July 19, 2024

**454218-1: SR 524 Resurfacing from SR 520 (W King St) to SR 528**

State Road Number: 524

Section Number: 70070-000

County: Brevard

Project Limits: From SR 520 (W King St) to SR 528

Begin MP/End MP: 0.005 to 4.739 (4.734 MI)

FM: 454218-1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Existing R/W Map Project Numbers: | SR 524  70070-2501 (1960); MP 0.000 to MP 4.146, var 68-ft LT & 132-ft RT min  SR 528  70007-2501 (1970); MP 4.146 to MP 6.460, var 68-ft LT & 132-ft RT min  SR 9 (I-95)  70220 405506-5 (2006); var 68-ft LT & 132-ft RT min | | | | | | |
| 1. Old Construction Project Numbers: | SR 524  Brevard Co Friday Rd at SR 524 (2023), Intersection Improvements  238002-3 (2010); MP 4.194, Traffic Ops PB London Blvd Signal Rebuild  413586-1 (2006) MP 0.181 to MP 5.200, Mill & Resurface  413352-1 (2006); MP 1.370 to MP 1.976, Interchange Improvements  412011-1 (2006); MP 4.505 to MP 4.749, Sidewalk  237704-1 (2001); MP 3.455 to MP 3.889, Intersection Improvements  70070-3529 (1991); MP 1.371 to MP 4.783, Milling & Resurfacing  70070-3527 (1990); MP 3.258 to MP 3.600, Turn Lane Widening  70070-3525 (1989); MP 4.121 to MP 4.363, Turn Lane Widening  70070-3501 (1961); MP 0.000 to MP 5.118, New Construction (old align)  SR 520  237474-1 (2006); MP 0.000 to 0.182, SR 520 Widen & Reconstruct  SR 528  70007-3503 (1985); MP 4.649 to MP 5.212, SR 528 Realignment  SR 9 (I-95)  70220-3402 (1964); MP 1.447 to MP 1.977, Interchange Construction | | | | | | |
| 1. Additional R/W required? | No. | | | | | | |
| 1. Level of Community Awareness Plan: | CAP Level 2, resurfacing with lane closures at interstate ramp terminals. | | | | | | |
| 1. Agreements required? | No | Yes | | | | | |
| Yes, including Local Funds. | | | | | | |
| 1. Are there any bridges within the limits? | #700054 SR 9 (I-95) SB over SR 524, 16-ft ¼ in vertical clear  #700128 SR 9 (I-95) NB over SR 524, 16-ft ¼ in vertical clear  (dimensions per FPID: 405506-5) | | | | | | |
| 1. Are there any RR Crossings within the project limits or in the vicinity? | No. | | | | | | |
| 1. Are there any Airports within 10 nautical miles? | Yes. | | | | | | |
| 1. Storm Water Management jurisdiction: | SJRWMD. | | | | | | |
| 1. Is the Project within the CCCL *(Coastal Construction Control Line)*? | No. | | | | | | |
| 1. Existing Utilities:   (per SS1C, as-builts, and field markers)    Existing Utilities cont’d | AT&T Florida  Brevard County Public Works - Fiber  Brevard County Utilities Reclaim/Sewer/Water  Bright House Networks LLC dba Charter/Spectrum  CenturyLink/Level 3  CenturyLink/Lumen  City of Cocoa - Sewer/Water  Crown Castle Fiber  Florida City Gas  Florida Gas Transmission (FGT)  Florida Power & Light - Distribution  Florida Power & Light - Transmission  Florida’s Turnpike Enterprise (FTE)  Uniti Fiber  Verizon Business/MCI  ZAYO Group (*Extraordinary Circumstances* noted) | | | | | | |
| 1. Any special MOT concerns? | City of Cocoa Fire Station 3 is within the project limits, coordinate lane closures accordingly.  Lane closures and proximity to interstate ramp terminals. | | | | | | |
| 1. Any construction concerns? | FGT identified on the corridor. | | | | | | |
| 1. Design/Posted/Target Speeds (mph) | Location (MP) | Design Speed | | | Posted Speed | Target Speed | |
| 0.005 to 0.200 | 501 | | | 45 | 45 | |
| 0.200 to 1.366 | 501 | | | 55 | 55 | |
| 1.366 to 1.510 | 45 | | | 45 | 45 | |
| 1.510 to 1.724 | 45 | | | 45 | 35 | |
| 1.724 to 2.006 | 45 | | | 45 | TBD | |
| 2.006 to 4.166 | 55 | | | 55 | 45 | |
| 4.166 to 4.739 | 55 | | | 45 | 45 | |
| 1. Design Criteria and Context Classification: | SHS, FDM (2024), RRR | | | | | | |
| Location (MP) | | Context Classification | | | | Access Class |
| 0.005 to 1.514 | | | C2 “Rural” | | | 04 |
| 1.514 to 1.836 | | | C3C “Suburban Commercial” | | | 03 |
| 1.836 to 4.305 | | | C3R “Suburban Residential” | | | 04 |
| 4.305 to 4.649 | | | C3C “Suburban Commercial” | | | 04 |
| 4.649 to 4.739 | | | C3C “Suburban Commercial” | | | 03 |
| 1. Lump Sum or Pay Item? | Pay Item. | | | | | | |
| 1. Proposed Design Schedule: | 18-24 Months. | | | | | | |

