

**Candidate Project Pavement Only Project (POP)**

April 29, 2024

To: Lavenia Toole, PE  
 From: Felicia Pannell, PE

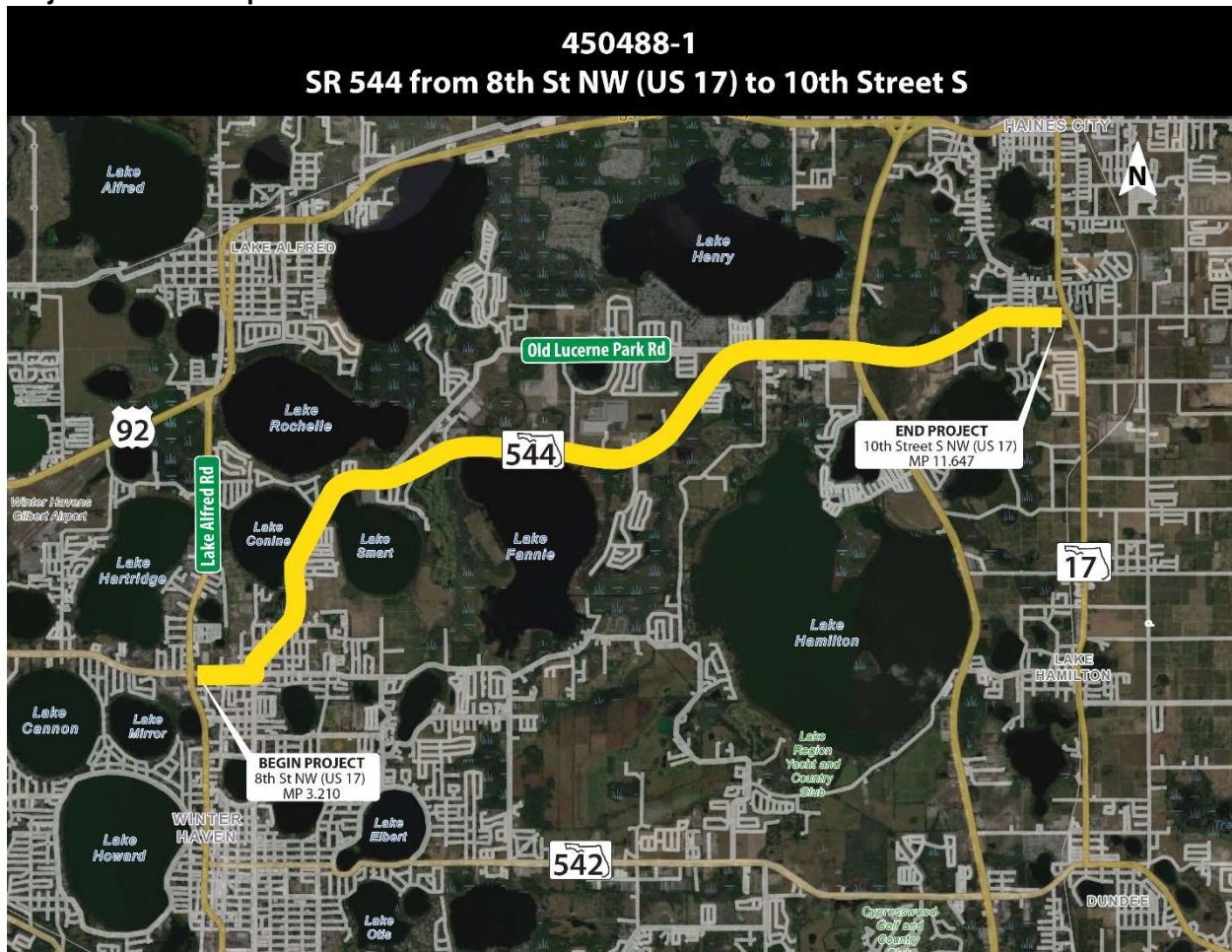
**RE: SR 544 from 8<sup>th</sup> St NW (US 17) to 10TH St S TECHNICAL POP Memo**

State Road Number: SR 544  
 Section Number: 16140000  
 County: Polk County  
 Project Limits: SR 544 from 8th St NW (US 17) to 10TH St S  
 Begin MP/End MP: 3.210 to 11.647  
 Exception limits: MP 3.693 to MP 4.169  
 Section Equation: N/A  
 Project Length: 8.437 miles  
 FPID No.: 450884-1  
 Work Mix: 0226 Pavement Only Resurfacing (Flex)

