

# PORTFOLIO



**COLUMBIA UNIVERSITY - GSAPP**

M.S. ADVANCED ARCHITECTURAL DESIGN

CLASS OF 2024  
JINJIAN CHEN

# CONTENT.

---

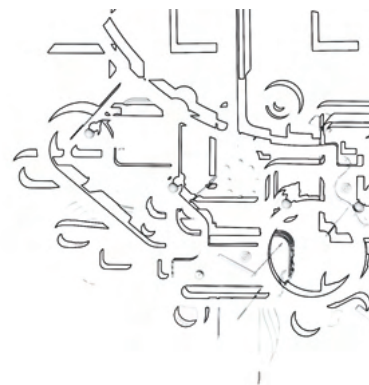


● A.

## FLOATSCAPE

FA 2023 STUDIO

STUDIO CRITIC: AMINA S. BLACKSHER



● B.

## NORHAVEN "FUN PALACE"

SP 2024 STUDIO

STUDIO CRITIC: IRINA VERONA,  
JENNIFER CARPENTER,  
JERRON HERMAN



● C.

## WATER GLITCH

SU 2023 STUDIO

STUDIO CRITIC: URIEL FOGUE

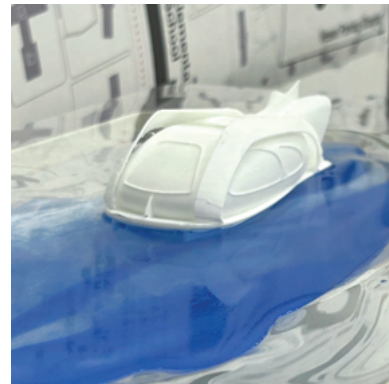
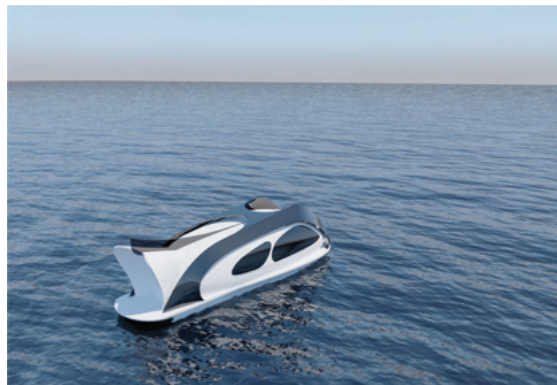
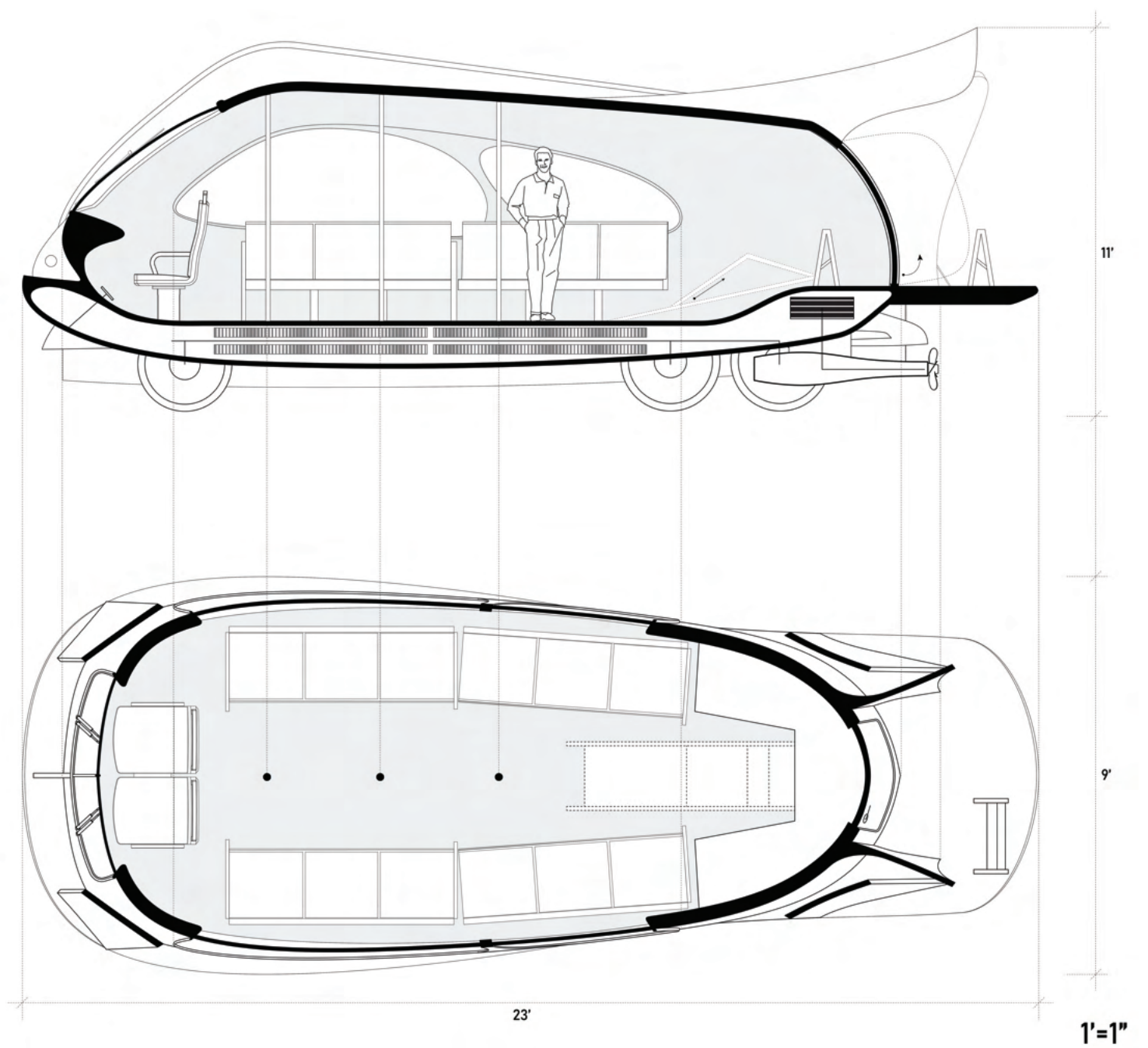


# FLOAT SCAPE

SU 2023 STUDIO  
NEW YORK

Given our growing susceptibility to extreme weather events, and anticipating a significant sea level rise, flooding New York City about five to ten feet in the future, the project: “FloatScape” utilizes the Spring Studio, located at the heart of Tribeca, as its prototype site. With its reputation for hosting innovative and artistic gatherings, Spring Studio serves as a hub for a wide range of communities. By adding additional structures attached to the Spring Studio, testing out the movement of people and transportation methods when the ground is absent due to severe flooding.

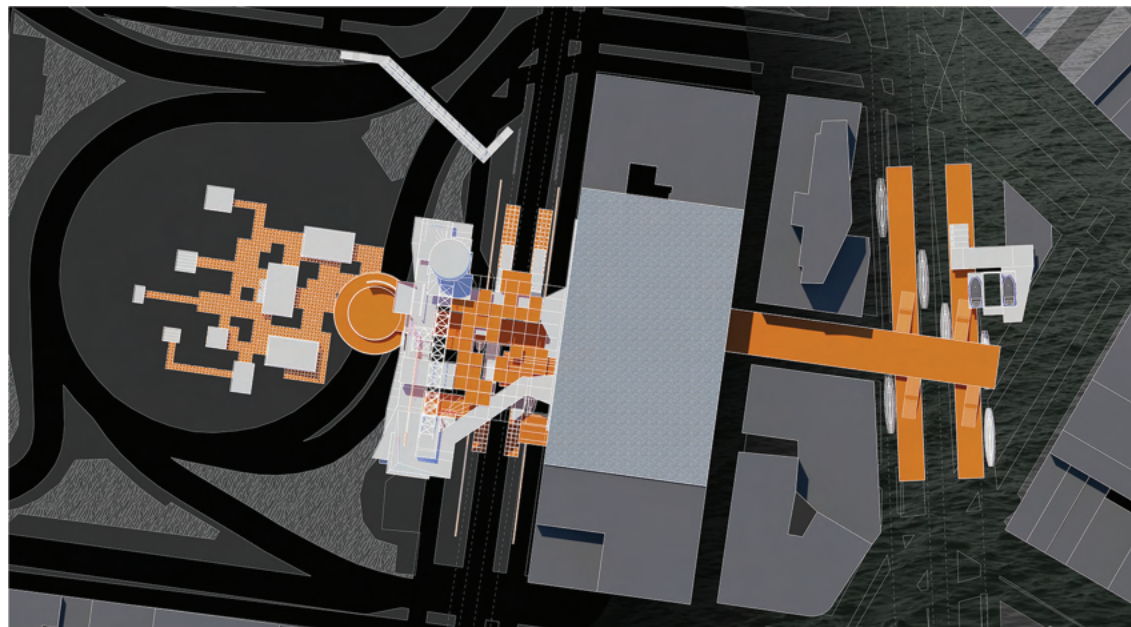
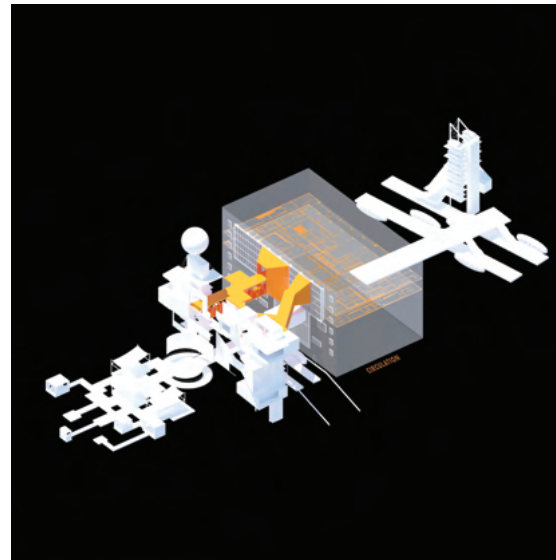
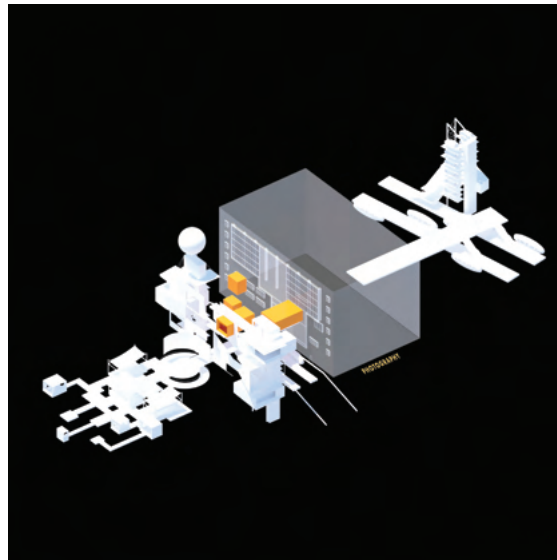
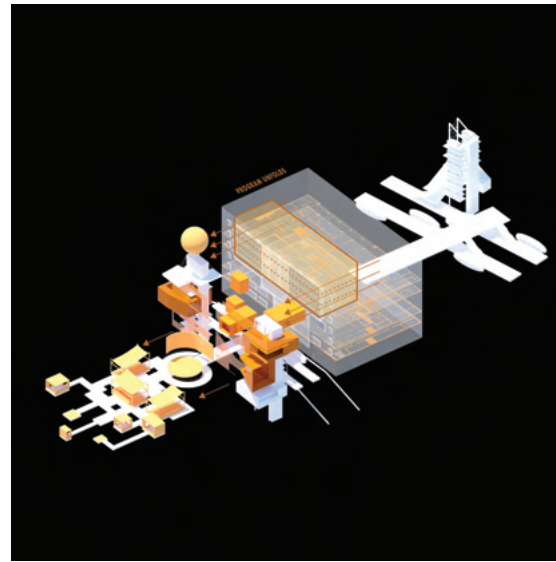
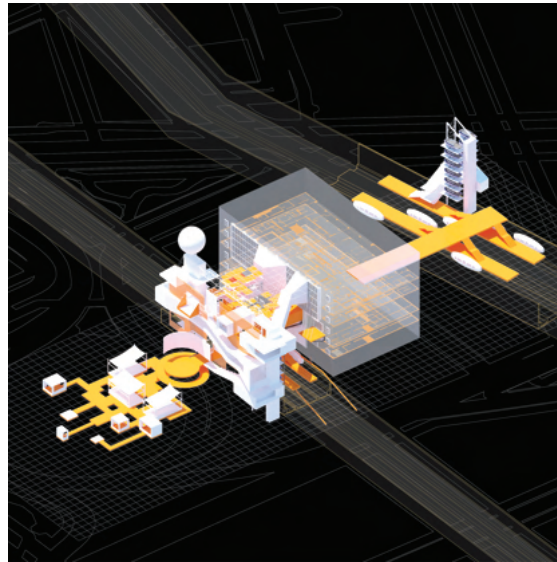
Team of Three: (Jinjian, Xinting, Xiaoyu)



