

North Shore D Neighborhood Improvement Project Public Meeting

August 8, 2024

5:30 PM

Ronald W. Shane Center
6500 Indian Creek Drive

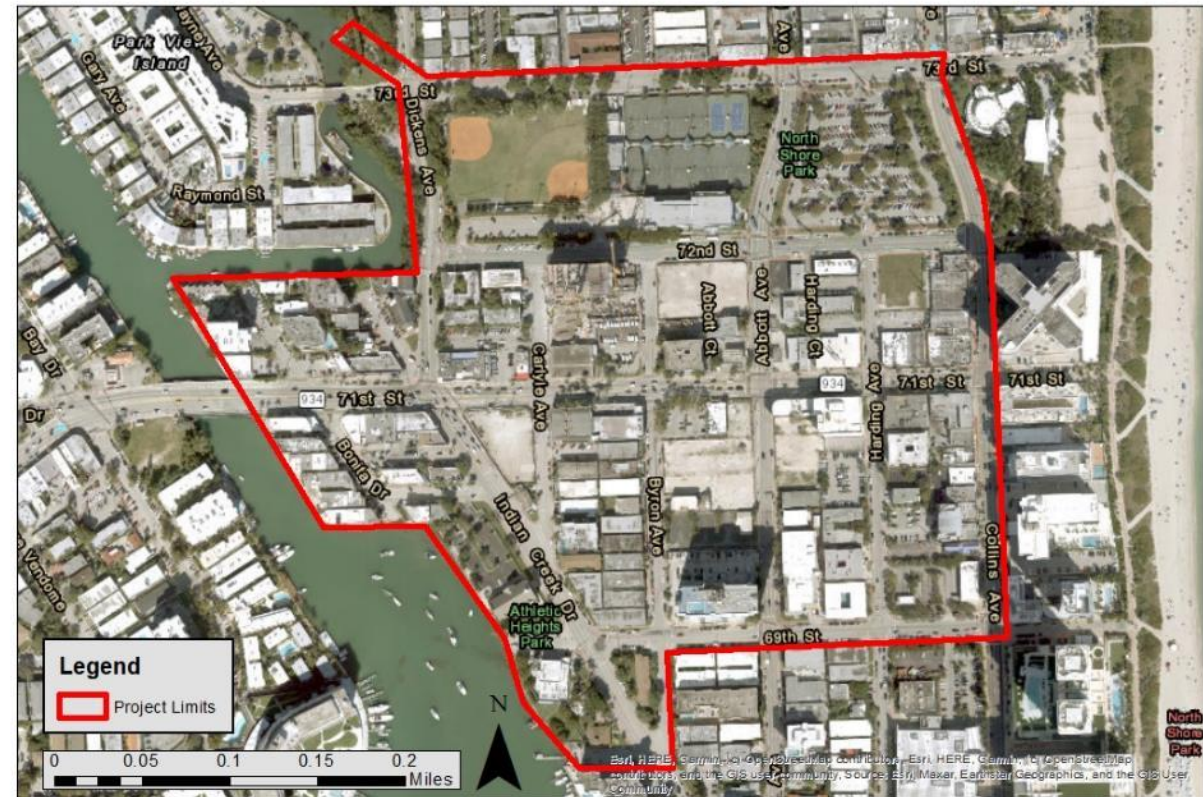


Agenda

- Introduction
- Project Progress Updates
- Next Steps
- Questions
- Conclusion

Project Overview

- The North Shore D Neighborhood Improvement project will improve the stormwater, water and sewer systems, increasing capacity and rehabilitating aging infrastructure.
- North Shore D is a priority flood mitigation area.
- The North Beach Town Center is targeted for new development.
- The project aims to improve water quality in this area.
- DIG ONCE! Approach the project through a coordinated effort to improve multiple infrastructure components simultaneously.



Consultant Team

Jacobs Team

Mauricio Lara, PE
Project Manager

Godofredo Canino, PE
Project Director

John Aleman
Client Account Manager

Alec Rodriguez, PE
Assistant Project Manager

Brizaga Team

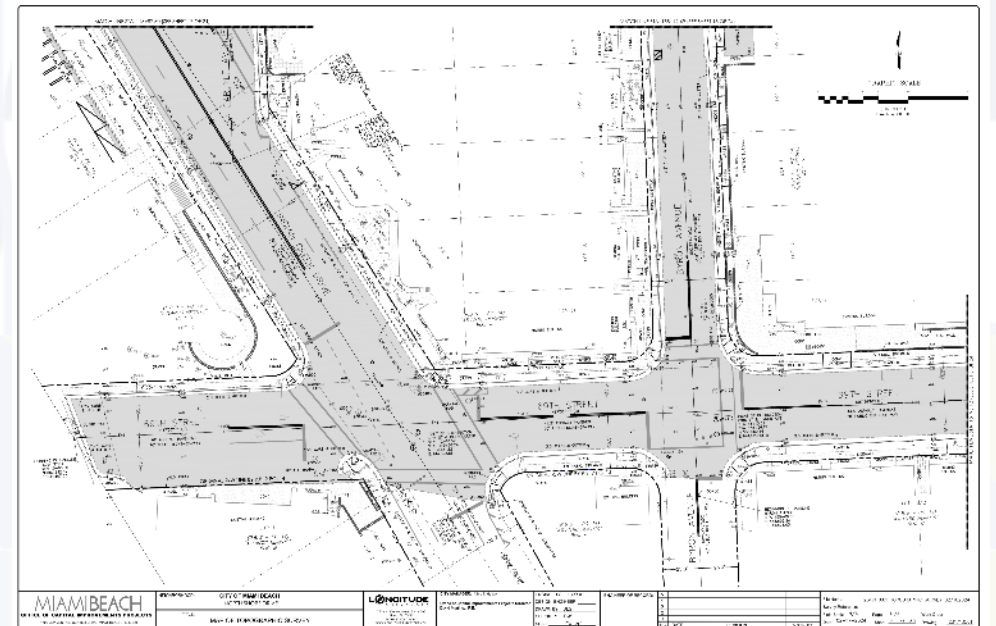
Michael Antinelli, PE
Principal

Afeefa Abdool-Ghany, Ph.D.
Senior Scientist

Tanoah Villain
Senior Associate

Data Collection

- Survey and Topography conducted by Longitude Surveyors between September 2023 and February 2024.
- Collected and verified locations and elevations of:
 - Roadways
 - Water utility systems
 - Sewer utility systems
 - Stormwater utility systems
 - Floor elevations of buildings



Stormwater – Existing Conditions

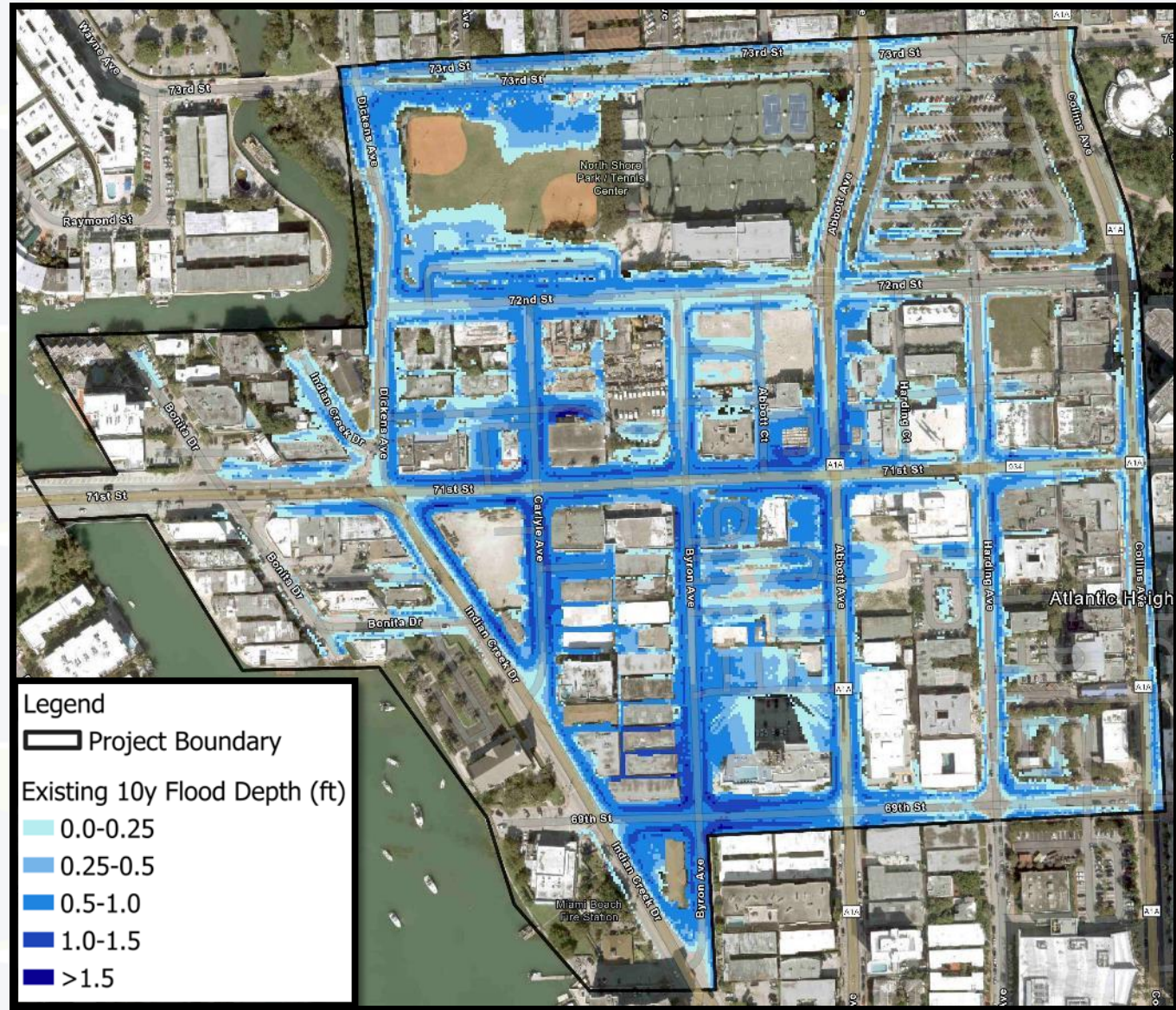
Flooding shown is for the 10-year, 24-hour storm.



