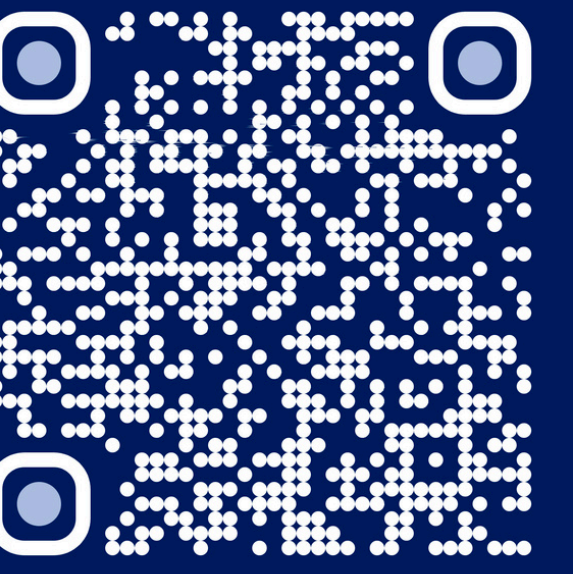




Welcome Bienvenido

Card Sound Road Bridge PD&E Phase

FPID 453765-1-22-01 | ETDM: 14539

¿Habla español?

Si necesitas traducciones, tenemos personal que puede ayudar.



Project Location

LEGEND  Project Limits (1.242 miles)  Card Sound Road Bridge (2,775 feet)  Bridge



- | | |
|--|---|
| 1. Card Sound Road Future Conditions Evaluation Update Study (Miami-Dade County) | 6. Saunders Creek |
| 2. USACE Biscayne Bay and Southeastern Everglades Ecosystem Restoration Project (BBSEER) | 7. Florida Keys National Marine Sanctuary |
| 3. Biscayne Bay Aquatic Reserve | 8. Model Lands Basin (SFWMD) |
| 4. Atlantic Intracoastal Waterway (ICW) | 9. Metrobus Route 302 Card Sound Express |
| 5. Crocodile Lake National Wildlife Refuge | 10. Card Sound Historic Fishing Village |

Why is this Project Needed?

Primary Purpose and Need



Address Structural Degradation
and Substandard Design Elements

Secondary Needs



Evaluate Pedestrian and
Bicycle Needs



Evaluate Evacuation and
Emergency Response Times

Card Sound Road Bridge Facts



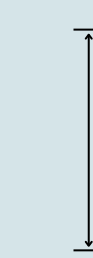
Year Constructed: 1969



Bridge Type: AASHTO Girders with Multi-Column Piers



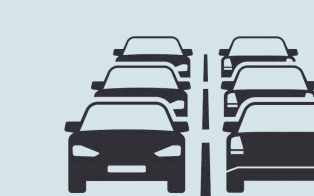
Bridge Length: 2,775 feet (0.5 miles)



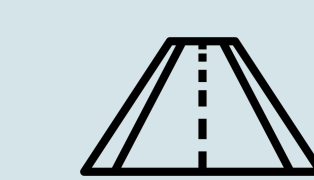
Vertical Clearance: 65 feet



Horizontal Clearance: 90 feet between piers



Travel Lanes: Two 12-foot travel lanes



Shoulders: Two-foot shoulders



Sidewalks: No existing sidewalks



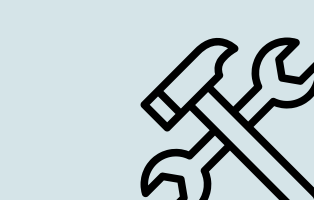
Bicycle Lanes: No existing bicycle lanes



Bridge Structure



Bridge Function: Does not meet current design standards for shoulder width



Bridge Maintenance: Latest repair 2016



Engineering Analysis

- Typical Section
- Multimodal Accommodations
- Bridge and Roadway Alignment
- Right of Way Needs
- Drainage
- Demolition/Constructability
- Temporary Traffic Control
- Utilities
- Safety
- ITS/Toll Gantry
- Cost Savings Strategies



Environmental Analysis

Social Resources

- Social, Economic, Community Land Use, Mobility

Cultural Resources

- Archaeological and Historical Resources
- Recreational Areas and Protected Lands

Natural Resources

- Wetlands and Other Surface Waters
- Protected Species and Habitat
- Water Resources