## VESSEL DESIGN

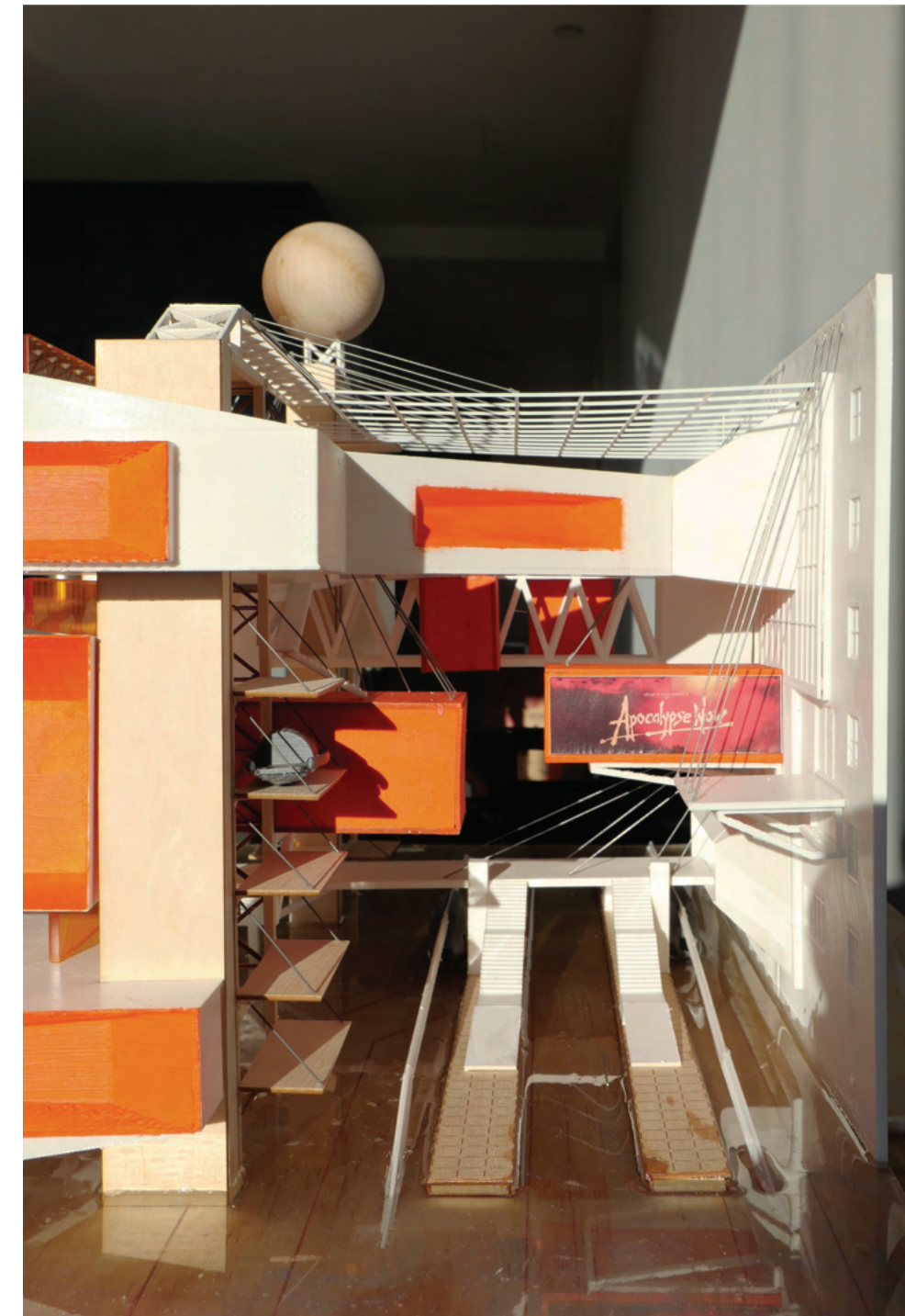
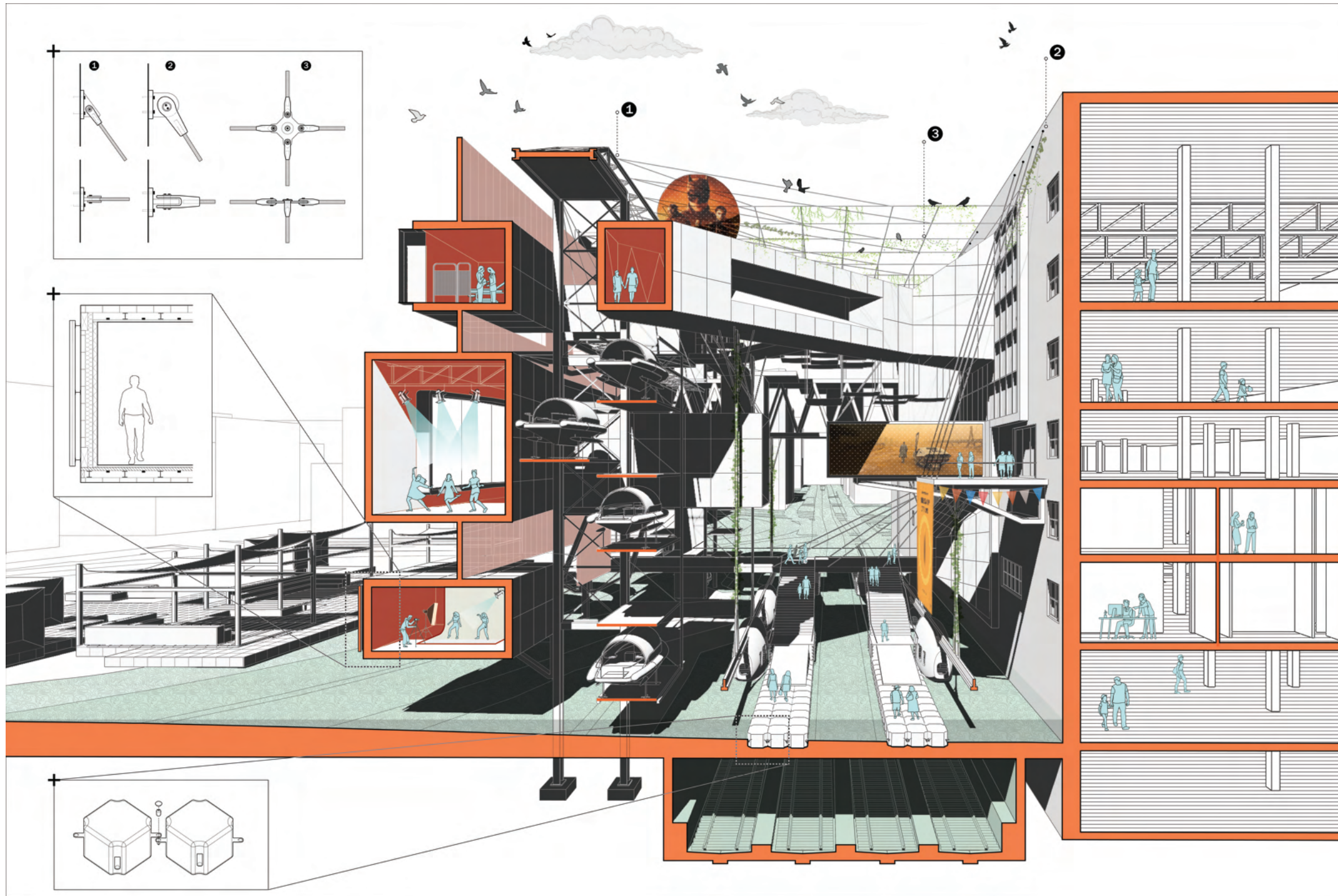
### Amphibious Shuttle

The first step is to design a wet network, driven by the question of how people are moving around, from point to point and to the site? I designed an amphibious shuttle that can be occupied by 20 to 25 people and connect neighborhoods. This system is giving the shuttle more flexibility, because of its two modes, allowing it to drive on wet conditions or dry land.



