

 June 19 - 20, 2025
 Hollywood, FL

**TRANSPORTATION
SYMPOSIUM**

BRIDGING THE EVERGLADES

Claudia Vinitzkiy-Calvo PE
FDOT Project Manager

Kyle Cheerangie, PE
HNTB Project Manager

Jermaine Lawrence, PE
HNTB Bridge Engineer

Transportation Symposium
Website


SCAN ME

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Agenda

- Project Overview
- Roadway Design
- Structure Design
- Hydraulic Design
- Permitting and Environmental
- Utility Coordination
- Funding Challenges

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Governor's Office EAA Ribbon Cutting



"The EAA Reservoir is the crown jewel of Everglades restoration, ensuring that we are sending water south and reducing harmful discharges into our waterways," said Governor Ron DeSantis.

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Governor's Office EAA Ribbon Cutting



EAA STA Cell 1 Ribbon Cutting

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Project Team

FDOT

- Claudia Vinitzkiy-Calvo, PE (PM)
- Jim Hughes, PE (Section Leader)
- Deborah Ihsan, PE (Construction)
- Anne Broadwell, PE (Environmental)
- Alex Marks, PE (Environmental)
- Ramon Otero, PE (Structures)
- Matt Gisoni, PE (Materials)
- Kadian McLean (Utilities)
- Arleen Dano (Utilities)
- Ervin Sterling, PE (Final Plans)



SFMWD and USACOE

South Florida Water Management District

- John Shaffer, PE (PM)
- Jose Guardiario, PE (Operations)

U.S. Army Corps of Engineers

- Brian E. Dillehay, PE (Lead Civil Engineer)



US Army Corps
of Engineers.

HNTB

- Kyle Cheerangie, PE (PM, EOR)
- Ana Patrizzi, PE
- James Ford, PE
- Fred Ochoa, PE (EOR)
- Jermaine Lawrence, PE
- Osmany Alfonso, PE
- Maria Parra, PE

Subconsultants

- Angela Alba, PE (AREHNA)
- Soheila Sadough, PE (ASA)
- Eugene Khashper (KEITH)
- Jen Shipley (MILLER LEGG)



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Project Overview | What is the CERP?

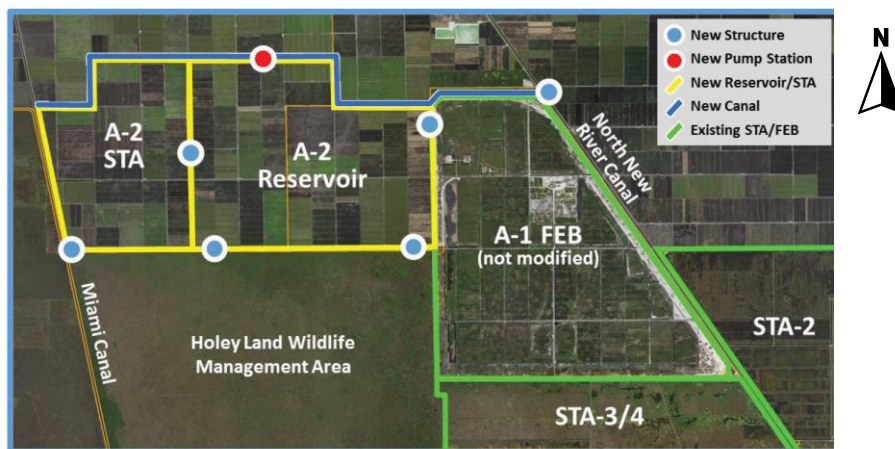
- The **Comprehensive Everglades Restoration Plan** is a framework for restoring, protecting and preserving the greater Everglades ecosystem. The plan is a **50-50 partnership** between the **State of Florida** and the **federal government**.
- The State of Florida and the South Florida Water Management District have so far invested approximately **\$2.3 billion** in CERP-related land acquisition, project design and construction.

