

# RESILIENT MARTIN

# CATCHING UP AND MOVING FORWARD

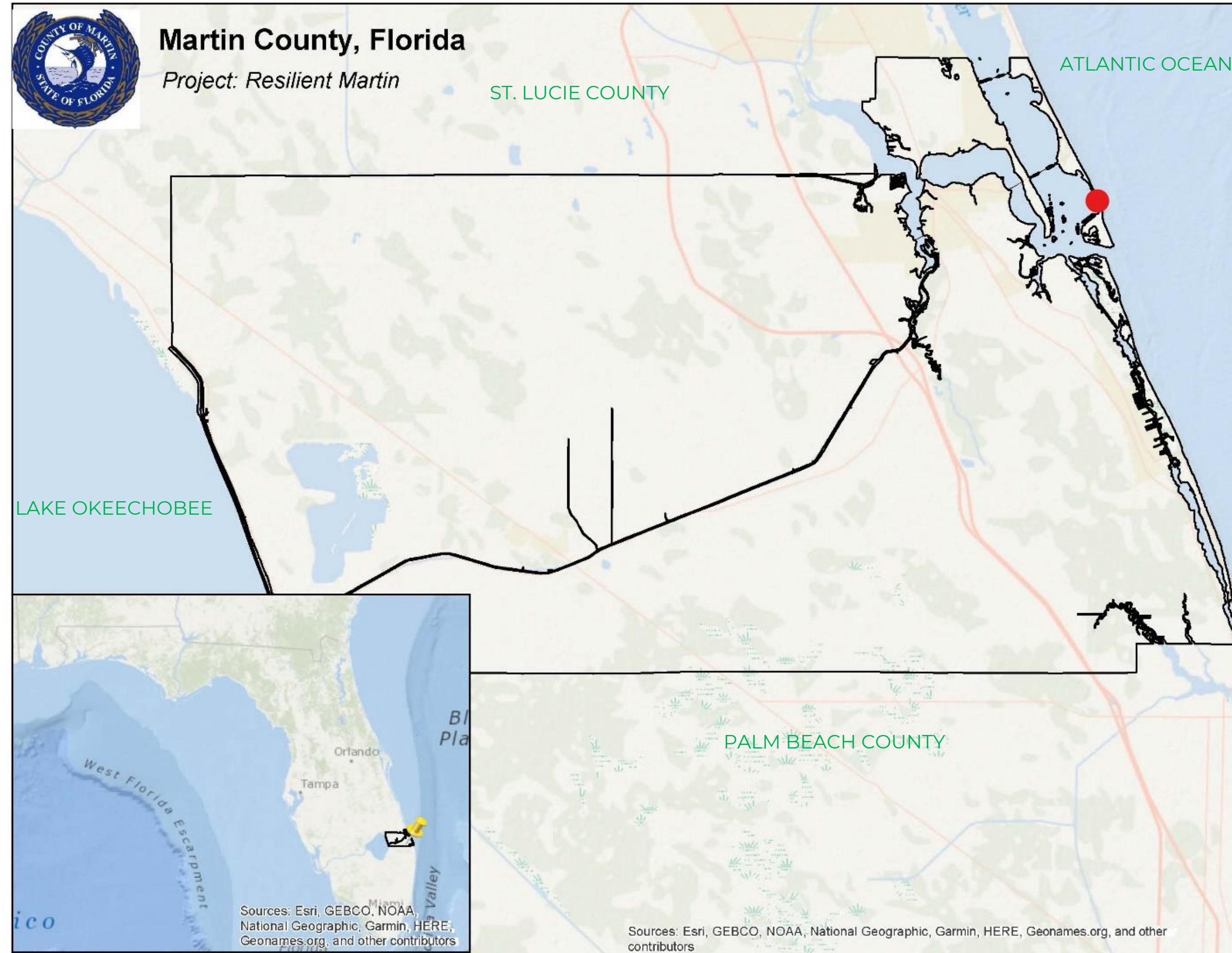


# PRESENTATION OUTLINE

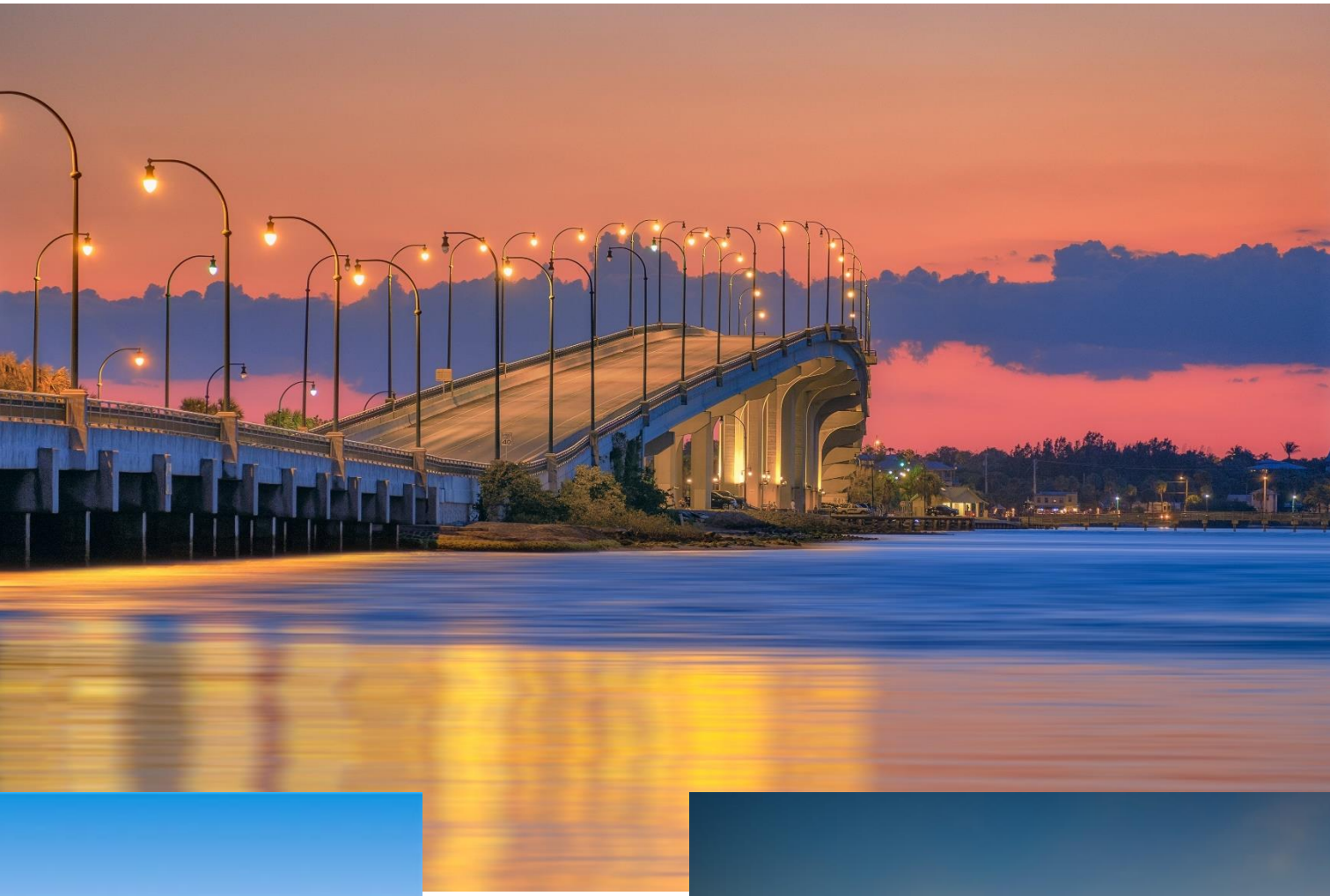
- Vulnerability Assessment Update Game!
- Implementing Projects Through an Existing CIP
- Existing Projects Underway
- Strategy into Climate Adaptation Areas
- Public Engagement Campaign



# WHERE ARE WE?



# MARTIN COUNTY DEPENDS ON OUR ENVIRONMENT



RESILIENT MARTIN

# LOCAL IMPACTS OF CLIMATE CHANGE



# VULNERABILITY ASSESSMENT UPDATE GAME!



2015 – PERIL OF FLOOD  
 2018 – COMP PLAN

SEA LEVEL RISE PROJECTIONS AND MAPPING  
 CRS LINKS TO SEA LEVEL RISE (SLR) AND RESILIENCY  
 BASIS TO PLAN FOR FUTURE SLR RISK



# RESILIENT FLORIDA IS BORN (2021)!

## 2021

- Statewide flooding and Sea Level Rise Resilience Legislation
- Resilient Florida Trust Fund/DEP
- **Updated the SLR Report (Amendment 1) to include required projections and add projects (Approved August 2021)**
- **Applied for 5 Implementation Grants**
- **Applied for 1 Planning Grant (Ongoing VA)**

## 2022

- Revision to 390.093
- **Amendment 2 – Mini-VA**
  - Cypress Creek Restoration
  - MacArthur Boulevard
  - Old Palm City North Neighborhood Improvements
- Stormwater Backflow Preventer Installation Program
- SW Mockingbird Land Flood Mitigation
- Additional Planning Funds

## 2023

- 2023-231 – Flooding and Sea Level Rise Vulnerability Studies
- **Amendment 3 – Mini-VA**
  - SE Merritt Way
  - Mangrove Island Shoreline Stabilization
  - Stuart Causeway Shoreline Protection
  - Jensen Beach Causeway Shoreline Protection
- **Current Vulnerability Assessment (2021 Grant)**





