Bridges of the Isles

FDOT

BRIDGES OF THE ISLES

Location

Fort Lauderdale,
Broward County

Location

Isle of Venice Drive

Fiesta Way

Nurmi Drive

Royal Palm Drive

Brief history

1997

- FDOT/City Studies done in 1997 and 2000 determined the Bridges were not NR-eligible

2000

- In 2000, the SHPO disagreed and determined that the bridges were not individually eligible, but could be contributing resources to a Historic District

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Brief history

2007 – ETDM Phase

A new CRAS was done to include the Sunrise Key Bridge since it was being bundled with the 4 bridges for construction. This study inadvertently proposed a large historic district encompassing 10-12 finger islands.

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Brief history

2007 – ETDM Phase

Developed a Purpose and Need to replace the structures

- Structurally deficient –excessive maintenance costs
- Functionally obsolete – no sidewalks or bike lanes
- Hurricane evacuation route

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Brief history

2007 – ETDM Phase

Develop a strategy to keep the Class of Action at a Categorical Exclusion Type II:

- Separate Sunrise Key Bridge from the Las Olas Blvd Bridges
- Agree that the structures are a contributing element to a historic district
- Anticipate a Cultural Resource Committee and include Section 106/Section 4(f) in the project schedule
- Narrow the APE

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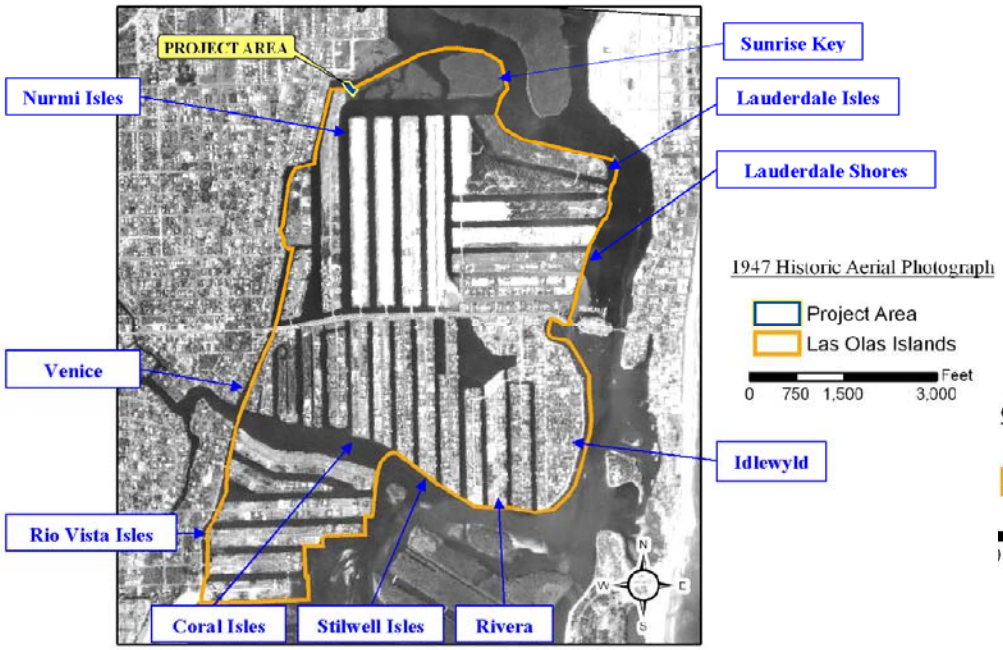
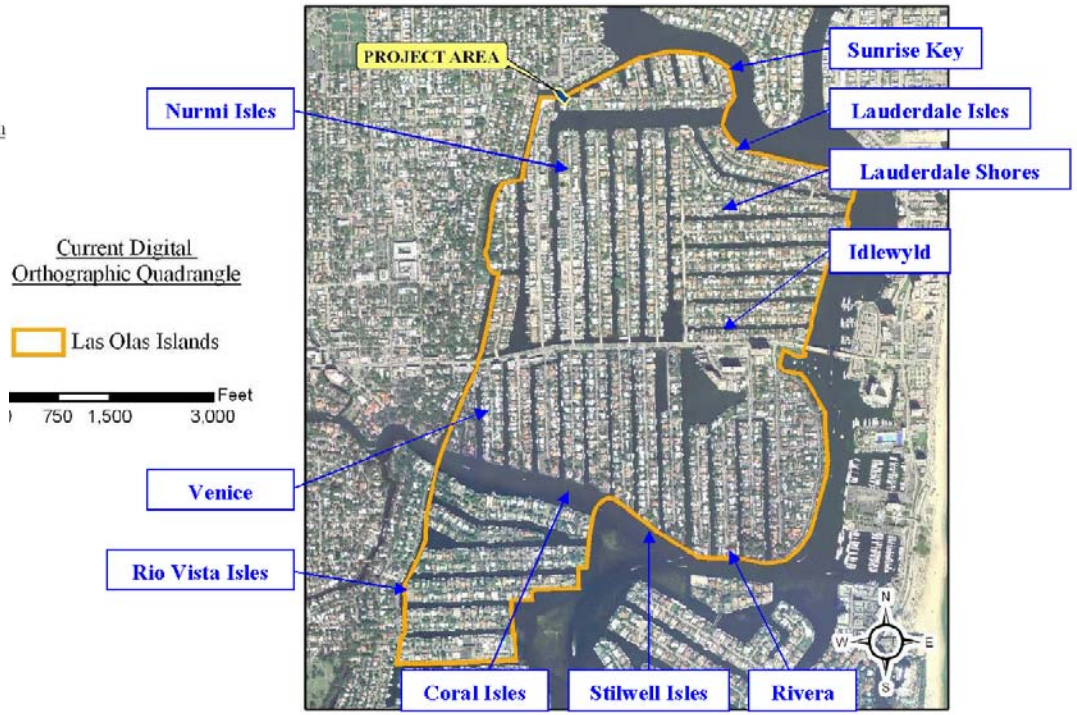
Historic Structure Assessment





