# Moving FiDi-Seaport Forward

## Closing the Coastal Protection Gap

November 2025

## How to Use This Report

*Moving FiDi-Seaport Forward* shares design updates and progress towards implementation of the FiDi-Seaport Climate Resilience Plan since the release of the *Financial District and Seaport Climate Resilience Master Plan* in December 2021. The Master Plan was a flexible framework that laid a foundation for the core infrastructure needed for flood control while setting aside adaptable space for future programming.

For more detailed information on the project, we invite you to explore other resources the City has released:

- *Securing a Resilient New York City: Funding and Financing Shoreline Protection* details recommendations for alternative financing for citywide climate resilience projects.

NYC EDC

NYC Mayor's Office of Climate & Environmental Justice

NYC Environmental Protection

FiDi and Seaport Climate Resilience Plan

# Moving FiDi-Seaport Forward



## Dear New Yorkers,

Climate change is here — hotter summers, stronger storms, flooded streets and subways. We can meet it with action, and we can meet it together.

New York City Economic Development Corporation (NYCEDC), the Mayor's Office of Climate and Environmental Justice, and our partners are advancing the Financial District and Seaport Climate Resilience Plan to close the last gap in Lower Manhattan's defenses against coastal flooding. This plan will protect ferry and transit hubs, deliver new public space, and safeguard low-lying neighborhoods where millions live, work, and play. Your advocacy for and amplification of climate action makes changes happen.

This is a big build, and big builds take time. But the payoff is bigger: a safer, more resilient, more livable New York for us and for the generations after us. Join us — **Moving FiDi-Seaport Forward**.

**— Andrew Kimball, President & CEO**
**New York City Economic Development Corporation**



## The Plan will protect this area from flooding while delivering key community amenities.

By bringing eight acres of new public open space, the Plan serves as a global model for how to embed critical flood defense infrastructure into a dense urban fabric, while expanding waterfront access and public recreational space. With continued community support and outside-the-box problem solving, the City is **Moving FiDi-Seaport Forward.**

## New York City is moving the Plan forward.

The goal is to deliver a waterfront that protects Lower Manhattan from flooding *and* builds the future we want. NYCEDC and the City have made great progress answering two questions key to implementation: What are we going to build and how are we going to fund it?

## Design has reached the 30 percent milestone.

This will allow the project to begin environmental review, a critical component for permitting the project for construction. The design incorporates cost-saving measures while still providing coastal protection and meeting community needs.

## The City has identified innovative funding and financing strategies to make this plan a reality.

Our financing strategy sets a precedent for how to advance projects without waiting for a disaster to unlock federal recovery dollars, and includes innovative mechanisms like a special assessment district and new ways of partnering with the US Army Corps of Engineers.

# Why We Need to Protect Lower Manhattan

## Lower Manhattan Serves the Entire Region

Lower Manhattan is an essential neighborhood in New York City. It is home to vital waterfront infrastructure, iconic landmarks, small businesses, and public open spaces. FiDi-Seaport, the one-mile shoreline between The Battery and the Brooklyn Bridge, supports regional and City ferry services and connects to the Manhattan Waterfront Greenway.

Lower Manhattan plays a critical role in the regional, national, and global economy, serving as one of the largest business districts in the country. This economic powerhouse fuels the city and the region, sustaining millions of families and making the neighborhood indispensable to New York and the region's overall vitality. Additionally, as a major transportation hub, Lower Manhattan connects all five boroughs and the Tri-State region through a robust network of subways, ferries, roads, bridges, tunnels, buses, and bike lanes. This area is also home to the Whitehall Ferry Terminal, which provides a vital ferry connection between Staten Island and Manhattan.

In recent years, Lower Manhattan has seen a transformation into a vibrant, mixed-use community. The residential population has increased by 170 percent over the past two decades. This evolution has made it not just a place to work or visit, but a thriving neighborhood that must meet the needs of a growing and diverse region.

# Climate Change Isn't Coming — It's Here

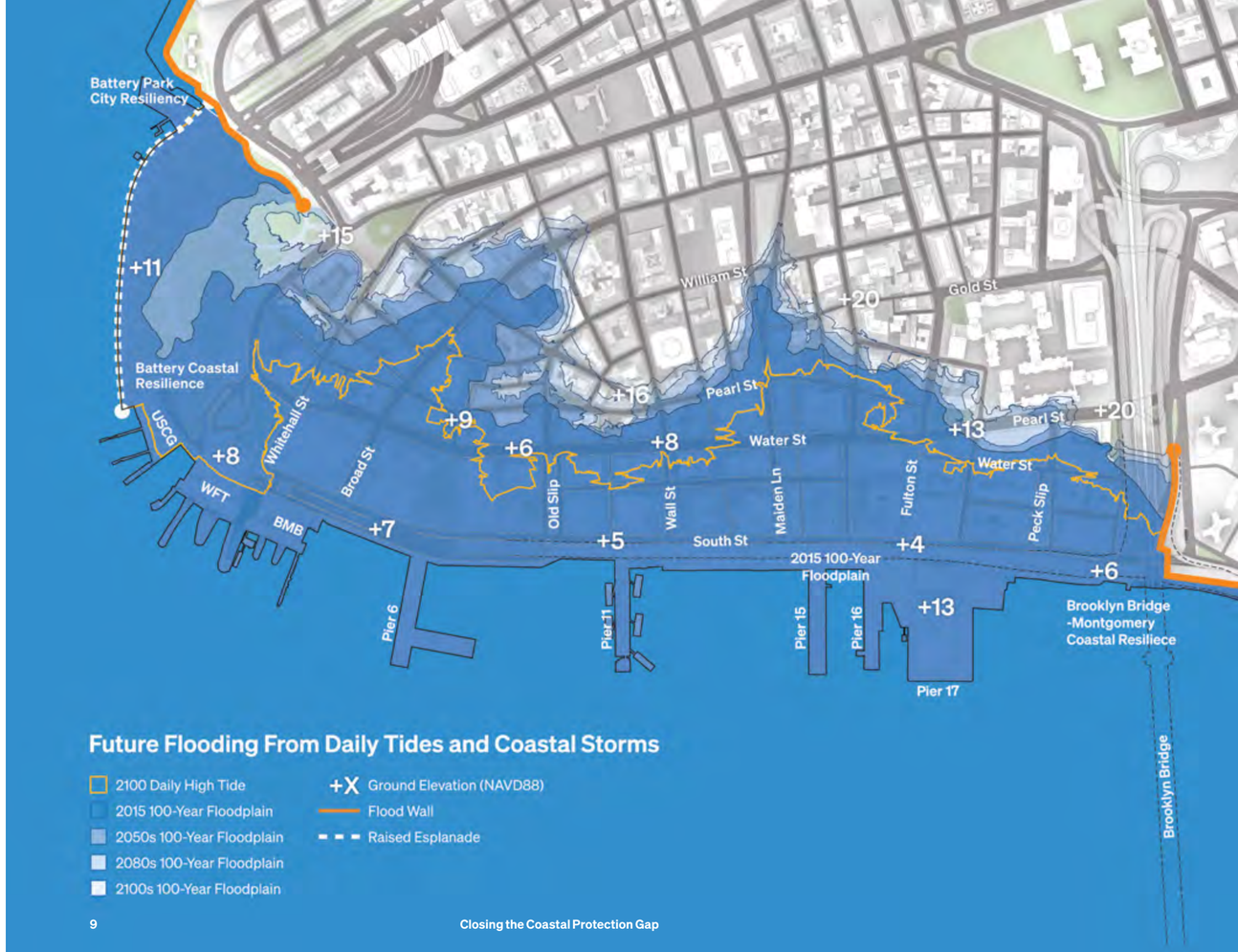
Lower Manhattan's shoreline today faces the new and increasing threat of climate change. Major weather events over the past decade have exposed just how vulnerable this area is to rising seas, extreme storms, and heat.

