

BK Bridge - Montgomery Coastal Resilience

February 20, 2020

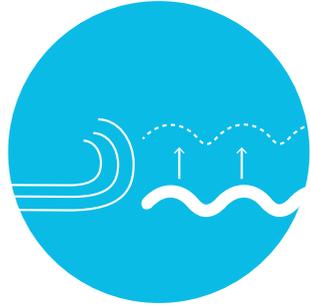
Design Progress for Two Bridges Neighborhood Project
Governor Alfred E. Smith Houses

Agenda

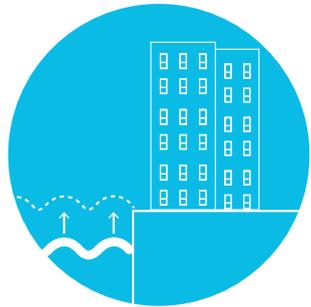
- ① Lower Manhattan Coastal Resiliency
- ② Project Recap
- ③ Design Updates
- ④ Q&A

1 Lower Manhattan Coastal Resiliency

Flood Risk



Storm Surge



Sea Level Rise (SLR)

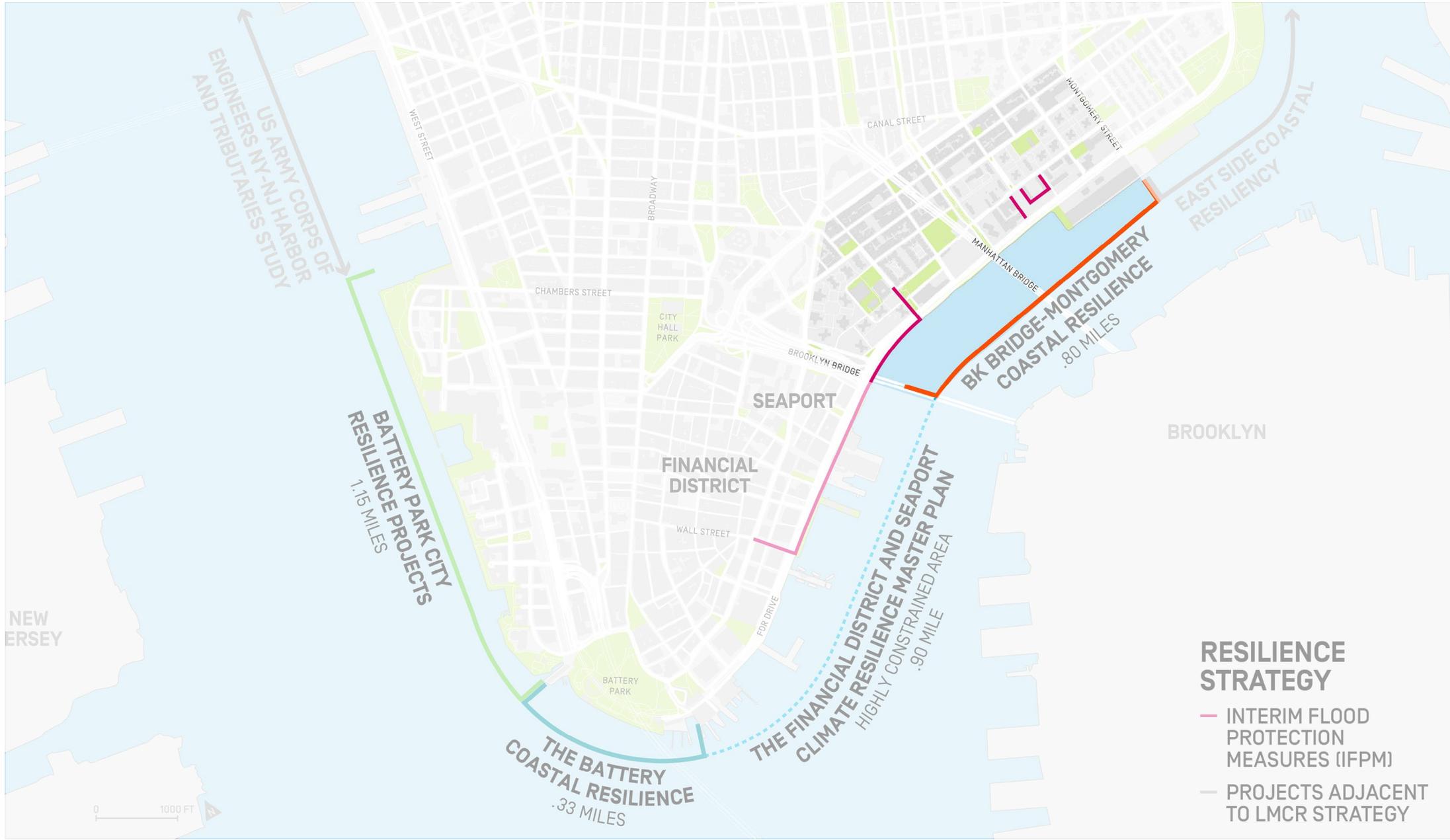


1 Lower Manhattan Coastal Resiliency



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

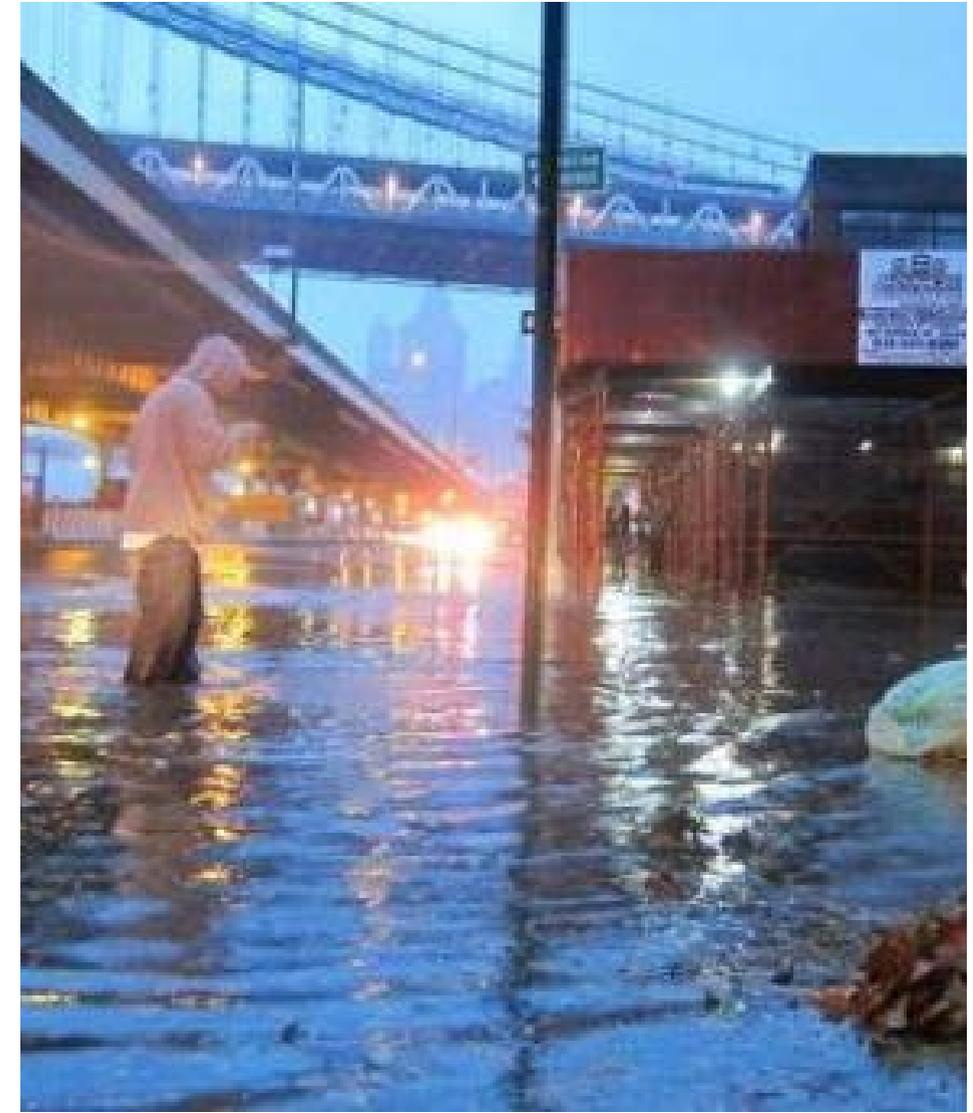
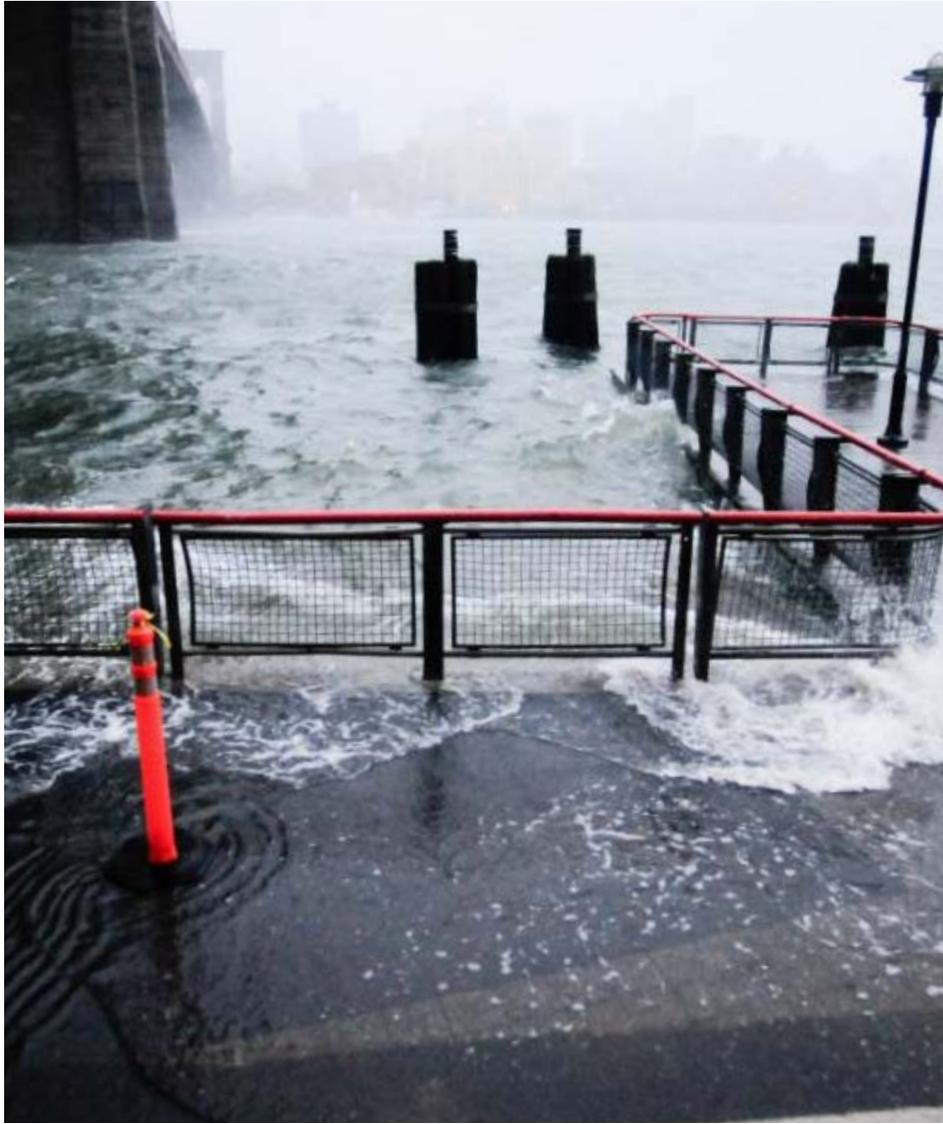
1 Lower Manhattan Coastal Resiliency



The **BK Bridge-Montgomery Coastal Resilience (BMCR)** project in the **Two Bridges neighborhood** will reduce flooding while maintaining the community's views and access to the waterfront.

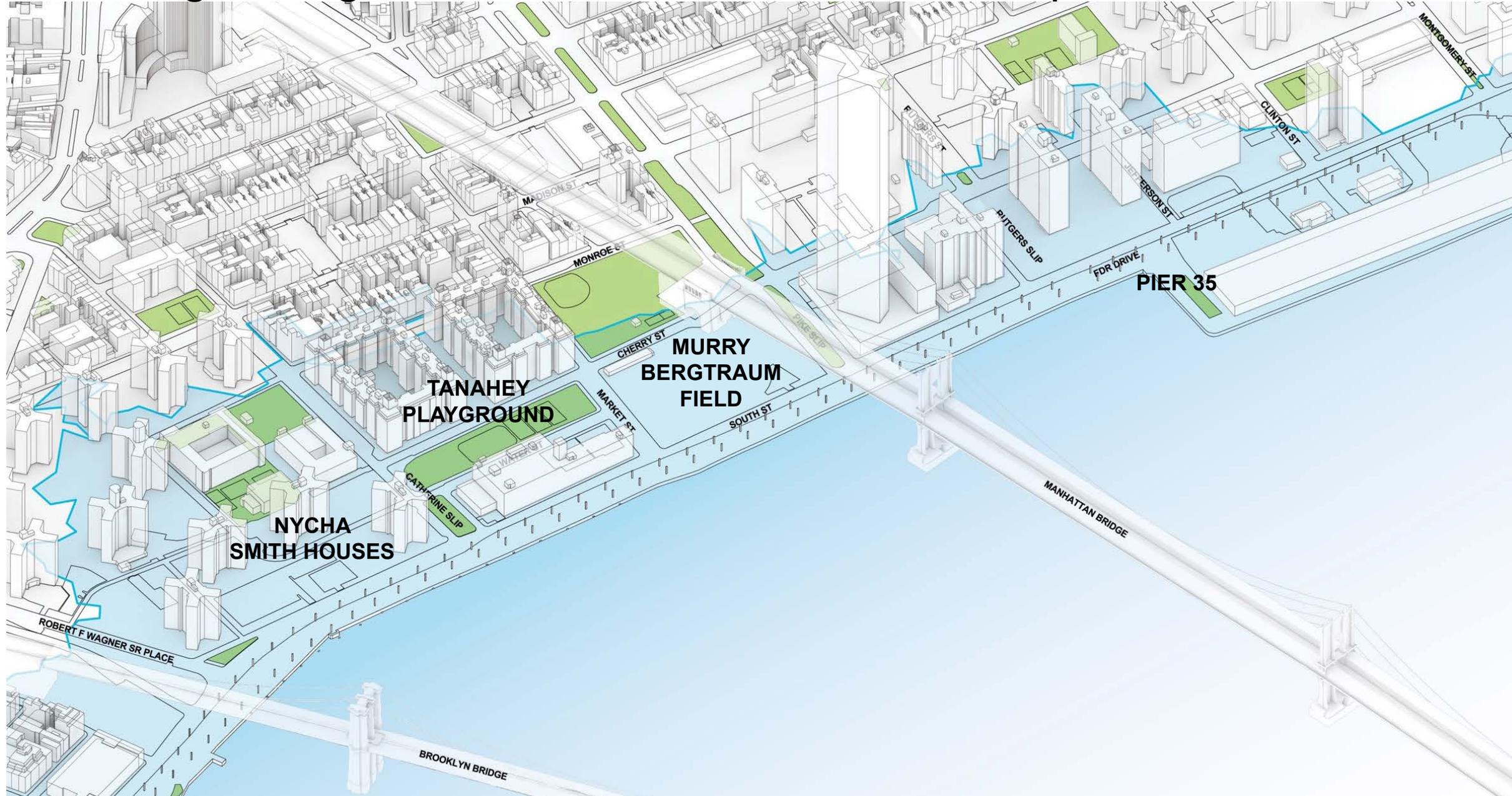
① Lower Manhattan Coastal Resiliency

Flood damage in Two Bridges from Hurricane Sandy



① Lower Manhattan Coastal Resiliency

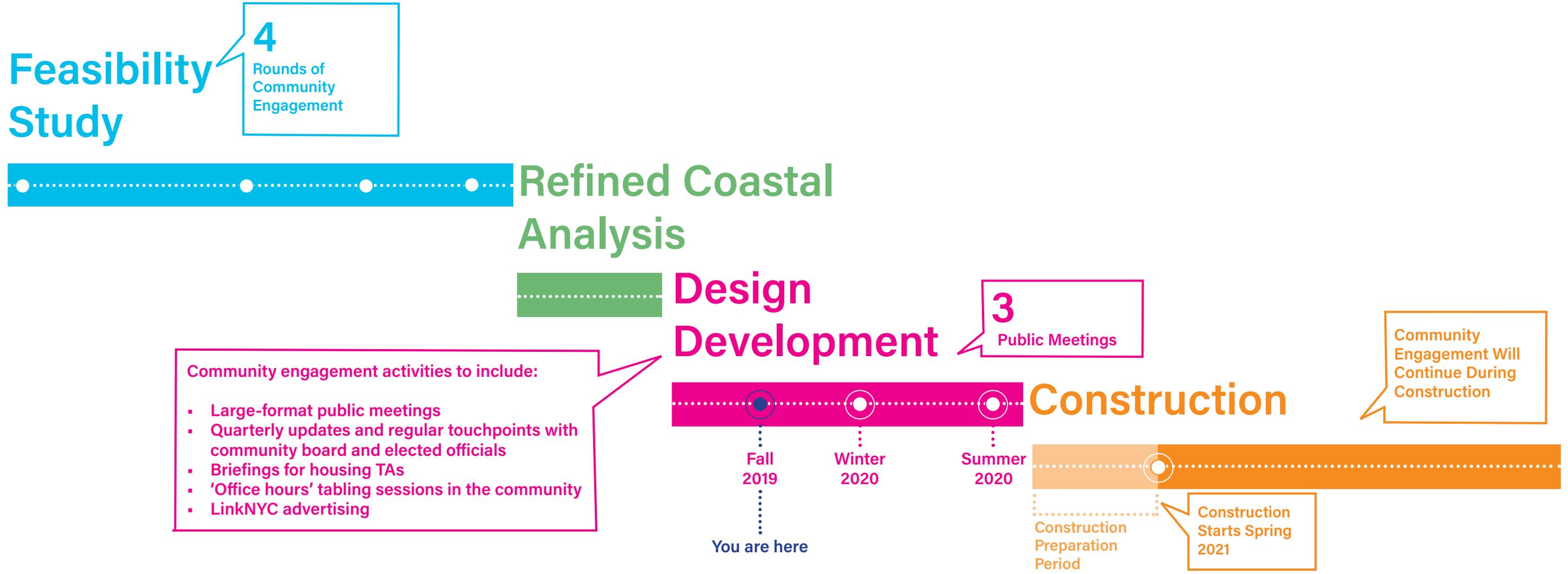
Two Bridges Neighborhood - 2050s 100-Year Floodplain



2 Project Recap

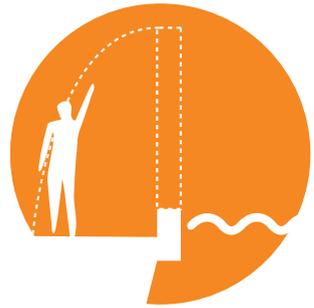
2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |

Brooklyn Bridge - Montgomery Coastal Resilience Timeline



2 Project Recap

We heard from the Two Bridges community that the project should try to achieve these goals:



Provide Flood Protection and Resilience



Preserve Views + Access



Distribute Program Equitably



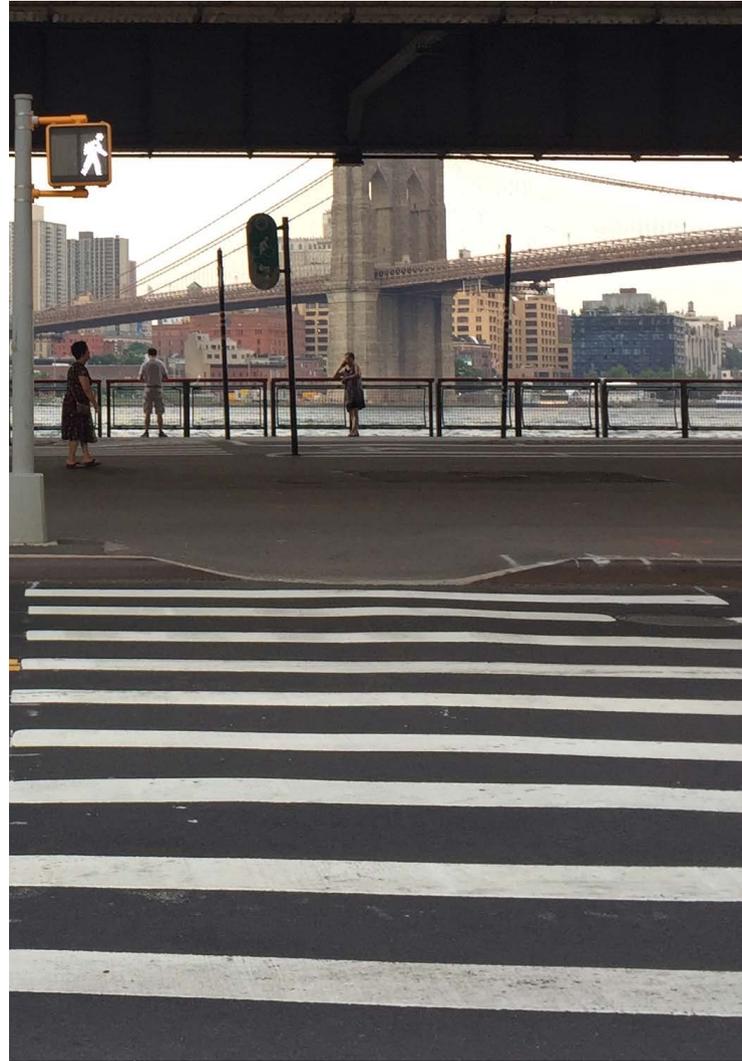
Integrate Infrastructure into Public Realm

② Project Recap

Preserve Views + Access



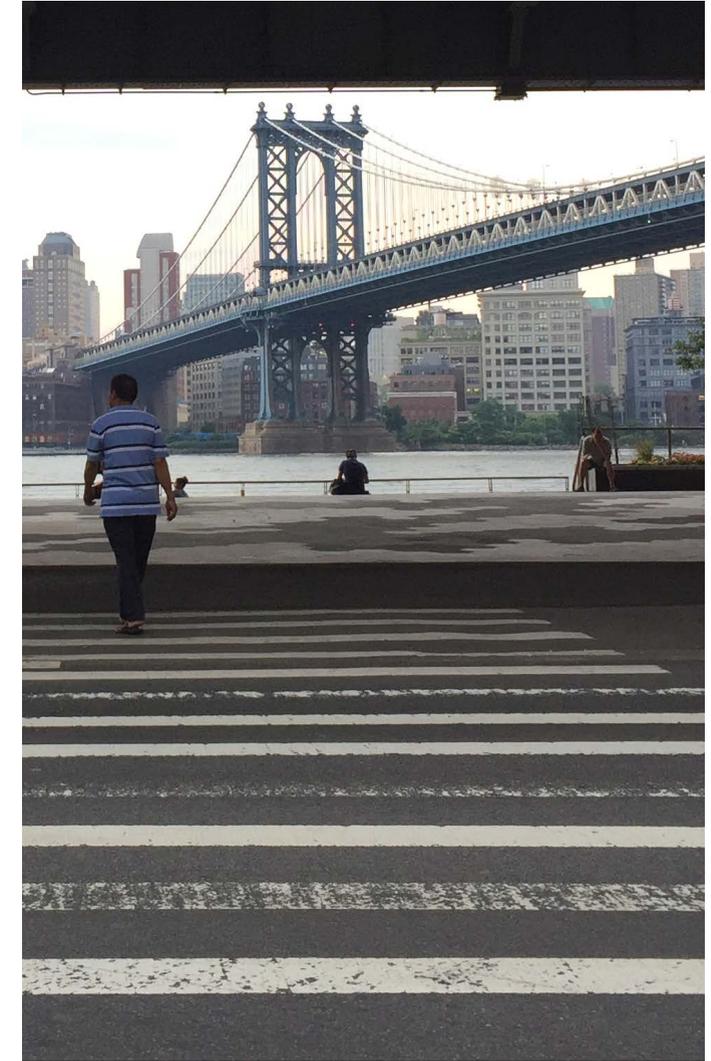
CATHERINE SLIP



MARKET SLIP



PIKE SLIP



RUTGERS SLIP

2 Project Recap

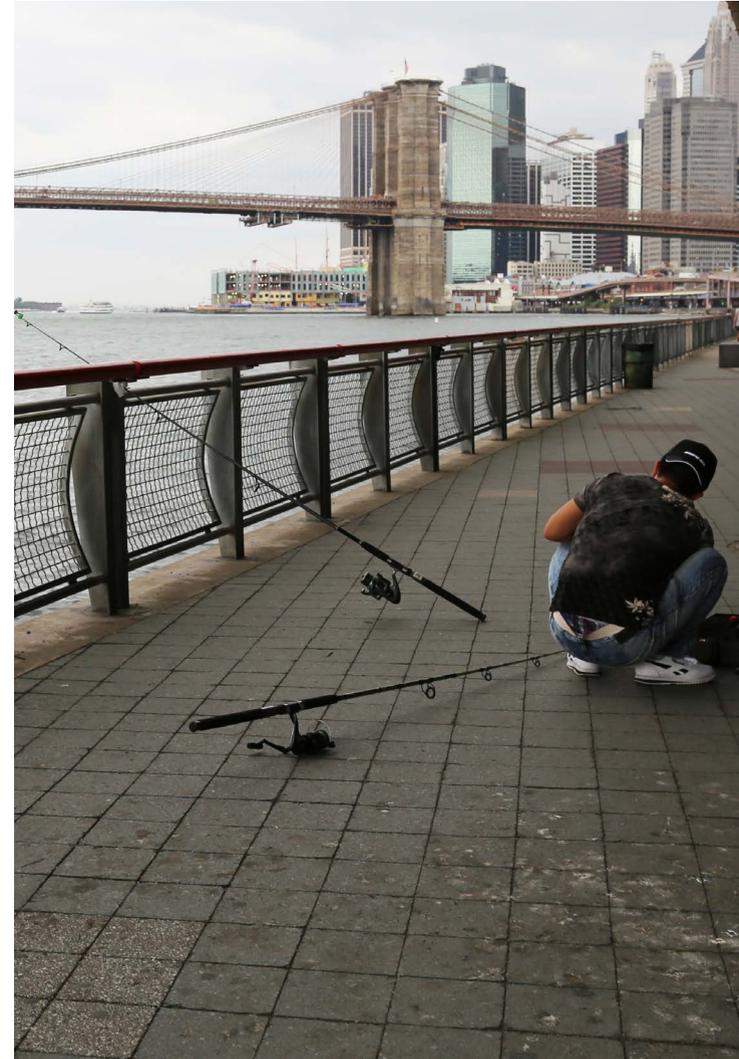
Distribute Program Equitably



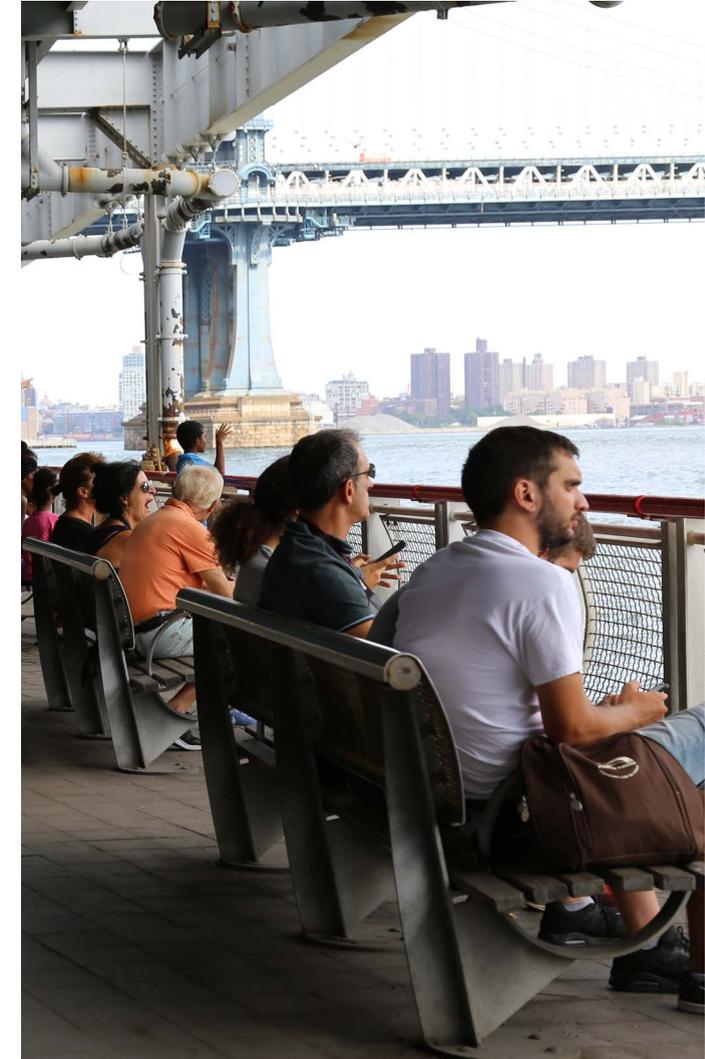
FITNESS PARK



BASKETBALL COURTS



FISHING AREA



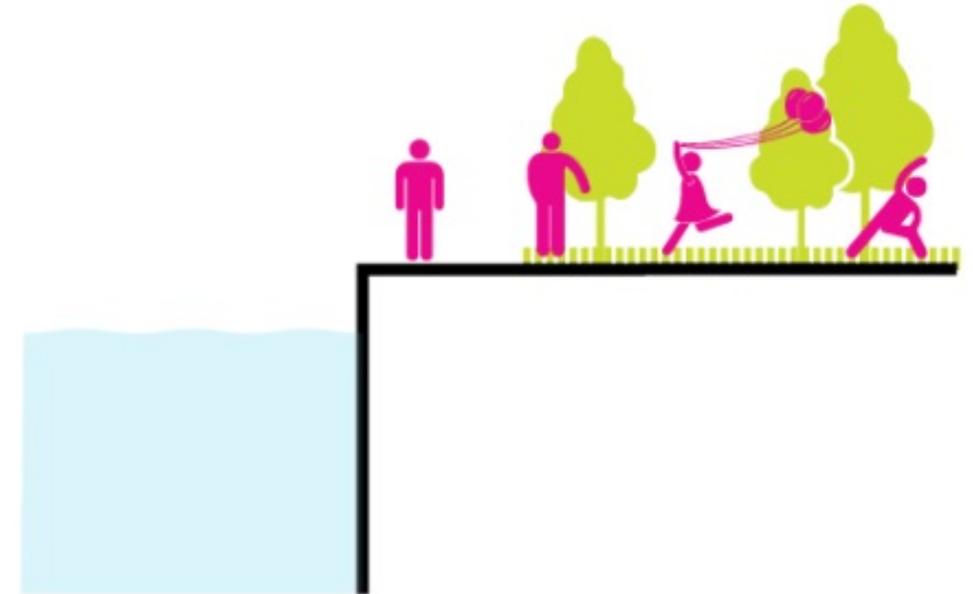
SEATING / OBSERVATION AREA

② Project Recap

Integrate Infrastructure into Public Realm

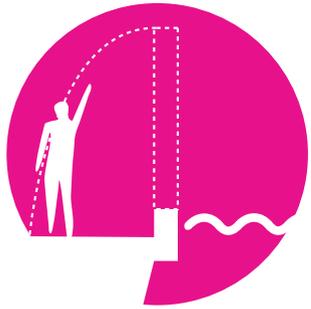


FLOOD REDUCTION

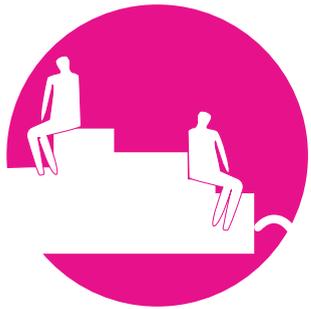


PUBLIC SPACE

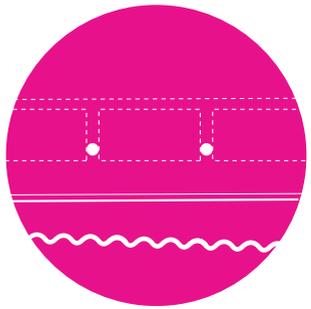
3 Design Updates



Resilience Infrastructure



Raised Platform (Sea Level Rise)



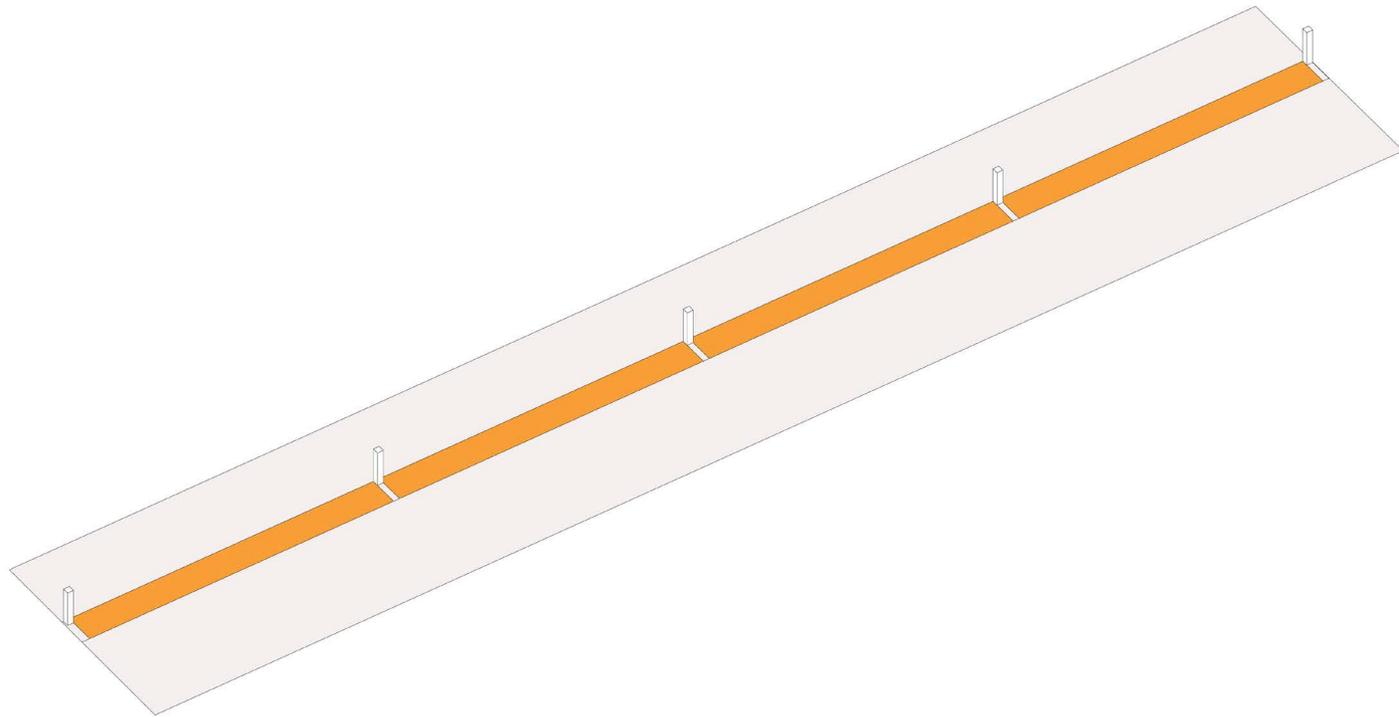
Alignment - Location of Infrastructure

③ Design Updates

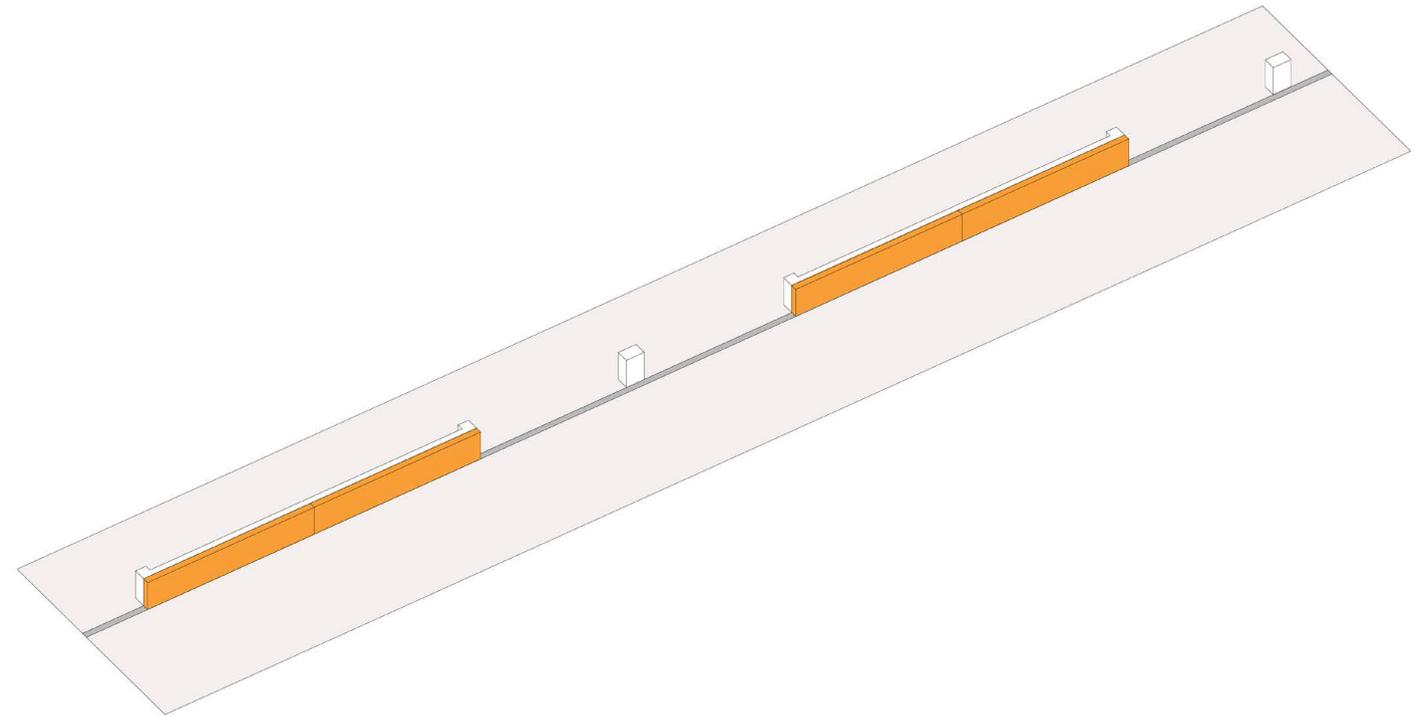
Infrastructure Toolkit

To preserve views and access along the waterfront, the project will utilize an infrastructure toolkit that combines fixed structures with deployable flood gates.

