Built Waterfront
Through Edge, Connection, and Exchange
Reclaiming the waterfront for Greenpoint
A Project in Brooklyn, N.Y.

by

Rodney P. Ziesemann

Bachelor of Industrial Design
Pratt Institute, Brooklyn, N.Y. 1992

Submitted to the Department of Architecture in Partial Fulfillment of the Requirements for the Degree of Master of Architecture at the Massachusetts Institute of Technology, February 1998.

Signature of Author
Rodney P. Ziesemann
January 23, 1998

Certified by
Fernando Domeyko - Perez, Senior Lecturer in Architecture
Thesis Supervisor

Accepted by
Roy Strickland, Associate Professor of Architecture
Chairperson, Departmental Committee on Graduate Students

© Rodney Ziesemann 1998. All rights reserved. The author hereby grants to M.I.T. permission to reproduce and to distribute publicly paper and electronic copies of this thesis document in whole or in part.
To my mother and father for their love, generosity, and patience.

Advisor
Fernando Domeyko
Senior Lecturer in Architecture

Reader
Peter Testa
Associate Professor

Reader
Hasan-Uddin Kahn
Visiting Associate Professor

Unless otherwise noted, all images are by the author.
Built Waterfront
Through Edge, Connection, and Exchange
Reclaiming the Waterfront for Greenpoint
A Project in Brooklyn, N.Y.

by
Rodney P. Ziesemann

Submitted to the Department of Architecture on January 23, 1998 in partial fulfillment of the requirements for the degree of Master of Architecture.

Abstract

Currently the waterfront of Brooklyn N.Y. between the Gowanus Canal of Redhook and the Newton Creek of Greenpoint is predominantly lined with various types of industrial and manufacturing uses. Scattered throughout are abandoned warehouses, industrial buildings, empty fenced lots, and dilapidated piers. Occasionally there exists a publicly accessible edge or a inhabited waterfront. Most if not all of the adjacent communities have lost their historic connection with the edge and waterfront.

Greenpoint is an active community which suffers from an industrial abandoned waterfront.

This investigation is attempting to prove that the lost connection between the community of Greenpoint and its waterfront can be reclaimed through building a physical exchange between water and earth.

Thesis supervisor
Fernando Domeyko - Perez
Senior Lecturer in Architecture, M.I.T.
1. INTRODUCTION

Brooklyn waterfront

current condition

2. GREENPOINT

physical location

access

history

current

site map

site photos

3. PROJECT VISION

program

4. SITE ANALYSIS

site

cities plan

urban decisions

studies

building gesture

5. ARCHITECTURAL PROGRAM

water

access

roof / structure / light

baths

internal connection

6. PROJECT

sketch model

site plan

massing

typology

plan

longitudinal section

cross section

7. SKETCHES

8. ACKNOWLEDGEMENTS

9. BIBLIOGRAPHY
introduction
Europeans began to settle into the Brooklyn waterfront areas from the early to mid 1600's. From then on the Brooklyn waterfront quickly grew to become one of the worlds most heavily concentrated industrial and manufacturing centers. The first waterfront areas to be developed for industrial uses, along with piers, warehouses, and ferry terminals were Greenpoint, then later Williamsburg, the Navy Yard, Fulton Ferry, Brooklyn Heights, later followed by Redhook.

By the 1800's, the waterfront of Greenpoint had developed into a great shipbuilding industry. Later, the Williamsburg waterfront developed with heavy industries, such as sugar refining and bulk oil storage. These industries are still in use. The inland communities of Greenpoint and Williamsburg relied heavily upon the rapid development and prosperity of the waterfront industries. Many residential communities developed adjacent to the waterfront because the industries provided income and security.

The first ferry terminal which linked Brooklyn to Manhattan was established in 1642 along Old Fulton Street. Soon after this the adjacent area of Brooklyn Heights became the first community to be urbanized with elegant town houses and grand hotels. Redhook emerged in the 1800's as one of New York's most active shipping and warehousing terminals.

**The decline of Brooklyn's industrial waterfront**

Construction of the Brooklyn-Queens and Gowanus expressways began in the 1940's. This urban intervention had a dramatic effect on parts of the Brooklyn waterfront and its neighboring communities. The waterfront industries were physically cut off from their adjacent residential communities and inland industries. Historic physical connections with the waterfront were broken.

