Doing More with Less: Implementing Complete Streets through Resurfacing Projects

Stephen Benson and Kelli Bradley
Presentation Outline

• Why Complete Streets?
• Screening resurfacing candidates
• Building “goes-with” scopes and identifying funding
• Work program best practices
• Lessons learned
• Recent projects
What is Complete Streets?

• FDOT’s **approach** to plan, design, construct, reconstruct, and operate the transportation system
• Serve the transportation needs of **users** of all ages, abilities, and modes
• **Context-Based**
• Provide a transportation **system** responsive to local land development patterns
What is Complete Streets?

FDOT Context Classifications
Why Complete Streets?

Improve Safety, Support Economic Development and Create Quality Places through integrated land use and transportation

FDOT’s Mission…
“provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity and preserves the quality of our environment and communities”
Why Complete Streets?

Florida Transportation Plan Goals

- **Safety** and security for residents, visitors, and businesses
- Agile, resilient, and quality infrastructure
- Efficient and reliable mobility for people and freight
- More transportation choices for people and freight
- Support Florida’s global economic competitiveness
- Support quality places to live, learn, work, and play
- Enhance Florida’s environment and conserve energy
Why Complete Streets?

Vision: Zero Deaths

Districtwide Fatalities

Florida Rated Most Dangerous State for Pedestrians

The last two years on record (2016 and 2017) were the most deadly years for people killed by drivers while walking since 1990, according to the report, which ranks states and metropolitan areas around the country using Smart Growth America's "Pedestrian Danger Index."

Jan 24, 2019

Nearly 50% of pedestrian crashes occurred while a pedestrian was trying to cross the road.

21% of bike/ped crashes in District 7 ended in serious injury or death

*2017 and 2018 data unofficial at time of presentation
Why Complete Streets?

D7 State Highway System – Context Zone and Crash Distribution by Centerline Miles

<table>
<thead>
<tr>
<th>Context</th>
<th>Centerline Miles</th>
<th>% Centerline Miles by Context</th>
<th>Ped/Bike Crashes</th>
<th>% Ped/Bike Crashes by Context</th>
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<tr>
<td>C1 – Natural</td>
<td>18</td>
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<tr>
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Leveraging RRR to Promote Complete Streets

- C4, C5, & C5 corridors are over-represented in crash data, especially for vulnerable road user crashes.
- Low hanging fruit have been picked.
- Opportunities to fully reconstruct C4, C5, C6 roads are rare.
Leveraging RRR to Promote Complete Streets

- The RRR program eventually touches every lane mile in the district.
- Candidate RRR projects are developed annually.
- RRR Program performance measures incentivize cost-efficiency.
Leveraging RRR to Promote Complete Streets

- Set aside district allocated funds, request MPO prioritization and pursue safety program funds when eligible.
- Screen RRR candidates annually and identify conceptual improvements.
- Identify programming strategy, potential funding sources and scenarios.
District 7 RRR Process

Existing Process

Candidate RRR List
(based on prior year pavement condition)

August

Pavement Condition Released

September

Programmed RRR List

September - December

Develop Draft Design Scope of Services
How does Complete Street fit in?

**Existing Process**

- **Candidate RRR List** (based on prior year pavement condition)
  
  - **August**
  
  - **Pavement Condition Released**
    
  - **September**
    
  - **Programmed RRR List**
    
  - **September - December**
    
  - **Develop Draft Design Scope of Services**

**New Steps**

- Screen RRR Candidates for Complete Streets needs
- Begin coordination with Locals
- Detailed review (RSA)
- Develop programming & funding strategy/scenarios
How does Complete Streets Fit in?

Ongoing Updates
- Candidate RRR List
  - District Maintenance office develops candidate RRR projects

Aug/Sept
- Review Existing Conditions & Context Classification
  - Review land use, crash data, bike/ped needs and confirm context classification
- Review Compliance with FDM standards & best practices
  - Review existing typical section against FDM standards for context classification
- Pavement Conditions Released/Programmed RRR List
  - Steps 2 and 3 are conducted for any projects not previously identified as candidates
- Finalize Input from Local Agencies
  - Local agencies provide feedback on issues and opportunities. Request MPO Review & Prioritization.
- Field Review (Complete Street Road Safety Audit)
  - Field visit with local stakeholders to identify project opportunities
- Develop strategy for programming and funding
  - Develop a strategy for programming and identify funding scenarios.
- Leadership/SME Review & Concurrence
- Finalize Proposed Scope of Work and Add Funds

Sept – Dec
- Additional Analysis and Coordination
  - Internal coordination, data collection, analysis, research, refinement of recommendations, etc.

