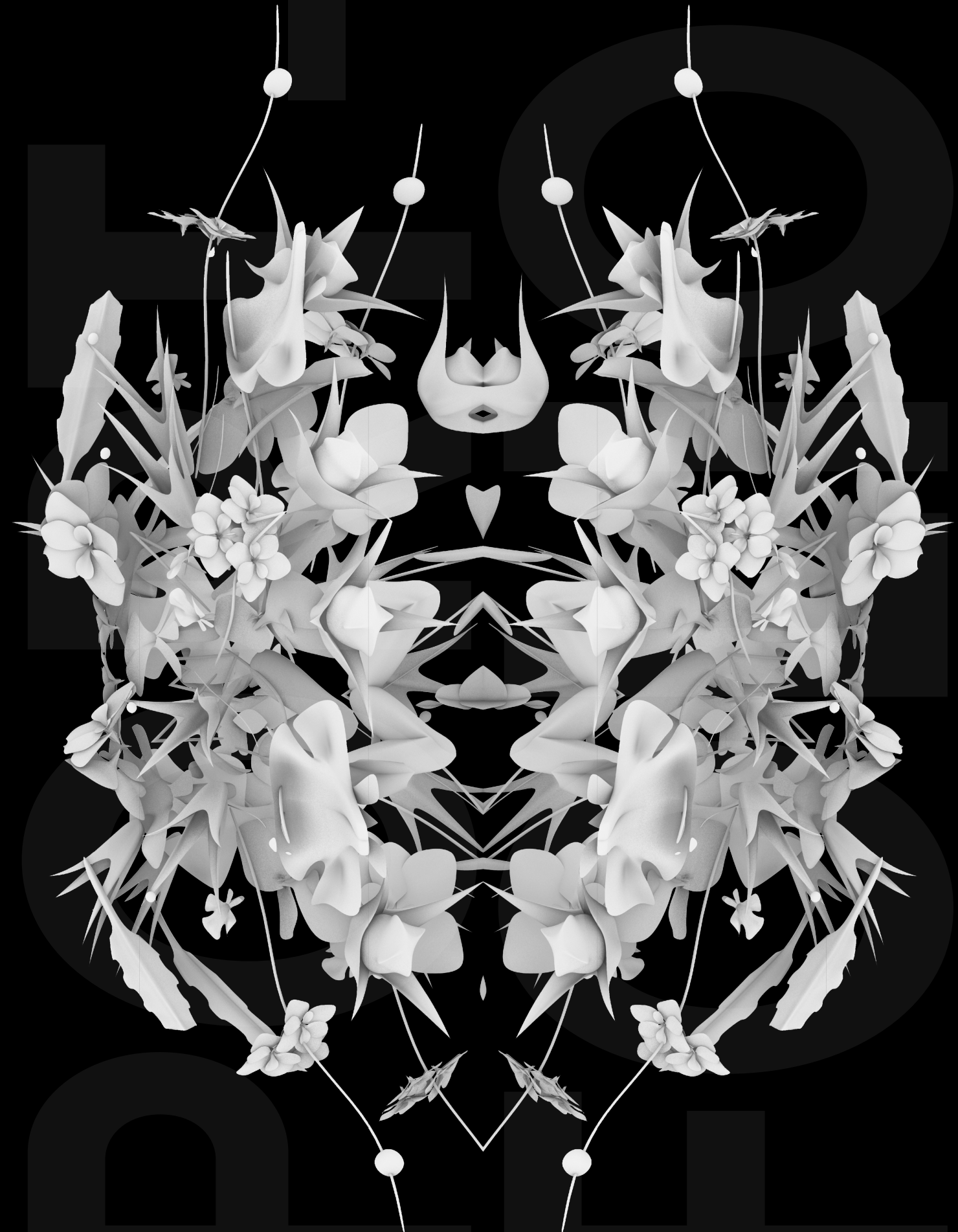


Architecture Design Work

From 2021 to 2025

Kodak Han

UPenn M.Arch 2025
hantq1994@outlook.com
(215)9302624



EDUCATION

2022 - 2025 **Master of Architecture** | University of Pennsylvania
GPA 3.92/4.00

2012 - 2016 **Bachelor in Accounting** | Nanjing Audit University | China

LEADERSHIP & RESEARCH

2024 - 2025 **Founder, Co-President | AIAS UPenn**
• Established the UPenn AIAS chapter, providing a platform for students to engage with professionals
• Organized 3 "Talk with Professionals" lectures, 4 office visits and a local networking event

2025 **Research Assistant | AML Lab**
• Contributed to robotic spatial 3D printing research, assisting in design and fabrication studies

PROFESSIONAL EXPERIENCE

2024 **Summer Internship | Gensler** | San Francisco
• Worked in SD for an airport project, focusing on façade design, interior layouts, and floor plans
• Contributed to CD for a residential project, including detailed drawings
• Prepared and presented a cross-office presentation on mixed-use design trends and forecasts

2023 **Summer Internship | Cooper Carry** | Atlanta
• Assisted in 100% DD for the SeaWorld Hotel, focusing on floor plans and façade design
• Supported feasibility studies and schematic design for the Galleria Hotel project

2020 - 2022 **Architecture Designer | BIDG** | Shanghai
• Led exterior and interior renovation of Shanghai Mart (Concept to DD)
• Collaborated on Fudan Middle School project (Concept to DD)
• Contributed to the Jiaxing Central Cultural Axis renovation, leading the center node design

2018 - 2020 **Associate Architecture Designer | MYP** | Shanghai
• Led landscape construction and pavilion design for Liuxu Factory (Concept to Construction)
• Managed architectural design for Shanghai Senlan Greenland (North Section) (SD to DD)
• Assisted in the architectural renovation of Chongqing Yangtze River North Bund Regeneration Competition (Final Winner)

2016 - 2017 **Associate Assurance | PwC** | Shanghai
• Focused on data analysis, risk assessment, financial modeling and consulting

AWARDS

June 2025 **Runner-up in BioDesign Challenge 2025**
Our BagasSeries project reimagines sugarcane waste from Philadelphia's SEA Market into community-serving biocomposite products. We won 2nd place at the 2025 BioDesign Challenge (65 teams, 24 countries) and was presented at the MoMA in New York

May 2023 **Harlan Coornvelt Memorial Prize**
For the 1st record in Structures class

Feb 2023 **Albert F. Schenck-Henry Gillette Woodman Scholarship Prize**
Design Competition Honorable Mention

SKILLS

Language Chinese, English, Japanese

Software Rhino, Grasshopper, Revit, Adobe PS/ID/AI, Enscape, AutoCAD, SketchUp, Twinmotion, Keyshot, V-Ray, C/Python, MS Excel, 3D Printing, Robot Studio

01 Home Basin

02 Botanic on Water

03 Catopia

04 Others



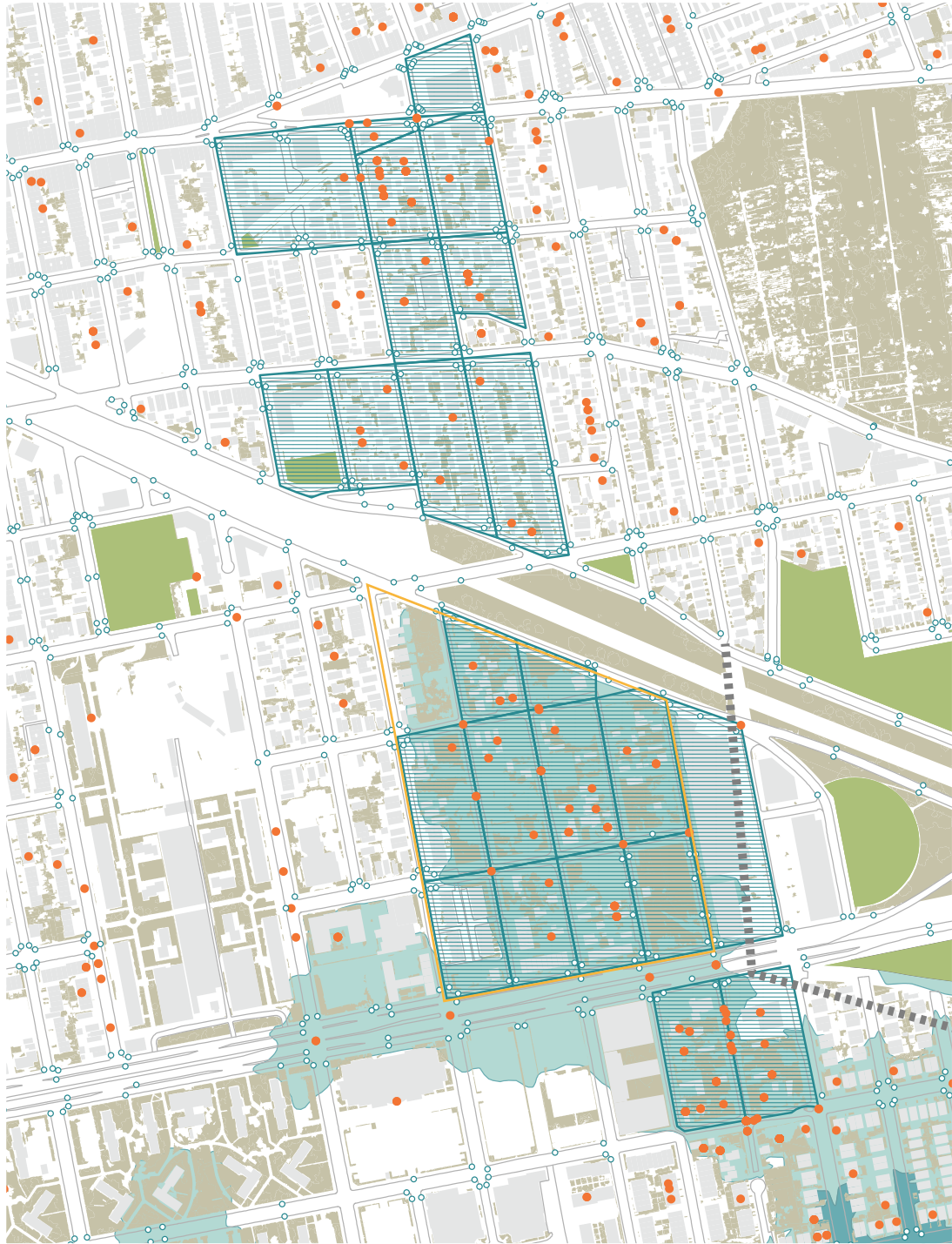
01

Home Basin

Location: The Hole, New York
Complete Date: 2024.12
Teammates: Nadine Nashef, Priyanjali Sinha

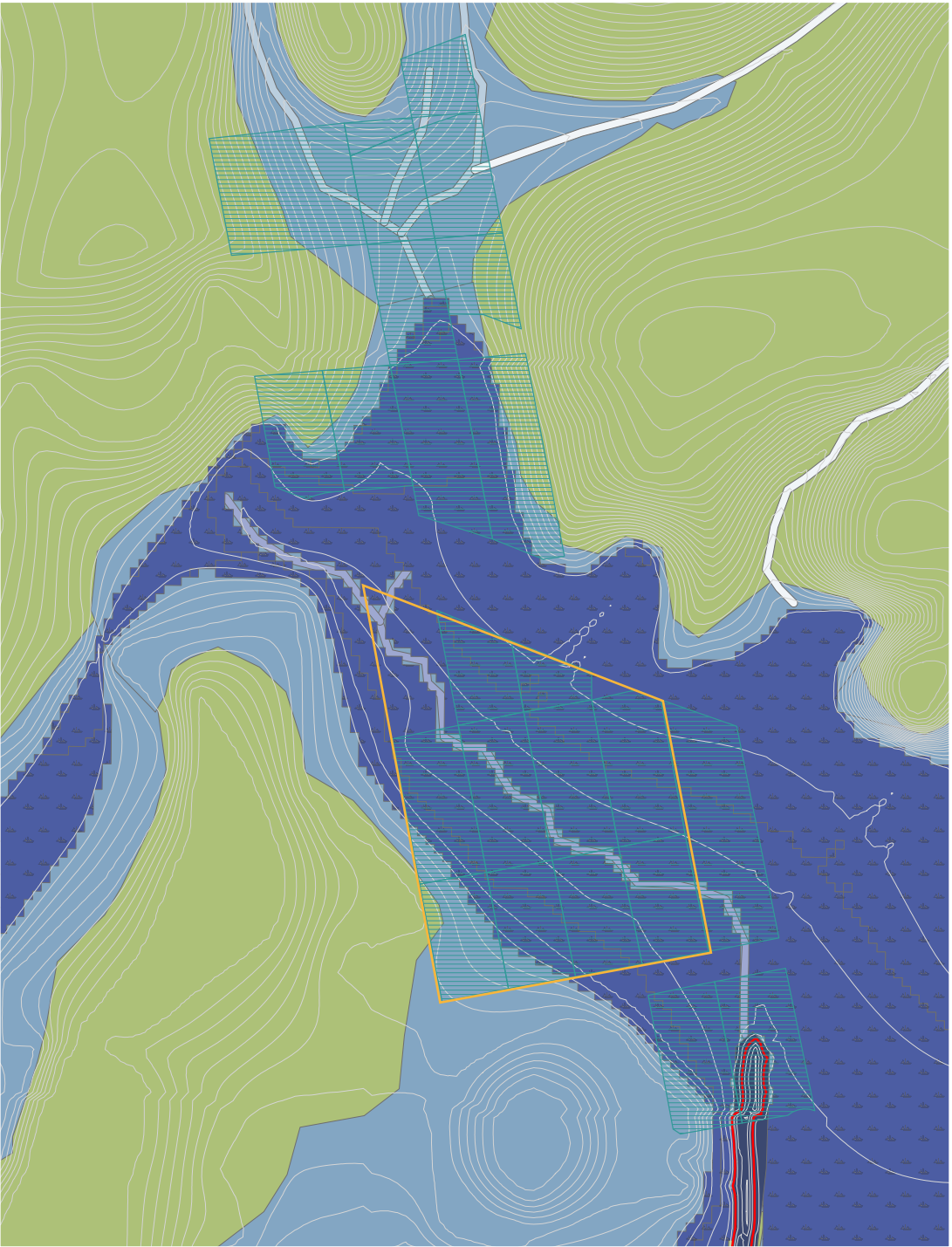
*All water has a perfect memory
and is forever trying to get back
to where it was.*

