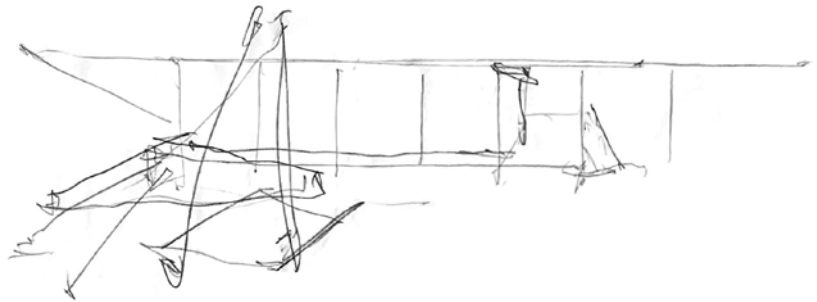


Jianlin Chen

Syracuse Architecture B.Arch 24'

jchen255@syr.edu
(680) 356-0507
Syracuse, NY 13210



I instinctively focus on sustainability and harmony between architecture and the environment in my designs. I experiment with innovative design and advanced computational tools, to create a dialogue between humans and the environment.

Architecture

Housing + Modular Housing inspired by Habitat 67	1
Movable House A Self-Sustainable Micro-House	11
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HOUSING +

Modular Housing inspired by Habitat 67

Syracuse, NY

ARC 409 Integrated Building Design Studio | 2023

Professor: Abingo Wu

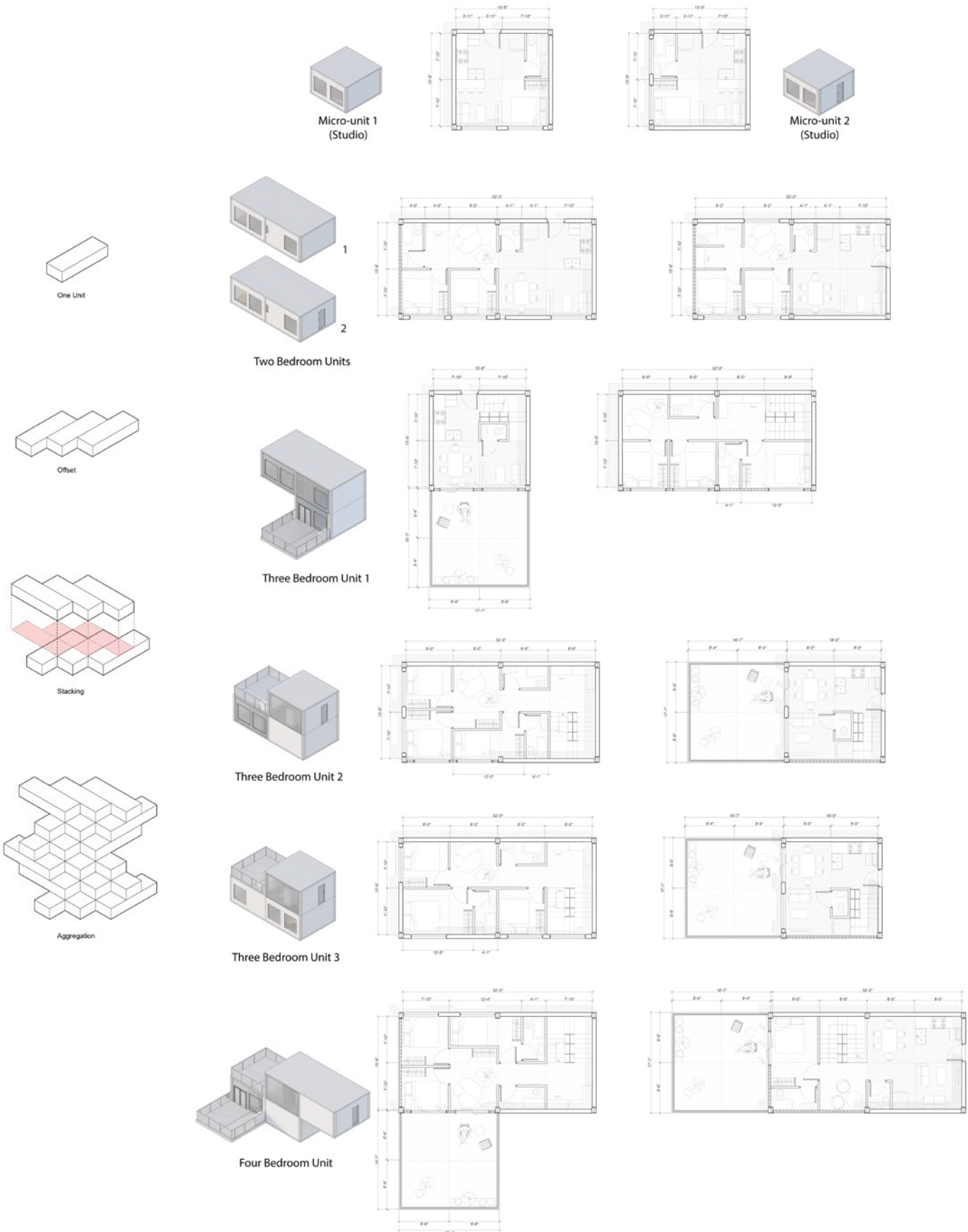
(In collaboration with Mia O Petrillo)

FUTURE LIVING HABITATS

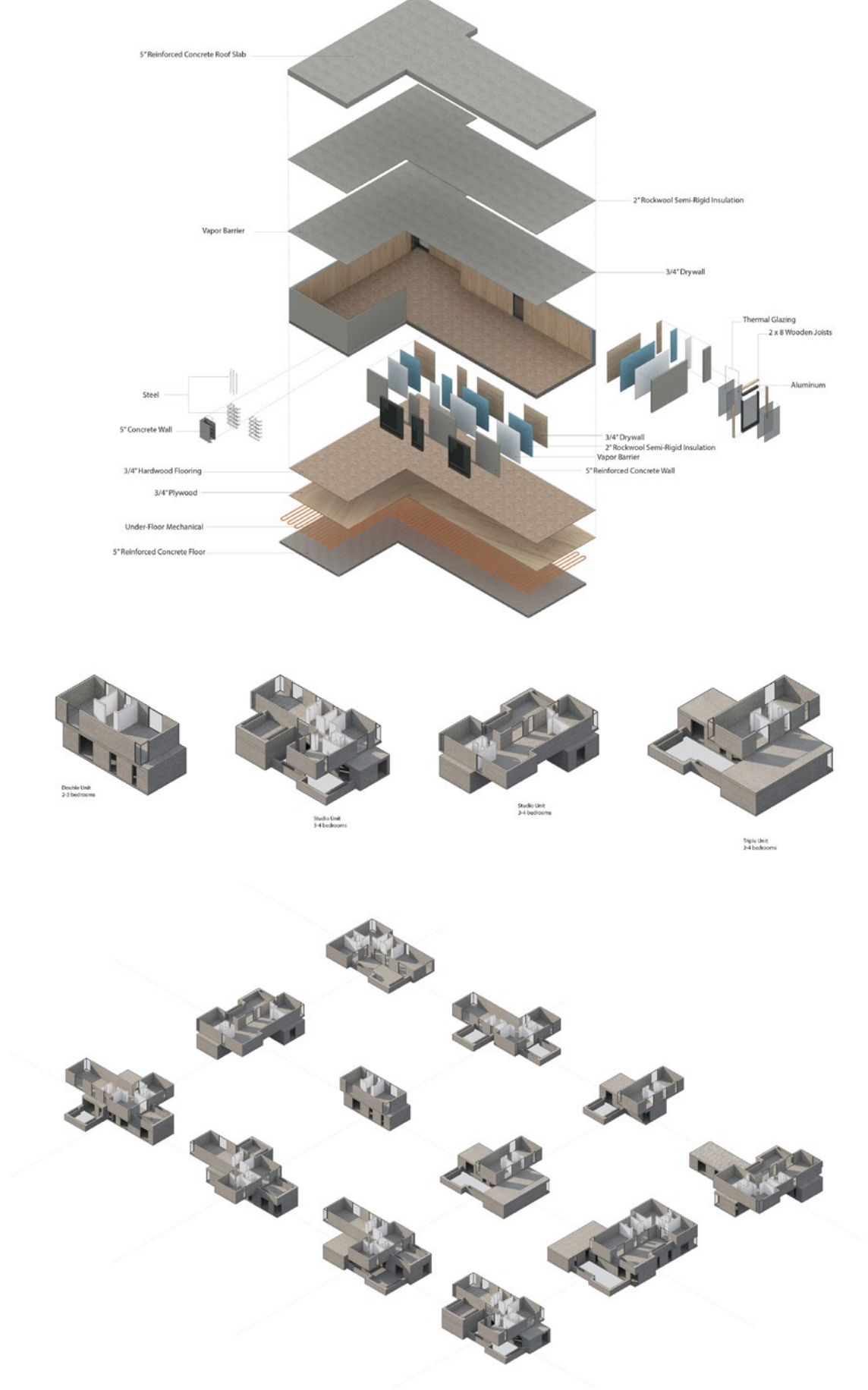
Housing + proposed an integrated design that contains **residential** and **market**. It investigates on **smallest living units** with the grid system of 8 ft x 8 ft squares. Housing + encompasses all major building systems (structure, HVAC, electrical, egress) corresponding to the NYS building code, and collaborated with experienced architectural consultants. The design of the housing units used a stacking strategy and the hollowed atrium functions as a market with an operable enclosure system for stalls, trucks, and pedestrian circulation. The orientation of the apartments maximizes natural sunlight reception and privacy. The design features steel I-beam framing structure with precast concrete panels, ceramic rainscreen cladding, and frosted glass panels.



