

## **Engineering Overview**

Jamison Edwards, P.E. - Engineering Project Manager



## FY 2025-2029 Work Plan

Project Cost Summary (\$000's)	Fiscal Year					
Category	2025	2026	2027	2028	2029	Totals
Existing System Improvements	157,955	59,705	39,725	117,195	251,926	626,506
System Expansion Projects	401,301	438,127	700,312	710,591	621,209	2,871,540
Interchange Projects	8,683	96,108	117,386	60,599	774	283,550
Facilities Projects	12,204	5,029	3,708	4,234	7,956	33,131
Transportation Technology Projects	14,384	24,838	2,133	3,127	5,995	50,477
Information Technology Projects	16,440	15,327	2,488	2,186	2,186	38,627
Signing and Pavement Markings	9,190	11,511	2,521	7,796	10,885	41,903
Renewal and Replacement Projects	32,936	14,718	43,349	61,730	39,458	192,191
Landscape & Hardscape Projects	1,958	9,609	10,964	744	1,684	24,959
Non-System Projects	7,057	0	246	3,107	0	10,410
TOTALS	662,108	674,972	922,832	971,309	942,073	4,173,294



## **Upcoming Design Projects**

534-244/245: SR 534 – Segments 4 & 5

> Narcoossee Road to Sunbridge Parkway





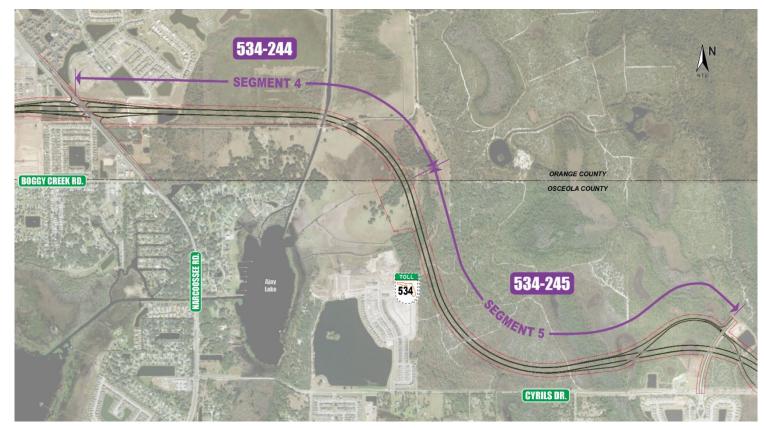
## 534-244/245: SR 534 - Segments 4 & 5 SR 534 from Narcoossee Road to Sunbridge Parkway