In 2012, Superstorm Sandy caused catastrophic damage across the five boroughs, including Lower Manhattan, claiming lives and damaging thousands of buildings and key infrastructure. The storm overwhelmed the city's stormwater system and subway repairs continued for years after. Superstorm Sandy demonstrated how disruptions ripple citywide, especially for low- and moderate-income workers in service industries and small business owners who were hardest hit.

In 2021, back-to-back storms Tropical Storm Henri and Hurricane Ida broke rainfall records, flooding homes and transit systems. That same summer also saw 17 days above 90 degrees, a sign of intensifying extreme heat. These trends are accelerating; sea levels have already risen one foot since 1900 and could rise up to an additional five feet by 2100.

**Superstorm Sandy, Hurricane Ida, and Tropical Storm Henri demonstrated how disruptions ripple citywide, especially for low- and moderate-income workers in service industries and small business owners who were hardest hit.**





# Major Climate Threats

## Tidal Flooding

Sea level rise will cause routine high tides to inundate the Financial District and South Street Seaport. By the 2050s, sea levels are projected to rise up 3.3 feet. By 2100, sea levels are projected to rise as much as 5.4 feet and water could reach three blocks inland.

## Coastal Storms

Hurricanes, nor'easters, and tropical storms bring storm surge. By 2100, a major coastal storm could bring over 15 feet of flooding to parts of Lower Manhattan.

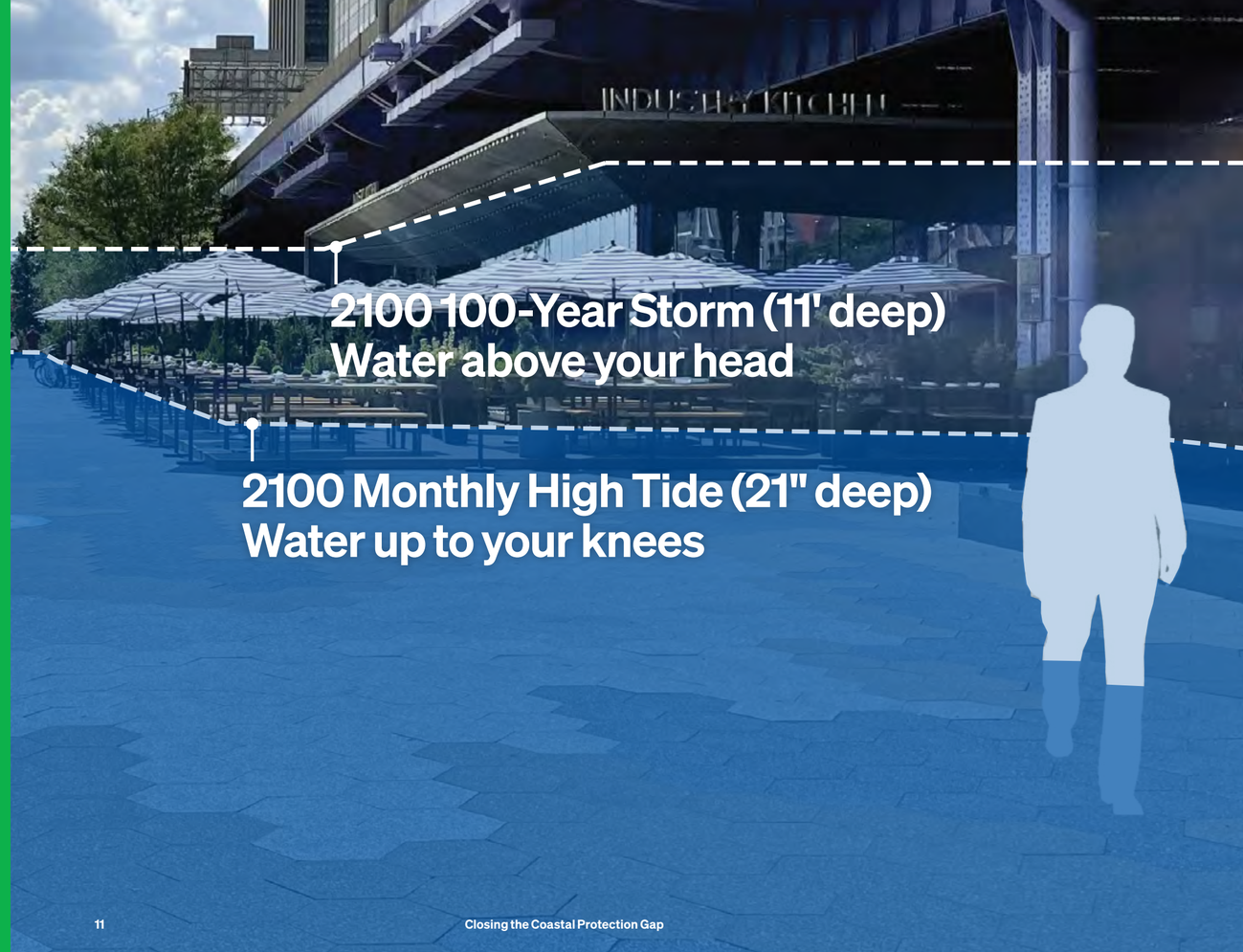
## Extreme Precipitation

Rainfall is intensifying, overwhelming storm-water systems and flooding inland streets. By the end of the century, the city could see 30 percent more rainfall annually and double the number of days with extreme rain.

## Extreme Heat

Over the next 30 years, New York City could see an increase of 7.1 degrees in average annual temperatures and 69 days at or above 90 degrees, a four-fold increase above the baseline of 17 days. Combined with the urban heat island effect, which describes the ways cities are often made warmer due to absorbent materials like asphalt and a lack of green space, this poses serious health risks, especially for vulnerable populations.





# Cost of Inaction

If no action is taken, repetitive flooding is projected to cause up to $20.3 billion in estimated cumulative total losses to the region by 2100. While this represents a tremendous economic impact, it still does not take into account many other costs that are challenging to quantify, including losses to citywide services from subway, electrical, stormwater infrastructure, and the Staten Island Ferry, which provides a critical lifeline between Staten Island and Manhattan.

Modeling suggests that if nothing is done to protect the FiDi-Seaport area, estimated quantified losses to the New York City metropolitan area would include:

**$8.4B**
**in direct economic impacts to businesses in the study area**

**$2.5B**
**in building damages**

**6.2K**
**residents impacted by flooding**

**$6.7B**
**in indirect and induced economic impacts to businesses within the New York City Metropolitan Statistical Area (MSA)**

**429K**
**daily subway and bus riders impacted by disruptions to commute**

**86K**
**workers impacted by flooded buildings**

# A Portfolio of Projects to Protect Lower Manhattan

Recognizing these risks, the city is advancing over $1.9 billion in capital projects as part of the Lower Manhattan Coastal Resiliency (LMCR) strategy.

