



Qiv Wang

UC Berkeley | College of Environmental Design

PORTFOLIO

Selected Works 2019 - 2025

Dear Michael Maltzan Architecture Team,

My name is Qiv Wang, currently a second-year M.Arch student at the University of California, Berkeley, and a student in Michael Maltzan's studio this semester. I am writing to express my sincere interest in a summer internship at your office.

After many conversations with Michael throughout the semester, and receiving valuable feedback from Nana and Hannah during the review, I've come to truly believe that social engagement and urban justice are not just themes but principles that he consistently upholds in his work. What makes this commitment rare and valuable is precisely its clarity and persistence.

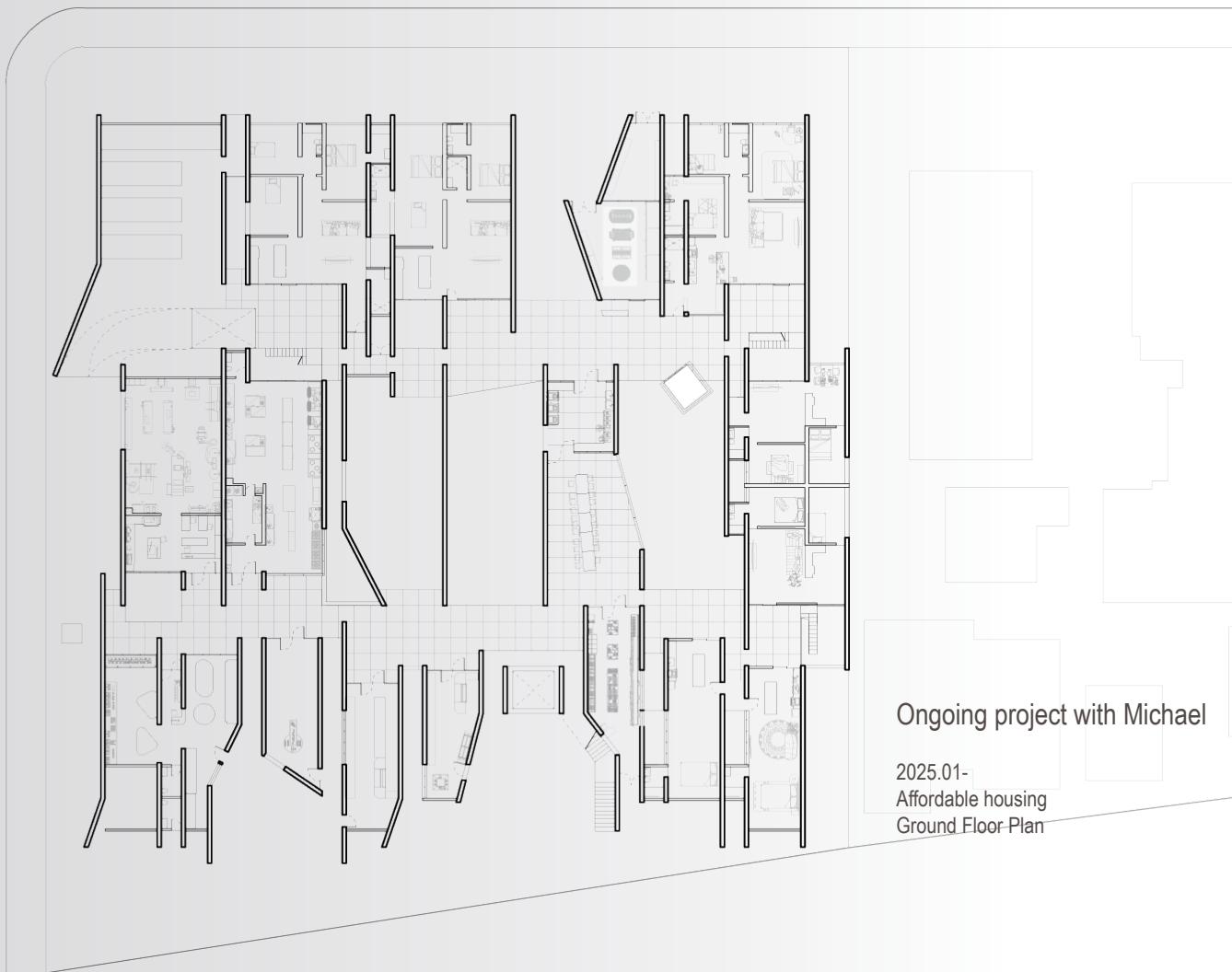
During a recent visit to Los Angeles, I had the chance to see several of Michael's built projects. What moved me the most was when I visited CREST and encountered one of the tenants. I asked him, "How do you feel about this building?" He said, "Everything is good—though there's some ventilation problem." Then he leaned on a cane, took a community food information flyer from his friend in a wheelchair, handed it to me, and cheerfully said, "You can get free food here!" That moment really touched me. Under that semi-outdoor eave, neighbors greeted one another and shared kindness. Perhaps that's one of the few things architecture can actually do. Inspired by that moment, I designed a food corridor in my current affordable housing studio project, connecting indoor and outdoor space in the hope of creating similar encounters.

What I hope to contribute to your office is a grounded and critical perspective on how architecture engages with its social, environmental, and economic contexts—an approach I believe aligns closely with your firm's values of equity and accessibility. I also have a deep passion for physical model making. During my undergraduate studies in Environmental Design, I worked intensively with hand-built models at a high level of complexity and scale. I understand that your office places strong value on model craft, and I would be genuinely excited to contribute that skill to your team. In addition to visual and spatial thinking, I've also taken on core roles in site strategy, programmatic design, and collaborative workflows—balancing conceptual clarity with project delivery.

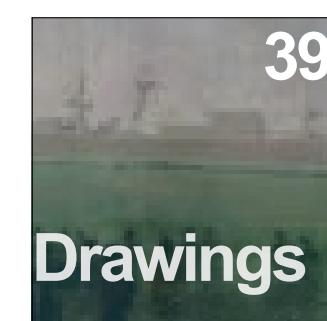
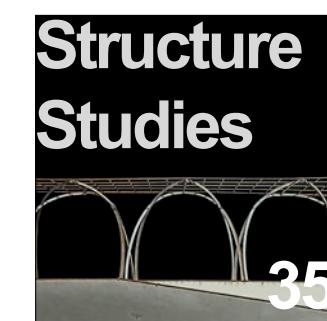
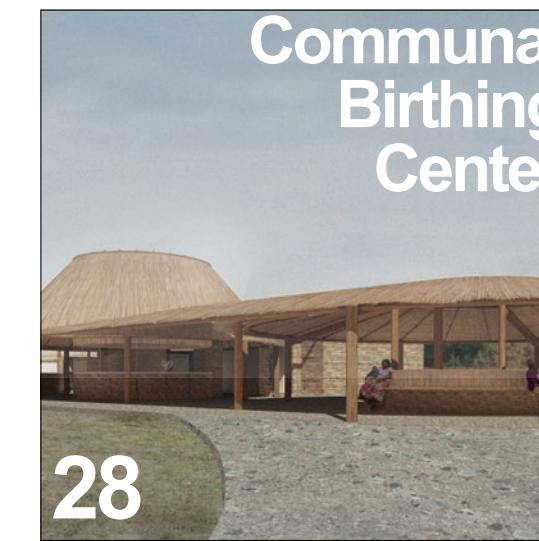
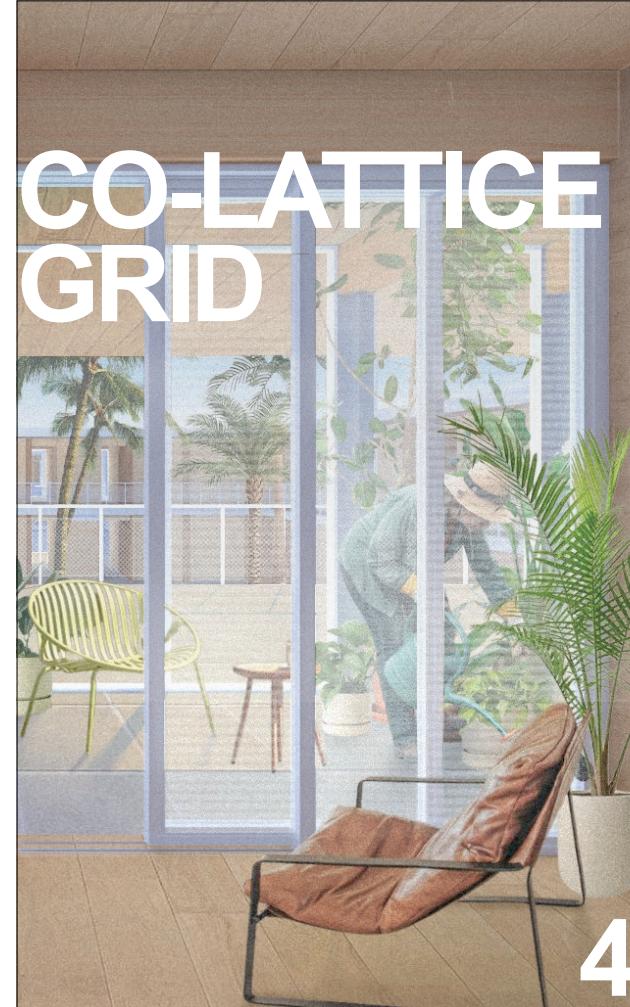
I would be truly grateful for the opportunity to join your office and contribute to your work this summer. I've attached my portfolio and CV, and would love the chance to continue this conversation in person. Thank you very much for your time and consideration.

Sincerely,

Qiv Wang

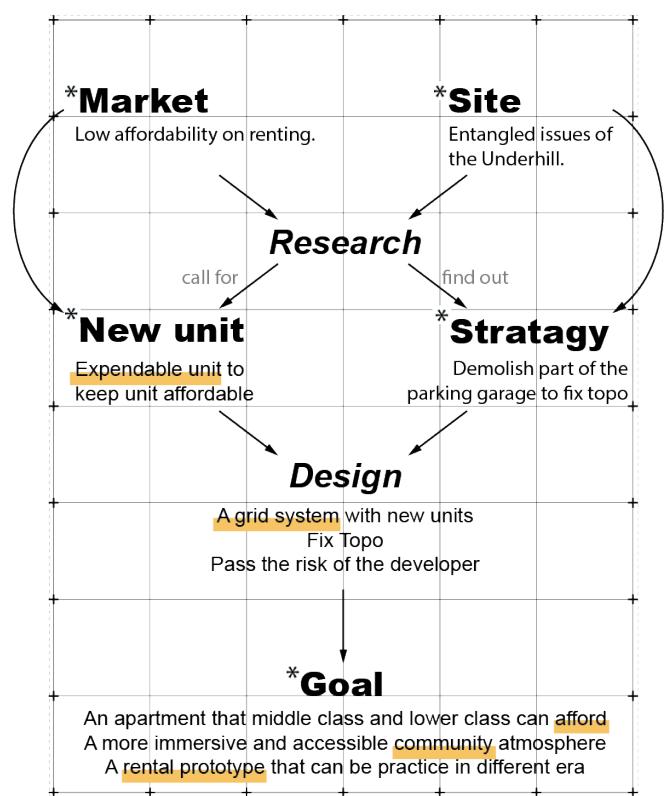


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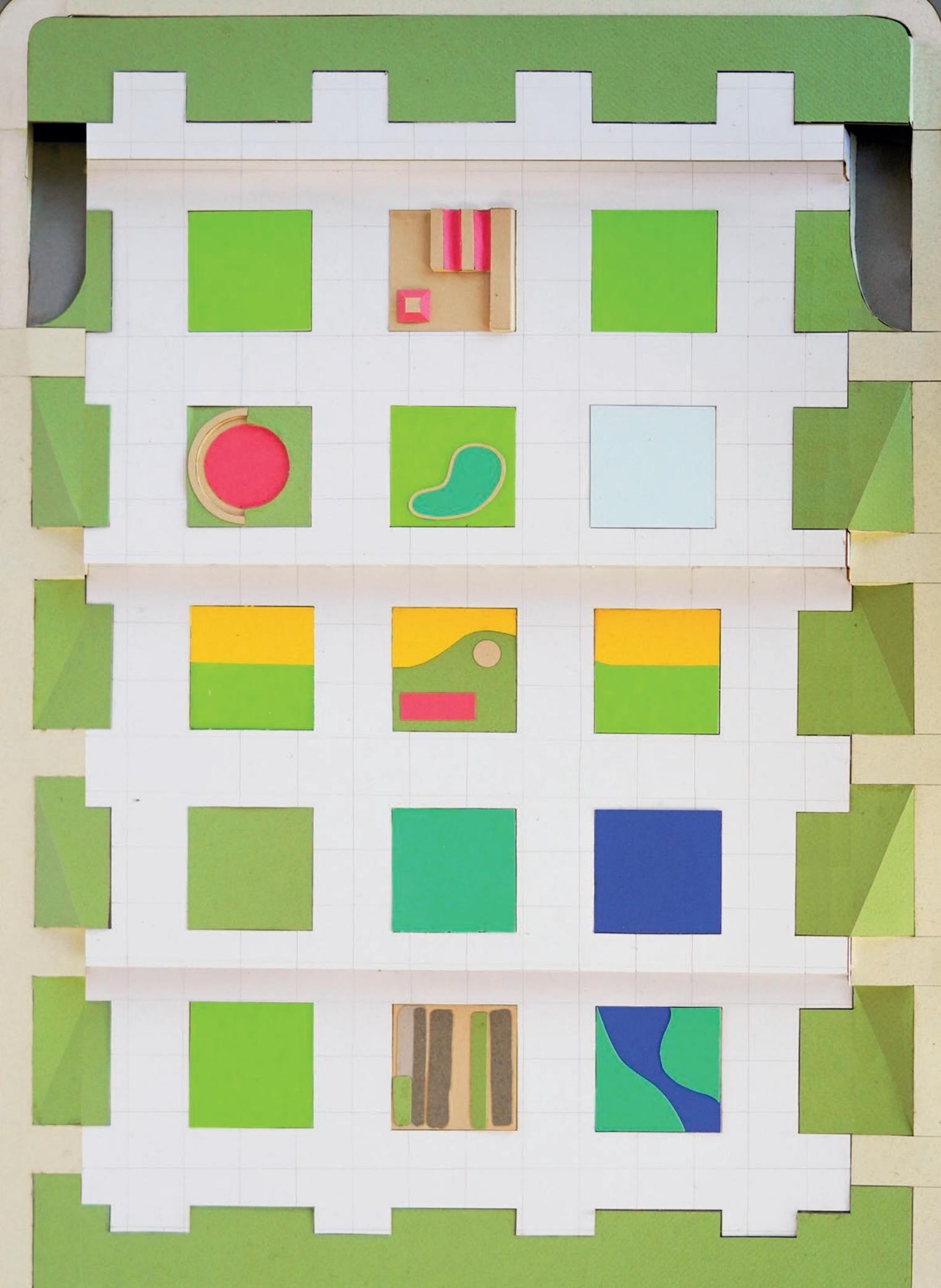
2019-2025
Selected Works

CO-LATTICE GRID



In Berkeley, housing availability for both students and faculty is a critical issue, compounded by the high cost of living due to rising land prices and limited supply. The situation severely impacts the ability of university affiliates and residents to access housing that matches their income, leading to significant affordability challenges.

According to the Cal Student Resource Center, students' average monthly expenses are \$3,660, with nearly 50% allocated to rent, food, and utilities. Following the standard affordability definition (30% of income for rent), the ideal affordable rent would be \$1,098. However, nearly 70% of listings in this price range on Facebook's housing group offer shared or converted rooms. This suggests that traditional family-oriented housing units may not adequately meet the needs of students. With the rise of single-person households and shorter rental terms, the typical one-bedroom apartment (comprising a kitchen, bathroom, living room, and bedroom) imposes a heavy burden on individual renters.



Physical model
-
Top View

Individual work

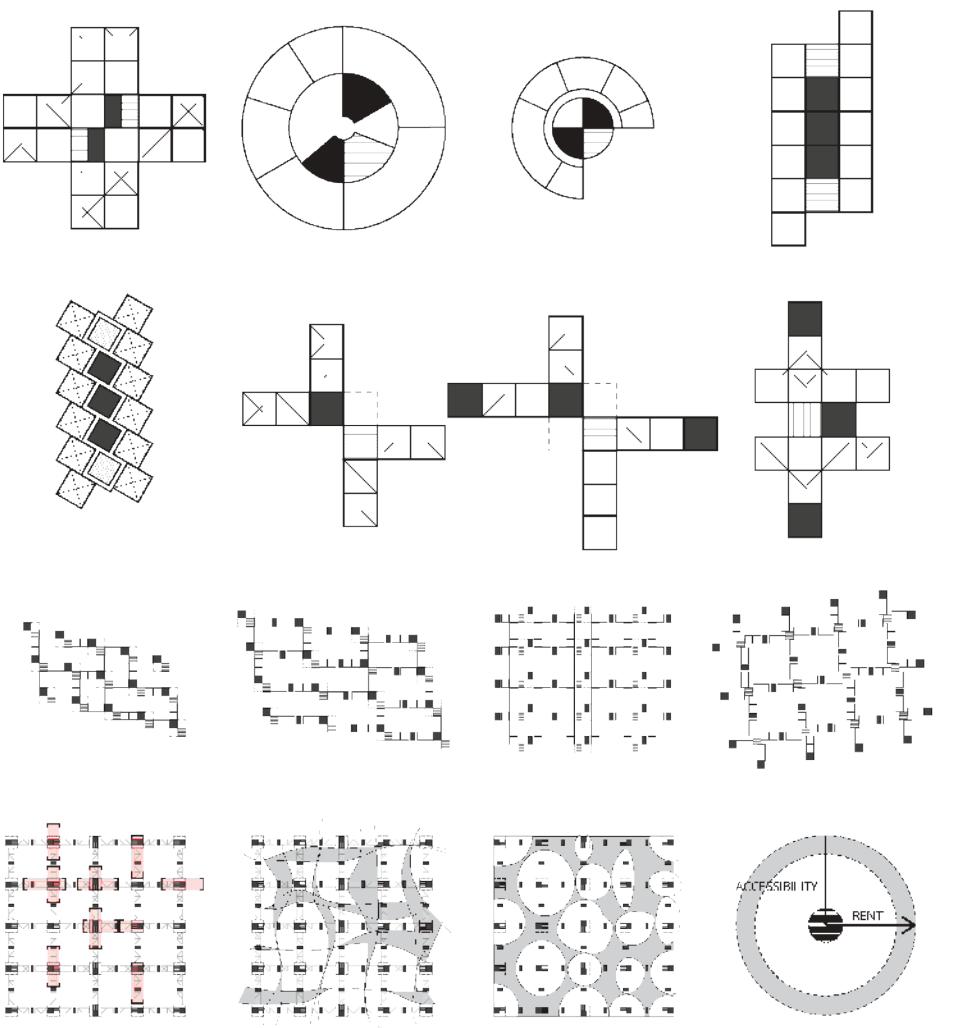
2024.09 - 2024.12

Instructor: Thomas Medek

Studio work

Affordable Housing

Housing Market

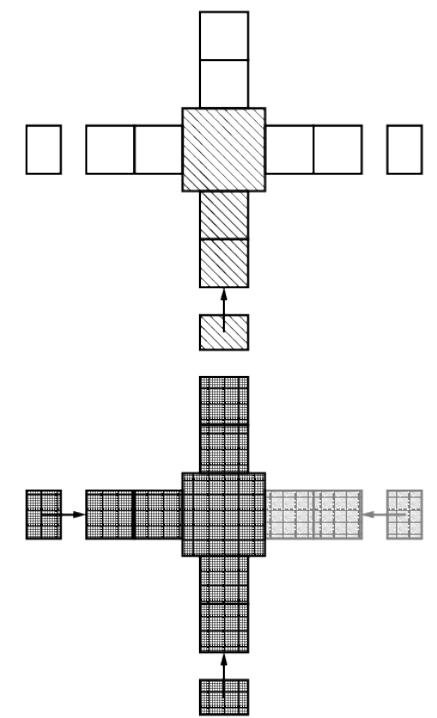


This proposal offers an alternative to address these affordability concerns. It focuses on three essential functions within a personal living space: the kitchen, bathroom, and an undefined flexible space. The size of the unit increases with rent, giving tenants the freedom to choose the space they need. However, expansion is limited by accessibility considerations, preventing unlimited growth based purely on financial power. This flexibility allows for adaptable social spaces and circulation areas, which can grow or shrink according to tenant needs. While the expansion of these units benefits real estate developers, the reduction of unit sizes and the creation of more public spaces could shift the potential financial risks to landowners. In response, the proposal introduces a mechanism of confrontation or cooperation between different units. Tenants can decide who will "take away" the central bathroom, depending on their needs. In certain cases, if the central bathroom remains unoccupied, a smaller unit without a kitchen (such as a 1-bedroom unit) can be inserted into that space. This flexible system not only offers a variety of housing options but also reduces risks for property owners while adapting to shifting market conditions.

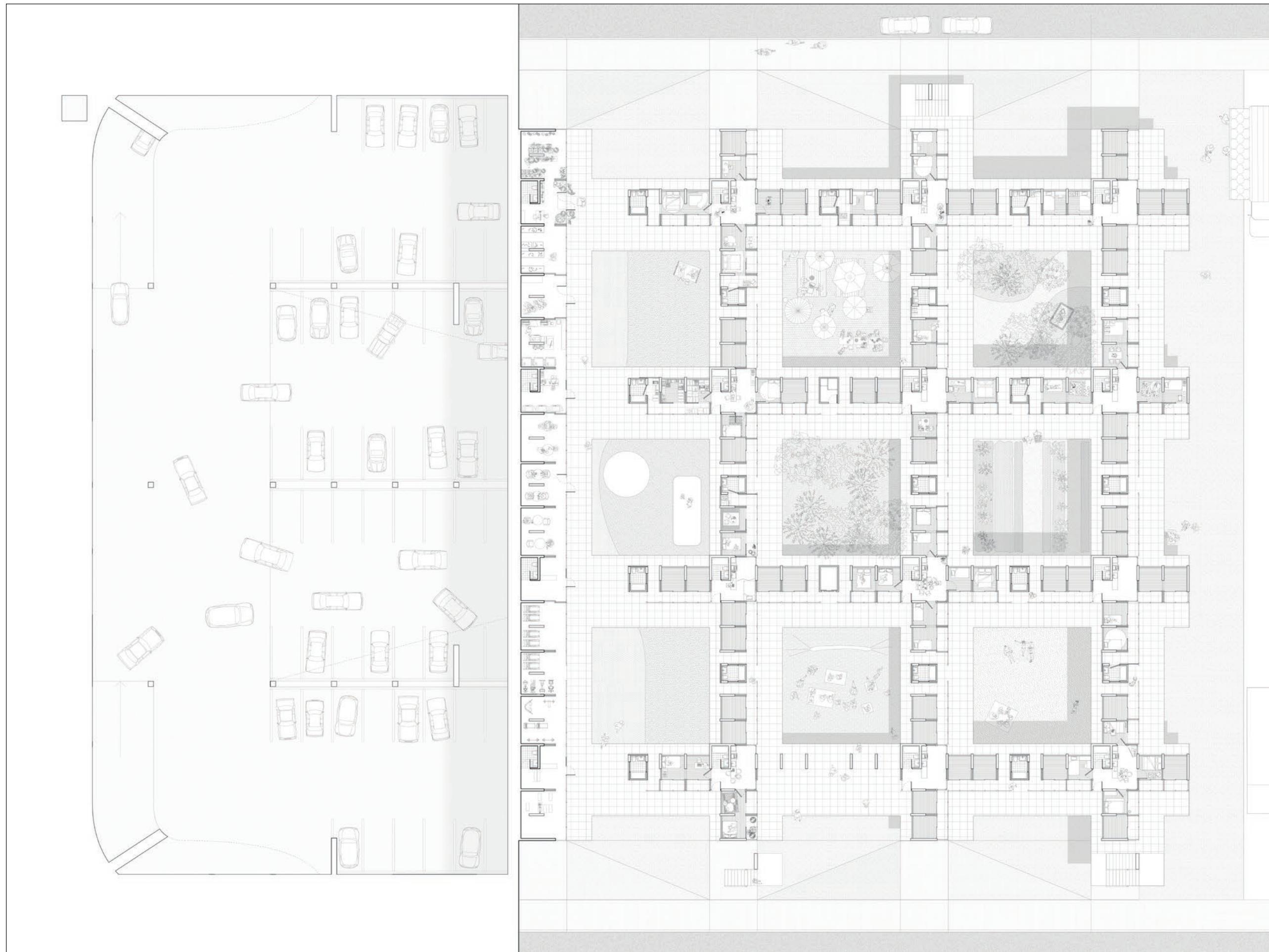
When this confrontation mechanism is expanded in all four directions, it forms a generic grid system. The grid creates multiple courtyards of uniform size, which become integral parts of the tenants' identities. These courtyards serve as a means of resisting the relentless expansion of the "non-stop city" driven by capitalist logic, as they allow each tenant to select the environment in which they wish to live. This structure fosters a sense of autonomy, giving residents the power to choose a space that aligns with their personal needs and preferences.



