



APRIL 7TH, 2016

REBUILD BY DESIGN

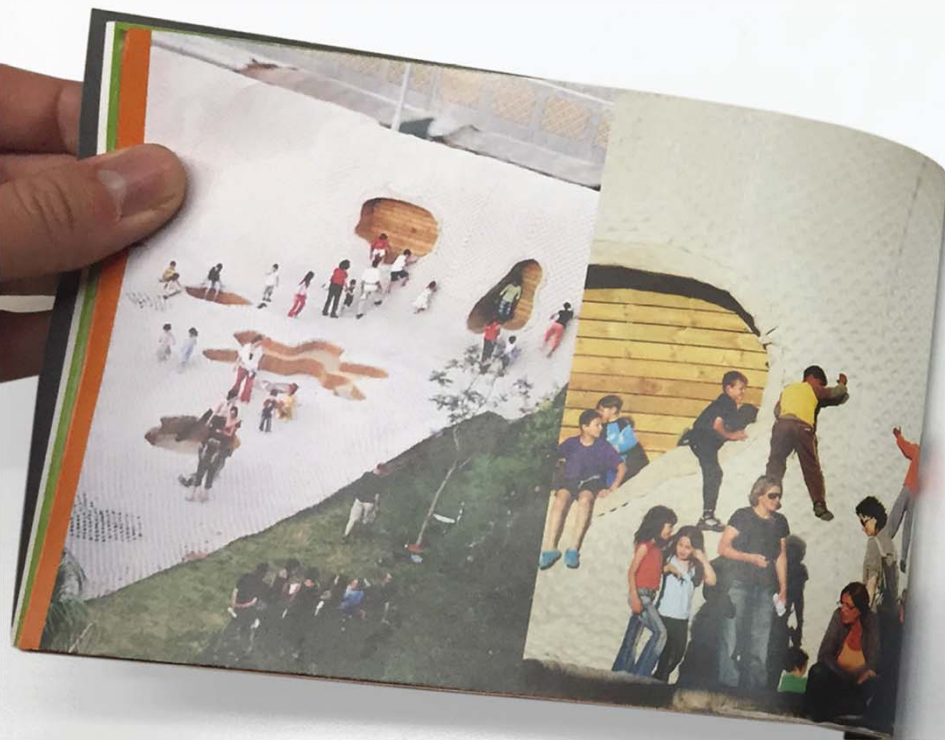
■ RESIST ■ DELAY ■ STORE ■ DISCHARGE ■

HUDSON RIVER

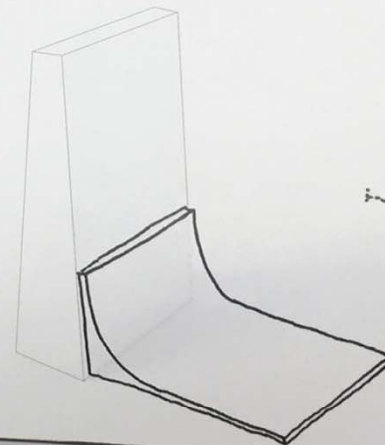
CAG MEETING – DESIGN ELEMENTS AND AMENITIES

Meeting Agenda

Introduction	.....	NJDEP
Alternatives 1, 2, & 3	.....	Dewberry
Urban Design	.....	OMA
Breakout	.....	All
Summary	.....	All



PROGRAM 02



Alternatives

ALTERNATIVE 1

Resist alignment which provides highest level of storm surge risk reduction benefits with waterfront structures.

CHARACTERISTICS:

- Provides greatest level of coastal flood risk reduction benefits
- Potentially least amount of transportation network (roadway and parking) disruption
- Highest cost and complexity to construct compared to the other alternatives
- Most impact on existing waterfront views/access

Legend:

Resist

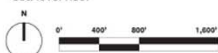
- Gate - Sliding
- Gate - Swinging
- Deployable
- Landscape
- Berm
- Raised Path
- Flood Barrier
- Elevated Walkway

Delay, Store, & Discharge

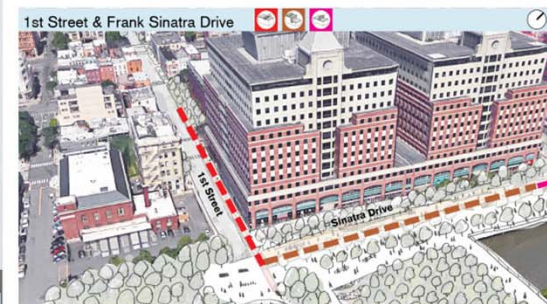
- Stormwater Tank
- Stormwater Tank Bump-out
- Multipurpose Stormwater Facilities
- Pumps

- Existing Structure
- Municipal Boundaries
- Study Area
- Preliminary FEMA 100 Year Flood Plain

* Approximate Structure Height to meet FEMA Certification and 2075 sea level rise.



(2/18) DRAFT IDEAS FOR DISCUSSION PURPOSES ONLY



Flood Risk Reduction	
Percent of Population with Coastal Storm Surge Risk Reduction Benefits	98%
Potential to Adapt to Higher Coastal Flood Event (200yr and Sea Level Rise)	●
Rainfall	●
Built Environment	
View Corridors	●
Waterfront Access	●
Potential Community Benefits	●
Connectivity/Circulation	●
Environmental Justice Populations	●
Construction/Maintenance & Operation	
Constructability	●
Construction Duration	●
Maintenance and Operation for Overall System	●
Environmental Impacts	
Potential Hazardous Waste Sites (Resist Only)	34
Wetlands	Yes
Essential Fish Habitat	Yes
Threatened and Endangered Species	Yes
Army Corp. Permits	Yes
Historic Properties	Yes
Archaeological Resources	●
Benefits/Cost Analysis	
Benefits	Highest
Costs	High
Benefits/Cost Ratio	●

ALTERNATIVE 2

Resist alignment
which provides storm
surge risk reduction
benefits using public
right-of-way.

CHARACTERISTICS:

- Does not impact waterfront views or existing waterfront access
- Less costly to construct compared to Alternative 1
- May require reduction in space along Washington Street for structure footprint
- May have impact on roadway/traffic flow on 15th Street

Legend:

Resist

- Gate - Sliding
- Gate - Swinging
- Deployable
- Landscape
- Berm
- Raised Path
- Flood Barrier
- Elevated Walkway

Delay, Store, & Discharge

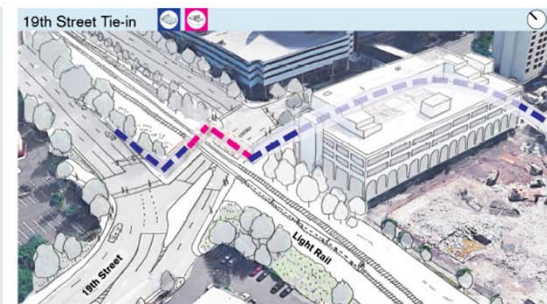
- Stormwater Tank
- Stormwater Tank Bump-out
- Multipurpose Stormwater Facilities
- Pumps

- Existing Structure
- Municipal Boundaries
- Study Area
- Preliminary FEMA 100 Year Flood Plain

* Approximate Structure Height to meet FEMA Certification and 2075 sea level rise.



(2/18) DRAFT IDEAS FOR DISCUSSION PURPOSES ONLY



Flood Risk Reduction	
Percent of Population with Coastal Storm Surge Risk Reduction Benefits	86%
Potential to Adapt to Higher Coastal Flood Event (200yr and Sea Level Rise)	●
Rainfall	●
Built Environment	
View Corridors	●
Waterfront Access	●
Potential Community Benefits	●
Connectivity/Circulation	●
Environmental Justice Populations	●
Construction/Maintenance & Operation	
Constructability	●
Construction Duration	●
Maintenance and Operation for Overall System	●
Environmental Impacts	
Potential Hazardous Waste Sites (Resist Only)	38
Wetlands	No
Essential Fish Habitat	No
Threatened and Endangered Species	No
Army Corp. Permits	No
Historic Properties	Yes
Archaeological Resources	●
Benefits/Cost Analysis	
Benefits	High
Costs	Lower
Benefits/Cost Ratio	●

ALTERNATIVE 3

Resist alignment
which provides storm
surge risk reduction
benefits using alleyway
easement.

CHARACTERISTICS:

- Does not impact waterfront views or existing waterfront access
- Less costly to construct and maintain compared to Alternative 1
- Reduced traffic and circulation impacts compared to Alternative 2 by using alleyway for portion of alignment
- May enhance the urban design and existing use of public space within the alleyway
- May require reduction in space along Washington Street for structure footprint

Legend:

Resist

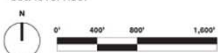
- Gate - Sliding
- Gate - Swinging
- Deployable
- Landscape
- Berm
- Raised Path
- Flood Barrier
- Elevated Walkway

Delay, Store, & Discharge

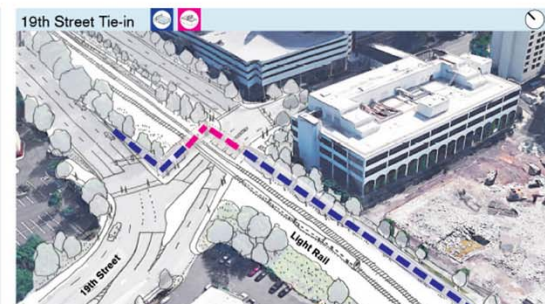
- Stormwater Tank
- Stormwater Tank Bump-out
- Multipurpose Stormwater Facilities
- Pumps

- Existing Structure
- Municipal Boundaries
- Study Area
- Preliminary FEMA 100 Year Flood Plain

* Approximate Structure Height to meet FEMA Certification and 2075 sea level rise.



(2/18) DRAFT IDEAS FOR DISCUSSION PURPOSES ONLY



Flood Risk Reduction	
Percent of Population with Coastal Storm Surge Risk Reduction Benefits	85%
Potential to Adapt to Higher Coastal Flood Event (200yr and Sea Level Rise)	●
Rainfall	●
Built Environment	
View Corridors	●
Waterfront Access	●
Potential Community Benefits	●
Connectivity/Circulation	●
Environmental Justice Populations	●
Construction/Maintenance & Operation	
Constructability	●
Construction Duration	●
Maintenance and Operation for Overall System	●
Environmental Impacts	
Potential Hazardous Waste Sites (Resist Only)	32
Wetlands	Yes
Essential Fish Habitat	No
Threatened and Endangered Species	No
Army Corp. Permits	No
Historic Properties	Yes
Archaeological Resources	●
Benefits/Cost Analysis	
Benefits	High
Costs	Lowest
Benefits/Cost Ratio	●

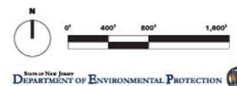
DELAY STORE DISCHARGE

OVERALL STRATEGY

- Design proposal aims to maximize the potential to capture, store, infiltrate, evaporate, and release stormwater.
- Goal is to achieve community co-benefits while improving management of stormwater that could reduce rainfall flooding.
- Besides BASF site, all stormwater management strategies are entirely on publicly-owned land.
- Proposal uses both "green" and "grey" stormwater management strategies.
- The team considered physical, environmental and infrastructure constraints in locating and designing specific interventions.

Legend:

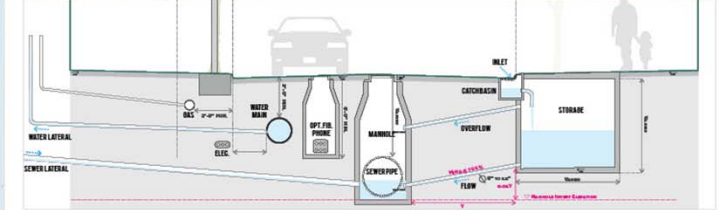
- Delay + Store - Parks
- Water Storage Sites
- Catchment Area
- New Outfall Pipe
- New Storm Sewer Pipe
- Hybrid Tank
- Tank
- Tank Bumpout
- Existing Flooding "Hotspot"
- Municipal Boundaries
- Study Area
- Ferry Lines



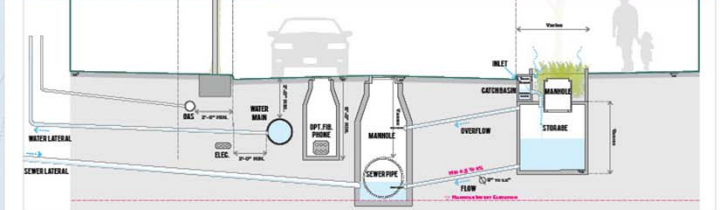
State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION



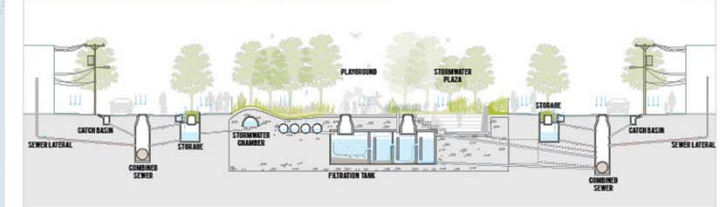
Typical Water Storage Unit Section



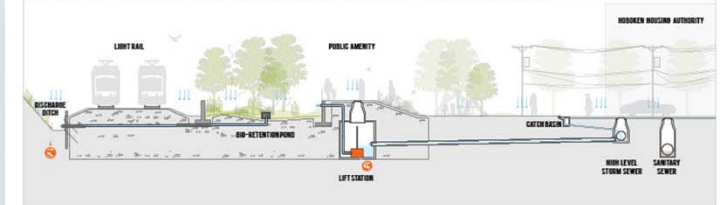
Typical Hybrid Tank Section - Inlet May Vary



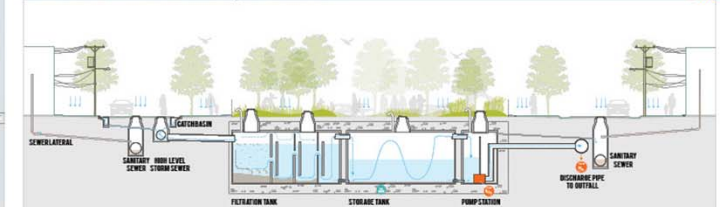
Typical Retrofitted Park Condition - Proposed Scenario



Section A-A - Hoboken Housing Authority and NJ Transit - Proposed Scenario



Section B-B - BASF Site - Proposed Scenario



RESIST • DELAY • STORE • DISCHARGE

Urban Design

Study Area

3 Cities

- Approximately 62,500 Residents
- 1,020 Acres
- Commuter Node
Hoboken Terminal
- County Utilities
North Hudson Sewage Authority (NHSA)
Public Service Enterprise Group (PSEG)



City-wide Interventions

Resist

- Alternative 1
- Alternative 2
- Alternative 3

Delay, Store, Discharge

- Large Sites
- Public Right of Way Sites



Urban Identity

Signage

Bikeshare

Data Gathering

Hoboken Cove Boat House

Existing Initiatives

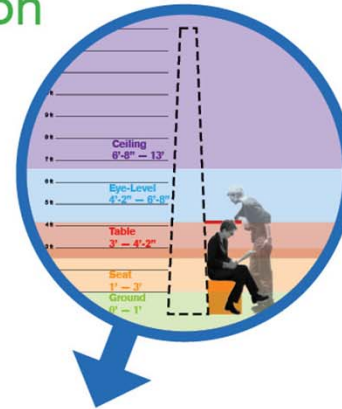
Washington Street Redevelopment

Public Wifi

Maintenance

Dry vs. Wet

Environmental Education

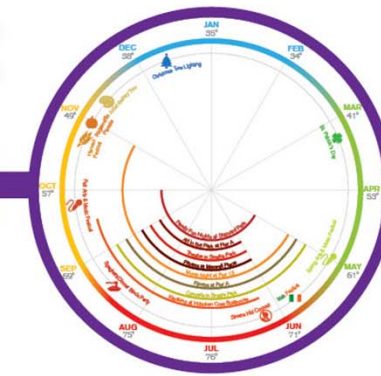


Views

Height

Shade

Festivals and Events

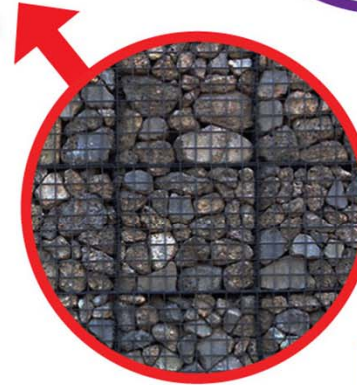


All-Weather Use

Seasonality

Sustainability

Materiality



Adaptability

Weather Resistant

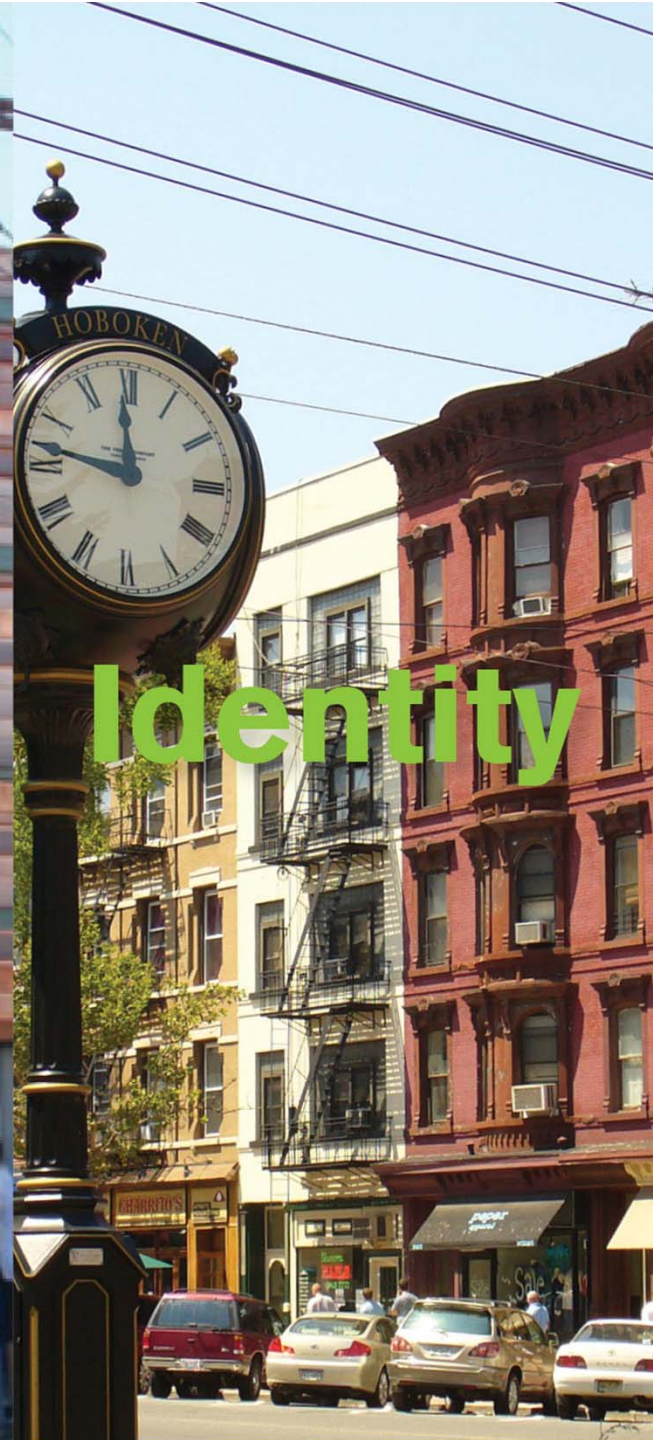




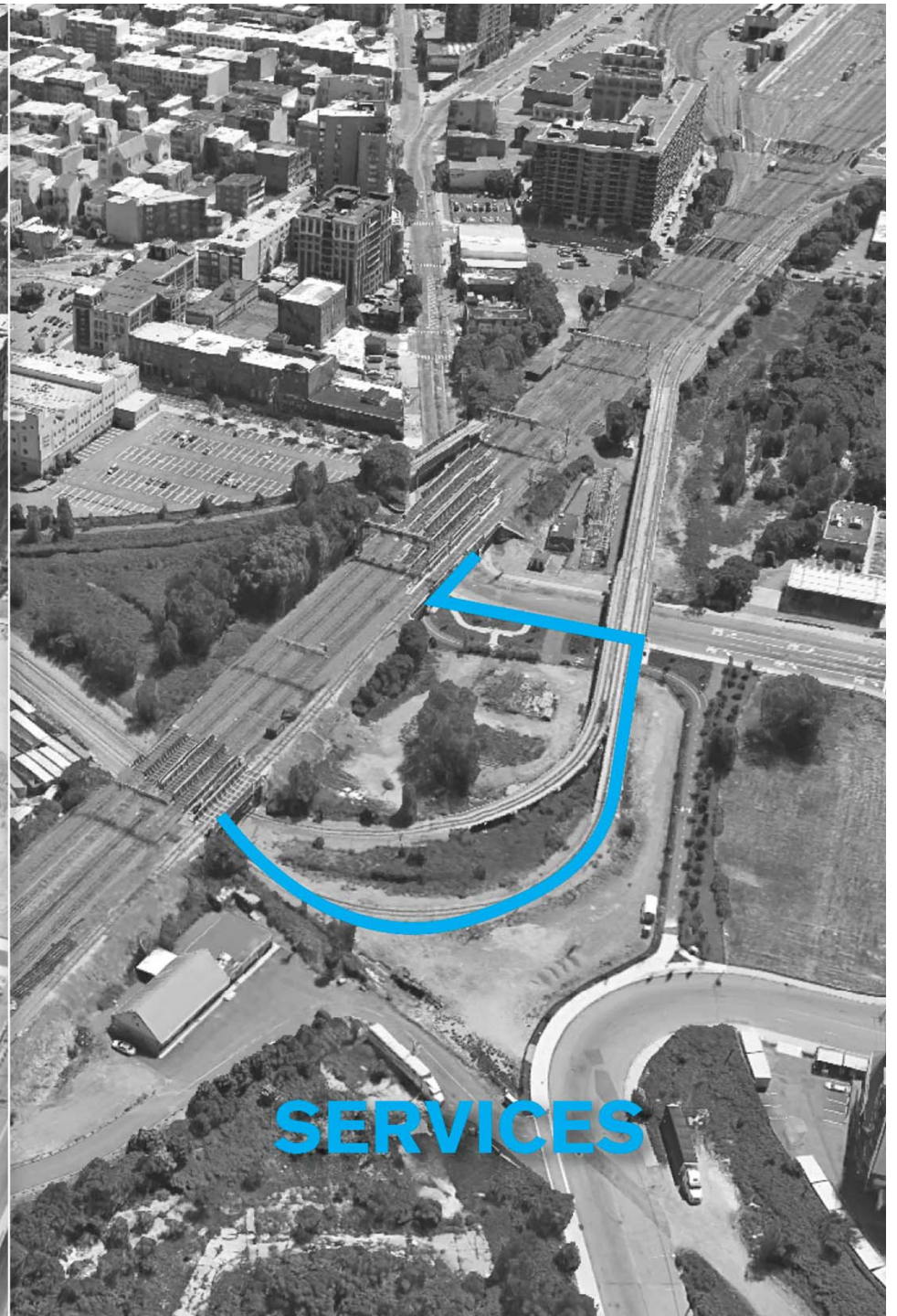
Places



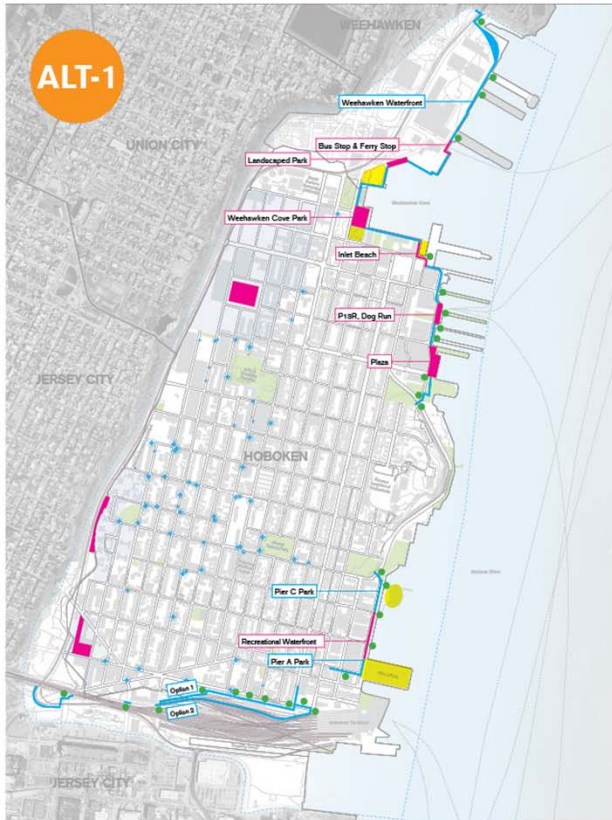
Services



Identity



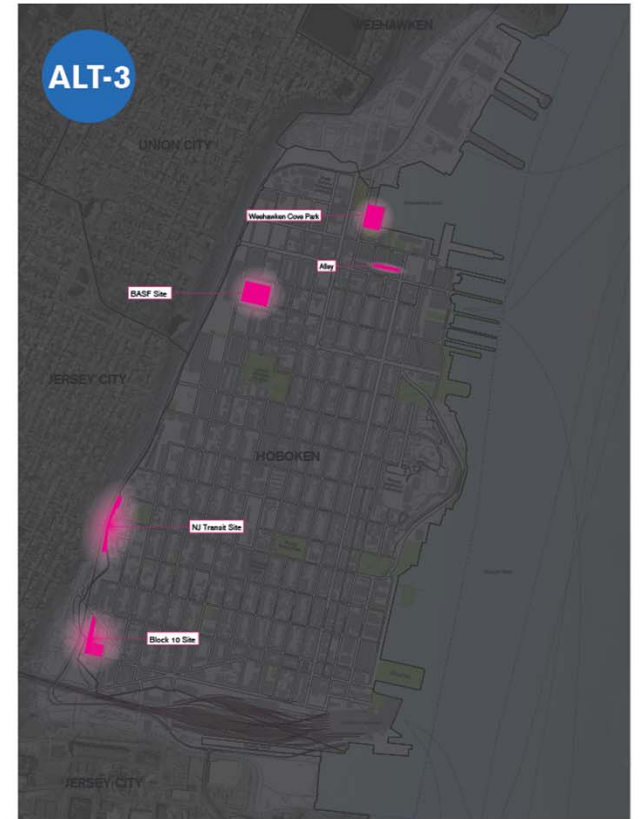
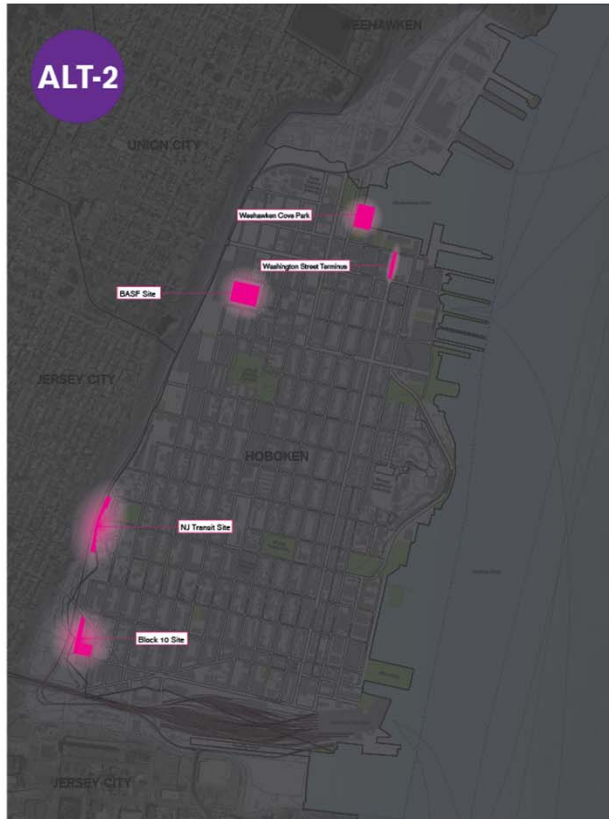
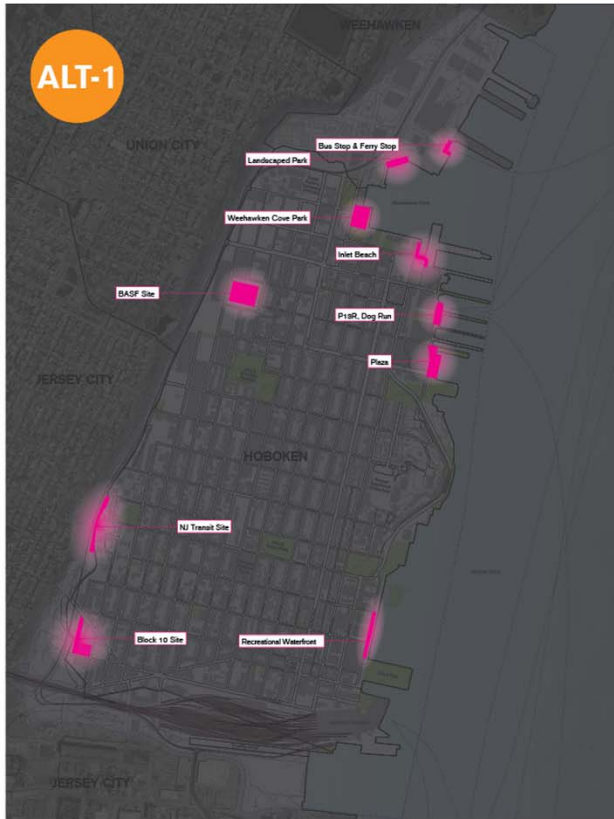
Alignment Activity



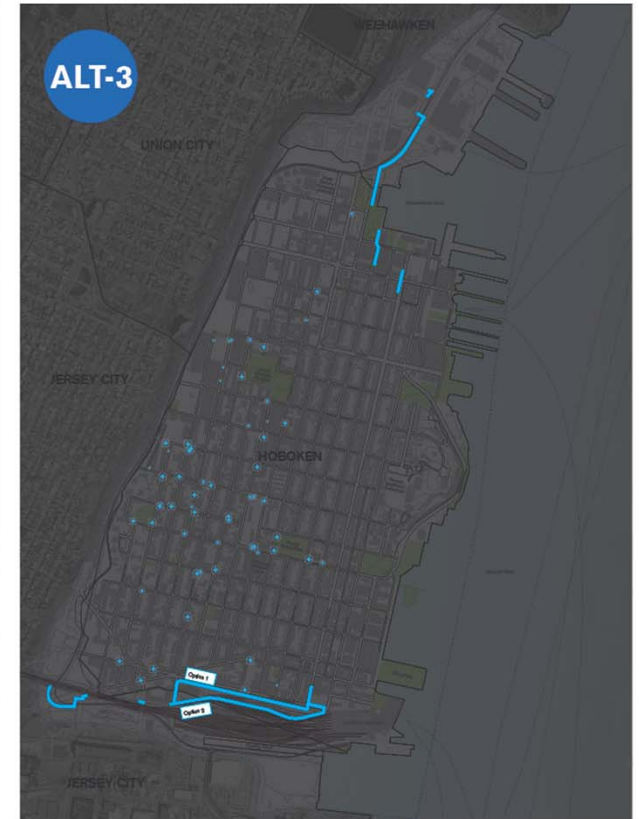
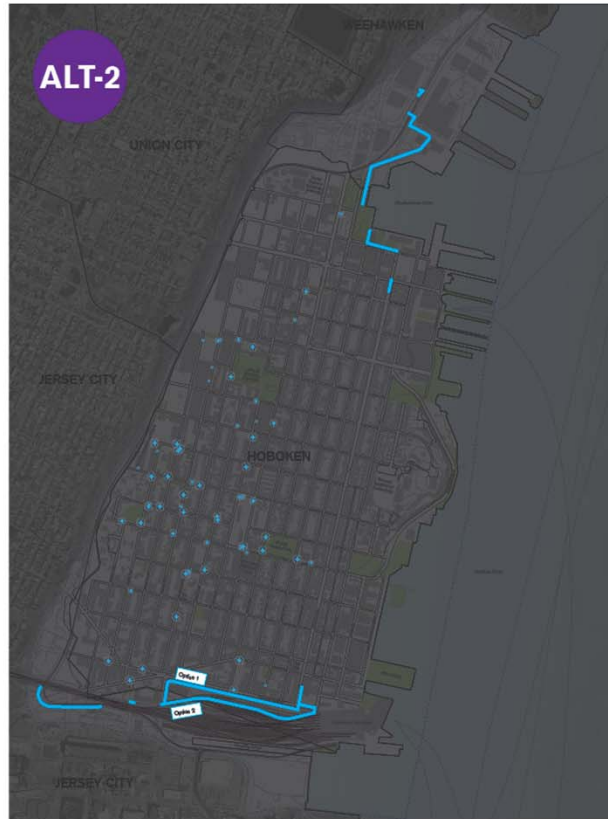
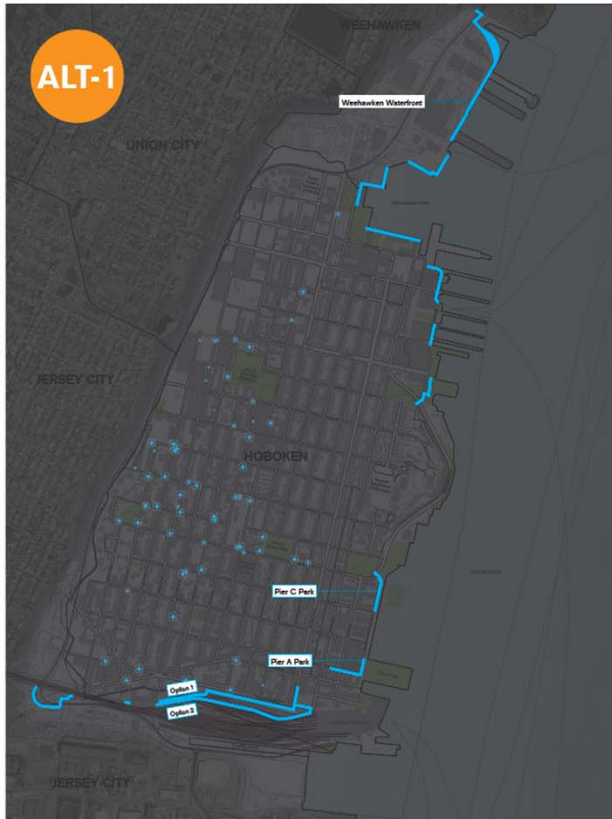
Regions

