

Orlando, FL

November 7-8, 2024



2024 TRANSPORTATION SYMPOSIUM

Transportation Resilience Delivered: District Case Studies



Tony Frye, State Transportation
Resilience Officer

FDOT Office of Environmental Management

Resilience Tools

- Scenario Sketch
Planning Tool (Planning)
 - <https://sls.geoplan.ufl.edu/>
- RAP Data Viewer (Planning)
 - [Link](#)
- Environmental Screening Tool (EST) Area of Interest (AOI) Tool Resilience Report
(Project Development and Environment)
 - <https://www.fla-etat.org/est/secure/> (Access Limited)
- Project Suite (PSEE) Resilience Tracker Module (Design)
 - <https://projectsuite.dot.state.fl.us/Pages/Home/Home.aspx>

Ongoing Projects

- Statewide Resilience Website
- Communications and Public Relations Library
- FDOT Resilience Manual (2025)
- ETDM AOI Resilience Report Integration
- PD&E Resilience Chapter (2025)

Development of Draft Goals



SAFETY & SECURITY

Advance Safer and More Secure Travel for All Users



MULTIMODAL OPTIONS

Provide Efficient and Reliable Multimodal Transportation Options



COMMUNITY & ENVIRONMENT

Preserve Florida's Natural Resources and Quality of Life



