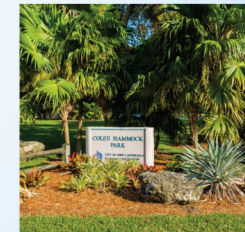




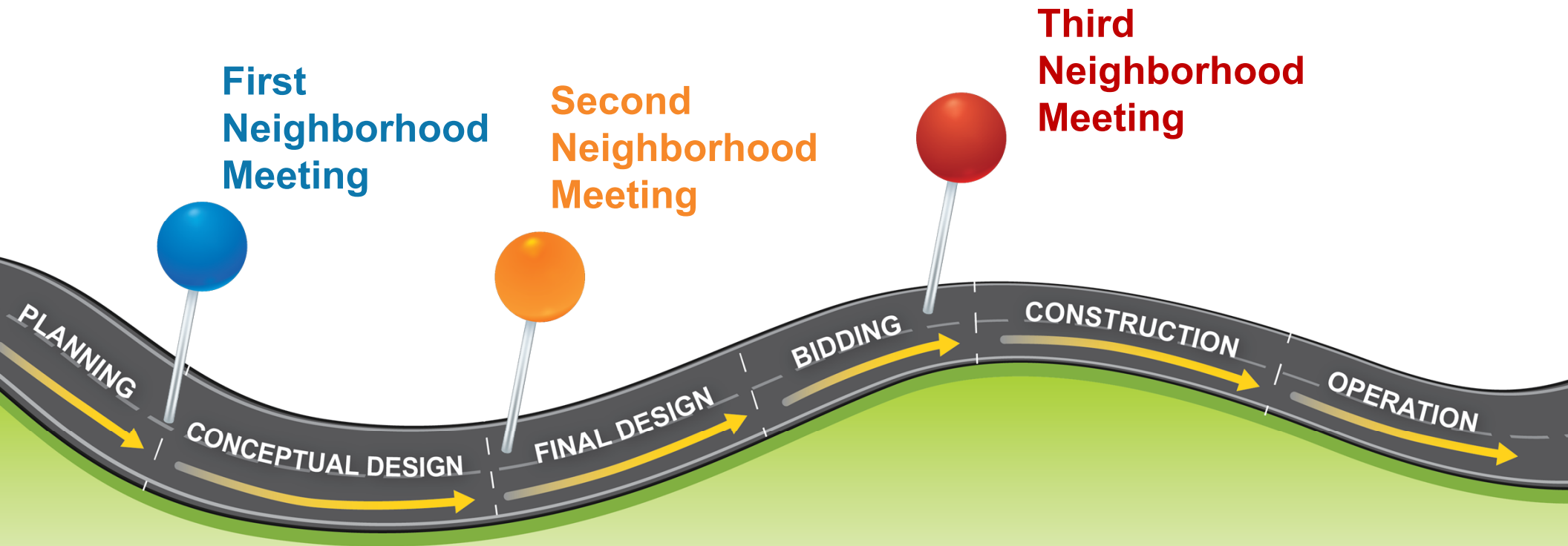
Fortify Lauderdale

Building a Resilient Future
in Fort Lauderdale



Tranche 2 Neighborhoods
Stormwater Management Improvements
City Project No. 12852
River Landings, Lauderdale Isles, Riverland
Manors/Woods, and Oak River Neighborhoods
& Adjoining Areas
December 10, 2024 at 6:45 pm

The Road to Improvement in Your Neighborhood



Meeting Objectives

- Give an overview of City's overall stormwater management program
- Give overview of current planning and conceptual design efforts for your neighborhood
- Gather your input and concerns about flooding events/conditions in your neighborhood
- Let you know what to expect next