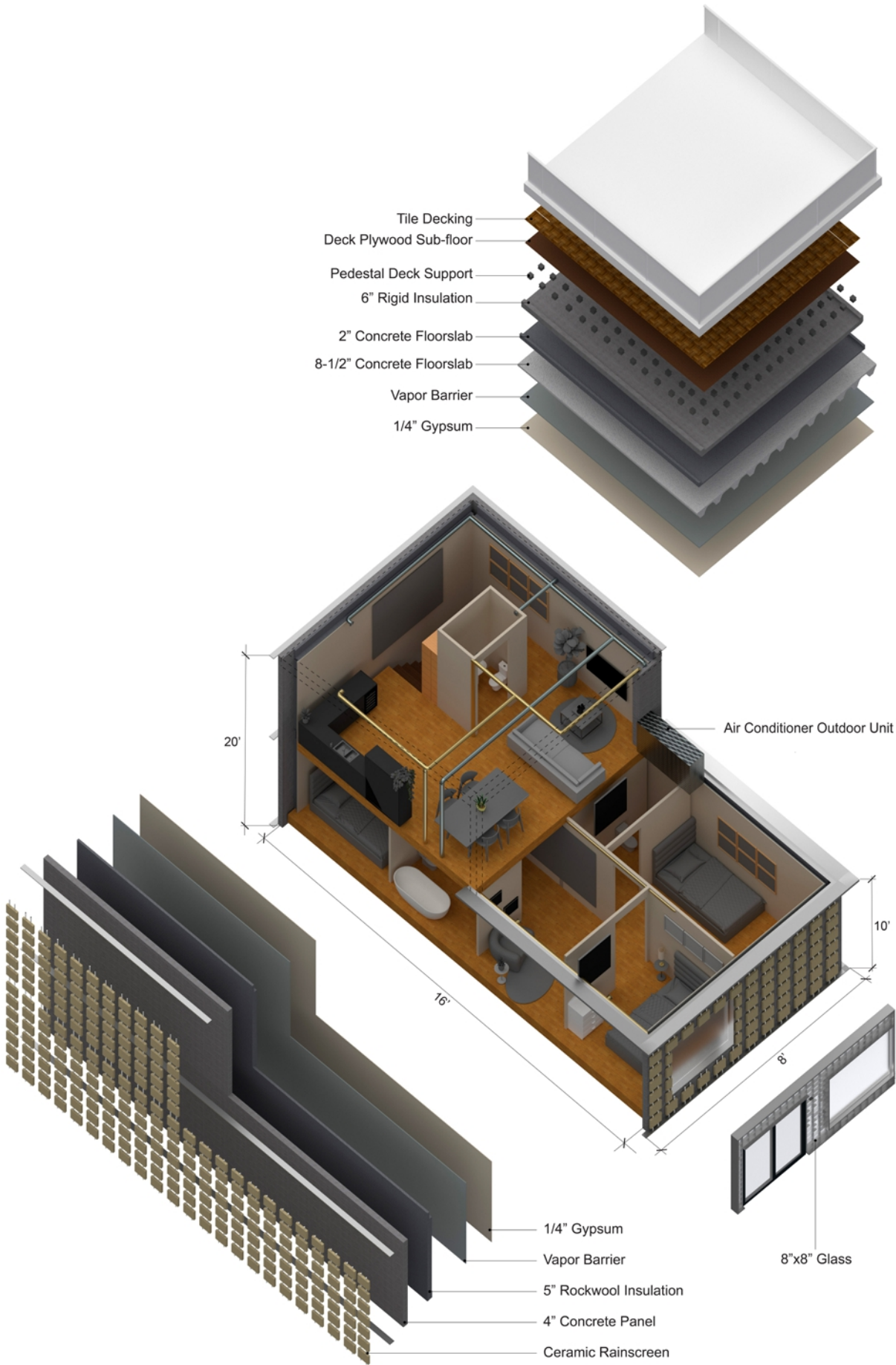
Dwelling Units



Habitate 67 Analysis



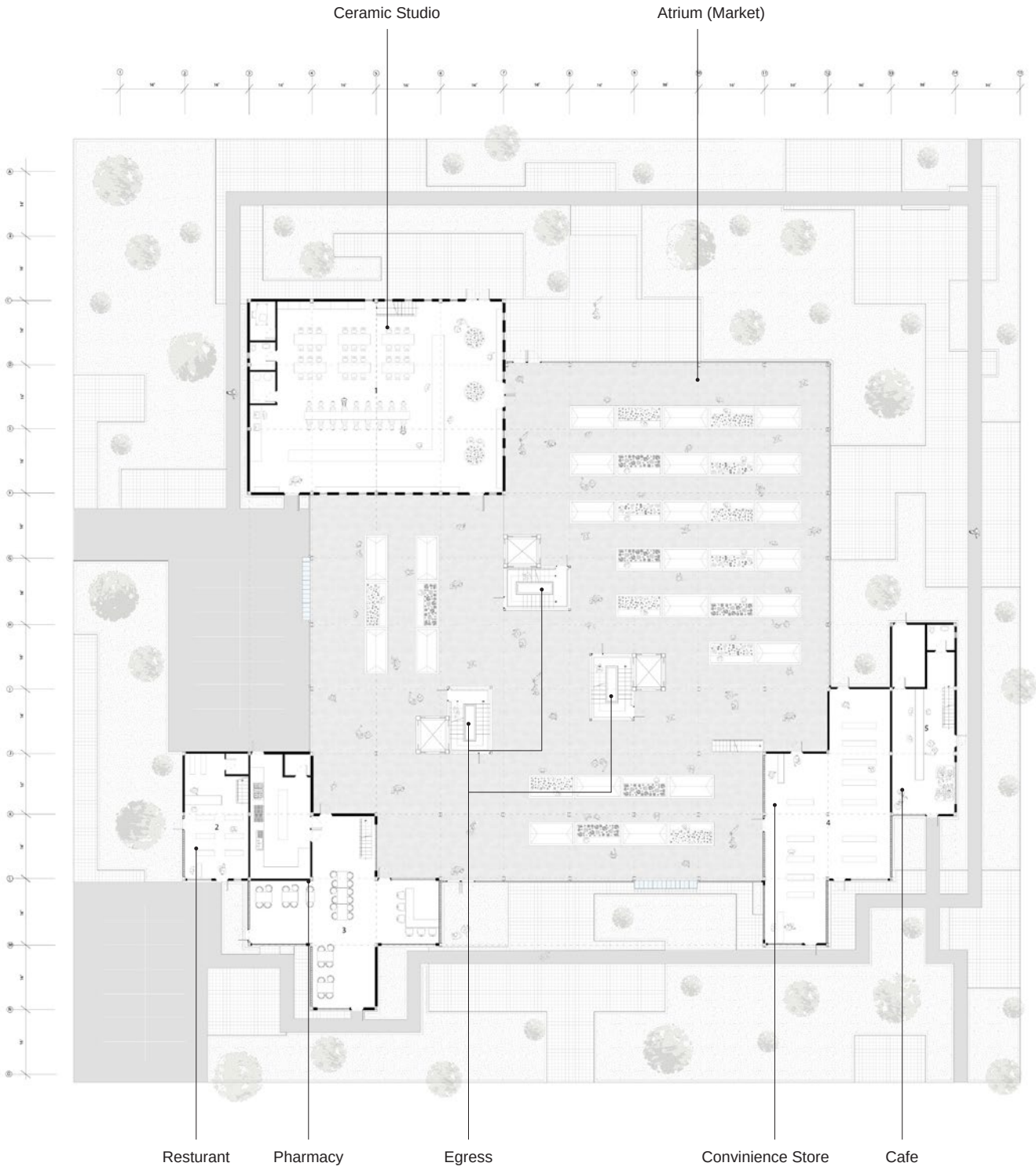
Exploded Unit Axon



Unit Configuration



Ground Floor Plan

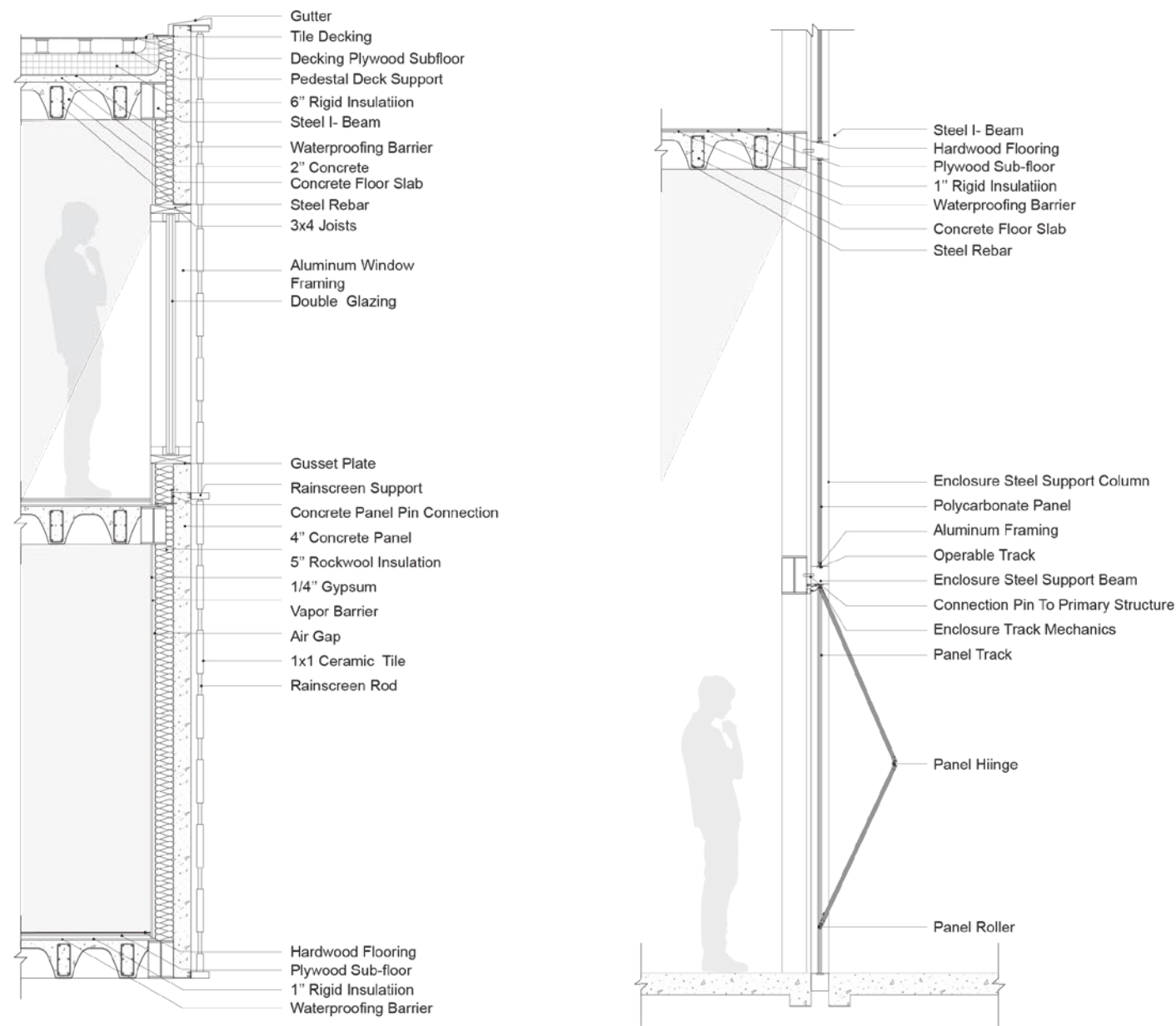


3rd Floor Plan

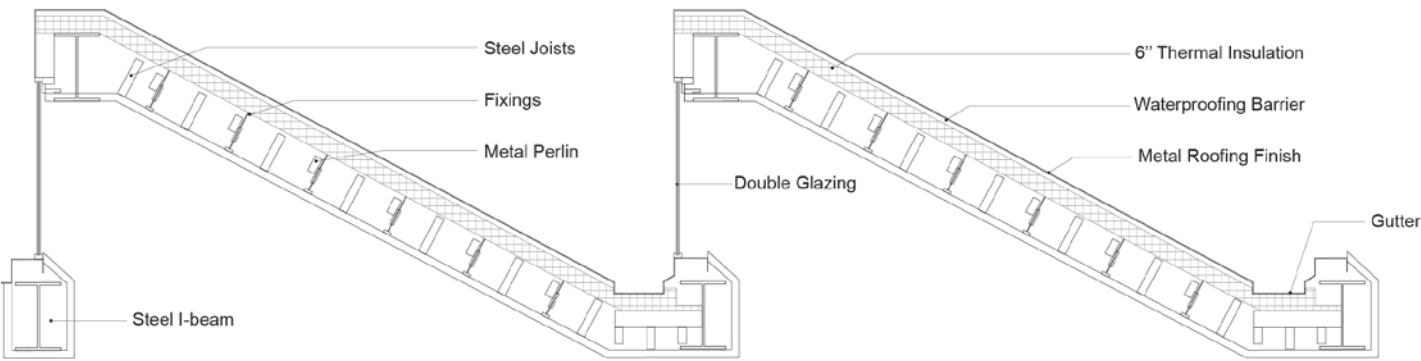


Details Sections

Rainscreen Facade and Operable Facade Detail



Roof Detail



Renders



MOVABLE HOUSE

A Self-Sustainable Micro-House

Pond Camping Area, Tulls, NY

ARC 222 Building System Design | 2020

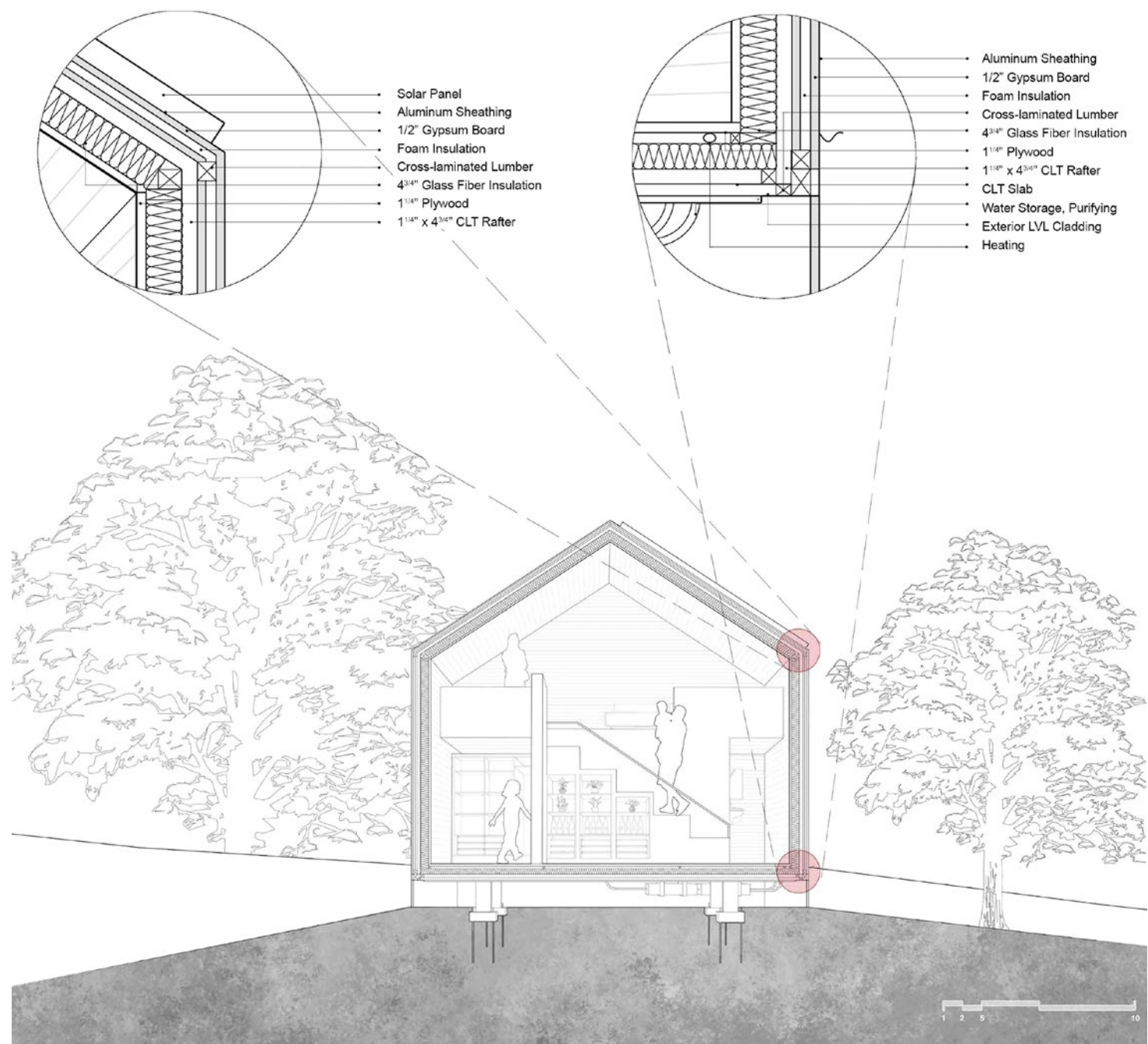
Professor: Daekon Park

(In collaboration with Runhe Song, Junjie Wang and Wenxuan Qiao)