#### 3.5 Miles

Design Advertisement: 45% Plans and Design-Build Criteria Package

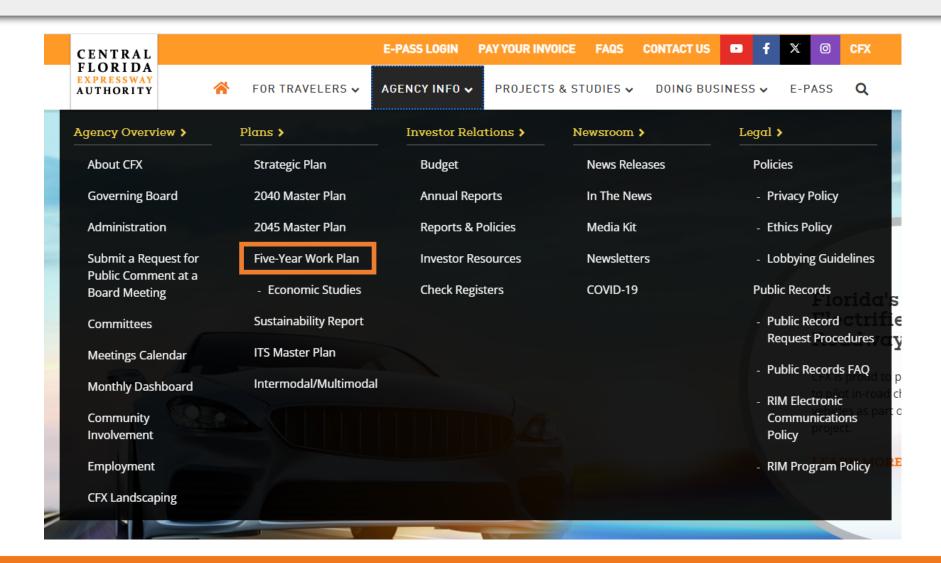
#### Advertisement

• 3<sup>rd</sup> Quarter 2024





### **CFX Website - 5 Year Work Plan**







### **Design Team Requirements**

#### **Prime Firm Requirements:**

- Prime executes at least 55% of the contract
- Utilize D/M/WBE Firms
  - 0 12 Points on Letters of Interest (LOI) scoring

#### **Key Local Resources:**

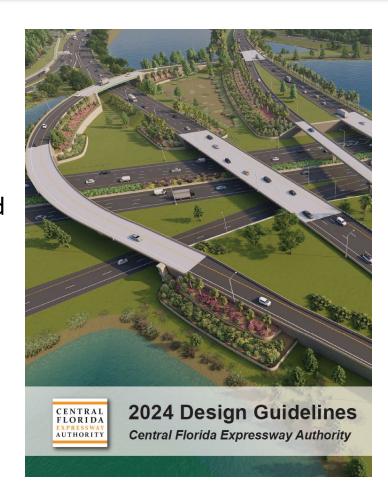
- Prime project manager
- Roadway lead
- Drainage lead





### **CFX Design Guidelines**

- Current 5<sup>th</sup> Edition
  - Published March 2024
  - Adopts 2024 FDOT Design Manual (FDM)
  - Website also includes CFX PD&E Guidelines and the CFX Design Details for ITS, Lighting, S&PM,
     Signalization, and Tolling
- Updated annually







## **Questions?**



Jamison Edwards, P.E.
CFX Engineering Project Manager

For marketing meetings contact:

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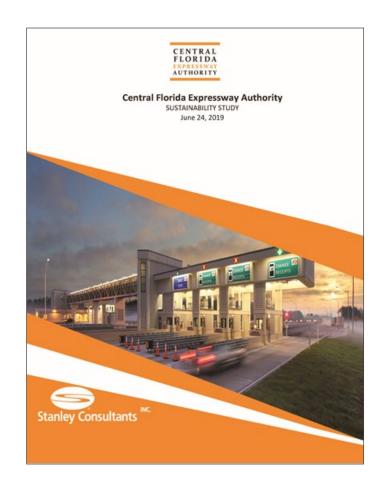
## **Transportation Technology Overview**

Bryan Homayouni, P.E. – Director of Intelligent Transportation Systems



## **Sustainability Study**

- Deployment of photovoltaic power solutions
- Improved energy efficiencies at CFX buildings
- Readiness for vehicle electrification

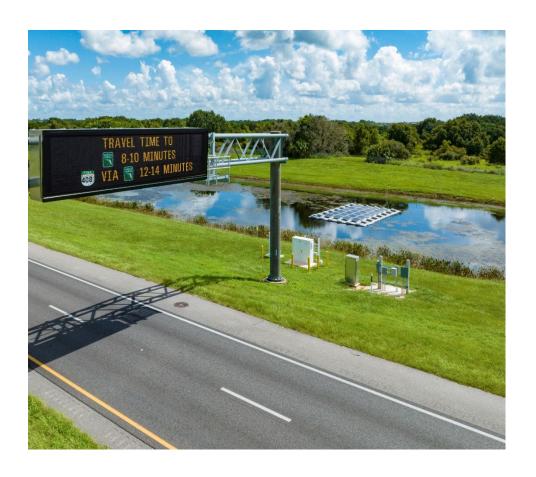






# Sustainability Projects FY 2025-2029 Work Plan

- Five solar deployment projects
- Includes solar deployment projects at nine existing toll plaza facilities
- SR 516 sustainability project
- Total capital investment estimated at \$14.8M