Flip Up Barrier: Sunny Day



Roller Gates & Fixed Structures: Sunny Day

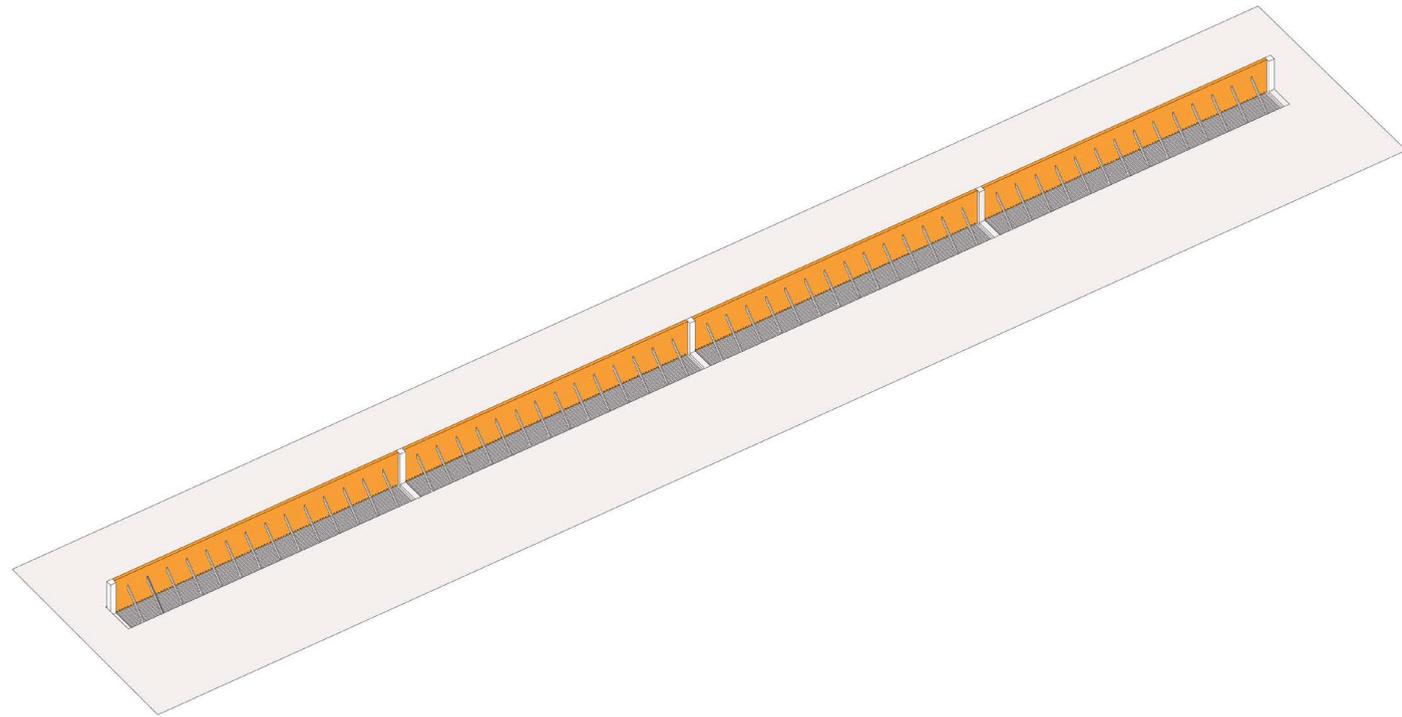


③ Design Updates

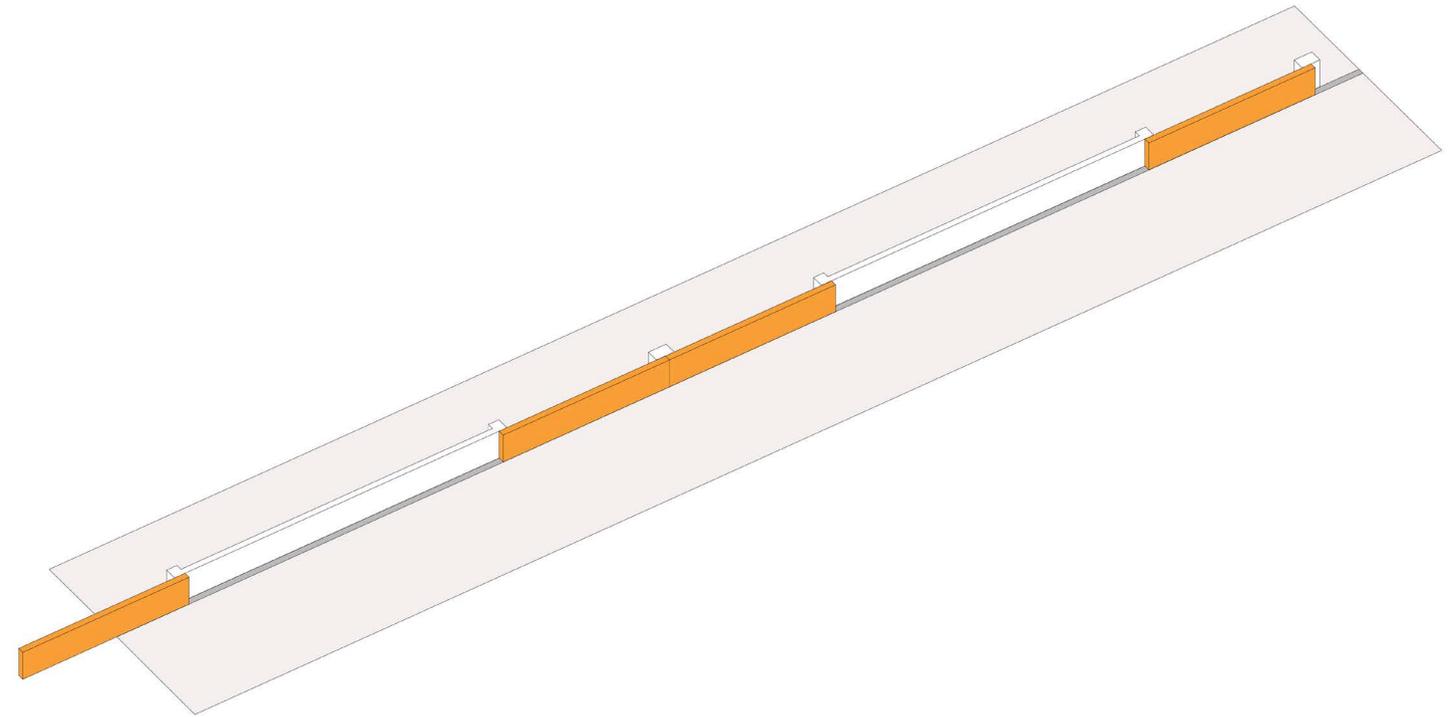
Infrastructure Toolkit

To preserve views and access along the waterfront, the project will utilize an infrastructure toolkit that combines fixed structures with deployable flood gates.

Flip Up Barrier: Deployed

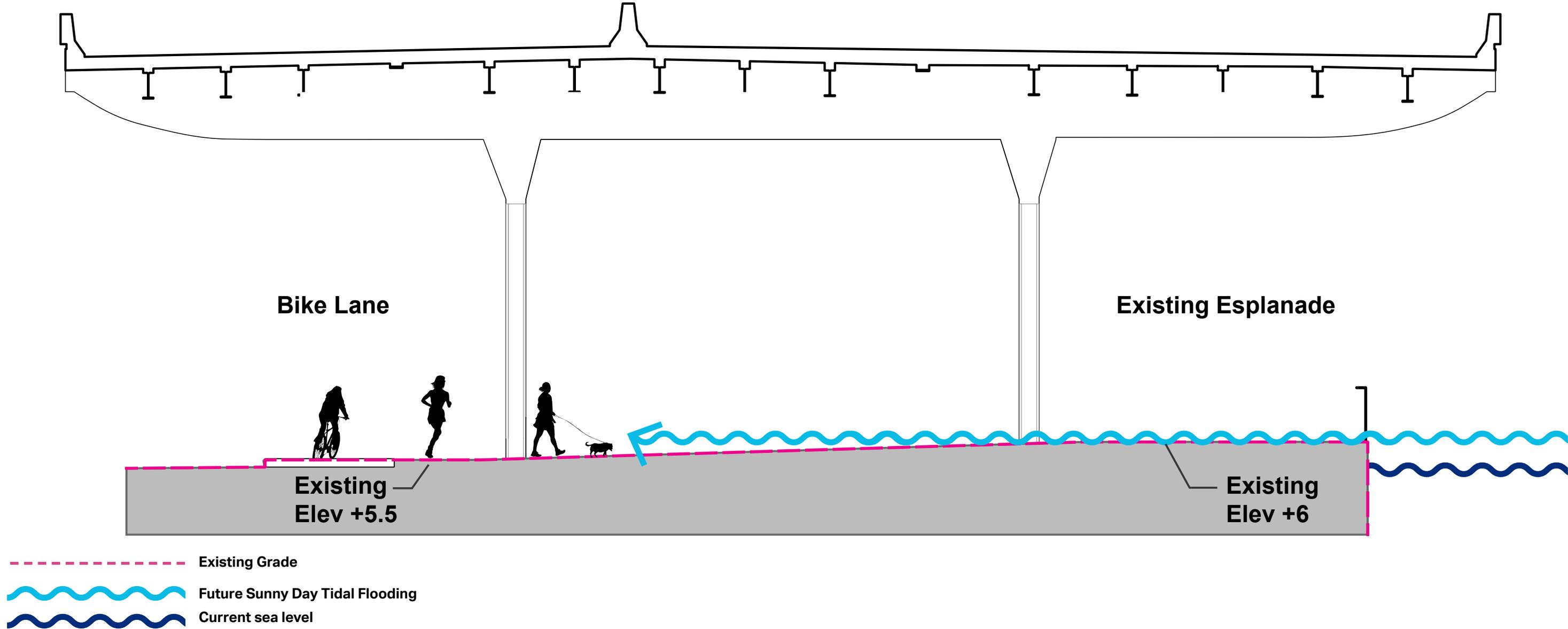


Roller Gates & Fixed Structures: Deployed



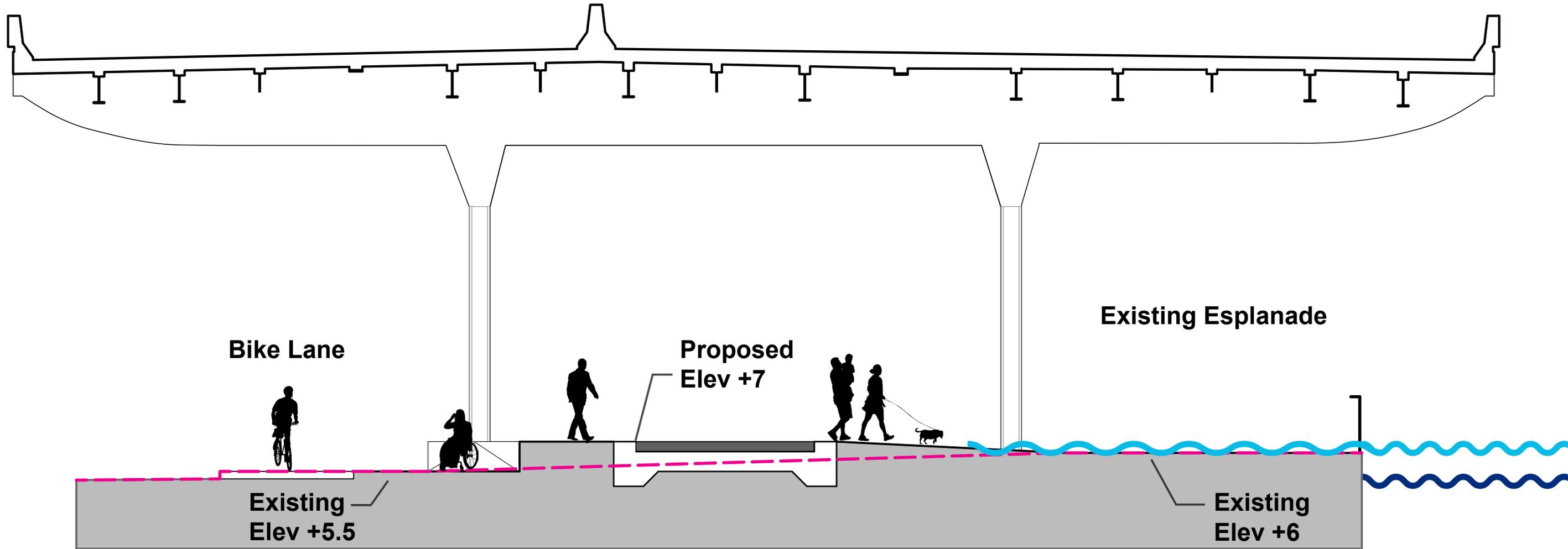
3 Design Updates

Raised Platform to Address Sunny Day Tidal Flooding from SLR



3 Design Updates

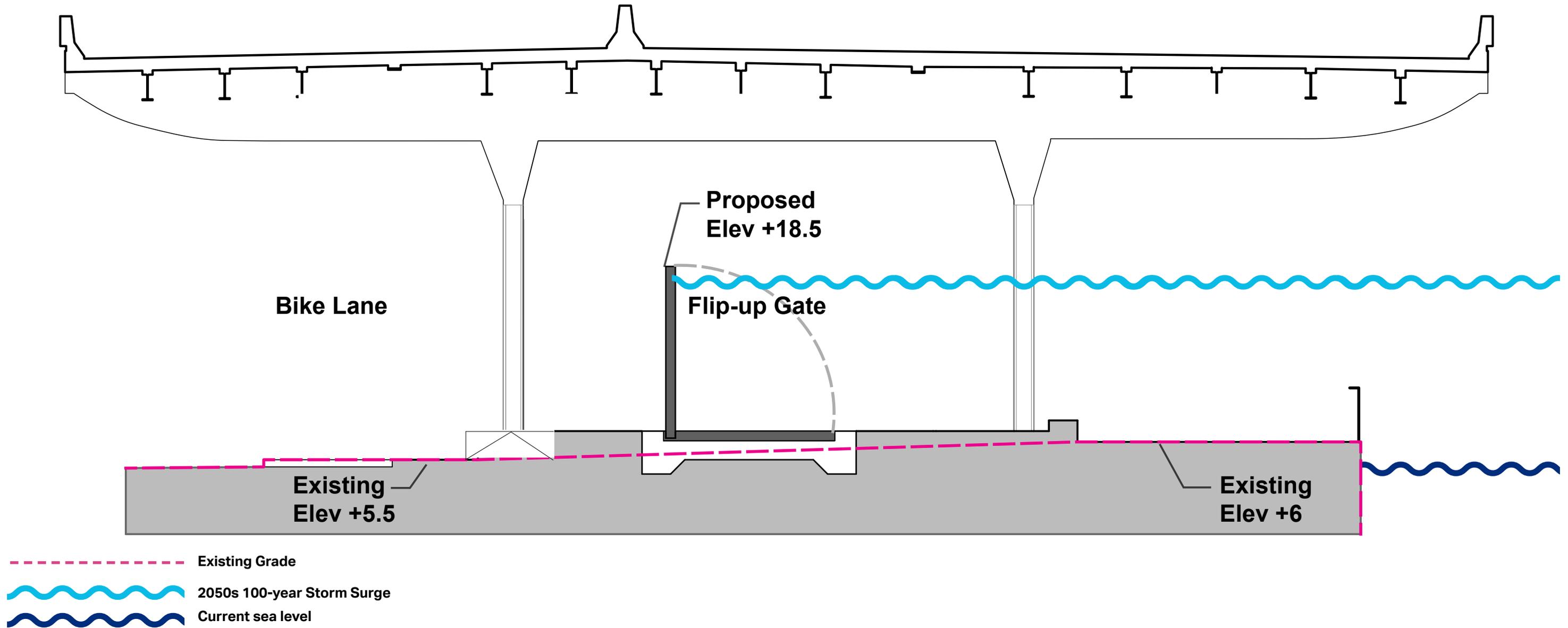
Raised Platform to Address Sunny Day Tidal Flooding from SLR



- Existing Grade
- Future Sunny Day Tidal Flooding
- Current sea level

3 Design Updates

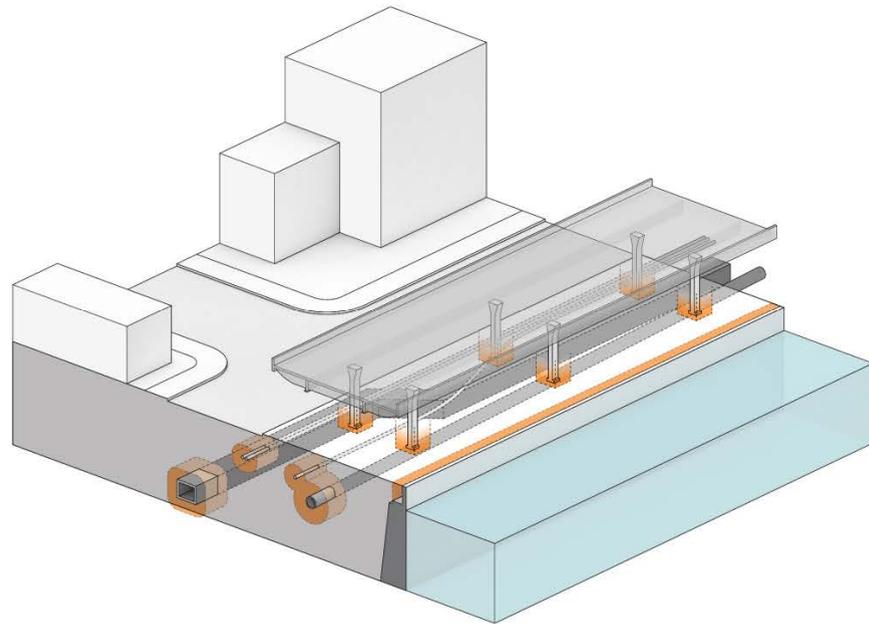
Deployed Flood Infrastructure



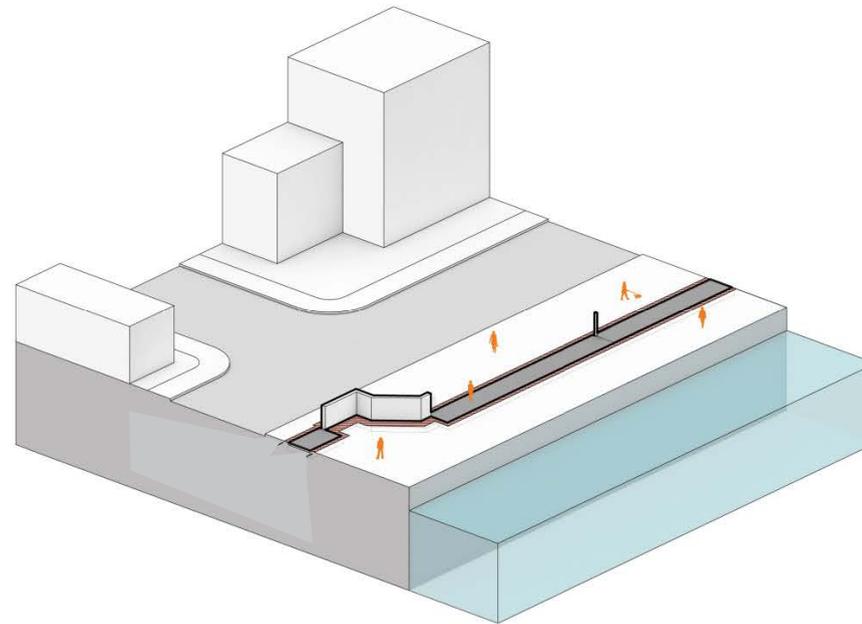
3 Design Updates

Flood Protection Alignment - Location of Infrastructure

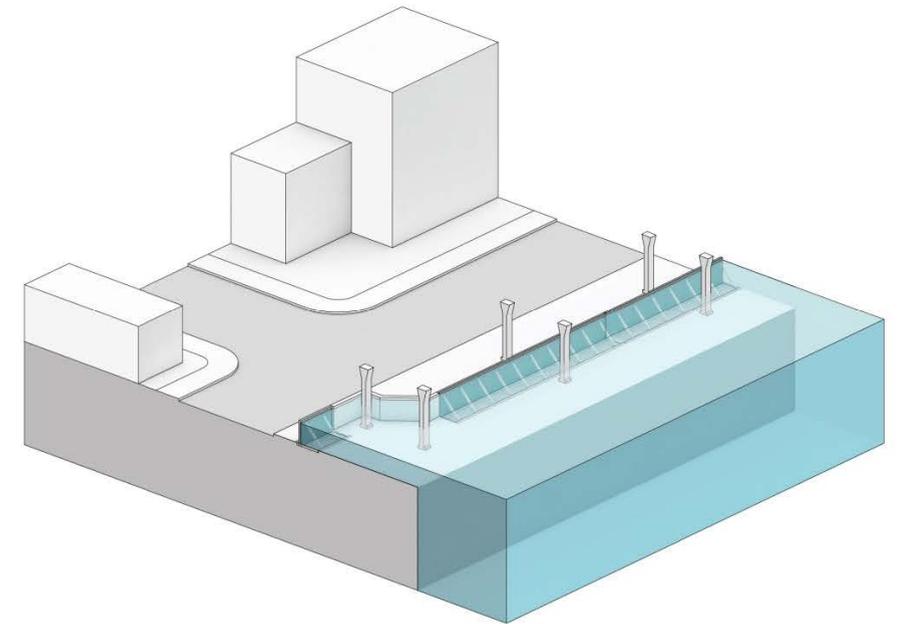
Site Constraints
Existing Infrastructure



