

TWIN LAKES PILOT ROAD ADAPTATION PROJECT ASSESSMENT DISCUSSION AND DIRECTION ITEM

March 25, 2025
Key Largo BOCC Meeting
Item O-1



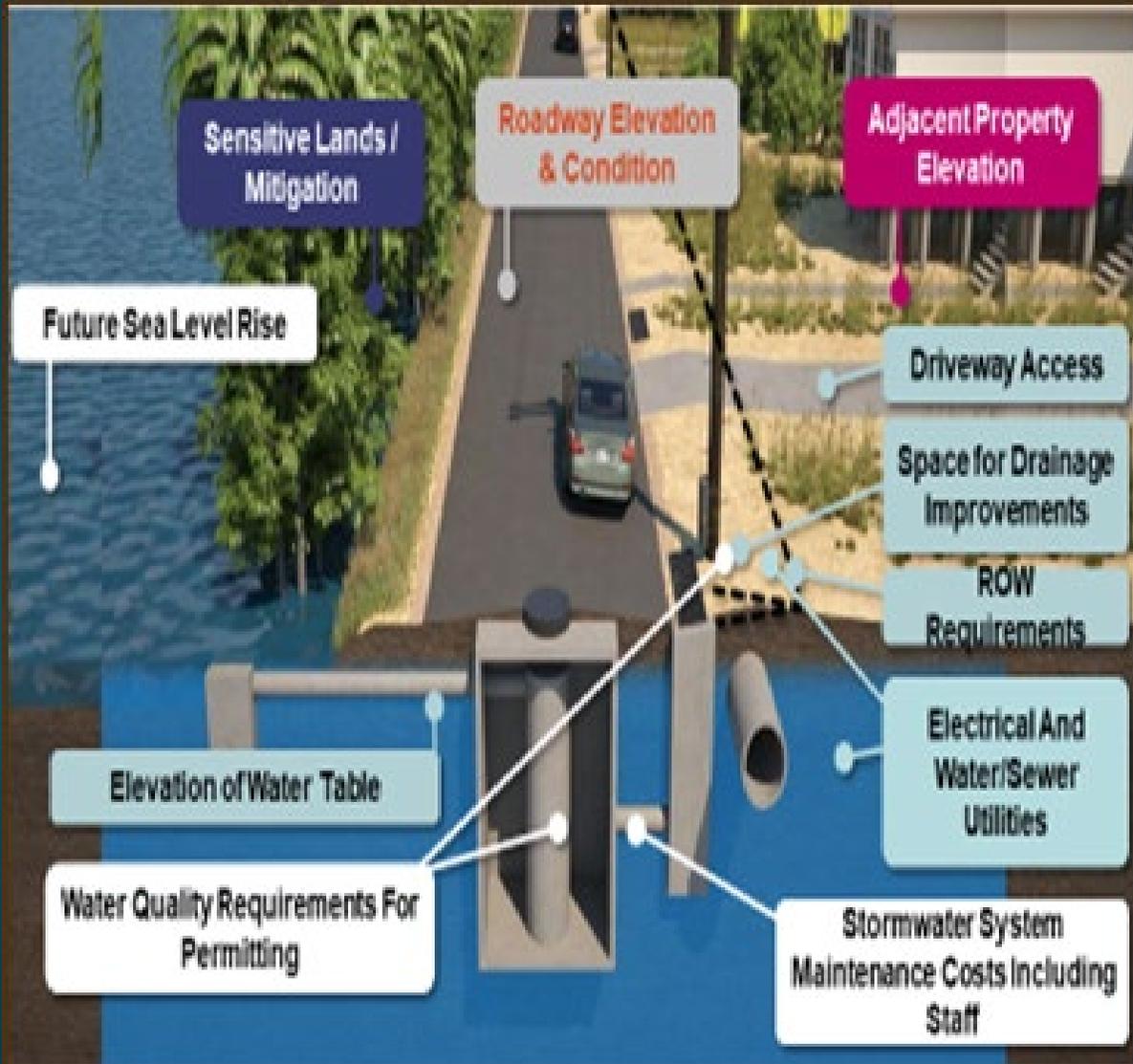
MONROE COUNTY
FLORIDA

Twin Lakes – Need for a Solution

- 1) Experiencing **frequent, persistent flooding and prolonged inundation due** to heavy rainfall, storm surge, high tides, and seasonal “King Tides,” causing damage to its public roadways and property.
- 2) **Flooded roads block access to the community** by homeowners, businesses services, public services, and emergency services. The significant flooding jeopardizes emergency response and the ability to clear road debris, restore power lines, and assess damage.
- 3) **Without functioning roadways, operational storm water systems, and supporting infrastructure** the Twin Lakes community cannot remain safe and secure or viable.