#### **Current ITS Assets**

- 293 CCTV cameras
- 188 data collection sensors
- 460 traffic monitoring stations
- 55 three-line dynamic message signs (DMS)
- 52 toll plaza DMS
- 30 arterial DMS
- 2 toll booth DMS
- 69 wrong-way driving detection stations
- Over 500 miles of fiber optic cable





### **ITS Design Details**

#### **Current 12th Edition**

- Updated March 2024
  - Includes part time shoulder use
  - Includes wrong-way driving system

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

#### ITS DESIGN DETAILS

FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM

MARCH 2024

CENTRAL FLORIDA EXPRESSWAY AUTHORITY 4974 ORL Tower Rd Orlando, FL 32807 PHONE NUMBER: 407-690-5000 FAX NUMBER: 407-690-5011





# **Transportation Technology FY 2025-2029 Work Plan**

#### Construction

Wrong-way driving countermeasures

#### **Design & Construction**

- Wrong-way driving upgrades project
- Connected vehicle projects
- Miscellaneous ITS upgrades project
- Lake Underhill Bridge lighting project
- Ramp intersection safety improvements

#### Implementation & Installation

- Lifecycle equipment replacements
- Video wall upgrades
- Advanced expressway operations performance measures





### **Questions?**



Bryan Homayouni, P.E.

CFX Director of Intelligent

**Transportation Systems** 

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### **Construction Overview**

Brent Dustin, P.E. - Construction Project Manager



### **CEI Qualifications**

#### **Major Types of Work:**

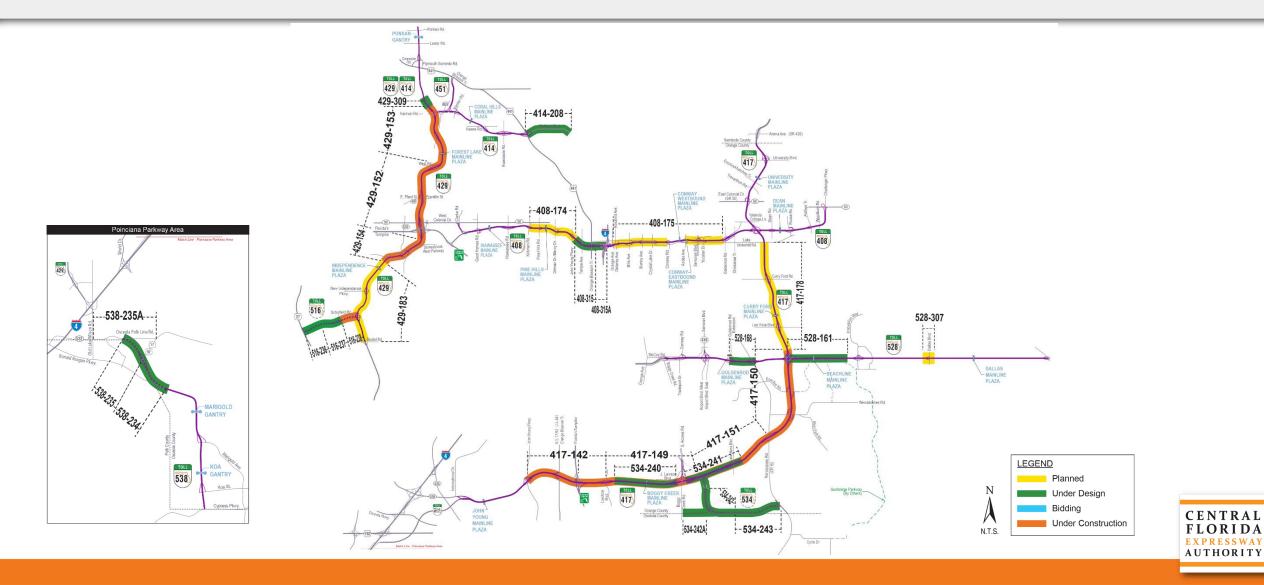
- 10.1 Roadway Construction
- 10.3 Construction Materials Inspection
- 10.4 Minor Bridge and Miscellaneous Structures
- 10.5 Major Bridge (scope dependent)

#### **Additional Services:**

- VT Lab Testing, Asphalt Plant Inspection
- Commercial Inspection
- Dynamic Testing Engineer

