

SHERMAN CREEK

Waterfront Esplanade Master Plan

Prepared for
New York City Economic Development Corporation

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FOREWORD

Dear Friend,

On behalf of the many stakeholders who were involved in the development of this document, it is a great pleasure to present the Sherman Creek Waterfront Esplanade Master Plan.

The document is the result of a two-year planning process during which New York City Economic Development Corporation worked closely with the New York City Department of Parks & Recreation, other City and State agencies, and a number of interested parties, including Manhattan Community Board 12, local elected officials, neighborhood residents, not-for-profit organizations, businesses, and property owners.

The master plan follows other City efforts to chart the future of this part of Upper Manhattan, dating back to 2003. One top priority identified through those earlier efforts was the reclamantion of the Harlem River waterfront, between Sherman Creek Inlet and West 208th Street, with new parks and open spaces for recreation. The City's open space investments in the area since 2003 have begun to address that concern.

The Sherman Creek Waterfront Esplanade Master Plan represents yet another step forward. The proposed esplanade would enhance the neighborhood's access to its waterfront and complement and support the active commercial, institutional, and industrial uses that are such an important part of this area. This master plan is thus aligned with the City-wide goal of achieving publicly accessible waterfronts, as set forth in the Waterfront Vision and Enhancement Strategy (WAVES) introduced by Mayor Michael R. Bloomberg and City Council Speaker Christine Quinn earlier this year.

Funding must now be secured to advance this master plan and realize its vision of a revitalized Harlem River Waterfront in Sherman Creek. We look forward to the continued commitment and coordinated effort of all interested parties to move this plan into implementation.

Sincerely,

Seth W. Pinsky
President, NYCEDC



EXECUTIVE SUMMARY

The Sherman Creek Waterfront Esplanade Master Plan (the “Master Plan”) establishes a planning and design framework for an open space amenity (the “Esplanade”) to revitalize a section of the Harlem River waterfront that has been derelict and inaccessible to the public for decades.

The Esplanade would connect certain City investments along the water’s edge, bring new recreational uses to the area, restore the natural habitat, and provide the upland neighborhoods with safe, unimpeded access to their waterfront. The Esplanade would complement and support the industrial, commercial, and institutional uses that are an integral part of the area’s vibrant fabric.

The active participation of local stakeholders during a 20-month outreach process was critically important to complete the plan. Their desires and concerns shaped the vision of the Esplanade and its accompanying conceptual design.

The Master Plan recommends a phased development of the Esplanade, given a reality of limited resources, the cost of developing, operating, and maintaining each Esplanade section, and the challenges and opportunities particular to each such section.

Phase 1 would include the Esplanade sections at Academy Street, the North Cove, and Pebble Beach Park, which could be developed as successive sub-phases.

Phase 2 would include the Esplanade section between West 204th Street and the area under the University Heights Bridge.

The Esplanade at Academy Street has the most potential to become the first project of the Master Plan, provided there were funding in place to develop, operate, and maintain the project. This Esplanade section would be constructed on City-owned property that could be made available for the project in the nearer term. In addition, this investment would yield a richer variety of programs than other Esplanade sections as well as significant neighborhood connections. The remaining Esplanade sections would follow, building on the momentum and success of this project.

The Master Plan considers potential management models for the Esplanade. The success of any model (i.e. the adequate stewardship of the Esplanade in the long term) will depend, ultimately, on the effective deployment of resources to the operation and maintenance of the Esplanade.

When realized, the Esplanade will enable uninterrupted pedestrian access to and along the water’s edge, furthering a key goal of the City’s Waterfront Vision and Enhancement Strategy (WAVES). The Esplanade will also restore Sherman Creek’s role as a significant natural habitat and a hub for water-based recreation. More importantly, the Esplanade will improve quality of life in the neighborhood, embracing its existing vitality and complementing it with much-needed recreational opportunities.



Fig. 1: View of the proposed Sherman Creek waterfront esplanade

BACKGROUND



Fig. 2: Sherman Creek location

The impetus for this Master Plan grew out of a City-driven planning study of the section of Inwood traditionally known as Sherman Creek (Fig. 2) in 2003–2004. The study identified several community recommendations regarding waterfront access, parks, and recreation. New York City Economic Development Corporation (“NYCEDC”) and the New York City Department of Parks & Recreation (“NYCDPR”) have worked together over the past few years to implement some of those recommendations. Key achievements include:

- The clean-up of the upland area just south of the Sherman Creek Inlet and the creation of a pedestrian trail (the “Nature Trail”), in partnership with New York Restoration Project (“NYRP”), a local non-profit; and
- The development of five parks (the “Street-End Parks”) at the Harlem River ends of West 202nd to West 206th Streets.

During the 2003-2004 study, the local community recommended the creation of a riverside esplanade to reclaim Sherman Creek for public recreation after decades of neglect. This Master Plan begins to address this request.

In October 2009, NYCEDC began to explore the feasibility of creating an Esplanade that could connect the Street-End Parks and revitalize the riverfront. The effort focused on the area (the “Esplanade Site”) bounded to the south by Sherman Creek Inlet, to the north by a tidal wetland at the end of West 208th Street (the “North Cove”), to the east by the Harlem River, and to the west by the lots adjoining the riverfront (Fig. 3).

The planning process began with an analysis of site constraints and opportunities and continued with an ambitious community outreach effort. Numerous local stakeholders participated in discussions that shaped a shared, broad-based vision for an Esplanade. NYCEDC worked closely with several agencies throughout the planning process, including NYCDPR and the New York City Department of Transportation (“NYCDOT”).

This Master Plan establishes a planning and design framework for a waterfront asset to achieve the following goals:

- Connect the Street-End Parks;
- Provide continuous waterfront access to the upland neighborhoods;
- Complement and support the commercial, industrial, and institutional uses that give vibrancy to the area;
- Restore the Esplanade Site’s natural habitat; and
- Revitalize with new recreational uses a section of the Harlem River waterfront that has been inaccessible and derelict for decades.

The plan articulates a shared vision of the Esplanade and presents a feasible conceptual design and complementary planning recommendations, their corresponding cost estimates, an implementation strategy, and a long-term maintenance strategy.



Fig. 3: Master Plan study area

Esplanade Site 1 Subway Station Nature Trail Street-End Parks

SITE

1. CONTEXT

The Esplanade Site is relatively flat, measures approximately 3,400 linear feet at the water's edge, and has an approximate area of 3.84 acres.

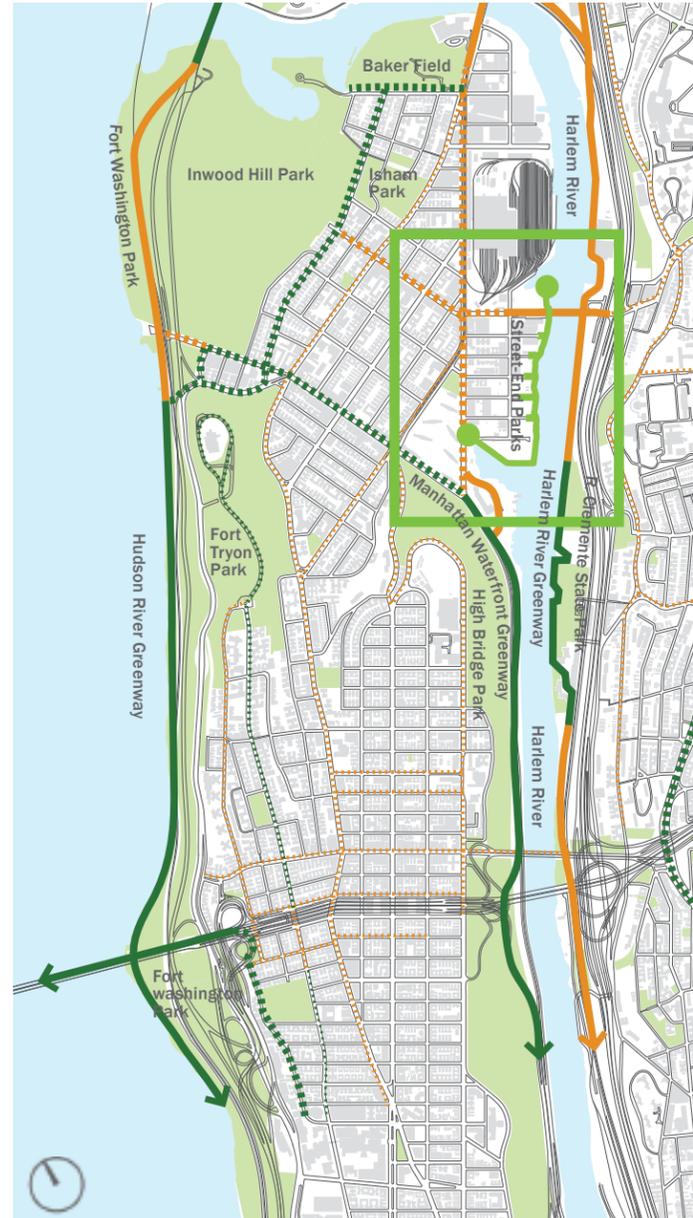
The Esplanade Site touches a planned network of greenways and bike paths that would integrate the area's low lying neighborhoods to its great open spaces, which are at higher elevations (Fig. 4). Today, however, the network is discontinuous at the waterfront, north of Dyckman Street.

There are two Broadway – 7th Avenue Local (1 line) subway stations relatively close to the Esplanade Site, at Dyckman Street and Nagle Avenue, and West 207th Street and 10th Avenue (Fig. 5). Further inland is an 8th Avenue (A/C line) subway stop at Broadway and West 207th Street. In addition, the BX12 select bus service connects the area to the Bronx.