69th Street



Byron Ave (South of 71st)



Legend

Project Boundary

Existing 10y Flood Depth (ft)

0.0-0.25

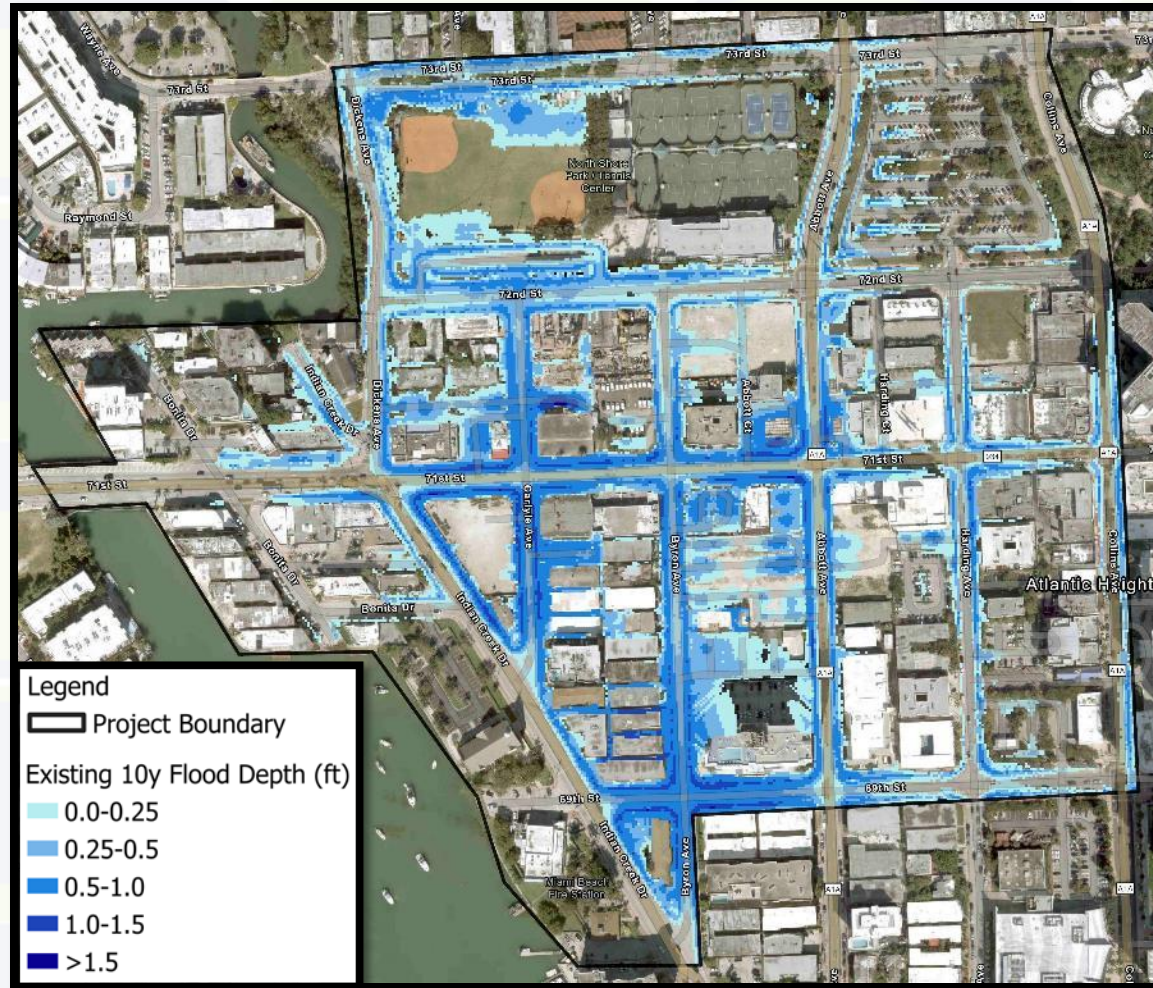
0.25-0.5

0.5-1.0

1.0-1.5

>1.5

Model Calibration



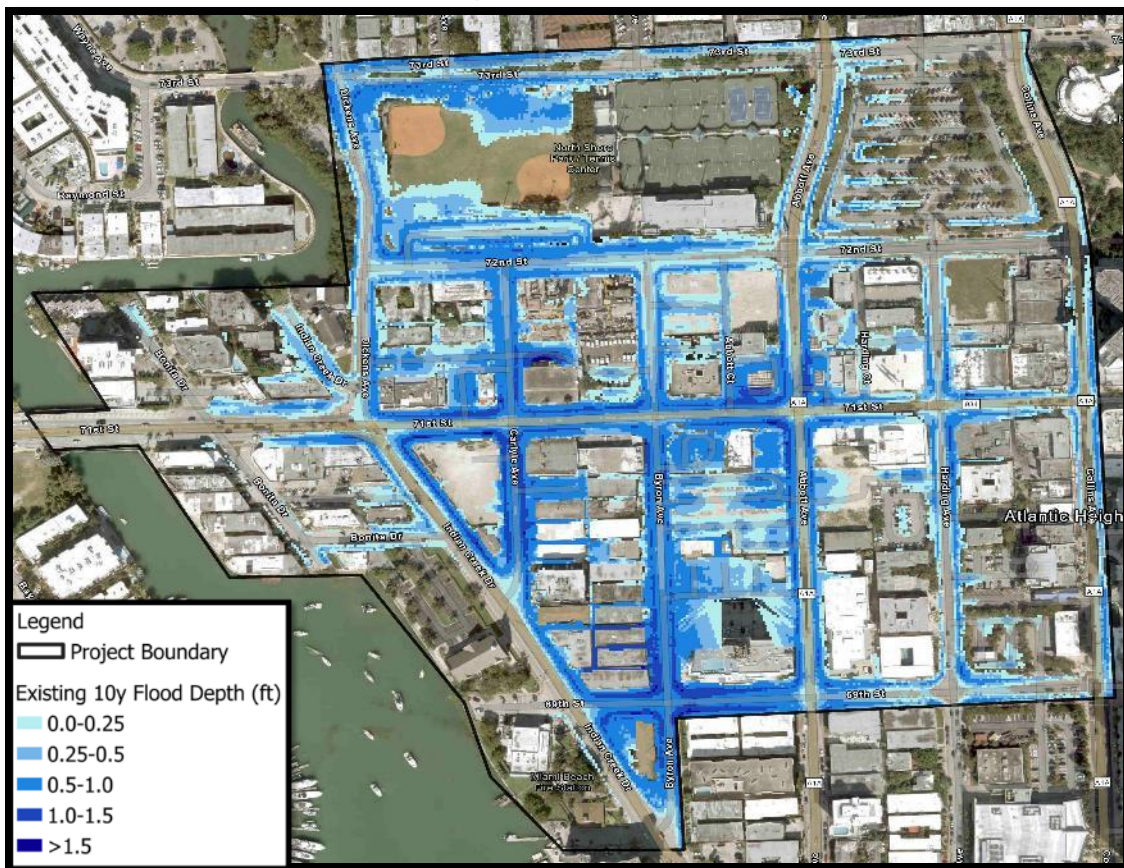
Date	Daily Total Rainfall (inches)
5/31/2022	0
6/1/2022	0.13
6/2/2022	0.27
6/3/2022	3.35
6/4/2022	8.47
6/5/2022	0