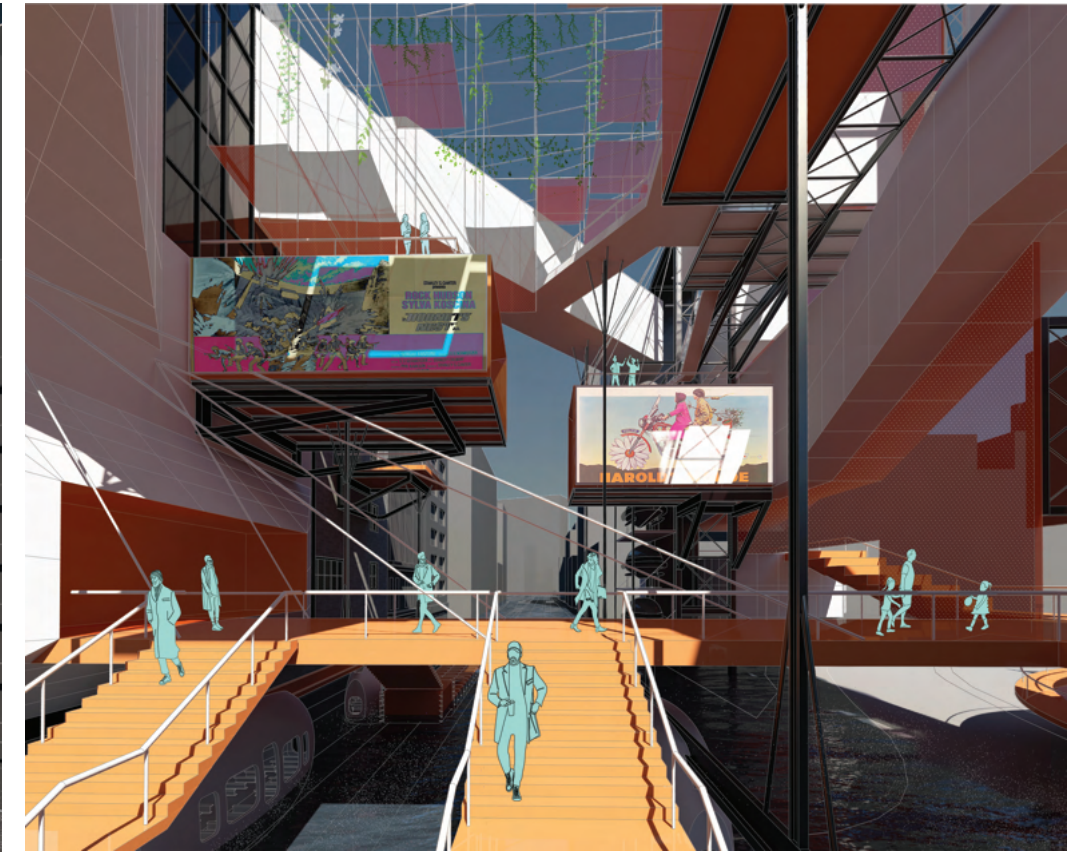
## SITE PROGRAM ARRANGEMENT ATTACHMENT TO SPRING STUDIO

The project is directly attached to the spring studio, with three sky bridging of circulations, and many of the new studio spaces are suspended in the air and attached to the two vessel storage towers, with tensile connection.



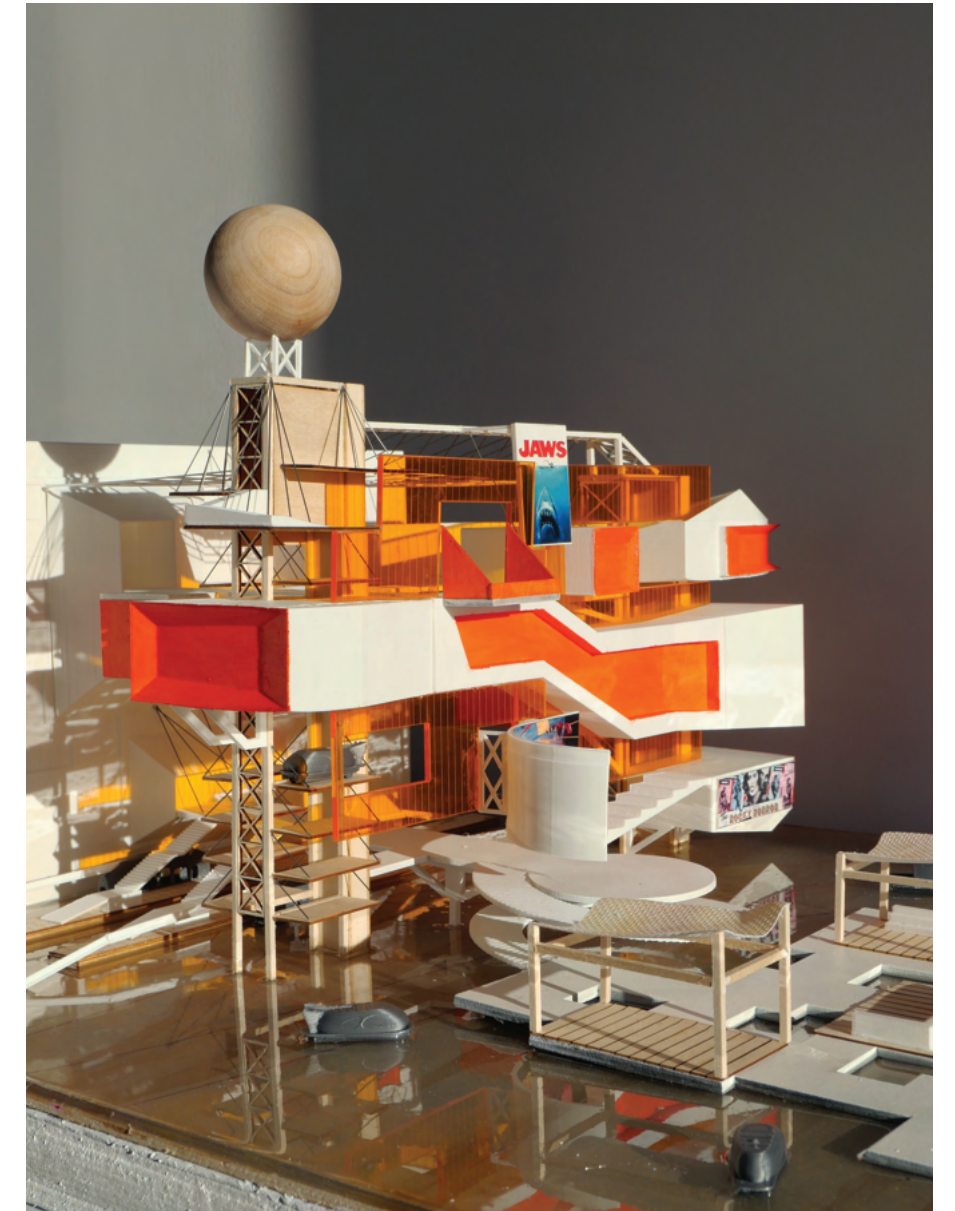
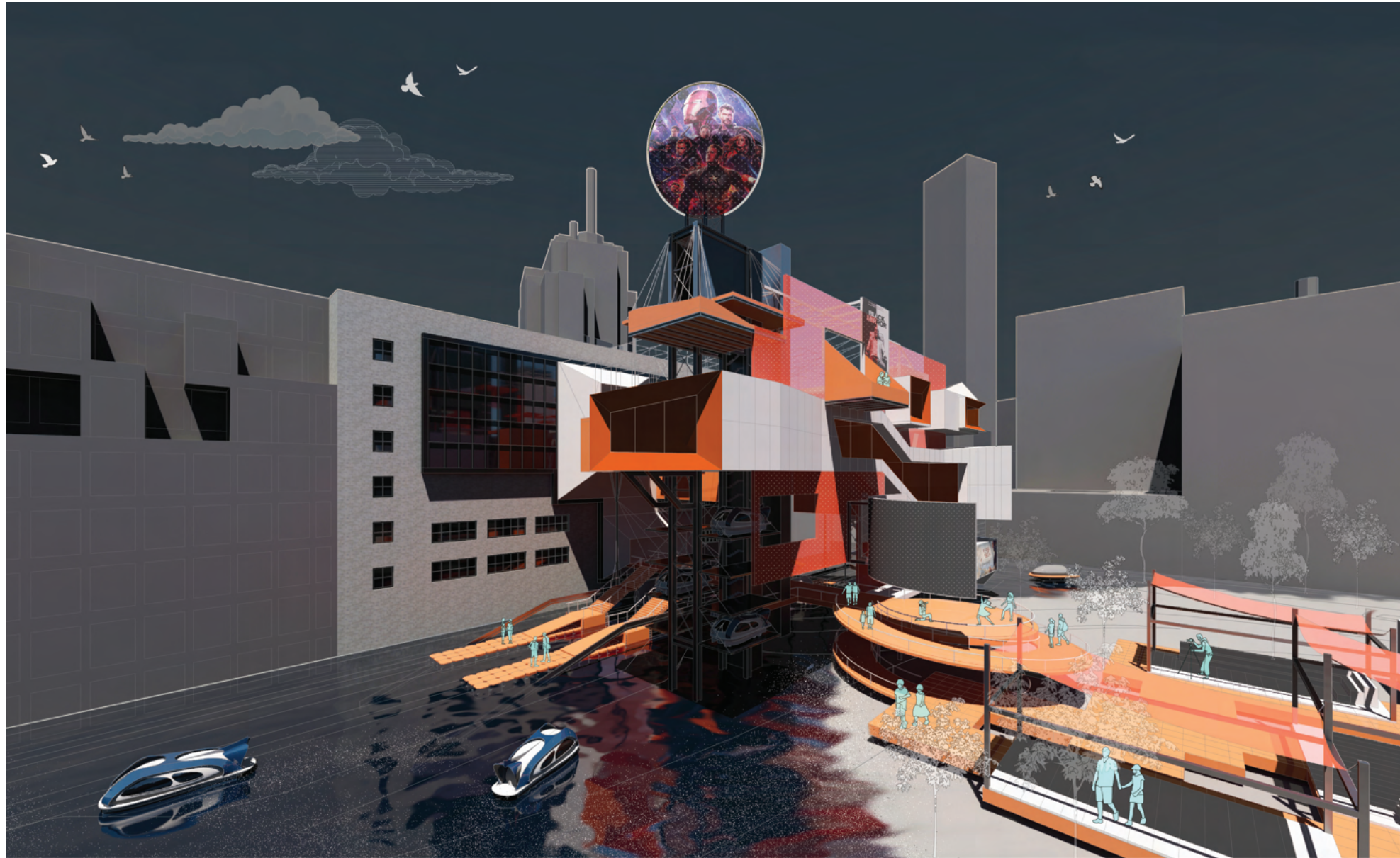
### SECTION OF NEW STRUCTURE AND ITS RELATION TO EXISTING BUILDING

From the drawing of the section, and the picture of the physical model, we can see the new program: emergency response, auditorium, photography studio and sky bridge, anchoring on to the vessel storage tower. When the in-between subway (1 train) will be flooded, the new subway system is giving a new arrival approach.



