

Building a Climate Resilience Strategy for Lower Manhattan: Extending the Shoreline

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With over 520 miles of shoreline – more than the coastlines of Miami, Los Angeles, Boston, and San Francisco combined – New York City is at risk from both future tidal flooding and more frequent and severe coastal storms.



In Lower Manhattan, the City is advancing over \$900M in **climate adaptation** projects. The Financial District and Seaport Master Plan will fill the missing link.

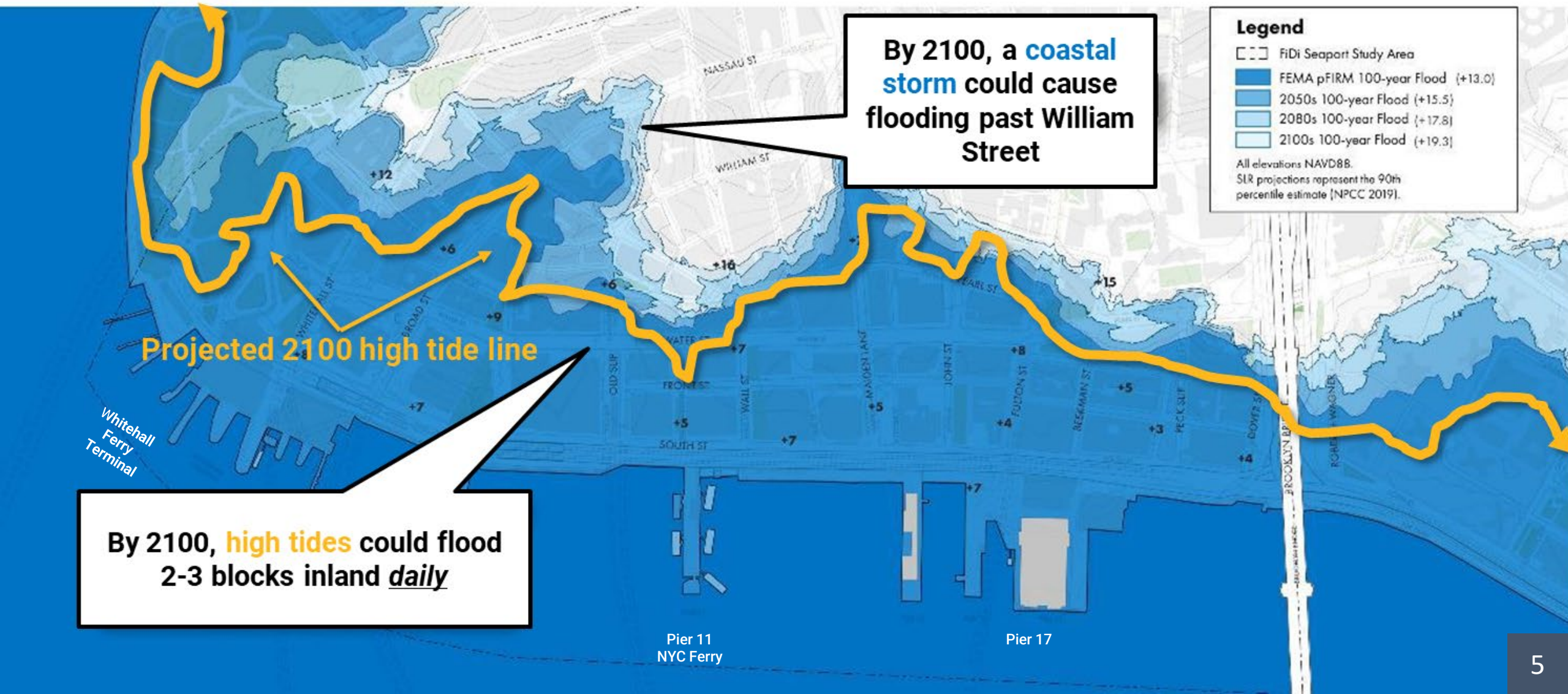
The FiDi-Seaport Climate Resilience Plan will be a **comprehensive resilience plan** to protect the Financial District and South Street Seaport

FIDI SEAPORT CLIMATE RESILIENCE PLAN
SIWW – CITY WATER RESILIENCE | APRIL 2022





We need to protect the Financial District & Seaport from two types of climate risks – daily tidal flooding and coastal storms.



Who is our **project team**?



The **New York City Economic Development Corporation (NYCEDC)** and the **Mayor's Office of Climate Resiliency (MOCR)** are leading the Climate Resilience Plan in close collaboration with the NYC Departments of Transportation, City Planning, Environmental Protection, Parks & Recreation, and more.

