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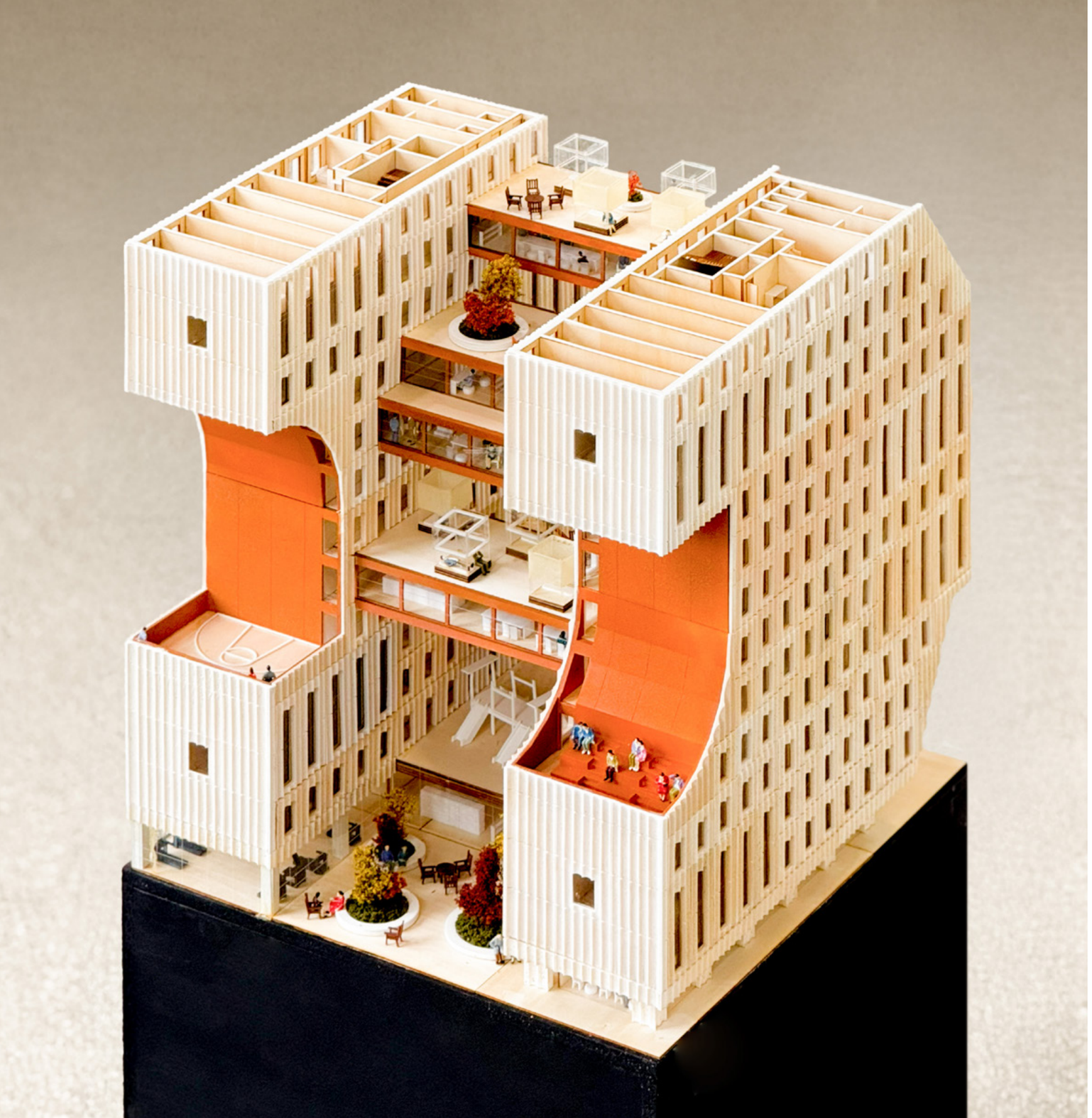


Summer Studio- Columbia University GSAPP MS.AAD

Life without Work, Work without Life

[Collective Housing in the Post-Pandemic Era]

After the pandemic, working from home became a normal part of everyday life and an important condition in choosing where and how to work. However, as work entered the domestic space, the boundary between labor and rest became increasingly unclear. The home became both an office and a shelter, often producing isolation, fatigue, and a loss of comfort.