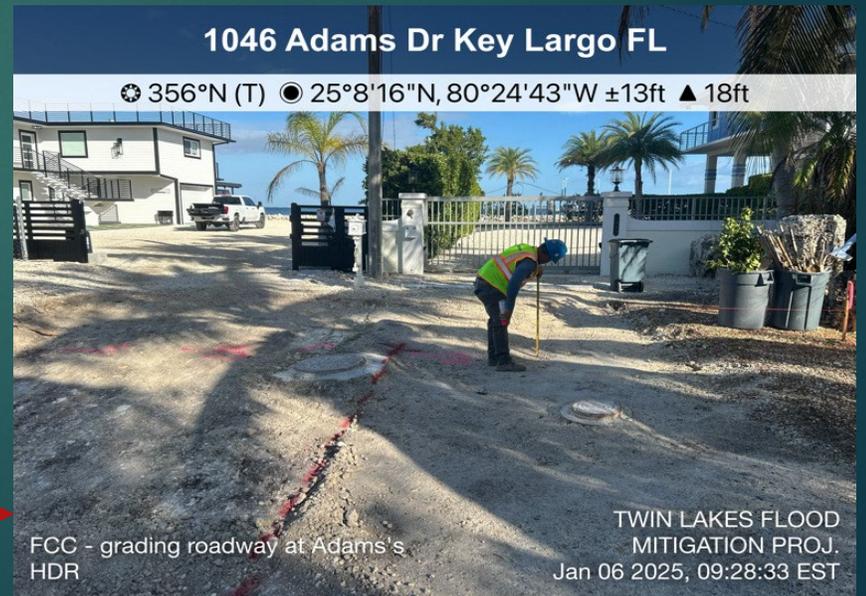
Project Summary



- ▶ Improvements to **4,633 linear feet** of roadway
- ▶ Elevating low sections to the target elevation of **13 inches** NAVD
- ▶ Installation of a **concrete gravity wall** adjacent to the wetlands
- ▶ Installation of an **engineered storm water collection system**, a treatment unit and a pump station with wet wells, electrical controls and a back-up generator.
- ▶ Storm water disposal will be via force main and **5 injection wells**.
- ▶ Will protect **105 homes**.