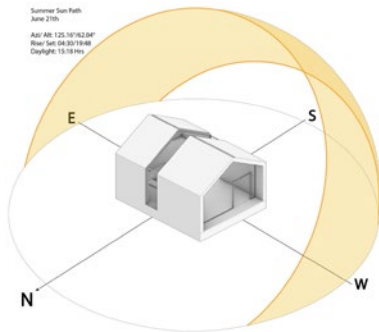
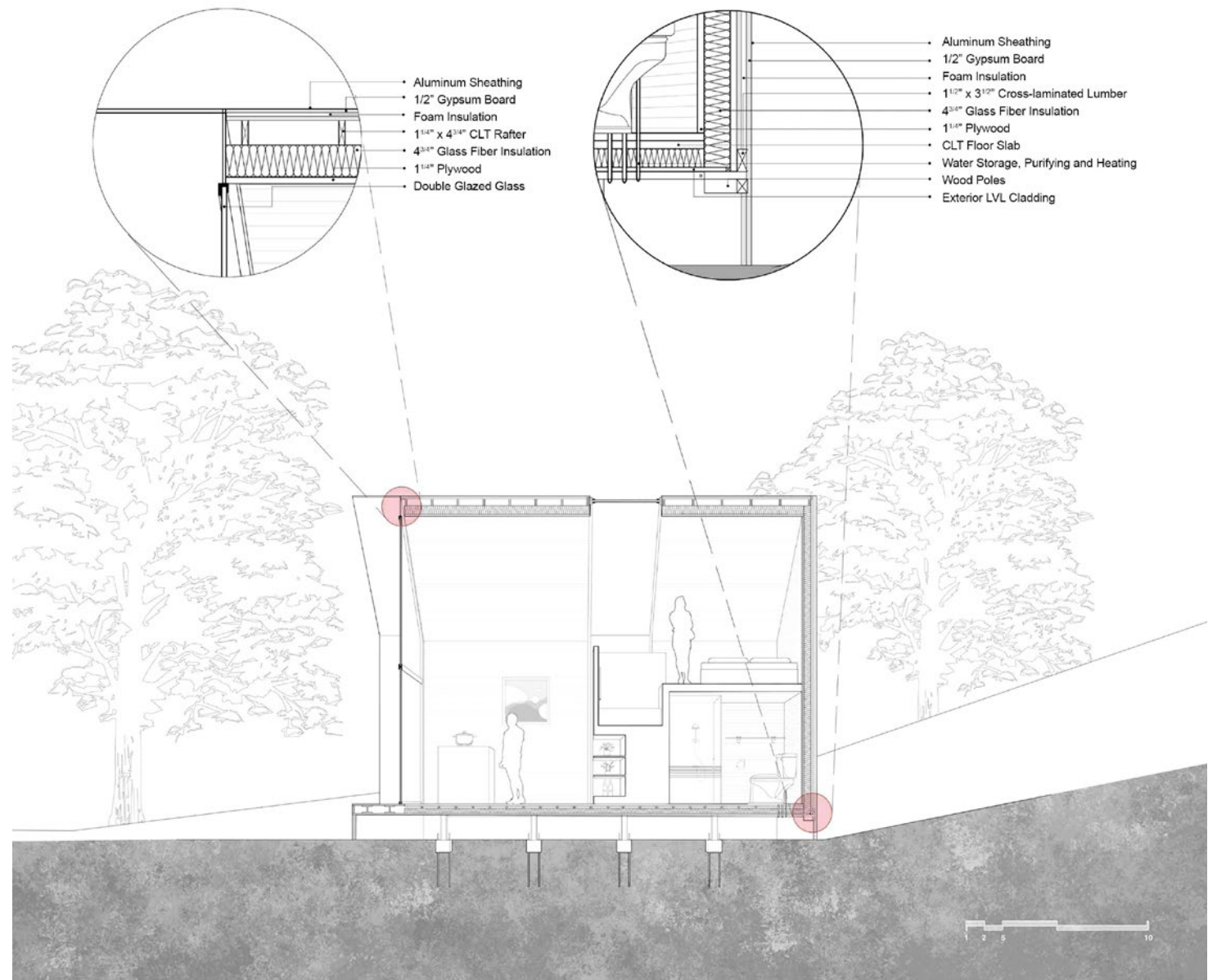
The Movable House is a movable **micro-house** in the Foster Pond camping area, New York. This house has all the necessities for living in a relatively small footage (396 ft²). A Movable House needs ground with leveled steel footing, access with a crane, and connection points for sunlight, water, sewage, and electricity. The tilted roof allows snow to slide down in the winter. The concept of this house has an elevated plate that separates the private (bedroom) and public spaces. The space under the elevated plate is the toilet. The Movable House is a **self-sustainable** house that includes a solar panel on the tilted roof and a water tank under the elevated plate, and heating pipes covered under the wood floor.



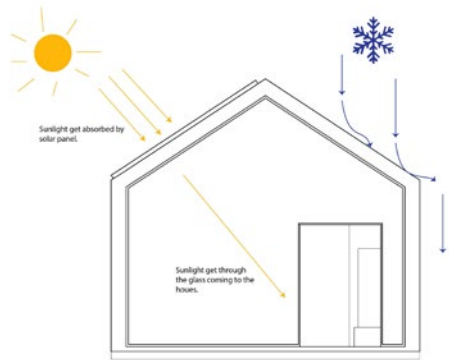
Section - Short



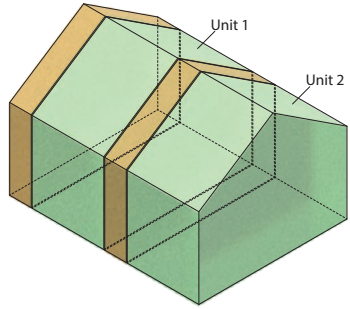
Section - Traverse



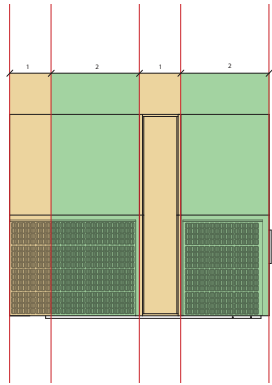
Orient the house in East-West direction to maximize the natural sunlight reception.



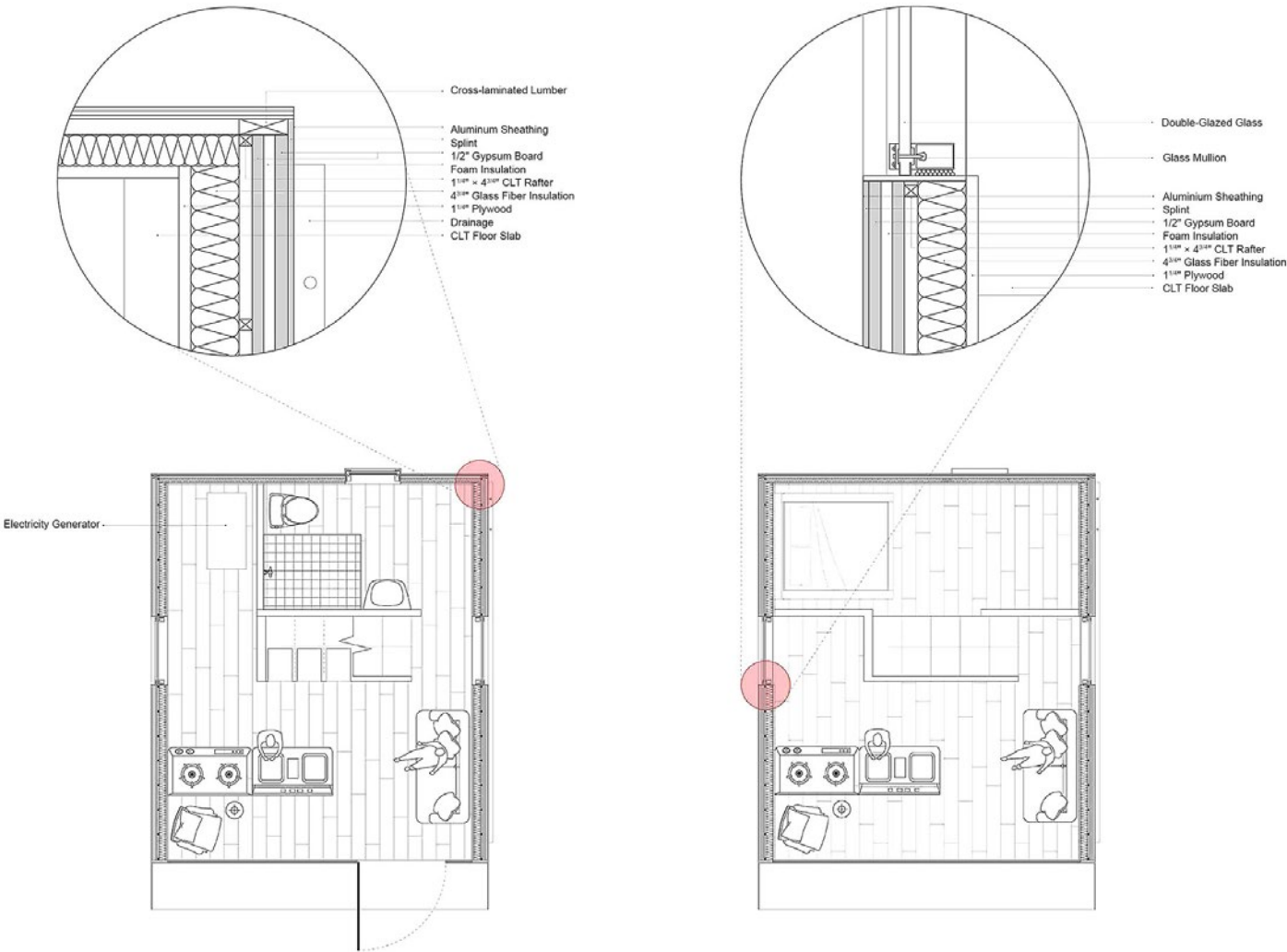
Tilted roof for sunlight reception and snow to slide in the winter.



