



October 28-29, 2025
Orlando, FL

PD&E Best Practices and Lessons Learned

Transportation Symposium Website



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Session Topics:

- Dealing with Unexpected Challenges – King Street Bridge
- Stormwater Solutions through Environmental Partnerships
- Innovative Approach to Noise Abatement

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October 28-29, 2025

Orlando, FL



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Dealing with Unexpected Challenges: Archaeological Monitoring and the King Street Drainage Project, St. Augustine

Ian Pawn, Ph.D.
Cultural Resources Coordinator, FDOT District 2



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Monitoring

- Minimization alternative to reduce impacts an undertaking may have on a historic resource (FDHR Module 3)
- Sensitive archaeological or historic resources have been identified within a project, and project commitment will include a qualified monitor to observe/record these resources while construction activities occur within or nearby
- Often focused on archaeology, but can include vibration monitoring or other types of observation of structures

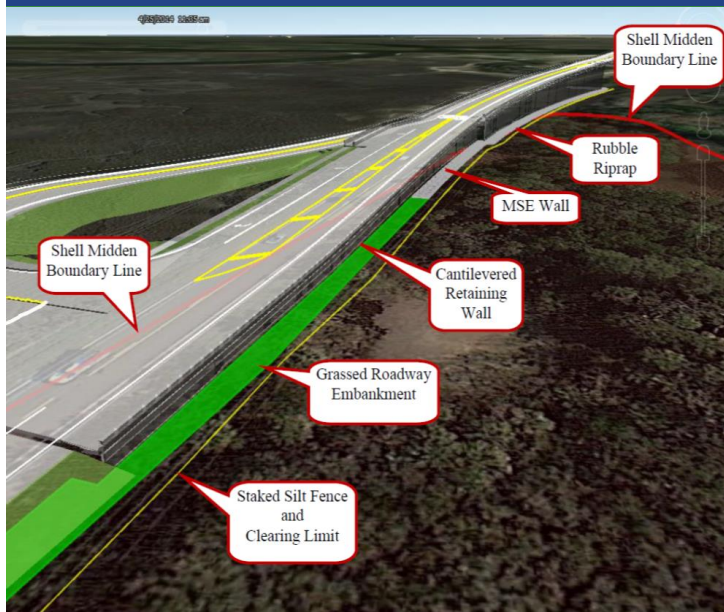


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PD&E and Design- Laying the Groundwork



- Project commitment- Ensures monitoring will go through the entire process and reach construction phase.
- Indicate monitoring areas in project plans
- Establish a monitoring plan, to be reviewed by SHPO and other stakeholders
- Early and often: communication

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Construction- Putting the Plan to Action

- “Tailgate meeting”- teach work crews about monitoring and what to do if they see something
- Flexibility in schedule. leave opportunities for work to continue
- Building trust between crews and monitors can be helpful to speed up process
- Keep a consistent reporting schedule and updated contact list



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The Unexpected?