UNIT Plan

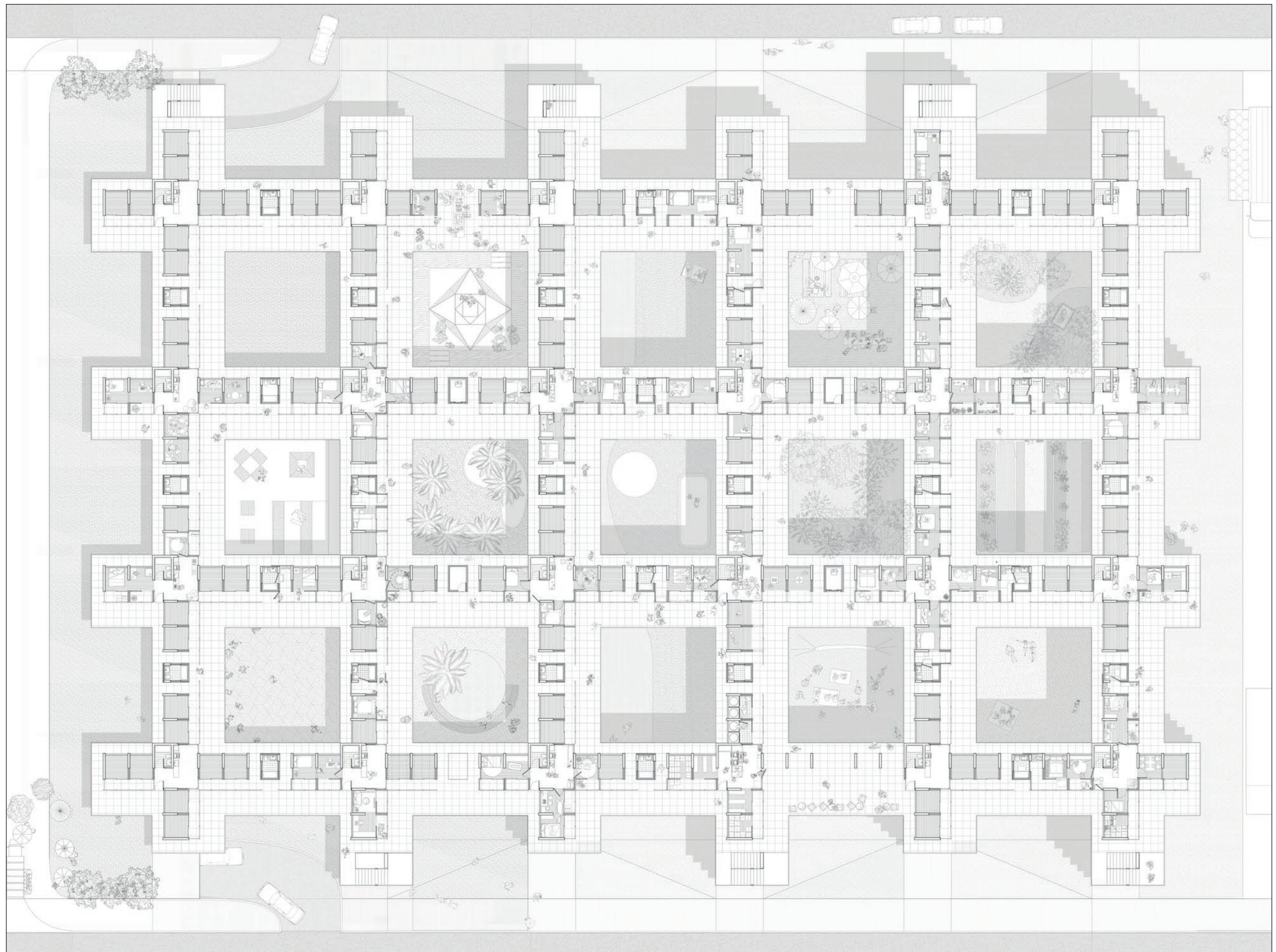


The above diagram illustrates the usage scenario of the UNIT Plan on the left: the unoccupied central bathroom of Unit B is taken over by Unit A, while the unoccupied room on the right side of Unit B, combined with the adjacent bathroom, forms a one-bedroom, one-bathroom unit without a kitchen. This configuration maximizes occupancy, ensuring profitability for developers. This economic logic is a crucial aspect of affordability.



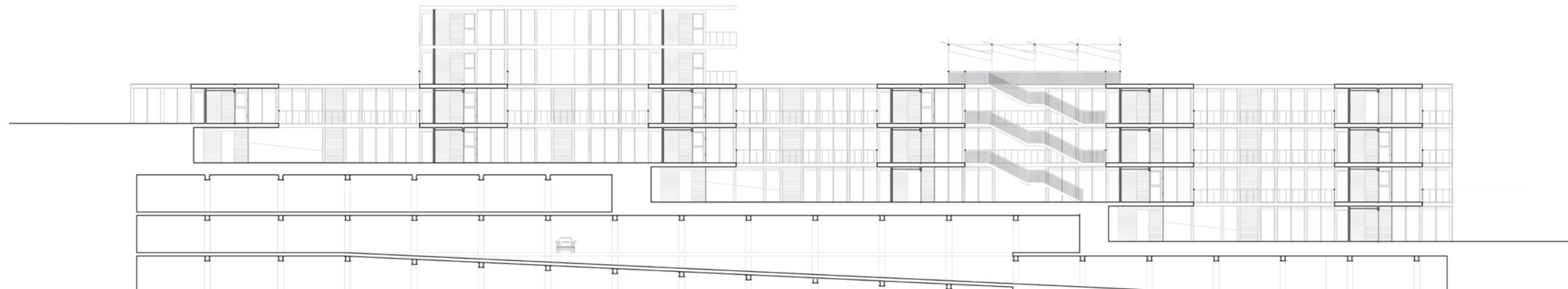
Plan-2F 0 1 3

10m

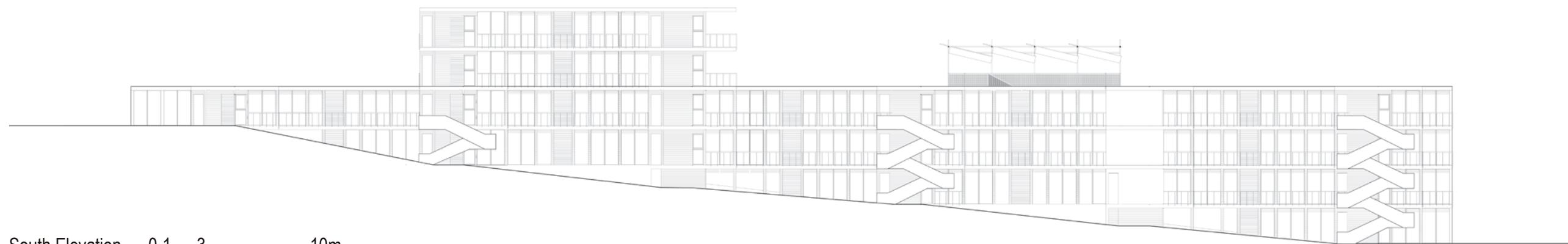


Plan-5F 0 1 3

10m



Long Section 0 1 3 10m



South Elevation 0 1 3 10m



Modular rooms allow for the rapid construction of more units. For this project's 76 units, a total of 1,280 modular load-bearing walls and 640 sliding doors are required. In a single full-floor layout consisting of 24 units, the construction requires 90 bathroom sets with plumbing systems and 24 kitchen systems.

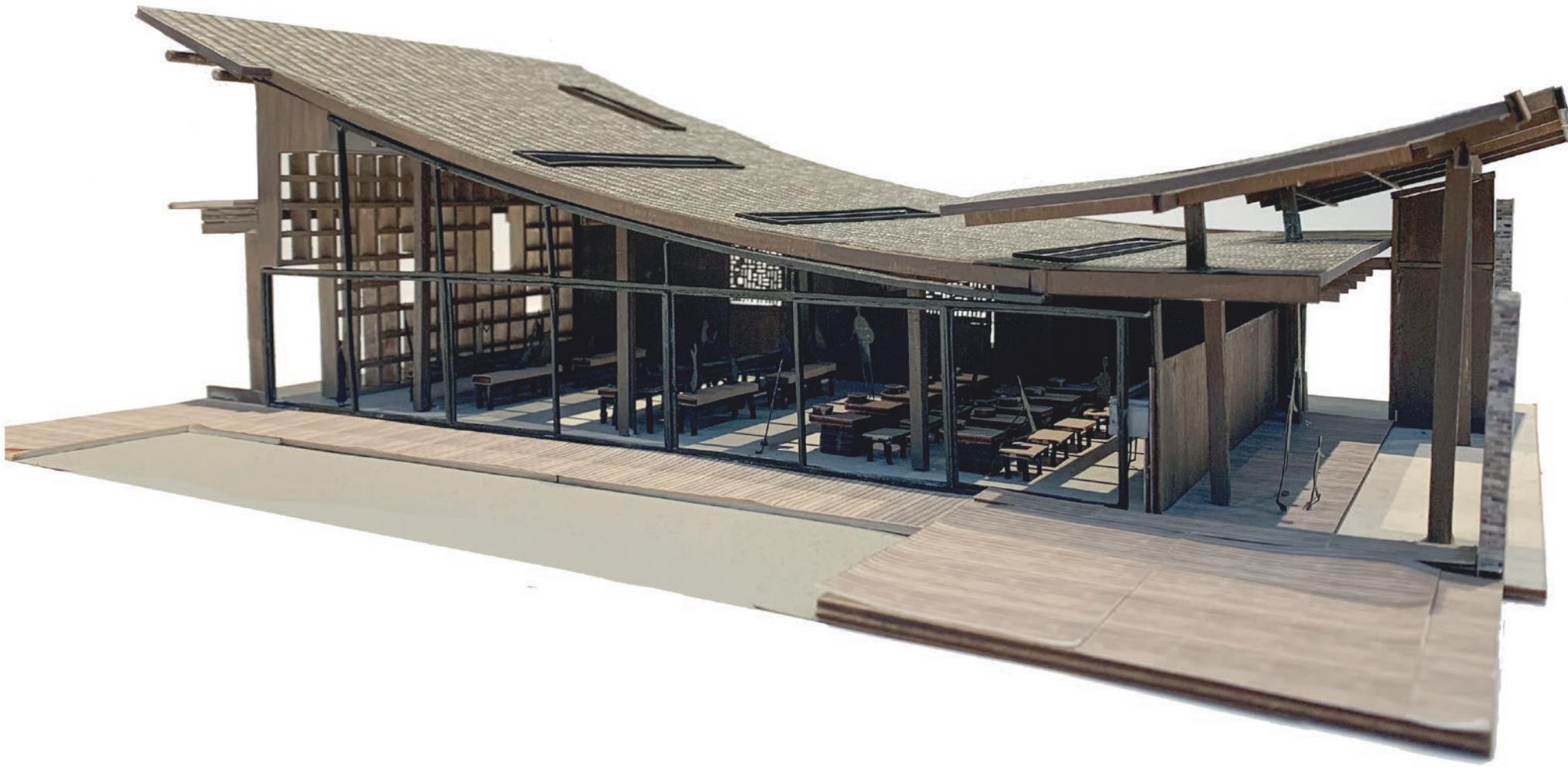
Through this modular approach, construction time and costs are significantly reduced while ensuring that when new units are added to existing buildings, the installation process generates minimal noise.



The transitional space between the rooms and the communal balcony serves not only as a separation zone for sliding doors and a privacy buffer but also as a platform for residents to express and shape their identities. By personalizing this passage—whether through decoration, repurposing it as storage, or even leaving it intentionally unused—residents gain a tangible sense of ownership over their space. In doing so, they also make a statement to the entire community, embedding their presence within the shared living environment.

By incorporating furniture, décor, and varying courtyard elevations, the units within this generic grid are given distinct identities. As people inhabit these spaces, no two rooms remain the same—each becomes a uniquely personalized home, transforming the grid into thousands of individual living experiences.

Two Courtyards House



In the swift urbanization of China today, countless culturally rich villages are vanishing. A dilemma emerges: preserve or demolish?

Preservation seems ethically right for culturally significant ancient buildings. However, impractical costs make it challenging. Local heritage agencies lack funds, and residents may not grasp the urgency. Demolition is common and economically viable, yet irreversible loss accompanies it.

Facing this dilemma, we choose a balanced renovation. This approach preserves cultural buildings while introducing new functions, rejuvenating the site and lessening the financial strain on government initiatives.

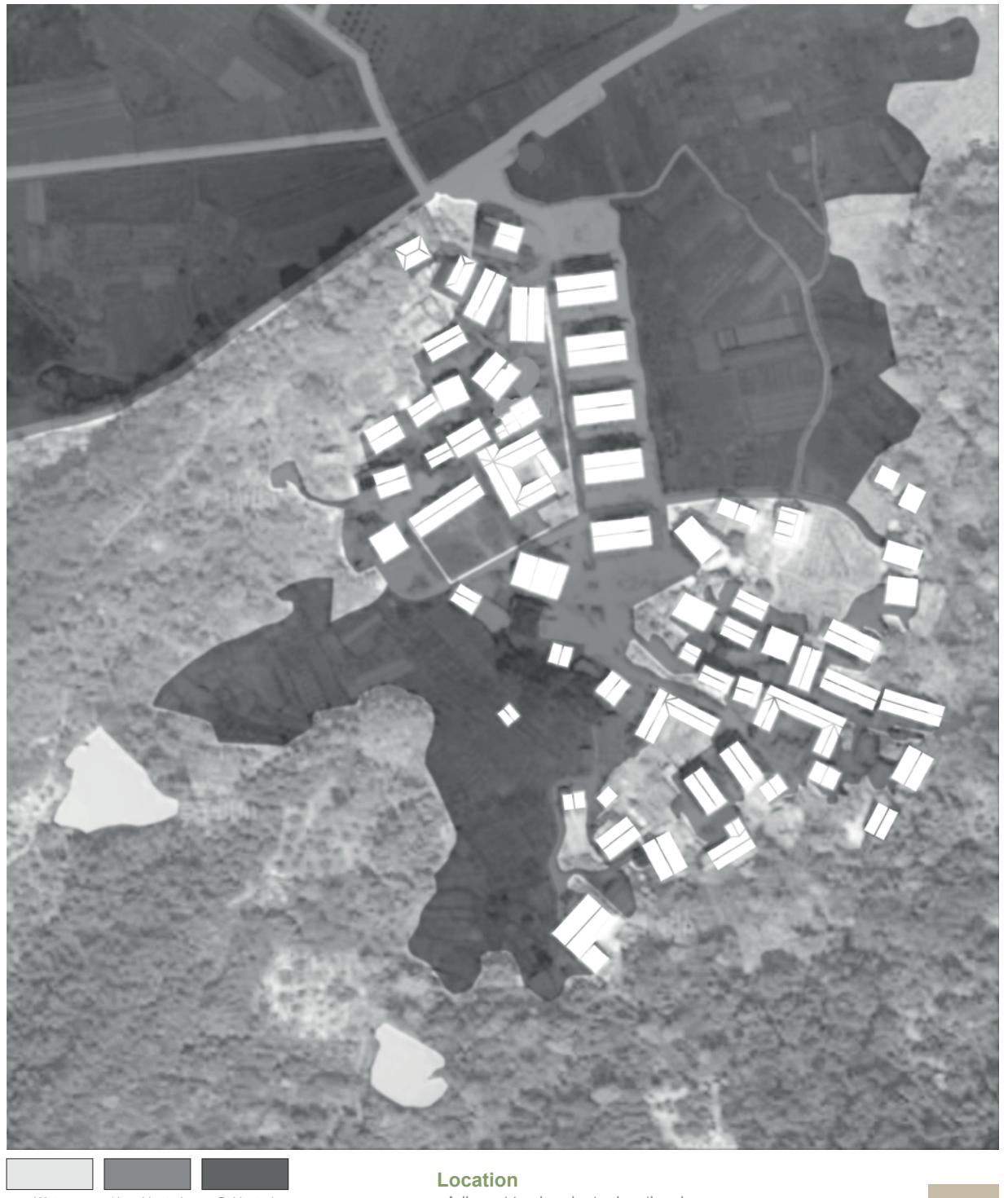
Individual work

2022.02 - 2022.05

Studio work

Adaptive Reuse

Vernacular Architecture



Water Uncultivated Cultivated

Location

- Adjacent to abundant educational resources:

Design for teachers, students, and art enthusiasts to engage in activities.

Population & Industry

- Lacks a large workforce for major industries:

Excludes consideration of complex functionalities for this village.

Historical & Cultural

- Limited historical, cultural, and tourism resources:

Rules out a functional orientation centered around tourism.

Liberary



Movies



Gallery



Pottery making

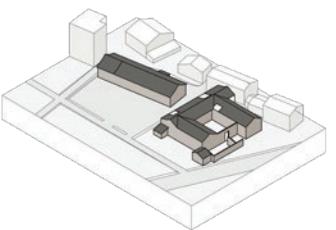


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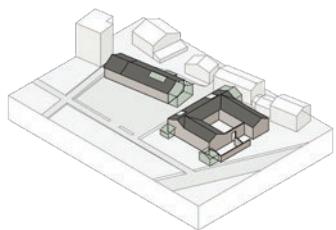


Concept Generation: Dual Quadrangle x Corridor System

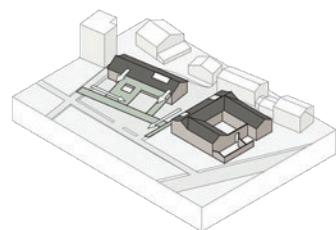
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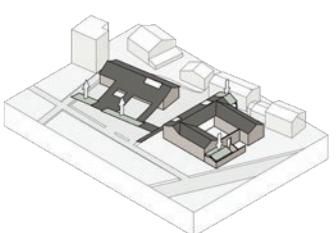
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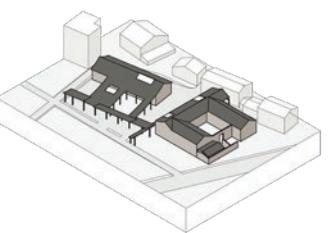
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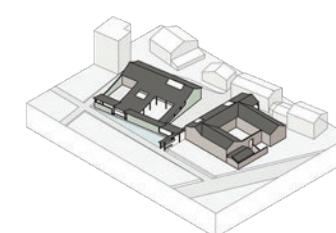
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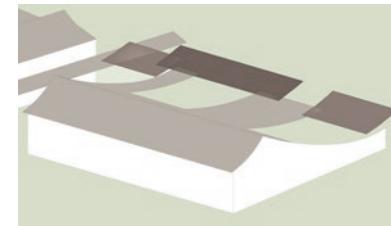
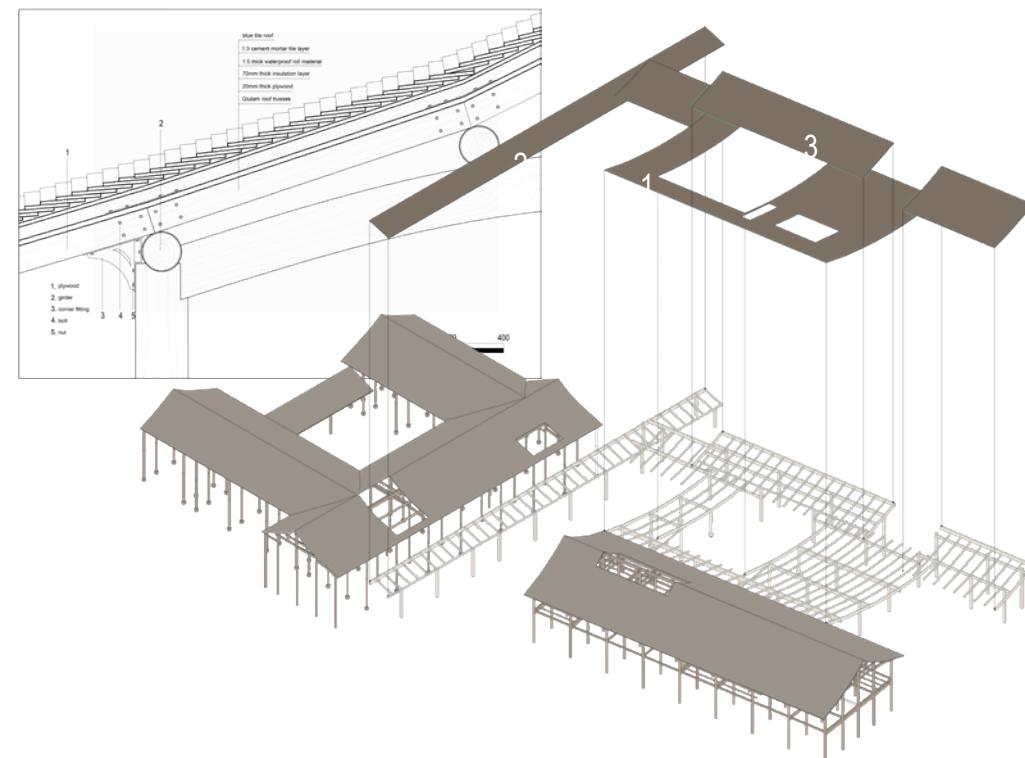


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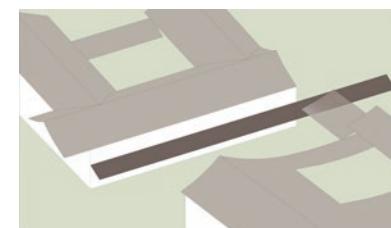


Corridor System Structure:

Roof Jointing, Corridor Covering



The arched roof is joined with the original roof



The straight corridor is arranged on the west side of the Guard House in a manner similar to a multiple eave structure.



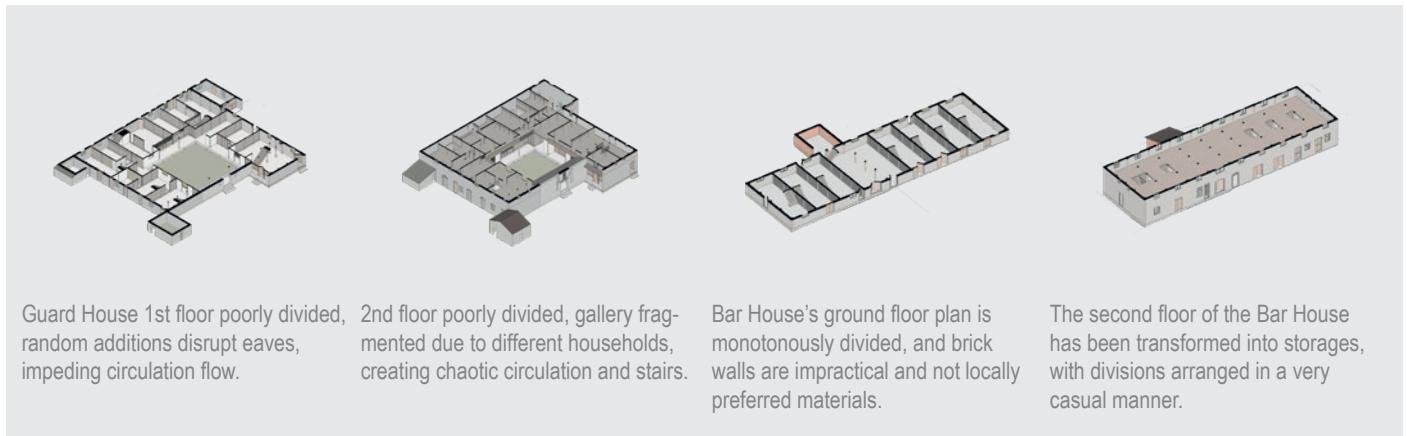
The overlapping eaves are "fragmented" as they stack above the arched roof and straight corridor.

Curved Roof: Covering the added space and corridor of the new quadrangle.

Straight Corridor: Providing sheltered space on the south side of the Guard House, while connecting to the Bar House.

Overlapping Eaves: Forming the new quadrangle and embodying the concept and space of the corridor.

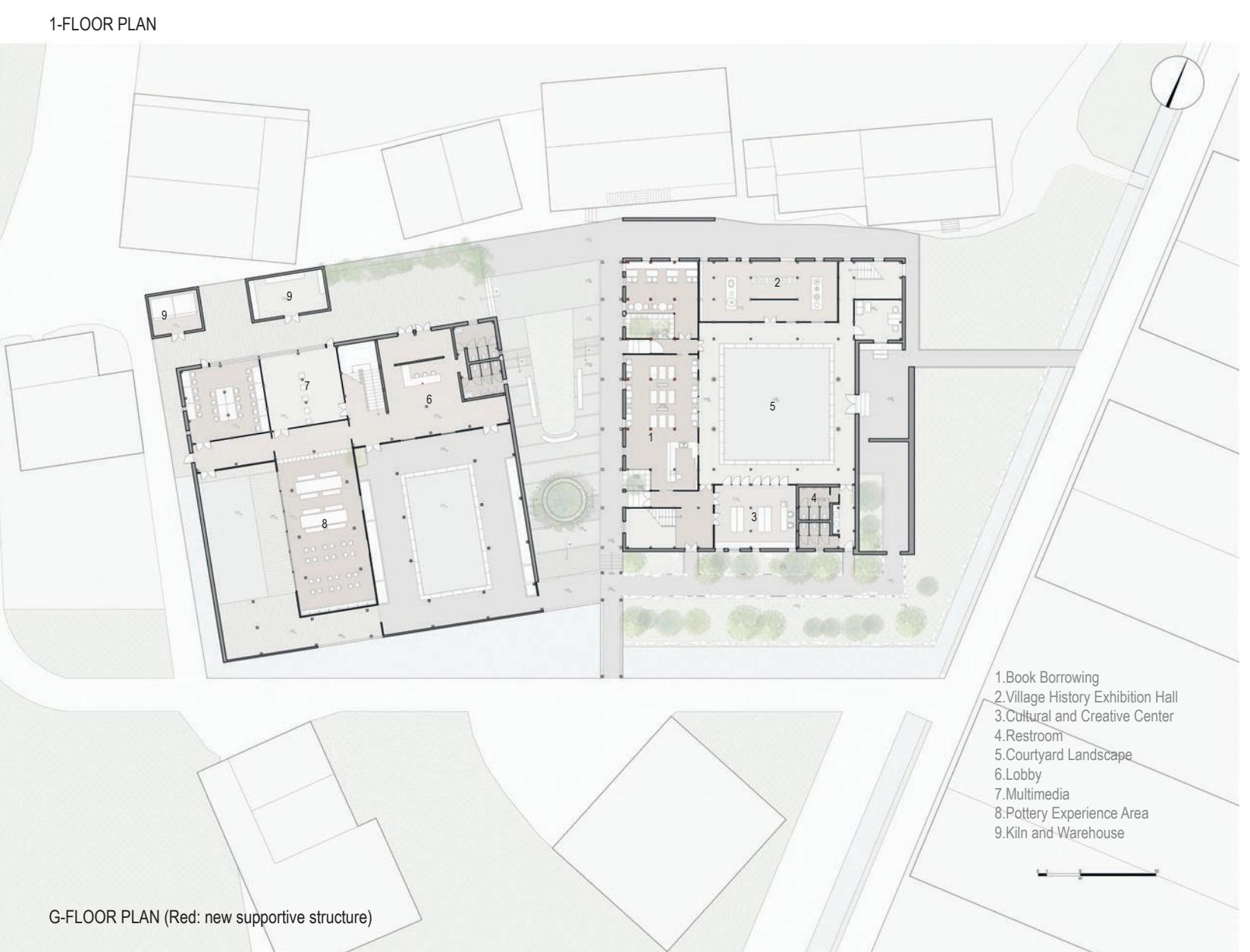
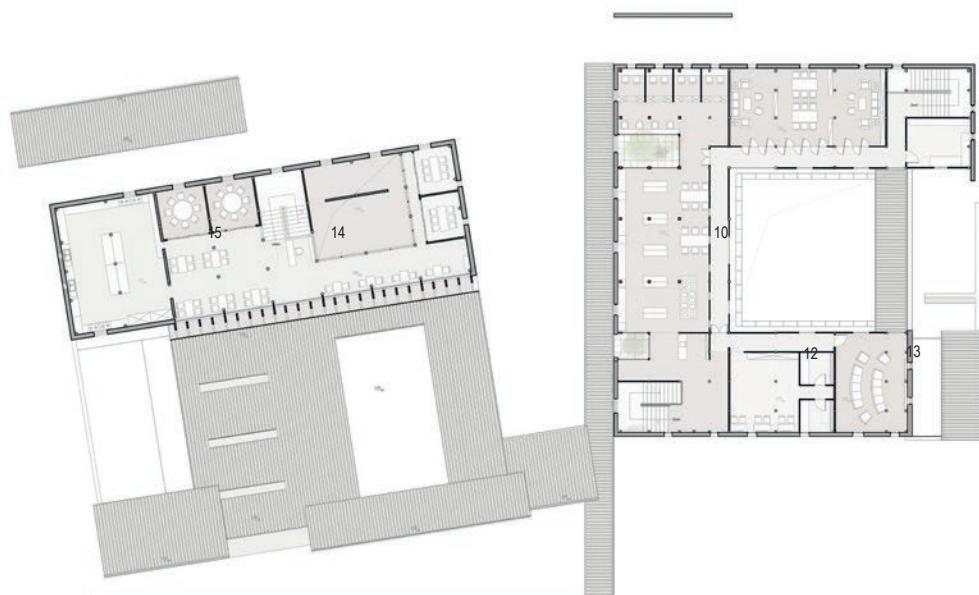
Space before the renew