Recent Progress

Pump Station work



Roadway Grading



Twin Lakes Under Construction

Notice to Proceed

5 May 2026

15 July 2024

Completion

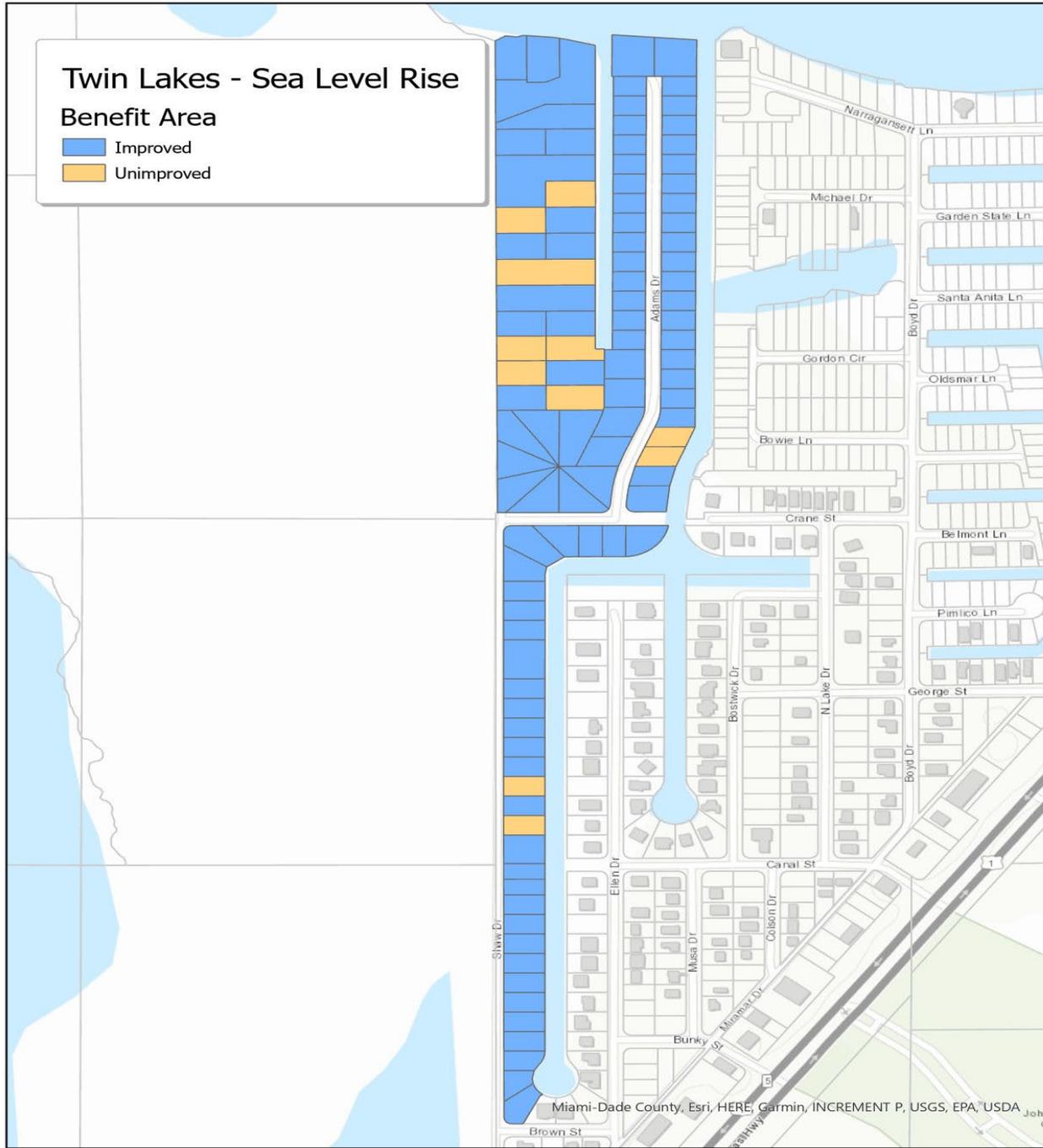


- Installation of a concrete gravity wall adjacent to the wetlands

Twin Lakes

Operation & Maintenance (O&M) Assessment

- ▶ The County fronts the capital costs associated with the Twin Lakes roads adaptation project: design, permits, and construction
- ▶ Higher level of service provided
- ▶ The Operations & Maintenance to be provided by residents benefitting from the project through a Municipal Services Benefit Unit (MSBU) and covers:
 - ▶ Electrical costs to operate the pumps
 - ▶ Repairs
 - ▶ Routine Maintenance Costs - labor, equipment
 - ▶ Replacement of Mechanical Equipment when it wears out
 - ▶ 5% of Mechanical Equipment Capital Costs standard method of determination



Benefit Area

Benefits: Maintain access to property

Twin Lakes Subdivision

Assessment Program Development

Develop Apportionment Methodology

- Identify Benefit Area
- Determine Benefitted Parcels
 - Developed and undeveloped parcels
 - 11 undeveloped
 - 93 developed
 - 30 homesteaded parcels

Create Assessment Database

- Determine appropriate billing unit
 - All residential parcels
 - Charge based on a per dwelling unit basis
 - Minimum of 1 assigned to undeveloped parcels

Type	Parcel Count	Average Market Value	High Market Value	Low Market Value	Average Taxable Value	Low Taxable Value
Unimproved	11	\$560,234	\$980,359	\$338,382	\$560,234	\$338,382
Improved	93	\$1,330,543	\$4,245,411	\$821,068	\$1,102,313	\$55,897
Total	104	\$1,249,068			\$1,044,977	