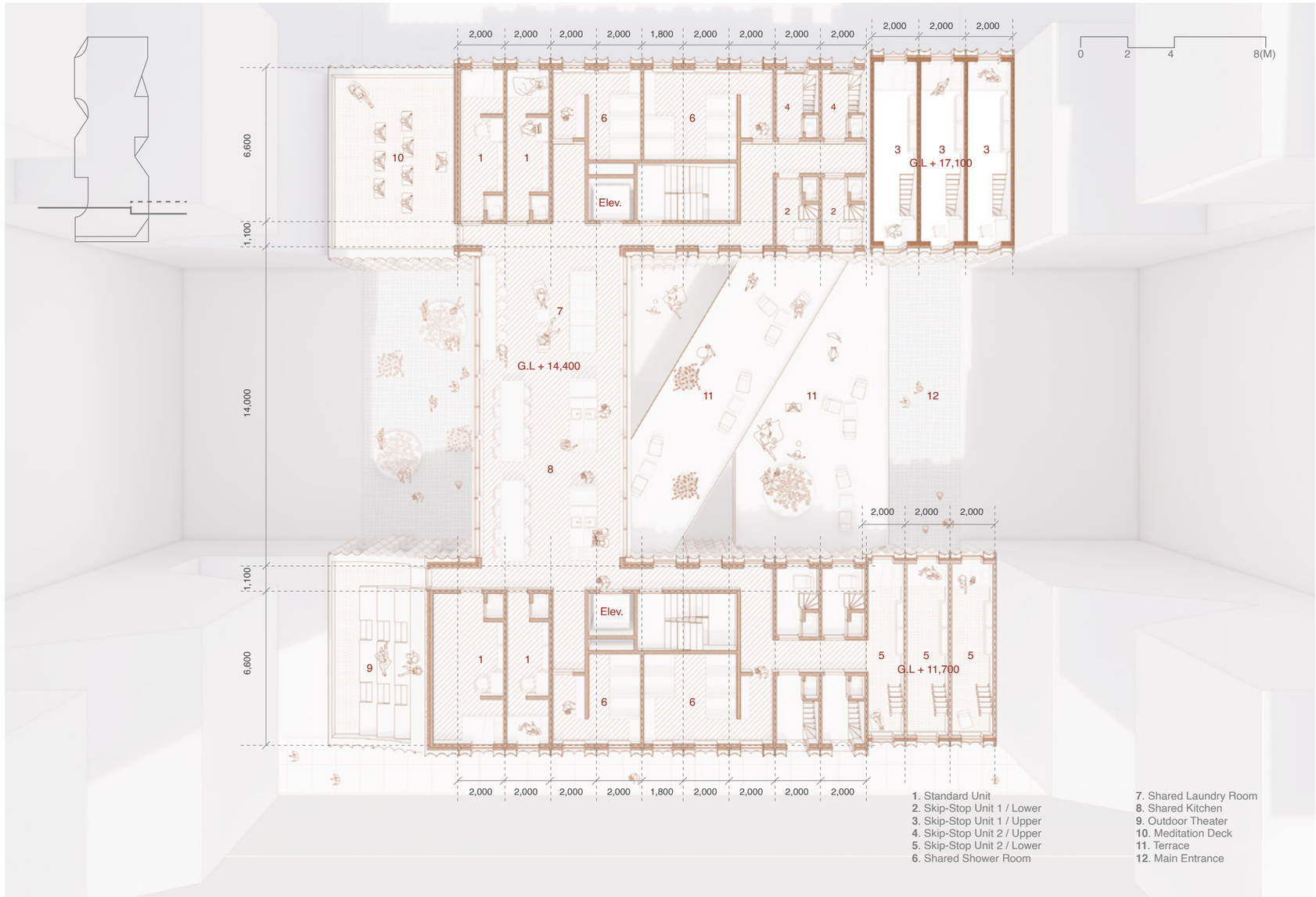
This project proposes a collective housing model for people who work from home. Instead of placing every function inside the private unit, shared kitchens, co-working areas, laundry rooms, and communal spaces are distributed throughout the building. By moving some domestic and work-related programs into collective areas, the private room can become a clearer and more comfortable space for rest.

Reinterpreting Steven Holl's Alphabet City H-Building, the project also uses skip-floor units to improve cross-ventilation and dual-aspect daylight, qualities that are often difficult to achieve in dense urban housing.