New development in shipping and warehousing technology also contributed to the decline of Brooklyn's waterfront. The new technology changed shipping and warehousing from bulk to containerization. Much of the waterfront could not make the shift nor keep up with the modern port operations of New Jersey.

The decline in waterfront activity and manufacturing produced vacant and or underutilized buildings, warehouses, land, and piers. However, the area does still retain considerable maritime and industrial activity, which continues to play an important role in the economy of Brooklyn and the city.

---

*Source: New York City Department of City Planning Sectional Maps.*
Currently the waterfront of Brooklyn N.Y. between the Gowanus canal of Redhook and Newton creek of Greenpoint is predominantly lined with various types of industrial and manufacturing uses. Scattered throughout are abandoned warehouses, industrial buildings, empty fenced off lots, and dilapidated piers. Occasionally there exists a publicly accessible edge or a inhabited waterfront. Most if not all of the adjacent communities have lost their historic connection with the edge and waterfront.

The current physical urban condition of this industrial and or abandoned waterfront is threefold.

1. The waters edge cannot be physically experienced or inhabited by the adjacent community or by the public.

2. The industrial and or abandoned waterfront is a physical and or visual barrier between the adjacent community and the waters edge.

3. The waterfront has virtually no physical or behavioral association with the adjacent community and its commercial strip. The community has lost its historical, physical, and behavioral connections with or inhabitation of its own waterfront.

Greenpoint is an active community which suffers from an industrial abandoned waterfront. It is a optimum place to investigate how to re-connect the existing community with its waterfront.
Greenpoint
physical location

Greenpoint is located in the north western portion of the Borough of Brooklyn New York. It is bordered on the north by Newton Creek. This water inlet separates Greenpoint from the Borough of Queens and is mainly used for the transportation of barges. Toward the east is the BQE (Brooklyn Queens Expressway), Brooklyn Union Gas, and Maspeth Creek. Toward the south is the district of Williamsburg. The particular boundaries which demarcate the district of Greenpoint from Williamsburg are McCarren Park (a recreation area shared by both communities), and the Bushwick Inlet. This Inlet is the remains of a once continuous waterway that used to connect with Newton Creek making Greenpoint a physical island. The Inlet was filled in during the 1960s, giving rise to McCarren Park. The entire western portion of Greenpoint is bordered by the East River.
access

Subway

There is no direct access from Manhattan. To get to Greenpoint from Manhattan one would need to take the L train one stop across the East River into Brooklyn to Williamsburg, and walk 10 minutes north through McCarren Park into Greenpoint. The G local makes two stops in Greenpoint along Manhattan Avenue.

Bus

The three major bus systems which serve Greenpoint all stop along Manhattan and Greenpoint Avenues, connecting the community with Queens, Williamsburg, Downtown Brooklyn, and the Fulton Ferry District.

Car

Car access to Greenpoint is not so limited considering the many major routes that pass through the community or that one has easy access to. Franklin Street, Manhattan Avenue, and McGuiness Boulevard, have direct connection to Queens, Williamsburg, and Broadway Street. The BQE connects directly with Queens, the Williamsburg Bridge, and Manhattan.

Subway map
Source: New York City Transit subway map.

Bus map
Source: New York City Transit bus map.
The development of Greenpoint as an urban center began in 1832 when Neziah Bliss (1790-1876) acquired a large piece of land in North Eastern Brooklyn (what is now Greenpoint). In 1834, Bliss had all his land surveyed and mapped into streets, and in order to connect Greenpoint with the growing village of Williamsburg he had a bridge erected over Bushwick Creek, now the Wallabout Channel and North 14th Street. In 1839 Bliss opened the Ravenswood, Greenpoint, and Hallett's Cove Turnpike along what is now Franklin Street. This new road, which connected Greenpoint, Williamsburg and Astoria Queens ended the rural character of this district and precipitated its growth as an urban center.

Shipbuilding

The 1850s brought a period of general prosperity and financial expansion for New York City. The wealth which flowed into the city, coupled with the massive European immigration, created a building boom which radically transformed the character and size of the city. The shear growth and development on the Island of Manhattan began to displace the great shipyards from their traditional location along the East River from Grand Street North to East 14th Street.

