

Maintenance Resurfacing Project Technical Scope

February 22, 2024

452907-1: SR 40 from Lake County Line to Railroad Ave.

State Road Numbers: 40
 Section Number: 79100-000
 County: Volusia
 Project Limits: Lake County Line to Railroad Ave.
 Begin MP/End MP: 0.000 to 6.389 (Length 6.389 Mi)
 FM: 452907-1

1. Existing R/W Map Project Numbers:	864 (1940) MP 0.000 to MP 6.397 79100 NRS 120 EXT (Unknown) MP 6.266 to MP 6.426 79100-2509 (1973) MP 6.266 to MP 6.426 79100-2508 (1975) 79100-2529 (1992) MP 0.640 to MP 1.083 79050 410251-1 (2012) 410676-1 (2012) MP 0.207 to MP 6.266			
2. Old Construction Project Numbers:	240685-1 (1985) MP 0.000 to MP 6.400; Resurfacing 244643-1 (1991) MP 0.000 to MP 30.317; Betterment/Landscaping 240939-1 (1995) MP 0.000 to MP 6.543; Widen/Resurfacing 415526-1 (2006) MP 0.000 to MP 6.535; Resurfacing 417002-1 (2007) MP 0.000 to MP 6.436; Signing & Pavement Marking 436918-1 (2015) MP 6.370 to MP 6.394; RR Safety Project			
3. Additional R/W required?	No			
4. Level of Community Awareness Plan:	CAP Level 1			
5. Agreements required?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes			
	<input type="checkbox"/> Yes, including Local Funds.			
6. Are there any bridges within the limits?	110077 (MP 7.697 to MP 7.795) (SR 40 – 11140000) 790048 (MP 3.248 to MP 3.254) 790049 (MP 5.263 to MP 5.273)			
7. Are there any RR Crossings within the project limits or in the vicinity?	Yes (CSX Crossing 621284W at SR 40 MP 6.397)			
8. Are there any Airports within 10 nautical miles?	Pierson Municipal Airport (2J8) Deland Municipal Airport (DED) Deep Woods Ranch Airport (FD86)			
9. Storm Water Management jurisdiction:	SJRWMD			
10. Is the Project within CCCL (<i>Coastal Construction Control Line</i>)?	No			
11. Existing Utilities per Sunshine One Call:	Clay Electric Salt Springs District Opticaltel Duke Energy Lumen - CenturyLink MCI Crown Castle NG AT&T/Distribution St Johns River Utility Inc Uniti Fiber LLC			
12. Any special MOT concerns?	St. John's River Draw Bridge (110077); CSX Railroad Crossing (621284W)			
13. Any construction concerns?	No			
14. Posted/Design Speed Limits (mph):	<u>Facility</u>	<u>Design</u>	<u>Posted</u>	<u>Target</u>
	SR 40	50 (0.000-0.300)	45	45
		60 (0.300-6.141)	55	55