Physical Effects

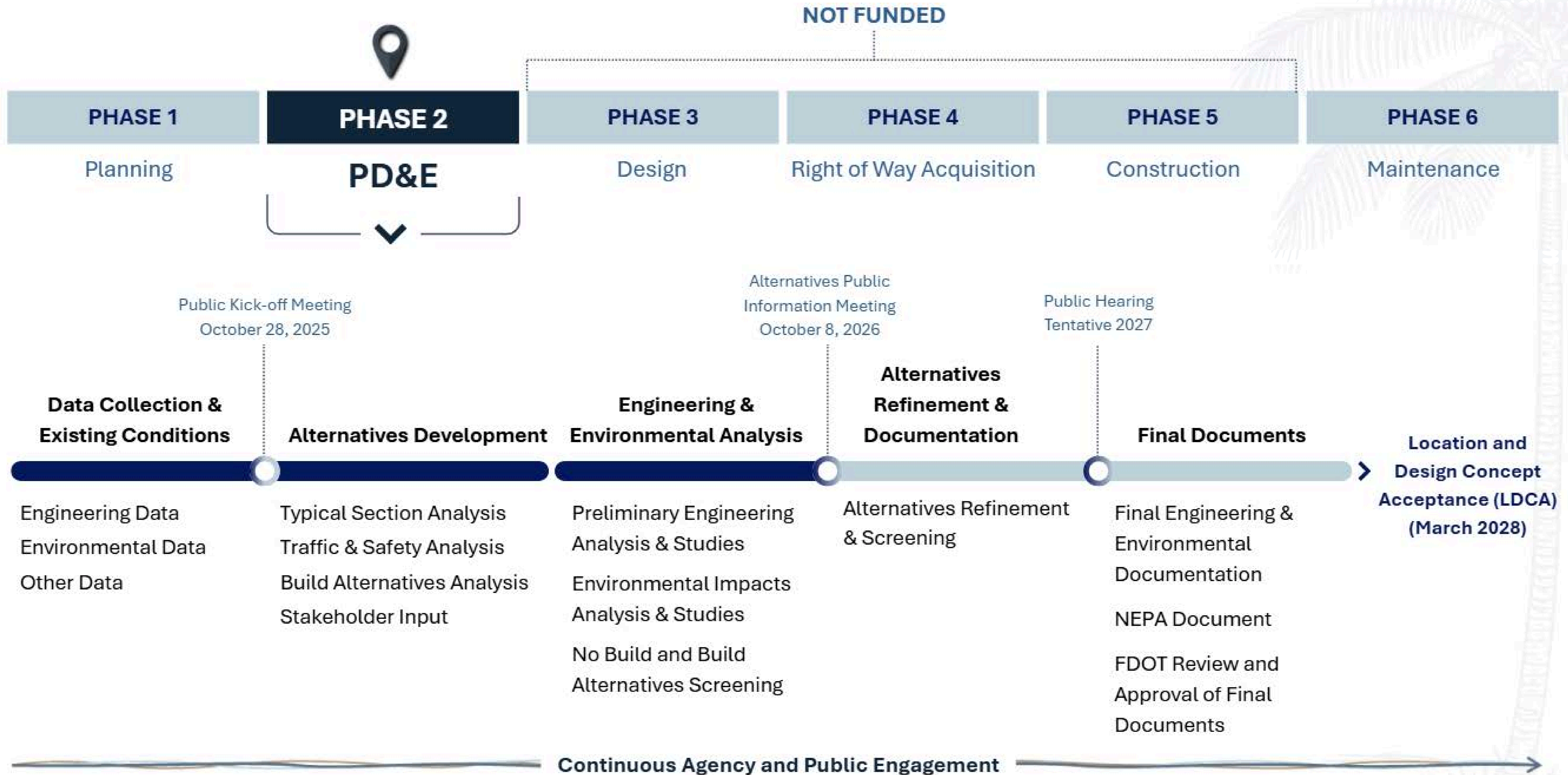
- Highway Traffic Noise
- Air Quality
- Contamination
- Utilities



Public Outreach

- Project Website
- Social Media
- Monroe County Meetings
- Coordination Meetings with Key Agencies and Stakeholders
- Elected Official/Agency Kick-off Meeting
- Public Kick-off Meeting
- Alternatives Public Information Meeting
- Public Hearing

Project Delivery Process



Alternatives Screening

LEGEND

✓ Alternative Evaluated

✗ Alternative Dismissed

✓ No-Action (or No-Build) Alternative

- No improvements are made
- Serves as a baseline for comparison to other alternatives

✗ Transportation System Management and Operations (TSM&O) Alternative

- Improve existing traffic signals and other traffic management technologies

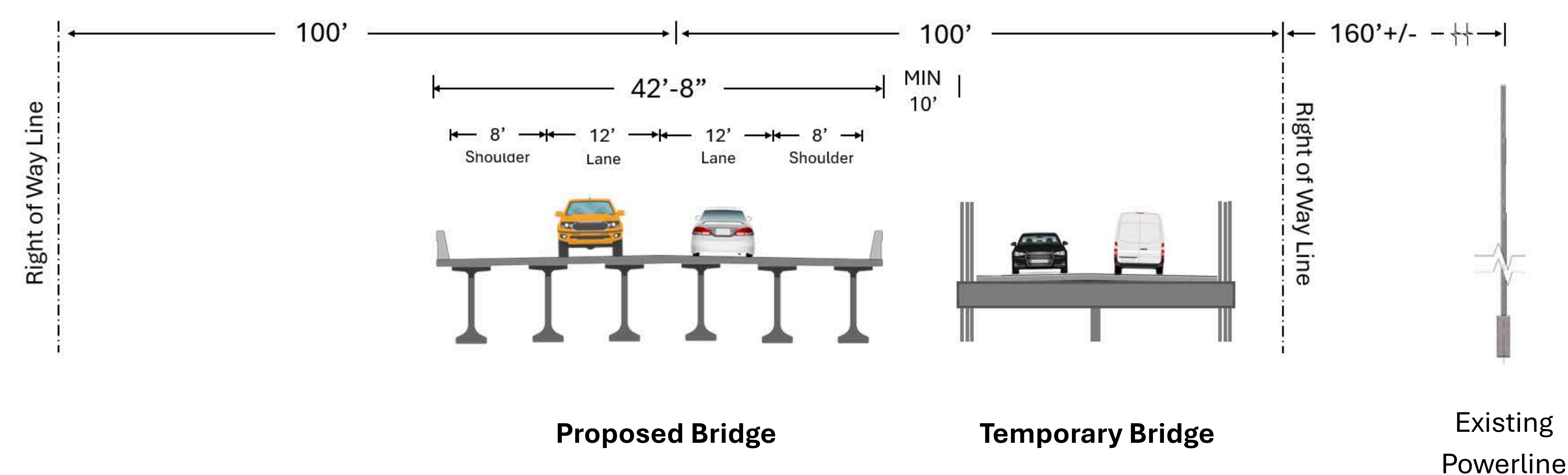
✗ Rehabilitation/Repair Alternative

- Serves as a baseline for comparison of the need to rehabilitate/repair against build alternatives

