CITY OF FORT LAUDERDALE

**Phase 2 Neighborhoods
Stormwater Management Improvements
City Project No. 12852
City Commission Meeting
April 15, 2025**

Objective

Our objective to summarize recommendations for the implementation of Phase 2 neighborhood projects is expected to span two commission meetings:

1. Today, the first meeting of two, is focused on communicating the recommended project ranking *methodology*, summarizing factors to be considered in the grouping and ordering of projects, for the City Commission's review and comment.

2. The second meeting will focus on finalization of grouping and ordering of projects using the methodology approved by the City Commission.
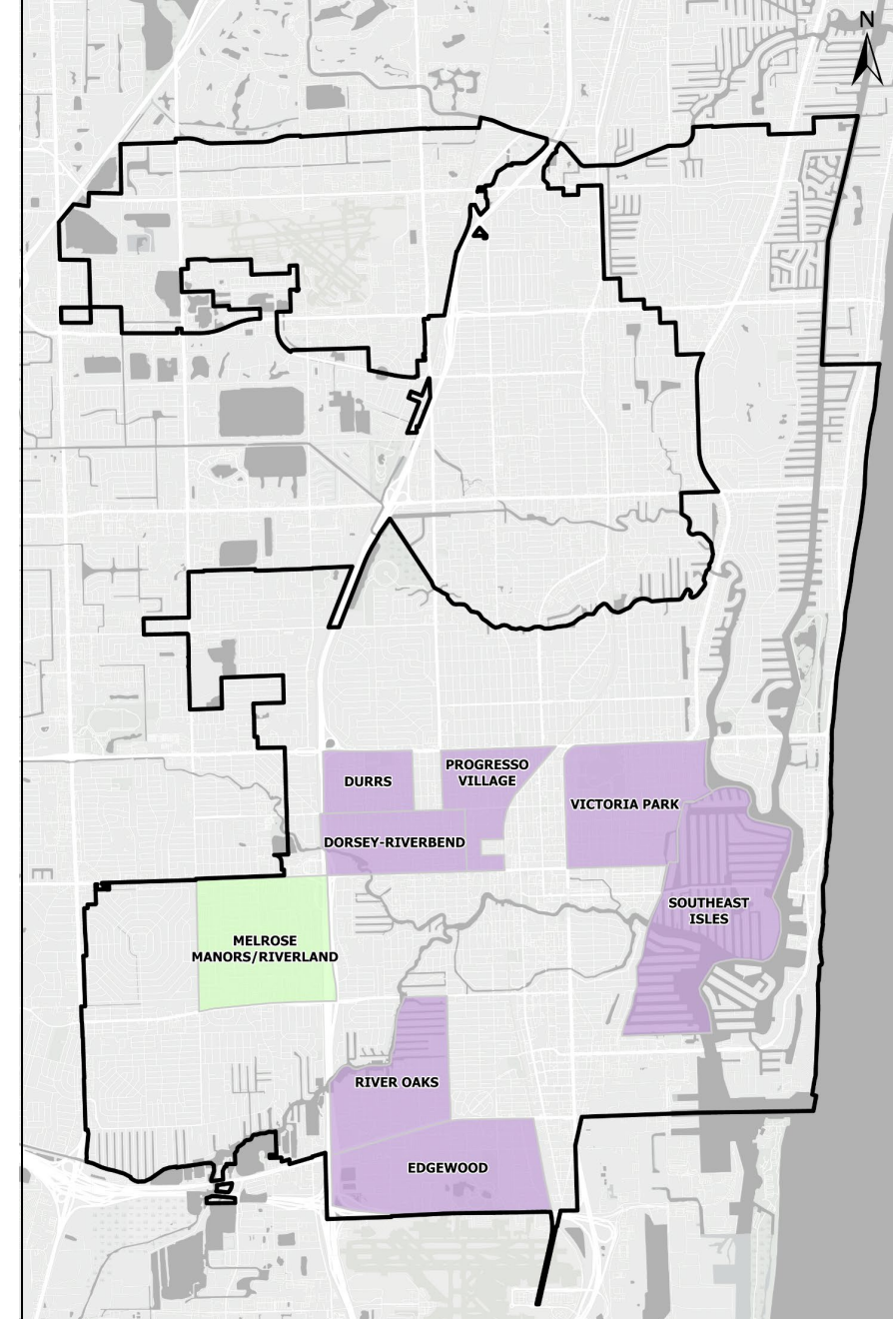
Meeting Agenda

1	Phase 1 & Phase 2 Neighborhood Projects
2	Phase 2 Project Analyses
3	Proposed Methodology for Project Prioritization
4	Next Steps