- Activation Design - Public spaces, with greatest opportunity for designing community amenities, programming, and place making.
- Passive Design - Publicly visible spaces, facade treatments and minimally designed structures to provide resist and communal services.
- Programming Design - Programming spaces to facilitate community amenities independent of structure.
- Gate Location along alignment
- Large Delay Store Discharge Sites

Places

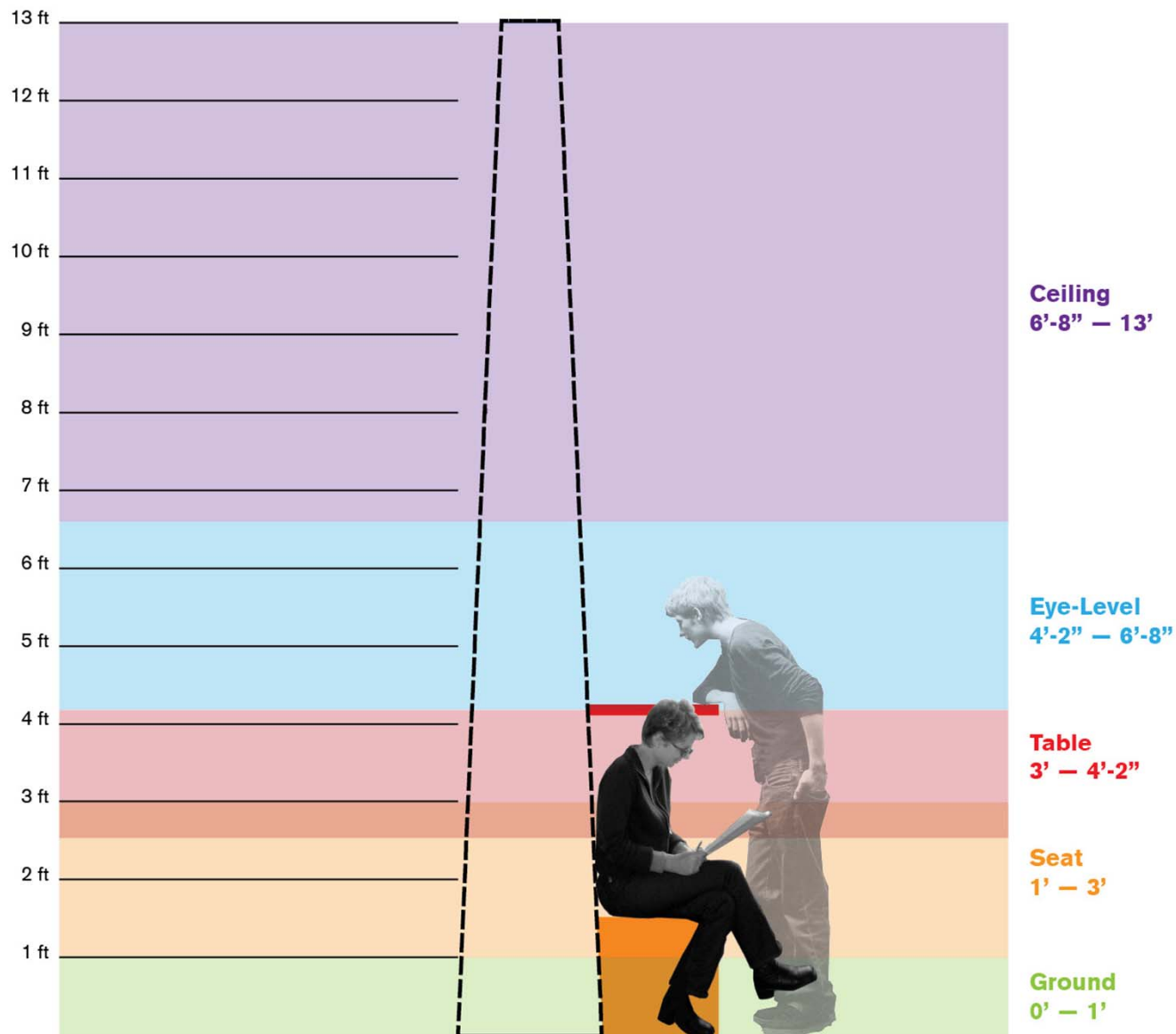


Services



Design Guidelines

Design Heights



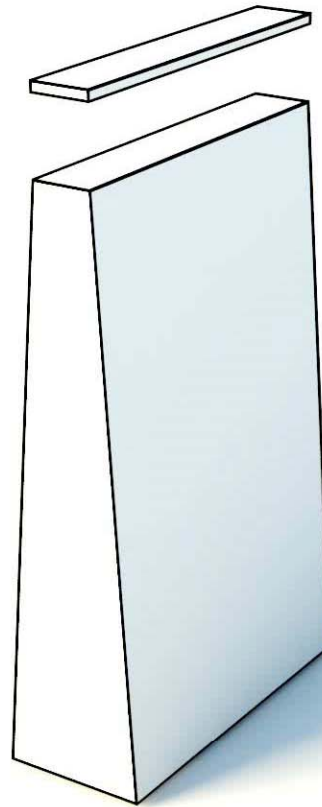
Design Heights



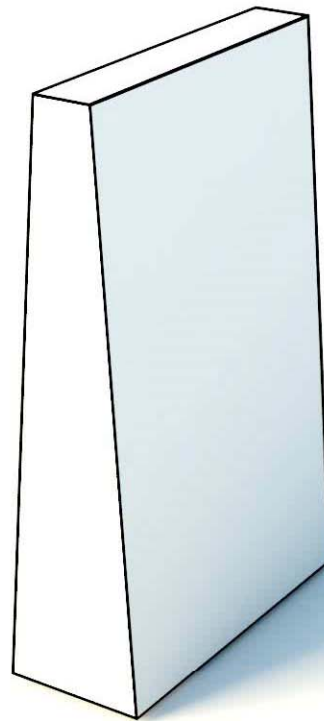
Heights







































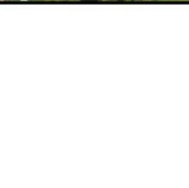



- Ceiling (6'-8" — 13')
- Eye-Level (4'-2" — 6'-8")
- Table (3' — 4'-2")
- Seat (1' — 3')
- Ground (0' — 1')

Addition / Subtraction



Scale

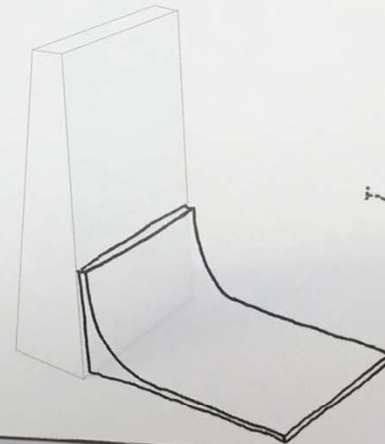


			INFORMATION	LIGHTING	FURNITURE	PLANTING	PROGRAM	SHELTER	SERVICES
7.5 ft									
6 ft		CEILING							
5 ft		EYE-LEVEL							
4 ft		TABLE							
3 ft		SEAT							
2 ft		SEAT							
1 ft		GROUND							

Preliminary Toolkit



PROGRAM 02



Design Zones

Design Zones

Zone 1 — Weehawken Tie In

Alternative **1** @ Waterfront to Lincoln Tunnel
Alternative **2, 3** @ Inland to 19th Street

Zone 2 — Weehawken Cove

Alternative **1, 2, 3** @ Boathouse to Park Space

Zone 3 — Residential

Alternative **1** @ Waterfront along Tea Building
Alternative **2** @ 15th St to Washington St.
Alternative **3** @ Alleyway to Washington St.

Zone 4 — North Waterfront

Alternative **1** Only

BASF Site

DSD - Alternative **1, 2, 3**

Block 10 Site

DSD - Alternative **1, 2, 3**

Zone 5 — South Waterfront

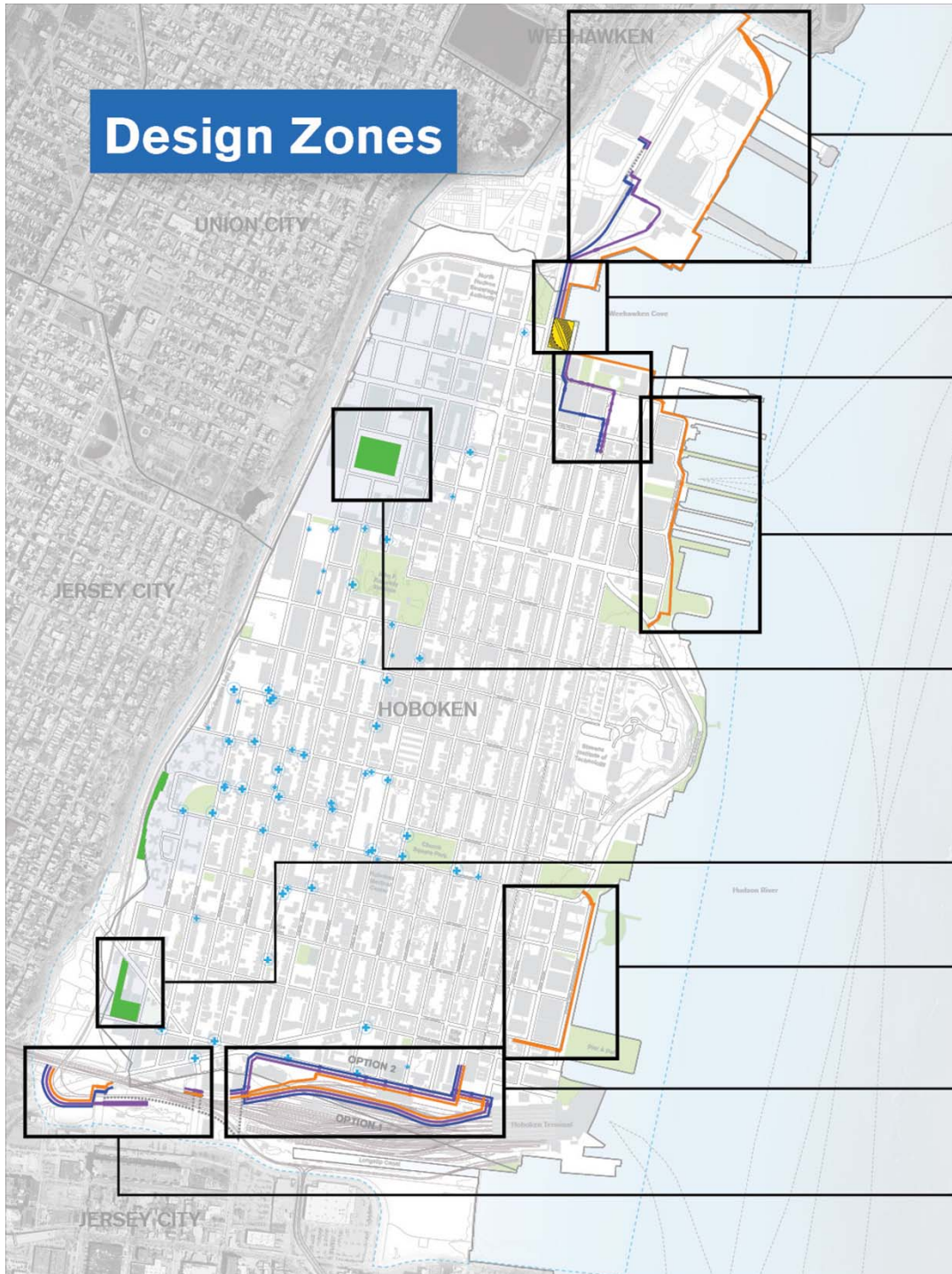
Alternative **1** Only

Zone 6 — Observer Highway

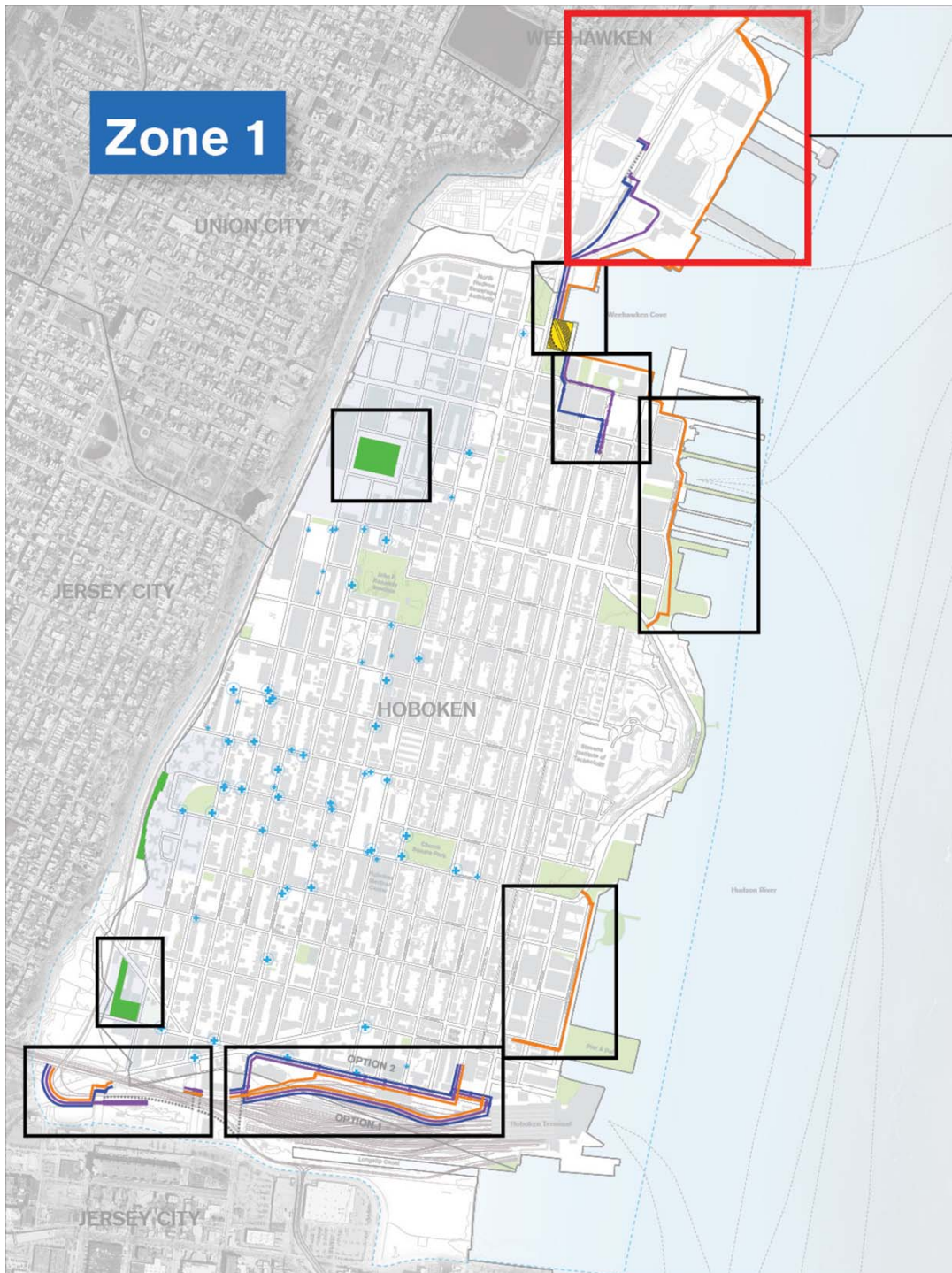
Alternative **1, 2, 3** @ Street or along rails

Zone 7 — Jersey Avenue Underpass

Alternative **1, 2, 3** @ Underpass



Zone 1



Zone 1 — Weehawken Tie In

Alternative **1** @ Waterfront to Lincoln Tunnel

Alternative **2, 3** @ Inland to 19th Street

Zone 1

ALT-1

ALT-2

ALT-3



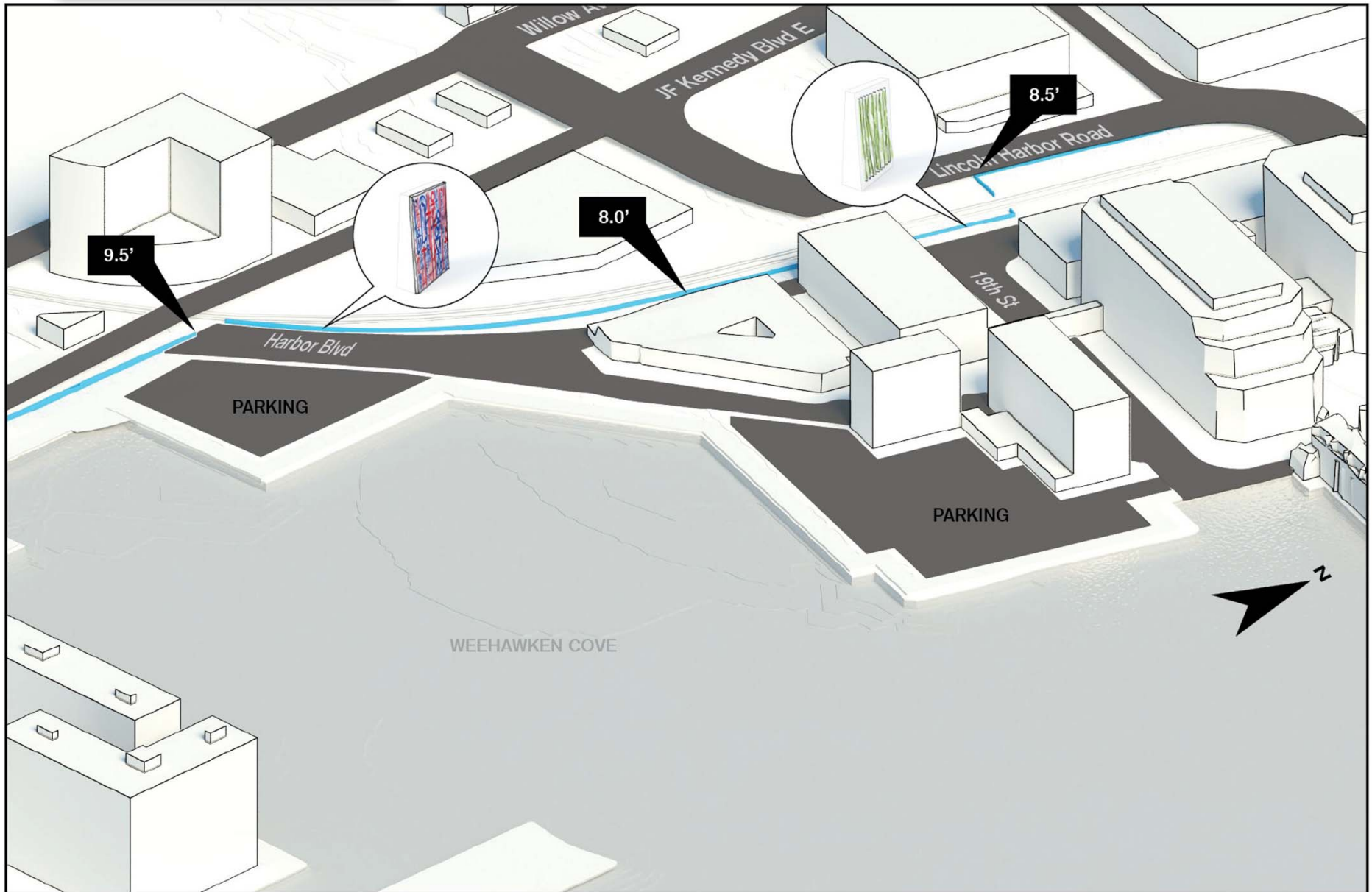
Lincoln Harbor Ferry Stop

Weehawken Park Space



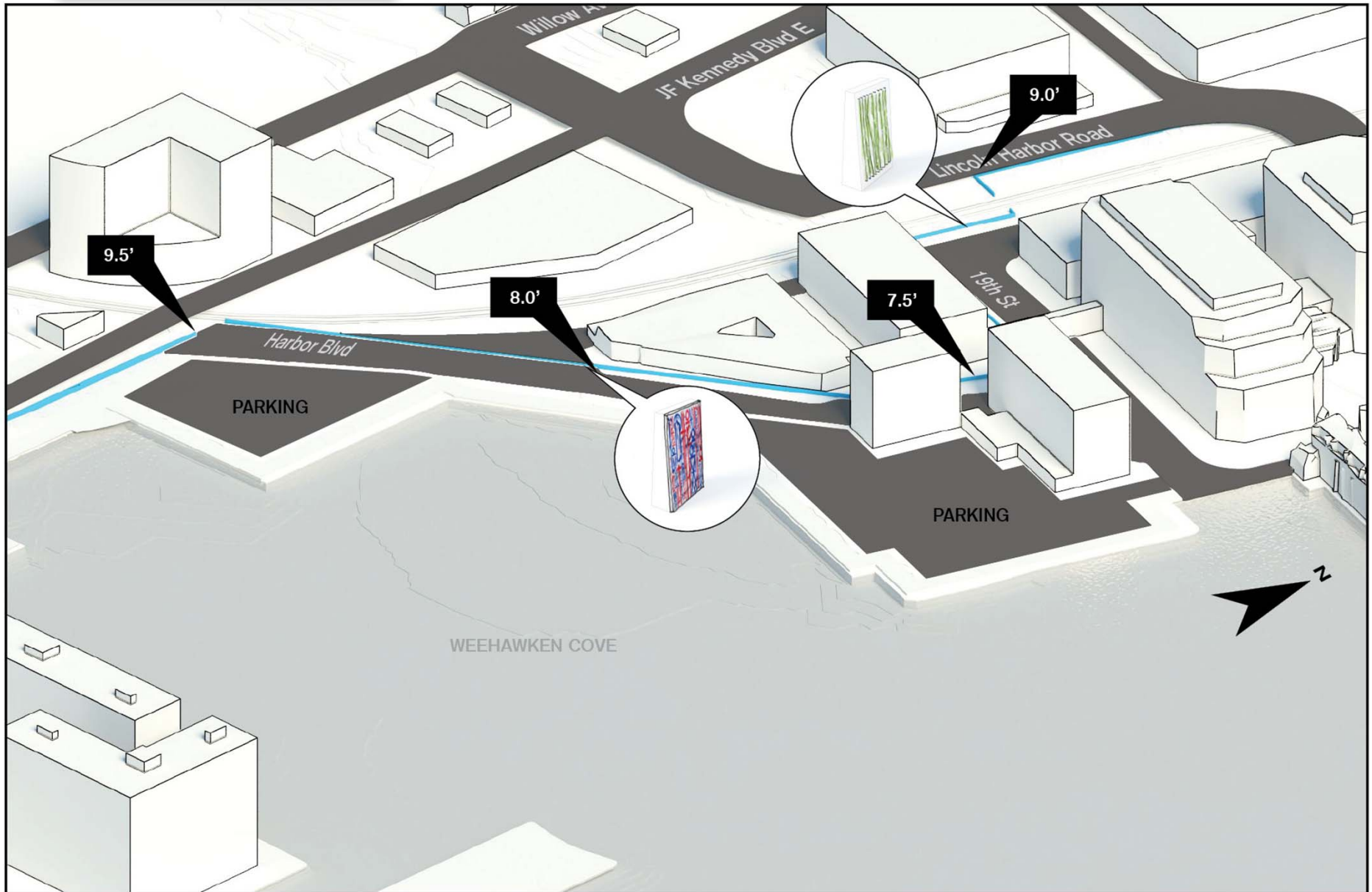
Alt. 3 Overview

ALT-3



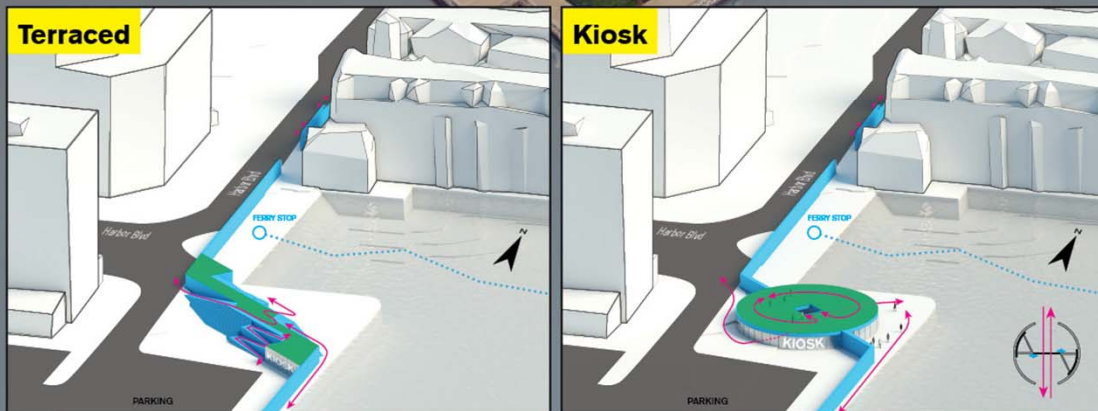
Alt. 2 Overview

ALT-2



Alt. 1 - Lincoln Harbor Ferry Stop

ALT-1



Terraced

ALT-1

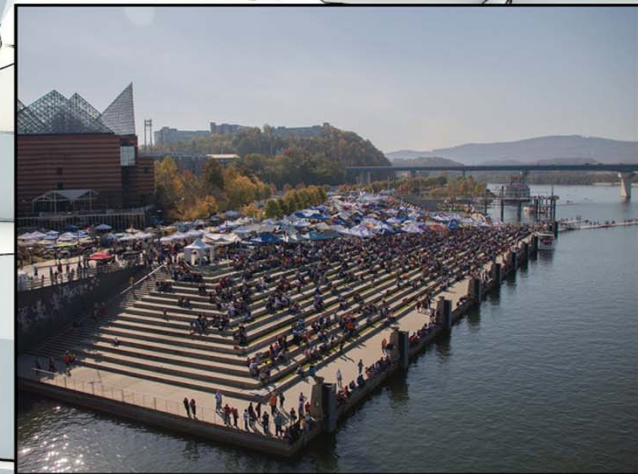
Harbor Blvd

Harbor Blvd

FERRY STOP

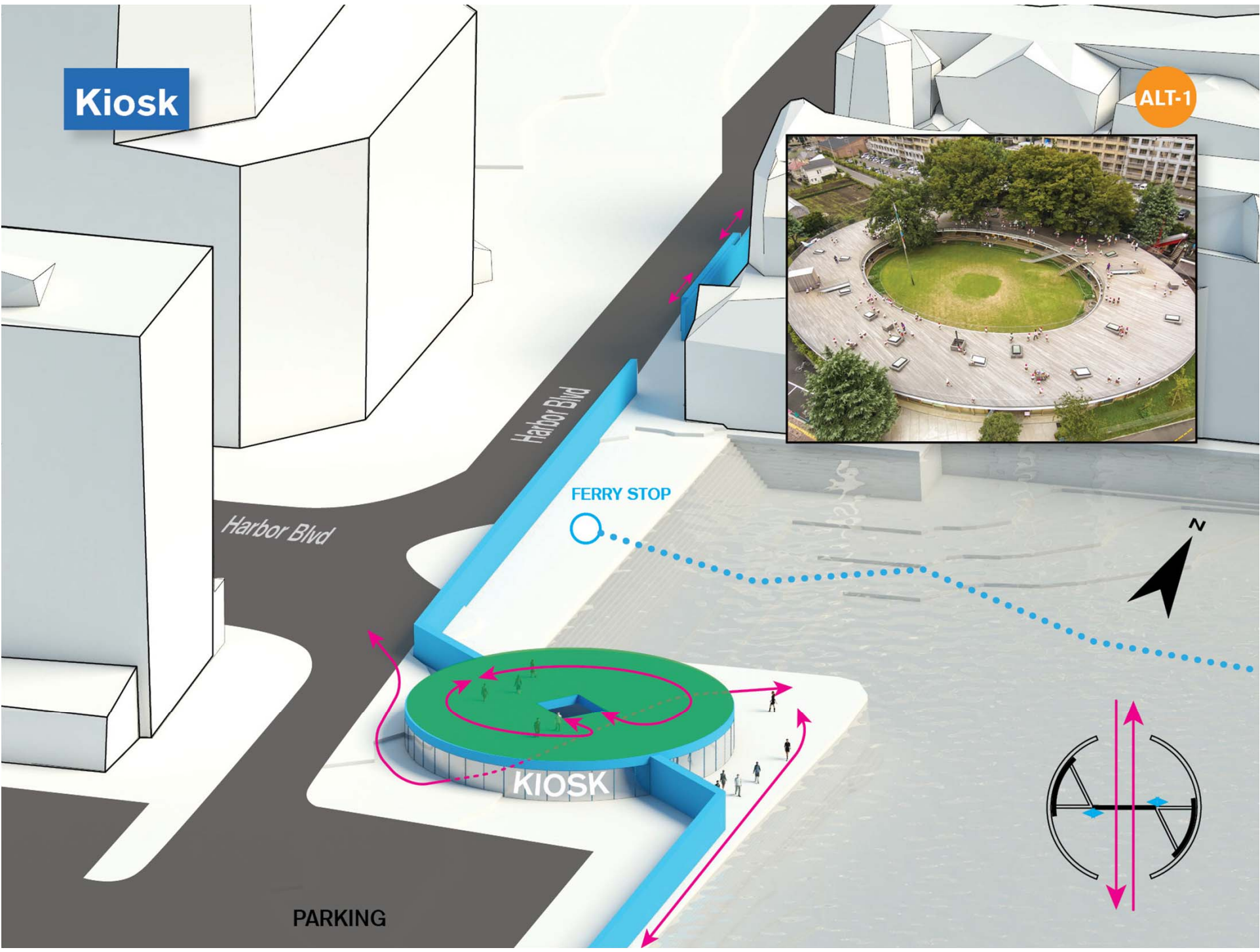
KIOSK

PARKING



Kiosk

ALT-1



Harbor Blvd

Harbor Blvd

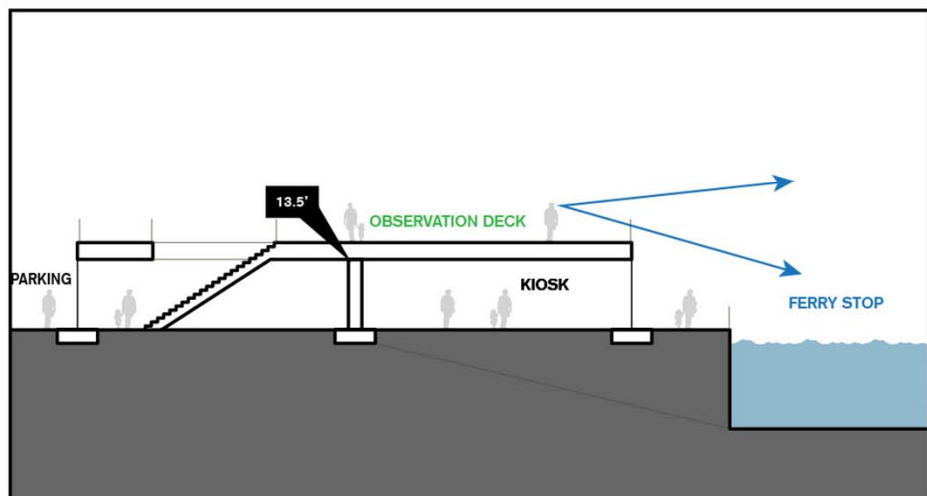
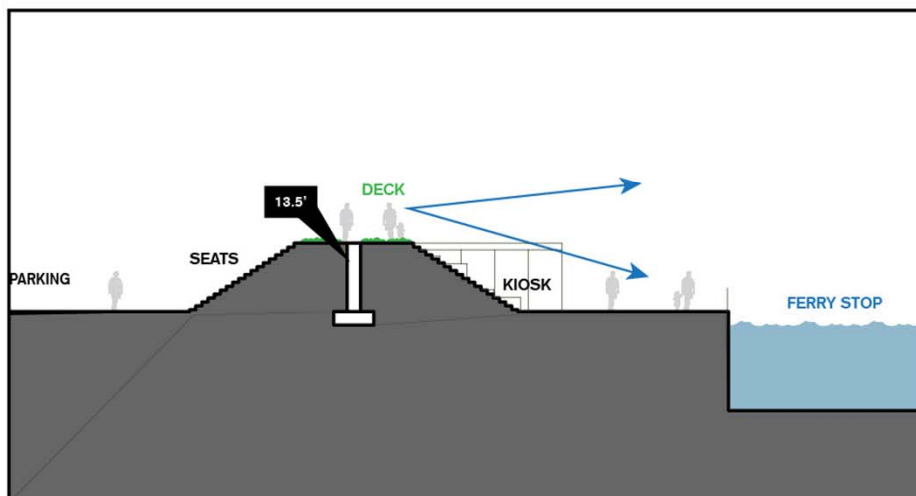
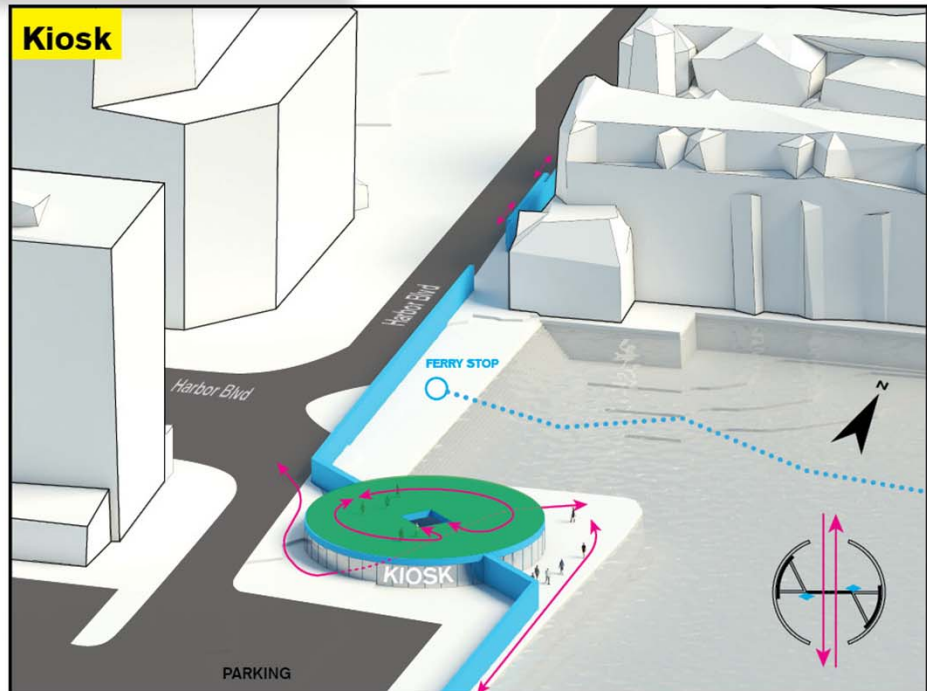
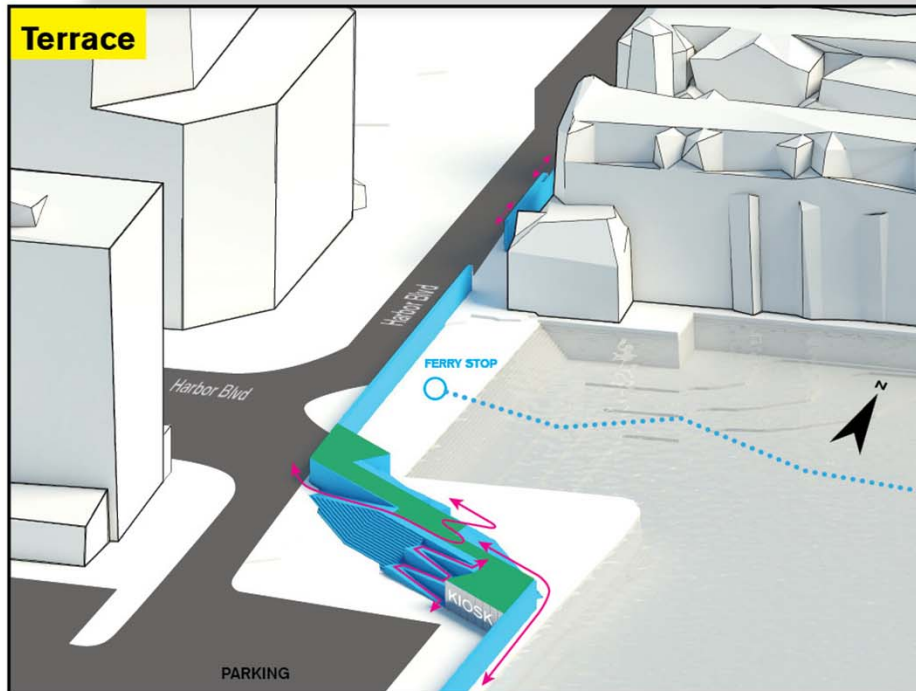
FERRY STOP

