

# GREENPOINT – WILLIAMSBURG WATERFRONT OPEN SPACE MASTER PLAN



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# GREENPOINT – WILLIAMSBURG WATERFRONT OPEN SPACE MASTER PLAN

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## LETTER FROM THE COMMISSIONER OF THE DEPARTMENT OF PARKS AND RECREATION

The 2005 rezoning of the Greenpoint and Williamsburg waterfront provided us with a unique opportunity to address the need for more parks in a burgeoning community and to create public access along a stretch of shoreline that has been closed off through much of our City's history.

The transformation of this largely underutilized, formerly industrial waterfront into an extension of the growing Greenpoint and Williamsburg communities is rapidly underway. The parks and esplanades proposed within this plan are essential parts of the City's goal, exemplified by PlaNYC, of reinvigorating growing neighborhoods and improving the quality of life for all city residents. The open spaces that will be constructed underscore Mayor Bloomberg's commitment to expanding access to the waterfront, building more parks to serve our growing population, and greening our City.

Building upon the Greenpoint and Williamsburg 197-A plans and the immense work done by GWAPP, OSA, and many other local open space advocates, Parks has developed a master plan that will guide open space development along this immensely important two mile stretch of the East River.

In close coordination with our community based partners, Brooklyn CB1, and our sister agencies, we have developed a plan that builds upon the 2005 rezoning recommendations and allows us to provide both neighborhoods with their first substantial waterfront access in the form of a continuous waterfront park and esplanade.

In keeping with the community vision, the plan provides a balance between active recreation, passive space, and restored habitat. With new sports fields, playgrounds, public amenities, lawn/gathering spaces, and natural areas, the plan is meant to provide enjoyment for all age groups and walks of life. We are proud to be a part of creating an enduring legacy for the communities of Greenpoint and Williamsburg and establishing one of the finest stretches of waterfront parks in New York City.

Adrian Benepe

Commissioner

New York City Department of Parks & Recreation





## 1. INTRODUCTION

### 1.1 Statement of the Open Space Master Plan Vision and Goals

The purpose of this Open Space Master Plan is to provide a framework for designing, developing and maintaining public open spaces along the Greenpoint-Williamsburg Waterfront. The New York City Department of Parks and Recreation, in conjunction with the Office of the Mayor, the Department of City Planning and the New York City Economic Development Corporation, developed this plan in an effort to coordinate and refine the recreation and open space opportunities created by the Greenpoint-Williamsburg Land Use and Waterfront Access Plan.

The following project goals guided the Open Space Master Planning Process and reflect the priorities set by the community and public agencies:

- Goal 1: Create a publicly accessible waterfront
- Goal 2: Create a balance between active and passive recreation opportunities to serve the diverse recreation needs of the community
- Goal 3: Identify appropriate opportunities for direct interaction with the river, such as boating
- Goal 4: Promote a healthy east river environment through sustainable design practices, habitat enhancement, and public education
- Goal 5: Develop design guidelines to unify the waterfront as a whole, while encouraging the creation of unique, memorable spaces on an individual basis
- Goal 6: Reflect the rich character, heritage and culture of the community in both publicly and privately developed open spaces.



FIGURE 1-1: CONTEXT MAP FOR THE GREENPOINT-WILLIAMSBURG WATERFRONT PLANNING AREA

### 1.1.1 THE GREENPOINT-WILLIAMSBURG WATERFRONT OPEN SPACE PLANNING AREA

The Greenpoint and Williamsburg neighborhoods are adjacent communities located in North Brooklyn, bordering the East River. Their contiguous waterfronts extend approximately two miles, between Manhattan Avenue and North Third Street. This segment of Brooklyn's waterfront, between the shoreline and West Street (in Greenpoint) and between the shoreline and Kent Avenue (in Williamsburg), comprise the planning area for the Greenpoint-Williamsburg Waterfront Open Space Master Plan.



The existing parks and open spaces in and around the Waterfront Planning Area are shown on Figure 1-2. These include the Manhattan Avenue Street End Park, Newtown Barge Terminal Playground, Greenpoint Playground, American Playground and McCarren Park. The existing park facilities and other open space resources are currently in high demand and the additional parkland provided for in the City's 2005 rezoning will be needed to serve the community as it grows and develops its underutilized waterfront parcels.

The purpose of this Master Plan is to identify the opportunities for various recreation program elements and present conceptual designs for the new parks and open spaces that reflect the City's and the community's visions for the waterfront.





FIGURE 1-2:  
WATERFRONT PLANNING AREA

-  EXISTING PARK
-  WATERFRONT PLANNING AREA BOUNDARY



## 1.2 A Public-Private Design Partnership

The most unique characteristic of the City's vision for the Greenpoint-Williamsburg Waterfront is its approach to implementation. The adopted zoning changes allow for the creation of a public waterfront walkway and adjoining public open spaces through the joint efforts of private developers and public agencies. While over 30 acres of planned public parks and 1 mile of shore public walkway will be designed, developed and maintained solely by parks, over 15 acres of supplemental open space and 1.5 miles of shore public walkway will be designed and built by private developers. Once they are built, developers may opt to transfer the Supplemental Open Space areas to the Parks Department, which would then assume responsibility for operations and maintenance.

The privately developed sites will be designed according to the requirements and guidelines provided in the City's Waterfront Zoning and in this document. The design framework presented in this document ensures that each independently and incrementally developed open space will communicate a consistent design philosophy to waterfront users and establish a legible waterfront design vocabulary. At the same time, the design principles and philosophy outlined in this document are flexible, in order to encourage responsive and innovative design.



## 2. PAST, PRESENT AND FUTURE CONDITIONS

### 2.1 Historical Context

Historically, Greenpoint and Williamsburg's waterfronts have been dynamic zones, shaped and transformed by both natural and economic factors.

Prior to European settlement in the 17th Century, the areas that would become Greenpoint and Williamsburg were primarily salt marsh, meadow, and forest landscapes. Rich fresh and salt-water riparian ecosystems were supported by the East River, Newtown Creek and Bushwick Creek.

Native Americans, including the Algonquians, inhabited this area during summer months, when they were able to hunt, fish, and later farm. When Dutch and French Huguenot settlers arrived in the 1600 and 1700's, they transformed the area into a predominantly agricultural landscape. Much of the native woodland and meadow landscapes were cleared and planted. Fertile soils and easy shipping access to Manhattan's markets allowed farming to remain the most prevalent land use until the mid-19th century, when population and economic growth in Manhattan forced shipbuilders to move across the East River to Brooklyn. The urbanization of Greenpoint and Williamsburg began during this period. Shipyards, worker housing, and many types of industrial and manufacturing facilities replaced nearly all of the farmland by 1900. To accommodate the thriving industries that required waterfront property, tidal marshes and wetlands were filled, pushing the shoreline out and creating new land. Busy piers lined the shore, and a wide variety of products were crafted and fabricated on waterfront sites, including fine glass and porcelain, iron, rope, petroleum, and pencils. In October of 1861 the keel was laid for the ironclad ship, the USS Monitor, at the Continental Iron Works on Bushwick Inlet, where the ship was launched 101 days later. The conceptual designs presented in Chapter 5 of the Master Plan incorporate materials, forms, and facilities to commemorate this period in history. DPR is particularly committed to acknowledging the U.S.S. Monitor's important role in the Greenpoint community. The Master Plan envisions interpretive space on Bushwick Inlet that would honor the memory of the Monitor and commemorate those who created her and sailed upon her. This portion of the New York City waterfront has a rich, multi-layered history, lending it a unique texture and character. For over two hundred years, it was recognized as one of the country's most active and productive shipping and manufacturing centers. During that time, the waterfront was a major source of economic growth for the City and region and a source of pride and identity for the surrounding communities.

In the past several decades, changing economic patterns, technological advances, and shifting land development patterns have impacted many waterfront communities, including Greenpoint and Williamsburg, resulting in vacancy and under-utilization of waterfront industrial resources.

In response, the City legislated a new and dramatically different vision for the Greenpoint-Williamsburg Waterfront through the 2005 Greenpoint-Williamsburg Zoning Amendment. As the City, the neighborhood, and the development community move forward and implement this new vision, the role of existing and planned open spaces will prove essential in defining the character and vitality of the waterfront.

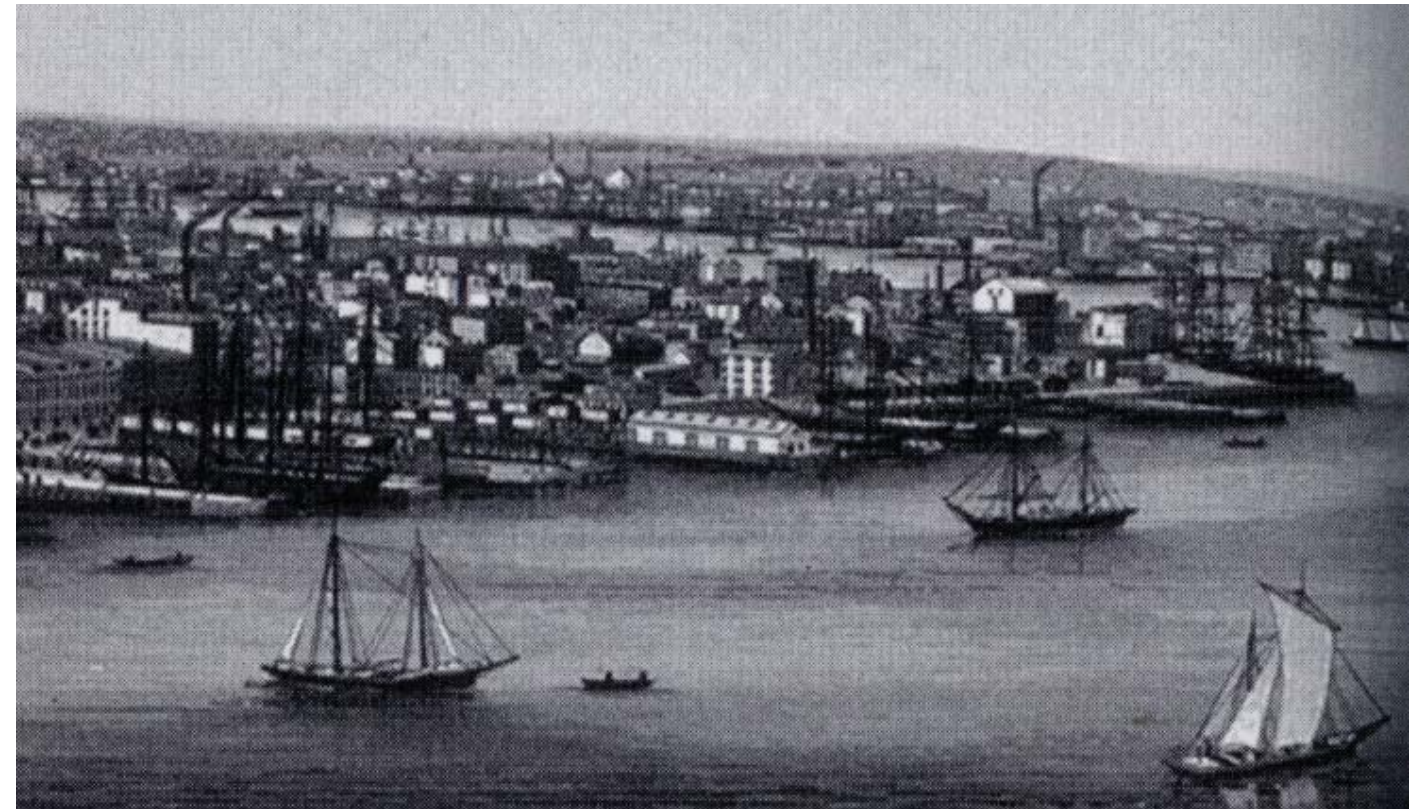


FIGURE 2-1: GREENPOINT WATERFRONT IN 1879

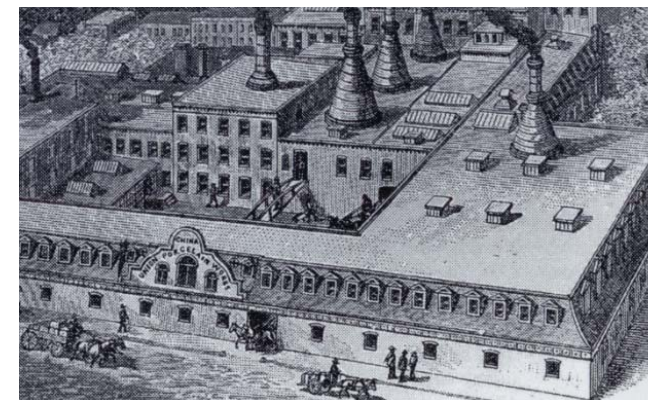


FIGURE 2-2: UNION PORCELAIN WORKS

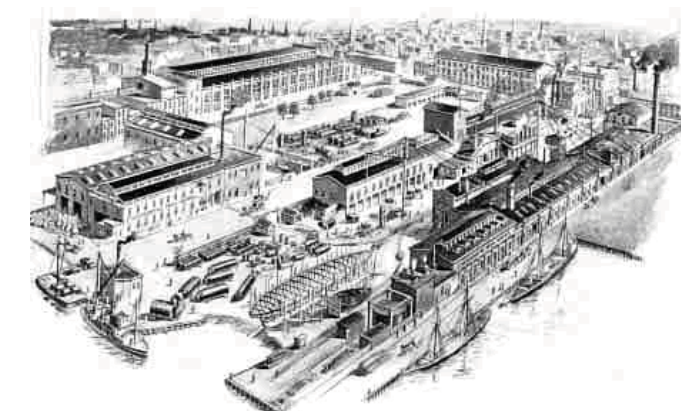


FIGURE 2-3: CONTINENTAL IRON WORKS

## WATERFRONT HISTORICAL CONTEXT - LANDMARKS

1. Chelsea 'Jute Mills,' manufacturers of rope, at 1155 Manhattan Avenue. Today the factory is part of the Greenpoint Manufacturing and Design Center.
2. Christian Doflinger's 'Greenpoint Glassworks' factory located at 99 Commercial Street. Mary Todd Lincoln purchased a table service for the White House there.
3. Pottery Beach was a favorite place for swimming. In the early 19th Century spectators watched yachts racing up the East River from Pottery Hill, above the beach.
4. In the early 17th Century, Grassy projection of land in N. Brooklyn named 'Green Point', or 'Green Hoek' by Dutch settlers.
5. At Henry Steer's shipyard, the largest wooden ship of the day, the 'Great Republic,' was built in 1866.
6. Worker's housing complex, the Astral Apartments, was built by Charles Pratt of Astral Oil Works.
7. At the site of the former Eberhard Faber pencil factory, #2 pencils still adorn the upper windows of the building's facade.
8. St. Elias Green Rite Church, at 129 Kent Street, formerly the Reformed Dutch Church, later to become the Church of the Ascension.
9. Union Porcelain Works, owned by Thomas C. Smith. The porcelain wares are much coveted by collectors and are exhibited in a number of museums including the Brooklyn Museum of Art and the Met.
10. St. Anthony's Church, with a 240' tower, is one of the most dramatically sited churches in NYC.
11. Union Baptist Church, the oldest standing church in Greenpoint, is located at 151 Noble Street (formerly Union Street).
12. Temple Beth El Synagogue was built in 1871. Ahavas Israel (180 Noble Street), built in 1893, was the last synagogue in Greenpoint with an active congregation.
13. Former Greenpoint Savings Bank, located at 807 Manhattan Avenue.
14. Once one of New York City's top five manufacturing plants, Armer Manufacturing Company, a rope factory, employed thousands of workers.
15. Site of the old American Manufacturing Company's rope factory complex, also known as the Greenpoint Terminal market, burned to the ground in May 2006.
16. The Civil War iron-clad ship, the U.S.S. Monitor, was assembled at the Continental Shipyard (later known as Ironworks). On March 9, 1862, the Monitor was launched from Bushwick Inlet.
17. Astral Oil Works refinery was started as part of Standard Oil in 1874.
18. St. Stanislaus Kostka Church, 1896, at Humboldt Street and Driggs Avenue, is the largest Polish congregation in the city.
19. The Russian Orthodox Cathedral, 1921, located at North 12th Street and Driggs Avenue, is known for its copper onion-shaped domes.
20. 184 Kent Avenue, site of the former headquarters of Austin, Nichols & Co., at one point, largest wholesale grocery store in the United States. This warehouse was designed in 1915 by Cass Gilbert.

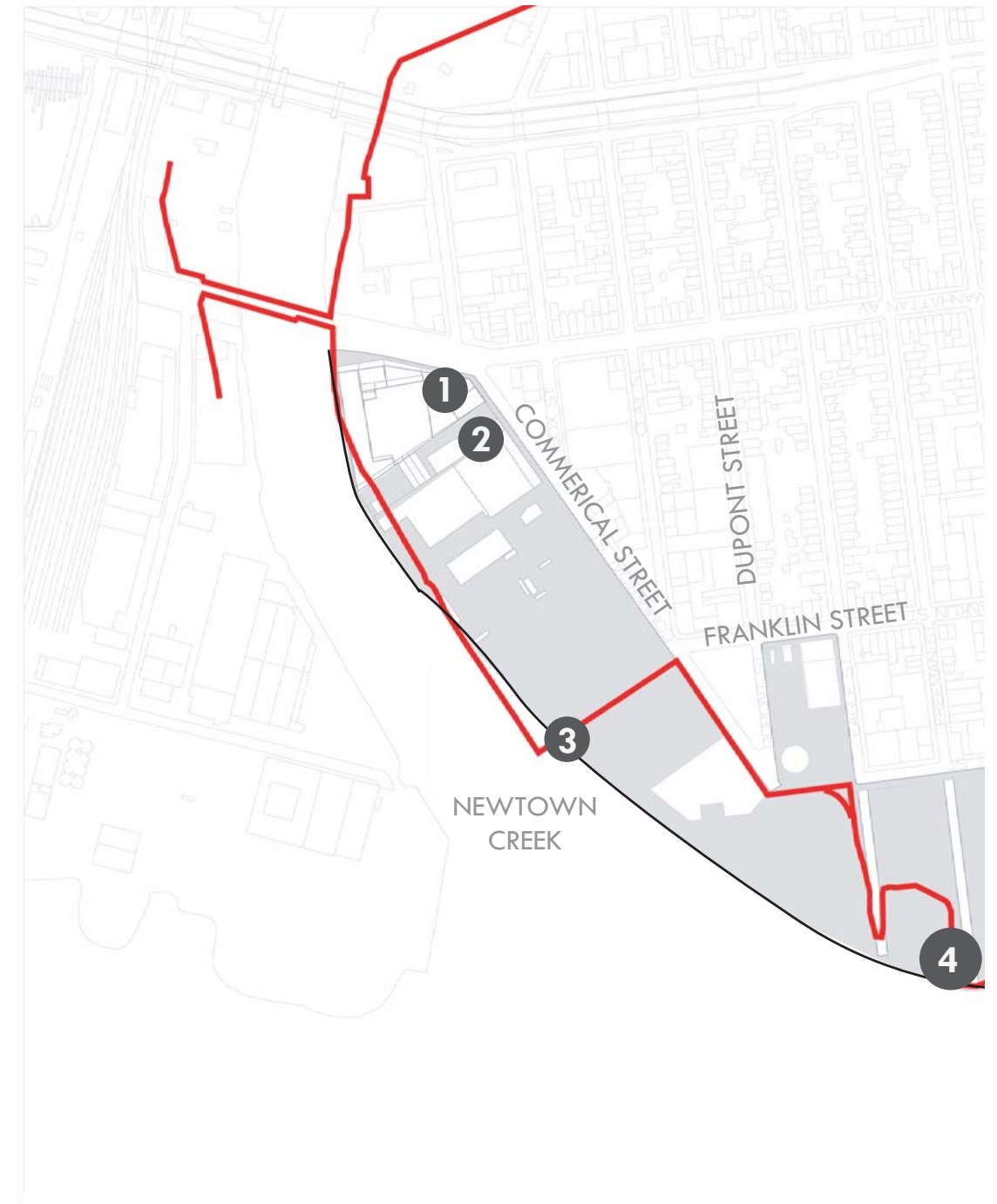




FIGURE 2-4:  
WATERFRONT HISTORICAL CONTEXT

- 1869 Shoreline Location
- 1988 Shoreline Location
- 2007 Shoreline & Waterfront Parcels





FIGURE 2-5: CONCRETE RUBBLE SLOPE, COMMERCIAL STREET & FRANKLIN STREET



FIGURE 2-6: STONE RIPRAP SLOPE, KENT STREET



FIGURE 2-7: TIMBER BULKHEAD WALL, MANHATTAN AVE.



FIGURE 2-8: STEEL SHEET PILE BULKHEAD AT N. 4TH STREET



FIGURE 2-9: CONCRETE SEAWALL, N. 7TH STREET



FIGURE 2-10: TIMBER CRIB WALL, BUSHWICK INLET



FIGURE 2-11: LOW-LEVEL PLATFORM, HURON STREET



FIGURE 2-12: HIGH-LEVEL PLATFORM, GREEN STREET PIER



## 2.2 Existing Conditions at the Water's Edge

Current conditions along the water's edge consist of urban, active industrial, and deteriorating industrial landscapes. Figures 2-5 through 2-12, photographs taken in early spring 2006 illustrate the deteriorated condition of the buildings and shoreline structures. In some areas, such as the narrow band surrounding Bushwick Inlet, less intensive use and limited access have allowed naturalized plant communities to establish themselves at the water's edge. Bushwick Inlet contains groves of *Ailanthus sp.*, *Morus sp.* and several invasive native and non-native ground covers and shrubs, which support wildlife.

The East River's currents are a strong erosive force continually affecting the shoreline. In response to this constant threat of flooding and erosion, owners of the waterfront parcels have employed a variety of techniques to reinforce their shorelines. The Existing Water's Edge Conditions plan, Figure 2-13, classifies the current shoreline into 6 basic categories of edge types in 4 states of repair. The shoreline structures were documented by McLaren Engineering Group using video and still photography from a boat, as well as aerial still photography by helicopter. The boat investigation was conducted on January 20th and 27th, 2006, at high tide and low tide respectively.



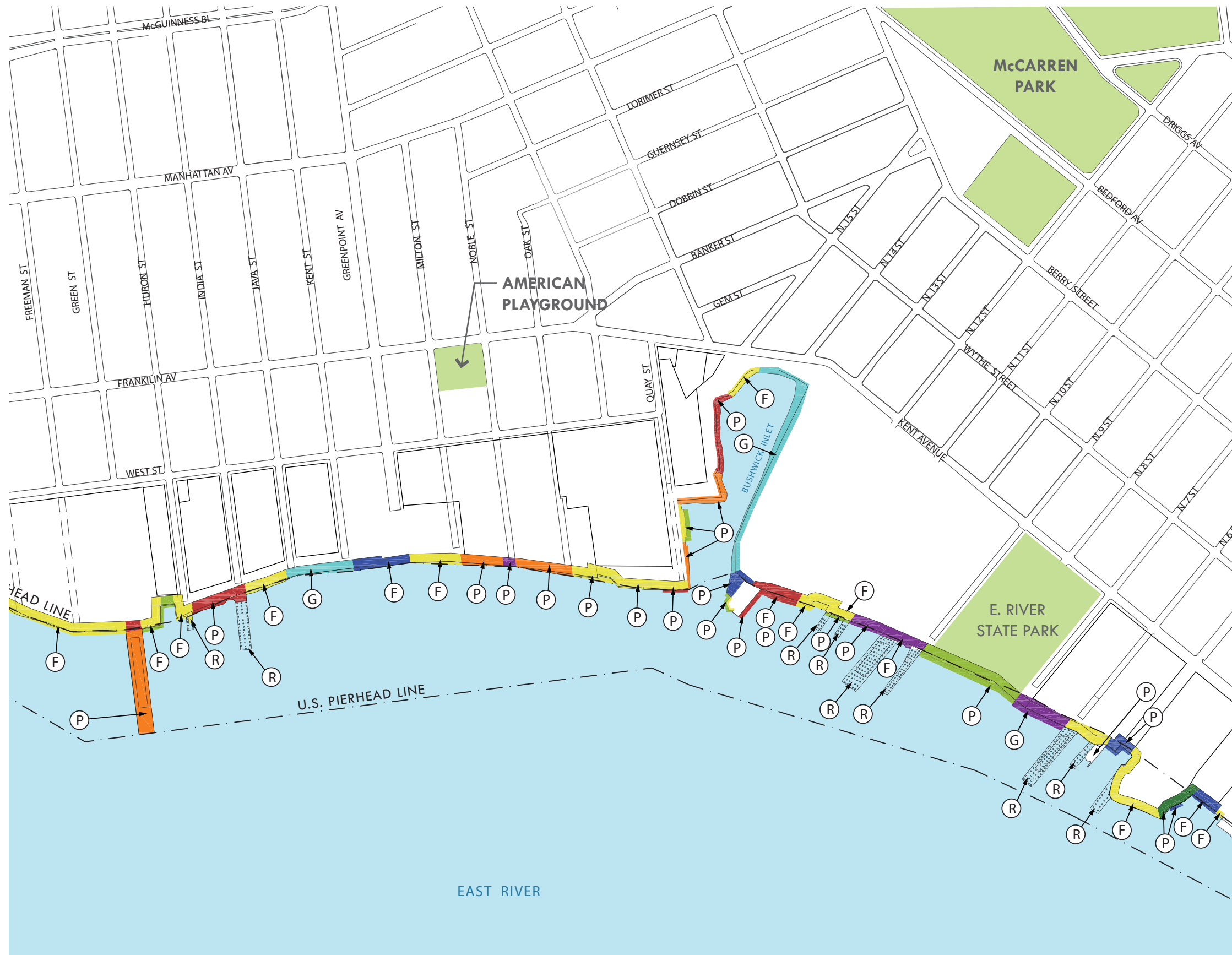


FIGURE 2-13:  
EXISTING WATER'S EDGE CONDITIONS

- EDGE TYPES**
- RUBBLE (CONCRETE SLOPE)
  - STONE RIPRAP SLOPE
  - TIMBER BULKHEAD
  - STEEL SHEET PILE BULKHEAD
  - CONCRETE SEAWALL
  - TIMBER CRIBWALL
  - LOW-LEVEL PLATFORM
  - HIGH-LEVEL PLATFORM
  - EXISTING PARKS
- EDGE CONDITION RATINGS**
- G STRUCTURE RATED GOOD, SEEMS TO BE FUNCTIONAL
  - F STRUCTURE RATED FAIR, FUNCTIONAL BUT EXHIBITS SOME SIGNS OF DISTRESS
  - P STRUCTURE RATED POOR, NOT FUNCTIONAL
  - R ONLY A REMNANT OF STRUCTURE REMAINS



## 2.3 Land Use and Transportation: Existing Conditions and Future Plans

Figure 2-14 shows land use patterns, transportation infrastructure, and public facilities in a composite of existing conditions and planned future conditions based on the 2005 zoning changes, other applicable land use regulations, planned transportation improvements, and planned public open space projects. The Open Space Master Plan assumes that this composite constitutes the planning context, or baseline conditions, for the Greenpoint-Williamsburg Waterfront. The 2005 rezoning is explained in detail, below.