Most of the LMCR projects are under construction or will soon complete design. However, the segment between The Battery and the Brooklyn Bridge presents a unique challenge and is the last remaining gap in the LMCR strategy. The concentration of subway tunnels, historic assets, active ferry terminals, and constrained waterfront space make traditional flood protection approaches difficult. The Plan addresses this challenge by extending the shoreline into the East River to accommodate the flood defense and public open space.

When complete, these projects will form a comprehensive approach to protect one of the city's most vulnerable and most valuable neighborhoods. Investing now means avoiding billions in future damages and preserving Lower Manhattan's role as a center of New York City's civic, economic, and cultural life.



# From Master Plan to Implementable Project

## What the Master Plan Accomplished

In December 2021, the City released the *Financial District and Seaport Climate Resilience Master Plan* as the result of a two-year public planning process. This process brought together City agencies, local experts, and the general public to identify goals and priorities for the flood defense. The Master Plan also began to chart a pathway for implementation, including funding, governance, permitting, and constructability.

The Climate Coalition of Lower Manhattan (CCLM), a group of local and citywide organizations and resilience advocates who have been involved since the development of the Master Plan, has regularly convened to receive updates on the design and provide early feedback and strategic direction.



## Key Design Elements

To protect Lower Manhattan from flooding, the new waterfront must be resilient while alsomaintaining critical functions and enhancing public destinations. The FiDi-Seaport Climate Resilience Plan is guided by three overarching goals:

- **Protect Lower Manhattan from daily tidal flooding and coastal storms through a multi-level flood defense system and new drainage infrastructure. The shoreline will need to be extended into the East River to ensure that the flood defense does not wall off the city from the water.**
- **Integrate climate resilience infrastructure into the city by building new resilient maritime facilities.**
- **Enhance the public waterfront experience by creating new public open spaces and community-serving uses that are universally accessible.**

# Community Engagement


**26**

tabling events engaged community members in busy public places.


**1,500+**

visitors learned about the project during the *Protecting FiDi, Building the Future* pop-up exhibit.

**19**

public workshops and stakeholder presentations gathered design feedback and shared information about the project.

**13**

walking tours helped the public envision a resilient future for Lower Manhattan.

**2,000+**

newsletters were distributed to advance the project's passive presence in the community.



## Key Changes from the Master Plan

The design in the Master Plan has been further refined to be implementable based on technical studies and cost optimization. This work has been guided by engagement with community members, the CCLM, City agency partners, ferry operators, maritime users, environmental advocates, and other stakeholders.

- **Reached 30 percent design of the flood defense infrastructure; the design is technically feasible, cost effective, and implementable.**
- **Developed a concept design for the southern flood defense alignment through The Battery that ties into adjacent resiliency projects.**
- **Finalized the in-water footprint of the project in the East River which is required to begin the environmental review and permitting process.**
- **Advanced funding, alternative financing, and governance strategies.**

# Understanding and Supporting the East River's Ecology

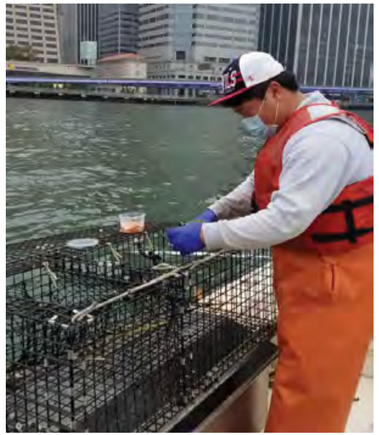
Understanding the East River's ecology and finding ways to actively support its ecosystems, rather than merely minimizing impact, has been core to the FiDi-Seaport project.

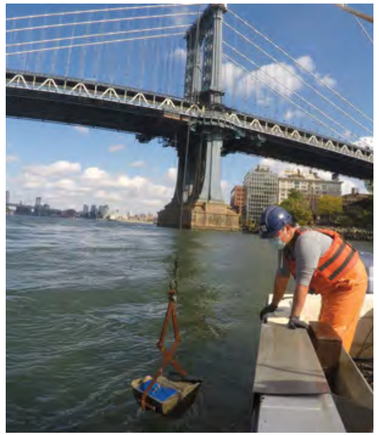
Early in the Master Planning stage, the project team modeled currents in the East River to understand the potential impacts of the shoreline extension. Using this data, the project team identified ways to reduce the project footprint, minimizing impacts to the East River while maintaining the integrity of the shoreline protection.

Additionally, the project sought to understand the existing ecosystems and opportunities to support habitat growth. The project team conducted two years (2021 and 2022) of biological and habitat sampling and testing to assess habitat conditions and marine life in the area. Over this time, more than 1,500 samples were collected from the lower East River. A third year of sampling and testing is currently underway and will support the project team's understanding of year-to-year differences.

While the shoreline extension presents unique challenges, it also offers opportunities to support ecosystems. Increasing habitat variety, surface complexity (through more textured and varied surfaces), and porosity (with additional crevices and porous spaces) creates diverse environments that support a larger number and greater diversity of fish, crabs, clams, mussels, snails, and other marine species. For example, one solution could introduce complex structures in the water and along the new bulkhead and pilings, providing habitat for fish, worms, sea anemones, and other aquatic organisms (bottom left and right).

The extended shoreline can improve on-land habitat as well. New green space will serve as a habitat corridor, connecting existing habitat patches along the waterfront and attracting birds and pollinators with biodiverse planting.