## FACADE APPROACH

The project is mainly dedicated to the "Tribeca Film Festival", and to film and entertainment related territory. The facade of the new structure is using aluminum panels and glass for the volumes, in order to be light weighted and a big piece of mesh to become the new facade of spring studio. Incorporating the LED screen on the facade, which will broadcast film related video to the public, to enhance the influence of Tribeca Film Festival to people's daily life.



## FACADE APPROACH

The project maximized the advantage of tensile structure, and lightweight material such as steel, aluminum panel, and mesh. Different pieces are mostly anchored onto the vessel storage towers, which serves as the core of this new structure.





## NORHAVEN “FUN PALACE”

---

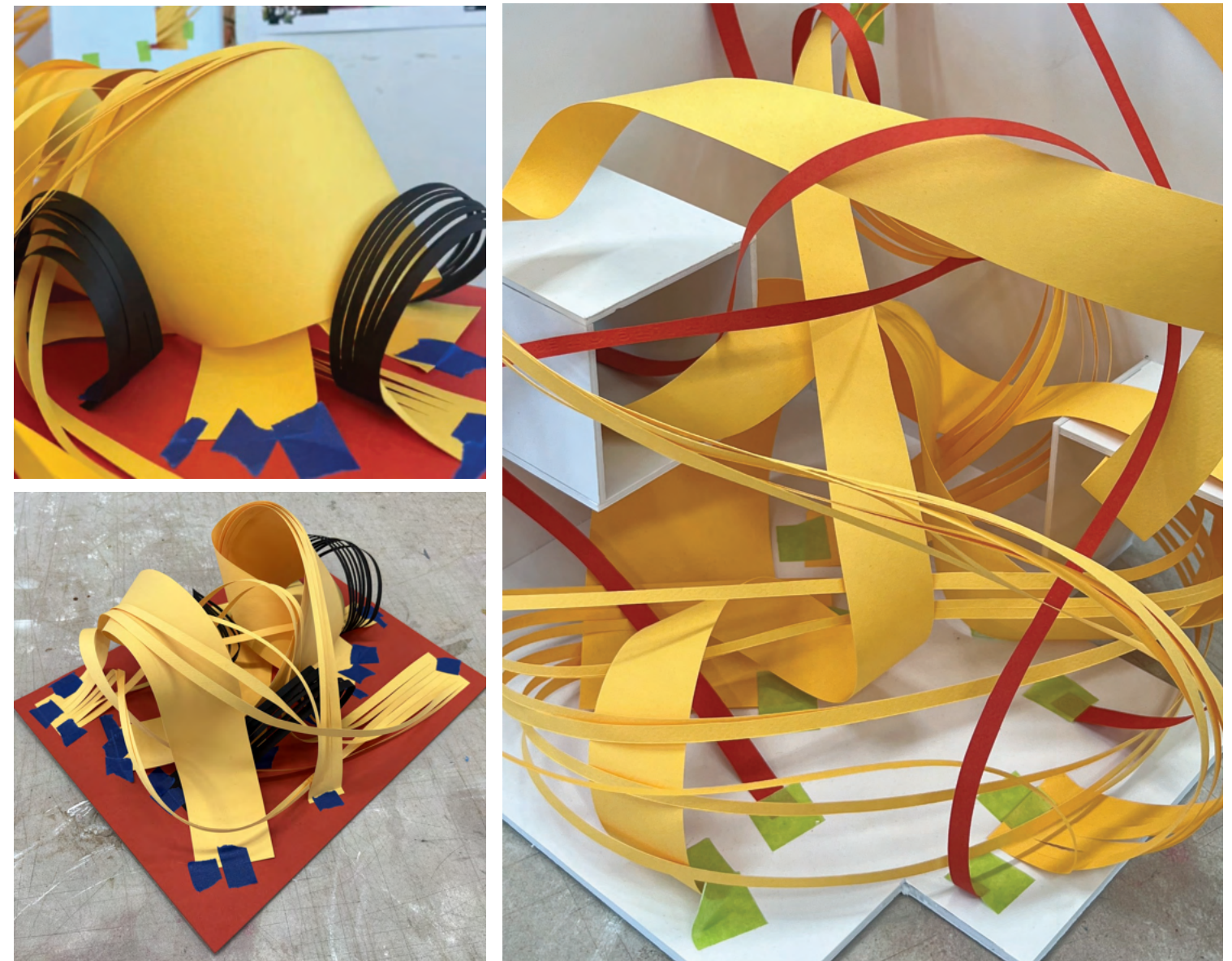
SP 2024 STUDIO  
COPENHAGEN

This project is an art and culture center dedicated to disabled artists and performers, located in Norhaven, Copenhagen, Denmark. It is a complex that is integrated with living space for disabled artists, performance space, practice space, dining area, exercise and amenities programs. Bringing art and culture elements from Copenhagen as the driving force, the project implements the color scheme of the city, the mobility and exercise culture within people’s daily routine, such as biking and river bath, as some most dominant and appearing design elements. To test out different mobility devices people will be on, no matter on bicycle, wheelchair or skateboards, the intersection of path and speed become the crucial moments to be tested out. The platform and routes are meant to fulfill people’s daily exercise needs.

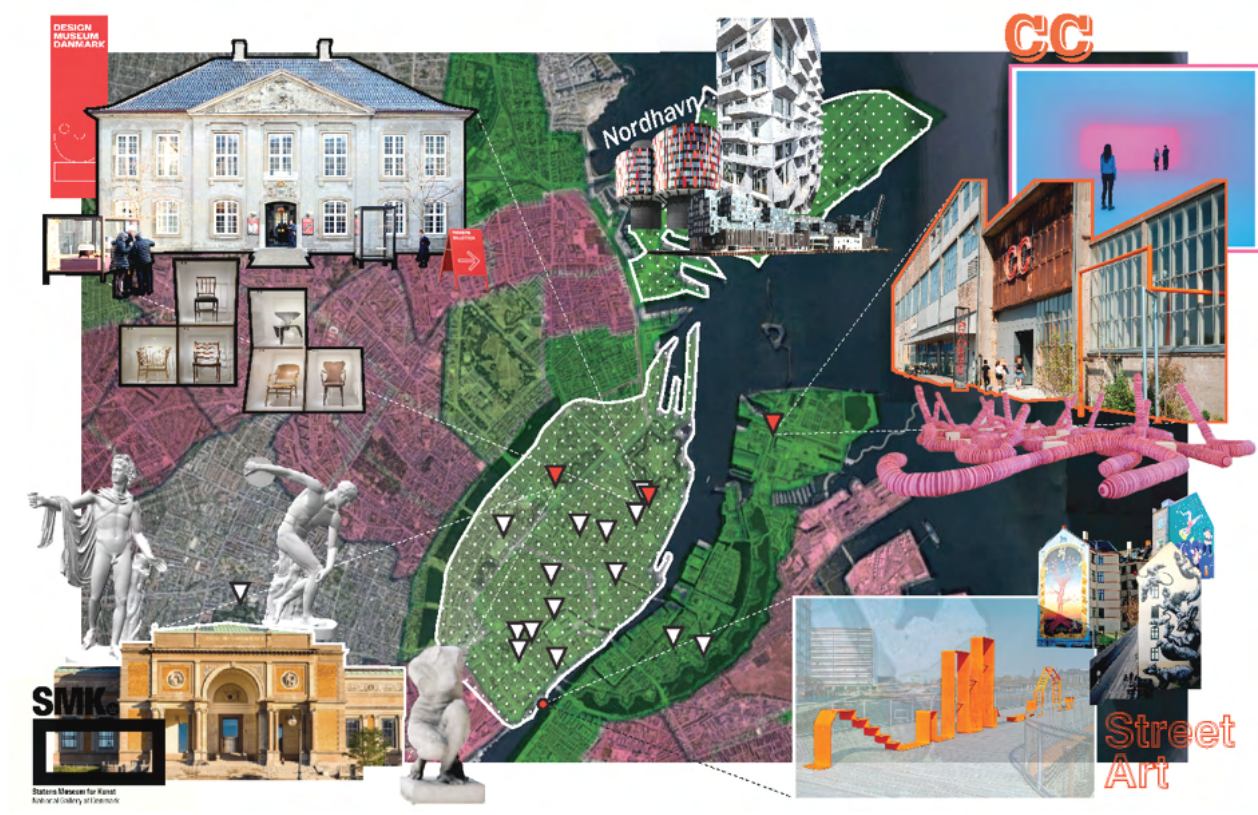
# RESEARCH ON COPENHAGEN ART & CULTURE INSTITUTION



# EARLY STAGE STUDY MODELS



Intersection of Movement  
 Collision & Overlapping Path  
 Variation on Speed  
 Rigidity VS. Softness