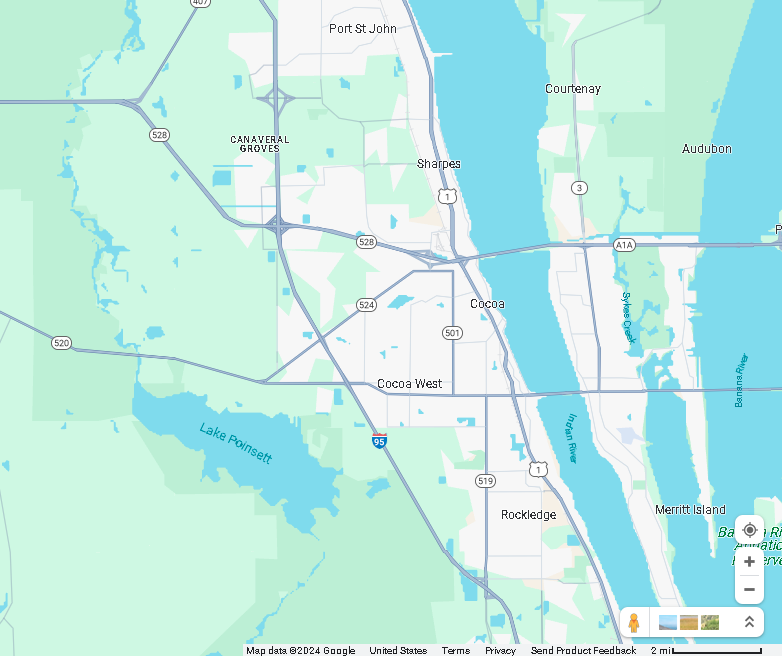
# 1 Per 70070-3501 the original design speed was 50 mph. Subsequent resurfacing projects used a 45 mph design speed. The posted speed is 55mph and is consistent with the C2 context classification and observed travel speeds.

# The District has determined that this project is to be programmed as a “Pavement Only Project” (POP) and therefore additional roadway and roadside evaluation, analysis, improvements, etc. are not to be included.

# Local Agency Coordination:

Conduct a Stakeholder meeting during the design phase to confirm the proposed scope remains consistent with the expectations set during scoping, close the loop on what will be included in the project and learn of any changes that may have occurred since the Scope’s development.

# Project Location Map: [(Google Maps Link)](https://maps.app.goo.gl/Lrwacy9XVY8Pyyzq7)

MC900239015[1]

**Project Abstract**

Mill and resurface SR 524 as a Pavement Only Project (POP), limited to pavement rehabilitation, ADA compliance, signing, and detection/pavement marking restoration.

