

BK Bridge - Montgomery Coastal Resilience

CB3 Parks & Waterfront Committee
April 15, 2021

AGENDA

1. PROJECT INTRODUCTION

2. FLOOD PROTECTION ALIGNMENT & RAISED PLATFORM

3. PROJECT DESIGN

LOWER MANHATTAN COASTAL RESILIENCY



New York City is implementing \$500M in on-land capital projects and advancing a Master Plan for FiDi-Seaport

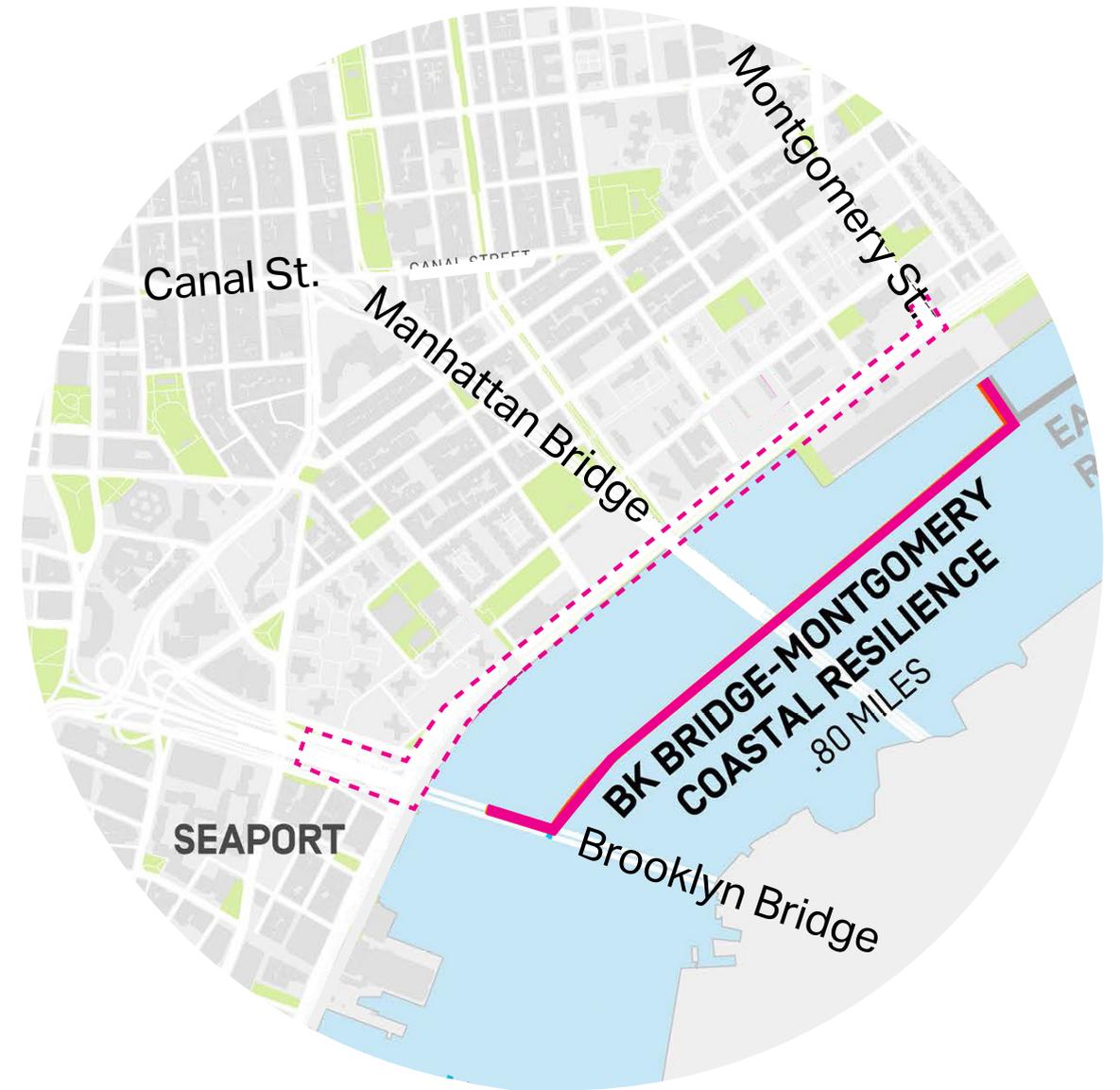
Capital projects to protect 70% of the shoreline of Lower Manhattan, and Master Plan for remaining 30%

- INTERIM FLOOD PROTECTION MEASURES (IFPM)
- PROJECTS ADJACENT TO LMCR STRATEGY

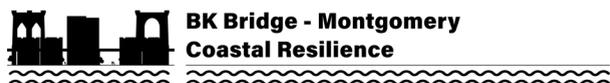
PROJECT DESCRIPTION

The **BK Bridge-Montgomery Coastal Resilience (BMCR)** project is a section of the LMCR project stretching from the Brooklyn Bridge to Montgomery Street.

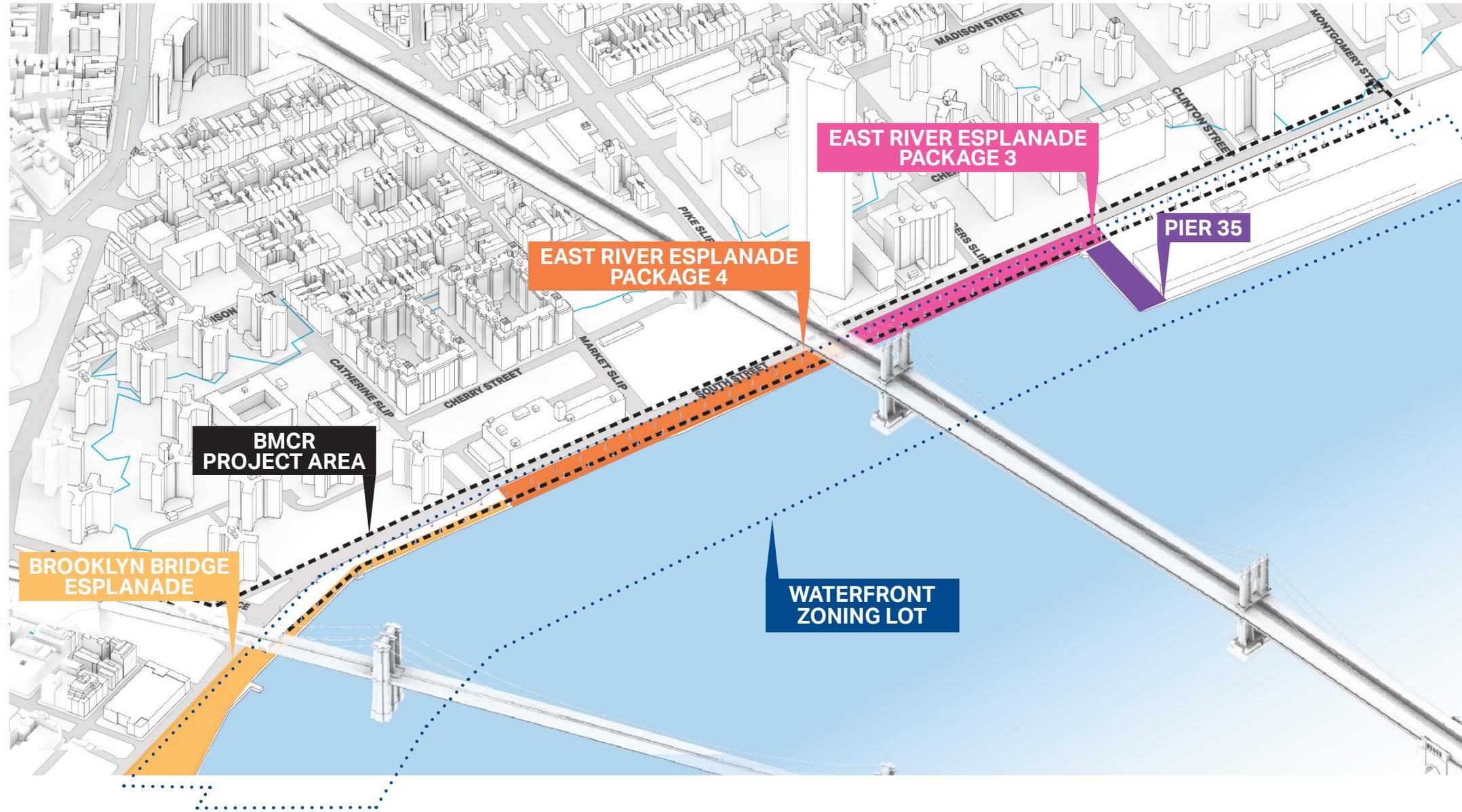
The infrastructure, when deployed, will protect the **Two Bridges neighborhood** from flooding while maintaining the community's views and access to the waterfront.



Project Team:



PROJECT COORDINATION



TIMELINES

- PIER 35**
2019 Completed
- EAST RIVER ESPLANADE - PACKAGE 3**
2014 Completed
- EAST RIVER ESPLANADE - PACKAGE 4**
2020 Completed
- BROOKLYN BRIDGE ESPLANADE (BBE)**
October 2019 - 100% Construction Documents
Currently in Construction Procurement
- BROOKLYN BRIDGE-MONTGOMERY COASTAL RESILIENCE**
November 2019 - Schematic Design Complete
May 2021 - 100% Construction Documents
June 2021 - Bidding
January 2022 - Construction Starts
July 2022 - Federal Spending Deadline

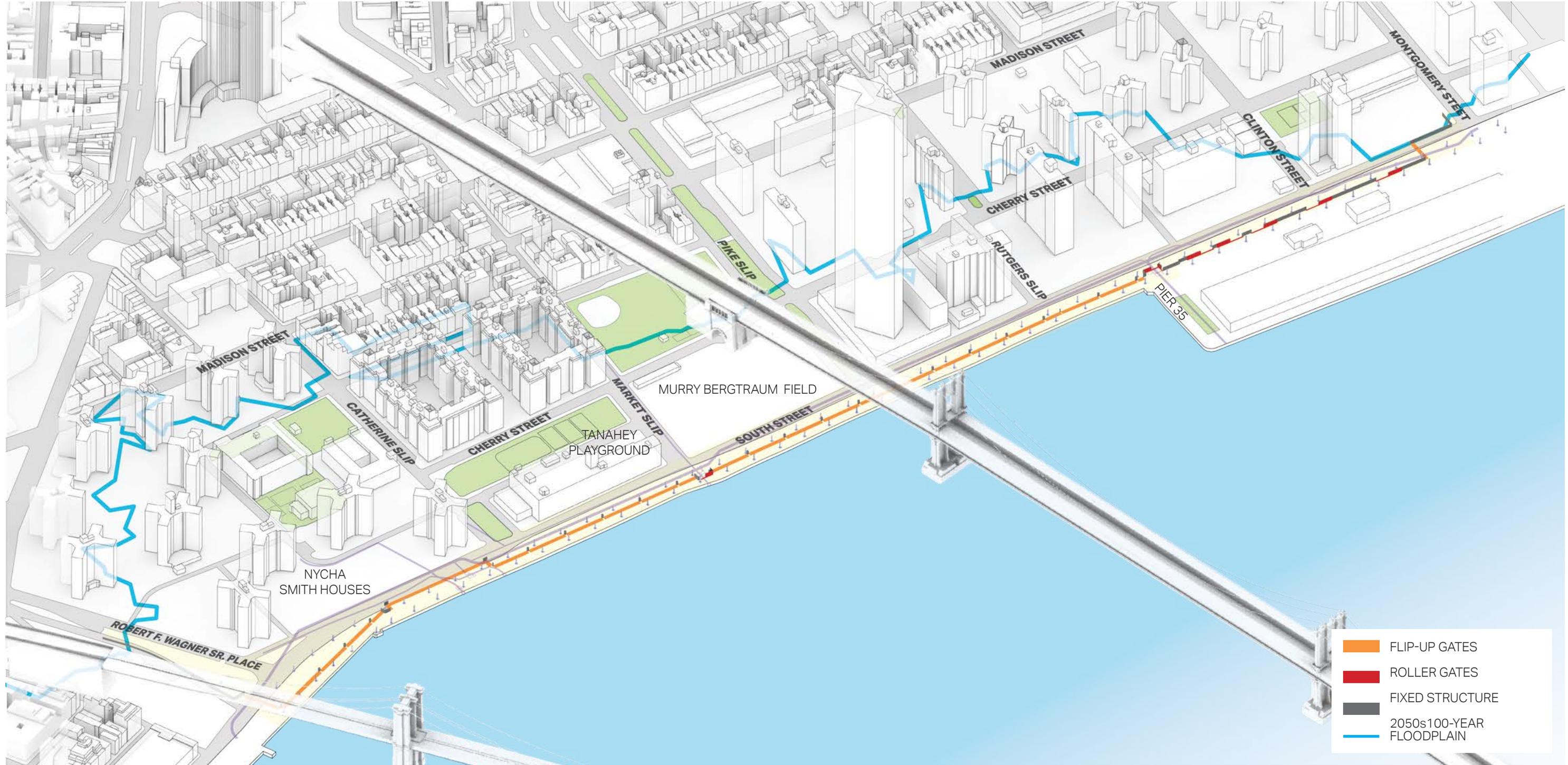
WATERFRONT ZONING LOT
Extends beyond BMCR project boundary; includes both CB1 and CB3

1. PROJECT INTRODUCTION

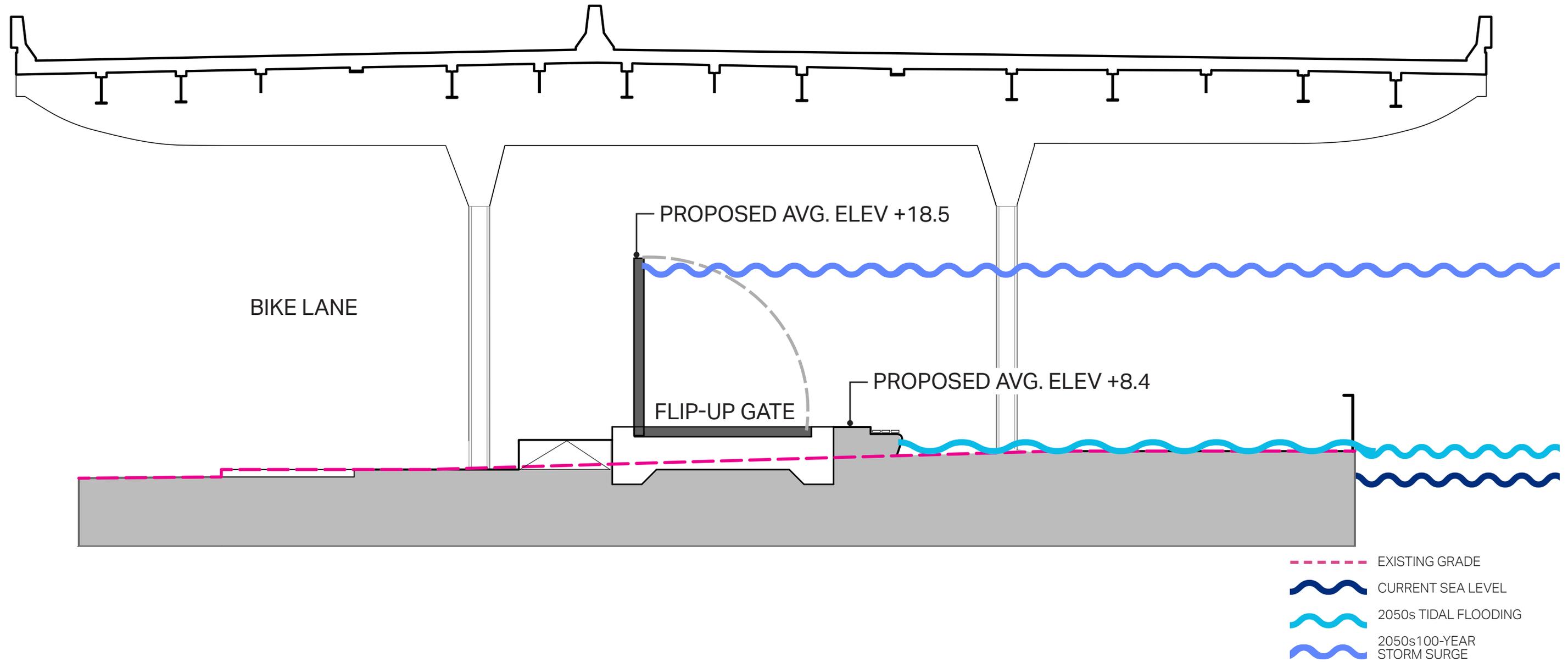
2. FLOOD PROTECTION ALIGNMENT & RAISED PLATFORM

3. PROJECT DESIGN

FLOOD PROTECTION ALIGNMENT



PROPOSED CONCEPTUAL TYPICAL SECTION



Raised Platform with Deployed Flood Infrastructure

1. PROJECT INTRODUCTION

2. FLOOD PROTECTION ALIGNMENT & RAISED PLATFORM

3. PROJECT DESIGN

- COMMUNITY FEEDBACK
- ESPLANADE PROGRAM
- ENGRAVED SIGNAGE
- LIGHTING
- FLOOD INFRASTRUCTURE
- INTERCEPTOR GATE BUILDING

COMMUNITY ENGAGEMENT AND FEEDBACK

For more than 4 years, the City has been meeting with Two Bridges community members about the project.