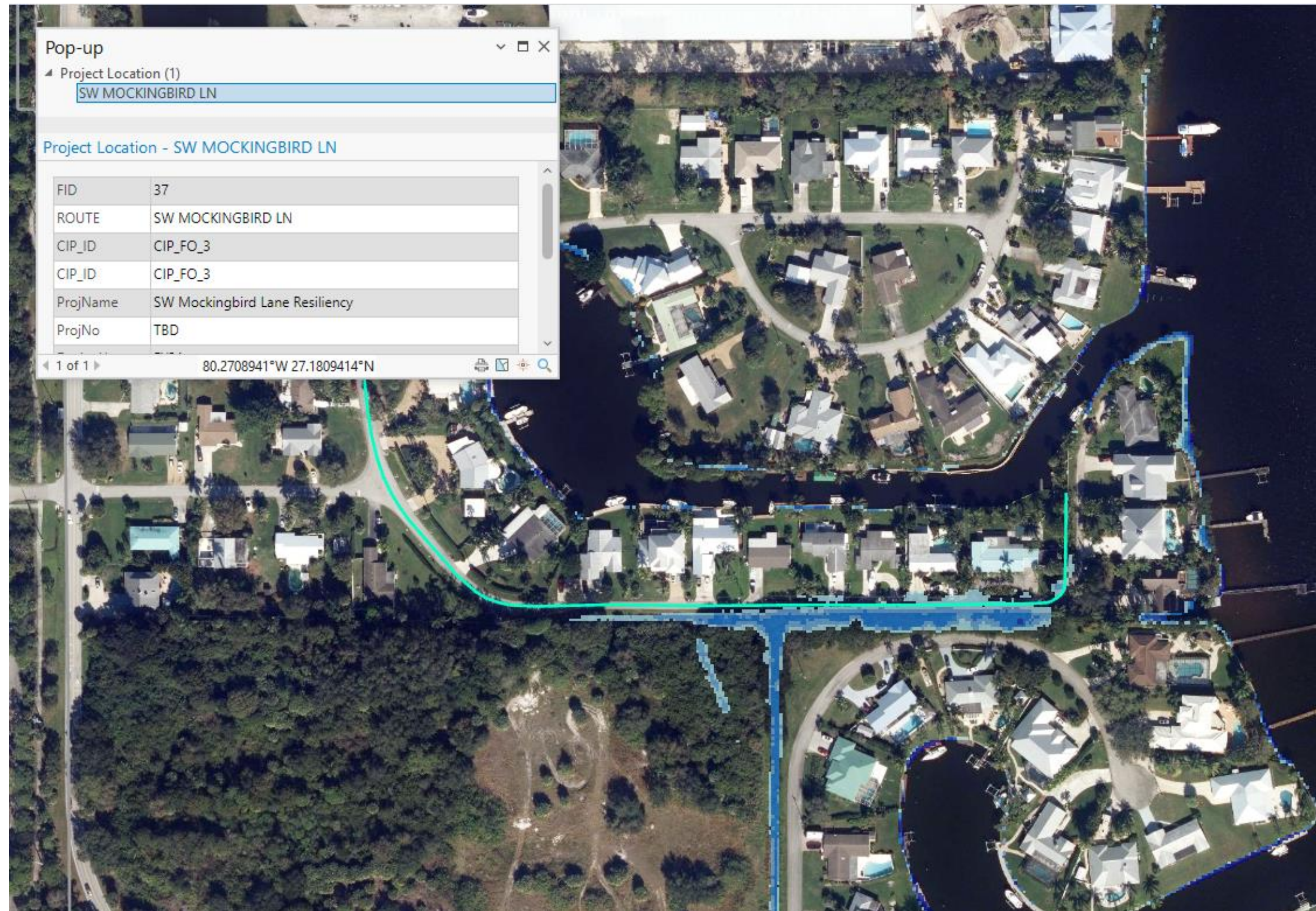
# IMPLEMENTING PROJECTS THROUGH AN EXISTING CIP

- Map Existing CIP on Inundation Maps
- Identify Vulnerability on the CIP Sheets
- Add the CIP projects into the Revised Vulnerability Assessment





# MAPPING CIP ON INUNDATION MAPS




MOCKINGBIRD LAND 2040 SLR



# IDENTIFYING VULNERABILITIES ON THE CIP SHEET

**SW Mockingbird Lane Resilience**

Category	Non-Concurrency
Project Number	124909
Location	Palm City
District	5
Project Limits	Palm City
Related Projects	
Lead Dept/Division	Public Works/Field Operations
Year Project Initiated	2021
Project Life Cycle	25 Years
Resilience Requirements	<input checked="" type="checkbox"/> 2040 Vulnerability <input checked="" type="checkbox"/> 2070 Vulnerability <input checked="" type="checkbox"/> 2100 Vulnerability



**DESCRIPTION**  
 A resilience project to address the current tidal/storm surge flooding that occurs on SW Mockingbird Lane. The project may include elevating the roadway, installing raised seawalls, and construction of other ancillary drainage features.



**BACKGROUND**

The County's Resilience Program will coordinate climate resiliency planning strategies as an integrated component of overall agency operations. Under the Resilience Program, pilot projects will be conducted to develop strategies for addressing flooding impacts caused by sea level rise and increased storm intensity. The information gained from these projects will be used to develop a project prioritization protocol for future use. SW Mockingbird Lane experiences repeated flooding during high tide events due to the low elevation of the roadway and adjacent drainage ditch. Formal design, supported by an HMGP grant, is actively ongoing and is anticipated to occur throughout FY23 with permitting going into FY24. HMGP funds are anticipated for construction in FY25 which would require a 25% match from the County, currently, there is no contract for construction. Matching funds will be sought through alternative grant sources as well as a potential MSBU.

**PROJECT ORIGINATION**

Infrastructure Needs

**JUSTIFICATION**

Martin County is currently coordinating technical data and policy response among planning, floodplain management, and coastal projects. This work involves mitigation practices to reduce flood risk in coastal areas resulting from high-tide events, storm surge, flash floods, stormwater runoff, and the related impacts of sea-level rise. Flooding of SW Mockingbird Lane was highly ranked on the Local Mitigation Strategy project list, resulting in the project being selected for application to the FEMA Hazard Mitigation Grant Program (HMGP).