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Project Overview | EAA Reservoir



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Project Overview | *Existing Condition* – Looking East

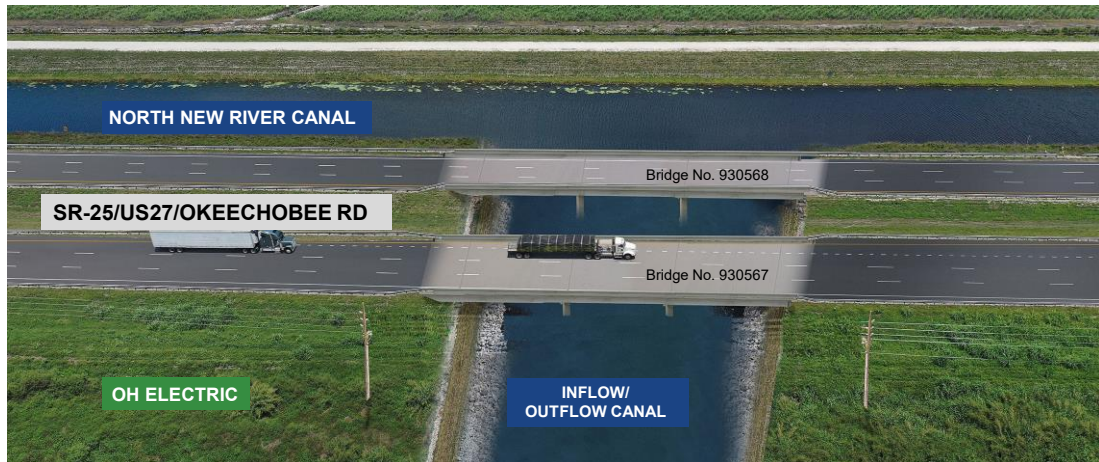


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Project Overview | *Proposed Condition* – Looking East



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Why Bridge the Everglades?

To Save the Everglades

- The proposed I/O canal is the lynch-pin to the CERP
- Reduces high-volume freshwater discharges to Northern Estuaries
- Reduce ongoing ecological damage to the Northern Estuaries and Everglades system
- Increased flows to the Greater Everglades
- Meets water quality requirements



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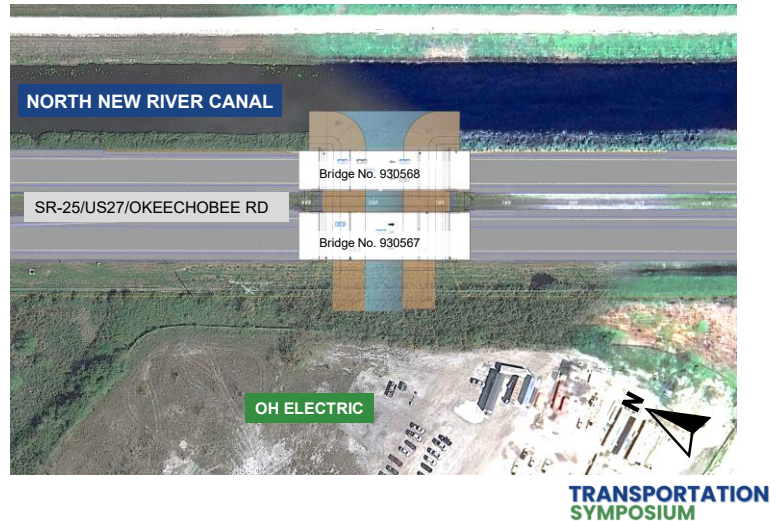
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Why Bridge the Everglades?

Critical I/O Canal Parameters

- The I/O canal cuts directly through SR 25 (US 27)
 - US 27 is a four-lane road
 - US 27 is the primary route between NW and central Florida
- Typical canal width of 160-foot (measure at the top of bank)
- Approximate 20-foot deep at the center of the canal

We built a bridge because the Everglades needed a canal.



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Why Bridge the Everglades?



