

# Portfolio

Michelle Liu  
2025 Selected Works

## Table of Contents

- |   |     |  |
|---|-----|--|
| 1 | P1  | Soft Entwine<br>Academic<br>Spring 2023      |
| 2 | P13 | Housing Pods<br>Academic<br>Fall 2019        |
| 3 | P17 | Big Little Village<br>Academic<br>Fall 2024  |
| 4 | P25 | Grounds in Flux<br>Academic<br>Fall 2022     |
| 5 | P33 | Church of Community<br>Academic<br>Fall 2021 |
| 6 | P37 | Annum Architects<br>2023 - 2024              |

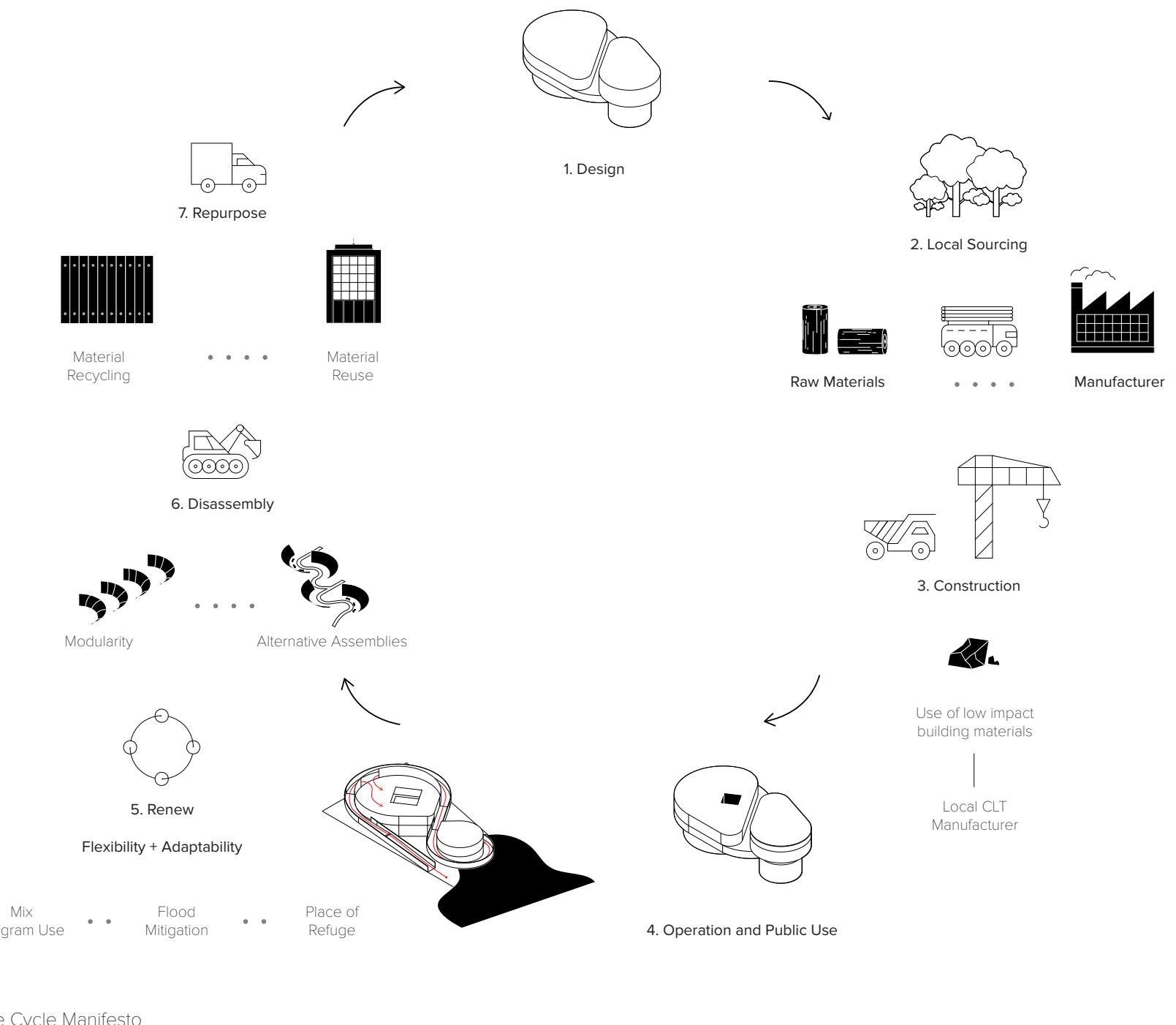
# 01. Soft Entwine

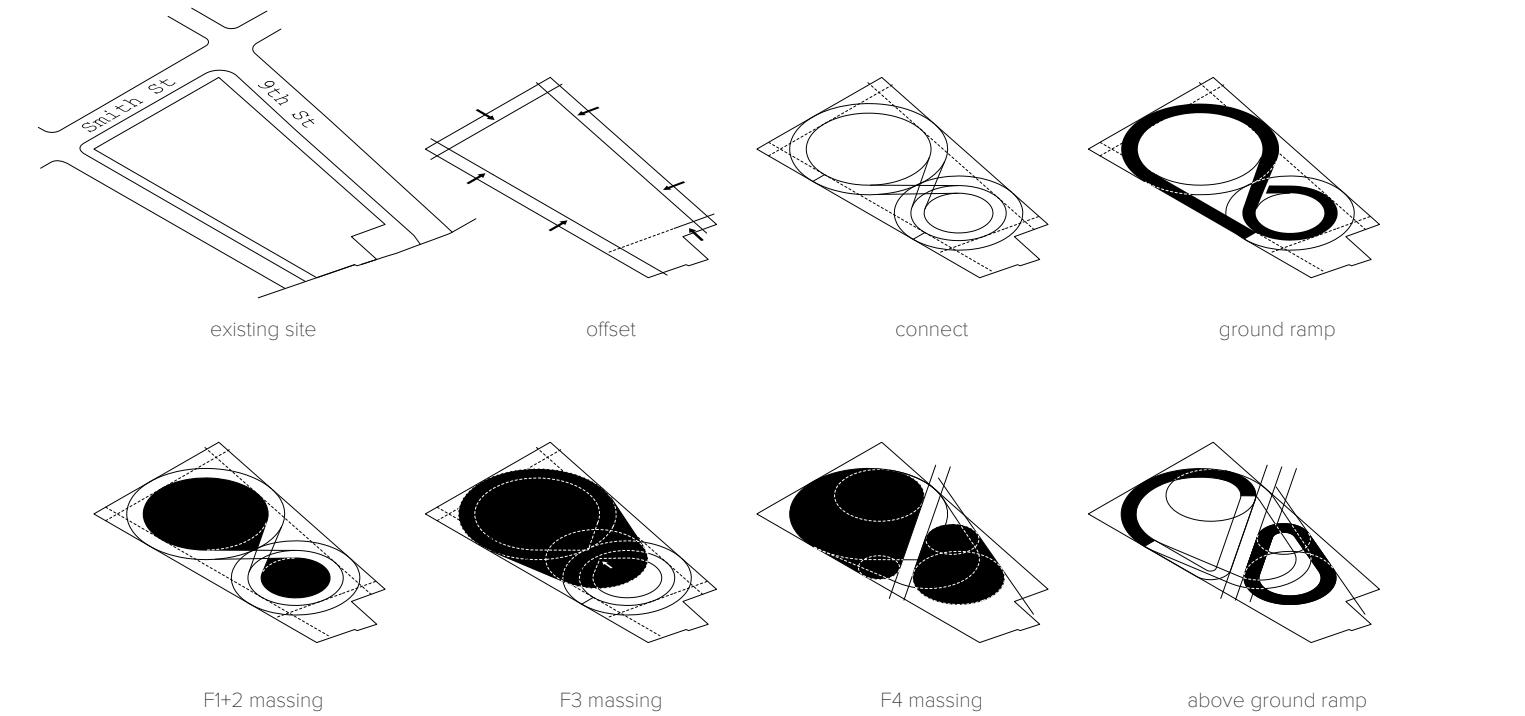
Course: ARC2014 - Design Studio IV  
Instructor: Chris Cornecelli

Continuity invites curiosity. Bridging together art and community through continuous circulation as program, users are brought together to experience the various production stages of creation. Through the weaving of spaces, Soft Entwine proposes an architecture of circulation that is both playful and multifaceted.

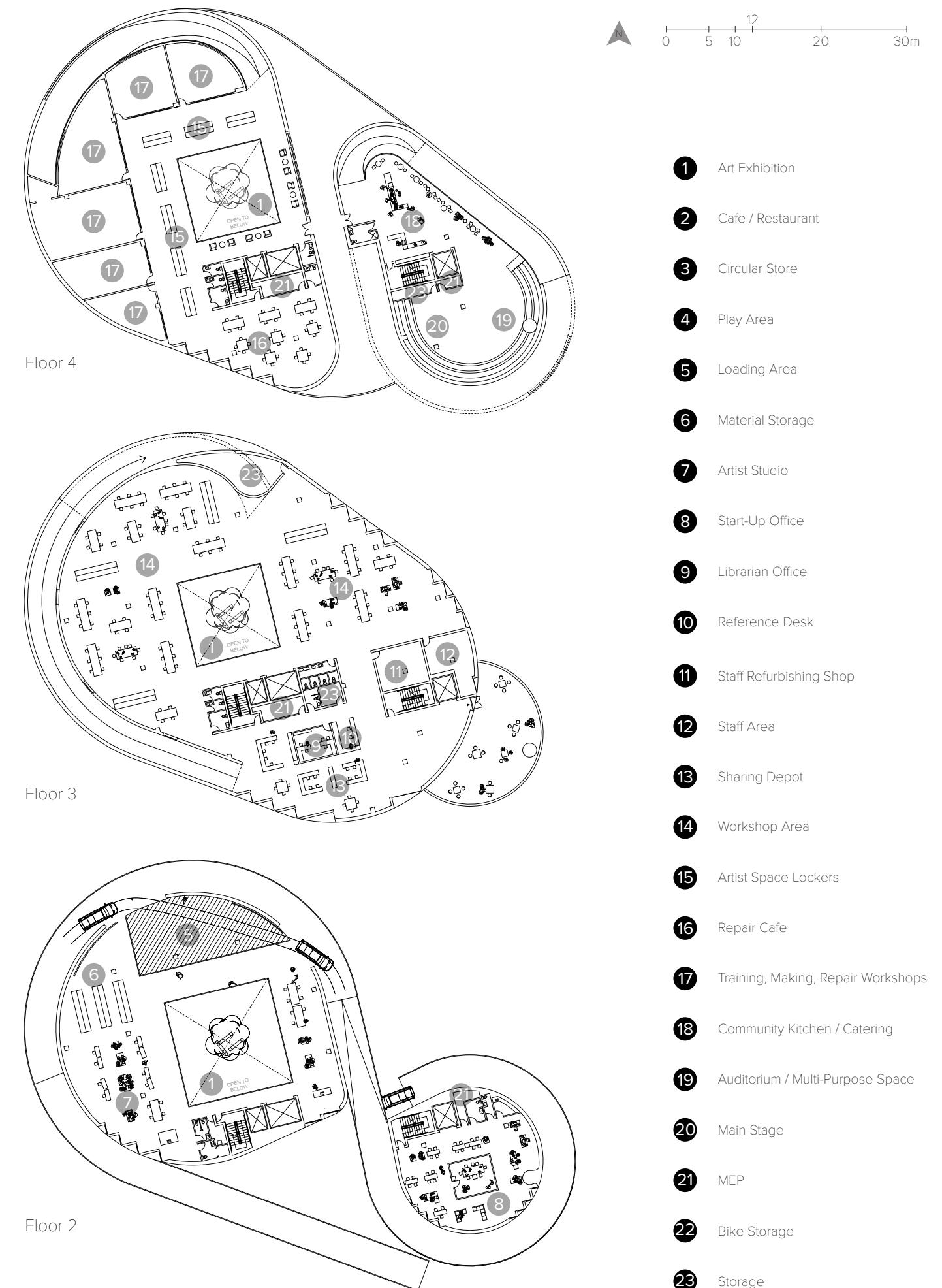
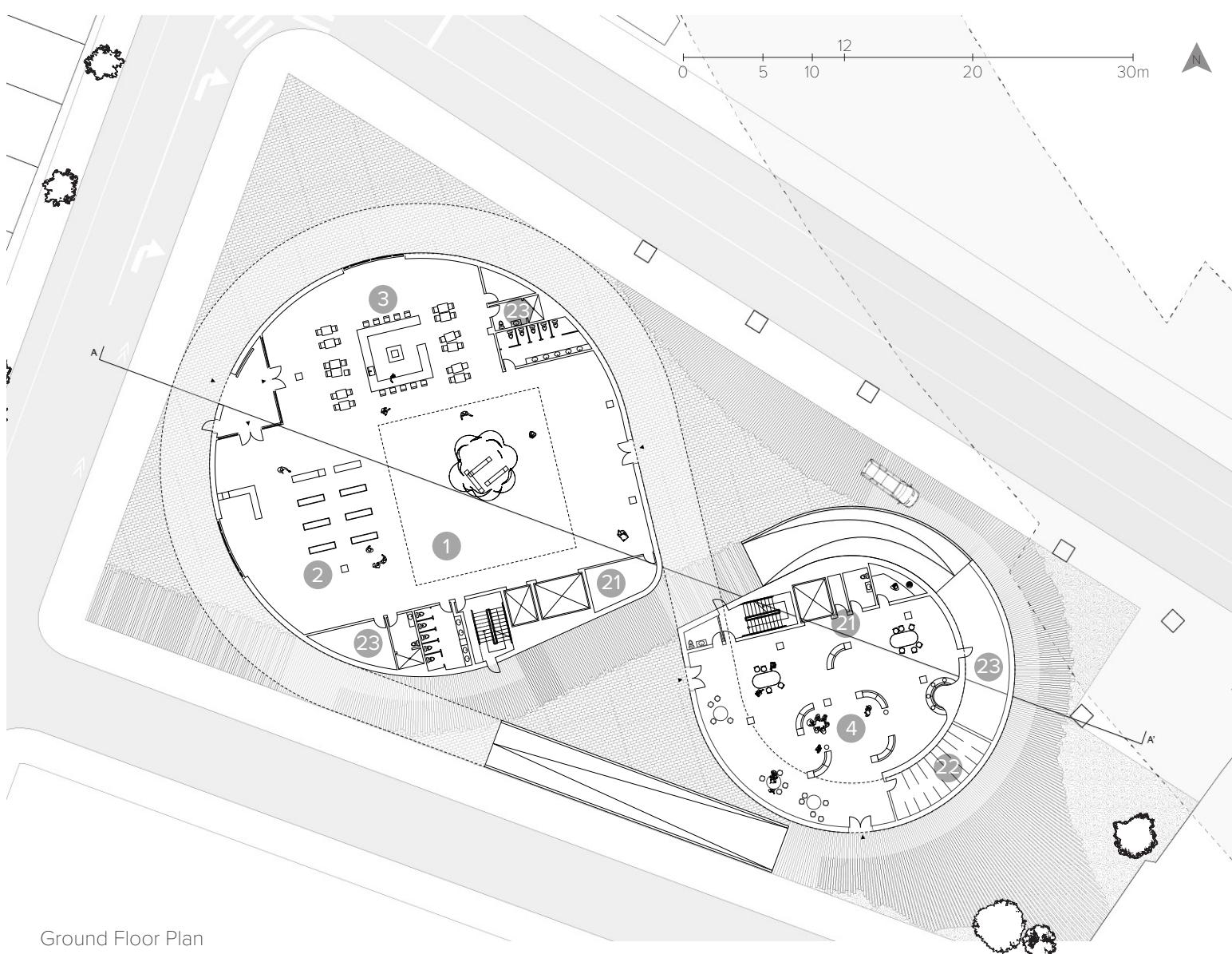
Located in Brooklyn, New York at 503 Smith Street, the site along the Gowanus canal embodies the magnitude and urgency of the climate threat in an area transitioning away from a heavy industrial past into an eco-industrial and mixed use future. The project aims to reimagine the social and material dimensions of buildings to define the urgent transition of the industry into a low carbon and circular economy. It is a social infrastructure for the neighborhood anchored around a library of things, a reuse factory and also an exhibition and workspace space for the local artists' community.

