

Maintenance Resurfacing Technical Scope

August 11th, 2023

452883-1: SR 5 from N. of Rocky Point Rd. to S. of SR 514 (Malabar Rd.) (SB only)

State Road Numbers: SR 5
 Section Number: 70010000
 County: Brevard
 Project Limits: SR 5 from N. of Rocky Point Rd. to S. of SR 514 (Malabar Rd.) (**SB side only**)
 Begin MP/End MP: 8.804 – 11.365 (Length 3.31 MI)
 FM: 452883-1

<ul style="list-style-type: none"> Existing R/W Map Project Numbers: 	70010-2276 (1961) MP 5.31 – MP 10.90 70010-2277 (1961) MP 10.95 – MP 16.10 70010_2376871 (1999) MP 8.21 – MP 8.41
<ul style="list-style-type: none"> Old Construction Project Numbers: 	70010-3276 (1961) 70010-3277 (1961) 237259-1 (1980) MP 5.30 – MP 10.20; RW Acquisition 237473-1 (1991) MP 10.05 – MP 16.08; Resurfacing 237611-1 (1996) MP 5.69 – MP 10.05; Resurfacing 237209-1 (1998) MP 0.00 – MP 11.41; Resurfacing 409166-1 (2004) MP 0.18 – MP 11.28; Resurfacing 421990-1 (2009) MP 8.81 – MP 11.39; Resurfacing 428860-1 (2014) MP 5.69 – MP 8.81; Resurfacing 437302-1 (2018) MP 5.69 – MP 13.78; Signing & Pavement Markings
<ul style="list-style-type: none"> Additional R/W required? 	No
<ul style="list-style-type: none"> Level of Community Awareness Plan: 	CAP Level 2, Urban Arterial Resurfacing
<ul style="list-style-type: none"> Agreements required? 	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Yes, including Local Funds.
<ul style="list-style-type: none"> Are there any bridges within the limits? 	No
<ul style="list-style-type: none"> Are there any RR Crossings within the project limits or in the vicinity? 	Yes. About 640 feet West of the Jordan Ave. intersection. About 1200 feet west of the Township Rd. intersection. About 830 feet west of the SR 514 (Malabar Rd.) intersection.
<ul style="list-style-type: none"> Are there any Airports within 10 nautical miles? 	Yes. Melbourne Orlando International Airport. Sebastian-Roseland Municipal Airport. Valkaria Airport.
<ul style="list-style-type: none"> Storm Water Management jurisdiction: 	SJRWMD
<ul style="list-style-type: none"> Is the Project within CCCL (<i>Coastal Construction Control Line</i>)? 	No
<ul style="list-style-type: none"> Existing Utilities per Sunshine One Call: 	Resurgence Infrastructure Group LLC AT&T/AT&T Distribution Brevard County Public Works Engineering City of Palm Bay Utilities Department Charter Communications Zayo Group Florida Power & Light Lumen MCI Communications Services Uniti Fiber LLC Cogent Communications
<ul style="list-style-type: none"> Any special MOT concerns? 	Yes.