10

Committee + Task Force Meetings

6

Public Meetings

4

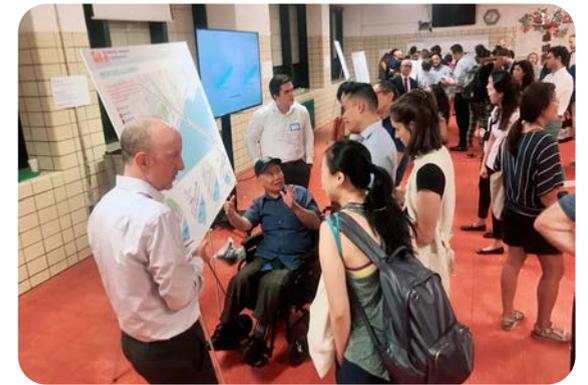
Presentations at Local Housing Developments

3

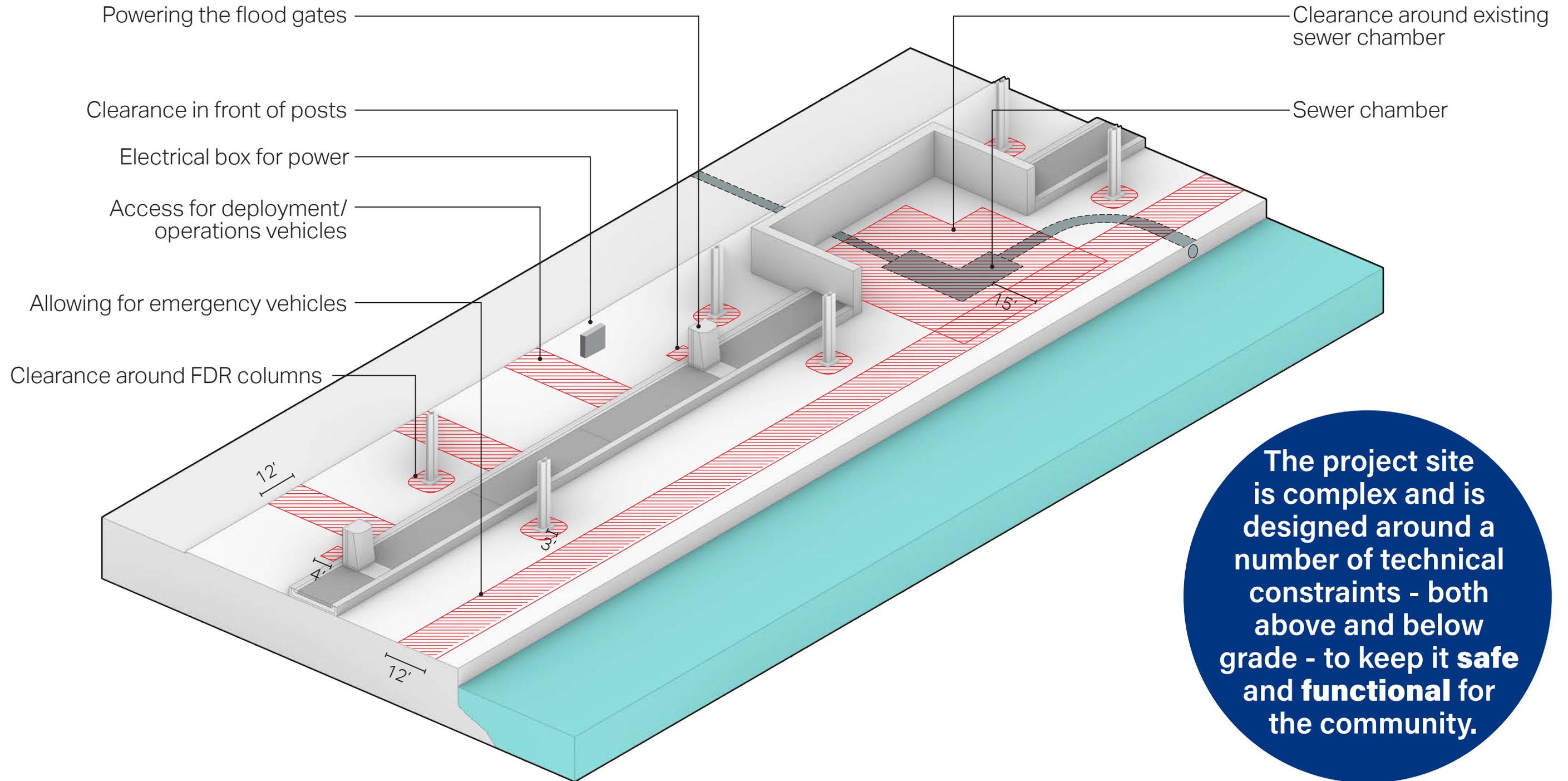
Community Tabling Sessions

3

Updates to Community Leaders



BALANCING FEEDBACK - TYPICAL SITE CONSTRAINTS



The project site is complex and is designed around a number of technical constraints - both above and below grade - to keep it **safe** and **functional** for the community.

BALANCING FEEDBACK

In addition to providing flood protection that preserves waterfront views and access, the new design incorporates your feedback on programming where feasible.



PLAY AND FITNESS AREAS WITH WATER FOUNTAINS ARE INCLUDED AT BOTH THE NORTH AND SOUTH ENDS OF THE PROJECT



CONTINUOUS NORTH-SOUTH BIKEWAY CONNECTION MAINTAINED



OPEN, FLEXIBLE SPACES INCLUDED



NEW UNIVERSAL AND SEATED FITNESS EQUIPMENT INCLUDED IN TWO FITNESS AREAS. DESIGN INCLUDES 17 PIECES OF EQUIPMENT, 9 SEATED



PLANTERS INSTALLED AS PART OF THE BBE AND ERE PROJECTS WILL REMAIN



TWO 2-5 YEAR-OLD PLAYGROUNDS AND ONE 5-12 PLAYGROUND ADDED AT THE WATERFRONT



PROPOSED STEEL KETTLE DRUMS IN NORTH 2-5 YEAR OLD PLAY AREA REPLACED WITH QUIETER EQUIPMENT



NAMES OF SLIPS ENGRAVED ON RAMPS AND HPU COLUMNS FOR WAYFINDING

BALANCING FEEDBACK



MORE GLIDER SWINGS INCLUDED



PICNIC TABLES REMOVED FROM FITNESS AREA



**PERFORMANCE SPACE AND PICNIC AREA
ADDED NEAR WAGNER PLACE**



**SKATE DETERRENTS INTEGRATED INTO THE
DESIGN**



A VARIETY OF SEATING TYPES ARE PROVIDED



**CLIMBING STRUCTURE ADDED NEAR RUTGERS
SLIP**



**GAME TABLE LAYOUTS UPDATED TO
ACCOMMODATE MORE ACCESSIBLE SEATING**



UNDERUTILIZED BOCCE COURTS REPLACED



**LIGHTING ADDED AT ENTRY AREAS AND EXISTING
LIGHTING UPDATED TO LED FIXTURES FOR
SAFETY**

BALANCING FEEDBACK

Due to site and technical constraints, not all feedback we heard could be accommodated in the design.

- EXISTING BASKETBALL WILL BE IMPACTED BY THE FLOOD PROTECTION ALIGNMENT AND RELOCATED WHERE SPACE PERMITS NEAR WAGNER PLACE
- DUE TO THE OVERHEAD FDR STRUCTURE, ADDITIONAL PLANTERS WILL NOT BE INCLUDED
 - BBE AND ERE PLANTERS WILL REMAIN
- EXISTING TURF FIELD WILL BE IMPACTED BY THE FLOOD PROTECTION ALIGNMENT AND REMOVED
 - A NEW TURF FIELD CANNOT BE CONSTRUCTED IN THE FLOOD ZONE. HOWEVER, A TURF FIELD WAS RECENTLY INSTALLED IN TANAHEY PLAYGROUND
- DUE TO APPENDIX G REQUIREMENTS AND EXISTING SITE CONSTRAINTS, BATHROOMS ARE NOT FEASIBLE AS PART OF THIS PROJECT
- BECAUSE OF SPACE AND MAINTENANCE CONSIDERATIONS, A DOG RUN IS NOT PART OF THE DESIGN
 - COMMUNITY PROVIDED MIXED FEEDBACK ON DOG RUNS; PARKS REQUIRES A COMMUNITY GROUP TO MAINTAIN DOG RUNS
- PUBLIC ARTWORK, SECURITY CAMERAS, AND BOLLARDS ARE NOT INCLUDED WITHIN THE BMCR PROJECT SCOPE
 - DESIGN DOES NOT PRECLUDE FUTURE INSTALLATION OF THESE ELEMENTS

DESIGN FEATURES

The **overall design and program elements have stayed the same** since we presented to the Community in September and December 2020.

We have made some **minor updates in response to community feedback and technical requirements.**

These updates will be highlighted throughout the presentation.

spaces to socialize,



spaces to sit and relax,



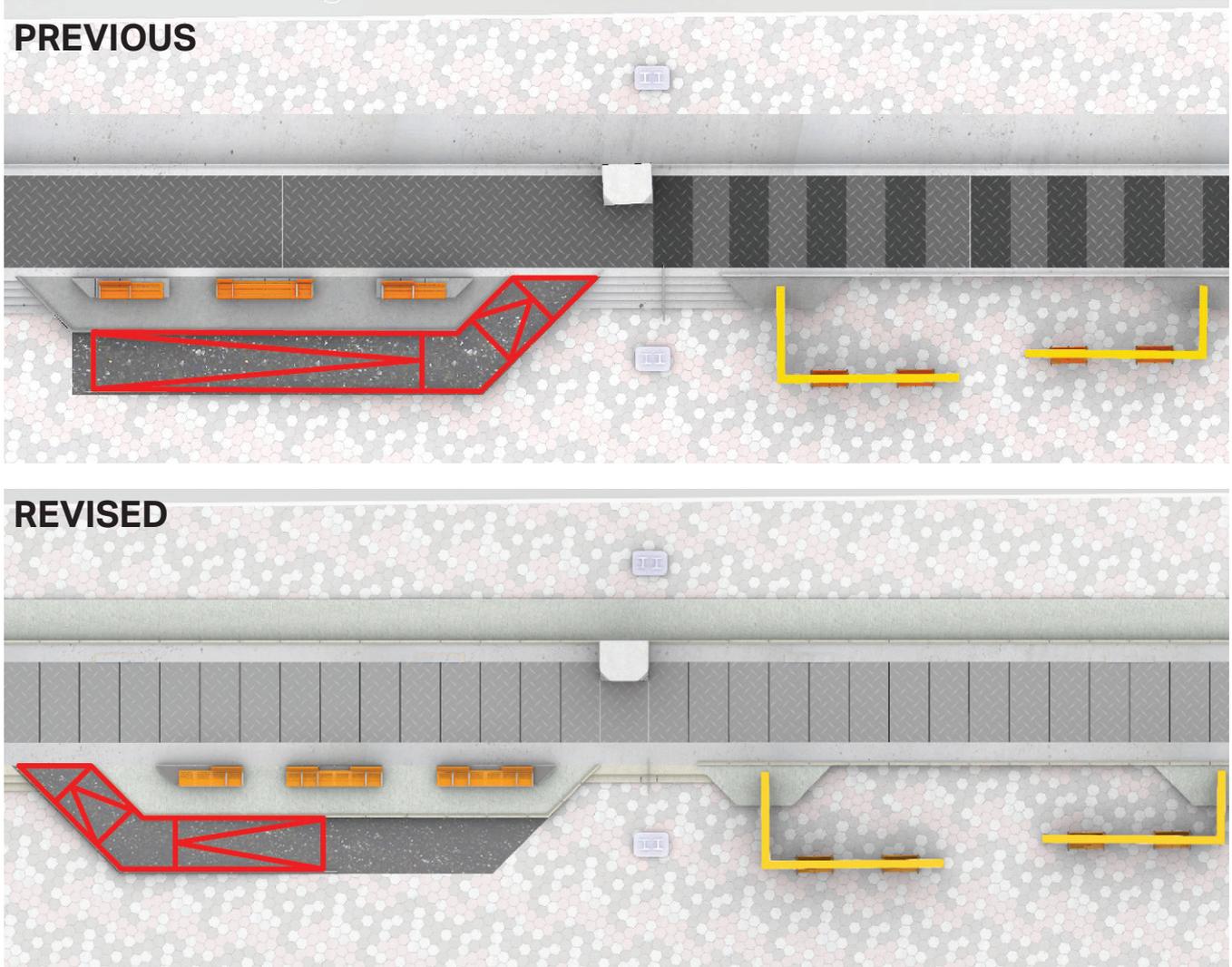
spaces to move,



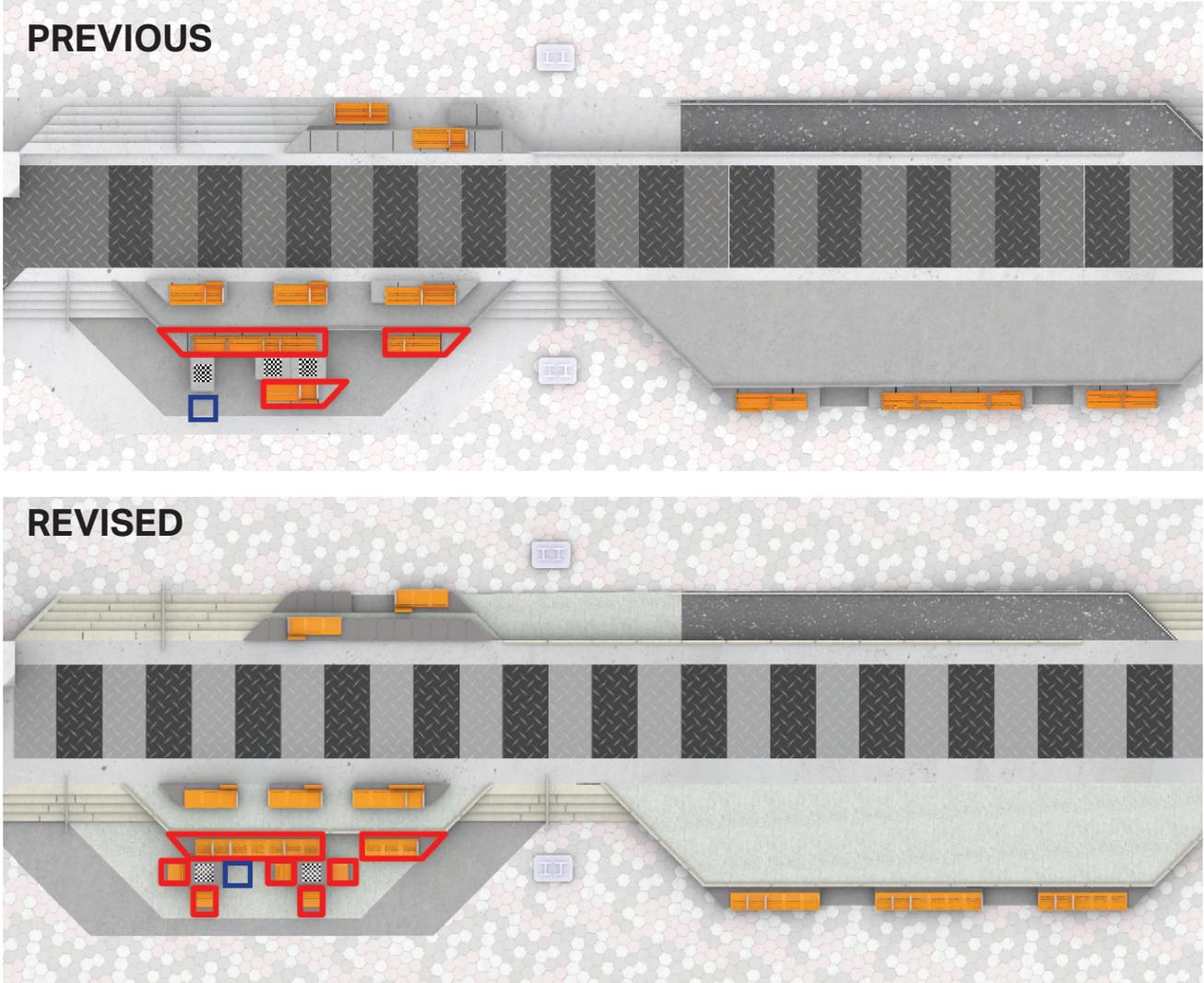
and spaces to play.



Ramp lengths have been shortened to reduce travel distance up and over the raised platform. The direction of ramp run has been reversed in some locations to further reduce travel distances.



In response to community feedback, we have modified the layout of game tables to add 4 seats to each table, including accessible companion seating.



