



Lake Maria Sanchez – Flood Mitigation and Drainage Project

Public Information Meeting
Thursday October 10, 2019
@ 5PM
City Hall – Alcazar Room



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EST. 1565

Lake Maria Sanchez Flood Mitigation and Drainage Project

- Current City Challenges (stormwater)
 - Aging infrastructure
 - Undersized collection system
 - Low-lying and coastal location (within a flood zone)
 - Highly developed (high impervious area)
 - **Subject to flooding – both from rainfall and tidal influence**

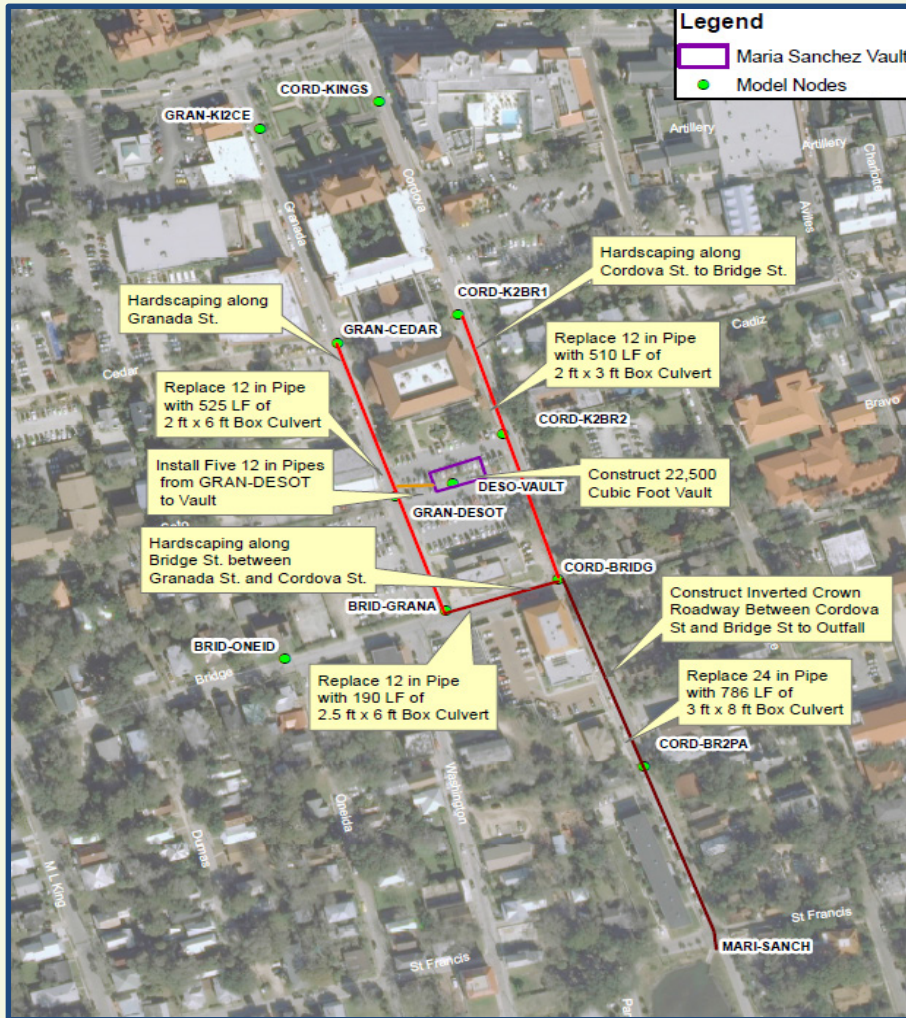


Photo credits: Miami Herald, Hurricane Matthew



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Lake Maria Sanchez Flood Mitigation and Drainage Project



- City's Stormwater Master Plan – 2013
 - Identified 3 pilot projects
- Downtown Drainage Improvements
 - Cordova, Granada, and Bridge Streets
 - Upgrade collection system
 - Improve conveyance to Lake
 - Provide stormwater treatment