RESILIENT INFRASTRUCTURE

Provide Agile and Resilient Transportation Infrastructure



ECONOMIC COMPETITIVENESS

Support Florida's Economic Competitiveness through Transportation Investments

Visioning

Goals & Objectives

Call to Action/Plan Development

Regional Visioning Sessions

Regional Workshops + Virtual Open House

Virtual Open House

Public Comment

Final Adoption



Statewide Webinar



Statewide Webinar + Virtual Open House



2024

April

May

June

July

Aug

Sept

Oct

Nov

Dec

2025

Jan

Feb

Mar

April

May

June

July

Aug

Sept

Oct

Nov

Dec



Steering Committee



Steering Committee



Steering Committee



Steering Committee



Steering Committee



Steering Committee



Focus Groups



Focus Groups



Focus Groups

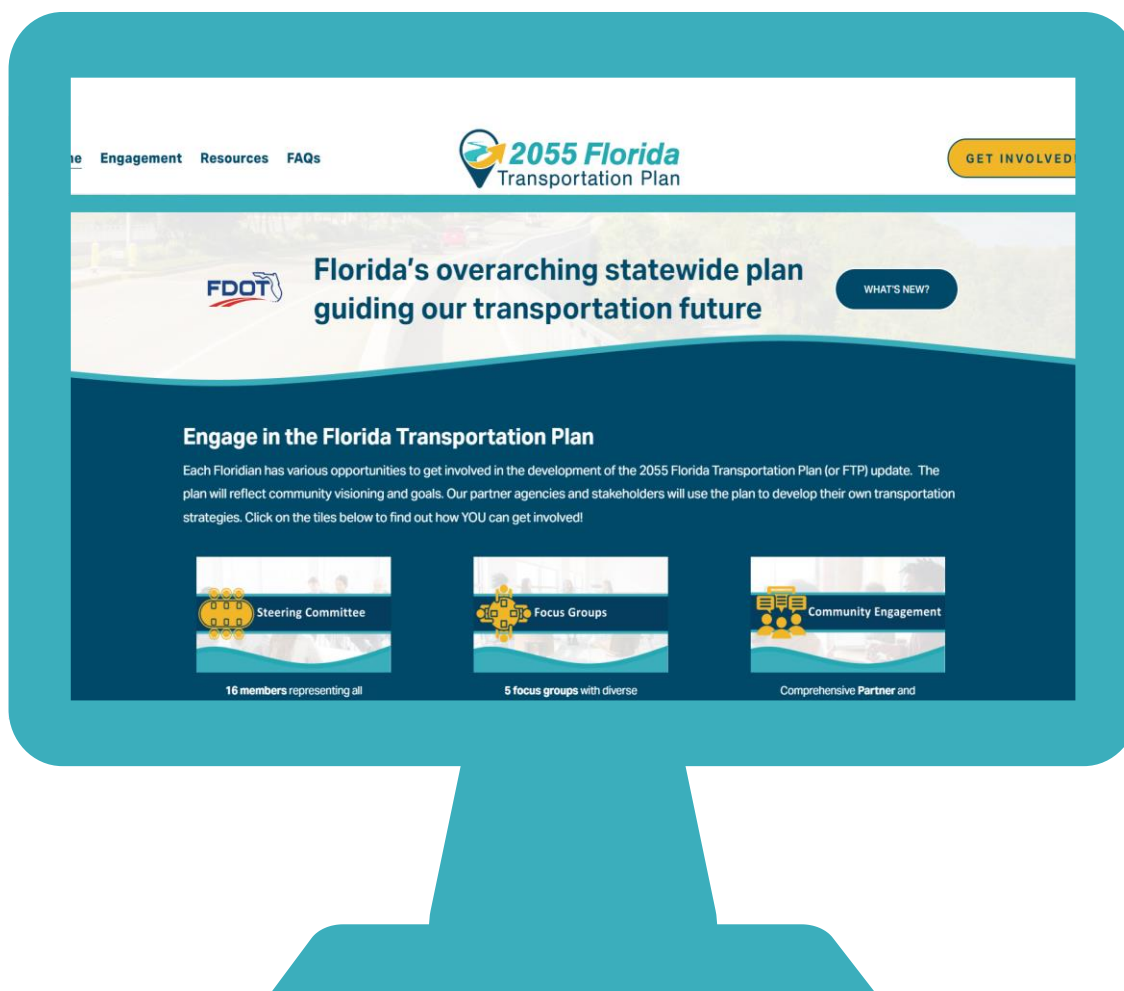


Optional Focus Groups

Partner Engagement

Local/Regional Outreach

Get Engaged Today!



Scan to
learn more!



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St. Augustine Seawall Replacement Project

Jamie Driggers

FDOT - District 2 Planning and Environmental

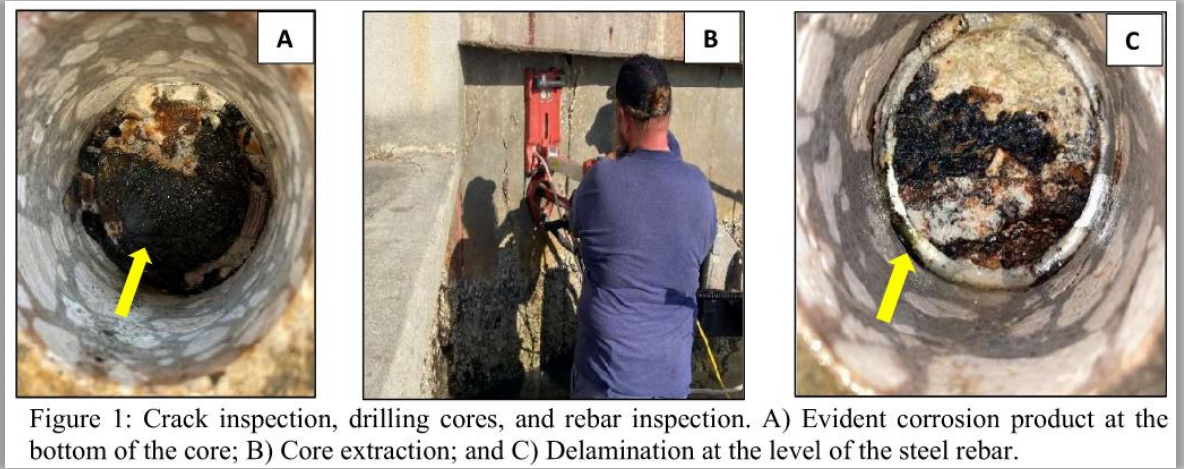
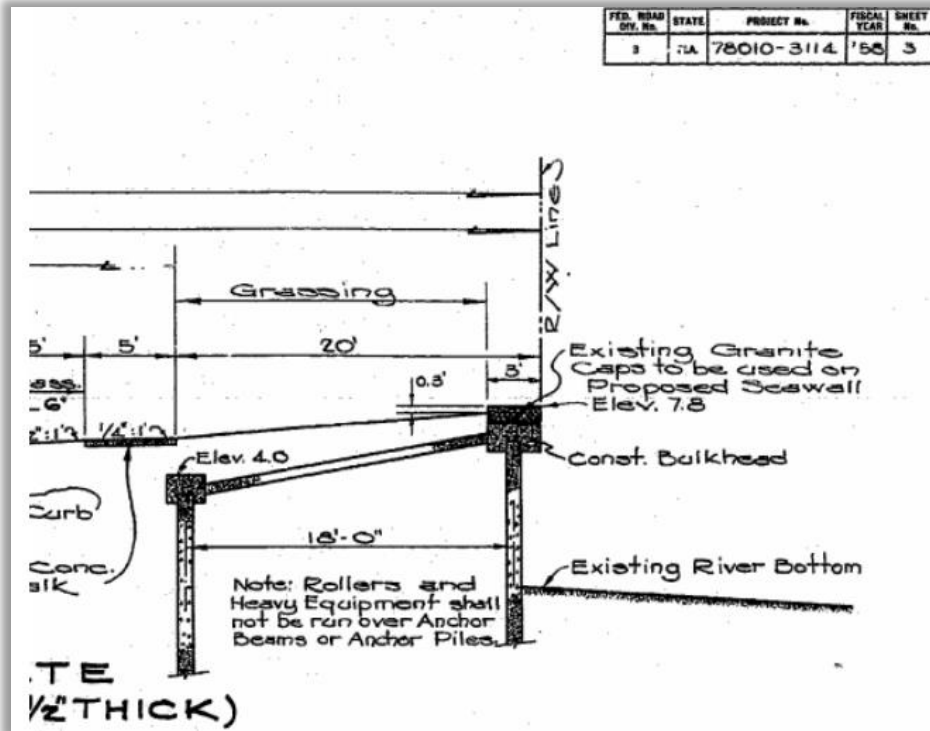