### 2.3.1 GREENPOINT-WILLIAMSBURG REZONING, 2005

The comprehensive rezoning of Greenpoint-Williamsburg, approved in May 2005, set the stage for the renewal of a vacant and under-utilized stretch of the Brooklyn waterfront, and for the continuing revitalization of these vibrant neighborhoods. It reclaims two miles of long-neglected East River waterfront to create over 50 acres of open space, including a continuous public esplanade and a new 28-acre park surrounding the Bushwick Inlet. The plan creates new opportunities for thousands of units of much-needed housing, including affordable housing, within a detailed urban design plan that addresses the scale of the existing neighborhoods. The rezoning also facilitates local commercial development, and promotes light industrial activity in appropriate areas.

The zoning changes include a new Inclusionary Housing program, which represents a groundbreaking approach to the creation of affordable housing in Greenpoint-Williamsburg. Under this program, developments providing affordable housing are eligible to develop additional floor area, within height and bulk regulations tailored specifically to each district. Affordable units can be provided either on the same site as the building receiving the bonus, or off-site either through new construction or preservation of existing affordable units. City, State, and Federal programs can be used to build the affordable housing that generates the zoning bonus.

The Greenpoint-Williamsburg rezoning and the new Inclusionary Housing program respond to the issues targeted by Mayor Bloomberg's New Housing Marketplace Plan, created to meet the changing housing needs of the City's communities by committing to the new construction or rehabilitation of 68,000 homes and apartments in five years. Today New York City faces an increasing demand for housing, a growing population, a scarcity of developable sites, and an aging housing stock. This rezoning will help to meet these challenges by making new land available for development, and by creating and preserving permanently affordable housing through a powerful combination of zoning incentives, housing programs, and the commitment of public and partner land. In Greenpoint-Williamsburg, about one-third of the projected units are expected to be affordable to low and moderate income households.

Source: New York City Department of City Planning, 2005

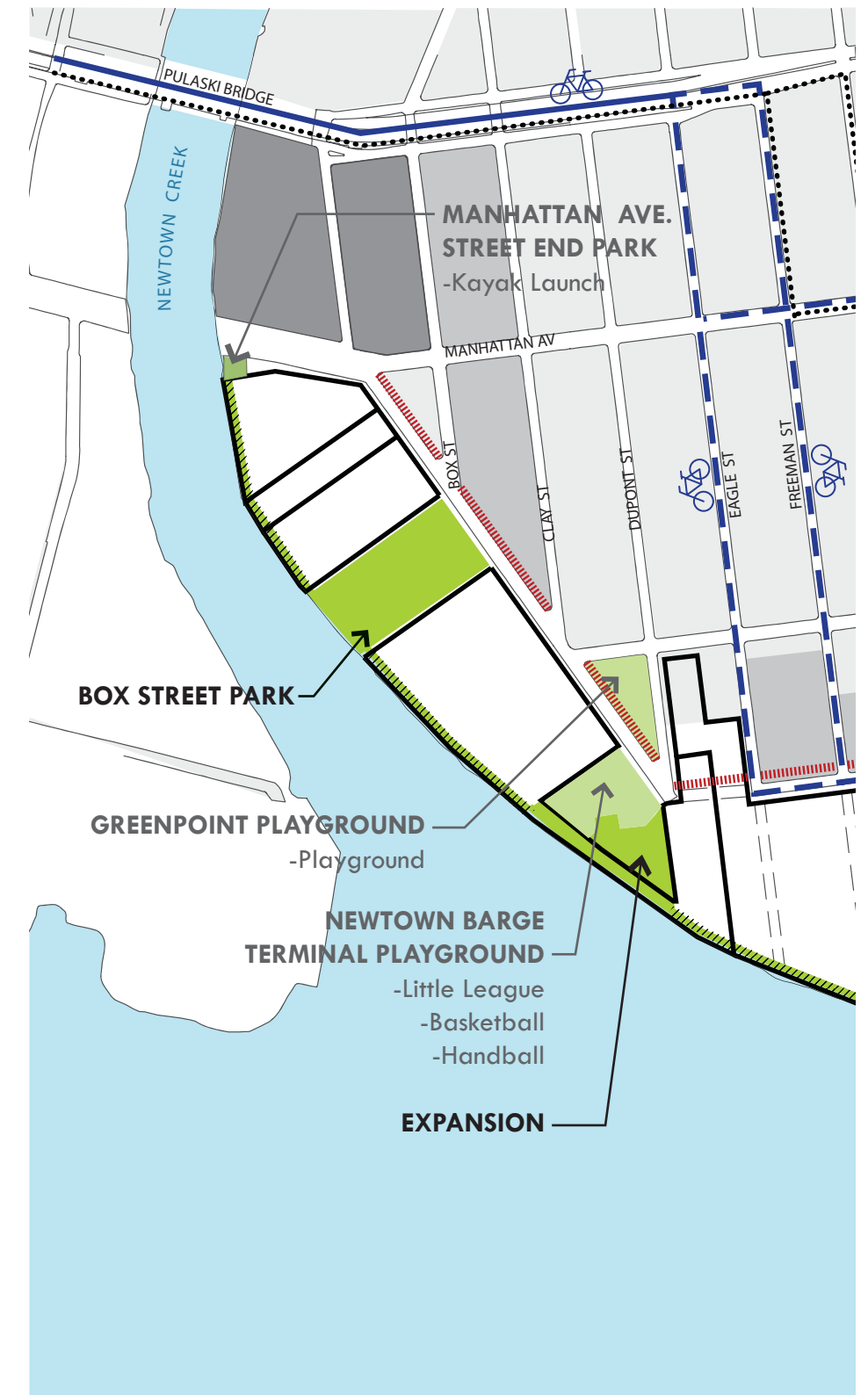




FIGURE 2-14:  
**LANDUSE & TRANSPORTATION: EXISTING & PLANNED FUTURE CONDITIONS**

- ZONING<sup>1</sup>**
- RESIDENTIAL\*
  - MIXED USE
  - INDUSTRIAL
  - COMMERCIAL CORRIDOR
  - WATERFRONT DEVELOPMENT PARCEL\*
- TRANSPORTATION**
- EXISTING BIKE ROUTE<sup>2</sup>
  - PROPOSED BIKE ROUTE<sup>2</sup>
  - SUBWAY LINE & STOP
  - BUS LINE
- OPEN SPACE<sup>3</sup>**
- EXISTING PARK
  - PROPOSED CITY BUILT PARK
  - DEVELOPER-BUILT SUPPLEMENTAL OPEN SPACE
  - SHORE WALKWAY
  - EXISTING PIER
  - PIER REMNANT



## 2.4 Recreation Program Consensus

Many community groups and organizations have contributed to the planning and design process for the Waterfront Planning Area. The plans generated by these community-based efforts have shared strong similarities, particularly regarding the type of recreation program and activities included in the plans. Figure 2-15 is a composite of several of these plans. The community's desired recreation activities are shown in the locations suggested, as are access and transportation links and other types of neighborhood improvements.

The Master Plan's recreation program is discussed in Chapter 3, and includes a variety of active and passive recreation opportunities such as kayaking, field sports, playgrounds, picnic areas, birdwatching and strolling.

The Greenpoint and Williamsburg communities have been highly involved in a number of planning processes to date that have focused on the waterfront. Through the effort and dedication of local residents, they have produced several visionary community planning and design documents, which have informed this Open Space Master Plan. These documents include:

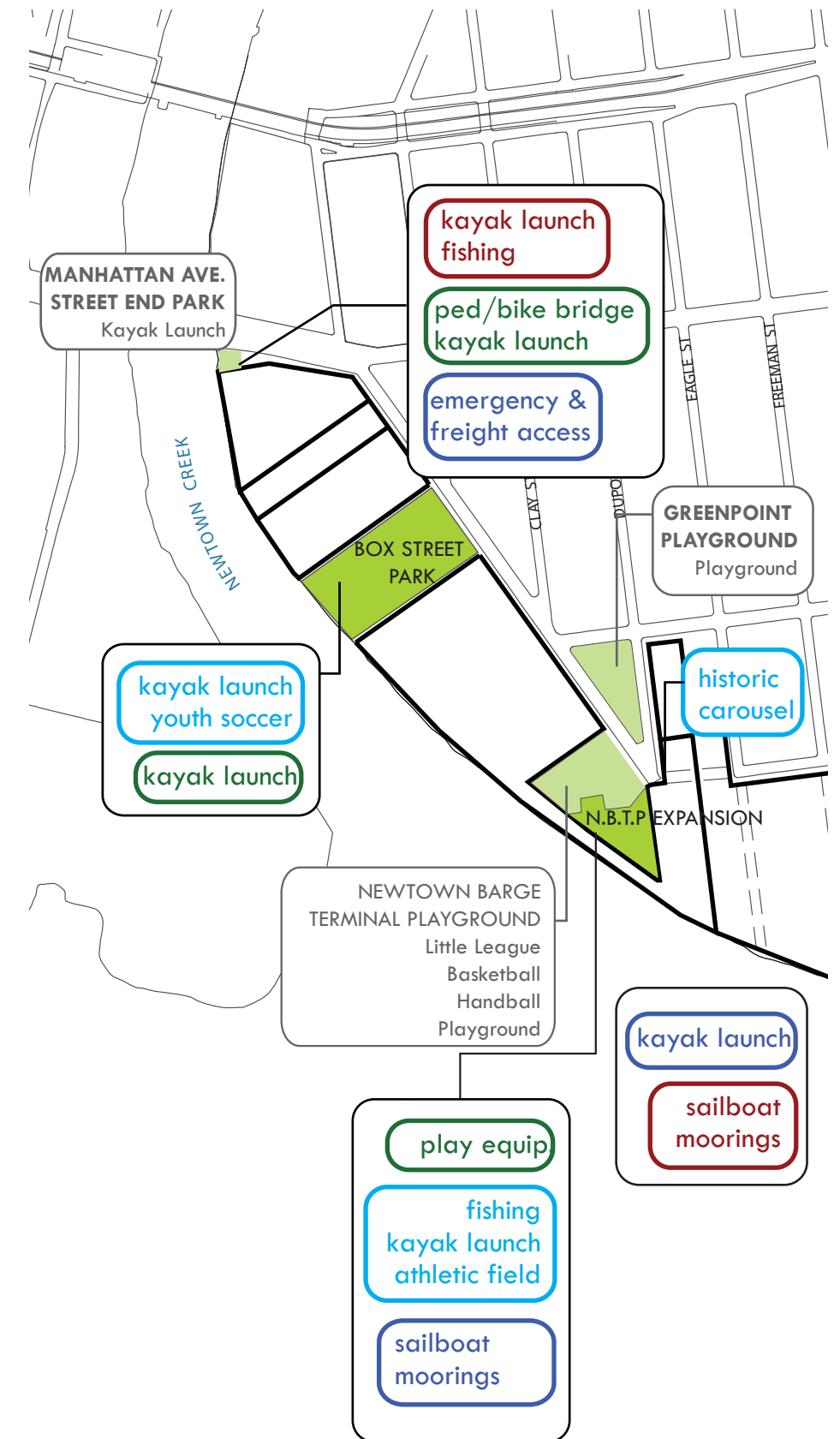
- Vision Plan for Brooklyn's Green Crescent, March 2006 - Guided by the vision of local and citywide parks advocates, the Municipal Art Society and Mathews Nielsen Landscape Architects prepared this concept plan for the East River waterfront that spans from the Williamsburg Bridge to Newtown Creek. Authors include: Greenpoint Waterfront Association for Parks & Planning; Brooklyn Greenway Initiative; Trust for Public Land; Regional Planning Association; Municipal Art Society of New York; Greenpoint-Williamsburg Residents; Mathews Nielsen Landscape Architects, PC.
- Greenpoint/Williamsburg Open Space Plan, November 2004 - Authors include: Greenpoint Waterfront Association for Parks and Planning; Trust for Public Land; Phillips Preiss Shapiro Associates; Fox and Fowle Architects, PC; Roesch Landscape Architects.

In addition to the community-based plans listed above, local residents have also participated in City-led planning initiatives for the Waterfront. These have included:

- Community Board 1, Greenpoint 197-A Plan, January 2002
- Community Board 1, Williamsburg 197-A Plan, January 2002
- Greenpoint-Williamsburg Zoning Amendment and Waterfront Access Plan, 2005

A theme that emerges from these public planning processes is that residents envision the Greenpoint-Williamsburg waterfront as an organic extension of their vibrant and treasured neighborhoods. This suggests that any comprehensive framework for the waterfront's new public open spaces should be specific to Greenpoint and Williamsburg and grow out of the neighborhoods' past and present character. The community is not looking to replicate other New York City waterfronts. This plan recognizes that the community wants the Greenpoint-Williamsburg Waterfront to be revitalized; they want it to remain, unmistakably, their own.

A second point expressed in community workshops is that, while people from outside the two neighborhoods may perceive the waterfront's industrial ruins as romantic or even picturesque, local residents take great pride in the waterfront's history as a dynamic manufacturing center and its considerable contributions to the U.S.'s economy, military and culture. The designs for open spaces along the waterfront should reflect this sentiment by celebrating the waterfront's historical contributions and by reconnecting the waterfront to its legacy of production and craftsmanship.



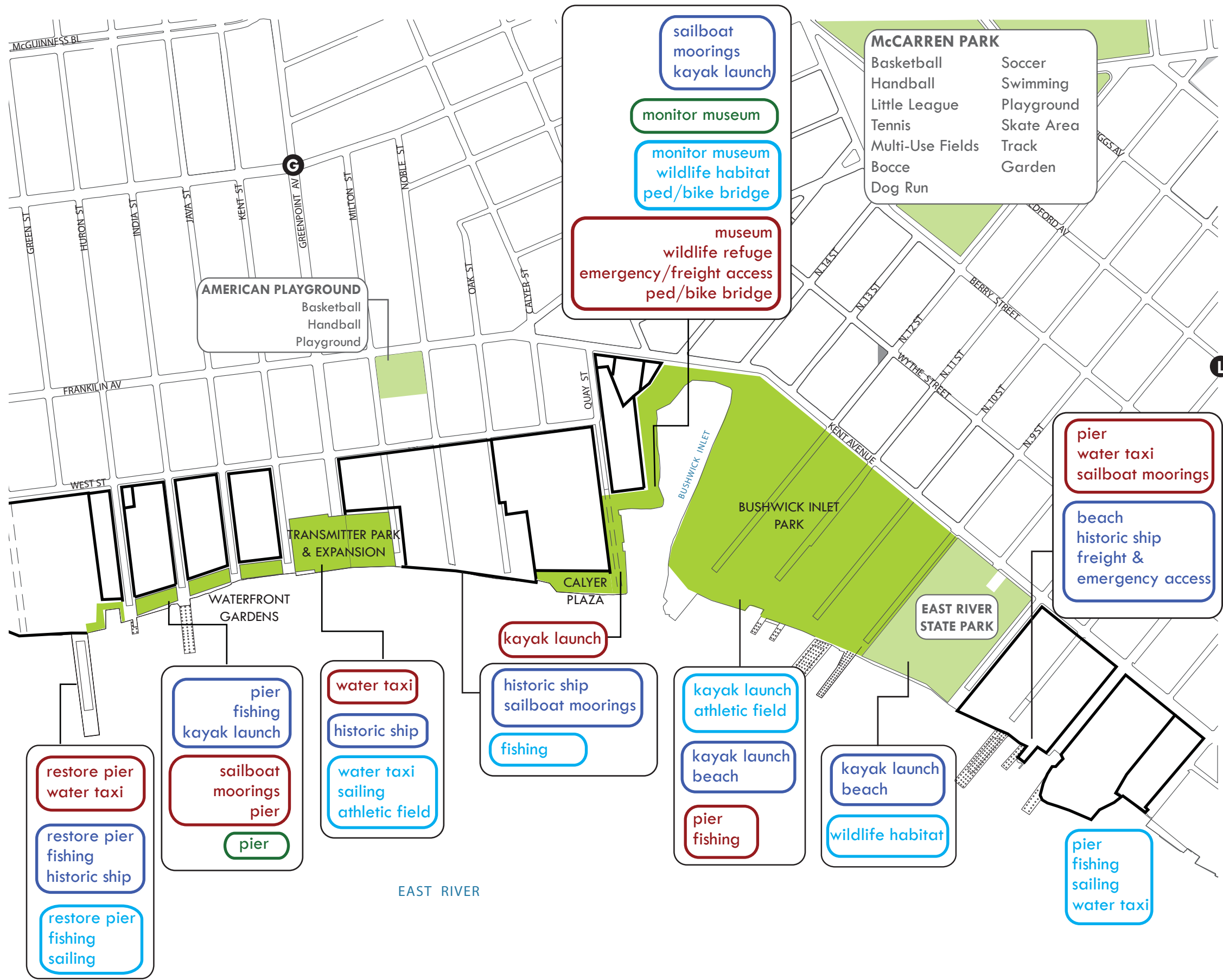


FIGURE 2-15  
**SUMMARY OF COMMUNITY-BASED  
 VISIONS FOR RECREATION PROGRAM**

- 197-A PLANS, 2002  
Community Board 1, Borough of Brooklyn
- VISION FOR BROOKLYN'S GREEN CRESCENT, 2006  
Brooklyn Greenway Initiative, Trust for Public Land, Regional Planning Association, Municipal Art Society of New York; Greenpoint-Williamsburg Residents; Mathews Nielsen Landscape Architects, PC
- GREENPOINT/WILLIAMSBURG OPEN SPACE PLAN, 2004  
Greenpoint Waterfront Assoc. for Parks and Planning; Trust for Public Land, Phillips Preiss Shapiro Associates; Fox and Fowle Architects, PC; Roesch Landscape Architects
- DRAFT OPEN WATER USE PLAN, 2005\*  
Metropolitan Waterfront Alliance
- EXISTING PARK PROGRAM
- EXISTING PARK
- FUTURE PARK
- G SUBWAY STOP

NOTE:  
 \* Proposed program elements listed are in addition to those included in Greenpoint/Williamsburg Open Space Plan.



This plan also responds to the community's interest in direct contact with the East River. Community members at public workshops and meetings have expressed a strong desire for this project to designate areas for sailing, kayaking, fishing, and other types of water-dependent recreation. Bushwick Inlet, due to its calmer, protected waters has unique potential to accommodate direct contact with the water.

The Master Plan's design vocabulary, presented in Chapter 6, is directly based on the community's input during the development of the 2005 Rezoning and Waterfront Access Plan. During those public processes, specific waterfront furnishings, including a bench, sea rail, a light, and paving materials, were selected and incorporated into the new zoning regulations. The purpose of these required elements was to create consistency and cohesiveness among the separately designed and developed private projects. For this Master Plan, the NYC Department of Parks and Recreation has incorporated the community's design objectives and criteria into the selection process to the greatest extent possible. The community's desire for furnishings that convey warmth, comfort, and a unique sense of place and local history, are very much reflected in the Master Plan's design vocabulary. In addition, NYC DPR has applied additional criteria to the Master Plan furnishings selection process. These include sustainability, durability, low maintenance, and promoting opportunities for local jobs and industry.



FIGURE 2-16: COMMUNITY BARRIERS TO WATERFRONT

### 3. VISION FOR A PUBLIC WATERFRONT

#### 3.1 Master Plan Overview

The Waterfront Master Plan encompasses a variety of different types of public spaces, including existing parks, future parks to be built by City agencies, future parks to be built by private developers, and a continuous pedestrian esplanade that will link the open spaces. The following sections describe the various types public spaces and the Master Plan’s vision for each.

##### 3.1.1 SHORE PUBLIC WALKWAY

The Shore Public Walkway is a continuous pedestrian route that will link all of the waterfront parcels for the entire length of the Waterfront Planning Area. The Shore Public Walkway will be developed in segments, at different times and by different parties. Therefore, NYC DPR will rely on the design guidelines and design vocabulary presented in this document to ensure that the Shore Public Walkway ultimately functions as uninterrupted link between the waterfront’s public open spaces and a significant recreation landmark in it’s own right.

##### 3.1.2 UPLAND OPEN SPACES

The open space parcels presented in this Master Plan include public parks to be developed by NYC DPR and several Supplemental Open Spaces, which will be designed and built by private developers according to the guidelines and concepts presented in this document. Chapters 4 and 5 of the Open Space Master Plan provide program recommendations and design considerations for both types of recreational open space.

#### 3.2 Sustainable Design Goals

Goal 4, of the Master Plan’s overall project goals, emphasizes the importance of sustainability to this project. To achieve this goal, the conceptual park designs and furnishings presented in the Master Plan reflect the Parks Department’s commitment to sustainable design. Both the publicly and privately developed portions of the Waterfront Planning Area should incorporate the following practices and elements, intended to increase the longevity and vibrance of the open spaces while reducing their environmental impact.

- The Adaptive Re-use of existing structures and materials. Whenever possible, salvaged structures (or portions of structures) and materials should be considered and evaluated for re-use on site. This practice reduces the amount of waste generated and hauled through surrounding neighborhoods while preserving historic character.
- “Green” Materials and Construction Practices are strongly encouraged. Design elements such as site furnishings and paving should be made from highly durable, easily maintainable and eco-friendly materials. Local production and fabrication should also be considered. Tropical hardwoods should be avoided.
- The incorporation of alternative energy sources, such as solar power, is encouraged throughout the Waterfront Planning Area and within the public open spaces.



FIGURE 3-1: AERIAL VIEWS OF PROPOSED BUSHWICK INLET PARK







FIGURE 3-2:  
WATERFRONT OPEN SPACE VISION PLAN

### 3.3 BLUE WAY TRAIL

One of the Master Plan's primary goals is to provide safe opportunities for direct interaction with the water in addition to public access to the waterfront's amenities and open spaces. The community has expressed a strong desire for possible kayak launches in particular. The Master Plan has identified seven locations suitable for kayak launches and landings. These possible kayak launch sites are distributed along the shoreline, as shown in figure 3-3.

### 3.4 PIERS

As recently as 1988, the Greenpoint-Williamsburg shoreline contained piers at the terminus of almost every street. Since then, all of these structures have greatly deteriorated, many to the point of complete disrepair. Although remnants of many of the piers are evident from the shore, the NYS Department of Environmental Conservation currently recognizes only one existing pier, located at the terminus of Green Street, as a viable existing structure.

The Greenpoint Williamsburg rezoning included a Waterfront Pier Analysis comparing the piers that existed in 1988 with the piers that existed at the time of the rezoning in 2004. The Greenpoint Williamsburg WAP allows for developers of some waterfront parcels to gain bonus development rights for the reconstruction of pier structures that existed in 1988.

Pier reconstruction proposals are subject to approval by the New York State Department of Environmental Conservation and Army Corps of Engineers (where applicable). The Open Space Master Plan encourages the restoration of the Green Street Pier, the construction and/or reconstruction of additional piers and several possible kayak launches throughout the Waterfront Planning Area. The geographic distribution of these piers is an important factor in creating and locating new program elements, particularly the water-dependent activities, recommended in this plan. NYC DPR proposes new public piers within both WNYC Transmitter Park and within Bushwick Inlet Park.





FIGURE 3-3:  
**PROPOSED BLUE WAY TRAIL**

- ★ POTENTIAL KAYAK LAUNCH SITES
- EXISTING PARKS
- PROPOSED PARKS, PRIVATELY DEVELOPED
- PROPOSED PARKS, PUBLICLY DEVELOPED
- PROPOSED ESPLANADE



### 3.5 Open Space Master Plan Framework

The following layers constitute the Open Space Master Plan's design framework: Access and Circulation, Recreation Program, Habitat and Ecology, and Lighting. Each is discussed in detail on the following pages.

#### 3.5.1 ACCESS AND CIRCULATION

The Open Space Master Plan envisions the waterfront as an extension of the adjacent neighborhoods rather than as an isolated area. The 2005 Zoning and Waterfront Access Plan provides a blueprint and establishes firm requirements for extensive access and circulation networks within the Waterfront Planning Area, with particular emphasis on alternative transportation modes. The Master Plan builds on this vision and integrates several specific circulation improvements into its plans for public parks. All circulation recommendations in this Master Plan will require further study, including transportation analyses of existing and proposed bicycle and transit facilities, to ensure coordination among public agencies and various transportation modes.

##### PEDESTRIANS

The Shore Public Walkway serves as the primary pedestrian route along the western (waterfront) edge of the Waterfront Planning Area. Although the Shore Public Walkway will be developed by different parties/entities at different times, upon completion it will provide a continuous public spine for the waterfront. The Upland Connections and private and public streets, established by the 2005 Waterfront Access Plan, will provide an extensive network of pedestrian connections to the Shore Public Walkway. The extensive pedestrian access reflects the Open Space Master Plan's Goal 1: Create a Publicly Accessible Waterfront.