Lake Maria Sanchez Flood Mitigation and Drainage Project



- The City participated in a community resilience initiative with FL Dept. Economic Opportunity (FDEO, 2015-2017):
 - Coastal Vulnerability Assessment
 - Strategic Adaptation Plan
- Three types of coastal flooding:
 - Mean Higher High Water (MHHW)
 - **Nuisance flooding**
 - 1% annual chance (i.e. 100-year flood)



Lake Maria Sanchez Flood Mitigation and Drainage Project



- Hurricane Matthew 2016– Federal Funding Available for Hazard Mitigation Projects
- City re-visited the Downtown Drainage Improvement project:
 - Increased scope
 - Address future vulnerabilities
 - Address current flooding
 - Make the City more resilient
- The City applied in June 2017 for Federal funding for this project
- FEMA awarded funding, went to Commission with contract February 2018



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Lake Maria Sanchez Flood Mitigation and Drainage Project

Project Objectives

Flood Protection (Structures)

- ✓ Estimated 200 Acre Benefit Area
- ✓ 25-Year Storm Event + 2050 Sea Level Rise
(6.4 Feet Storm Surge)
- ✓ Protect 186 Structures
(Currently at Risk)

Flood Protection (Roadways)

- ✓ 10-Year, 24-Hour Rainfall Event Level of Service
(7.6 inches)
- ✓ Protected from Coastal Flooding
- ✓ Reduces both Depth and Duration of Flooding



St. Francis and Cordova





Critical Components

- ✓ Conveyance
- ✓ Pump Station
- ✓ Bulkhead
- ✓ Tide Gates

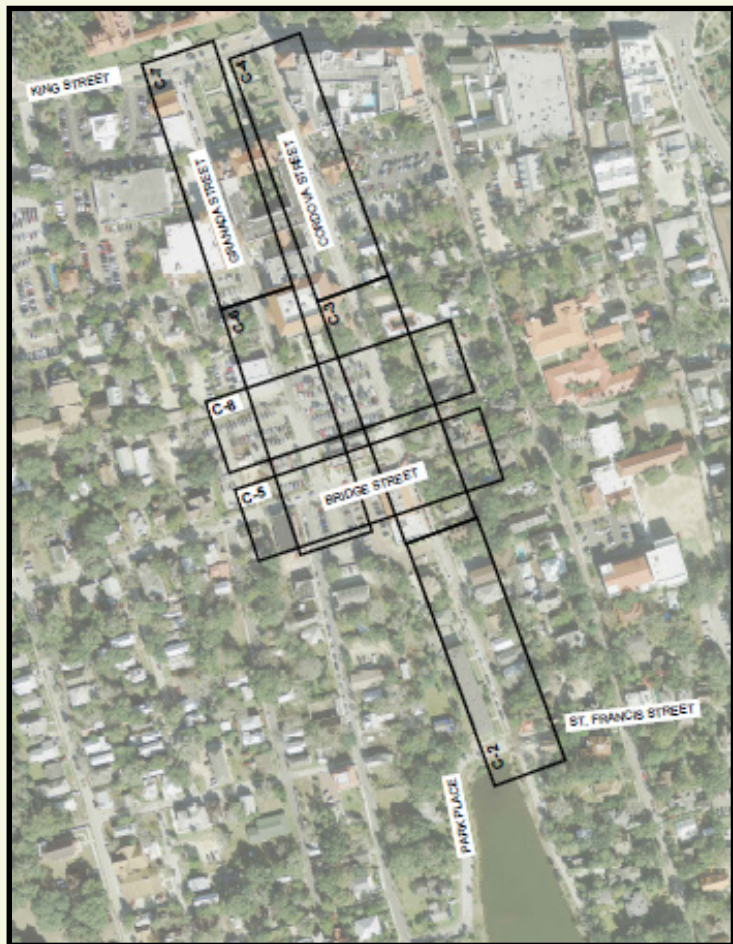


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Stormwater Conveyance System Improvements

Features

- ✓ Historical, Downtown Area (Granada, Cordova, and Bridge Street to Lake Maria Sanchez)
- ✓ Improve Collection, Storage, and Conveyance
- ✓ 10-Year, 24-Hour Rainfall Event (7.6 Inches)
Roadway Level of Service