Everglades Wildlife Protection

- The proposed canal cross-section allows for wildlife crossings at either end of both bridges

NORTH NEW RIVER CANAL

Wildlife Crossing

INFLOW/
OUTFLOW CANAL

Wildlife Crossing

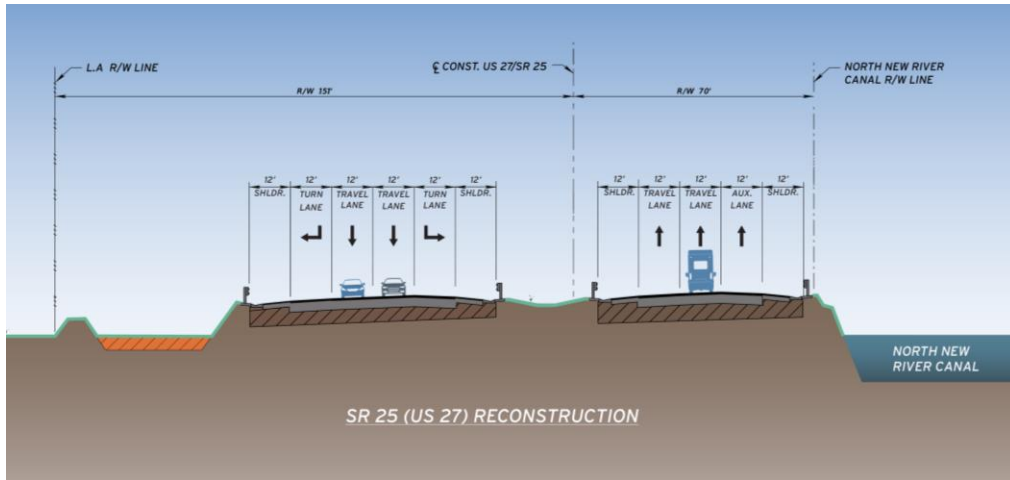
SR-25/US27/OKEECHOBEE RD

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Roadway Design | Typical Section