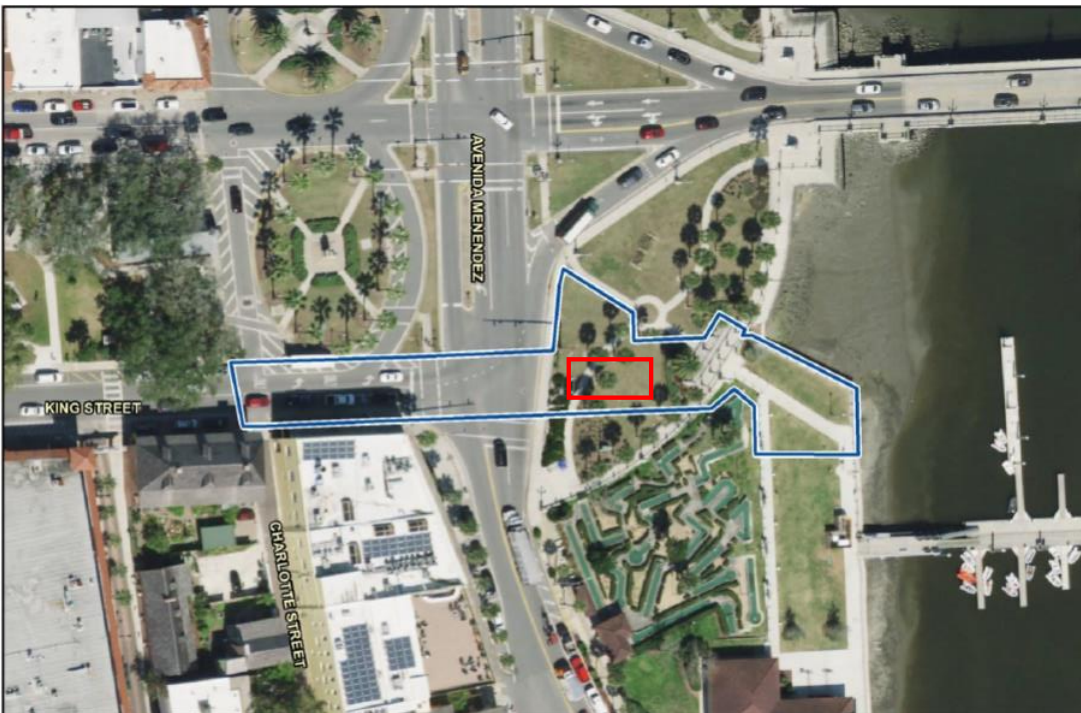


- Additional funding may be needed
- Careful communication between monitor and crew can reduce or eliminate delays
- The monitoring plan can provide guidelines
 - Human remains statement-applicable laws, chain of contact, procedure

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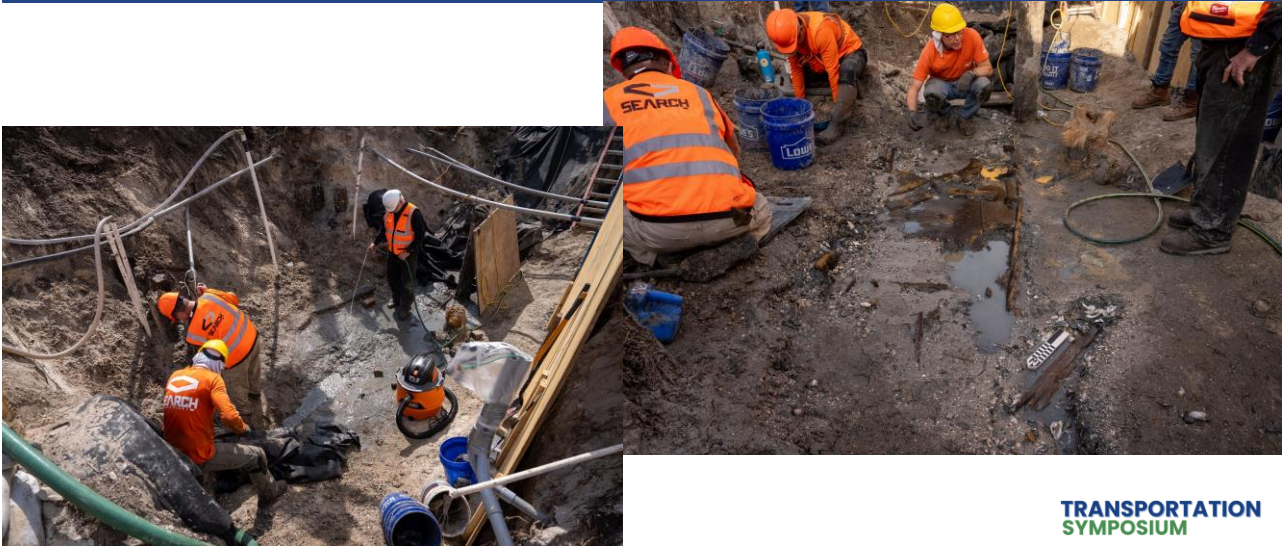


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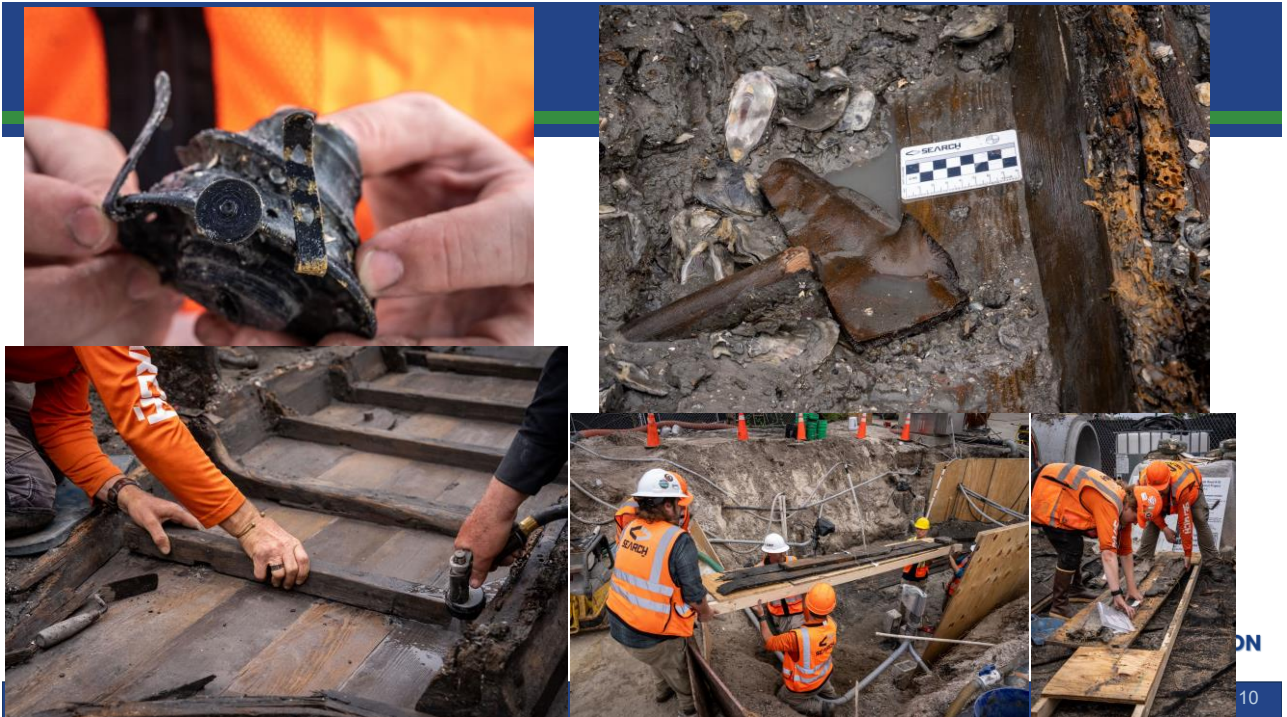
Discovery in Pipe Trench (approx. 6.5 feet down)