1

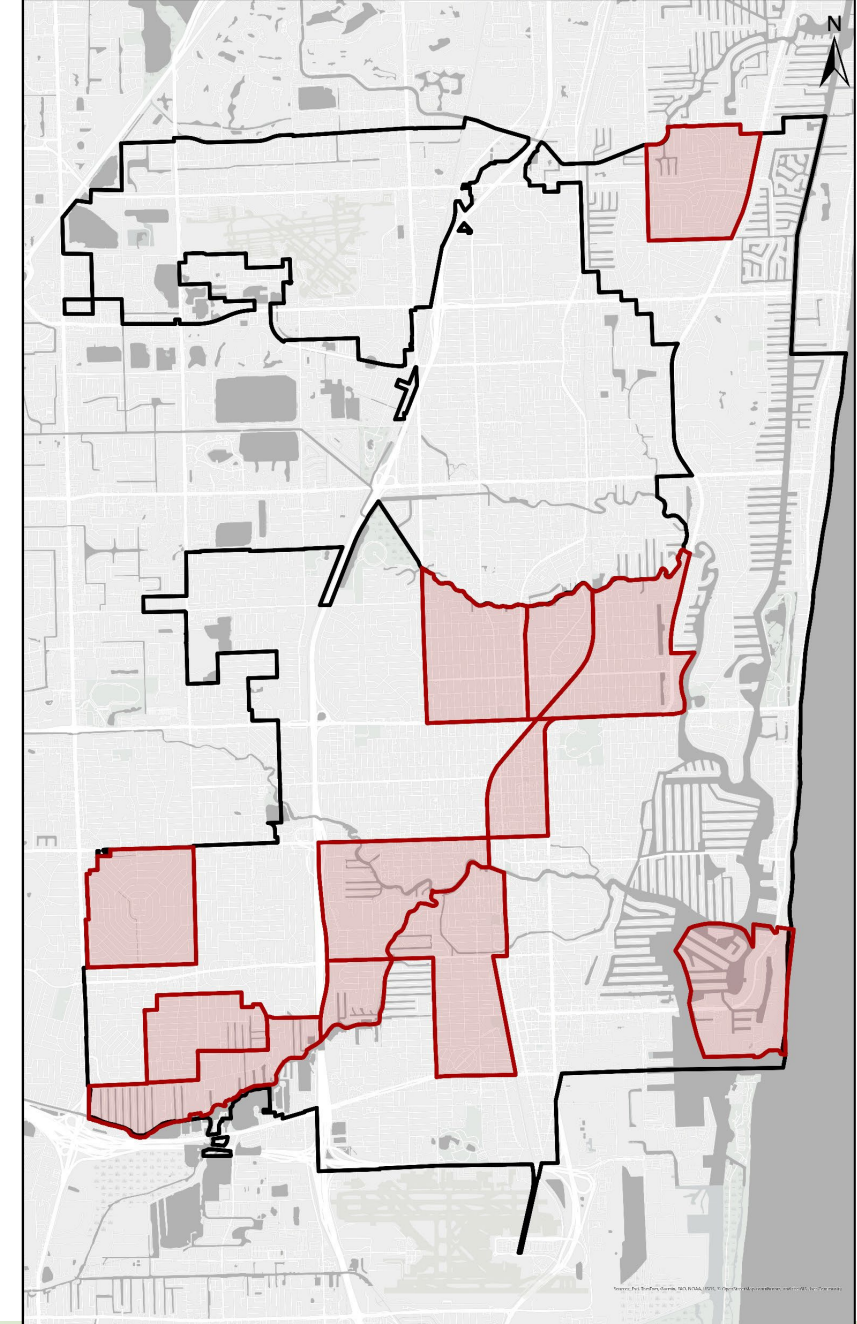# Phase 1 & Phase 2 Neighborhood Projects

Phase 1: Eight Neighborhoods

- Edgewood

- River Oaks

- Dorsey-Riverbend

- Durrs

- Progresso Village

- Victoria Park

- Southeast Isles

- Melrose Manors/Riverland *

Phase 2: 17+ Neighborhoods/12 Projects

- Flagler Village

- Harbour Inlet & Adjoining Areas

- Imperial Point

- Lauderdale Isles, Oak River, River Landings, Riverland Manors/Woods & Adjoining Areas

- Melrose Park

- Middle River Terrace

- Poinsettia Heights and Lake Ridge

- Riverland Village, Chula Vista & Adjoining Areas

- Sailboat Bend and Riverside Park

- Shady Banks

- South Middle River

- Tarpon River and Croissant Park

2

Phase 2 Project Analysis

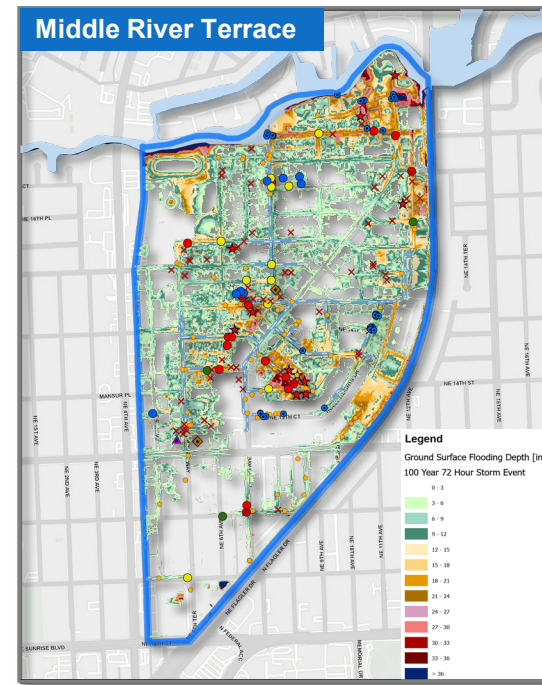# Phase 2 Neighborhood Project Analysis involved three primary components