□ PRECAST BENCH □ COMPANION SEAT

DESIGN ZONES



SPACES TO
SOCIALIZE



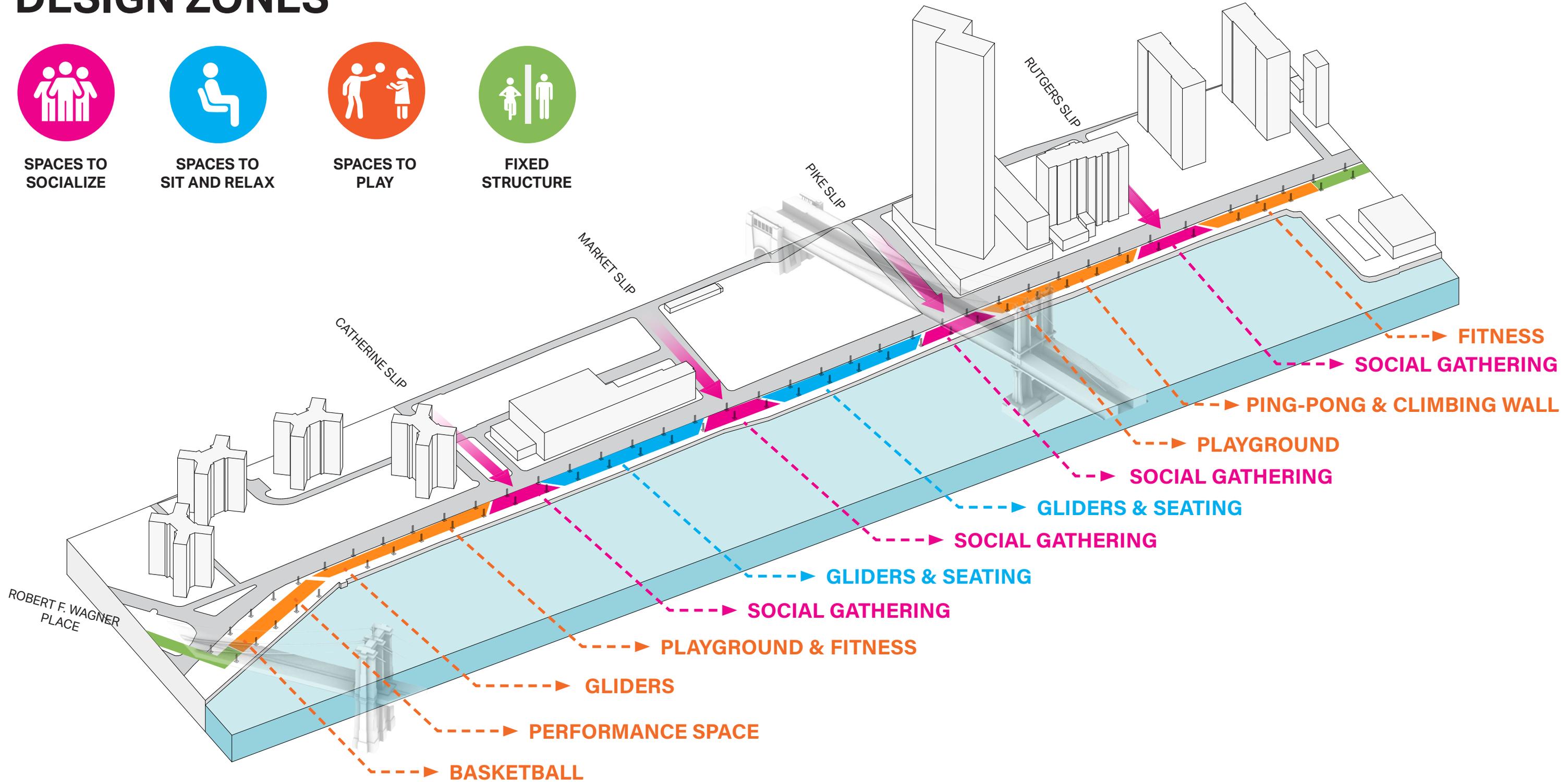
SPACES TO
SIT AND RELAX



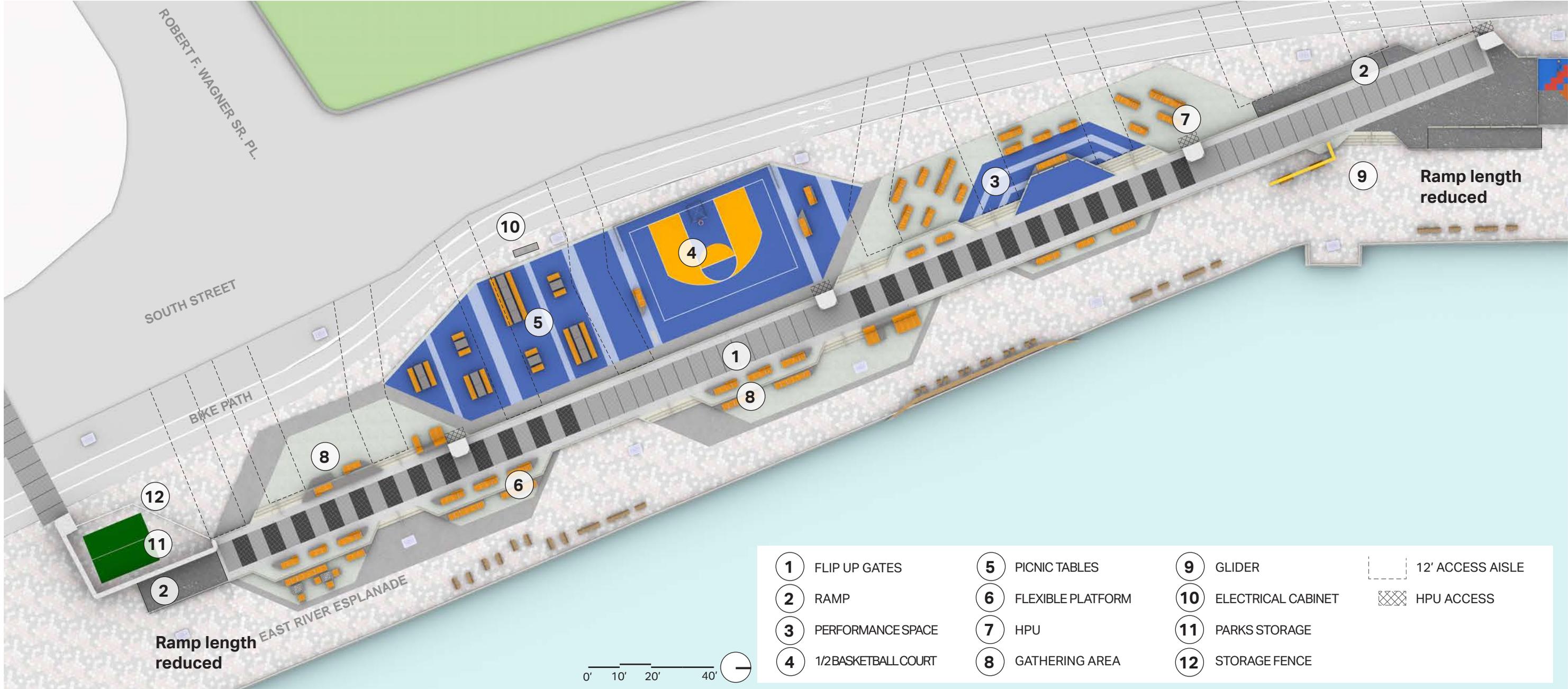
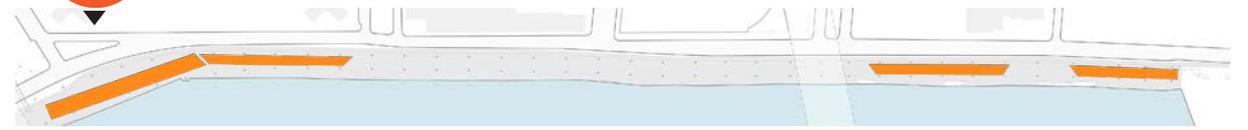
SPACES TO
PLAY



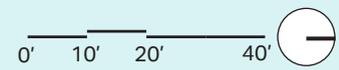
FIXED
STRUCTURE



SOUTH ACTIVE | SPORT / PERFORMANCE



- | | | | |
|------------------------|---------------------|----------------------|--------------------|
| ① FLIP UP GATES | ⑤ PICNIC TABLES | ⑨ GLIDER | ⋯ 12' ACCESS AISLE |
| ② RAMP | ⑥ FLEXIBLE PLATFORM | ⑩ ELECTRICAL CABINET | ⊗ HPU ACCESS |
| ③ PERFORMANCE SPACE | ⑦ HPU | ⑪ PARKS STORAGE | |
| ④ 1/2 BASKETBALL COURT | ⑧ GATHERING AREA | ⑫ STORAGE FENCE | |



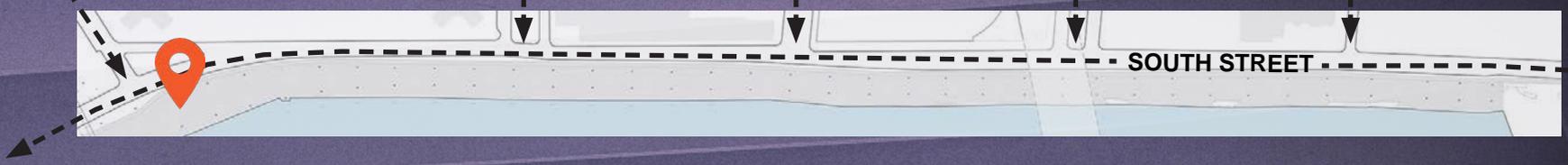
ROBERT F. WAGNER Sr. PLACE

CATHERINE SLIP

MARKET SLIP

PIKE SLIP

RUTGERS SLIP



SOUTH SPACES TO PLAY | SPORT

ROBERT F. WAGNER Sr. PLACE

CATHERINE SLIP

MARKET SLIP

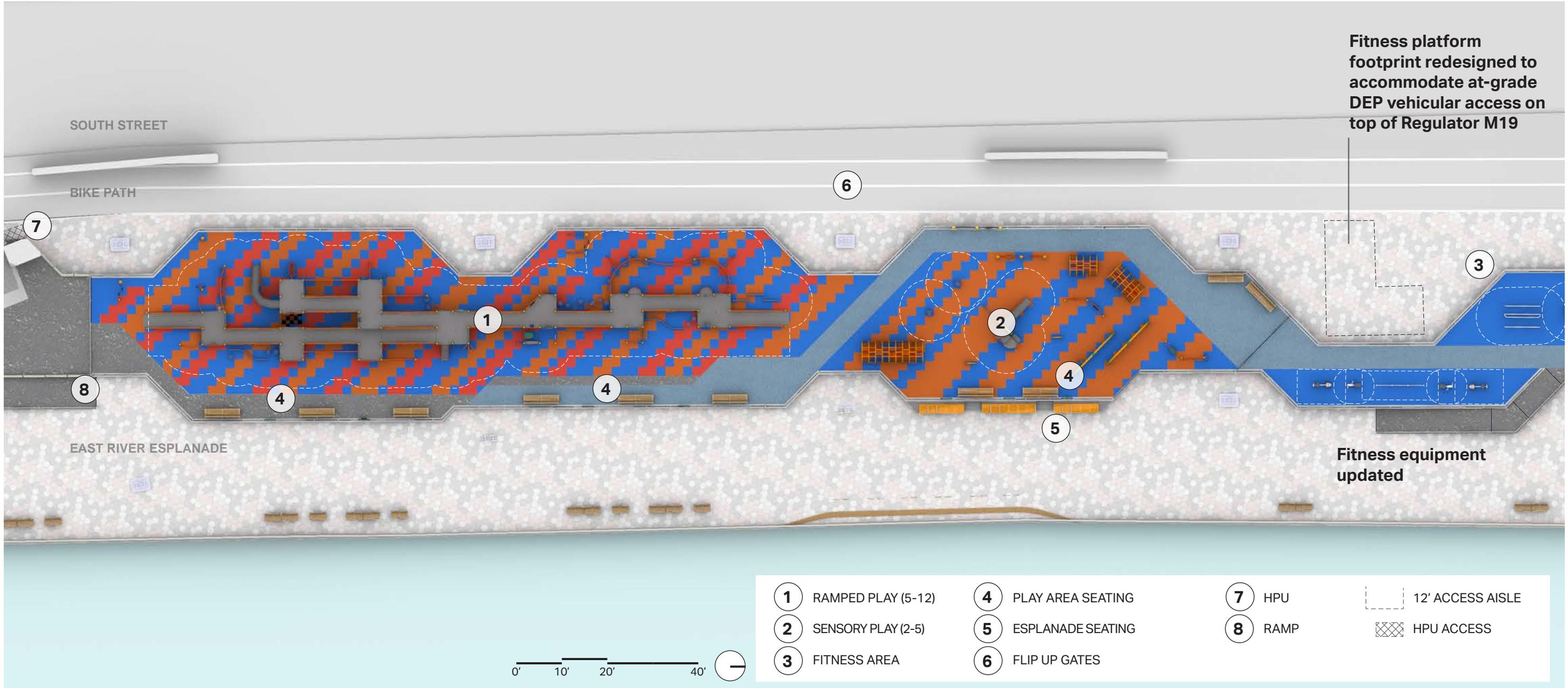
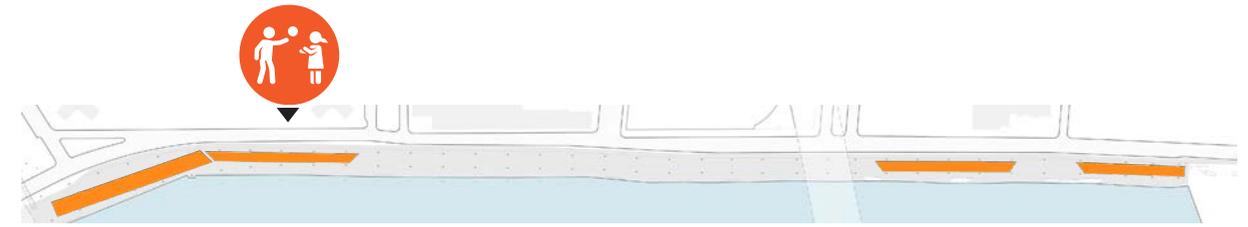
PIKE SLIP

RUTGERS SLIP



SOUTH SPACES TO PLAY | PERFORMANCE

SOUTH ACTIVE | PLAY & FITNESS PLAN



ROBERT F. WAGNER Sr. PLACE

CATHERINE SLIP

MARKET SLIP

PIKE SLIP

RUTGERS SLIP



SOUTH SPACES TO PLAY | PLAY

SOUTH ACTIVE | FITNESS EQUIPMENT



Arm Bike



Sit-up Bench



Leg Press

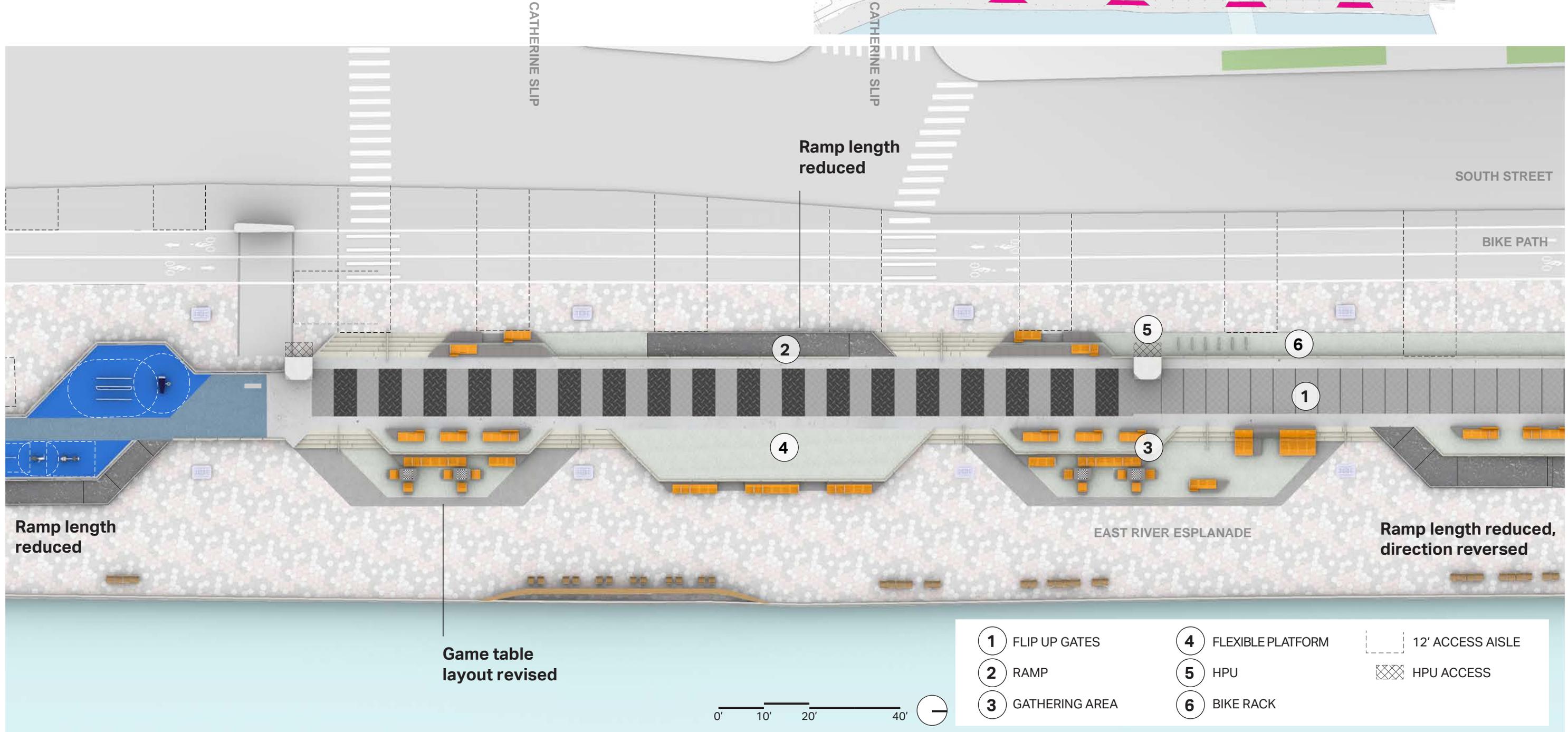


Triple Bars

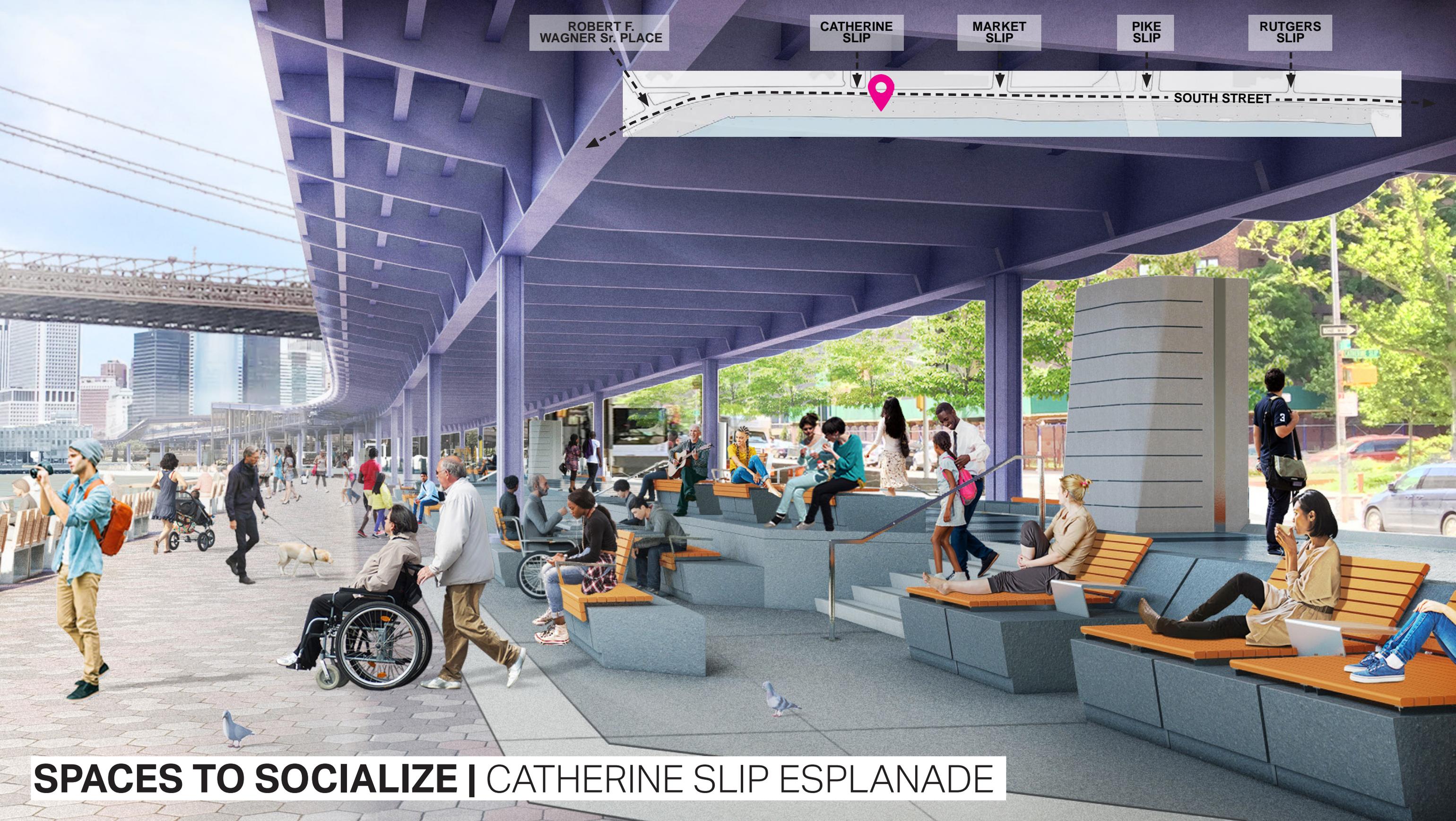


Pull Up Bars, 5'6\", 7'0\", 8'0\"