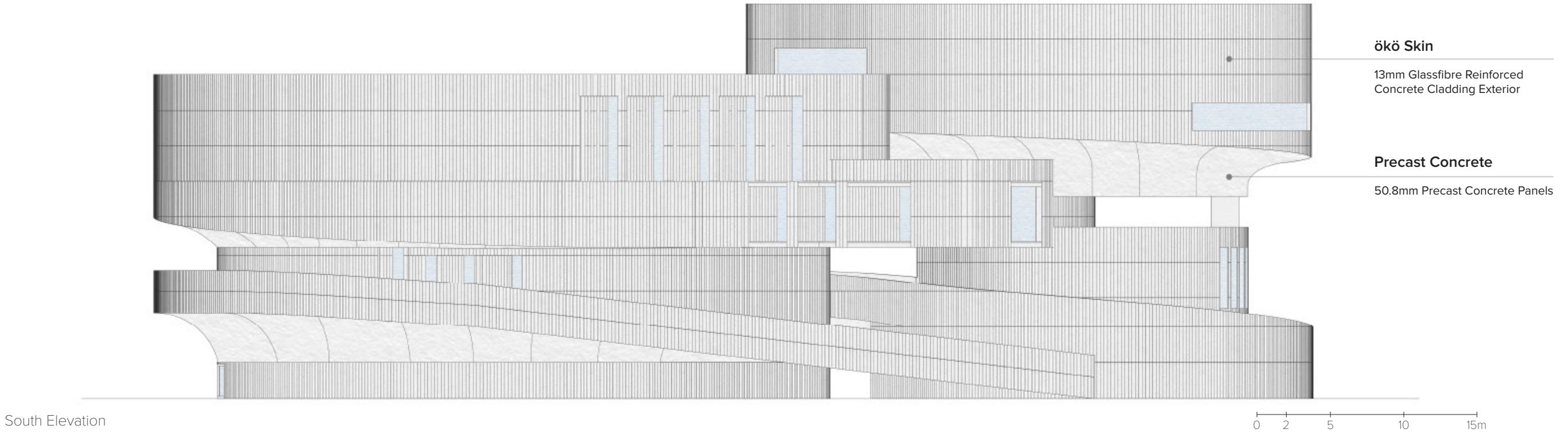
Collaborator: Amelia Chung



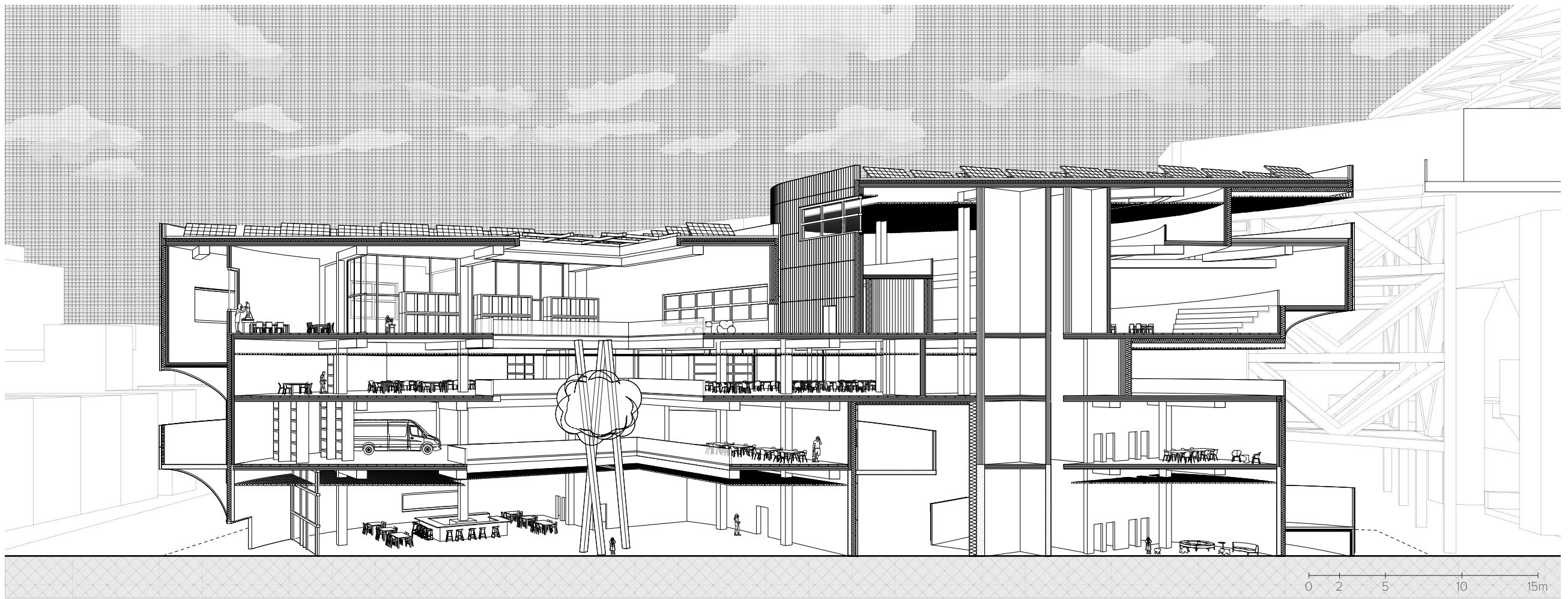


Soft Entwine | 2023

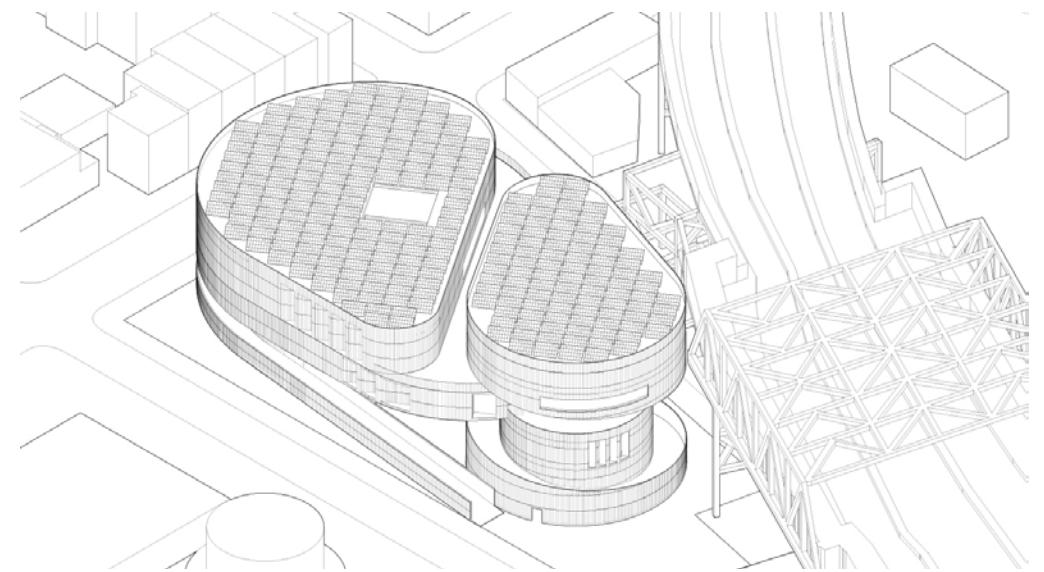




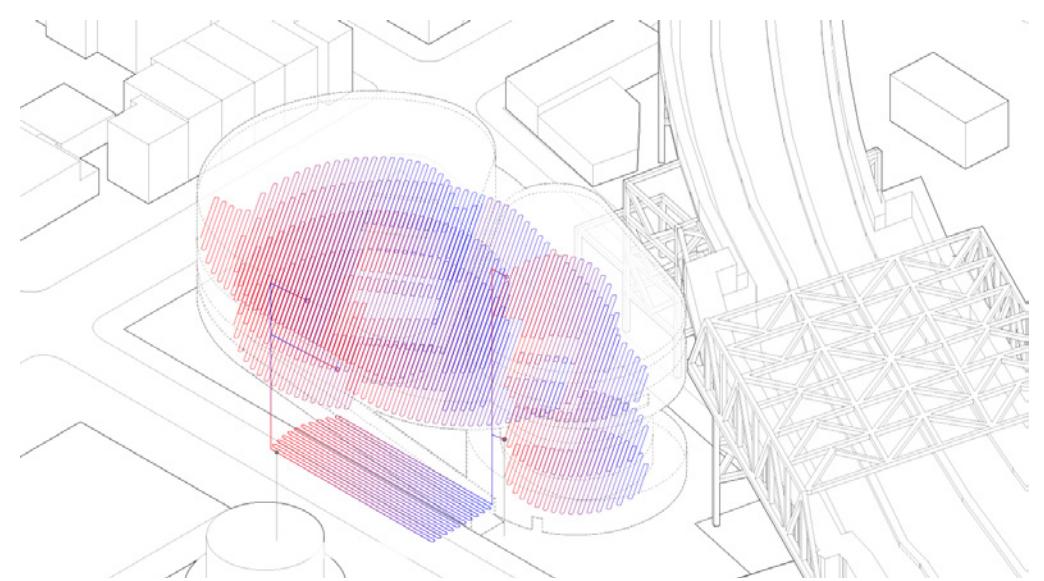
Soft Entwine | 2023



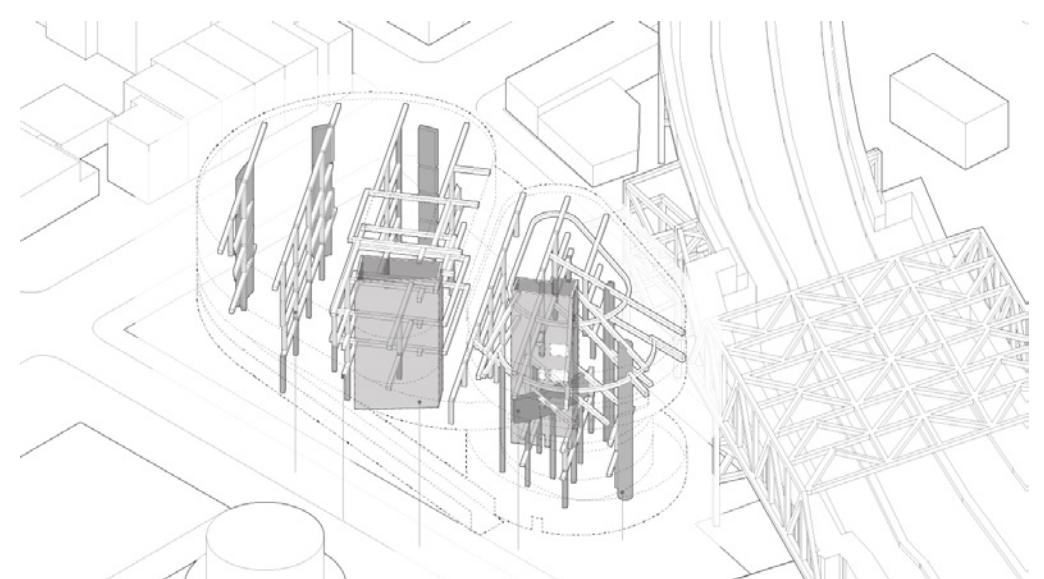
Section A-A'



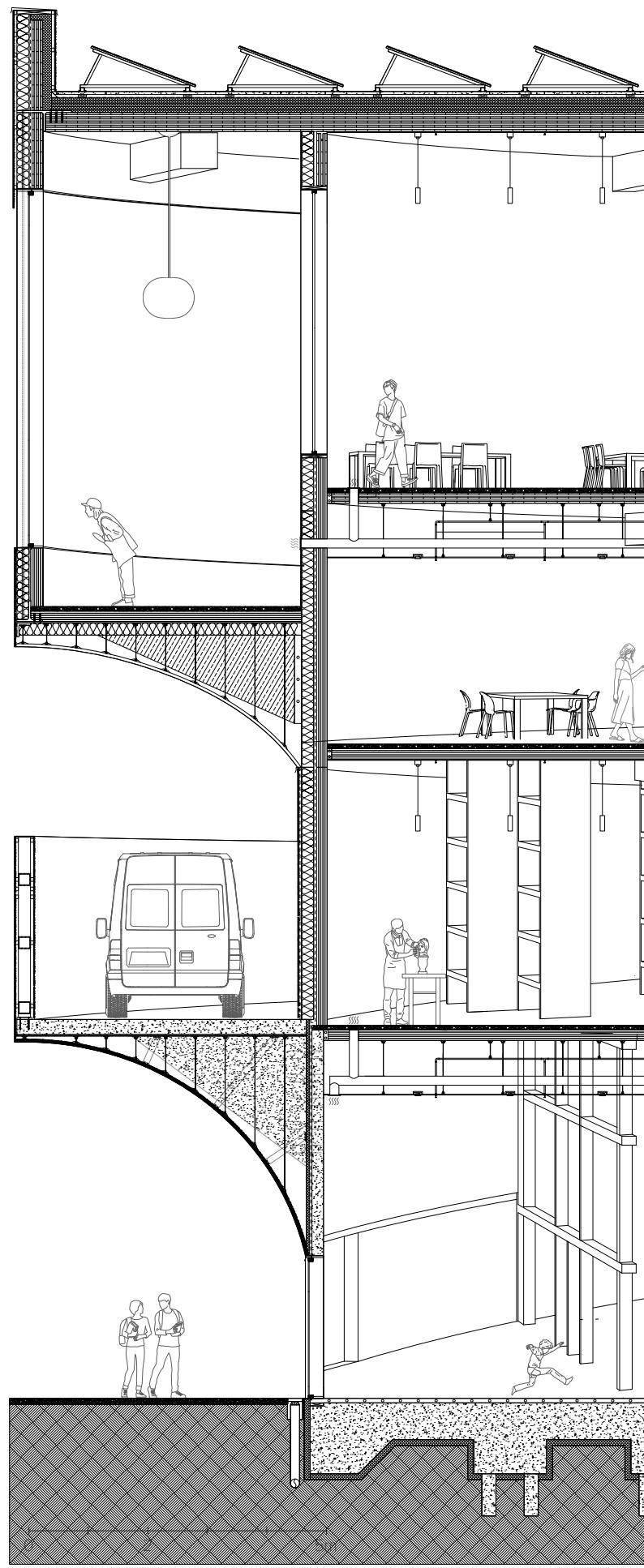
Renewable Energy Sources - Roof Mounted PV Panels