Over a dozen firms moved across the river to Greenpoint, transforming its waterfront into one of the major areas for shipbuilding in the country.

Greenpoint today still contains a number of buildings from the shipbuilding era.

Many of the frame houses on Milton Street and Noble Street were built by shipwrights and ship carpenters to house the workers employed in the shipyards. Many of the buildings on Franklin Street date from the early 1800s.

The first shipbuilding firm to leave Manhattan for Greenpoint was headed by Eckford Webb, a member of one of the most prominent shipbuilders in the United States during the nineteenth century.

Webb and his firm produce over 150 ships and received international recognition for his work. Webb Avenue in the Bronx was named in honor of him. He founded and financed the Webb Academy for Shipbuilders. This school exists today and is regarded as the country's premiere institute for training naval architects.

Eckford Webb entered partnership with George W. Bell in 1856. The firm became known as Webb & Bell, and was located at the foot of Milton Street. However, with the decline of shipbuilding in New York in the 1870s, the firm shifted its interests to oil and paint manufacturing.

Another important firm was that of Thomas Fitch Rowland (1831-1907), who founded Continental Works between Noble Street and Meserole Avenue. Following the outbreak of the Civil War the Department of the Navy commissioned Rowland to produce gun carriages and mortar beds. Continental Works in partnership with John Erickson built the hull of the first iron clad ship the Monitor. With the success of this ship's fighting ability the firm was contracted to produce four more iron-clads: the Montauk, the Catskill, the Passaic, and the double turretled Onondaga.

1. New York City Department of Planning. "Greenpoint Historic District Designation Report." p.2

2. Ibid, p.3
With the general decline in the shipbuilding industry following the war, Rowland began to design and manufacture boilers, steam engines, and equipment for the oil and gas industry.

Another important shipbuilder of this time was John Englis (1808-1888), the founder of Englis & Son. His firm located at the end of Kent Street produced some of the most famous luxurious steamers to sail the Hudson River and Long Island Sound. During the Civil War, Englis built Union vessels to be used in enforcing the blockade of the southern ports. He also produced ships for private interests to be used in the Chinese trade. After the war his son John Englis, Jr., was taken into partnership. The firm Englis & Son remained in business until 1911, making this firm the only one of the great nineteenth century shipyards to remain active just before World War I.

After the civil war there was a major decline in shipbuilding due to a number of factors in particular the advent of the iron ship which New York shipbuilders were reluctant to build. However, since a number of other industries had settled into the area, Greenpoint supported a diversified economy and did not suffer drastically from the depression in shipbuilding. Factories producing porcelain, china, glass, refined sugar, boxes, pencils, machinery and boilers, as well as oil refineries supported the economy.

**China and Porcelain**

Another industry which had firmly established itself in Greenpoint prior to the shipbuilding trade was the production of porcelain and china.

Charles Cartlidge & Co was the first pottery works in Greenpoint. It was established in 1848 by an Englishman named Charles Cartlidge. The factory was located near Freeman and West streets on what was then called Pottery Hill. The factory manufactured tea sets, pitchers, bowls, door knobs, buttons, cameos, and busts. Many of the firm's pieces had won prestigious awards and were exhibited at the New York Crystal Palace in 1853. The Brooklyn Museum has collected numerous examples of their work. Unfortunately in 1855 the company suffered financial difficulties and had to close.

In 1850 two years after Cartlidge's pioneering effort, a German family, William Boch and his four sons moved to Greenpoint and began their pottery business. They started several firms but only two survived, the Union Porcelain Works and the Empire China Works. The factories produced stair rods, decorated plates, door trimmings such as knobs and key hole covers. As with Cartlidge, these firms ran into financial difficulties as well.

The Union Porcelain Works passed into the hands of a stock company which induced Thomas C. Smith to underwrite them. ¹

Under Smith's direction, the Union Porcelain Works was to become one of the most famous porcelain producing factories in the country, both for its innovative approach towards manufacturing and quality control. Smith's porcelain achieved importance as the first hard porcelain to be successfully manufactured in the United States.

---

¹ Ibid, p.6
To insure quality he purchased his own quarry for quartz and feldspar, constructed his own machine shop for the necessary tools and machinery, modernized the plant buildings, and for the decorated wares hired the eminent artist, John Mackie Falconer, and the sculptor, Karl Muller.