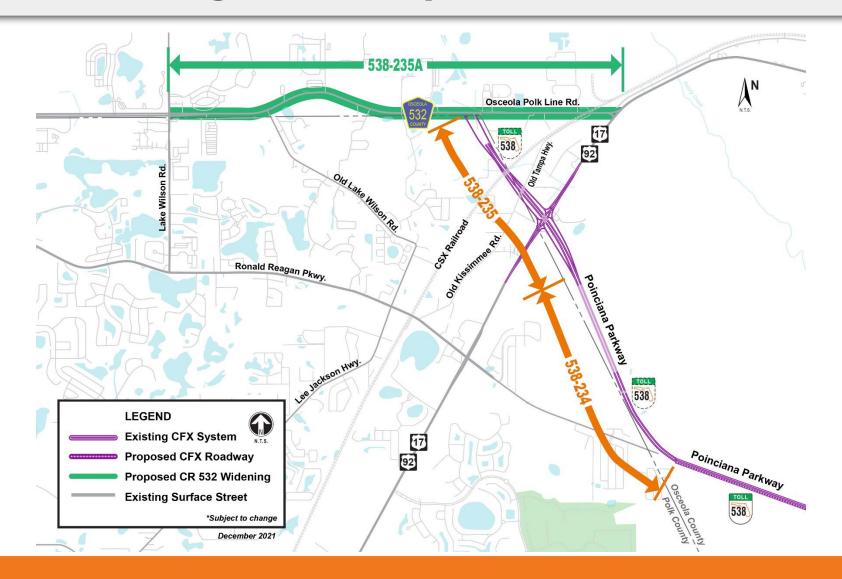


### **Status of Major Projects**



### **SR 538 Extension**

#### CR 532 to Ronald Reagan Parkway

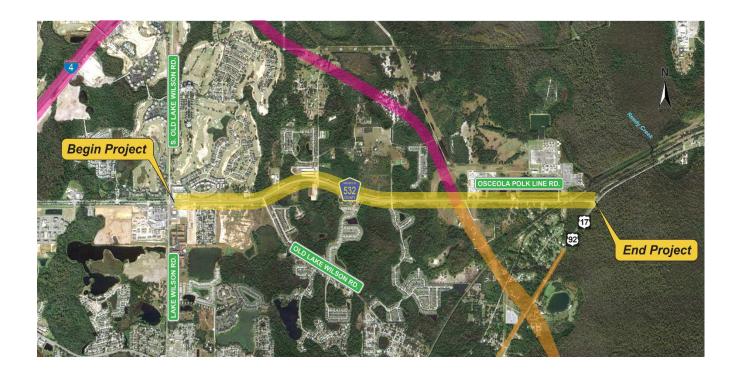


CENTRAL

AUTHORITY

# CR 532 Widening Lake Wilson Road to US 17/92

- Project (538-235A)
- CEI Advertisement:
  - 1st Quarter 2025
- \$46M construction cost estimate
  - 2-lane to 4-lane divided (2.9 mi.)
  - Partnership with Osceola Co.
  - 10' trail & 5' sidewalk
  - CSX Railroad at-grade crossing





