Hudson River Park

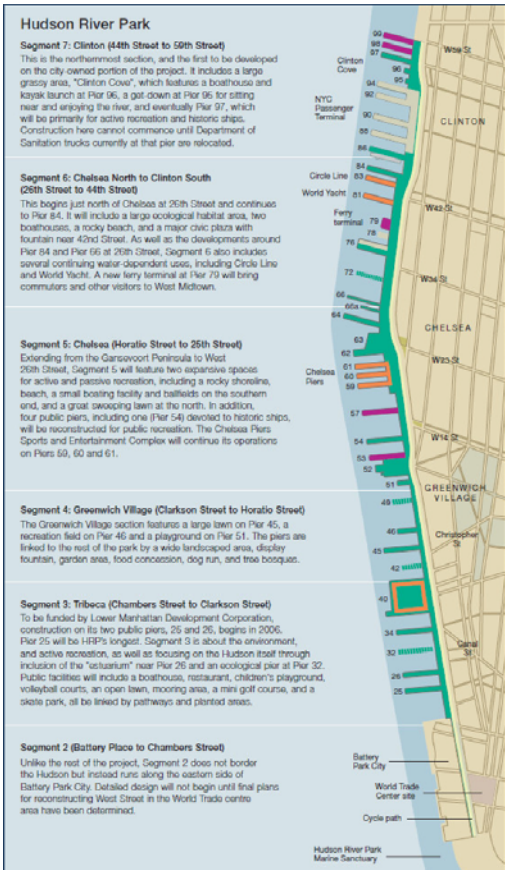
Jordan Bell
David Tomlinson

Above: Boardwalk; from Hudson River Park .org

Left: people using the park from DPD study

Hudson River Park is largest park in manhattan to be built since Central Park was built in mid 19th century. The park consists of a five mile long strip covering 550 acres running up the western side of manhattan from the northern end of Battery Park City at the south end to 59th street at the northern end. The park includes renovation of over a dozen derelict piers, the creation of a bikeway, and a pedestrian promenade. A mix of pubic functions are incorporated into the design such as ball fields and large recreational lawns as well as interspersed commercial space.

After the west side Highway was closed in 1972 the space has been in need of revitalization and local neighborhoods have been advocating for a new roadway and parks. The park planning process really got underway starting in the early 90's with plans for a bike and pedestrian path.



"This is the Central Park of the 21st Century... an innovative design that preserves the ecology of the Hudson and creates a world class venue from which to experience all the New York waterfront has to offer" -Governor Pataki

Pier 45 before


Pier 45 Today

West side bike path before

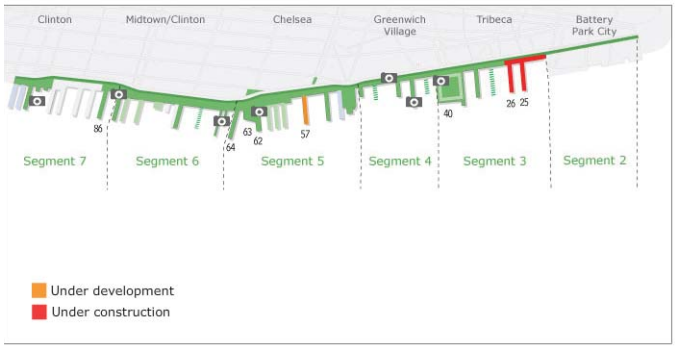
West side bike path today

Before and after Photos from Hudson River Park Trust. http://www.hudsonriverpark.org/construction/index.asp

Planning approach

Early planning for the project began in early nineties with the formation of the Hudson River Park Conservancy in 1992. Through the 90's the Conservancy worked to construct new bike and pedestrian connections and started a public planning process that created a concept and financial plan.

The Hudson River Conservancy later became the Hudson River Park Trust Which now owns and operates the park. The Trust divided the park into 7 geographic regions or "segments" which then had different designers selected for each segment.