This broad context sets the stage for a more detailed look at the Esplanade Site, its evolution over time as a built environment, and its issues and opportunities vis-à-vis the goals of the Master Plan.

(Opposite Page)
Fig 5: Neighborhood context

- Esplanade Site
- - - Blocks
- Street-End Parks
- Nature Trail



- Existing Greenway
- Planned Greenway
- - - Existing Bike path
- - - Planned Bike path

Fig. 4: Parks, greenways, and bike paths in northern Manhattan



History

Historically, tidal wetlands and mudflats characterized the Esplanade Site and its immediate vicinity (Fig. 6). These swampy conditions, combined with a relative lack of amenities, limited population growth in the area for many years.

Population grew over time and this part of the Harlem River gradually became a locus for water-based recreational activities. This waterfront played host to a number of collegiate and social boat clubs – similar to the Schuylkill River in Philadelphia. The development of the Harlem River Speedway in 1898 strengthened the area's role as a hub for outdoor recreation (Fig. 7).

By the early 1900s, there were boat clubs of all types along Sherman Creek. Often, these clubs hosted activities other than rowing, such as handball, bowling, and billiards.

The completion of Harlem River Ship Canal in 1895 began to change Sherman Creek's natural environment. Small boatbuilding, coal, and lumber yards began to develop in the area. The existing recreational uses gave way to new industrial uses in the following decades.

The expansion of the elevated train service to the northern part of Manhattan in the early 1900s, led to the development of a large railroad maintenance yard and an 8-storey coal-fired generating facility in the area (Fig. 8). Sherman Creek, which once flowed well inland, began to transform into a cove-like inlet off the Harlem River.

More recently, the Consolidated Edison Company of New York ("Con Ed") has developed power distribution facilities in the area, including a new substation at Academy Street and 9th Avenue (the "Academy Substation").



Fig. 6: 1776: Sherman Creek Inlet



Fig. 7: 1905: Boat race at the Harlem River Speedway

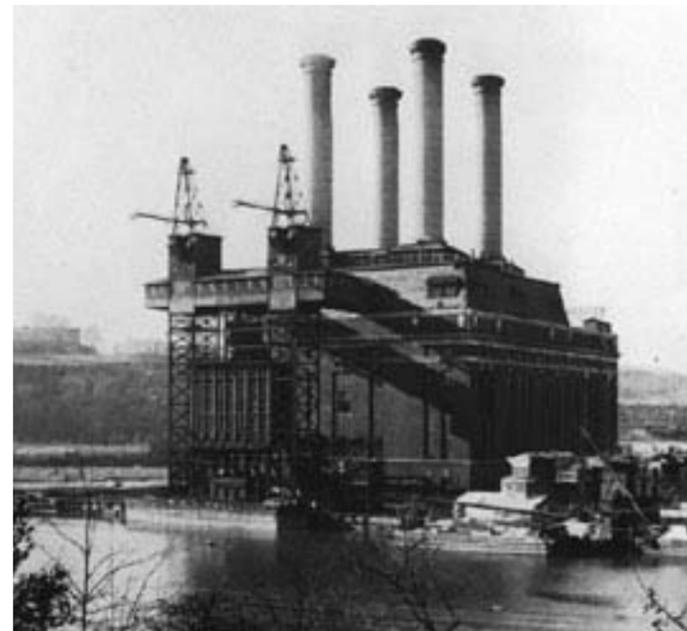


Fig. 8: 1908: Coal-fired power generating facility in Sherman Creek

Built Environment Today

The Esplanade Site is largely defined by the Street-End Parks, which are located at the Harlem River terminus of each of West 202nd to West 206th Streets. The parks are as wide as each street's right-of-way ("ROW").

The parks include amenities such as picnic tables, barbecue grills, game tables, and lookouts to fish or simply enjoy the landscape (Fig. 9). Also, there are steps to access the river at West 202nd Street. Local residents and organizations use the parks frequently, especially during the warm seasons.

The Esplanade Site is bookended by Sherman Creek Inlet to the south and the North Cove to the north. Both were once wetlands and are now mud flats.

NYCDPR and organizations such as NYRP, Friends of Sherman Creek, and the Manhattan Wetlands and Wildlife Association have undertaken commendable efforts to clean up the debris, boat shells, ruined docks, and other waste that have littered these mudflats for years (Fig. 10).

Adjacent to the Esplanade Site, the built environment consists of 1 to 2 storey buildings with large floor plates, power distribution structures, and paved parking lots (Fig. 11). Between 9th and 10th Avenues, there are low-rise residential, commercial, and community facility buildings with smaller floor plates.

There is a high-density residential neighborhood west of 10th Avenue consisting of 4 to 6 storey tenement buildings and Dyckman Houses, a New York City Housing Authority high-rise complex.

The neighborhood includes a bustling U-shaped commercial corridor along Dyckman Street, Broadway, and West 207th Street, with some larger, free-standing commercial buildings alongside the Broadway – 7th Avenue Local subway (1 train).



Fig. 9: Fishing at the West 203rd Street-End Park



Fig. 10: Sherman Creek Inlet, Academy Substation in the background.



Fig. 11: Power distribution facility between West 201st and West 202nd Streets

2. ISSUES

Waterfront Land Ownership

The varying width of the City-owned lots along the waterfront, which range from three to 100 feet, and their irregular shapes in certain points make it challenging to create a continuous, usable and safe passage for pedestrians (Fig. 12).

In addition, private parties own some of the land directly adjacent to the waterfront, making it more complex to lay out a publicly accessible amenity in those locations. This is the case from Academy Street to West 202nd Street where Con Ed's properties extend to the U.S. Pierhead and Bulkhead Line and Bulkhead Line.

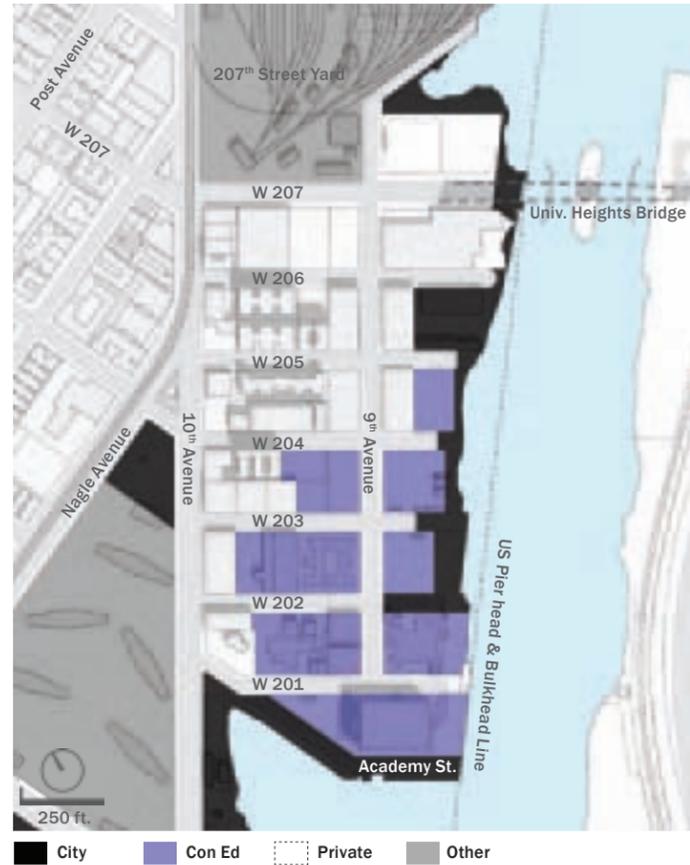


Fig. 12: Land ownership

Shoreline Conditions

The Esplanade Site's shoreline is a hodgepodge of rip-rap, concrete bulkhead, granite bulkhead, timber piles, and sheet piles. Approximately 85% of this infrastructure is in varying levels of degradation and is, in most cases, in poor condition (Fig. 13). Some sections are inadequate with regards to erosion control; only a few sections — primarily at the Street-End Parks — require relatively little repair.



Fig. 13: Shoreline conditions

Uses Along the Waterfront

Most of the land uses along the Esplanade Site occupy full blocks and require security fences (Fig. 14). These conditions create an isolated and uninviting environment for pedestrians and limit public access to the waterfront. Going from south to north, the uses along the Esplanade Site include:

- Academy–West 202nd Street: electricity distribution;
- West 202nd–West 205th Street: parking, including a New York City Police Department (“NYCPD”) impound tow lot and a NYCDOT maintenance yard;
- West 205th–West 206th Street: facility operated by NYCDOT–Division of Bridges;
- West 206th–West 207th Street: wholesale food product distribution;
- Under the University Heights Bridge: parking/equipment storage, operated by NYCDOT–Division of Bridges;
- West 208th Street: parking.

There are vibrant commercial and community facility uses along 9th Avenue, from West 204th to West 207th Streets. The commercial uses include supermarkets, wholesale food, and restaurant equipment distribution.

