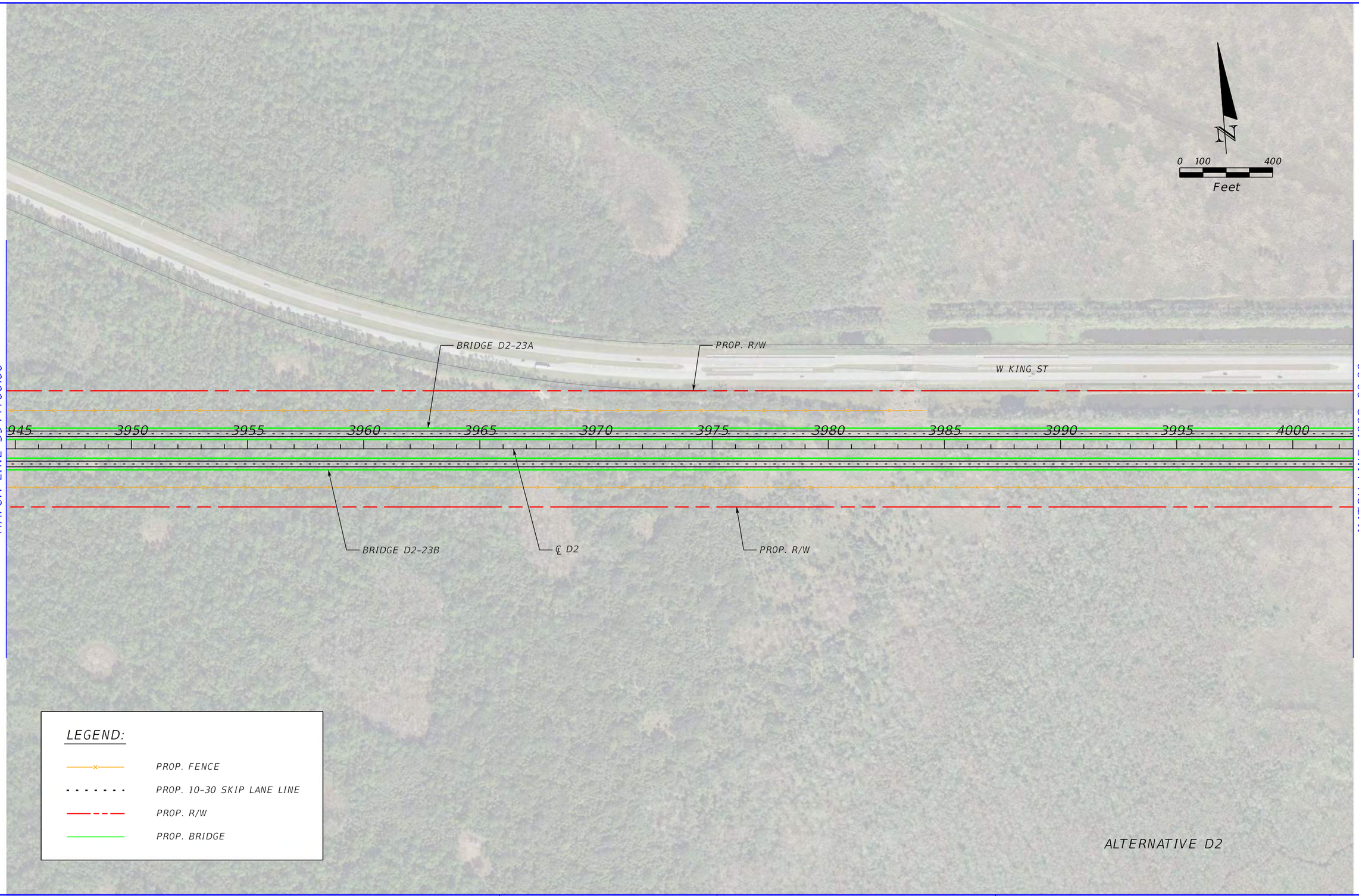
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (17)

SHEET NO.

Michael.Hunter 3/8/2021 5:33:56 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - D2\Plan Sheets\PLANRD017.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

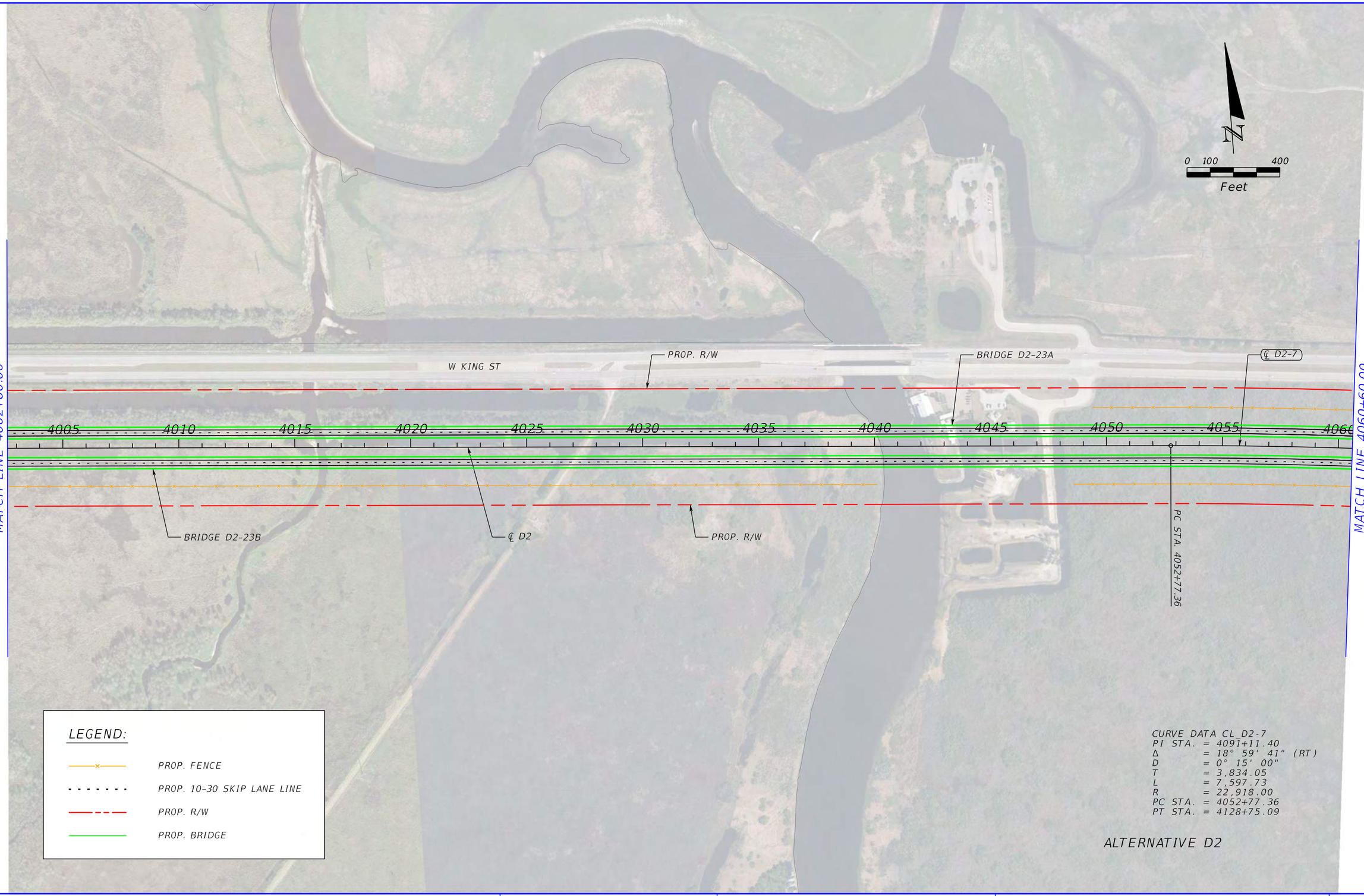
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (18)

SHEET NO.

Michael.Hunter 3/8/2021 5:34:41 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - D2\Plan Sheets\PLANRD018.dgn



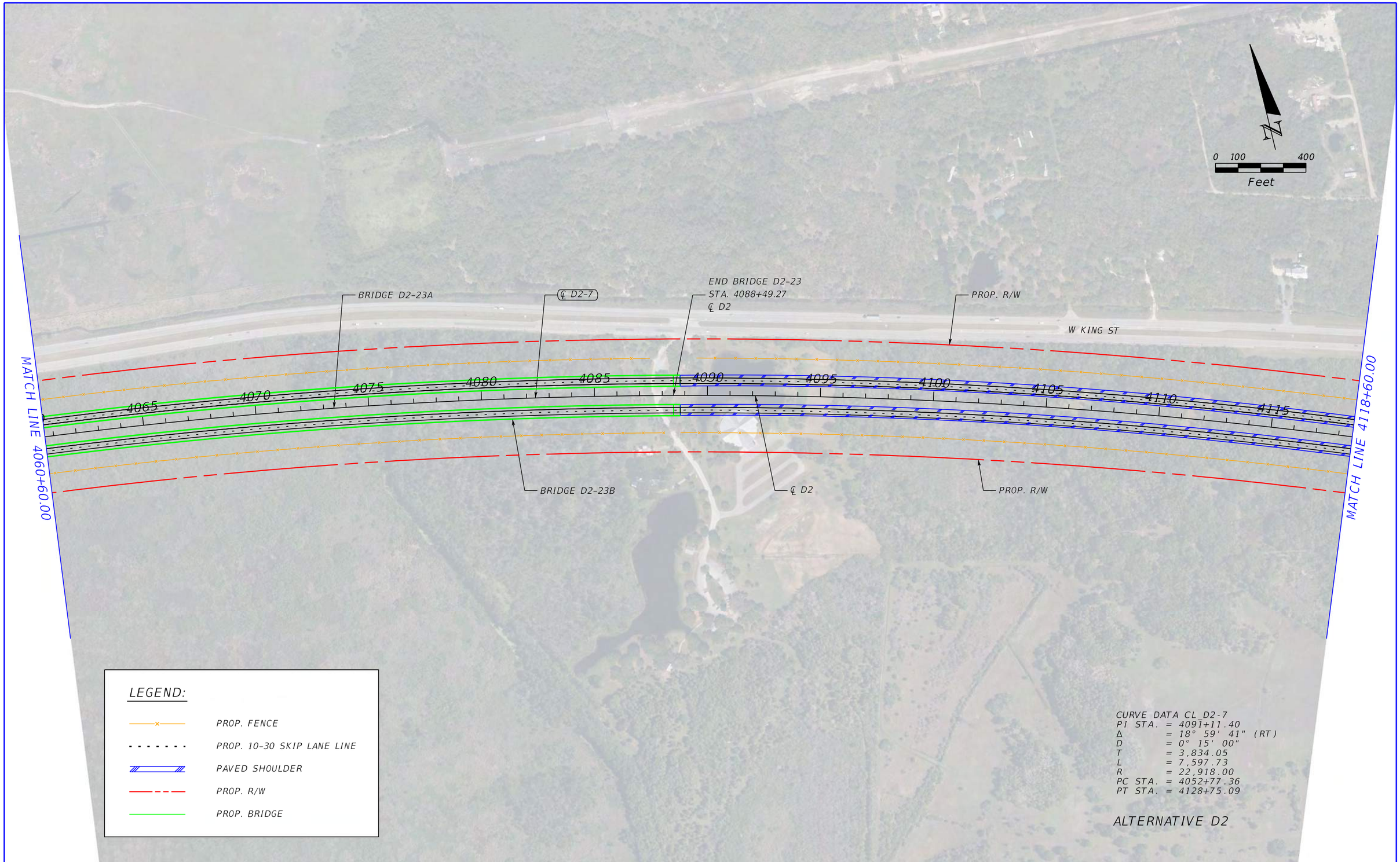
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (19)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (20)

SHEET NO.

SATELLITE BLVD

N

0 100 400

Feet

EXIST. PIPES
CD-520-07
(2 - 18" PIPES)

W KING ST

BRIDGE D2-24 (ON-RAMP)

MATCH LINE 4176+60.00

MATCH LINE 4118+60.00

℄ D2-7

PROP. R/W

℄ D2-8

4120 4125 4130 4135 4140 4145 4150 4155 4160 4165 4170 4175

℄ D2

PROP. R/W

PRC STA. 4162+30.71

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL_D2-7
PI STA. = 4091+11.40
Δ = 18° 59' 41" (RT)
D = 0° 15' 00"
T = 3,834.05
L = 7,597.73
R = 22,918.00
PC STA. = 4052+77.36
PT STA. = 4128+75.09

CURVE DATA CL_D2-8
PI STA. = 4191+15.17
Δ = 65° 19' 08" (LT)
D = 1° 16' 24"
T = 2,884.46
L = 5,130.14
R = 4,500.00
PC STA. = 4162+30.71
PT STA. = 4213+60.85

ALTERNATIVE D2

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

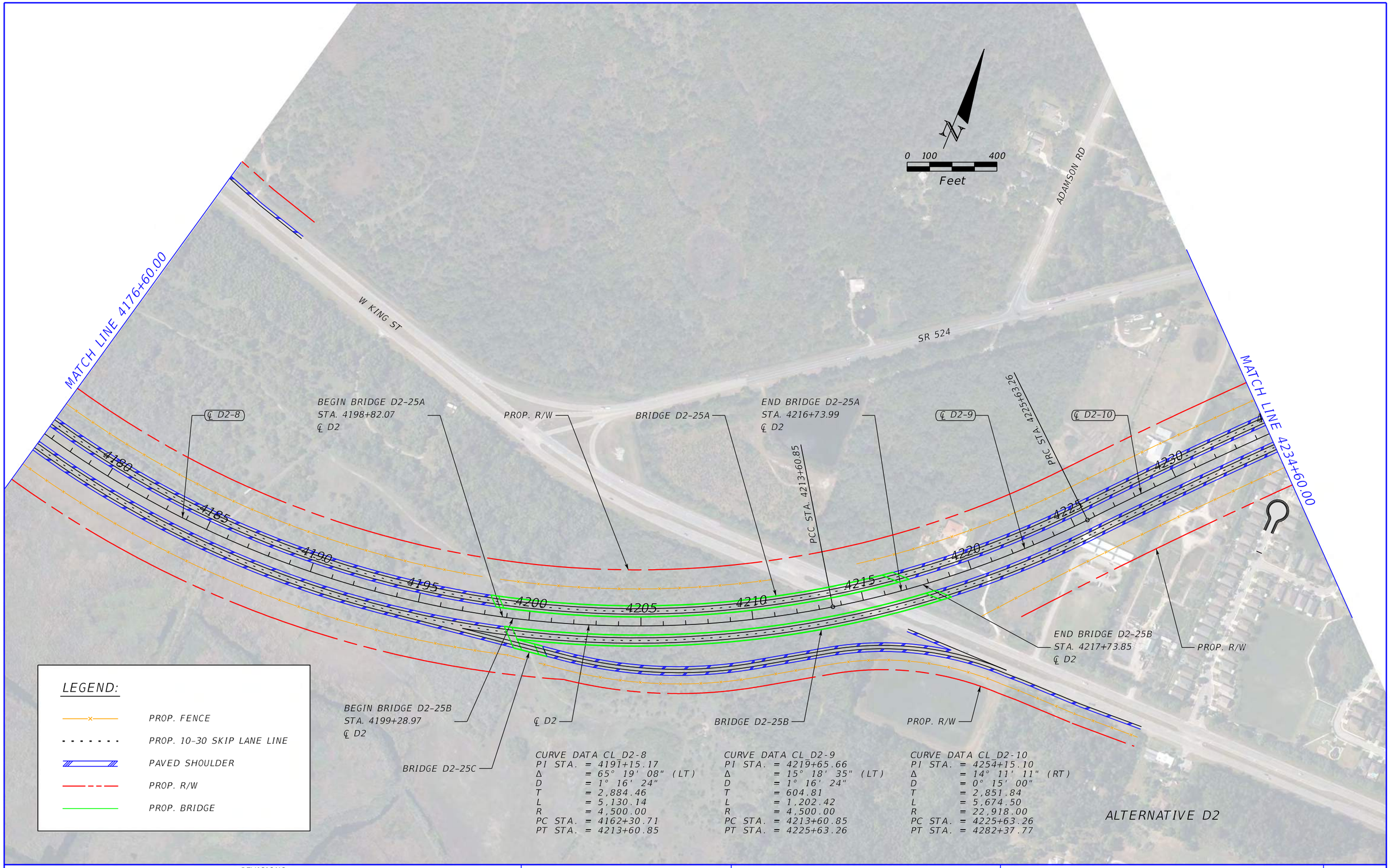
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (21)

SHEET NO.

Michael.Hunter 3/8/2021 5:35:50 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - D2\Plan Sheets\PLANRD021.dgn



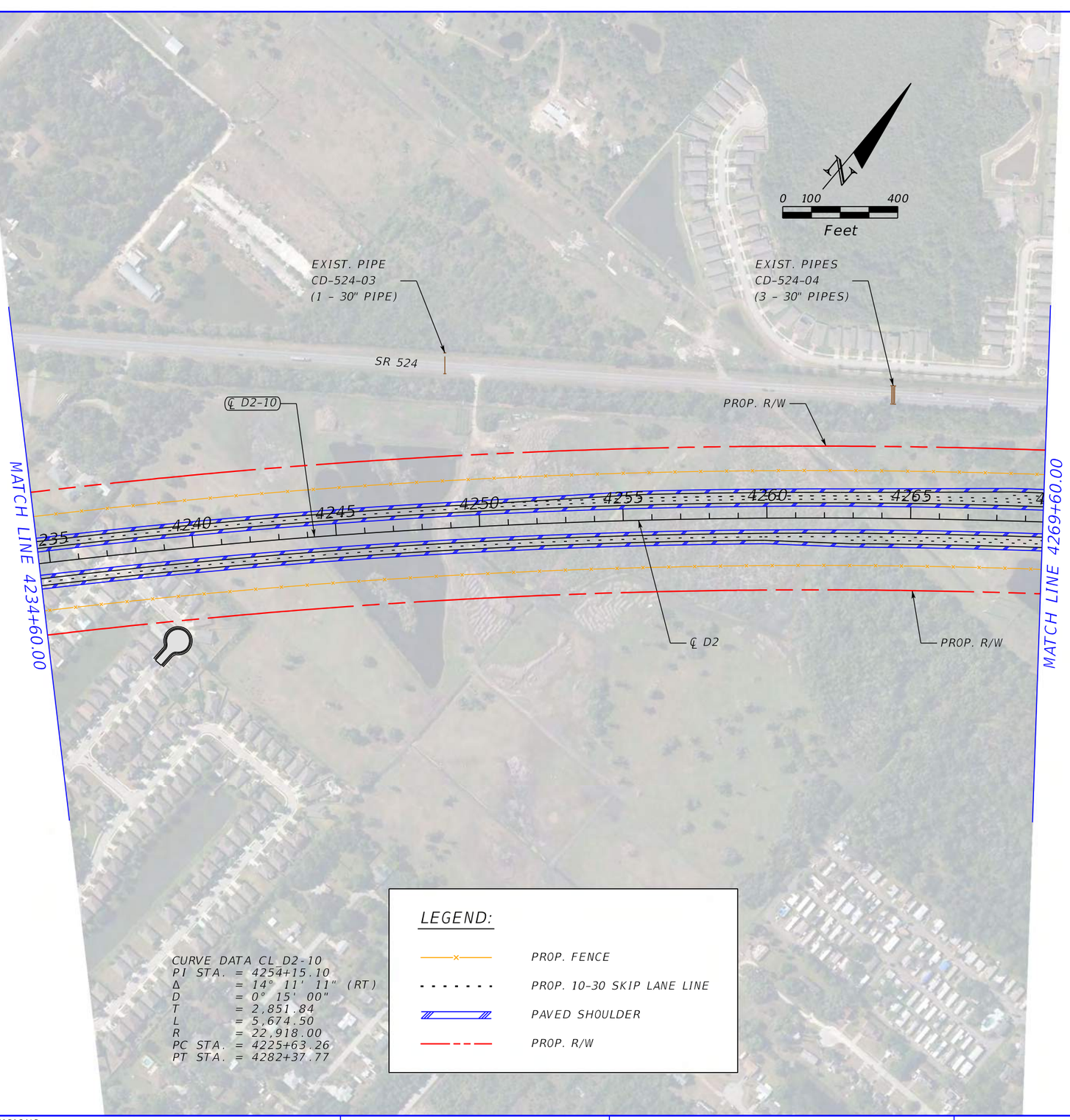
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (22)

SHEET NO.



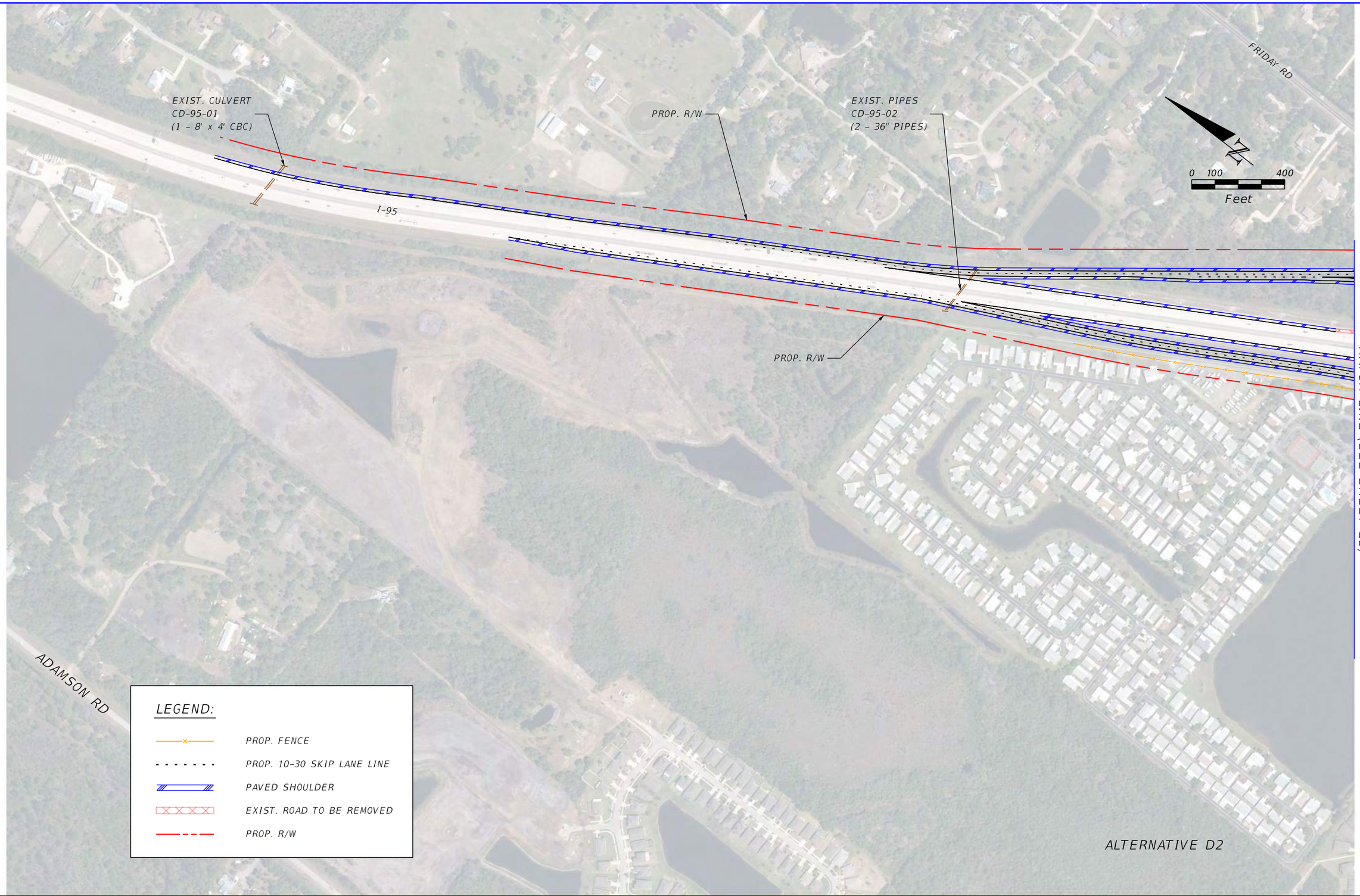
CURVE DATA CL D2-10
PI STA. = 4254+15.10
Δ = 14° 11' 11" (RT)
D = 0° 15' 00"
T = 2,851.84
L = 5,674.50
R = 22,918.00
PC STA. = 4225+63.26
PT STA. = 4282+37.77

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

ALTERNATIVE D2

REVISIONS				CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (23)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				ALT. D2	BREVARD ORANGE OSCEOLA			



REVISIONS				CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (24)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				ALT. D2	BREVARD ORANGE OSCEOLA			

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

FRIDAY RD

INTERCHANGE B BRIDGE D2-28

EXIST. PIPE
CD-95-03
(1 - 42" PIPE)

END PROJECT
℄ D2
STA. 4292+72.54

INTERCHANGE B BRIDGE D2-27

PROP. R/W

EXIST. PIPE
CD-95-04
(1 - 36" PIPE)

TOWNSEND RD

RELOCATED TOWNSEND RD

PT STA. 4292+72.54

℄ D2

I-95

4285

4280

4275

4270

INTERCHANGE B BRIDGE D2-29

PT STA. 4282+37.77

INTERCHANGE B BRIDGE D2-26

FRIDAY RD

PROP. R/W

℄ D2-10

PROP. R/W

SR 524

0 100 400
Feet

MATCH LINE (SEE SHEET 24)

MATCH LINE (SEE SHEET 26)

MATCH LINE 4269+60.00

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL D2-10
PI STA. = 4254+15.10
Δ = 14° 11' 11" (RT)
D = 0° 15' 00"
T = 2,851.84
L = 5,674.50
R = 22,918.00
PC STA. = 4225+63.26
PT STA. = 4282+37.77

ALTERNATIVE D2

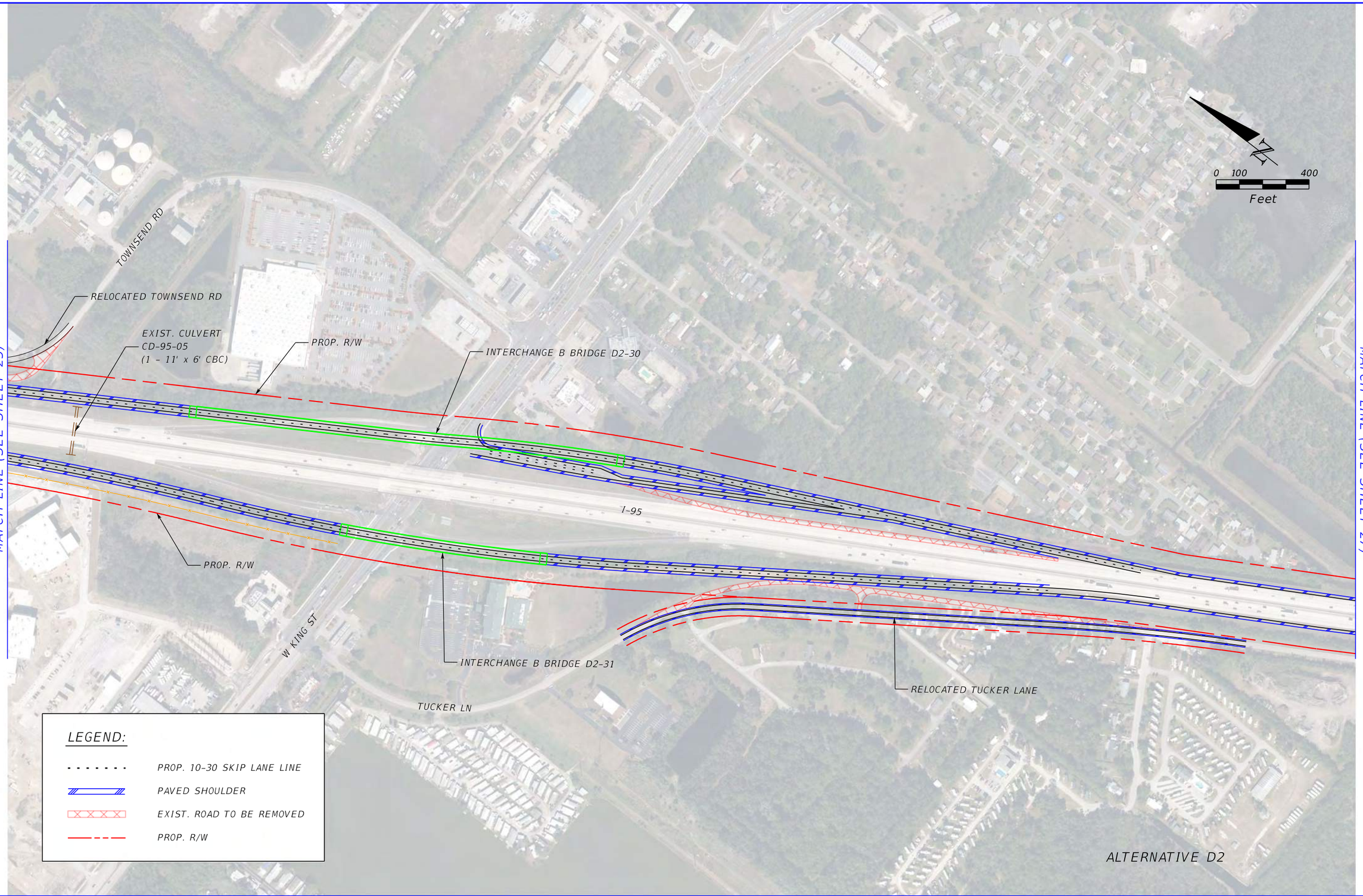
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (25)

SHEET NO.



REVISIONS					
DATE	DESCRIPTION	DATE	DESCRIPTION		

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (26)

SHEET NO.

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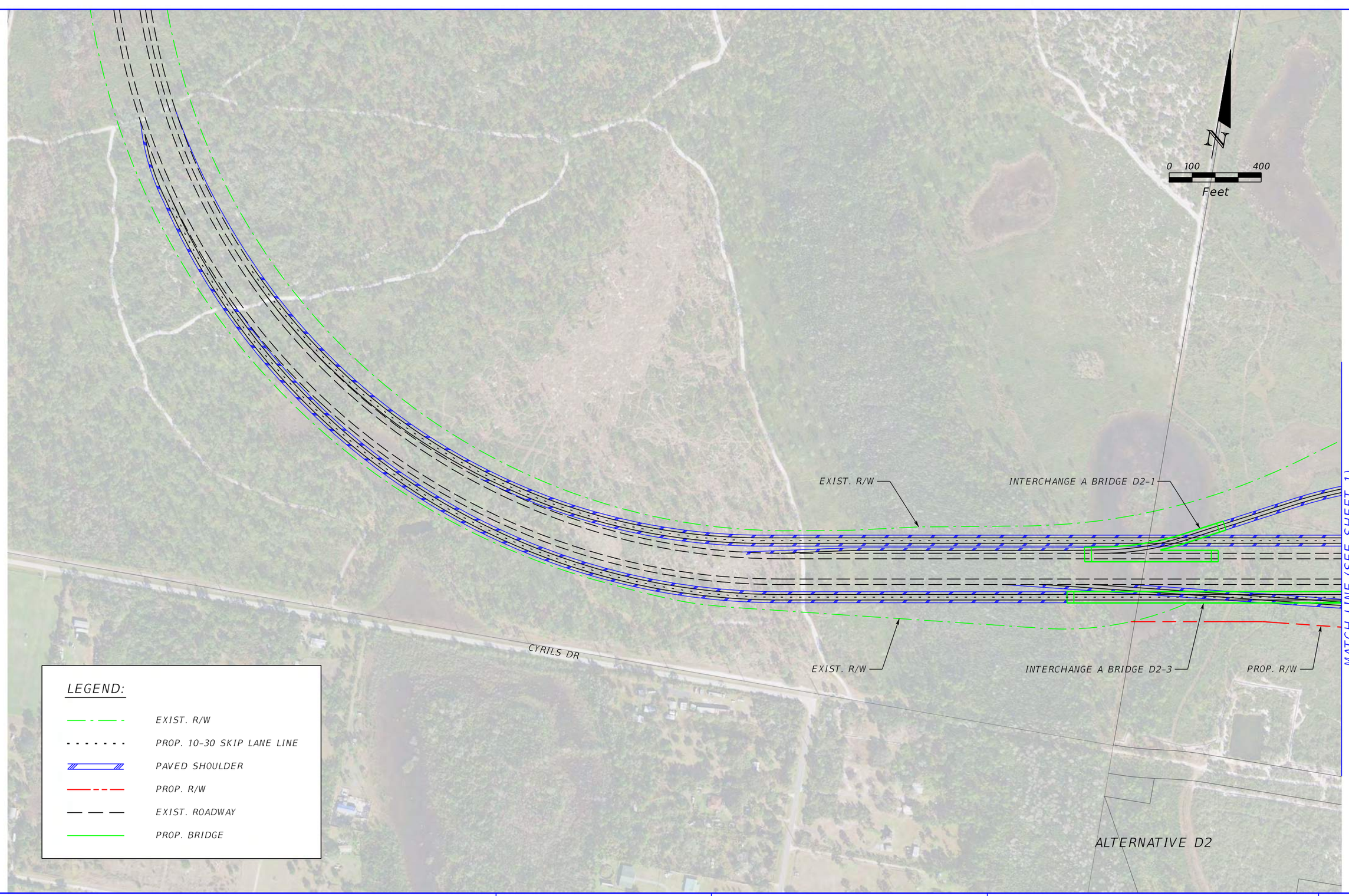
REVISIONS				CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (27)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				ALT. D2	BREVARD ORANGE OSCEOLA			



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (28)

SHEET NO.

MATCH LINE (SEE SHEET 1)

PROP. R/W

EXIST. R/W

EXIST. R/W

0 100 400

Feet

ALTERNATIVE D2

LEGEND:

- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- EXIST. ROADWAY
- EXIST. R/W

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. D2	BREVARD ORANGE OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (29)

SHEET NO.

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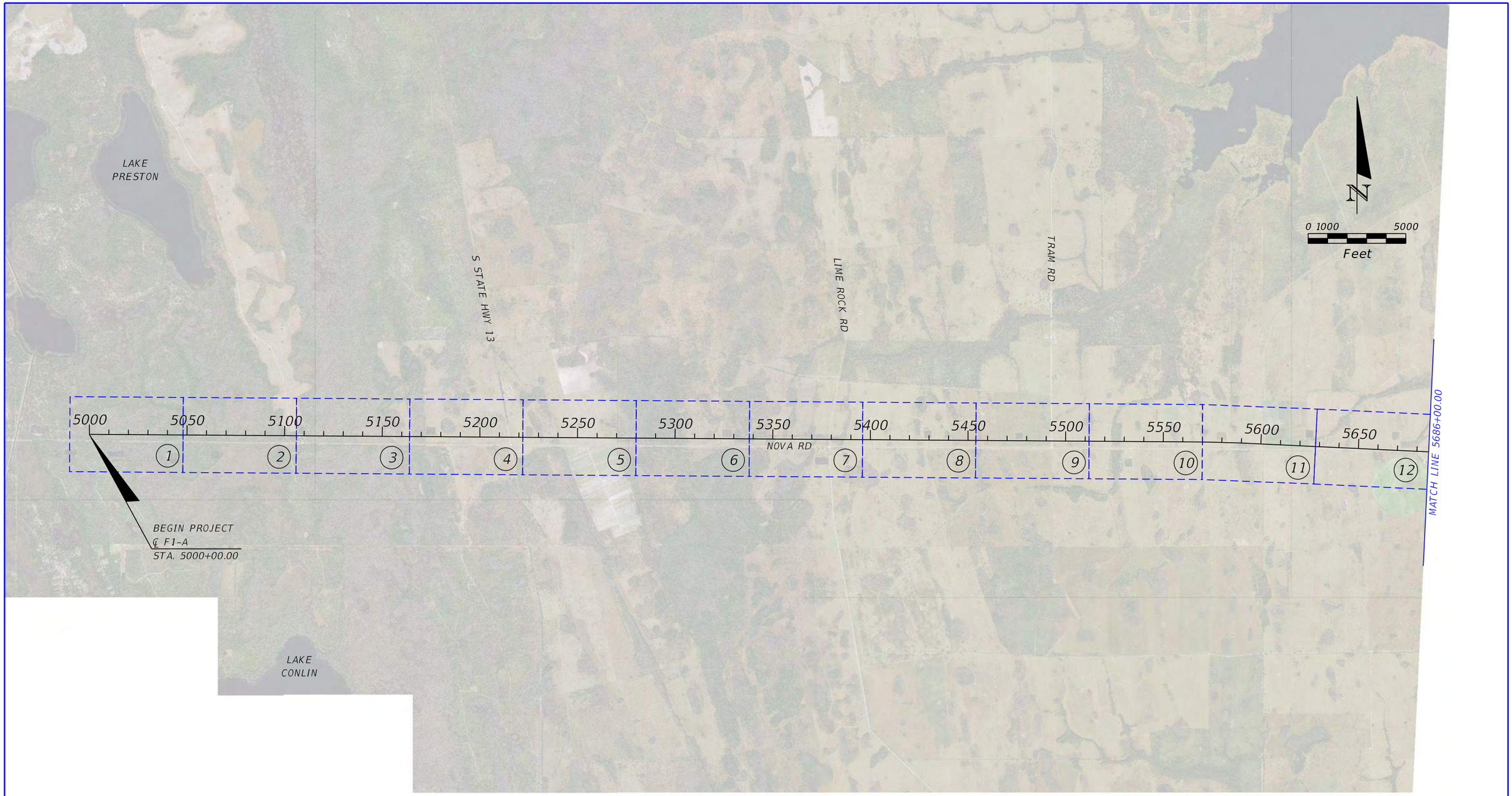
APPENDIX G

Concept Plans for Alternative F1



ALTERNATIVE F1-A

REVISIONS				CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (1)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				ALT. F1-A	BREVARD OSCEOLA			

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MATCH LINE 5686+00.00

5700 5750 5800 5850 5900 5950 6000 6050 6100 6150 6200 6250 6300 6350 6400 6450 6500

13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

DRIFTWOOD RD

BRANCH RD

DEER PARK RD

LAKE WINDER

SAWMILL GRDE

VIERA BLVD

JUDGE FRAN JAMIESON WAY

N WICKHAM RD

I-95

N

0 1000 5000

Feet

END PROJECT
℄ F1-A
STA. 6541+04.66

LAKE WASHINGTON

ALTERNATIVE F1-A

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (2)

SHEET NO.

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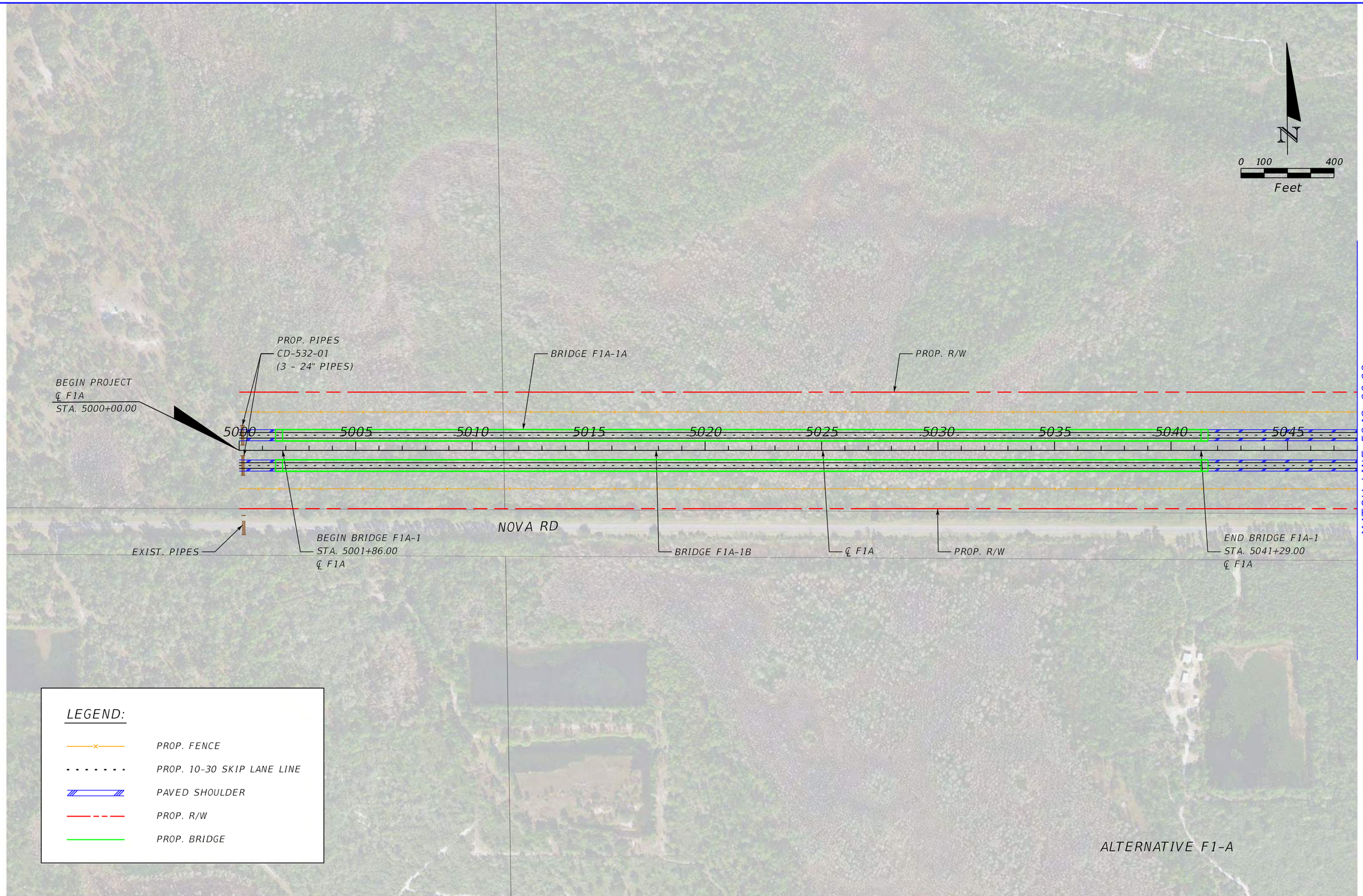

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (01)

SHEET NO.

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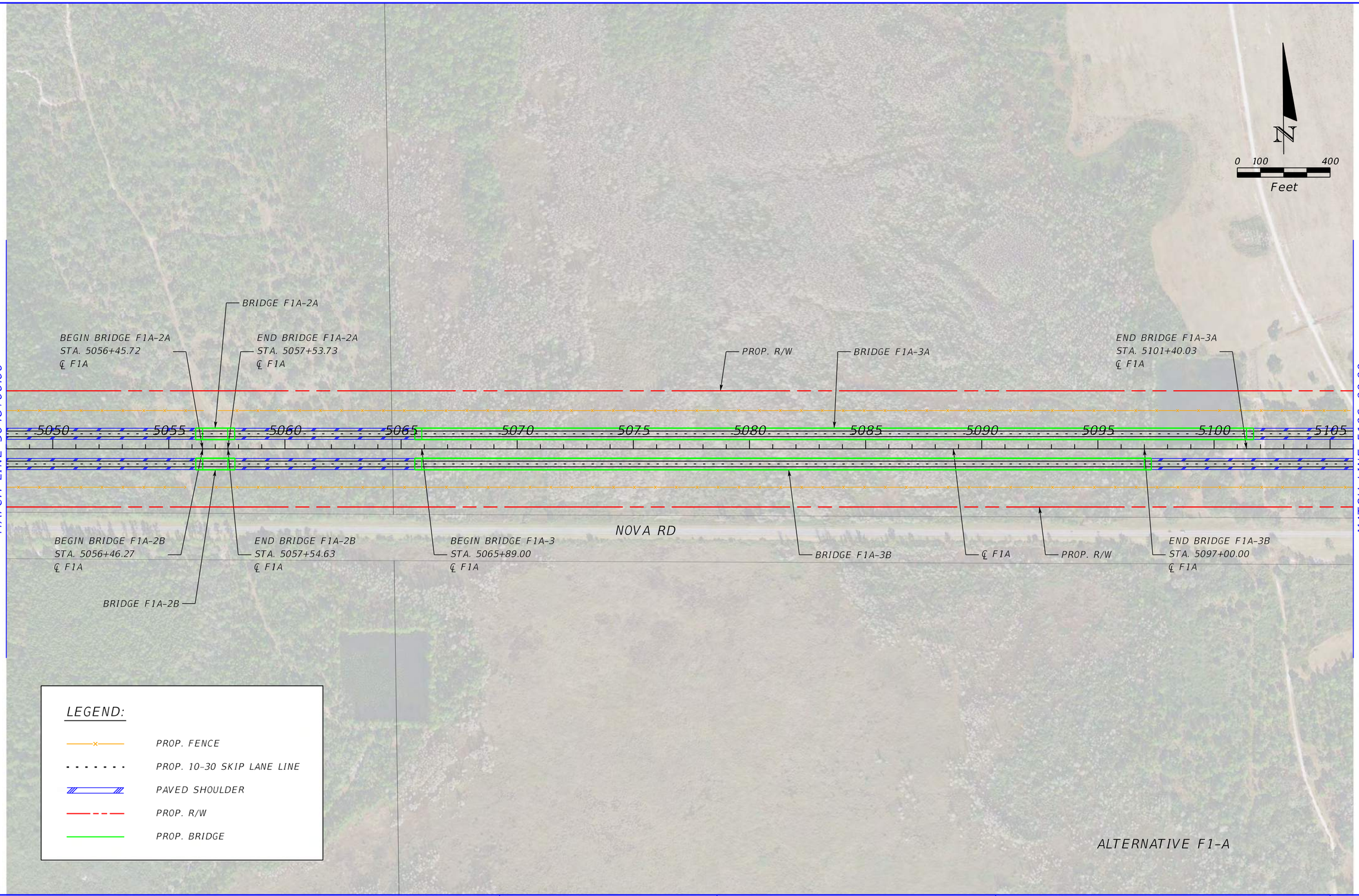


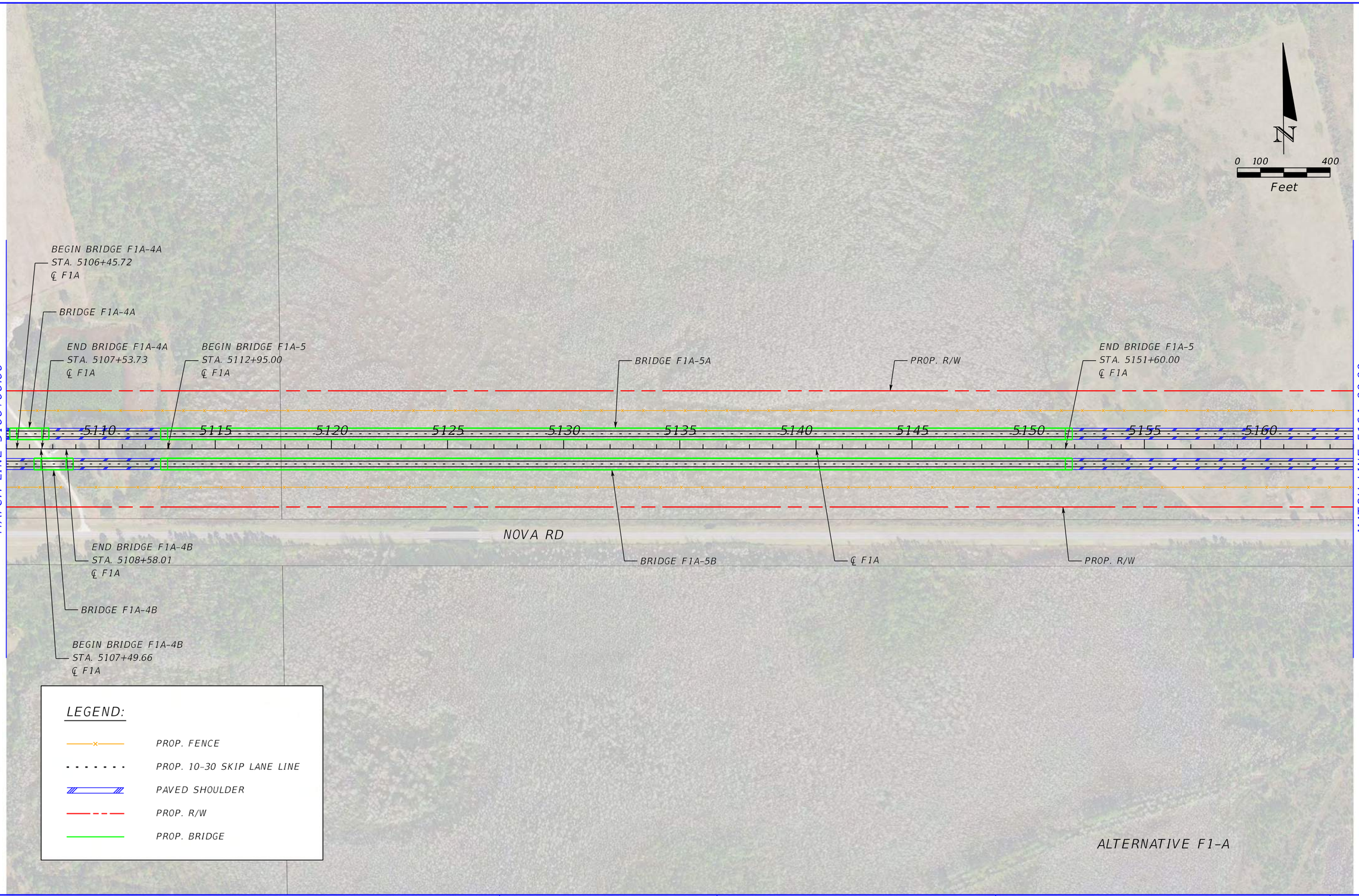
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (02)

SHEET NO. 2



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

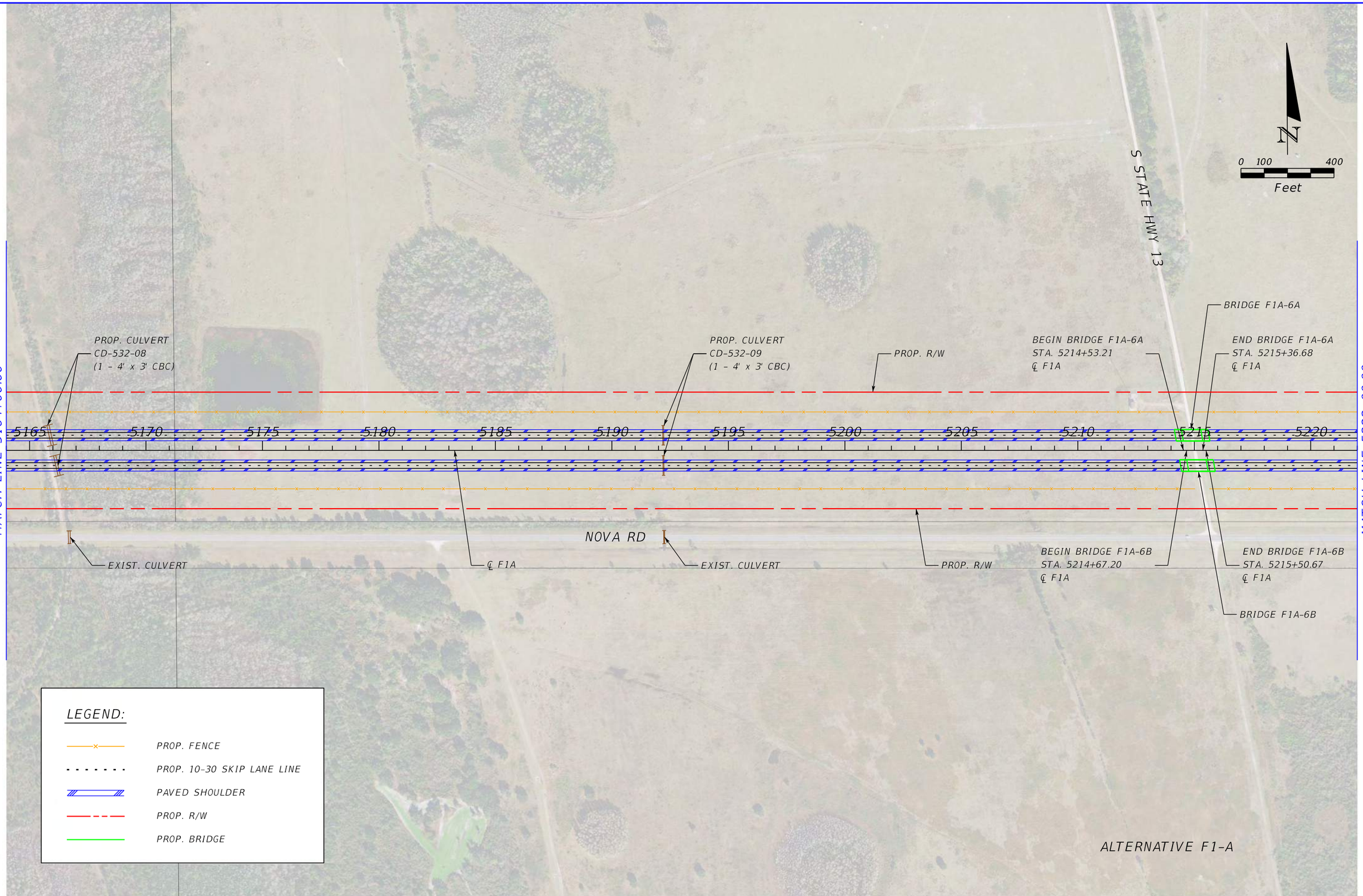
CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (03)

SHEET NO.

Michael.Hunter 3/4/2021 7:46:31 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F1-A\Plan Sheets\PLANRD03.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

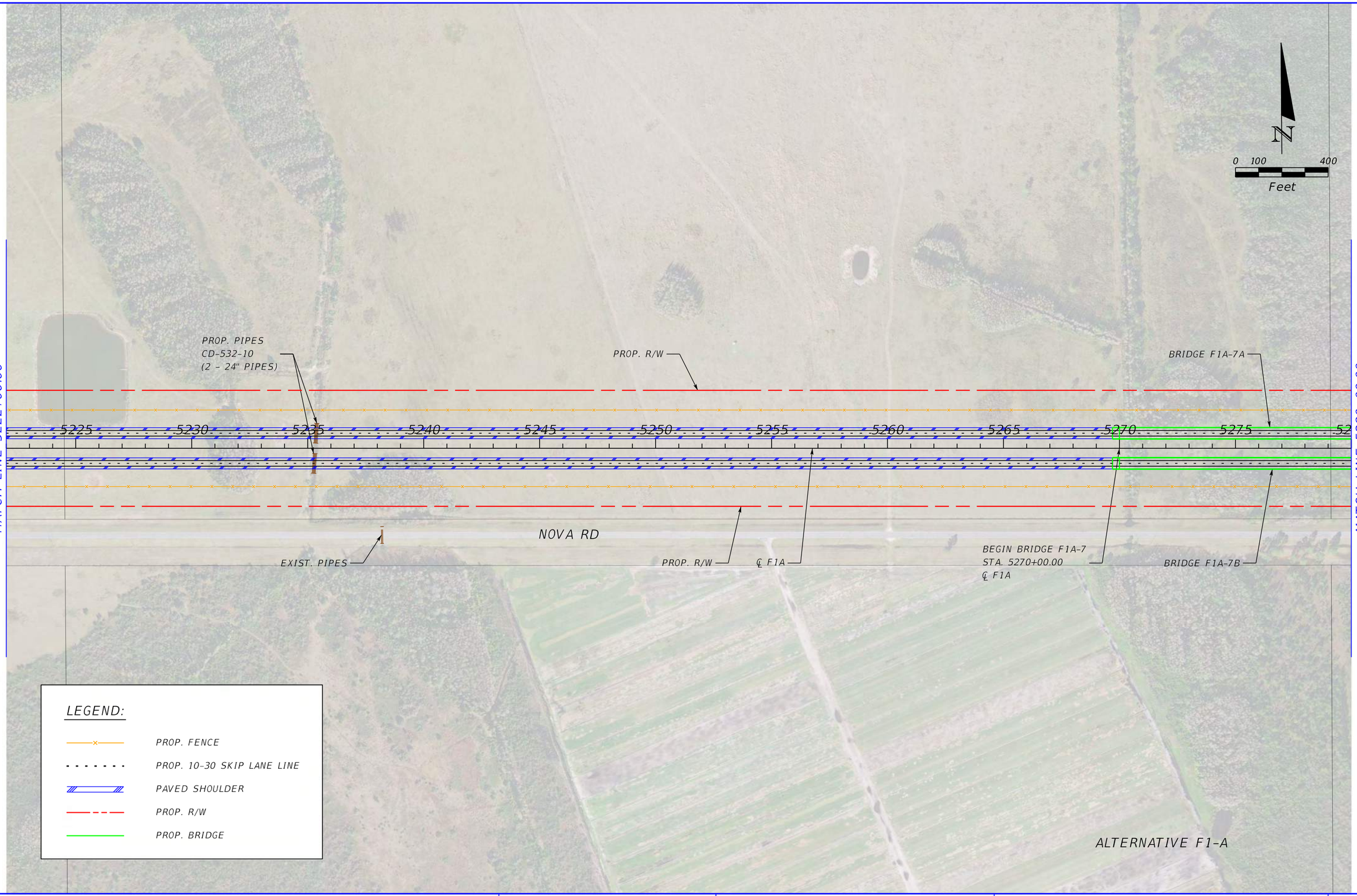
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (04)

SHEET NO.

Michael.Hunter 3/4/2021 7:46:53 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F1-A\Plan Sheets\PLANRD04.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (05)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 5280+00.00

MATCH LINE 5338+00.00

BRIDGE F1A-7A

PROP. R/W

PROP. CULVERT
CD-532-14
(1 - 10' x 3' CBC)

80 5285 5290 5295 5300 5305 5310 5315 5320 5325 5330 5335

NOVA RD

BRIDGE F1A-7B

END BRIDGE F1A-7
STA. 5306+49.00
℄ F1A

℄ F1A

PROP. R/W

EXIST. CULVERT

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

ALTERNATIVE F1-A

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

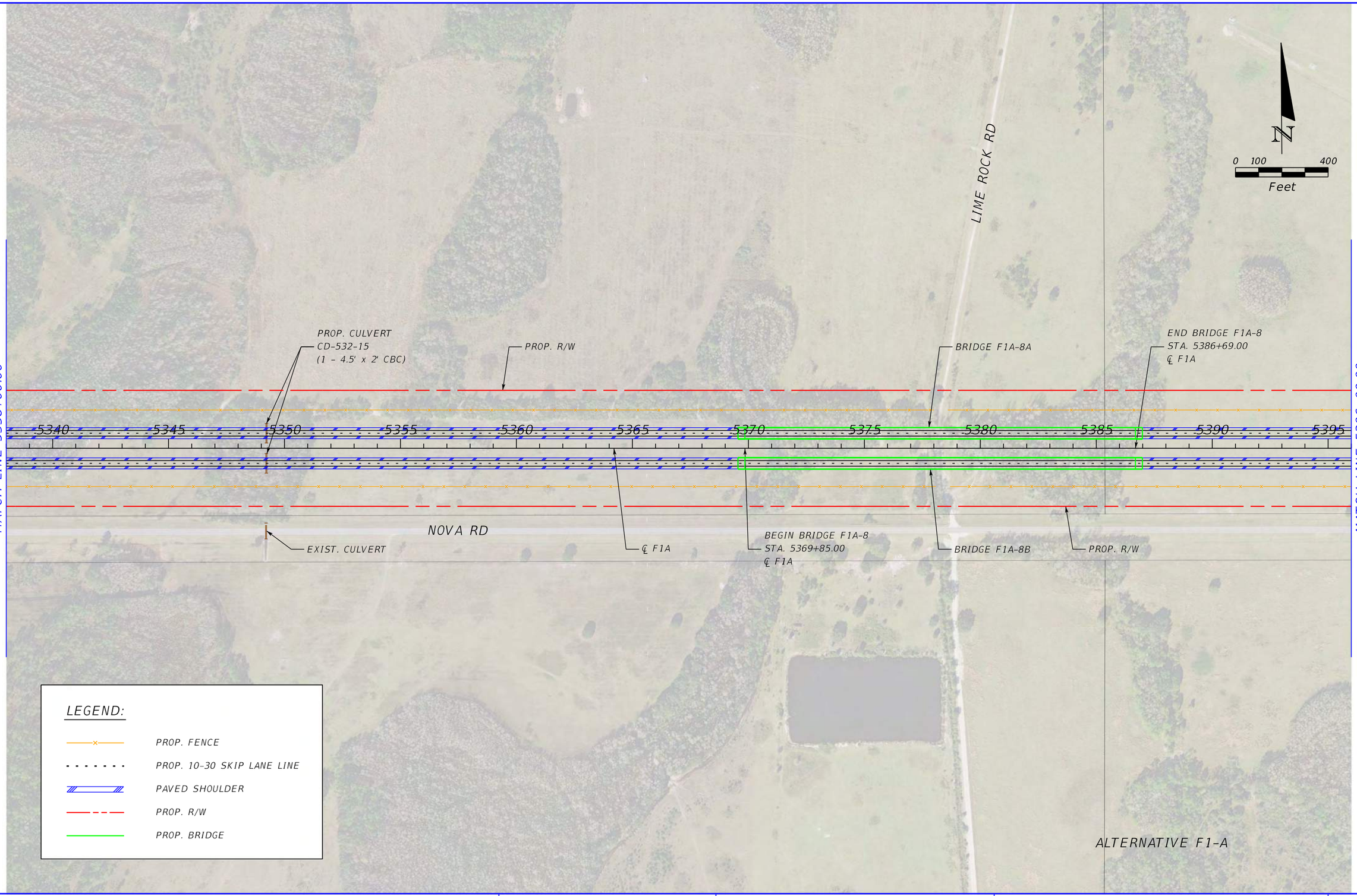
CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (06)

SHEET NO.

Michael.Hunter 3/4/2021 7:47:38 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F1-A\Plan Sheets\PLANRD06.dgn



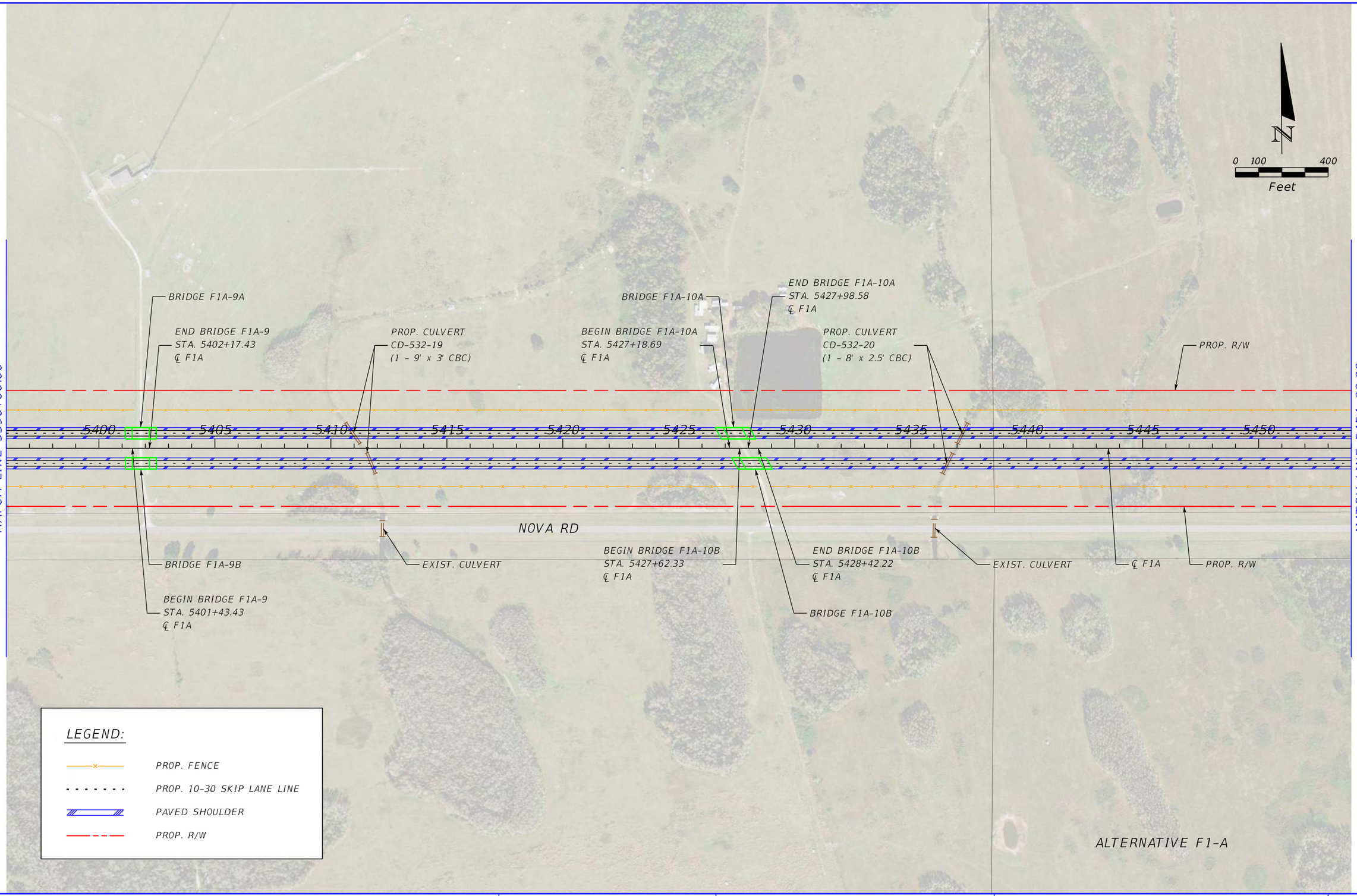
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (07)

SHEET NO.



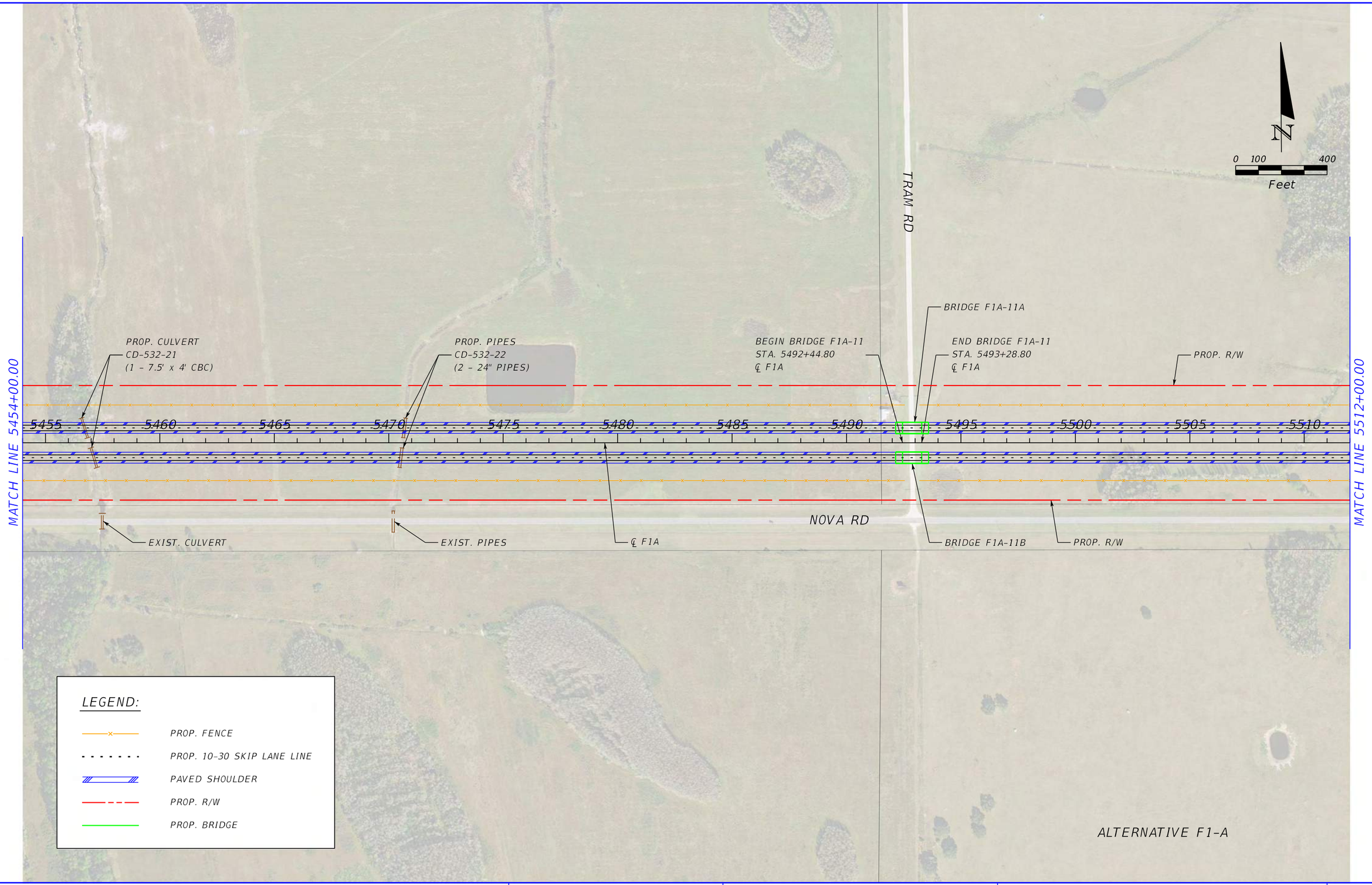
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (08)

SHEET NO.



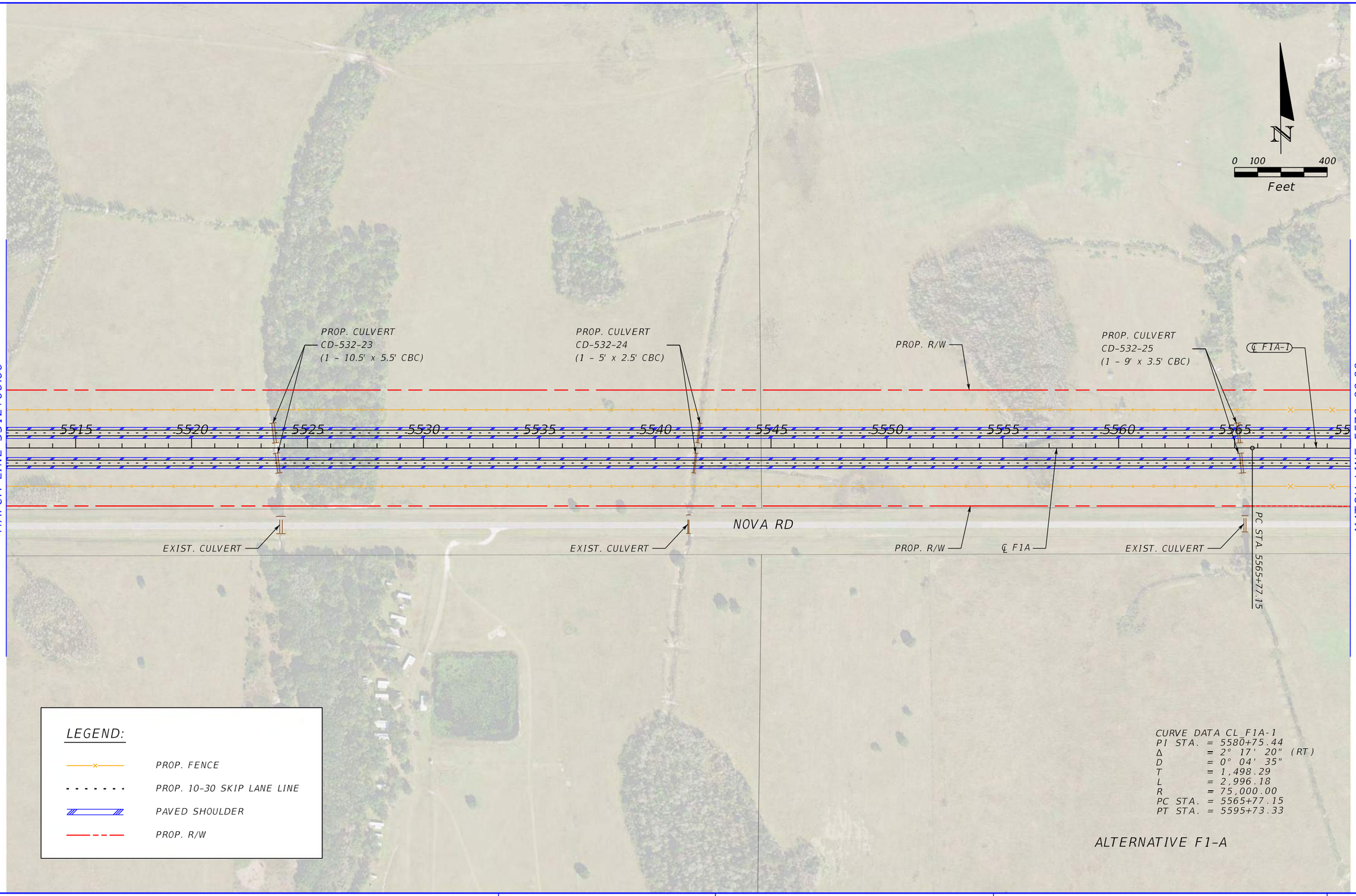
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (09)

SHEET NO.



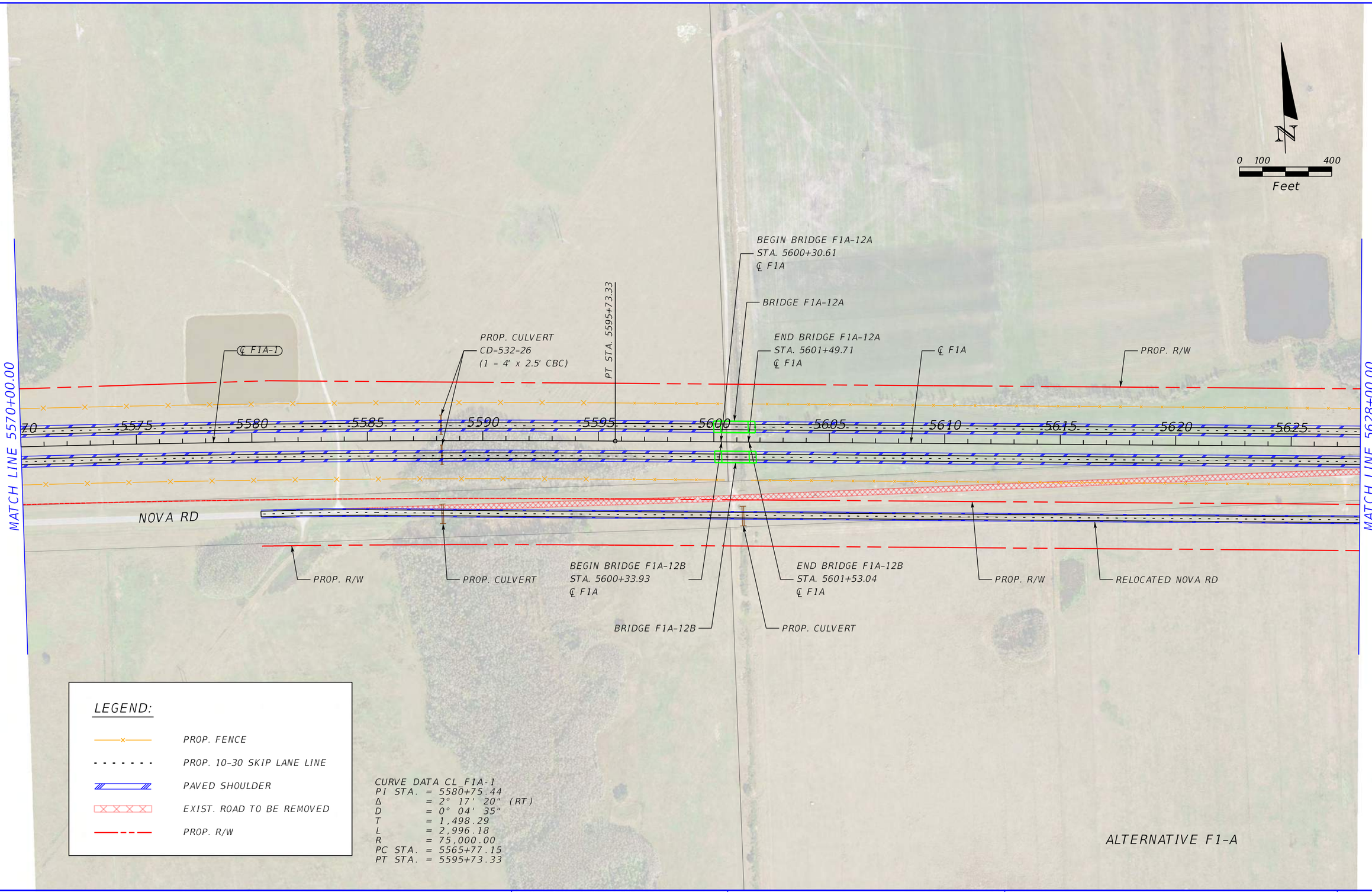
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (10)

SHEET NO.



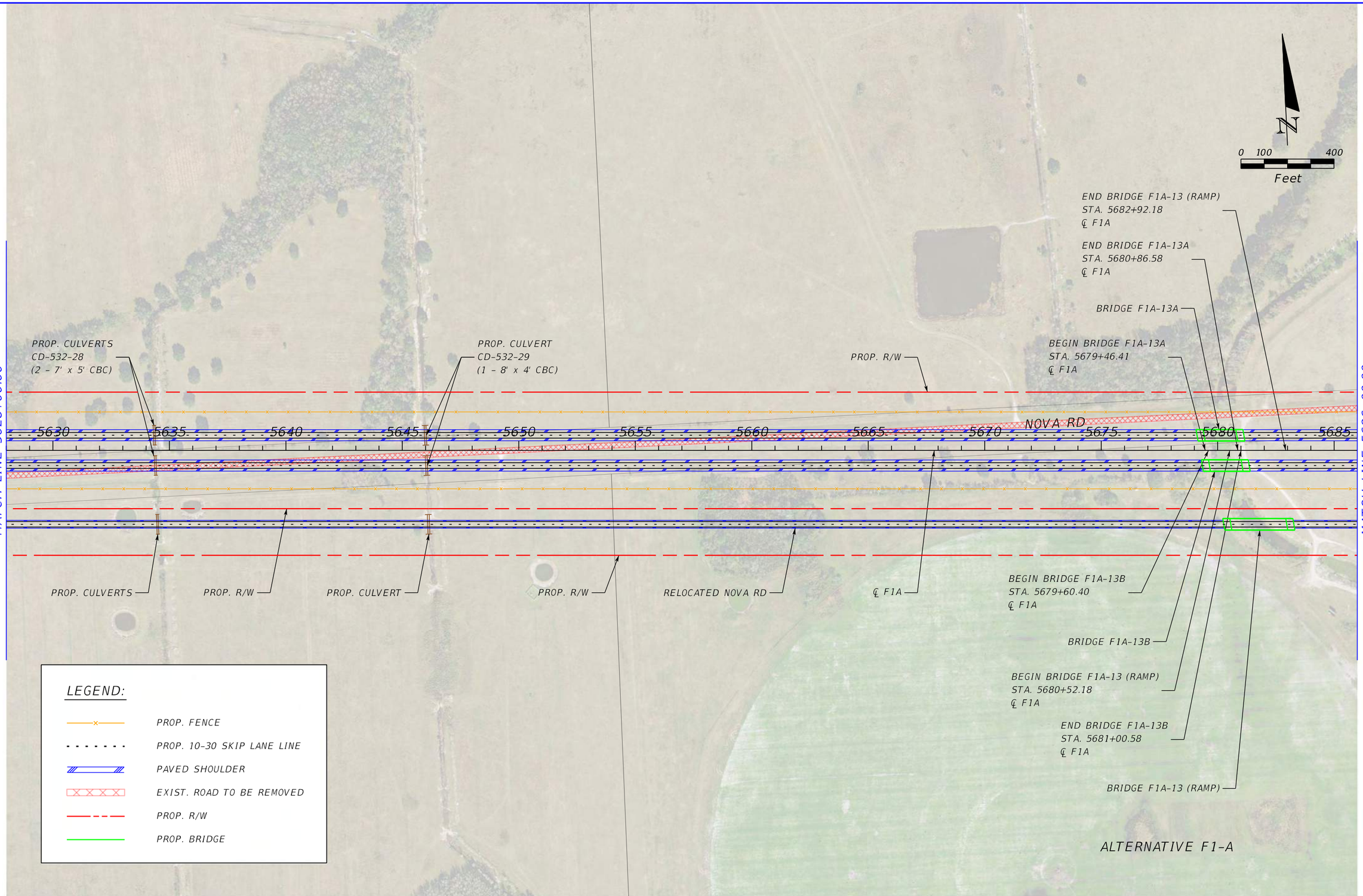
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (11)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (12)

SHEET NO.

N

0 100 400
Feet

NOVA RD

DRIFTWOOD RD

MATCH LINE 5686+00.00

MATCH LINE 5744+00.00

℄ F1A

PROP. R/W

℄ F1A-2

BEGIN BRIDGE F1A-14A
STA. 5735+86.73
℄ F1A

BRIDGE F1A-14A

END BRIDGE F1A-14A
STA. 5736+91.67
℄ F1A

5690 5695 5700 5705 5710 5715 5720 5725 5730 5735 5740

PC STA. 5698+69.73

PROP. R/W

PROP. R/W

RELOCATED NOVA RD

BEGIN BRIDGE F1A-14B
STA. 5736+06.34
℄ F1A

END BRIDGE F1A-14B
STA. 5737+11.64
℄ F1A

BRIDGE F1A-14B

DEER PARK RD

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. R/W

CURVE DATA CL_F1A-2
PI STA. = 5787+39.27
Δ = 42° 18' 51" (RT)
D = 0° 15' 00"
T = 8,869.54
L = 16,925.39
R = 22,918.00
PC STA. = 5698+69.73
PT STA. = 5867+95.12

ALTERNATIVE F1-A

REVISIONS				CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (13)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				ALT. F1-A	BREVARD OSCEOLA			

DRIFTWOOD RD

DRIFTWOOD RD

BRANCH RD

N

0 100 400

Feet

MATCH LINE 5744+00.00

MATCH LINE 5802+00.00

℄ F1A-2

PROP. R/W

BEGIN BRIDGE F1A-15A
STA. 5794+04.75
℄ F1A

BRIDGE F1A-15A

END BRIDGE F1A-15A
STA. 5794+83.21
℄ F1A

5745 5750 5755 5760 5765 5770 5775 5780 5785 5790 5795 5800

PROP. PIPES
CD-RG-17
(9 - 30" PIPES)

℄ F1A

PROP. R/W

BEGIN BRIDGE F1A-15B
STA. 5794+25.71
℄ F1A

END BRIDGE F1A-15B
STA. 5795+04.50
℄ F1A

BRIDGE F1A-15B

LEGEND:

PROP. FENCE

PROP. 10-30 SKIP LANE LINE

PAVED SHOULDER

PROP. R/W

CURVE DATA CL F1A-2
PI STA. = 5787+39.27
Δ = 42° 18' 51" (RT)
D = 0° 15' 00"
T = 8,869.54
L = 16,925.39
R = 22,918.00
PC STA. = 5698+69.73
PT STA. = 5867+95.12

ALTERNATIVE F1-A

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

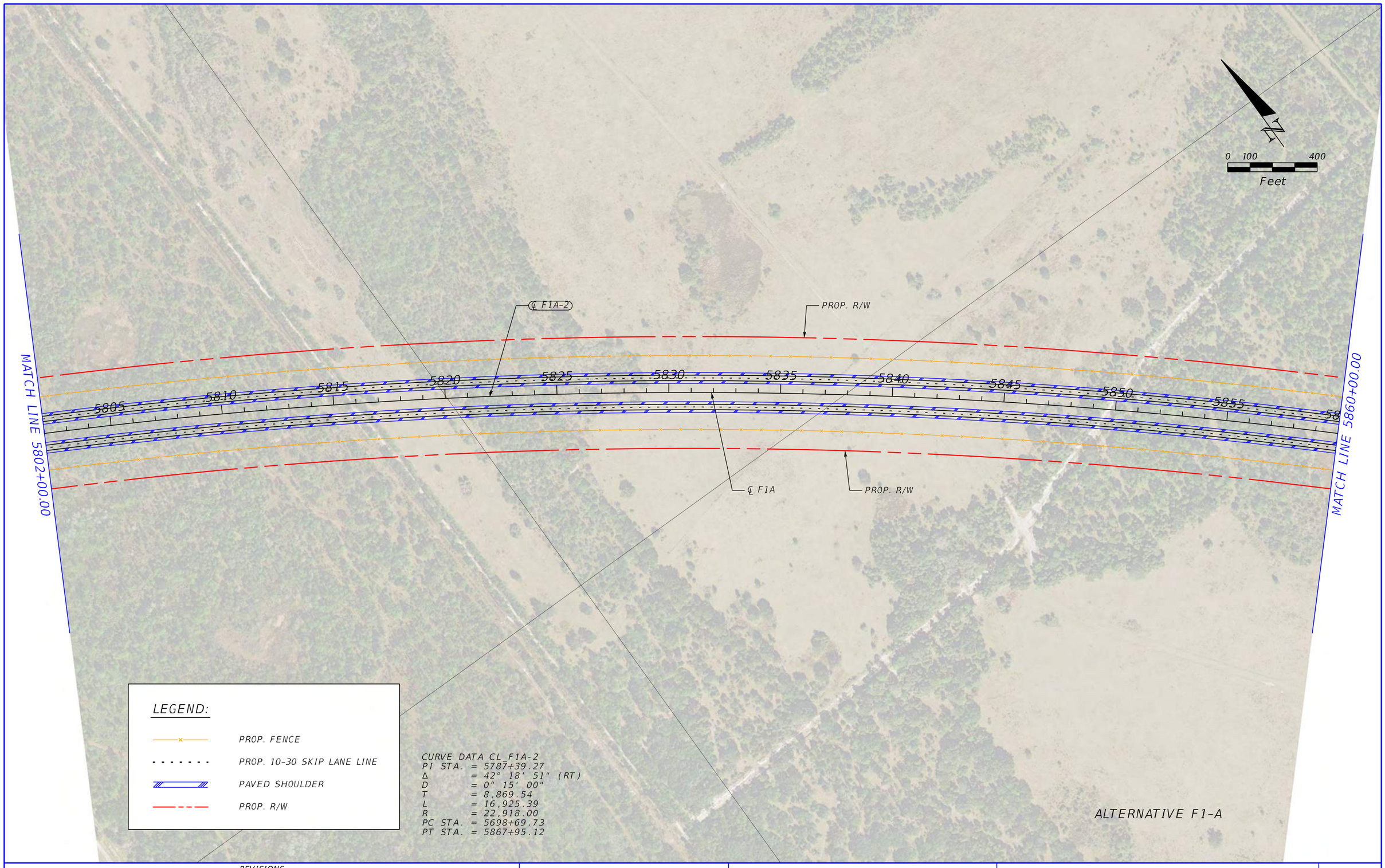
CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (14)

SHEET NO.

Michael.Hunter 3/4/2021 7:50:24 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F1-A\Plan Sheets\PLANRD014.dgn



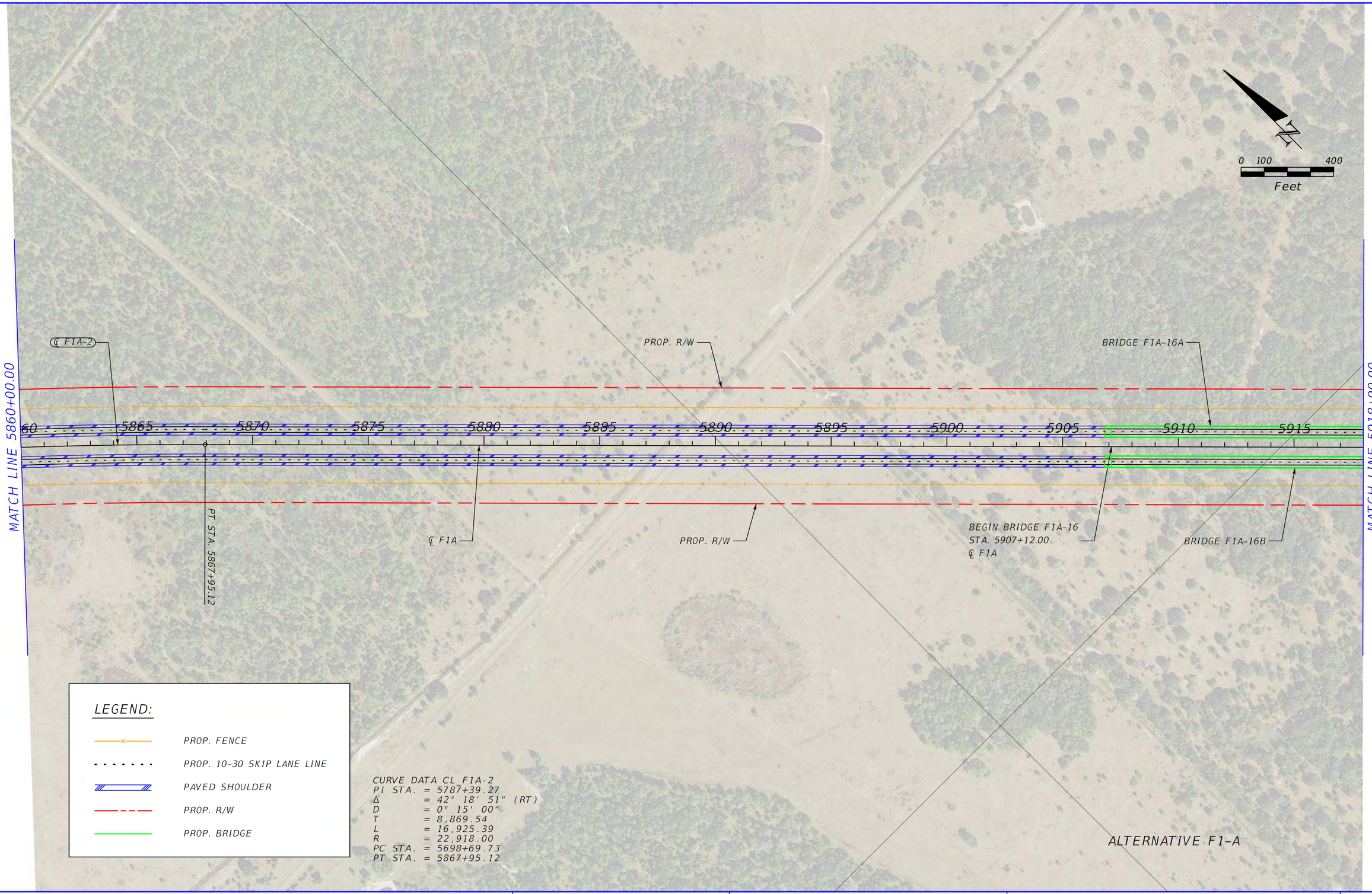
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (15)

SHEET NO.



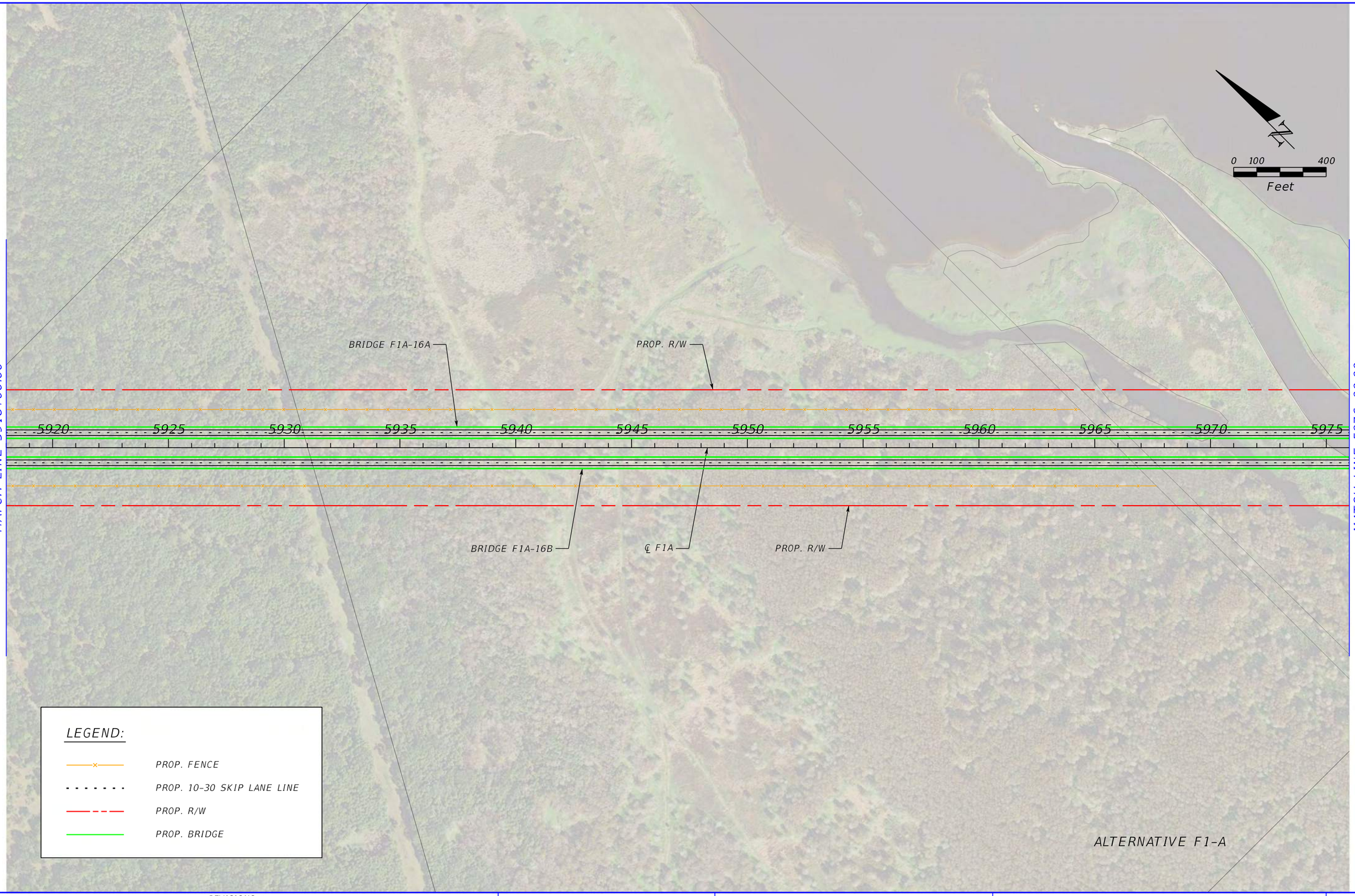
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (16)

SHEET NO.



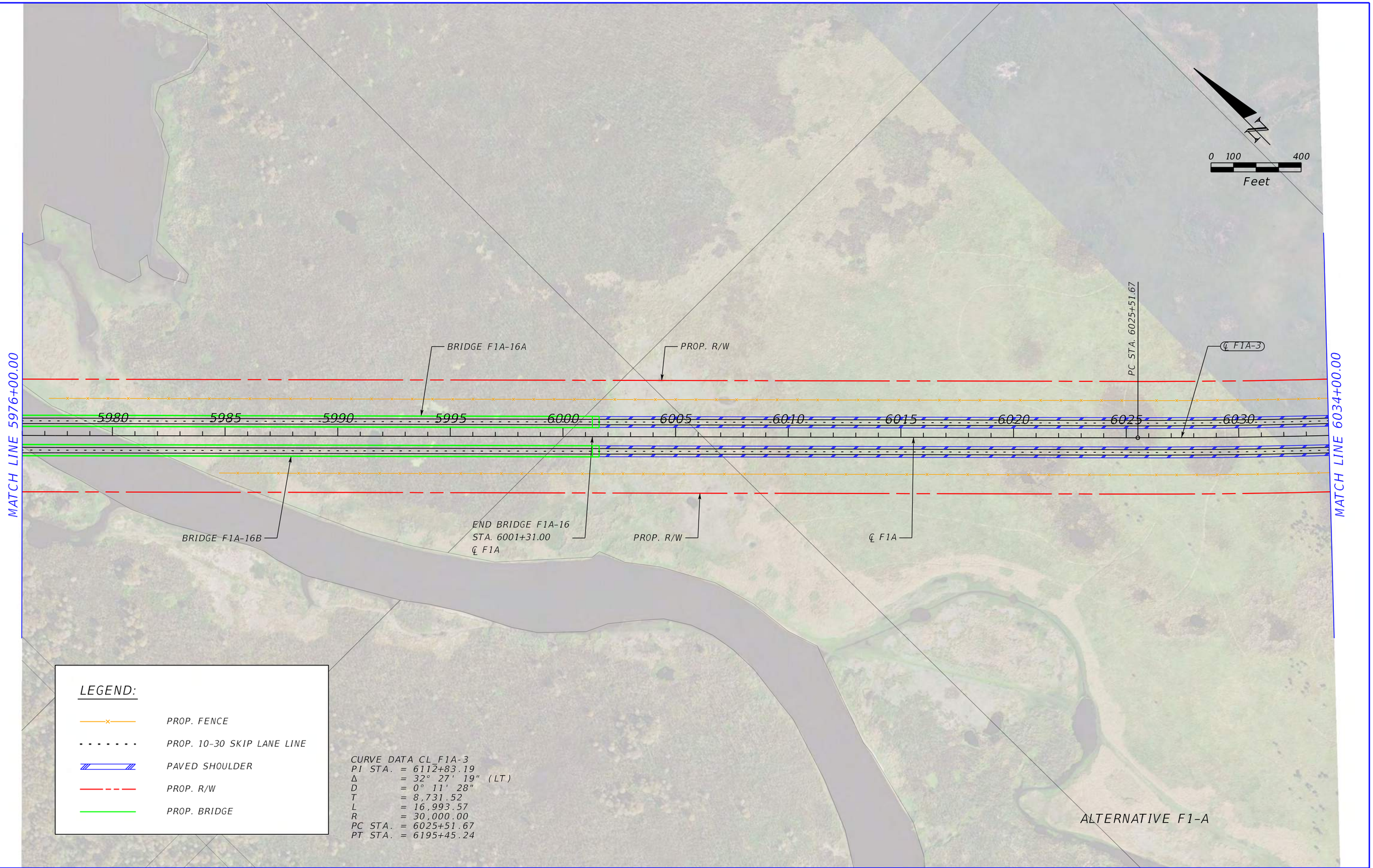
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (17)

SHEET NO.



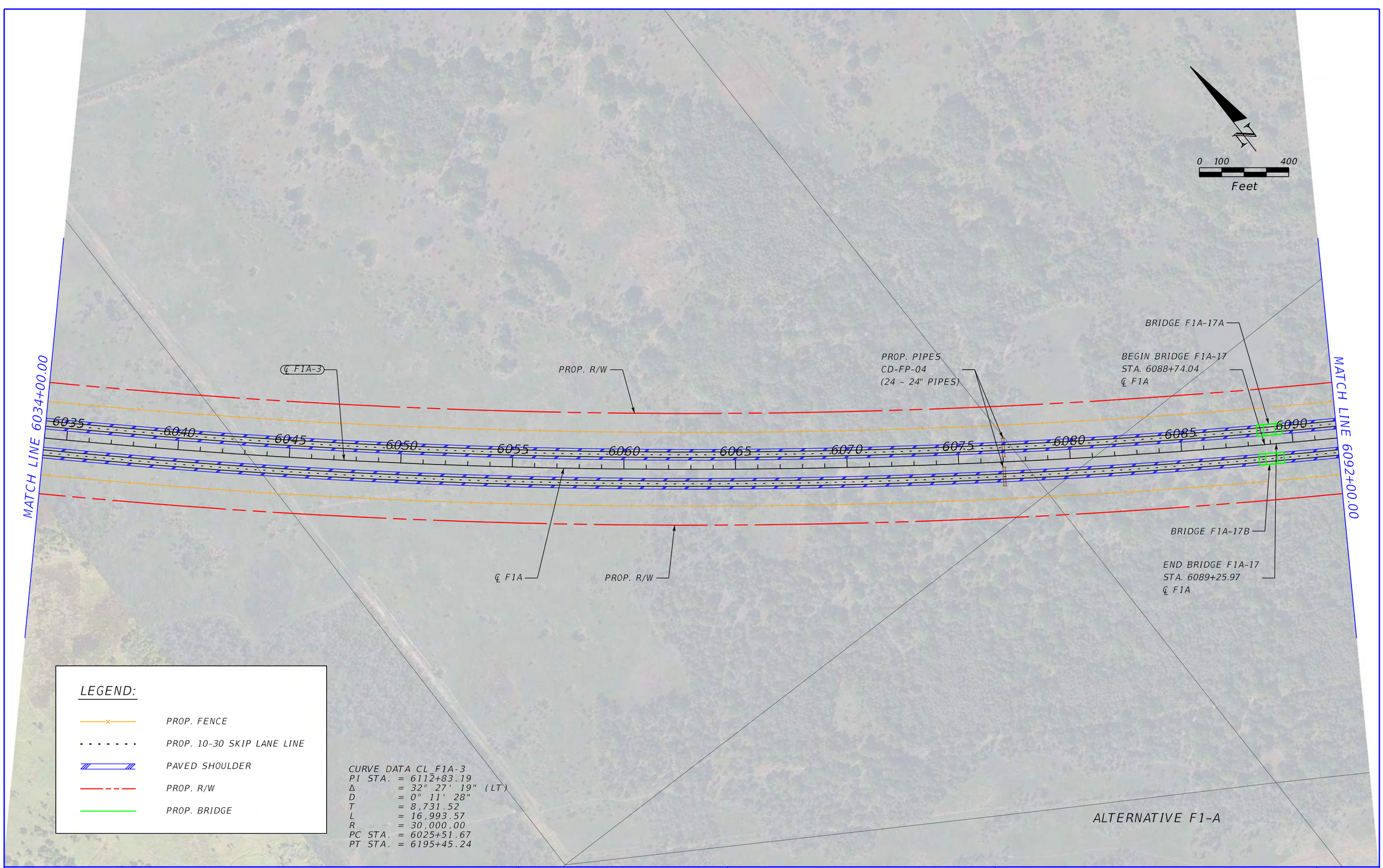
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (18)

SHEET NO.



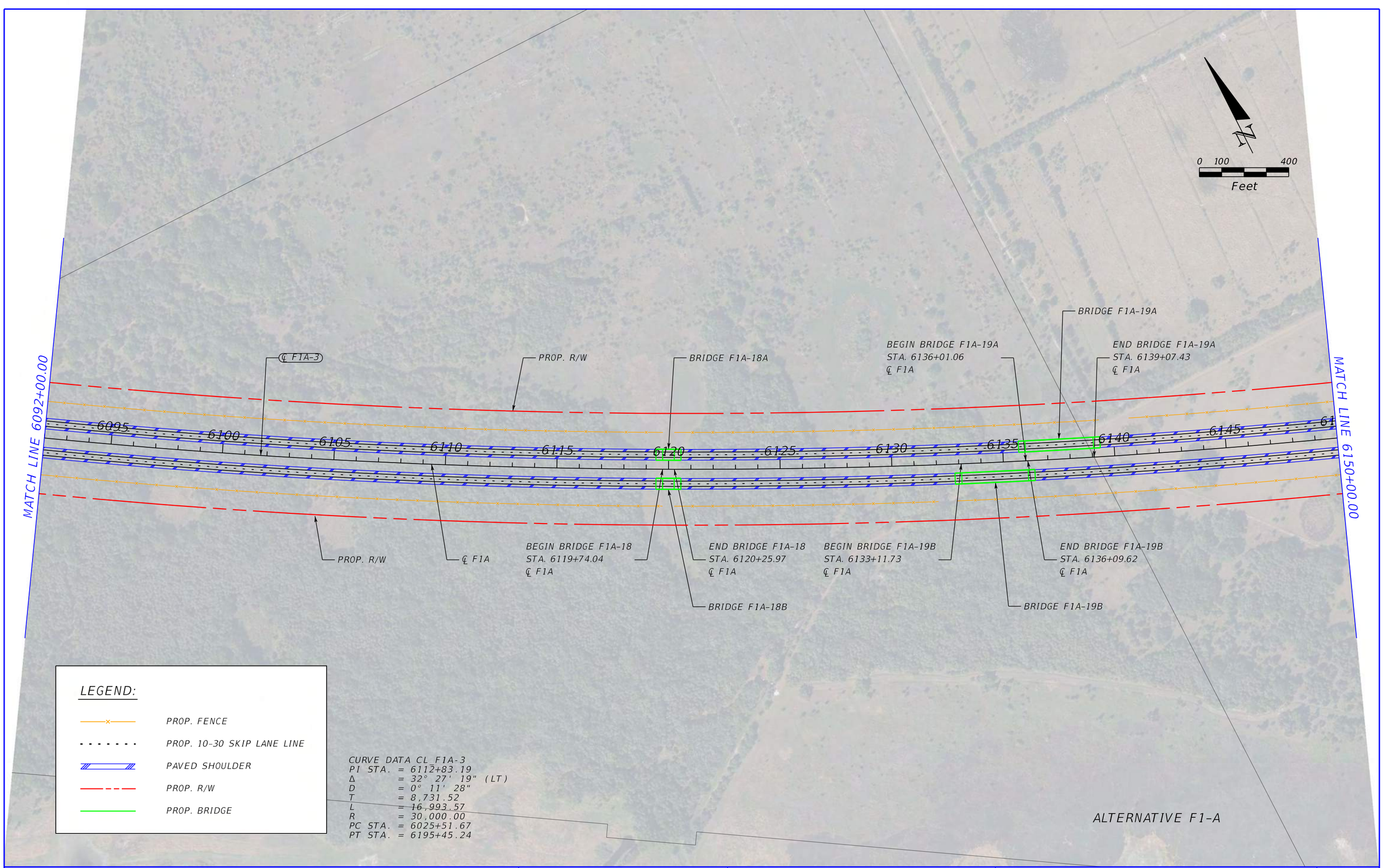
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (19)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (20)

SHEET NO.

LAKE WINDER RD

N

0 100 400
Feet

MATCH LINE 6150+00.00

MATCH LINE 6208+00.00

℄ F1A-3

PROP. R/W

PT STA. 6195+45.24

50 6155 6160 6165 6170 6175 6180 6185 6190 6195 6200 6205

℄ F1A

PROP. R/W

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

CURVE DATA CL F1A-3
PI STA. = 6112+83.19
Δ = 32° 27' 19" (LT)
D = 0° 11' 28"
T = 8,731.52
L = 16,993.57
R = 30,000.00
PC STA. = 6025+51.67
PT STA. = 6195+45.24

ALTERNATIVE F1-A

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

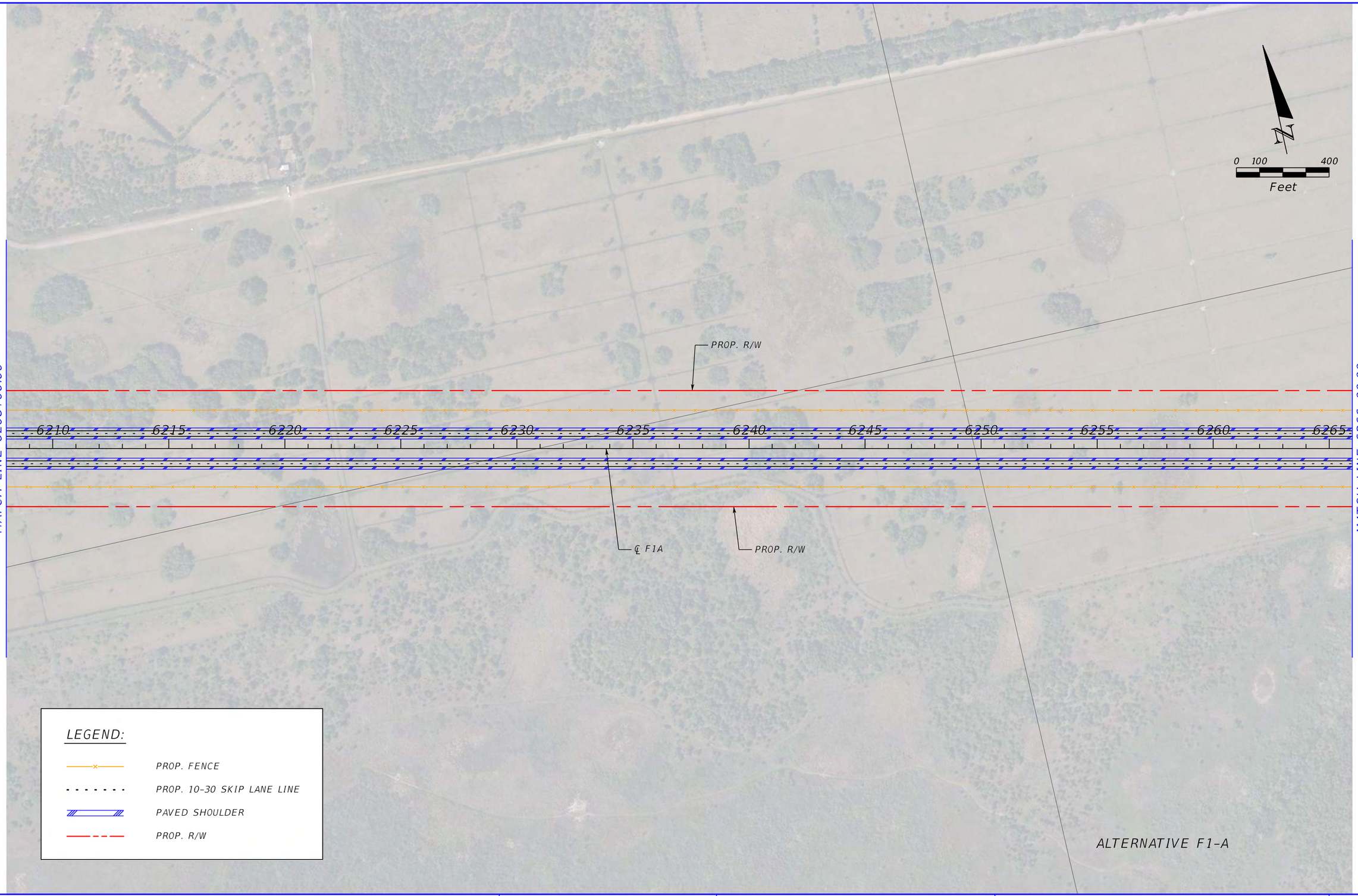
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (21)

SHEET NO.

Michael.Hunter 3/4/2021 7:52:59 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F1-A\Plan Sheets\PLANRD021.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (22)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 6266+00.00

PROP. R/W

℄ F1A-4

6270 6275 6280 6285 6290 6295 6300 6305 6310 6315 6320

PROP. R/W

℄ F1A

PC STA. 6315+19.53

MATCH LINE 6324+00.00

LEGEND:

PROP. FENCE

PROP. 10-30 SKIP LANE LINE

PAVED SHOULDER

PROP. R/W

CURVE DATA CL_F1A-4
PI STA. = 6341+89.76
Δ = 13° 17' 29" (RT)
D = 0° 15' 00"
T = 2,670.24
L = 5,316.50
R = 22,918.00
PC STA. = 6315+19.53
PT STA. = 6368+36.03

ALTERNATIVE F1-A

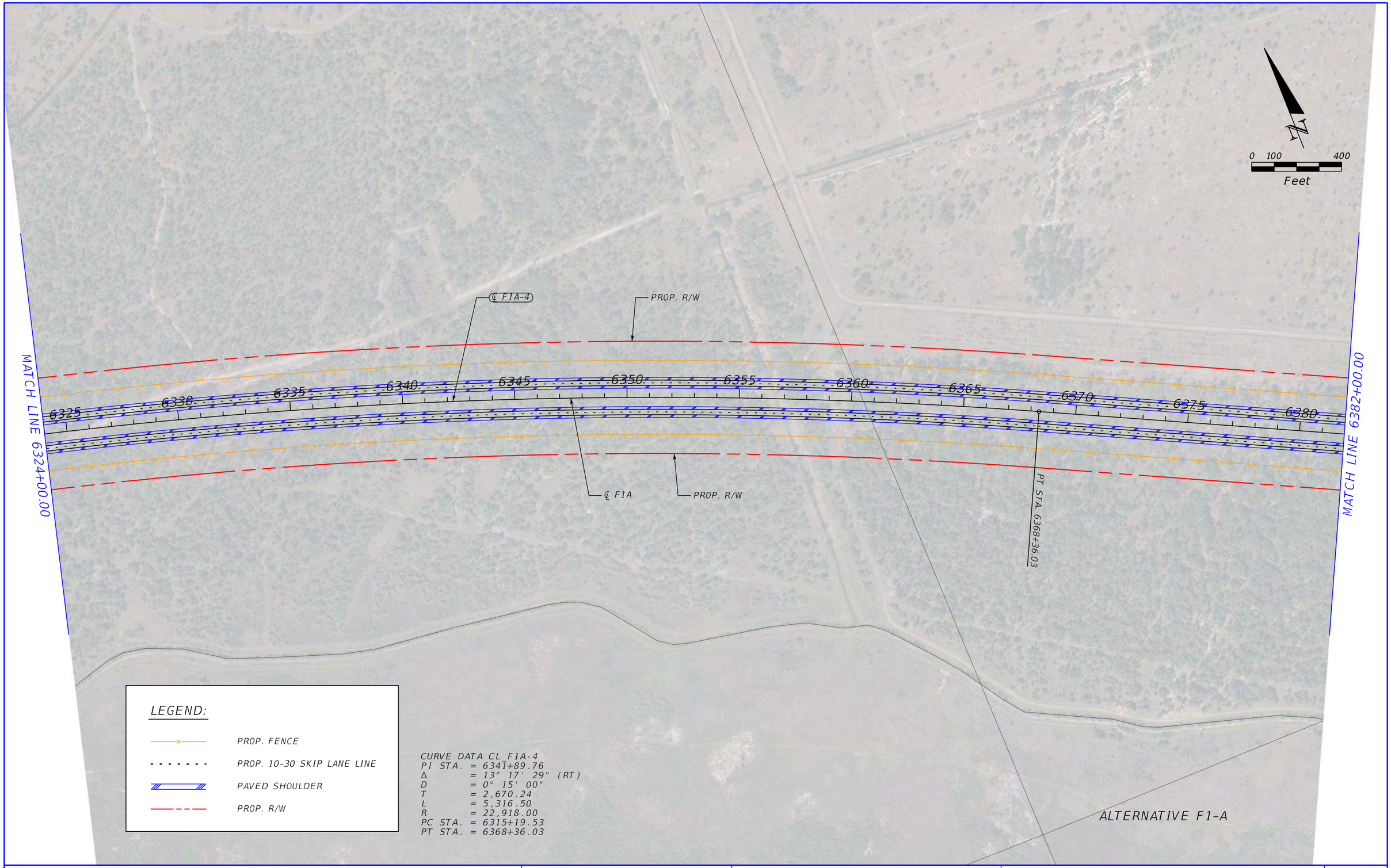
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (23)

SHEET NO.



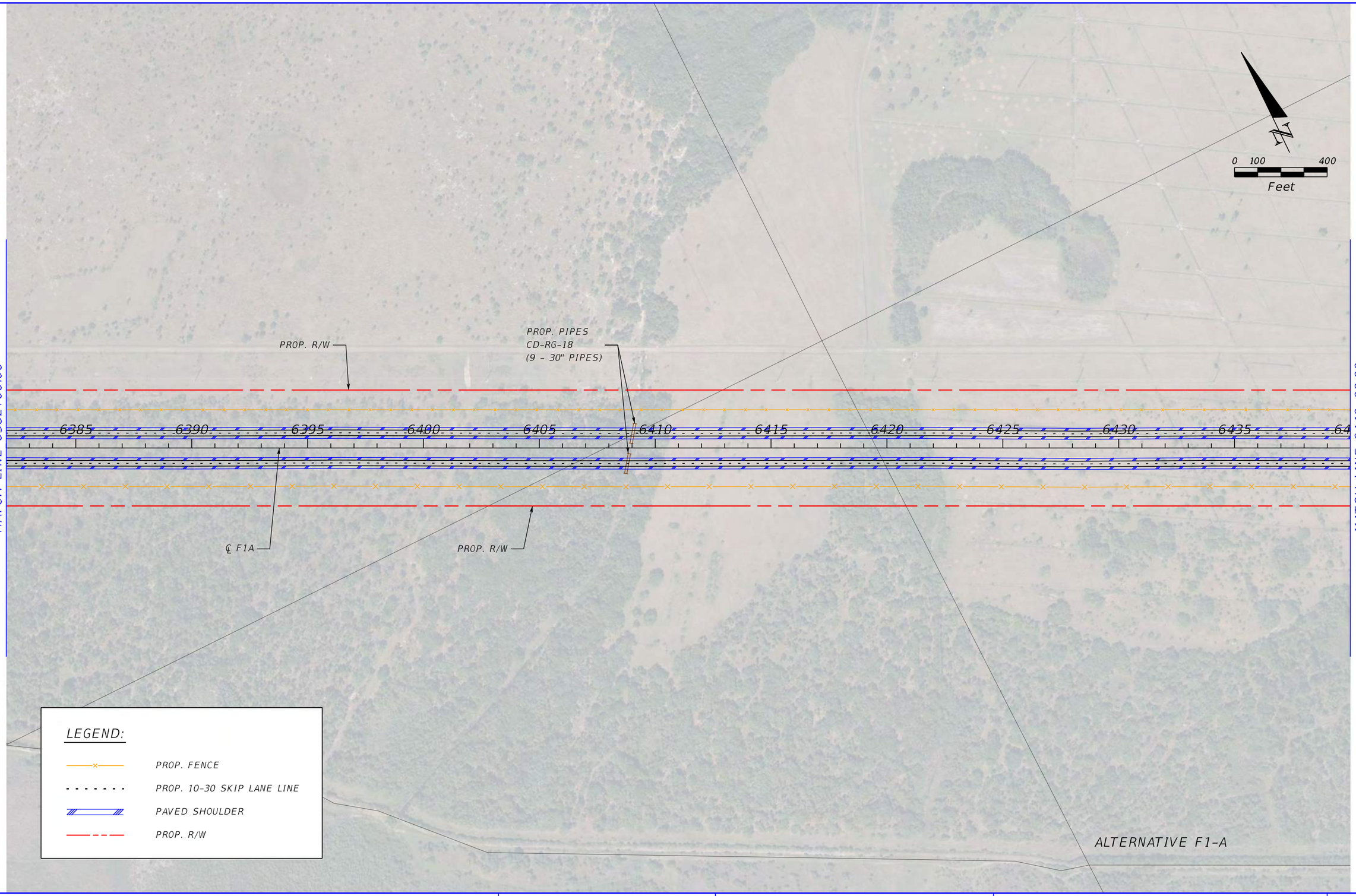
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (24)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (25)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 6440+00.00

MATCH LINE 6484+58.00

PROP. R/W

℄ F1A-5

6440 6445 6450 6455 6460 6465 6470 6475 6480 6485 6490 6495

PROP. PIPES
CD-RG-19
(8 - 30" PIPES)

℄ F1A

PROP. R/W

PROP. PIPES
CD-RG-20
(6 - 30" PIPES)

PC STA 6494+46.10

LEGEND:

PROP. FENCE

PROP. 10-30 SKIP LANE LINE

PAVED SHOULDER

PROP. R/W

CURVE DATA CL F1A-5
PI STA. = 6507+55.66
Δ = 25° 41' 42" (LT)
D = 0° 59' 52"
T = 1,309.56
L = 2,575.07
R = 5,742.00
PC STA. = 6494+46.10
PT STA. = 6520+21.18

ALTERNATIVE F1-A

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (26)

SHEET NO.

0 100 400
Feet

PROP. PIPES
CD-95-11
(2 - 30" PIPES)

PROP. R/W

PROP. PIPES
CD-95-12
(2 - 24" PIPES)

I-95

INTERCHANGE A
BRIDGE F1A-22

℄ F1A

INTERCHANGE A
BRIDGE F1A-21

INTERCHANGE A
BRIDGE F1A-20

6535
6530
6525
6520
6515
6510
6505
6500

PT STA. 6520+21.18

PROP. R/W

PROP. R/W

℄ F1A-5

MATCH LINE (SEE SHEET 28)

ALTERNATIVE F1-A

MATCH LINE 6484+58.00

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL_F1A-5
PI STA. = 6507+55.66
Δ = 25° 41' 42" (LT)
D = 0° 59' 52"
T = 1,309.56
L = 2,575.07
R = 5,742.00
PC STA. = 6494+46.10
PT STA. = 6520+21.18

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (27)

SHEET NO.

