City of St. Augustine: Building Resiliency Through Partnerships

Jessica Beach, P.E., Public Works
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Isabelle Lopez, City Attorney

July 31, 2019
Florida Local Environmental Resource Agencies Annual Conference
Avenida Menendez Historic Seawall – Idea to Implementation

Project Location Map and Historic Photos
Past Storms and Damage

<table>
<thead>
<tr>
<th>Dates</th>
<th>Event</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>1846</td>
<td>Hurricane</td>
<td>Partial Collapse</td>
</tr>
<tr>
<td>September 1999</td>
<td>Hurricane Floyd</td>
<td>Wall tilted</td>
</tr>
<tr>
<td>October 1999</td>
<td>Hurricane Irene</td>
<td>Top section toppled</td>
</tr>
<tr>
<td><strong>September 2001</strong></td>
<td><strong>Tropical Storm Gabrielle</strong></td>
<td>Flooding, partial collapse</td>
</tr>
<tr>
<td>September 2004</td>
<td>Hurricane Frances</td>
<td>$60,000 damages</td>
</tr>
<tr>
<td>August 2008</td>
<td>Tropical Storm Faye</td>
<td>150-foot section breached</td>
</tr>
</tbody>
</table>
Avenida Menendez Historic Seawall – Idea to Implementation

T.S. Gabrielle 2001
Avenida Menendez Historic Seawall – Idea to Implementation

- Required a lot of **consensus building** from the public (2001-2008)
- Designed for a Category 1 Storm
- Balance between flood protection and Historic Preservation
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
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<tbody>
<tr>
<td>September 2001</td>
<td>City Commission approved moving forward with Seawall Project</td>
</tr>
<tr>
<td>July – August 2002</td>
<td>Information meeting about seawall; Presentation to City Residents</td>
</tr>
<tr>
<td>October 2002</td>
<td>City Commission, staff presentation on new seawall &amp; 2 Open House meetings to discuss project</td>
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<tr>
<td>January 2003</td>
<td>Public Workshop on Seawall, City Commission approved FIND grant for engineering design</td>
</tr>
<tr>
<td>March 2004</td>
<td>Public Hear for CDBG Grant ($750,000)</td>
</tr>
<tr>
<td>January 2005</td>
<td>Section 106 Review</td>
</tr>
<tr>
<td>March 2005</td>
<td>SHPO approval</td>
</tr>
<tr>
<td>March 2006</td>
<td>Certificate of Appropriateness - HARB</td>
</tr>
<tr>
<td>September 2008</td>
<td>Presentation on damage to Seawall from TS Faye; City Commission meeting – announced FEMA funding eligible</td>
</tr>
<tr>
<td>2008-2011</td>
<td>Design, permitting, bidding of project</td>
</tr>
<tr>
<td>2011-2013</td>
<td>Construction and project close out</td>
</tr>
</tbody>
</table>
Avenida Menendez Historic Seawall – Idea to Implementation

- 2+ years construction (2011-2013)
- Historical wall started tilting & collapsing (vibrations)
- Re-design parapets (façade) & stormwater system
Avenida Menendez Historic Seawall – Idea to Implementation

- Operate under environmental and archaeological restrictions
- Habitat creation areas - environmental mitigation (salt marsh restoration)
- SunTree Nutrient Separating Baffle Boxes for Water Quality

<table>
<thead>
<tr>
<th>Project Cost</th>
<th>$ 7,091,500</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEMA through HMGP (75%)</td>
<td>$ 4,743,750</td>
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<tr>
<td>City of St. Augustine (25%)</td>
<td>$ 2,347,750</td>
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</tbody>
</table>
Avenida Menendez Historic Seawall – Idea to Implementation

- Constructed to elevation 7.1 NAVD88 (historic seawall around 5 NAVD88)
- 1200 linear feet
- APWA Project of the Year (2015) for Historical Restoration/Preservation
St Augustine Seawall: Historical Aspects

Jenny Wolfe, Historic Preservation Officer

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Resilient Heritage: St. Augustine Historic Seawall

Images courtesy of St. Augustine Historical Society (ca. 1885)
PARTNERSHIPS THROUGH PROJECT TIMELINE

2001
BUILDING COMMUNITY CONSENSUS

2004-2005
ARCHAEOLOGY AND SECTION 106 REPORT

2005-2006
LOCAL BOARD REVIEW

2003 - 2005
CONSULTATION WITH STATE AND FEDERAL PRESERVATION OFFICIALS ON PROJECT IMPACTS

2011-2013
ADDITIONAL DESIGN AND MITIGATION REVIEW CONSTRUCTION MONITORING

Rendering from Bellomo-Herbert Company

*Timeline specific to historic preservation review processes
Resilient Heritage: St. Augustine Seawall Mitigation for Historic Preservation