Las Olas Islands District in 1947 (top left aerial) and in 2007 (bottom right aerial)

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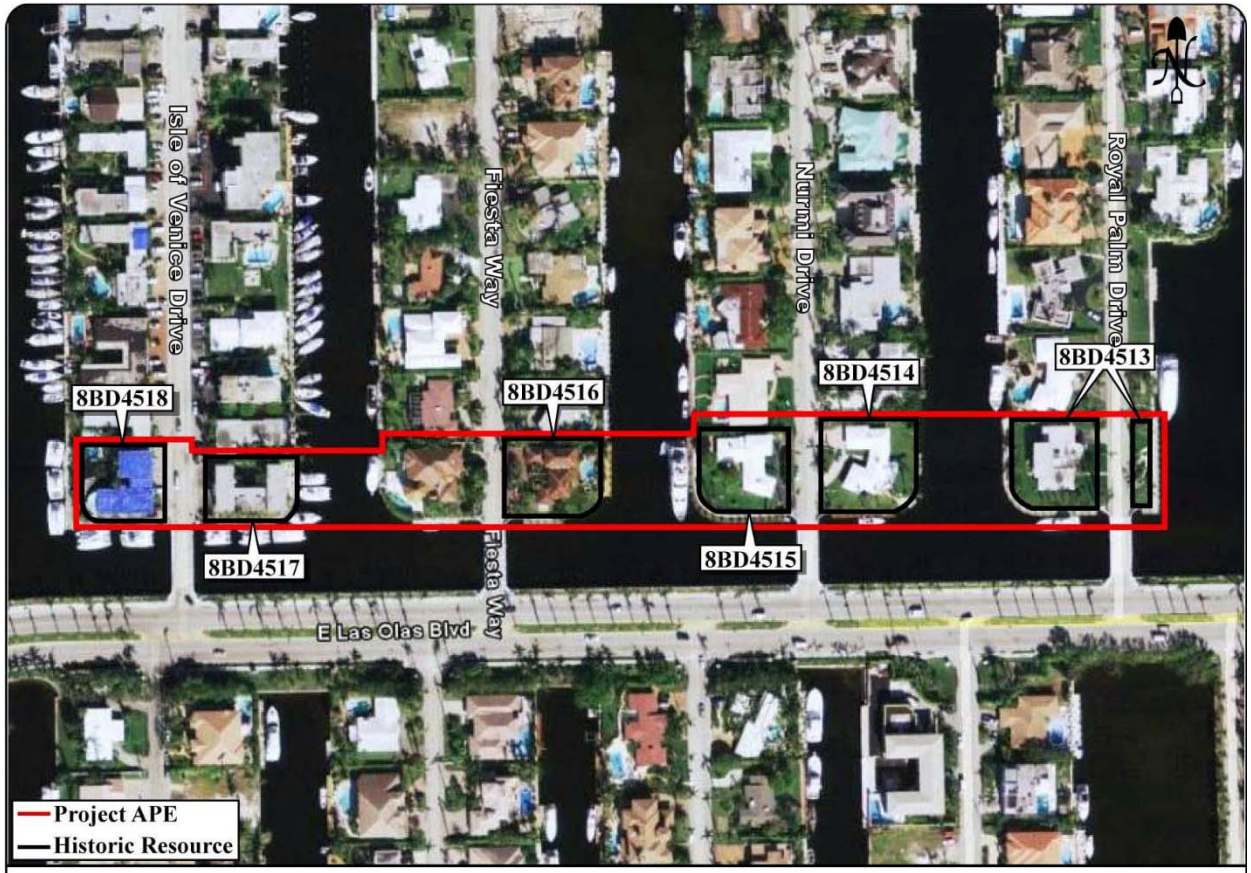