- Toni Morrison



Current Context

- | | |
|---------------------|------------------|
| Previous Surface | Flood Complaints |
| High Flood Risk | Catch Basin |
| Moderate Flood Risk | Blue Zone |

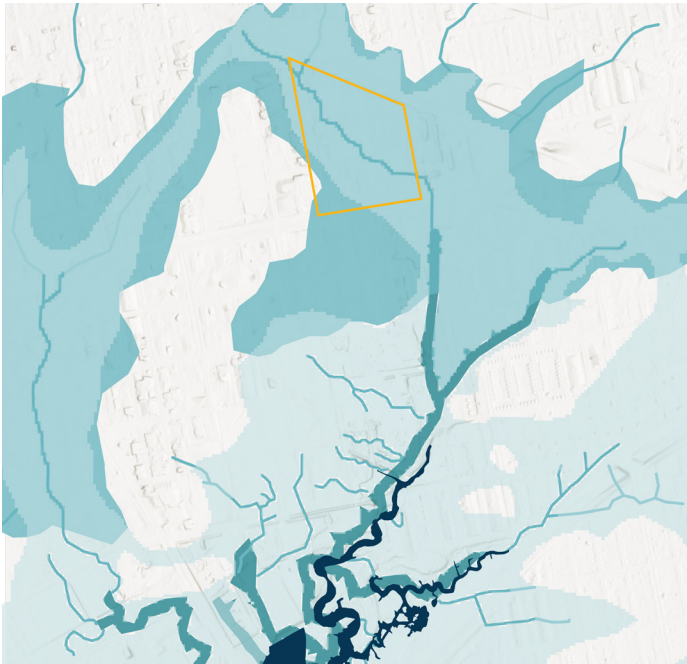


Historical Context

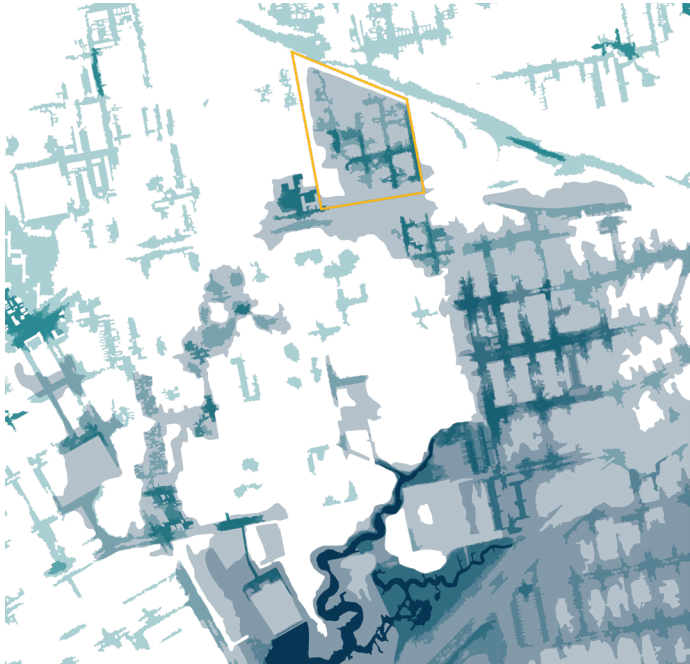
- | | | | |
|--------------------|---------------------|--------------|--------------------|
| Pond | Intermittent Stream | Saltmarsh | Beach |
| Streams Buffered | River | Marine Water | Blue Zone |
| Freshwater Wetland | Tidal Creek | Dunes | Historic Shoreline |

A Flood-Resilient Urban Strategy

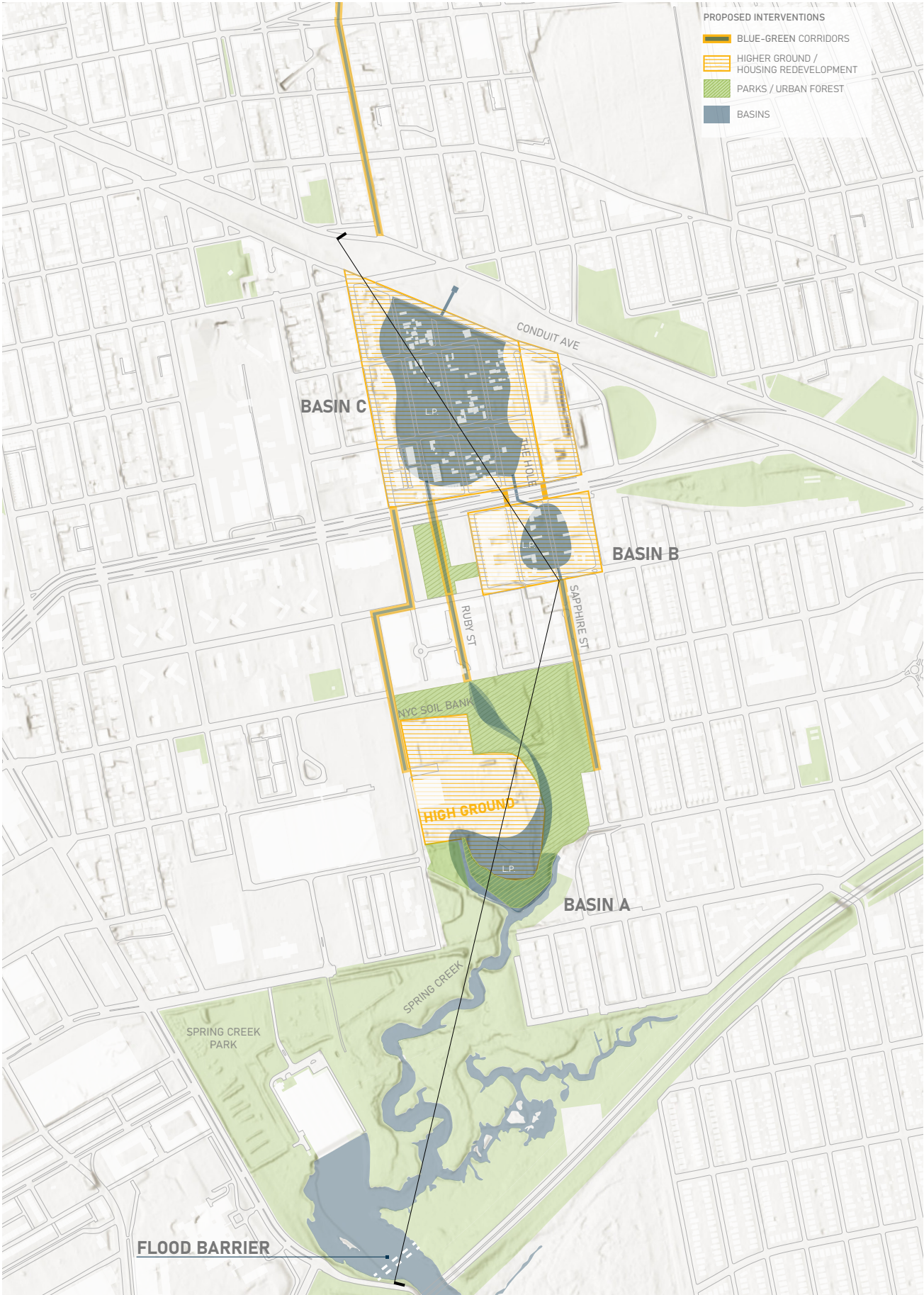
A coastal flood barrier protects against storm surges. Flood-prone areas are restored as water reservoirs, linked by blue-green corridors offering parks and urban forests. Residents are relocated to higher ground or housed in adaptive architecture that coexists with water.



Existing Water



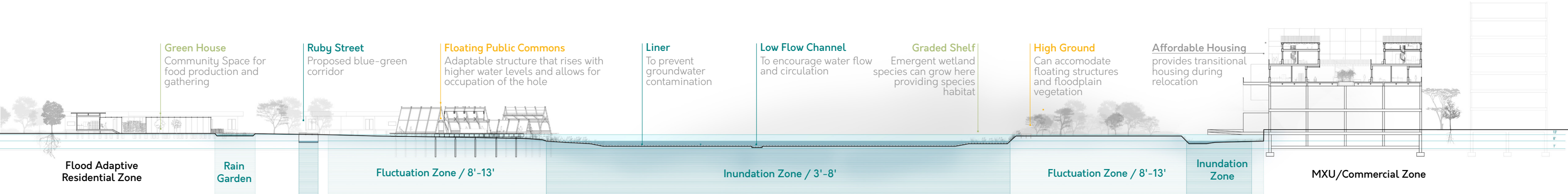
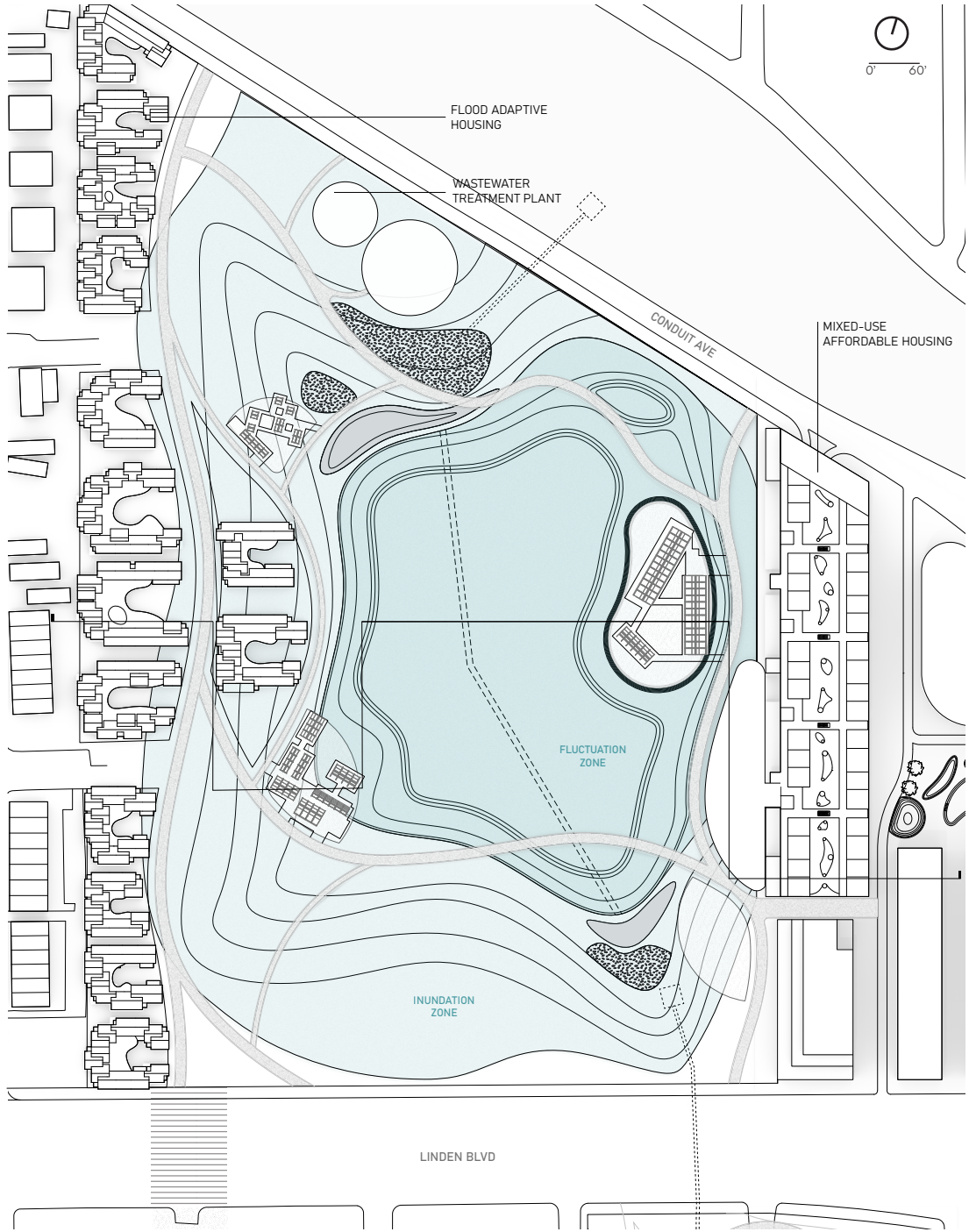
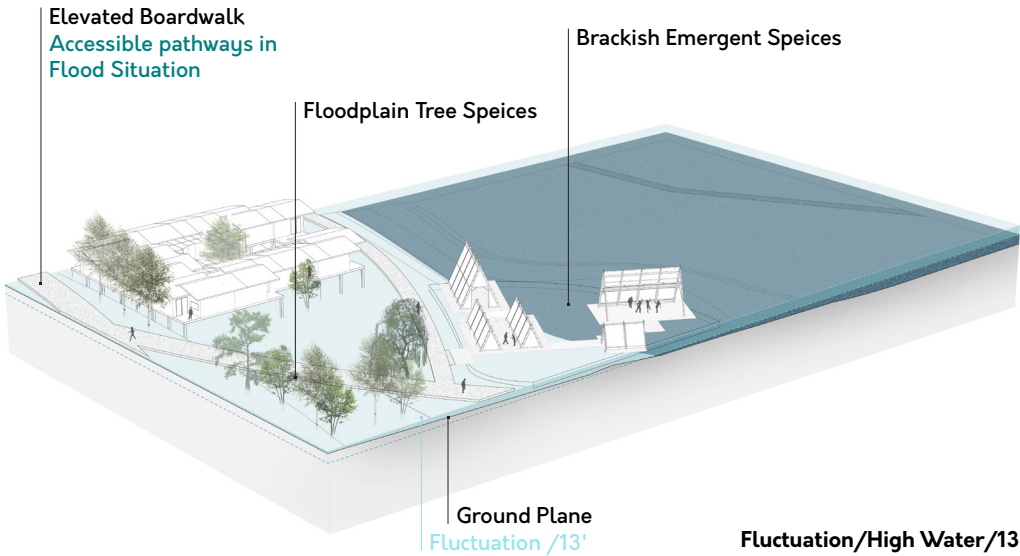
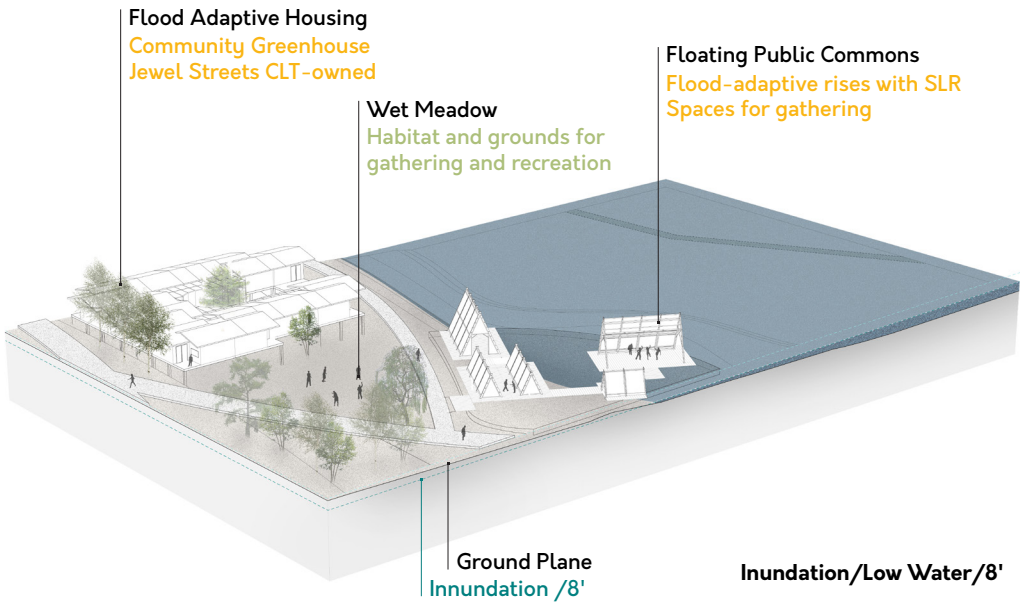
Flood Risk