Year	Summer, 2025
Location	Anywhere
Type	Collective Housing
Category	Group of 2
Professor	Neeraj Bhatia
	[nb3330@columbia.edu]

From Extruded H to Porous Housing

This project reinterprets Steven Holl's Alphabet City H-Building by transforming its rigid, extruded H-shaped mass into a more porous housing system. The connecting bars are shifted and rotated, while openings are carved into the façade to allow daylight to reach the inner courtyards. Rather than rejecting the original H-Building, the project modifies its geometry to create a lighter, more open structure for collective living.

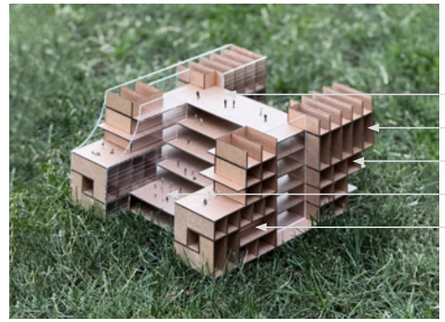


Plan G.L + 11,700 - 14,400 - 17,100

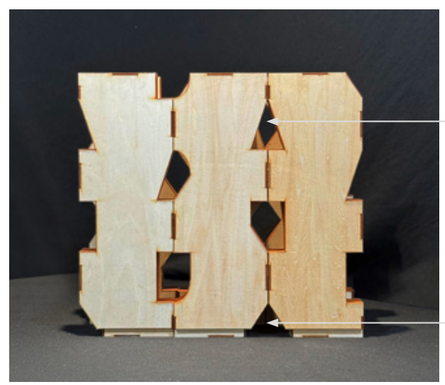
Study Models: From Unit to Urban Scale

The study models explore the project across multiple scales, beginning with the individual unit, expanding into clusters, and finally testing its relationship to the urban block. This process allows the housing system to be developed gradually as a flexible structure rather than a fixed building form.

