Hollywood, FL

June 13-14, 2024

2024 TRANSPORTATION SYMPOSIUM

Resurfacing, Restoration, and Rehabilitation (RRR) Process in District 4 and 6

Geysa Sosa, PE

FDOT D4 Project Development Manager

Raymond Valido, PE

FDOT D6 Roadway Design Engineer

FDOT

Agenda:

- Introduction
- Background
- D4 RRR Process
- D6 RRR Process
- Questions and Answer

Introduction:

Geysa Sosa, PE

- FDOT D4 Project Development Manager
- 20 Years of Experience
  - 9 with FDOT
  - 8 as a Transportation/Traffic Consultant
  - 3 with IDOT

Raymond Valido, PE

- FDOT D6 District Roadway Design Engineer
- 13 Years of Experience
  - 8 with FDOT
  - 5 as a Design Consultant

Introduction:

- Florida Statutes – Section 334.046

(1) The prevailing principles to be considered in planning and developing an integrated, balanced statewide transportation system are: preserving the existing transportation infrastructure; enhancing Florida's economic competitiveness; and improving travel choices to ensure mobility.

(4) At a minimum, the department's goals shall address the following prevailing principles.

(a) Preservation.—Protecting the state's transportation infrastructure investment. Preservation includes:

1. Ensuring that 80 percent of the pavement on the State Highway System meets department standards;

80%

Introduction:

- Work Program Instructions Part III – Chapter 27: Resurfacing
  - Projects are established in accordance with:
    - Criteria of safety (Friction, rutting, and/or raveling)
    - Preservation of the system (cracking or structural deficiency)
    - Ride (roughness, measured by the laser profile),
    - Or other, as needed, to maintain the integrity of the system

Introduction:

- Resurfacing, Restoration, and Rehabilitation (RRR) Projects:

"Defined as work undertaken to extend the service life of an existing highway and enhance highway safety for all modes of travel. This includes the placement of additional surface materials and other work necessary to return an existing roadway to a condition of structural and functional adequacy." – FDM 114.1

Background:

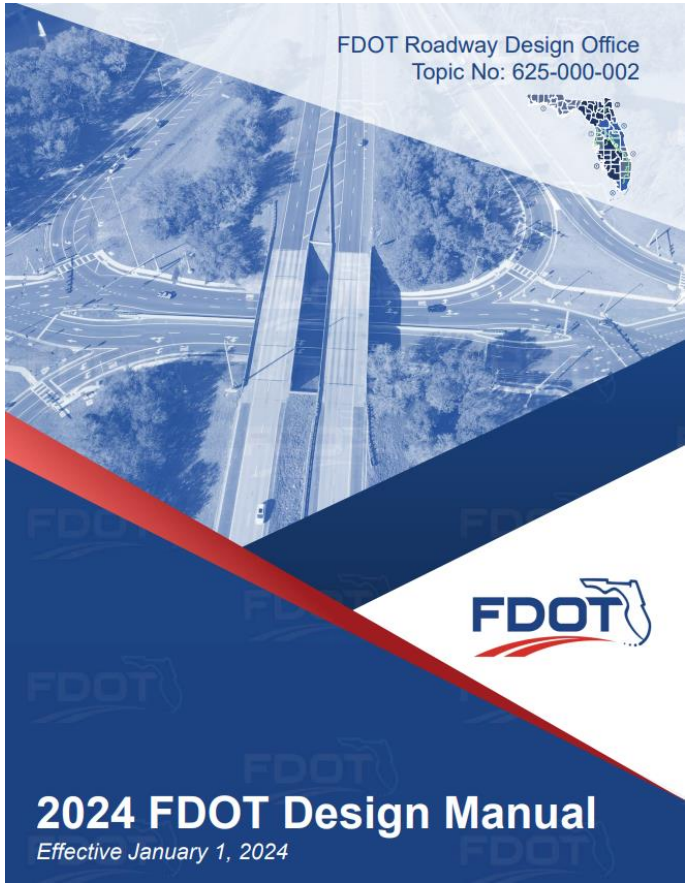
- FDM – 114

114 Resurfacing, Restoration, and Rehabilitation (RRR)

114.1 General

Resurfacing, restoration, and rehabilitation (RRR) work is defined as work undertaken to extend the service life of an existing highway and enhance highway safety for all modes of travel. This includes the placement of additional surface materials and other work necessary to return an existing roadway to a condition of structural and functional adequacy. This chapter contains processes and requirements specific to RRR projects necessary to evaluate existing roadways for safety and performance.

The District Safety Engineer and District Safety Administrator must be involved in determining safety needs. Target Speed must be established early in the design process to assist with meeting safety objectives.



Background:

- FDM – 114

114.1.1 Improvements in RRR Projects

RRR projects must meet ***FDM Part 2*** criteria and requirements. In addition, the following must be included in the scope for each RRR project:

(1) Provide improvements recommended by the Safety Assessment described in FDM 114.3.2.2.

(2) Pavement Resurfacing/Rehabilitation.

(3) Modifications necessary to comply with the ***FDM*** requirements associated with the Americans with Disabilities Act (ADA).

(4) Provide paved shoulders.

(5) Improvements to roadside barriers and guardrail necessary to meet minimum standards.

(6) Improvements to bridge rails necessary to meet minimum standards.

(7) Provide Traffic Signal Mast Arms within the mast arm policy area (see ***FDM 232.8***) where existing strain poles require replacement/relocation.

114.3.2.2 Safety Assessment

Perform a safety assessment, resulting in written recommendations. The safety assessment should include:

(1) Evaluation of safety needs identified and documented through the ***Safety Assessment Dashboard***. The Safety Assessment Dashboard is an internal FDOT application accessible only to specific FDOT positions. Coordinate with the District Traffic Safety Engineer to obtain information from the dashboard.

(2) Evaluation of proactive safety countermeasures supporting the Safe System approach.

(3) Identification of significant crash locations, with:

  (a) Determination of possible causes, and

  (b) Recommended modifications, mitigation measures, implementation of speed management techniques, or other safety countermeasures.

(4) Review of correspondence files for letters of public concern.

(5) Review of historic crash and travel statistics.

(6) Identification of safety and mobility measures such as filling pedestrian facility gaps, providing adequate crossing opportunities, correcting deficiencies of bicycle facilities, and improving connectivity of bicycle facilities.

The safety assessment along with written recommendations must be submitted to the District Safety Engineer and District Safety Administrator.

Background:

- FDM – 114

114.2 Planning and Programming RRR Projects

The principal objectives of a RRR project are intended to extend the service life and provide for the needs of the roadway through the next resurfacing cycle, which include:

(1) To preserve or extend the service life of the existing pavement.

(2) To improve multi-modal capacity (without adding continuous through lanes).

(3) To improve multi-modal operating characteristics.

(4) To provide safety modifications that support the Safe System approach (see ***FDM 102*** for definition.)

(5) To provide, to the extent practicable, for expected transportation needs in the corridor based on context classification changes over time.

RRR projects are typically identified and programmed based on projections of deficient pavement condition and are funded under the Department's Pavement Resurfacing program. Districts are tasked with meeting assigned lane mile resurfacing targets. Resurfacing funds are allocated annually to each District based on an estimated cost per lane mile. The amount allocated includes funds necessary for pavement resurfacing, rehabilitation, minor reconstruction, and pavement milling and recycling. Refer to ***Part III, Chapter 27, Resurfacing***, of the ***Work Program Instructions*** for funding resurfacing projects.

Due to limitations on resurfacing funds, improvements other than those necessary to address a safety need or to meet design criteria must be carefully considered before inclusion in the project scope. To ensure that the safety needs of the project are addressed, to the extent feasible, coordination with the District Safety Engineer and District Safety Administrator should be done at the time of scoping. Coordinate early with the DSE and DSA to balance the safety needs, available time and resources to accomplish the RRR and safety needs objectives.

Identify potential modifications to meet anticipated future conditions during the context classification review as part of scoping. This will typically include reviewing local and District plans (e.g., bicycle facilities plan, corridor studies, sector plans, etc.) for desired pedestrian, bicycle, and transit facilities along the project corridor to identify opportunities for improvement as part of the RRR project.

Background:

- FDM – 114

114.3.2.4 Identified Improvements

Coordinate with the District Project Manager, District Design Engineer, District Safety Engineer, and District Safety Administrator for safety related issues with identified improvements necessary to correct deficiencies. Crash analysis should include an examination of needs identified through the ***Safety Assessment Dashboard*** and the identification of proactive countermeasures in support of the Safe System approach.

Identified improvements may include:

(1) Remove, relocate, or make crashworthy roadside obstacles.

(2) Remove unwarranted guardrail.

(3) Upgrade or replace nonstandard guardrail, end treatments and crash cushions.

(4) Replace or retrofit obsolete bridge rails.

(5) Improve side slopes; slope flattening/stabilizing.

(6) Correct shoulder drop-off.

(7) Provide or widen paved shoulders.

(8) Correct pavement cross slope and superelevation.

(9) Provide side drain safety modifications.

(10) Increase sight distance at intersections.

(11) Improve pavement markings.

(12) Improve pavement drainage.

(13) Provide new or replace deficient sidewalks.

(14) Provide transit stops.

(15) Provide new or upgrade existing pedestrian crossings (e.g., midblock crossings, bulb-outs, raised crosswalks, refuge islands).

(16) Provide new or upgrade existing bicycle facilities (e.g., keyholes, conflict markings).

(17) Upgrade railroad crossing approaches.

(18) Provide or upgrade signalization (e.g., leading pedestrian intervals, pedestrian signals, automatic recall, push-button locations, midblock pedestrian signals).

(19) Provide or upgrade lighting.

(20) Upgrade signing and other traffic control devices (e.g., Rapid Rectangular Flashing Beacons, Pedestrian Hybrid Beacons).

(21) Provide or upgrade curb cuts, ramps, and other ADA features.

(22) Reconstruct or close driveways to comply with Access Management standards.