Living with Wetness

Zoom into Basin C, here "Water" and "Ground" merge into a spectrum of wetness. A central inundation zone hosts floating public commons. Fluctuation zones adapt to rising waters with elevated housing. Most residents are relocated here. To the east, new affordable housing replaces former commercial areas, supporting future urban growth.

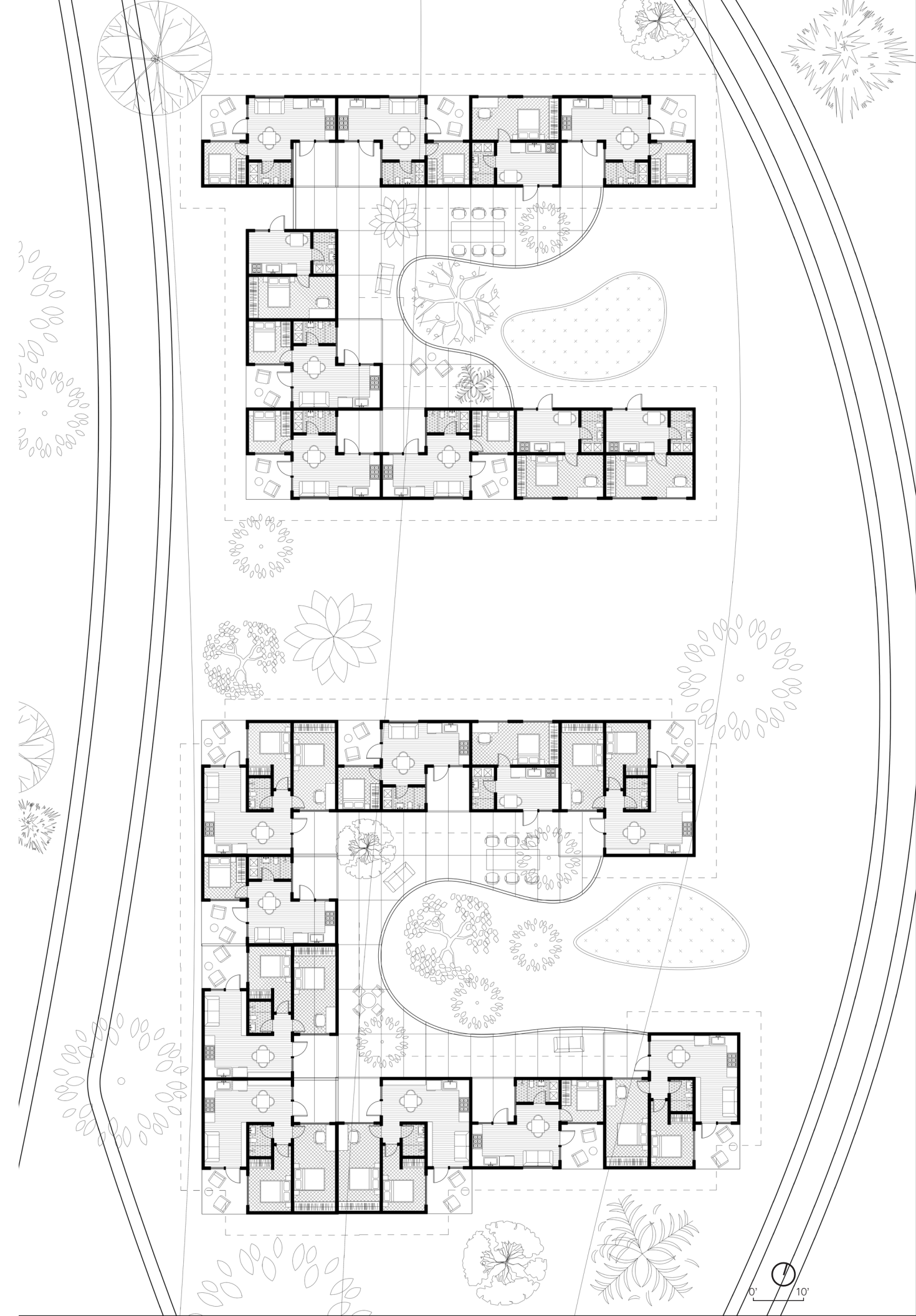
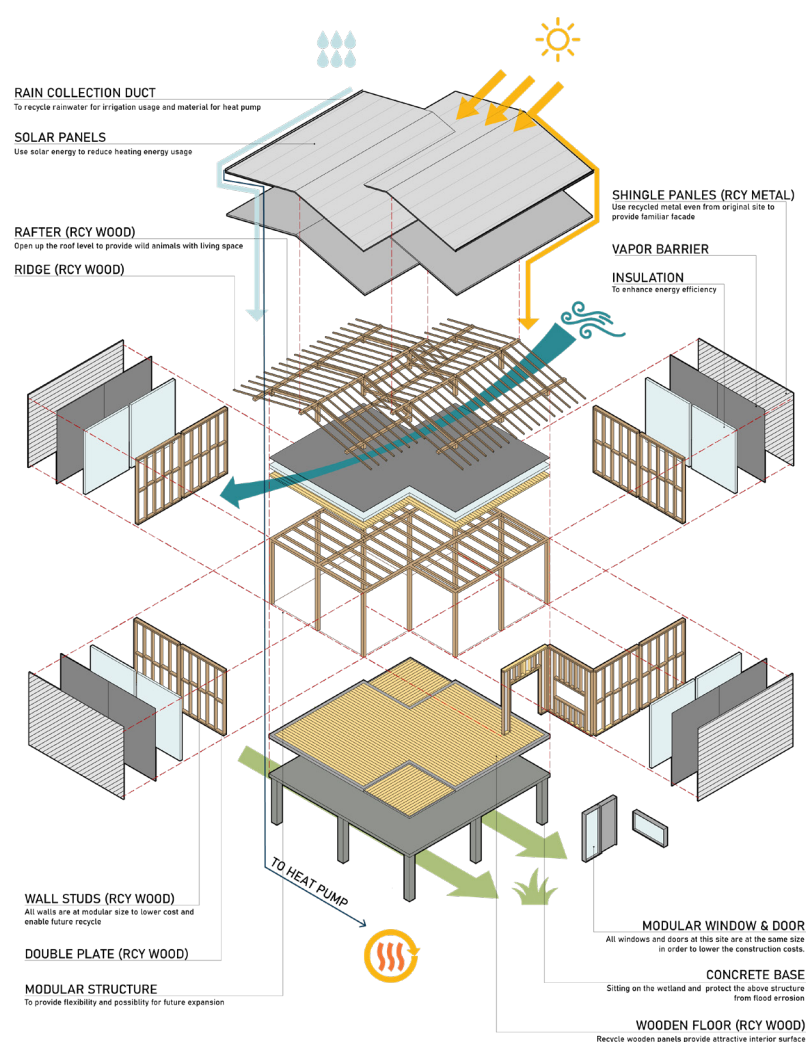
The area and depth of the design is based on our calculation of future rainwater and flood water volume.



Adaptive Community

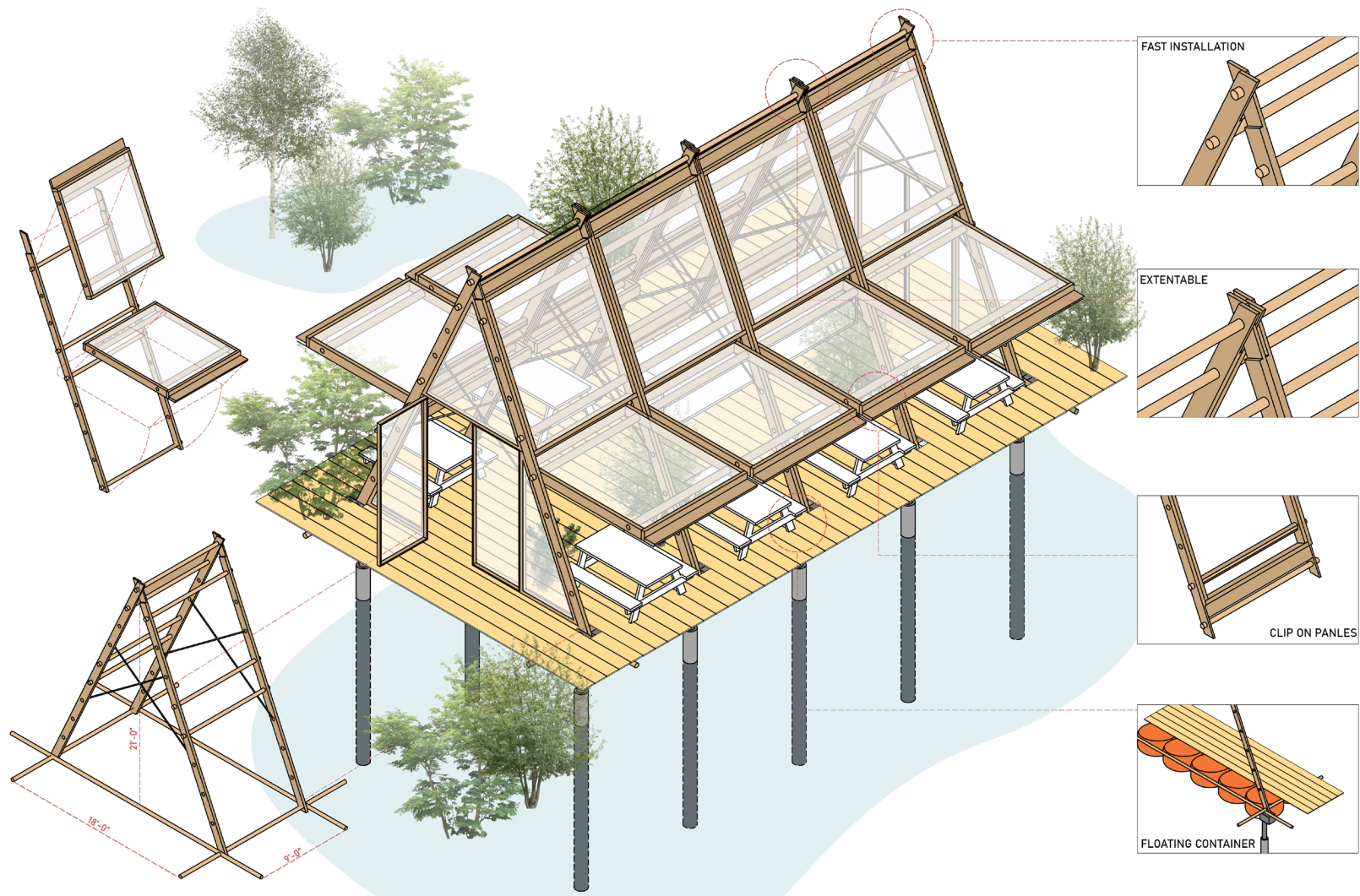
Elevated bases let water flow beneath. The design balances ecological performance with affordability, offering resilient homes for a changing climate.

