



Coastal Area Action Plan
**Inventory of Resilience and
Mitigation Projects**

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Introduction

To assist with Task 2 of the City of Tampa Coastal Area Action Plan – Strengthen ties with key community lifelines and identify specific projects to mitigate impacts of tropical events and severe flooding – Applied Sciences has created an inventory of current and proposed mitigation projects for the areas south of Gandy Boulevard and in Palmetto Beach.

The following steps were taken to gather pertinent information:

- Review of the Capital Improvement Projects (CIPs) listed on the City’s website
- Email communication through Benesch and Stephen Benson to City stakeholder departments
- Calls and communication with stakeholder departments
- Review of known past work, completed by Applied Sciences

Projects are mapped collectively and individually on the following pages. A summary of findings is included. Other studies or regulatory documents have also been reviewed and summarized in the lists below.

General Planning Guidance, from Past Studies

Planning Documents that relate to sea level rise include:

- The Comprehensive Plan
- The Code of Ordinances, mostly Building + Land Development Codes
- Stormwater Technical Standards Manual, for Public and Private
- Local Building Code Amendments
- The Transportation Technical Manual
- The Local Mitigation Strategy
- The Post-Disaster Redevelopment Plan
- The Environmental Protection Commission in Hillsborough County
- Regional Water Management District policies and guidelines
- Also, in Florida, Statewide mandates such as those found under Chapter 163, Intergovernmental Programs, which regulates policy such as Peril of Flood

The Community Vulnerability Study (Hillsborough County) provided the following recommendations that may be related to this study:

- Identify public facilities within the CHHA, for possible relocation and space allocation (CVS)
- Identify and potentially remove mobile homes within the CHHA (CVS)
- Identify and evaluate industrial or toxic sites within the CHHA (CVS)
- Undergrounding of utilities within the CHHA (CVS, SLR Regs)
- Establish real estate disclosure program within CHHA, or other overlay? (CVS)
- Consider a citizen plan-implementation steering committee to monitor progress on local mitigation actions (CVS)
- Review repetitive loss properties and consider for integration into conservation projects (+/- CVS)
- Evaluate transportation routes and alternatives for increased storminess and hurricanes (CVS)

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- City/County buildings shall be located, design and constructed so that they may be utilized for hurricane shelters (CVS)
- Prioritize roadway maintenance and construction projects on evacuation routes (CVS)
- Ensure sheltering needs are met (CVS)
- In multi-family buildings in high-risk flood zones, include secure gathering/sheltering space for sheltering in-place, with backup potable water (CVS)

The Regulatory Approach to Sea Level Rise (City of Tampa) provided five primary issues related to sea level rise and coastal development:

- Open space and government properties are primarily impacted in the near future (40 years)
- Clustered private lands are impacted by sea level rise
- A primary concern is hardened shorelines and loss of habitat
- Subsurface hydrology issues should be in focus, potentially more than surface water flows
- Flood insurance has a strong relationship with increased flooding hazard. There is potentially an uncertain future related to flood insurance.

The study also provided the following recommendations that may be related to the Coastal Area Action Plan:

- Commit to planning and permitting toward future sea level and groundwater height scenarios
- Consider secondary impacts of sea level rise
- Map and inventory susceptible infrastructure
- Develop flexible coastline space
- Create overlay zones
- Consider building height regulations and, in doing so, also consider design guidelines
- Establish (erosion based) setbacks
- Establish sea wall standards, working toward the removal of sea walls
- Increase living shorelines
- Consider rolling and conservation easements
- Consider impact fees for coastal development, especially where sea walls are included
- Consider tax incentives for developing density out of the floodway
- Consider real estate disclosures

Existing and Upcoming Projects

Two primary areas within the City of Tampa are the subject of this study: South of Gandy Boulevard and the Palmetto Beach Community. To gather context about existing resilience issues, a study of existing and planned projects were reviewed. These projects are as follows:

South of Gandy

Coastal Access from the Interior

At the west side of the peninsula, multiple projects are focused on constructing roadway improvements and/or trails to provide pedestrian access to the coastal edge, where community amenities have existed but are also increasing due to new development. Specific sites include Tyson Avenue and Prescott Street, each of which connect dense urban areas with waterfront restaurant areas.