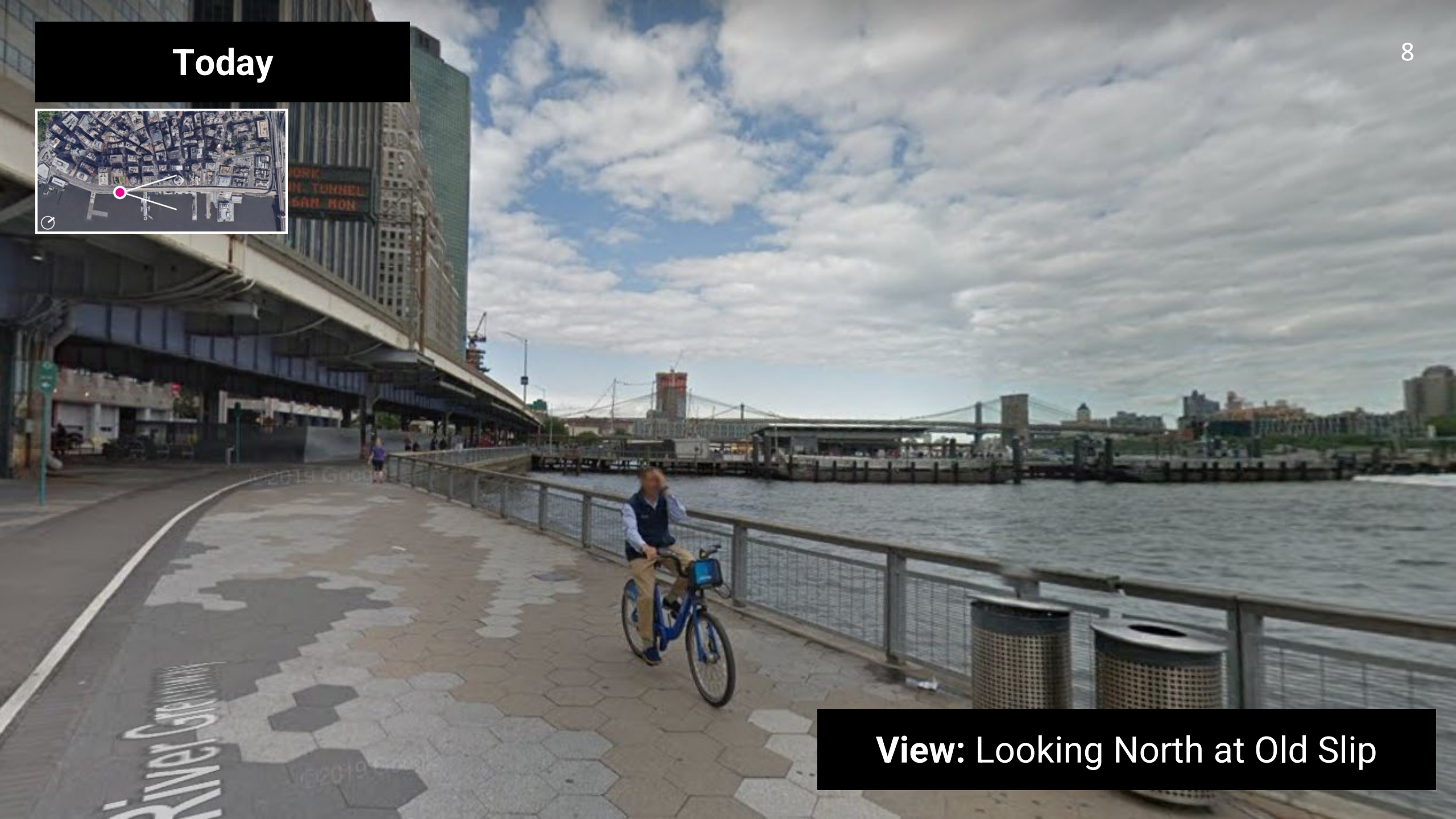
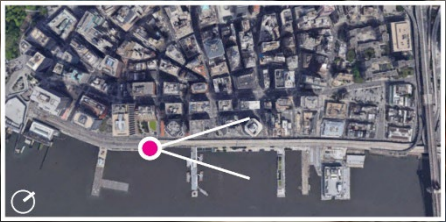
An interdisciplinary team of experts are supporting this work, led by the Dutch engineering firm **Arcadis** and including **ONE Architecture & Urbanism** and **SCAPE Landscape Architecture**.

The FiDi-Seaport Climate Resilience Plan will transform this waterfront.

It will protect us from climate change while preserving what people love most and creating the waterfront we want for the future.