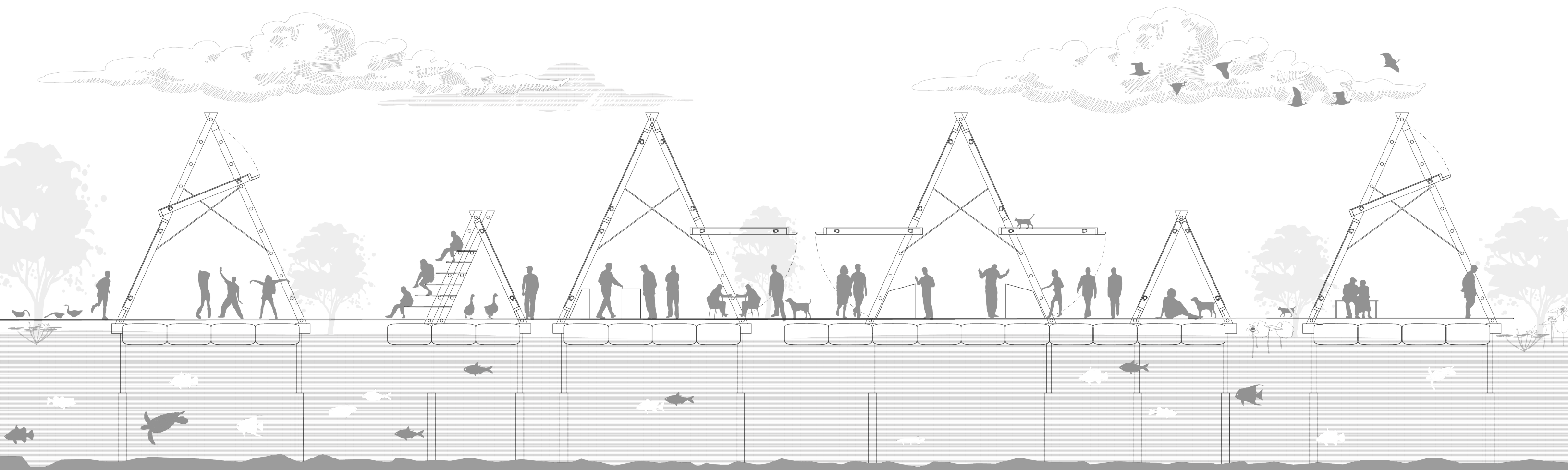
Homes form U-shaped clusters around shared courtyards and central spaces host public amenities and community gardens, enhancing food resilience and social interaction.



Floating Public Commons

In the inundated zone, floating structures offer adaptable public spaces. A universal modular system allows easy assembly by anyone and supports various uses—community gathering, markets, or recreation—based on configuration and scale.





The whole project reimagines living with water through layered resilience—from city-scale strategies to adaptable homes and shared public spaces. By integrating ecological systems, modular design, and community-focused planning, it offers a sustainable and inclusive vision for future flood-prone urban environments.

02

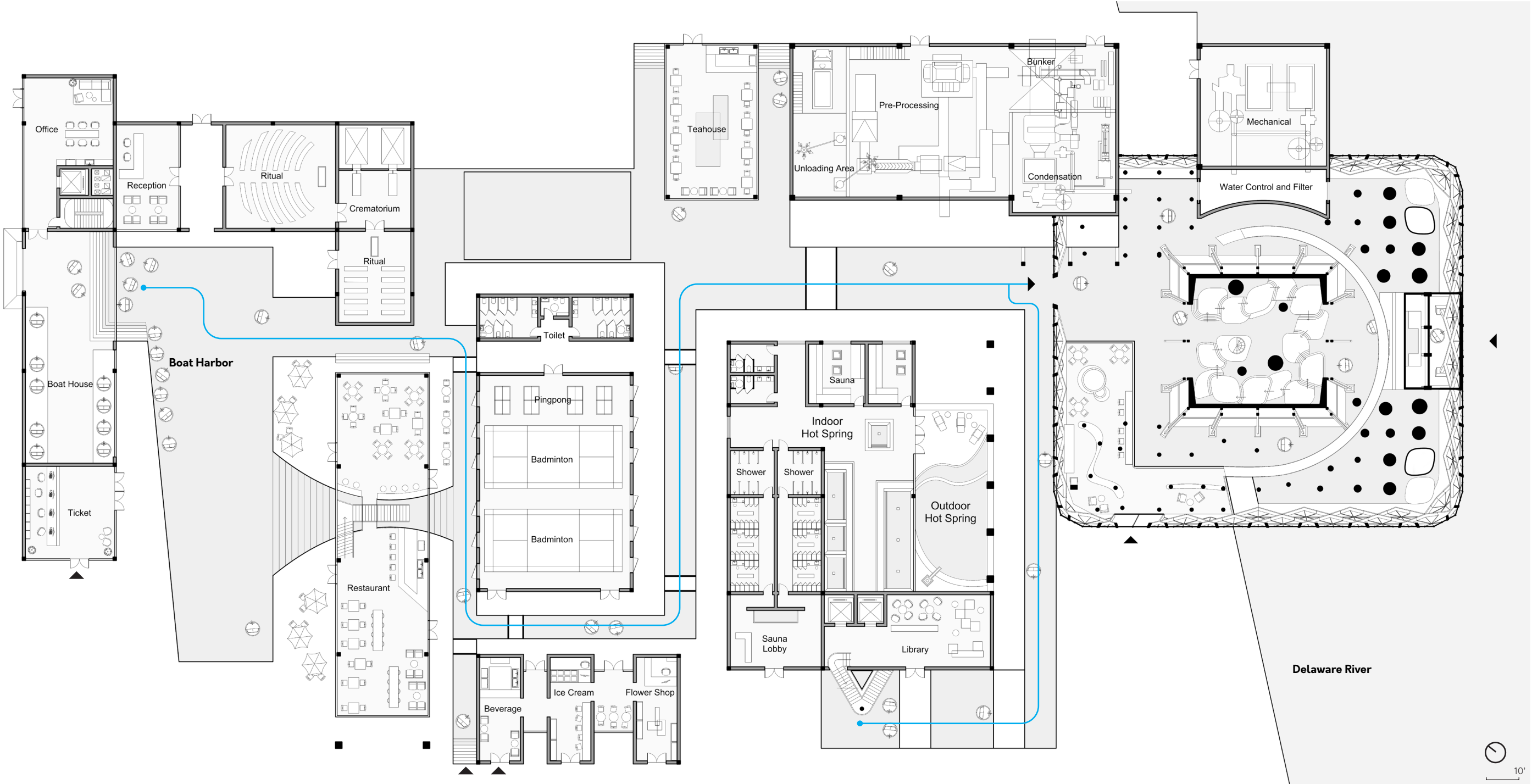
Botanic on Water

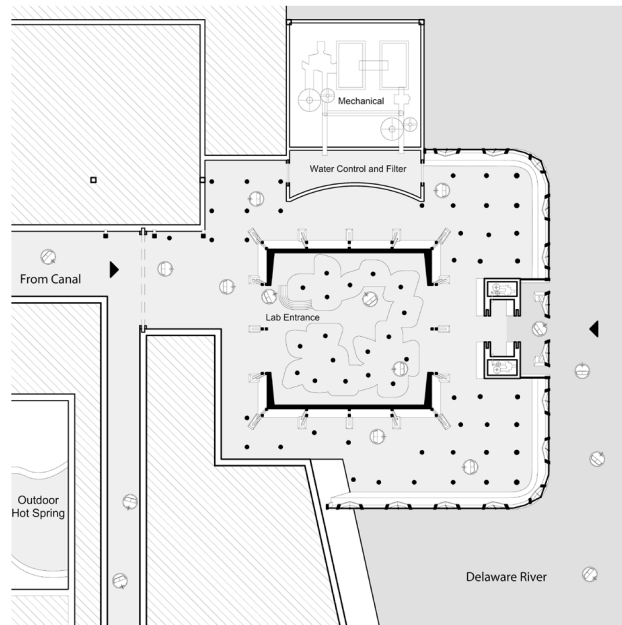
UPenn 602 Design Studio
Complete Date: 2024.05
Instructor: Ian Smith
Teammate: Aotong Yan



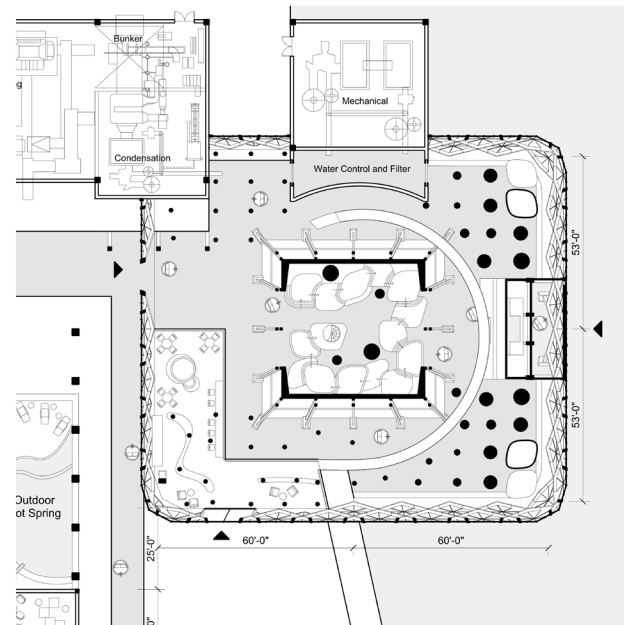
Cycle of Life and Renewal

Set on a vacant triangular lot near the Delaware River, this project explores the cyclical nature of life: death, birth, transformation, and renewal. The design unfolds as an experiential journey that begins with a boat ride and guides visitors through a sequence of architectural spaces, each representing a stage of evolution. The path culminates in a botanical greenhouse that merges land and water, offering an immersive encounter with nature's capacity for regeneration.