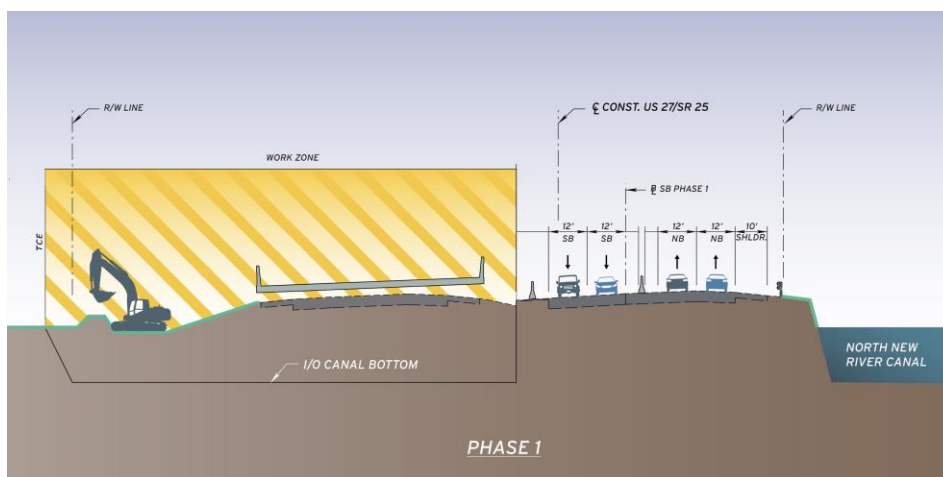


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Roadway Design | MOT

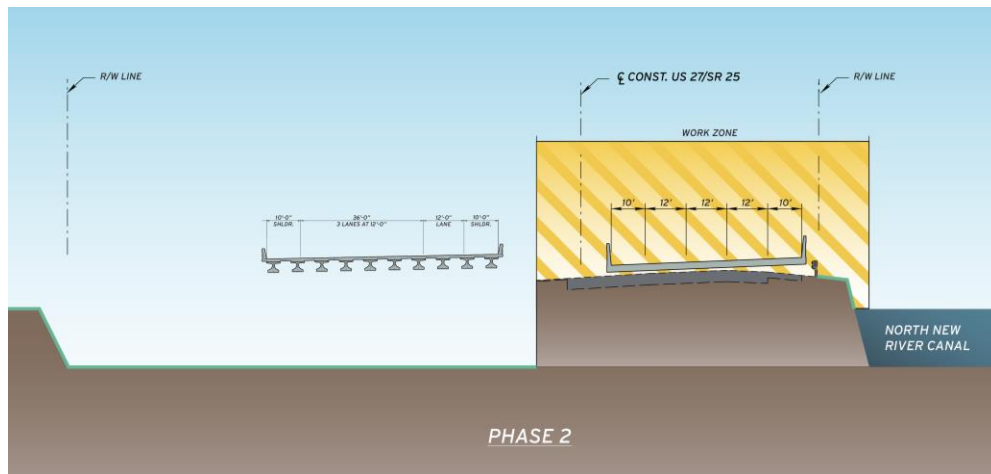


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Roadway Design | MOT



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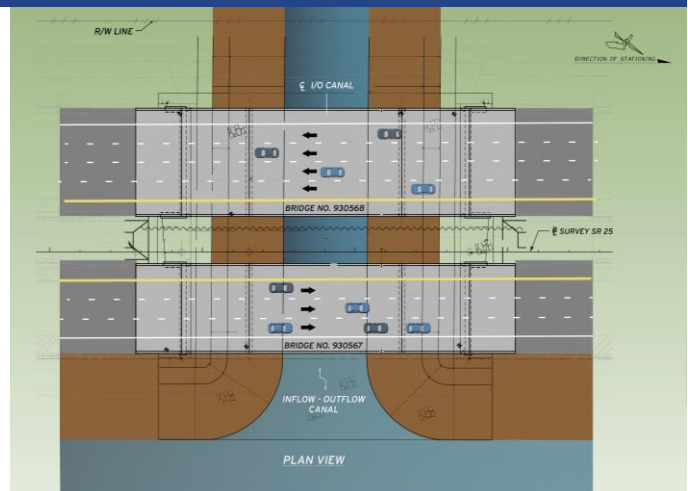
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Structural Design | Proposed Bridge Geometry

Bridge Geometry: Parallel bridges

- Straight bridges
- Both 189-foot long (long bridge)
- NB bridge ~ 60-foot wide
- SB bridge ~ 71-foot wide
- Both bridges have 3 Spans
- 44.25'-100'-44.25



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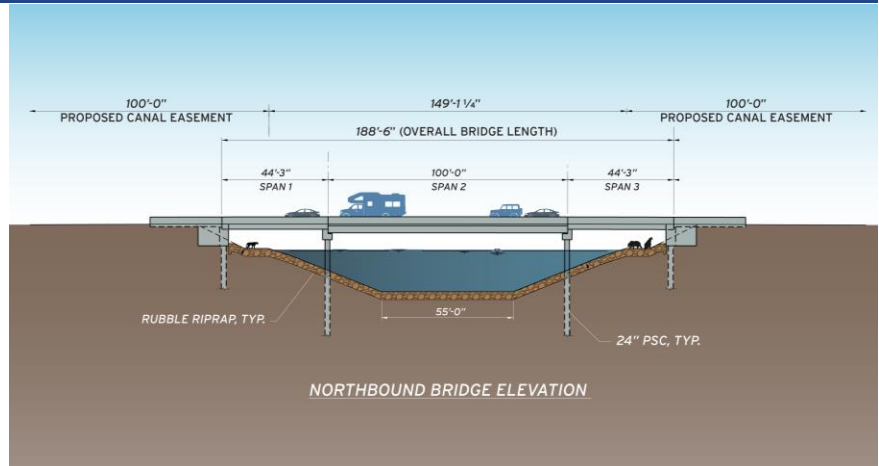
Structural Design | Proposed Bridge Geometry

Bridge Superstructure

- 26" Cast-in-place flat slab approach spans
- 36" Florida-I beams main span with 8.5" CIP deck slab

Bridge Vertical Clearance Criteria

FDOT	2 ft above DHW
	6 ft above control elevation
SFWM	2 ft above DHW
	4.5 ft above SHWE
WLC	5 ft VC with pad above control