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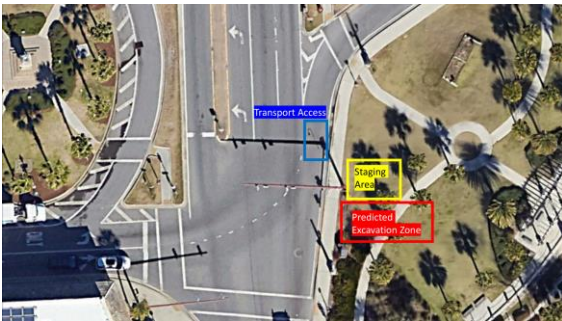


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What were the best practices?

- Monitoring plan had clear chain of contact
- Communication maintained weekly throughout project
- Funding available quickly for emergency
- Construction crew assisted monitors to speed up work for everyone
- Construction could continue in other areas



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***A Unique Solution to Stormwater Through
Environmental Partnerships,
S.R. 528 Widening***

Casey Lyon
Environmental Manager
Florida Department of Transportation
District 5
October 2025

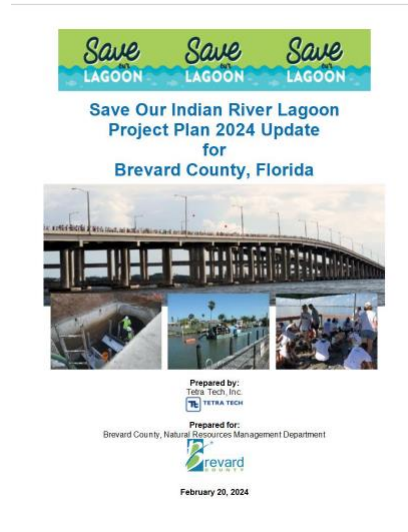
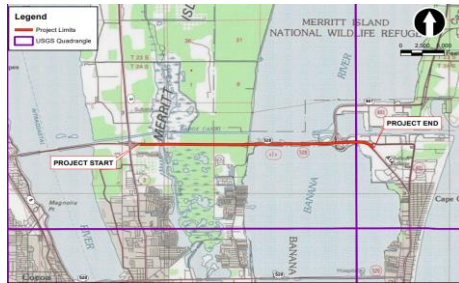
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The map illustrates the proposed SR 520 project area. It shows the coastline of Florida from Merritt Island in the north to Cocoa Beach in the south. Key locations include Merritt Island National Wildlife Refuge, Port Canaveral, Cape Canaveral, and Cocoa Beach. Major roads are labeled: SR 520 (the proposed project route), SR 401 (Cape M1), SR 407 (Cape M2), SR 501 (Cape M3), and SR 502 (Cape M4). The project is marked with a yellow line from the 'BEGIN PROJECT' point near Merritt Island to the 'END PROJECT' point near Cape Canaveral. The Atlantic Ocean is to the east.