Key Map



Lake Maria Sanchez



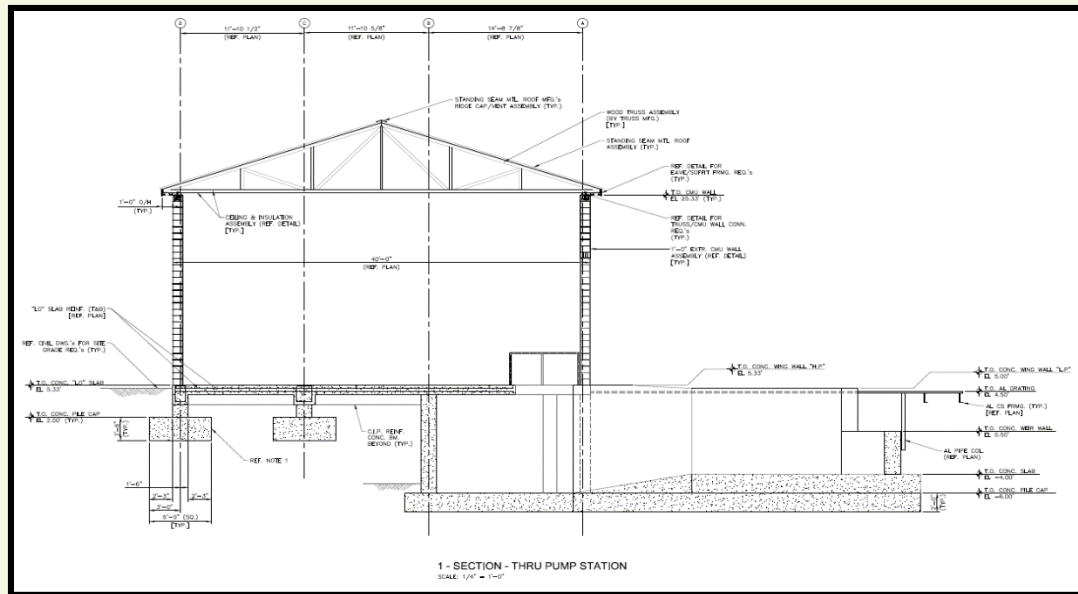
DeSoto/Granada



Stormwater Pump Station

Features

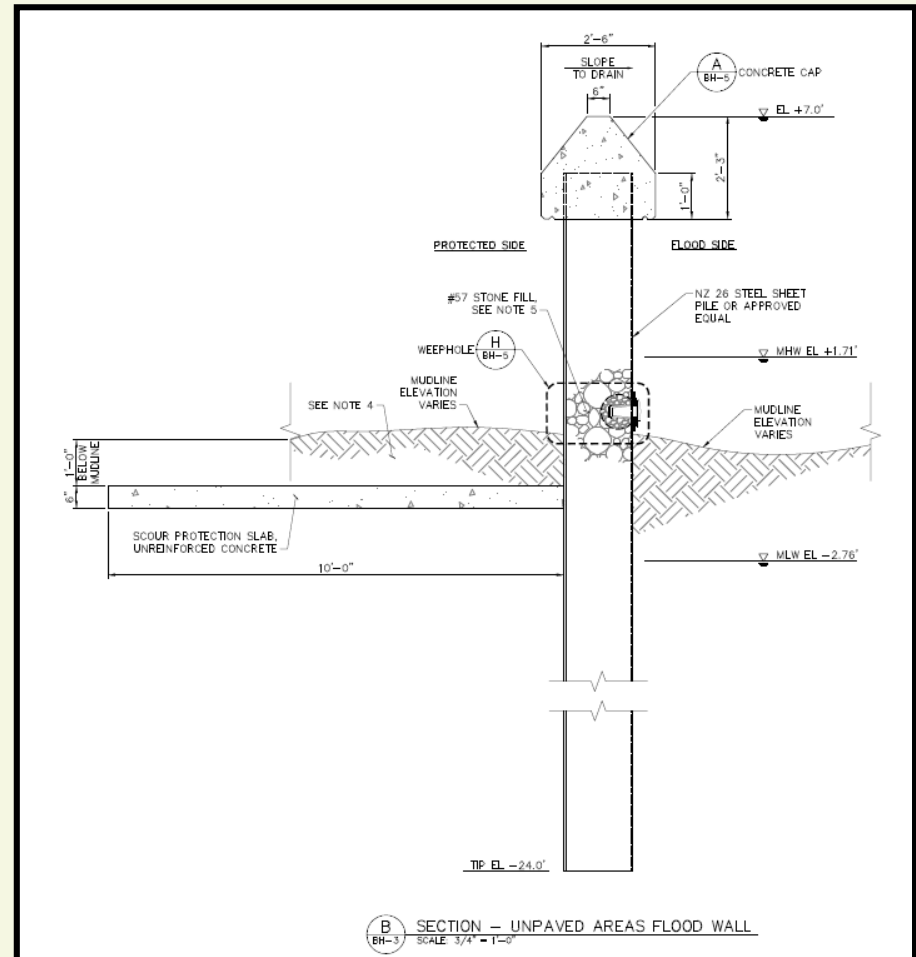
- ✓ Submersible Pumps
- ✓ 100 CFS (65 MGD)
- ✓ Automated Operations
- ✓ Back-Up Generator
- ✓ Critical Equipment Protected (100 Year Flood Event)
- ✓ Off-Street Maintenance
- ✓ Tidal Flow to/from Lake Maria Sanchez