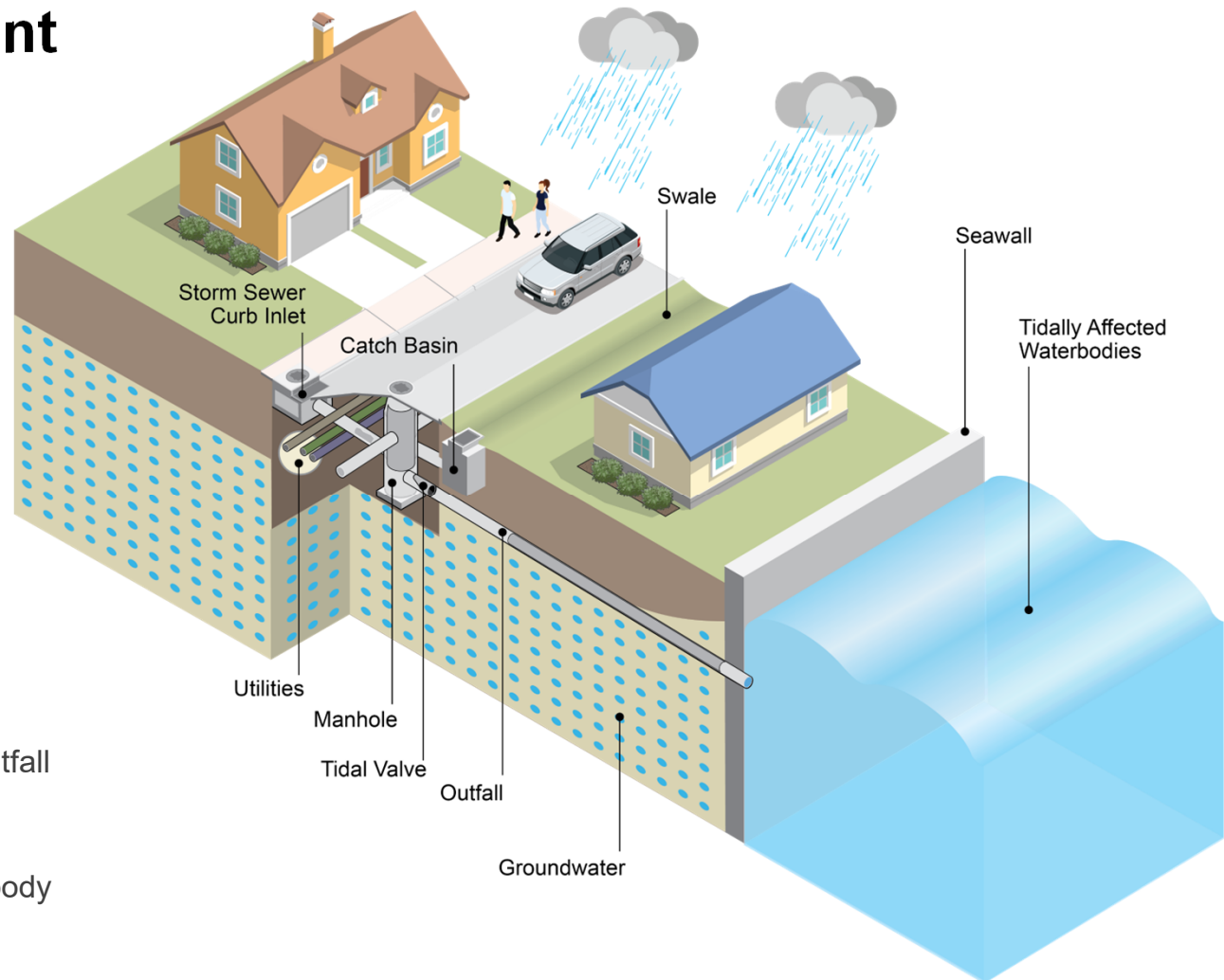
Residents

**"Best results achieved
via collaboration"**

Stormwater Management

Stormwater Terminology

- Rainfall
- Groundwater
- Runoff
- Right-of-Way
- Swale
- Catch Basin/Curb Inlet
- Stormline
 - Gravity main
 - Force main
- Manhole
- Tidal Valve
- Discharge/Outfall
- Seawall
- Canal/Waterbody



Common Stormwater System Features



Swale



Inlet/Catch Basin



Curb Inlet



Tidal Valve



Outfall

Fortify Lauderdale

Primary Goal:

To Improve Resilience to Impacts of Climate Change within the City's Most Vulnerable Neighborhoods and Communities

- Part of public investment includes stormwater improvements for 17 neighborhoods.
- The Fort Lauderdale Stormwater Program progress reports and events are posted on the City's website: <https://www.fortlauderdale.gov/fortifylauderdale>



Fortify Lauderdale Building a Resilient Future in Fort Lauderdale

Fort Lauderdale Stormwater Program Progress Report

October 2024

Work on the Stormwater/Resilience Master Plan continues to progress throughout vulnerable neighborhoods in the City.

Updated project progress for Tranche 1 and Tranche 2 neighborhood is provided below. Work continues on planning efforts associated with the Tranche 2 neighborhoods, including updates to the City's existing stormwater model allowing simulation of current and future conditions to inform stormwater improvements.

Tranche 1 Neighborhoods
Project Status Update:

- Construction substantially completed
- In Construction
- In Design

Community members actively participating in a previous public outreach meeting.

Public Outreach Meetings for Tranche 2 Neighborhoods.

The City is currently scheduling public outreach meetings, which will begin in October 2024 and continue through December 2024. Please check the Fortify Lauderdale website for the latest information on meetings in your neighborhood.

Your input is essential—stay informed and take part in shaping the future of your neighborhood at the upcoming meetings.

For updates and information: www.fortlauderdale.gov/fortifylauderdale

Key steps to advance the Tranche 2 planning effort:

STEP
1

Update the City's
Master Plan Stormwater Model

STEP
2

Conceptualize Needed
Improvements

STEP
3

Apply for a Conceptual Permit
with Broward County

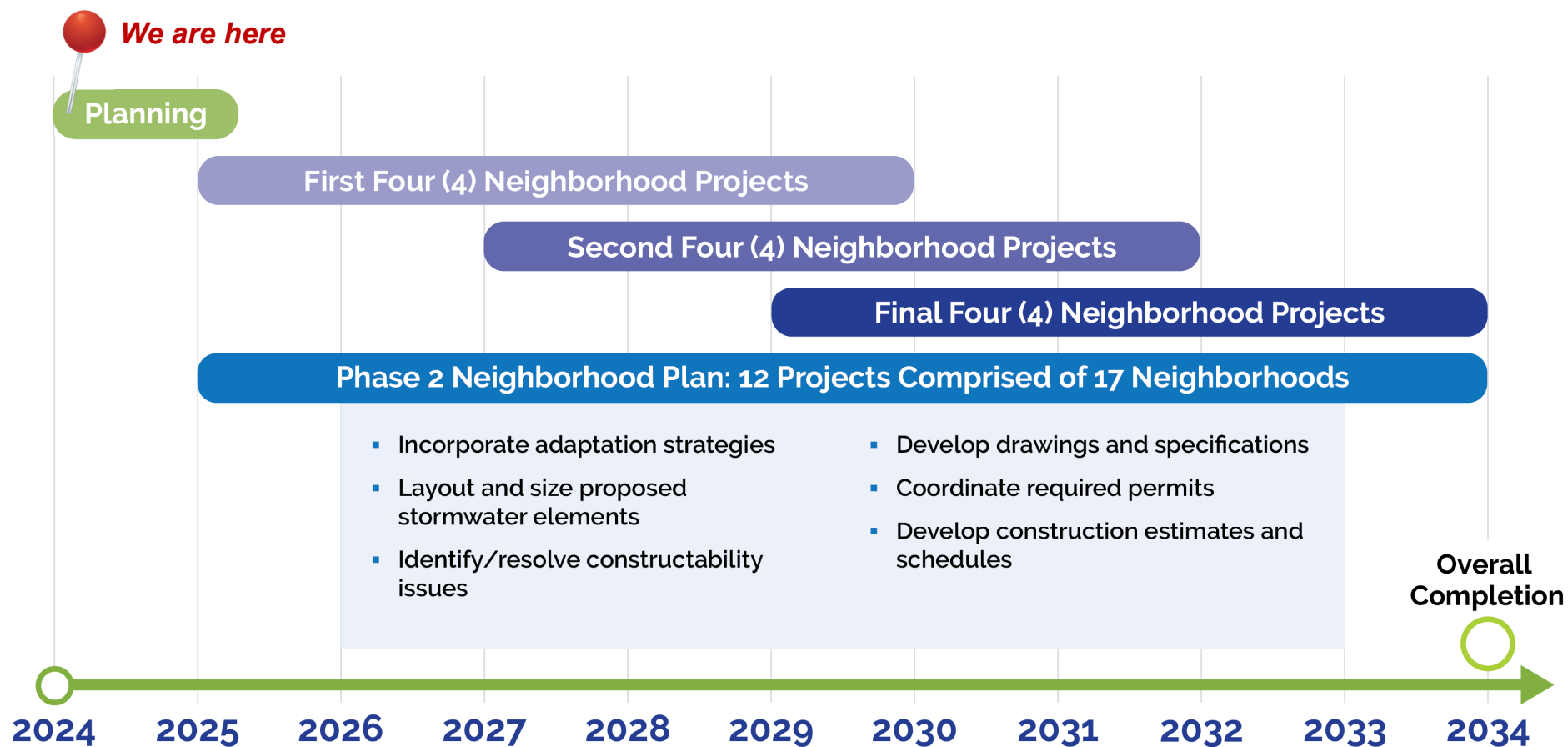
STEP
4

Initiate Public Outreach,
Engagement and Private Resiliency

STEP
5

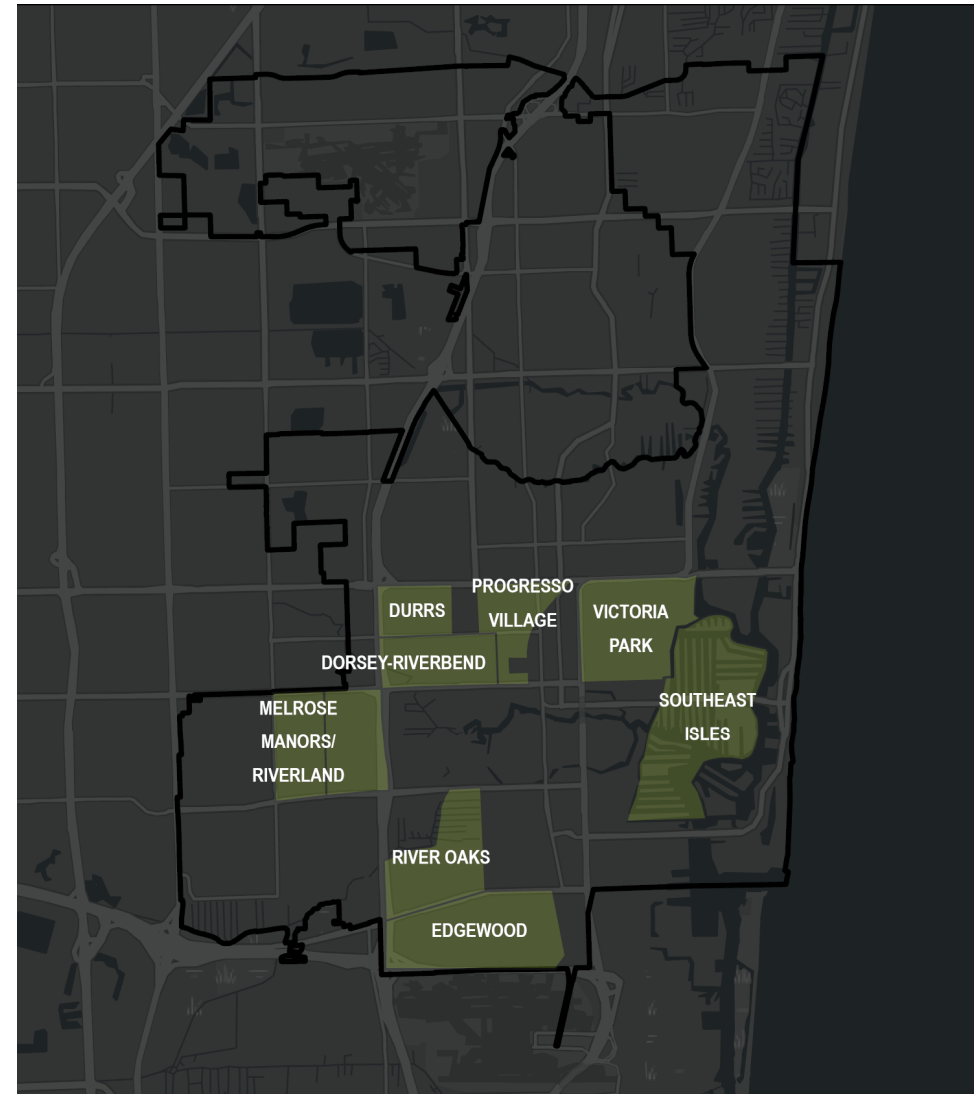
Develop Overall Program
Management Plan

The Phased Project Schedule plans for completion by 2034



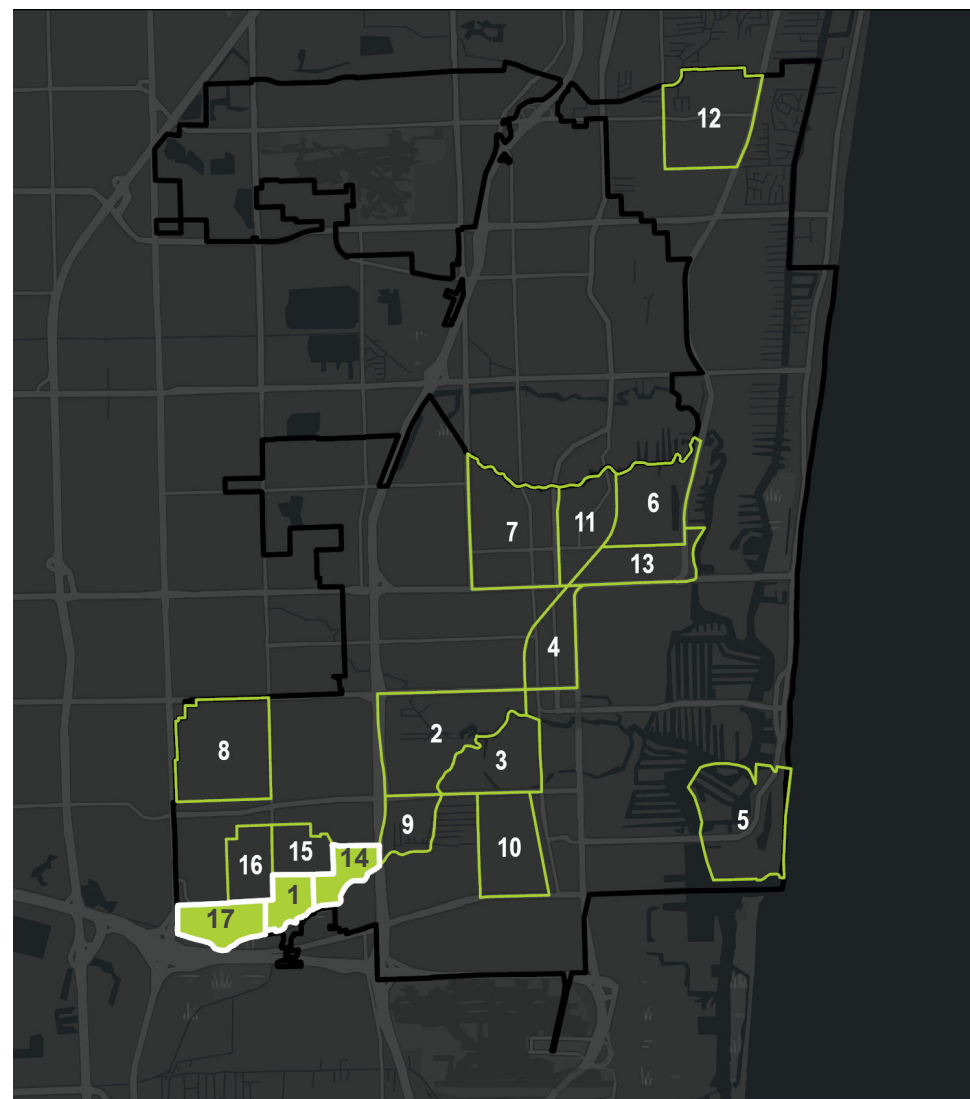
Original Eight Neighborhoods

- Edgewood
- River Oaks
- Dorsey-Riverbend
- Durrs
- Progresso Village