Determine Assessment Revenue Requirements

- Operation and Maintenance Costs
 - Pump station
 - Maintenance and repair
 - Future replacement costs
 - Electricity
 - **DOES NOT** fund regular road maintenance
- Miscellaneous Assessable Costs
 - Study, Annual Maintenance and Administrative Costs
 - Statutory Discount and Tax Collector Collection Costs



Twin Lakes Subdivision

Calculate Rates for O&M

	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	5-Year Average
Total O&M Costs and Reserves for Equipment Replacement*	\$172,300	\$180,915	\$189,961	\$199,459	\$209,432	\$190,413
Misc. Assessable Costs	\$37,893	\$27,511	\$28,745	\$30,040	\$31,400	\$31,118
Total Maintenance Assessable Costs	\$210,193	\$208,426	\$218,705	\$229,499	\$240,832	\$221,531
Annual Maintenance Assessment Rate	\$2,022	\$2,005	\$2,103	\$2,207	\$2,316	\$2,131

*Reserves are allowed to build up from year to year to replace equipment as needed



Next Steps Implementation

Event	Data	Location
Sea Level Rise and Flood Mitigation Master Assessment Ordinance No. 002-2021	February 17, 2021	
Resolution of Intent	November 19, 2024	
Public Information Session	March 25, 2025	Key Largo BOCC
Additional Discussion, as needed	April 16, 2025	Marathon BOCC
Adopts Initial Assessment Resolution	May 21, 2025	Key West BOCC
Mail First Class Notices	May 28, 2025	
Publish Notice in Newspaper	May 28, 2025	
Adopt Final Assessment Resolution	June 18, 2025	Key Largo BOCC
Certify Twin Lakes Assessment Roll to Tax Collector	By September 15, 2025	
Tax Bills Mailed	November 2025	

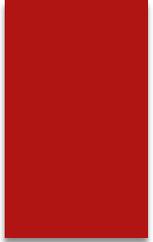


Capital Cost Assessment



Funding Twin Lakes Construction

Ferriera Construction Contract: \$20,546,254
WSP CEI Contract: \$ 1,422,618
Total \$21,968,872



Funding Source	\$ Amount
Federal Appropriation	\$ 5.4 M
State Resilient FL Grant	\$ 3.9 M
County Funds	\$10.8 M
FKAA (water line)	\$ 1.8 M
Residents	\$ 0
Total	\$21.9 M

Costs and Funding Current Road Adaptation Projects

Project	Federal Funds	State RF Funds	County Funds	Shortfall	Residents	Total Cost
Twin Lakes	\$ 5.4 M	\$ 3.9 M	\$ 10.8 M	-----		\$21.5 M (inc \$1.4 FKAA)
Sands	\$ 8.1 M	\$12.2 M	\$ 4.25 M	TBD / Construction Bids not yet Received		\$24.5 est.
Stillwright	\$20.5 M	\$21.1 M	\$ 5.40 M	TBD / Construction Bids not yet Received		\$47.1 M est.
Conch Key	-----	\$ 3.6 M	\$ 9.09 M	TBD / Construction Bids not yet Received		\$12.7 M est
Winston Waterways KL	\$36.6 M	\$14.7M		TBD / Construction Bids not yet Received		\$51.1 M est
Big Coppitt	\$60.8 M	\$22.7 M		TBD / Construction Bids not yet Received		\$83.6 M est
Flagler	\$54.1 M	-----		\$18.1 M est TBD / Construction Bids not yet Received		\$72.2 M

Monroe County Roadway Vulnerability Analysis and Adaptation Plan



49 Neighborhood areas*

Areas for 2025

\$888,825,245

\$1,630,803 (O&M)

10 Neighborhood areas

Areas for 2030

\$179,591,227

\$339,356 (O&M)

10 Neighborhood areas

Areas for 2035

\$159,316,236

\$307,851 (O&M)

28 Neighborhood areas

Areas Beyond 2035

\$378,007,456

\$683,432 (O&M)