S.R. 528 Design Project #407402-4

- ELA approach:
 - Enhance existing ponds?
 - Joint stormwater ponds?
 - Partnering with Brevard County
 - Save Our Indian River Lagoon
 - Projects vetted for nitrogen removal



S.R. 528 Design Project #407402-4

- Banana River Lagoon Impaired for Nutrients (Seagrass)

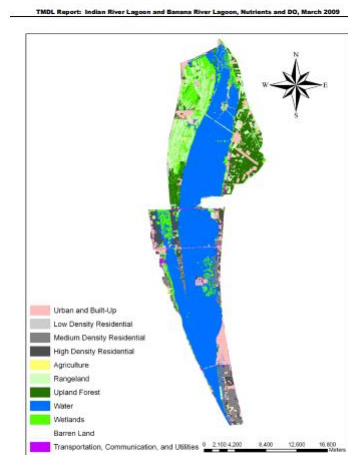
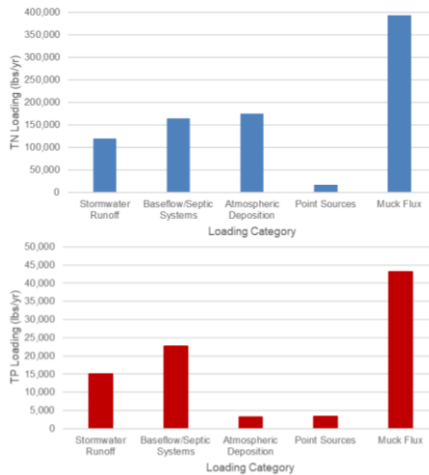


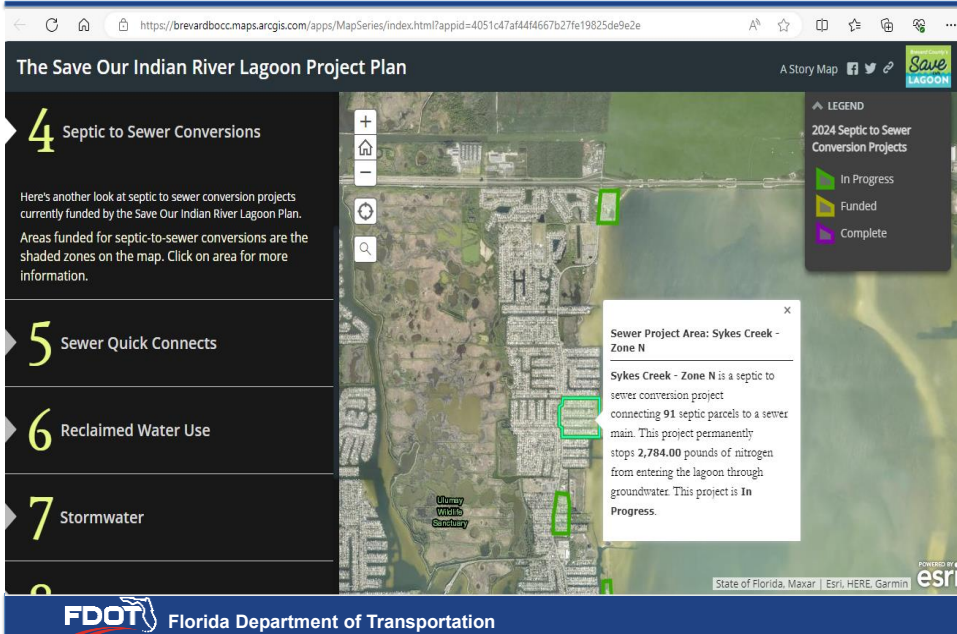
Figure 4.5. Major Land Uses in the Banana River Lagoon Watershed

S.R. 528 ELA Process (Project #407402-4)

- ELA Findings:
 - FDOT participation in Septic to Sewer Conversion Project
 - Agreements needed between FDOT and Brevard County
 - Allows for advancing additional Save Our Indian River Lagoon Projects

Project Number	Project Name	Responsible Entity	Sub-lagoon	Number of Lots	Total Nitrogen Reduction (pounds per year)	Total Nitrogen Cost per Pound per Year	Total Phosphorus Reduction (pounds per year)	Total Phosphorus Cost per Pound per Year	Plan Funding
2016-47	Sykes Creek - Zone N*	Brevard County	Banana	91	2,784	\$1,500	Not applicable	Not applicable	\$4,176,000
2016-48	Sykes Creek - Zone M*	Brevard County	Banana	56	1,798	\$1,500	Not applicable	Not applicable	\$2,697,000
2016-49	Sykes Creek - Zone T*	Brevard County	Banana	148	3,360	\$1,500	Not applicable	Not applicable	\$5,040,000
2016-30	City of Rockledge*	City of Rockledge	North IRL	15	712	\$703	Not applicable	Not applicable	\$500,580
2016-31/32	City of Cocoa - Zones J and K*	City of Cocoa	North IRL	92	3,748	\$1,646	Not applicable	Not applicable	\$6,167,373
2016-35	South Beaches - Zone A*	Brevard County	North IRL	37	1,306	\$1,500	Not applicable	Not applicable	\$1,959,000
2016-39	City of Palm Bay - Zone B*	City of Palm Bay	Central IRL	77	2,136	\$1,203	Not applicable	Not applicable	\$2,569,644
2016-46	City of Palm Bay - Zone B*	City of Palm Bay	Central IRL	249	6,809	\$1,220	Not applicable	Not applicable	\$8,309,628
109	City of Titusville - Zones A-G*	City of Titusville	North IRL	18	1,563	\$769	Not applicable	Not applicable	\$1,201,392
203	South Central - Zone A*	Brevard County	North IRL	101	3,655	\$1,500	Not applicable	Not applicable	\$5,482,500