✓ Build Alternatives *(includes TSM&O strategies and multimodal options)*

✗ Existing Alignment

- Alternative 1: Center Alignment
- Alternative 2: South Alignment
- Alternative 3: North Alignment

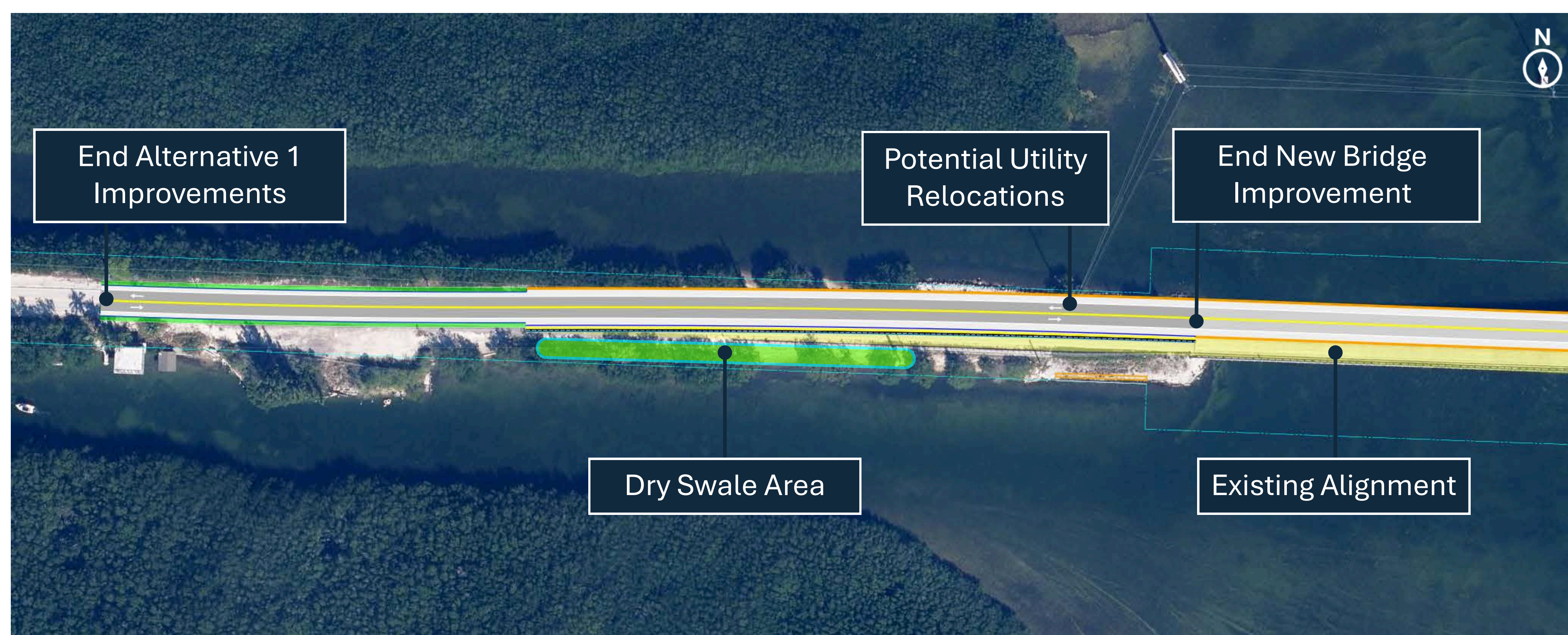
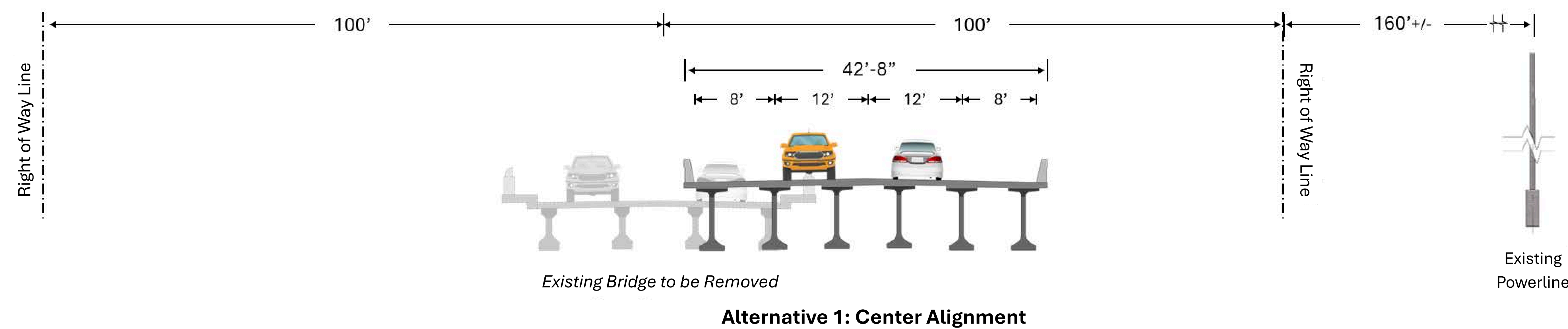
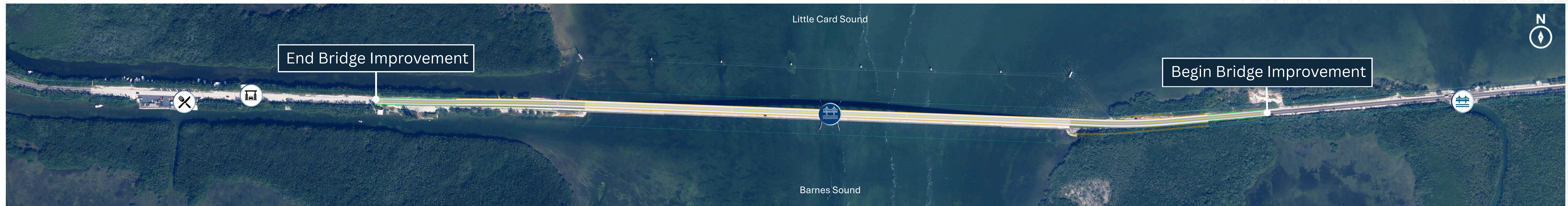