Changes to circulation and spatial division



Materials used for courtyards





Long Section: Exhibition room-Multimedia

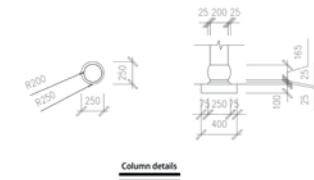
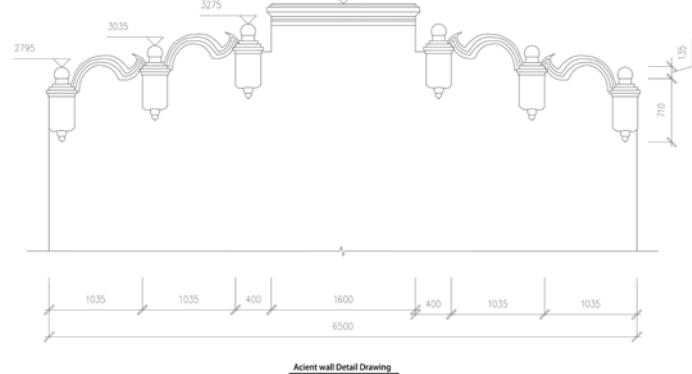
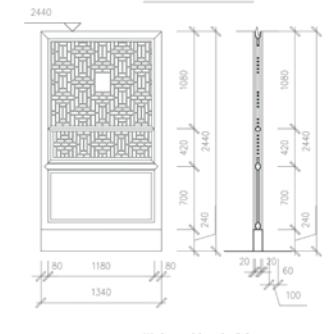
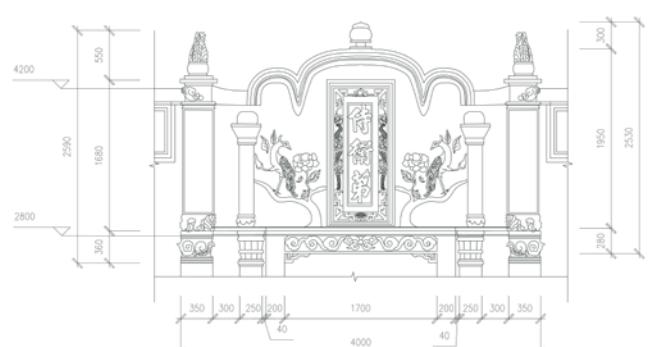
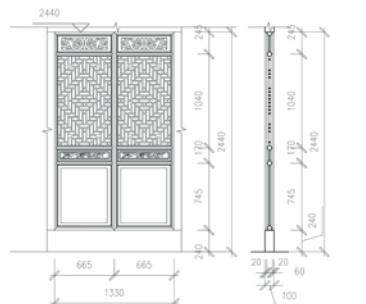


Long Section: Courtyards



Shiwei Section WN-SE

Ancient windows & doors & walls detailed drawings



Entrances designed for human scale



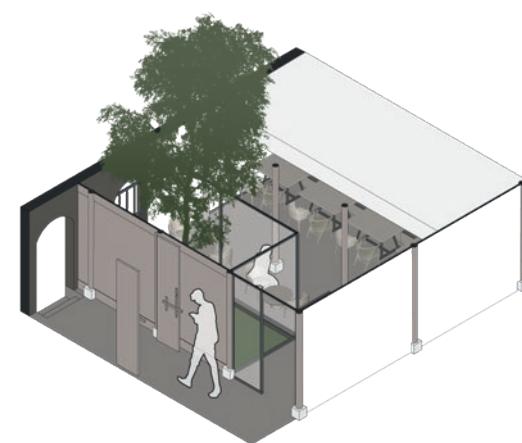
Guard House South Entrance
Tea Service Counter.



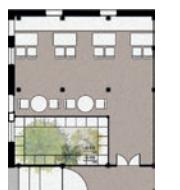
#1 Entry
Internal steps for height, creating a covered entrance without encroaching on the corridor.

#2 Courtyard
Utilized collapse for an outdoor space, enclosed with glass after breaking the outer wall.

#3 Counter
Redesigned flow: enter, order, take drinks to seating. Ceiling indicates spatial changes.



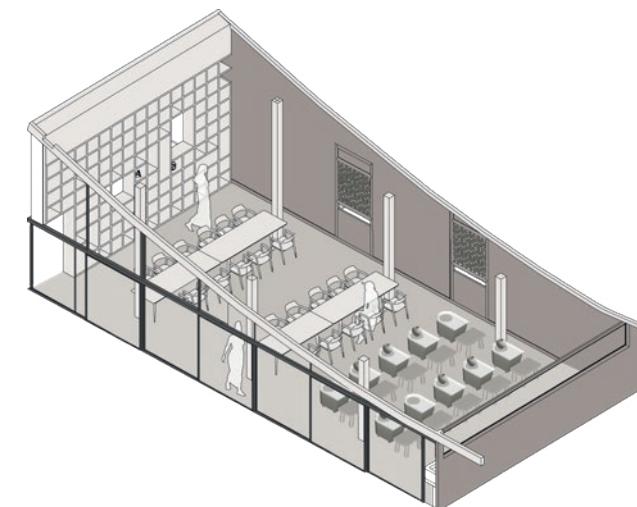
North Entrance
North Passage



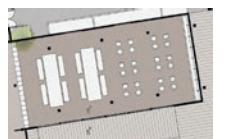
#1 Entry
North access connects square and guardhouse, featuring a distinctive dual wooden wall design.

#2 Courtyard
Smaller northern courtyard for intimate seating.

#3 Ceiling
Divides passages and tea seating, implying spatial distinctions.



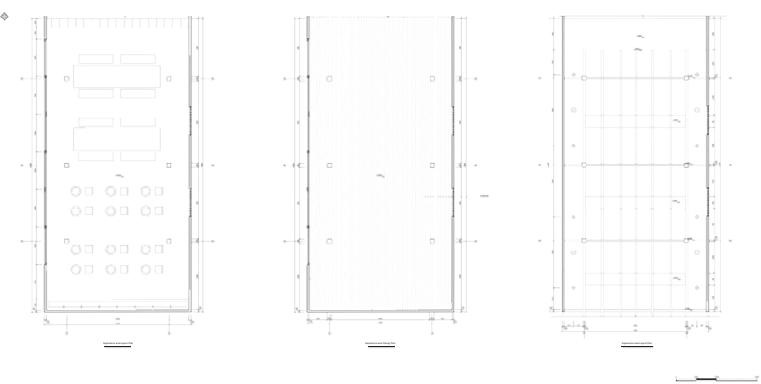
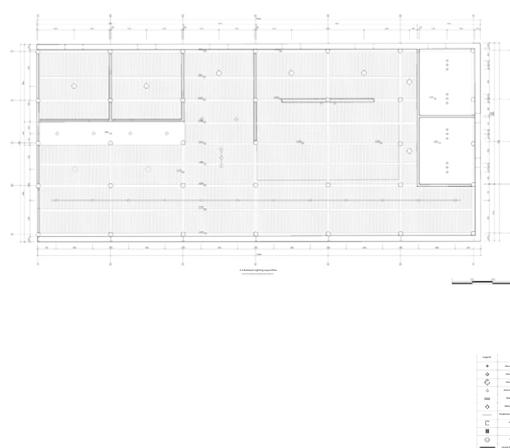
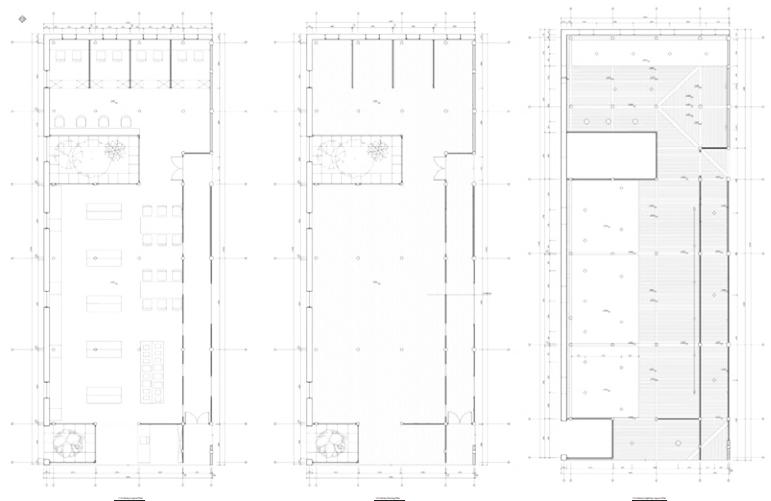
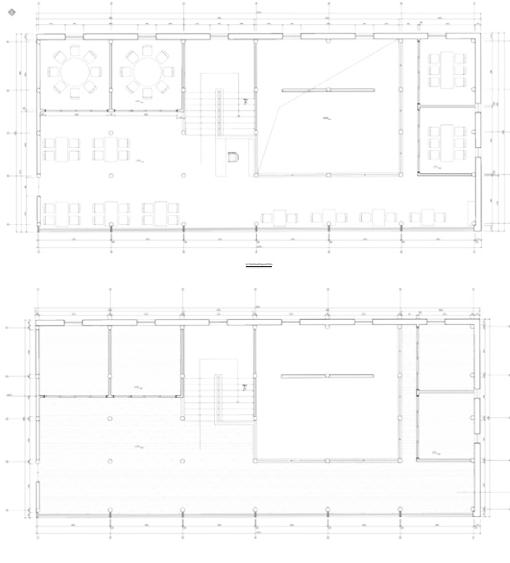
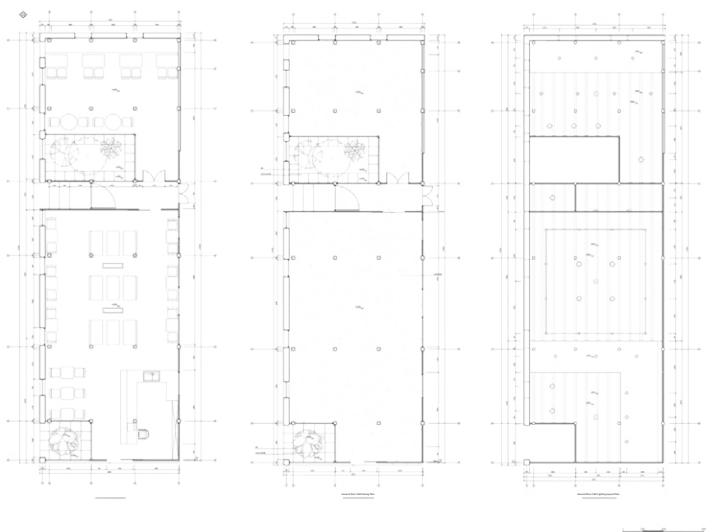
Pottery Studio Base
Spacious Area Under the Arc Roof



#1 Facade
East facade preserves courtyard form with wooden walls and matching windows. Closer to the private courtyard, large glass panels open the pottery area.

#2 Cabinet
Northern cabinets display pottery and serve as flexible dividers, also creating an entrance. They function as cabinets, walls, and doors.

Interior Materiality & Furniture & Lighting Layout



Traditional Kang Table



Abstracted Kang Table

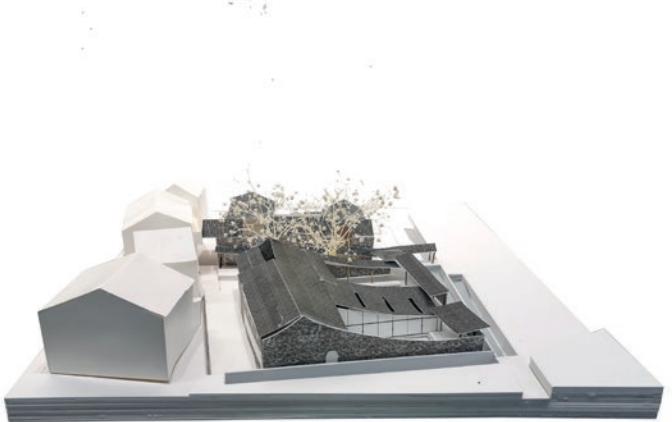
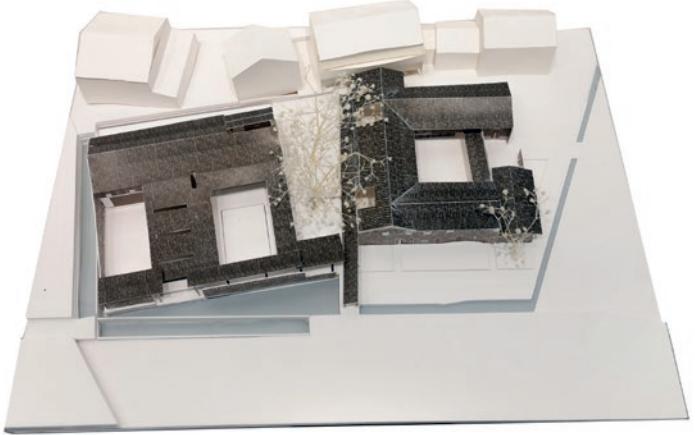


built-in reading desk

For the interior lighting, I have tried to avoid harsh, glaring lights, as they are not only uncomfortable to the eyes but also disrupt the original texture of the preserved building. My goal is to restore as much of the original soft ambiance as possible.

I have translated the forms of traditional local furniture into new abstract modernist piece

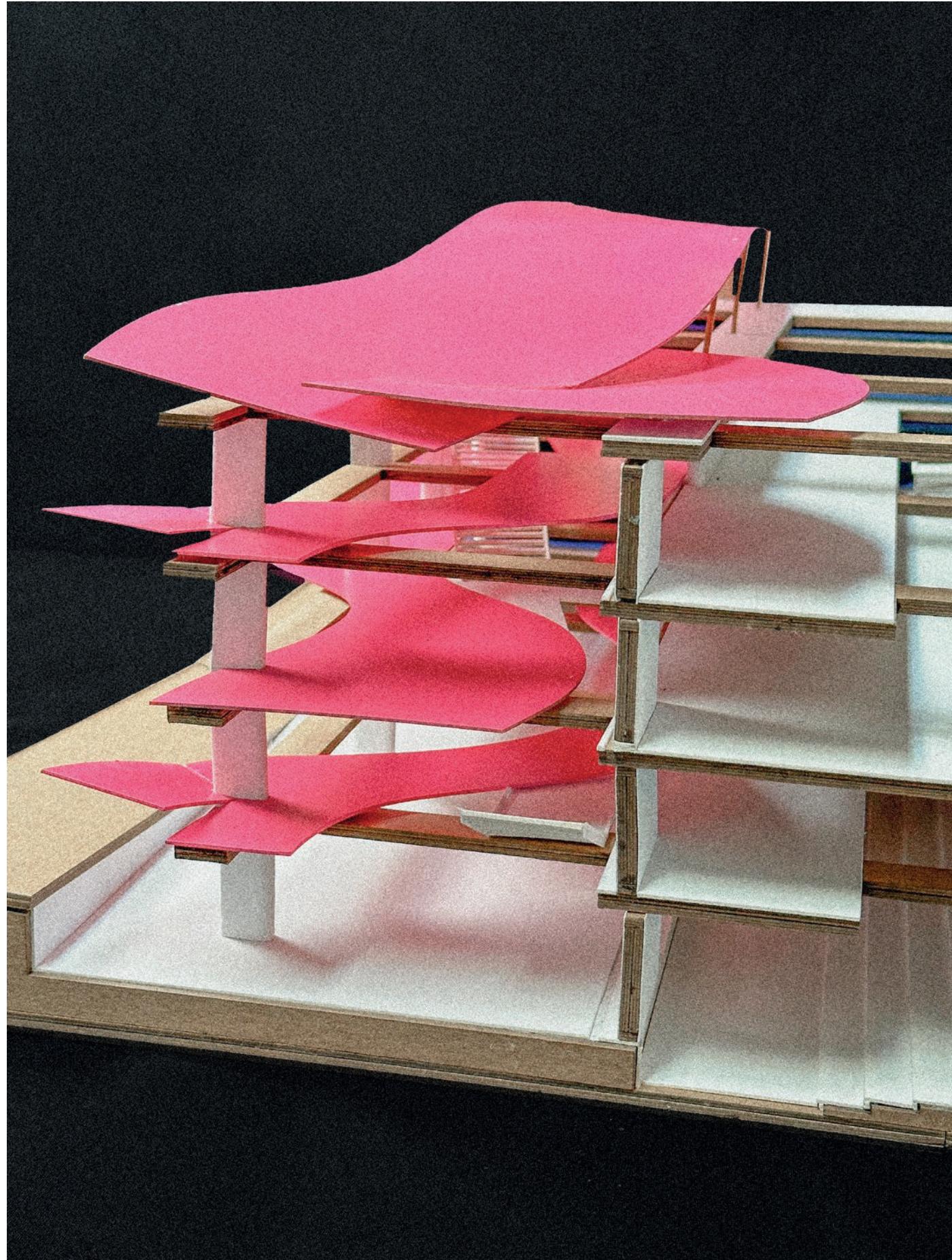
Models



1:100 Site Model

1:50 Gaurd House Section Model

1:50 Bar House Partial Model



Berkeley On Graphics

Site brief: The project involves the renovation of a parking structure on the edge of the University of California, Berkeley campus, transforming it into a multi-disciplinary academic building. The existing structure has a low ceiling height of 7–8 feet, limited natural light, significant height variations, and vehicular access drive-throughs on each floor.

Architects often avoid incorporating decoration, especially 2D surface ornamentation, in architectural design, as it is perceived to compromise the purity of structural aesthetics. However, patterns themselves possess a powerful influence—they do not merely serve as atmospheric embellishments but can directly shape human behavior.

In an environment with extremely low natural light and constraints that prevent the use of partition walls or furniture, the project explores how patterns and subtle manipulations of their form can act as a "score" for human movement and interaction. This investigation focuses on the potential of patterns as spatial directives, demonstrating how their application can define behavior and navigation without physical barriers.

Individual work

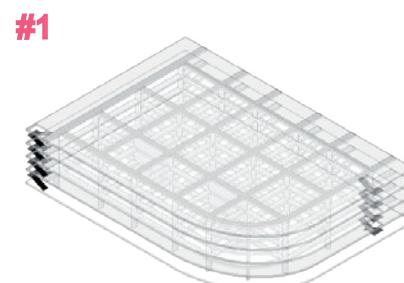
2023.01 - 2024.05

Instructor: Andrew Atwood

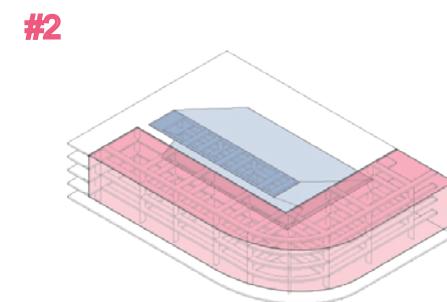
Studio work

Education Mixuse

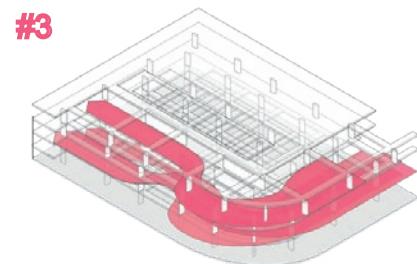
The preliminary site analysis revealed that the primary issue with the building was the insufficient floor height, which prevented adequate natural light from meeting the standards required for a school building. In response to this condition, two key design principles were established: 1) removing portions of the floor slabs to allow natural light to penetrate deeper into the building, and 2) avoiding the addition of new walls that could obstruct the flow of light.



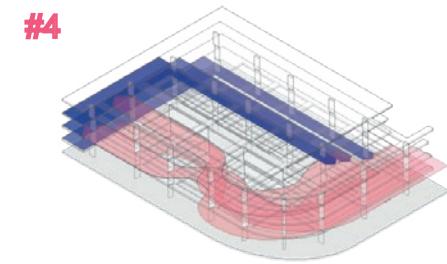
Original Parking structure



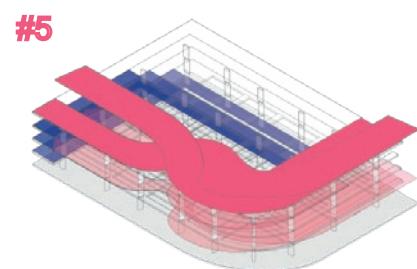
The choice to cut out some floor plates in the building for the short floor heights allows light to reach directly into the depths of the building.



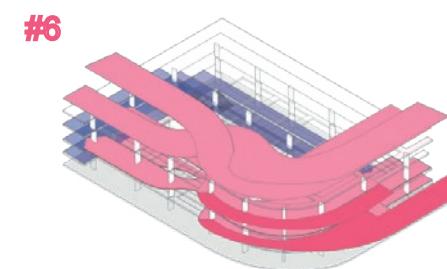
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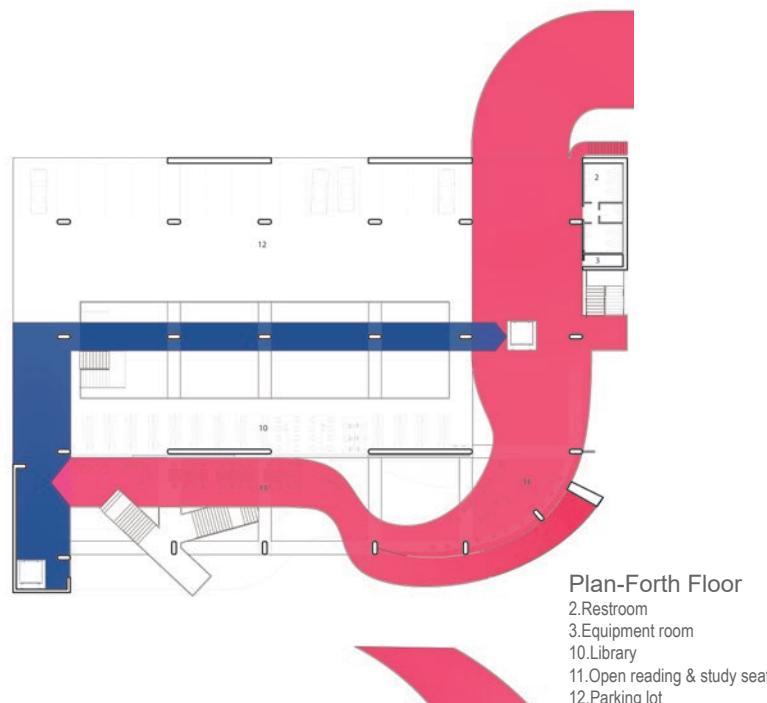
The curvilinear form of the pink deck and the widened planes carry the public activity spaces in the building; the linear form of the blue deck provides horizontal rapid transit access in the building.



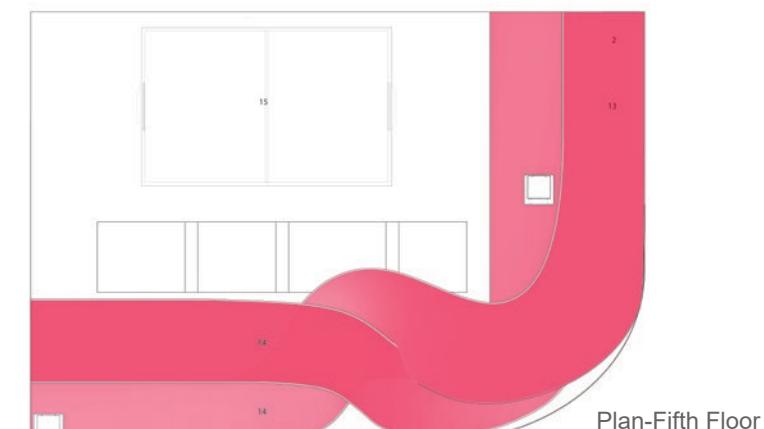
The pink deck to the roof begins to morph into an open grandstand with a direct view of San Francisco and the ocean.



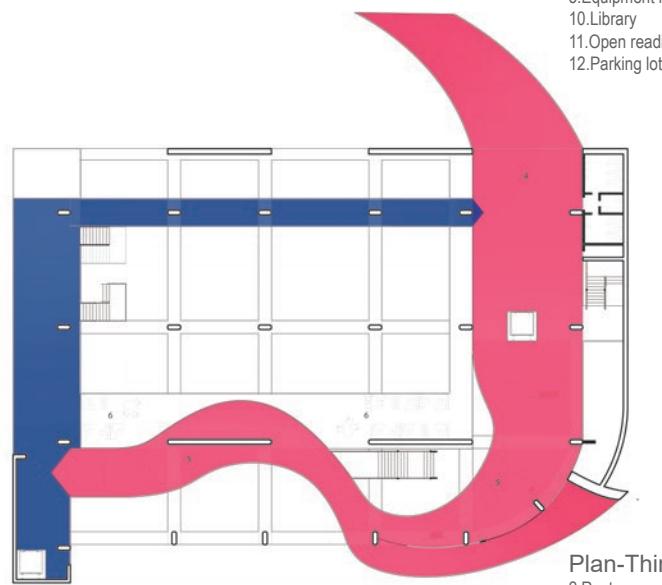
Each floor is connected by public stairs and a walkable ramp on the southeast side, providing different public ways of navigating through the building. With the help of the height difference, one can walk directly from the southeast side to the first, second and third floors.