Unit Study Model



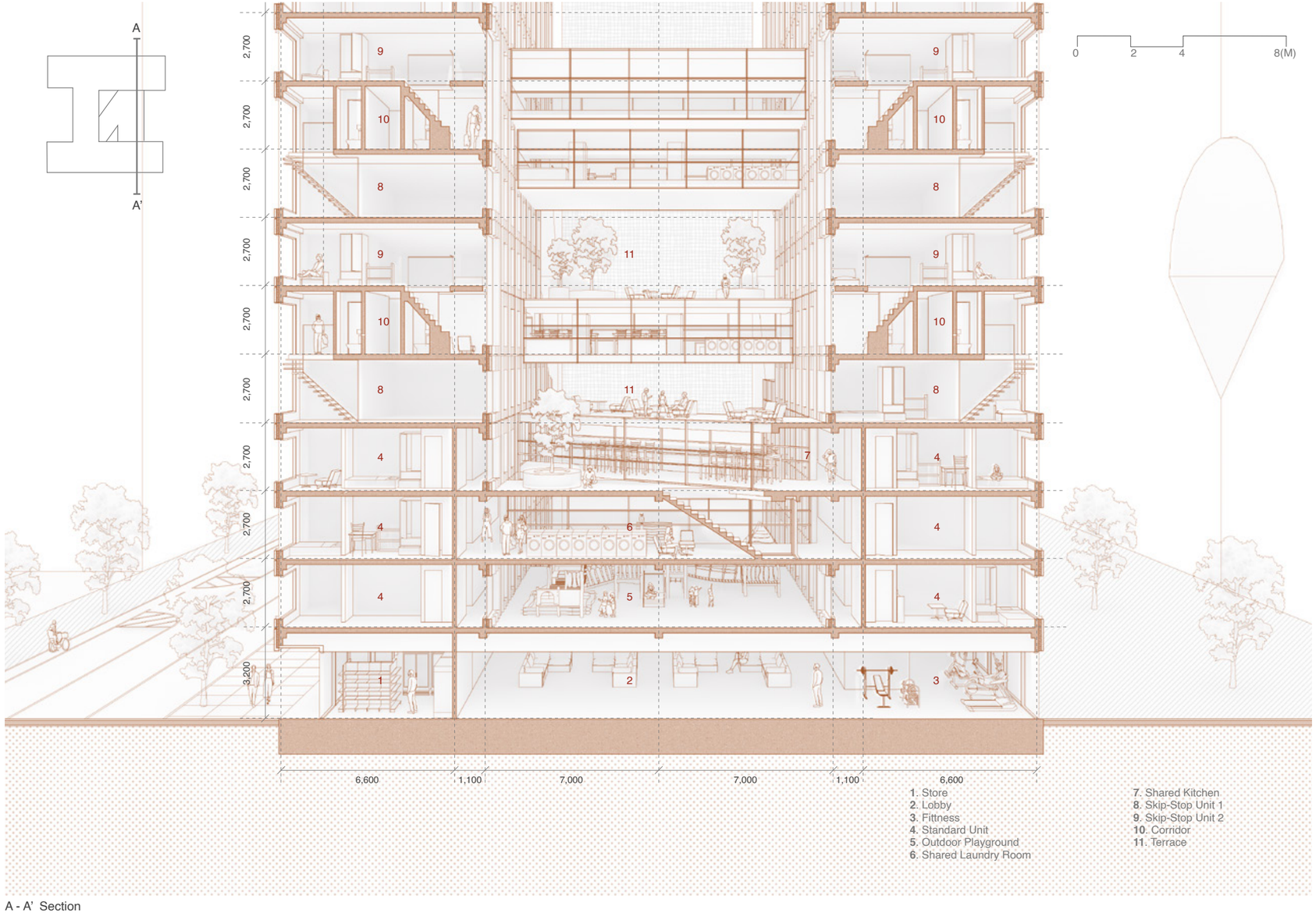
Cluster Study Model



Urban Scale Study Model

Sectional Living: Units, Voids, and Shared Terraces

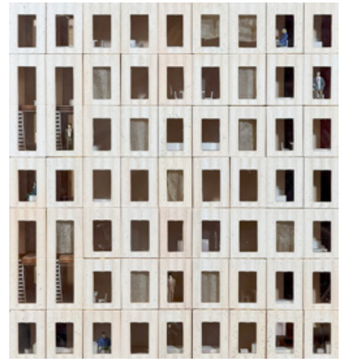
The section alternates standard units and skip-floor units every three levels, responding to the façade openings and internal circulation. Shared spaces and open terraces are placed between these units to improve comfort and create moments of encounter. By bringing light into the courtyard, the section strengthens the idea of dual-aspect living within a dense urban housing condition.

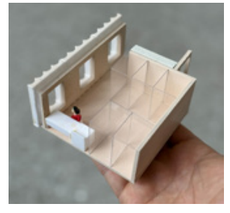


A - A' Section

Model as a Design Tool

producing a final model in one step, the project was studied through an iterative process of attaching, removing, and rearranging units, communal spaces, gyms, and façade openings. This hands-on process helped clarify the relationship between interior programs and the exterior expression of the building.





Fall Studio - Columbia University GSAPP MS.AAD

New Landscape of Rememberance

[Sacred Turn in Jeju Island Caves]

This project reimagines the sealed refuge caves of Seonheul Village, sites of civilian hiding during the Jeju 4·3 Incident, as a continuous landscape of memory and ecological care. Circular ponds replace metal fences, rainwater structures replenish the aquifer that supports local tangerine farms, and communal programs reconnect the caves with daily life. Without disturbing the remains, the proposal transforms the area into a living terrain of remembrance, water renewal, and livelihood.

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Year	Fall, 2025
Location	Jeju Island
Type	Landscape Architecture
Category	Group of 2
Professor	Ziad Zamaladine
	[mzj2104@columbia.edu]