St. Augustine Seawall Replacement Project



History

Existing Seawall Construction ~1958-1960

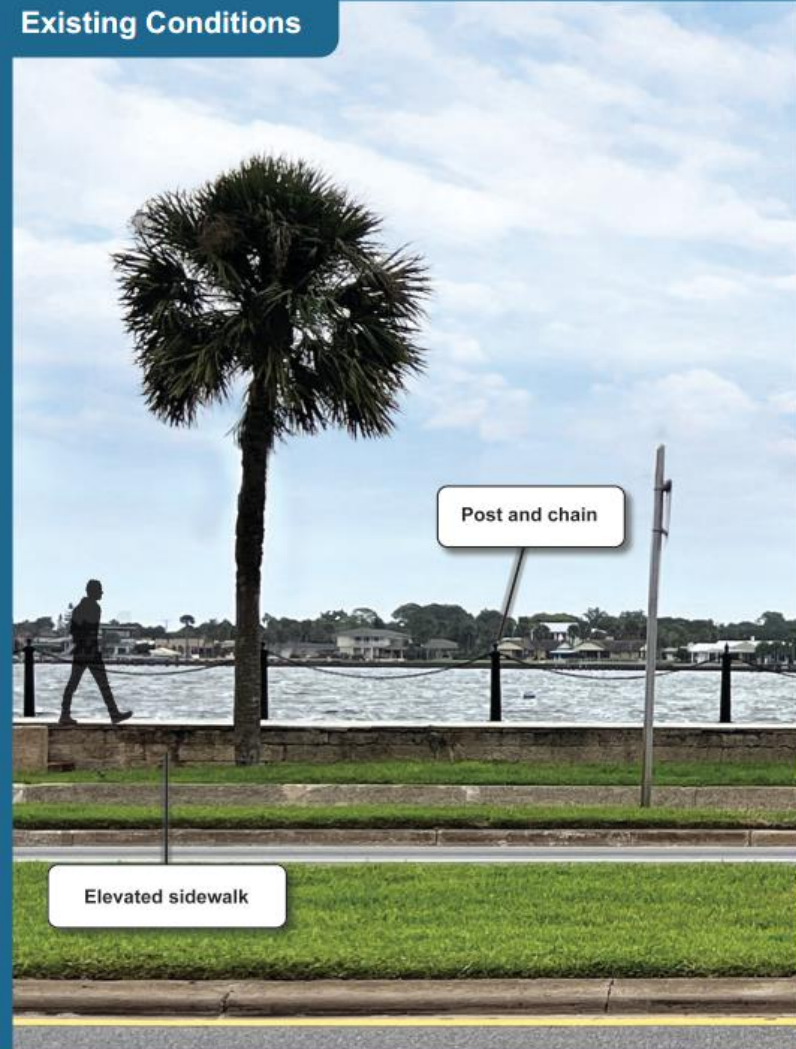


Delivery Considerations

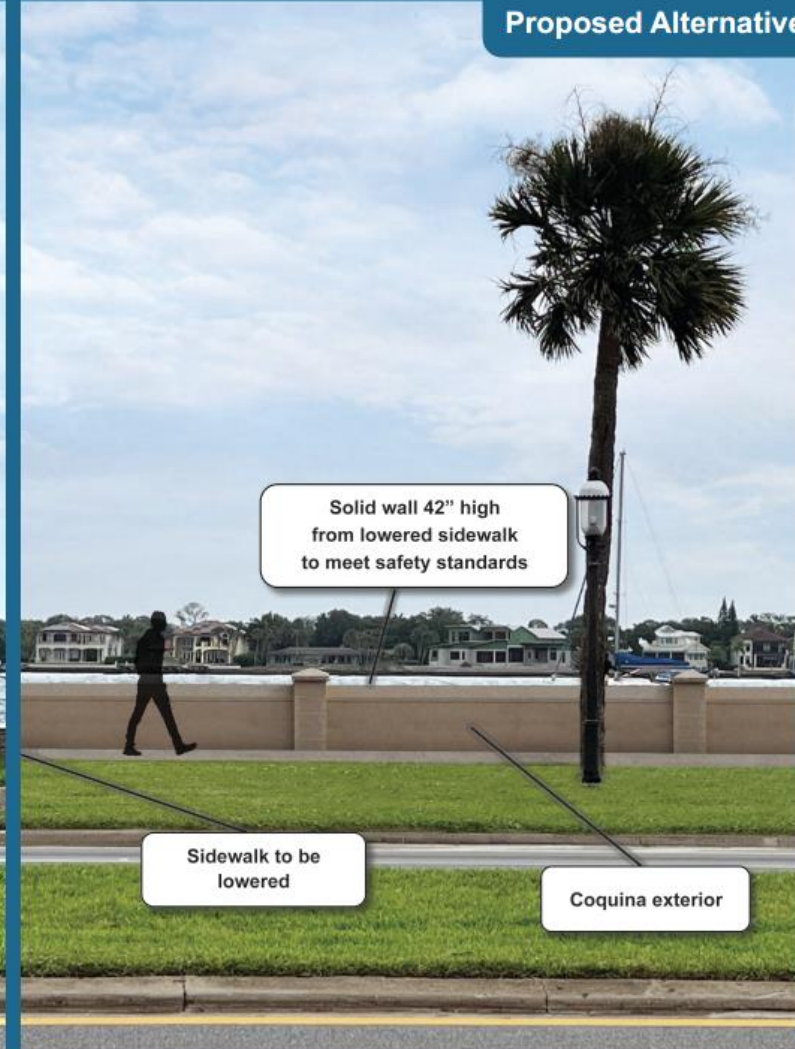