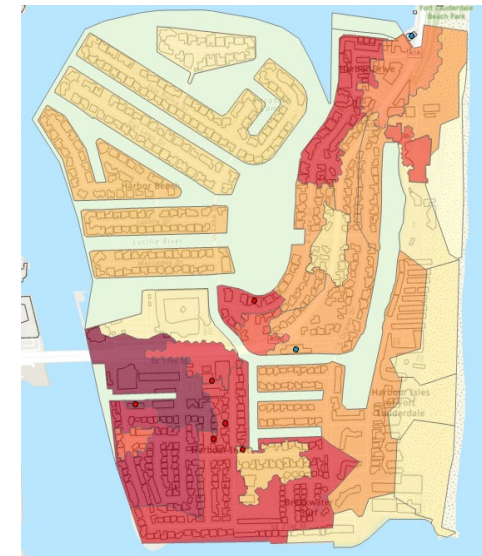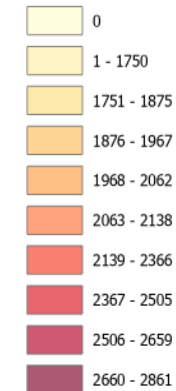**A. Flooding Information Neighbor/Agency Data** ➕ **B. Flood Modeling** ➕ **C. Level of Service (LOS)**
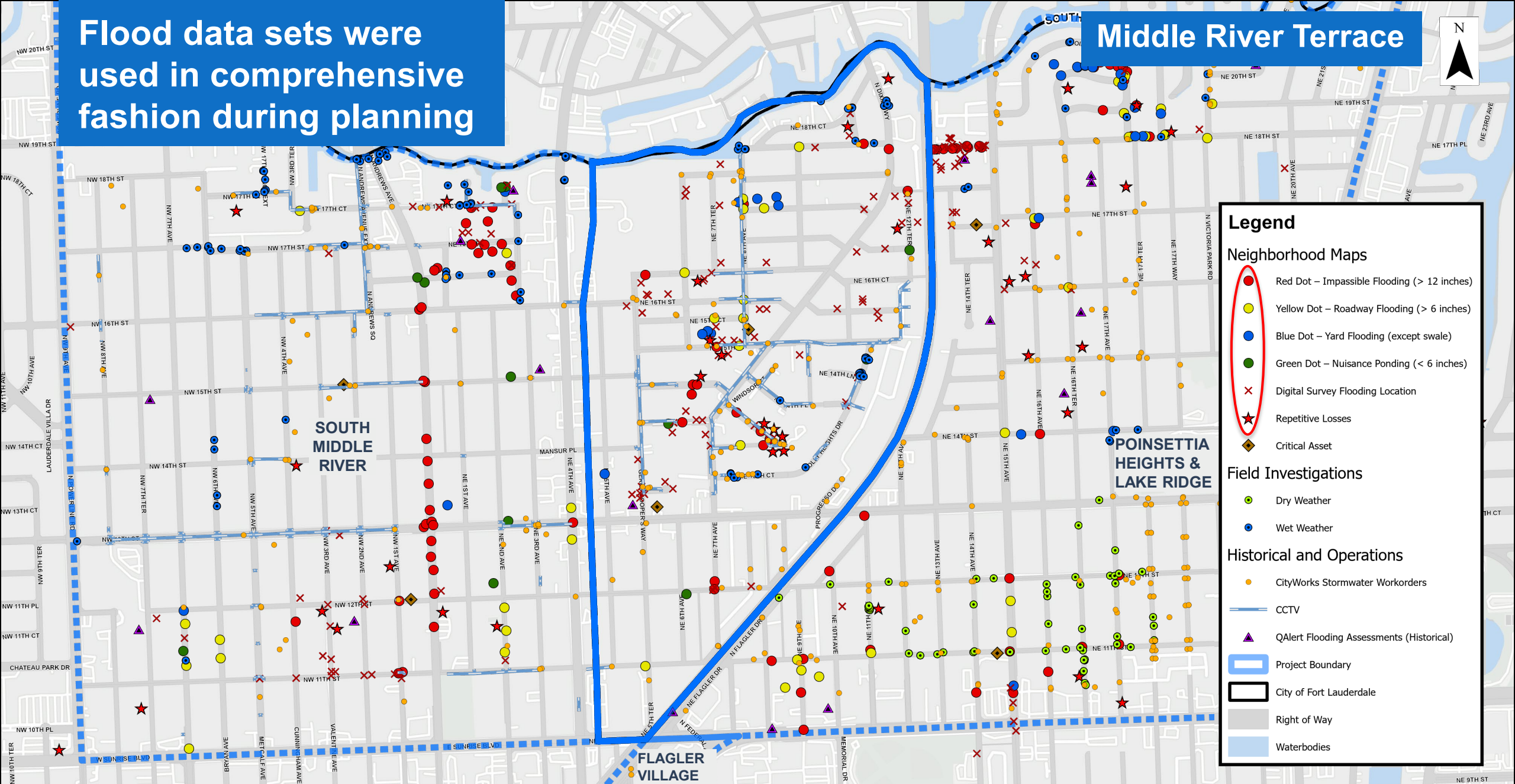

Flood Survey

Middle River Terrace

Flood data sets were used in comprehensive fashion during planning

Middle River Terrace

Legend

Neighborhood Maps
- Red Dot – Impassible Flooding (> 12 inches)
- Yellow Dot – Roadway Flooding (> 6 inches)
- Blue Dot – Yard Flooding (except swale)
- Green Dot – Nuisance Ponding (< 6 inches)
- ✕ Digital Survey Flooding Location
- ★ Repetitive Losses
- ◆ Critical Asset