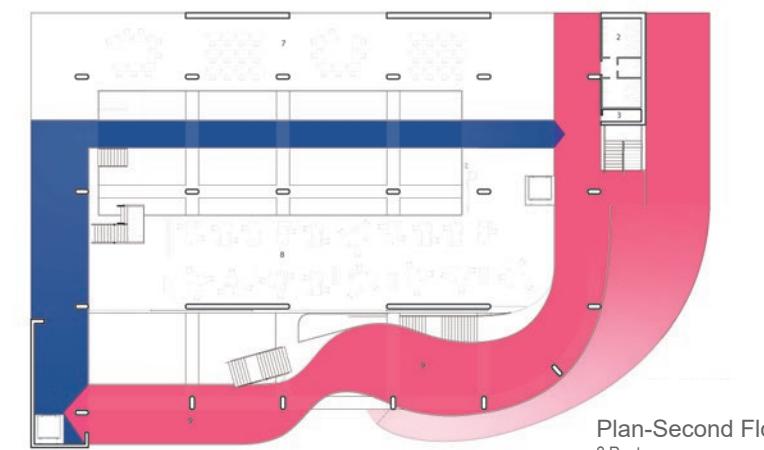
Plan-Forth Floor
2.Restroom
3.Equipment room
10.Library
11.Open reading & study seats
12.Parking lot



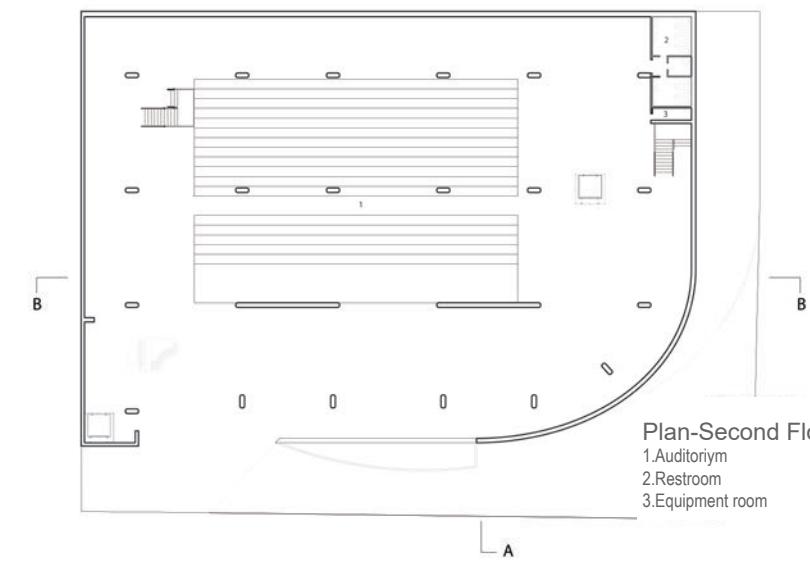
Plan-Fifth Floor
2.Restroom
13 Changing rooms
14.Viewing platform
15.Football pitch



Plan-Third Floor
2.Restroom
3.Equipment room
4.Academic Lobby
5.Gallery
6.Office



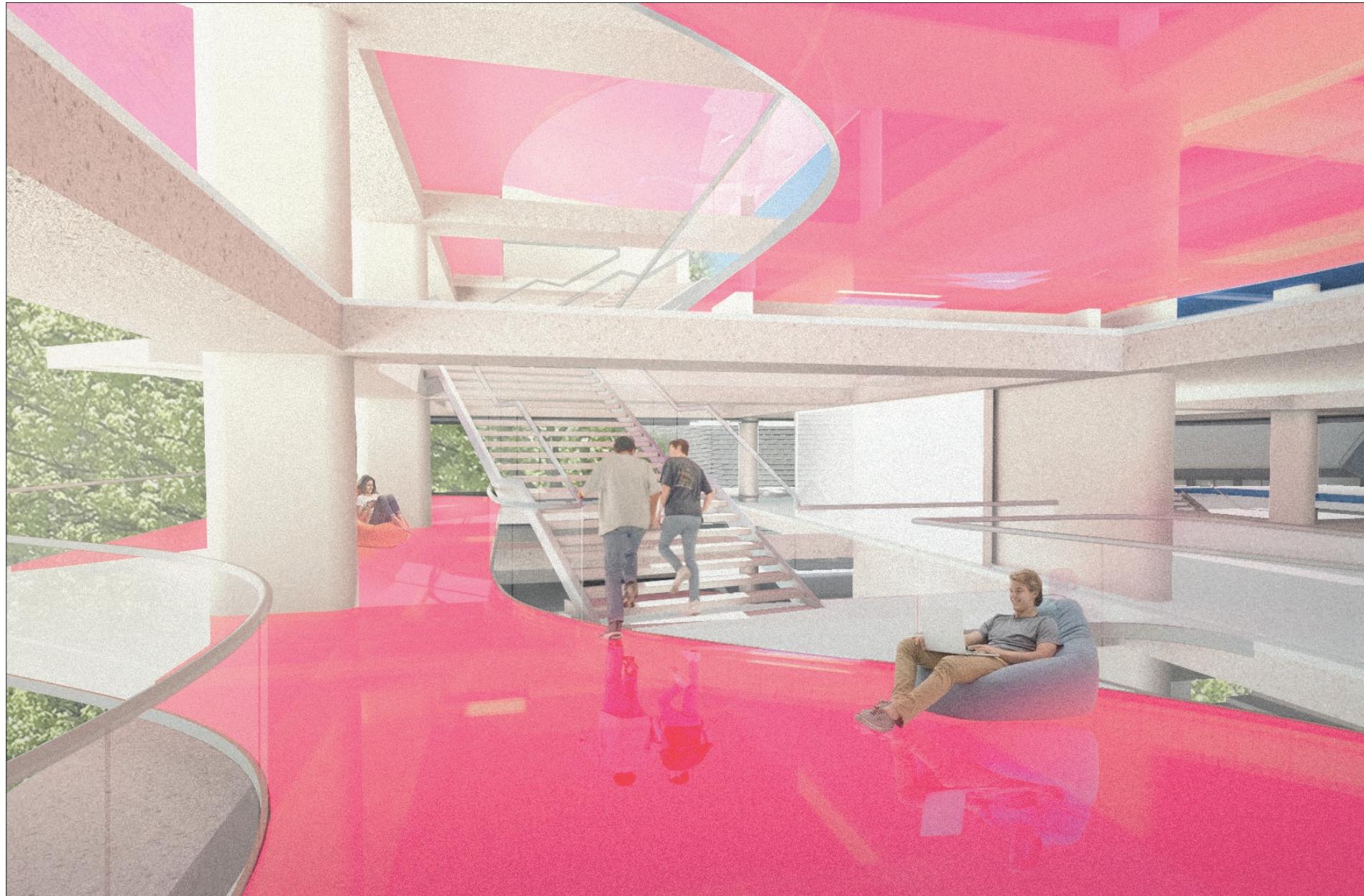
Plan-Second Floor
2.Restroom
3.Equipment room
7.Small classrooms
8.Big classrooms
9.Cafe & Informal social space



Plan-Second Floor
1.Auditorium
2.Restroom
3.Equipment room



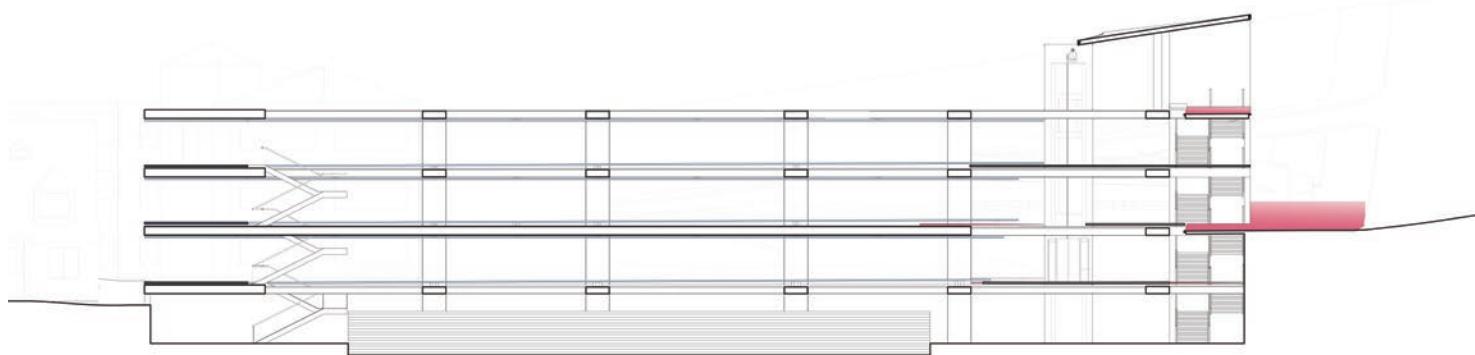
Graphics found at Berkeley Student Center.



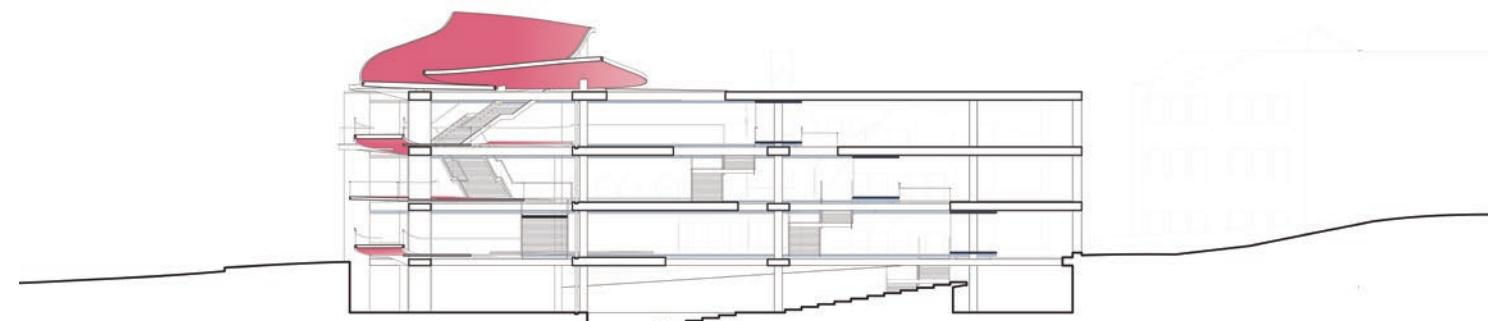
The curving pink circulation paths create a more fluid spatial experience while clearly defining the leisure areas—students and faculty can relax within the curvy pink zones, while the straight blue pathways facilitate efficient movement. Beyond and between these two circulation types are functional spaces such as open classrooms, offices, parking areas, and the library, seamlessly integrating activity, rest, and utility within the design.

The pink and blue circulation paths not only distinguish themselves from the rest of the building in plan but also vary in scale in section. The blue corridors are subtly offset in height from the main floor and ceiling, introducing an additional layer of spatial perception beyond just color. This subtle height variation subconsciously defines and separates spaces, enhancing the spatial experience.

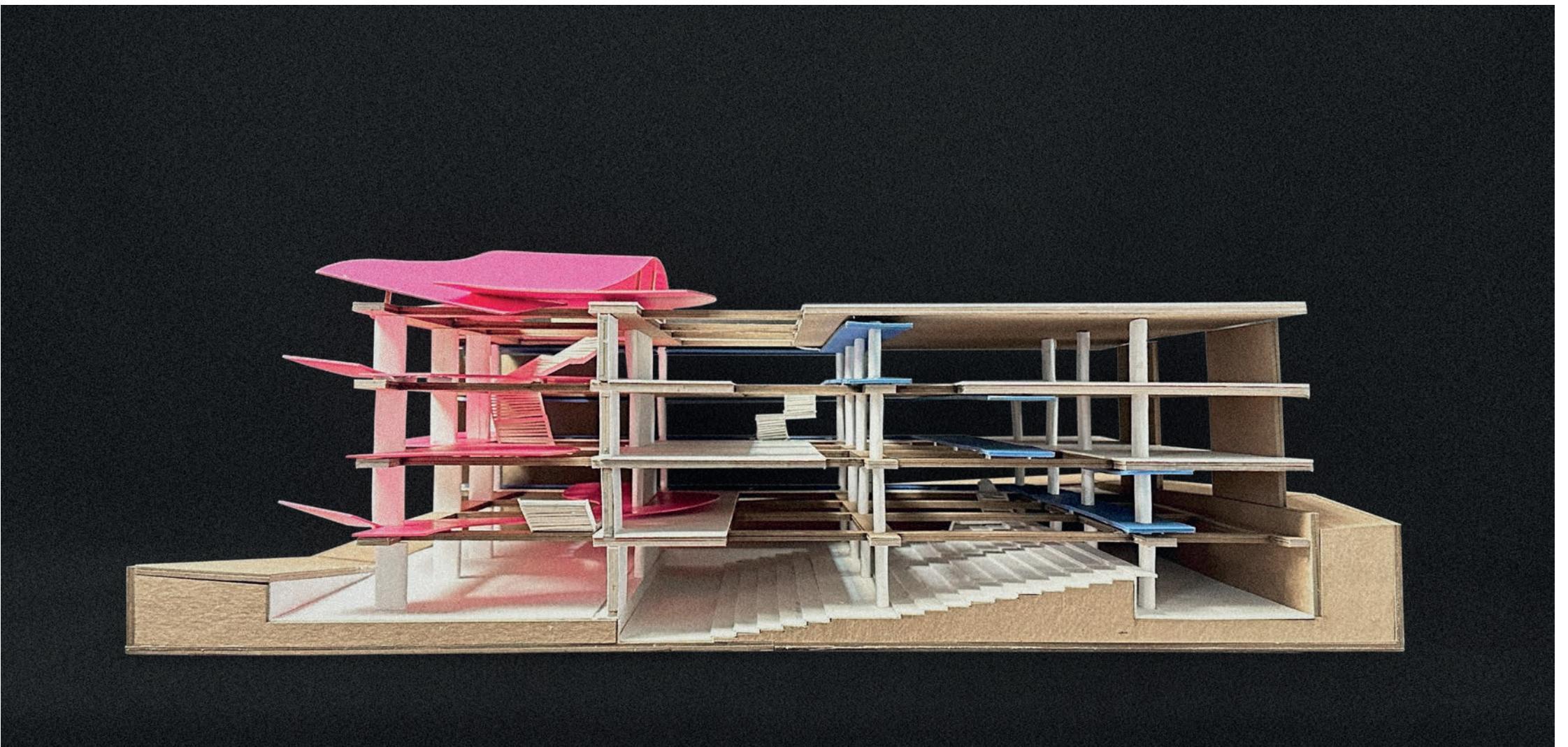
Meanwhile, the curving pink areas create partial double-height spaces in many of the outward-facing public zones, making the vertical space feel more open and expansive, reinforcing a stronger sense of communal presence.



Section B-B



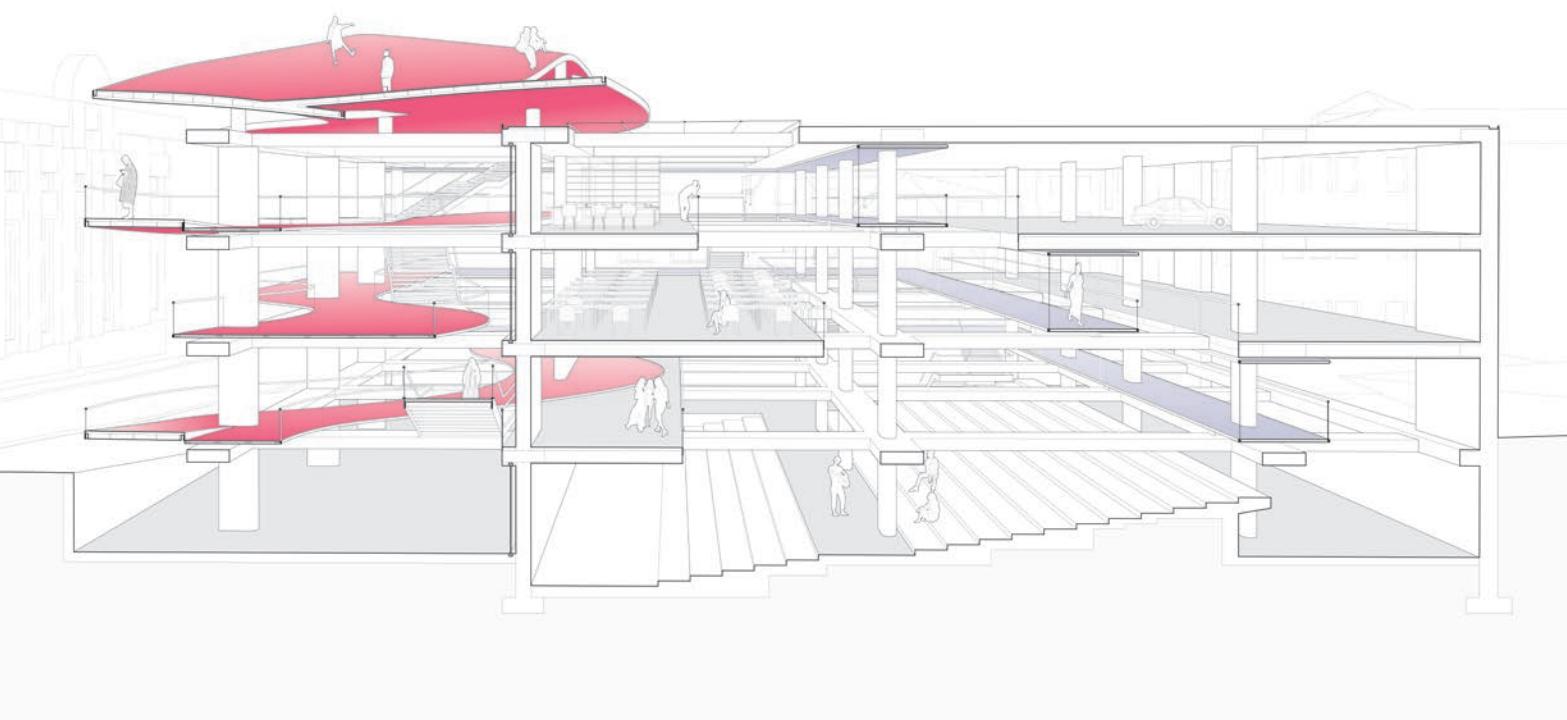
Section A-A



Section Model

The diagonal cutouts in the building mass allow sunlight to penetrate more effectively to the ground level. By strategically arranging spaces based on their sunlight needs, each functional area within the building is optimally illuminated, ensuring that natural light is efficiently distributed throughout.

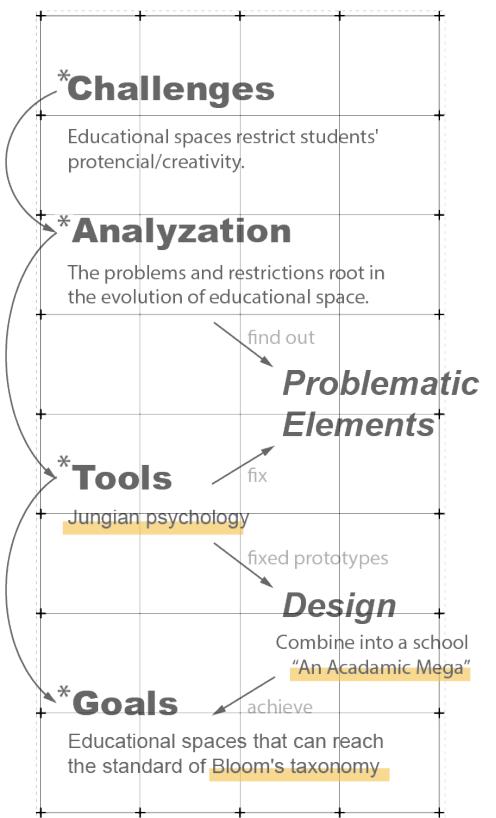
The diagonal cutouts in the building mass allow sunlight to penetrate more effectively to the ground level. By strategically arranging spaces based on their sunlight needs, each functional area within the building is optimally illuminated, ensuring that natural light is efficiently distributed throughout.



Perspective Section Drawing

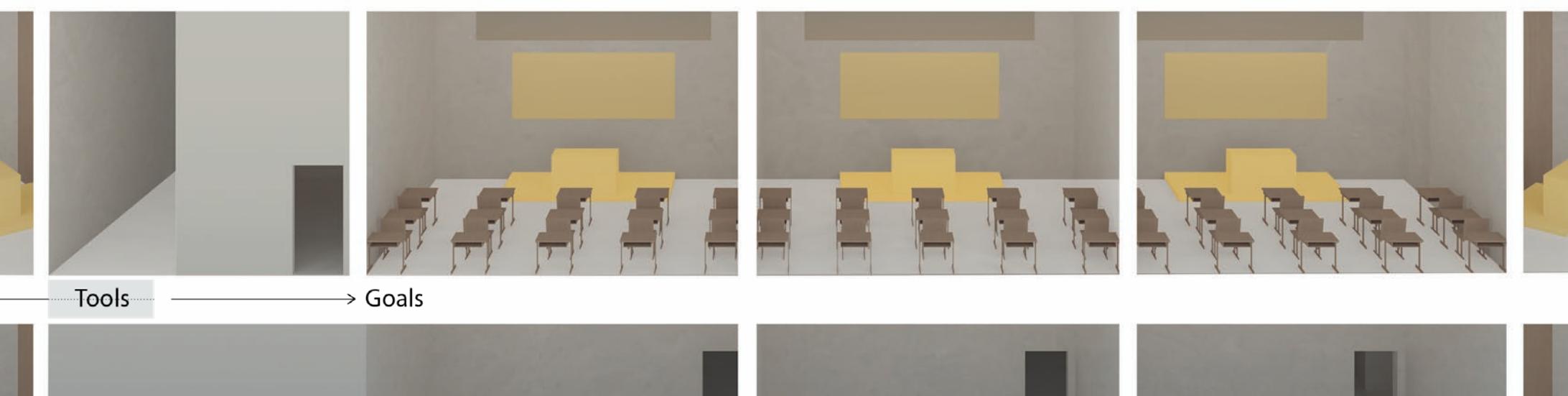
AN ACADEMIC MEGA

Individual work
2021.11 - 2022.05
Instructor: Yu
Studio work
Conceptual design
• • • ○ ○



Education is always evolving, but the educational space is still very much in the "classical" stage. This is because educational activities have their deep historical roots, and modern educational spaces, which carry educational functions, inherit the historical prototype of educational spaces.

The prototypes of educational space have their limits. For example, some spaces evolve under religion or administrative control, and their residual negative subconsciousness and their fixed organizational forms can cause negative effects in education.



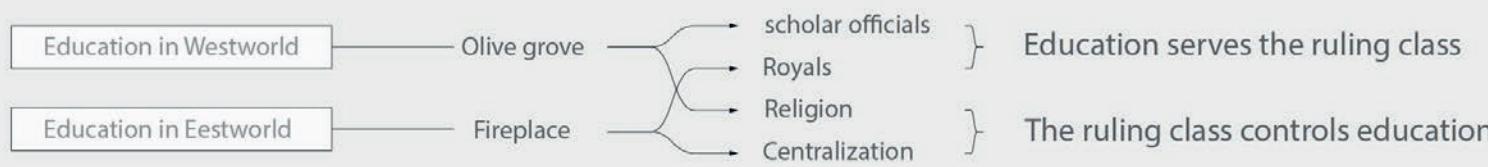
Challenges

→ Analysis

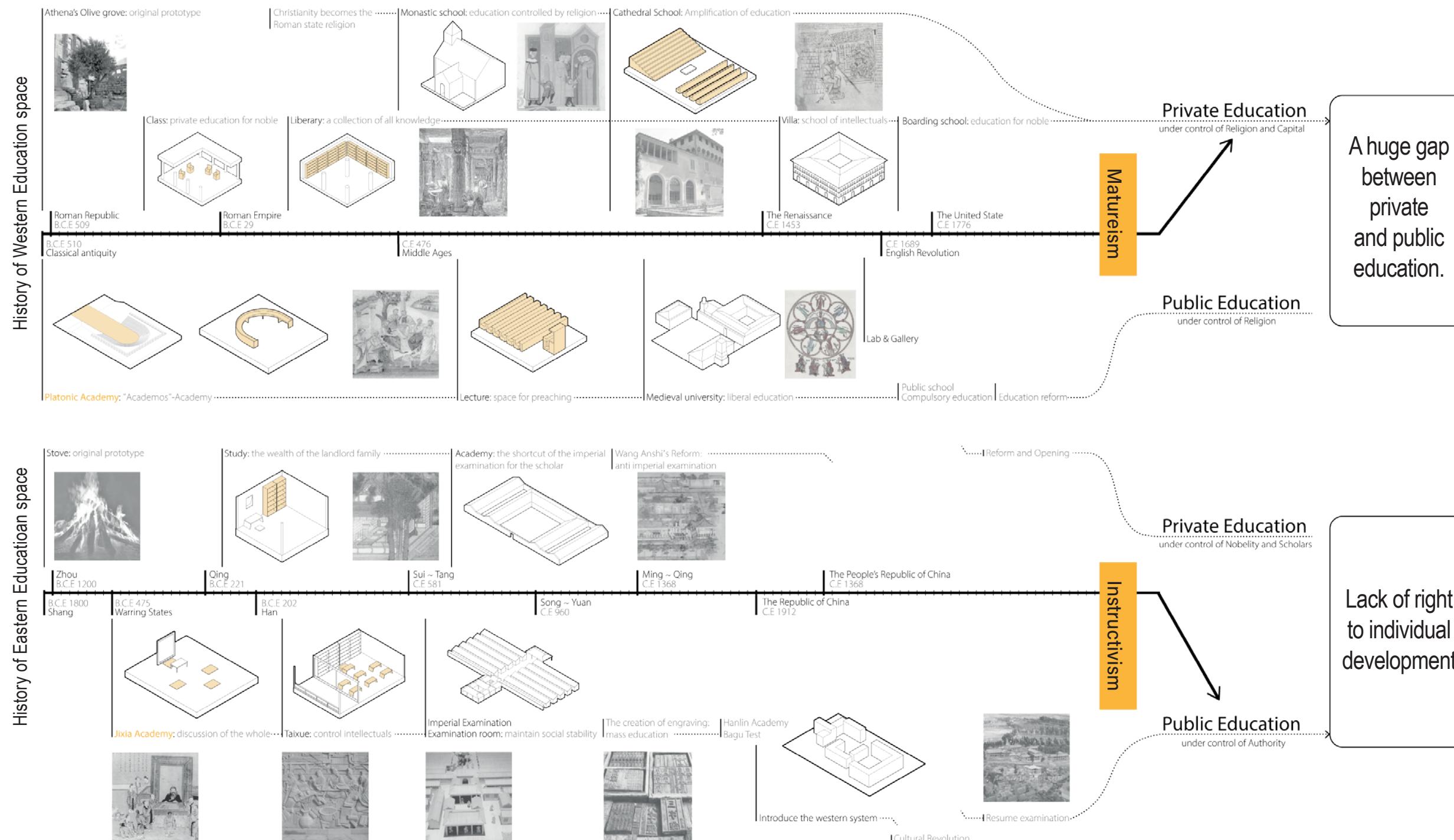
Tools

→ Goals

► step I. Concluding the prototypes from the history



In the history of education, the Axial Age was the starting point for the large-scale development of educational spaces, but the divergence between Eastern and Western approaches to education emerged and consequently affected educational spaces.