SOCIAL POCKET | CATHERINE SLIP PLAN



- | | | |
|------------------|---------------------|------------------|
| ① FLIP UP GATES | ④ FLEXIBLE PLATFORM | 12' ACCESS AISLE |
| ② RAMP | ⑤ HPU | HPU ACCESS |
| ③ GATHERING AREA | ⑥ BIKE RACK | |



ROBERT F. WAGNER Sr. PLACE

CATHERINE SLIP

MARKET SLIP

PIKE SLIP

RUTGERS SLIP

SOUTH STREET

SPACES TO SOCIALIZE | CATHERINE SLIP ESPLANADE



ROBERT F. WAGNER Sr. PLACE

CATHERINE SLIP

MARKET SLIP

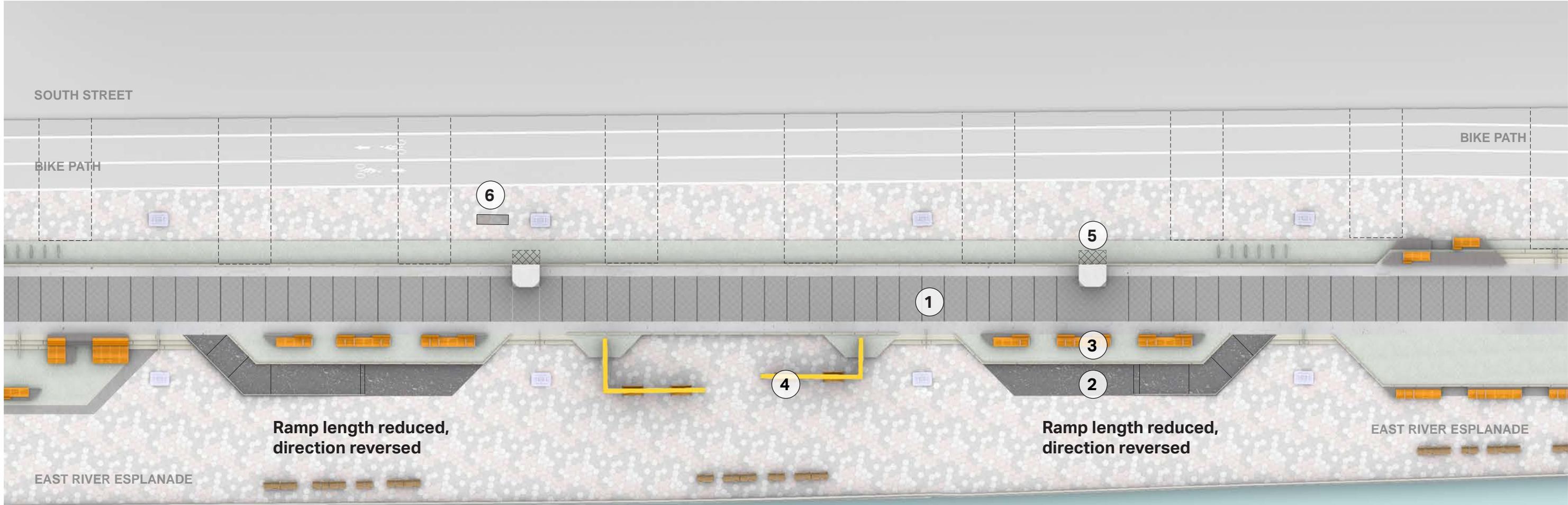
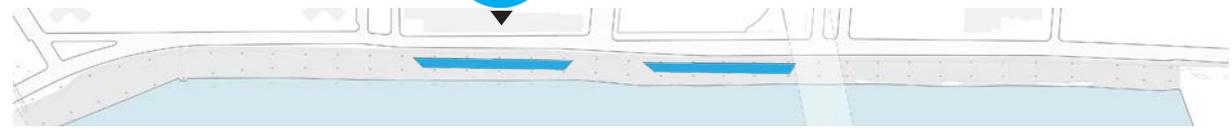
PIKE SLIP

RUTGERS SLIP

SOUTH STREET

SPACES TO SOCIALIZE | CATHERINE SLIP ESPLANADE

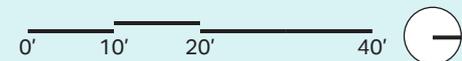
PASSIVE POCKET | CATHERINE / MARKET PLAN



Ramp length reduced, direction reversed

Ramp length reduced, direction reversed

- 1 FLIP UP GATES
- 2 RAMP
- 3 SEATING OVERLOOK
- 4 GLIDERS
- 5 HPU
- 6 ELECTRICAL CABINET
- 12' ACCESS AISLE
- HPU ACCESS





ROBERT F. WAGNER Sr. PLACE

CATHERINE SLIP

MARKET SLIP

PIKE SLIP

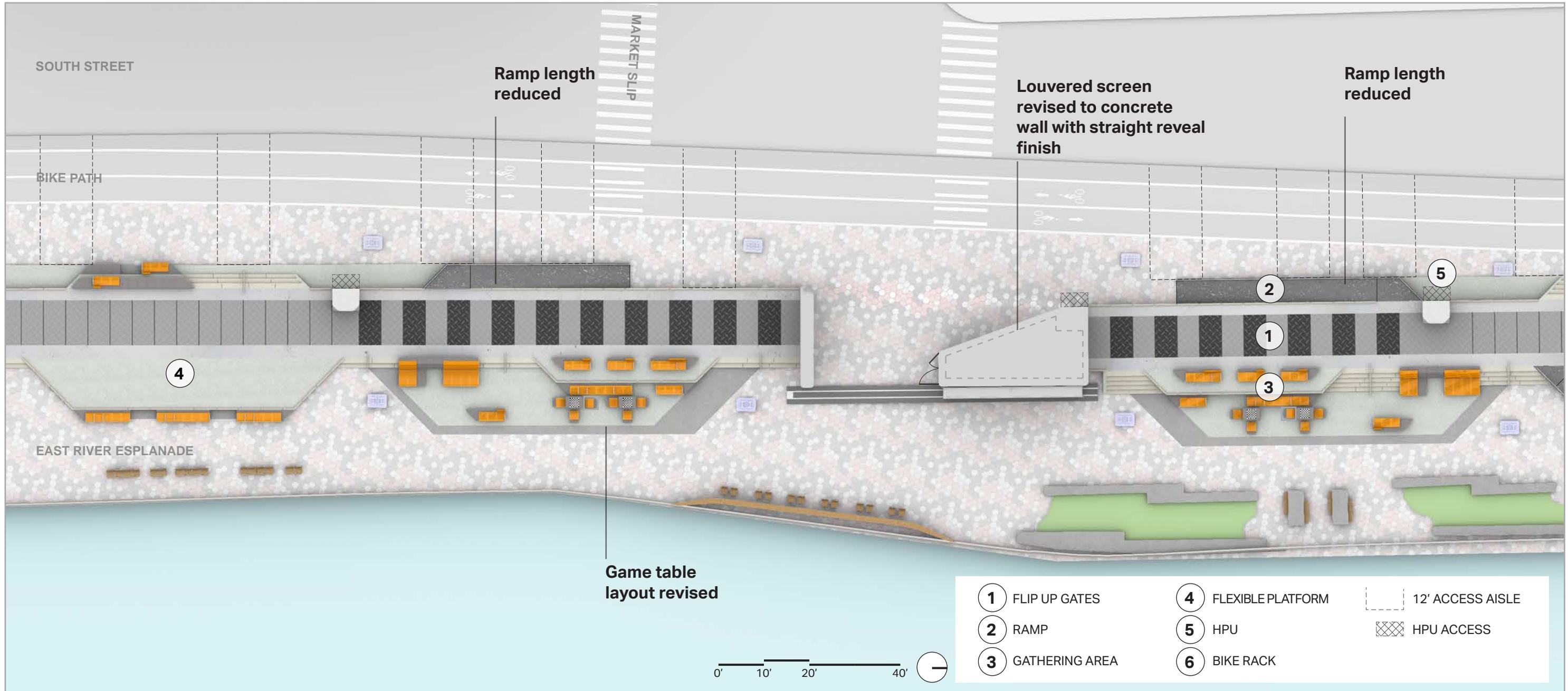
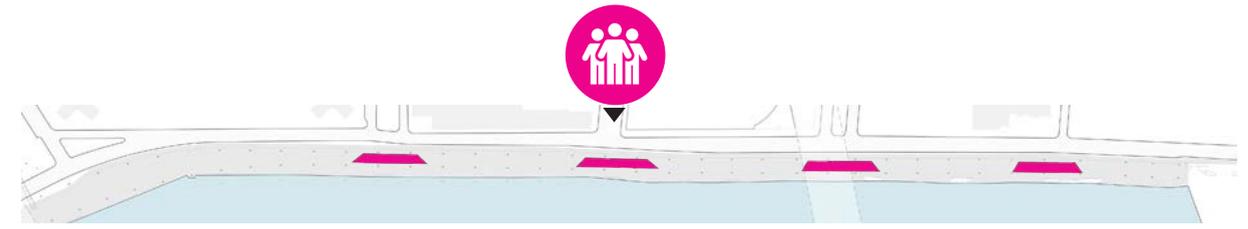
RUTGERS SLIP

SOUTH STREET

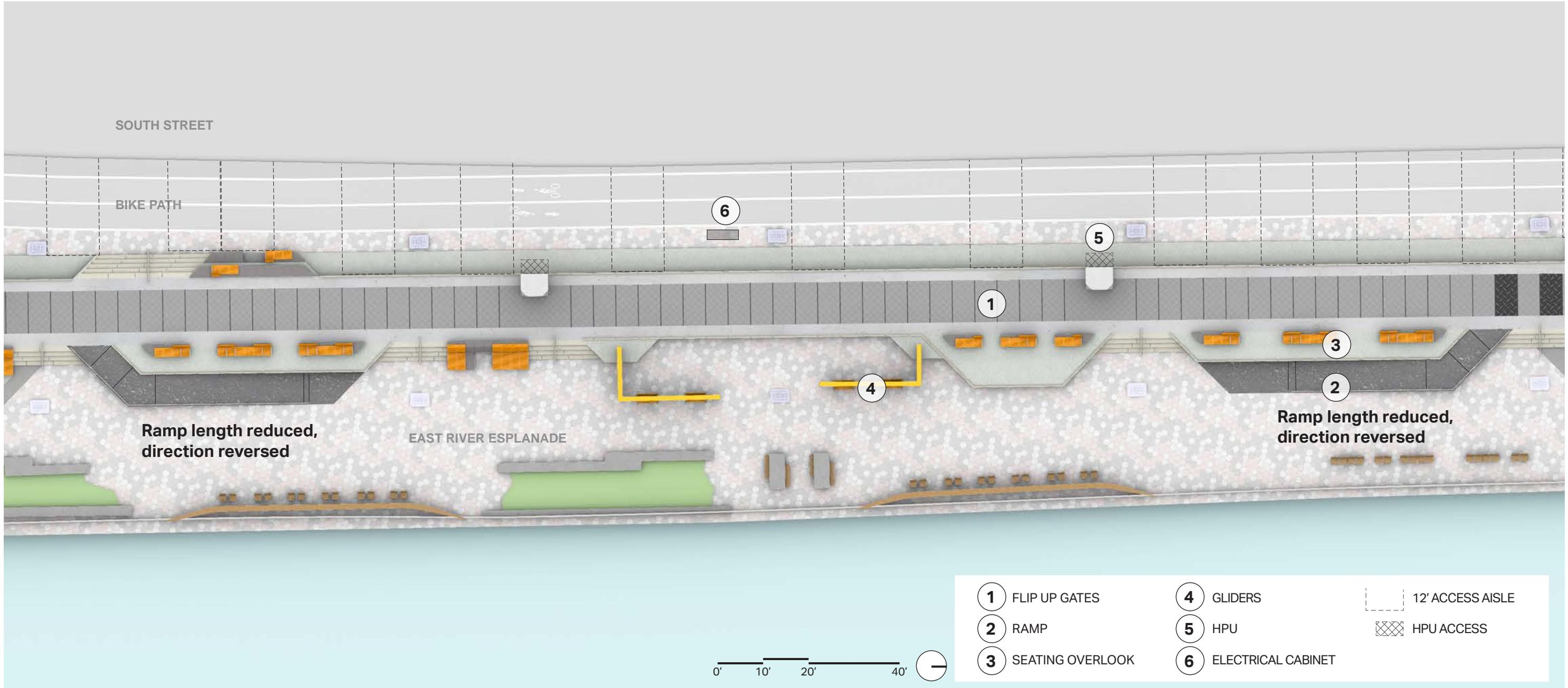
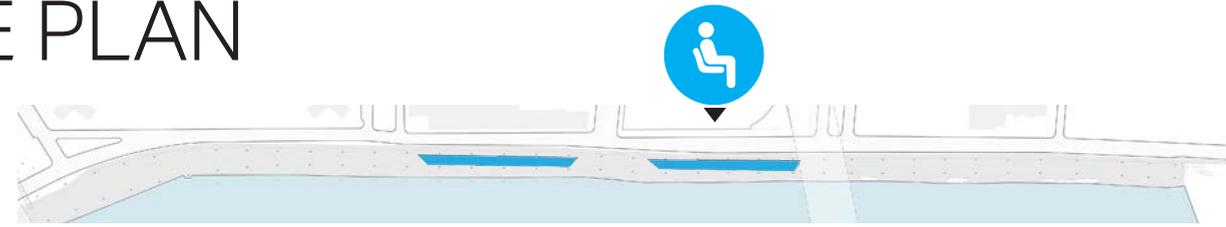
MARKET SLIP

SPACES TO SIT AND RELAX | CATHERINE / MARKET

SOCIAL POCKET | MARKET SLIP PLAN



PASSIVE POCKET | MARKET / PIKE PLAN





ROBERT F. WAGNER Sr. PLACE

CATHERINE SLIP

MARKET SLIP

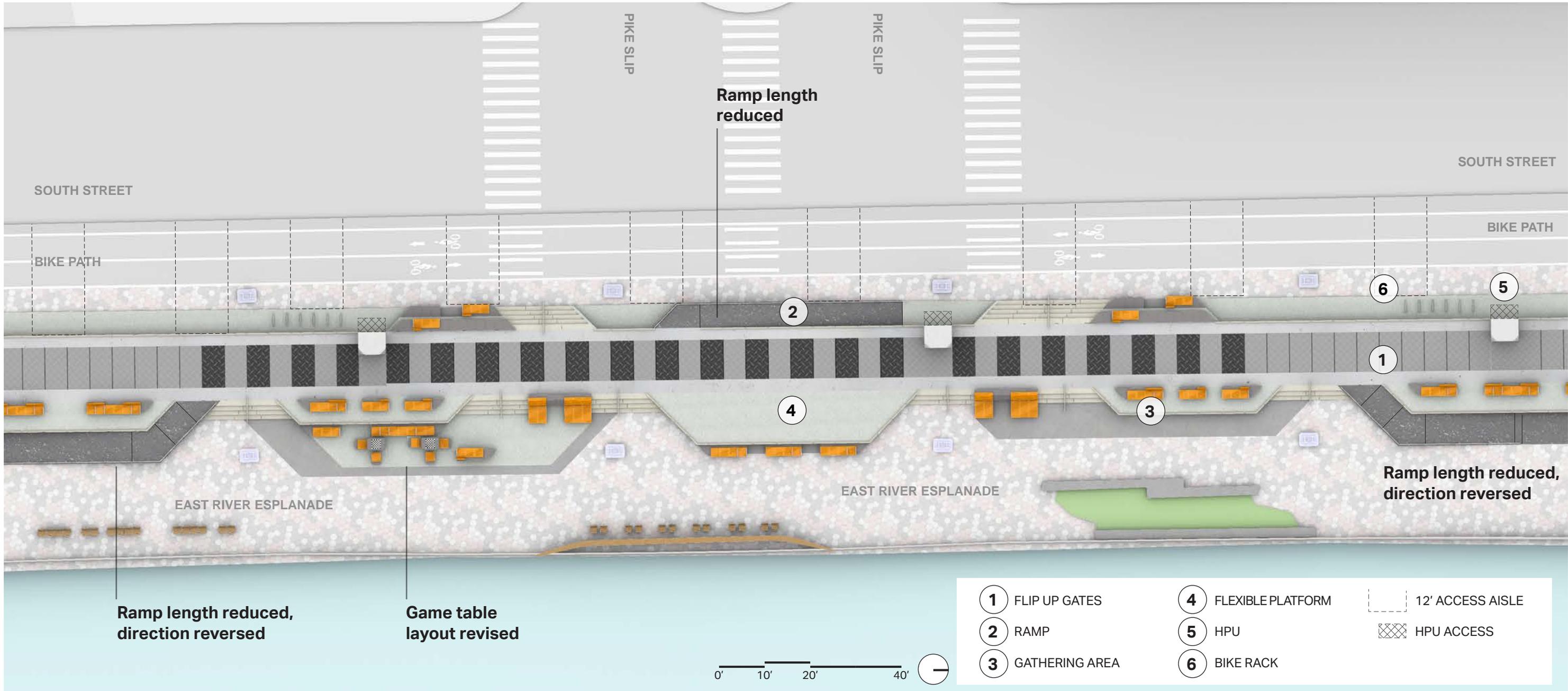
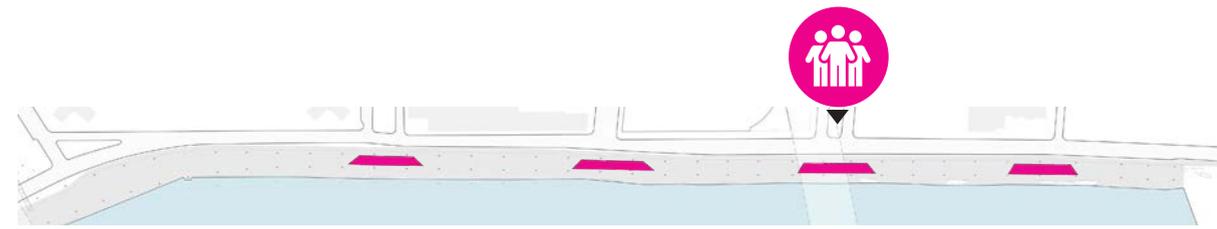
PIKE SLIP