After Smith's death in 1900 his son C.H.L. Smith inherited the firm. By the mid 1920s following the son's death the Union Porcelain Works was closed.

**Glass**

The Greenpoint Glass Works located on Commercial Street was one of the best known glass factories in the area. It was founded by Christian D. Forflinger (1828-1915) in the 1860s. His glass was so regarded that Mary Todd Lincoln commissioned the Greenpoint firm to produce table settings for the white house. Christian's health forced him to the country and the works was singed over to two former employers. The company changed several hands and names over the following decades finally ending in 1946 with the Gleason Tiebout Co. who produced lamps and bulbs.

**Oil**

Throughout the nineteenth century Greenpoint and its neighboring community Williamsburg became the oil refining center for New York City. By far the most famous of the refineries was the Astral Oil Works founded by Charles Pratt. The refinery was located in Williamsburg however many of the workers were from Greenpoint, and in 1886, Pratt built one of the country's first model housing developments for workers.

The Astral Apartments was located on Franklin Street between Java and India Streets, and was considered highly innovative at the time of its construction. The building was to provide a greater degree of air, light, and sanitary facilities to each apartment than was typically found in flats during that period. Pratt bought up the small independent refineries in Greenpoint and joined with John D. Rockefeller to form Standard Oil. Currently there are no refineries in Greenpoint, however some oil storage tanks still remain and remind us of the role the area once played in the development of this most important national industry.

By 1883, eighteen of the twenty glass factories in Brooklyn were located in Greenpoint, as were all of the porcelain and pottery works, the majority of the brass foundries, and iron foundries and many breweries, book and drug plants, the wholesale furniture trade and scores of other industries, making Greenpoint one of the most important manufacturing districts within the region. Although many of these industries have left Brooklyn for other cheaper areas of the country, Greenpoint still remains a major manufacturing section. Today in Greenpoint there are approximately 500 firms in manufacturing, processing, wholesaling, retailing, and warehousing which employ about 21,000 workers.

*On the following page are images taken throughout Greenpoint's waterfront which reminded me of the district's rich industrial past.*
current

Waterfront

Greenpoint has an almost continuous band of active industrial uses along the water's edge and a mix of industrial, residential and commercial uses inland. At the northern tip bordering Newton Creek are eight industrial buildings containing woodworking, furniture manufacturing, down and feather processing, and a Transit Authority bus repair facility.

The Greenpoint lumber Exchange, located at the entrance to Newton creek has been in operation since 1934 and is the only specialized marine terminal for lumber now operating in New York City. It owns 34 acres of land and provides storage space for local contractors and wholesalers. It uses a 500 foot long pier for bulk cargo ships.

The Newton Barge Terminal Playground separates the Lumber exchange and the Bus repair facility.

Light industrial uses stretch southward from the lumber exchange to Kent Street. These include a printer, an envelope manufacturer, and a light fixture manufacturer. Between Kent and Greenpoint Ave. is the city owned former WNYC transmitter site. The 1.2 acre, grassy open space has two 300' radio transmitter towers and two small one story buildings that are currently being used by the Department of Parks and Recreation (DPR).

Greenpoint Terminal market

Between Greenpoint Avenue and Oak Street is the former Greenpoint Terminal Market. The site consists of 14 acres of privately owned mostly vacant land.

The six industrial buildings range in height from one to seven stories and cover approximately 70% of the site. The four piers on the site are in varying states of disrepair. A plastic manufacturing firm occupies portions of two buildings most inland. The entire 11 acre block at the southern most section of the site is occupied by two trucking firms.

Economy

*In 1991, there were 99 industrial firms with 2,439 employees in the larger Greenpoint industrial area.*

Manufacturing accounted for about half of the industrial employment. Major manufacturing includes paper products, craft related activities and woodworking.

*Approximately 41% of the 232 acres in Greenpoint is used for industry and about 40% is residential. The remaining 9% of land is vacant most of which is accounted for by the Greenpoint Terminal Market site.*

Commercial strip

Manhattan Ave. The G line subway stop, and all the major bus stops all pass through Manhattan Avenue making it a place of exchange for public transit.

The streets are lined with mom and pop shops, ethnic deli's, Korean groceries, and various types of restaurants from American, Polish, Greek, Indian to Thai.