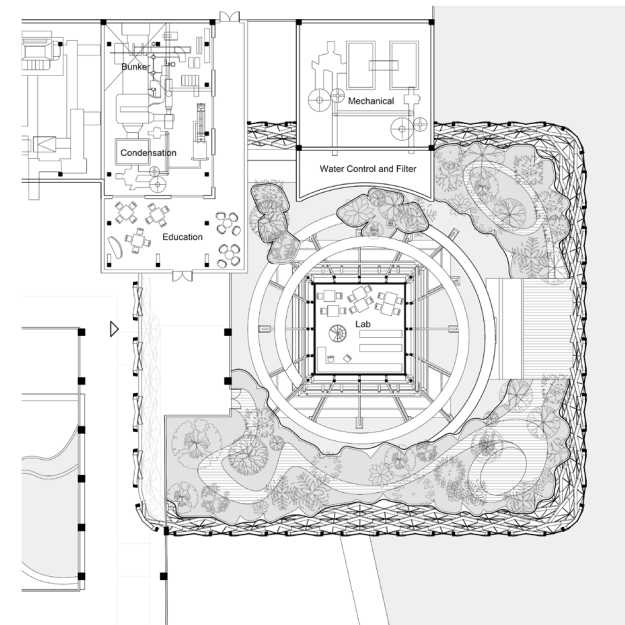




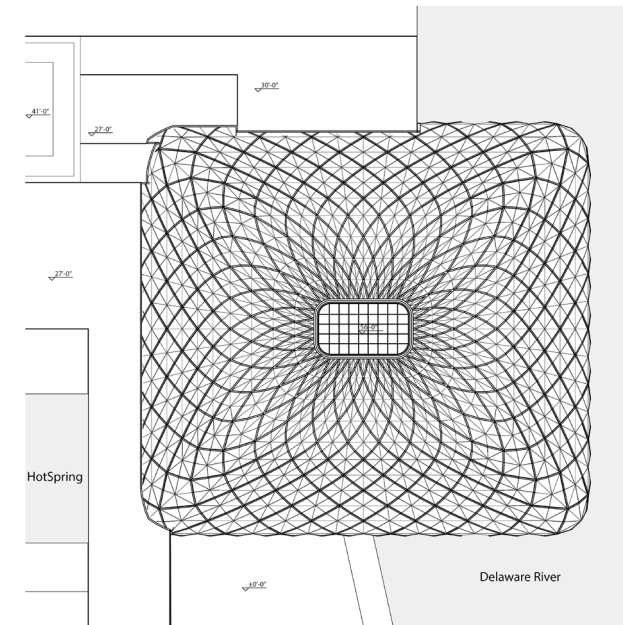
Water Level



Entrance Level



Garden Level



Structure Level

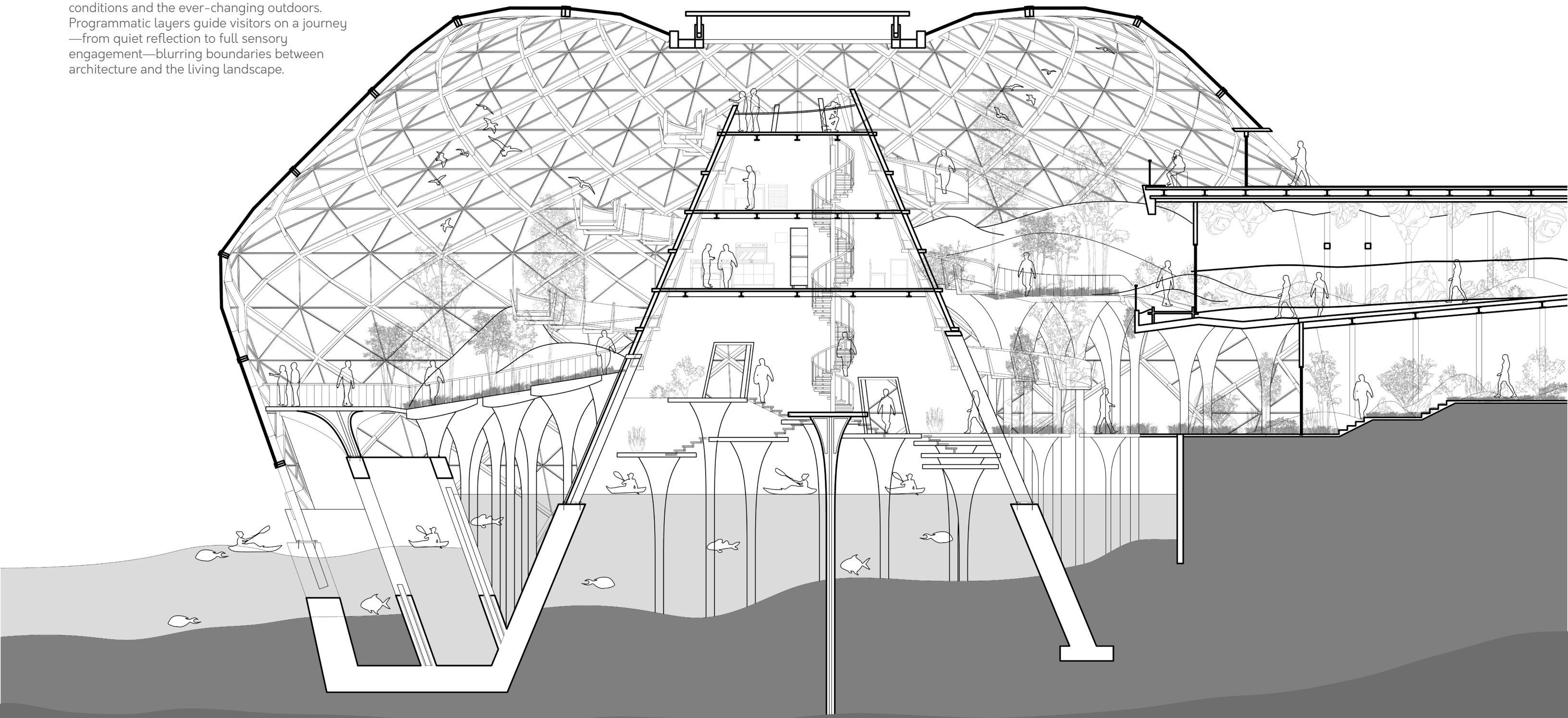
Garden with Layers

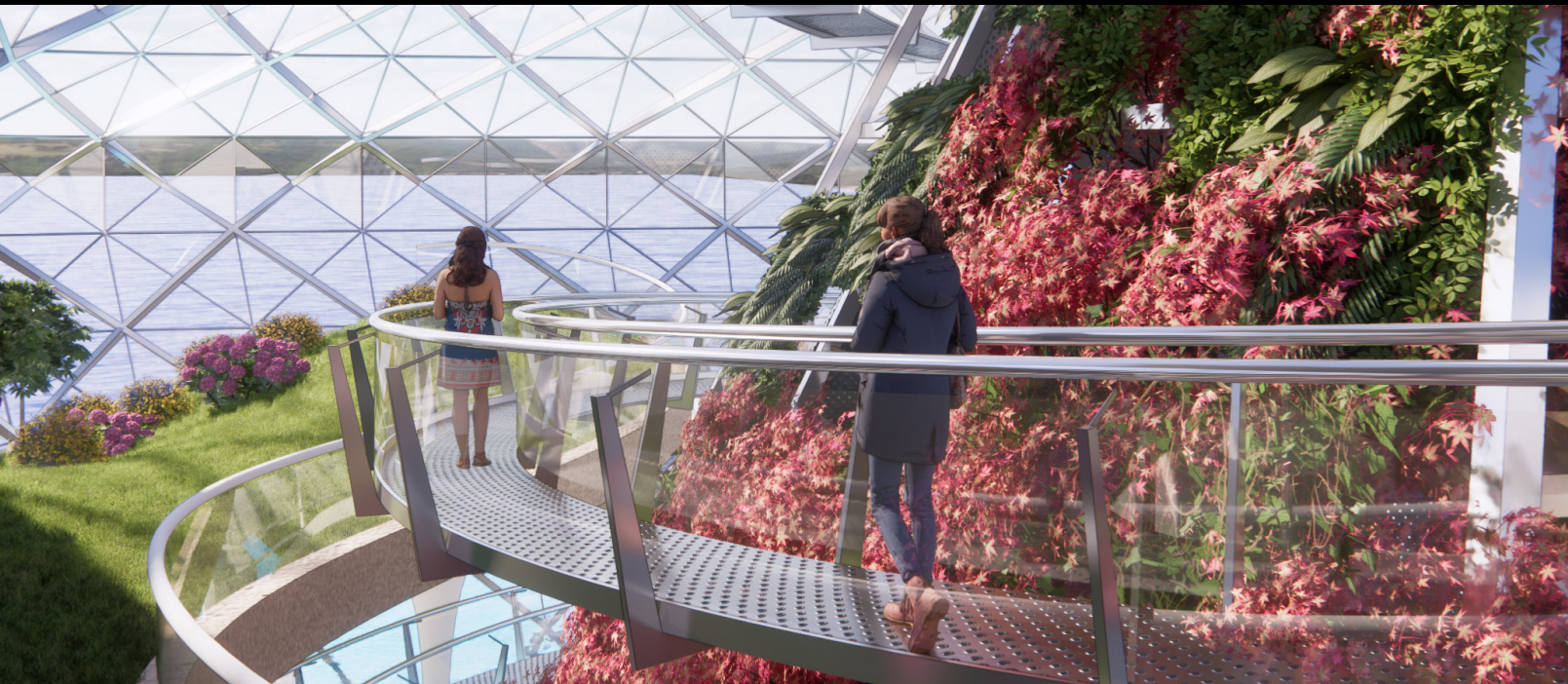
The plan series illustrates the botanical garden's multi-layered composition: landscape, water, circulation, and program. Each layer functions autonomously yet interlocks to shape a seamless spatial narrative. Boat and pedestrian pathways thread through curated botanical zones, linking enclosed structures with open-air spaces. This interplay of movement and environment invites visitors to engage with nature at multiple scales.



An Ecologic System

Interior climates are carefully calibrated through a blend of passive and active systems—piston-operated oculi, thermal zoning, and water-level-responsive ventilation. The architecture mediates between stabilized interior conditions and the ever-changing outdoors. Programmatic layers guide visitors on a journey—from quiet reflection to full sensory engagement—blurring boundaries between architecture and the living landscape.







03

Catopia

Location: Changning, Shanghai, China
Complete Date: 2021.03
Instructor: Yibo Feng
Research Collaborator: Kiki 🐾
Individual Work

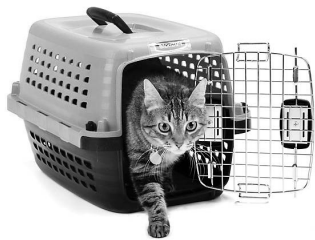
After adopting my cat, Kiki, in 2017, I began encountering more stray animals and speaking with fellow adopters. I soon realized that Shanghai has long struggled with the issue of stray cats. Without proper guidance, the relationships among stray animals and humans, cat-lovers and the broader community, and individuals and the government often become strained. This project proposes a space dedicated to rebuilding these relationships through sharing, empathy, and adoption.

Source: Gloucester county animal shelter



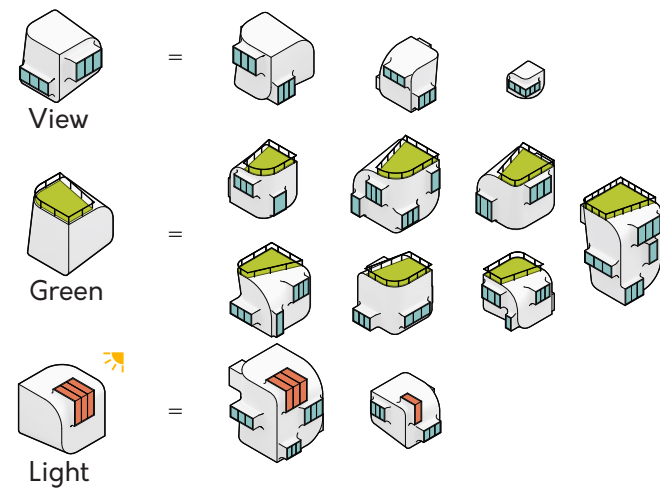
Individuals

The inspiration of the individual blocks comes from the pet carriers. They are used to capture and move stray cats. The mellow shapes provide cats with feelings of safety, and small openings allow them to look outside through narrow perspectives.



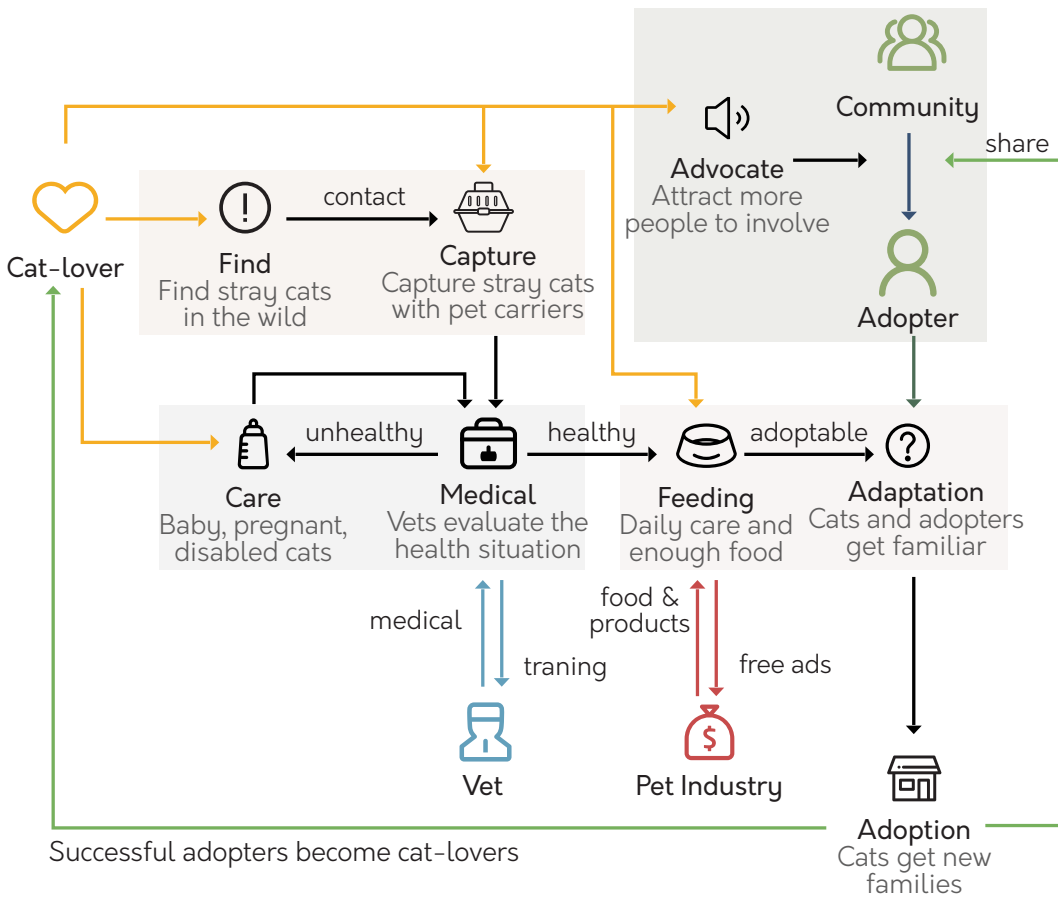
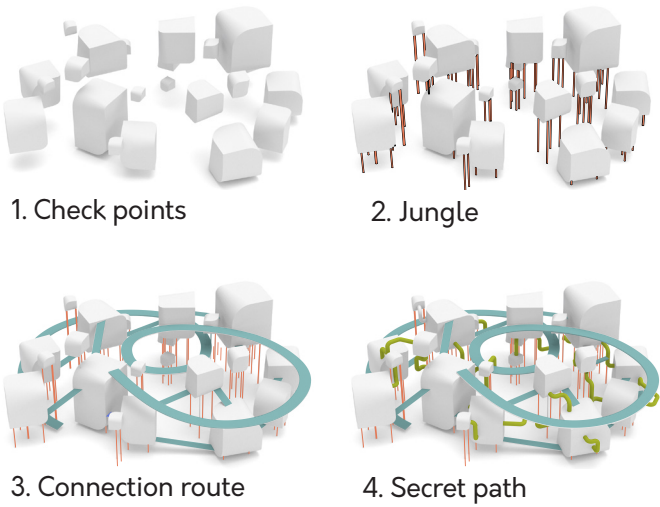
Types

Three different forms are allocated to different blocks according to their functions. Thus, every block enjoys a unique appearance.