RUTGERS SLIP

SOUTH STREET

SPACES TO SIT AND RELAX | MARKET / PIKE

SOCIAL POCKET | PIKE SLIP PLAN



- 1** FLIP UP GATES
- 2** RAMP
- 3** GATHERING AREA
- 4** FLEXIBLE PLATFORM
- 5** HPU
- 6** BIKE RACK
- 12' ACCESS AISLE**
- HPU ACCESS**

ROBERT F. WAGNER Sr. PLACE

CATHERINE SLIP

MARKET SLIP

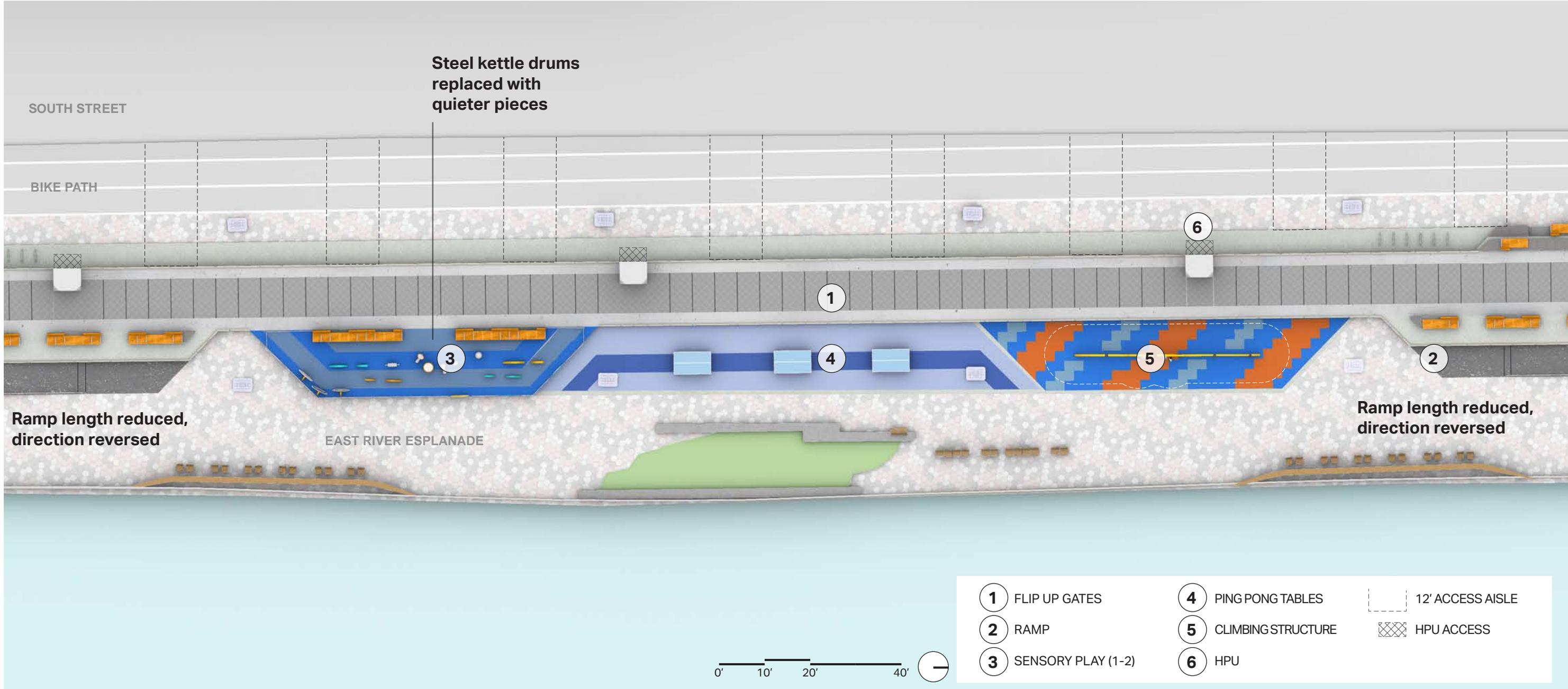
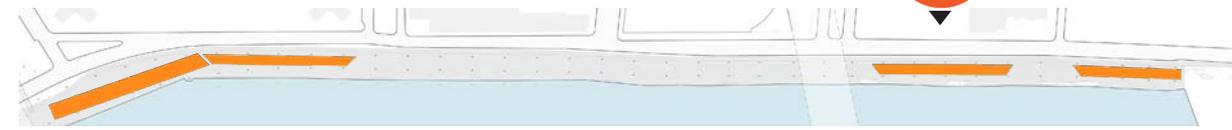
PIKE SLIP

RUTGERS SLIP



SPACES TO SOCIALIZE | PIKE SLIP

NORTH ACTIVE | PLAY & CLIMB PLAN



ROBERT F. WAGNER Sr. PLACE

CATHERINE SLIP

MARKET SLIP

PIKE SLIP

RUTGERS SLIP

SOUTH STREET



NORTH SPACES TO PLAY | PLAY

ROBERT F. WAGNER Sr. PLACE

CATHERINE SLIP

MARKET SLIP

PIKE SLIP

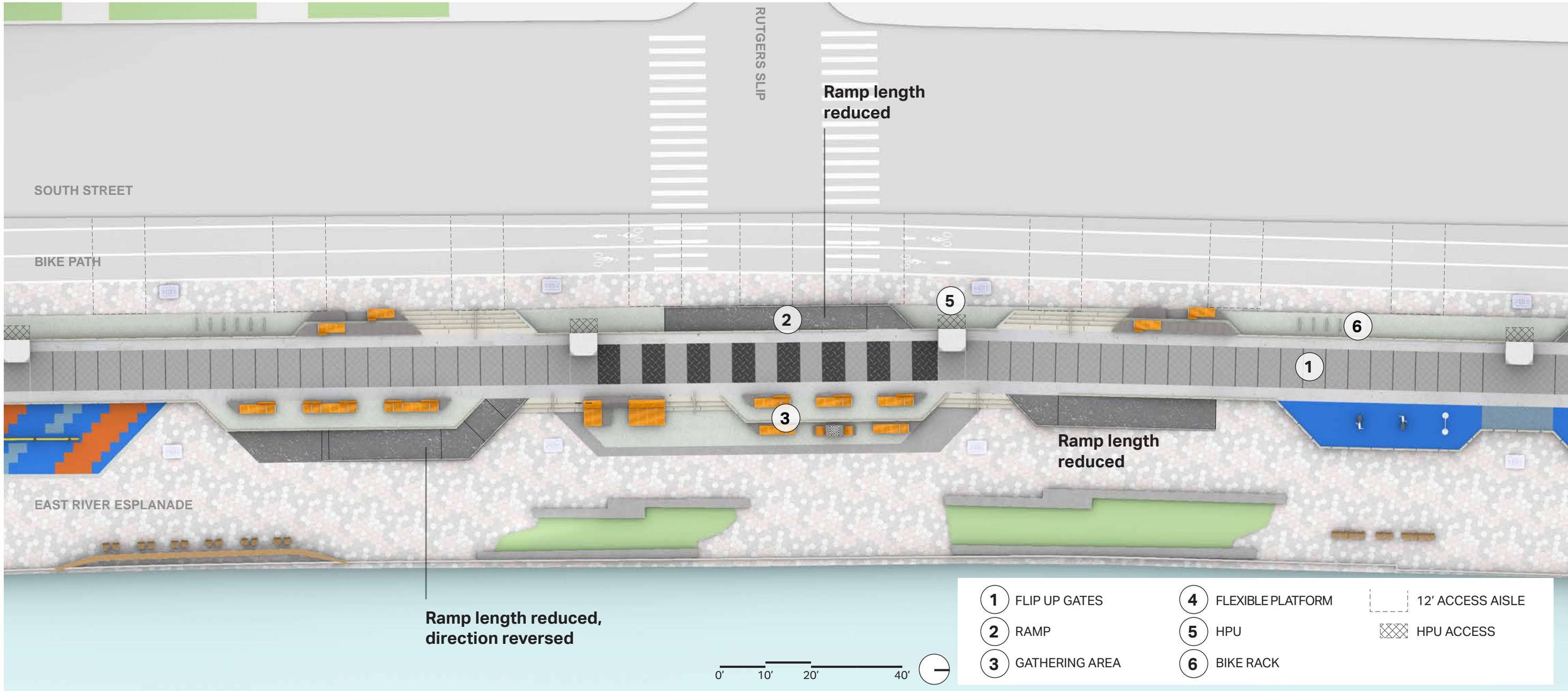
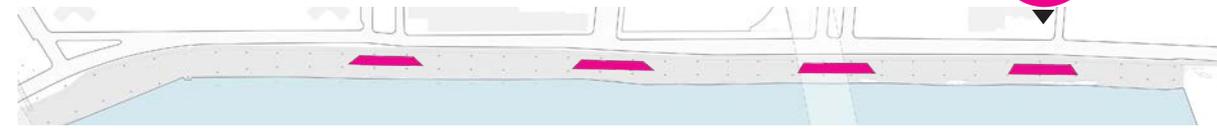
RUTGERS SLIP

SOUTH STREET



NORTH SPACES TO PLAY | CLIMBING AND SPORTS

SOCIAL POCKET | RUTGERS SLIP PLAN





ROBERT F. WAGNER Sr. PLACE

CATHERINE SLIP

MARKET SLIP

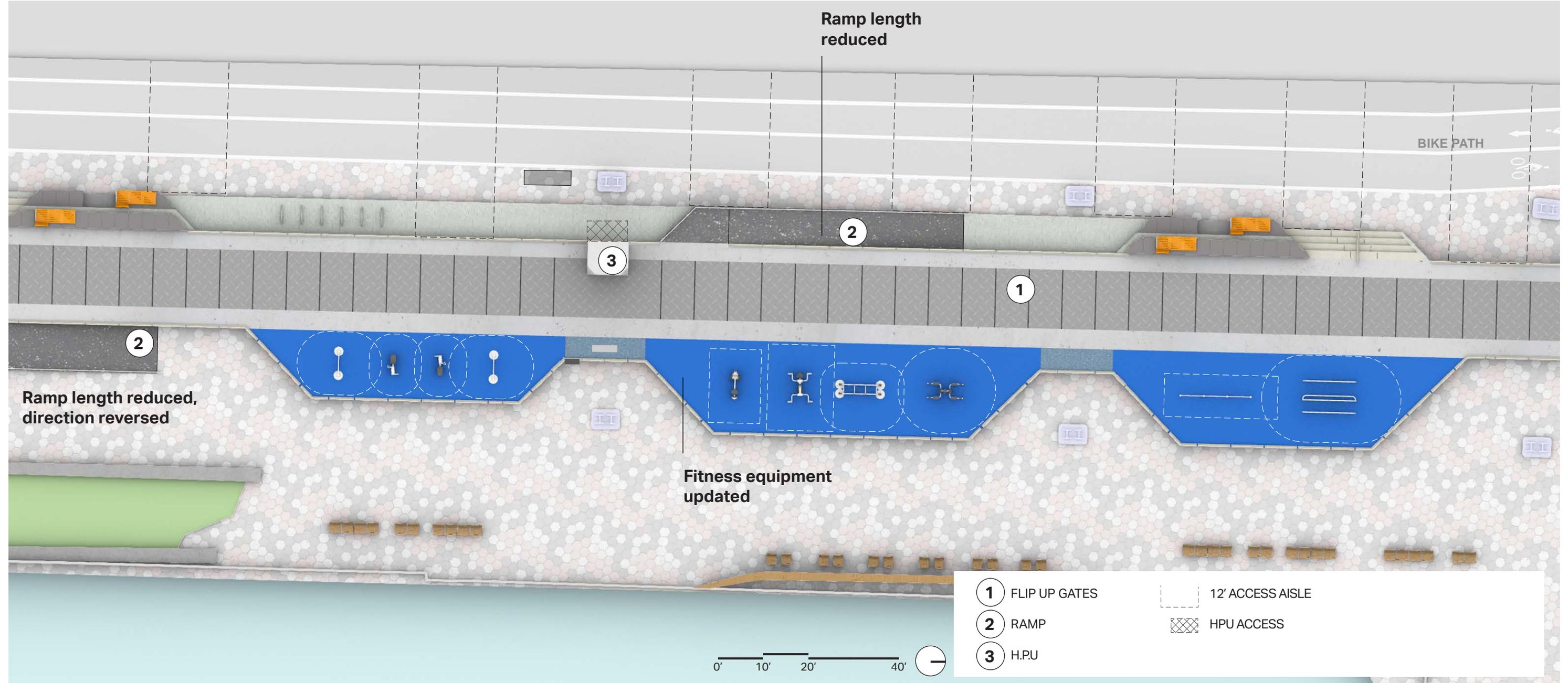
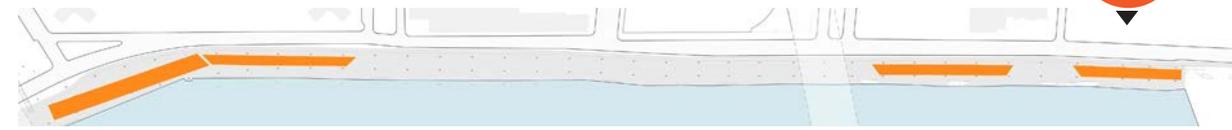
PIKE SLIP

RUTGERS SLIP

SOUTH STREET

SPACES TO SOCIALIZE | RUTGERS SLIP

NORTH ACTIVE | FITNESS PLAN



ROBERT F. WAGNER Sr. PLACE

CATHERINE SLIP

MARKET SLIP

PIKE SLIP

RUTGERS SLIP



NORTH SPACES TO PLAY | FITNESS

NORTH ACTIVE | FITNESS EQUIPMENT



a. Arm Bike



b. Triple Bars



Push Up & Leg Lift Station



Incline Press



Dip Bench



Pull Up Bars, 5'6", 7'0", 8'0"