S.R. 528 ELA Process (Project #407402-4)



S.R. 528 ELA Process (Project #407402-4)

- ELA Results:
 - Eliminates offsite ponds and associated Right of Way acquisition (15 acres)
 - Environmental benefits
 - Provides net water quality improvement over traditional stormwater methods
 - Total nitrogen reduction: 2784 lbs/yr (**240x better than traditional methods**)
 - Total wetland impact reduction: 13 acres of estuarine habitat



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S.R. 528 ELA Process (Project #407402-4)

- ELA Results continued:
 - Regional approach for Banana River Lagoon
 - Stakeholder support



St. Johns River
Water Management District



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S.R. 528 ELA Process (Project #407402-4)

- Memorandum of Understanding (MOU)
 - Joint funding
 - Permit condition
- Joint Participation Agreement (JPA)
 - Brevard County pays for design and partial construction costs
 - FDOT pays for remaining construction and CEI costs
- Allocation of Credits
 - 48% FDOT
 - 52% Brevard County

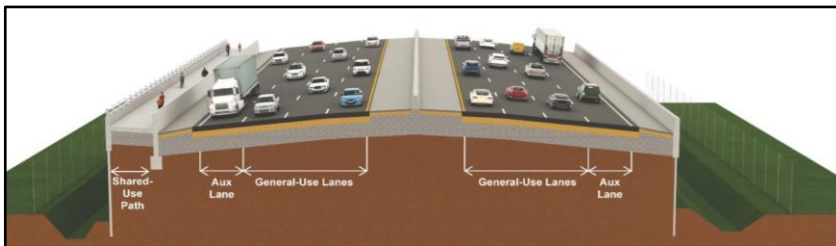


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S.R. 528 Status (Project #407402-4)

- 60% plans completed and approved
 - Incorporates ELA approach
 - R/W mapping in progress
 - Memorandum of Understanding signed by Brevard County and FDOT
 - Septic to Sewer construction beginning Summer 2025
 - Permitting Status
 - SJRWMD – Issued
 - USCG – Pending
 - USACE - Pending

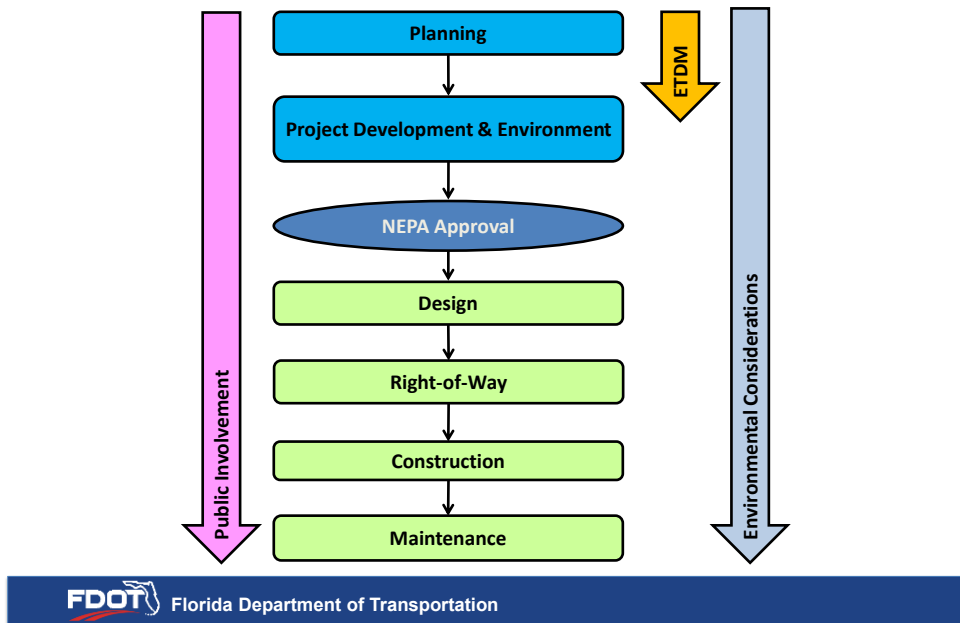


Proposed Typical Section

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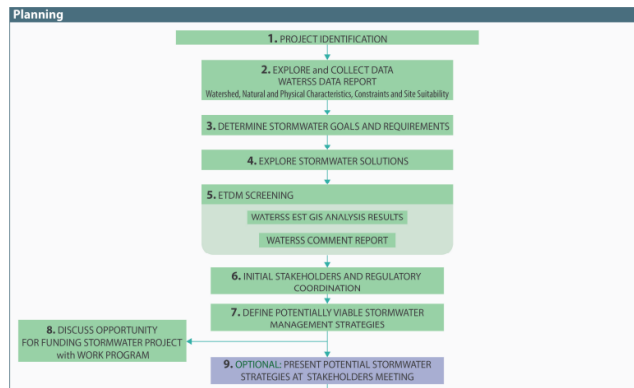
Transportation Project Delivery