During the screening of this alternative, it was determined that this alternative has one or more disadvantages that prevent it from being successfully implemented and therefore it was removed from further consideration. The need for a temporary bridge will result in:

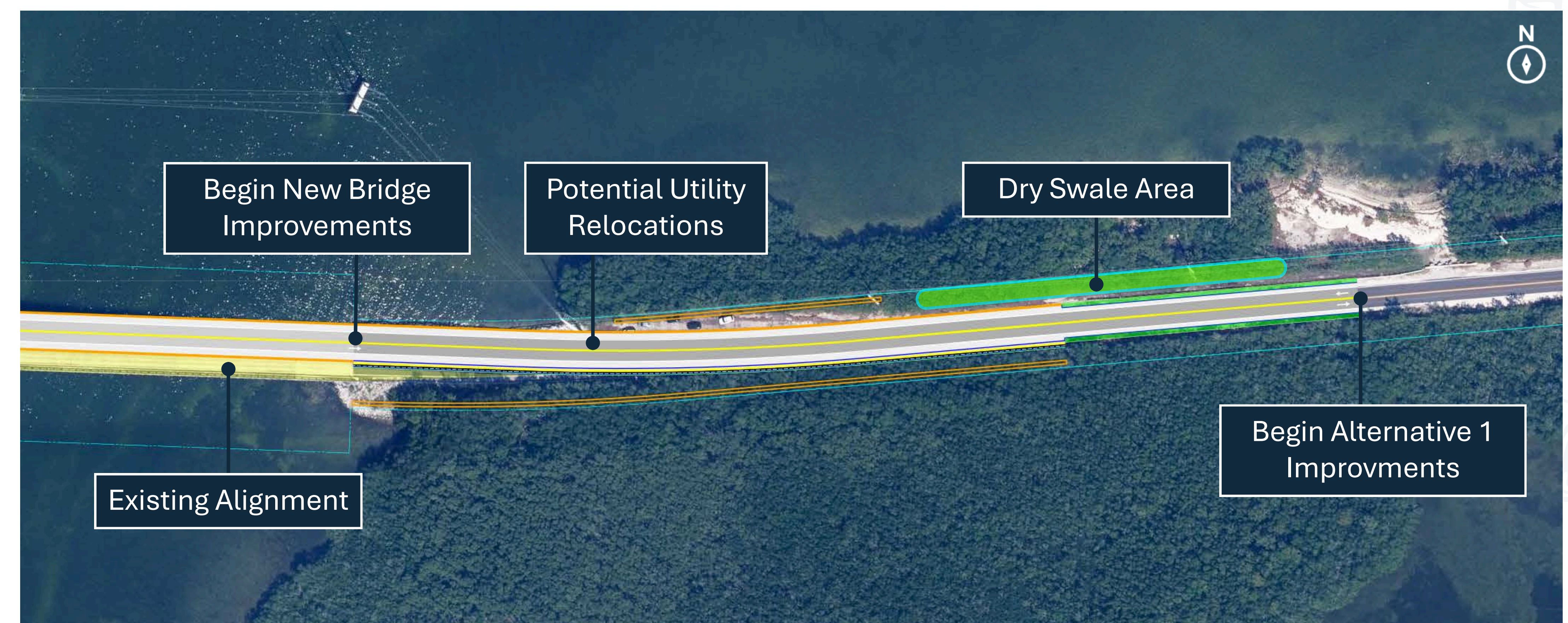
- Additional environmental impacts and increased mitigation for construction of the temporary bridge
- Increased time and costs to construct the temporary bridge
- Impacts to navigation due to a lower vertical clearance of the temporary bridge
- Additional permitting
- Potential evacuation and emergency response disruptions or delays due to lack of shoulders. A wider temporary bridge to include shoulders increases impacts.

Alternative 1: Center Alignment

LEGEND Existing Right of Way Existing Alignment Stormwater Management Card Sound Road Bridge Saunders Creek Bridge Alabama Jack's Historic Restaurant Toll Gantry