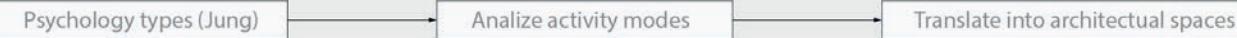


Challenges → Analization

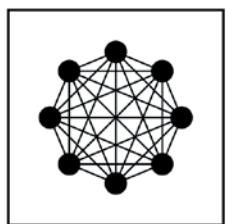
Tools

→ Goals

► step II. Found solutions in Psychology types by Jung

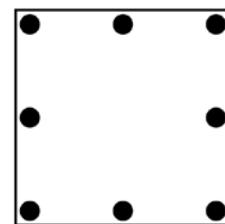


Analytical psychology is derived from Jung's theory of personality development. The eight dimensions represent eight different activity preferences. I use analytical psychology to parse the personality activities in the educational space and to establish the order of the space based on the activities of people within the educational system.



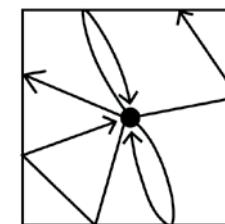
Extravert

-connections between individuals
-pursue a dynamic image in other's eyes



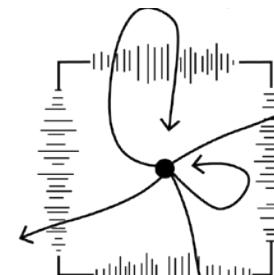
Introvert

-individual's inward exploration
-seek an internally solid self-image



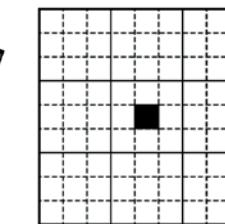
Sensing

-bounded information
-define boundaries



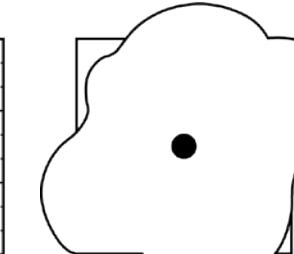
iNtuition

-information without boundaries.
-abstract the absorbed information



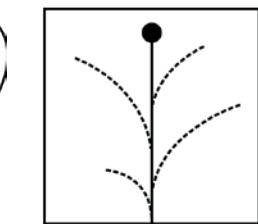
Thinking

-a preference for using thinking first



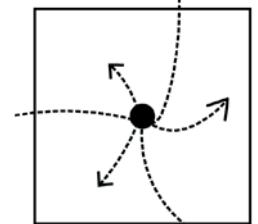
Feeling

-a preference for using feeling first



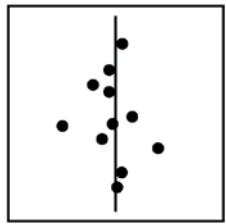
Judging

-organized and prepared
-make and stick to plans



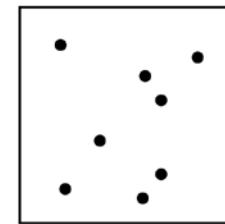
Perceiving

-keep options open
-act spontaneously & flexible with making plans



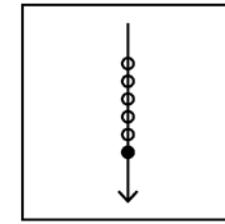
NJ

NJ is a cognitive model of association around the main idea. Using NJ in education allows for the use of spaces with different functions to help teachers teach.



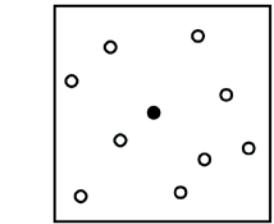
NP

NP is a cognitive model for discovering diverse connections between things. Using NP in education can give full play to students' initiative.



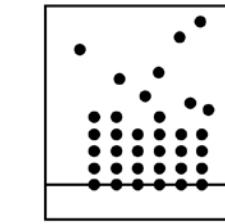
SJ

SJ is a cognitive model that follows the empirical analysis of reality. Using SJ in education can help students better make connections between knowledge and reality.



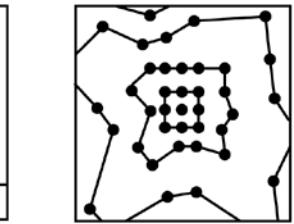
SP

SP is a mode of cognition that discovers the possibility of things. Using SP in education can help students better create new things.



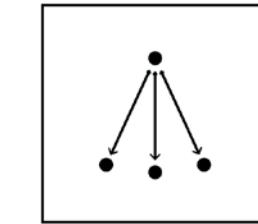
TP

TP is a judgment function that prefers to use thinking to analyze knowledge. The use of TP in education can help students engage in rational inquiry.



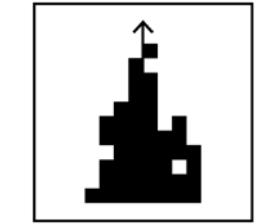
FP

FP is a judgment function that prefers to use emotion to analyze information. Using FP in education can help students in self-perception profiling.



FJ

FJ is a judgmental function that tends to focus on the needs of the group. Using FJ in education can help students develop a group perspective and enhance interpersonal interactions.



TJ

TJ is a judgmental function that tends to focus on how things work. Using TJ in education can help students use rational thinking to think and execute strict plans.

Judgment function

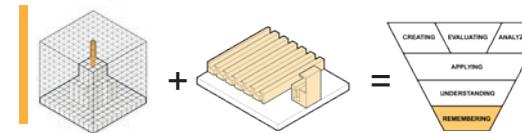
Cognitive function

Behavior Patterns

3D reconstruction

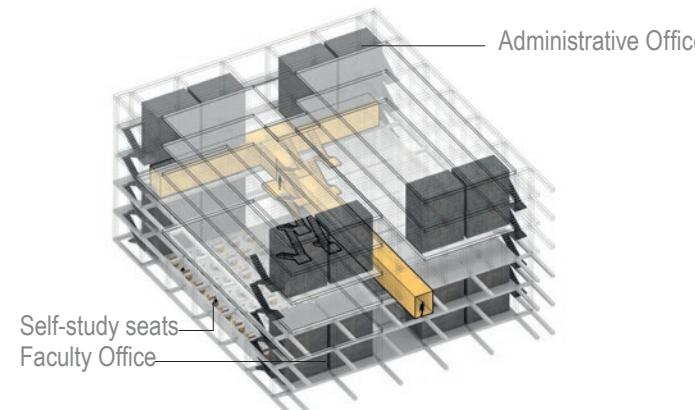
► step III. Combine into education units
step VI. Combine into academic mega

Spaces influenced by activity modes → apply → Education prototypes

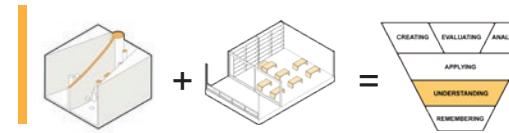


Study room for REMEMBERING

Homogeneous space for independent learning

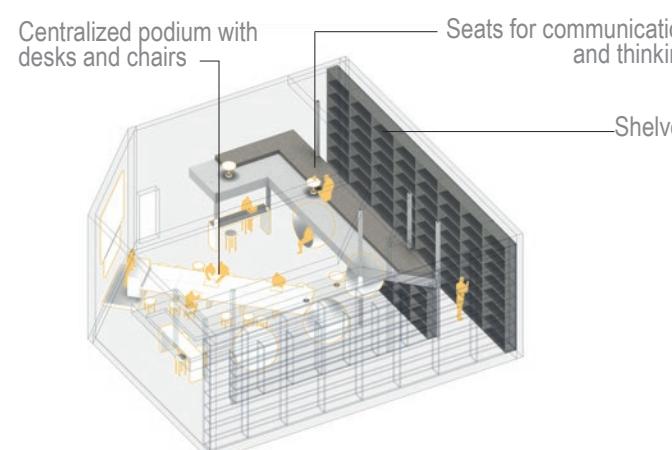


Offices have increased surveillance of students.

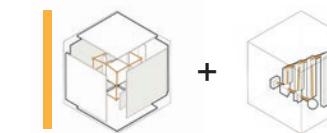


Classroom for UNDERSTANDING

Support space around teaching

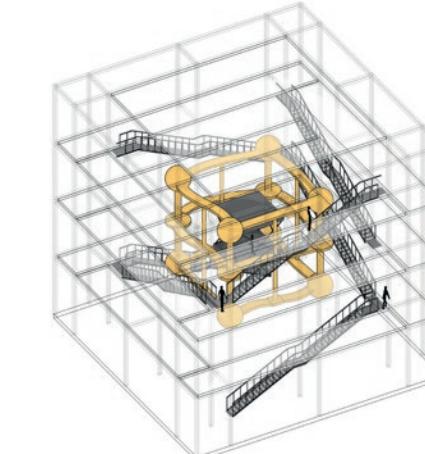


Assisted learning spaces help students better understanding.

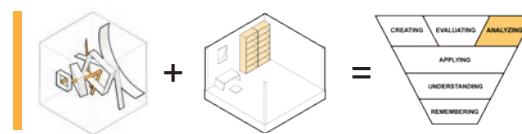


Core of student's activity

Connecting various student activity spaces

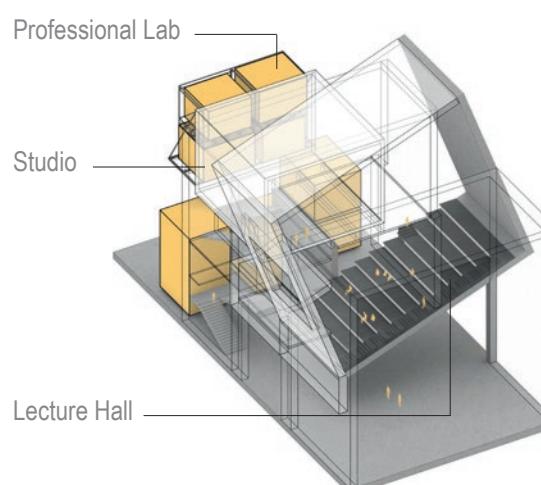


Enhance socialization among students.

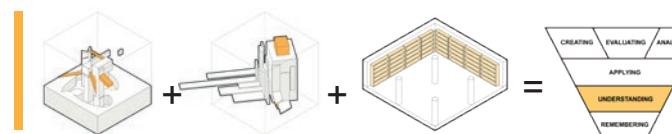


Lab for ANALYZING

Specialized Learning

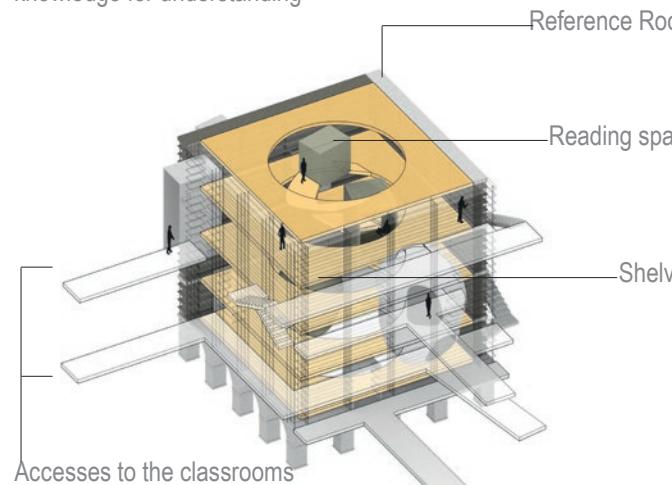


A continuously enhanced space for specialized education.

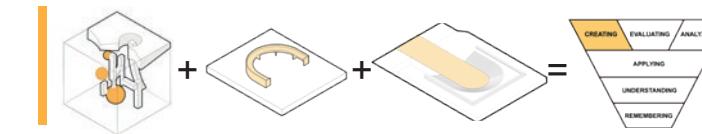


Library for UNDERSTANDING

Space for self-directed search to absorb knowledge for understanding

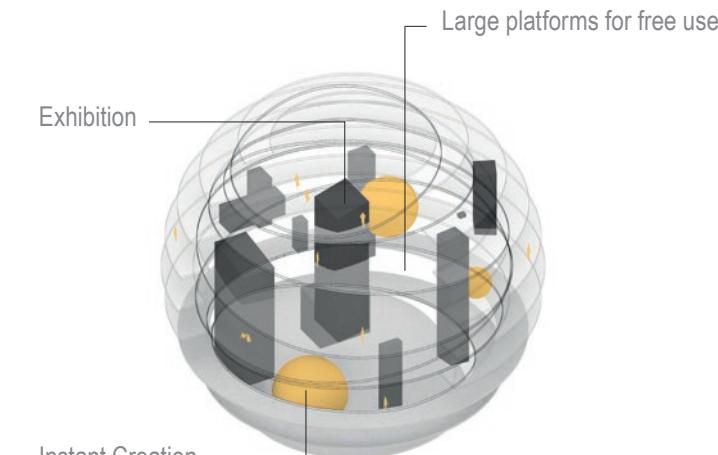


Adding accessibility to libraries.



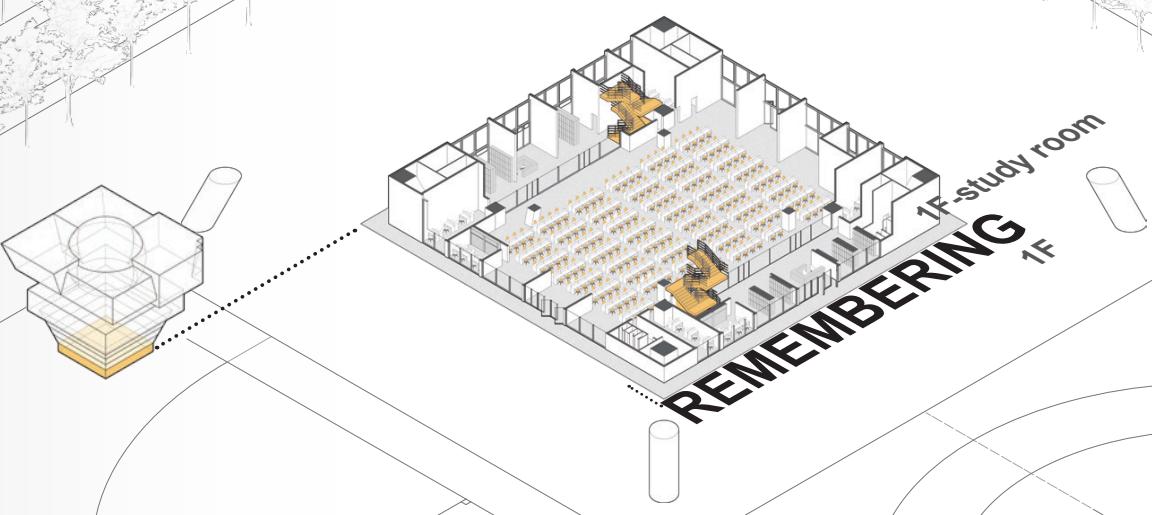
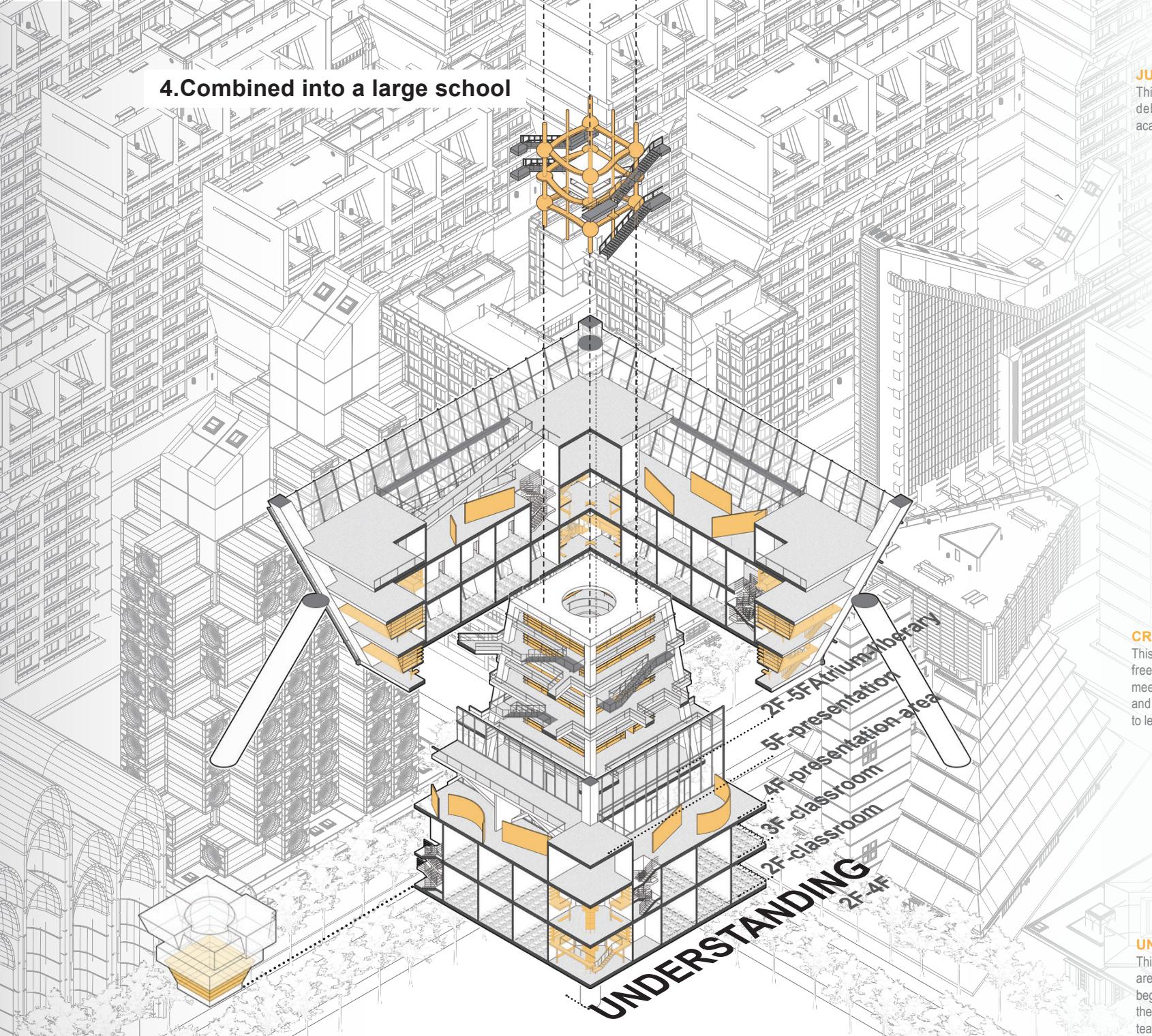
Exploration center for CREATING

Discover the free space for creativity



Small spaces that provide inspiration and large spaces that are fully open to enhance students' creativity.

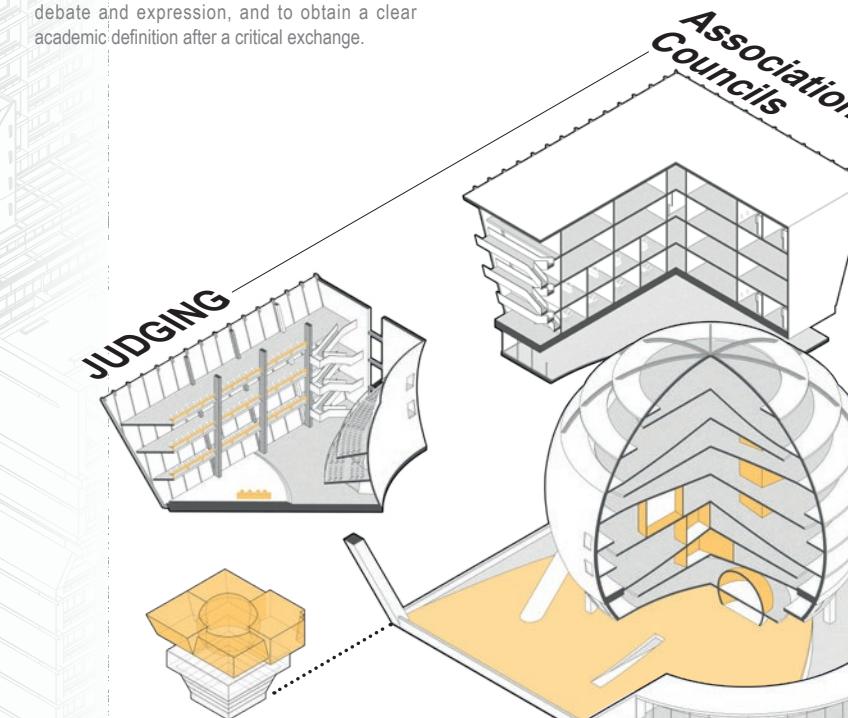
4. Combined into a large school



UNDERSTANDING

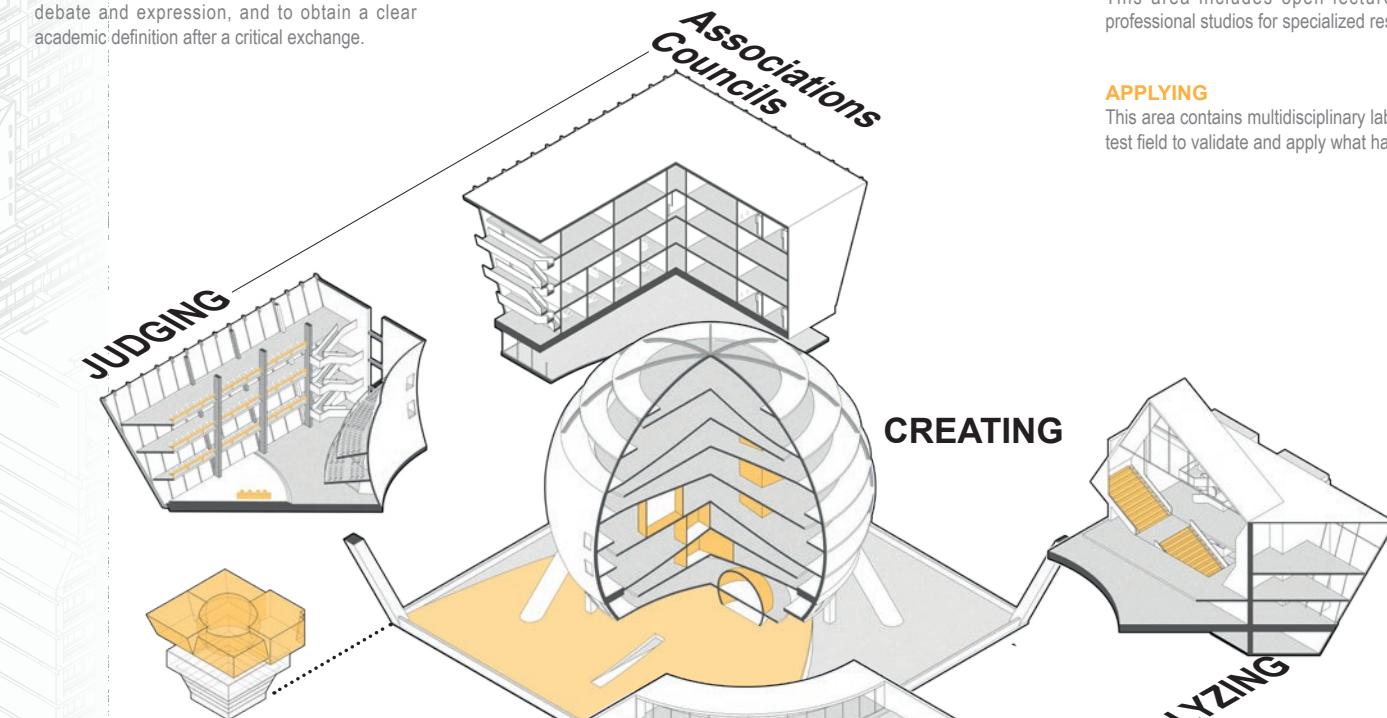
JUDGING

This area requires students to engage in serious debate and expression, and to obtain a clear academic definition after a critical exchange.



CREATING

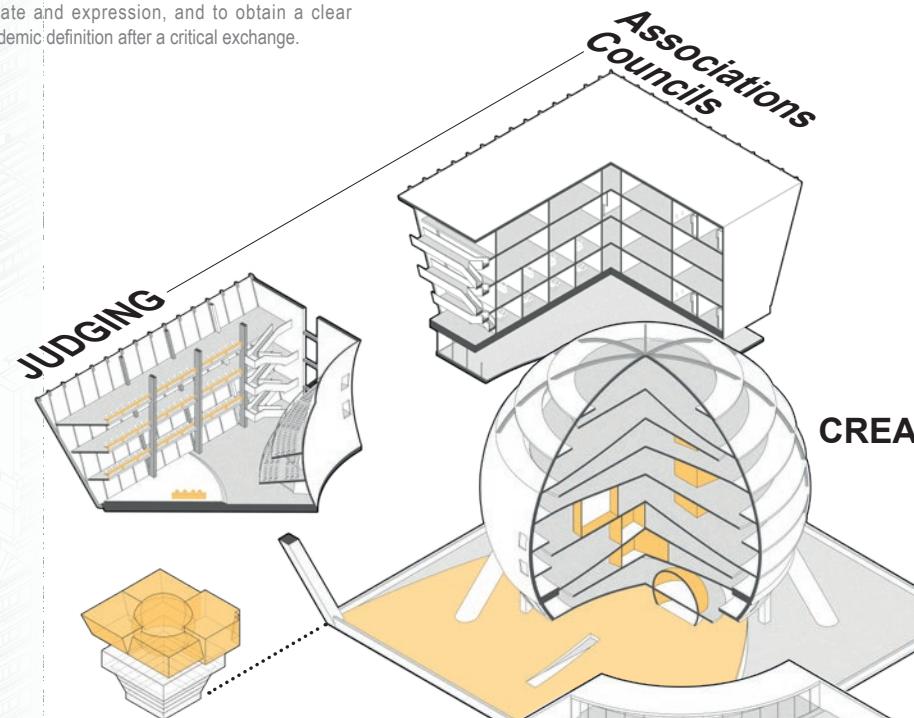
This area allows students to think, talk, and create freely on it. At the same time, this area is also a meeting place for four other areas, where students and teachers from different areas talk in the center to learn and generate new ideas.



**STUDENT UNION
6F-10F**

ANALYZING

This area includes open lecture spaces and professional studios for specialized research.