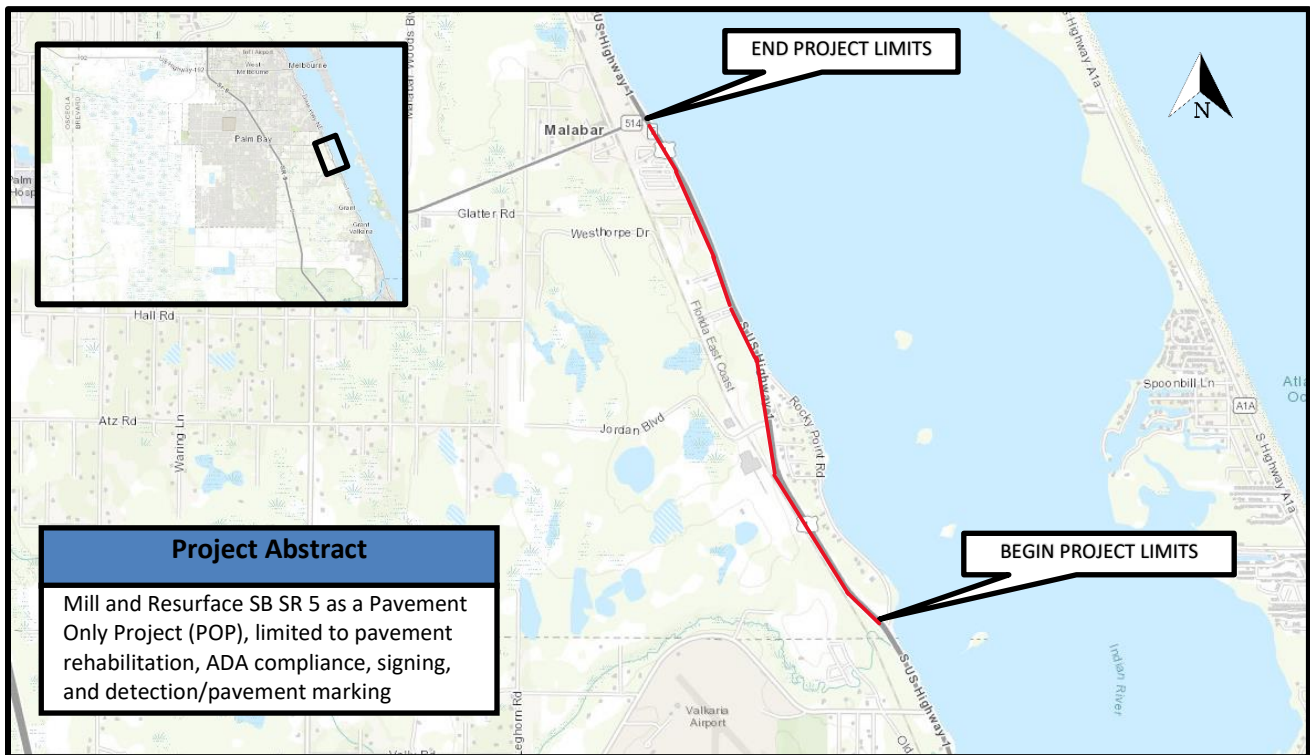
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	Corridor is a designated evacuation route. See here for more information: https://maps.floridadisaster.org/county/EVAC_brevard.pdf			
• Any construction concerns?	No			
• Posted/Design Speed Limits (mph): Source: FDOT SLD (Section Number: 70010000)	<u>Milepost Range</u>	<u>Design</u>	<u>Posted</u>	<u>Target</u>
	8.804 – 10.056	55 mph	55 mph	55 mph
	10.056 – 11.217	50 mph	50 mph	50 mph
	11.217 – 11.365	45 mph	45 mph	45 mph
• Design Criteria and Highway System:	SHS, FDM (2023), RRR			
	<u>Milepost Range</u>	<u>Context Classification</u>		
	8.804 – 8.811	C3C		
	8.811 – 11.233	C3R		
	11.233 – 11.365	C3C		
• Lump Sum or Pay Item?	Pay Item			
• Proposed Design Schedule:	18-24 Months			

Local Agency Coordination:

The Engineer should coordinate to obtain an agreement with Brevard County/City of Palm Bay for maintenance needs associated with the proposed improvements.

Project Location Map:



The Engineer is responsible for verifying all items in the proposed scope and shall review the **project** for conformance with all applicable criteria and standards.

Intent and Nature of Project:

The purpose of the project is to restore the functional condition of the asphalt pavement to extend the service life of the existing roadway in accordance with FDOT Design Manual Section 114.1.4 as a POP. The nature of the project is limited to asphalt resurfacing, ADA compliance, detection restoration, and signing and pavement markings.