Michael.Hunter 3/4/2021 8:55:27 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F1-A\Plan Sheets\PLANRD027.dgn

COUNTY RD

DEERWOOD TRAIL

PARKWAY DR

HARLOCK RD

PROP. R/W

PROP. CULVERTS
CD-95-13
(3 - 8' x 4' CBC)

I-95

MATCH LINE (SEE SHEET 27)

PROP. R/W

WASHINGTON DR

SMITHFIELD

WESTLAND

PROVINCE DR

ALTERNATIVE F1-A

N

0 100 400

Feet

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-A	BREVARD OSCEOLA	

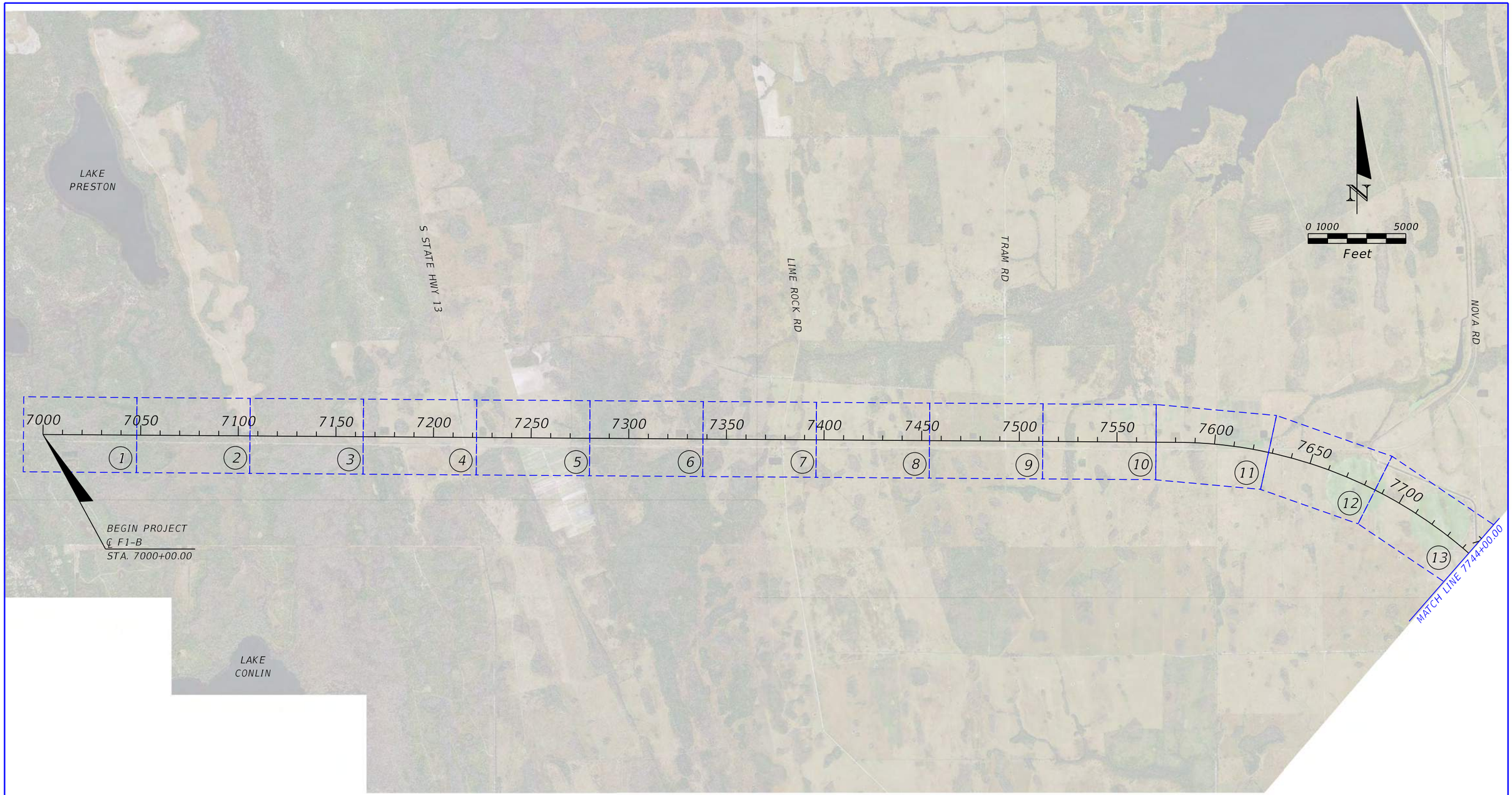
OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (28)

SHEET NO.

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

APPENDIX H

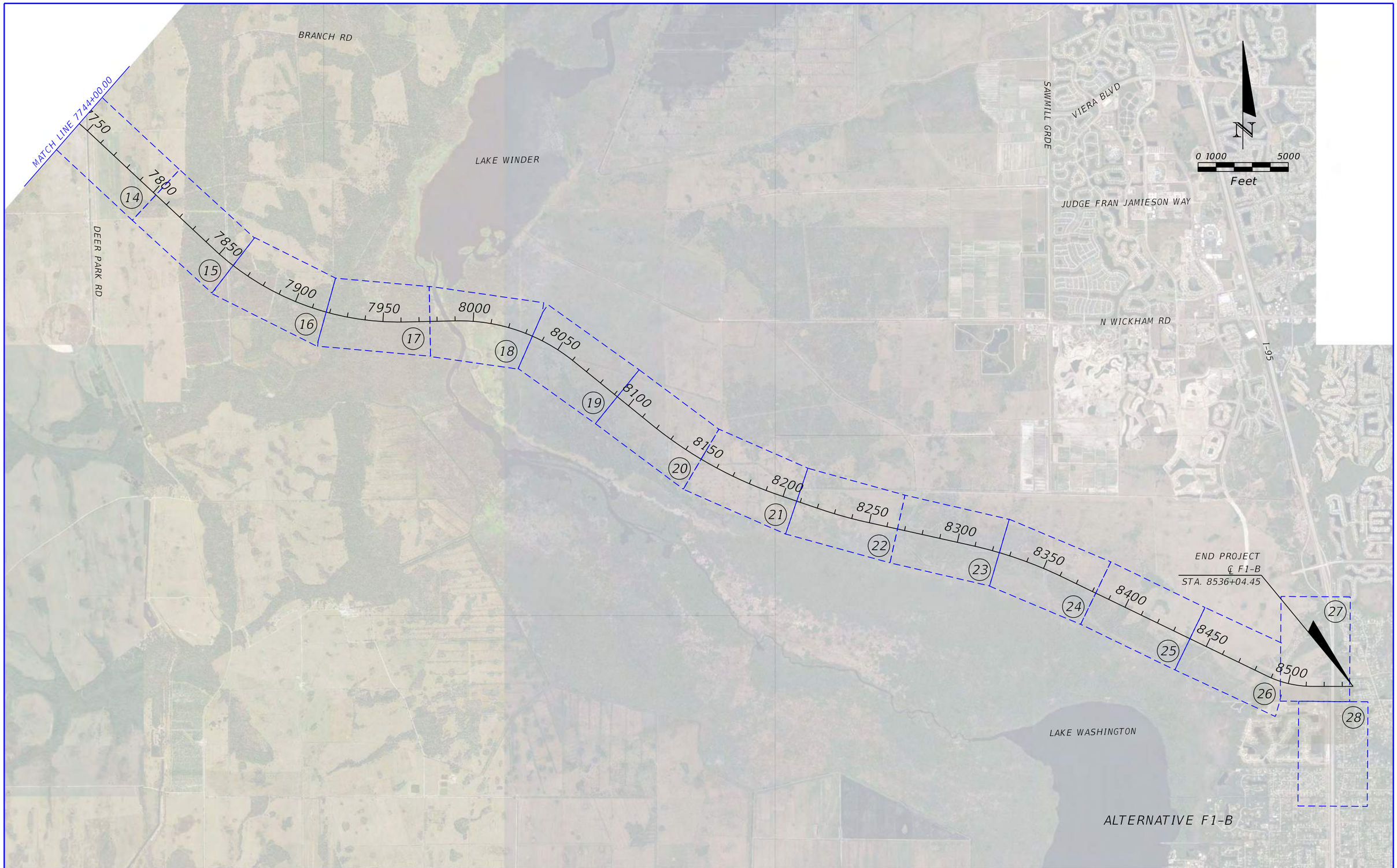
Concept Plans for Alternative F1b



ALTERNATIVE F1-B

REVISIONS					CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (1)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					ALT. F1-B	BREVARD OSCEOLA			

Spencer.Edwards 3/4/2021 7:43:50 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F1-B\Plan Sheets\PLAYRD01.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

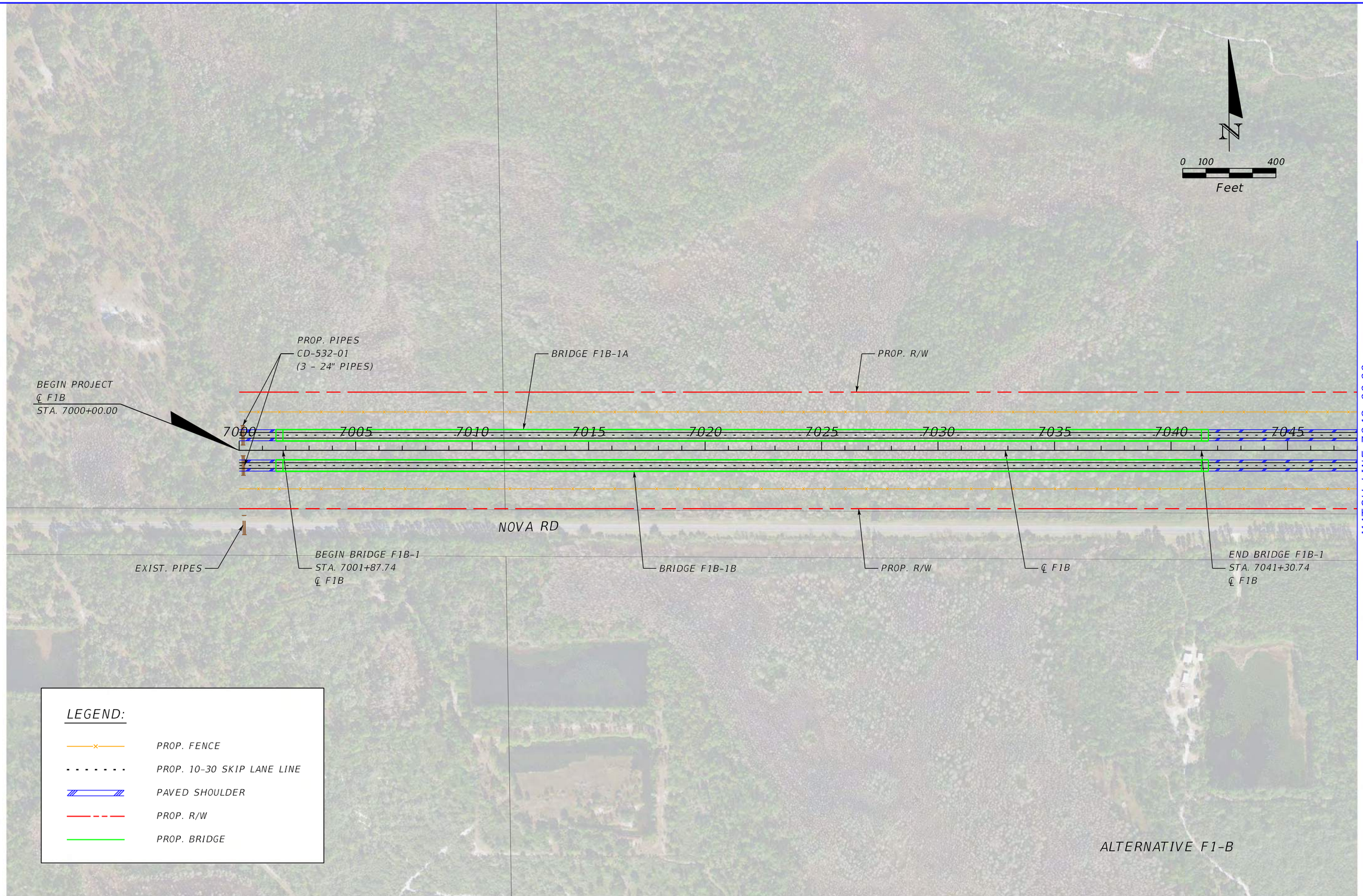
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (2)

SHEET NO.

Spencer.Edwards 3/4/2021 7:43:55 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F1-B\Plan Sheets\PLAYRD02.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (01)

SHEET NO.

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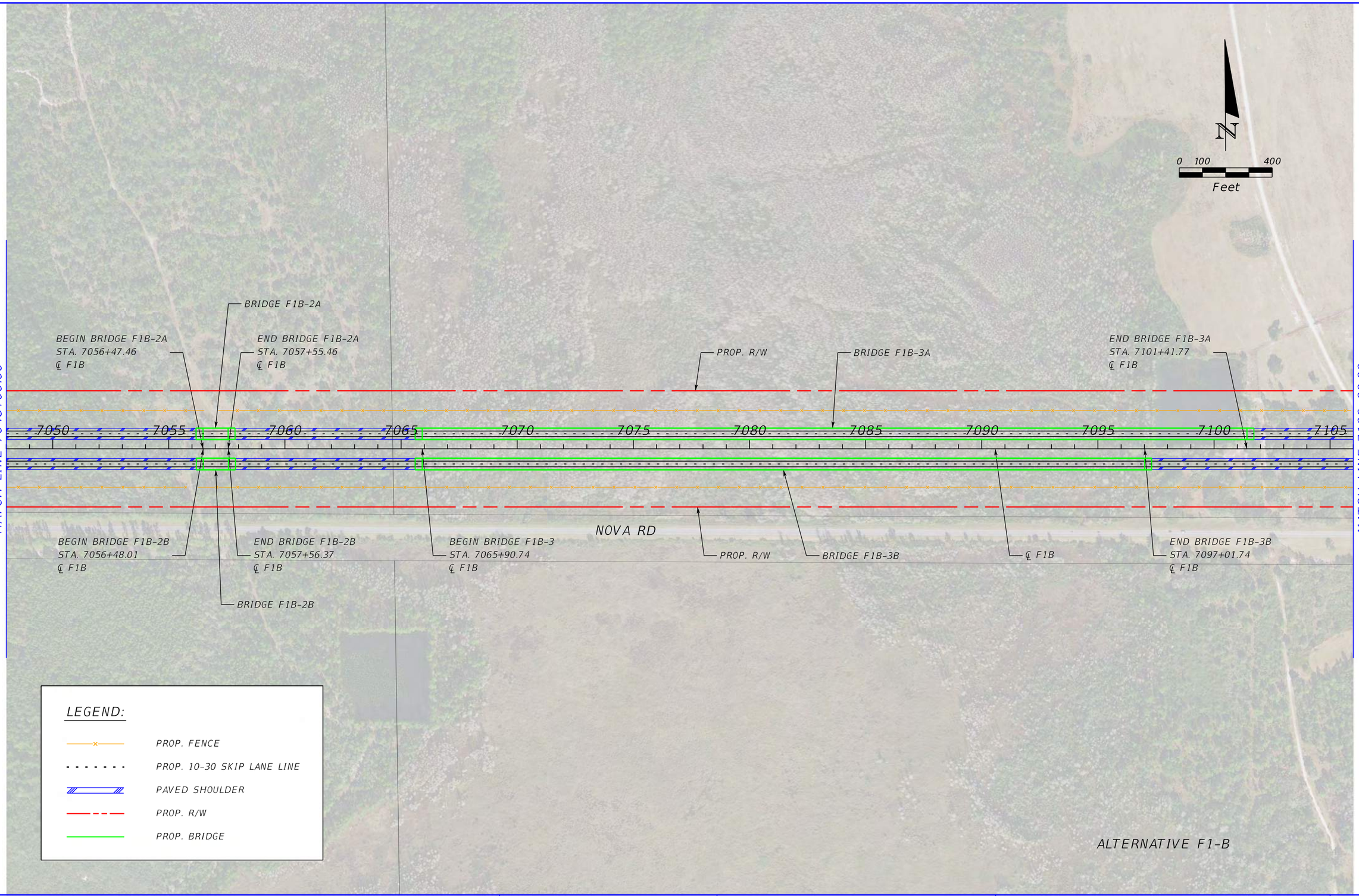


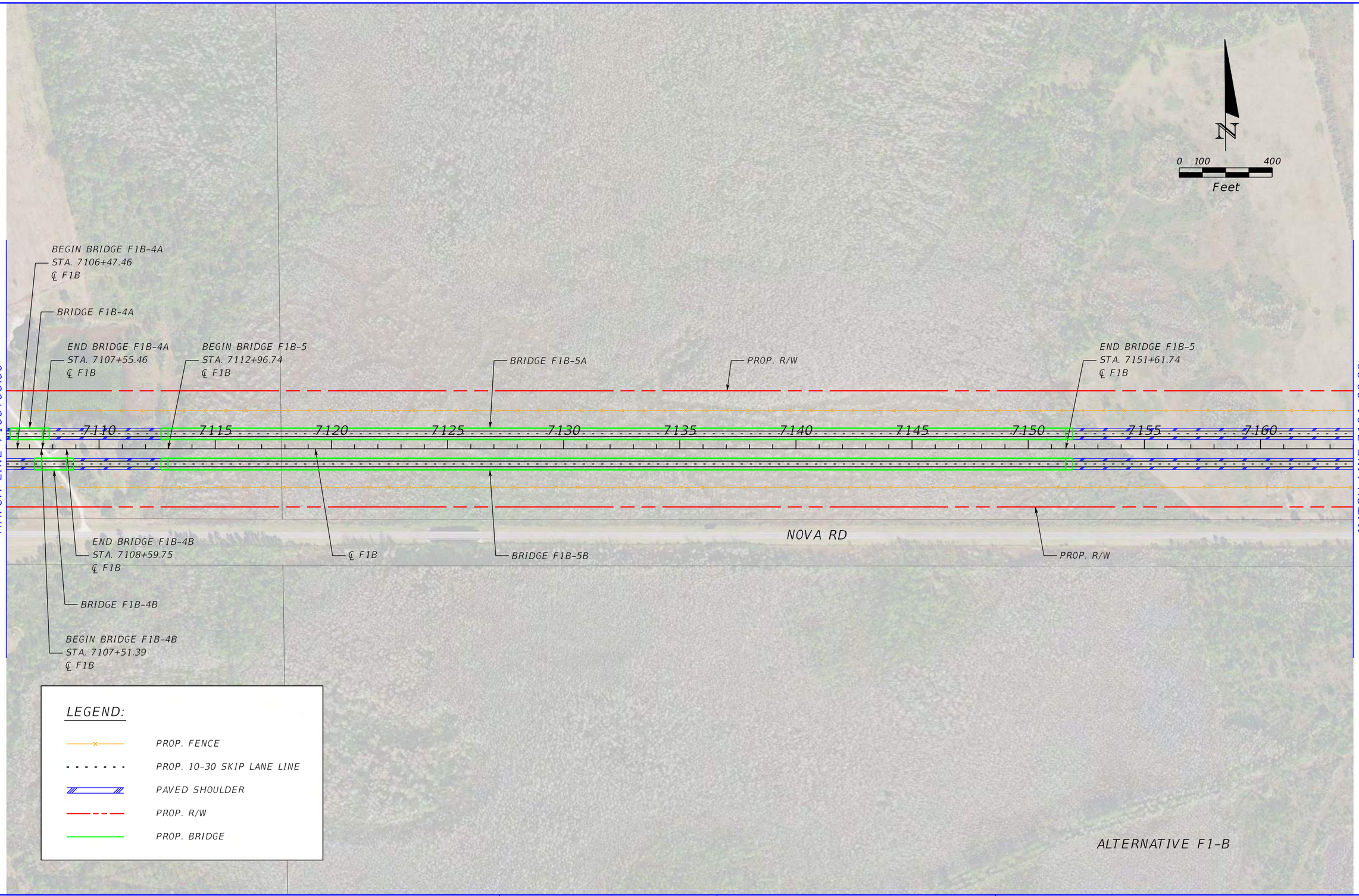
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (02)

SHEET NO.



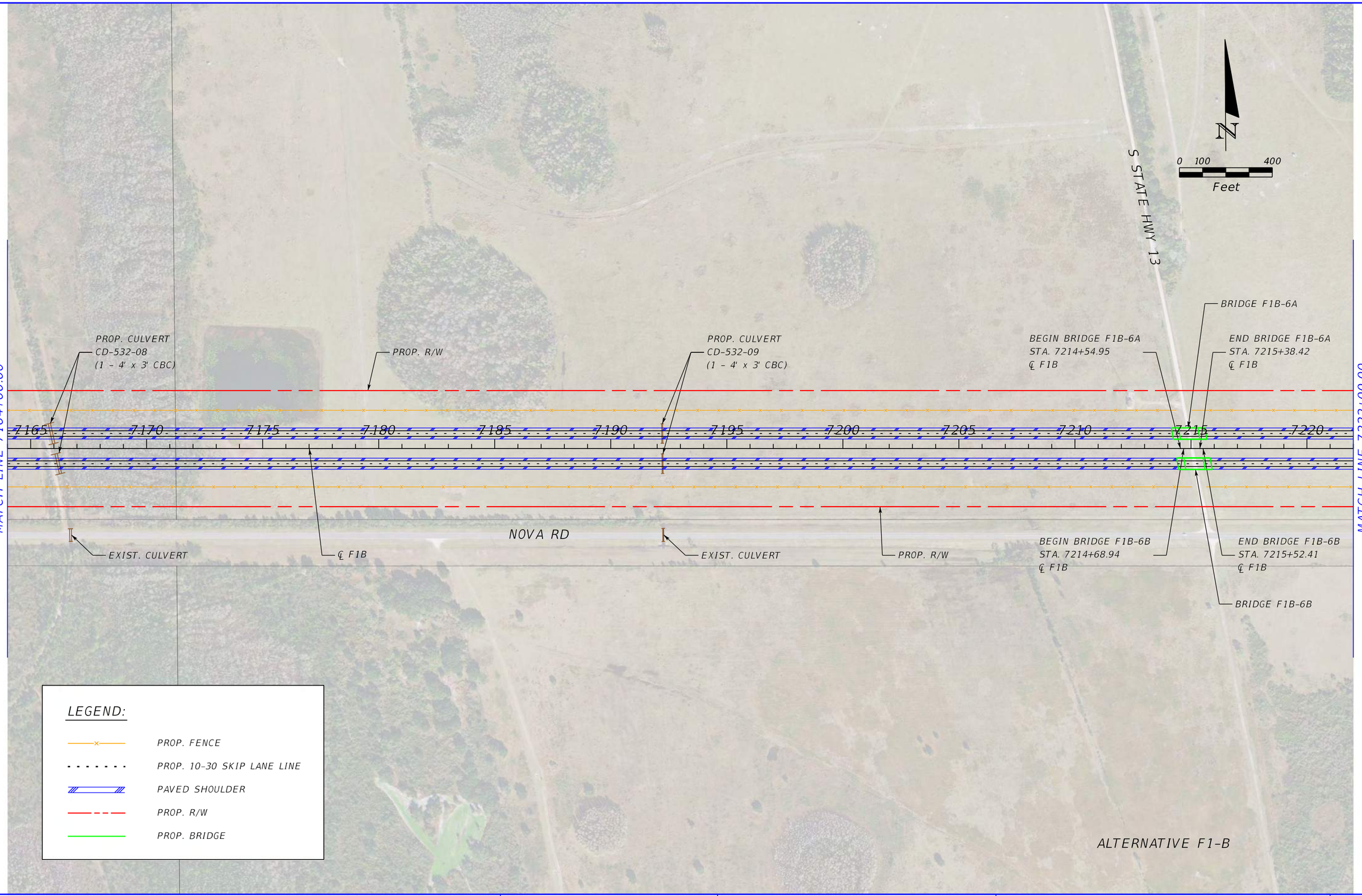
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (03)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (04)

SHEET NO.



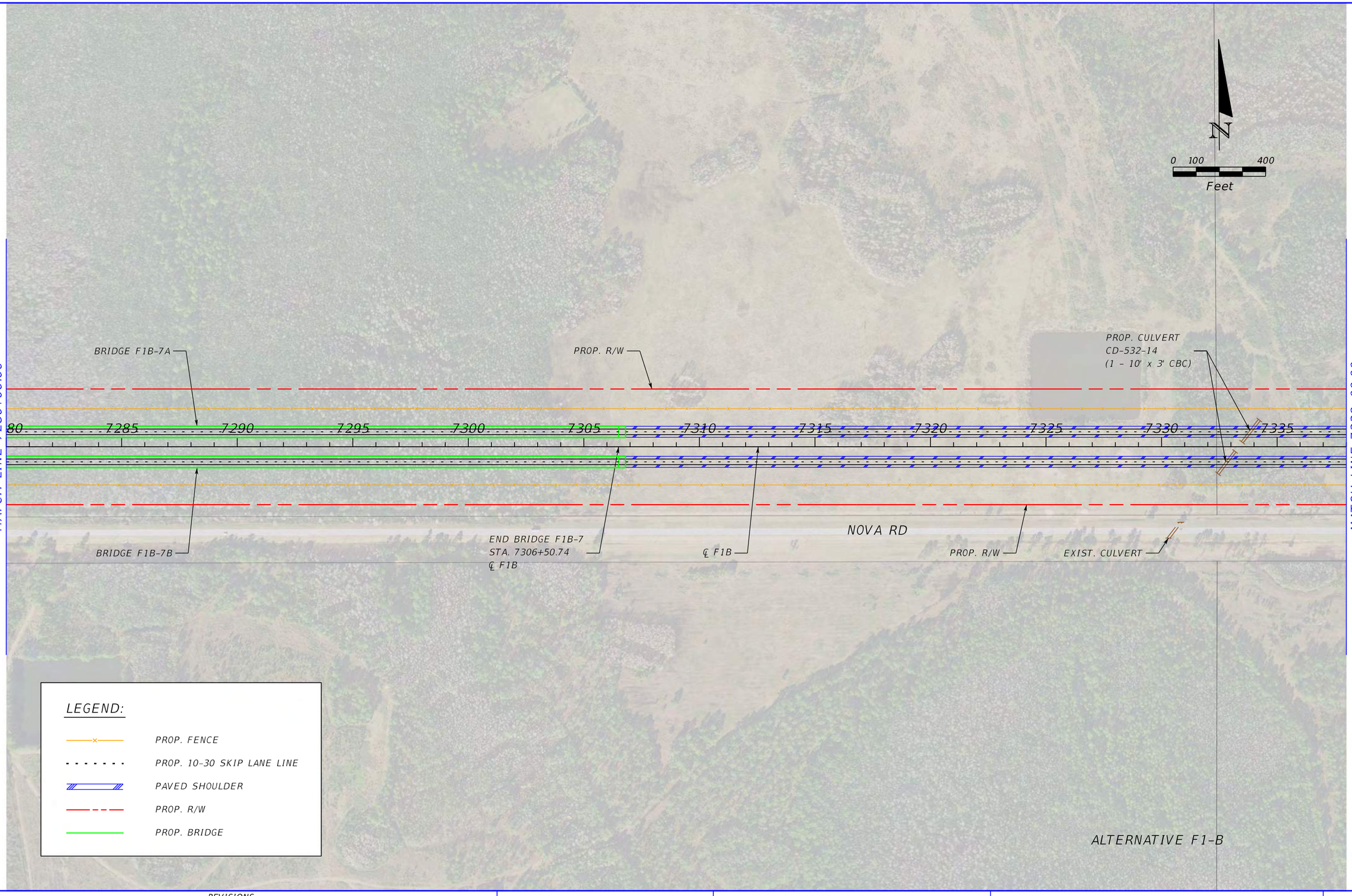
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (05)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (06)

SHEET NO.

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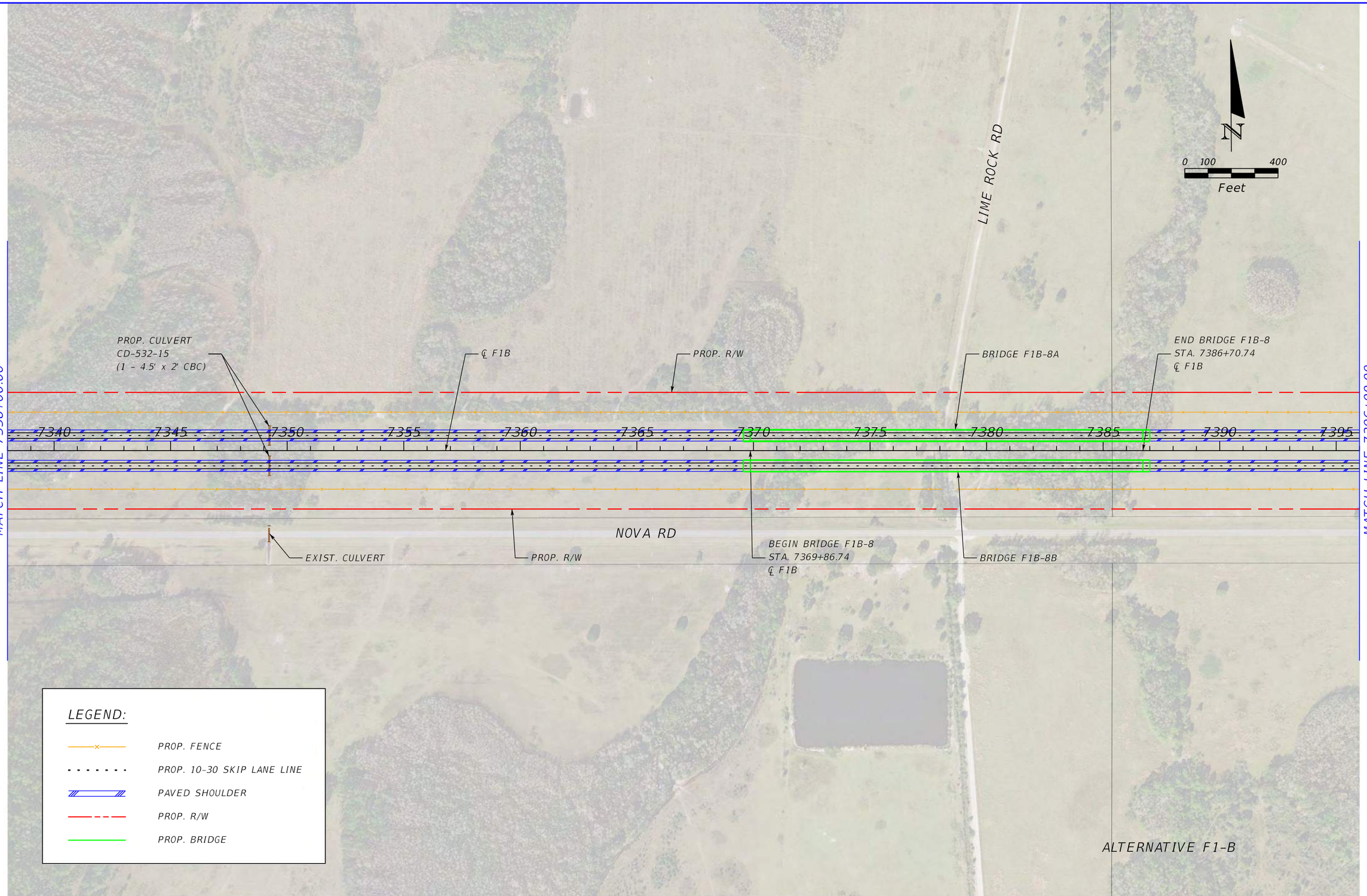

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (07)

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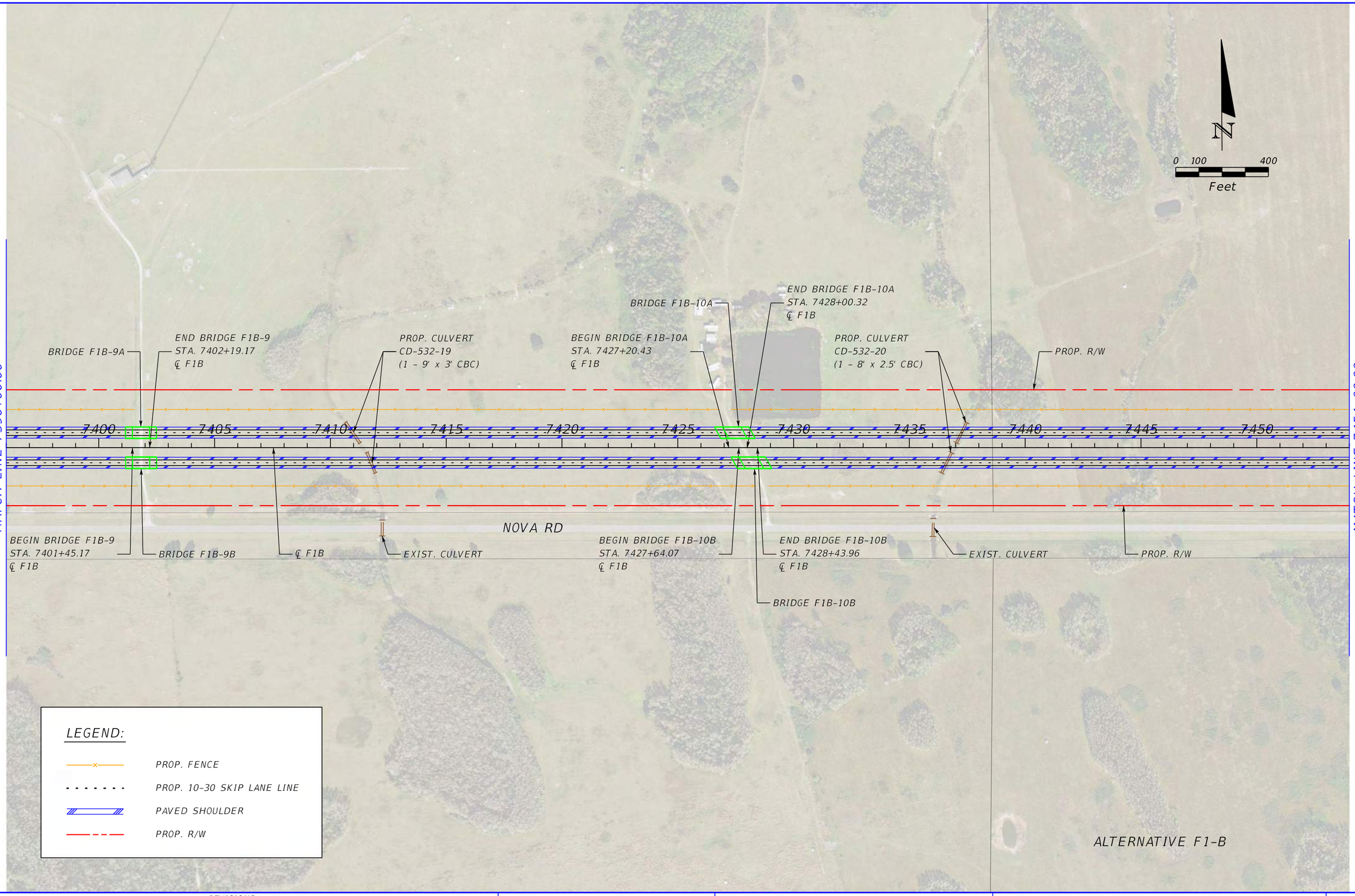


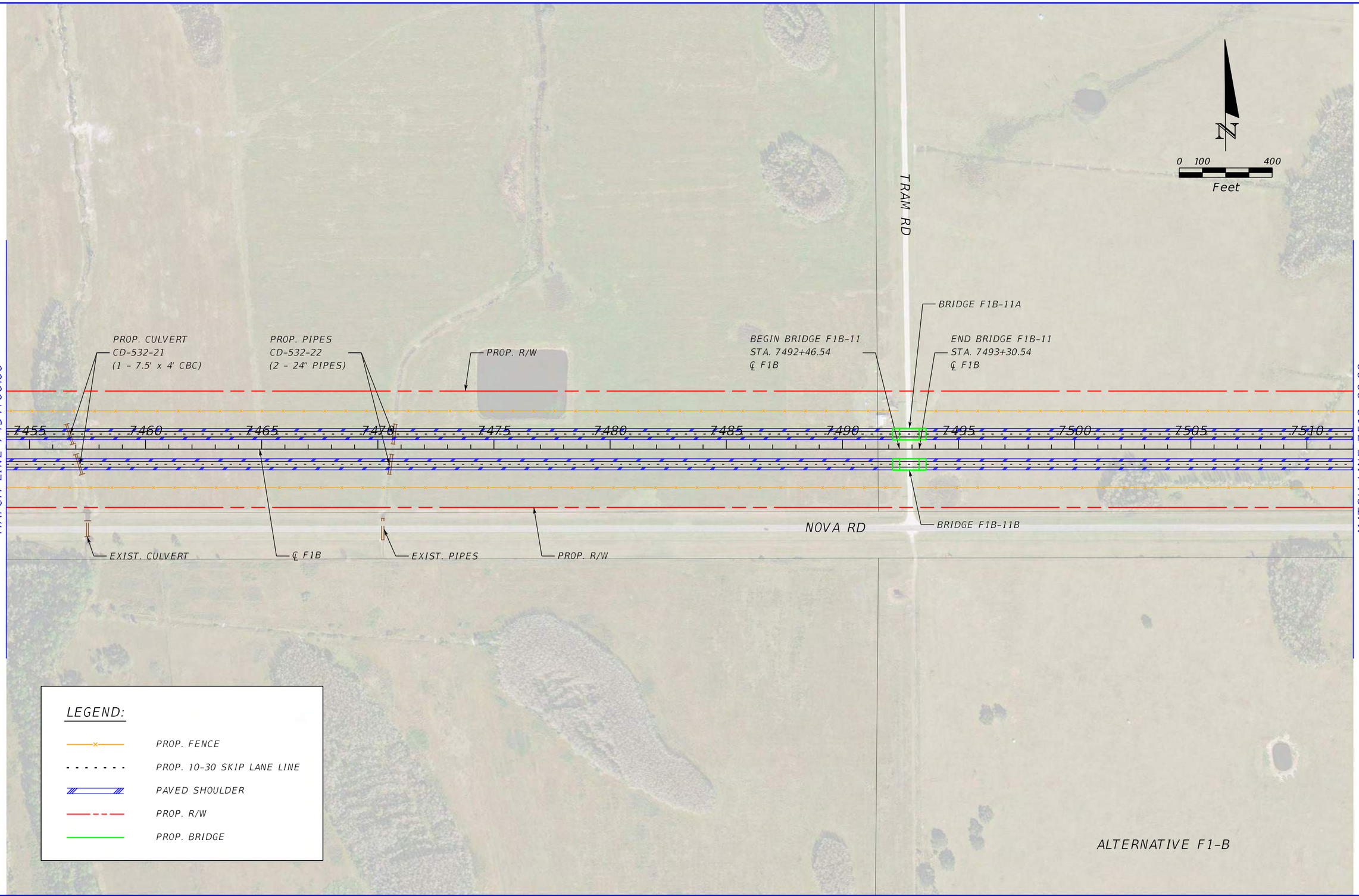
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (08)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (09)

SHEET NO.

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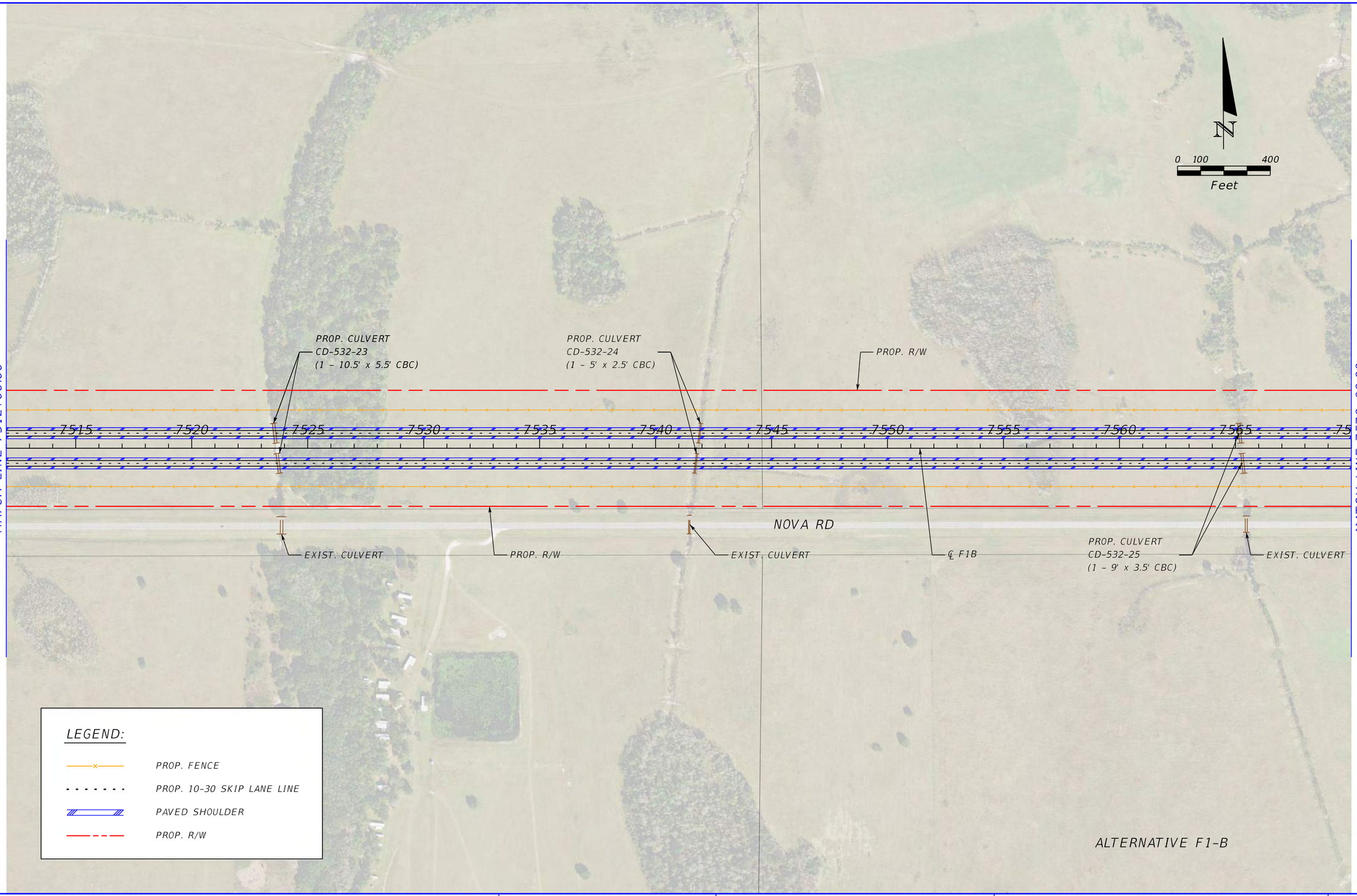

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (10)

SHEET NO.

N

0 100 400

Feet

BEGIN BRIDGE F1B-12
STA. 7600+30.18
℄ F1B

PROP. DIRT ROAD

PROP. CULVERT
CD-532-26
(1 - 4' x 2.5' CBC)

BRIDGE F1B-12A

END BRIDGE F1B-12
STA. 7601+50.10
℄ F1B

℄ F1B-3

PROP. R/W

BRIDGE F1B-13A

BEGIN BRIDGE F1B-13A
STA. 7619+97.67
℄ F1B

END BRIDGE F1B-13A
STA. 7620+90.93
℄ F1B

MATCH LINE 7570+00.00

7570 7575 7580 7585 7590 7595 7600 7605 7610 7615 7620 7625

NOVA RD

PC STA. 7580+77.18

PROP. R/W

PROP. CULVERT

PROP. R/W

BEGIN BRIDGE F1B-12B
STA. 7600+36.94
℄ F1B

BRIDGE F1B-12B

END BRIDGE F1B-12B
STA. 7601+57.29
℄ F1B

RELOCATED NOVA RD

PROP. CULVERT

℄ F1B

BEGIN BRIDGE F1B-13B
STA. 7619+69.19
℄ F1B

END BRIDGE F1B-13B
STA. 7620+62.83
℄ F1B

BRIDGE F1B-13B

MATCH LINE 7628+00.00

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. DIRT ROAD
- PROP. R/W

CURVE DATA CL F1B-3
PI STA. = 7670+23.23
Δ = 42° 38' 47" (RT)
D = 0° 15' 00"
T = 8,946.05
L = 17,058.34
R = 22,918.00
PC STA. = 7580+77.18
PT STA. = 7751+35.51

ALTERNATIVE F1-B

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (11)

SHEET NO.

NOVA RD

RELOCATED NOVA RD

PROP. CULVERT

EXIST. CULVERT

PROP. CULVERT
CD-532-29
(1 - 8' x 4' CBC)

PROP. R/W

℄ F1B-3

7630 7635 7640 7645 7650 7655 7660 7665 7670 7675 7680 7685

PROP. CULVERTS
CD-532-28
(2 - 7' x 5' CBC)

℄ F1B

PROP. R/W

MATCH LINE 7628+00.00

MATCH LINE 7686+00.00

N

0 100 400
Feet

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. R/W

CURVE DATA CL_F1B-3
PI STA. = 7670+23.23
Δ = 42° 38' 47" (RT)
D = 0° 15' 00"
T = 8,946.05
L = 17,058.34
R = 22,918.00
PC STA. = 7580+77.18
PT STA. = 7751+35.51

ALTERNATIVE F1-B

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (12)

SHEET NO.

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DEER PARK RD

N

0 100 400

Feet

MATCH LINE 7686+00.00

MATCH LINE 7744+00.00

PROP. R/W

℄ F1B-3

7690 7695 7700 7705 7710 7715 7720 7725 7730 7735 7740

PROP. R/W

℄ F1B

PROP. DIRT ROAD

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. DIRT ROAD
- PROP. R/W

CURVE DATA CL F1B-3
PI STA. = 7670+23.23
Δ = 42° 38' 47" (RT)
D = 0° 15' 00"
T = 8,946.05
L = 17,058.34
R = 22,918.00
PC STA. = 7580+77.18
PT STA. = 7751+35.51

ALTERNATIVE F1-B

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (13)

SHEET NO.

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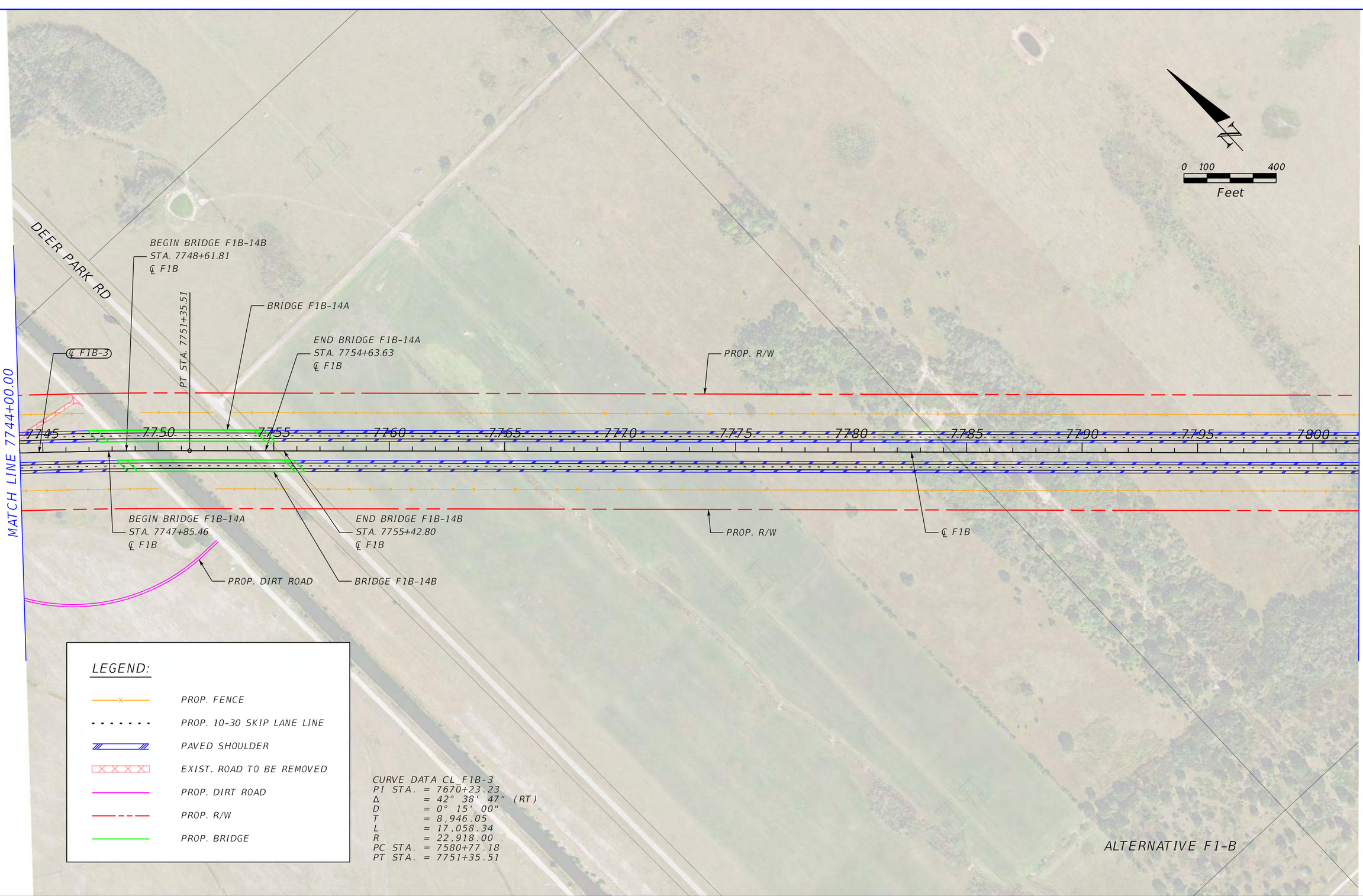


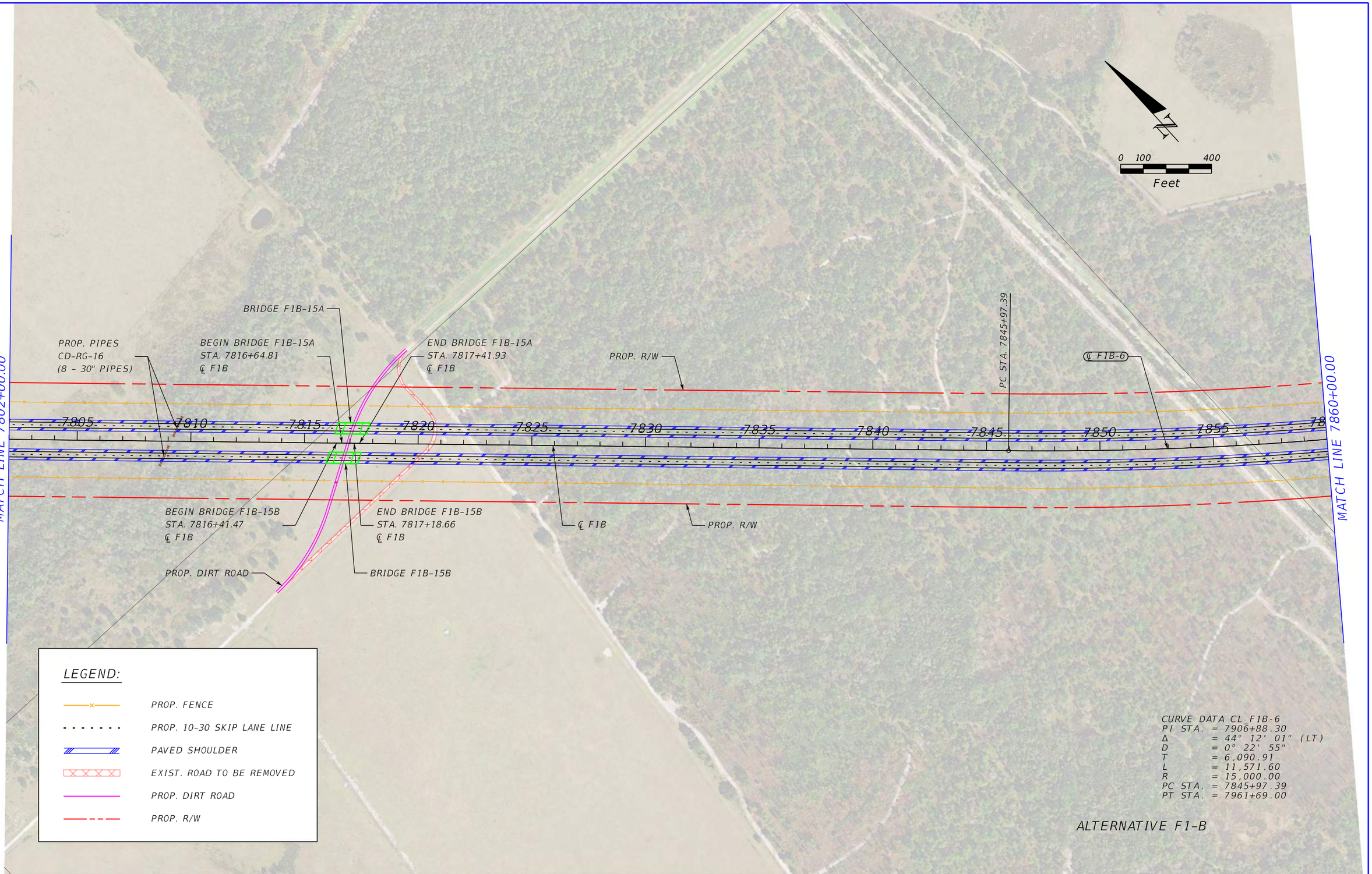
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (14)

SHEET NO.



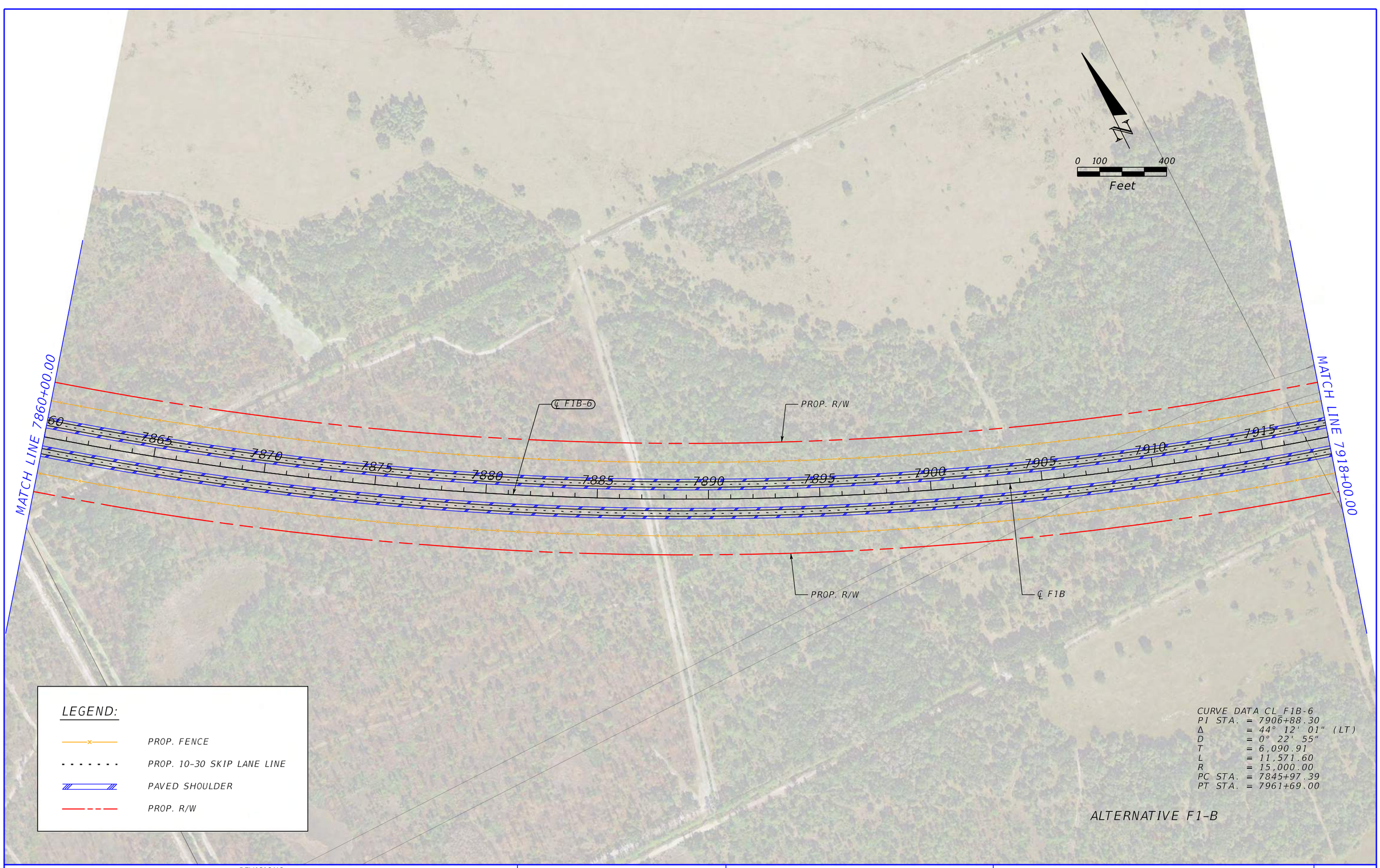
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (15)

SHEET NO.



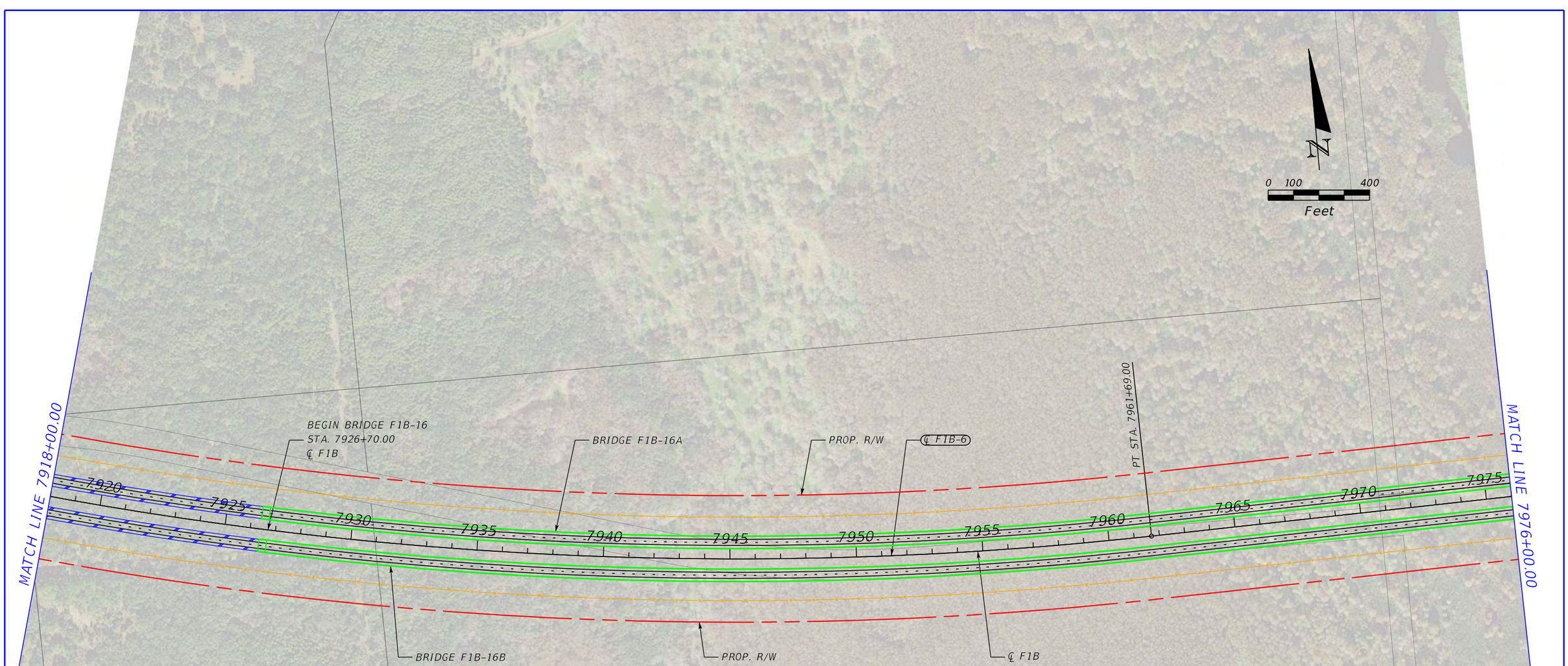
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (16)

SHEET NO.



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL F1B-6
PI STA. = 7906+88.30
Δ = 44° 12' 01" (LT)
D = 0° 22' 55"
T = 6,090.91
L = 11,571.60
R = 15,000.00
PC STA. = 7845+97.39
PT STA. = 7961+69.00

ALTERNATIVE F1-B

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (17)

SHEET NO.

END BRIDGE F1B-16A
STA. 7987+69.65
℄ F1B

END BRIDGE F1B-16B
STA. 7988+22.08
℄ F1B

BRIDGE F1B-16A

PROP. R/W

℄ F1B-9

7980 7985 7990 7995 8000 8005 8010 8015 8020 8025 8030

MATCH LINE 7976+00.00

BRIDGE F1B-16B

PC STA. 7990+55.71

PROP. R/W

℄ F1B

MATCH LINE 8034+00.00

N

0 100 400
Feet

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL F1B-9
PI STA. = 8027+14.47
Δ = 40° 11' 34" (RT)
D = 0° 34' 23"
T = 3,658.76
L = 7,014.96
R = 10,000.00
PC STA. = 7990+55.71
PT STA. = 8060+70.66

ALTERNATIVE F1-B

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (18)

SHEET NO.

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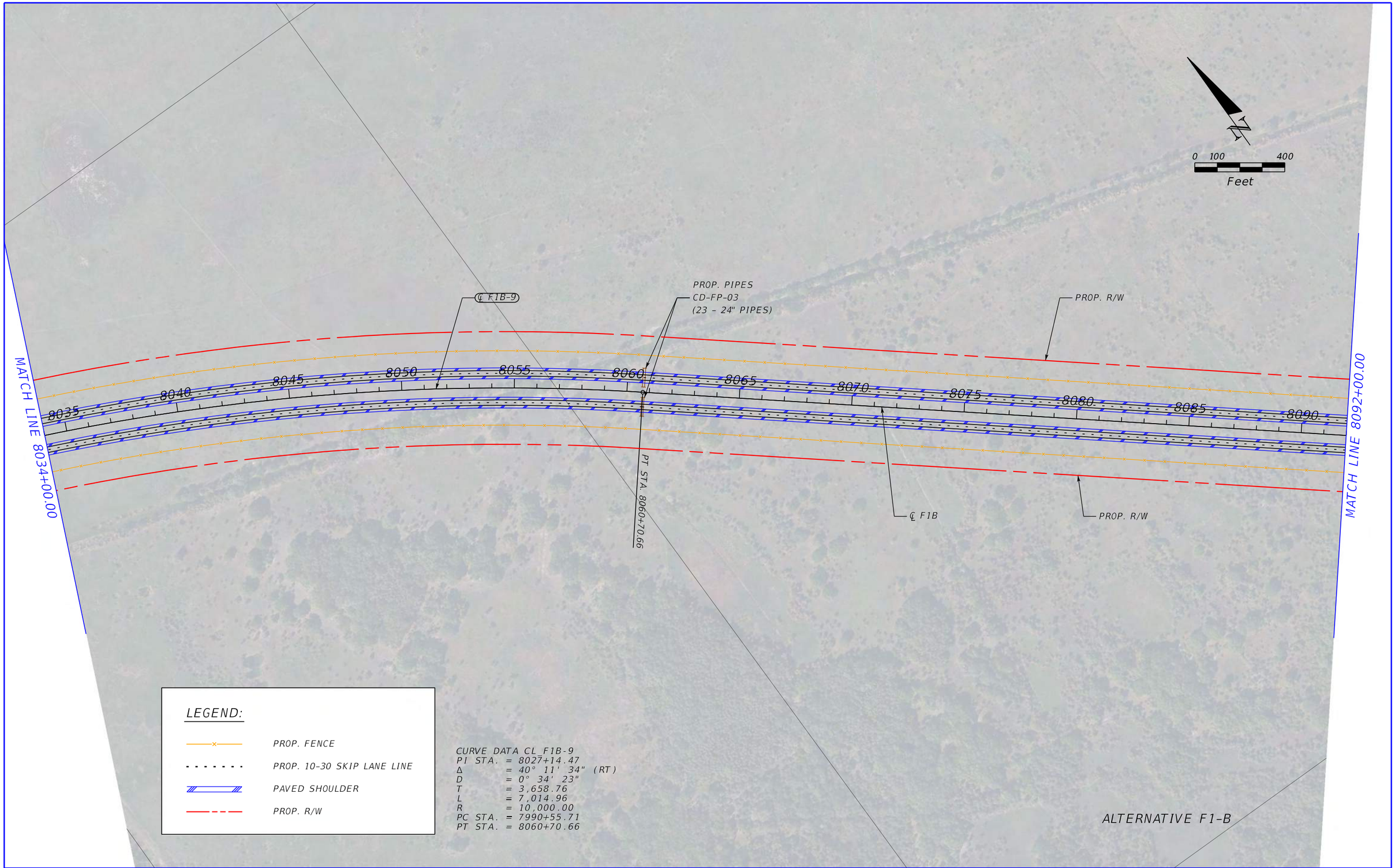


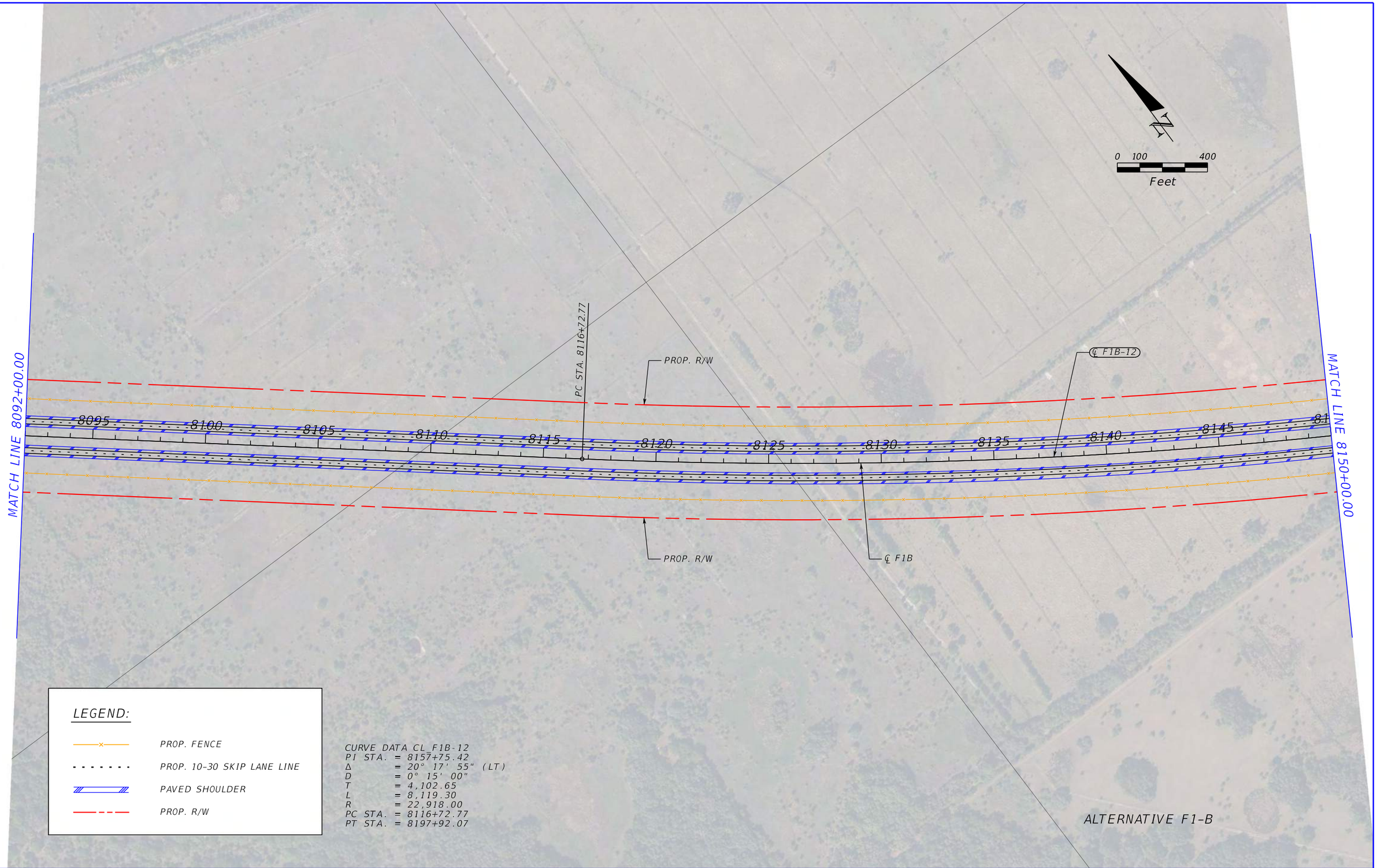
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (19)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (20)

SHEET NO.

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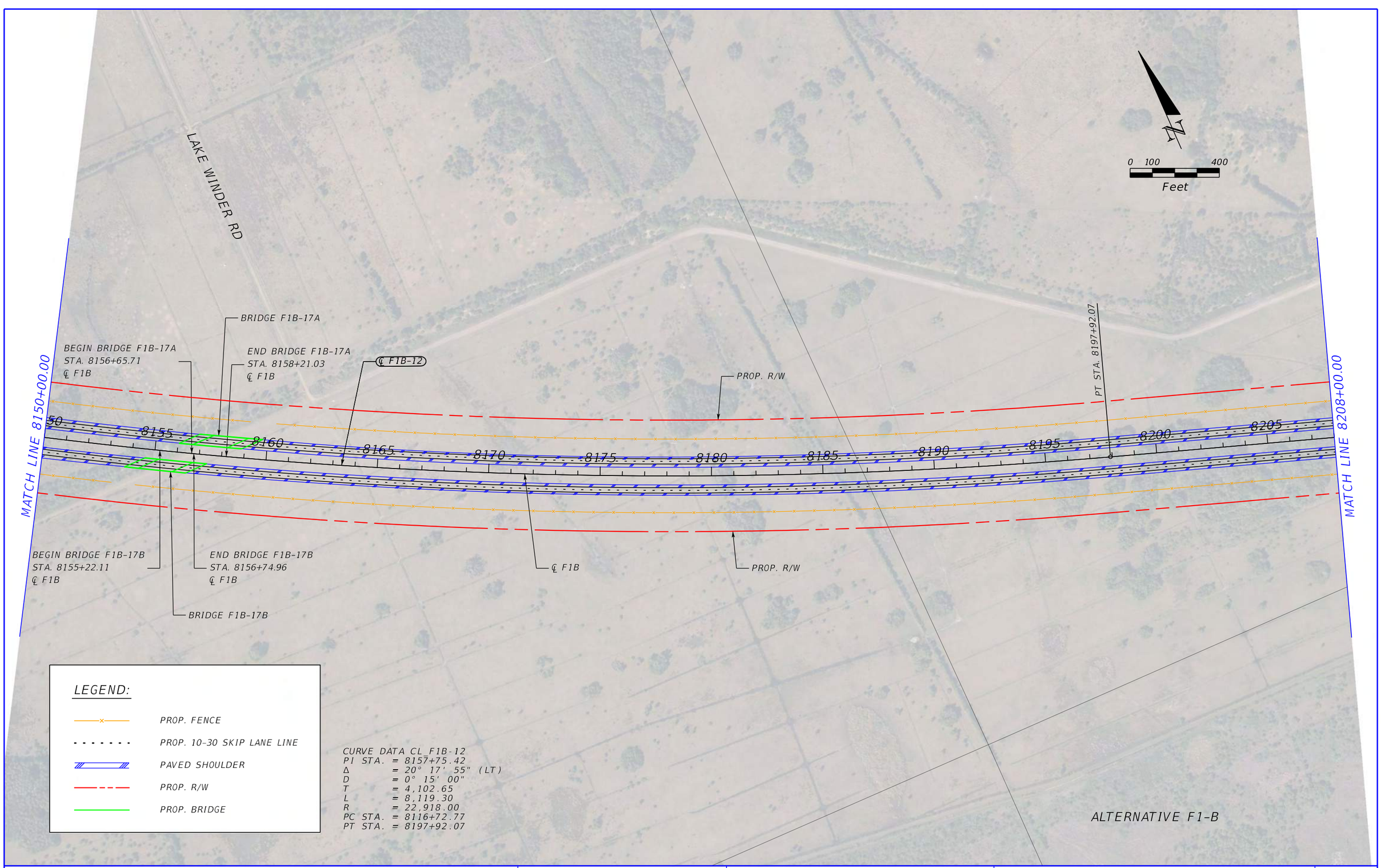


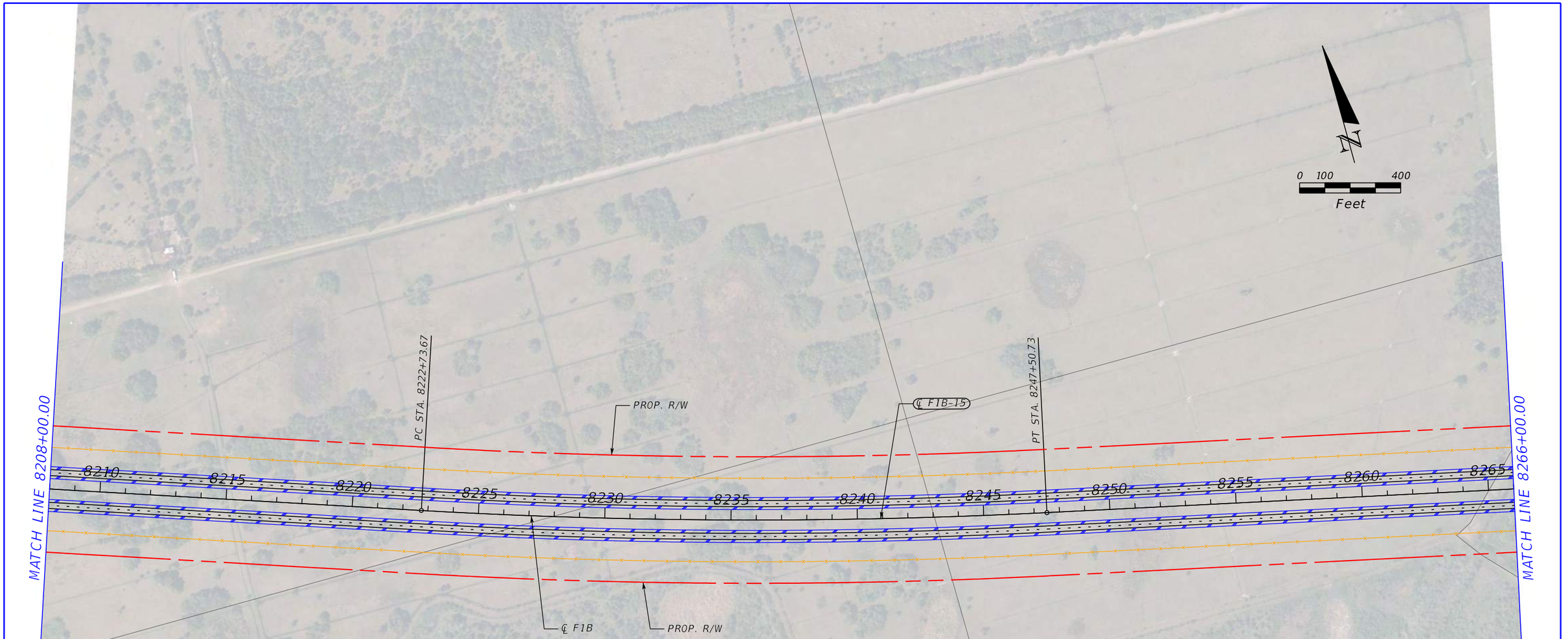
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (21)

SHEET NO.



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

CURVE DATA CL_F1B-15
PI STA. = 8235+13.41
Δ = 6° 11' 34" (LT)
D = 0° 15' 00"
T = 1,239.73
L = 2,477.05
R = 22,918.00
PC STA. = 8222+73.67
PT STA. = 8247+50.73

ALTERNATIVE F1-B

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (22)

SHEET NO.

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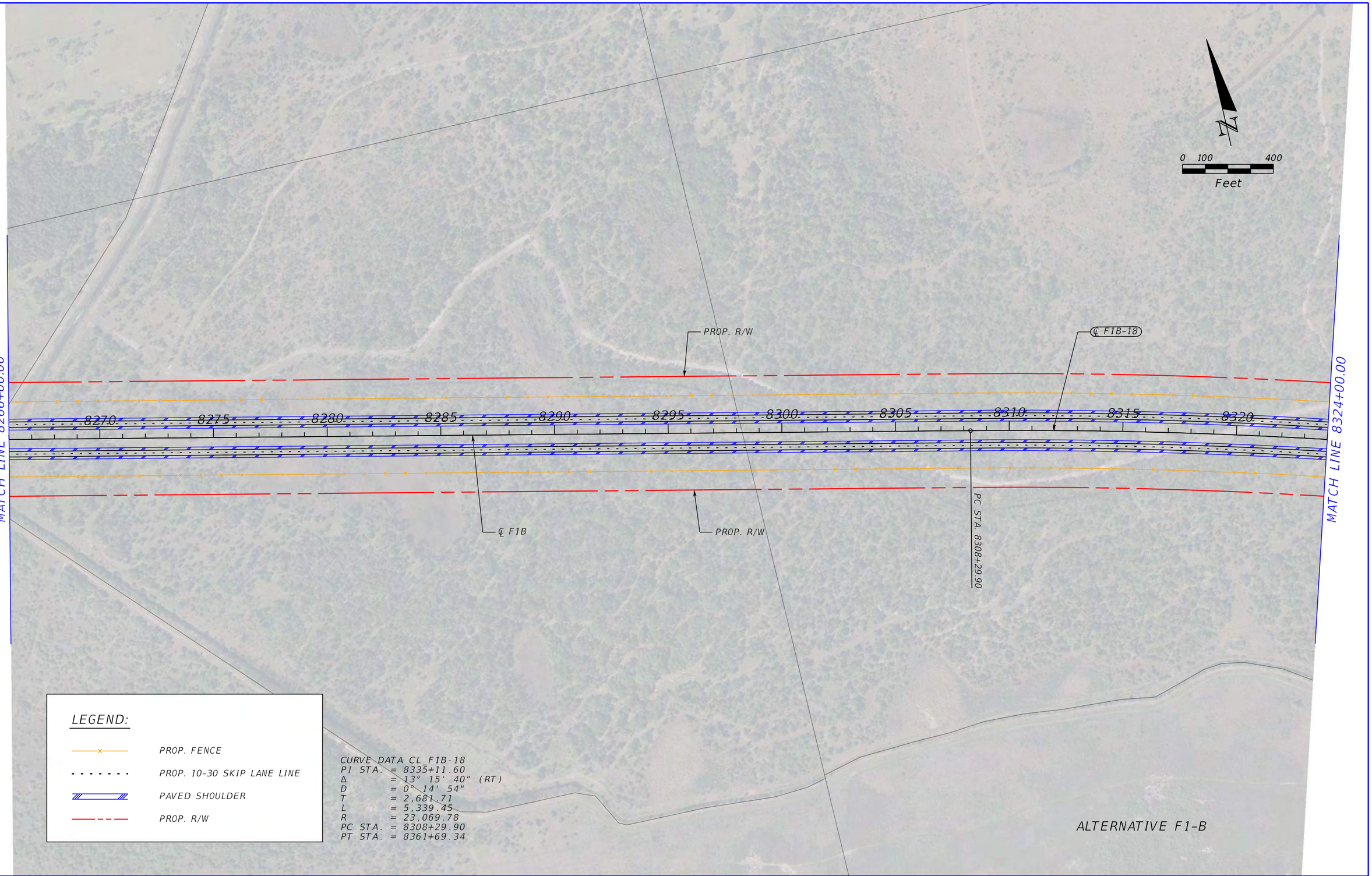


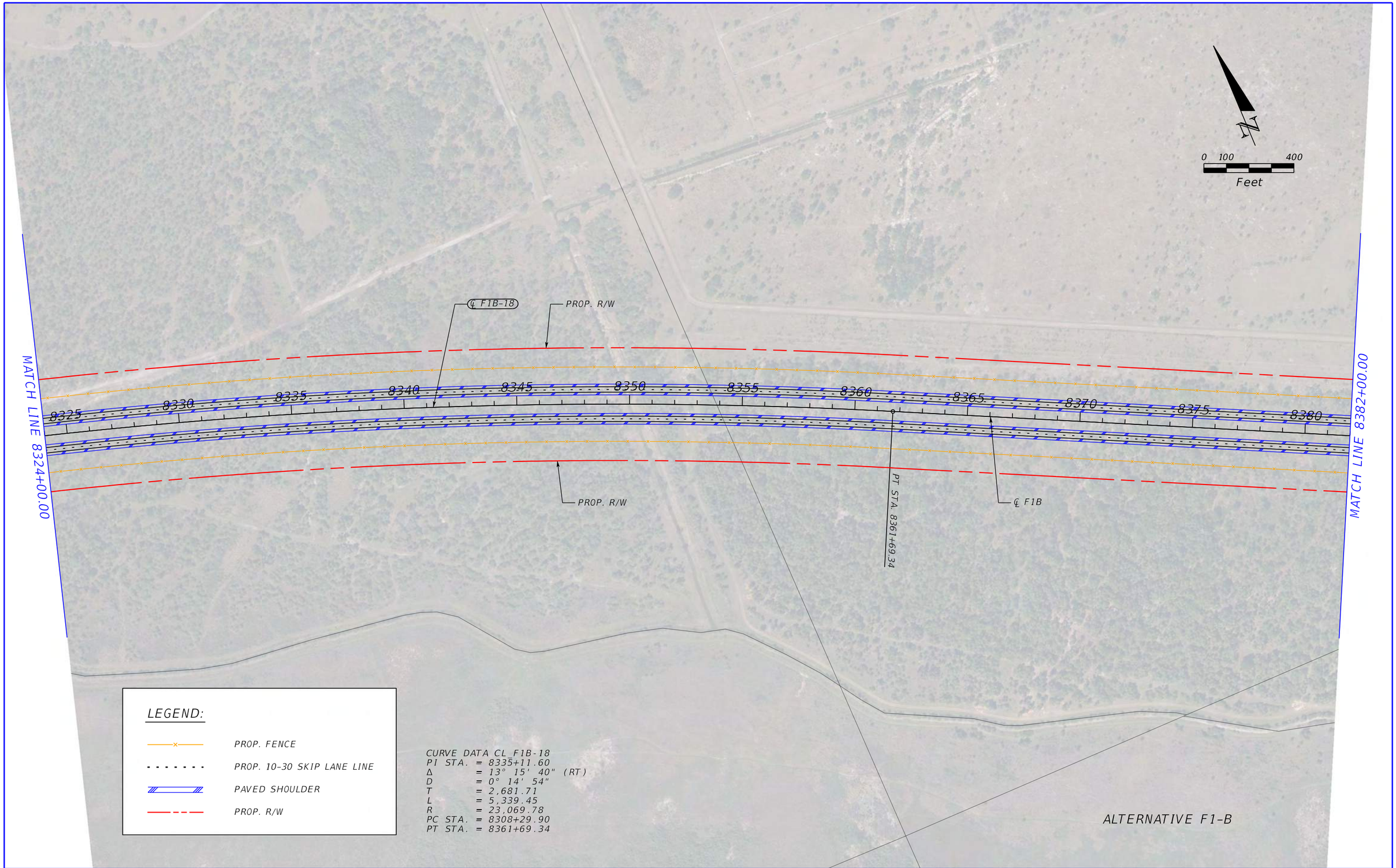
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (23)

SHEET NO.



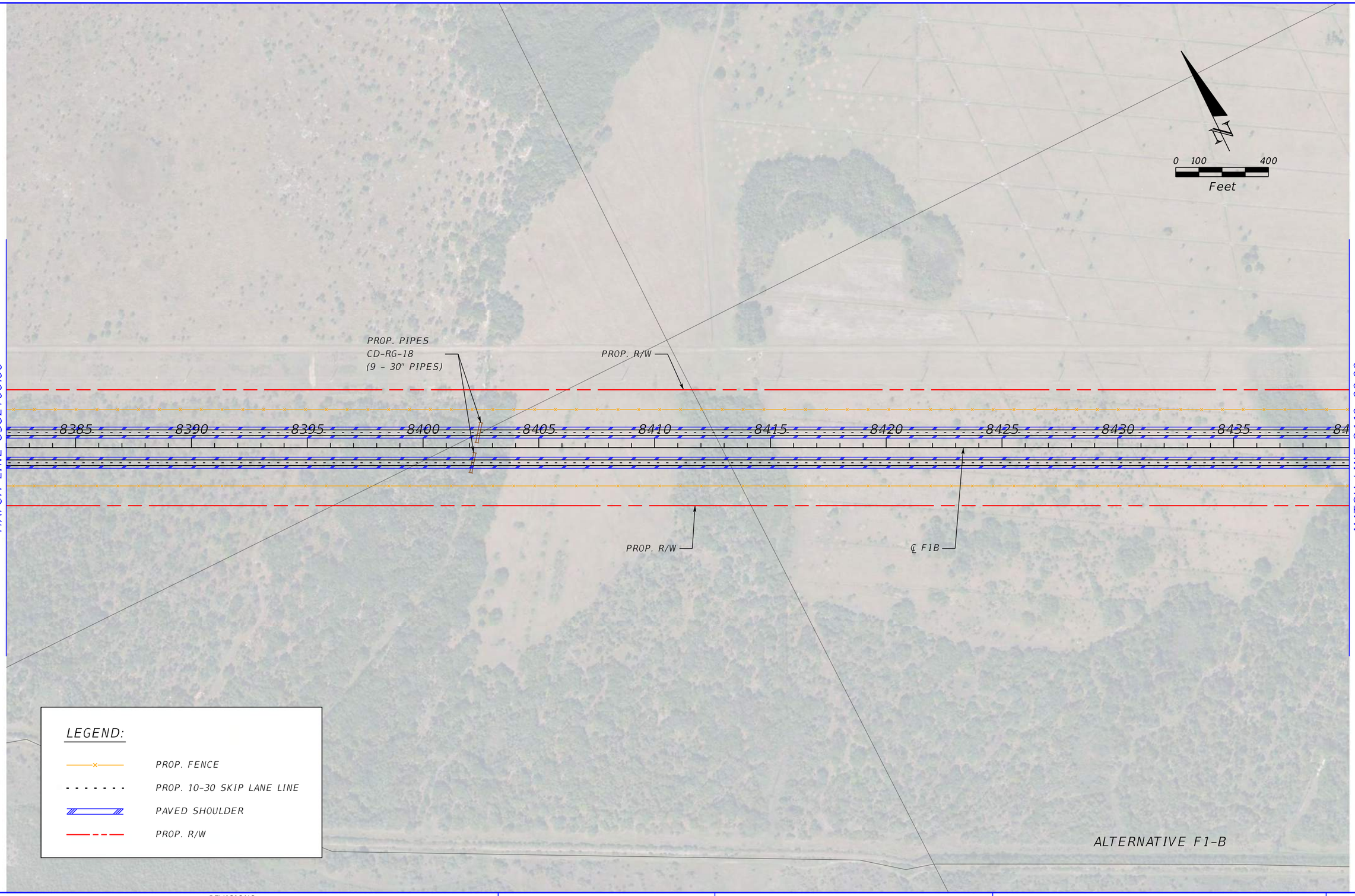
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (24)

SHEET NO.



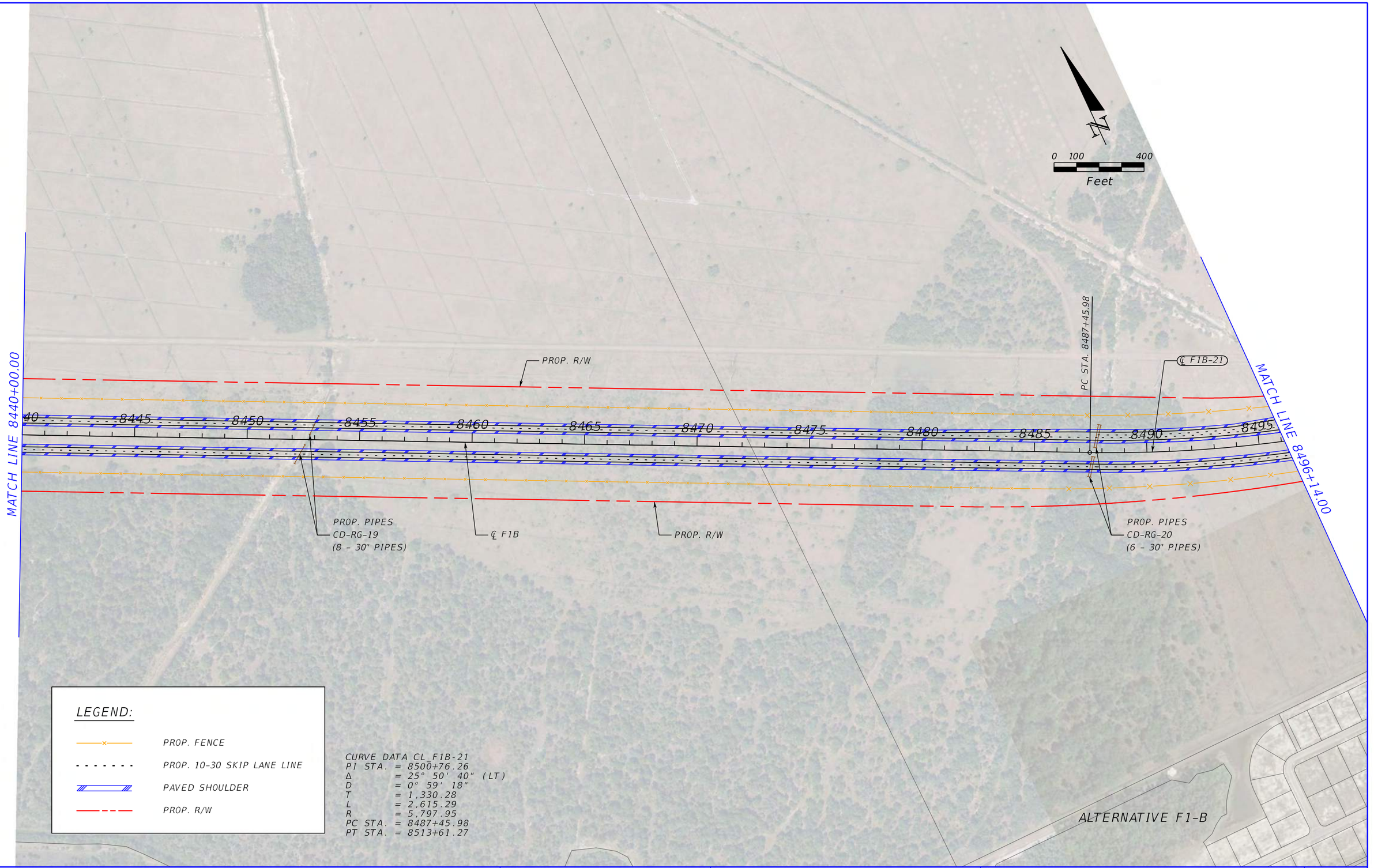
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (25)

SHEET NO.



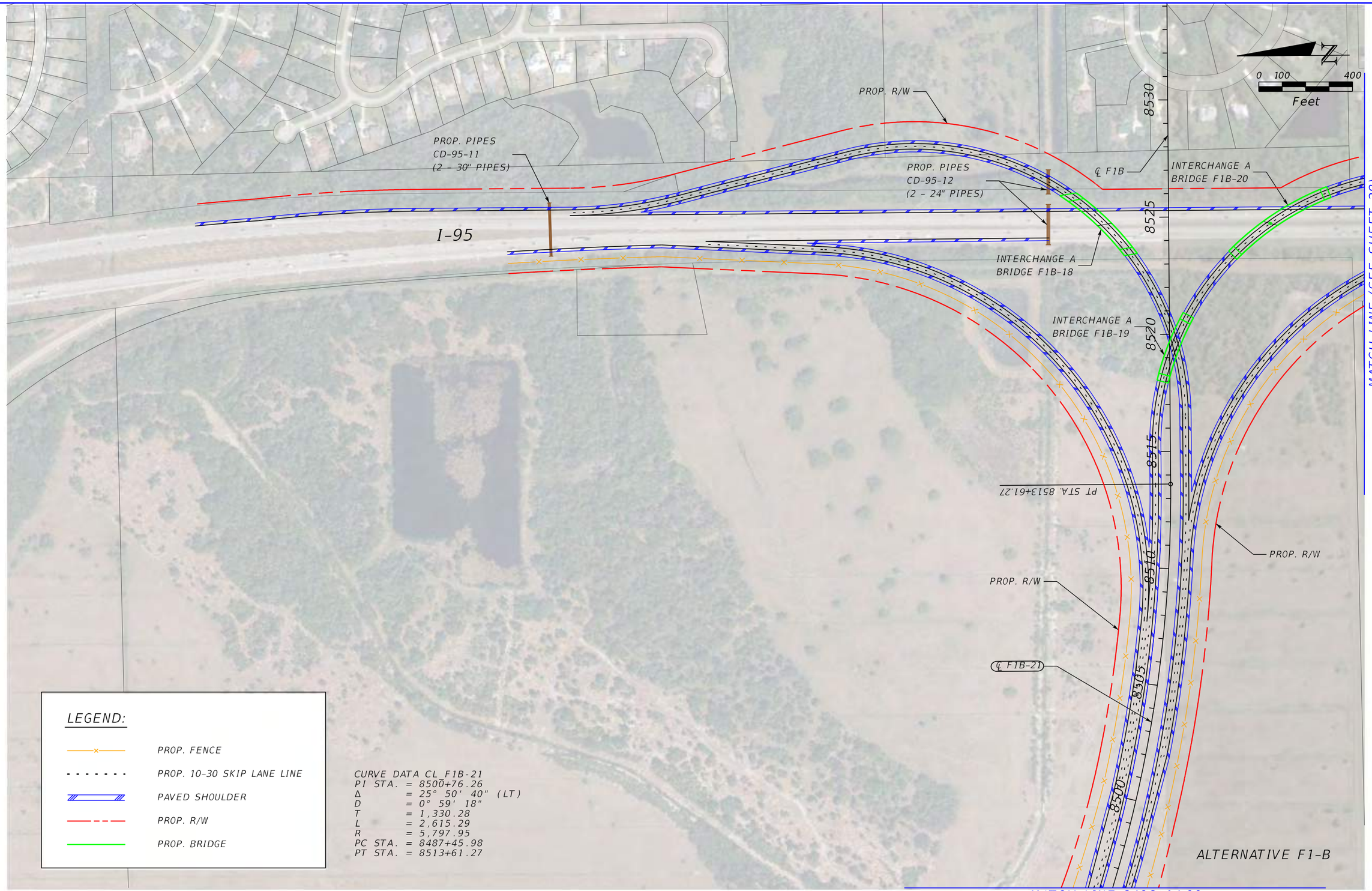
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (26)

SHEET NO.



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL_F1B-21
PI STA. = 8500+76.26
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D = 0° 59' 18"
T = 1,330.28
L = 2,615.29
R = 5,797.95
PC STA. = 8487+45.98
PT STA. = 8513+61.27

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F1-B	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (27)

SHEET NO.

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



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

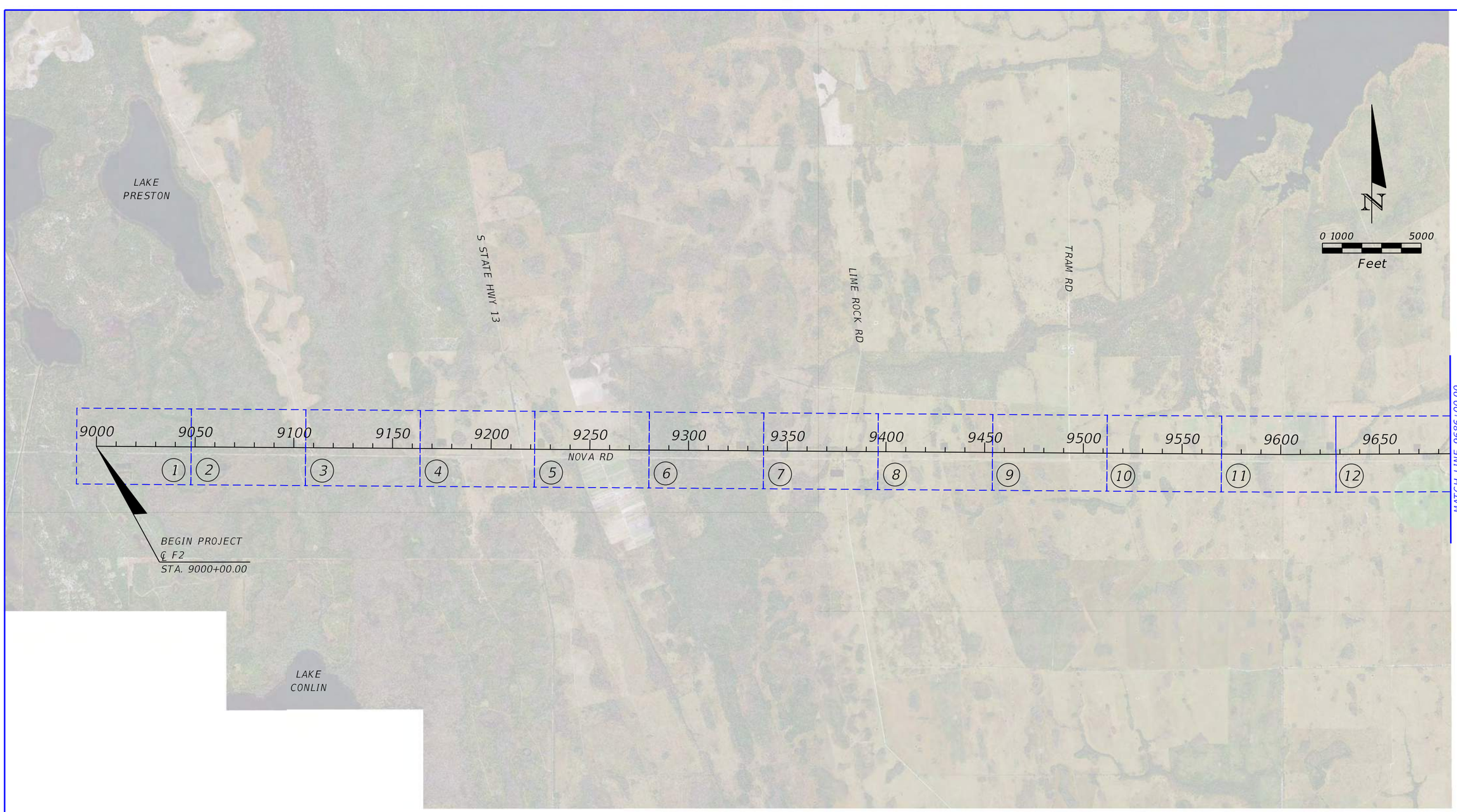
ALTERNATIVE F1-B

REVISIONS					CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (28)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					ALT. F1-B	BREVARD OSCEOLA			

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

APPENDIX I

Concept Plans for Alternative F2



ALTERNATIVE F2

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

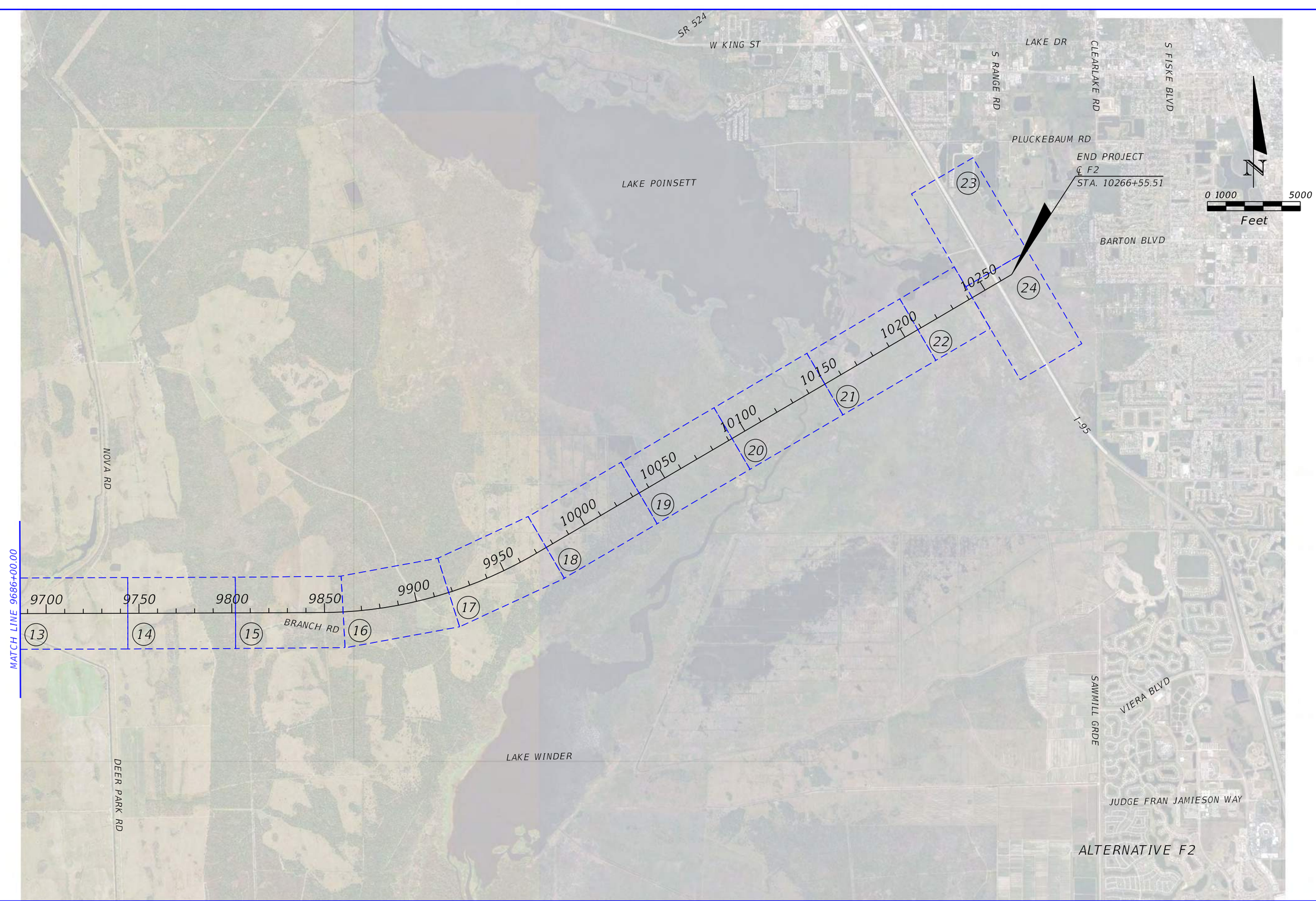
CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (1)

SHEET NO.

Michael.Hunter 3/8/2021 4:24:05 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F2\Plan Sheets\PLAYRD01.dgn



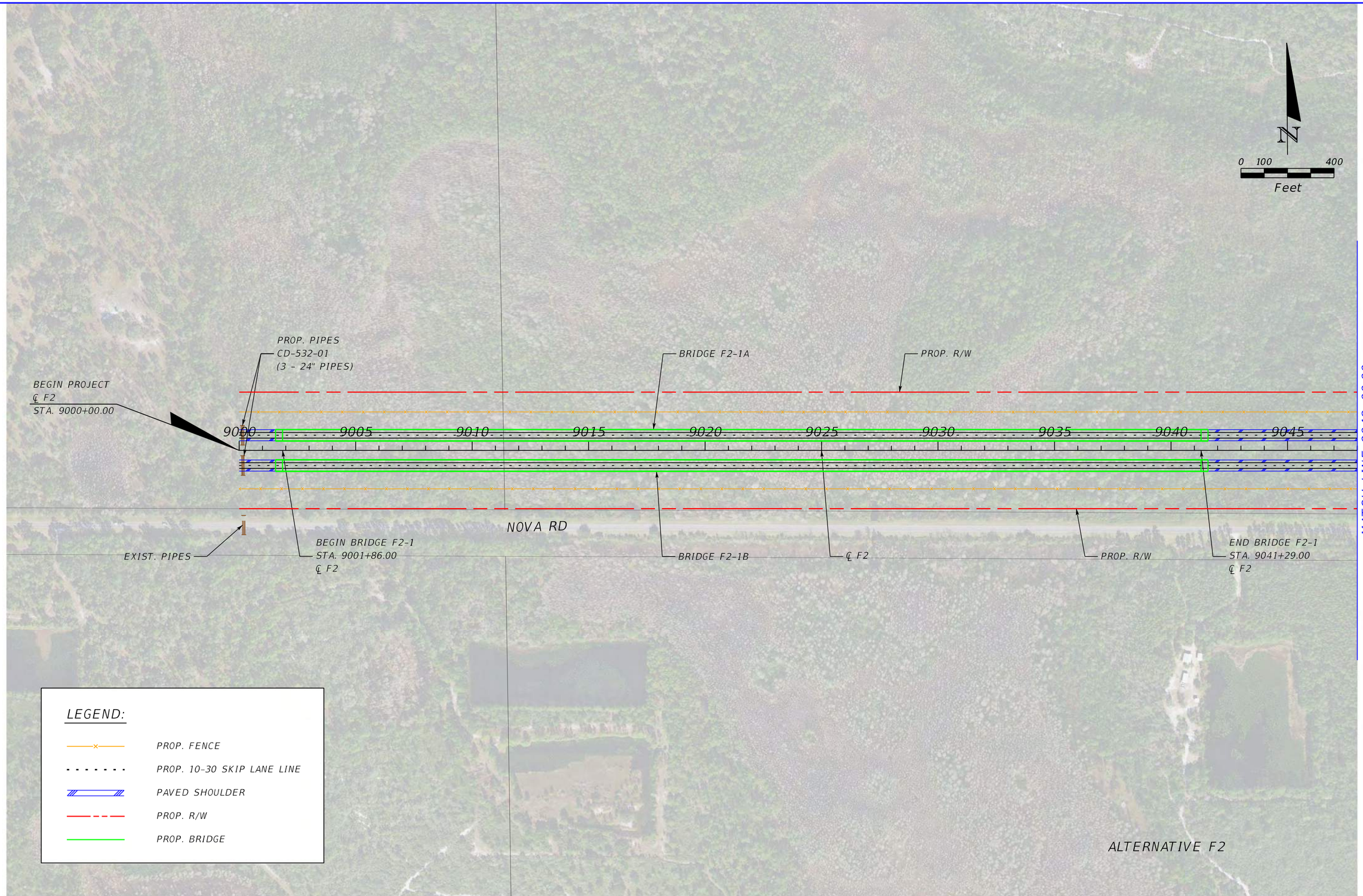
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (2)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

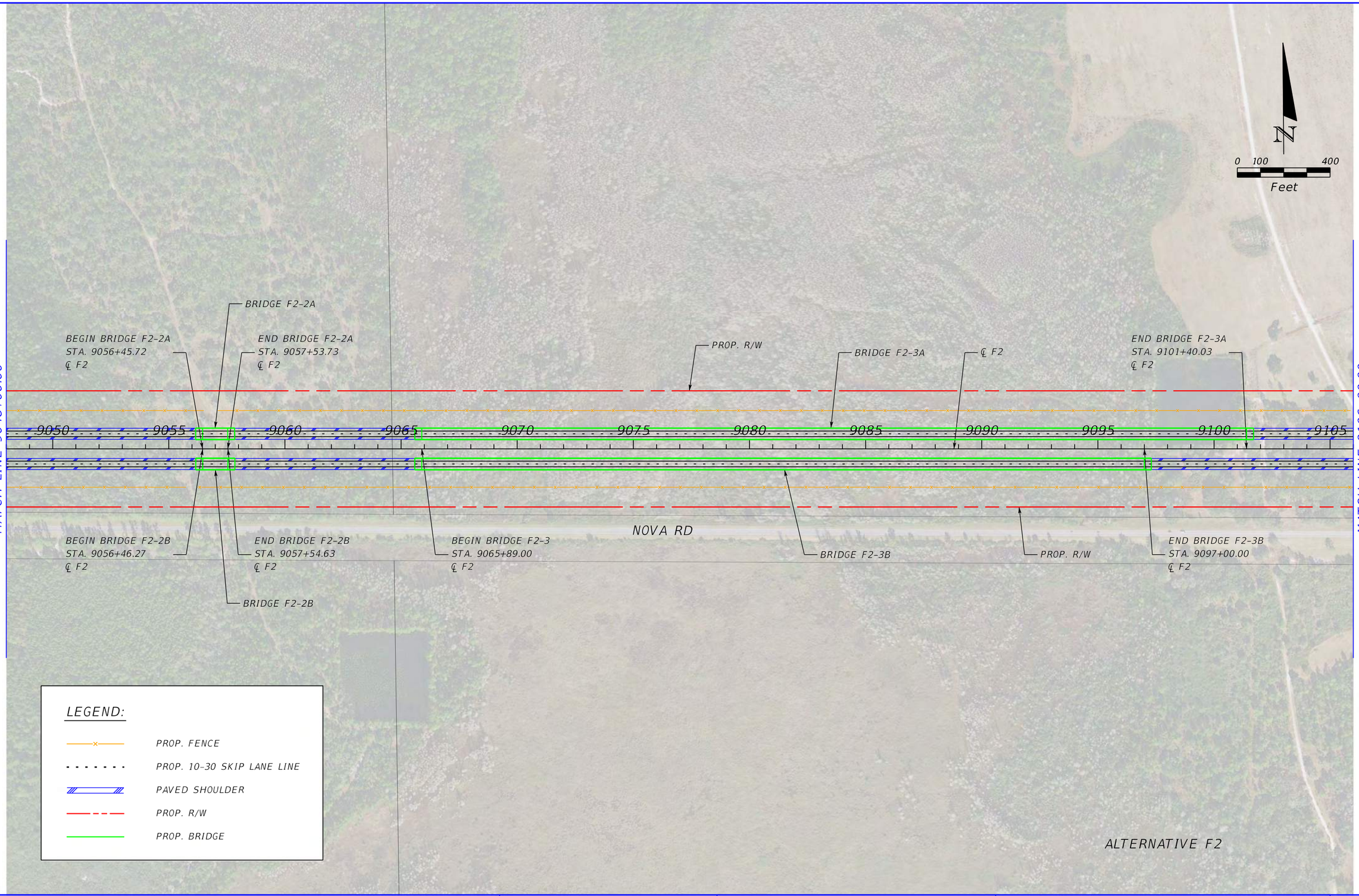
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (01)

SHEET NO.

Michael.Hunter 3/8/2021 4:24:36 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F2\Plan Sheets\PLANRD01.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

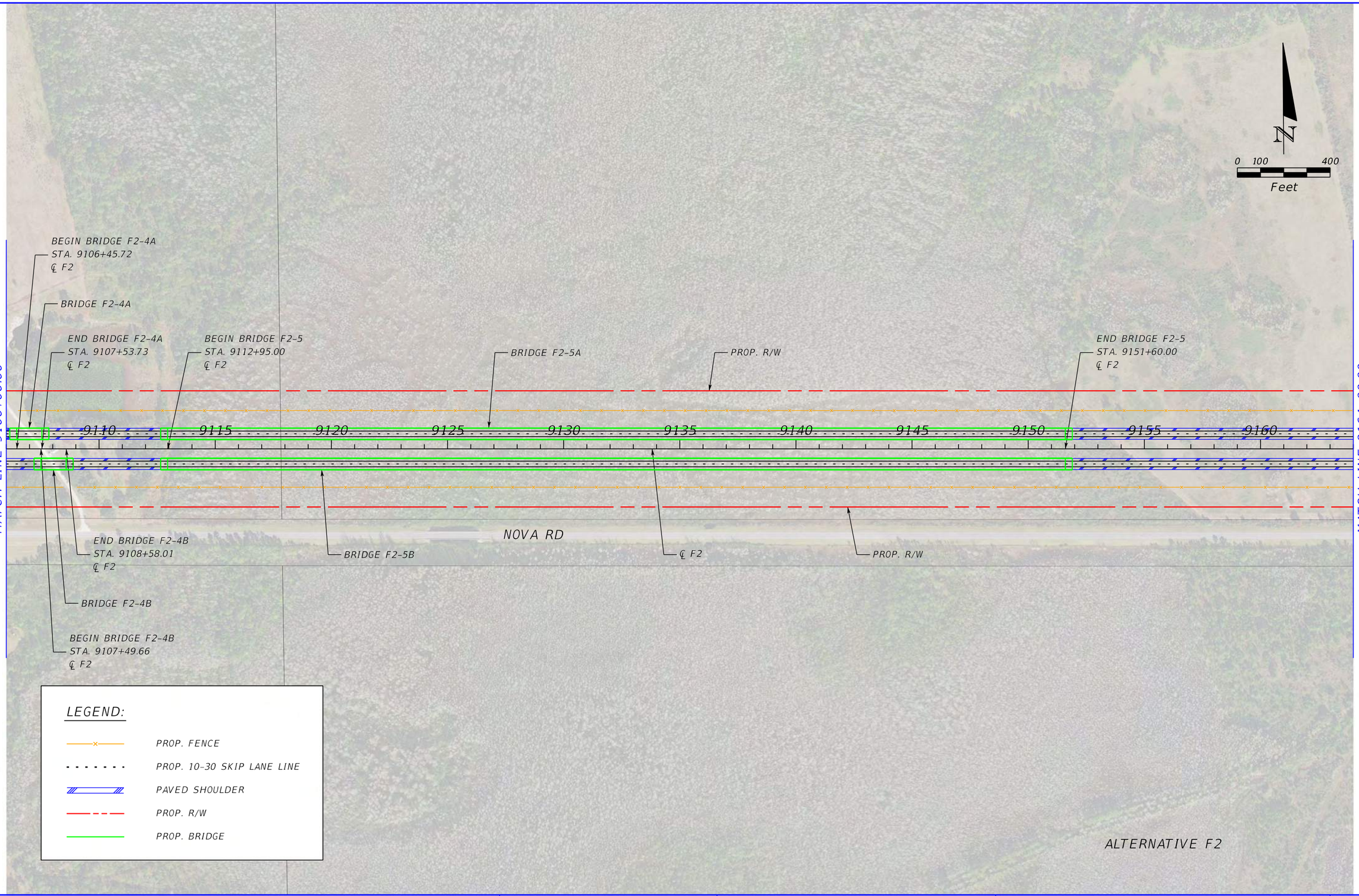
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (02)

SHEET NO.

Michael.Hunter 3/8/2021 4:24:51 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F2\Plan Sheets\PLANRD02.dgn



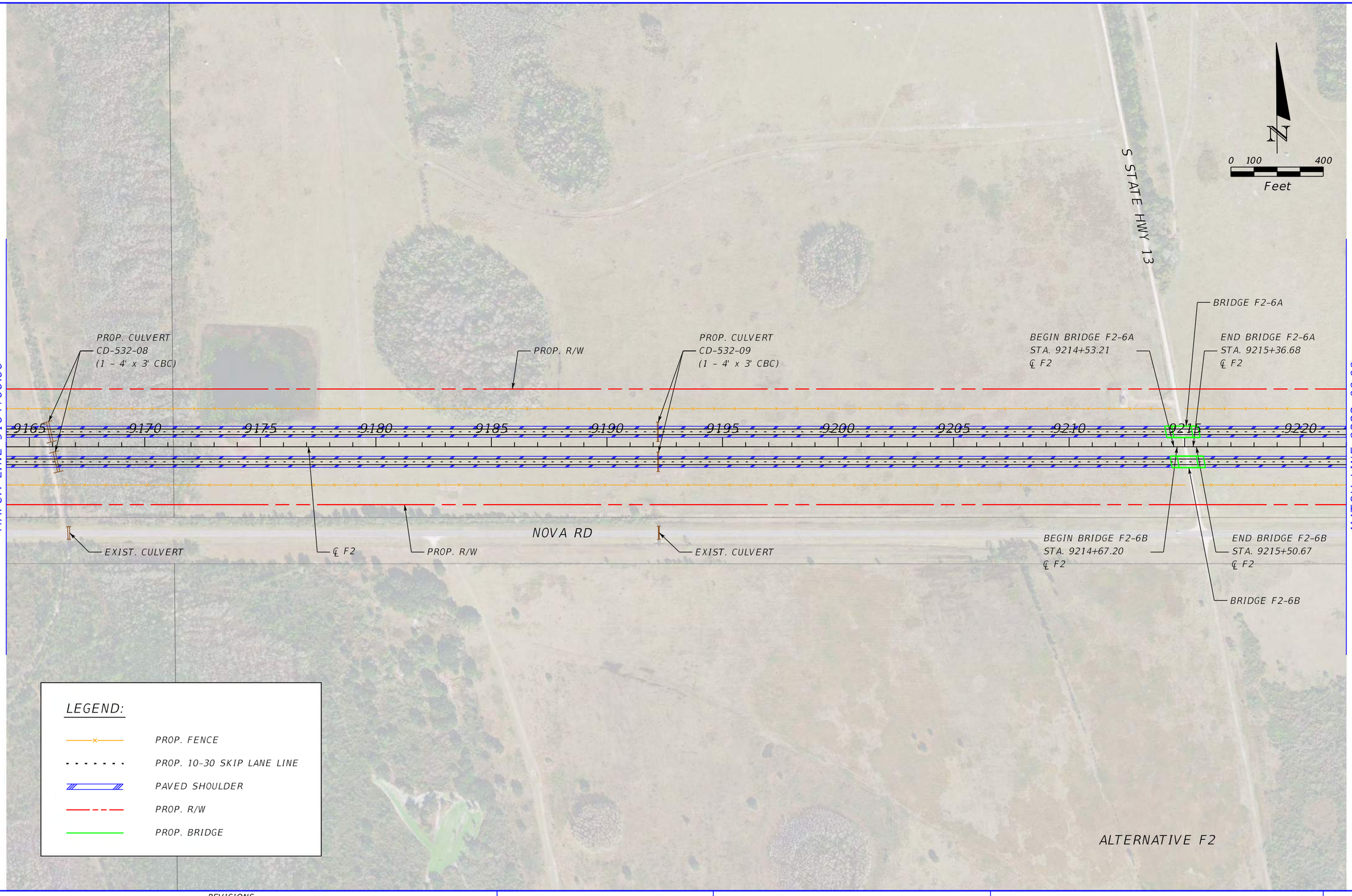
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (03)

SHEET NO.



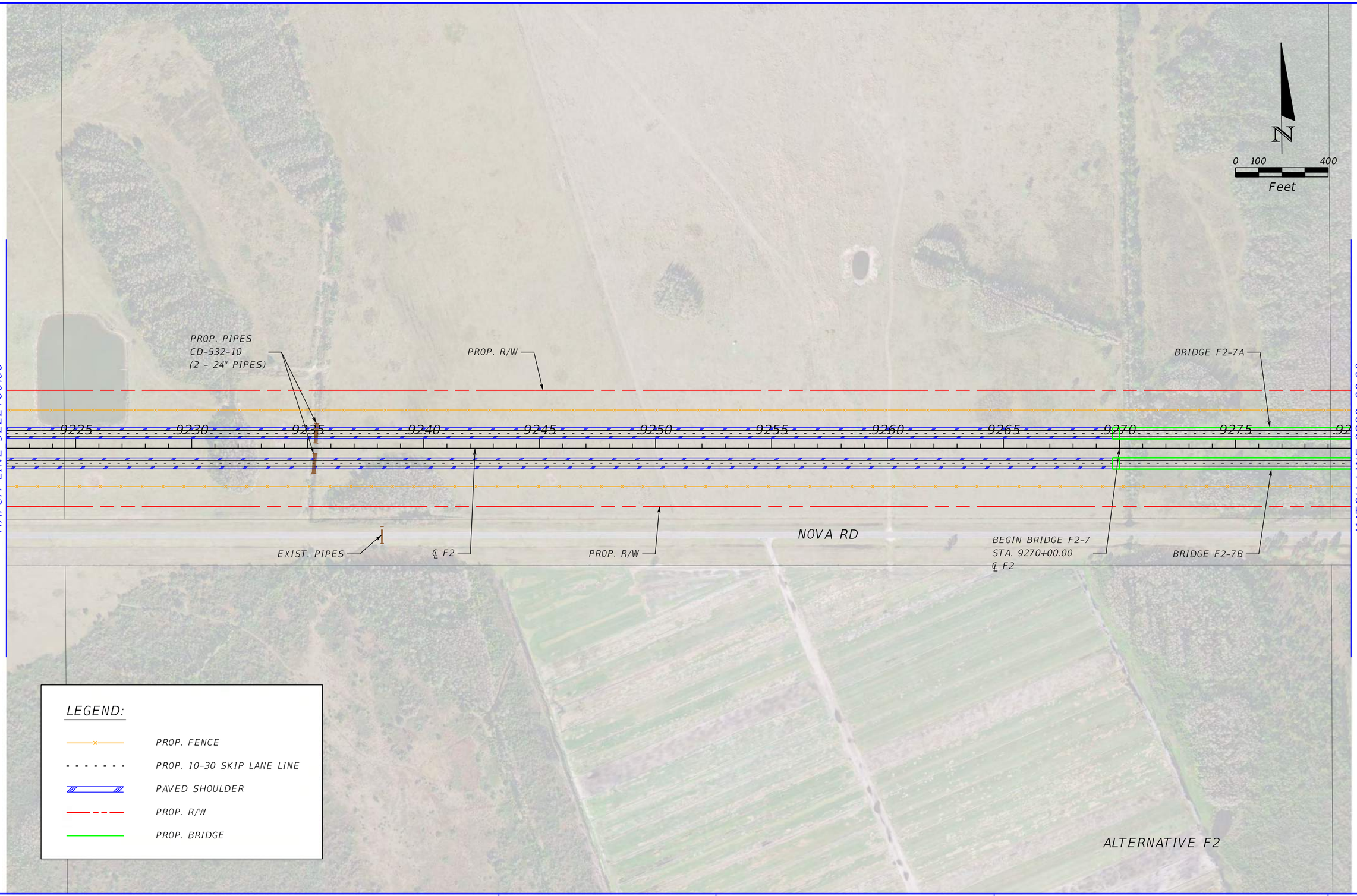
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (04)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (05)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 9280+00.00

MATCH LINE 9338+00.00

BRIDGE F2-7A

PROP. R/W

END BRIDGE F2-7
STA. 9306+49.00
℄ F2

PROP. CULVERT
CD-532-14
(1 - 10' x 3' CBC)

80 9285 9290 9295 9300 9305 9310 9315 9320 9325 9330 9335

BRIDGE F2-7B

℄ F2

PROP. R/W

NOVA RD

PROP. CULVERT

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

ALTERNATIVE F2

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

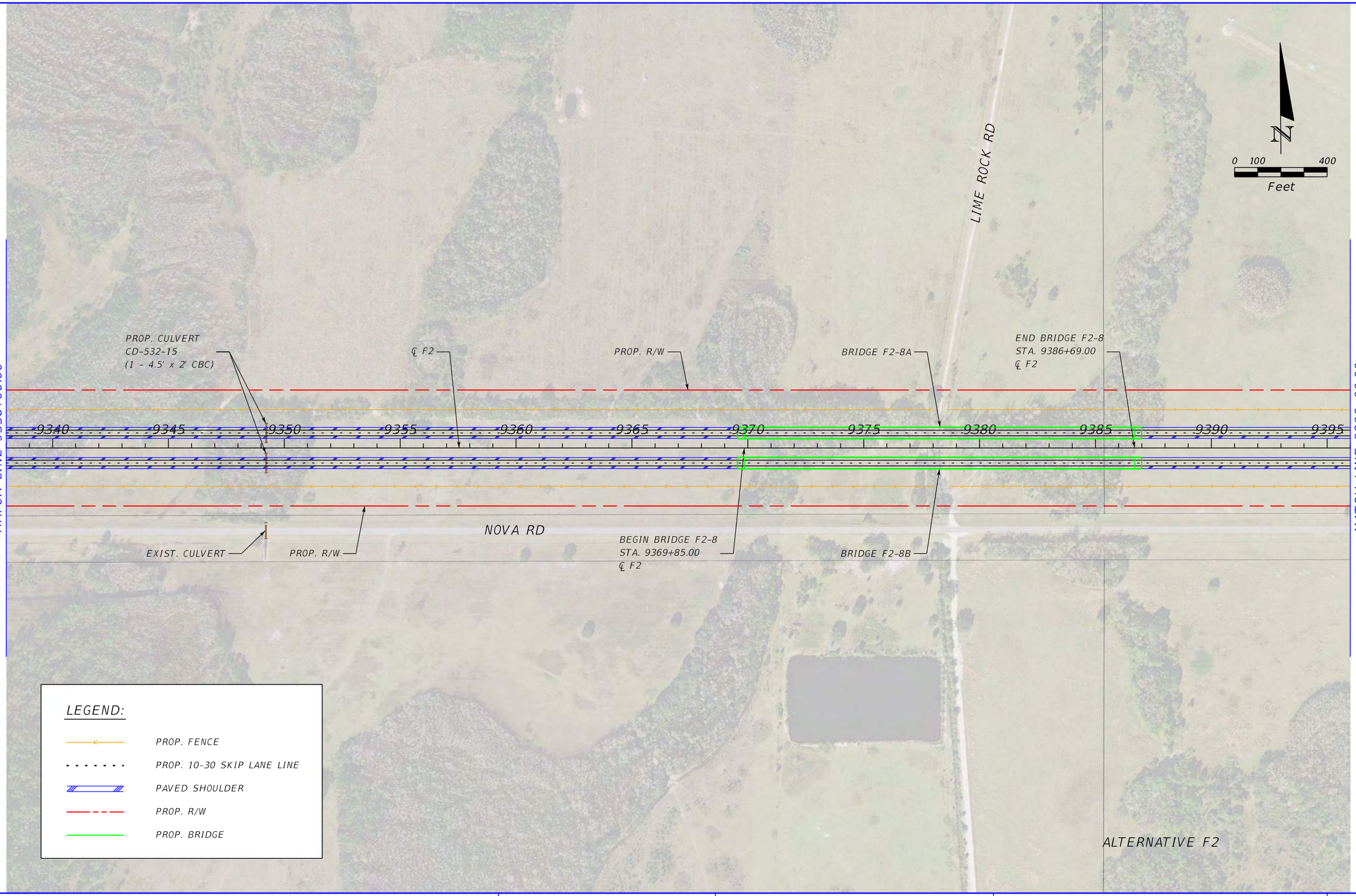
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (06)

SHEET NO.