END PROJECT

BEGIN PROJECT

# 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. The project is based on a request from the FDOT District 5 Pavement Management and Maintenance Office for a review of Roadway 70070-000 from MP 0.000 to MP 5.200. The begin project limit has been adjusted from MP 0.000 to MP 0.005 to match the future proposed FPID: 442885-1 construction limit. Per coordination with PLEMO, the end project limit has been adjusted to MP 4.739 in anticipation of the jurisdictional transfer of the eastbound on-ramp to SR 528, which is currently under the SR 524 Roadway ID, to Florida’s Turnpike Enterprise (FTE). Confirm the status of the transfer with PLEMO and FTE prior to advertisement, coordination between agencies is ongoing. This work is not included in the estimate based on guidance at the time of scoping.

* The Scope and plan sheets are provided to convey the general overall intent of the project and to establish the estimated cost for programming. These documents are not intended to serve as detailed design level directives but are to communicate the project’s primary objectives as approved by District staff. The Engineer is responsible for developing the final design within the constraints of the project budget while meeting the project’s needs.

# Project Description:

* Project is in central Brevard County and within the City of Cocoa.
* SR 524 is classified as an urban minor arterial and is a designated evacuation route per the Florida Department of Emergency Management.
* The following projects have been identified within the vicinity of this resurfacing project. The FDOT PM is to confirm the status, proposed improvements, and coordinate project limits prior to advertisement.
  + FPID: 407402-3 SR 528 widening and reconstruction project from east of SR 524 (Industry Rd) to east of SR 3 (Courtenay Pkwy) is currently in design with an October 2026 production date. Right of Way acquisition began in December 2023, and the project is not funded for construction. The FDOT PM is Tyler Burgett.
  + FPID: 426530-1 SR 524 Feasibility Study from I-95 to Clearlake Rd, SR 501 from SR 524 to Michigan Blvd, and Cox Rd from SR 524 to SR 520 (JPA with Space Coast Transportation Planning Organization (SCTPO)) was completed in January 2010.
  + FPID: 433605-1 SR 501 widening and reconstruction project from Michigan Ave to SR 524 (Industry Rd) is currently in design. The project is not funded for Right of Way or construction. The FDOT PM is Sam Jumber.
  + FPID: 437983-1 SR 524 PD&E for widening and reconstructing from Friday Rd (MP 1.510) to Industry Rd (MP 4.651) proposes to raise the profile for base clearance and includes a multi-use path. The project is in development and programmed for design in 2025, it is not funded for Right of Way or construction. The FDOT PD&E PM is Maria Serrano-Acosta.
  + FPID: 447085-1 SR 501 RRR from SR 520 (King St) to Michigan Ave (original limits were from SR 520 to SR 524 but were reduced) was let to construction in June 2023 and is anticipated to be completed in Fall 2025. The FDOT PM is Gregory Prytyka.
  + FPID: 448788-1 SR 520 from SR 524 to Tucker Ln candidate RRR project that is not funded for design or construction and has been replaced by the FPID: 452885-1 POP project with the same limits. The FDOT PM is Celine Bounds.
  + FPID: 452885-1 SR 520 POP project from west of SR 524 to Tucker Ln is in development and is anticipated to be let to construction in December 2026. The FDOT PM is Derek Dean.

# Typical Sections:

* Per as-built plans, the project includes 6 typical sections.
  + MP 0.005 to MP 1.050, MP 1.977 to MP 2.300, & MP 3.886 to MP 4.000: 2 lane undivided flush shoulder section with 12-ft travel lanes and 10-ft shoulders (4-ft paved). 8-ft sidewalk on the westbound side from MP 3.886 to MP 4.000.
  + MP 1.050 to MP 1.395, MP 2.300 to MP 3.886, & MP 4.000 to MP 4.649: 2 lane divided flush shoulder section with 12-ft travel lanes and 10-ft shoulders (4-ft paved), and a westbound 5-ft to 8-ft sidewalk separated by a 12-ft paved median. 5-ft sidewalk on the eastbound side from MP 4.439 to MP 4.649.
  + MP 1.395 to MP 1.977: 4 lane divided flush shoulder section through the I-95 interchange with 12-ft travel lanes and 10-ft shoulders (4-ft paved), per direction separated by a 40-ft type F curbed median.
  + MP 4.649 to MP 4.739: 6 lane divided flush shoulder section with 12-ft travel lanes and 10-ft shoulders (4-ft paved), separated by a 4-ft concrete separator.
  + 70070031: 15-ft single lane ramp with 6-ft inside shoulder (2-ft paved) and 9.5-ft outside shoulder (5-ft paved).
  + 70070110: 18-ft single lane ramp with 6-ft inside shoulder (2-ft paved) and 6-ft outside shoulder (5-ft paved).
* Per 2023 traffic data:

|  |  |  |  |
| --- | --- | --- | --- |
| **MP** | **TMS Site No.\*** | **AADT** | **T%** |
| SR 524 to SR 520 WB | 702129 | 1,100 | 4.0 |
| SR 520 WB to SR 524 | 702082 | 1,600 | 4.0 |
| 1.070 | 700425 | 7,600 | 9.11 |
| 3.985 | 700426 | 14,200 | 15.91 |
| 4.703 | 700435 | 22,000 | 8.41 |

1T% for 2007 through 2022 ranged from 5% to 15.9%.

\*No data available for TMS No 700411, two cabinets numbered 700411 identified in the field.

# Roadway Scope Items:

* A Pavement Condition Assessment has been requested and will be completed by FDOT. The pavement is in fair to poor condition with moderate longitudinal cracking, moderate rutting, alligator cracking in the wheel path. Prepare three pavement designs: 1) milling and resurfacing the travel lanes, 2) milling and resurfacing the paved shoulders, and 3) isolated areas of deeper milling and resurfacing.
* MPSV data will be collected; however, cross slope and superelevation correction are not to be included as components of this project.

# Drainage Scope Items:

* The existing drainage structures and systems are to be maintained. No work.

# Utility Scope Items:

* Adjust all valve covers, utility pull boxes, utility manholes, etc. to be flush with proposed sidewalk, ramps, roadside, and roadway pavement as necessary to complete the proposed improvements.
  + Note ZAYO Group has been identified as having Extraordinary Circumstances per FS 556.105(8)(a).
* Quality Level C “QL C” utility information is anticipated.
* The Engineer is to confirm and show utility poles on all applicable plan sheets for the purpose of utility coordination.

# Multimodal Scope Items:

## The Engineer shall include a project-specific pedestrian/bicyclist temporary traffic control plan.

## Transit:

* Space Coast Area Transit (SCAT) Routes 6 and 11 utilize a portion of the SR 524 corridor east of the *Cocoa Commons* Shopping Entrance (MP 4.439). Coordinate temporary and permanent changes that may affect these routes or stops.

## Bicycles:

* The existing 4-ft paved outside shoulders serve as the bicycle facility. Keyholes are provided at 13 of the 24 right turn lanes. Keyholes/bicycle lanes are to be added through pavement markings only where existing pavement structure permits, no widening is proposed.

Pedestrians:

* There is existing 5-ft to 8-ft concrete sidewalk between Cox Rd (MP 2.916) and Industry Rd (MP 4.649) LT and from MP 4.439 to Industry Rd (MP 4.649) RT. Existing gaps in sidewalk connectivity are to remain.
* Reconstruct existing curb ramps that do not comply with minimum ADA criteria and ensure all ramps have detectable warning surfaces (DWS). 10 ramps have been assumed to require reconstruction for estimating purposes.

# 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.
  + There are floodplains adjacent to the project. The current scope of work is not anticipated to have impacts, however if there are any changes to the scope of work, coordination with the FDOT Environmental Permits Office will be necessary for evaluation to determine if additional documentation must be provided.

# 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 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.
* There are potential 4(f) resources along the project limits: Junny Rios Martinez Park.

# Structural Scope Items:

* No work.