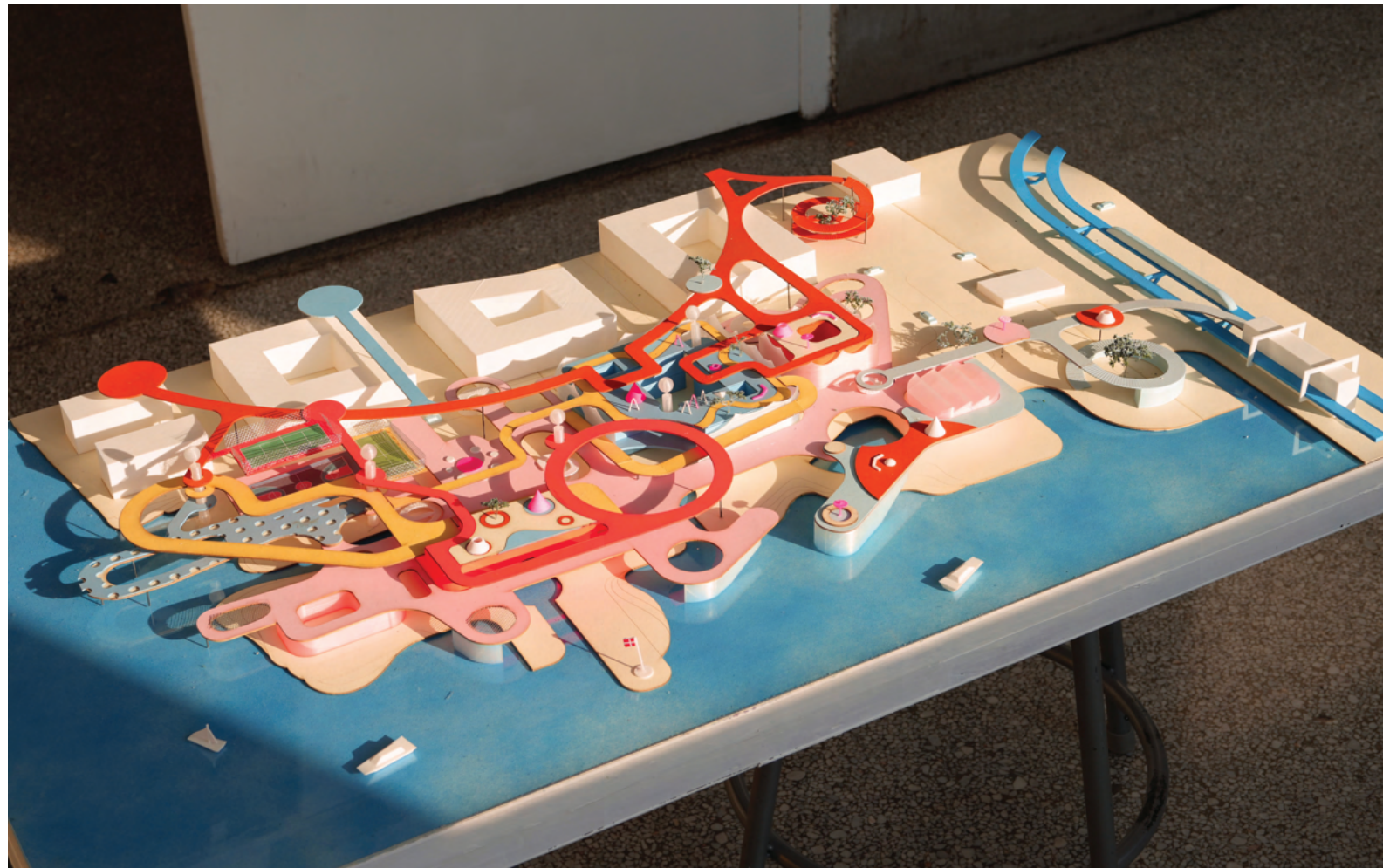


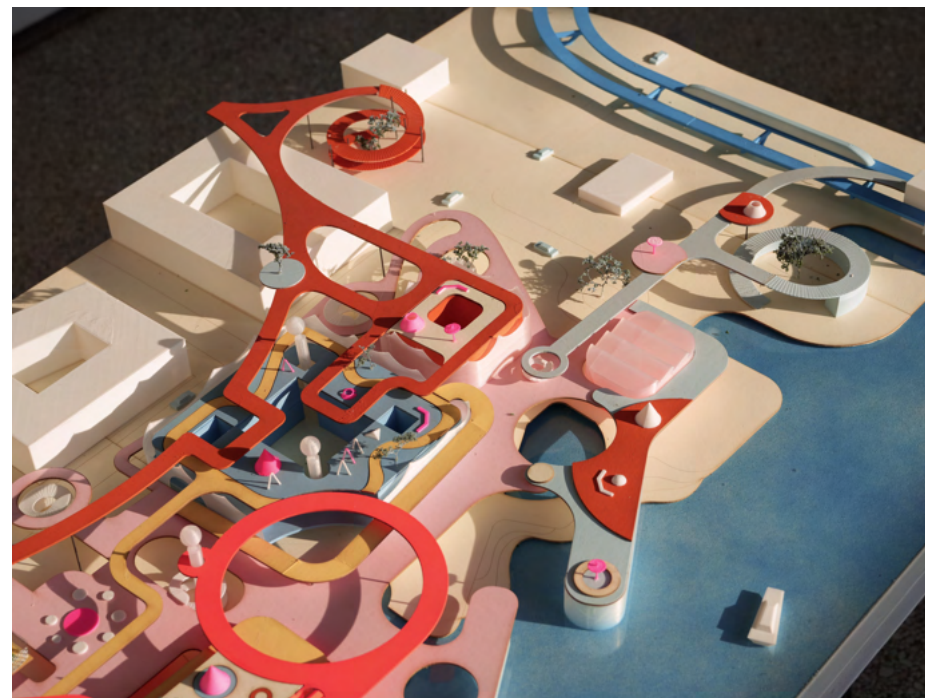
# PROJECT OVERVIEW

The project is located in the area of Norhaven, Copenhagen, on an empty lot, and is associated with the future master plan provided by COBE. The lot area is 850 ft by 400 ft.

The project emphasized on:

- State of Play
- City Edge Manipulation
- Connection to Water
- Link with Future City

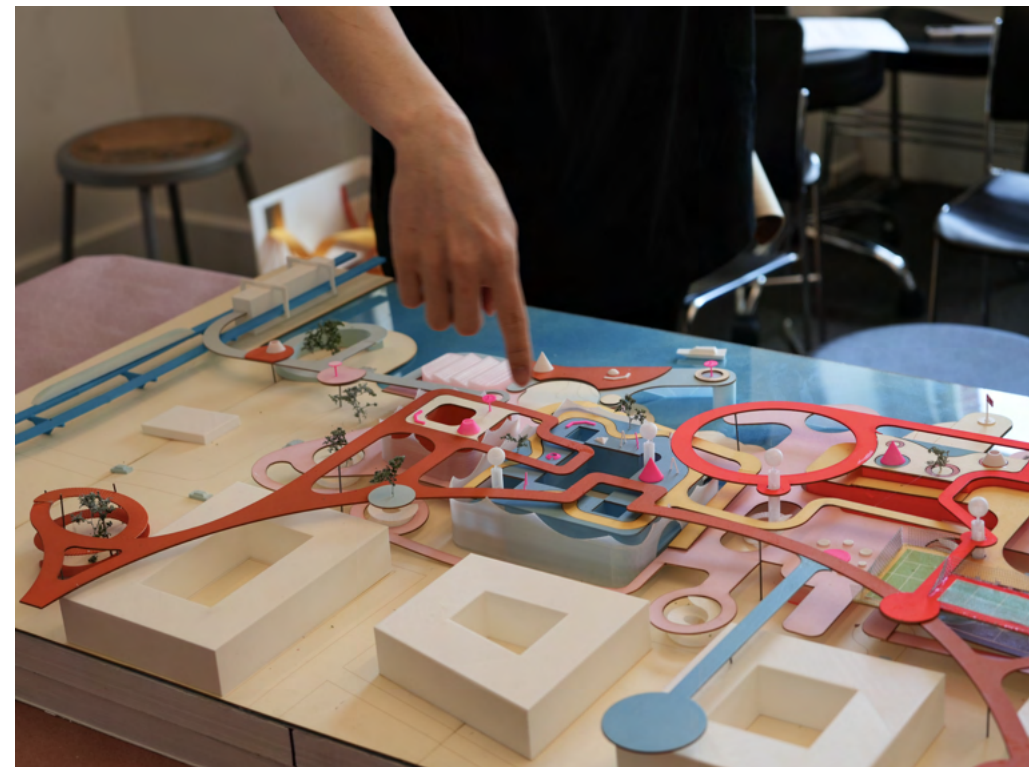
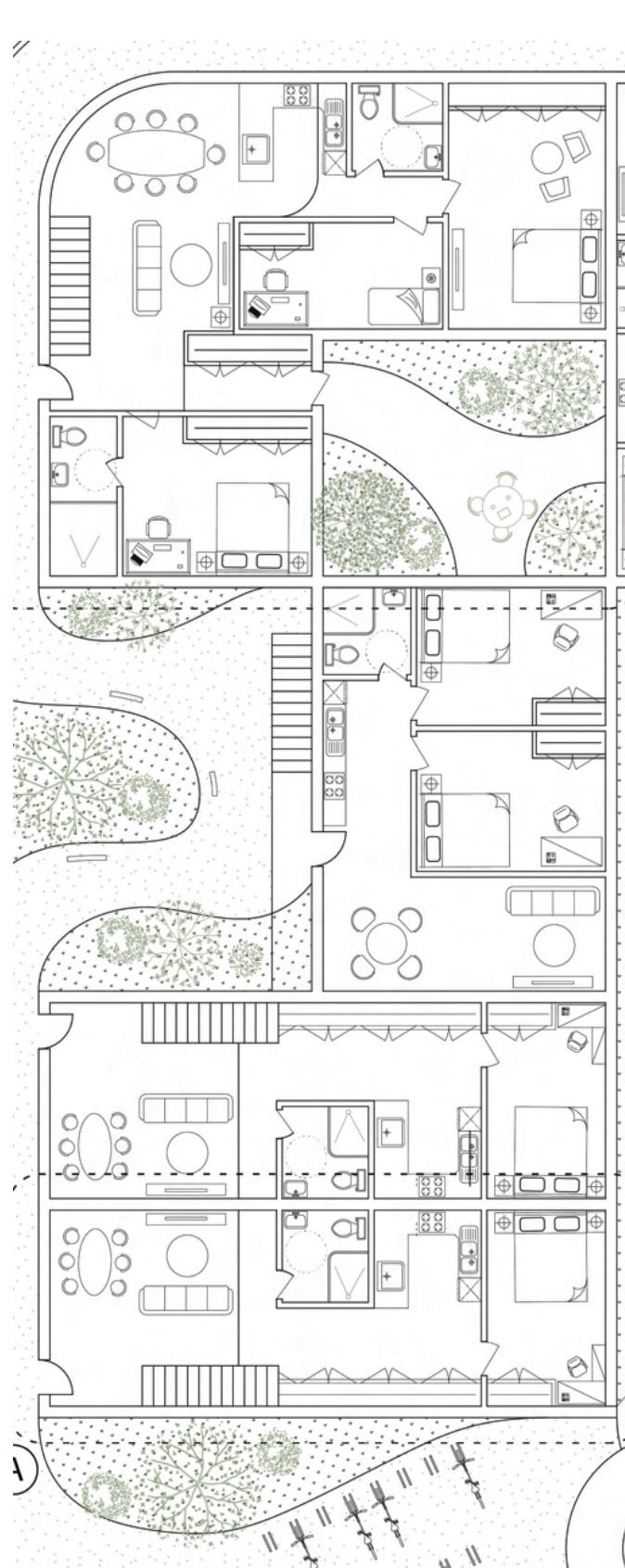