Figure 4: Locations of Historic Buildings Identified within the Project APE

Brief history

2008 – ETDM Phase

In 2008 SHPO agreed with the FDOT's determination that the Sunrise Key Bridge, originally included in the PD&E Study with the four Nurmi Isles Bridges, was not eligible for listing in the NR. The replacement of the Sunrise Key Bridge was processed as a PCE. It was included in the Design/Build contract with the Nurmi Isles bridges.

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PD&E Process

During PD&E Study…

Public involvement and Cultural Resource Committee activities were combined:

- Cultural Resources Committee (CRC) established
  - Included local historic agency reps, residents, SHPO and FHWA
- Meetings held throughout the PD&E Study
  - Public/Agency Kick off Meeting, CRC meetings, Public Hearing

During PD&E Study…

Specific design elements important to the groups:

THE RESIDENTS	vs.	LOCAL HISTORIANS
• "Humped" bridge profile • Minimal typical section allowable (include sidewalks and bikes) • Bridge name lettering and lighting • Overall character and symmetry • Shape of exterior walls and piers, plant urns		• KEEP THE ORIGINAL STRUCTURE • Add separate pedestrian bridge

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During PD&E Study…

Evaluation Matrix that allowed common sense to prevail!

- no build
- rehabilitation
- rehab with ped bridge
- A1 – one sidewalk
- A2 – two sidewalks
- A3 – sidewalks and bike lanes with 12 foot lanes