Today

8



View: Looking North at Old Slip

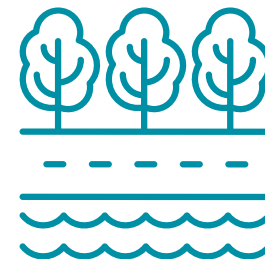
Project Goals



Protect Lower Manhattan from daily tidal flooding and coastal storms



Integrate our climate resilience infrastructure into the city



Enhance the public waterfront experience

Ingredients



Flood Defense Infrastructure



Stormwater Management



Resilient Ferry Terminals and Piers



Fluid Access and Circulation



Ecological Preservation



Existing Public Destinations



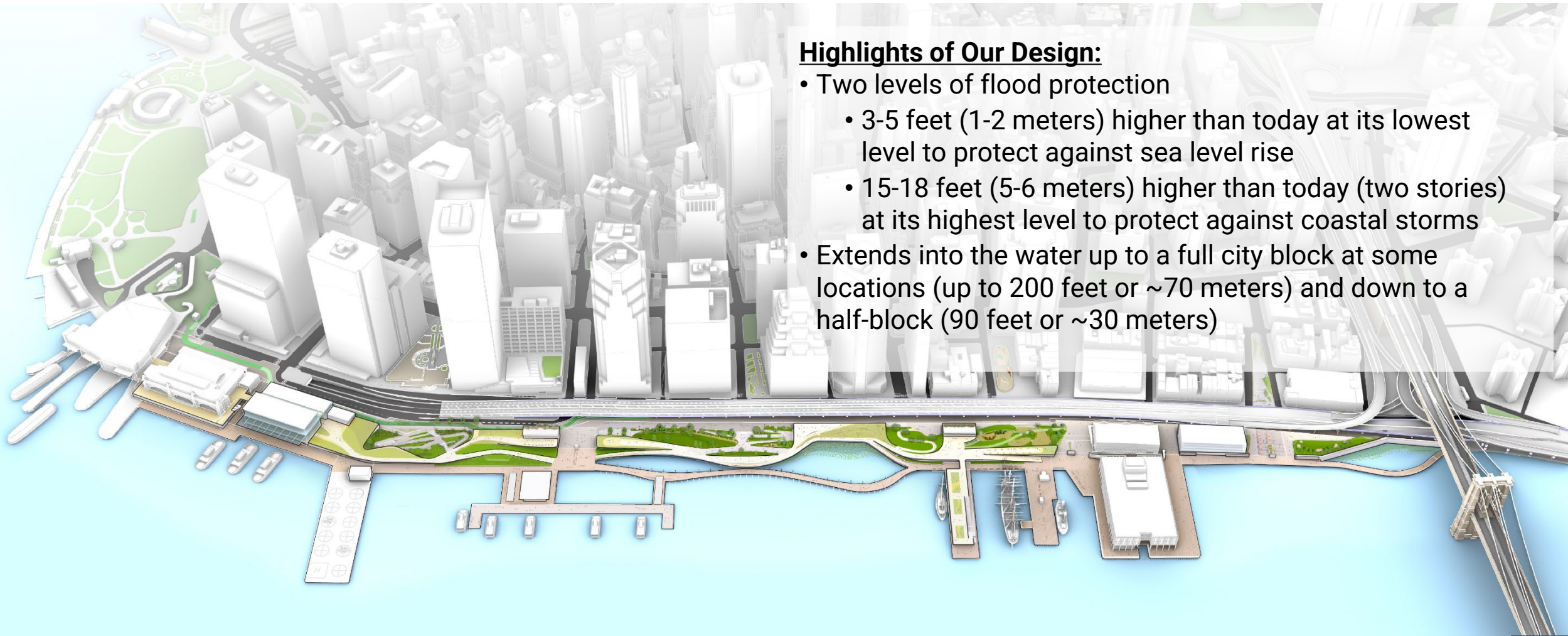
Multi-level Waterfront Experiences



New Open Space and Programming

Our Plan

Grounded in extensive community conversations, collaboration, and regulatory feedback, our plan lays out a shared vision that is feasible, implementable and provides a dynamic urban and waterfront experience.