KIOSK

PARKING

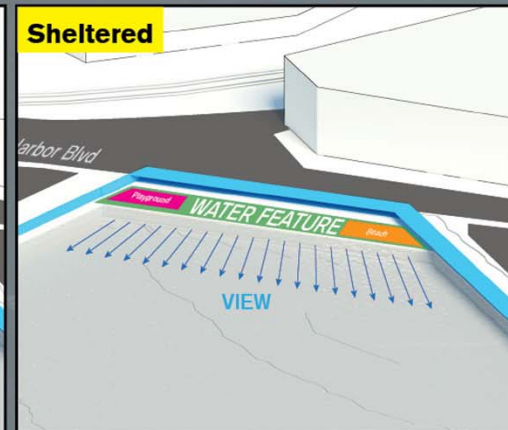
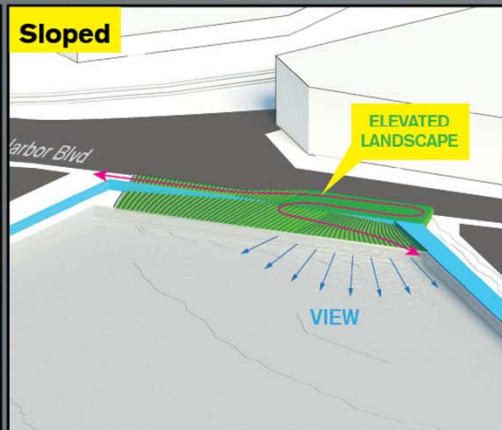
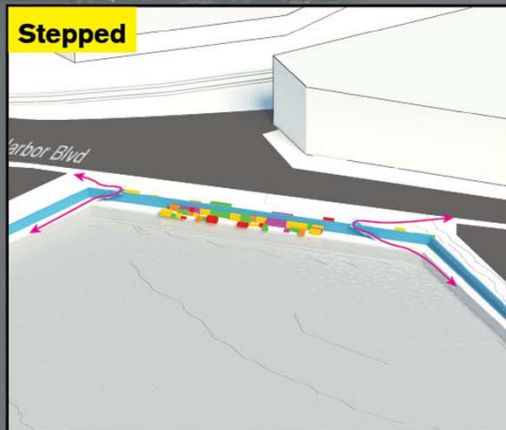
Alt. 1 - Lincoln Harbor Ferry Stop Overview

ALT-1



Alt. 1 - Weehawken Park Space

ALT-1



Stepped

ALT-1

Harbor Blvd



WEEHAWKEN COVE

Sloped

ALT-1

Harbor Blvd

**ELEVATED
LANDSCAPE**

VIEW



WEEHAWKEN COVE

Sheltered

ALT-1

Harbor Blvd

Playground

WATER FEATURE

Beach

VIEW



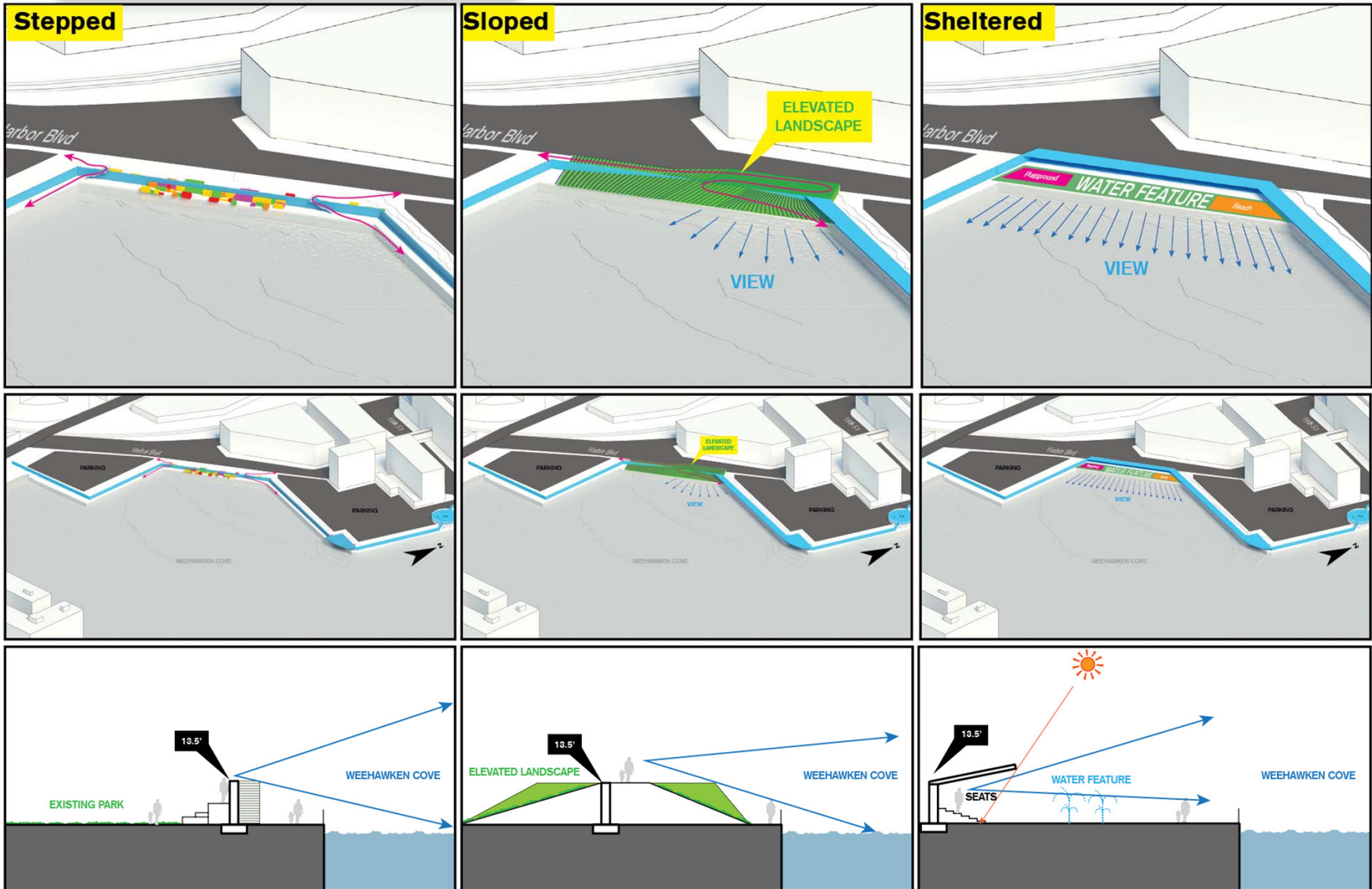
WEEHAWKEN COVE

Sheltered

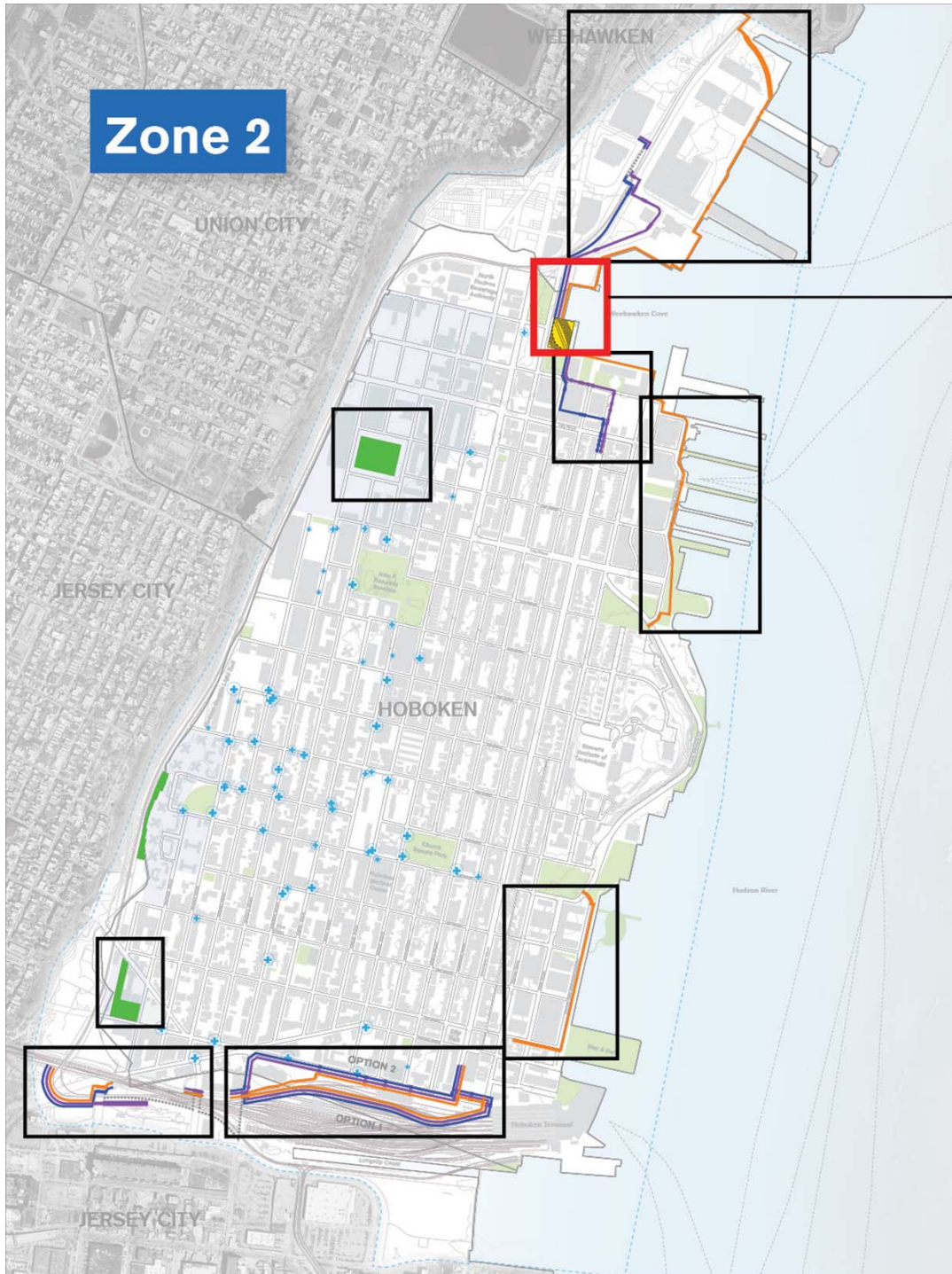


Alt. 1 - Park Overview

ALT-1



Zone 2



Zone 2 — Weehawken Cove

Alternative 1, 2, 3 @ Boathouse to Park Space

Zone 2

ALT-1

ALT-2

ALT-3

Harborside Park

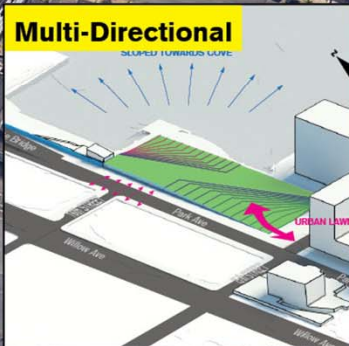
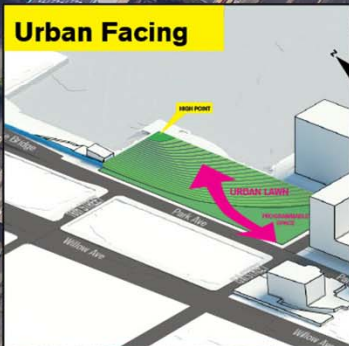
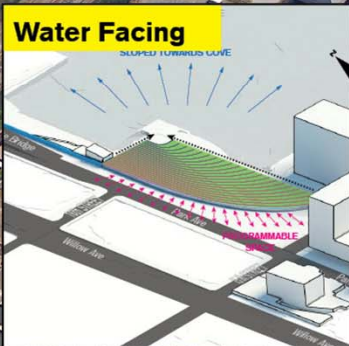


Harborside Park

ALT-1

ALT-2

ALT-3



Water Facing

ALT-1

ALT-2

ALT-3

WEEHAWKEN COVE

SLOPED TOWARDS COVE



Park Avenue Bridge

Willow Avenue Bridge

Willow Ave

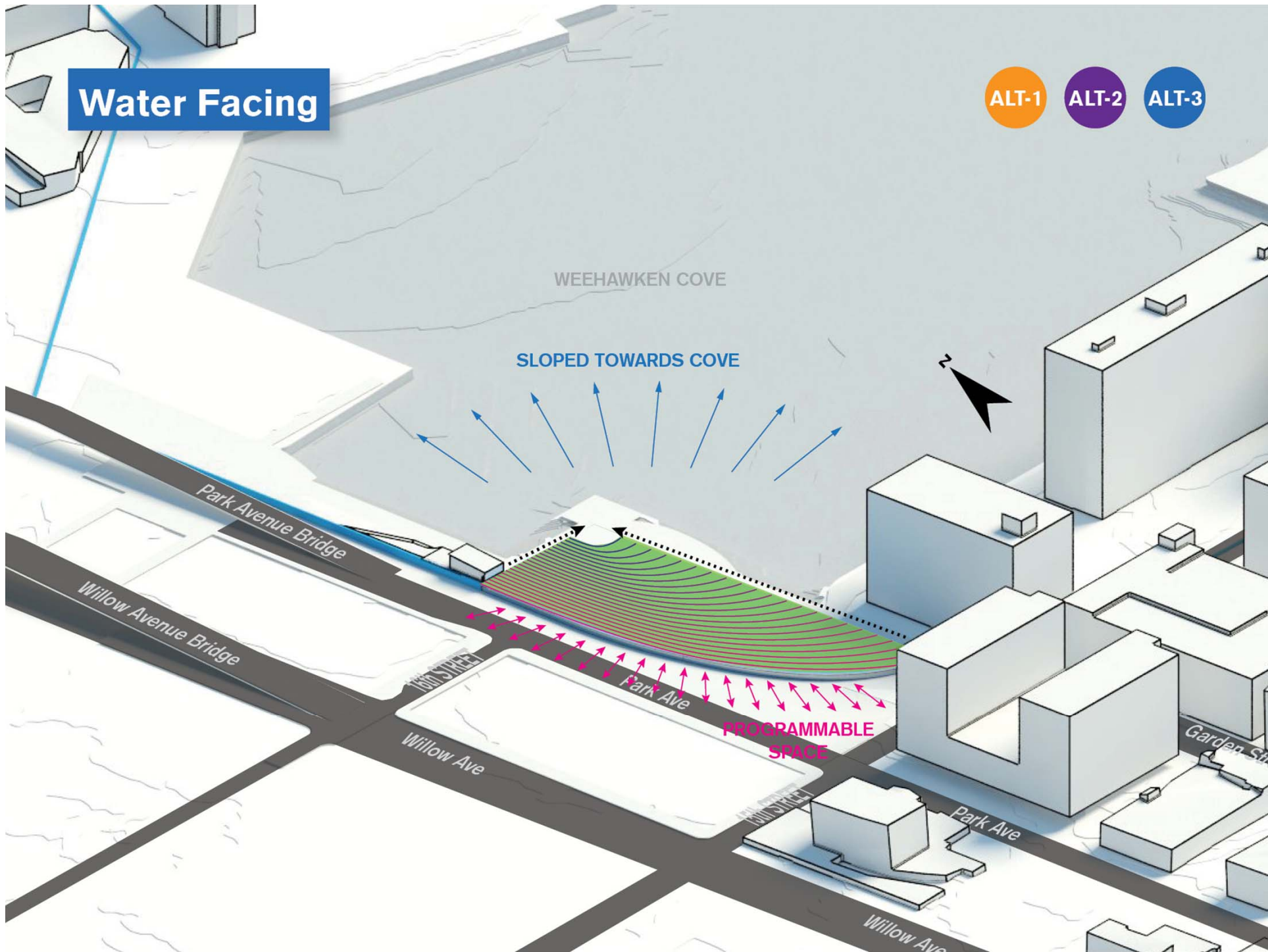
Park Ave

PROGRAMMABLE SPACE

Park Ave

Willow Ave

Garden St



Urban Facing

ALT-1

ALT-2

ALT-3

WEEHAWKEN COVE



HIGH POINT

Park Avenue Bridge

Willow Avenue Bridge

Willow Ave

Park Ave

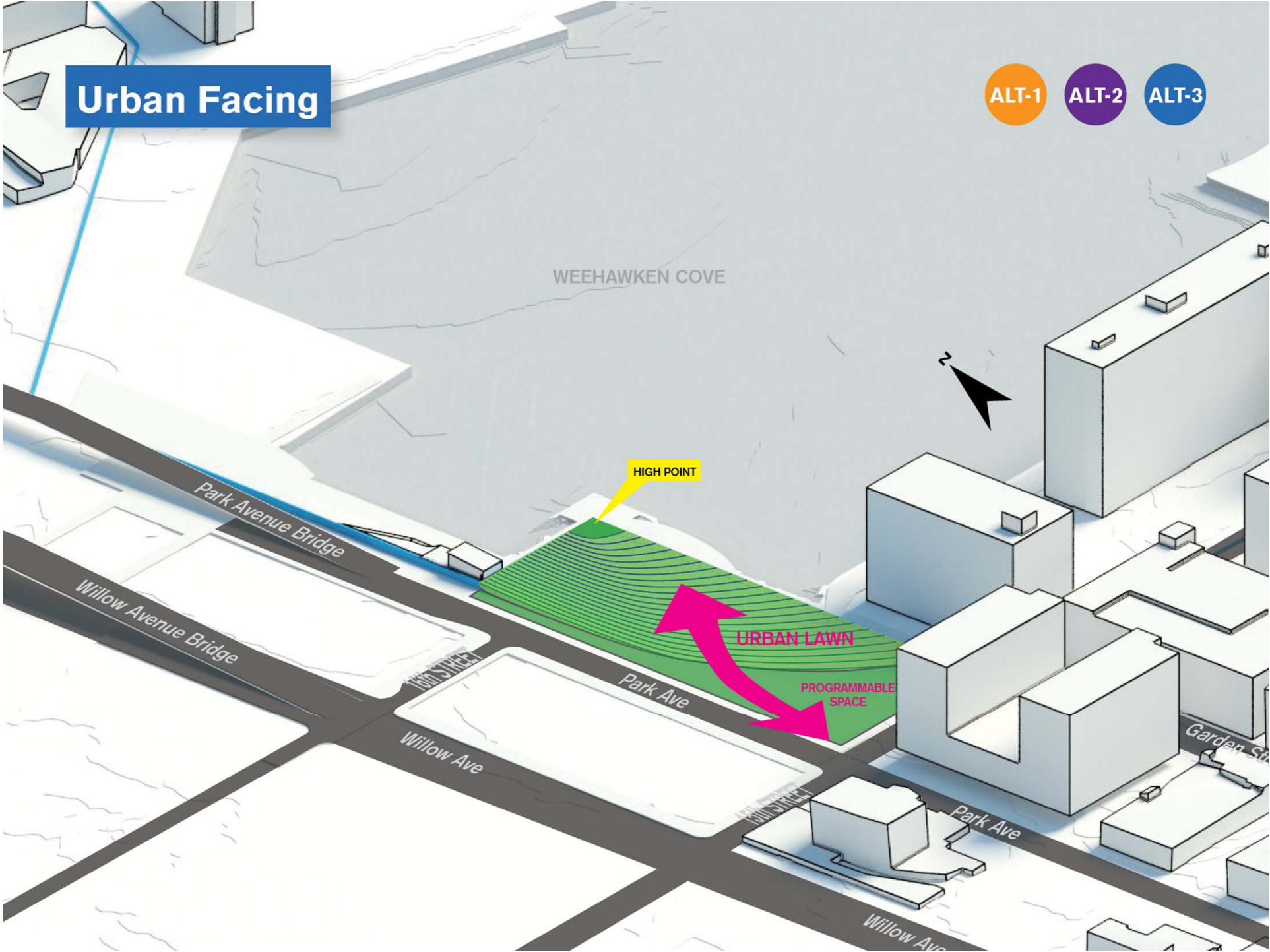
URBAN LAWN

PROGRAMMABLE SPACE

Park Ave

Willow Ave

Garden St



Multi-Directional

ALT-1

ALT-2

ALT-3

WEEHAWKEN COVE

SLOPED TOWARDS COVE



Park Avenue Bridge

Willow Avenue Bridge

Willow Ave

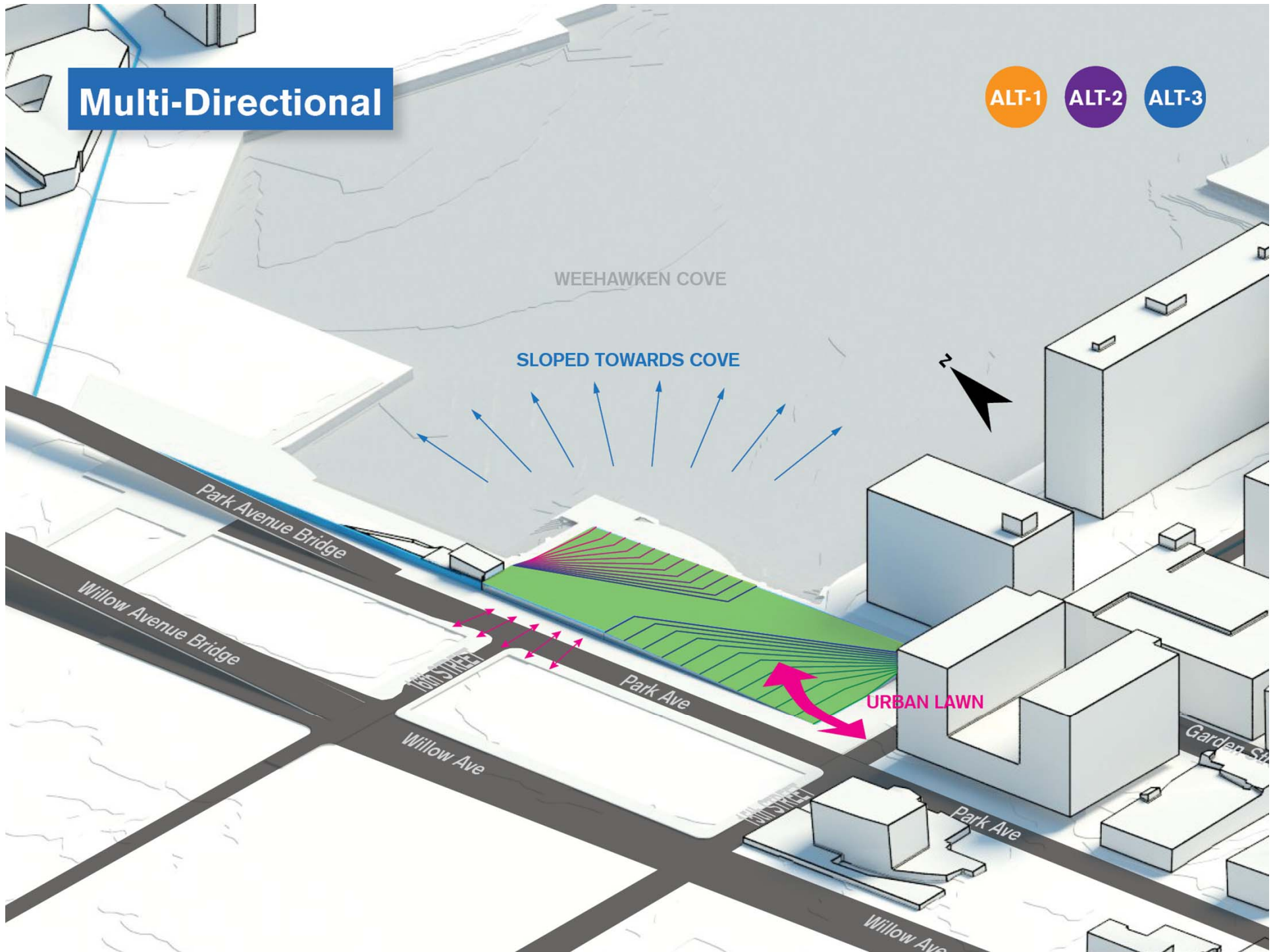
Park Ave

URBAN LAWN

Garden St

Park Ave

Willow Ave



Urban Lawn

Dolores Park, San Francisco



Beach

Paris, France



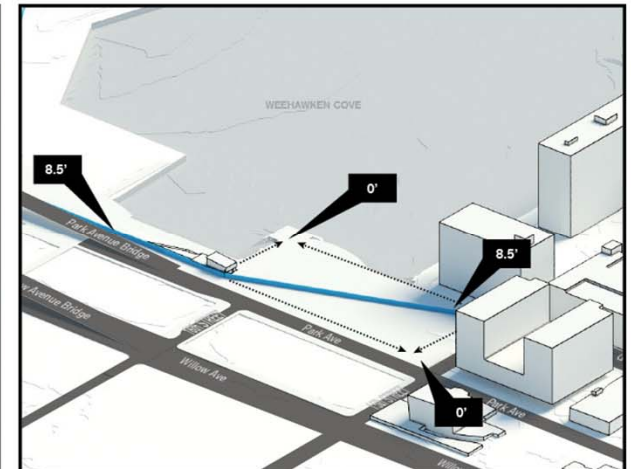
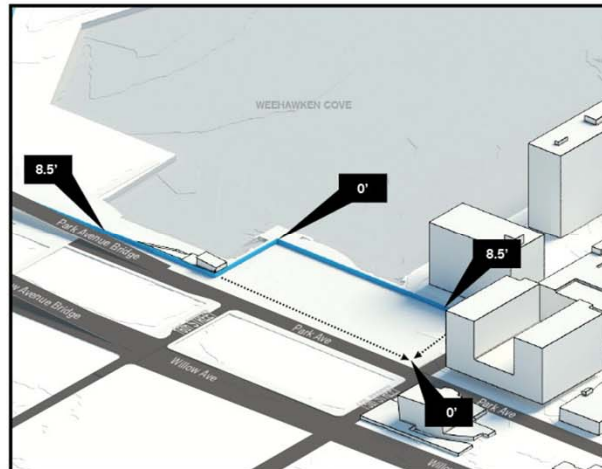
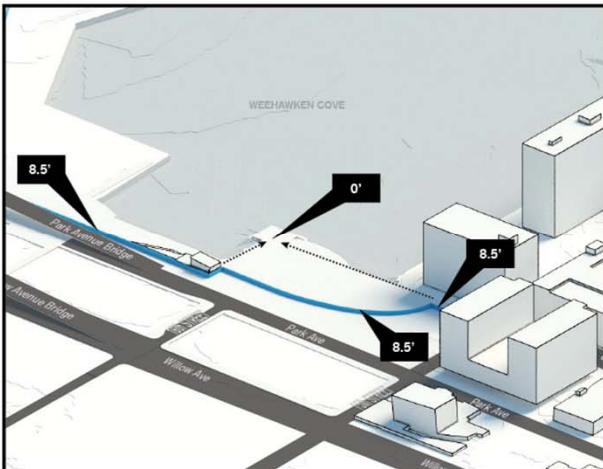
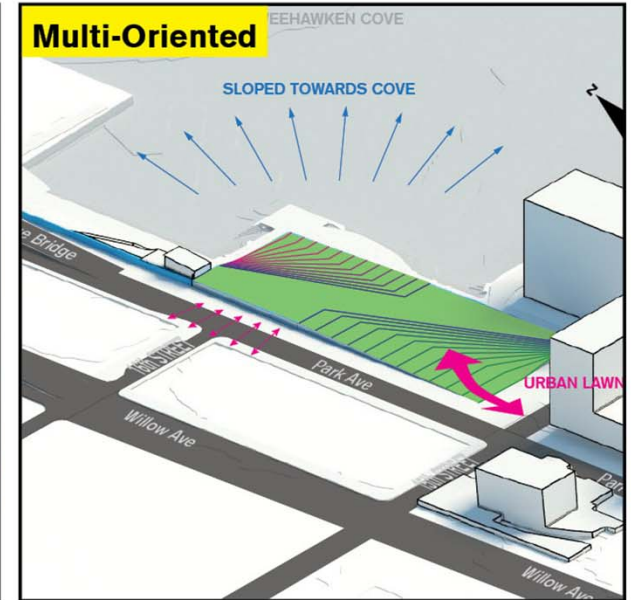
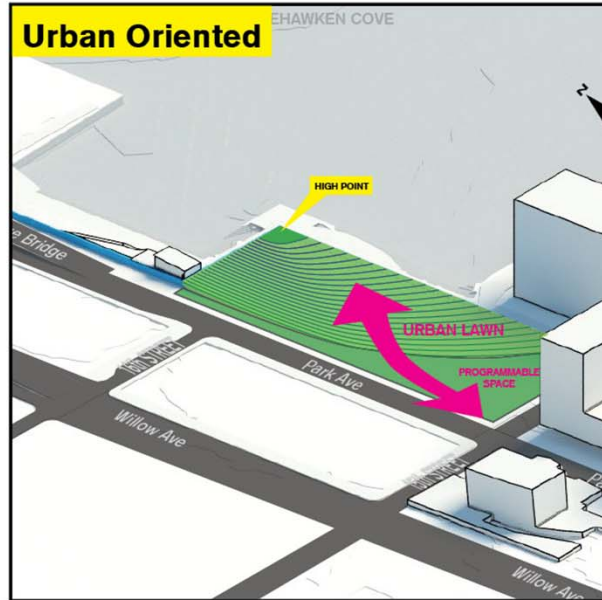
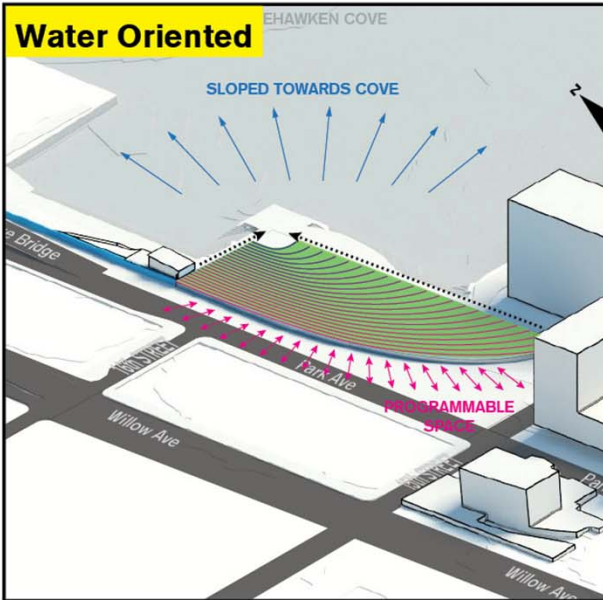
Playscape