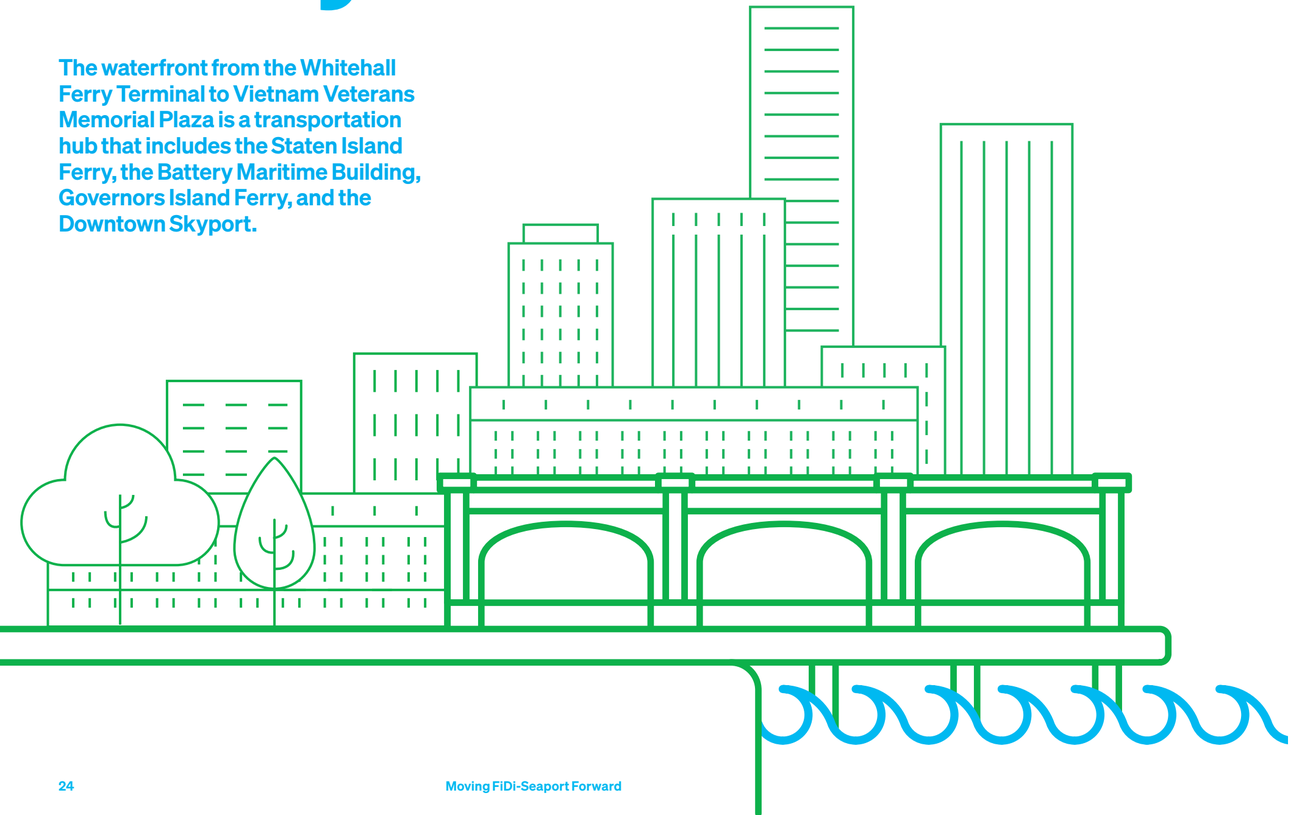





Southern Tie-In
Flood protection is integrated through The Battery and connects to South Battery Park City Resilience to create a continuous line of flood defense.
A new pump station prevents inland flooding by managing stormwater.
Floodgates are stored during normal conditions and deployed during coastal storms.
Eight acres of new public open space and a continuous elevated esplanade provide increased public access to the waterfront.
The shoreline is extended into the East River by up to one city block (90-200 feet) to accommodate flood defense infrastructure.
Ferry terminals are reconstructed and elevated.
Ferry Hub
Elevated two-level waterfront provides protection against sea level rise and coastal storms.
Harbor View Park
Seaport Piers

# Ferry Hub

**The waterfront from the Whitehall Ferry Terminal to Vietnam Veterans Memorial Plaza is a transportation hub that includes the Staten Island Ferry, the Battery Maritime Building, Governors Island Ferry, and the Downtown Skyport.**



## Today

Whitehall Ferry Terminal, Governors Island Ferry, and the Downtown Manhattan Heliport will experience monthly flooding by the 2050s, causing frequent service closures.

## Our Solution

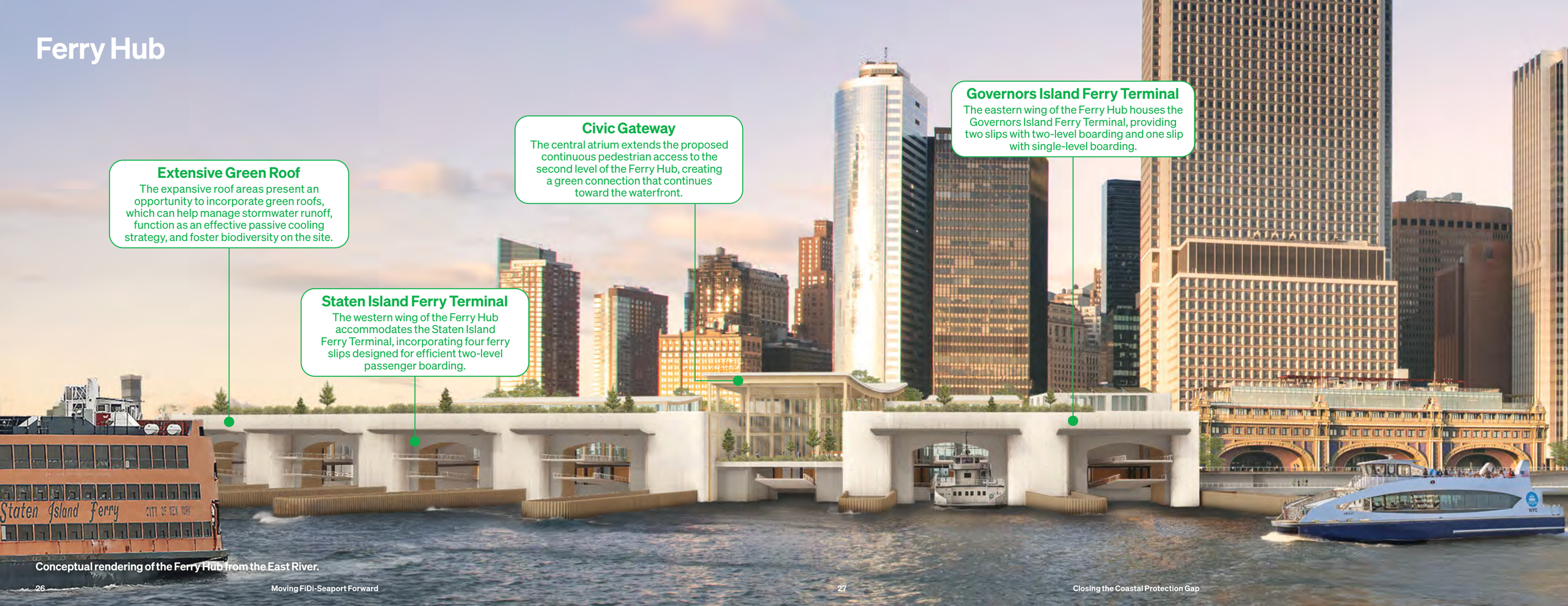
A new combined ferry terminal for the Staten Island and Governors Island Ferries will be built and elevated with construction phased to avoid disruptions to service. The historic Battery Maritime Building will be preserved and protected against storm flooding, and the Downtown Skyport will be elevated against sea level rise.

Pedestrian and bicycle access in this area will be improved through a new public plaza inland of the Battery Maritime Building that will cap over the Battery Park Underpass.

Ferry terminals need more capacity and efficient boarding spaces. Source: Jennifer S. Altman via NY Times

The existing Whitehall Ferry Terminal disconnects South Street and The Battery. Source: Google Maps

# Ferry Hub




### Extensive Green Roof

The expansive roof areas present an opportunity to incorporate green roofs, which can help manage stormwater runoff, function as an effective passive cooling strategy, and foster biodiversity on the site.

### Staten Island Ferry Terminal

The western wing of the Ferry Hub accommodates the Staten Island Ferry Terminal, incorporating four ferry slips designed for efficient two-level passenger boarding.