Line of Protection
Sunny Day

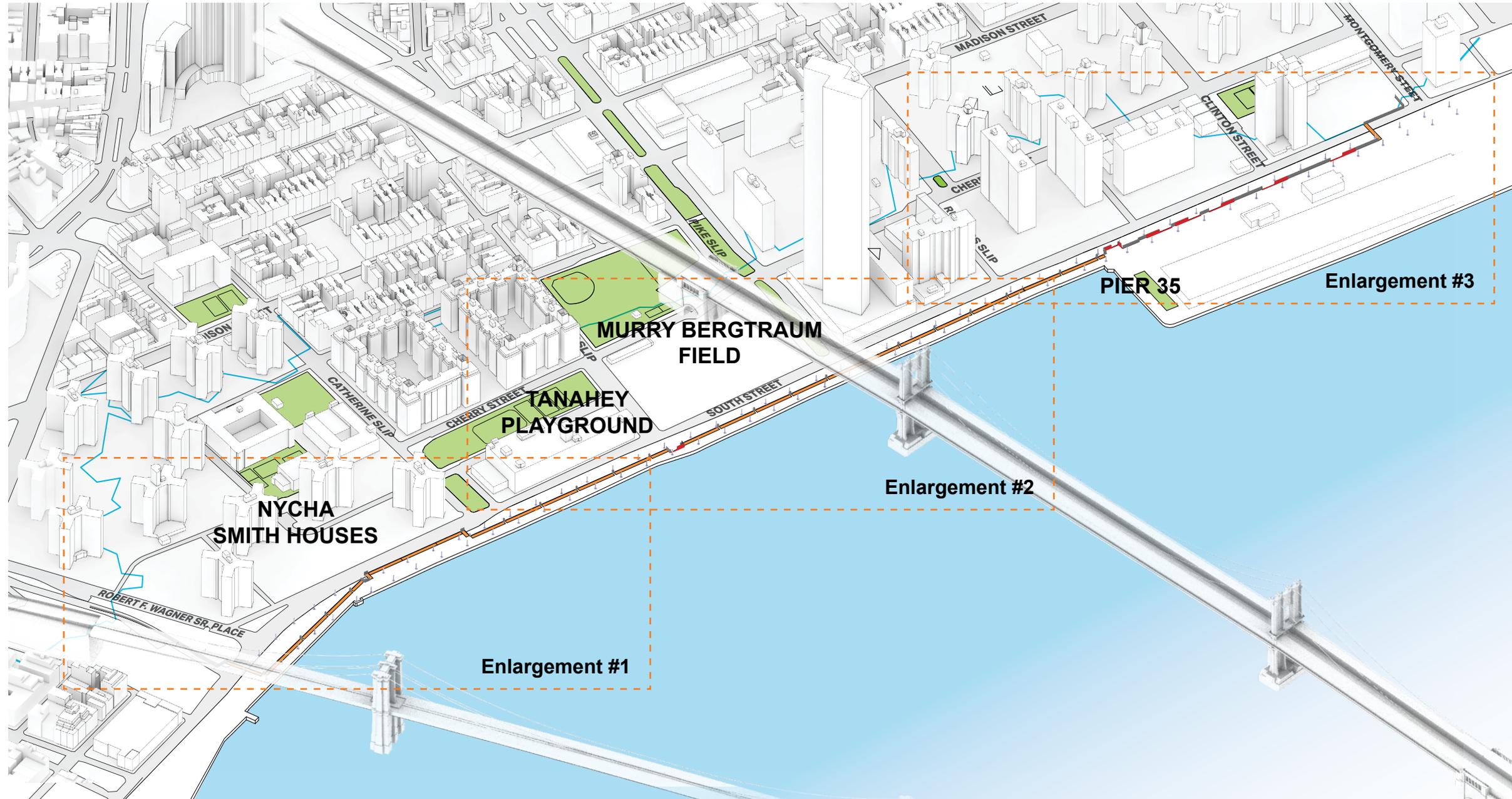


Line of Protection
Deployed



③ Design Updates

Flood Protection Alignment

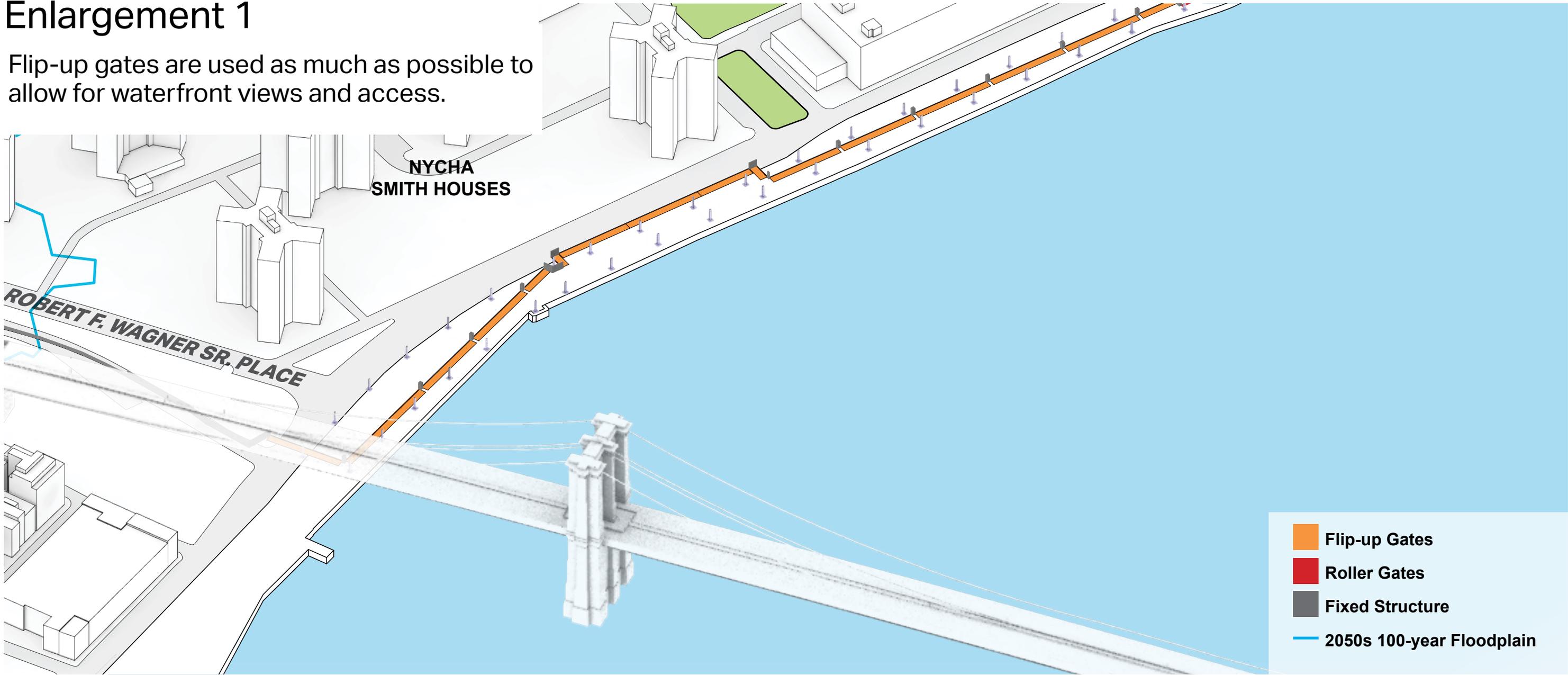


- Flip-up Gates
- Roller Gates
- Fixed Structure
- 2050s 100-year Floodplain

3 Design Updates

Enlargement 1

Flip-up gates are used as much as possible to allow for waterfront views and access.

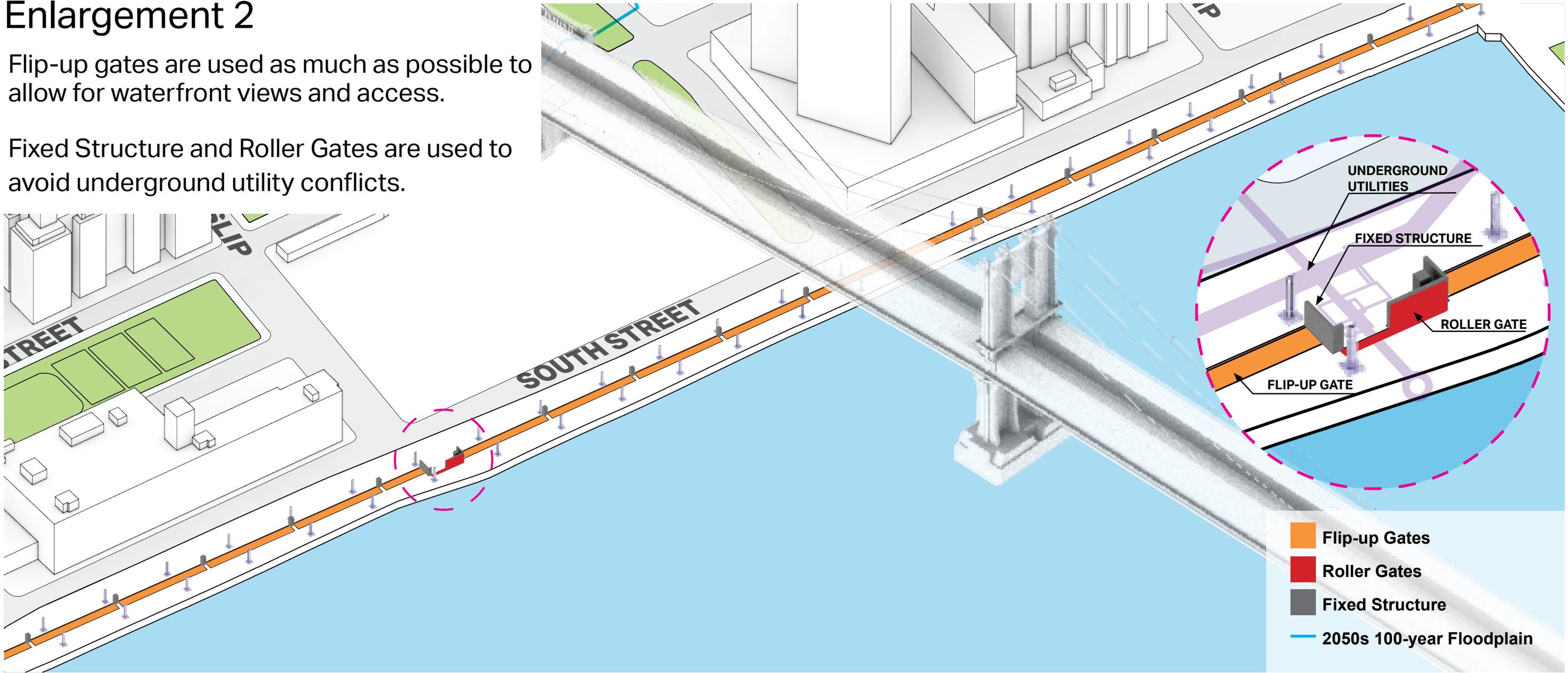


3 Design Updates

Enlargement 2

Flip-up gates are used as much as possible to allow for waterfront views and access.

Fixed Structure and Roller Gates are used to avoid underground utility conflicts.



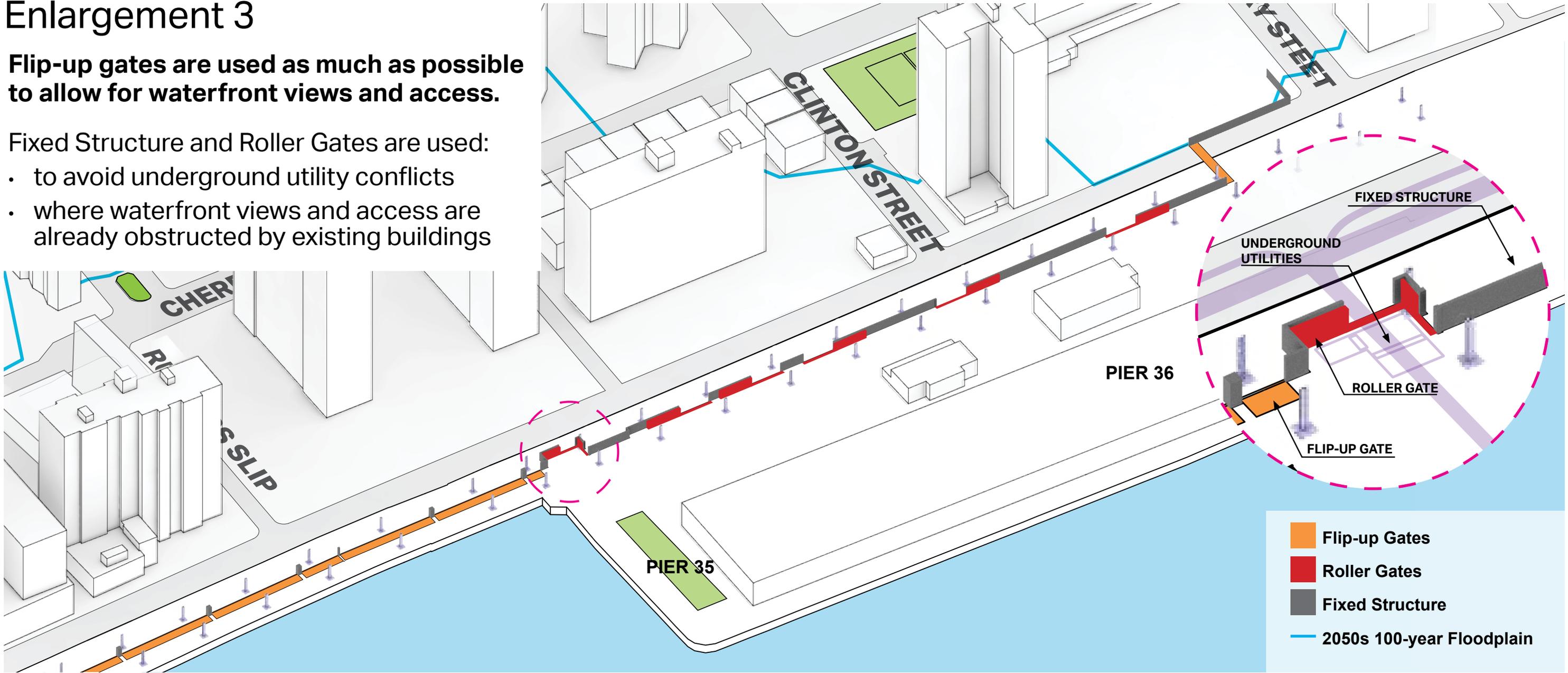
3 Design Updates

Enlargement 3

Flip-up gates are used as much as possible to allow for waterfront views and access.

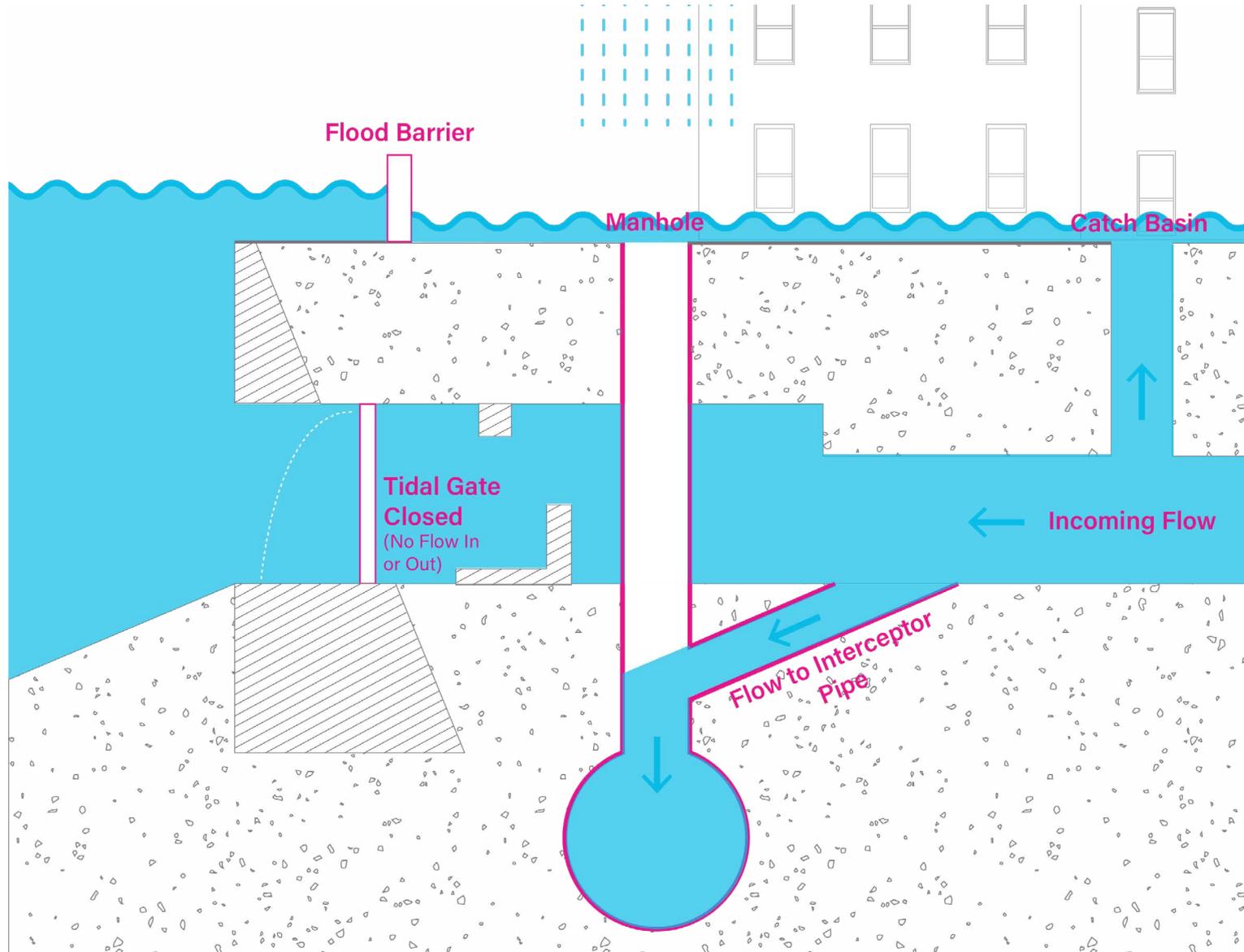
Fixed Structure and Roller Gates are used:

- to avoid underground utility conflicts
- where waterfront views and access are already obstructed by existing buildings



3 Design Updates

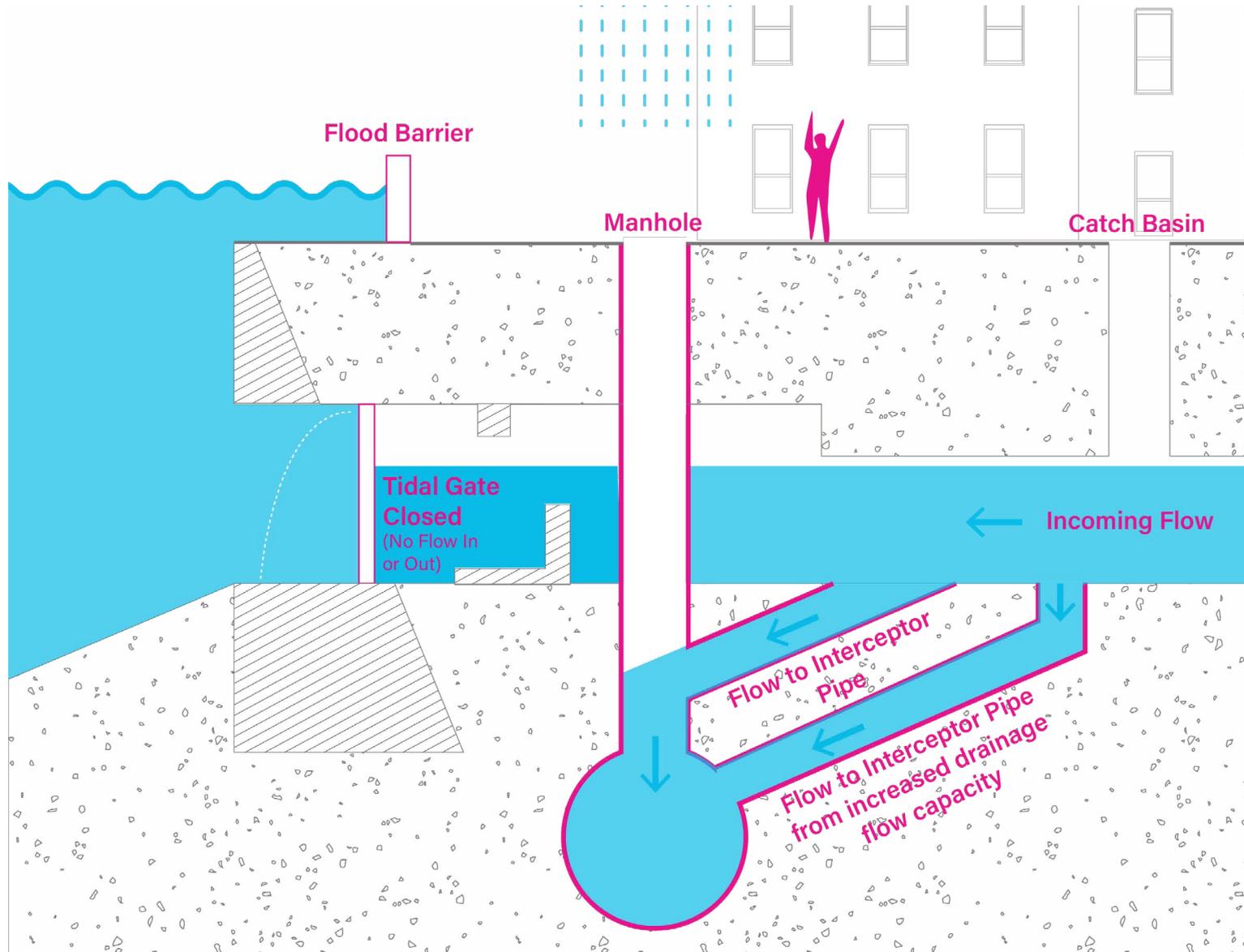
BMCR Without Drainage Intervention



Storm surge and sea level rise decrease the system's ability to discharge, leading to **street and basement flooding.**

3 Design Updates

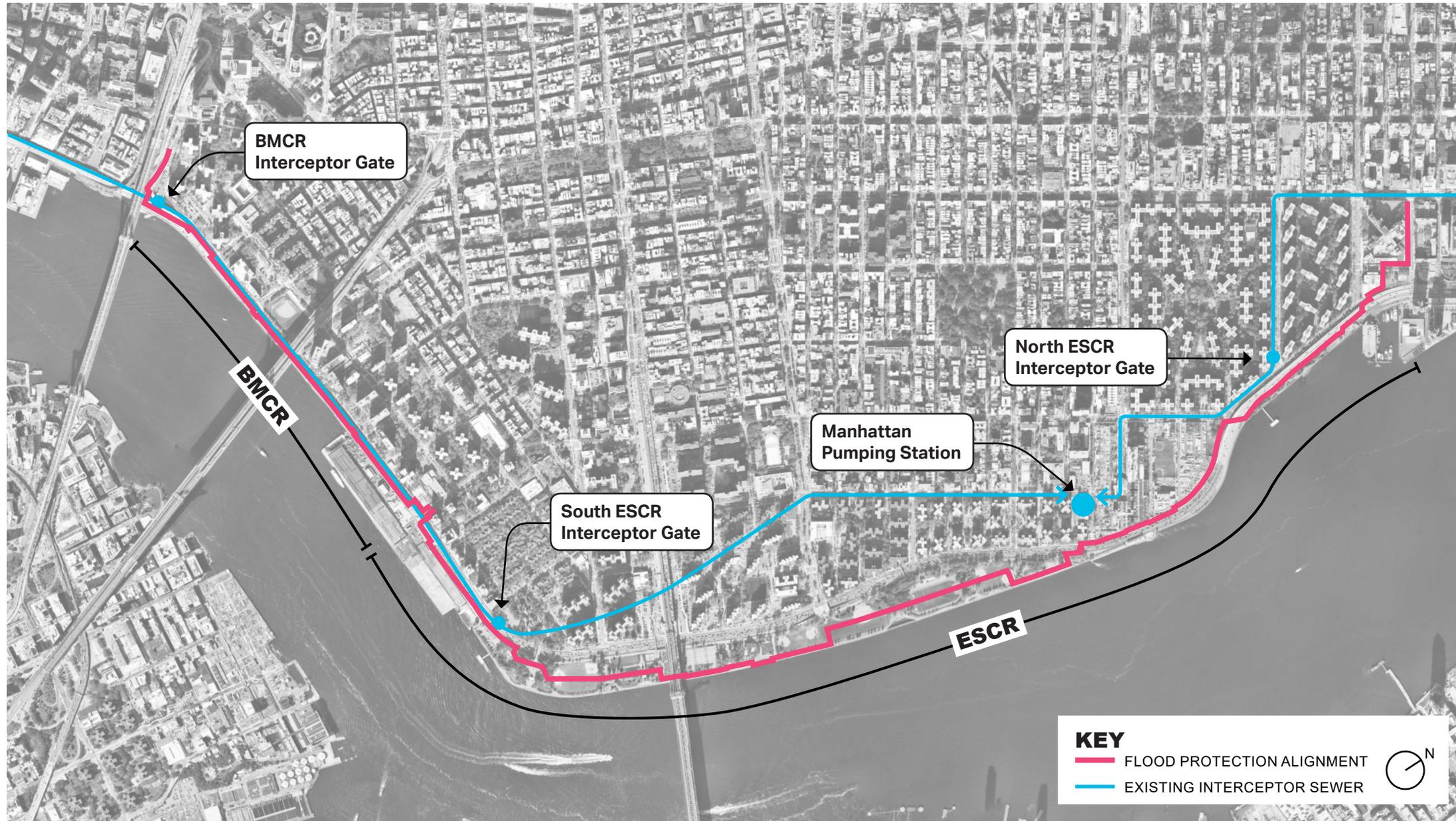
BMCR With Drainage Intervention



The proposed drainage system will allow **additional flow capacity** to the interceptor pipe, **reducing the risk of street and basement flooding.**

INTERCEPTOR GATE BUILDING

Combined BMCR / ESCR Approach



BMCR IGB



SOUTH ESCR IGB



NORTH ESCR IGB

BMCR / ESCR COMBINED INTERCEPTOR STRATEGY

INTERCEPTOR GATE BUILDING

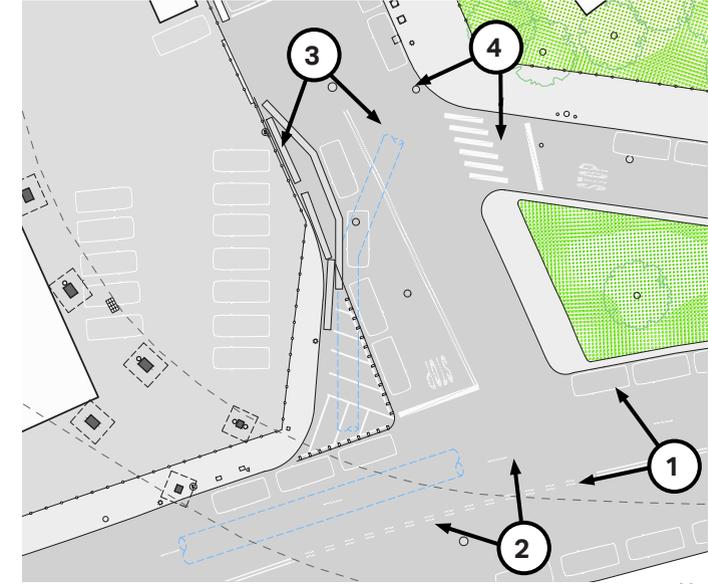
Existing Conditions



1. AERIAL VIEW FROM SOUTHEAST



2. VIEW LOOKING NORTH FROM SOUTH STREET



KEY



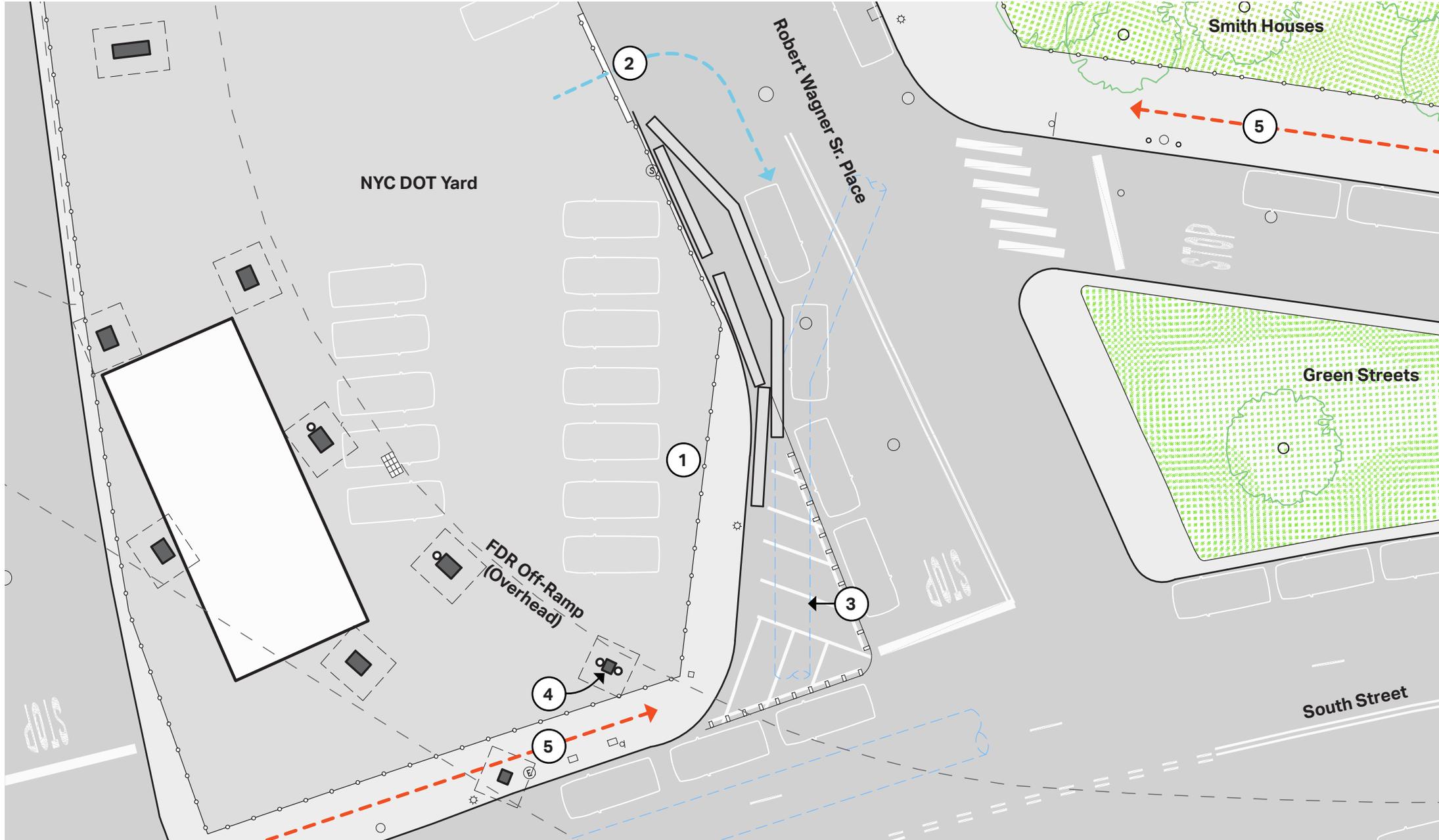
3. VIEW LOOKING SOUTH FROM WAGNER PL.



4. VIEW LOOKING SOUTHWEST FROM WAGNER PL.

INTERCEPTOR GATE BUILDING

Existing Conditions

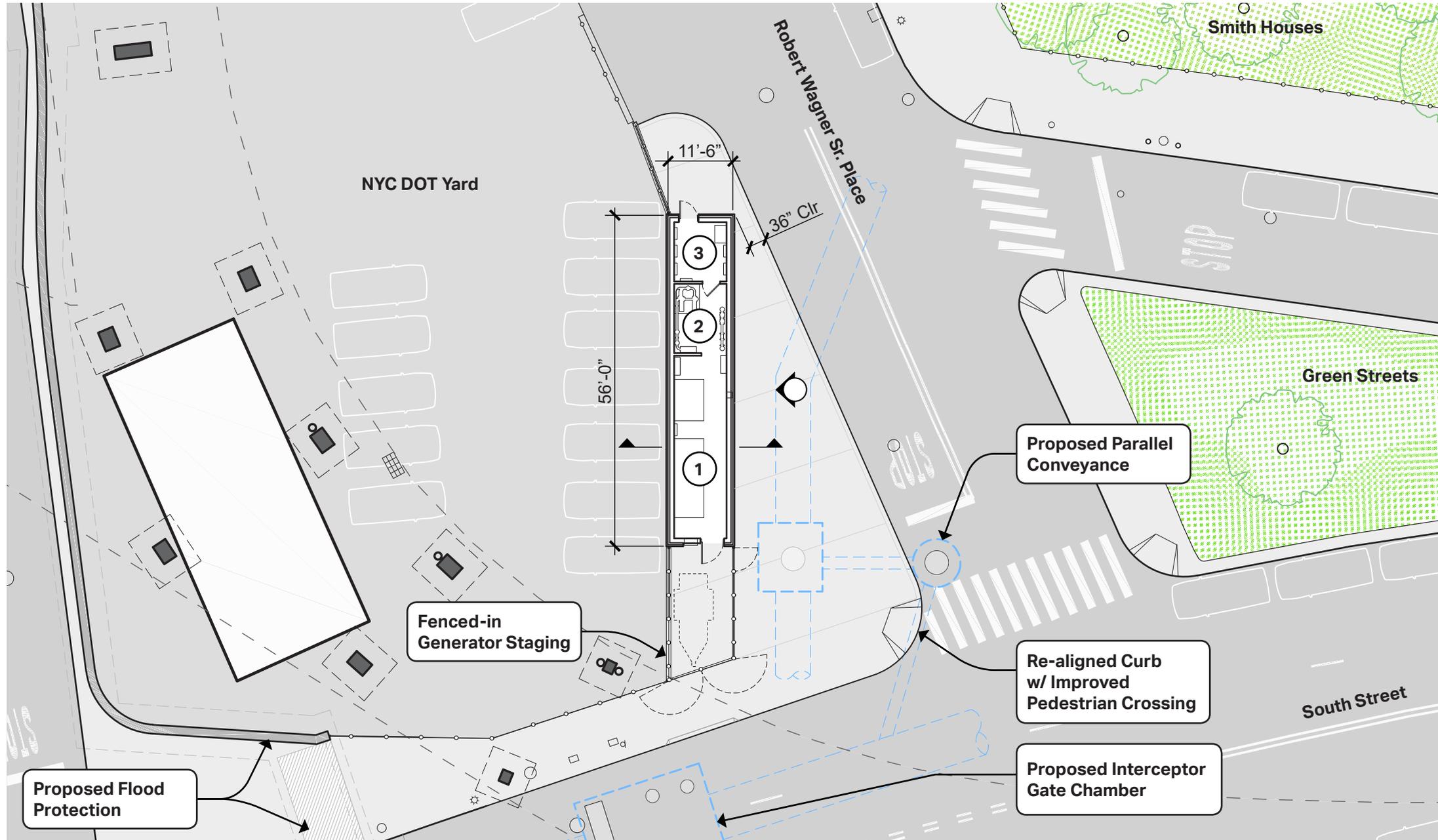


SITE CONSTRAINTS & OPPORTUNITIES

1. MINIMIZE IMPACT ON EXISTING DOT YARD
2. MAINTAIN THE DOT YARD'S EXISTING GATE OPENING AND IMPROVE DOT'S ACCESS TO SOUTH STREET (ROBERT WAGNER SR. PL CONVERTS TO ONE WAY NORTH OF THE YARD)
3. PROVIDE REQ'D OFFSET FROM EXISTING BELOW GRADE COMBINED SEWER
4. PROVIDE ADEQUATE CLEARANCE FROM EXISTING FDR COLUMNS AND FOOTINGS
5. IMPROVE PEDESTRIAN CONNECTION ALONG SOUTH STREET'S NORTH SIDEWALK; EXISTING STREET PATTERN CREATES RIFT WITH NO CLEAR PEDESTRIAN CONNECTION, ENCOURAGING JAYWALKING