Stormwater Improvements

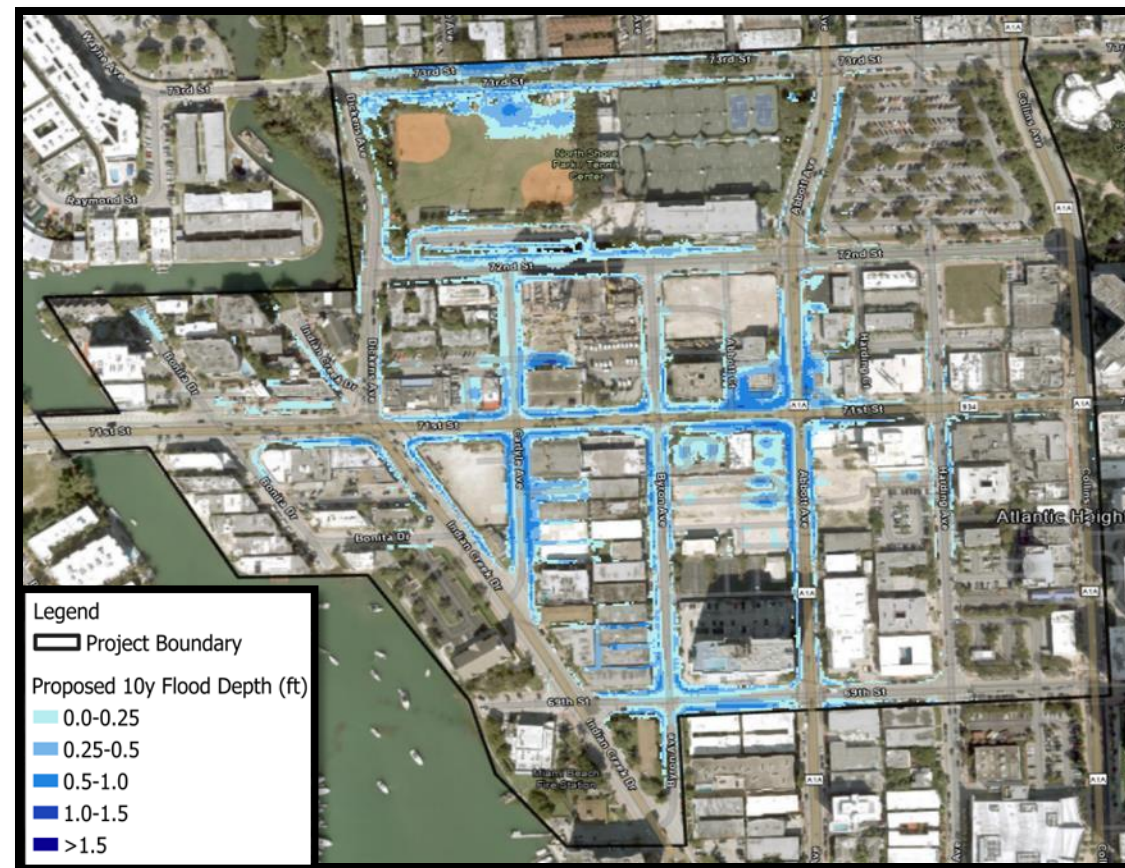
- Upgrades to the stormwater system
 - Larger capacity stormwater pipes
 - New stormwater pump stations
 - Improved outfalls
- Reduce flooding from intense rainstorms (“rain bombs”) using stormwater systems
- Minimize street flooding associated with sea level rise and tidal surges (“king tides”) via road raising