Delivery Considerations

Existing Conditions



Proposed Alternative



Construction



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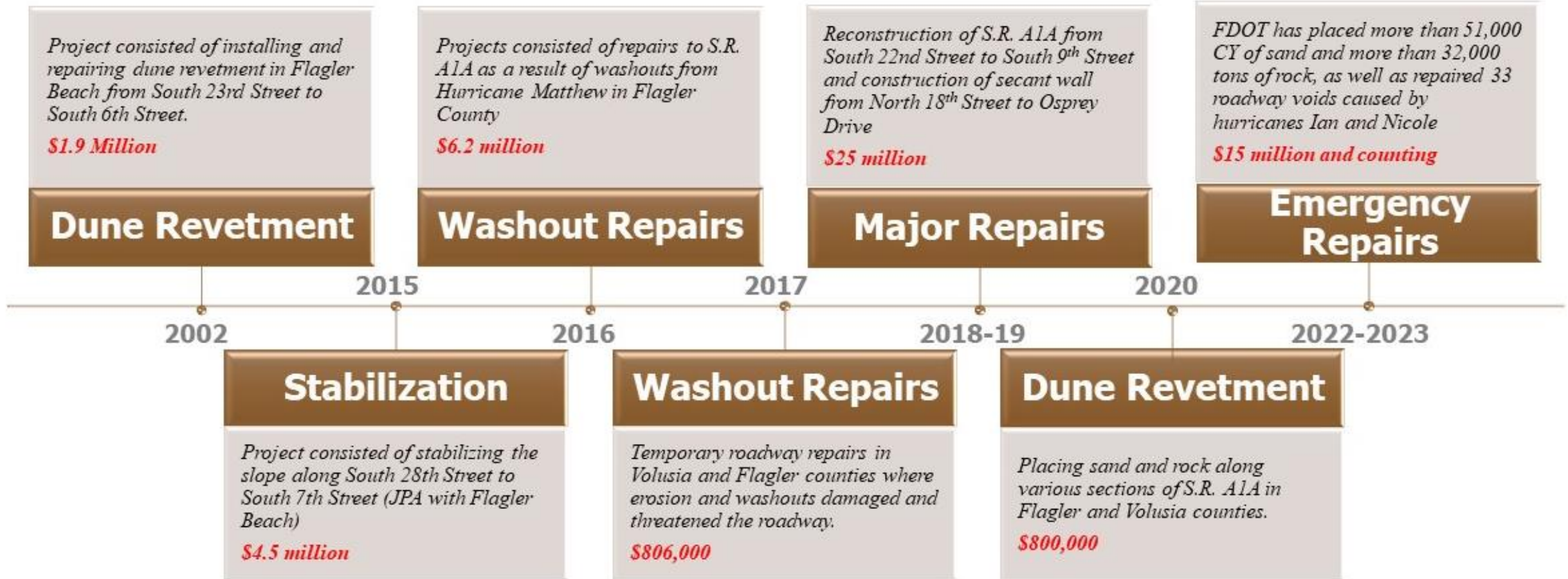
SR A1A Seawall in Flagler and Volusia Counties