Leg Press



Seated Bench Press

ENGRAVED SIGNAGE

ENGRAVED SIGNAGE | STREET SIDE RAMPS



ENGRAVED SIGNAGE | WATER SIDE HPU



LIGHTING

EXISTING LIGHTING AT ENTRY POINTS



Catherine Slip



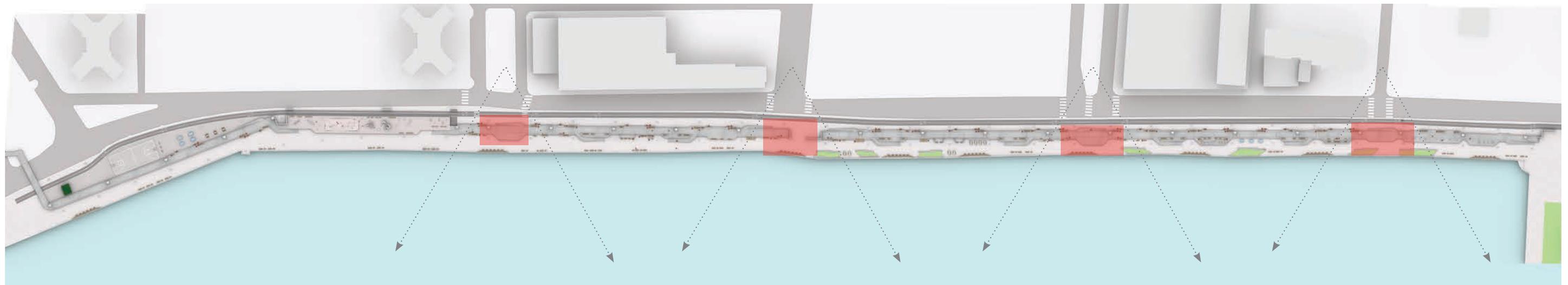
Market Slip



Pike Slip



Rutgers Slip



PROPOSED LIGHTING AT ENTRY POINTS | INDIRECT PROJECTION

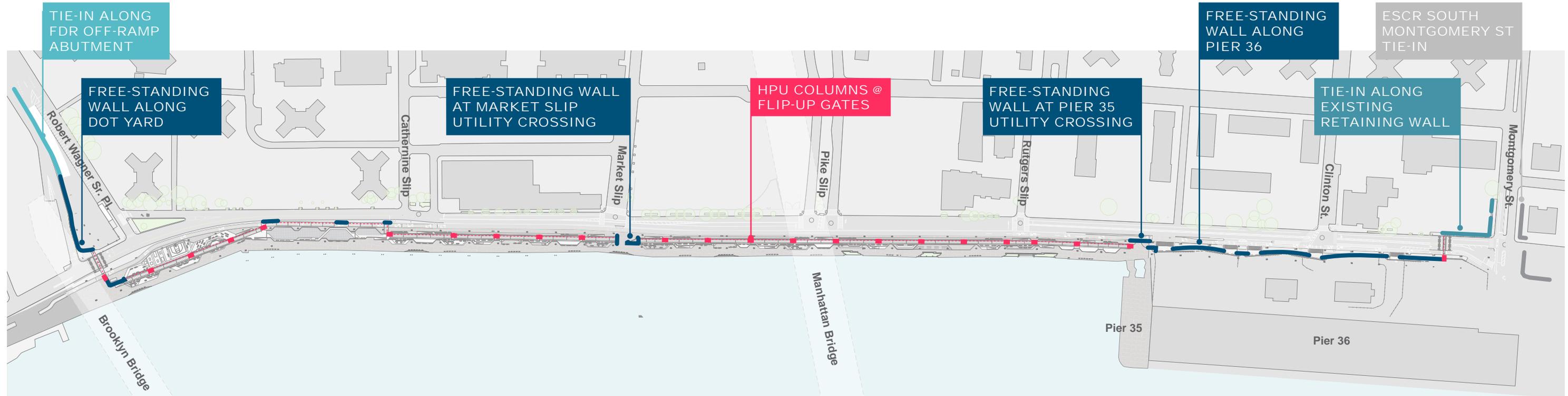


Surface mounted LED linear wall-washer and shielding visor, 51W, 4000K

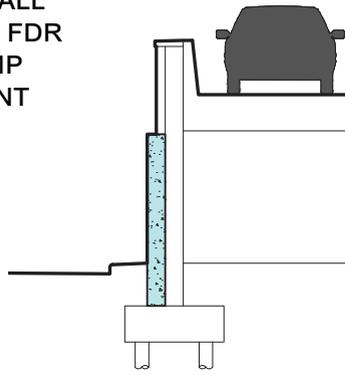
FLOOD INFRASTRUCTURE

FLOOD PROTECTION

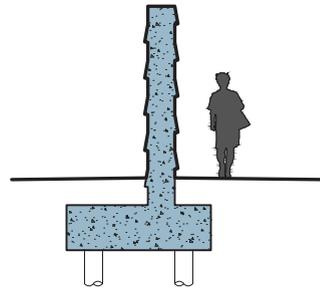
Exposed Floodwall Overview



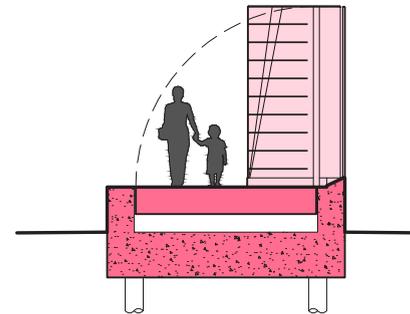
FLOODWALL AGAINST FDR OFF-RAMP ABUTMENT



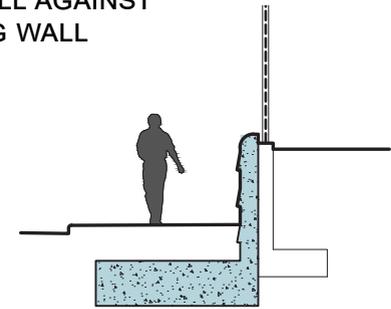
FREE-STANDING FLOODWALL



HPU COLUMNS @ FLIP-UP GATES

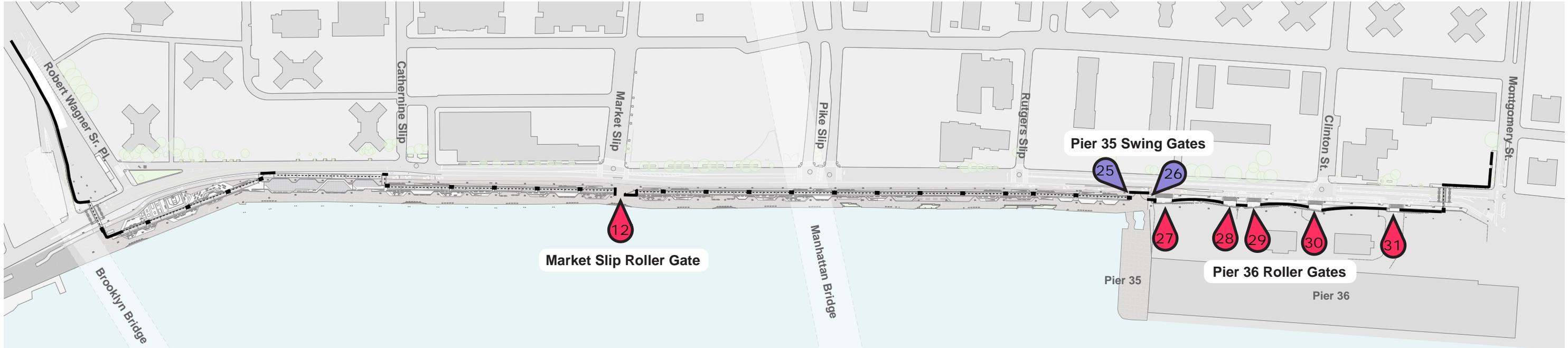


FLOODWALL AGAINST RETAINING WALL



FLOOD PROTECTION

Above Grade Gates

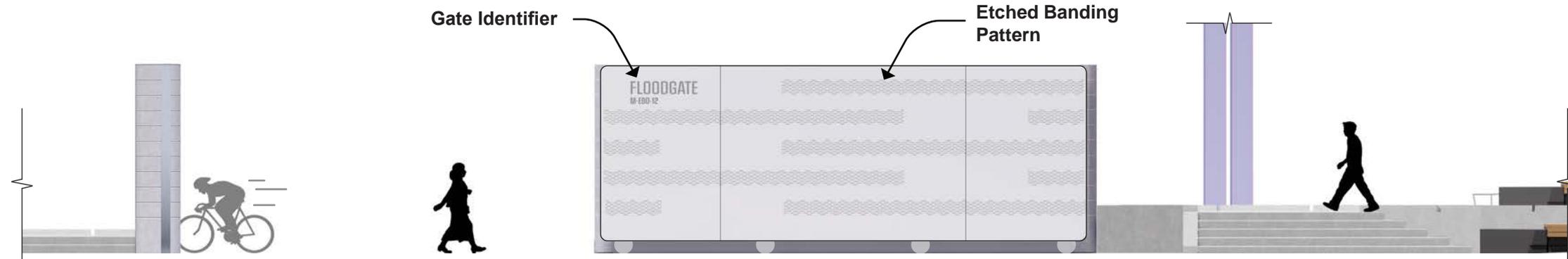


-  SWING GATE (2)
-  ROLLER GATE (6)

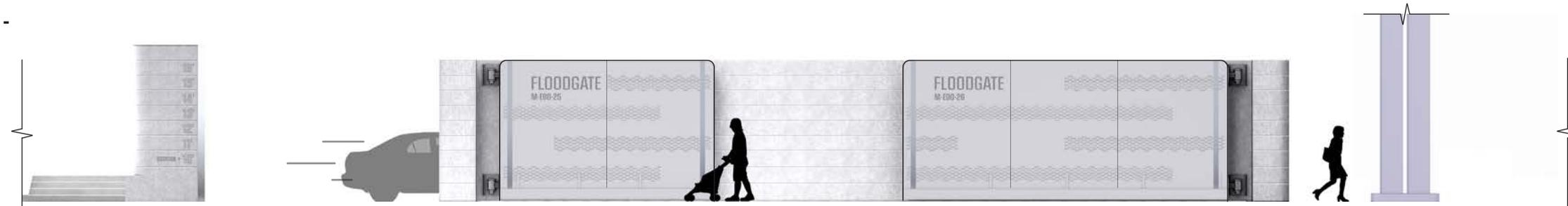
-  EXPOSED FLOODWALL & HPU COLUMNS
-  LINE OF FLIP-UP GATES

FLOOD PROTECTION

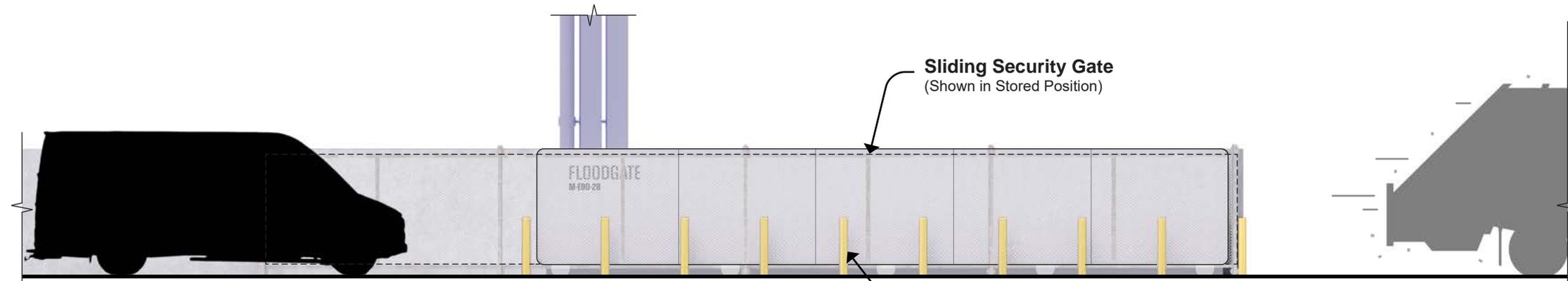
Above Grade Gates



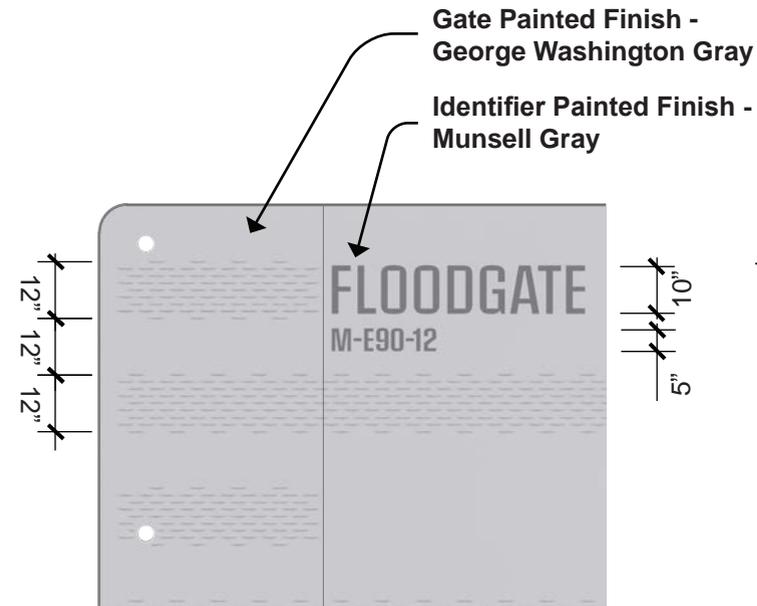
MARKET SLIP ROLLER GATE



PIER 35 SWING GATES



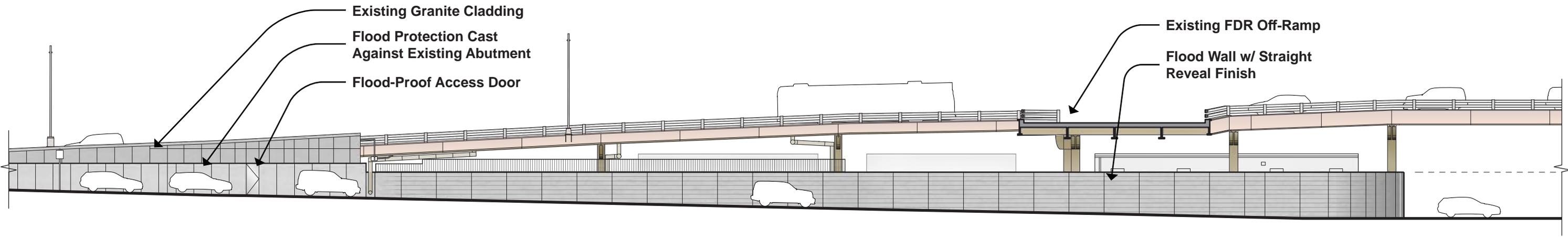
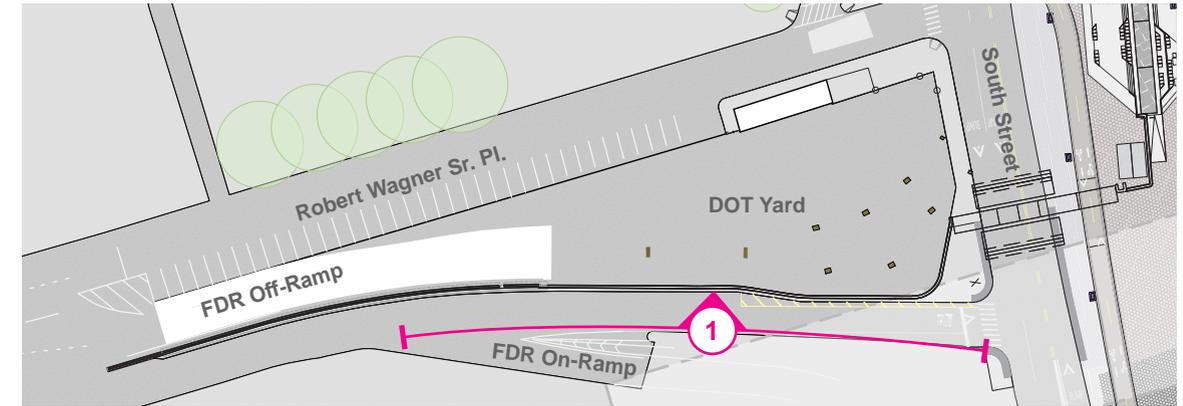
TYPICAL PIER 36 ROLLER GATE



DETAIL OF SIGNAGE

FLOOD PROTECTION WALKTHROUGH

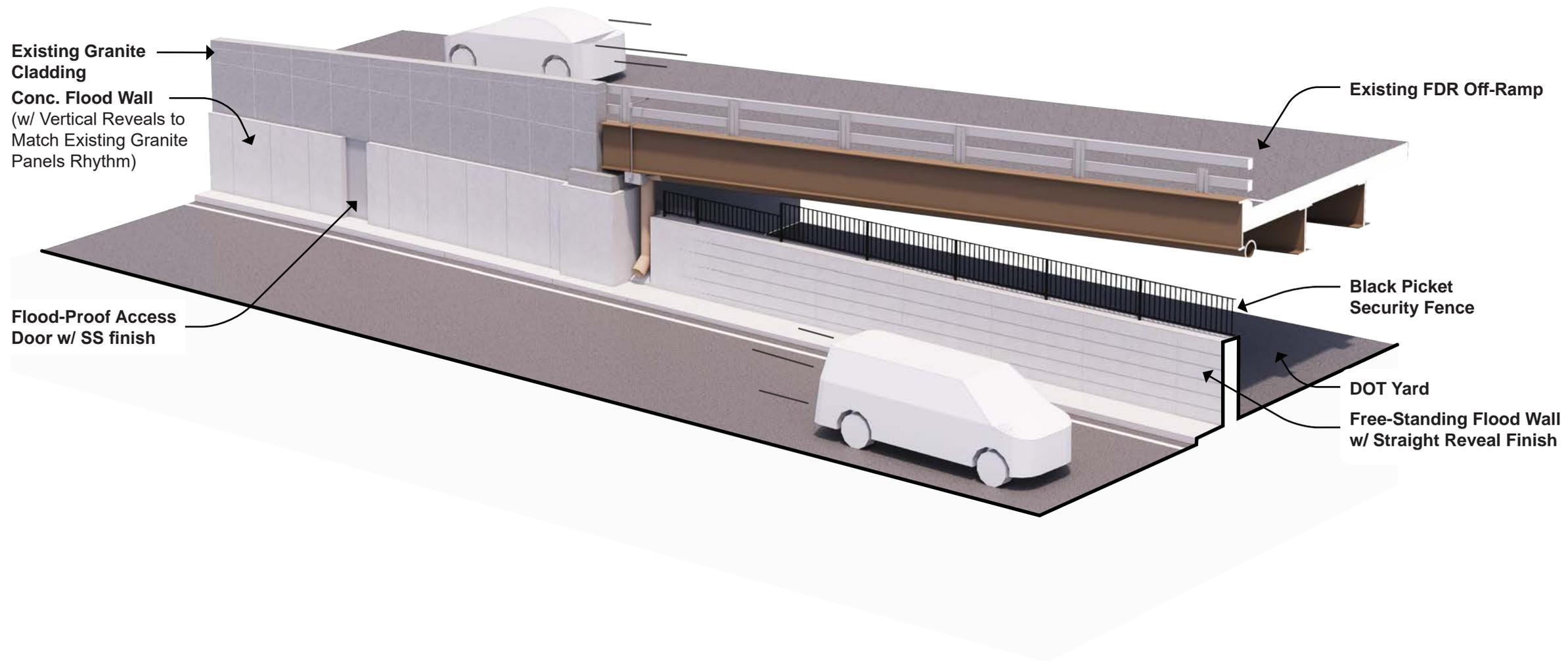
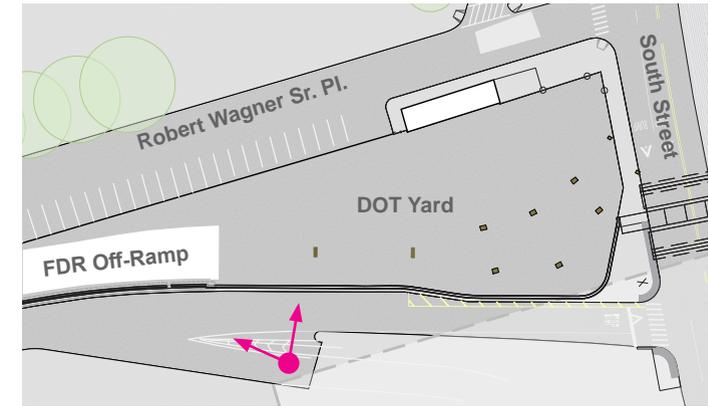
Brooklyn Bridge Tie-In