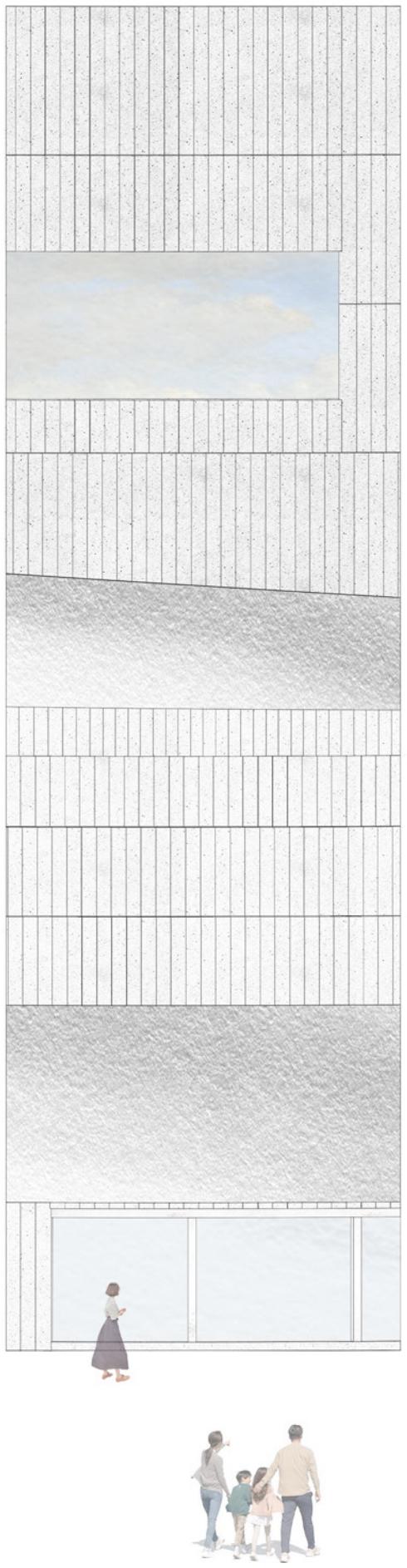
Renewable Energy Sources - Hydronic Radiant Heating and Cooling



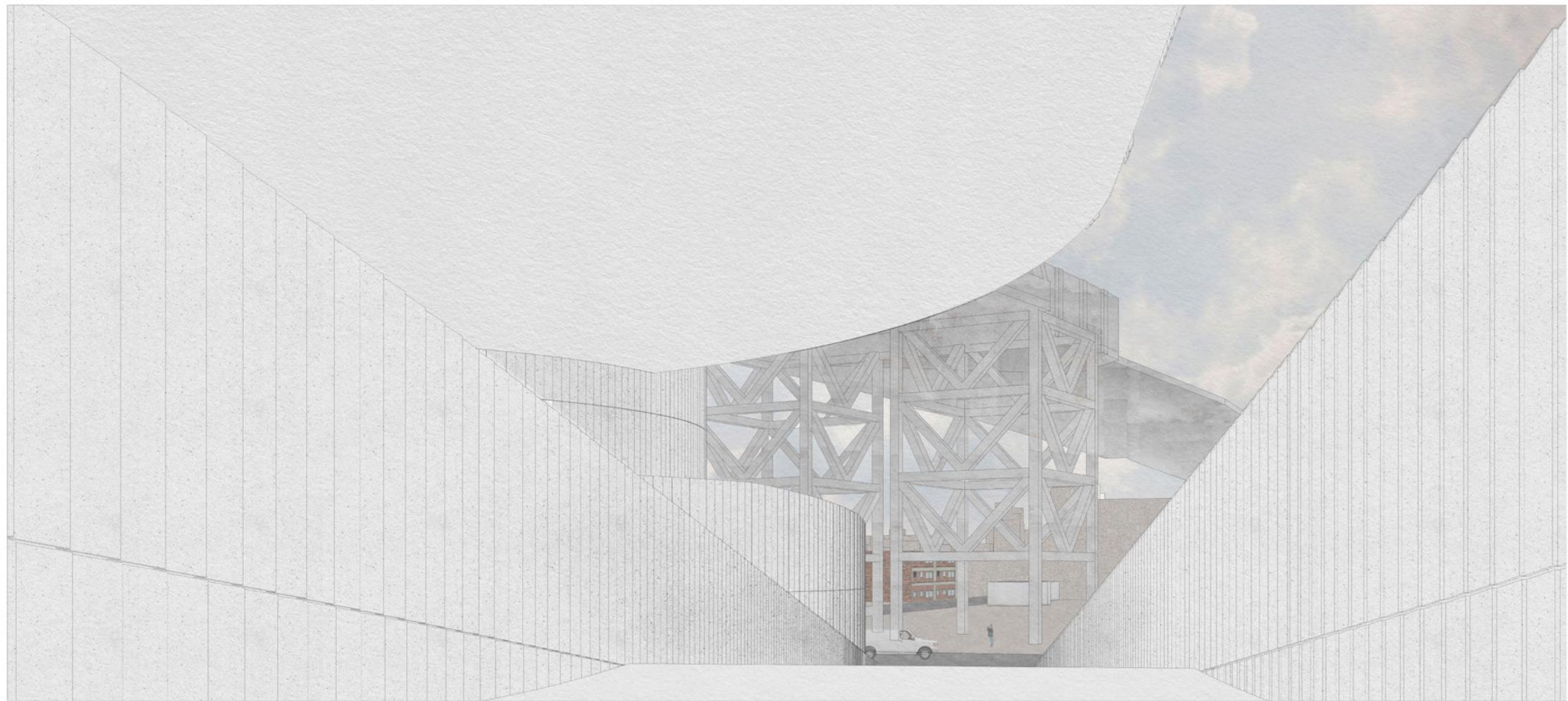
Structural System - Mass Timber & Concrete Core