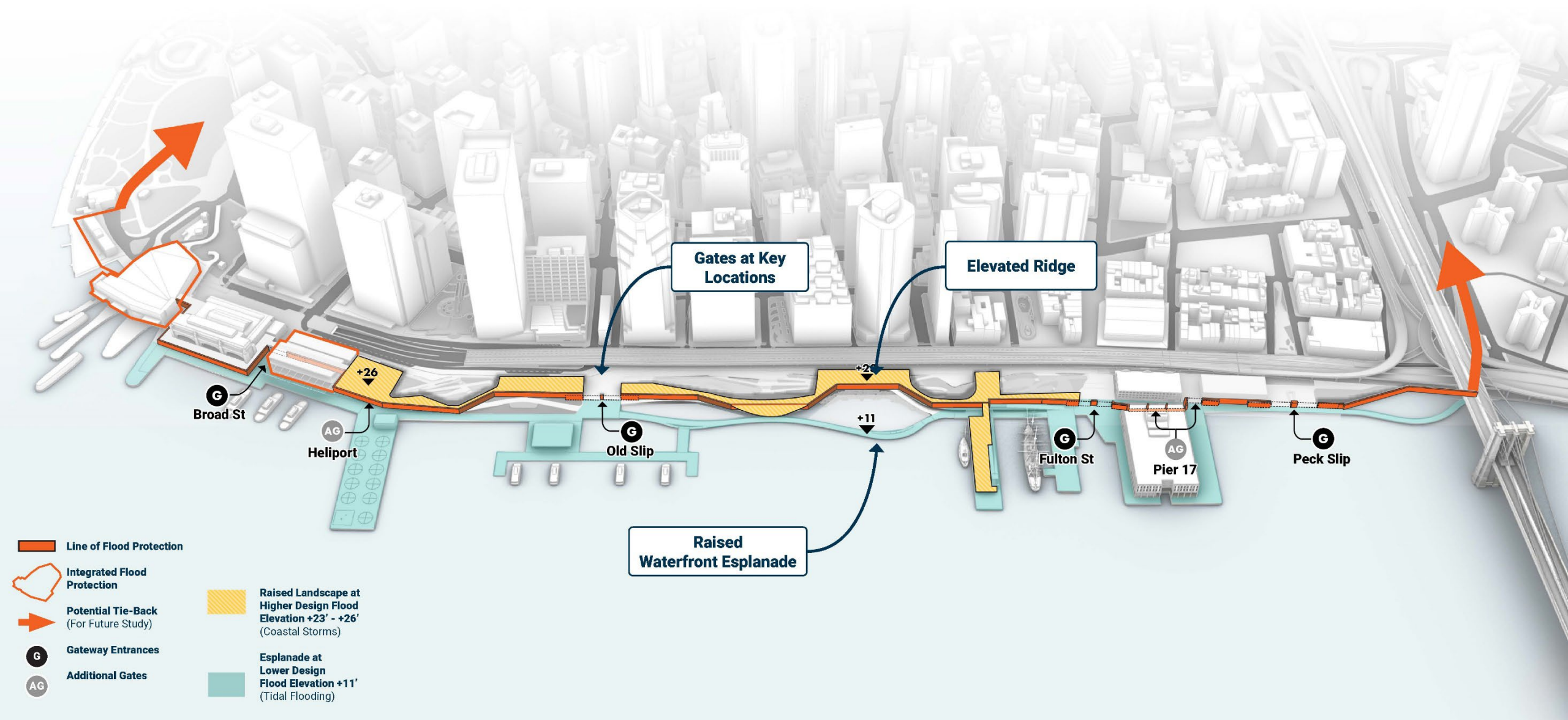


Highlights of Our Design:

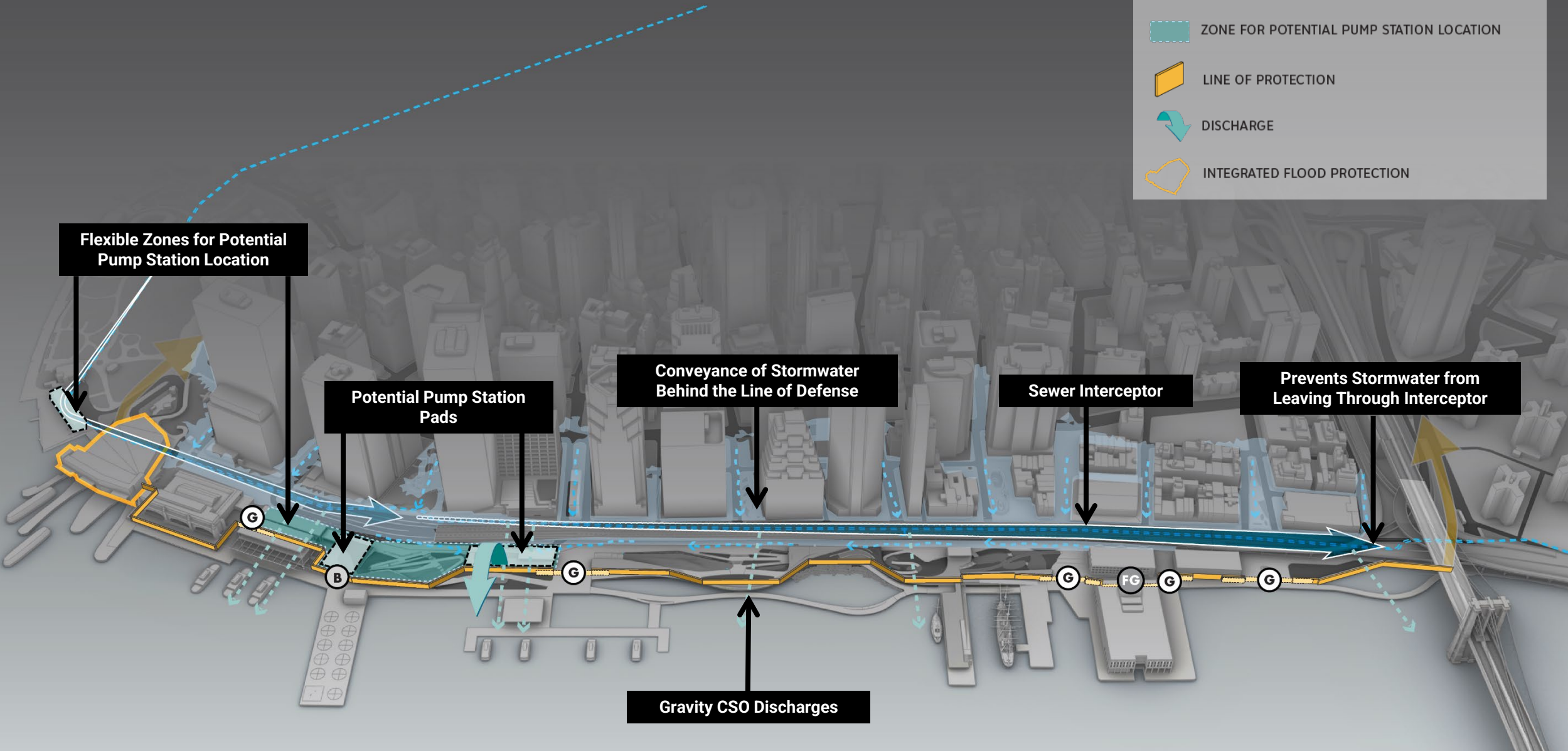
- Two levels of flood protection
 - 3-5 feet (1-2 meters) higher than today at its lowest level to protect against sea level rise
 - 15-18 feet (5-6 meters) higher than today (two stories) at its highest level to protect against coastal storms
- Extends into the water up to a full city block at some locations (up to 200 feet or ~70 meters) and down to a half-block (90 feet or ~30 meters)