Joseph Fontanelli

FDOT – District 5 Environmental
Management

S.R. A1A – A History of Vulnerability

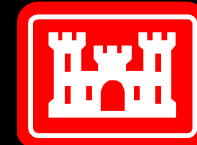


S.R. A1A Resiliency Strike Team

*Partnering to Protect a
Treasured Corridor*



U.S. Department of Transportation
**Federal Highway
Administration**



**US Army Corps
of Engineers®**

**TRANSPORTATION
SYMPOSIUM**

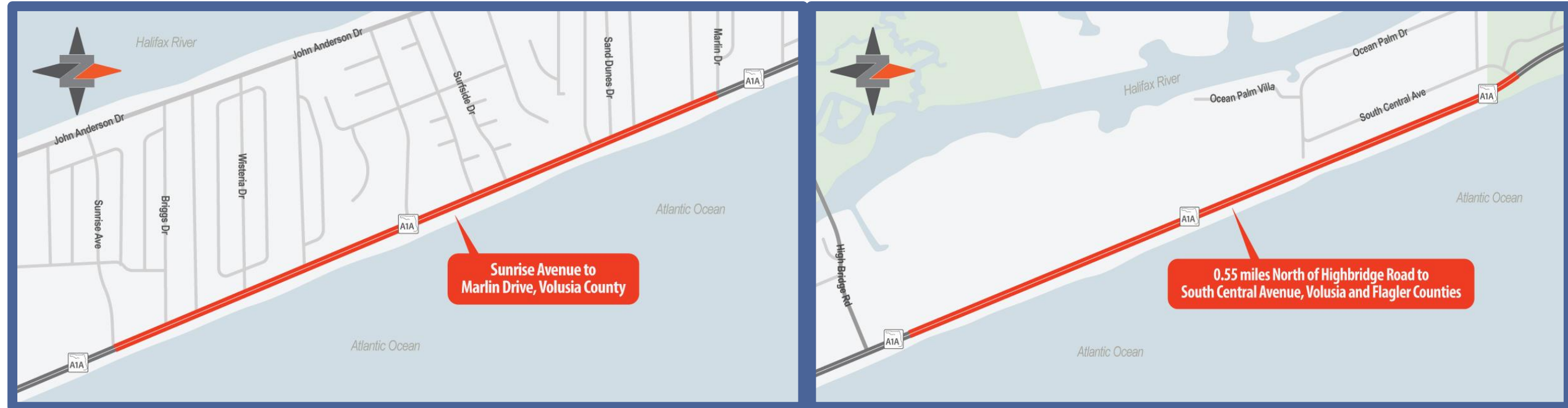
S.R. A1A Resiliency Project

- Construct two buried secant walls in Volusia and Flagler counties
- Each wall about 1.3 miles long
- Design similar to the buried secant wall in northern Flagler Beach built in 2019



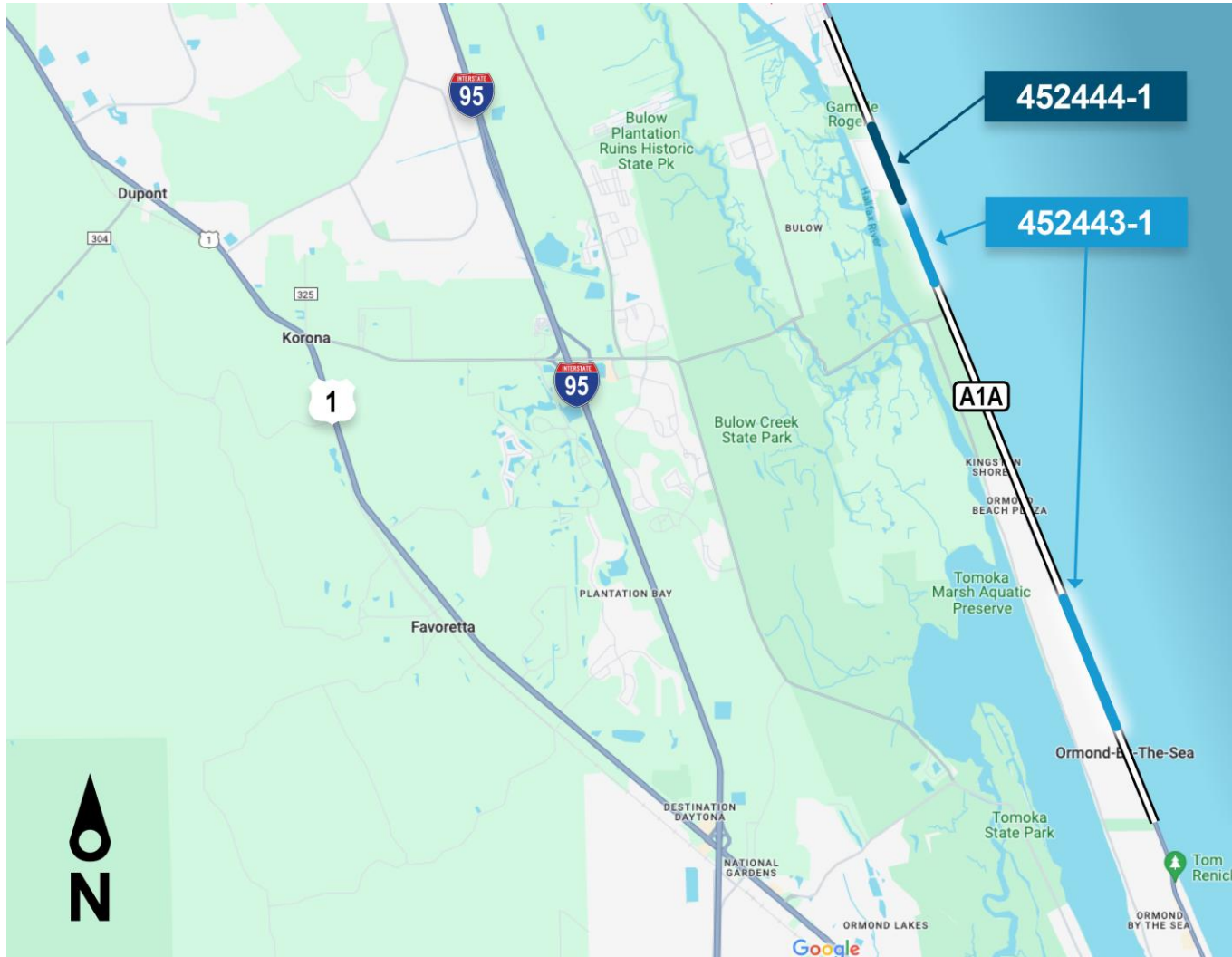
Existing secant wall in Flagler Beach after Hurricane Milton