Flood Mitigation Benefits

Existing Conditions

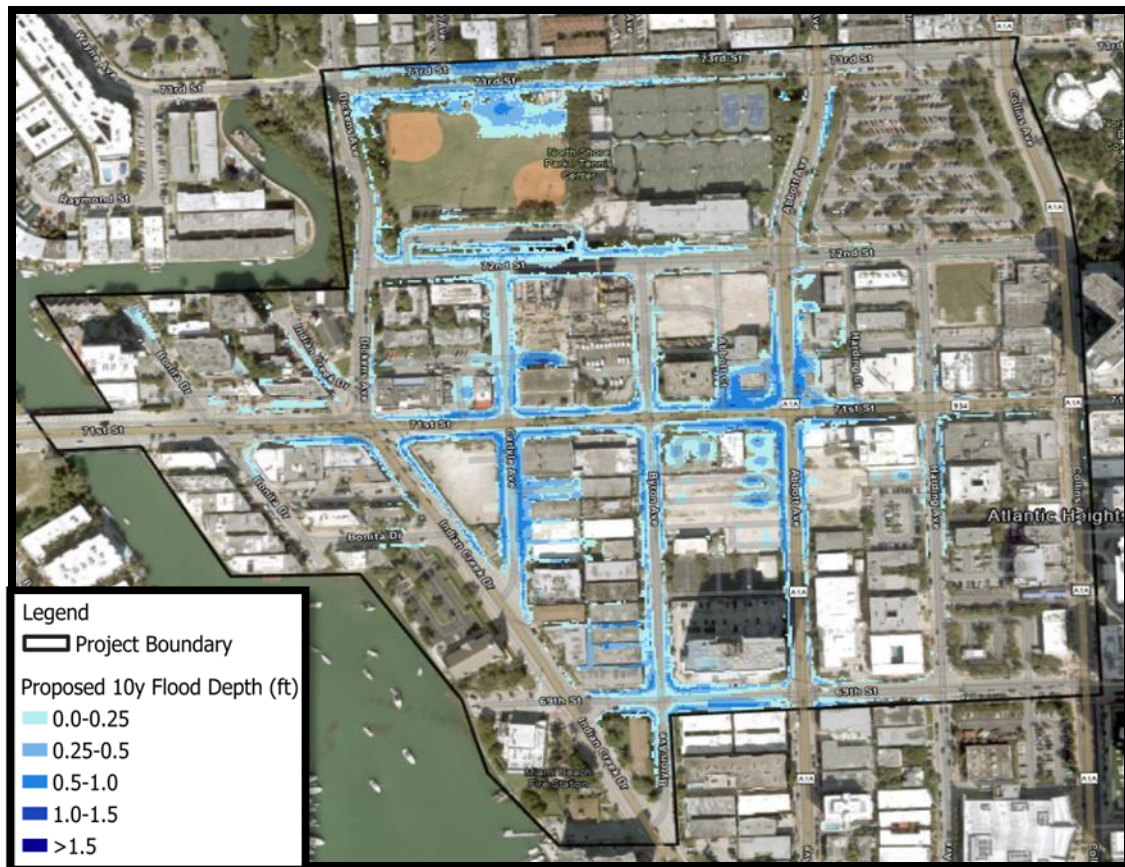


Proposed Conditions



Flood Mitigation Benefits

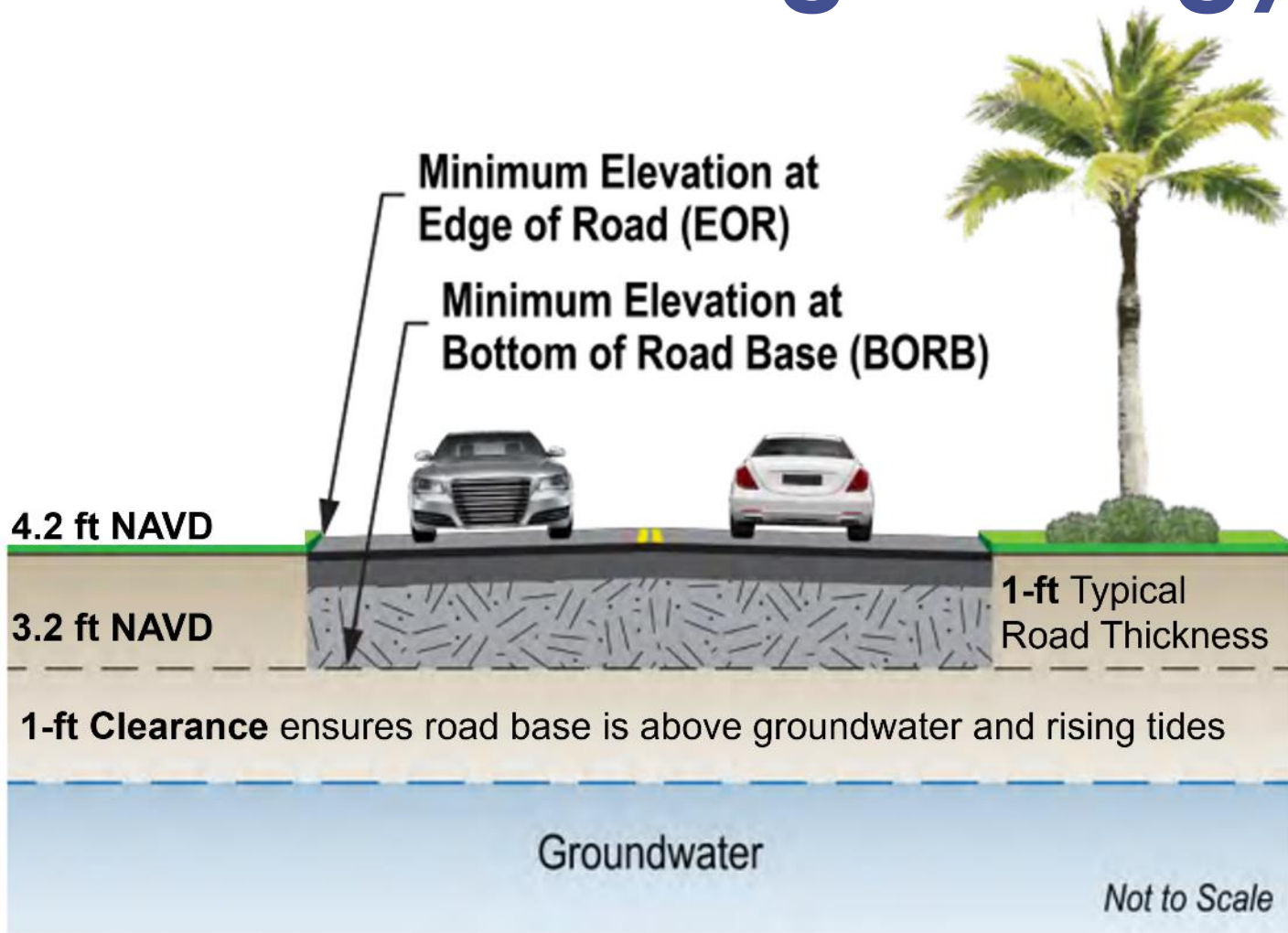
Interim Conditions



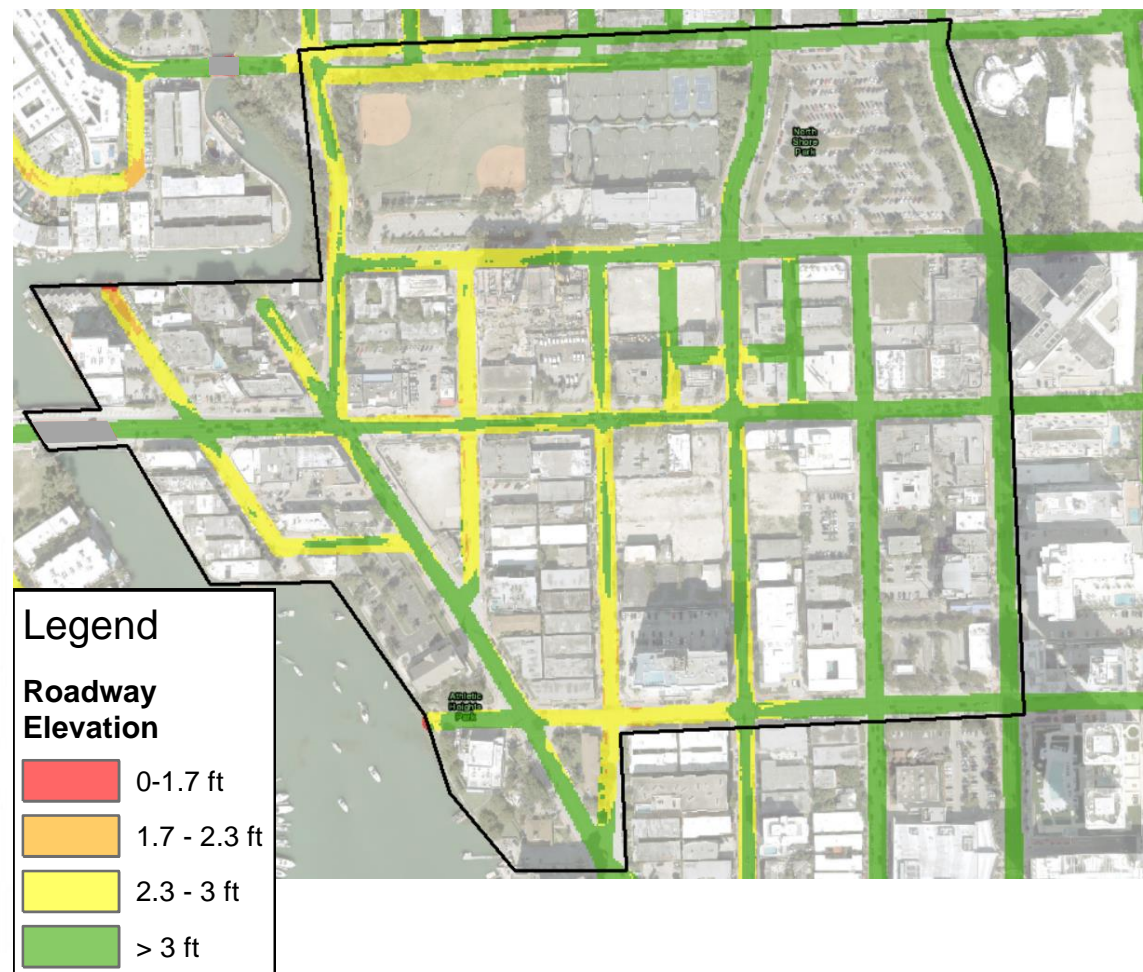
Ultimate Conditions



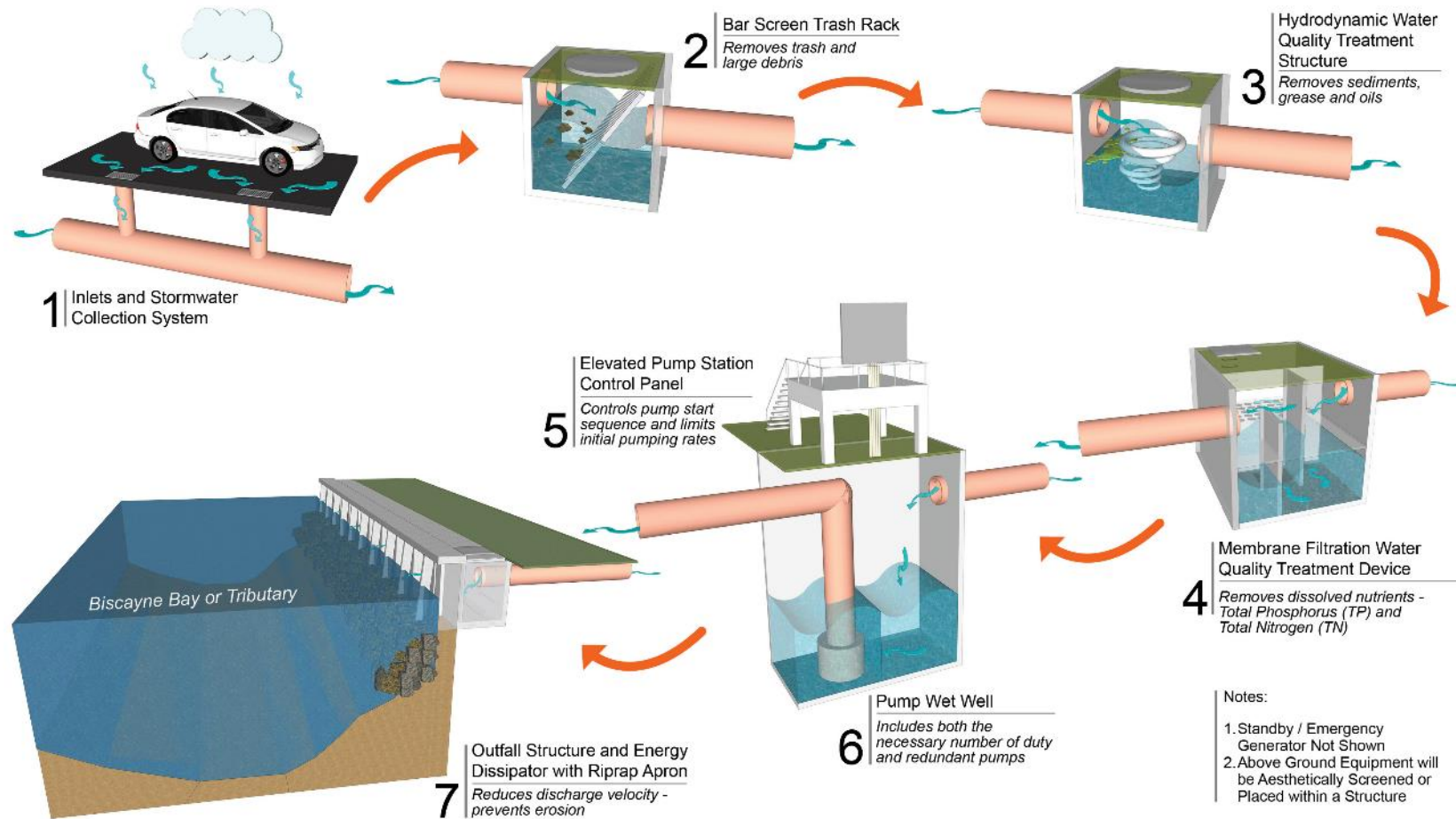
Road Raising Strategy



Existing Road Elevations



Water Quality Improvements



Water Quality Improvements

- Discontinue outfalls at 72nd Street and 73rd Street to improve environmental conditions near Park View Island
- Install new outfall at 69th Street
- Add 12 Water Quality Injection Wells
 - Designed to address initial 1.5” of stormwater runoff
 - “Dirtiest” runoff due to accumulated pollutants between rainfalls
 - Provide stormwater capture and injection down 100 feet
- Improves water / environmental quality during flood events in the streets and waterways

Blue-Green Infrastructure

1

PERMEABLE PAVEMENT

Stormwater will discharge in defined permeable pavement parking areas. Permeable pavement looks like standard pavement but allows water to drain into an underlying infiltration trench. Permeable pavement will reduce stormwater flowing into private property, minimize soil compaction from parked vehicles on lawns, recharge groundwater, and filter stormwater.