INTERCEPTOR GATE BUILDING

Proposed Site Plan

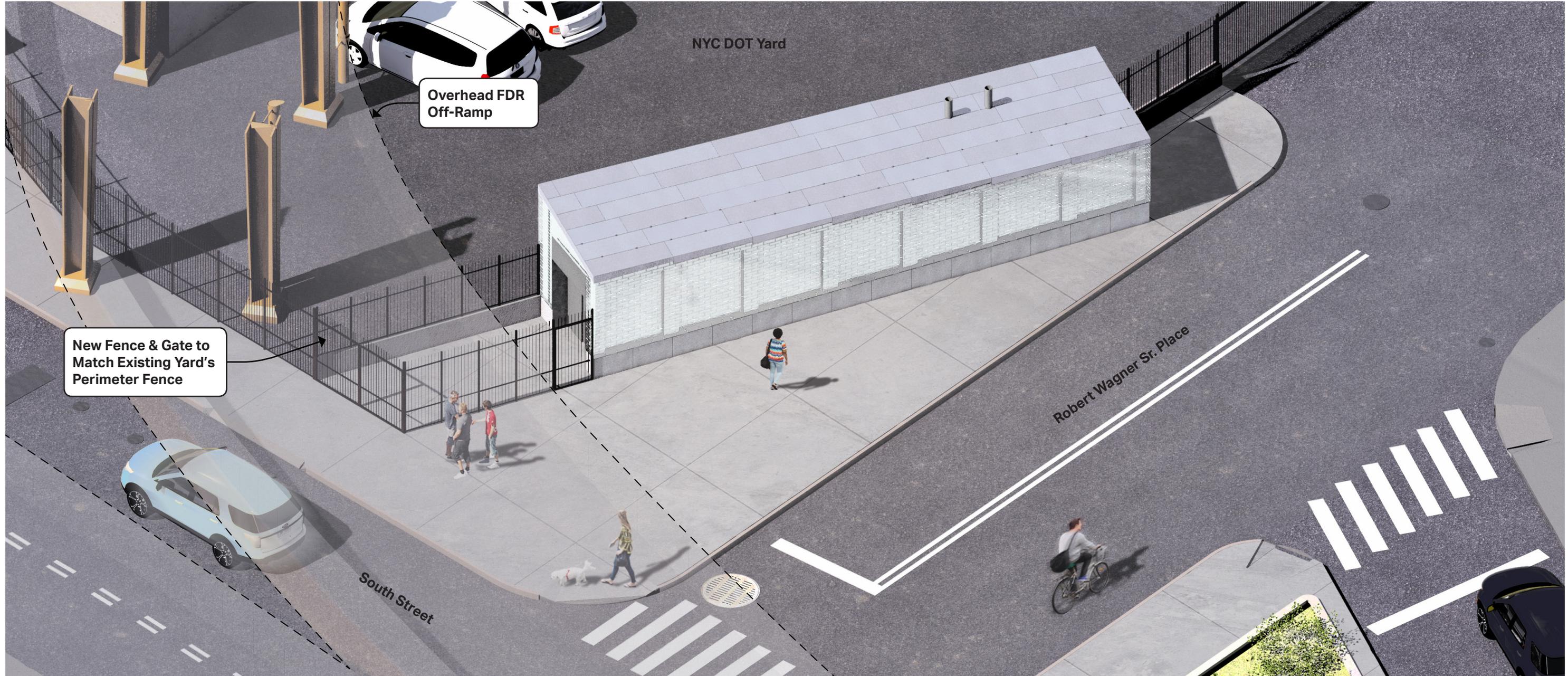


- KEY:**
- 1. Hydraulic Area
 - 2. Pump Area
 - 3. Electrical Room



INTERCEPTOR GATE BUILDING

Aerial View from Southeast



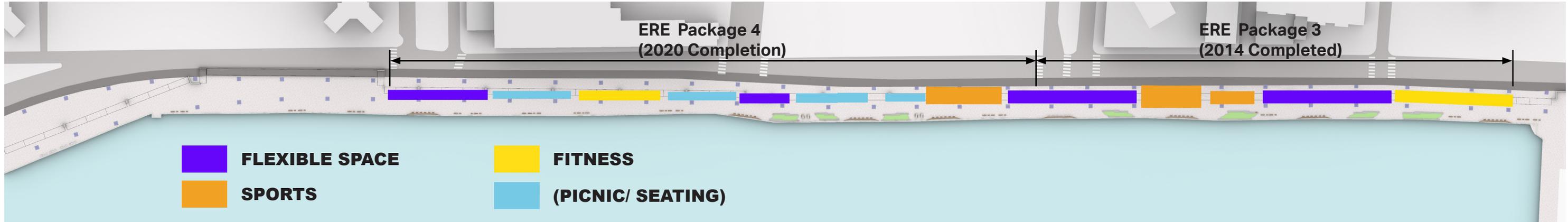
INTERCEPTOR GATE BUILDING

View from Southeast



PROPOSED PROGRAM TYPE

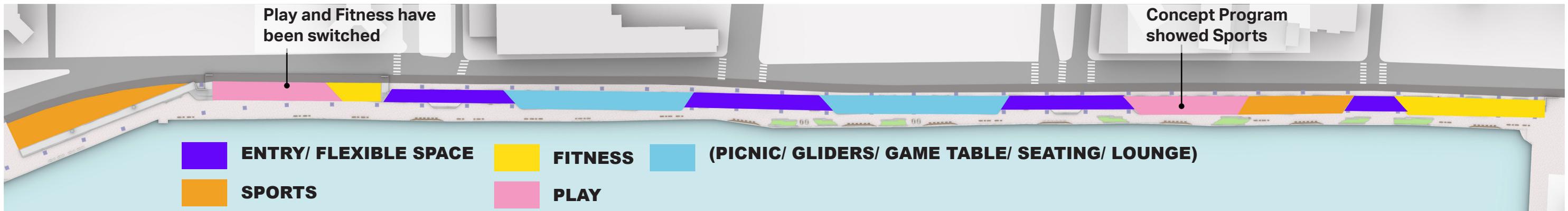
Existing Program



Proposed Program Zones - PDC Conceptual Review (October 2019)

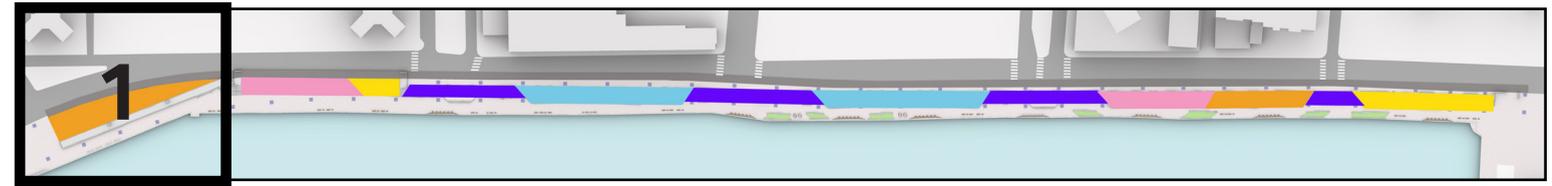


Proposed Program Zones - PDC Preliminary Review (February 2020)