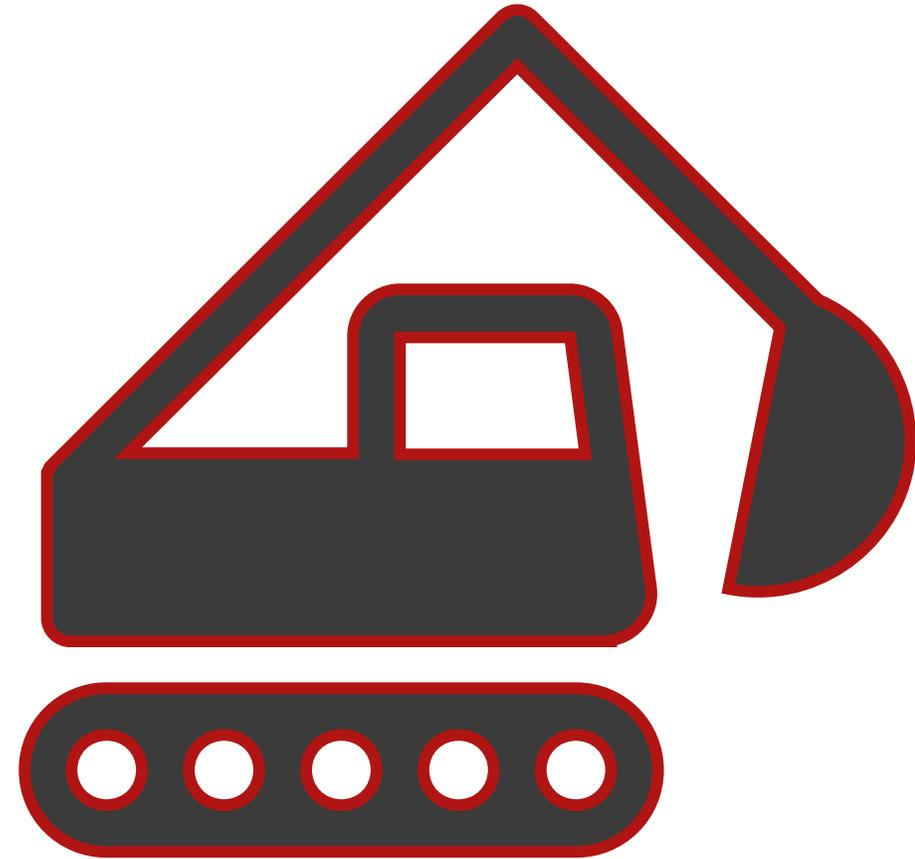
\$1.6 Billion*
(Avg \$9.6 Million / Mile)

\$3.0 Million
Annual
Operation &
Maintenance

* **Cost Estimate is based on 2020 Dollars.** Cost estimate is conceptual and does not include design, right-of-way acquisition, harmonization/cost to cure, and legal fees. Cost estimates are preliminary and subject to change.

Twin Lakes Capital Assessment

- ▶ The **County initially fronts the capital costs** associated with the Twin Lakes roads adaptation project: design, permits, and construction
- ▶ Potential **Capital Cost Assessment** to be provided by residents benefitting from the project through a Municipal Services Benefit Unit (MSBU).
- ▶ **Capital investments protect the owner's investments** in property development
- ▶ **Capital investments help increase the value of the owner's property** moving forward



Capital Funding – Shall Neighborhoods pay for capital costs?

Capital Costs for Twin Lakes is **\$10,788,800** for County-only contribution

Option 1: Prepay Initial Prepayment Per Unit

Option 2: Pay Annual Assessment -- over 20-year period @ 4.5% interest; collected on annual tax bill

Capital Funding Level	100%	50%	25%	15%	10%	5%
Total Construction Costs	\$10,788,800	\$5,394,400	\$2,697,200	\$1,618,320	\$1,078,880	\$539,440
Initial Resident \$ Prepayment Per Unit (Option 1)	\$103,739	\$51,870	\$25,935	\$15,561	\$10,374	\$5,187
Annual Debt Service	\$829,402	\$414,701	\$207,351	\$124,411	\$82,941	\$41,471
Misc. Assessable Costs	\$79,289	\$39,104	\$19,823	\$11,894	\$7,930	\$3,964
Total Annual Capital Assessment Costs	\$908,691	\$453,805	\$227,174	\$136,305	\$90,871	\$45,435
Annual Resident \$ Assessment Amount Per Unit (Option 2)	\$8,738	\$4,364	\$2,185	\$1,311	\$874	\$437

Staff recommends not using percentage but set **fixed capital costs** sharing to use for all future projects.

Next Steps - Implementation

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The End