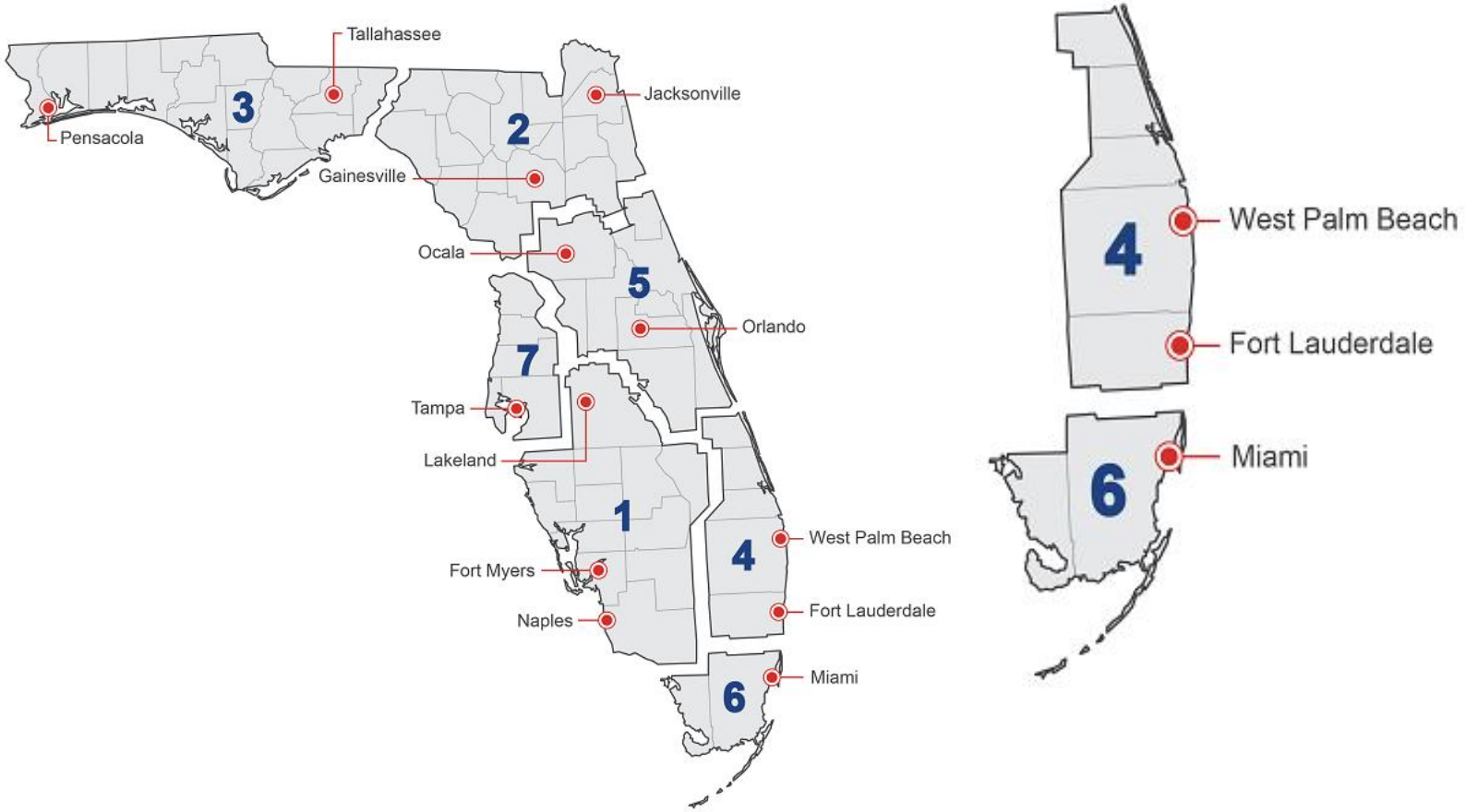
(23) Adjusting corridor speeds to reflect changing development conditions or safety needs (see ***FDM 201.5.1*** for Target Speed on RRR projects).

Background:

- FDM – 114
  - Extend service life of pavement
  - Address ADA
  - Improve Safety

TARGET ZERO
FATALITIES & SERIOUS INJURIES

Background:

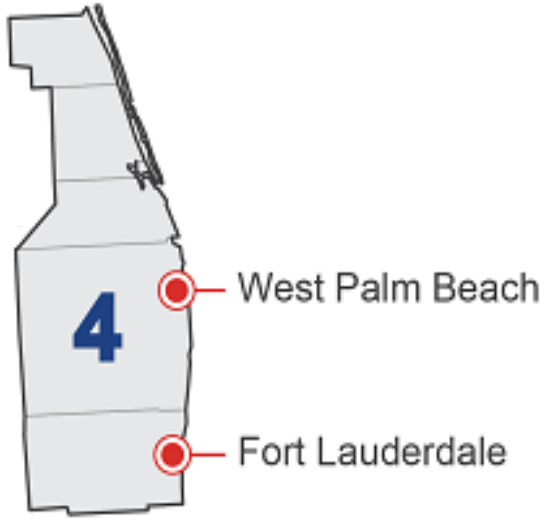


- D4 and D6 share many of the same consultants
- Overview of RRR Process for D4 and D6
  - Each district implements different internal processes to meet requirements

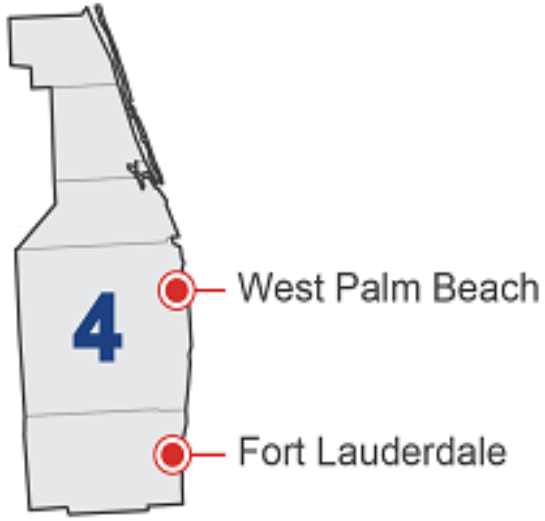
Background:

- Florida continues to invest in Transportation Infrastructure
  - 19/20 Budget → $10.8 Billion
  - 23/24 Proposed Budget → $14.8 Billion
    - **37% increase**
- Cost escalation is impacting how we program our RRR Projects
  - Example Statewide Historical Unit Cost
    - Superpave TLC PG76-22
      - 4/1/20 – 9/30/20: $98.21
      - 10-1/23 – 3/31/24: $171.49
        - **75% increase**
    - Curb & Gutter Type F
      - 4/1/20 – 9/30/20: $22.48
      - 10-1/23 – 3/31/24: $49.31
        - **119% increase**

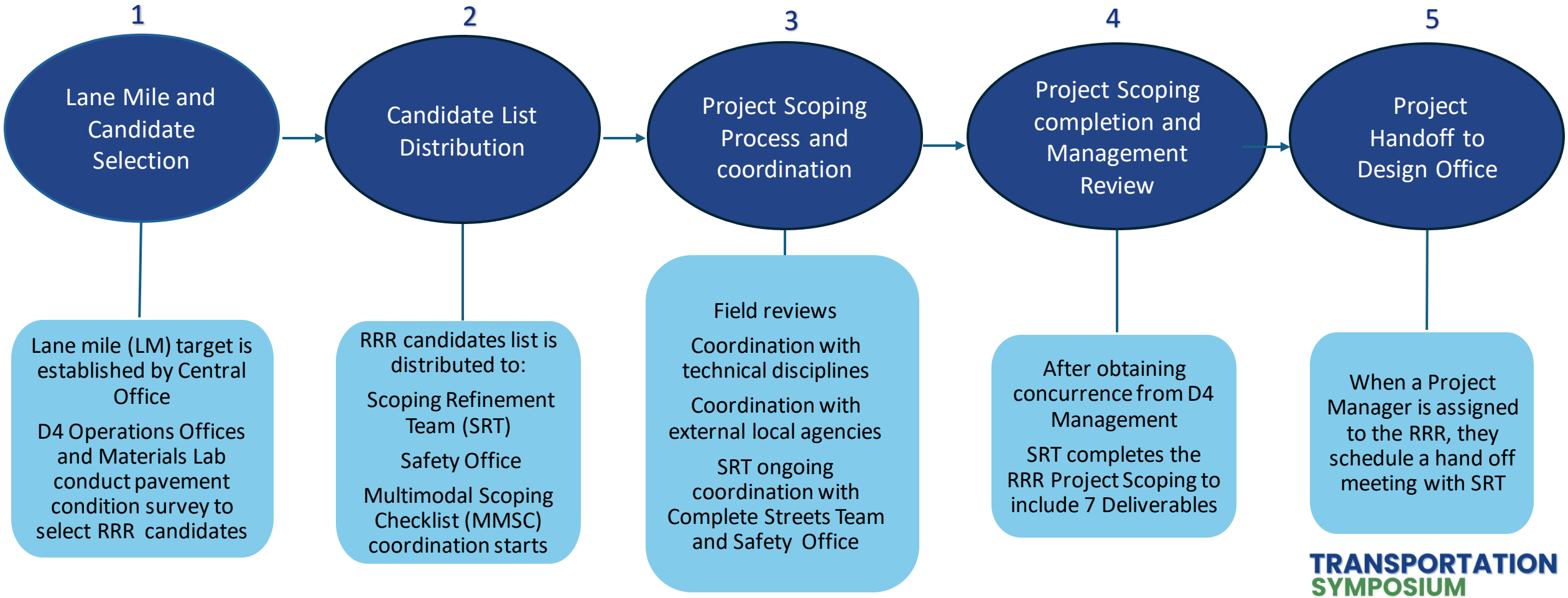
District Processes



D4 Process



D4 Process


1
Lane Mile and Candidate Selection
Lane mile (LM) target is established by Central Office
D4 Operations Offices and Materials Lab conduct pavement condition survey to select RRR candidates
2
Candidate List Distribution
RRR candidates list is distributed to:
Scoping Refinement Team (SRT)
Safety Office
Multimodal Scoping Checklist (MMSC) coordination starts
3
Project Scoping Process and coordination
Field reviews
Coordination with technical disciplines
Coordination with external local agencies
SRT ongoing coordination with Complete Streets Team and Safety Office
4
Project Scoping completion and Management Review
After obtaining concurrence from D4 Management
SRT completes the RRR Project Scoping to include 7 Deliverables
5
Project Handoff to Design Office
When a Project Manager is assigned to the RRR, they schedule a hand off meeting with SRT

D4 Process

WHAT is the District 4 Scope Refinement Team?

District 4 Scope Refinement Team (SRT) is a multidisciplinary technical team of experts in Transportation Planning, Design and other disciplines. SRT is managed by the Scoping Coordinator with assistance from project development engineers and a team of consultants. SRT performs a planning level scoping of New Project Candidates to determine eligibility.

Includes but not limited to:

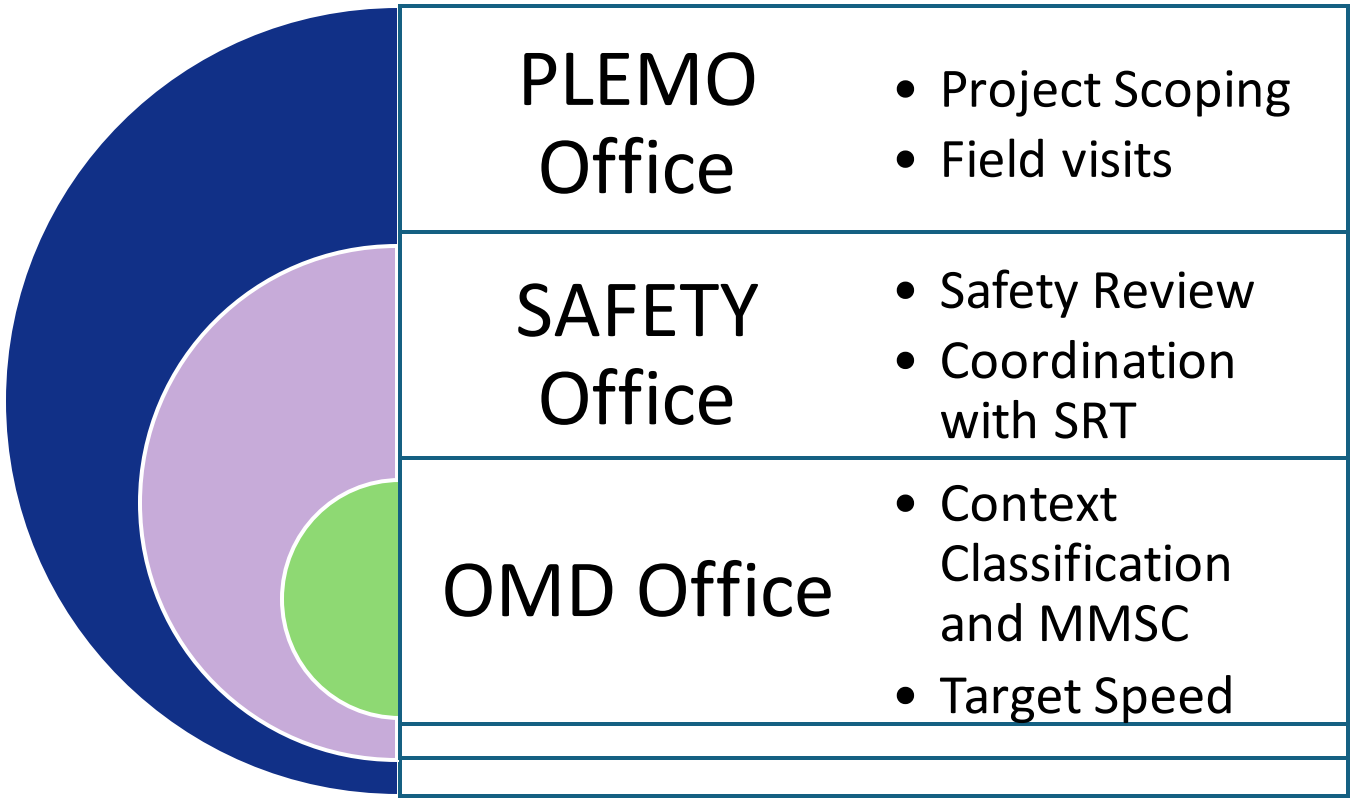
- RRR Projects,
- LOPP (List of Priority Projects)
- Safety Off-System
- Bridge Rehabilitation