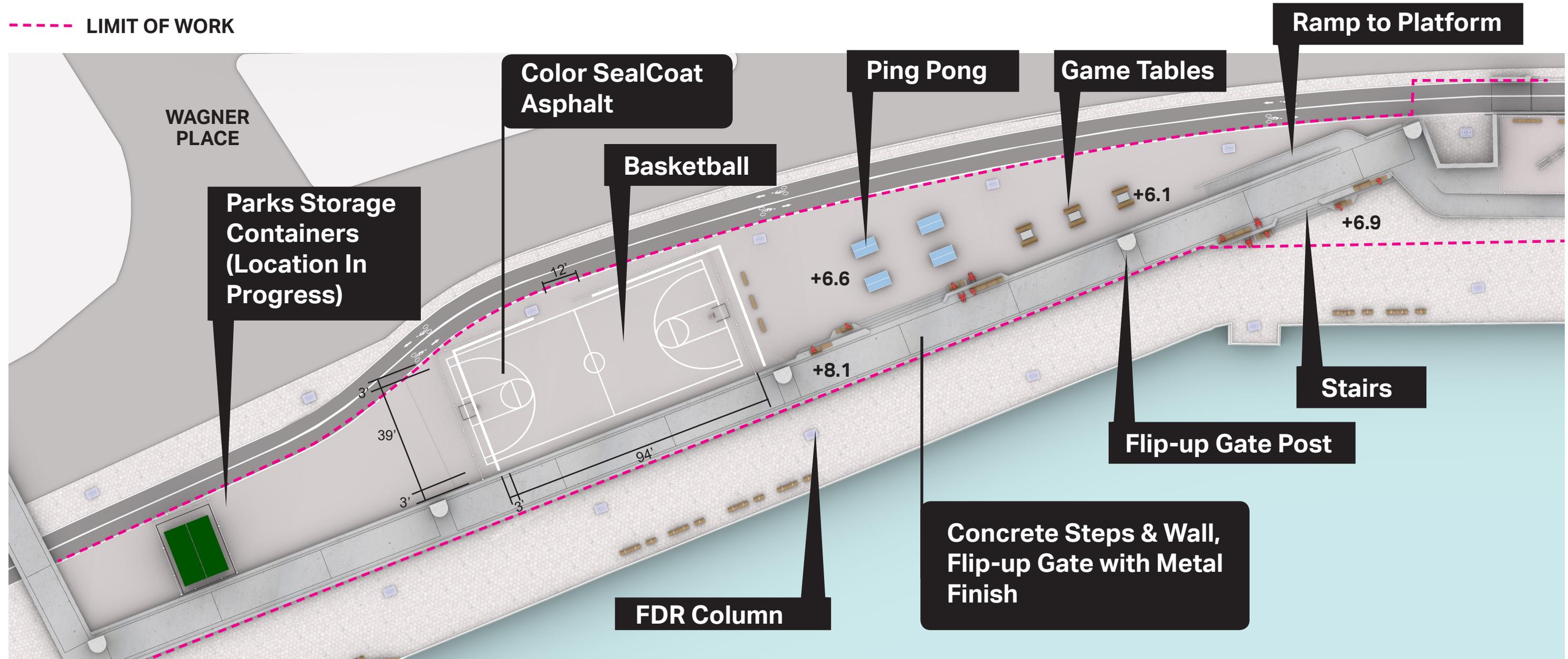


SITE PLAN 1

Basketball and Ping Pong North of Wagner Place

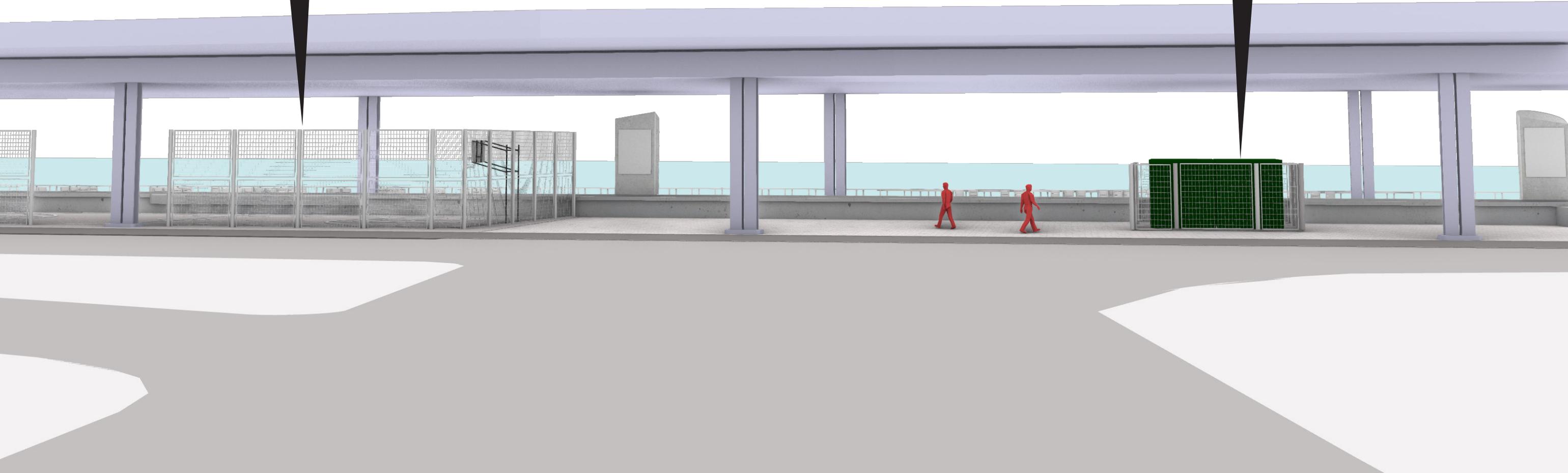


--- LIMIT OF WORK



Basketball Court

**Parks Storage Containers
(Location In Progress)**

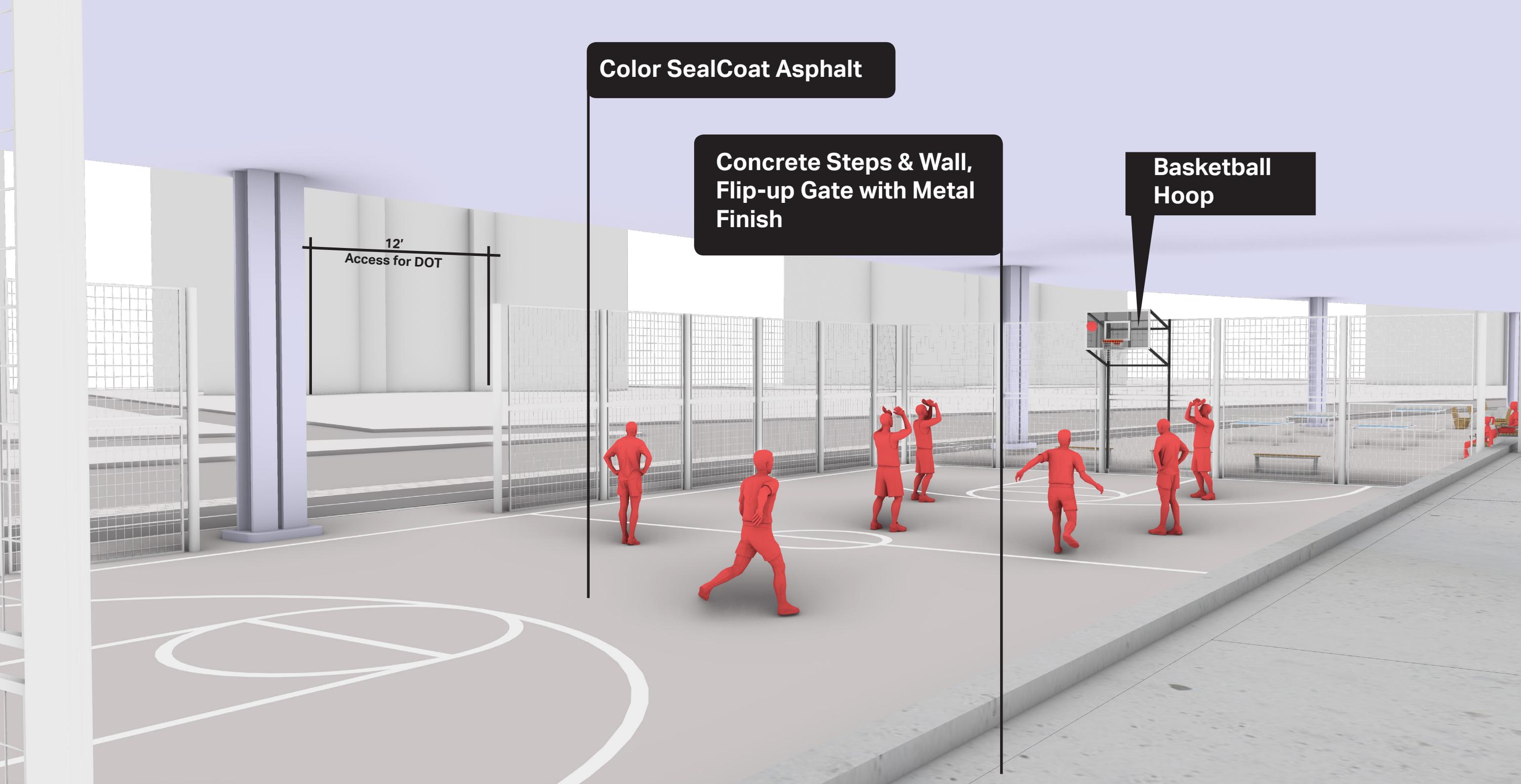


Color SealCoat Asphalt

**Concrete Steps & Wall,
Flip-up Gate with Metal
Finish**

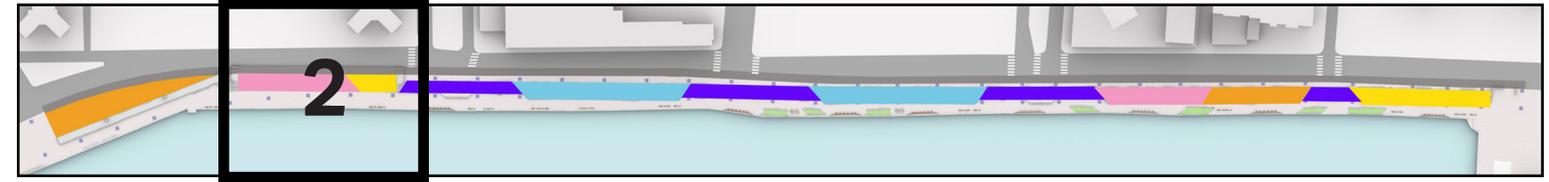
**Basketball
Hoop**

12'
Access for DOT

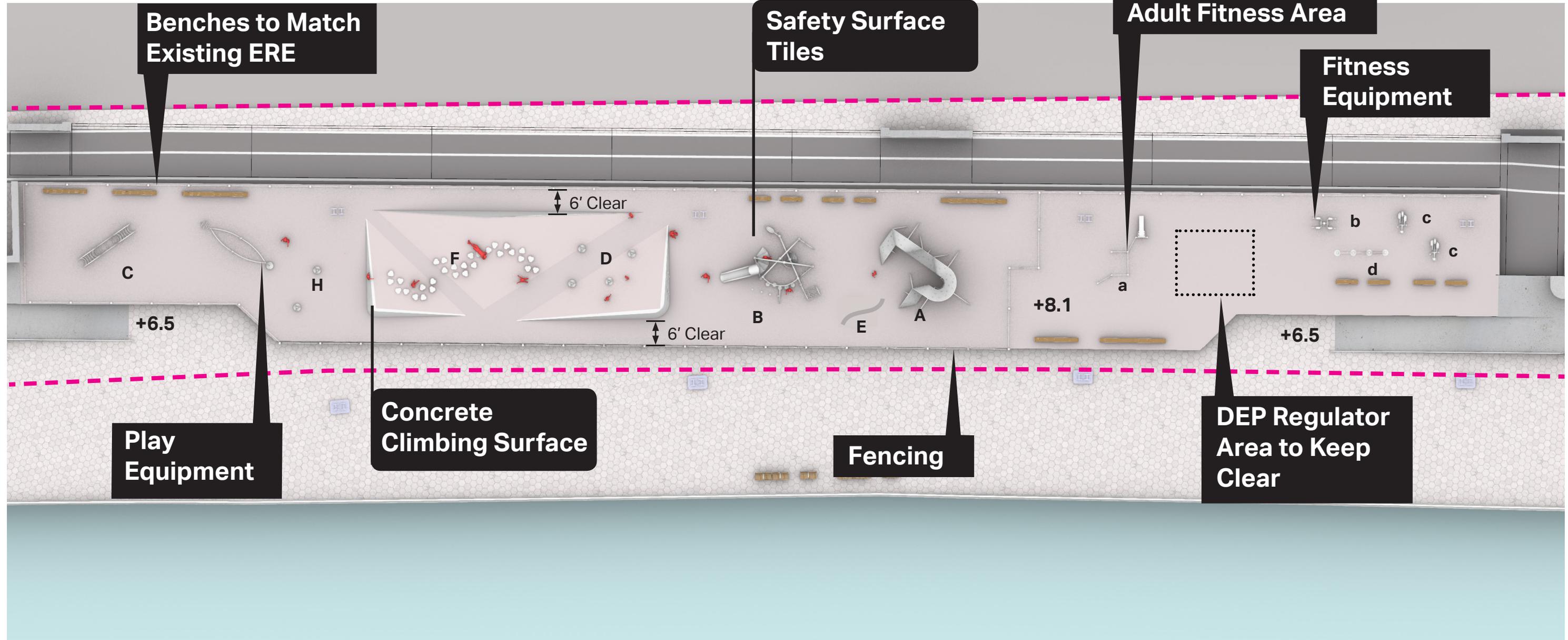


SITE PLAN 2

5-12 Play and Adult Fitness South of Catherine Slip



--- LIMIT OF WORK

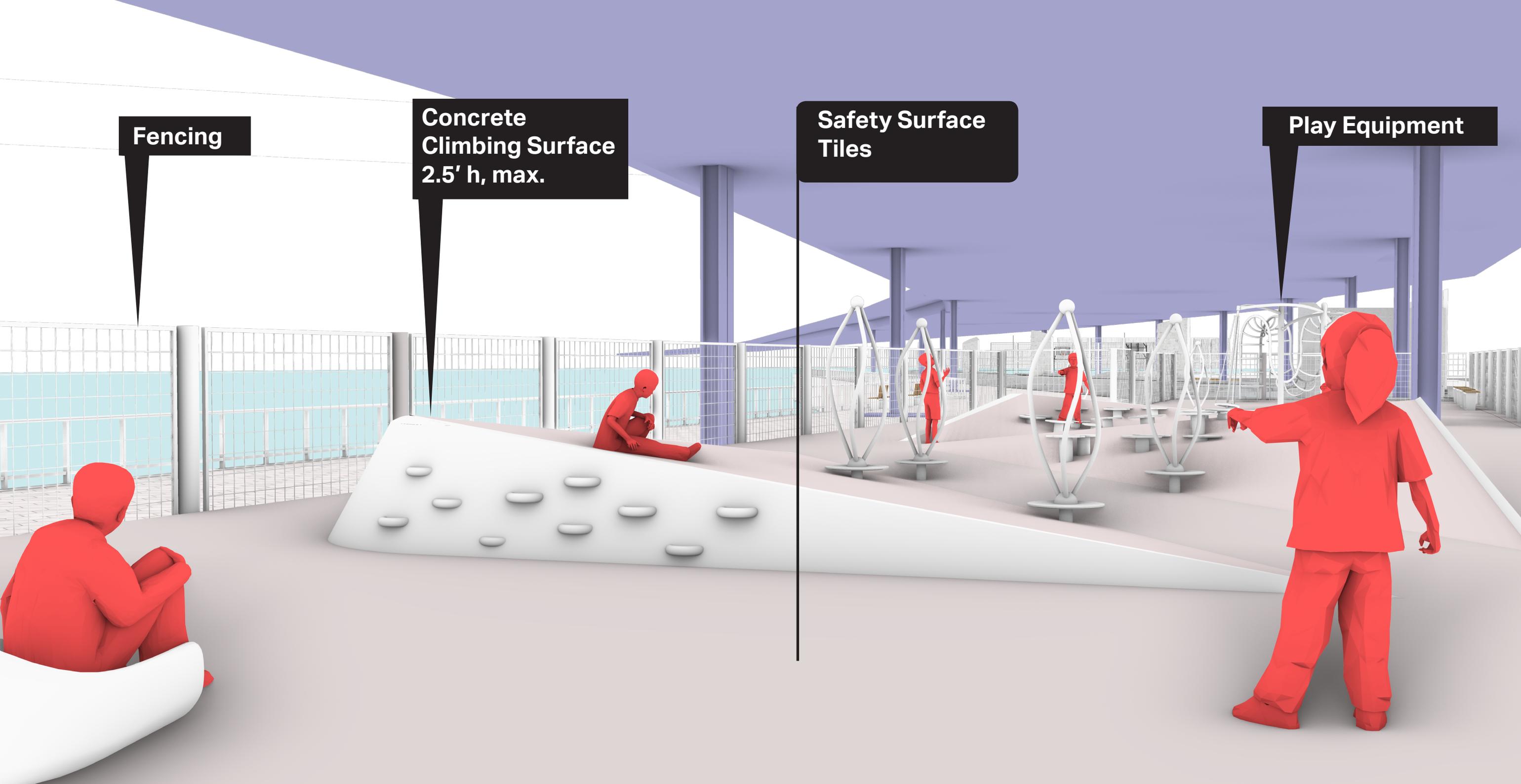


Fencing

Concrete Climbing Surface
2.5' h, max.

Safety Surface
Tiles

Play Equipment

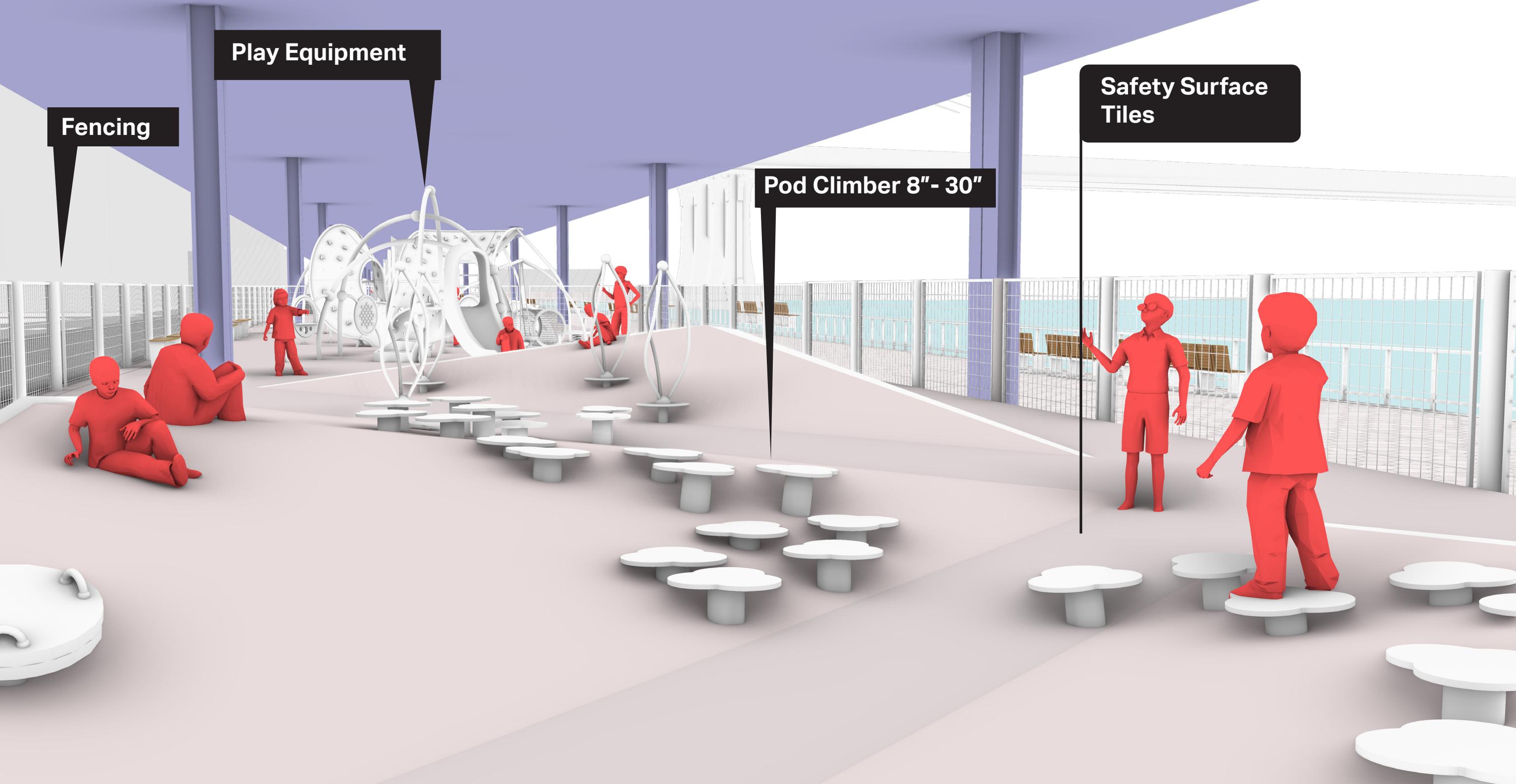


Fencing

Play Equipment

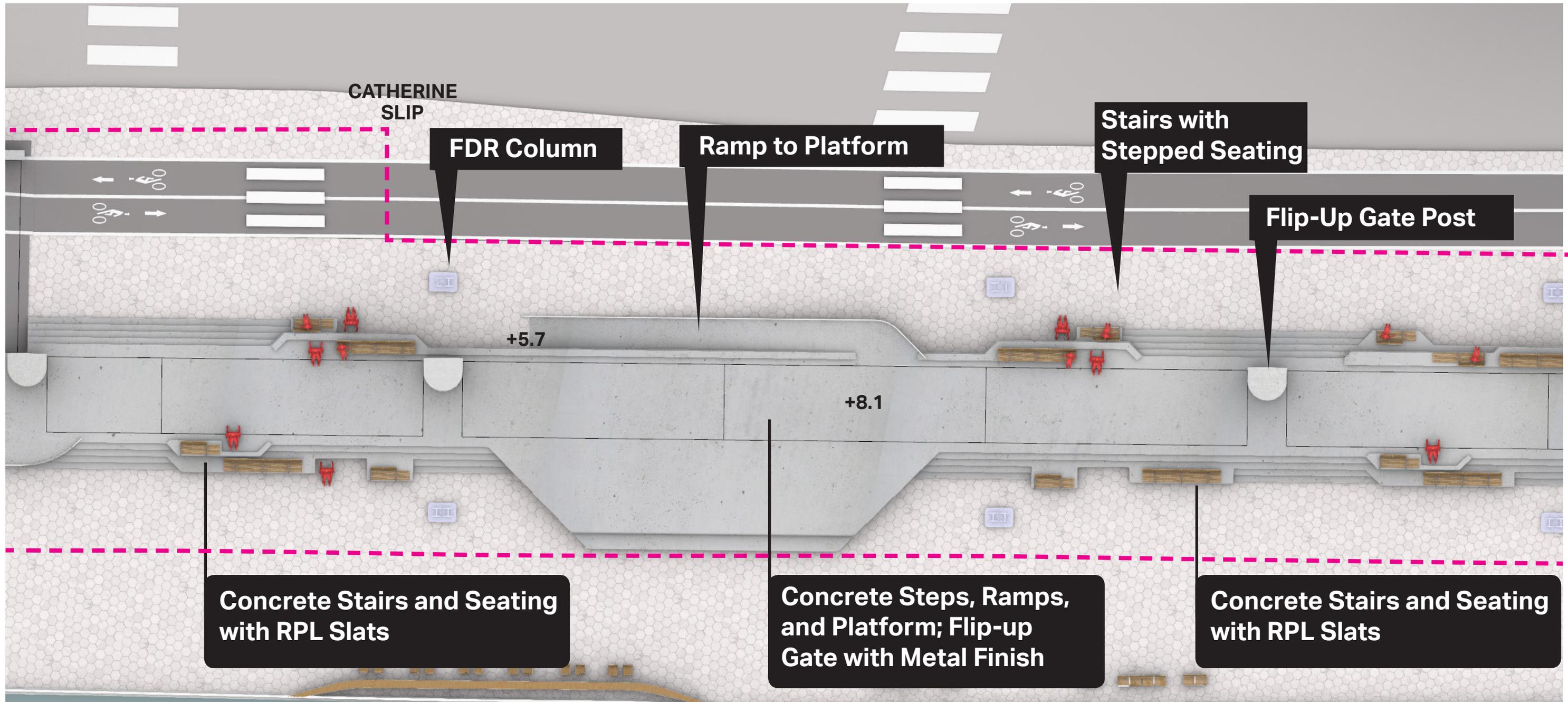
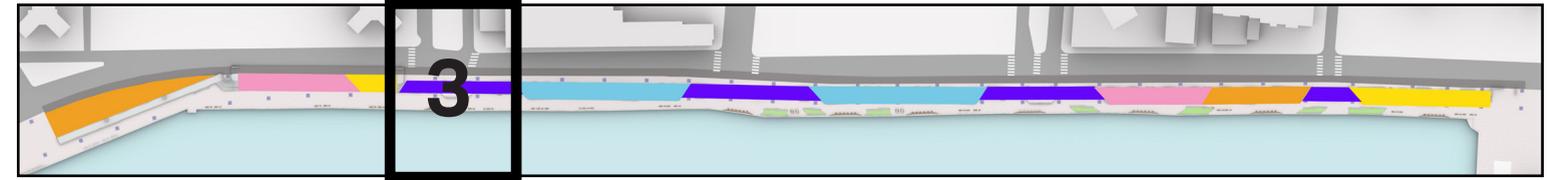
Pod Climber 8" - 30"

Safety Surface Tiles



SITE PLAN 3

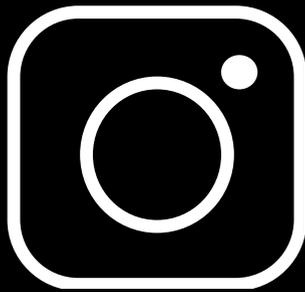
Entry, Overlook and Seating at Catherine Slip



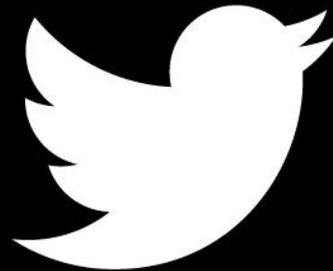
STAY IN TOUCH:



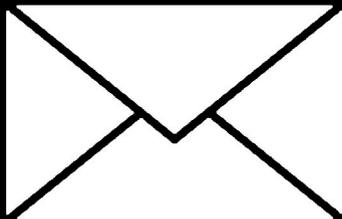
www.nyc.gov/lmcr



@NYClimate



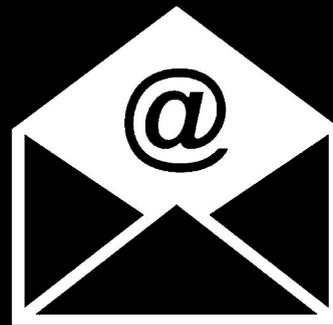
@NYClimate



By Mail
253 Broadway - 14th Floor



In Person



lmcr@cityhall.nyc.gov

INTERCEPTOR GATE BUILDING

Proposed Material Palette



STAINLESS STEEL
Back Up Wall,
Doors, & Trim Elements



SOLID GLASS BRICK
Facade
(Pictured: Office Mockup)



BARRE GREY GRANITE
Stone Base



FLAT-LOCK METAL TILE Sloped
Roof Assembly

PLAY EQUIPMENT



A: Landscape Structures-Mobius climber



B: Landscape Structures- Evos



C: Landscape Structures- Humpty Climber



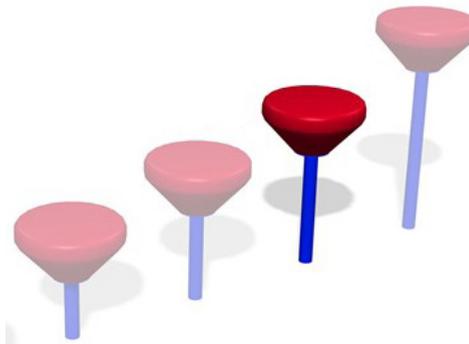
D: Landscape Structures- Curva Spinner



E: Landscape Structures-Curved Balance Beam



F: Landscape Structures: Pod Climber 8" - 30"



G: Climbing Surface



H: Landscape Structure Whoosh Winder Slide

FITNESS EQUIPMENT



a. Combine (South Fitness)



c. Push Up & Leg Lift Station - ADA



b.. Arm Bike - ADA



d. Triple Bars- ADA

SAFETY SURFACE TILES



Mitchell EZ Fall Safety Surface Tiles

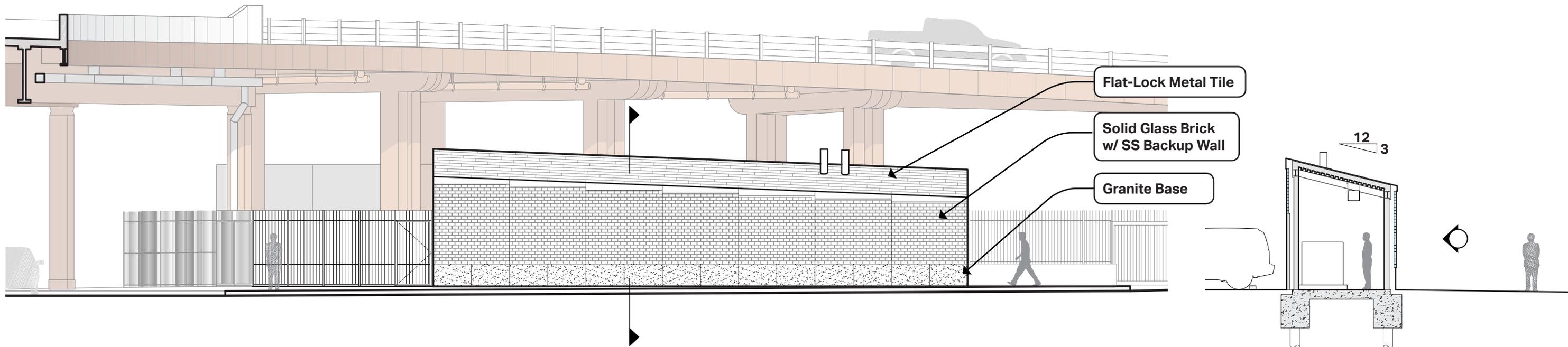
3 Design Updates

The BMCR and ESCR **drainage systems will be connected** so that stormwater flows to the Manhattan Pump Station and gets pumped to and treated at the Newtown Creek Wastewater Treatment Plant.