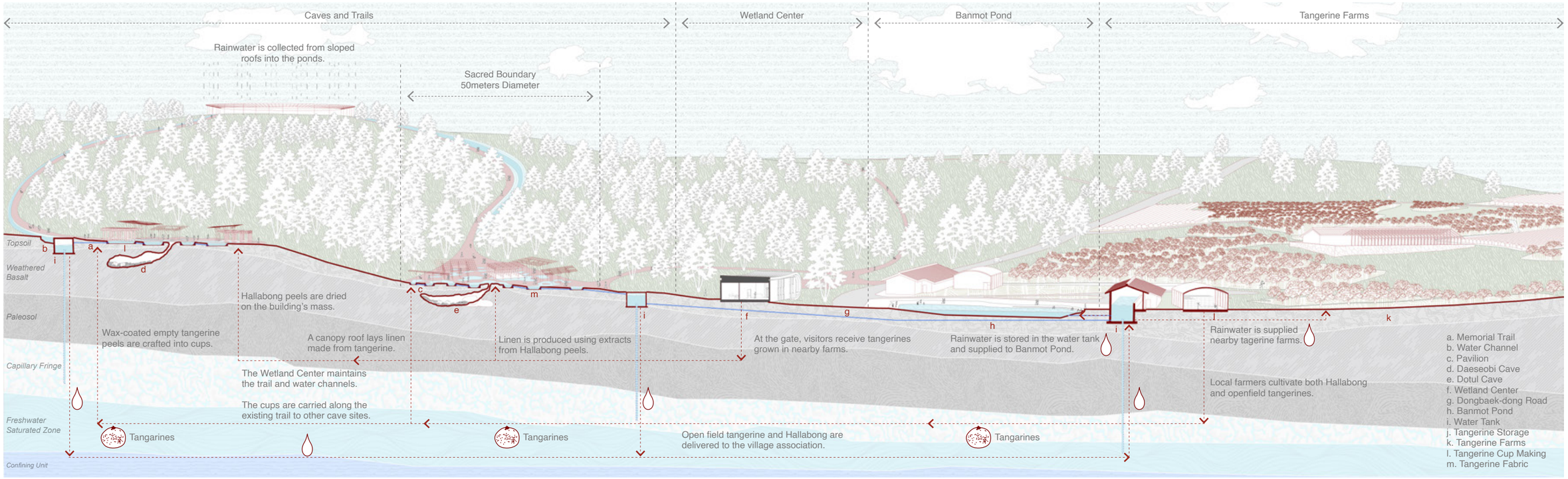
Jeju Island

Volcanic Topography, Tangerine Culture, and Hidden Water

A community-based system of slope-scaled ponds, rainwater canopies, and tangerine donations connects water cycles, agriculture, and ritual, transforming the caves from isolated memorials into active infrastructures of memory, livelihood, reflection, and shared care.

The project does not attempt to disturb or monumentalize the natural caves of Jeju, which once served as places of refuge, but instead creates a careful public ground around them where people can return, rest, and gather. again.

Rather than treating history as something closed, buried, or already resolved, the system brings these memories back to the surface through water, fruit, shade, and seasonal rituals. It does not claim to solve the trauma directly, instead, it offers a space where people can speak, remember, and think together



1. Mapping the Sacred Boundary of Seonheul Village's Caves

2. Villagers who took refuge and hid inside the caves during the incident

1. Mapping the Sacred Boundary of Seonheul Village's Caves
A site map: Three refuge caves with 50m boundaries that echo the villagers' watch radius protecting those inside.

2. Villagers who took refuge and hid inside the caves during the incident
During the Jeju 4·3 Incident, villagers hid in these caves as neighbors stood guard—fragile sanctuaries where protection meant risking one's life.

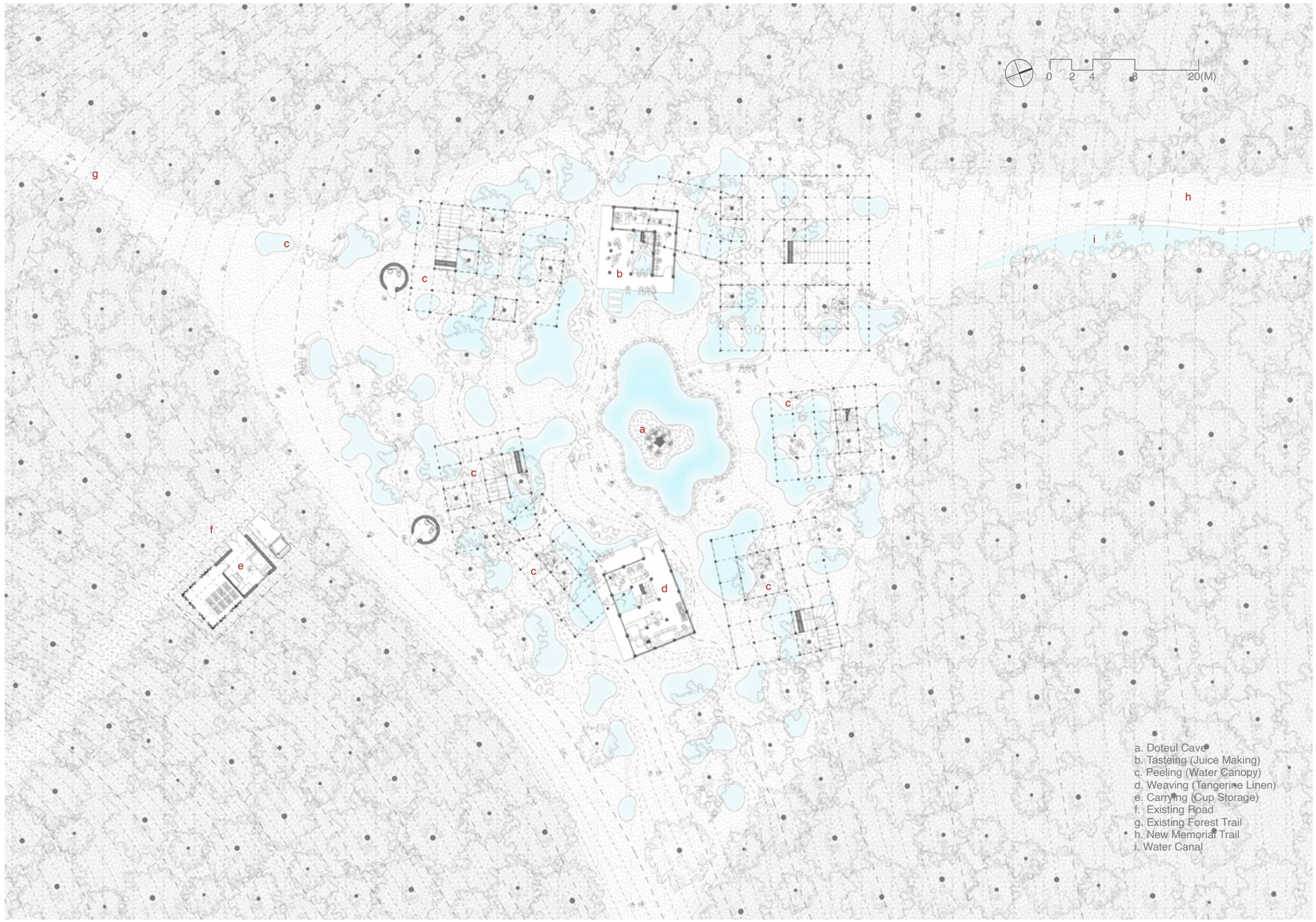
3. The current condition of the caves.
The cave entrances, still bearing their traces, are now sealed with iron bars.