1. Existing R/W Map Project Numbers:	614-104 (1951); 80 feet minimum 16140-2501 (1962); varies 16140-2503 (1968); 114 feet minimum 16140-2508 (1985); varies
2. Old Construction Project Numbers:	423471-1 Add Turn Lane(s) (2014) MP 9.617 to MP 10.068 197298-2 RRR (2005) MP 3.213 to MP 3.666 197224-2 RRR (2004) MP 9.982 to MP 11.647
3. Proposed Projects:	(440273-1 PD&E, MP 3.681 to MP 11.647 440273-2 Add Lanes Recon MP 3.693 to MP 7.284 440273-3 Add Lanes Recon MP 7.284 to MP 11.647 447877-1 Media Mod (2022) MP 3.350 to MP 3.693 447474-1 traffic control devices push button MP 1.021 to MP 1.267 449655-1 Safety (2026) MP 0.279 to MP 0.451 446535-1 Sidewalk (2025) MP 0.517 to MP 1.636 447874-1 Safety (2023) MP 3.000 to MP 3.224
4. Adjacent Projects:	196915-3 RRR (2009) MP 0.365 to MP 3.156 197677-1 Intersection (1998) MP 2.151 to MP 3.151 450893 RRR FY29 16293000 - on hold for City of Winter Haven study - connect at excepted out intersection so it does not affect this project. 450875 RRR FY27 (16030) MP 29.069 to MP 32.824 - Crosses this project at 8th St

	450888 RRR FY27 (16180) MP 12.925 to MP 16.636
5. Additional R/W Required?	No
6. Level of Community Awareness Plan:	Level 1
7. Are there any bridges within the limits?	Yes, BR #16-0136 (MP 1.890 to MP 1.902) BR #16-7900 UP (MP 3.449 to MP 3.451) BR #16-0021 (MP 9.080 to MP 9.099) CB #16-0147 (MP 10.199 to 10.204)
8. Are there any RR Crossings within the project limits or in the vicinity?	No
9. Are there any Airports within 5-miles?	Yes, Winter Haven Regional Airport & FBO
10. Storm Water Management Jurisdiction:	Southwest Florida WMD
11. AADT:	33,800 AADT (2023); Truck % = 10.0
12. Number of Existing Utilities:	15 Utilities: ATT – Communication Lines, Fiber; Centurylink – Fiber, Telephone; Charter Communications – CATV, Fiber, Telephone; City of Auburndale – Sewer, Water; City of Winter Haven – Sewer, Water, Fiber; Cogent Communications – Fiber; Duke Energy – Electric; Fla Gas Trans – Gas; Florida Public Utility – Gas; Frontier – CATV, Communication Lines; Lumen – Fiber; Summit Broadband – Fiber, Telephone; Tampa Electric Company – Electric; Teco Fiber – Fiber; Zayo Group – Fiber.
13. Posted/Design Speed Limits:	Posted Speed: 35 mph (MP 3.210 to MP 3.693) 45 MPH (MP 4.169 to MP 4.919) 50 MPH (MP 4.919 to MP 9.644) 45 MPH (MP 9.644 to MP 9.943) 50 MPH (MP 9.943 to MP 10.788) 45 MPH (MP 10.788 to MP 11.003) Design Speed: 45 mph (MP 3.210 to MP 3.213) 35 mph (MP 3.213 to MP 3.693) 45 MPH (MP 4.169 to MP 4.919) 55 MPH (MP 4.919 to MP 8.432) 50 MPH (MP 8.432 to MP 9.644) 45 MPH (MP 9.644 to MP 9.943) 55 MPH (MP 9.943 to MP 11.003)
14. SIS Facility? / Context Classification:	No / C3C (MP 3.210 to MP 3.683) C4 (MP 3.683 to MP 4.165) C3R (MP 4.165 to MP 5.783) C3C (MP 5.738 to MP 11.647)
15. Resilient Modulus:	16,000 psi

## Project Location Map:



## Typical Section Discussion:

- The context and target speed meetings were held on July 7, 2023. The target speed was set to match the existing posted speed ranging from 35-50 mph. The following speeds were also changed during this meeting:
  - MP 3.124 to MP 3.168 - Posted speed changed from 35 mph to 45 mph
  - MP 9.943 to MP 11.003 – Design speed changed from 65 mph to 55 mph
  - MP 4.169 TO MP 4.919 – Posted speed changed from 35 mph to 45 mph
  - MP 4.919 TO MP 8.432 – Posted speed changed from 45-55 mph to 50 mph
- Typical section description:
  - Typical 1 (MP 3.210 to MP 3.693) = 4-lane undivided roadway with 12-ft travel lanes; 12-15.5 ft two-way left turn lane; Type F curb and gutter and 5-ft sidewalk on both sides.
  - Typical 2 (MP 4.169 to MP 9.706 and MP 9.943 to MP 11.003) = 2-lane undivided roadway with 12-ft travel lanes; 8-ft outside shoulders (5-ft paved) and no sidewalk.
  - Typical 3 (MP 9.706 to MP 9.853) = 2-lane divided roadway with 12-ft travel lanes; 11-ft turn lanes and a 5-ft keyhole lane on the right side; Type F curb and gutter; 6-ft sidewalk on right side.