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

## Signing and Pavement Markings

* Signing and pavement markings shall be completed for the project limits. Inventory all signing including evaluation for compliance with all applicable criteria and coordinate with the District Design Office for any changes to existing signing. Any existing signs that conflict with the proposed signs or pavement markings, and non-compliant signs or pavement markings, are to be addressed in the plans.
  + A No Passing Zone study is not required, the existing passing restrictions are to be carried forward.
  + Portions of this project qualifies for lane departure mitigation thru the application of Audible and Vibratory Treatment based on the posted speed equal or greater than 50 mph and flush shoulder typical section.

## Signals

* The project includes 8 signalized intersections. Restore vehicle detection in-kind if disturbed by milling and resurfacing operations. No changes are proposed unless stated.
  + I-95 SB On Ramp/Off Ramp (MP 1.634) – horizontal heads
  + I-95 NB On Ramp/Off Ramp (MP 1.695) – horizontal heads
  + N Friday Rd (MP 1.836)
  + Walmart Distribution Center (MP 2.518)
  + Cox Rd (MP 2.916)
  + London Blvd (MP 4.194)
  + Shopping Center Entrance (MP 4.439)
  + Industry Rd/ SR 501 (Clearlake Rd) (MP 4.649) – Provide flexible retroreflective backplates. Future reconstruction of this signal is proposed under FPID: 433605-1.
* There are 7 Traffic Monitoring Sites within the project limits. Coordinate disposition with the District Data Collection Manager.
  + MP 1.450 RT – abandoned concrete cabinet base to be removed.
  + 700411, PTMS\* – Two cabinets (1 base and 1 pedestal mounted) with the same number identified in the field at different mileposts. Traffic data was not available.
  + 700425, PTMS
  + 700426, Road Tube (no work)
  + 700435, PTMS
  + 702082, Road Tube (no work)
  + 702129, Road Tube (no work)

## Intelligent Transportation Systems (ITS)

* Restoration of the detection systems are to be consistent with the ITS Master Plan. The Engineer;
* Shall follow the Risk Assessment protocol, including Checklist and Systems Engineering analysis.
* Shall designate fiber in the plans, determine any conflicts and resolve.
* Additional ITS guidance can be found here: <https://www.cflsmartroads.com/projects/technical_docs.html#(Designers)>

# Lighting Scope Items:

* No work.

# Landscaping Scope Items:

* No work.

# Survey Scope Items:

Design Survey

* 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 Plane 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 Mapping

* No work.

# Office of Right of Way Scope Items:

* No work.

# Right of Way Administration Scope Items:

* No work.

# Geotechnical and Pavement Scope Items:

* 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 cub ramp requirements is determined to be technically infeasible within the POP limitations, a Design Variation will be required.
* Design Variation Memorandum
* None.
* Design Variation
  + None, pending ADA evaluation.
* Design Exception
  + None.

# Additional Items Considered During Scoping:

* Existing curb ramps that meet ADA criteria for cross slope and longitudinal grade, but do not meet current FDOT Standard Plans, are to remain per the District Roadway Design Office.
* Per direction from the District, median opening spacing that does not meet FDM access management criterion is not required to be documented when the existing substandard condition is to remain.
* There is no lighting on the corridor, except for standard roadway lighting, including underdeck lights, through the I-95 interchange and at the Walmart Distribution Center entrance intersection. Future lighting is proposed at the SR 501 intersection under FPID: 433605-1. Corridor or intersection lighting is not a component of this project.
* Signal structures east of I-95 are within the FDOT District 5 Mast Arm Boundary. 4 intersections within the boundary include strain pole structures. Signal reconstruction is not a component of this POP project.
* The City of Cocoa and Brevard County are considering a partnership to realign Adamson Rd and funding discussions are ongoing with the Space Coast TPO. A signal warrant analysis was completed by a local developer which determined a traffic signal is warranted at this intersection (MP 0.415). Any improvements, including a new signal, left turn lane, etc. are not included in this project.
* The FDOT Brevard Maintenance Office requested for the project limits to be extended north on Industry Rd; however, this section is off system. The project is to terminate at the end of Rdwy ID 70070-000.