### Civic Gateway

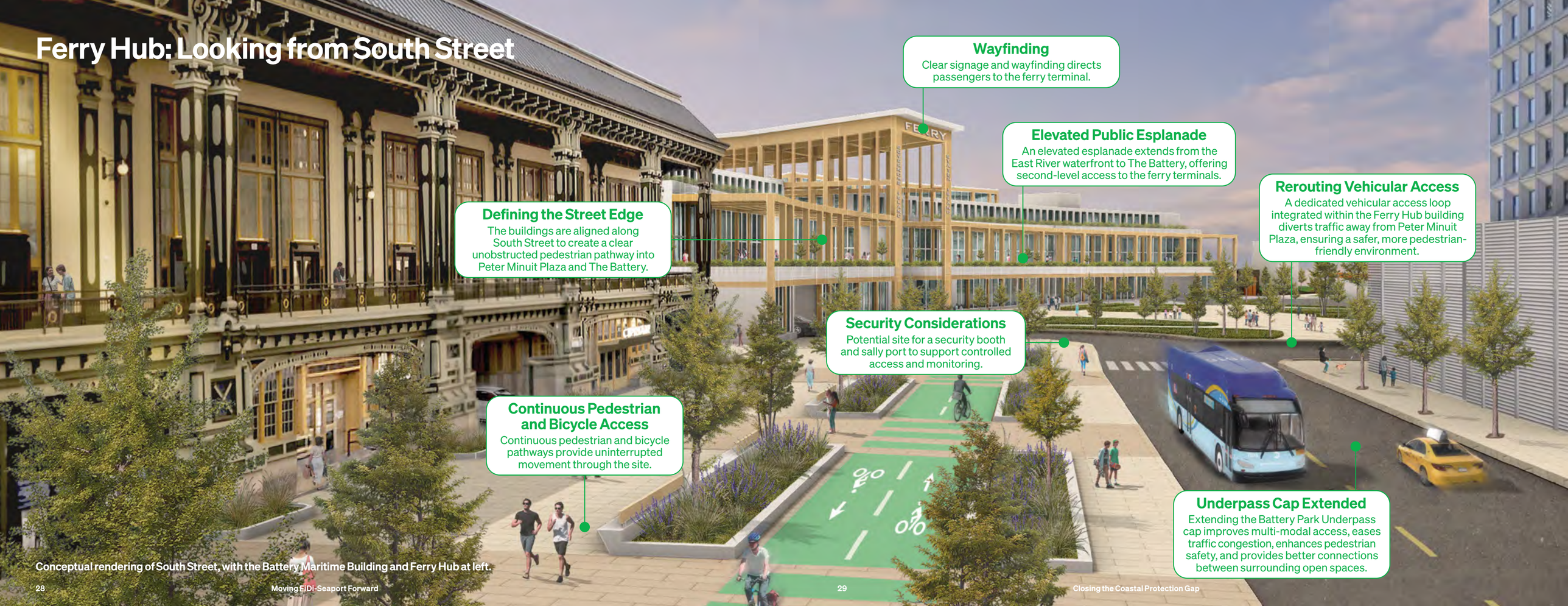
The central atrium extends the proposed continuous pedestrian access to the second level of the Ferry Hub, creating a green connection that continues toward the waterfront.

### Governors Island Ferry Terminal

The eastern wing of the Ferry Hub houses the Governors Island Ferry Terminal, providing two slips with two-level boarding and one slip with single-level boarding.

Conceptual rendering of the Ferry Hub from the East River.

# Ferry Hub: Looking from South Street




**Wayfinding**
Clear signage and wayfinding directs passengers to the ferry terminal.

**Elevated Public Esplanade**
An elevated esplanade extends from the East River waterfront to The Battery, offering second-level access to the ferry terminals.

**Rerouting Vehicular Access**
A dedicated vehicular access loop integrated within the Ferry Hub building diverts traffic away from Peter Minuit Plaza, ensuring a safer, more pedestrian-friendly environment.

**Defining the Street Edge**
The buildings are aligned along South Street to create a clear unobstructed pedestrian pathway into Peter Minuit Plaza and The Battery.

**Security Considerations**
Potential site for a security booth and sally port to support controlled access and monitoring.

**Continuous Pedestrian and Bicycle Access**
Continuous pedestrian and bicycle pathways provide uninterrupted movement through the site.

**Underpass Cap Extended**
Extending the Battery Park Underpass cap improves multi-modal access, eases traffic congestion, enhances pedestrian safety, and provides better connections between surrounding open spaces.

Conceptual rendering of South Street, with the Battery Maritime Building and Ferry Hub at left.

# Harbor View Park

**The new two-level waterfront will protect the neighborhood from coastal flooding while expanding recreational opportunities.**

## Today

NYC DOT's Wall Street/Pier 11 ferry landing for regional and City ferry services, located between the FDR and the shoreline, is narrow, making it challenging to accommodate flood defense and public programming. There is also inadequate queuing space for ferries, causing pedestrian and bicycle congestion along the waterfront.

## Our Solution

The Wall Street/Pier 11 ferry landing will be rebuilt with more space for passengers and vessels to support regional and City ferry services. To the north of the ferry terminal will be a new signature open space built on the shoreline extension that steps down towards the water, creating better views, recreational space, and pedestrian connections.

Queueing for Pier 11 ferries today often leads to congested space along the waterfront. Source: Gwynne Hogan via WNYC

Multi-level paths can provide opportunities for overlooks and water access. Source: Dewdrop via Steemit

# Harbor View Park

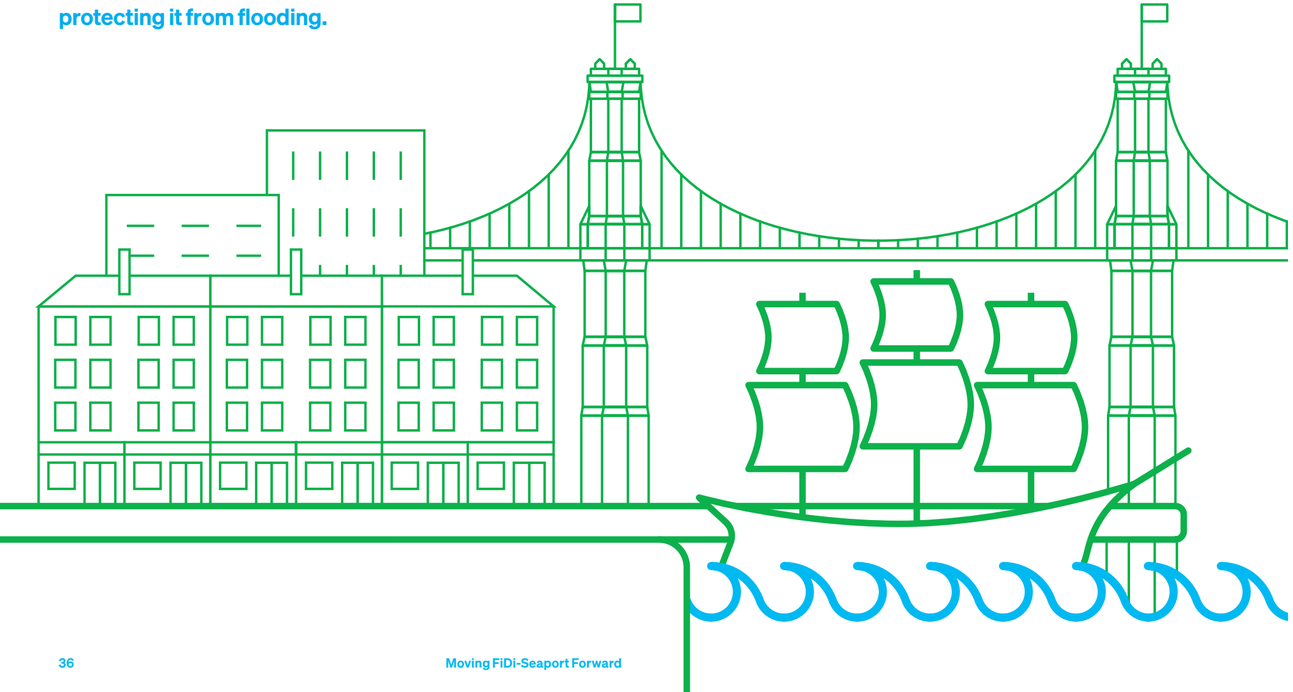

Conceptual rendering of the multi-level esplanade at Maiden Lane.