2

ENHANCED TREE PITS/BUMP-OUTS

Enhanced tree pits located in bump-outs will provide increased shade for residents, reduce traffic speeds on local roads, reduce stormwater discharges, and improve water quality. Enhanced tree pits will also provide significant rooting volume for trees and a diverse understory to contribute to a healthier native South Florida ecosystem.

3

BALANCED ON-STREET PARKING

On-street parking will serve various modes of transportation and be enhanced with bump-outs and sidewalks accommodating lush plants to mitigate elevated surface temperatures, manage stormwater, enhance walkability, and improve aesthetics for neighborhood.

4

GREEN ROOFS

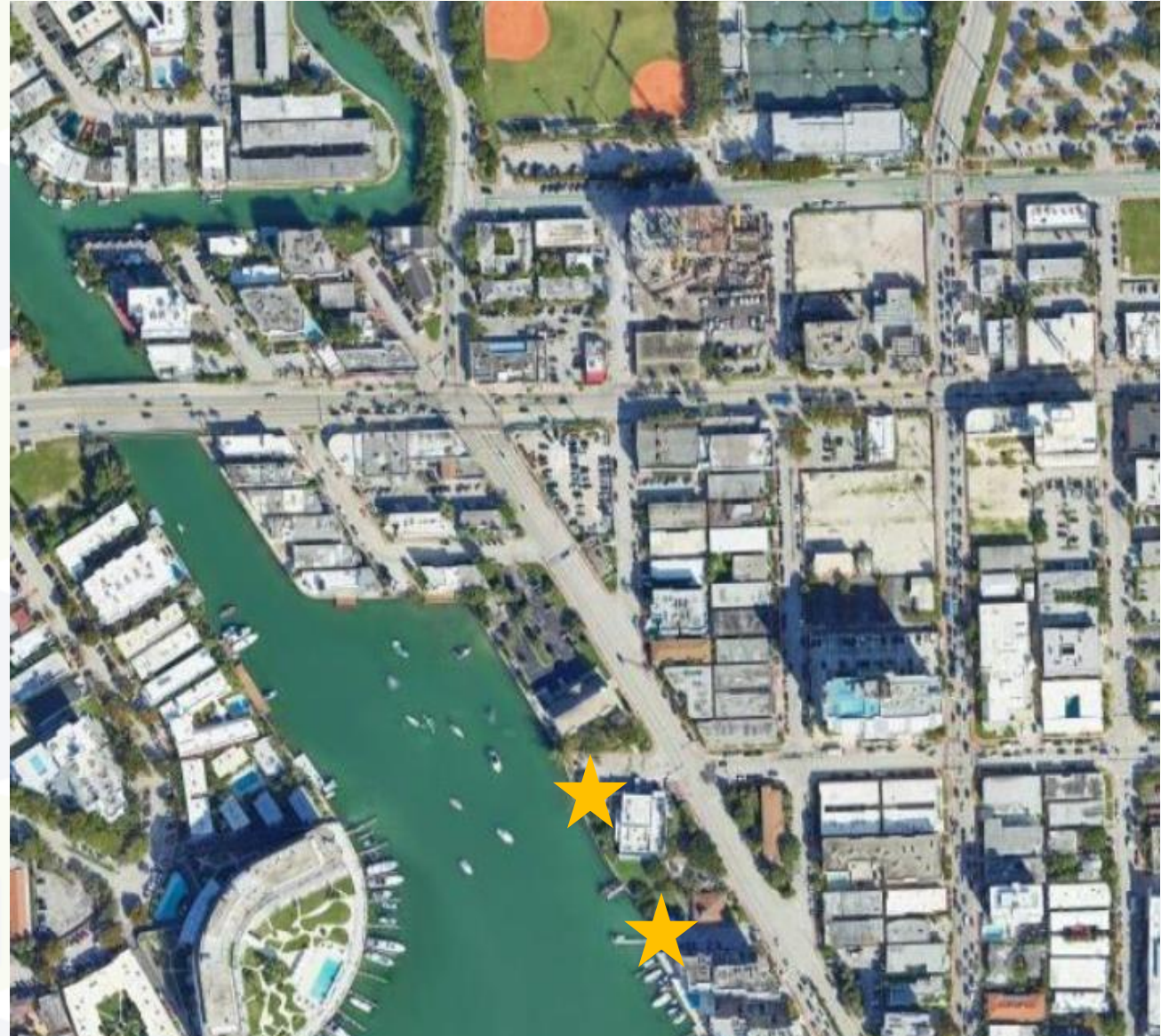
Green Roofs accept stormwater to filter and absorb flows, as well as cool urban heat islands and provide habitat



Pump Stations

Three City-owned sites were analyzed for pump station siting:

- Bonita Drive southern street end (Bonita Drive)
- **69th Street western street end (Fire Station)**
- **Miami Beach Police Sub Station Parking Lot off Indian Creek Drive (Police Sub Station)**