Michael.Hunter 3/8/2021 4:25:36 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F2\Plan Sheets\PLANRD06.dgn



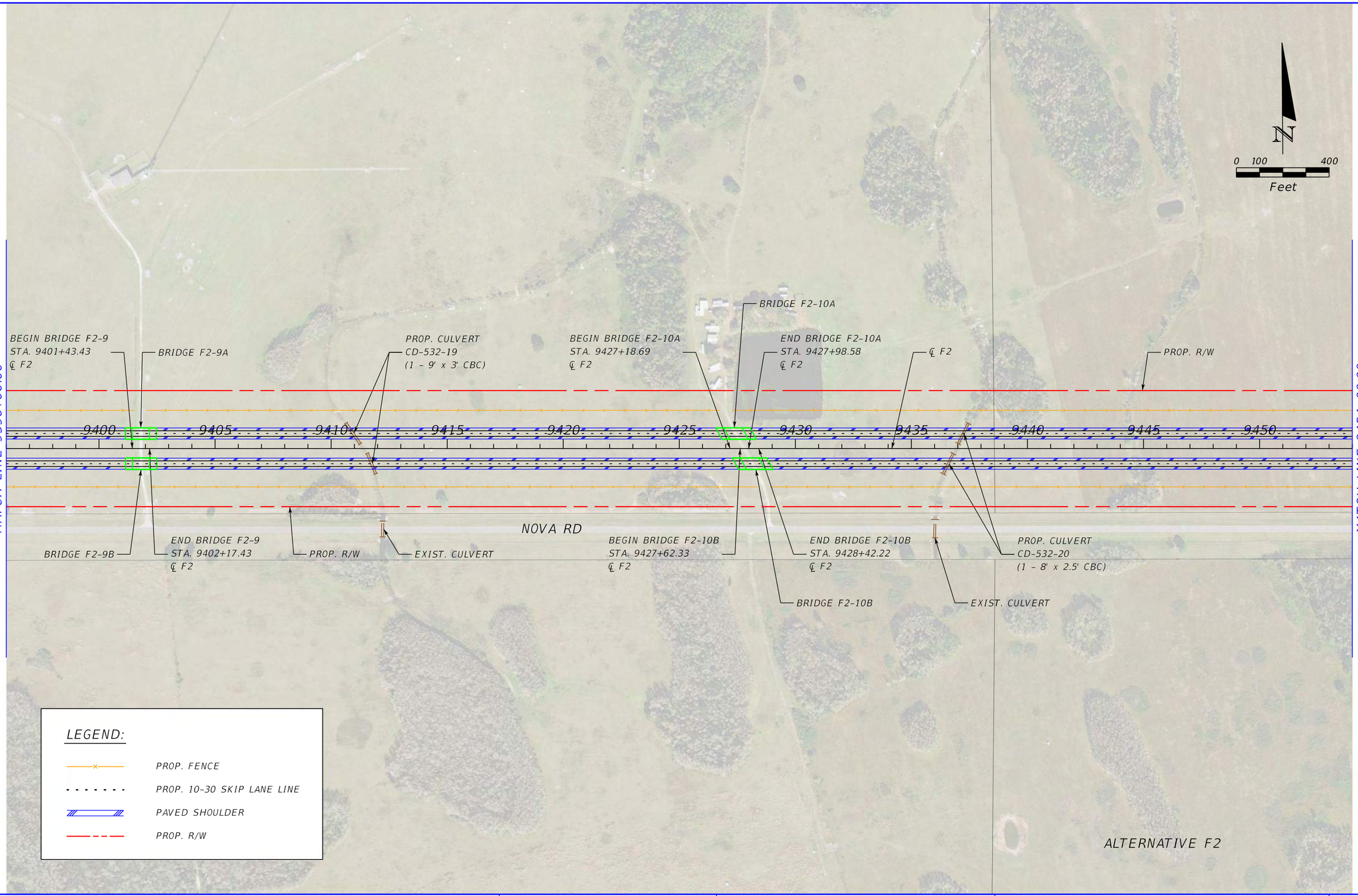
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (07)

SHEET NO.



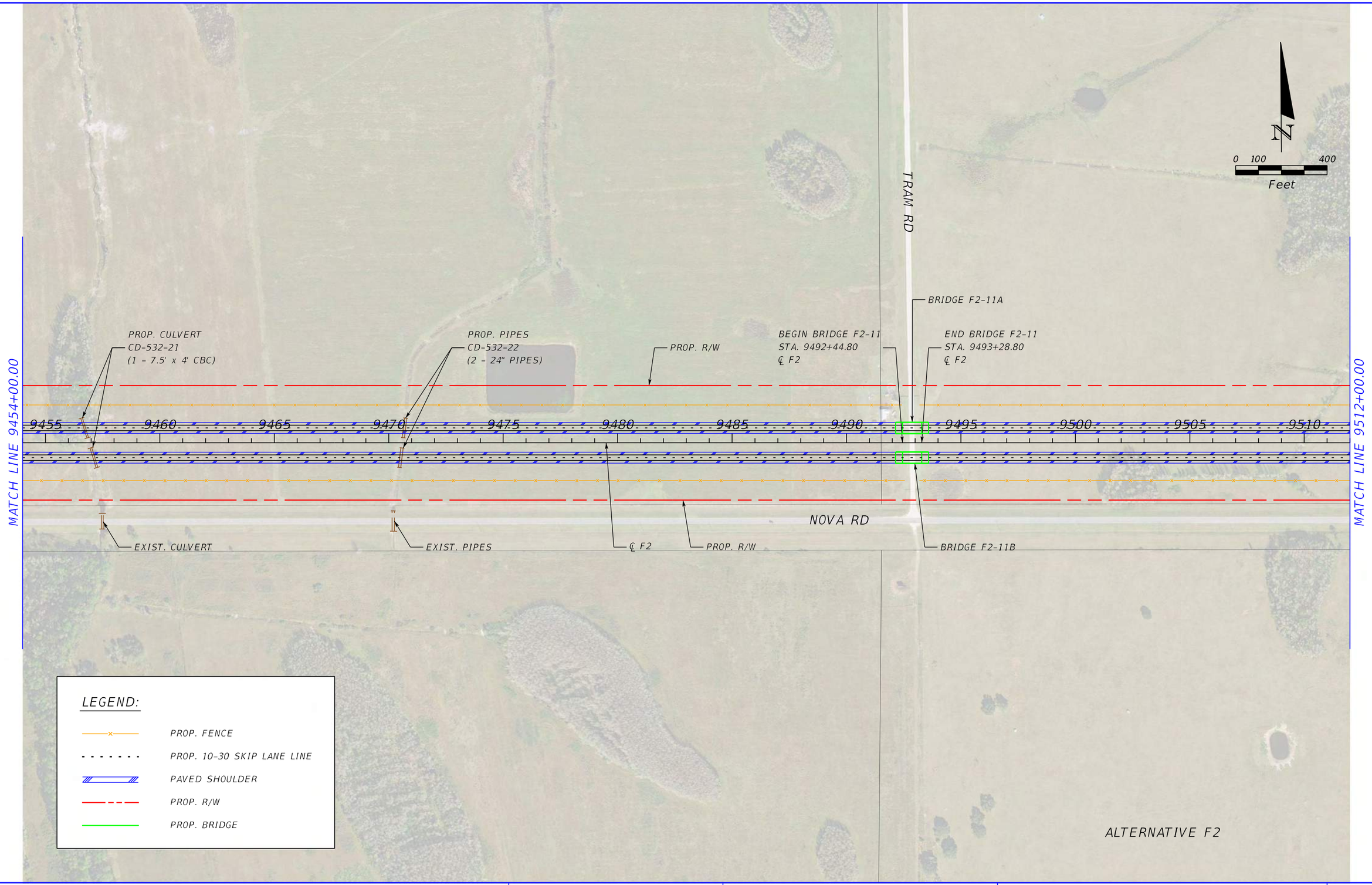
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (08)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

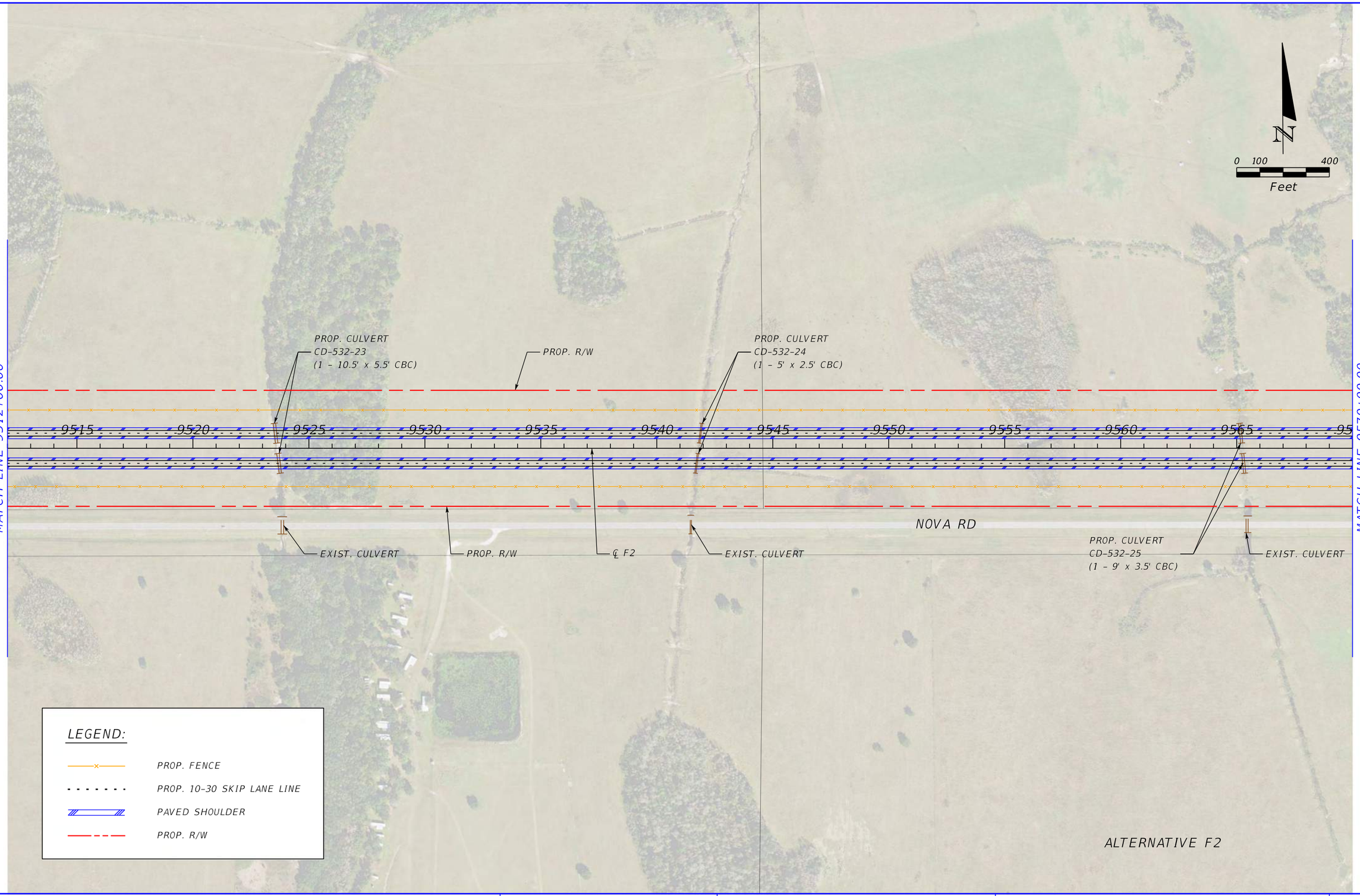
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (09)

SHEET NO.

Michael.Hunter 3/8/2021 4:26:10 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F2\Plan Sheets\PLANRD09.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (10)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 9570+00.00

MATCH LINE 9628+00.00

PROP. R/W

PROP. CULVERT
CD-532-26
(1 - 4' x 2.5' CBC)

PROP. DIRT ROAD

PI STA. 9600+54.12

BRIDGE F2-12A

END BRIDGE F2-12
STA. 9601+49.67
℄ F2

9570 9575 9580 9585 9590 9595 9600 9605 9610 9615 9620 9625

PROP. R/W

EXIST. CULVERT

BEGIN BRIDGE F2-12
STA. 9600+30.65
℄ F2

BRIDGE F2-12B

EXIST. CULVERT

NOVA RD

℄ F2

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. DIRT ROAD
- PROP. R/W

ALTERNATIVE F2

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (11)

SHEET NO.

Michael.Hunter 3/8/2021 4:26:31 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F2\Plan Sheets\PLANRD011.dgn

N

0 100 400

Feet

MATCH LINE 9628+00.00

MATCH LINE 9686+00.00

PROP. CULVERTS
CD-532-28
(2 - 7' x 5' CBC)

PROP. CULVERT
CD-532-29
(1 - 8' x 4' CBC)

PROP. R/W

END BRIDGE F2-13A
STA. 9682+64.20
℄ F2

BRIDGE F2-13A

BEGIN BRIDGE F2-13A
STA. 9680+75.20
℄ F2

9630 9635 9640 9645 9650 9655 9660 9665 9670 9675 9680 9685

EXIST. CULVERTS

EXIST. CULVERT

PROP. R/W

℄ F2

NOVA RD

BEGIN BRIDGE F2-13B
STA. 9680+37.01
℄ F2

BRIDGE F1A-13B

END BRIDGE F2-13B
STA. 9681+62.43
℄ F2

ALTERNATIVE F2

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (12)

SHEET NO.

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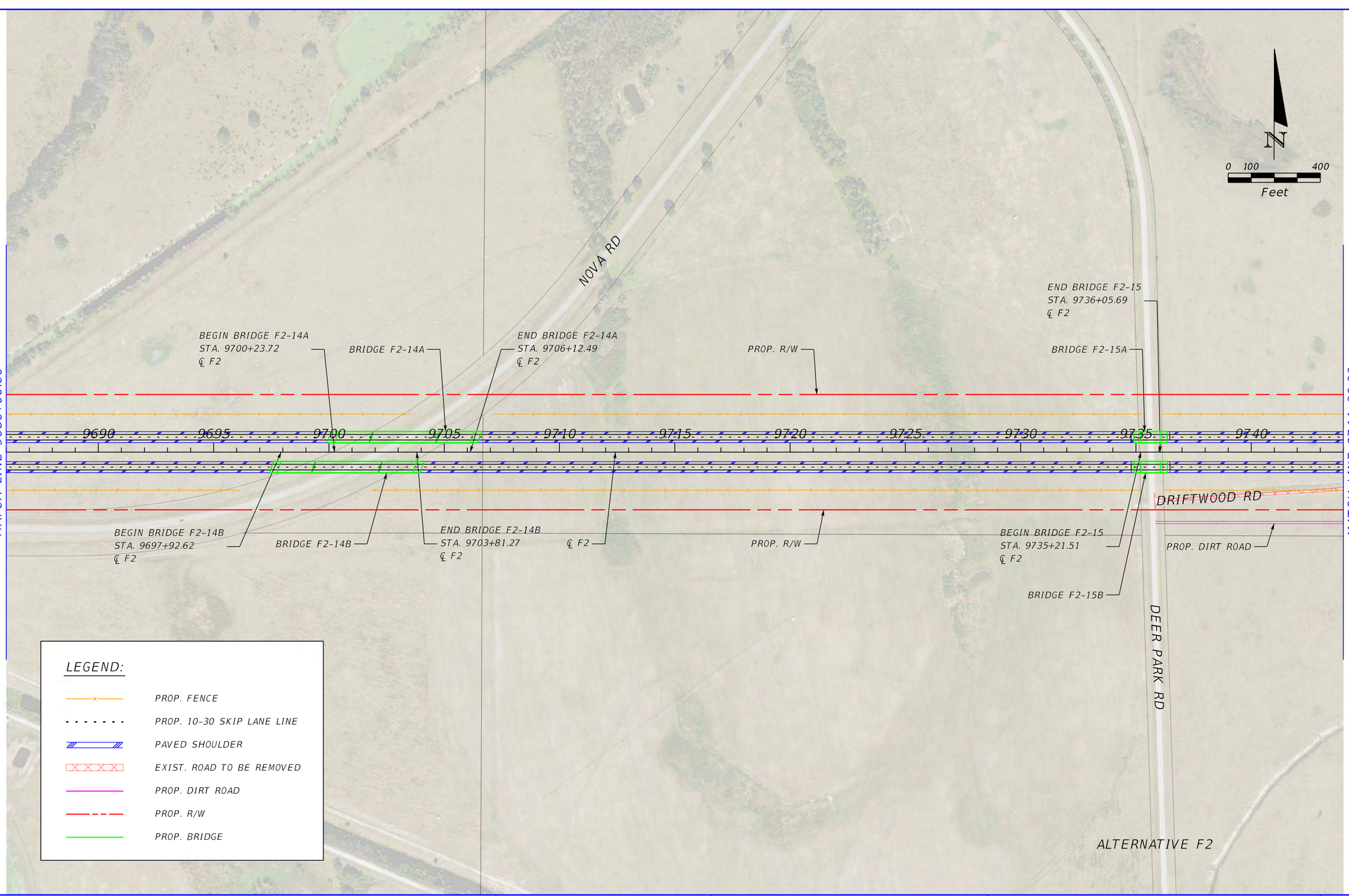

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (13)

SHEET NO.

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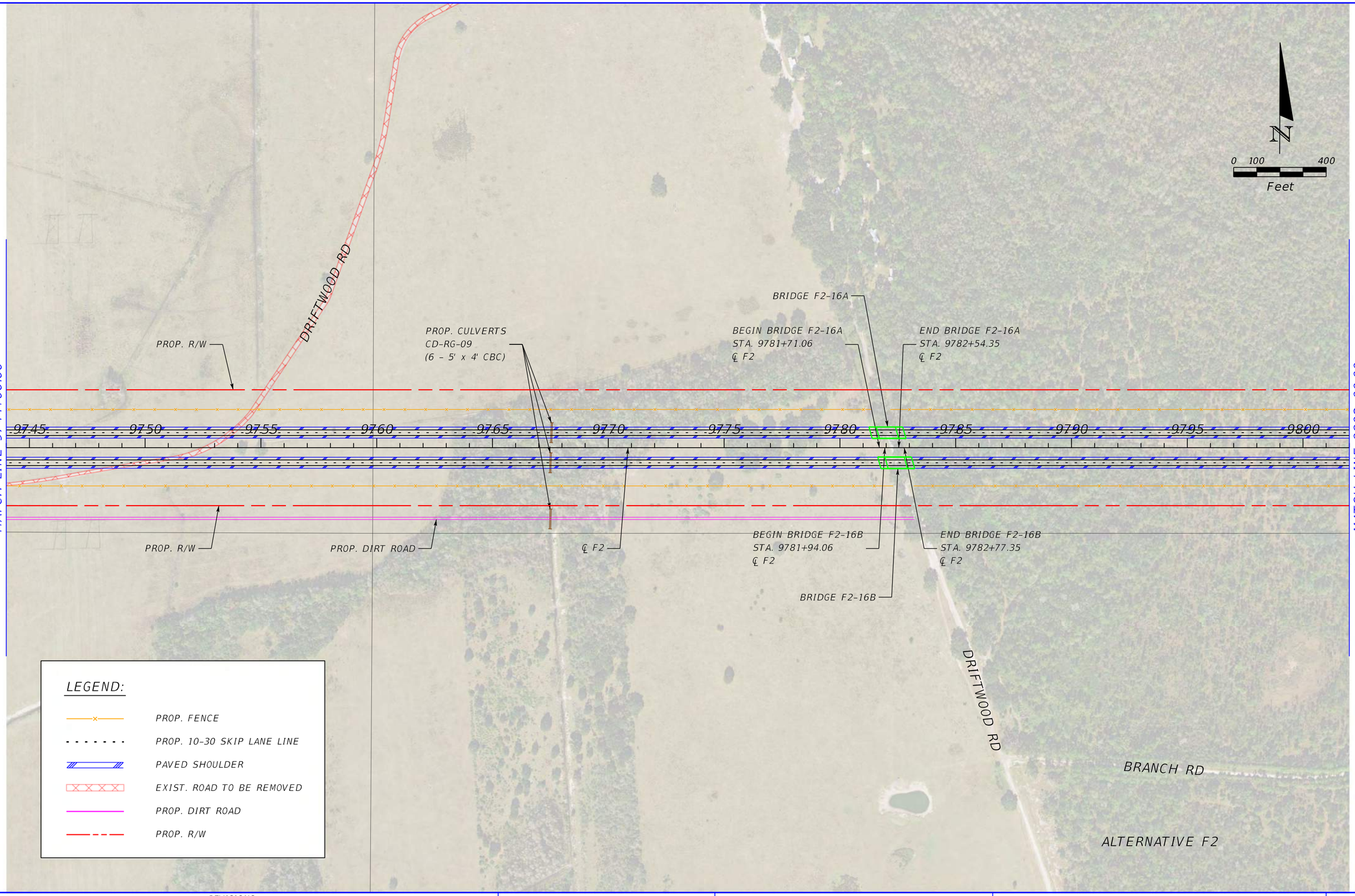


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (14)

SHEET NO.

N

0 100 400
Feet

MATCH LINE 9802+00.00

MATCH LINE 9860+00.00

PROP. R/W

PC STA. 9848+20.85

℄ F2-5

9805 9810 9815 9820 9825 9830 9835 9840 9845 9850 9855 98

PROP. R/W

℄ F2

BRANCH RD

ALTERNATIVE F2

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

CURVE DATA CL_F2-5
PI STA. = 9909+94.29
Δ = 30° 09' 07" (LT)
D = 0° 15' 00"
T = 6,173.44
L = 12,060.61
R = 22,918.00
PC STA. = 9848+20.85
PT STA. = 9968+81.46

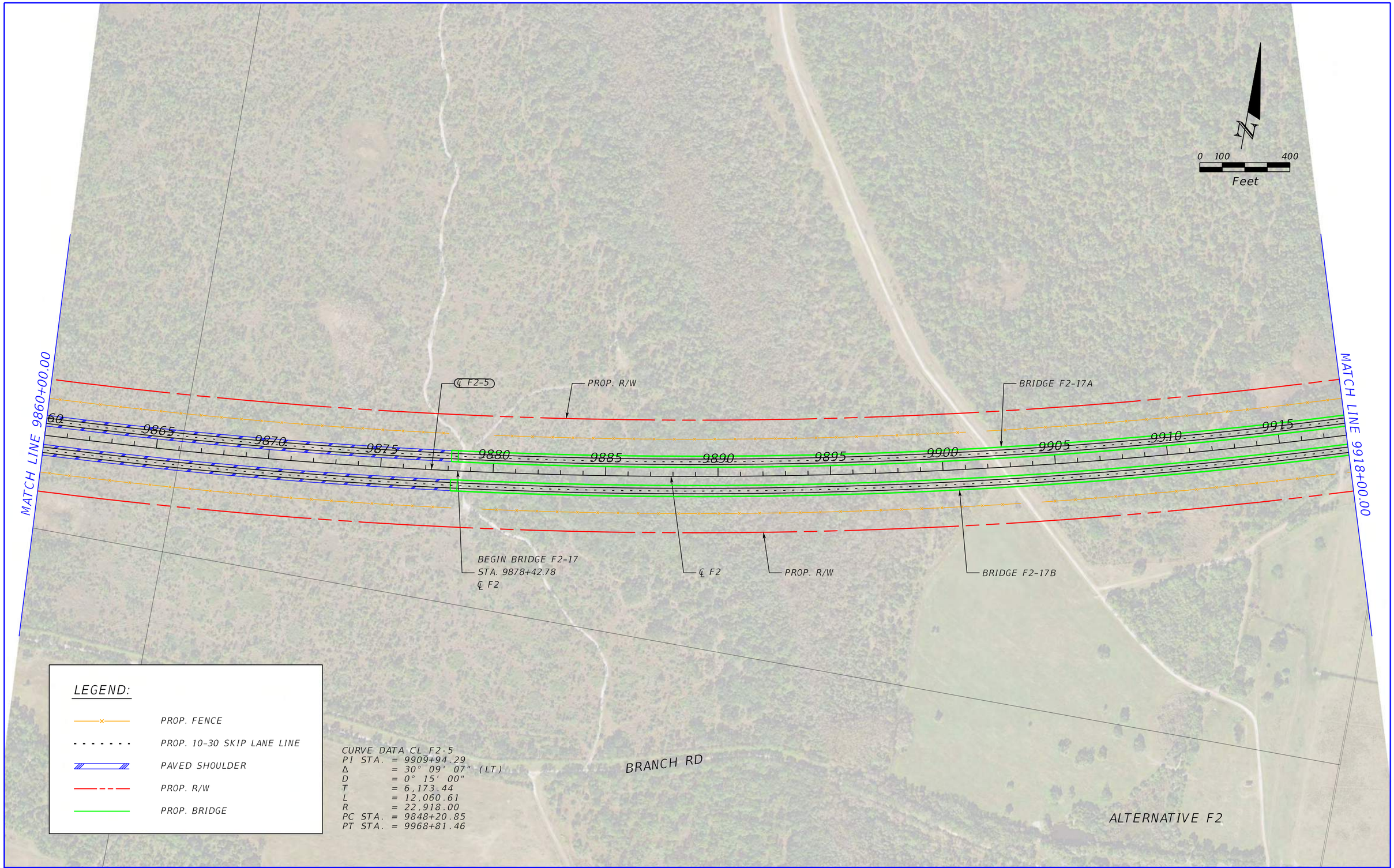
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (15)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

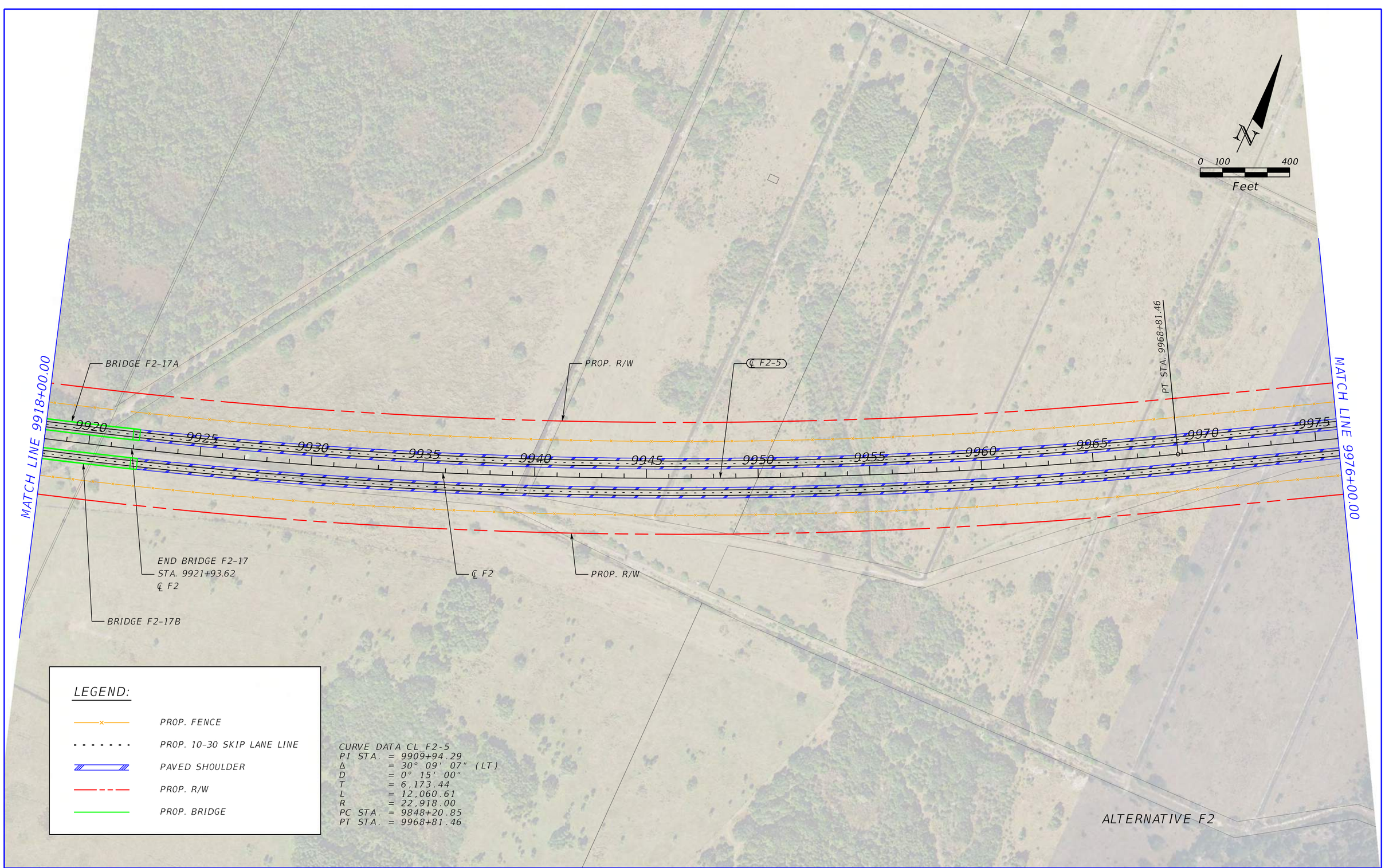
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (16)

SHEET NO.

Michael.Hunter 3/8/2021 4:27:50 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F2\Plan Sheets\PLANRD016.dgn



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL F2-5
PI STA. = 9909+94.29
Δ = 30° 09' 07" (LT)
D = 0° 15' 00"
T = 6,173.44
L = 12,060.61
R = 22,918.00
PC STA. = 9848+20.85
PT STA. = 9968+81.46

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

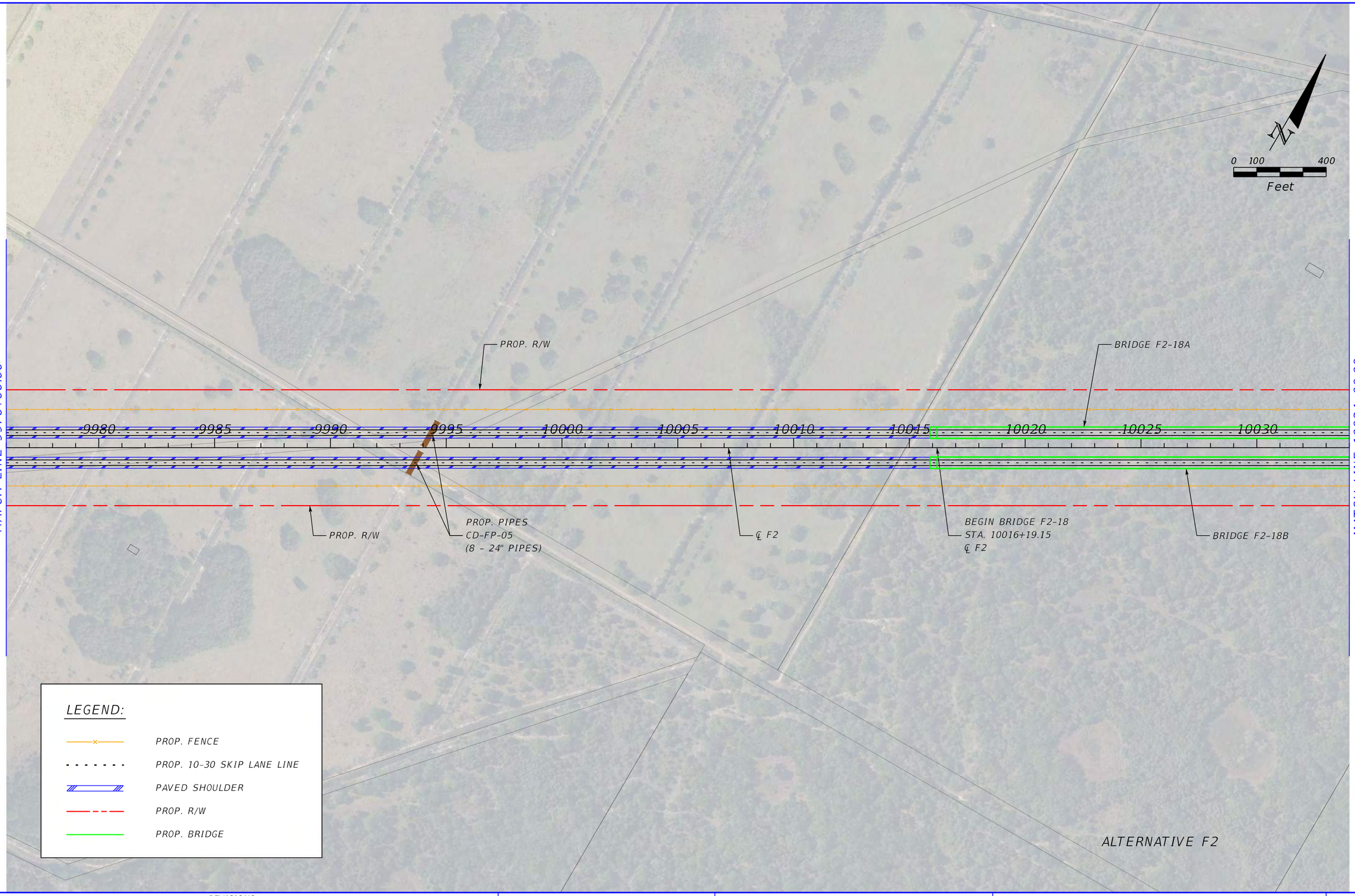
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (17)

SHEET NO.

Michael.Hunter 3/8/2021 4:28:11 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F2\Plan Sheets\PLANRD017.dgn



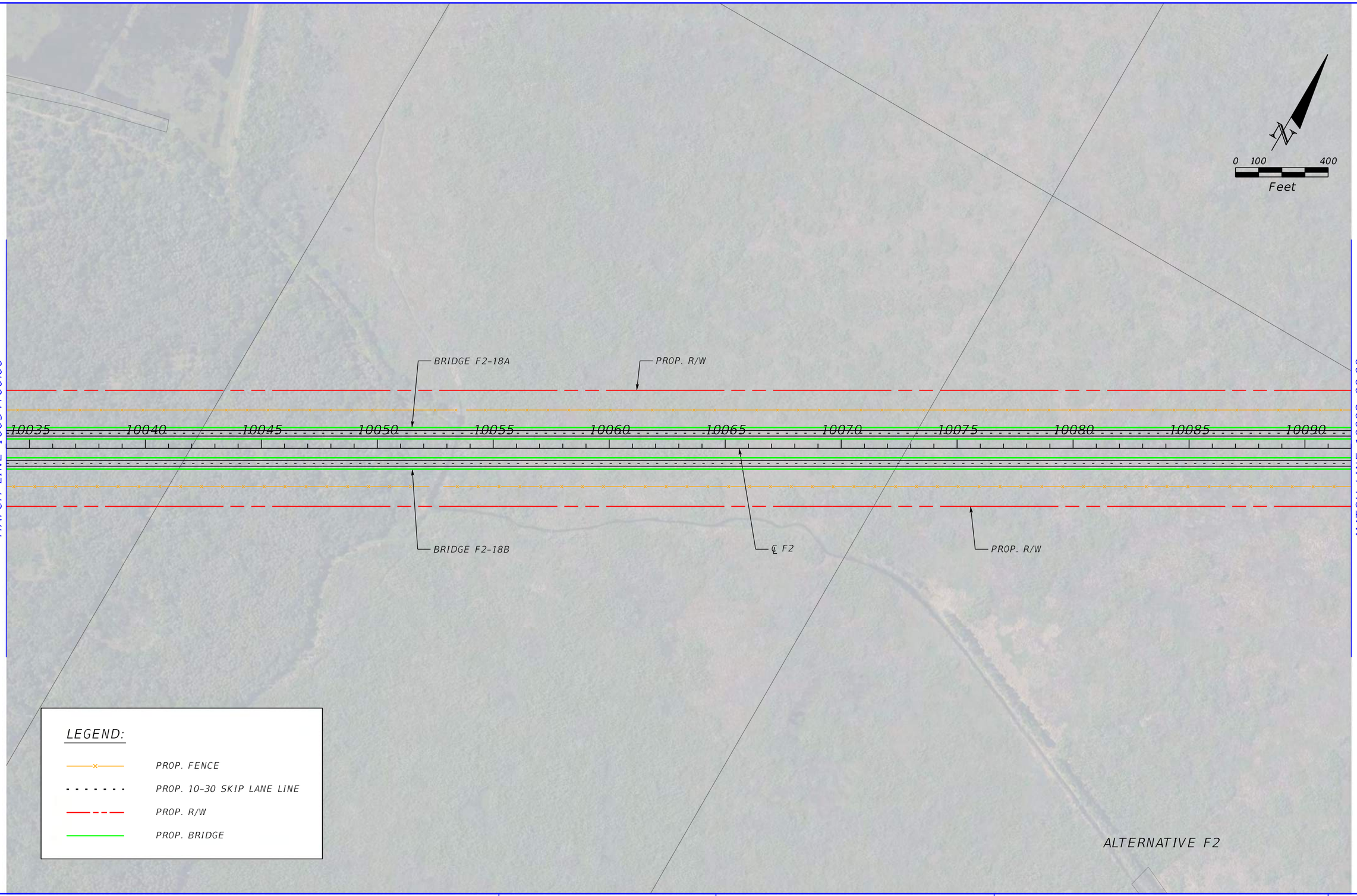
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (18)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

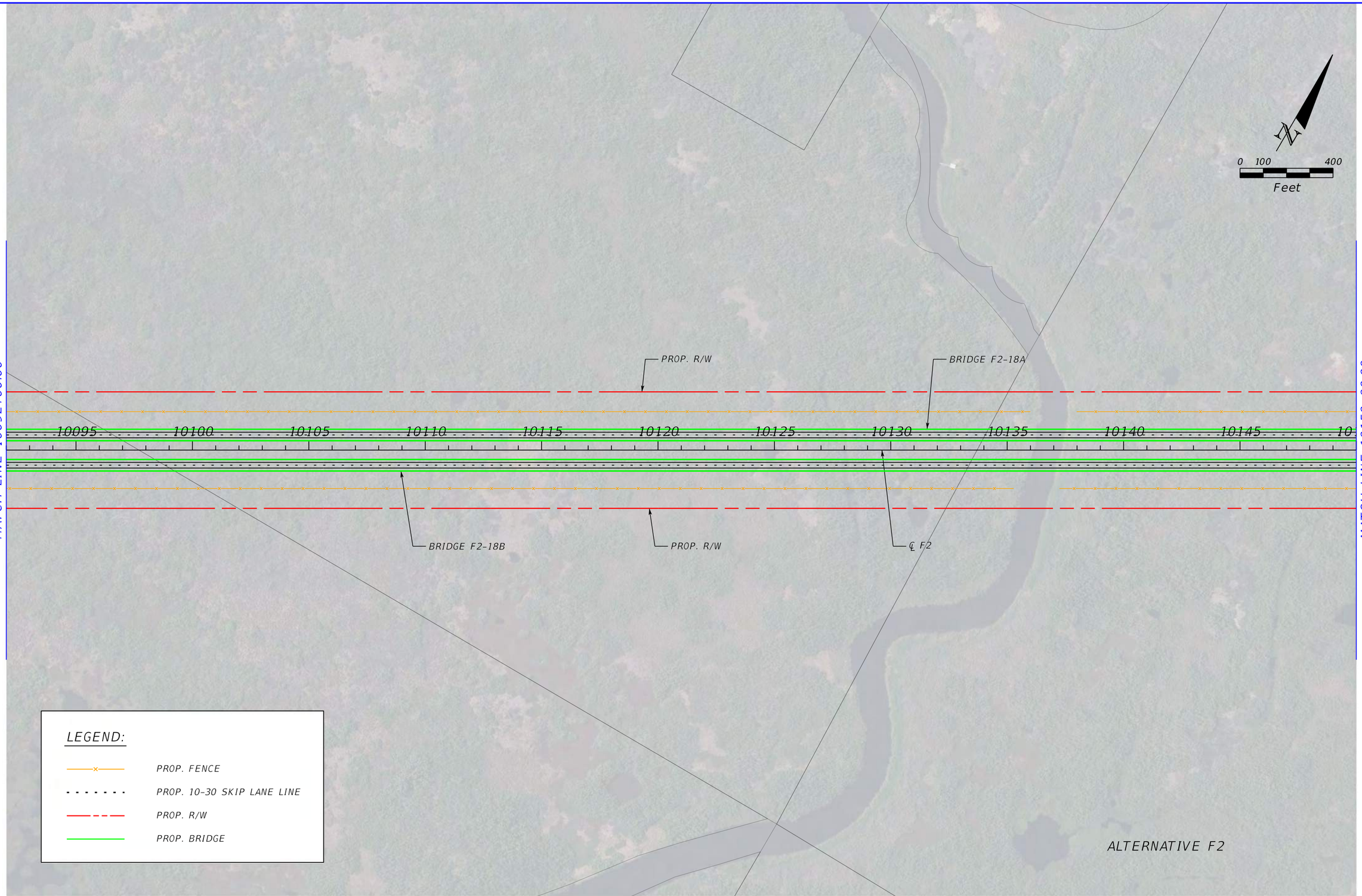
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (19)

SHEET NO.

Michael.Hunter 3/8/2021 4:28:53 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F2\Plan Sheets\PLANRD019.dgn



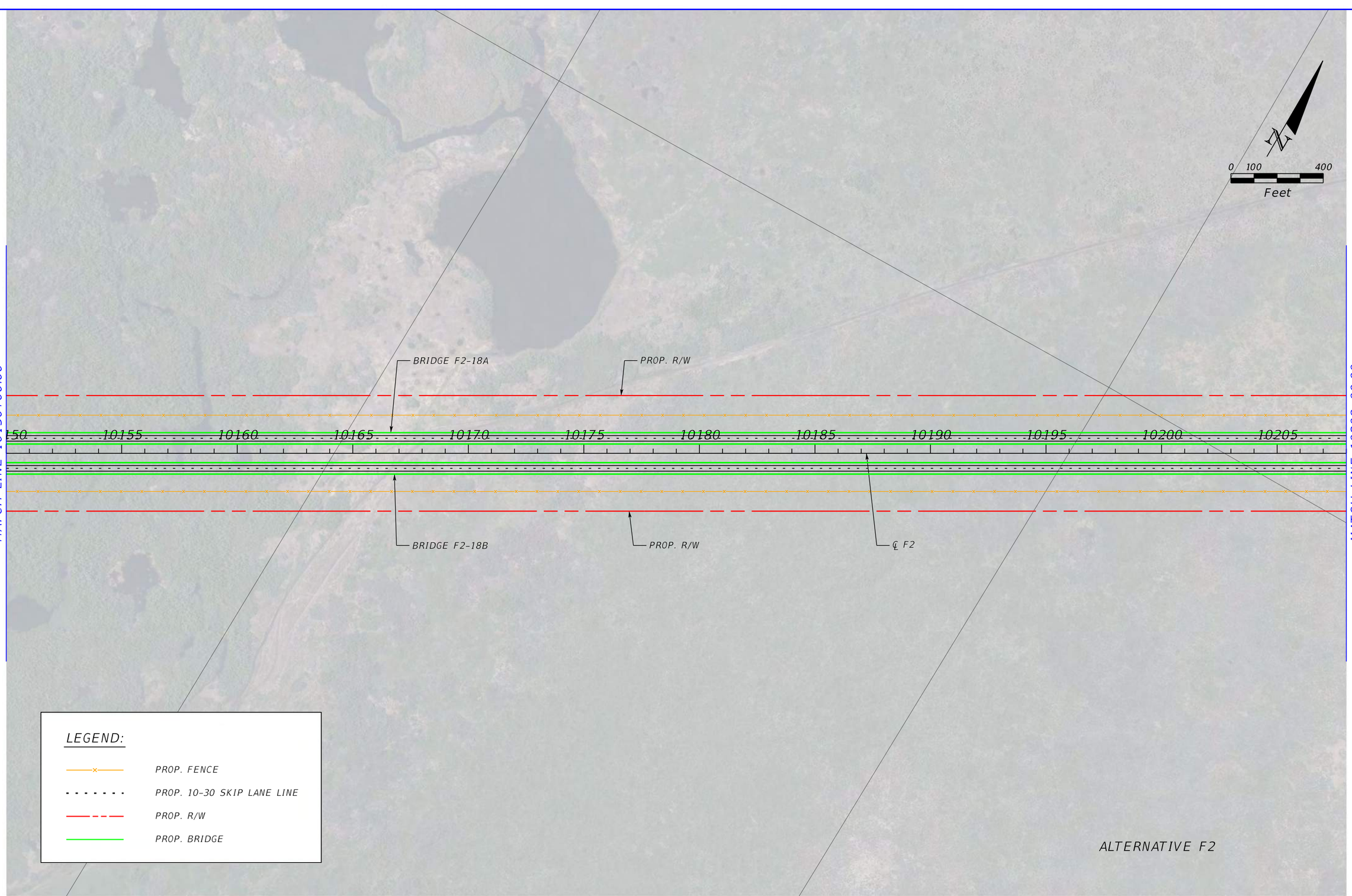
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (20)

SHEET NO.



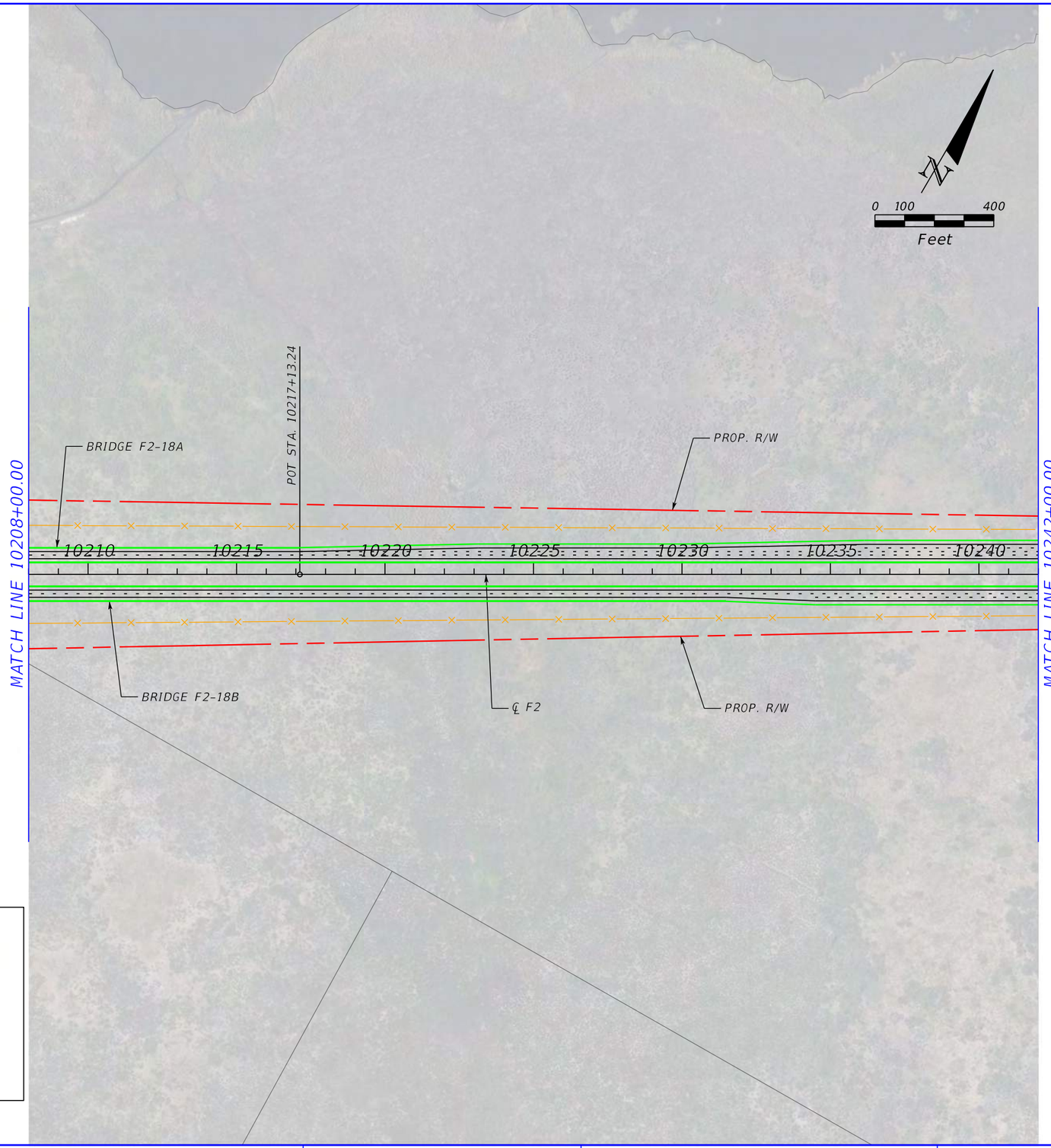
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (21)

SHEET NO.



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PROP. R/W
- PROP. BRIDGE

ALTERNATIVE F2

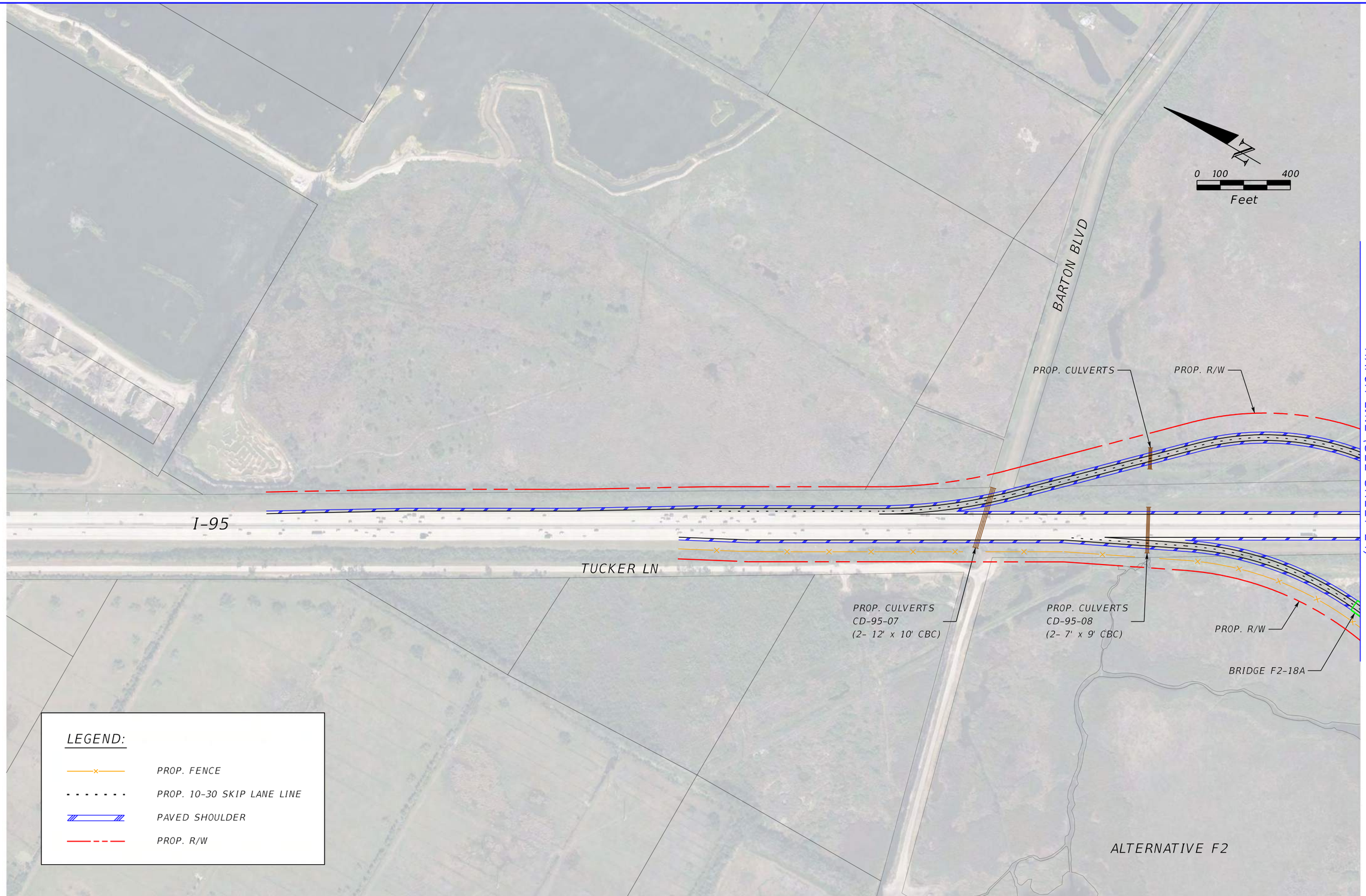
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (22)

SHEET NO.



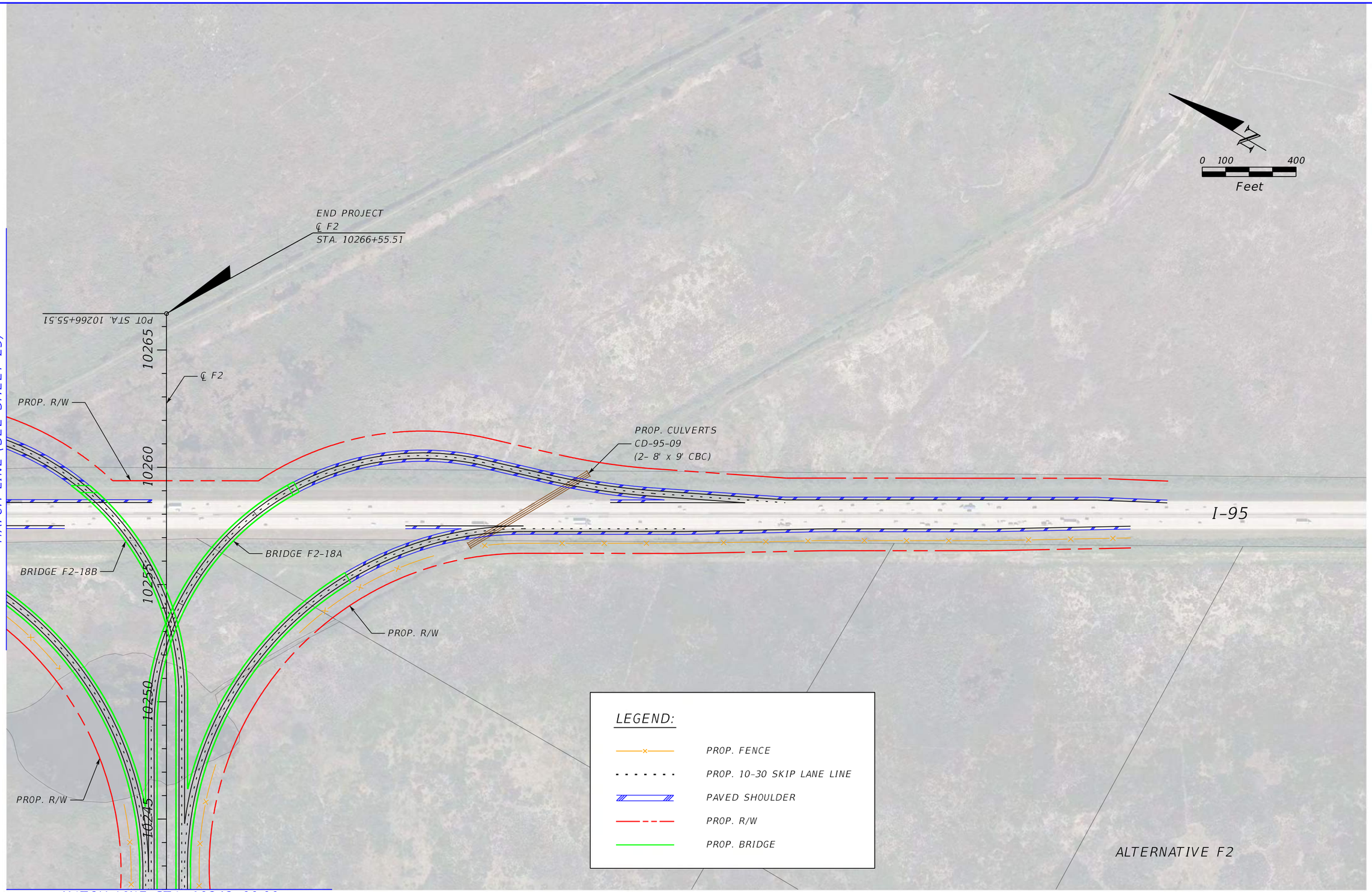
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (23)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F2	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (24)

SHEET NO.

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

APPENDIX J

Concept Plans for Alternative F3

LAKE PRESTON

S STATE HWY 13

LIME ROCK RD

TRAM RD

N

0 1000 5000

Feet

11000 11050 11100 11150 11200 11250 11300 11350 11400 11450 11500 11550 11600 11650

NOVA RD

1 2 3 4 5 6 7 8 9 10 11 12

BEGIN PROJECT
℄ F3
STA. 11000+00.00

MATCH LINE 11686+00.00

LAKE CONLIN

ALTERNATIVE F3

REVISIONS					CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (1)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					ALT. F3	BREVARD OSCEOLA			

MATCH LINE 11686+00.00

11700

11750

11800

11850

11900

11950

12000

12050

13

14

15

16

17

18

19

MATCH LINE 12092+00.00

DRIFTWOOD RD

BRANCH RD

LAKE WINDER

DEER PARK RD

SAWMILL GRDE

VIERA BLVD

I-95

JUDGE FRAN JAMIESON WAY

N WICKHAM RD

STADIUM PKWY

N

0 1000 5000

Feet

ALTERNATIVE F3

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (2)

SHEET NO.

Spencer.Edwards 3/4/2021 7:57:08 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F3\Plan Sheets\PLAYRD02.dgn

MATCH LINE 12092+00.00

20 2100 21 12150 22 12200 23 12250 24 12300 25 12350 26 12400 27 12450 28 12500 29 12550 30 12600 31 12650 32 12700 12750

END PROJECT
℄ F3
STA. 12757+47.62

W EAU GALLIE BLVD

N JOHN RODES BLVD

ELLIS RD

POST RD

PARKWAY DR

I-95

LAKE WASHINGTON

LAKE WASHINGTON DR

N

0 1000 5000
Feet

ALTERNATIVE F3

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

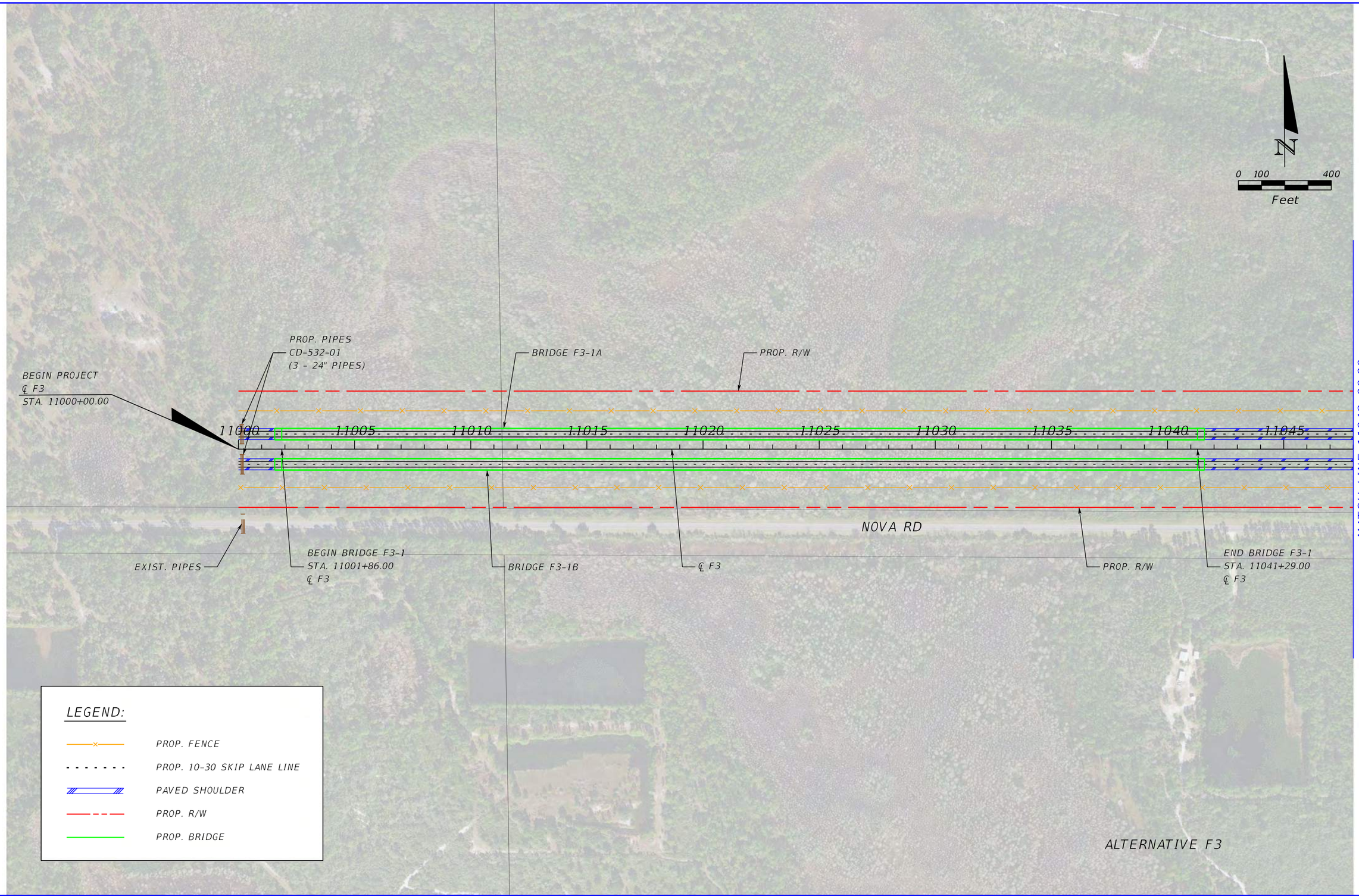
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (3)

SHEET NO.

Spencer.Edwards 3/4/2021 7:57:12 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F3\Plan Sheets\PLAYRD03.dgn



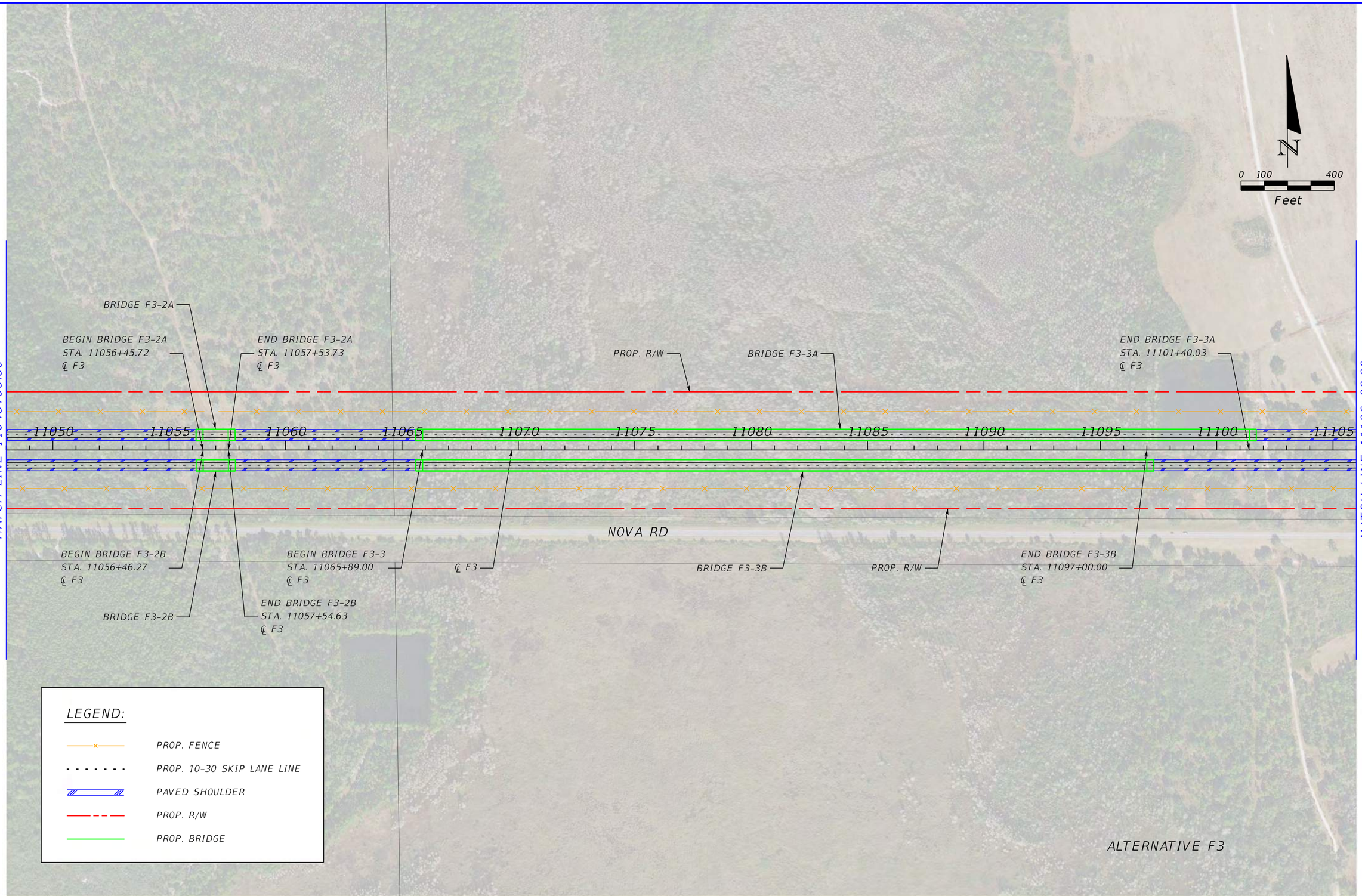
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (01)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (02)

SHEET NO.

N

0 100 400

Feet

BEGIN BRIDGE F3-4A
STA. 11106+45.72
℄ F3

BRIDGE F3-4A

END BRIDGE F3-4A
STA. 11107+53.73
℄ F3

BEGIN BRIDGE F3-5
STA. 11112+95.00
℄ F3

BRIDGE F3-5A

PROP. R/W

END BRIDGE F3-5
STA. 11151+60.00
℄ F3

MATCH LINE 11106+00.00

11110 11115 11120 11125 11130 11135 11140 11145 11150 11155 11160

MATCH LINE 11164+00.00

NOVA RD

END BRIDGE F3-4B
STA. 11108+58.01
℄ F3

BRIDGE F3-4B

BEGIN BRIDGE F3-4B
STA. 11107+49.66
℄ F3

BRIDGE F3-5B

℄ F3

PROP. R/W

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

ALTERNATIVE F3

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (03)

SHEET NO.

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (04)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 11222+00.00

11225 11230 11235 11240 11245 11250 11255 11260 11265 11270 11275

MATCH LINE 11280+00.00

PROP. R/W

BRIDGE F3-7A

PROP. PIPES
CD-532-10
(2 - 24" PIPES)

EXIST. PIPES

℄ F3

PROP. R/W

NOVA RD

BEGIN BRIDGE F3-7
STA. 11270+00.00
℄ F3

BRIDGE F3-7B

ALTERNATIVE F3

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

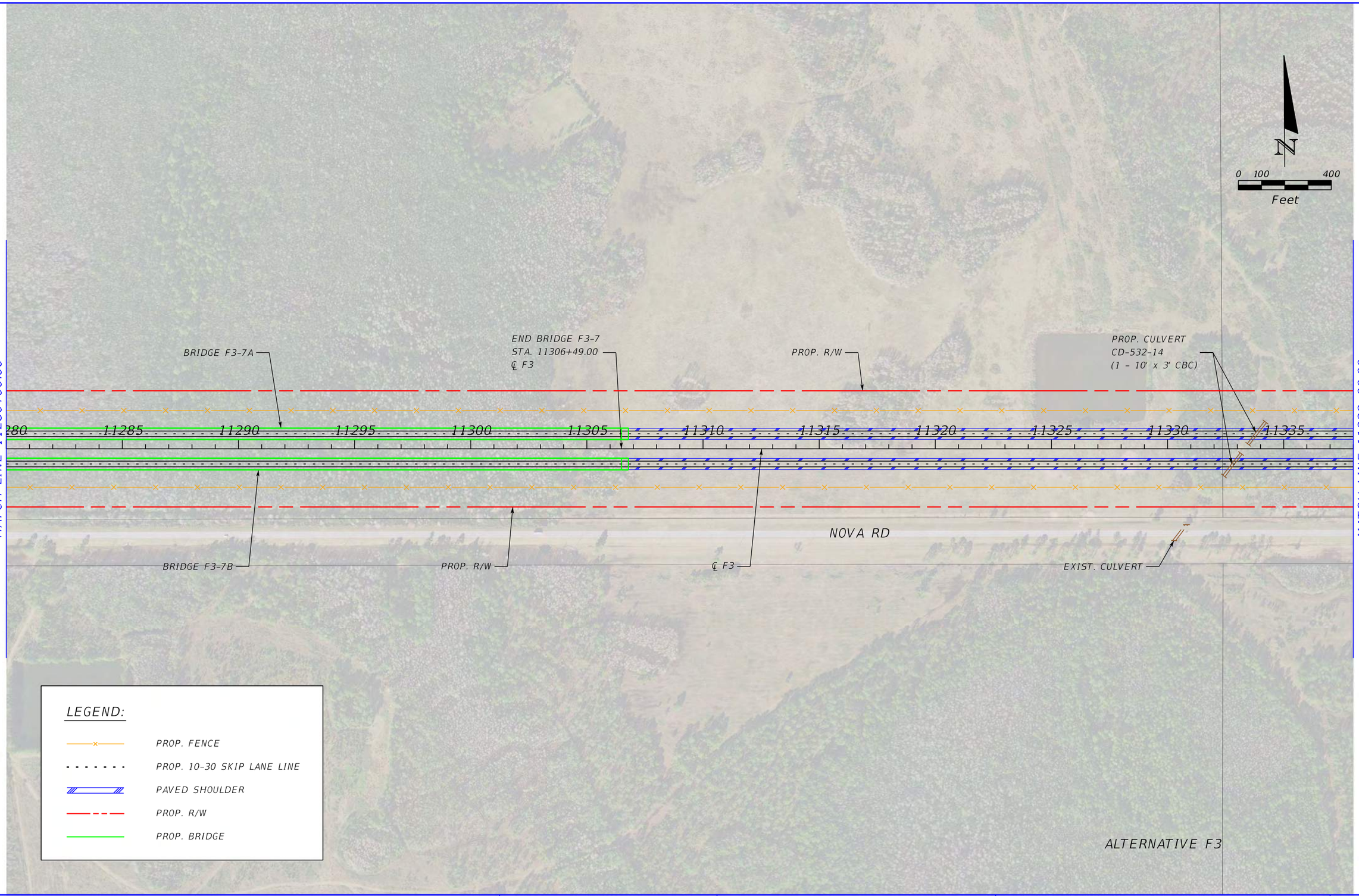
CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (05)

SHEET NO.

Spencer.Edwards 3/4/2021 7:57:53 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F3\Plan Sheets\PLANRD05.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

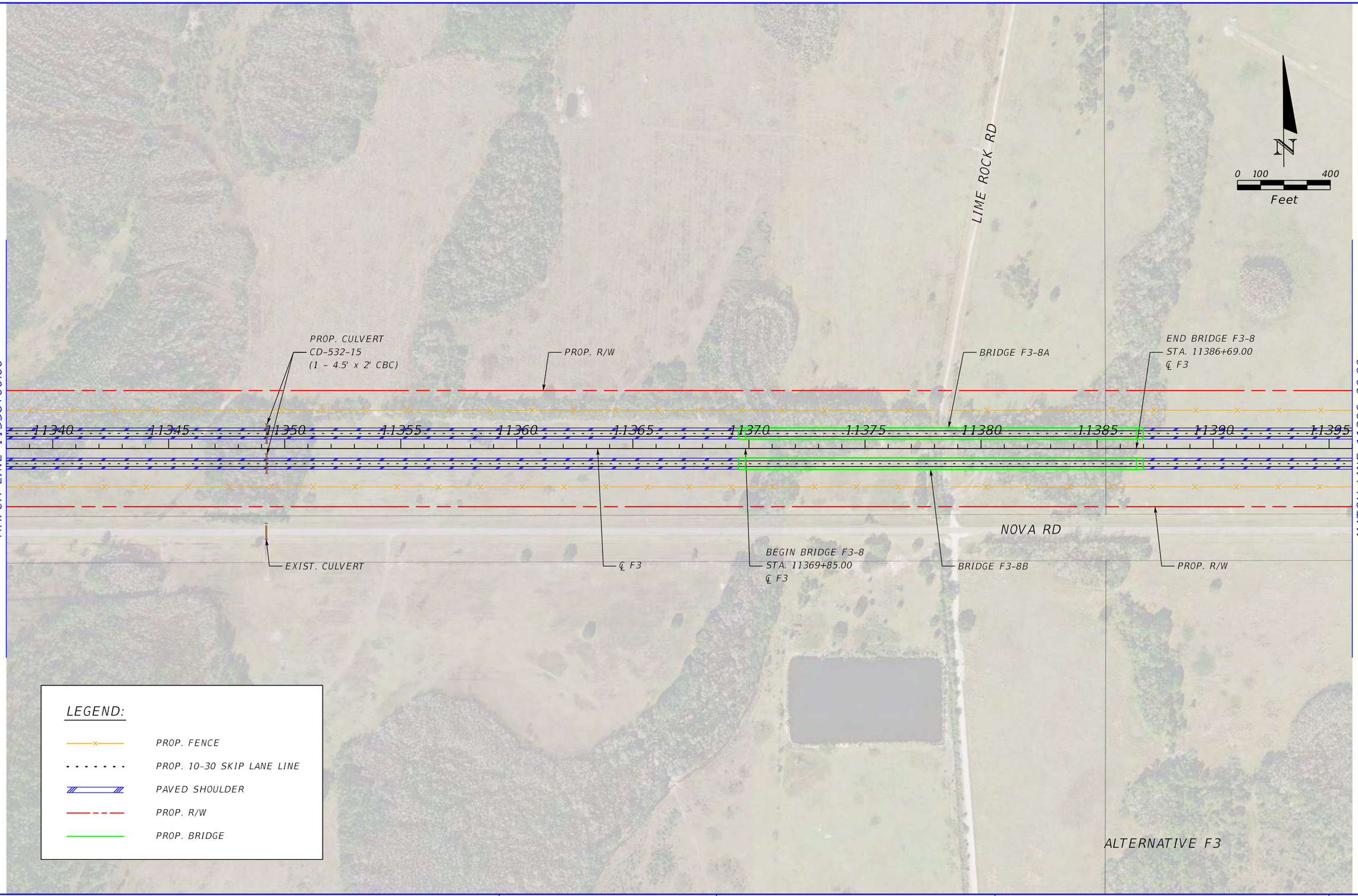
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (06)

SHEET NO.

Spencer.Edwards 3/4/2021 7:58:00 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F3\Plan Sheets\PLANRD06.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (07)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 11396+00.00

MATCH LINE 11454+00.00

BRIDGE F3-9B

END BRIDGE F3-9
STA. 11402+17.43
℄ F3

PROP. CULVERT
CD-532-19
(1 - 9' x 3' CBC)

BEGIN BRIDGE F3-10A
STA. 11427+18.69
℄ F3

BRIDGE F3-10A

END BRIDGE F3-10A
STA. 11427+98.58
℄ F3

PROP. CULVERT
CD-532-20
(1 - 8' x 2.5' CBC)

PROP. R/W

11400 11405 11410 11415 11420 11425 11430 11435 11440 11445 11450

BEGIN BRIDGE F3-9
STA. 11401+43.43
℄ F3

BRIDGE F3-9B

EXIST. CULVERT

℄ F3

PROP. R/W

NOVA RD

BEGIN BRIDGE F3-10B
STA. 11427+62.33
℄ F3

BEGIN BRIDGE F3-10B
STA. 11427+62.33
℄ F3

EXIST. CULVERT

BRIDGE F3-10B

ALTERNATIVE F3

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (08)

SHEET NO.

Spencer.Edwards 3/4/2021 7:58:16 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F3\Plan Sheets\PLANRD08.dgn



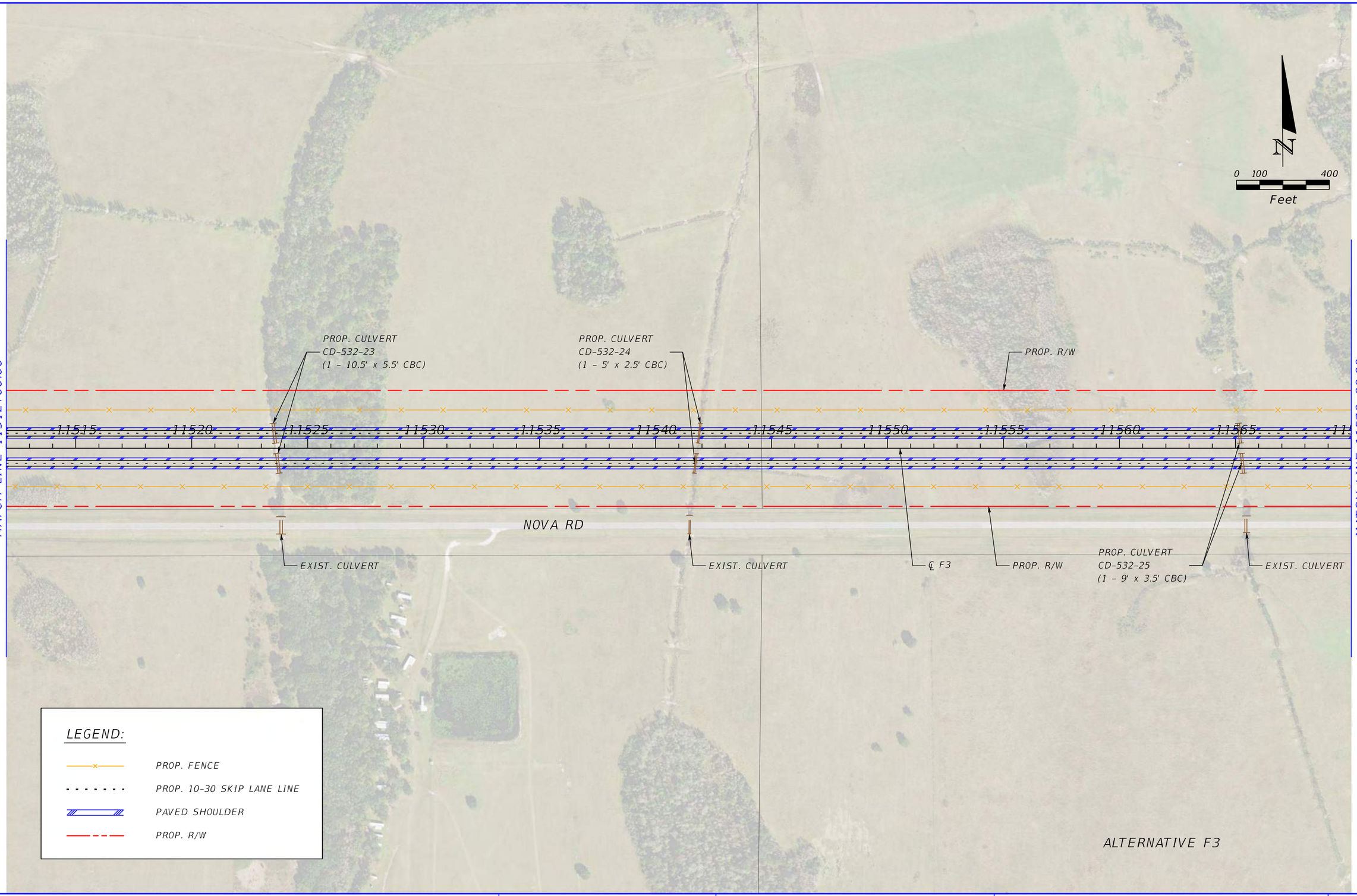
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (09)

SHEET NO.



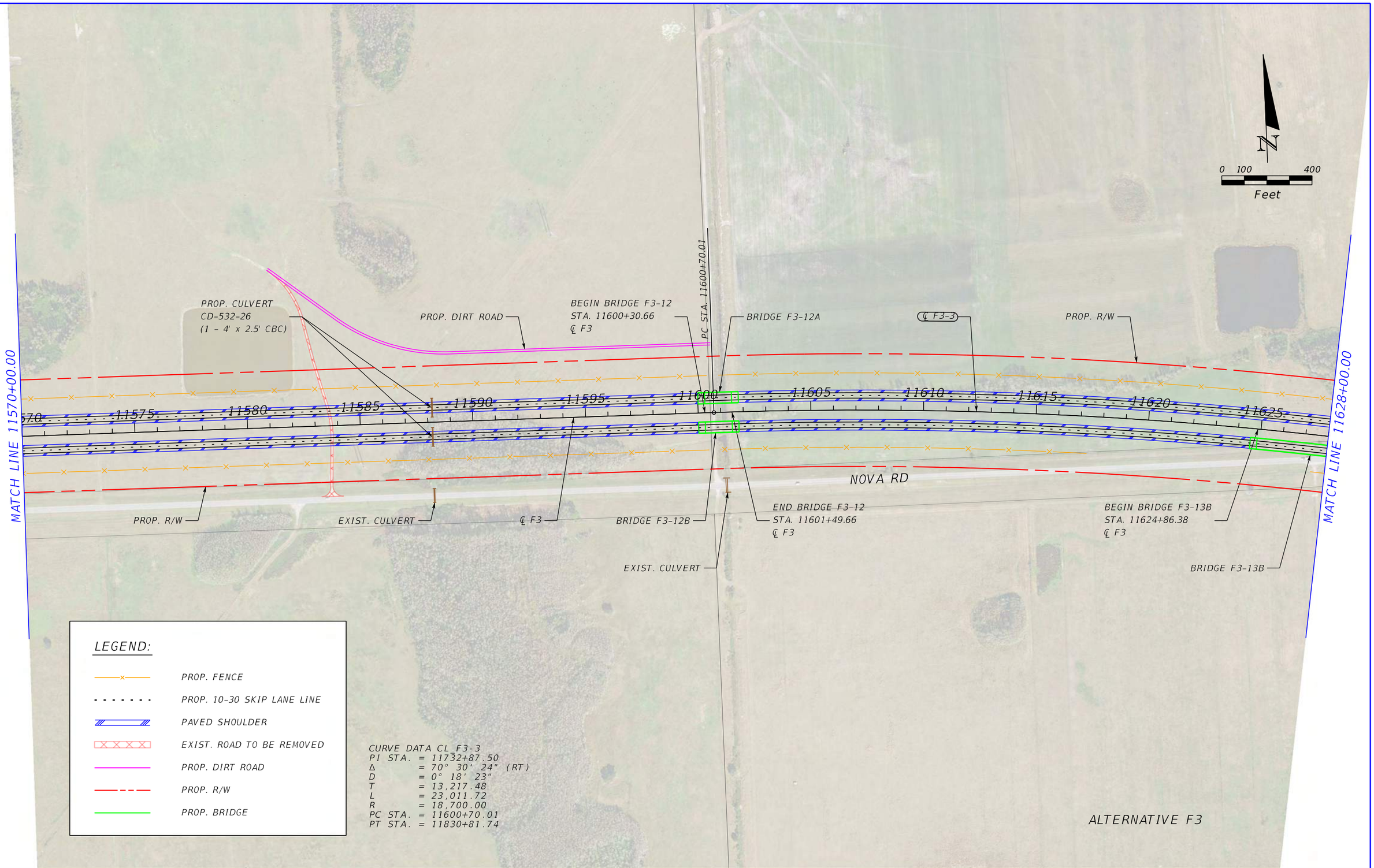
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (10)

SHEET NO.



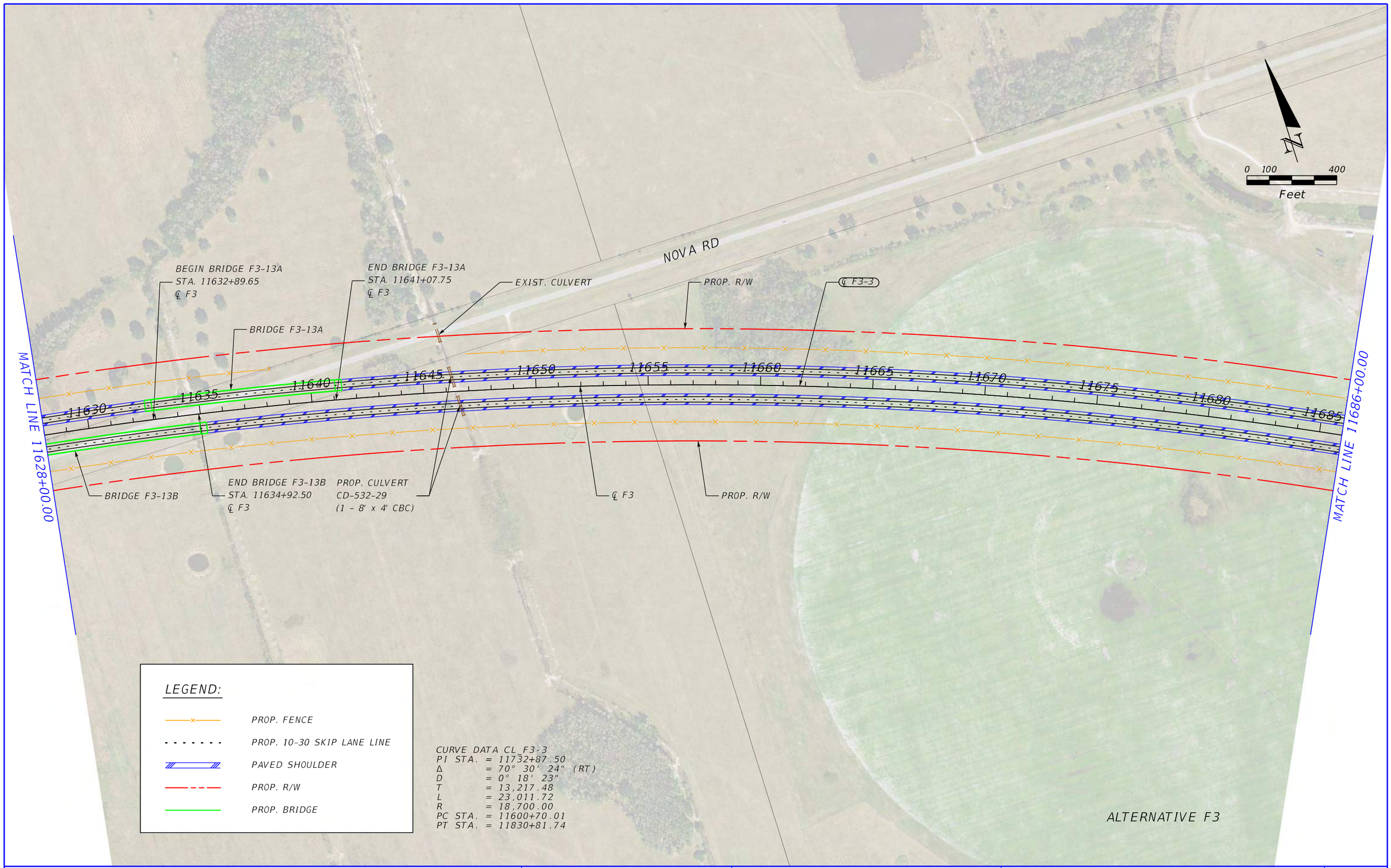
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (11)

SHEET NO.



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL F3-3
PI STA. = 11732+87.50
Δ = 70° 30' 24" (RT)
D = 0° 18' 23"
T = 13,217.48
L = 23,011.72
R = 18,700.00
PC STA. = 11600+70.01
PT STA. = 11830+81.74

ALTERNATIVE F3

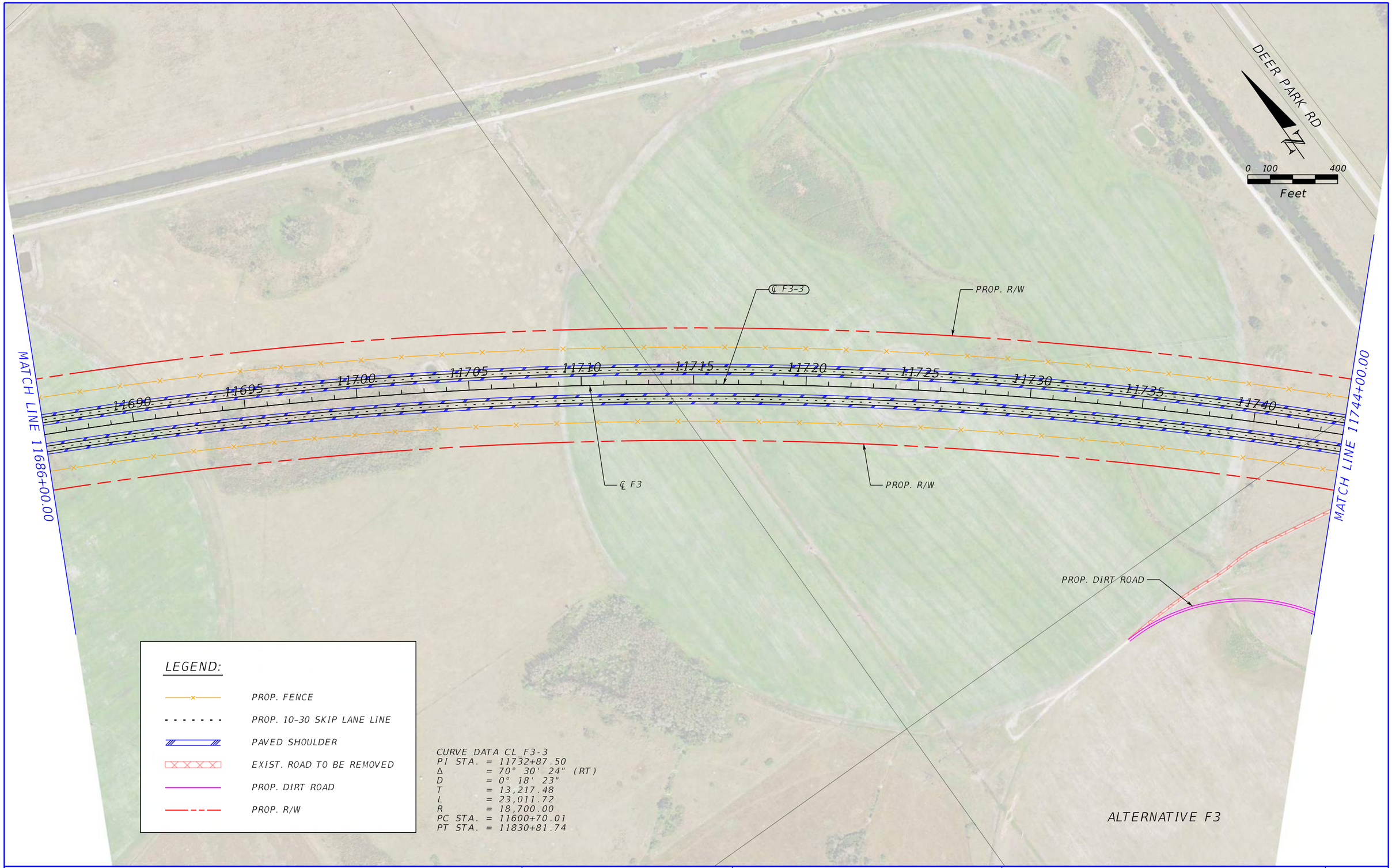
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (12)

SHEET NO.



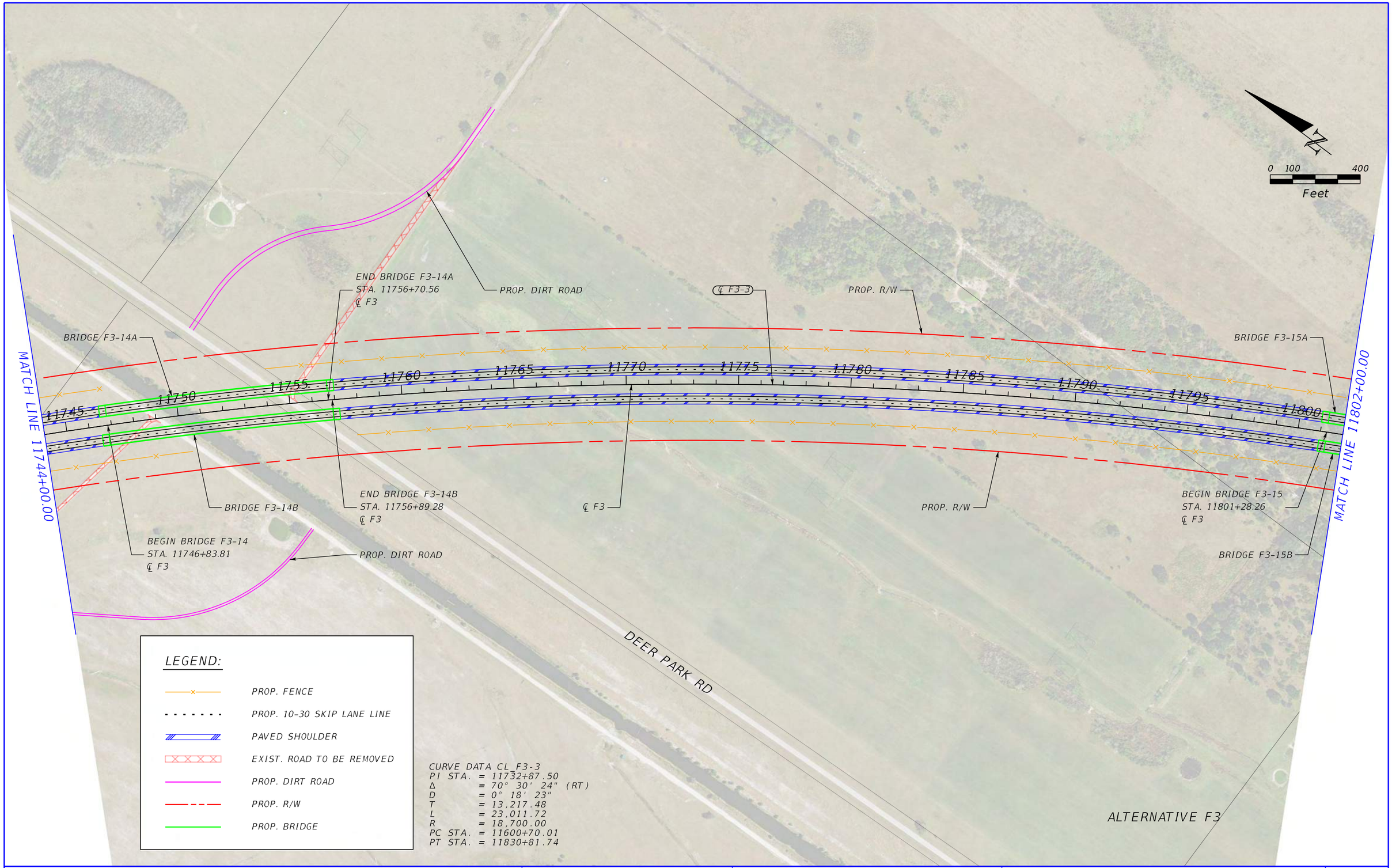
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (13)

SHEET NO.



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. DIRT ROAD
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL_F3-3
PI STA. = 11732+87.50
Δ = 70° 30' 24" (RT)
D = 0° 18' 23"
T = 13,217.48
L = 23,011.72
R = 18,700.00
PC STA. = 11600+70.01
PT STA. = 11830+81.74

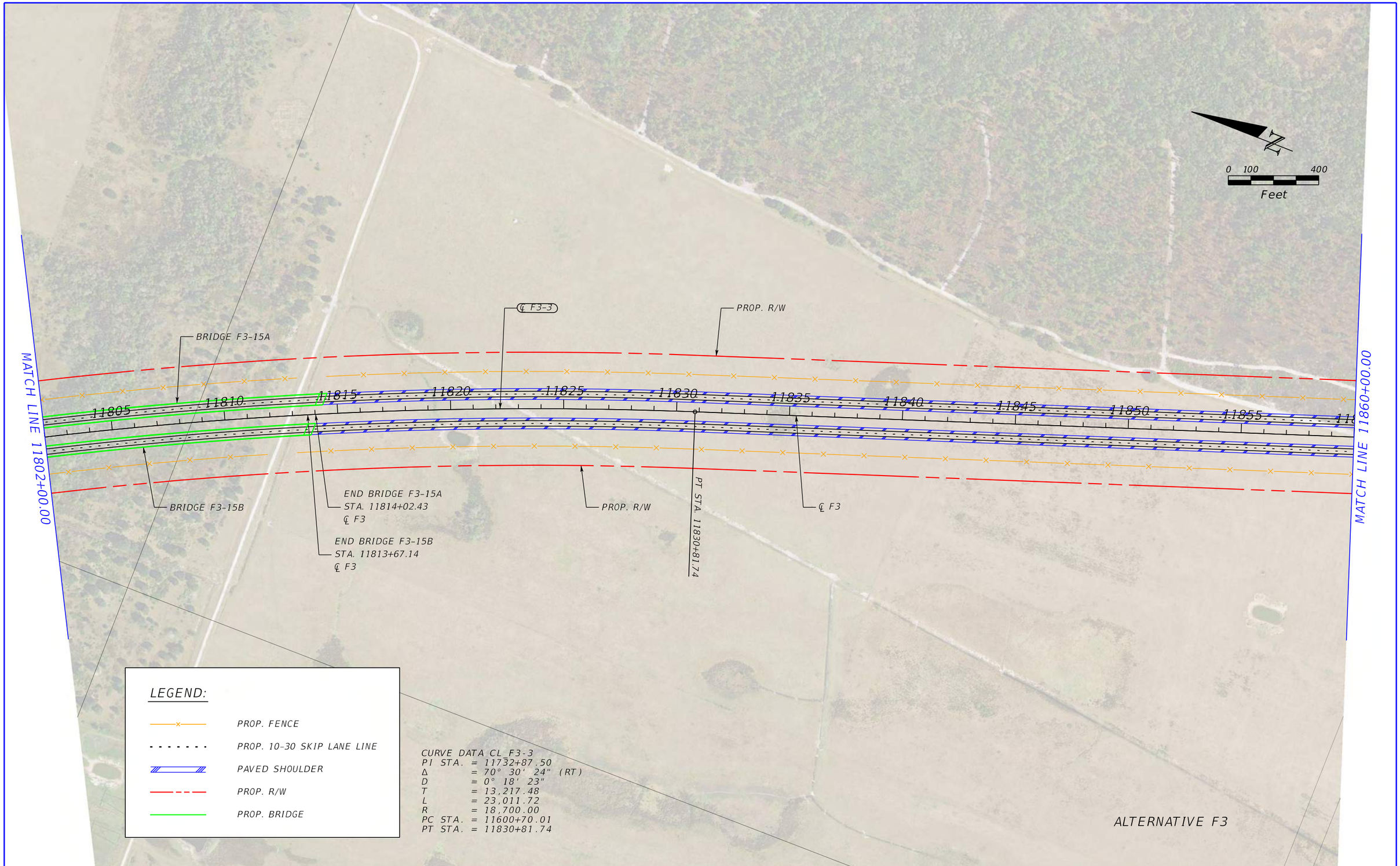
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

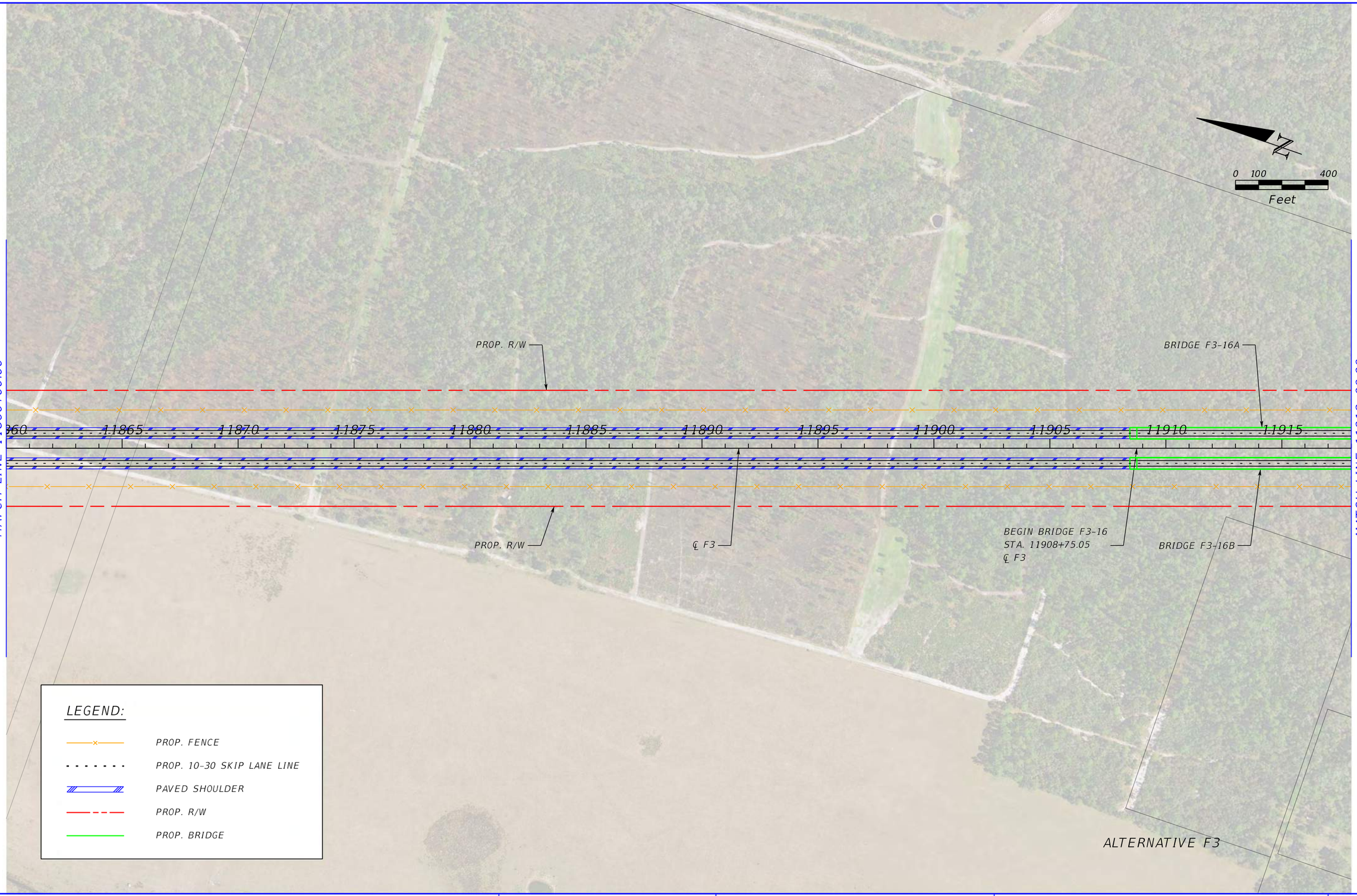
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (14)

SHEET NO.



REVISIONS					CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (15)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					ALT. F3	BREVARD OSCEOLA			



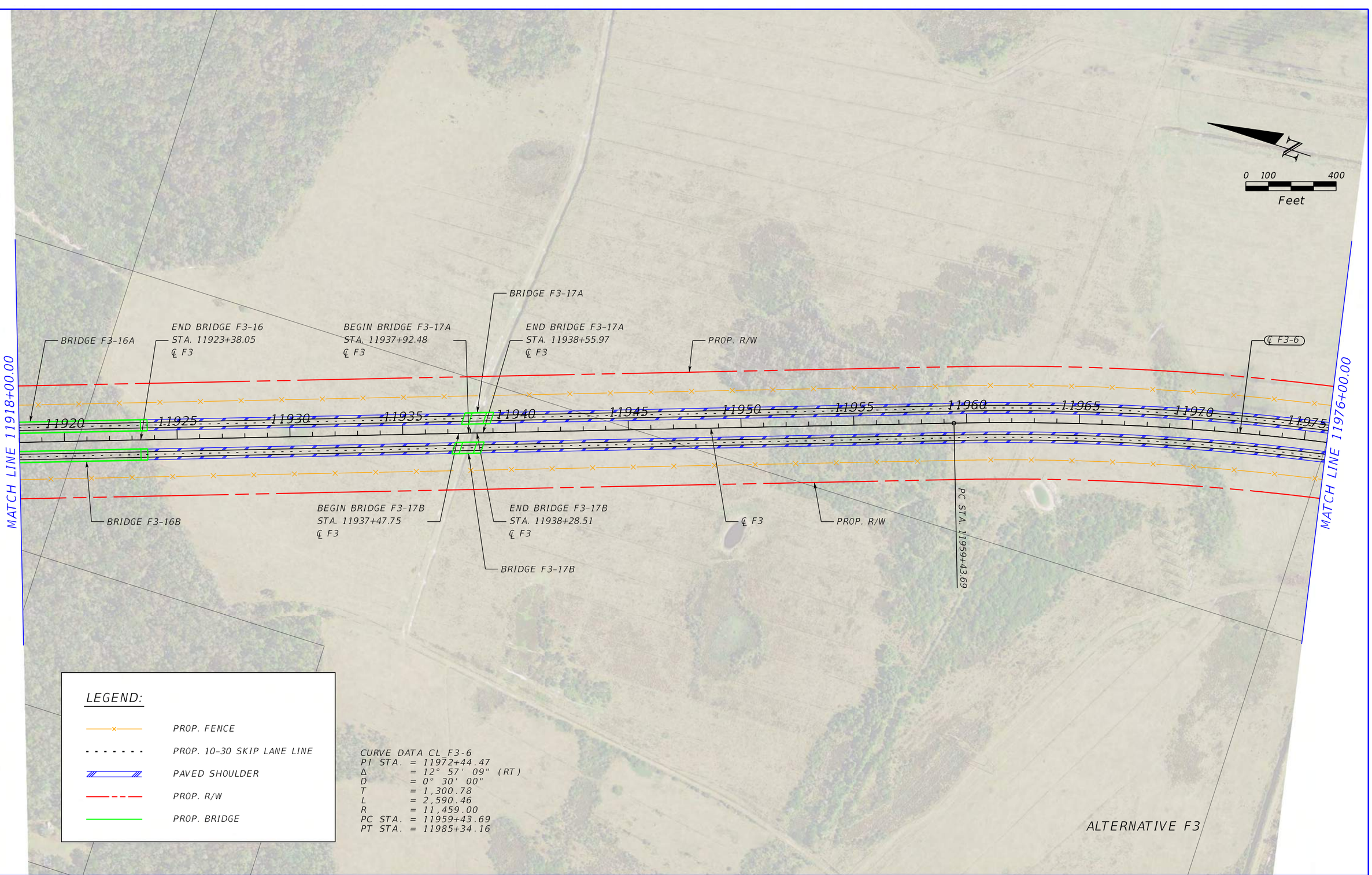
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (16)

SHEET NO.



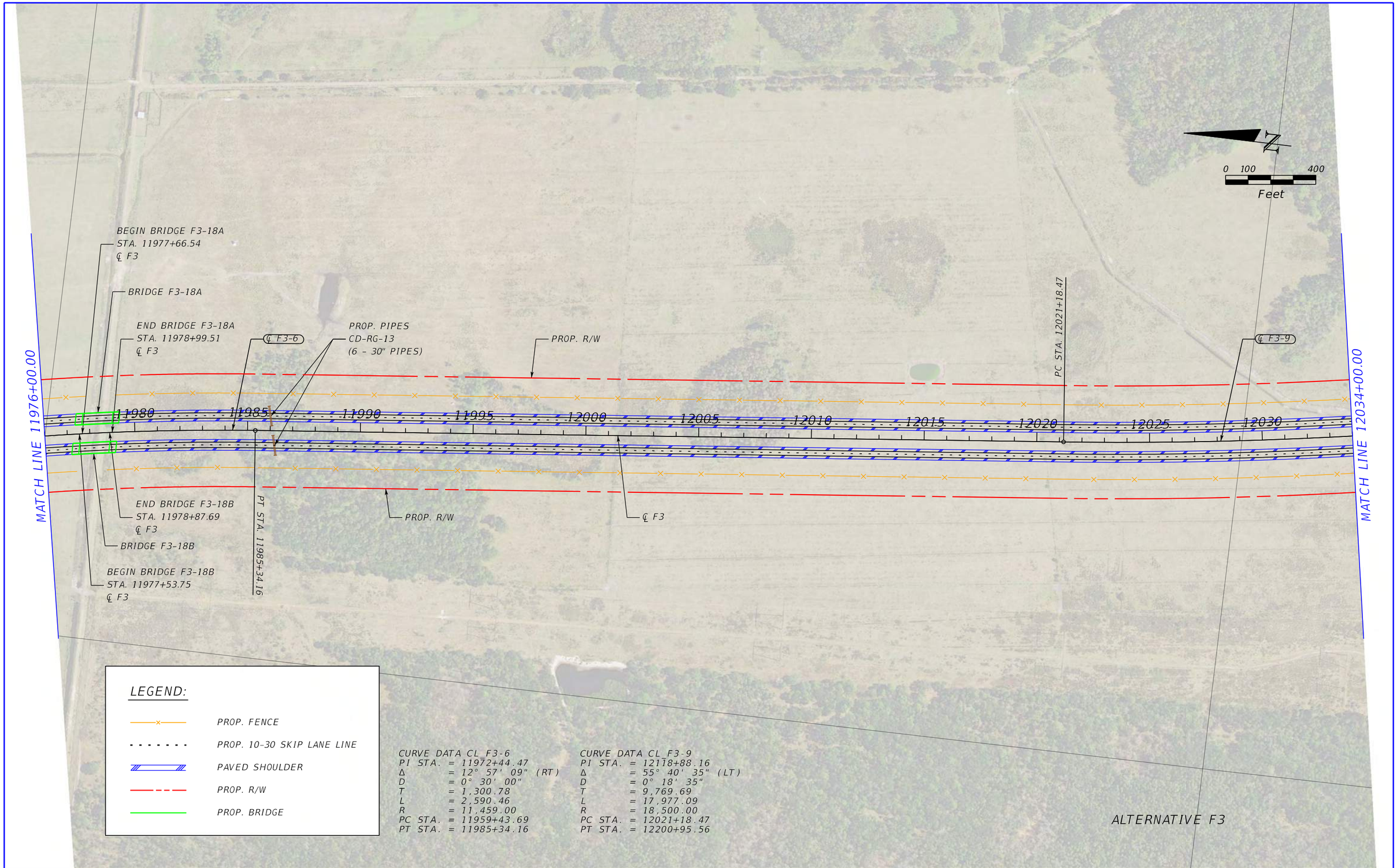
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (17)

SHEET NO.



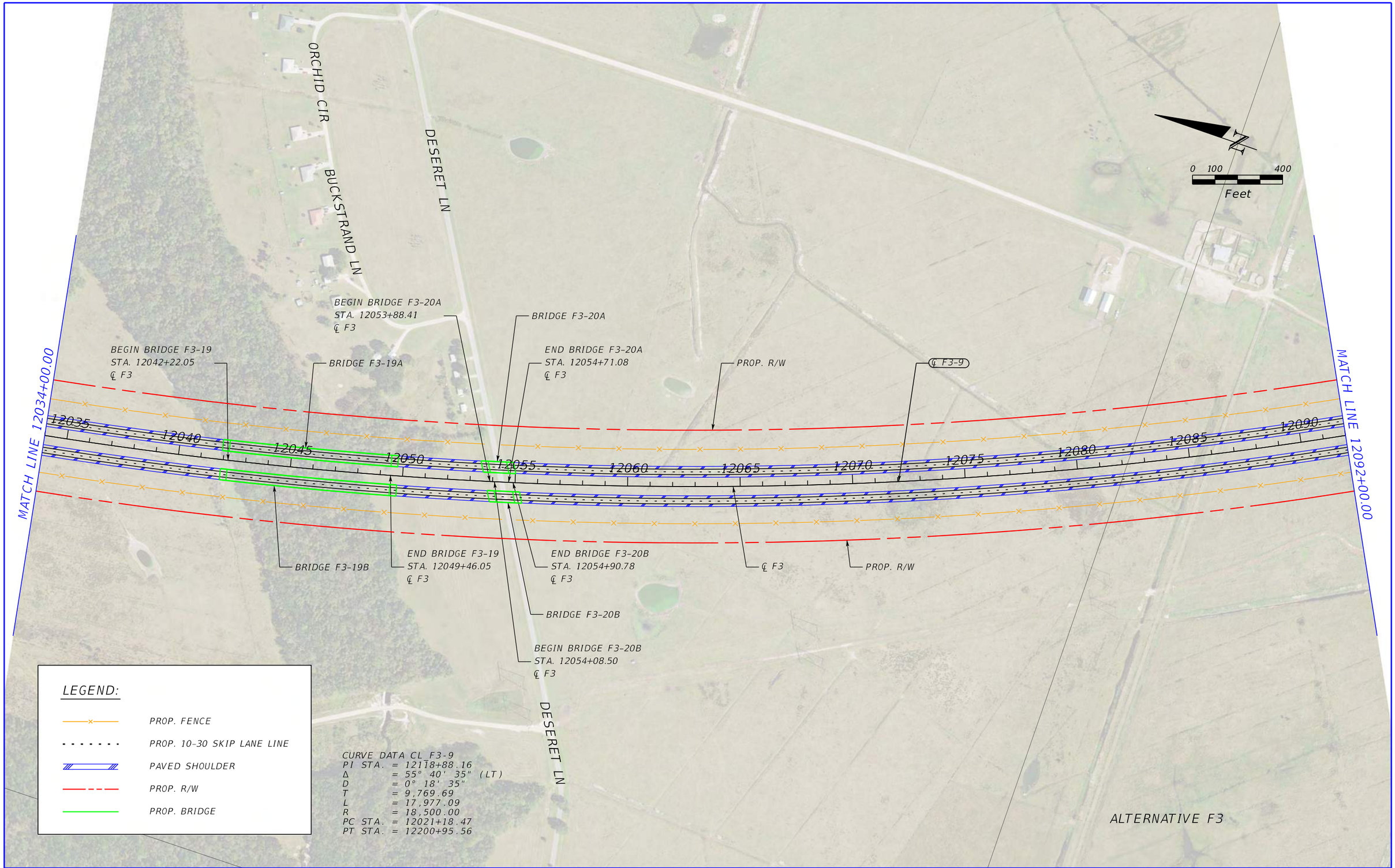
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (18)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (19)

SHEET NO.