December
- Finalize Proposed Scope of Work and Develop Draft Design Scope of Services
Building a RRR “Goes-With” Scope

Identify list of safety and other opportunities from:

- Road Safety Audit
- Planning screens
- Input from locals
Building a RRR “Goes-With” Scope
Complete Streets is About More Than Just Bike/Ped

Projects are screened for all disciplines
- Traffic operations
- Drainage
- Lighting
- Access management
- Turn lanes
- Signalization

Example: SR 44 Citrus County
Building a RRR “Goes-With” Scope
Input from Locals & Stakeholders

What do you know?
- Bike/Ped Issues
- Planned Trails
- Safety/Operational Issues
- Types of User
- Future Land Use
- Nearby Projects

What would you like to see?
- Changes to Typical Section
- Pedestrian Crossings
- Safety Improvements
- Operational Improvements
- Additional Features
Building a RRR “Goes-With” Scope
Input from Locals & Stakeholders

SHAREPOINT SITE

• View upcoming RRR projects in your jurisdiction
• Get notified when new projects are created
Building a RRR “Goes-With” Scope
Input from Locals & Stakeholders

SHAREPOINT SITE

1. View upcoming RRR projects in your jurisdiction
2. Get notified when new projects are created
3. Provide project feedback

1) List any issues with existing bicycle/pedestrian facilities and network connections in this area. This includes gaps in sidewalk or trail networks as well as roadway crossings.

**Agency Responses:**
- **Agency:** Pinellas County, **Responder:** Joan Rice
- **Response:** There are no bicycle lanes as the speed is high. The sidewalks could be wider to accommodate passing people.

3) Are you aware of any safety issues that should be analyzed addressed? If so, please describe.

**Note:** For preliminary crash data summary, see Context Classification Report in Project Documents section above.

**Agency Responses:**
- **Agency:** Pinellas County, **Responder:** Joan Rice
- **Response:** Sight visibility with overgrown medians. The north 5 or 6 medians are part of a landscape project that will clean out some of the growth. Michael Kidde, D7 Landscape Architect knows about this project.
Building a RRR “Goes-With” Scope
Input from Locals & Stakeholders

PARTICIPATE IN FIELD REVIEWS

• Understand challenges first hand
• Hear from stakeholders with other interests and priorities
Building a RRR “Goes-With” Scope
Leverage Flexibility in the FDM

Florida Design Manual Chapter 114 Resurfacing, Restoration and Rehabilitation (RRR)

114.1.1 Proposed Improvements (Type of Work)

The following items must be included in each RRR project unless written authorization to deviate from this policy is obtained at a Director level position in the District:

1. Safety improvements needed to address crash problems.
2. Pavement Resurfacing/Rehabilitation.
3. Modifications necessary to Comply with the Americans with Disabilities Act (ADA).
4. Paved Shoulders.

Many safety items can be absorbed as part of a typical RRR scope of work.
Building a RRR “Goes-With” Scope
Leverage Flexibility in the FDM - Retrofit

Document design speed, posted speed, and allowable range

➢ Set a target speed

The speed at which all drivers are legally required to operate at or below.
Established by Procedure – Rule 14-15.012, Florida Administrative Code

The speed at which vehicles operate during free flow conditions.

The speed at which all drivers are legally required to operate at or below.
Established by Procedure – Rule 14-15.012, Florida Administrative Code

Established by FDOT Design Manual

[Diagram showing Venn diagram with Design Speed, Posted Speed, and Operating Speed]
Building a RRR “Goes-With” Scope
Leverage Flexibility in the FDM

Built-in flexibility to do more on resurfacing projects

• When posted speed exceeds the allowable range, roadway elements that encourage lower operating speeds should be included with the project
• Width of the bicycle lane depends on the width of the available roadway pavement
• Sections of raised or restrictive medians are recommended on RRR projects
Cost Estimating - “Goes-With” Improvements

Estimate Early, Update Often

Long Range Estimates should be completed after Road Safety Audit report
RRR Goes-With
Something Is Better Than Nothing

Busch Blvd
- 3.3 miles corridor
- City of Tampa and unincorporated Hillsborough County
- Corridor Planning Study recommended reconstruction to add median and bike lanes and fill sidewalk gaps
RRR Goes-With
Something Is Better Than Nothing

Busch Blvd

• Resurfacing project with construction to begin late Spring 2019
• Includes spot safety enhancements including spot medians and pedestrian crossings
• Continue to advance long-term vision through production process
What About Funding?

MPO Opportunities

• Funding allocated for RRR can typically not be used for additional elements

• Federal, state, and local sources can be added
What About Funding?

MPO Opportunities

If projects are on the MPO priority lists, it opens additional funding opportunities and local awareness.