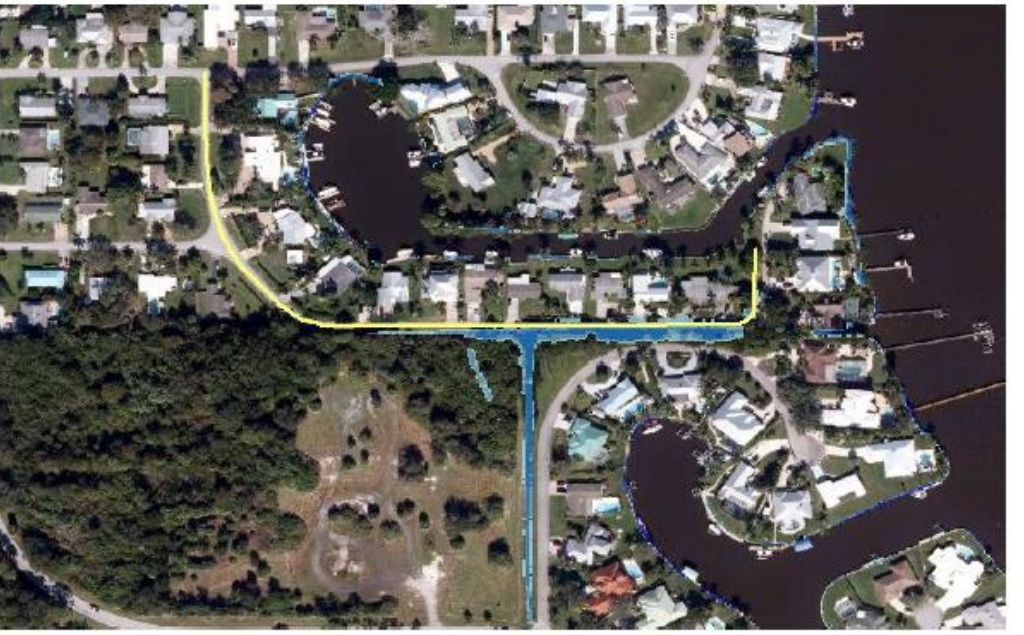
Expenditures	Total	To Date	Carryover	Funded					Unfunded
				FY24	FY25	FY26	FY27	FY28	FY29-FY33
Design	354,843	334,843		20,000					
Land	1,500,000				1,500,000				
Construction	3,500,000				3,500,000				
<b>Expenditure Total</b>	<b>5,354,843</b>	<b>334,843</b>		<b>20,000</b>	<b>5,000,000</b>	-	-	-	-
Revenues	Total	To Date	Carryover	FY24	FY25	FY26	FY27	FY28	FY29-FY33
Franchise Fees	346,079	126,079		20,000	200,000				
Grants	2,080,219	208,764			1,871,455				
<b>Revenue Total</b>	<b>2,426,298</b>	<b>334,843</b>	-	<b>20,000</b>	<b>2,071,455</b>	-	-	-	-
<b>Total Unfunded</b>									<b>2,928,545</b>

**OPERATING BUDGET IMPACT**

Impacts to the operating budget are expected to be minimal since this roadway is currently in maintenance inventory.

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# ADD THE CIP PROJECTS INTO THE REVISED VULNERABILITY ASSESSMENT

- Add the CIP Projects in the Revised Maps
- Determine the Direct Vulnerability
- Determine the Indirect Vulnerability
- Add the Project in the Vulnerability Assessment

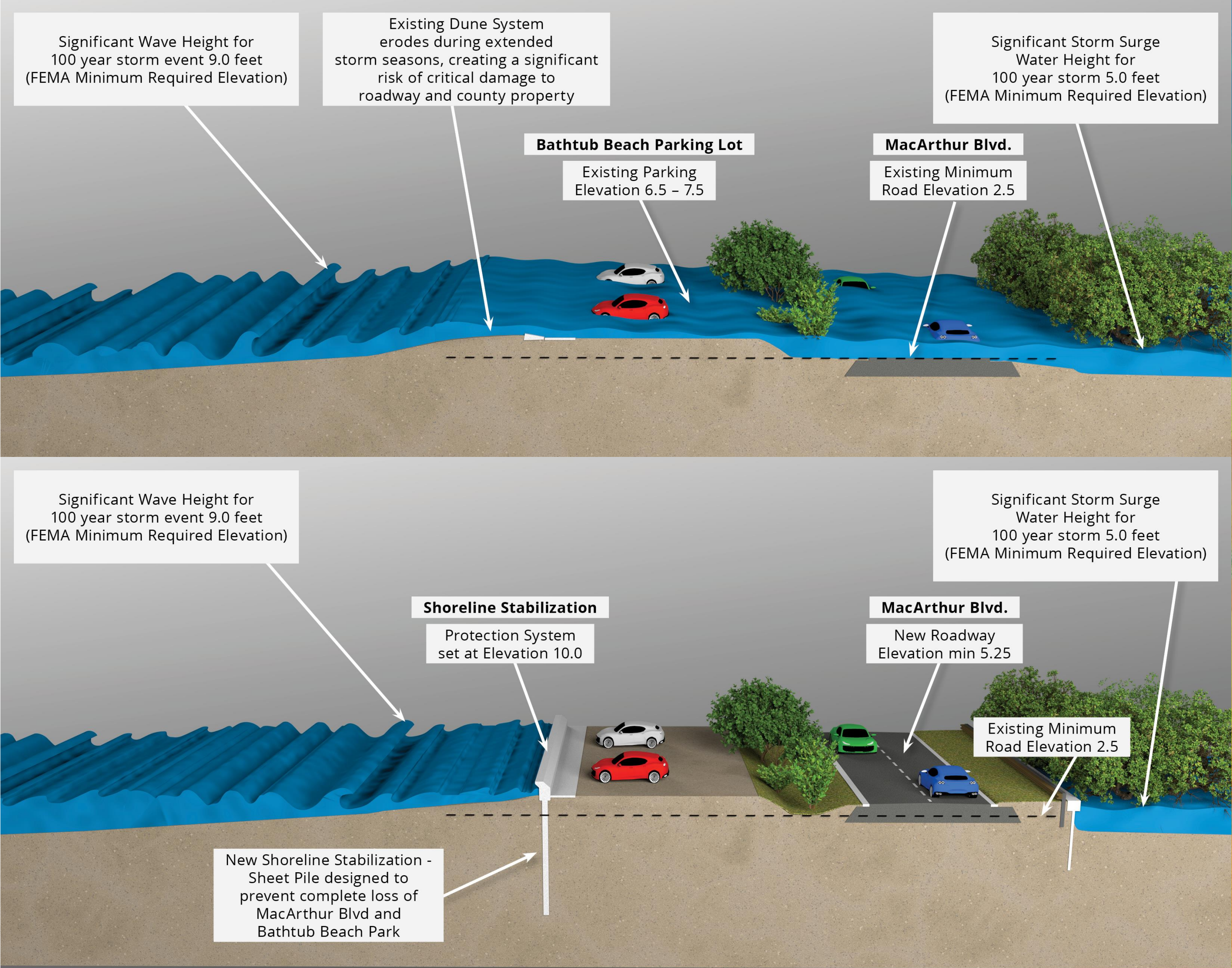


# EXISTING PROJECTS UNDERWAY



# MAC ARTHUR BLVD AND BATHTUB BEACH PHASE 1: SHORELINE STABILIZATION

- A seawall constructed and buried UNDER the dune line
- Invisible to beachgoers (under normal conditions)
- No impact on turtle nesting or shorebirds
- Protection of public beach parking lot, roadway, and utilities during major storms