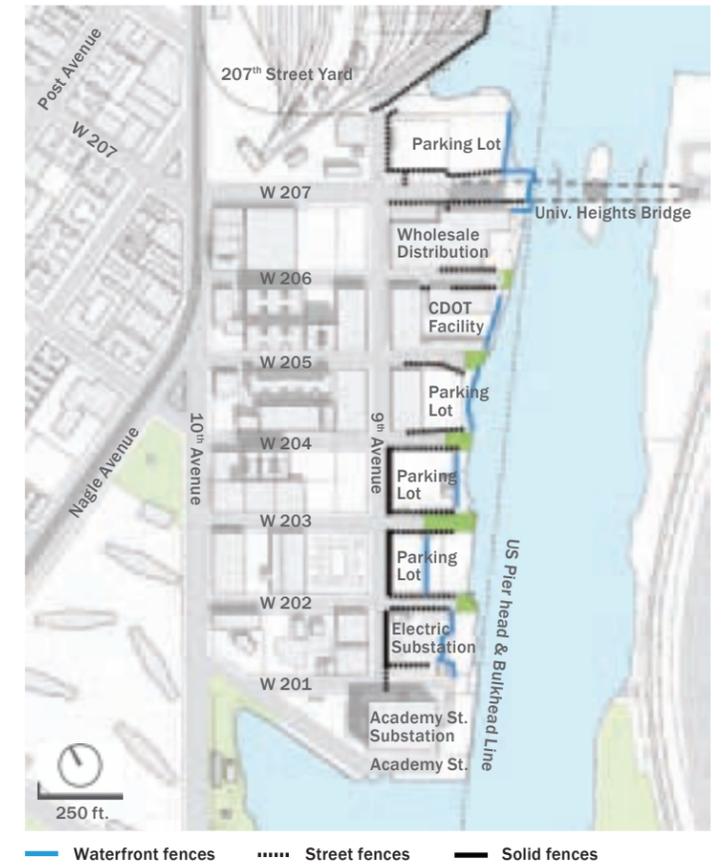


Fig. 14: Fences around the Esplanade Site

Pedestrian Circulation

The high volume of car and truck traffic along 9th Avenue limits pedestrian access to the Esplanade Site, especially at key upland neighborhood connections such as Academy, West 204th, and West 207th Streets.

Most of the traffic comes from the University Heights Bridge, turns west onto 9th Avenue, then west on West 202nd Street, and south on 10th Avenue towards the Harlem River and FDR Drives (Fig. 15).

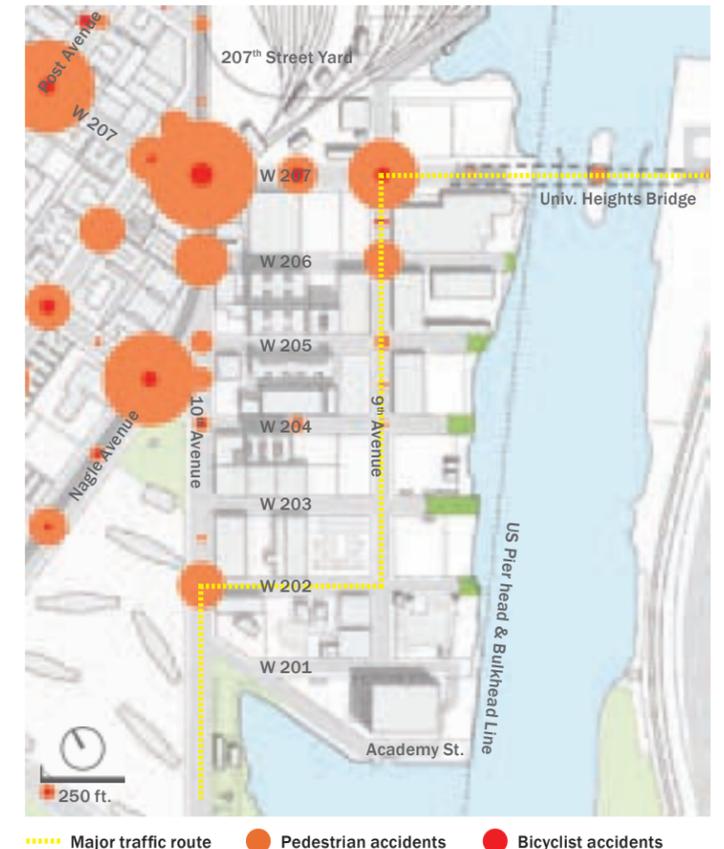


Fig. 15: Traffic movement and accidents

3. OPPORTUNITIES

Upland

The Esplanade Site has tremendous potential to become a lively public space, as almost 40,000 people live within a 10-minute walk (Fig. 16). The creation of pedestrian-friendly linkages at the following points could help realize this potential:

- a** Academy Street–West 201st Street–10th Avenue intersection, which would connect to the area’s densest residential communities;
- b** West 204th Street, which would connect to the area’s main commercial corridors; and
- c** 9th Avenue–West 208th Street intersection, which would connect to West 207th Street and the University Heights Bridge.



Potential entrances to the Esplanade
 Population within 10 min walking distance
 Major pedestrian routes to the Esplanade

Fig. 16: Upland linkage opportunities

At Water’s Edge

The Esplanade Site offers great opportunities to restore and enjoy the natural habitat and also touch the water (Fig. 17). This would be feasible at:

- d** Sherman Creek Inlet and the North Cove, which could be restored to function as wetlands once again; and,
- e** Shorelines at Academy Street, West 203rd–West 205th Street, and West 207th–West 208th Street, which could be rehabilitated to enable people to touch the water.



Ecological restoration opportunities
 'Get-down-to-water' opportunities

Fig. 17: Opportunities at the water's edge

COMMUNITY ENGAGEMENT PROCESS

The outreach to local stakeholders started in December 2009 and spanned a 20-month period. The goals of this process were to:

- Identify local stakeholders' desires and concerns regarding a future public space at the Esplanade Site;
- Create consensus around a vision, goals, and strategy to implement such public space;
- Foster active participation in the conceptual design process; and
- Identify potential maintenance partners for the proposed Esplanade.

The outreach included more than 45 meetings. There was a large public charrette on March 20, 2010, where more than 60 attendees voiced their opinions and programming ideas in connection with a future public space at the Esplanade Site. There were similar conversations in smaller meetings with common-interest groups (e.g. local property and business owners, rowing/boating groups, and other non-profit organizations). There were also several meetings with Manhattan Community Board 12, which was kept up-to-date on the progress of the planning process.

An advisory committee comprised of City agencies, local elected officials, community members, and other stakeholders was established as a forum for stakeholder input. The committee met twice during the course of the planning process: once on August 5, 2010 to provide feedback on a set of preliminary configurations for a future Esplanade (Fig. 18); and a second time on July 13, 2011 to provide feedback on a preferred Esplanade configuration (Fig. 19).

The following themes surfaced consistently throughout the outreach regarding a future Esplanade:

Desires

1. Continuous public access to the waterfront
2. Connections to upland neighborhoods
3. Water-related uses (fishing, boating)
4. Special event programming
5. Recreation opportunities for all ages

Concerns

1. Conflicts between traffic and pedestrian flows
2. Pedestrian safety and security
3. Respect for the existing commercial operations
4. Ongoing maintenance



Fig. 18: First advisory committee meeting



Fig. 19: Second advisory committee meeting

VISION

A long-term partnership between the City, local elected officials, and community stakeholders will enable the gradual development of the Esplanade. This amenity will reconnect the community to its waterfront, providing safe access and recreational opportunities for people of all ages, establishing synergies with neighboring land uses, and restoring the environment. Four principles inform this vision:

Continuity

The Esplanade will provide safe, continuous waterfront access to the public, from Sherman Creek Inlet to the North Cove and from the upland neighborhoods to the water's edge.

Community-centric Programs

The Esplanade will include recreational programs that respond effectively to the needs, desires, and concerns of the local community.

Coexistence

The Esplanade will complement and support the industrial, commercial and institutional operations that give vitality to the area.

Sustainability

The Esplanade will be a well-maintained asset that improves the area's natural environment and the Harlem River's water quality.



PLANNING PRINCIPLES

1. CONTINUITY

The principles that inform the vision have also shaped the Esplanade's conceptual design. They have determined how the design will relate to the Esplanade Site, with its constraints and opportunities.

The Esplanade should enable uninterrupted pedestrian access to and along the water's edge (Fig. 20). Also, the Esplanade should restore continuity in the area's role as a significant natural habitat (Fig. 22) and a hub for water-based recreation (Fig. 24). The design proposes the following to realize the principle of continuity:

Continuity of Access

The design includes safe, meaningful pedestrian connections throughout the entire Esplanade Site, and recommendations to create safe, inviting links to the uplands (Fig. 21).

Ecological Continuity

The design features restored salt marshes and freshwater wetlands (Fig. 23). The design also features the following "green" elements: porous shoreline edges, native and marine organism plantings, infrastructure measures that divert storm water away from the conventional system and into the freshwater wetlands, and fences that integrate plants with security fences.

All these elements would also create continuity with NYRP's ecological restoration efforts at Swindler Cove in Sherman Creek Park, located just south of the Esplanade Site.

Historical Continuity

The design includes several water-based recreation features such as a pebble beach, a fishing pier, a floating dock to launch row boats, and a community facility that could be programmed for boating uses (Fig. 25).