Wastewater Pumps

Other projects include a wastewater pumping station near Port Tampa and also rehabilitating wastewater collection piping in the central area of the peninsula.

New and Renovated Parks

A parks project will renovate Gandy and A.J. Palonis Parks, with a trail connection under the Gandy Bridge. This area provides passive recreational opportunities including fishing, picnicking, walking, kayak and boat launch, as well as other passive recreational activities. Another project in the central area will construct a large-scale stormwater park, called MacDill 48.

Pedestrian Safety

Interbay, a primary road that connects east and west sides, will be improved for roadway safety and pedestrian mobility.

Water Distribution

Near Ballast Point projects are focused on water distribution, with a minor stormwater project.

Stormwater Analysis

The City has recently completed a stormwater master plan for the Lower Peninsula, which includes all areas between Gandy Boulevard and MacDill Air Force Base. This project identified areas susceptible to flooding with a suite of projects to make improvements.

Resilience for MacDill AFB

Currently, MacDill Air Force Base is conducting a 'Resilience Review' study to evaluate factors, including those outside of Base boundaries, that influence its resilience status.

Project Map

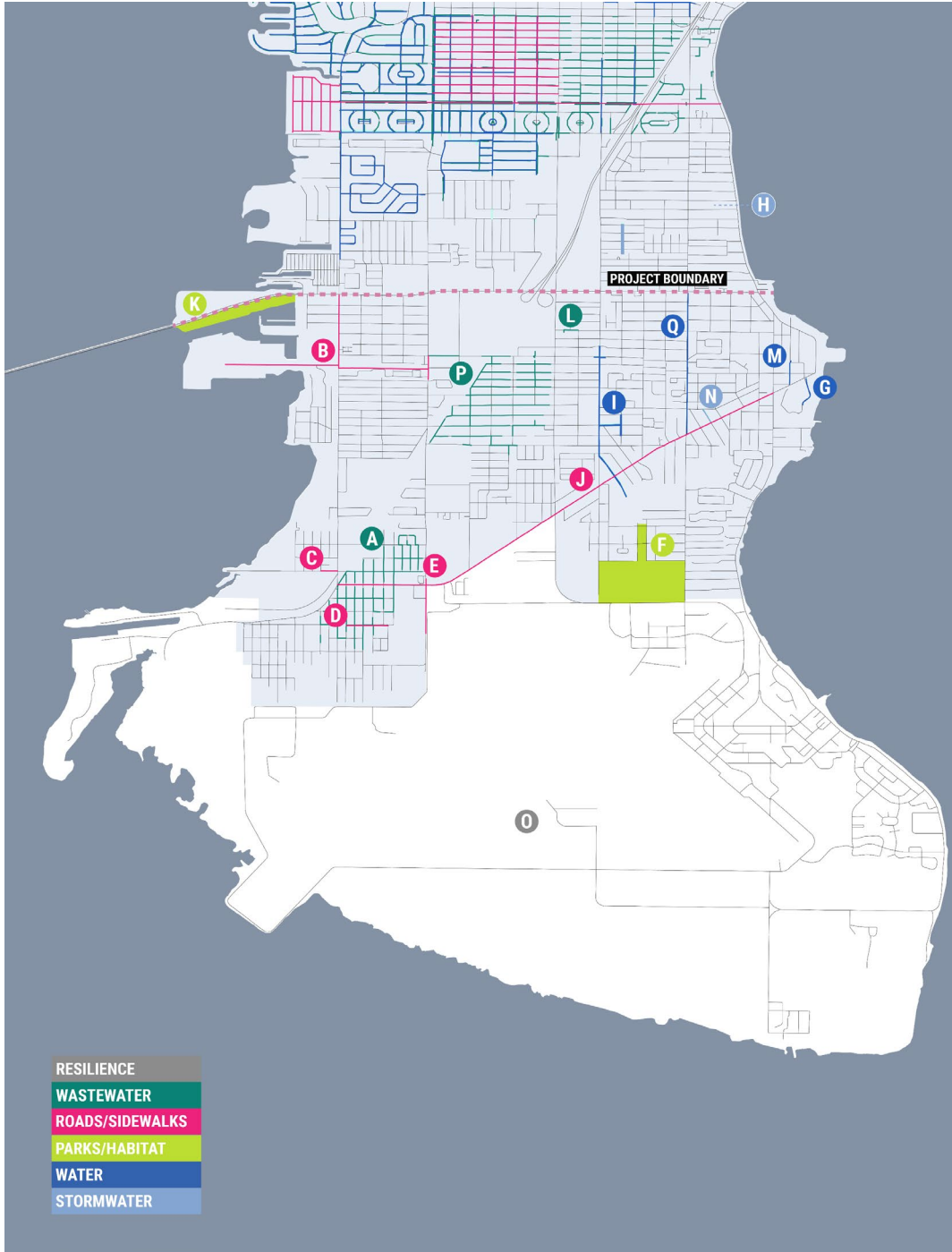


Figure 1 - South of Gandy Project Location Map