# Harbor View Park: Rebuilt Wall Street/Pier 11 Ferry


Conceptual rendering looking towards the East River from Old Slip.

# Seaport Piers

**The Seaport Piers area will preserve the historic South Street Seaport's connection to the waterfront while protecting it from flooding.**



## Today

The Seaport District is a vibrant cultural and historic neighborhood that is a destination for both residents and visitors. Pier 17 was elevated to protect against storms after Superstorm Sandy, but Piers 15 and 16 will experience monthly flooding by the 2080s.

## Our Solution

Historic uses in this area will be maintained and protected in the new design. Pier 16 will be elevated and Pier 15 will be replaced by a new Pier 19 to the north. Floodgates will provide direct access to the water from the city. A new small cove by the Brooklyn Bridge could create recreational and ecological opportunities. The floodwall will also connect to the adjacent Brooklyn Bridge-Montgomery Coastal Resilience project.

Multi-modal public access to and from the new waterfront will be provided through bike lanes and walkways. Source: Google Maps

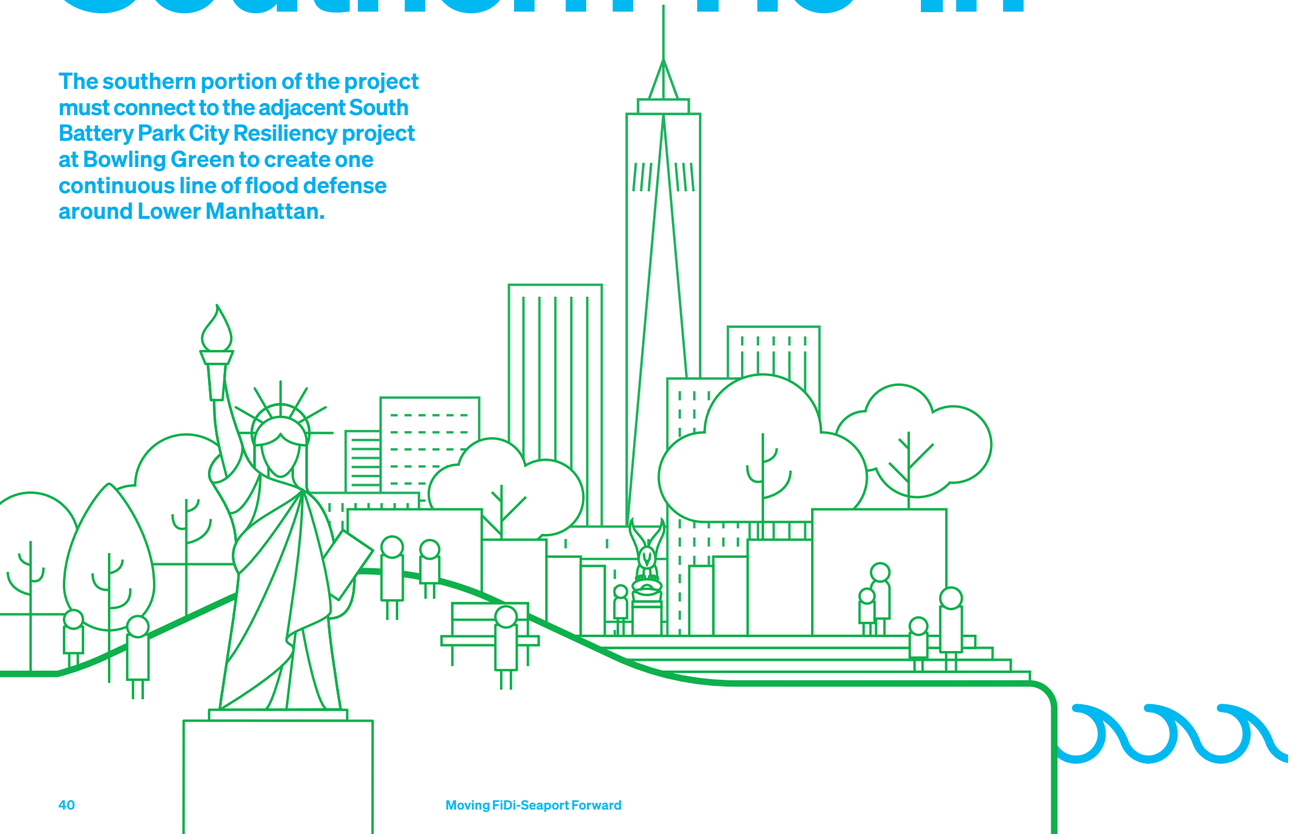
The vibrant Seaport District is at risk of flooding which will disrupt programming and businesses. Source: Marvel

# Fulton Street Gateway at Pier 17


Conceptual rendering of the Fulton Street gateway looking south from Pier 17.

# Southern Tie-In

**The southern portion of the project must connect to the adjacent South Battery Park City Resiliency project at Bowling Green to create one continuous line of flood defense around Lower Manhattan.**

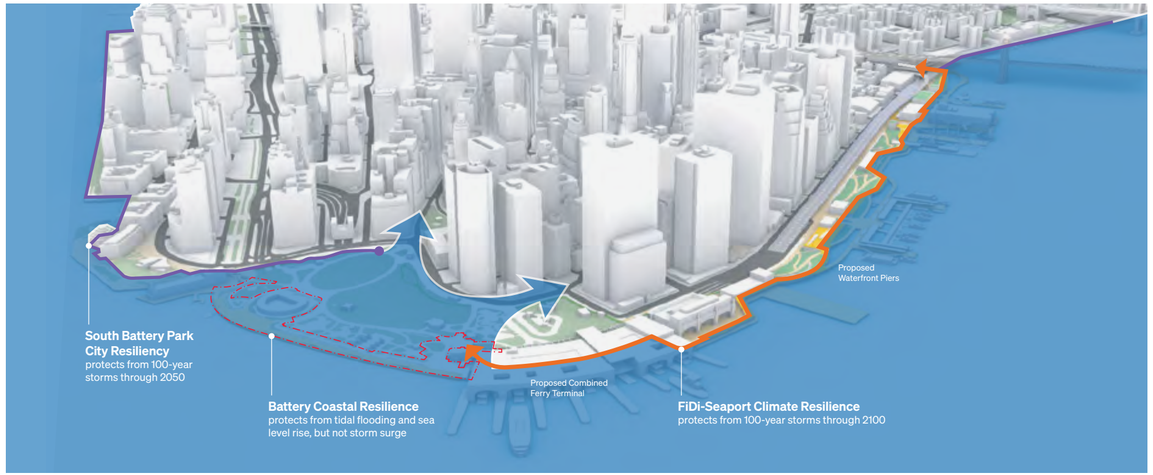


## Today

Three flood resilience projects come together at the southern tip of Manhattan and need to connect to create a closed flood protection system. Extensive studies of above ground and subsurface infrastructure constraints determined that the only technically feasible alignment to connect the flood protection at Whitehall Ferry Terminal to the South Battery Park City Resiliency project was to go through The Battery.