Field Investigations
- Dry Weather
- Wet Weather

Historical and Operations
- CityWorks Stormwater Workorders
- CCTV
- ▲ QAlert Flooding Assessments (Historical)
- Project Boundary
- City of Fort Lauderdale
- Right of Way
- Waterbodies

SOUTH MIDDLE RIVER

POINSETTIA HEIGHTS & LAKE RIDGE

FLAGLER VILLAGE

A. Flooding Information Neighbor/Agency Data

Points assigned due to City data collection

Number of Reports per acre within the Project Area
divided by the Number of Reports per acre in the worst area

Points assigned due to FEMA repetitive losses

Number of Repetitive Loss properties per acre within the Project Area
divided by the Number of Repetitive Loss properties per acre in the worst area
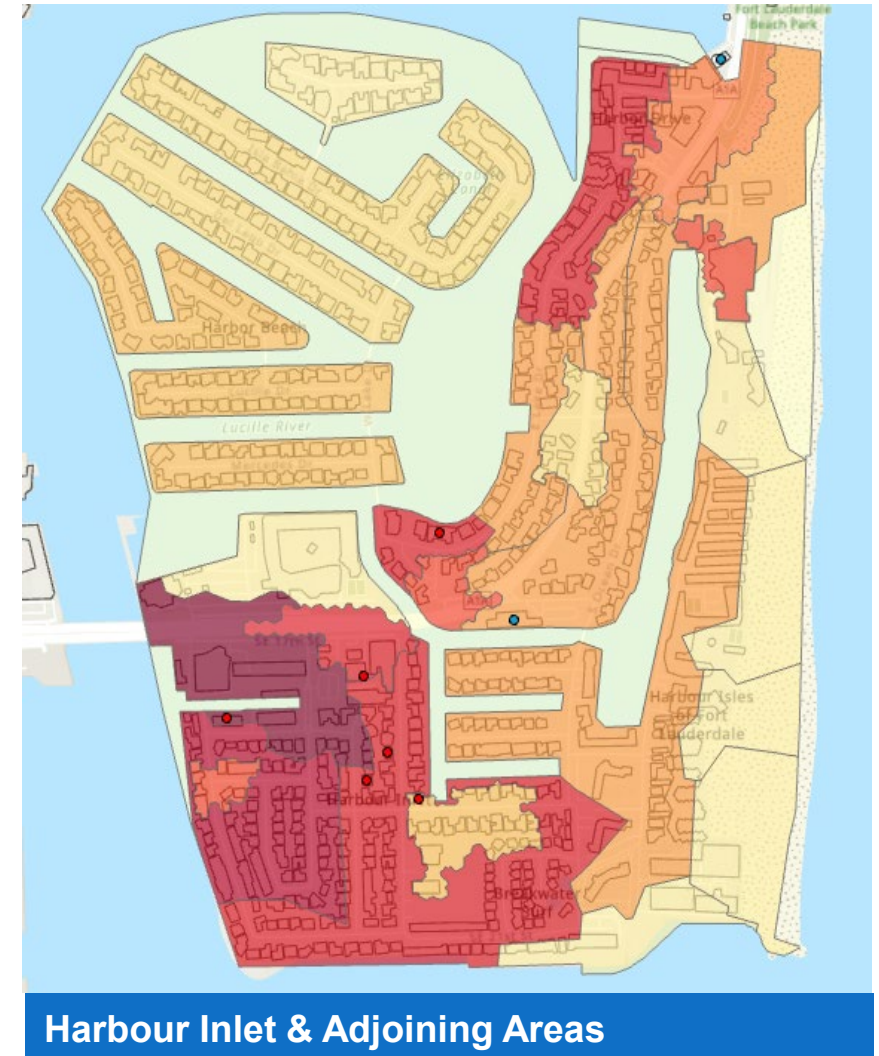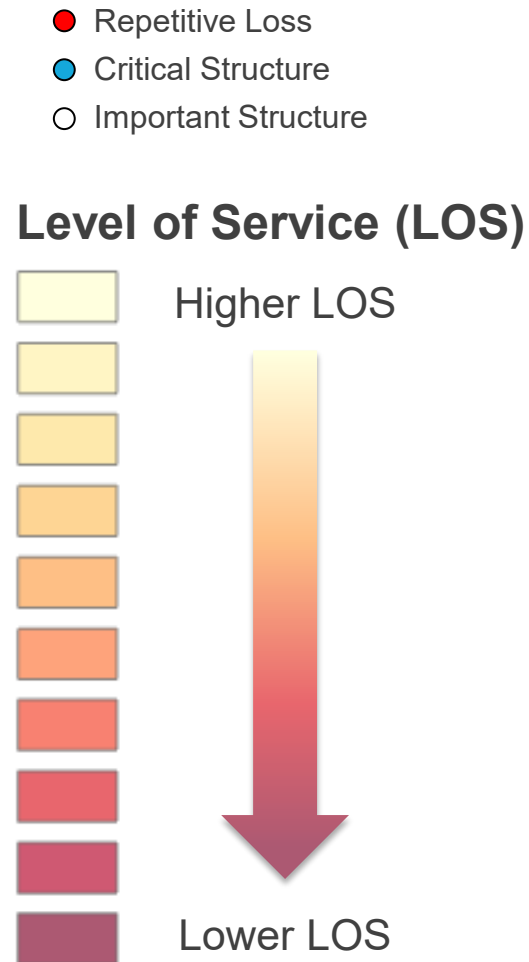
B. For Flood Modeling, multiple scenarios were used to assist proper planning and prioritization