**Our project will protect Lower
Manhattan from daily tidal
flooding and coastal storms.**

Integrating Flood Defense Infrastructure



Interior Drainage



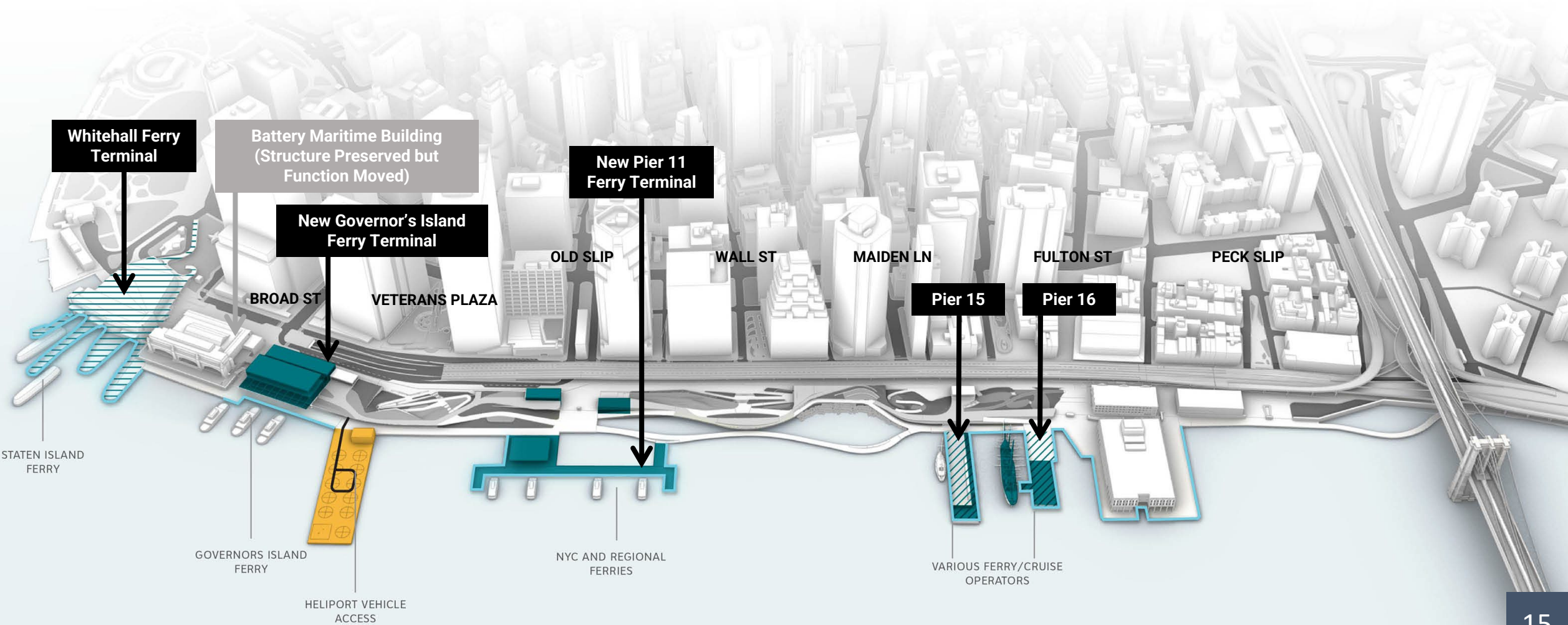
**Our project will integrate
climate resilience
infrastructure into the city.**