1. EXPOSED WALL ELEVATION - FLOOD SIDE ALONG ROBERT WAGNER SR. PL

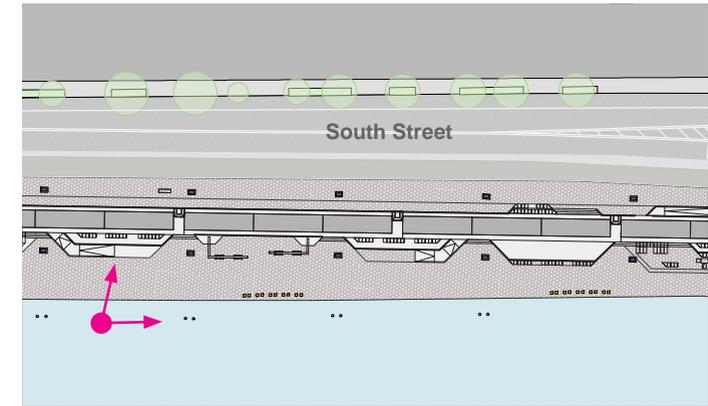
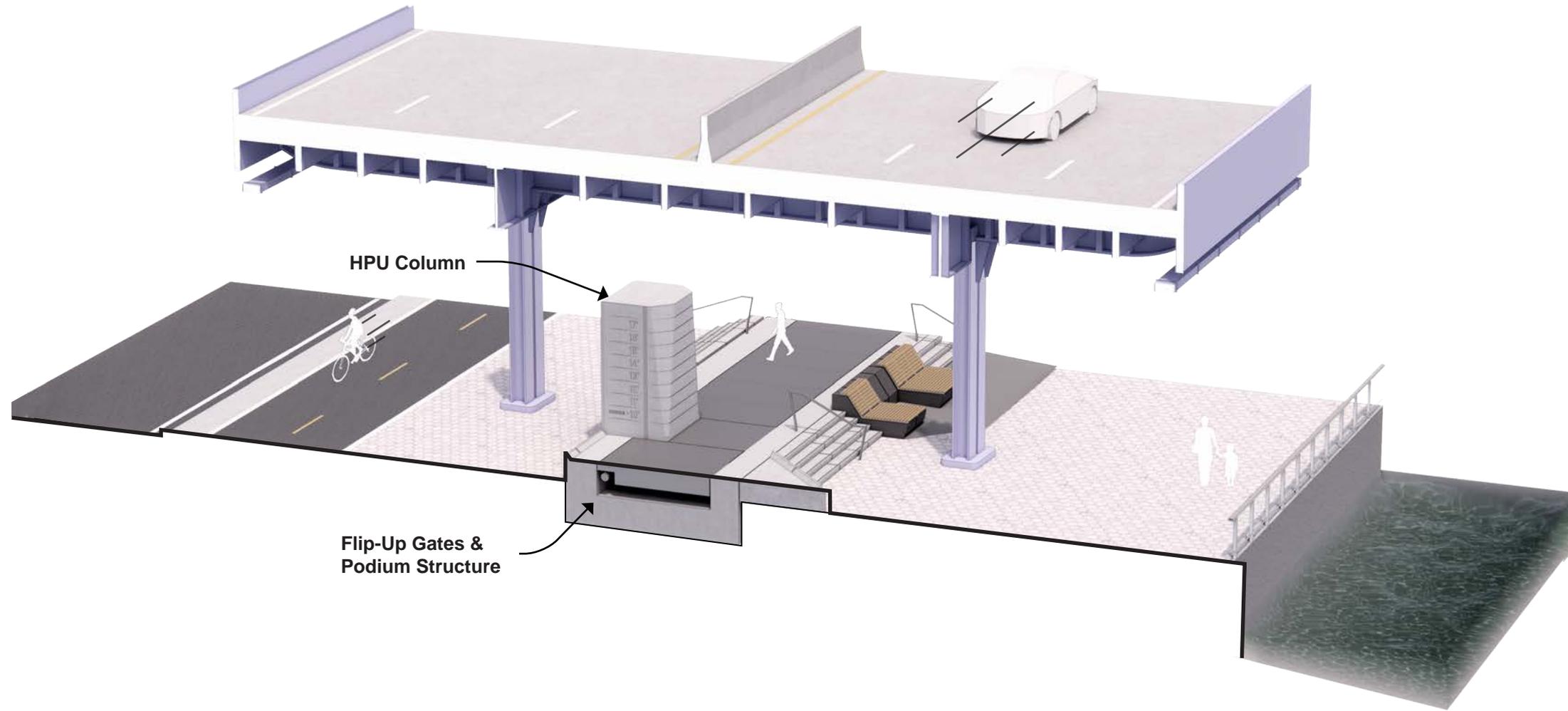
FLOOD PROTECTION WALKTHROUGH

Wall Transition at Abutment



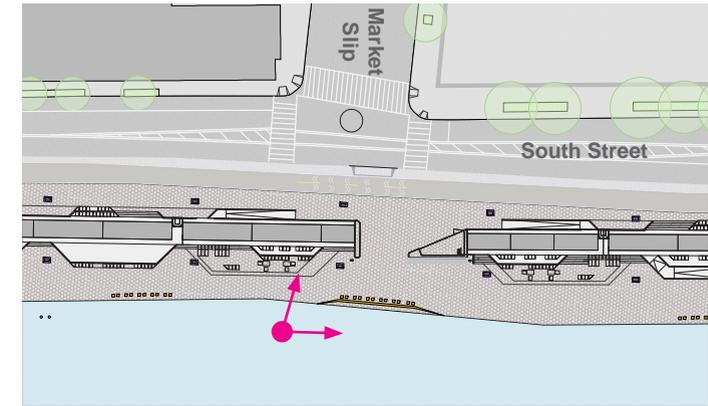
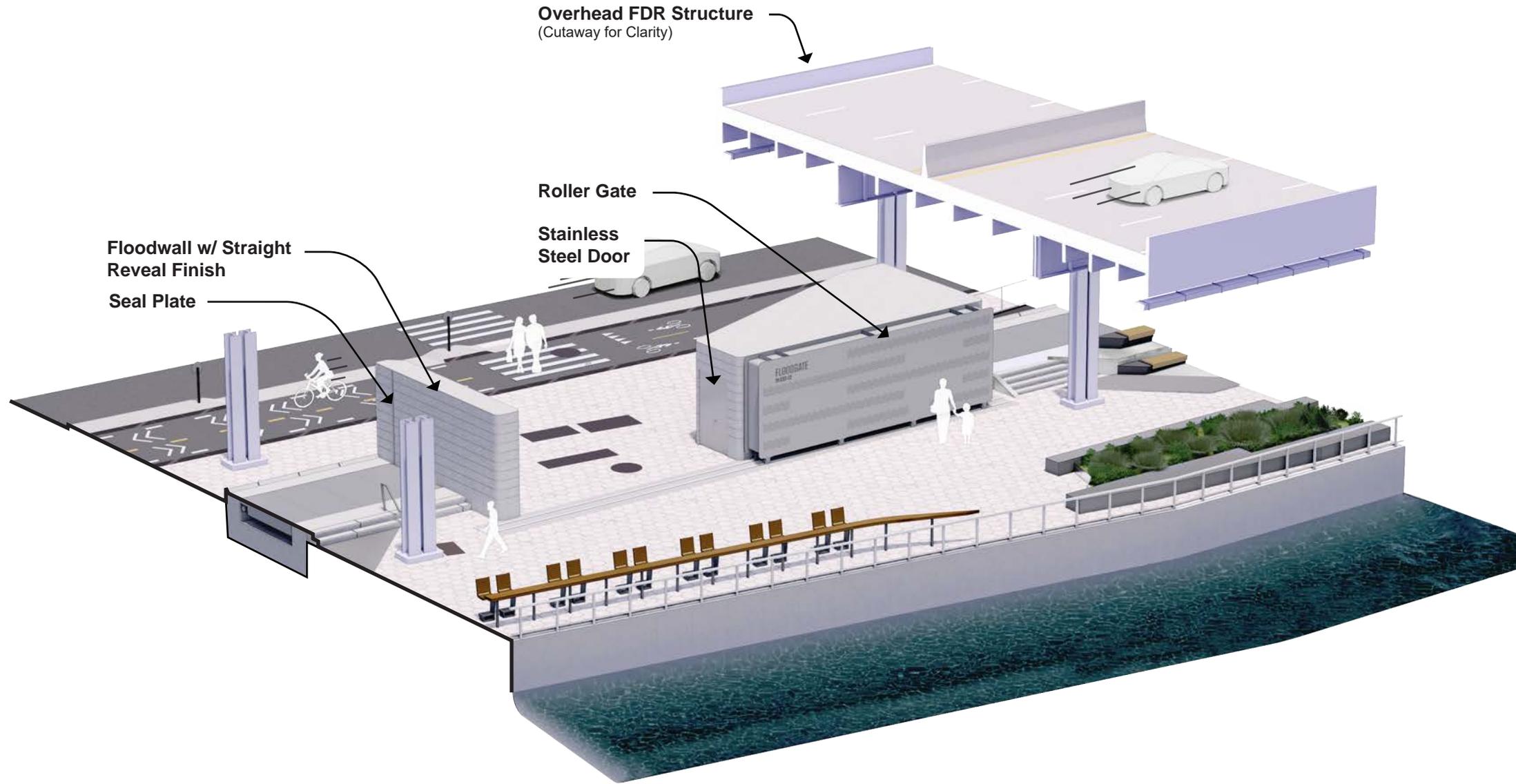
FLOOD PROTECTION WALKTHROUGH

Typical HPU Columns



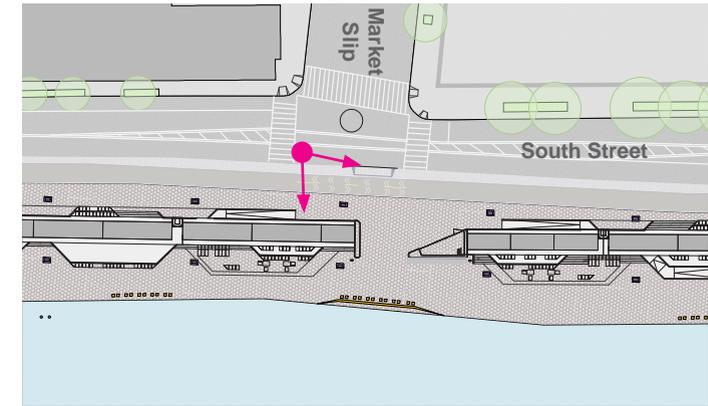
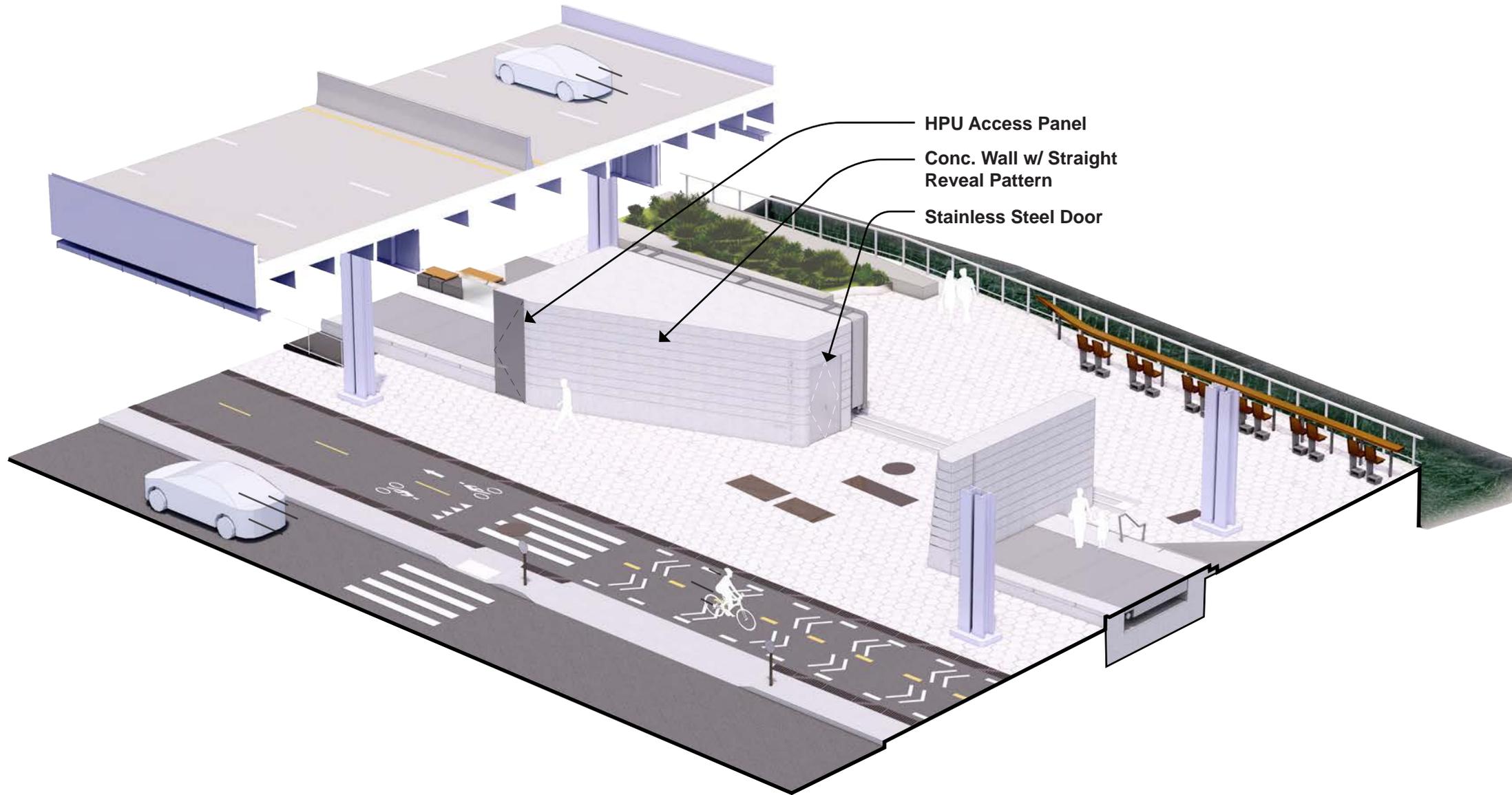
FLOOD PROTECTION WALKTHROUGH

Market Slip Utility Crossing - Flood Side (Gate 12)



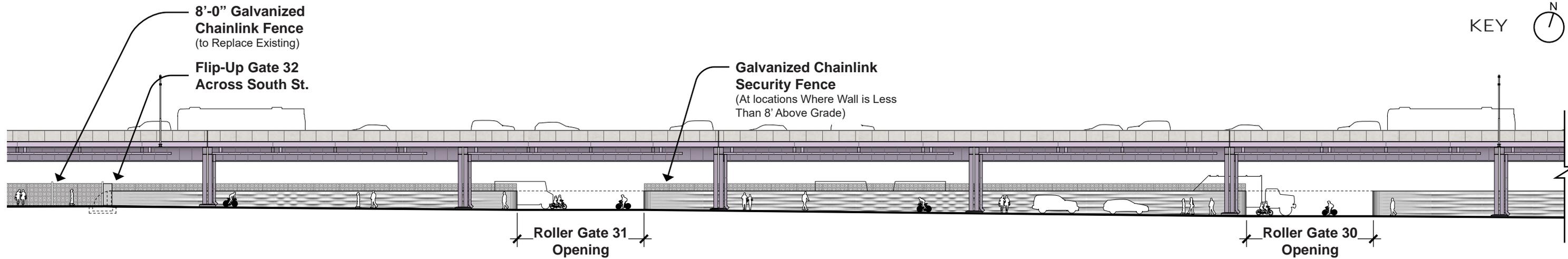
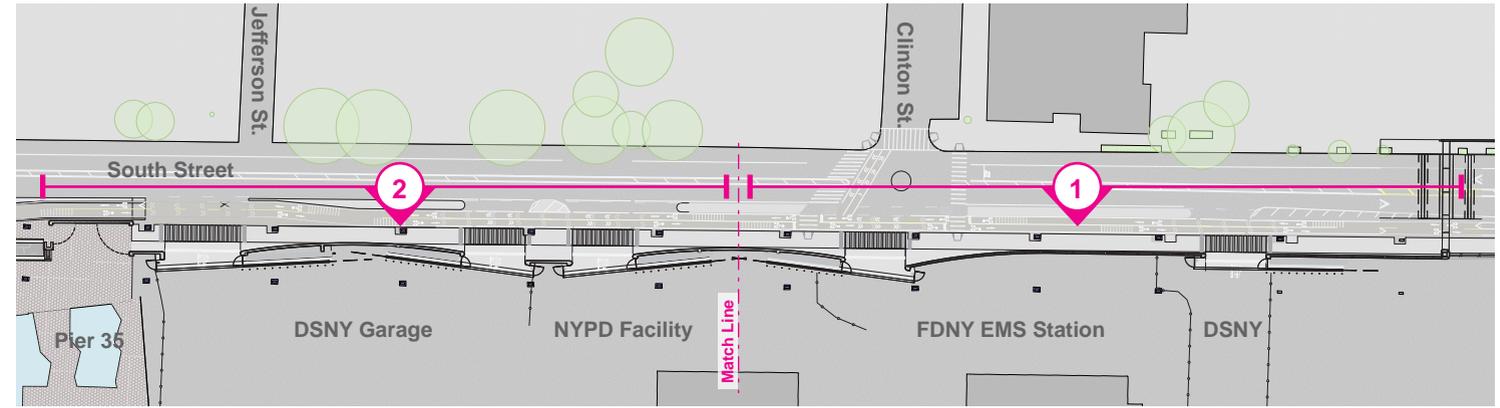
FLOOD PROTECTION WALKTHROUGH