Projects



A. Wastewater Pumping Station Rehabilitation Prescott Pump Station

This project provides for the rehabilitation of the wastewater pumping station at 4806 Prescott St. Project will include replacement of pumps, piping, valves, and electrical improvements to ensure continued reliability of the station.

Project Status: Design
COST: \$5,100,000



B. Tyson Ave. & Manhattan Ave. Improvements (West Shore Blvd. and Manhattan Ave.)

This project provides for operational, capacity, safety, and multimodal improvements by constructing a roadway and multi-use trail on unimproved Tyson Ave. right-of-way and widening Manhattan Ave. This project also sees improvements made to West Shore Blvd.

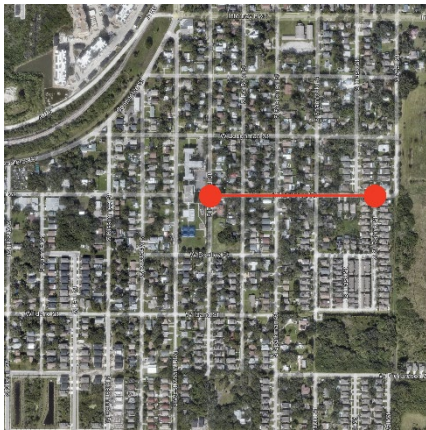
Project Status: Planning
COST: \$6,000,000



C. Sidewalks - Prescott Street (South Kissimmee Street to West Shore Boulevard)

This project provides for new sidewalks.

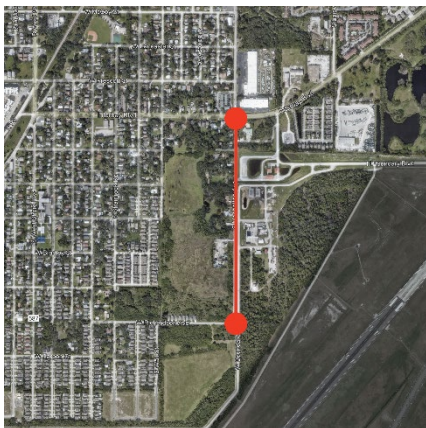
Project Status: Design
COST: \$32,000



D. Sidewalks - Ingraham Street (South Fitzgerald Street to South St. Patrick Street)

This project provides for new sidewalks.

Project Status: Design
COST: \$80,000



E. Manhattan Avenue (Richardson Avenue to Interbay Boulevard)

This project provides for the design of roadway construction plans for an existing unimproved right of way to provide an alternative north-south traffic circulation route for the Port Tampa Area.