Fig. 20: Brooklyn Bridge Park - Example of uninterrupted pedestrian access to and along the water's edge



Fig. 22: Natural configuration of Sherman Creek, circa 1776

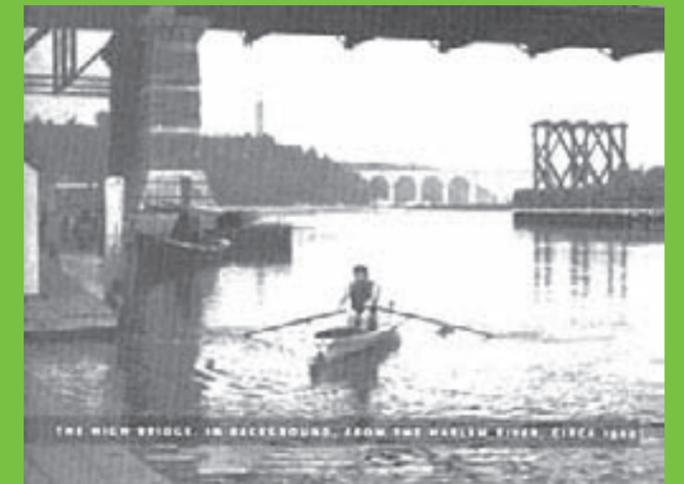


Fig. 24: Rowing the Harlem River in the early 1900s

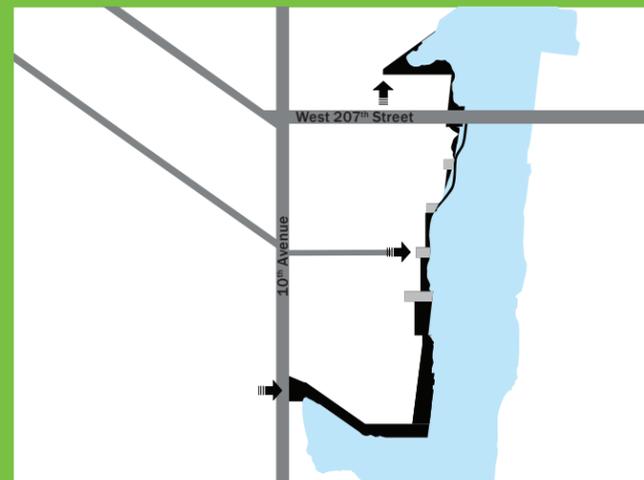


Fig. 21: Continuity of access

- █ Proposed connectors
- ➔ Proposed access points



Fig. 23: Ecological continuity

- █ Proposed restoration
- █ Historical wetland
- █ Historical shoreline

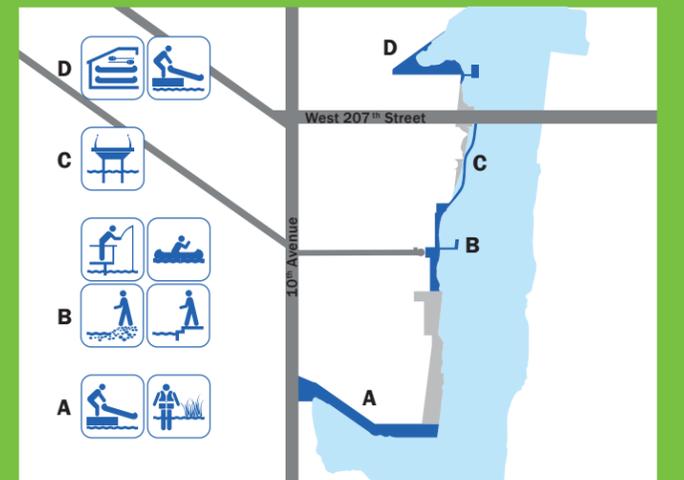


Fig. 25: Historical continuity

- █ Proposed amenities and locations

3. CO-EXISTENCE

The Esplanade should complement and support the industrial, commercial, and institutional operations that surround the Esplanade Site (Fig. 27-28).

The Esplanade, its layout, amenities, and main connections to the upland neighborhoods, is designed to embrace and create synergies with those operations. In addition, the design includes “green” fences, safety buffers, and traffic-calming measures to enable peaceful coexistence between the Esplanade and its immediate neighbors.



Fig. 27: Supermarket, 9th Avenue between West 205th and West 206th Streets



Fig. 28: NYCDOT facility between West 205th and West 206th Streets

4. SUSTAINABILITY

The Esplanade should function as a well-maintained asset that improves the natural environment and the Harlem River’s water quality.

Thus, in addition to the design features aimed at restoring ecological continuity (Fig. 29 and 31), the Master Plan proposes a strategy to ensure that the Esplanade is adequately maintained over the long term (Fig. 30).



Fig. 29: Salt marsh



Fig. 30: Brooklyn Bridge Park - example of a well maintained open space

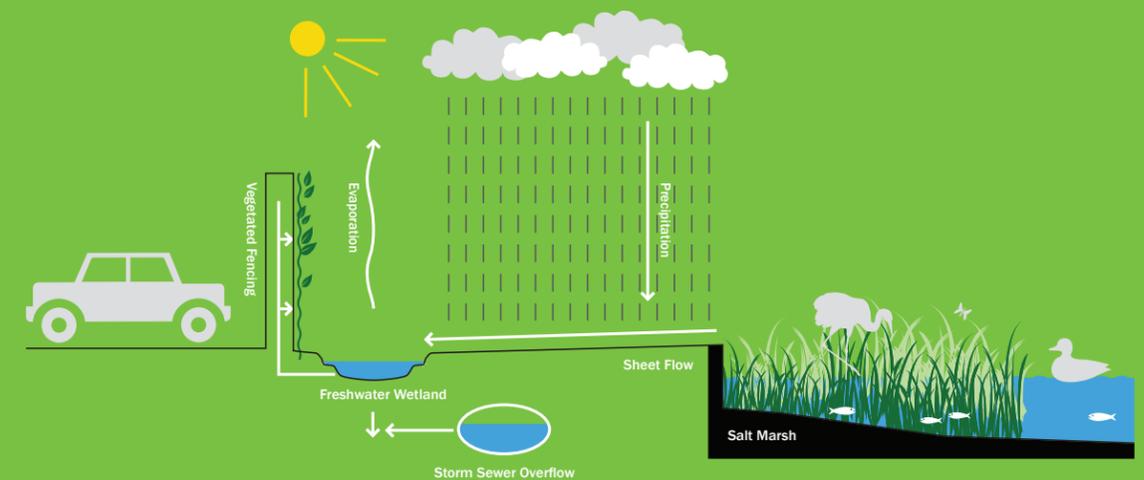


Fig. 31: Schematic representation of on-site water management

CONCEPTUAL DESIGN

1. ACADEMY STREET



2. PEBBLE BEACH PARK



3. RIVERWALK



4. NORTH COVE



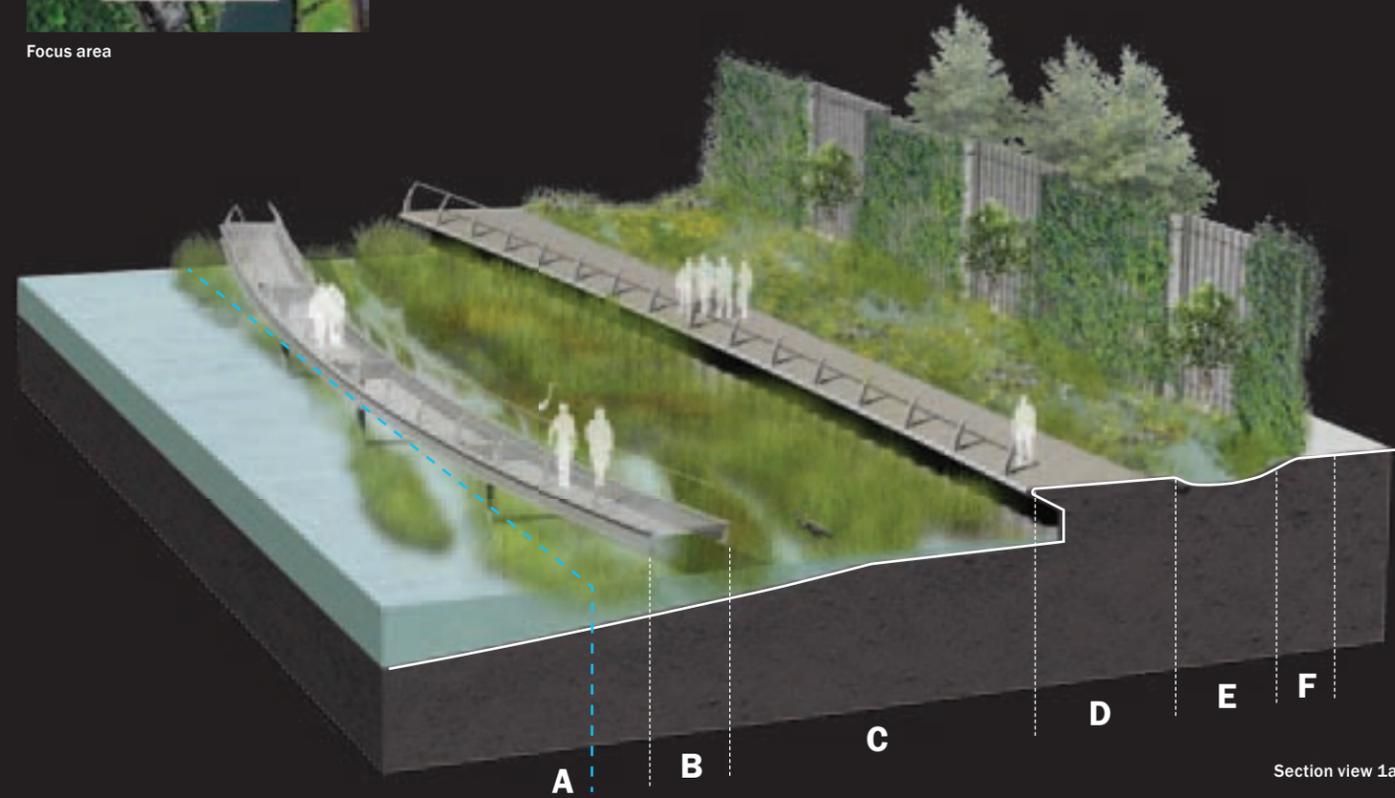
Fig 32: Sherman Creek Waterfront Esplanade plan view

1. ACADEMY STREET

1a. WETLAND WALK



Focus area



Section view 1a

- A Mean High Water Line and Academy Street ROW
- B Wetland Walk
- C Salt Marsh
- D Esplanade
- E Freshwater Wetlands
- F Vegetated Fencing
- G Look-Out Area
- H Pedestrian Access to the Water
- I Public Lawn
- J Lighted Shade Structure



Plan view



Fig. 33: Existing conditions at the proposed Wetland Walk site

Part of the Academy Street ROW east of 10th Avenue will become a natural area, with freshwater wetlands, restored salt marshes, and green infrastructure to collect, treat and recirculate stormwater run-off. A walkway will wind amidst these amenities and there will be look-out points to enjoy views of the river.