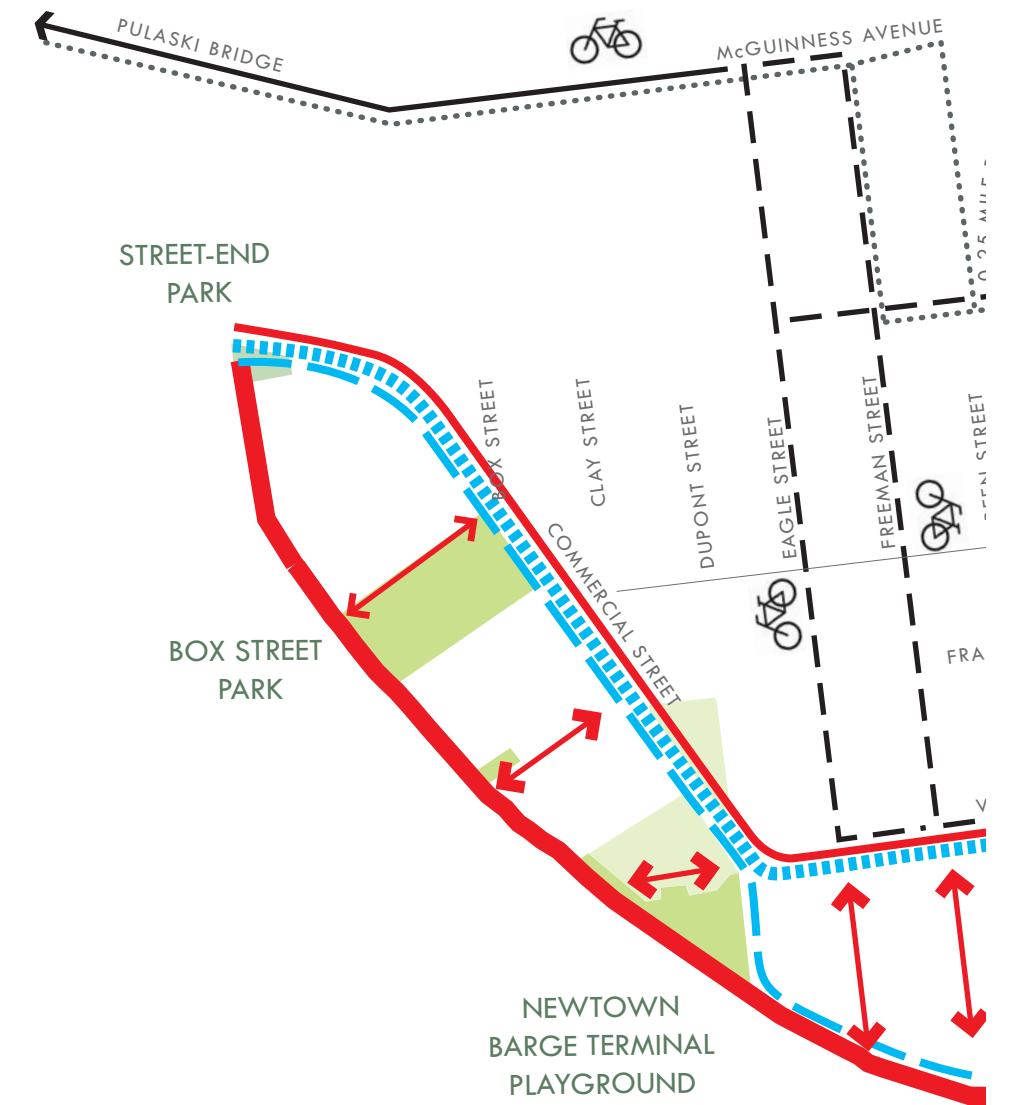
##### BICYCLES

The Open Space Master Plan encourages bicycle ridership as a recreation activity and a means of accessing and connecting the Shore Public Walkway and parks throughout Greenpoint and Williamsburg. Due to its limited width, the Shore Public Walkway cannot safely accommodate a designated bicycle path along the water's edge. However, several community planning efforts to date have proposed alternative bicycle circulation routes through the Waterfront Planning Area, as shown in Figure 3-4. The Open Space Master Plan provides direct bicycle access to Bushwick Inlet Park and the Waterfront at Bushwick Inlet Park. Beyond the park's boundaries, bike access will transition to on-street bicycle facilities, to be designed and determined in conjunction with NYC Department of Transportation. All bicycle circulation improvements will require further study and coordination between NYC DPR, NYC DOT, and other agencies.

##### PUBLIC TRANSPORTATION

The Master Plan designates potential water taxi stops at the WNYC Transmitter Park Pier, the North 6th Street Pier, and possibly, at the Green Street Pier. The development of future water taxi facilities should be consistent with applicable City and State policies and regulations and will require interagency discussions and coordination.

In response to public input, the Open Space Master Plan recommends that the City explore opportunities to provide bus service on Kent Avenue and Franklin Street, to serve both the parks and the new waterfront development. All proposed transit improvements, including a new or modified bus line, will require additional study and coordination among the MTA and other public agencies.



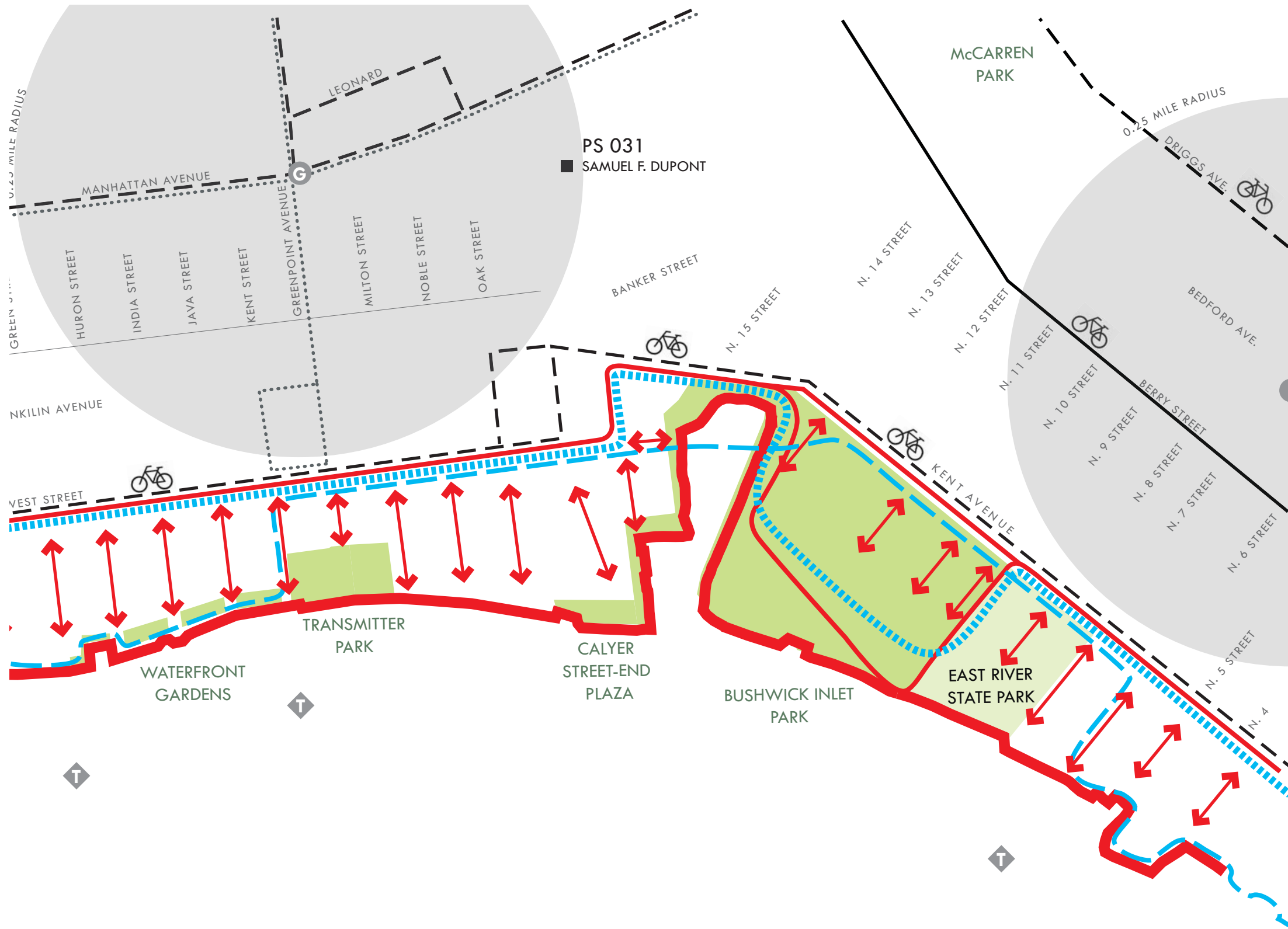


FIGURE 3-4:  
**PROPOSED BICYCLE & PEDESTRIAN ACCESS & CIRCULATION PLAN**

LEGEND

- PROPOSED BICYCLE CIRCULATION  
G-W OPEN SPACE MASTER PLAN
- PROPOSED BICYCLE CIRCULATION  
A VISION FOR BROOKLYN'S GREEN CRESCENT
- - - PROPOSED BICYCLE CIRCULATION  
BROOKLYN WATERFRONT GREENWAY INITIATIVE
- ▬ PLANNED SHORE PUBLIC WALKWAY
- ↕ PLANNED PEDESTRIAN ACCESS <sup>1</sup>
- ↕ PLANNED BICYCLE ROUTE <sup>2</sup>
- ↕ EXISTING BICYCLE ROUTE <sup>2</sup>
- ⋯ BUS ROUTE
- G SUBWAY STOP
- T POTENTIAL WATER TAXI
- EXISTING PARKS
- PROPOSED PARKS

SOURCES:  
 Greenpoint Williamsburg Waterfront Access Plan, 2005  
 New York City Cycling Map, 2007



## VEHICULAR TRAFFIC

Vehicles will be permitted on Waterfront public streets. Upland Connections and the Shore Public Walkway are exclusively pedestrian access ways.

### 3.5.2 RECREATION PROGRAM AND ACTIVITIES

The recreation program plan shown in Figure 3-5 maximizes the public use and enjoyment of the waterfront. Because of the extent and variety of different parks to be created along the waterfront, the Open Space Master Plan can accommodate both the recreation needs of the community and the ecological requirements for a healthy estuarine environment. This involves identifying areas that will support recreation activities, such as kayaking and sailing, that are directly linked to the water; providing active recreation facilities that meet the community's and NYC DPR's needs; integrating restored habitat throughout the waterfront, which supports the East River's ecological processes and creates memorable, experiential passive recreation settings. The program plan outlined below relates directly to Goal 2 of the Open Space Master Plan: Create of Balance of Active and Passive recreation opportunities to serve the diverse recreation needs of the community.

#### WATER-DEPENDENT RECREATION

In order to take full advantage of the unique recreation opportunities afforded by the East River, the Open Space Master Plan places a high priority on water-dependent recreation uses. The Recreation Program Plan identifies possible locations for kayak launches, fishing, sailing moors, and waterfront "get-downs." The Open Space Master Plan's Goal 3, to "Identify Appropriate Opportunities for Direct Interaction with the River" is strongly reflected in these Program Plan elements.

#### ACTIVE RECREATION

The majority of active recreation facilities used by residents of the Greenpoint and Williamsburg neighborhoods are clustered in McCarren Park and in some of the smaller playgrounds located in both neighborhoods. The Master Plan increases the number of active recreation facilities in both neighborhoods, distributing them along the length of the project area in both privately and publicly-built open spaces. The active recreation uses include athletic fields, such as youth soccer, softball, and volleyball; and a variety of play areas that include active play equipment, water play elements, interactive and educational play features.

#### PASSIVE RECREATION

The waterfront environment is an ideal setting for passive recreation. The Recreation Program Plan proposes a variety of passive recreation activities, such as picnic areas, bird-watching, scenic views, seating areas, and gardens.

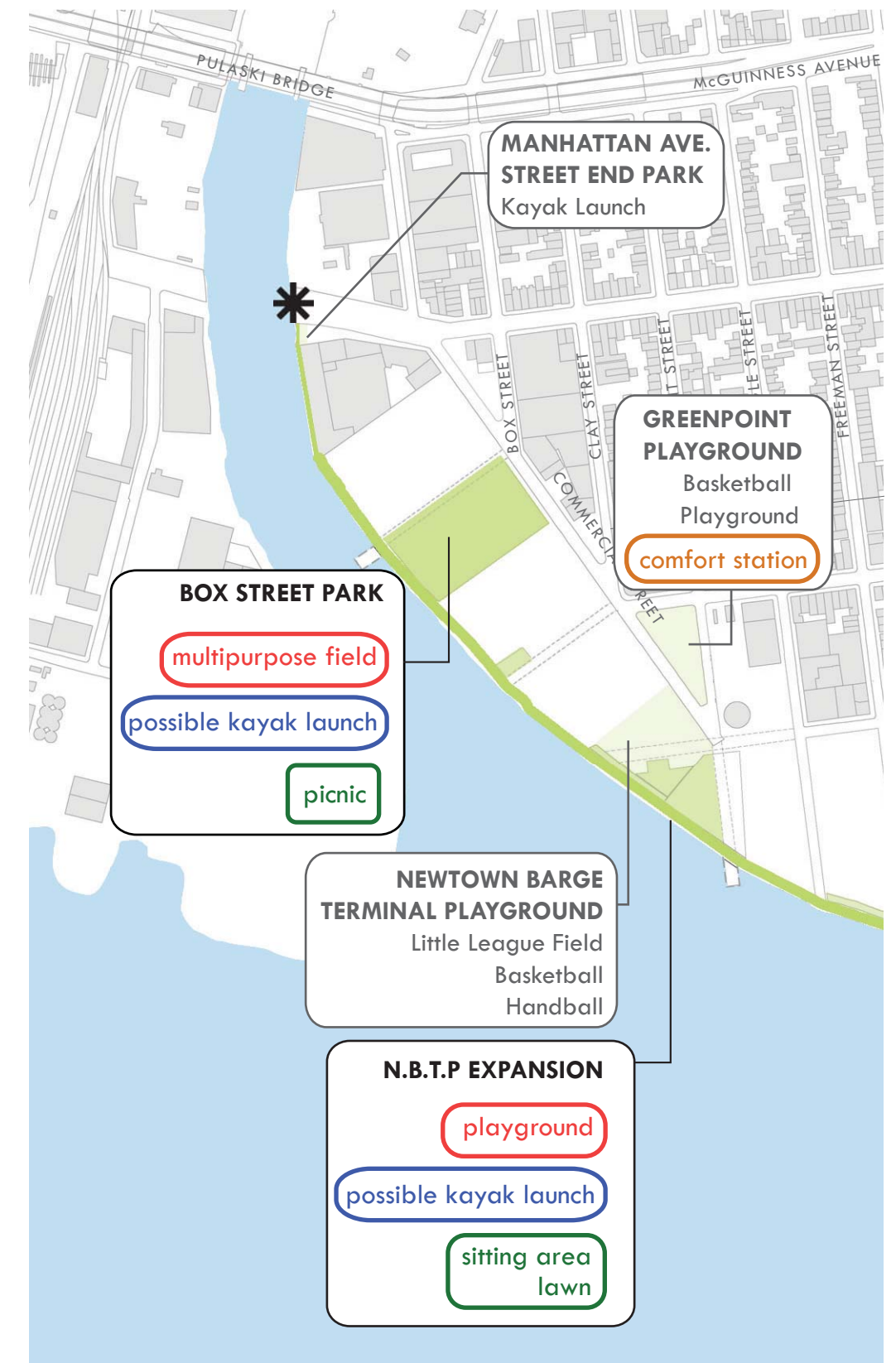




FIGURE 3-5:  
PROPOSED RECREATION PROGRAM PLAN

- LEGEND
- ACTIVE RECREATION
  - PASSIVE RECREATION
  - WATER RECREATION
  - FACILITY/SERVICE
  - EXISTING PARK PROGRAM
  - PARK/WATERFRONT ENTRANCE
  - EXISTING PARK
  - FUTURE PARK
  - SUBWAY STOP





FIGURE 3-6: WETLAND



FIGURE 3-7: MEADOW



FIGURE 3-8: GARDEN



FIGURE 3-9: BOSQUE/PLAZA



FIGURE 3-10: LAWN



FIGURE 3-11: RIPRAP EDGE



FIGURE 3-12: SYNTHETIC TURF FIELD



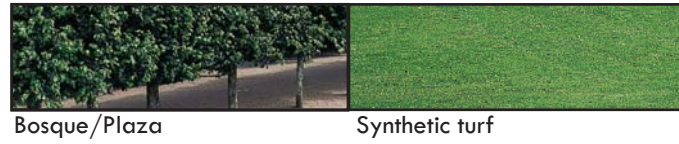
FIGURE 3-13: PIER



FIGURE 3-14: SAND BEACH



**BOX STREET PARK**



**NEWTOWN BARGE TERMINAL PLAYGROUND**



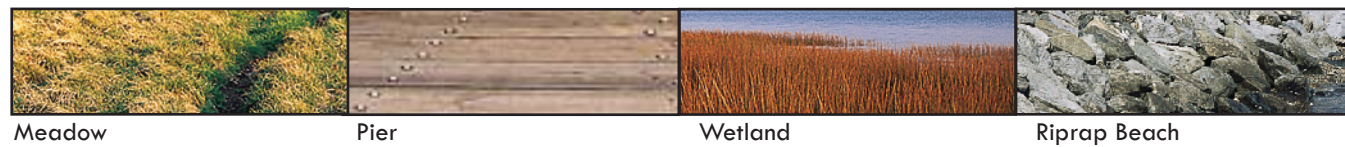
**GREENPOINT PLAYGROUND**



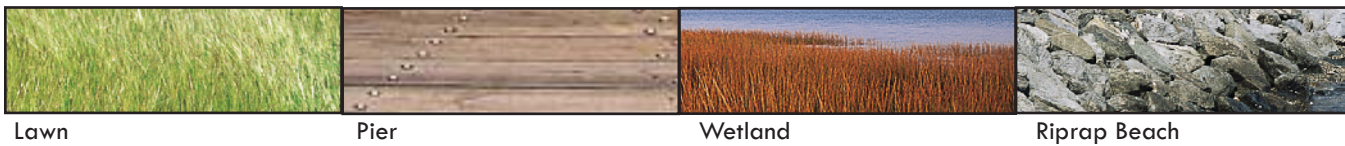
**WATERFRONT GARDENS**



**TRANSMITTER PARK**



**TRANSMITTER PARK EXPANSION**



**CALYER STREET-END PLAZA**



**BUSHWICK INLET PARK**



FIGURE 3-15: LANDSCAPE TYPES FOR PROPOSED PUBLIC OPEN SPACES

**3.5.3 HABITAT AND LANDSCAPE TYPES**

The public open spaces included in the Master Plan will include a wide array of landscape types, from formal bosques, plazas and gardens to restored wetland habitats and meadows. As it travels through various landscape types, the Shore Public Walkway should take on characteristics of its environment, becoming a dynamic landscape type in itself.

The Master Plan encourages the use of native plant species in all landscape types, so that all open spaces provide some level of habitat value, in addition to meeting program and maintenance requirements. Due to its substantial size, Bushwick Inlet Park presents an unmatched opportunity to create extensive areas of estuarine wetland habitat. Opportunities also exist for smaller wetland-restoration projects on other proposed parks and Supplemental Open Spaces. For example, plans for Transmitter Park (see Chapter 5) include smaller habitat restoration areas.

### 3.5.4 LIGHTING

The Open Space Master Plan illumination strategy is designed to create a through-line of uniformity along the Walkway punctuated by pools of light combined with seating. Lighting types and applications include a standard light pole to establish a repeated rhythm along the Shore Public Walkway, seating and gathering areas illuminated with low bollards of two different heights, and gateways defined by lighting to draw people to the waterfront. Finally, a line of amenity-height light bollards accentuate the piers. The illumination represents a minimalist aesthetic and provides a safe and welcoming evening and nighttime environment.

The lighting design for the Greenpoint Waterfront includes three lighting fixture types which were selected for appropriate lighting characteristics, forms and surfaces to match thematic concepts, relatively easy maintenance, and energy efficiency.

- **LT-1A:** Standard Pole; The Candela Pole Light with an asymmetric optic will provide a standard level of illumination along the path and nearby area.
- **LT-1B:** Standard Pole; The Candela Pole Light with a symmetric optic will mark the upland connections and provide a standard level of illumination along upland corridors.
- **LT-2, LT-3:** Bollard We-ef Tharos; The optional light fixture, Bollard, at low and standard heights, will contribute to a sense of place combined with benches.
- **LT-4:** Bollard We-ef Tharos; The optional light fixture, amenity-height bollard (with optics and form similar to the Bollards), will create a central linear illumination down the center of the piers suggesting a spirit of adventure and extension to the water.



FIGURE 3-16: DAY VIEW OF CANDELA POLE



FIGURE 3-17, 3-18: DAY & NIGHT VIEWS OF LIGHT BOLLARDS

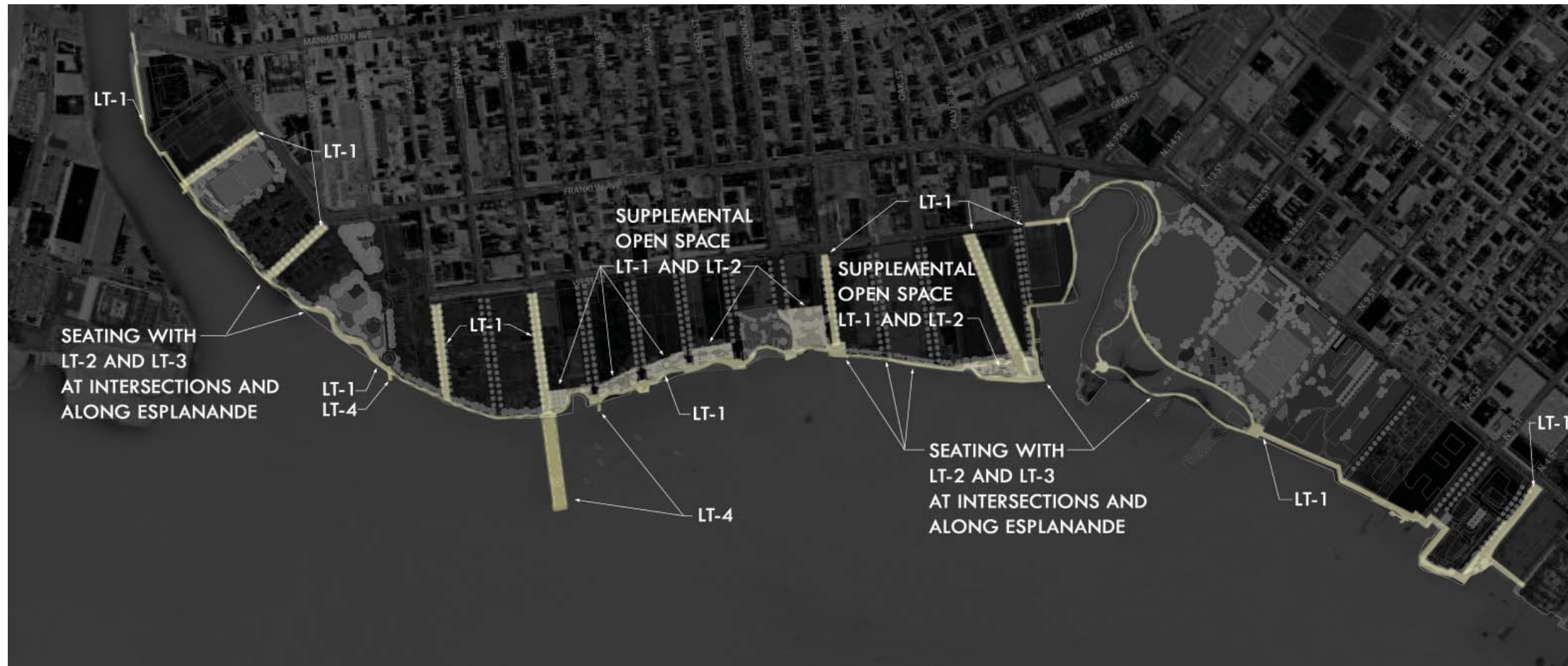


FIGURE 3-19  
**PROPOSED AREAS OF ILLUMINATION**

- LT-1: CANDELA POLE (12'-0")
- LT-2: LOW BOLLARD (3'-0")
- LT-3: STANDARD BOLLARD (4'-7")
- LT-4: AMENITY-HEIGHT BOLLARD (8'-0")