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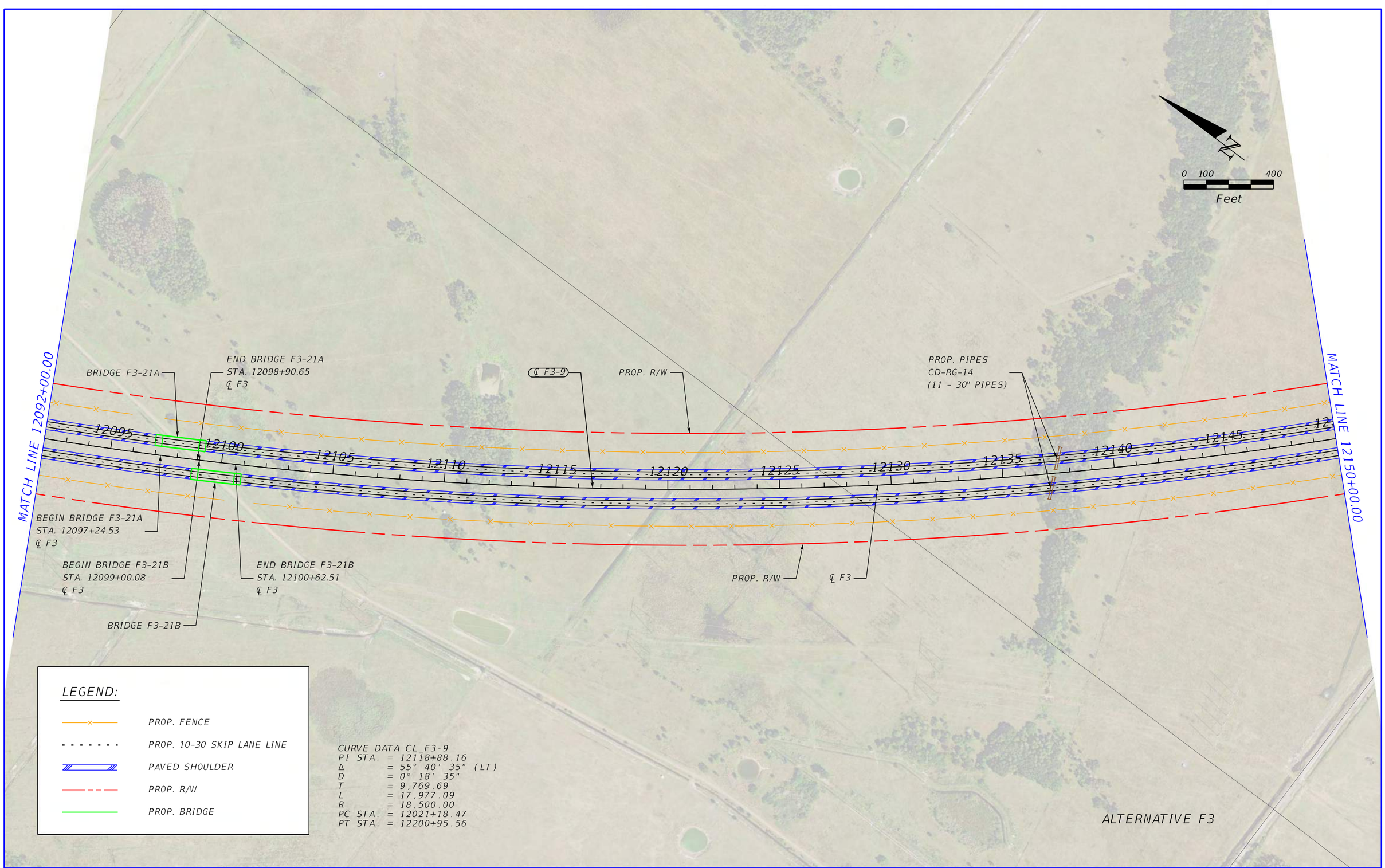

REVISIONS				CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (20)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				ALT. F3	BREVARD OSCEOLA			

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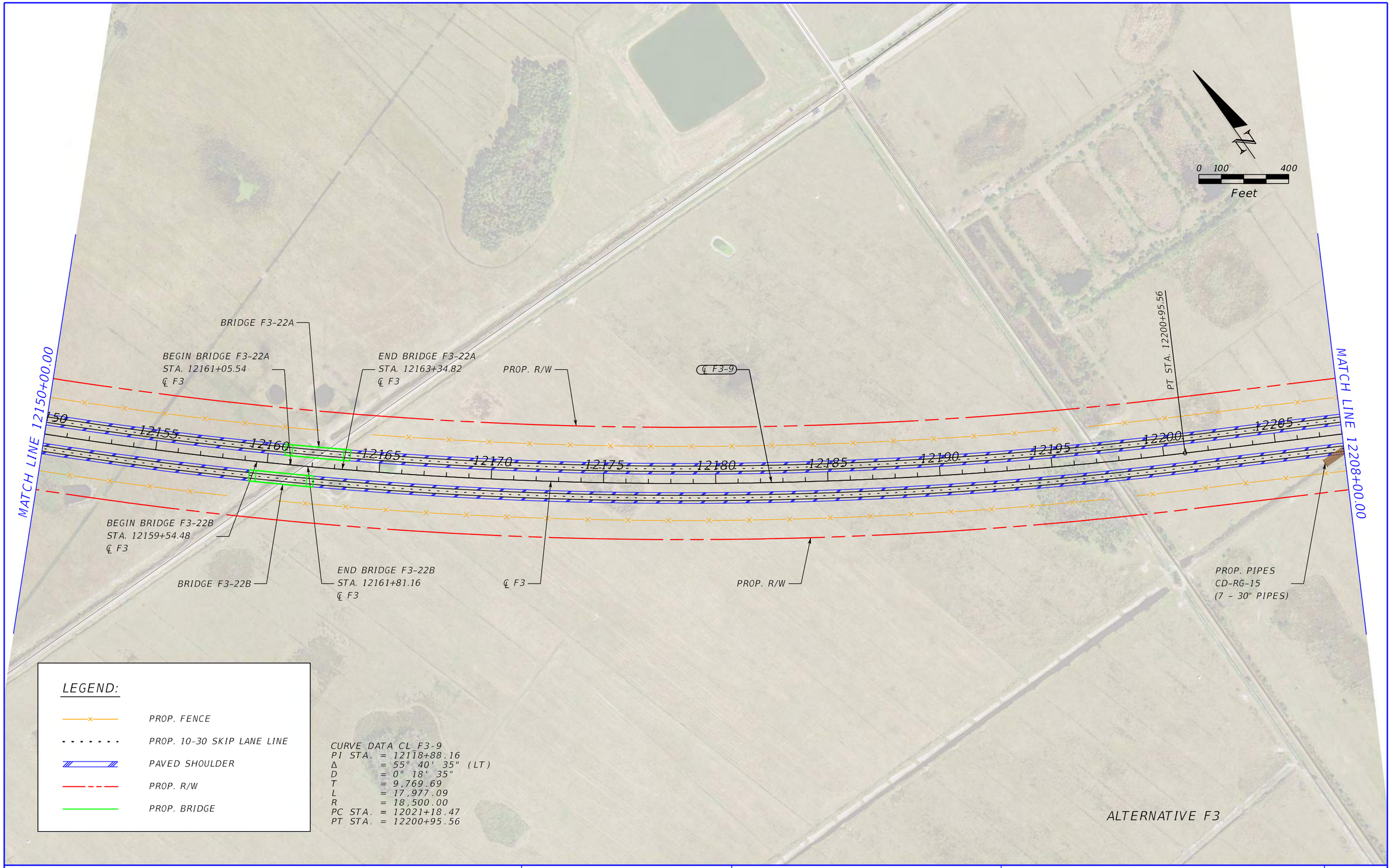


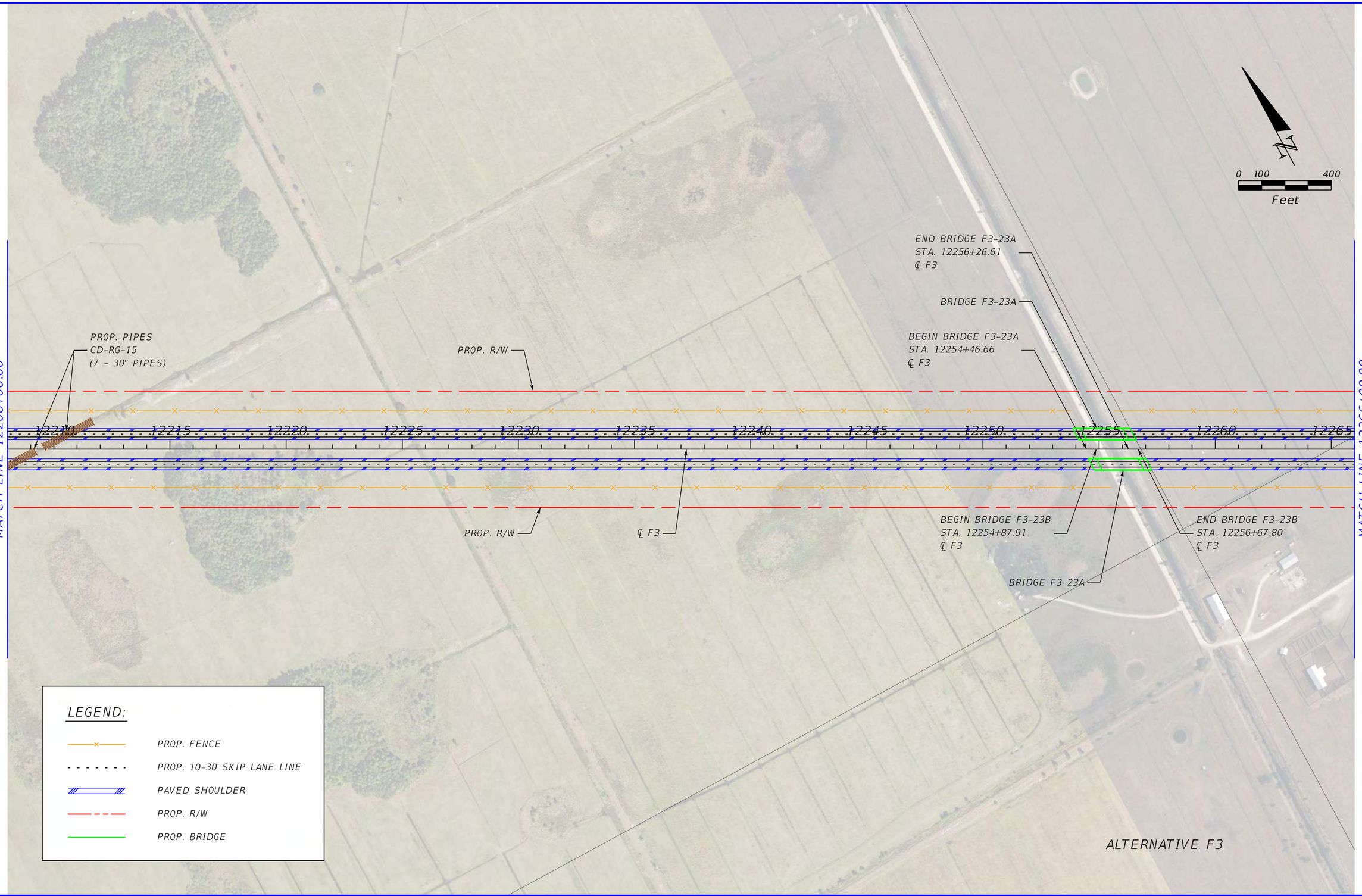
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (21)

SHEET NO.



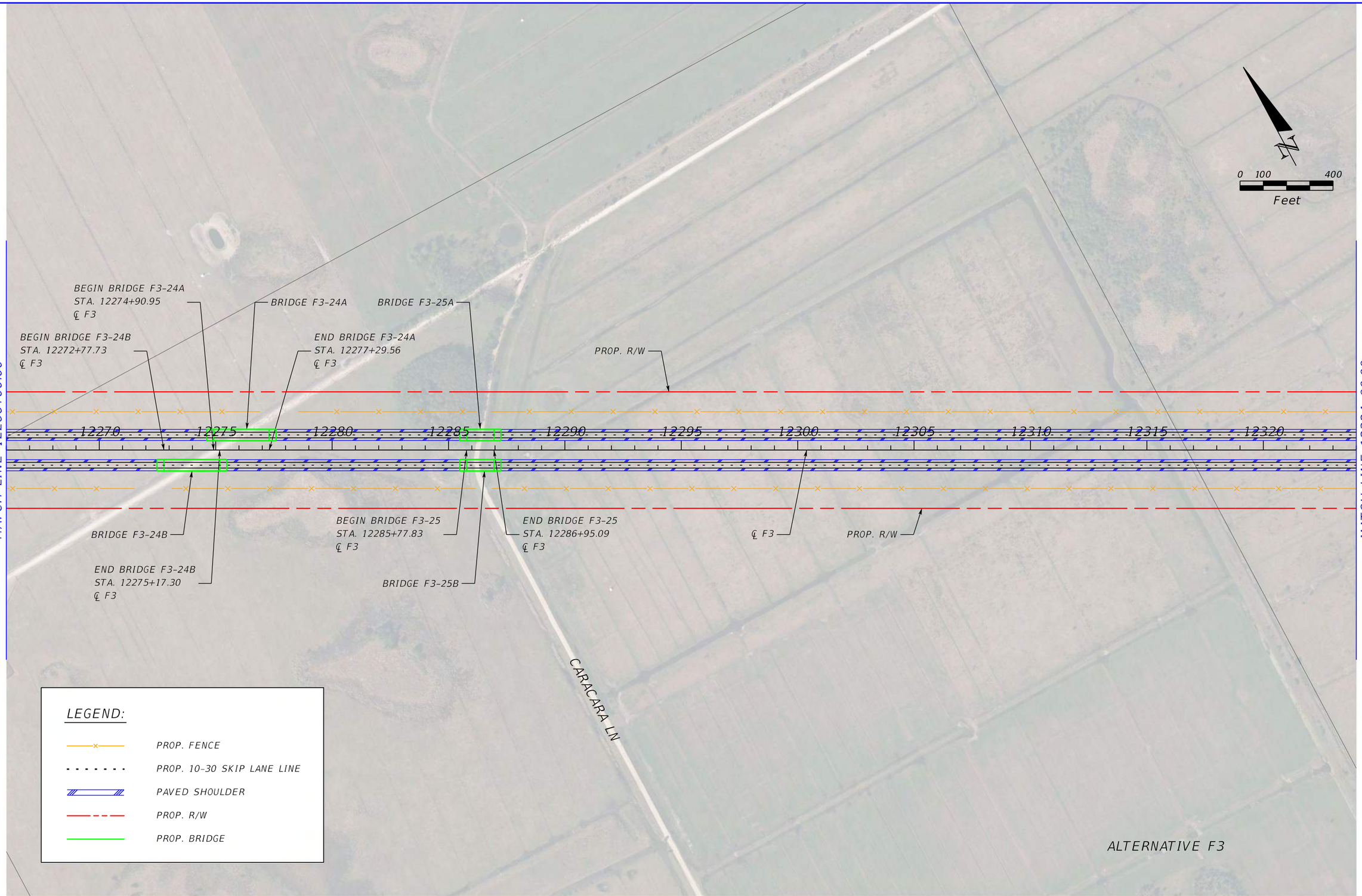
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (22)

SHEET NO.



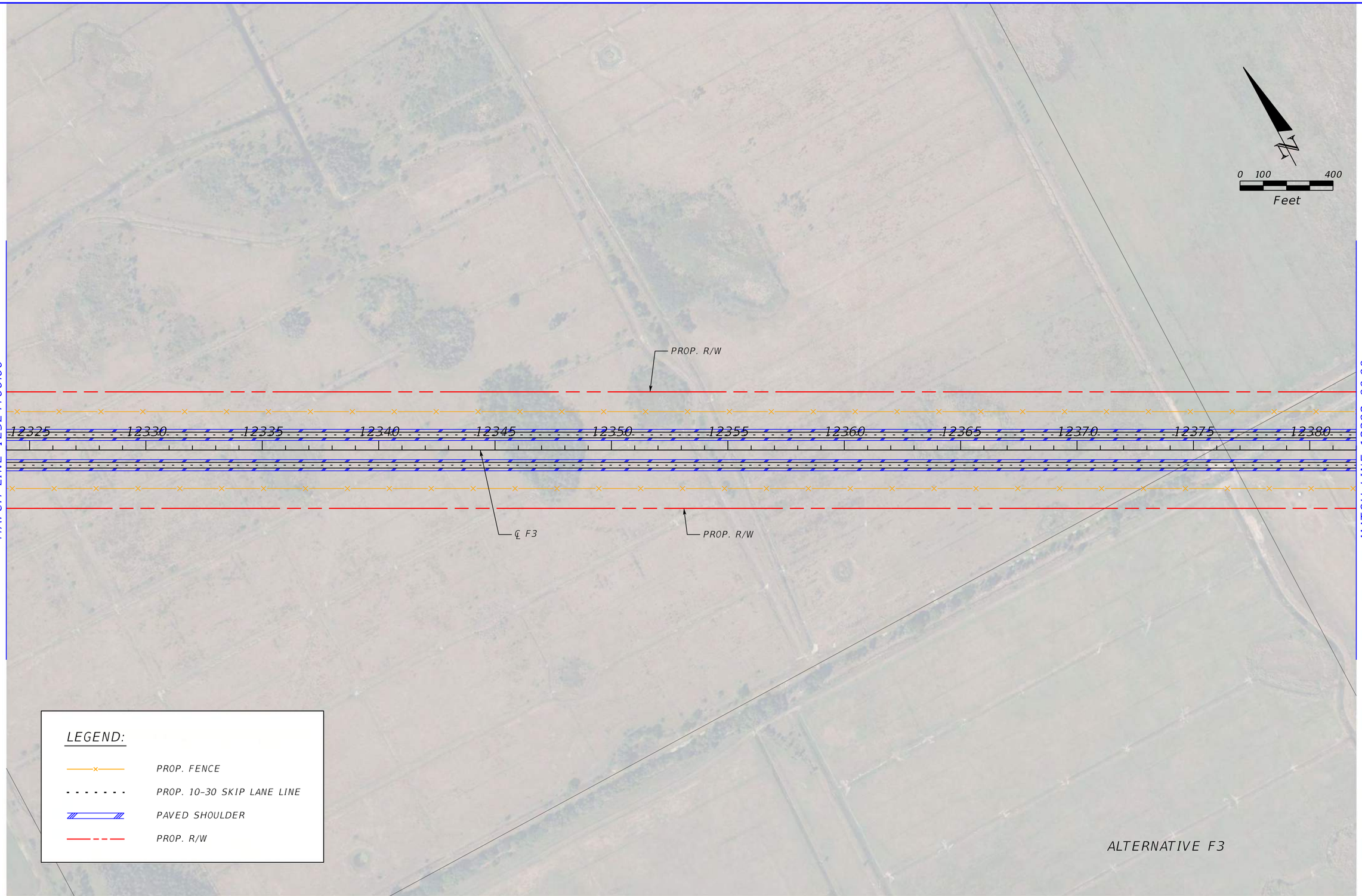
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (23)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (24)

SHEET NO.

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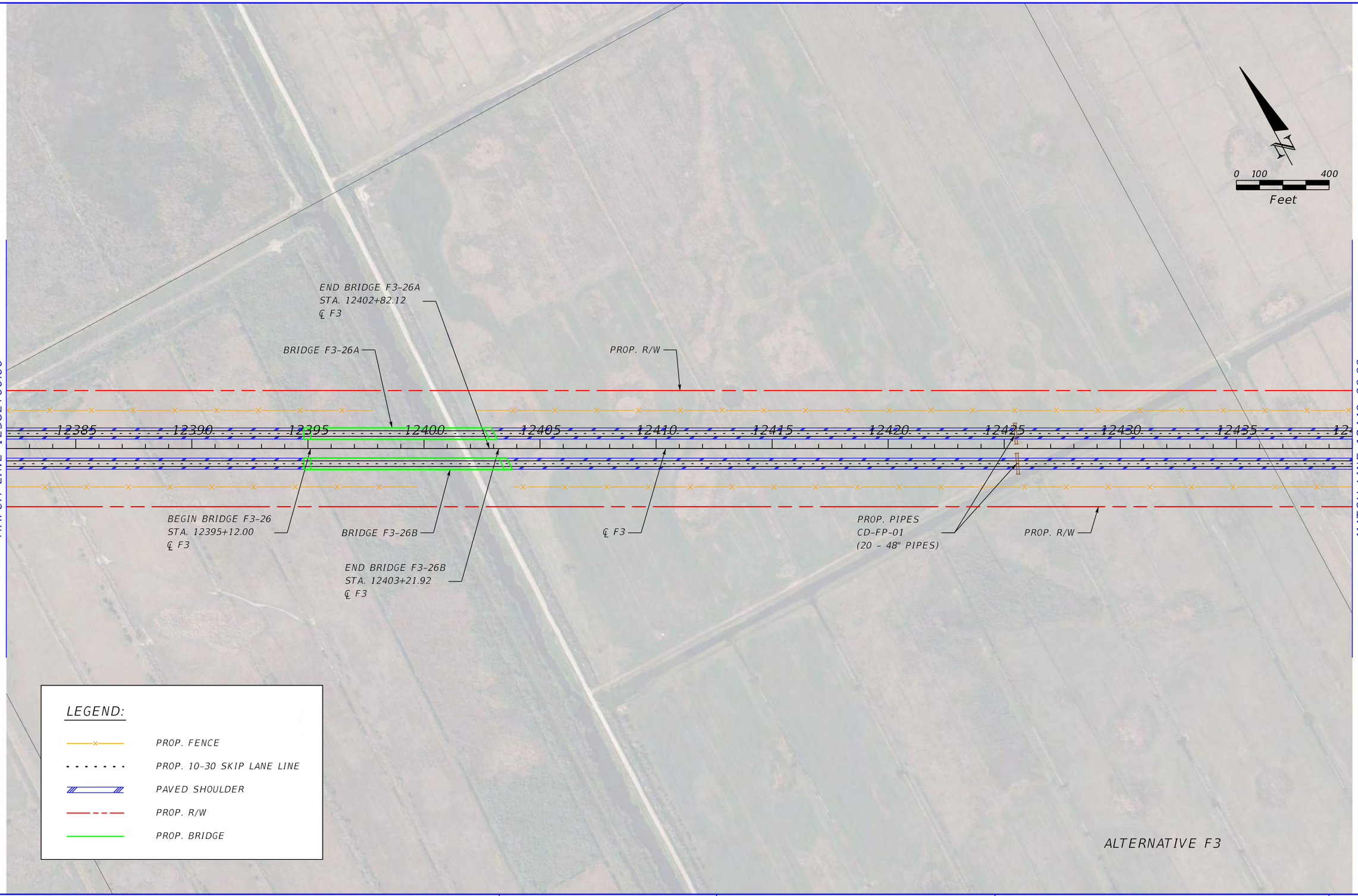


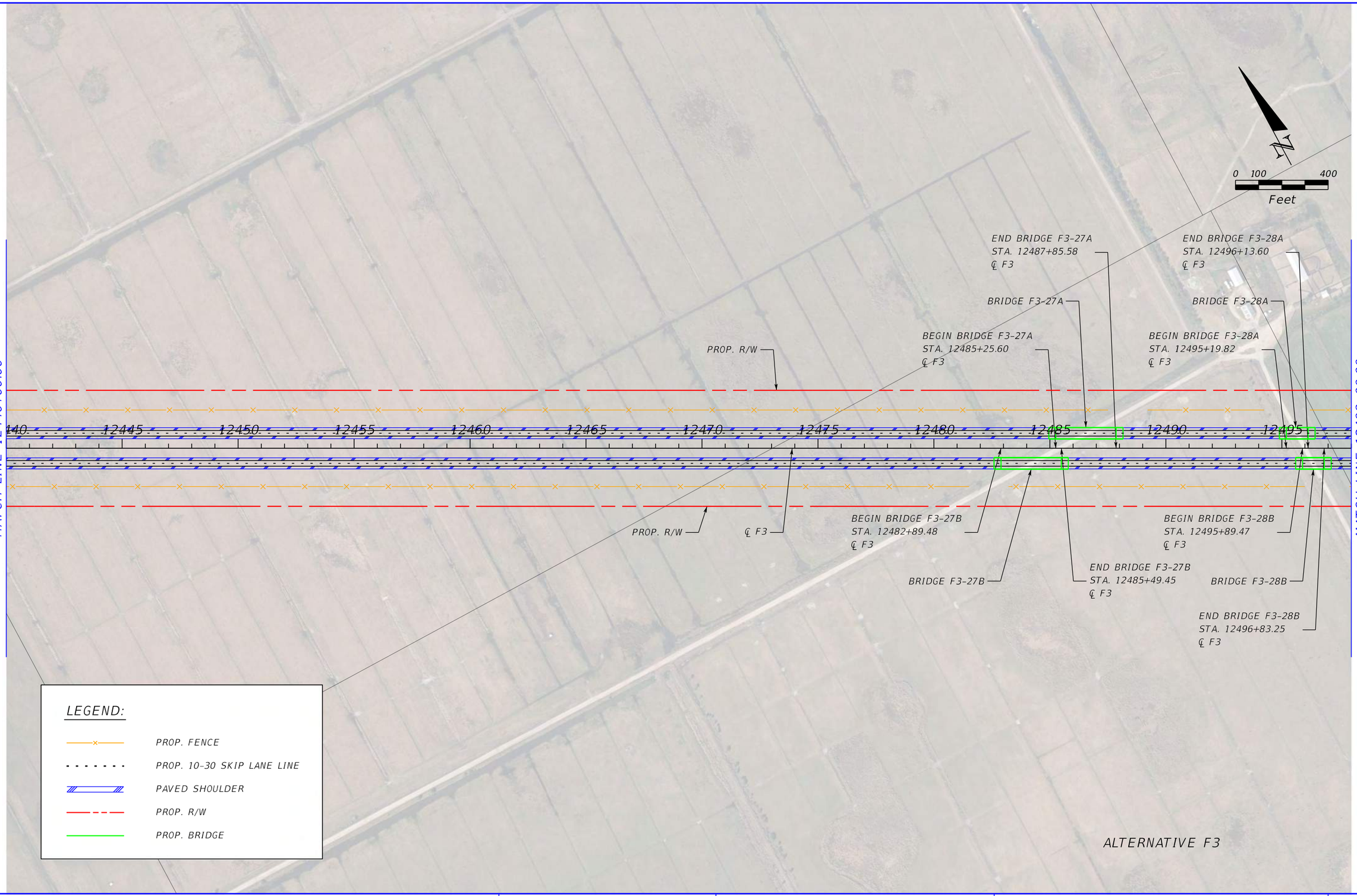
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (25)

SHEET NO.



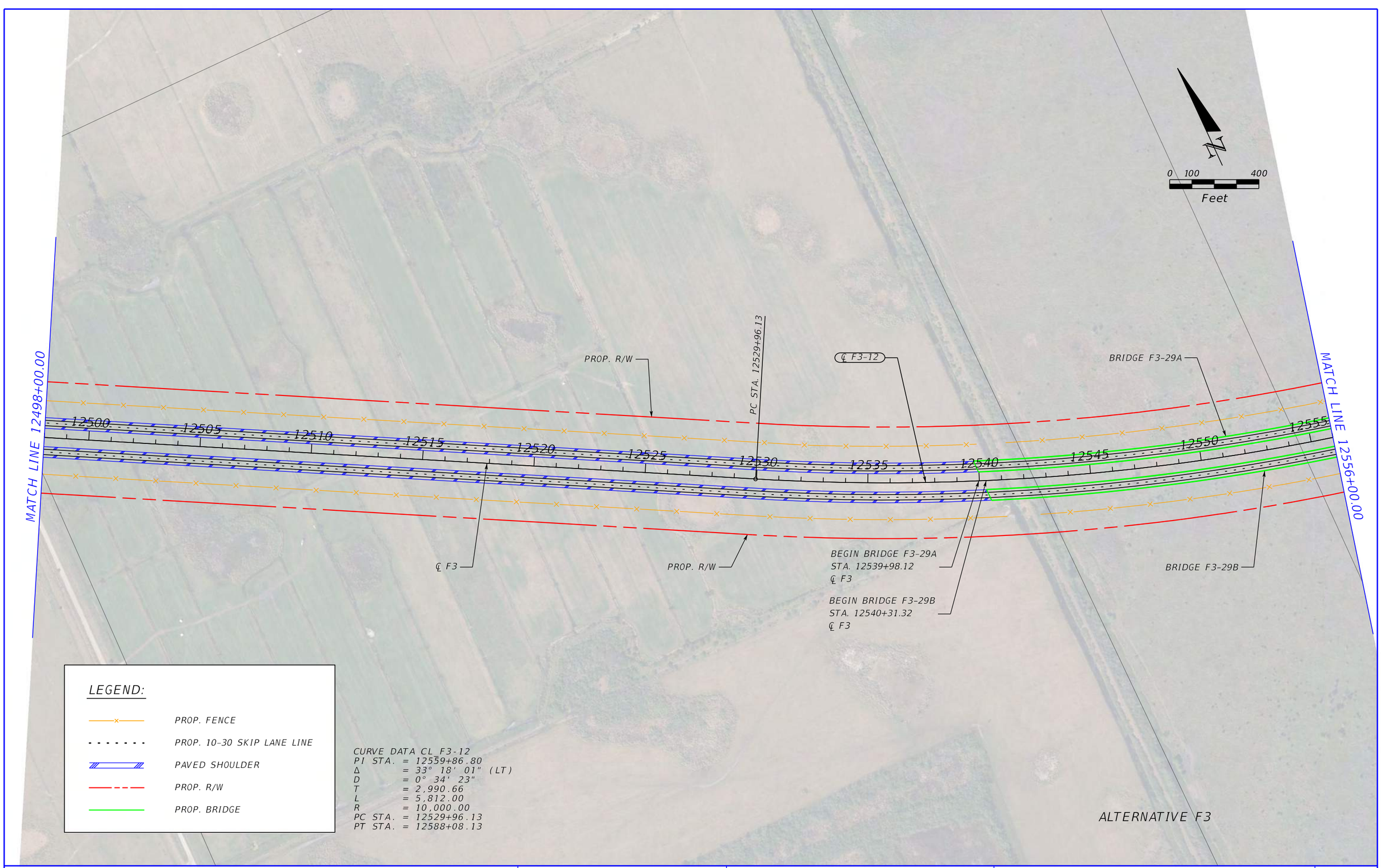
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (26)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (27)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 12556+00.00

MATCH LINE 12614+00.00

BRIDGE F3-29A

℄ F3-12

PT STA. 12588+08.13

PROP. R/W

12560 12565 12570 12575 12580 12585 12590 12595 12600 12605 12610

BRIDGE F3-29B

℄ F3

PROP. R/W

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL F3-12
PI STA. = 12559+86.80
Δ = 33° 18' 01" (LT)
D = 0° 34' 23"
T = 2,990.66
L = 5,812.00
R = 10,000.00
PC STA. = 12529+96.13
PT STA. = 12588+08.13

ALTERNATIVE F3

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

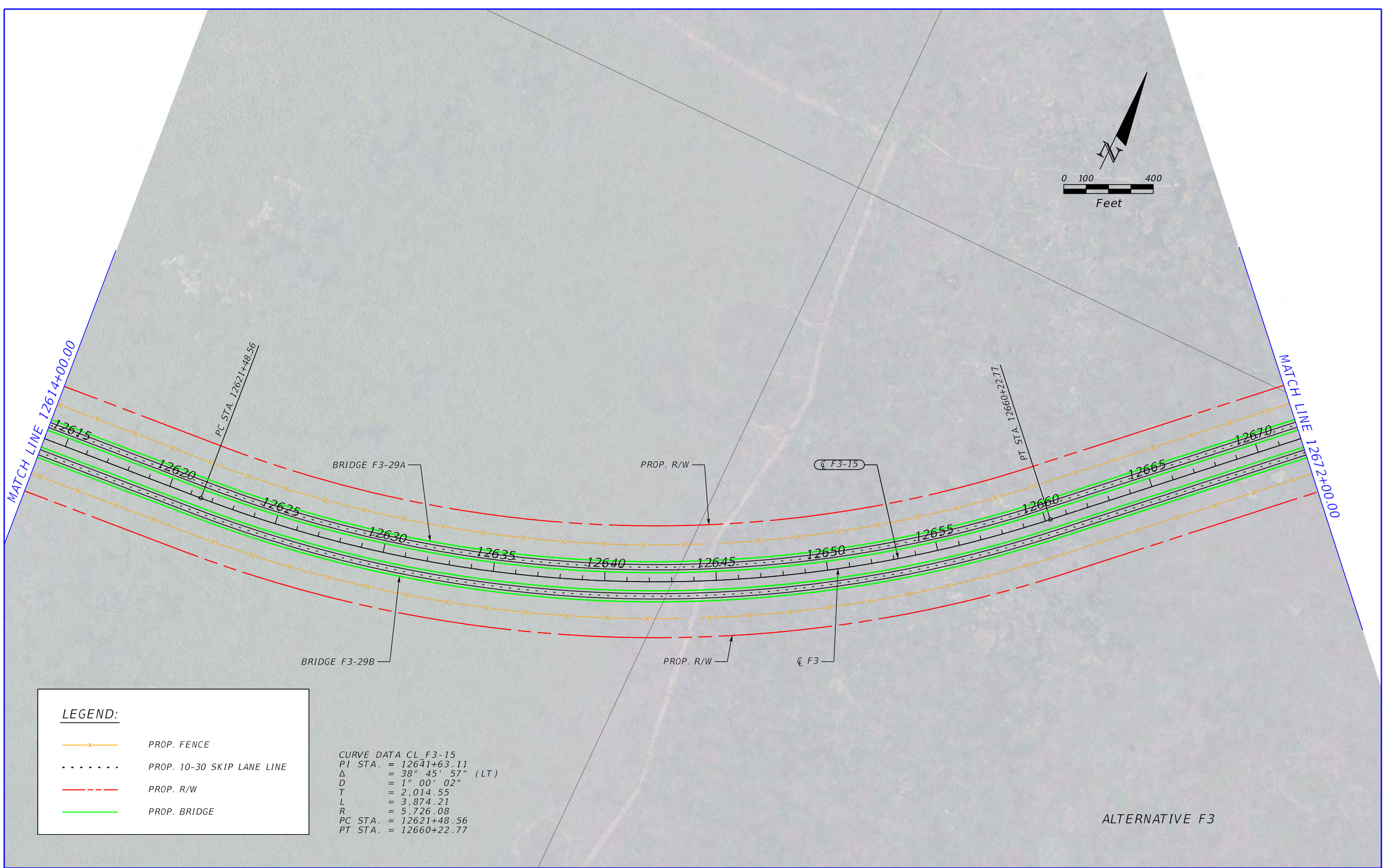
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (28)

SHEET NO.

Spencer.Edwards 3/4/2021 8:01:52 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F3\Plan Sheets\PLANRD028.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (29)

SHEET NO.

W EAU GALLIE BLVD

N

0 100 400

Feet

℄ F3-18

PROP. R/W

BRIDGE F3-29A

℄ F3-19

END BRIDGE F3-29
STA. 12729+00.00
℄ F3

12675 12680 12685 12690 12695 12700 12705 12710 12715 12720 12725

MATCH LINE 12672+00.00

PC STA. 12685+30.87

BRIDGE F3-29B

PCC STA. 12702+13.05

℄ F3

PROP. R/W

PT STA. 12727+62.70

MATCH LINE 12730+00.00

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL F3-18
PI STA. = 12693+78.05
Δ = 16° 49' 14" (RT)
D = 1° 00' 00"
T = 847.19
L = 1,682.18
R = 5,730.00
PC STA. = 12685+30.87
PT STA. = 12702+13.05

CURVE DATA CL F3-19
PI STA. = 12715+09.34
Δ = 25° 29' 41" (RT)
D = 1° 00' 00"
T = 1,296.28
L = 2,549.65
R = 5,730.00
PC STA. = 12702+13.05
PT STA. = 12727+62.70

ALTERNATIVE F3

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (30)

SHEET NO.

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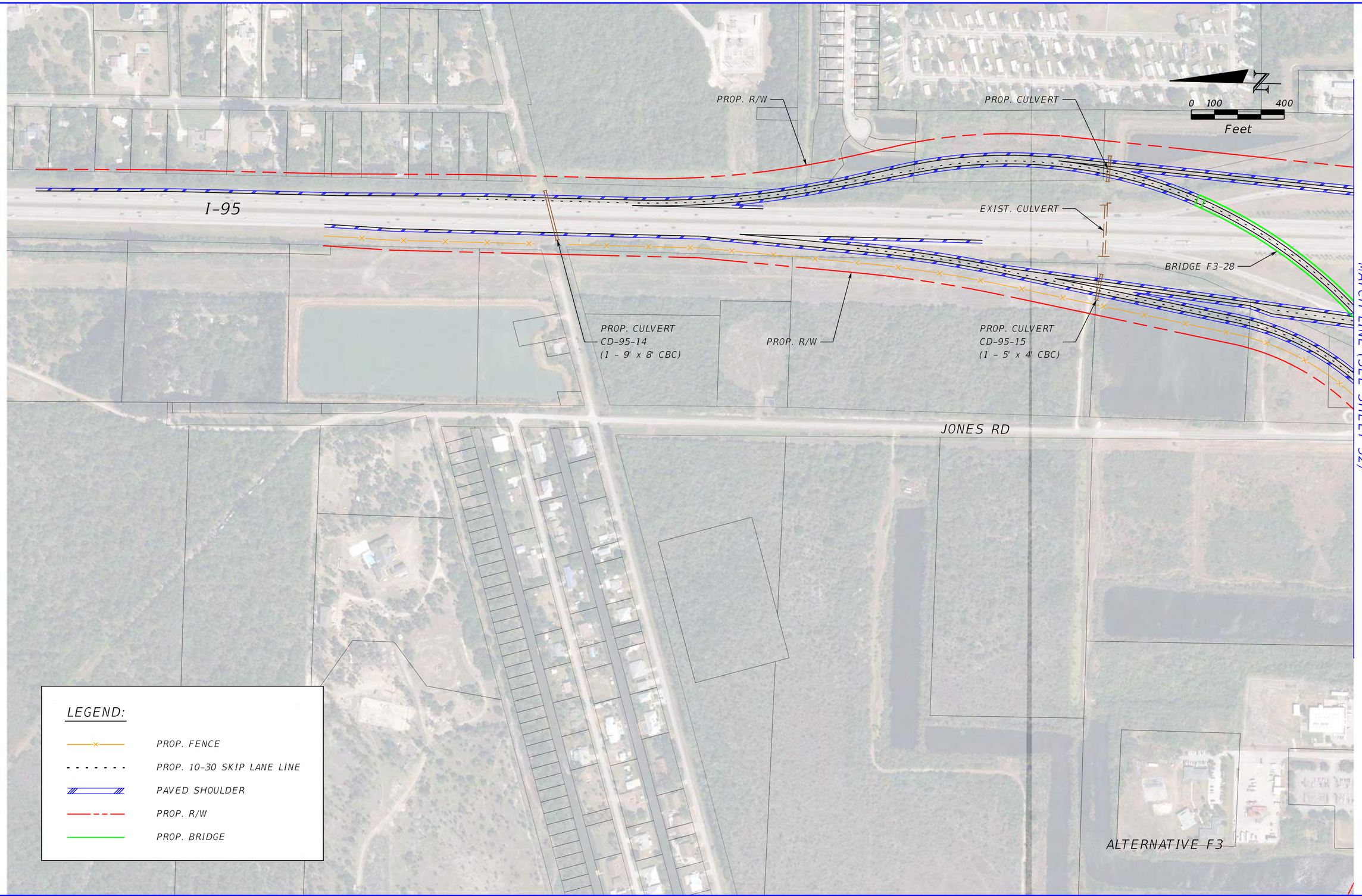

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (31)

SHEET NO.

Spencer.Edwards 3/4/2021 8:02:25 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F3\Plan Sheets\PLANRD031.dgn

W EAU GALLIE BLVD

END PROJECT
℄ F3
STA. 12757+47.62

PROP. R/W

PROP. PIPE
CD-95-16
(1 - 30" PIPE)

N

0 100 400
Feet

EXIST. PIPES
CD-95-19
(3 - 48" PIPES)

I-95

POT STA. 12757+47.62

BRIDGE F3-28

PROP. R/W

12755

EXIST. PIPE
CD-95-17
(1 - 24" PIPE)

EXIST. CULVERT
CD-95-18
(1 - 6' x 6' CBC)

℄ F3

BRIDGE F3-29

MATCH LINE (SEE SHEET 31)

12750

PI STA. 12749+60.07

JONES RD

PROP. R/W

12745

BEGIN BRIDGE F3-28
STA. 12743+42.99
℄ F3

BEGIN BRIDGE F3-29
STA. 12740+98.10
℄ F3

12740

BRIDGE F3-29

PAW PRINTS AVE

12735

POT STA. 12735+84.03

30

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. R/W
- PROP. BRIDGE

ALTERNATIVE F3

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F3	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (32)

SHEET NO.

Spencer.Edwards 3/4/2021 8:02:36 AM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F3\Plan Sheets\PLANRD032.dgn

APPENDIX K

Concept Plans for Alternative F4

LAKE
PRESTON

S STATE HWY 13

LIME ROCK RD

TRAM RD

N

0 1000 5000
Feet

13000 13050 13100 13150 13200 13250 13300 13350 13400 13450 13500 13550 13600 13650

NOVA RD

1 2 3 4 5 6 7 8 9 10 11 12

BEGIN PROJECT
℄ F4
STA. 13000+00.00

MATCH LINE 13686+00.00

LAKE
CONLIN

ALTERNATIVE F4

REVISIONS					CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (1)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					ALT. F4	BREVARD OSCEOLA			

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

MATCH LINE 13686+00.00

13700

13750

13800

13850

13900

13950

14000

14050

13

14

15

16

17

18

19

DRIFTWOOD RD

BRANCH RD

DEER PARK RD

LAKE WINDER

SAWMILL GRDE

VIERA BLVD

I-95

JUDGE FRAN JAMIESON WAY

N WICKHAM RD

STADIUM PKWY

N

0 1000 5000

Feet

MATCH LINE 14092+00.00

ALTERNATIVE F4

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (2)

SHEET NO.

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



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (3)

SHEET NO.

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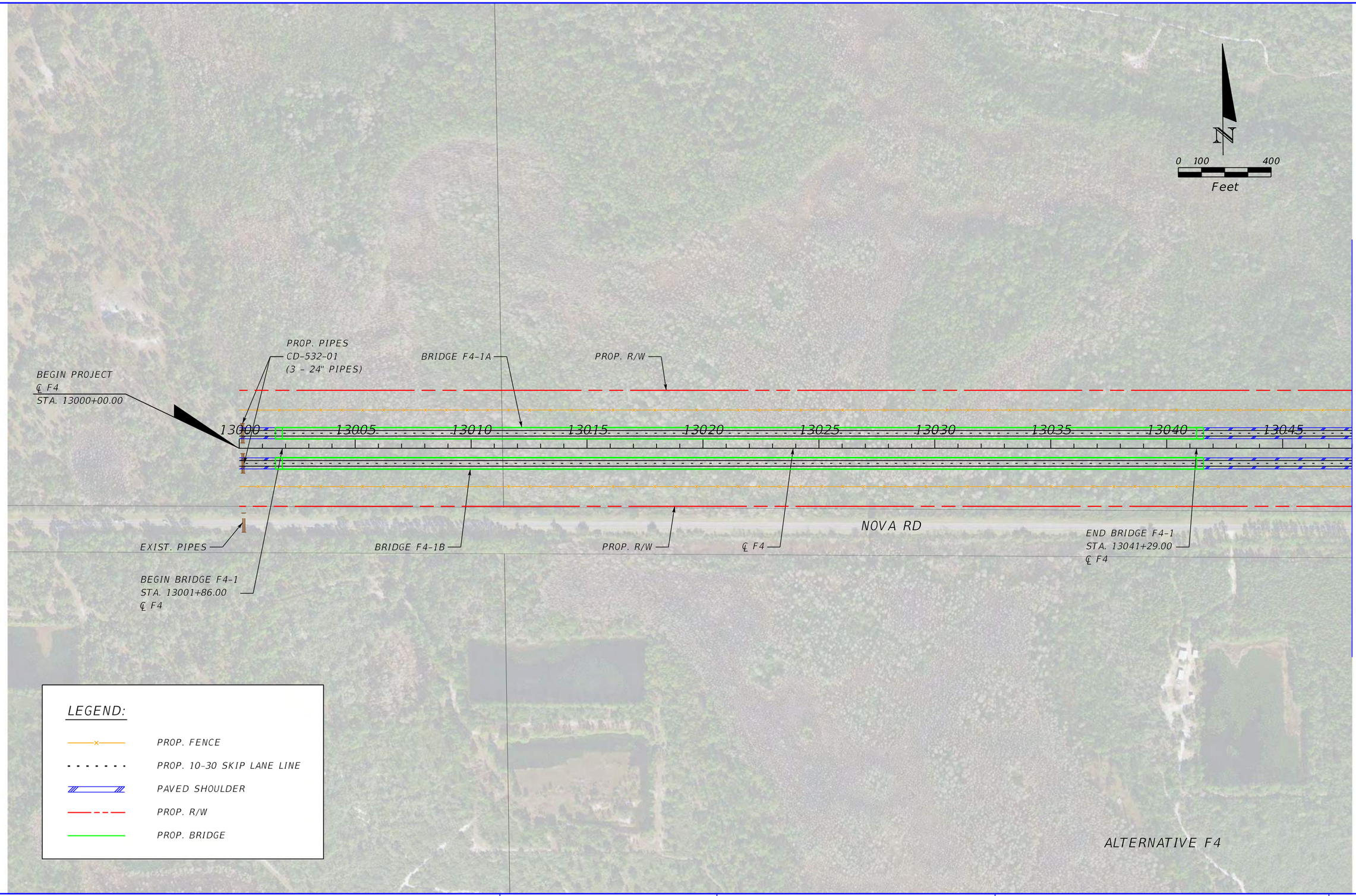

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (01)

SHEET NO.

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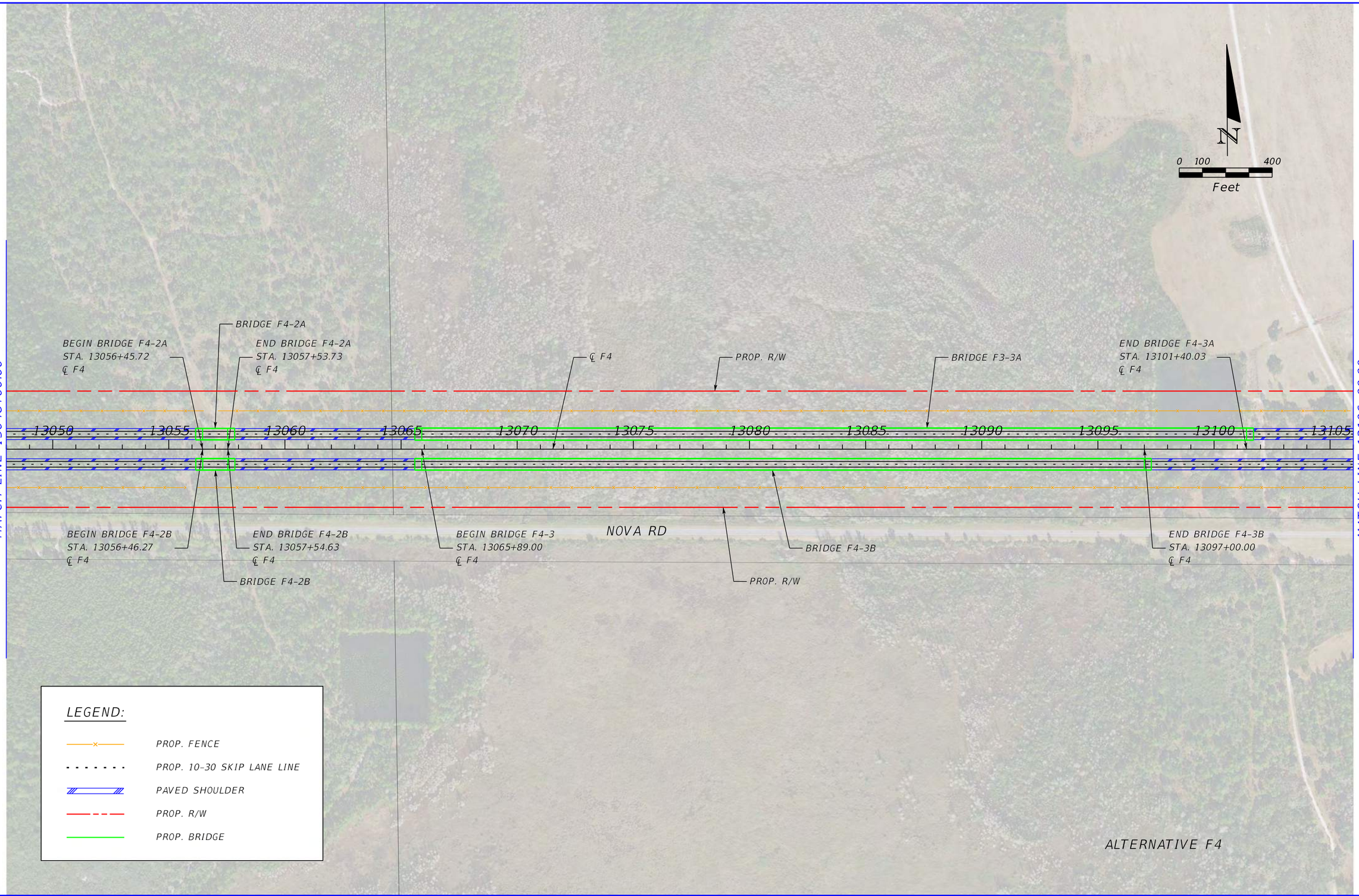


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (02)

SHEET NO.

N

0 100 400

Feet

BEGIN BRIDGE F4-4A
STA. 13106+45.72
℄ F4

BRIDGE F4-4A

END BRIDGE F4-4A
STA. 13107+53.73
℄ F4

BEGIN BRIDGE F4-5
STA. 13112+95.00
℄ F4

BRIDGE F4-5A

PROP. R/W

END BRIDGE F4-5
STA. 13151+60.00
℄ F4

MATCH LINE 13106+00.00

13110 13115 13120 13125 13130 13135 13140 13145 13150 13155 13160

MATCH LINE 13164+00.00

END BRIDGE F4-4B
STA. 13107+54.63
℄ F4

BRIDGE F4-4B

BEGIN BRIDGE F4-4B
STA. 13106+46.27
℄ F4

BRIDGE F4-5B

NOVA RD

℄ F4

PROP. R/W

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

ALTERNATIVE F4

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (03)

SHEET NO.

Michael.Hunter 3/8/2021 4:52:13 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F4\Plan Sheets\PLANRD03.dgn



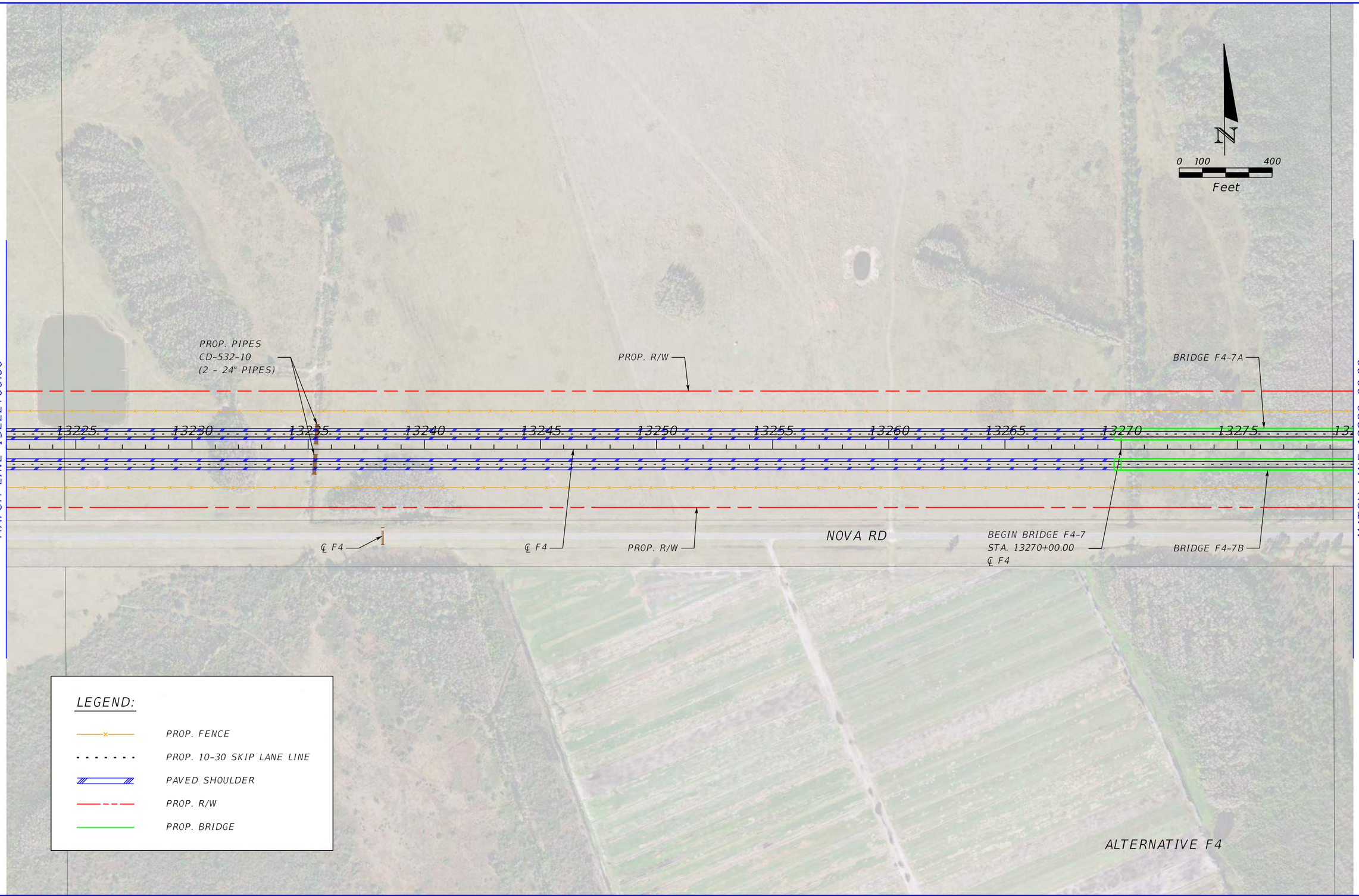
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (04)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (05)

SHEET NO.

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N

0 100 400

Feet

MATCH LINE 13280+00.00

BRIDGE F4-7A

END BRIDGE F4-7
STA. 13306+49.00
℄ F4

PROP. R/W

PROP. CULVERT
CD-532-14
(1 - 10' x 3' CBC)

13280 13285 13290 13295 13300 13305 13310 13315 13320 13325 13330 13335

BRIDGE F4-7B

PROP. R/W

℄ F4

NOVA RD

EXIST. CULVERT

MATCH LINE 13338+00.00

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

ALTERNATIVE F4

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (06)

SHEET NO.

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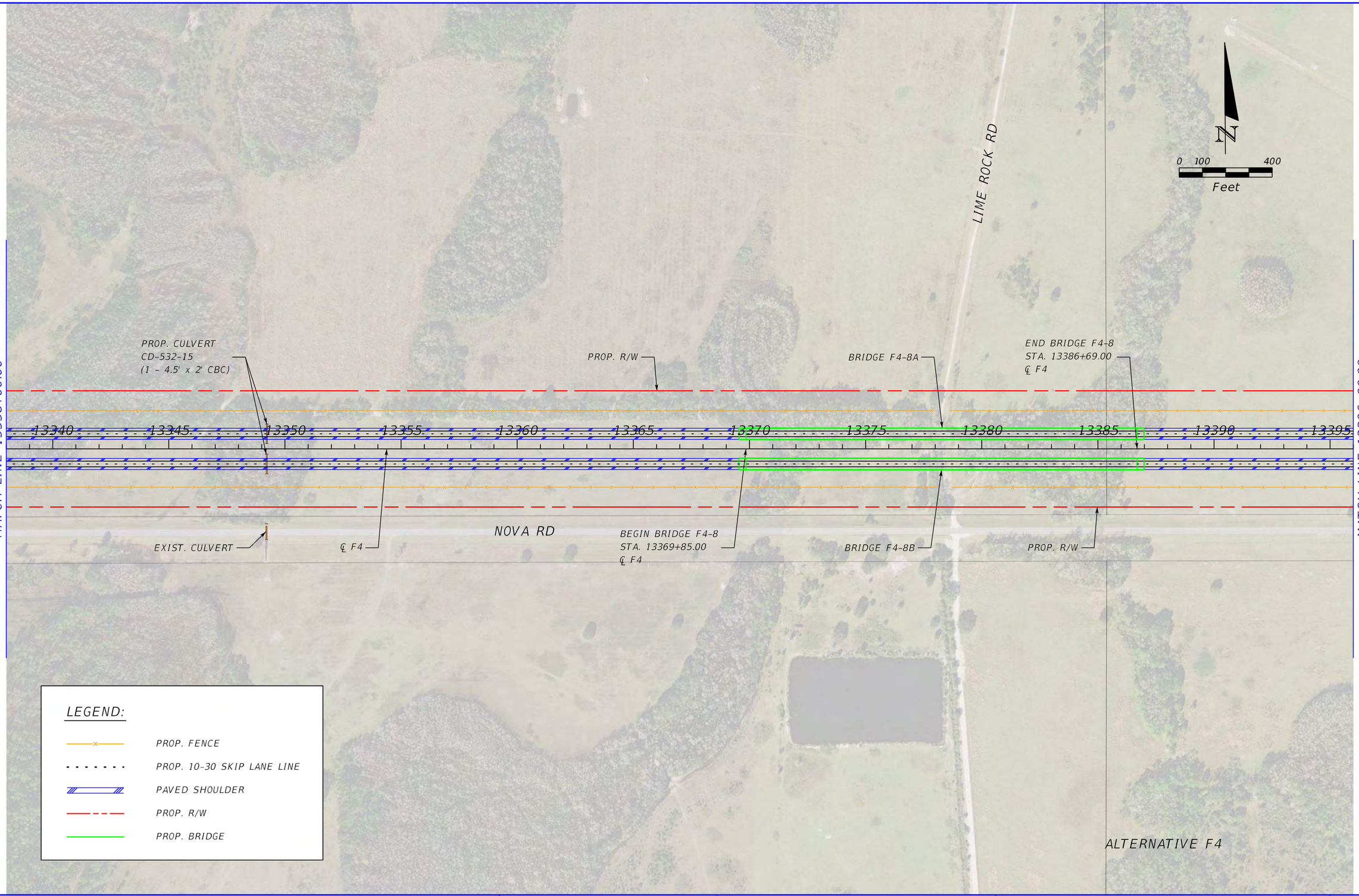

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (07)

SHEET NO.

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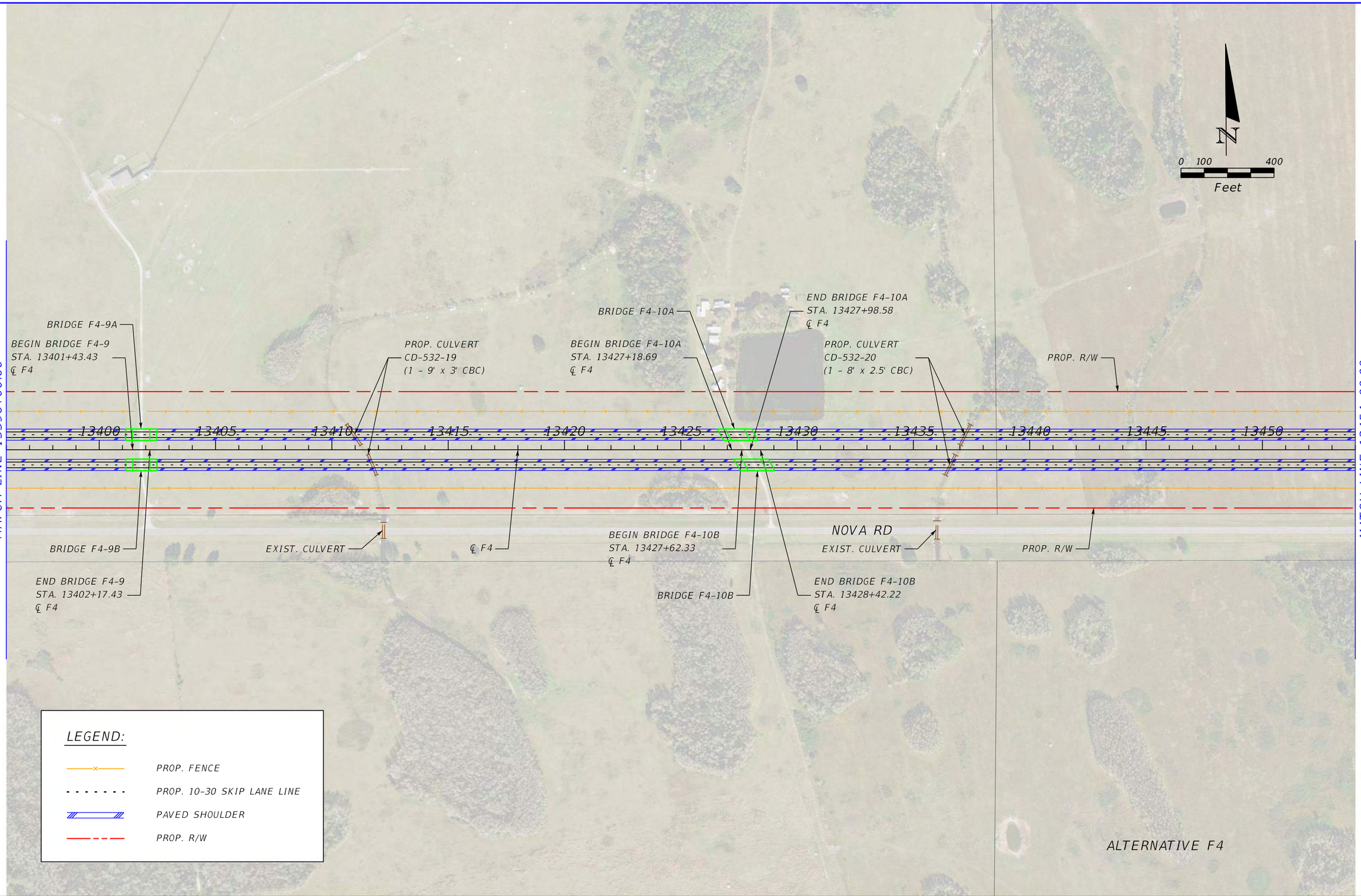

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (08)

SHEET NO.

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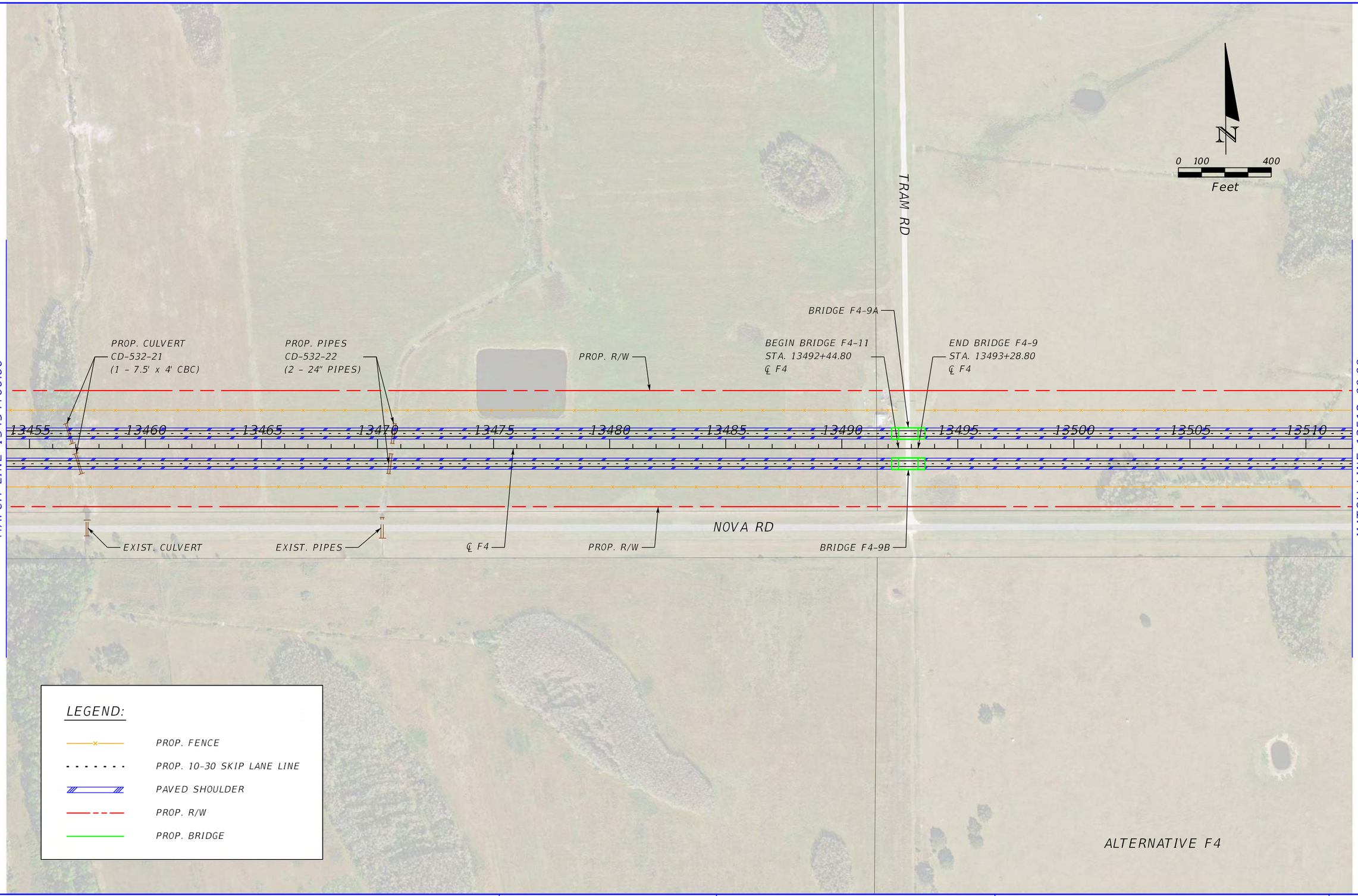

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (09)

SHEET NO.

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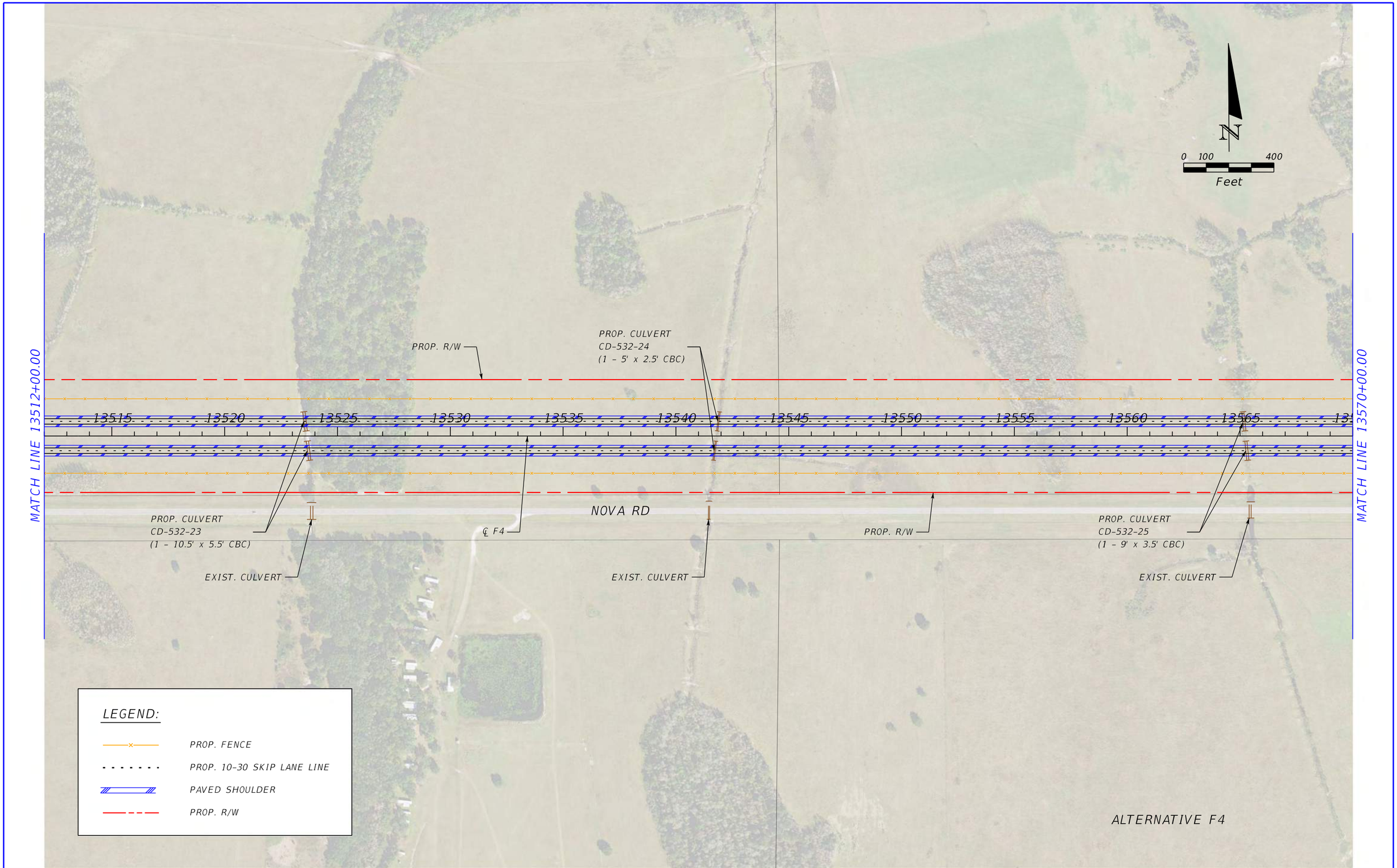

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (10)

SHEET NO.

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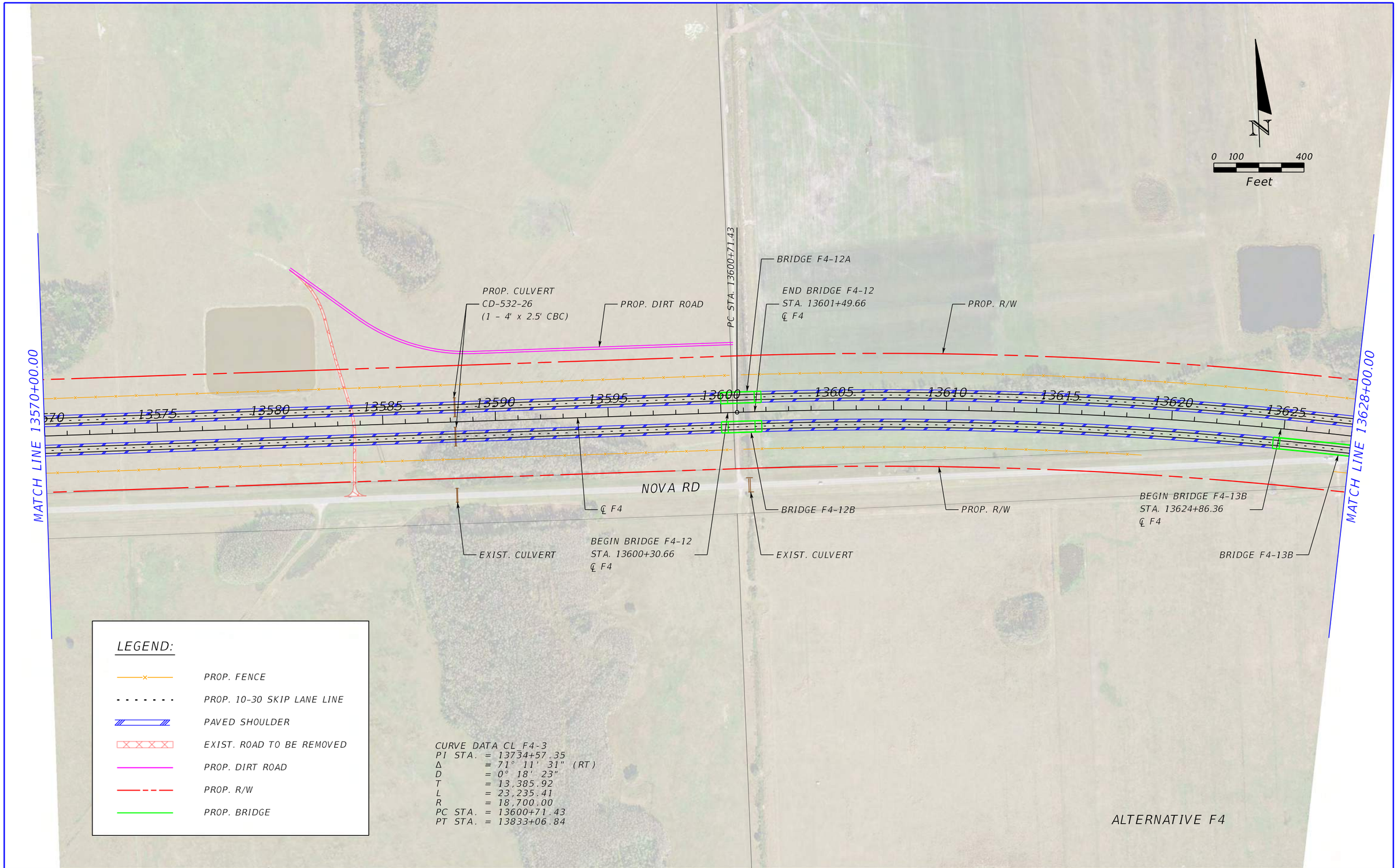


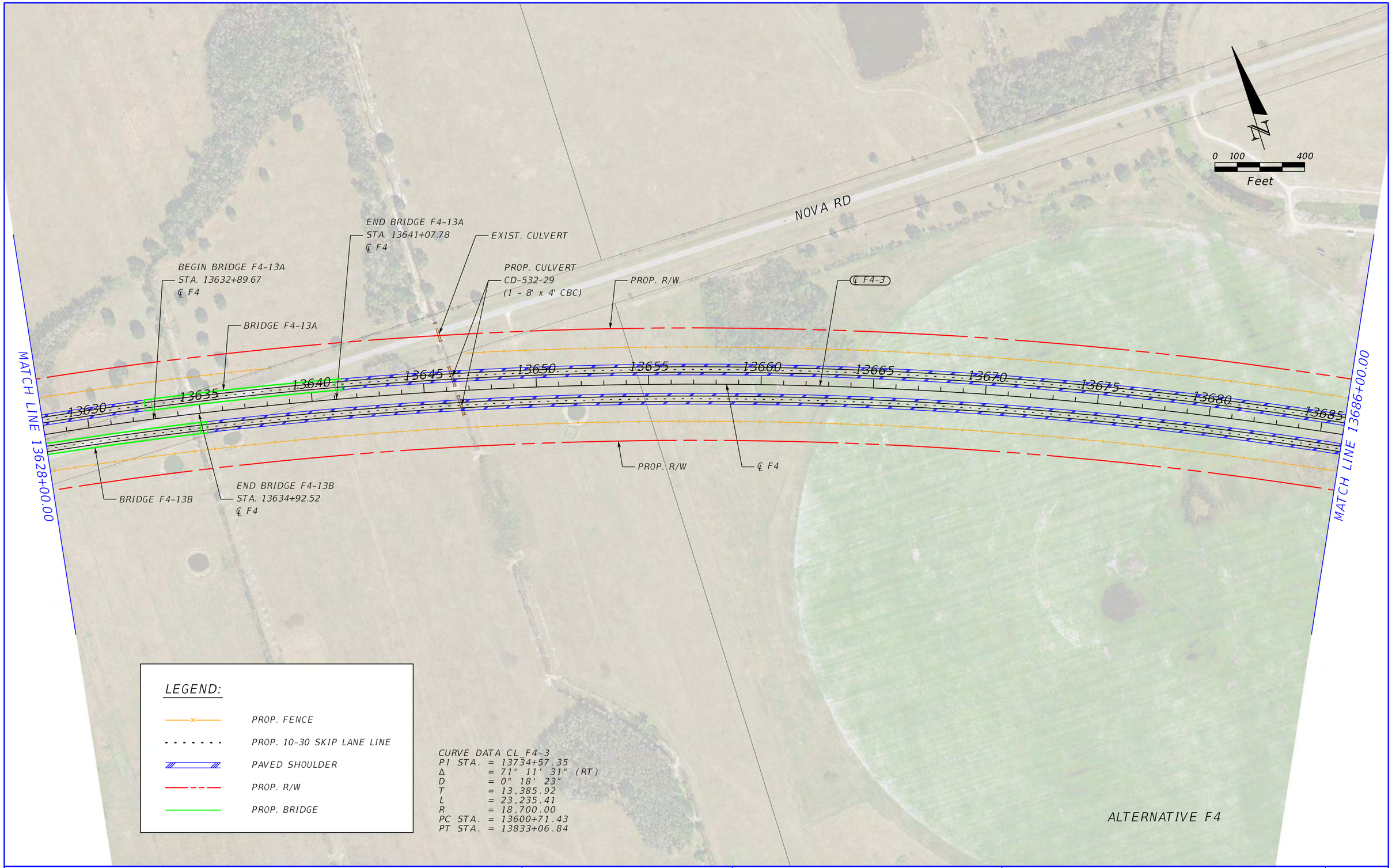
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (11)

SHEET NO.



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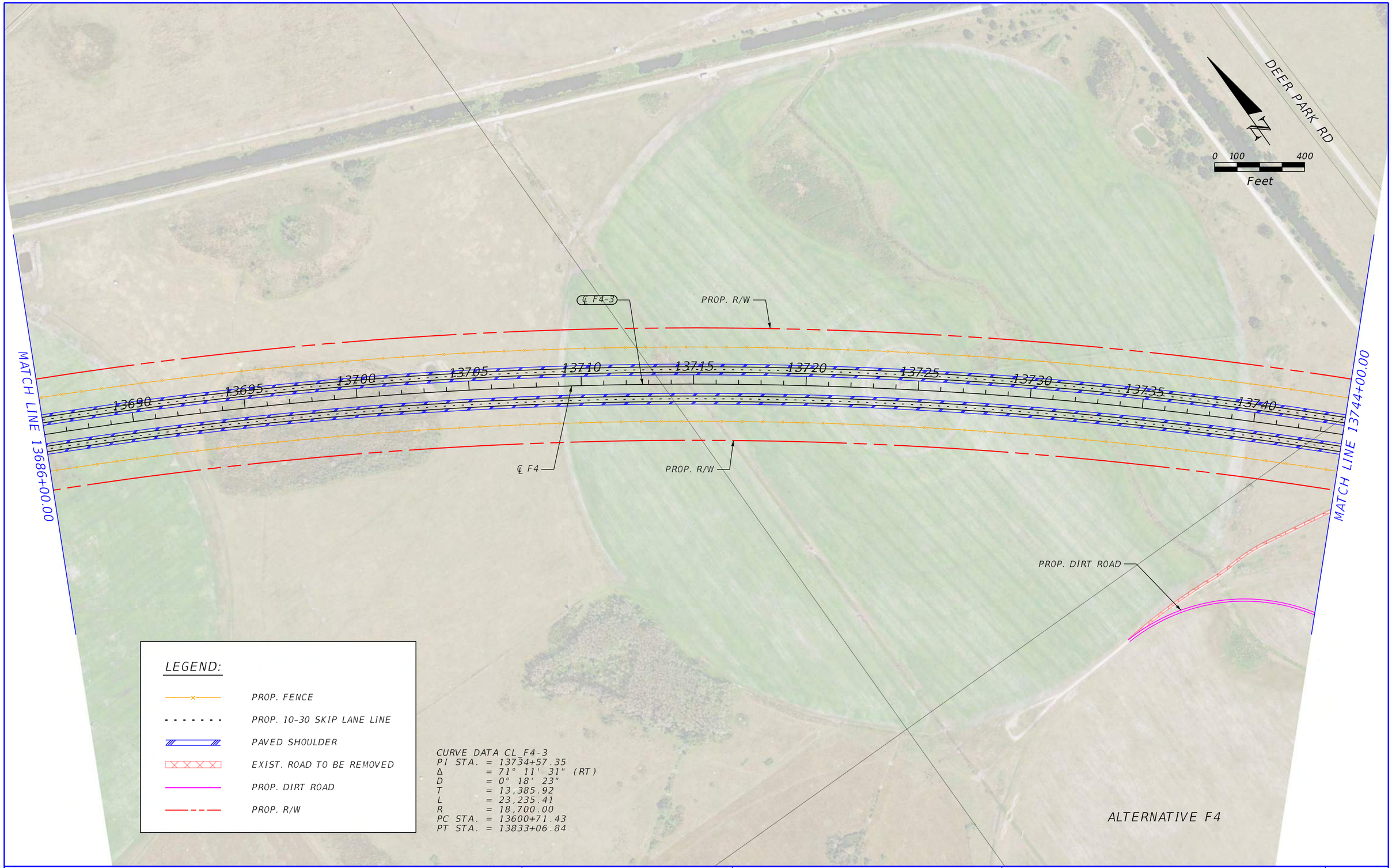
DATE	DESCRIPTION	DATE	DESCRIPTION	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (12)
				ROAD NO. / COUNTY / FINANCIAL PROJECT ID	SHEET NO.
				ALT. F4 / BREVARD OSCEOLA	



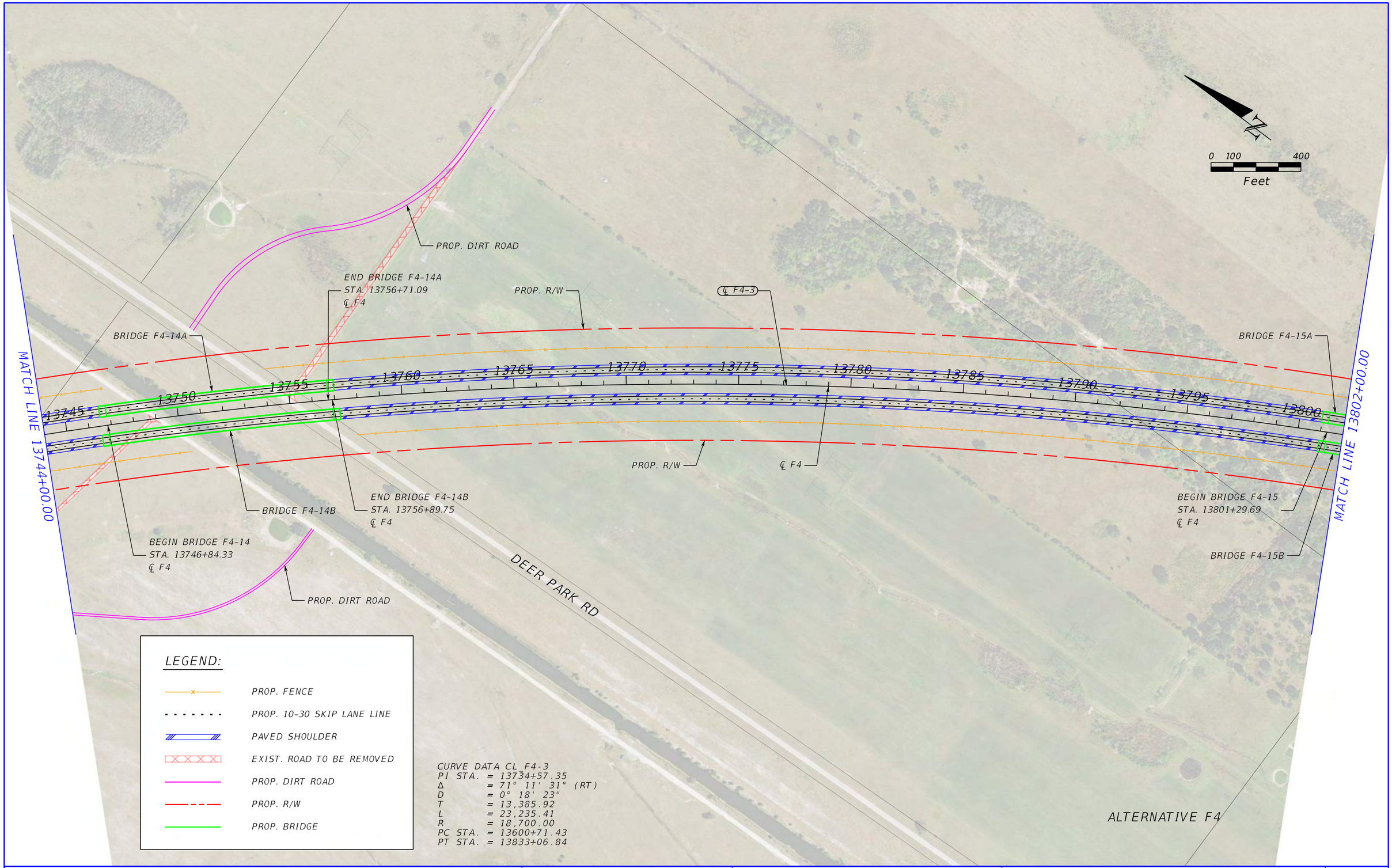
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (13)

SHEET NO.



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. DIRT ROAD
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL F4-3
PI STA. = 13734+57.35
Δ = 71° 11' 31" (RT)
D = 0° 18' 23"
T = 13,385.92
L = 23,235.41
R = 18,700.00
PC STA. = 13600+71.43
PT STA. = 13833+06.84

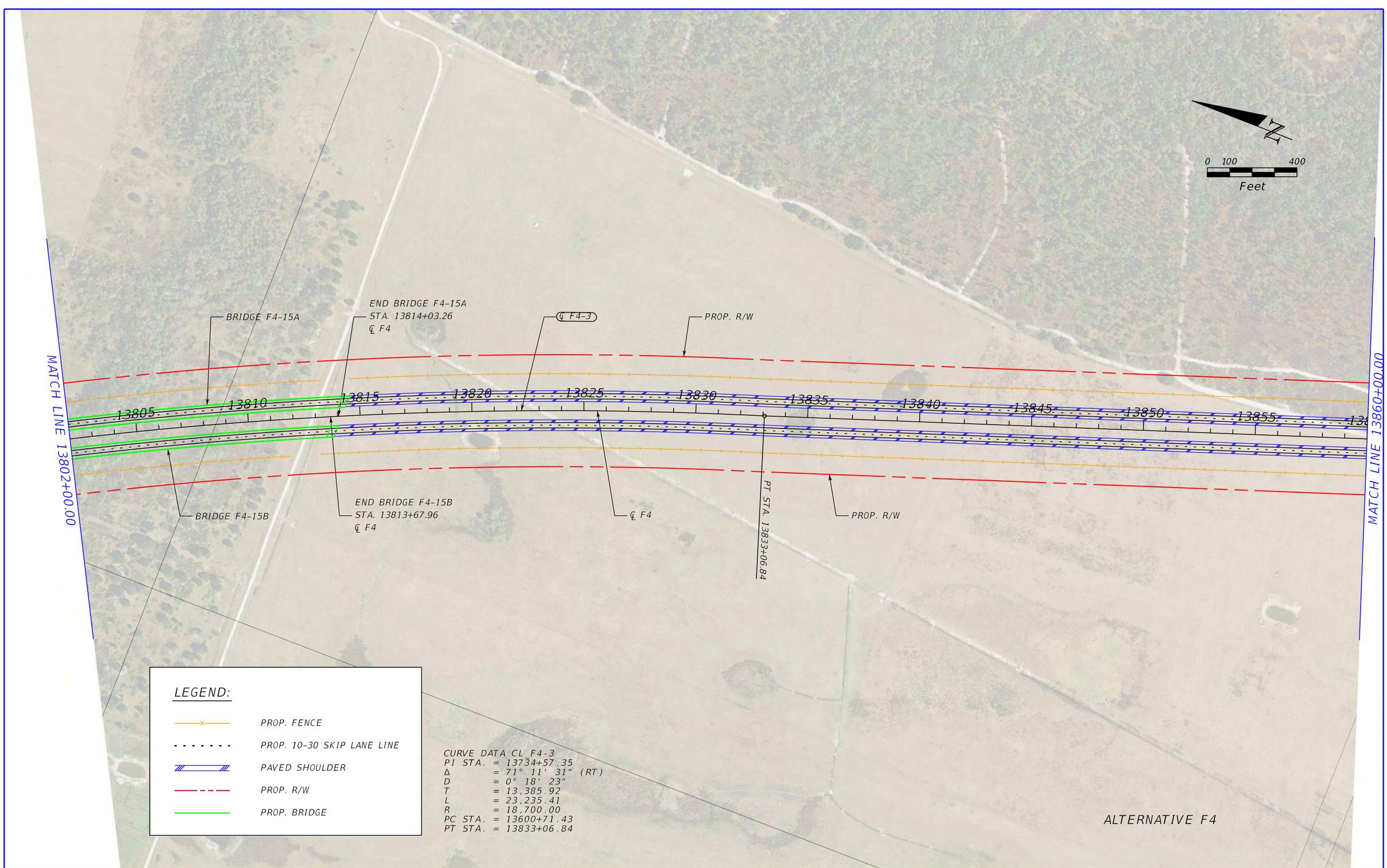
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (14)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (15)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (16)

SHEET NO.

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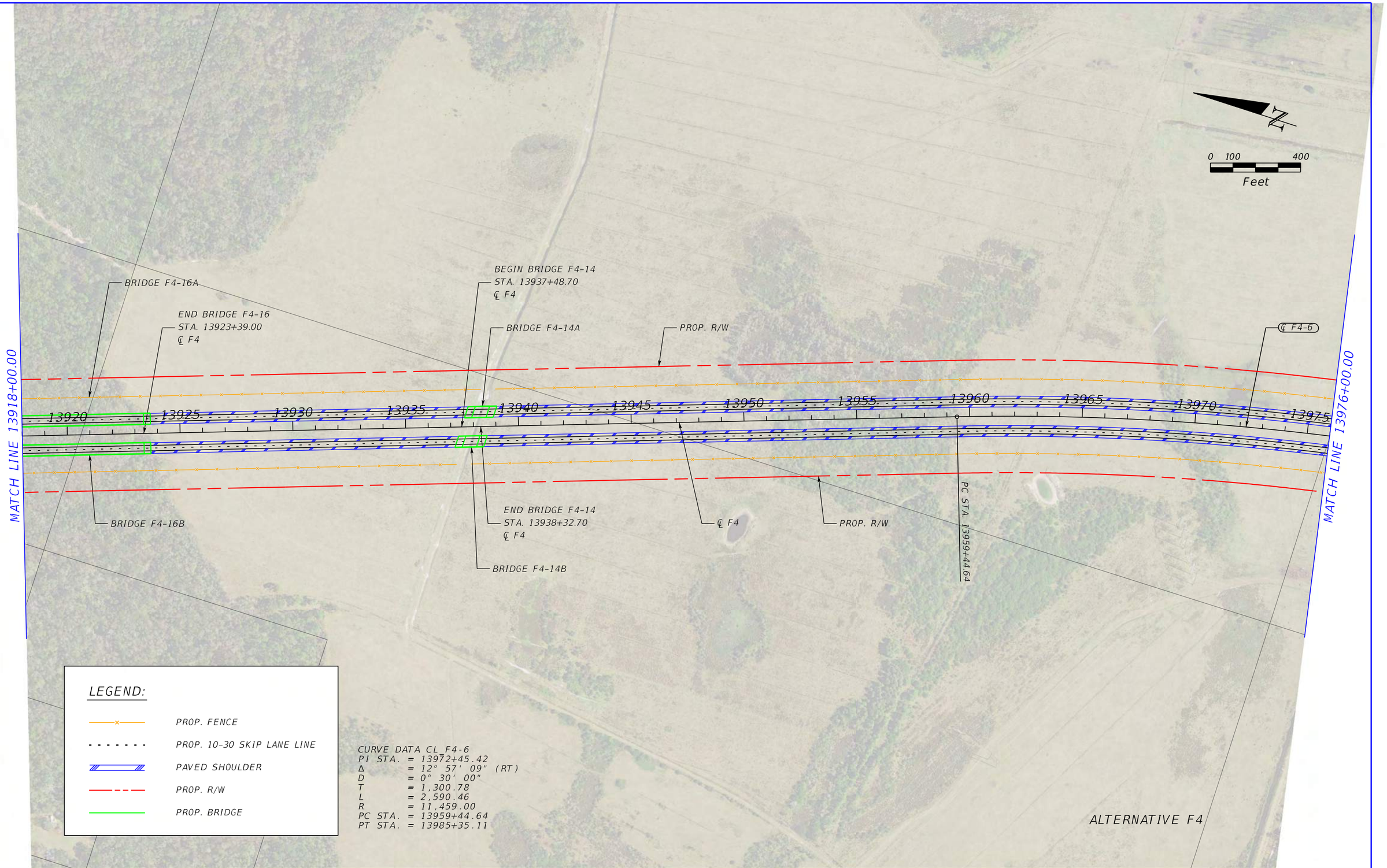


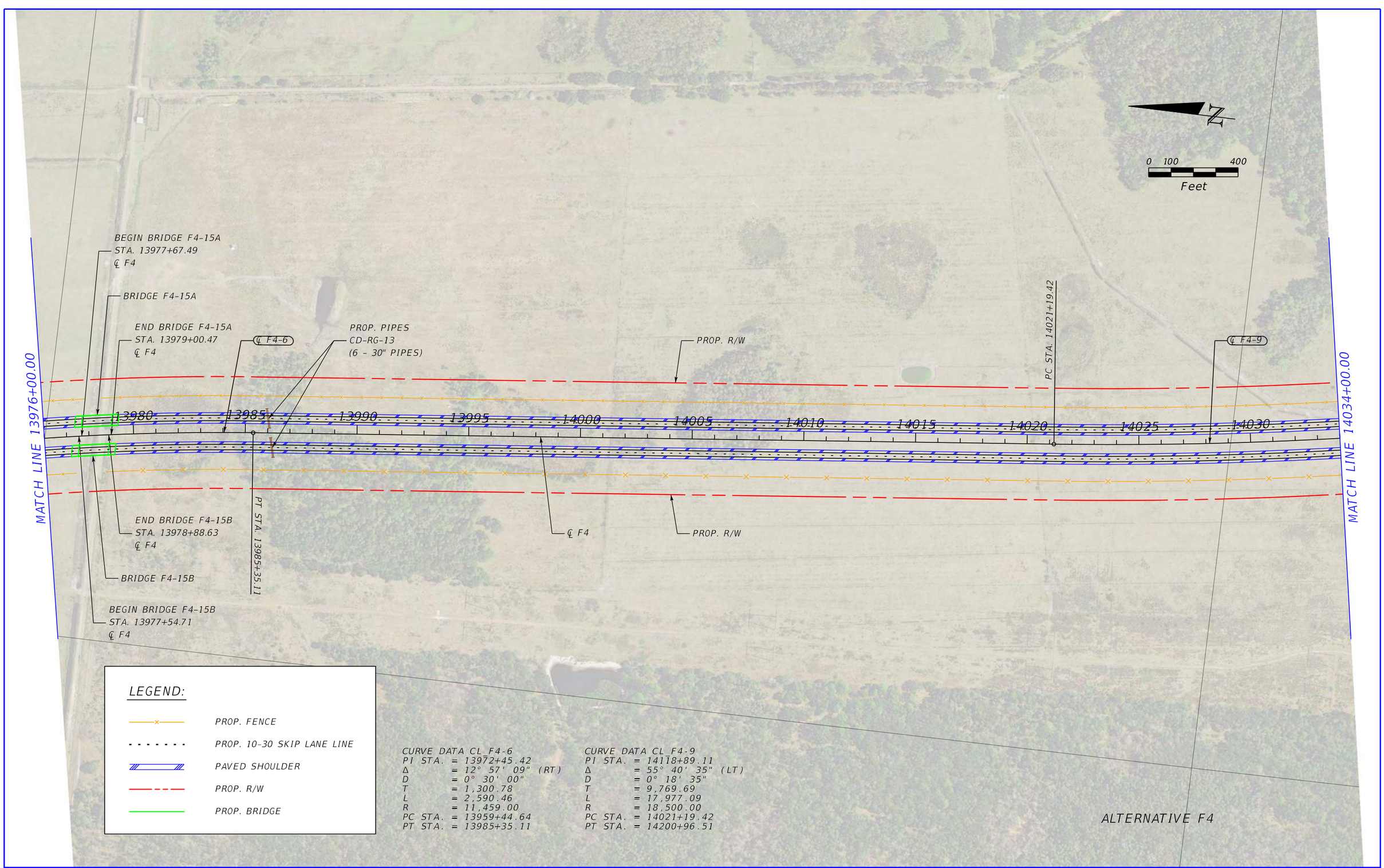
REVISIONS					
DATE	DESCRIPTION	DATE	DESCRIPTION		

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (17)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (18)

SHEET NO.

ORCHID CIR

BUCKSTRAND LN

DESERET LN

N

0 100 400

Feet

MATCH LINE 14034+00.00

MATCH LINE 14092+00.00

BEGIN BRIDGE F4-19
STA. 14042+23.00
℄ F4

BRIDGE F4-19A

BEGIN BRIDGE F4-20A
STA. 14053+79.11
℄ F4

BRIDGE F4-20A

END BRIDGE F4-20A
STA. 14054+72.03
℄ F4

℄ F4-9

PROP. R/W

14035 14040 14045 14050 14055 14060 14065 14070 14075 14080 14085 14090

BRIDGE F4-19B

END BRIDGE F4-19
STA. 14049+47.00
℄ F4

END BRIDGE F4-20B
STA. 14054+91.72
℄ F4

BRIDGE F4-20B

BEGIN BRIDGE F4-20B
STA. 14054+09.44
℄ F4

℄ F4

PROP. R/W

DESERET LN

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL F4-9
PI STA. = 14118+89.11
Δ = 55° 40' 35" (LT)
D = 0° 18' 35"
T = 9,769.69
L = 17,977.09
R = 18,500.00
PC STA. = 14021+19.42
PT STA. = 14200+96.51

ALTERNATIVE F4

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

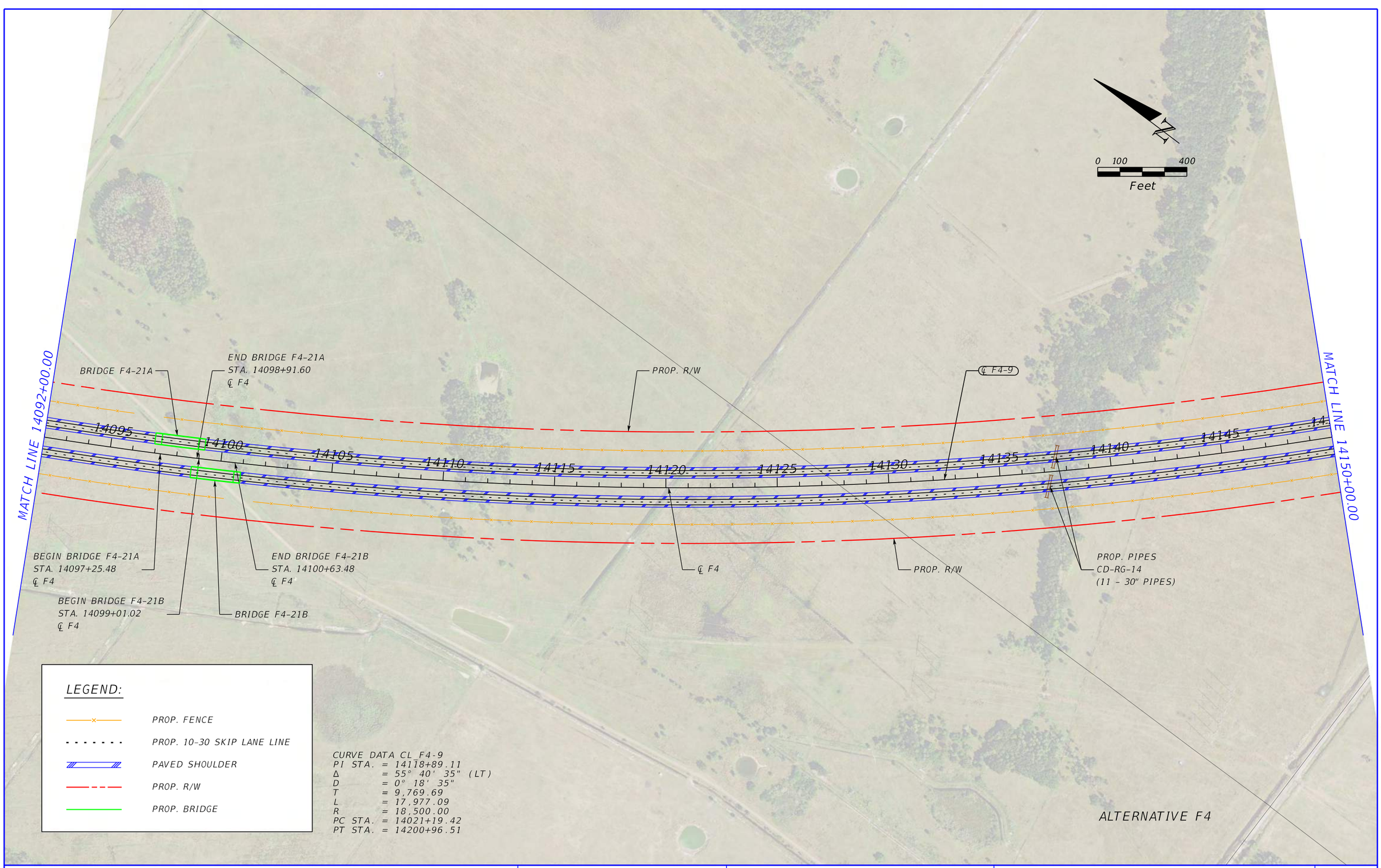
CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (19)

SHEET NO.

Michael.Hunter 3/8/2021 4:56:37 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F4\Plan Sheets\PLANRD019.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

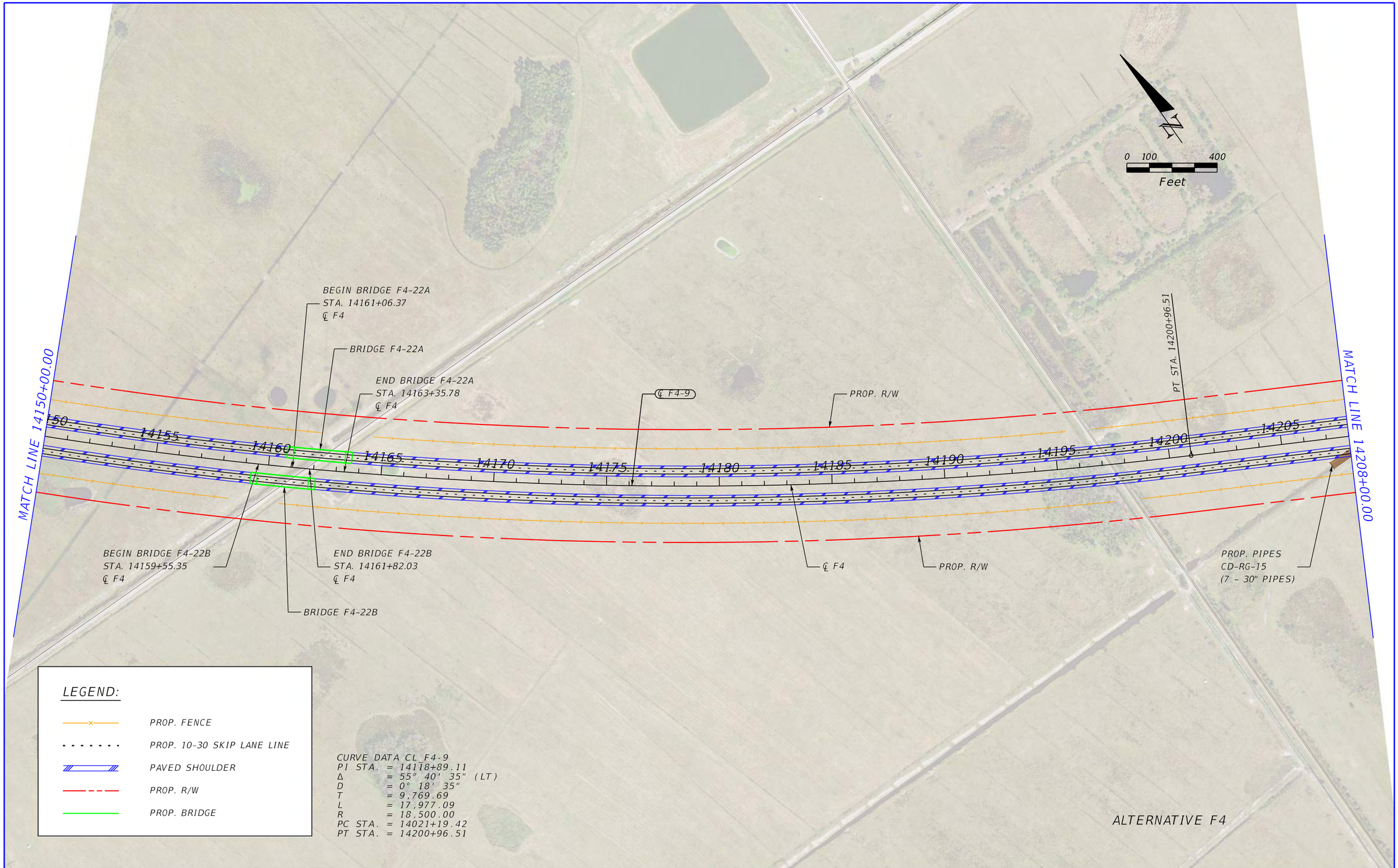
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (20)

SHEET NO.

Michael.Hunter 3/8/2021 4:56:55 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F4\Plan Sheets\PLANRD020.dgn



REVISIONS				CENTRAL FLORIDA EXPRESSWAY AUTHORITY			OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (21)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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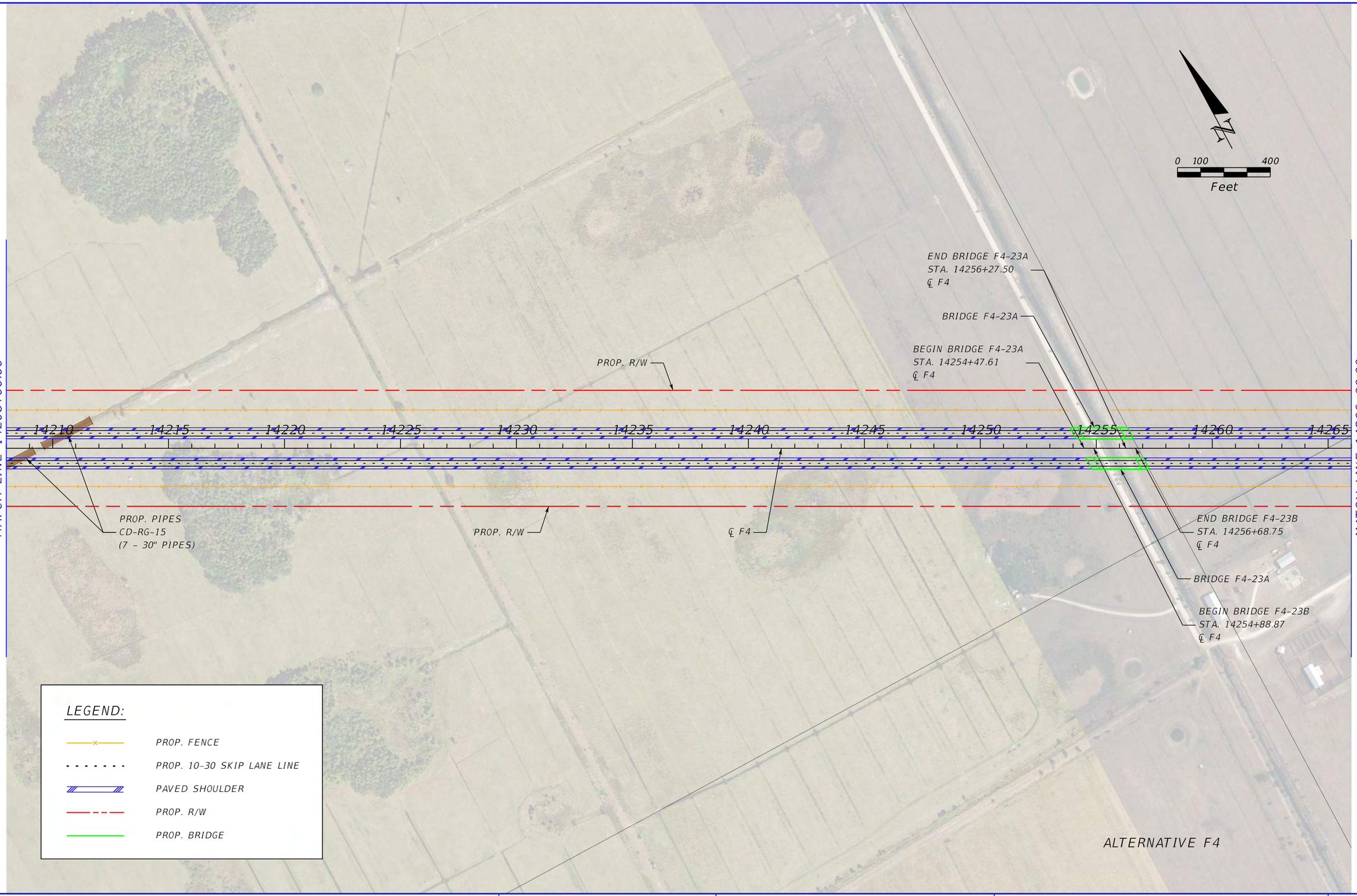


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (22)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 14266+00.00

MATCH LINE 14324+00.00

BEGIN BRIDGE F4-24A
STA. 14274+91.90
℄ F4

BRIDGE F4-24A

BEGIN BRIDGE F4-24B
STA. 14272+78.68
℄ F4

END BRIDGE F4-24A
STA. 14277+30.51
℄ F4

BRIDGE F4-25A

PROP. R/W

14270 14275 14280 14285 14290 14295 14300 14305 14310 14315 14320

BRIDGE F4-24B

END BRIDGE F4-24B
STA. 14275+18.25
℄ F4

BEGIN BRIDGE F4-25
STA. 14285+78.78
℄ F4

BRIDGE F4-25B

END BRIDGE F4-25
STA. 14286+96.04
℄ F4

℄ F4

PROP. R/W

CARACARA LN

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

ALTERNATIVE F4

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

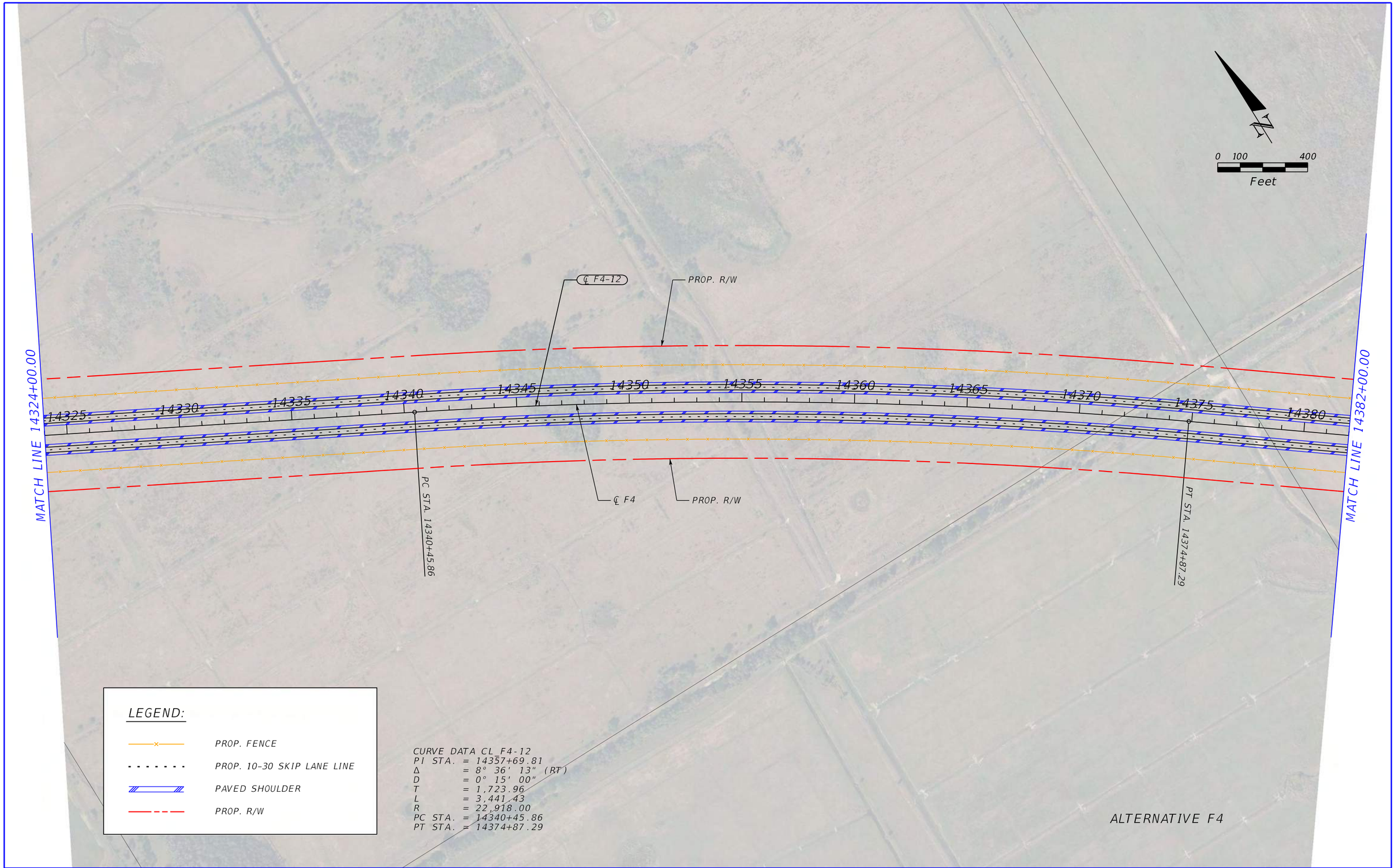
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (23)

SHEET NO.

Michael.Hunter 3/8/2021 4:57:45 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F4\Plan Sheets\PLANRD023.dgn



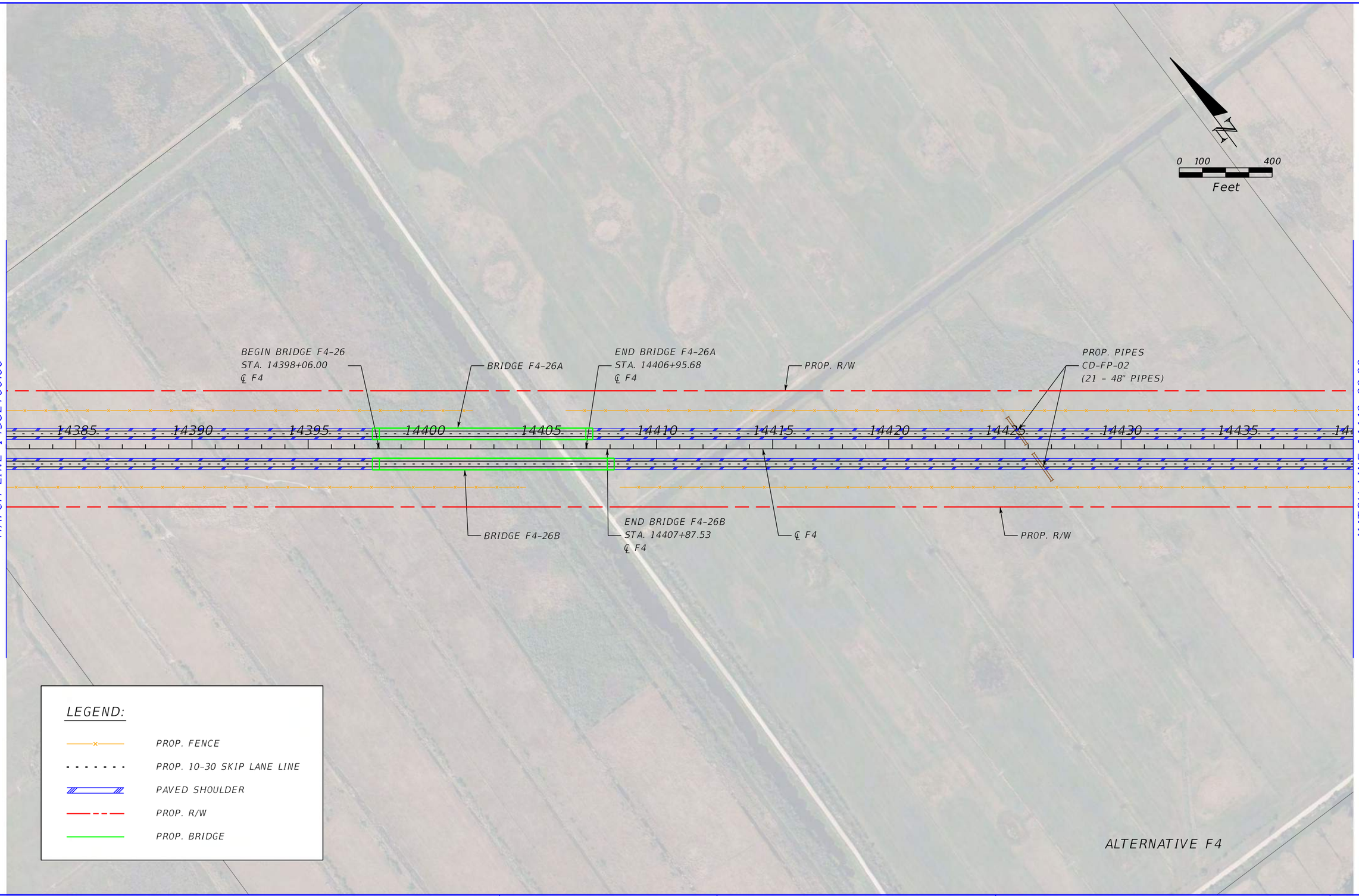
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (24)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (25)

SHEET NO.

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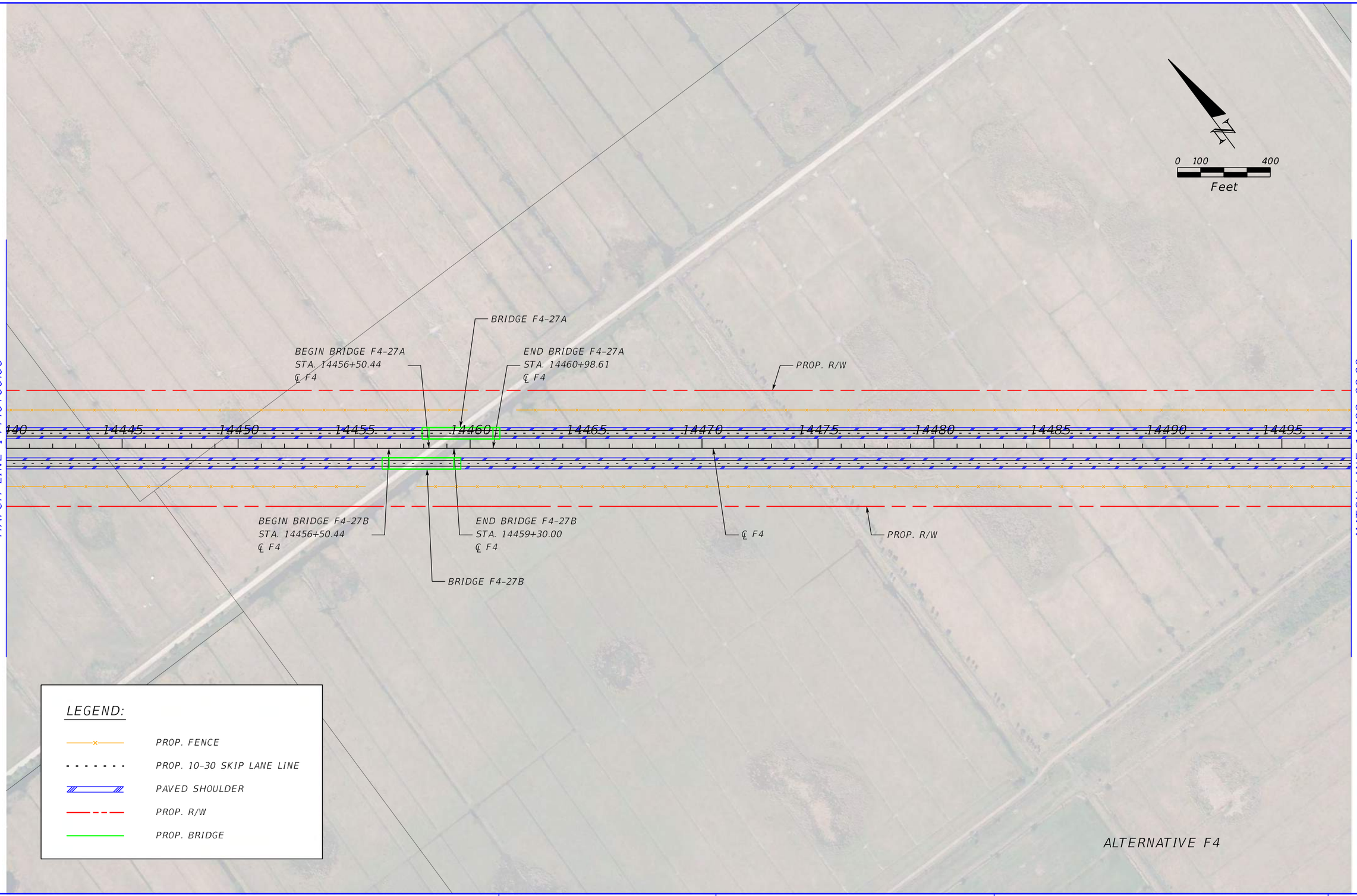


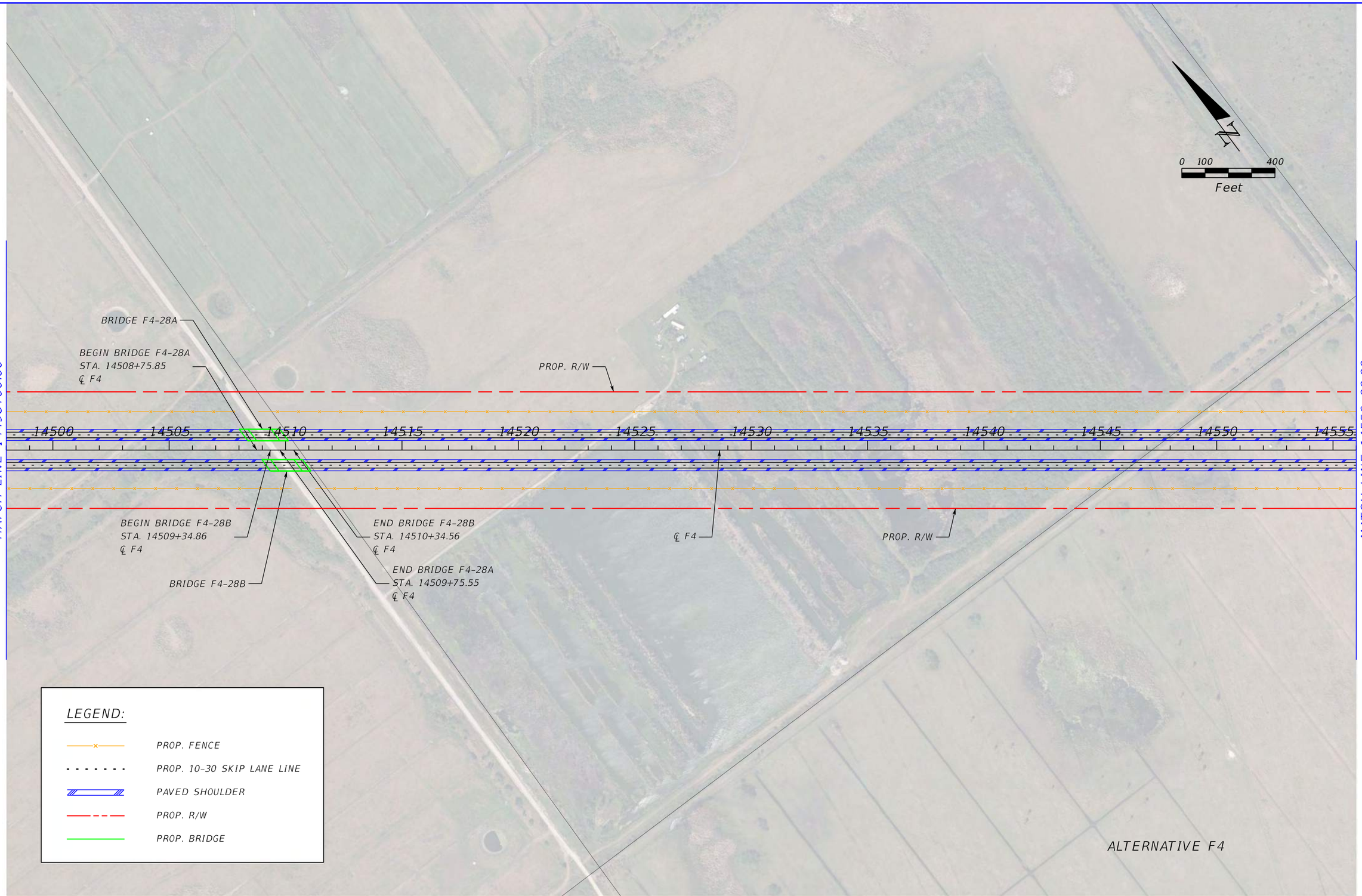
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (26)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (27)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 14556+00.00

MATCH LINE 14614+00.00

14560 14565 14570 14575 14580 14585 14590 14595 14600 14605 14610

BRIDGE F4-29A

PROP. R/W

BEGIN BRIDGE F4-29B
STA. 14560+18.42
℄ F4

BEGIN BRIDGE F4-29A
STA. 14559+58.31
℄ F4

BRIDGE F4-29B

℄ F4

PROP. R/W

SPACE COAST PKWY

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

ALTERNATIVE F4

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (28)

SHEET NO.

Michael.Hunter 3/8/2021 4:59:03 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F4\Plan Sheets\PLANRD028.dgn

N

0 100 400

Feet

MATCH LINE 14614+00.00

MATCH LINE 14672+00.00

BRIDGE F4-29A

PROP. R/W

PC STA. 14650+39.12

℄ F4-15

14615

14620

14625

14630

14635

14640

14645

14650

14655

14660

14665

14670

BRIDGE F4-29B

SPACE COAST PKWY

℄ F4

PROP. R/W

SWEETWATER DR

ALTERNATIVE F4

LEGEND:

PROP. FENCE

PROP. 10-30 SKIP LANE LINE

PROP. R/W

PROP. BRIDGE

CURVE DATA CL F4-15
PI STA. = 14668+65.82
Δ = 37° 11' 12" (LT)
D = 1° 03' 19"
T = 1,826.70
L = 3,524.24
R = 5,430.00
PC STA. = 14650+39.12
PT STA. = 14685+63.36

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (29)

SHEET NO.

