Brooklyn Bridge Park

Designer: **Michael Van Valkenburgh Associates**
Client: **Brooklyn Bridge Park Development Corporation**

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Above: Aerial View
(MVV Associates)

At Left: Kayak put-in
(MVV Associates)

Below: Brooklyn-Queens
Expressway
(New York State DOT)

The Brooklyn Bridge Park reaches 1.3 miles through a light industrial zone along Brooklyn's northwest edge on the East River. The majority of the land on the 85 acre site served as a bulk cargo shipping and storage complex from the 1950's until 1983. The Brooklyn-Queens Expressway runs along the east edge of the site, creating a narrow, linear typology and presenting major design challenges including access to adjacent neighborhoods, noise mitigation and stormwater management. The park complex includes existing structures such as 6 over-water piers and now-abandoned warehouse buildings. And the north edge of the site extends under and between the Brooklyn and Manhattan Bridges, presenting oportunities for iconic views and unique overhead landscapes. The site is framed to the south by Pier 6 and views to Ellis Island and the Statue of Liberty.

Quick Facts:

The Brooklyn-Queens Expressway is a multi-level, 6-8 lane, limited access highway that carries approximately 160,000 vehicles per day.

Brooklyn had the least amount of parkland per acre of any metroplitan area in the country before this project was initiated.

The Brooklyn Bridge Park 2005 Master Plan, developed by MVVA, received a 2009 ASLA Honor Award for Analysis and Planning.

The estimated cost for constructing the park is $350 million dollars. The estimated cost for maintenance is $16 million dollars per year.

Above: Schematic Site Plan (MVV Associates)

STAGED OPENING TIMELINE

Spring 2010:
Pier 1

Summer 2010:
Pier 1 Promendade
Pier 6 Playground

Winter 2011:
Empire Fulton Park

Spring 2011- :
Construction Continues

Planning Approach and Design Strategies

To define the underlying organizational structure, function, form and long-term performance capacity of the Brooklyn Bridge Park site, MVVA interpreted the classic “sustainability” trifecta of environmental, economic and social health through practical lenses such as diverse programming and self-generating financing. They also focused on providing high-value connectivity with the urban fabric and recasting environmental challenges as unique site assets.

Diverse Programming to Facilitate Site Activation

With very limited points of entry/exit, site activation is critical in order to maintain vibrancy as well as public safety. To ensure the site will be well-used year-round as well as at night, MVVA has planned and provided for a wide variety of programs. Some affordances, such as dedicated recreational bike paths and opportunities for dog-walking, are distributed across the entire site and offer ongoing opportunites for activity. Others, such as infrastructure for outdoor movies and intentionally flat-planed space are provided for one-time or regularly scheduled events. And fixed elements such as dedicated sports fields, specialized boating facilities, cafe concessions and whimsical playground landscapes will focus certain types of uses to specific zones within park. Some of the key program features of each section of the park are described below.

North:	Tidal inlet, water taxi, dog walking
Interbridge:	Tabaccco Warehouse event space, outdoor movie venue, “Manhattan Cove” water access, playground, dog run, festivals/market space, Empire Stores
Pier One:	“Tots” playground, meadows, terraced wetlands, walking paths cafe/restaurant, information & park concessions, water taxi, barge music, wedding space
Pier Two:	5-acre semi-enclosed sports facilities, calm water for kayaks and canoes, tidal inlet, tennis courts
Pier Three:	Passive lawn, paved event space, calm water for small boats
Pier Four:	“Pebble Beach” water access, floating walkways, “nature island”
Pier Five:	Dedicated sports facilities, large pleasure-craft marina, historic boat moorage, off-dock fishing, “picnic table peninsula”, public restrooms, public boat access and boathouse
Pier Six:	Information and park concessions, cafes and restaurants, adventure playground, sand volleyball, ecological strolling paths, dog run, warming hut

Financial Planning to Ensure Viability of Long-Term Success

The days of grand development in the style of Frederick Law Olmsted and Robert Moses, whose parks and playgrounds were built and maintained by the government for decades, have given way to an era of private-public partnerships and pay-as-you-go.

"There is this accelerating notion that not just parks but many aspects of the public realm have to be self-financing," said Michael Sorkin, director of the graduate program in urban design at the City College of New York. "The paradox is that it's always amounting to giving away some public good in order to realize some other public good."