- Victoria Park
- Southeast Isles
- Melrose Manors/Riverland



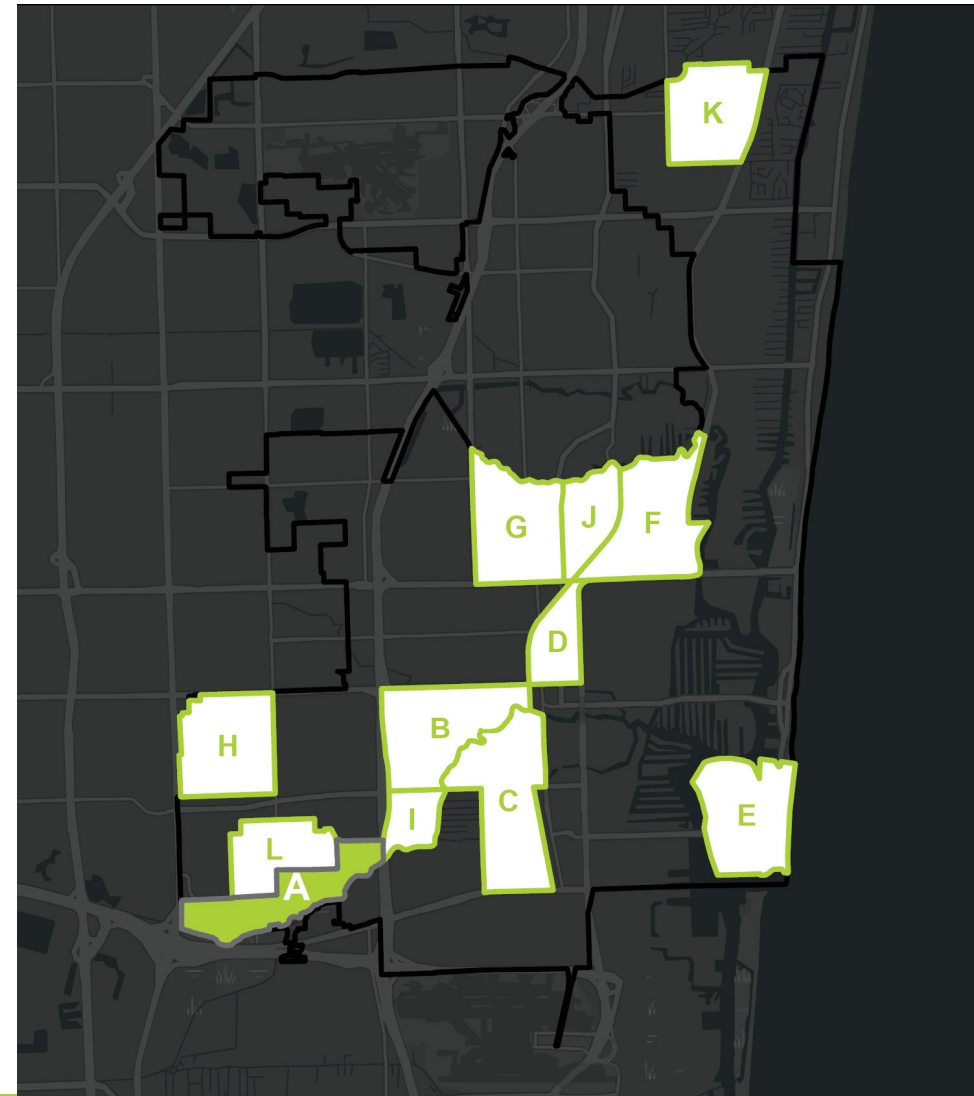
Tranche 2 Neighborhoods

1. River Landings, Riverland Manors/Woods & Adjoining Areas
- 2a. Sailboat Bend
- 2b. Riverside Park
3. Tarpon River
4. Flagler Village
5. Harbour Inlet & Adjoining Areas
6. Poinsettia Heights
7. South Middle River
8. Melrose Park
9. Shady Banks
10. Croissant Park
11. Middle River Terrace
12. Imperial Point
13. Lake Ridge
14. Oak River & Adjoining Areas
15. Chula Vista & Adjoining Areas
16. Riverland Village
17. Lauderdale Isles