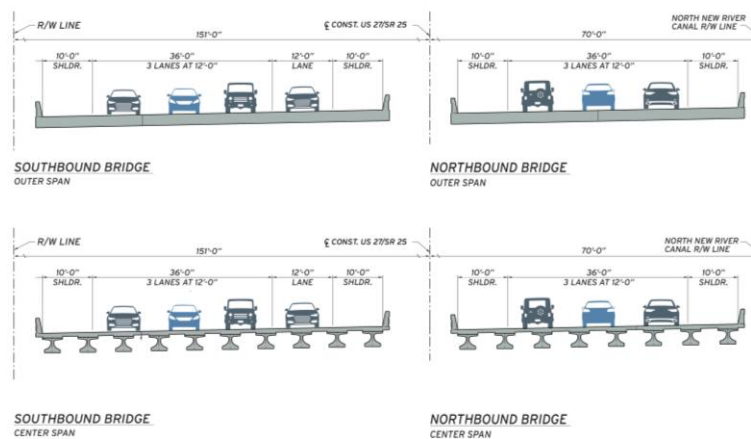


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Structural Design | Bridge Typical Section

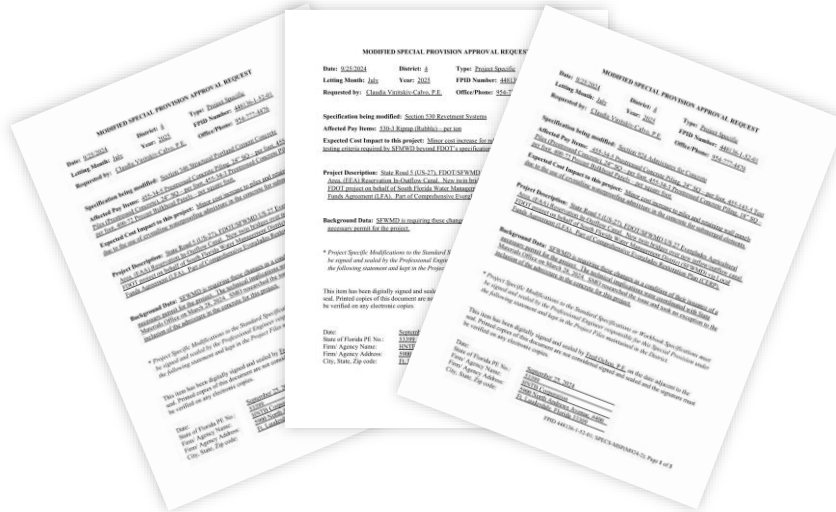


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Structural Design | Challenges



New Specifications

- Concrete Additive
- Filter Fabric
- Rubble Riprap

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Structural Design | Challenges

Blasting!

- Everglades Agricultural Area (EAA) canal construction will utilize explosives to excavate the canal section.
- There are no provisions within FDOT's policy for blasting outside of the ROW, so extensive coordination with Construction, Materials (local and state) and Permitting Offices were required.



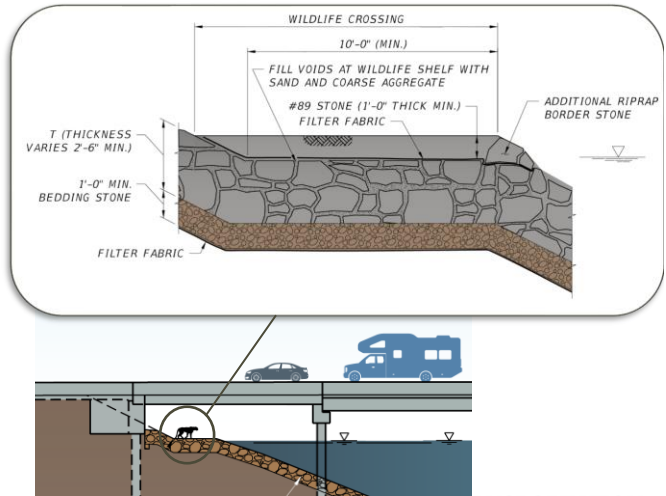
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Structural Design | Challenges