WHY is the District 4 Scope Refinement Team Important?
HOW does the District 4 Scope Refinement Team Improve Safety?

The Scoping Refinement Phase is the first opportunity for District 4 to identify and recommend Safety Countermeasure elements that could be incorporated in the candidate project, also resiliency needs and the Initial Phase Target Speed. Currently SRT coordinates with Complete Streets Team to review context classification and determine Initial Target Speed.

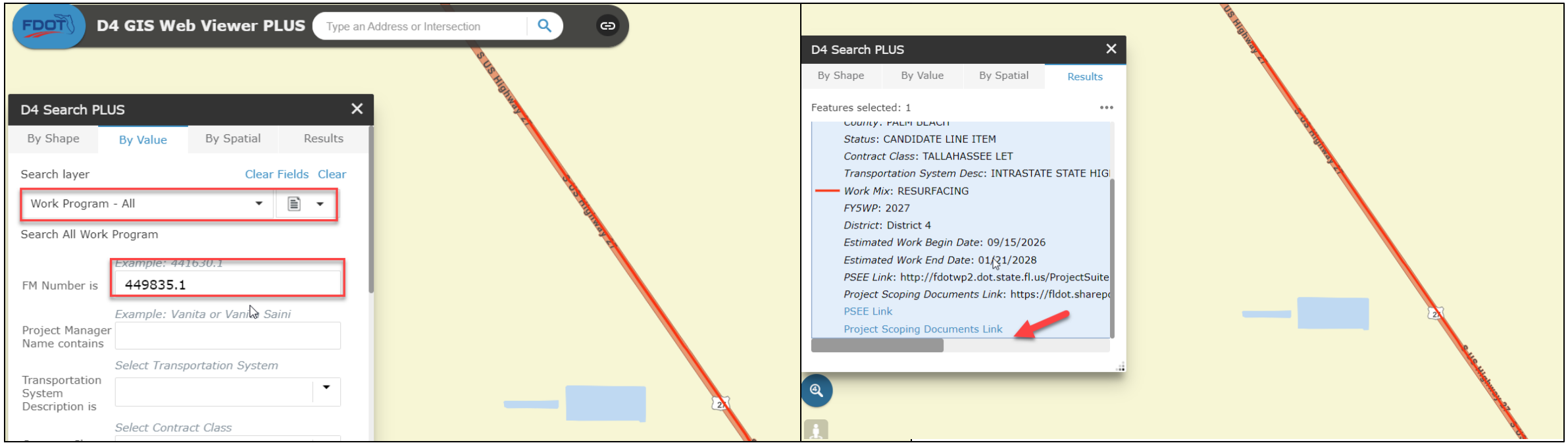
SRT follows the Florida Design Manual (FDM) and coordinates extensively with the Safety Office in reviewing the Safety Assessments and discussing feasible Safety Counter Measures to implement in the project. SRT coordinates with external agencies and other technical disciplines during the scoping process to prepare a complete project technical scope.

D4 Process



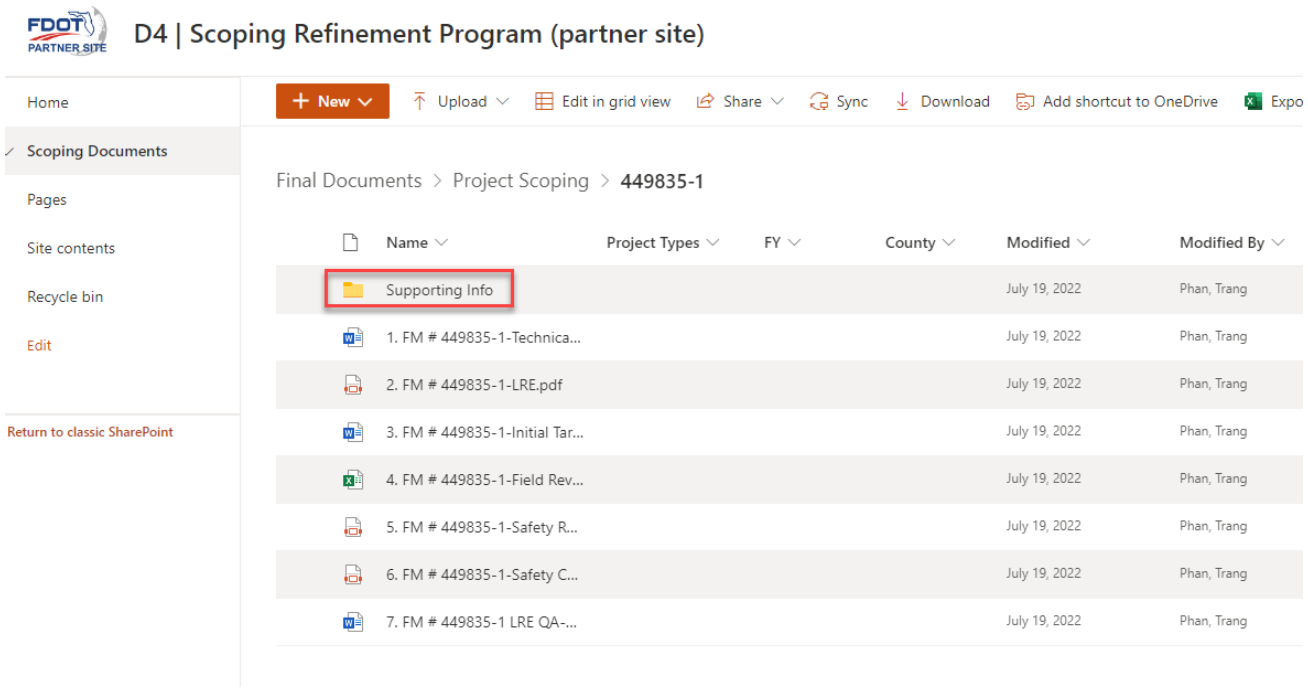
PLEMO Office	• Project Scoping • Field visits
SAFETY Office	• Safety Review • Coordination with SRT
OMD Office	• Context Classification and MMSC • Target Speed

D4 Process


D4 GIS Web Viewer PLUS
Type an Address or Intersection
D4 Search PLUS
By Shape
By Value
By Spatial
Results
Search layer
Clear Fields
Clear
Work Program - All
Search All Work Program
Example: 441630.1
FM Number is
449835.1
Example: Vanita or Vanita Saini
Project Manager Name contains
Select Transportation System
Transportation System Description is
Select Contract Class
S US Highway 27
D4 Search PLUS
By Shape
By Value
By Spatial
Results
Features selected: 1
Status: CANDIDATE LINE ITEM
Contract Class: TALLAHASSEE LET
Transportation System Desc: INTRASTATE STATE HIG
Work Mix: RESURFACING
FY5WP: 2027
District: District 4
Estimated Work Begin Date: 09/15/2026
Estimated Work End Date: 01/21/2028
PSEE Link: http://fdotwp2.dot.state.fl.us/ProjectSuite
Project Scoping Documents Link: https://fldot.sharepo
PSEE Link
Project Scoping Documents Link
US Highway 27
S US Highway 27

D4 Process

1. Technical Scope
2. Multimodal Scoping Checklist
3. Initial Target Speed Memo
4. Safety Review Assessment
5. LRE
6. LRE Checklist
7. Field Review Checklist



D4 Process

Project Documents

Florida Department of Transportation District Four

Multimodal Scoping Checklist (MMSC)

The Office of Modal Development (OMD) has coordinated internally with OMD staff on rail, freight, aviation, transit, complete street, and bike and pedestrian issues as well as with external agencies (transit, school board staff, local government staff and Metropolitan Planning Organizations (MPOs). We are providing you the below list for you to review and respond. OMD staff is available to assist you as you develop and scope your project.

The checklist *does not* replace design interaction with local agencies, as needed, throughout the design process.

Project FM#	449822.1
Facility name/limits	SR-84/MARINA BLVD FROM E OF SW 18 TERRACE TO MIAMI ROAD
County	Broward
Project type	Resurfacing
Project Manager	Sabrina Aubery
Approved scope	N/A

Highlight Page
Completed Date: 4/8/2024
Updated Date: N/A

Florida Department of Transportation, District 4
Multimodal Scoping Checklist (MMSC)

FM#:	449822.1	**County:**	Broward
Facility Name:	SR-84/MARINA BLVD		
Project Limits:	FROM E OF SW 18 TERRACE TO MIAMI ROAD		
Project Type:	Resurfacing		
Project Manager:	Sabrina Aubery		

Project Level Context Classification

The determination of the project level context classification(s) (PLCC) to be used for this project is based on an assessment of the primary and secondary measures described in the Project Level Context Classification Guide. These measures address land use, building and parking characteristics, roadway connectivity and density along the project corridor.

The project level context classification(s) for this project is:

C4 – Urban General

PLCC Review Summary

PLCC Justification:

- SR-84/Marina Boulevard from E of SW 18 Terrace to west of SW 6th Avenue – **C4-Urban General**
  - The segment consists of a variety of land uses such as dining, retail, office, and multi-family residential that includes multiple large mixed-use complexes.
  - There is a mix of attached and detached structures. Most attached structures contain a variety of land uses and have parking garages built within the structure. Most detached structures are smaller commercial uses set within small blocks.
  - Many parcels contain more than one type of business or land use.
  - Residential communities are located directly behind the fronting uses throughout most of the corridor, allowing non-motorized users to easily access many uses along SR-84/Marina Boulevard.
  - Storefronts of most uses throughout the project limits face the roadway and are located directly behind the sidewalk lining the corridor, providing direct access for motorized and non-motorized users.
  - Building footprints are small, contributing to a well-connected roadway network.
  - Many uses have driveways that connect directly to SR-84/Marina Boulevard.
  - SR-84/Marina Boulevard receives frequent activity given its proximity to I-95 and the many residential areas surrounding the corridor.