New Seawall Locations



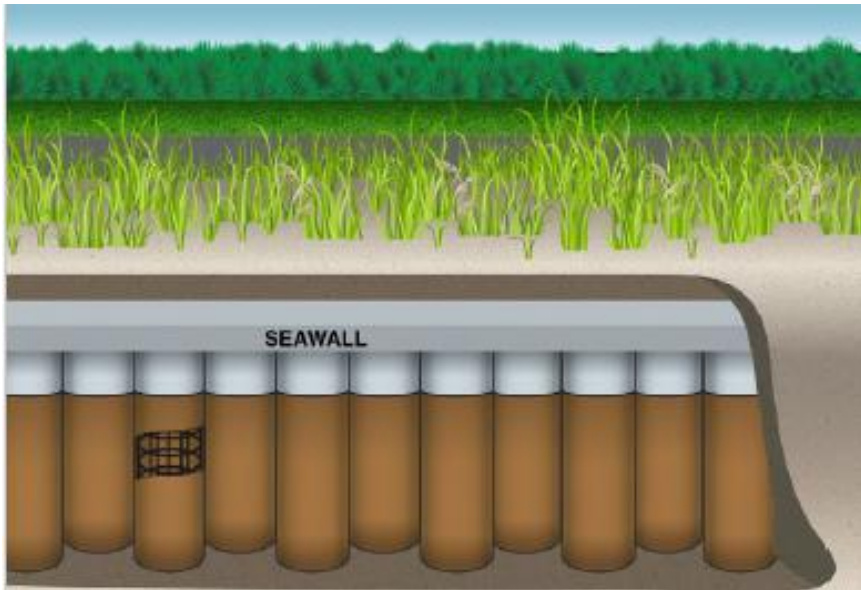
Locations determined by level of vulnerability and with consideration for the ongoing U.S. Army Corps of Engineers beach renourishment project in Flagler Beach.

New Seawall Locations



Locations determined by level of vulnerability and with consideration for the ongoing U.S. Army Corps of Engineers beach renourishment project in Flagler Beach.

Why the Secant Wall Design?



- Various armoring techniques were evaluated.
- Secant wall did not require a tie-back, which was not allowed by FDEP.
- Coquina rock was shown to be too fragile.
- Granite required too large a footprint and would have to be sourced from outside Florida.
- Sheet pile could not be driven as deeply as the secant wall piles.

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Henry Canal Projects



Melissa Mulvaney & Dani Intriago

FDOT – District 7 Drainage



422929-1: Henry Canal - Introduction

- Project Origin – District 7 Maintenance Office
- Project Need – Address Erosion, Slope Stability of the channel banks, Scour of the channel bottom, Accessibility for maintenance along Henry Canal
- Project Length - 2.5 miles