2. Ibid. p.61
Major supermarkets, five and dime stores, family doctors, hospitals, hardware, and BurgerKing make this Avenue a self sustaining commercial strip. At the local news stands one can purchase the latest Polish magazine, the Greenpoint Gazette, and the New York times.

**Social places**

**Y.M.C.A.** Located in the heart of Greenpoint it is the only indoor recreation/learning center for the community. Open to all ages of the with activities ranging from water sports, computer classes, aerobics, yoga, chess, and group family therapy.

**Religious institutions.** St. Cyril and Methodist with convent, St. Elias Greek Rite Catholic Church with sunday school, Church of the Ascension Episcopal with sunday school, St. Johns Lutheran Church, Greenpoint Dutch Reformed Church, Union Baptist Church, St. Anthonies with convent and school, Polish Catholic Church of the Resurrection, Cornerstone Temple, Church of the Holy Family with rectory, convent and day care center, Synagogue with school, Irish School of Methodist with rectory and parish hall.

**Other.** The Polish Alliance Center, The Brooklyn Public Library Greenpoint Branch, and three major district schools.

**Open spaces.**

**American Park.** Located between Noble and Milton Streets below Franklin Ave. This park is the physical threshold between the old waterfront (the Greenpoint Terminal Market), and the heart of Greenpoint.

The surface of the park is paved with many trees, a basketball court, a handball court, a place for kids to play, a place to relax and watch, and a public bathroom. The park is used by all age groups. American park is a physical extension of the community towards the waterfront.

**McCarren Park.** Sits between Williamsburg and Greenpoint covering an area of almost 8 blocks. The park is used by both communities. Activities include baseball, basketball, handball, a running track, and kiddy play area. McCarren Park did not seem to have the same intense daily use as American Park.

**Newton Barge Terminal playground.** Located on Th. e northern most tip of Greenpoint adjacent to the Greenpoint Lumber Exchange. The inland portion of the park has a paved surface with seating, and several swing sets. The area closest to the river is a hard surface baseball field, with basketball and several handball courts. The local inhabitants mainly use this parks facilities.

**India Street pier.** An abandoned pier at the end of india Street, used mainly by the people of the immediate area for fishing sunbathing, socializing, drinking, and hanging out. It collapsed in the summer of 1997 and is no longer accessible.
The adjacent page has two diagrams which illustrate the current physical condition of Greenpoint.

The heart of Greenpoint, its center of gravity is circled. This is the community's main governmental, institutional, social, and commercial district.

Running through its center is the life line of Greenpoint. Its commercial and public transportation strip.

Beyond West Street is Greenpoint's waterfront. This entire portion of land is lined with industrial buildings and uses, all of which block public access and views to the water but are never the less vital to Greenpoint's economy.

As a result the citizens of Greenpoint have no physical connection with or access to their waterfront.

Between Greenpoint Ave. and Oak Street is the abandoned Greenpoint Terminal Market. This waterfront parcel is marked for development in the near future. The community now has the opportunity to physically reclaim part if not all of its waterfront.

However, this raises two important questions.

1. How to re-connect the existing community with its waterfront at the urban scale?

2. What type of architecture / building will benefit the existing community now and support forthcoming development?

Source: Sanborn Map Company, New York.
site photos
1. Bushwick Inlet.


5. American Park north.

7. Deli, corner of Franklin Ave. and Milton Street.

8. Greenpoint Terminal Market. THE SITE.
9. Corner of Greenpoint Ave. and West Street.

10. Kent Street pier.
11. India Street pier.

12. India Street pier.

project vision
program

Urban

The vision of the project at the urban scale is to reconnect the community of Greenpoint with its waterfront.

A plan for the Greenpoint Terminal Market site will be proposed, providing a large framework to work within.

The diagram on the following page illustrates Greenpoint's center of gravity being connected with the waterfront, simply through opening a small space within the Greenpoint Terminal Market site. This is the large urban framework in general.

Within this structure one building and one open space will be inserted. It is intended that the building and the open space will provide a viable physical infrastructure, which will benefit the existing community now, future inhabitants, and forthcoming adjacent development.

Architecture

The infrastructure will be a health center for the citizens of Greenpoint. This health facility is different from most others in that it combines the bodily exercise of the mental with that of the physical, as well as providing a place for the public to spectate and to simply be.