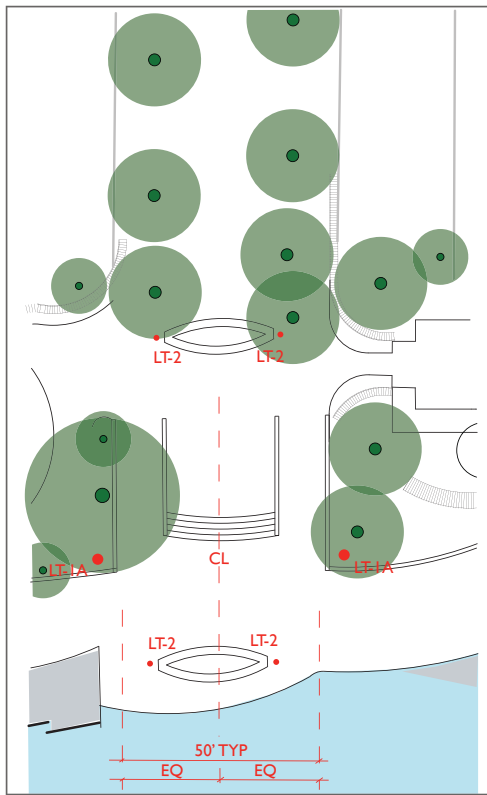


FIGURE 3-20: SEATING AREAS AND STREET END; LT-1A AND LT-2 TYPICAL LAYOUT

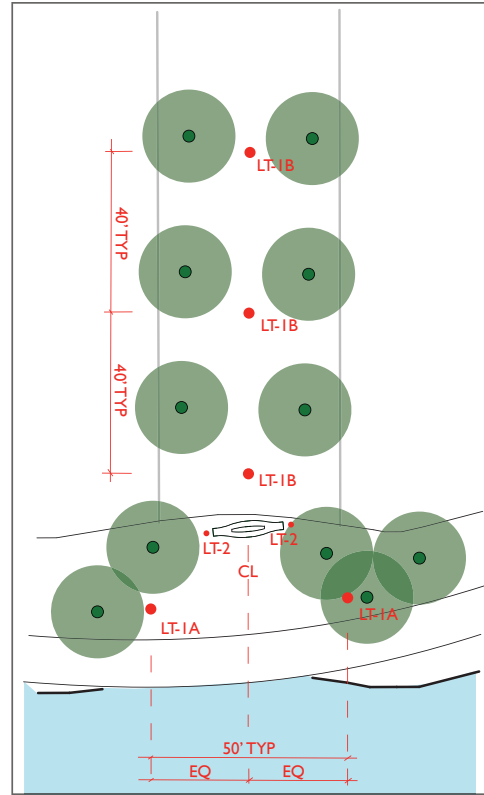


FIGURE 3-21: SEATING AREAS AND UPLAND CONNECTION; LT-1A, LT-1B AND LT-2 TYPICAL LAYOUT

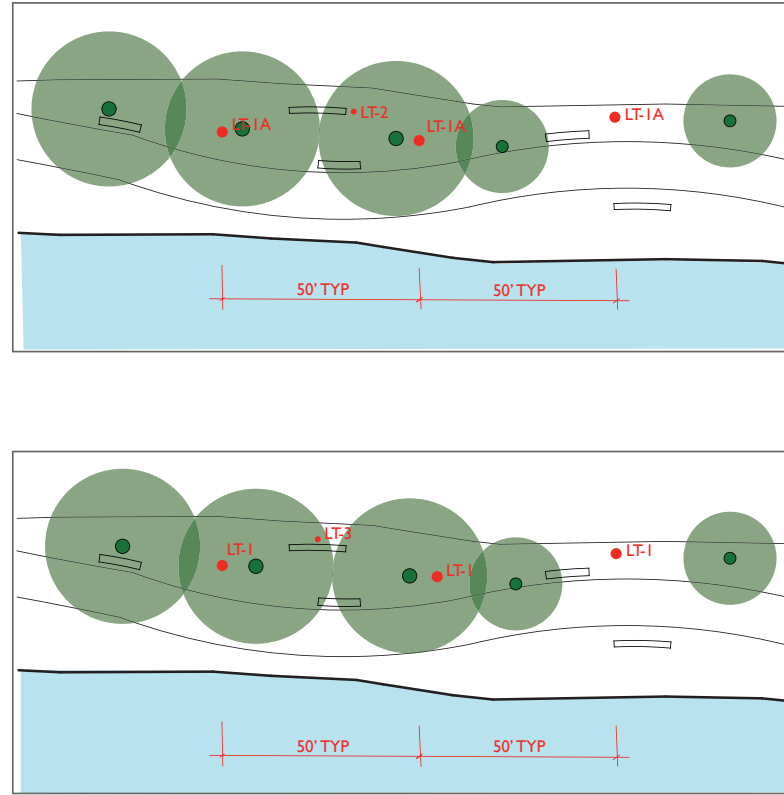


FIGURE 3-22 & 23: SEATING AREAS AT ESPLANADE; LT-1A TYPICAL LAYOUT WITH LT-2 & LT-3 OPTION; TYPICAL LIGHT POLE OFFSET FROM EDGE OF WALK IS 8'-0".

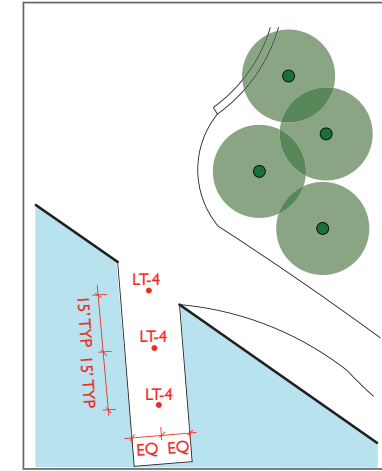


FIGURE 3-24: PIER AREAS; LT-4 TYPICAL LAYOUT FOR PIER WIDTH < 30 FT

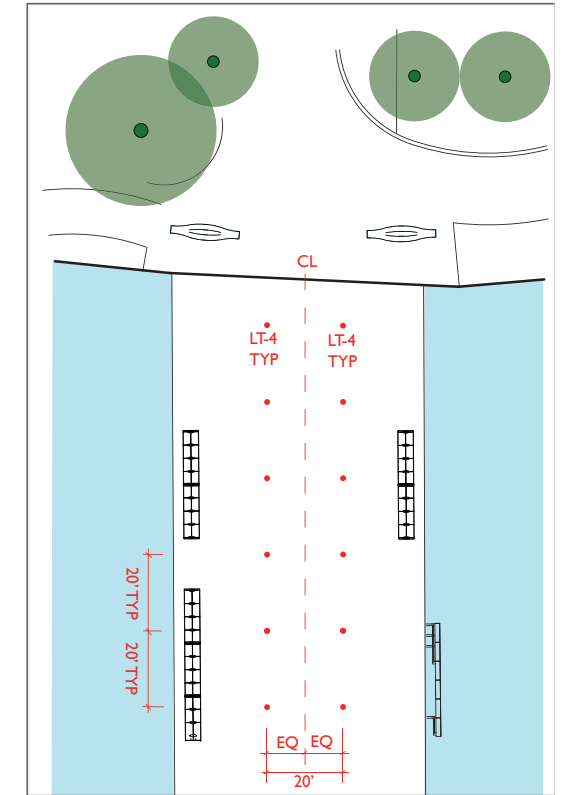


FIGURE 3-25: PIER AREAS; LT-4 TYPICAL LAYOUT FOR PIER WIDTH > 30 FT

## 4. PUBLIC/PRIVATE PARTNERSHIP PROJECTS

The Waterfront Planning Area contains approximately two miles of Shore Public Walkway and four designated Supplemental Open Space areas. Private developers will be responsible for creating these public spaces in conjunction with the redevelopment of their adjacent waterfront parcels. In addition, private developers will be responsible for developing three to four potential pier reconstruction/restoration projects.

The design guidelines and conceptual designs presented in this section reflect each site's relationship to the water and surrounding development (both existing and planned). The guidelines and conceptual designs are intended to work in tandem with the design vocabulary (presented in the last chapter of this document) to guide the overall program, layout, and design of the Waterfront Planning Area's privately-developed public spaces.

### 4.1 The Shore Public Walkway

#### 4.1.1 CONTEXT AND CHARACTER: MANHATTAN AVENUE TO NORTH 4TH STREET

The Shore Public Walkway will ultimately extend approximately two miles, through two neighborhoods, intersecting with streets, pedestrian connections, private property, public parks and open spaces, while continuously hugging the East River. The Master Plan proposes a standard design vocabulary to ensure quality and consistency along the entire length of the Shore Public Walkway. However, the Master Plan simultaneously recognizes the need for innovative responses to the diverse site conditions that characterize the Shore Public Walkway's route. Each segment of the Shore Public walkway should be expressive of its unique context, including views, history, and relationship to the surrounding landscape and water's edge. This will ensure that each segment of the Walkway will serve as a memorable public space and destination in itself.



FIGURE 4-1: PUBLIC/PRIVATE PARTNERSHIP PROJECTS, LOOKING SOUTHEAST

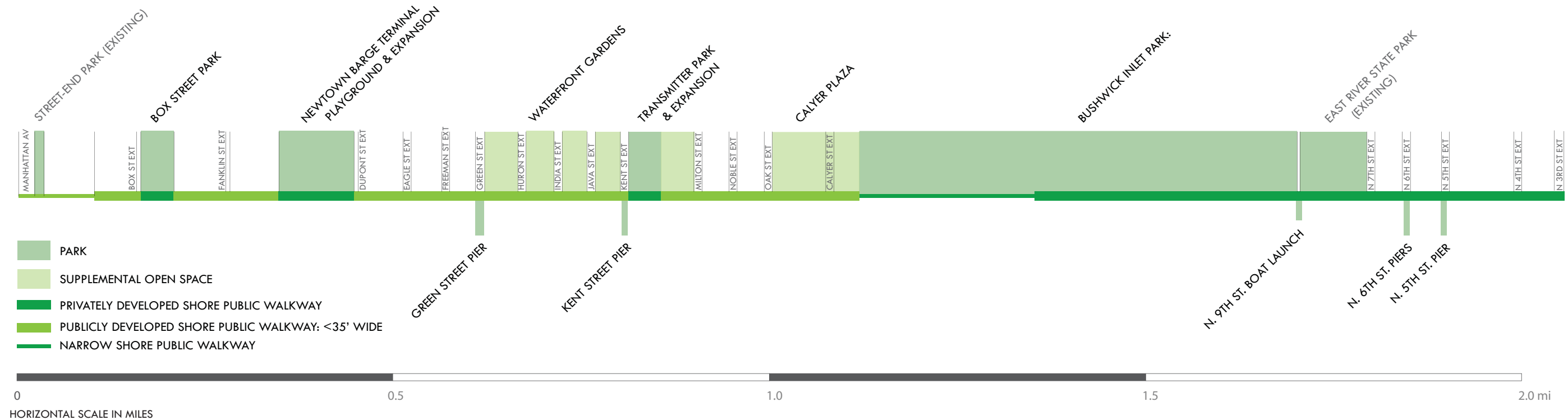


FIGURE 4-2: LINEAR DIAGRAM OF THE SHORE PUBLIC WALKWAY

#### 4.1.2 CONTEXT AND CHARACTER: UPLAND BOUNDARY TO WATER'S EDGE

The character of the Shore Public Walkway will be determined largely by its context: the development that occurs along its upland side and the treatment of the water's edge along the shore. The development abutting the Shore Public Walkway will consist of private and semi-private properties, including residential, office and retail spaces. The Shore Public Walkway must bridge the transition between the private realm associated with these developments and the Shore Public Walkway's entirely public promenade. This transition will require careful design consideration in order to ensure that the Shore Public Walkway effectively conveys a truly public character. The waterfront zoning regulations and the Waterfront Access Plan identify two functional zones within the Shore Public Walkway: the Pedestrian Circulation Zone, which abuts the water and is intended for more intensive pedestrian activity, and the Buffer Zone, which extends from the edge of the pathway to the property line. The buffer zone is envisioned as a "quieter", multi-use zone that will feature plantings, including screenings for adjacent residential uses; some furnishings; and landscape features such as retaining walls, steps, slopes, etc., to accommodate elevation changes.

The design of the Buffer Zone will greatly determine the success of the transition from private to public within the Shore Public Walkway. While the Buffer Zone's function and program will respond to the privacy and access needs of the adjacent development, the Shore Public Walkway should not be designed as a "front yard" or "entry-court" for private developments along the waterfront. Shore Public Walkway designs should reference the water's edge and adjacent public spaces, rather than the private development's architecture.

The character of the Shore Public Walkway will be greatly influenced by the type of edge treatment applied (see Chapter 5). For example, a bulkhead wall installed at the bulkhead line maximizes paved and planted space behind it; a gradual reinforced slope at the water's edge requires some of the Shore Public Walkway's width to achieve necessary grades but provides visual interest and brings visitors closer to the river. On many sites, combining two or more edge treatments will create unique, site-specific designs and opportunities for innovative approaches to Shore Public Walkway design.

Figures 4-3 and 4-4 illustrate two Shore Public Walkway designs that incorporate identical design vocabulary elements but address different edge treatments and upland contexts. The buffer zone in Figure 4-4 functions as inhabitable public space, accommodating pedestrian circulation between the adjacent ground-floor cafe and the pedestrian walkway. Double sided benches activate both sides of the path and surface materials such as decomposed granite/ stone fines are integrated with planting beds. The bulkhead wall eliminates the need to accommodate different elevations within the Shore Public Walkway, creating a flat, open feeling throughout. The Buffer Zone illustrated in Figure 4-4 is designed to screen the adjacent residential uses and provide a sloped lawn for seating. The riprap edge creates variety and visual interest while eliminating the need for a sea rail along its length.



FIGURE 4-3: VIEW OF SHORE PUBLIC WALKWAY, WITH BULKHEAD WALL



FIGURE 4-4: VIEW OF SHORE PUBLIC WALKWAY, WITH COMBINED RIP-RAP AND BULKHEAD WALL

#### 4.1.3 STREET AND UPLAND CONNECTIONS: TRANSITION ZONES

Where streets and upland connections meet the Shore Public Walkway, a number of potential edge conditions may need be reconciled. These areas, designated 'Transition Zones' in the waterfront zoning regulations, will require special attention to ensure pedestrian access and flow. Factors that could apply to the Transition Zones include:

- Differences in grade between adjacent properties
- Differences in grade between the roadway end and the Shore Public Walkway
- Transitions between different types of water's edge treatments

In order to ensure that these issues do not interrupt pedestrian access along the Shore Public Walkway, NYC DPR requires the following from private developers:

- All developers must build to the center line of adjacent streets and/or Upland Connections
- If two neighboring properties are developed at different times, the developer of the first project will establish the finished elevations and grades for the adjacent streets and/or Upland Connections.
- The subsequent developer must ensure that:
  - all pathways and walkways within the public realm are aligned
  - all elevation transitions meet applicable ADA and zoning requirements
  - any transition between water's edge treatment meet with NYC DPR's approval

Each Transition Zone will function as a pedestrian gateway and represents an opportunity to attract and welcome visitors to the waterfront. Transition Zones may be furnished with elements such as art installations or special seating, including sculptural versions of the River Bench system. All furnishing within the transition zone must comply with applicable zoning regulations regarding pedestrian circulation and visual access of view corridors. Special signage, including embedded street names and directional indicators, may also be appropriate Transition Zone treatments.

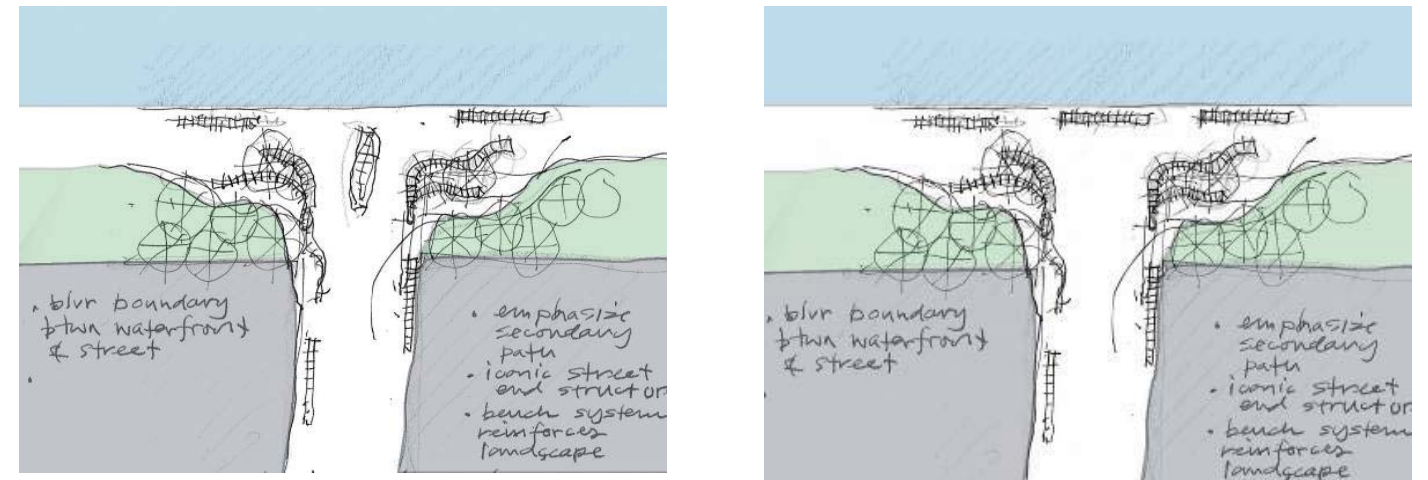


FIGURE 4-5: ALTERNATIVE BENCH LAYOUTS FOR TRANSITION ZONES.



FIGURE 4-6: CROSS SECTION OF STREET/UPLAND CONNECTION INTERSECTION. ARCHITECTURAL ELEVATIONS, COURTESY OF FXFOWLE ARCHITECTS, PC.

## 4.2 Waterfront Gardens and Green Street Pier

The Waterfront Gardens consist of a series of Supplemental Open Spaces located between Green and Kent streets. These open spaces will combine formal and informal gardens and a variety of play areas. A platform edge, soft edge or a hybrid edge solution (see Chapter 3) is recommended in this area. The gardens will contain two levels, with the Shore Public Walkway occupying the lower terrace and the active recreation areas located on the upper level. The uses envisioned in this area include children's spaces: tot-lots, butterfly gardens, picnic spots and a dog run.

Located adjacent to the Waterfront Gardens, the Green Street Pier is the only pier remaining within the Waterfront Planning Area. Zoning regulations currently allow for a commercial use to be located in the center of the pier, provided that the pier remain open to the public and the view down Green Street of the water remains unobstructed. The Master Plan envisions this pier to be restored and used as a fishing pier, sailboat dock, and/or water taxi dock. The designated commercial area could incorporate uses consistent with the pier's public role, such as concessions and attractions or an exhibition and performance space.



FIGURE 4-7: WATERFRONT GARDENS EXISTING SITE

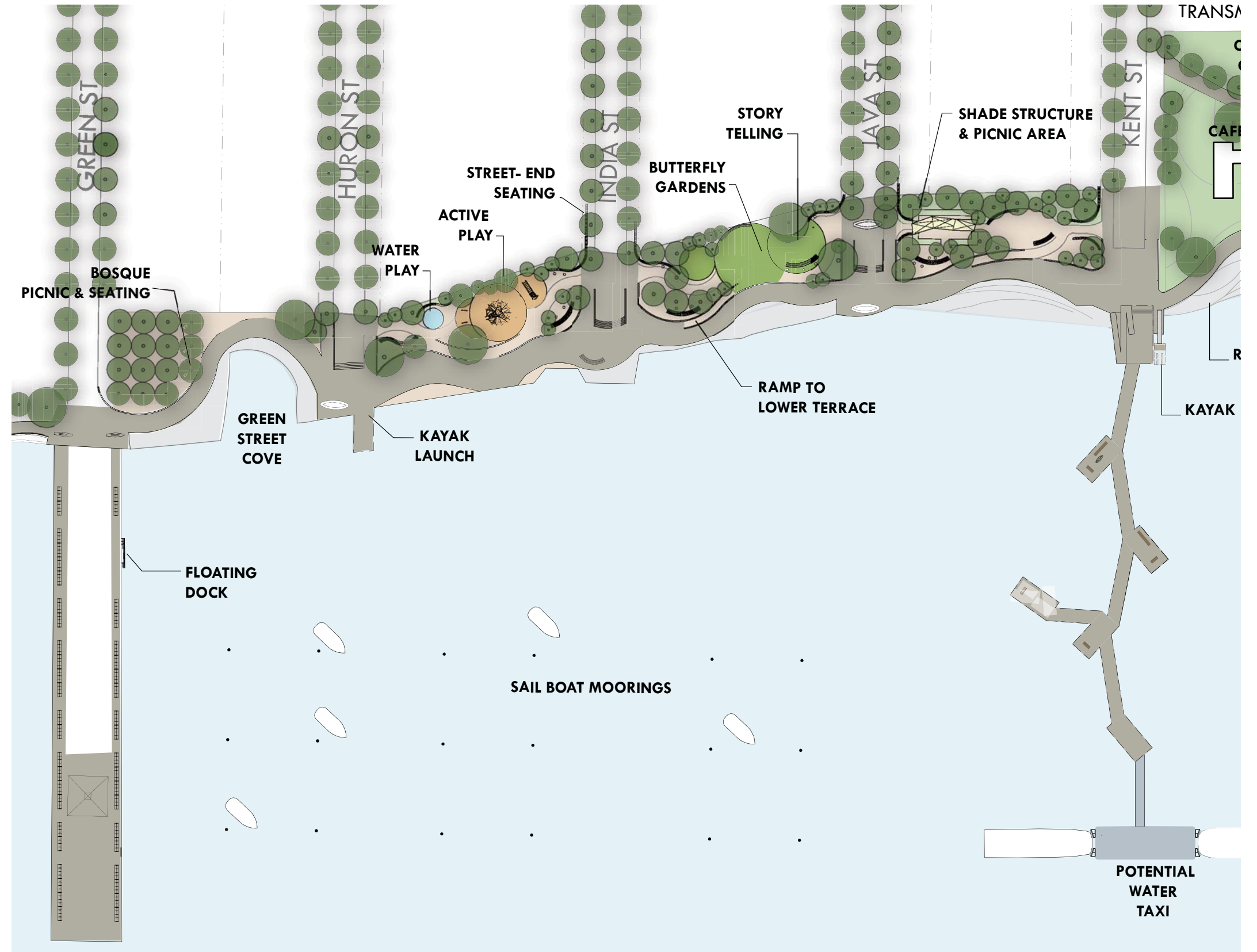


FIGURE 4-8: CONCEPT PLAN FOR WATERFRONT GARDENS



### 4.3 Transmitter Park Expansion and Milton Street Pier

Transmitter Park is a NYC DPR project currently in the design process, and is discussed in Chapter 5. Transmitter Park will be built in multiple phases. Phase 1 will be built by NYCDPR and will extend from Kent Street to Greenpoint Avenue. It will include construction of a new pier at Kent Street. The southern expansion of the park, Phase 2, will be designed and developed by a private developer with coordination with NYCDPR. Phase 2 will extend from Greenpoint Avenue to Milton Street. The second phase is envisioned to include the possible reconstruction of a fishing pier at the base of Milton Street at the southern end of the park's waterfront. The second phase is identified as a potential location for a small, satellite NYC DPR maintenance facility. A fishing pier could also be constructed in conjunction with the park expansion. The pier would be located at the terminus of Milton Street, at the south end of the park's waterfront.



FIGURE 4-9: TRANSMITTER PARK EXPANSION EXISTING SITE

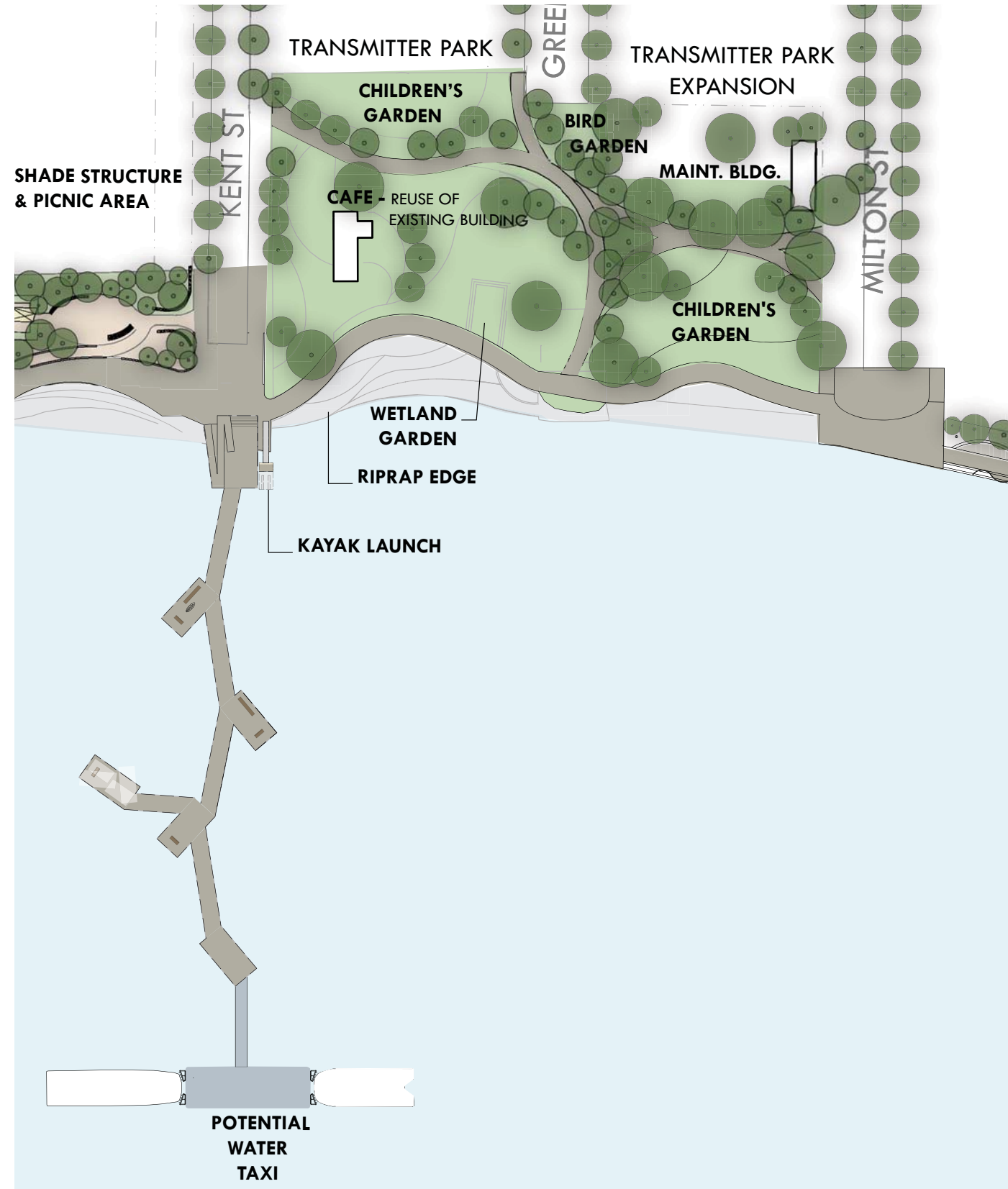


FIGURE 4-10: CONCEPT PLAN FOR TRANSMITTER PARK (LEFT) & TRANSMITTER PARK EXPANSION (RIGHT)



#### 4.4 Calyer Street-End Plaza

This Plaza is located on a prominent site at the mouth of Bushwick Inlet with views across the Inlet and the East River. This design creates a formal yet playful public space through undulating terraces and signature, sculptural benches. The planted upper terraces are an ideal setting for sitting in the shade and viewing the water and Manhattan skyline; the open, lower terraces bring visitors in close proximity to the water.