D4 Process

Project Documents

To: Geysa Sosa, PE
From: Scope Refinement Team
RE: SR 882 (Forest Hill Boulevard) Resurfacing from Lake Clarke Drive to US 1 (Dixie Highway)

State Road Number: 882
Section Number: 93016000
County: Palm Beach
Project Limits: from East of Lake Clarke Drive (@ pavement seam) to US 1 (Dixie Highway)
Begin MP/End MP: 8.156 to 9.233 (Length 1.077 Mi)
FM No.: 446373-1-52-01

1. Posted/Design Speed Limits:	MP Range	Design Speed	Posted Speed	Target Speed
	8.156 to 9.233	40	35	35
2. Design Criteria and Highway System:	SHS, FDM (2022)			
	Milepost Range		Context Classification	
	8.156 to 9.233		C4 – Urban General	
3. AADT	**MP 8.156 to MP 8.350:** 48,000 AADT (2020); Truck = 6.2% (24 hour) **MP 8.350 to MP 8.730:** 25,500 AADT (2020); Truck = 2.4% (24 hour) **MP 8.730 to MP 9.233:** 18,100 AADT (2020); Truck = 3.4% (24 hour)			
4. Shoulder widening? (Y/N) / Reason	No			
5. New Sidewalk construction/gaps (Y/N)	☐Yes		☒No	
6. Old Construction Project Numbers:	**229782-1-52-01** Forest Ct to S Dixie Hwy			
7. R/W Issues? (Y/N)	No			
8. Level of Community Awareness Plan:	Level 2, four lane urban divided resurfacing project (As per FDM 104.3.1)			
9. Local Agencies agreements required? Check if MOAs are required for lighting improvements	☒ Yes		☐No	
	☒ YES (including Local Funds) ☐ No MOA with Towne of Lake Clarke Shores and the City of West Palm Beach – Possible revision, coordination required, possible local funds Lighting, Maintenance, and Compensation Agreement with Towne of Lake Clarke Shores and the City of West Palm Beach - Possible revision, coordination required			

SRT Initial Target Speed Consideration for RRR vetting

FM #: 446373-1

SR #/Local Name: SR 882 (Forest Hill Blvd)

Limits: From Lake Clarke Drive to US1/Dixie Highway

Mile Posts: 8.156 to 9.233

Prepared By: HNTB Corp

Date: May 21, 2022

EXISTING TYPICAL SECTION:
The existing typical section consists of a 6-lane divided urban arterial roadway west of Forest Ct (3 lanes in each way) with 11-ft wide travel lanes, FDOT type F curb and gutter, 6-ft to 7-ft wide sidewalks on both sides and a raised landscaped median with FDOT Type F curb and gutter. East of Forest Ct, the existing typical sections a 5-lane section with 9 ft travel lanes, an 11-ft wide center left turn lane, and FDOT Type F curb and gutter in each direction, and 4-ft to 5-ft wide concrete sidewalk on both sides.

PROPOSED TYPICAL SECTION:
The proposed typical section consists of a 6-lane divided urban arterial roadway west of Forest Ct (3 lanes in each way) with 11-ft wide travel lanes, FDOT type F curb and gutter, 6-ft to 7-ft wide sidewalks on both sides and a raised landscaped median with FDOT type F curb and gutter. East of Forest Ct, the proposed typical sections consist of a 5-lane section with 9 ft travel lanes, an 11-ft wide center left turn lane, and FDOT type F curb and gutter in each direction, 5-ft wide concrete sidewalk for the westbound direction and 8-ft wide concrete sidewalk for the eastbound direction (south side).

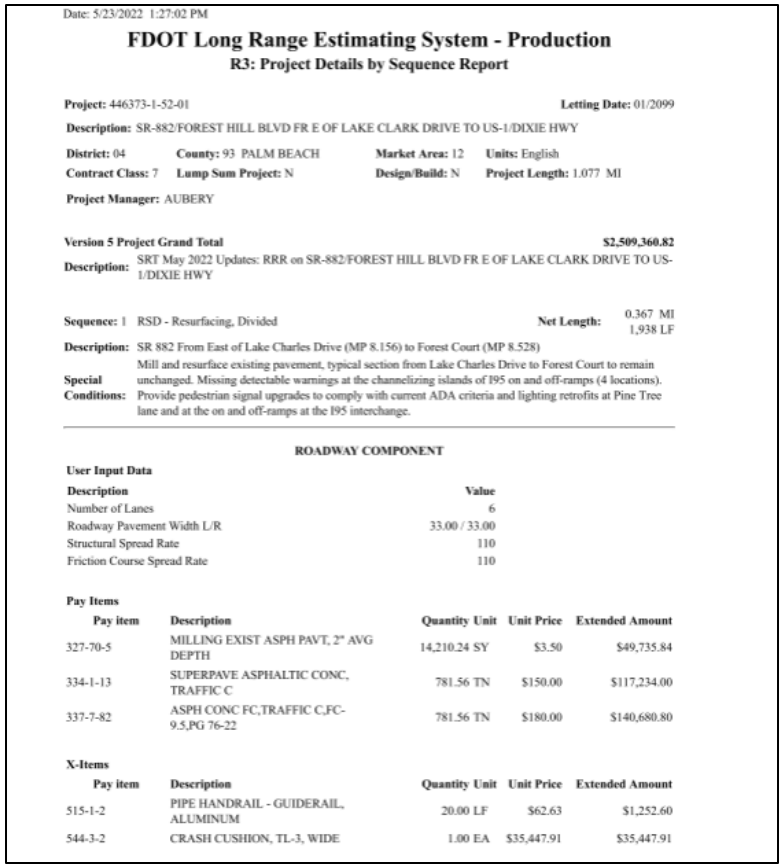
CONTEXT CLASSIFCATION:
The roadway has a context classification of C4- Urban General.

85% SPEED/OBSERVED SPEEDS: To be completed by others.

LAND USE:
The project corridor is located within the Town of Lake Clarke Shores and the Parker Ridge neighborhood. The

D4 Process

Project Documents



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FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 446373-1-52-01 **Letting Date:** 01/2099

Description: SR-882/FOREST HILL BLVD FR E OF LAKE CLARK DRIVE TO US-1/DIXIE HWY

District: 04 **County:** 93 PALM BEACH **Market Area:** 12 **Units:** English
Contract Class: 7 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 1.077 MI

Project Manager: AUBERY

Version 5 Project Grand Total **$2,509,360.82**

Description: SRT May 2022 Updates: RRR on SR-882/FOREST HILL BLVD FR E OF LAKE CLARK DRIVE TO US-1/DIXIE HWY

Sequence: 1 RSD - Resurfacing, Divided **Net Length:** 0.367 MI 1,938 LF

Description: SR 882 From East of Lake Charles Drive (MP 8.156) to Forest Court (MP 8.528)

Special Conditions: Mill and resurface existing pavement, typical section from Lake Charles Drive to Forest Court to remain unchanged. Missing detectable warnings at the channelizing islands of I95 on and off-ramps (4 locations). Provide pedestrian signal upgrades to comply with current ADA criteria and lighting retrofits at Pine Tree lane and at the on and off-ramps at the I95 interchange.

ROADWAY COMPONENT

User Input Data

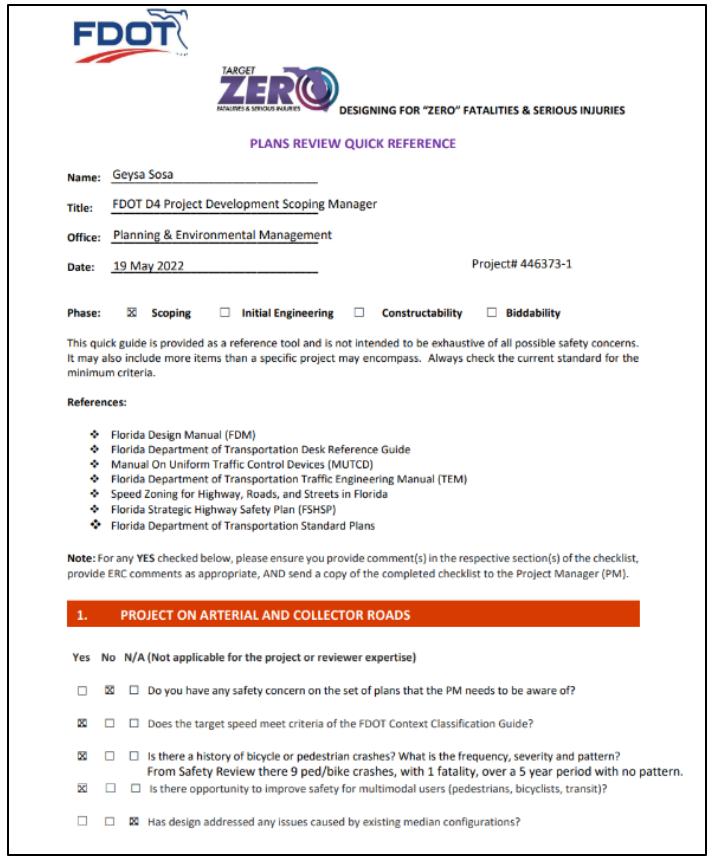
Description	Value
Number of Lanes	6
Roadway Pavement Width L/R	33.00 / 33.00
Structural Spread Rate	110
Friction Course Spread Rate	110

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	14,210.24	SY	$3.50	$49,735.84
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	781.56	TN	$150.00	$117,234.00
337-7-82	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	781.56	TN	$180.00	$140,680.80

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
515-1-2	PIPE HANDRAIL - GUIDERAIL, ALUMINUM	20.00	LF	$62.63	$1,252.60
544-3-2	CRASH CUSHION, TL-3, WIDE	1.00	EA	$35,447.91	$35,447.91



FDOT

TARGET ZERO DESIGNING FOR "ZERO" FATALITIES & SERIOUS INJURIES

PLANS REVIEW QUICK REFERENCE

Name: Geysa Sosa

Title: FDOT D4 Project Development Scoping Manager

Office: Planning & Environmental Management

Date: 19 May 2022 Project# 446373-1

Phase: ☒ **Scoping** ☐ **Initial Engineering** ☐ **Constructability** ☐ **Biddability**

This quick guide is provided as a reference tool and is not intended to be exhaustive of all possible safety concerns. It may also include more items than a specific project may encompass. Always check the current standard for the minimum criteria.

References:

- Florida Design Manual (FDM)
- Florida Department of Transportation Desk Reference Guide
- Manual On Uniform Traffic Control Devices (MUTCD)
- Florida Department of Transportation Traffic Engineering Manual (TEM)
- Speed Zoning for Highway, Roads, and Streets in Florida
- Florida Strategic Highway Safety Plan (FSHSP)
- Florida Department of Transportation Standard Plans

Note: For any **YES** checked below, please ensure you provide comment(s) in the respective section(s) of the checklist, provide ERC comments as appropriate, AND send a copy of the completed checklist to the Project Manager (PM).