Bulkhead – South of Lake Maria Sanchez

Features

- ✓ Protects Residential Structures
- ✓ 1,900 Linear Feet @ 7.0 Feet Elevation
- ✓ Restricted Pedestrian Access
- ✓ Sustainable Design
- ✓ Environmentally Sound Construction



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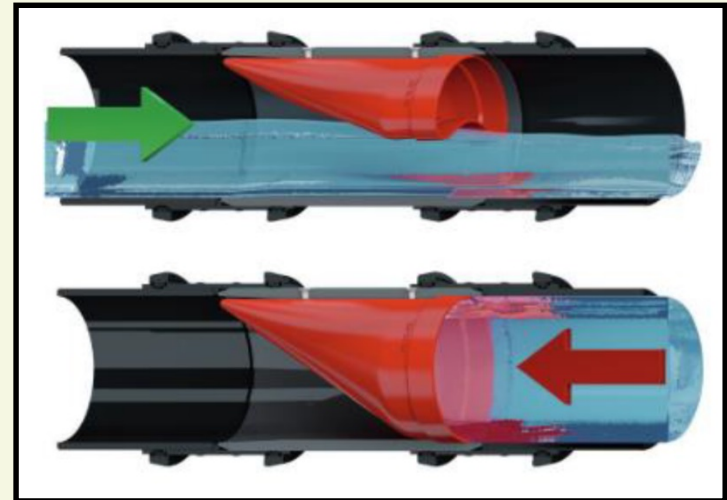
Tide Gates

Features

- ✓ Installed on Existing Drainage Pipes
- ✓ Prevents Tidal Backflow & Flooding
- ✓ Approx. 26 Locations