Project Status: Design
COST: \$1,000,000



F. MacDill 48 Park Improvements

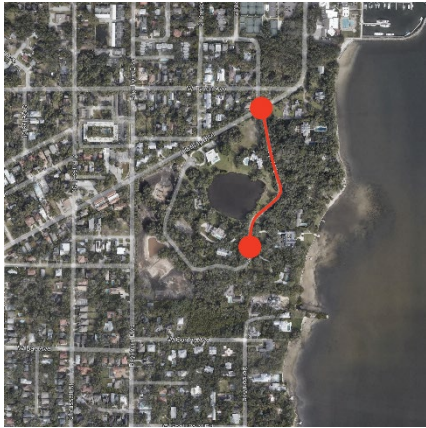
This project is to provide for site improvements not included in the Lower Peninsula Stormwater project. Improvements are needed to safety, access, and security of the site, as well as to meet management plan requirements.

Project Status: Planning
COST: \$0

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G. Lykes Lane

The Lykes Lane project will improve the City of Tampa’s water distribution system by replacing the existing water mains and increasing the capacity of the system. It will also improve our ability to serve a growing population. Approximately 1,035 Linear Feet of water mains 6 inch in diameter will be replaced and upgraded. This project will replace the aging water mains in this area with new and larger diameter water mains, improving water pressure and water quality while reducing the number of service interruptions that might have been caused by main breaks or leakage.

Project Status: Procurement

COST: \$258,379.77



H. Lower Peninsula Watershed Plan - Southeast Region

This project provides for a study, modeling, and construction of this regional watershed to address chronic flooding for the 6,000-acre area. Project alternatives will be analyzed for capital improvements. Flooding Relief/ water quality improvement

Project Status: Construction

COST: \$51,100,000

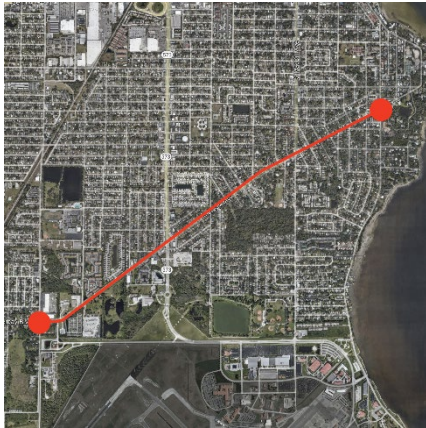


I. Lower Peninsula

The Lower Peninsula project will improve the City of Tampa’s water distribution system by replacing the existing water mains and increasing the capacity of the system. It will also improve our ability to serve a growing population. Approximately 3,638 Linear Feet of water mains ranging from 2 to 16 inches in diameter will be replaced and upgraded. This project will replace the aging water mains in this area with new and larger diameter water mains, improving water pressure and water quality while reducing the number of service interruptions that might have been caused by main breaks or leakage.

Project Status: Construction

COST: \$1,655,135



J. Interbay Boulevard (West Shore Avenue to Bayshore Boulevard)

This project provides for safety, multimodal, and operational improvements.

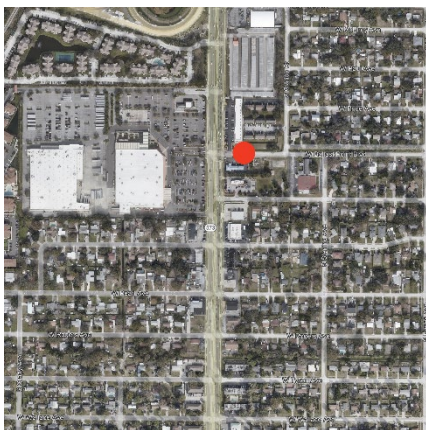
Project Status: Design
COST: \$8,000,000



K. Gandy South Park

This project provides for the design and construction of improvements to Gandy Park South and A. J. Palonis Park. Improvements include but are not limited to a trail connection under the Gandy Bridge, passive recreational opportunities including fishing, picnicking, walking, kayak launching, as well as other passive recreational activities. Improved parking, restrooms, shelters, and boardwalks are key components of the improvement project.