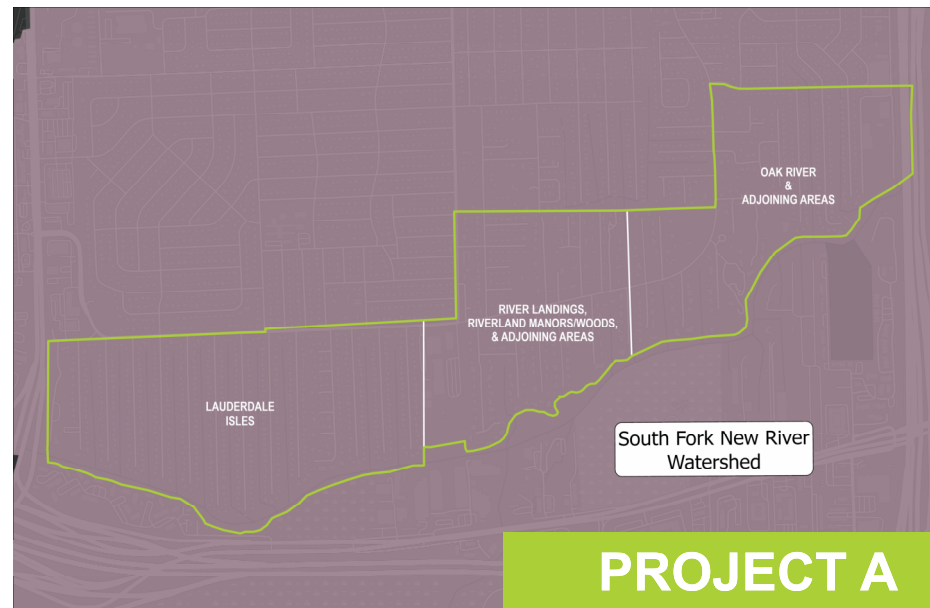
Projects

- A. Lauderdale Isles & Adjoining Areas
- B. Sailboat Bend and Riverside Park
- C. Tarpon River and Croissant Park
- D. Flagler Village
- E. Harbour Inlet & Adjoining Areas
- F. Poinsettia Heights and Lake Ridge
- G. South Middle River
- H. Melrose Park
- I. Shady Banks
- J. Middle River Terrace
- K. Imperial Point
- L. Riverland Village, Chula Vista & Adjoining Areas



The 17 Neighborhoods were consolidated into 12 Projects based on a variety of factors

- Proximity/Adjacency
- Similarity of hydrologic conditions and drainage infrastructure



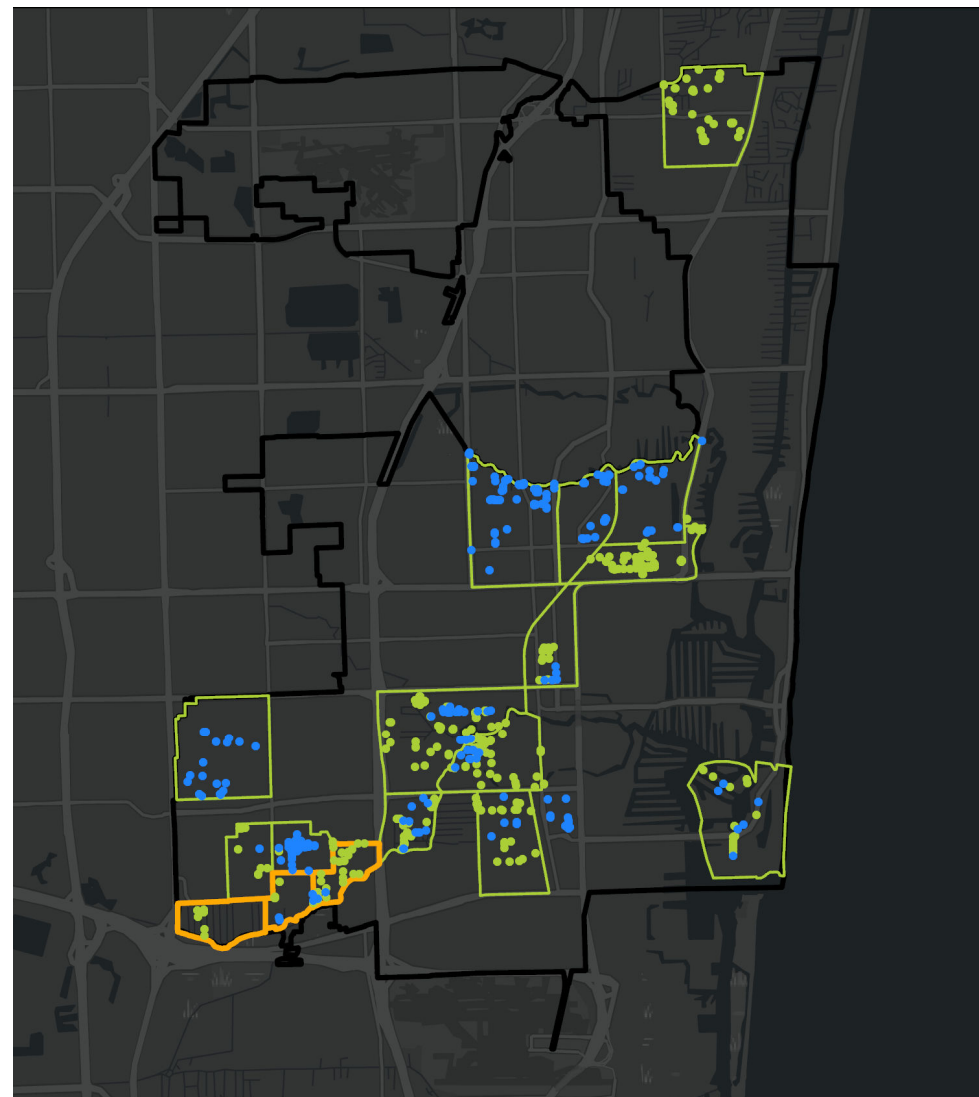
Spatial coverage for data collection was widespread