Diane Cardwell, New York Times, 2/5/10

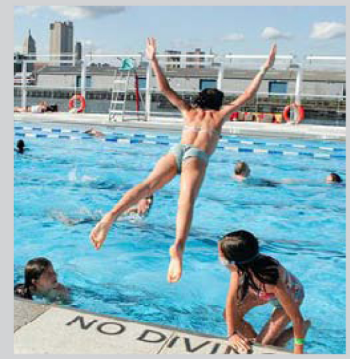
The financial health and development of the site is under the jurisdiction of a non-profit agency created by the State of New York, the Brooklyn Bridge Park Development Corporation.

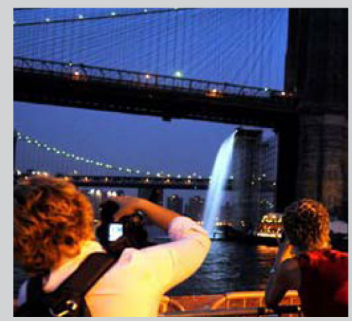
To date, this financial governance and oversight body has secured just over 2/3 of the funds necessary to construct the park as designed and permitted (about $230M of $350M) from City and State sources. Therefore, construction is proceeding in a staged fashion with the current funds projected to finance "Phase I": Brooklyn Bridge Plaza (under the Brooklyn Bridge), Pier 1, Pier 5, part of Pier 6, and all upland areas between Piers 1 & 6.

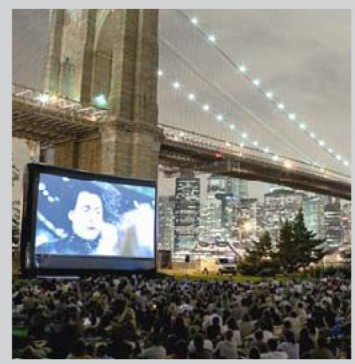
Additionally, the operations and maintenance requirements of the completed park are projected to cost $16M annually, a cost roughly equivalent to rebuilding the park every 20 years. Perhaps surprisingly, the most demanding cost is the maintenance of the12,000 underwater pilings that support the park's six piers and are under constant attack by marine wood-boring organisms.

The funding gap for construction and the need for a robust on-going operating budget have led to a controversial proposal for about nine percent of the site to be developed into luxury residential property (a mixture of apartments and condominiums), as well as a hotel. The site will also include multiple revenue-generating concessions such as cafes, restaurants, boat rental facilities, etc.

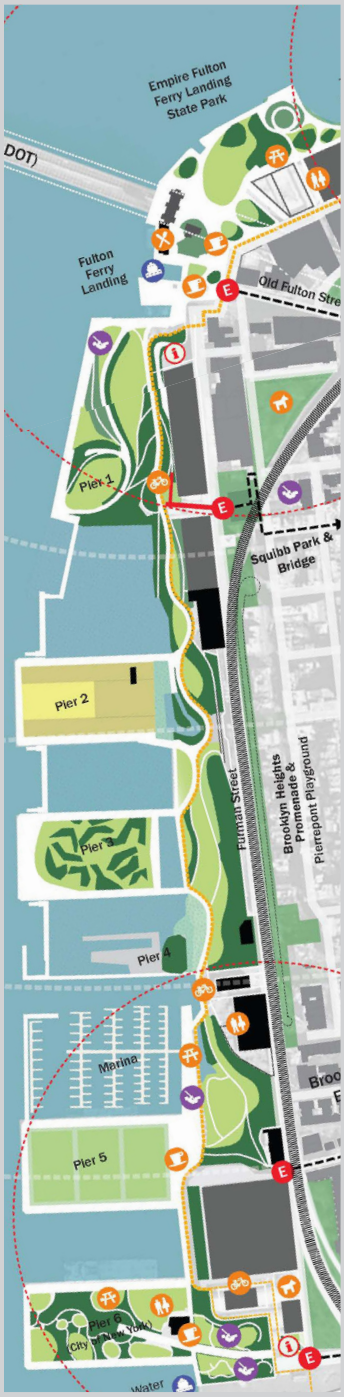
Below: A mixture of diverse program elements will help activate the park in all seasons, day and night.
(Photos: Etienne Frossand)