Existing Condition: Erosion at top of bank, sediment in channel bottom



Existing Condition: Erosion

422929-1: Henry Canal – Additional Erosion

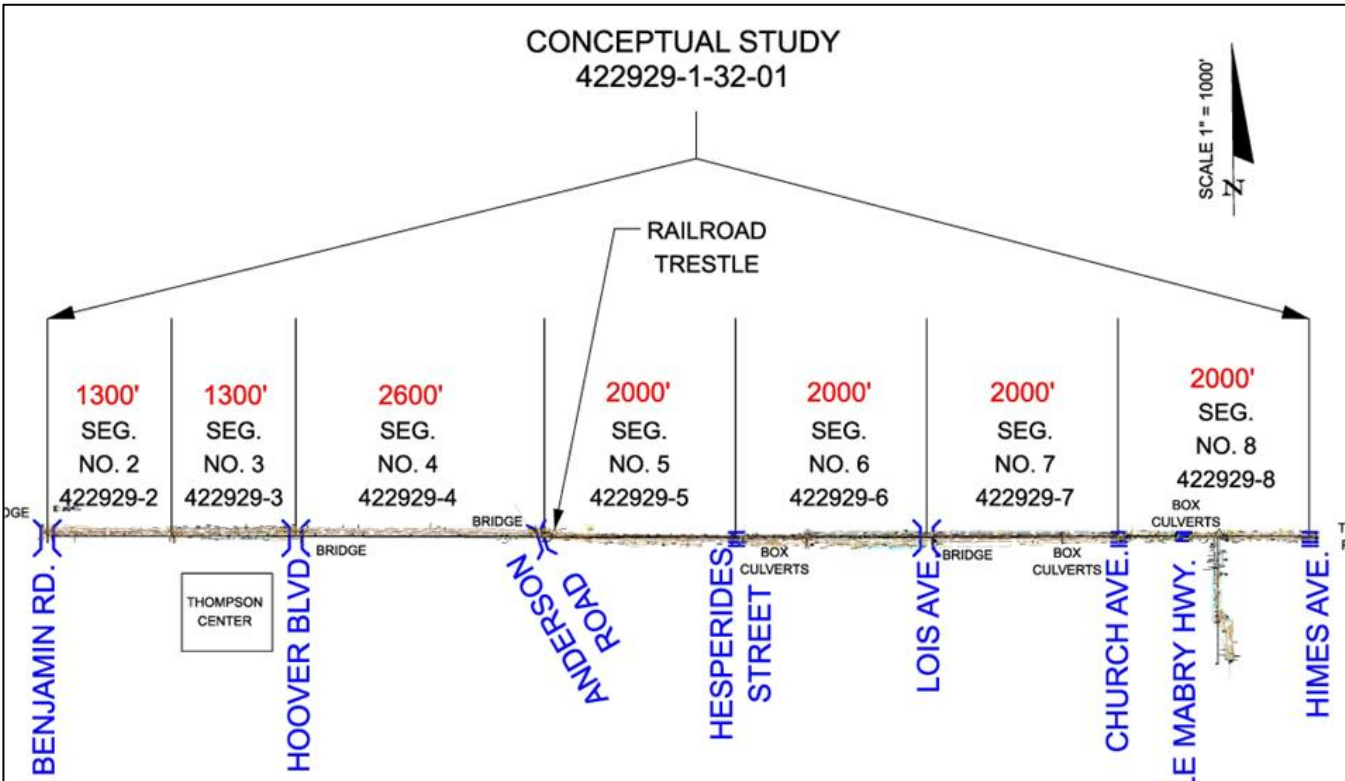


Existing Condition: Erosion uprooted tree fell into Henry Canal

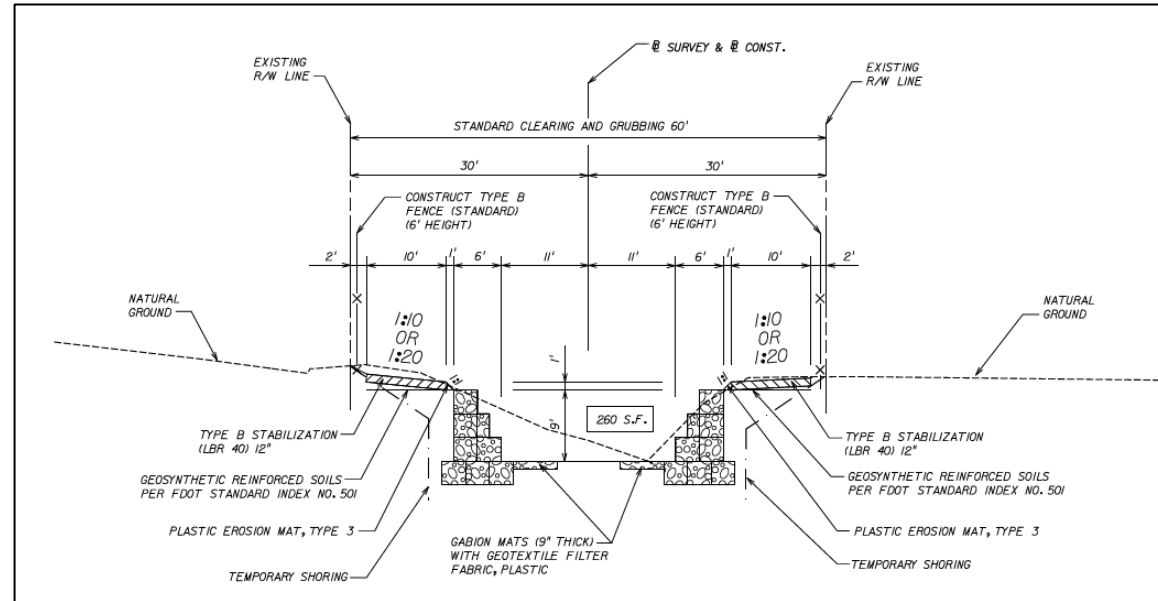


Existing Condition: Erosion caused by sheet flow from rain event

422929-1: Henry Canal – Projects Segment



Henry Canal – Project Segments



Henry Canal – Typical Section
Gabion Baskets under Geosynthetic Reinforced Soil Slopes

422929-1: Henry Canal - Challenges

- Temporary Drainage
- Gabion Rock – material availability
- Temporary/Permanent Easements – maintain access to canal
- Permitting



Construction of Gabion Baskets

422929-1: Henry Canal - Challenges



Temporary Drainage – Broken Sheet Pile



Temporary Drainage – Trench Box

422929-1: Henry Canal - Solutions

- Construct in sections
- Required contractor to submit a water bypassing plan
- Schedule Letting to construct during non-rainy season



Construction of Henry Canal



Water Bypassing Plan –
Used pumps redirect water from work zone.