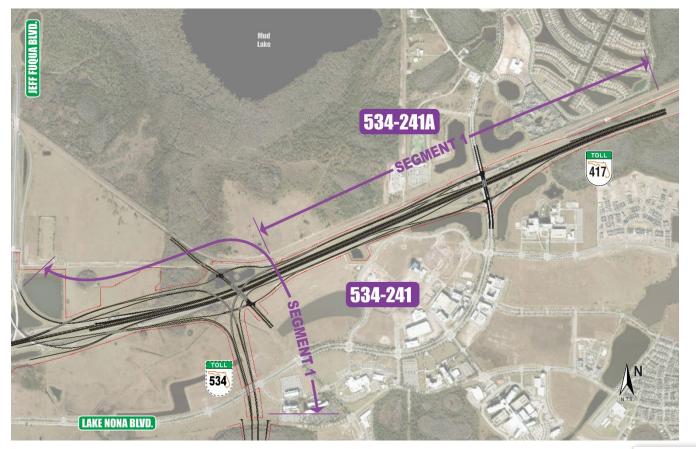
## SR 534 – Osceola Parkway Extension

SR 417 to Narcoossee Rd



# SR 534 - Segment 1 SR 534/SR 417 Interchange - South Portion

- Project (534-241)
- CEI Advertisement:
  - 2<sup>nd</sup> Quarter 2025
- \$249M construction cost estimate
  - First section of new systems interchange for SR 417 and SR 534
  - New 0.7-mile 4-lane roadway (Medical City Drive)
  - Widening NB and SB of SR 417
  - Multiple new / widened bridges





# SR 534 - Segment 2A

#### Simpson Road Extension

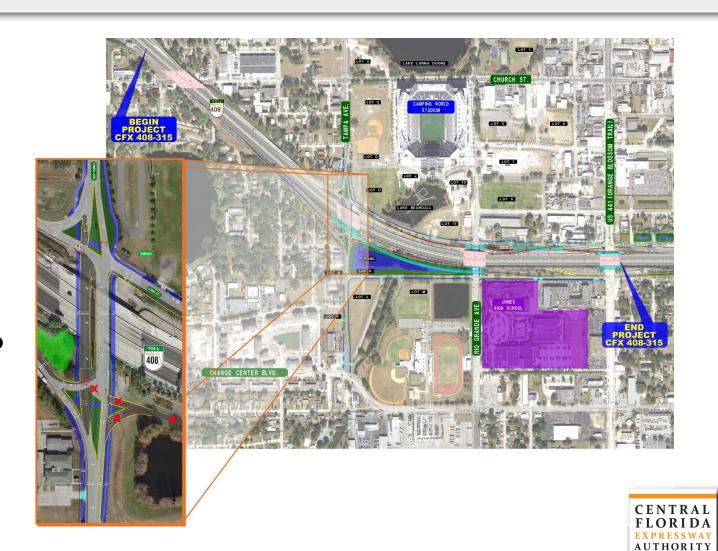
- Project (534-242A)
- CEI Advertisement:
  - 2<sup>nd</sup> Quarter 2025
- \$32M construction cost estimate
  - New 1.1-mile 4-lane roadway
  - From Simpson/Boggy Creek
     Intersection to SR 534
  - Two 10' shared use paths





# SR 408 Tampa Avenue Interchange Tampa Avenue to OBT

- Project (408-315)
- CEI Advertisement:
  - 2<sup>nd</sup> Quarter 2025
- \$120M construction cost estimate
  - Multiple widened bridges
  - 1 new bridge
  - Add a 4<sup>th</sup> lane eastbound from JYP to OBT
  - New and widened ramps
  - 1 AET ramp toll gantry



# SR 408 Orange Blossom Trail Interchange OBT to I-4

- Project (408-315A)
- CEI Advertisement:
  - 2<sup>nd</sup> Quarter 2025

- \$66M Construction cost estimate
  - Multiple new / widened bridges
  - Add a 4th lane eastbound from OBT to I-4
  - New and reconstructed ramps
  - 1 AET ramp toll gantry
  - Bids with 408-315