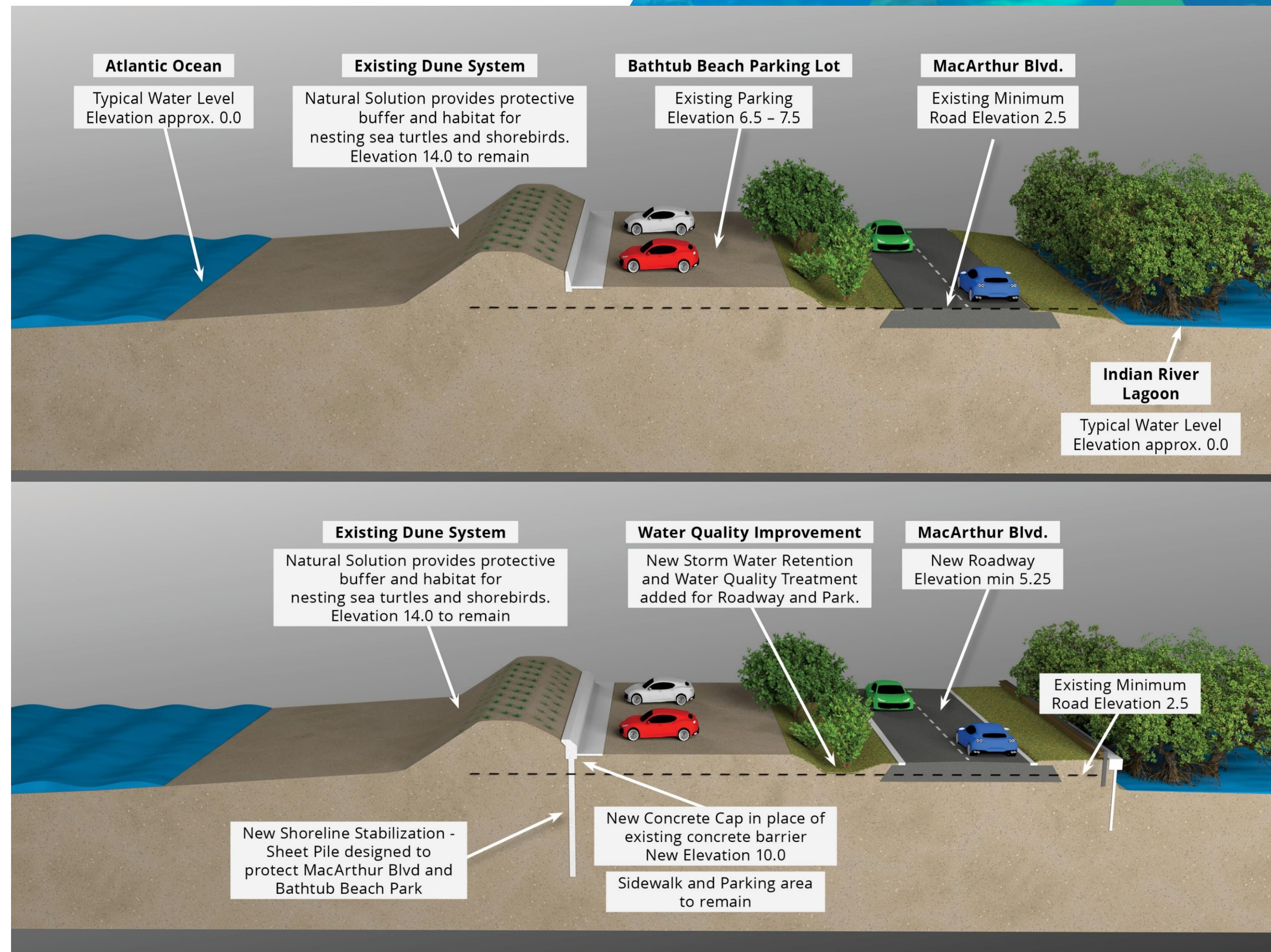


# PHASE 1-CONSTRUCTION



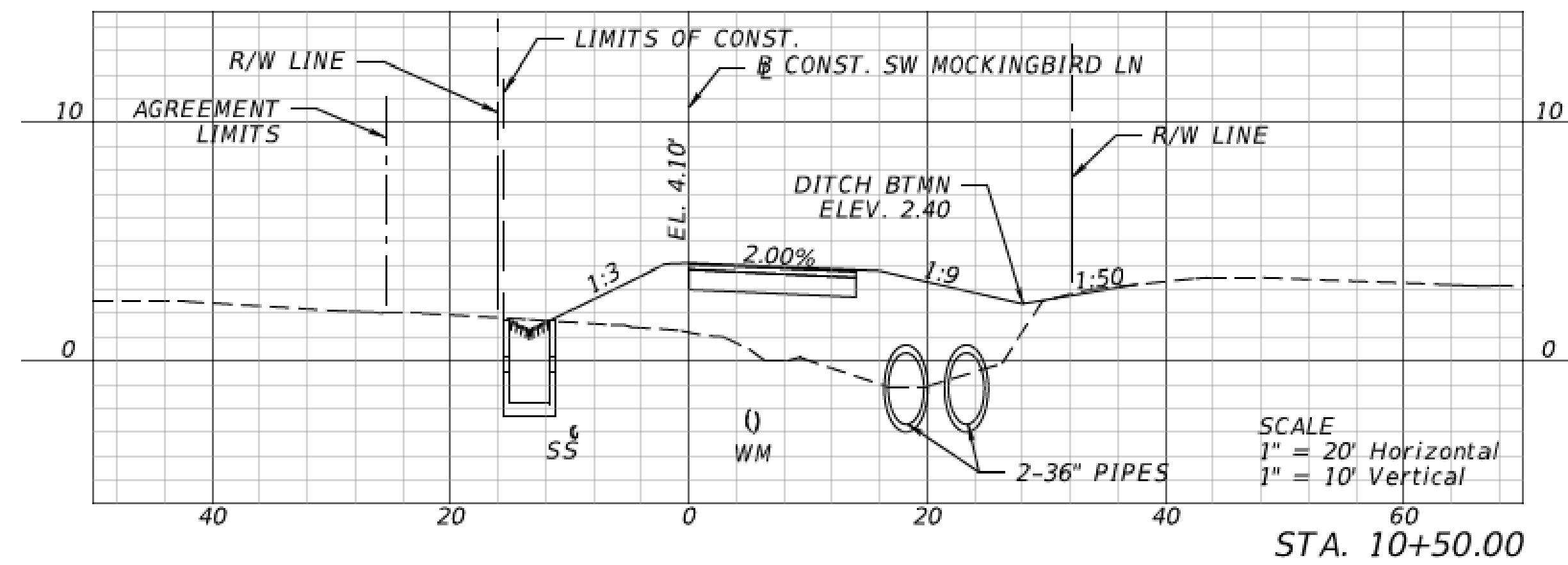