Event	Rainfall (inches)	Asset Evaluated
10 Year – 24 Hr	8.7	Roadways
100 Year – 72 Hr	18.5	Structures

2040 and 2070 Planning Horizons were modeled to evaluate vulnerability to Sea Level Rise and other climate impacts

C. Using model results, a LOS evaluation was conducted for each project, yielding a comparable metric regarding the relative impact of flooding

- Considers the overall area impacted

- Considers estimated miles of roadway flooded and number of structures flooded

- Considers critical facilities and repetitive losses

➡ Provides a means of estimating which areas are most heavily impacted (highest score)

- 🔴 Repetitive Loss
- 🔵 Critical Structure
- ⚪ Important Structure

Level of Service (LOS)

Higher LOS

Lower LOS

Harbour Inlet & Adjoining Areas

C (continued). Level of Service (LOS) Points

Structures:

The "Structures LOS Points" are calculated based on model results. The calculation considers the number of buildings/structures expected to experience flooding during the 10- and 100-year storm events.

Roads:

**The "Roads LOS Points" are calculated based on model results**. The calculation considers the length of roads expected to flood. The storm event used in this calculation varies depending on road classification.

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Proposed Methodology for Project Prioritization

The intent is to place the 12 projects into three "time-based" groups of four projects
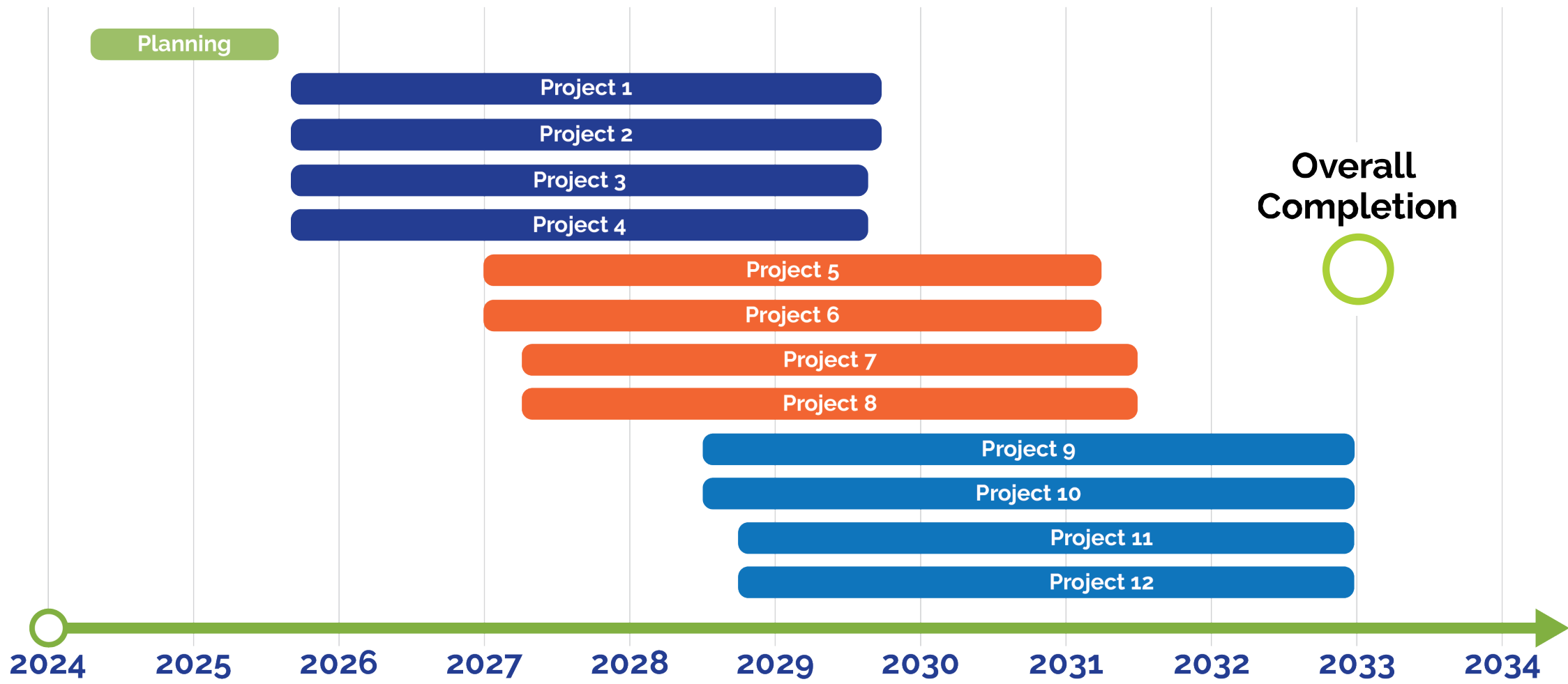
A variety of factors could be used in prioritizing the order of work