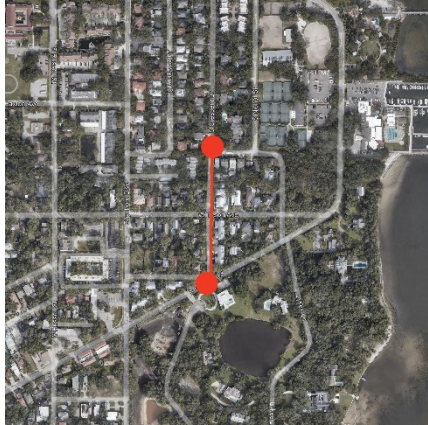
Project Status: Procurement
COST: \$2,000,000



L. Ballast Point Pumping Station Rehabilitation

The project provides for the rehabilitation of the wastewater pumping station at 3606 Ballast Point Blvd. Project will include replacement of pumps, piping, valves, and electrical improvements to ensure continued reliability of the station.

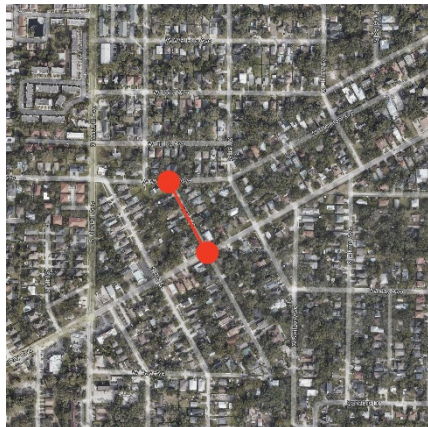
Project Status: Procurement
COST: \$1,000,000



M. North Ballast Point Water Distribution

The Ballast Point Project will improve the City of Tampa’s water distribution system by replacing the existing water mains and increasing the capacity of the system. It will also improve our ability to serve a growing population. Approximately 1,102 Linear Feet of water mains ranging from 2 to 6 inches in diameter will be replaced and upgraded.

Project Status: Procurement
COST: \$280,560



N. 2nd St. from Wyoming to Interbay

Upgrade the drainage system on 2nd St. and provide a connection to box culvert at 3rd St.

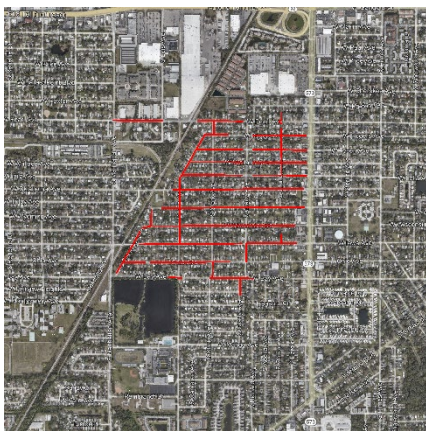
Project Status: Closeout
COST: \$50,000.00



O. Military Installation Resilience Review

This program is designed to help communities make informed decisions by enabling states and communities to partner with local commands to respond to, address, and mitigate activities that are either impairing or likely to impair the use of the installation.

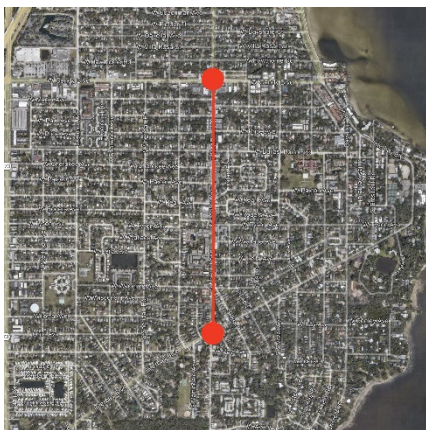
Project Status: Unknown
COST: Unknown



P. Gandy Area Wastewater Collection System Rehabilitation

Gravity wastewater collection system rehabilitation by installation of CIPP liner in approximately 51,092 LF of 8-inch and application of structural coating rehabilitation of approximately 182 manholes. Project location boundaries are Mango Avenue to the north, Pax.