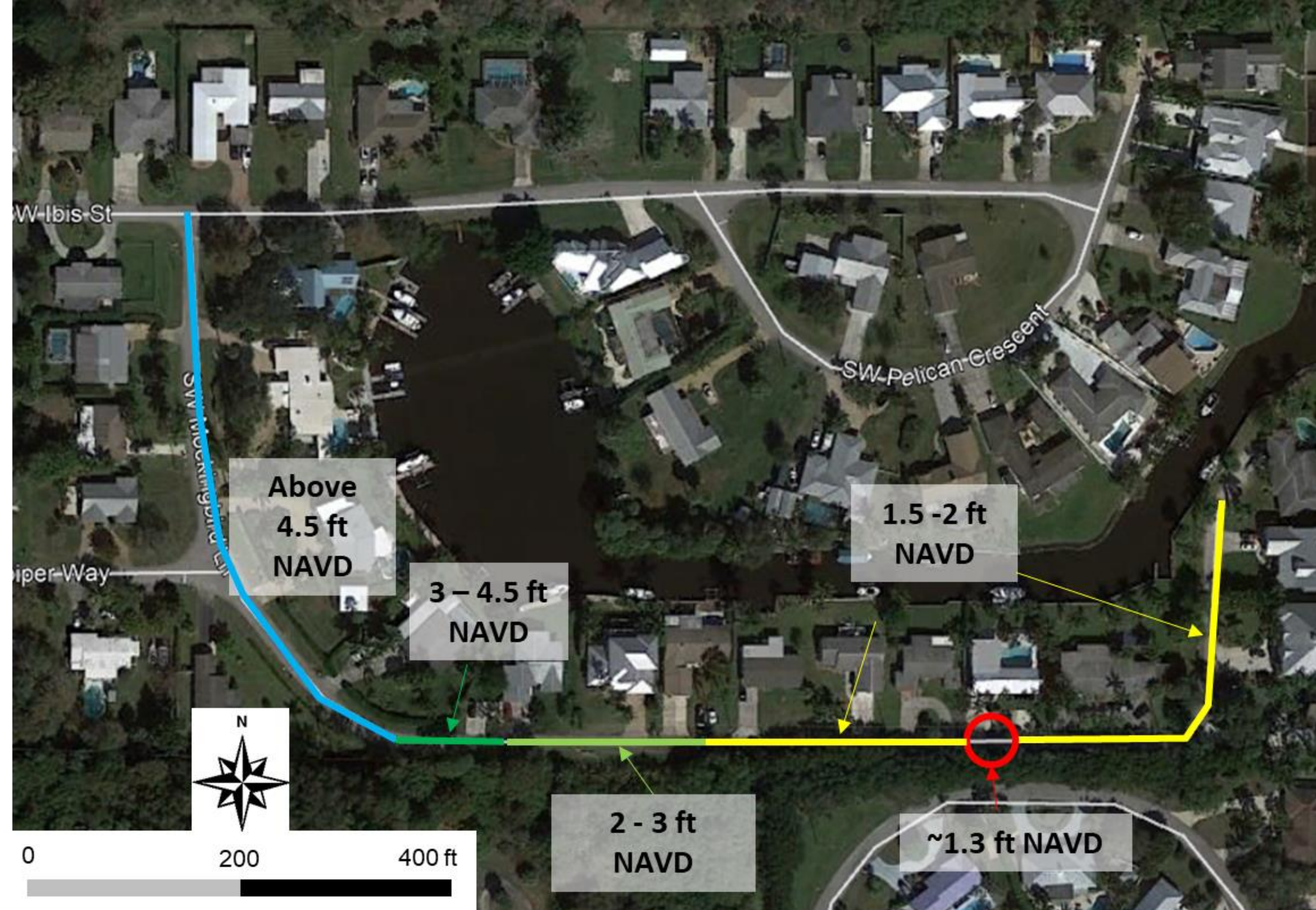
# MAC ARTHUR BLVD. AND BATHTUB BEACH PHASE 2: ROADWAY ELEVATION