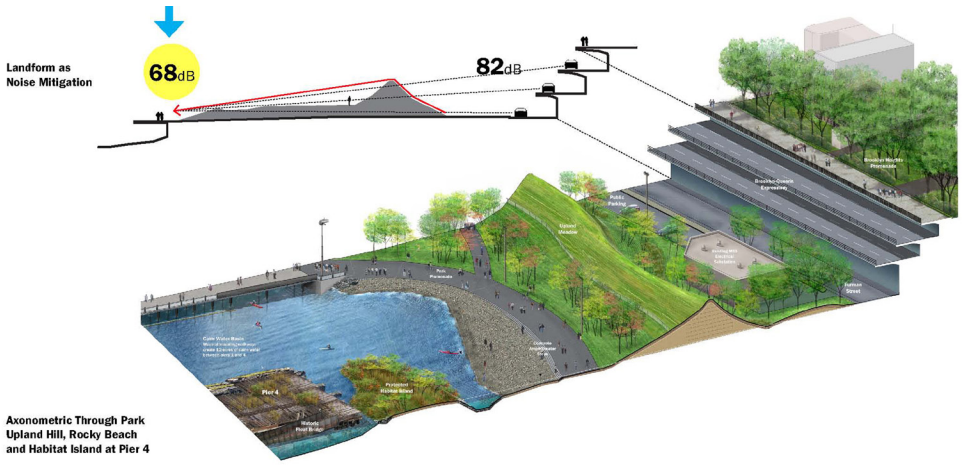


Above: Beach and landform
Right: Noise reducing landform
Below: Entrances, marked in red, are limited. There are only 3 main gateways into the park. (MVVA Associates)



Noise Reduction

The Brooklyn-Queens Expressway, directly adjacent to the park, is difficult to tolerate at 75 decibels. Noise-reducing earthen berms running alongside the expressway will create quieter conditions within the park, reducing the volume to a calmer 68 decibels. The berms will be a defining landscape feature of the park.



Neighborhood Connectivity

The Brooklyn-Queens Expressway runs between Brooklyn Bridge Park and its adjacent neighborhoods, making connections into the 1.3 mile long park nonexistent except at three critical points: Atlantic Avenue, Fulton Ferry Landing, and John Street.

These entry ways into the park are treated as “urban junctions”, places where neighborhood and park intersect. Spaces with more everyday appeal are clustered around each urban junction, while other elements including large scale event spaces, boat docks, and organized sports areas are farther into the park. Through this strategic programming, each urban junction partly acts like a local neighborhood park.

People-Water Connectivity

The transformation of this industrial area into an inviting public park brings the exciting opportunity for Brooklyn residents to actually touch the water, which used to be largely inaccessible. Fishing piers, water taxi access, marina, boat launch, calm water zone for kayaking, and a beach area are some programattic elements that connect people to water at Brooklyn Bridge Park.

As the tide rises, the water snakes up through sculptural kayak launches, creating a dynamic experience and making the tides very engaging, playful, and visible. This experiential connection with natural processes is meaningful to Brooklynites. Tides were nearly imperceptible throughout most of Brooklyn’s history, because of the straight piers and removed nature of the waterfront.

Left: Interaction with water will play a central, unifying role in defining the park's charactar. Below: Active recreation will be possible throughout the park. (MVVA Associates)

Sustainability

Brooklyn Bridge Park explores the "three legs" of sustainability and their overlap, in ways that are fundamental to the park's design.

The designers chose an industrial aesthetic for the park that would maintain its sense of place. Because of this approach, construction choices that save money and resources, like extensive use of recycled on-site materials, add to the desired character of the place.

Stormwater will be collected, either as runoff from hardscape or after filtering through vegetated treatment swales. 70% of the park's irrigation needs will be met by stormwater captured from the site and held in stormwater storage tanks.

Six acres of bird and fish habitat will be designed using native plants, creating a start for a living ecosystem. Pier one will include terraced water gardens that form a productive tidal ecosystem, and pier six will include a wide variety of microclimates of marshes, meadows, and lawns, offering visitors a range of comfort through varying climatic conditions.

Human health and physical activity are a strong theme. Much of the park's programming creates dynamic places for children to play, and Pier 2 and Pier 5 will be repurposed as active recreation spaces offering areas for basketball, handball, street hockey, volleyball, softball, soccer, and other sports activities. A bike path will run through most of the park as well, and kayaking and canoeing will be possible in the calm areas between Piers 1, 2, and 3.

Quick Facts:

Tens of thousands of board feet of Yellow Pine were re-used on- site from the demolition of the building on Pier One.

Paving will reflect rather than absorb sunlight, minimizing "heat island" effect.

About 2.5 acres of salt marsh and water gardens will be created on Piers One and Six.