LOS score/severity of flooding

Neighborhood feedback

Spatial distribution of investment

Hydrologic/ hydraulic interactions between neighborhoods

Cumulative construction impacts in a given area

Project size/costs
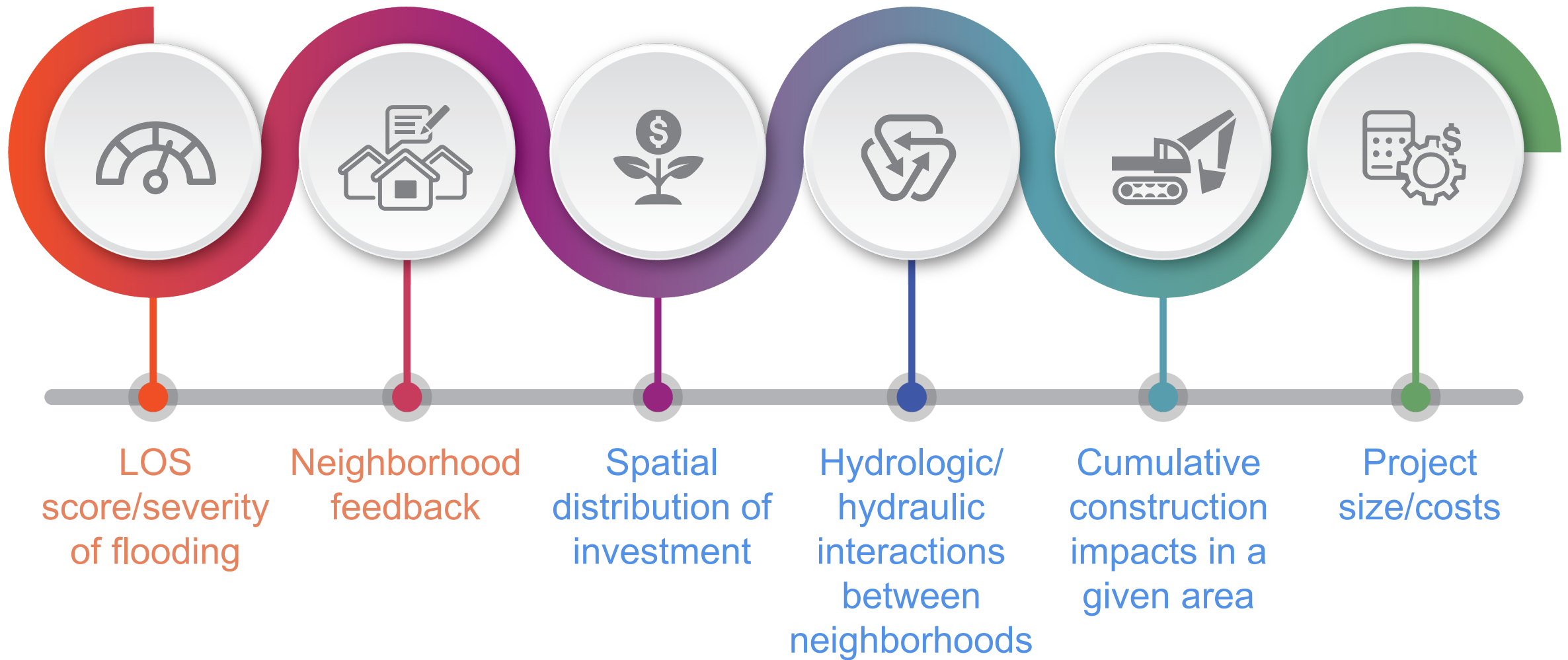
Numerical Analysis for Project Prioritization