- Most vulnerable section of roadway between Bathtub Beach & Sailfish Point doesn't meet current FEMA standards
- Elevate 1,100 feet from 2.5 to 5.5 feet NAVD
- Meets and exceeds FEMA 100 year storm
- Provides Stormwater Retention



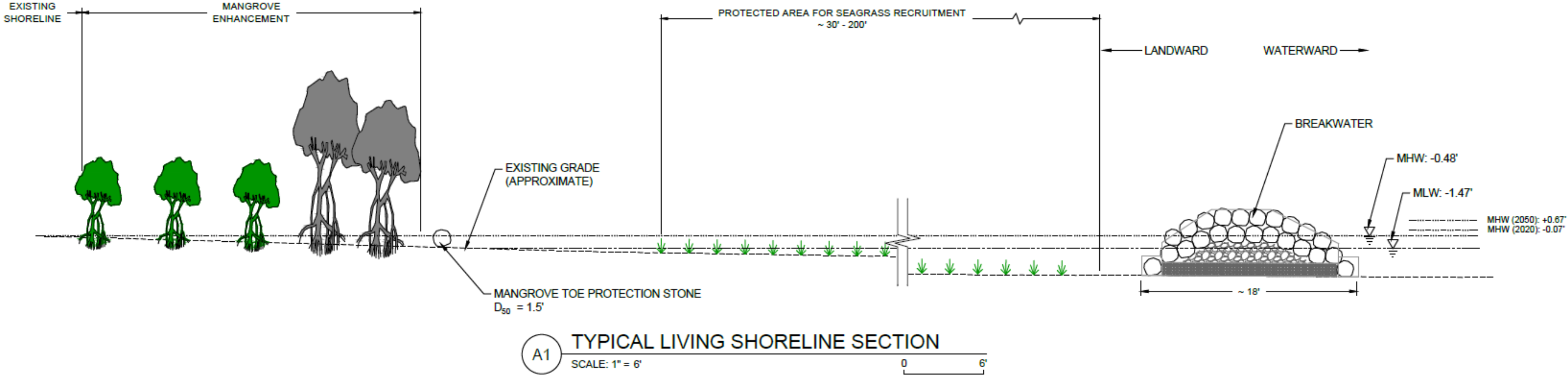
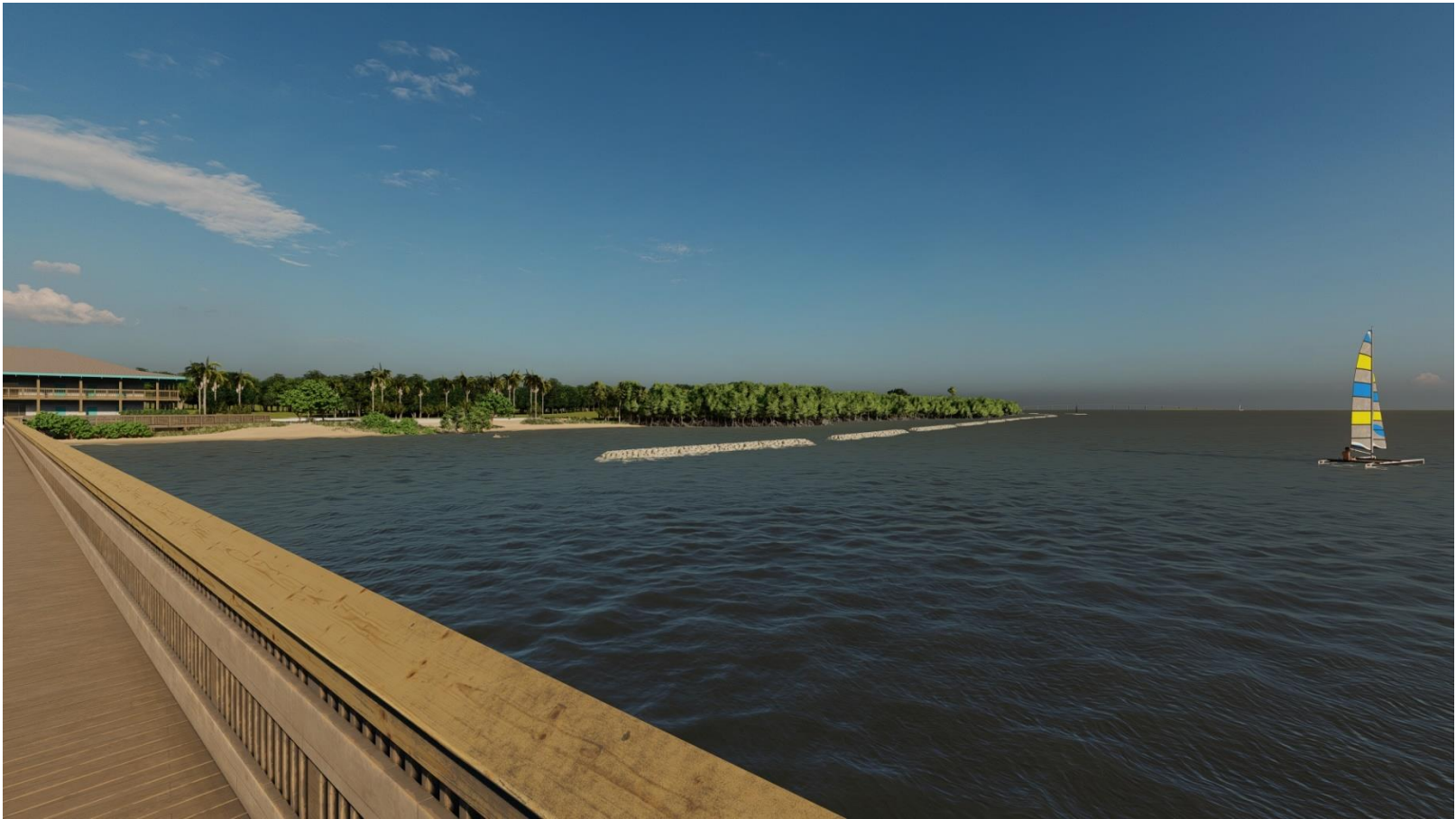
# MOCKINGBIRD LANE