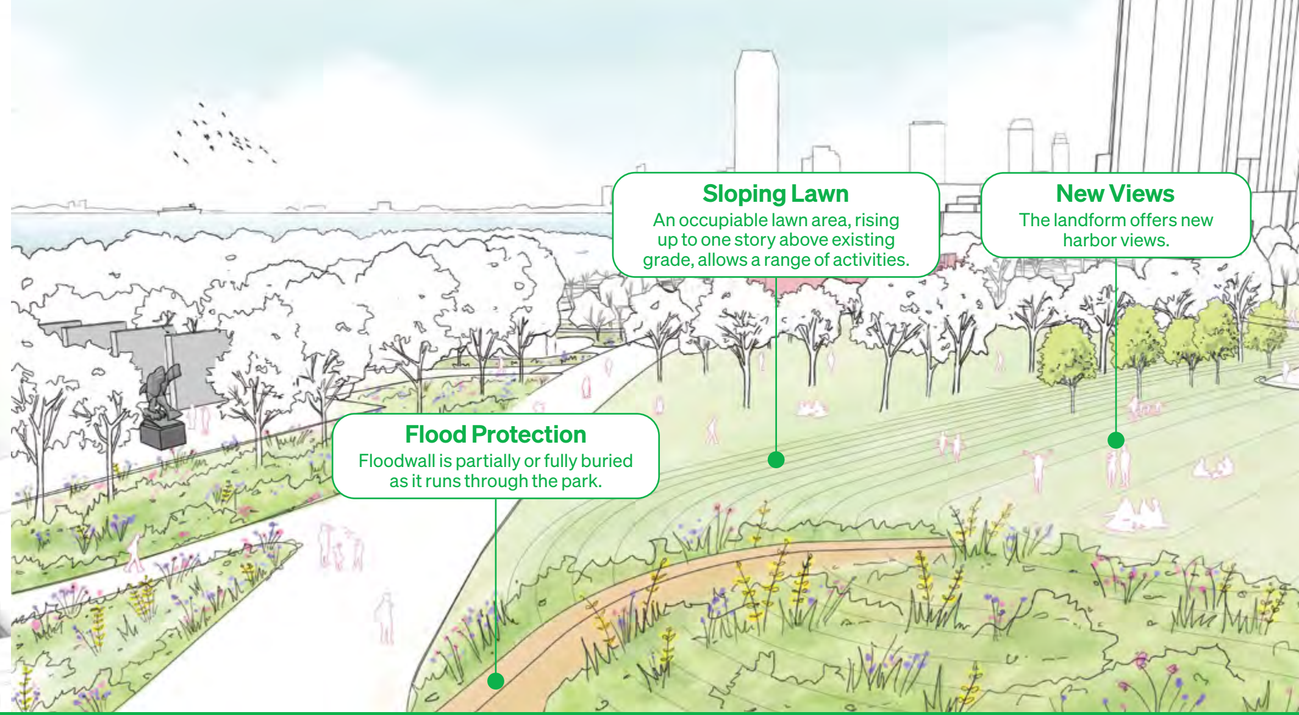
## Our Solution

The flood defense will need to weave through a complex web of subsurface infrastructure, including subway tunnels, the Battery Park Underpass, and the Hugh L. Carey Tunnel. To minimize underground and aboveground disturbances and avoid walling off the park from the water, the floodwall will be buried under the landscape in The Battery to create a gently sloping landform that offers new opportunities for open space and public programming and will create new views of the water. As a result, part of The Battery will be designed to be floodable during storms, while beloved assets such as the Seaglass Carousel, the Urban Farm, and Battery Playscape will be protected from flooding.




Three flood resilience projects meet at the southern tip of Manhattan and must "tie-in" to one another to create continuous flood protection.

# Southern Tie-In


In the working concept design for the Southern Tie-In, a reconfigured oval lawn allows clear views to Castle Clinton and a passive gathering space, and an expanded, tree-shaded plaza welcomes visitors at the main entrance and can be used for flexible events. An accessible path runs through large, gently sloping lawns for flexible gathering, and a hilltop ridge offers new harbor views.

This sketch shows a bird's-eye view of the landform. An accessible path brings visitors up and over the landform with moments to rest and look out. At its high point, the landform is approximately 15 feet in height above the existing elevation, or about one story tall. Floodgates maintain at-grade pedestrian access and views along major axes to the water.

# How Do We Get There?

The Plan sets a new global model for integrating flood protection into a vibrant urban waterfront. Implementation of a megaproject like this requires an equally innovative approach to funding.

With the changing landscape of federal funding availability, New York City is working to identify innovative financing sources that will allow the City to proactively reduce risks along our coastline *before* an extreme weather event hits, instead of relying on disaster relief like after Superstorm Sandy. To address this challenge, the City convened a task force of experts in policy, real estate, and finance. The Task Force's report, *Funding and Financing Shoreline Protection*, recommended a diverse approach that included working to secure new sources of federal funding, leveraging local powers, and engaging insurance companies.

**The City needs a bold funding plan now** to build infrastructure for a resilient future. To secure one of the revenue streams identified, NYCEDC will work with the City and stakeholders over the next year to advance plans to pilot a Lower Manhattan special assessment district, referenced in the *Funding and Financing Shoreline Protection* report as a **Shoreline Protection District (SPD)**.

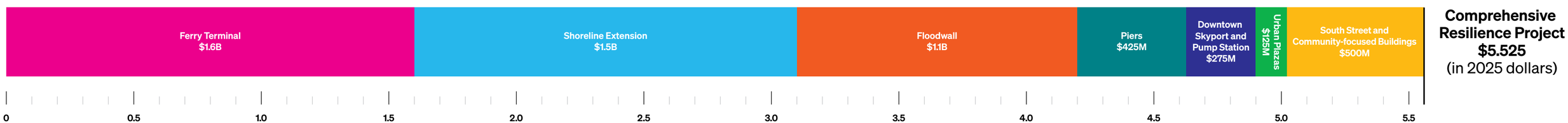
## Project Cost

Since the Master Plan, NYCEDC has prioritized reducing project costs by identifying where construction could be expedited and phased to minimize disruption to waterfront access, right-sizing planned facilities to better fit stakeholder needs, and consolidating waterfront uses.

The estimated capital cost of the FiDi-Seaport Climate Resilience Plan is $5.5 billion in 2025 dollars. The earliest construction could begin is 2029, at which point, with escalation, the total project cost will be an estimated $8-9 billion.

Every additional year of delay contributes to millions of dollars in escalation costs due to inflation, changes in market conditions, and unforeseen events. This is why the City is advancing environmental review, which is required to secure the capital to begin construction.