semi-private
private



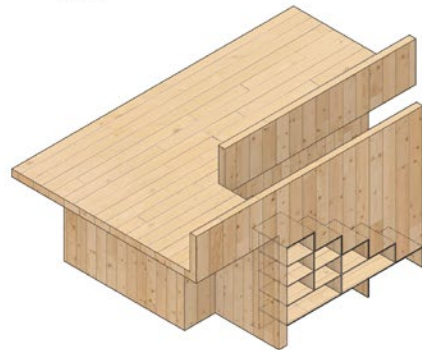
Detail Plans And Built-In Furniture



1st Floor

2nd Floor

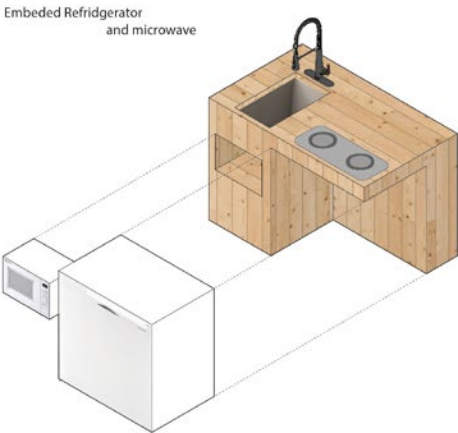
Embed Storage (Under-Stair)
Living



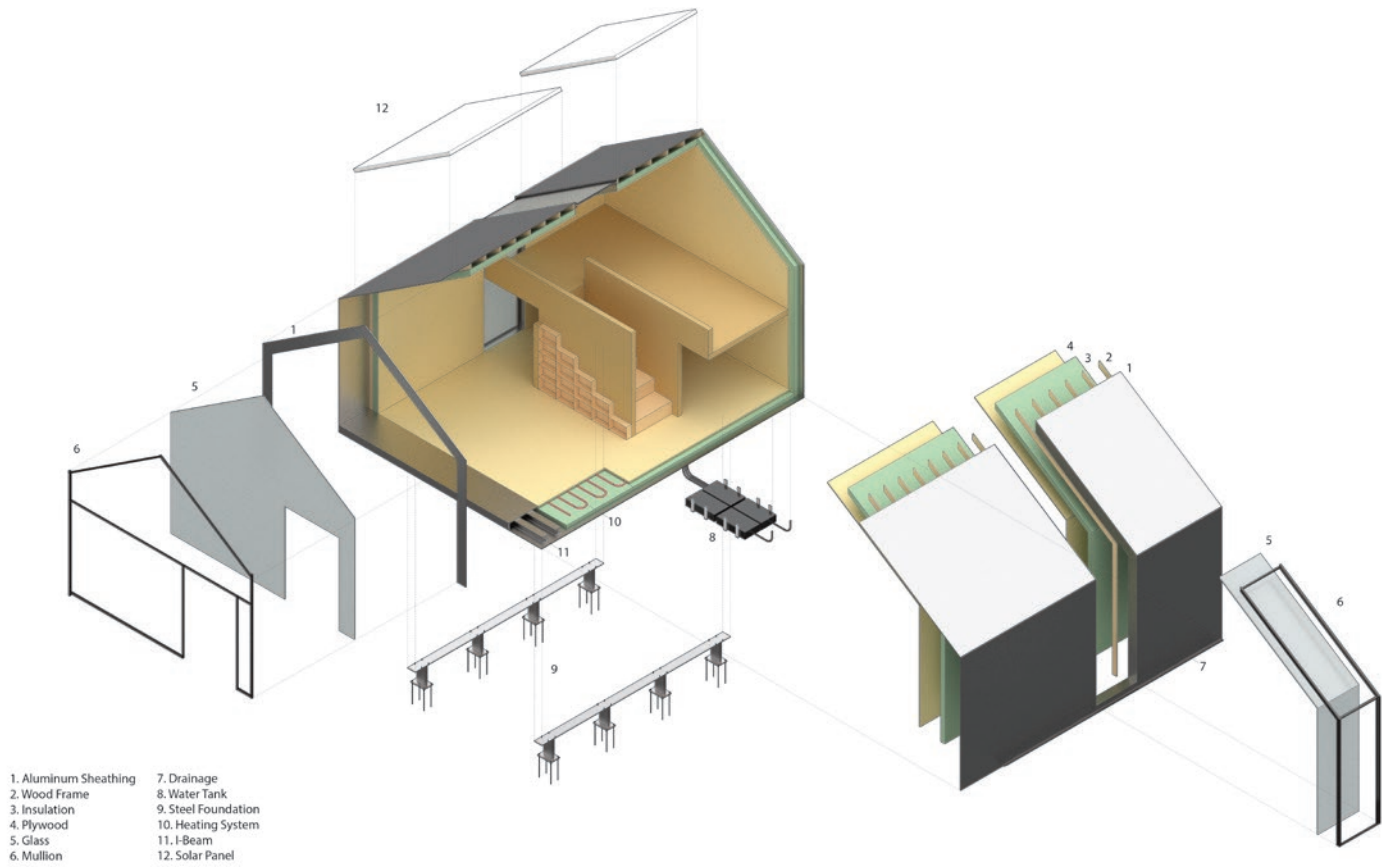
Embed Storage (Under Stair)
Toilet



Embedded Refridgerator
and microwave



Exploded Axon and Sectional Render



BETWEEN THE MOUNDS

“Le Bonifiche” -- Rethinking the Garden

Grosseto, Italy

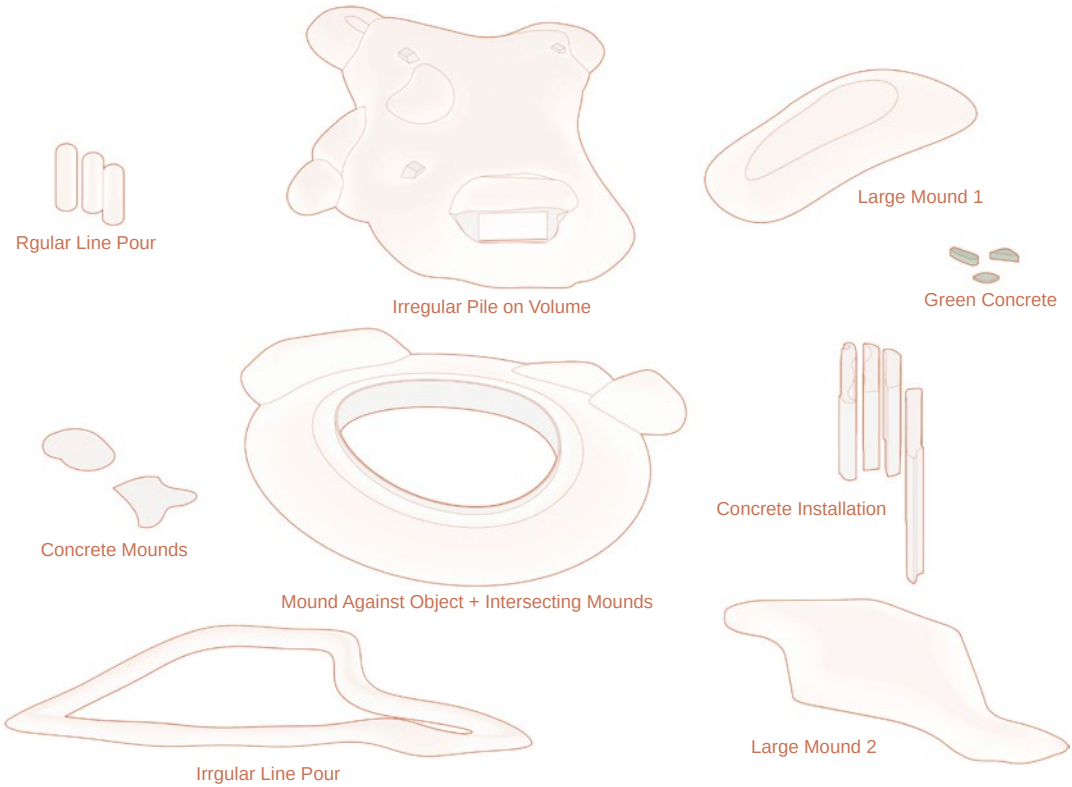
ARC 407 Architectural Studio | 2022
Professor: Cecilia Lundbäck
(In collabration with Ruijia Ma and Yuxi Dai.)

“Le Bonifiche”

- to reclaim a degraded area with agricultural and building interventions, to rehabilitate
- to restore marshy land to make it productive and suitable for human settlement, to drain.

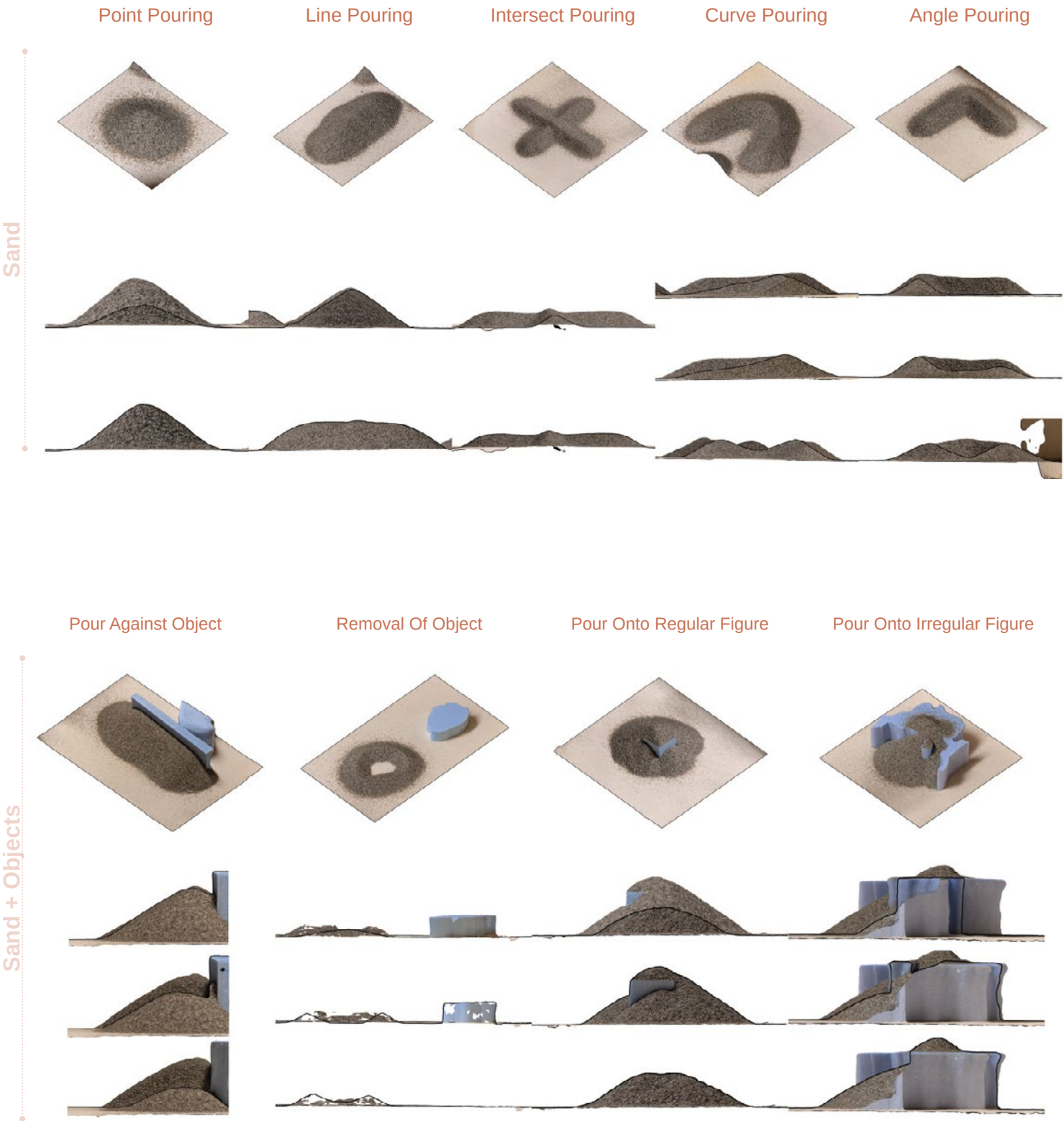
This project allows us to rethink the land use of an area in the flood zone along the Ombrone River. The Ombrone River was intervened with embankment, and the flood zone is left as a wetland.

Between the Mounds is an **experiential project** to create a calm environment that is immersed in nature with architectural intervention. Reed, water, and the natural animals created a relaxing and harmonious vibe. The interlocking between the soil and buildings allows visitors to hide from observing the natural species, and quietly observing nature. The configuration of the plan is extracted by a combined figure-ground drawing of the ground (with or without pavement), and the mounds are shaped by pouring sand. Different techniques of pouring create different scales of mounds. The rough look of the concrete and the insertion of architecture with the soft mounds formulate a strong comparison. The mounds look random but designed and poured with accuracy. Different types of objects are included: pure mound, grassed mound, concrete, and green(algae) concrete.



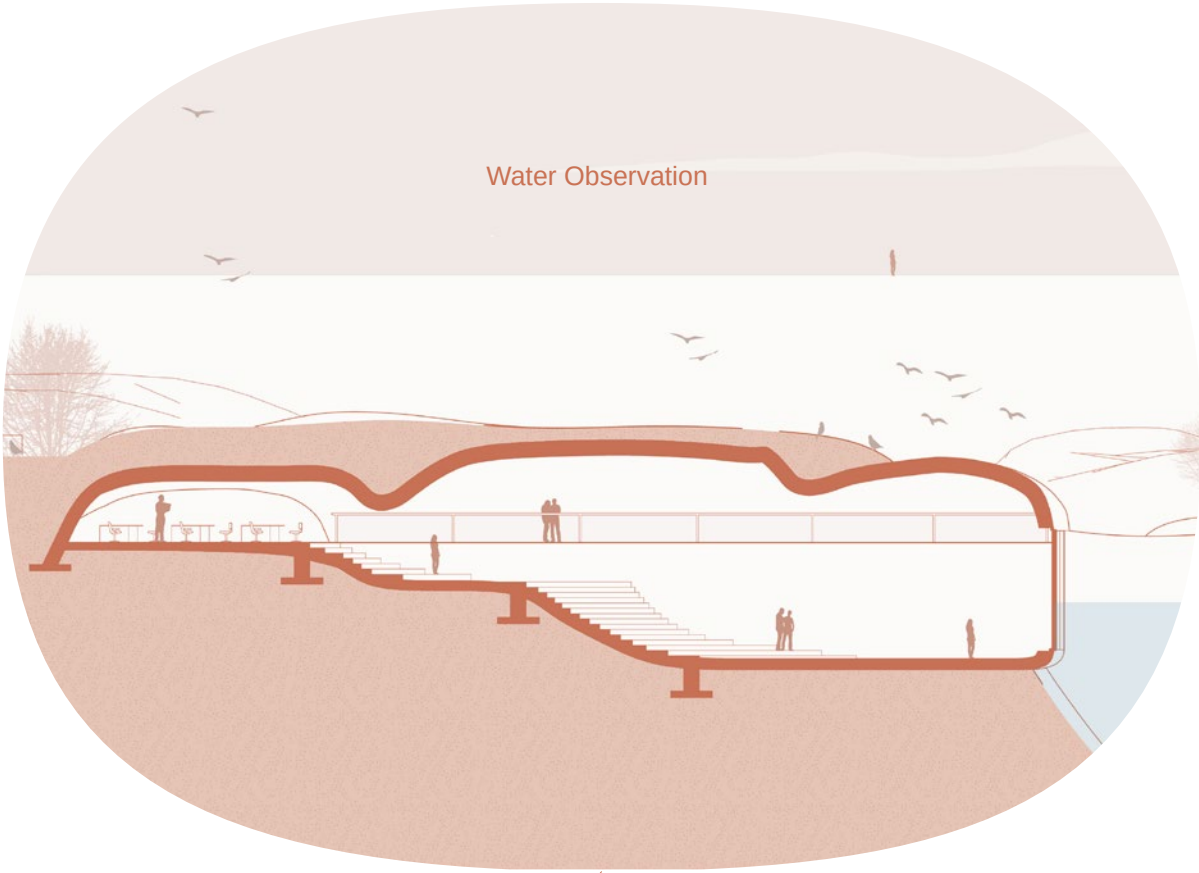
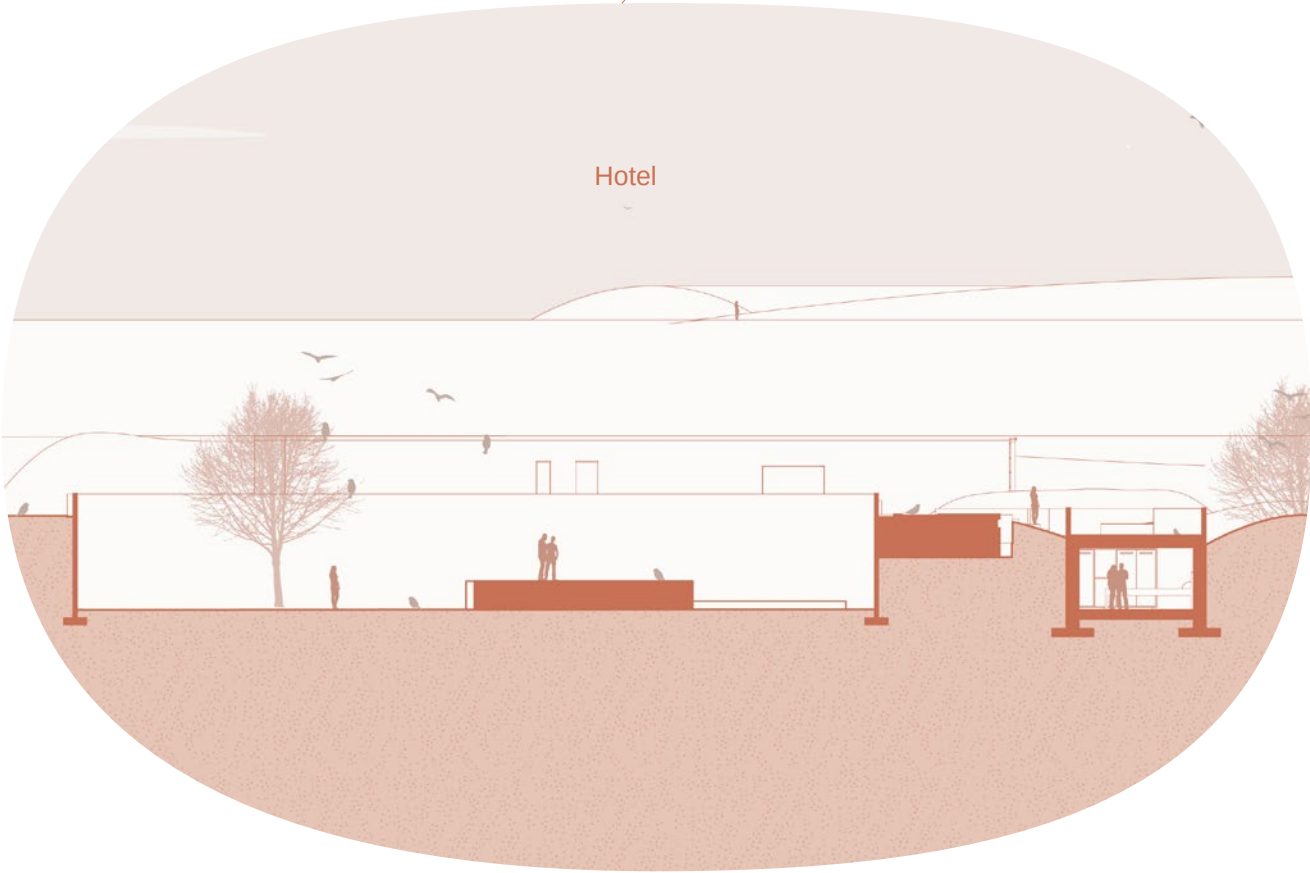
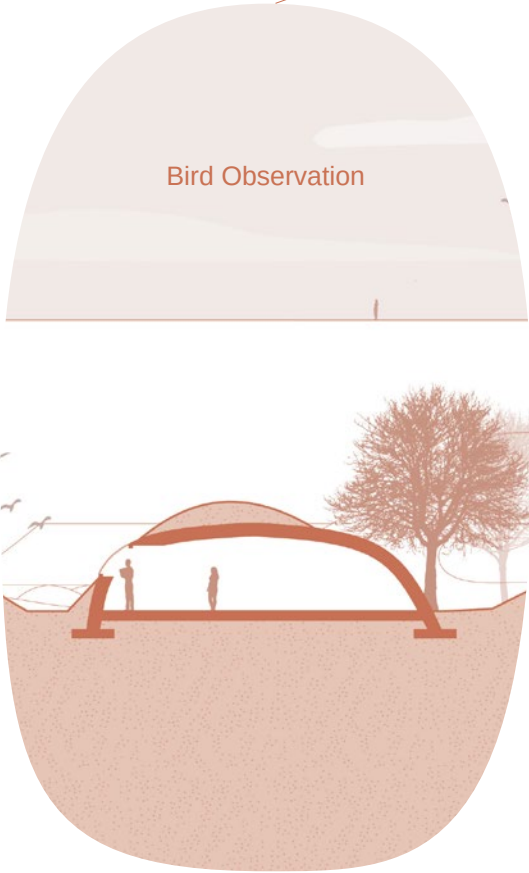
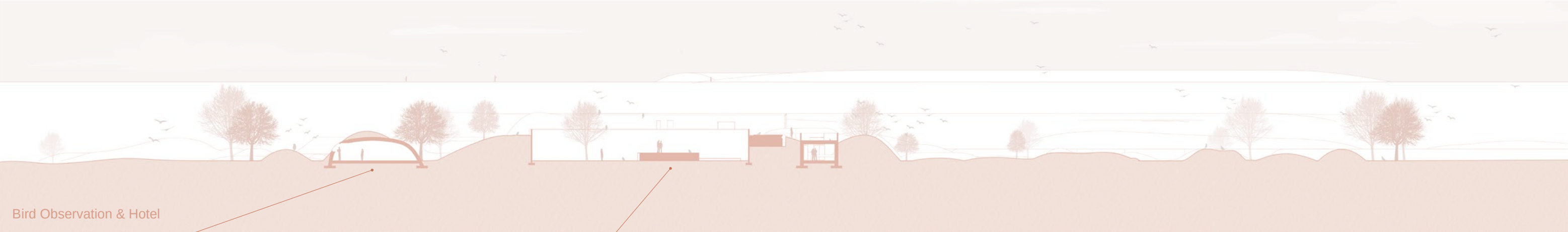
Mound and Object