Blaxland Riverside Park, Sydney, Australia

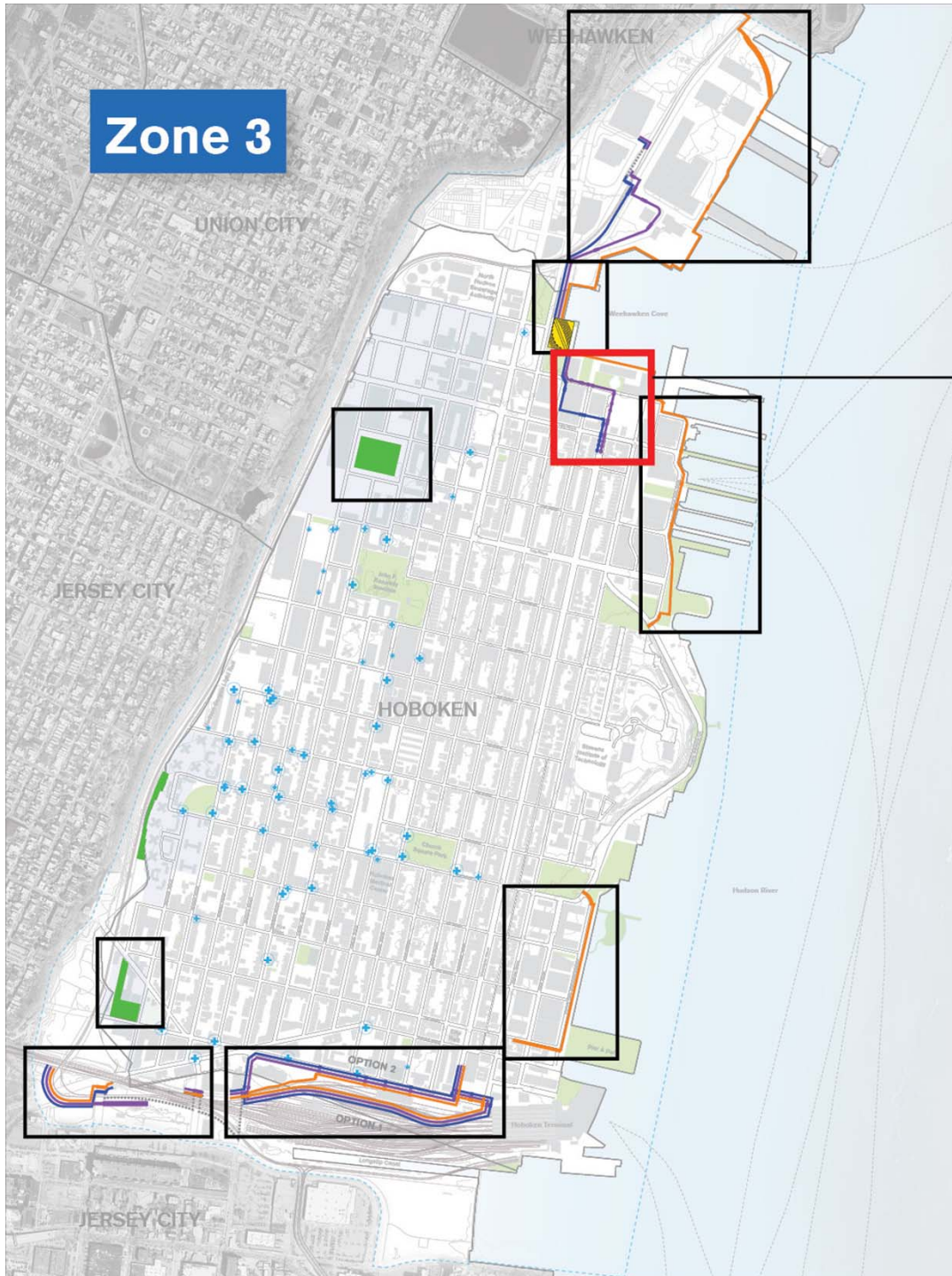


Harborside Park Overview

ALT-1 ALT-2 ALT-3



Zone 3



Zone 3 — Residential

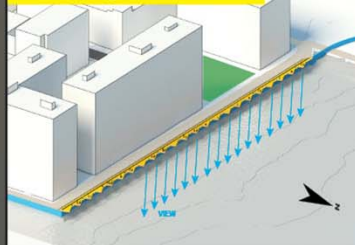
- Alternative 1 @ Waterfront along Tea Building
- Alternative 2 @ 15th St to Washington St.
- Alternative 3 @ Alleyway to Washington St.



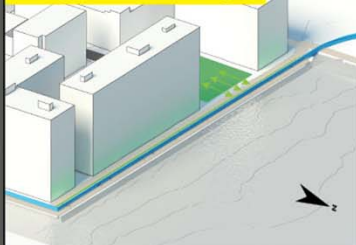
Alt. 1 - Weehawken Cove Promenade

ALT-1

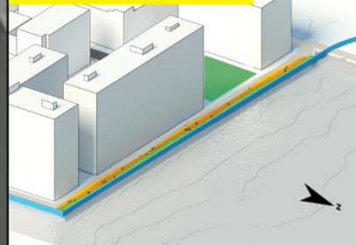
Viewing Platforms



Sloped Landscape

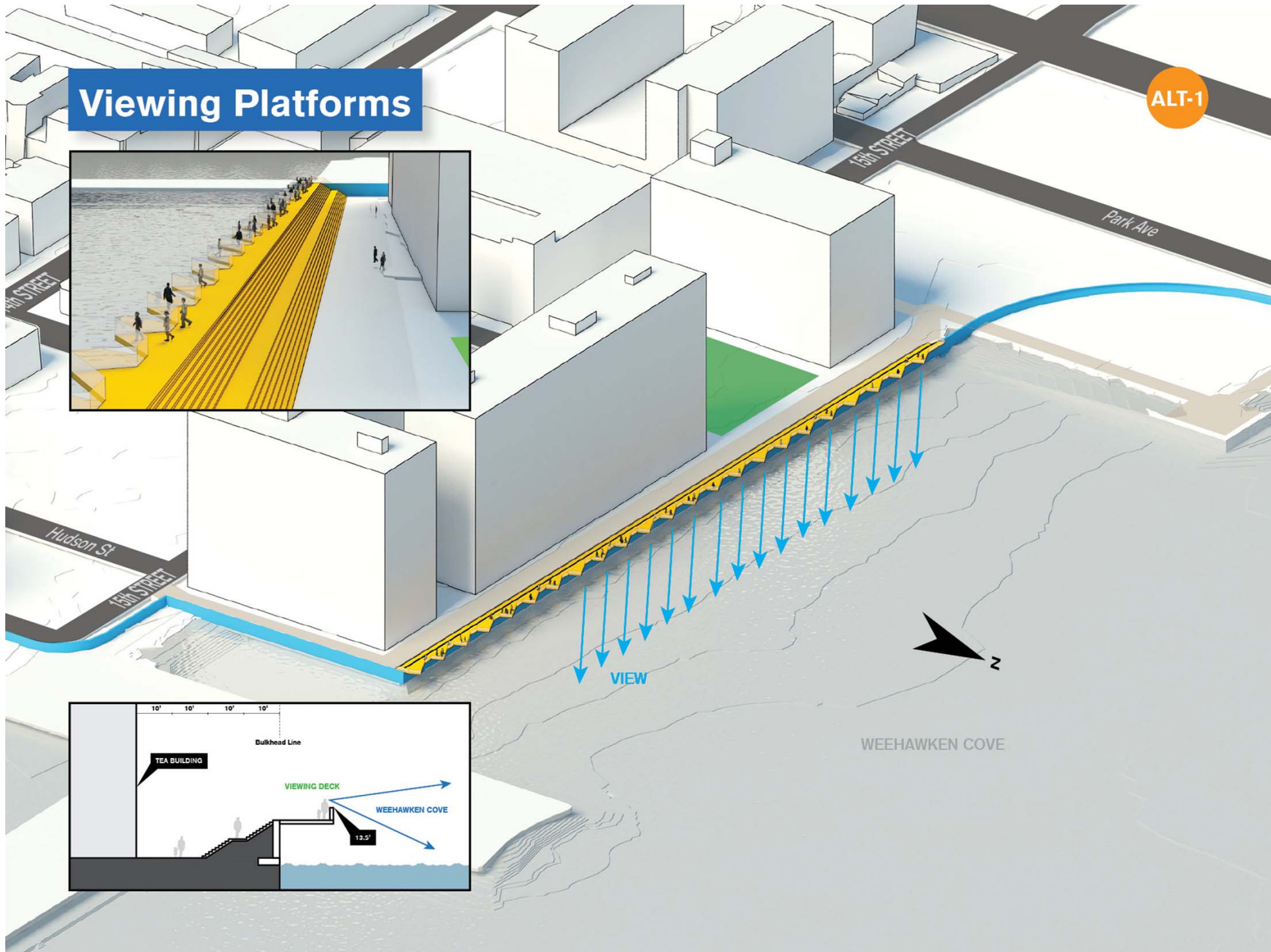


Undulating Paths



Viewing Platforms

ALT-1

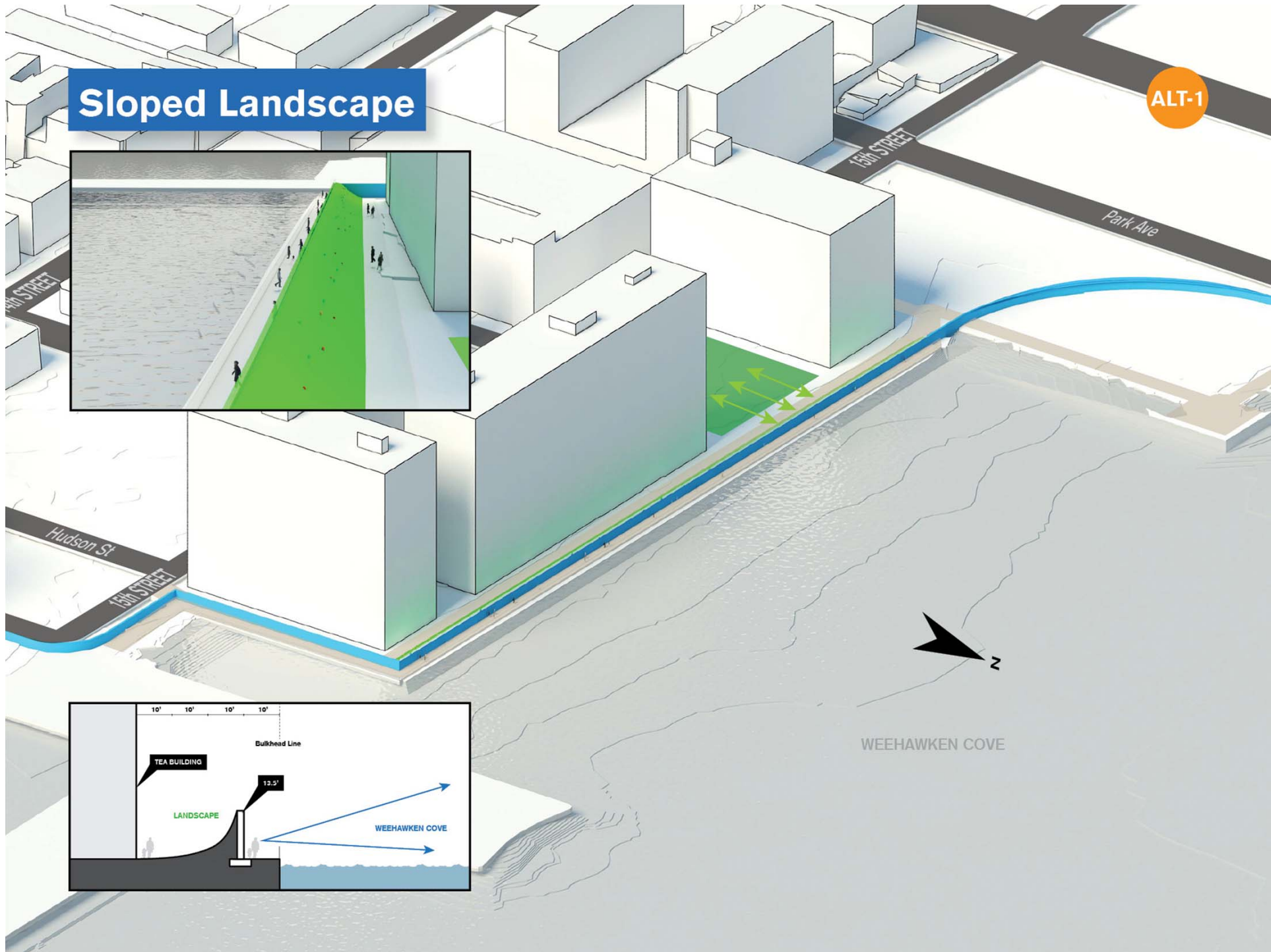


Viewing Platforms

A vibrant illustration of a rooftop viewing platform in New York City. The platform features a wide wooden deck with a series of parallel wooden planks running along its length. People are engaged in various activities: a man stands on the left with a dog, a woman and child play with a large prop sword, a woman runs, a couple walks a dog, a man plays guitar, a woman sits on the steps, a man sits on the ground, and a couple walks away. The background shows a dense city skyline with numerous skyscrapers under a clear blue sky.

Sloped Landscape

ALT-1

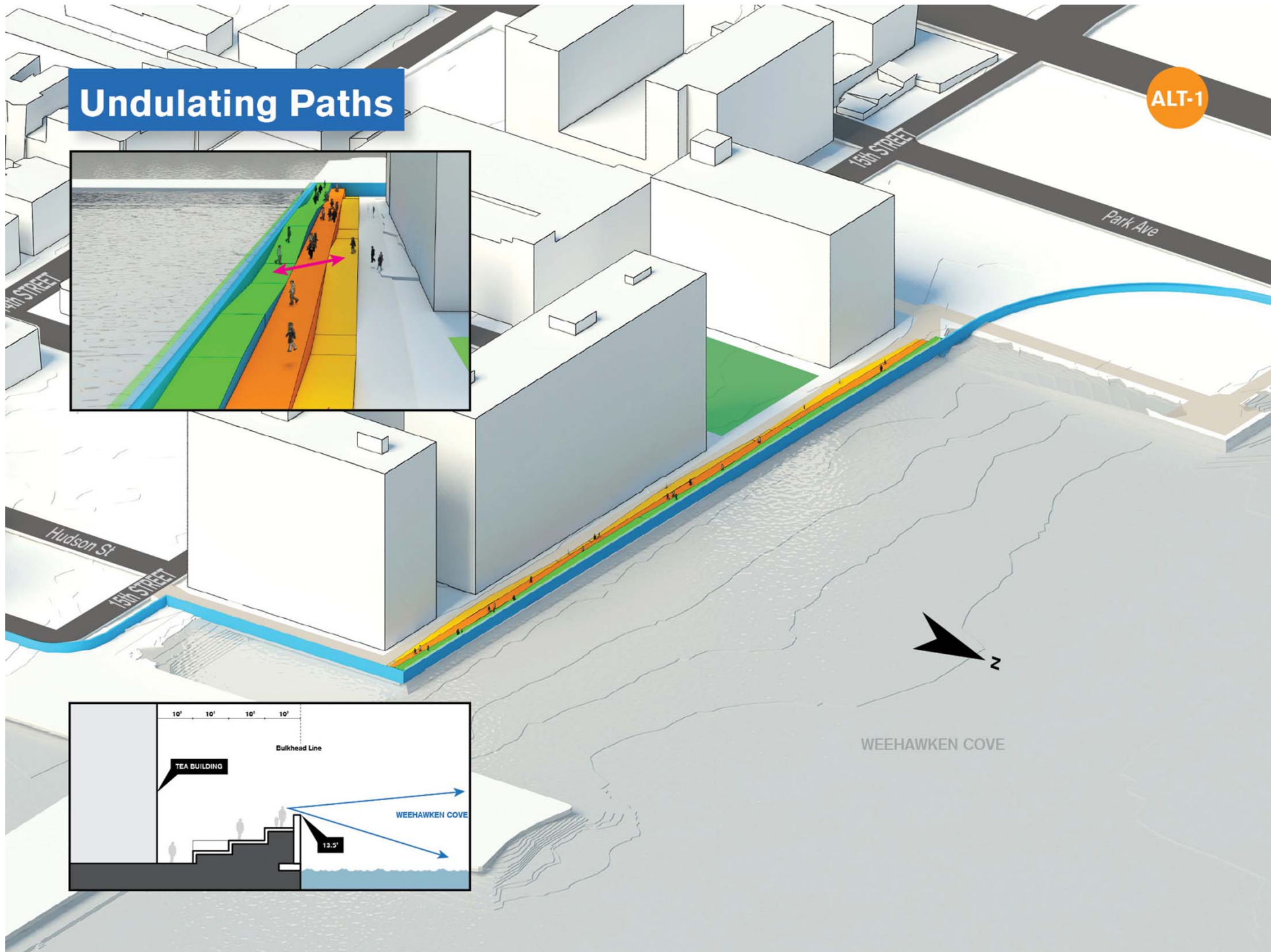


Sloped Landscape



Undulating Paths

ALT-1

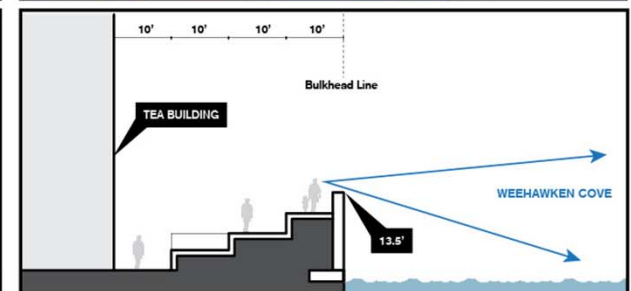
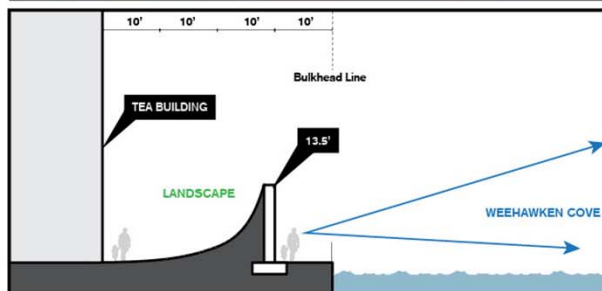
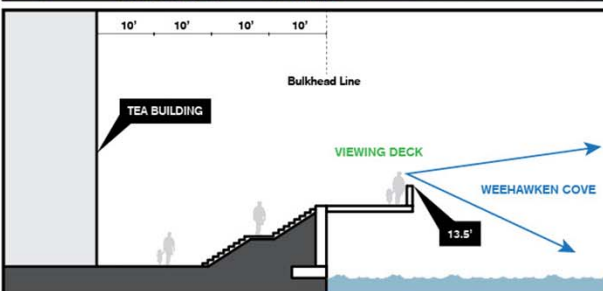
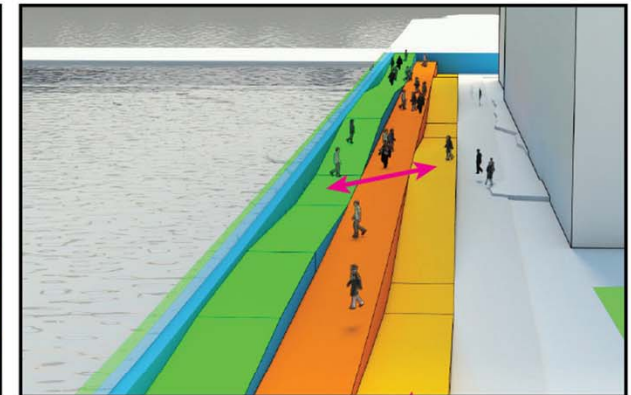
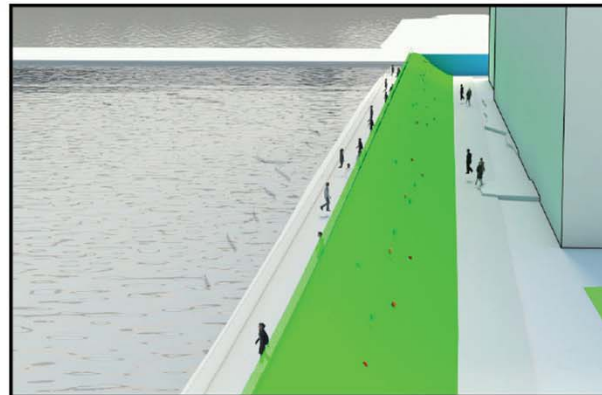
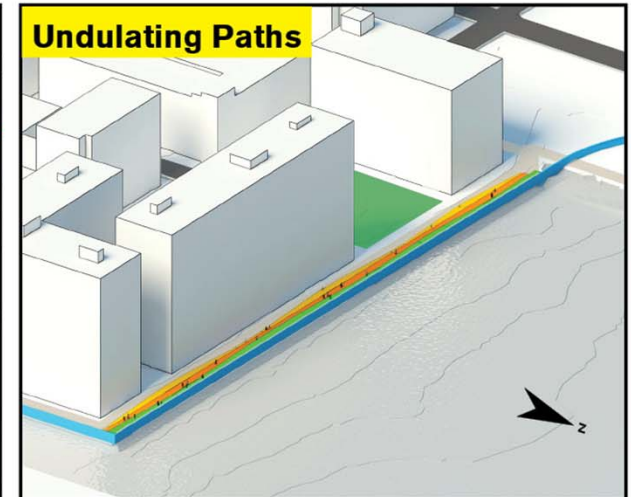
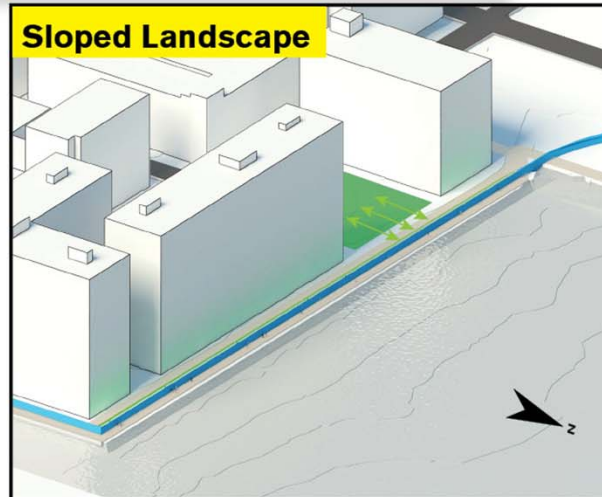
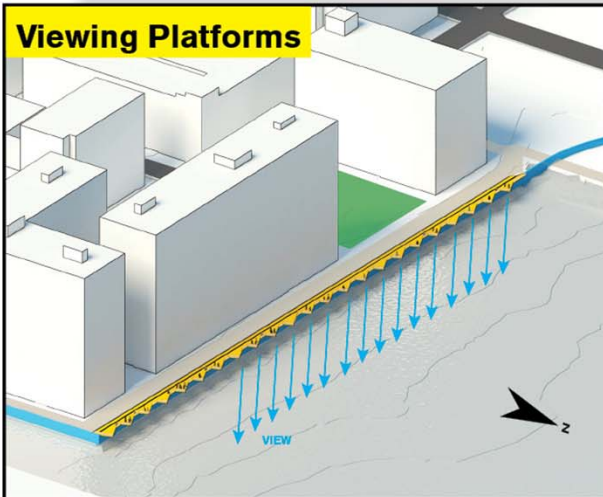