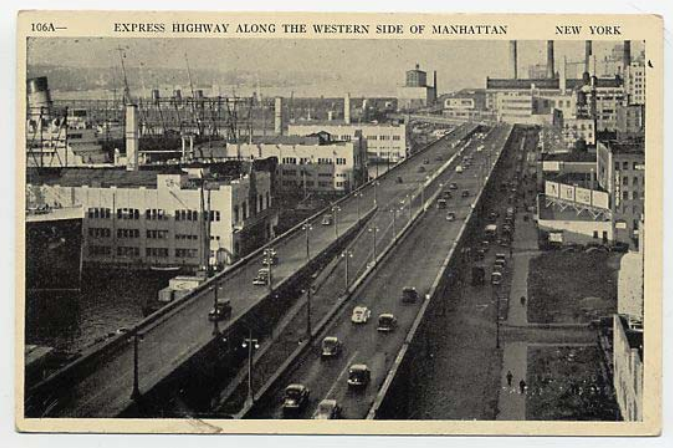
Segment 2/3 (lower manhattan and TriBeCa): Sasaki Associates, Mathews Nielsen
Segment 4 (Greenwich Village): Abel Bainnson Butz

Segment 5 (Chelsea): Michael Van Valkenburgh

Segment 6/7 (midtown and Clinton): Richard Dattner Architects/Miceli Kulik Williams Joint Venture

Construction on the Site began n 1999 and by 2008 50% of the projects construction was complete.

The parks construction was paid for with equal parts from the City and State with a small amount from the Federal Government. The Total costs were $400+ Million. The expected annual operation costs are around $20 million. All of the operation costs are expected to be covered by commercial activities within the park and non of it comes from public sources. This has been a contrrversial method with possibilities of shortfalls. It has been recommended that the park assess a fee on neighboring residential properties in order to make up for these possible shortfalls.

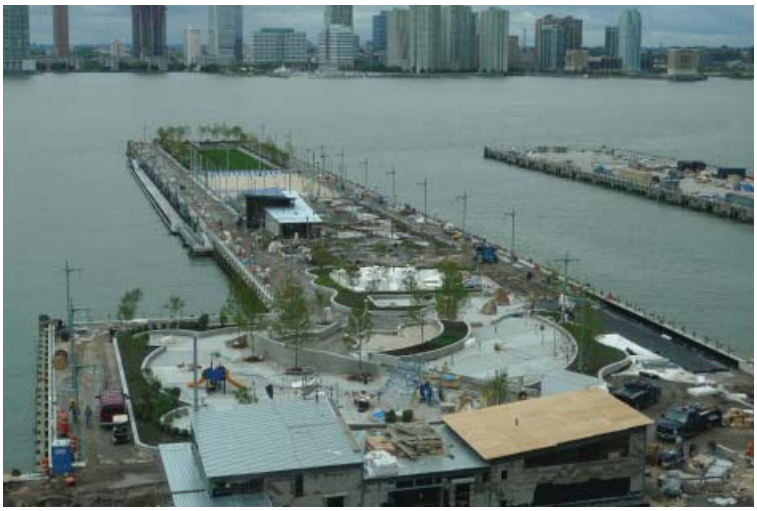


Historic Photo of the West side elevated highway that ran along what is now Hudson river park from 1948 when its construction was completed until it was demolished after a dump truck collapsed through the upper level in 1973, starting in 1977 and completed in 1989

Historic image of the piers along the Hudson prior to the west side highway.

source above photos: Wired New York
source photo right: Google Earth, Oct 2010.

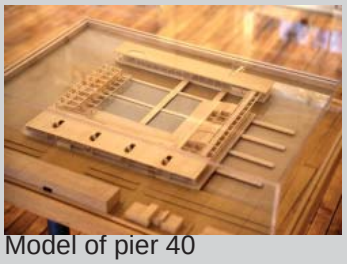
Pier 45 designed by Abel Bainnson Butz, LLP was completed in 2003



Pier 25 under construction. This pier is in segment 3 of the project and was designed by Sasaki Associates.

Another redeveloped pier along the park at Jane St, between W11th & W 12th St.

Pier 40



Model of pier 40

Pier 40 Charrette Plan

Pier 40

Pier 40 is one of the major commercial endeavours within the Hudson River Park system. This is the largest single pier along the park and one of the last built with construction of the original pier being completed in the early 1960's. The pier has served largely as a parking lot for years and then later had a soccer filed placed on it. Pier 40 has long had local advocates for a park to replace the parking. Controversy has been over wether the park should be new green space or more sports facilities. Early charrettes for the pier came up with a wide range of possible ideas of combining sports fields, green space and wholly new interactive spaces with beaches and swimming spaces. These Charrettes incorporated a huge amount of community response and interaction which pushed the designers to really cover a wide gamut of current and future uses and the huge concrete pier. Ray points out in his book "beyond the Edge" that it was through the charrette action and community involvement that led to the workshop which culminated in a bar raising plan that was endorsed by the community and the hudson river trust.