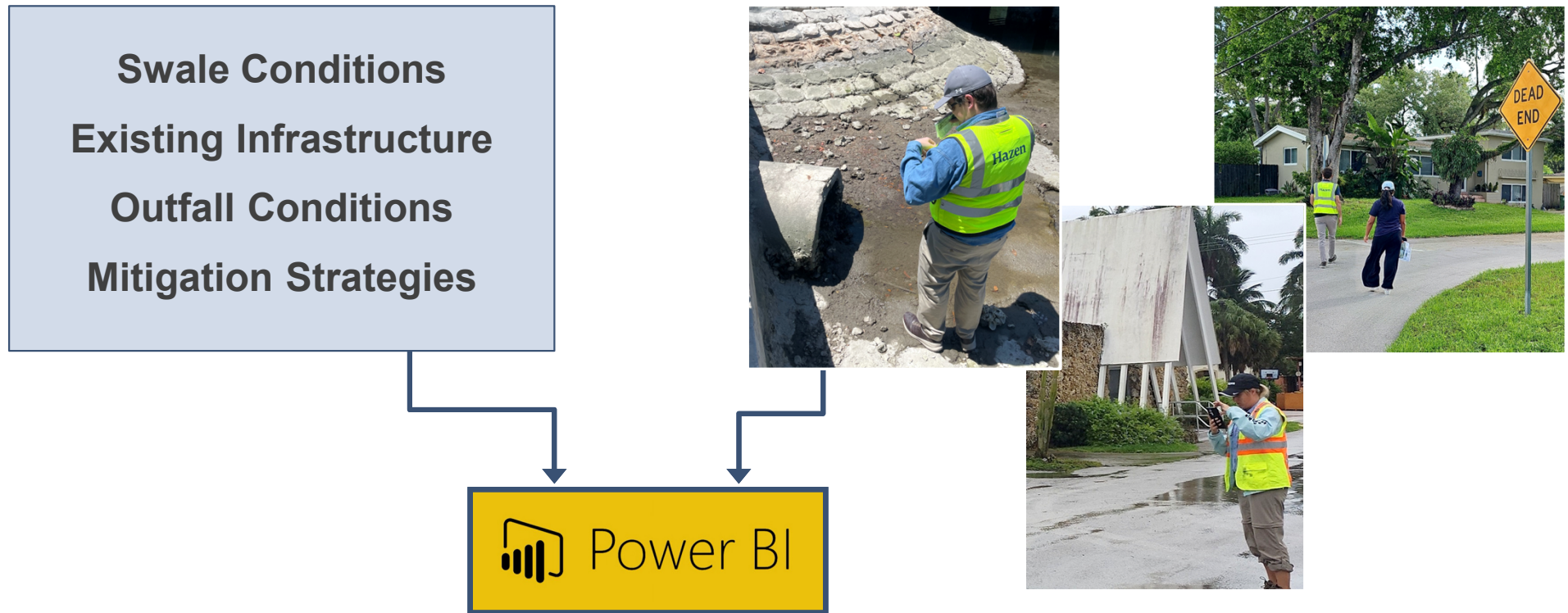
Wet Weather Site Visits



Dry Weather Site Visits



Data Collection Team used ArcGIS Survey123...



...and populated a PowerBI Dashboard

Field Data Summary – River Landings, Riverland Manors/Woods & Adjoining Areas



Flooding

Nature of Flooding	Is There Drainage Infrastructure?
Isolated	Minimal

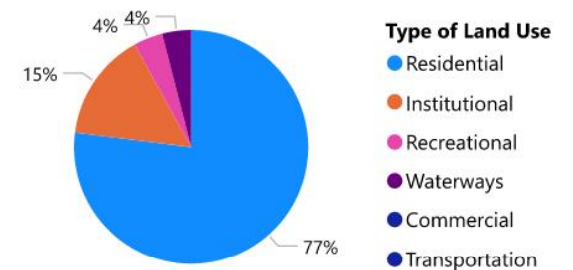
Swales

Existing Swales?	Grading Problems?
Limited	Yes

Outfalls

Existing Outfalls?	Accessible?	Condition
Yes	Yes	Poor

Land Use Distribution



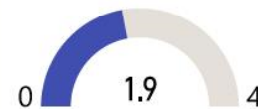
Existing Critical Facilities

Sanitary Sewer Lift Station (1)
Schools (2)

Critical Facilities



Buildings per Acre



Field Data Summary - Oak River & Adjoining Areas



Flooding

Nature of Flooding	Is There Drainage Infrastructure?
Isolated	Existing but undersized

Outfalls

Existing Outfalls?	Accessible?
Yes	No

Swales

Existing Swales?	Paved Swales?	Distribution	Grading Problems?
Yes	Yes	Inconsistent	Yes

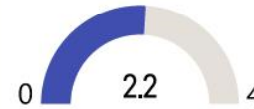
Existing Critical Facilities

Sanitary Sewer Lift Station (3)

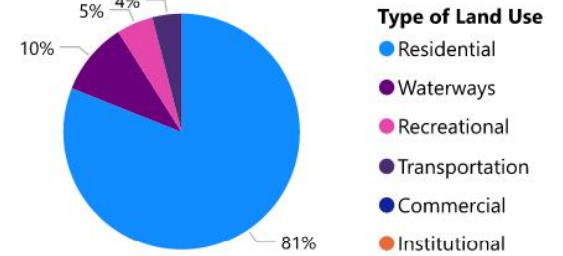
Critical Facilities



Buildings per Acre



Land Use Distribution



Field Data Summary - Lauderdale Isles



Flooding

Nature of Flooding	Is There Drainage Infrastructure?
Isolated	Yes

Outfalls

Existing Outfalls?	Accessible?
Yes	No

Swales

Existing Swales?	Paved Swales?	Distribution	Grading Problems?
Yes	No	Inconsistent	Yes