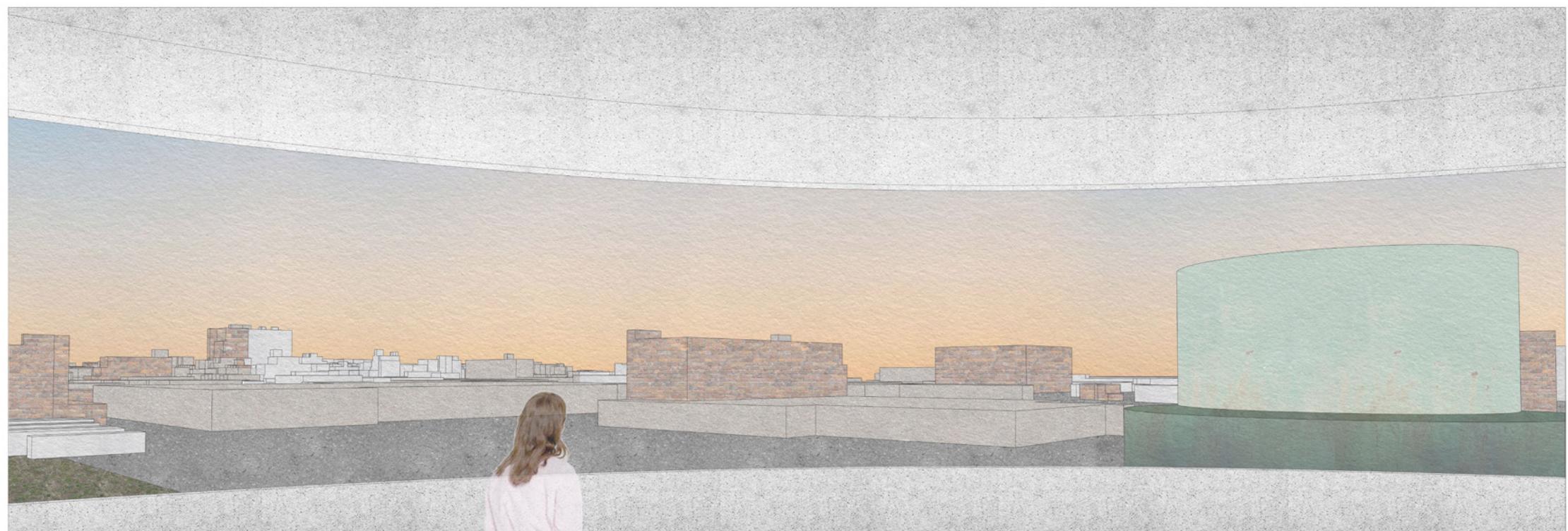
Detail Section



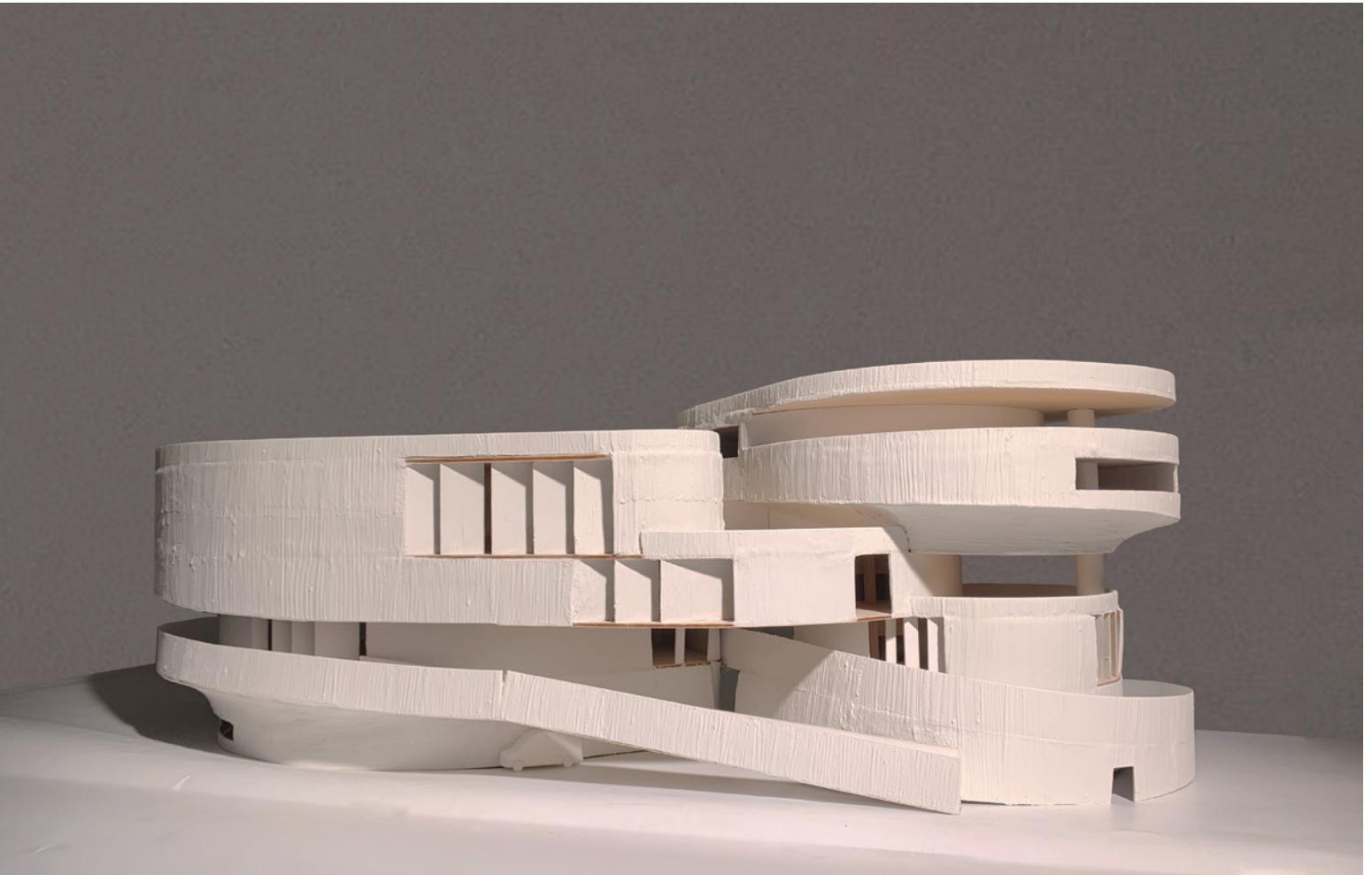
North Entrance - Collage



Auto Ramp Entrance - Collage



South Balcony - Collage



1:100 Model

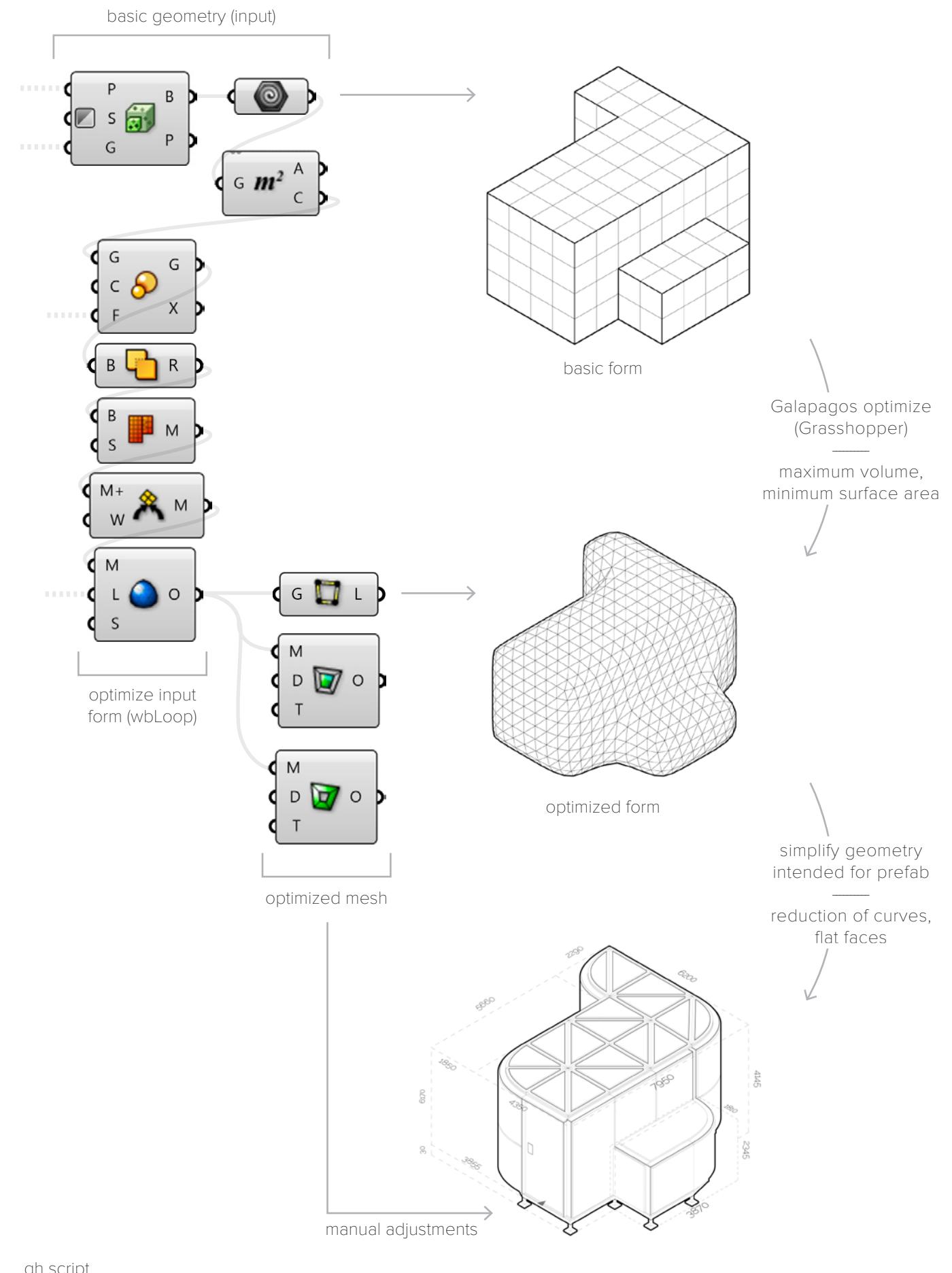
## 02. Autonomous Housing Pods

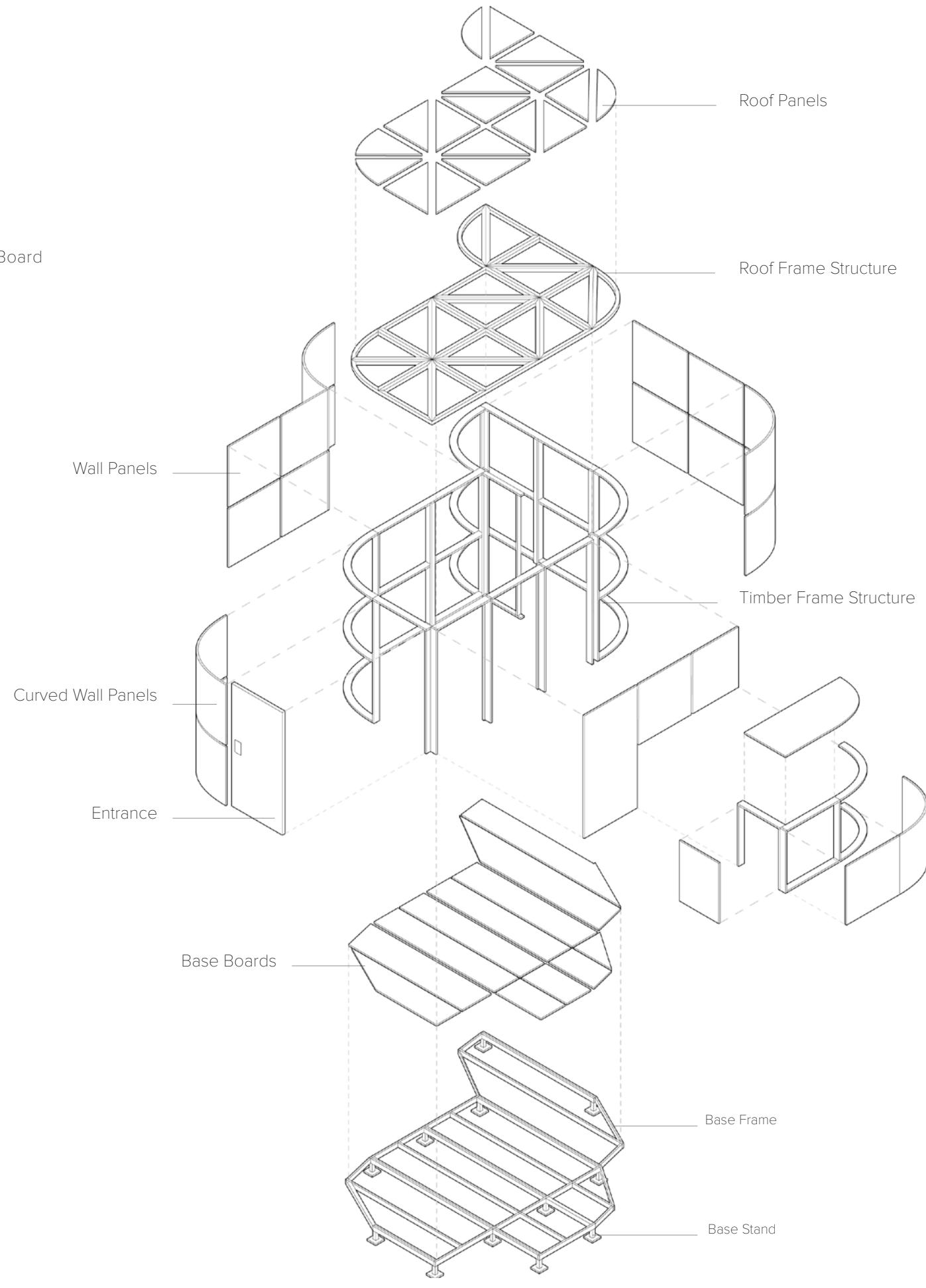
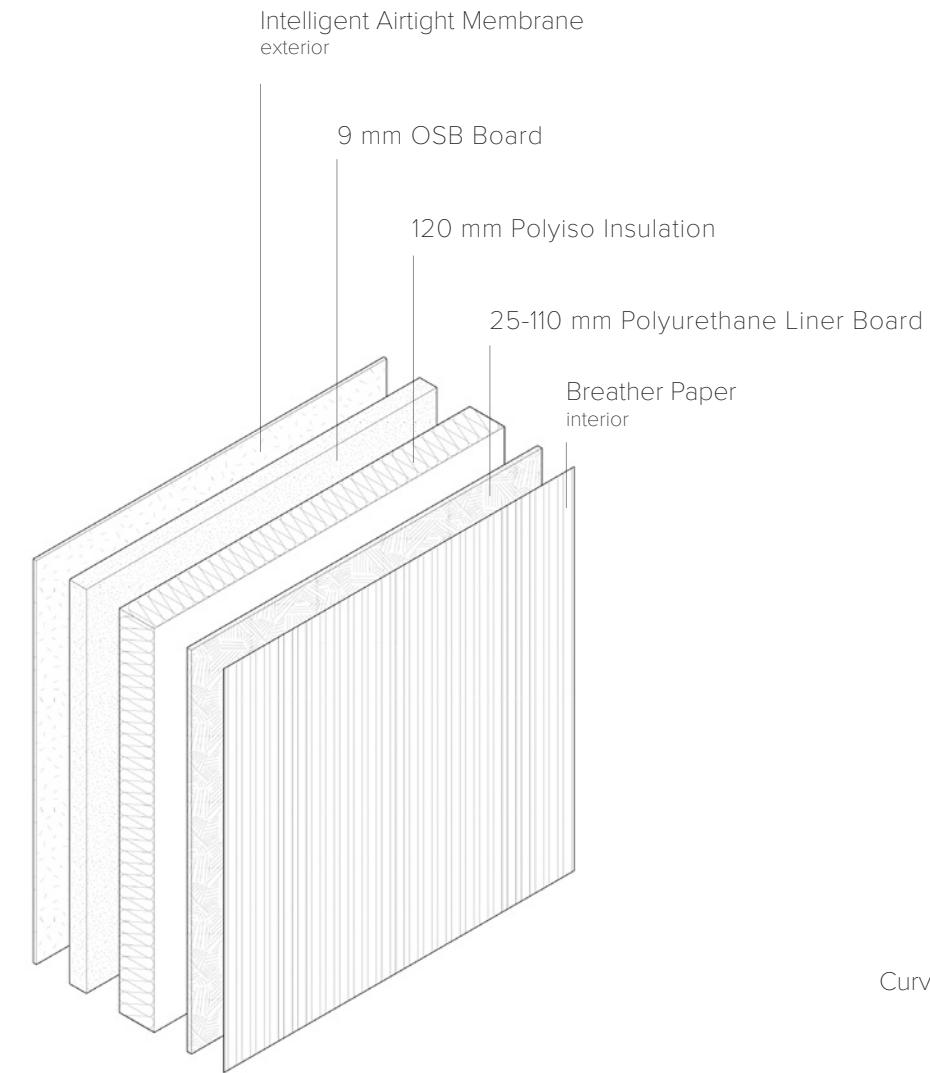
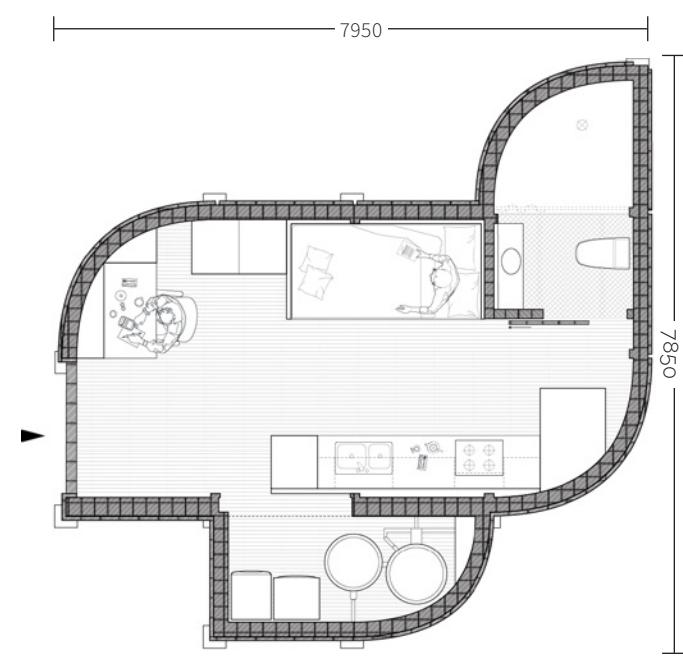
Course: ARC480 - Advanced Topics in the Technology of Architecture  
Instructor: Tom Bessai

The pod is designed for deployability, optimization, and autonomy—key qualities informed by extensive precedent research on automobiles, boats, and bicycles. Borrowing fabrication techniques from each, the final design ensures adaptability to any flat terrain while maintaining a streamlined, efficient structure.

The form generation began with a series of boxes, which were then optimized using Galapagos, a Grasshopper plugin that maximizes volume while minimizing surface area. The resulting geometry—a fusion of the rigid input boxes and the smooth, optimized output—produced a curvilinear, structurally efficient form. This framework, explored through modular framing techniques, allows the pod to duplicate, expand, and aggregate, offering scalable possibilities for deployment.

Collaborators: Christian Paez Diaz, Reem Khalifeh, Jo-Lynn Yen, Mina Yip, Pengfei Zhao





Exploded Construction Axonometric

## 03. Big Little Village

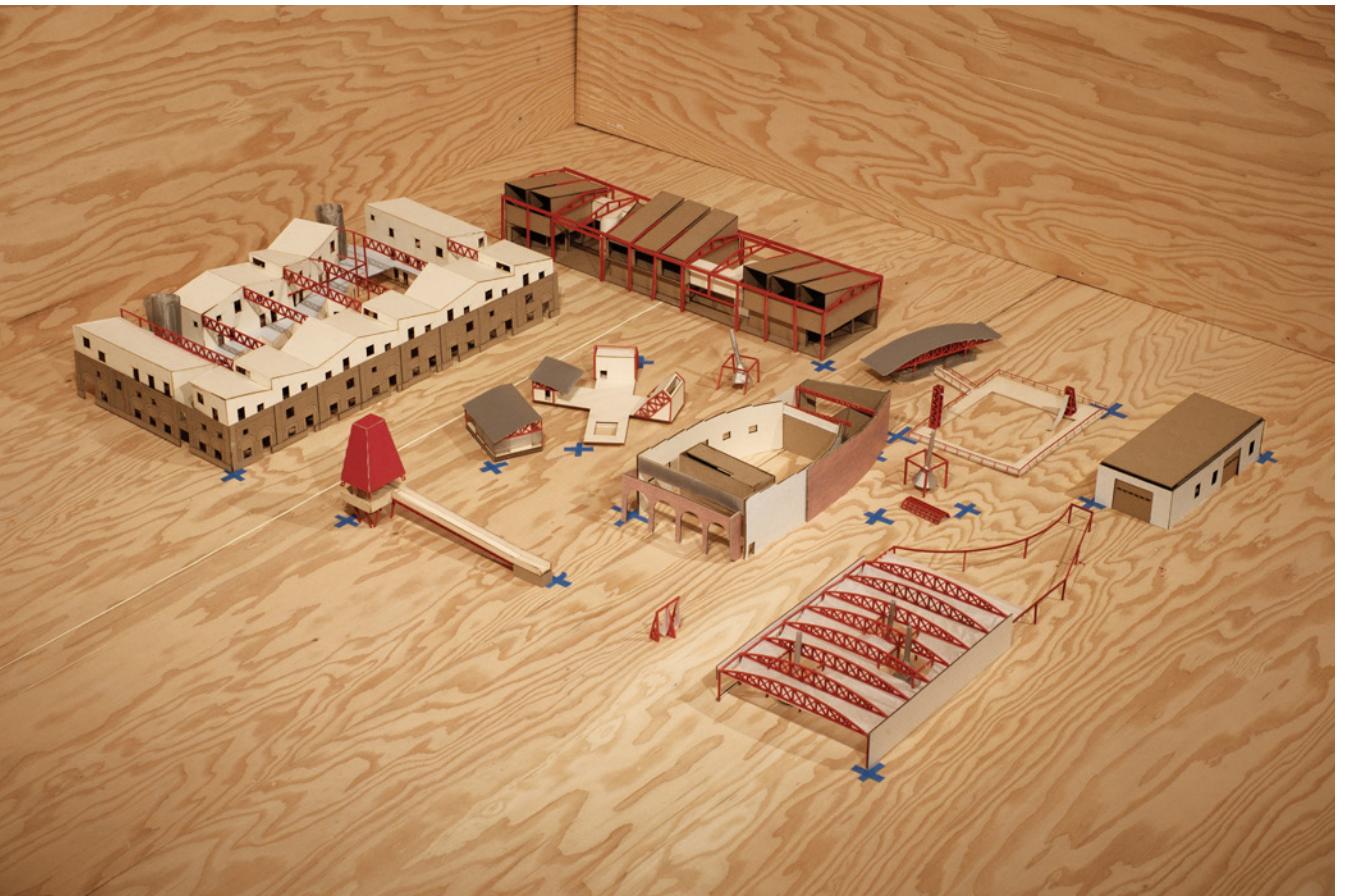
Course: ARC3015 - Option Studio  
Instructor: Florian Idenburg and Jing Liu of SO-IL

Big Little Village reimagines a strip of land in Detroit, between Jefferson Avenue and the Detroit River, as a site of care, repair, and transformation. Rooted in the city's ethos of resilience and resourcefulness, the project catalogues all existing materials on site—buildings, surfaces, and found objects—as a foundation for design. By celebrating what's already there, it proposes adaptive reuse strategies that prioritize repair over demolition and evolution over replacement, repairing memory through architecture and honoring the histories embedded in place.