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Next Steps – Improving on the ELA

- Watershed Approach to Evaluate Regional Stormwater Solutions (WATERSS)



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Casey Lyon Environmental Manager FDOT District 5

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Balancing Policy and Public Engagement

An Innovative Approach to Noise Abatement

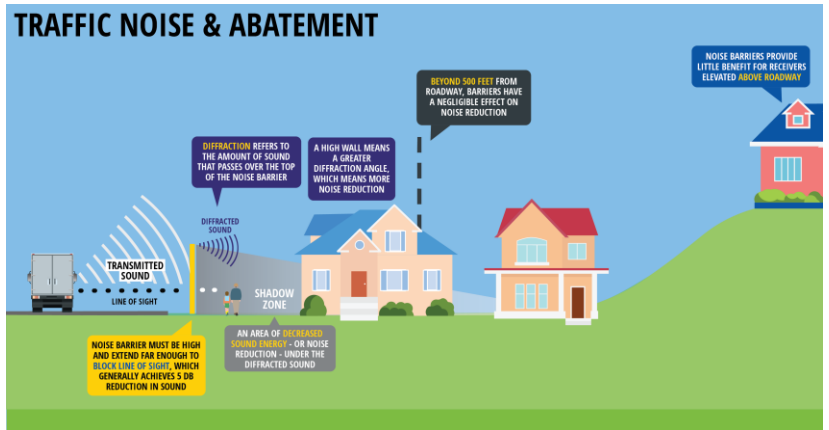
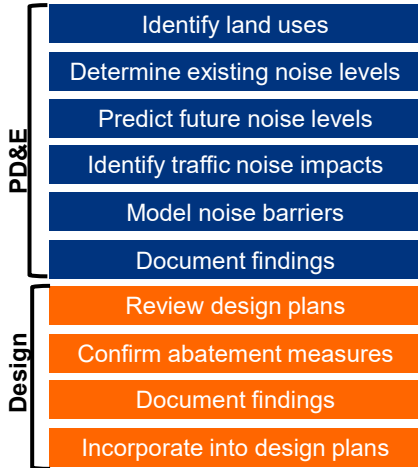
Robin Rhinesmith
District 7 Environmental Manager

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Noise Barrier Basics



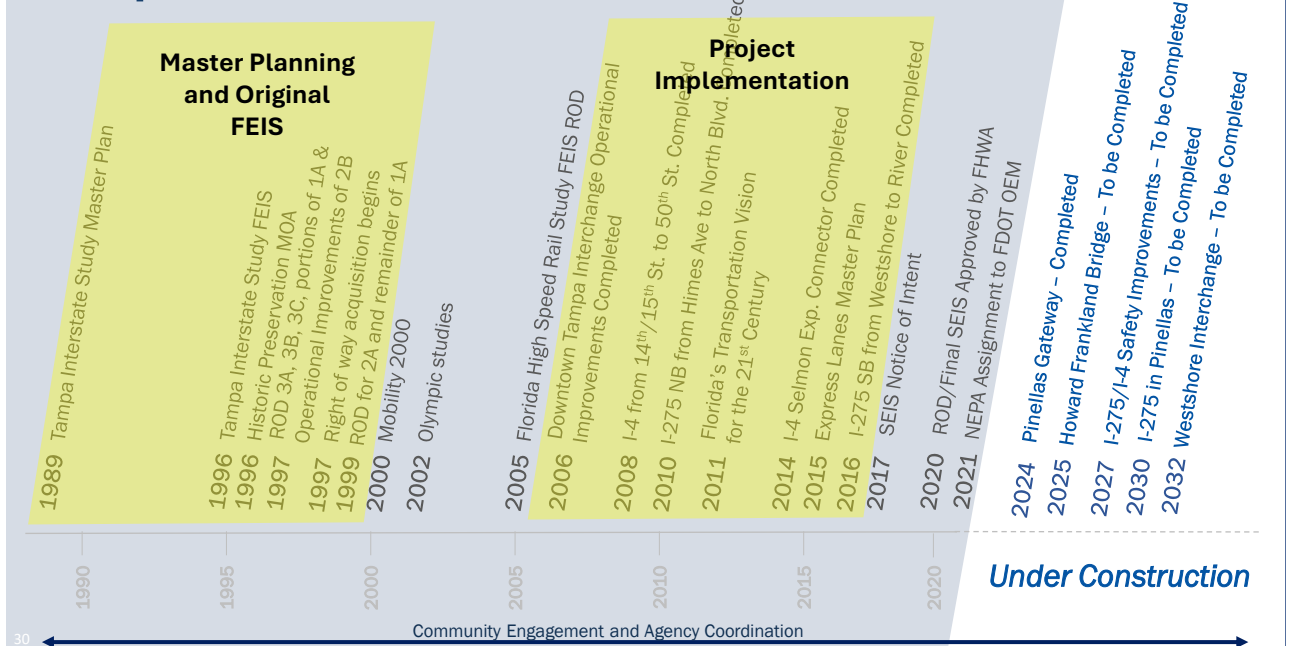
Noise barriers must be both feasible and cost reasonable.