If it is not written down, it never happened

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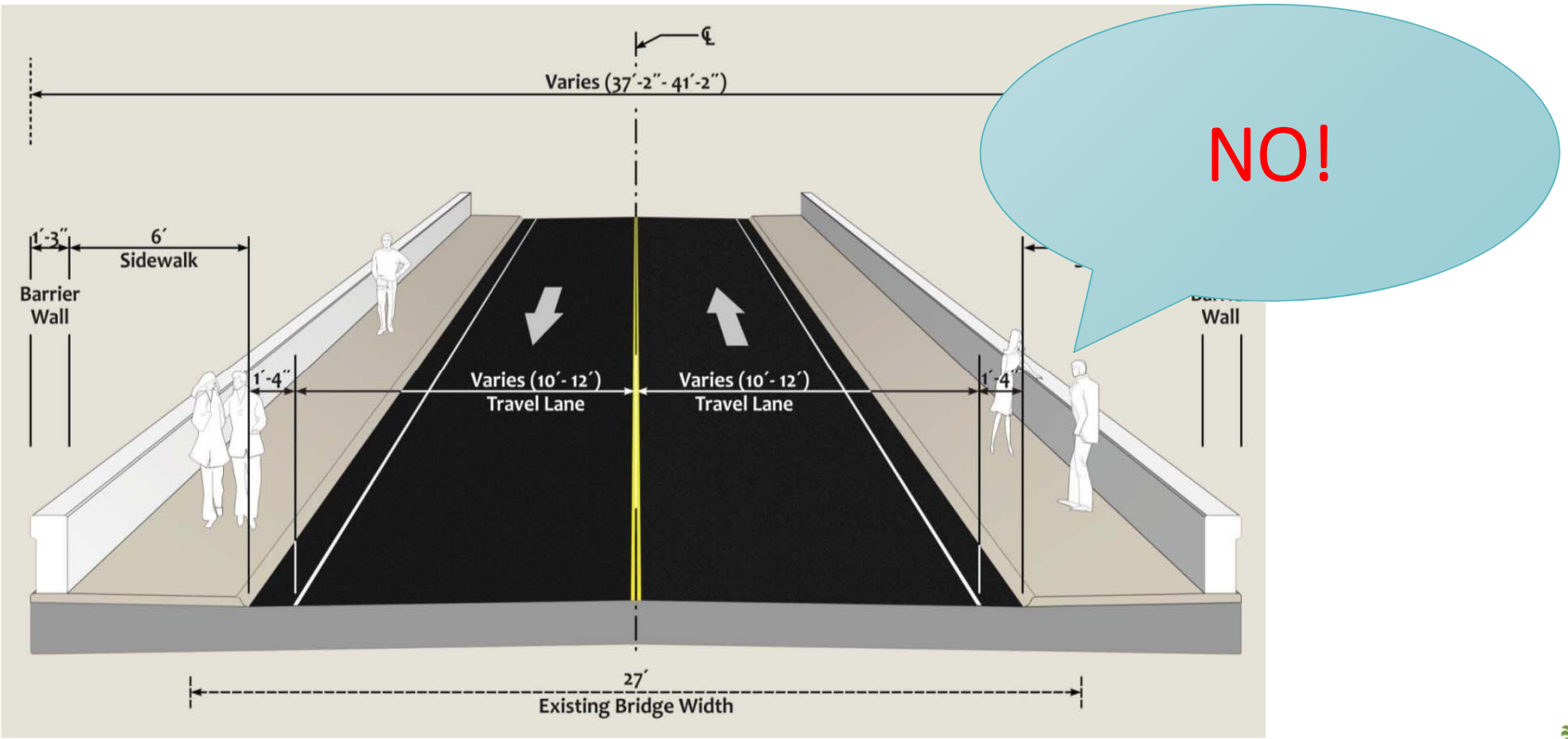
During PD&E Study…



Replacement Alternative 2 (Preferred)