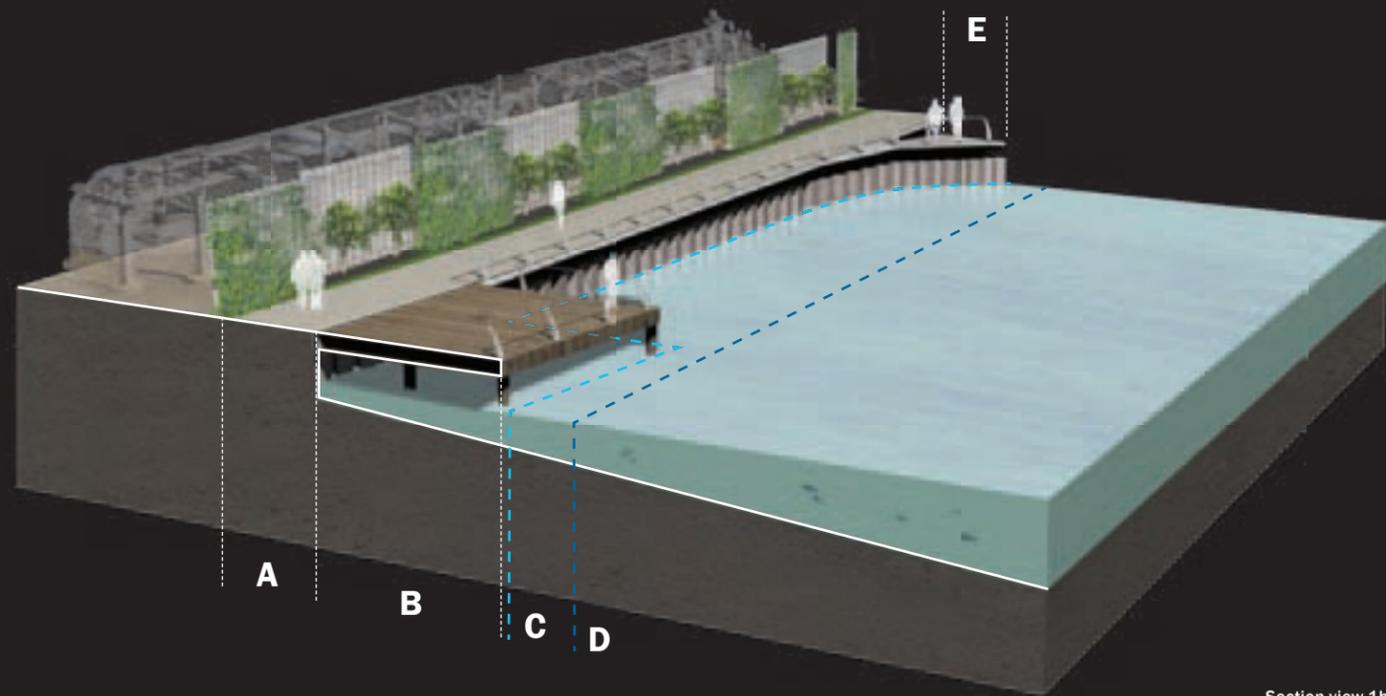
Fig. 34: Proposed Wetland Walk



Focus area

1. ACADEMY STREET

1b. THE MALECÓN



Section view 1b

- A Esplanade
- B Restored Wooden Deck
- C Existing Bulkhead and Mean High Water Line
- D U.S. Pierhead & Bulkhead Line
- E Ramp down to Boat Launch at West 202nd Street-End Park



Plan view



Fig. 35: Existing conditions at the proposed Malecón site

A substantial portion of the Academy Street ROW will become a waterfront promenade, with lawns and other areas for passive recreation. The Malecón will have shade structures, a space for community gatherings and group activities, and a fishing deck at the Harlem River end of West 201st Street. Seventeen-foot high vegetated fences will create a “green” buffer with respect to the neighboring utility operations.



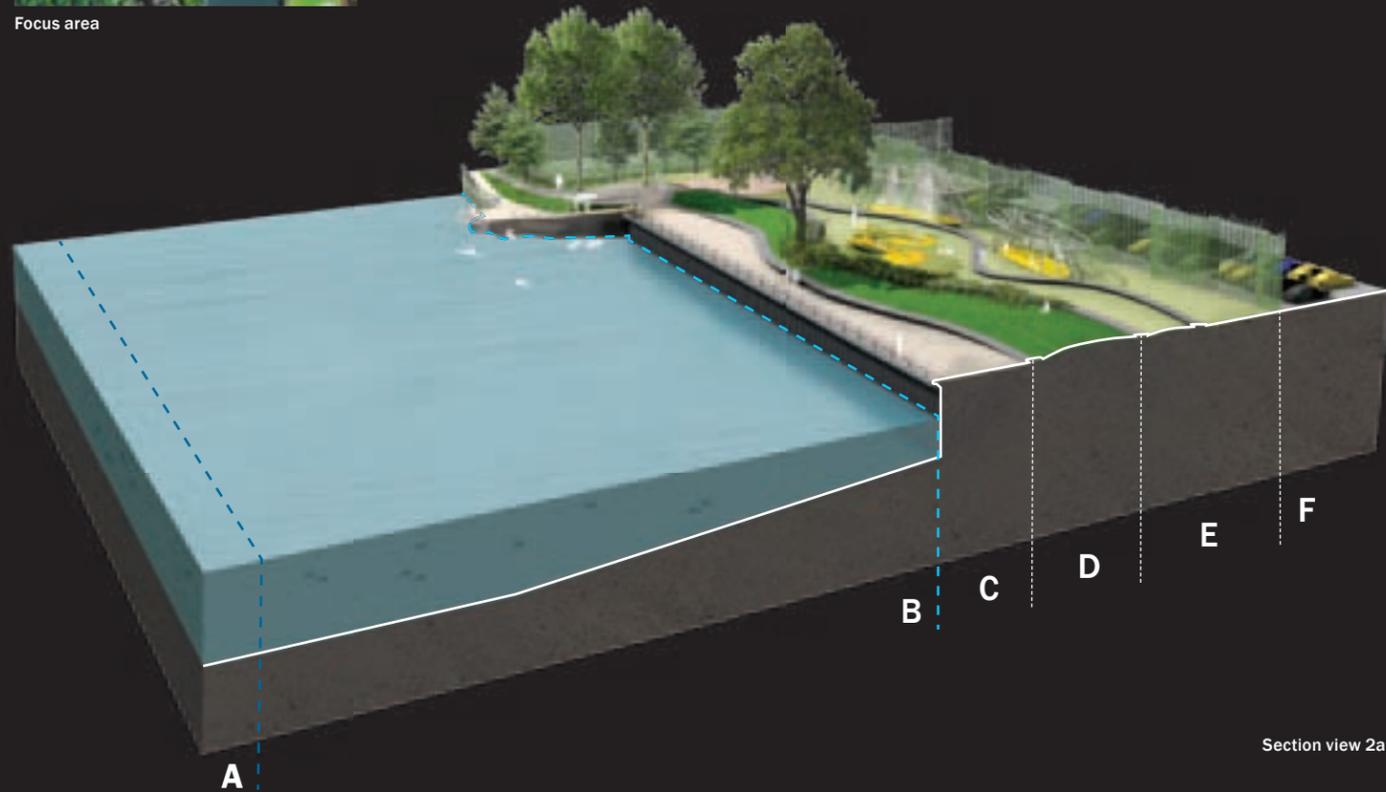
Fig. 36: Proposed Malecón, looking out to the Harlem River

2. PEBBLE BEACH PARK

2a. FITNESS & PLAY



Focus area



Section view 2a

- A U.S. Pier head & Bulkhead Line
- B Existing Bulkhead and Mean High Water Line
- C Esplanade
- D Lawn
- E Safety Surface with Spray Showers and Shade Structures
- F Existing Parking Lot
- G Expanded West 202nd Street-End Park
- H Active Recreation Area
- I Existing West 203rd Street-End Park



Plan view



Fig. 37: Existing conditions at the proposed Fitness & Play site

The Street-End Parks at West 202nd Street and West 203rd Street will be connected by a public place that people of all ages can enjoy. The place will include seating, shade structures, a play area, a water feature for children, and fitness equipment for adults.

The plan view shows a 100-foot inland extension of the Street-End Park at West 202nd Street. The extension would create additional space for recreation (e.g. a half basketball court or similar type of amenity) and mirror the current extent of the park at West 203rd Street. Further studies will be needed to address any subsurface infrastructure issues associated with the extension.