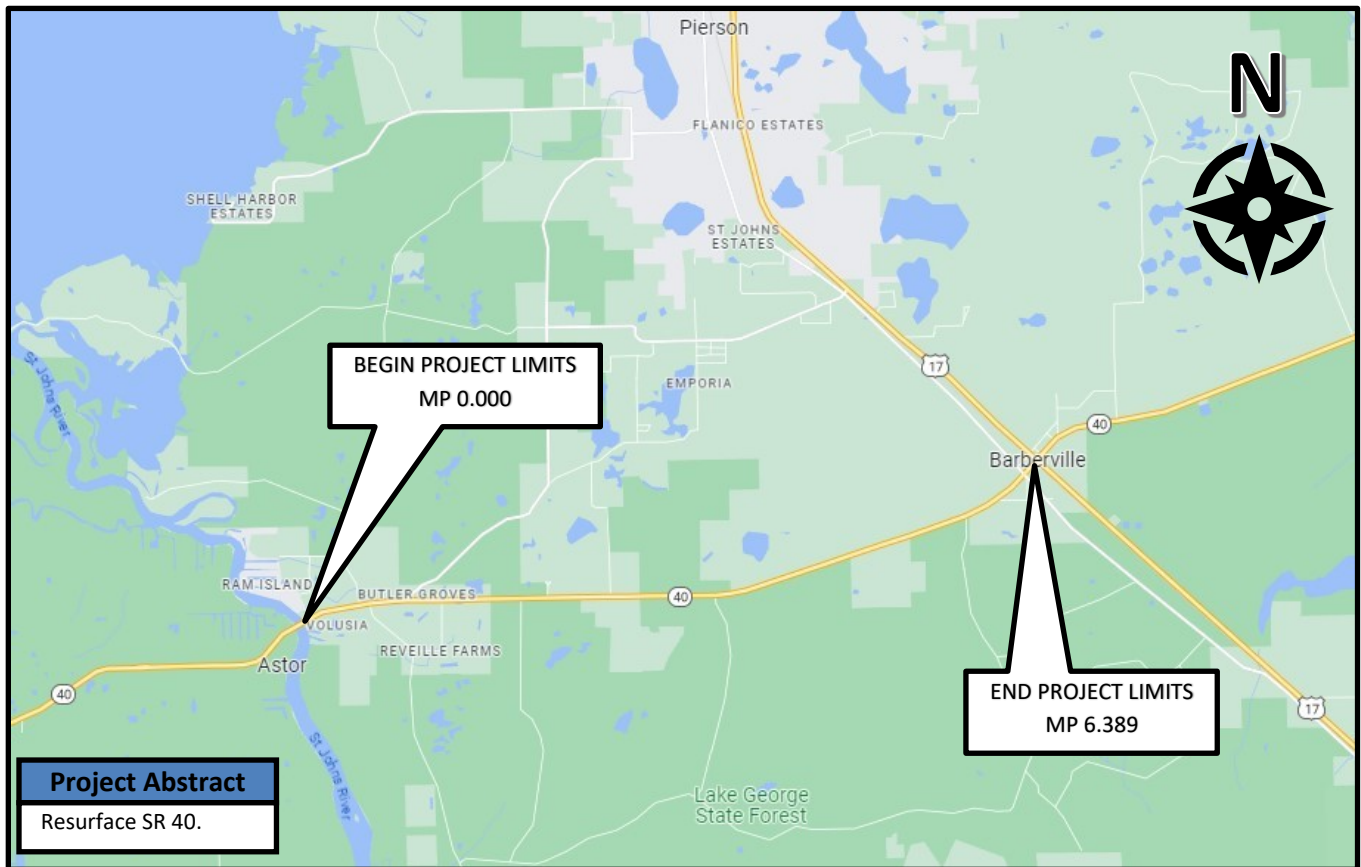
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	45 (6.141-6.236)	45	45
	45 (6.236-6.389)	40	40
15. Design Criteria and Highway System:	SIS, SHS, FDM RRR		
	<u>Facility</u>	<u>Context Classification</u>	
	SR 40 (0.00-1.57)	C3R	
	SR 40 (1.57-2.83)	C2	
	SR 40 (2.83-4.64)	C1	
	SR 40 (4.64-5.16)	C2	
	SR 40 (5.16-5.69)	C1	
	SR 40 (5.69-6.39)	C3R	
16. Lump Sum or Pay Item?	Pay Item		
17. Proposed Design Schedule:	18-24 Months		

Agreements Required:

None.

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 this project is to resurface the existing pavement along SR 40 from Lake County Line to the intersection with Railroad Avenue. This maintenance resurfacing project also includes signing & pavement markings.

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Project Description:

- Project is located along SR 40, from Lake County Line in Astor, Florida to intersection with Railroad Ave. in Barberville, Florida within Volusia County.
- SR 40 is classified as a rural principal arterial with Access Classification 03.
- The following projects have been identified as tentative within the vicinity of this project's limits:
 - 449792-1 (Bridge Repair/Rehabilitation on SR 40/Astor Bridge # 110077 Structure Maintenance with an anticipated letting date of 5/7/2024)
 - 410251-1 (Add Lanes & Reconstruct on SR 15 (US 17) from Deleon Springs Blvd to SR 40)
 - 240836-1 (Add Lanes & Reconstruct on SR 40 from SR 15/US 17 to SR 11 MP 6.446 – MP 12.822)
 - 451311-1 (Resurfacing on SR 40 from US 17 to SR 11 MP 6.389 – MP 13.115 with an anticipated letting date of 2/4/2025)
- The following projects have been identified as active within the vicinity of this project's limits:
 - 445294-1 (Resurfacing on SR 40 from Marion County Line to Volusia County Line with a letting date of 11/1/2022)

Typical Sections:

- Per field review and as-built plans, the project includes one (1) existing typical section. No changes to the typical section are being proposed.
 - Existing typical section consists of one 12-foot lane with 10-foot (4-foot paved) shoulder in each direction and an open drainage system along both sides.