- Typical 4 (MP 9.853 to MP 9.943) = 2-lane divided roadway with 12-ft travel lanes; 11-ft turn lanes and a 5-ft keyhole lane on the left side; Type F curb and gutter on the left side and 6-ft shoulder (5-ft paved) on the right side; no sidewalk.
- Typical 5 (MP 11.003 to MP 11.647) = 4-lane undivided roadway with 11-ft travel lanes; and Type F curb and gutter; 5-ft sidewalk on left side.

**Pavement Design Assumptions for LRE:**

- Design will need to prepare the pavement design for this project. Any pavement design used in this estimate is for budget purposes only.

**Mainline Milling and Resurfacing:**

- For budget purposes, the mainline through lanes and turn lanes are recommended to be milled 3 ½" and resurfaced with 2" SP 12.5 (Traffic C, PG 76-22) and 1 ½" FC-12.5 (Traffic C, PG 76-22).

**Shoulder Milling and Resurfacing:**

- For budget purposes, the paved shoulders are to be milled 1 ½" and resurfaced with 1½" FC-12.5 (Traffic C, PG 76-22).

**Side Street Milling and Resurfacing:**

- For budget purposes, the side streets are recommended to be milled 1½" and resurfaced with 1½" FC-12.5 (Traffic C, PG 76-22).
- In accordance with the FDM Chapter 214 and the Standard Plans Index 330-001, it is recommended that all side streets be resurfaced to the back of the furthest return, right of way, or existing pavement joint, whichever is greater.

**Traffic Monitoring Site:**

- There is a traffic monitoring site located at approximate MP 8.733. Quantities are included in the LRE to replace the sensors and loops. Recommend coordinating with the Transportation Data and Analytics Office when developing the Traffic Monitoring Site plan. Victor Johnson, FDOT Traffic Data Collection Coordinator, can be contacted at email [victor.johnson@dot.state.fl.us](mailto:victor.johnson@dot.state.fl.us).

# FDOT Long Range Estimating System - Production

## R3: Project Details by Sequence Report

**Project:** 450884-1-52-01

**Letting Date:** 01/2099

**Description:** SR 544 from E of 8th St NW (US17) to 10th St S

**District:** 01

**County:** 16 POLK

**Market Area:** 08

**Units:** English

**Contract Class:** Lump Sum Project: N

**Design/Build:** N

**Project Length:** 11.155 MI

**Project Manager:** 4P

**Version 5-P Project Grand Total**

**\$13,264,321.82**

**Description:** Reduced limits from Version 4 - POP only - 5/10/24

**Sequence:** 1 MIS - Miscellaneous Construction

**Net Length:** 8.437 MI  
44,547 LF

**Description:** POP (w loops)

### ROADWAY COMPONENT

**X-Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-2	MILLING EXIST ASPH PAVT,3 1/2" AVG DEPTH	178,337.28	SY	\$3.95	\$704,432.26
327-70-6	MILLING EXIST ASPH PAVT,1 1/2" AVG DEPTH	95,399.00	SY	\$4.56	\$435,019.44
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	19,617.10	TN	\$177.39	\$3,479,877.37
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	22,583.00	TN	\$198.55	\$4,483,854.65
546-72-3	GROUND-IN RUMBLE STRIPS, 8" SIN	14.10	GM	\$2,166.52	\$30,547.93
570-1-2	PERFORMANCE TURF, SOD	23,401.00	SY	\$4.86	\$113,728.86
704-1-1	TUBULAR MARKER, DURABLE, 36" WHITE POST	5.00	EA	\$190.86	\$954.30
706-1-3	RAISED PAVMT MARK, TYPE B	4,245.00	EA	\$4.36	\$18,508.20
710-12-290	PAINTED PAVT MARK,DUR,YELLOW,ISLAND NOSE	125.00	SF	\$5.49	\$686.25
710-90	PAINTED PAVEMENT MARKINGS, FINAL SURFACE	1.00	LS	\$69,896.71	\$69,896.71
711-11-123	THERMOPLASTIC, STD, WHITE, SOLID, 12"	6,230.00	LF	\$3.45	\$21,493.50
711-11-124	THERMOPLASTIC, STD, WHITE, SOLID, 18"	590.00	LF	\$5.44	\$3,209.60
711-11-125	THERMOPLASTIC, STD, WHITE, SOLID, 24"	1,540.00	LF	\$6.58	\$10,133.20
711-11-141	THERMOPLASTIC, STD, WHITE, DOT GUIDE, 6"	1.14	GM	\$2,661.25	\$3,033.82
711-11-160	THERMOPLASTIC, STD, WHITE, MESSAGE	18.00	EA	\$198.42	\$3,571.56
711-11-170	THERMOPLASTIC, STD, WHITE, ARROW	219.00	EA	\$77.66	\$17,007.54
711-11-224	THERMOPLASTIC, STD, YELLOW, SOLID, 18"	3,035.00	LF	\$5.34	\$16,206.90
711-11-241	THERMOPLASTIC,STD,YELLOW,DOT / GUIDE, 6"	0.96	GM	\$2,754.23	\$2,644.06
711-14-125	THERMOPLASTIC, PREFORM, WHITE, SOLID,24"	1,298.00	LF	\$17.08	\$22,169.84