INTERCEPTOR GATE BUILDING

Elevation & Section



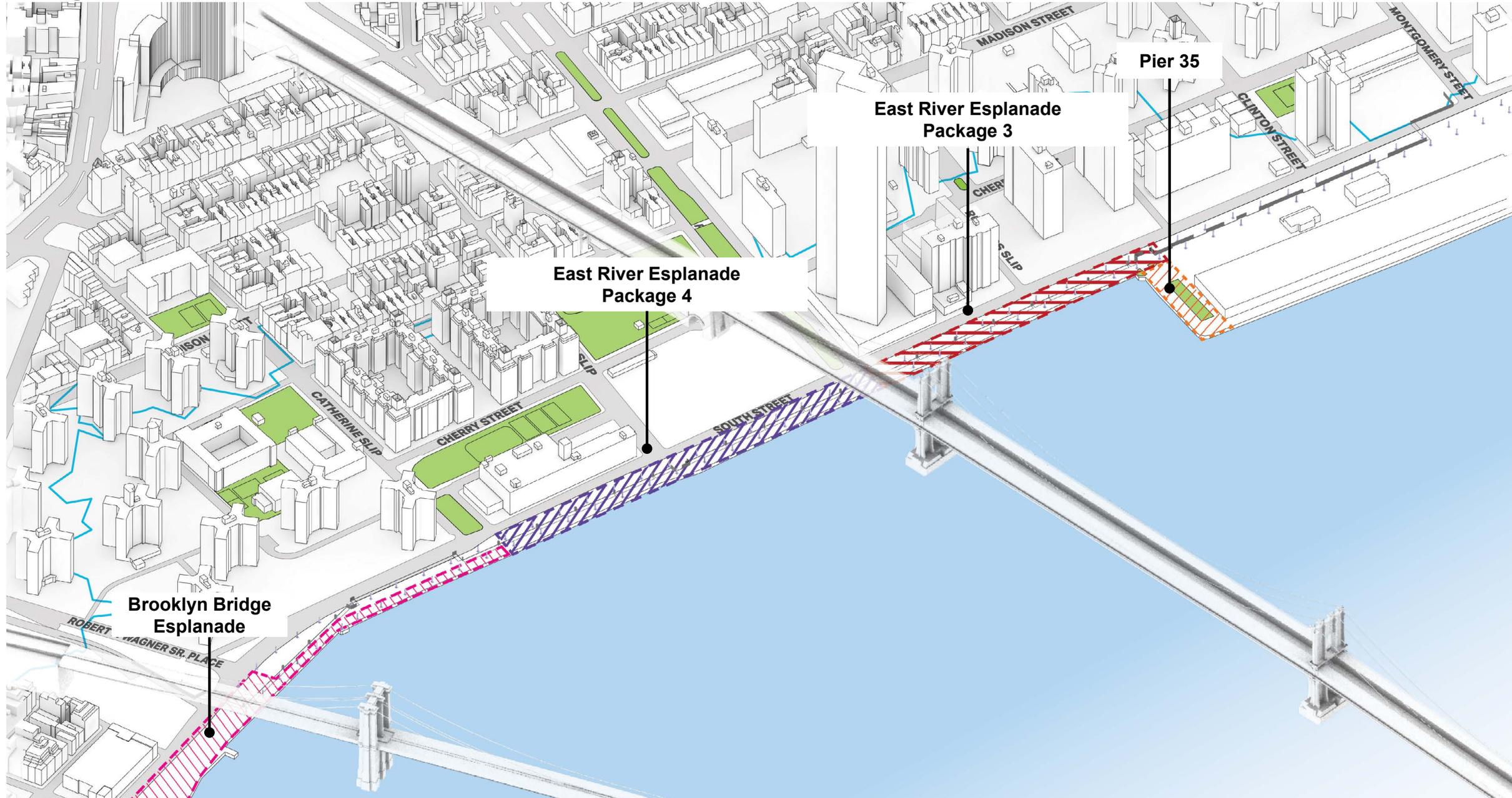
1. EAST ELEVATION

2. CROSS SECTION

0' 5' 20' 40'
SCALE: 3/64" = 1'

③ Design Updates

Project Coordination



3 Design Updates

Existing and Planned Public Amenities



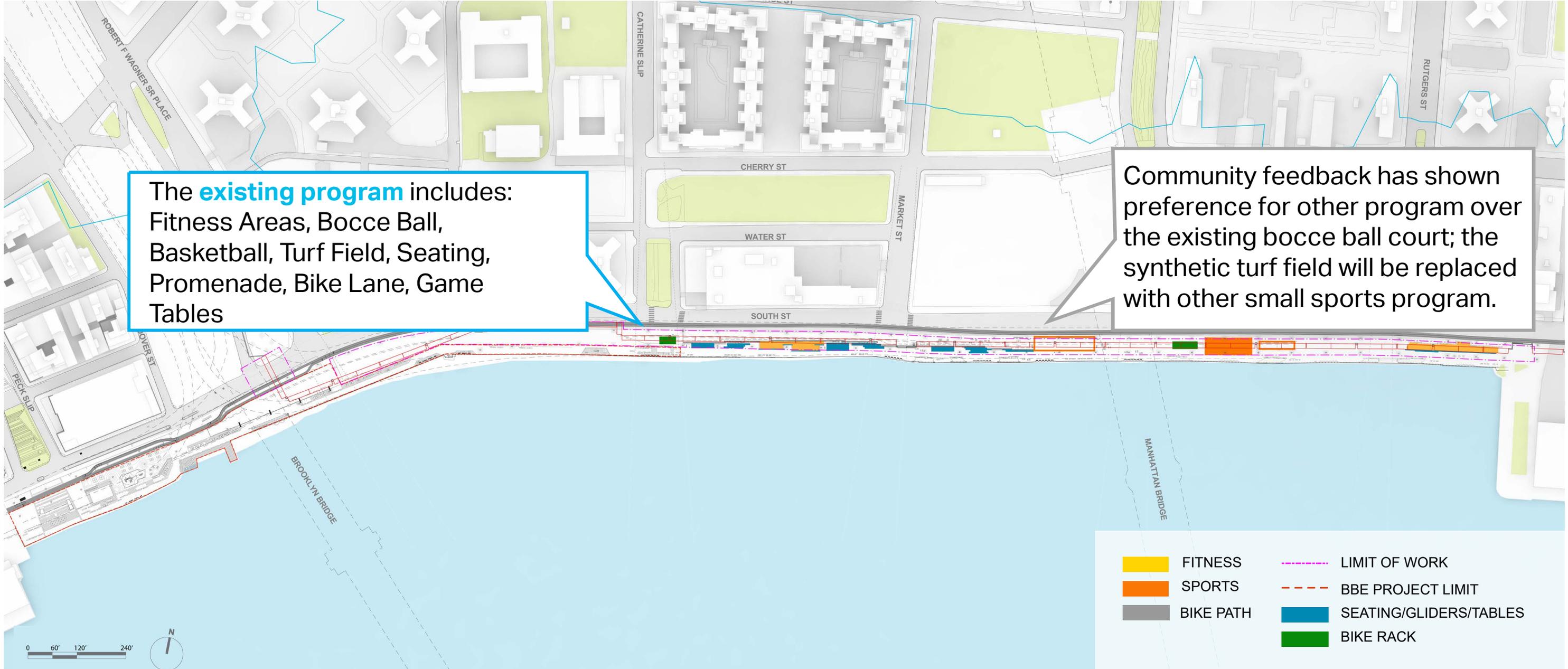
③ Design Updates

2016-2018 Community Input



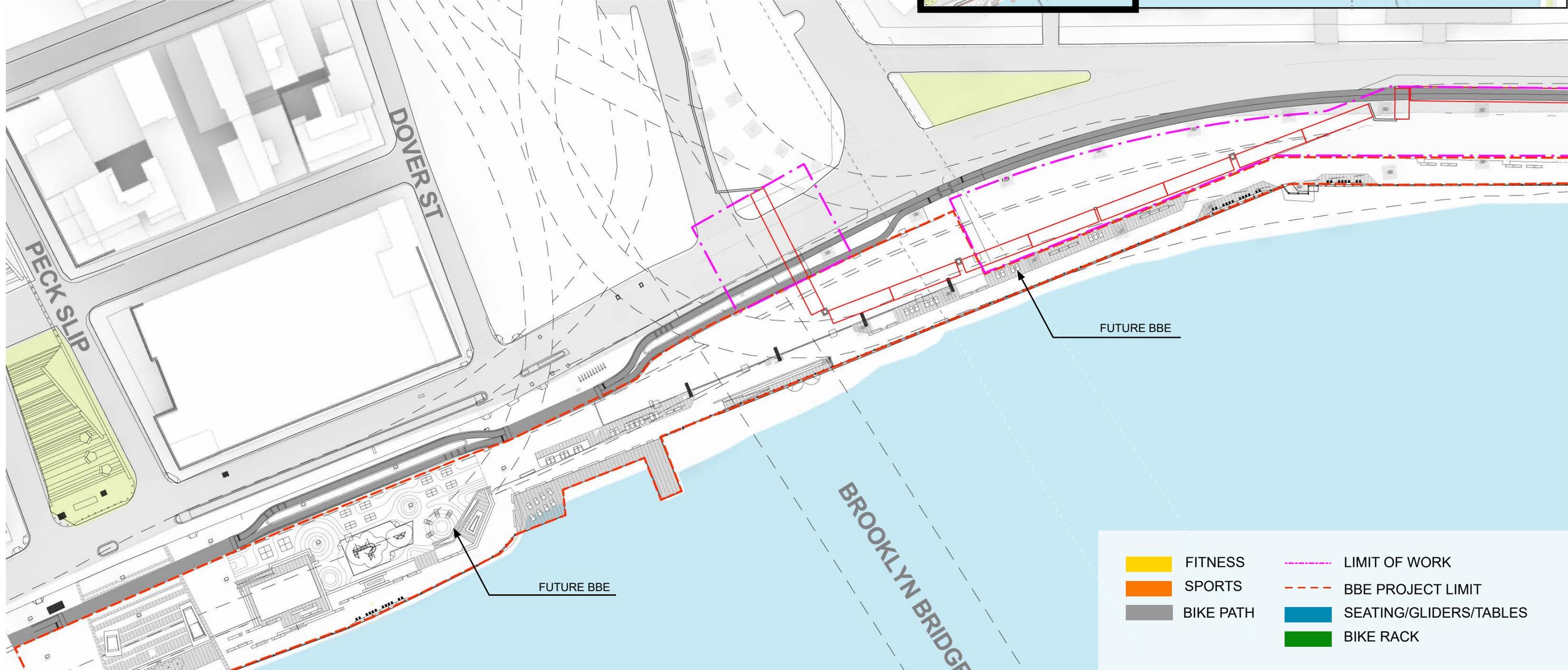
3 Design Updates

Impacted Program to Replace or Remove



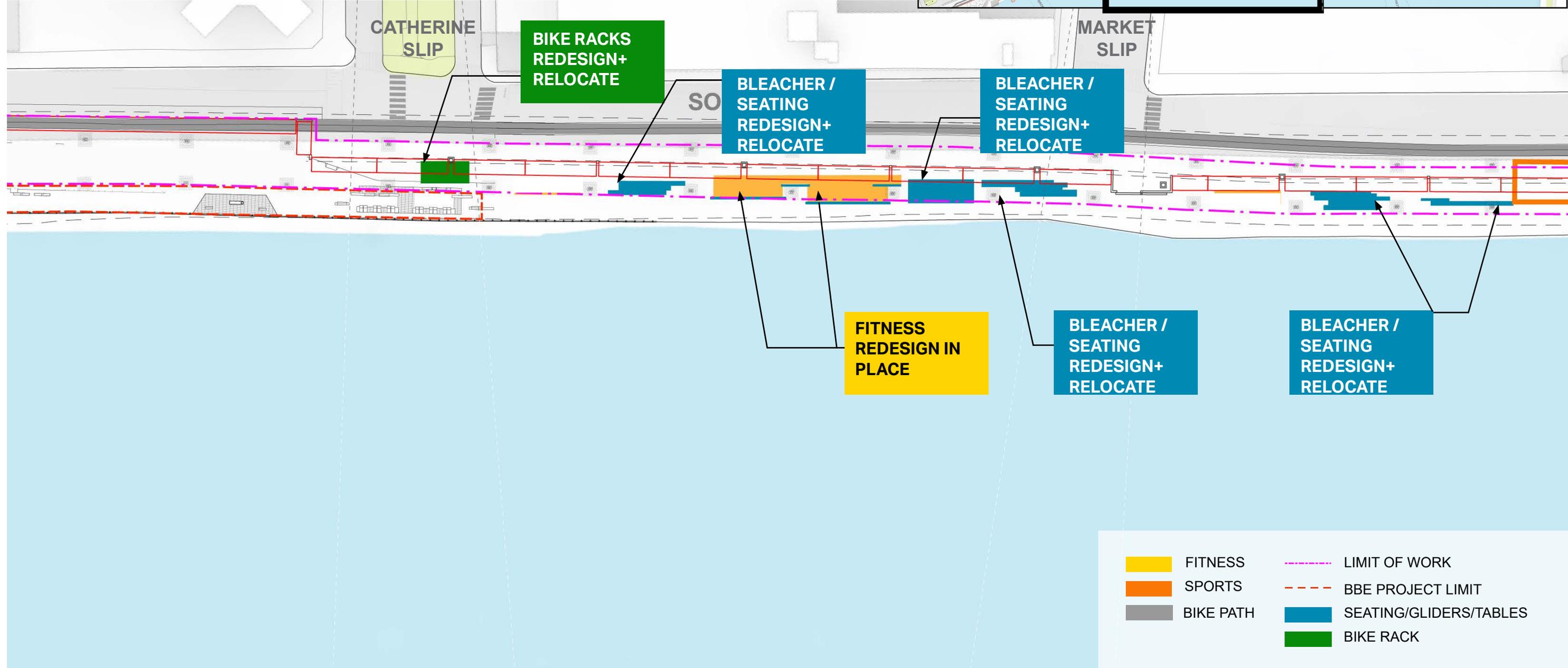
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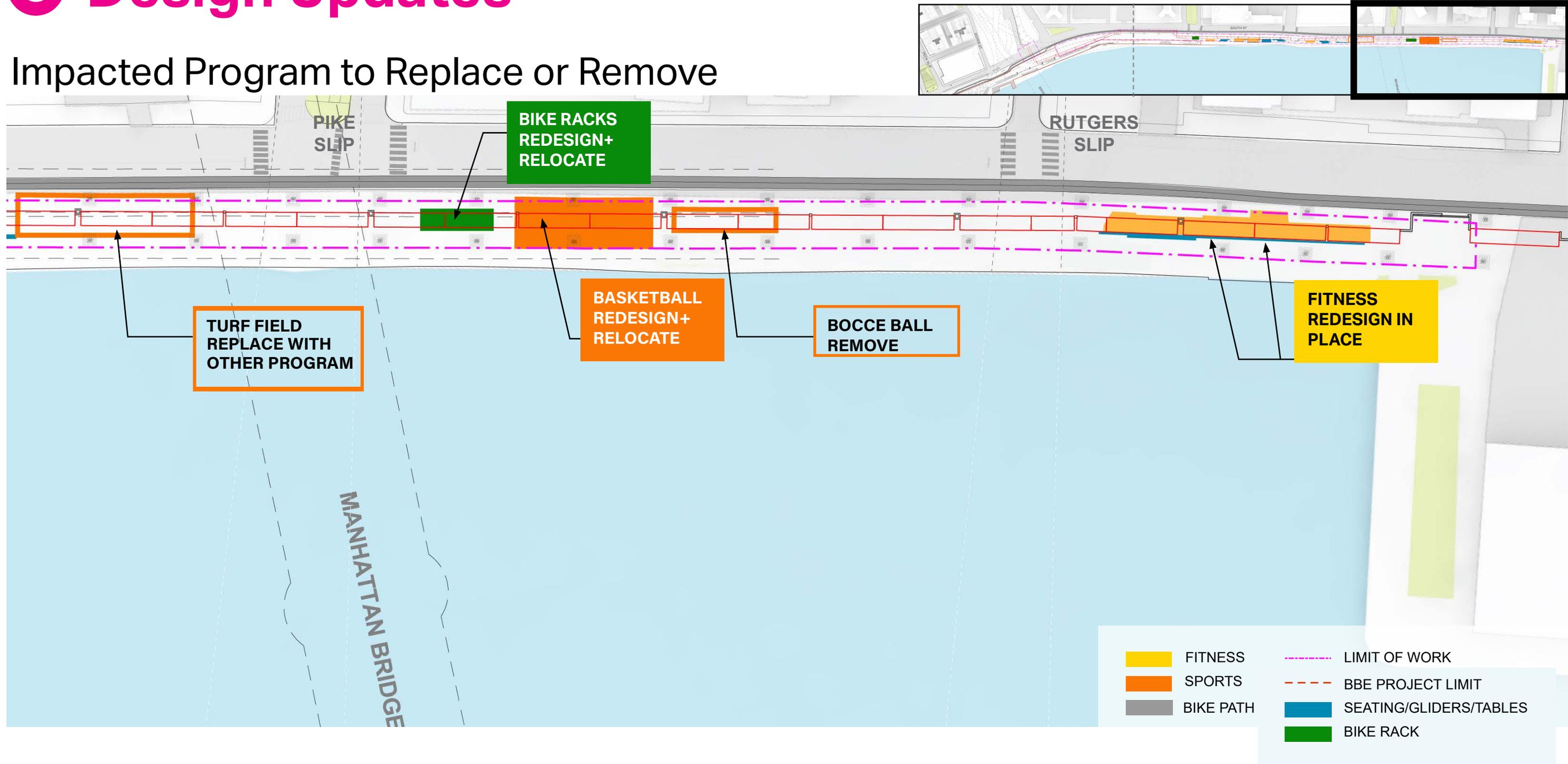
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Impacted Program to Replace or Remove



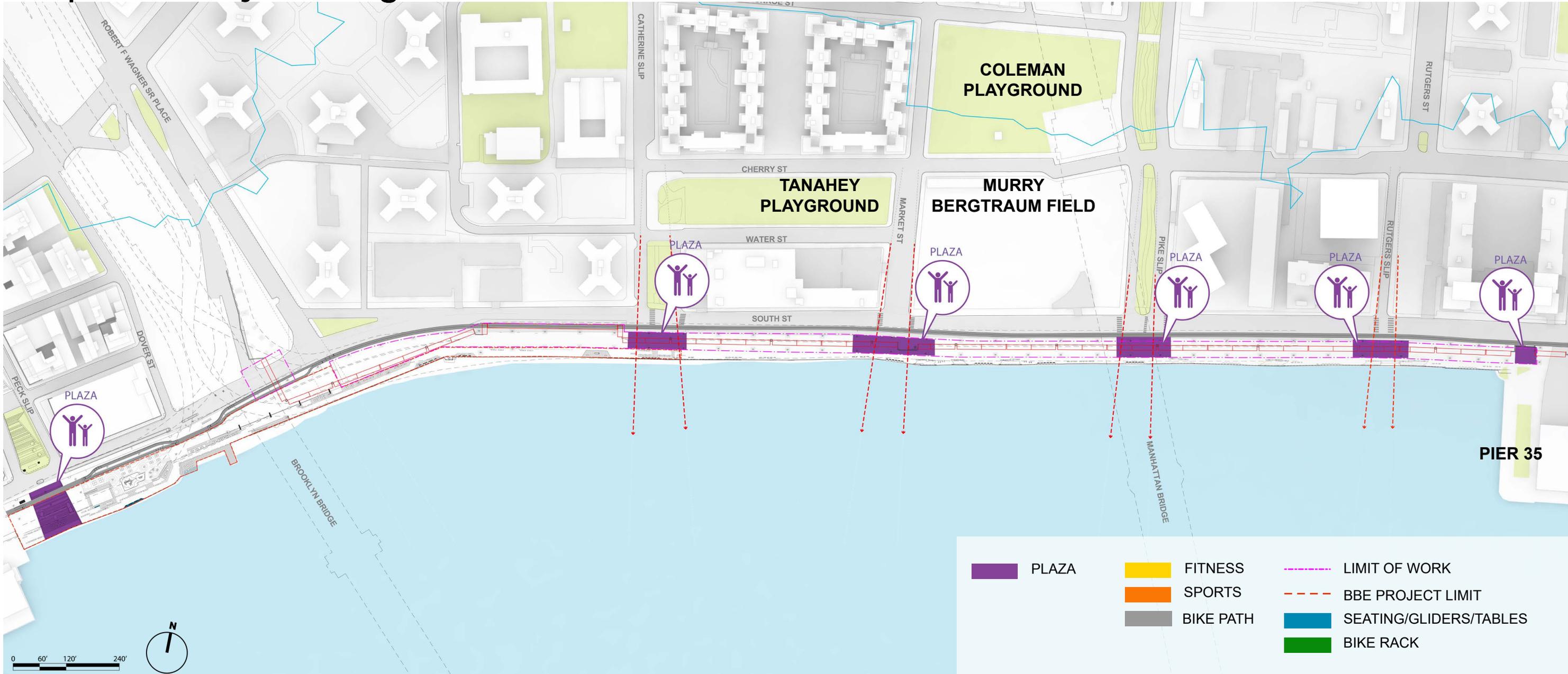
③ Design Updates

Impacted Program to Replace or Remove



3 Design Updates

Proposed Project Program



③ Design Updates

Proposed Project Program



③ Design Updates

Proposed Program