Objective: Obtain a Project Score that can be used to rank projects

Model-Driven LOS Score multiplied by a **LOS Weighting Factor**

+

Neighborhood Feedback Score multiplied by a **Feedback Weighting Factor**

➡ **Project Score**

The suggested weighting factors are **75% for LOS** and **25% for feedback.**

City Commission Input

Level of Service (LOS) Score

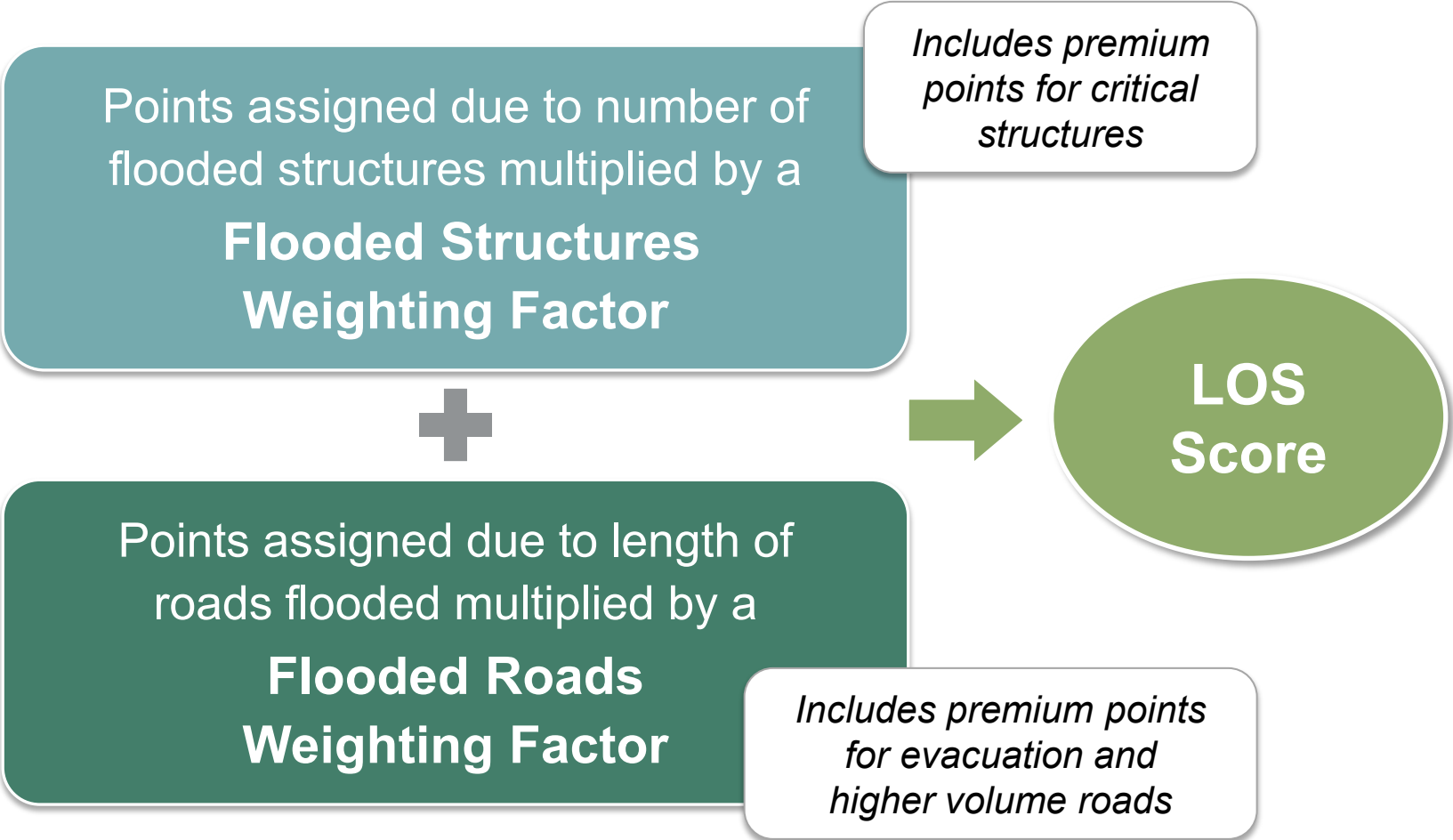Points assigned due to number of flooded structures multiplied by a **Flooded Structures Weighting Factor**

Includes premium points for critical structures

+

Points assigned due to length of roads flooded multiplied by a **Flooded Roads Weighting Factor**

Includes premium points for evacuation and higher volume roads

➜ **LOS Score**

The suggested weighting factors are **50% / 50%.**

City Commission Input

Neighborhood Feedback Score

Points assigned due to City data collection multiplied by a **City data Weighting Factor**

+

Points assigned due to FEMA repetitive losses multiplied by a **FEMA RL Weighting Factor**

→

Neighborhood Feedback Score
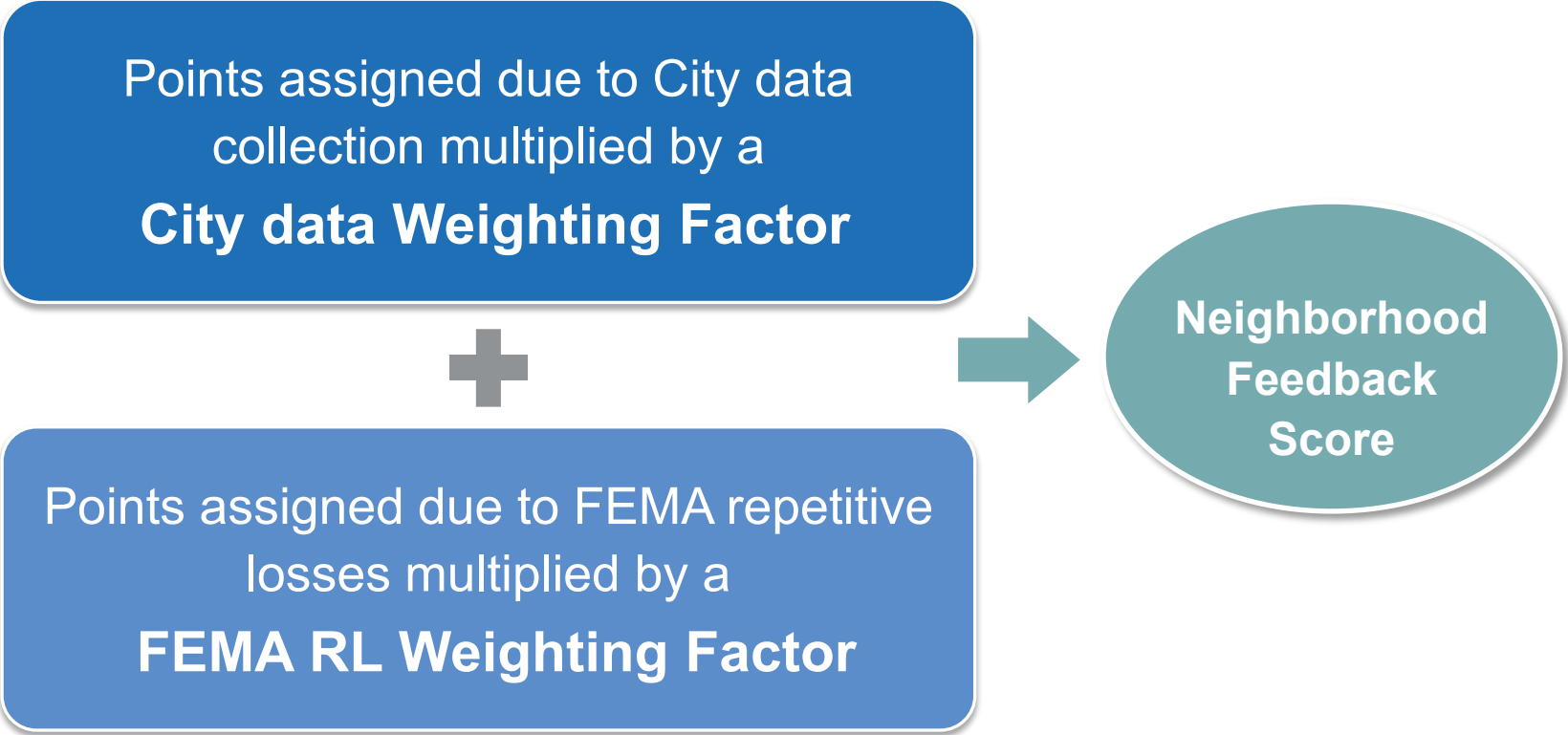
The suggested weighting factors are **60% for City data** and **40% for FEMA RL**.
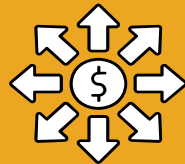
City Commission Input