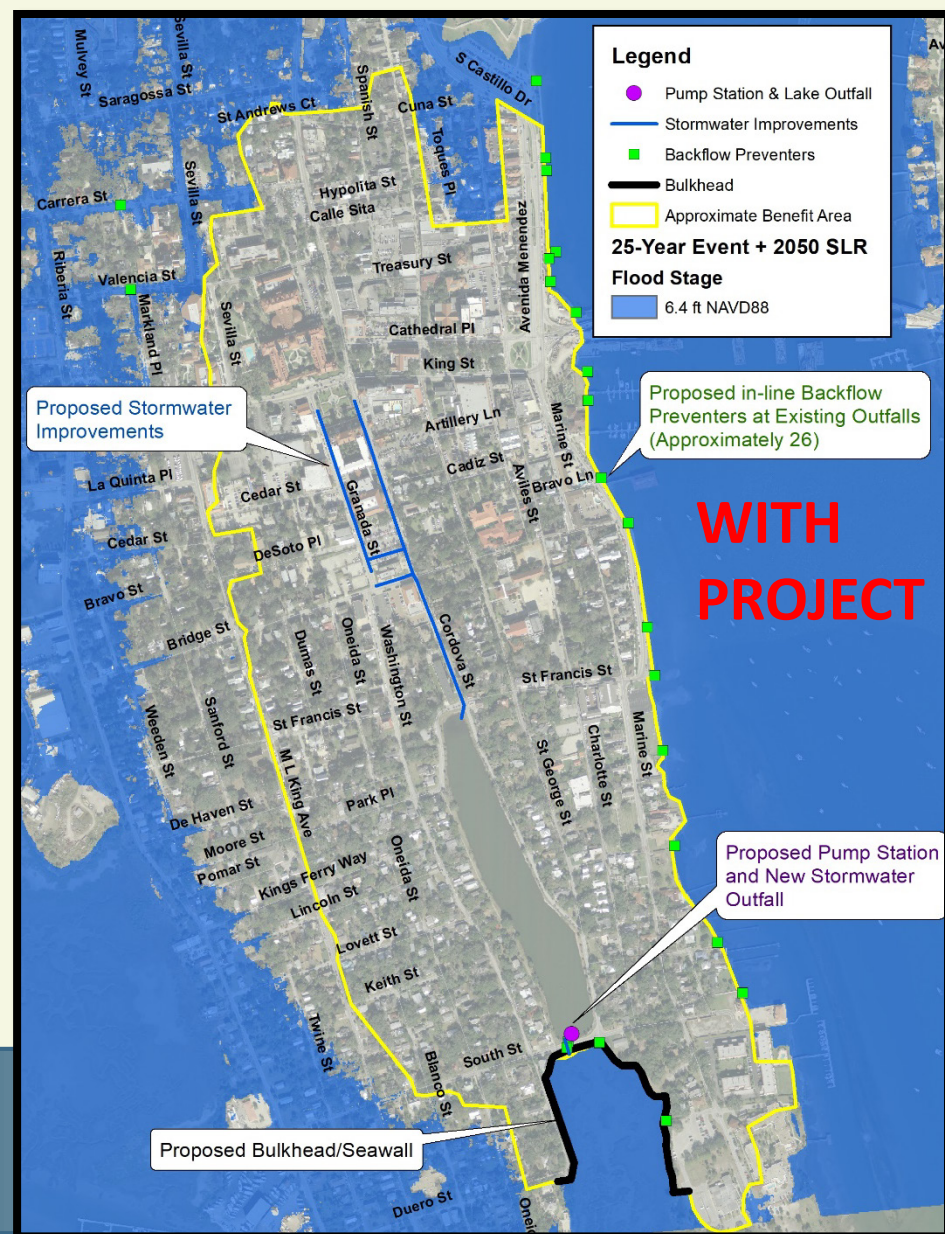
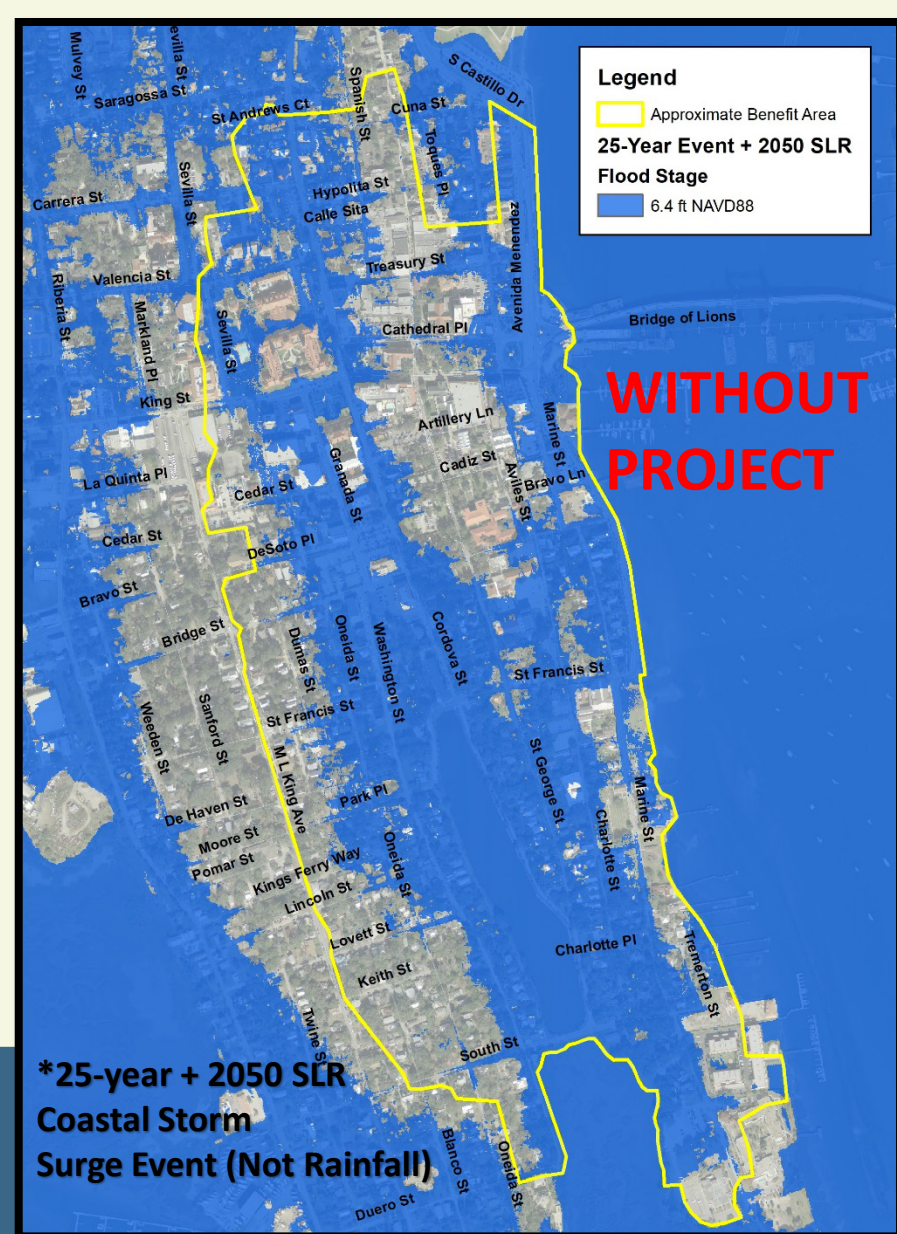
Tidal Flooding
St. Francis/Cordova