Project Status: Planning
COST: \$3,000,000



Q. South MacDill Avenue

Water project along S. MacDill Ave.

Project Status: Planning
COST: \$1,752,500

Palmetto Beach

There are three separate planning efforts currently in progress for this area: This Coastal Area Action Plan, the Palmetto Beach Living Coastline and Community Engagement Project, and a study of Bermuda Boulevard and its sea wall. Besides these studies, a handful of CIP projects have been identified and mapped (see Figure 2). The Port will also be expanding in the coming years. This development may have an impact on McKay Bay.

McKay Bay Living Coastline

Another project is in the planning stages to define a potential living coastline in McKay Bay. The specific project site is not yet defined, however it will consider sea level rise and storm surge in its design solutions.

Bermuda Boulevard

A study is currently underway to evaluate the potential to renovate the Bermuda Boulevard sea wall, which could adjacent roadway. This project may also be linked with projects to relieve inland stormwater flooding, and to include the mitigate water quality problems before drainage enters McKay Bay.

Water and Wastewater: Collection and Conveyance

Other projects are isolated, all related to water distribution and wastewater collection and conveyance.

The Port

An upcoming Port dredging project will excavate sediment in the channel from the mouth of the Bay up to South 22nd Street / Highway 41 at the south end of Palmetto Beach.