- 670 LF Raising Road to elevation 4.1 feet NAVD
- 430 LR Raising Road to elevation 5.1 feet NAVD
- 109 acres drains to outfall
- Control Structure with One Way Valves



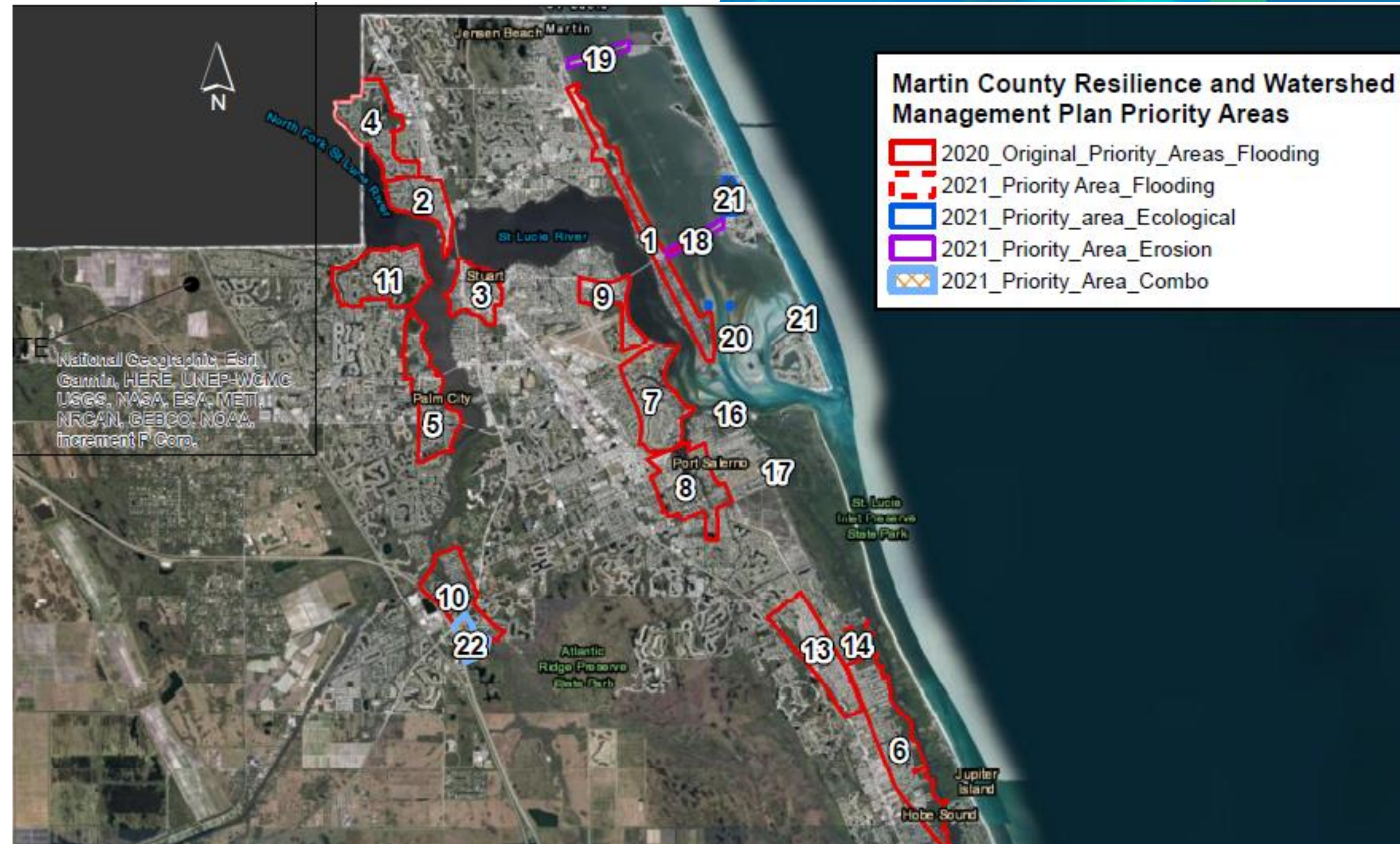


# INDIAN RIVERSIDE PARK HYBRID LIVING SHORELINE



# STRATEGY INTO CLIMATE ADAPTATION ACTION AREAS

- Focus on Priority Areas
- H&H Modeling
- Refined VA in the Priority Areas
- Focused community engagement
- Adaptation Solutions





# PUBLIC ENGAGEMENT CAMPAIGN

## Past Efforts

- Started in 2019 with a Resilient Planning Group
- Shifted to a Facebook Live Event in 2020
- Online Survey
- Story Map
- Some Community Presentations

## Future Efforts

- More Robust Effort
- Focus on Priority Areas
- Expand to community areas and community groups
- Expand Resiliency Beyond Coastal Flood Risk
- Include other threats
- Buy in on Adaptation Solutions



QUESTIONS/COMMENTS?



RESILIENT MARTIN