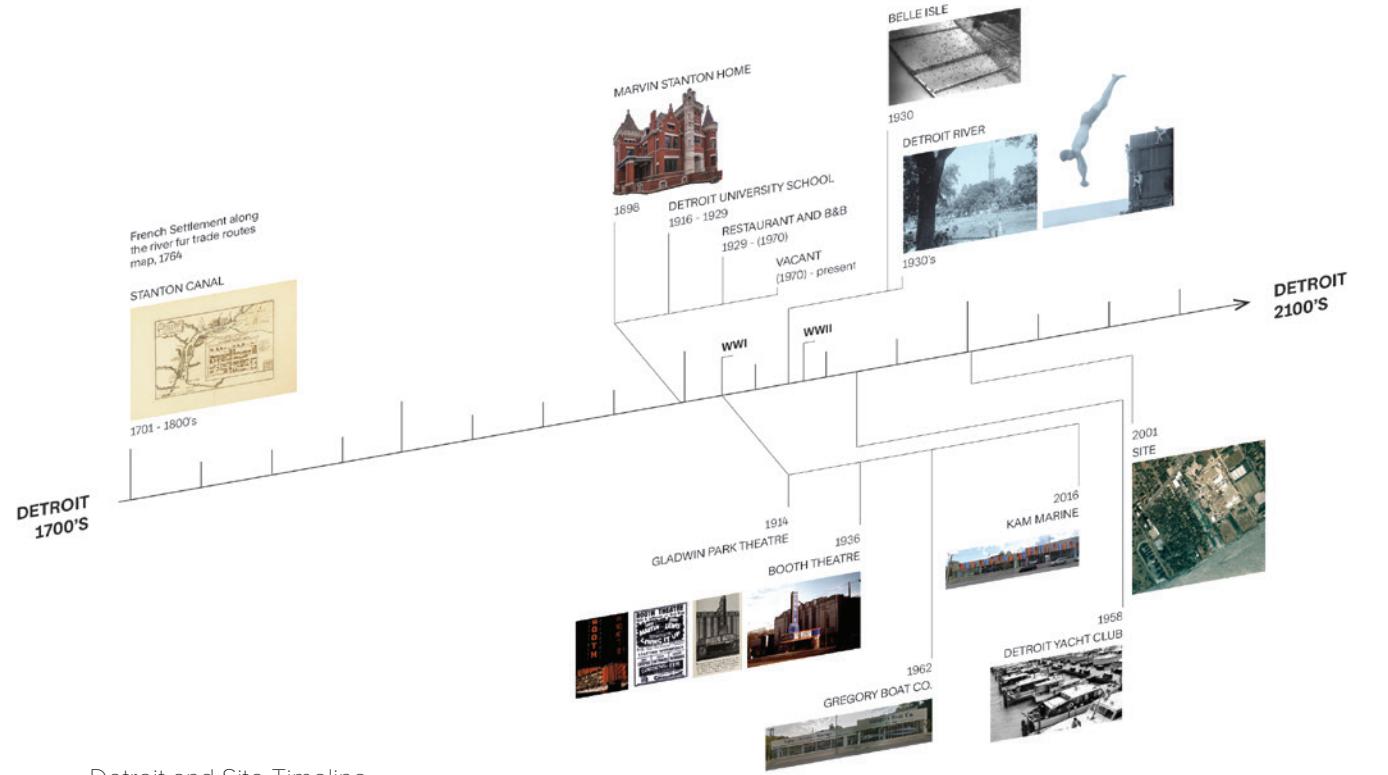
Framed around three “states of being”—Tending, Invitation, and Becoming—the project resists linear development in favor of temporal shifts that respond to changing community needs. Each building operates as an autonomous yet interconnected entity, supporting acts of play, creation, rest, and gathering in structures that once served as a theatre, boat storage, and navy yard.

A key focus is the site's reconnection to the larger community, inviting public interaction with water through improved riverfront access. This gesture addresses historical inequities while reaffirming Detroit's deep ties to its waterfront. Balancing preservation with progress, the project becomes a slow, collective act of making—a living archive that grows with its people. It is a vision rooted in resilience, committed to care, and unapologetically Detroit.

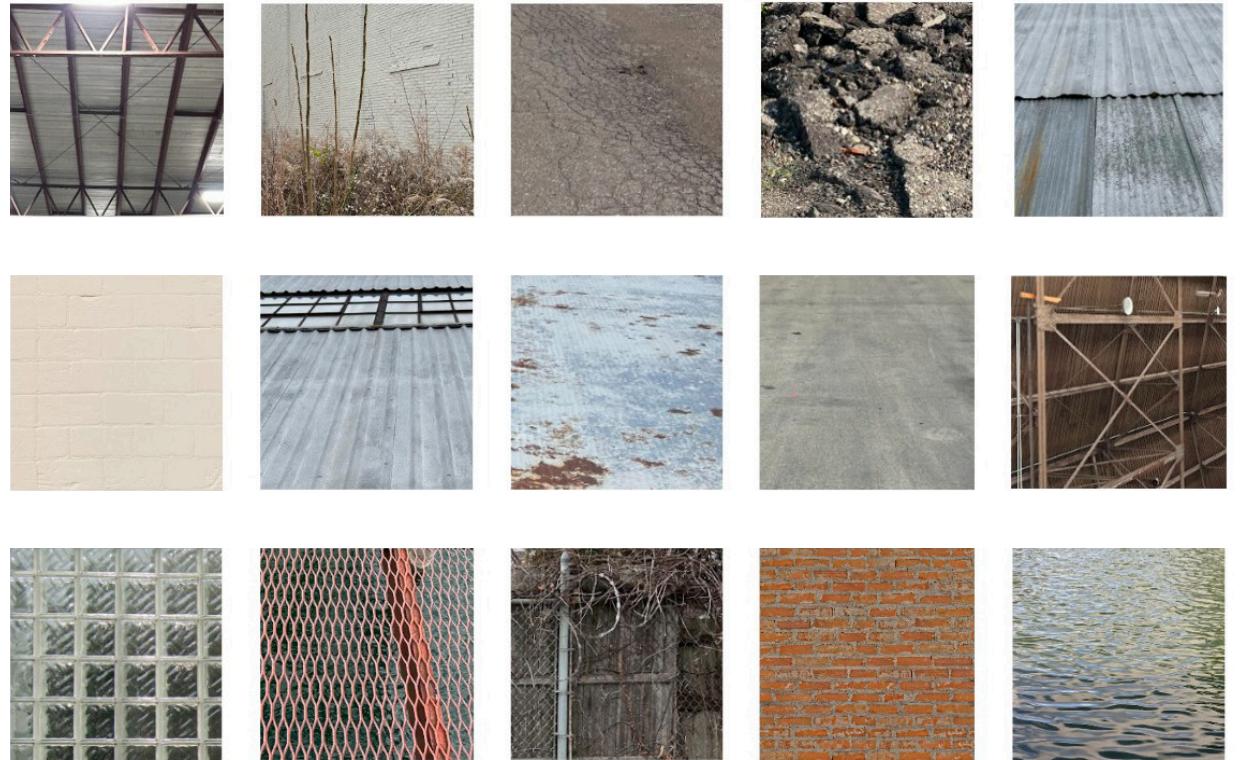
Collaborators: Nichola Basford, Ariana Fernandez Chesquin, Declan Roberts