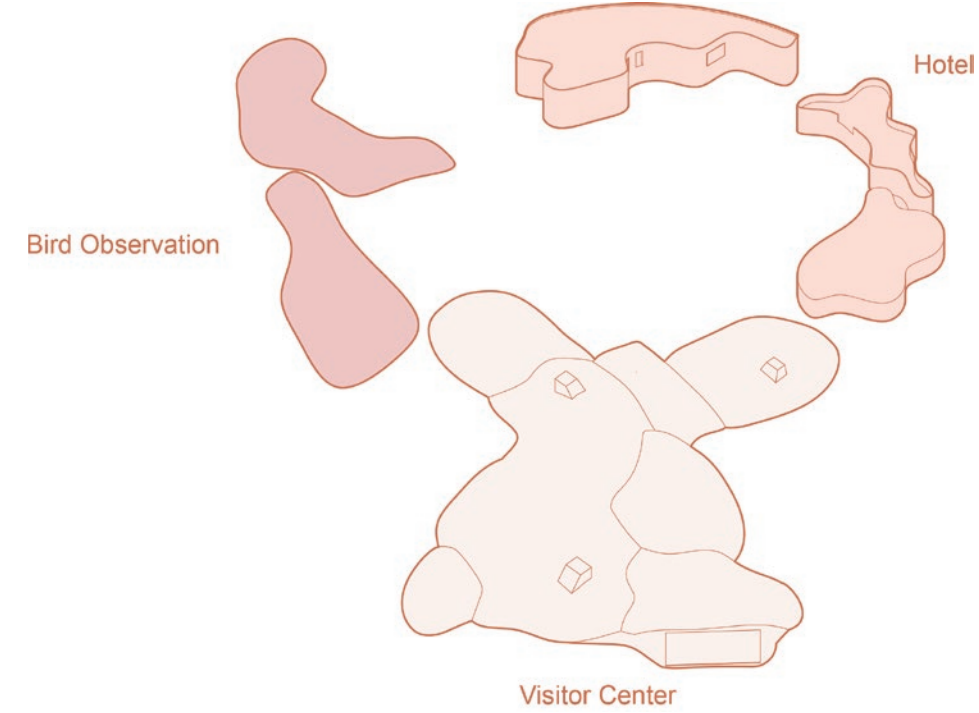
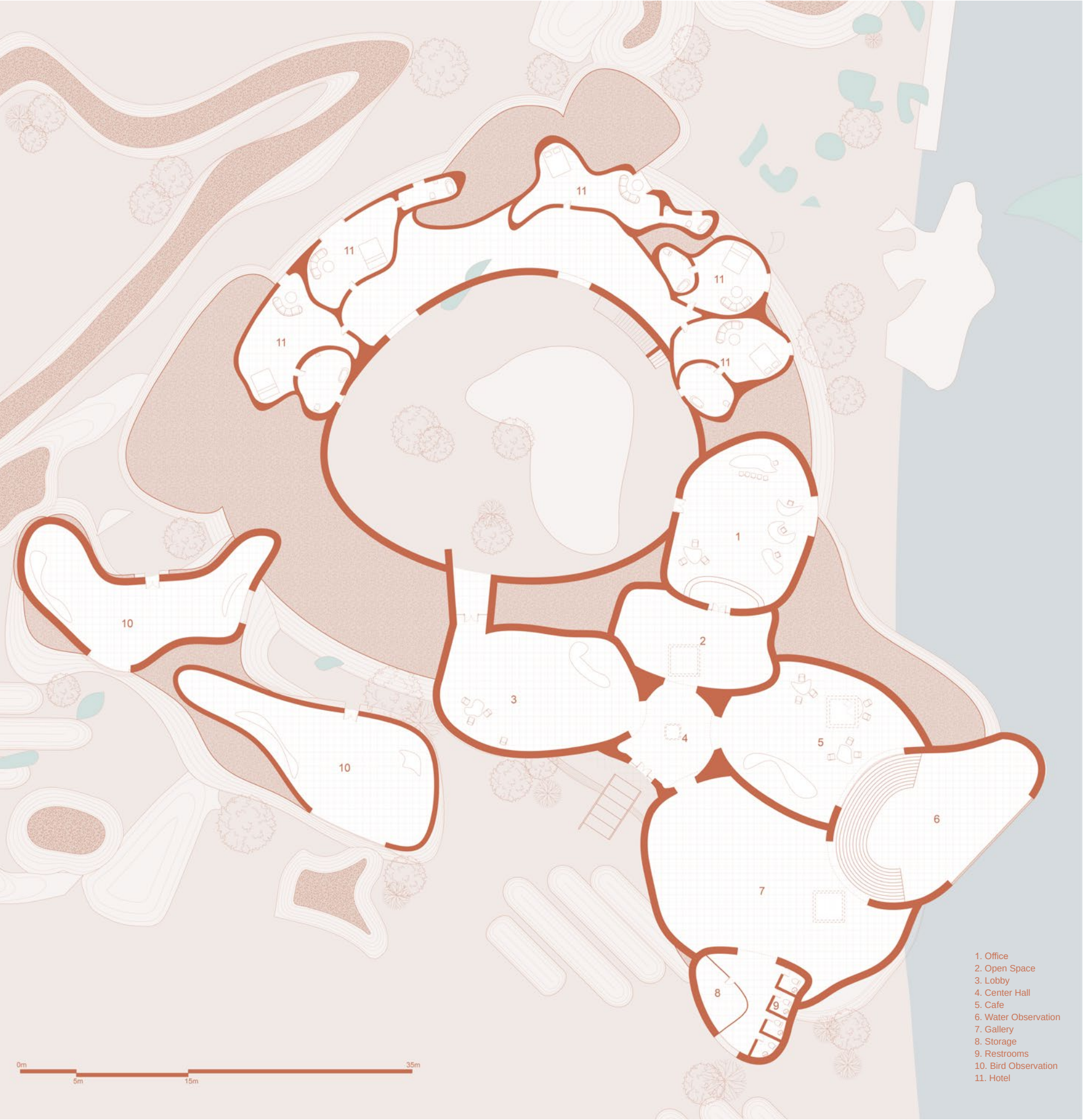
Sand experiment explores the interaction between the mound and object.



Mound and Concrete

Mound and Architecture





URBAN HERMITS

A Utopian Housing Community

Washington, D.C.

ARC 307 Architectural Design Studio | 2021
Professor: Elizabeth Kamell
(Individual Work)

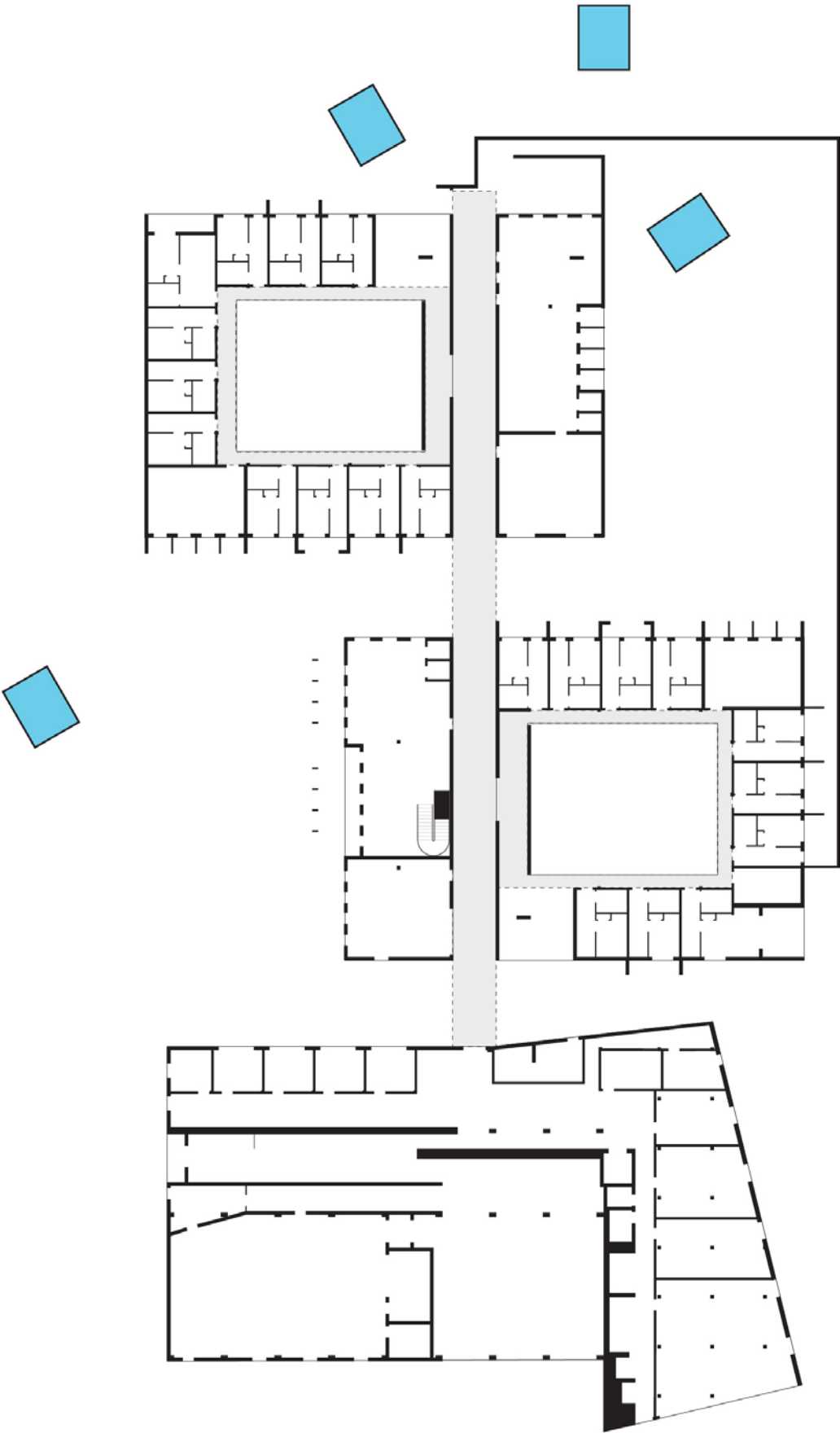
In a crowded and busy city like Washington D.C., the mixture of various elements can generate disorder, making it difficult for people to achieve inner peace and maintain a clear system of thinking. The utopia of urban hermits aims to provide inhabitants with a space to achieve their individual accomplishments.