Ferries, Ships, & Piers

HELIPORT

MARITIME FACILITIES

RECONSTRUCTED MARITIME FACILITIES

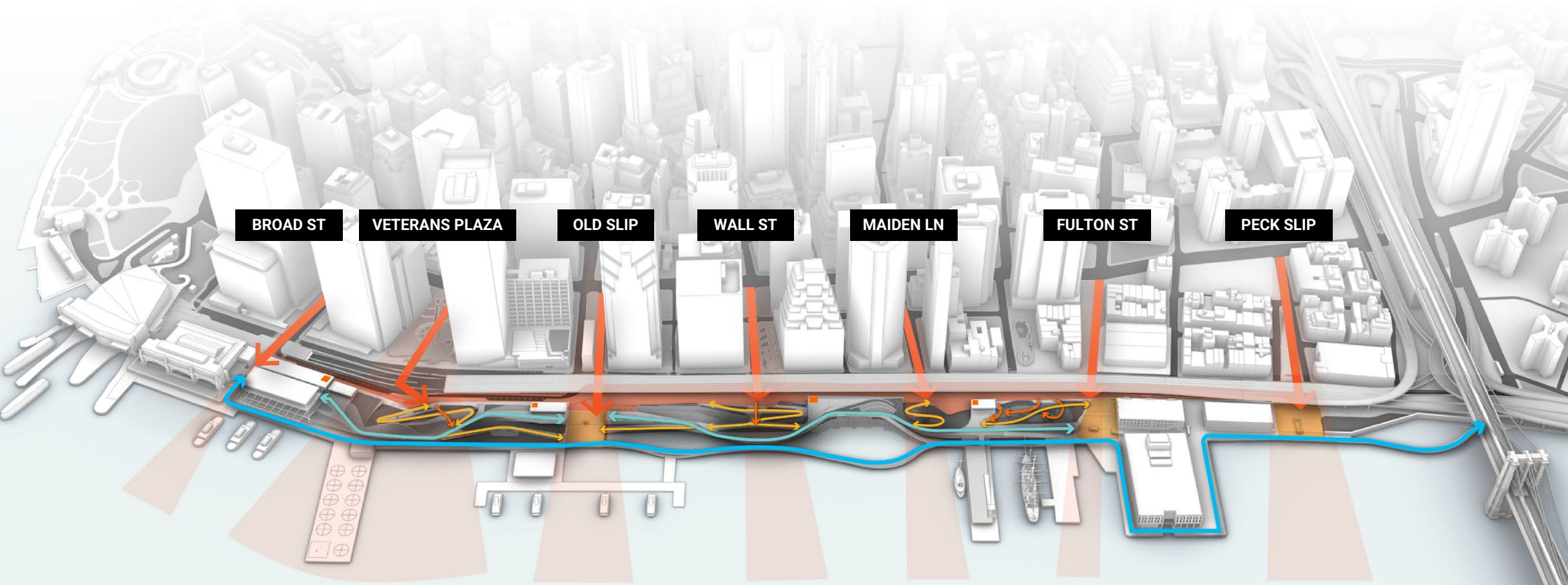


Access & Circulation

Pedestrians

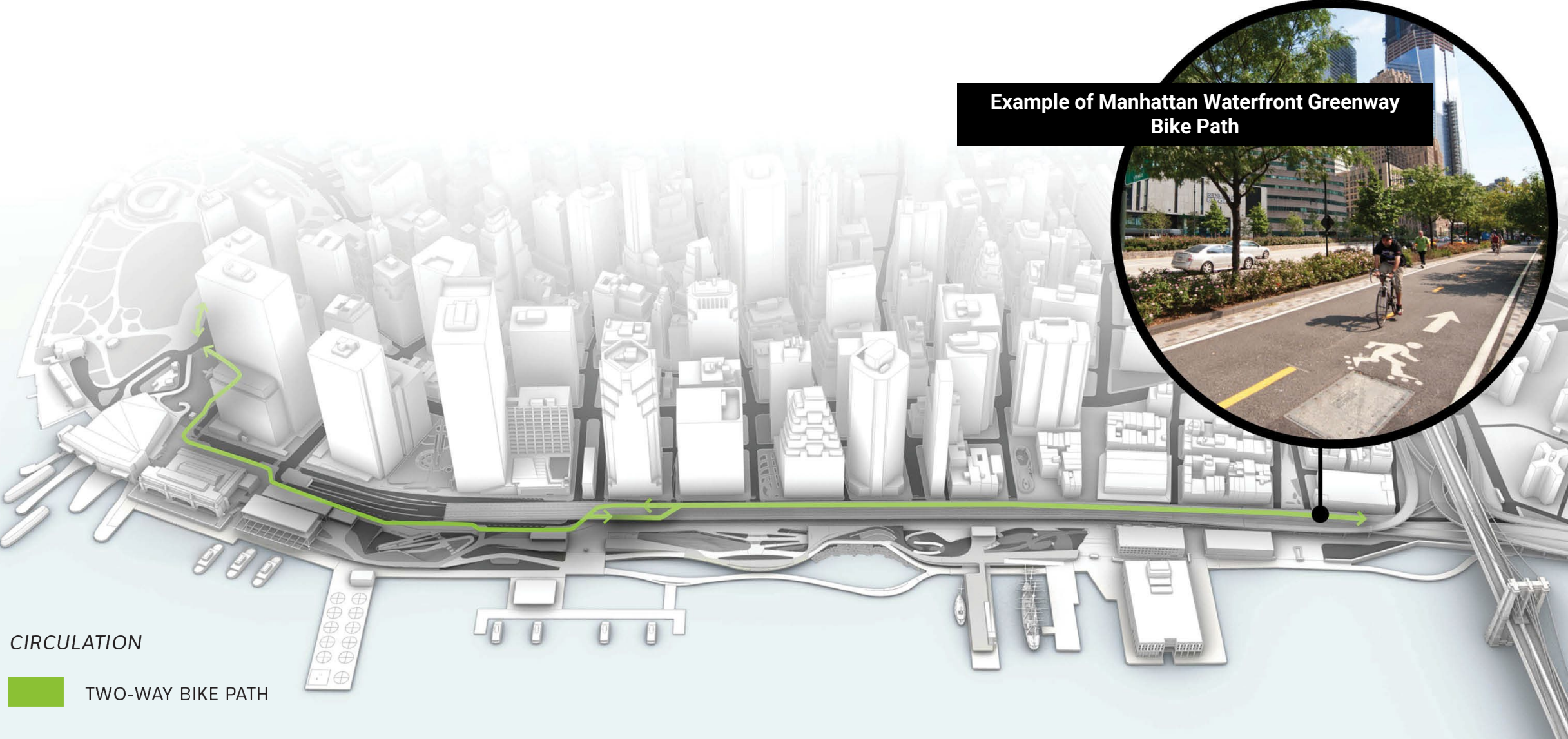
PEDESTRIAN CIRCULATION

- ← WATERFRONT ESPLANADE
- ← UPPER LEVEL
- ← RAMP
- ← STAIRS AND ELEVATORS
- ← NEIGHBORHOOD CONNECTION
- ← EXTENSION OF STREET CORRIDOR
- ← GATEWAYS
- ← SOUTH STREET SIDEWALK



Access & Circulation

Bicycles



Access & Circulation

Emergency and Maintenance Vehicles



Fire Engines and
Similar Size



Ambulance, Flood Defense
Operations, and Maintenance



Small Vehicles for
Operations



Ecology

Design Strategies to Protect & Preserve



INTERTIDAL (PRESERVED)
MLLW (-2.77') - MHHW (2.28)