From yelp.com reviews of Brooklyn Bridge Park (what's open so far):

"I love it out here. I come here all the time. This place has it all."

"Brooklyn Bridge Park probably now is my favorite date spot"

"Mind-bogglingly clean, even the restrooms"

"You know that a place is special when all you need to do to adequately enjoy it is sit down quietly and take in the view."

"A boat periodically passed by with a bunch of "woo!!!"-ing passengers and bumping music that could either be a nuisance or mild entertainment for the moment."

"This place has already become well-trafficked on weekends, but not over the top... yet. Soon tourists will continue off the Promenade and invade this Park, but also soon there will be more and more park to offset the multitude of onlookers and camera holders."

"ABSOLUTELY beautiful on a sunny day. The views are gorgeous. The breeze coming off the water is relaxing."

"Jaw-dropping views. The Bridge, Manhattan, the water, the green..."

"One of my favorite places on earth, but preferable on weekdays or late at night."

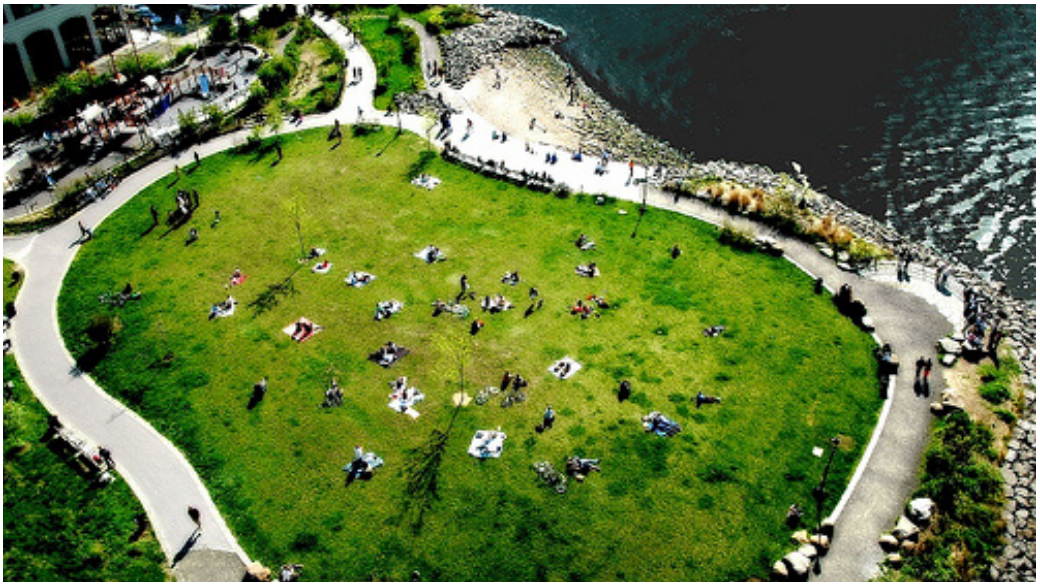
"No matter if it's snowy, rainy, or sunny, the breathtaking view of the Manhattan skyline from this park will never disappoint."

Right: View from Manhattan Bridge (photo from http://picturefocus.wordpress.com/)

Overlapping Sustainability

Recycled materials are cost effective and maintain an aesthetic and a sense of place; the landscape mosaic resulting from biodiverse habitats ensures comfortable conditions for people somewhere on any given day, on this site that can often experience harsh climate; collecting stormwater saves on irrigation costs and creates beautiful wetland gardens in the process; all these elements combine to create a place that fosters health and active recreation...

Many solutions in the design of Brooklyn Bridge Park were the most ecologically healthy, financially sound, and human friendly solution, all in one efficient stroke. The park stands as a clear, understandable example of how sustainability, if done right, is not an expensive luxury, but rather an extremely beneficial, practical strategy towards making very livable places.



SOURCES:

American Society of Landscape Architects website:
http://www.asla.org/2009awards/011.html

Brooklyn Bridge Park Conservancy website:
www.brooklynbridgepark.org

Brooklyn Bridge Park Development Corporation website:
www.brooklynbridgeparknyc.org

Brooklyn Bridge Park: Design Strategies, Design Elements & Park Chronology
Michael Van Valkenburgh Associates, Spring 2010 (pamphlet)

When Parks Must Rely on Public Money by Diane Cardwell
New York Times, February 5, 2010 (newspaper article)

Yelp.com reviews of Brooklyn Bridge Park
http://www.yelp.com/biz/brooklyn-bridge-park-brooklyn