Inspired by Le Corbusier’s early idea of “you must concentrate on your faith and give,” this community is envisioned as a representation of “unity of action” living in seclusion, rather than collective life. In this community, individuals represent only themselves and are not categorized by family, race, or social occupation. The residents will consistently pursue personal realization, separate from the busy world outside. Labor will serve the residents, acting as a mild connection between the community and the outside world. The residential form will consist of individual cells, including areas for working, storage, and sleeping. A community center in the front archives and propagates the hermits’ achievements. It allows the community residents to show the hermits’ individualities and to gather. “Hermits” will live separately from their servants: the hermits will reside in their individual cells (separate from the city), while the servants will live in dormitories.

Reference:
Miles, M. (2007). *Urban Utopias: The Built and Social Architectures of Alternative Settlements*. Taylor & Francis



Living (Hermit)



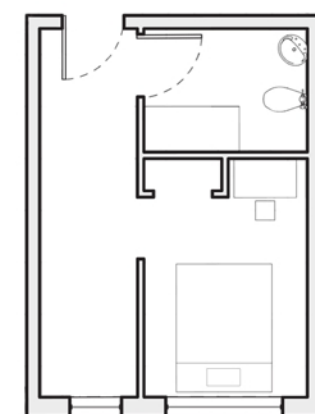
“Urban Hermits” is a futuristic way of living. The hermit cell can expand and swallow more corners of the city and, in turn, the whole world...



First Floor Plan

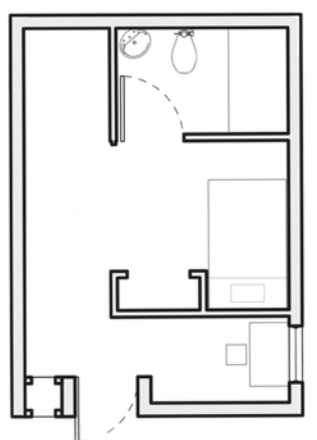


Private Yard V.S. Public Yard



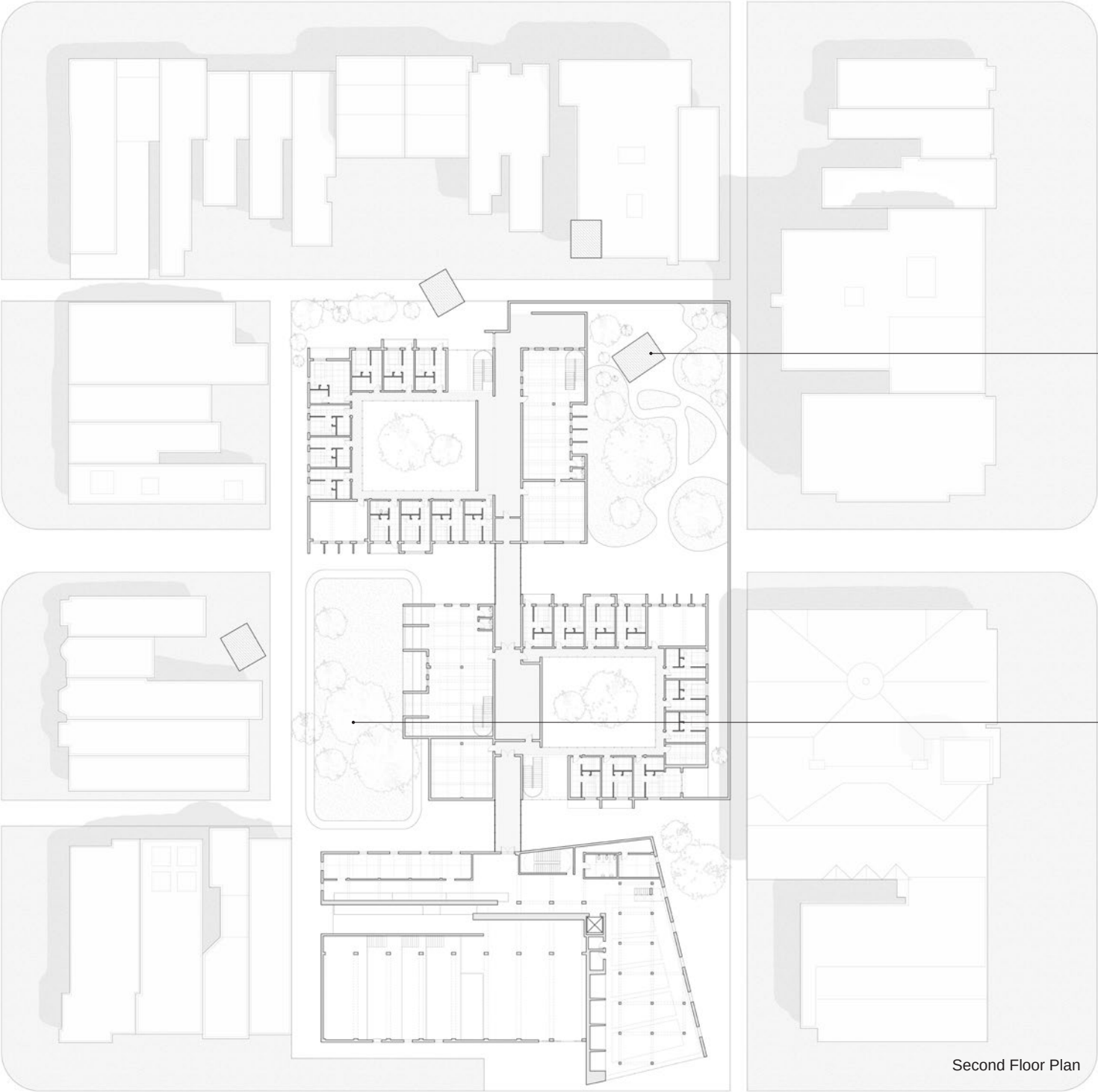
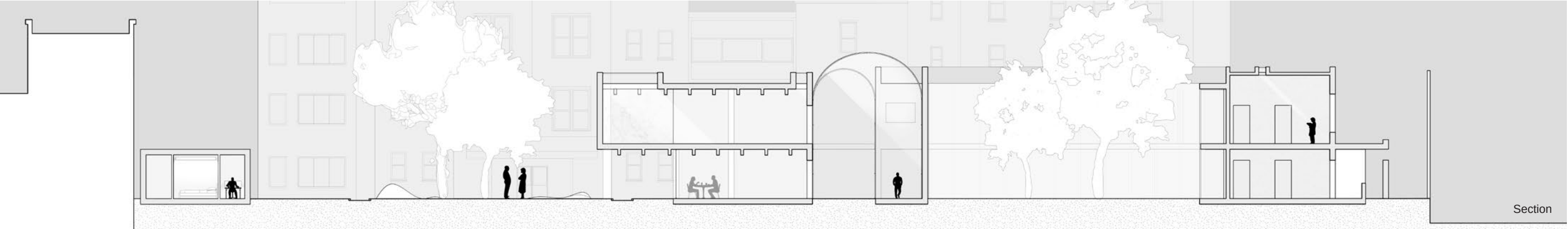
Monk Cell

more windows, no delivery chamber
more connection to the outside



Hermit Cell

window only receives basic lighting needs
delivery chamber to receive items
less connection to the outside



Individual Life V.S. Community Life



FROZEN FABRIC

Fabric Casting, Digital Formwork, Translation From Digital To Physical

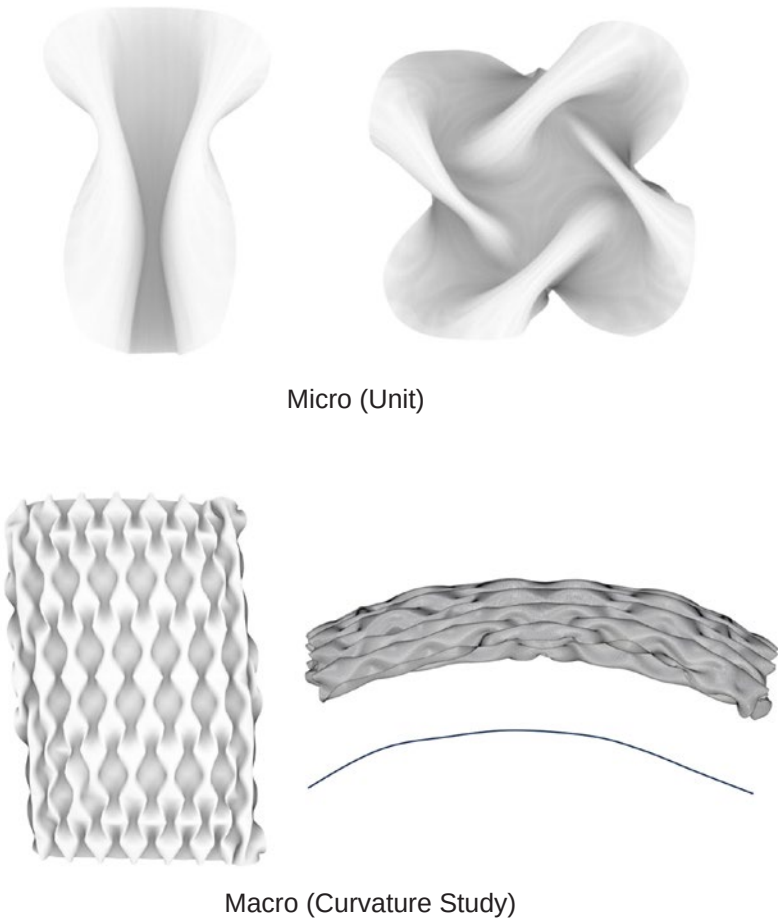
Syracuse, NY

ARC 498 Directed Research | 2024
Professor: Daekwon Park
(In collabration with Yajie Lan)

Frozen Fabric draws inspiration from **Canadian smocking**, a technique where fabric **shrinks** through stitching. This project includes a **translation from digitally produced forms to physical objects**.

The study of fabric formation has two scopes. **Microscopic** analysis focuses on the patterns within each unit, reflecting the contraction trajectory and determining unit appearance. **Macroscopic** analysis examines the overall fabric formation and its structural potentials, with adjustments in patterns affecting curvature.

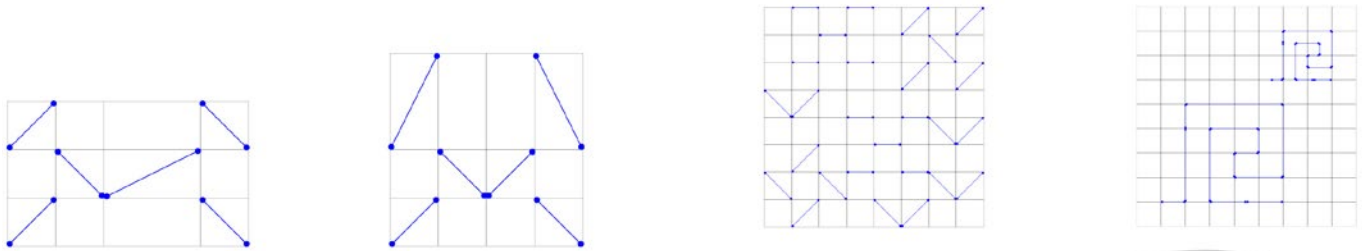
Besides, physical modeling alongside digital simulations accounts for **material performance** variations. Various casting materials are tested, from hair gel and fabric starch for smaller scales to plaster, cement and epoxy for larger, more stable structures. Innovative casting methods, such as using air or biomaterials like mycelium, can be also explored. Given the project’s aim for application in human-scale architectural projects, efficient and rapid assembly methods are crucial, extending beyond traditional thread connections used in smocking.