Despite the disputes over the use for pier 40 Governmental forces have judged that pier 40 will be one of the main economic endeavours in the park that will help to fund maintenance for all for Hudson River Park. Its size and structure make it an ideal space for the much larger endeavours. Possibly based on the outcomes of the early Charrettes the final endorsed plans for Pier 40 will have broad programming that can work to cover many of these issues.

“These four piers, between West 17th and 23rd Streets, once served as arrival and departure points for great ocean liners”

Photo: WestRink_V1_460x285 nycgo-com.jpg

Photo: swimcetner Chelsea piers.jpg

Photo:chelsea_piers_terrace_4-CPSunsetTerrace.jpg

Photo:ClimbingwallChelseapiers-HauteLivingMag.jpg

Revenue Structure

“Three areas called “nodes of development” have been identified by the [Hudson River Park] conservancy as ideal sites for commercial projects that would fund the maintenance of the park: the 42nd Street area, where Circle Line and cruise ships currently dock; the Chelsea Piers, which are already being developed; and Pier 40, currently a forty-acre parking lot and storage facility at the western end of Houston Street. Hotels, commercial offices, and residences are banned from the park, but commercial recreational uses will be encouraged. According to the conservancy’s plan, revenues from projects within the park will be used only for the park itself.” (Bone, 1997.)

Chelsea Piers

“These four piers, between West 17th and 23rd Streets, once served as arrival and departure points for great ocean liners….have been undergoing conversion into a one-million-square-foot center for sports, film production, and public recreation. Each of the four piers extends over six hundred feet into the Hudson River. Two will be enclosed, and a five-block-long building will link the piers on the shore.”

Chelsea Piers provides not only a secure revenue source for park maintenance, but provides a recreational space that is both unique to and needed in the dense city-scape of Manhattan and New York City. The recreational opportunities vary from swimming to ice-skating to rock climbing, training, running and aerobics. Chelsea Piers also provides additional neighborhood sports fields and facilities (soccer, basketball, volleyball and tennis) that are present but in much demand in Manhattan, especially on its west side. It also provides activities that are novel in Manhattan such as a golf driving range and batting cages. The cohesive structure of the Piers provides for more league and club sports than informal pick-up sports, and access is a privilege that is payed for at the cost of $12.00-$100/day depending on the activity and equipment and balls required.

Photo: 350px-Chelsea_Piers NYpassenberBlog.jpg

The vast expanse of recreational space at Chelsea Piers is staggering. Despite being commercially private in nature, it provides for a wide range of interest groups and age ranges, with special courses geared for children. It is something of a remnant from Mayor Guliani's plans to bring big-box stores to the West side.

Pier 40

At 15-acres and 800 feet long, Pier 40 was once "the largest reinforced, pre-stressed concrete structure in the world and the largest shipping terminal in the US." (Van Allen Institute.) It is still the largest pier on the Hudson River. The pier has served as a cruise line dock in 1962, then a parking garage, warehouse and movie production house. In 1998 Community Board 2 and the Van Allen Institute partnered to offer a public design competition. With over 141 entries, the submissions sought to reconcile the pier's industrial history with the desire of the local community to maximize open green space and provide for self-sustaining revenue.

By 1999, a winner had been selected and worked with key constituents from the neighborhood to refine their design. What has happened between then and now is not entirely clear, but in 2008, the city eliminated funding for Pier 40, and according to The Villager in 2009, a committee was still issuing RFP's for a development plan that would complement the $5.5M in parking rent and renovate the crumbling roof. Apparently, developers are no longer interested in entering the foray with the complex community in the midst of an economic downturn. Today, there is are sports fields over the parking garage, with intermittent water access to the Hudson River. The following passages relay some of the issues surrounding the Pier.

Photo: pier_40 AVCblogs.jpg

Photo: Pier40 - P40 Partnership.jpg

Photo: Pier40 Realty - NYObserver .jpg

Photo: Pier40 - The Villager.gif

Photo: Pier 40 #2 - The Villager.gif

"It is not within the power of any one body to carry into effect a plan for any portion of the waterfront of Manhattan,"

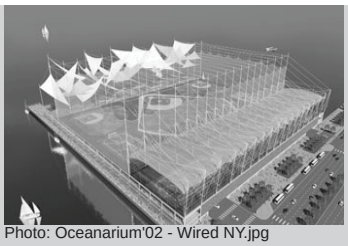


Photo: Oceanarium'02 - Wired NY.jpg

"Pier 40 is arguably the most disputed "node of development" in the Hudson River Park Plan. Nearby neighborhoods—Chelsea, Greenwich Village, SoHo, and TriBeCa—are in desperate need of park space. The local community board and its waterfront advocacy organization […] are adamant that the pier not be developed for commercial use, citing the pier as the area's only potential park locale. The community board has held firm that it will only approve its own park plan, which calls for razing Pier 40 to street level and creating an open green space. The federation believes it can finance the pan with Route 9A easement money (the contested $85 million for Westway's right-of-way) and other federal funding. Both the conservancy and […] president of the Route 9A Project, consider the federation's financing proposals unrealistic.