Wildlife Crossing (WLC)

- Designed per FDOT guidelines
- Multi-agency coordination - FDOT, FWC & SFWMD



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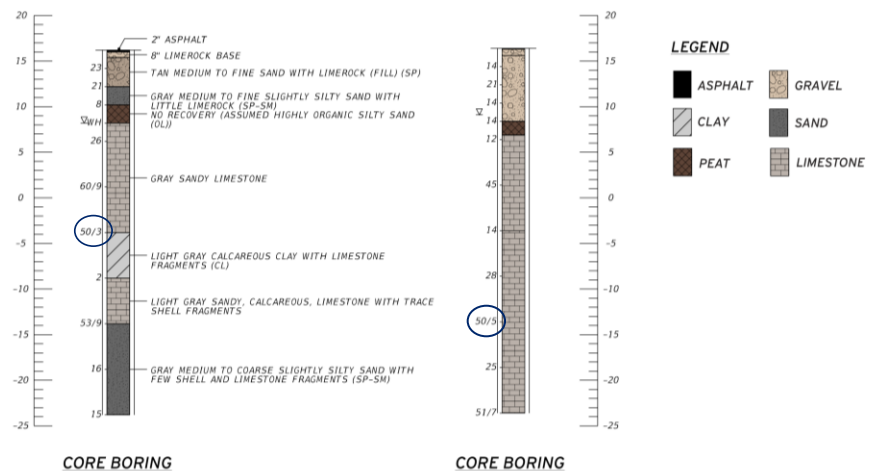
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Structural Design | Challenges

Geotechnical Issues

- Shallow foundation not feasible due to differential settlement concerns
- Deep foundation challenges due to the presence of very hard limestone
- Preforming required for up to the first 35'



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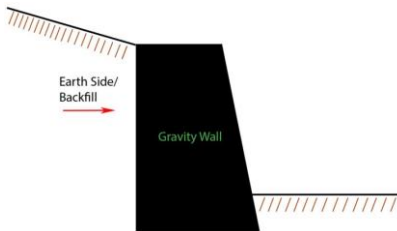
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Structural Design | Challenges

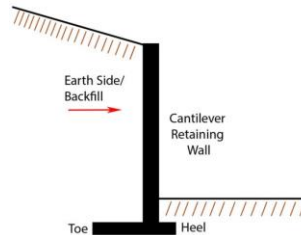
Retaining wall selection criteria

- Wall height
- Geotechnical concerns



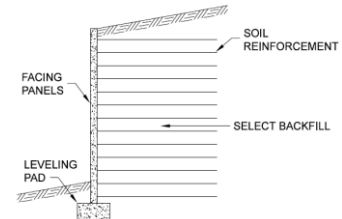
Gravity Wall

- Wall height > 5-foot



CIP Cantilever Wall

- Exceed global stability limits



MSE Wall

- Not feasible

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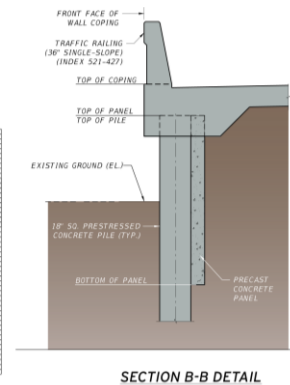
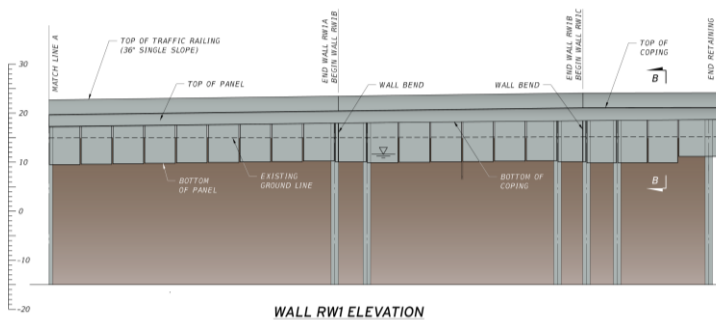
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Structural Design | Challenges