Undulating Paths



Alt. 1 - Weehawken Cove Promenade

ALT-1



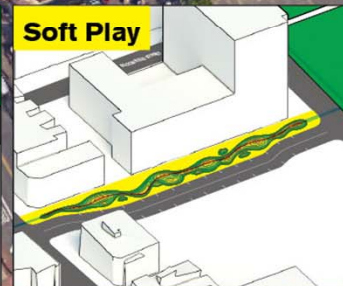
Alt. 2 - Washington Street

ALT-2

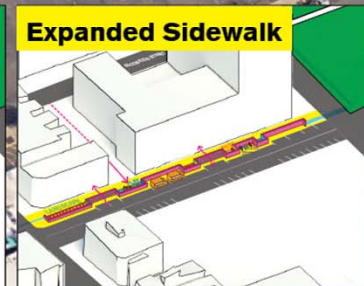
Community Stoop



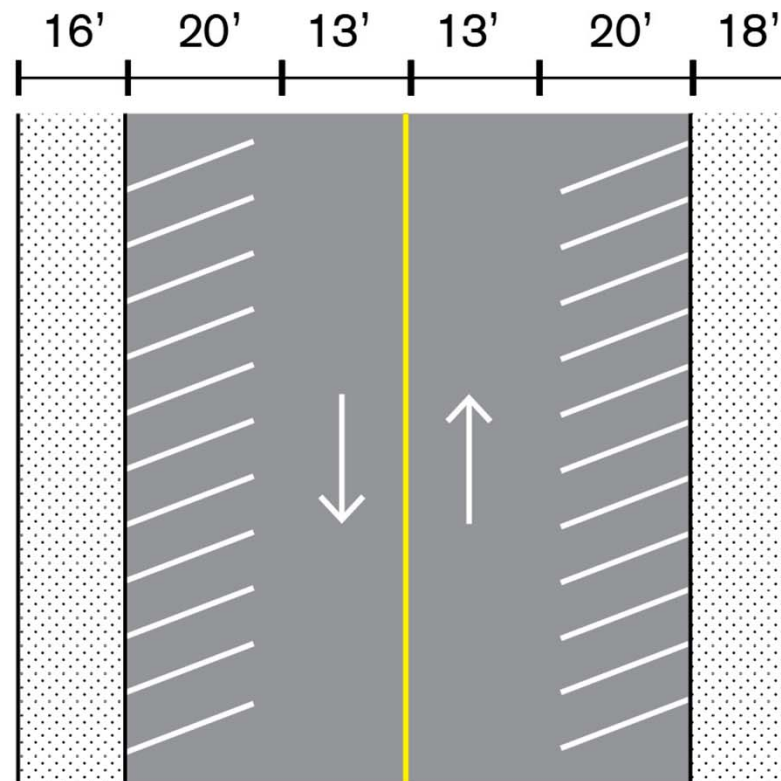
Soft Play



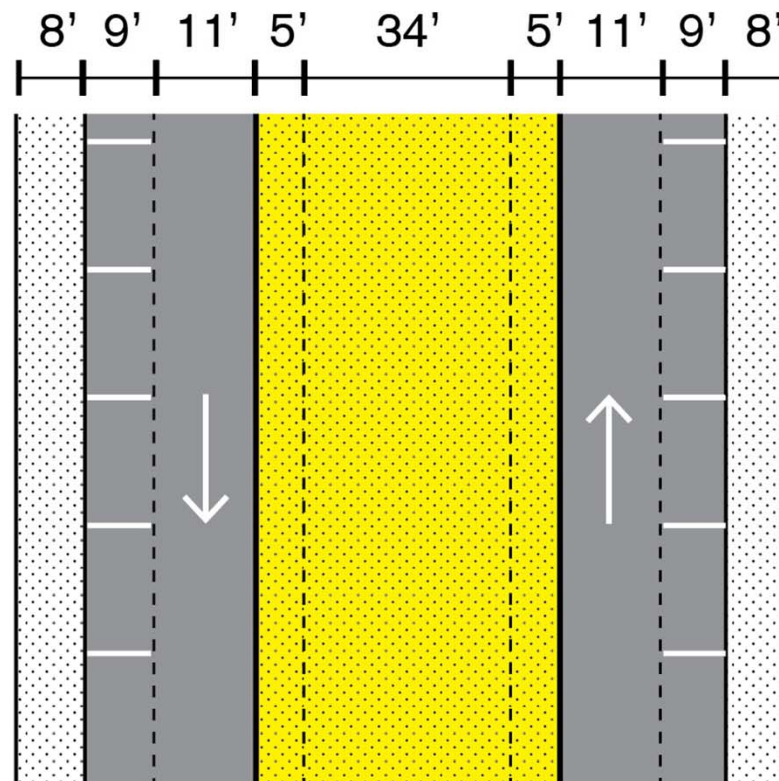
Expanded Sidewalk



Existing

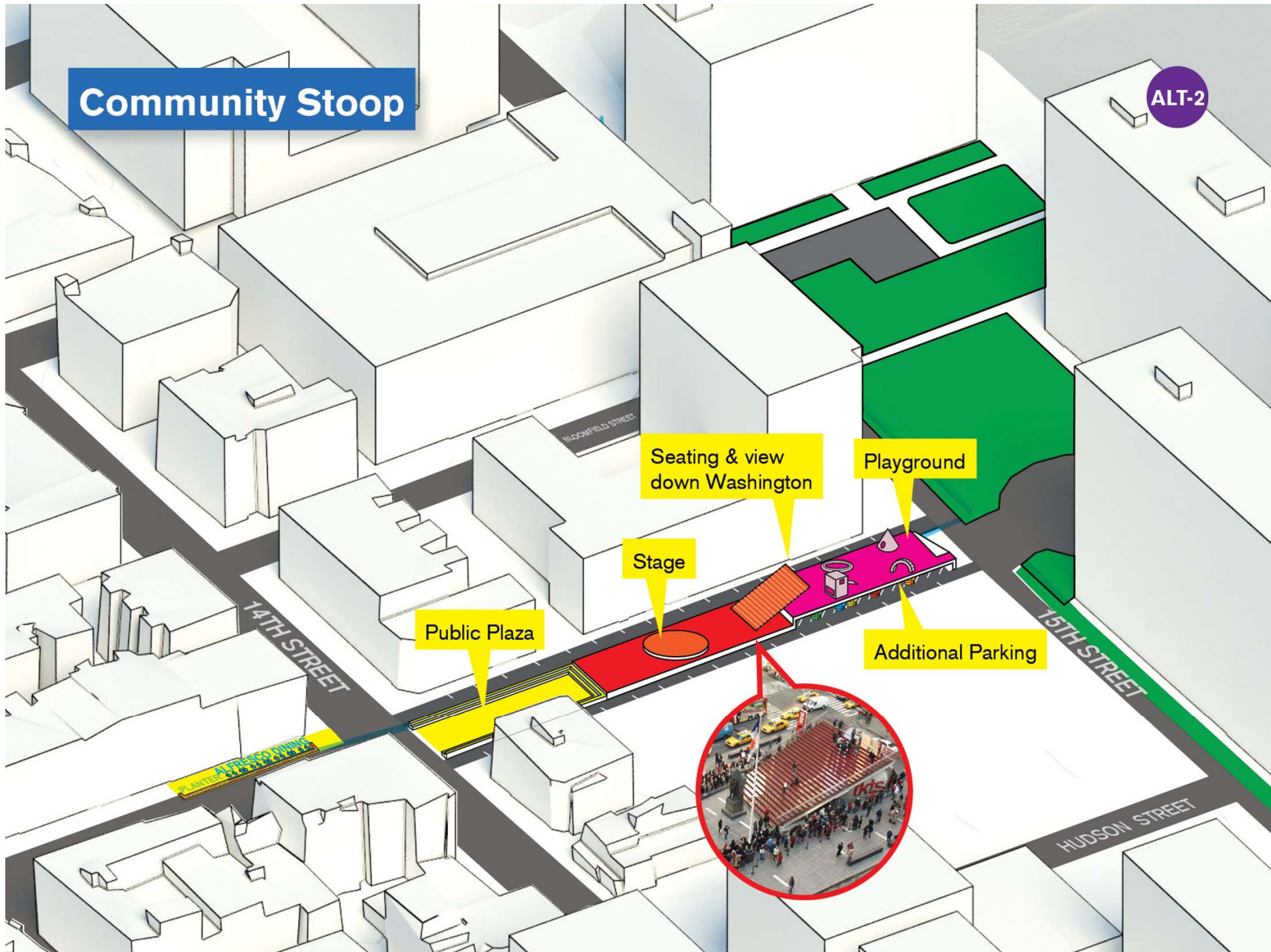


Pedestrian Island



Community Stoop

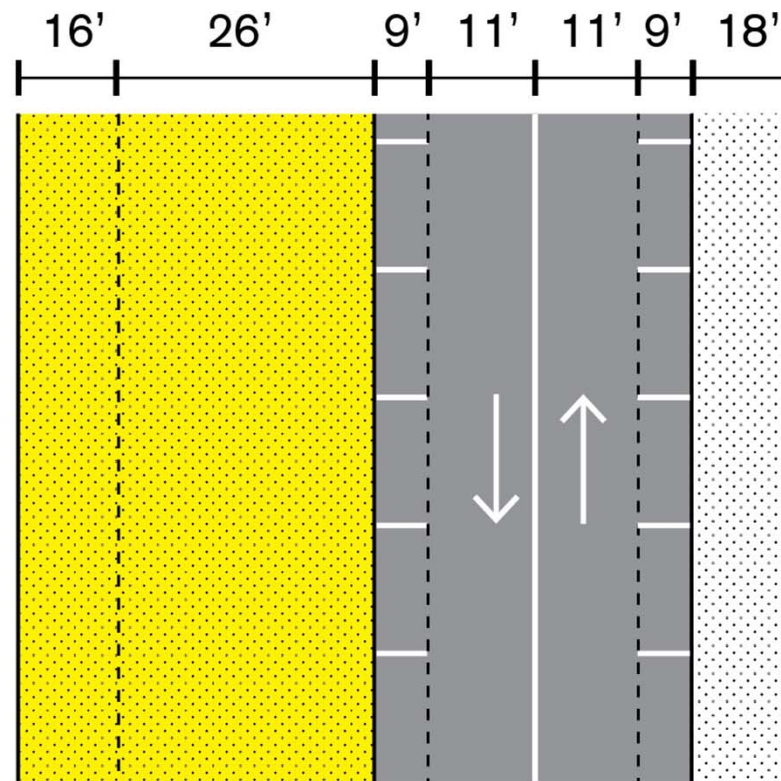
ALT-2



Elevated Public Square



Widened Sidewalk



Soft Play

ALT-2



Amphitheater seating

Pockets for informal gathering



14TH STREET

15TH STREET

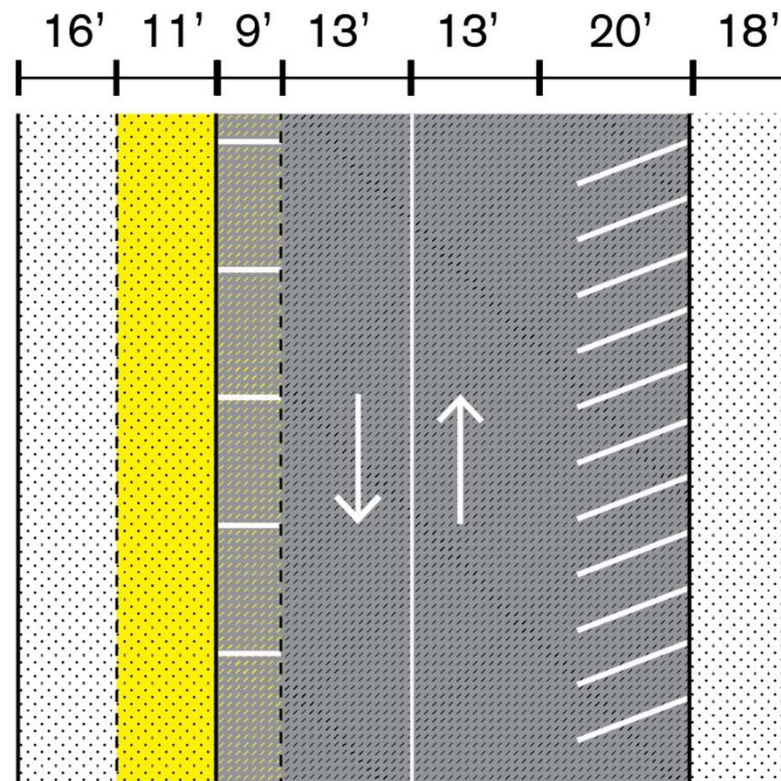
HUDSON STREET

ALPESPO DIVINY
PLANTED

Play Landscape



Expanded Sidewalk



Expanded Sidewalk

ALT-2



Informal community gathering spaces



Parallel Parking



LANDSCAPE

15TH STREET

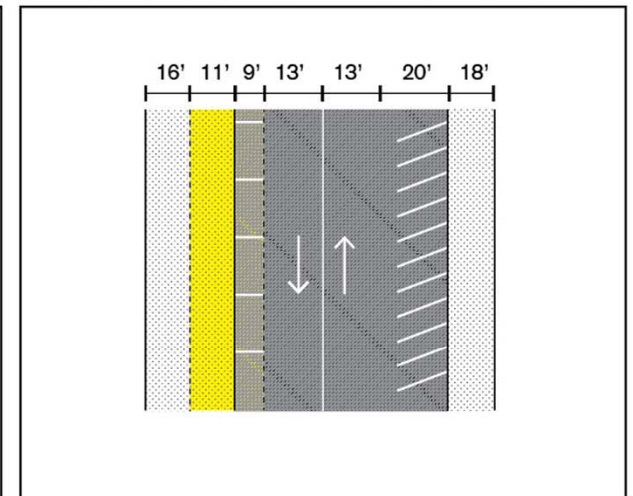
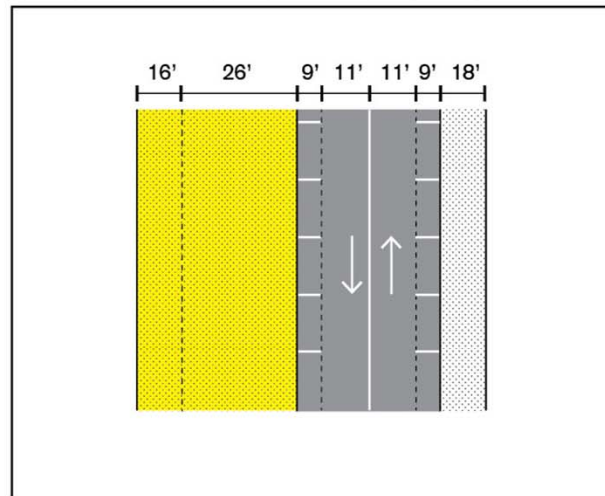
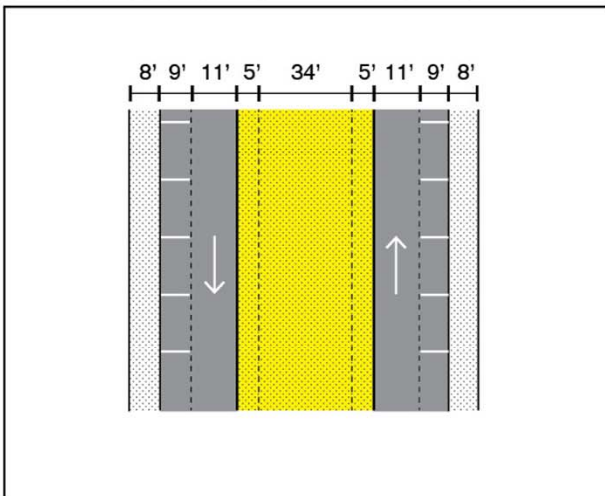
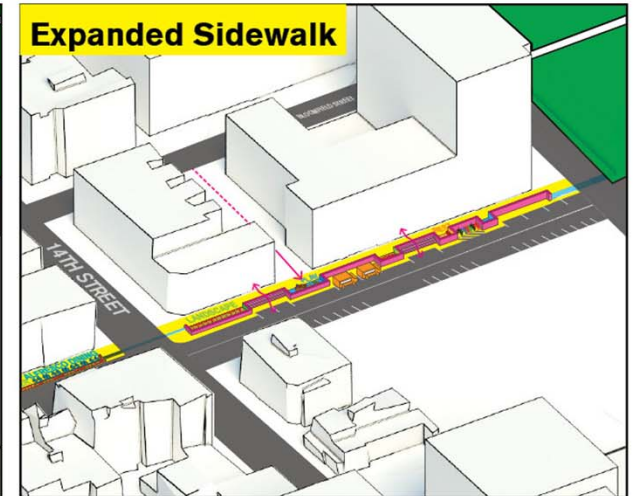
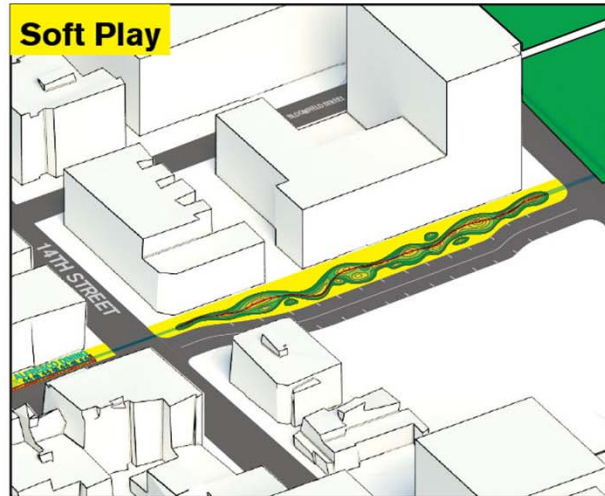
HUDSON STREET

Parklet



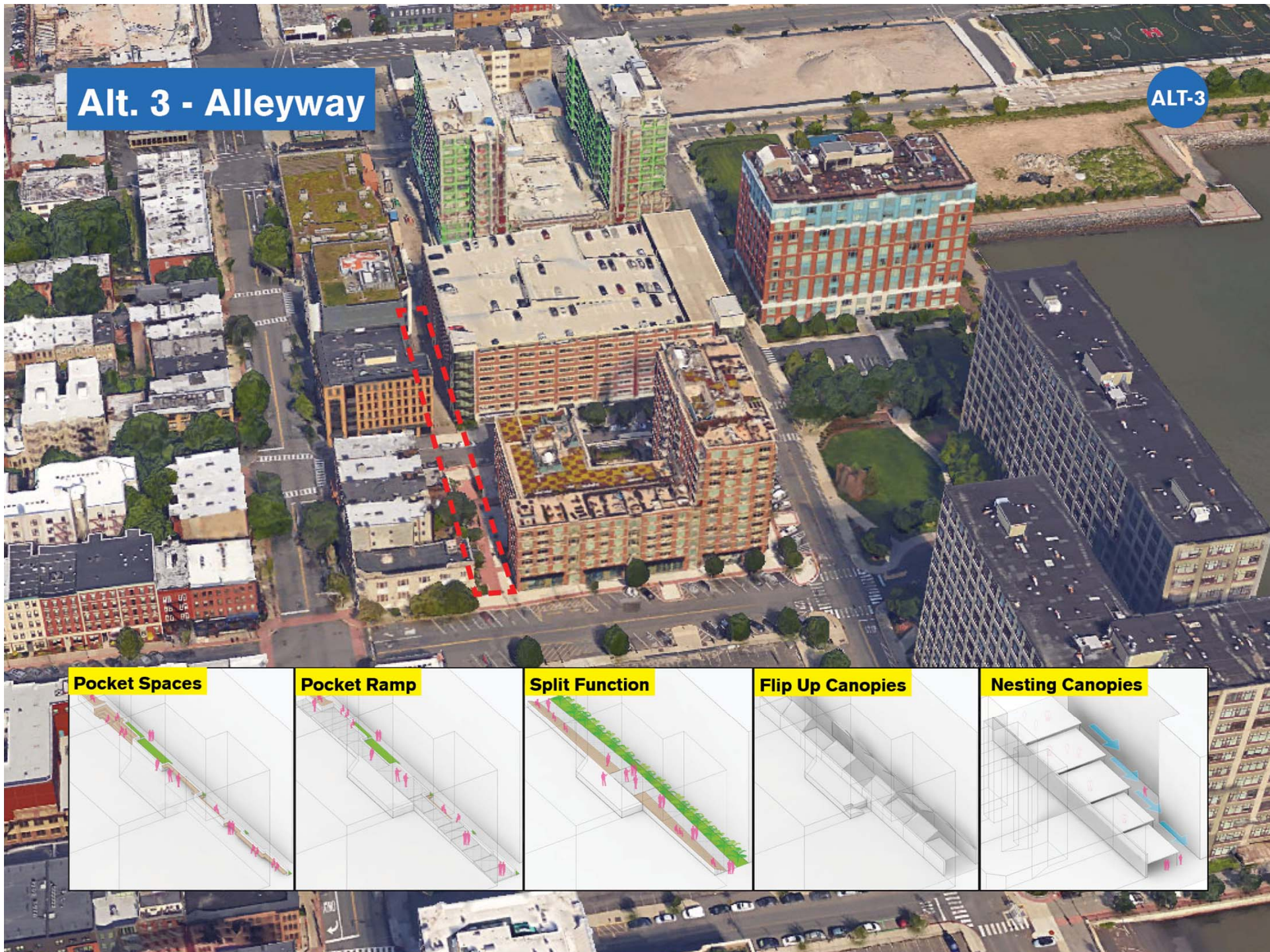
Alt. 2 - Washington Street Overview

ALT-2

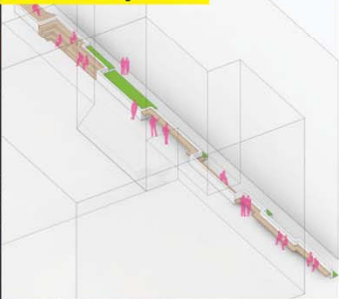


Alt. 3 - Alleyway

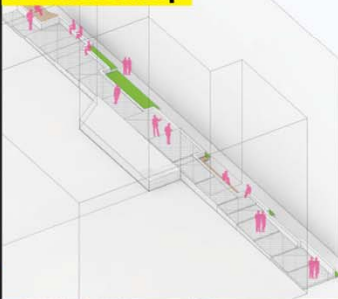
ALT-3



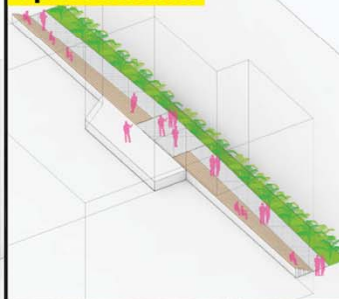
Pocket Spaces



Pocket Ramp



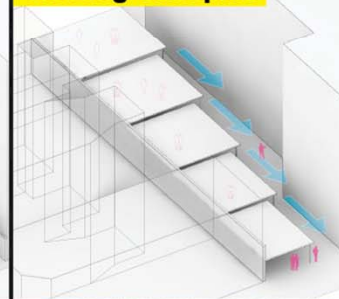
Split Function



Flip Up Canopies

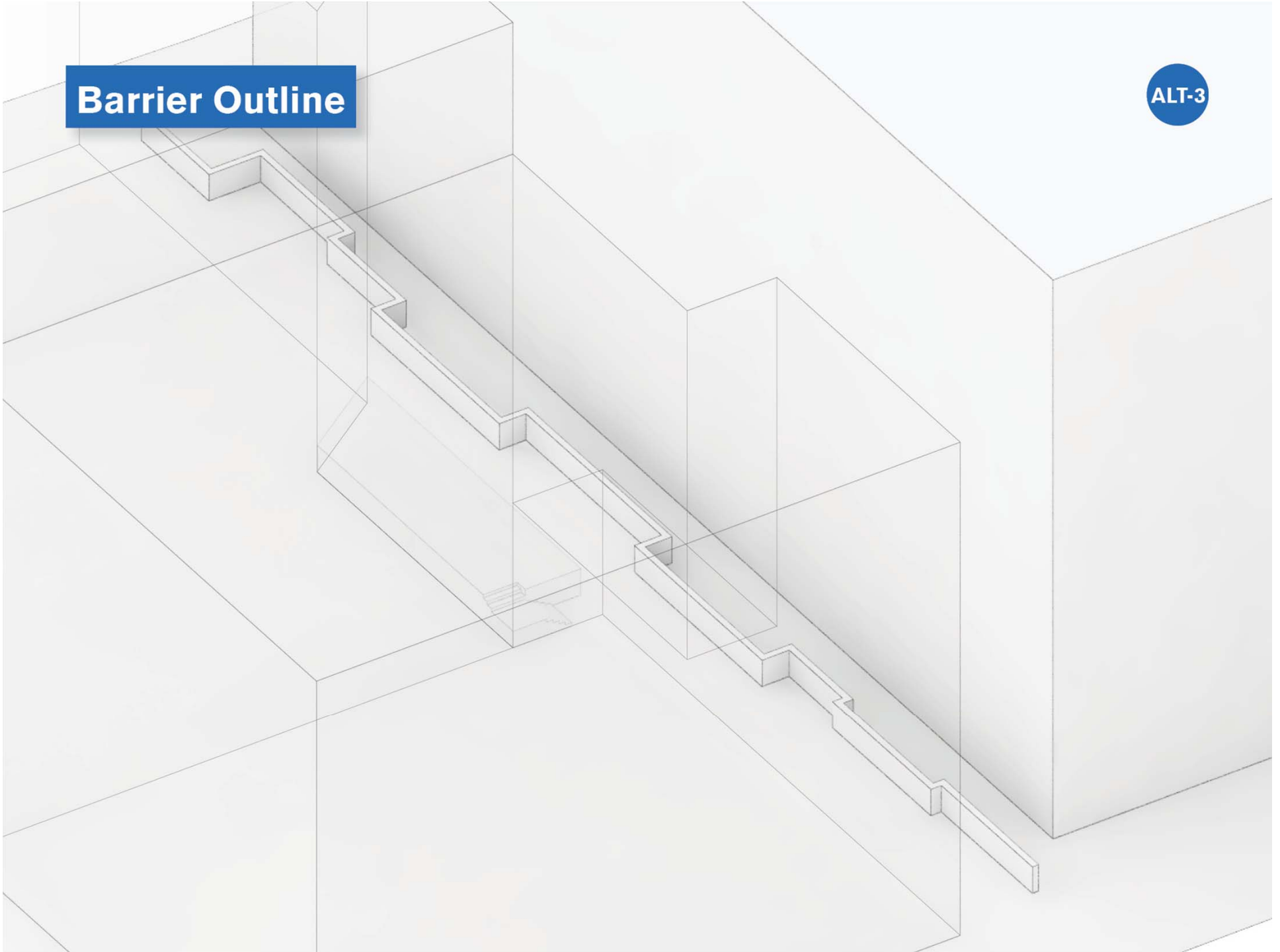


Nesting Canopies



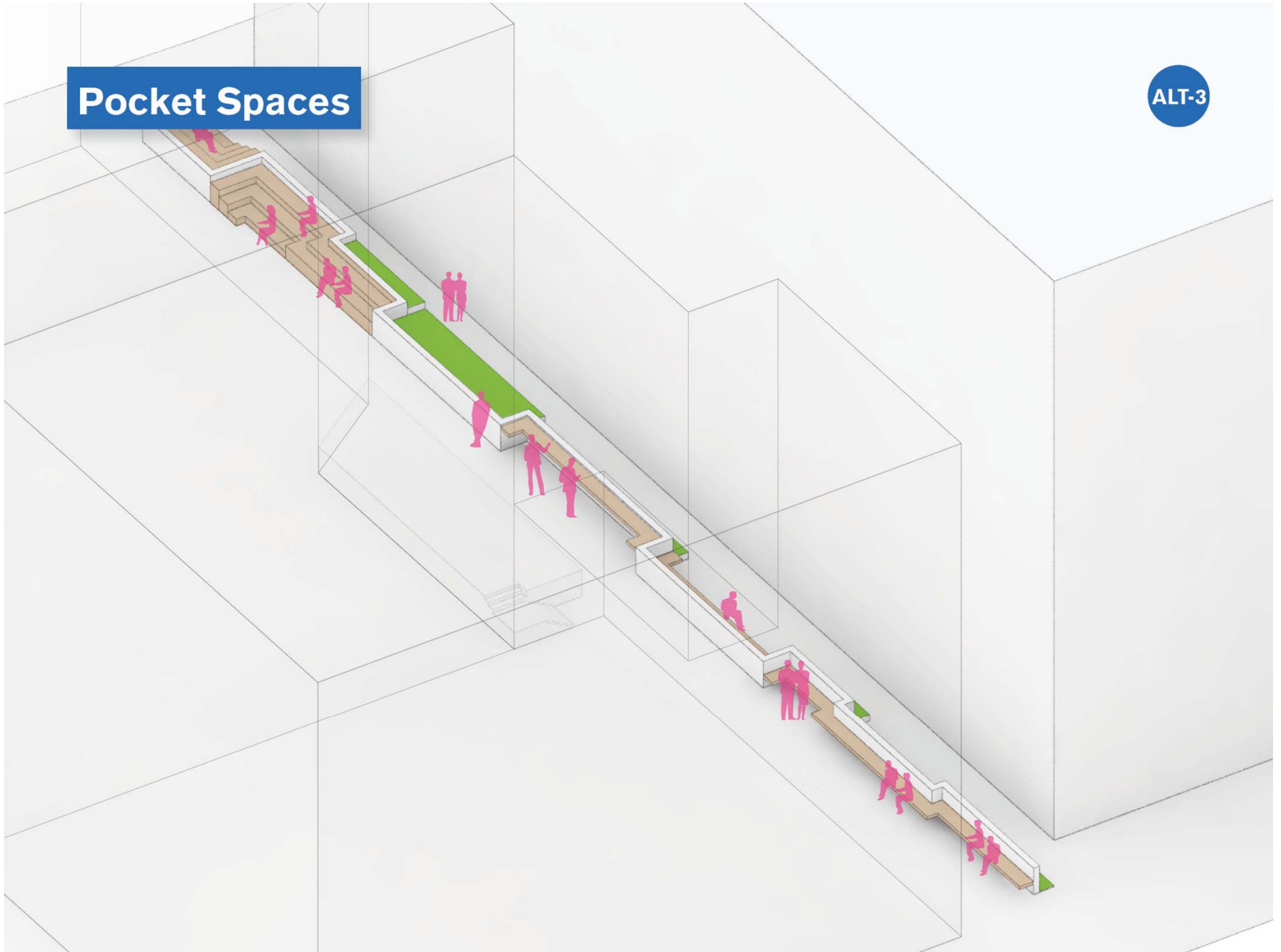
Barrier Outline

ALT-3



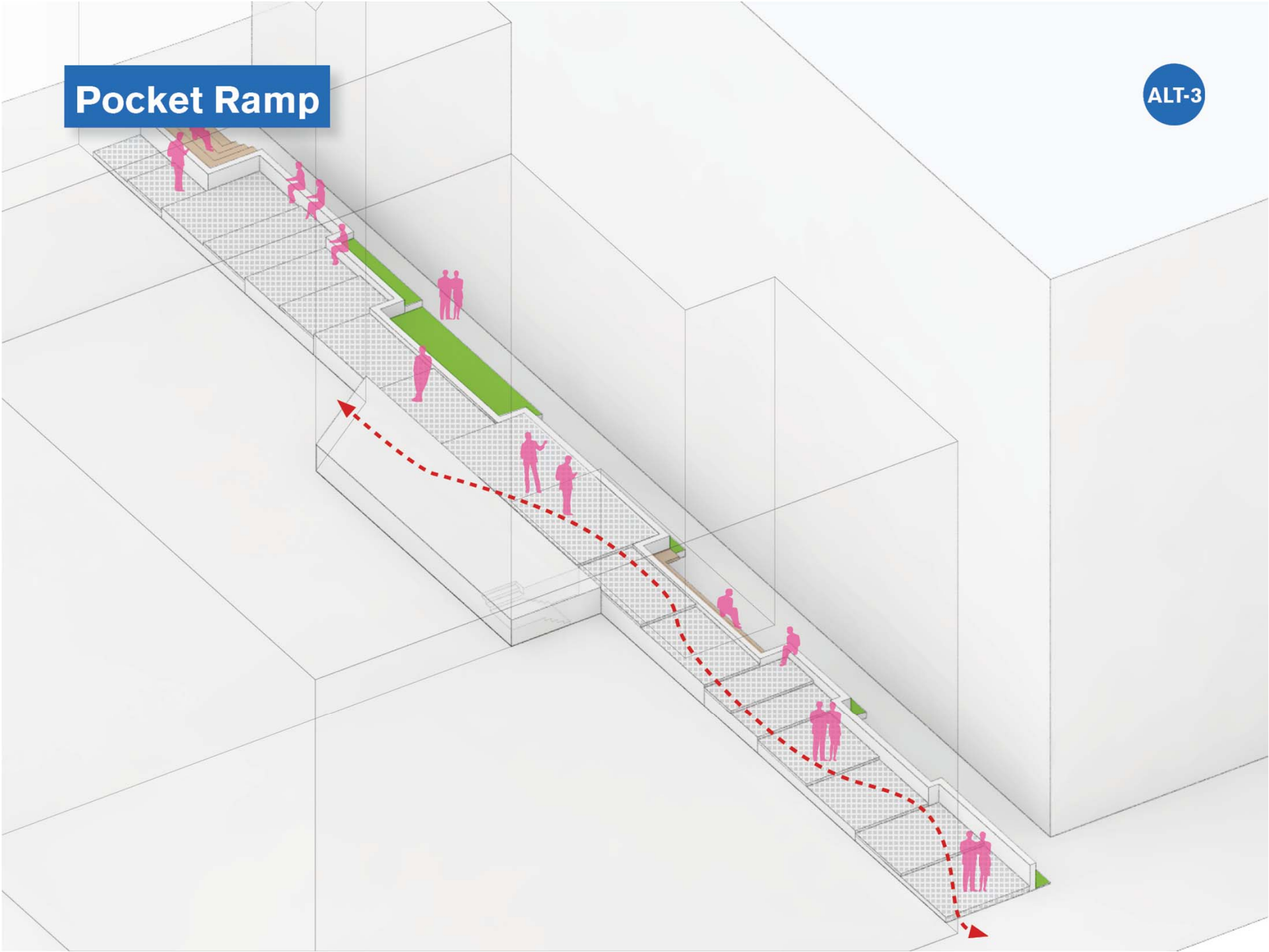
Pocket Spaces

ALT-3



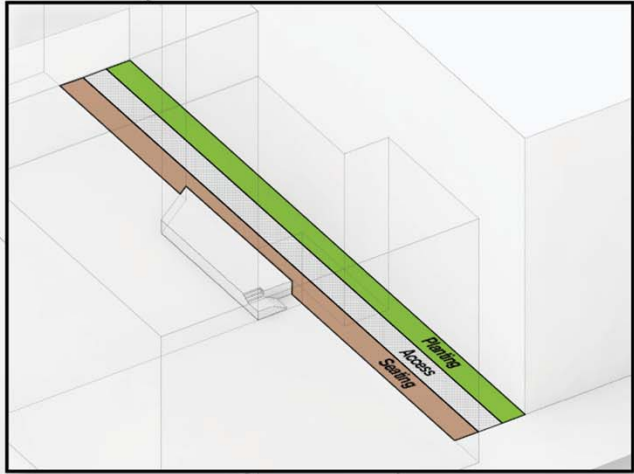
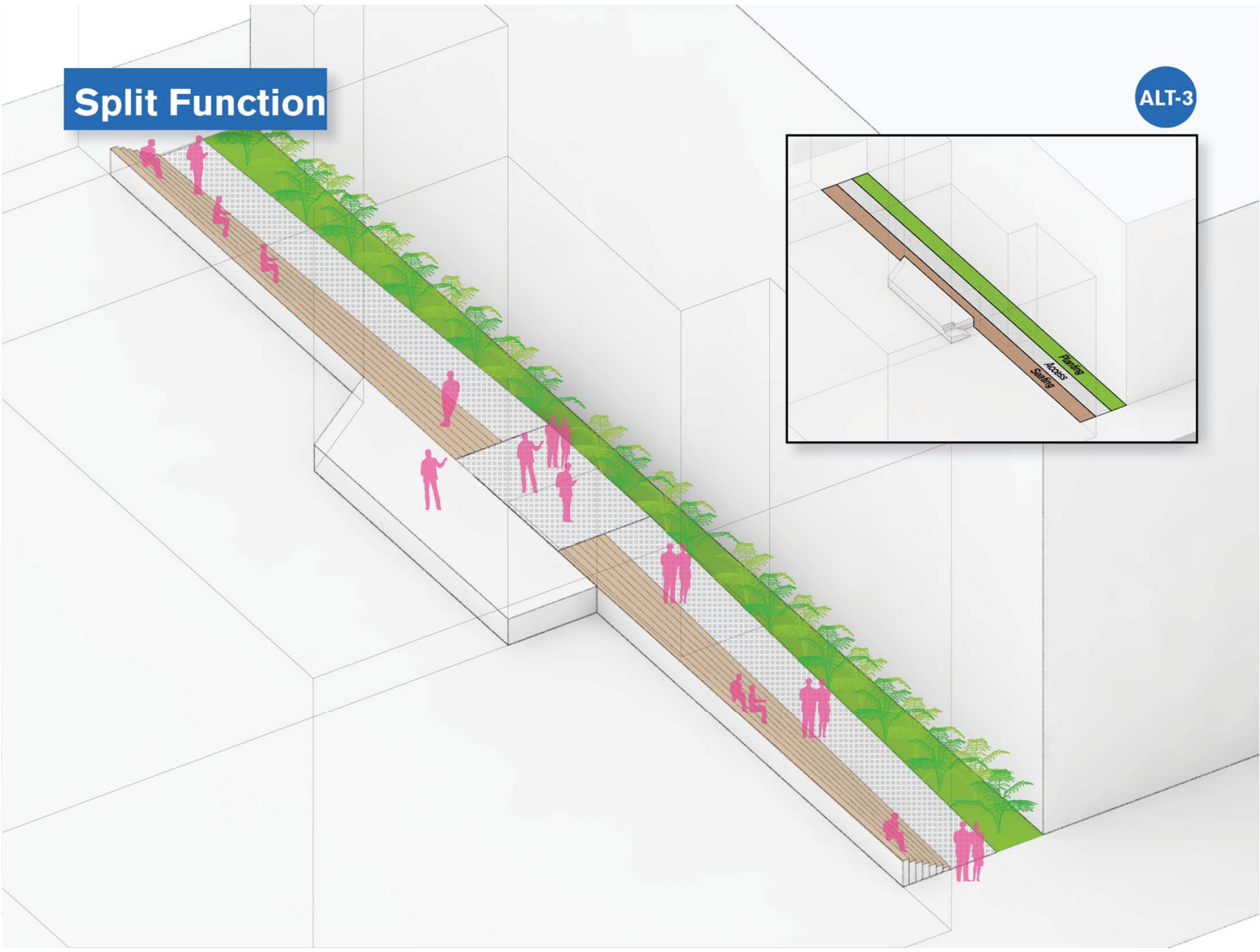
Pocket Ramp