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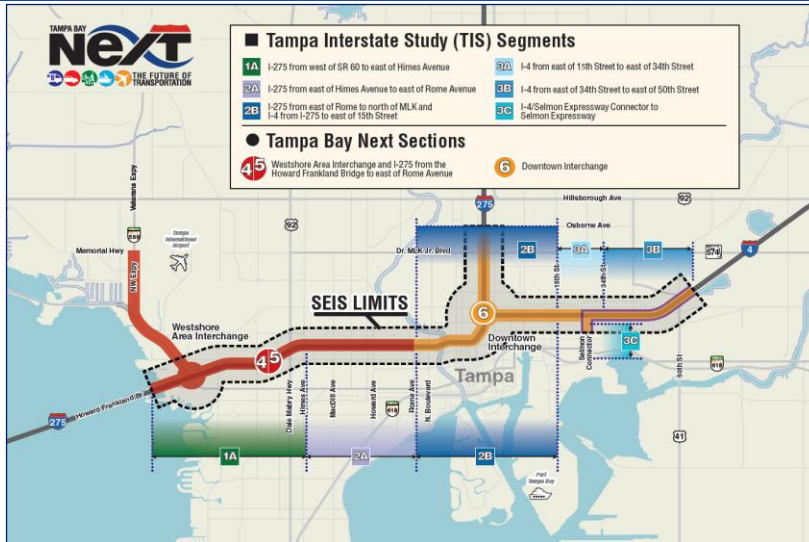
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Tampa Interstate Milestones



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Tampa Interstate Study (TIS) Supplemental Environmental Impact Study (SEIS)



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CHALLENGE:

In some areas, using the traditional process, noise barriers no longer met both the feasible and reasonable abatement criteria.

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Solution 1: Replace Noise Barriers In-Kind



Noise Study Report Update



Noise Study Report Update

Example: Noise barriers west of the Hillsborough River

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Solution 1: Replace Noise Barriers In-Kind



Noise Study Report Update



Noise Study Report Update

Example: North of Downtown
Tampa Interchange (I-275/I-4)

Example: East of Downtown
Tampa Interchange (I-275/I-4)

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Solution 2: Consider Perimeter (Visual) Walls to Fill Gaps



Carver City in West Tampa

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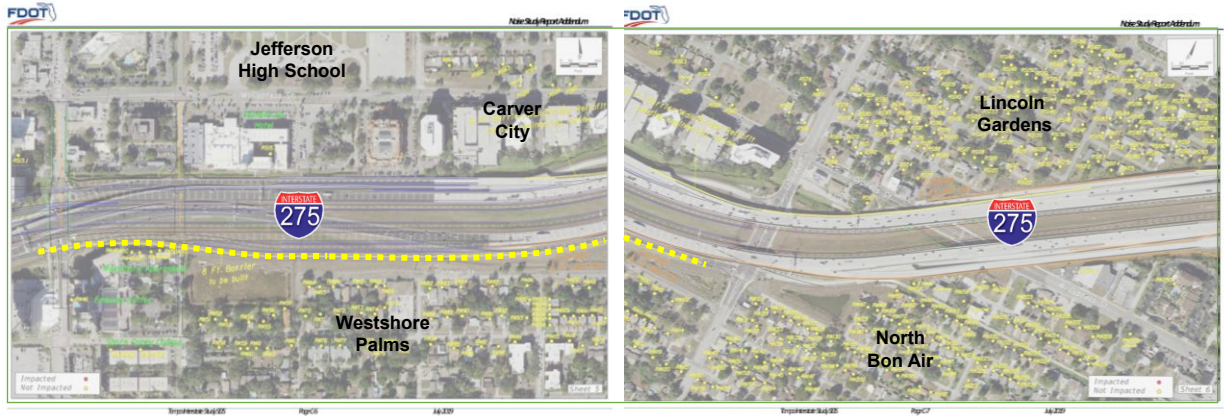
Solution 2: Consider Perimeter (Visual) Walls to Fill the Gaps