Design, Fabrication, Simulation Correlation of Parametrically Paterned Flexible Formwork and Casting

Fabric Formation

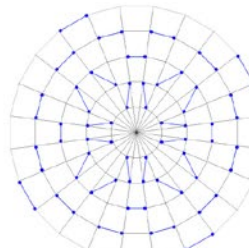
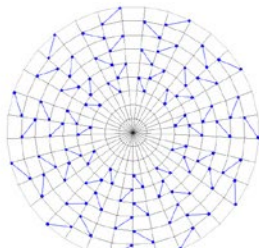
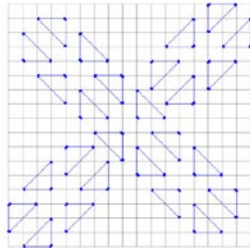
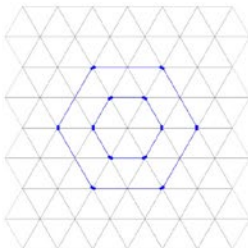
Customized Gridding System | *Micro to Macro*



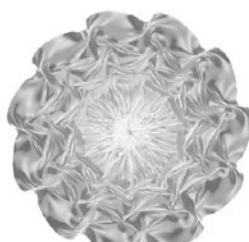
Uneven Grid



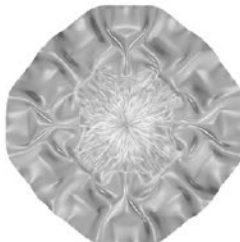
Customized Pattern



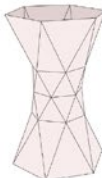
Triagnular Patten & Triangular Grid



Radial Pattern



Tessellation | *Macro to Micro*



Tessellate Desired Surface by Triangulation



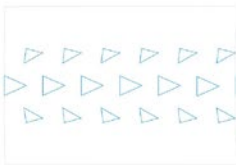
Unroll the Curved Surface



• Smocking Can Compress Space



Find the Mid-Points of Profile Lines of the Gap Spaces



Connect Mid-Points as Smocking Pattern

Fabric Casting

Fabric Material



Linen



Felt



Vinyl



Canvas

Connection Method



Thread



Rope



Metal Wire



Cable

Casting Material



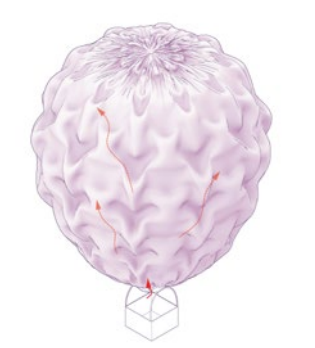
Plaster



Mortar



Epoxy



Air

Shaping Method



Only Gravity



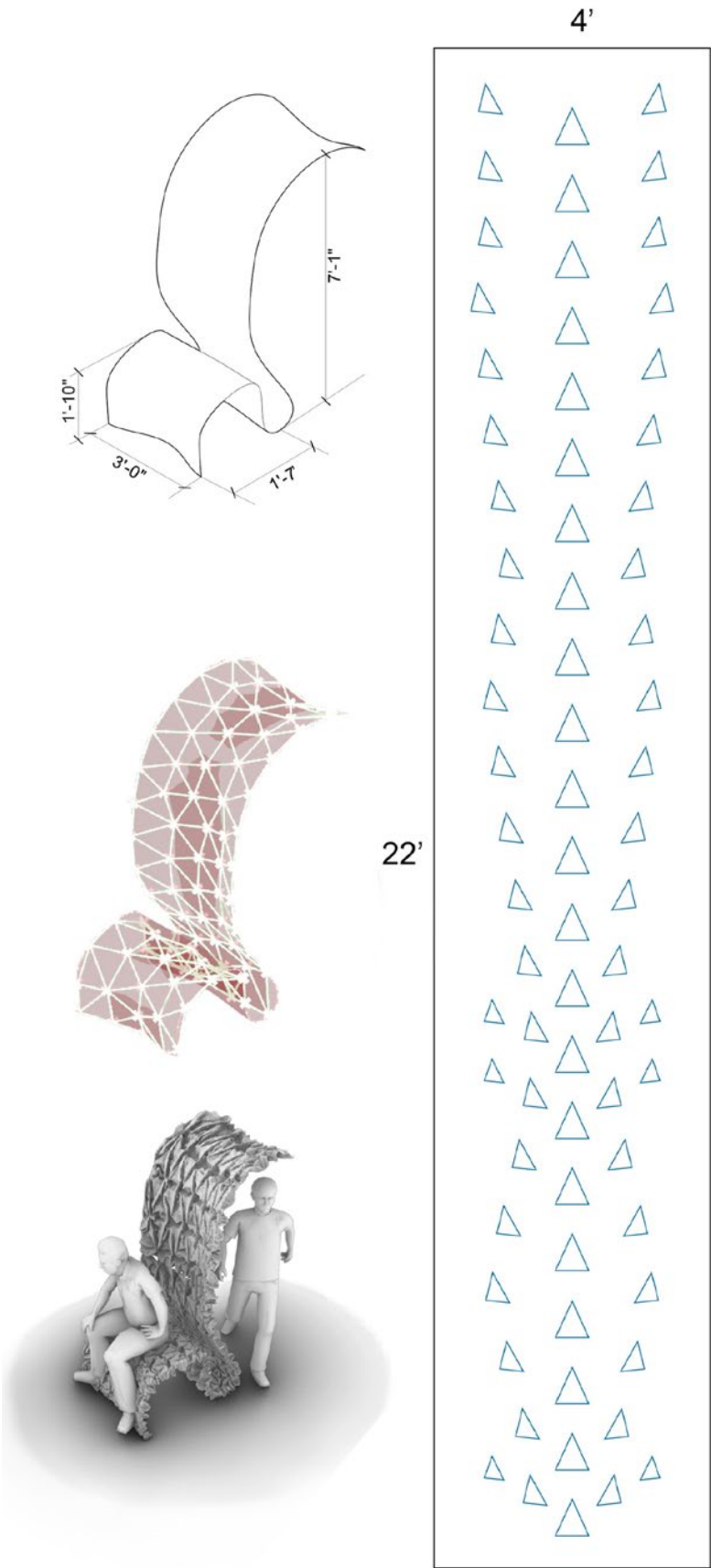
Hanging



Draping



Stretching



KLEINARCHITEKTUR

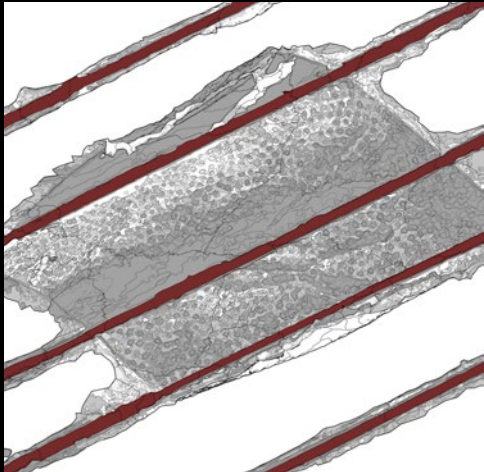
Material Semblance, 2d To 3d, An Interactive Pavilion

Florence, Italy

ARC 500 Material Semblance | 2022
Professor: Cecilia Lundback
(In collabration with Yajie Lan)

“Kleinarchitektur” is a **small pavilion**. The design of this project incorporates three phases: Scanning, Digital Fabrication, and Application.

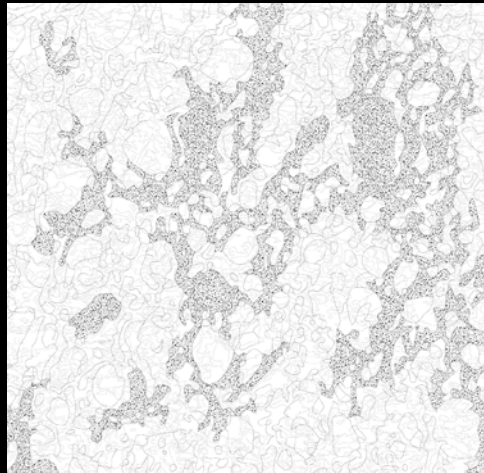
To start with, various phases involve **creating digital textures and merging different materials** to design an interactive pavilion. Textures from a face towel, two types of stone, and folded tissue are digitally captured and converted into models and patterns using photogrammetry and design software. Then, these textures are digitally combined using modeling techniques to create complex surfaces. Finally, a curved 3D model is designed to mimic the flow of fabric, with “pop-in” and “pop-out” features following the fabric’s folds. This “flowing” surface demonstrates the pavilion’s movement and interacts with people, blurring the line between architecture and installation.



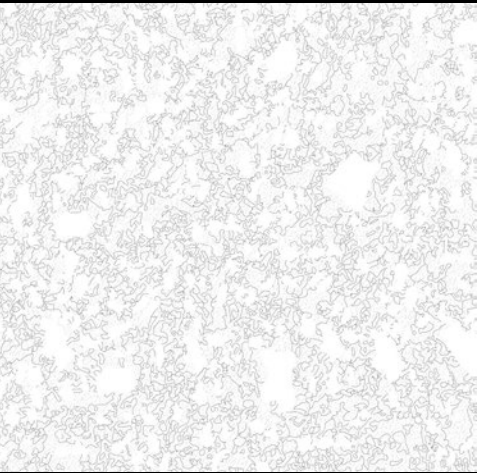
Face Towel



Tissue

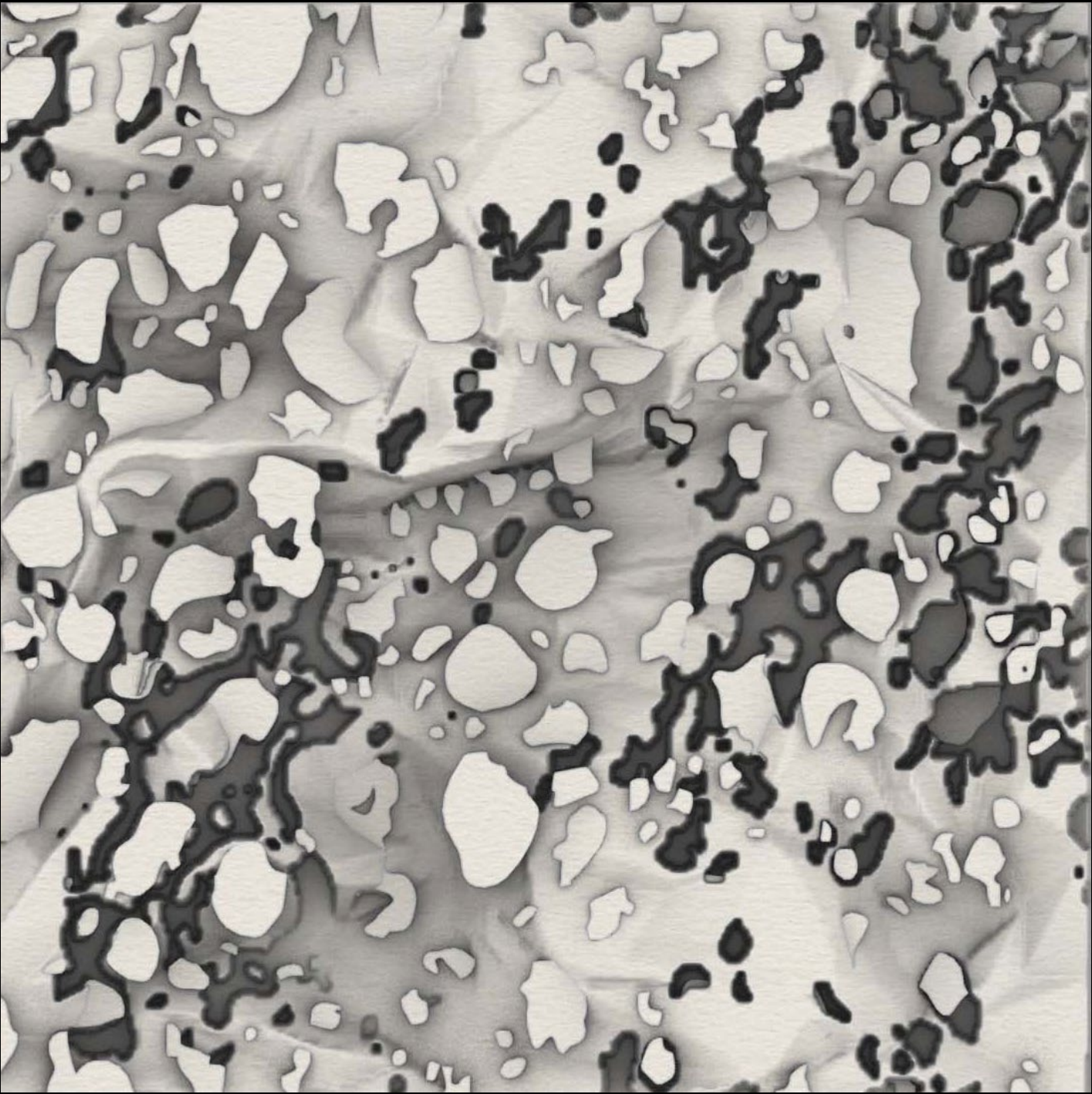
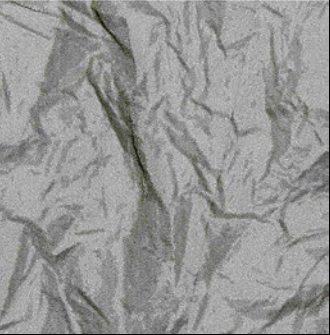
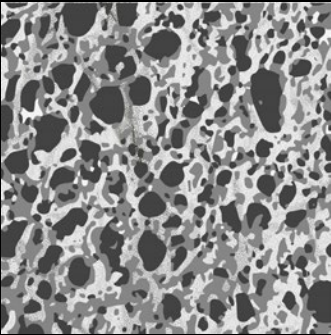
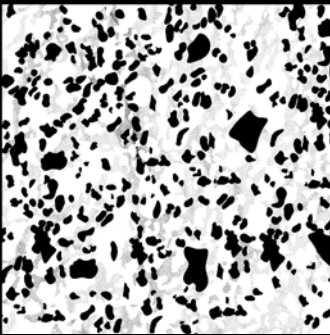