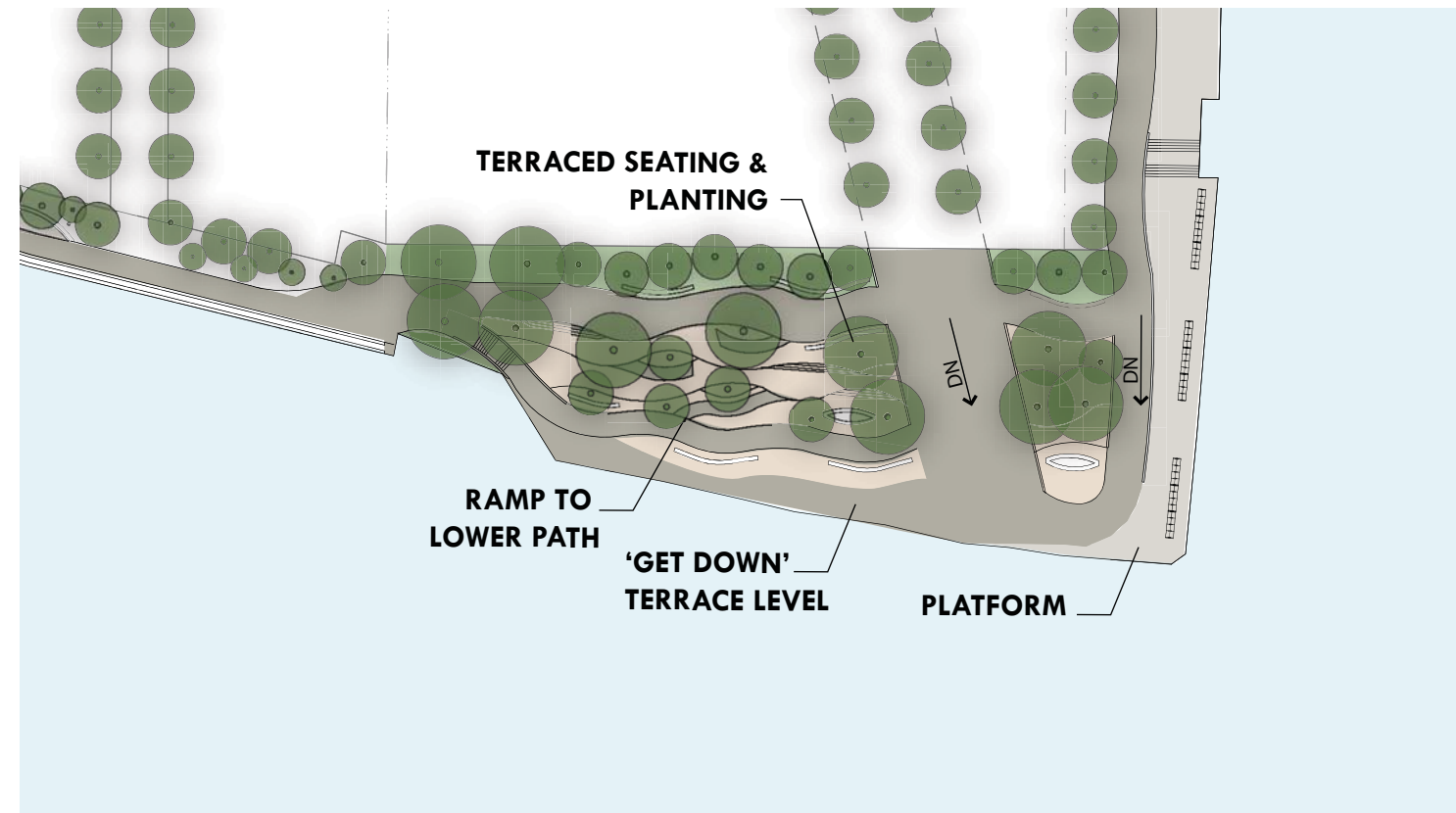


FIGURE 4-12: CONCEPT PLAN FOR CALYER STREET END PLAZA



FIGURE 4-11: CALYER STREET END PLAZA EXISTING SITE

## 5. THE CITY PARKS

This section presents conceptual designs for public open space projects to be developed by the NYC DPR. The Waterfront Planning Area contains four planned public parks: Box Street Park, Newton Barge Terminal Playground Expansion, WNYC Transmitter Park, and Bushwick Inlet Park. In addition to the planned parks, The Waterfront Planning Area contains four existing public parks: Street End Park (at Manhattan Avenue's north terminus), Greenpoint Playground, Newton Barge Terminal Playground, and the East River State Park.

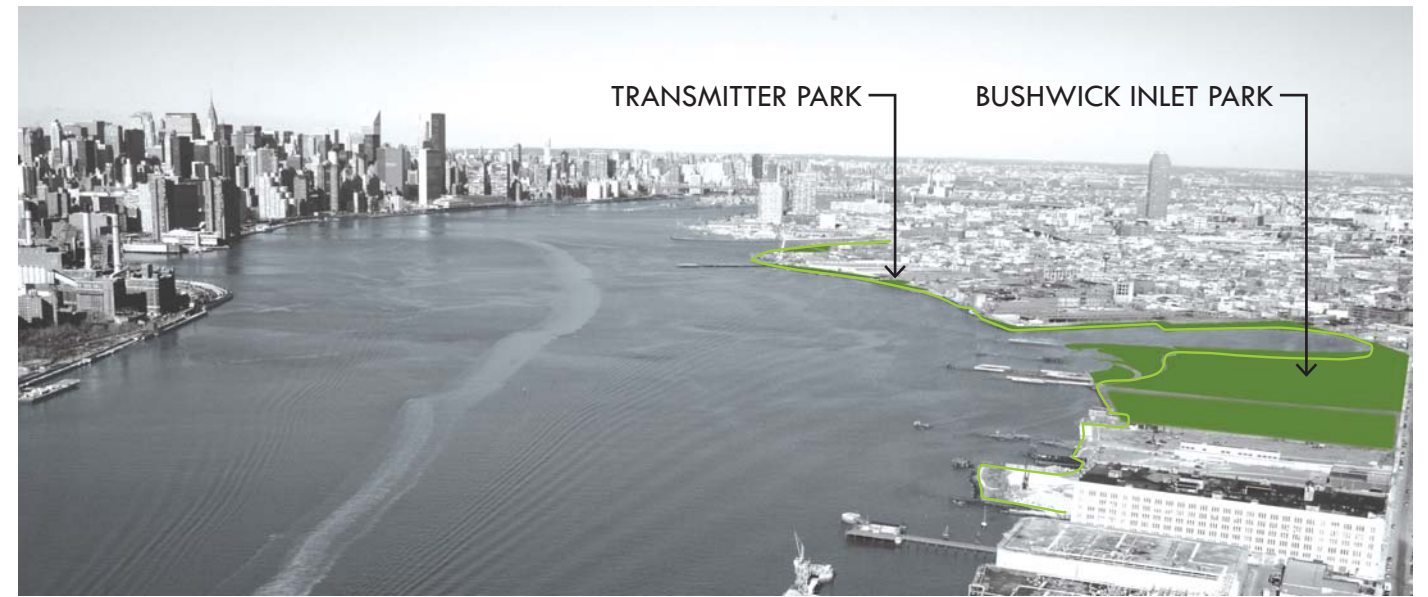


FIGURE 5-1: VIEW NORTH

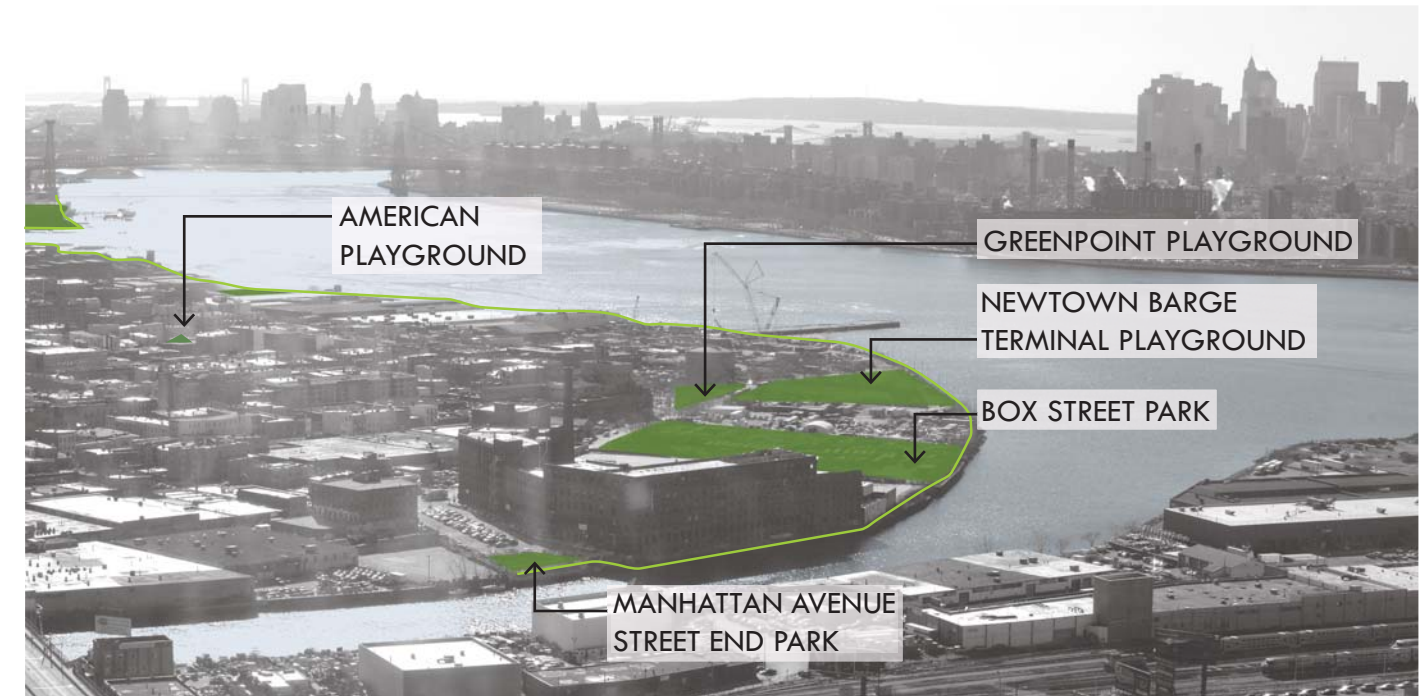


FIGURE 5-2: VIEW SOUTH



FIGURE 5-3: BOX STREET PARK: EXISTING SITE PHOTO

### 5.1 Box Street Park

The proposed Box Street Park, located at 65 Commercial Street at the end of Box Street, will combine active and passive recreation facilities to create a dynamic neighborhood park. This 2.5-acre park will include a much-needed multipurpose field in addition to a shaded picnic terrace that will overlook the Shore Public Walkway and the East River. The picnic terrace will be open to the Shore Public Walkway and its shade structure and seating will create a unique, comfortable gathering space from which visitors may view the water or a game.

The design retains the existing bulkhead wall, which is in good condition and does not currently require extensive repair. The site's location, at the mouth of Newtown Creek, makes it an appropriate access point for kayaks.



FIGURE 5-4: VIEW OF MULTIPURPOSE FIELD, SHORE PUBLIC WALKWAY, SEATING AREA AND SHADE STRUCTURE



FIGURE 5-5: CONCEPT DESIGN PLAN FOR BOX STREET PARK

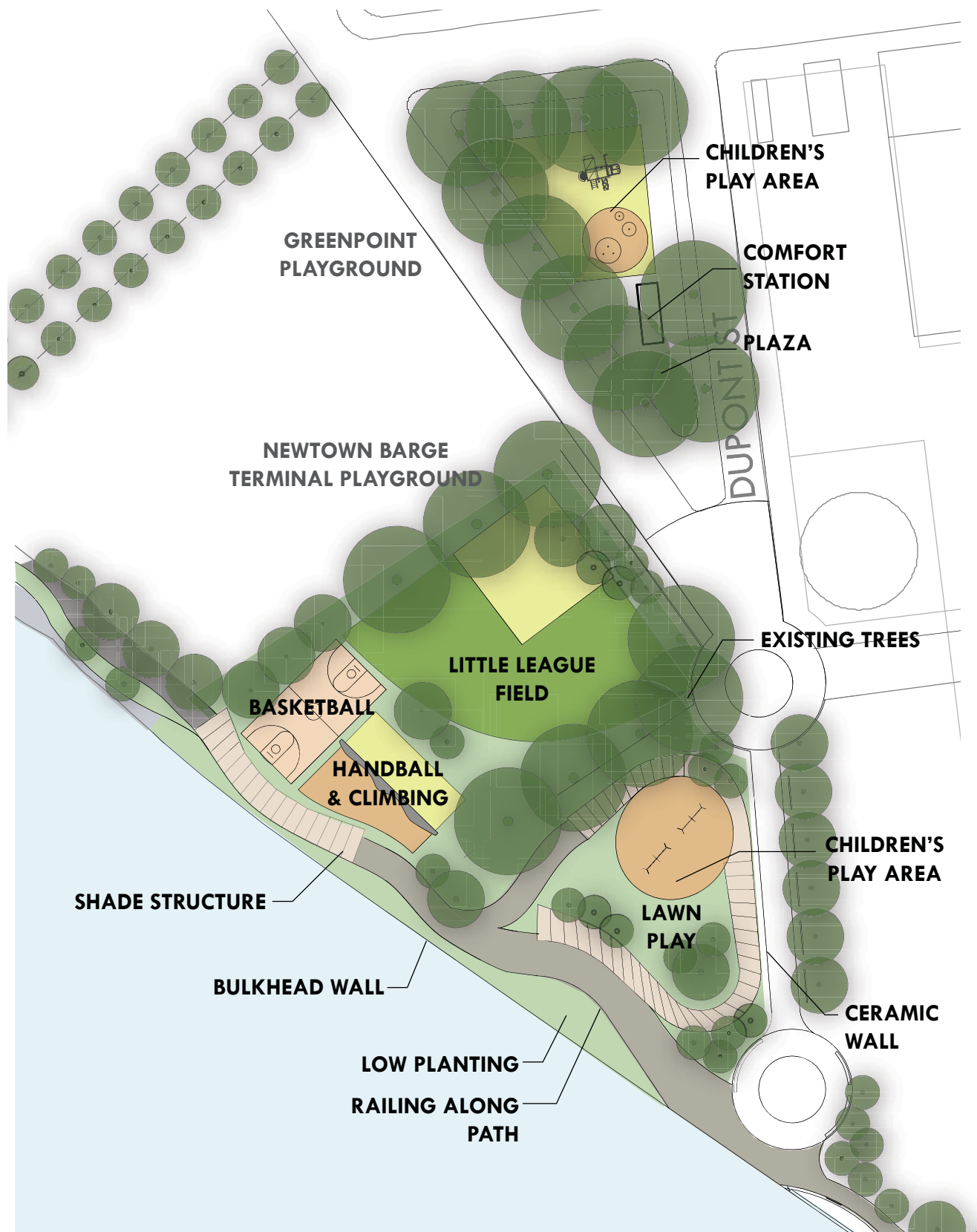


FIGURE 5-6: CONCEPT DESIGN FOR NEWTOWN BARGE TERMINAL PLAYGROUND EXPANSION AND GREENPOINT PLAYGROUND

### 5.2 Newtown Barge Terminal Playground and Greenpoint Playground

These two existing playgrounds, located across the street from each other, are envisioned as two connected pieces of park, one allowing for intensive, paved uses on an upland site and the other providing green play areas and passive recreation activities near the water. The existing Newtown Barge Terminal Playground contains a ball field, handball and basketball facilities. The Greenpoint Playground (located across Commercial Street) contains children's play equipment. The planned expansion of the Newton Barge Playground will allow NYC DPR to further reorganize and expand the recreation activities in the two playgrounds: the children's play area will be expanded into the waterfront site at Newton Barge Playground. The trellis and backstop structures will provide shade for picnicking, viewing games, and strolling.

The most distinctive and irreplaceable characteristics of these playground sites are their tree canopies. These sites are the only waterfront sites that contain existing, mature trees with generous canopies. Therefore, the design concepts presented here prioritize the preservation of these trees which are integral to the historical and aesthetic significance of these sites. The plan also includes a ceramic mosaic wall along the extension of Dupont Street as a tribute to the porcelain works which once occupied the waterfront sites.



FIGURE 5-7: EXISTING SITE PHOTO OF NEWTON BARGE TERMINAL AND GREENPOINT PLAYGROUNDS



FIGURE 5-8: CENTURY VASE, MANUFACTURED BY UNION PORCELAIN WORKS, GREENPOINT, BROOKLYN, 1876



FIGURE 5-9: DETAIL FROM GAUDI MOSAIC WALL, BARCELONA, SPAIN



FIGURE 5-10: TRANSMITTER PARK, EXISTING SITE

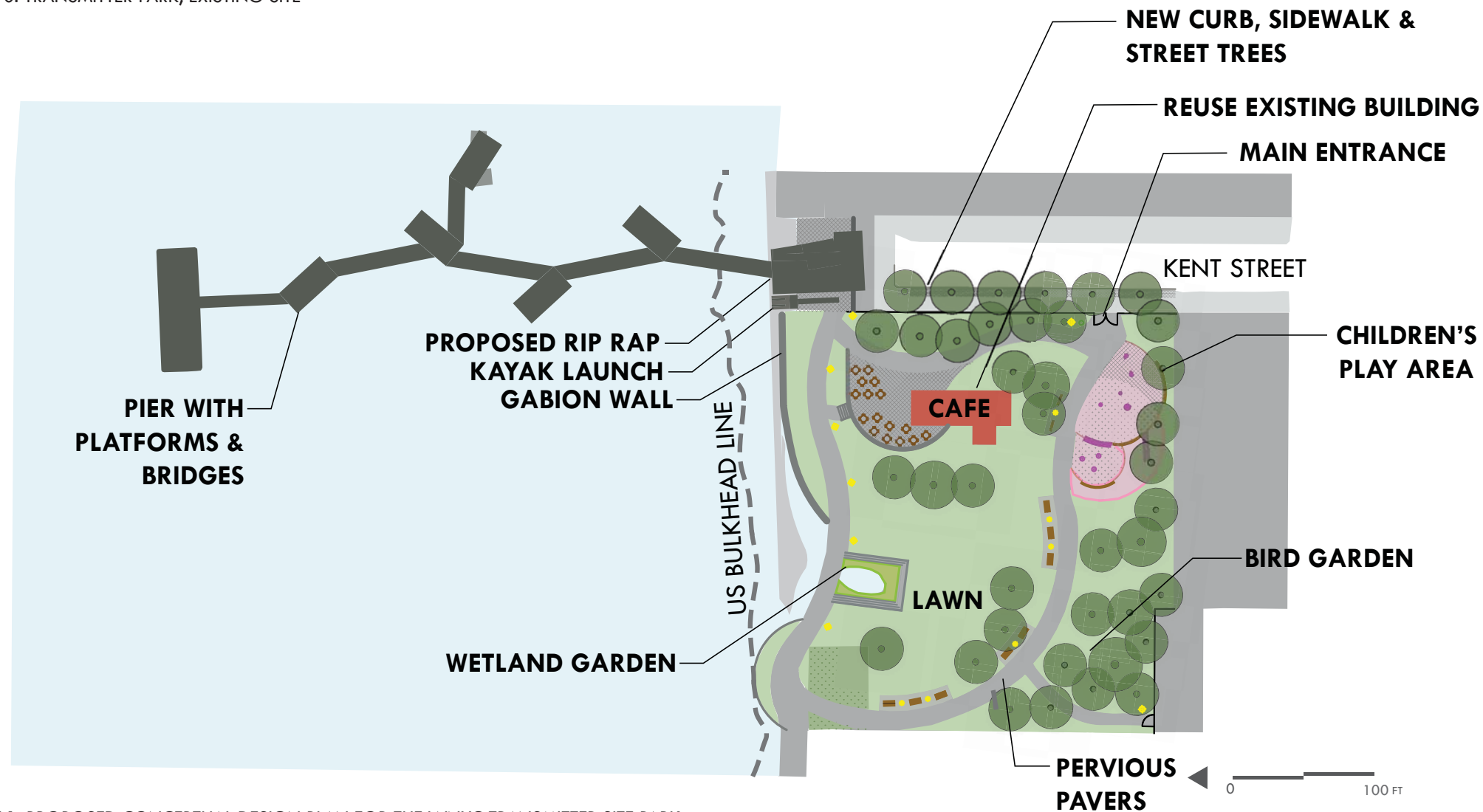


FIGURE 5-11: PROPOSED CONCEPTUAL DESIGN PLAN FOR THE WNYC TRANSMITTER SITE PARK

### 5.3 Transmitter Park

The former site of the WNYC transmitter has been planned as a waterfront park for several years. The conceptual design for this park includes a variety of artful and interactive children's play areas, such as a butterfly garden and open play areas. In addition, Transmitter Park offers opportunities for wetland habitat restoration and a terraced rip-rap edge. The existing building that stands on the site will be rehabilitated to accommodate public restrooms and a café.

Transmitter Park will also include a public pier located at the end of Kent Street. This pier has been identified as a potential location for the Floating Pool and for ferry service.

In addition to the portion of the park described above, to be developed by the NYC DPR, a phase 2, expansion of the park, from Greenpoint Avenue to Milton Street is planned. A private developer will develop the expansion phase of the park, which is discussed with other private-public partnership projects in Chapter 4.



FIGURE 5-12: BUSHWICK INLET PARK, EXISTING SITE PHOTO

#### 5.4 Bushwick Inlet Park

Bushwick Inlet Park is the centerpiece of the Greenpoint-Williamsburg Waterfront. The park site encompasses almost 30 acres of land and surrounds Bushwick Inlet, a narrow, protected remnant of Bushwick Creek. The park is envisioned as a cultural destination and landmark for New York City. The buildout of this substantial project will take place over a 15-to 20-year period.

The concepts presented in the following section are intended to serve as a framework and vision for this landmark piece of open space. It is expected that changes and refinements to the design will be necessary in response to the land acquisition, remediation, and development processes.

Some of the Bushwick Inlet Park parcels pose both known and potential challenges associated with contamination from a number of sources. The conceptual designs presented in this section assume that the site will be remediated to levels safe and appropriate for recreation uses. Ultimately, a Remediation Plan, which will require New York State Department of Environmental Conservation and/or New York City Department of Environmental Protection approval, will be developed in conjunction with Bushwick Inlet Park design and the final park design will be reflective of the Remediation Plan.

A defining feature of this park will be the juxtaposition of naturalistic and urban landscapes and the incorporation of both active and passive recreation as well as restored natural areas. The conceptual park design organizes various types of recreation program elements to correspond with their surrounding landscape contexts. Park structures are primarily organized along street frontage, active recreation areas are located in the upland areas, water-dependent recreation is focused at the inlet, and the habitat and wetland spaces are situated along the river.

Due to its size and the potential complexity of the site's remediation process, Bushwick Inlet Park will be built in multiple phases.

5.4.1 BUSHWICK INLET PARK - RECREATION PROGRAM

The programming for Bushwick Inlet Park will be diverse and balanced to satisfy a wide spectrum of users. The active recreation facilities and services are concentrated on the upland side of the primary bicycle/pedestrian path, which divides the site. The passive recreation uses are located around the wetlands and industrial gardens on the waterfront side of the bicycle/pedestrian path.

Specific active recreation elements will include a children's play area, youth soccer and Little-League fields, volleyball courts, a pier for small boat and kayak access, a bike path, and a dog run. The passive recreation areas will include an open lawn that can be used as a large performance space; a beach and "get-down" area; smaller performance spaces near the water with amphitheater seating; picnic areas; informal seating terraces around the inlet; and a bird blind and look-out platform over a restored wetland area. The park will also include multi-use public buildings. A combined comfort station and NYC DPR District Headquarters building will mark the North 9th Street park entrance. The DPR is particularly committed to acknowledging the U.S.S. Monitor's important role in history of the Greenpoint community. The Master Plan envisions interpretive space on Bushwick Inlet that would honor the memory of the Monitor and commemorate those who created her and sailed upon her.