During PD&E Study…

Royal Palm Proposed Bridge Design Depicting a 42” Solid Wall

Royal Palm Bridge Proposed Bridge Design, Depicting a 32” Wall with 10” Railing

During PD&E Study…

Nurmi Isles Proposed Bridge Design, Depicting a 42” Solid Wall

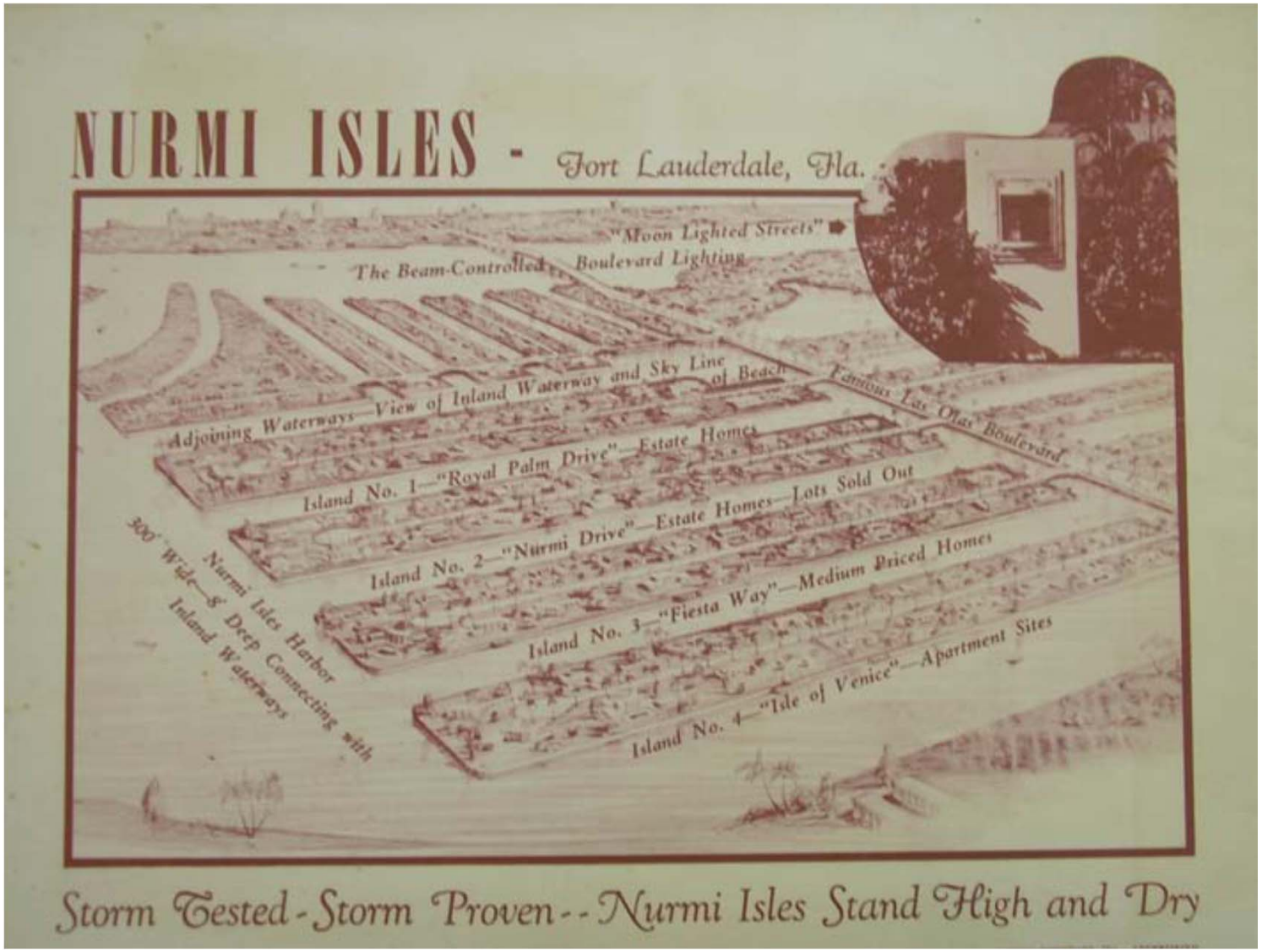
Nurmi Isles Proposed Bridge Design, Depicting a 32” Wall with a 10” Railing

Historic perspective

Unique development that allowed every property to have a view of the water

Copied in other south Florida communities

Developer was Mr. Nurmi



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Nurmi Isles Now a Reality

"Man Made" Paradise - Dreams Come True

With all who have chosen Nurmi Isles their stories are the same—"It's the one location in a lifetime search that has made our dreams come true." Here is the beauty of Venetian Waterways, with the convenience of top location in one of America's premier resorts. Here are shown just a few of the views many people of Nurmi Isles feel express their desire for living comfort at its picturesque best.

From childhood all have dreamed of living near water. Thoreau had his Walden Pond, The Potomac has its famed Mt. Vernon, but perhaps no homes on earth have used marine views so effectively as those on Nurmi Isles. Homesites on four islands, bounded on all sides with beautiful waterways—Reflections of tropical skies, sunrises and sunsets—truly a man made paradise.

Nurmi Isles are highly restricted. They appeal to people of culture and discernment. This splendid environment of congenial neighbors is one of the intangible, yet important values to be sought in residential property. An association is being planned to promote the continued beauty, exclusiveness and social life of the Islands . . . to maintain and augment their present desirability.