1. PROJECT ON ARTERIAL AND COLLECTOR ROADS

Yes	No	N/A (Not applicable for the project or reviewer expertise)	
☐	☒	☐	Do you have any safety concern on the set of plans that the PM needs to be aware of?
☒	☐	☐	Does the target speed meet criteria of the FDOT Context Classification Guide?
☒	☐	☐	Is there a history of bicycle or pedestrian crashes? What is the frequency, severity and pattern? From Safety Review there 9 ped/bike crashes, with 1 fatality, over a 5 year period with no pattern.
☒	☐	☐	Is there opportunity to improve safety for multimodal users (pedestrians, bicyclists, transit)?
☐	☐	☒	Has design addressed any issues caused by existing median configurations?

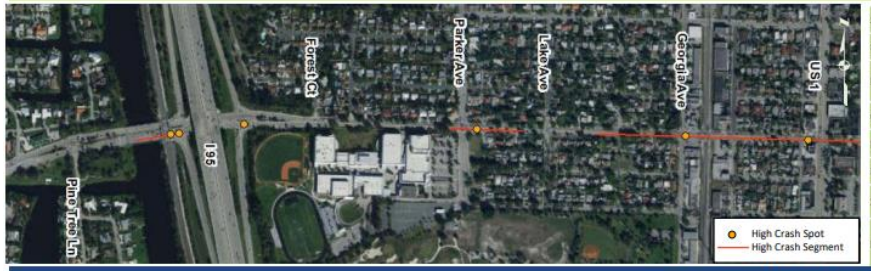
TRANSPORTATION SYMPOSIUM

D4 Process

Project Documents

3R SAFETY REVIEW ACTION SUMMARY
FM 446373-1 – SR 882/FOREST HILL BOULEVARD FROM EAST OF LAKE CLARK DRIVE TO US-1/DIXIE HIGHWAY (MP 8.161 TO MP 9.233)

GENERAL OVERVIEW AND CRASH SUMMARY



Section/Milepost Limits	93016000, MP 8.161 to MP 9.233
State Road No./Name	SR 882/Forest Hill Boulevard
Functional Classification	MP 8.161 - MP 8.374 : Urban Principal Arterial Other MP 8.374 - MP 9.230 : Urban Minor Arterial MP 9.230 - MP 9.233 : Urban Major Collector
Context Classification	Preliminary/Future: C4 - Urban General
FDOT Access Classification	MP 8.161 - MP 8.730 : Access Class 05 MP 8.730 - MP 9.218 : Access Class 06
Speed Limit	35 Miles Per Hour
2020 Traffic Volumes (vehicles per day)	48,000 (West of Palm Tree Ln to I-95); 25,500 (I-95 to Parker Ave)/ 18,100(Parker Ave to US 1)
Pedestrian/Bike Facilities	Sidewalks - Continuous sidewalks on both sides of roadway; Bike lanes - Continuous bike lanes eastbound lanes

CRASH SUMMARY

All Crashes	2017	2018	2019	Total	2020	2021
Fatal (K)	0	0	1	1	0	0
Incapacitating (A)	1	1	1	3	2	2
Non-Incapacitating (B)	10	9	10	29	3	4
Possible Injury (O)	20	22	27	69	6	16
None	69	64	51	184	54	94
Total	***100***	***96***	***90***	***286***	***65***	***116***

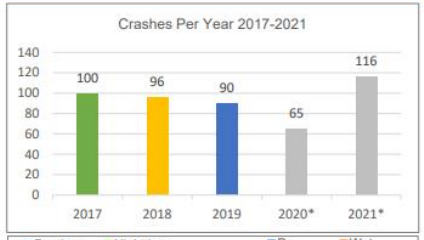
Ped and Bike	2017	2018	2019	Total	2020	2021
Fatal (K)	0	0	1	1	0	0
Incapacitating (A)	0	0	0	0	0	0
Non-Incapacitating (B)	0	1	1	2	0	0
Possible Injury (O)	0	2	1	3	0	0
None	0	0	0	0	1	2
Total	***0***	***3***	***3***	***6***	***1***	***2***

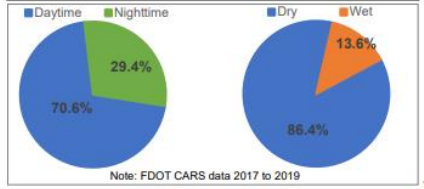
High Crash Spot (MP)	Year
8.341, 8.442, & 9.044	2017 & 2018
8.352 & 9.212	2016
8.760	2017

High Crash Segment (BMP-EMP)	Year
8.293 - 8.359	2016 & 2018
8.722 - 8.822 & 8.922 - 9.233	2017

All Crashes	Years			3-Year Total	2020	2021
	2017	2018	2019			
Rear End	31	23	25	18	14	40
Head On	0	0	0	1	1	0
Angle	22	23	23	8	5	8
Left Turn	7	10	9	18	18	16
Right Turn	3	0	0	1	2	5
Sideswipe	22	4	6	6	15	16
Backed Into	0	1	0	0	0	0
Pedestrian	0	2	1	4	1	1
Bicycle	0	1	2	1	0	1
Fixed Object/Off Road	6	12	10	4	5	6
Other Non-Fixed Object Collisions	1	1	1	1	0	2
Others	8	19	13	2	4	21
Total	***100***	***96***	***90***	***286***	65	116

Note : Please note that Department is a user of the Signal 4 data (for 2020 and 2021) and is not responsible for the Signal 4 data. Signal 4 information for 2020 and 2021 was provided to complement the CARS data (the CARS data is as complete and final as reasonably possible up to 2019). Crash codes from CARS were not verified.





1

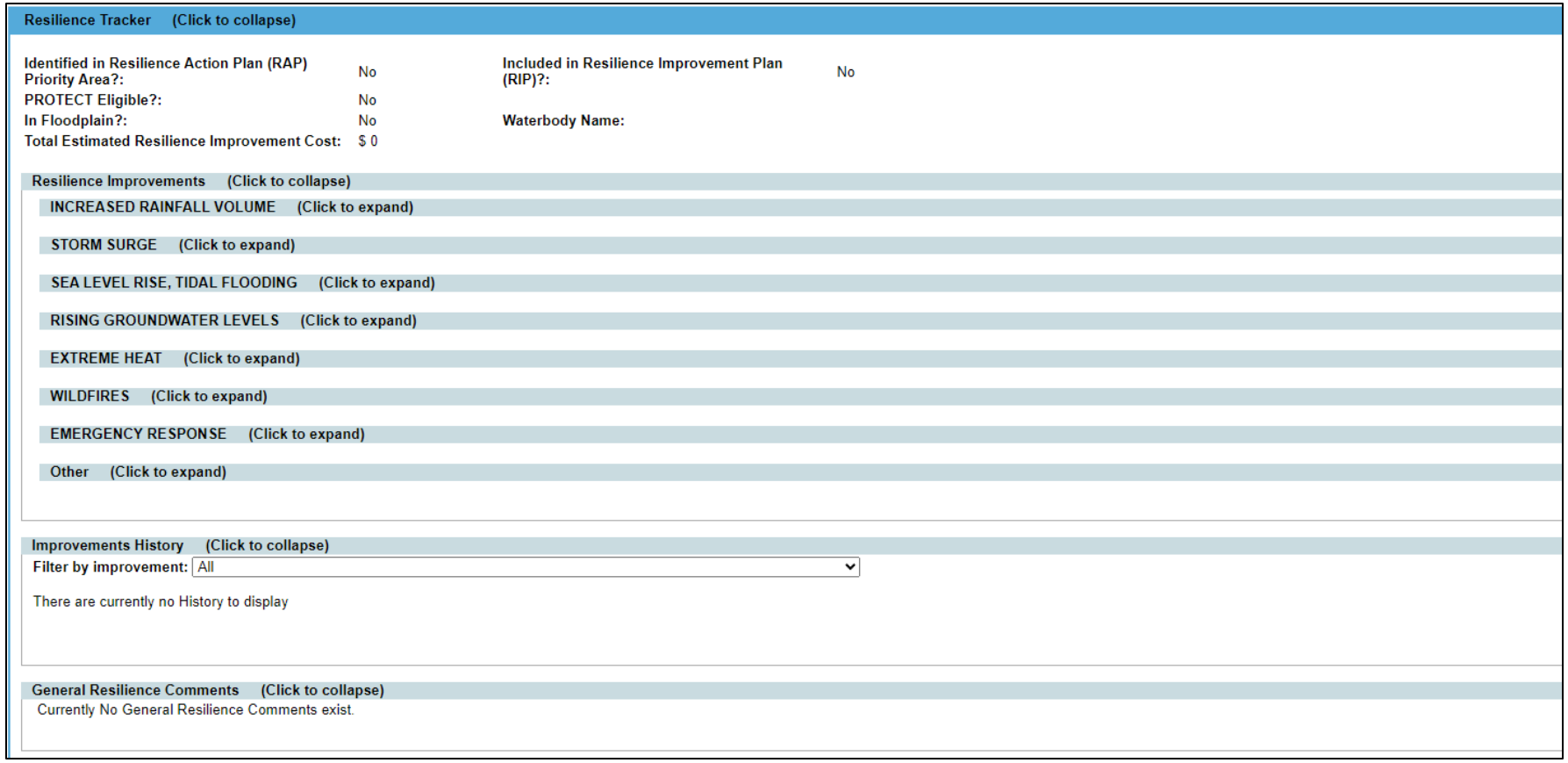
TRANSPORTATION SYMPOSIUM

D4 Process

1. Multi Modal Scoping Checklist
2. Resiliency Module on PSEE
3. Safety Counter Measures Module on PSEE

D4 Process

Resiliency Module Tracker



TRANSPORTATION SYMPOSIUM

D4 Process

Safety Countermeasures Module

Safety Countermeasures (Click to collapse)

BICYCLE/PEDESTRIAN (Click to collapse)

Measures	Included	Not Included	N/A	To Be Evaluated	Comment
Add or increase sidewalk width	◉	○	○	○	Added sidewalk to fill the gap from the Creekside Community to Kings Hwy.
Advance warning signage and pavement markings for pedestrian crossing	○	○	◉	○	
Bicycle lane (not buffered)	◉	○	○	○	Green colored bike lane markings added for conflict point at the northbound at right turn lanes from SR-70 onto Sallie Chupco Tommie Way, into the new residential development, onto Yorktown Drive, onto Woodswalk Drive, and Kings Highway.
Buffered bicycle lane	○	○	◉	○	
Grade separated pedestrian crossing	◉	○	○	○	Existing Pedestrian Bridge at St. Lucie County Fairgrounds west of Midway Rd.
High-visibility style crosswalk markings	○	○	◉	○	
Midblock Pedestrian Signal (MPS)	○	○	◉	○	
Midblock Traffic Control Signal (traditional)	○	○	◉	○	
Pedestrian crossing island (midblock)	○	○	◉	○	
Pedestrian Hybrid Beacon (PHB or HAWK)	○	○	◉	○	
Raised crosswalk	○	○	◉	○	
Rectangular Rapid Flashing Beacon (RRFB)	○	○	◉	○	
Refuge island (intersection)	○	○	◉	○	
Shared use path	◉	○	○	○	Exsiting shared use path along the north side of SR-70

D4 Process

Safety Countermeasures Module

INTERSECTION (Click to collapse)