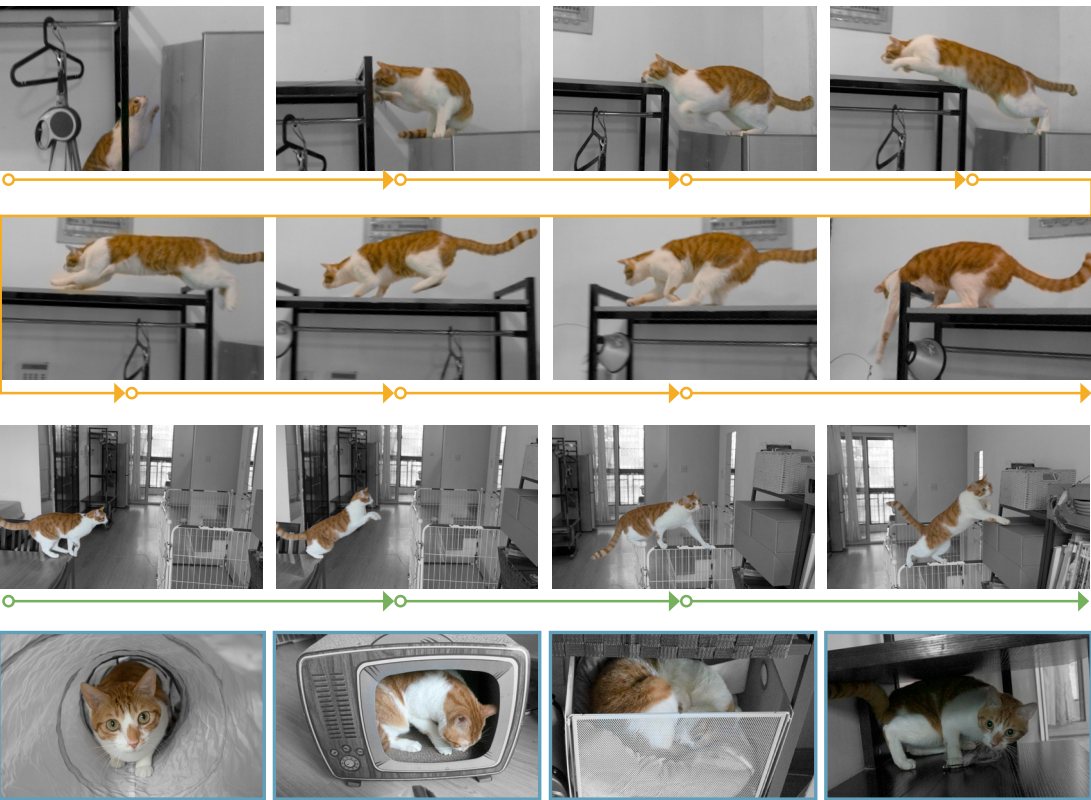
Groups

Indoor cats understand our houses as a jungle and practice hunting behaviors every day. They will set dispersed "check points" and have flexible routes connecting these points. Sometimes they also take secret paths that humans cannot see.



Adoption Circle

Catopia is envisioned as a space to reorganize and nurture the relationships between stray cats, communities, and institutions—creating a positive and self-sustaining cycle. Veterinarians can contribute their expertise through medical evaluation and treatment, while the pet industry supports the space with food and supplies. Community-oriented public areas—such as libraries and cafés—invite nearby residents to engage with the space, increasing opportunities for interaction with cats and ultimately encouraging adoption.



Kiki's daily "hunting" route A
One of Kiki' routes is jumping onto the fridge and crossing the upper level of hanger.

Kiki's daily "hunting" route B
Another route is from the dining table to the bookshelves.

Kiki's check points
Tunnel Toys
Corrugated paper box
Corners on bookshelves
Interlayer of chairs

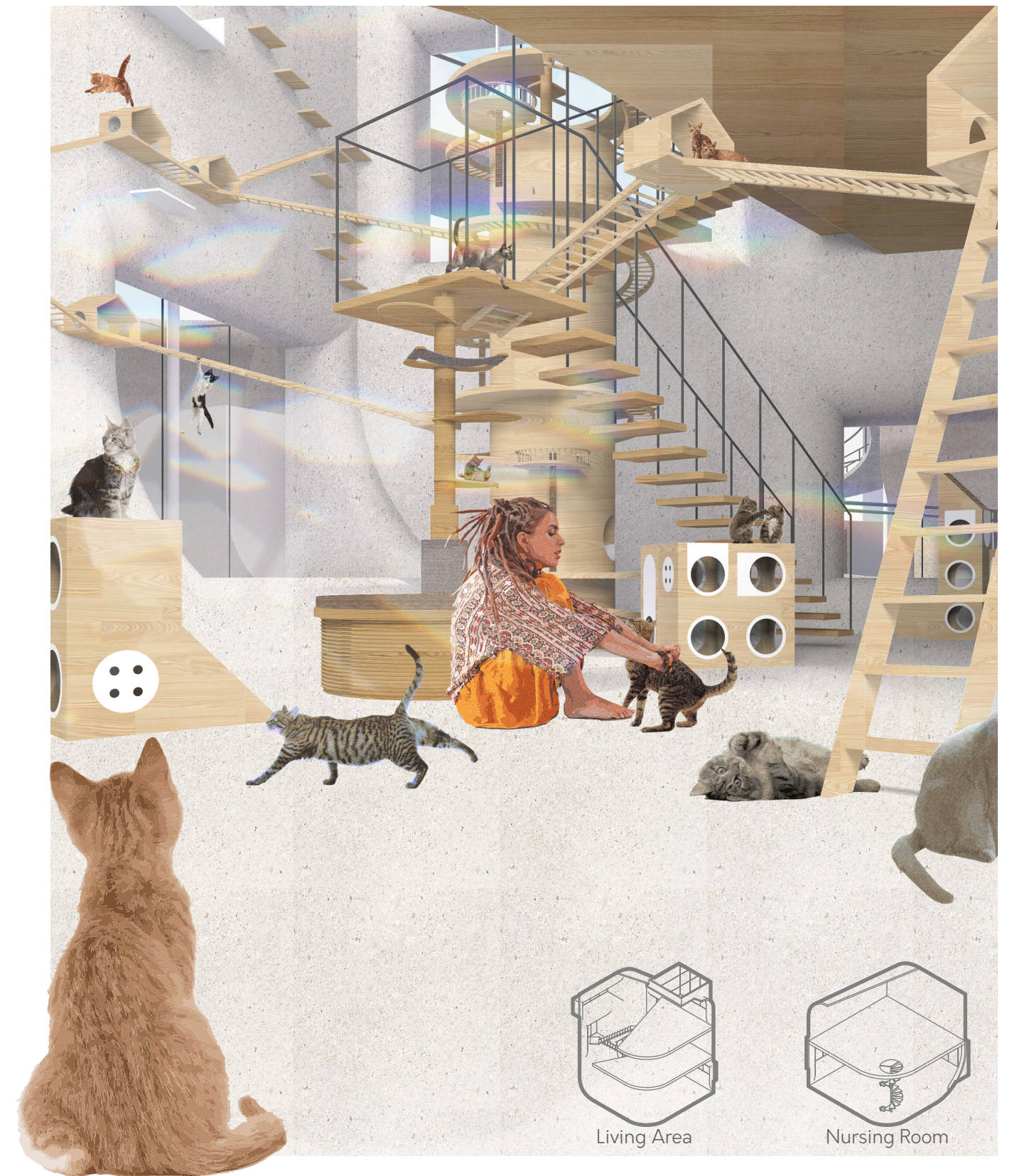
▼ Liquid Space

The floors flow fluently and connect with each other. The boundary of "rooms" and "functions" in human language fade away. Floors, stairs and furniture become equal when forming a playground.





The community library is one of the community-oriented blocks of Catopia. It offers the community a comfortable place to read and stay with relaxing cats.



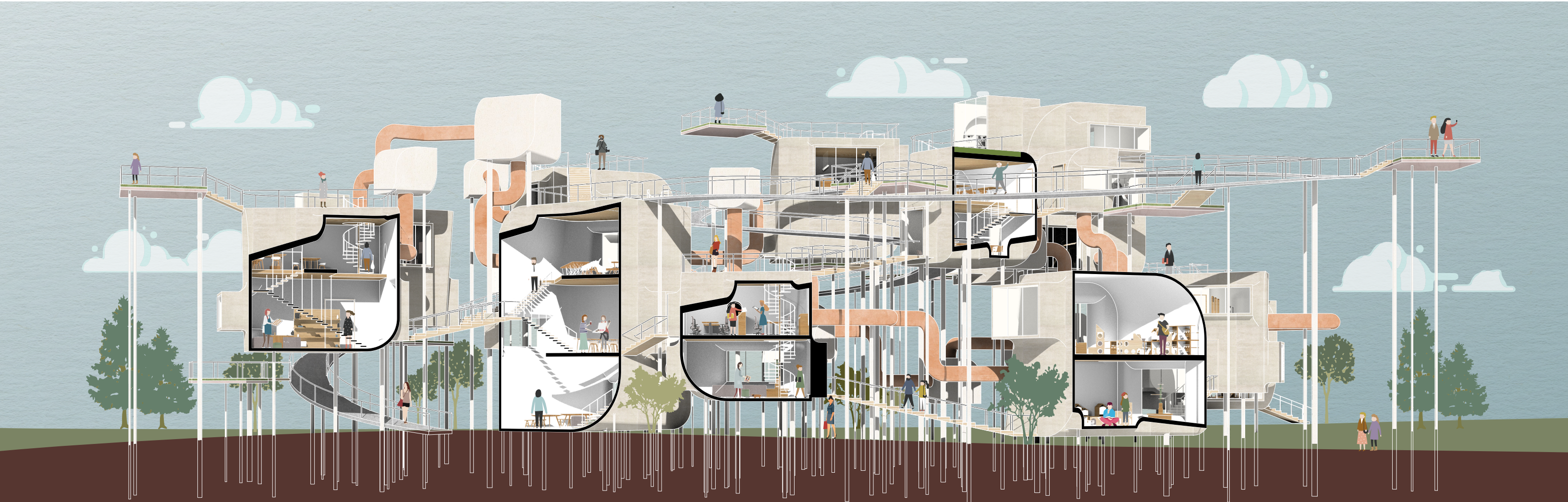
The cat living areas are cat-oriented blocks and intend to become interesting playgrounds for cats. They provide cats with many opportunities to hide, climb and dash around.



▲ Jungle Beneath the Blocks



▲ Maze On the Roof



04

Others

Non-Planar Robotic 3D Printing

Location: Philadelphia, US
Complete Date: 2024.12
Instructor: Robert Stuart-Smith
Teammates: Carlotta De Bellis

In this seminar, we explored the use of a robotic arm in combination with PETG pellet material for 3D printing. The design interprets the organic logic of a tree—from root to branch to canopy—through this innovative material and fabrication method.