Venetian Waterway Front for Every Home

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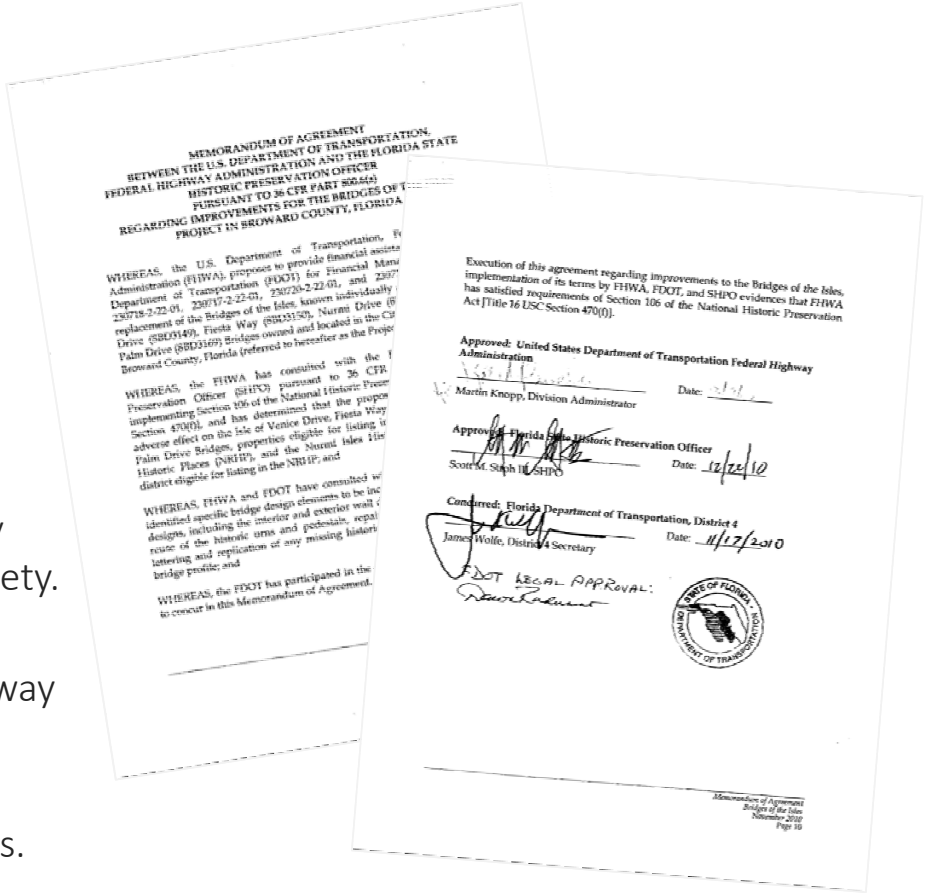
BRIDGES OF THE ISLES

During PD&E Study…

- Memorandum of Agreement (MOA)

  Included specifics regarding the aesthetics of new bridges

  Stipulated the following:
  - FDOT will complete recordation documentation of the bridges and submit copies to the SHPO, Broward County Historical Commission and Ft. Lauderdale Historical Society.
  - FDOT will compile a historic context document which includes an inventory of Broward County's historic roadway bridges and a discussion of their importance to the development of the area.
  - A historic marker will be installed adjacent to the bridges.



MEMORANDUM OF AGREEMENT
BETWEEN THE U.S. DEPARTMENT OF TRANSPORTATION,
FEDERAL HIGHWAY ADMINISTRATION AND THE FLORIDA STATE
HISTORIC PRESERVATION OFFICER
PURSUANT TO 36 CFR PART 800.6(c)
REGARDING IMPROVEMENTS FOR THE BRIDGES OF T
PROJECT IN BROWARD COUNTY, FLORIDA

Execution of this agreement regarding improvements to the Bridges of the Isles, implementation of its terms by FHWA, FDOT, and SHPO evidences that FHWA has satisfied requirements of Section 106 of the National Historic Preservation Act [Title 16 USC Section 470(f)].

Approved: United States Department of Transportation Federal Highway Administration

Martin Knopp, Division Administrator — Date:

Approved: Florida State Historic Preservation Officer

Scott M. Stiph II, SHPO — Date: 12/22/10

Concurred: Florida Department of Transportation, District 4

James Wolfe, District 4 Secretary — Date: 11/17/2010

FDOT LEGAL APPROVAL:

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

Memorandum of Agreement
Bridges of the Isles
November 2010
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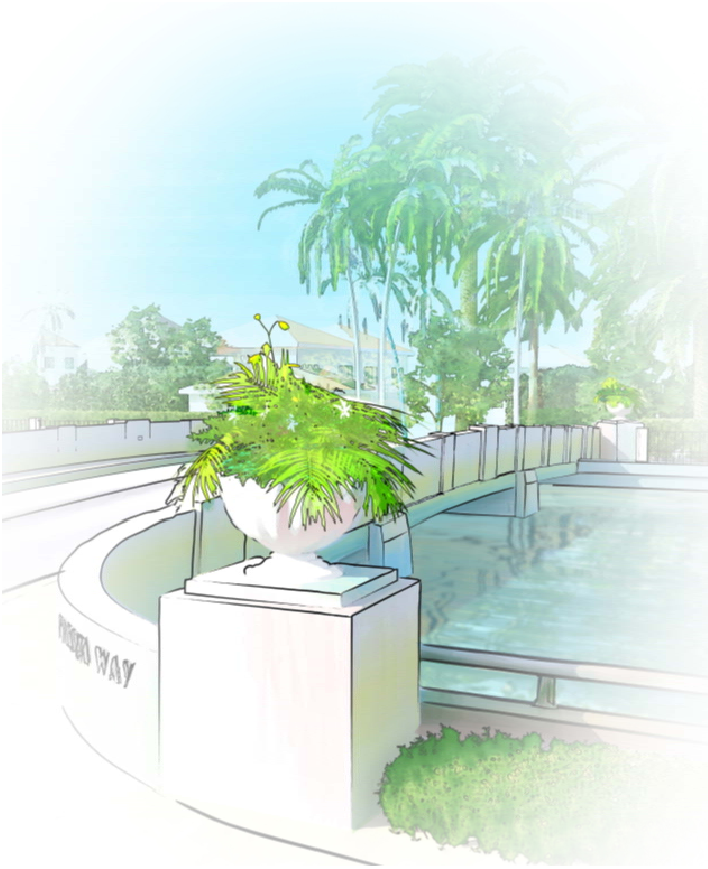
BRIDGES OF THE ISLES

Design Build Process

Design Build

Critical Elements

- Preserving the architectural and aesthetic components of the bridges
- Maintaining safe access for the residents and local community



Design Build

- Address stakeholders commitments that were established during the PD&E Study phase and solidified in the Memorandum of Agreement (MOA)
- Maintain safe access to the Nurmi Finger Islands and Sunrise Key throughout construction
- Utilize accelerated bridge construction techniques to minimize impacts to local community mobility and construction duration
- Reduce environmental impacts

Historic urn and pedestal

Historic lettering

Existing bridge lighting

Manatees at Numi Bridges

by the Structural Engineer in responsible charge of the wall design.

Note to developer of the RFP: *Partial Height Walls: Partial height walls such as perched and toe-walls are generally not desirable due to maintenance issues related to mowing and maintaining adjacent fill slopes. In general, full height walls better facilitate future widenings. See Structures Design Guidelines Figure 3-20. Include restrictions regarding partial height walls as deemed appropriate based on project specific requirements.*

d. For bridges over navigable waterways, establish the required pier strengths using the MathCadd program furnished by the Department if no specific pier strength is listed in the Design and Criteria Package. The MathCadd program furnished by the Department allows for the proposed bridge geometry to be input by the Engineer. Other parameters such as water traffic, waterway characteristics, etc. may not be changed. This assures that all Design-Build Firms are designing on the same assumptions other than the specific bridge layout that each is proposing.

e. MOA Stipulations: The following applies specifically to the four historic bridges; Fiesta Way, Nurmi Drive, Royal Palm, and Isle of Venice Bridges.

- Identified specific bridge design elements to be incorporated into the new bridge designs, including the interior and exterior wall design, railing design, lighting, reuse of the historic urns and pedestals, repair and reuse of historic bridge lettering and replication of any missing historic bridge lettering, and humped bridge profile

- Nurmi Isles Historic District side or north side of the Project, all construction activity will take place within the existing right-of-way, with the exception of a temporary construction easement on the northeast and northwest sides of the bridges that is needed temporarily for construction activities.

Pre-Construction

Phase I

Pre-construction drilling on bridge – June 2013

Drilling to test soil underneath Fiesta Way Bridge (left) and Isles of Venice Bridge (right) – July 2013

Temporary utility relocation at Isles of Venice Bridge – Nov 2013

Lessons Learned

- Involve Survey and Mapping as early as possible
  - Discrepancy with City ROW vs private property
- Involve ROW as early as possible
  - Coordination with yacht owners could have been worked out earlier
- Re-survey for submerged vegetation
  - Design/Build Team “found” johnson seagrass after contract was awarded