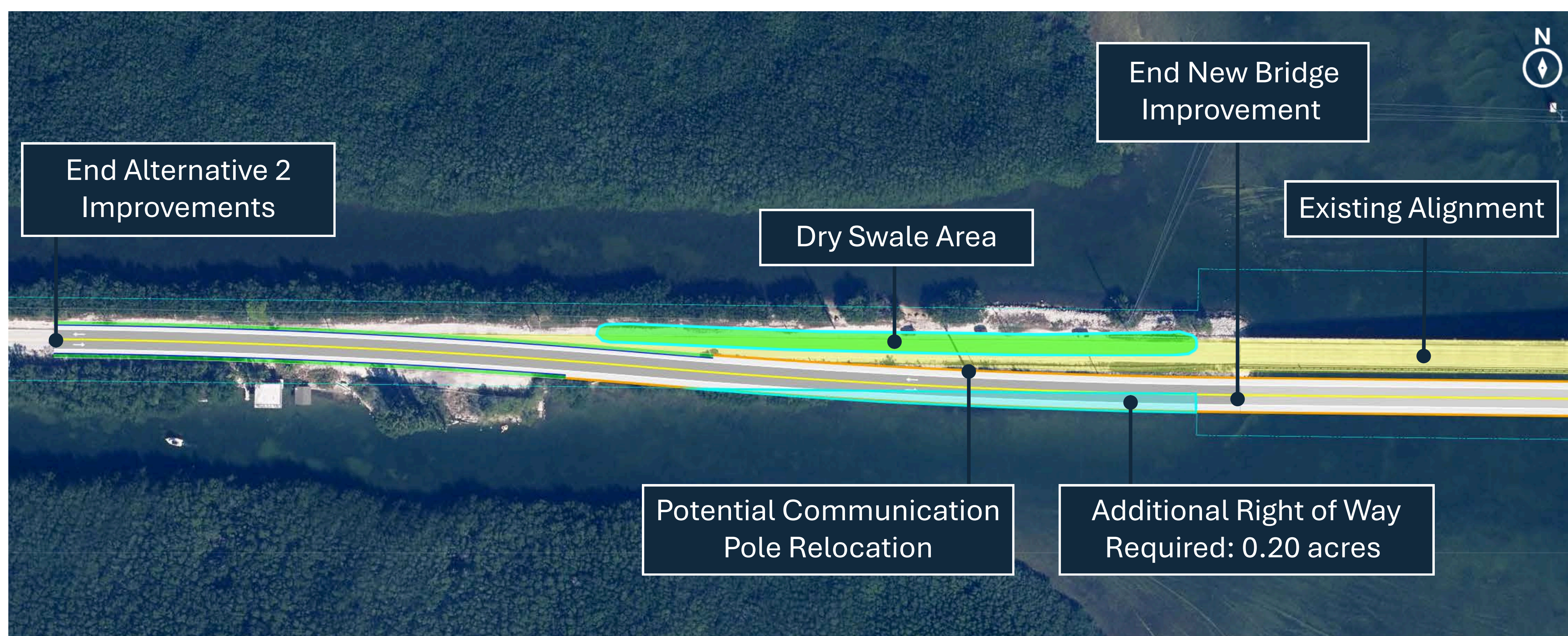
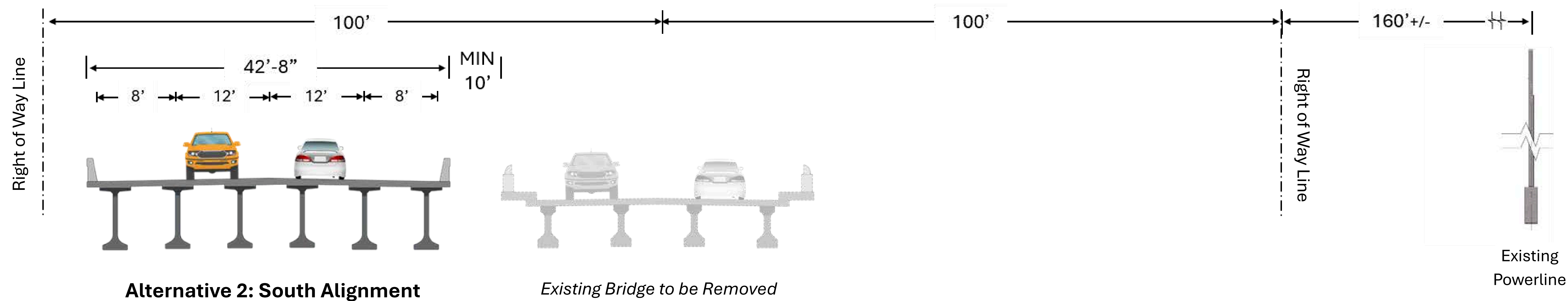
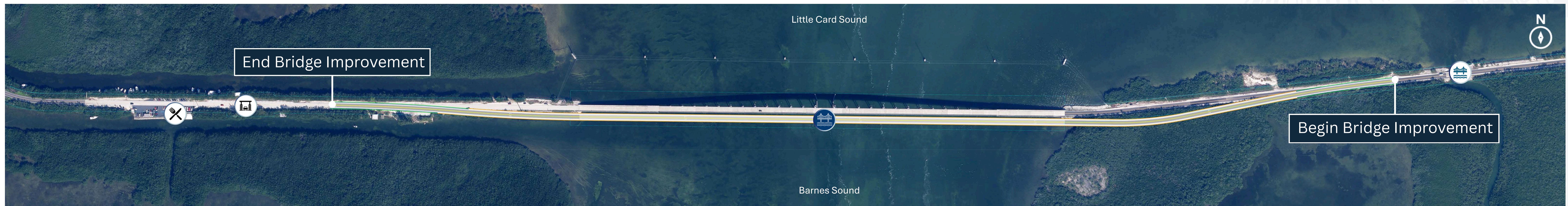
Alternative 1: Center Alignment at West Approach