Tide Gate (TYP)



Lake Maria Sanchez Flood Mitigation – Coastal Flood Level of Protection*



Lake Maria Sanchez Flood Mitigation – Stormwater Flood Level of Protection*



Maintenance of Traffic

- ✓ Vehicles
- ✓ Pedestrians
- ✓ Bicyclists



Maintenance of Traffic Plans

Temporary Access

- ✓ Residences
- ✓ Businesses
- ✓ Tourists



Wayfinder Signs



Lake Maria Sanchez Flood Mitigation and Drainage Project – Next Steps

- Complete design for FEMA scope of the project (end of this year, 2019)
- Public Outreach
 - Public Information Meeting – Thursday, October 10, 2019
 - City website for up to date information:
(www.citystaug.com/LakeMariaSanchez)
 - Project “Fact Sheet” – get the project facts!
 - Frequency Asked Questions
 - Submit your comments at stormwater@citystaug.com or call Public Works at (904) 825-1040
- Submit final design to FEMA, await their review and approval before proceeding towards bidding and construction (likely late 2020 or early 2021)





Project Partners:



FEMA



FloridaDisaster.ORG
DIVISION OF EMERGENCY MANAGEMENT



MCKIM & CREED
ENGINEERS SURVEYORS PLANNERS



moffatt & nichol



Applied Sciences



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