



ASSIGNMENT :

4

Nov 09-
Dec 5/6

architecture [and] ecology

A new ecological ground as an activated body, the calibrated intersection between land and water; Architecture as a thickened edge, volumetrically reinterpreting living systems.

ON

X-PIER Create a waterfront structure, as an augmentation of the city's surface, in order to achieve a dynamic landscape, cityscape, and building interface that engages the East River and plans for future city rhythms: reaching out into the water, yet tied back to the land into the living system of the city.

The X-Pier will be the first one along the East River Park, in stark contrast to the highly developed West edge of Manhattan, which counts **36 programmed, usable piers compared to 9 along the East River**, with Pier 107 as the only remaining pier that protrudes into the East River north of East River Park. The X-Pier seeks to re-imagine Manhattan's precious waterfront - from the Brooklyn Bridge to East 15th Street.

The East River, historically the East edge of Manhattan, moves more and more into the center, essentially becoming a central line between Manhattan, Brooklyn and Queens. The X-Pier is not only reaching out onto the water, but potentially also reaching in, connecting the East River Park to the City, which is currently mostly cut off by the FDR Drive. The X-Pier should be considered as part of a regional plan for storm surge protection and rising water levels, with a rise in sea level by as much as two feet along the North American Atlantic coast by the end of the 21st century.*

Sitting at the edge of the city, the interface with the water, at the limit of 14th Street where it meets the East River Park, the X-Pier becomes part of the promenade sequence around Manhattan. Reversing the dominance of the car, the X-Pier gives priority to pedestrians and cyclists. A new transport interchange must be meticulously incorporated to allow easy pedestrian circulation between 14th Street and the East River Park. Moreover, the new reliance on ferries means that many people now arrive from the water at East 34th Street and require safe street crossings and transportation connections.

The X-Pier will predict future patterns of living in the city, **re-structuring, systematizing and re-grounding the urban relationship between infrastructure, ecology, and culture, ephemeral and physical. The X-Pier creates a new ground, physically, but also conditionally as a site of interaction.** Programs for the X-Pier will be variable and spring from a comprehensive list of possibilities. As the corners and intersections form a line east-west along 14th Street, the pier can be understood as an extension of this line beyond the edge of Manhattan, **a vector of energies to the opposite shore and horizon, pier-ing into the future of myth and reality.**

Topography /təˈpɑːɡrəfi/

Etymology

<Late Middle English: via late Latin from Greek topographia, from topos 'place' + -graphia (see -graphy). n. a. The arrangement of the natural and artificial physical features of an area: 'the topography of the island'. b. A detailed description or representation on a map of the natural and artificial features of an area.

Typology /tiˈpɒləʒi/

Etymology

<Mid 19th century (sense 2): from Greek tupos 'type' + -logy. noun. a. A classification according to general type, especially in archaeology, psychology, or the social sciences: 'a typology of Saxon cremation vessels'. b. Study or analysis using typology. c. The study and interpretation of types and symbols, originally especially in the Bible.

Morphology /mɒrˈfɒləʒi/

Etymology

<Mid 19th century: from Greek morphē 'form' + -logy. noun. a. The study of the forms of things, in particular. b. *Biology* The branch of biology that deals with the form of living organisms, and with relationships between their structures. *Linguistics* The study of the forms of words.

*See *Navigator* p. 52 for East River Blueway Plan Excerpt[s], history / evolution of East River



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CONSTRAINTS

>

- Your project responds to an in depth study of topography, typology, and morphology by combining no more than **3 Program lenses + 3 Typology lenses**, in order to define a new Archi-Type, X-Pier, see Archi-Type table below. Scrutinize the implicit relationship between man, manmade and nature; reacting to numerous natural and artificial stimuli
- Consider the X-Pier as part of a masterplan: edge expansion in order to protect Manhattan's East side (including the adjacent Con Edison Power Station) from future floodwaters
- Designs should consider energy practices, such as: solar, wind, wave, and tidal power, natural heating, cooling and ventilation. The pier could potentially become self sufficient, disconnected from land for electricity, water, etc.

• SIZE

No more than **2 stories** high

Approx. 200 x 200 ft [not including circulation to and from mainland]
(400 x 90 ft = average typical West edge pier proportion)

• SPACE

Designing volume through manipulation of the city's surface: intersecting and interacting with lines, grids and networks; planes with identified vectors of motion

Ratio:

Open : Enclosed **70% : 30%**

Structures should occupy no more than 30% of the platform, leaving at least 30% for walkways, gardens and open space
min. 25% Transparency to the water

Access points: connection to existing footbridge, or proposed new, spanning FDR Drive to improve pedestrian circulation to the waterfront