The architectural investigation is rooted within the natural elements of water, earth, and light. Specifically how to construct and intensify these elements to make a place for the body to experience the mental and the physical.

WATER

swimming pool 12,575ft.sq.
physiotherapy
massage room
therapy room
therapeutic pool 345ft.sq.
public baths
hot air sauna
turkish sauna
ice bath
steam room
warm bath

EARTH

basketball court
indoor running track 12,540ft.sq.
weight training room
nautilus room
racketball courts 6,000ft.sq.
gymnastics
variable activity space 4,800ft.sq.
cafe
facilities
office / administration
entrance reception
storage
maintenance

Diagram illustrating the connection between Greenpoint's center of gravity and its waterfront.

Greenpoint Land Use Map.

Source: Sanborn Map Company, New York.
site analysis
**site**

**Physical condition**

Furthest north are the dilapidated piers of India, Java and Kent Street. India Street pier despite its dangerous condition is still used by the neighboring inhabitants.

Below is the Transmitter site which is currently leased and run by the Department of parks and recreation (DPR). On the site stands two 300 foot radio receiver towers and two small buildings, all used by the (DPR).

Below between Greenpoint Ave. and Oak Street stands the former Greenpoint Terminal Market. The buildings between Oak and Milton Street are brick load bearing structures with heavy timber framed floors. The buildings between Milton Street and Greenpoint Ave. are one story steel shed structures.

The Trucking Company sits south, and occupies the whole area between Oak street and Noble Street. The structure is a one story brick building.

Bushwick Inlet sits furthest south. The waterfront is lined with one story brick buildings used for storage and a wholesale clothing store.

Furthest north one block inland is the old Faber Castle Pencil Company. The six story ornate brick buildings are now used for storage, mixed use, and a thread / knitting manufacturer.

The M24 bus stop is located on the corner of Greenpoint Ave. and West Street. This is a local bus connecting the community of Greenpoint with Williamsburg and Queens.

American Park is located within the immediate site.

The remaining blocks of the immediate site which were not called out are light industrial and residential.
Based on the Comprehensive Waterfront Plan administered by the New York City Department of City Planning. The following criteria has been given to Greenpoint’s waterfront.

Develop the former WNYC transmitter site for public open space. The 1.5 acre site is currently and will remain under jurisdiction by the DPR (Department of Parks and Recreation). The DPR will continue to use the two 300 foot radio tower receivers, as well as the two one story buildings. The remainder of the site should be developed for public open space.

Greenpoint Avenue. The street should be improved with trees, and signage making it the main waterfront access corridor in Greenpoint.

Rehabilitate the Noble Street pier. Noble Street pier is the only city owned pier in Greenpoint. This pier should be rehabilitated for public recreation and open space use. Noble Street should be built and opened to the public, providing an access corridor to the pier.

Rezone the former Greenpoint Terminal Market to permit residential development. Two acres should be devoted to public access, and a 40 foot wide shore public walkway.

The blocks adjacent to the site on the south should be zoned to light industrial to ensure compatibility with other industrial development in the area.

The site plan should integrate the surrounding neighborhood. The industrial buildings on the site and adjacent to it reflect the character and history of the neighborhood. The site plan should try to incorporate some of them as industrial uses along with the residential development.
urban decisions

Site

Greenpoint Ave. is adjacent to the site providing easy and direct access to the subway, bus, ferry, and trucks for servicing the facility.

The shed structures on the site can be easily torn down thus providing an optimum place for inserting the first building in the development.

Edge

The edge from the Bushwick Inlet to the ferry and beyond should be a path with various public places.

Housing

Housing should be located adjacent to American Park on the west and south providing a healthy continuity of the existing community toward the water.

The major portion of housing should be built on the southern most tip of Greenpoint overlooking Bushwick inlet and Manhattan.

Transmitter site

A major portion of the site should be allocated to parking for the new facility and future ferry service.

Ferry

Direct connection with the island of manhattan is inevitable. The ferry terminal should be located at the end of Kent Street providing easy access to Greenpoint Ave. and the bus stop.

Greenpoint Terminal Market

The buildings on the waterfront are structurally sound, have historic significance, and contribute to the visual quality of Greenpoint and its waterfront. The buildings should be rehabilitated to benefit the community. The ground floors should be public and have an association with the waterfront.