Michael.Hunter 3/8/2021 4:59:22 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F4\Plan Sheets\PLANRD029.dgn

N

0 100 400

Feet

MATCH LINE 14672+00.00

℄ F4-15

BRIDGE F4-29A

PT STA. 14685+63.36

PROP. R/W

14675 14680 14685 14690 14695 14700 14705 14710 14715 14720 14725

℄ F4

END BRIDGE F4-29
STA. 14710+21.64
℄ F4

MATCH LINE 14730+00.00

PROP. R/W

BRIDGE F4-29B

SPACE COAST PKWY

BRIDGE F4-29C

ALTERNATIVE F4

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL F4-15
PI STA. = 14668+65.82
Δ = 37° 11' 12" (LT)
D = 1° 03' 19"
T = 1,826.70
L = 3,524.24
R = 5,430.00
PC STA. = 14650+39.12
PT STA. = 14685+63.36

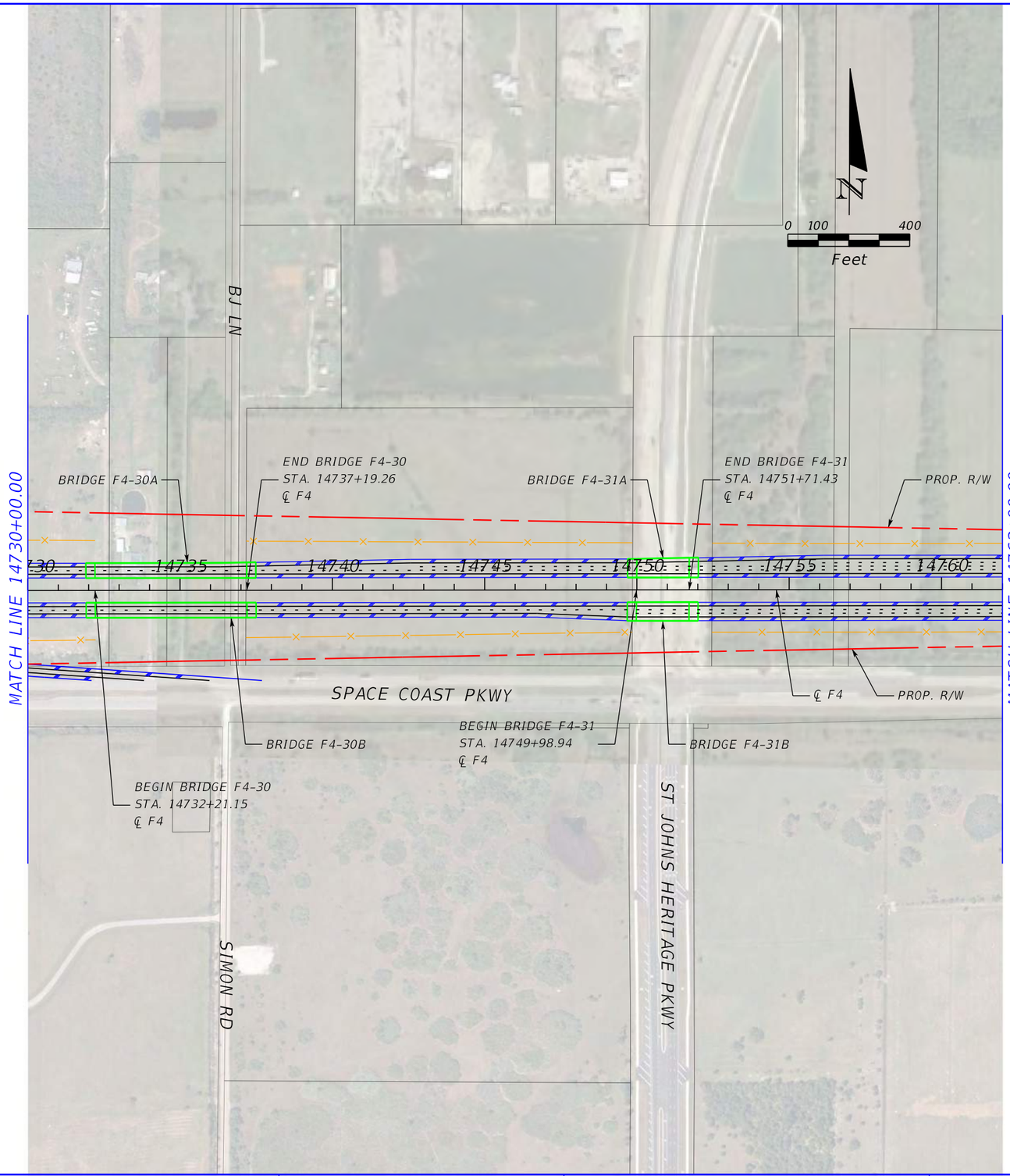
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (30)

SHEET NO.



LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

ALTERNATIVE F4

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (31)

SHEET NO.

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

S JOHN RODES BLVD

N

0 100 400

Feet

PROP. R/W

EXIST. PIPE
CD-95-20
(1 - 36" PIPE)

EXIST. PIPE
CD-95-21
(1 - 36" PIPE)

PROP. PIPE
CD-95-22
(1 - 24" PIPE)

I-95

ST JOHNS HERITAGE PKWY

PROP. R/W

MATCH LINE (SEE SHEET 33)

ALTERNATIVE F4

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

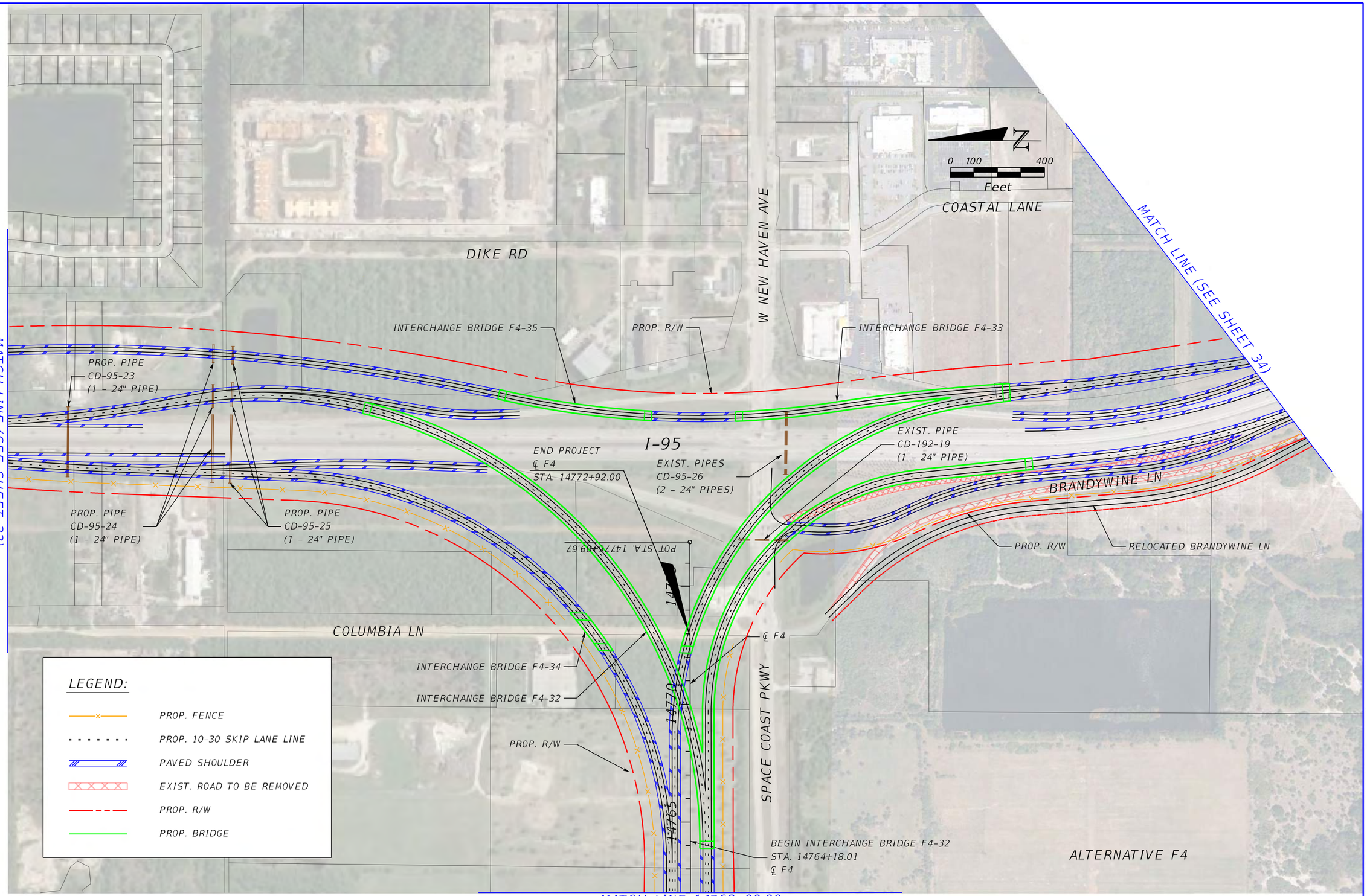
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (32)

SHEET NO.

Michael.Hunter 3/8/2021 4:59:57 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - F4\Plan Sheets\PLANRD032.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (33)

SHEET NO.

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

MATCH LINE (SEE SHEET 33)

MIAMI AVE
MICHIGAN ST
ARIZONA ST
OKLAHOMA ST
OHIO ST
KEYSTONE AVE
MICHIGAN ST
MILWAUKEE AVE
VERMONT ST
MERLIN DR
GRIFFIN LN
I-95
INDIANA ST
LADY HAWK WAY
BISHOP LN
BRANDYWINE LN
FOX RUN TRAIL
MICHIGAN ST
PENNSYLVANIA ST
OHIO ST
CHICAGO AVE
RANCH RD

0 100 400
Feet

PROP. R/W
PROP. CULVERT
CD-95-27
(1 - 5' x 4' CBC)
PROP. R/W
PROP. ROAD

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. R/W

ALTERNATIVE F4

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. F4	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (34)

SHEET NO.

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

APPENDIX L

Concept Plans for EAG Alternative

LAKE JOEL

TROUT LAKE

BEGIN PROJECT
℄ EAG
STA. 13000+00.00

13000 13050 13100 13150 13200 13250 13300 13350 13400 13450 13500 13550 13600 13650 13700 13750 13802

1 2 3 4 5 6 7 8 9 10 11 12 13 14

S STATE HWY 13

NOVA RD

N

0 1000 5000
Feet

MATCH LINE 13802+00.00

ALTERNATIVE EAG

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (1)

SHEET NO.

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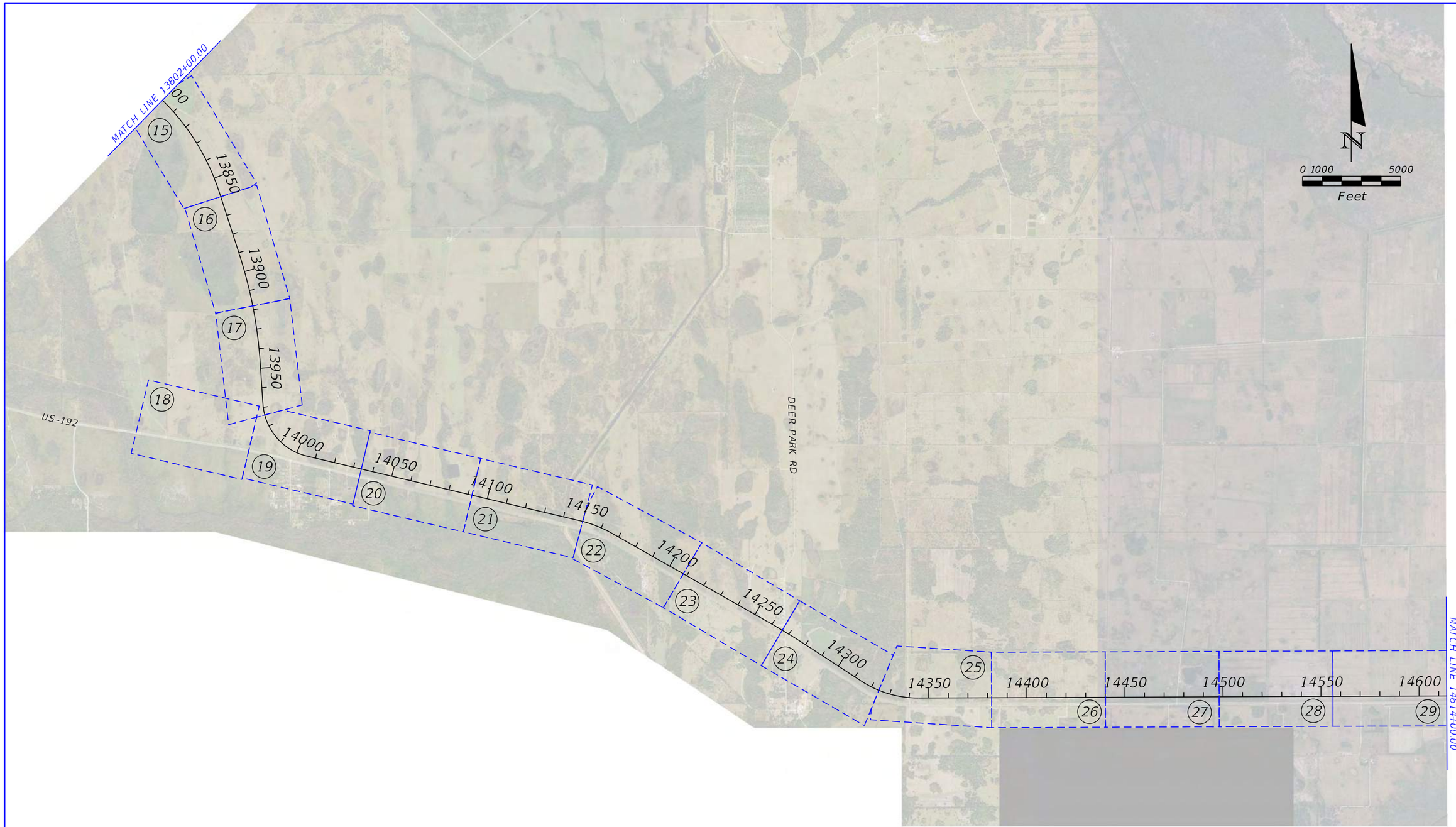

ALTERNATIVE EAG

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (2)

SHEET NO.

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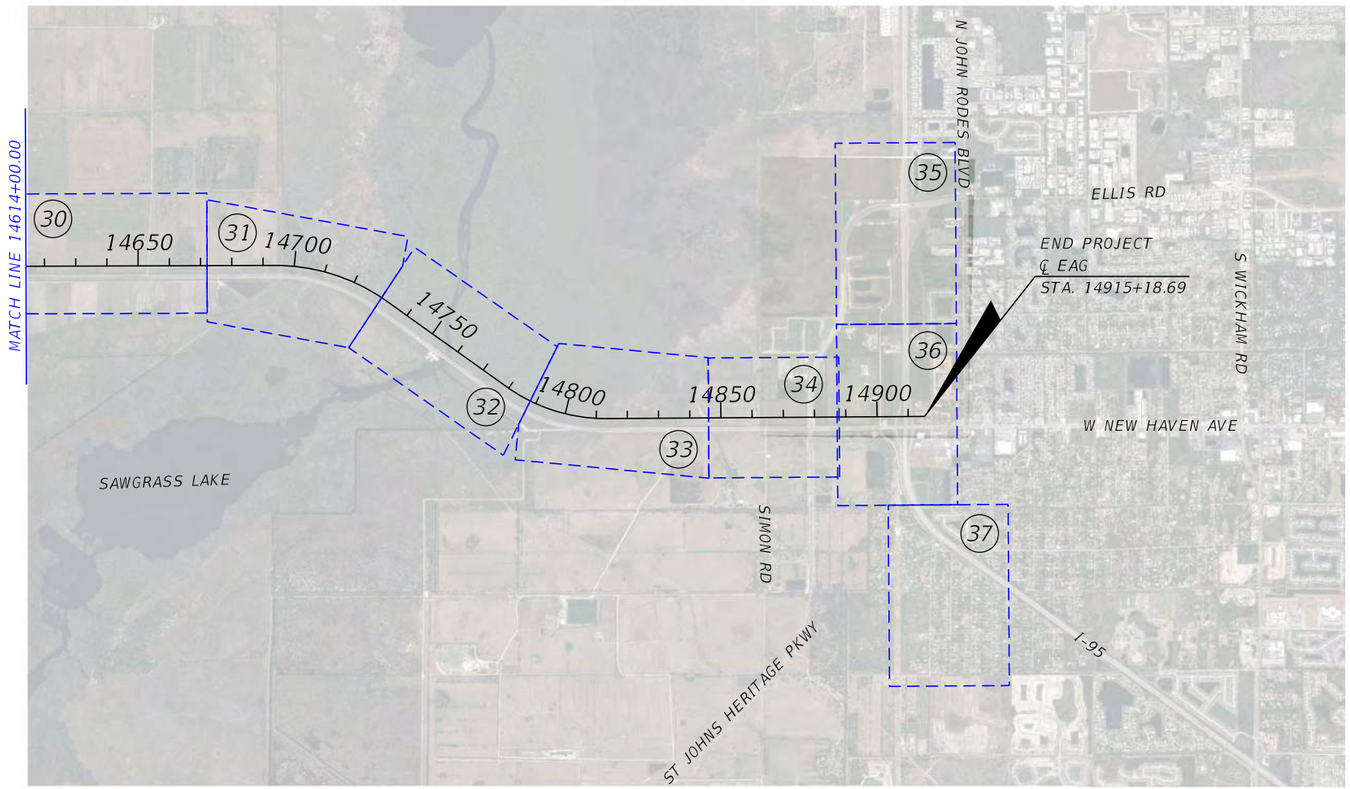


N

0 1000 5000

Feet

ALTERNATIVE EAG

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

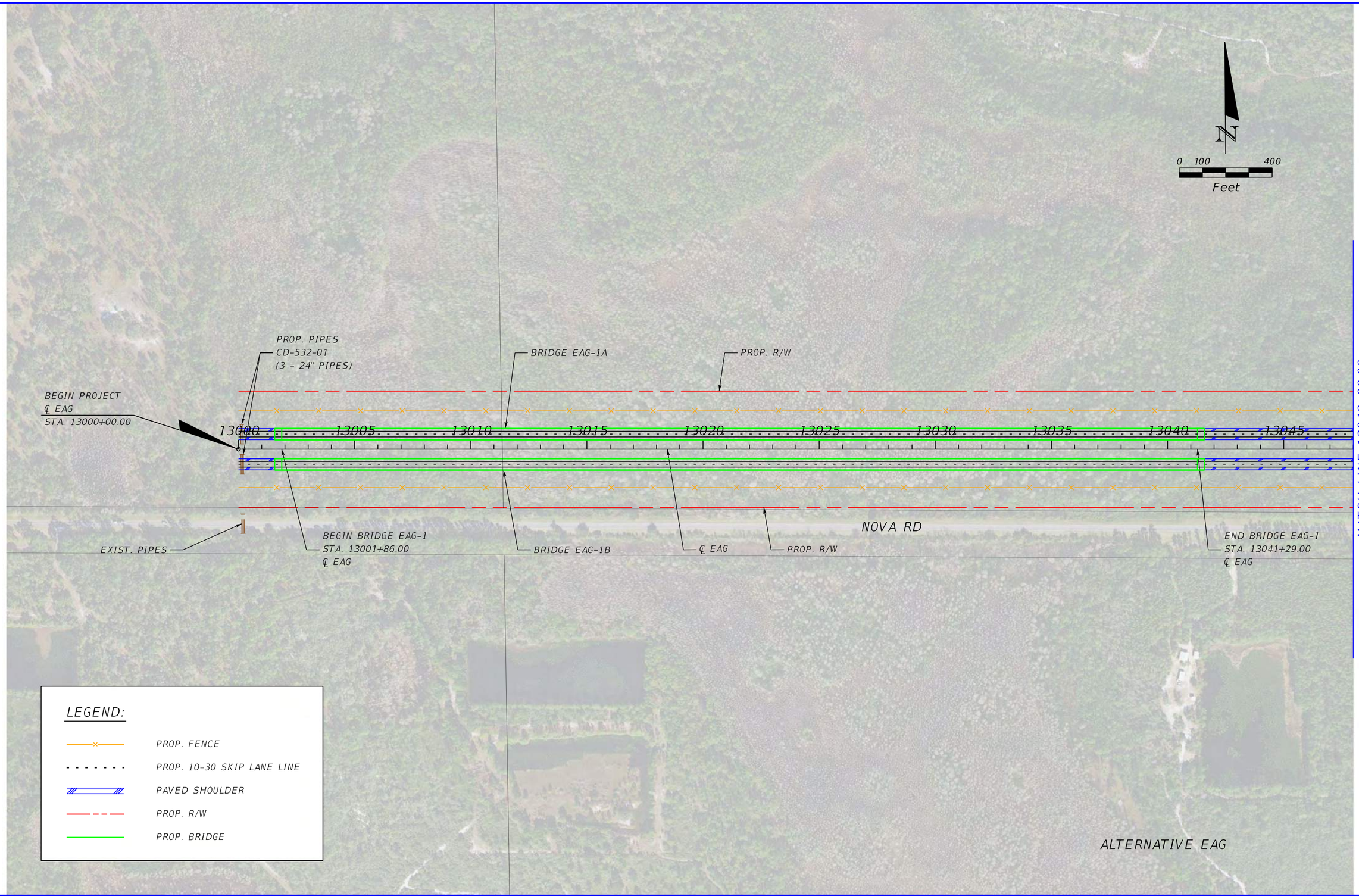
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PROJECT LAYOUT (3)

SHEET NO.

Michael.Hunter 3/8/2021 5:15:20 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - EAG\Plan Sheets\PLAYRD03.dgn



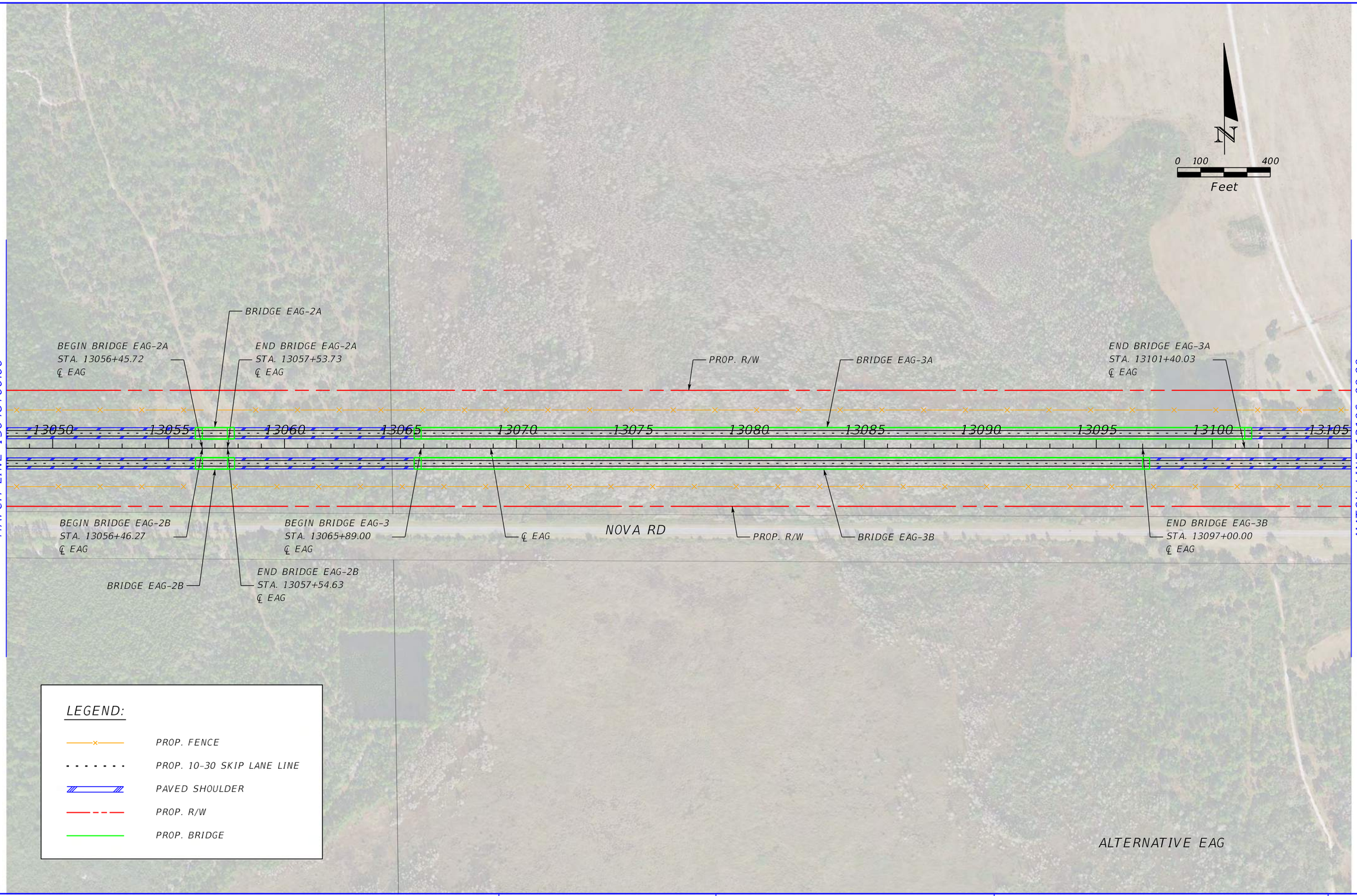
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (01)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (02)

SHEET NO.

Michael.Hunter 3/8/2021 5:15:40 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - EAG\Plan Sheets\PLANRD02.dgn

N

0 100 400

Feet

BEGIN BRIDGE EAG-4A
STA. 13106+45.72
℄ EAG

BRIDGE EAG-4A

END BRIDGE EAG-4A
STA. 13107+53.73
℄ EAG

BEGIN BRIDGE EAG-5
STA. 13112+95.00
℄ EAG

BRIDGE EAG-5A

PROP. R/W

END BRIDGE EAG-5
STA. 13151+60.00
℄ EAG

MATCH LINE 13106+00.00

13110 13115 13120 13125 13130 13135 13140 13145 13150 13155 13160

MATCH LINE 13164+00.00

NOVA RD

END BRIDGE EAG-4B
STA. 13108+58.01
℄ EAG

BRIDGE EAG-4B

BEGIN BRIDGE EAG-4B
STA. 13107+49.66
℄ EAG

℄ EAG

BRIDGE EAG-5B

PROP. R/W

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

ALTERNATIVE EAG

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (03)

SHEET NO.

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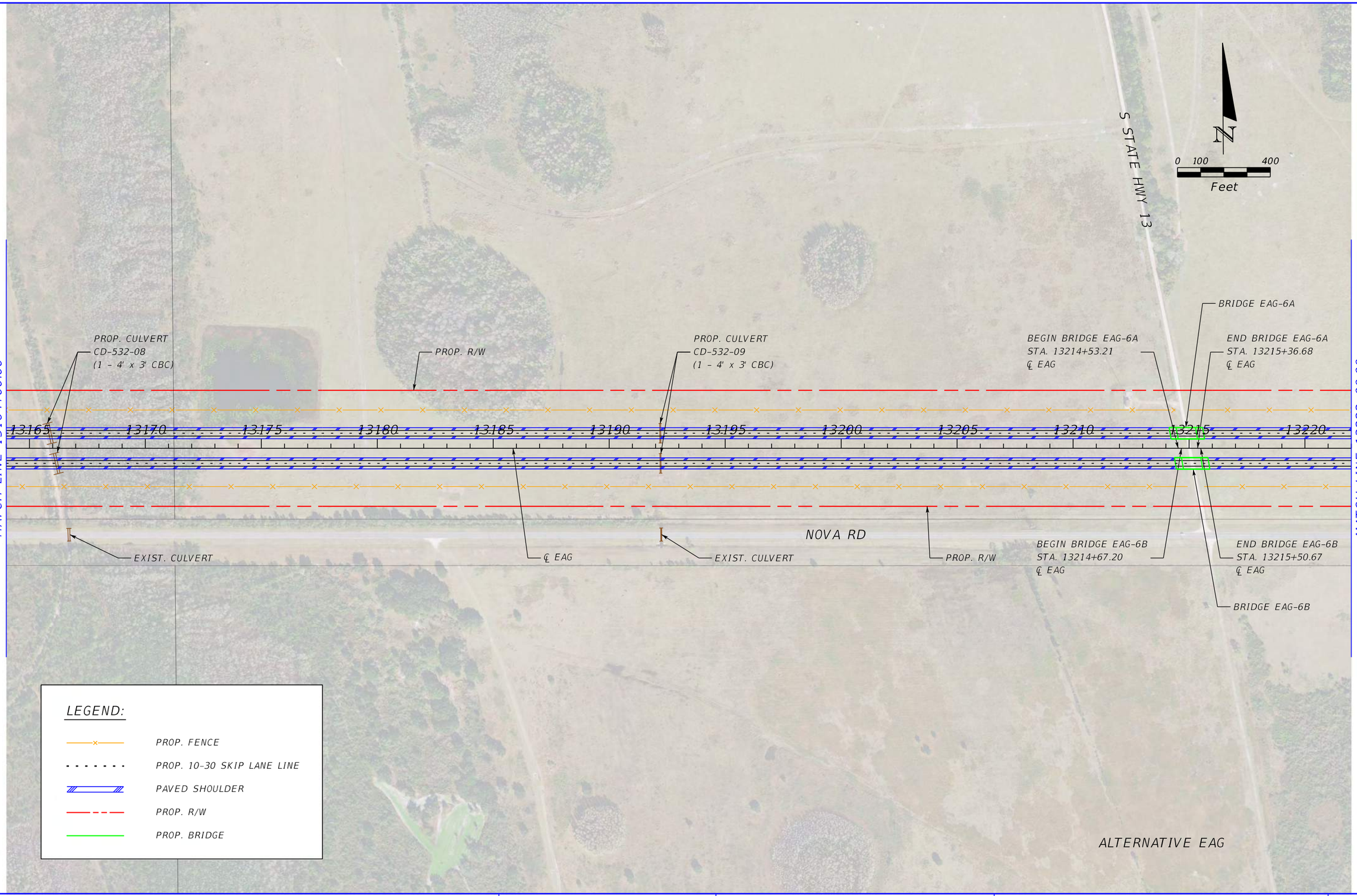


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

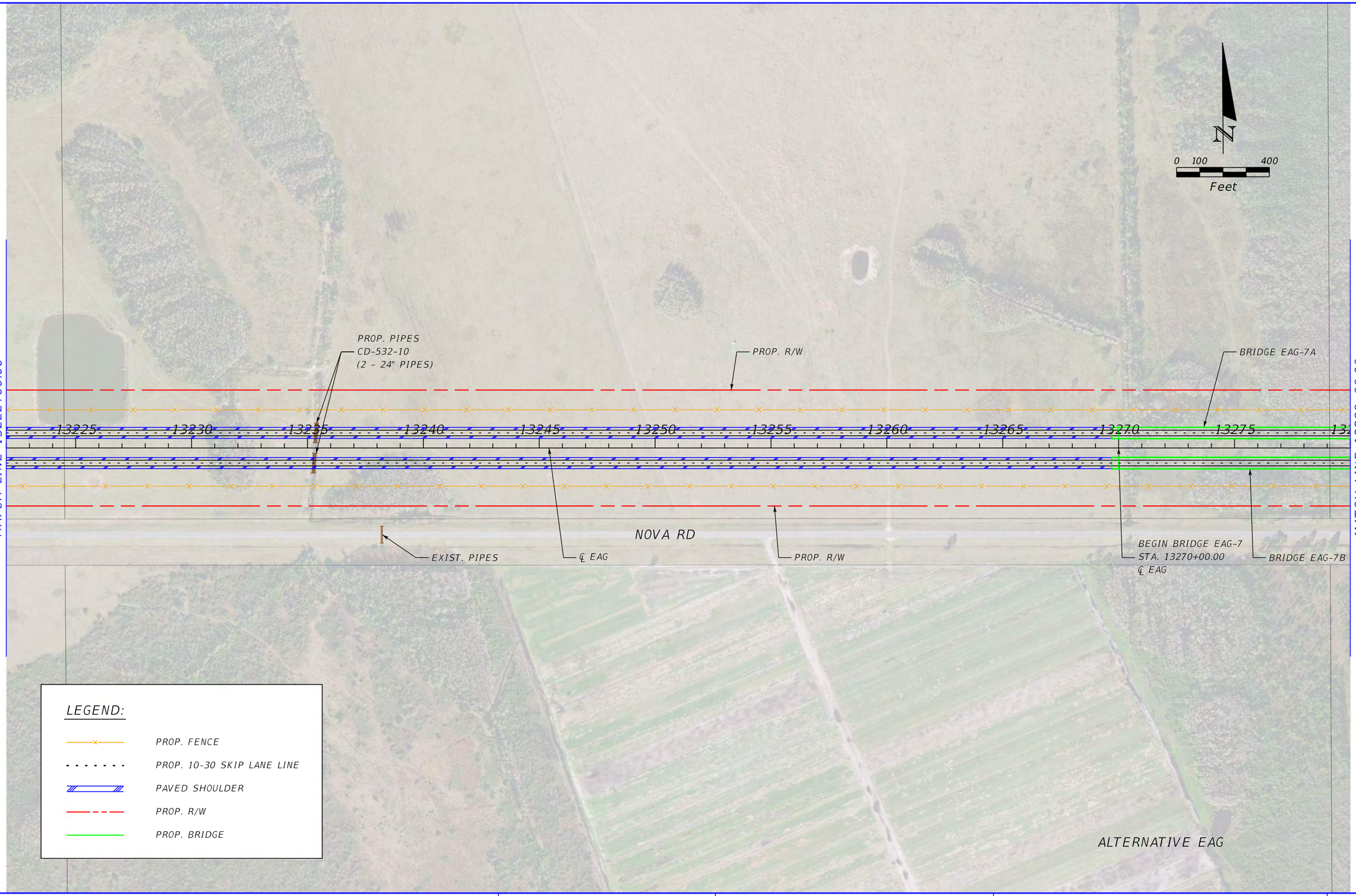
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (04)

SHEET NO.

Michael.Hunter 3/8/2021 5:16:07 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - EAG\Plan Sheets\PLANRD04.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (05)

SHEET NO.

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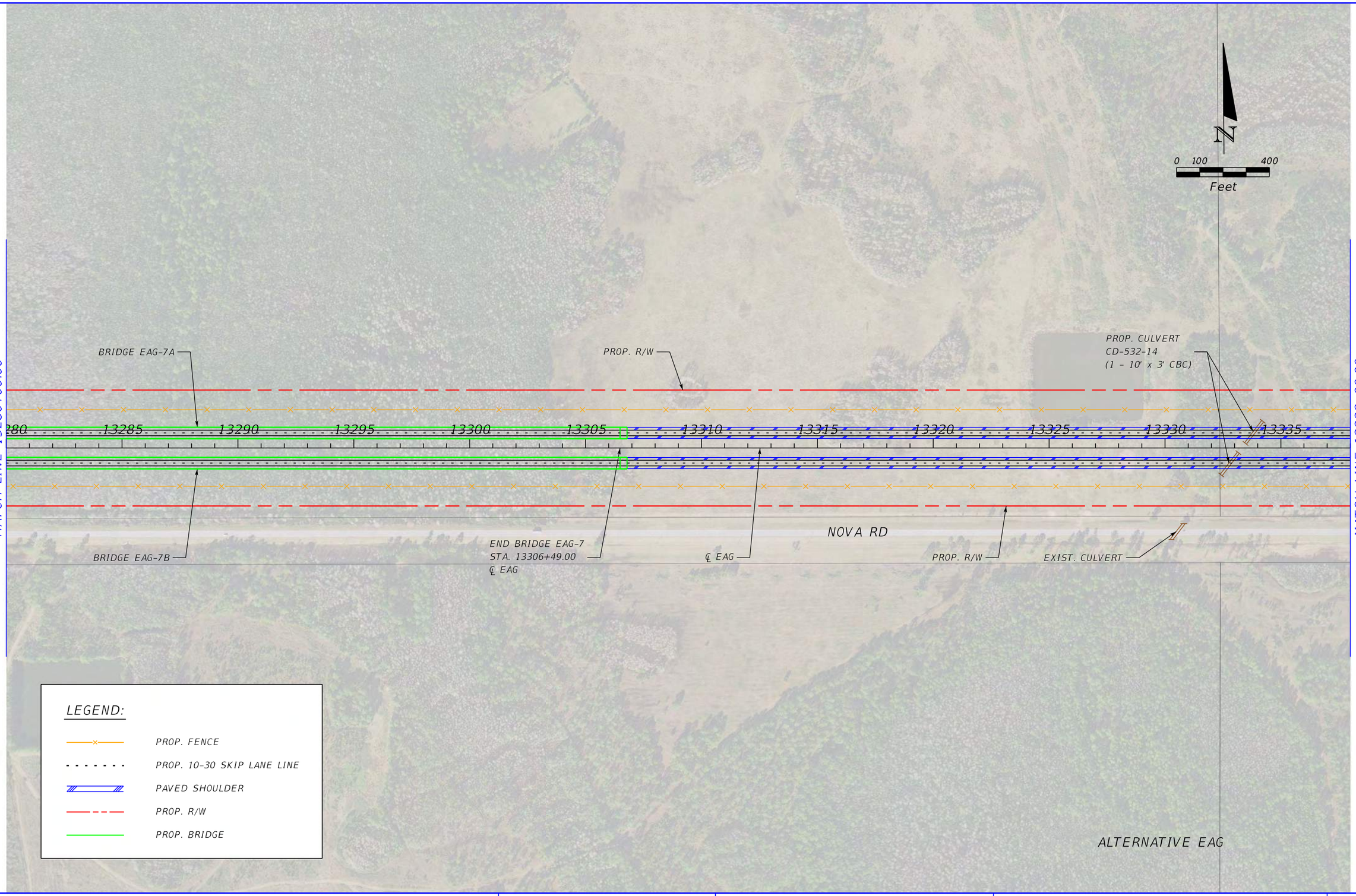


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (06)

SHEET NO.

Michael.Hunter 3/8/2021 5:16:30 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - EAG\Plan Sheets\PLANRD06.dgn

LIME ROCK RD

N

0 100 400

Feet

MATCH LINE 13338+00.00

MATCH LINE 13396+00.00

PROP. CULVERT
CD-532-15
(1 - 4.5' x 2' CBC)

PROP. R/W

BRIDGE EAG-8A

END BRIDGE EAG-8
STA. 13386+69.00
℄ EAG

13340 13345 13350 13355 13360 13365 13370 13375 13380 13385 13390 13395

NOVA RD

EXIST. CULVERT

PROP. R/W

℄ EAG

BEGIN BRIDGE EAG-8
STA. 13369+85.00
℄ EAG

BRIDGE EAG-8B

ALTERNATIVE EAG

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (07)

SHEET NO.

Michael.Hunter 3/8/2021 5:16:46 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - EAG\Plan Sheets\PLANRD07.dgn

BRIDGE EAG-10

PROP. R/W

℄ EAG-1

13425 13430 13435 13440 13445 13450

℄ EAG

PT STA. 13427+28.52

PROP. R/W

13420

13415

NOVA RD

EXIST. CULVERT
CD-532-19
(1 - 9' x 3' CBC)

PROP. R/W

PC STA. 13411+63.71

13410

13405

13400

BRIDGE EAG-9

MATCH LINE 13454+00.00

N

0 100 400
Feet

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. BRIDGE
- PROP. R/W

CURVE DATA CL EAG-1
PI STA. = 13421+57.74
Δ = 89° 39' 26" (RT)
D = 5° 43' 46"
T = 994.03
L = 1,564.81
R = 1,000.00
PC STA. = 13411+63.71
PT STA. = 13427+28.52

ALTERNATIVE EAG

MATCH LINE 13396+00.00

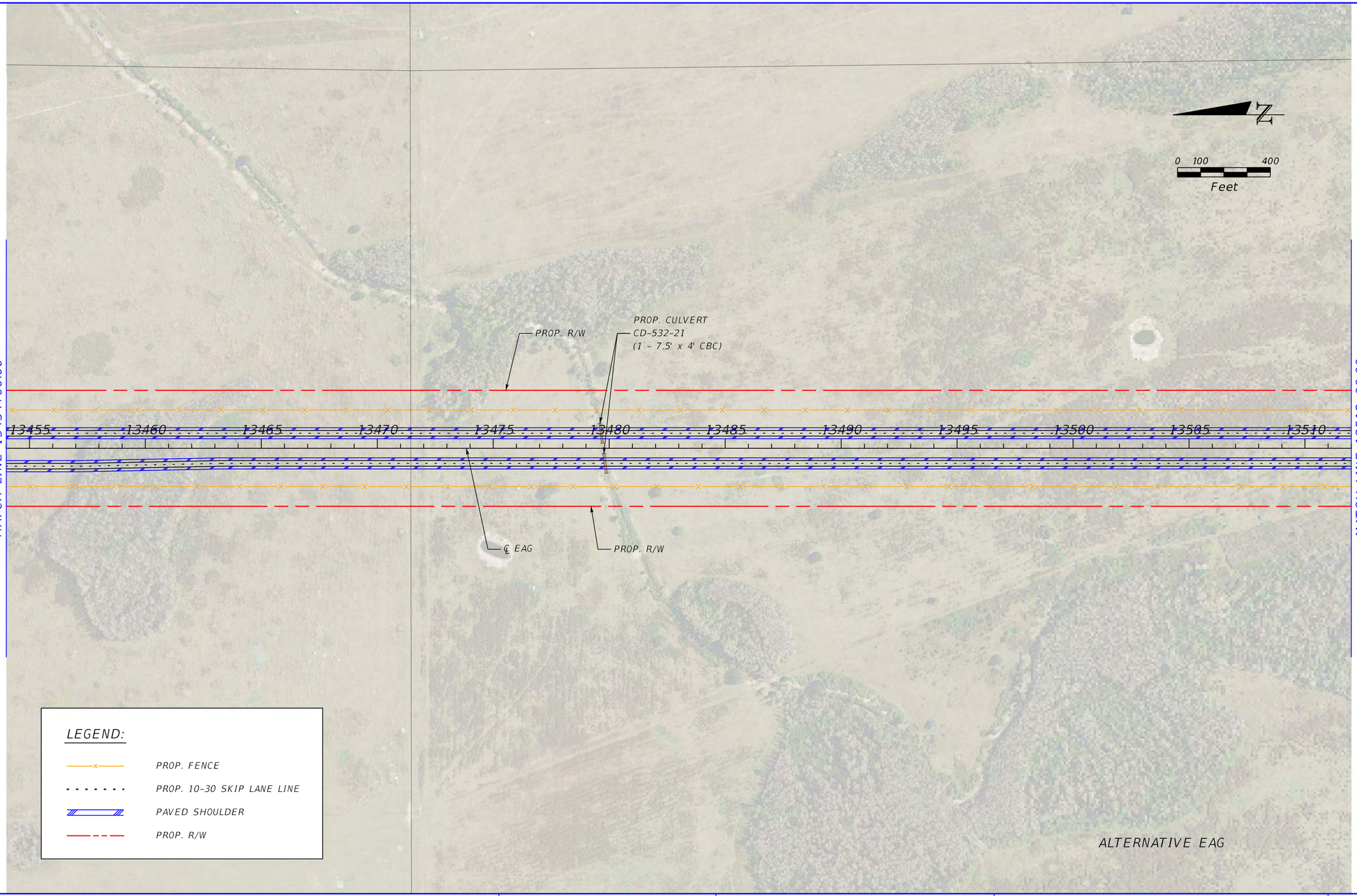
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (08)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (09)

SHEET NO.

N

0 100 400
Feet

MATCH LINE 13512+00.00

PC STA. 13517+10.09

℄ EAG-2

PROP. R/W

13515 13520 13525 13530 13535 13540 13545 13550 13555 13560 13565

MATCH LINE 13570+00.00

℄ EAG

PROP. R/W

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

CURVE DATA CL EAG-2
PI STA. = 13556+40.36
Δ = 37° 51' 45" (LT)
D = 0° 30' 00"
T = 3,930.28
L = 7,572.40
R = 11,459.00
PC STA. = 13517+10.09
PT STA. = 13592+82.49

ALTERNATIVE EAG

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (10)

SHEET NO.

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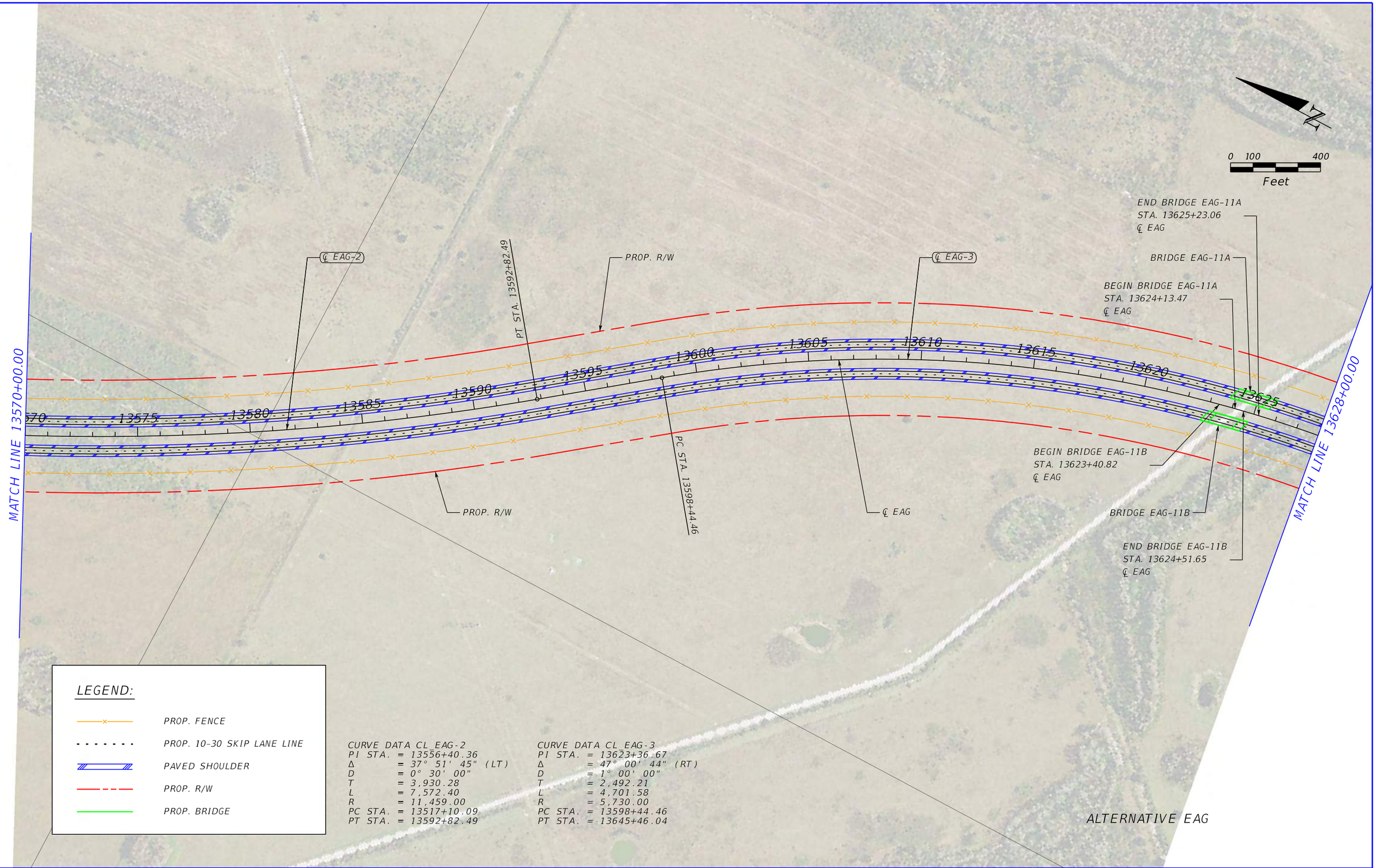


LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL_EAG-2
PI STA. = 13556+40.36
Δ = 37° 51' 45" (LT)
D = 0° 30' 00"
T = 3,930.28
L = 7,572.40
R = 11,459.00
PC STA. = 13517+10.09
PT STA. = 13592+82.49

CURVE DATA CL_EAG-3
PI STA. = 13623+36.67
Δ = 47° 00' 44" (RT)
D = 1° 00' 00"
T = 2,492.21
L = 4,701.58
R = 5,730.00
PC STA. = 13598+44.46
PT STA. = 13645+46.04

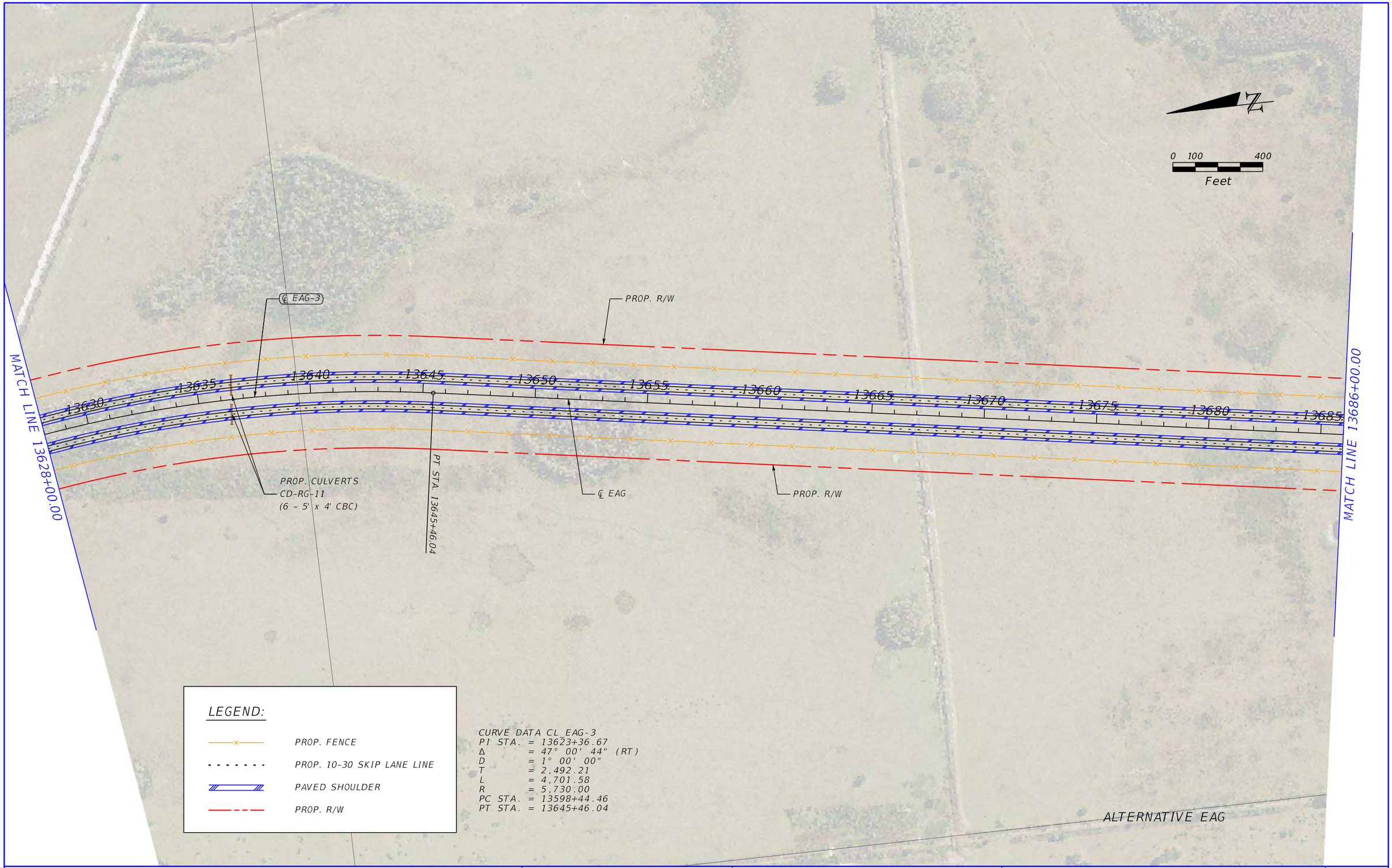
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (11)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (12)

SHEET NO.

N

0 100 400
Feet

MATCH LINE 13686+00.00

MATCH LINE 13744+00.00

PC STA. 13688+85.37

℄ EAG-4

PT STA. 13706+34.77

PROP. R/W

PC STA. 13732+36.88

℄ EAG-5

13690 13695 13700 13705 13710 13715 13720 13725 13730 13735 13740

℄ EAG

PROP. R/W

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

CURVE DATA CL_EAG-4
PI STA. = 13697+61.78
Δ = 8° 44' 50" (LT)
D = 0° 30' 00"
T = 876.40
L = 1,749.40
R = 11,459.00
PC STA. = 13688+85.37
PT STA. = 13706+34.77

CURVE DATA CL_EAG-5
PI STA. = 13754+66.52
Δ = 49° 04' 30" (LT)
D = 1° 10' 23"
T = 2,229.64
L = 4,183.26
R = 4,884.00
PC STA. = 13732+36.88
PT STA. = 13774+20.14

ALTERNATIVE EAG

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (13)

SHEET NO.

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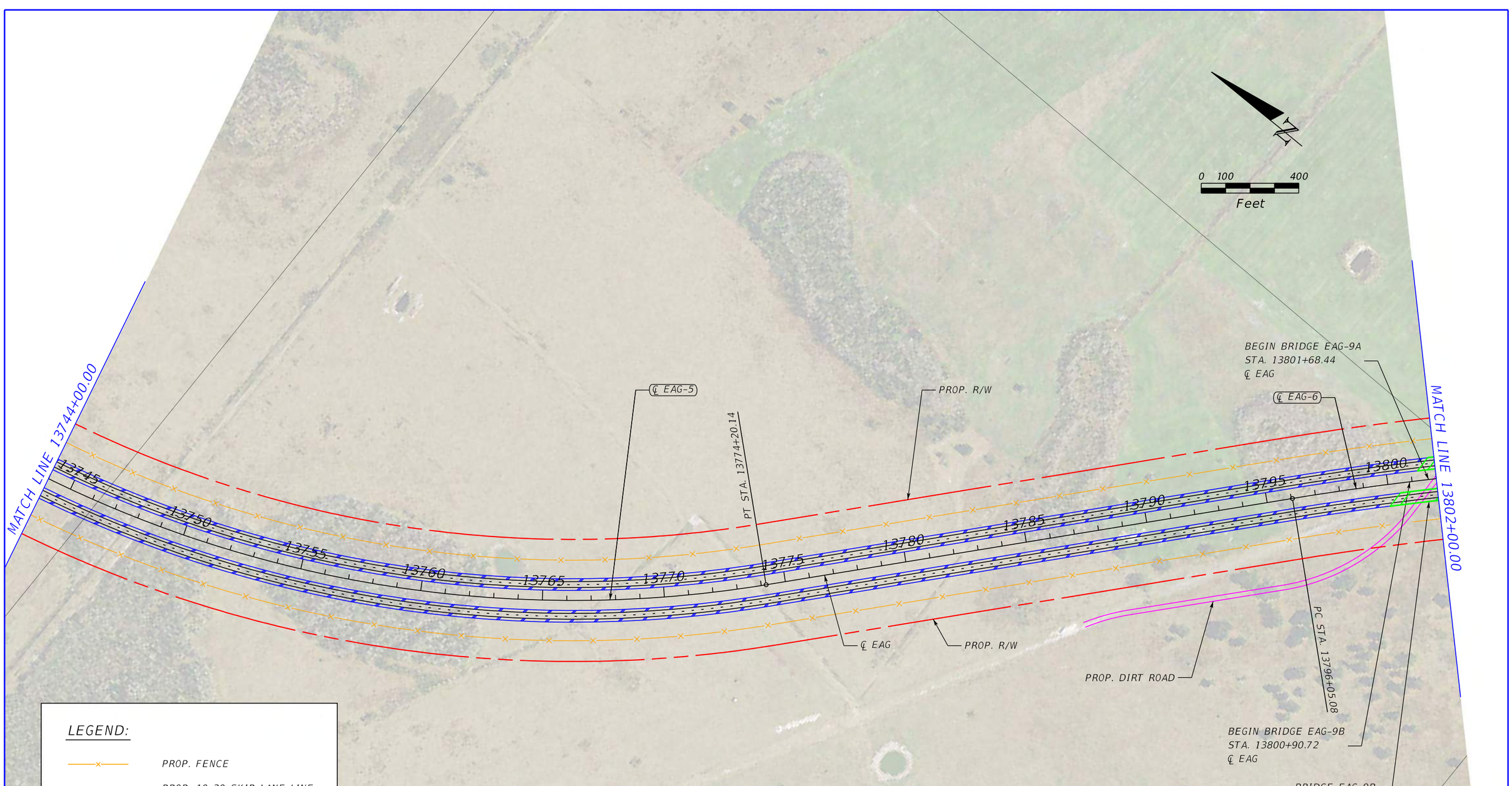

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (14)

SHEET NO.

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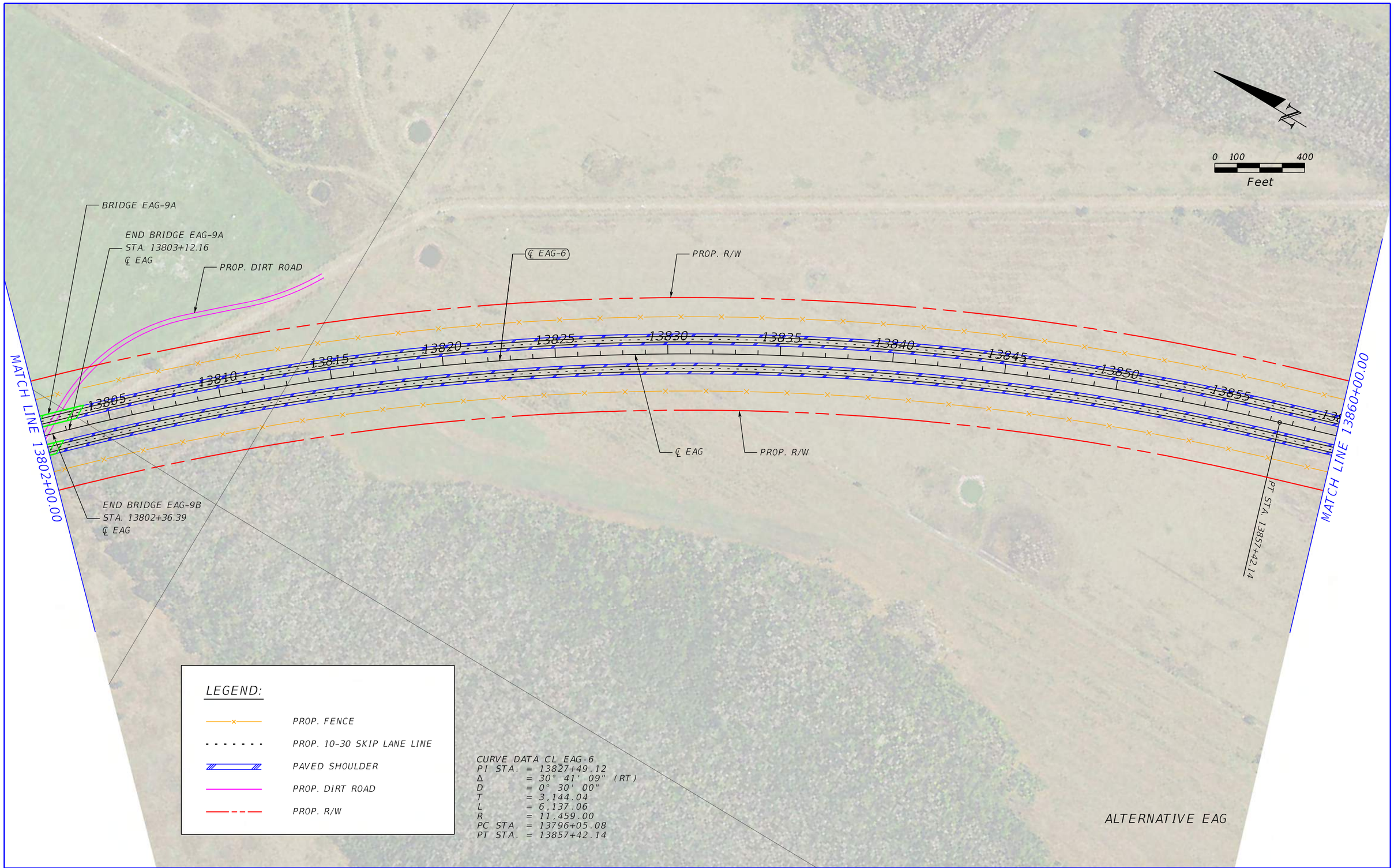

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (15)

SHEET NO.

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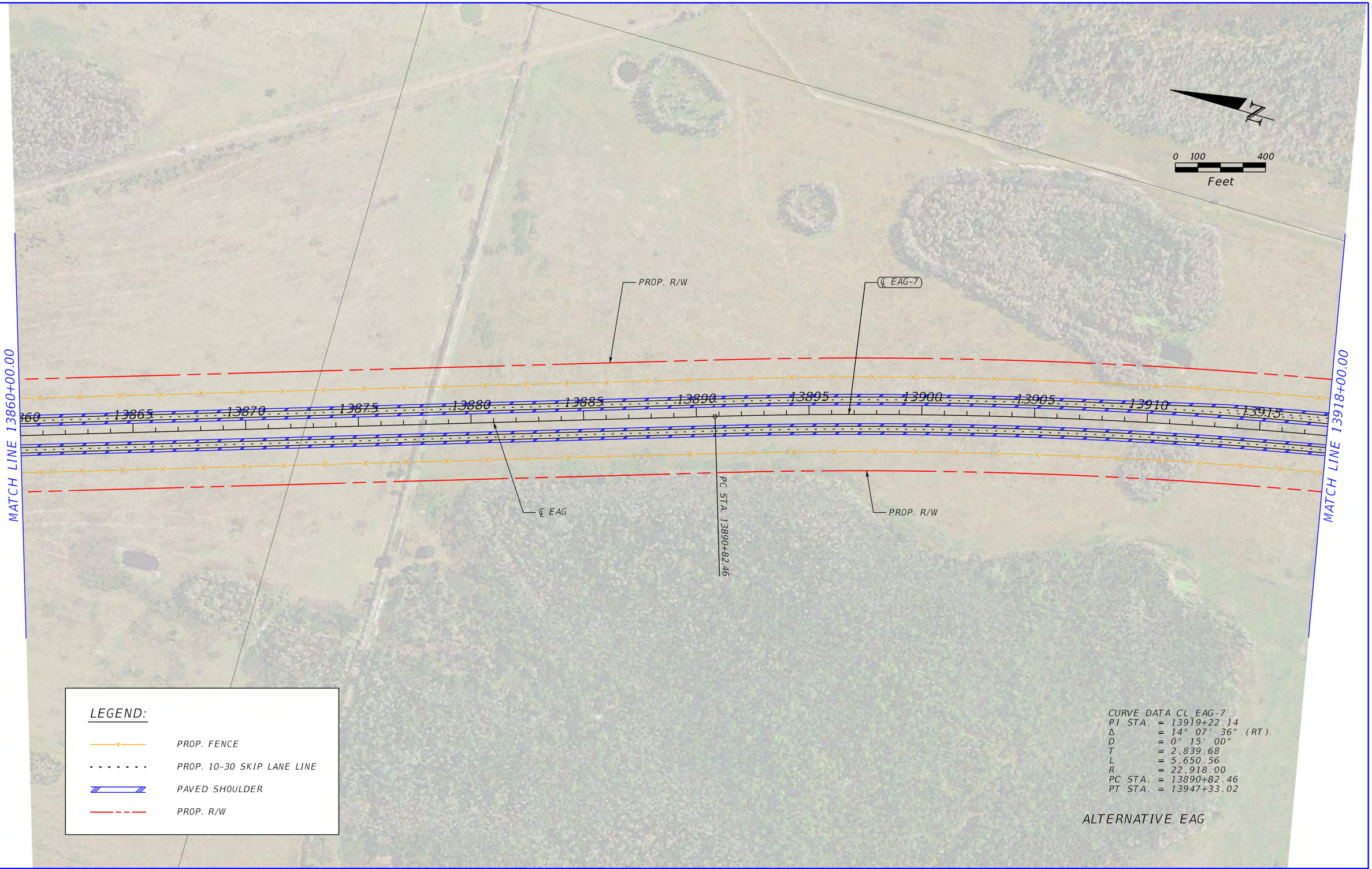


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (16)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 13918+00.00

℄ EAG-7

PROP. R/W

13920 13925 13930 13935 13940 13945 13950 13955 13960 13965 13970

PC STA. 13968+29.99

℄ EAG-8

MATCH LINE 13974+00.00

℄ EAG

PROP. R/W

PT STA. 13947+33.02

LEGEND:

PROP. FENCE

PROP. 10-30 SKIP LANE LINE

PAVED SHOULDER

PROP. R/W

CURVE DATA CL EAG-7
PI STA. = 13919+22.14
Δ = 14° 07' 36" (RT)
D = 0° 15' 00"
T = 2,839.68
L = 5,650.56
R = 22,918.00
PC STA. = 13890+82.46
PT STA. = 13947+33.02

CURVE DATA CL EAG-8
PI STA. = 13989+96.59
Δ = 72° 54' 23" (LT)
D = 1° 57' 13"
T = 2,166.60
L = 3,732.12
R = 2,933.00
PC STA. = 13968+29.99
PT STA. = 14005+62.10

ALTERNATIVE EAG

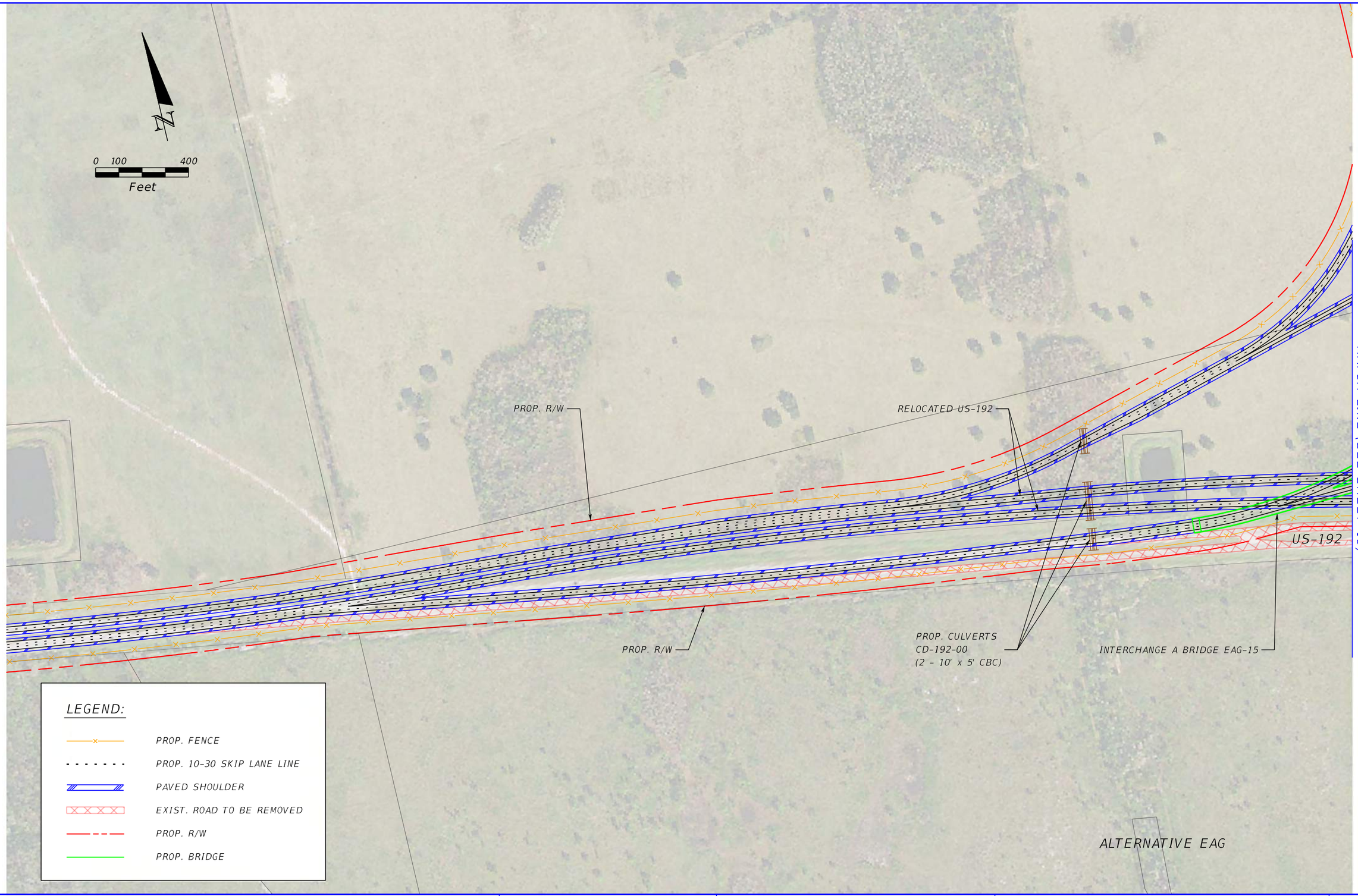
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (17)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (18)

SHEET NO.

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

MATCH LINE 13976+00.00

MATCH LINE (SEE SHEET 18)

MATCH LINE 14034+00.00

13975

13980

13985

13990

13995

14000

14005

14010

14015

14020

14025

14030

INTERCHANGE A BRIDGE EAG-13

INTERCHANGE A BRIDGE EAG-14

INTERCHANGE A BRIDGE EAG-15

℄ EAG-8

PT STA. 14005+62.10

PROP. CULVERT
CD-192-01
(1 - 7' x 3' CBC)

℄ EAG

PROP. R/W

E IRLO BRONSON MEMORIAL HWY

RELOCATED US-192

PROP. R/W

PROP. CULVERT
CD-192-01
(1 - 7' x 3' CBC)

PROP. R/W

OSCEOLA DR

MAGNOLIA RD

ALTERNATIVE EAG

N

0 100 400

Feet

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL EAG-8
PI STA. = 13989+96.59
Δ = 72° 54' 23" (LT)
D = 1° 57' 13"
T = 2,166.60
L = 3,732.12
R = 2,933.00
PC STA. = 13968+29.99
PT STA. = 14005+62.10

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (19)

SHEET NO.

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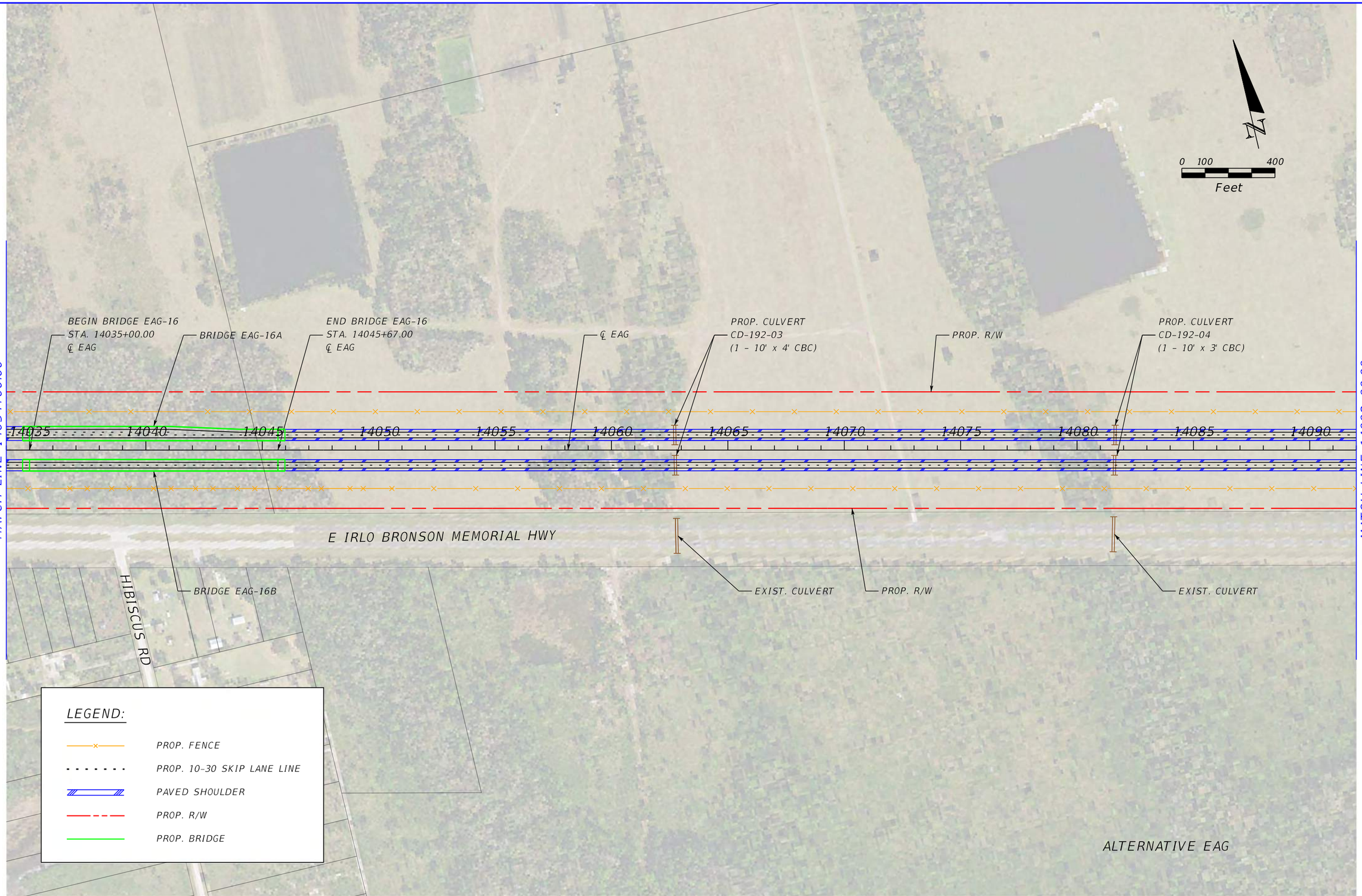

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (20)

SHEET NO.

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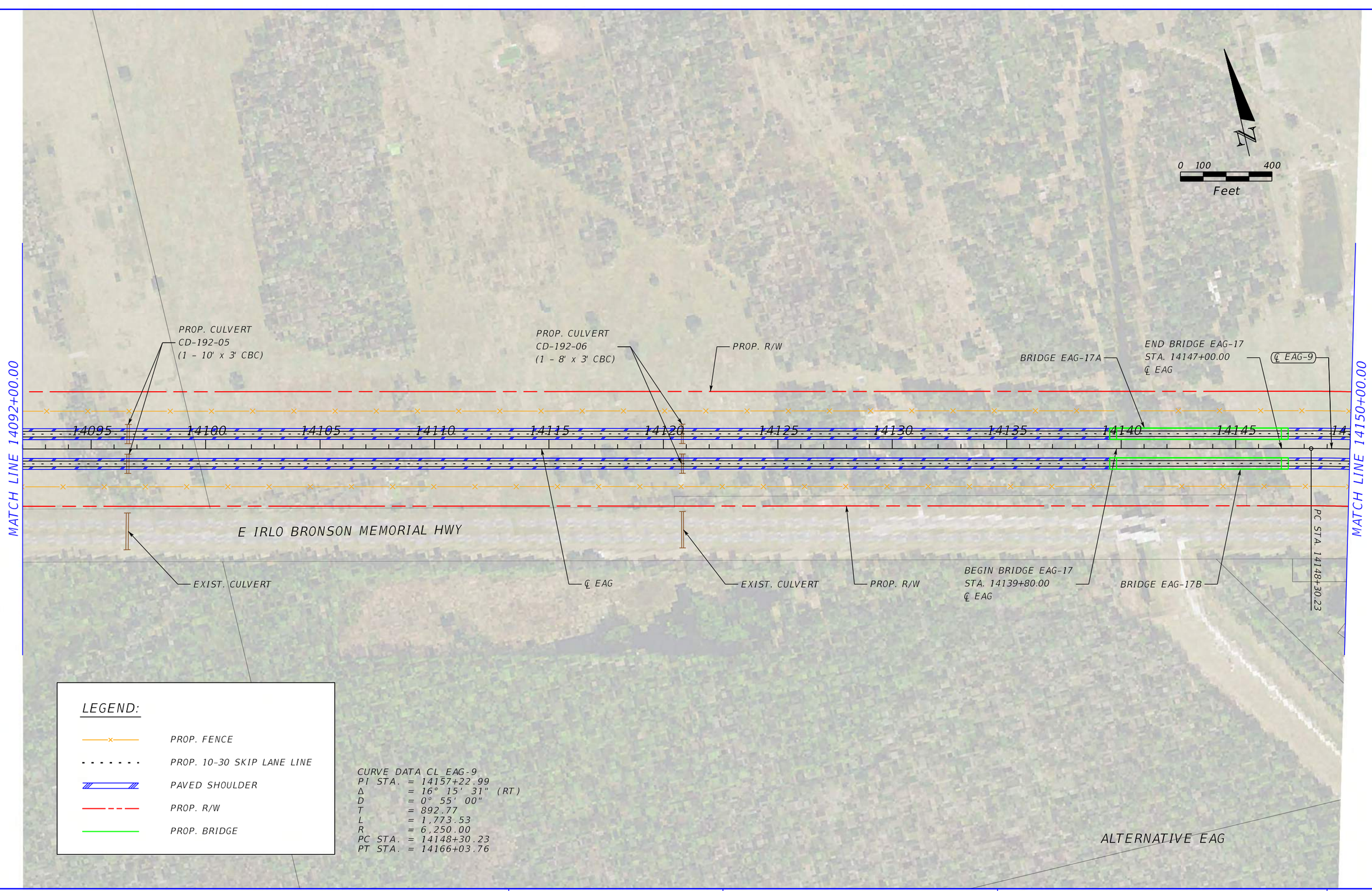

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL_EAG-9
PI STA. = 14157+22.99
Δ = 16° 15' 31" (RT)
D = 0° 55' 00"
T = 892.77
L = 1,773.53
R = 6,250.00
PC STA. = 14148+30.23
PT STA. = 14166+03.76

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (21)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 14150+00.00

MATCH LINE 14208+00.00

BRIDGE EAG-18A

END BRIDGE EAG-18
STA. 14154+66.80
℄ EAG

PROP. CULVERT
CD-192-08
(1 - 6' x 3' CBC)

PROP. R/W

BRIDGE EAG-19A

END BRIDGE EAG-19
STA. 14203+53.00
℄ EAG

14150 14155 14160 14165 14170 14175 14180 14185 14190 14195 14200 14205

E IRLO BRONSON MEMORIAL HWY

PT STA. 14166+03.76

℄ EAG-9

EXIST. CULVERT

BRIDGE EAG-18B

BEGIN BRIDGE EAG-18
STA. 14154+12.00
℄ EAG

PROP. R/W

℄ EAG

BEGIN BRIDGE EAG-19
STA. 14188+75.00
℄ EAG

BRIDGE EAG-19B

ALTERNATIVE EAG

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL EAG-9
PI STA. = 14157+22.99
Δ = 16° 15' 31" (RT)
D = 0° 55' 00"
T = 892.77
L = 1,773.53
R = 6,250.00
PC STA. = 14148+30.23
PT STA. = 14166+03.76

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (22)

SHEET NO.

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N

0 100 400
Feet

PROP. R/W

PROP. DIRT ROAD

℄ EAG-10

DEER PARK RD

MATCH LINE 14208+00.00

14210 14215 14220 14225 14230 14235 14240 14245 14250 14255 14260 14265

MATCH LINE 14266+00.00

E IRLO BRONSON MEMORIAL HWY

℄ EAG

PROP. R/W

PROP. CULVERTS
CD-192-10
(2 - 6' x 5' CBC)

EXIST. CULVERTS

PC STA. 14257+35.68

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. R/W
- PROP. DIRT ROAD

CURVE DATA CL_EAG-10
PI STA. = 14268+04.46
Δ = 3° 28' 24" (RT)
D = 0° 09' 45"
T = 1,068.77
L = 2,136.89
R = 35,250.00
PC STA. = 14257+35.68
PT STA. = 14278+72.58

ALTERNATIVE EAG

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (23)

SHEET NO.

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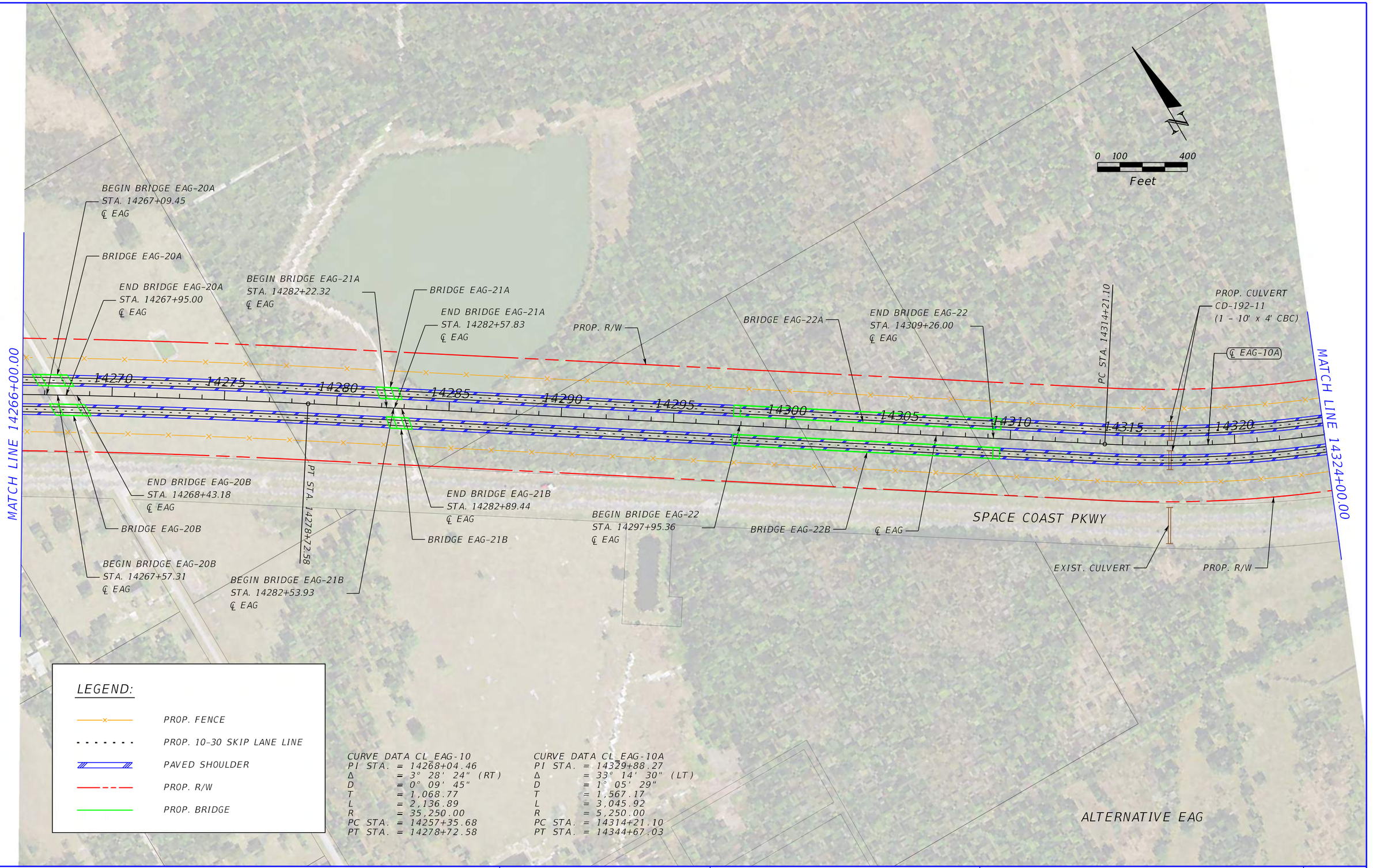


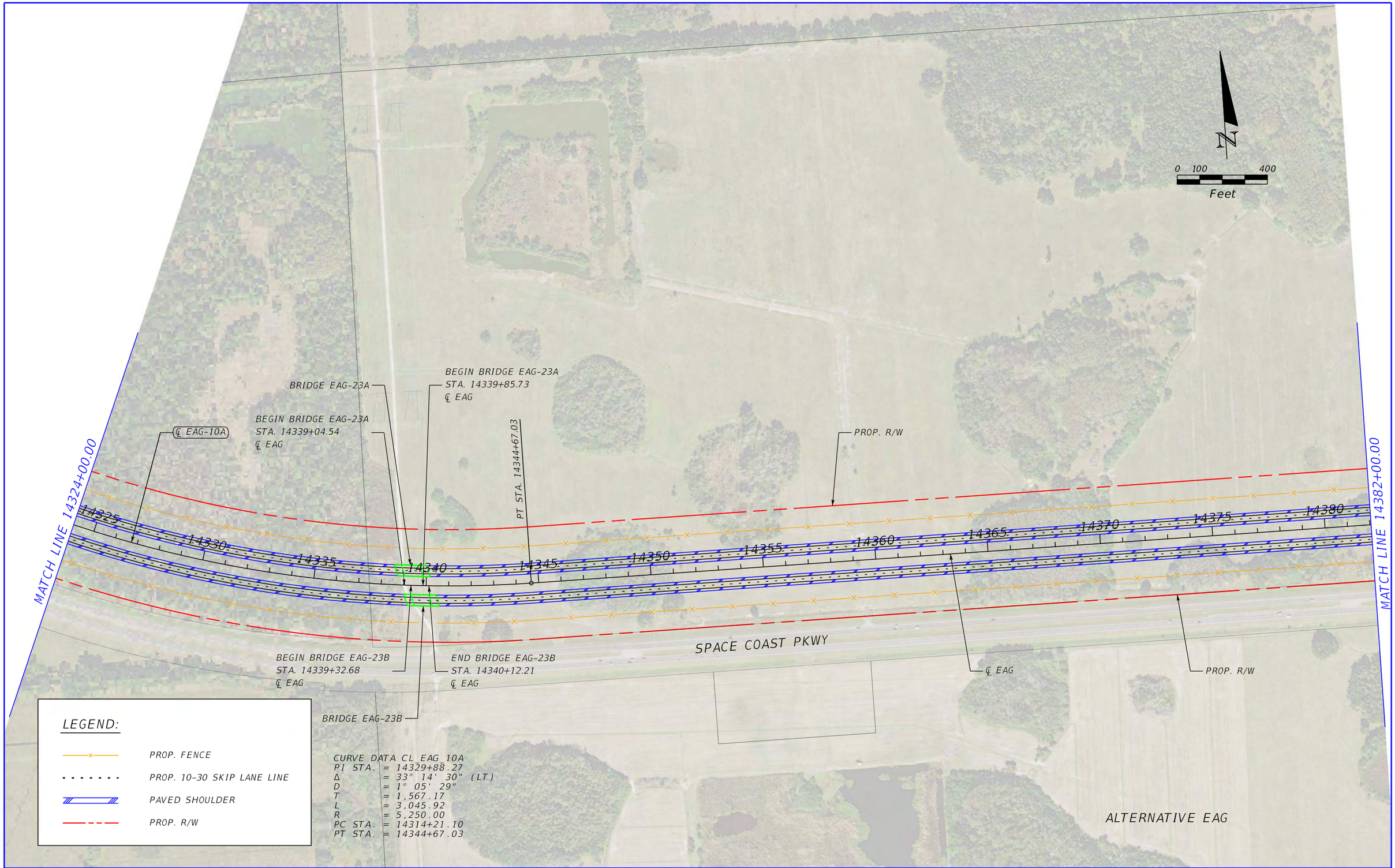
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (24)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (25)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 14382+00.00

MATCH LINE 14440+00.00

14385 14390 14395 14400 14405 14410 14415 14420 14425 14430 14435 14440

PROP. R/W

℄ EAG

PROP. R/W

SPACE COAST PKWY

SAPLING LN

ALTERNATIVE EAG

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

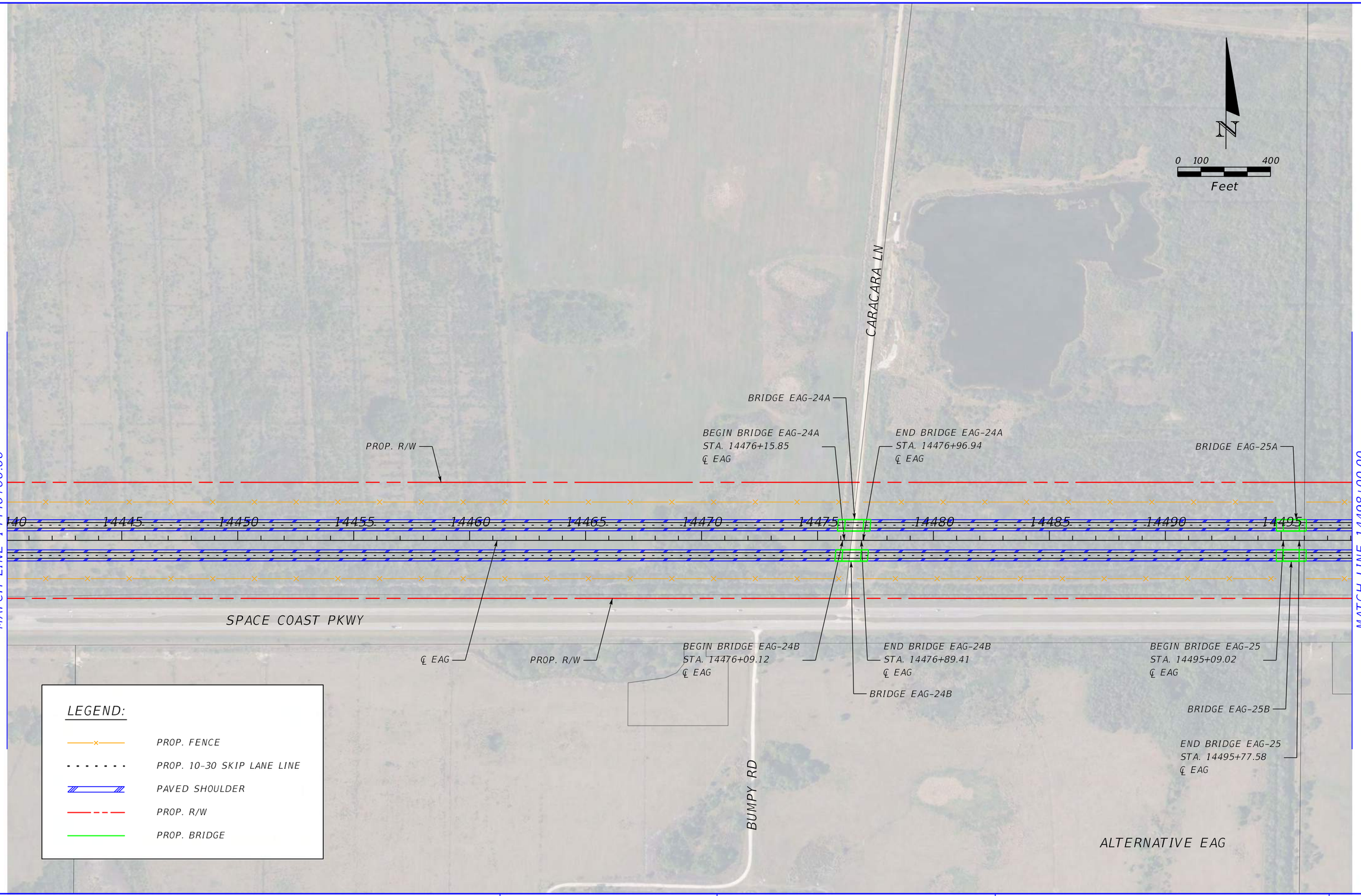
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (26)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (27)

SHEET NO.

N

0 100 400

Feet

MATCH LINE 14498+00.00

MATCH LINE 14556+00.00

14500 14505 14510 14515 14520 14525 14530 14535 14540 14545 14550 14555

PROP. CULVERTS
CD-192-13
(2 - 6' x 6' CBC)

PROP. R/W

PROP. CULVERT
CD-192-14
(1 - 5' x 4' CBC)

℄ EAG

EXIST. CULVERTS

SPACE COAST PKWY

PROP. R/W

EXIST. CULVERTS

RADAR RD

ALTERNATIVE EAG

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (28)

SHEET NO.

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N

0 100 400

Feet

PROP. R/W

MATCH LINE 14556+00.00

14560 14565 14570 14575 14580 14585 14590 14595 14600 14605 14610

MATCH LINE 14614+00.00

SPACE COAST PKWY

℄ EAG

PROP. R/W

OCEAN PRAIRIE LN

RADAR RD

ALTERNATIVE EAG

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (29)

SHEET NO.

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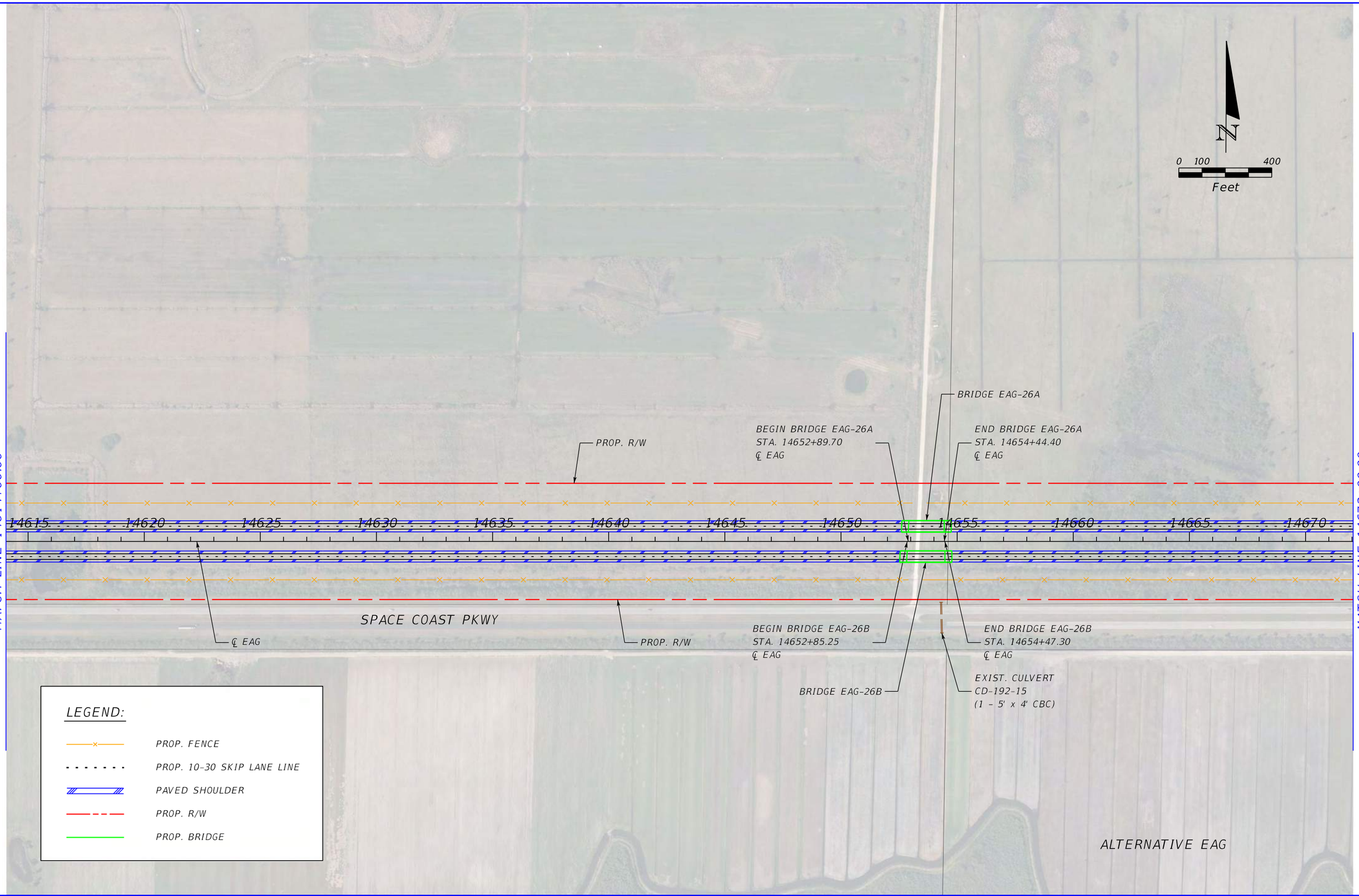

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (30)

SHEET NO.

Michael.Hunter 3/8/2021 5:23:53 PM Default K:\ORL_TPTO\149800002_OBCC\200_Engineering\Roadway\Alternative Alignments\Alternative - EAG\Plan Sheets\PLANRD030.dgn

N

0 100 400
Feet

PROP. R/W

℄ EAG-11

BRIDGE EAG-27A

14675 14680 14685 14690 14695 14700 14705 14710 14715 14720 14725

MATCH LINE 14672+00.00

℄ EAG

PC STA. 14693+38.97

BEGIN BRIDGE EAG-27
STA. 14694+87.03
℄ EAG

SPACE COAST PKWY

PROP. R/W

BRIDGE EAG-27B

MATCH LINE 14730+00.00

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL_EAG-11
PI STA. = 14712+56.41
Δ = 34° 06' 40" (RT)
D = 0° 55' 00"
T = 1,917.44
L = 3,720.94
R = 6,250.00
PC STA. = 14693+38.97
PT STA. = 14730+59.91

ALTERNATIVE EAG

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (31)

SHEET NO.

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N

0 100 400
Feet

MATCH LINE 14730+00.00

MATCH LINE 14788+00.00

℄ EAG-11

BRIDGE EAG-27A

PROP. R/W

PC STA. 14778+23.02

℄ EAG-12

14730

14735

14740

14745

14750

14755

14760

14765

14770

14775

14780

14785

PT STA. 14730+59.91

SPACE COAST PKWY

BRIDGE EAG-27B

℄ EAG

PROP. R/W

ALTERNATIVE EAG

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PROP. R/W
- PROP. BRIDGE

CURVE DATA CL EAG-11
PI STA. = 14712+56.41
Δ = 34° 06' 40" (RT)
D = 0° 55' 00"
T = 1,917.44
L = 3,720.94
R = 6,250.00
PC STA. = 14693+38.97
PT STA. = 14730+59.91

CURVE DATA CL EAG-12
PI STA. = 14796+20.13
Δ = 36° 37' 30" (LT)
D = 1° 03' 19"
T = 1,797.11
L = 3,470.99
R = 5,430.00
PC STA. = 14778+23.02
PT STA. = 14812+94.01

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (32)

SHEET NO.

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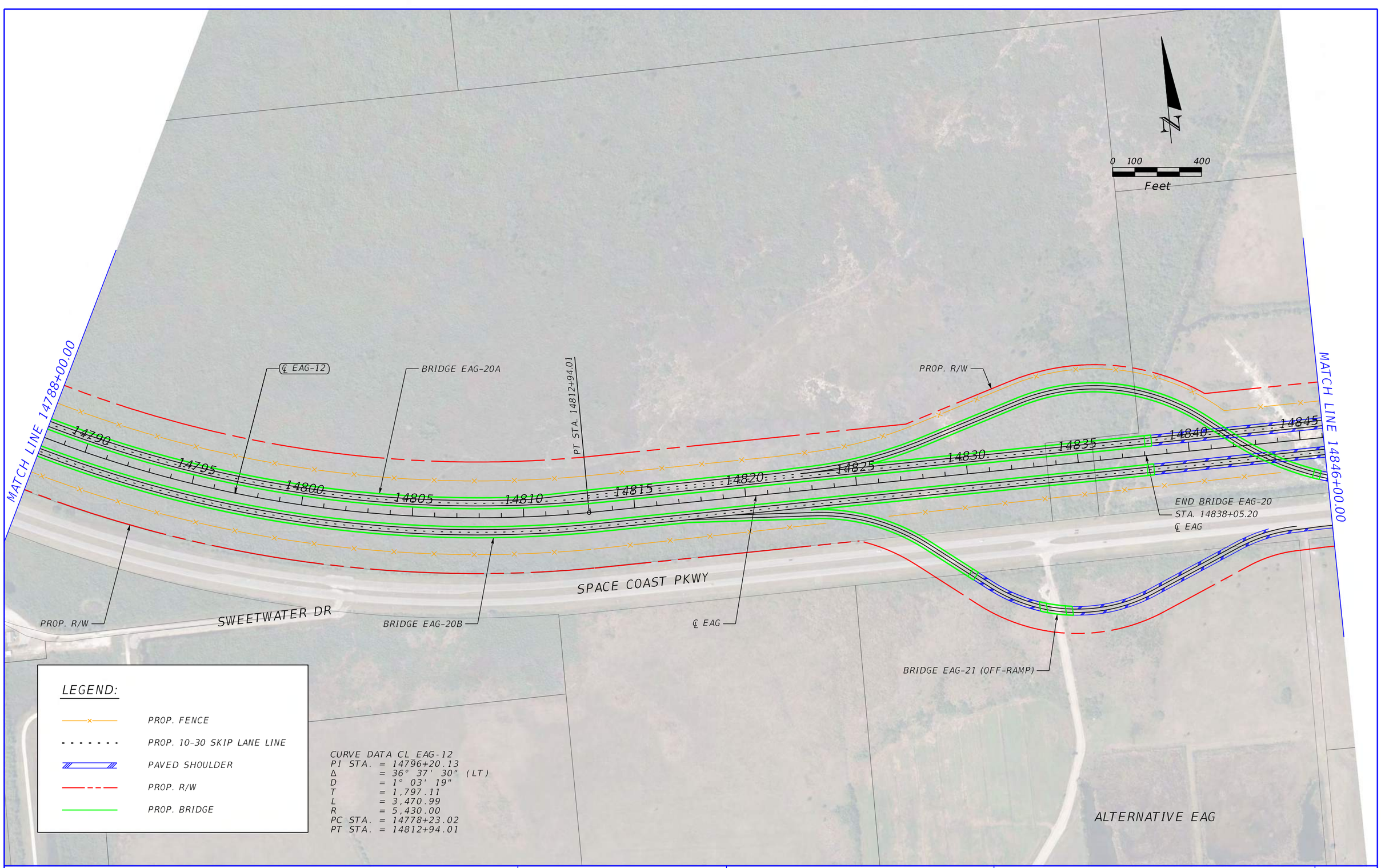


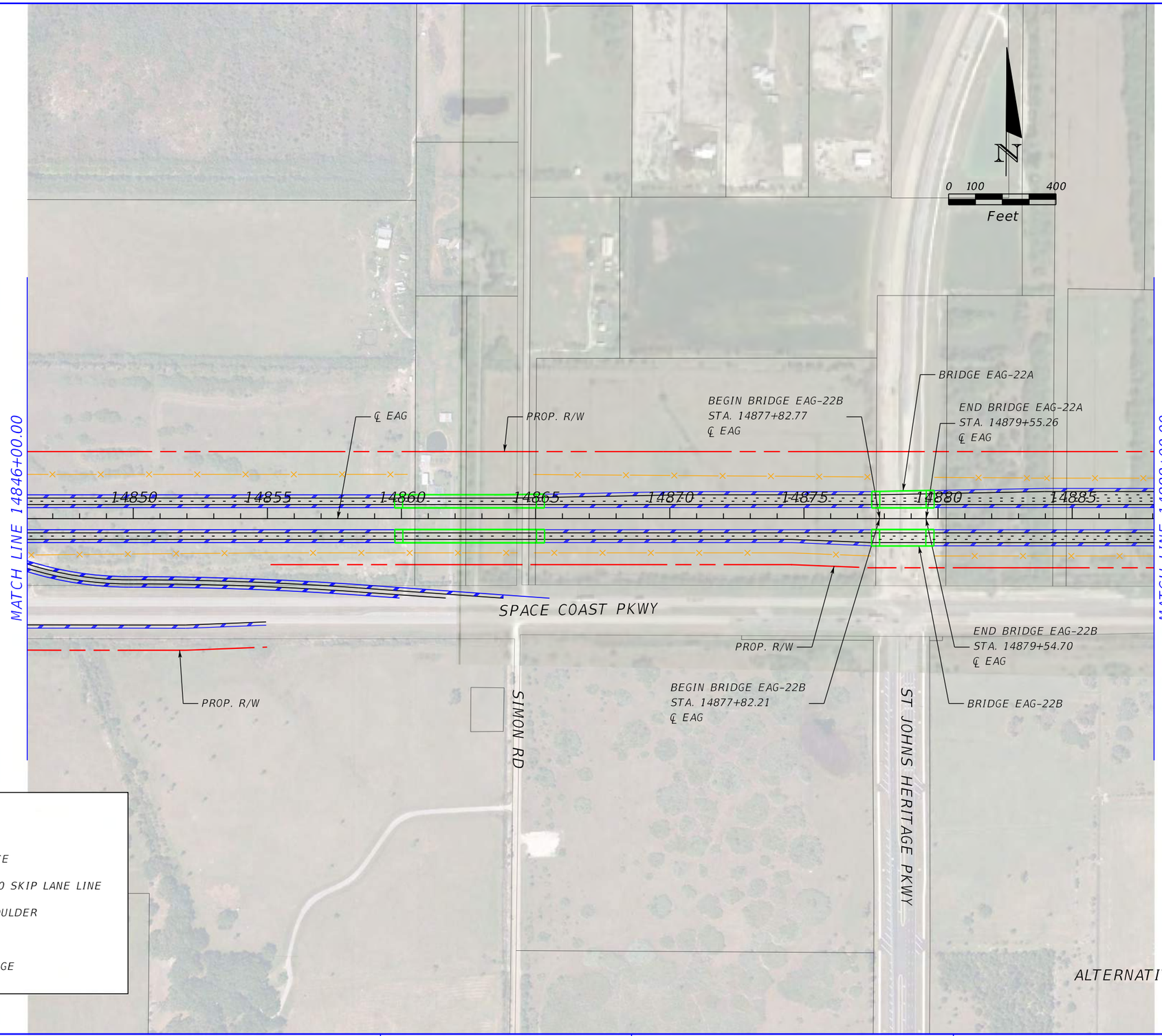
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (33)

SHEET NO.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (34)

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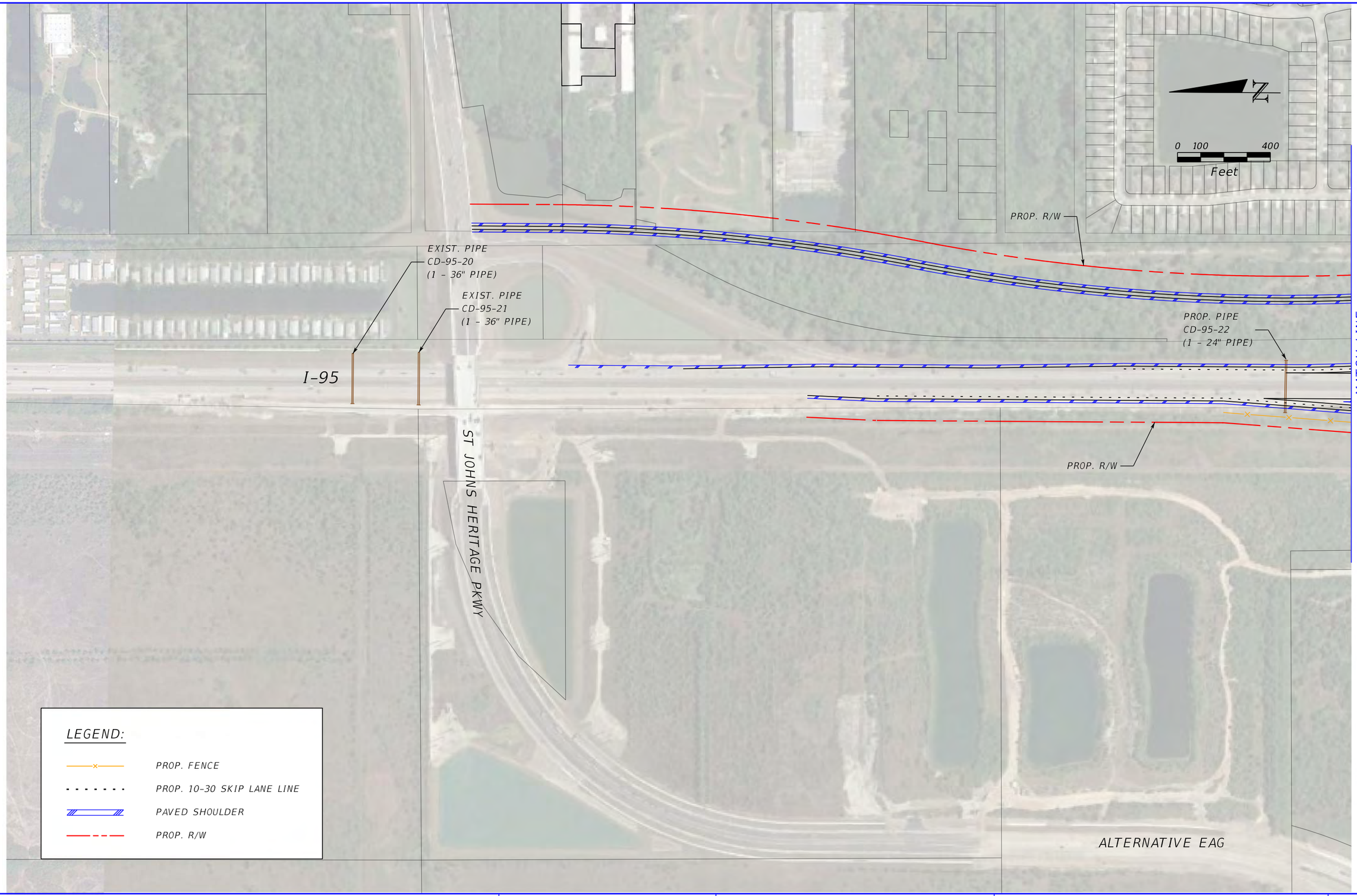

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (35)

SHEET NO.

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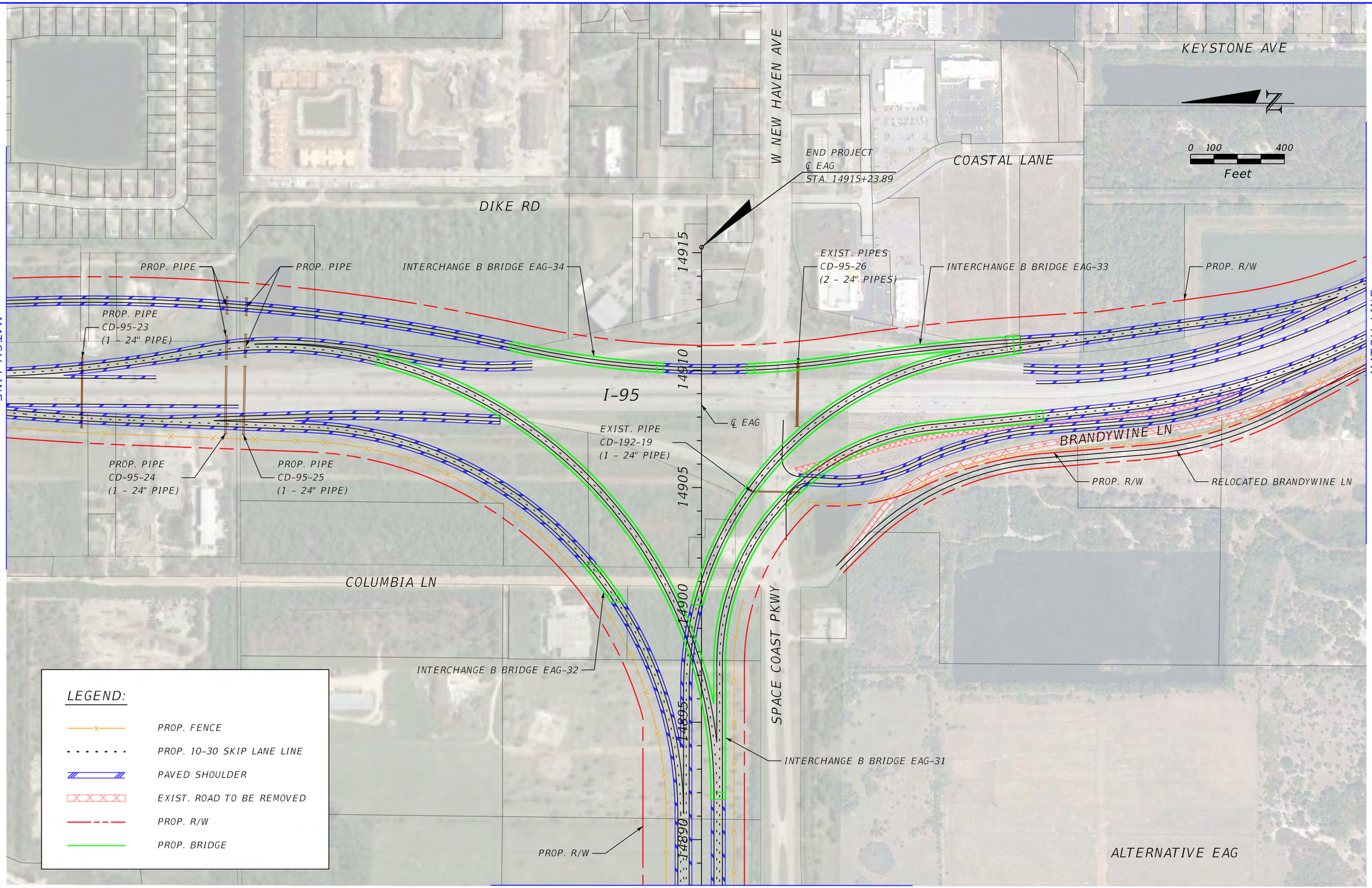

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (36)

SHEET NO.

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

MICHIGAN ST
MILWAUKEE AVE
I-95
BISHOP LN
MICHIGAN ST
PROP. R/W
GRIFFIN LN
FOX RUN TRAIL
OHIO ST
MERLIN DR
LADY HAWK WAY
BRANDYWINE LN
PENNSYLVANIA ST
PROP. R/W
RANCH RD
RANCH RD
MATCH LINE
PROP. CULVERT
CD-95-27
(1 - 5' x 4' CBC)
ALTERNATIVE EAG

N

0 100 400
Feet

LEGEND:

- PROP. FENCE
- PROP. 10-30 SKIP LANE LINE
- PAVED SHOULDER
- EXIST. ROAD TO BE REMOVED
- PROP. R/W

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ALT. EAG	BREVARD OSCEOLA	

OSCEOLA TO BREVARD COUNTY CONNECTOR PLAN SHEET (37)

SHEET NO.

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APPENDIX M

Pond Sizing Methodology

Pond Sizing Methodology

General Overview

The required pond volume for the proposed improvements is calculated by the following:

$$Total\ Pond\ Volume\ Required = Required\ Treatment\ Volume + Required\ Attenuation\ Volume + Floodplain\ Impact\ Volume$$

The treatment volume includes the first flush runoff volume from the proposed developed site to be retained and treated prior to discharging downstream. The attenuation volume includes the storage of the additional excess runoff caused by the proposed development, thereby, minimizing the peak flowrate from the site to mimic pre-development conditions so as not to adversely impact offsite properties. The floodplain impact volume includes the storage between the 10-year event and the 100-year event that is impacted due to the proposed development. The floodplain impact volume is only included in stormwater pond sizing within the SFWMD jurisdiction. Floodplain compensation is kept separate from stormwater ponds within the SJRWMD jurisdiction.

The basin area includes the alignment corridor right-of-way, which was divided into several subbasins along floodplain or hydraulic boundaries from the existing topology; proposed roadway profiles were not developed. It is assumed that each subbasin will have one pond, which is sized using the methodology described within the following sections. Evaluation of basin delineation, pond sites, and their potential impacts (with regard to maintenance, constructability, aesthetics, environmental, social, and cultural, etc.) will be conducted within the PD&E phase. All assumptions were based on the best available data from desktop review.

Within this feasibility effort, it is assumed that each of the pond volume parameters are "stacked" instead of taking credit for any possible volume overlapping; this provides a conservative estimate which can be further evaluated within the PD&E phase. The methodology used to determine these parameters for calculating pond volumes is described within the following sections.

Treatment Volume

For the purposes of the feasibility study, all proposed ponds are assumed to be wet. The required treatment volume for wet ponds is larger than dry ponds and the water tables are generally shallow within the project area. It assumed that evaluation of pond types will be accomplished during the PD&E phase.

For both the SFWMD and SJRWMD, the required treatment volume criterion for a wet detention pond is the greatest volume of either 1-inch over the basin or 2.5-inches over the new impervious area.

Within the project corridors, basins D1-3, D1-4, D1-5, D1-6, D2-3, D2-4, D2-5, D2-6 F1-5, F1-6, F1-7, F1-8, F1-9, F1-10, F1b-5, F1b-6, F1b-7, F1b-8, F1b-9, F1b-10, F2-5, F2-6, F2-7, F2-8, F2-9, F2-10, F3-5, F3-6, F3-7, F3-8, F3-9, F3-10, F4-5, F4-6, F4-7, F4-8, F4-9, F4-10, F4b-5, F4b-6, F4b-7, F4b-8, F4b-9, and F4b-10 are located within the Econlockhatchee River waterbody Basins D1-18, D1-19, D1-20, D1-21,

D2-18, D2-19, D2-20, and D2-21 are located within the Jim Creek waterbody Basins D1-24, D1-25, D1-26, D1-27, D2-24, D2-25, D2-28, D2-29, D2-30, F3-43, F3-44, F4-44, F4-45, F4-46, F4b-52, F4b-53, and F4b-54 are located within the St. Johns River waterbody. Basins F1-28, F1-29, F1-30, F1-31, F1-32, F1-33, F1b-27, F1b-28, F1b-29, F1b-30, F1b-31, F3-27, F3-28, F4-27, and F4-28 are located within the Lake Winder Drain waterbody. Basins F1-40, F1b-39, and F3-45 are located within the Lake Washington Drain waterbody. Basins D1-1, D2-1, D1-3, D2-1, D2-2, D2-3, F1-1, F1-3, F1b-1, F1b-3, F2-1, F2-3, F3-1, F3-3, F4-1, F4-3, F4b-1, and F4b-3 are located in the Lake Okeechobee BMAP. All of these basins will require an additional 50% of additional treatment volume. Impaired waterbody nutrients include fecal coliform, mercury (in fish tissue), dissolved oxygen, iron, macrophytes and nitrogen. Nutrient removal calculations are not included in this phase, but may need to be included in future phases.

$$Treatment\ Volume = Greatest\ of\ 1"\ over\ Basin\ Area\ or\ 2.5"\ over\ New\ Impervious\ Area$$

$$BMAP\ Treatment\ Volume = 1.5 * Treatment\ Volume$$

Existing roadway impervious areas that cross the alternative alignments were digitized via aerial imagery. Impervious areas for Corridors D1, D2, F1, F1b, F2, F3, F4, and F4b were digitized using the proposed mainline typical section which includes a fully paved median, resulting in a total impervious width of 210-feet.

Attenuation Volume

Criteria

SFWMD/Osceola County

Criteria set forth by SFWMD and Osceola County was reviewed to determine the governing criteria from these agencies. The Osceola County design storm event is the 10-year/72-hour storm event (8.49 inches). For the purposes of this analysis, it was determined that the controlling criteria for attenuation is the SFWMD requirement of the post-development peak flow rate not exceeding the pre-development peak flow rate for the 25-year/72-hour storm event. The rainfall amount for this storm was derived from the NOAA Point Precipitation Frequency Estimate and is 10.6 inches. Since no routing is being performed during this feasibility phase, the attenuation volume will be based on the pre-post difference in volume generation, not peak discharge rate.

SJRWMD/Osceola County/Brevard

Criteria set forth by SJRWMD, Osceola County, and Brevard County was reviewed to determine the governing criteria from these agencies. The Osceola County design storm event is the 10-year/72-hour storm event (8.49 inches). The Brevard County design storm event is the 25-year/24-hour storm event with 9 inches of rainfall per County Land Development Code (Chapter 62, Article X, Division 6). The SJRWMD design storm event is the 25-year/24-hour event with rainfall of 8.81 inches from the NOAA Point Precipitation Frequency Estimate. For the purposes of this analysis, it was determined that the controlling criteria for attenuation is the 25-year/24-hour storm event with respective to total amount of rainfall and 9 inches would be used for this analysis. Since no routing is being performed during this feasibility phase, the attenuation volume will be based on the pre-post difference in volume generation, not peak discharge rate.

Evaluation

The SCS Runoff Curve Number (CN) Method was used to determine the total runoff volume for the pre-development and post-development conditions. The SFWMD land cover and land use, dated 2017/19, and the SJRWMD land cover and land use, dated 2014, were modified to include existing roadway impervious area along the corridors to determine the CN for the pre-development condition. The Osceola Brevard Connector Expressway alternative alignments were digitized, as described above, to determine the difference in land use along the proposed corridors.

$$Runoff = \frac{(P - 0.2S)^2}{(P + 0.8S)}$$

$$S = \frac{1000}{CN} - 10$$

$$Volume = Runoff * Basin\ Area$$

$$Attenuation\ Volume\ =\ Post\ Development\ Volume\ -\ Pre\ Development\ Volume$$

For basins that have a lower CN in the post-development condition, (e.g. marsh land coverage is converted to impervious area and open – good land uses), the attenuation volume is assumed zero and no credit is provided for generating a lower runoff volume. See **Table 1** for the conversion between the Florida Land Use and Cover Classification System (FLUCCS) within the SFWMD and SJRWMD land use files to the CN land use categories to determine the attenuation volume.