APPLYING

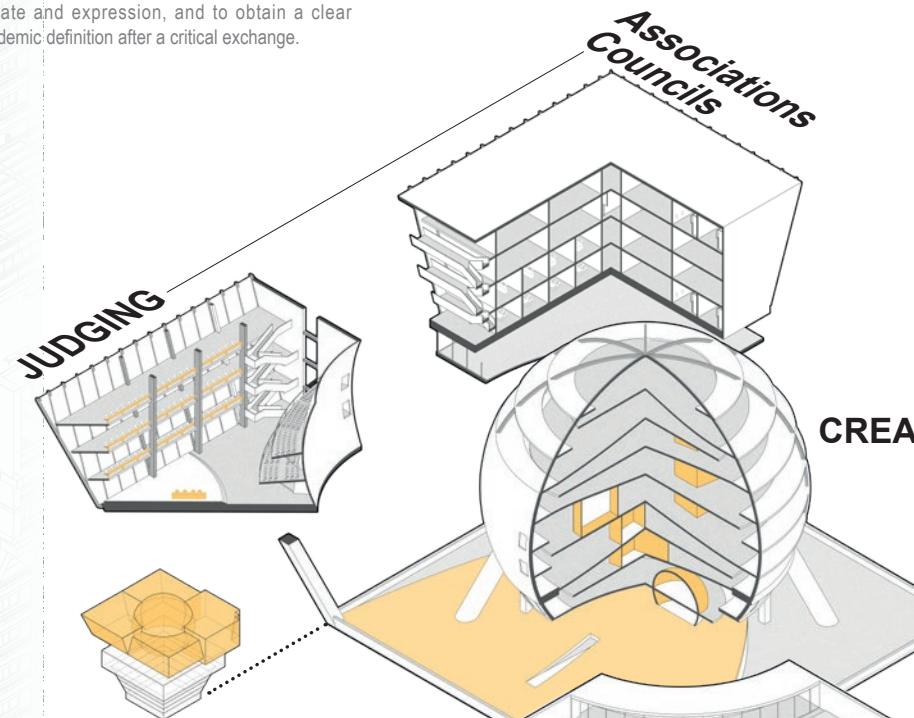
This area contains multidisciplinary laboratories and a test field to validate and apply what has been learned.

REMEMBERING

This area is given to students for independent learning and memorization. The evenly distributed tables and chairs reduce the level of student congregation. Also, this area is the most supervised area by teachers and administrators.

UNDERSTANDING

This area expects students to understand what they are learning. This is where the teacher-led format begins to emerge. At the same time, the higher up the hierarchy, the less supervision and the freer the teaching format.



0 10000 50000

1F

1 studyroom
2 administration office
3 faculty office

2F

3 faculty office
4 classroom
5 integrated classroom
6 library

3F

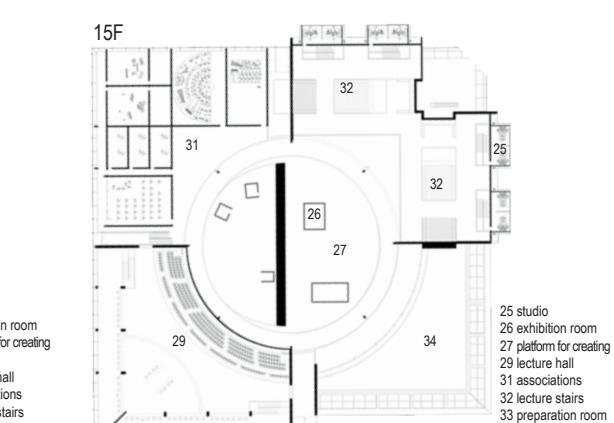
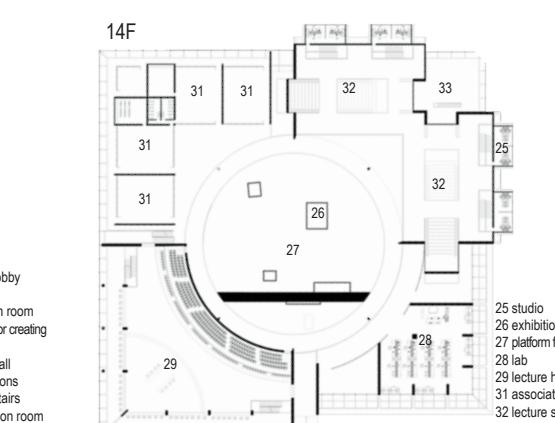
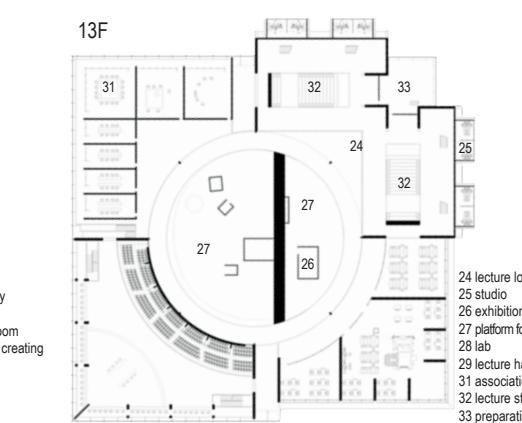
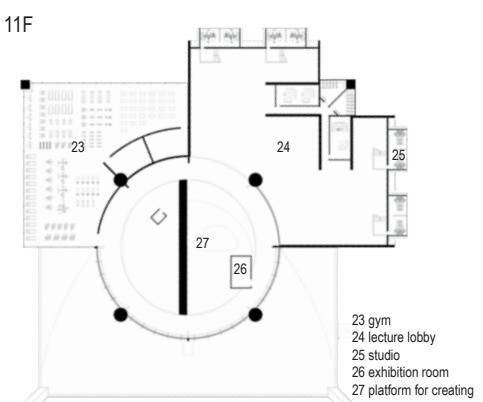
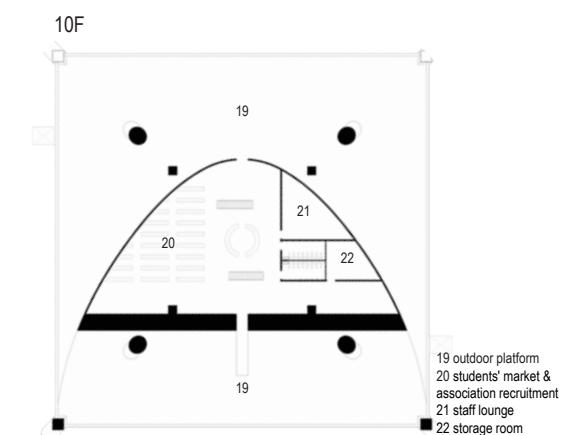
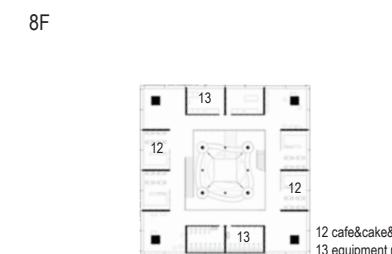
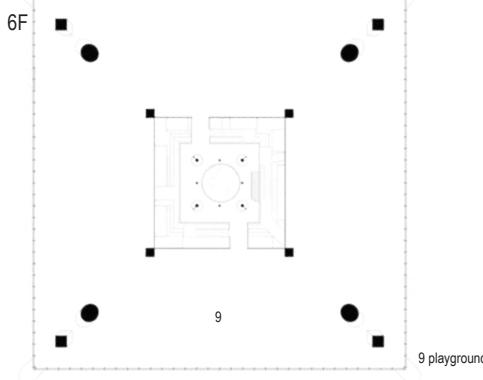
4 classroom
5 integrated classroom
6 library

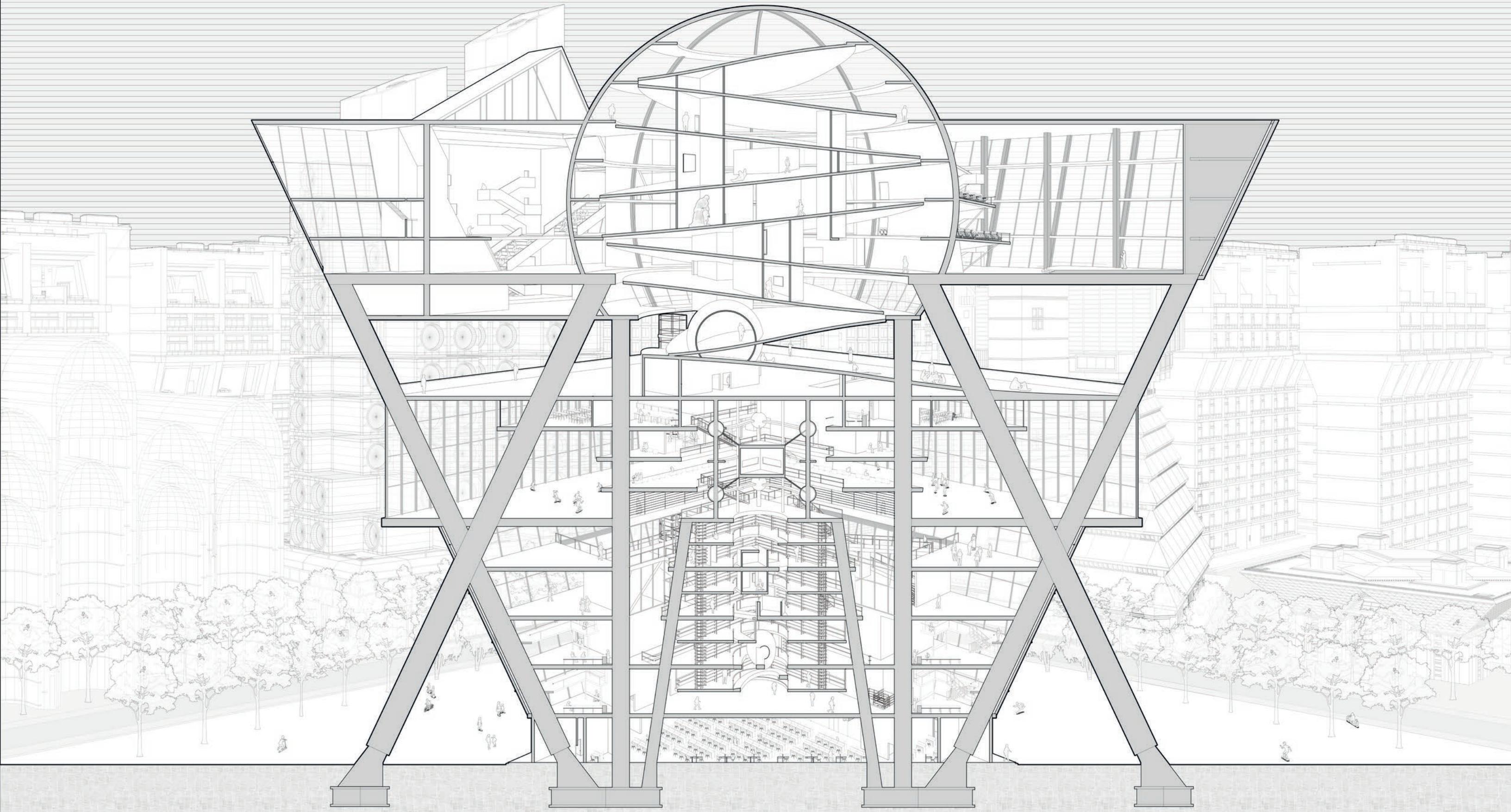
4F

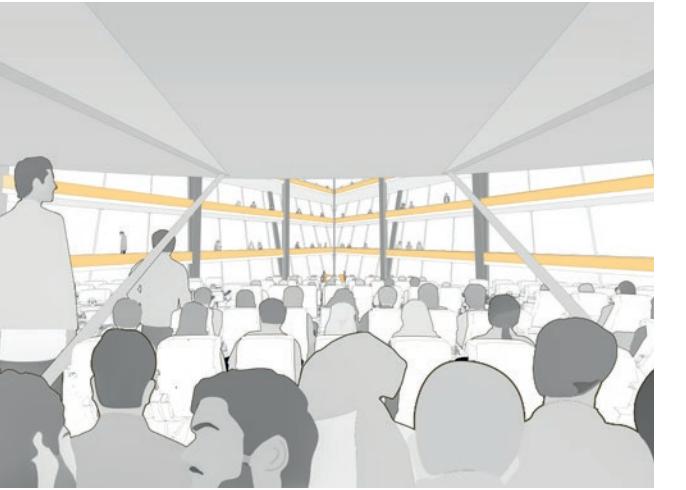
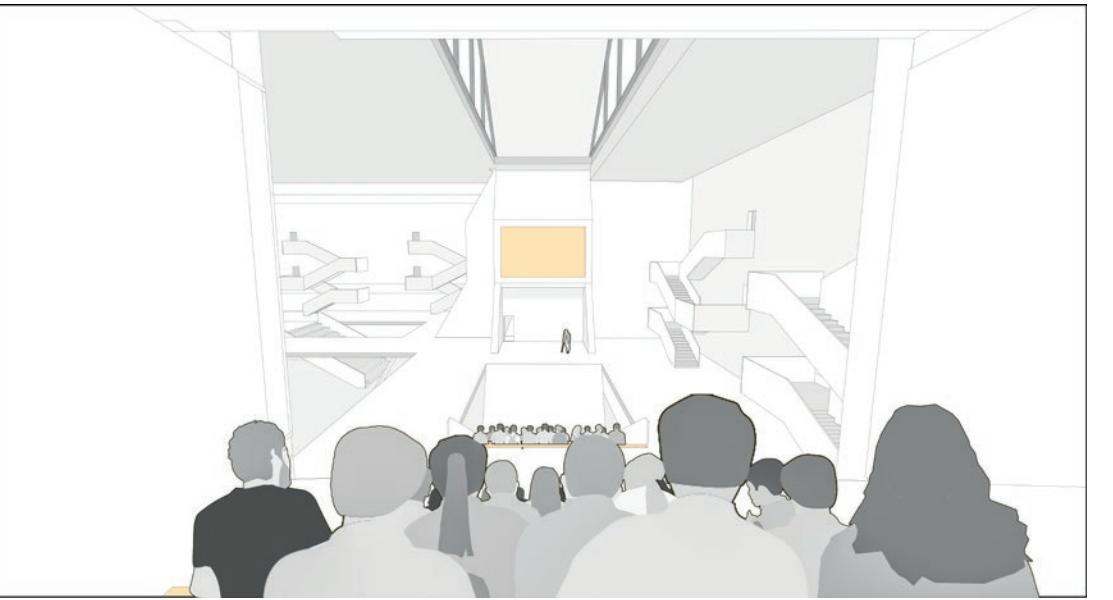
6 library
7 presentation layer
8 inquiry room

5F

6 library
7 presentation layer







Communal Birthg Center

Teammate: Zikuan Dong

2023.12 - 2024.01

Practicl

Competition

Vernacular Architecture

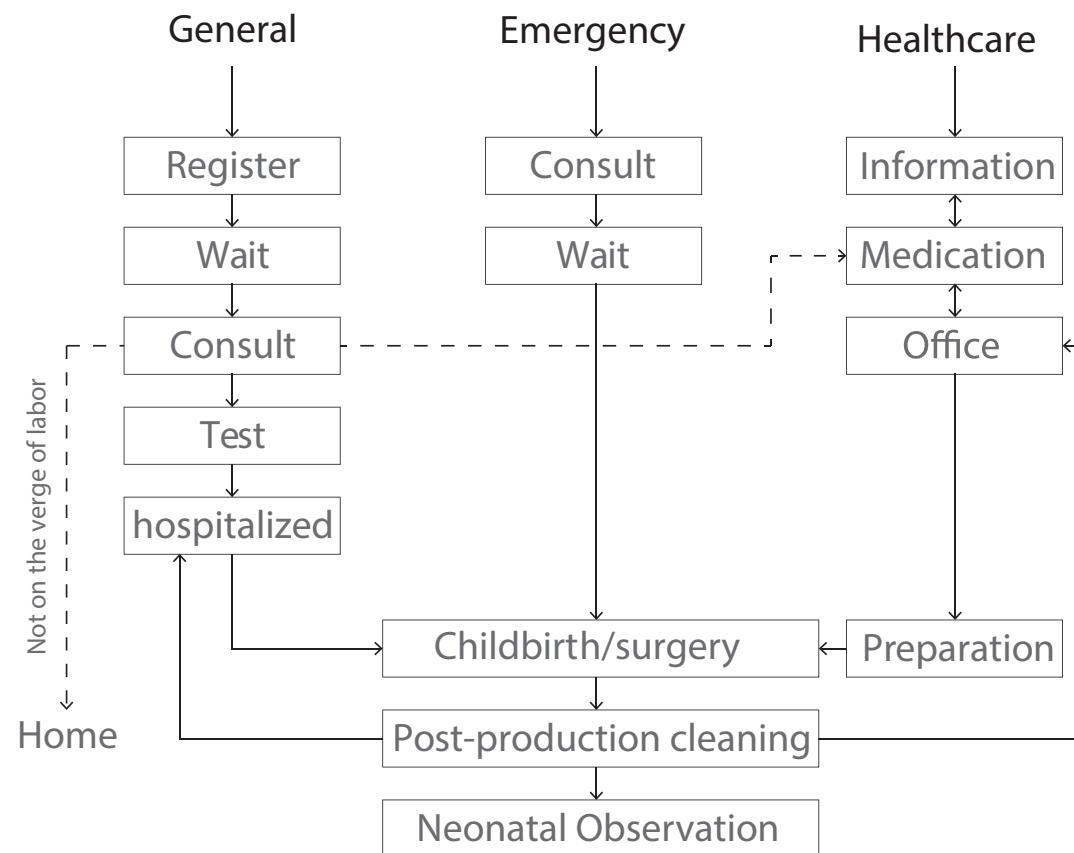
The maternity conditions in Senegal have been consistently poor, characterized by insufficient beds, unhygienic delivery environments, and inadequate medical resources. Our maternity center design addresses these issues comprehensively. The architectural form is based on spatial management and local building structures. The patient workflow follows a sequence from examination to ward, delivery, return to ward, and finally going home, all centered around the staff area for efficient monitoring and access.

Emergency entry and the perioperative communication area are located at the opposite end for a secure shortcut to labor and operating areas. The neonatal observation area is surrounded by the ward, allowing new mothers to stay close to their babies despite separation. The reception area, designed as a semi-isolated pavilion, serves as a recreational space for patients and the community, with the pharmacy nearby for staff to monitor patients and engage with the community. All patient areas are equipped with disability facilities like railings, handles, and ramps. Water-using areas are strategically placed to minimize material use and reduce health risks.

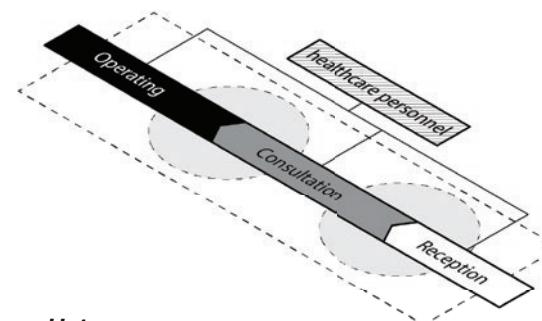


Communal Birthing Center Standard Workflow

We categorize people into three groups: doctors, pregnant women, and visitors. Each group has its own circulation route to ensure an efficient birthing process while coordinating the necessary points of convergence and separation at the right time. This also ensures that the surgical area remains strictly regulated. Given the urgency of childbirth, we have designated emergency access routes to both the operating room and delivery room, with monitoring and control facilitated through the consultation desk.

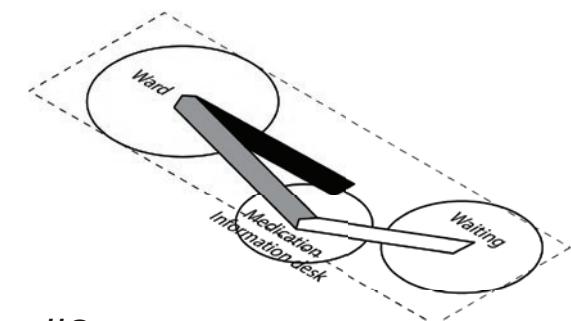


Design Strategy



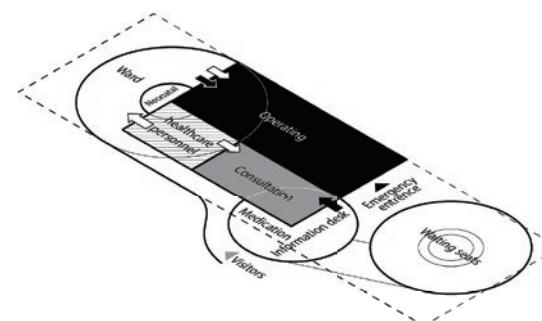
#1

Basic functions and circulations concluded from Crowd Sourcing.



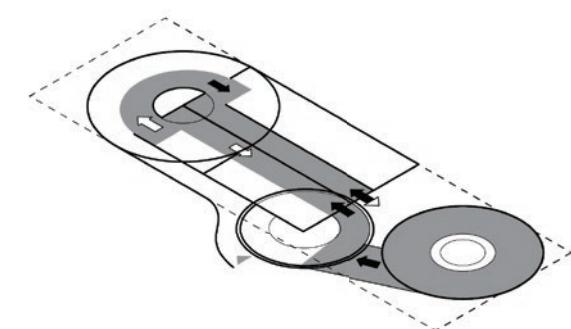
#2

The curved flow and the use of Senegal's local barrel-vaulted building form emphasize the three important spaces.



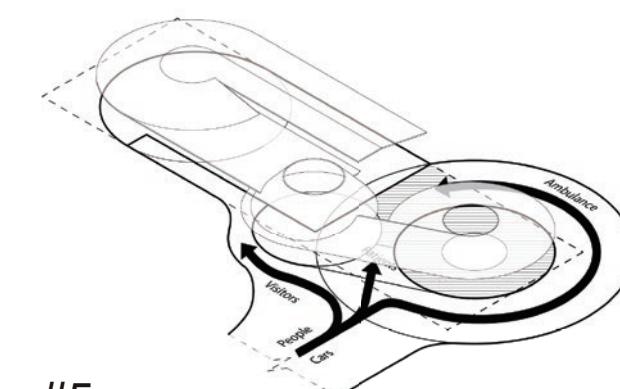
#3

Continuing the division of functional zoning according to flow lines and making healthcare personnel the most accessible area of the entire building to minimize movement distances for the sparse number of physicians.



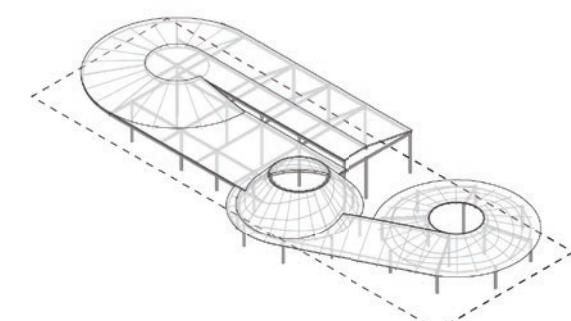
#4

The patient's circulation remains in the same order of Reception-Consultation-Ward-Operation.



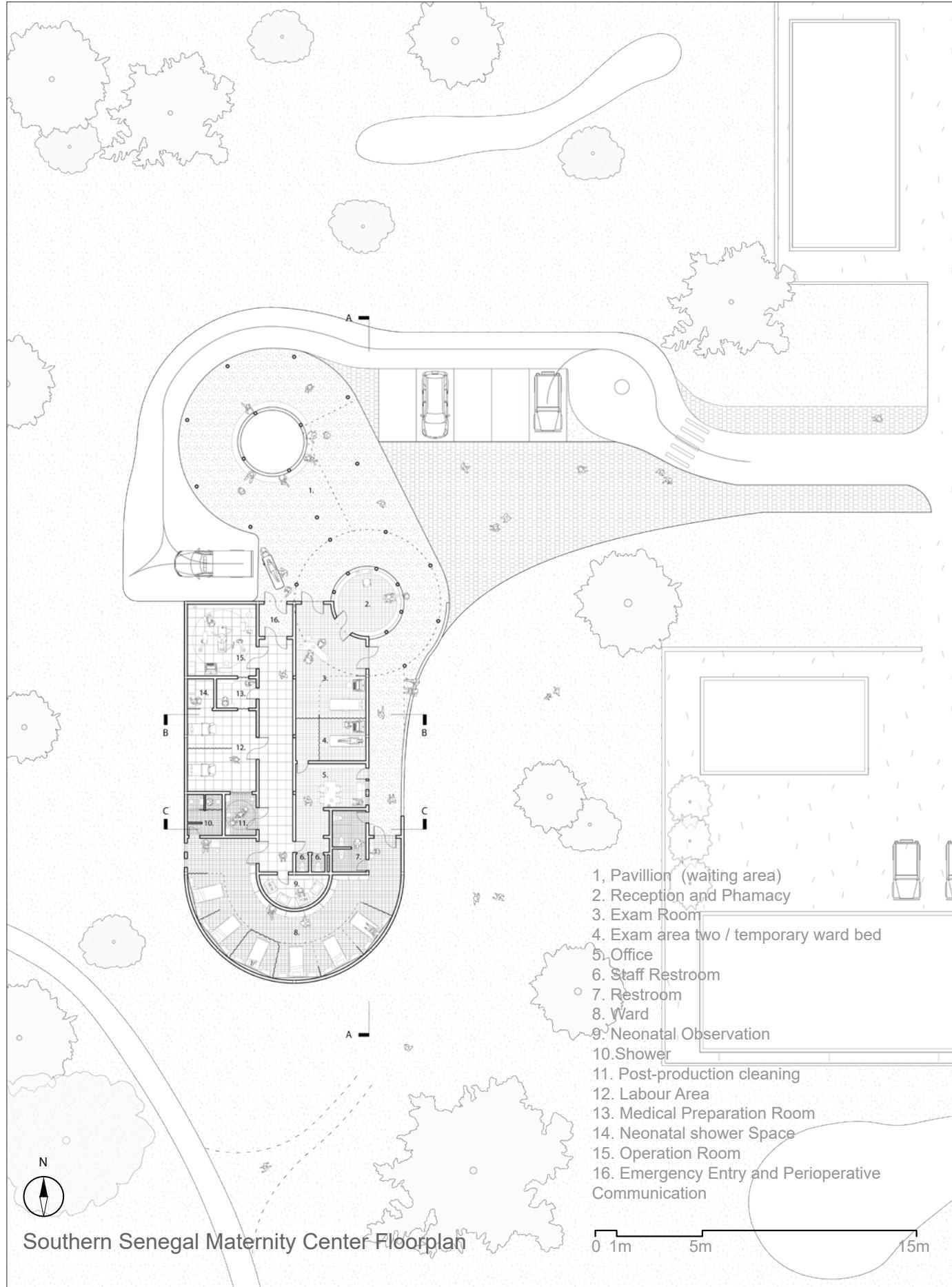
#5

The entrance is set between the INFORMATION DESK and WAITING SEATS to ensure that the doctor can direct people to wait or ask questions. Ambulances can bypass the waiting seats and go straight to the emergency entrance.