1:100 Models Captured at Various States of Being

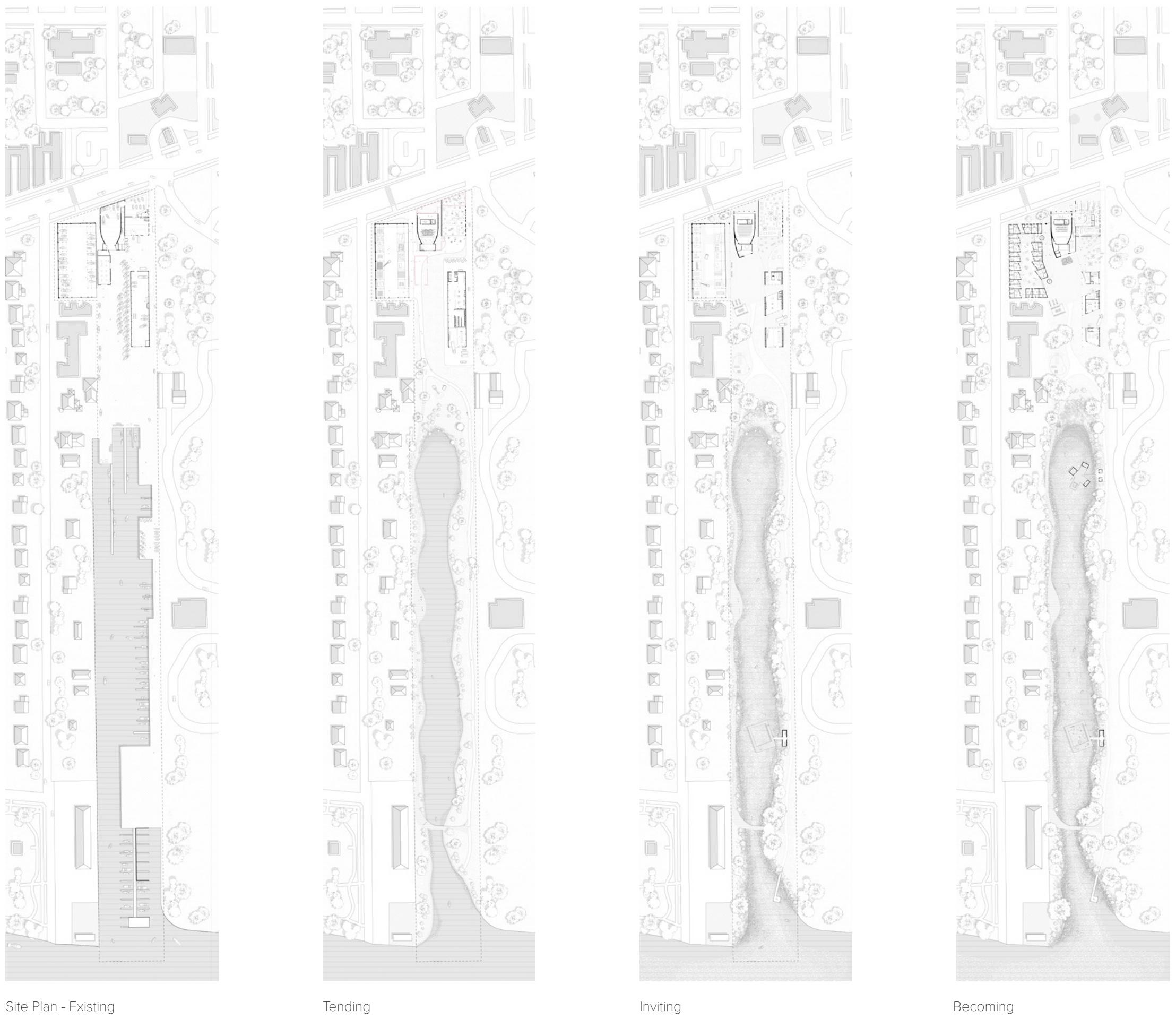


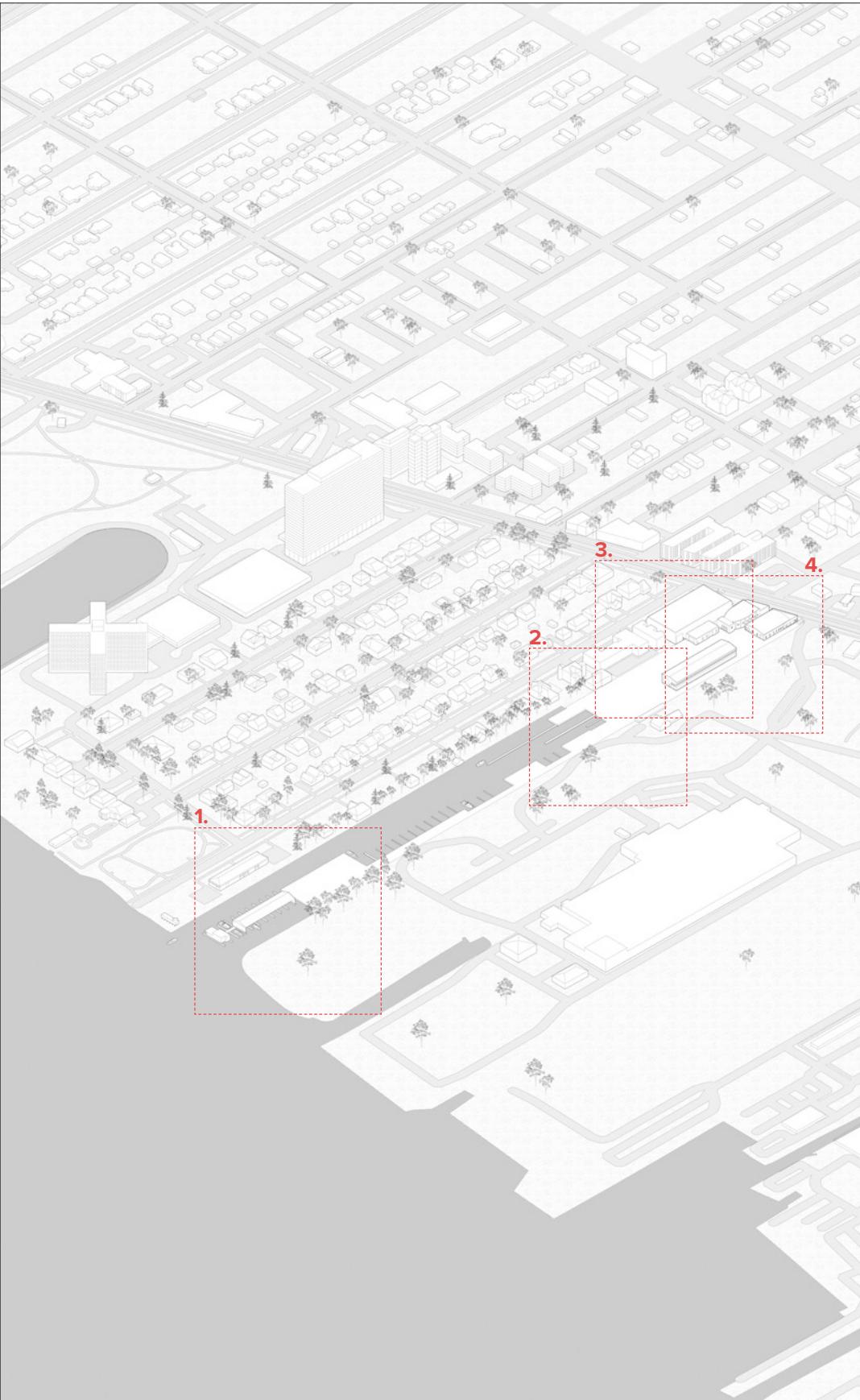
Detroit and Site Timeline



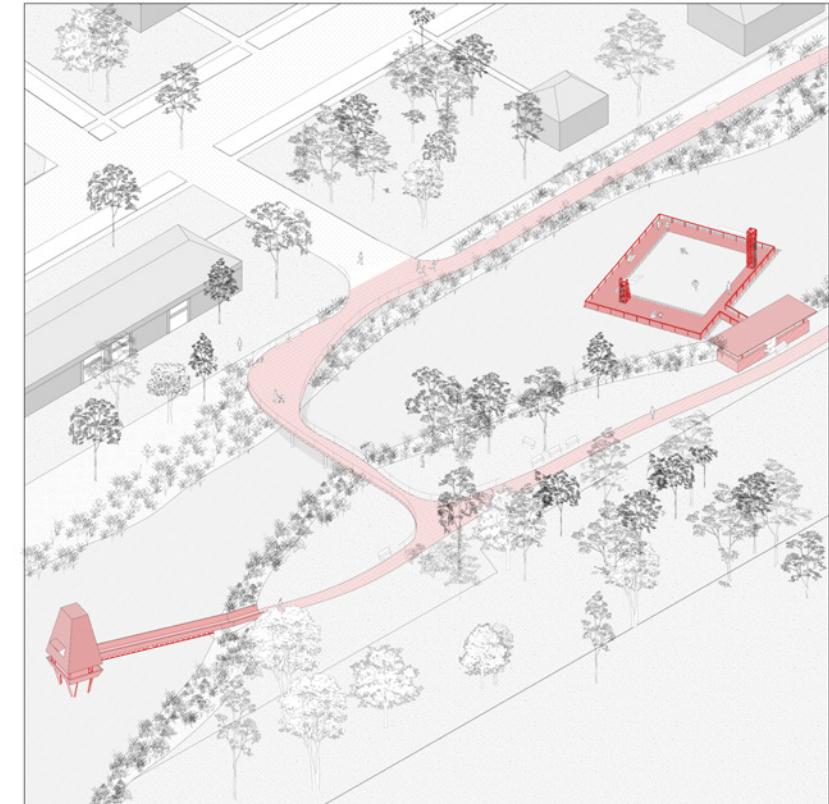
Existing Material on Site

ITEM CODE	ITEM DESCRIPTION	CROSS	UNITS	QUANTITY	LOCATION	Lifespan (years)
1	Brick Block - 8x8x16	Sq ft	1000	1000	Boat Storage	50-100
2	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
3	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
4	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
5	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
6	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
7	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
8	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
9	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
10	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
11	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
12	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
13	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
14	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
15	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
16	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
17	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
18	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
19	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
20	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
21	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
22	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
23	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
24	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
25	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
26	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
27	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
28	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
29	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
30	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
31	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
32	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
33	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
34	Steel Beams	Sq ft	1000	1000	Boat Storage	50-100
35	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
36	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
37	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
38	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
39	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
40	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
41	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
42	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
43	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
44	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
45	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
46	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
47	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
48	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
49	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
50	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
51	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
52	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
53	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
54	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
55	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
56	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
57	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
58	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
59	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
60	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
61	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
62	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
63	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
64	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
65	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
66	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
67	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
68	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
69	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
70	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
71	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
72	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
73	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
74	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
75	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
76	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
77	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
78	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
79	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
80	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
81	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
82	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
83	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
84	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
85	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
86	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
87	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
88	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
89	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
90	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
91	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
92	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
93	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
94	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
95	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
96	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
97	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
98	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
99	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
100	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
101	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
102	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
103	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
104	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
105	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
106	Brick Block	Sq ft	1000	1000	Boat Storage	50-100
107	Brick Block	Sq ft	1000	1000	Bo	





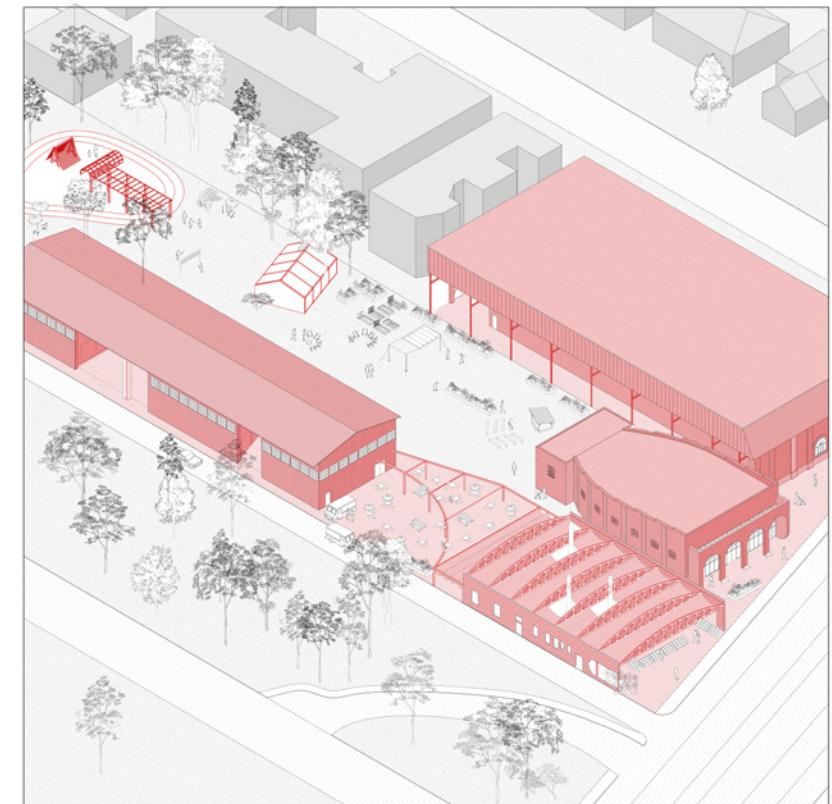
Axo



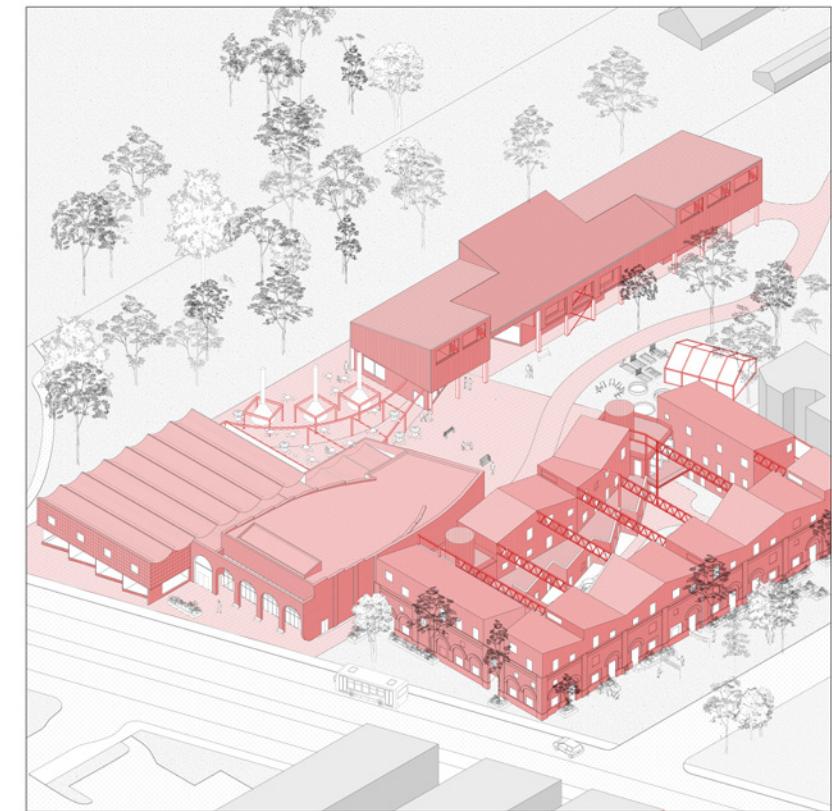
1. Inviting - Bird House + Community Pool Addition



2. Tending - Site Remediation + Material Processing



3. Inviting - Market Hall and Workshop Hub + Playground Addition



4. Becoming - Formal Housing, Theatre, and Restaurants

## 04. Grounds in Flux

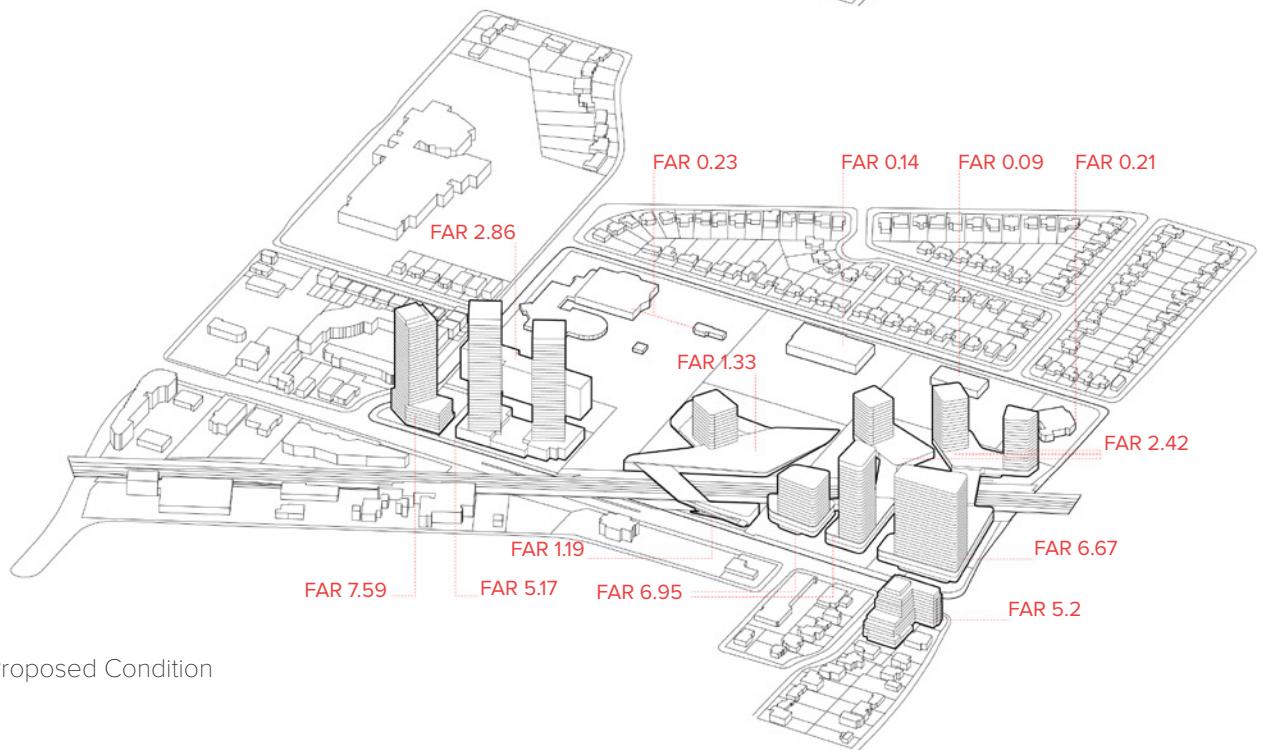
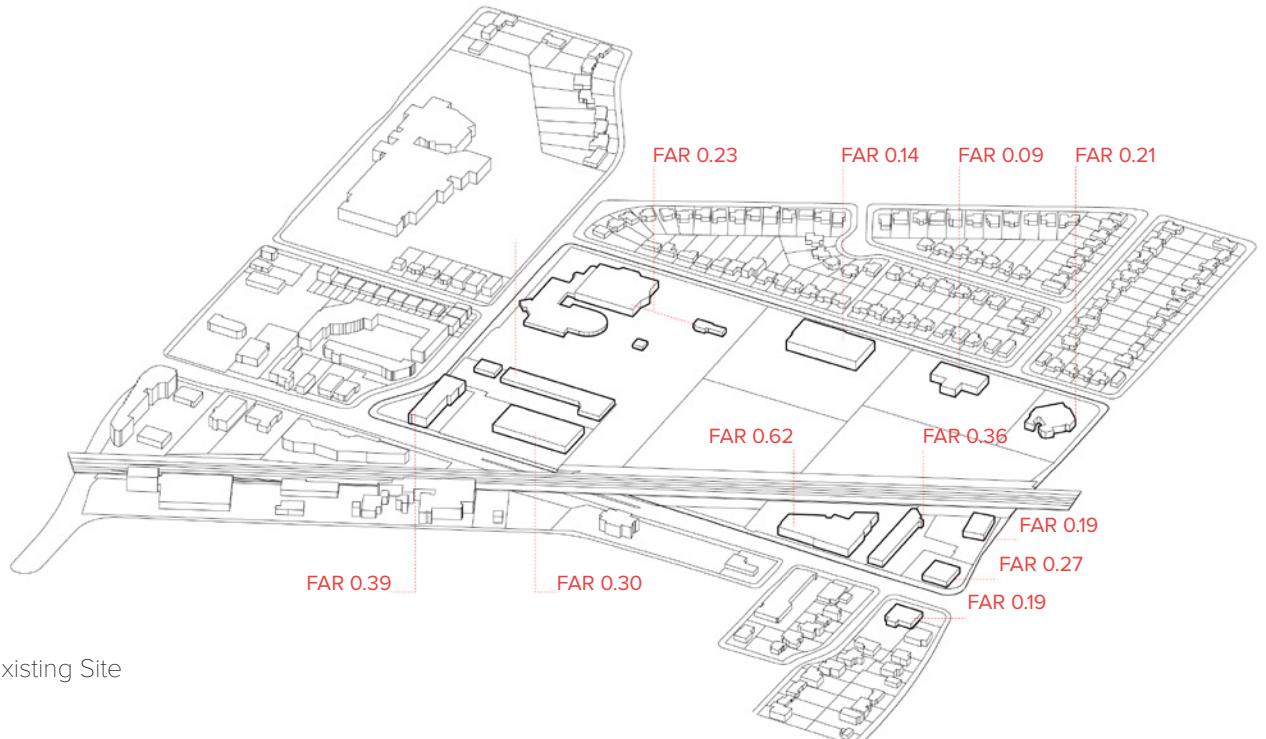
Course: ARC2013 - Design Studio III  
Instructor: Roberto Damiani

Grounds in Flux is a community hub with purpose-built rentals in the core of Scarborough, Toronto. In response to rapid population growth and a shortage of acceptable, affordable housing, the project introduces increased density while strengthening connections to community resources, public transit, and nearby employment zones.

A train rail currently divides the site, isolating the commercial street corner from the institutions to the north. The design actively bridges this separation by introducing elevated podiums that stretch across the rail, creating new circulation routes and public gathering spaces.

The proposed massings are structured in three parts: a commercial and institutional ground floor that activates the street, an elevated podium fostering commercial and community activity, and rental towers above. Through inclusionary zoning, the design integrates affordable housing within the tower's lower levels while ensuring social connectivity through shared amenity spaces, reinforcing a sense of community across all residents.