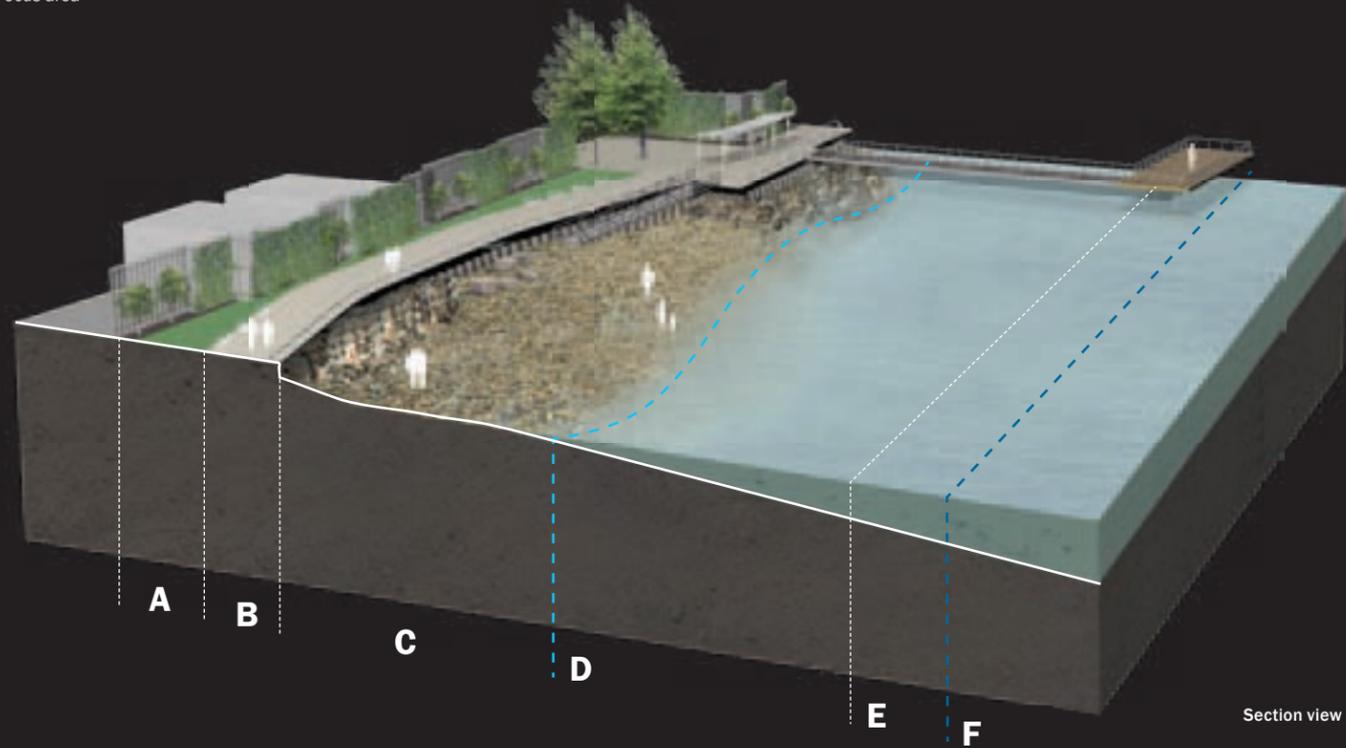
Fig. 38: Proposed Fitness & Play area, looking out to the Harlem River

2. PEBBLE BEACH PARK

2b. PEBBLE BEACH

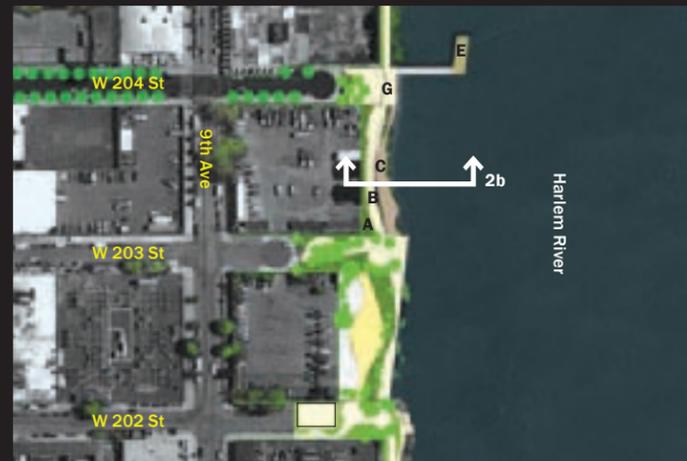


Focus area



Section view 2b

- A Safety Buffer Zone
- B Esplanade Overlooking Pebble Beach
- C Pebble Beach
- D Mean High Water Line
- E Fishing Pier
- F U.S. Pier head & Bulkhead Line
- G Cantilevered Look-Out with Shade Structure and Ramp to Pebble Beach



Plan View



Fig. 39: Existing conditions at the proposed Pebble Beach site

The Pebble Beach will span from West 202nd Street to West 204th Street, where people will be able to touch the water and launch their row boats and kayaks. A new fishing pier will extend into the river from the Street-End Park at West 204th Street, creating a strong connection to the upland neighborhoods to the west.

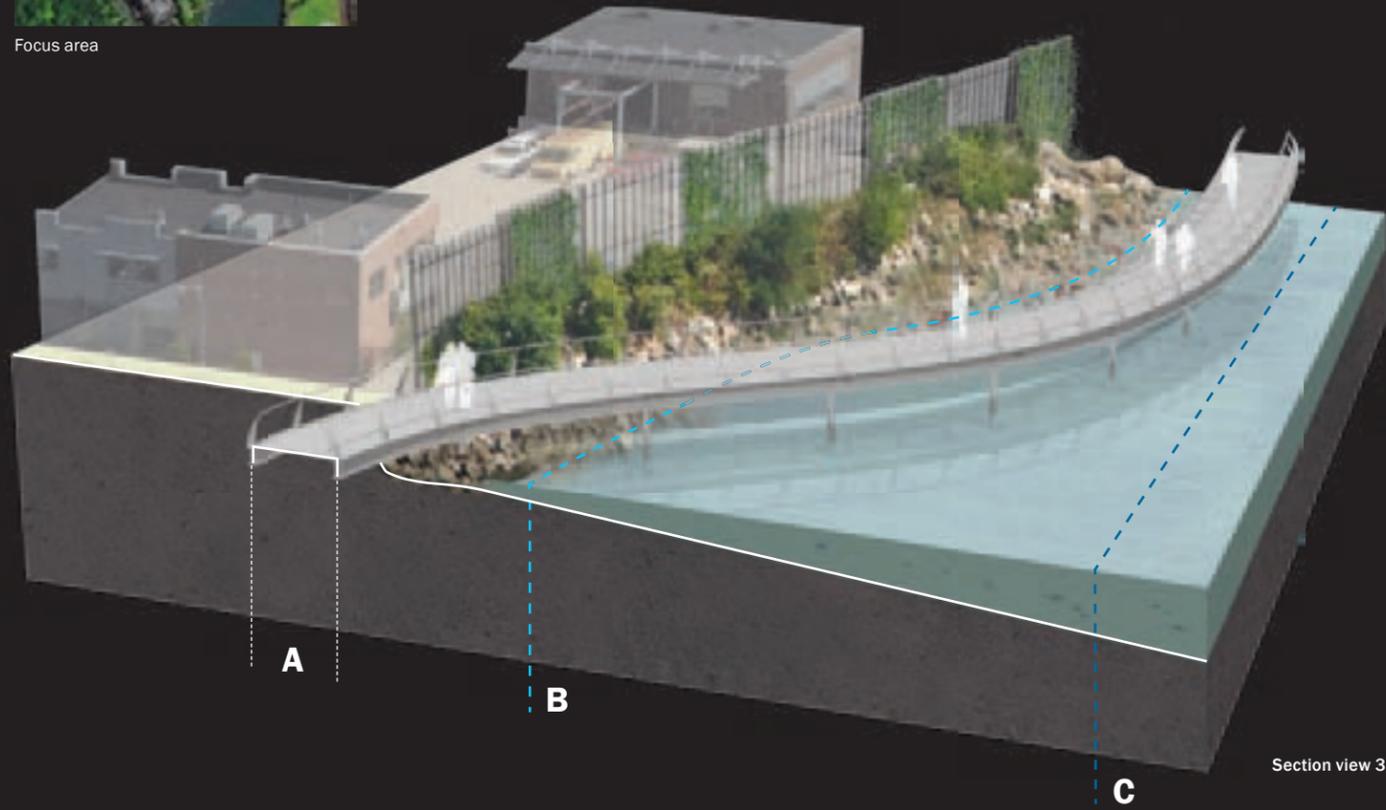


Fig. 40: Proposed fishing pier and Pebble Beach

3. RIVERWALK



Focus area



Section view 3

- A Riverwalk
- B Mean High Water Line
- C U.S. Pier head & Bulkhead Line
- D Vegetated Fencing
- E Esplanade under University Heights Bridge
- F Mussel Farming
- G Existing West 205th Street-End Park
- H Existing West 206th Street-End Park



Plan view



Fig. 41: Existing conditions at the proposed Riverwalk site

A ten-foot wide riverside walkway will create a safe pedestrian path that connects the Street-End Parks at West 205th Street and West 206th Street, and continues under the University Heights Bridge.