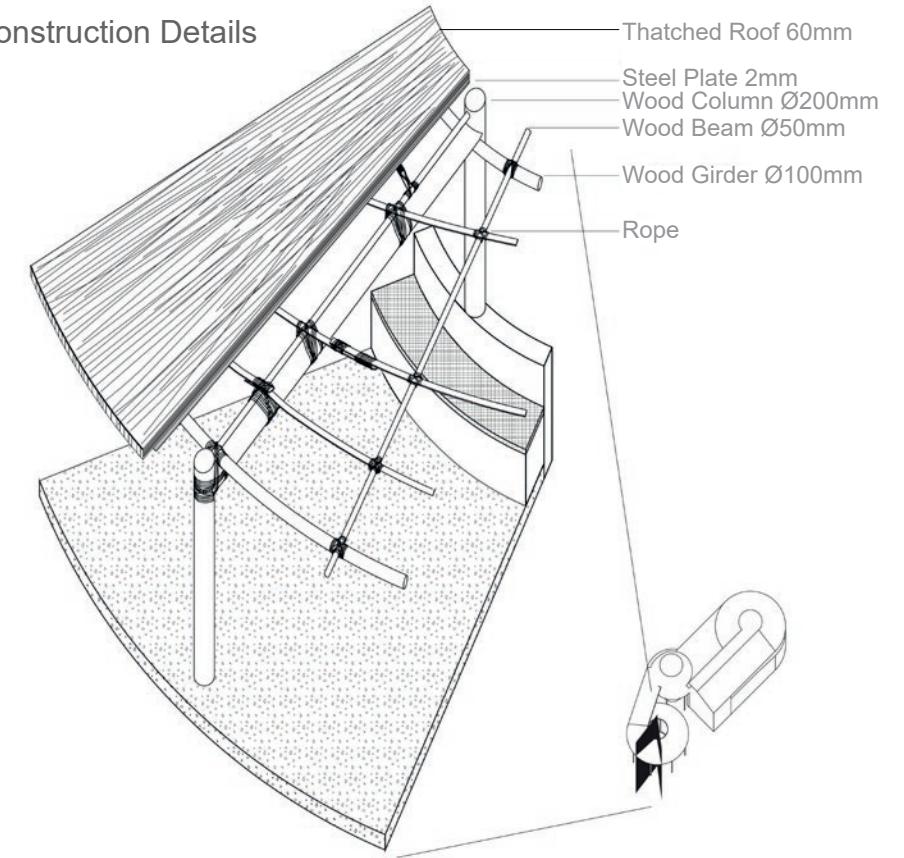
#6

Combined with the local architectural form, the wooden structure is mainly used with brick walls to create roofs of different heights to facilitate ventilation and lighting.



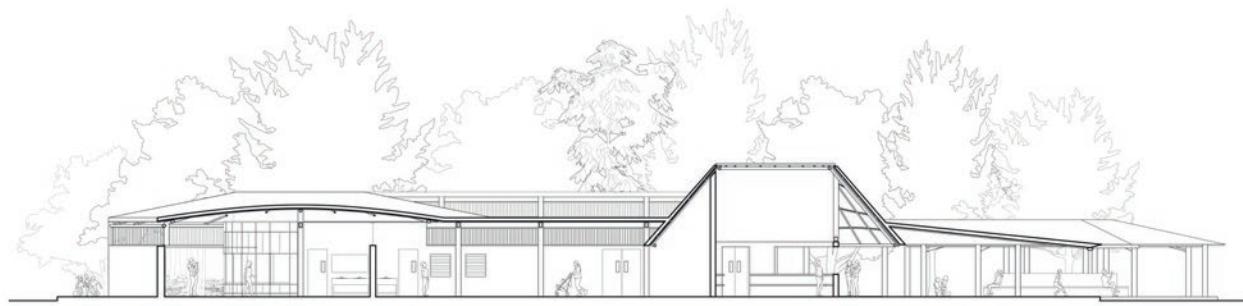
Accessible walkway guide people to the main entrance

Construction Details

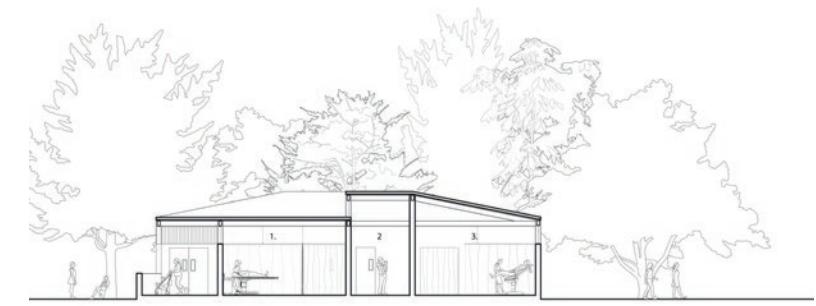


Due to budget constraints, design must use locally available, low-cost materials.

Also, the building cannot accommodate mechanical ventilation, dehumidification, heating, or even a running water system. Instead, passive design strategies are employed to ensure a hygienic and comfortable environment for expectant mothers. Since there is no sewage system, toilets are carefully placed in isolated locations to prevent bacteria from entering the operating and delivery rooms.

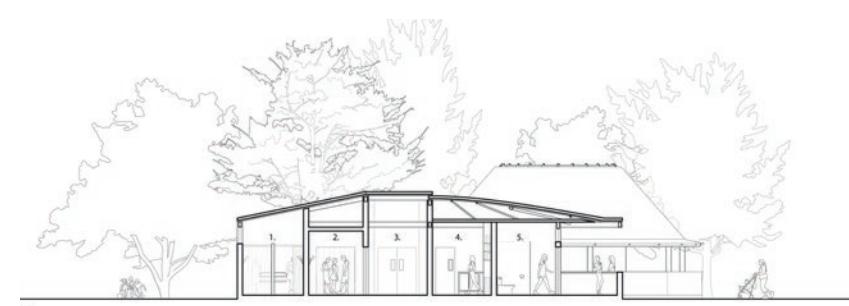


Section A-A



Section B-B

- 1.Exam Room
- 2.Medical Area Corridor
- 3.Labour Room



Section C-C

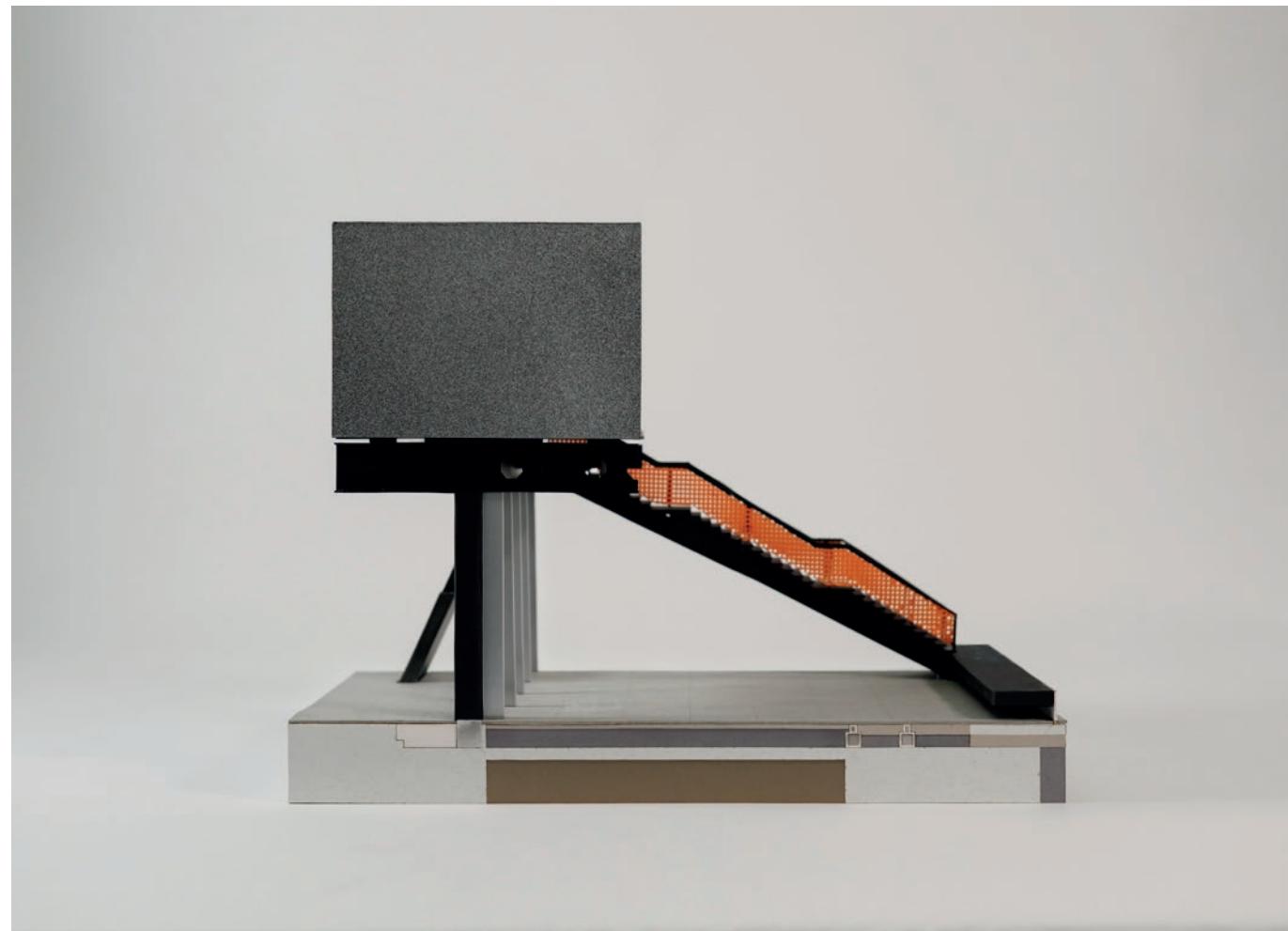
- 1.Ward Shower
- 2.Post-production cleaning
- 3.Medical corridor
- 4.Office
- 5.Restroom

We elevated the roof slightly to allow air circulation through the gaps, while solid high walls prevent direct sunlight and excessive dust. Hard partitions are minimized to maximize the number of beds, while soft partitions ensure privacy for pregnant women and their families while facilitating medical examinations.



Passive Ventilation and soft natural lighting create an relaxed environment

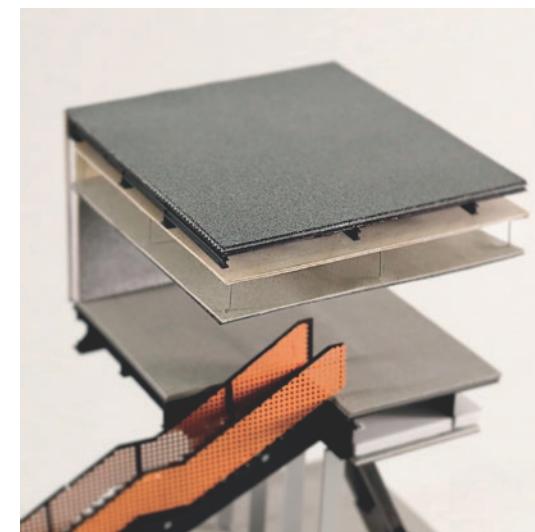
Model Making



Project: Study of the structure of Prada Foundation
Teammate: Nathan Schuppert
Year: 2024



Using different sheets to make insulations



Spray foam sheet to simulate aluminum foam



Stairs as structural supporters to hold the model

Study, Calculate, Design with Thermal Mass

Project:
FROM THE AFAR MAT TENT
INTO THE AMERICAN WOOD FRAMING

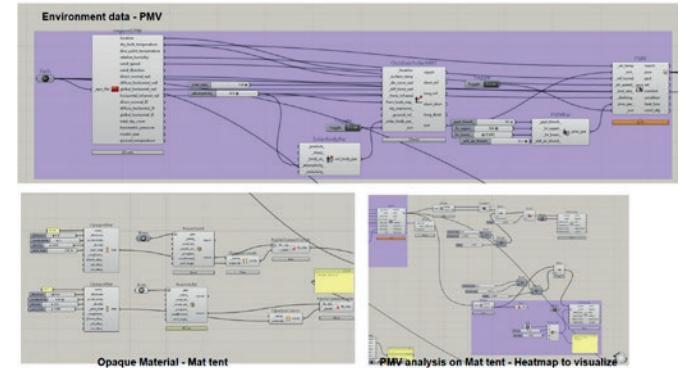
Teammate: Brant Zhao, Bea Choo
Year: 2024



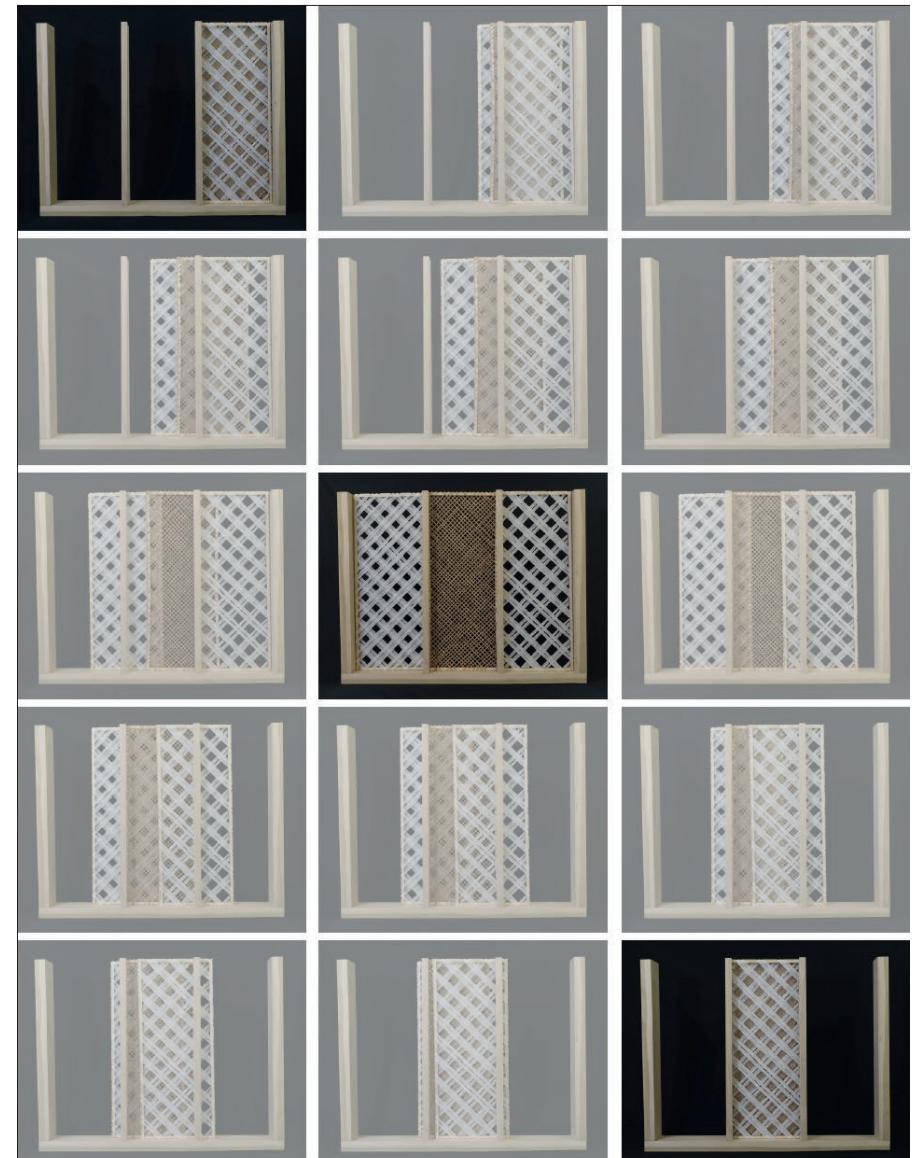
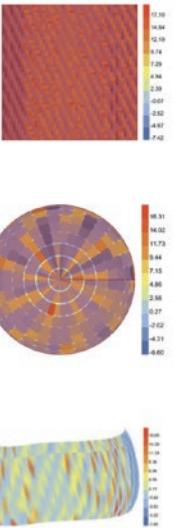
The study and model making of afar tent

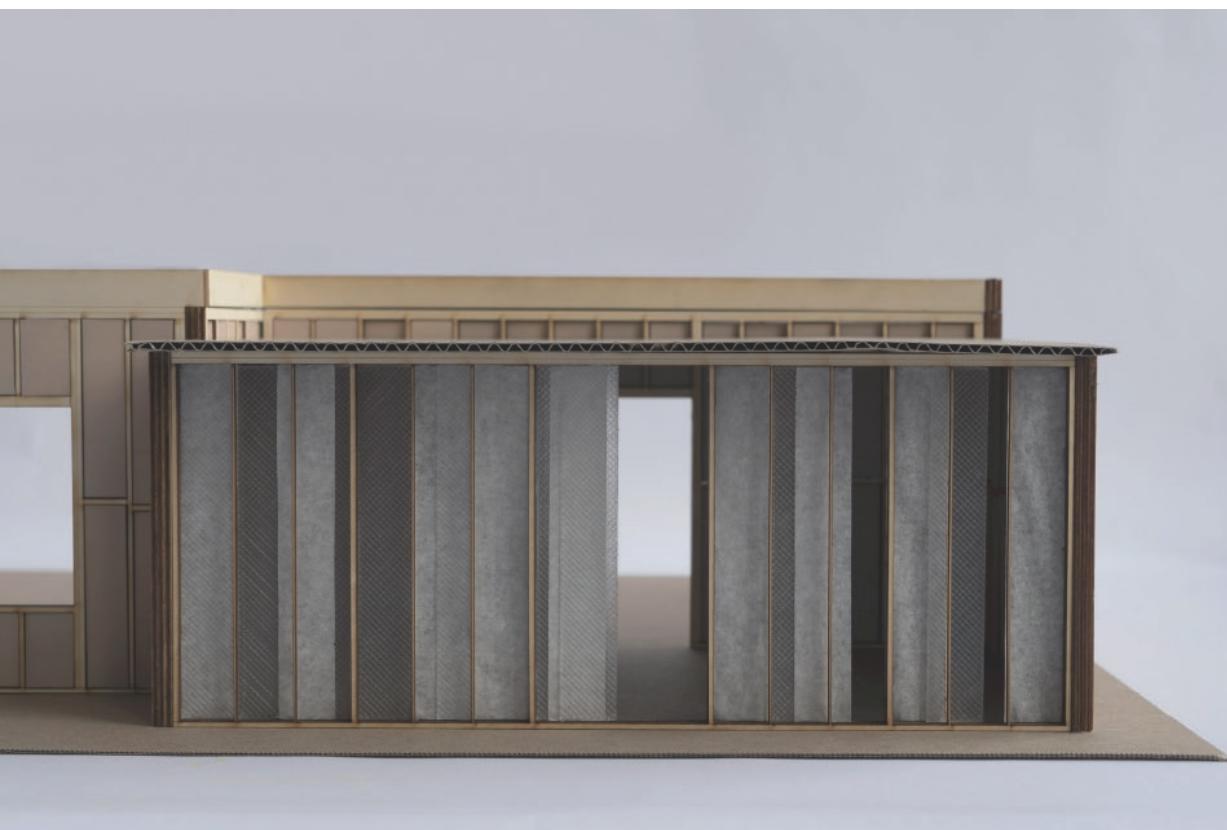


Weaved using Afar technic and Palm leaves

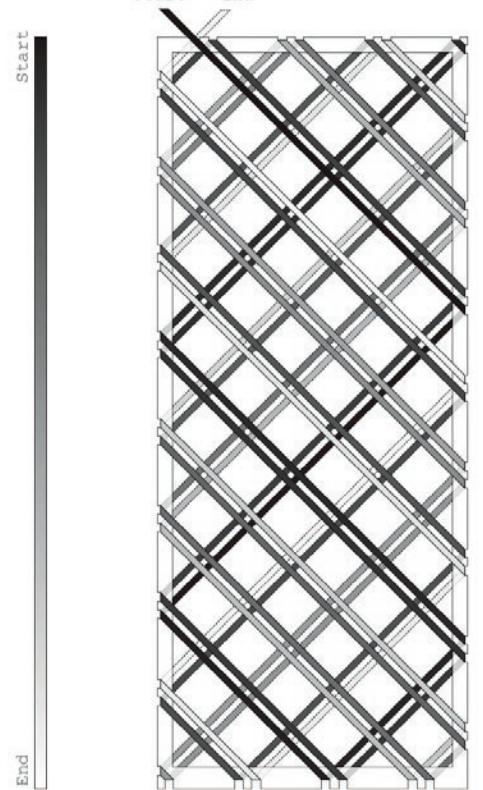


I50 7730 recommends a comfort range of eMv -0.5 to +0.5, and most building design and analysis are based on this standard, 0 is the ideal comfort value -0.5 to +0.5 is the recommended comfort range, indicating that most people feel comfortable. PMV +1 or beyond indicates that people will likely feel too hot or too cold.





Different densities of mat



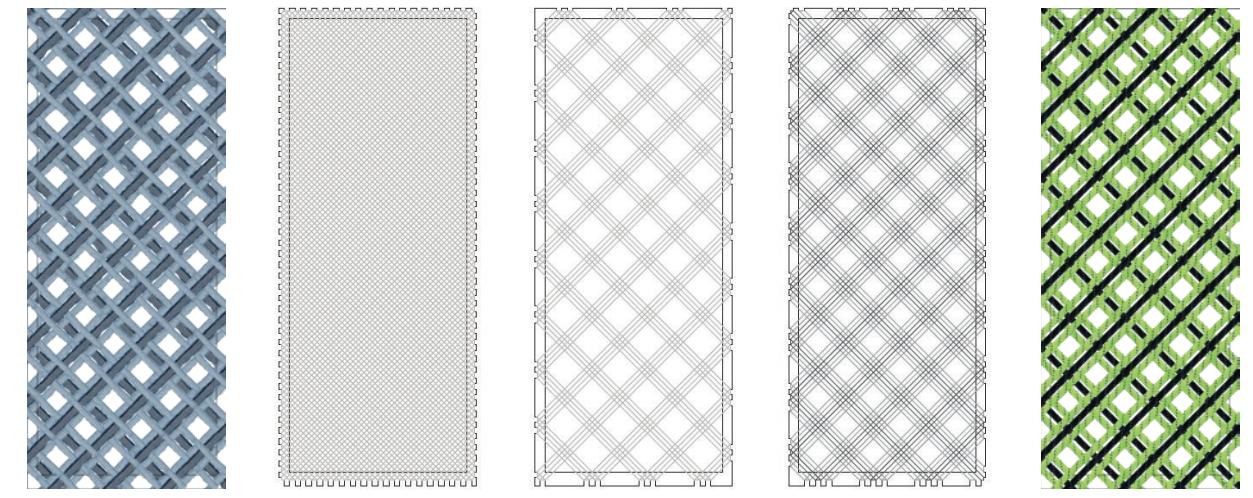
One strip to finish a mat



Process



Different densities of mat



75%

45%

50%

1:1

2:3

3:2

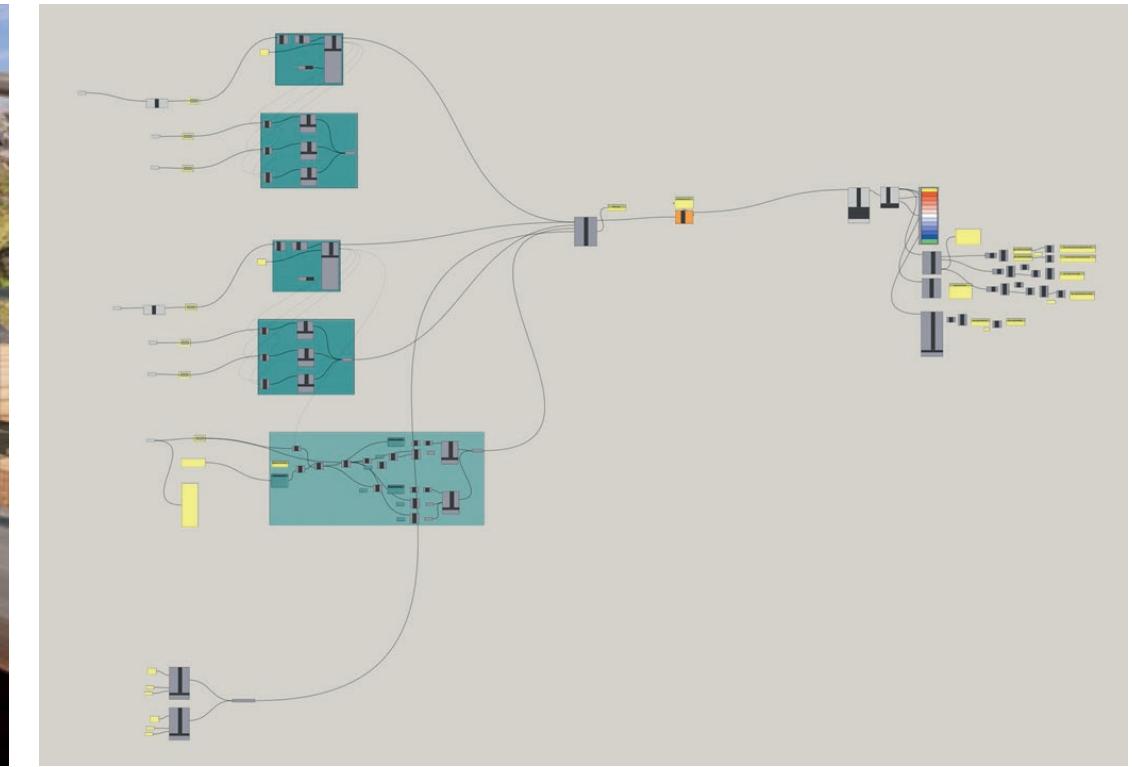
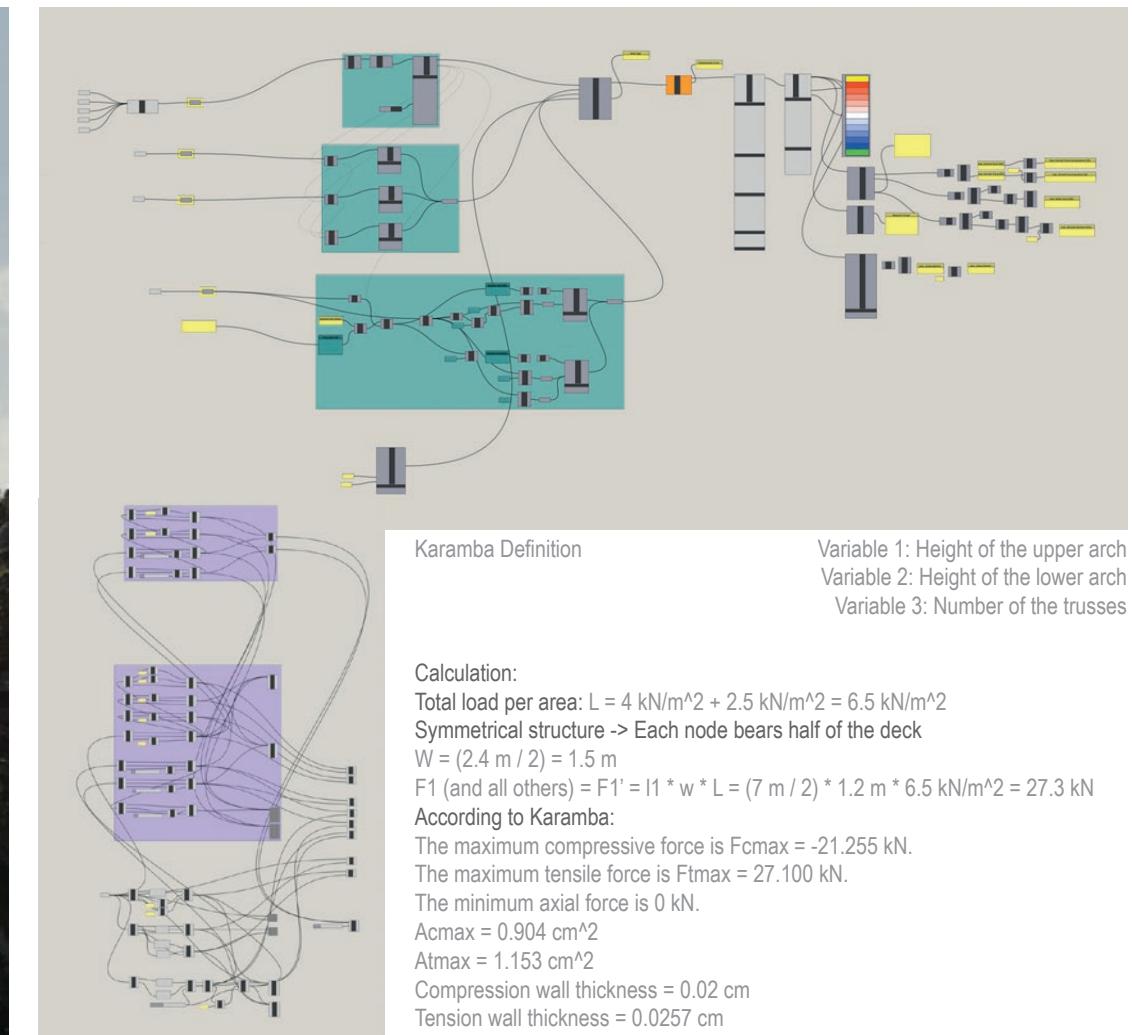
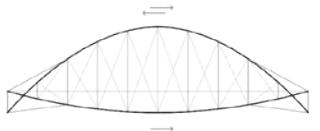
Using the gears to control the density