HISTORIC ST. AUGUSTINE SEAWALL

National Historic Preservation Act
Section 106 Report

Prepared for
City of St. Augustine

Prepared by
Cecile-Marie Sastre, Ph. D.
Historian

January 10, 2005

FEDERAL REQUIREMENTS

LOCAL DESIGN CONSIDERATIONS

ALTERNATIVES

<table>
<thead>
<tr>
<th>GOALS</th>
<th>Rehabilitation</th>
<th>6’ Promenade with Parking</th>
<th>4’ Promenade with Parking</th>
<th>10’ Promenade with Parking</th>
<th>10’ Promenade without Parking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historic Preservation</td>
<td></td>
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<tr>
<td>Flood Control</td>
<td></td>
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<tr>
<td>Parking</td>
<td></td>
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<tr>
<td>Circulation</td>
<td></td>
<td></td>
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<tr>
<td>Vista</td>
<td></td>
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<tr>
<td>Amenities</td>
<td></td>
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</table>

Rendering from Taylor Engineering
Resilient Heritage: St. Augustine Seawall Mitigation for Historic Preservation
Resilient Heritage: St. Augustine Seawall Mitigation for Historic Preservation
Resilient Heritage: St. Augustine Seawall Mitigation for Historic Preservation
Resilient Heritage: St. Augustine Seawall Mitigation for Historic Preservation
Resilient Heritage: Other Partnerships in St. Augustine

Images courtesy University of Florida
St Augustine Seawall: Funding Sources and Legal Aspects

Isabelle Lopez, City Attorney

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FUNDING SOURCES:

➢ **AD VALOREM TAXATION**

➢ **NEIGHBORHOOD OR BUSINESS IMPROVEMENT DISTRICT**

➢ **SPECIAL ASSESSMENTS**

➢ **LOCAL DISCRETIONARY TAX**

➢ **GRANTS**

- **AD VALOREM**: Broad source of revenue based on property taxes can be used for any public project.

- **DISTRICTS**: §163.511 Ad valorem tax via referendum specific to district only, up to maximum of 2 mills, includes drainage and street improvements.

- **SPECIAL ASSESSMENTS**: Drainage, Seawalls, Streets.
  Not a tax, no limits, but must pass 2-prong test:
  The property assessed must gain a special benefit
  The assessment must be apportioned equitably.

- **LOCAL DISCRETIONARY TAX**:
  New option per §125.0104 tourist development tax now includes build/repair/improve public facilities needed to increase tourist-related business activities (includes transportation, drainage, pedestrian).

- **GRANTS**: FEMA Hazard Mitigation, EPA Smart Growth.
  [http://toolkit.climate.gov/content/funding-opportunities](http://toolkit.climate.gov/content/funding-opportunities)
FUNDING SOURCES:

- **Impact Fee/Mobility Fee**: Reflect cost of adaptation infrastructure that services new development; mobility fees designed with level of service (LOS) that factors adaptation retrofits.

- **User Fee**: Utilities pass on the costs of maintaining the system, stormwater utility fees can fund the adaptation capital costs of providing the service to the end user.

- **TDRs**: Allow density on vulnerable properties to be transferred to other parcels; “sending” ➔ “receiving”.

- **CDDs**: Form of government, can factor costs of resiliency into capital improvements specific to it.

- **HOAs**: §336.125 Transfer public roads to private HOA within residential subdivisions, may be favored if community control over level and cost of adaptation.

- **CRAs**: Captures increase in property taxes (TIF) and sets it aside for capital projects to improve “blight” (includes inadequate street layout & unsafe conditions).
FUNDING SOURCES:

- **PUBLIC-PRIVATE PARTNERSHIP** (§287.05712)
- **MUNICIPAL BOND**
- **GOVERNMENT RISK FINANCING**

- **P3**: Contract between public & private entity providing for private funding of infrastructure in exchange for revenue sharing (toll roads, parking structures).

- **MUNICIPAL BONDS**:
  1) **General Obligation Bond**: Full faith & credit, voter approved;
  2) **Ad Valorem Bond**: Secured by proceeds of ad valorem taxes, voter approved;
  3) **Revenue Bond**: Payable from revenues not ad valorem (utility fees, impact/mobility fees, parking fees);
  4) **Improvement Bond**: payable from special assessments for the project.

- **GOVERNMENT RISK FINANCING**:
  1) **Catastrophe (Cat) Bond**: Insurance co. issues bond through bank, investors buy bond, if no catastrophe in set period, insurance co. pays investors, FEMA launched 1st cat bond to transfer risk of NFIP in 2018.
  2) **Parametric Hurricane Policy**: Does not indemnify pure loss but agrees to payment if set metric is reached (wind speeds), Alabama obtained 1st state parametric hurricane policy in 2010.
(10)(a) This section does not apply to *any actions* taken by a governmental entity which relate to the operation, maintenance, or expansion of transportation facilities, and this section does not affect existing law regarding eminent domain relating to transportation.

(b) This section does not apply to *any actions* taken by a county with respect to the adoption of a Flood Insurance Rate Map issued by the Federal Emergency Management Agency for the purpose of participating in the National Flood Insurance Program, unless such adoption incorrectly applies an aspect of the Flood Insurance Rate Map to the property in such a way as to, but not limited to, incorrectly assess the elevation of the property. Question: *could this include freeboard rule, or other local code created mitigation as part of NFIP community?*

Beware of Jordan v. St. Johns County (5th DCA 2011) (not Bert Harris but inv. condemnation; failure to either maintain or abandon road in light of changing environmental conditions). Question: *could adaptation area plus adopted LOS have solved the government’s dilemma?*