SHALLOW SUBTIDAL
-6 MLLW (-8.57') - MLLW (-2.77')



SUBTIDAL
(-40') - (-20')



SUBTIDAL
(-20') - -6 MLLW (-8.57')



SUBTIDAL
< (-40')



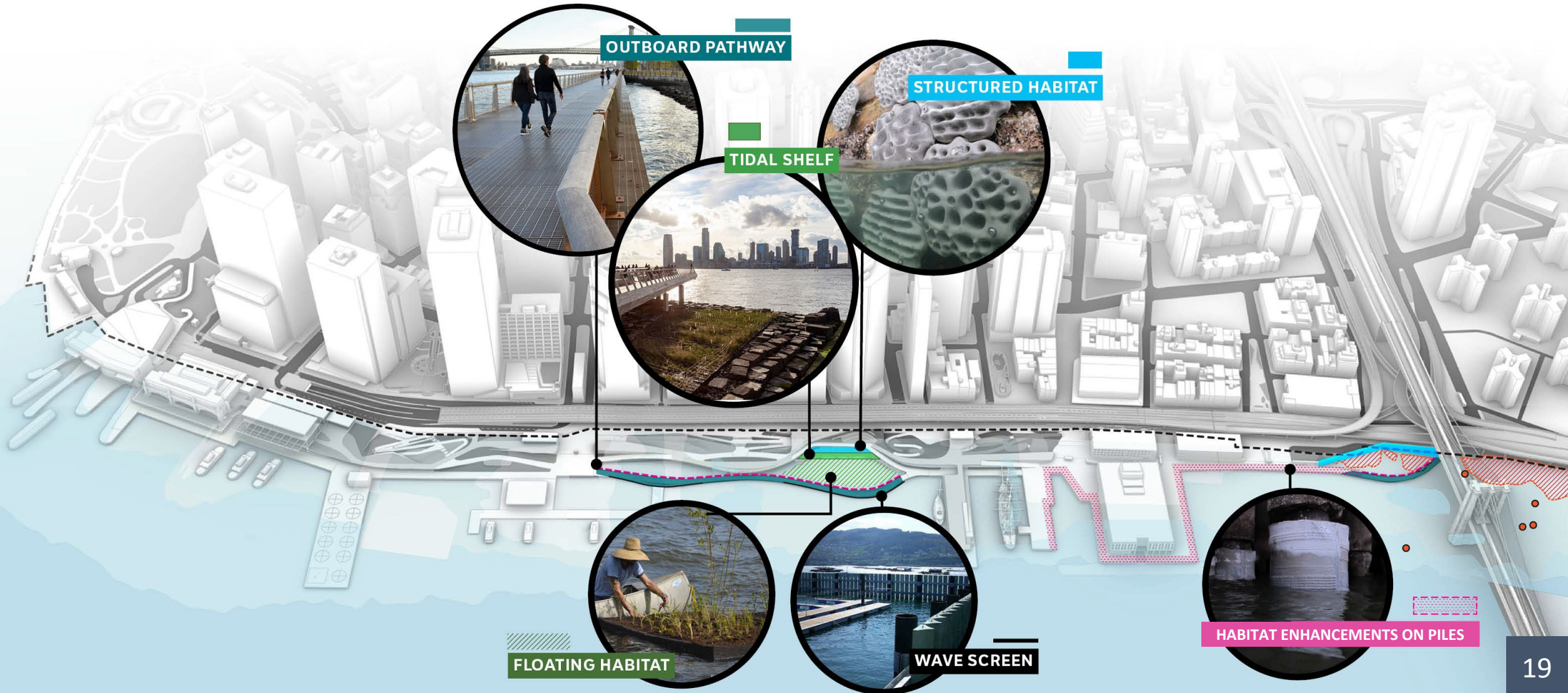
EXISTING BATHYMETRY



EXISTING BULKHEAD



S. VULGARIS WORM FOUND



**Our project will create a new
kind of waterfront experience.**

Birds-eye View (Facing South)