## SR 429 & Binion Road Interchange

#### North of Binion Road Bridge to South of Lust Road Bridge

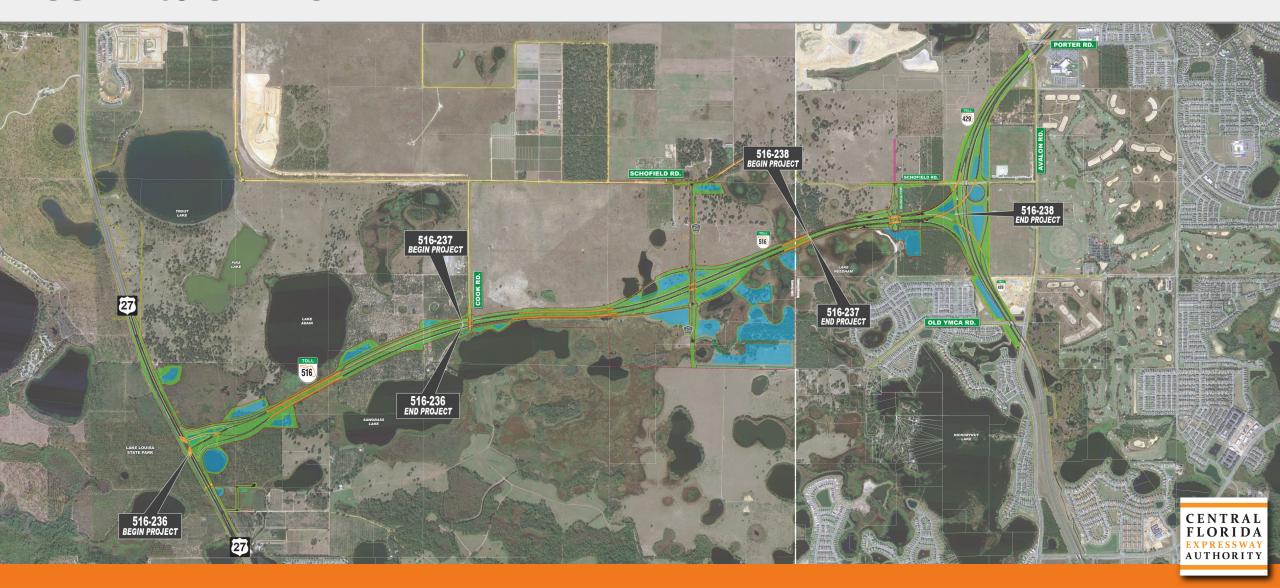
- Project (429-309)
- CEI Advertisement:
  - 2<sup>nd</sup> Quarter 2025
- \$38M construction cost estimate
  - Binion Road half interchange
  - 1 new bridge
  - Roundabout at Binion Road and New Boy Scout Road
  - 2 new ramp toll sites





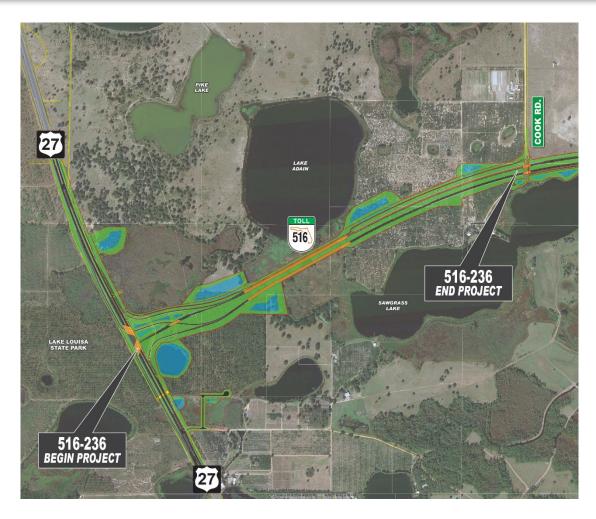
## SR 516 Lake/Orange Expressway

US 27 to SR 429



# SR 516 Lake/Orange Expressway US 27 to Cook Road

- Project (516-236)
- CEI Advertisement:
  - 3<sup>rd</sup> Quarter 2025
- \$194M construction cost estimate
  - New expressway (1.2 mi.)
  - US 27 re-construction (1.4 mi.)
  - Free-flow interchange at US 27
  - 8 new bridges (including trail along SR 516)
  - 14' wide trail along SR 516 & US 27
  - In-road EV charging pilot





# SR 516 Lake/Orange Expressway

#### Cook Road to Lake/Orange County Line

- Project (516-237)
- CEI Advertisement:
  - 3<sup>rd</sup> Quarter 2025
- \$239M construction cost estimate
  - New expressway (1.9 mi.)
  - CR 455 interchange
  - 8 new bridges
  - 2 new ramp toll sites
  - 14' wide trail along SR 516 & CR 455