Roadway Scope Items:

- A Pavement Condition Assessment will be completed by FDOT prior to design. Existing pavement was observed to be in good to fair condition. MPSV data provided by the Department indicated the average rutting for lanes L1 and R1 was 0.47 inches. Two (2) pavement designs have been assumed for estimating purposes: 1) Mill and resurface travel lanes 2) Mill and resurface shoulders.
- Cross slope correction is not part of this project.

Drainage Scope Items:

- No work proposed.

Utility Scope Items:

- Utility coordination will be required to determine if any necessary adjustments are required to avoid conflicts with the proposed construction.
- Adjust all valve covers, utility pull boxes, fire hydrants, and utility manholes to be flush with proposed roadside and roadway pavement as necessary to complete the proposed improvements.

Multimodal Scope Items:

Transit:

- No transit routes operate within the project limits.

Bicycle facilities:

- No marked bicycle facilities are present within the project limits.

Pedestrian facilities:

- No pedestrian facilities are present within the project limits except at the St. John's River Bridge (110077). No new pedestrian facilities are proposed at this time.

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.

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- This project is not anticipated to exceed one acre of soil disturbing activities and will not require NPDES coverage under the FDEP Generic Permit for Stormwater Discharge from Large and Small Construction Activities.

Environmental Scope Items:

- Complete an environmental assessment by a qualified environmental professional:
 - 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.
 - Forested wetlands occur adjacent to both sides of the Right of Way intermittently throughout the project area and are not to be impacted.
 - A contamination assessment is required for the project. The level of documentation required will be dependent on the contamination sites in the area, scope of work proposed, and previous assessments conducted. Coordinate with the District Contamination Impact Coordinator to determine project needs.
- 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 structural improvements are anticipated for this project.

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 prepare the Inventory all signing within the project limits including evaluation for compliance with FDOT Specifications, FDM, Standard Plans, MUTCD, FHWA, etc. criteria and shall coordinate with the District Design Office for any changes to existing signs. 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.
 - Implement audible and vibratory treatment on mainline pavement centerline and shoulders along the project limits.

Signals

- Project limits include no existing signalized intersections and no proposed signalized intersections.
- Coordinate with the District Data Collection Manager to remove loops and TMS components for MP 0.146 and MP 6.321.

Intelligent Transportation Systems (ITS)

- Engineer shall follow the Risk Assessment protocol, including Checklist and Systems Engineering analysis.
- Engineer to complete the ITS Certification, if applicable.

Lighting Scope Items:

- There is no existing lighting within the project limits and no lighting improvements are planned under this project.

Landscaping Scope Items:

- No work proposed.

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Survey Scope Items:

- Obtain Design Survey, collecting data for the areas and locations of proposed work. Total survey area will be determined by the Engineer based on the limits of disturbance.
 - Survey locations in relation to the State Plan Coordinate System.
 - Locate utilities as Quality Level C “QL C” and surface features including valve covers, meter boxes, manholes, etc. within the areas of proposed work.
 - Include items identified by the environmental assessment.

Right of Way and Mapping Scope Items:

- No work proposed.

Geotechnical Scope Items:

- Pavement Coring Report and Resilient Modulus values are to be provided by FDOT District Materials Office.
- FDOT to perform Pavement Coring Report and provide ESAL calculation and Resilient Modulus values.

Design Documentation:

- POP projects are exempt from Design Variation and Exception documentation other than for ADA curb ramp requirements. If compliance with ADA curb ramp requirements is determined to be technically infeasible within the POP limitations, a Design Variation will be required per FDM 222.2.2.