Carver City Trail Head

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Solution 2: Consider Perimeter (Visual) Walls to Fill the Gaps



Westshore Interchange (I-275/SR 60) from Westshore Blvd. to Dale Mabry Hwy.
(To be constructed)

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Solution 2: Consider Perimeter Walls to Fill the Gaps



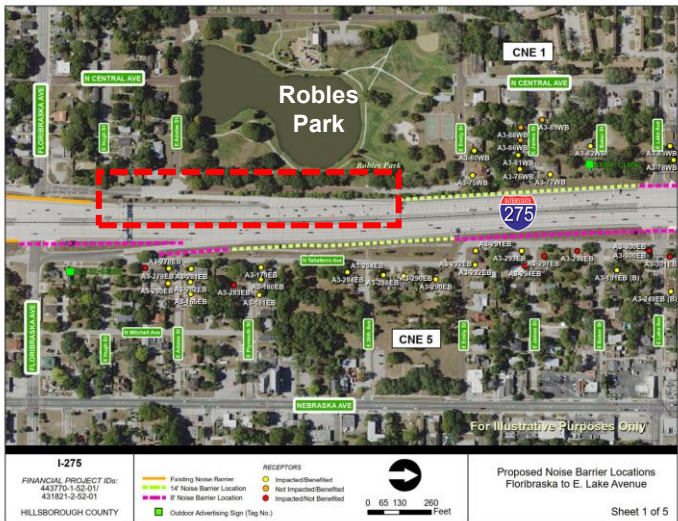
Downtown
Tampa
Interchange
(I-275/I-4):
Under
Construction

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Solution 3: Use Combined Philosophy to Justify Barriers



Robles Park in Tampa Heights

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Solution 3: Use Combined Philosophy to Justify Barriers

Multiple Barrier Options Proposed



10' Landscape
On City of Tampa R/W

8' Visual Barrier
On I-275 Shoulder

Existing

14' Noise Barrier
On I-275 Shoulder

10' Landscape Trellis
On City of Tampa R/W

Solution 3: Use Combined Philosophy to Justify Barriers



Community Survey

FDOT pauses plans for I-275 noise wall at Robles Park to get neighbors' feedback



Photo by: WFTS

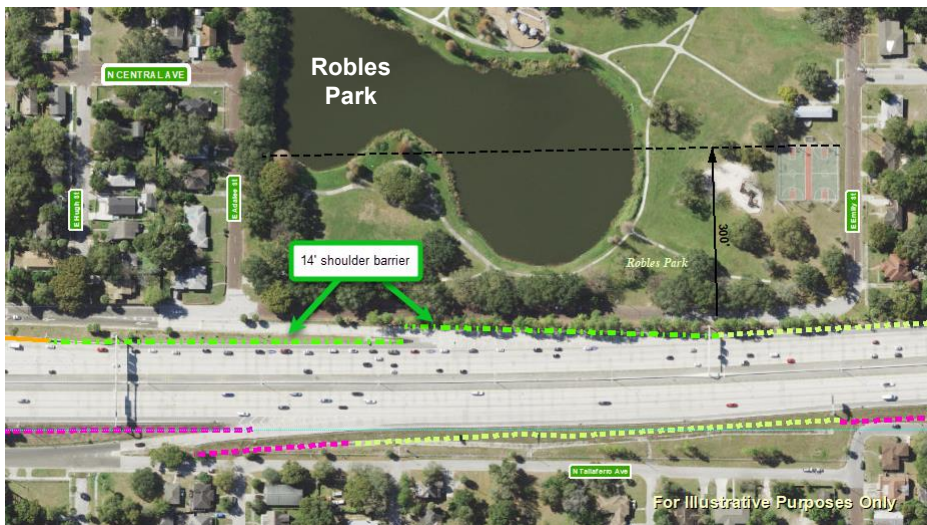
**DRIVING
TAMPA BAY
FORWARD**
TAMPA BAY 2030

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Solution 3: Use Combined Approach to Justify Barriers



- Analyzed the benefits and costs of CNE 1, 2/3, and 4 as a combined system
- Designed two 14' barriers to benefit park and residents to the south and to meet feasibility criteria
- Met cost reasonable thresholds by averaging costs of combined system

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Solution 3: Use Combined Philosophy to Justify Barriers



Construction Completed in 2024

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Lessons Learned and Best Practices



- Listen to community input.
- Be flexible.
- Use your tools creatively.
- Work closely with OEM/FHWA.
- Document your decisions.
- Look for the yes and do the right thing.

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Robin Rhinesmith
Environmental Administrator
FDOT District 7

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Contact Us



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DEADLINE

Please be sure to **certify your attendance** before leaving this event or no later than **November 30th**, in order to receive PDH/CEC. Detailed instructions are available on the Transportation Symposium website.

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