Waterfront plaza

A new waterfront plaza should be constructed between the Greenpoint Terminal Market and the new facility. The plaza should focus architecturally on water and the horizon. Publicly this plaza will be activated by a cafe adjacent to the new facility and a restaurant overlooking Noble Street pier.

Site model with diagram of major urban decisions.
*studies*

Study #1

Building the reciprocity between the urban plaza and entrance.

Study #2

Building the exchange of water and land at the city scale by piering out towards the river with the building.

Study #3

Constructing an internal continuity between the water and urban street.

---

Early studies of the building gesture.
building decisions

West street edge

The edge of West Street is intensified by an outdoor urban green strip where one can view the internal activities of the facility or simply sit along the street edge.

Internal urban plaza

The space adjacent to West Street is conceived as an internal urban plaza. The plaza has visual and controlled physical access to the West Street.

Building edge

The public edge of the building is intensified through visual access, the entrance, and the cafe.

Entrance

The entrance is adjacent to the waterfront plaza. The public cafe and views to the public swimming pool intensify the entrance.

Secondary access

A second public entrance to the facility is adjacent to Greenpoint Ave. and the parking lot.

Internal connection

The internal connection between water and community is built through the main access corridor.
architectural program
A major component of this building is water. Water for exercise, for therapy, and for public bathing.

The sketch reveals the horizontal nature of water through a construction of planes. Each plane builds a territory upon which a specific behavior associated with water occurs. The large surface is swimming. The Middle surface is physical therapy, ending on the bottom with the baths.

The largest plane extends out toward and over the East River revealing the artificiality of the bathing water while providing a place to be within the landscape of the city.
access

Access is an architectural construction by which one moves into, within, and out of the building.

The sketch constructs access through horizontal and vertical elements that fold and articulate to form what I refer to as canals.
I use the metaphor of a tree to investigate roof, structure, and light.

This sketch investigates a simple steel column structure to hold up an articulated roof system, all which allow light to cascade down within the building.
The primary concern with the public bathing area was intimacy and light.

The sketch constructs intimacy and light through the use of columns, walls, and transparency. The baths receive light not only from the sky, but from diffused light entering from within the building through a translucent glass screen. As one enters the building one sees the collected steam as well as figures moving behind the screen.
The physical connection between the community and the waters edge is addressed at the building scale as well as the urban.

The connection is built architecturally through an internal street, providing view and access of the water on one end and that of the community on the other.

This territory of the building is where the public and athletes move, spectate, and participate. It is where light, structure, view, and activity all come together.

This internal connection is the life and blood of the building.
project
**Sketch model**

Early sketch model exploring the major organization of the urban plaza, entrance, pool, baths, and changing facilities.
site plan with building sketch
Site plan in context showing organization.
massing model

Plan view of massing model.
typology model

Plan view of typology model
Plan drawing of first floor.
longitudinal section
section A west east
cross section
sketches
urban site plan

Early urban site plan showing overall organization.
water movement diagrams

Diagram of water movement through baths and building.
In order to enter the pool, you have an
open curved ramp through the water.
A separate curved ramp leads to the
adjacent area.
Sketch of baths in plan showing major organization.
baths

Left: sketch for baths and dimensions.

Right: sketch for baths showing quality in the space.
changing facilities

Left: sectional sketch for changing facilities.

Right: section for changing facilities.
Left: plan sketch for pool organization.

Right: early sketches for pool and structure.
Left: sketch of water flowing from pool down to the baths.

Right: sketch of the structure for pool and connection to plaza.
Acknowledgments
thankyou

Dr. William Fogler
for the countless hours you have spent with me looking, analyzing, and making.

Jane Kim
for your kindness and generosity throughout the many years.

Jan Wampler
for your continuous support, belief, and offered experiences beyond the walls of M.I.T.

my thesis committee
for your persistence, encouragement, and pushing me beyond my abilities.

thankyou Jason, Eileen, Rob, Bundit, Soo-Hwa, and Joel for enriching my days and making the whole experience worthwhile.

sandra for helping me see the many things that really counts in life - thankyou.


Schwartz, Gertrude. “Place Names in Greenpoint”. Brooklyn College of the City University of New York, June 1966.


for the little boy who has been with me since the brooklyn years.

image painted by paul Klee.

Source: unknown.