Stone 1



Stone 2

Material Creation



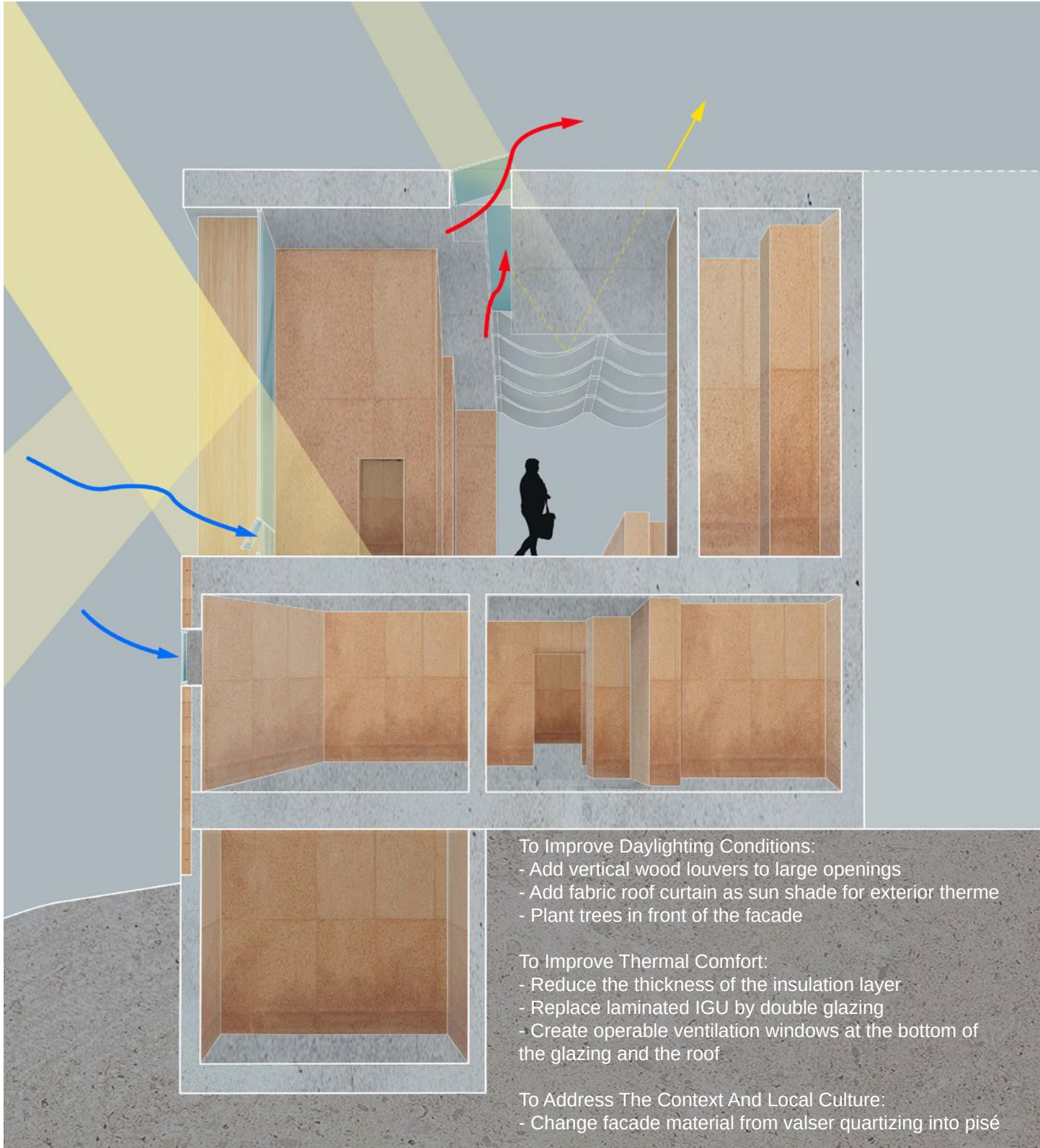


THERME VALS 2.0

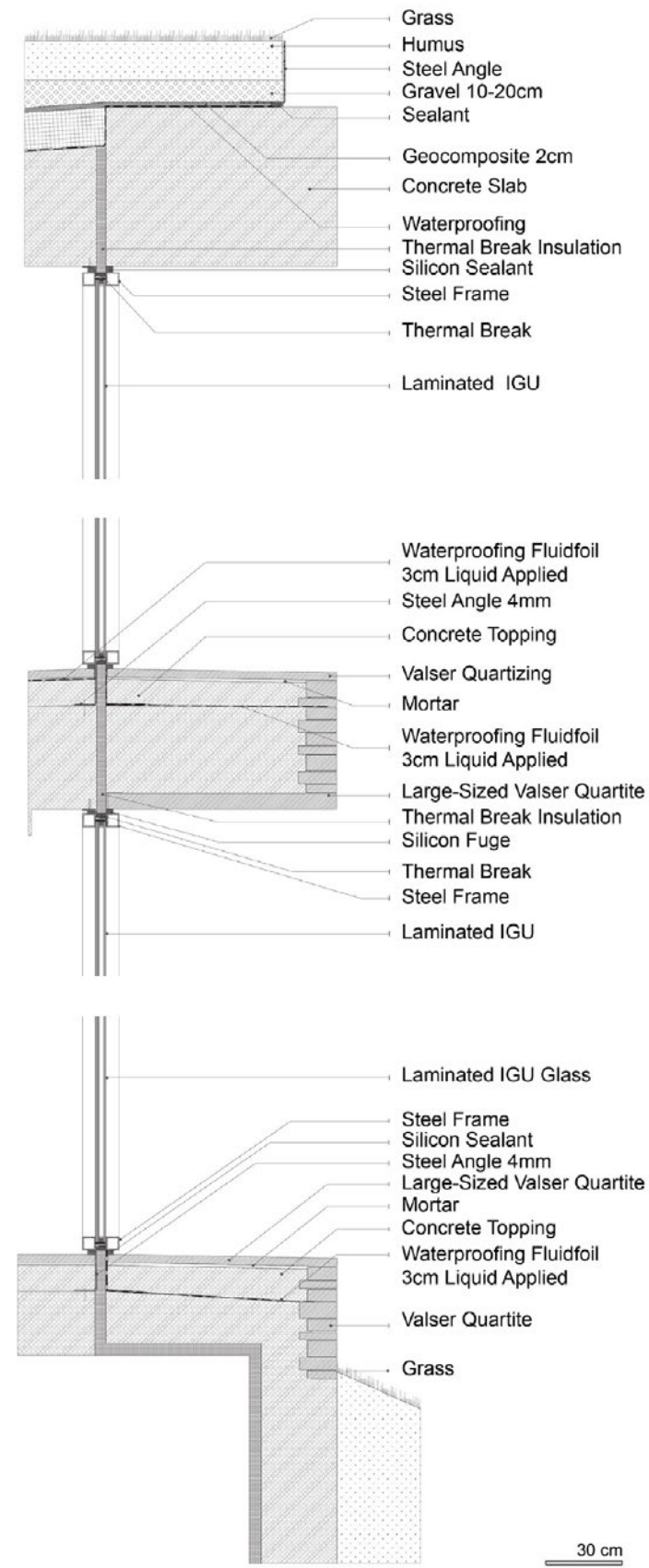
If Therme Vals were built in Morocco...

Marrakesh, Morocco

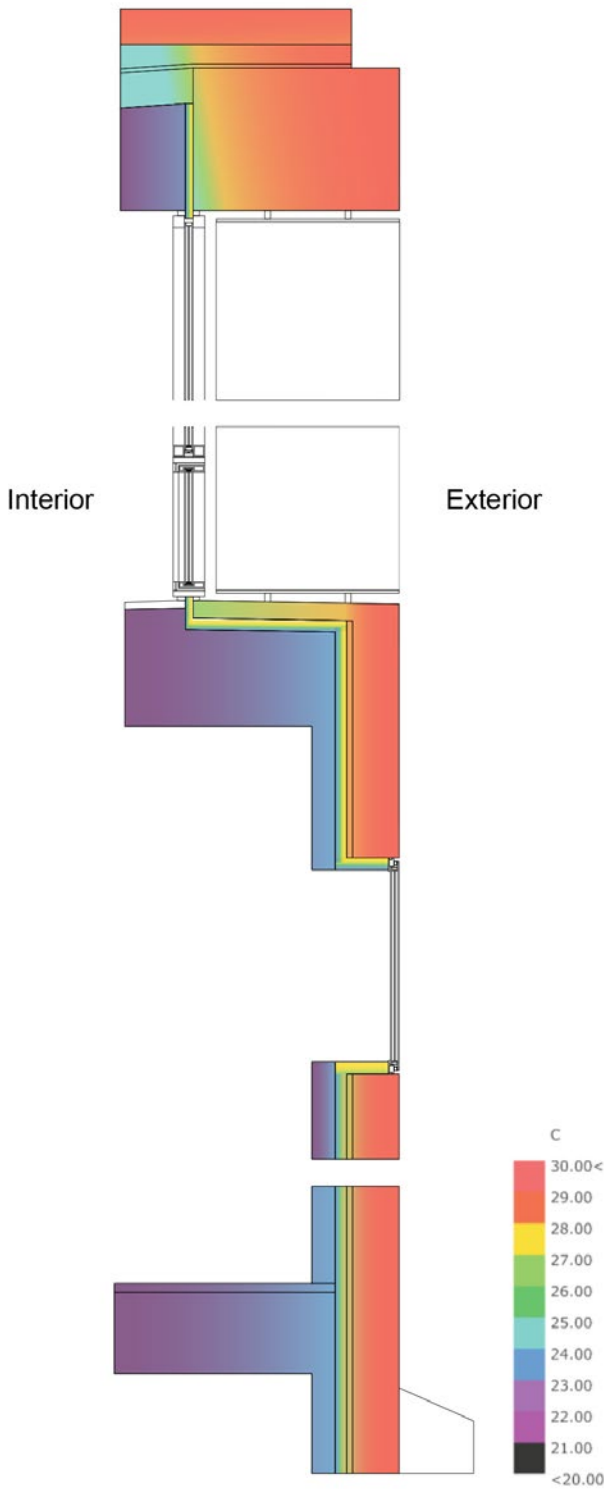
ARC 322 Building Systems Design + Integration | 2021
Professor: Nina Wilson
(In collaboration with Qi Liu, Yixing Liu, Yajie Lan)



Re-designed Section



Therm Analysis (Re-designed)



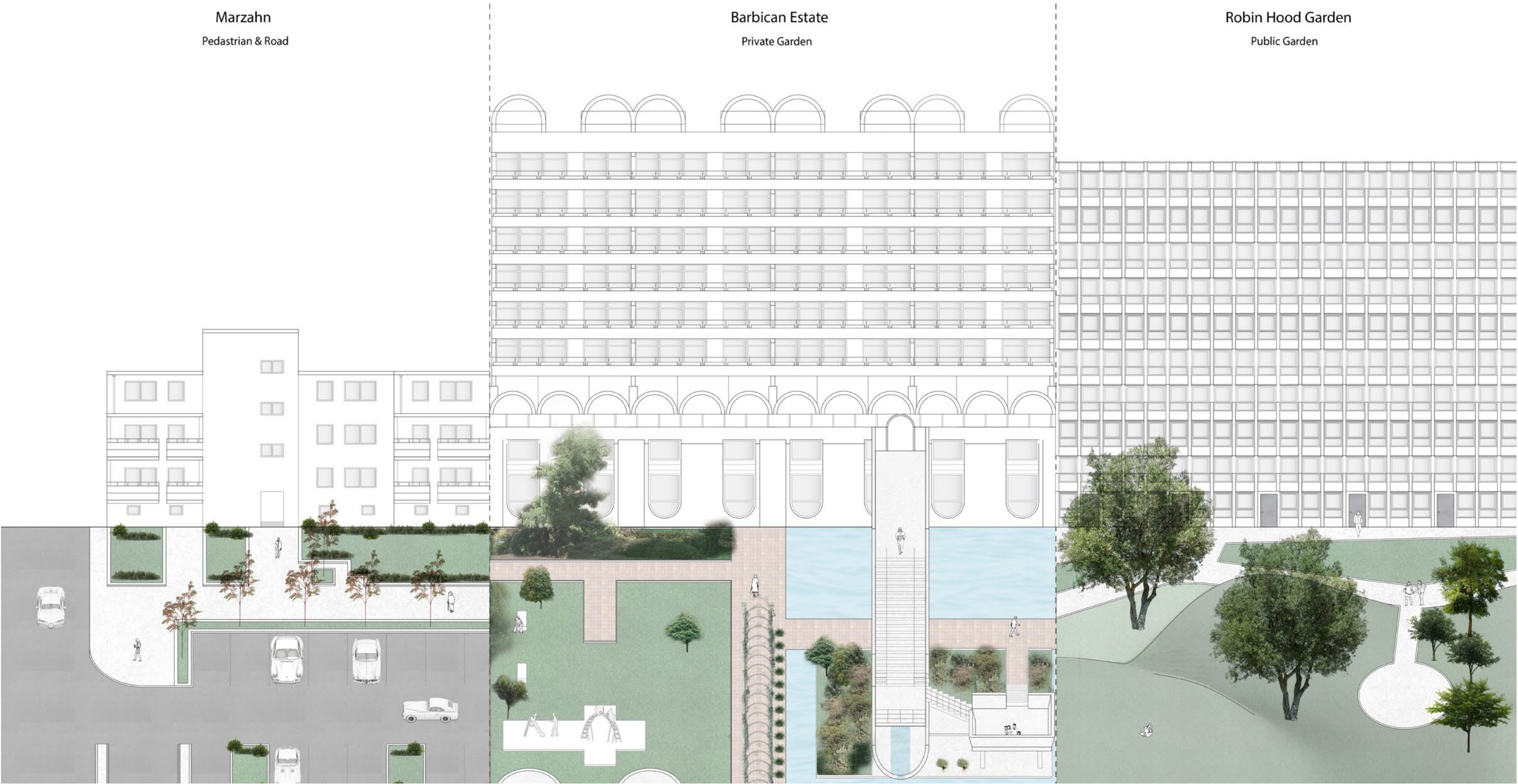
POST-WAR HOUSING STUDY

analytical drawing of architectural theory

London, UK

ARC 500 Genealogies of the City: London | 2022
Professor: Alessandro Toti
(Individual Work)

How do different forms of public space affect the residential quality of post-war estates?



ART, CRAFT AND PHOTOGRAPHY

Doll Head
Syracuse, NY | 2023



Dumbarton Oaks
Washington, D.C. | 2023



Seattle, WA | 2023



Multiple Places, Italy | 2022