FIGURE 5-13: BUSHWICK INLET PARK, CONCEPTUAL DESIGN PLAN



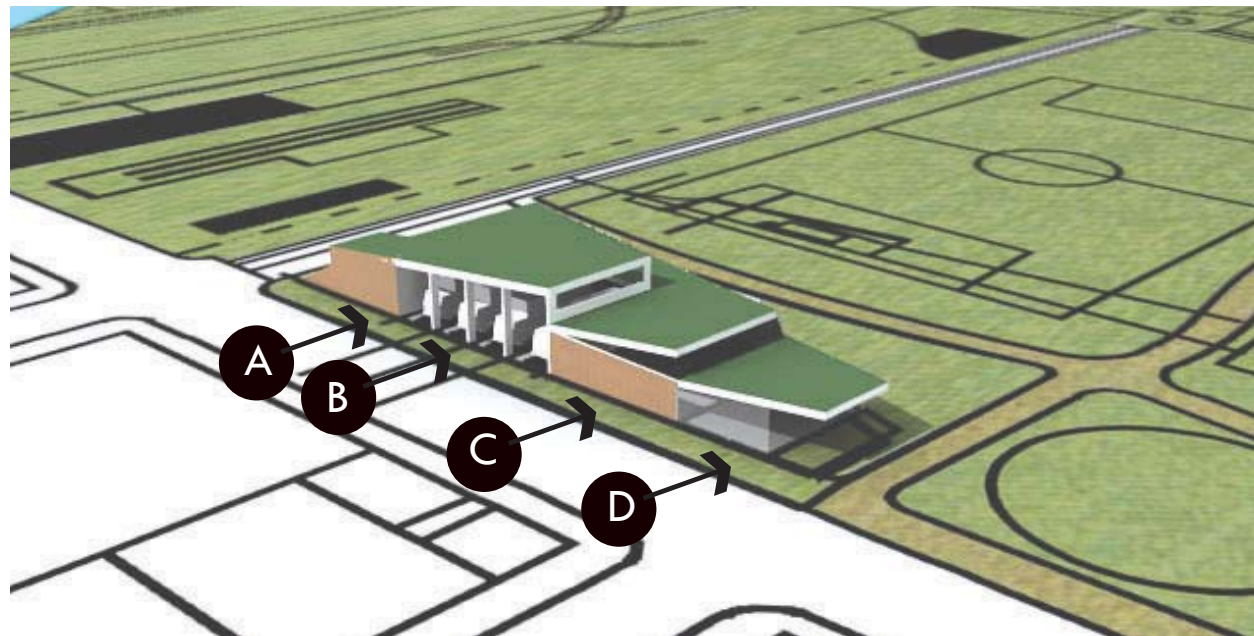


FIGURE 5-14: CONCEPTUAL VIEW OF NORTH 9TH STREET GATEWAY COMFORT STATION

- A Parks Reception on Kent Ave from left to right: Public Facade
- B Truck Bays
- C Public Multi-Purpose Room
- D Public Entrance



FIGURE 5-15: CONCEPTUAL SITE PLAN FOR RESTAURANT  
NOT TO SCALE

#### 5.4.2 BUSHWICK INLET PARK - CIRCULATION

The bike path and elevation change delineate the edge of the active, upland portion of the park. The narrow, linear paths that follow the historic street alignments cross the active portion of the park providing cross-circulation for pedestrians. The path along the water's edge on the proposed wetlands is envisioned as a "floating path" that sits just above the water on a wave attenuation structure, which will protect the wetlands from severe erosion. Other minor paths along the Inlet should be pulled back from the shoreline, creating a green buffer between the paths and the water.

#### 5.4.3 PARK SUB-AREAS

Bushwick Inlet Park has been broken down into several sub-areas, each of which will have distinct characters and offer unique recreation opportunities.

##### NORTH 9TH STREET GATEWAY

Bushwick Inlet Park's entrance at North 9th Street will serve as its southern gateway. A multi-use building at this location will house a comfort station for park visitors and a NYC DPR District Headquarters facility to service the park.

The comfort station/headquarters building is envisioned as a "green building" featuring a potentially occupiable green roof built against a berm. These elements will allow the edges of structure to blend into the landscape. The buildings facade should reference the neighborhood's architectural patterns, forms, materials, and grain. The program for the building will include flexible community space for meetings, classes, and other events; athletic equipment lockers; storage for DPR maintenance equipment and vehicles; and administrative space.

##### ACTIVE RECREATION AREA

To meet the existing demand for active recreation facilities, Bushwick Inlet Park will include artificial turf fields for youth soccer and Little League in addition to volleyball courts. Children's active play areas, including water play and play structures and equipment and a dog run will be located along Kent Avenue, near the North 9th Street Comfort Station.

##### NORTH 12TH STREET GATEWAY

The park entrance at 12th Street will serve as a gateway to the Central Lawn and Bushwick Inlet. Formal bosques and gardens will define the entrance point and create a distinctive landscape treatment along the Kent Avenue street-edge. Low seatwalls or benches should line the park boundary on the sidewalk along Kent Avenue. The bosque and garden areas will provide shaded seating and views of the Inlet and Central Lawn.

##### CENTRAL LAWN

The Central Lawn's design is a direct response to the community's need for open-ended green space, with flexibility to accommodate varied activities and interests. The open configuration will support a variety of informal games and "pick-up" sports while simultaneously providing opportunities for meeting, gathering, relaxing, and other passive uses. The Central Lawn will also be able to accommodate small stages and screens for outdoor events, such as small concerts, theatre and dance performances, and movie screenings.

## BUSHWICK INLET

The area surrounding Bushwick Inlet will emphasize water-dependent recreation and wetland habitat. The Inlet's relatively calm, sheltered water makes it a safe area for boating and direct interaction with the river, in addition to being an extraordinary area for experiencing local wildlife. The north side of the inlet, which will be surrounded by new residential buildings, is intended to support more active, intensive uses. It includes a beach area, protected by a curved bulkhead wall, and a terraced, rip-rap "get-down."

The DPR is particularly committed to acknowledging the U.S.S. Monitor's important role in history of the Greenpoint community. The Master Plan envisions interpretive space on Bushwick Inlet that would honor the memory of the Monitor and commemorate those who created her and sailed upon her. A boathouse and kayak launch will be constructed, providing boat access and storage for kayaks, as well as public amenities, such as community space, a snack stand and restrooms.

The south side of the inlet features a more "natural" edge, which will transition into a band of meadow that surrounds the water's edge. The edge may be constructed from rip-rap or a combination of rip-rap and bulkhead wall, depending on edge conditions. Wide, planted terraces will be built into the landscape between the North 13th and 14th Street park entrances. Also within the meadow area, informal performance and gathering spaces will be incorporated into the landscape, using amphitheater seating.

## WETLAND AREA

The final design for Bushwick Inlet Park will reflect the ultimate remediation plan, as required by NYSDEC. The Master Plan envisions that the park will contain extensive wetlands and restored habitat. The substantial size of the area proposed for habitat restoration provides opportunities for layering passive recreation experiences with the wetland's ecological function. Examples of the passive recreation activities envisioned for the wetland area include the "floating" path, a bird blind and a look-out platform. These elements will provide access and unusual views within this naturalistic landscape, while minimizing disruption of its function.

The waterfront restaurant will be located at the end of North 9th Street, overlooking the restored marshlands. The restaurant is envisioned as a flexible and casual waterfront space, with a covered deck for outdoor seating and dining. This facility will be built and operated by an outside vendor or vendors and it may be designed to support several mobile catering units or a permanent kitchen. This restaurant is intended as a destination that will draw visitors through the park, to the water's edge. The design of the restaurant takes advantage of views extending across the wetland area and beyond, to the East River and Manhattan skyline.



FIGURE 5-16: VIEW OF BUSHWICK INLET



FIGURE 5-17: VIEW OF WETLAND AREA AND RESTAURANT FROM FLOATING PATH

## 6. WATERFRONT DESIGN VOCABULARY

Greenpoint and Williamsburg's waterfront open spaces will feature common design elements that will form a consistent, legible vocabulary for the furnishings, paving, planting, lighting, and signage. Elements from the design vocabulary are required by zoning regulations and the Waterfront Access Plan on the privately-developed Supplemental Open Spaces and Upland Connections and on privately-developed portions of the Shore Public Walkway. Based on NYC DPR and other public agencies' discretion, the publicly-developed parks and streets may also incorporate design vocabulary elements. The intent of the design vocabulary is to knit together the segments and parcels that will make up the waterfront's public realm, areas that could otherwise feel like disparate, unrelated spaces due to the fact that they will be independently designed and developed. This chapter describes in detail each of the waterfront's standard design elements.

Private developers are required by the Greenpoint Williamsburg Waterfront Zoning to adhere to the design vocabulary and the elements listed, below:

- Seating
- Railing
- Lighting
- Paving
- Planting

In addition to the required elements listed above, this chapter includes the following optional design vocabulary elements:

- Water's Edge
- Shade Structures
- Signage
- Bicycle Racks
- Trash Receptacles
- Bollards
- Drinking Fountains

While private developers are not required to use these elements, the NYC DPR strongly encourages all waterfront developers to include these items because they will contribute to the overall consistency and quality of the waterfront's public open spaces.



FIGURE 6-1: DESIGN VOCABULARY ELEMENTS ON THE SHORE PUBLIC WALKWAY



FIGURE 6-2: DESIGN VOCABULARY ELEMENTS ON THE SHORE PUBLIC WALKWAY



FIGURE 6-3: STANDARD SINGLE-SIDED WXYRIVER BENCH WITH BACK AND ARMS



FIGURE 6-4: WXYRIVER BENCH, NO BACK OR ARMS

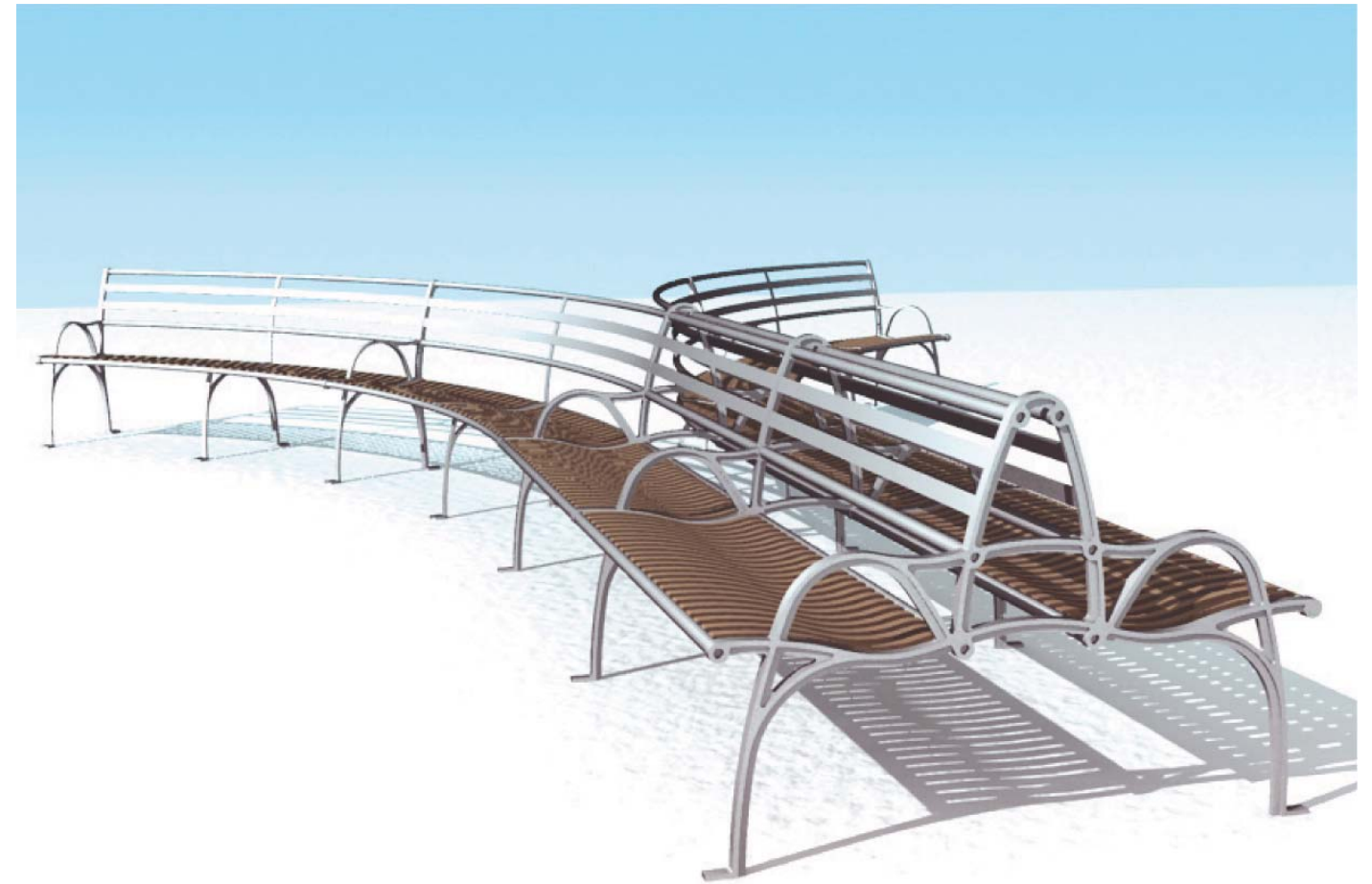


FIGURE 6-5: RENDERING OF DOUBLE-SIDED, CURVILINEAR WXYRIVER BENCH WITH ARMS

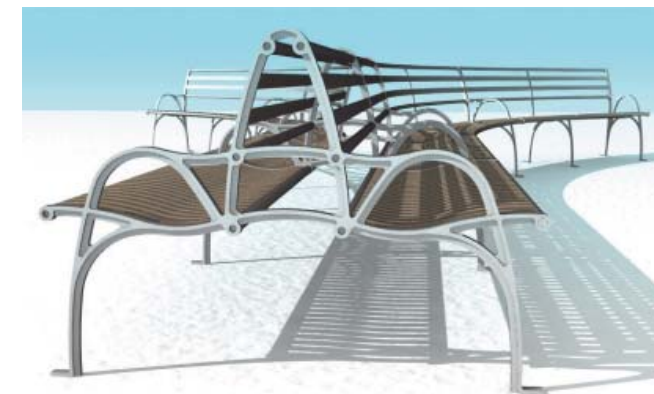


FIGURE 6-6: VIEW OF THE WXYRIVER BENCH CAST METAL BRACKETS

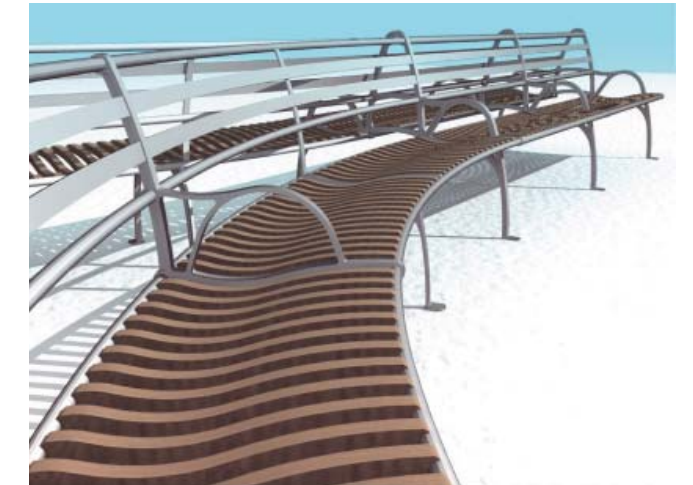


FIGURE 6-7: VIEW OF THE WXYRIVER BENCH WOODEN SEAT

## 6.1 Required Design Vocabulary Elements

### 6.1.1 SEATING

The Master Plan’s WXYRiver Bench System provides a design vocabulary specifically for waterfront seating. Comprised of several modular variations, the components of the bench system can be combined and customized to take full advantage of the waterfront’s varied landscape types and conditions. The bench’s basic profile invites people to sit and enjoy the waterfront’s everyday spectacles and extraordinary views. Its flexibility encourages private developers to create unique bench arrangements that will help create memorable public spaces.

The standard version of the WXYRiver Bench System provides a comfortable, elegant, and attractive signature furnishing for the waterfront. The standard version of the bench consists of a one-sided back, with arms and a back. Also, the WXYRiver Bench System can be more sustainably produced because the wooden slats span a shorter distance than conventional wooden benches and therefore do not require hardwoods derived from threatened or endangered rainforest tree species. This material choice, combined with the opportunity for local manufacture, makes the WXYRiver Bench System a model for sustainable economic development and design.

Modified versions of the standard bench can be used to create and define special public spaces in parks and along the Shore Public Walkway. Additional versions of the bench include a double-sided, backless, and armless modular and stand-alone pieces. The double-sided option has the ability to activate both sides of the Shore Public Walkway, which may be desirable depending on ground-floor land use and space availability on the upland side of the walkway. The backless version may be appropriate on the water side of the walkway to avoid blocking views of the water from behind the bench. Areas that require distinct seating treatments may incorporate the “zipper” version of the bench, shown in Figure 6-5.

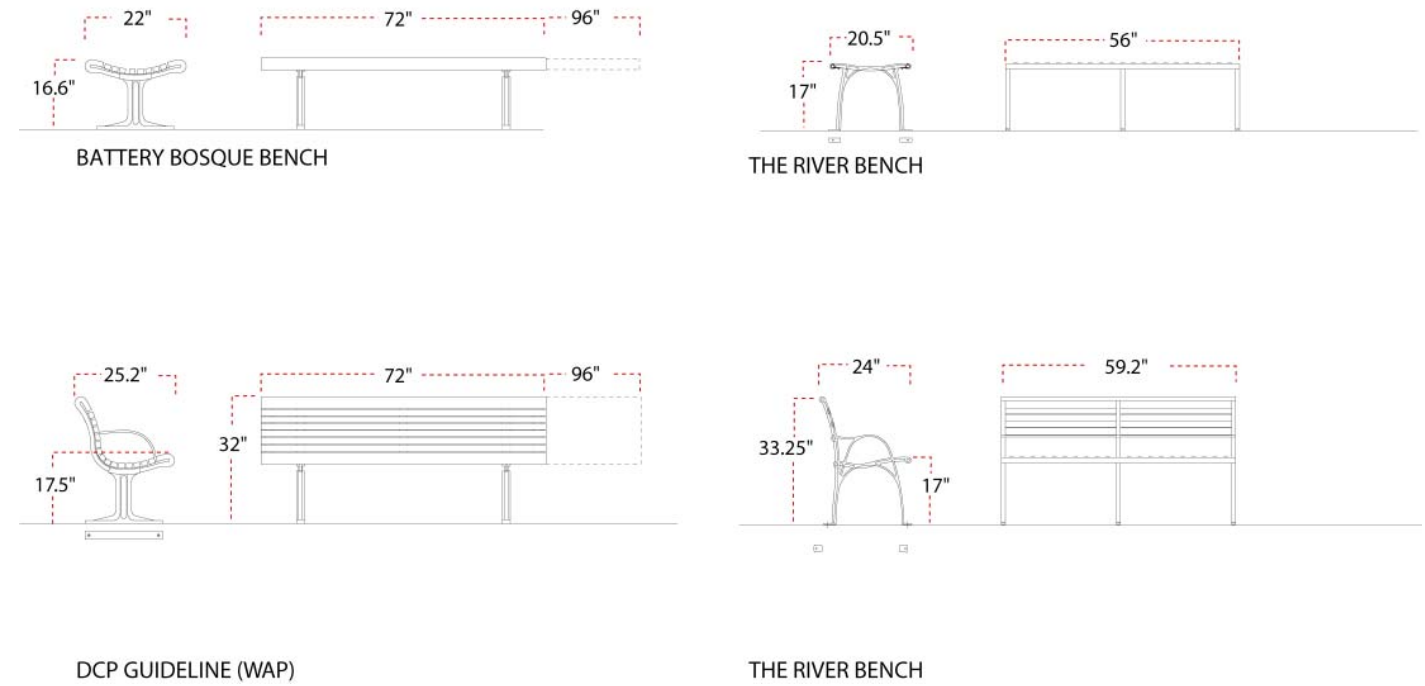


FIGURE 6-8: RIVER BENCH COMPARISON

## 6.1.2 LIGHTING

LT-1, the standard light fixture, the Candela, will contribute to the Shore Public Walkway's cohesive character during the daytime and lend definition to the visitor's experience at night. The Candela was selected by NYC Department of Parks & Recreation based solely on NYCDOT acceptance for maintenance. The fixture's powder-coated RAL 9006 Matte finish has been selected to complement the proposed River Bench and the Sea Rail.

To achieve desired nighttime lighting levels and effects, the Master Plan will follow the recommended spacing the standard light fixtures LT-1A and LT-1B and will provide lighting levels that meet those required by the applicable zoning regulations.

The Masterplan recommends spacing the standard light fixture LT-1A at 50-feet on center. The pole should be installed on the upland side of the primary designated pedestrian path 8 feet from the walkway edge. The upland position of the light fixtures will reduce interference with river views. The standard light fixture LT-1B should be installed with a spacing of 40-feet on center, centered at the upland connections.

LT-2, LT-3, LT-4: Bollard, We-ef Tharos, low, standard and amenity heights

The optional light fixture will contribute to the Shore Public Walkway's unified character by complementing the standard light fixture in finish and profile, as well as punctuating seating areas, piers and intersections along the walkway with welcoming pools of light.

The fixture's shielded light source and frosted lens will make it the ideal addition to gathering areas as its indirect glow will define the locations with unobtrusive illumination. The fixture's sturdy build and sleek silhouette will accentuate the piers as extensions of the Walkway both day and night. The fixture's marine-grade aluminum-alloy and superior corrosion protection will make it suitable for any exterior, landscaped areas, including wet locations. Finally, the fixture's beckoning glow will mark the Walkways gateways and intersections at night for pedestrians.



FIGURE 6-9A: VIEW OF THE CANDELA POLE



FIGURE 6-9B: VIEW OF THE CANDELA FIXTURE



FIGURE 6-10: LT-2, LT-3, LT-4, BOLLARD WE-EF THAROS

The Master Plan recommends installing the optional fixture in two different heights, low and standard, on the upland side of the primary pedestrian path next to benches and at the intersections of upland connections and streets. The Master Plan recommends either installing the low height fixtures (36 inches) next to the benches for concentrated illumination or installing the standard height fixtures (55 inches) behind the bench for a more even illumination. The Master Plan recommends installing the optional fixture at amenity height (8 feet) in the middle of piers with a width less than 30 feet and spacing the fixtures 15 feet on-center. For piers wider than 30ft the Master Plan recommends installing two rows of the amenity-height bollards at a spacing of 20ft, 10ft from each side of center-line of the piers. The Master Plan also recommends ordering all the optional light fixtures in RAL 9006 Matte to match the Masterplan finish.

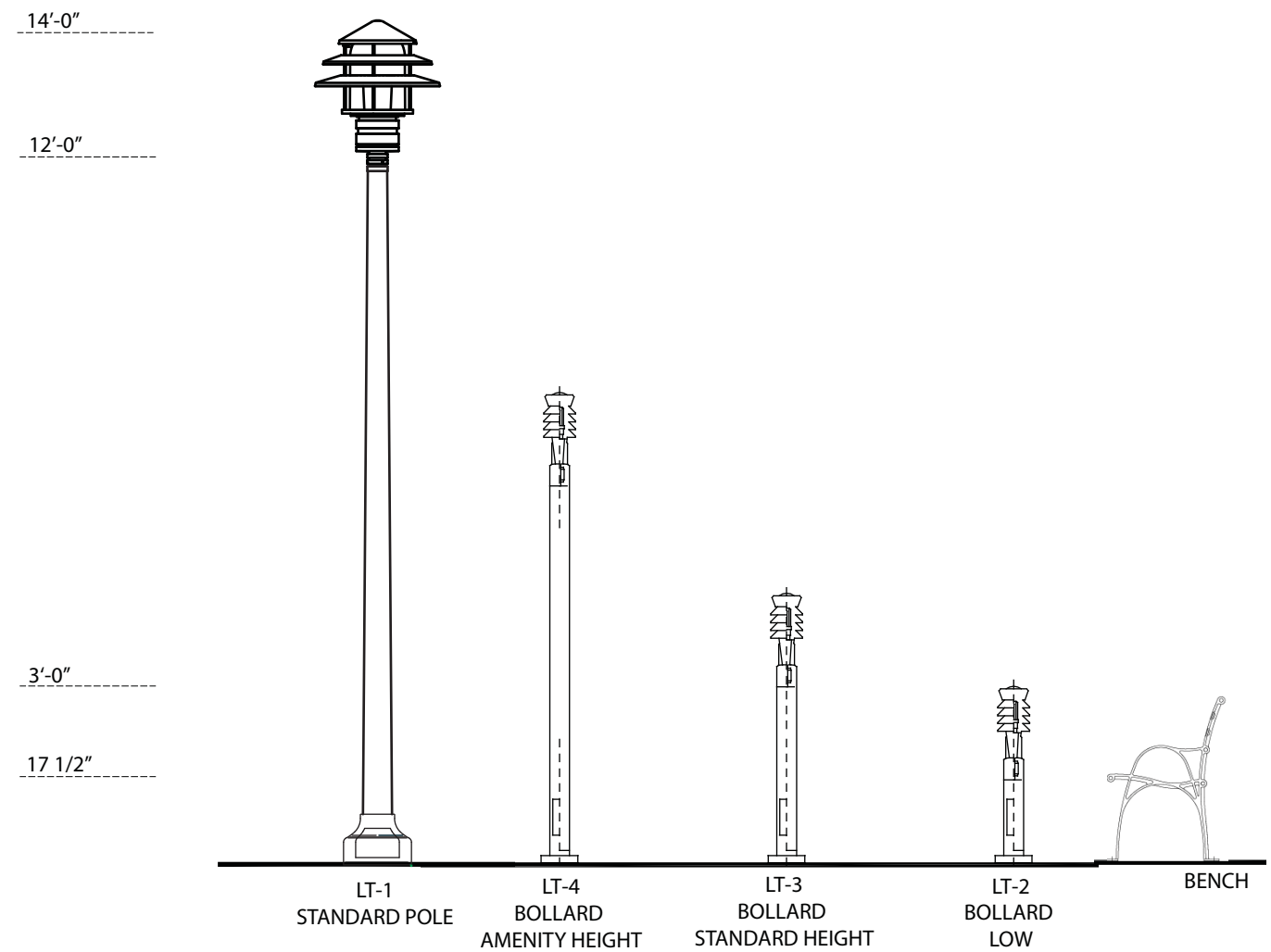


FIGURE 6-1 1: HEIGHT COMPARISON DIAGRAM FOR THE STANDARD PARK POLE AND BOLLARDS



FIGURE 6-12: WATERFRONT WXYRIVER RAILING

### 6.1.3 SEA RAIL

The Greenpoint-Williamsburg sea rail will be installed in segments along the water's edge, at locations where a vertical drop greater than 30 inches and/or a slope of more than 50 percent occurs. Repeated segments of the sea rail will help define the waterfront's visual character. The railing design incorporates a traditional, comfortable, oval-shaped top rail made from metal; stainless steel vertical supports; and stainless steel fabric tensioned between horizontal rails.