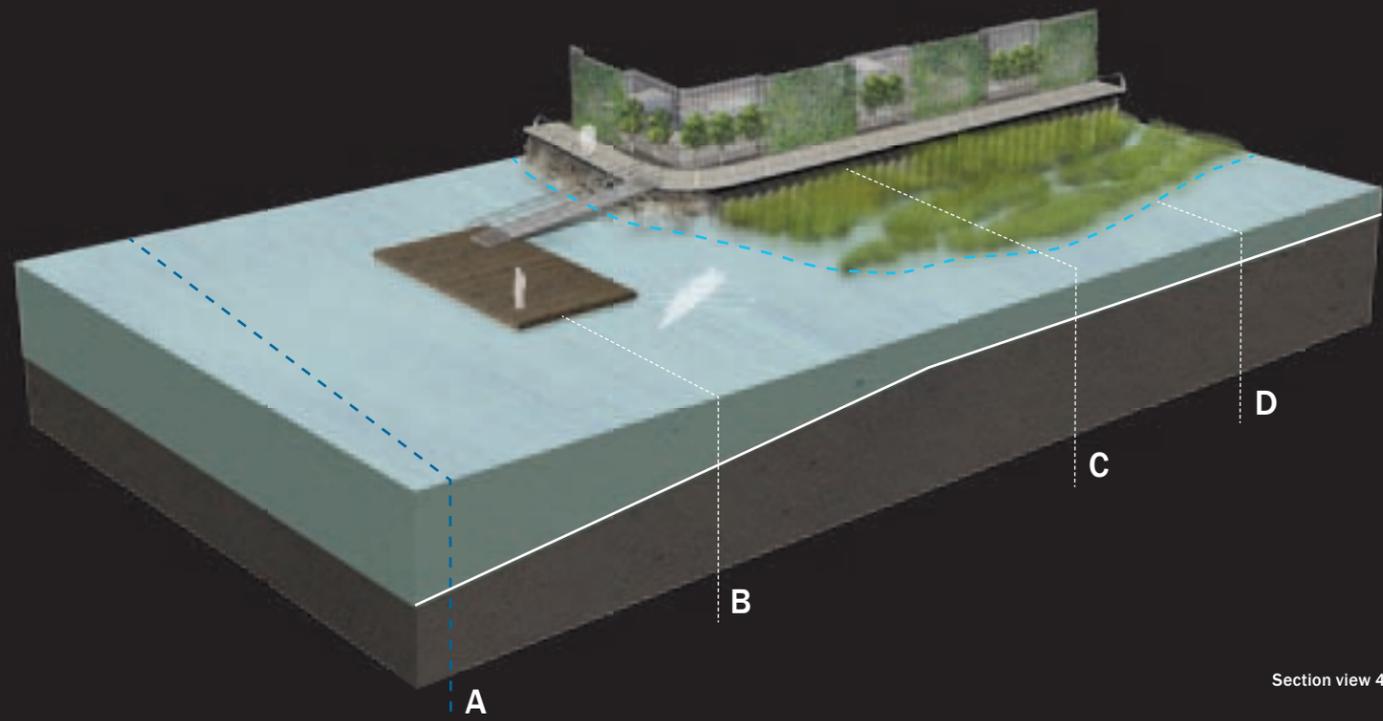


Fig. 42: Proposed Riverwalk and reef seeding

4. NORTH COVE



Focus area



Section view 4

- A U.S. Pier head & Bulkhead Line
- B Floating Dock for Launching Boats
- C Esplanade overlooking Salt Marsh at the North Cove
- D Mean High Water Line
- E Salt Marsh
- F Community Facility
- G Esplanade connecting area under the University Heights Bridge



Plan view



Fig. 43: Existing conditions at the proposed North Cove site

The North Cove will become an improved natural haven, with restored salt marshes, freshwater wetlands, and green infrastructure to enhance water quality. There will also be a dock to launch row boats and a community facility that could be programmed for boating uses (e.g. boat storage).



Fig. 44: Proposed loading dock at the North Cove, proposed community facility in the background

5. UPLAND CONNECTIONS AND STREETS

Safe and inviting pedestrian corridors and entry points at Academy Street, West 204th Street, and 9th Avenue should connect the Esplanade to the upland neighborhoods. The recommendations below are intended to create these linkages. However, the recommendations will have to be studied further and coordinated with NYCDOT to ensure adequate implementation. The proposed curb extensions will require detailed scope and costing work.

A. Academy Street

The Academy Street–West 201st Street–10th Avenue intersection lacks sufficient curbs or markings to guide pedestrian movement. The existing 125 foot wide north-south crosswalk should be rationalized, greened, and made more pedestrian friendly (Fig. 45). The intersection should be reconfigured as shown in Fig. 48.



Fig. 45: Existing conditions at Academy Street - West 201st Street - 10th Avenue intersection

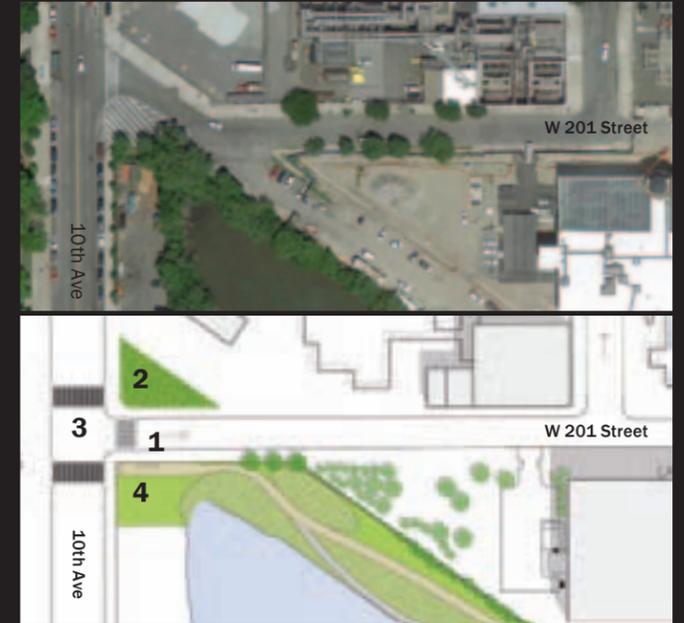


Fig. 48: Academy Street recommendations

1. Extend West 201st Street to 10th Avenue
2. Create a green plaza on the Academy Street ROW that would be left over after realigning West 201st Street
3. Create crosswalks at the intersection of West 201st Street and 10th Avenue for safe pedestrian crossing from Dyckman Street to the Academy Street entrance of the Esplanade
4. Evaluate potential concession opportunity

B. West 204th Street

The West 204th Street–10th Avenue intersection should offer pedestrian a space for refuge (Fig. 46). The curbs at the West 204th Street–10th Avenue intersection should be extended and the overall streetscape along West 204th Street should be improved, as proposed in Fig. 49, to create an inviting pedestrian environment.



Fig. 46: Existing condition at the West 204th Street - 10th Avenue intersection



Fig. 49: West 204th Street recommendations

1. Extend curbs at the 10th Avenue and West 204th Street intersection
2. Extend curbs at the 9th Avenue intersections
3. Install all way stop signs at the West 202nd Street and 9th Avenue intersection

C. 9th Avenue

Specific measures should be considered to slow down vehicular traffic along 9th Avenue (Fig. 47). All way stop signs should be considered for the 9th Avenue–West 202nd Street intersection, as shown on Fig. 49. Curb extensions should be considered for all the 9th Avenue intersections between West 203rd and West 206th Streets. These measures would facilitate pedestrian movements across the avenue by slowing down vehicular traffic.



Fig. 47: Vehicular traffic along 9th Avenue

MAKING IT HAPPEN

The Master Plan will be successful if its vision and goals become reality and the resulting Esplanade becomes a lasting community asset. To ensure this success, the Master Plan sets forth two strategies that are inextricably linked and are complementary to each other. One focuses on the development of the Esplanade (the “Implementation Strategy”), while the second one (the “Maintenance Strategy”) focuses on the long-term operation and maintenance of the asset once it is developed.

These strategies will help elicit stakeholder support for the Esplanade as well as secure the funding needed to move this Master Plan forward into implementation.

1. Implementation Strategy

The Esplanade should be developed incrementally, in phases, given a reality of limited resources, the cost of developing each section of the Esplanade Site as public open space, and the challenges and opportunities particular to each section.

Identifying and securing development and maintenance funds will be easier to achieve for discrete parts of the Esplanade than for the entire project at once. In addition, moving forward first on the parts with fewer development challenges and greater programmatic opportunities will be more effective than waiting to make the entire Esplanade happen simultaneously.

Waiting to develop the entire Esplanade at once would entail letting the whole shoreline deteriorate for a longer period of time. This would not only impact local ecosystems and water quality, but also increase the cost and complexity of restoring the area’s

habitat. Furthermore, the Street-End Parks and the Nature Trail would not reach their full potential for a longer period of time.

The following phasing plan would effectuate the proposed approach and ensure that the development of each part of the Esplanade helps build momentum and support for the next part, until the entire amenity is complete.

Phasing Plan

Each section of the waterfront Esplanade was considered from the following perspectives: current availability of land (i.e. land ownership and use), programming opportunities, required shoreline improvements, construction cost, regulatory considerations (i.e. need for environmental permits or mitigations), and maintenance partnership potential.

The result of the evaluation is a two-phase project (Fig. 50). The first phase includes the Esplanade sections that could happen sooner, given the above criteria. The second phase consists of the sections that would likely happen later, given the same criteria.

Phase 1

The first phase of the project would be developed in three successive sub-phases that would include the Esplanade sections at Academy Street, the North Cove, and Pebble Beach Park.

Phase 1A – Academy Street

The Esplanade at Academy Street is an ideal candidate to start implementing the Master Plan. The street’s ROW east of 10th Avenue is City-owned (NYCDOT jurisdiction) and is not used for



Fig. 50: Esplanade phases

vehicular traffic. Thus, the property could be made available in the nearer term to develop the Esplanade. This part of the Esplanade would create a richer variety of recreational programs compared to other Esplanade sections. Also, this section would establish key connections to the residential neighborhoods upland and to NYRP’s environmental restoration efforts at Swindler Cove in Sherman Creek Park. Compared to other sections of the Esplanade Site, the shoreline here would require less investment in marine edge stabilization.