TABLE 1 - CONVERSION OF FLUCCS LAND USE DESCRIPTIONS TO SCS RUNOFF CURVE NUMBER CATEGORY

FLUCCS	SCS Runoff CN (TR-55)
ABANDONED GROVES	RowCrops_SR_Good
BAY SWAMPS	Water
CATTLE FEEDING OPERATIONS	Farmsteads
CITRUS GROVES	RowCrops_SR_Good
COMMERCIAL AND SERVICES	Commercial
COMMUNICATIONS	Industrial
COMMUNITY RECREATIONAL FACILITIES	Commercial
CYPRESS	Water
DISTURBED LAND	Pasture_Good
ELECTRICAL POWER TRANSMISSION LINES	Grassland_Good
EMERGENT AQUATIC VEGETATION	Water
FALLOW CROP LAND	Fallow_Good
FIELD CROPS	RowCrops_SRCR_Good
FRESHWATER MARSHES	Water
HARDWOOD - CONIFEROUS MIXED	Woods_Good
HERBACEOUS (DRY PRAIRIE)	Open_Good
HYDRIC PINE FLATWOODS	Woods_Good
IMPERVIOUS	Impervious
IMPROVED PASTURES	Pasture_Good

FLUCCS	SCS Runoff CN (TR-55)
INSTITUTIONAL	Commercial
LAKES	Water
LIMEROCK OR DOLOMITE	Pasture_Good
MARINAS AND FISH CAMPS	Water
MIXED RANGELAND	Pasture_Good
MIXED SHRUBS	Brush_Good
MIXED WETLAND HARDWOODS	Woods_Grass_Good
OPEN LAND	Open_Good
ORNAMENTALS	Farmsteads
PINE FLATWOODS	Woods_Good
RESERVOIRS	Water
RESIDENTIAL, HIGH DENSITY	Residential_65
RESIDENTIAL, LOW DENSITY	Residential_25
RESIDENTIAL, MEDIUM DENSITY	Residential_38
ROADS AND HIGHWAYS	Impervious
RURAL RESIDENTIAL	Residential_12
SHRUB AND BRUSHLAND	Brush_Good
SOD FARMS	Open_Good
SPOIL AREAS	Fallow_Good
STREAMS AND WATERWAYS	Water
SURFACE WATER COLLECTION PONDS	Water
TREELESS HYDRIC SAVANNA	Pasture_Good
UNIMPROVED PASTURES	Pasture_Good
UPLAND HARDWOOD FORESTS	Woods_Good
WET PRAIRIES	Woods_Good
WETLAND FORESTED MIXED	Woods_Good
WILLOW AND ELDERBERRY	Woods_Good
WOODLAND PASTURES	Woods_Grass_Good

Pond Sizing

As mentioned, it is assumed that all proposed ponds within the Osceola Brevard Connector Expressway will be wet detention facilities. The assumed pond geometry is a square shape, 1:4 side slopes, 1-foot of freeboard, 20-ft berm and 20% additional area for the tie-down slopes and landscaping, which resulted in the following equations to calculate the pond sizes:

$$Pond\ Length\ at\ Design\ Depth = \sqrt{\frac{Total\ Pond\ Volume\ Required * 43560\frac{ft^2}{ac}}{Design\ Depth}} + \left(\frac{Design\ Depth}{2} * (2 * 4)\right)$$

$$Required\ Pond\ Area$$
$$= 1.2 * \frac{\left(Pond\ Length\ at\ Design\ Depth + 2 * (Freeboard\ Height * 4 + Berm\ Width)\right)^2}{43560\frac{ft^2}{ac}}$$

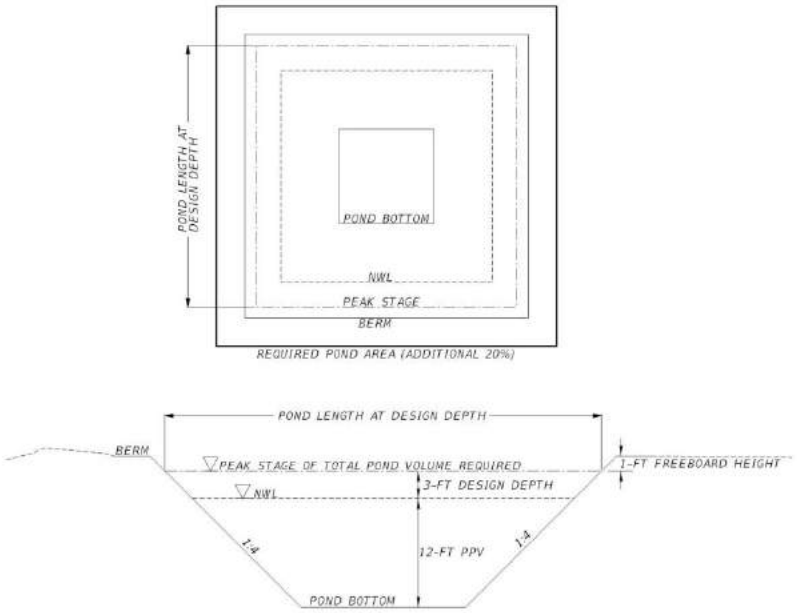


PLATE 1 - POND SIZING TYPICAL SECTION (NOT TO SCALE)

Pond Quantities

For comparison purposes, quantities associated with the pond sizes, which including excavation and sodding, were provided. It is assumed that the excavation volume will equal the required pond volume and the permanent pool volume. The permanent pool volume will be calculated with an assumed pond depth of 12-feet below the normal water level (NWL) for the at 1:4 side slopes to the bottom of the pond. Sodding assumptions include sodding the entire required pond area to 2-feet below the pond NWL. Calculations and summary of comparison between the alignments are included in **Table A.6** and **Table A.7** within **Attachment 1**.

Floodplain Evaluation

Design Criteria

SFWMD

No net encroachment into the floodplain, between the average wet season water table and that encompassed by the 100-year event, which will adversely affect the existing rights of others, will be allowed. Compensation is typically provided in the form of cup for cup compensation and can be included in the design of the proposed stormwater ponds.

SJRWMD

Floodways and floodplains, and levels of flood flows or velocities of adjacent streams, impoundments or other water courses must not be altered so as to adversely impact the off-site storage and conveyance capabilities of the water resource. A system may not cause a net reduction in flood storage within a 10-year floodplain except for structures elevated on pilings or traversing works. The floodway and floodplain criteria are applicable only to locations downstream of the point on a stream or watercourse where the drainage area is five square miles.

Floodplain compensation area must be separate from the proposed stormwater ponds.

Special Basin Criteria for Econlockhatchee River Basin: No net reduction in flood storage within the 100-yr floodplain of Econlockhatchee or its tributaries with an upstream drainage area of 1-sq.mi. or greater.

For the purposes of this PD&E, a review of floodplains within the project corridors with a contributing area of less than 5 square miles (or 1 square mile if within the Econlockhatchee River Basin) were not evaluated for impacts. If the contributing area was greater than the threshold, floodplain impacts were estimated using the 100-year information as supplied by FEMA. This will be a conservative estimate for floodplain impacts since only the 10-year is required (unless it is in the Econlockhatchee River basin).

Evaluation

For the floodplain evaluation, potential impacts to the Federal Emergency Management Agency (FEMA) mapped floodplains database, dated October 2019, as part of the Osceola County June 2013 FIS were reviewed and quantified. Only flood zones classified as Zone X, Zone AE, and Zone A are present along the corridor and only these FEMA-approved floodplain areas were reviewed and quantified for impacts. Natural historic depressions or wetlands were not evaluated for floodplain impacts as part of this feasibility study, but may require further evaluation in future phases.

Zone X is an area of minimal flood hazard and was not evaluated for floodplain impacts. Zone AE has an established Base Flood Elevation (BFE) that has been approved by FEMA. Zone A has an identified area of inundation resulting from the 100-year storm event, but no BFE has been established.

To assess the floodplain impacts for each corridor, an approximate BFE for the FEMA floodplain shapes was established. These elevations were estimated using the best available data and considered the following sources in **Table 2**. No site-specific information (i.e. geotechnical testing, wetland survey,

topographic survey, etc.) was obtained for these estimates. No hydrologic/hydraulic modeling was performed. Some of the information reviewed utilized the NGVD 1929 vertical datum; this information was converted to the NAVD 1988 vertical datum using Corpscon v6 as follows: 0.00 ft NGVD = -1.17 ft NAVD.

TABLE 2 - DESCRIPTION OF DATA REVIEWED IN PRELIMINARY ANALYSIS

Data	Source	Relevance
FEMA Flood Insurance Study	FEMA Geodatabases (October 2019) & 2013 FIS for Osceola County	High
DEM or Contours developed from source	2016 LiDAR data from Osceola County in 3-ft grid format	High
Soil coverage	NRCS coverage provided by USDA	High – Depth to water table information
Land use land coverage	SJRWMD	Low – Ensure floodplain is still applicable
National Wetland Inventory	US Fish and Wildlife Service	Low – Used where other information could not be found.

Base Flood Elevation (BFE)

The BFE can vary across the extent of the floodplain based on local topography, the amount of vegetative cover, presence of urbanization, water control infrastructure, and inflows to the floodplain. To estimate the BFE, the factors local to the area of potential impacts was weighted heavier. Due to the lack of development and permits within the corridors, the primary assumption for determining the BFE for Zone A was to overlay the FEMA floodplain shapefile over the DEM and estimate the average elevation. This elevation rounded to the nearest half foot.

As the corridors approach the St. Johns River from the east, the topographic relief results in steeper slopes (over 1%) as the ground surface slopes towards the river. There are several mapped FEMA floodplains within this steeper gradient. These floodplains are considered transitional and convey flood waters between flat pools of storage to the River. This was confirmed by review of aerial imagery. For the transitional floodplains, the FEMA floodplain shape was used as an inundation shape and a depth of one-foot was assumed.

Assessing Floodplain Impacts

For those floodplains which represent storage, a BFE inundation shape was generated using the estimated BFE overlaid on the DEM. A Cut/Fill Analysis tool in ARCMap was used to estimate the impact volume within the floodplain boundary between the BFE inundation shape and the DEM. The floodplain boundary follows the right-of-way and assumes all floodplain volume within the right-of-way will be impacted by the proposed improvements.

For those floodplains which represent a transitional floodplain, the FEMA Flood Zone A was clipped within the right-of-way. As stated previously, a depth of one-foot is assumed for conveyance. The floodplain impact volume was then calculated using the following:

$$Floodplain\ Impact\ Volume\ for\ Transitional\ Floodplains = 1ft.x\ FEMA\ Flood\ Zone\ Area$$

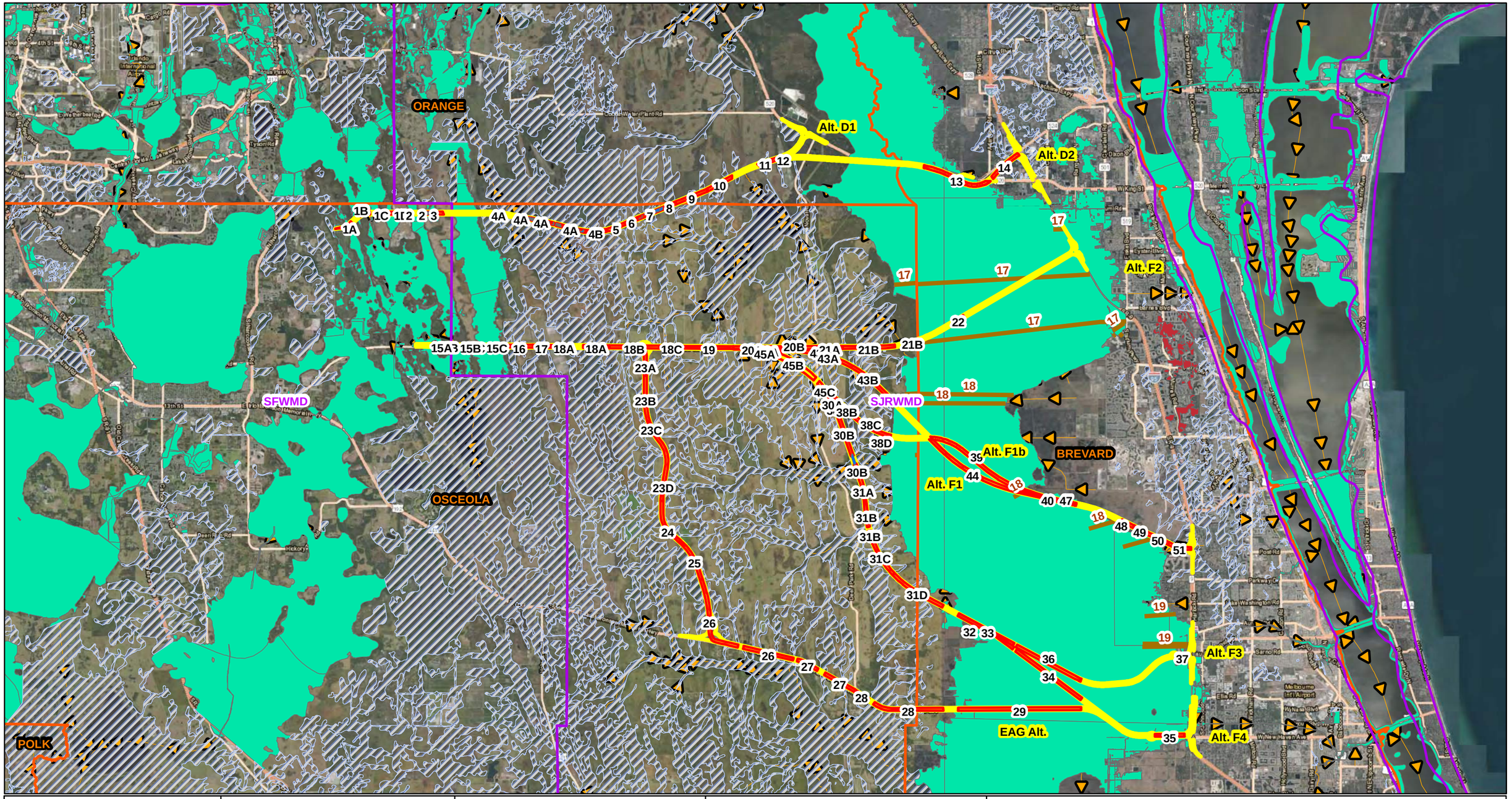
Impacts were also not considered where a floodplain was plotted within the corridor which did not correspond to a FEMA floodplain.

The proposed bridge crossings over the Econlockhatchee River and St. Johns River will most likely have floodplain impacts associated with the new crossing and bridge approaches. The extent of these impacts was not estimated at this time. A hydraulic analysis will be required during design to ensure agency requirements are met. No floodplain impacts were assessed beneath proposed bridge locations for the purposes of estimating floodplain compensation required. Additional information can be found within the St. Johns River Crossing Bridge Technical Memorandum, under a separate cover.

Floodplain Compensation

For those floodplain impacts within the SFWMD, it is assumed the floodplain compensation will be included in the proposed stormwater pond volume and the stormwater pond geometry assumptions as discussed in **Section A** would apply.

For those floodplain impacts within the SJRWMD, it is assumed that a separate floodplain compensation area would be required. Floodplain compensation would only need to be provided for impacts to storage floodplains, not transitional floodplain impacts. Transitional floodplains would be accommodated by off-site conveyance either through a closed system which crosses the proposed roadway or an open system which runs parallel to the proposed roadway. This will be further discussed in **Section C**.



The Balmoral Group 165 Lincoln Avenue Winter Park, FL 32789 Phone: (407) 629-2185 www.balmoralgroup.us	CENTRAL FLORIDA EXPRESSWAY AUTHORITY CF&M Study for the Osceola-Brevard County Connector CFX No. 599-229	**Figure FP-1** Floodplain Impact Evaluation Overall Contributing Area Floodplain Basins	N 0 1.75 3.5 7 Miles	**Legend** Floodplain Basins Alignment Alternatives Primary Hydroedges WMD Boundary County Boundary Estimated Floodplain Impact **FEMA Flood Zones (10-2019)** A AE AH Base Flood Elevation

ORANGE
SJRWMD
2
0.35 sq. mi.
3
0.44 sq. mi.
Elevation = 73[ft
1C
24.09 sq. mi.
1B
Alt D1
Alt D2
1B
1C
1D
1D
0.07 sq. mi.
2
2
3
Elevation = 68.6[ft]
Floodplain Impact (3) = 1.28 [ac-ft]
Elevation = 65.5[ft]
Floodplain Impact (1C) = 1.05 [ac-ft]
Elevation=70[ft]
Floodplain Impact (2) = 0.21 [ac-ft]
Floodplain Impact (1D) = 5.52 [ac-ft]
SFWMD
Elevation = 63[ft]
Elevation = 68.2[ft]
Elevation = 65.2[ft]
1A
24.09 sq. mi.
Elevation = 67.2[ft]
Elevation = 69.1[ft]
OSCEOLA
Elevation = 70.1[ft]
1A
Floodplain Impact (1A) = 41.06 [ac-ft]
Elevation = 71[ft]
Elevation = 64.3[ft]
Elevation = 64.6[ft]
Elevation = 69.8[ft]
Floodplain Impact (2) = 0.21 [ac-ft]

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CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CF&M Study for the Osceola-Brevard County Connector
CFX No. 599-229

Figure FP-2

Floodplain Impact Evaluation
Contributing Area
Floodplain Basins 1A, 1C, 1D, 2, and 3

N

0 0.125 0.25 0.5 Miles

Legend

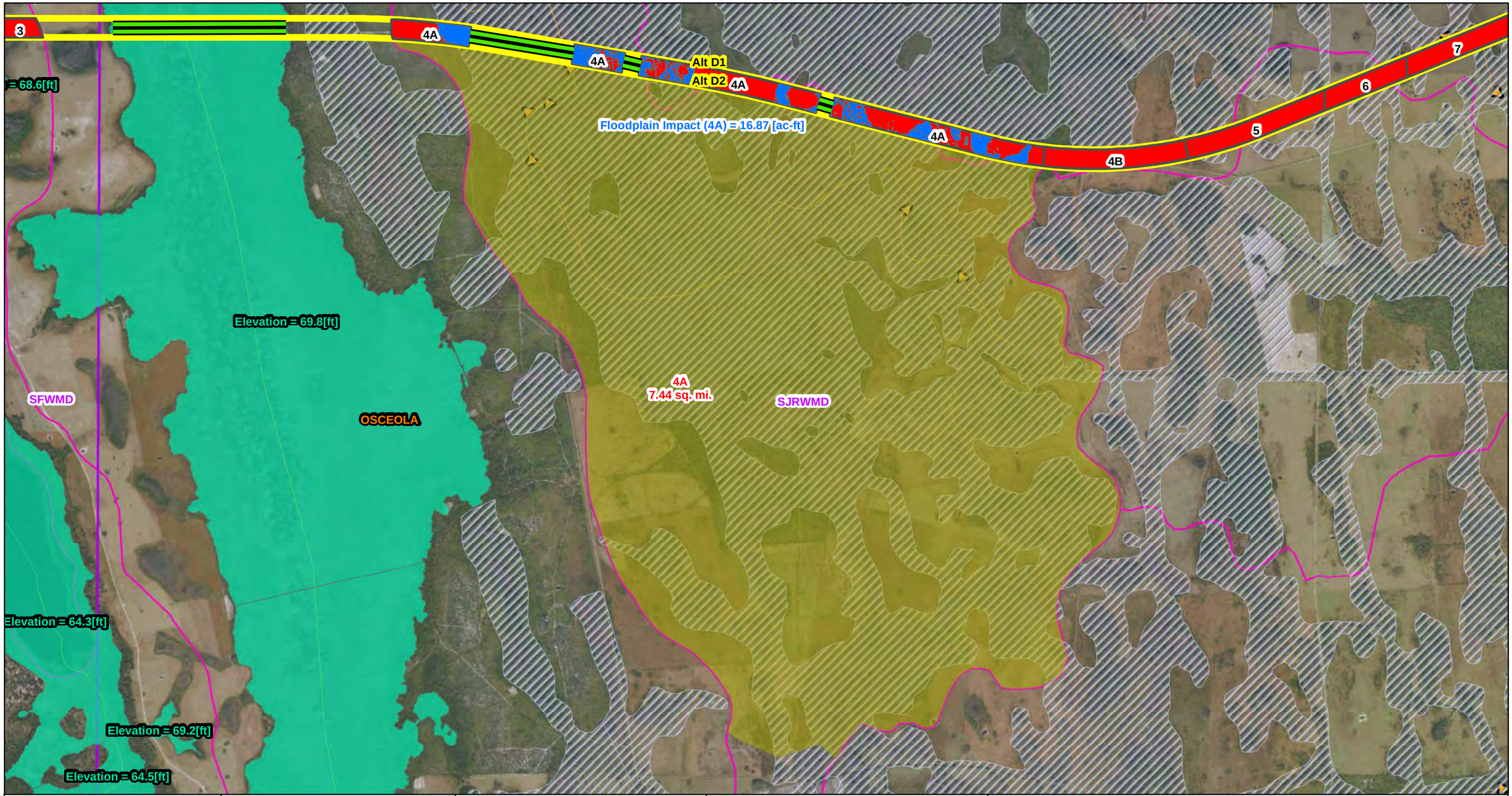
- County Boundary
- WMD Boundary
- Floodplain Basins
- Alignment Alternatives
- Waterbody IDs (08-02-2019)
- Estimated Floodplain Impact

Contributing Areas

- SFWMD

FEMA Flood Zones (10-2019)

- A
- AE
- Primary Hydroedges
- Proposed Bridges



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CF&M Study for the Osceola-Brevard County Connector
CFX No. 599-229

Figure FP-3

Floodplain Impact Evaluation
Contributing Area
Floodplain Basin 4A

N

0 0.25 0.5 1 Miles

Legend

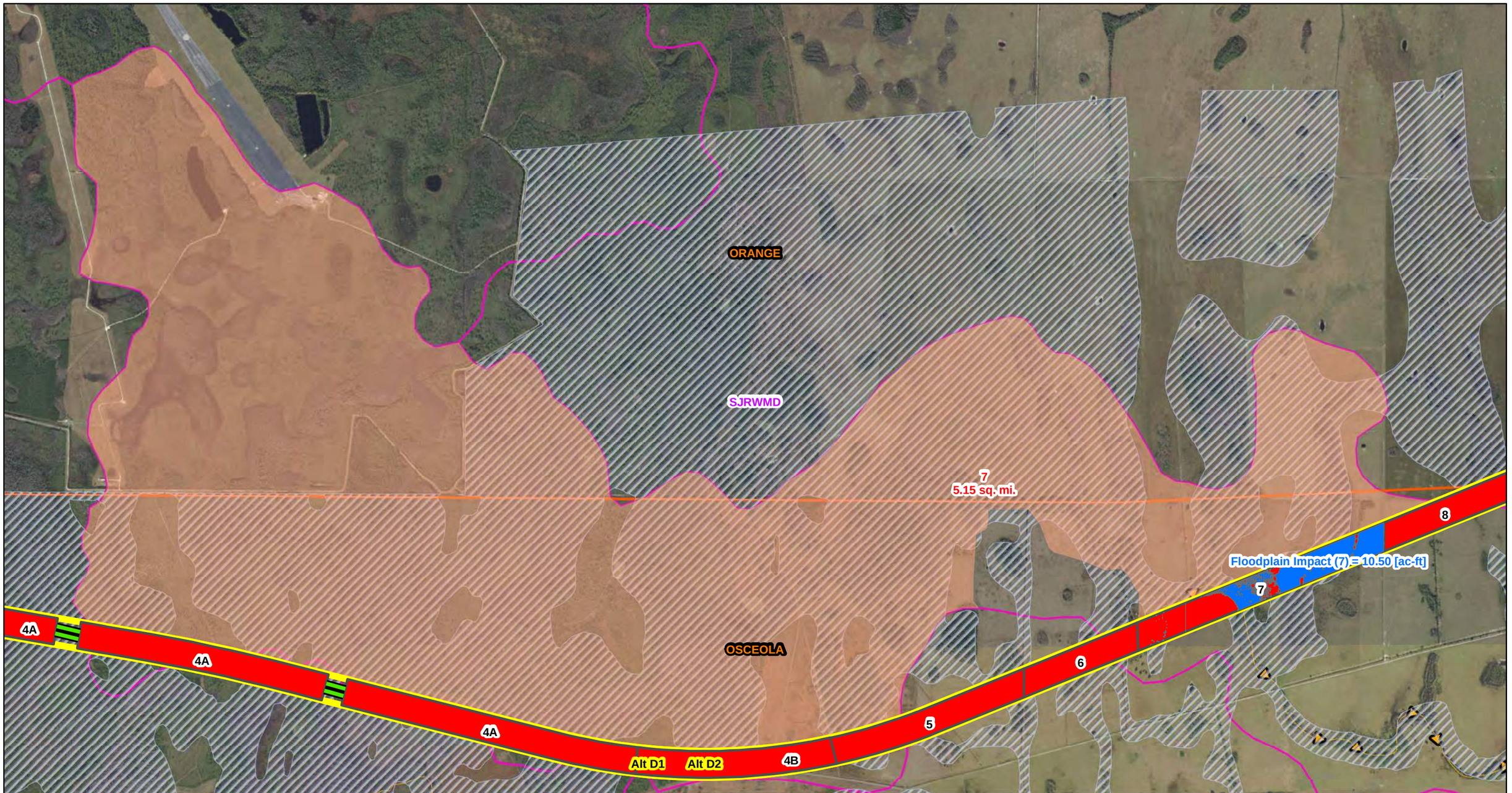
- County Boundary
- WMD Boundary
- Floodplain Basins
- Alignment Alternatives
- Waterbody IDs (08-02-2019)
- Estimated Floodplain Impact

Contributing Areas

- SJRWMD, Little Econ. Special Basin, More Than 1 Sq. Mi.

FEMA Flood Zones (10-2019)

- A
- AE
- Primary Hydroedges
- Proposed Bridges



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CFX No. 599-229

Figure FP-3

Floodplain Impact Evaluation
Contributing Area
Floodplain Basin 7

N

0 0.175 0.35 0.7
Miles

Legend

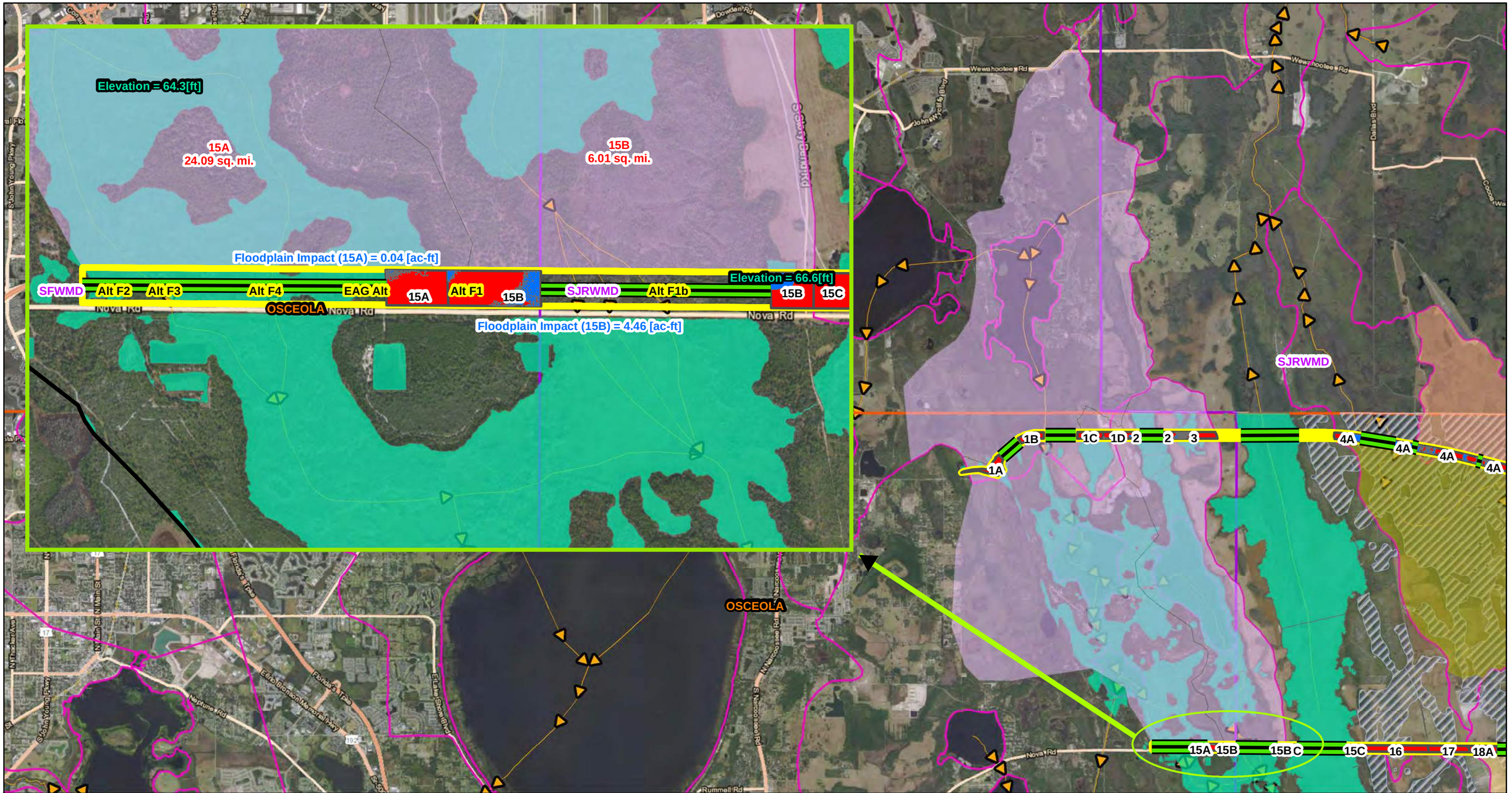
- County Boundary
- WMD Boundary
- Floodplain Basins
- Alignment Alternatives
- Waterbody IDs (08-02-2019)
- Estimated Floodplain Impact
- Proposed Bridges

Contributing Areas

- SJRWMD, More Than 5 Sq. Mi.

FEMA Flood Zones (10-2019)

- A
- Primary Hydroedges



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CFX No. 599-229

Figure FP-5

Floodplain Impact Evaluation
Contributing Area
Floodplain Basins 15A and 15B

N

0 0.75 1.5 3 Miles

Legend

- Floodplain Basins
- **Contributing Areas**
  - Does not meet Minimum Contributing Basin Criteria
  - SFWMD
  - SJRWMD, Little Econ. Special Basin, More Than 1 Sq. Mi.
  - SJRWMD, More Than 5 Sq. Mi.
- WMD Boundary
- County Boundary
- Alignment Alternatives
- **FEMA Flood Zones (10-2019)**
  - A
  - AE
- Estimated Floodplain Impact
- Primary Hydroedges
- Waterbody IDs (08-02-2019)
- Proposed Bridges

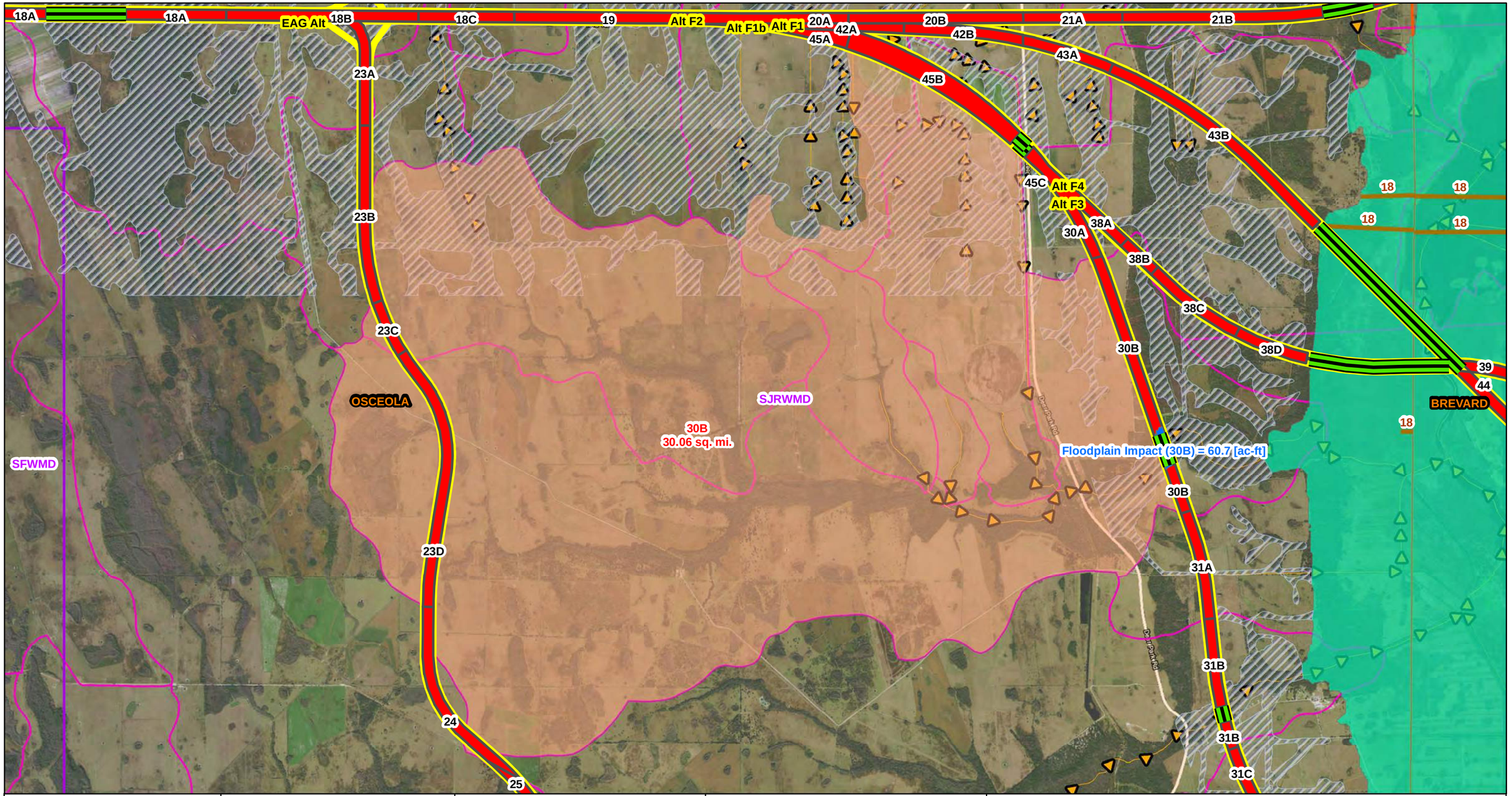

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Figure FP-6

Floodplain Impact Evaluation
Contributing Area
Floodplain Basin 30B

N

0 0.475 0.95 1.9 Miles

Legend

- County Boundary
- WMD Boundary
- Floodplain Basins
- Alignment Alternatives
- Waterbody IDs (08-02-2019)
- Estimated Floodplain Impact

Contributing Areas

- SJRWMD, More Than 5 Sq. Mi.
- Base Flood Elevation

FEMA Flood Zones (10-2019)

- A
- AE
- Primary Hydroedges
- Proposed Bridges

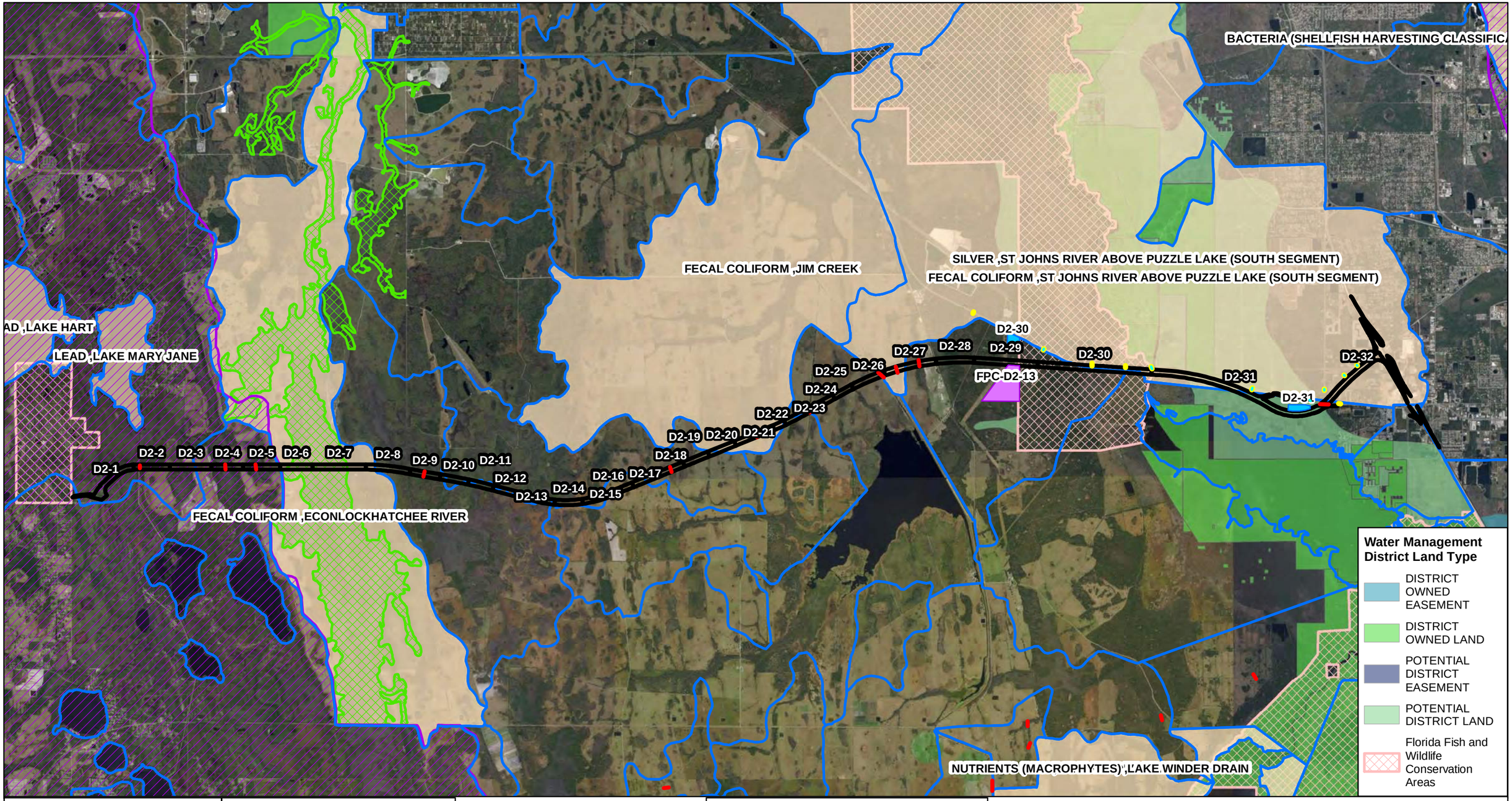

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Figure A.1

Alternative D2
Pond Siting Evaluation

N
W E
S

0 0.75 1.5 3 Miles

Legend

- Proposed Cross Drains
- Existing Cross Drains
- Basins
- Waterbody IDs
- Basin Management Action Plan Areas
- Nutrient Impaired Waterbodies
- Outstanding Florida Waters
- FPC Ponds
- SMF Ponds

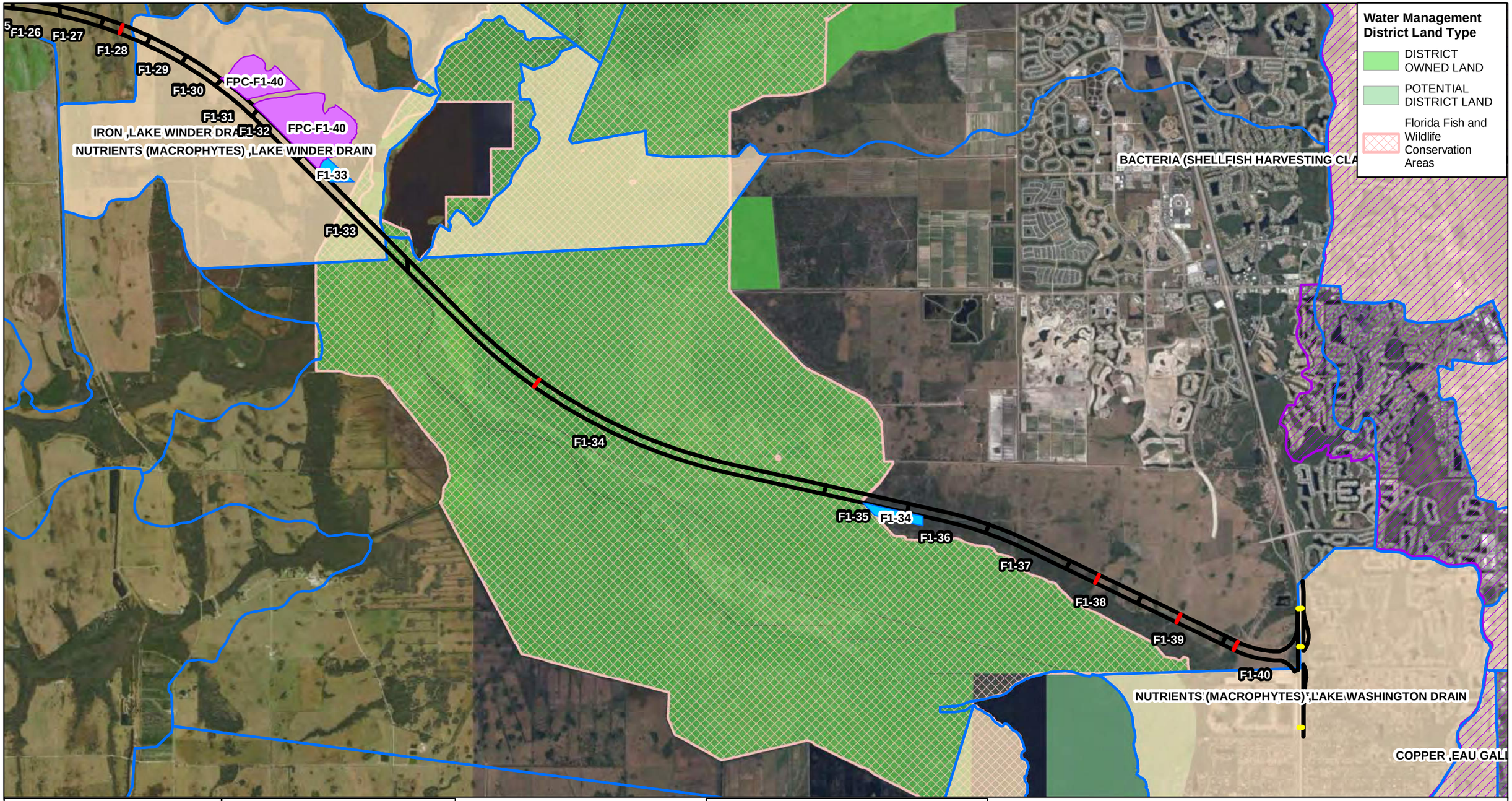

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Figure A.2

Alternative F1
East Portion
Pond Siting Evaluation

N
W E
S

0 0.5 1 2 Miles

Legend

- Proposed Cross Drains
- Existing Cross Drains
- Basins
- Waterbody IDs
- Basin Management Action Plan Areas
- Nutrient Impaired Waterbodies
- FPC Ponds
- SMF Ponds

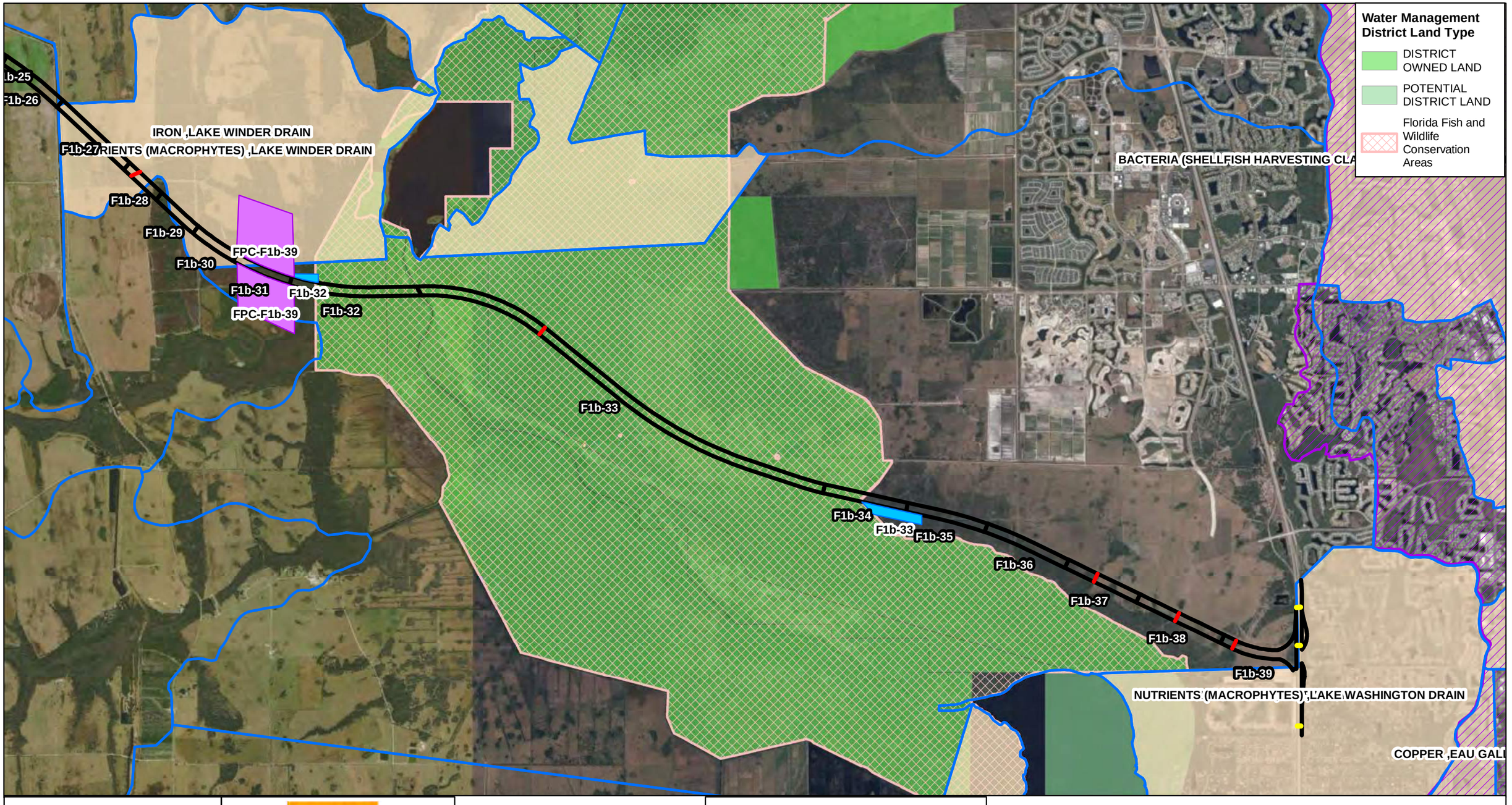

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Figure A.3

Alternative F1b
East Portion
Pond Siting Evaluation

N
W E
S

0 0.5 1 2 Miles

Legend

- Proposed Cross Drains
- Existing Cross Drains
- Basins
- Waterbody IDs
- Basin Management Action Plan Areas
- Nutrient Impaired Waterbodies
- FPC Ponds
- SMF Ponds

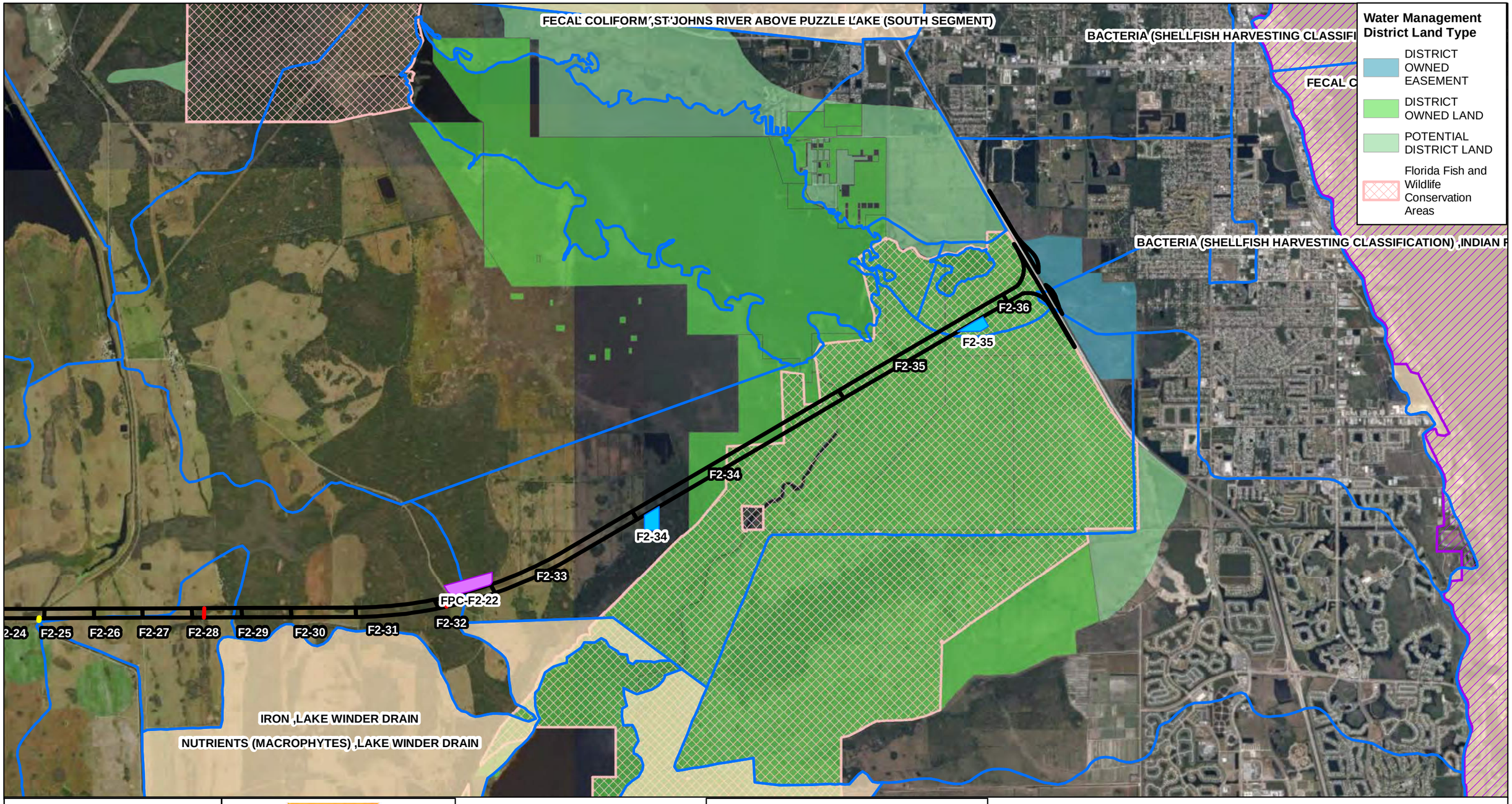

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Figure A.4

Alternative F2
East Portion
Pond Siting Evaluation

N
W E
S

0 0.5 1 2 Miles

Legend

- Proposed Cross Drains
- Existing Cross Drains
- Basins
- Waterbody IDs
- Basin Management Action Plan Areas
- Nutrient Impaired Waterbodies
- FPC Ponds
- SMF Ponds

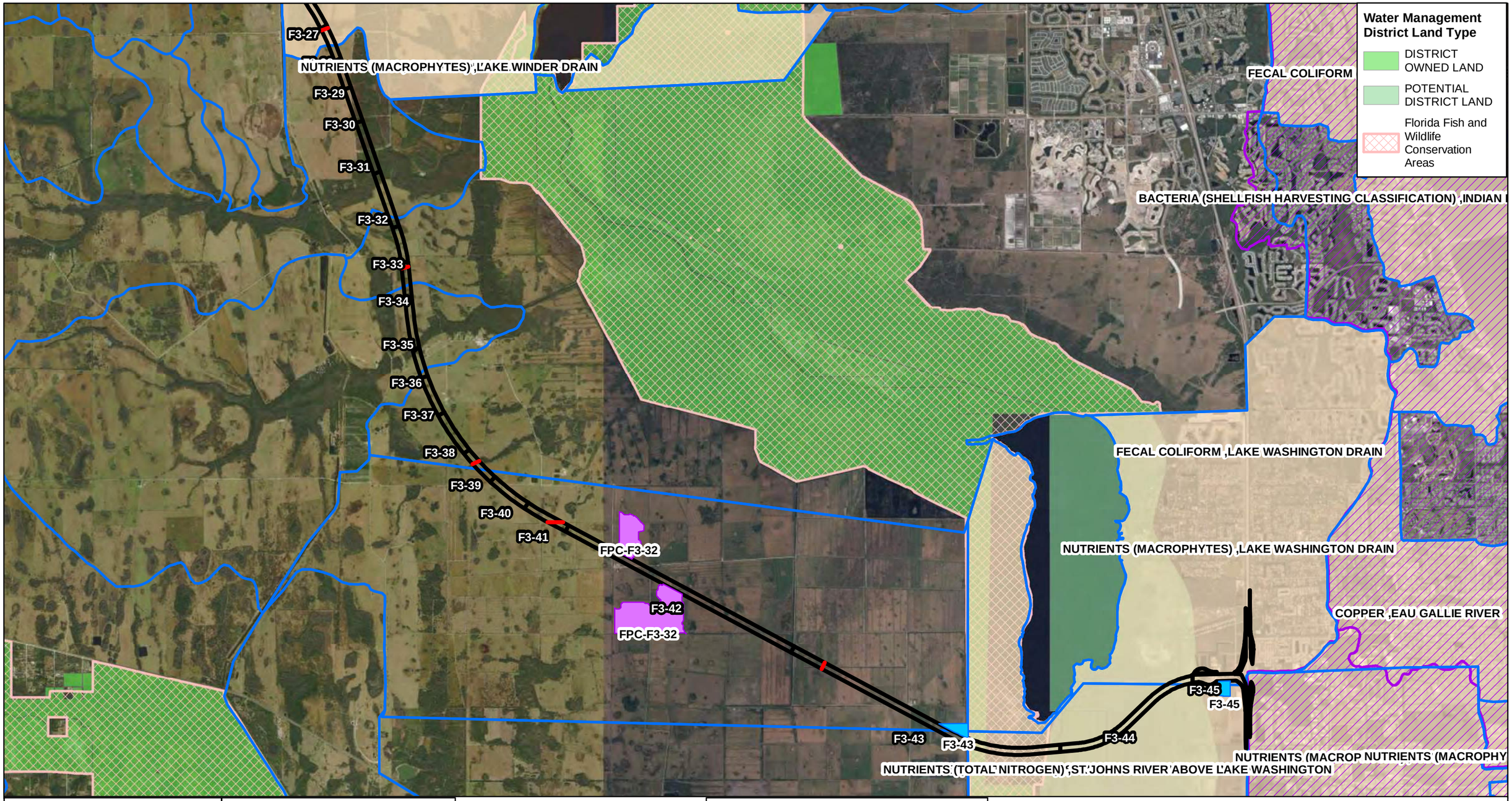

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Figure A.5

Alternative F3
East Portion
Pond Siting Evaluation

N
W E
S

0 0.5 1 2 Miles

Legend

- Proposed Cross Drains
- Basins
- Waterbody IDs
- Basin Management Action Plan Areas
- Nutrient Impaired Waterbodies
- FPC Ponds
- SMF Ponds

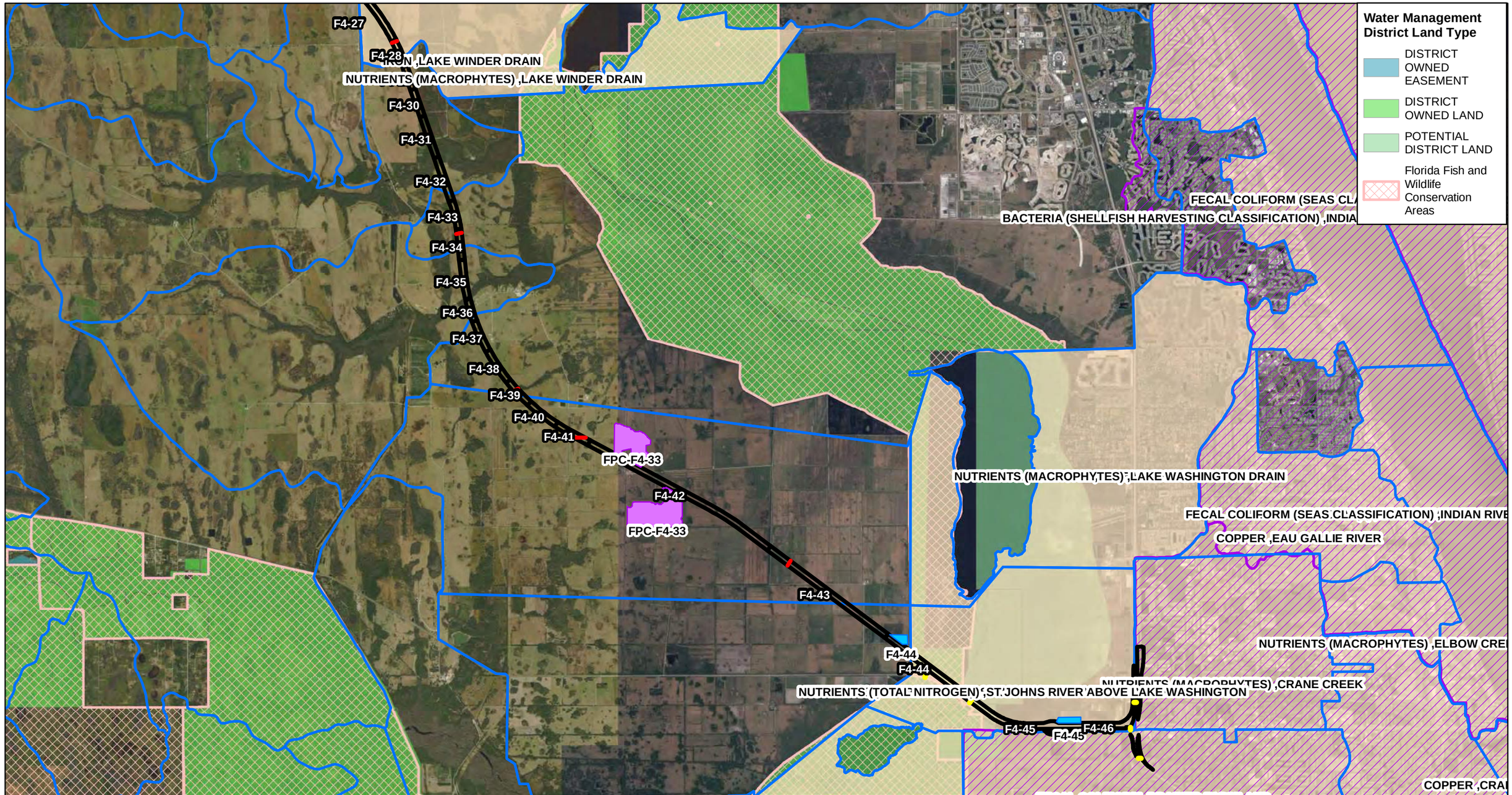

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Figure A.6

Alternative F4
East Portion
Pond Siting Evaluation

N
W E
S

0 0.75 1.5 3 Miles

Legend

- Proposed Cross Drains
- Existing Cross Drains
- Basins
- Waterbody IDs
- Basin Management Action Plan Areas
- Nutrient Impaired Waterbodies
- FPC Ponds
- SMF Ponds

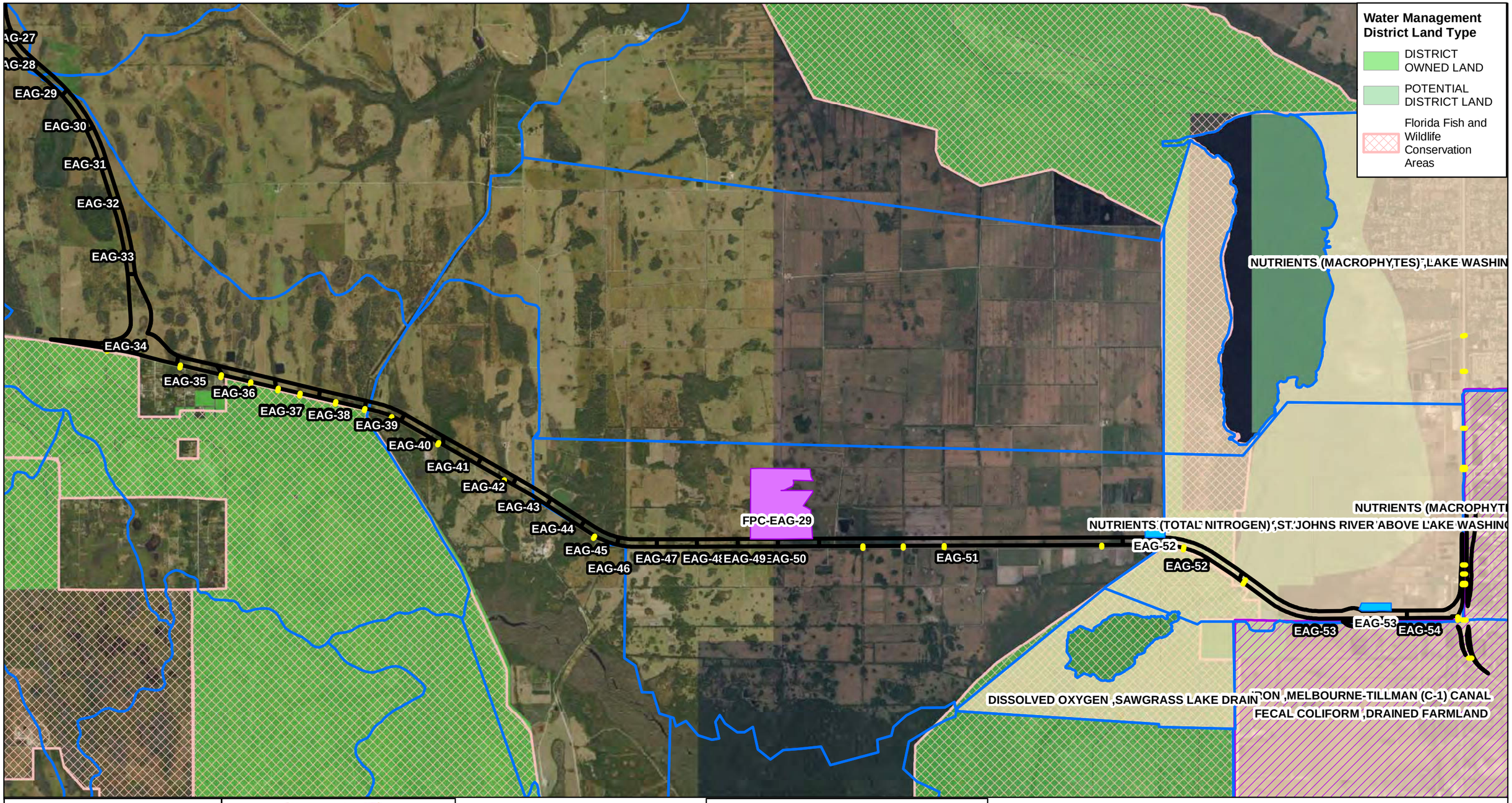

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Figure A.7

EAG Alternative
East Portion
Pond Siting Evaluation

N
W E
S

0 0.5 1 2 Miles

Legend

- Existing Cross Drains
- Basins
- Waterbody IDs
- Basin Management Action Plan Areas
- Nutrient Impaired Waterbodies
- FPC Ponds
- SMF Ponds

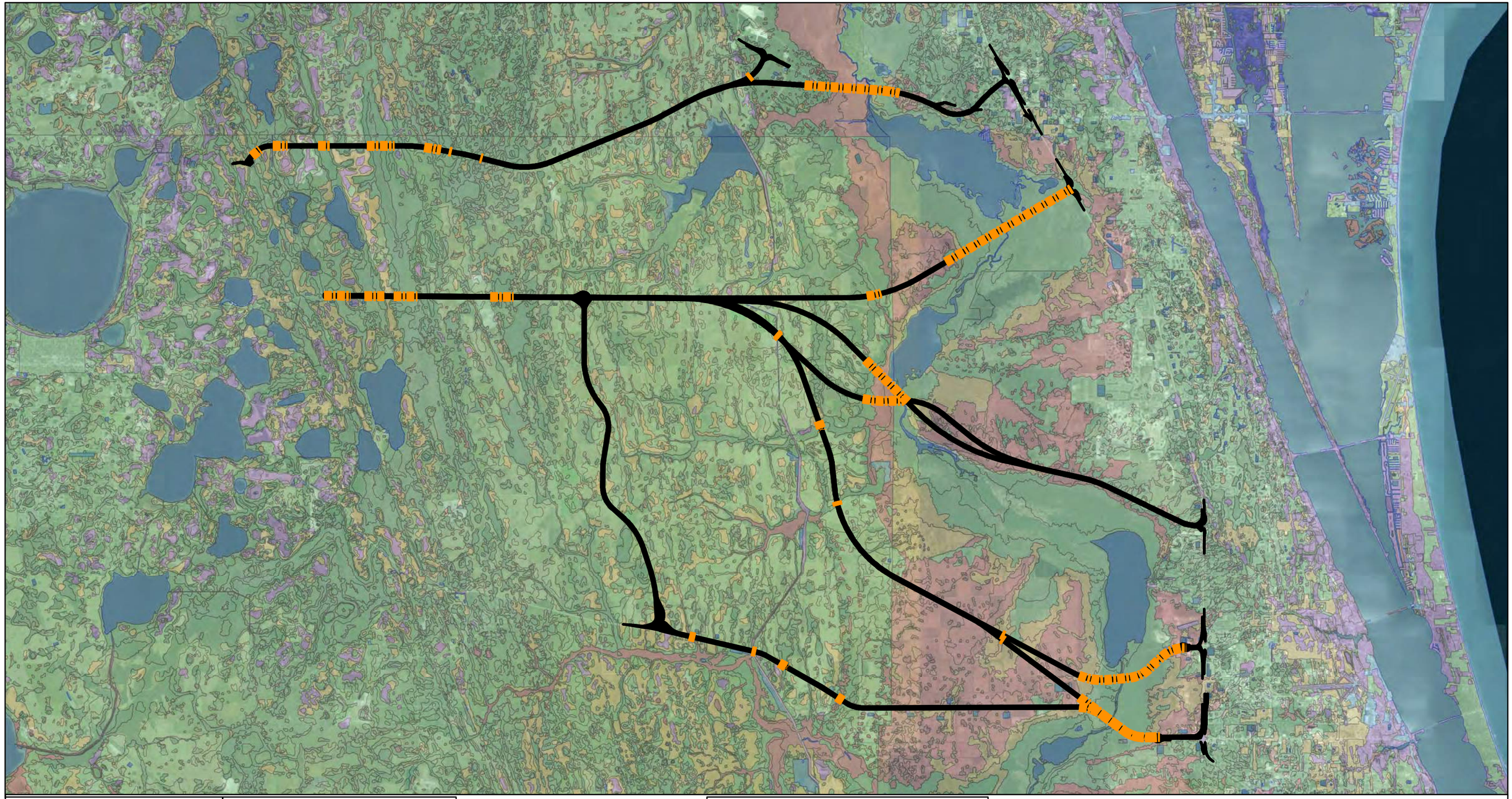

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Figure A.8

Soils

N
W E
S

0 1.5 3 6 Miles

Legend

- Alignment Alternatives
- Bridges

Hydrologic Soil Group

- Water
- A
- A/D
- B/D
- C/D
- D

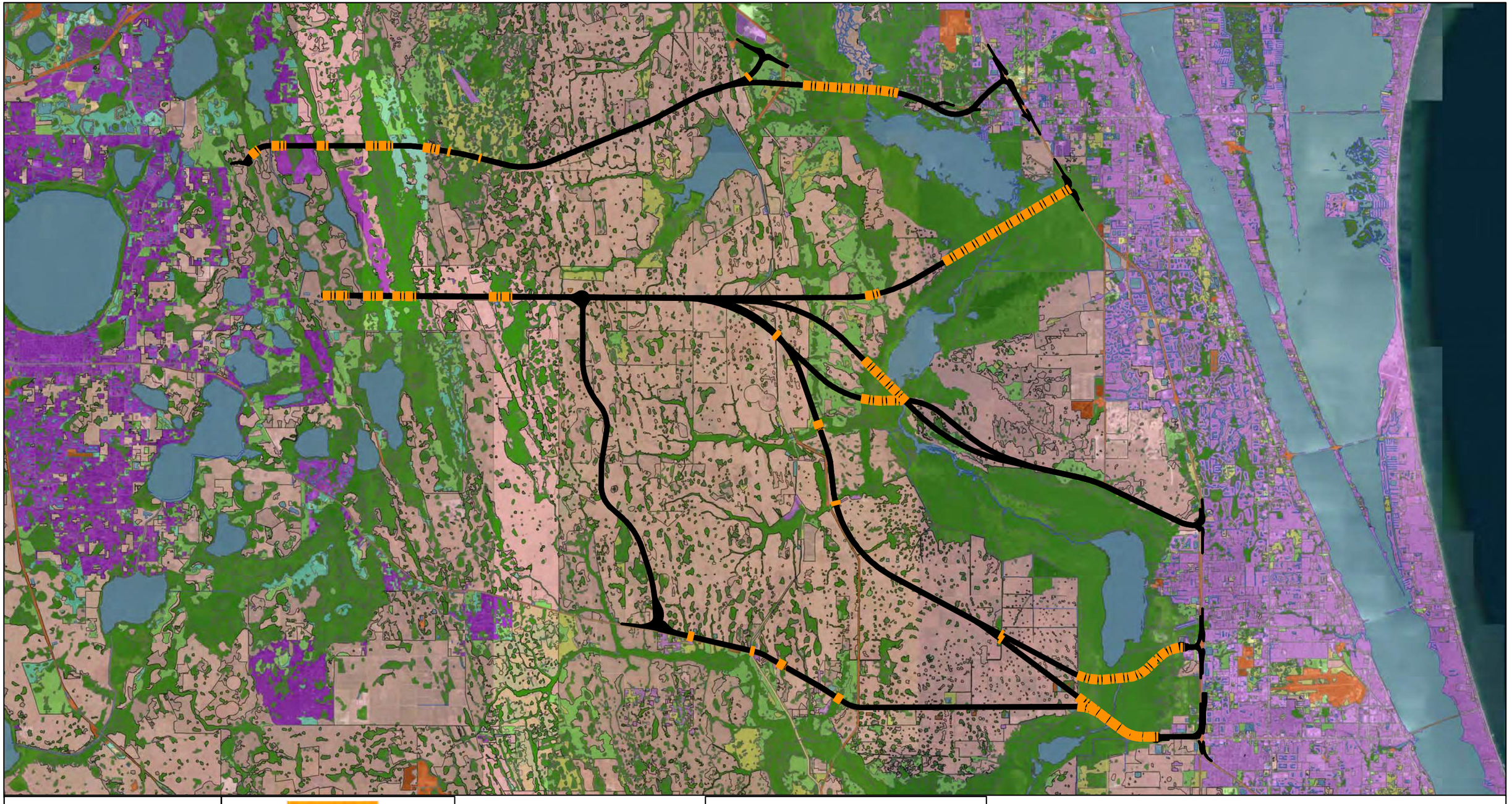

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Figure A.9

Landuse

N
W E
S

0 1.5 3 6 Miles

Legend

- Alignment Alternatives
- Bridges

Landuse Description

- Agriculture
- Barren Land
- Transportation
- Upland Forests
- Upland Nonforested
- Urban And Built Up
- Water
- Wetlands

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

8.81	**SJRWMD Rainfall (25yr/24hr, in)**
10.6	**SFWMD Rainfall (25yr/72hr, in)**

Notes:
(1) Attenuation volume zero if pre CN is greater than post CN (may occur due to existing water/wetland features)

Table A.1 - Attenuation Volume Summary

Corridor D1

			Existing					Proposed					Results
Basin	**WMD**	**Area (ac)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Attenuation Volume (ac-ft)**
D1-1	SFWMD	74.77	80.42	2.43	0.49	8.15	50.78	86.06	1.62	0.32	8.88	55.31	4.5
D1-2	SFWMD	38.81	78.11	2.80	0.56	7.85	25.38	85.83	1.65	0.33	8.85	28.61	3.2
D1-3	SFWMD	45.88	87.12	1.48	0.30	9.01	34.45	84.16	1.88	0.38	8.63	33.01	0.0
D1-4	SFWMD	34.75	81.28	2.30	0.46	8.26	23.93	87.60	1.42	0.28	9.07	26.27	2.3
D1-5	SFWMD	40.90	85.28	1.73	0.35	8.78	29.92	87.64	1.41	0.28	9.08	30.94	1.0
D1-6	SFWMD, SJRWMD	35.44	83.17	2.02	0.40	8.51	25.12	87.61	1.41	0.28	9.07	26.80	1.7
D1-7	SJRWMD	58.50	85.19	1.74	0.35	7.02	34.22	87.62	1.41	0.28	7.32	35.66	1.4
D1-8	SJRWMD	48.88	81.78	2.23	0.45	6.61	26.90	87.60	1.42	0.28	7.31	29.79	2.9
D1-9	SJRWMD	33.37	88.26	1.33	0.27	7.39	20.56	87.66	1.41	0.28	7.32	20.36	0.0
D1-10	SJRWMD	31.69	84.74	1.80	0.36	6.96	18.39	87.64	1.41	0.28	7.32	19.33	0.9
D1-11	SJRWMD	27.89	83.24	2.01	0.40	6.78	15.76	87.60	1.42	0.28	7.31	16.99	1.2
D1-12	SJRWMD	39.56	82.16	2.17	0.43	6.65	21.93	87.58	1.42	0.28	7.31	24.10	2.2
D1-13	SJRWMD	29.95	81.95	2.20	0.44	6.63	16.54	87.66	1.41	0.28	7.32	18.27	1.7
D1-14	SJRWMD	30.73	80.26	2.46	0.49	6.42	16.44	87.58	1.42	0.28	7.31	18.72	2.3
D1-15	SJRWMD	28.91	81.71	2.24	0.45	6.60	15.89	87.59	1.42	0.28	7.31	17.61	1.7
D1-16	SJRWMD	29.37	79.91	2.51	0.50	6.38	15.61	87.60	1.42	0.28	7.31	17.90	2.3
D1-17	SJRWMD	29.87	81.43	2.28	0.46	6.56	16.33	87.61	1.41	0.28	7.31	18.20	1.9
D1-18	SJRWMD	30.39	81.64	2.25	0.45	6.59	16.68	87.61	1.41	0.28	7.31	18.52	1.8
D1-19	SJRWMD	29.27	81.89	2.21	0.44	6.62	16.15	87.61	1.41	0.28	7.31	17.84	1.7
D1-20	SJRWMD	31.22	80.36	2.44	0.49	6.43	16.74	87.60	1.42	0.28	7.31	19.03	2.3
D1-21	SJRWMD	29.36	83.76	1.94	0.39	6.85	16.75	87.60	1.42	0.28	7.31	17.89	1.1
D1-22	SJRWMD	30.09	80.68	2.39	0.48	6.47	16.22	87.59	1.42	0.28	7.31	18.33	2.1
D1-23	SJRWMD	29.27	81.98	2.20	0.44	6.63	16.17	87.61	1.41	0.28	7.31	17.84	1.7
D1-24	SJRWMD	31.02	80.00	2.50	0.50	6.39	16.51	87.58	1.42	0.28	7.31	18.90	2.4
D1-25	SJRWMD	23.02	79.72	2.54	0.51	6.35	12.19	87.68	1.40	0.28	7.32	14.05	1.9
D1-26	SJRWMD	37.97	82.11	2.18	0.44	6.65	21.03	88.07	1.35	0.27	7.37	23.32	2.3
D1-27	SJRWMD	72.39	79.01	2.66	0.53	6.27	37.80	87.45	1.43	0.29	7.30	44.01	6.2
D1-28	SJRWMD	39.68	77.17	2.96	0.59	6.04	19.98	87.56	1.42	0.28	7.31	24.16	4.2
D1-29	SJRWMD	53.35	81.63	2.25	0.45	6.59	29.28	82.30	2.15	0.43	6.67	29.64	0.4

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

8.81	**SJRWMD Rainfall (25yr/24hr, in)**
10.6	**SFWMD Rainfall (25yr/72hr, in)**

Notes:
(1) Attenuation volume zero if pre CN is greater than post CN (may occur due to existing water/wetland features)

Table A.1 - Attenuation Volume Summary

Corridor D2

			Existing					Proposed					Results
Basin	**WMD**	**Area (ac)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Attenuation Volume (ac-ft)**
D2-1	SFWMD	74.77	80.42	2.43	0.49	8.15	50.78	86.06	1.62	0.32	8.88	55.31	4.5
D2-2	SFWMD	38.81	78.11	2.80	0.56	7.85	25.38	85.83	1.65	0.33	8.85	28.61	3.2
D2-3	SFWMD	45.88	87.12	1.48	0.30	9.01	34.45	84.16	1.88	0.38	8.63	33.01	0.0
D2-4	SFWMD	34.75	81.28	2.30	0.46	8.26	23.93	87.60	1.42	0.28	9.07	26.27	2.3
D2-5	SFWMD	40.90	85.28	1.73	0.35	8.78	29.92	87.64	1.41	0.28	9.08	30.94	1.0
D2-6	SFWMD, SJRWMD	35.58	83.17	2.02	0.40	8.51	25.23	87.61	1.41	0.28	9.07	26.90	1.7
D2-7	SJRWMD	58.74	85.19	1.74	0.35	7.02	34.36	87.62	1.41	0.28	7.32	35.81	1.5
D2-8	SJRWMD	49.00	81.78	2.23	0.45	6.61	26.97	87.61	1.41	0.28	7.31	29.86	2.9
D2-9	SJRWMD	33.50	88.26	1.33	0.27	7.39	20.64	87.66	1.41	0.28	7.32	20.43	0.0
D2-10	SJRWMD	31.79	84.74	1.80	0.36	6.97	18.45	87.64	1.41	0.28	7.32	19.39	0.9
D2-11	SJRWMD	27.96	83.24	2.01	0.40	6.78	15.81	87.60	1.41	0.28	7.31	17.04	1.2
D2-12	SJRWMD	39.65	82.17	2.17	0.43	6.65	21.98	87.59	1.42	0.28	7.31	24.16	2.2
D2-13	SJRWMD	30.02	81.95	2.20	0.44	6.63	16.58	87.66	1.41	0.28	7.32	18.32	1.7
D2-14	SJRWMD	30.83	80.26	2.46	0.49	6.42	16.49	87.59	1.42	0.28	7.31	18.78	2.3
D2-15	SJRWMD	29.01	81.71	2.24	0.45	6.60	15.95	87.59	1.42	0.28	7.31	17.67	1.7
D2-16	SJRWMD	29.51	79.91	2.51	0.50	6.38	15.69	87.59	1.42	0.28	7.31	17.98	2.3
D2-17	SJRWMD	30.04	81.43	2.28	0.46	6.56	16.43	87.60	1.42	0.28	7.31	18.31	1.9
D2-18	SJRWMD	30.58	81.64	2.25	0.45	6.59	16.79	87.59	1.42	0.28	7.31	18.63	1.8
D2-19	SJRWMD	29.46	81.89	2.21	0.44	6.62	16.25	87.59	1.42	0.28	7.31	17.95	1.7
D2-20	SJRWMD	31.40	80.37	2.44	0.49	6.43	16.83	87.59	1.42	0.28	7.31	19.14	2.3
D2-21	SJRWMD	29.51	83.76	1.94	0.39	6.85	16.84	87.59	1.42	0.28	7.31	17.98	1.1
D2-22	SJRWMD	30.19	80.68	2.39	0.48	6.47	16.28	87.59	1.42	0.28	7.31	18.40	2.1
D2-23	SJRWMD	29.37	81.98	2.20	0.44	6.63	16.22	87.61	1.41	0.28	7.31	17.90	1.7
D2-24	SJRWMD	31.11	80.00	2.50	0.50	6.39	16.56	87.59	1.42	0.28	7.31	18.96	2.4
D2-25	SJRWMD	23.15	79.72	2.54	0.51	6.35	12.26	87.65	1.41	0.28	7.32	14.12	1.9
D2-26	SJRWMD	38.87	82.37	2.14	0.43	6.68	21.63	87.94	1.37	0.27	7.35	23.82	2.2
D2-27	SJRWMD	58.40	81.45	2.28	0.46	6.57	31.95	88.00	1.36	0.27	7.36	35.82	3.9
D2-28	SJRWMD	41.83	75.89	3.18	0.64	5.89	20.52	87.57	1.42	0.28	7.31	25.48	5.0
D2-29	SJRWMD	70.18	76.30	3.11	0.62	5.94	34.72	87.57	1.42	0.28	7.31	42.75	8.0
D2-30	SJRWMD	125.80	85.58	1.68	0.34	7.07	74.10	87.66	1.41	0.28	7.32	76.75	2.7
D2-31	SJRWMD	209.76	87.14	1.48	0.30	7.26	126.85	87.34	1.45	0.29	7.28	127.28	0.4
D2-32	SJRWMD	142.20	83.58	1.97	0.39	6.82	80.86	86.57	1.55	0.31	7.19	85.18	4.3

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

8.81	**SJRWMD Rainfall (25yr/24hr, in)**
10.6	**SFWMD Rainfall (25yr/72hr, in)**

Notes:
(1) Attenuation volume zero if pre CN is greater than post CN (may occur due to existing water/wetland features)

Table A.1 - Attenuation Volume Summary

Corridor F1

			Existing					Proposed					Results
Basin	**WMD**	**Area (ac)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Attenuation Volume (ac-ft)**
F1-1	SFWMD	59.57	81.78	2.23	0.45	8.33	41.34	87.60	1.41	0.28	9.07	45.04	3.7
F1-3	SFWMD, SJRWMD	60.91	82.84	2.07	0.41	8.46	42.96	87.59	1.42	0.28	9.07	46.04	3.1
F1-5	SJRWMD	34.13	80.79	2.38	0.48	6.48	18.44	87.60	1.42	0.28	7.31	20.80	2.4
F1-6	SJRWMD	29.22	81.43	2.28	0.46	6.56	15.98	87.62	1.41	0.28	7.32	17.81	1.8
F1-7	SJRWMD	30.34	84.74	1.80	0.36	6.97	17.61	87.62	1.41	0.28	7.32	18.49	0.9
F1-8	SJRWMD	30.43	80.49	2.42	0.48	6.45	16.35	87.58	1.42	0.28	7.31	18.54	2.2
F1-9	SJRWMD	30.35	81.14	2.32	0.46	6.53	16.51	87.60	1.42	0.28	7.31	18.50	2.0
F1-10	SJRWMD	30.24	79.98	2.50	0.50	6.39	16.09	87.57	1.42	0.28	7.31	18.42	2.3
F1-11	SJRWMD	30.44	83.15	2.03	0.41	6.77	17.18	87.60	1.42	0.28	7.31	18.55	1.4
F1-12	SJRWMD	30.63	84.35	1.85	0.37	6.92	17.66	87.59	1.42	0.28	7.31	18.66	1.0
F1-13	SJRWMD	30.06	80.49	2.42	0.48	6.45	16.15	87.59	1.42	0.28	7.31	18.32	2.2
F1-14	SJRWMD	30.38	79.62	2.56	0.51	6.34	16.06	87.57	1.42	0.28	7.31	18.51	2.5
F1-15	SJRWMD	30.49	79.70	2.55	0.51	6.35	16.14	87.57	1.42	0.28	7.31	18.57	2.4
F1-16	SJRWMD	40.58	80.80	2.38	0.48	6.49	21.93	87.64	1.41	0.28	7.32	24.74	2.8
F1-17	SJRWMD	27.79	80.49	2.42	0.48	6.45	14.93	87.59	1.42	0.28	7.31	16.93	2.0
F1-18	SJRWMD	31.09	80.70	2.39	0.48	6.47	16.77	87.59	1.42	0.28	7.31	18.94	2.2
F1-19	SJRWMD	47.02	80.06	2.49	0.50	6.39	25.06	87.57	1.42	0.28	7.31	28.64	3.6
F1-20	SJRWMD	30.34	79.68	2.55	0.51	6.35	16.05	87.57	1.42	0.28	7.31	18.48	2.4
F1-21	SJRWMD	35.34	81.47	2.28	0.46	6.57	19.34	87.60	1.41	0.28	7.31	21.54	2.2
F1-22	SJRWMD	55.83	79.99	2.50	0.50	6.39	29.71	88.42	1.31	0.26	7.41	34.48	4.8
F1-23	SJRWMD	29.90	80.58	2.41	0.48	6.46	16.09	87.59	1.42	0.28	7.31	18.22	2.1
F1-24	SJRWMD	30.08	84.28	1.86	0.37	6.91	17.32	87.64	1.41	0.28	7.32	18.34	1.0
F1-25	SJRWMD	30.59	89.50	1.17	0.23	7.54	19.23	87.74	1.40	0.28	7.33	18.68	0.0
F1-26	SJRWMD	30.39	80.01	2.50	0.50	6.39	16.18	87.57	1.42	0.28	7.31	18.51	2.3
F1-27	SJRWMD	27.92	81.62	2.25	0.45	6.59	15.33	87.66	1.41	0.28	7.32	17.03	1.7
F1-28	SJRWMD	31.76	79.62	2.56	0.51	6.34	16.78	87.56	1.42	0.28	7.31	19.34	2.6
F1-29	SJRWMD	25.73	79.80	2.53	0.51	6.36	13.64	87.57	1.42	0.28	7.31	15.67	2.0
F1-30	SJRWMD	26.56	78.96	2.66	0.53	6.26	13.86	87.56	1.42	0.28	7.31	16.17	2.3
F1-31	SJRWMD	30.07	79.60	2.56	0.51	6.34	15.88	87.55	1.42	0.28	7.31	18.31	2.4
F1-32	SJRWMD	40.66	86.62	1.54	0.31	7.19	24.38	87.62	1.41	0.28	7.32	24.79	0.4
F1-33	SJRWMD	97.06	80.08	2.49	0.50	6.40	51.75	87.65	1.41	0.28	7.32	59.20	7.5
F1-34	SJRWMD	309.21	81.58	2.26	0.45	6.58	169.58	87.59	1.42	0.28	7.31	188.39	18.8
F1-35	SJRWMD	54.20	77.39	2.92	0.58	6.07	27.42	87.52	1.43	0.29	7.30	32.99	5.6
F1-36	SJRWMD	52.11	77.21	2.95	0.59	6.05	26.26	87.56	1.42	0.28	7.31	31.73	5.5
F1-37	SJRWMD	56.49	78.25	2.78	0.56	6.17	29.07	87.58	1.42	0.28	7.31	34.42	5.4
F1-38	SJRWMD	50.48	79.78	2.53	0.51	6.36	26.76	87.57	1.42	0.28	7.31	30.75	4.0
F1-39	SJRWMD	59.80	80.13	2.48	0.50	6.40	31.91	85.74	1.66	0.33	7.09	35.32	3.4
F1-40	SJRWMD	79.31	79.53	2.57	0.51	6.33	41.84	84.90	1.78	0.36	6.99	46.16	4.3

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

8.81	**SJRWMD Rainfall (25yr/24hr, in)**
10.6	**SFWMD Rainfall (25yr/72hr, in)**

Notes:
(1) Attenuation volume zero if pre CN is greater than post CN (may occur due to existing water/wetland features)

Table A.1 - Attenuation Volume Summary

Corridor F1b

			Existing					Proposed					Results
Basin	**WMD**	**Area (ac)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Attenuation Volume (ac-ft)**
F1b-1	SFWMD	59.57	81.78	2.23	0.45	8.33	41.34	87.60	1.41	0.28	9.07	45.04	3.7
F1b-3	SFWMD, SJRWMD	60.91	82.84	2.07	0.41	8.46	42.96	87.59	1.42	0.28	9.07	46.04	3.1
F1b-5	SJRWMD	34.14	80.76	2.38	0.48	6.48	18.44	87.66	1.41	0.28	7.32	20.82	2.4
F1b-6	SJRWMD	29.21	81.35	2.29	0.46	6.55	15.95	87.68	1.41	0.28	7.32	17.82	1.9
F1b-7	SJRWMD	30.33	84.71	1.81	0.36	6.96	17.60	87.69	1.40	0.28	7.32	18.51	0.9
F1b-8	SJRWMD	30.42	80.48	2.43	0.49	6.45	16.34	87.70	1.40	0.28	7.33	18.57	2.2
F1b-9	SJRWMD	30.35	81.09	2.33	0.47	6.52	16.49	87.71	1.40	0.28	7.33	18.53	2.0
F1b-10	SJRWMD	30.24	79.98	2.50	0.50	6.39	16.09	87.72	1.40	0.28	7.33	18.46	2.4
F1b-11	SJRWMD	30.44	83.15	2.03	0.41	6.77	17.18	87.72	1.40	0.28	7.33	18.59	1.4
F1b-12	SJRWMD	30.63	84.40	1.85	0.37	6.92	17.67	87.72	1.40	0.28	7.33	18.70	1.0
F1b-13	SJRWMD	30.06	80.44	2.43	0.49	6.44	16.14	87.72	1.40	0.28	7.33	18.35	2.2
F1b-14	SJRWMD	30.38	79.62	2.56	0.51	6.34	16.05	87.72	1.40	0.28	7.33	18.55	2.5
F1b-15	SJRWMD	30.49	79.70	2.55	0.51	6.35	16.13	87.71	1.40	0.28	7.33	18.61	2.5
F1b-16	SJRWMD	40.57	80.79	2.38	0.48	6.48	21.92	87.67	1.41	0.28	7.32	24.75	2.8
F1b-17	SJRWMD	27.77	80.47	2.43	0.49	6.45	14.92	87.68	1.40	0.28	7.32	16.95	2.0
F1b-18	SJRWMD	31.09	80.67	2.40	0.48	6.47	16.76	87.67	1.41	0.28	7.32	18.97	2.2
F1b-19	SJRWMD	47.02	80.06	2.49	0.50	6.40	25.06	87.64	1.41	0.28	7.32	28.67	3.6
F1b-20	SJRWMD	30.34	79.68	2.55	0.51	6.35	16.05	87.62	1.41	0.28	7.31	18.49	2.4
F1b-21	SJRWMD	35.33	81.47	2.27	0.45	6.57	19.34	87.62	1.41	0.28	7.32	21.54	2.2
F1b-22	SJRWMD	56.29	80.68	2.39	0.48	6.47	30.35	87.85	1.38	0.28	7.34	34.44	4.1
F1b-23	SJRWMD	28.63	80.06	2.49	0.50	6.40	15.26	87.67	1.41	0.28	7.32	17.47	2.2
F1b-24	SJRWMD	34.32	83.78	1.94	0.39	6.85	19.59	87.58	1.42	0.28	7.31	20.91	1.3
F1b-25	SJRWMD	30.14	82.49	2.12	0.42	6.69	16.81	87.58	1.42	0.28	7.31	18.36	1.6
F1b-26	SJRWMD	45.10	85.87	1.65	0.33	7.10	26.69	87.98	1.37	0.27	7.36	27.65	1.0
F1b-27	SJRWMD	58.36	80.01	2.50	0.50	6.39	31.08	87.86	1.38	0.28	7.34	35.72	4.6
F1b-28	SJRWMD	28.21	79.71	2.55	0.51	6.35	14.93	87.54	1.42	0.28	7.31	17.17	2.2
F1b-29	SJRWMD	31.68	78.63	2.72	0.54	6.22	16.42	87.49	1.43	0.29	7.30	19.27	2.9
F1b-30	SJRWMD	30.87	79.00	2.66	0.53	6.27	16.12	87.56	1.42	0.28	7.31	18.80	2.7
F1b-31	SJRWMD	38.51	79.00	2.66	0.53	6.27	20.11	87.56	1.42	0.28	7.31	23.45	3.3
F1b-32	SJRWMD	82.55	90.14	1.09	0.22	7.62	52.43	87.65	1.41	0.28	7.32	50.35	0.0
F1b-33	SJRWMD	293.18	80.34	2.45	0.49	6.43	157.08	87.66	1.41	0.28	7.32	178.83	21.8
F1b-34	SJRWMD	54.29	81.58	2.26	0.45	6.58	29.77	87.58	1.42	0.28	7.31	33.07	3.3
F1b-35	SJRWMD	52.22	77.39	2.92	0.58	6.07	26.41	87.52	1.43	0.29	7.30	31.78	5.4
F1b-36	SJRWMD	56.49	77.20	2.95	0.59	6.05	28.47	87.58	1.42	0.28	7.31	34.41	5.9
F1b-37	SJRWMD	50.48	78.25	2.78	0.56	6.17	25.98	87.58	1.42	0.28	7.31	30.76	4.8
F1b-38	SJRWMD	59.81	79.78	2.53	0.51	6.36	31.70	87.56	1.42	0.28	7.31	36.42	4.7
F1b-39	SJRWMD	79.31	79.53	2.57	0.51	6.33	41.84	84.90	1.78	0.36	6.99	46.16	4.3

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

8.81	**SJRWMD Rainfall (25yr/24hr, in)**
10.6	**SFWMD Rainfall (25yr/72hr, in)**

Notes:
(1) Attenuation volume zero if pre CN is greater than post CN (may occur due to existing water/wetland features)

Table A.1 - Attenuation Volume Summary

Corridor F2

			Existing					Proposed					Results
Basin	**WMD**	**Area (ac)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Attenuation Volume (ac-ft)**
F2-1	SFWMD	59.57	81.78	2.23	0.45	8.33	41.34	87.60	1.41	0.28	9.07	45.04	3.7
F2-3	SFWMD, SJRWMD	60.91	82.84	2.07	0.41	8.46	42.96	87.59	1.42	0.28	9.07	46.04	3.1
F2-5	SJRWMD	33.61	80.76	2.38	0.48	6.48	18.15	87.67	1.41	0.28	7.32	20.50	2.4
F2-6	SJRWMD	28.69	81.35	2.29	0.46	6.55	15.66	87.69	1.40	0.28	7.32	17.51	1.9
F2-7	SJRWMD	29.73	84.71	1.81	0.36	6.96	17.25	87.70	1.40	0.28	7.33	18.15	0.9
F2-8	SJRWMD	29.76	80.48	2.43	0.49	6.45	15.99	87.72	1.40	0.28	7.33	18.17	2.2
F2-9	SJRWMD	29.65	81.09	2.33	0.47	6.52	16.11	87.73	1.40	0.28	7.33	18.11	2.0
F2-10	SJRWMD	29.51	79.98	2.50	0.50	6.39	15.70	87.73	1.40	0.28	7.33	18.02	2.3
F2-11	SJRWMD	29.69	83.14	2.03	0.41	6.77	16.75	87.74	1.40	0.28	7.33	18.13	1.4
F2-12	SJRWMD	29.86	84.41	1.85	0.37	6.93	17.23	87.74	1.40	0.28	7.33	18.24	1.0
F2-13	SJRWMD	29.30	80.44	2.43	0.49	6.44	15.73	87.74	1.40	0.28	7.33	17.90	2.2
F2-14	SJRWMD	29.63	79.62	2.56	0.51	6.34	15.66	87.74	1.40	0.28	7.33	18.10	2.4
F2-15	SJRWMD	29.75	79.70	2.55	0.51	6.35	15.75	87.73	1.40	0.28	7.33	18.17	2.4
F2-16	SJRWMD	40.44	80.78	2.38	0.48	6.48	21.85	87.68	1.40	0.28	7.32	24.68	2.8
F2-17	SJRWMD	27.18	80.47	2.43	0.49	6.45	14.60	87.71	1.40	0.28	7.33	16.60	2.0
F2-18	SJRWMD	30.47	80.66	2.40	0.48	6.47	16.43	87.70	1.40	0.28	7.32	18.60	2.2
F2-19	SJRWMD	46.23	80.06	2.49	0.50	6.40	24.64	87.68	1.41	0.28	7.32	28.21	3.6
F2-20	SJRWMD	29.93	79.68	2.55	0.51	6.35	15.83	87.65	1.41	0.28	7.32	18.25	2.4
F2-21	SJRWMD	34.98	81.46	2.28	0.46	6.57	19.14	87.64	1.41	0.28	7.32	21.33	2.2
F2-22	SJRWMD	55.55	80.73	2.39	0.48	6.48	29.98	87.77	1.39	0.28	7.33	33.95	4.0
F2-23	SJRWMD	29.83	79.96	2.51	0.50	6.38	15.87	87.80	1.39	0.28	7.34	18.24	2.4
F2-24	SJRWMD	30.08	80.74	2.38	0.48	6.48	16.24	87.58	1.42	0.28	7.31	18.33	2.1
F2-25	SJRWMD	30.18	81.65	2.25	0.45	6.59	16.57	87.63	1.41	0.28	7.32	18.40	1.8
F2-26	SJRWMD	29.34	88.63	1.28	0.26	7.44	18.18	87.64	1.41	0.28	7.32	17.89	0.0
F2-27	SJRWMD	30.13	80.09	2.49	0.50	6.40	16.07	87.63	1.41	0.28	7.32	18.37	2.3
F2-28	SJRWMD	30.09	78.44	2.75	0.55	6.20	15.54	87.61	1.41	0.28	7.31	18.34	2.8
F2-29	SJRWMD	30.04	79.02	2.65	0.53	6.27	15.70	87.61	1.41	0.28	7.31	18.31	2.6
F2-30	SJRWMD	39.31	79.94	2.51	0.50	6.38	20.91	87.60	1.42	0.28	7.31	23.96	3.1
F2-31	SJRWMD	49.50	79.40	2.59	0.52	6.31	26.05	87.57	1.42	0.28	7.31	30.15	4.1
F2-32	SJRWMD	35.58	80.95	2.35	0.47	6.50	19.29	87.61	1.41	0.28	7.31	21.69	2.4
F2-33	SJRWMD	97.48	80.48	2.42	0.48	6.45	52.37	87.61	1.41	0.28	7.31	59.41	7.0
F2-34	SJRWMD	145.95	87.02	1.49	0.30	7.24	88.09	87.62	1.41	0.28	7.31	88.97	0.9
F2-35	SJRWMD	124.60	96.11	0.40	0.08	8.34	86.62	87.67	1.41	0.28	7.32	76.02	0.0
F2-36	SJRWMD	47.53	99.15	0.09	0.02	8.71	34.49	95.72	0.45	0.09	8.29	32.85	0.0

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

8.81	**SJRWMD Rainfall (25yr/24hr, in)**
10.6	**SFWMD Rainfall (25yr/72hr, in)**

Notes:
(1) Attenuation volume zero if pre CN is greater than post CN (may occur due to existing water/wetland features)

Table A.1 - Attenuation Volume Summary

Corridor F3

			Existing					Proposed					Results
Basin	**WMD**	**Area (ac)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Attenuation Volume (ac-ft)**
F3-1	SFWMD	59.57	81.78	2.23	0.45	8.33	41.34	87.60	1.41	0.28	9.07	45.04	3.7
F3-3	SFWMD, SJRWMD	60.91	82.84	2.07	0.41	8.46	42.96	87.59	1.42	0.28	9.07	46.04	3.1
F3-5	SJRWMD	33.61	80.76	2.38	0.48	6.48	18.15	87.67	1.41	0.28	7.32	20.50	2.4
F3-6	SJRWMD	28.69	81.35	2.29	0.46	6.55	15.67	87.69	1.40	0.28	7.32	17.51	1.8
F3-7	SJRWMD	29.73	84.71	1.81	0.36	6.96	17.25	87.70	1.40	0.28	7.33	18.15	0.9
F3-8	SJRWMD	29.77	80.48	2.43	0.49	6.45	15.99	87.72	1.40	0.28	7.33	18.17	2.2
F3-9	SJRWMD	29.65	81.09	2.33	0.47	6.52	16.11	87.73	1.40	0.28	7.33	18.11	2.0
F3-10	SJRWMD	29.51	79.98	2.50	0.50	6.39	15.70	87.73	1.40	0.28	7.33	18.02	2.3
F3-11	SJRWMD	29.69	83.15	2.03	0.41	6.77	16.75	87.74	1.40	0.28	7.33	18.13	1.4
F3-12	SJRWMD	29.86	84.41	1.85	0.37	6.93	17.23	87.74	1.40	0.28	7.33	18.24	1.0
F3-13	SJRWMD	29.31	80.44	2.43	0.49	6.44	15.73	87.74	1.40	0.28	7.33	17.90	2.2
F3-14	SJRWMD	29.63	79.62	2.56	0.51	6.34	15.66	87.74	1.40	0.28	7.33	18.10	2.4
F3-15	SJRWMD	29.76	79.70	2.55	0.51	6.35	15.75	87.73	1.40	0.28	7.33	18.17	2.4
F3-16	SJRWMD	40.44	80.78	2.38	0.48	6.48	21.85	87.68	1.40	0.28	7.32	24.68	2.8
F3-17	SJRWMD	27.19	80.47	2.43	0.49	6.45	14.60	87.71	1.40	0.28	7.33	16.60	2.0
F3-18	SJRWMD	30.48	80.67	2.40	0.48	6.47	16.43	87.70	1.40	0.28	7.32	18.60	2.2
F3-19	SJRWMD	46.24	80.06	2.49	0.50	6.40	24.64	87.67	1.41	0.28	7.32	28.21	3.6
F3-20	SJRWMD	29.93	79.68	2.55	0.51	6.35	15.84	87.65	1.41	0.28	7.32	18.26	2.4
F3-21	SJRWMD	34.99	81.46	2.28	0.46	6.57	19.15	87.64	1.41	0.28	7.32	21.34	2.2
F3-22	SJRWMD	56.06	80.68	2.39	0.48	6.47	30.23	88.22	1.34	0.27	7.39	34.52	4.3
F3-23	SJRWMD	29.67	80.20	2.47	0.49	6.41	15.85	88.05	1.36	0.27	7.37	18.21	2.4
F3-24	SJRWMD	34.95	83.41	1.99	0.40	6.80	19.82	87.59	1.42	0.28	7.31	21.30	1.5
F3-25	SJRWMD	30.50	82.10	2.18	0.44	6.64	16.89	87.58	1.42	0.28	7.31	18.58	1.7
F3-26	SJRWMD	43.46	85.85	1.65	0.33	7.10	25.72	87.78	1.39	0.28	7.33	26.56	0.8
F3-27	SJRWMD	60.37	80.03	2.50	0.50	6.39	32.15	87.87	1.38	0.28	7.35	36.95	4.8
F3-28	SJRWMD	29.11	79.97	2.50	0.50	6.38	15.49	87.56	1.42	0.28	7.31	17.73	2.2
F3-29	SJRWMD	24.92	80.00	2.50	0.50	6.39	13.26	87.56	1.42	0.28	7.31	15.17	1.9
F3-30	SJRWMD	29.08	79.38	2.60	0.52	6.31	15.30	87.55	1.42	0.28	7.31	17.71	2.4
F3-31	SJRWMD	44.24	78.92	2.67	0.53	6.26	23.07	87.55	1.42	0.28	7.31	26.94	3.9
F3-32	SJRWMD	46.99	81.36	2.29	0.46	6.55	25.66	87.58	1.42	0.28	7.31	28.63	3.0
F3-33	SJRWMD	29.68	80.50	2.42	0.48	6.45	15.95	87.58	1.42	0.28	7.31	18.08	2.1
F3-34	SJRWMD	31.83	80.39	2.44	0.49	6.44	17.07	87.59	1.42	0.28	7.31	19.39	2.3
F3-35	SJRWMD	40.24	79.86	2.52	0.50	6.37	21.37	87.56	1.42	0.28	7.31	24.51	3.1
F3-36	SJRWMD	23.60	79.87	2.52	0.50	6.37	12.53	87.57	1.42	0.28	7.31	14.37	1.8
F3-37	SJRWMD	33.26	80.00	2.50	0.50	6.39	17.71	87.57	1.42	0.28	7.31	20.26	2.6
F3-38	SJRWMD	37.28	79.86	2.52	0.50	6.37	19.79	87.56	1.42	0.28	7.31	22.70	2.9
F3-39	SJRWMD	31.16	80.37	2.44	0.49	6.43	16.71	87.57	1.42	0.28	7.31	18.98	2.3
F3-40	SJRWMD	34.91	81.27	2.30	0.46	6.54	19.03	87.58	1.42	0.28	7.31	21.27	2.2
F3-41	SJRWMD	38.22	80.14	2.48	0.50	6.41	20.40	87.59	1.42	0.28	7.31	23.29	2.9
F3-42	SJRWMD	208.90	82.26	2.16	0.43	6.66	115.99	87.67	1.41	0.28	7.32	127.44	11.5
F3-43	SJRWMD	238.32	80.85	2.37	0.47	6.49	128.92	87.59	1.42	0.28	7.31	145.21	16.3
F3-44	SJRWMD	125.34	81.54	2.26	0.45	6.58	68.68	87.62	1.41	0.28	7.32	76.41	7.7
F3-45	SJRWMD	95.19	85.35	1.72	0.34	7.04	55.84	85.81	1.65	0.33	7.10	56.28	0.4

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

8.81	**SJRWMD Rainfall (25yr/24hr, in)**
10.6	**SFWMD Rainfall (25yr/72hr, in)**

Notes:
(1) Attenuation volume zero if pre CN is greater than post CN (may occur due to existing water/wetland features)

Table A.1 - Attenuation Volume Summary

Corridor F4

			Existing					Proposed					Results
Basin	**WMD**	**Area (ac)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Weighted CN**	**S**	**Ia**	**Runoff (in)**	**Runoff (ac-ft)**	**Attenuation Volume (ac-ft)**
F4-1	SFWMD	59.57	81.78	2.23	0.45	8.33	41.34	87.60	1.41	0.28	9.07	45.04	3.7
F4-3	SFWMD, SJRWMD	60.91	82.84	2.07	0.41	8.46	42.96	87.59	1.42	0.28	9.07	46.04	3.1
F4-5	SJRWMD	33.61	80.76	2.38	0.48	6.48	18.15	87.67	1.41	0.28	7.32	20.50	2.4
F4-6	SJRWMD	28.69	81.35	2.29	0.46	6.55	15.67	87.69	1.40	0.28	7.32	17.51	1.8
F4-7	SJRWMD	29.73	84.71	1.81	0.36	6.96	17.25	87.70	1.40	0.28	7.33	18.15	0.9
F4-8	SJRWMD	29.77	80.48	2.43	0.49	6.45	15.99	87.72	1.40	0.28	7.33	18.17	2.2
F4-9	SJRWMD	29.65	81.09	2.33	0.47	6.52	16.11	87.73	1.40	0.28	7.33	18.11	2.0
F4-10	SJRWMD	29.51	79.98	2.50	0.50	6.39	15.70	87.73	1.40	0.28	7.33	18.03	2.3
F4-11	SJRWMD	29.69	83.15	2.03	0.41	6.77	16.75	87.74	1.40	0.28	7.33	18.13	1.4
F4-12	SJRWMD	29.86	84.41	1.85	0.37	6.93	17.23	87.74	1.40	0.28	7.33	18.24	1.0
F4-13	SJRWMD	29.31	80.44	2.43	0.49	6.44	15.73	87.74	1.40	0.28	7.33	17.90	2.2
F4-14	SJRWMD	29.63	79.62	2.56	0.51	6.34	15.66	87.74	1.40	0.28	7.33	18.10	2.4
F4-15	SJRWMD	29.76	79.70	2.55	0.51	6.35	15.75	87.73	1.40	0.28	7.33	18.17	2.4
F4-16	SJRWMD	40.44	80.78	2.38	0.48	6.48	21.85	87.68	1.40	0.28	7.32	24.68	2.8
F4-17	SJRWMD	27.19	80.47	2.43	0.49	6.45	14.60	87.71	1.40	0.28	7.33	16.60	2.0
F4-18	SJRWMD	30.48	80.67	2.40	0.48	6.47	16.43	87.70	1.40	0.28	7.32	18.60	2.2
F4-19	SJRWMD	46.24	80.06	2.49	0.50	6.40	24.64	87.67	1.41	0.28	7.32	28.21	3.6
F4-20	SJRWMD	29.93	79.68	2.55	0.51	6.35	15.84	87.65	1.41	0.28	7.32	18.26	2.4
F4-21	SJRWMD	34.99	81.46	2.28	0.46	6.57	19.15	87.64	1.41	0.28	7.32	21.34	2.2
F4-22	SJRWMD	56.09	80.68	2.39	0.48	6.47	30.24	88.22	1.34	0.27	7.39	34.53	4.3
F4-23	SJRWMD	29.67	80.20	2.47	0.49	6.41	15.86	88.05	1.36	0.27	7.37	18.22	2.4
F4-24	SJRWMD	34.93	83.41	1.99	0.40	6.80	19.80	87.59	1.42	0.28	7.31	21.28	1.5
F4-25	SJRWMD	30.50	82.10	2.18	0.44	6.64	16.89	87.58	1.42	0.28	7.31	18.58	1.7
F4-26	SJRWMD	43.44	85.85	1.65	0.33	7.10	25.70	87.77	1.39	0.28	7.33	26.55	0.9
F4-27	SJRWMD	60.39	80.03	2.50	0.50	6.39	32.16	87.87	1.38	0.28	7.35	36.97	4.8
F4-28	SJRWMD	29.10	79.97	2.50	0.50	6.38	15.48	87.56	1.42	0.28	7.31	17.72	2.2
F4-29	SJRWMD	24.91	80.00	2.50	0.50	6.39	13.26	87.56	1.42	0.28	7.31	15.17	1.9
F4-30	SJRWMD	29.08	79.38	2.60	0.52	6.31	15.30	87.55	1.42	0.28	7.31	17.71	2.4
F4-31	SJRWMD	44.26	78.92	2.67	0.53	6.26	23.07	87.55	1.42	0.28	7.31	26.95	3.9
F4-32	SJRWMD	47.00	81.36	2.29	0.46	6.55	25.67	87.58	1.42	0.28	7.31	28.63	3.0
F4-33	SJRWMD	29.68	80.50	2.42	0.48	6.45	15.95	87.58	1.42	0.28	7.31	18.08	2.1
F4-34	SJRWMD	31.83	80.39	2.44	0.49	6.44	17.07	87.59	1.42	0.28	7.31	19.39	2.3
F4-35	SJRWMD	40.24	79.86	2.52	0.50	6.37	21.37	87.56	1.42	0.28	7.31	24.51	3.1
F4-36	SJRWMD	23.60	79.87	2.52	0.50	6.37	12.53	87.57	1.42	0.28	7.31	14.37	1.8
F4-37	SJRWMD	33.26	80.00	2.50	0.50	6.39	17.71	87.57	1.42	0.28	7.31	20.26	2.6
F4-38	SJRWMD	37.28	79.86	2.52	0.50	6.37	19.79	87.56	1.42	0.28	7.31	22.70	2.9
F4-39	SJRWMD	31.16	80.37	2.44	0.49	6.43	16.71	87.57	1.42	0.28	7.31	18.98	2.3
F4-40	SJRWMD	34.91	81.27	2.30	0.46	6.54	19.03	87.58	1.42	0.28	7.31	21.27	2.2
F4-41	SJRWMD	38.22	80.14	2.48	0.50	6.41	20.40	87.59	1.42	0.28	7.31	23.29	2.9
F4-42	SJRWMD	213.18	82.01	2.19	0.44	6.63	117.85	87.68	1.41	0.28	7.32	130.08	12.2
F4-43	SJRWMD	149.34	81.52	2.27	0.45	6.57	81.80	87.58	1.42	0.28	7.31	90.97	9.2
F4-44	SJRWMD	103.77	87.63	1.41	0.28	7.32	63.27	87.76	1.40	0.28	7.33	63.40	0.1
F4-45	SJRWMD	146.99	81.38	2.29	0.46	6.56	80.30	87.92	1.37	0.27	7.35	90.06	9.8
F4-46	SJRWMD	120.74	79.41	2.59	0.52	6.32	63.55	81.48	2.27	0.45	6.57	66.09	2.5

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

8.81	SJRWMD Rainfall (25yr/24hr, in)
10.6	SFWMD Rainfall (25yr/72hr, in)

Notes:
(1) Attenuation volume zero if pre CN is greater than post CN (may occur due to existing water/wetland features)

Table A.1 - Attenuation Volume Summary

Corridor EAG

			Existing					Proposed					Results
Basin	WMD	Area (ac)	Weighted CN	S	Ia	Runoff (in)	Runoff (ac-ft)	Weighted CN	S	Ia	Runoff (in)	Runoff (ac-ft)	Attenuation Volume (ac-ft)
EAG-1	SFWMD	59.57	81.78	2.23	0.45	8.33	41.34	87.60	1.41	0.28	9.07	45.04	3.7
EAG-3	SFWMD, SJRWMD	60.91	82.84	2.07	0.41	8.46	42.96	87.59	1.42	0.28	9.07	46.04	3.1
EAG-5	SJRWMD	33.77	80.77	2.38	0.48	6.48	18.24	87.63	1.41	0.28	7.32	20.59	2.4
EAG-6	SJRWMD	28.87	81.38	2.29	0.46	6.56	15.77	87.64	1.41	0.28	7.32	17.60	1.8
EAG-7	SJRWMD	29.95	84.72	1.80	0.36	6.96	17.38	87.64	1.41	0.28	7.32	18.27	0.9
EAG-8	SJRWMD	30.03	80.48	2.42	0.48	6.45	16.13	87.65	1.41	0.28	7.32	18.31	2.2
EAG-9	SJRWMD	29.95	81.11	2.33	0.47	6.52	16.28	87.65	1.41	0.28	7.32	18.27	2.0
EAG-10	SJRWMD	29.85	79.98	2.50	0.50	6.39	15.89	87.65	1.41	0.28	7.32	18.21	2.3
EAG-11	SJRWMD	30.07	83.15	2.03	0.41	6.77	16.97	87.64	1.41	0.28	7.32	18.34	1.4
EAG-12	SJRWMD	30.28	84.37	1.85	0.37	6.92	17.47	87.63	1.41	0.28	7.32	18.47	1.0
EAG-13	SJRWMD	29.77	80.47	2.43	0.49	6.45	15.99	87.62	1.41	0.28	7.32	18.15	2.2
EAG-14	SJRWMD	30.13	79.62	2.56	0.51	6.34	15.92	87.61	1.41	0.28	7.31	18.37	2.5
EAG-15	SJRWMD	30.30	79.70	2.55	0.51	6.35	16.04	87.59	1.42	0.28	7.31	18.46	2.4
EAG-16	SJRWMD	120.10	83.01	2.05	0.41	6.76	67.60	86.18	1.60	0.32	7.14	71.46	3.9
EAG-17	SJRWMD	31.51	83.44	1.98	0.40	6.81	17.88	87.47	1.43	0.29	7.30	19.16	1.3
EAG-18	SJRWMD	32.76	81.49	2.27	0.45	6.57	17.93	87.60	1.42	0.28	7.31	19.96	2.0
EAG-19	SJRWMD	31.89	80.00	2.50	0.50	6.39	16.97	87.58	1.42	0.28	7.31	19.42	2.5
EAG-20	SJRWMD	33.71	80.00	2.50	0.50	6.39	17.95	87.57	1.42	0.28	7.31	20.53	2.6
EAG-21	SJRWMD	35.76	80.00	2.50	0.50	6.39	19.03	87.56	1.42	0.28	7.31	21.78	2.8
EAG-22	SJRWMD	32.36	80.00	2.50	0.50	6.39	17.23	87.56	1.42	0.28	7.31	19.71	2.5
EAG-23	SJRWMD	34.86	82.63	2.10	0.42	6.71	19.49	87.55	1.42	0.28	7.31	21.22	1.7
EAG-24	SJRWMD	33.71	80.00	2.50	0.50	6.39	17.94	87.58	1.42	0.28	7.31	20.53	2.6
EAG-25	SJRWMD	32.63	80.00	2.50	0.50	6.39	17.37	87.58	1.42	0.28	7.31	19.88	2.5
EAG-26	SJRWMD	31.24	80.00	2.50	0.50	6.39	16.63	87.58	1.42	0.28	7.31	19.03	2.4
EAG-27	SJRWMD	34.77	80.70	2.39	0.48	6.47	18.76	87.61	1.41	0.28	7.31	21.19	2.4
EAG-28	SJRWMD	32.11	80.00	2.50	0.50	6.39	17.09	87.57	1.42	0.28	7.31	19.56	2.5
EAG-29	SJRWMD	32.52	81.59	2.26	0.45	6.58	17.84	87.61	1.41	0.28	7.31	19.82	2.0
EAG-30	SJRWMD	33.91	80.00	2.50	0.50	6.39	18.05	87.56	1.42	0.28	7.31	20.65	2.6
EAG-31	SJRWMD	31.93	80.00	2.50	0.50	6.39	17.00	87.56	1.42	0.28	7.31	19.44	2.4
EAG-32	SJRWMD	31.75	80.05	2.49	0.50	6.39	16.92	87.56	1.42	0.28	7.31	19.34	2.4
EAG-33	SJRWMD	51.98	80.00	2.50	0.50	6.39	27.67	87.57	1.42	0.28	7.31	31.66	4.0
EAG-34	SJRWMD	232.67	80.60	2.41	0.48	6.46	125.27	83.38	1.99	0.40	6.80	131.84	6.6
EAG-35	SJRWMD	34.92	80.70	2.39	0.48	6.47	18.84	87.13	1.48	0.30	7.26	21.11	2.3
EAG-36	SJRWMD	45.23	79.44	2.59	0.52	6.32	23.82	87.25	1.46	0.29	7.27	27.40	3.6
EAG-37	SJRWMD	35.27	79.81	2.53	0.51	6.36	18.71	87.40	1.44	0.29	7.29	21.42	2.7
EAG-38	SJRWMD	36.27	79.66	2.55	0.51	6.35	19.18	87.43	1.44	0.29	7.29	22.04	2.9
EAG-39	SJRWMD	30.30	79.07	2.65	0.53	6.27	15.84	83.98	1.91	0.38	6.87	17.35	1.5
EAG-40	SJRWMD	35.58	80.36	2.44	0.49	6.43	19.07	86.49	1.56	0.31	7.18	21.29	2.2
EAG-41	SJRWMD	31.80	80.01	2.50	0.50	6.39	16.93	87.57	1.42	0.28	7.31	19.37	2.4
EAG-42	SJRWMD	30.66	82.17	2.17	0.43	6.65	17.00	87.58	1.42	0.28	7.31	18.68	1.7
EAG-43	SJRWMD	30.83	80.78	2.38	0.48	6.48	16.65	87.59	1.42	0.28	7.31	18.78	2.1
EAG-44	SJRWMD	30.41	82.55	2.11	0.42	6.70	16.97	87.63	1.41	0.28	7.32	18.54	1.6
EAG-45	SJRWMD	30.08	78.13	2.80	0.56	6.16	15.44	87.58	1.42	0.28	7.31	18.33	2.9
EAG-46	SJRWMD	29.75	74.80	3.37	0.67	5.75	14.26	86.29	1.59	0.32	7.15	17.73	3.5
EAG-47	SJRWMD	30.48	84.27	1.87	0.37	6.91	17.54	87.60	1.42	0.28	7.31	18.57	1.0
EAG-48	SJRWMD	31.13	80.62	2.40	0.48	6.46	16.77	87.61	1.41	0.28	7.31	18.97	2.2
EAG-49	SJRWMD	30.48	80.56	2.41	0.48	6.46	16.40	87.61	1.41	0.28	7.31	18.58	2.2
EAG-50	SJRWMD	31.28	80.00	2.50	0.50	6.39	16.65	87.60	1.42	0.28	7.31	19.06	2.4
EAG-51	SJRWMD	230.72	80.25	2.46	0.49	6.42	123.42	87.60	1.42	0.28	7.31	140.60	17.2
EAG-52	SJRWMD	96.75	88.05	1.36	0.27	7.37	59.39	87.79	1.39	0.28	7.34	59.14	0.0
EAG-53	SJRWMD	146.93	81.37	2.29	0.46	6.56	80.26	87.93	1.37	0.27	7.35	90.02	9.8
EAG-54	SJRWMD	120.74	79.41	2.59	0.52	6.32	63.55	81.48	2.27	0.45	6.57	66.09	2.5

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.2 - Treatment Volume Summary

Corridor D1

Basin	Area (ac)	Existing Impervious Area (ac)	Proposed Impervious Area (ac)	Treatment Volume - Basin (ac-ft)	Treatment Volume - Impervious Area (ac-ft)	Treatment Volume Required (ac-ft)	Located in a Nutrient Impaired Waterbody (NIW), BMAP, and/or OFW	Required Treatment Volume (w/ Add'l 50%, if applicable) (ac-ft)
D1-1	74.77	0.0	23.7	6.2	4.9	6.2	BMAP	9.3
D1-2	38.81	0.0	16.7	3.2	3.5	3.5	BMAP	5.2
D1-3	45.88	0.0	19.4	3.8	4.0	4.0	BMAP	6.1
D1-4	34.75	0.0	14.6	2.9	3.0	3.0	BMAP	4.6
D1-5	40.90	0.0	17.2	3.4	3.6	3.6	BMAP	5.4
D1-6	35.44	0.0	14.9	3.0	3.1	3.1	OFW, NIW	4.7
D1-7	58.50	0.0	24.7	4.9	5.1	5.1	OFW, NIW	7.7
D1-8	48.88	0.0	20.6	4.1	4.3	4.3	NIW	6.4
D1-9	33.37	0.0	14.1	2.8	2.9	2.9	No	2.9
D1-10	31.69	0.0	13.4	2.6	2.8	2.8	No	2.8
D1-11	27.89	0.0	11.7	2.3	2.4	2.4	No	2.4
D1-12	39.56	0.0	16.7	3.3	3.5	3.5	No	3.5
D1-13	29.95	0.0	12.6	2.5	2.6	2.6	No	2.6
D1-14	30.73	0.0	13.0	2.6	2.7	2.7	No	2.7
D1-15	28.91	0.0	12.2	2.4	2.5	2.5	No	2.5
D1-16	29.37	0.0	12.4	2.4	2.6	2.6	No	2.6
D1-17	29.87	0.0	12.6	2.5	2.6	2.6	No	2.6
D1-18	30.39	0.0	12.8	2.5	2.7	2.7	No	2.7
D1-19	29.27	0.0	12.4	2.4	2.6	2.6	No	2.6
D1-20	31.22	0.0	13.2	2.6	2.7	2.7	NIW	4.1
D1-21	29.36	0.0	12.4	2.4	2.6	2.6	NIW	3.9
D1-22	30.09	0.0	12.7	2.5	2.6	2.6	NIW	4.0
D1-23	29.27	0.0	12.3	2.4	2.6	2.6	NIW	3.9
D1-24	31.02	0.0	13.1	2.6	2.7	2.7	No	2.7
D1-25	23.02	0.0	9.7	1.9	2.0	2.0	No	2.0
D1-26	37.97	0.0	16.0	3.2	3.3	3.3	NIW	5.0
D1-27	72.39	0.0	30.5	6.0	6.4	6.4	NIW	9.5
D1-28	39.68	0.0	16.7	3.3	3.5	3.5	NIW	5.2
D1-29	53.35	1.1	4.7	4.4	0.7	4.4	NIW	6.7
Total	**1096.27**	**1.1**	**436.7**	**91.4**	**90.7**	**95.8**		**126.3**