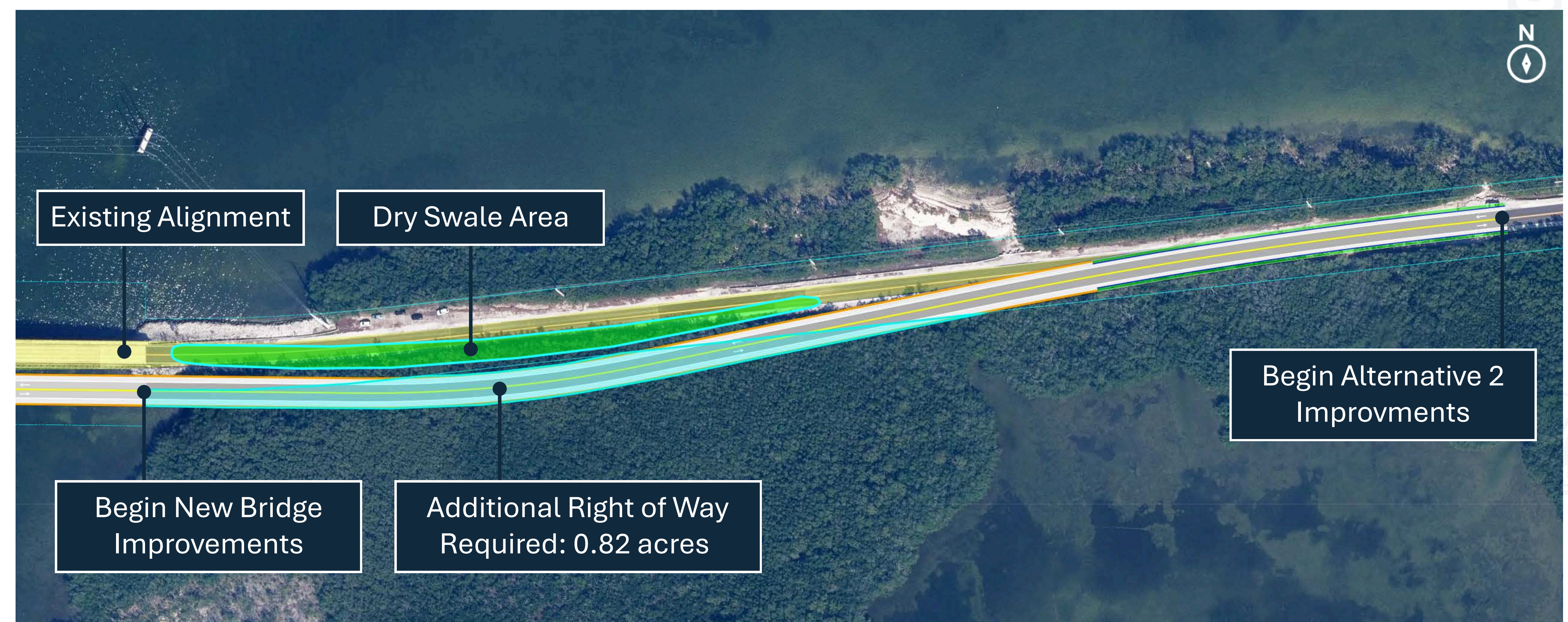
Alternative 1: Center Alignment at East Approach

Alternative 2: South Alignment

LEGEND Existing Right of Way Right of Way Needed Existing Alignment Stormwater Management Card Sound Road Bridge Saunders Creek Bridge Alabama Jack's Historic Restaurant Toll Gantry