Retaining wall selection

- A post and panel wall system determined to be the most feasible solution



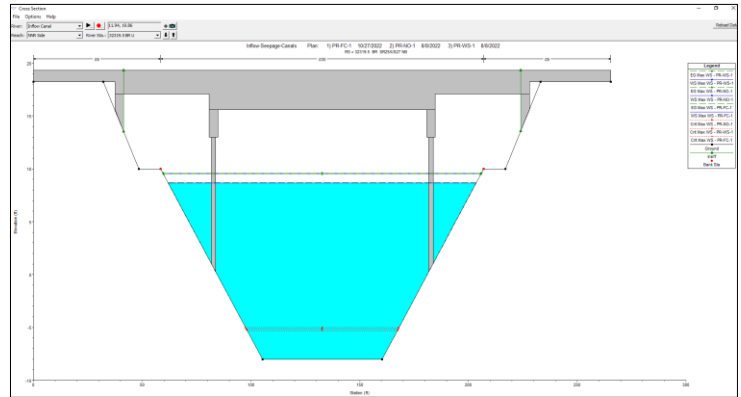
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Hydraulics | Design

- NNR Side Canal
 - Controlled Canal
 - Non-conventional hydrology
- Water Supply, Normal Operations, Flood Control and Future Flow (3,000 cfs).
- Min. vertical clearance 6.21ft
- Scour analysis => Max scour 4.63ft
- Entire Canal Riprapped



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Permits And Regulatory Agency Coordination | Management



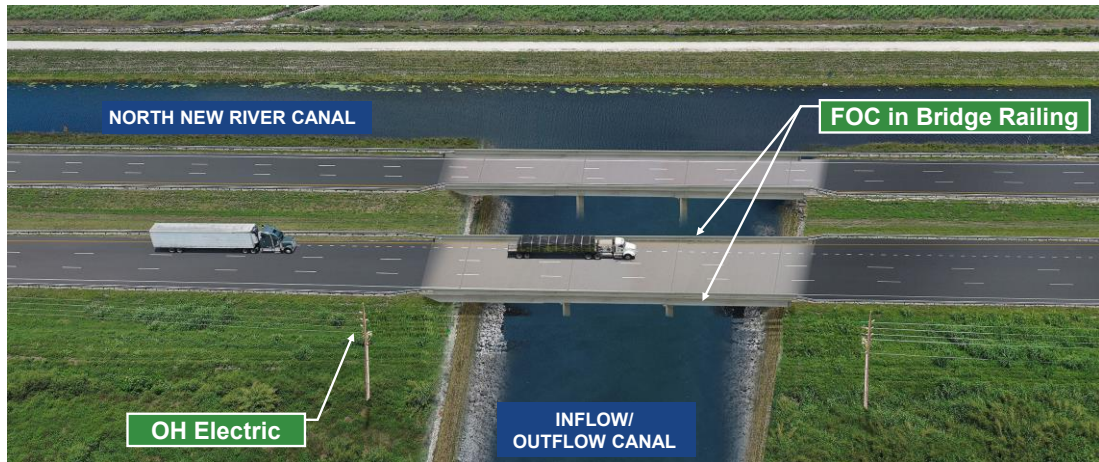
- **FDEP** – CERPRA (No action)
- **USFWS** (Complete)
- **USACOE** – 404 (Complete)
- **USACOE** – 408 (Complete)
- **SFWMD** – Dewatering (Complete)
- **FWC** (Complete)
- **SFWMD** – ERP Mod (Complete)
- **SFWMD** – ROW Mod (Complete)