Project Description:

- Project is located along SR 5, from north of Rocky Point Road to South of SR 514 (Malabar Road) in Palm Bay, Florida within Brevard County.
- SR 5 is classified as an urban principal arterial with access classification 03 within project limits.
- There is currently one (1) active project identified within the vicinity of this project:
 - 435657-1: SR 5 from Indian River County line to N. of Goat Creek (MP 0.19 – MP 8.82); Resurfacing.
- Tentative Work Program
 - 443814-1: US 1 from N. of Century Oaks Circle to N. of Myers Dr. (3.706 miles); Resurfacing.
 - 430136-1: SR 514 (Malabar Rd.) from Babcock Rd. to US 1 (3.600 miles); PD&E, Widening.
 - 447092-1: NB US 1 from Rocky Point Rd. to SR 514 (Malabar Rd.) (2.433 miles); Resurfacing

Typical Sections:

- Within project limits, there are two (2) typical sections along 70010000 (SR 5):
 - MP 8.804 – MP 10.222: 4-lane, 2-way divided Urban Principal Arterial highway with 12-foot travel lanes. Sodded median width varies between 18-feet to 40-feet. There are 4-foot paved outside shoulders. No curb and gutter present on inside or outside.
 - MP 10.222 – MP 11.365: 4-lane, 2-way divided Urban Principal Arterial highway with 12-foot NB travel lanes and 11-foot SB travel lanes. Curbed sodded median is 18-feet in width. There are 4-foot paved outside shoulders with valley gutter and guardrail on the eastern side of the corridor.
- No dedicated bicycle facilities exists within project limits.
- No sidewalk is present within project limits.
 - Sidewalk facilities are being proposed along the corridor in a separate project. See Roadway and Multimodal Scope Item sections of this document for more information.
- 2022 traffic data from FDOT GIS Data Hub:

Mile Post Limits	AADT	K (%)	D (%)	T (%)
1.964 – 11.406	16,856	9.0	52.7	6.6

Roadway Scope Items:

- A Pavement Condition Assessment was completed June 8, 2023, and found the roadway pavement to be in fair to poor condition. Specifically, the mainline travel lanes (R1/R2/L1/L2) are in fair to poor condition, the turn lanes are in fair to good condition, and the outside paved shoulders are in fair to poor condition. Semi-continuous moderate to severe raveling, longitudinal cracking, and branch cracking was observed in both wheel paths along the mainline travel lanes. Light transverse cracking and light longitudinal joint cracking along the turn lanes was observed throughout the project limits. Isolated areas with light to moderate vegetation growth was observed along the outside paved shoulders. Semi-continuous moderate longitudinal joint cracking was observed in the southbound paved shoulder from MP 5.868 to MP 12.803.
- Mill and resurface existing asphalt pavement along SR 5*, rehabilitate the roadway sections that are in distress, and restore the final surface. ***Note: Milling and Resurfacing will only be performed on SB SR 5**
- Cross slope correction is not part of this project.

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Drainage Scope Items:

- The primary goal for improvements along this corridor is to utilize the existing drainage system. No work proposed.

Utility Scope Items:

- Utility coordination will be required to determine any necessary adjustments to avoid conflicts with the proposed construction.
- Quality Level “QL C” utility information is anticipated in areas of potential conflicts.

Multimodal Scope Items:

Transit:

- There are no transit facilities operating along the corridor within project limits. No changes to this item are being proposed.

Bicycle facilities:

- Exclusive bicycle facilities are not present on either side of the corridor within the project limits.

Pedestrian facilities:

- Adjacent construction project (FPID 447092-1) is proposing a 6’ sidewalk along the west side of SR 5/US 1 from Orange Avenue to Malabar Road. The intent of FPID 447092-1 is to mill and resurface the northbound travel lanes and shoulders within the same project limits as this scope; therefore, no additional sidewalk is needed on the west side of SR 5/US 1.
- A pedestrian-specific temporary traffic control plan should be provided to maintain connectivity within the corridor in the event of lane closures/detours during milling and resurfacing operations.