Market Slip Utility Crossing - Protected Side (Gate 12)

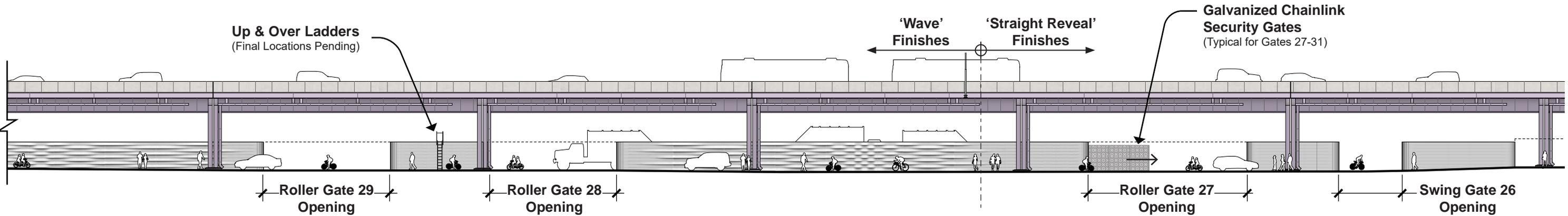


FLOOD PROTECTION WALKTHROUGH

Pier 36 Exposed Wall



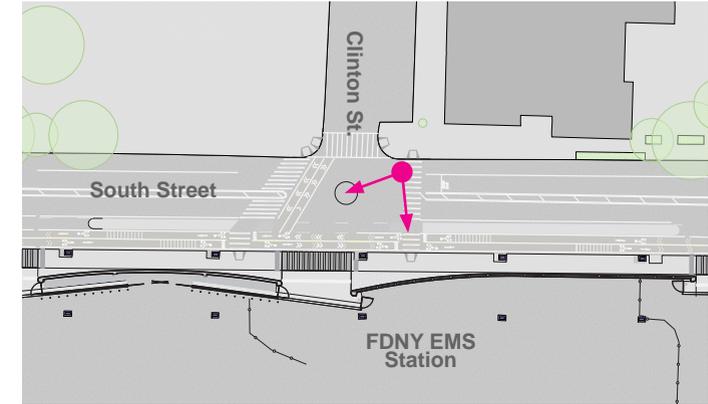
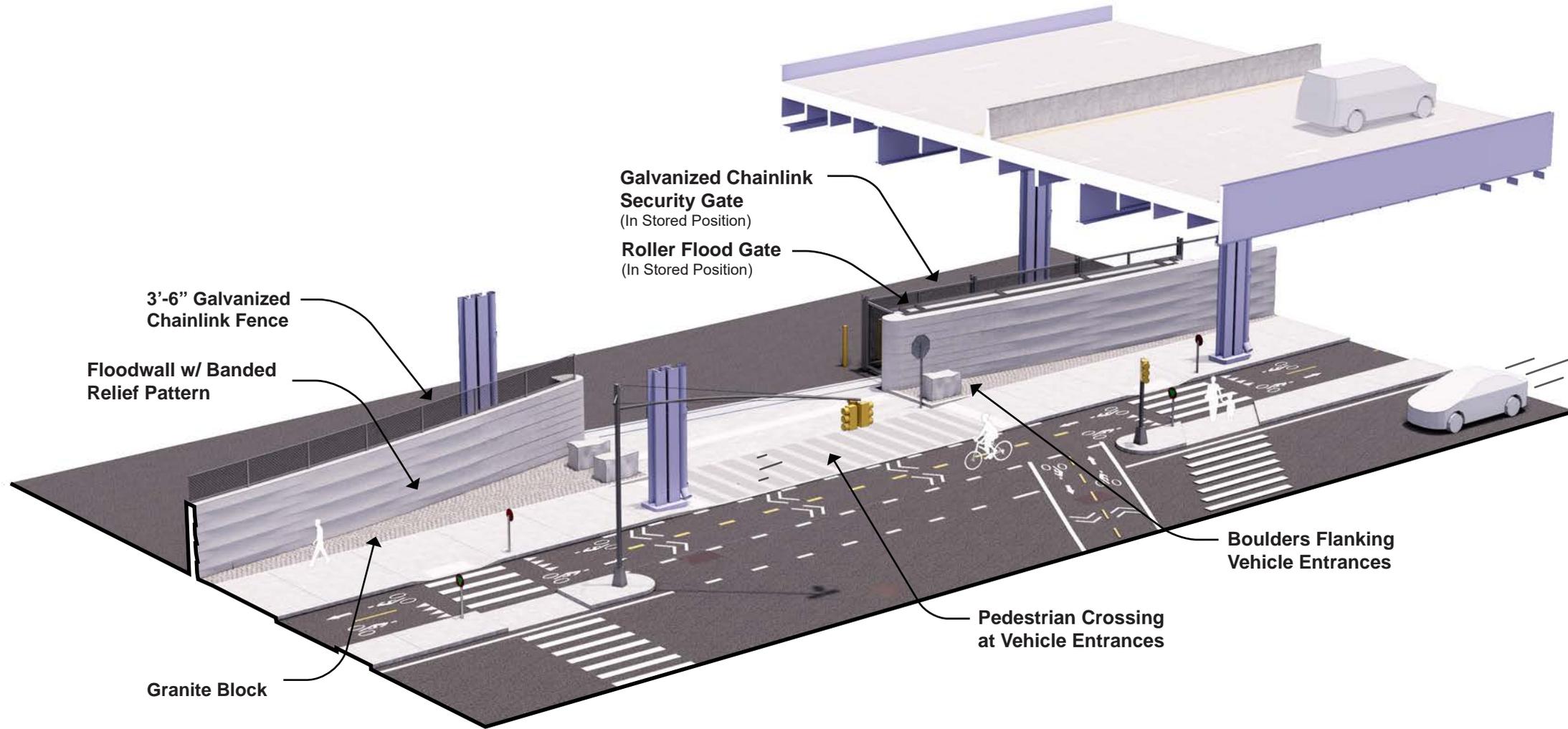
1. EXPOSED WALL ELEVATION - PROTECTED SIDE ALONG SOUTH STREET (EAST SECTION)



2. EXPOSED WALL ELEVATION - PROTECTED SIDE ALONG SOUTH STREET (WEST SECTION)

FLOOD PROTECTION WALKTHROUGH

Pier 36 Driveway at Clinton Street (Gate 30)



FLOOD PROTECTION WALKTHROUGH

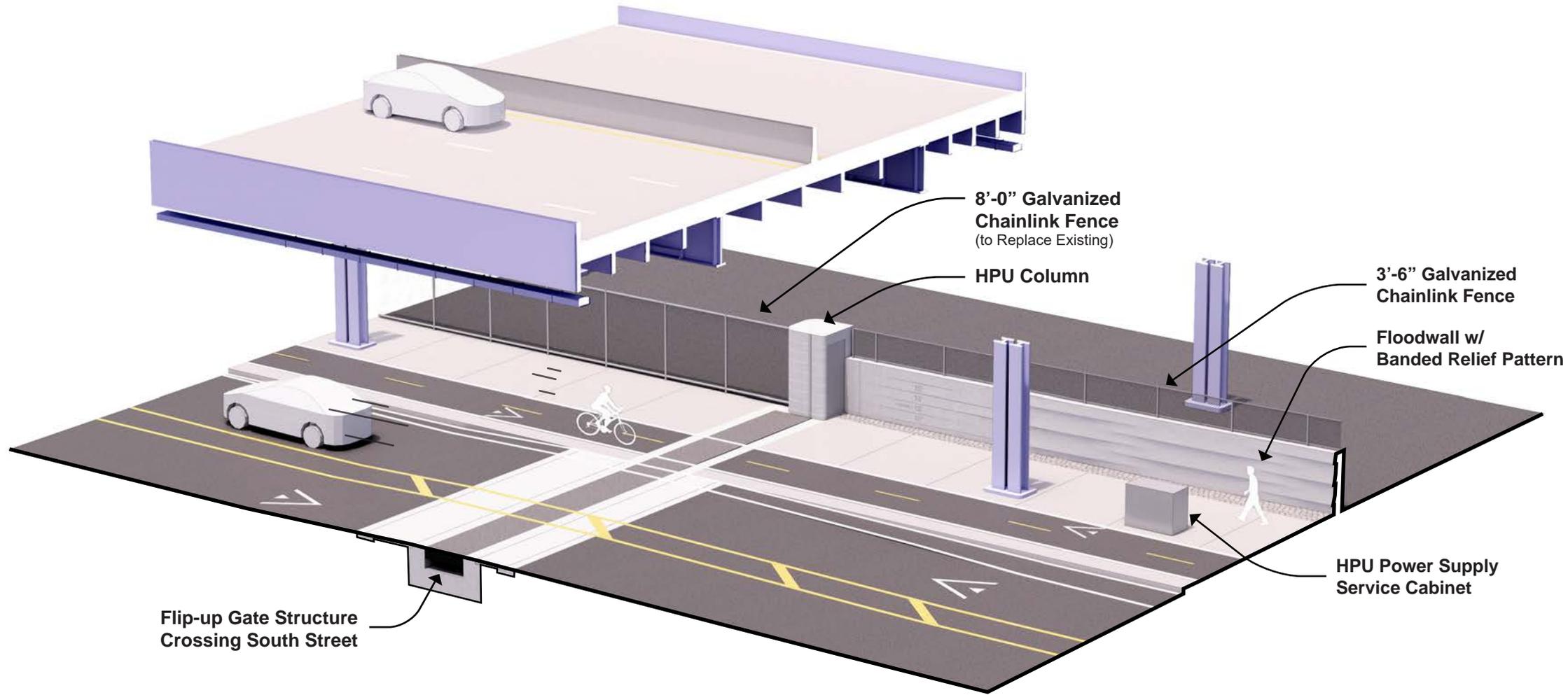
View Looking North Along Pier 36, At Vehicle Entrance at Clinton Street (Gate 30)



EXISTING VIEW (APPROXIMATE)

FLOOD PROTECTION WALKTHROUGH

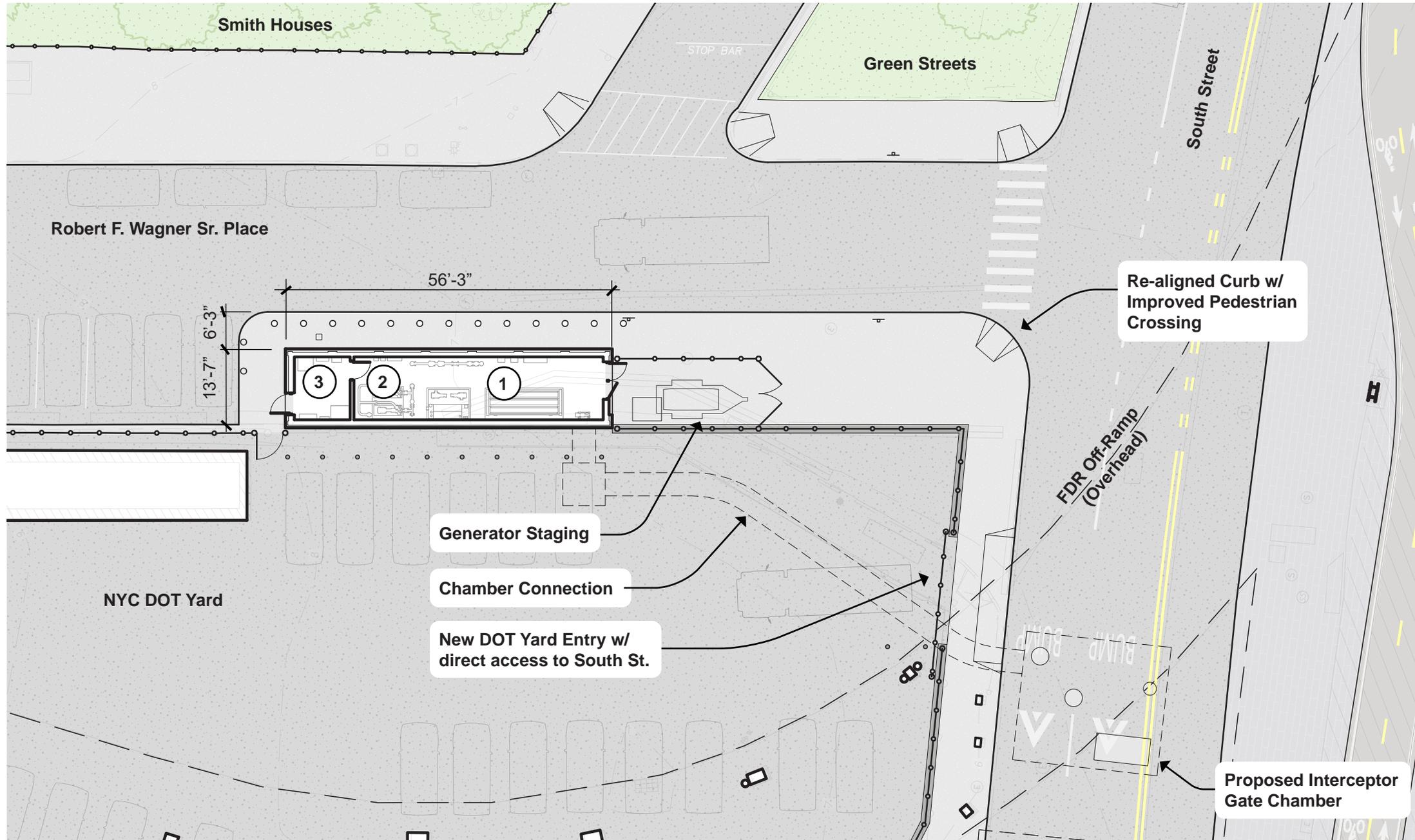
South Street Crossing - Pier 36 Side



INTERCEPTOR GATE BUILDING

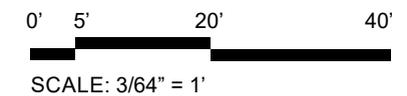
INTERCEPTOR GATE BUILDING

Proposed Site Plan



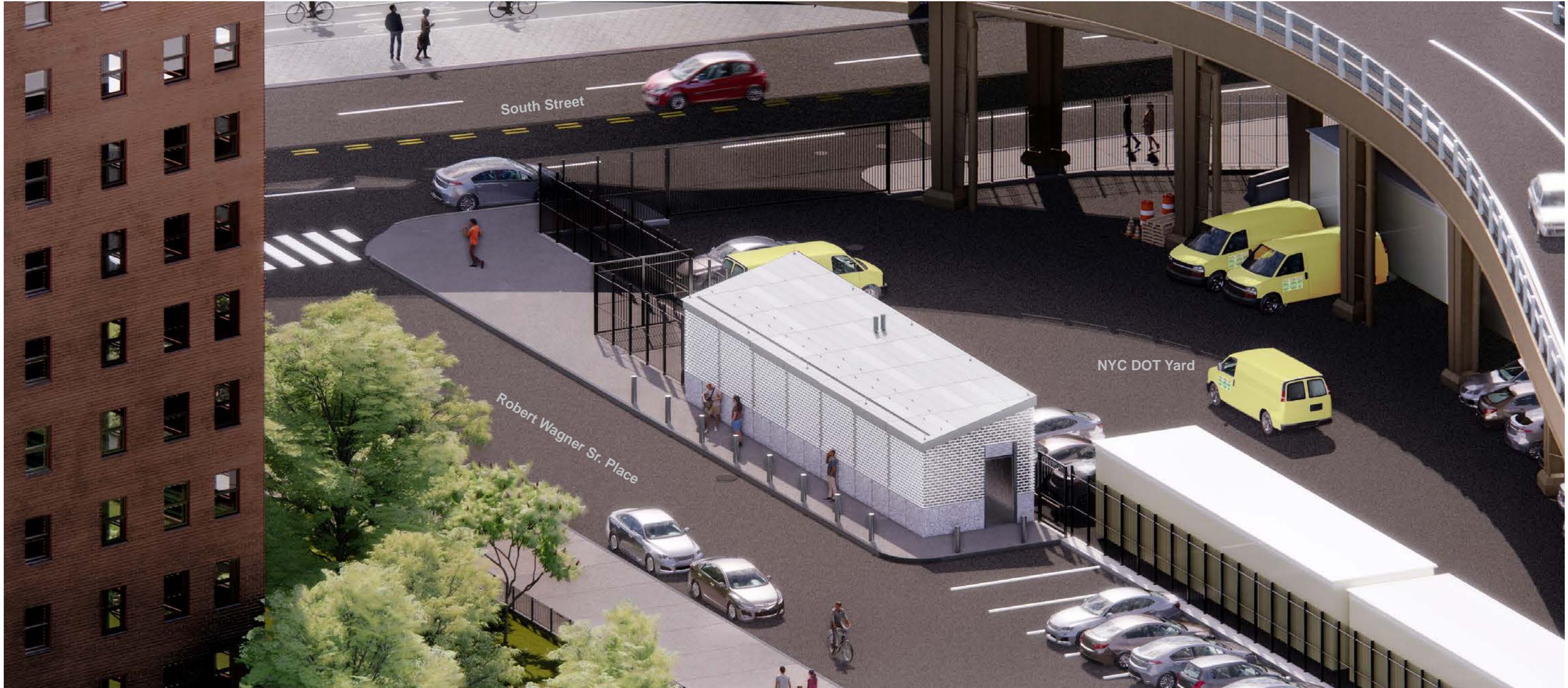
KEY:

- 1. Hydraulic Area
- 2. Pump Area
- 3. Electrical Room



INTERCEPTOR GATE BUILDING

Aerial View from East



INTERCEPTOR GATE BUILDING

View from South Street