Measures	Included	Not Included	N/A	To Be Evaluated	Comment
Add left-turn lane	○	◉	○	○	Existing to remain.
Add right-turn lane	○	◉	○	○	Existing to remain.
Alternative intersections or interchanges	◉	○	○	○	RCUT Intersections at S. Header Canal Road and at Shinn Road.
Bicycle box	○	○	◉	○	
Bicycle signal	○	○	◉	○	
Centerline hardening (without pedestrian crossing island)	○	○	◉	○	
Change left turn signal head from 5-sec. protected-permissive to 4-sec. protected-permissive FYA	○	○	○	◉	
Crosswalks on all approaches	○	○	◉	○	
Curb extensions (bulb-outs)	○	○	◉	○	
Exclusive pedestrian phase	○	○	◉	○	
High Friction Surface Treatment (HFST) on intersection approach	○	◉	○	○	Pavement is being resurfaced with standard pavement.
Increase left turn protection at intersection	○	○	◉	○	
Intersection Conflict Warning System (ICWS)	○	○	◉	○	
Leading Pedestrian Interval (LPI)	○	○	◉	○	
Modify channelized right turn lane	○	○	◉	○	
Modify full access to right-in-right-out (RIRO) access at stop-controlled intersections or driveways	○	○	◉	○	
Modify skewed intersection to a right angle	○	○	◉	○	

D6 Processes

D6 Process

Plan
- Pavement condition survey
- Lane mile (LM) target

Program
- Prioritize projects to meet LM target

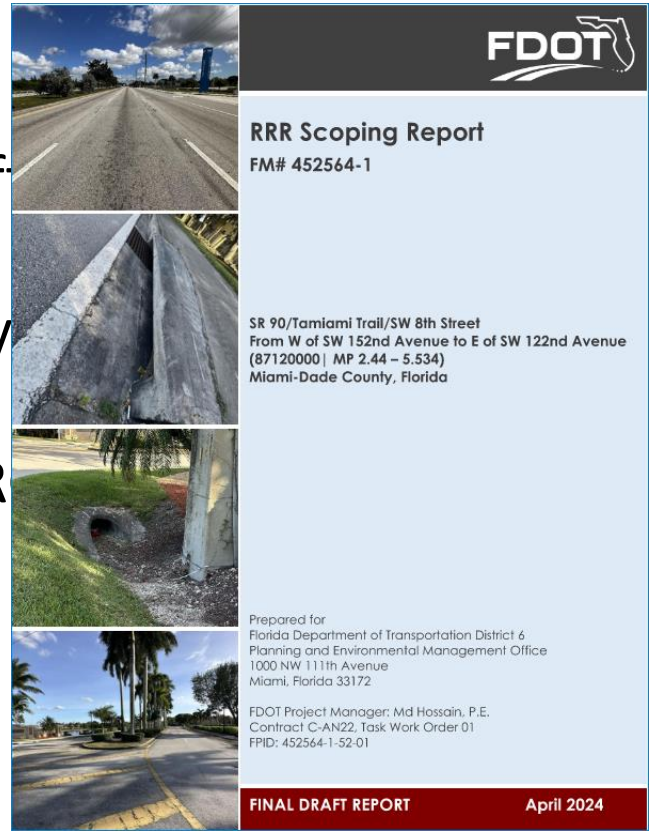
Scoping
- Conduct field review
- Complete scoping report

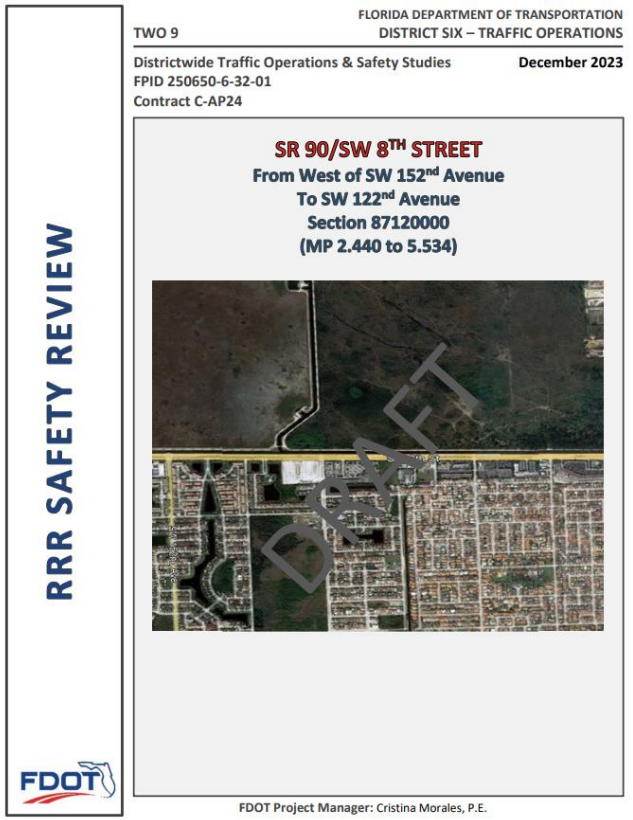
Identify Improvements
- Scope phasing
- Align scope to fund allocation
- RRR committee review

Design
- Procure design consultant
- ERC Phase review

D6 Process

- Scoping
  - Scoping consultant develops draf report
  - Safety office develops RRR Safety Review
  - Reports are reviewed through ER





D6 Process

- Scoping Reports
  - To differentiate RRR Scope vs other scope, our recommendations are divided as follows:
    - **Category A** : Pavement Restoration Elements; including pavement restoration, ADA curb ramps, signals, signing, and pavement marking.
    - **Category B1** : RRR Safety Enhancements as identified in the RRR Safety Review Report or a RRR Safety Report. Recommendations have dedicated safety funds.
    - **Category B2** : RRR Safety Enhancements as identified in the RRR Safety Review Report or RRR Safety Report. Recommendations do not qualify or have dedicated safety funds.
    - **Category C** : Other Improvements

D6 Process

- Scoping Reports
  - Written to the designers to clearly delineate the future designers scope
  - Identifies items that are maintenance responsibility
  - Identifies items that were considered but not included in the scope

D6 Process

- Scoping Report Example

3.0 RECOMMENDATIONS IMPROVEMENTS

To address the project purpose and need and the deficiencies identified, several improvements were identified. These improvements are intended to follow FDM criteria and requirements for RRR Projects and are grouped into the following funding categories.

3.1 Category A – Pavement Restoration & ADA Improvements

Category A is reserved for the pavement restoration elements, including pavement restoration, ADA curb ramps, signals, signing, and pavement marking. Components to be addressed based on the RRR criteria in FDM Section 114.1.1 "Improvements in RRR Projects" and FDM Section 114.3.2.4 "Identified Improvements" that may be included at the discretion of the Scoping Review Task Team. The following are the Category A improvements.

3.1.1 Roadway

- Mill and resurface the existing roadway pavement.
- Retrofit the bridge traffic railings, barrier walls and the guardrail transitions at the northeast corner of SW 127th Avenue intersection to meet standards and to accommodate the new crosswalk on the east side of the intersection.
- Evaluate cross slopes corrections.
- Adjust the existing storm drain manholes, utility manhole tops, and valves within the limits of milling & resurfacing or sidewalk reconstruction, as necessary.
- Re-grade the curb and gutter at the 2 locations identified in Table 2-5 where water ponding was observed.
- Provide thrie-beam connection from the existing guardrails to the barrier walls at the locations identified in Section 2.6.22.2.
- Provide new guardrails with thrie-beam connections to the existing bridge railings for the bridge over the SW 132nd Avenue Canal. A license agreement may be required for the installation of the guardrail on the southwest side of the bridge.
- Upgrade deficient pedestrian curb ramps and detectable warning surfaces.

3.1.2 Signing and Pavement Markings

- Upgrade all substandard ground-mounted signs to comply with the applicable editions of the FDOT Standard Plans, the FDOT Traffic Engineering Manual (TEM), and the Manual on Uniform Traffic Control Devices (MUTCD). Excludes any existing sign to be repaired by FDOT Maintenance Office.
- Provide wrong way countermeasure signs and pavement markings at unsignalized intersections along the project corridor.

Scoping Report for SR 90/Tamiami Trail/SW 8th Street
From W of SW 152nd Avenue to E of SW 122nd Avenue
Miami-Dade County, Florida | FM: 452564-1-52-01

- Replace and upgrade all pavement markings to meet the latest FDOT Standard Plans for Road Construction.
- Provide high emphasis crosswalks at all signalized intersection crosswalks.
- Replace the existing pavement markings along the existing bridge over the 132nd Avenue Canal with permanent tape per FDM 230.3.1.1.

3.1.3 Signalization

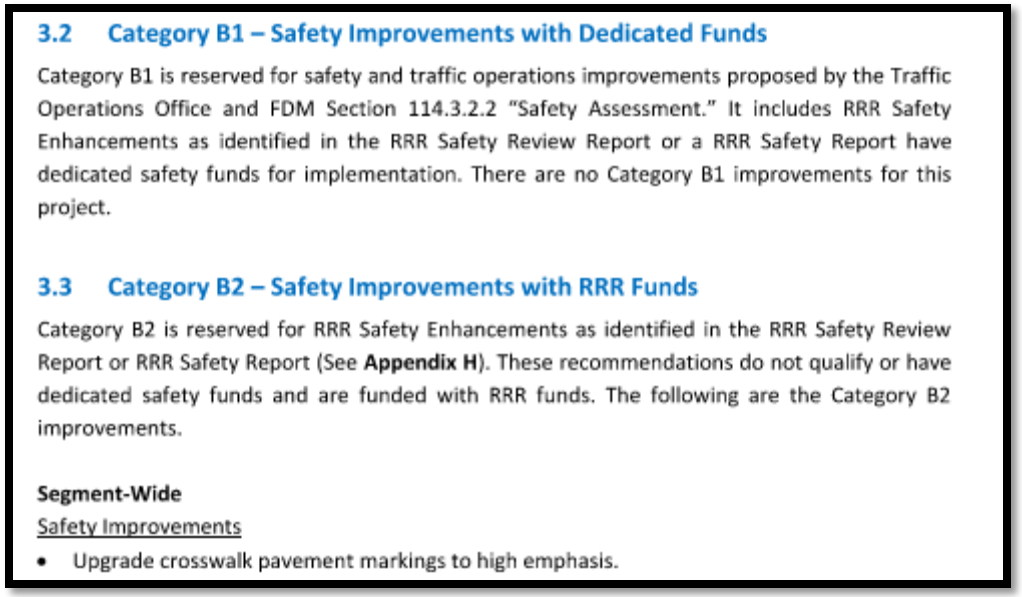
- Provide new countdown pedestrian signals and/or install ADA-compliant pedestrian pushbuttons and detector signs at all signalized intersections.
- Replace signal pull boxes impacted by the reconstruction of pedestrian curb ramps.
- Provide flexible retroreflective backplates to all signals at signalized intersections. If the retro reflective backplates cannot be installed without replacing the signal heads, then the recommendation can be omitted.

3.1.4 Lighting

- Provide new intersection lighting for the proposed crosswalk on the east leg of SW 127th Avenue intersection.
- Replace lighting pull boxes impacted by the reconstruction of pedestrian curb ramps.

D6 Process

- Scoping Report Example



3.2 Category B1 – Safety Improvements with Dedicated Funds

Category B1 is reserved for safety and traffic operations improvements proposed by the Traffic Operations Office and FDM Section 114.3.2.2 "Safety Assessment." It includes RRR Safety Enhancements as identified in the RRR Safety Review Report or a RRR Safety Report have dedicated safety funds for implementation. There are no Category B1 improvements for this project.