The openings in the steel fabric are approximately 4 by 4 inches, which maximizes visibility through the mesh while meeting safety criteria. The top hand rail should be constructed out of metal.

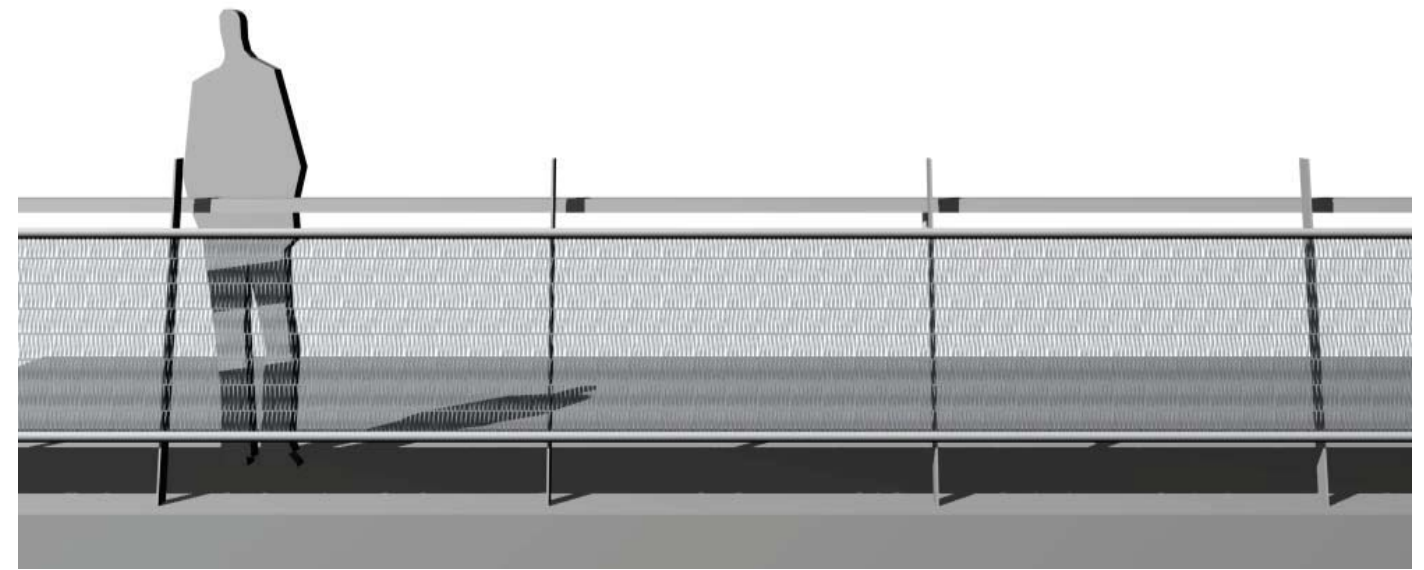


FIGURE 6-14: ELEVATION VIEW OF THE WXYRIVER RAIL SYSTEM



FIGURE 6-13: WATERFRONT WXYRIVER RAILING

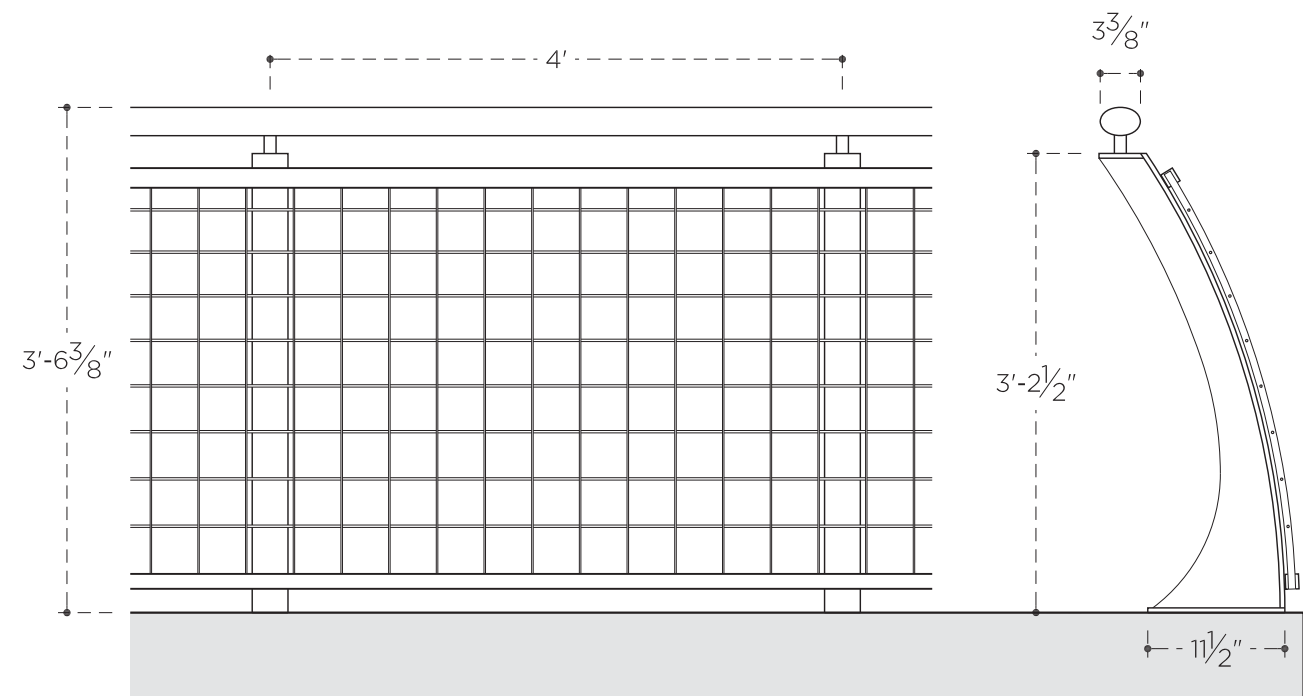


FIGURE 6-15: WATERFRONT WXYRIVER RAIL DIMENSIONS





FIGURE 6-16: 4 X 12 INCH RECTANGULAR ASPHALT PAVERS



FIGURE 6-17: BLUESTONE FOR EDGING & ACCENT



FIGURE 6-18: WOOD PAVERS FOUND AT GREENPOINT TERMINAL MARKET SITE

#### 6.1.4 PAVING AND HARDSCAPE MATERIALS

Paving materials are an important part of the Shore Public Walkway in both functional and aesthetic terms. Setting up themes and patterns with paving materials will create connected but varied walking experiences along the waterfront. All paving must meet ADA requirements for accessibility, NYC DOT requirements for skid resistance, and NYC DPR standards for maintainability. In addition, there are places where pervious paving will be required by regulatory agencies such as NYS DEC, and where heavy wheel loads must be accommodated for fire truck access. These and other applicable requirements and standards will require detailed study on a site-by-site basis.

##### SHORE PUBLIC WALKWAY STANDARD: THE ASPHALT PAVER

The standard paver for the shore public walkway will be a 4-inch by 12-inch asphalt block paver, shown in Figures 6-16. Asphalt pavers were selected for their resilience and durability in salt water environments and for their visual character, which is reminiscent of both industrial and park landscapes. Exposure to the elements tends to bring out the color of the aggregate and thus make them more handsome over time.

##### SHORE PUBLIC WALKWAY SPECIAL PAVING OPTIONS

###### Pervious Paver

For areas where pervious pavers are required or desired pavers will be 3-inch (width) by 24-inch (length) by 4-inches (depth) pavers with 1/4-inch spacers integrally cast. To comply with zoning requirements, 50 percent of the pavers should be gray.

###### Recycled Cobblestones

Private developers are strongly encouraged to use recycled materials wherever possible as a sustainable, aesthetically distinct paving alternative. Streets and upland connections may be paved with recycled cobblestones. The cobblestones convey the historical character of the waterfront and provide a durable surface.

###### Wood 'Boardwalk' Walkways

In an effort to promote sustainable design on the Greenpoint-Williamsburg waterfront and to minimize the use of tropical hardwoods, wood decking and paving is not encouraged for use in large quantities. Wood is intended to be used as an accent or secondary material on the Shore Public Walkway. However, wood may be used in some cases in small areas intended to be treated as 'Boardwalks' or decks.

###### Stone Pavers

Stone pavers are intended to be used in areas on and off of the Shore Public Walkway. Stone lends a more formal character and is therefore appropriate in areas such as waterfront plazas. Bluestone may be used in combination with the standard asphalt paver, as an edging or accent material.

###### Crushed Stone

Secondary walkways along the waterfront may be paved with asphalt pavers (above) or with crushed stone. Crushed stone creates a less formal surface, which may be appropriate for some of the secondary paths in Supplemental Access Areas.



FIGURE 6-19: HYDRANGEA QUERCIFOLIA



FIGURE 6-20: ARCTOSTAPHYLOS UVA-URSI



FIGURE 6-21: SCHYZACHYRIUM SCOPARIUM



FIGURE 6-22: ARMERIA MARITIME



FIGURE 6-23: EUPATORIUM PURPUREUM



FIGURE 6-24: SPARTINA ALTERNAFLORA

### 6.1.5 PLANT MATERIAL

Currently much of the Greenpoint-Williamsburg industrial waterfront lacks trees or any other type of planting, and while this maximizes open views of the water, it also creates a desolate environment. Zoning regulations will require new development to include substantial quantities of plant material within the Shore Public Walkway and in Supplemental Open Spaces. The plants included in the Open Space Master Plan plant list (Appendix B) are intended to provide the shade, textures, colors and sense of enclosure that a sustainable pedestrian environment requires. The plant list species satisfy the diverse horticultural requirements of the East River waterfront environment. Due to extreme soil, wind, salt and sun/shade conditions on the waterfront, many plant species either will not survive or will require greatly increased maintenance and irrigation efforts.

The Master Plan encourages the creation of a variety of landscape types, from formal waterfront plazas to restored wetland gardens. In order to ensure that all landscape types, including the “urban” types, provide ecological benefit and habitat value, the Master Plan’s plant list emphasizes the use of native plant species. Because the cultural and environmental factors associated with each landscape type may vary, some of the plants listed may not be suitable for every area. Criteria to consider in the plant selection process include program, maintenance levels, aesthetics, habitat value, New York City/State native species, salt and wind tolerance, and resistance to the Asian Longhorned Beetle.

The East River’s wetland habitats require a very specific plant palette, also included in the plant list. These grasses and shrubs are specifically adapted for inundation and brackish water. Private projects that include wetland habitat restoration components should include these species.



FIGURE 6-25: QUERCUS RUBRA



FIGURE 6-26: ZELKOVA SERRATA



FIGURE 6-27: AMELANCHIER CANADENSIS



FIGURE 6-28: CORNUS KOUSA



FIGURE 6-29: ILEX OPACA



FIGURE 6-30: BACCHARIS HALIMIFOLIA



FIGURE 6-31: 50% RIPRAP SLOPE



FIGURE 6-32: RIPRAP AND CURVED BULKHEAD WALL



FIGURE 6-33: RIPRAP AND GABION WALLS, PHOTO COURTESY OF THE INTERNATIONAL EROSION CONTROL ASSOCIATION

## 6.2 Optional Design Vocabulary Elements

### 6.2.1 THE WATER'S EDGE

In addition to protecting against erosion, the Master Plan proposes edge treatments that will provide potential habitat and visual interest. The Master Plan's palette of edge-treatment concepts, illustrated on this page, are starting points for designing safe, varied, and attractive edge conditions. A number of criteria should be taken into consideration when selecting types of edge treatments. These include the physical and natural factors impacting the shoreline, the existing and proposed elevations and grades, and the space requirements associated with upland program and Shore Public Walkway design. Selection of edge treatments should be based on site and marine surveys, conducted by licensed surveyors and engineers. Any modifications of the water's edge will require approval by NYS DEC and, in some cases, the US Army Corps of Engineers (ACOE).

The Master Plan encourages private developers to explore alternatives to the conventional, and potentially stark, monotonous, bulkhead wall. Riprap, shown alone and in combination with low bulkhead walls and gabion structures, creates a relatively "soft" edge and provides access to the water, with a maximum 50 percent slope down to the water. Although space limitations and safety concerns may not allow for edge treatments made entirely of riprap on every parcel, "hybrid" riprap options can provide variety and interest on sites where standard riprap is not feasible. These combine plantings and rip-rap with bulkhead walls, gabions, and other conventional erosion control materials. The NYC DPR has begun using these types of treatments at several waterfront parks throughout the city, including the Bronx River Greenway. Wetland grasses such as native *Spartina sp.* are particularly suited to this type of environment because they thrive in areas periodically inundated with salt or brackish water. Marine-grade plastics are also recommended for gabion and "blanket" erosion control devices, due to their resilience in salt-water environments. The Master Plan also encourages designs for the water's edge which 'step-down,' either in the form of terraces or stepped or staggered walls, as a technique for creating a varied, inviting edge.

In areas where the bulkhead wall currently exists and is in good condition, the Master Plan recommends that it be retained. The Shore Public Walkway does not necessarily need to hug the edge of the wall for its entire length. The Walkway should meander, creating pockets for plantings such as low grasses or native shrubs between the water's edge and the walkway.

In areas where the width of the Shore Public Walkway is constrained and there is no existing bulkhead wall (or the existing wall is in poor condition and will be removed), the Open Space Master Plan recommends stepped or terraced gabion as a potential edge treatment. The double walls allow a steeper slope than a riprap edge and the gap between the walls may be planted or reinforced with a contrasting material.

Riprap is a common and relatively cost-effective means of protecting the water's edge against erosion. Riprap also offers the advantage of creating a gradual slope down to the water, eliminating sudden drop-offs and the need for railings. In some areas, where the width of the Shore Public Walkway is constrained or where riprap alone cannot provide sufficient protection against erosion, the Master Plan recommends hybrid edge solutions. This approach combines walls built below the Mean High Water elevation with riprap installed above. Depending on the tide level, different proportions of the wall would be exposed throughout the day. Because the wall does create a drop-off to the water, a railing would be required.

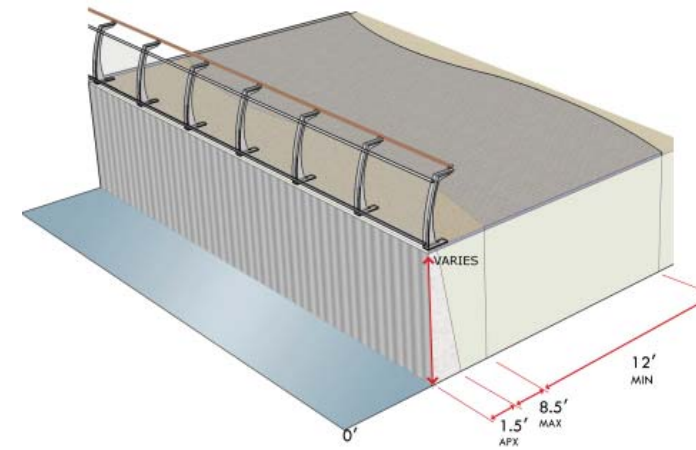


FIGURE 6-34: BULKHEAD WALL

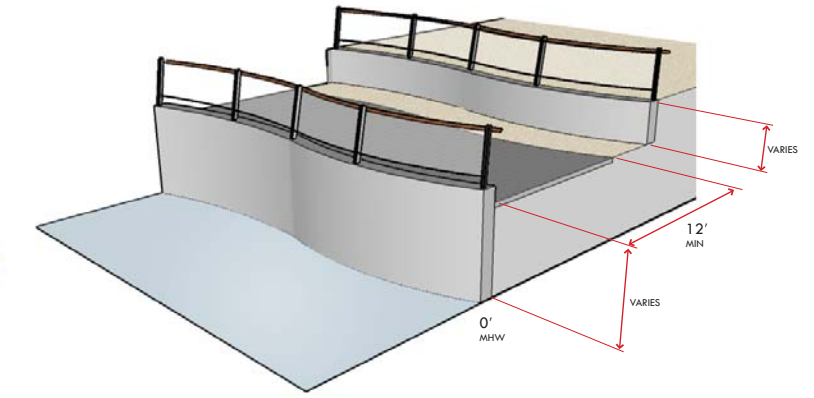


FIGURE 6-35: CURVED, TERRACED BULKHEAD WALL

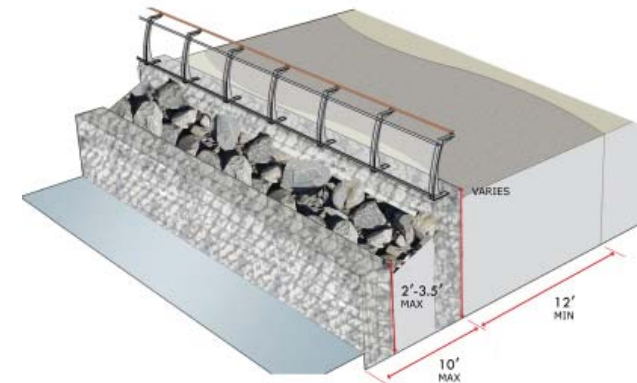


FIGURE 6-36: DOUBLE GABION WALLS

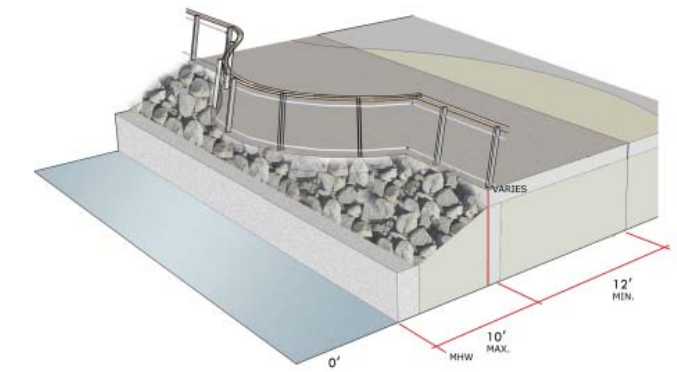


FIGURE 6-37: LOW WALL WITH RIPRAP AND OVERLOOK

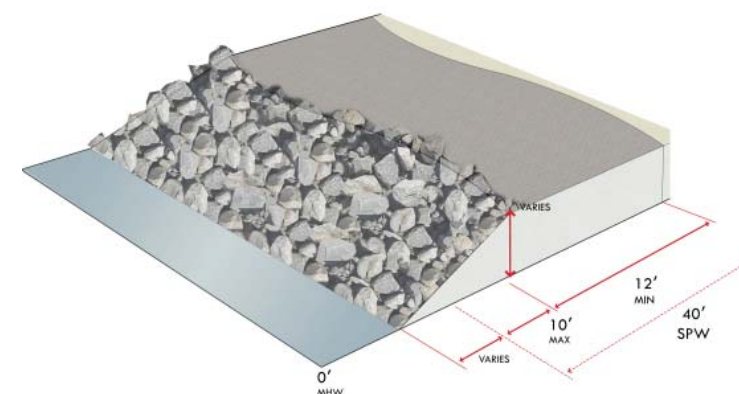


FIGURE 6-38: RIPRAP

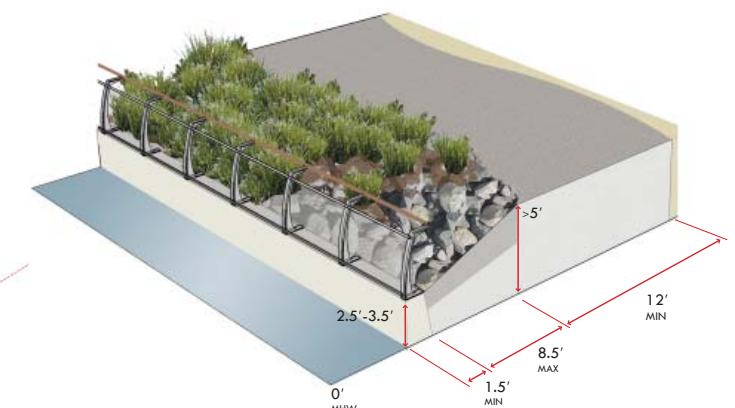


FIGURE 6-39: LOW WALL WITH RIPRAP AND RAILING

## 6.2.2 OPTIONAL SEATING

The WXYZipper Bench system is a seating option that may be used to supplement the standard WXYRiver Bench (presented in section 6.1.1), on the Shore Public Walkway, Supplemental Open Spaces and in some Waterfront parks. Zoning regulations require that 50 percent of seating on the Shore Public Walkway and Supplemental Open Spaces conform to the standard WXYRiver Bench system; the remaining 50 percent of seating on privately developed sites is flexible. The WXYZipper Bench system is recommended for privately developed sites and as a seating system for some public parks within the Waterfront Planning Area. The WXYZipper Bench system is designed to complement the form and materials of the WXYRiver Bench system. The design offers several advantages over standard wooden benches in that its modular components can be manufactured locally, using computer-aided manufacturing (CAM) techniques, supporting metal fabricators in New York City and reducing the amount of time and energy that materials and products spend in transit.

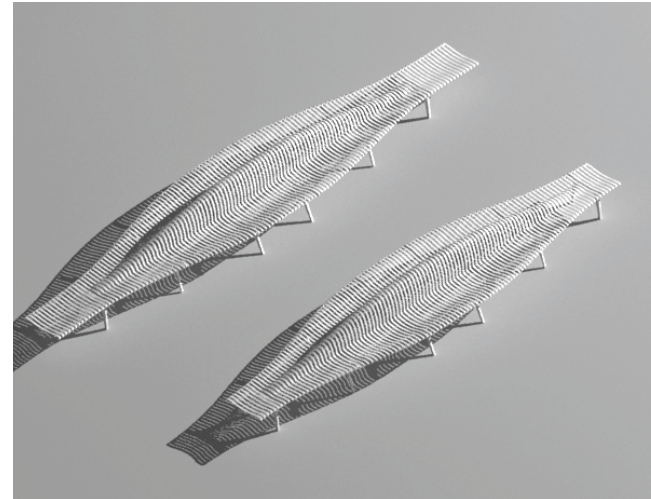


FIGURE 6-40: RENDERING OF DOUBLE-SIDED ELLIPTICAL BENCHES



FIGURE 6-41: RENDERING OF 3 DOUBLE-SIDED BENCH SEGMENTS.