ALT-3



Split Function

ALT-3



Flip Up - Open

ALT-3



Flip Up - Closed

ALT-3



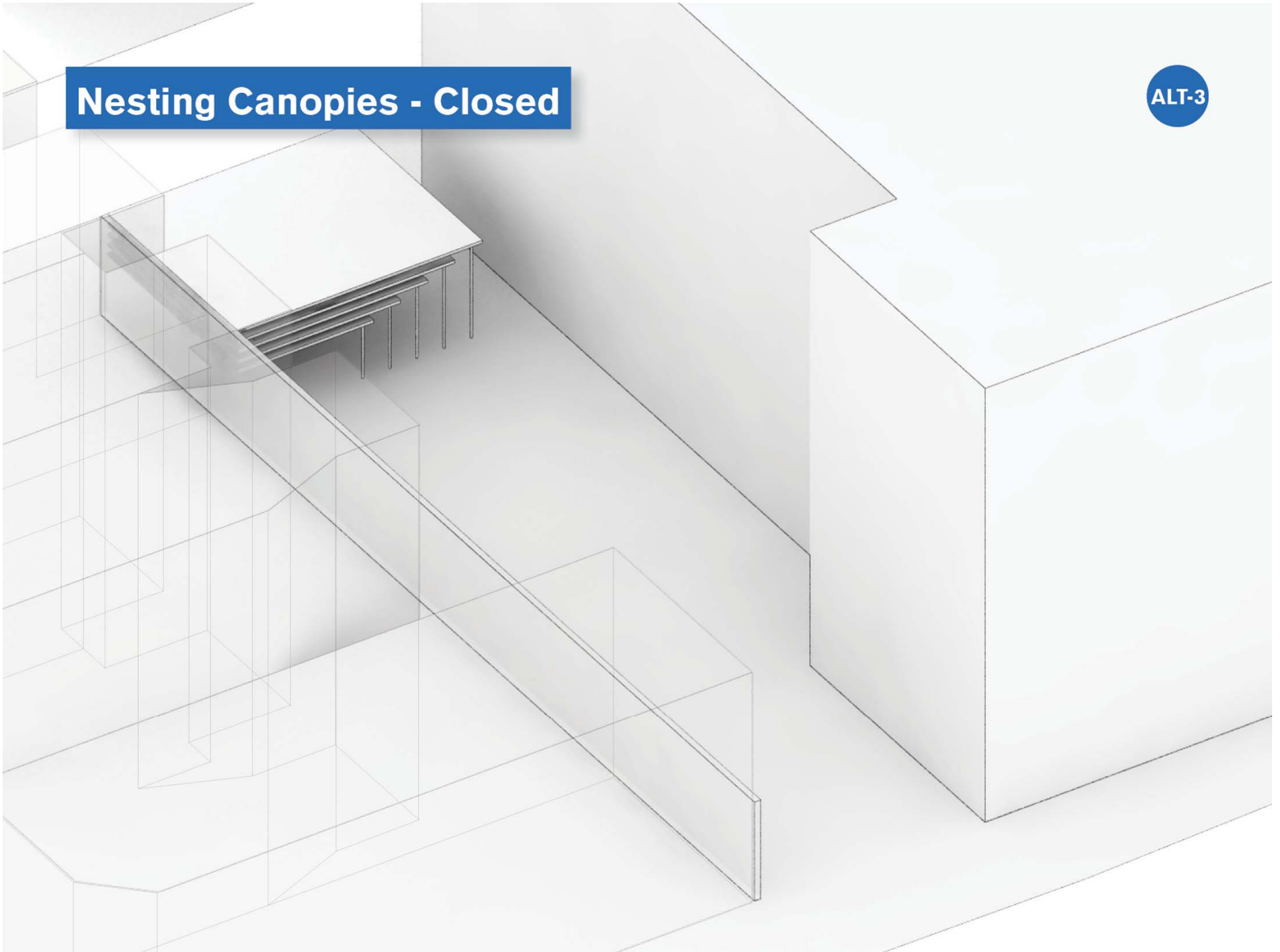
Flip Up - Mixed

ALT-3



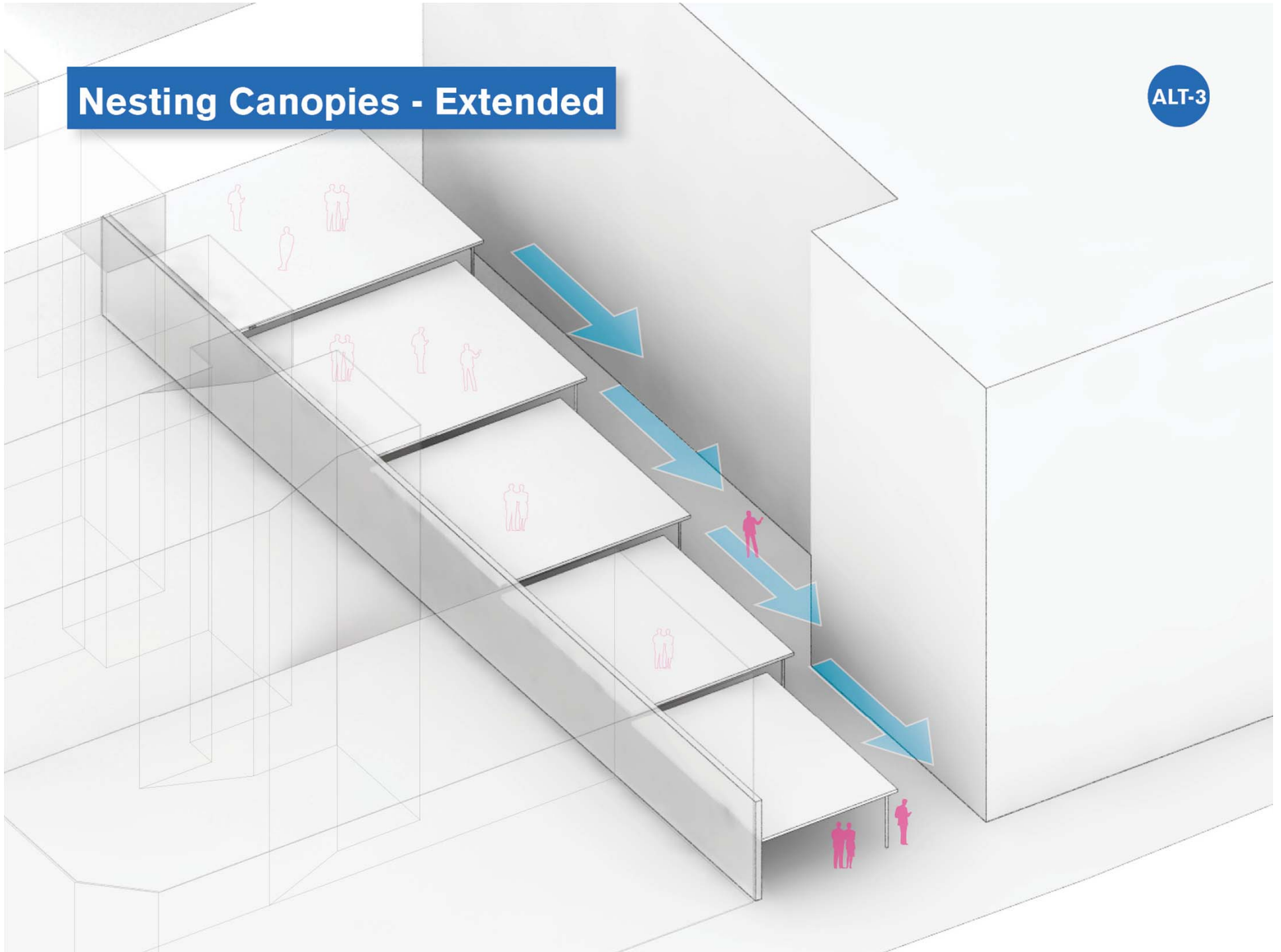
Nesting Canopies - Closed

ALT-3



Nesting Canopies - Extended

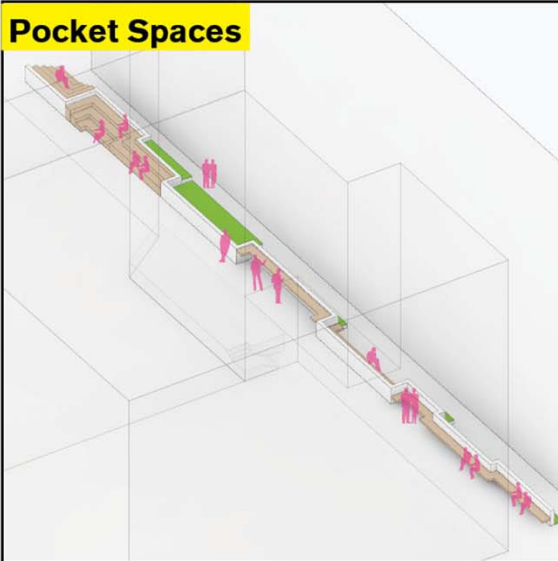
ALT-3



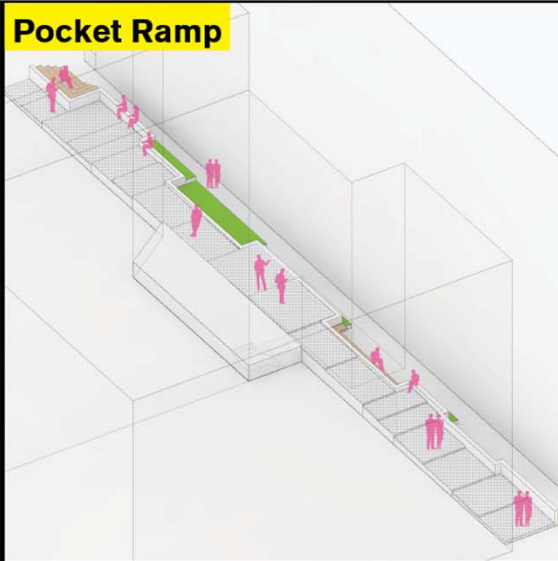
Alt 3. - Alleyway Overview

ALT-3

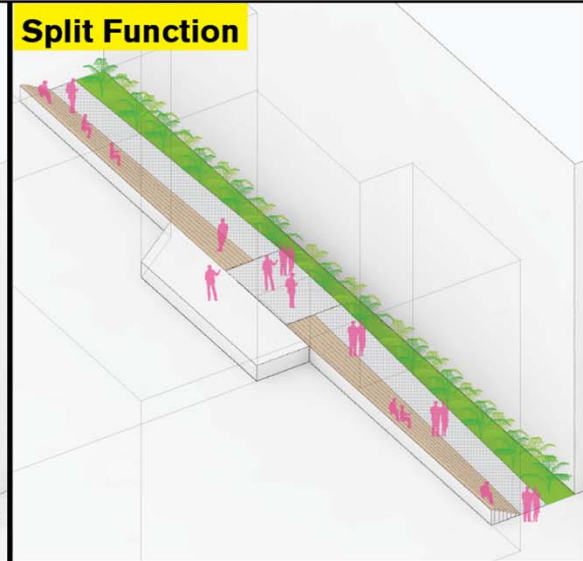
Pocket Spaces



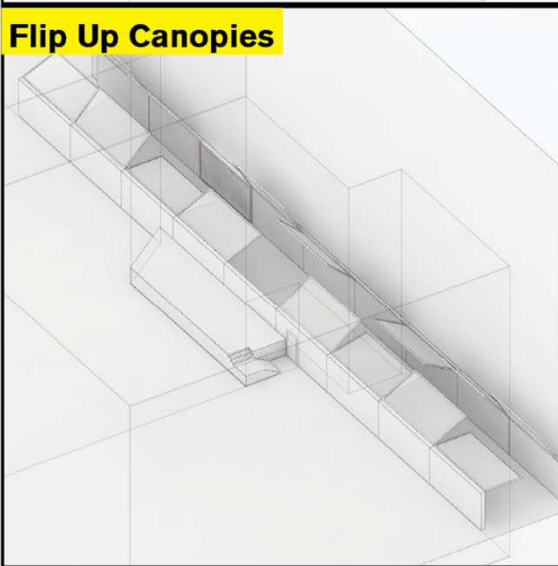
Pocket Ramp



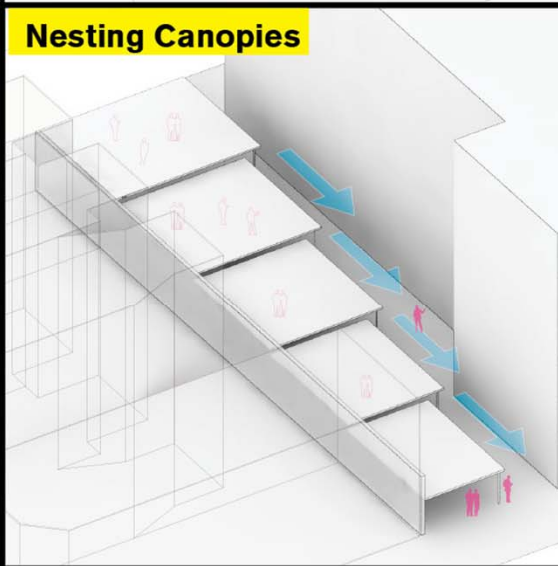
Split Function



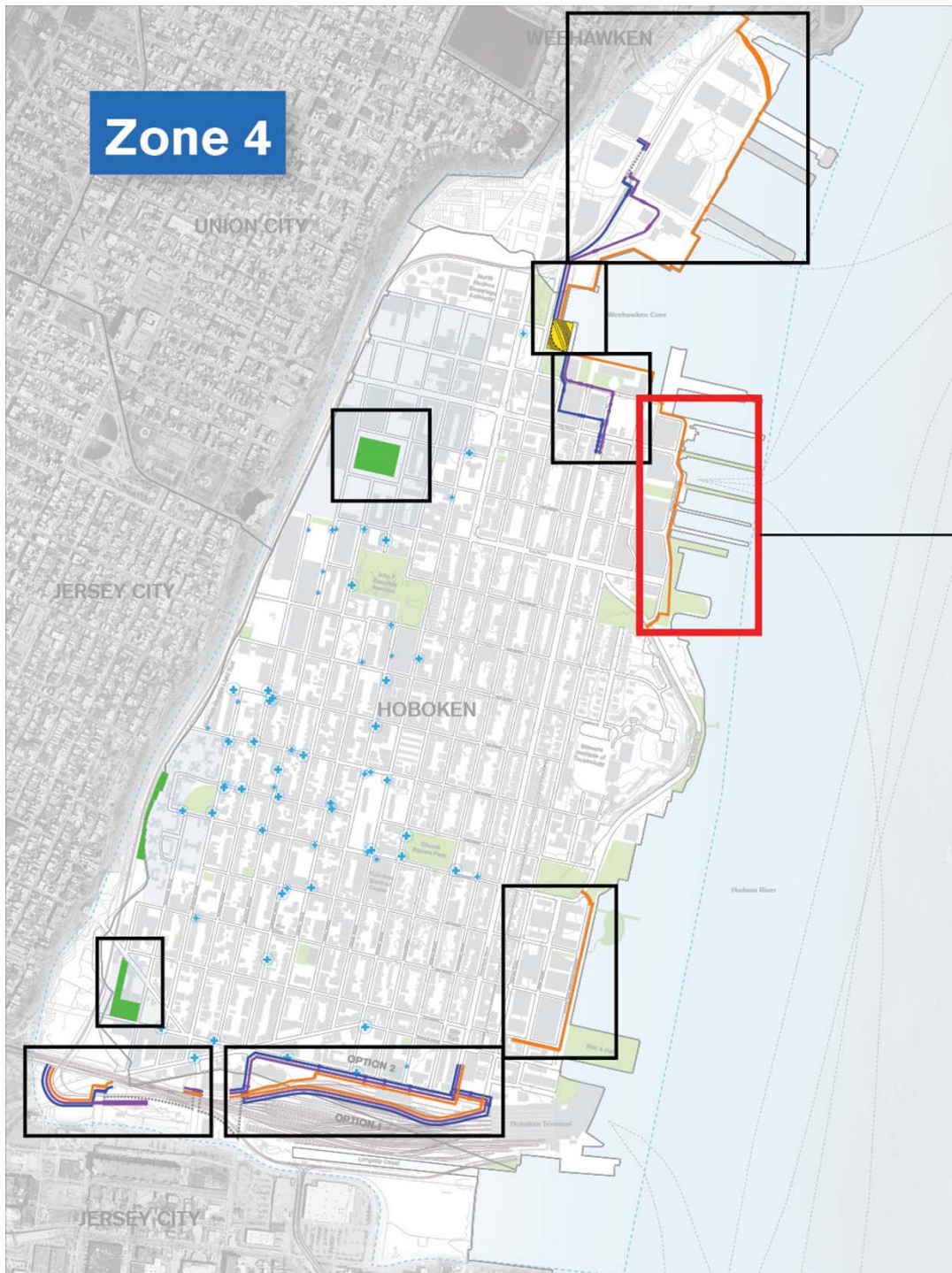
Flip Up Canopies



Nesting Canopies



Zone 4



Zone 4 — North Waterfront

Alternative 1 Only

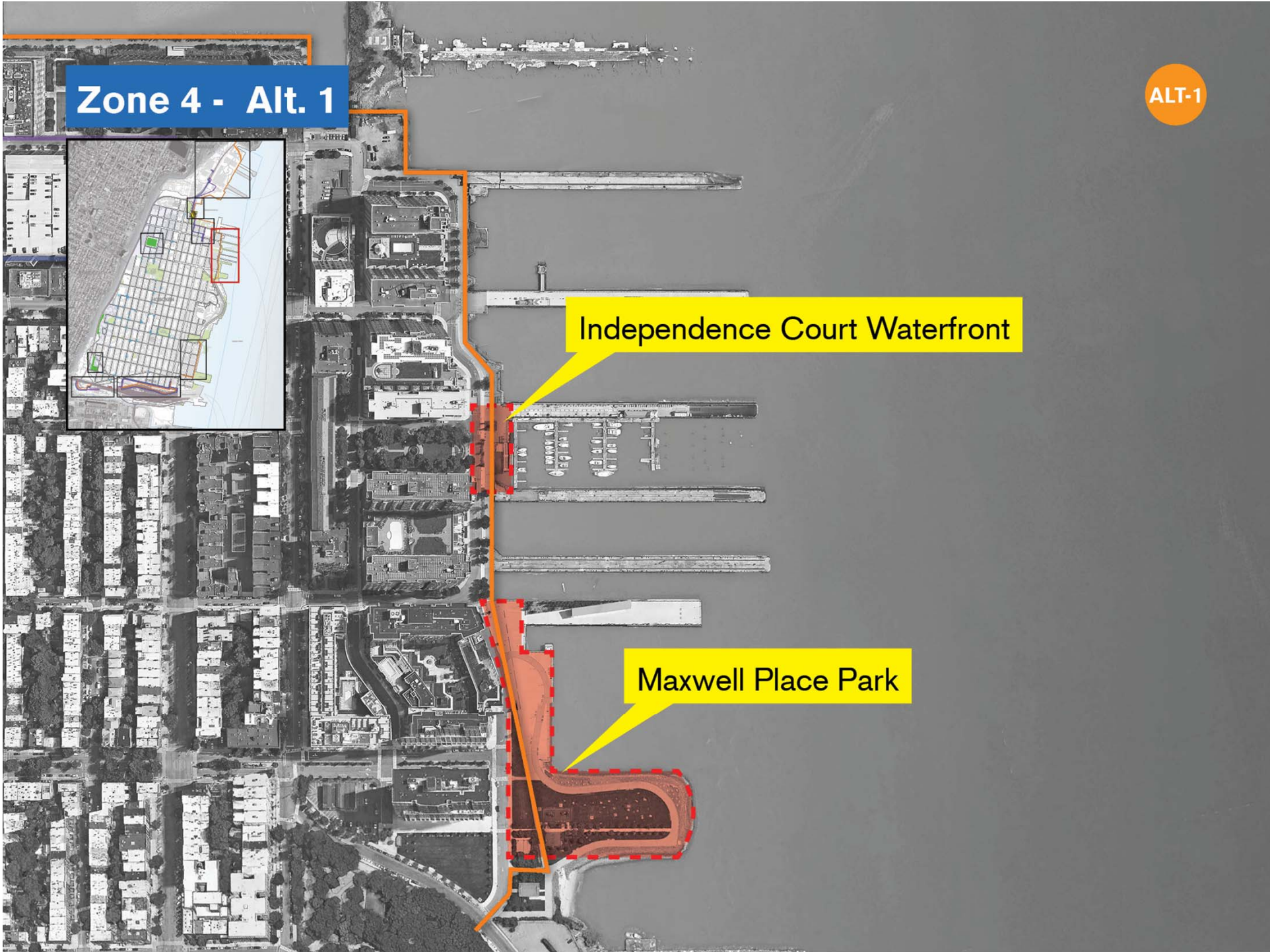
Zone 4 - Alt. 1

ALT-1



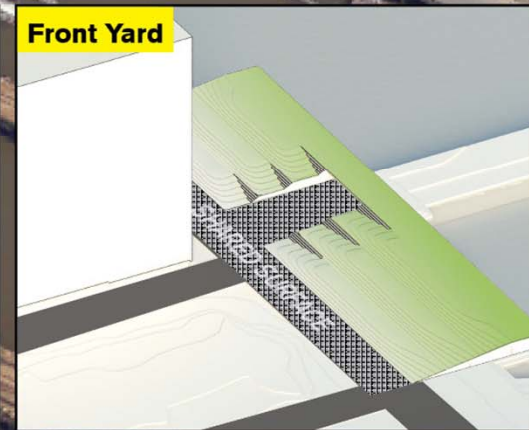
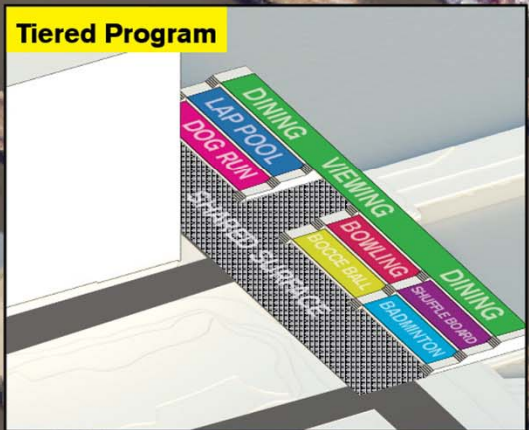
Independence Court Waterfront

Maxwell Place Park



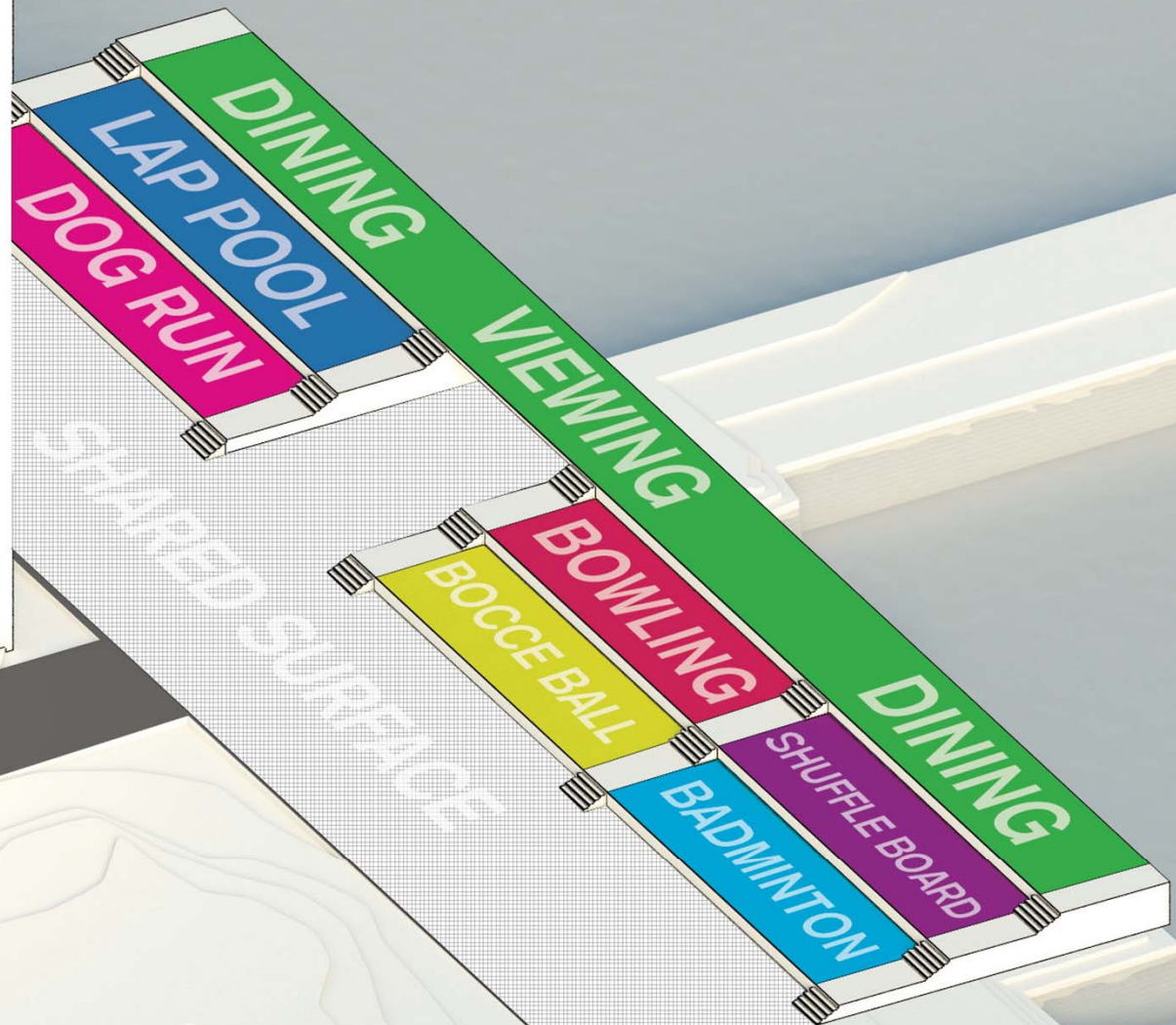
Independence Court Waterfront

ALT-1



Tiered Program

ALT-1

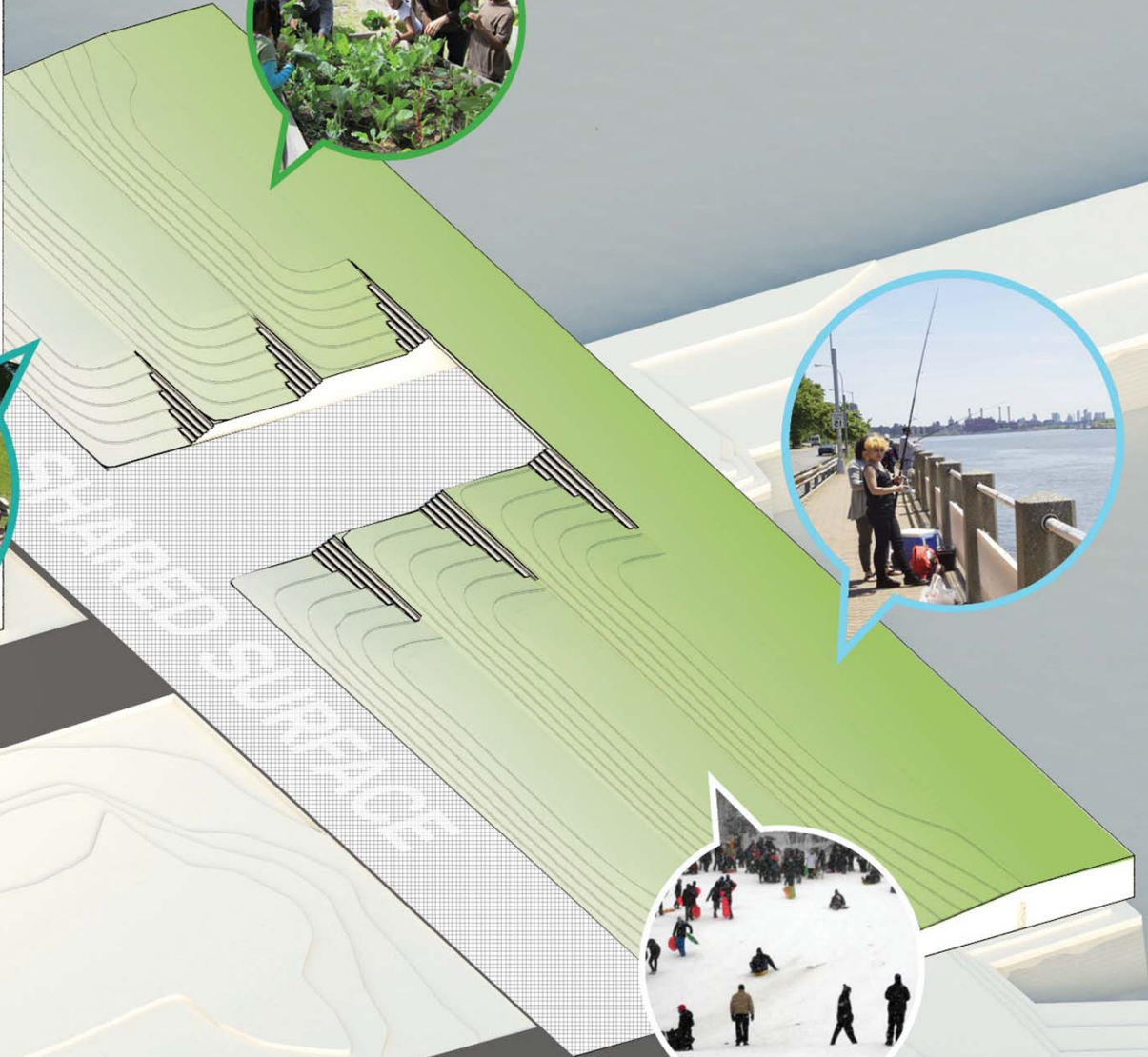


Tiered Program



Front Yard

ALT-1



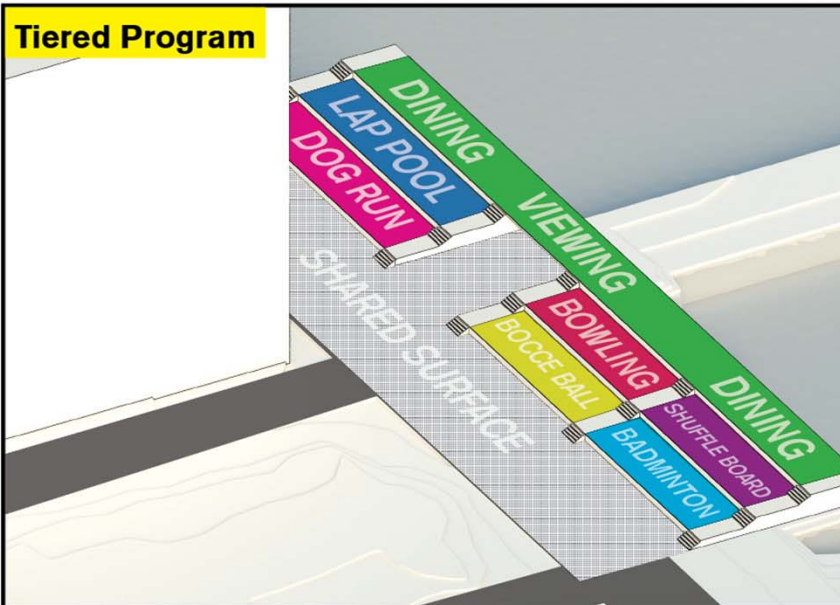
Front Yard



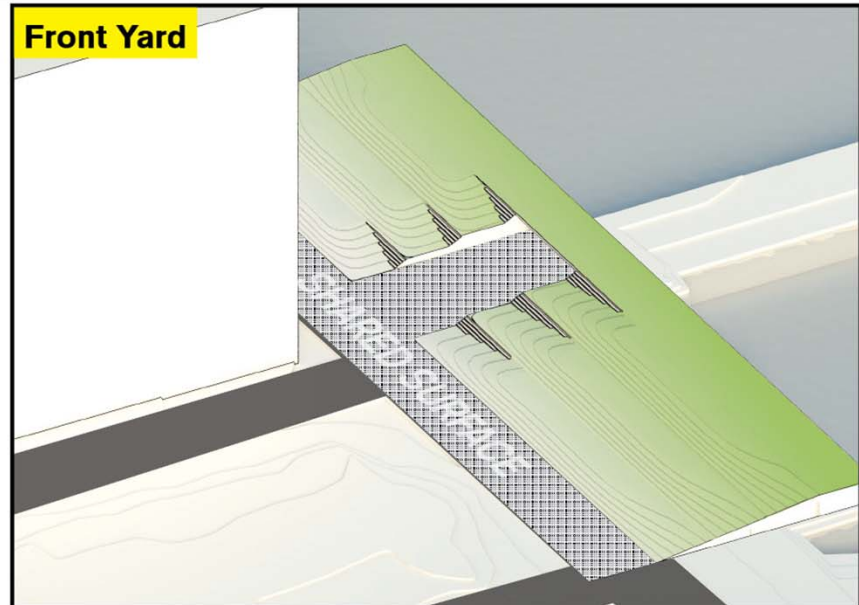
Alt 1. - Independence Court Waterfront Overview

ALT-1

Tiered Program



Front Yard



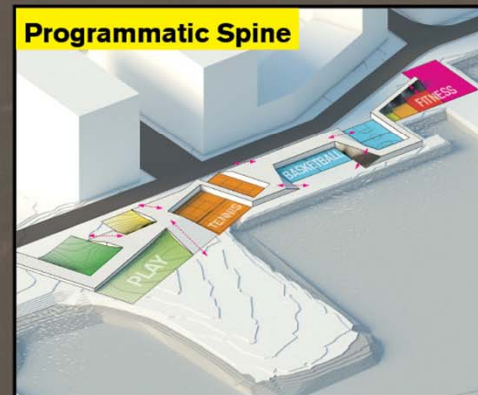
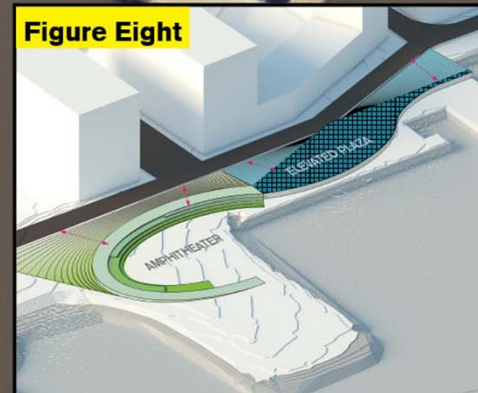


Figure Eight



Programmatic Spine

ALT-1



Programmatic Spine



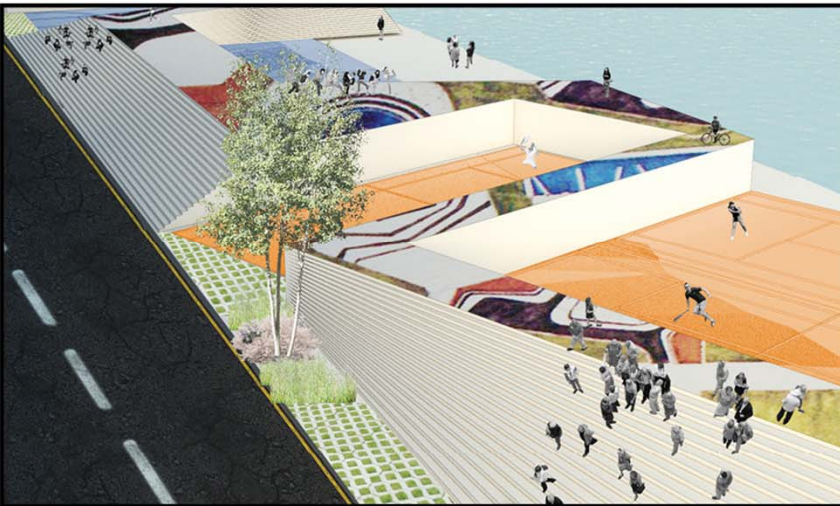
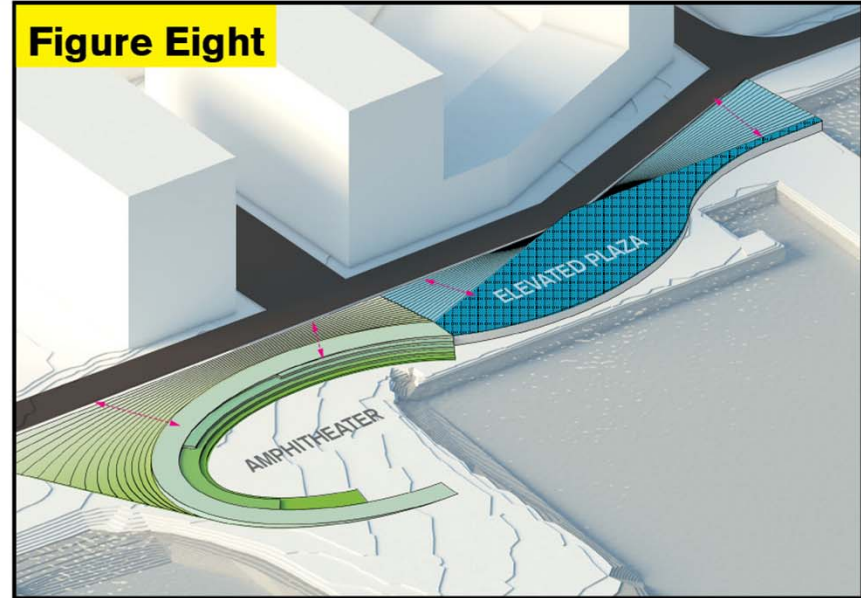
Alt. 1 - Maxwell Place Park Overview