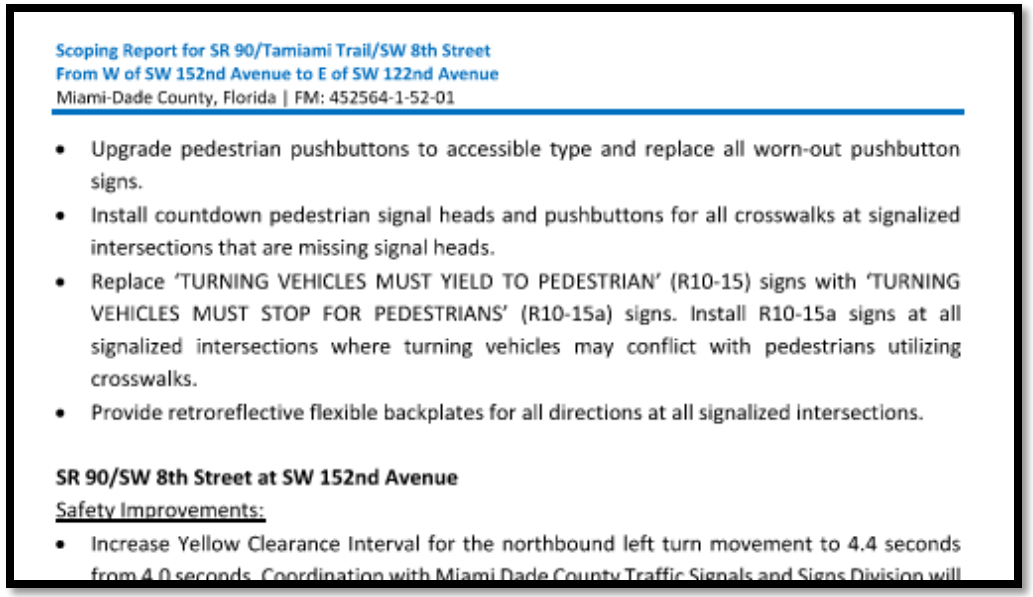
3.3 Category B2 – Safety Improvements with RRR Funds

Category B2 is reserved for RRR Safety Enhancements as identified in the RRR Safety Review Report or RRR Safety Report (See **Appendix H**). These recommendations do not qualify or have dedicated safety funds and are funded with RRR funds. The following are the Category B2 improvements.

Segment-Wide

Safety Improvements

- Upgrade crosswalk pavement markings to high emphasis.



Scoping Report for SR 90/Tamiami Trail/SW 8th Street
From W of SW 152nd Avenue to E of SW 122nd Avenue
Miami-Dade County, Florida | FM: 452564-1-52-01

- Upgrade pedestrian pushbuttons to accessible type and replace all worn-out pushbutton signs.
- Install countdown pedestrian signal heads and pushbuttons for all crosswalks at signalized intersections that are missing signal heads.
- Replace 'TURNING VEHICLES MUST YIELD TO PEDESTRIAN' (R10-15) signs with 'TURNING VEHICLES MUST STOP FOR PEDESTRIANS' (R10-15a) signs. Install R10-15a signs at all signalized intersections where turning vehicles may conflict with pedestrians utilizing crosswalks.
- Provide retroreflective flexible backplates for all directions at all signalized intersections.

SR 90/SW 8th Street at SW 152nd Avenue

Safety Improvements:

- Increase Yellow Clearance Interval for the northbound left turn movement to 4.4 seconds from 4.0 seconds. Coordination with Miami Dade County Traffic Signals and Signs Division will

D6 Process

- Scoping Report Example

3.4 Category C – Other Improvements

Category C is reserved for all other operational, capacity, and operational improvements requested by the Department and subject to approval by the Scoping Task Team for inclusion in RRR Projects.

The scoping team reviewed the FDOT D6 Safety Office RRR Safety Review Report and identified the following Category C improvements (**Pending approval by the Scoping Committee**). Any additional studies will be done by the planning or safety office.

1. Close the median opening at SW 139th Avenue and extend the eastbound left turn lanes at SW 137th Avenue. An access management study that includes an operational analysis for SW

3.5 Improvements Not Included

The following improvements were considered but not recommended to be implemented as part of this project since they do not fall under the guidelines of FDM Chapter 114 RRR Criteria.

- Coordinate with local law enforcement to increase enforcement of improper lane changes on the eastbound approach at SW 137th Avenue.
- Provide a signal head for each through lane at SW 142nd Avenue for eastbound traffic and at SW 122nd Avenue for eastbound and westbound traffic. This improvement will require structural analysis to determine if the existing mast arms can support the additional loading.

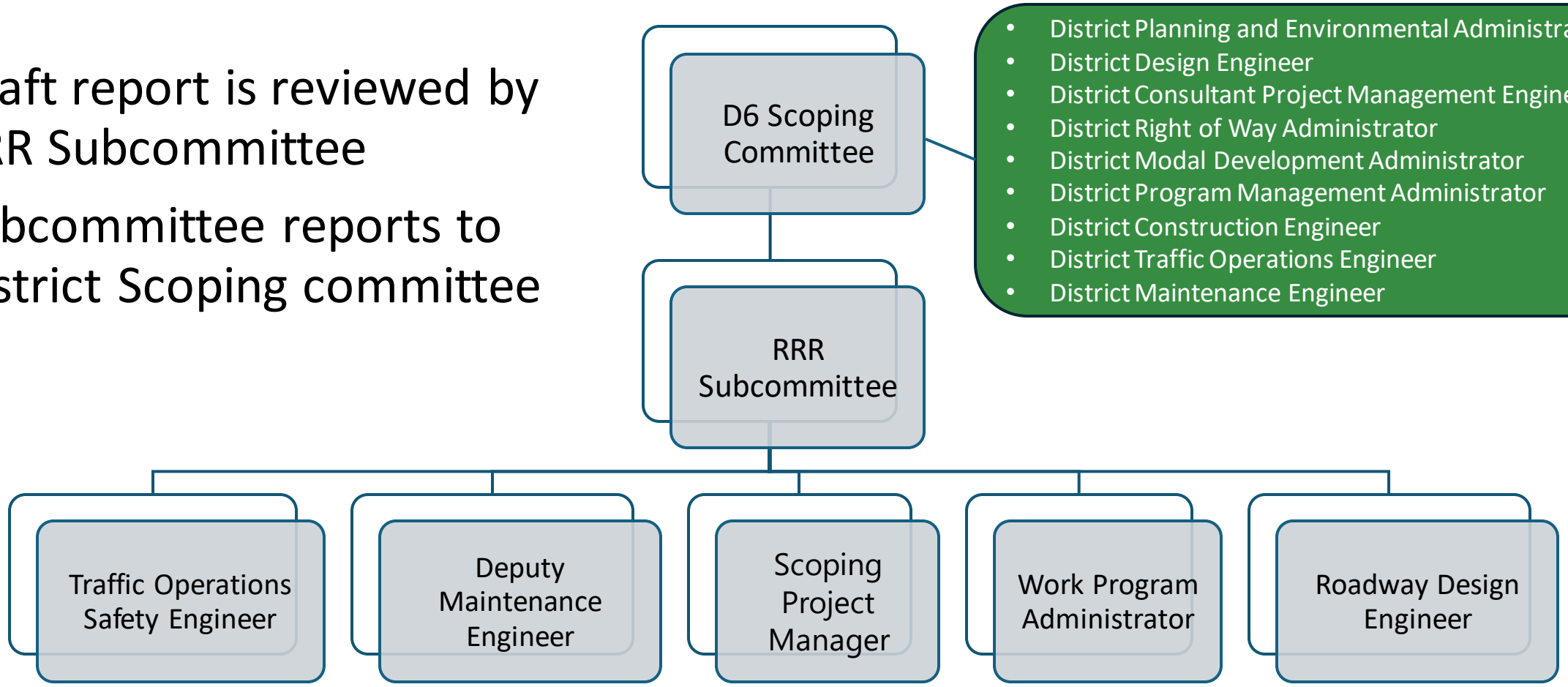
3.6 Maintenance Recommendations

The following deficiencies below were identified during the field review and will be forwarded to the FDOT D6 Maintenance Office to be addressed and will not be part of this project.

1. Repair or retrofit all luminaires that are non-functional along the corridor.
2. Trim trees and shrubs to comply with clear sight triangle requirements where feasible.
3. Reconstruct damaged sidewalk segments (See **Appendix C** for list of locations).
4. Clean drainage inlets along the project corridor (See **Appendix C**).
5. Repair/replace damaged, defaced and faded signs.
6. Repair or replace the damaged pedestrian railing at the southwest corner of SW 152nd Avenue.

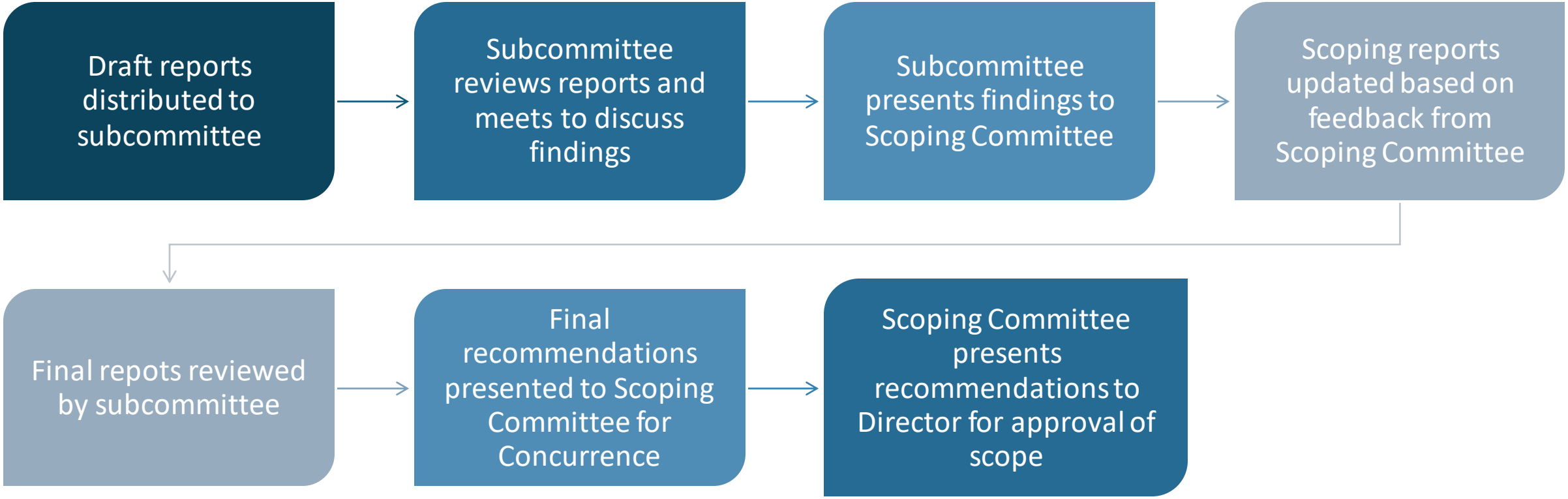
D6 Process

- Draft report is reviewed by RRR Subcommittee
- Subcommittee reports to District Scoping committee



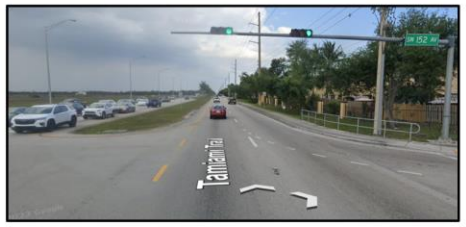
D6 Process

- RRR Subcommittee Process



D6 Process

- RRR Subcommittee Presentation



RRR Scoping Subcommittee Review

SR 90/TAMIAMI TRL/SW 8 ST. FROM W. OF SW 152 AVE. TO E. OF SW 122 AVE

452564-1 Project Information

State Road: 90 (TAMIAMI TRL/SW 8 ST.)