Project Map

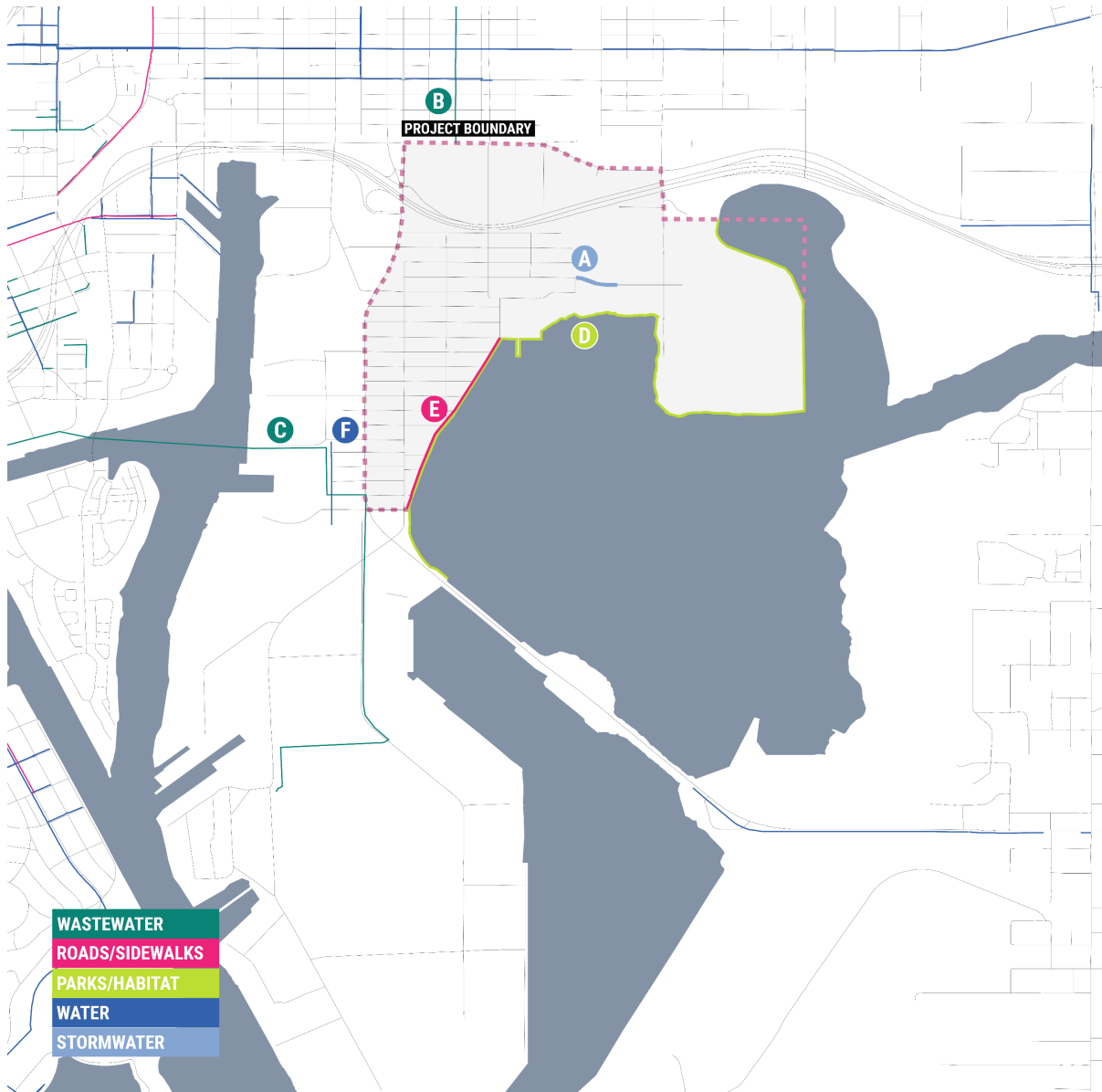


Figure 2 – Palmetto Beach Project Location Map

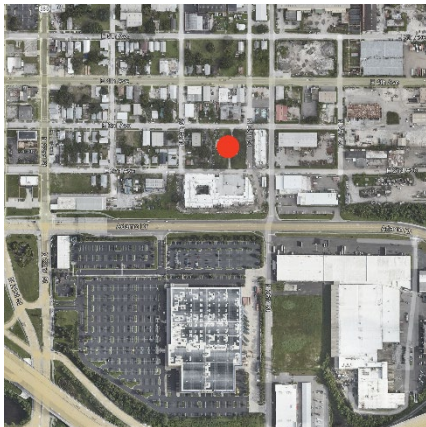
Projects



A. Clark Street and 30th Street Pipe Relocation

This project provides for relocating and upgrading an existing pond outfall system including installation of new pipes and inlets.

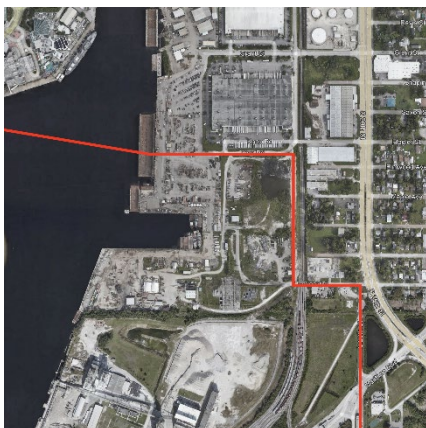
Project Status: Design
COST: \$500,000



B. Ybor Pumping Station Standby Generator

This project provides for the installation of a standby generator at the Ybor pumping station.

Project Status: Construction
COST: \$1,100,000



C. Harbour Island Force Main Replacement

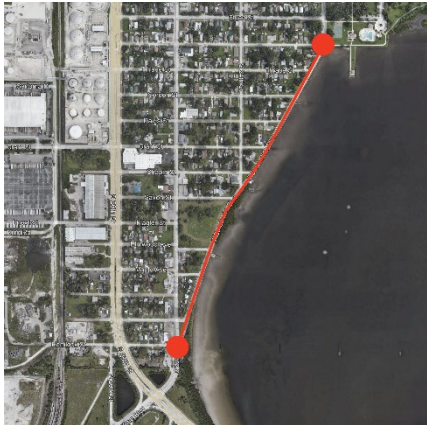
The project will include the installation of approximately 9,000 LF of 48” and 54” Force Main pipeline from the Krause Pump Station to the Howard F. Curren AWTP.