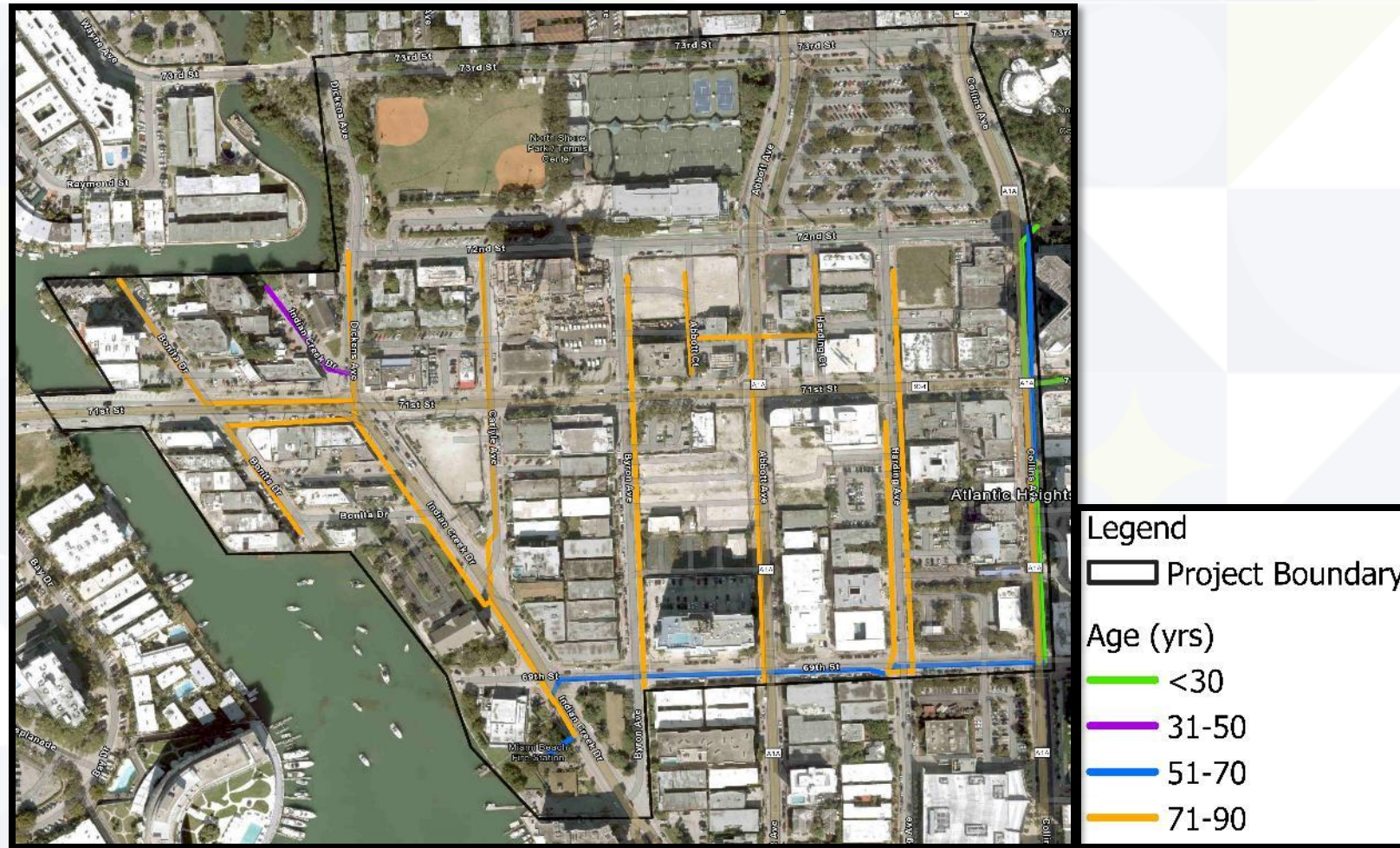


Separate Sanitary Sewer and Storm Drain Systems



Source: MetroConnects.org

Sanitary Sewer – Existing Conditions



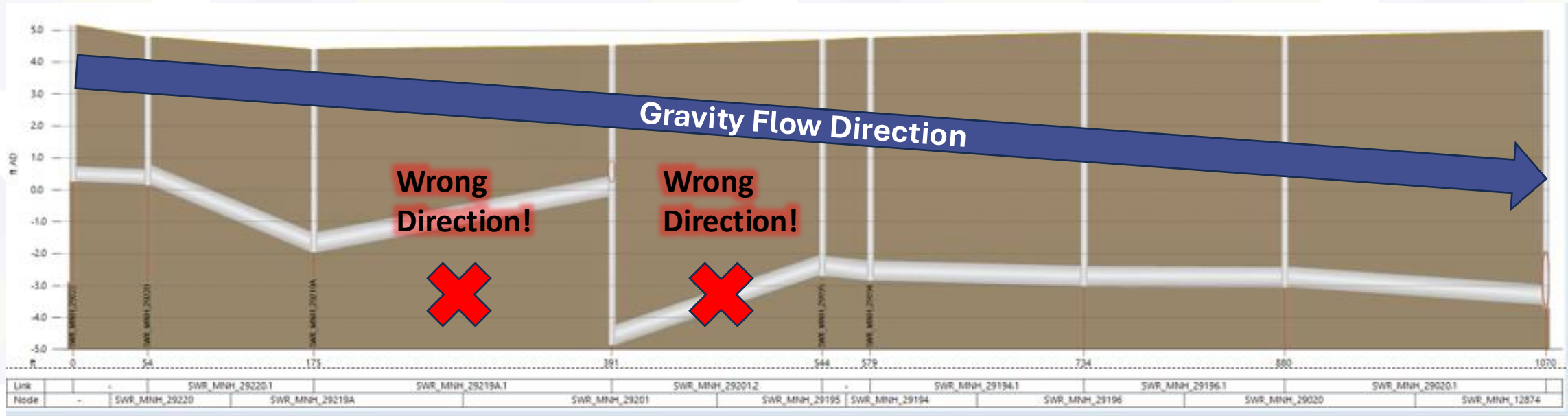
Sanitary Sewer – Existing Conditions

- Most sewer pipes are more than 70 years old.
- Broken or damaged pipes and connections cause leaks into and out of the system, creating water quality issues.
- Pipe sizes are adequate for future growth, but pump station 19 needs to be upgraded.
- Some gravity-based pipes are sloped the wrong way, causing system backups.
- Concerns about grease traps not working or being bypassed, contributing to water quality issues.