Lobby: 1000 sf

Exhibition: 700 sf temporary, 300 sf permanent

Transportation Hub:

docking: edge area no less than 100 linear ft

bicycle parking

Seating: no less than 100 people, modes of gathering or dispersing

BOH: Restrooms, 2 men / 2 women

Kitchen: 500 sf

Cafe: 1500 sf

Kiosks

***Note: Programs will vary as unique X-Pier Archi-Types develop**

• SITE

1 Site along the East River Park between the Brooklyn Bridge and East 14th Street*

• MOVEMENT

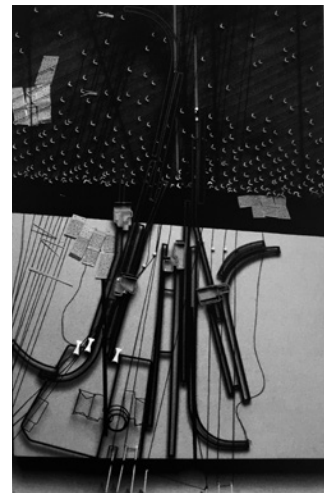
Designs should account for connections between modules/ elements at various scales, this will allow for fluidity in rearranging the urban extension and creating form as a prototype that could multiply and mutate within or around the city

Objective:

> Create an accessible and dynamic waterfront structure that engages the East River, and plans for resiliency, exposing unfamiliar rhythms of the city. **Manipulate established territories, evolving fresh topographies/ typologies/ morphologies.** The masterplan will re-establish the waterfront, with the X-Pier as part of a living system. The X-Pier as a new Archi-Type will result from the intersection of programmatic and typological considerations, creating a unique urban ecology. **Ecological and cultural forces emerge and the urban landscape flexes to respond.**



A Mur Island, Vito Acconci



A Retreating Village, Smout Allen

*See *Navigator* "ON" for site map



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REQUIREMENTS

- Analytical drawings of the city's edge and living systems
- Analysis of urban traffic and pedestrian flows in the area, and connection to pier
- Descriptive synopsis [150-300 words]: Selection/ definition of typologies and programs for X-Pier related to research in order to create your own unique urban ecology and living system.
- Site / systems map: Network composed of form and structure, shifting over time with pressures and vectors from the water and land, forming continuous relationships between parts, or ruptures, where softer elements meet hard elements.
- Study Models : Sketch, Diagrammatic, Programmatic, Kinetic
- Model: Spatial construct, volumetric, line --> volume
- Axonometric: shifting the plane, drawing continuity and ruptures in the system; soft vs. hard; anchored vs. free

1/16" = 1'0" Scale

1/16" = 1'0" Scale

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- 1 Plan, 1 Section

1/8" = 1'0" Scale

- Evolved site / systems map: Network composed of form and structure, shifting over time with pressures and vectors from the water and land, forming continuous relationships between parts, or ruptures, where softer elements meet hard elements.
- Descriptive synopsis [150-300 words]: Selection/ definition of typologies and programs for X-Pier related to research in order to create your own unique urban ecology and living system.
- Model: Spatial construct, volumetric, line --> volume PLUS
- Detail model, highlighting a particular element
- Axonometric: shifting the plane, drawing continuity and ruptures in the system; soft vs. hard; anchored vs. free
- 2 Plans
- 2 Sections: at least one vertical cross section that includes platform modulation and unique anchor type
- 3D Perspective[s] situating project along the city's edge: intersecting systems and conditons
- Documentation of its design evolution and movement (as video, photograph, GIF, drawings, other)

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- Core I Log Book **

FINAL



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ARCHI- TYPE >

Your project responds to an in depth study of topography, typology, and morphology by combining no more than **3 Program Lenses + 3 Typology lenses**, in order to define a new Archi-Type, X-Pier, see Archi-Type table below.

PROGRAM

Memory pier / Monument
Theatre of Tragedy
Theatre of the Absurd
Sun barge
Terminal: boat hub, boat launch
Farm / Park / Market
Power Plant : Solar, Wind
Storm surge/ Flood protection
Kindergarten
Water filtration
Oyster bar / farm / fishery
Fitness / Recreation
Gallery/ Museum

TPOLOGY

Pier
Barge
Bridge
Underpass
Overpass
Island
Peninsula
Dock
Lagoon
Filter
Wharf
Platform
Port

PROGRAM + TYPOLOGY = X-PIER . . .

READINGS >

- 1 Burns, Carol, and Andrea Kahn. "Why Site Matters." *Site Matters*. Hoboken: Routledge, 2005.
- 2 Callejas, Luis. "Islands and Atolls." *Pamphlet Architecture*, No. 33, 2013.
- 3 Conrads, Ulrich. "Frederick Kiesler: Space City Architecture." *Programs and Manifestoes on 20th-century Architecture*. MIT Press, 1971, 98.
- 4 Finsterlin, Hermann. "Architecture of the Future: Play of Forms and Subtle Construction." *Wendingen*, volume 6, issue 3. Amsterdam, 1924.
- 5 Marshall, Stephen. "The Challenge." *Streets & Patterns*, Routledge; 1 edition, 2004.

****NOTE**