Existing Critical Facilities

Sanitary Sewer Lift Station (1)

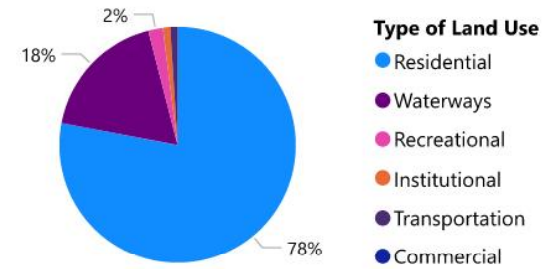
Critical Facilities



Buildings per Acre



Land Use Distribution

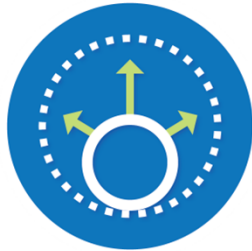


A variety of potential adaptation strategies is proposed



Extend Drainage System

DS



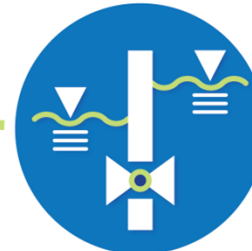
Increase Conveyance Capacity

UP



Install Pump Station

PS-I



Install Tidal Valve

TV



Capital Maintenance

MA



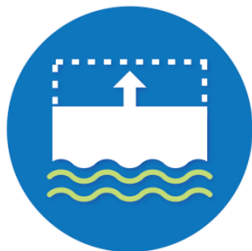
Private Resiliency Program

PR



Upgrade Existing Pump Station

PS-U



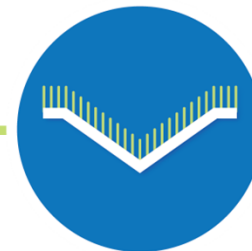
Raise Seawalls

RS



Grading Improvements

GI



Rehabilitate Grass Swales

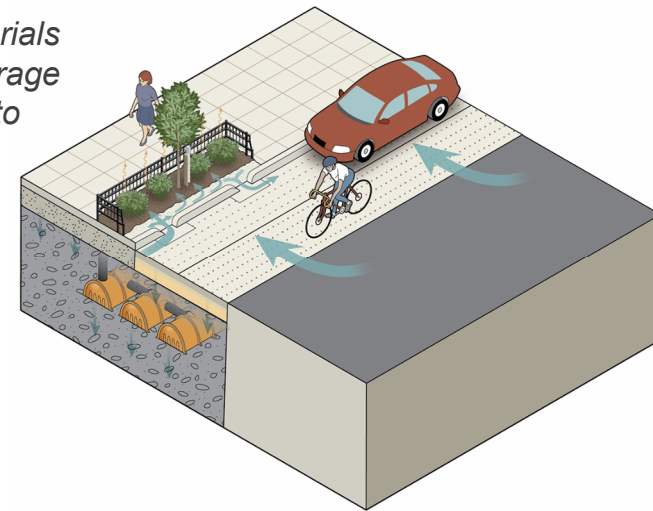
SW

Green Infrastructure and Basin Storage

- Suitable Landscaping and Flood-Resistant Materials
- Enhanced Stormwater Storage or Ponds
- Bioswales and Bioretention
- Permeable Pavement or Pavers
- Rainwater Harvesting



Green infrastructure/materials and non-conventional storage can be incorporated into adaptation strategies.