## PROGRAM DIAGRAM

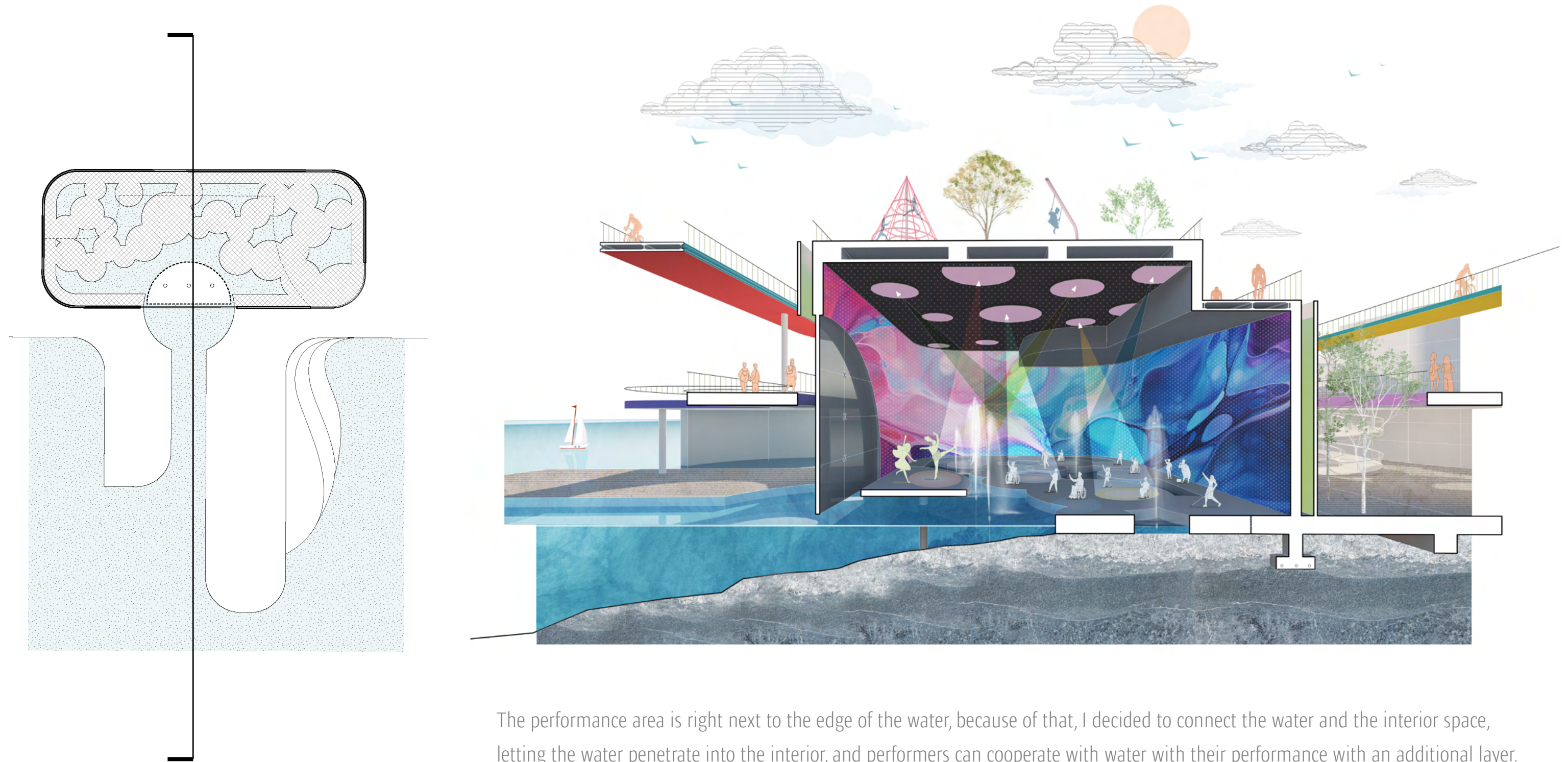
The complex consists of housing units (long term & short time), which will be located around the center area, and kitchen & dining, performance space, practice area, sports amenities as the supporting programs.

Pictures of physical model.



HOUSING UNIT DESIGN

# PERFORMANCE SPACE DESIGN

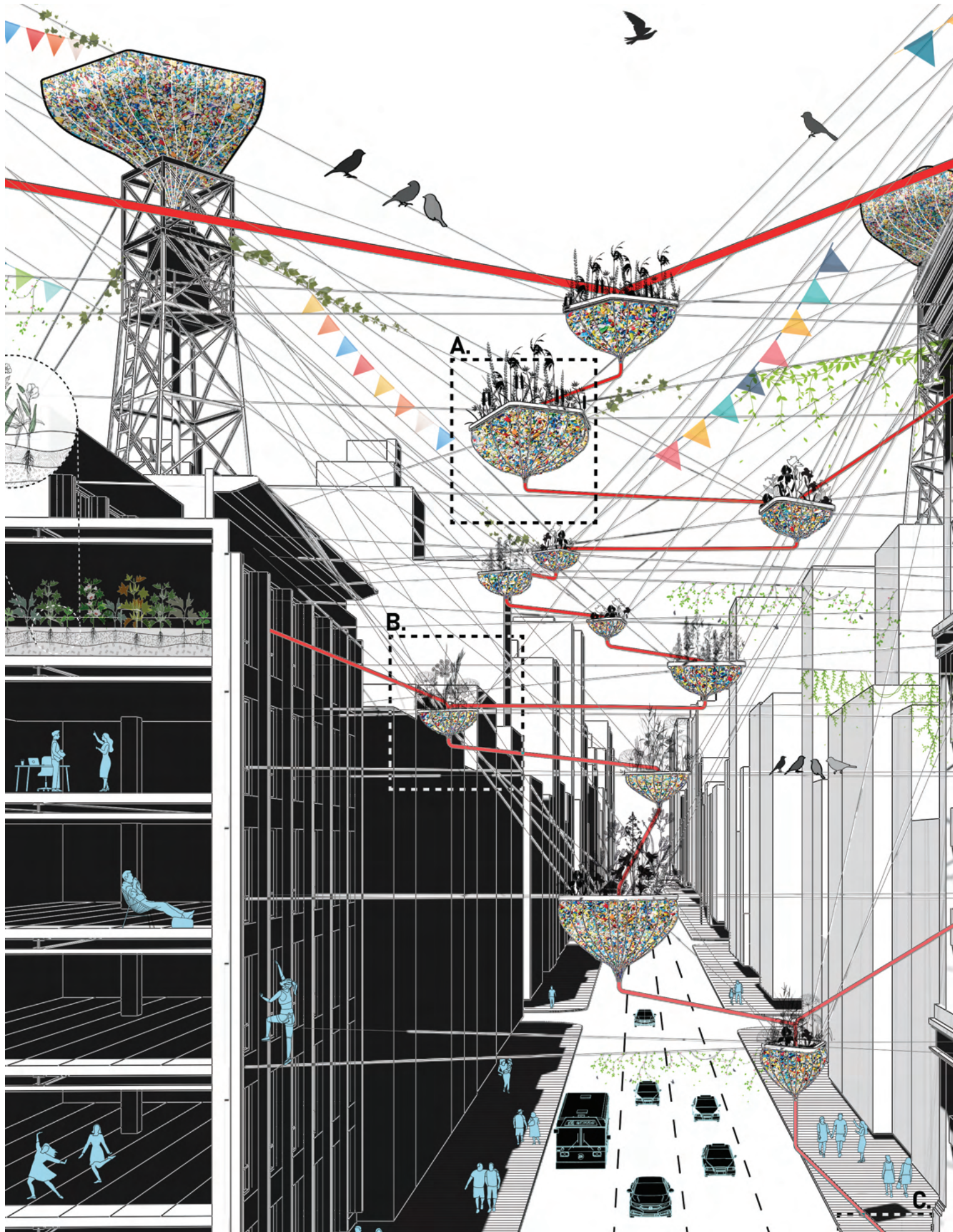


The performance area is right next to the edge of the water, because of that, I decided to connect the water and the interior space, letting the water penetrate into the interior, and performers can cooperate with water with their performance with an additional layer. Audience will be standing or seated on islands that are surrounded by water.

# VIGNETTES



Close up moments to express the ideas of collision, intersection, and meandering of the project.