While governmental forces admit the district is in dire need of park space, Pier 40 has been judged an excellent site for the commercialization necessary to help fund the whole of Hudson River Park. According to HDRC president Peter Keogh, it is inevitable that Pier 40 will be commercially developed. […] Pier 40 has become the flash point for what Keogh has described as the potential "Balkanization" of the Hudson River waterfront.

The task of reconciling such competing forces was described by the Manhattan Regional Planning Association as early as 1930:

> *It is not within the power of any one body to carry into effect a plan for any portion of the waterfront of Manhattan, there are concerned in the control of this waterfront federal, state, and municipal authorities. Numerous private corporations and persons are concerned in its ownership and development. The preparation of any plan with the expectation of public action in putting it into effect is impractical. The expense that would be involved even with the highest degree of cooperation between the owners and the public authorities would be enormous. The making of plans for definite application has to proceed in the usual piecemeal way, although these partial plans should be fitted into a comprehensive plan of the city."*

Source:
Bone, Kevin ed; The New York Waterfront, Evolution and Building Culture of the Port and Harbor, © 1997 Monacelli Press, New York. Pgs 221-227.

The Edge Condition

In lower Manhattan, on a summer day, you can feel the cool sea breeze blowing in from the harbor. The breeze seems to purify the gritty stench of the streets after a weekend of late night street life. The breeze is something of a phenomenal horizon, an olfactory and sensorial event that sweeps through the city streets, its origin invisible.

The Horizon

The edges of Manhattan provide a rare glimpse of the actual horizon that is generally the view of only the most privileged of residents from their uptown, high rise apartments. Shy of hopping the subway to the outer boroughs, or leaving the city entirely, it is one of the only opportunities for residents of Manhattan to escape the intense verticality and constructed perspective space of the grid iron streets. While Central Park serves to mitigate this lack, it is circumscribed by enormous office and residential buildings along its each and every side.

Ecological Edge

Hudson River Park reinforces the impermeable western edge of Manhattan. Despite the possibilities for a permeable, undulating edge, the status quo of coverage was maintained in order to satisfy both the real estate demands of the city and the protests of environmentalist. This least common denominator approach is certainly a disappointment in the park. It was decided that the new park would not add any additional fill to the Hudson River in order to not impinge on the river habitat any further. The prospect of commercial development kept the notion of maximum usable area on the table.

The Hudson River is “one of only a few large tidal river systems in the northeastern US” that provides the potential for habitat. The Lower Hudson “provides wintering habitat for large numbers of striped bass by providing a sheltered environment with abundant food sources associated with the winter position of the river’s salt front.

Juvenile striped bass may also take advantage of physiological or ecological benefits associated with the transition area between estuarine brackish and higher-salinity coastal environments. Fish surveys have also found summer/winter flounder, white perch, Atlantic tomcod, Atlantic silversides, bay anchovy, hogchokers and American eel in significant numbers. This reach may also be important for bluefish and weakfish young-of-year and both Atlantic sturgeon and shortnose (adult only) sturgeon. American shad and blue crabs also contribute to the fishery. Biota of the lower trophic levels are also present in substantial numbers and provide an important food source. These include planktonic forms such as copepods, rotifers, mysid shrimp, and benthic forms such as nematodes, oligochaetes, polychaetes, and amphipods. (hudsonriverpark.org/.../planningHistory.pdf*)*

The Estuarine Sanctuary Management Report was prepared based on the Hudston River Estuary Program, 1993, and outlines the Manhattan shoreline's

relationship to the larger Hudson River.

WATER
The water portion of Hudson River Park is bounded on the south by the north bulkhead of Battery Park City and on the north by the north side of Pier 99 located at the foot of West 59th Street. The eastern boundary of the water area is a continuous historic bulkhead which includes relieving platforms. The west boundary is the U.S. Pierhead Line as designated in 1856 by the Commission for the Preservation of the Harbor. This line was delineated to protect the river's navigable channel. It was subsequently adopted by the Federal Rivers and Harbor Act of 1899 (as amended), and is also identified on the official map of the City of New York.