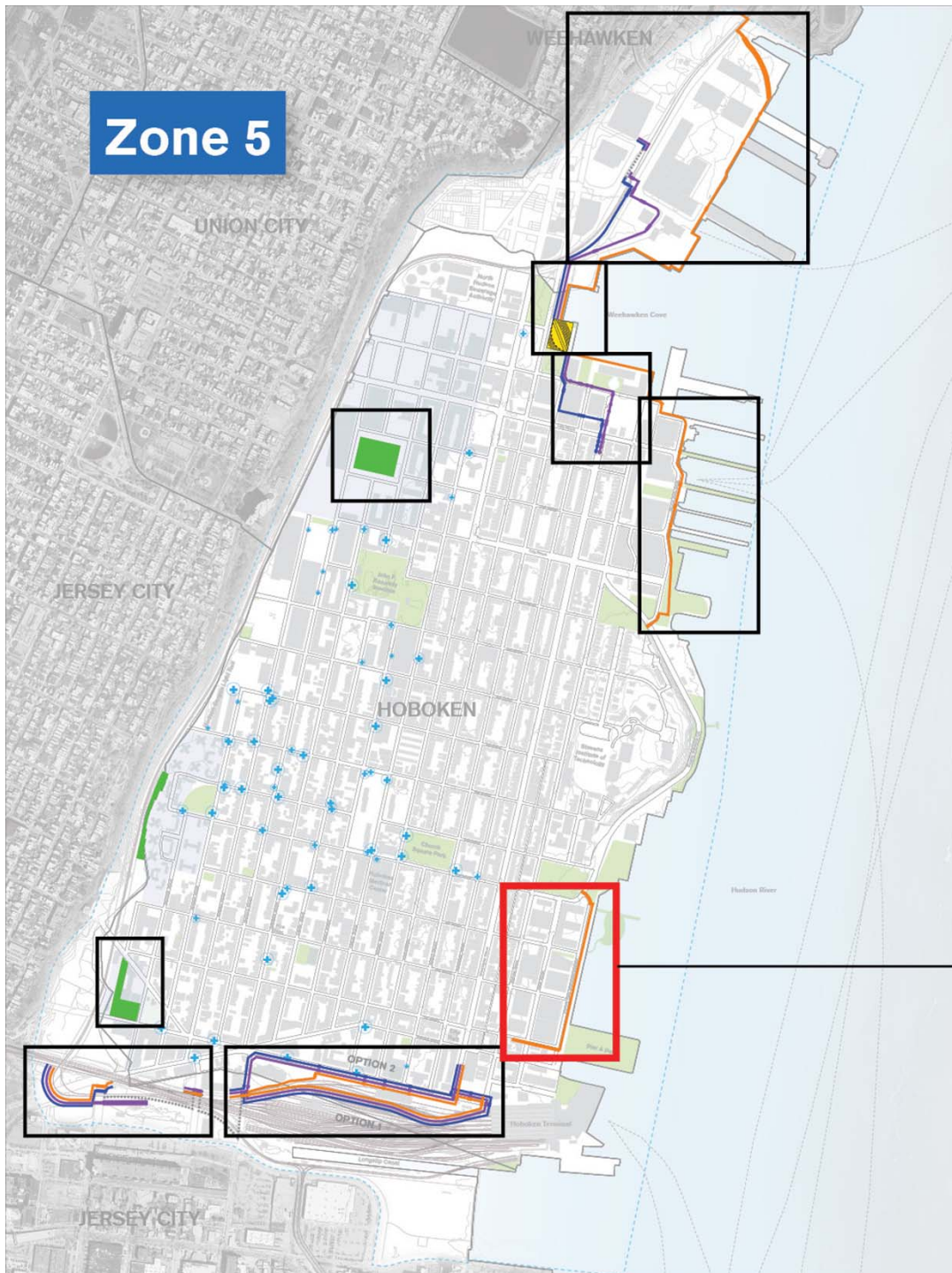
ALT-1

Programmatic Spine



Figure Eight





Zone 5 — South Waterfront

Alternative 1 Only

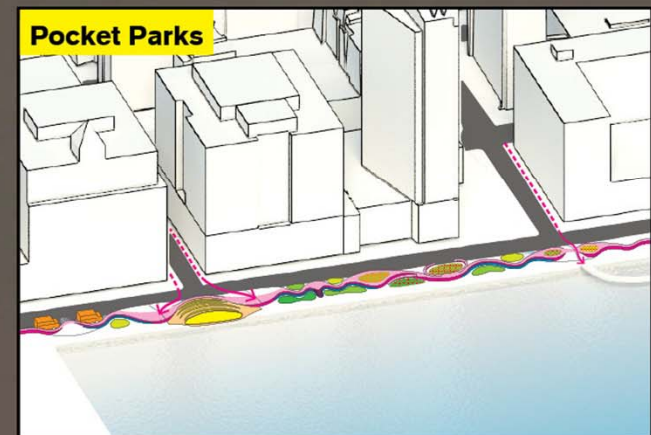
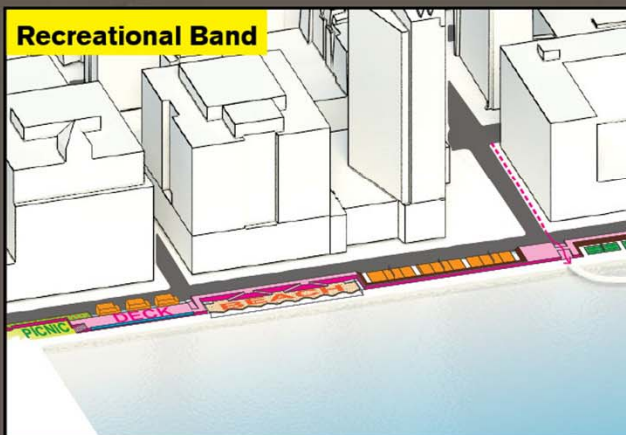
Zone 5 - Alt. 1

ALT-1



South Waterfront Promenade

ALT-1

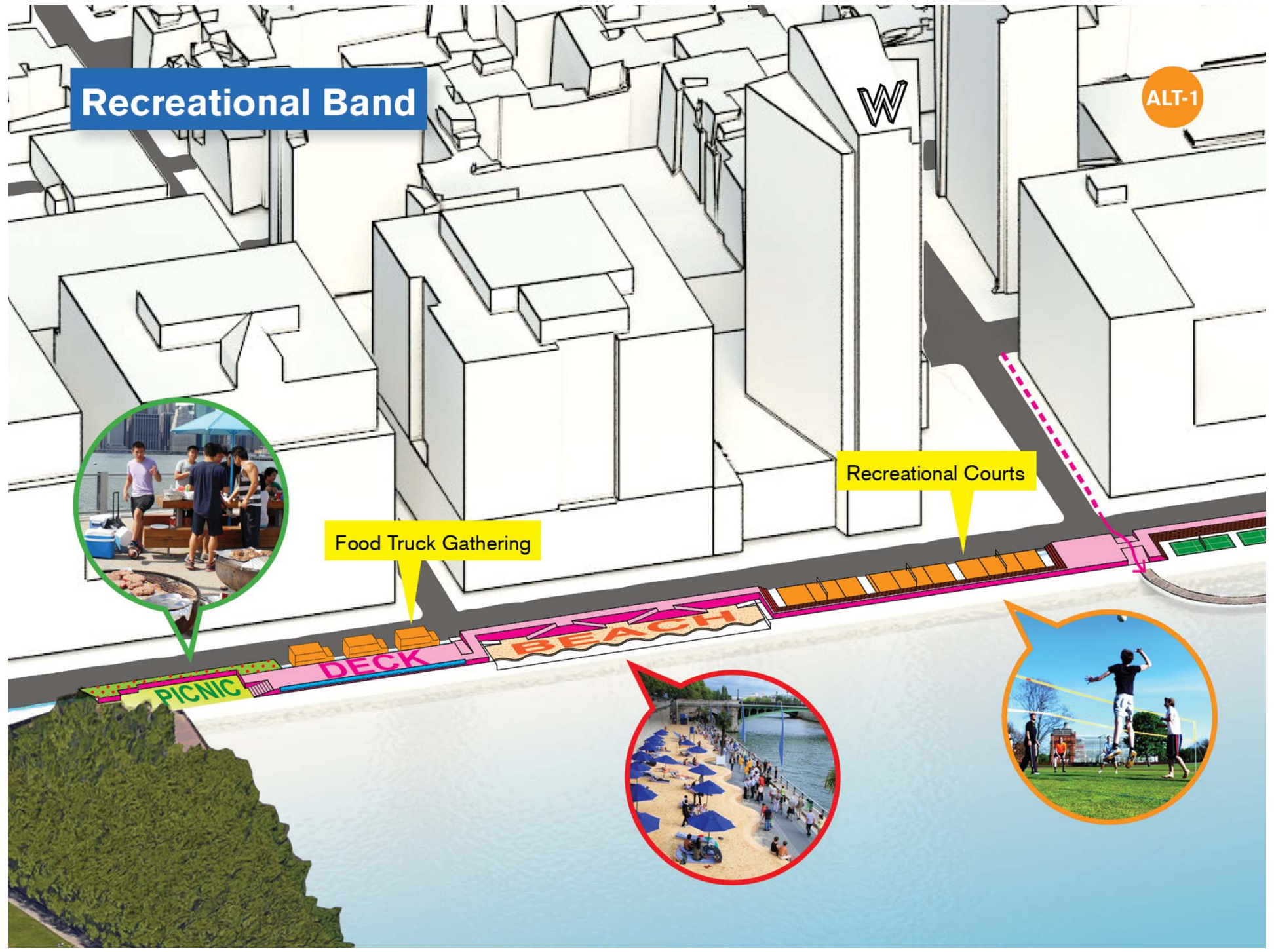


Recreational Band

ALT-1

Recreational Courts

Food Truck Gathering



Pocket Parks

ALT-1

Pockets for informal gathering

Amphitheater seating

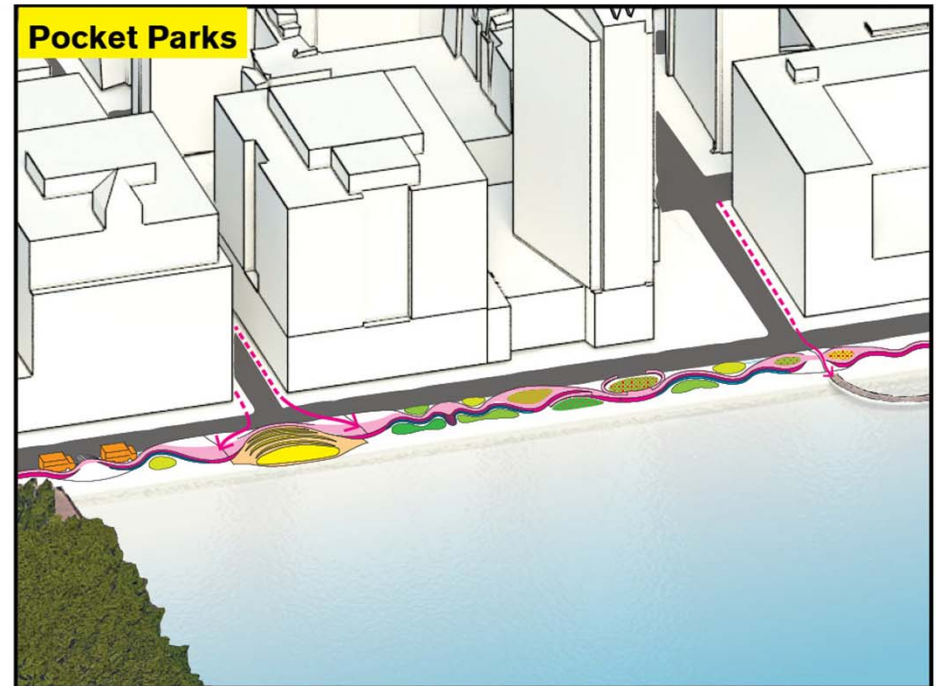
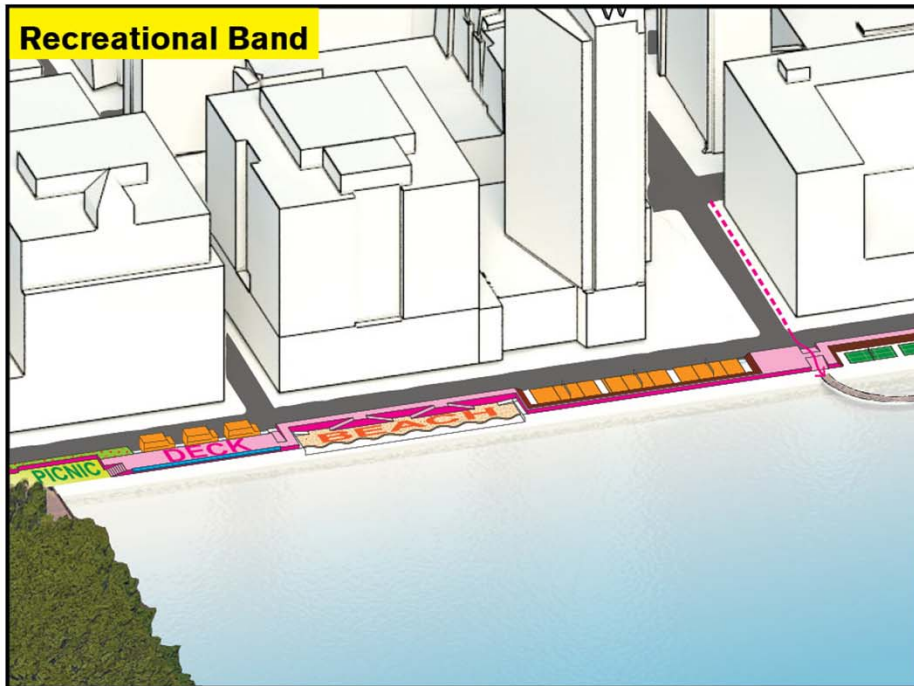