Permitting Scope Items:

- Coordinate with FDOT, submitting a permit determination letter to the Environmental Permits Office, Attention District Five Permits Coordinator, for review and concurrence during the design process, considering the below descriptions of work and conditions.
 - This project is anticipated to exceed one acre of soil disturbing activities and will require NPDES coverage under the FDEP Generic Permit for Stormwater Discharge from Large and Small Construction Activities.
- Wetlands were noted adjacent to the Right of Way and are not to be impacted. The apparent wetland lines shown on the Concept are from the Florida Geographic Data Library and are for informational purposes only.
- The following National Register of Historic Places (NRHP) Historic Districts have been identified within the project limits:
 - Jorgensen’s General Store

Environmental Scope Items:

- Complete an environmental assessment:
 - A protected species assessment is required for the project. The level of assessment should be commensurate with the scope of work. The assessment should focus on species applicable to the project area with consideration given to consultation areas, habitats, and known occurrence data.
 - A Cultural Resources Assessment is required and is to be conducted by Cultural Resources Professionals as outlined in 36 CFR Part 61 and set forth in the Professional Qualifications Standards section of the Secretary of the Interior’s Standard and Guidelines for Archaeology and Historic Preservation.

Structural Scope Items:

- No work proposed.

Traffic Operations (Includes Signing, Signals, ITS) Scope Items:

Signing and Pavement Markings

- Signing and Pavement Marking shall be completed for the proposed improvements. The Engineer will inventory all signing within the project limits, including evaluation for compliance with FDOT Specifications, FDM, Standard Plans, MUTCD, FHWA, etc. criteria. Any existing signs or pavement markings that conflict with the proposed signs or pavement markings or non-compliant signs or pavement markings shall be addressed in the plans.
- Provide audible and vibratory treatment (AVT) for edge and center lines from MP 8.804 to MP 11.217 (posted speed 50 mph or greater) per FDM 210.4.6.

Signals (ITS)

- Signal detection is to be reestablished. Existing detection methods are provided within the table below.
- The project includes 1 signalized intersection;

MP 9.843- Jordan Blvd (Mast Arms)	
Detection	Inductive Loops
Backplates	Existing Backplates
Left Turns	NB Protected/Permissive
Pedestrian Signals	Pedestrian Poles
Other	N/A

- Traffic Monitoring Sites within the project limits have been reviewed and the following recommendations coordinated with the Data Collection Manager;

MP	TMS Site No. & Type	Recommendation
11.226	700114; TTMS	Restore detection, reconstruct cabinet with pedestal mount

- Coordinate any signalization requirements including lane closures/detours with Maintaining Agency.

Intelligent Transportation Systems (ITS)

- Any ITS items within the project limits shall be shown on plan sheets that are necessary for other work. Plan sheets are not necessary solely to show ITS elements. ITS Certification Memo will be required at Production. See District Design Memo 09-02. Existing components include fiber optic interconnect.

Lighting Scope Items:

- No work proposed.

Landscaping Scope Items:

- No work proposed.

Survey Scope Items:

- Obtain Design Survey for the areas and locations of identified and proposed improvements. Total survey area will be determined by the Engineer based on the limits of disturbance.

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- DTM will be needed in areas of anticipated design such as curb ramp reconstruction.
- Utility designates at a minimum in the areas of anticipated design.
- Include items identified by the environmental assessment.

Right of Way and Mapping Scope Items:

- No work proposed.

Geotechnical and Pavement Scope Items:

- Pavement Coring Report and Resilient Modulus values are to be provided by FDOT District Materials Office.
- ESAL Calculations to be provided by the FDOT District Planning Office.
- Perform and obtain the necessary geotechnical information as directed by the Geotechnical Office.

Design Documentation:

- The design documentation items noted below are necessary to implement the proposed improvements. The Engineer is responsible for verifying all items in the proposed Scope and design conform with all applicable criteria and standards, including the identification of any required Memoranda, Variations and Exceptions.
- Design Variation Memorandum
 - None.
- Design Variation
 - None.
- Design Exception
 - None.

Candidate Project Development Considerations (items not to be included in final design):

- None.