Collaborator (research): Emilie Tamlik

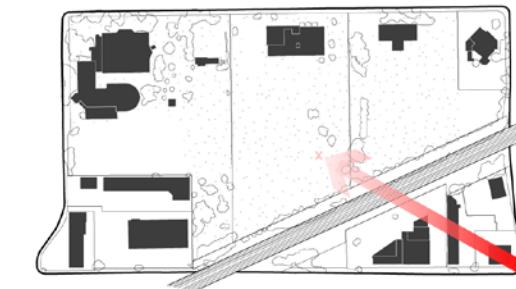




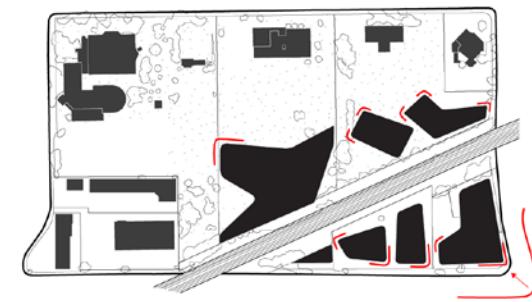
1. existing site conditions



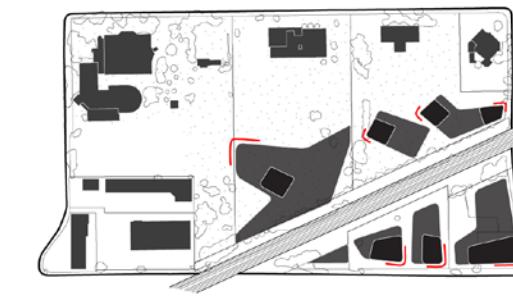
2. site shadow considerations



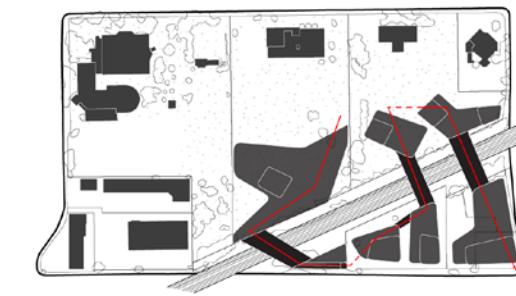
3. massing proposal height consideration



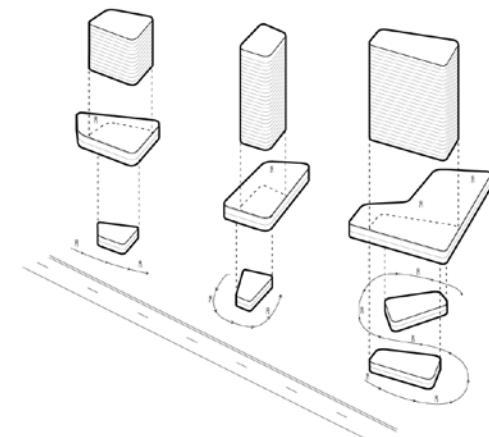
4. podium



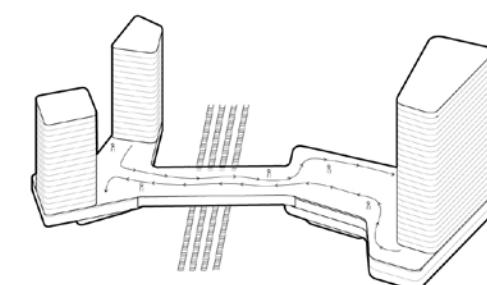
5. residential towers



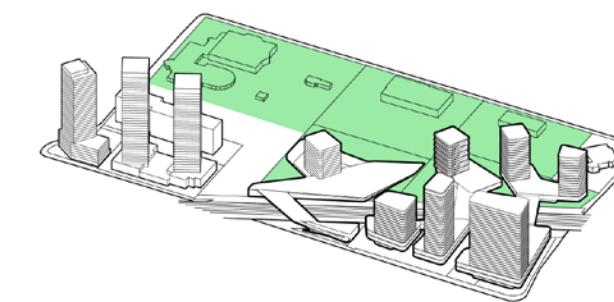
6. weaving circulation



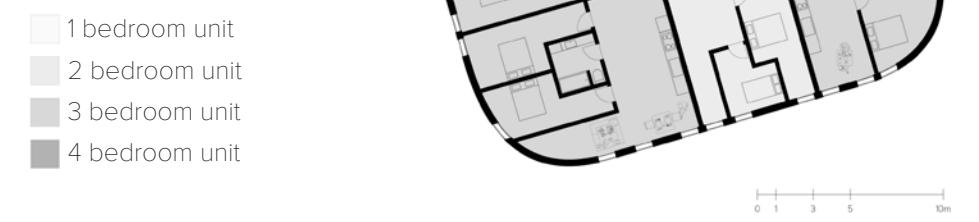
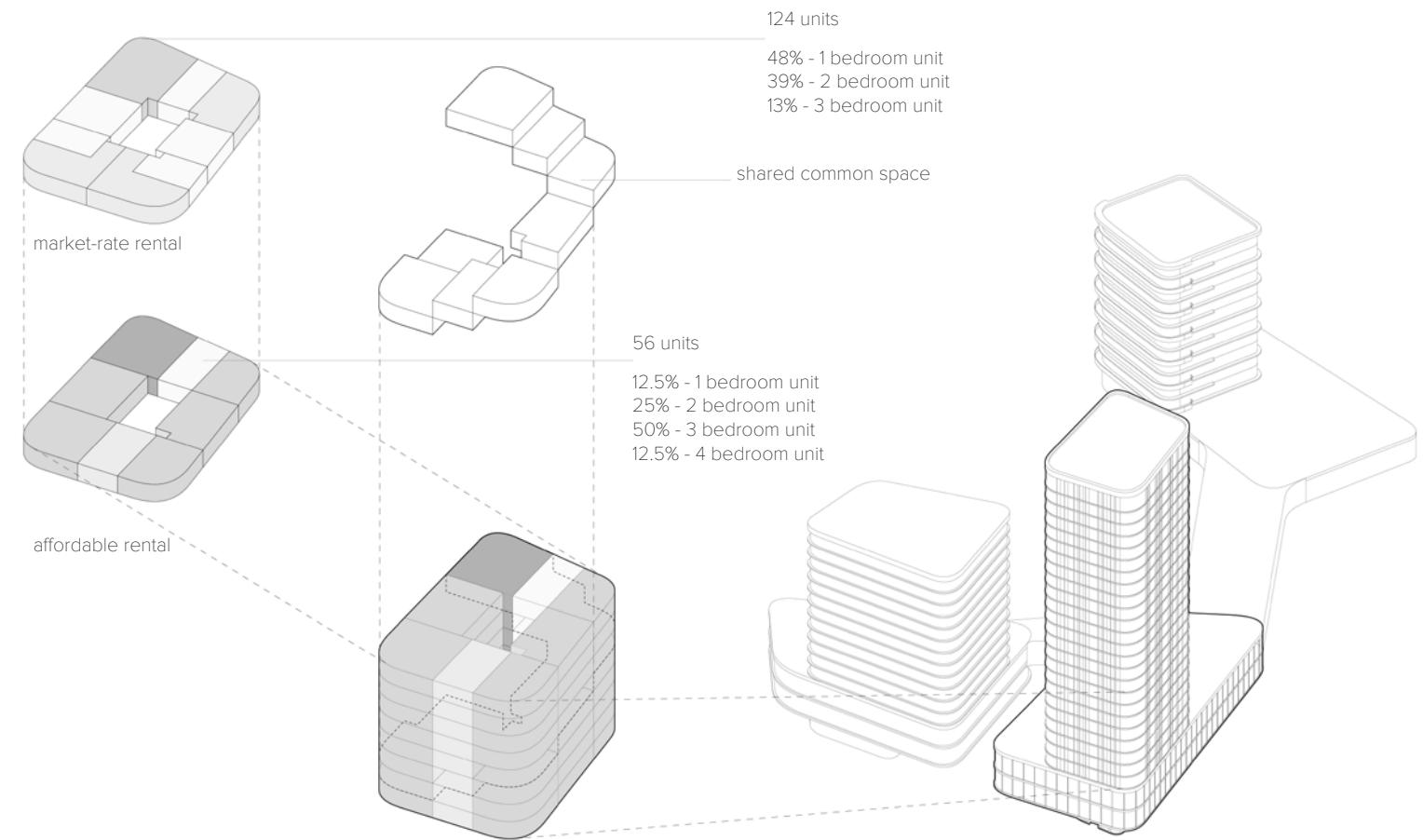
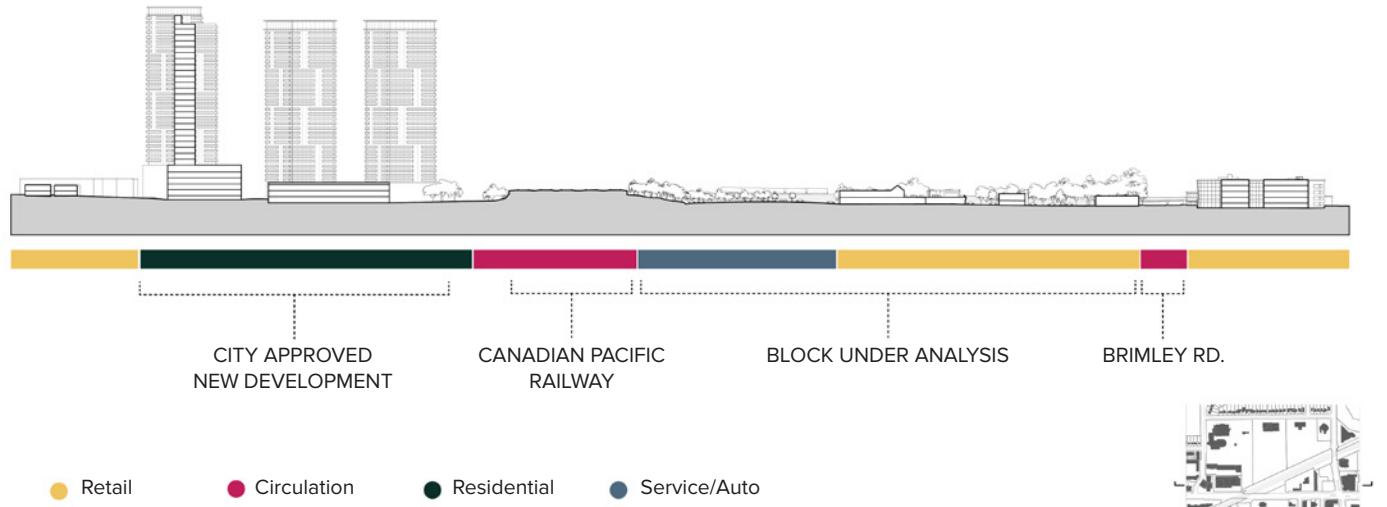
7. walkable ground condition



8. elevated podiums as bridges



9. proposed massings





Sheppard Ave. Streetfront Collage

## 05. Church of Community

Course: ARC1041 - Building Science I  
Instructor: Ted Kesik

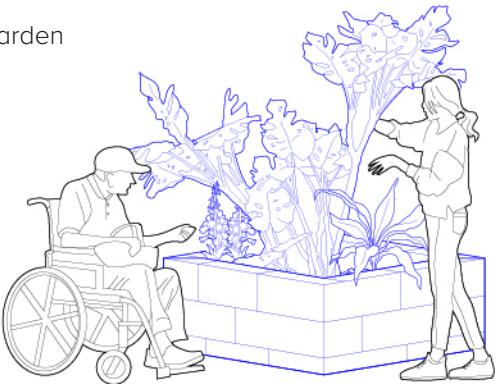
Historically, churches have served as communal gathering spaces, but with declining attendance, many have become underutilized or abandoned. This project repurposes Headford United Church in Richmond Hill, Ontario, transforming it into a community hub that fosters inclusivity and shared resources.

By introducing an urban garden, sanitation facility, tool-sharing workshop, and communal kitchen, the design provides essential services that bridge generational and socio-economic gaps. These programs create accessible spaces for learning, working, and gathering, reinforcing a support network within the community. As a replicable model for adaptive reuse, the project demonstrates how abandoned buildings can be revitalized into active, community-driven spaces.

These programs are necessary to create affordable community-based initiatives for the public to have access to shared spaces, tools, and food. The proposed new typologies within this project can be replicated and adapted to other underutilized or abandoned buildings and serve as a precedent for future projects of similar size.

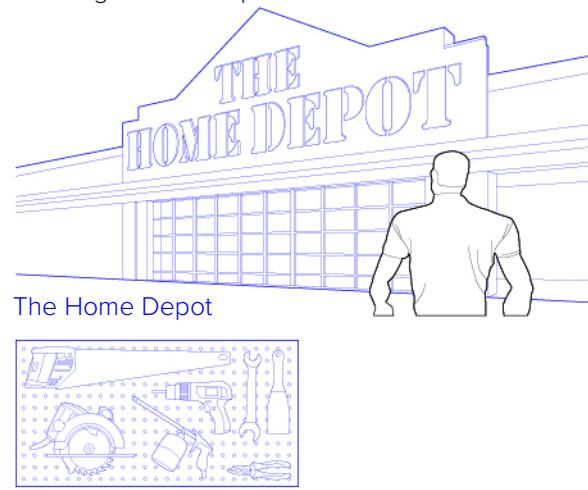
Collaborators: Jessica Babe, Amelia Chung, Larissa Ho, Rachel Sau

1.0 Urban Garden

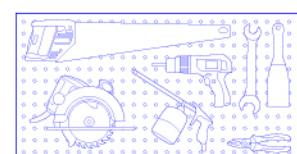


Accessible raised garden beds

2.0 Tool Sharing & Workshop

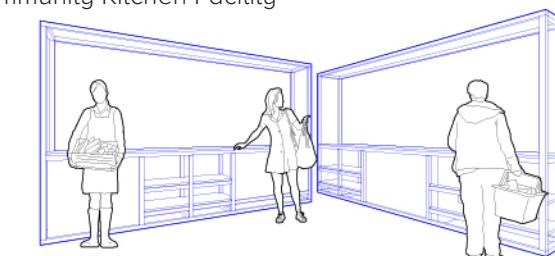


The Home Depot



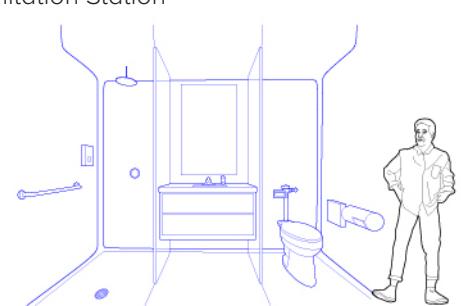
Toronto Tool Library

3.0 Community Kitchen Facility



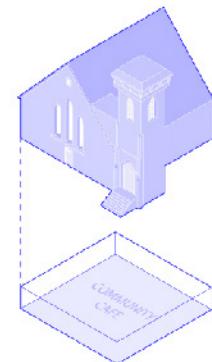
Co-kitchen design by Himani Harikrishna Ravuri