711-14-160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	12.00 EA	\$231.44	\$2,777.28
711-14-170	THERMOPLASTIC, PREFORMED, WHITE, ARROW	12.00 EA	\$134.51	\$1,614.12
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	18.61 GM	\$5,558.07	\$103,435.68
711-16-102	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 8"	0.12 GM	\$6,728.06	\$807.37
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	1.90 GM	\$1,616.01	\$3,070.42
711-16-201	THERMOPLASTIC, STD-OTH, YELLOW, SOLID, 6"	14.15 GM	\$5,357.56	\$75,809.47
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	2.00 GM	\$1,730.92	\$3,461.84
713-103-101	PERMANENT TAPE, WHITE, SOLID, 6" CONC BR	0.05 GM	\$34,928.43	\$1,746.42
713-103-201	PERMANENT TAPE, YELLOW, SOLID, 6" CONC BR	0.05 GM	\$34,633.26	\$1,731.66
<b>Roadway Component Total</b>				<b>\$9,631,430.26</b>

### SHOULDER COMPONENT

#### User Input Data

**Description** **Value**

#### X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	84,068.00	LF	\$1.63	\$137,030.84
104-15	SOIL TRACKING PREVENTION DEVICE	2.00	EA	\$2,689.06	\$5,378.12
107-1	LITTER REMOVAL	48.25	AC	\$48.53	\$2,341.57
107-2	MOWING	48.25	AC	\$84.04	\$4,054.93
527-2	DETECTABLE WARNINGS	1,640.00	SF	\$35.46	\$58,154.40
<b>Shoulder Component Total</b>					<b>\$206,959.86</b>

### SIGNALIZATIONS COMPONENT

#### Signalization 9

**Description** **Value**  
 Type Miscellaneous  
 Multiplier 1  
 Description SR 544 (Havendale Blvd) at SR 555/US 17 (8th St NW)

#### X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
660-2-102	LOOP ASSEMBLY, F&I, TYPE B	2.00	AS	\$1,115.84	\$2,231.68
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	4.00	AS	\$1,354.74	\$5,418.96

#### Signalization 10

**Description** **Value**  
 Type Miscellaneous  
 Multiplier 1  
 Description SR 544 (Havendale Blvd) at SR 549 (1st St N)

**X-Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
660-2-102	LOOP ASSEMBLY, F&I, TYPE B	4.00 AS	\$1,115.84	\$4,463.36
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	8.00 AS	\$1,354.74	\$10,837.92

**Signalization 12**

Description	Value
Type	Miscellaneous
Multiplier	1
Description	SR 544 (Havendale Blvd) at SR 25/US 27

**X-Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
660-2-102	LOOP ASSEMBLY, F&I, TYPE B	6.00 AS	\$1,115.84	\$6,695.04
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	9.00 AS	\$1,354.74	\$12,192.66

**Traffic Monitoring 1**

Description	Value
Lanes	2
Multiplier	1

**X-Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
695-2-1	TMS VEH SNSR-NON-WEIGHT, F&I, <b>Comment:</b> Roadway	2.00 EA	\$1,900.00	\$3,800.00
695-6-12	TMS IND LOOP ASSEMBLY <b>Comment:</b> Roadway	2.00 EA	\$1,705.02	\$3,410.04
<b>Signalizations Component Total</b>				<b>\$49,049.66</b>

**Sequence 1 Total****\$9,887,439.78**

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**Units:** English

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**Design/Build:** N

**Project Length:** 11.155 MI

**Project Manager:** 4P

**Version 5-P Project Grand Total**

**\$13,264,321.82**

**Description:** Reduced limits from Version 4 - POP only - 5/10/24

**Project Sequences Subtotal**

**\$9,887,439.78**

102-1	Maintenance of Traffic	15.00 %	\$1,483,115.97
101-1	Mobilization	10.00 %	\$1,137,055.58

**Project Sequences Total**

**\$12,507,611.33**

Project Unknowns	5.00 %	\$625,380.57
Design/Build	0.00 %	\$0.00

**Non-Bid Components:**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	\$131,329.92	\$131,329.92

**Project Non-Bid Subtotal**

**\$131,329.92**

**Version 5-P Project Grand Total**

**\$13,264,321.82**