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<th>2018 Priority</th>
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<td>Kennedy Blvd (Westshore to Brevard)</td>
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What About Funding?
State Funds Reserved for Complete Streets

- Lane mile allocations for RRR projects to be used per FDM
  - Additional items of work to be funded with District Funds
- District 7 made a commitment in 2017 to implement Complete Streets
What About Funding?
State Funds Reserved for Complete Streets

• District created a Complete Streets Reserve Box in outer years
  • $5 million of district allocated funds originally approved
  • Future amount will be adjusted based on anticipated need
• Utilize reserved funds to add Complete Streets elements of work to RRR projects.
  • Must keep separate from RRR using separate sequence
    FPID XXXXXXXX-X-52-02
Construction Costs

• District completes “worst case” LRE using Complete Streets study (separate from RRR LRE)

• Prioritize recommendations if not enough $$ to do everything
Construction Costs

• Programming as a -52-02 allows
  • One set of plans - quantities separated in quantity boxes
  • 2 LREs
  • 2 projects in AASHTOWare
  • One specs package
  • -02 can be easily “turned off”
  • Allows District to track and report on multiple work types
Design Costs

District decision and is subjective
  • If only minor work being added, absorb under the -32-01 (RRR PE)
  • If a larger effort, utilize reserve Box and add -32-02 (CPST PE)

If all else fails...
  • Include as optional services in design scope of services
Program Management Rules of Thumb & Work Program Instructions

• RRR allocations are to preserve our pavement system
• Different program numbers utilized in FM to track work type
• Each project sequence is limited to one program number:
  • 02 - Roadway
  • 03 - Bridge
  • 04 - Bridge Repair
  • 05 - Roadway Resurfacing
  • 06 - Safety
  • 07 - Traffic Operations
Programming

- RRR project example
- Utilized 3 sequences
  - RRR
  - Safety
  - Complete Streets

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Pre-Planning

• Continuing to use existing District RRR process
• Adding new steps to process to address Complete Streets Policy
• Requires continuous coordination among multiple offices and external partners
• This coordination must be done quickly and efficiently, or will miss opportunity!
Cost Increases After Design Begins

- Design cost increases
  - Utilize contingencies
- Construction cost increases
  - Try to leave some funds in the reserve Box for future increases
  - Communicate with Work Program - use contingencies
- It never hurts to ask for additional funds
- If additional fund are not available, may need to reduce scope
  - Something is better than nothing
Lessons Learned

• Each district operates a little differently but generally follow the same rules (Work Program Instructions, FDOT manuals, Targets)
• Funding is a challenge that requires multiple offices in the District, but it is not a barrier.
• New funding isn’t always needed - but most funds have strings. Its a matter of getting the right type of funds plugged into the right project.
• Consolidated project scoping process helps
• Get the locals & MPOs on board with the goals
• Early and often communication
Jackson Street (Downtown Tampa)

PROJECT BACKGROUND

Transit

Walking

Bicycling
PRIOR CONDITION

• 3 travel lanes with parking on both sides and an eastbound bike lane

• There is no bike lane on Kennedy Blvd (parallel westbound roadway)
• Identified need for two-way bicycle facility during resurfacing
Public and Stakeholder Engagement

- Develop Graphics
- 17 Stakeholder Meetings
- 4 MPO Committee Meetings
  + MPO Board
- 1 Public Meeting
- Significant Coordination With:
  - City of Tampa Economic Development and Transportation
  - Tampa-Hillsborough Expressway Authority
Proposed Changes

**Before**
- Resurfacing
- Minor drainage improvements
- Upgraded signing and paving markings
- Lane reduction and two-way protected bike lane

**After**
- New traffic signal with pedestrian crossing at Governor St.
- Upgraded sidewalks and curb ramps
- Landscape pots/planters (movable)
- Curb extensions

Jackson Street (Downtown Tampa)
Cost Considerations

• In-house design
• Total CST cost (phases 52 & 57) = approx. $5.7M
• Majority of the additional cost was associated with:
  ▪ curb extensions/bulb outs at nearly every intersection
  ▪ associated drainage impacts
  ▪ traffic separator and supplemental signal heads associated with the two-way bike lane (cycle track)
• Project was broken into three sequence numbers to separate the resurfacing costs from the “complete streets” costs.
Funding Solutions

- FDOT used state and federal funds to cover 100% of the cost; no local funds were used
- District Safety Office secured HSP funds to cover some of the additional costs
- Hillsborough MPO supported the project and allowed SU/STP funds to be applied to the complete street features and cover balance of project cost
Project Status

• Construction complete October 2018
• Contact information for persons familiar with the project
  • Stephen Benson
  • Tana Johnston-Schultz (Design PM)
US 41/ N. 40th Street (East Tampa)

PROJECT BACKGROUND

- 6-lane divided with no on-street bike facility
- Restriped during 2017 resurfacing project
- Converted to 4-lane divided with 7’ buffered bike-lane
Additional Improvements

• Reconstructed four existing span wire signals with mast arms
• Upgraded sidewalks and curb ramps, replaced broken sidewalks, and closed abandoned driveways
• Minor drainage improvements
• Added median landscaping
• Subsequent Landscape project currently underway
Funding Considerations

• In-house design
• Total CST cost (phases 52 & 57) = approx. $5.9M
• All improvements were absorbed into the overall resurfacing project cost
Questions?
PPRs: Setting Up the Project in Work Program

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<th>Phase 52-02</th>
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List below the current LRE* costs by functional component as follows. All amounts are uncapped pre-PS&I Project Day Costs (PDC):