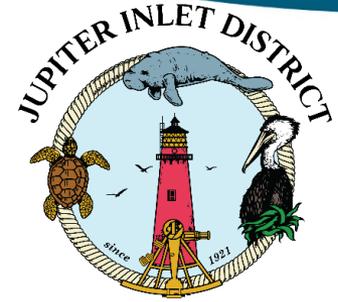




TAYLOR ENGINEERING, INC.



Jupiter Inlet Lighthouse Outstanding Natural Area

Living Shoreline Project

Joseph B. Chaison, P.E.

Jonathan Brumfield, P.E.*

** PE Passed. Licensure pending.*

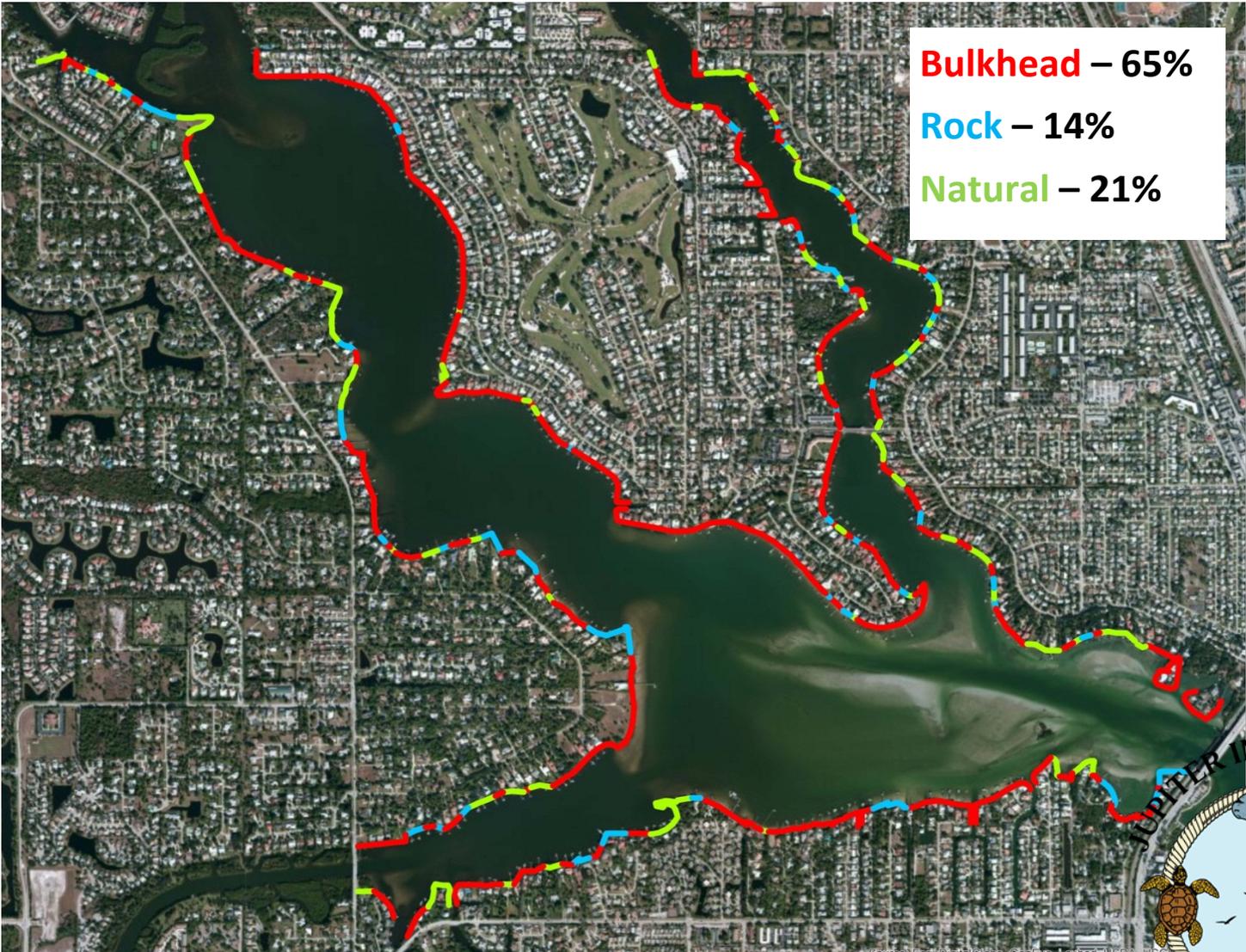
September 17, 2021



Jupiter Inlet District



Shoreline Assessment – 2013



Bulkhead – 65%
Rock – 14%
Natural – 21%



Project Goals

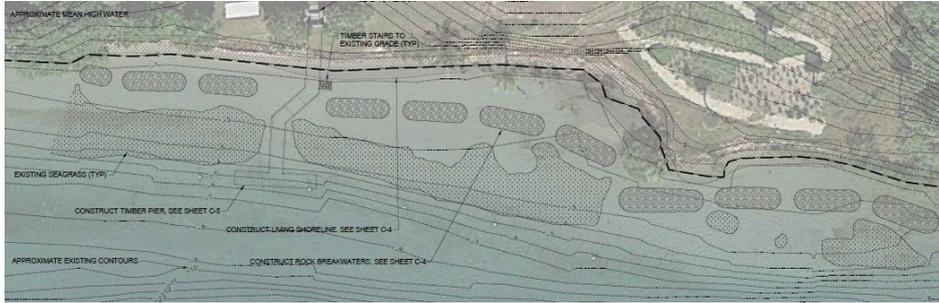
- Stabilize eroded shoreline 550 feet
- Protect archeological and historic resources
- Habitat creation
- Recreation - Education
- Demonstration project for Living Shorelines
- Partner with Bureau of Land Management



Living Shoreline Project - Rendering

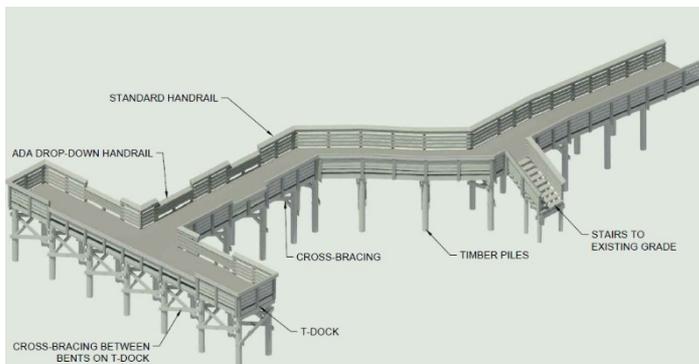
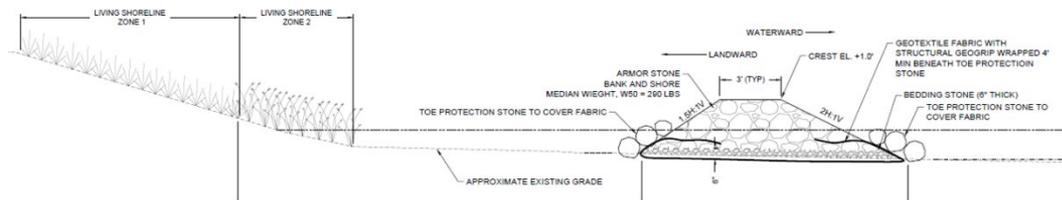


Design Overview



Design Overview

- Eleven breakwaters
- Observation Pier
- Living Shoreline plantings
- Zero impacts requested or authorized
- Design adjusted following pre-construction seagrass survey



Project Overview



Design and Resiliency



Design Development

- Coastal modeling; storm surge, waves, scour, current and wave forces (50-year event)
- Design calculated with coastal loads
- Deck Elevation: +6.0 NAVD88
- Open grated decking