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.2 - Treatment Volume Summary

Corridor D2

Basin	Area (ac)	Existing Impervious Area (ac)	Proposed Impervious Area (ac)	Treatment Volume - Basin (ac-ft)	Treatment Volume - Impervious Area (ac-ft)	Treatment Volume Required (ac-ft)	Located in a Nutrient Impaired Waterbody (NIW), BMAP, and/or OFW	Required Treatment Volume (w/ Add'l 50%, if applicable) (ac-ft)
D2-1	74.77	0.0	23.7	6.2	4.9	6.2	BMAP	9.3
D2-2	38.81	0.0	16.7	3.2	3.5	3.5	BMAP	5.2
D2-3	45.88	0.0	19.4	3.8	4.0	4.0	BMAP	6.1
D2-4	34.75	0.0	14.6	2.9	3.0	3.0	BMAP	4.6
D2-5	40.90	0.0	17.2	3.4	3.6	3.6	BMAP	5.4
D2-6	35.58	0.0	14.9	3.0	3.1	3.1	OFW, NIW	4.7
D2-7	58.74	0.0	24.7	4.9	5.1	5.1	OFW, NIW	7.7
D2-8	49.00	0.0	20.6	4.1	4.3	4.3	NIW	6.4
D2-9	33.50	0.0	14.1	2.8	2.9	2.9	No	2.9
D2-10	31.79	0.0	13.4	2.6	2.8	2.8	No	2.8
D2-11	27.96	0.0	11.7	2.3	2.4	2.4	No	2.4
D2-12	39.65	0.0	16.7	3.3	3.5	3.5	No	3.5
D2-13	30.02	0.0	12.6	2.5	2.6	2.6	No	2.6
D2-14	30.83	0.0	13.0	2.6	2.7	2.7	No	2.7
D2-15	29.01	0.0	12.2	2.4	2.5	2.5	No	2.5
D2-16	29.51	0.0	12.4	2.5	2.6	2.6	No	2.6
D2-17	30.04	0.0	12.6	2.5	2.6	2.6	No	2.6
D2-18	30.58	0.0	12.8	2.5	2.7	2.7	No	2.7
D2-19	29.46	0.0	12.4	2.5	2.6	2.6	No	2.6
D2-20	31.40	0.0	13.2	2.6	2.7	2.7	NIW	4.1
D2-21	29.51	0.0	12.4	2.5	2.6	2.6	NIW	3.9
D2-22	30.19	0.0	12.7	2.5	2.6	2.6	NIW	4.0
D2-23	29.37	0.0	12.3	2.4	2.6	2.6	NIW	3.9
D2-24	31.11	0.0	13.1	2.6	2.7	2.7	No	2.7
D2-25	23.15	0.0	10.4	1.9	2.2	2.2	No	2.2
D2-26	38.87	0.0	24.3	3.2	5.1	5.1	NIW	7.6
D2-27	58.40	0.0	34.5	4.9	7.2	7.2	NIW	10.8
D2-28	41.83	0.0	17.6	3.5	3.7	3.7	NIW	5.5
D2-29	70.18	0.0	21.3	5.8	4.4	5.8	OFW	8.8
D2-30	125.80	0.0	61.5	10.5	12.8	12.8	OFW, NIW	19.2
D2-31	209.76	0.0	83.9	17.5	17.5	17.5	NIW	26.2
D2-32	142.20	0.0	34.3	11.9	7.2	11.9	NIW	17.8
Total	**1582.54**	**0.0**	**647.1**	**131.9**	**134.8**	**142.2**		**195.9**

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.2 - Treatment Volume Summary

Corridor F1

Basin	Area (ac)	Existing Impervious Area (ac)	Proposed Impervious Area (ac)	Treatment Volume - Basin (ac-ft)	Treatment Volume - Impervious Area (ac-ft)	Treatment Volume Required (ac-ft)	Located in a Nutrient Impaired Waterbody (NIW), BMAP, and/or OFW	Required Treatment Volume (w/ Add'l 50%, if applicable) (ac-ft)
F1-1	59.57	0.0	25.0	5.0	5.2	5.2	BMAP	7.8
F1-3	60.91	0.0	25.5	5.1	5.3	5.3	BMAP	8.0
F1-5	34.13	0.0	14.3	2.8	3.0	3.0	OFW, NIW	4.5
F1-6	29.22	0.0	12.3	2.4	2.6	2.6	OFW, NIW	3.8
F1-7	30.34	0.0	12.7	2.5	2.7	2.7	OFW, NIW	4.0
F1-8	30.43	0.0	12.8	2.5	2.7	2.7	NIW	4.0
F1-9	30.35	0.0	12.7	2.5	2.7	2.7	NIW	4.0
F1-10	30.24	0.0	12.7	2.5	2.6	2.6	NIW	4.0
F1-11	30.44	0.0	12.8	2.5	2.7	2.7	No	2.7
F1-12	30.63	0.0	12.8	2.6	2.7	2.7	No	2.7
F1-13	30.06	0.0	12.6	2.5	2.6	2.6	No	2.6
F1-14	30.38	0.0	12.7	2.5	2.7	2.7	No	2.7
F1-15	30.49	0.0	12.8	2.5	2.7	2.7	No	2.7
F1-16	40.58	0.0	17.0	3.4	3.5	3.5	No	3.5
F1-17	27.79	0.0	11.7	2.3	2.4	2.4	No	2.4
F1-18	31.09	0.0	13.0	2.6	2.7	2.7	No	2.7
F1-19	47.02	0.0	19.7	3.9	4.1	4.1	No	4.1
F1-20	30.34	0.0	12.7	2.5	2.7	2.7	No	2.7
F1-21	35.34	0.0	14.8	2.9	3.1	3.1	No	3.1
F1-22	55.83	0.0	12.6	4.7	2.6	4.7	No	4.7
F1-23	29.90	0.0	12.6	2.5	2.6	2.6	No	2.6
F1-24	30.08	0.0	12.9	2.5	2.7	2.7	No	2.7
F1-25	30.59	0.0	12.8	2.5	2.7	2.7	No	2.7
F1-26	30.39	0.0	11.7	2.5	2.4	2.5	No	2.5
F1-27	27.92	0.0	13.3	2.3	2.8	2.8	No	2.8
F1-28	31.76	0.0	10.8	2.6	2.3	2.6	NIW	4.0
F1-29	25.73	0.0	11.2	2.1	2.3	2.3	NIW	3.5
F1-30	26.56	0.0	12.6	2.2	2.6	2.6	NIW	3.9
F1-31	30.07	0.0	17.1	2.5	3.6	3.6	NIW	5.3
F1-32	40.66	0.0	40.8	3.4	8.5	8.5	NIW	12.7
F1-33	97.06	0.0	129.8	8.1	27.0	27.0	NIW	40.6
F1-34	309.21	0.0	22.8	25.8	4.7	25.8	No	25.8
F1-35	54.20	0.0	21.9	4.5	4.6	4.6	No	4.6
F1-36	52.11	0.0	23.7	4.3	4.9	4.9	No	4.9
F1-37	56.49	0.0	21.2	4.7	4.4	4.7	No	4.7
F1-38	50.48	0.0	25.1	4.2	5.2	5.2	No	5.2
F1-39	59.80	0.0	35.3	5.0	7.4	7.4	No	7.4
F1-40	79.31	0.0	20.5	6.6	4.3	6.6	NIW	9.9
Total	**1787.47**	**0.0**	**749.4**	**149.0**	**156.1**	**182.3**		**222.3**

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.2 - Treatment Volume Summary

Corridor F1b

Basin	Area (ac)	Existing Impervious Area (ac)	Proposed Impervious Area (ac)	Treatment Volume - Basin (ac-ft)	Treatment Volume - Impervious Area (ac-ft)	Treatment Volume Required (ac-ft)	Located in a Nutrient Impaired Waterbody (NIW), BMAP, and/or OFW	Required Treatment Volume (w/ Add'l 50%, if applicable) (ac-ft)
F1b-1	59.57	0.0	25.0	5.0	5.2	5.2	BMAP	7.8
F1b-3	60.91	0.0	25.5	5.1	5.3	5.3	BMAP	8.0
F1b-5	34.14	0.0	14.3	2.8	3.0	3.0	OFW, NIW	4.5
F1b-6	29.21	0.0	12.2	2.4	2.6	2.6	OFW, NIW	3.8
F1b-7	30.33	0.0	12.7	2.5	2.6	2.6	OFW, NIW	4.0
F1b-8	30.42	0.0	12.8	2.5	2.7	2.7	NIW	4.0
F1b-9	30.35	0.0	12.7	2.5	2.7	2.7	NIW	4.0
F1b-10	30.24	0.0	12.7	2.5	2.6	2.6	NIW	4.0
F1b-11	30.44	0.0	12.8	2.5	2.7	2.7	No	2.7
F1b-12	30.63	0.0	12.8	2.6	2.7	2.7	No	2.7
F1b-13	30.06	0.0	12.6	2.5	2.6	2.6	No	2.6
F1b-14	30.38	0.0	12.7	2.5	2.7	2.7	No	2.7
F1b-15	30.49	0.0	12.8	2.5	2.7	2.7	No	2.7
F1b-16	40.57	0.0	17.0	3.4	3.5	3.5	No	3.5
F1b-17	27.77	0.0	11.6	2.3	2.4	2.4	No	2.4
F1b-18	31.09	0.0	13.0	2.6	2.7	2.7	No	2.7
F1b-19	47.02	0.0	19.7	3.9	4.1	4.1	No	4.1
F1b-20	30.34	0.0	12.7	2.5	2.6	2.6	No	2.6
F1b-21	35.33	0.0	14.8	2.9	3.1	3.1	No	3.1
F1b-22	56.29	0.0	23.6	4.7	4.9	4.9	No	4.9
F1b-23	28.63	0.0	12.0	2.4	2.5	2.5	No	2.5
F1b-24	34.32	0.0	14.4	2.9	3.0	3.0	No	3.0
F1b-25	30.14	0.0	12.7	2.5	2.6	2.6	No	2.6
F1b-26	45.10	0.0	18.9	3.8	3.9	3.9	No	3.9
F1b-27	58.36	0.0	24.5	4.9	5.1	5.1	NIW	7.7
F1b-28	28.21	0.0	11.8	2.4	2.5	2.5	NIW	3.7
F1b-29	31.68	0.0	13.3	2.6	2.8	2.8	NIW	4.2
F1b-30	30.87	0.0	13.0	2.6	2.7	2.7	NIW	4.1
F1b-31	38.51	0.0	16.2	3.2	3.4	3.4	NIW	5.1
F1b-32	82.55	0.0	34.7	6.9	7.2	7.2	No	7.2
F1b-33	293.18	0.0	123.1	24.4	25.6	25.6	No	25.6
F1b-34	54.29	0.0	22.8	4.5	4.7	4.7	No	4.7
F1b-35	52.22	0.0	21.9	4.4	4.6	4.6	No	4.6
F1b-36	56.49	0.0	23.7	4.7	4.9	4.9	No	4.9
F1b-37	50.48	0.0	21.2	4.2	4.4	4.4	No	4.4
F1b-38	59.81	0.0	25.1	5.0	5.2	5.2	No	5.2
F1b-39	79.31	0.0	20.5	6.6	4.3	6.6	NIW	9.9
Total	**1779.72**	**0.0**	**734.1**	**148.3**	**152.9**	**155.3**		**180.1**

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.2 - Treatment Volume Summary

Corridor F2

Basin	Area (ac)	Existing Impervious Area (ac)	Proposed Impervious Area (ac)	Treatment Volume - Basin (ac-ft)	Treatment Volume - Impervious Area (ac-ft)	Treatment Volume Required (ac-ft)	Located in a Nutrient Impaired Waterbody (NIW), BMAP, and/or OFW	Required Treatment Volume (w/ Add'l 50%, if applicable) (ac-ft)
F2-1	59.57	0.0	25.0	5.0	5.2	5.2	BMAP	7.8
F2-3	60.91	0.0	25.5	5.1	5.3	5.3	BMAP	8.0
F2-5	33.61	0.0	14.3	2.8	3.0	3.0	OFW, NIW	4.5
F2-6	28.69	0.0	12.2	2.4	2.6	2.6	OFW, NIW	3.8
F2-7	29.73	0.0	12.7	2.5	2.6	2.6	OFW, NIW	4.0
F2-8	29.76	0.0	12.8	2.5	2.7	2.7	NIW	4.0
F2-9	29.65	0.0	12.7	2.5	2.7	2.7	NIW	4.0
F2-10	29.51	0.0	12.7	2.5	2.6	2.6	NIW	4.0
F2-11	29.69	0.0	12.8	2.5	2.7	2.7	No	2.7
F2-12	29.86	0.0	12.8	2.5	2.7	2.7	No	2.7
F2-13	29.30	0.0	12.6	2.4	2.6	2.6	No	2.6
F2-14	29.63	0.0	12.7	2.5	2.7	2.7	No	2.7
F2-15	29.75	0.0	12.8	2.5	2.7	2.7	No	2.7
F2-16	40.44	0.0	17.0	3.4	3.5	3.5	No	3.5
F2-17	27.18	0.0	11.6	2.3	2.4	2.4	No	2.4
F2-18	30.47	0.0	13.0	2.5	2.7	2.7	No	2.7
F2-19	46.23	0.0	19.7	3.9	4.1	4.1	No	4.1
F2-20	29.93	0.0	12.7	2.5	2.6	2.6	No	2.6
F2-21	34.98	0.0	14.8	2.9	3.1	3.1	No	3.1
F2-22	55.55	0.0	23.4	4.6	4.9	4.9	No	4.9
F2-23	29.83	0.0	12.5	2.5	2.6	2.6	No	2.6
F2-24	30.08	0.0	12.7	2.5	2.6	2.6	No	2.6
F2-25	30.18	0.0	12.8	2.5	2.7	2.7	No	2.7
F2-26	29.34	0.0	12.4	2.4	2.6	2.6	No	2.6
F2-27	30.13	0.0	12.8	2.5	2.7	2.7	No	2.7
F2-28	30.09	0.0	12.7	2.5	2.7	2.7	No	2.7
F2-29	30.04	0.0	12.7	2.5	2.6	2.6	No	2.6
F2-30	39.31	0.0	16.6	3.3	3.5	3.5	No	3.5
F2-31	49.50	0.0	20.9	4.1	4.3	4.3	No	4.3
F2-32	35.58	0.0	15.0	3.0	3.1	3.1	No	3.1
F2-33	97.48	0.0	41.1	8.1	8.6	8.6	No	8.6
F2-34	145.95	0.0	61.5	12.2	12.8	12.8	No	12.8
F2-35	124.60	0.0	52.5	10.4	10.9	10.9	No	10.9
F2-36	47.53	2.2	5.6	4.0	0.7	4.0	No	4.0
Total	**1464.07**	**2.2**	**605.8**	**122.0**	**125.8**	**129.0**		**142.3**

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.2 - Treatment Volume Summary

Corridor F3

Basin	Area (ac)	Existing Impervious Area (ac)	Proposed Impervious Area (ac)	Treatment Volume - Basin (ac-ft)	Treatment Volume - Impervious Area (ac-ft)	Treatment Volume Required (ac-ft)	Located in a Nutrient Impaired Waterbody (NIW), BMAP, and/or OFW	Required Treatment Volume (w/ Add'l 50%, if applicable) (ac-ft)
F3-1	59.57	0.0	25.0	5.0	5.2	5.2	BMAP	7.8
F3-3	60.91	0.0	25.5	5.1	5.3	5.3	BMAP	8.0
F3-5	33.61	0.0	14.3	2.8	3.0	3.0	OFW, NIW	4.5
F3-6	28.69	0.0	12.2	2.4	2.6	2.6	OFW, NIW	3.8
F3-7	29.73	0.0	12.7	2.5	2.6	2.6	OFW, NIW	4.0
F3-8	29.77	0.0	12.8	2.5	2.7	2.7	NIW	4.0
F3-9	29.65	0.0	12.7	2.5	2.7	2.7	NIW	4.0
F3-10	29.51	0.0	12.7	2.5	2.6	2.6	NIW	4.0
F3-11	29.69	0.0	12.8	2.5	2.7	2.7	No	2.7
F3-12	29.86	0.0	12.8	2.5	2.7	2.7	No	2.7
F3-13	29.31	0.0	12.6	2.4	2.6	2.6	No	2.6
F3-14	29.63	0.0	12.7	2.5	2.7	2.7	No	2.7
F3-15	29.76	0.0	12.8	2.5	2.7	2.7	No	2.7
F3-16	40.44	0.0	17.0	3.4	3.5	3.5	No	3.5
F3-17	27.19	0.0	11.6	2.3	2.4	2.4	No	2.4
F3-18	30.48	0.0	13.0	2.5	2.7	2.7	No	2.7
F3-19	46.24	0.0	19.7	3.9	4.1	4.1	No	4.1
F3-20	29.93	0.0	12.7	2.5	2.6	2.6	No	2.6
F3-21	34.99	0.0	14.8	2.9	3.1	3.1	No	3.1
F3-22	56.06	0.0	23.6	4.7	4.9	4.9	No	4.9
F3-23	29.67	0.0	12.5	2.5	2.6	2.6	No	2.6
F3-24	34.95	0.0	14.7	2.9	3.1	3.1	No	3.1
F3-25	30.50	0.0	12.8	2.5	2.7	2.7	No	2.7
F3-26	43.46	0.0	18.2	3.6	3.8	3.8	No	3.8
F3-27	60.37	0.0	25.3	5.0	5.3	5.3	NIW	7.9
F3-28	29.11	0.0	12.2	2.4	2.5	2.5	NIW	3.8
F3-29	24.92	0.0	10.5	2.1	2.2	2.2	No	2.2
F3-30	29.08	0.0	12.2	2.4	2.5	2.5	No	2.5
F3-31	44.24	0.0	18.6	3.7	3.9	3.9	No	3.9
F3-32	46.99	0.0	19.7	3.9	4.1	4.1	No	4.1
F3-33	29.68	0.0	12.5	2.5	2.6	2.6	No	2.6
F3-34	31.83	0.0	13.4	2.7	2.8	2.8	No	2.8
F3-35	40.24	0.0	16.9	3.4	3.5	3.5	No	3.5
F3-36	23.60	0.0	9.9	2.0	2.1	2.1	No	2.1
F3-37	33.26	0.0	14.0	2.8	2.9	2.9	No	2.9
F3-38	37.28	0.0	15.7	3.1	3.3	3.3	No	3.3
F3-39	31.16	0.0	13.1	2.6	2.7	2.7	No	2.7
F3-40	34.91	0.0	14.7	2.9	3.1	3.1	No	3.1
F3-41	38.22	0.0	16.1	3.2	3.4	3.4	No	3.4
F3-42	208.90	0.0	88.0	17.4	18.3	18.3	No	18.3
F3-43	238.32	0.0	100.5	19.9	20.9	20.9	NIW	31.4
F3-44	125.34	0.0	52.8	10.4	11.0	11.0	NIW	16.5
F3-45	95.19	2.6	17.3	7.9	3.1	7.9	NIW	11.9
Total	**2056.23**	**2.6**	**845.7**	**171.4**	**175.6**	**180.5**		**217.7**

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.2 - Treatment Volume Summary

Corridor F4

Basin	Area (ac)	Existing Impervious Area (ac)	Proposed Impervious Area (ac)	Treatment Volume - Basin (ac-ft)	Treatment Volume - Impervious Area (ac-ft)	Treatment Volume Required (ac-ft)	Located in a Nutrient Impaired Waterbody (NIW), BMAP, and/or OFW	Required Treatment Volume (w/ Add'l 50%, if applicable) (ac-ft)
F4-1	59.57	0.0	25.0	5.0	5.2	5.2	BMAP	7.8
F4-3	60.91	0.0	25.5	5.1	5.3	5.3	BMAP	8.0
F4-5	33.61	0.0	14.3	2.8	3.0	3.0	OFW, NIW	4.5
F4-6	28.69	0.0	12.2	2.4	2.6	2.6	OFW, NIW	3.8
F4-7	29.73	0.0	12.7	2.5	2.6	2.6	OFW, NIW	4.0
F4-8	29.77	0.0	12.8	2.5	2.7	2.7	NIW	4.0
F4-9	29.65	0.0	12.7	2.5	2.7	2.7	NIW	4.0
F4-10	29.51	0.0	12.7	2.5	2.6	2.6	NIW	4.0
F4-11	29.69	0.0	12.8	2.5	2.7	2.7	No	2.7
F4-12	29.86	0.0	12.8	2.5	2.7	2.7	No	2.7
F4-13	29.31	0.0	12.6	2.4	2.6	2.6	No	2.6
F4-14	29.63	0.0	12.7	2.5	2.7	2.7	No	2.7
F4-15	29.76	0.0	12.8	2.5	2.7	2.7	No	2.7
F4-16	40.44	0.0	17.0	3.4	3.5	3.5	No	3.5
F4-17	27.19	0.0	11.6	2.3	2.4	2.4	No	2.4
F4-18	30.48	0.0	13.0	2.5	2.7	2.7	No	2.7
F4-19	46.24	0.0	19.7	3.9	4.1	4.1	No	4.1
F4-20	29.93	0.0	12.7	2.5	2.6	2.6	No	2.6
F4-21	34.99	0.0	14.8	2.9	3.1	3.1	No	3.1
F4-22	56.09	0.0	23.6	4.7	4.9	4.9	No	4.9
F4-23	29.67	0.0	12.5	2.5	2.6	2.6	No	2.6
F4-24	34.93	0.0	14.7	2.9	3.1	3.1	No	3.1
F4-25	30.50	0.0	12.8	2.5	2.7	2.7	No	2.7
F4-26	43.44	0.0	18.2	3.6	3.8	3.8	No	3.8
F4-27	60.39	0.0	25.3	5.0	5.3	5.3	NIW	7.9
F4-28	29.10	0.0	12.2	2.4	2.5	2.5	NIW	3.8
F4-29	24.91	0.0	10.5	2.1	2.2	2.2	No	2.2
F4-30	29.08	0.0	12.2	2.4	2.5	2.5	No	2.5
F4-31	44.26	0.0	18.6	3.7	3.9	3.9	No	3.9
F4-32	47.00	0.0	19.7	3.9	4.1	4.1	No	4.1
F4-33	29.68	0.0	12.5	2.5	2.6	2.6	No	2.6
F4-34	31.83	0.0	13.4	2.7	2.8	2.8	No	2.8
F4-35	40.24	0.0	16.9	3.4	3.5	3.5	No	3.5
F4-36	23.60	0.0	9.9	2.0	2.1	2.1	No	2.1
F4-37	33.26	0.0	14.0	2.8	2.9	2.9	No	2.9
F4-38	37.28	0.0	15.7	3.1	3.3	3.3	No	3.3
F4-39	31.16	0.0	13.1	2.6	2.7	2.7	No	2.7
F4-40	34.91	0.0	14.7	2.9	3.1	3.1	No	3.1
F4-41	38.22	0.0	16.1	3.2	3.4	3.4	No	3.4
F4-42	213.18	0.0	89.7	17.8	18.7	18.7	No	18.7
F4-43	149.34	0.0	62.8	12.4	13.1	13.1	No	13.1
F4-44	103.77	0.0	43.6	8.6	9.1	9.1	NIW	13.6
F4-45	146.99	0.2	56.9	12.2	11.8	12.2	NIW	18.4
F4-46	120.74	3.2	16.6	10.1	2.8	10.1	NIW	15.1
Total	**2122.54**	**3.4**	**856.7**	**176.9**	**177.8**	**185.5**		**218.4**

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.2 - Treatment Volume Summary

Corridor EAG

Basin	Area (ac)	Existing Impervious Area (ac)	Proposed Impervious Area (ac)	Treatment Volume - Basin (ac-ft)	Treatment Volume - Impervious Area (ac-ft)	Treatment Volume Required (ac-ft)	Located in a Nutrient Impaired Waterbody (NIW), BMAP, and/or OFW	Required Treatment Volume (w/ Add'l 50%, if applicable) (ac-ft)
EAG-1	59.57	0.0	25.0	5.0	5.2	5.2	BMAP	7.8
EAG-3	60.91	0.0	25.5	5.1	5.3	5.3	BMAP	8.0
EAG-5	33.77	0.0	14.3	2.8	3.0	3.0	OFW, NIW	4.5
EAG-6	28.87	0.0	12.3	2.4	2.6	2.6	OFW, NIW	3.8
EAG-7	29.95	0.0	12.7	2.5	2.7	2.7	OFW, NIW	4.0
EAG-8	30.03	0.0	12.8	2.5	2.7	2.7	NIW	4.0
EAG-9	29.95	0.0	12.7	2.5	2.7	2.7	NIW	4.0
EAG-10	29.85	0.0	12.7	2.5	2.6	2.6	NIW	4.0
EAG-11	30.07	0.0	12.8	2.5	2.7	2.7	No	2.7
EAG-12	30.28	0.0	12.8	2.5	2.7	2.7	No	2.7
EAG-13	29.77	0.0	12.6	2.5	2.6	2.6	No	2.6
EAG-14	30.13	0.0	12.7	2.5	2.7	2.7	No	2.7
EAG-15	30.30	0.0	12.8	2.5	2.7	2.7	No	2.7
EAG-16	120.10	0.0	16.4	10.0	3.4	10.0	No	10.0
EAG-17	31.51	0.0	13.1	2.6	2.7	2.7	No	2.7
EAG-18	32.76	0.0	13.8	2.7	2.9	2.9	No	2.9
EAG-19	31.89	0.0	13.4	2.7	2.8	2.8	No	2.8
EAG-20	33.71	0.0	14.2	2.8	3.0	3.0	No	3.0
EAG-21	35.76	0.0	15.0	3.0	3.1	3.1	No	3.1
EAG-22	32.36	0.0	13.6	2.7	2.8	2.8	No	2.8
EAG-23	34.86	0.0	14.6	2.9	3.0	3.0	No	3.0
EAG-24	33.71	0.0	14.2	2.8	3.0	3.0	No	3.0
EAG-25	32.63	0.0	13.7	2.7	2.9	2.9	No	2.9
EAG-26	31.24	0.0	13.1	2.6	2.7	2.7	No	2.7
EAG-27	34.77	0.0	14.6	2.9	3.0	3.0	No	3.0
EAG-28	32.11	0.0	13.5	2.7	2.8	2.8	No	2.8
EAG-29	32.52	0.0	13.7	2.7	2.8	2.8	No	2.8
EAG-30	33.91	0.0	14.2	2.8	3.0	3.0	No	3.0
EAG-31	31.93	0.0	13.4	2.7	2.8	2.8	No	2.8
EAG-32	31.75	0.0	13.3	2.6	2.8	2.8	No	2.8
EAG-33	51.98	0.0	21.9	4.3	4.6	4.6	No	4.6
EAG-34	232.67	1.5	36.8	19.4	7.3	19.4	No	19.4
EAG-35	34.92	0.9	14.0	2.9	2.7	2.9	No	2.9
EAG-36	45.23	0.0	18.3	3.8	3.8	3.8	No	3.8
EAG-37	35.27	0.0	14.5	2.9	3.0	3.0	No	3.0
EAG-38	36.27	0.0	15.1	3.0	3.1	3.1	No	3.1
EAG-39	30.30	0.0	12.7	2.5	2.6	2.6	No	2.6
EAG-40	35.58	0.7	15.0	3.0	3.0	3.0	No	3.0
EAG-41	31.80	0.7	13.4	2.6	2.6	2.6	No	2.6
EAG-42	30.66	0.5	12.9	2.6	2.6	2.6	No	2.6
EAG-43	30.83	0.1	13.0	2.6	2.7	2.7	No	2.7
EAG-44	30.41	0.7	12.8	2.5	2.5	2.5	No	2.5
EAG-45	30.08	0.7	12.7	2.5	2.5	2.5	No	2.5
EAG-46	29.75	0.4	12.5	2.5	2.5	2.5	No	2.5
EAG-47	30.48	1.6	12.9	2.5	2.4	2.5	No	2.5
EAG-48	31.13	0.1	13.1	2.6	2.7	2.7	No	2.7
EAG-49	30.48	0.0	12.9	2.5	2.7	2.7	No	2.7
EAG-50	31.28	0.0	13.2	2.6	2.8	2.8	No	2.8
EAG-51	230.72	4.2	97.4	19.2	19.4	19.4	No	19.4
EAG-52	96.75	1.2	40.7	8.1	8.2	8.2	NIW	12.4
EAG-53	146.93	0.2	56.9	12.2	11.8	12.2	NIW	18.4
EAG-54	120.74	3.2	16.6	10.1	2.8	10.1	NIW	15.1
Total	**2505.19**	**16.7**	**919.0**	**208.8**	**188.0**	**214.7**		**243.3**

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.3 - Floodplain Impacts

Corridor D1

Corridor Alternative	SMF Pond/FPC Basin Name	WMD	Floodplain Impact IDs	Floodplain Impacts Total (ac-ft)	Methodology
D1	D1-1	SFWMD	1A	41.06	Cut-Fill
D1	D1-3	SFWMD	1C, 1D	6.57	Cut-Fill
D1	D1-4	SFWMD	2	0.21	Cut-Fill
D1	D1-5	SFWMD	3	1.28	Cut-Fill
D1	FPC-D1-4A	SJRWMD	4A	16.87	Cut-Fill
D1	FPC-D1-7	SJRWMD	7	10.52	Cut-Fill
			Total Volume Impact	**77 ac-ft**	

Corridor D2

Corridor Alternative	SMF Pond/FPC Basin Name	WMD	Floodplain Impact IDs	Floodplain Impacts Total (ac-ft)	Methodology
D2	D2-1	SFWMD	1A	41.06	Cut-Fill
D2	D2-3	SFWMD	1C, 1D	6.57	Cut-Fill
D2	D2-4	SFWMD	2	0.21	Cut-Fill
D2	D2-5	SFWMD	3	1.28	Cut-Fill
D2	FPC-D2-4A	SJRWMD	4A	16.87	Cut-Fill
D2	FPC-D2-7	SJRWMD	7	10.52	Cut-Fill
D2	FPC-D2-13	SJRWMD	13	146.5	Transitional
			Total Volume Impact	**223 ac-ft**	

Corridor F1

Corridor Alternative	SMF Pond/FPC Basin Name	WMD	Floodplain Impact IDs	Floodplain Impacts Total (ac-ft)	Methodology
F1	F1-1	SFWMD	15A	0.04	Cut-Fill
F1	F1-3	SFWMD	15B	4.46	Cut-Fill
F1	FPC-F1-40	SJRWMD	40, 44	342.5	Transitional
			Total Volume Impact	**347 ac-ft**	

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.3 - Floodplain Impacts

Corridor F1b

Corridor Alternative	SMF Pond/FPC Basin Name	WMD	Floodplain Impact IDs	Floodplain Impacts Total (ac-ft)	Methodology
F1b	F1b-1	SFWMD	15A	0.04	Cut-Fill
F1b	F1b-3	SFWMD	15B	4.46	Cut-Fill
F1b	FPC-F1b-39	SJRWMD	39, 47	340.4	Transitional
			Total Volume Impact	**345 ac-ft**	

Corridor F2

Corridor Alternative	SMF Pond/FPC Basin Name	WMD	Floodplain Impact IDs	Floodplain Impacts Total (ac-ft)	Methodology
F2	F2-1	SFWMD	15A	0.04	Cut-Fill
F2	F2-3	SFWMD	15B	4.46	Cut-Fill
F2	FPC-F2-22	SJRWMD	22	26.7	Transitional
			Total Volume Impact	**31 ac-ft**	

Corridor F3

Corridor Alternative	SMF Pond/FPC Basin Name	WMD	Floodplain Impact IDs	Floodplain Impacts Total (ac-ft)	Methodology
F3	F3-1	SFWMD	15A	0.04	Cut-Fill
F3	F3-3	SFWMD	15B	4.46	Cut-Fill
F3	FPC-F3-30B	SJRWMD	30B	60.74	Cut-Fill
F3	FPC-F3-32	SJRWMD	32, 36, 37	306.0	Transitional
			Total Volume Impact	**371 ac-ft**	

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.3 - Floodplain Impacts

Corridor F4

Corridor Alternative	SMF Pond/FPC Basin Name	WMD	Floodplain Impact IDs	Floodplain Impacts Total (ac-ft)	Methodology
F4	F4-1	SFWMD	15A	0.04	Cut-Fill
F4	F4-3	SFWMD	15B	4.46	Cut-Fill
F4	FPC-F4-30B	SJRWMD	30B	60.74	Cut-Fill
F4	FPC-F4-33	SJRWMD	33, 34, 35	369.4	Transitional
			Total Volume Impact	**435 ac-ft**	

Corridor EAG

Corridor Alternative	SMF Pond/FPC Basin Name	WMD	Floodplain Impact IDs	Floodplain Impacts Total (ac-ft)	Methodology
EAG	EAG-1	SFWMD	15A	0.04	Cut-Fill
EAG	EAG-3	SFWMD	15B	4.46	Cut-Fill
EAG	FPC-EAG-29	SJRWMD	29, 35	321.7	Transitional
			Total Volume Impact	**326 ac-ft**	

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.4 - Pond Sizing Parameters

Corridor D1

Basin	Attenuation Volume	Treatment Volume	Floodplain Compensation	Total Required Pond Volume
	ac-ft	ac-ft	ac-ft	ac-ft
D1-1	4.5	9.3	41.1	54.9
D1-2	3.2	5.2	--	8.4
D1-3	0.0	6.1	6.6	12.7
D1-4	2.3	4.6	0.2	7.1
D1-5	1.0	5.4	1.3	7.7
D1-6	1.7	4.7	--	6.4
D1-7	1.4	7.7	--	9.1
D1-8	2.9	6.4	--	9.3
D1-9	0.0	2.9	--	2.9
D1-10	0.9	2.8	--	3.7
D1-11	1.2	2.4	--	3.6
D1-12	2.2	3.5	--	5.7
D1-13	1.7	2.6	--	4.3
D1-14	2.3	2.7	--	5.0
D1-15	1.7	2.5	--	4.2
D1-16	2.3	2.6	--	4.9
D1-17	1.9	2.6	--	4.5
D1-18	1.8	2.7	--	4.5
D1-19	1.7	2.6	--	4.3
D1-20	2.3	4.1	--	6.4
D1-21	1.1	3.9	--	5.0
D1-22	2.1	4.0	--	6.1
D1-23	1.7	3.9	--	5.6
D1-24	2.4	2.7	--	5.1
D1-25	1.9	2.0	--	3.9
D1-26	2.3	5.0	--	7.3
D1-27	6.2	9.5	--	15.7
D1-28	4.2	5.2	--	9.4
D1-29	0.4	6.7	--	7.1
FPC-D1-4A	--	--	16.9	16.9
FPC-D1-7	--	--	10.5	10.5

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.4 - Pond Sizing Parameters

Corridor D2

Basin	Attenuation Volume	Treatment Volume	Floodplain Compensation	Total Required Pond Volume
	ac-ft	ac-ft	ac-ft	ac-ft
D2-1	4.5	9.3	41.1	54.9
D2-2	3.2	5.2	--	8.4
D2-3	0.0	6.1	6.6	12.7
D2-4	2.3	4.6	0.2	7.1
D2-5	1.0	5.4	1.3	7.7
D2-6	1.7	4.7	--	6.4
D2-7	1.5	7.7	--	9.2
D2-8	2.9	6.4	--	9.3
D2-9	0.0	2.9	--	2.9
D2-10	0.9	2.8	--	3.7
D2-11	1.2	2.4	--	3.6
D2-12	2.2	3.5	--	5.7
D2-13	1.7	2.6	--	4.3
D2-14	2.3	2.7	--	5.0
D2-15	1.7	2.5	--	4.2
D2-16	2.3	2.6	--	4.9
D2-17	1.9	2.6	--	4.5
D2-18	1.8	2.7	--	4.5
D2-19	1.7	2.6	--	4.3
D2-20	2.3	4.1	--	6.4
D2-21	1.1	3.9	--	5.0
D2-22	2.1	4.0	--	6.1
D2-23	1.7	3.9	--	5.6
D2-24	2.4	2.7	--	5.1
D2-25	1.9	2.2	--	4.1
D2-26	2.2	7.6	--	9.8
D2-27	3.9	10.8	--	14.7
D2-28	5.0	5.5	--	10.5
D2-29	8.0	8.8	--	16.8
D2-30	2.7	19.2	--	21.9
D2-31	0.4	26.2	--	26.6
D2-32	4.3	17.8	--	22.1
FPC-D2-4A	--	--	16.9	16.9
FPC-D2-7	--	--	10.5	10.5
FPC-D2-13	--	--	146.5	146.5

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.4 - Pond Sizing Parameters

Corridor F1

Basin	Attenuation Volume	Treatment Volume	Floodplain Compensation	Total Required Pond Volume
	ac-ft	ac-ft	ac-ft	ac-ft
F1-1	3.7	7.8	0.0	11.5
F1-3	3.1	8.0	4.5	15.6
F1-5	2.4	4.5	--	6.9
F1-6	1.8	3.8	--	5.6
F1-7	0.9	4.0	--	4.9
F1-8	2.2	4.0	--	6.2
F1-9	2.0	4.0	--	6.0
F1-10	2.3	4.0	--	6.3
F1-11	1.4	2.7	--	4.1
F1-12	1.0	2.7	--	3.7
F1-13	2.2	2.6	--	4.8
F1-14	2.5	2.7	--	5.2
F1-15	2.4	2.7	--	5.1
F1-16	2.8	3.5	--	6.3
F1-17	2.0	2.4	--	4.4
F1-18	2.2	2.7	--	4.9
F1-19	3.6	4.1	--	7.7
F1-20	2.4	2.7	--	5.1
F1-21	2.2	3.1	--	5.3
F1-22	4.8	4.7	--	9.5
F1-23	2.1	2.6	--	4.7
F1-24	1.0	2.7	--	3.7
F1-25	0.0	2.7	--	2.7
F1-26	2.3	2.5	--	4.8
F1-27	1.7	2.8	--	4.5
F1-28	2.6	4.0	--	6.6
F1-29	2.0	3.5	--	5.5
F1-30	2.3	3.9	--	6.2
F1-31	2.4	5.3	--	7.7
F1-32	0.4	12.7	--	13.1
F1-33	7.5	40.6	--	48.1
F1-34	18.8	25.8	--	44.6
F1-35	5.6	4.6	--	10.2
F1-36	5.5	4.9	--	10.4
F1-37	5.4	4.7	--	10.1
F1-38	4.0	5.2	--	9.2
F1-39	3.4	7.4	--	10.8
F1-40	4.3	9.9	--	14.2
FPC-F1-40	--	--	342.5	342.5

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.4 - Pond Sizing Parameters

Corridor F1b

Basin	Attenuation Volume	Treatment Volume	Floodplain Compensation	Total Required Pond Volume
	ac-ft	ac-ft	ac-ft	ac-ft
F1b-1	3.7	7.8	0.0	11.5
F1b-3	3.1	8.0	4.5	15.6
F1b-5	2.4	4.5	--	6.9
F1b-6	1.9	3.8	--	5.7
F1b-7	0.9	4.0	--	4.9
F1b-8	2.2	4.0	--	6.2
F1b-9	2.0	4.0	--	6.0
F1b-10	2.4	4.0	--	6.4
F1b-11	1.4	2.7	--	4.1
F1b-12	1.0	2.7	--	3.7
F1b-13	2.2	2.6	--	4.8
F1b-14	2.5	2.7	--	5.2
F1b-15	2.5	2.7	--	5.2
F1b-16	2.8	3.5	--	6.3
F1b-17	2.0	2.4	--	4.4
F1b-18	2.2	2.7	--	4.9
F1b-19	3.6	4.1	--	7.7
F1b-20	2.4	2.6	--	5.0
F1b-21	2.2	3.1	--	5.3
F1b-22	4.1	4.9	--	9.0
F1b-23	2.2	2.5	--	4.7
F1b-24	1.3	3.0	--	4.3
F1b-25	1.6	2.6	--	4.2
F1b-26	1.0	3.9	--	4.9
F1b-27	4.6	7.7	--	12.3
F1b-28	2.2	3.7	--	5.9
F1b-29	2.9	4.2	--	7.1
F1b-30	2.7	4.1	--	6.8
F1b-31	3.3	5.1	--	8.4
F1b-32	0.0	7.2	--	7.2
F1b-33	21.8	25.6	--	47.4
F1b-34	3.3	4.7	--	8.0
F1b-35	5.4	4.6	--	10.0
F1b-36	5.9	4.9	--	10.8
F1b-37	4.8	4.4	--	9.2
F1b-38	4.7	5.2	--	9.9
F1b-39	4.3	9.9	--	14.2
FPC-F1b-39	--	--	340.4	340.4

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.4 - Pond Sizing Parameters

Corridor F2

Basin	Attenuation Volume	Treatment Volume	Floodplain Compensation	Total Required Pond Volume
	ac-ft	ac-ft	ac-ft	ac-ft
F2-1	3.7	7.8	0.0	11.5
F2-3	3.1	8.0	4.5	15.6
F2-5	2.4	4.5	--	6.9
F2-6	1.9	3.8	--	5.7
F2-7	0.9	4.0	--	4.9
F2-8	2.2	4.0	--	6.2
F2-9	2.0	4.0	--	6.0
F2-10	2.3	4.0	--	6.3
F2-11	1.4	2.7	--	4.1
F2-12	1.0	2.7	--	3.7
F2-13	2.2	2.6	--	4.8
F2-14	2.4	2.7	--	5.1
F2-15	2.4	2.7	--	5.1
F2-16	2.8	3.5	--	6.3
F2-17	2.0	2.4	--	4.4
F2-18	2.2	2.7	--	4.9
F2-19	3.6	4.1	--	7.7
F2-20	2.4	2.6	--	5.0
F2-21	2.2	3.1	--	5.3
F2-22	4.0	4.9	--	8.9
F2-23	2.4	2.6	--	5.0
F2-24	2.1	2.6	--	4.7
F2-25	1.8	2.7	--	4.5
F2-26	0.0	2.6	--	2.6
F2-27	2.3	2.7	--	5.0
F2-28	2.8	2.7	--	5.5
F2-29	2.6	2.6	--	5.2
F2-30	3.1	3.5	--	6.6
F2-31	4.1	4.3	--	8.4
F2-32	2.4	3.1	--	5.5
F2-33	7.0	8.6	--	15.6
F2-34	0.9	12.8	--	13.7
F2-35	0.0	10.9	--	10.9
F2-36	0.0	4.0	--	4.0
FPC-F2-22	--	--	26.7	26.7

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.4 - Pond Sizing Parameters

Corridor F3

Basin	Attenuation Volume	Treatment Volume	Floodplain Compensation	Total Required Pond Volume
	ac-ft	ac-ft	ac-ft	ac-ft
F3-1	3.7	7.8	0.0	11.5
F3-3	3.1	8.0	4.5	15.6
F3-5	2.4	4.5	--	6.9
F3-6	1.8	3.8	--	5.6
F3-7	0.9	4.0	--	4.9
F3-8	2.2	4.0	--	6.2
F3-9	2.0	4.0	--	6.0
F3-10	2.3	4.0	--	6.3
F3-11	1.4	2.7	--	4.1
F3-12	1.0	2.7	--	3.7
F3-13	2.2	2.6	--	4.8
F3-14	2.4	2.7	--	5.1
F3-15	2.4	2.7	--	5.1
F3-16	2.8	3.5	--	6.3
F3-17	2.0	2.4	--	4.4
F3-18	2.2	2.7	--	4.9
F3-19	3.6	4.1	--	7.7
F3-20	2.4	2.6	--	5.0
F3-21	2.2	3.1	--	5.3
F3-22	4.3	4.9	--	9.2
F3-23	2.4	2.6	--	5.0
F3-24	1.5	3.1	--	4.6
F3-25	1.7	2.7	--	4.4
F3-26	0.8	3.8	--	4.6
F3-27	4.8	7.9	--	12.7
F3-28	2.2	3.8	--	6.0
F3-29	1.9	2.2	--	4.1
F3-30	2.4	2.5	--	4.9
F3-31	3.9	3.9	--	7.8
F3-32	3.0	4.1	--	7.1
F3-33	2.1	2.6	--	4.7
F3-34	2.3	2.8	--	5.1
F3-35	3.1	3.5	--	6.6
F3-36	1.8	2.1	--	3.9
F3-37	2.6	2.9	--	5.5
F3-38	2.9	3.3	--	6.2
F3-39	2.3	2.7	--	5.0
F3-40	2.2	3.1	--	5.3
F3-41	2.9	3.4	--	6.3
F3-42	11.5	18.3	--	29.8
F3-43	16.3	31.4	--	47.7
F3-44	7.7	16.5	--	24.2
F3-45	0.4	11.9	--	12.3
FPC-F3-30B	--	--	60.7	60.7
FPC-F3-32	--	--	306.0	306.0

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.4 - Pond Sizing Parameters

Corridor F4

Basin	Attenuation Volume	Treatment Volume	Floodplain Compensation	Total Required Pond Volume
	ac-ft	ac-ft	ac-ft	ac-ft
F4-1	3.7	7.8	0.0	11.5
F4-3	3.1	8.0	4.5	15.6
F4-5	2.4	4.5	--	6.9
F4-6	1.8	3.8	--	5.6
F4-7	0.9	4.0	--	4.9
F4-8	2.2	4.0	--	6.2
F4-9	2.0	4.0	--	6.0
F4-10	2.3	4.0	--	6.3
F4-11	1.4	2.7	--	4.1
F4-12	1.0	2.7	--	3.7
F4-13	2.2	2.6	--	4.8
F4-14	2.4	2.7	--	5.1
F4-15	2.4	2.7	--	5.1
F4-16	2.8	3.5	--	6.3
F4-17	2.0	2.4	--	4.4
F4-18	2.2	2.7	--	4.9
F4-19	3.6	4.1	--	7.7
F4-20	2.4	2.6	--	5.0
F4-21	2.2	3.1	--	5.3
F4-22	4.3	4.9	--	9.2
F4-23	2.4	2.6	--	5.0
F4-24	1.5	3.1	--	4.6
F4-25	1.7	2.7	--	4.4
F4-26	0.9	3.8	--	4.7
F4-27	4.8	7.9	--	12.7
F4-28	2.2	3.8	--	6.0
F4-29	1.9	2.2	--	4.1
F4-30	2.4	2.5	--	4.9
F4-31	3.9	3.9	--	7.8
F4-32	3.0	4.1	--	7.1
F4-33	2.1	2.6	--	4.7
F4-34	2.3	2.8	--	5.1
F4-35	3.1	3.5	--	6.6
F4-36	1.8	2.1	--	3.9
F4-37	2.6	2.9	--	5.5
F4-38	2.9	3.3	--	6.2
F4-39	2.3	2.7	--	5.0
F4-40	2.2	3.1	--	5.3
F4-41	2.9	3.4	--	6.3
F4-42	12.2	18.7	--	30.9
F4-43	9.2	13.1	--	22.3
F4-44	0.1	13.6	--	13.7
F4-45	9.8	18.4	--	28.2
F4-46	2.5	15.1	--	17.6
FPC-F4-30B	--	--	60.7	60.7
FPC-F4-33	--	--	369.4	369.4

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.4 - Pond Sizing Parameters

Corridor EAG

Basin	Attenuation Volume	Treatment Volume	Floodplain Compensation	Total Required Pond Volume
	ac-ft	ac-ft	ac-ft	ac-ft
EAG-1	3.7	7.8	0.0	11.5
EAG-3	3.1	8.0	4.5	15.6
EAG-5	2.4	4.5	--	6.9
EAG-6	1.8	3.8	--	5.6
EAG-7	0.9	4.0	--	4.9
EAG-8	2.2	4.0	--	6.2
EAG-9	2.0	4.0	--	6.0
EAG-10	2.3	4.0	--	6.3
EAG-11	1.4	2.7	--	4.1
EAG-12	1.0	2.7	--	3.7
EAG-13	2.2	2.6	--	4.8
EAG-14	2.5	2.7	--	5.2
EAG-15	2.4	2.7	--	5.1
EAG-16	3.9	10.0	--	13.9
EAG-17	1.3	2.7	--	4.0
EAG-18	2.0	2.9	--	4.9
EAG-19	2.5	2.8	--	5.3
EAG-20	2.6	3.0	--	5.6
EAG-21	2.8	3.1	--	5.9
EAG-22	2.5	2.8	--	5.3
EAG-23	1.7	3.0	--	4.7
EAG-24	2.6	3.0	--	5.6
EAG-25	2.5	2.9	--	5.4
EAG-26	2.4	2.7	--	5.1
EAG-27	2.4	3.0	--	5.4
EAG-28	2.5	2.8	--	5.3
EAG-29	2.0	2.8	--	4.8
EAG-30	2.6	3.0	--	5.6
EAG-31	2.4	2.8	--	5.2
EAG-32	2.4	2.8	--	5.2
EAG-33	4.0	4.6	--	8.6
EAG-34	6.6	19.4	--	26.0
EAG-35	2.3	2.9	--	5.2
EAG-36	3.6	3.8	--	7.4
EAG-37	2.7	3.0	--	5.7
EAG-38	2.9	3.1	--	6.0
EAG-39	1.5	2.6	--	4.1
EAG-40	2.2	3.0	--	5.2
EAG-41	2.4	2.6	--	5.0
EAG-42	1.7	2.6	--	4.3
EAG-43	2.1	2.7	--	4.8
EAG-44	1.6	2.5	--	4.1
EAG-45	2.9	2.5	--	5.4
EAG-46	3.5	2.5	--	6.0
EAG-47	1.0	2.5	--	3.5
EAG-48	2.2	2.7	--	4.9
EAG-49	2.2	2.7	--	4.9
EAG-50	2.4	2.8	--	5.2
EAG-51	17.2	19.4	--	36.6
EAG-52	0.0	12.4	--	12.4
EAG-53	9.8	18.4	--	28.2
EAG-54	2.5	15.1	--	17.6
FPC-EAG-29	--	--	321.7	321.7

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.5 - Pond Sizing Calculations

Corridor D1

Basin	Required Volume	Additional Percent for Landscaping /	Design Depth	L & W at Design Depth	Required Pond Area*
	ac-ft	pct	ft	ft	ac
D1-1	54.9	20%	3	905	25.1
D1-2	8.4	20%	3	361	4.7
D1-3	12.7	20%	3	441	6.6
D1-4	7.1	20%	3	333	4.1
D1-5	7.7	20%	3	346	4.3
D1-6	6.4	20%	3	317	3.7
D1-7	9.1	20%	3	375	5.0
D1-8	9.3	20%	3	379	5.1
D1-9	2.9	20%	3	217	2.0
D1-10	3.7	20%	3	244	2.4
D1-11	3.6	20%	3	241	2.3
D1-12	5.7	20%	3	300	3.4
D1-13	4.3	20%	3	262	2.7
D1-14	5.0	20%	3	281	3.0
D1-15	4.2	20%	3	259	2.6
D1-16	4.9	20%	3	279	3.0
D1-17	4.5	20%	3	268	2.8
D1-18	4.5	20%	3	268	2.8
D1-19	4.3	20%	3	262	2.7
D1-20	6.4	20%	3	317	3.7
D1-21	5.0	20%	3	281	3.0
D1-22	6.1	20%	3	310	3.6
D1-23	5.6	20%	3	297	3.3
D1-24	5.1	20%	3	284	3.1
D1-25	3.9	20%	3	250	2.5
D1-26	7.3	20%	3	338	4.1
D1-27	15.7	20%	3	489	8.0
D1-28	9.4	20%	3	381	5.1
D1-29	7.1	20%	3	333	4.1
FPC-D1-4A	16.9	20%	2	615	12.1
FPC-D1-7	10.5	20%	2	486	7.9
Total	**198.9**				**148.8**

*Top of pond: Assumes 1 ft of freeboard, square shape, 4:1 slopes, 20-ft berm, 20% for landscaping and tie-in slopes

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.5 - Pond Sizing Calculations

Corridor D2

Basin	Required Volume	Additional Percent for Landscaping /	Design Depth	L & W at Design Depth	Required Pond Area*	
	ac-ft	pct	ft	ft	ac	
D2-1	54.9	20%	3	905	25.1	
D2-2	8.4	20%	3	361	4.7	
D2-3	12.7	20%	3	441	6.6	
D2-4	7.1	20%	3	333	4.1	
D2-5	7.7	20%	3	346	4.3	
D2-6	6.4	20%	3	317	3.7	
D2-7	9.2	20%	3	377	5.0	
D2-8	9.3	20%	3	379	5.1	
D2-9	2.9	20%	3	217	2.0	
D2-10	3.7	20%	3	244	2.4	
D2-11	3.6	20%	3	241	2.3	
D2-12	5.7	20%	3	300	3.4	
D2-13	4.3	20%	3	262	2.7	
D2-14	5.0	20%	3	281	3.0	
D2-15	4.2	20%	3	259	2.6	
D2-16	4.9	20%	3	279	3.0	
D2-17	4.5	20%	3	268	2.8	
D2-18	4.5	20%	3	268	2.8	
D2-19	4.3	20%	3	262	2.7	
D2-20	6.4	20%	3	317	3.7	
D2-21	5.0	20%	3	281	3.0	
D2-22	6.1	20%	3	310	3.6	
D2-23	5.6	20%	3	297	3.3	
D2-24	5.1	20%	3	284	3.1	
D2-25	4.1	20%	3	256	2.6	
D2-26	9.8	20%	3	389	5.3	
D2-27	14.7	20%	3	474	7.6	
D2-28	10.5	20%	3	402	5.6	
D2-29	16.8	20%	3	506	8.5	Sited together as D2-30
D2-30	21.9	20%	3	576	10.8	
D2-31	26.6	20%	3	633	12.8	Sited together as D2-31
D2-32	22.1	20%	3	578	10.9	
FPC-D2-4A	16.9	20%	2	615	12.1	
FPC-D2-7	10.5	20%	2	486	7.9	
FPC-D2-13	146.5	20%	1	2,530	183.2	
Total	**428.6**				**372.3**	

*Top of pond: Assumes 1 ft of freeboard, square shape, 4:1 slopes, 20-ft berm, 20% for landscaping and tie-in slopes

Pond sited as shown in Figure A.1

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.5 - Pond Sizing Calculations

Corridor F1

Basin	Required Volume	Additional Percent for Landscaping /	Design Depth	L & W at Design Depth	Required Pond Area*	
	ac-ft	pct	ft	ft	ac	
F1-1	11.5	20%	3	421	6.1	
F1-3	15.6	20%	3	488	8.0	
F1-5	6.9	20%	3	329	4.0	
F1-6	5.6	20%	3	297	3.3	
F1-7	4.9	20%	3	279	3.0	
F1-8	6.2	20%	3	312	3.6	
F1-9	6.0	20%	3	307	3.5	
F1-10	6.3	20%	3	314	3.7	
F1-11	4.1	20%	3	256	2.6	
F1-12	3.7	20%	3	244	2.4	
F1-13	4.8	20%	3	276	2.9	
F1-14	5.2	20%	3	287	3.1	
F1-15	5.1	20%	3	284	3.1	
F1-16	6.3	20%	3	314	3.7	
F1-17	4.4	20%	3	265	2.7	
F1-18	4.9	20%	3	279	3.0	
F1-19	7.7	20%	3	346	4.3	
F1-20	5.1	20%	3	284	3.1	
F1-21	5.3	20%	3	289	3.2	
F1-22	9.5	20%	3	383	5.2	
F1-23	4.7	20%	3	273	2.9	
F1-24	3.7	20%	3	244	2.4	
F1-25	2.7	20%	3	210	1.9	
F1-26	4.8	20%	3	276	2.9	
F1-27	4.5	20%	3	268	2.8	
F1-28	6.6	20%	3	322	3.8	
F1-29	5.5	20%	3	295	3.3	
F1-30	6.2	20%	3	312	3.6	
F1-31	7.7	20%	3	346	4.3	
F1-32	13.1	20%	3	448	6.8	Sited together as F1-33
F1-33	48.1	20%	3	848	22.2	
F1-34	44.6	20%	3	817	20.6	Sited together as F1-34
F1-35	10.2	20%	3	397	5.5	
F1-36	10.4	20%	3	401	5.6	
F1-37	10.1	20%	3	395	5.5	
F1-38	9.2	20%	3	377	5.0	
F1-39	10.8	20%	3	408	5.8	
F1-40	14.2	20%	3	466	7.3	
FPC-F1-40	342.5	20%	1	3,867	422.2	
Total	**688.7**				**608.9**	

*Top of pond: Assumes 1 ft of freeboard, square shape, 4:1 slopes, 20-ft berm, 20% for landscaping and tie-in slopes

Pond sited as shown in Figure A.2

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.5 - Pond Sizing Calculations

Corridor F1b

Basin	Required Volume	Additional Percent for Landscaping /	Design Depth	L & W at Design Depth	Required Pond Area*	
	ac-ft	pct	ft	ft	ac	
F1b-1	11.5	20%	3	421	6.1	
F1b-3	15.6	20%	3	488	8.0	
F1b-5	6.9	20%	3	329	4.0	
F1b-6	5.7	20%	3	300	3.4	
F1b-7	4.9	20%	3	279	3.0	
F1b-8	6.2	20%	3	312	3.6	
F1b-9	6.0	20%	3	307	3.5	
F1b-10	6.4	20%	3	317	3.7	
F1b-11	4.1	20%	3	256	2.6	
F1b-12	3.7	20%	3	244	2.4	
F1b-13	4.8	20%	3	276	2.9	
F1b-14	5.2	20%	3	287	3.1	
F1b-15	5.2	20%	3	287	3.1	
F1b-16	6.3	20%	3	314	3.7	
F1b-17	4.4	20%	3	265	2.7	
F1b-18	4.9	20%	3	279	3.0	
F1b-19	7.7	20%	3	346	4.3	
F1b-20	5.0	20%	3	281	3.0	
F1b-21	5.3	20%	3	289	3.2	
F1b-22	9.0	20%	3	373	4.9	
F1b-23	4.7	20%	3	273	2.9	
F1b-24	4.3	20%	3	262	2.7	
F1b-25	4.2	20%	3	259	2.6	
F1b-26	4.9	20%	3	279	3.0	
F1b-27	12.3	20%	3	435	6.5	
F1b-28	5.9	20%	3	305	3.5	
F1b-29	7.1	20%	3	333	4.1	
F1b-30	6.8	20%	3	326	3.9	
F1b-31	8.4	20%	3	361	4.7	Sited together as F1b-32
F1b-32	7.2	20%	3	335	4.1	
F1b-33	47.4	20%	3	842	21.9	Sited together as F1b-33
F1b-34	8.0	20%	3	353	4.5	
F1b-35	10.0	20%	3	393	5.4	
F1b-36	10.8	20%	3	408	5.8	
F1b-37	9.2	20%	3	377	5.0	
F1b-38	9.9	20%	3	391	5.4	
F1b-39	14.2	20%	3	466	7.3	
FPC-F1b-39	340.4	20%	1	3,855	419.6	
Total	**542.70**				**587.1**	

*Top of pond: Assumes 1 ft of freeboard, square shape, 4:1 slopes, 20-ft berm, 20% for landscaping and tie-in slopes

Pond sited as shown in Figure A.3

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.5 - Pond Sizing Calculations

Corridor F2

Basin	Required Volume	Additional Percent for Landscaping /	Design Depth	L & W at Design Depth	Required Pond Area*	
	ac-ft	pct	ft	ft	ac	
F2-1	11.5	20%	3	421	6.1	
F2-3	15.6	20%	3	488	8.0	
F2-5	6.9	20%	3	329	4.0	
F2-6	5.7	20%	3	300	3.4	
F2-7	4.9	20%	3	279	3.0	
F2-8	6.2	20%	3	312	3.6	
F2-9	6.0	20%	3	307	3.5	
F2-10	6.3	20%	3	314	3.7	
F2-11	4.1	20%	3	256	2.6	
F2-12	3.7	20%	3	244	2.4	
F2-13	4.8	20%	3	276	2.9	
F2-14	5.1	20%	3	284	3.1	
F2-15	5.1	20%	3	284	3.1	
F2-16	6.3	20%	3	314	3.7	
F2-17	4.4	20%	3	265	2.7	
F2-18	4.9	20%	3	279	3.0	
F2-19	7.7	20%	3	346	4.3	
F2-20	5.0	20%	3	281	3.0	
F2-21	5.3	20%	3	289	3.2	
F2-22	8.9	20%	3	371	4.9	
F2-23	5.0	20%	3	281	3.0	
F2-24	4.7	20%	3	273	2.9	
F2-25	4.5	20%	3	268	2.8	
F2-26	2.6	20%	3	206	1.8	
F2-27	5.0	20%	3	281	3.0	
F2-28	5.5	20%	3	295	3.3	
F2-29	5.2	20%	3	287	3.1	
F2-30	6.6	20%	3	322	3.8	
F2-31	8.4	20%	3	361	4.7	
F2-32	5.5	20%	3	295	3.3	
F2-33	15.6	20%	3	488	8.0	Sited together as F2-34
F2-34	13.7	20%	3	458	7.1	
F2-35	10.9	20%	3	410	5.8	Sited together as F2-35
F2-36	4.0	20%	3	253	2.5	
FPC-F2-22	26.7	20%	1	1,082	35.3	
Total	**252.3**				**164.6**	

*Top of pond: Assumes 1 ft of freeboard, square shape, 4:1 slopes, 20-ft berm, 20% for landscaping and tie-in slopes

Pond sited as shown in Figure A.4

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.5 - Pond Sizing Calculations

Corridor F3

Basin	Required Volume	Additional Percent for Landscaping /	Design Depth	L & W at Design Depth	Required Pond Area*	
	ac-ft	pct	ft	ft	ac	
F3-1	11.5	20%	3	421	6.1	
F3-3	15.6	20%	3	488	8.0	
F3-5	6.9	20%	3	329	4.0	
F3-6	5.6	20%	3	297	3.3	
F3-7	4.9	20%	3	279	3.0	
F3-8	6.2	20%	3	312	3.6	
F3-9	6.0	20%	3	307	3.5	
F3-10	6.3	20%	3	314	3.7	
F3-11	4.1	20%	3	256	2.6	
F3-12	3.7	20%	3	244	2.4	
F3-13	4.8	20%	3	276	2.9	
F3-14	5.1	20%	3	284	3.1	
F3-15	5.1	20%	3	284	3.1	
F3-16	6.3	20%	3	314	3.7	
F3-17	4.4	20%	3	265	2.7	
F3-18	4.9	20%	3	279	3.0	
F3-19	7.7	20%	3	346	4.3	
F3-20	5.0	20%	3	281	3.0	
F3-21	5.3	20%	3	289	3.2	
F3-22	9.2	20%	3	377	5.0	
F3-23	5.0	20%	3	281	3.0	
F3-24	4.6	20%	3	270	2.8	
F3-25	4.4	20%	3	265	2.7	
F3-26	4.6	20%	3	270	2.8	
F3-27	12.7	20%	3	441	6.6	
F3-28	6.0	20%	3	307	3.5	
F3-29	4.1	20%	3	256	2.6	
F3-30	4.9	20%	3	279	3.0	
F3-31	7.8	20%	3	349	4.4	
F3-32	7.1	20%	3	333	4.1	
F3-33	4.7	20%	3	273	2.9	
F3-34	5.1	20%	3	284	3.1	
F3-35	6.6	20%	3	322	3.8	
F3-36	3.9	20%	3	250	2.5	
F3-37	5.5	20%	3	295	3.3	
F3-38	6.2	20%	3	312	3.6	
F3-39	5.0	20%	3	281	3.0	
F3-40	5.3	20%	3	289	3.2	
F3-41	6.3	20%	3	314	3.7	
F3-42	29.8	20%	3	670	14.2	
F3-43	47.7	20%	3	844	22.0	Sited as F3-43
F3-44	24.2	20%	3	605	11.8	Sited together
F3-45	12.3	20%	3	435	6.5	as F3-45
FPC-F3-30B	60.7	20%	2	1,158	40.1	
FPC-F3-32	306.0	20%	1	3,655	377.8	
Total	**719.1**				**611.2**	

*Top of pond: Assumes 1 ft of freeboard, square shape, 4:1 slopes, 20-ft berm, 20% for landscaping and tie-in slopes

Pond sited as shown in Figure A.5

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.5 - Pond Sizing Calculations

Corridor F4

Basin	Required Volume	Additional Percent for Landscaping /	Design Depth	L & W at Design Depth	Required Pond Area*	
	ac-ft	pct	ft	ft	ac	
F4-1	11.5	20%	3	421	6.1	
F4-3	15.6	20%	3	488	8.0	
F4-5	6.9	20%	3	329	4.0	
F4-6	5.6	20%	3	297	3.3	
F4-7	4.9	20%	3	279	3.0	
F4-8	6.2	20%	3	312	3.6	
F4-9	6.0	20%	3	307	3.5	
F4-10	6.3	20%	3	314	3.7	
F4-11	4.1	20%	3	256	2.6	
F4-12	3.7	20%	3	244	2.4	
F4-13	4.8	20%	3	276	2.9	
F4-14	5.1	20%	3	284	3.1	
F4-15	5.1	20%	3	284	3.1	
F4-16	6.3	20%	3	314	3.7	
F4-17	4.4	20%	3	265	2.7	
F4-18	4.9	20%	3	279	3.0	
F4-19	7.7	20%	3	346	4.3	
F4-20	5.0	20%	3	281	3.0	
F4-21	5.3	20%	3	289	3.2	
F4-22	9.2	20%	3	377	5.0	
F4-23	5.0	20%	3	281	3.0	
F4-24	4.6	20%	3	270	2.8	
F4-25	4.4	20%	3	265	2.7	
F4-26	4.7	20%	3	273	2.9	
F4-27	12.7	20%	3	441	6.6	
F4-28	6.0	20%	3	307	3.5	
F4-29	4.1	20%	3	256	2.6	
F4-30	4.9	20%	3	279	3.0	
F4-31	7.8	20%	3	349	4.4	
F4-32	7.1	20%	3	333	4.1	
F4-33	4.7	20%	3	273	2.9	
F4-34	5.1	20%	3	284	3.1	
F4-35	6.6	20%	3	322	3.8	
F4-36	3.9	20%	3	250	2.5	
F4-37	5.5	20%	3	295	3.3	
F4-38	6.2	20%	3	312	3.6	
F4-39	5.0	20%	3	281	3.0	
F4-40	5.3	20%	3	289	3.2	
F4-41	6.3	20%	3	314	3.7	
F4-42	30.9	20%	3	682	14.7	
F4-43	22.3	20%	3	581	11.0	Sited together as F4-44
F4-44	13.7	20%	3	458	7.1	
F4-45	28.2	20%	3	652	13.5	Sited together as F4-45
F4-46	17.6	20%	3	518	8.9	
FPC-F4-30B	60.7	20%	2	1,158	40.1	
FPC-F4-33	369.4	20%	1	4,015	454.9	
Total	**781.3**				**689.1**	

*Top of pond: Assumes 1 ft of freeboard, square shape, 4:1 slopes, 20-ft berm, 20% for landscaping and tie-in slopes

Pond sited as shown in Figure A.6

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.5 - Pond Sizing Calculations

Corridor EAG

Basin	Required Volume	Additional Percent for Landscaping /	Design Depth	L & W at Design Depth	Required Pond Area*	
	ac-ft	pct	ft	ft	ac	
EAG-1	11.5	20%	3	421	6.1	
EAG-3	15.6	20%	3	488	8.0	
EAG-5	6.9	20%	3	329	4.0	
EAG-6	5.6	20%	3	297	3.3	
EAG-7	4.9	20%	3	279	3.0	
EAG-8	6.2	20%	3	312	3.6	
EAG-9	6.0	20%	3	307	3.5	
EAG-10	6.3	20%	3	314	3.7	
EAG-11	4.1	20%	3	256	2.6	
EAG-12	3.7	20%	3	244	2.4	
EAG-13	4.8	20%	3	276	2.9	
EAG-14	5.2	20%	3	287	3.1	
EAG-15	5.1	20%	3	284	3.1	
EAG-16	13.9	20%	3	461	7.2	
EAG-17	4.0	20%	3	253	2.5	
EAG-18	4.9	20%	3	279	3.0	
EAG-19	5.3	20%	3	289	3.2	
EAG-20	5.6	20%	3	297	3.3	
EAG-21	5.9	20%	3	305	3.5	
EAG-22	5.3	20%	3	289	3.2	
EAG-23	4.7	20%	3	273	2.9	
EAG-24	5.6	20%	3	297	3.3	
EAG-25	5.4	20%	3	292	3.2	
EAG-26	5.1	20%	3	284	3.1	
EAG-27	5.4	20%	3	292	3.2	
EAG-28	5.3	20%	3	289	3.2	
EAG-29	4.8	20%	3	276	2.9	
EAG-30	5.6	20%	3	297	3.3	
EAG-31	5.2	20%	3	287	3.1	
EAG-32	5.2	20%	3	287	3.1	
EAG-33	8.6	20%	3	365	4.8	
EAG-34	26.0	20%	3	626	12.6	
EAG-35	5.2	20%	3	287	3.1	
EAG-36	7.4	20%	3	340	4.2	
EAG-37	5.7	20%	3	300	3.4	
EAG-38	6.0	20%	3	307	3.5	
EAG-39	4.1	20%	3	256	2.6	
EAG-40	5.2	20%	3	287	3.1	
EAG-41	5.0	20%	3	281	3.0	
EAG-42	4.3	20%	3	262	2.7	
EAG-43	4.8	20%	3	276	2.9	
EAG-44	4.1	20%	3	256	2.6	
EAG-45	5.4	20%	3	292	3.2	
EAG-46	6.0	20%	3	307	3.5	
EAG-47	3.5	20%	3	237	2.3	
EAG-48	4.9	20%	3	279	3.0	
EAG-49	4.9	20%	3	279	3.0	
EAG-50	5.2	20%	3	287	3.1	
EAG-51	36.6	20%	3	741	17.2	Sited together as EAG-52
EAG-52	12.4	20%	3	436	6.5	
EAG-53	28.2	20%	3	652	13.5	Sited together as EAG-53
EAG-54	17.6	20%	3	518	8.9	
FPC-EAG-29	321.7	20%	1	3,747	396.9	
Total	**715.9**				**616.1**	

*Top of pond: Assumes 1 ft of freeboard, square shape, 4:1 slopes, 20-ft berm, 20% for landscaping and tie-in slopes

Pond sited as shown in Figure A.7

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.6 - Pond Right-of-way Area Summary

Alignment	Corridor D1	Corridor D2	Corridor F1	Corridor F1b	Corridor F2	Corridor F3	Corridor F4	Corridor EAG
Alignment Length (miles)	15.2	22.8	28.9	28.8	23.8	33.2	33.6	36.3
Number of Ponds	29	32	38	37	34	43	44	52
Total (SMF & FPC) Pond Area (ac)	148.8	372.3	608.9	587.1	164.6	611.2	689.1	616.1
Total Sited Ponds (SMF & FPC) Around St Johns River (ac)	0.0	226.2	482.9	460.2	58.7	418.1	495.4	443.0
Total Non-Sited Ponds (SMF & FPC) (ac)	148.8	146.1	126.0	126.9	105.9	193.1	193.7	173.1

Table A.7 - Pond Construction Quantity Summary

Pay Item	Corridor D1	Corridor D2	Corridor F1	Corridor F1b	Corridor F2	Corridor F3	Corridor F4	Corridor EAG
120-1: Regular Excavation (Pond)	1,602,221	2,430,836	2,872,658	2,557,336	1,492,679	2,927,014	3,007,687	3,106,142
570-1-2: Performance Sod	373,487	1,328,020	2,433,327	2,393,288	468,385	2,438,059	2,818,168	2,402,739

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229
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Table A.8 - Parcel Data per Pond for Select Sites Adjacent to St. Johns River

Corridor Alternative	Pond Type	Basin	Pond	Parcel Area (ac)	County	Parcel ID	Property Owner	Required Pond Area (ac)	Total Parcel Area (ac)
D2	SMF	D2-29	D2-30	21.1	ORANGE	342428000000023	FARMLAND RESERVE INC	19.3	21.1
		D2-30							
D2	SMF	D2-31	D2-31	26.2	BREVARD	24 3533-00-250	KEY BANK N A	23.7	26.2
		D2-32							
D2	FPC	FPC-D2-13	D2-FPC	187.9	ORANGE	342428000000023	FARMLAND RESERVE INC	183.2	187.9
F1	SMF	F1-32	F1-33	30.1	OSCEOLA	012634000000100000	FARMLAND RESERVE INC	29.0	30.1
		F1-33							
F1	SMF	F1-34	F1-34	37.3	BREVARD	26 3525-00-1	A DUDA & SONS INC	31.7	37.3
		F1-35							
		F1-36							
F1	FPC	FPC-F1-40	F1-FPC	105.1	OSCEOLA	022634000000100000	FARMLAND RESERVE INC	422.2	438.8
			F1-FPC	233.1	OSCEOLA	012634000000100000	FARMLAND RESERVE INC		
			F1-FPC	100.6	OSCEOLA	352534000000100000	FARMLAND RESERVE INC		
F1b	SMF	F1b-31	F1b-32	4.3	OSCEOLA	132634000000100000	FARMLAND RESERVE INC	8.8	10.5
		F1b-32	F1b-32	6.2	OSCEOLA	122634000000100000	FARMLAND RESERVE INC		
F1b	SMF	F1b-33	F1b-33	37.3	BREVARD	26 3525-00-1	A DUDA & SONS INC	31.8	37.3
		F1b-34							
		F1b-35							
F1b	FPC	FPC-F1b-39	F1b-FPC	164.4	OSCEOLA	142634000000100000	FARMLAND RESERVE INC	419.6	422.9
			F1b-FPC	258.5	OSCEOLA	112634000000100000	FARMLAND RESERVE INC		
F2	SMF	F2-33	F2-34	18.5	BREVARD	25 3521-00-250	FARMLAND RESERVE INC	15.1	18.5
		F2-34							
F2	SMF	F2-35	F2-35	14.0	BREVARD	25 3512-00-1	ST JOHNS RIVER WATER MANAGEMENT	8.3	14.0
		F2-36							
F2	FPC	FPC-F2-22	F2-FPC	3.1	BREVARD	25 3530-00-1	FARMLAND RESERVE INC	35.3	36.0
			F2-FPC	32.9	OSCEOLA	252534000000100000	FARMLAND RESERVE INC		
F3	SMF	F3-43	F3-43	26.3	BREVARD	27 3525-01-2	FARMLAND RESERVE INC	22.0	26.3
F3	SMF	F3-44	F3-45	4.4	BREVARD	27 3622-00-753	RGSG ENTERPRISES INC	18.3	19.5
			F3-45	7.9	BREVARD	27 3622-00-766	MORTGAGE INVESTMENT FUND I LLC		
		F3-45	F3-45	2.6	BREVARD	27 3622-00-759	FAMILY RENTALS LLC		
			F3-45	4.7	BREVARD	27 3622-00-751	MORTGAGE INVESTMENT FUND I LLC		
F3	FPC	FPC-F3-32	FPC-F3-32	279.4	BREVARD	27 3517-00-1	FARMLAND RESERVE INC	377.8	377.8
			FPC-F3-32	98.3	BREVARD	27 3508-00-1	FARMLAND RESERVE INC		
F4	SMF	F4-43	F4-44	19.8	BREVARD	27 3525-01-2	FARMLAND RESERVE INC	18.1	19.8
		F4-44							
F4	SMF	F4-45	F4-45	24.3	BREVARD	28 3604-00-1	PM KPHTH MANAGEMENT LLC	22.4	24.3
		F4-46							
F4	FPC	FPC-F4-33	F4-FPC	67.2	BREVARD	27 3507-00-1	FARMLAND RESERVE INC	454.9	459.0
			F4-FPC	14.2	BREVARD	27 3508-00-1	FARMLAND RESERVE INC		
			F4-FPC	279.4	BREVARD	27 3517-00-1	FARMLAND RESERVE INC		
			F4-FPC	98.2	BREVARD	27 3508-00-1	FARMLAND RESERVE INC		
EAG	SMF	EAG-51	F4b-52	29.6	BREVARD	27 3536-01-2	FARMLAND RESERVE INC	23.7	29.6
		EAG-52							
EAG	SMF	EAG-53	F4b-53	24.3	BREVARD	28 3604-00-1	PM KPHTH MANAGEMENT LLC	22.4	24.3
		EAG-54							
EAG	FPC	FPC-EAG-29	F4b-FPC	408.1	BREVARD	27 3520-00-1	BREVARD COUNTY	396.9	408.1

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Table A.9 - Pond Quantities

Corridor D1

Basin	Required Volume	Pond Area	PPV	Total Excavation Volume	Total Excavation Volume	Total Sodding
	ac-ft	ac	ac-ft	ac-ft	CY	SY
D1-1	54.9	25.1	197.3	252.2	406,940	36,025
D1-2	8.4	4.7	25.6	34.0	54,907	10,409
D1-3	12.7	6.6	40.7	53.4	86,173	12,953
D1-4	7.1	4.1	21.2	28.3	45,622	9,503
D1-5	7.7	4.3	23.2	30.9	49,895	9,550
D1-6	6.4	3.7	18.8	25.2	40,668	8,638
D1-7	9.1	5.0	28.1	37.2	59,945	10,783
D1-8	9.3	5.1	28.8	38.1	61,389	10,958
D1-9	2.9	2.0	7.4	10.3	16,686	5,702
D1-10	3.7	2.4	9.9	13.6	22,005	6,442
D1-11	3.6	2.3	9.6	13.2	21,333	6,108
D1-12	5.7	3.4	16.5	22.2	35,753	8,254
D1-13	4.3	2.7	11.9	16.2	26,073	6,991
D1-14	5.0	3.0	14.1	19.1	30,885	7,383
D1-15	4.2	2.6	11.5	15.7	25,391	6,658
D1-16	4.9	3.0	13.8	18.7	30,194	7,535
D1-17	4.5	2.8	12.5	17.0	27,442	7,172
D1-18	4.5	2.8	12.5	17.0	27,442	7,172
D1-19	4.3	2.7	11.9	16.2	26,073	6,991
D1-20	6.4	3.7	18.8	25.2	40,668	8,638
D1-21	5.0	3.0	14.1	19.1	30,885	7,383
D1-22	6.1	3.6	17.8	23.9	38,557	8,612
D1-23	5.6	3.3	16.1	21.7	35,055	7,923
D1-24	5.1	3.1	14.5	19.6	31,577	7,715
D1-25	3.9	2.5	10.6	14.5	23,355	6,626
D1-26	7.3	4.1	21.9	29.2	47,044	9,196
D1-27	15.7	8.0	51.4	67.1	108,323	15,060
D1-28	9.4	5.1	29.1	38.5	62,112	10,804
D1-29	7.1	4.1	21.2	28.3	45,622	9,503
FPC-D1-4A	16.9	12.1	0.0	16.9	27,265	58,564
FPC-D1-7	10.5	7.9	0.0	10.5	16,940	38,236

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.9 - Pond Quantities

Corridor D2

Basin	Required Volume	Pond Area	PPV	Total Excavation Volume	Total Excavation Volume	Total Sodding
	ac-ft	ac	ac-ft	ac-ft	CY	SY
D2-1	54.9	25.1	197.3	252.2	406,814	36,058
D2-2	8.4	4.7	25.6	34.0	54,907	10,409
D2-3	12.7	6.6	40.7	53.4	86,173	12,953
D2-4	7.1	4.1	21.2	28.3	45,622	9,503
D2-5	7.7	4.3	23.2	30.9	49,895	9,550
D2-6	6.4	3.7	18.8	25.2	40,668	8,638
D2-7	9.2	5.0	28.4	37.6	60,667	10,628
D2-8	9.3	5.1	28.8	38.1	61,389	10,958
D2-9	2.9	2.0	7.4	10.3	16,686	5,702
D2-10	3.7	2.4	9.9	13.6	22,005	6,442
D2-11	3.6	2.3	9.6	13.2	21,333	6,108
D2-12	5.7	3.4	16.5	22.2	35,753	8,254
D2-13	4.3	2.7	11.9	16.2	26,073	6,991
D2-14	5.0	3.0	14.1	19.1	30,885	7,383
D2-15	4.2	2.6	11.5	15.7	25,391	6,658
D2-16	4.9	3.0	13.8	18.7	30,194	7,535
D2-17	4.5	2.8	12.5	17.0	27,442	7,172
D2-18	4.5	2.8	12.5	17.0	27,442	7,172
D2-19	4.3	2.7	11.9	16.2	26,073	6,991
D2-20	6.4	3.7	18.8	25.2	40,668	8,638
D2-21	5.0	3.0	14.1	19.1	30,885	7,383
D2-22	6.1	3.6	17.8	23.9	38,557	8,612
D2-23	5.6	3.3	16.1	21.7	35,055	7,923
D2-24	5.1	3.1	14.5	19.6	31,577	7,715
D2-25	4.1	2.6	11.2	15.3	24,711	6,808
D2-26	9.8	5.3	30.5	40.3	65,007	11,154
D2-27	14.7	7.6	47.9	62.6	100,916	14,682
D2-28	10.5	5.6	32.9	43.4	70,088	11,524
D2-29	16.8	8.5	55.4	72.2	116,495	15,764
D2-30	21.9	10.8	74.0	95.9	154,648	18,917
D2-31	26.6	12.8	91.2	117.8	190,105	21,219
D2-32	22.1	10.9	74.7	96.8	156,152	19,087
FPC-D2-4A	16.9	12.1	0.0	16.9	27,265	58,564
FPC-D2-7	10.5	7.9	0.0	10.5	16,940	38,236
FPC-D2-13	146.5	183.2	0.0	146.5	236,353	886,688

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.9 - Pond Quantities

Corridor F1

Basin	Required Volume	Pond Area	PPV	Total Excavation Volume	Total Excavation Volume	Total Sodding
	ac-ft	ac	ac-ft	ac-ft	CY	SY
F1-1	11.5	6.1	36.5	48.0	77,380	12,395
F1-3	15.6	8.0	51.1	66.7	107,582	15,216
F1-5	6.9	4.0	20.5	27.4	44,203	9,325
F1-6	5.6	3.3	16.1	21.7	35,055	7,923
F1-7	4.9	3.0	13.8	18.7	30,194	7,535
F1-8	6.2	3.6	18.1	24.3	39,260	8,460
F1-9	6.0	3.5	17.5	23.5	37,854	8,281
F1-10	6.3	3.7	18.5	24.8	39,963	8,791
F1-11	4.1	2.6	11.2	15.3	24,711	6,808
F1-12	3.7	2.4	9.9	13.6	22,005	6,442
F1-13	4.8	2.9	13.5	18.3	29,504	7,202
F1-14	5.2	3.1	14.8	20.0	32,271	7,563
F1-15	5.1	3.1	14.5	19.6	31,577	7,715
F1-16	6.3	3.7	18.5	24.8	39,963	8,791
F1-17	4.4	2.7	12.2	16.6	26,757	6,840
F1-18	4.9	3.0	13.8	18.7	30,194	7,535
F1-19	7.7	4.3	23.2	30.9	49,895	9,550
F1-20	5.1	3.1	14.5	19.6	31,577	7,715
F1-21	5.3	3.2	15.1	20.4	32,965	7,895
F1-22	9.5	5.2	29.4	38.9	62,835	11,133
F1-23	4.7	2.9	13.2	17.9	28,815	7,354
F1-24	3.7	2.4	9.9	13.6	22,005	6,442
F1-25	2.7	1.9	6.8	9.5	15,380	5,516
F1-26	4.8	2.9	13.5	18.3	29,504	7,202
F1-27	4.5	2.8	12.5	17.0	27,442	7,172
F1-28	6.6	3.8	19.5	26.1	42,080	8,816
F1-29	5.5	3.3	15.8	21.3	34,357	8,075
F1-30	6.2	3.6	18.1	24.3	39,260	8,460
F1-31	7.7	4.3	23.2	30.9	49,895	9,550
F1-32	13.1	6.8	42.1	55.2	89,113	13,300
F1-33	48.1	22.2	171.6	219.7	354,398	32,790
F1-34	44.6	20.6	158.4	203.0	327,486	30,582
F1-35	10.2	5.5	31.9	42.1	67,908	11,504
F1-36	10.4	5.6	32.6	43.0	69,361	11,679
F1-37	10.1	5.5	31.5	41.6	67,182	11,658
F1-38	9.2	5.0	28.4	37.6	60,667	10,628
F1-39	10.8	5.8	34.0	44.8	72,272	12,028
F1-40	14.2	7.3	46.1	60.3	97,221	14,009
FPC-F1-40	342.5	422.2	0.0	342.5	552,567	2,043,448

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.9 - Pond Quantities

Corridor F1b

Basin	Required Volume	Pond Area	PPV	Total Excavation Volume	Total Excavation Volume	Total Sodding
	ac-ft	ac	ac-ft	ac-ft	CY	SY
F1b-1	11.5	6.1	36.5	48.0	77,380	12,395
F1b-3	15.6	8.0	51.1	66.7	107,582	15,216
F1b-5	6.9	4.0	20.5	27.4	44,203	9,325
F1b-6	5.7	3.4	16.5	22.2	35,753	8,254
F1b-7	4.9	3.0	13.8	18.7	30,194	7,535
F1b-8	6.2	3.6	18.1	24.3	39,260	8,460
F1b-9	6.0	3.5	17.5	23.5	37,854	8,281
F1b-10	6.4	3.7	18.8	25.2	40,668	8,638
F1b-11	4.1	2.6	11.2	15.3	24,711	6,808
F1b-12	3.7	2.4	9.9	13.6	22,005	6,442
F1b-13	4.8	2.9	13.5	18.3	29,504	7,202
F1b-14	5.2	3.1	14.8	20.0	32,271	7,563
F1b-15	5.2	3.1	14.8	20.0	32,271	7,563
F1b-16	6.3	3.7	18.5	24.8	39,963	8,791
F1b-17	4.4	2.7	12.2	16.6	26,757	6,840
F1b-18	4.9	3.0	13.8	18.7	30,194	7,535
F1b-19	7.7	4.3	23.2	30.9	49,895	9,550
F1b-20	5.0	3.0	14.1	19.1	30,885	7,383
F1b-21	5.3	3.2	15.1	20.4	32,965	7,895
F1b-22	9.0	4.9	27.7	36.7	59,224	10,453
F1b-23	4.7	2.9	13.2	17.9	28,815	7,354
F1b-24	4.3	2.7	11.9	16.2	26,073	6,991
F1b-25	4.2	2.6	11.5	15.7	25,391	6,658
F1b-26	4.9	3.0	13.8	18.7	30,194	7,535
F1b-27	12.3	6.5	39.3	51.6	83,237	13,090
F1b-28	5.9	3.5	17.1	23.0	37,153	8,434
F1b-29	7.1	4.1	21.2	28.3	45,622	9,503
F1b-30	6.8	3.9	20.2	27.0	43,494	8,994
F1b-31	8.4	4.7	25.6	34.0	54,907	10,409
F1b-32	7.2	4.1	21.5	28.7	46,332	9,349
F1b-33	47.4	21.9	168.9	216.3	349,011	32,445
F1b-34	8.0	4.5	24.3	32.3	52,040	10,057
F1b-35	10.0	5.4	31.2	41.2	66,456	11,329
F1b-36	10.8	5.8	34.0	44.8	72,272	12,028
F1b-37	9.2	5.0	28.4	37.6	60,667	10,628
F1b-38	9.9	5.4	30.8	40.7	65,731	11,484
F1b-39	14.2	7.3	46.1	60.3	97,221	14,009
FPC-F1b-39	340.4	419.6	0.0	340.4	549,179	2,030,864

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.9 - Pond Quantities

Corridor F2

Basin	Required Volume	Pond Area	PPV	Total Excavation Volume	Total Excavation Volume	Total Sodding
	ac-ft	ac	ac-ft	ac-ft	CY	SY
F2-1	11.5	6.1	36.5	48.0	77,380	12,395
F2-3	15.6	8.0	51.1	66.7	107,582	15,216
F2-5	6.9	4.0	20.5	27.4	44,203	9,325
F2-6	5.7	3.4	16.5	22.2	35,753	8,254
F2-7	4.9	3.0	13.8	18.7	30,194	7,535
F2-8	6.2	3.6	18.1	24.3	39,260	8,460
F2-9	6.0	3.5	17.5	23.5	37,854	8,281
F2-10	6.3	3.7	18.5	24.8	39,963	8,791
F2-11	4.1	2.6	11.2	15.3	24,711	6,808
F2-12	3.7	2.4	9.9	13.6	22,005	6,442
F2-13	4.8	2.9	13.5	18.3	29,504	7,202
F2-14	5.1	3.1	14.5	19.6	31,577	7,715
F2-15	5.1	3.1	14.5	19.6	31,577	7,715
F2-16	6.3	3.7	18.5	24.8	39,963	8,791
F2-17	4.4	2.7	12.2	16.6	26,757	6,840
F2-18	4.9	3.0	13.8	18.7	30,194	7,535
F2-19	7.7	4.3	23.2	30.9	49,895	9,550
F2-20	5.0	3.0	14.1	19.1	30,885	7,383
F2-21	5.3	3.2	15.1	20.4	32,965	7,895
F2-22	8.9	4.9	27.4	36.3	58,503	10,607
F2-23	5.0	3.0	14.1	19.1	30,885	7,383
F2-24	4.7	2.9	13.2	17.9	28,815	7,354
F2-25	4.5	2.8	12.5	17.0	27,442	7,172
F2-26	2.6	1.8	6.5	9.1	14,731	5,180
F2-27	5.0	3.0	14.1	19.1	30,885	7,383
F2-28	5.5	3.3	15.8	21.3	34,357	8,075
F2-29	5.2	3.1	14.8	20.0	32,271	7,563
F2-30	6.6	3.8	19.5	26.1	42,080	8,816
F2-31	8.4	4.7	25.6	34.0	54,907	10,409
F2-32	5.5	3.3	15.8	21.3	34,357	8,075
F2-33	15.6	8.0	51.1	66.7	107,582	15,216
F2-34	13.7	7.1	44.3	58.0	93,532	13,819
F2-35	10.9	5.8	34.3	45.2	73,001	11,873
F2-36	4.0	2.5	10.9	14.9	24,032	6,475
FPC-F2-22	26.7	35.3	0.0	26.7	43,076	170,852

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.9 - Pond Quantities

Corridor F3

Basin	Required Volume	Pond Area	PPV	Total Excavation Volume	Total Excavation Volume	Total Sodding
	ac-ft	ac	ac-ft	ac-ft	CY	SY
F3-1	11.5	6.1	36.5	48.0	77,380	12,395
F3-3	15.6	8.0	51.1	66.7	107,582	15,216
F3-5	6.9	4.0	20.5	27.4	44,203	9,325
F3-6	5.6	3.3	16.1	21.7	35,055	7,923
F3-7	4.9	3.0	13.8	18.7	30,194	7,535
F3-8	6.2	3.6	18.1	24.3	39,260	8,460
F3-9	6.0	3.5	17.5	23.5	37,854	8,281
F3-10	6.3	3.7	18.5	24.8	39,963	8,791
F3-11	4.1	2.6	11.2	15.3	24,711	6,808
F3-12	3.7	2.4	9.9	13.6	22,005	6,442
F3-13	4.8	2.9	13.5	18.3	29,504	7,202
F3-14	5.1	3.1	14.5	19.6	31,577	7,715
F3-15	5.1	3.1	14.5	19.6	31,577	7,715
F3-16	6.3	3.7	18.5	24.8	39,963	8,791
F3-17	4.4	2.7	12.2	16.6	26,757	6,840
F3-18	4.9	3.0	13.8	18.7	30,194	7,535
F3-19	7.7	4.3	23.2	30.9	49,895	9,550
F3-20	5.0	3.0	14.1	19.1	30,885	7,383
F3-21	5.3	3.2	15.1	20.4	32,965	7,895
F3-22	9.2	5.0	28.4	37.6	60,667	10,628
F3-23	5.0	3.0	14.1	19.1	30,885	7,383
F3-24	4.6	2.8	12.8	17.4	28,128	7,021
F3-25	4.4	2.7	12.2	16.6	26,757	6,840
F3-26	4.6	2.8	12.8	17.4	28,128	7,021
F3-27	12.7	6.6	40.7	53.4	86,173	12,953
F3-28	6.0	3.5	17.5	23.5	37,854	8,281
F3-29	4.1	2.6	11.2	15.3	24,711	6,808
F3-30	4.9	3.0	13.8	18.7	30,194	7,535
F3-31	7.8	4.4	23.6	31.4	50,609	9,880
F3-32	7.1	4.1	21.2	28.3	45,622	9,503
F3-33	4.7	2.9	13.2	17.9	28,815	7,354
F3-34	5.1	3.1	14.5	19.6	31,577	7,715
F3-35	6.6	3.8	19.5	26.1	42,080	8,816
F3-36	3.9	2.5	10.6	14.5	23,355	6,626
F3-37	5.5	3.3	15.8	21.3	34,357	8,075
F3-38	6.2	3.6	18.1	24.3	39,260	8,460
F3-39	5.0	3.0	14.1	19.1	30,885	7,383
F3-40	5.3	3.2	15.1	20.4	32,965	7,895
F3-41	6.3	3.7	18.5	24.8	39,963	8,791
F3-42	29.8	14.2	103.1	132.9	214,369	22,961
F3-43	47.7	22.0	170.1	217.8	351,320	32,455
F3-44	24.2	11.8	82.4	106.6	171,970	20,149
F3-45	12.3	6.5	39.3	51.6	83,237	13,090
FPC-F3-30B	60.7	40.1	0.0	60.7	97,929	194,084
FPC-F3-32	306.0	377.8	0.0	306.0	493,680	1,828,552

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Table A.9 - Pond Quantities

Corridor F4

Basin	Required Volume	Pond Area	PPV	Total Excavation Volume	Total Excavation Volume	Total Sodding
	ac-ft	ac	ac-ft	ac-ft	CY	SY
F4-1	11.5	6.1	36.5	48.0	77,380	12,395
F4-3	15.6	8.0	51.1	66.7	107,582	15,216
F4-5	6.9	4.0	20.5	27.4	44,203	9,325
F4-6	5.6	3.3	16.1	21.7	35,055	7,923
F4-7	4.9	3.0	13.8	18.7	30,194	7,535
F4-8	6.2	3.6	18.1	24.3	39,260	8,460
F4-9	6.0	3.5	17.5	23.5	37,854	8,281
F4-10	6.3	3.7	18.5	24.8	39,963	8,791
F4-11	4.1	2.6	11.2	15.3	24,711	6,808
F4-12	3.7	2.4	9.9	13.6	22,005	6,442
F4-13	4.8	2.9	13.5	18.3	29,504	7,202
F4-14	5.1	3.1	14.5	19.6	31,577	7,715
F4-15	5.1	3.1	14.5	19.6	31,577	7,715
F4-16	6.3	3.7	18.5	24.8	39,963	8,791
F4-17	4.4	2.7	12.2	16.6	26,757	6,840
F4-18	4.9	3.0	13.8	18.7	30,194	7,535
F4-19	7.7	4.3	23.2	30.9	49,895	9,550
F4-20	5.0	3.0	14.1	19.1	30,885	7,383
F4-21	5.3	3.2	15.1	20.4	32,965	7,895
F4-22	9.2	5.0	28.4	37.6	60,667	10,628
F4-23	5.0	3.0	14.1	19.1	30,885	7,383
F4-24	4.6	2.8	12.8	17.4	28,128	7,021
F4-25	4.4	2.7	12.2	16.6	26,757	6,840
F4-26	4.7	2.9	13.2	17.9	28,815	7,354
F4-27	12.7	6.6	40.7	53.4	86,173	12,953
F4-28	6.0	3.5	17.5	23.5	37,854	8,281
F4-29	4.1	2.6	11.2	15.3	24,711	6,808
F4-30	4.9	3.0	13.8	18.7	30,194	7,535
F4-31	7.8	4.4	23.6	31.4	50,609	9,880
F4-32	7.1	4.1	21.2	28.3	45,622	9,503
F4-33	4.7	2.9	13.2	17.9	28,815	7,354
F4-34	5.1	3.1	14.5	19.6	31,577	7,715
F4-35	6.6	3.8	19.5	26.1	42,080	8,816
F4-36	3.9	2.5	10.6	14.5	23,355	6,626
F4-37	5.5	3.3	15.8	21.3	34,357	8,075
F4-38	6.2	3.6	18.1	24.3	39,260	8,460
F4-39	5.0	3.0	14.1	19.1	30,885	7,383
F4-40	5.3	3.2	15.1	20.4	32,965	7,895
F4-41	6.3	3.7	18.5	24.8	39,963	8,791
F4-42	30.9	14.7	107.2	138.1	222,729	23,649
F4-43	22.3	11.0	75.4	97.7	157,656	19,257
F4-44	13.7	7.1	44.3	58.0	93,532	13,819
F4-45	28.2	13.5	97.1	125.3	202,226	22,091
F4-46	17.6	8.9	58.3	75.9	122,452	16,450
FPC-F4-30B	60.7	40.1	0.0	60.7	97,929	194,084
FPC-F4-33	369.4	454.9	0.0	369.4	595,965	2,201,716

Project: CF&M Study for the Osceola-Brevard County Connector (CFX No. 599-229)
Location: Osceola, Orange, and Brevard Counties, FL

Table A.9 - Pond Quantities

Corridor EAG

Basin	Required Volume	Pond Area	PPV	Total Excavation Volume	Total Excavation Volume	Total Sodding
	ac-ft	ac	ac-ft	ac-ft	CY	SY
EAG-1	11.5	6.1	36.5	48.0	77,380	12,395
EAG-3	15.6	8.0	51.1	66.7	107,582	15,216
EAG-5	6.9	4.0	20.5	27.4	44,203	9,325
EAG-6	5.6	3.3	16.1	21.7	35,055	7,923
EAG-7	4.9	3.0	13.8	18.7	30,194	7,535
EAG-8	6.2	3.6	18.1	24.3	39,260	8,460
EAG-9	6.0	3.5	17.5	23.5	37,854	8,281
EAG-10	6.3	3.7	18.5	24.8	39,963	8,791
EAG-11	4.1	2.6	11.2	15.3	24,711	6,808
EAG-12	3.7	2.4	9.9	13.6	22,005	6,442
EAG-13	4.8	2.9	13.5	18.3	29,504	7,202
EAG-14	5.2	3.1	14.8	20.0	32,271	7,563
EAG-15	5.1	3.1	14.5	19.6	31,577	7,715
EAG-16	13.9	7.2	45.0	58.9	95,007	13,992
EAG-17	4.0	2.5	10.9	14.9	24,032	6,475
EAG-18	4.9	3.0	13.8	18.7	30,194	7,535
EAG-19	5.3	3.2	15.1	20.4	32,965	7,895
EAG-20	5.6	3.3	16.1	21.7	35,055	7,923
EAG-21	5.9	3.5	17.1	23.0	37,153	8,434
EAG-22	5.3	3.2	15.1	20.4	32,965	7,895
EAG-23	4.7	2.9	13.2	17.9	28,815	7,354
EAG-24	5.6	3.3	16.1	21.7	35,055	7,923
EAG-25	5.4	3.2	15.5	20.9	33,661	7,743
EAG-26	5.1	3.1	14.5	19.6	31,577	7,715
EAG-27	5.4	3.2	15.5	20.9	33,661	7,743
EAG-28	5.3	3.2	15.1	20.4	32,965	7,895
EAG-29	4.8	2.9	13.5	18.3	29,504	7,202
EAG-30	5.6	3.3	16.1	21.7	35,055	7,923
EAG-31	5.2	3.1	14.8	20.0	32,271	7,563
EAG-32	5.2	3.1	14.8	20.0	32,271	7,563
EAG-33	8.6	4.8	26.3	34.9	56,344	10,585
EAG-34	26.0	12.6	89.0	115.0	185,566	21,194
EAG-35	5.2	3.1	14.8	20.0	32,271	7,563
EAG-36	7.4	4.2	22.2	29.6	47,756	9,526
EAG-37	5.7	3.4	16.5	22.2	35,753	8,254
EAG-38	6.0	3.5	17.5	23.5	37,854	8,281
EAG-39	4.1	2.6	11.2	15.3	24,711	6,808
EAG-40	5.2	3.1	14.8	20.0	32,271	7,563
EAG-41	5.0	3.0	14.1	19.1	30,885	7,383
EAG-42	4.3	2.7	11.9	16.2	26,073	6,991
EAG-43	4.8	2.9	13.5	18.3	29,504	7,202
EAG-44	4.1	2.6	11.2	15.3	24,711	6,808
EAG-45	5.4	3.2	15.5	20.9	33,661	7,743
EAG-46	6.0	3.5	17.5	23.5	37,854	8,281
EAG-47	3.5	2.3	9.3	12.8	20,663	6,258
EAG-48	4.9	3.0	13.8	18.7	30,194	7,535
EAG-49	4.9	3.0	13.8	18.7	30,194	7,535
EAG-50	5.2	3.1	14.8	20.0	32,271	7,563
EAG-51	36.6	17.2	128.4	165.0	266,184	26,764
EAG-52	12.4	6.5	39.6	52.0	83,970	12,935
EAG-53	28.2	13.5	97.1	125.3	202,226	22,091
EAG-54	17.6	8.9	58.3	75.9	122,452	16,450
FPC-EAG-29	321.7	396.9	0.0	321.7	519,009	1,920,996

APPENDIX N

Hydraulics Methodology

Location Hydraulic Analysis Methodology

For the location hydraulic analysis, existing and proposed cross drain locations were identified and estimates are provided for the existing and proposed sizes. Note this analysis was focused on providing evaluation and estimates for significant offsite water conveyance and so this evaluation is not a comprehensive list of all cross drains required for each conceptual corridor, but is meant to provide an inventory for cost comparison purposes. A field review was performed along CR 532 (Nova Road) as part of this effort to identify existing cross drains in locations where FDOT Straight Line Diagrams or ERP permit data was unattainable along existing roadways that paralleled an alternative alignment. There were three identified animal crosses along CR 532 (Nova Road) during the field review. Quantities within this analysis include hydraulic crossings for offsite conveyance only. It is recommended to evaluate wildlife commitments within the PD&E phase.

No hydrologic/hydraulic modeling was performed as part of this analysis. The estimates of location and size for the cross drains are a preliminary estimate of what would be required in order to not create substantial changes in the flood elevations adjacent to the project; however, this cannot be confirmed without further evaluation in future phases. Since the existing terrain is comprised of wetland sloughs, the regression equation was used during analysis to consider storage within the contributing basin.

Along the conceptual corridors, existing and proposed cross drain locations were identified by review of the Digital Elevation Model (DEM), Federal Emergency Management Agency (FEMA) floodplains, National Wetland Inventory (NWI), existing permit information, FDOT Straight Line Diagrams, field review, and aerial imagery. The following approaches were used:

1. If there is an existing cross drain currently conveying offsite flow, within close proximity either upstream or downstream of the proposed alignment, it is assumed the proposed cross drain size will match the existing cross drain. Existing hydraulic crossings along SR 520, SR 524, CR 532, CR 419, or US 192 were reviewed to determine existing pipe sizing and bridge locations.

2. The C-30 crossing over SFWMD canal right-of-way is assumed to be bridged to meet U.S. Coast Guard navigational requirements regarding all horizontal and vertical clearances. The C-30 canal crossing is anticipated to require both a Department of Transportation (Federal) Permit and a SFWMD Notice General Permit.

3. In areas where a proposed cross drain location is identified and there is no existing flow data, the USGS Regression Equations for Florida Region 4 (Q based off of contributing area and percent available storage) will be utilized to determine the design flow. The Continuity Equation, Q=vA, will be applied, using a velocity of 6 feet per second, to determine the required cross sectional area for the proposed cross drain. A pipe or culvert size based on this cross sectional area will be provided for cost purposes.

   Preliminary basins were delineated using the FDEP waterbody shapefile (October 2020) for areas with off-site conveyance as denoted by FEMA floodplains. Off-site conveyance where no

FEMA floodplain is identified was not considered for evaluation during this time. Basins were reviewed and combined to create upstream contributing areas for each proposed cross drain. Cross drains with a contributing basin less than 130 acres were excluded from analysis.

For basins that use the Regression Equations, storage area was determined from the U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) and U.S. Fish and Wildlife Service (USFWS) NWI. These storage areas were reviewed to ensure storage is still provided within the current condition, and areas that have been drained for agricultural production were removed.

Proposed cross drains are sized for the 50-year design storm event. It is assumed that proposed bridges will be used to convey off-site flow for the Econlockhatchee River and St. Johns River.

Pipe sizing assumed the required cross sectional area is the minimum allowable size and rounded up to the nearest conventional pipe size. Generally the surrounding terrain is comprised of wetland sloughs, thus the maximum pipe size used was a 30-inch RCP. Box culverts were sized for any areas resulting in a large number of barrels for a 30-inch RCP. Where box culverts were used, it was assumed that the maximum height is 4-feet where 2-feet will actually convey the runoff.

4. For locations where the alternative alignment is located within the St. Johns River floodplain, floodplain relief pipes were placed within the limits outside of the bridge extents. The depth between the existing ground elevation and the FEMA BFE set the size of the pipe barrel and it was assumed that a crossing will be provided every 0.25-mile (1,300-feet).

Quantity Estimates

To provide a comparison between the alternative alignment options, quantity estimates for each proposed cross drain or existing cross drain extension were computed with the following assumptions:

- Endwalls will be used over MES due to available space within the typical section & spaced approximately 10-feet from Right-of-Way limit.
- Riprap ditch lining will be used at both sides of each cross drain since the design velocity is at 6 fps. The riprap will extend 10-feet to the Right-of-Way and will be 0.5-feet deep. Any cross drains that were sized based upon existing cross drains were also assumed to require ditch lining.
- All box culverts will use Concrete Class IV and will follow Tables 9 – 16 in Index 400-292 of the FDOT Design Standards for the wall thickness (varies from 8" to 12") to quantify the required concrete with an additional 10% for box culvert corners and wingwalls.
- All pipes and culverts cost estimates were based on a per linear foot and per barrel estimate and multiplied by the number of barrels and linear feet of pipe would be needed for the crossing. Costs do not consider the change of unit costs for utilizing multi-barrel endwalls. Review of the FDOT 12month moving average unit costs between a single endwall and a double endwall was equivalent per barrel.

- All box culverts reinforcing steel has an approximate ratio of 265 between the required cubic yards of concrete and pounds of steel. This ratio was estimated from three CBC designs within FPID 201032-6-52-01 and FPID 410666-3-52-01.



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CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CF&M Study for the Osceola-Brevard County Connector
CFX No. 599-229

Cross Drain Analysis Figure

N
W E
S

0 1.5 3 6 Miles

Legend

- SFWMD Canal R/W
- Alignment Alternatives
- Long Proposed Bridges
- Short Proposed Bridges

Existing Structure

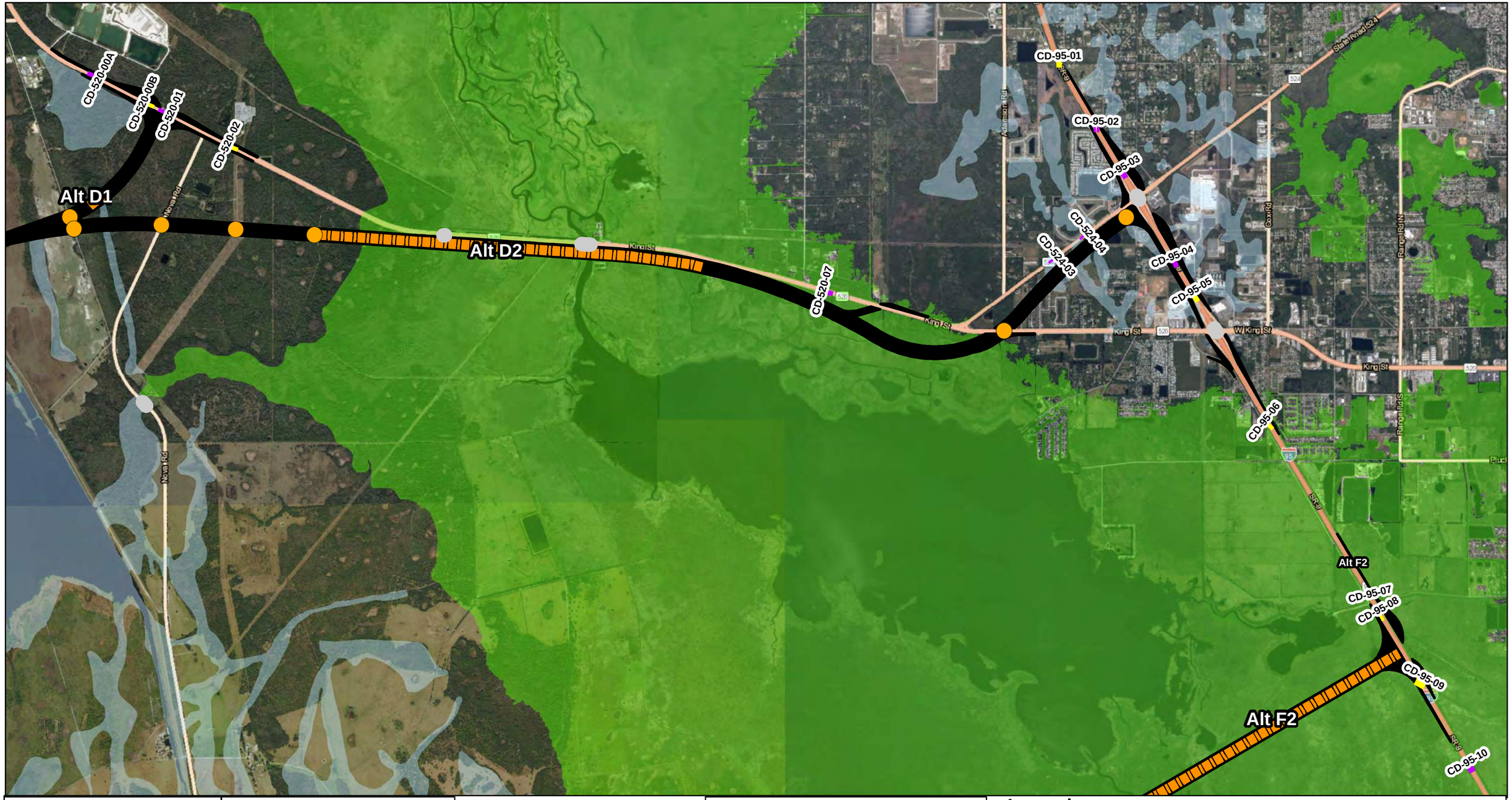
- Existing Box Culvert
- Existing Pipe
- Existing Bridges

Proposed CD Method

- Floodplain
- Regression

FEMA Flood Zone

- A
- AE
- AH
- AO
- OPEN WATER
- VE



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CF&M Study for the Osceola-Brevard County Connector
CFX No. 599-229

Existing Cross Drains
Figure 1

N
W E
S

0 0.4 0.8 1.6 Miles

Legend

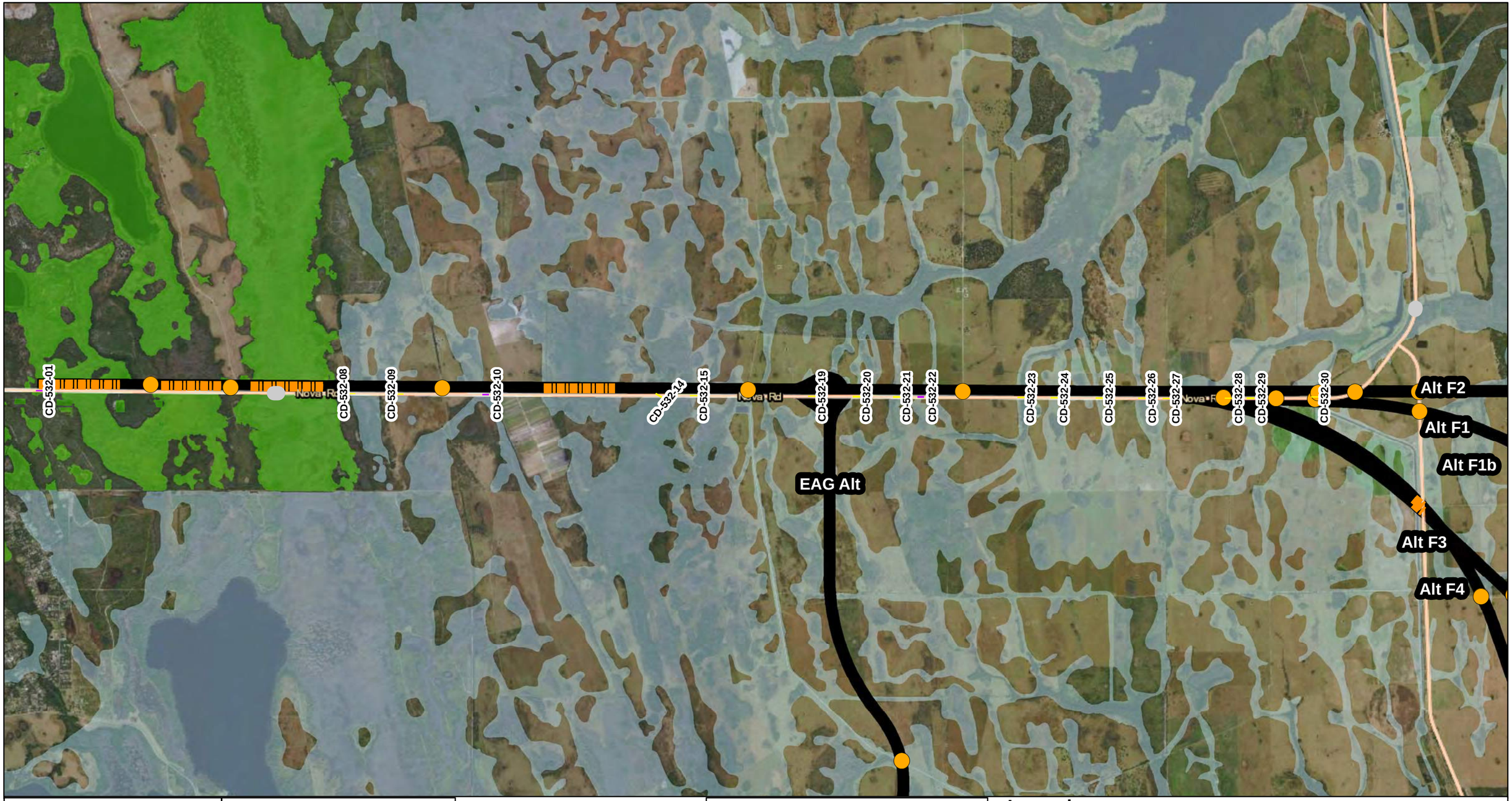
- Alignment Alternatives
- Existing Bridges
- Long Proposed Bridges
- Short Proposed Bridges

Structure

- Existing Box Culvert
- Existing Pipe

FEMA Flood Zone

- A
- AE



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CF&M Study for the Osceola-Brevard County Connector
CFX No. 599-229

Existing Cross Drains
Figure 2

N
W E
S

0 0.5 1 2 Miles

Legend

- Alignment Alternatives
- Existing Bridges
- Long Proposed Bridges
- Short Proposed Bridges

Structure

- Existing Box Culvert
- Existing Pipe

FEMA Flood Zone

- A
- AE



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CF&M Study for the Osceola-Brevard County Connector
CFX No. 599-229

Existing Cross Drains
Figure 3

N
W E
S

0 0.5 1 2 Miles

Legend

- Alignment Alternatives
- Existing Bridges
- Long Proposed Bridges
- Short Proposed Bridges

Structure

- Existing Box Culvert
- Existing Pipe

FEMA Flood Zone

- A
- AE

Cross Drain Summary Table

PROJECT: CF&M Study for the Osceola-Brevard County Connector

By: JM 1/26/2021

LOCATION: Osceola, Orange, and

Checked: AE 1/26/2021

Structure No.	Pipe Sizing Methodology	Length	No. of Endwalls	Cross Drain Size	Costs
CD-520-00A	Existing	130	2	1- 36'' Pipe	$29,461
CD-520-00B	Existing	650	2	3- 10'x4' CBC	$2,815,511
CD-520-01	Existing	670	1	1- 36'' PIPE	$95,238
CD-520-02	Existing	145	2	1- 10'x3' CBC	$176,357
CD-520-03	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-520-04	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-520-05	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-520-06	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-520-07	Existing	500	2	2- 18'' PIPE	$92,450
CD-520-08	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-524-01	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-524-02	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-524-03	Existing	500	2	1- 30'' PIPE	$65,886
CD-524-04	Existing	500	2	3- 30'' PIPE	$197,659
CD-532-01	Existing	500	2	3- 24'' PIPE	$162,625
CD-532-02	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-532-03	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-532-04	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-532-05	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-532-06	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-532-07	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-532-08	Existing	500	2	1- 4'x3' CBC	$304,120
CD-532-09	Existing	500	2	1- 4'x3' CBC	$304,120
CD-532-10	Existing	500	2	2- 24'' PIPE	$108,416
CD-532-11	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-532-12	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-532-13	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-532-14	Existing	500	2	1- 10'x3' CBC	$674,759
CD-532-15	Existing	500	2	1- 4.5'x2' CBC	$290,238
CD-532-16	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-532-17	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-532-18	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-532-19	Existing	500	2	1- 9'x3' CBC	$560,142
CD-532-20	Existing	500	2	1- 8'x2.5' CBC	$432,236
CD-532-21	Existing	500	2	1- 7.5'x4' CBC	$472,695
CD-532-22	Existing	500	2	2- 24'' PIPE	$108,416
CD-532-23	Existing	500	2	1- 10.5'x5.5' CBC	$809,576
CD-532-24	Existing	500	2	1- 5'x2.5' CBC	$324,442
CD-532-25	Existing	500	2	1- 9'x3.5' CBC	$580,391
CD-532-26	Existing	500	2	1- 4'x2.5' CBC	$290,201
CD-532-27	Existing	500	2	1- 7'x4' CBC	$452,410
CD-532-28	Existing	500	2	2- 7'x5' CBC	$971,895*
CD-532-29	Existing	500	2	1- 8'x4' CBC	$486,022
CD-532-30	Existing	500	2	1- 11'x7.5' CBC	$1,025,397*

Cross Drain Summary Table

PROJECT: CF&M Study for the Osceola-Brevard County Connector

By: JM 1/26/2021

LOCATION: Osceola, Orange, and

Checked: AE 1/26/2021

Structure No.	Pipe Sizing Methodology	Length	No. of Endwalls	Cross Drain Size	Costs
CD-192-00	Existing	500	2	2- 10'x5' CBC	$1,525,424
CD-192-01	Existing	500	2	1- 7'x3' CBC	$418,872
CD-192-02	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-192-03	Existing	500	2	1- 10'X4' CBC	$715,256
CD-192-04	Existing	500	2	1- 10'X3' CBC	$674,759
CD-192-05	Existing	500	2	1- 10'x3' CBC	$674,759
CD-192-06	Existing	500	2	1- 8'X3' CBC	$452,484
CD-192-07	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-192-08	Existing	500	2	1- 6'x3' CBC	$378,302
CD-192-09	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-192-10	Existing	500	2	2- 6'x5' CBC	$904,672
CD-192-11	Existing	500	2	1- 10'x4' CBC	$715,256
CD-192-12	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-192-13	Existing	500	2	2- 6'x6' CBC	$971,747
CD-192-14	Existing	500	2	1- 5'x4' CBC	$378,228
CD-192-15	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-192-17	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-192-18	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-192-19	Existing	500	2	1- 24'' PIPE	$54,208
CD-95-01	Existing	--	--	1- 8'x4' CBC	No Anticipated Impact
CD-95-02	Existing	180	2	2- 36'' PIPE	$72,229
CD-95-03	Existing	485	2	1- 42'' PIPE	$90,772
CD-95-04	Existing	350	2	1- 36'' PIPE	$58,736
CD-95-05	Existing	310	2	1- 11'x6' CBC	$575,158
CD-95-06	Existing	65	1	2- 9'x5' CBC	$133,605
CD-95-07	Existing	170	2	2- 12'x10' CBC	$827,831
CD-95-08	Existing	400	2	2- 7'x9' CBC	$1,143,374
CD-95-09	Existing	530	2	2- 8'x9' CBC	$1,620,309
CD-95-10	Existing	--	--	1- 42'' PIPE	No Anticipated Impact
CD-95-11	Existing	120	2	2- 30'' PIPE	$46,865
CD-95-12	Existing	800	2	2- 24'' PIPE	$162,140
CD-95-13	Existing	75	1	3- 8'x4' CBC	$198,202
CD-95-14	Existing	155	2	1- 9'x8' CBC	$215,047
CD-95-15	Existing	535	2	1- 5'x4' CBC	$405,773
CD-95-16	Existing	170	2	1- 30'' PIPE	$29,019
CD-95-17	Existing	60	1	1- 24'' PIPE	$10,092
CD-95-18	Existing	60	1	1- 6'x6' CBC	$50,827
CD-95-19	Existing	125**	1	3- 48'' PIPE	$121,584
CD-95-20	Existing	--	--	1- 36'' PIPE	No Anticipated Impact
CD-95-21	Existing	640	1	1- 36'' PIPE	$91,246
CD-95-22	Existing	440	2	1- 24'' PIPE	$48,836
CD-95-23	Existing	510	2	1- 24'' PIPE	$55,104
CD-95-24	Existing	490	2	1- 24'' PIPE	$53,313
CD-95-25	Existing	480	2	1- 24'' PIPE	$52,417
CD-95-26	Existing	--	--	2- 24'' PIPE	No Anticipated Impact
CD-95-27	Existing	150	1	1- 5'x4' CBC	$110,414

Cross Drain Summary Table

PROJECT: CF&M Study for the Osceola-Brevard County Connector

By: JM 1/26/2021

LOCATION: Osceola, Orange, and Checked: AE 1/26/2021

Structure No.	Pipe Sizing Methodology	Length	No. of Endwalls	Cross Drain Size	Costs
CD-RG-01	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-RG-02	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-RG-03	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-RG-04	Regression	500	2	8- 6'x4' CBC	$3,350,387
CD-RG-05	Regression	500	2	4- 30'' PIPE	$263,545
CD-RG-06	Regression	500	2	9- 30'' PIPE	$592,976
CD-RG-07	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-RG-08	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-RG-09	Regression	500	2	6- 5'x4' CBC	$2,269,367
CD-RG-10	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-RG-11	Regression	500	2	6- 5'x4' CBC	$2,269,367
CD-RG-12	N/A	N/A	N/A	BRIDGE	Within Proposed Bridge Limits
CD-RG-13	Regression	500	2	6- 30'' PIPE	$395,317
CD-RG-14	Regression	500	2	11- 30'' PIPE	$724,748
CD-RG-15	Regression	500	2	7- 30'' PIPE	$461,203
CD-RG-16	Regression	500	2	8- 30'' PIPE	$527,090
CD-RG-17	Regression	500	2	9- 30'' PIPE	$592,976
CD-RG-18	Regression	500	2	9- 30'' PIPE	$592,976
CD-RG-19	Regression	500	2	8- 30'' PIPE	$527,090
CD-RG-20	Regression	500	2	6- 30'' PIPE	$395,317
CD-FP-01	Floodplain	500	2	20- 48'' PIPE	$2,265,064
CD-FP-02	Floodplain	500	2	21- 48'' PIPE	$2,378,318
CD-FP-03	Floodplain	500	2	23- 24'' PIPE	$1,246,789
CD-FP-04	Floodplain	500	2	24- 24'' PIPE	$1,300,997
CD-FP-05	Floodplain	500	2	8- 24'' PIPE	$433,666

NOTE:

** Cross drain(s) are included in some alignments, but within proposed bridge limits for other alignments*

*** Include an addition 75' of pipe & MHs to connect to the existing canal to mimic existing design per SJRWMD ERP 119341-1*

Peak Flow Rate: Regression Method

PROJECT: CF&M Study for the Osceola-Brevard County Connector BY: AE 1/26/2021

LOCATION: Osceola, Orange, and Brevard Counties, FL CHECKED: JN 1/26/2021

Cross Drain ID	FP ID	Basin	Basin storage			50 yr- Peak discharge (cfs)	Comments
		Sq miles	Sq miles	%	% Used		
--	1	0.07	0.003	4.43	4.43	79.40	Merge with FP 2
--	2	0.35	0.18	51.77	34.12	99.15	
CD-RG-01	N/A	N/A	N/A	N/A	N/A	N/A	Removed
CD-RG-02	N/A	N/A	N/A	N/A	N/A	N/A	Removed
CD-RG-03	N/A	N/A	N/A	N/A	N/A	N/A	Removed
--	5	0.20	0.04	17.62	17.62	91.23	Merge with 6
--	6	0.10	0.01	11.05	11.05	71.38	Merge with 7
--	7	5.15	2.02	39.22	34.12	509.86	
CD-RG-04	5, 6, & 7	5.45	2.07	37.91	34.12	527.75	Bonnet Gully
--	8	0.19	0.049	25.85	25.85	76.22	Merges with FP 9 Outfall
CD-RG-05	9	0.21	0.025	11.74	11.74	109.63	
CD-RG-06	10	0.91	0.124	13.67	13.67	252.87	
--	--	--				--	Bridge (Canal adjacent to a roadway)
--	11	0.11	0.042	38.13	34.12	49.00	
--	12	0.12	0.018	15.22	15.22	70.70	At top of slough, merge with FP 11
CD-RG-08	N/A	N/A	N/A	N/A	N/A	N/A	Removed
--	13	--	--			--	Match Existing CD sizes
--	14	--	--			--	Match Existing CD sizes
--	15A	--	--			--	Match Existing CD sizes
--	18	--	--			--	Match Existing CD sizes
--	19	--	--			--	Match Existing CD sizes
--	20A	--	--			--	Match Existing CD sizes
CD-RG-09	21A	1.25	0.15	11.67	11.67	325.67	Garrett Branch
--	21B	8.30	2.44	29.42	29.42	722.79	Bridge (CR 532 over Cox Creek)
--	23B	--	--			--	Match Existing CD sizes
--	23C	0.05	0.00	0.00	0.00	128.57	Merge to 23D
--	23D	1.65	0.26	16.02	16.02	342.12	
CD-RG-11	23C, 23D	1.70	0.26	15.55	15.55	352.39	Upstream of Wolf Creek
--	26	--	--			--	Match Existing CD sizes
--	27	--	--			--	Match Existing CD sizes
CD-RG-12	N/A	N/A	N/A	N/A	N/A	N/A	Removed
--	30B	--	--			--	Bridge (CR 419 over Wolf Creek)
CD-RG-13	31A	0.66	0.18	27.50	27.50	158.81	
--	31B	--	--			--	Bridge (CR 419 over Pennywash Creek)
CD-RG-14	31C	1.34	0.20	15.15	15.15	307.88	
CD-RG-15	31D	0.36	0.02	5.60	5.60	198.83	
CD-RG-16	38A	0.54	0.04	7.57	7.57	228.94	
--	38C	--	--			--	Ditched directly to St. Johns River Floodplains
--	42A	--	--			--	Match Existing CD sizes
CD-RG-17	43A	0.84	0.10	12.50	12.50	249.15	
--	45A	--	--			--	Match Existing CD sizes
--	45B	--	--			--	Match Existing CD sizes
--	48	0.51	0.04	8.01	8.01	216.68	
--	49	0.18	0.02	8.47	8.47	112.61	Merge with FP 48
CD-RG-18	48, 49	0.69	0.06	8.13	8.13	259.08	
CD-RG-19	50	0.40	0.02	5.23	5.23	217.03	
CD-RG-20	51	0.51	0.09	16.71	16.71	164.67	

Assumptions:

- Regression equations for Region 4
- Excluded conveyance areas from NHD dataset (i.e. river channels, etc.)
- Capped storage at 34.12% per limitations to Region 4 Regression Equations
- Assume if Basin area is less than 0.2 sq. miles, this area can be routed to adjacent crossing

Proposed Pipe: Velocity Method

PROJECT: CF&M Study for the Osceola-Brevard County Connector BY: AE 1/26/2021

LOCATION: Osceola, Orange, and Brevard Counties, FL CHECKED: JN 1/26/2021

Structure No.	Peak Discharge Methodology	50-yr Peak Discharge (cfs)	Velocity (ft/s)	Minimum Cross Sectional Area (sf)	Cross Drain Size	Provided Cross Section Area (sf)
CD-RG-01	--	--	--	--	Bridge	--
CD-RG-02	--	--	--	--	Bridge	--
CD-RG-03	--	--	--	--	Bridge	--
CD-RG-04	Regression	527.75	6	88.0	8- 6'x 4' CBC	96.0
CD-RG-05	Regression	109.63	6	18.3	4- 30'' PIPE	19.6
CD-RG-06	Regression	252.87	6	42.1	9- 30'' PIPE	44.2
CD-RG-07	--	--	--	--	Bridge	--
CD-RG-08	--	--	--	--	Bridge	--
CD-RG-09	Regression	325.67	6	54.3	6- 5'x 4' CBC	60.0
CD-RG-10	--	--	--	--	Bridge	--
CD-RG-11	Regression	352.39	6	58.7	6- 5'x 4' CBC	60.0
CD-RG-12	--	--	--	--	Bridge	--
CD-RG-13	Regression	158.81	6	26.5	6- 30'' PIPE	29.5
CD-RG-14	Regression	307.88	6	51.3	11- 30'' PIPE	54.0
CD-RG-15	Regression	198.83	6	33.1	7- 30'' PIPE	34.4
CD-RG-16	Regression	228.94	6	38.2	8- 30'' PIPE	39.3
CD-RG-17	Regression	249.15	6	41.5	9- 30'' PIPE	44.2
CD-RG-18	Regression	259.08	6	43.2	9- 30'' PIPE	44.2
CD-RG-19	Regression	217.03	6	36.2	8- 30'' PIPE	39.3
CD-RG-20	Regression	164.67	6	27.4	6- 30'' PIPE	29.5

Assumptions

(1) The design frequency event is 50-year (2% probability flow)

(2) Continuity Equation (Q=vA) was used to determine the minimum cross sectional area of the cross drain.