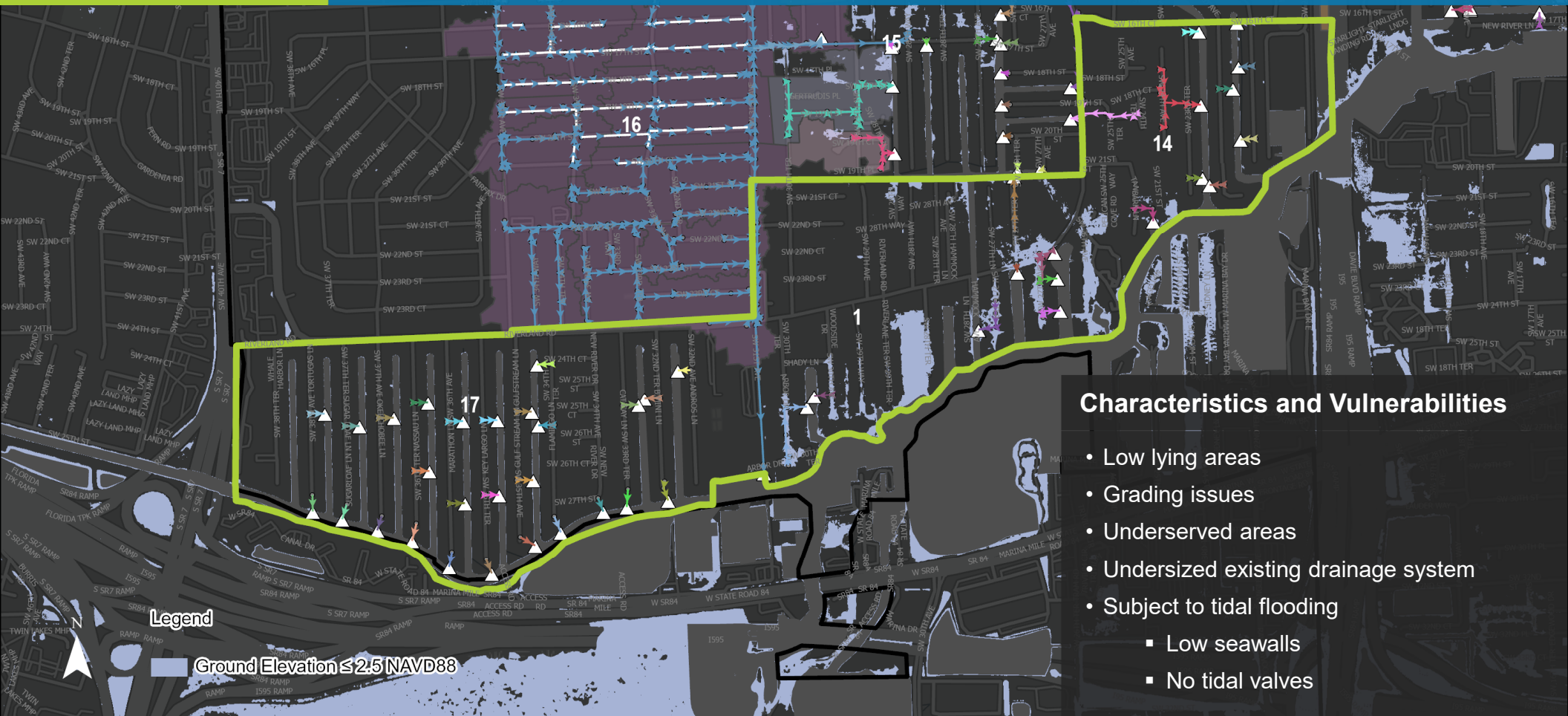


Takeaway from Field Work & Desktop Analyses

		Adaptation Strategies									
											
Project	Tranche 2 Neighborhoods	DS	UP	PS-I	MA	PR	PS-U	RS	GI	TV	SW
A	Lauderdale Isles & Adjoining Areas	✓	✓	✓		✓		✓	✓	✓	✓
B	Sailboat Bend, Riverside Park & Adjoining Areas	✓	✓	✓		✓		✓	✓	✓	✓
C	Tarpon River and Croissant Park	✓	✓	✓		✓		✓		✓	✓
D	Flagler Village		✓		✓	✓	✓				
E	Harbour Inlet & Adjoining Areas		✓			✓				✓	
F	Lake Ridge and Poinsettia Heights	✓	✓	✓		✓			✓		✓
G	South Middle River	✓	✓	✓		✓			✓		✓
H	Melrose Park			✓	✓	✓					
I	Shady Banks	✓	✓	✓		✓				✓	✓
J	Middle River Terrace	✓	✓	✓		✓			✓		✓
K	Imperial Point	✓	✓			✓					✓
L	Riverland Village, Chula Vista & Adjoining Areas	✓		✓	✓	✓		✓		✓	✓

PROJECT A

Lauderdale Isles & Adjoining Areas



Characteristics and Vulnerabilities

- Low lying areas
- Grading issues
- Underserved areas
- Undersized existing drainage system
- Subject to tidal flooding
 - Low seawalls
 - No tidal valves

PROJECT A

Lauderdale Isles & Adjoining Areas



Potential Adaptation Strategies

-  Grading Improvements
-  Rehabilitate Grass Swales
-  Extend Drainage System
-  Increase Conveyance Capacity
-  Raise Seawalls
-  Install Tidal Valve
-  Install Pump Station
-  Private Resiliency Program

Neighbor's Input leveraging ArcGIS Survey123 to...

- Identify specific flooding locations
- Describe flooding experiences and associated impacts
- Identify primary concerns related to flooding
- Collect flooding photos/videos

Report Flooding

 Fort Lauderdale Stormwater Program
Flood Survey



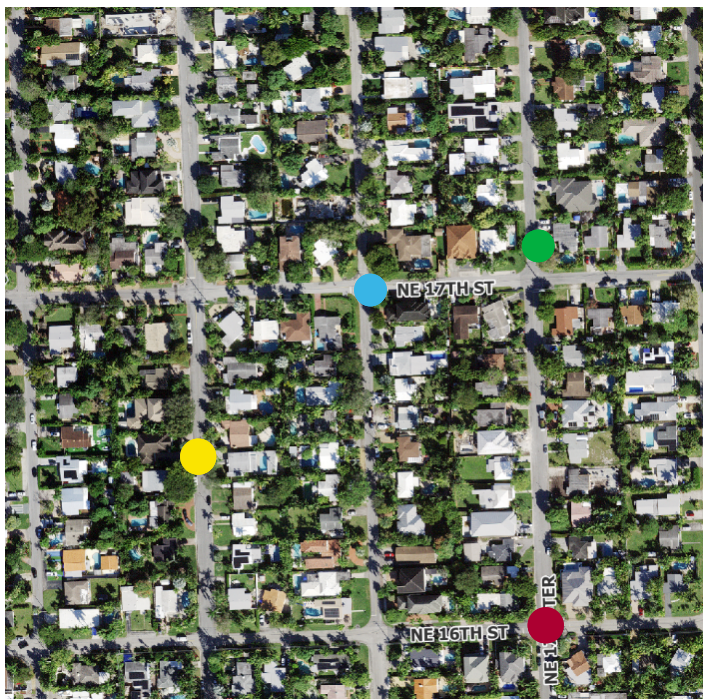
Flood Survey

Please follow link
via QR Code



<https://arcg.is/1fbTbj0>

Data Collection – Flooding Locations



- Green Dot – Nuisance Ponding (< 6 inches)
- Blue Dot – Yard Flooding (except swale)
- Yellow Dot – Roadway Flooding (> 6 inches)
- Red Dot – Impassible Flooding (> 12 inches)

We are available with maps after the presentation to collect flooding location data in addition to the digital survey.

What to Expect Next



- Field crews will continue to collect data in your area
- Collecting of information via survey (QR Code/link) or in person during neighborhood meetings
- Next meeting will include design recommendations for each neighborhood. Check Fortify Lauderdale website for meeting dates:
<https://www.fortlauderdale.gov/fortifylauderdale>







**Fortify
Lauderdale**
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in Fort Lauderdale

Flood Survey



<https://arcg.is/1fbTbj0>

Questions

-  Green Dot – Nuisance Ponding (< 6 inches)
-  Blue Dot – Yard Flooding (except swale)
-  Yellow Dot – Roadway Flooding (> 6 inches)
-  Red Dot – Impassible Flooding (> 12 inches)