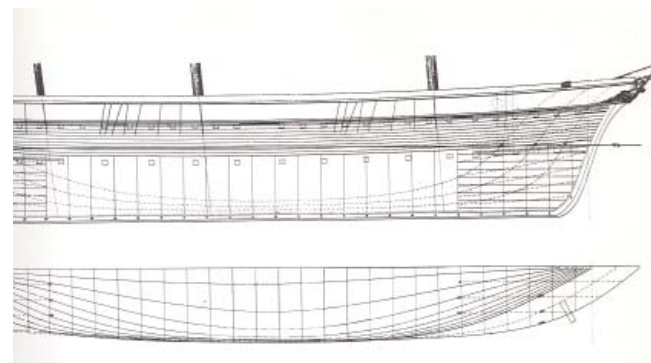


FIGURE 6-42: BENCH SYSTEM REFERENCES A SHIP'S HULL IN BOTH DESIGN AND CONSTRUCTION



FIGURE 6-43: RENDERING OF STANDARD WXYZIPPER BENCH: SINGLE-SIDED WITH ARMS

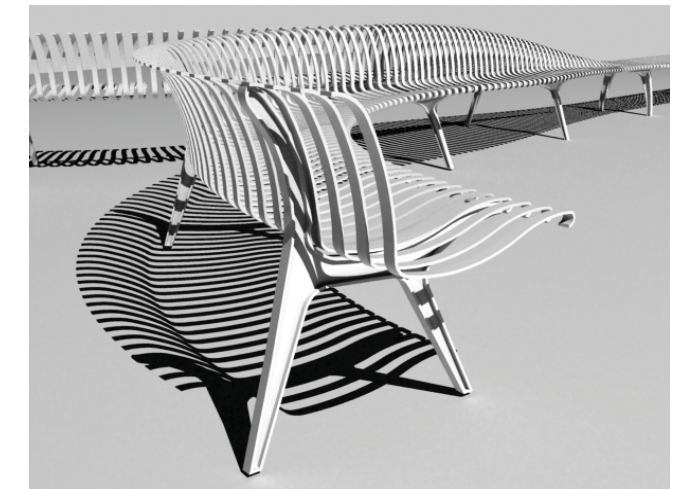
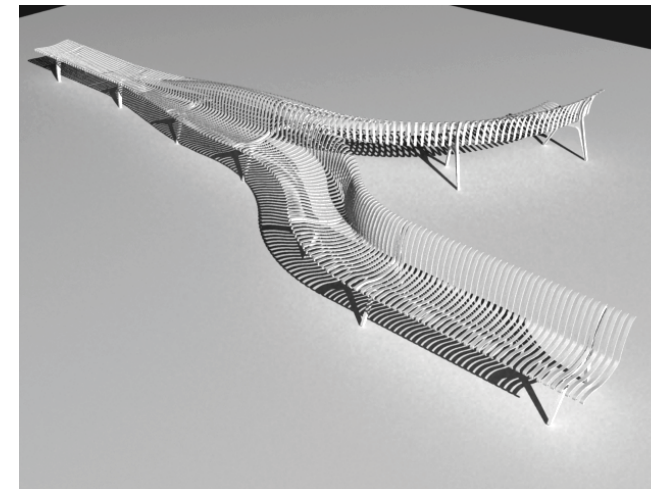


FIGURE 6-44, 6-45 RENDERINGS OF SCULPTURAL WXYZIPPER BENCH



FIGURE 6-46: LIGHT BOLLARD 36"

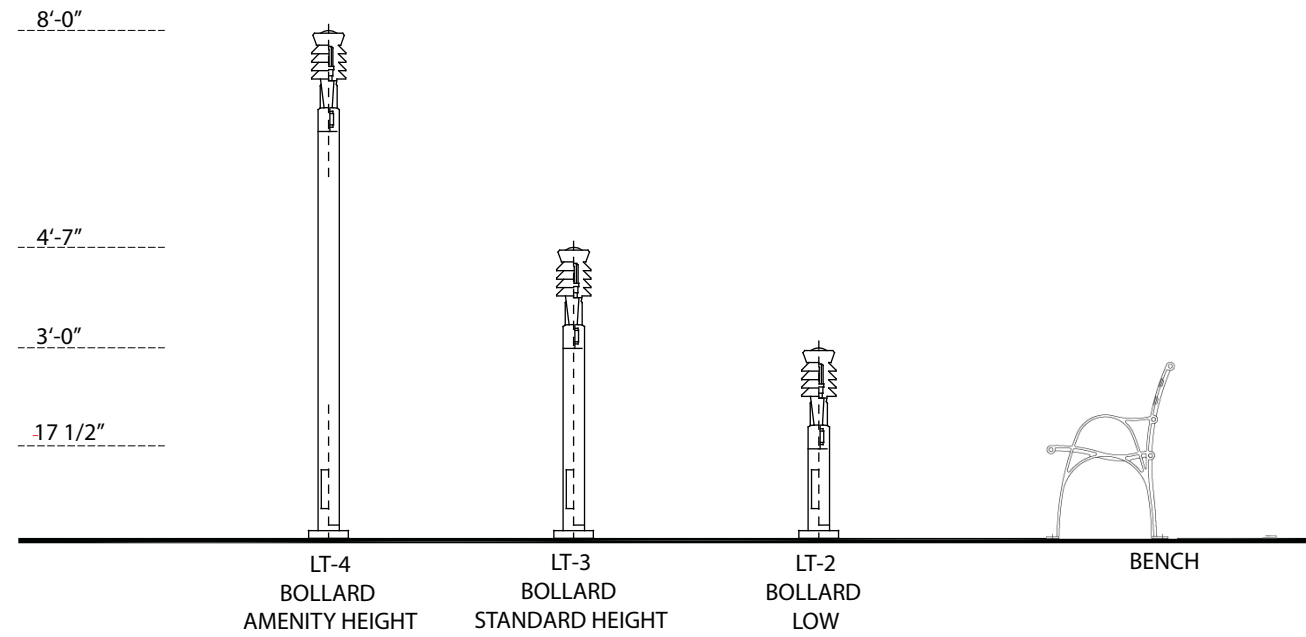


FIGURE 6-47: COMPARISON OF THE BOLLARDS AND BENCH

### 6.2.3 OPTIONAL LIGHTING

These spaces give opportunity for controlled variety in lighting and fixture placement. The Master Plan recommends either of the two following lighting application plans for the “supplemental” open spaces, to be placed according to a qualified lighting designer:

1. Park Poles LT-1 B to mark pathways; bollards LT-2, LT-3 to illuminate and define seating areas; and amenity-height bollards LT-4 to create a central linear illumination pattern down the center of the piers.
2. Bollards LT-2, LT-3 to mark either side of the path with glowing light; Park Poles LT-1 B to create bright, welcoming seating areas; and amenity-height bollards LT-4 for central linear illumination pattern down the center of the piers.

### 6.2.3 SHADE STRUCTURES

Given the Greenpoint-Williamsburg Waterfront's north-south orientation and western sun exposure, providing comfortable, shaded seating and passive recreation areas will be a major design challenge. The applicable zoning regulations and Waterfront Access Plan require a significant amount of planting, including shade trees, along the Shore Public Walkway. However, in some cases, shade structures may be necessary to supplement the shade coverage provided by trees.

Shade structures for the Waterfront should primarily relate to the other design vocabulary elements on the Shore Public Walkway. Like all Waterfront furnishings, shade structures should reflect a design approach consistent with the surrounding public space rather than the architecture of the private realm. If possible, shade structures should be constructed out of wood and incorporate trellis or arcade components to support vines (please see Appendix B for recommended vines).



FIGURE 6-48: SHADE STRUCTURE MODEL



FIGURE 6-49: EXAMPLE OF WOOD SHADE STRUCTURE/  
TRELLIS





FIGURE 6-50: STANDARD STAINLESS STEEL BOLLARD



FIGURE 6-51: ALTERNATIVE BOLLARD MATERIALS

#### 6.2.4 BOLLARDS

Where the Shore Public Walkway, streets and Upland Connections intersect, traffic bollards may be used to define the edge of the pedestrian realm and to prevent vehicles from encroaching on pedestrian-only areas, subject to NYC PDC approval and the NYC Bollard Committee approval.

The standard bollard is a 12-inch diameter stainless steel bollard. The bollard is removable for emergency vehicle access. In addition to the standard bollard, the Master Plan encourages the use of innovative materials that provide sufficient safety and visibility while helping to create unique and memorable spaces, as shown below. Granite boulders and other natural or sculptural elements are encouraged for this application.

### 6.2.5 BICYCLE RACKS

Providing bicycle racks throughout the waterfront—particularly near the facilities that will serve as bicycle destinations, such as water taxi stations, sports fields, and gathering spaces—will promote bicycling and help reduce automobile traffic. A bicycle rack requires relatively little investment but provides a great deal of security and convenience to bicyclists. The “Bola” bike rack described below, a modified conventional “U” rack, was selected for the Waterfront because of its durability, design and installation flexibility, and ease of use. In addition, the “Bola” bike rack is manufactured from 65 percent total recycled material, 50 percent post-consumer recycled material. The bike rack can be seen in Figure 6-52 and 6-53.

### 6.3.5 TRASH RECEPTACLES

Because it is anticipated that the Shore Public Walkway will be maintained by NYC DPR, developers are encouraged to use the standard trash receptacle, which will facilitate trash collection and removal. The standard trash container was selected based on NYC DPR’s maintenance, capacity, access and durability criteria.

### 6.3.6 DRINKING WATER FOUNTAINS

Drinking water will be a vital amenity for waterfront visitors. Developers are strongly encouraged to install drinking fountains along the 2 mile length of Shore Public Walkway and in Supplemental Open Spaces. To ensure consistency and ease of maintenance, the NYC DPR encourages developers to install the standard drinking fountain, shown left. The fountain was selected based on NYC DPR’s maintenance and durability criteria, in addition to ADA access criteria.



FIGURE 6-52: STANDARD STAINLESS STEEL BIKE RACK, SINGLE



FIGURE 6-53: STANDARD STAINLESS STEEL BIKE RACK, MULTIPLE



FIGURE 6-54: STANDARD TRASH RECEPTACLE



FIGURE 6-55: STANDARD DRINKING FOUNTAIN

## **LIST OF ABBREVIATIONS**

ACOE - Army Corps of Engineers

ADA - Americans with Disabilities Act

GWAPP - Greenpoint Waterfront Association for Parks & Planning

MAS - The Municipal Art Society

MHW - Mean High Water

MTA - Metropolitan Transportation Authority (New York State)

NYC DCP - New York City Department of City Planning

NYC DDC - New York City Department of Design and Construction

NYS DEC - New York State Department of Environmental Conservation

NYC DEP - New York City Department of Environmental Protection

NYS DOS - New York State Department of State

NYC DOT - New York City Department of Transportation

NYC DPR - New York City Department of Parks and Recreation

NYC EDC - New York City Economic Development Corporation

NYC PDC - New York City Public Design Commission



## ACKNOWLEDGEMENTS

### GOVERNMENT AGENCIES & OFFICIALS

NEW YORK STATE,  
DEPARTMENT OF STATE  
DIVISION OF COASTAL RESOURCES

NEW YORK CITY,  
OFFICE OF THE MAYOR

NEW YORK CITY,  
DEPARTMENT OF PARKS AND RECREATION

NEW YORK CITY  
ECONOMIC DEVELOPMENT CORPORATION

CITY OF NEW YORK,  
DEPARTMENT OF CITY PLANNING

BOROUGH PRESIDENT, MARTY MARKOWITZ

BROOKLYN COMMUNITY BOARD 1

### COMMUNITY NON-PROFIT GROUPS

THE MUNICIPAL ART SOCIETY OF NEW YORK

METROPOLITAN WATERFRONT ALLIANCE

BROOKLYN GREENWAY INITIATIVE

GREENPOINT WATERFRONT ASSOCIATION  
FOR PARKS & PLANNING

### CONSULTANTS

EDAW, INC.

WEISZ + YOES ARCHITECTURE

LENI SCHWENDINGER LIGHT PROJECTS, LTD

M.G. MCLAREN ENGINEERING GROUP

RUSSELL DESIGN



**APPENDIX A**

**LIST OF MATERIALS**





## BIKE RACKS



MANUFACTURER: LANDSCAPE FORMS  
MODEL: BOLA  
MATERIAL: STAINLESS STEEL



MANUFACTURER: LANDSCAPE FORMS  
MODEL: FLO  
MATERIAL: STAINLESS STEEL

## PEDESTRIAN LIGHTING



MANUFACTURER: LUMEC  
MODEL: CANDELA POLE HEAD: 8309MH 150W;  
POLE: 906HR  
MATERIAL: STEEL  
FINISH: POWDER COAT  
COLOR: RAL 9006 MATTE

## RAILING

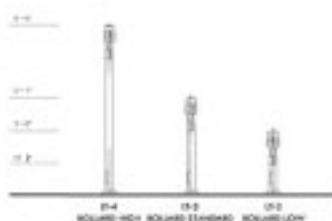


MANUFACTURER: X2US LLC  
MODEL: WXYRIVER RAIL SYSTEM  
MATERIAL: STAINLESS STEEL  
FINISH: PASSIVATED BEADED BLAST

## BOLLARDS



MANUFACTURER: LANDSCAPE FORMS  
MODEL: ANNAPOLIS  
MATERIALS: STRUCTURAL STEEL, ALUMINUM, SPUN ALUMINUM BASE  
FINISH: BEAD BLASTED  
DIMENSIONS: 12" DIAMETER



MANUFACTURER: WE-EF LIGHTING  
MODEL: THAROS #641-6051 (MH 35W)  
MATERIAL: MARINE GRADE DIE-CAST ALUMINUM  
FINISH: POWDER COAT  
COLOR: RAL 9006 MATTE  
DIMENSIONS: HT 8'-0", 5'-7", 3'-0"

## DRINKING FOUNTAIN



MANUFACTURER: HAWS, INC.  
MODEL: 3202G  
MATERIAL: HEAVY-DUTY 12-GAUGE FABRICATED STEEL  
FINISH: GALVANIZED  
COLOR: TBD BY DPR  
\* UNDERDRAIN REQUIRED

## TRASH RECEPTACLE



MANUFACTURER: LANDSCAPE FORMS  
MODEL: PARC VUE  
MATERIAL: STEEL / POLYETHYLENE LINER  
FINISH: POWDER COAT  
COLOR: SILVER / BLACK LID AND LINER  
DIMENSIONS: SIDE OPENING - 23" X 43"

## PAVING



MANUFACTURER: HANOVER  
MODEL: GRAND TUDOR  
MATERIAL: ASPHALT BLOCK  
SURFACE: GROUND TUDOR  
COLOR: TBD BY DPR  
DIMENSIONS: 4" X 12"

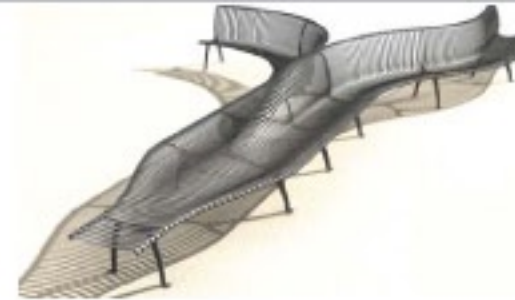


MANUFACTURER: NICOLock  
MODEL: SF-RIMA  
MATERIAL: PERMEABLE PAVEMENT  
COLOR: VARIES  
DIMENSIONS: 7-3/4" X 7-3/4"

## BENCHES



MANUFACTURER: SOHEIL MOSUN  
MODEL: WXYRIVER BENCH SYSTEM  
MATERIALS: WHITE OAK, CAST IRON STANCHIONS, STEEL FRAME  
FINISH: KYNAR  
COLOR: RAL 9006 MATTE



MANUFACTURER: X2US LLC  
MODEL: WXYZIPPER BENCH SYSTEM  
MATERIAL: GALVANIZED STEEL STRAPS, PLATE STANCHIONS AND FRAME  
FINISH: KYNAR  
COLOR: RAL 9006 MATTE



**APPENDIX B  
GREENPOINT - WILLIAMSBURG WATERFRONT PLANT LIST**

GREENPOINT-WILLIAMSBURG OPENSACE MASTER PLAN - Plant List					
Botanical Name	Common Name	NY Native Sp.	Salt Tolerance	Suitable for tree pit	Suitable for landscape bed
<b>LARGE SHADE TREES</b>					
DECIDUOUS					
<i>Fagus grandifolia</i>	American Beech	Y	N	N	Y
<i>Ginkgo biloba</i>	Ginkgo	N	Y	Y	Y
<i>Gleditsia tracanthos inermis</i>	Thornless Honey Locust	Y	Y	Y	Y
<i>Gymnocladus dioica</i>	Kentucky Coffee Tree	N	Y	Y	Y
<i>Juglans cinera</i>	Butternut	Y	N	N	Y
<i>Nyssa sylvatica</i>	Tupelo	Y	N	N	Y
<i>Quercus alba</i>	White Oak	Y	N	N	Y
<i>Quercus bicolor</i>	Swamp White Oak	Y	Y	Y	Y
<i>Quercus muehlenbergii</i>	Chinkapin Oak	Y	N	N	Y
<i>Quercus palustris</i>	Pin Oak	Y	Y	Y	Y
<i>Quercus phellos</i>	Willow Oak	Y	Y	Y	Y
<i>Quercus robur 'Fastigiata'</i>	English Oak	N	Y	Y	Y
<i>Quercus rubra</i>	Red Oak	Y	N	Y	Y
<i>Sophora japonica</i>	Scholar Tree	N	Y	Y	Y
<i>Tilia cordata</i>	Little Leaf Linden	N	N	N	Y
<i>Tilia tomentosa</i>	Silver Linden	N	N	Y	Y
<i>Viburnum prunifolium</i>	Blackhaw Viburnum	Y	N	N	Y
<i>Zelkova serrata</i>	Japanese Zelkova	N	Y	Y	Y
EVERGREEN					
<i>Juniperus virginiana</i>	Eastern Red Cedar	Y	N	N	Y
<i>Pinus rigida</i>	Pitch Pine	Y	N	N	Y
<b>MEDIUM + SMALL ORNAMENTAL TREES</b>					
DECIDUOUS					
<i>Amelanchier canadensis</i>	Shadblow/ Serviceberry	Y	Y	Y	Y
<i>Cercis canadensis</i>	Redbud	N	N	N	Y
<i>Cladastris lutea</i>	Yellowwood	Y	N	N	Y
<i>Cornus kousa</i>	Korean Dogwood	N	N	N	Y
<i>Cornus mas</i>	Cornelian Cherry Dogwood	N	N	N	Y
<i>Crataegus phaenopyrum</i>	Washington Hawthorn		N	N	Y
<i>Franklinia alatamaha</i>	Franklin Tree	Y	N	N	Y
<i>Hamamelis virginiana</i>	Witch Hazel (multi-stemmed)	Y	N	N	Y
<i>Koelreuteria paniculata</i>	Golden Rain Tree	N	Y	Y	Y
<i>Magnolia virginiana</i>	Sweet Bay Magnolia		Y*	N	Y
<i>Prunus cistena</i>	Purple leaf Sand Cherry	N	Y	Y	Y
<i>Syringa reticulata</i>	Japanese tree lilac	N	Y	Y	Y
EVERGREEN					
<i>Chamaecyparis tyoides 'Andelyensis'</i>	Atlantic white cedar	Y	N	N	Y
<i>Ilex opaca</i>	American Holly	Y	N	N	Y
<i>Pinus strobus</i>	Eastern White Pine	Y	N	N	Y

Notes:			
* Limited salt tolerance			
** Cultural requirements include highly specific inundation cycles			

Botanical Name	Common Name	NY Native Sp.	Salt Tolerance	Suitable for tree pit	Suitable for landscape bed
<b>SHRUBS</b>					
<i>Aeschulus parviflora</i>	Bottlebrush Buckeye	Y	N	All shrubs should be used in landscape areas only	
<i>Amorpha fruticosa</i>	Indigo bush Amorpha	Y	Y		
<i>Baccharis halimifolia</i>	Groundsel Tree	Y	Y		
<i>Carpinus caroliniana</i>	Blue Beech, Ironwood, American Hornbeam, Muscledwood	Y	N		
<i>Chaenomeles sp.</i>	Flowering Quince	N	N		
<i>Cotoneaster bivaricatus</i>	Spreading Cotoneaster	N	N		
<i>Cytissus scoparius</i>	Scotch Broom	N	N		
<i>Deutzia sp.</i>	Deutzia	N	N		
<i>Erica sp.</i>	Heath	N	N		
<i>Euonymus alata</i>	Winged Euonymus	N	N		
<i>Forsythia x intermedia</i>	Forsythia	N	N		
<i>Hydrangea sp.</i>	Flowering Hydrangea		N		
<i>Hypericum calycinum</i>	Aaronsbeard St. Johnswart	N	N		
<i>Hypericum prolificum</i>	Shrubby St. Johnswart	Y	N		
<i>Leucothoe fontanesiana</i>	Drooping Leucothoe	N	N		
<i>Myrica pennsylvanica</i>	Bayberry	Y	Y		
<i>Pieris japonica</i>	Japnaese Andromedea	N	N		
<i>Potentilla fruticosa</i>	Bush Cinquefoil	Y	N		
<i>Prunus virginiana</i>	Choke Cherry	Y	N		
<i>Prunus maritima</i>	Beach plum	Y	N		
<i>Quercus ilicifolia</i>	Scrub Oak	Y	N		
<i>Rhododendron sp.</i>	Azaleas	Y	N		
<i>Rhus Aramatica</i>	Fragrant Sumac	Y	N		
<i>Rhus glabra</i>	Smooth Sumac	Y	N		
<i>Ribes cynosbati</i>	Pasture Gooseberry	Y	N		
<i>Rosa carolina</i>	Carolina Rose	Y	N		
<i>Rosa rugosa</i>	Rugosa Rose	N	N		
<i>Spiraea latifolia</i>	Meadowsweet	Y	N		
<i>Symphocarpos albus</i>	Common Snowberry	Y	N		
<i>Symphocarpos orbiculatus</i>	Indiancurrant Coralberry	Y	N		
<i>Vaccinium corymbosum</i>	Highbush Blueberry	Y	Y*		
<i>Viburnum dentatum</i>	Arrowwood Viburnum	Y	Y*		
<i>Viburnum prunifolium</i>	Blackhaw Viburnum	Y	N		
<i>Viburnum acerifolium</i>	Mapleleaf Viburnum	Y	N		
<i>Weigelia florida</i>	Flowering Weigelia	N			
EVERGREEN					
<i>Ilex x 'Nellie Stevens'</i>	Nellie Stevens Holly	N	N		
<i>Ilex x attenuata 'Fosteri'</i>	Foster No. 2 Holly	N	N		
<i>Ilex cornuta 'Burfordii'</i>	Chinese Holly	N	N		
<i>Ilex glabra</i>	Inkberry	Y	N		
<i>Juniperus chinensis 'Columnaris'</i>	Chinese Juniper	N	N		
<i>Juniperus chinensis 'Keteleeri'</i>	Chinese Juniper	N	N		
<i>Juniperus communis 'Hibernica'</i>	Common Juniper	N	N		
<i>Picea mariana 'Doumetii'</i>	Doumet Black Spruce	Y	N		
<i>Pinus mugo</i>	Mugo Pine	N	N		
<i>Pinus rigida</i>	Pitch Pine	Y	N		
<i>Taxus x media 'Hicksii'</i>	Hicks yew (females excluded)	N	N		

Botanical Name	Common Name	NY Native Sp.	Salt Tolerance	Suitable for tree pit	Suitable for landscape bed
<b>GROUND COVER SHRUBS</b>					
Use in landscape areas only					
<i>Ajuga reptans</i>	Bugleweed	N	N		
<i>Arctostaphylos uva-ursi</i>	Bearberry	Y	Y*		
<i>Cornus canadensis</i>	Bunchberry	Y	N		
<i>Cotoneaster divaricatus</i>	Spreading Cottoneaster	N	N		
<i>Cotoneaster horizontalis</i>	Spreading Cottoneaster	N	N		
<b>BULBS</b>					
Use in landscape areas only					
<i>Allium stellatum</i>	Prairie Onion	Y	N		
<i>Erythronium americanum</i>	Yellow Adder's Tongue	Y	N		
<i>Oxalis violacea</i>	Violet Wood Sorrel	Y	N		
<i>Viola patilacea</i>	Wood Violet	Y	N		
<b>GRASSES</b>					
Use in landscape areas only					
<i>Andropogon gerardii</i>	Big Bluestem Grass	Y	N		
<i>Andropogon scoparium</i>	Little Bluestem	Y	N		
<i>Andropogon virginicus</i>	Broomsedge	Y	N		
<i>Calamagrostis canadensis</i>	Bluejoint Grass	Y	Y*		
<i>Carex pennsylvanica</i>	Pennsylvania Sedge	Y	N		
<i>Chasmanthium latifolium</i>	Northern Sea Oats	Y	N		
<i>Danthonia spicata</i>	Poverty Oatgrass	Y	N		
<i>Deschampsia flexuosa</i>	Wavyhair Grass	Y	N		
<i>Imperata cylindrica rubra</i>	Japanese Blood Grass	N	N		
<i>Miscanthus sinensis</i>	Eulalia Grass	N	N		
<i>Pennisetum alopecuroides</i>	Fountain Grass	N	N		
<i>Schizachyrium scoparium</i>	Little Bluestem	Y	Y*		
<i>Uniola latifolia</i>	Northern Sea Oats	N	N		
<b>PERENNIALS</b>					
Use in landscape areas only					
<i>Ammeria maritime</i>	Maritime Thrift		Y*		
<i>Artemisia stelleriana</i>	Beach Wormwood	Y	Y*		
<i>Asarum canadense</i>	Wild Ginger	Y	N		
<i>Aster divaricatus</i>	White Wood Aster	Y	N		
<i>Aster linariifolius</i>	Stiff-leaved Aster	Y	N		
<i>Aster tuberosa</i>	Butterfly Weed	Y	N		
<i>Cimicifuga racemosa</i>	Snakeroot	Y	N		
<i>Chrysogonum virginianum</i>	Golden Star	Y	N		
<i>Coreopsis lanceolata</i>	Lance-leaf Coreopsis	Y	N		
<i>Dianthus sp.</i>	Pinks	N	Y*		
<i>Dryopteris marginalis</i>	Marginal Fern	Y	N		
<i>Eupatorium purpureum</i>	Purple Joe-Pye Weed	Y	N		
<i>Heuchera sanguinea</i>	Coral Bells	Y	Y*		
<i>Lupinus perennis</i>	Wild Blue Lupine	Y	N		
<i>Monarda fistulata</i>	Wild Bergamot	Y	N		
<i>Oenothera biennis</i>	Evening Primrose	Y	N		
<i>Oenothera missouriensis</i>	Missouri Primrose	N	Y*		
<i>Oenothera tetragona</i>	Sundrops	N	Y*		
<i>Pachysandra procumbens</i>	Alleghany Spurge	Y	N		
<i>Senecio aureus</i>	Golden Groundsel	Y	N		

Botanical Name	Common Name	NY Native Sp.	Salt Tolerance	Suitable for tree pit	Suitable for landscape bed
<i>Phlox divaricata</i>	Woodland Phlox	Y	N		
<i>Sedum spectabile</i>	Showy Sedum	N	Y*		
<i>Solidago speciosa</i>	Showy Goldenrod	Y	N		
<i>Tiarella cordifolia</i>	Foam Flower	Y	N		
<b>WETLAND - Emergent Herbaceous</b>					
Use in landscape areas only					
<i>Distichlis spicata</i>	Saltgrass	Y	Y		
<i>Panicum anarulum</i>	Coastal Panic Grass	Y	Y		
<i>Panicum virgatum</i>	Switch Grass	Y	Y		
<i>Spartina alterniflora**</i>	Smooth Cordgrass	Y	Y		
<i>Spartina patens**</i>	Saltmeadow Cordgrass	Y	Y		
<b>WETLAND - Shrubs</b>					
Use in landscape areas only					
<i>Cephalanthus occidentalis</i>	Buttonbush	Y	Y*		
<i>Clethra alnifolia</i>	White Alder	Y	Y*		
<i>Cornus amomum</i>	Sildy dogwood	Y	N		
<i>Ilex glabra</i>	Inkberry	Y	Y		
<i>Ilex verticillata</i>	Winterberry Holly/ black Alder	Y	Y*		
<i>Iva frutescens</i>	Marsh Elder	Y	Y		
<i>Lindera benzoin</i>	Spicebush	Y	Y*		
<i>Sambucus canadensis</i>	Common elderberry	Y	Y*		
<i>Viburnum dentatum</i>	Southern Arrowwood	Y	N		

Notes:			
* Limited salt tolerance			
** Cultural requirements include highly specific inundation cycles			