422929-1: Henry Canal – Coordination Efforts



Constructability – Trees in Conflict with Clearing and Grading Work



Temporary Construction Easement – Removed Trees to Prevent Property Damage

422929-1: Henry Canal – Construction Complete

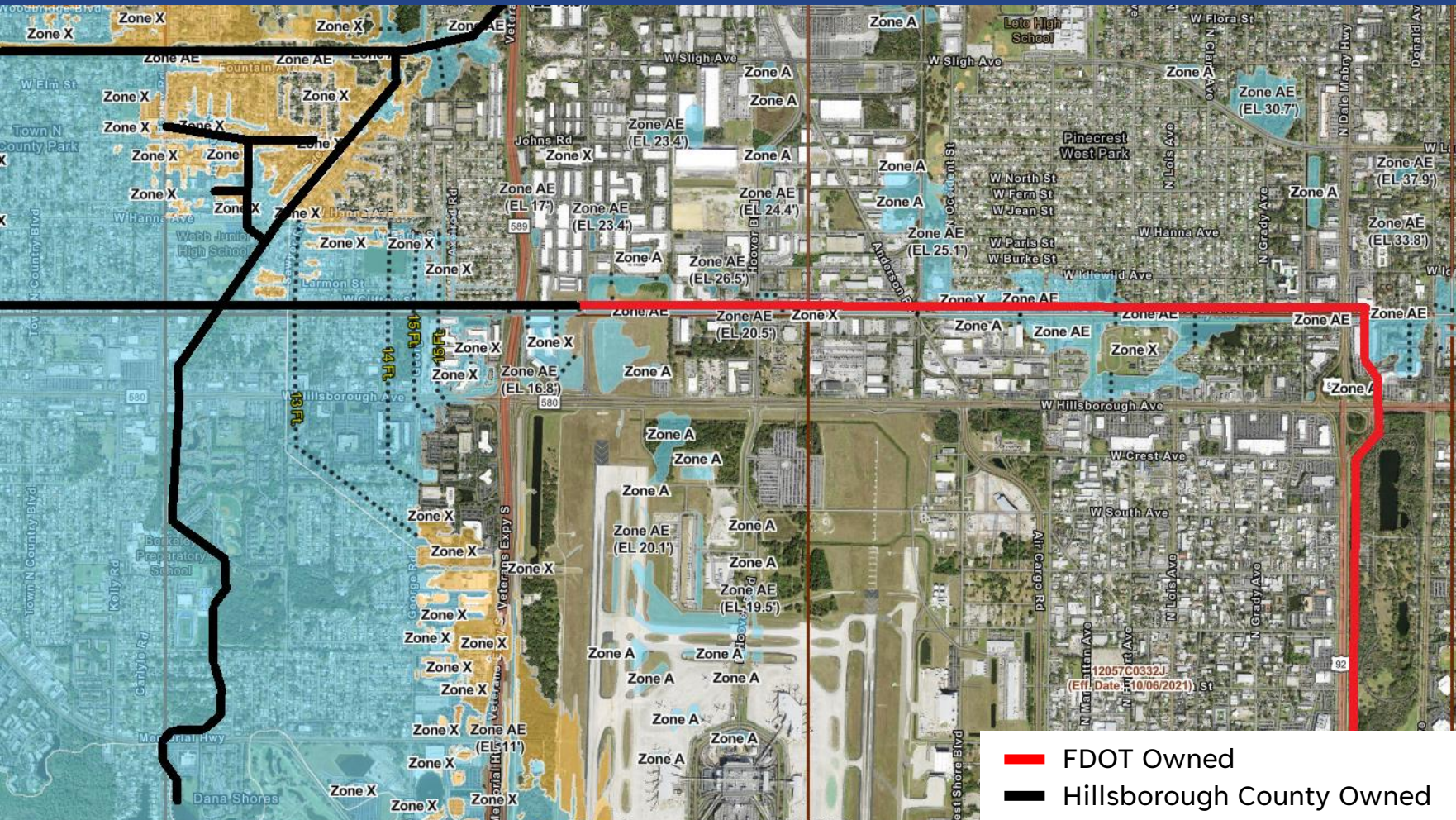


**Construction Complete:
Henry Canal Segment 3 (July 2019)**



**Post Hurricane Milton
Henry Canal Segment 3 (October 2024)**

422929-1: Henry Canal - Regional Drainage Analysis



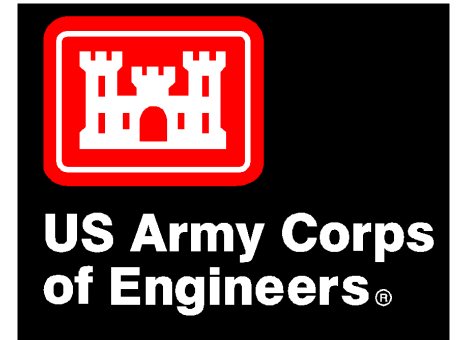
- Bypass System to alleviate flooding on SR 580 and surrounding neighborhoods

Regional Drainage Solution for Lower Sweetwater Creek

422929-1: Henry Canal - Stakeholders



Hillsborough
County Florida



Hillsborough County Aviation
Authority



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