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Utility Coordination



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Other Challenges

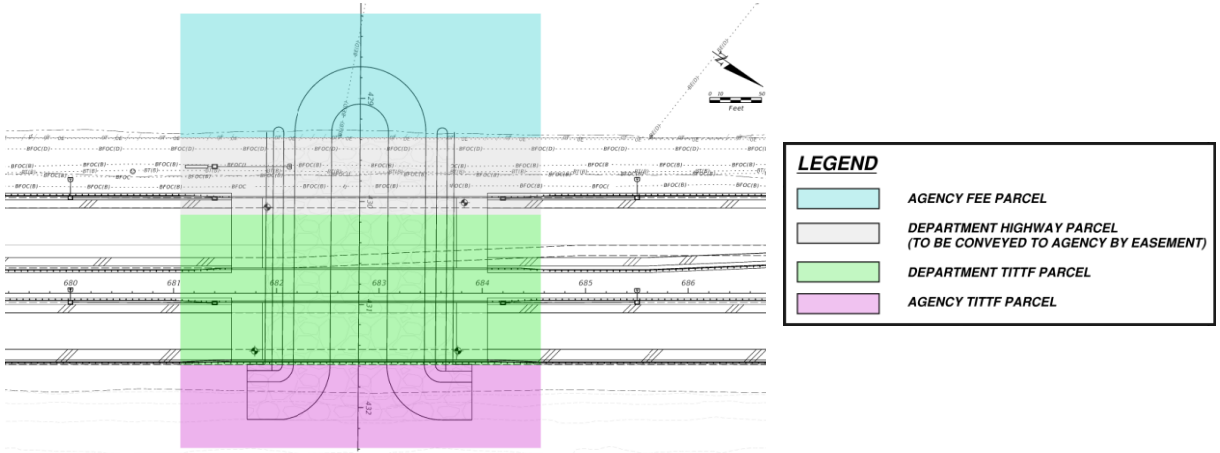
- Project was fully funded by SFWMD
- LFA (Design and Construction)
- MMOA
- Coordination with SFWMD (Exec. Board)
- Supplements (Shifted funding to avoid multiple SAs)
 - TRB Meetings
 - MOT Redesign
- Federal Provisions on a Locally Funded Project

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Right of Way

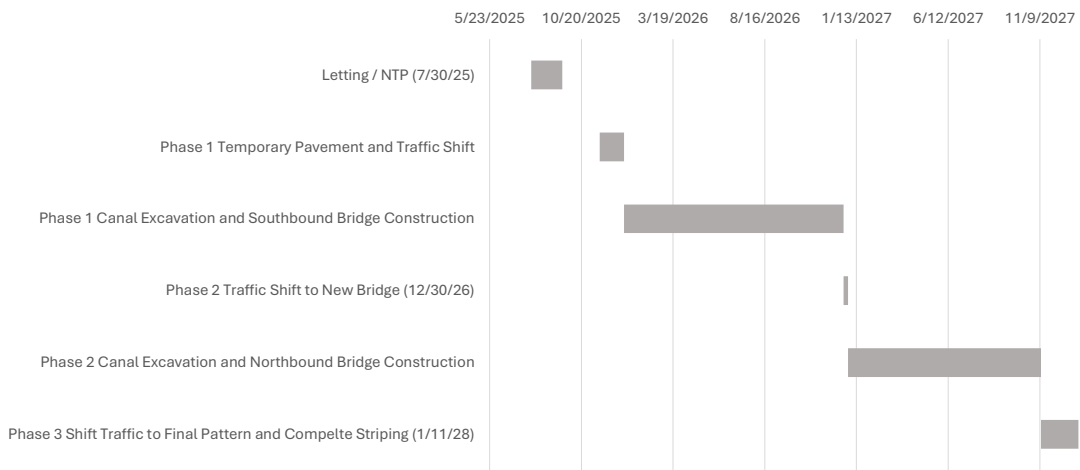


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Construction Timeline | Timeline



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Safety Message

“Don’t drive like you own the road; drive like you own the car. Share the road with others – watch out for motorcycles, bikes, and pedestrians.” (www.flhsmv.gov)

(and watch out for wildlife too!)

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Thank you.



CONTACT US:


Claudia Vinitskiy-Calvo
claudia.vinitskiy-calvo@dot.state.fl.us


Kyle Cheerangie
kcheerangie@HNTB.com

Jermaine Lawrence
jglawrence@hntb.com

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

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Website



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