4.0 Sanitation Station

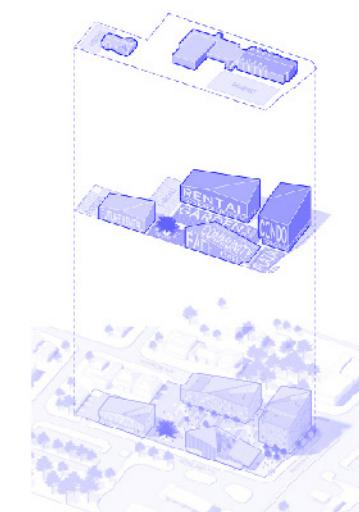


StudioAC mobile shower facility design

1.0 St. John's Anglican Church  
Chapleau, ON

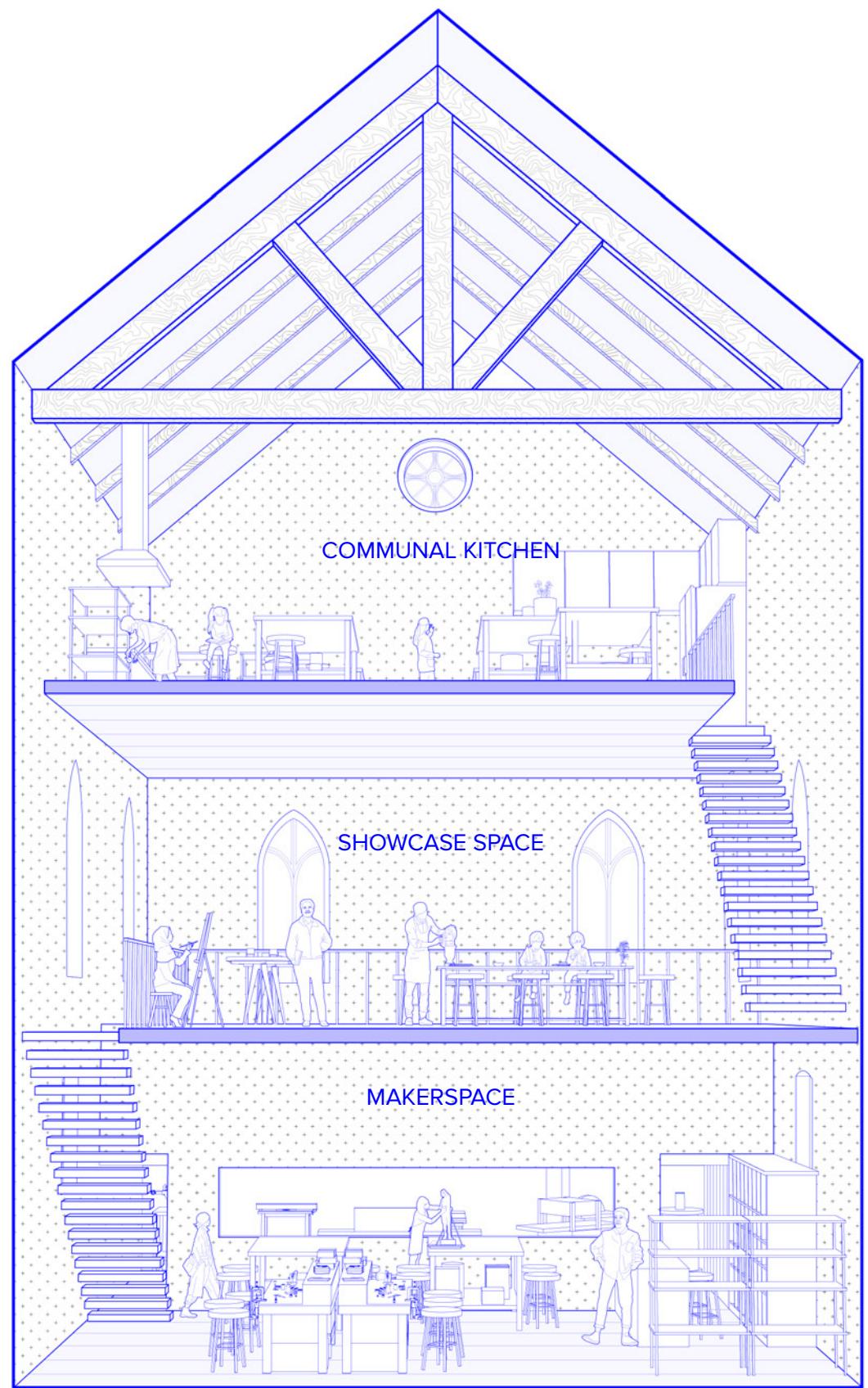


2.0 St. Julian of Norwich Church  
Ottawa, ON

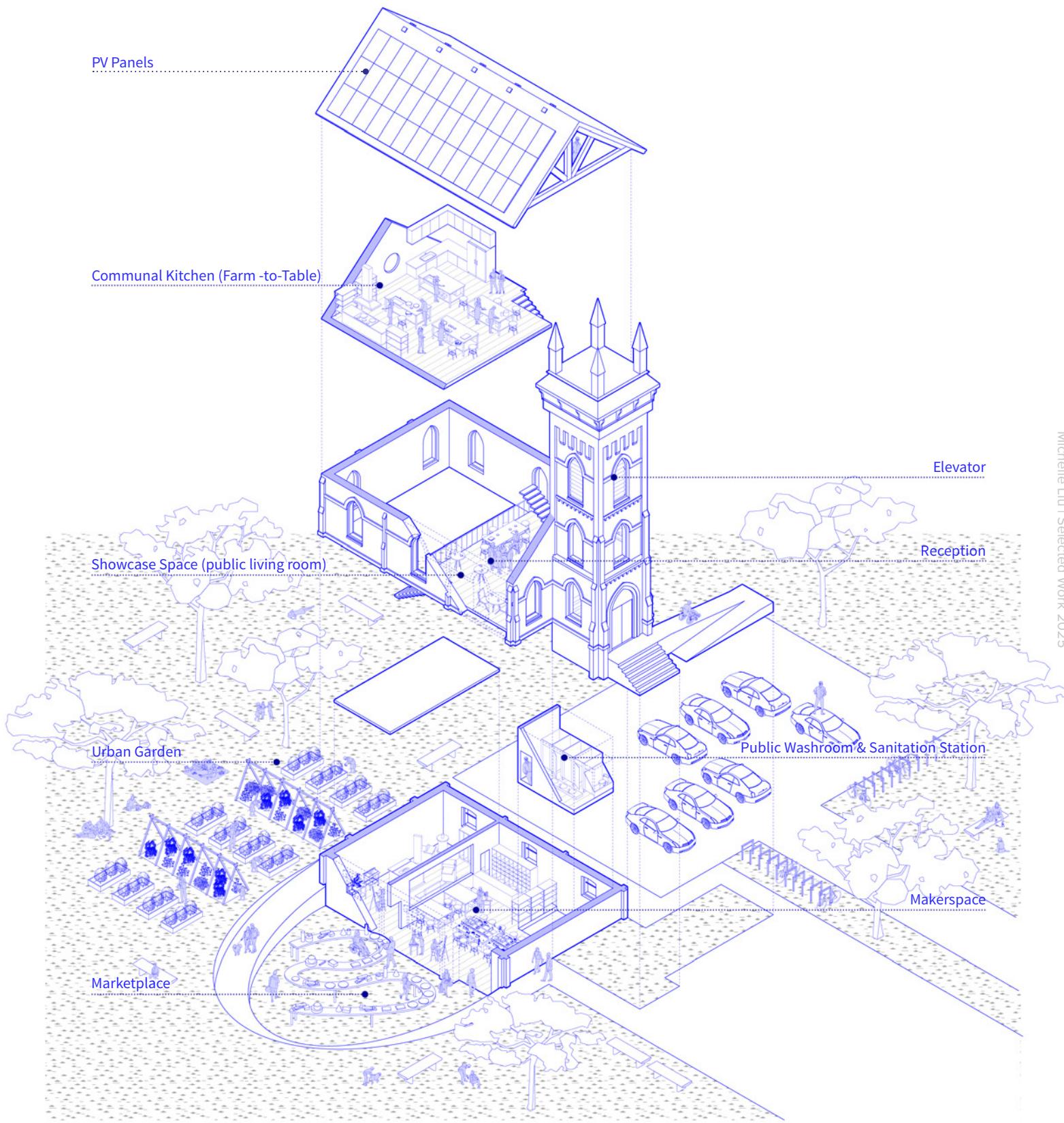


3.0 Cecil Community Centre  
Toronto, ON





Interior Perspective



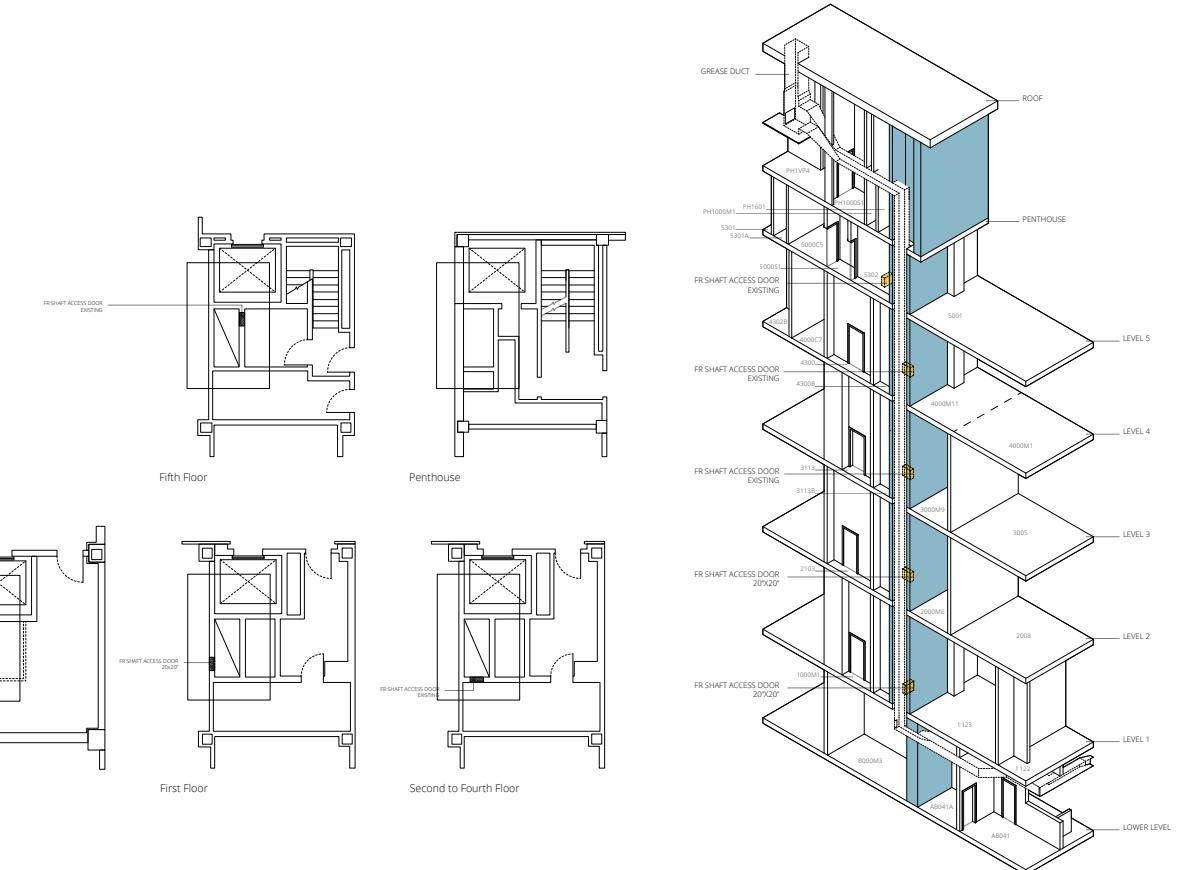
Exploded Program Diagram

## 06. Annum Architects

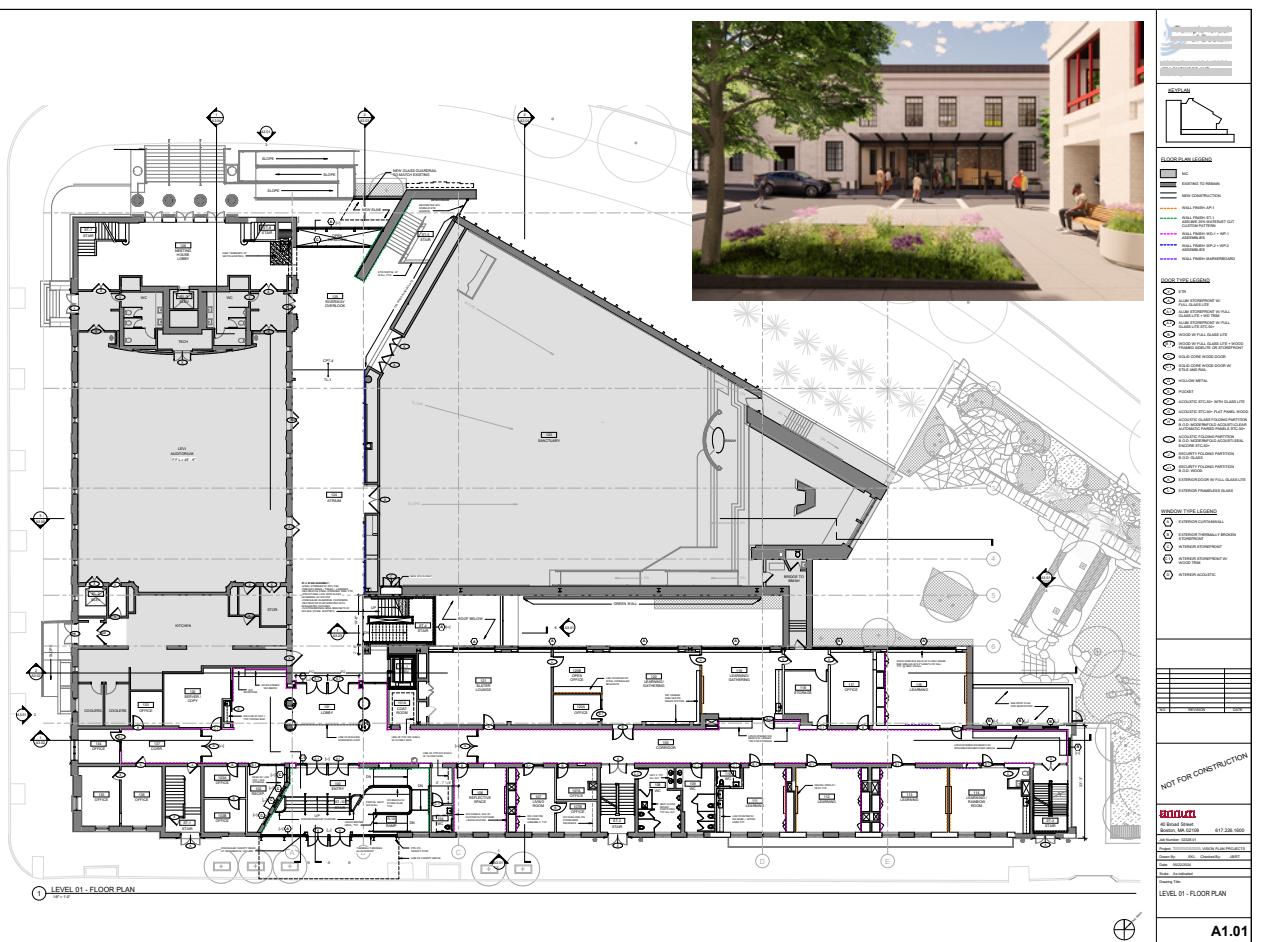
Annum Architects, formerly known as Ann Beha Architects, is a prominent architectural firm based in Boston, MA renowned for its innovative and sustainable design solutions for its work in educational institutions, cultural institutions, and historic preservation. With a commitment to integrating modern design principles with a deep respect for historical context, Annum Architects has successfully executed numerous projects that reflect a balance between contemporary aesthetics and preservation of cultural heritage.

While on my 16-month internship, I had the chance to work on part of the schematic design package and renders for a reform synagogue project in Boston, MA.

I also had the opportunity to work on pre-design, schematic design, and design development phases on the Smithsonian National Museum of American History in Washington, D.C. In addition, a few enabling projects including a grease duct riser feasibility study, emergency generator project in CD, flood strategy in CD, and AHU project in CA.



Smithsonian NMAH: Grease Duct Riser Feasibility Study - Shaft Diagrams



Reform Synagogue in Boston: SD Set and Entrance Render

thank you ☺