Project Status: Construction
COST: \$83,042,970



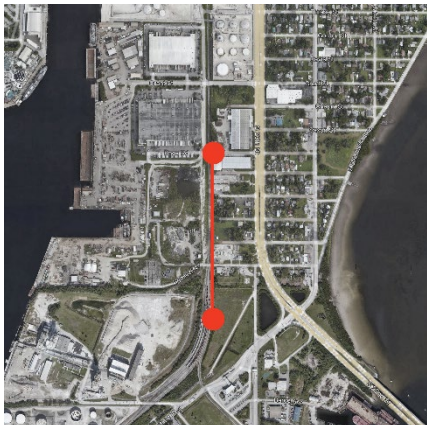
D. Palmetto Beach Living Coastline and Community Engagement
Project to identify coastal habitat improvement projects (not yet initiated)

Project Status: Planning
COST: Undefined



E. Bermuda Boulevard Complete Streets and Resilient Sea Wall
Sea Wall and Complete streets improvement project and renovation.

Project Status: Planning
COST: Undefined

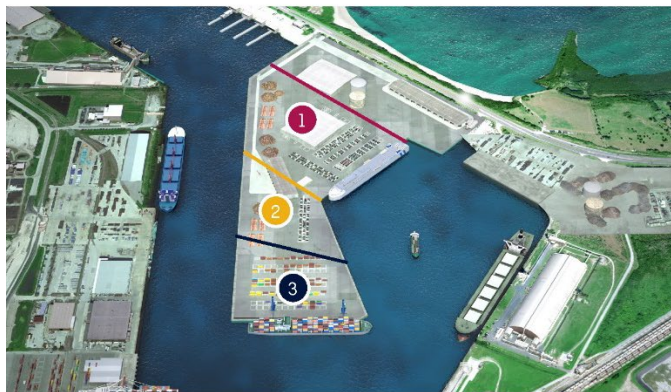


F. Palmetto Beach Water Project
Water project starting at Knox Road along railroad track.

Project Status: Planning
COST: \$392,276

Images below are shown from the Port's Vision 2030 document

CAPITAL IMPROVEMENT PROGRAM / *East Port*



FY 2017 - 2021

- 1 EAST PORT UPLAND FILL AND CARGO YARD EXPANSION (PHASE 2): 42 acres of upland cargo yard area will be developed to accommodate dry bulk material handling / Estimated Cost: \$57,000,000

FY 2022 - 2026

- 2 EAST PORT UPLAND FILL AND CARGO YARD EXPANSION (PHASE 3): 18 acres will be completed to meet Port Tampa Bay's long-term expansion needs / Estimated Cost: \$63,000,000

FY 2027 +

- 3 EAST PORT UPLAND FILL AND CARGO YARD EXPANSION (PHASE 4): 12 acres will be completed to meet Port Tampa Bay's long-term expansion needs / Estimated Cost: \$131,000,000



CAPITAL IMPROVEMENT PROGRAM / *Port Sutton/ Pendola Point*



FY 2017 - 2021

- 1 BERTH 3 DRY BULK DEVELOPMENT: Expansion will include pile supported runway for bulk handling equipment / Estimated Cost: \$5,168,000

FY 2027 +

- 2 PENDOLA EAST CARGO YARD DEVELOPMENT: Construction of cargo yard to support additional cargo volumes / Estimated Cost: \$6,500,000

LONG-TERM OPPORTUNITY

- 3 LAND EXPANSION: Upland fill of approximately 230 acres on Pendola Point to support PTB's growing needs