# WATER GLITCH

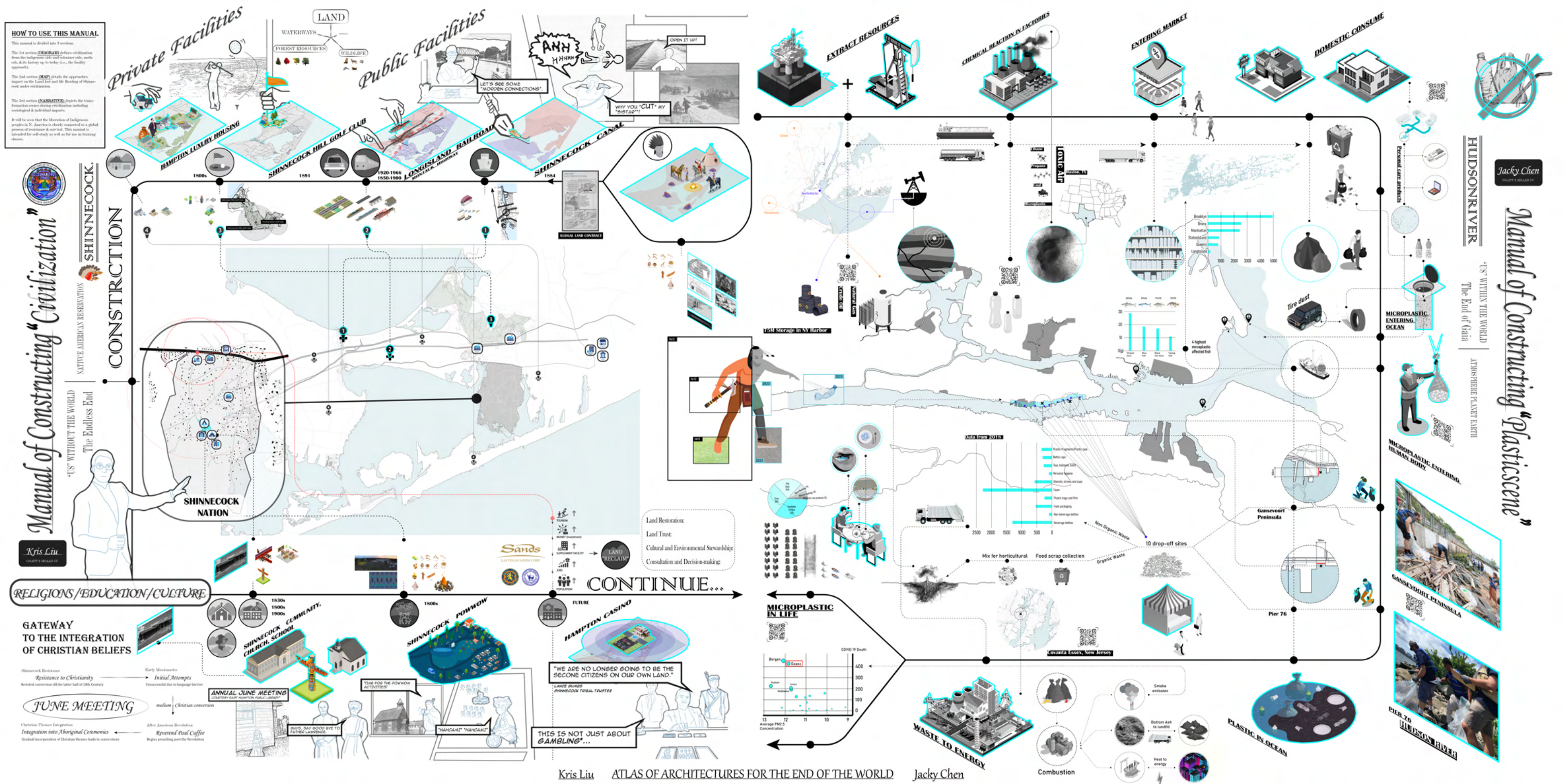
SU 2023 STUDIO

NEW YORK

The project began with an investigation into the presence of microplastics in rivers, water systems, animals, and ultimately, the human body, posing significant health risks. It sought to unveil this issue and explore the potential use of biological techniques for resolution. A proposed architectural installation suspended above Broadway in lower Manhattan, filled with plants designed to filter water, could have a profound impact. By bringing this hidden issue to light and involving citizens in its oversight, the installation not only raises awareness but also facilitates water filtration through designated plant pods. Ultimately, the goal of the project is to demonstrate that certain plants and biological methods can effectively extract microplastics from water, thus aiding in water filtration and reuse.



# RESEARCH COSMOGRAM



## Research on the matter of Microplastic

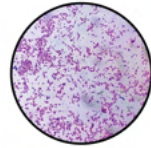
Drawing with Kris Liu

### Level of Fecal Coliform

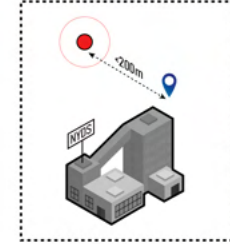
Location	Code	% Unsafe	Mean	Min	Max	Count
Coney Island Creek and Coney Ave.	CIC2	94%	37,402	54	200,000	121
Head of Bergen Basin	BB2	79%	35,483	99	200,000	99
Brax River and 23rd Street	BR1	72%	6,750	344	175,000	86
Alley Creek & Northern Blvd.	AC1	46%	28,816	11	200,000	154
Head of Bergen Basin	BB4	44%	6,399	45	200,000	99
Coney Island Creek	CIC3	44%	4,735	30	156,000	123
Flushing Creek	FL1	43%	3,395	20	78,000	178
9th Street Bridge	SC6	42%	36,197	4	200,000	144
Westchester Ave. & Bronx River	BR3	41%	8,910	24	200,000	85
Carroll Street Bridge	SC4	40%	20,117	4	200,000	143

### Fecal Coliform

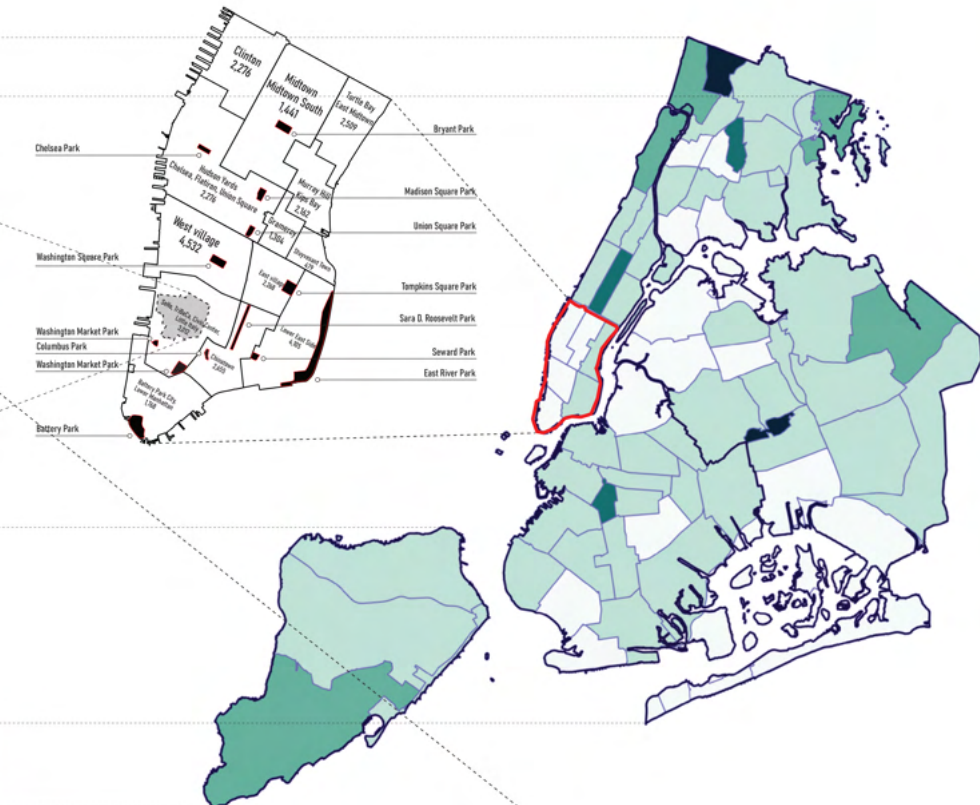
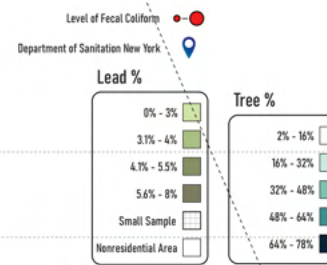
- Human Sewage:
- Animal Waste From:
- From Agriculture:



### High Fecal Coliform spots in relation to NYDS



### The lack of vegetation

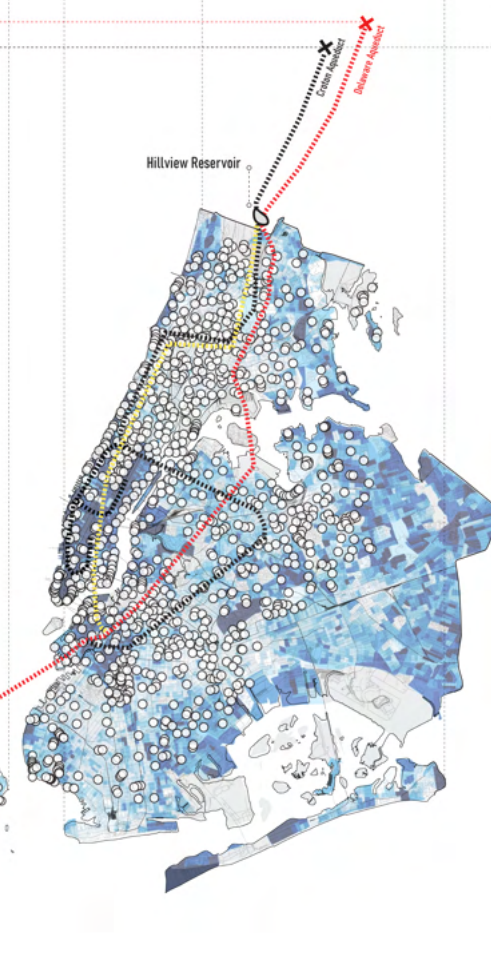


- Chinese elm
- Ginkgo
- Japanese Zelkova
- American Basswood
- Japanese Pagoda tree
- Thornless Honeylocust