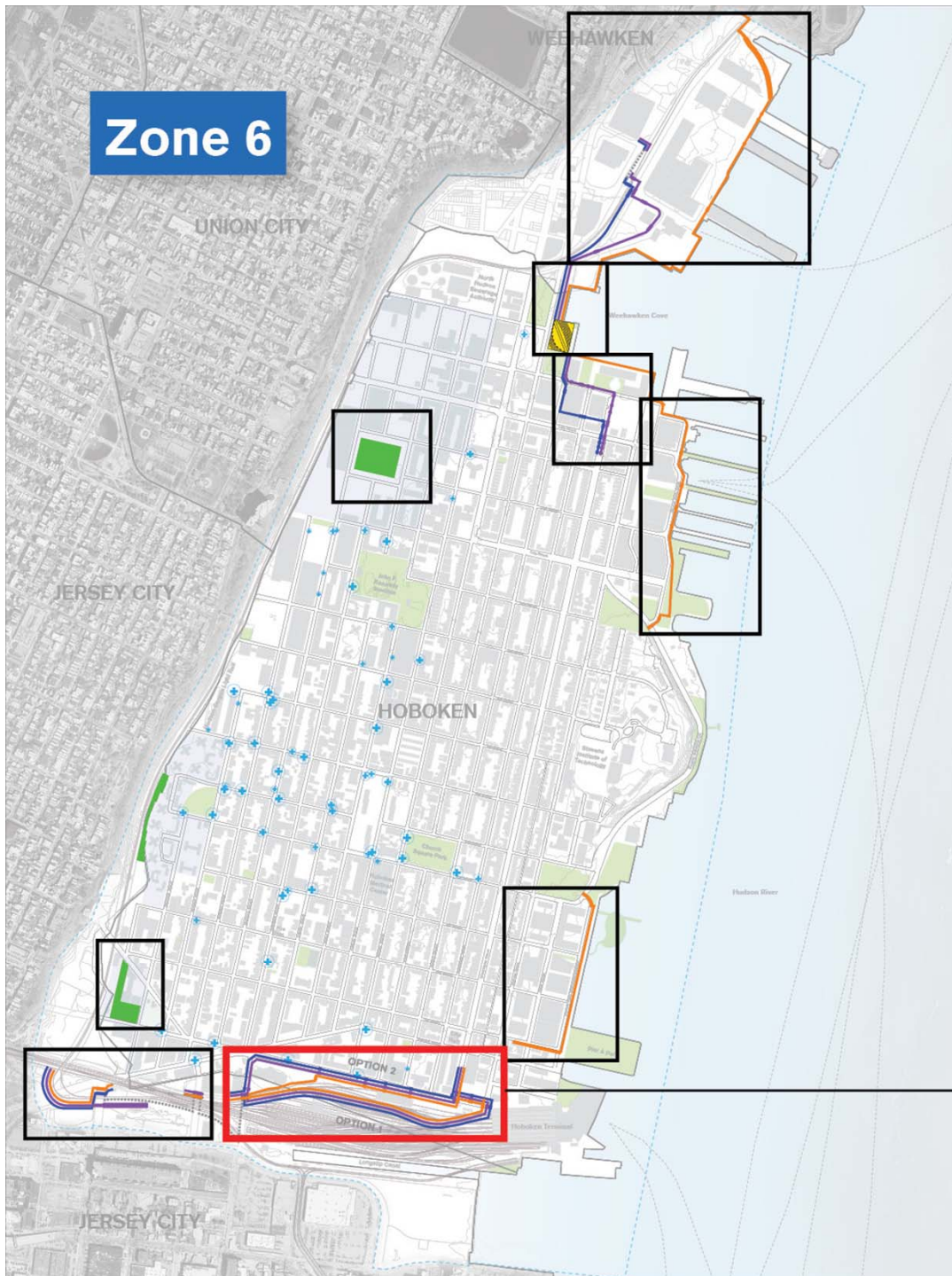
Pocket Parks



Alt. 1 - South Waterfront Overview

ALT-1





Zone 6 — Observer Highway
Alternative 1, 2, 3 @ Street or along rails

Zone 6

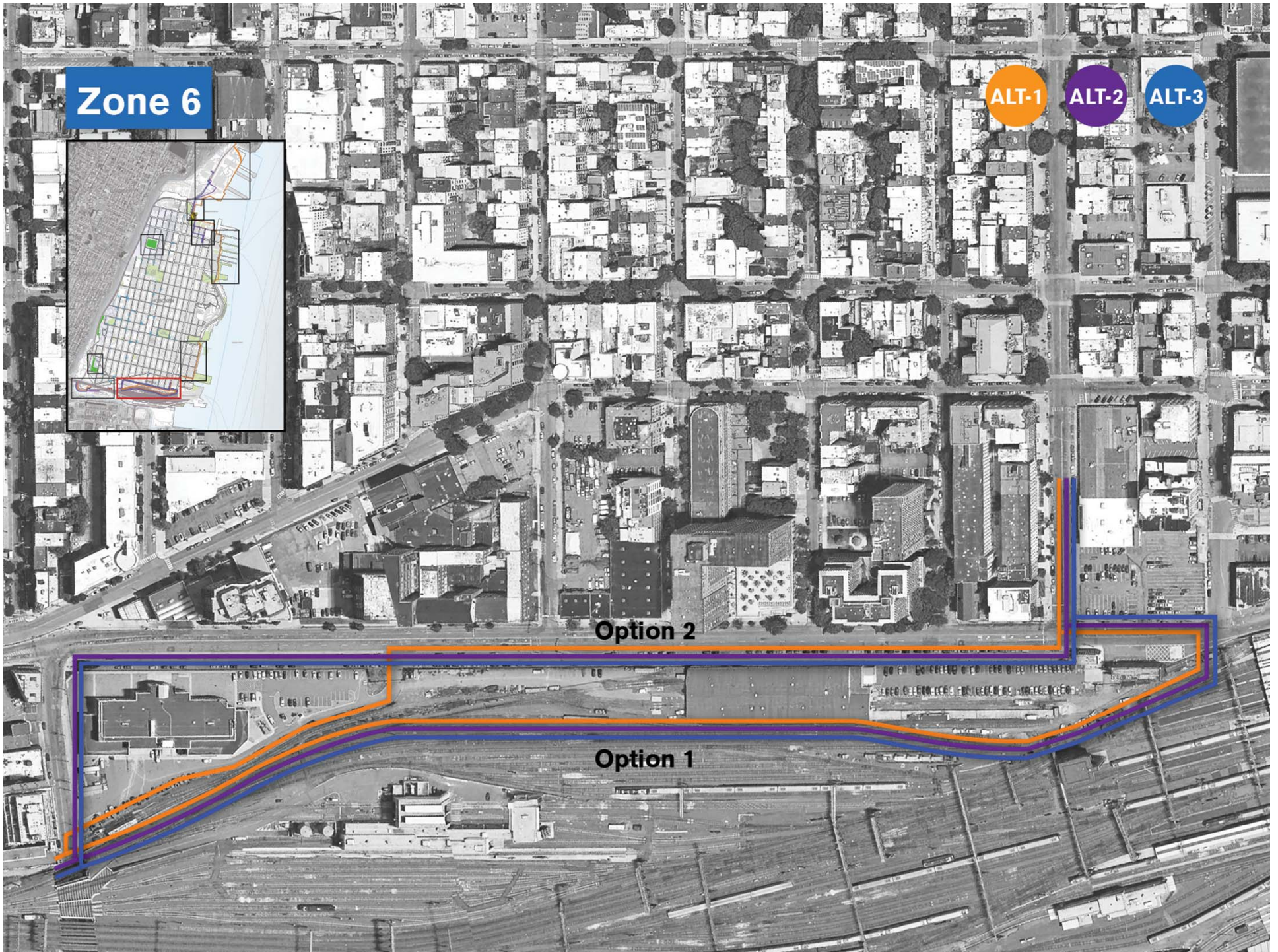
ALT-1

ALT-2

ALT-3

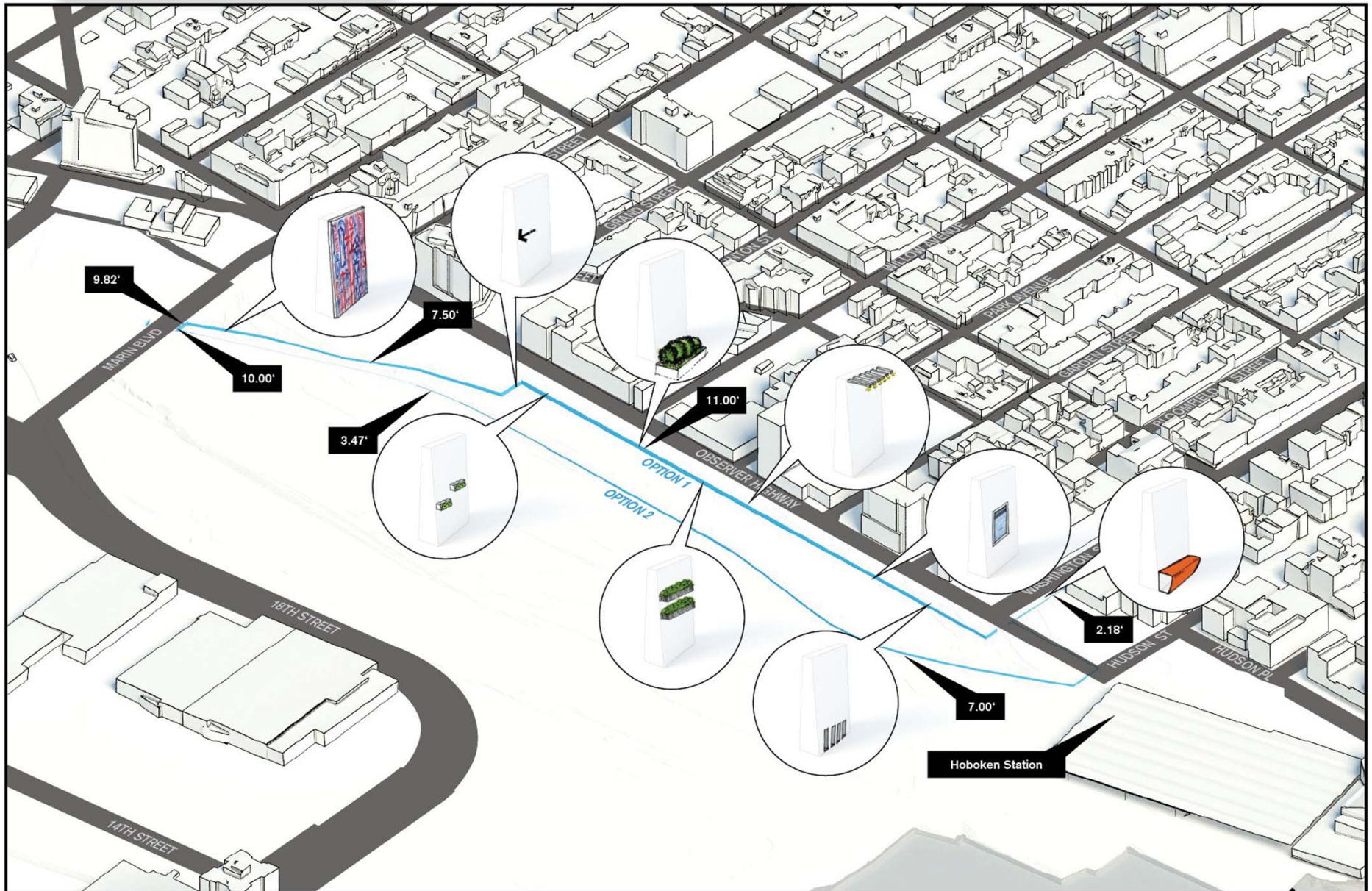
Option 2

Option 1



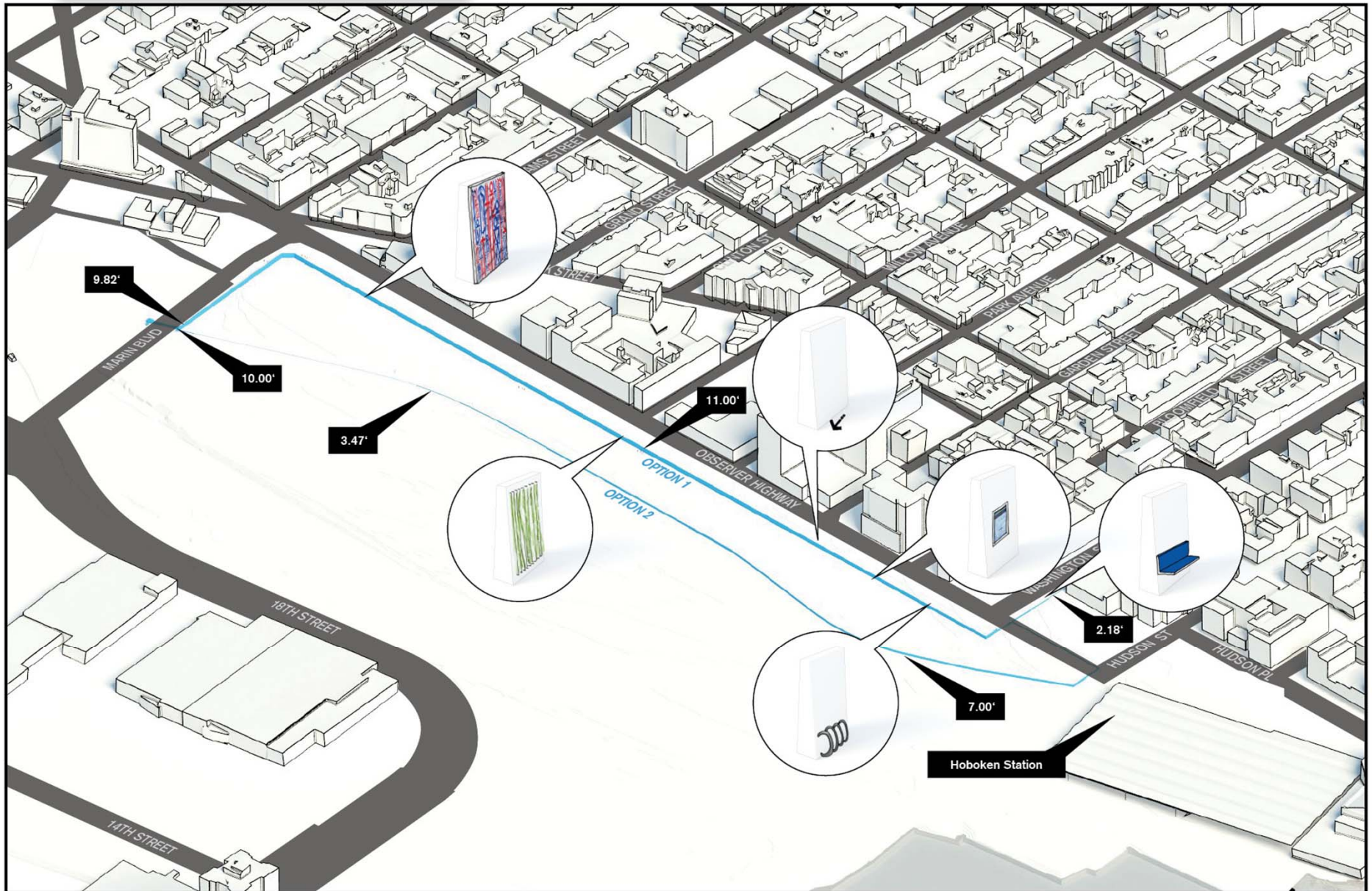
Alt. 1 Overview

ALT-1



Alt. 2 & 3 Overview

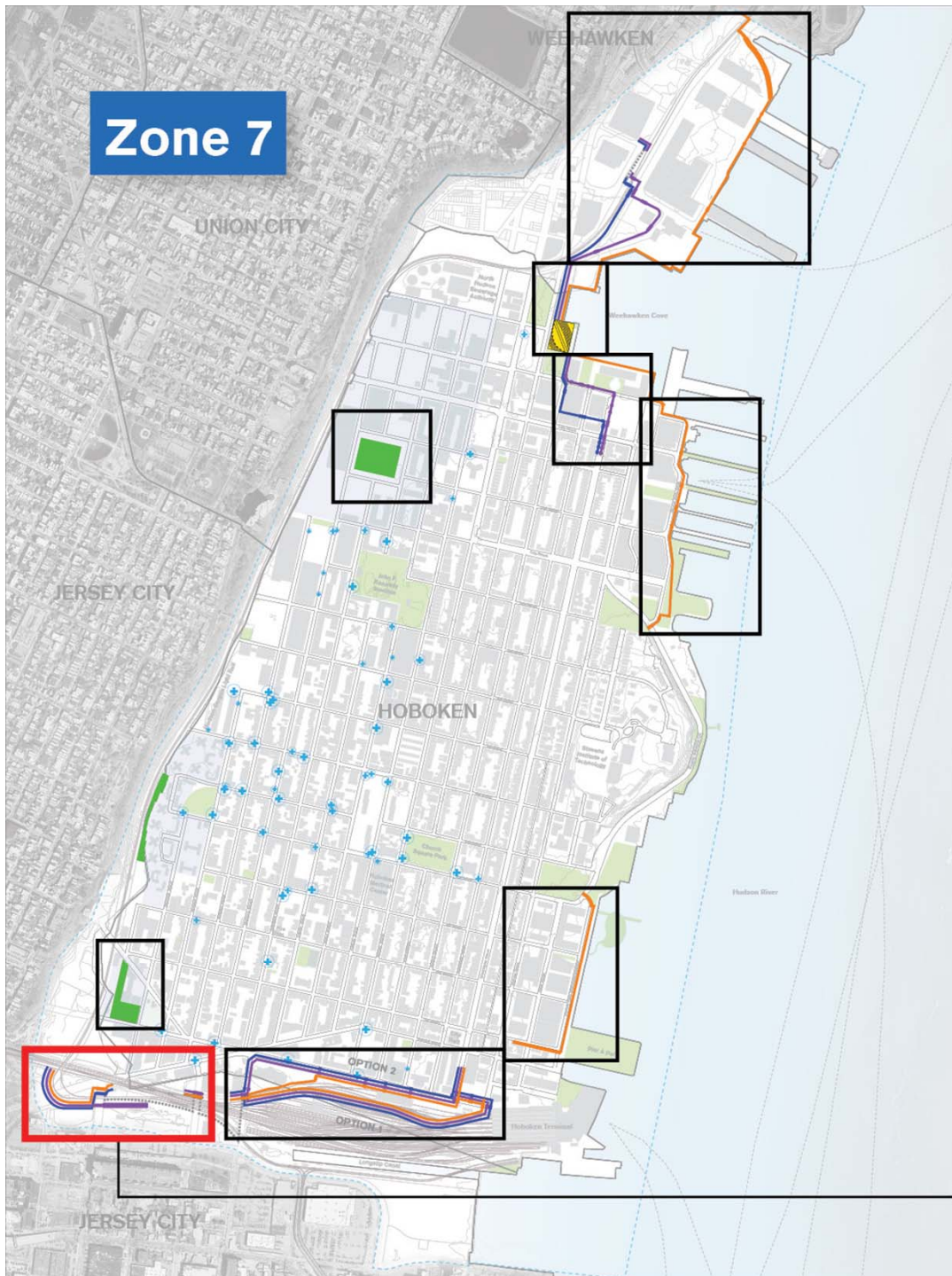
ALT-2 ALT-3





Wall Planting





Zone 7 — Jersey Avenue Underpass
Alternative 1, 2, 3 @ Underpass

Zone 7

ALT-1

ALT-2

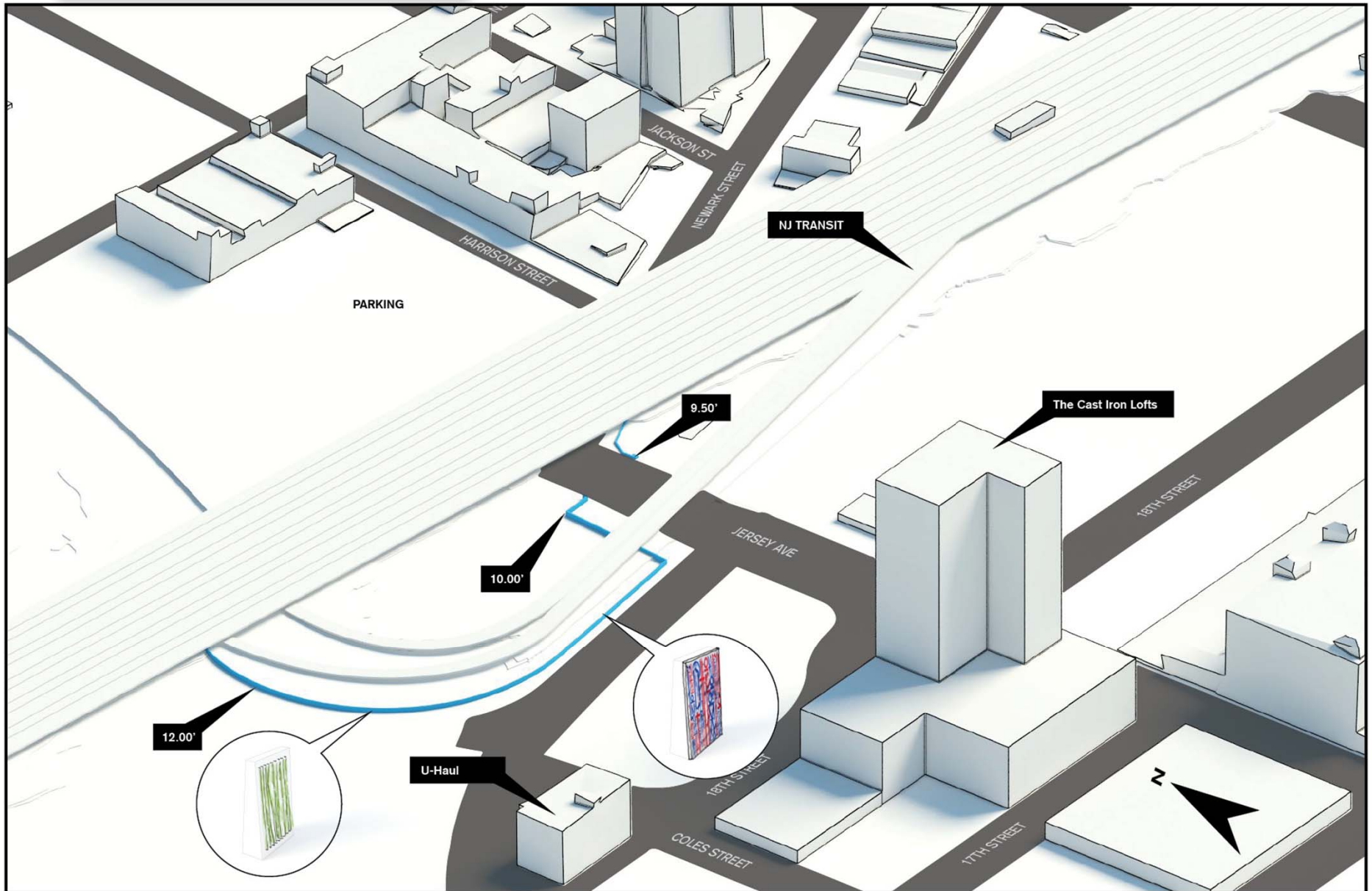
ALT-3



Alt. 1 & 3 Overview

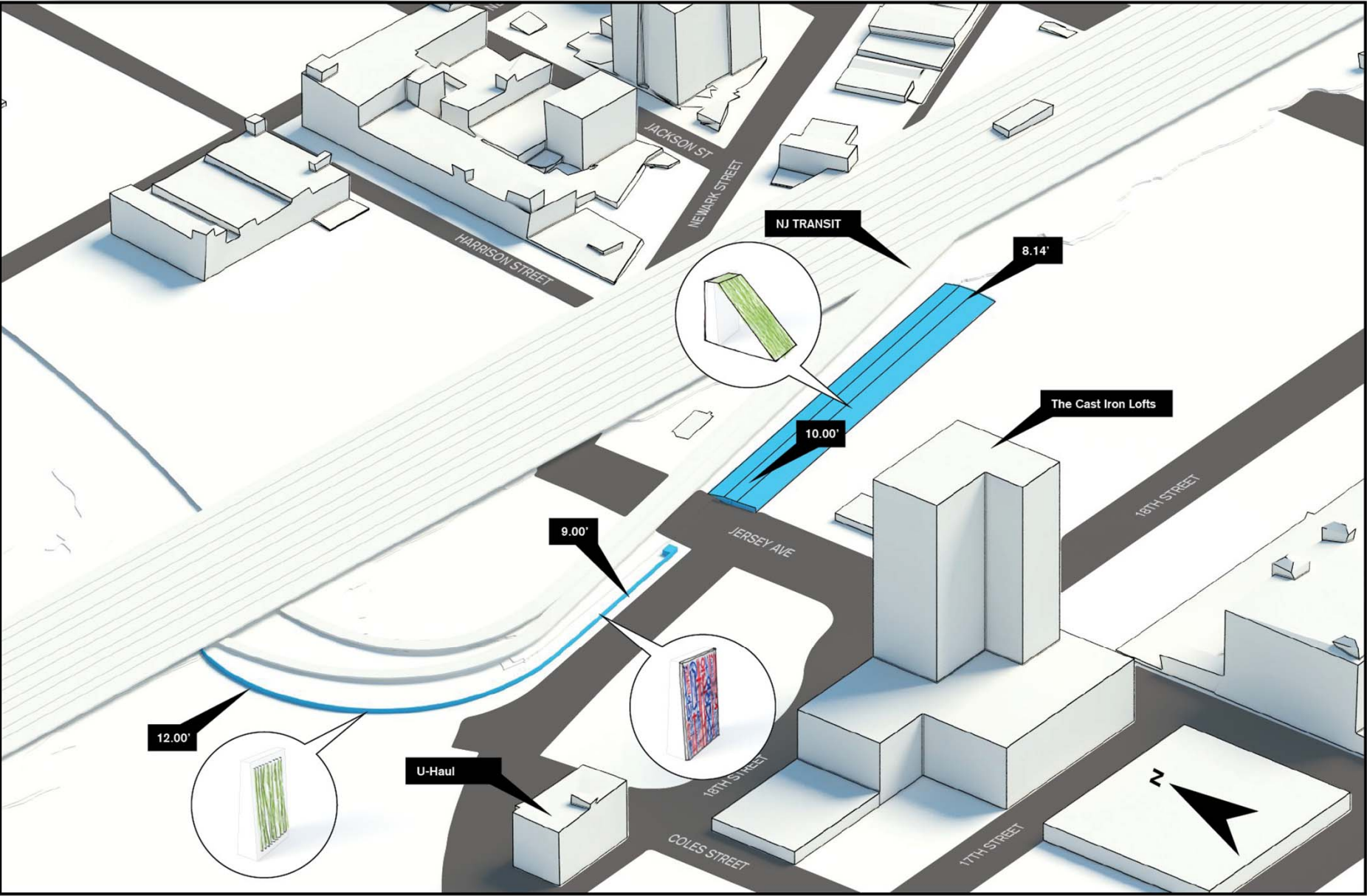
ALT-1

ALT-3



Alt. 2 Overview

ALT-2



DSD STRATEGY

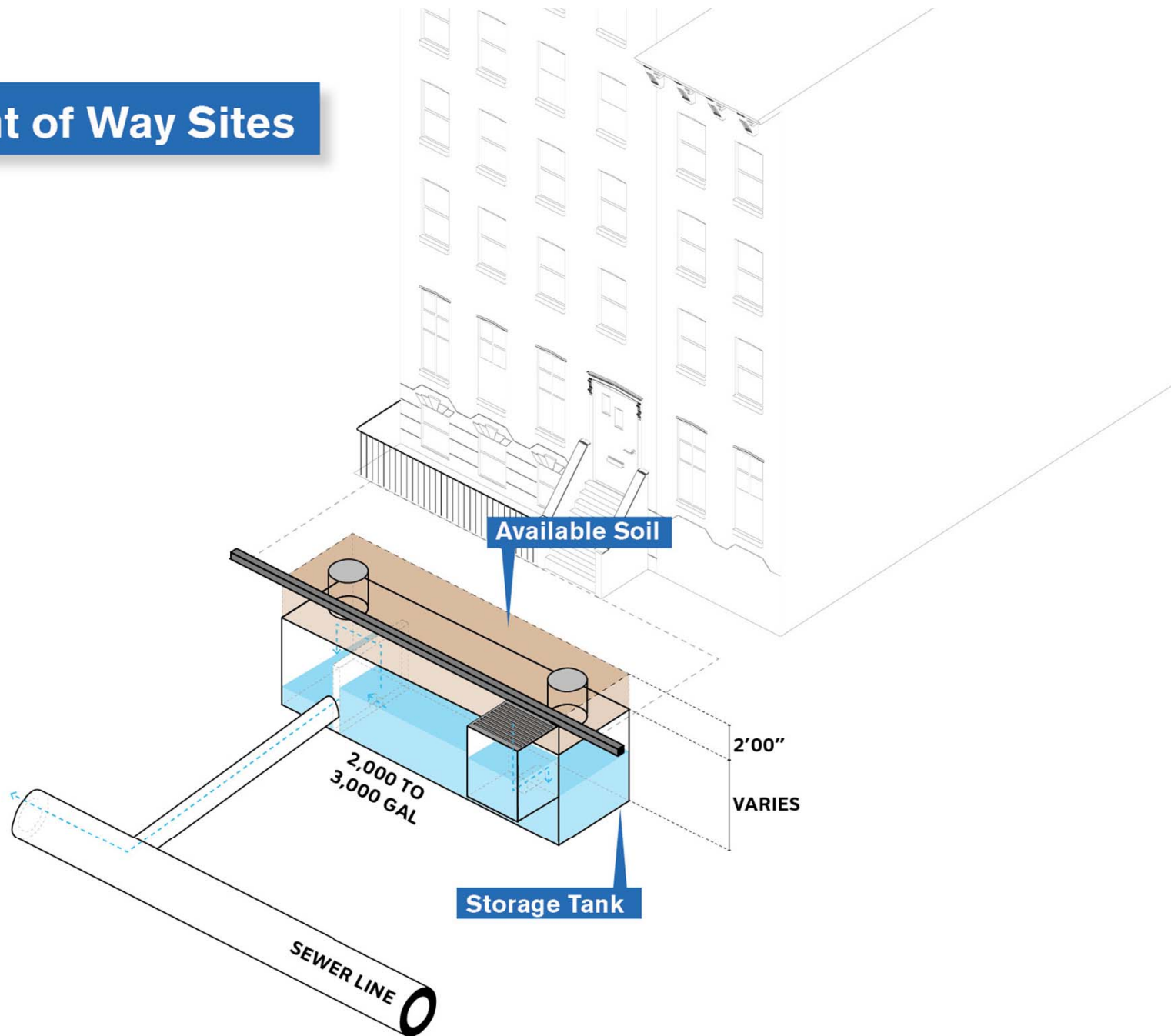


BASF Site

Public Right of Way Sites

Block 10 Site

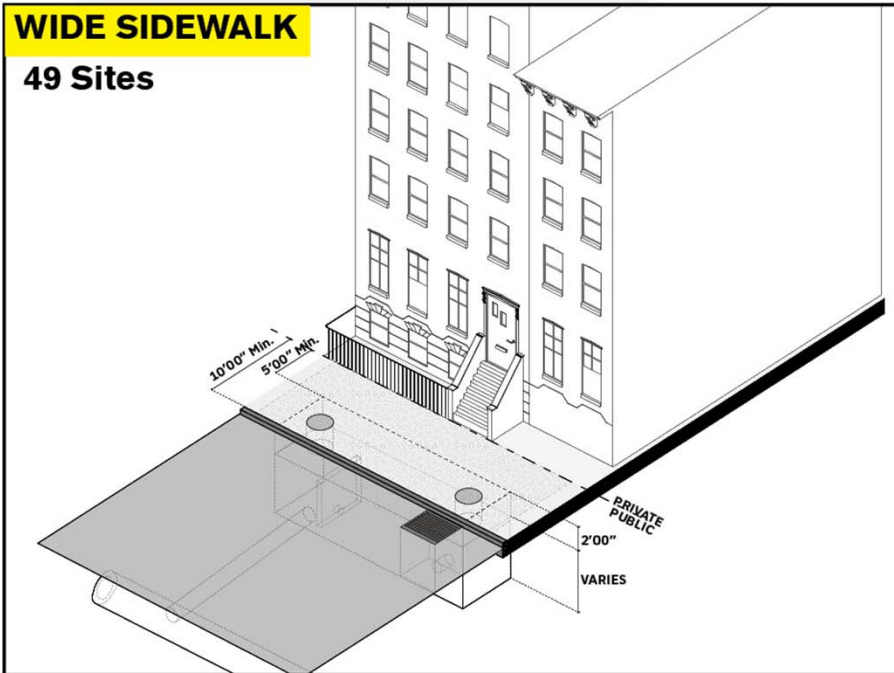
Right of Way Sites



Right of Way Sites

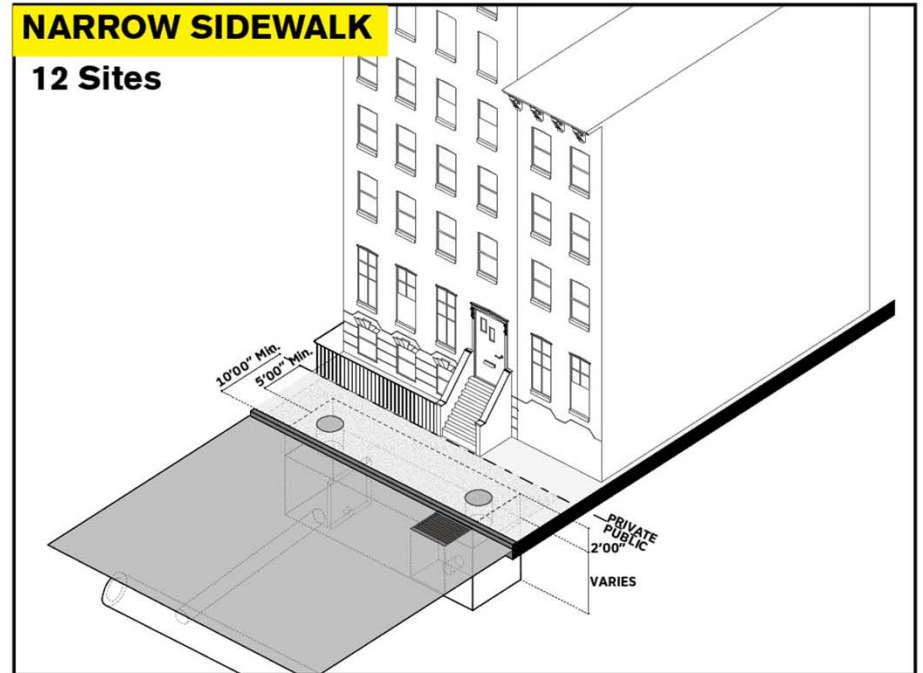
WIDE SIDEWALK

49 Sites

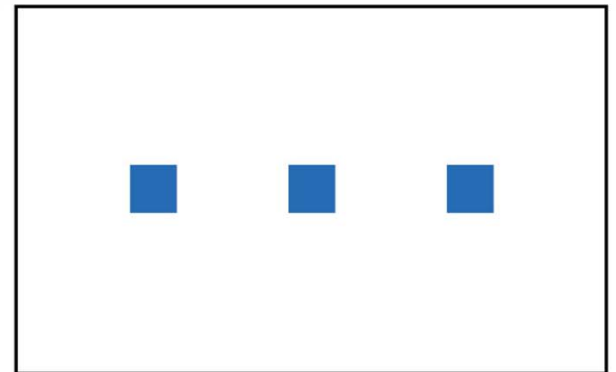
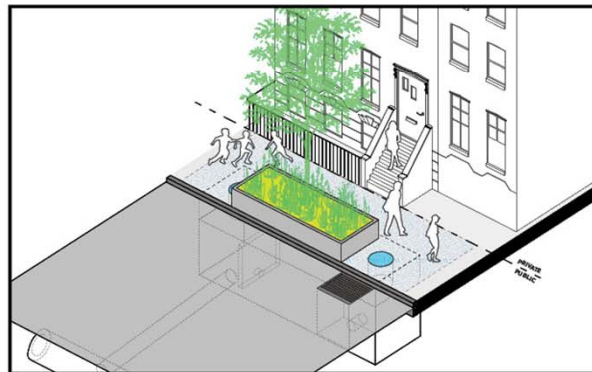
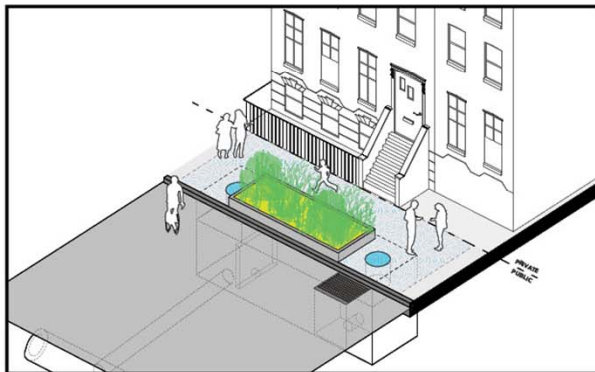
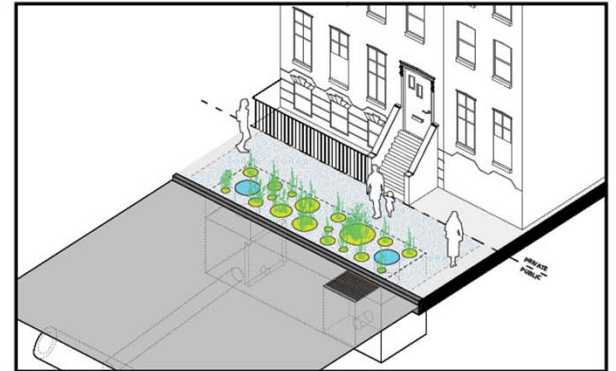
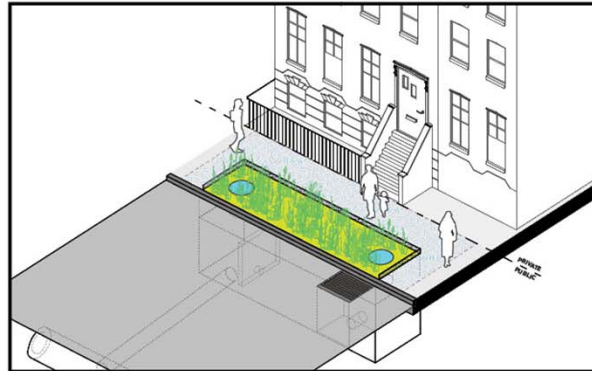
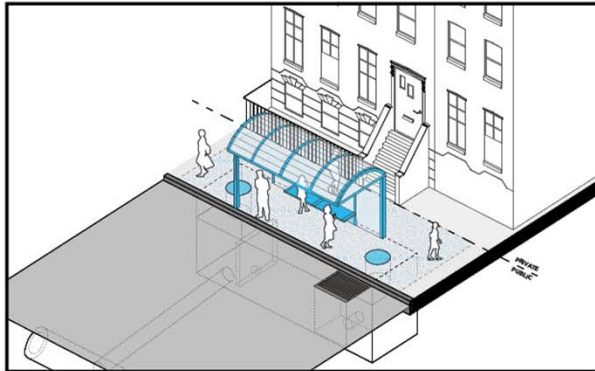
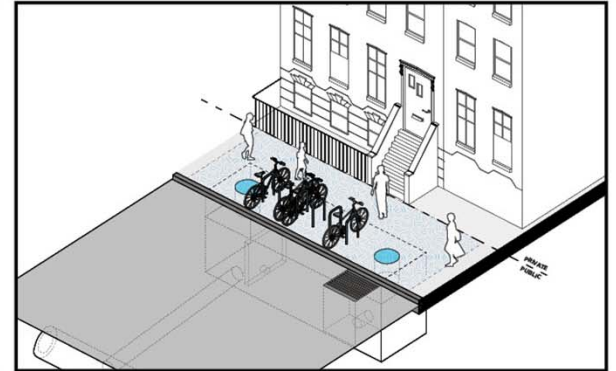
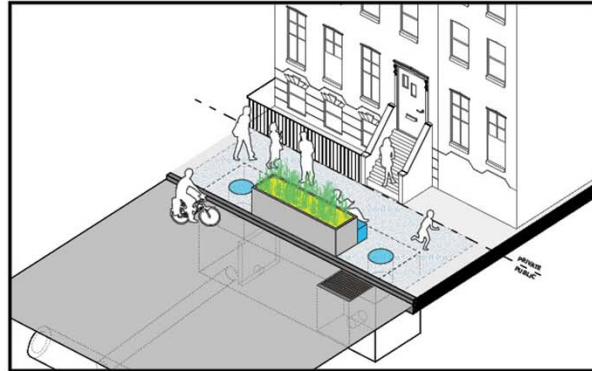
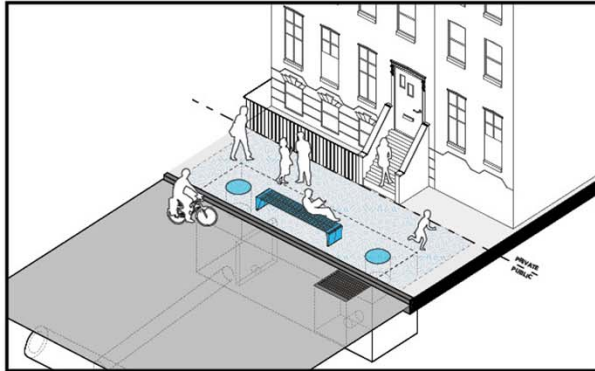


NARROW SIDEWALK

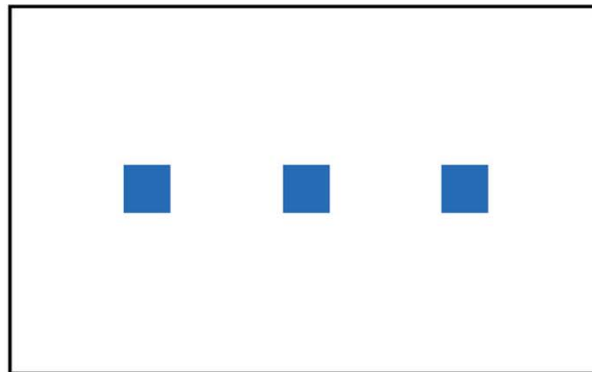
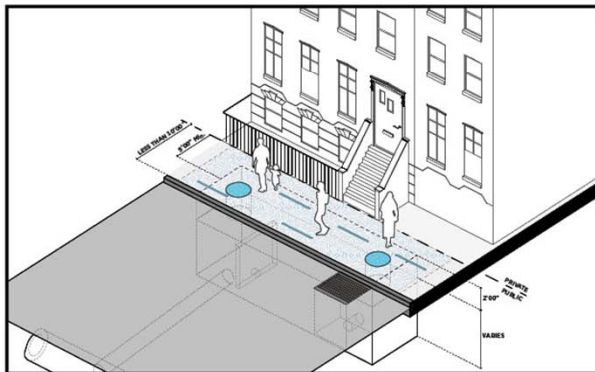
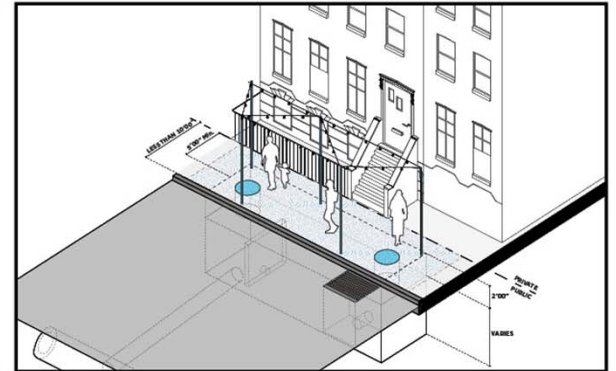
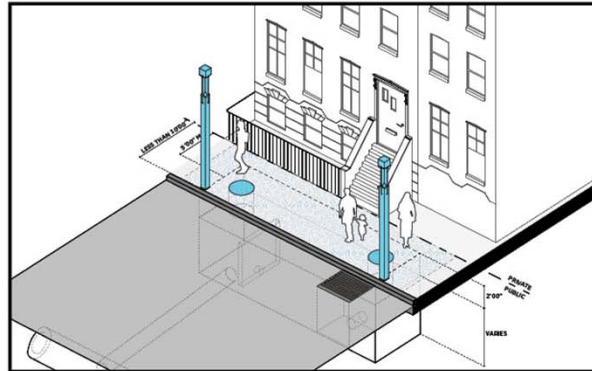
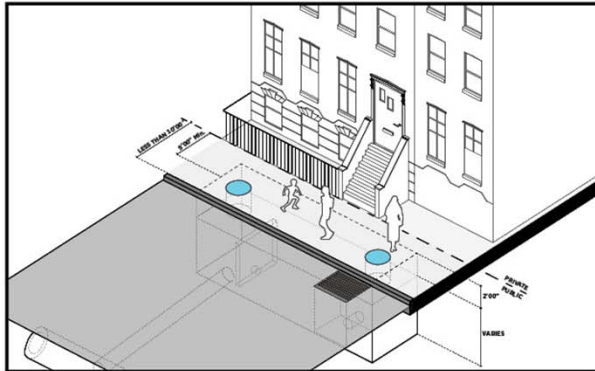
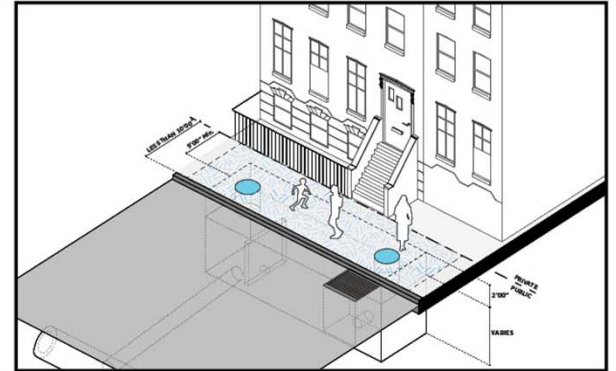
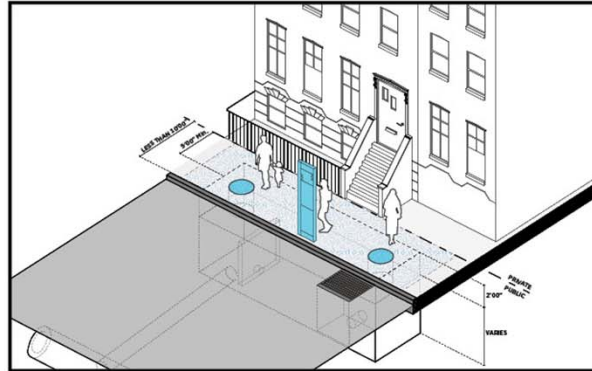
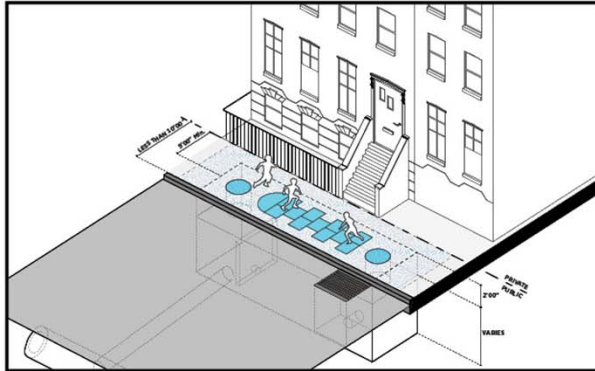
12 Sites



Wide Sidewalk



Narrow Sidewalk



BASF SITE



BASF SITE

DESTINATION



RECREATION



ECO

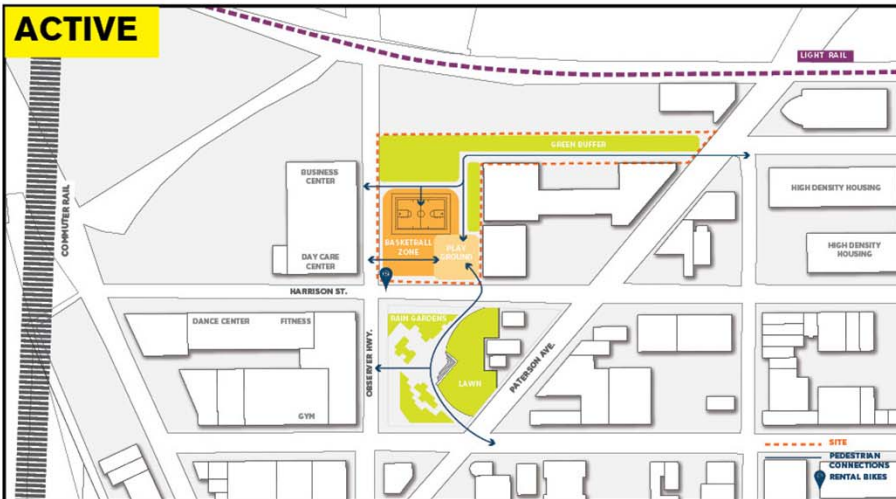


Block 10

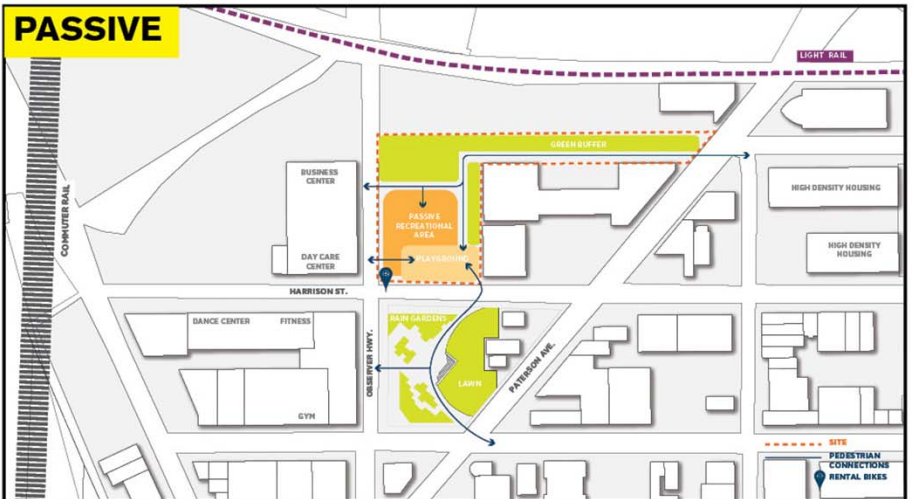


Block 10

ACTIVE



PASSIVE





Breakout

- a. What features/characteristics are important in this zone?**
- b. What features do you like about the design concept for this zone?**
- c. Do you have any concerns with the proposed design ideas?**
- d. What area within the zone is important to you?**
- e. What elements are missing from the design concept for this zone?**



Breakout

Zones 1-3 (Weehawken, North Hoboken)

Zones 4-5 (North and South Waterfront)

Zones 6-7 (South Hoboken)

Delay, Store, Discharge

Next Steps

- 4/12/16 Urban Design Workshop
Adams Gardens (HHA Senior Housing)
220 Adams Street, Hoboken
6:30 PM**
- 4/14/16 Urban Design Workshop
Elks Lodge
1005 Washington Street, Hoboken
6:30 PM**
- 4/28/16 Urban Design Workshop
St. Lawrence Church Community Room
22 Hackensack Avenue, Weehawken
6:30 PM**

Planned Short Term Schedule

April	Focus on Urban Amenities
May	CAG (Community) continued Urban Amenities/review of computer modeling
June	Public Meeting review of Alternatives Analysis
June/July	Community Meeting to unveil the Preferred Alternative

END