Limits: FROM W. OF SW 152 AVE. TO E. OF SW 122 AVE.

Exception: FROM EAST OF SW 139 AVE TO EAST OF SW 137TH AVE (439918-1)

Length: 3.094

Lane Miles: 15.925 miles

Functional Classification: Urban Principal Arterial Other

Context Classification: C3R, C3C, C4

~~**Design Advertisement Date:** 9/16/2024~~ (Internal)

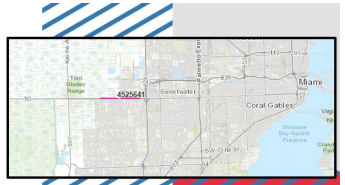
Letting Date: 1/27/2027 (FY 27)

Pavement Condition Survey (2024):

- Ride = 6.9
- Crack = 9.0
- Rutting = 9.0

Pavement Age: 152 Ave to 127 Ave – 24 years /

127 Ave to TPK 14 years by 2027



RRR Scope : Funding Category A

Recommended by Scoping Report:

Roadway:

- ✓ Mill and resurface the existing roadway pavement.
- ✓ Retrofit the bridge traffic railings, barrier walls and the guardrail transitions at the northeast corner of SW 127th Avenue intersection to meet standards and to accommodate the new crosswalk on the east side of the intersection.
- ✓ Evaluate cross slopes corrections.
- ✓ Adjust the existing storm drain manholes, utility manhole tops, and valves within the limits of milling & resurfacing or sidewalk reconstruction, as necessary.
- ✓ Provide thrie-beam connection from the existing guardrails to the barrier walls at the locations identified in Section 2.6.22.2.
- ✓ Provide new guardrails with thrie-beam connections to the existing bridge railings for the bridge over the SW 132nd Avenue Canal. A license agreement (committee recommends revisiting this language) may be required for the installation of the guardrail on the southwest side of the bridge.
- ✓ Upgrade deficient pedestrian curb ramps and detectable warning surfaces

RRR Scope – Funding Category A

Recommended by Scoping Report:

For discussion with Scoping Committee:

- Re-grade the curb and gutter at the 2 locations identified in Table 2-5 where water ponding was observed.
  - Only location 1632+40 is at curb ramp.
  - RRR Sub-committee recommendation
    - Do not include if no documented issues by drainage or maintenance. Not clear from report.
    - Only include 1632+40 since it occurs at a curb ramp
    - Cost TBD

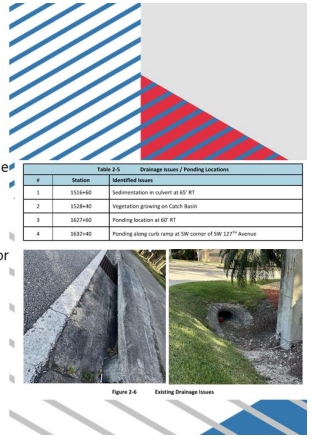


Table 2-5 Drainage Issues / Ponding Locations

#	Station	Identified Issues
1	1516+60	Sedimentation in culvert at 65' RT
2	1528+40	Vegetation growing on Catch Basin
3	1627+60	Ponding location at 60' RT
4	1632+40	Ponding along curb ramp at SW corner of SW 127th Avenue

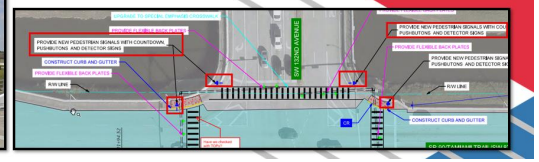
Figure 2-6 Existing Drainage Issues

RRR Scope – Funding Category A

Recommended by Scoping Report:

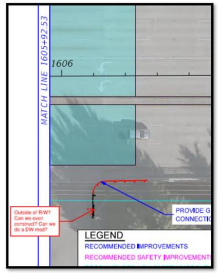
For discussion with Scoping Committee:

- Signalization on bridges
  - May require additional analysis to determine impacts to bridge and/or R/W impacts.
  - Cost may increase



Other Observations

- *Guardrail updates outside of R/W*
- *Need a license agreement – Private Property*



SYMPOSIUM

D6 Process

- RRR Subcommittee Presentation

452564-1 Project Information

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D6 Process

- RRR Subcommittee Presentation

RRR Scope : Funding Category A

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D6 Process

- RRR Subcommittee Presentation

RRR Scope – Funding Category A

Recommended by Scoping Report:

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Figure 2-6 Existing Drainage Issues

D6 Process

- RRR Subcommittee Presentation

RRR Scope – Funding Category A

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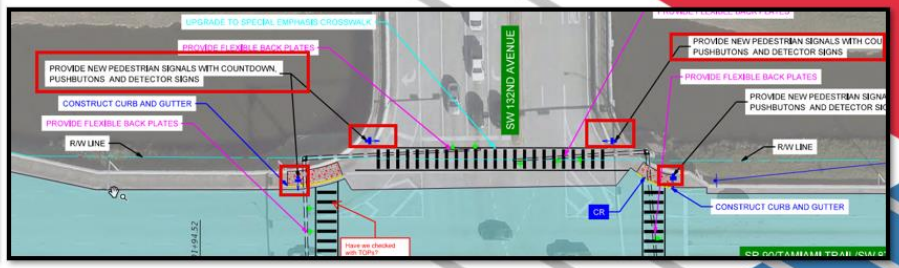

D6 Process

- RRR Subcommittee Presentation

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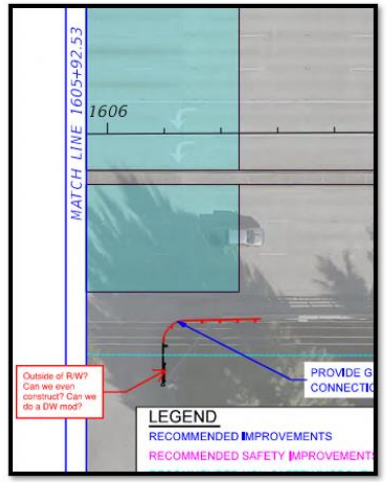

D6 Process

- RRR Subcommittee
  - Subcommittee makes recommendations to District Scoping Committee, not decisions
  - Provide consistency in scope delineation
  - Avoid scope creep
  - Avoid creating confusion for designers

D6 Process

- RRR Program
  - RRR vs Pavement Only Project (POP) vs Ride-only
  - Non-RRR related request by other agencies

D6 Process

- Design Phase
  - Designers uses recommendations in scoping report to begin design
    - Designer still required to review all FDM criteria
  - Major changes to scope need to be presented to District Scoping Committee
  - Work program team flags projects which large cost changes

Contact Us

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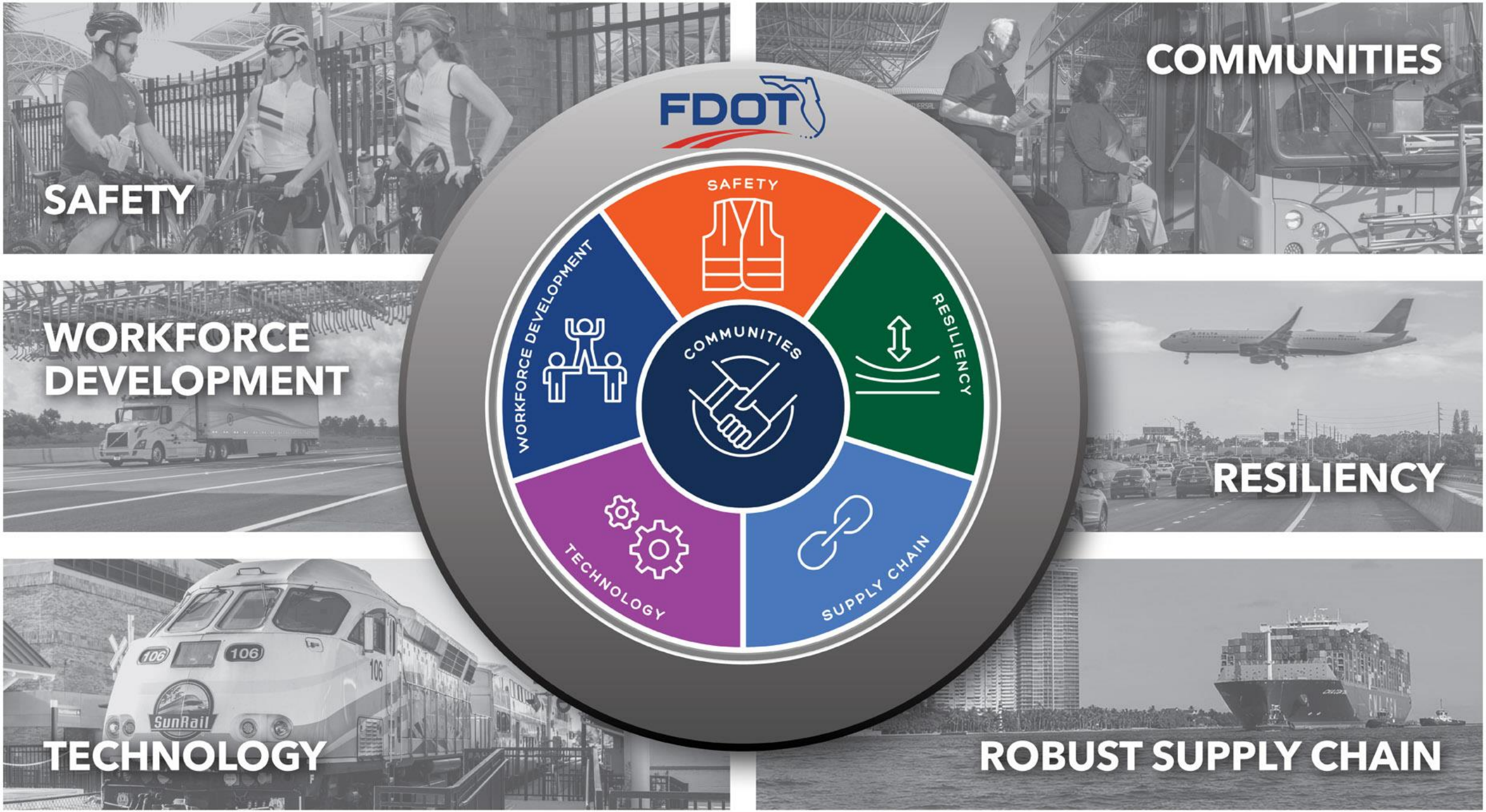
TRANSPORTATION SYMPOSIUM

Safety Message


FDOT
SAFETY
COMMUNITIES
WORKFORCE DEVELOPMENT
RESILIENCY
TECHNOLOGY
SUPPLY CHAIN
SAFETY
COMMUNITIES
WORKFORCE DEVELOPMENT
RESILIENCY
TECHNOLOGY
SUPPLY CHAIN
106
SunRail