Hallucination

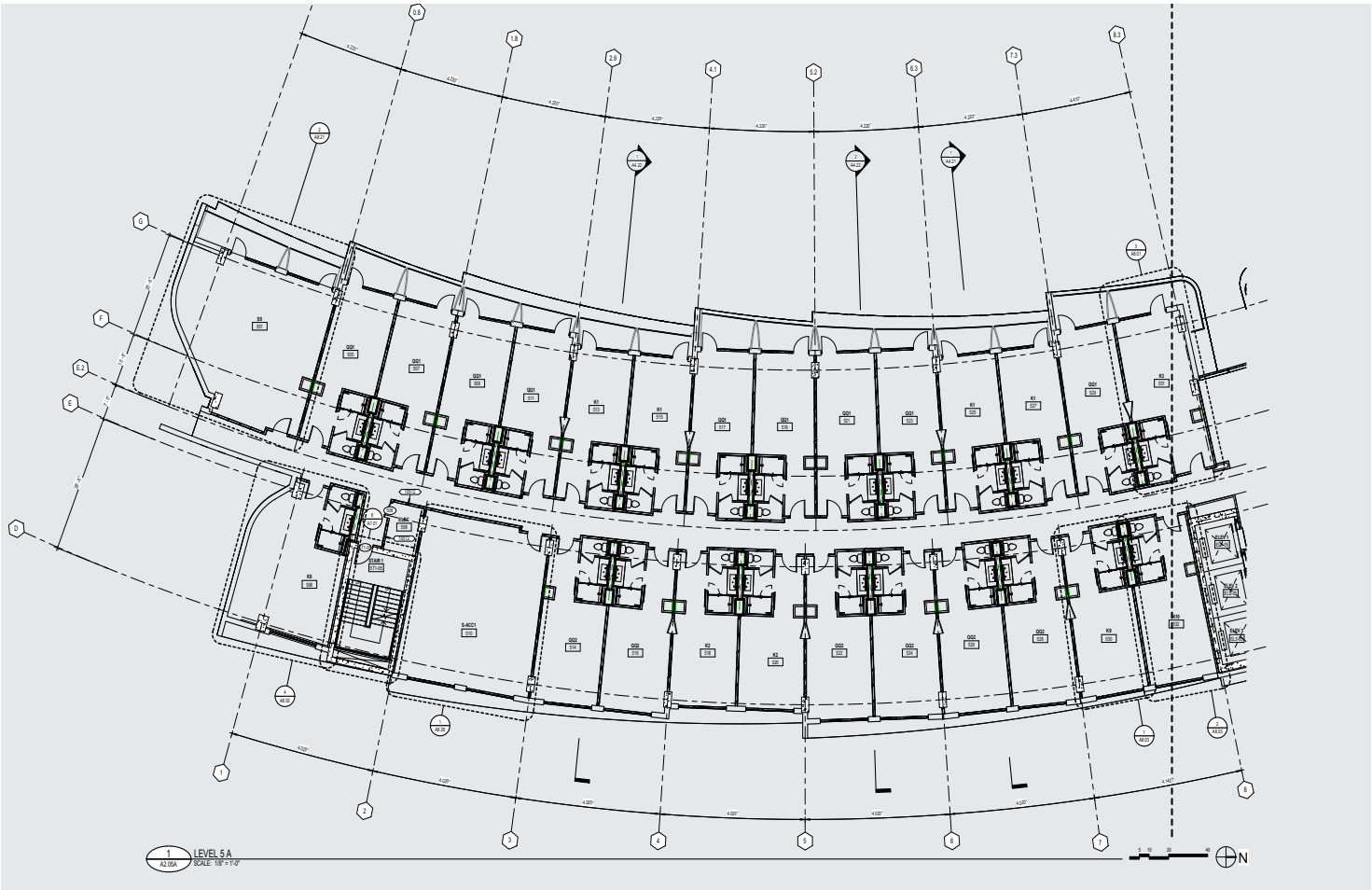
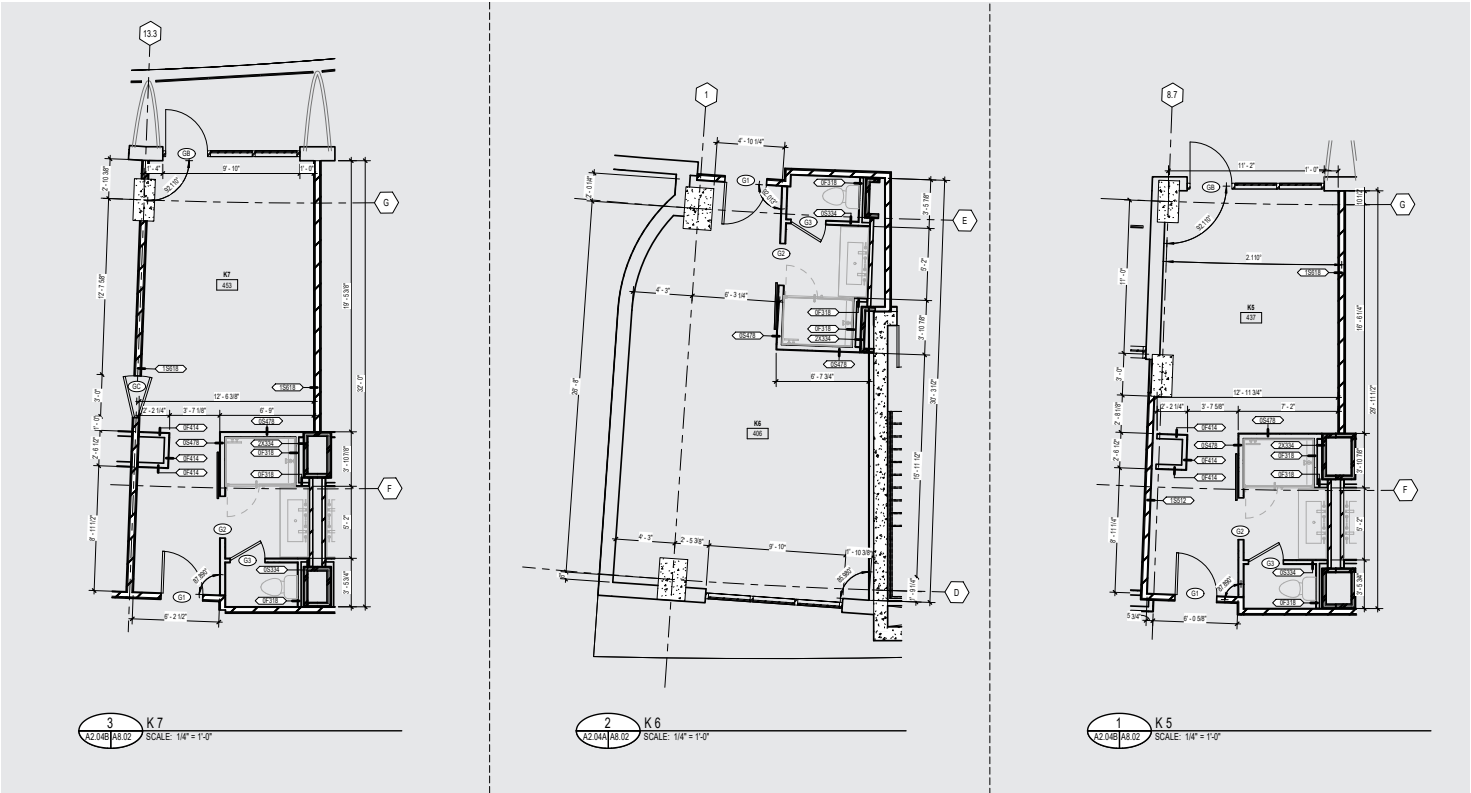
UPenn 501 Design Studio
Instructor: Danielle Willems
Complete Date: 2022.10
Teammates: Song Zhang, Sahil Shah, Wenyi Zhang
Contribution: Weaving & Pattern Design, Fabrication

We aimed to create an installation that evokes a sense of hallucination. Inside, reflective mirrors and LED elements manipulate lines of sight to generate moments of surprise for visitors. On the exterior, a black-and-white 2D pattern combines with 3D woven structures to produce a camouflage effect, blurring perceptions of space and depth.

SeaWorld Hotel

Summer Intern Project
Location: Orlando, Florida
Complete Date: 2023.08
Responsible for: Schematic Design, Design Development

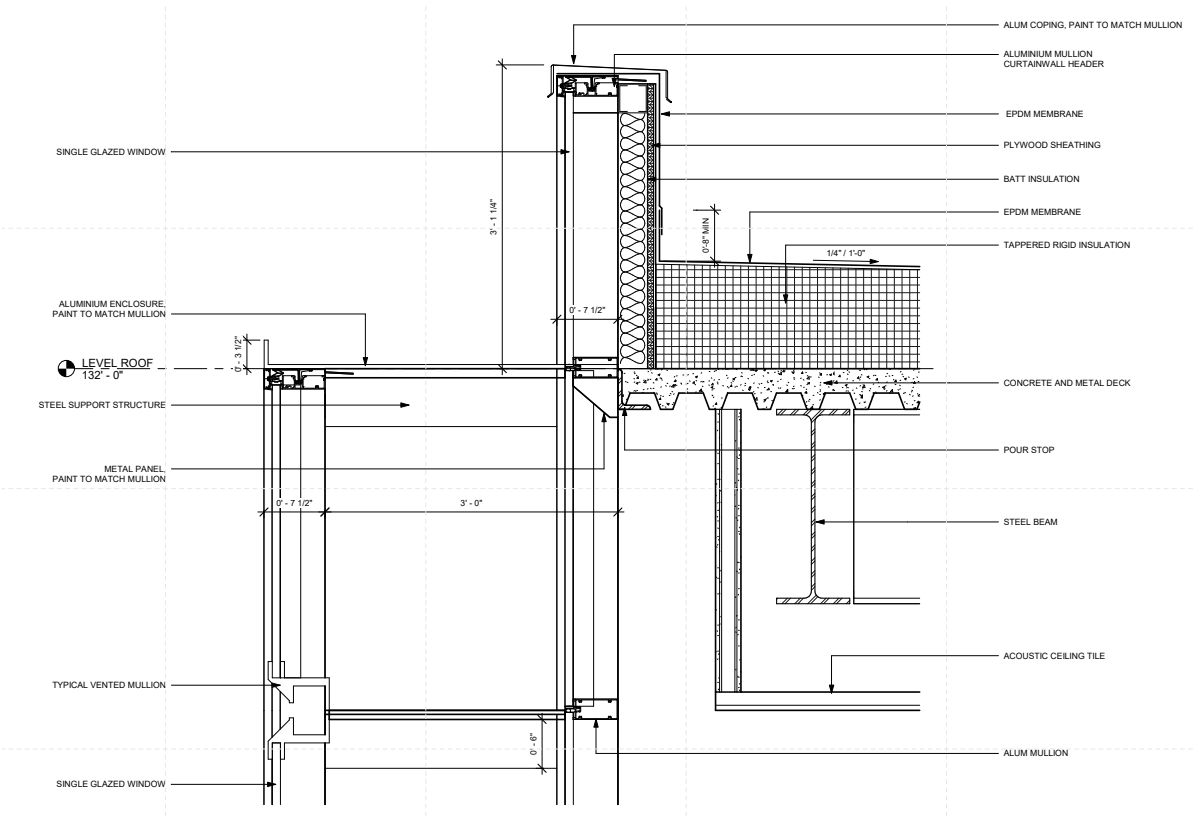
During the summer, I interned at Cooper Carry, where I contributed to the Schematic Design (SD) and Design Development (DD) phases of the SeaWorld Hotel project. Situated adjacent to the SeaWorld Theme Park, the hotel was envisioned to harmonize with the oceanic and aquatic themes of its surroundings. Its facade, inspired by a school of fish, evokes a sense of fluidity and motion. I was responsible for the detailed design of this concave facade and produced a range of drawings, including floor plans, room layouts, room matrices, and wall sections.



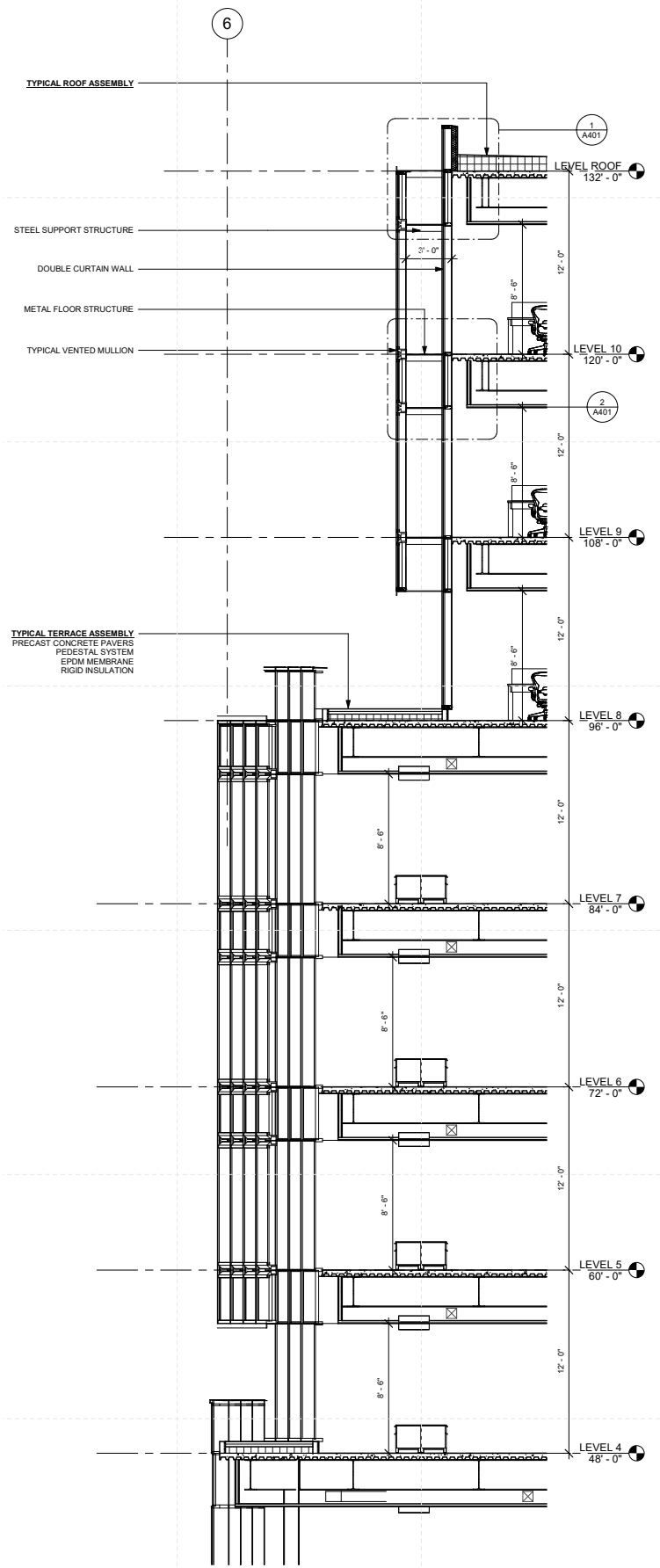
White Boxes

UPenn Construction Class
Location: Philadelphia, US
Complete Date: 2023. 05
Instructor: Franca Trubiano