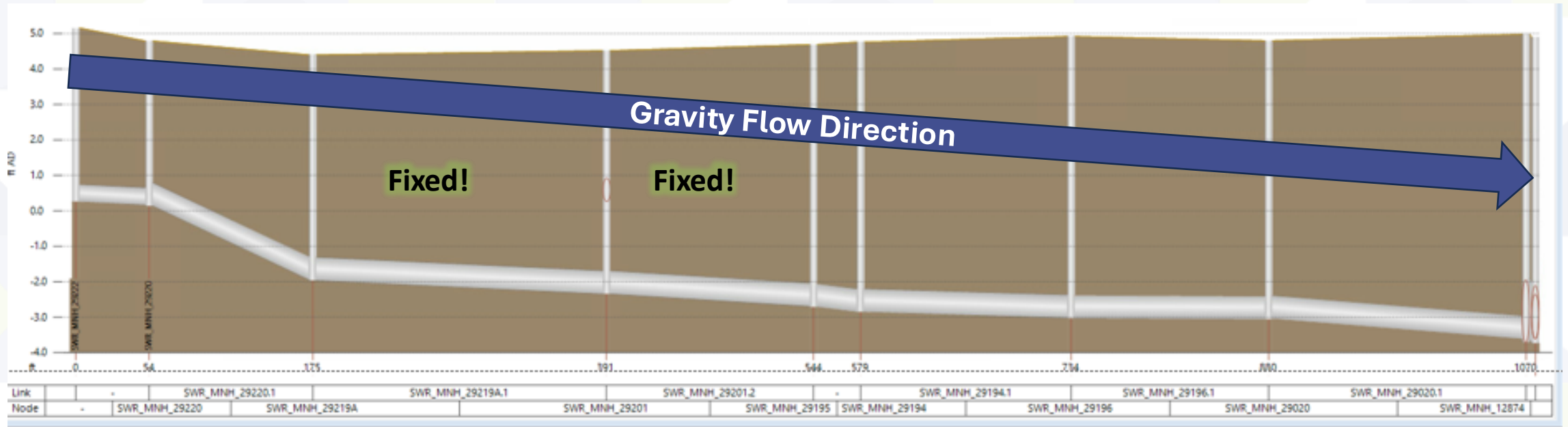


Miami Beach Art Deco Manhole Cover

Sanitary Sewer – Existing Conditions

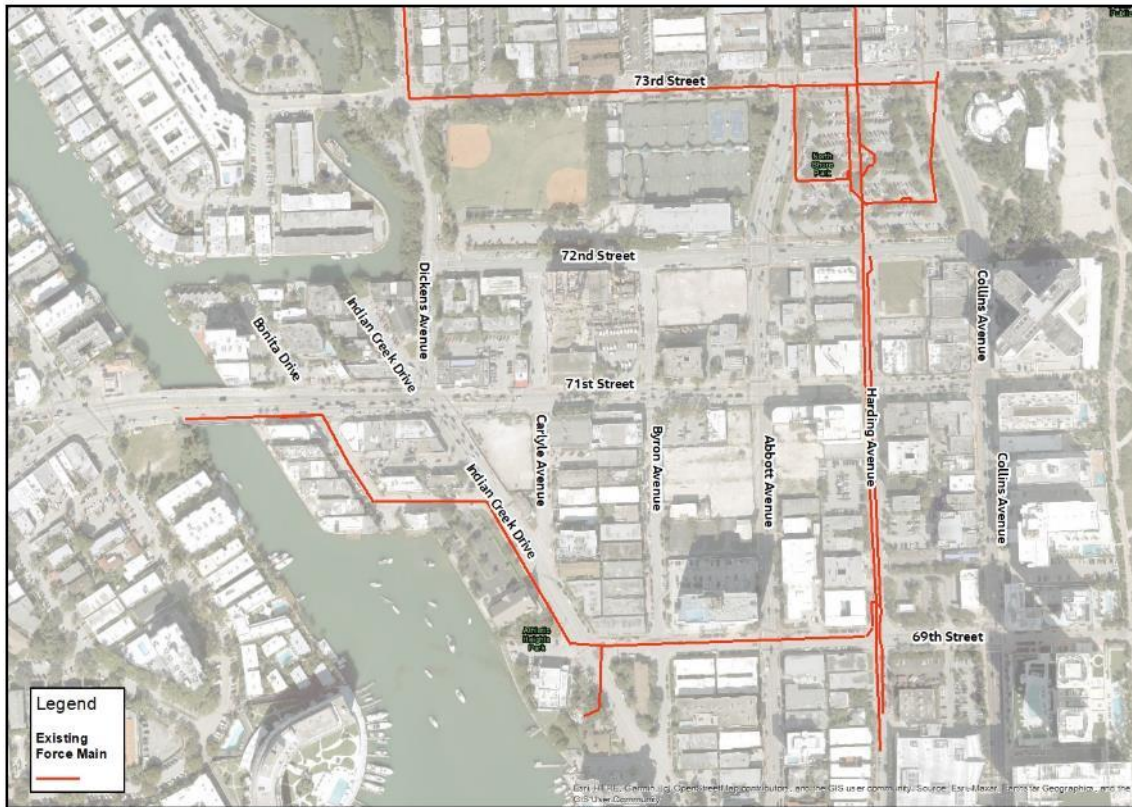


Sanitary Sewer – Proposed Conditions

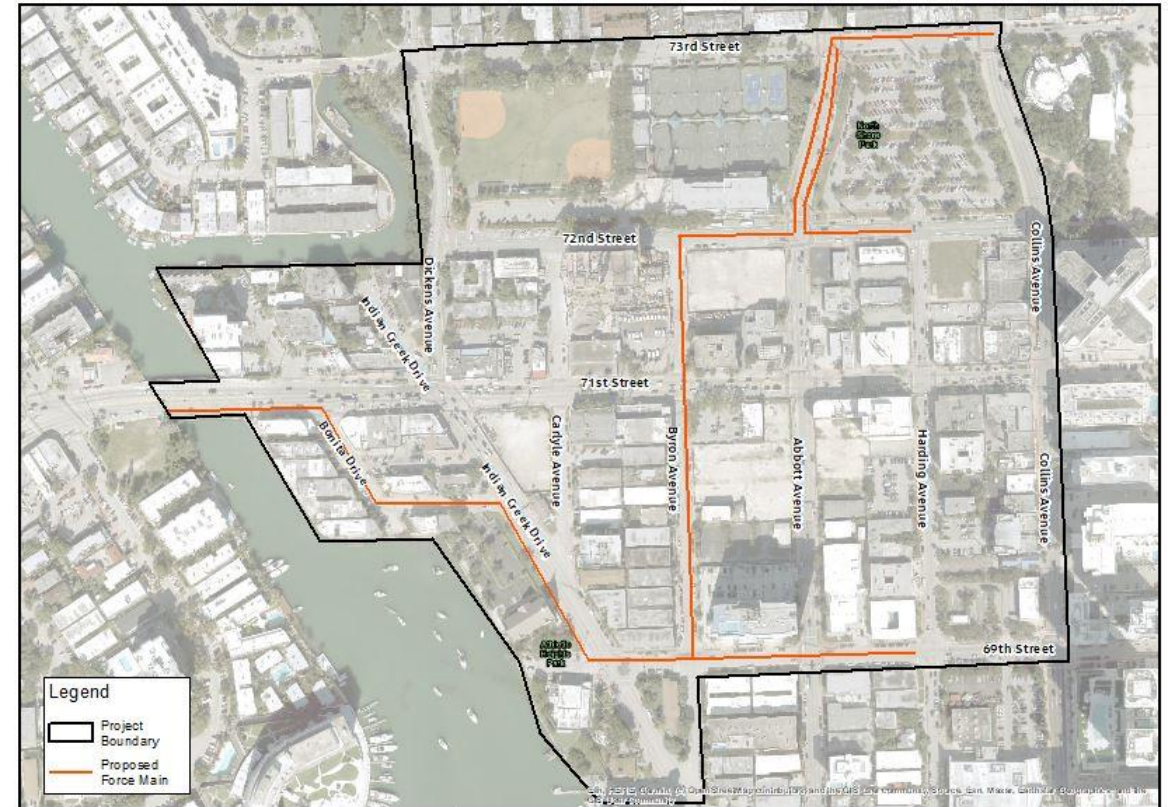


Sanitary Sewer Force Mains

Existing Conditions

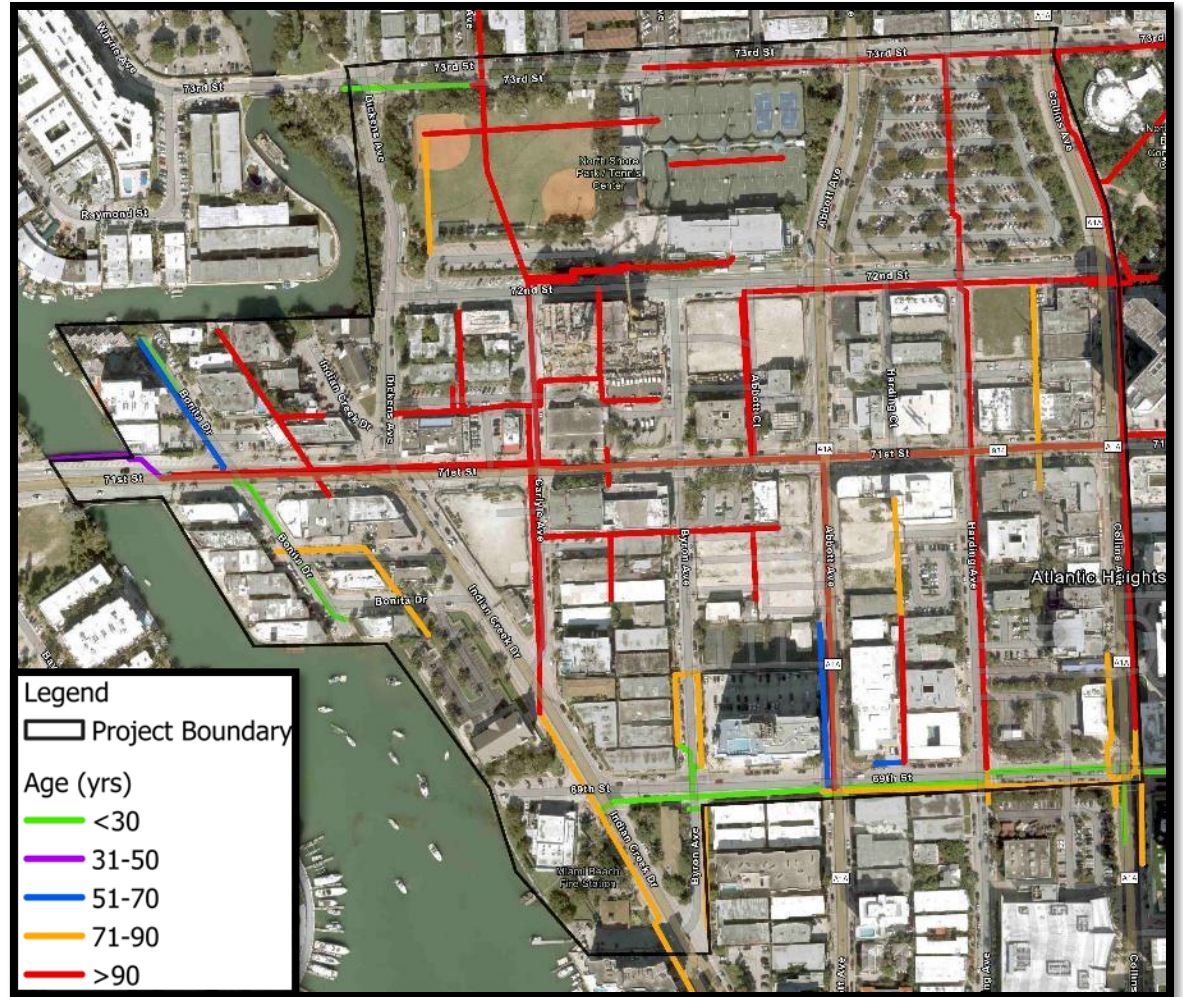


Proposed Conditions



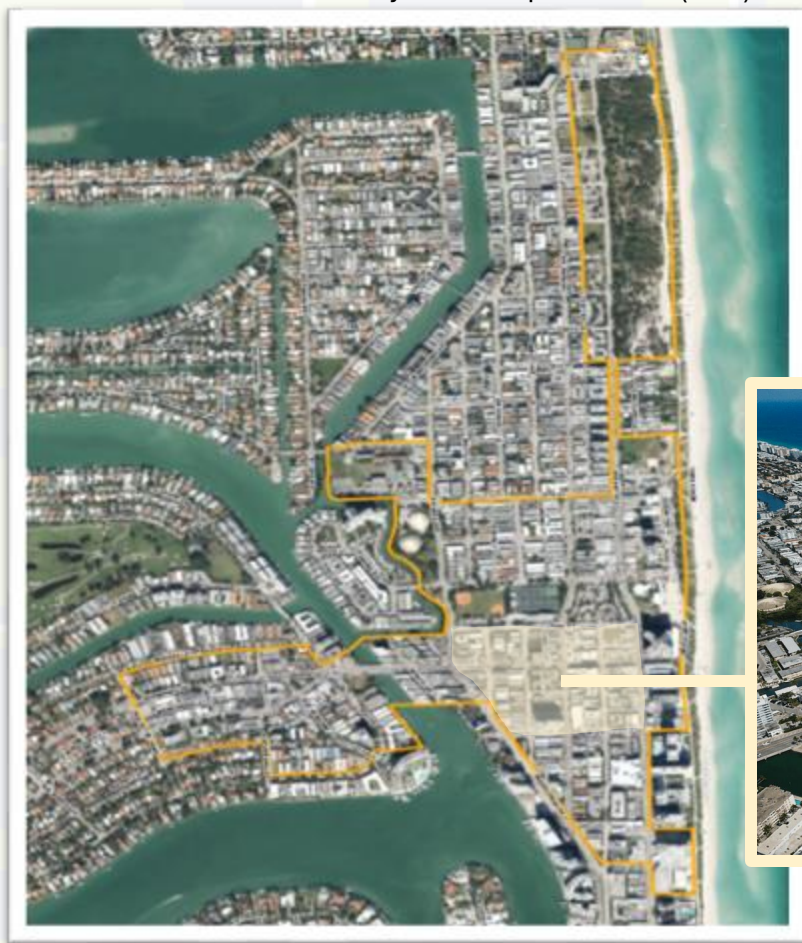
Water System – Existing Conditions

- Most water pipes are more than 90 years old.
- Comprehensive upgrades and modernization of water systems will help to meet current and future needs.
- System reliability, sustainability, and neighborhood functionality will be enhanced by replacing aging and underperforming pipes.



Preparing for Growth

North Beach Community Redevelopment Area (CRA)



North Beach Town Center



This project facilitates new development by enhancing community character and replacing aging infrastructure

- Pedestrian-friendly walkways
- Larger trees for more immediate shade canopy / heat island reduction
- Elevation of public Right-of-Way harmonized to new commercial and multi-family construction

Project Approach

- Wrapping up Stage 1 which performs all engineering modeling and prepares a Basis of Design Report that defines:

- Pump station size & location
- Pipe sizes
- Location of water quality infrastructure
- Any harmonization concerns
- Road elevations

Stage 1 –
Defining
Infrastructure
Needs

- Model and understand the below-ground utilities (water, sewer, stormwater)
- Identify the subsurface improvements
- Define road elevation and system sizing

Stage 2 -
Design

- Define roadway typical sections, roadway improvements and harmonization, landscaping,
- Design improvements

Stage 3 -
Construction

▲ Miami Beach will conduct a public meeting and obtain community endorsement prior to moving to the next stage

Project Cost and Schedule

City awarded \$10M Resilient Florida design grant

STAGE	COST	2023		2024				2025				2026			
		JUL-SEP	OCT-DEC	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC
PHASE 1: BASIS OF DESIGN	\$2,653,000	AUGUST 2023-JULY 2024													
PHASE 2 PROCUREMENT		EST. 6 MONTHS													
PHASE 2: COMPLETE DESIGN	\$7,347,000	EST. 14 MONTHS													