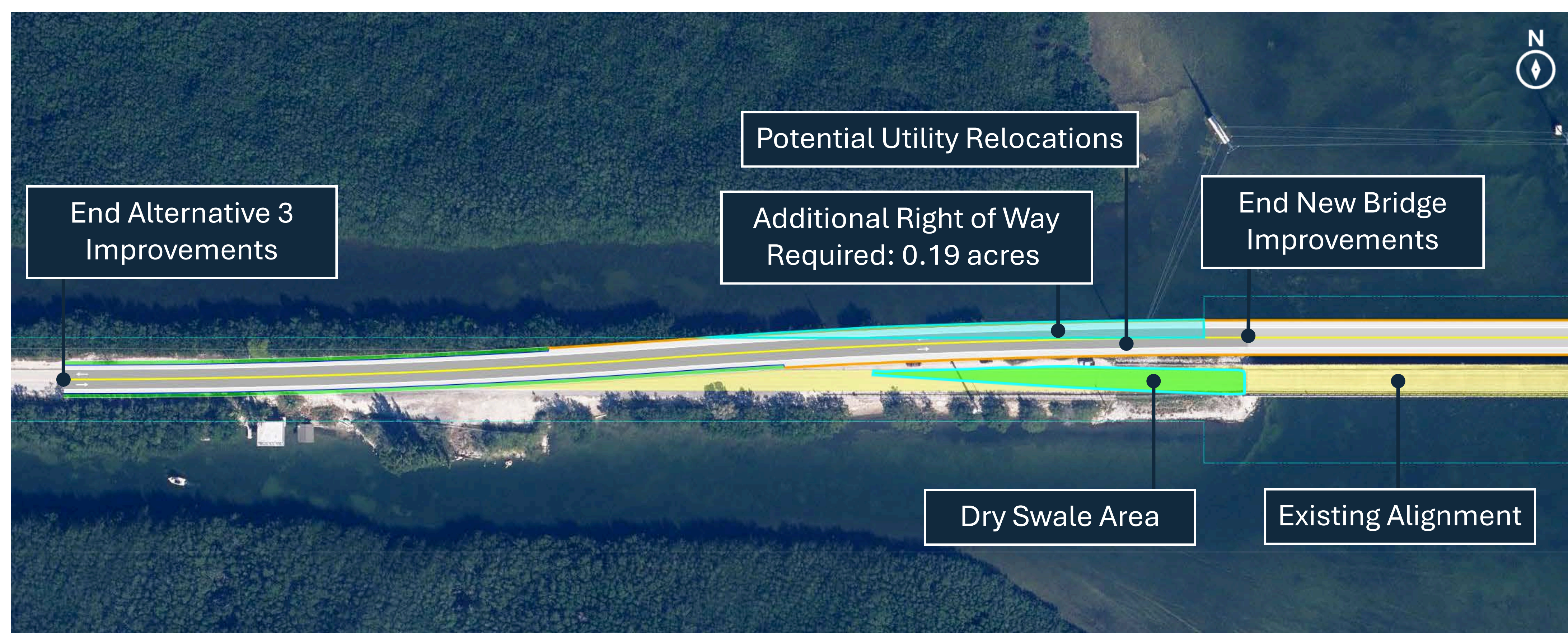
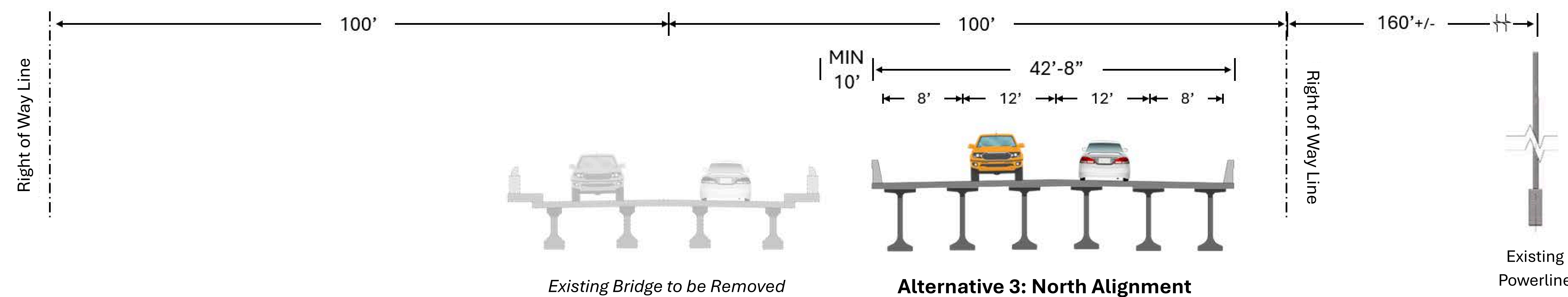
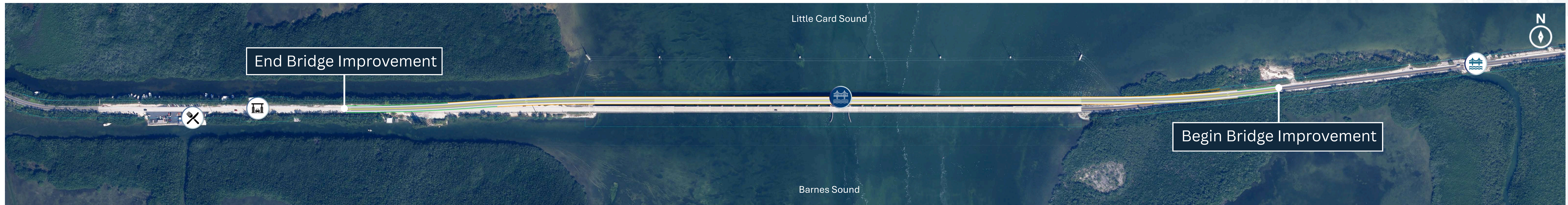
Alternative 2: South Alignment at West Approach



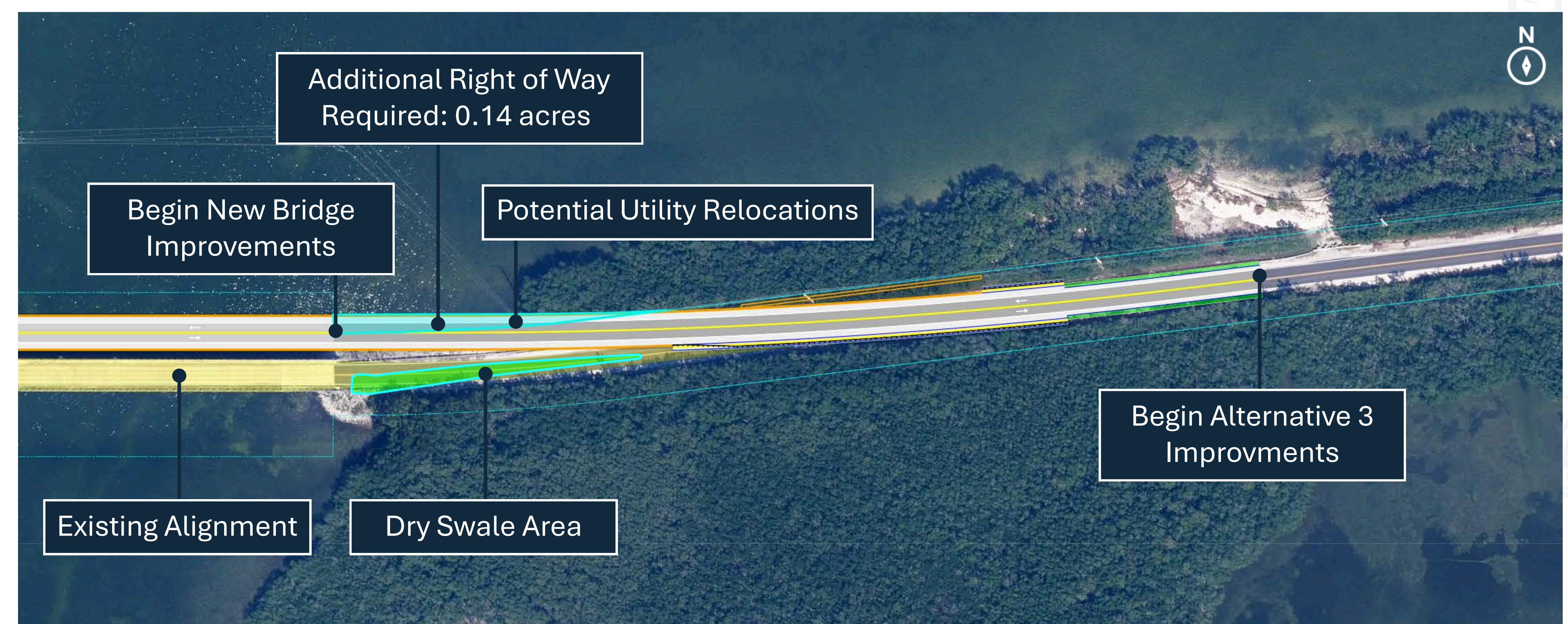
Alternative 2: South Alignment at East Approach