**While the project is expensive, the benefits are great, and the cost of inaction is even greater.**




**Comprehensive Resilience Project**
**$5.525**
(in 2025 dollars)

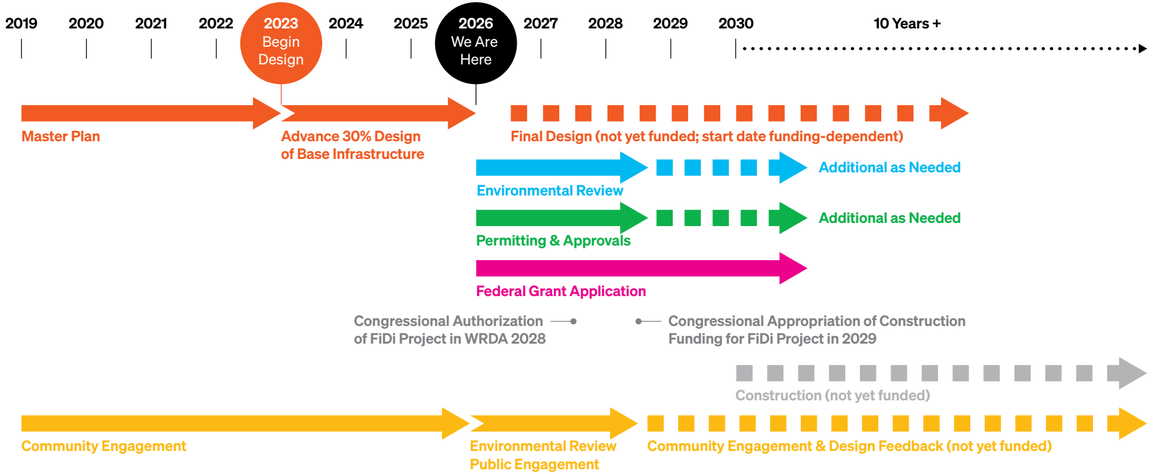
# Financing Design and Construction

The Master Plan identified that no single funding stream would be sufficient, and implementing this project will require partnership across City, State, and Federal governments.

The US Army Corps of Engineers (USACE) Civil Works program is the largest source of federal resilience funding available for coastal cities and could provide up to 65 percent of design and construction costs.

The City has been working closely with USACE to follow the model established in their Alternative Delivery program, which utilizes existing authorities legislated by Congress in the Water Resources Development Act (WRDA) to allow states and cities to take a lead role in the feasibility, design, and construction of coastal storm risk management projects. This allows the City to access federal funding and harness the technical support of USACE while ensuring that the project meets local needs.

The City is now collaborating with USACE on an integrated feasibility report and environmental review study, which would allow the project to be authorized for construction and thereby eligible for USACE Civil Works congressional appropriations.






# Alternative Financing— Sustained Funding for Resilience Projects

The *Funding and Financing Shoreline Protection* report developed strategies for new revenue generation and financial structures to support a citywide portfolio of coastal resilience projects. This work builds on more than a decade of City policy and planning efforts and incorporates critical considerations of equity and financial responsibility. To address these challenges, the Resilience Finance Task Force made the following recommendations:

### Operations

**Establish Shoreline Protection Districts to fund local operations and maintenance**, which would require property owners protected by resilience investments to pay a fee to fund the maintenance of resilience infrastructure.

### Capital

**Pursue multiple long-term revenue sources to support construction**, such as through tax and insurance surcharges.

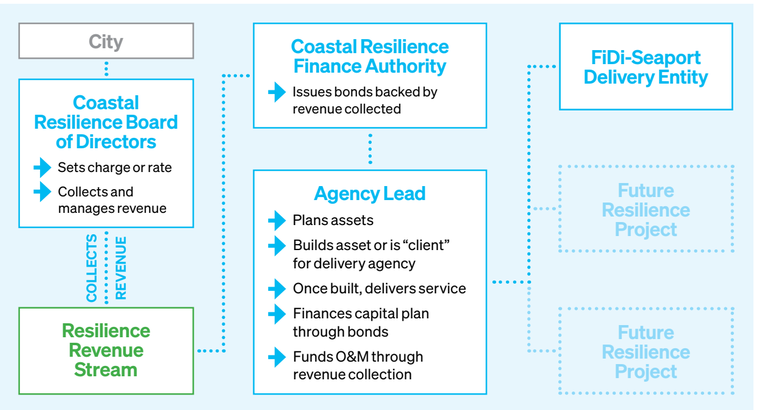
### Governance

**Create a Resilience Finance Authority and Board to manage and finance capital costs** of resilience projects.

### Insurance

**Collaborate with the insurance industry on climate risk and resilience** to ensure that resilience investments translate into financial benefits for protected New Yorkers.

These strategies will facilitate the implementation and maintenance of resilience projects across the city, including the FiDi-Seaport Climate Resilience Plan. NYCEDC is proud to work with City agencies to operationalize a precedent-setting resilience financing strategy.



# What's Next?

## Permitting and Environmental Review

A project of this scale will take approximately a decade to construct. Before construction can begin, the project must secure required regulatory permits. The FiDi-Seaport Climate Resilience Plan will need to go through the environmental review process, including a third year of biological and habitat sampling and testing in the East River, which will assess the environmental impacts of the project, and obtain approvals from local, state, and federal regulatory agencies. The base infrastructure of the flood defense and footprint of the shoreline extension into the East River has reached a level of design that allows environmental review to begin. Advancing environmental review is a crucial step to implement the project and will allow the project to be eligible for larger funding sources through federal appropriations.

## Call to Action

Protecting New York City from flooding is critical for ensuring the city is able to serve all New Yorkers for generations to come. The FiDi-Seaport Climate Resilience Plan is one piece of the City's strategy to achieve this, but the biggest barrier that remains is funding.

Local advocacy for funding—**support from you**—is crucial to building a coalition of support for a more resilient New York City.

**Each of you has a role to play in getting this plan across the finish line:**

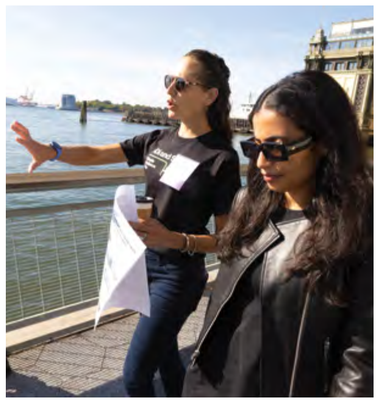
- Show up and speak up at meetings; submit comments; keep us accountable.
- Spread the word on your block, in your building, and across your borough.
- Champion funding requests and regulatory approvals.

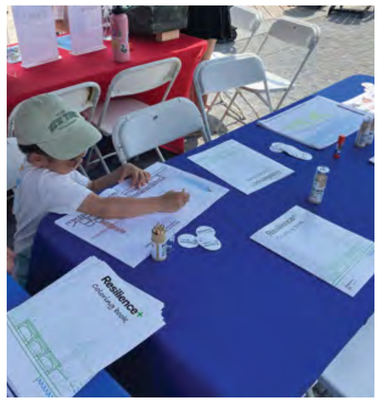
# Photo Gallery







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NYC Mayor's Office of Climate & Environmental Justice

NYC Environmental Protection

# FiDi and Seaport Climate Resilience Plan