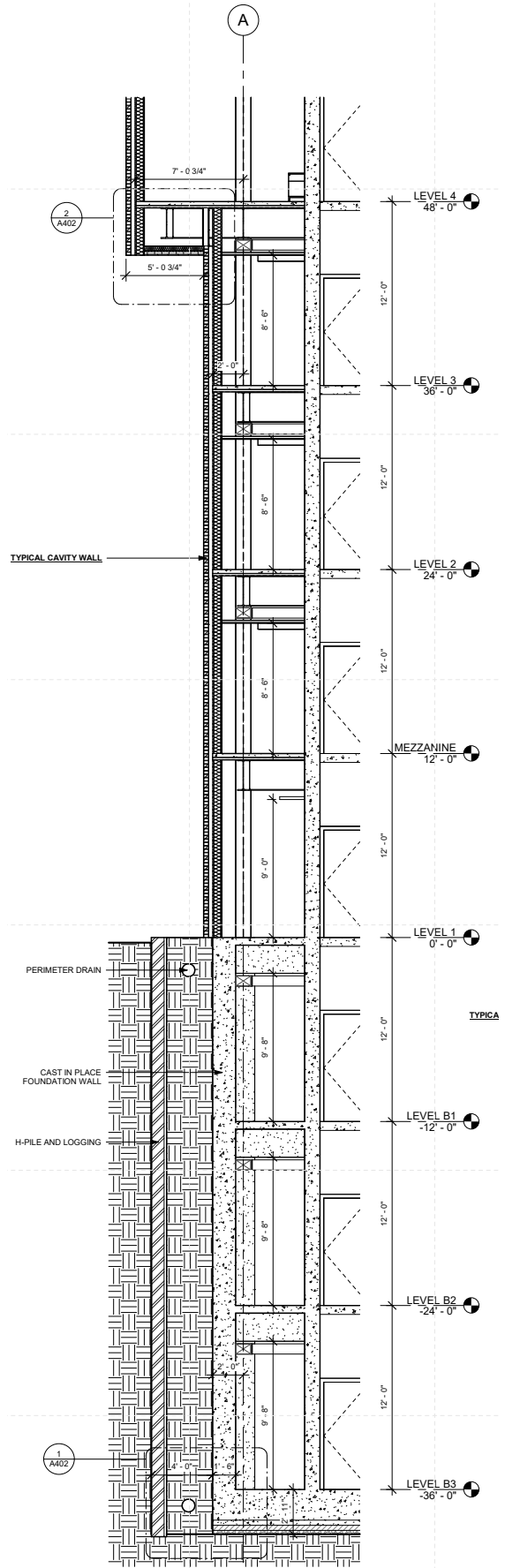
This office project is located at the downtown area in Philadelphia. The design explores the interplay of materials and varied mullion configurations to create a refined façade expression. The course focused on utilizing BIM software to develop detailed architectural drawings, emphasizing precision in documentation and construction logic.



3 SECTION DETAIL - PARAPET AT CURTAINWALL
1 1/2" = 1'-0"



2 WALL SECTION - TYPICAL FUNDATION
1/4" = 1'-0"



1 WALL SECTION - TYPICAL FUNDATION
1/4" = 1'-0"



Waterfront Museum

UPenn 501 Design Studio
Location: Philadelphia, US
Complete Date: 2022.12
Instructor: Danielle Willems
Individual Work

This museum sits at the river's edge near the heart of Philadelphia. The design aims to both fragment and merge the views of nature and urban life, creating a form that dissolves boundaries between the two.

AI Integrated Design

UPenn 502 Design Studio
Location: Philadelphia, US
Complete Date: 2023.04
Instructor: Ezio Blasetti
Individual Work

This project envisions a grocery market where architecture itself becomes a form of advertisement for the vendors. Each shop is uniquely themed to reflect its merchandise—for instance, the vegetable store evokes the forms of lettuce and radish through both its façade and interior design, while the deli counter visually references pizza and sausage. I explored an AI-assisted workflow that translates conceptual keywords into images (1D to 2D), images into spatial models (2D to 3D), and models into videos and interior environments (3D and beyond).

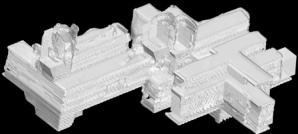
Vegetables Shop

A MIXED PLANT OF BROCCOLI TOMATOES BELL PEPPERS, DETAILED, ZAHA HADID, BLACK BACKGROUND, 4K –UPBETA –V 4

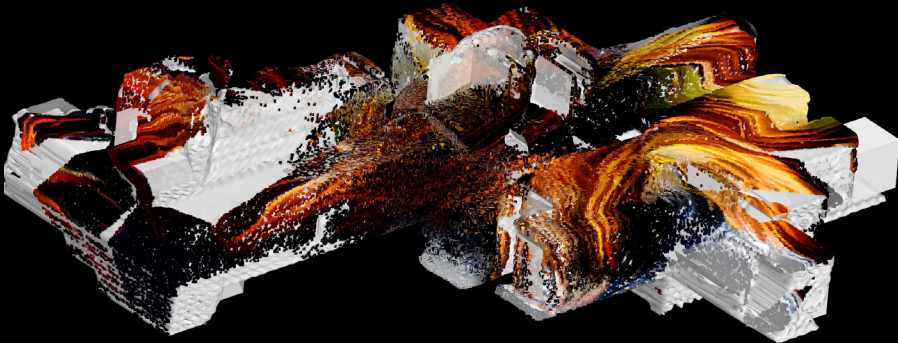
1D - ChatGPT



2D - MidJourney



3D - Runway Video Modify



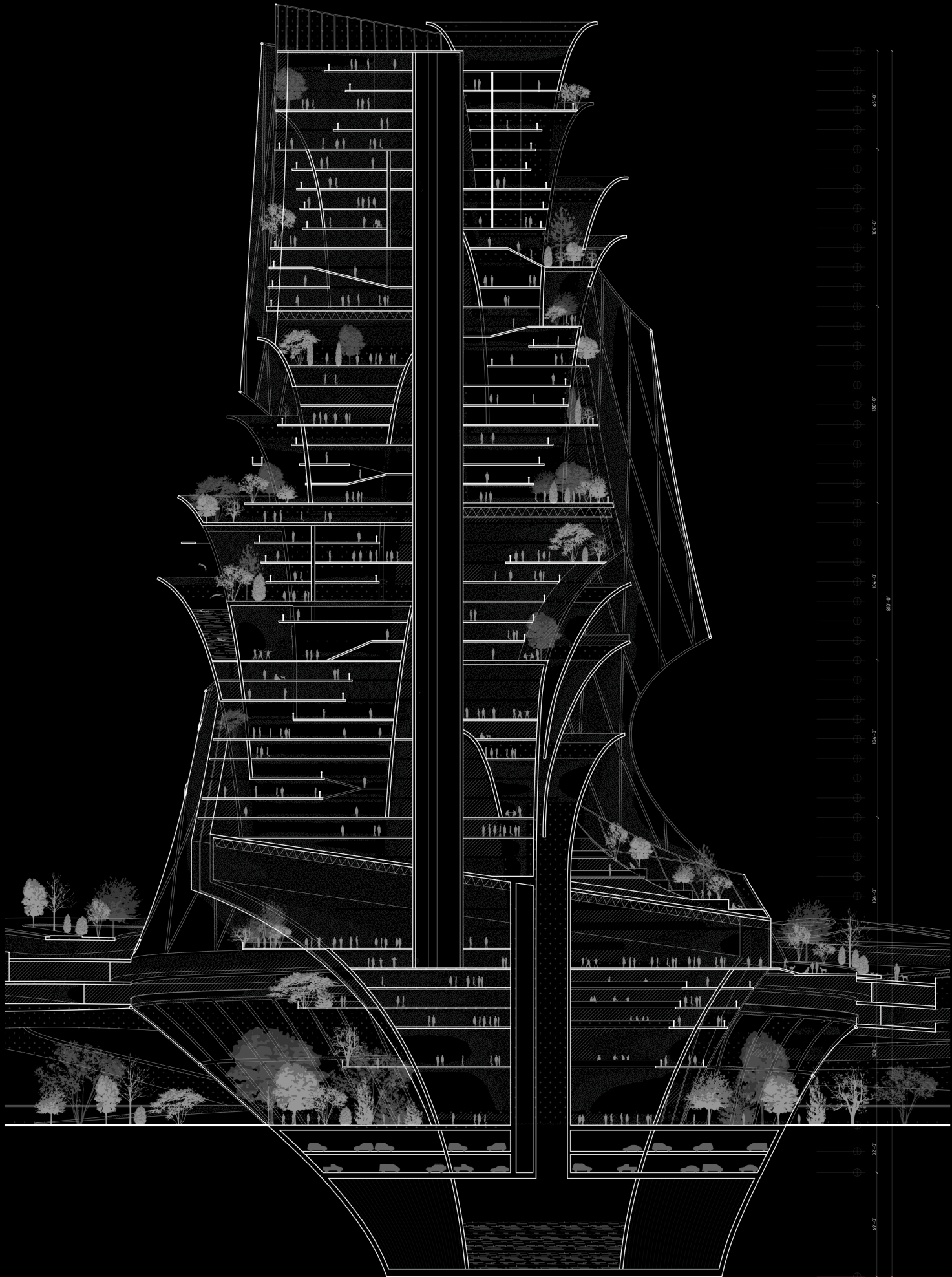
3D - Point Cloud Projection by Python Code



Re-weaving Río Fucha

UPenn 702 Design Studio
Location: Bogotá , Colombia
Complete Date: 2025.05
Instructor: Winka Dubbeldam
Teammates: Kai Chen, Jeremy Pham

This project seeks to transform a polluted, underserved area into a sustainable, inclusive community. A regenerated wetland park, along with water and waste treatment, will restore the river's ecology and mitigate flooding, while mixed-use centers and residential towers will provide public services and housing for 10,000 residents on the top. The design offers a resilient urban model that revitalizes the river and improves quality of life.

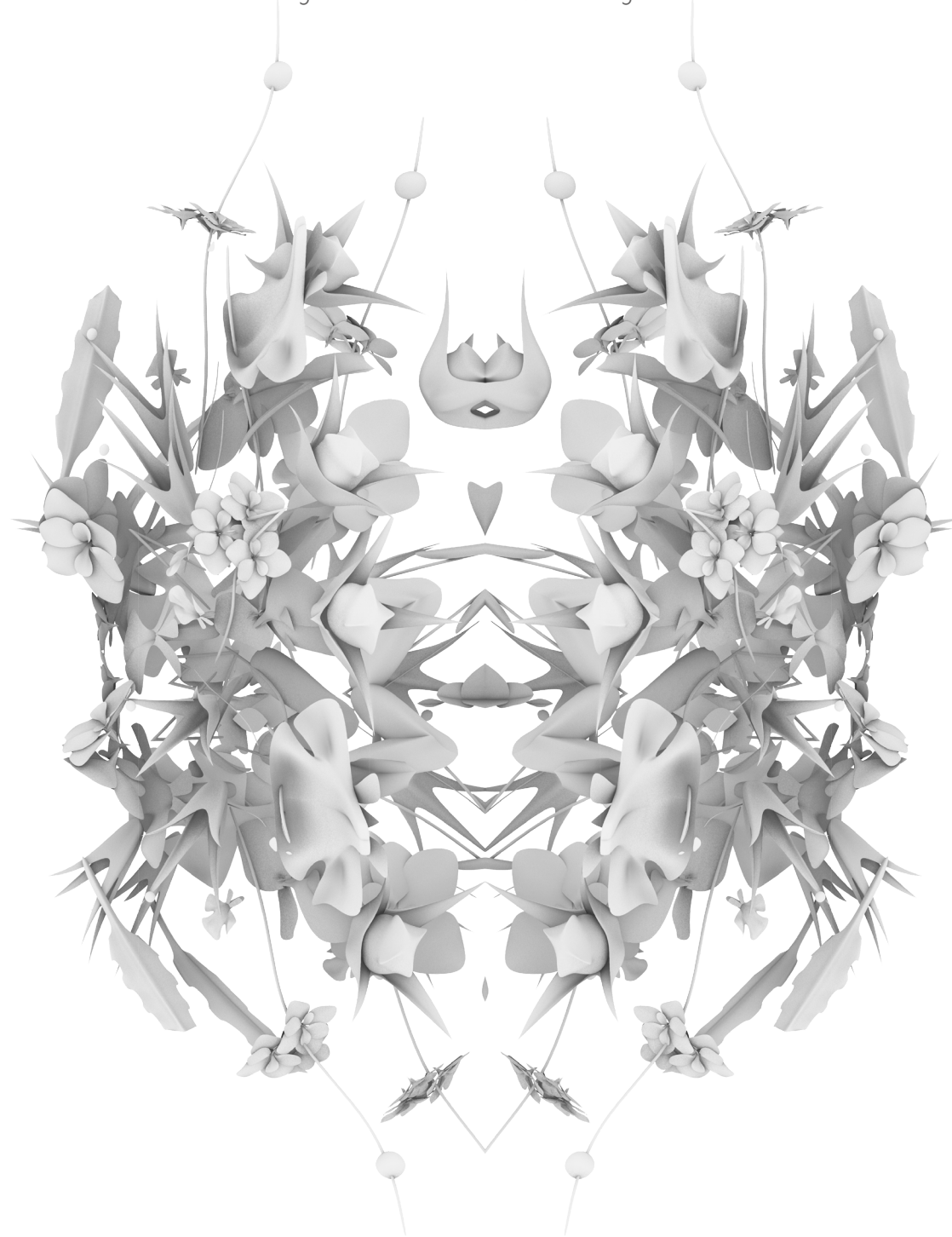




Plant Morphology

Complete Date: 2021. 08
Instructor: Dongfang Xie
Individual Work

These flowers were grown on my balcony. I studied their growth patterns and translated their organic rhythms into design expressions, capturing the quiet elegance of these remarkable living forms.



Kodak Han
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