Subjective criteria are proposed to be used as follows:

Hydrologic Interactions - Direct prioritization (downstream system built first)

Spatial Distribution - Adjust by one group to more evenly spread work throughout the City at a given time

Cumulative Construction Impacts - Adjust by one group (timing) to reduce impacts on traffic/neighbors
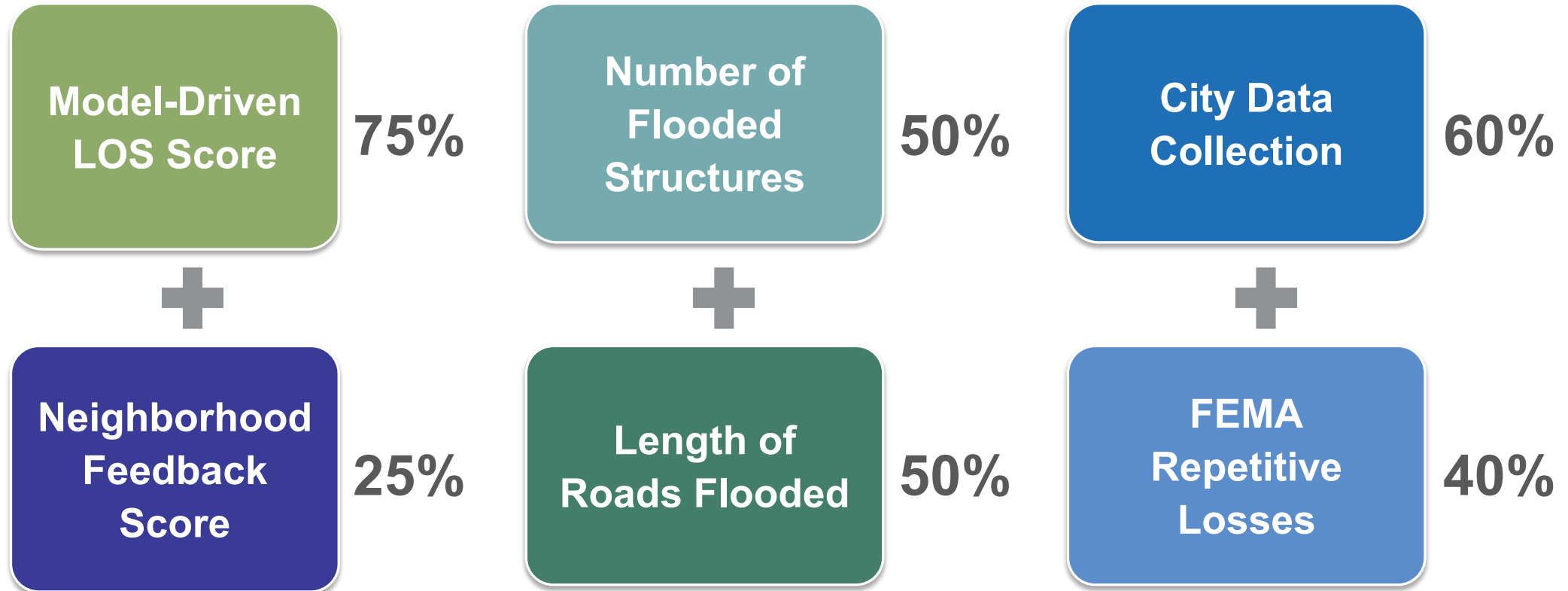
Project Costs - Adjust by one group to avoid aggregating the "most expensive" or "least expensive" projects in the same group

4

Next Steps

The primary decisions affecting prioritization

Model-Driven LOS Score 75%	**Number of Flooded Structures** 50%	**City Data Collection** 60%
+	+	+
Neighborhood Feedback Score 25%	**Length of Roads Flooded** 50%	**FEMA Repetitive Losses** 40%

Questions