Contract and Sequence

Owner:	Jupiter Inlet District
Engineer:	Taylor Engineering, Inc.
Contractor:	Ferreira Construction
Contract Price:	\$537,170.40
Contract Duration:	120 days
Notice to Proceed:	5 April 2021



1. Limestone Breakwaters
2. Timber Observation Pier
3. Living Shoreline
4. Upland site restoration

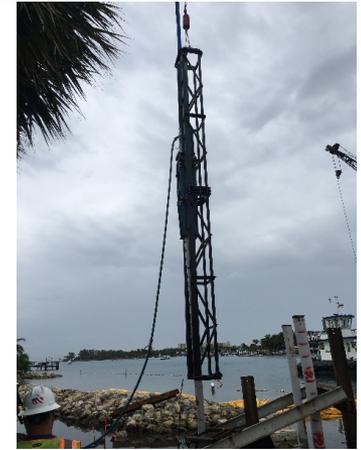
Breakwater Construction



- Bedding Stone, Geotextile fabric with structural grid foundation
- Bank and Shore Armor Stone (514 tons)
- Placement by long reach excavator

Environmental controls

Observation Pier Construction



- 12" PVC wrapped timber piles
- 35 feet long (typical embedment 21 feet)
- Driven with impact hammer
- Environmental controls

Observation Pier Construction



- Open grated deck (Fibergrate)
- ADA drop handrails with composite
- All 316 stainless hardware
- Hurricane tie downs

Plantings



- Florida Natives Nursery
- 2" Liners
- Zone 1 – *Spartina Patens* (above MHW)
- Zone 2 – *Spartina Alterniflora* (below MHW)



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Delivering Leading-Edge Solutions



180 Day Survival Criteria Warranty

Archeological Monitoring



Current Status and Next Steps





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THANK YOU