### Catskill/Delaware Watersheds

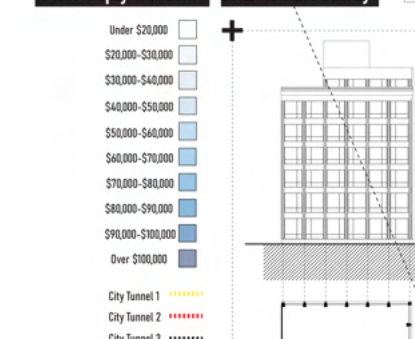


### Croton Watersheds

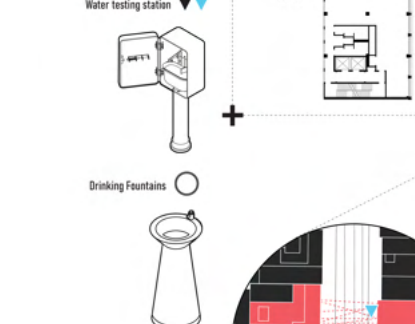


### Water Quality & Toxicity

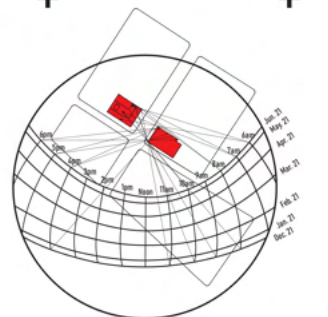
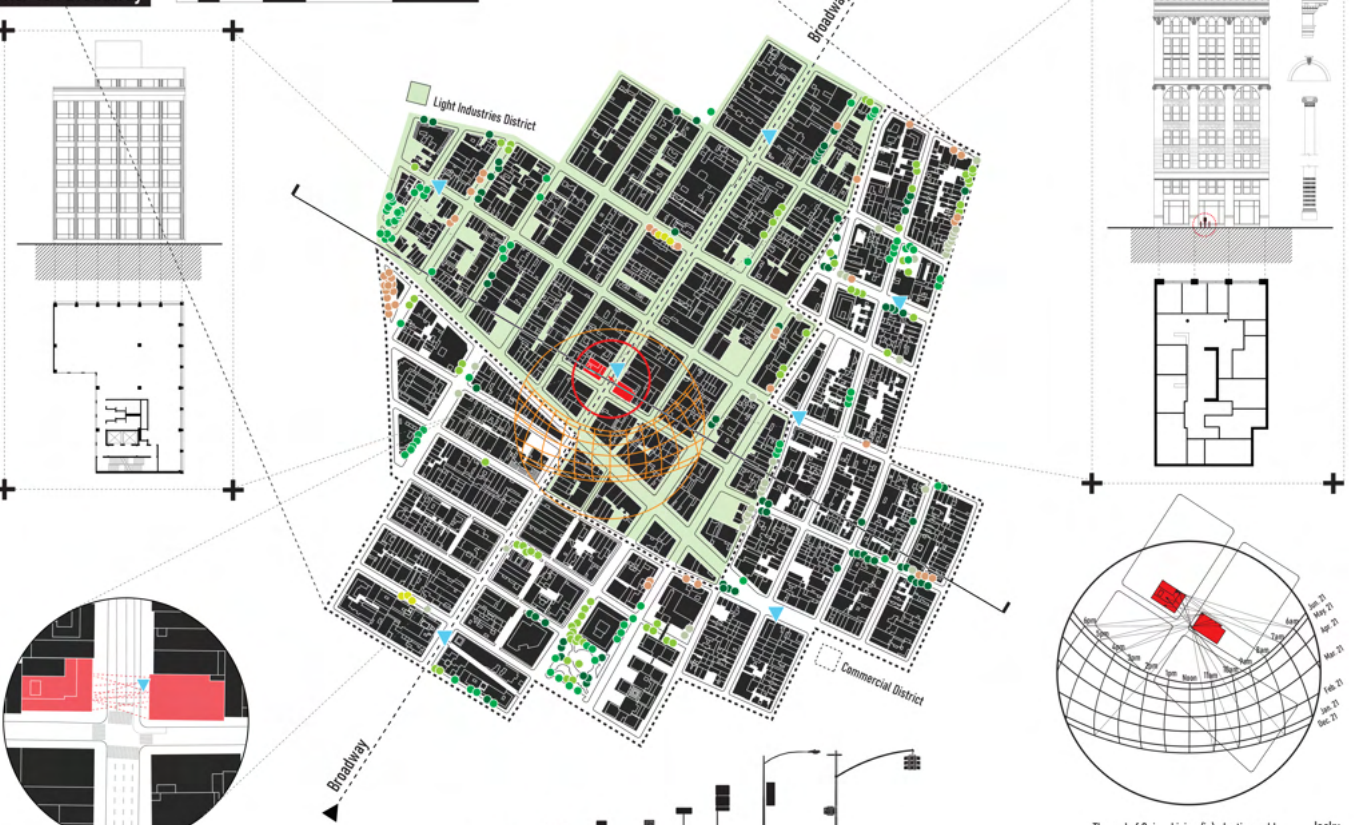
### Tree Canopy Distribution



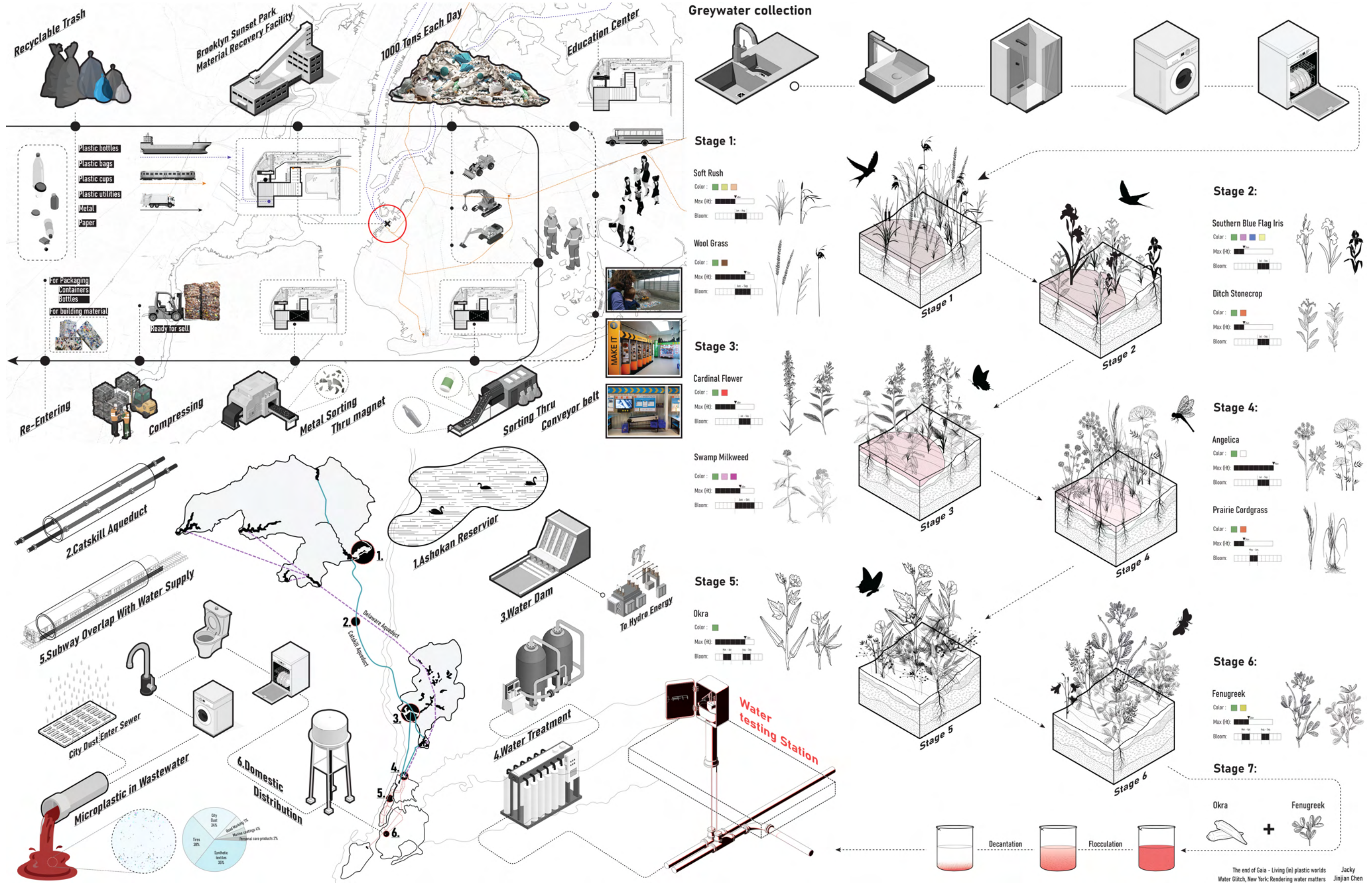
### Water Supply & Income



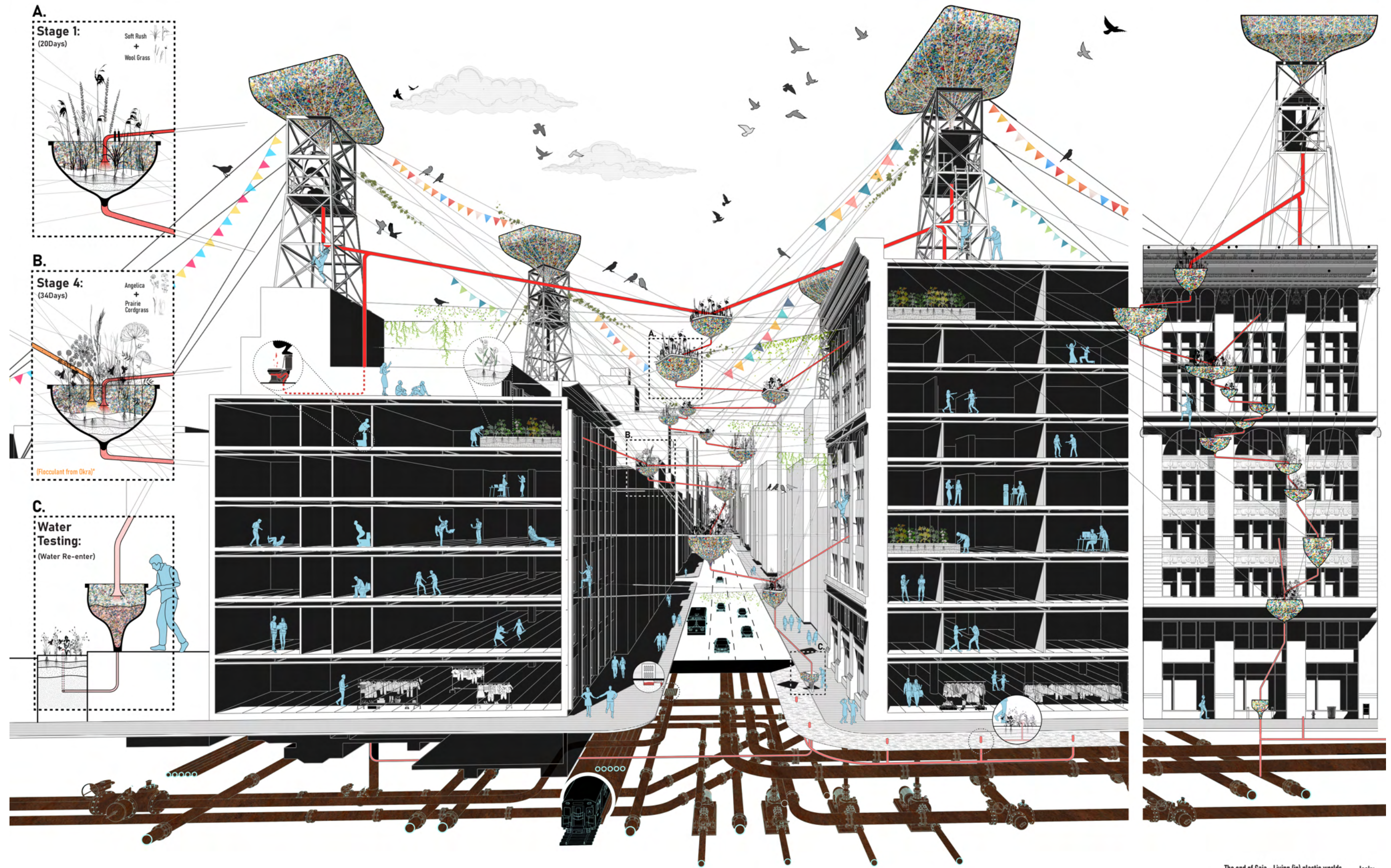
### Site: 434 Broadway



The end of Gaia - Living (in) plastic worlds  
Water Glitch, New York: Rendering water matters  
Jacky Jinjian Chen



Water Transportation Route & Bio Techniques Application



The end of Gaia - Living (in) plastic worlds Jacky  
Water Glitch, New York: Rendering water matters Jinjian Chen

Water Glitch to Collect Rain Water, Filtering Water to be Reuse, Reveal a Hidden Social Issue