PIERS
The Sanctuary contains 36 piers, plus a number of platforms. Some of these structures are utilized for recreation and other purposes, but others are deteriorated, unsafe, and closed to the public. Construction of commercial piers began on the Hudson in the early 1800's and progressed from south to north. Pier numbers followed this progression of development, and while many piers have been replaced or repaired over the years, they have retained their designated number. Maximum pier lengths are defined by the U.S. Pierhead Line.
Under the Act, piers not included in the park are: Pier 76*; Pier 78, which is privately owned by New York Waterway, a ferry operator; Piers 88, 90 and 92 which are currently, and will continue to be, managed by the City as passenger ship terminals; and Pier 94, which is being used for trade show operations by the City.
* Under the Act, the park will eventually include 50 percent of Pier 76, but this pier is currently City-owned and used by the New York Police Department (NYPD) for storing towed vehicles.

BULKHEAD
Nearly five miles of bulkhead define the high-water line of the Sanctuary. Constructed between 1871 and 1936, in large part by the New York City Department of Docks, this bulkhead stabilized the shoreline of the once industrial waterfront. The bulkhead has been determined to be eligible for listing on the State and National Registers of Historic Places. The *ESMP addresses management of the river west of the bulkhead.*

UPLAND
The Hudson River Park also includes upland area between the Route 9A bikeway/walkway and the bulkhead. The ESMP will not uniformly address the Park's upland elements, but does speak to upland issues of sustainability, habitat, and sanctuary-related features, such as the estuarium and ecological piers, and conflicting use. Those that potentially can potentially effect the Estuarine Sanctuary , such as fertilizing and litter control practices, are addressed by the plan.

The report goes on to enumerate the native biota of the Lower Hudson River: Phytoplankton (mainly diatoms); submerged aquatic vegetation and benthic macroalgae; zooplankton; benthic invertebrates; fish; and birds.

Water Quality

The tidal cycle in New York Harbor effects the salinity of the Hudson River, which varies hourly. In summer and fall when upstream flows are lower, tidal-swept saline water reaches further upstream. In the winter, when upstream water flows are high, freshwater overflows on top of saline water (on account of density differences) and the river environment is stratified.

The Lower Hudson River has the typical problems of a modern river. There are combined sewer overflows (CSOs), low dissolved oxygen (DO) levels, and a high dependence on wastewater treatment plants and other expensive infrastructure to maintain and monitor its water quality. Stormwater runoff and CSOs contribute to 85% of all floatable debris in New York Harbor. Upstream of the City is a post-industrial river bed laden with PCBs from General Electric's plant.

Conclusions

While there are some native plantings and attempts at stormwater management that are present in the park, the overall master plan concedes the edge to its existing, real estate driven conclusions. The park serves as a social-cultural buffer to the city's density, but only allows one to approach the river, rather than touch it. And few New Yorkers wish to come into contact with the water. It is possible to launch kayaks from several locations, but the ecological literacy that might have been enhanced has been left as a mystery, far below grade.

Lessons Learned

Hudson River park is great example of patience and persistence in creating a magnificent public space. Development happened over an extensive period of time but was able to over time work through many different hurdles to be built.

The park is designed to be cohesive but has separate designers for the areas of the park and within that each pier becomes its own space and destination. This creates a diverse and interactive space for many people and demographics.

The funding structure for hudson river park is something to look at. There is extensive controversy over fully funding a park through commercial efforts is the way to go, but any park needs to be able to support itself to some degree in terms of maintenance and upkeep. When looking at the Seattle waterfront it will be important to look at ways to bring in maintenance funding for the long run.

The park, though successful, does not address the edge in a meaningful way, and tends to reinforce it rather than challenge it.

References:

Bone, Kevin ed; *The New York Waterfront, Evolution and Building Culture of the Port and Harbor,* © 1997 Monacelli Press, New York. Pgs 221-227.

Gastil, Raymond W.: *Beyond the Edge, New York's New Waterfront,* 2002 Princeton Architectural Press, new york. pgs. 126-130

Seattle Department of Planning and Development: http://www.seattle.gov/dpd/planning/central_waterfront/partnershipscommittee/briefingbook/index.htm

Hudson River Park Trust: http://www.hudsonriverpark.org/index.asp

Abel Bainnson butz, LLP http://www.abbnyc.com/projects.html

Hudson River Park Estuarine Sanctuary Management Plan, September 2002; Hudson River Park Trust with Allee King Rosen & Fleming, Inc. and PBS & J.