Experiential Walkthrough



Grand new entrances to the waterfront

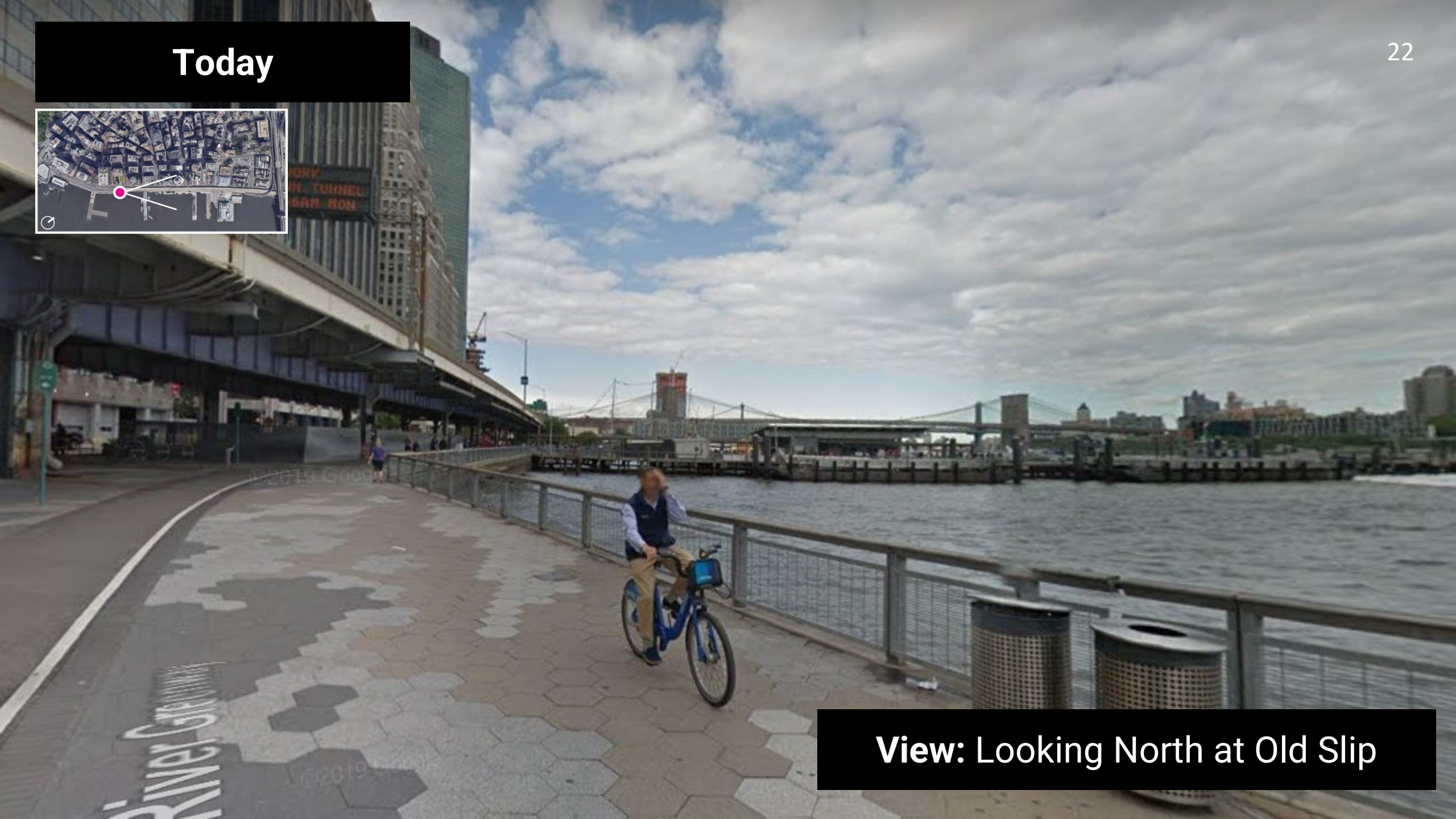
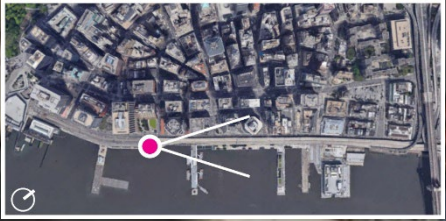
Upper level with expansive views of the East River

Flexibility to add open space, cafes, gardens, playgrounds, and more

Places to get close to the water and learn about aquatic ecology

Today

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View: Looking North at Old Slip

Upper Walkway (Facing North)

Experiential Walkthrough

Restaurant & cafes
could be on the upper
level.

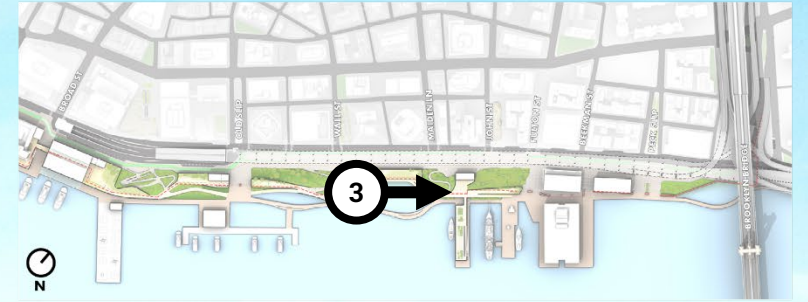
Seamless connections
between upper and
lower levels.



Pine Street Cove (Facing North)

Experiential Walkthrough

Coves will provide opportunities to **enhance aquatic habitats** and create **public educational programming**.

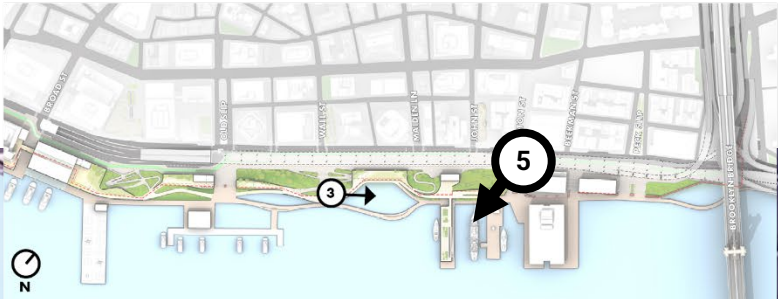


Outboard paths will bring people closer to the water.



Fulton Street Gateway (Facing East)

Experiential Walkthrough



Fulton St. gate will preserve views of waterfront & historic ships on sunny days.

Play spaces & gardens will face the city inland of the flood wall.