- Construction costs are being estimated in the range of \$140M to \$220M (includes FDOT Right-of-Way)
- Miami Beach grants team is actively seeking additional federal and state grants

MIAMIBEACH

OFFICE OF THE CITY MANAGER

NO. LTC # 043-2022

LETTER TO COMMISSION

TO: Mayor Dan Gelber and Members of the City Commission

FROM: Alina T. Hudak, City Manager

DATE: February 1, 2022

SUBJECT: **Miami Beach is Awarded \$18.6 Million in Grants through the Resilient Florida Grant Program**

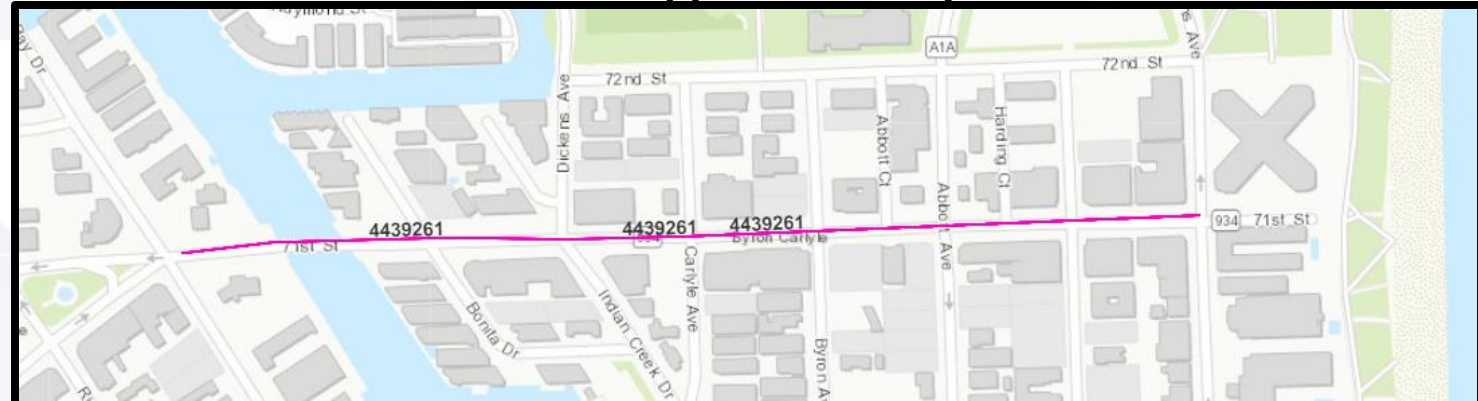
I am pleased to report that the City has been awarded three grants totaling over \$18.6 million for environmental resilience projects through the Resilient Florida Grant Program. The projects will help prepare coastal and inland communities for the adverse impacts of flooding and storm surge and will enhance our City's efforts to protect our community from storm damage.

The Resilient Florida Grant Program was created to help prepare communities for the impacts of sea level rise and flooding.

North Beach Town Center
Total award amount: \$10,000,000

Multi-Jurisdictional Collaboration

- There are many FDOT-owned roads within the project area (Abbott, Collins, 71st)
- Miami Beach is collaborating with FDOT on roadway improvements, stormwater improvements, landscaping, urban forestry, bike lanes, street lighting
- FDOT resurfacing (maintenance) project on 71st Street between Bay Drive and Collins Avenue scheduled to begin in July 2025



Project Recap

- Improve water quality in the community, including Park View Island
- Upgrade stormwater conveyance and treatment systems
- Replace aging infrastructure to improve performance, resilience, and longevity of water and sewer systems
- Raise roads above king tide elevations
- Improve roadways, urban tree canopy, lightning, signals
- Create a sustainable, resilient community capable of withstanding various environmental challenges ahead.

Next Steps

- Continue coordination with all stakeholders
- Finalize the Basis of Design Report
- City will move forward to finalize detailed design

Neighborhood Contact

Kevin Pulido, Director of Neighborhood Affairs

Email: kevinpulido@miamibeachfl.gov

Phone: (305) 673-7000 ext. 22112



Thank You