(3) Concrete Box Culverts (CBC) dimensions are shown as width x height.

(4) CBC assumes a 2-ft freeboard within the culvert.

Proposed Pipe: Floodplain Method

PROJECT: CF&M Study for the Osceola-Brevard County Connector
LOCATION: Osceola, Orange, and Brevard Counties, FL

BY: AE 01/26/21
CHECKED: JN 01/26/21

Cross Drain ID	Alignment	FP IDs	Floodplain Extents	Cross Drain Size	Comments
		(ft)	Length (ft)		
CD-FP-01	F3	32, 36	25,500	20- 48'' PIPE	
CD-FP-02	F4	33, 34	27,300	21- 48'' PIPE	
CD-FP-03	F1b	39, 47	29,700	23- 24'' PIPE	
CD-FP-04	F1	44, 40	30,200	24- 24'' PIPE	
CD-FP-05	F2	22	9,500	8- 24'' PIPE	

Assumptions:

- At locations where FEMA Floodplain Boundaries for the St. John's River are located along Alignment
- The length of the Alignment that is below the FEMA BFE, where a bridge is not anticipated
- Assumes a pipe every 1,300-ft along the Alignment within the FEMA Floodplain
- Pipe size is the average depth between the existing ground elevation and the FEMA BFE

Cost Estimates

PROJECT: CF&M Study for the Osceola-Brevard County Connector — BY: JM 1/26/2021

LOCATION: Osceola, Orange, and Brevard Counties, FL — CHECKED: AE 1/26/2021

Round Pipe Estimates

48" CD				
Item	Amount	Unit	Cost	
Conc Class I, Endwalls	8.15	CY	$ 11,307.23	(1)
Cost Per Endwall			$ 11,307.23	
Pipe Culvert, Opt Material, Round, 48"S/CD	1	LF	$ 187.79	
Cost of Pipe Per LF Per Barrel			$ 187.79	
Riprap, Rubble, F&I, Ditch Lining	1.80	TN	$ 249.78	
Cost of Riprap Per Barrel Per No. of Endwalls			$ 249.78	
Manholes, J-8, <10'	1.00	EA	$ 7,375.25	
Cost Per Manhole			$ 7,375.25	

42" CD				
Item	Amount	Unit	Cost	
Conc Class I, Endwalls	6.33	CY	$ 8,782.18	(1)
Cost Per Endwall			$ 8,782.18	
Pipe Culvert, Opt Material, Round, 42"S/CD	1	LF	$ 156.48	
Cost of Pipe Per LF Per Barrel			$ 156.48	
Riprap, Rubble, F&I, Ditch Lining	1.60	TN	$ 222.03	
Cost of Riprap Per Barrel Per No. of Endwalls			$ 222.03	

36" CD				
Item	Amount	Unit	Cost	
Straight Concrete Endwalls, 36", Single, 0 Degrees, Round	1	EA	$ 7,223.42	(2)
Cost Per Endwall			$ 7,223.42	
Pipe Culvert, Opt Material, Round, 36"S/CD	1	LF	$ 133.07	
Cost of Pipe Per LF Per Barrel			$ 133.07	
Riprap, Rubble, F&I, Ditch Lining	1.36	TN	$ 188.11	
Cost of Riprap Per Barrel Per No. of Endwalls			$ 188.11	

30" CD				
Item	Amount	Unit	Cost	
Straight Concrete Endwalls, 30", Single, 0 Degrees, Round	1	EA	$ 5,973.03	(2)
Cost Per Endwall			$ 5,973.03	
Pipe Culvert, Opt Material, Round, 30"S/CD	1	LF	$ 111.72	
Cost of Pipe Per LF Per Barrel			$ 111.72	
Riprap, Rubble, F&I, Ditch Lining	1.13	TN	$ 157.27	
Cost of Riprap Per Barrel Per No. of Endwalls			$ 157.27	

24" CD				
Item	Amount	Unit	Cost	
Straight Concrete Endwalls, 24", Single, 0 Degrees, Round	1	EA	$ 5,488.07	(2)
Cost Per Endwall			$ 5,488.07	
Pipe Culvert, Opt Material, Round, 24"S/CD	1	LF	$ 89.54	
Cost of Pipe Per LF Per Barrel			$ 89.54	
Riprap, Rubble, F&I, Ditch Lining	0.91	TN	$ 126.43	
Cost of Riprap Per Barrel Per No. of Endwalls			$ 126.43	

18" CD				
Item	Amount	Unit	Cost	
Straight Concrete Endwalls, 18", Single, 0 Degrees, Round	1	EA	$ 4,206.14	(2)
Cost Per Endwall			$ 4,206.14	
Pipe Culvert, Opt Material, Round, 18"S/CD	1	LF	$ 78.34	
Cost of Pipe Per LF Per Barrel			$ 78.34	
Riprap, Rubble, F&I, Ditch Lining	0.76	TN	$ 104.85	
Cost of Riprap Per Barrel Per No. of Endwalls			$ 104.85	

Table 1

Rip-Rap Assumptions:	
Length =	10 ft
Width =	Y
Thickness =	0.5 ft

Table 2

Size	Y Value
48"	6'-9"
42"	6'-0"
36"	5'-1"
30"	4'-3"
24"	3'-5"
18"	2'-10"

Follows FDOT 2020 Standard Plans, Index 430-030, Dimension 'Y'

Table 3

Size	Class I Conc (CY) - Single
48"	8.15
42"	6.33

Follows FDOT 2019 Standard Plans, Index 430-030

Cost Estimates

PROJECT: CF&M Study for the Osceola-Brevard County Connector — BY: JM 1/26/2021

LOCATION: Osceola, Orange, and Brevard Counties, FL — CHECKED: AE 1/26/2021

Concrete Box Culvert Estimates

4'x2.5' CBC	4'	x	2.5'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.43	CY	$ 454.42	(3)
Reinforcing Steel - Roadway	114	LB	$ 149.34	(4)
Cost Per LF Per Barrel			$ 603.76	
Riprap, Rubble, F&I, Ditch Lining	1.42	TN	$ 197.36	
Riprap Cost Per Barrel Per No. of Endwalls			$ 197.36	

4'x3' CBC	4'	x	3'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.45	CY	$ 475.56	(3)
Reinforcing Steel - Roadway	120	LB	$ 157.20	(4)
Cost Per LF Per Barrel			$ 632.76	
Riprap, Rubble, F&I, Ditch Lining	1.42	TN	$ 197.36	
Riprap Cost Per Barrel Per No. of Endwalls			$ 197.36	

4.5'x2' CBC	4.5'	x	2'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.43	CY	$ 454.42	(3)
Reinforcing Steel - Roadway	114	LB	$ 149.34	(4)
Cost Per LF Per Barrel			$ 603.76	
Riprap, Rubble, F&I, Ditch Lining	1.56	TN	$ 215.86	
Riprap Cost Per Barrel Per No. of Endwalls			$ 215.86	

5'x2.5' CBC	5'	x	2.5'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.48	CY	$ 507.26	(3)
Reinforcing Steel - Roadway	128	LB	$ 167.68	(4)
Cost Per LF Per Barrel			$ 674.94	
Riprap, Rubble, F&I, Ditch Lining	1.69	TN	$ 234.36	
Riprap Cost Per Barrel Per No. of Endwalls			$ 234.36	

5'x4' CBC	5'	x	4'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.56	CY	$ 591.81	(3)
Reinforcing Steel - Roadway	149	LB	$ 195.19	(4)
Cost Per LF Per Barrel			$ 787.00	
Riprap, Rubble, F&I, Ditch Lining	1.69	TN	$ 234.36	
Riprap Cost Per Barrel Per No. of Endwalls			$ 234.36	

6'x3' CBC	6'	x	3'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.56	CY	$ 591.81	(3)
Reinforcing Steel - Roadway	149	LB	$ 195.19	(4)
Cost Per LF Per Barrel			$ 787.00	
Riprap, Rubble, F&I, Ditch Lining	1.96	TN	$ 271.37	
Riprap Cost Per Barrel Per No. of Endwalls			$ 271.37	

6'x4' CBC	6'	x	4'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.62	CY	$ 655.22	(3)
Reinforcing Steel - Roadway	165	LB	$ 216.15	(4)
Cost Per LF Per Barrel			$ 871.37	
Riprap, Rubble, F&I, Ditch Lining	1.96	TN	$ 271.37	
Riprap Cost Per Barrel Per No. of Endwalls			$ 271.37	

6'x5' CBC	6'	x	5'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.67	CY	$ 708.06	(3)
Reinforcing Steel - Roadway	178	LB	$ 233.18	(4)
Cost Per LF Per Barrel			$ 941.24	
Riprap, Rubble, F&I, Ditch Lining	1.96	TN	$ 271.37	
Riprap Cost Per Barrel Per No. of Endwalls			$ 271.37	

Table 4

CBC Wall Thickness Assumptions:	
Size	Y Value
<9'	8''
=9'	9''
=10'	10''
=11'	11''
=12'	12''

Follows FDOT 2020 Standard Plans, Index 400-929

Cost Estimates

PROJECT: CF&M Study for the Osceola-Brevard County Connector — BY: JM 1/26/2021

LOCATION: Osceola, Orange, and Brevard Counties, FL — CHECKED: AE 1/26/2021

6'x6' CBC	6'	x	6'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.72	CY	$ 760.90	(3)
Reinforcing Steel - Roadway	191	LB	$ 250.21	(4)
Cost Per LF Per Barrel			$ 1,011.11	
Riprap, Rubble, F&I, Ditch Lining	1.96	TN	$ 271.37	
Riprap Cost Per Barrel Per No. of Endwalls			$ 271.37	

7'x3' CBC	7'	x	3'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.62	CY	$ 655.22	(3)
Reinforcing Steel - Roadway	165	LB	$ 216.15	(4)
Cost Per LF Per Barrel			$ 871.37	
Riprap, Rubble, F&I, Ditch Lining	2.22	TN	$ 308.37	
Riprap Cost Per Barrel Per No. of Endwalls			$ 308.37	

7'x4' CBC	7'	x	4'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.67	CY	$ 708.06	(3)
Reinforcing Steel - Roadway	178	LB	$ 233.18	(4)
Cost Per LF Per Barrel			$ 941.24	
Riprap, Rubble, F&I, Ditch Lining	2.22	TN	$ 308.37	
Riprap Cost Per Barrel Per No. of Endwalls			$ 308.37	

7'x5' CBC	7'	x	5'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.72	CY	$ 760.90	(3)
Reinforcing Steel - Roadway	191	LB	$ 250.21	(4)
Cost Per LF Per Barrel			$ 1,011.11	
Riprap, Rubble, F&I, Ditch Lining	2.22	TN	$ 308.37	
Riprap Cost Per Barrel Per No. of Endwalls			$ 308.37	

7'x9' CBC	7'	x	9'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	1.07	CY	$ 1,130.78	(3)
Reinforcing Steel - Roadway	284	LB	$ 372.04	(4)
Cost Per LF Per Barrel			$ 1,502.82	
Riprap, Rubble, F&I, Ditch Lining	2.22	TN	$ 308.37	
Riprap Cost Per Barrel Per No. of Endwalls			$ 308.37	

7.5'x4' CBC	7.5'	x	4'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.7	CY	$ 739.76	(3)
Reinforcing Steel - Roadway	186	LB	$ 243.66	(4)
Cost Per LF Per Barrel			$ 983.42	
Riprap, Rubble, F&I, Ditch Lining	2.36	TN	$ 326.88	
Riprap Cost Per Barrel Per No. of Endwalls			$ 326.88	

8'x2.5' CBC	8'	x	2.5'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.64	CY	$ 676.35	(3)
Reinforcing Steel - Roadway	170	LB	$ 222.70	(4)
Cost Per LF Per Barrel			$ 899.05	
Riprap, Rubble, F&I, Ditch Lining	2.49	TN	$ 345.38	
Riprap Cost Per Barrel Per No. of Endwalls			$ 345.38	

8'x3' CBC	8'	x	3'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.67	CY	$ 708.06	(3)
Reinforcing Steel - Roadway	178	LB	$ 233.18	(4)
Cost Per LF Per Barrel			$ 941.24	
Riprap, Rubble, F&I, Ditch Lining	2.49	TN	$ 345.38	
Riprap Cost Per Barrel Per No. of Endwalls			$ 345.38	

Cost Estimates

PROJECT: CF&M Study for the Osceola-Brevard County Connector — BY: JM 1/26/2021

LOCATION: Osceola, Orange, and Brevard Counties, FL — CHECKED: AE 1/26/2021

8'x4' CBC	8'	x	4'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.72	CY	$ 760.90	(3)
Reinforcing Steel - Roadway	191	LB	$ 250.21	(4)
Cost Per LF Per Barrel			$ 1,011.11	
Riprap, Rubble, F&I, Ditch Lining	2.49	TN	$ 345.38	
Riprap Cost Per Barrel Per No. of Endwalls			$ 345.38	

8'x9' CBC	8'	x	9'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	1.13	CY	$ 1,194.18	(3)
Reinforcing Steel - Roadway	300	LB	$ 393.00	(4)
Cost Per LF Per Barrel			$ 1,587.18	
Riprap, Rubble, F&I, Ditch Lining	2.49	TN	$ 345.38	
Riprap Cost Per Barrel Per No. of Endwalls			$ 345.38	

9'x3' CBC	9'	x	3'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.83	CY	$ 877.14	(3)
Reinforcing Steel - Roadway	220	LB	$ 288.20	(4)
Cost Per LF Per Barrel			$ 1,165.34	
Riprap, Rubble, F&I, Ditch Lining	2.80	TN	$ 388.55	
Riprap Cost Per Barrel Per No. of Endwalls			$ 388.55	

9'x3.5' CBC	9'	x	3.5'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.86	CY	$ 908.85	(3)
Reinforcing Steel - Roadway	228	LB	$ 298.68	(4)
Cost Per LF Per Barrel			$ 1,207.53	
Riprap, Rubble, F&I, Ditch Lining	2.80	TN	$ 388.55	
Riprap Cost Per Barrel Per No. of Endwalls			$ 388.55	

9'x5' CBC	9'	x	3.5'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	0.86	CY	$ 908.85	(3)
Reinforcing Steel - Roadway	228	LB	$ 298.68	(4)
Cost Per LF Per Barrel			$ 1,207.53	
Riprap, Rubble, F&I, Ditch Lining	2.80	TN	$ 388.55	
Riprap Cost Per Barrel Per No. of Endwalls			$ 388.55	

9'x8' CBC	9'	x	8'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	1.13	CY	$ 1,194.18	(3)
Reinforcing Steel - Roadway	300	LB	$ 393.00	(4)
Cost Per LF Per Barrel			$ 1,587.18	
Riprap, Rubble, F&I, Ditch Lining	2.80	TN	$ 388.55	
Riprap Cost Per Barrel Per No. of Endwalls			$ 388.55	

10'x3' CBC	10'	x	3'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	1.00	CY	$ 1,056.80	(3)
Reinforcing Steel - Roadway	265	LB	$ 347.15	(4)
Cost Per LF Per Barrel			$ 1,403.95	
Riprap, Rubble, F&I, Ditch Lining	3.11	TN	$ 431.72	
Riprap Cost Per Barrel Per No. of Endwalls			$ 431.72	

10'x4' CBC	10'	x	4'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	1.06	CY	$ 1,120.21	(3)
Reinforcing Steel - Roadway	281	LB	$ 368.11	(4)
Cost Per LF Per Barrel			$ 1,488.32	
Riprap, Rubble, F&I, Ditch Lining	3.11	TN	$ 431.72	
Riprap Cost Per Barrel Per No. of Endwalls			$ 431.72	

Cost Estimates

PROJECT: CF&M Study for the Osceola-Brevard County Connector — BY: JM 1/26/2021

LOCATION: Osceola, Orange, and Brevard Counties, FL — CHECKED: AE 1/26/2021

10'x5' CBC	10'	x	5'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	1.13	CY	$ 1,194.18	(3)
Reinforcing Steel - Roadway	300	LB	$ 393.00	(4)
Cost Per LF Per Barrel			$ 1,587.18	
Riprap, Rubble, F&I, Ditch Lining	3.11	TN	$ 431.72	
Riprap Cost Per Barrel Per No. of Endwalls			$ 431.72	

10.5'x5.5' CBC	10.5'	x	5.5'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	1.2	CY	$ 1,268.16	(3)
Reinforcing Steel - Roadway	318	LB	$ 416.58	(4)
Cost Per LF Per Barrel			$ 1,684.74	
Riprap, Rubble, F&I, Ditch Lining	3.25	TN	$ 450.23	
Riprap Cost Per Barrel Per No. of Endwalls			$ 450.23	

11'x6' CBC	11'	x	6'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	1.41	CY	$ 1,490.09	(3)
Reinforcing Steel - Roadway	374	LB	$ 489.94	(4)
Cost Per LF Per Barrel			$ 1,980.03	
Riprap, Rubble, F&I, Ditch Lining	3.42	TN	$ 474.90	
Riprap Cost Per Barrel Per No. of Endwalls			$ 474.90	

11'x7.5' CBC	11'	x	7.5'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	1.52	CY	$ 1,606.34	(3)
Reinforcing Steel - Roadway	403	LB	$ 527.93	(4)
Cost Per LF Per Barrel			$ 2,134.27	
Riprap, Rubble, F&I, Ditch Lining	3.42	TN	$ 474.90	
Riprap Cost Per Barrel Per No. of Endwalls			$ 474.90	

12'x10' CBC	12'	x	10'	
Item	Amount	Unit	Cost	
Conc Class IV, Culverts	1.96	CY	$ 2,071.33	(3)
Reinforcing Steel - Roadway	520	LB	$ 681.20	(4)
Cost Per LF Per Barrel			$ 2,752.53	
Riprap, Rubble, F&I, Ditch Lining	3.73	TN	$ 518.07	
Riprap Cost Per Barrel Per No. of Endwalls			$ 518.07	

NOTE:

(1) New cost estimates do not have straight concrete endwalls >36" with the new costing methodology in FDOT BOE, used 2019 statewide moving average and 2019 standard plans to calculate this value

(2) Straight Conc. EW for Double/Triple/Quadruple is assumed to be equivalent to a single barrel costing. Within this 12m moving average there has been one instance of a double EW being used, and it is close to double the cost of the single barrel EW.

(3) Concrete volume calculated assumes 1LF of CBC for wall thickness per Standard Plans shown in Table 4, with an assumed additional 10% for wingwalls

(4) Reinforcing steel assumes a ratio of 265 pounds of steel for 1 cubic yard of concrete. Ratio derived from Culvert Designed in FPID 201032-6-52-01 and 410666-3-52-01

APPENDIX O

Cultural Resource Desktop Analysis

CULTURAL RESOURCE DESKTOP ANALYSIS FOR THE OSCEOLA-BREVARD COUNTY CONNECTOR PROJECT, OSCEOLA, ORANGE, AND BREVARD COUNTIES, FLORIDA

CONSULTANT:	SEARCH 700 N. 9th Avenue, Pensacola, Florida 32501
PRINCIPAL INVESTIGATOR:	Jessica Fish, MSt, RPA
CLIENT:	Kimley-Horn
DATE:	January 2021
CENTRAL FLORIDA EXPRESSWAY #:	599-229
SEARCH PROJECT #:	T20050

In January 2021, SEARCH completed a cultural resource desktop analysis of the proposed Osceola-Brevard County Connector in Osceola, Orange, and Brevard Counties, Florida. The Central Florida Expressway Authority (CFX) is developing alternatives for a proposed road connecting Interstate 95 (I-95) to the proposed Northeast Connector (CFX Project No. 599-288) in Osceola, Orange, and Brevard Counties, Florida. SEARCH has been tasked by Kimley-Horn with evaluating the location of the eight project corridor alternatives with the purpose of identifying cultural resource potential and previously recorded historic properties that are listed, or may be eligible for listing, in the National Register of Historic Places (NRHP). The Florida Master Site File (FMSF) database was reviewed for any previous surveys or previously recorded resources. Archaeological site probability was evaluated based on various environmental conditions demonstrated to be reliable indicators for past human occupation, including topography, soil drainage, distance to water, and prior disturbance. In addition, the Osceola and Brevard Counties' Property Appraisers' geographic information system (GIS) databases were reviewed to determine if parcels containing structures constructed prior to 1977 are located in the vicinity of the project corridor. For the purposes of this desktop analysis, the Study Area was defined as the proposed project corridor alternatives in addition to a 500-foot (152.4-meter) buffer (**Figure 1**).

ENVIRONMENT

Location and Modern Conditions

The project area (see **Figure 1**) consists of eight corridor alternatives generally running east to west between I-95 and the proposed Northeast Connector in Osceola, Orange, and Brevard Counties, Florida. Total length, including all possible alternatives, is approximately 244.2 miles (393.1 kilometers), although this includes some overlap between corridors (**Table 1**). The project corridor alternatives lie within Township 24 South, Range 33 East; Township 24 South, Range 34 East; Township 24 South, Range 35 East; Township 25 South, Range 32 East; Township 25 South, Range 33 East; Township 25 South, Range 34 East; Township 25 South, Range 35 East; Township 25 South, Range 36 East; Township 26 South, Range 33 East; Township 26 South,

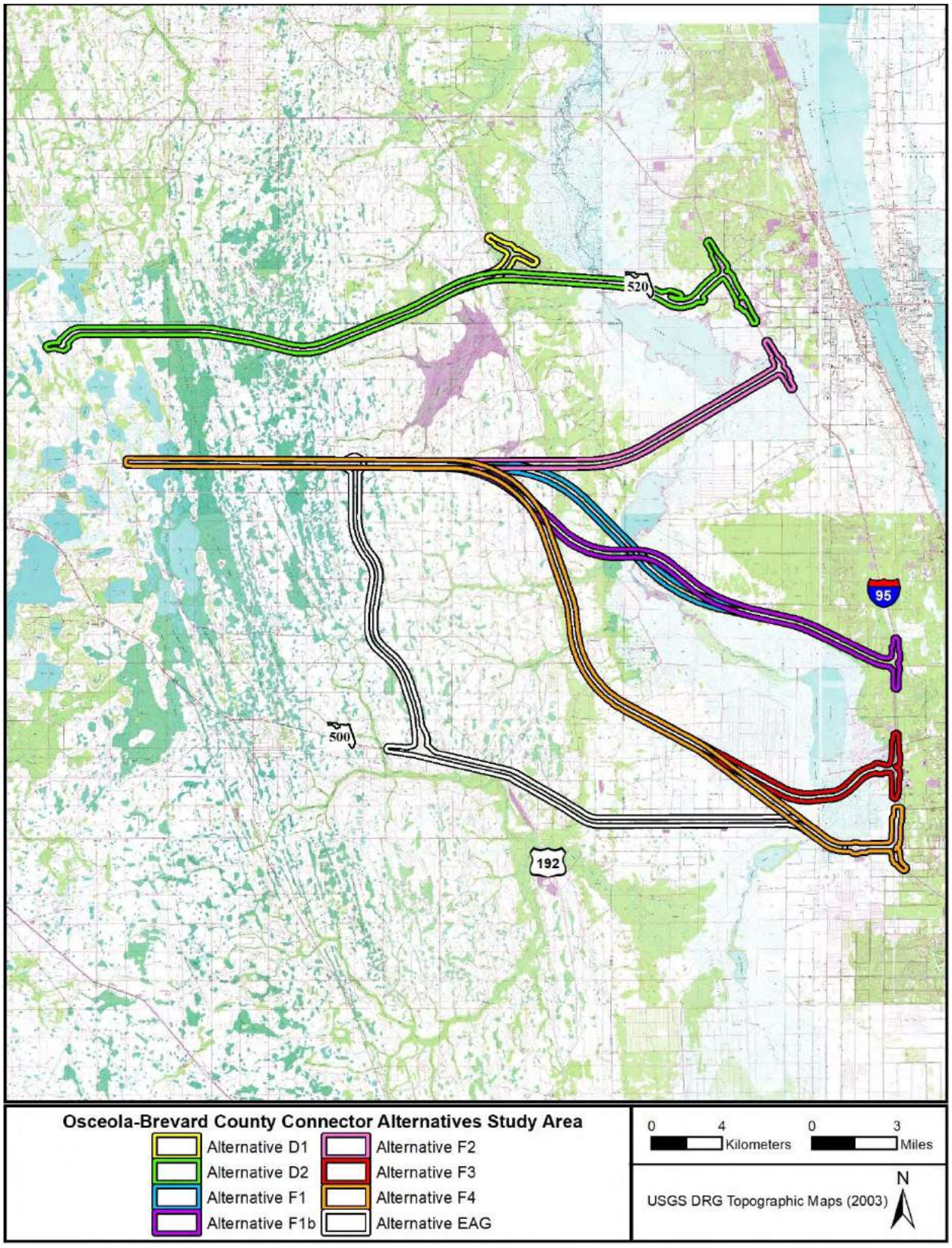


Figure 1. Location of the Osceola-Brevard County Connector Alternatives Study Area.

Table 1. Environmental Conditions in the Osceola-Brevard County Connector Alignments.

Name	Length in Miles (km)	Township, Range	Counties	Soils	Significant Waterways	Overall Environment
D1	18.95 (30.5)	Township 24 South, Range 33 East; Township 24 South, Range 34 East; Township 25 South, Range 31 East; Township 25 South, Range 32 East; Township 25 South, Range 33 East	Osceola, Orange, Brevard	Poorly to very poorly drained	none	Largely undeveloped with lots of small ponds and wetlands
D2	28.75 (46.28)	Township 24 South, Range 33 East; Township 24 South, Range 34 East; Township 24 South Range 35 East; Township 25 South Range 31 East, Township 25 South, Range 32 East; Township 25 South Range 33 East	Osceola, Orange, Brevard	Poorly to very poorly drained	St. Johns River	Largely undeveloped with lots of small ponds and wetlands; small segment follows Nova Road
F1	30.58 (49.21)	Township 25 South, Range 32 East; Township 25 South, Range 33 East; Township 25 South, Range 34 East; Township 26 South, Range 34 East; Township 26 South, Range 35 East; Township 26 South, Range 36 East; Township 27 South, Range 36 East	Osceola, Brevard	Poorly to very poorly drained	St. Johns River	Largely undeveloped, approximately half follows Nova Road
F1b	30.49 (49.07)	Township 25 South, Range 32 East; Township 25 South, Range 33 East; Township 25 South, Range 34 East; Township 26 South, Range 34 East; Township 26 South, Range 35 East; Township 26 South, Range 36 East; Township 27 South, Range 36 East	Osceola, Brevard	Poorly to very poorly drained	St. Johns River	Largely undeveloped, approximately half follows Nova Road
F2	25.56 (41.14)	Township 25 South, Range 32 East; Township 25 South, Range 33 East; Township 25 South, Range 34 East; Township 25 South, Range 35 East	Osceola, Brevard	Poorly to very poorly drained	St. Johns River	Largely undeveloped, approximately half follows Nova Road
F3	35.41 (57)	Township 25 South, Range 32 East; Township 25 South, Range 33 East; Township 25 South, Range 34 East; Township 26 South, Range 34 East; Township 27 South, Range 34 East; Township 27 south, Range 35 South, Township 27 South, Range 36 East; township 28 South, Range 36 East	Osceola, Brevard	Poorly to very poorly drained	St. Johns River	Largely undeveloped, significant portion follows Nova Road

Table 1. Environmental Conditions in the Osceola-Brevard County Connector Alignments.

Name	Length in Miles (km)	Township, Range	Counties	Soils	Significant Waterways	Overall Environment
F4	35.95 (57.86)	Township 25 South, Range 32 East; Township 25 South, Range 33 East; Township 25 South, Range 34 East; Township 26 South, Range 34 East; Township 27 South, Range 34 East; Township 27 south, Range 35 South, Township 27 South, Range 36 East	Osceola, Brevard	Poorly to very poorly drained	St. Johns River	Largely undeveloped, significant portion follows Nova Road and east end aligns with Space Coast Parkway
EAG	38.52 (61.99)	Township 25 South, Range 32 East; Township 25 South, Range 33 East; Township 26 South, Range 33 East; Township 27 South, Range 33 East; Township 27 South, Range 34 East; Township 27 South, Range 35 East; Township 27 South, Range 36 South; Township 28 South, Range 36 East	Osceola, Brevard	Poorly to very poorly drained	St. Johns River	Largely undeveloped, large portions follow established roads including Space Coast Parkway, E Irlo Bronson Memorial Highway and Nova Road

Range 34 East; Township 26 South, Range 35 East; Township 26 South, Range36 East; Township 27 South, Range 33 East; Township 27 South, Range 34 East; Township 27 South, Range 35 East; Township 27 South, Range 36 East; and Township 28 South, Range 36 East. The segments under review include existing roads as well as several possible new roadway alignments (see **Figure 1;** see **Table 1**).

Development within the Osceola-Brevard County Connector Study Area ranges from densely populated residential and commercial development at the eastern edge to undeveloped forest and wetland. The only significant development along the majority of the alignments is limited to canals and existing roadways. An environmental description for each segment is provided in **Table 1**.

The study area is located in the Eastern Flatwoods District, as described by Brooks (1981). This region developed out of a series of barrier islands and lagoons, and elevations are generally less than 90 feet (27. 4 meters) above mean sea level (amsl). The Eastern Flatwoods District is divided into physiographic provinces. The western ends of all eight segments in the Osceola Brevard County Connector project fall within the Holopaw-Indian Town Ridgees and Swales province. Vegetation in this region consists of flatwoods and cypress stands, with some areas of sand pine scrub. The eastern ends of Alignments D1, D2, and F1 primarily fall within the St. Johns Wet Prairie, which consists of marshes and grass prairies. Elevations in this region are quite low, generally between 6.0 and 12 feet (1.8 and 3.7 meters) amsl. Finally, the eastern halves of Alignments F1, F1b, F2, F3, F4, and EAG are located in the St. Johns Marsh. This province also consists of marshes and grass prairies, but elevations are more than 18 feet (5.5 meters) amsl.

The St. Johns River is the defining drainage feature for all of the alignments under review. The only alignment not to cross the river is D1; however, even this alignment crosses over several St. Johns River tributaries. The alignments pass in proximity to several large lakes, including Sawgrass Lake, Lake Washington, and Lake Winder, all associated with the St. Johns River. Soils in the Osceola-Brevard County Connector project varies widely (see **Table 1**), although most soils are poorly or very poorly drained (**Figures 2** and **3**).

BACKGROUND RESEARCH

Florida Master Site File Review

A review of the FMSF database updated in October 2020 indicates that 65 previous cultural resource surveys have been conducted within 1.0 mile (1.6 kilometers) of the Osceola-Brevard County Connector, of which 44 intersect a portion of the study area (**Figures 4-7**; **Table 2**). With few exceptions, these surveys are limited to intersecting relatively small portions of the proposed alignments. The majority of the study area has not been subjected to a cultural resource survey that meets current Module-3 standards.

Table 2. Cultural Resource Surveys Conducted within 1.0 Mile (1.6 Kilometers) of the Study Area.

FMSF No.	Title	Year	Author	Intersecting Segment(s)
66	Sarno Road Borrow Pit Archaeological and Historic Survey	1977	Rollins College	F3
594	Lake Poinsett-Midway 500 KV Transmission Line Project, Archaeological and Historical Survey Assessment	1981	Poe, Charles Boyce	D1, D2, F1, F1b, F2, F3, F4, EAG
1034	Archaeological Reconnaissance Sandhill Point Tract, Brevard County, Florida	1985	Edward D. Stone, Jr. and Associates	F1, F1b
1152	Reconnaissance survey in the Upper St. Johns River Flood Control Project, Osceola, Brevard and Indian River Counties, Florida	1984	New World Research, Inc.	EAG
1290	Cultural Resource Assessment Survey of the Martin Marietta Aerospace Electronic Optical Test Site, Orange County, Florida	1986	Piper Archaeological Research, Inc.	none
1646	Proposed Response to Future Area Development for GDC's West Malabar Tract, Brevard County, Florida	1981	CCC Enterprises, Inc.	F4, EAG
1842	Proposed Multilaning of Existing Two-Lane US 192 from CR 532, near St Cloud, to I 95, in Osceola & Brevard Counties, Florida	1989	FDOT	F4, EAG
1852	Archaeological site types, distribution and preservation within the upper St Johns River basin, Florida	1985	Florida Museum of Natural History	F1, F1b, F2
2368	Historic Properties Survey of Rockledge, Florida	1990	Historic Property Associates, Inc.	none
2391	Archaeological Assessment of Six Selected areas in Brevard County: a First Generation Model	1990	UWF	D2, F1, F1b, F2, F3, F4, EAG

Table 2. Cultural Resource Surveys Conducted within 1.0 Mile (1.6 Kilometers) of the Study Area.

FMSF No.	Title	Year	Author	Intersecting Segment(s)
2877	Cultural Resource Assessment Survey of Three Proposed Central Florida Veterans Administration Hospital Sites, Orange and Brevard Counties, Florida	1990	Piper Archaeological Research, Inc.	none
3288	A Cultural Resource Assessment Survey of SR 520 Bridge Replacement at the St. Johns River at the Orange/Brevard County Line, Florida	1992	Archaeological Consultants, Inc. (ACI)	none
4295	Phase I Cultural Resources Investigation of Proposed Access Roads Within the Florida Portion of the Proposed Florida Gas Transmission Company Phase III Expanson Project Pipeline Corridor [Draft Report]	1994	R. Christopher Goodwin & Associates, Inc. (RCG&A)	EAG
4383	Phase I Cultural Resources Investigation of the Proposed 30 IN O.D. Mainline Loop South Portion in the Florida Gas Transmission Company Phase III Expansion Project [Draft Report]	1993	RCG&A	EAG
4443	An Archaeological Assessment of the Triple N Ranch Wildlife Management Area, Osceola County, Florida	1996	FL Bureau of Archaeological Research (FL BAR)	EAG
4796	A Cultural Resource Assessment Survey of Proposed Pond Locations along SR 500 (US 192), Osceola and Brevard Counties, Florida	1997	Environmental Services, Inc. (ESI)	F4, EAG
5346	A Cultural Resources Assessment Survey of State Road 520 from Interstate 95 in Brevard County to State Road 50 in Orange County, Florida	1996	Florida Archaeological Services, Inc. (FASI)	D1, D2
5840	Cultural Resources Assessment Survey of the Proposed Buccaneer Gas Pipeline, Florida [Volume 1: Final Report of Findings; Volume 2: Appendices]	2000	Panamerican Consultants, Inc.	none
5941	An Intensive Cultural Resource Assessment Survey of the Brevard Crossing DRI Brevard County, Florida	2000	ESI	D2
6295	Cultural Resources Survey and Inventory, Florida Gas Transmission Phase V Expansion, Gulf Power Lateral, Palmetto Power Lateral, Loop C, Loop D, Loop E, Loop G, Loop H St. Petersburg Lateral, Loop I St. Petersburg Lateral, Jacksonville Loop, and FP&L	2000	RCG&A	D1, D2
6794	Cultural Resource Assessment Survey for the Interstate 95 PD&E Study from State Road 514 to State Road 50, Brevard County, Florida	2001	Janus Research	D2, F1, F1b, F2, F3, F4, EAG
8192	Phase I Archaeological Survey of a Possible Reroute at Mile Post 730, Brevard County, Florida	1995	RCG&A	F4, EAG
8699	Archaeological Survey for Ranger Construction Inc., Proposed Borrow Pit: DHR Project File No. 2002-1789 Phase I	2002	Funk, Thomas	EAG
8791	Cultural Resource Assessment Survey of the Palm Bay Parkway PD&E Study From Malabar Road to Ellis Road, Brevard County	2003	Janus Research	F4
9190	Cultural Resource Survey and Assessment S & L Materials Mine, Orange County, Florida	2003	SouthArc, Inc.	none

Table 2. Cultural Resource Surveys Conducted within 1.0 Mile (1.6 Kilometers) of the Study Area.

FMSF No.	Title	Year	Author	Intersecting Segment(s)
9405	Cultural Resource Assessment Survey of the I-95/Pineda Causeway Extension Interchange PD&E Study, Brevard County	2003	Janus Research	F1, F1b
10372	A Cultural Resource Assessment Survey of the Washingtonia Residential Tract, Brevard County, Florida	2004	ESI	F1, F1b
10445	Phase 1 Cultural Resource Survey of Camp Ensign, Desert Ranch, Osceola County, Florida	2004	SEARCH	none
10868	An Archaeological Survey of the Adamson Road/Huang Parcel, Brevard County, Florida	2004	Thomas Penders and Associates	D2
10891	Reconnaissance Survey of Seven Ponds along Interstate 95 from SR 50 to SR 514	2004	Janus Research	F3, F4
11305	A Cultural Resource Reconnaissance Survey of the Emerald Lake Tract, Brevard County, Florida	2004	ESI	D2
11350	An Archaeological Survey of the Adamson Road Phase II Development (Fleckinger Parcel), Brevard County, Florida	2005	Thomas Penders and Associates	none
11358	An Archaeological Survey of the Adamson Road Phase III Development (Reis El Bara Parcel), Brevard County, Florida	2005	Thomas Penders and Associates	D2
11753	An Archaeological and Historical Survey of the Proposed Florida Power and Light Company. Poinsett/Martin/ Midway 500KV Transmission Line in Orange, Osceola, Indian Rover and St. Lucie Counties, Florida	1982	Poe, Charles Boyce	D1, D2, F1, F1b, F2, F3, F4, EAG
12162	A Cultural Resources Assessment of the Pineda Causeway Realignment and Extension Project, Brevard County, Florida	2005	Post, Buckley, Schuh & Jernigan	none
12465	A Cultural Resources Assessment Survey of the Hammons Parcel Brevard County, Florida	2006	Thomas Penders and Associates	none
12469	An Archaeological and Historical Survey of the Veranda Park Subdivision Project Area in Brevard County, Florida	2005	Panamerican Consultants, Inc.	none
12591	Cultural Resource Assessment Survey of the Santa Barbara Development Property, Brevard County, Florida	2006	ACI	none
12684	A Cultural Resources Assessment Survey of the Brisbane Manor Development,	2006	Thomas Penders and Associates	none
12878	Cultural Resources Survey and Assessment Viera DRI Expansion Brevard County, Florida	2006	SouthArc, Inc.	F1, F1b
13087	A Cultural Resources Assessment Survey of the Pluckebaum R-2A Parcel, Brevard County, Florida	2006	Thomas Penders and Associates	F2
13653	Cultural Resource Assessment Survey of the Wadsworth Waterfowl Project Brevard County, Florida	2006	Heritage Services, Inc.	F2
14225	A Cultural Resource Reconnaissance Survey of the Rodes Park Property and an Assessment of 8BR2081 and 82090, Brevard County, Florida	2007	ESI	none
15202	An Archeological Reconnaissance Survey of the Santa Barbara Preserve Project, Brevard County, Florida	2008	FASI	none
15512	A Phase 1 Cultural Resource Survey of the CarMax Property, Brevard County, Florida	2008	SEARCH	F4
18848	Cultural Resource Assessment Survey Report, US 192 Solid Waste Management Facility, Brevard County, Florida	2012	ACI	EAG
19479	Cultural Resource Assessment Survey of the New Interchange at I-95 and Ellis Road PD&E Study, Brevard County, Florida	2012	SEARCH	F3, F4

Table 2. Cultural Resource Surveys Conducted within 1.0 Mile (1.6 Kilometers) of the Study Area.

FMSF No.	Title	Year	Author	Intersecting Segment(s)
19831	Phase I Cultural Resource Assessment Survey of the Florida Gas Transmission Company Proposed Contractor Warehouse, Melbourne 1 Site, Brevard County, Florida	1993	ACI	none
19851	Cultural Resource Assessment Survey for Florida Gas Transmission Co. Extra Work Spaces (EWS), Reroute and Temporary Construction Easements	1994	ACI	EAG
20585	A Cultural Resources Assessment Survey of the Proposed Doppler Weather Radar Site, Orange County, Florida	2007	US Air Force	none
20925	Cultural Resource Assessment Survey Springhead Lake Property, Osceola County, Florida	2014	ACI	none
21117	A Phase I Cultural Resource Assessment Survey of the Connor Woods Subdivision, City of Melbourne, Brevard County, Florida	2014	Advanced Archaeology, Inc.	F1, F1b
22718	Cultural Resources Reconnaissance Survey, Neighborhood 9, Village 1, Viera Project Addendum Report, Brevard County, Florida	2016	SouthArc, Inc.	none
23119	Cultural Resource Assessment Survey Osceola Parkway Extension from West of Boggy Creeky Road to the Proposed Northeast Connector Expressway and Boggy Creek Road / SR 417 Access Road Project Development and Environment Study, Orange and Osceola Counties	2016	Janus Research	D1, D2
23165	Cultural Resource Assessment Survey of the S&L Mine Phases 2 & 3, Orange County, Florida	2016	ACI	none
24354	Phase I Cultural Resources Assessment Survey of the Sunbridge Utility Site and Access Road, Osceola County, Florida	2017	SEARCH	D1, D2
24646	Cultural Resource Assessment Survey of the Sunbridge/Del Webb Property, Osceola County, Florida	2017	ACI	D1, D2
25125	Phase I Cultural Resources Assessment Survey of Sunbridge Permit Area 5, Osceola County, Florida	2018	SEARCH	D1, D2
25131	Phase I Cultural Resources Assessment Survey of Sunbridge Permit Area 3A, Osceola County, Florida	2018	SEARCH	D1, D2
25548	Cultural Resource Assessment Survey, Oasis at West Melbourne, Brevard County, Florida	2018	ACI	F4
25887	Cultural Resource Assessment Survey of the Sunbridge Parkway, Segments 2, 3, and 4, Orange County, Florida	2019	SEARCH	none
25903	Phase I Cultural Resource Assessment Survey of Sunbridge Permit Area 3, Osceola County, Florida	2019	SEARCH	D1, D2
25962	Cultural Resource Assessment Survey for the Osceola Parkway Extension PD&E Re-Evaluation, Orange and Osceola Counties, Florida	2019	SEARCH	D1, D2
25988	Technical Memorandum: Cultural Resource Assessment Survey for the Re-Evaluation of the New Interchange and Drainage Improvements at I-95 and Ellis Road, Brevard County, Florida	2019	SEARCH	F3, F4
26867	Cultural Resource Assessment Survey Gaco to Poinsett South 500 kV Transmission Line Rebuild, Orange and Seminole Counties, Florida	2020	Janus Research	D1

Highlighted surveys intersect the project area.

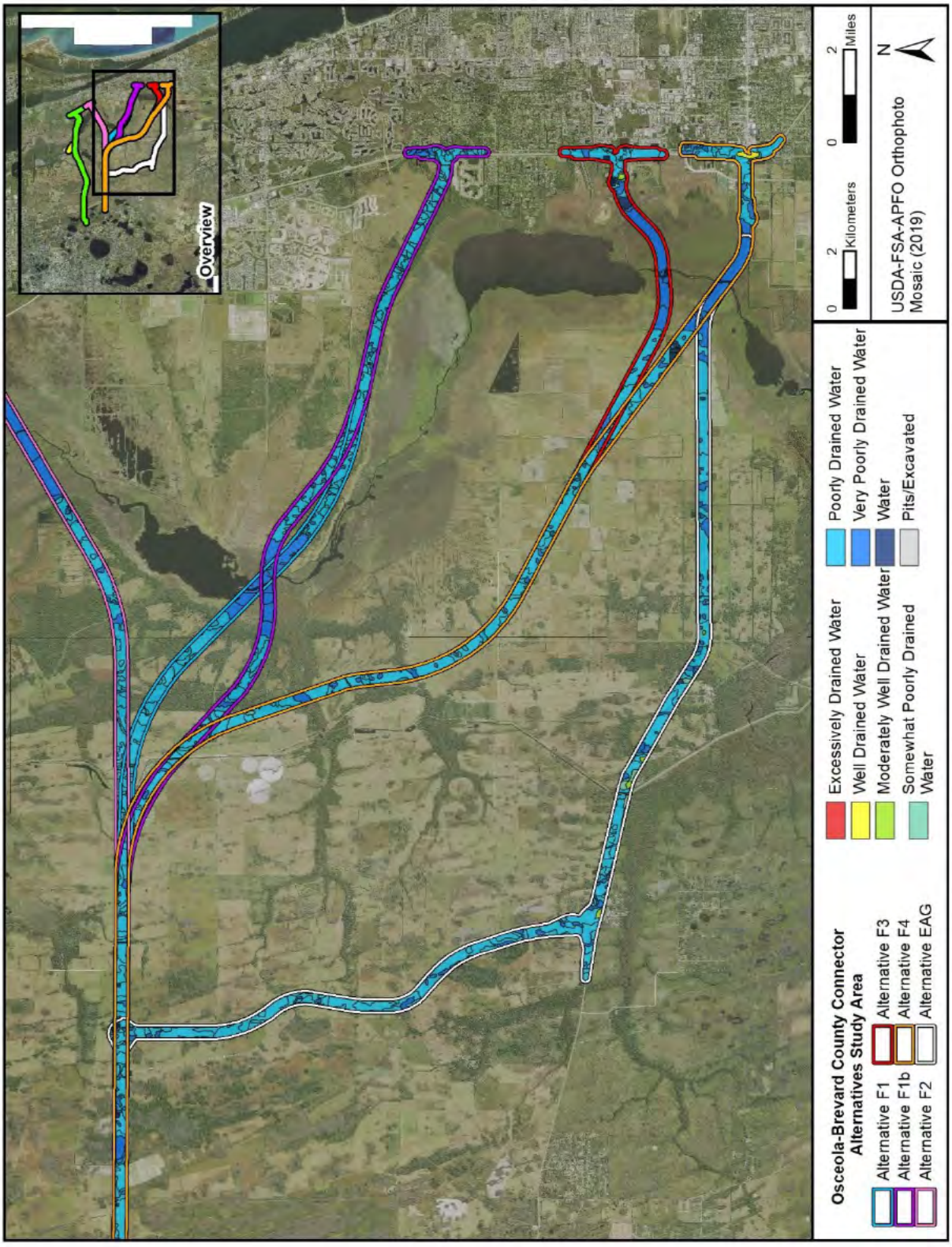


Figure 2. Soil drainage in the Osceola-Brevard County Connector Alternatives Study Area, map 1 of 2.

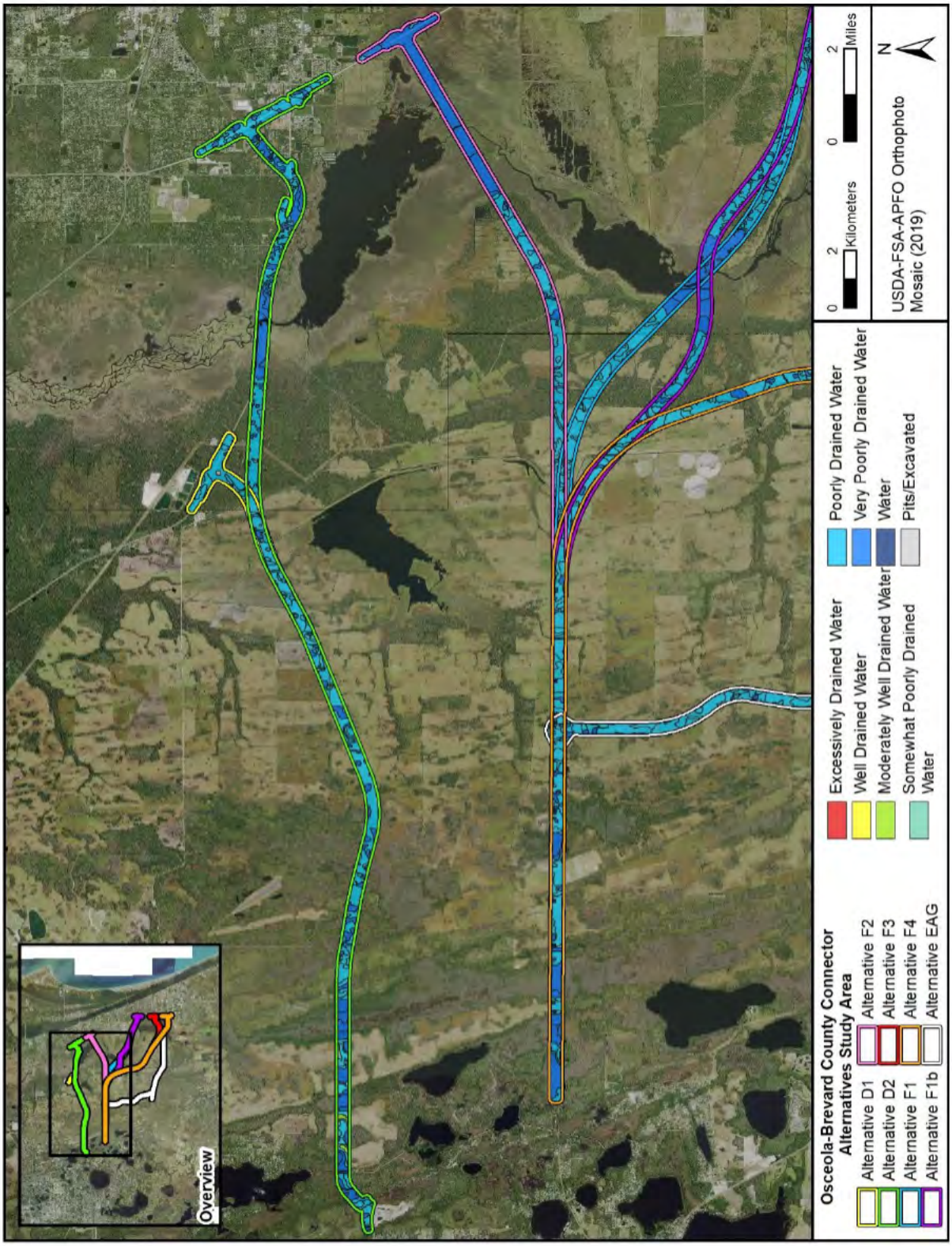


Figure 3. Soil drainage in the Osceola-Brevard County Connector Alternatives Study Area, map 2 of 2.

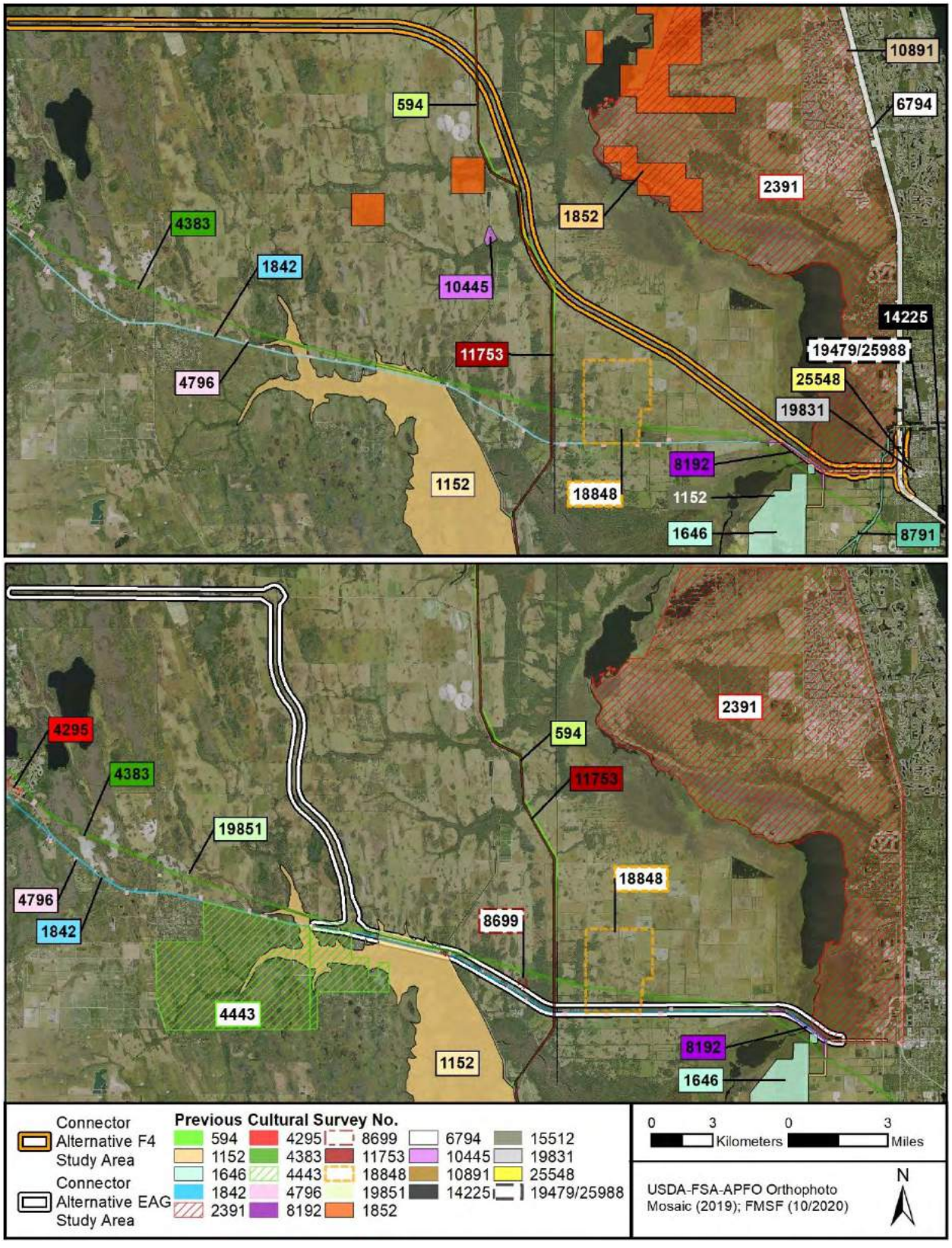


Figure 4. Cultural resource surveys conducted within the Osceola-Brevard County Connector Alternatives Study Area, map 1 of 4.

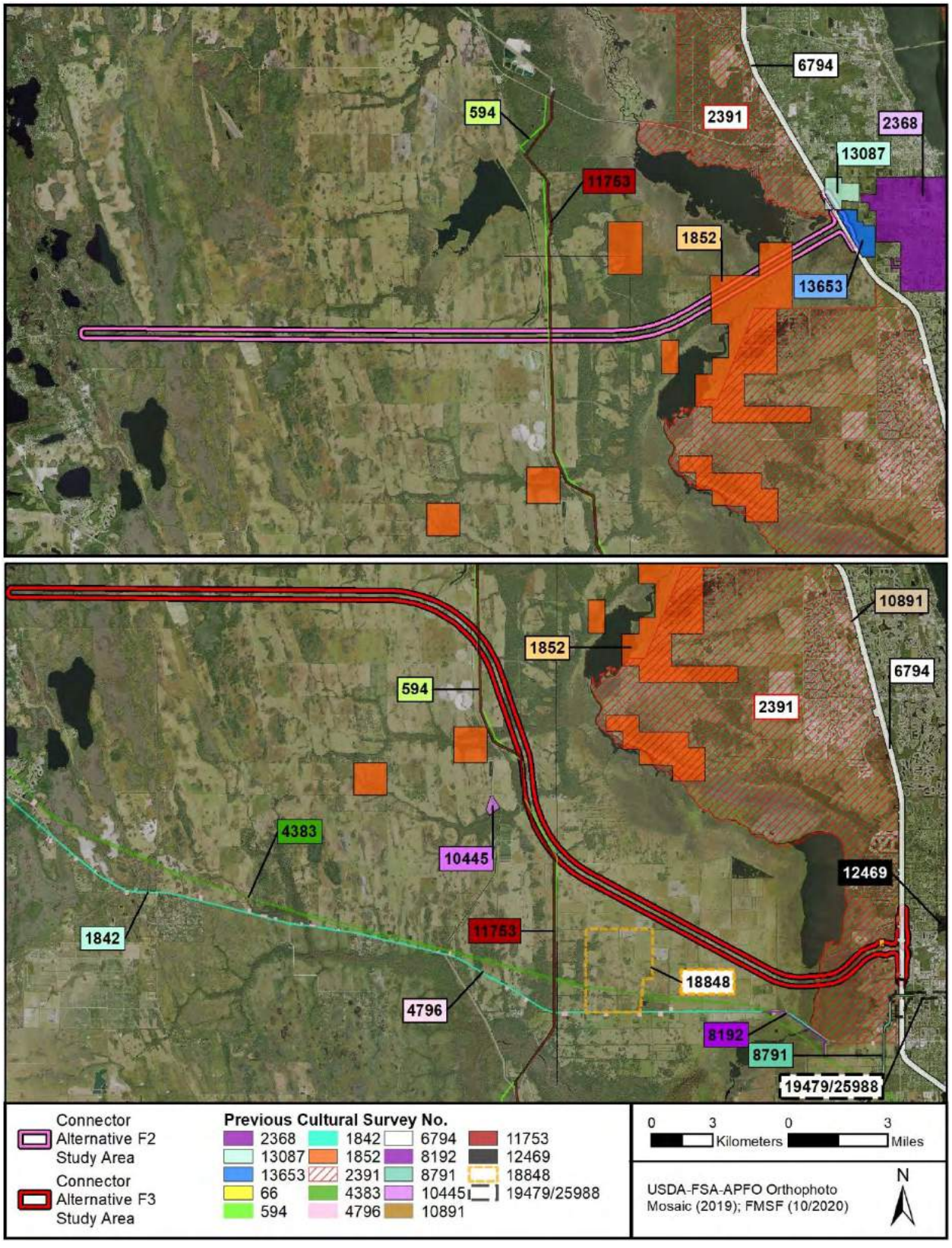


Figure 5. Cultural resource surveys conducted within the Osceola-Brevard County Connector Alternatives Study Area, map 2 of 4.

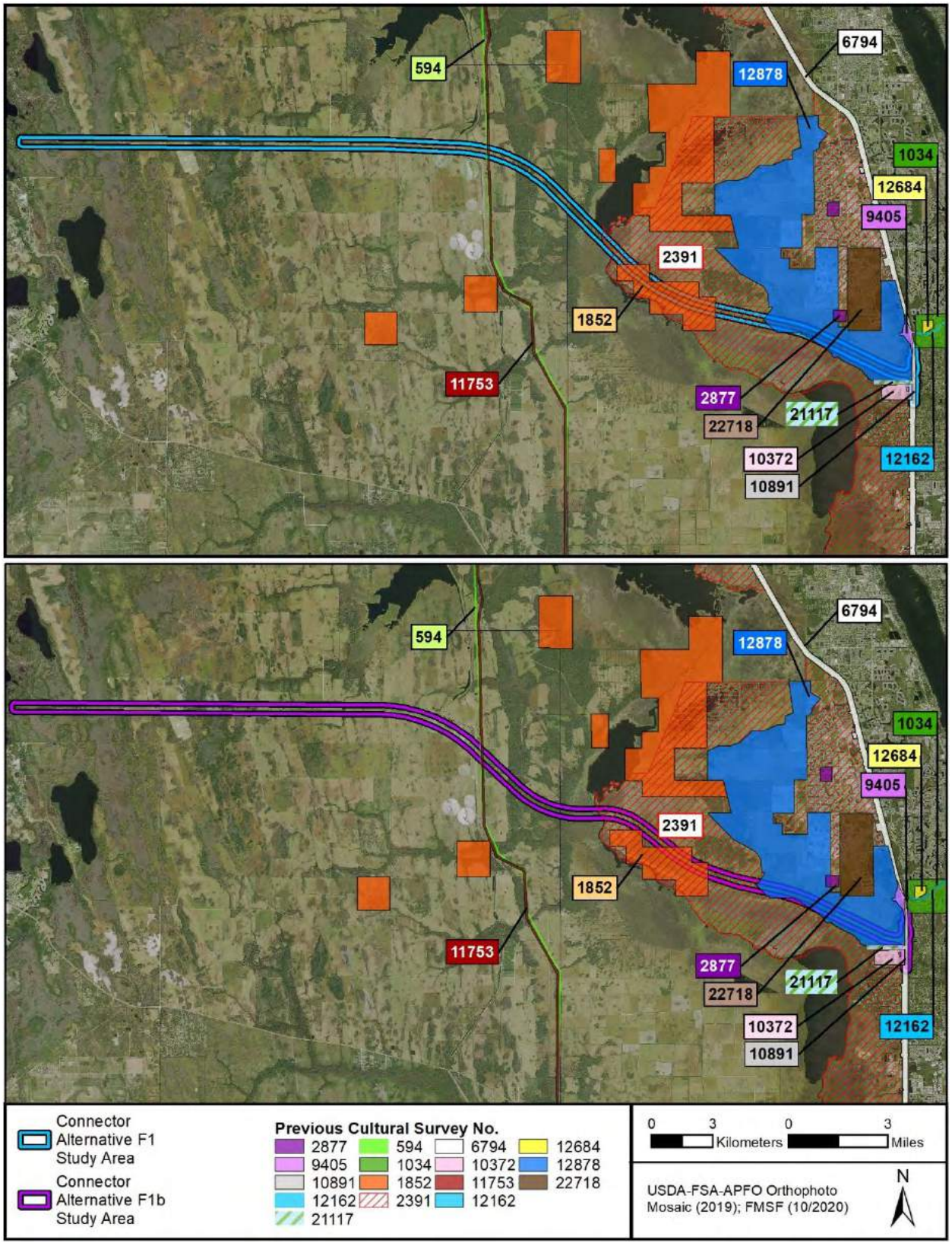


Figure 6. Cultural resource surveys conducted within the Osceola-Brevard County Connector Alternatives Study Area, map 3 of 4.

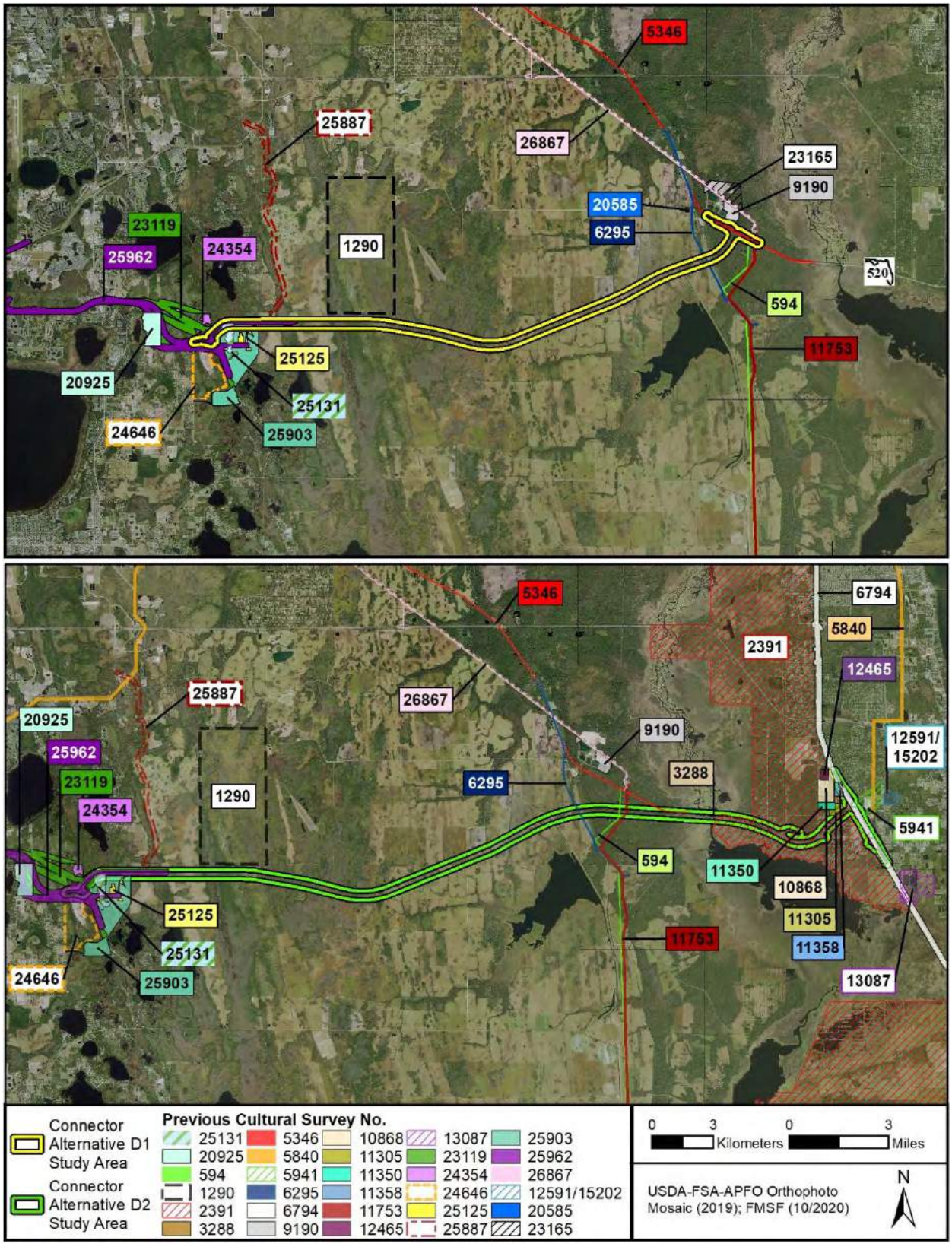


Figure 7. Cultural resource surveys conducted within the Osceola-Brevard County Connector Alternatives Study Area, map 4 of 4.

Three broad-scale surveys have been conducted along the St. Johns River in the eastern half of the study area; these surveys provide some context and preview of the types of cultural resources that may be expected within the Osceola-Brevard County Connector alignments. FMSF Survey No. 1852 was conducted in 1985 by the Florida Museum of Natural History and included survey within Alignments F1, F1b, and F2. The goal of this survey was to identify archaeological site types, distribution, and their level of preservation within the upper St. Johns River basin. [redacted]

The University of West Florida (UWF) conducted a cultural resource survey of six areas in Brevard County in 1990, including a large section of mostly agricultural land east of the St. Johns River at the eastern end of the current study area (FMSF Survey No. 2391). Portions of the survey intersected all of the proposed alignments except for Alternatives D1. The goal of the survey was to develop a predictive model for future archaeological study; the survey did not include any intense archaeological or architectural history survey within the APE and did identify any new sites. In 2006, SouthArc, Inc. conducted a cultural resource survey of the Viera DRI Expansion project (FMSF Survey No. 12878). This survey included the eastern end of Alternatives F1 and F1b and followed Module 3 standards for archaeological testing in moderate- and high-probability areas. This survey identified no sites within the proposed alignments.

The FMSF review further indicates that three historic structures, [redacted] 11 resource groups, and one historic bridge are located within 1.0 mile (1.6 kilometers) of the project study area (**Table 3**; **Figures 8-11**). [redacted] The historic structure (8BR01815) and three linear resources (8BR02783, 8OS02824, and 8OS01804) have all been determined ineligible for the NRHP by the State Historic Preservation Officer (SHPO). The remaining resources in the Osceola-Brevard County Connector Study Area have not yet been evaluated for consideration in the NRHP.

Table 3. Previously Recorded Resources within 1.0 Mile (1.6 Kilometers) of the Study Area.

Historic Structures					
FMSF No.	**Address**	**Year Built**	**Surveyor Recommendation**	**SHPO Evaluation**	**Alignment**
8BR01247	4500 Aurora Road	ca. 1915	Ineligible for NRHP	Not Evaluated	none
8BR01815	E Jones Road	1950	Ineligible for NRHP	Ineligible for NRHP	F3
8BR02782	600 S John Rodes Boulevard	ca. 1950	Ineligible for NRHP	Ineligible for NRHP	none
[redacted]					
[redacted]					
[redacted]					
[redacted]					

Table 3. Previously Recorded Resources within 1.0 Mile (1.6 Kilometers) of the Study Area.

[redacted]

Table 3. Previously Recorded Resources within 1.0 Mile (1.6 Kilometers) of the Study Area.

[redacted]

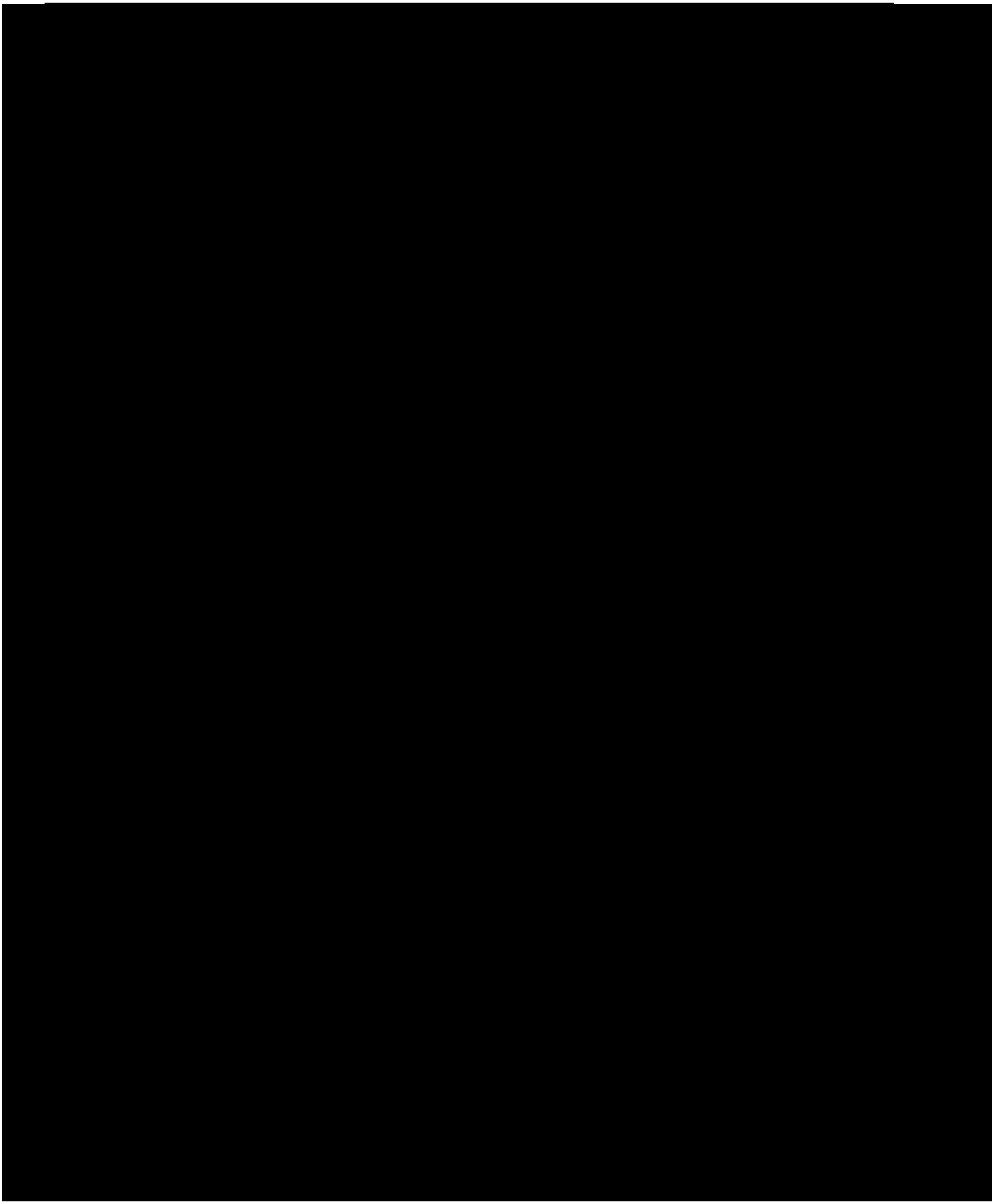
Table 3. Previously Recorded Resources within 1.0 Mile (1.6 Kilometers) of the Study Area.

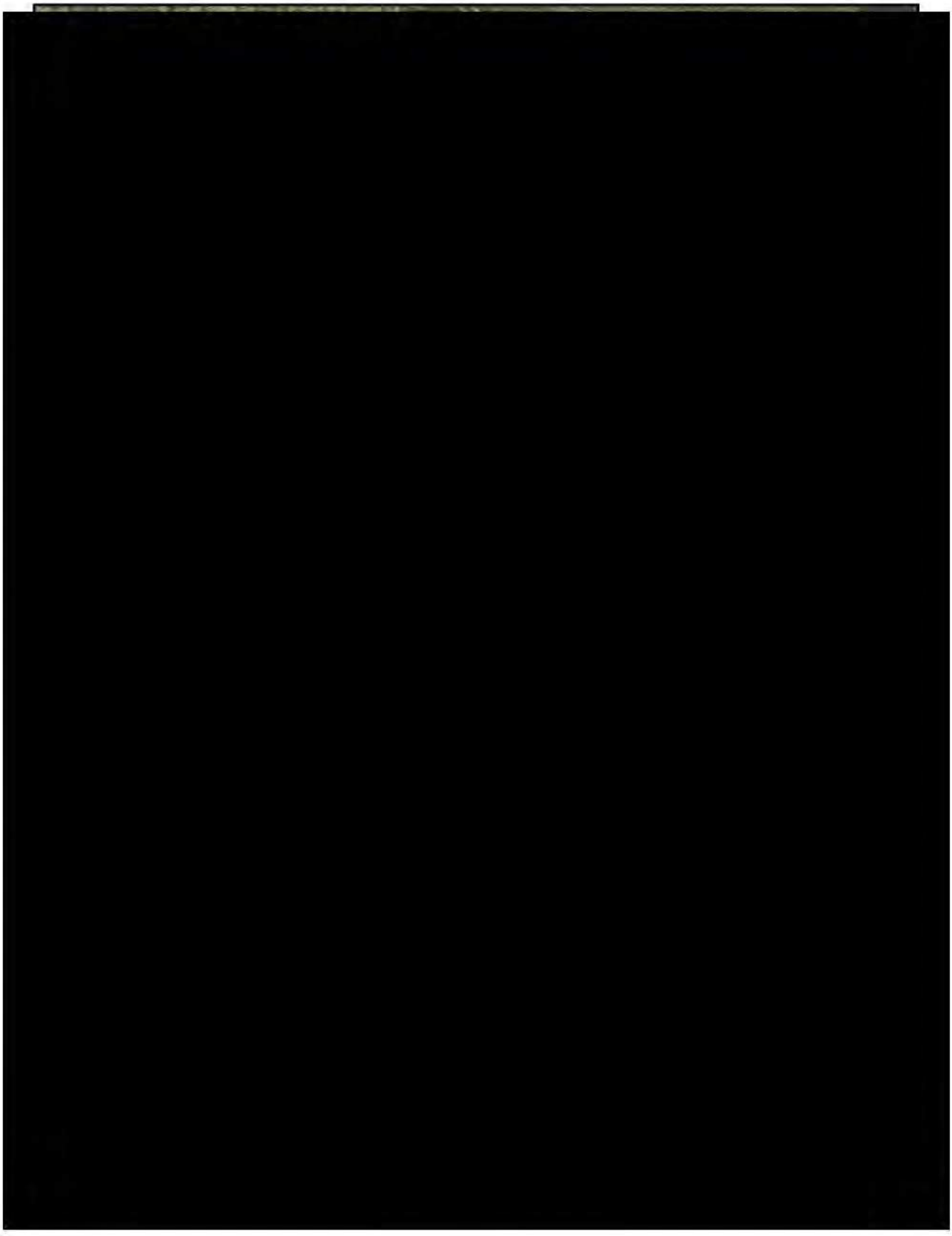
[redacted]

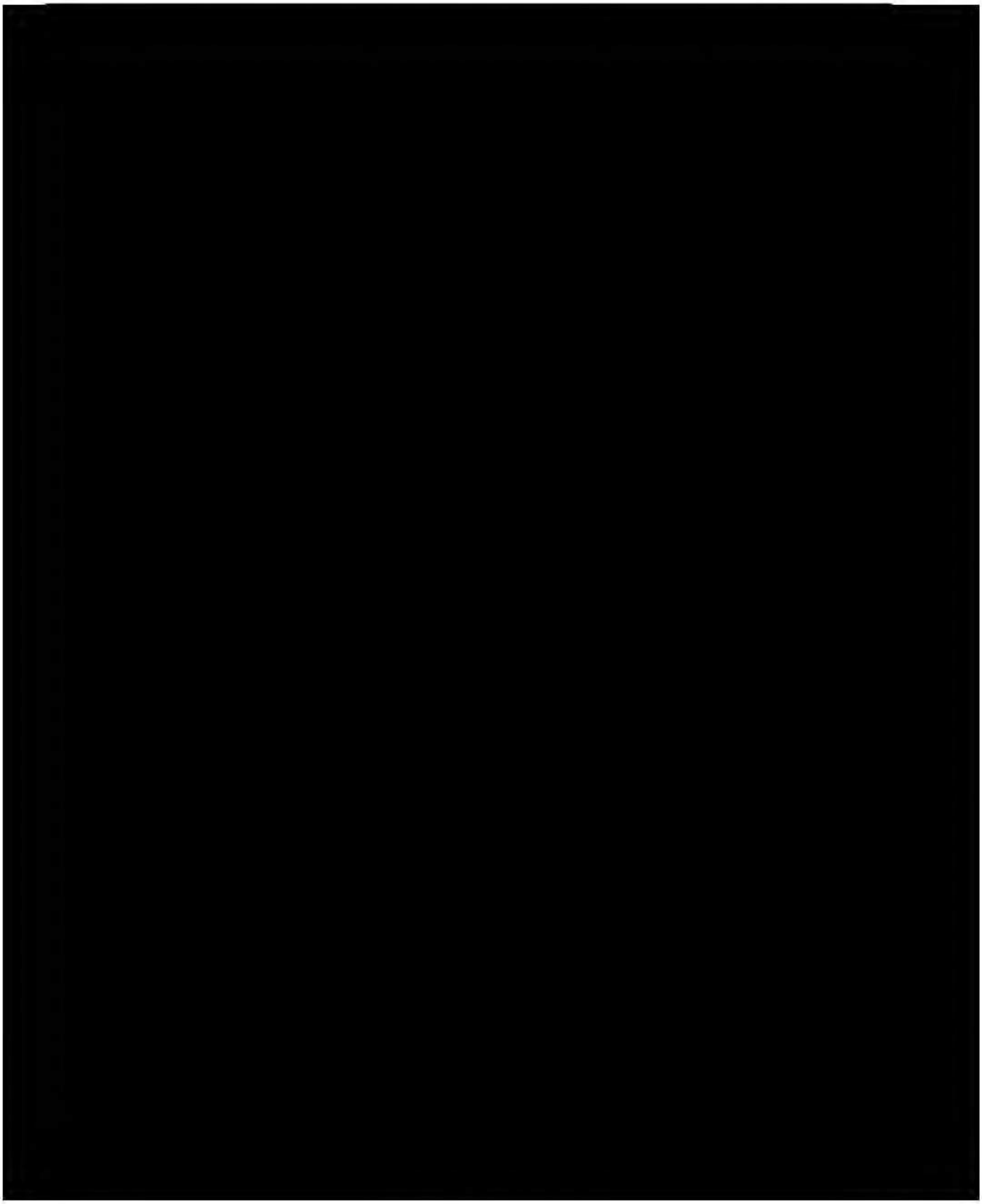
Resource Groups				
FMSF No.	**Name**	**Period of Significance**	**SHPO Evaluation**	**Alignment**
8BR02081	Melbourne-Tillman Water Control Dist c62	American-20th Century	Insufficient Information	none
8BR02090	Melbourne-Tillman Water Control Dist c63	American-20th Century	Insufficient Information	none
8BR02092	Melbourne Tillman Water Ctrl DistC62,63	1925-1957	Insufficient Information	none
8BR02143	Rockledge Country Club Resource Group	1927-1957	Insufficient Information	none
8BR02172	Union Cypress Saw Mill	1912-1932	Not Evaluated	F4
8BR02783	W. Melbourne Canal	not available	Ineligible for NRHP	F4
8BR03075	Moccasin Island Levee	not available	Insufficient Information	none
8BR03367	Viera Canal System	World War II & Aftermath 1941-1950	Ineligible for NRHP	none
8BR03990	Canal Near S John Rodes Blvd	not available	Not Evaluated	none
8OS02824	C-30 Canal	Twentieth century American, 1900-present; World War I & Aftermath, 1917-1920	Ineligible for NRHP	D1, D2
8OS01804	Brick Road/Old Melbourne Highway	Twentieth century American, 1900-present	Ineligible for NRHP	EAG

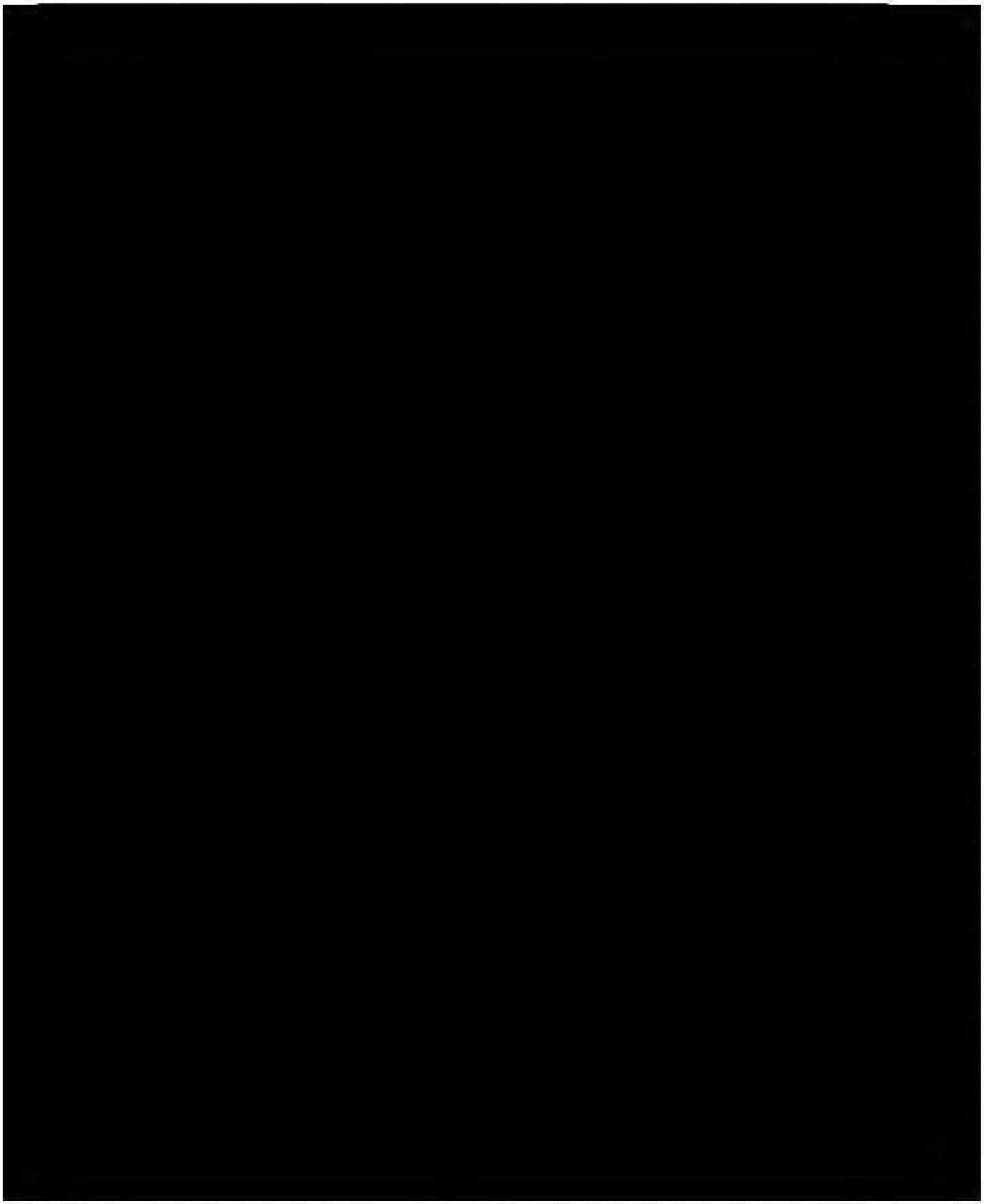
Historic Bridges				
FMSF No.	**Name**	**Year Built**	**SHPO Evaluation**	**Alignment**
8BR01818	Washington Rd. Bridge	ca. 1990	Ineligible for NRHP	none

Highlighted resources are located within an alignment. Italicized resources contain human remains.









UNRECORDED CULTURAL RESOURCES

Unrecorded Architectural Resources

In addition to the FMSF, the Osceola, Brevard, and Orange Counties' Property Appraisers' databases were reviewed to identify parcels containing unrecorded structures of historic age (i.e., structures with Actual Year Built dates earlier than 1977). This search identified 141 parcels within the current Study Area with an Actual Year Built date earlier than 1977. The majority of these parcels are situated in the eastern end of the Study Area (**Figures 12-15**).

In addition to unrecorded buildings, several canals intersect the Study Area, some of which may be of historic age. **Figure 16** shows the location of canals identified on modern aerials. Fieldwork or additional research may reveal additional canals.

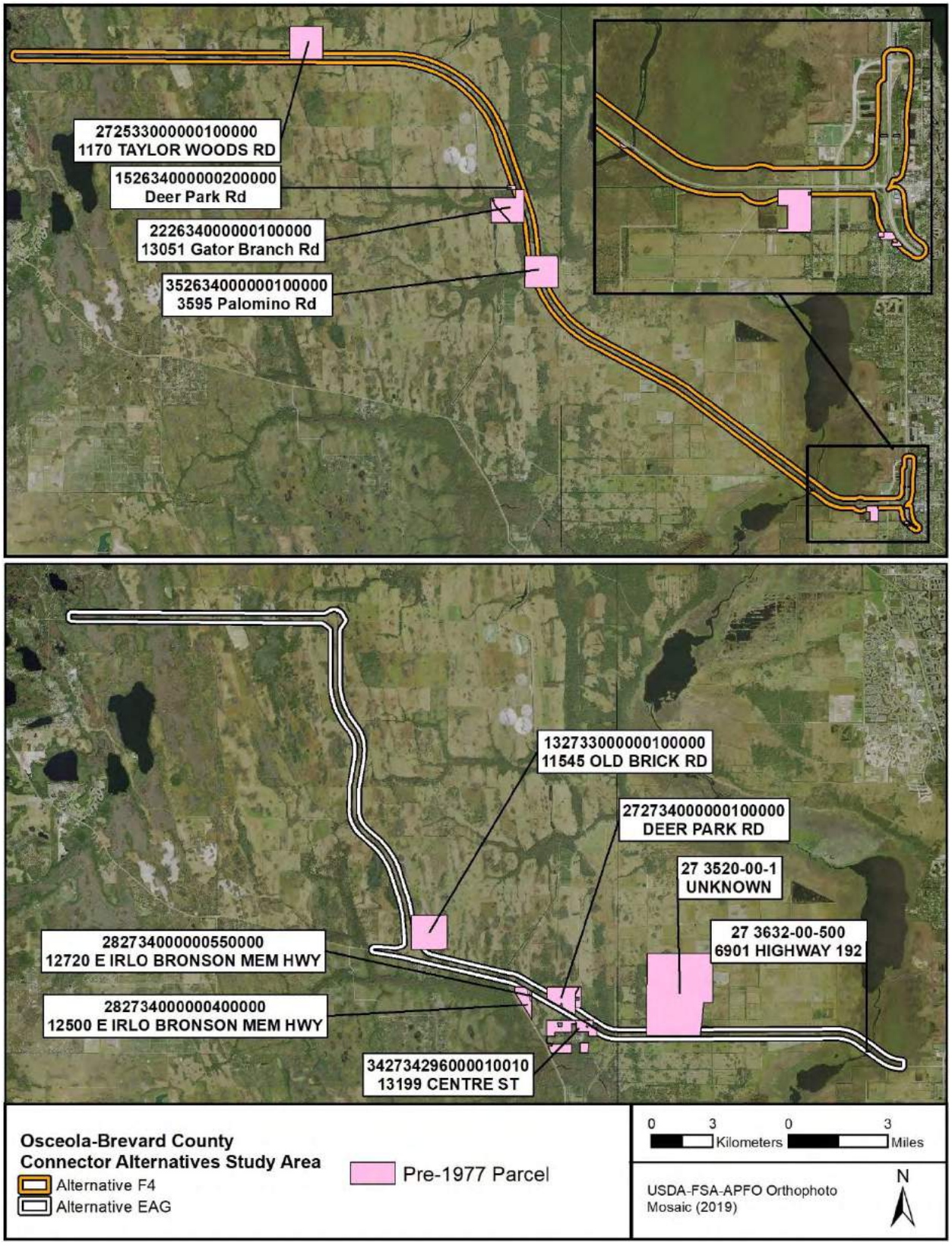


Figure 12. Parcels containing unrecorded historic structures in the Osceola-Brevard County Connector Alternatives Study Area, map 1 of 4.

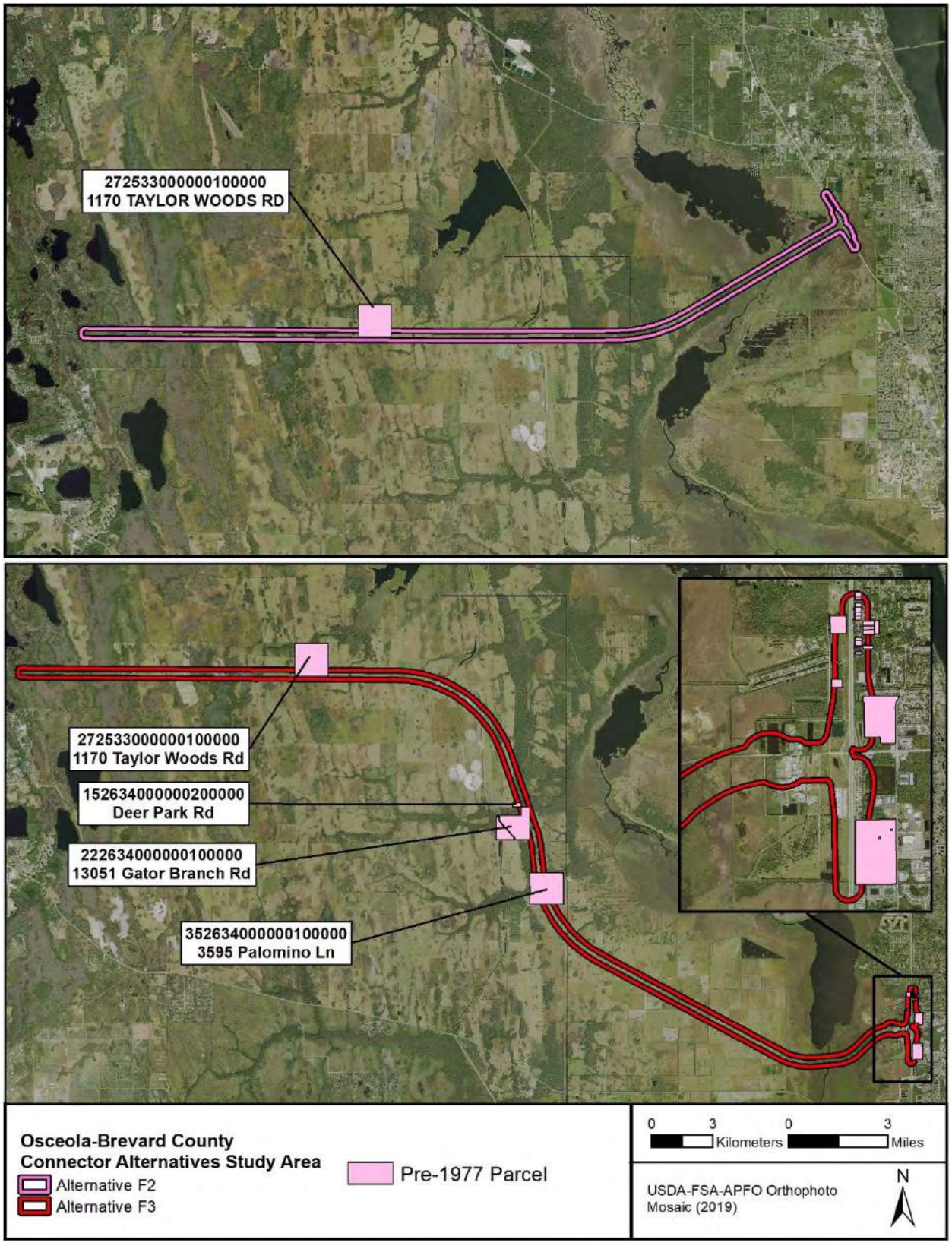


Figure 13. Parcels containing unrecorded historic structures in the Osceola-Brevard County Connector Alternatives Study Area, map 2 of 4.

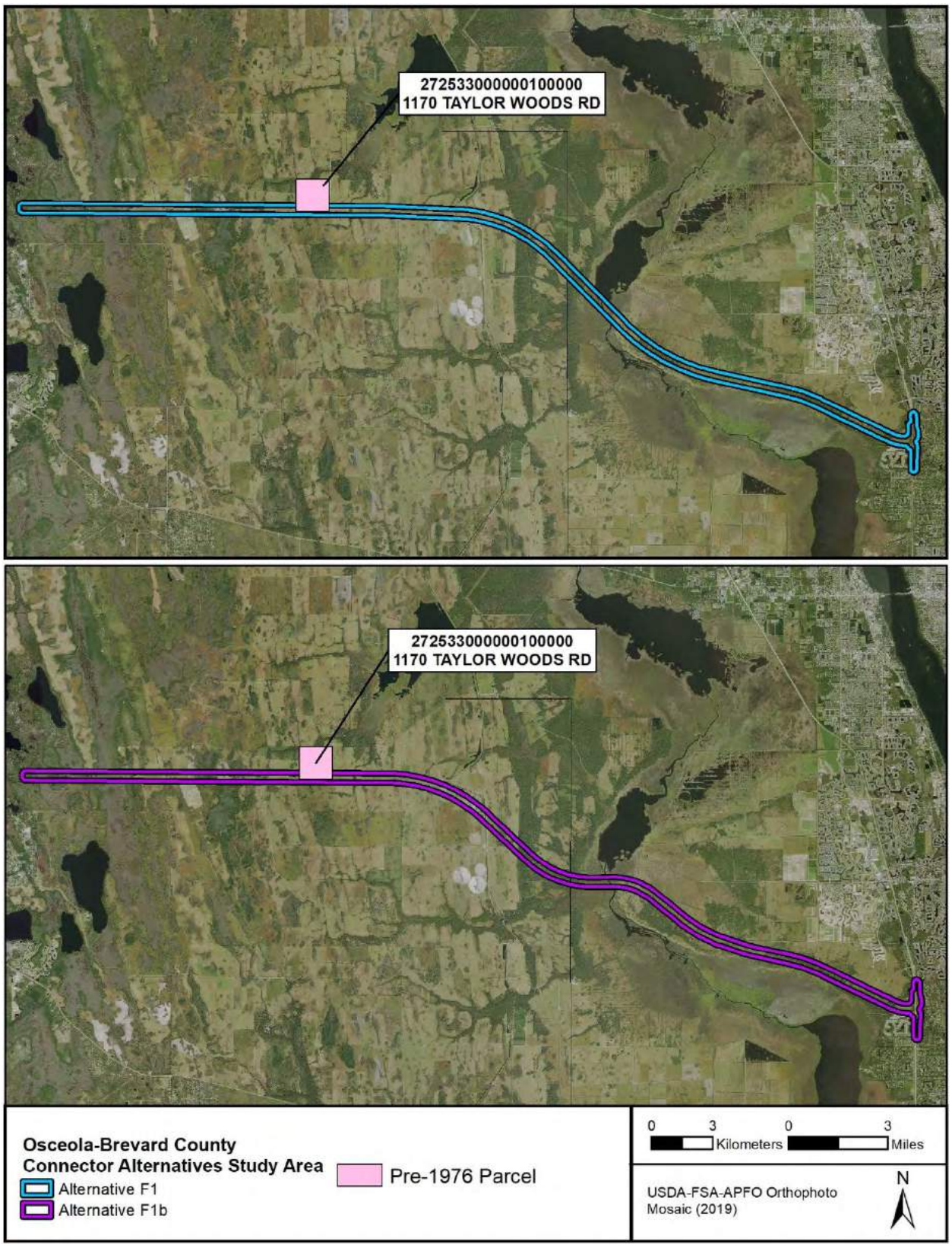


Figure 14. Parcels containing unrecorded historic structures in the Osceola-Brevard County Connector Alternatives Study Area, map 3 of 4.

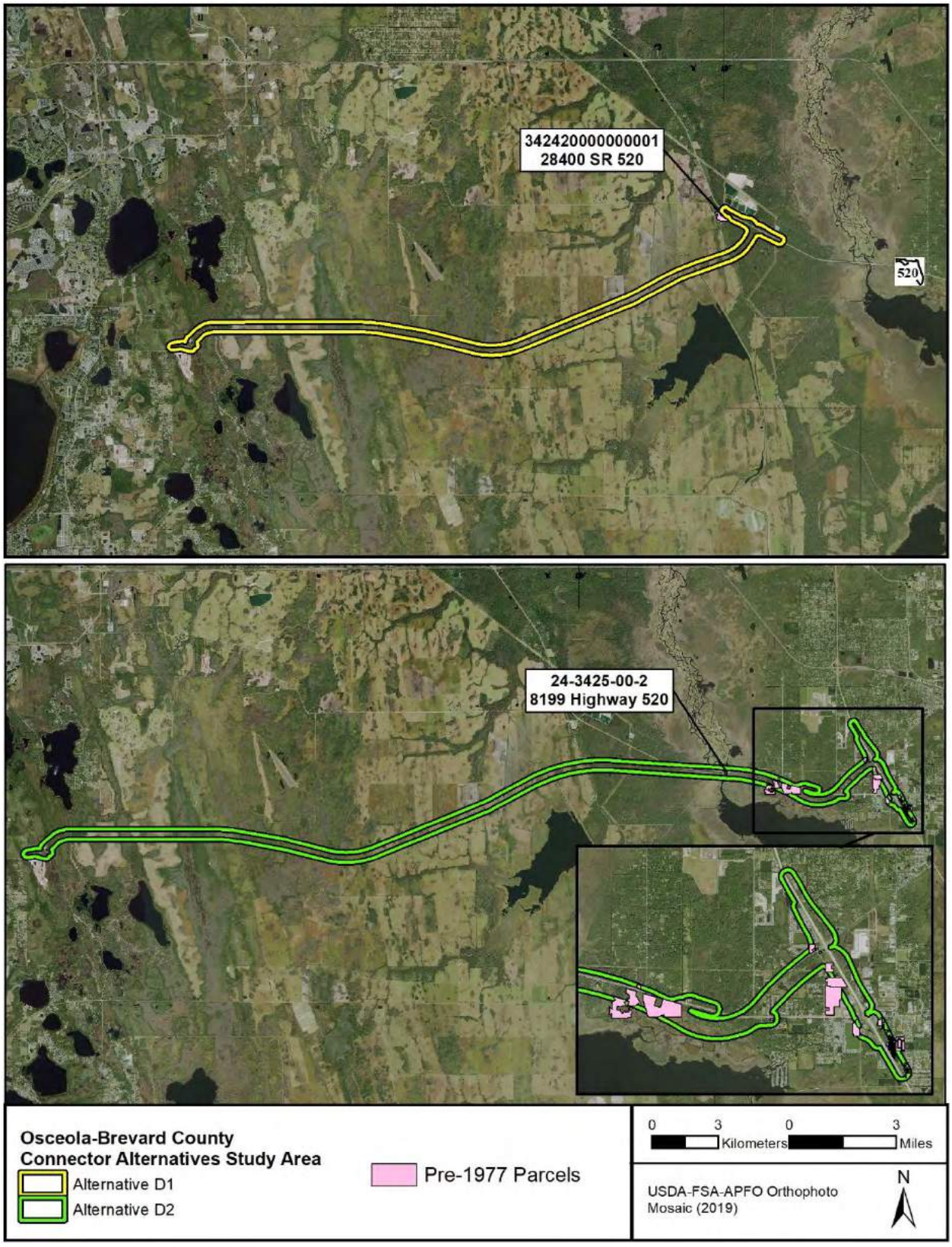


Figure 15. Parcels containing unrecorded historic structures in the Osceola-Brevard County Connector Alternatives Study Area, map 4 of 4.

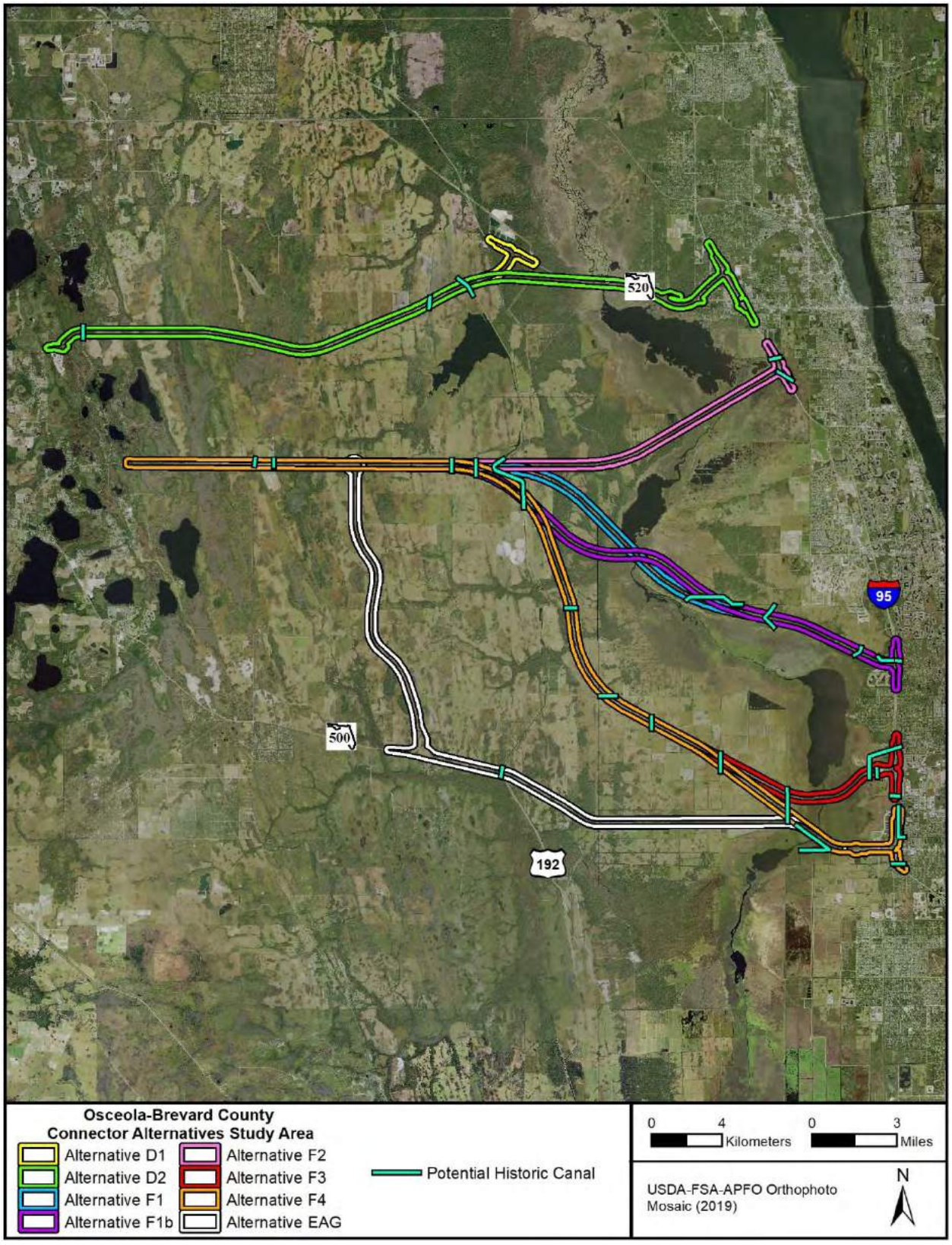


Figure 16. Location of potential historic canals within the Osceola-Brevard County Connector Alternatives Study Area.

[redacted]

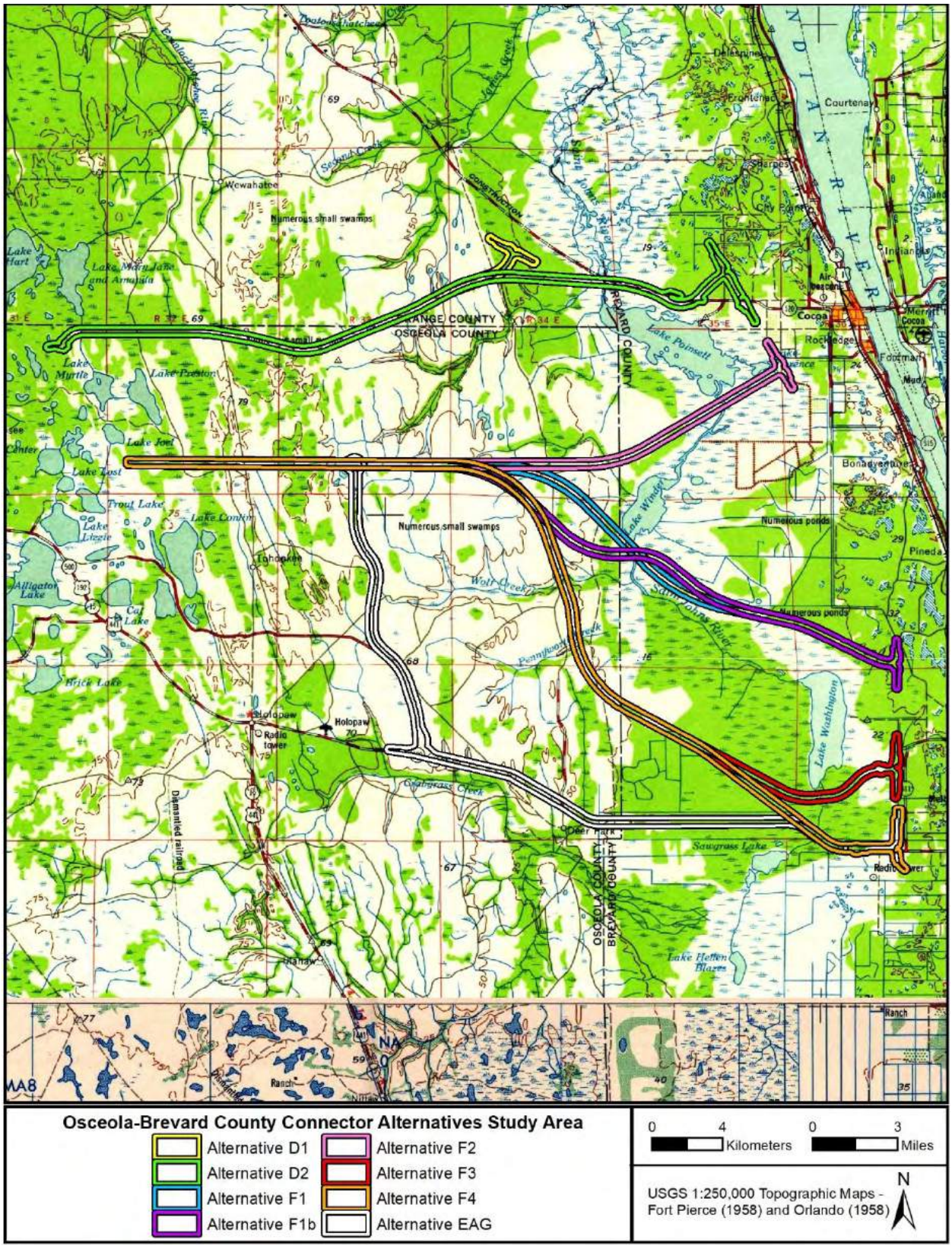


Figure 17. USGS topographic maps of Fort Pierce and Orlando, Florida (USGS 1958a, 1958b).

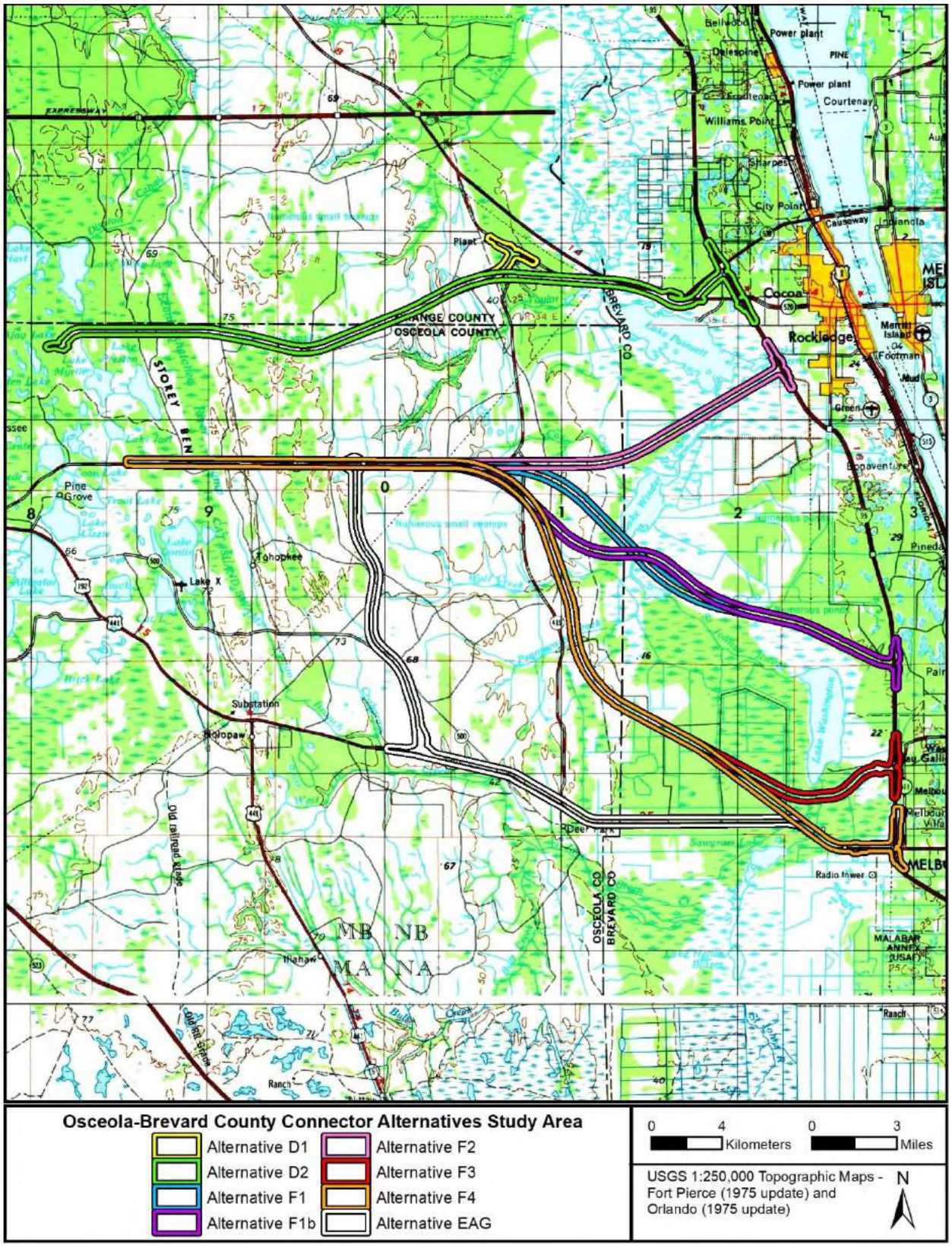


Figure 18. USGS topographic maps of Fort Pierce and Orlando, Florida (USGS 1975a, 1975b).

[redacted]

Permits for Cultural Resource Survey

Portions of the Osceola-Brevard County Connector Study Area fall in public-, state-, or Federally-owned lands. As such, permits will need to be acquired in order to conduct a cultural resource survey in portions of the proposed alignments. **Table 4** summarizes these restricted access areas.

Table 4. Permits Required for Cultural Resource Work in the Osceola-Brevard County Connector Study Area.

Name	Manager	Permit Required	Alignment(s)
Split Oak Forest Mitigation Park Wildlife and Environmental Area	Florida Fish & Wildlife Conservation Commission	1A-32	D1, D2
Tosohatchee Wildlife Management Area	Florida Fish & Wildlife Conservation Commission	1A-32	D2
Canaveral Marshes Conservation Area	St. Johns River Water Management District	Special Use Permit	D2
Upper St. Johns River Marsh Wildlife Management Area	Florida Fish & Wildlife Conservation Commission and St. Johns Water Management District	1A-32 and Special Use Permit	EAG, F1, F1b, F2, F3, F4

Table 4. Permits Required for Cultural Resource Work in the Osceola-Brevard County Connector Study Area.

Name	Manager	Permit Required	Alignment(s)
River Lakes Conservation Area	St. Johns River Water Management District	Special Use Permit	EAG, F1, F1b, F2, F3, F4
Wadsworth-Greenbaum Conservation Easement	St. Johns River Water Management District	Special Use Permit	F2
Herky Huffman/Bull Creek Wildlife Management Area	Florida Fish & Wildlife Conservation Commission	1A-32	EAG
Three Forks Conservation Area	St. Johns River Water Management District	Special Use Permit	EAG, F4
Kempfer Property Flowage Easement	St. Johns River Water Management District	Special Use Permit	EAG

CULTURAL RESOURCES SUMMARY MATRIX

The findings of this desktop analysis relative to each of the alternative segments are summarized in the cultural resource matrix below (**Table 5**).

Table 5. Osceola-Brevard County Connector Cultural Resources Matrix.

Alignment	Previous Surveys?	[redacted]	Historic Parcels and Canals	Archaeological Potential	Permits Needed?
D1	12	[redacted]	1 parcel; 3 canals	[redacted]	Yes
D2	17	[redacted]	103 parcels; 3 canals	[redacted]	Yes
EAG	15	[redacted]	7 parcels; 5 canals	[redacted]	Yes
F1	10	[redacted]	1 parcel; 9 canals	[redacted]	Yes
F1b	10	[redacted]	1 parcel; 9 canals	[redacted]y	Yes
F2	7	[redacted]	1 parcel; 7 canals	[redacted]	Yes
F3	8	[redacted]	23 parcels; 14 canals	[redacted]	Yes
F4	14	[redacted]	11 parcels; 13 canals	[redacted]	Yes

RECOMMENDATIONS AND CONCLUSIONS

Once a preferred alternative is selected for the proposed improvements, the project area of potential effects (APE) should be defined and a Phase I cultural resource assessment survey (CRAS) should be conducted. For corridor surveys, SEARCH generally recommends defining the APE as the proposed corridor right-of-way and expanded to the back or side property lines of adjacent parcels or 328 feet (100 meters).

Any historic buildings within the APE should be recorded and evaluated for NRHP eligibility. The construction area also should be subjected to subsurface testing according to probability for archaeological resources to determine if any prehistoric or historic archaeological sites are present. Generally, areas that have been sufficiently tested as part of a previous archaeological survey do not require further subsurface testing, except in the cases of previously identified but unevaluated sites; given the limited amount of archaeological testing performed within the study area, this will likely include the majority of the preferred alternative. Historic structures and archaeological sites identified during survey of the Osceola-Brevard County Connector project should be assessed for their potential eligibility for listing in the NRHP. Depending on the funding and permitting requirements of the project, the resulting CRAS report should be submitted to the SHPO for review and comment.

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