# 1 – Year Look Ahead CEI Advertisements

Project #	Description	Construction Cost Estimate	Anticipated CEI Advertisement*	
-	Construction Management Consultant	-	7/15/2024	
+	Systemwide Materials Testing & Geotechnical Services	-	4 <sup>th</sup> Quarter 2024	
-	Systemwide CEI Services	-	1 <sup>st</sup> Quarter 2025	
538-235A	CR 532 Widening Lake Wilson Road to US 17/92	\$46 Million	1 <sup>st</sup> Quarter 2025	
534-241	SR 534 - Segment 1 - SR 534/SR417 Interchange - South Portion	\$249 Million	2 <sup>nd</sup> Quarter 2025	
534-242A	SR 534 - Segment 2A - Simpson Road Extension	\$32 Million	2 <sup>nd</sup> Quarter 2025	
408-315 & 408-315A	SR 408 Tampa Avenue Interchange SR 408 Orange Blossom Trail Interchange	\$188 Million	2 <sup>nd</sup> Quarter 2025	
429-309	SR 429 Binion Road Interchange	\$38 Million	2 <sup>nd</sup> Quarter 2025	
516-236	SR 516 US 27 to Cook Road	\$194 Million	3 <sup>rd</sup> Quarter 2025	
516-237	SR 516 Cook Road to Lake/Orange County Line	\$239 Million	3 <sup>rd</sup> Quarter 2025	
*Quarters are "calendar" quarters and subject to change.				

# 1 - Year Look Ahead Construction Advertisements

Project #	Description	Construction Cost Estimate	
528-168	SR 528 Widening Goldenrod Road to Narcoossee Road	\$54 Million	
538-235A	CR 532 Widening from Lake Wilson Road to US 17/92	\$46 Million	
534-241	SR 534 - Segment 1 - SR 534/SR417 Interchange - South Portion	\$249 Million	
534-242A	SR 534 - Segment 2A - Simpson Road Extension	\$32 Million	
408-315 & 408-315A	SR 408 Tampa Avenue Interchange SR 408 Orange Blossom Trail Interchange	\$188 Million	
429-309	SR 429 Binion Road Interchange	\$38 Million	
516-236	SR 516 from US 27 to Cook Road	\$194 Million	
516-237	SR 516 from Cook Road to Lake/Orange County Line	\$239 Million	
599-170B	Systemwide Water Body Protection Improvements	\$0.9 Million	
528-769	SR 528 Miscellaneous Resurfacing Project	\$6.7 Million	



# 1 - Year Look Ahead Construction Advertisements

Project #	Description	Construction Cost Estimate
	SR 538 Utility Corridor Pre-Works	\$3.2 Million
408-440	CFX Headquarters Chiller Replacement	\$0.7 Million
408-428	CFX HQ Lighting Retro-commissioning (currently advertised)	\$0.65 Million
599-426	Systemwide Generator Replacement	\$0.8 Million
599-765	Systemwide Plazas Roof Replacements	\$1.5 Million
800-904	Goldenrod Road (SR 551) Resurfacing from SR 528 to Lee Vista Blvd	\$6.2 Million
599-571	Systemwide Miscellaneous ITS Upgrades	\$13.2 Million
	Lake Underhill Bridge Architectural Lighting	\$0.15 Million
528-670	SR 528 Guide Sign Replacement from McCoy/Boggy Creek Road to SR 436	\$1.5 Million
528-668	SR 528 Airport Signage Update	\$4.3 Million



# 1 - Year Look Ahead Construction Advertisements

Project #	Description	Construction Cost Estimate
599-669	Systemwide Ramp AET Signing & Pavement Markings (currently advertised)	\$5.3 Million
599-671	Systemwide Mainline AET Signing	\$2.0 Million
528-778	SR 528 Bridge Improvements	\$0.65 Million
599-773	Systemwide Coatings of Steel Bridges and Plaza Ped Bridges	\$8.9 Million
599-774	Systemwide Coatings of Ramp Plaza Butterfly Structures	\$0.9 Million
599-770	SR 417 & SR 408 Concrete Coatings	\$4.4 Million
414-781	SR 414 Concrete Coatings	\$5.2 Million



## **Questions?**



Brent Dustin, P.E.

**Construction Project Manager** 

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