Alternative 3: North Alignment

LEGEND Existing Right of Way Right of Way Needed Existing Alignment Stormwater Management Card Sound Road Bridge Saunders Creek Bridge Alabama Jack's Historic Restaurant Toll Gantry



Alternative 3: North Alignment at West Approach



Alternative 3: North Alignment at East Approach

Evaluation Matrix

LEGEND

● Best

● Good

● Worst

○ No Change

		NO-BUILD ALTERNATIVE	ALTERNATIVE 1 (Center)	ALTERNATIVE 2 (South)	ALTERNATIVE 3 (North)
PLANNING & STANDARDS	Meets Purpose and Need for the Project	● Worst	● Best	● Best	● Best
	Supported by Local Government	● Worst	● Best	● Best	● Best
	Consistent with Monroe County Capital Improvement Plan	● Worst	● Best	● Best	● Best
	Meets FDOT Design Manual (Current Edition)	● Worst	● Best	● Best	● Best
	Meets FDOT Structurs Design Manual (Current Edition)	● Worst	● Best	● Best	● Best
BRIDGE	Maintains Vertical Navigational Clearance Above Mean High Water	○ No Change	○ No Change	○ No Change	○ No Change
	Maintains Horizontal Navigational Clearance at ICW	○ No Change	○ No Change	○ No Change	○ No Change
	Benefit to Marine Traffic	○ No Change	○ No Change	○ No Change	○ No Change
	Meets 75 Year Bridge Life	● Worst	● Best	● Best	● Best
TRAFFIC OPERATIONS & SAFETY	Benefit to Vehicular Traffic	○ No Change	● Best	● Best	● Best
	Improved Evacuation/Emergency Response	● Worst	● Best	● Best	● Best
	Impacts to Terrestrial Wetlands	○ No Change	● Good	● Worst	● Best
NATURAL RESOURCES	Impacts to Surface Waters	○ No Change	● Best	● Good	● Worst
	Impacts to Seagrass/Proposed Green Sea Turtle Habitat	○ No Change	● Best	● Worst	● Good
	Impacts to Essential Fish Habitat/Nassau Grouper Critical Habitat	○ No Change	● Best	● Good	● Worst
	Impacts to Coral	○ No Change	● Worst	● Best	● Worst
SOCIAL, ECONOMIC, AND CULTURAL RESOURCES	Impacts to Section 4(f) Resources - Recreation	○ No Change	● Best	● Best	● Best
	Impacts to Section 106 Resources - Historic	○ No Change	● Worst	● Worst	● Worst
	Impacts County Toll Revenue	○ No Change	● Best	● Best	● Best
	Improved Bicycle and Pedestrian Facilities	○ No Change	● Worst	● Worst	● Worst
	Impacts Local Business Acess	○ No Change	● Best	● Best	● Best
	Impacts Existing Toll Gantry	○ No Change	● Best	● Best	● Best
	Utility Pole Relocations/Emergency Service Pole	○ No Change	● Good	● Best	● Worst
PHYSICAL RESOURCES	Impacts from Contamination Sites	○ No Change	● Best	● Best	● Best
	Required Stormwater Management Facilities	○ No Change	● Good	● Worst	● Best
RIGHT OF WAY	Parcels Impacted	○ No Change	● Best	● Worst	● Worst
	Additional Right of Way Required	○ No Change	● Best	● Worst	● Good
	Requires Modification to Sovereign Submerged Lands (SSL) License (acres)	○ No Change	● Best	● Worst	● Good
	Requires Temporary Easement to SSL for Construction	○ No Change	● Best	● Worst	● Good
CONSTRUCTABILITY	Foundation Installation Impacts to Existing Bridge	○ No Change	● Best	● Best	● Best
	Requires Phased Construction	○ No Change	● Worst	● Best	● Best
	Bridge Closure or Detour During Construction	○ No Change	● Worst	● Good	● Best
	Bridge Construction Duration	○ No Change	● Worst	● Good	● Best
COSTS	Design, Right of Way, Construction	○ No Change	● Worst	● Good	● Best
	Bridge Maintenance	● Worst	● Worst	● Good	● Best

Proposed Bridge

The proposed bridge typical section will remain consistent across all alternatives. The bridge will be widened to include:

- Two 12-foot-wide travel lanes, one in each direction
- Two 8-foot paved shoulders on both sides
- Total width of 42 feet 8 inches