There are two options to develop this section of the Esplanade:

Option A: All the amenities planned for this section (see pg. 30) are developed once all the necessary funding is secured; or

Option B: The amenities are developed incrementally, as funding becomes available, starting with the conversion of the Academy Street ROW into a promenade, continuing with the installation of park furniture, and ending with the addition of the wetlands, lawns, and shade structures.

Regardless of which development option is chosen, the successful implementation of this phase will require:

- Con Ed to vacate the part of the Academy Street ROW that it is currently using to stage the construction of the Academy Substation;
- De-mapping the Academy Street ROW through the appropriate environmental review and Uniform Land Use Review Procedure.

Phase 1B – North Cove

The City owns but does not actively use this waterfront portion, which is under NYCDOT and New York City Department of Citywide Administrative Services jurisdiction. The rehabilitation of this severely eroded shoreline would significantly improve the local ecology and water quality. Furthermore, this section would also establish a meaningful connection to the University Heights Bridge, which is an active pedestrian link to the Bronx. Also, the community facility proposed for this section could attract long-term maintenance partners and/or revenue-generating programs.

Phase 1C – Pebble Beach Park

This section would be phased later, as the City does not own all the waterfront land in the area. Con Ed owns the portion between Academy Street and West 202nd Street; consequently, an access easement or similar arrangement with Con Ed would be required to implement this section of the Esplanade. The arrangement should allow the use of a 40-foot-wide strip of land for Esplanade purposes. The strip would be measured inland from the U.S. Pier head and Bulkhead Line.

Security/safety around the Con Ed structures facing the river would have to be addressed in the arrangement. These issues were discussed extensively with Con Ed during the planning process and have been incorporated in the Esplanade’s conceptual design, including:

- Limiting plantings to shrubs;
- Creating a six foot wide buffer between the Esplanade and the Con Ed structures;
- Allowing adequate water-side access to load and unload

- heavy materials and equipment at Con Ed’s substations;
- Planning vegetated fencing that is at least 10 feet high alongside the Con Ed structures; and
- Coordinating any proposed street-end enhancement with Con Ed to avoid any negative impacts to ongoing operations.

The Esplanade section between West 202nd Street and West 204th Street, should be phased later, as it would be the most expensive to build, operate, and maintain of all Phase 1 sub-phases. Furthermore, this section does not have as much potential to improve the local ecology or water quality as Academy Street or the North Cove.

Phase 2

The second phase of the project extends from West 204th Street to the area under the University Heights Bridge, and would consist, essentially, of the Riverwalk.

This amenity should be developed last. There is very little land available for the Esplanade along this portion of the waterfront; in some points, the land available is only three feet wide. Given this constraint, part of the Riverwalk would have to be built over the water, which limits the options for recreational programs, increases development costs, and would likely trigger lengthy permitting processes.

Furthermore, NYCDOT–Division of Bridges uses the area under the University Heights Bridge for parking and equipment storage. Consequently, this section of the Esplanade could move forward only after coordinating a mutually–beneficial solution with NYCDOT.

The solution could be an Esplanade layout that creates an easily–accessible, safe, and defensible space for pedestrians under the University Heights Bridge, while allowing sufficient head clearance and turning radii for NYCDOT’s vehicles. Another solution would be to identify suitable relocation space for the NYCDOT operations. In this event, the Esplanade’s layout or features should not prevent NYCDOT from accessing the area with the vehicles and equipment necessary to inspect and maintain the bridge.

Project Costs

The Implementation Strategy is informed by a thorough cost estimating exercise. This exercise sought to better understand, from a broad, order–of–magnitude perspective, how much it would cost to build the Esplanade (the “Construction Cost Estimate”) and how much it would cost to operate and maintain the asset once it is built (the “O&M Cost Estimate”). This section discusses key findings.

Construction Cost Estimate

This estimate is based on a detailed assessment of the Esplanade Site and the Esplanade’s conceptual design. The estimate is in 2011 Dollars and includes material, labor, and equipment costs to build each phase of the project, as well typical contingencies for a conceptual stage of design. The estimate also carries escalation multipliers, as the project will be phased over time.

The marine infrastructure component of the Esplanade will be the most expensive to carry out, as it includes stabilization work for many areas that are in severe disrepair. The marine component also includes the rehabilitation of some existing structures such as the wooden deck at West 201st Street and new in–water structures such as the wetland walk at Academy Street and the West 204th Street fishing pier. The ‘super-structure’ (i.e. furniture, plantings, etc.) work will require less investment. Notably, the final numbers are comparable to those of similar public spaces developed along the New York City waterfront over the past five years, such as Manhattan’s East River Waterfront Park.

O&M Cost Estimate

This estimate is based on cost research of comparable projects in New York City and extensive conversations with local experts such as NYCDPR and NYRP. The estimate is in 2011 Dollars and is in the form of an annual operating budget that covers operation and maintenance costs for each phase of the Esplanade (labor, supplies, equipment, utilities, etc.) The estimate carries escalation multipliers, as the project will be phased over time, and assumes a high standard of care once the entire Esplanade is developed.

The following table shows the cost breakdowns for each project phase:

Cost Estimates (in 2011 Dollars)

Phase	Sub-Phase	Construction	O&M
1	A	\$22.8 M	\$65K/yr
	B	\$11.4M	\$76K/yr
	C	\$26.0 M	\$173K/yr
2		\$25.0 M	\$89K/yr
TOTAL		\$85.2 M	\$403K/yr

2. Maintenance Strategy

Well-cared-for parks enhance neighborhoods. Conversely, lack of maintenance can render a wonderful open space undesirable for a community. A strategy is thus required to ensure that the Esplanade remains a valuable community asset for a long time.

The maintenance plan is the strategy's first key component. A high-level plan was created to develop the O&M Cost Estimate. The plan lists regular and special maintenance tasks and the resources needed to complete those tasks. The high-level plan is part of the Master Plan's project record and should be a blueprint for the detailed plan that would be created when the Master Plan is implemented.

The detailed plan would establish operations and maintenance ("O&M") best practices for every element of the Esplanade.

The plan would also consider the impacts that the Esplanade's linear layout and waterfront location may have on O&M needs and costs. The Esplanade's marine infrastructure would require specific consideration given its constant exposure to salt water, tides, wakes, and pollution; the same for the proposed wetlands and saltmarshes.

The management model is the strategy's second key component. Traditionally, the public sector has led, and paid for, the O&M of public open spaces in New York City. However, fiscal constraints and the emergence of committed non-profit sector players have led to the implementation of multi-party models in several public open spaces.

The allocation of roles and responsibilities varies from one model to the other, depending on each partner's abilities, experience, and resources, i.e. depending on what each partner is best prepared to deliver. What is critical in any multi-party model is that, together, the parties bring all the expertise and resources needed to execute the maintenance plan adequately over time.

Currently, NYCDPR manages the Street-End Parks. NYCDPR could assume management of the Esplanade as long as dedicated funding was made available for that purpose. Such funding would have to cover the Esplanade's day-to-day O&M, capital repairs, and the supervision of any third party entrusted with specific O&M duties.

Alternatively, the Esplanade could be managed under a multi-party model. Non-profit partners with strong local ties and the relevant abilities, experience, and resources could lead certain O&M responsibilities and cover the corresponding costs. The terms of the partnership(s) could be delineated in written agreements similar to the ones currently in place with the Prospect Park Alliance and The Battery Conservancy, for example.

The multi-party arrangement shown on the next page is based on precedent research and input from NYCDPR and NYRP. The model allocates O&M tasks, based on the skills, experience, and resources each potential O&M partner could eventually bring to the table. 'Core' tasks are basic O&M requirements for the park. The O&M of the Esplanade's ecological components would go beyond those basic duties and is therefore categorized as 'non-core.'

A conveniently-located, easily-accessible management facility would be critical for the effective O&M of the Esplanade. The size and operational scope of the facility would have to adequately meet the new needs associated with such O&M (e.g. accommodate additional staff, equipment, and storage space).

Earned income models (e.g. concessions) would also be relevant to the O&M of the Esplanade. The Master Plan has identified potential revenue-generating opportunities at the Academy Street entrance to the Esplanade and the North Cove. Those opportunities should be explored further, as the Esplanade is implemented.

Potential Allocation of O&M Duties

NYCDPR

Core Tasks

- Cleaning
- Emptying trash cans
- Powerwashing
- Removing Graffiti
- Repairing play equipment
- Removing litter
- Enforcing rodent control
- Cleaning the comfort station
- Refilling and regrading pebble beach
- Removing snow
- Lighting
- Upkeeping the lawn
- Maintaining the trees
- Managing park trades
 - Site furnishing
 - Drinking fountain
 - Quick couplers
 - Irrigation
 - Structure (shade, docks, piers, etc.)
 - Safety surface
 - Play equipment
 - Sports facilities

O & M Partner

Non - Core Tasks

- Maintaining landscaped areas
- Maintaining ecological areas daily and seasonally
- Removing litter from landscaped areas and all floatables
- Watering
- Replacing plants
- Removing invasive species
- Enforcing annual cutbacks



Fig. 51: Proposed Fitness & Play area



Fig. 52: Proposed mussel seeding under the Riverwalk



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Compare Foods Supermarket
Lebron Restaurant Supplies
J.J.'s Milk Store, Inc.
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Manhattan Wetlands and Wildlife Association
Empire State Rowing Association
Harlem River Community Rowing
Inwood Canoe Club
Row New York
YM & YWHA of Washington Heights & Inwood
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The Audubon Partnership for Economic Development
Metropolitan Waterfront Alliance
NYC Department of Citywide Administrative Services
NYC Department of City Planning
NYC Department of Parks & Recreation
NYC Department of Transportation
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