Study, Calculate, Design with Structure

Project:
 1.Bridge design
 2.Kayak Pavillion design

Teammate:
 Alex Burgaud
 Zikuan Dong
 Anli Zhang

Year: 2024





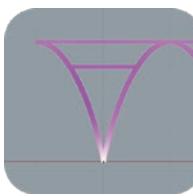
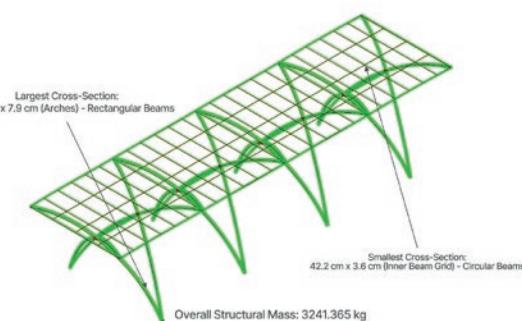
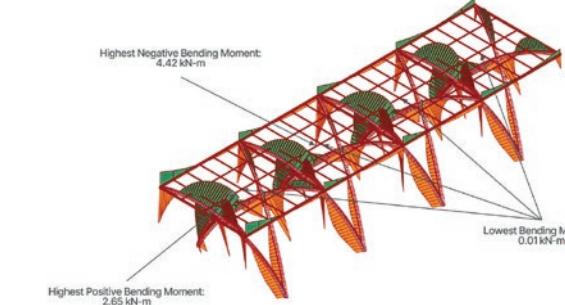
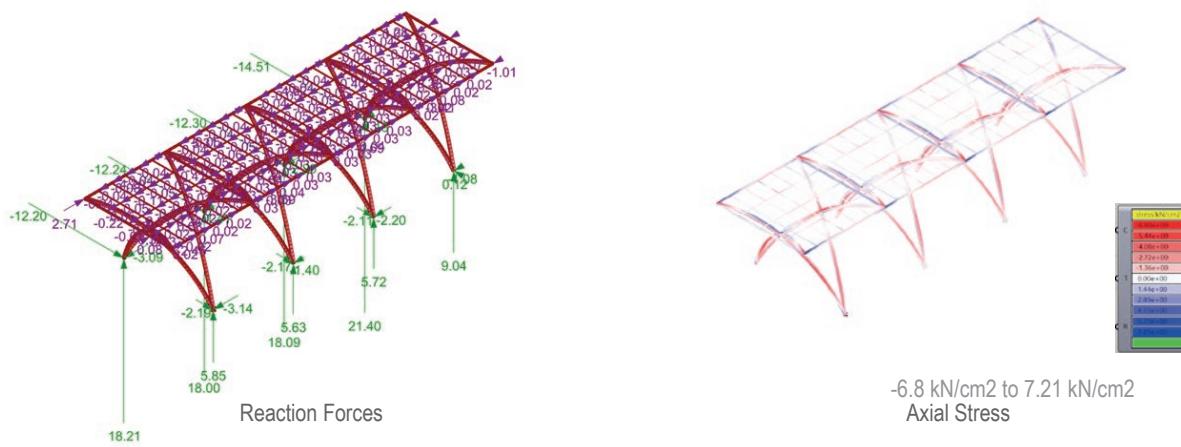
Issues: Error in design where arches would interfere with and go above the beam grid, heavy deformation, and high utilization

Maximum Vertical Displacement: 3.587 cm
Maximum Utilization: 97.2%
Structural Mass: 5,528.681 kg
Largest Cross-Section: 152.4 cm x 9.5 cm (rectangular)

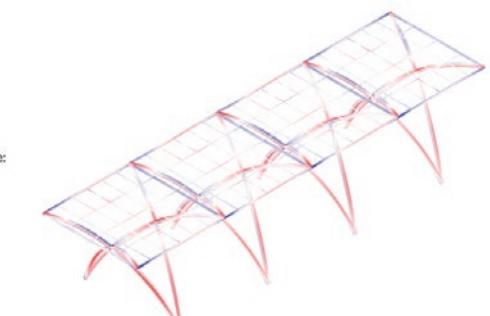
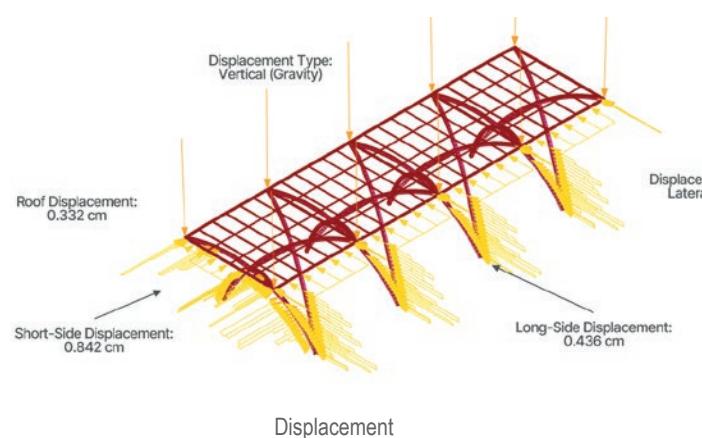
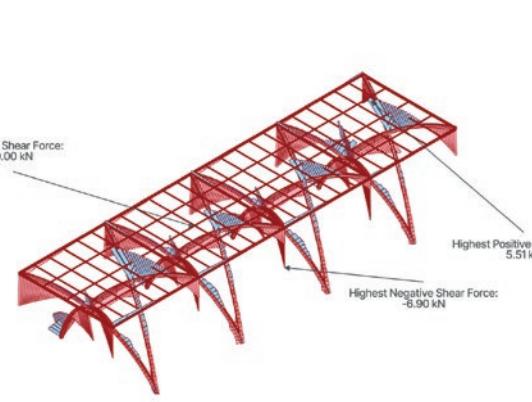
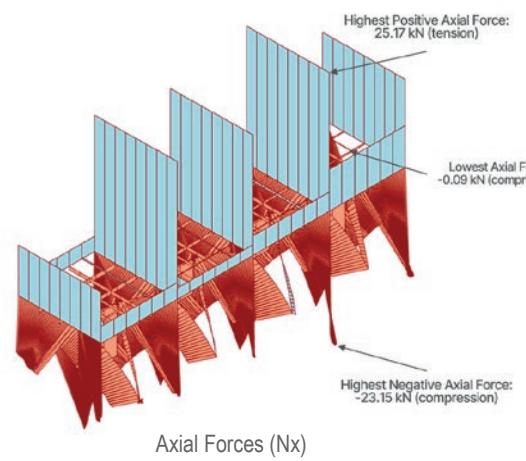


Changes: Utilized GraphMapper in Karamba to form arches, additional pin supports
Issues: Weak lateral support

Maximum Vertical Displacement: 0.87 cm
Maximum Utilization: 36.7%
Structural Mass: 4,013.649 kg
Largest Cross-Section: 114.3 cm x 9.5 cm (rectangular)



Changes: Made the arch structure stronger by adding straight bars connecting the mirrored arches to prevent domino effect from lateral loads



Stage

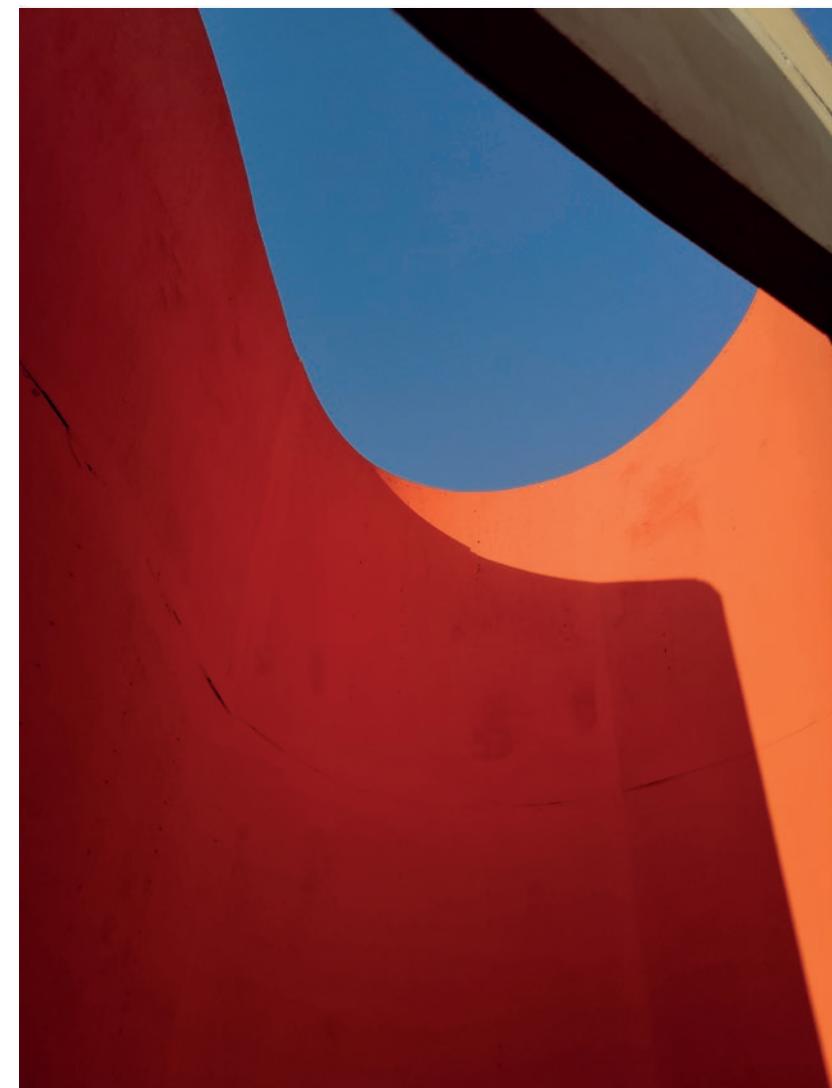
Project: World Stage
one of a several installations for Art Festival
Year: 2019



Performance at the opening ceremony - Day time



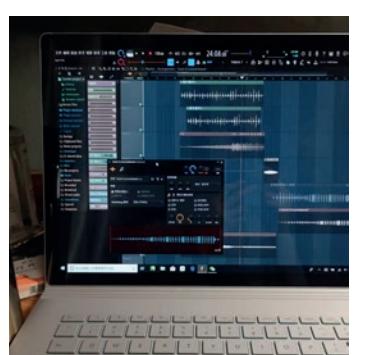
Performance at the opening ceremony - Night time



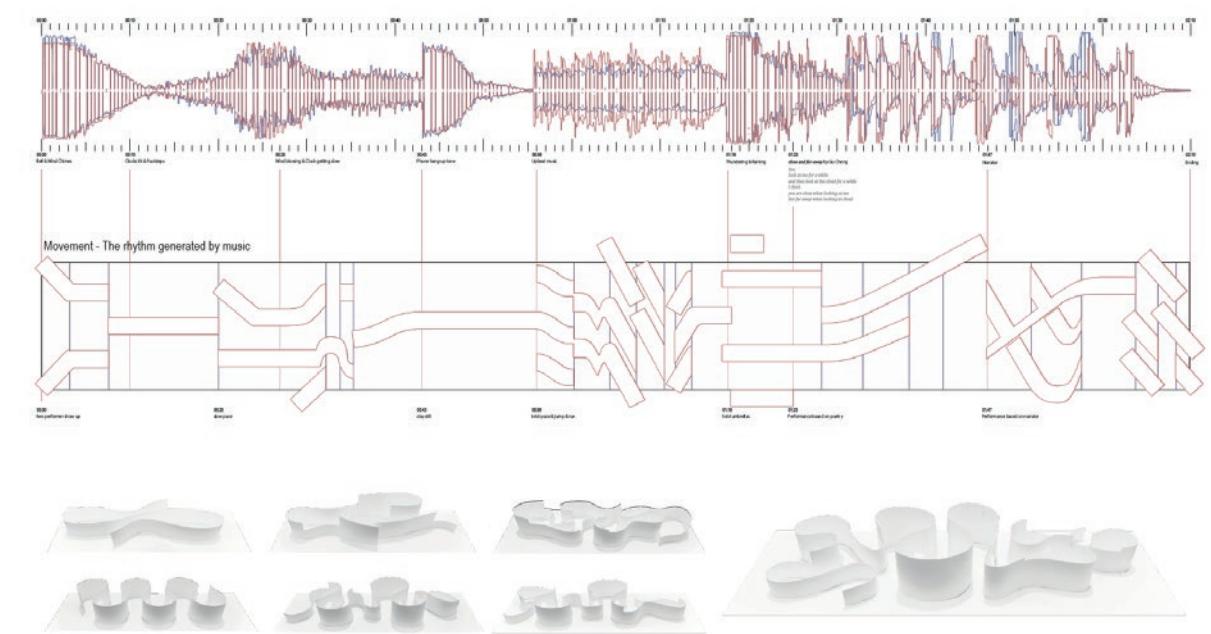
Construction site
Within only a week of the construction time, we managed to find the local contractors to participate, and we kept in touch for the next year's construction.



Costume and Music
Within one week for design with no experience, I figured out how to edit music by myself and made the whole set of costumes with teammates.



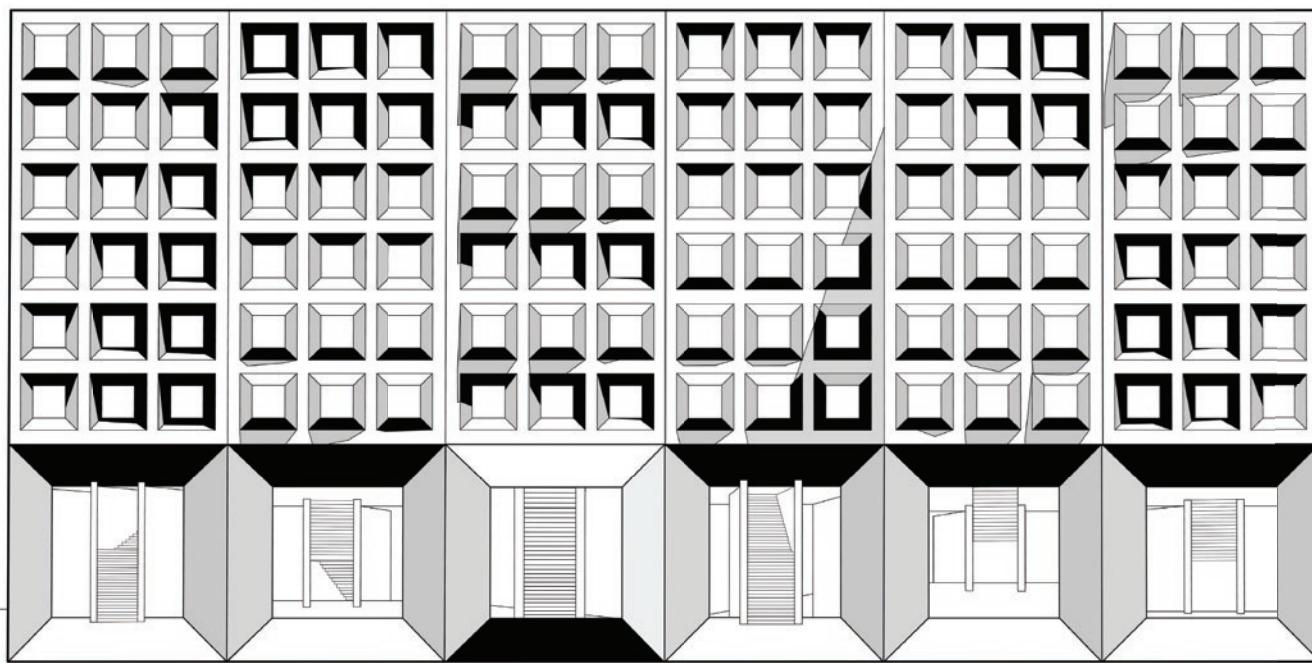
Editing music



Project: Projection

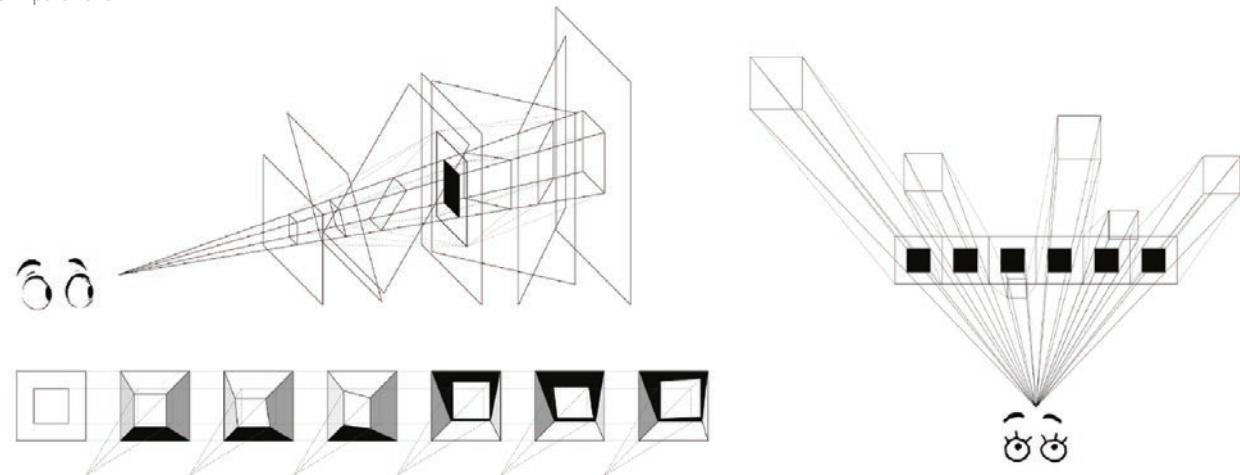
Project: A long term study of mechanism of visual projection

Year: 2021-2024

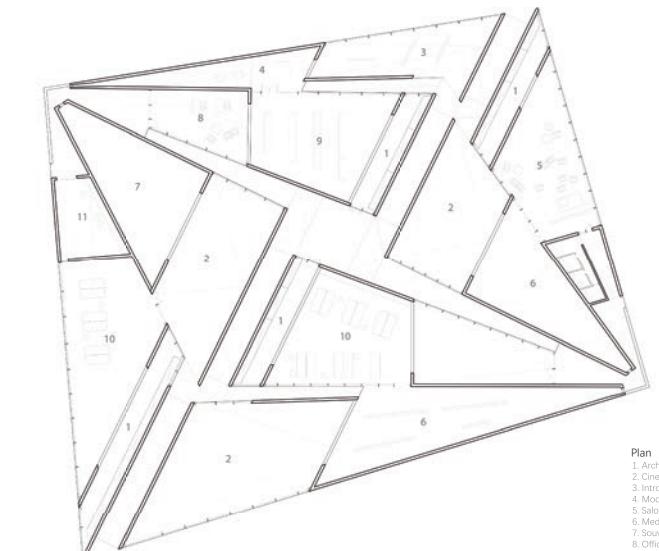
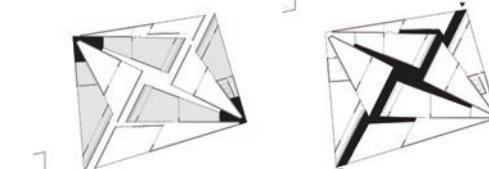
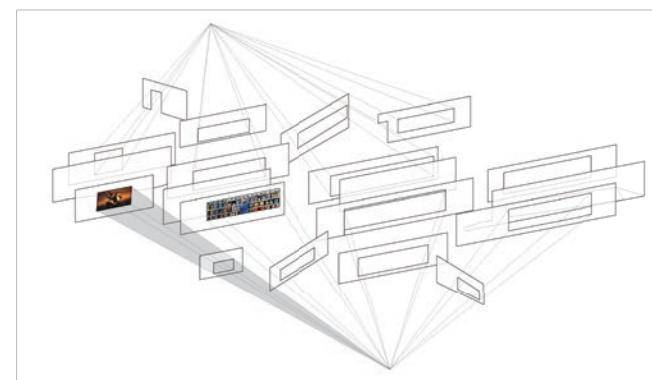
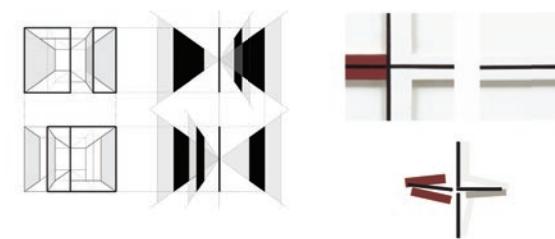


Project. Projection is a long-term research initiative. Humans perceive their environment through sensory neurons that transmit information to the cerebral cortex, triggering the secretion of various hormones that evoke emotions such as happiness, calmness, surprise, or fear. The Projection project explores how architectural "optical illusions" can be used to stimulate individuals and enrich spatial experiences. The research is divided into two parts: the first focuses on the design of an apartment building, while the second centers on a film archive.

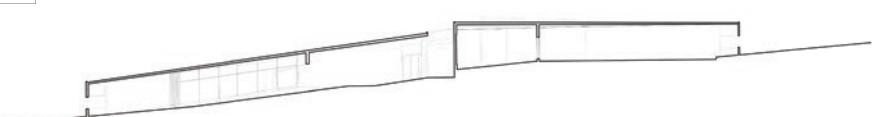
Part I. Apartment



Part II. Film Archive



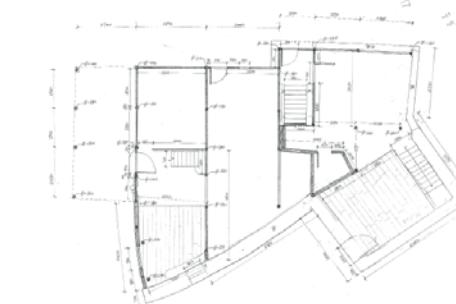
Plan
1. Archive
2. Cinema
3. Introduction Room
4. Model Showroom
5. Salon
6. Media Room
7. Souvenir Shop
8. Office
9. Storage
10. Study Room
11. Dark Room



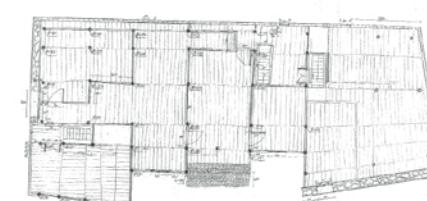
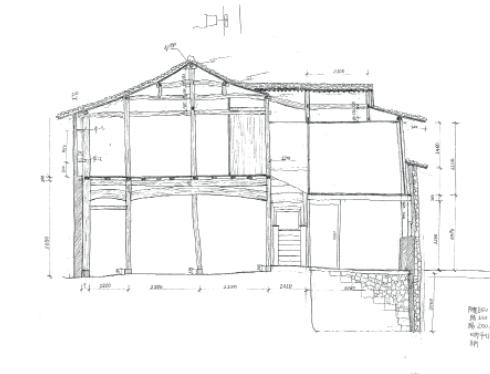
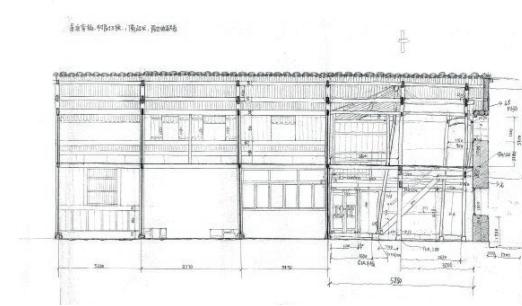
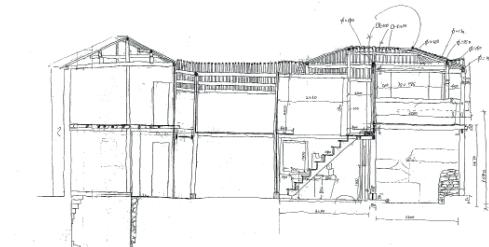
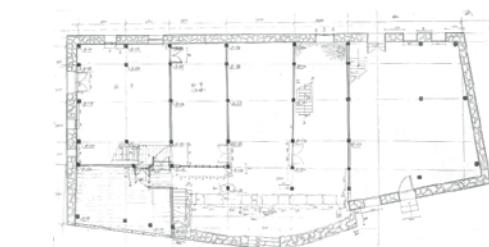
Drawings



Meterial: Toner
2019



History Heritage Measurement
Material: Charcoal
2021.10 - 2021.11



Translated from the poetry 《送王屋山人魏万还王屋》

2022

Material:Ipad(Procreate)