3. The current condition of the caves.

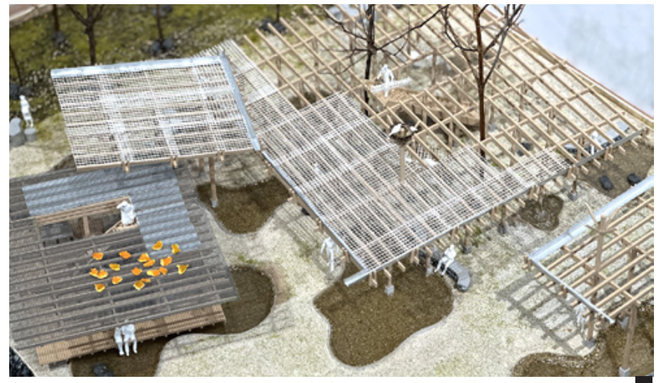
Cave, Pond, Canopy and Movement

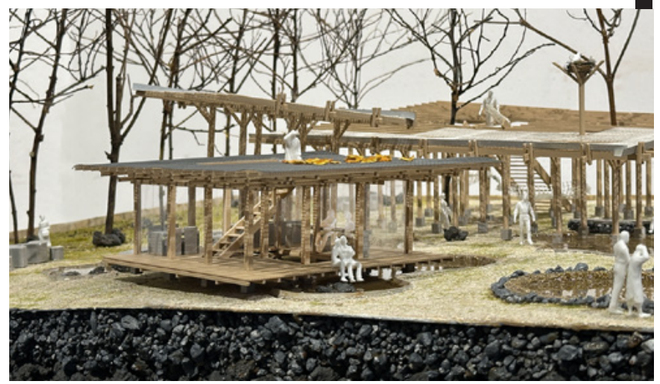
The ground plan arranges hierarchical ponds that deepen toward the cave, creating a clear spatial gradient and guiding movement without forcing a single path. Changes in depth and spacing slow visitors down, create brief pauses, and draw attention toward the cave entrance. Above, canopies act as quiet markers that collect rainwater and channel it into the pond system, making the water cycle legible on the ground.

Along the slope, tangerine programs unfold as small stations that connect fruit circulation back to the landscape. As visitors move downhill, water flow, tangerine exchange, and remembrance overlap, forming a continuous field where water, fruit, and memory converge around the cave.



a. Doteul Cave
b. Tasteing (Juice Making)
c. Peeling (Water Canopy)
d. Weaving (Tangerine Linen)
e. Carrying (Cup Storage)
f. Existing Road
g. Existing Forest Trail
h. New Memorial Trail
i. Water Canal

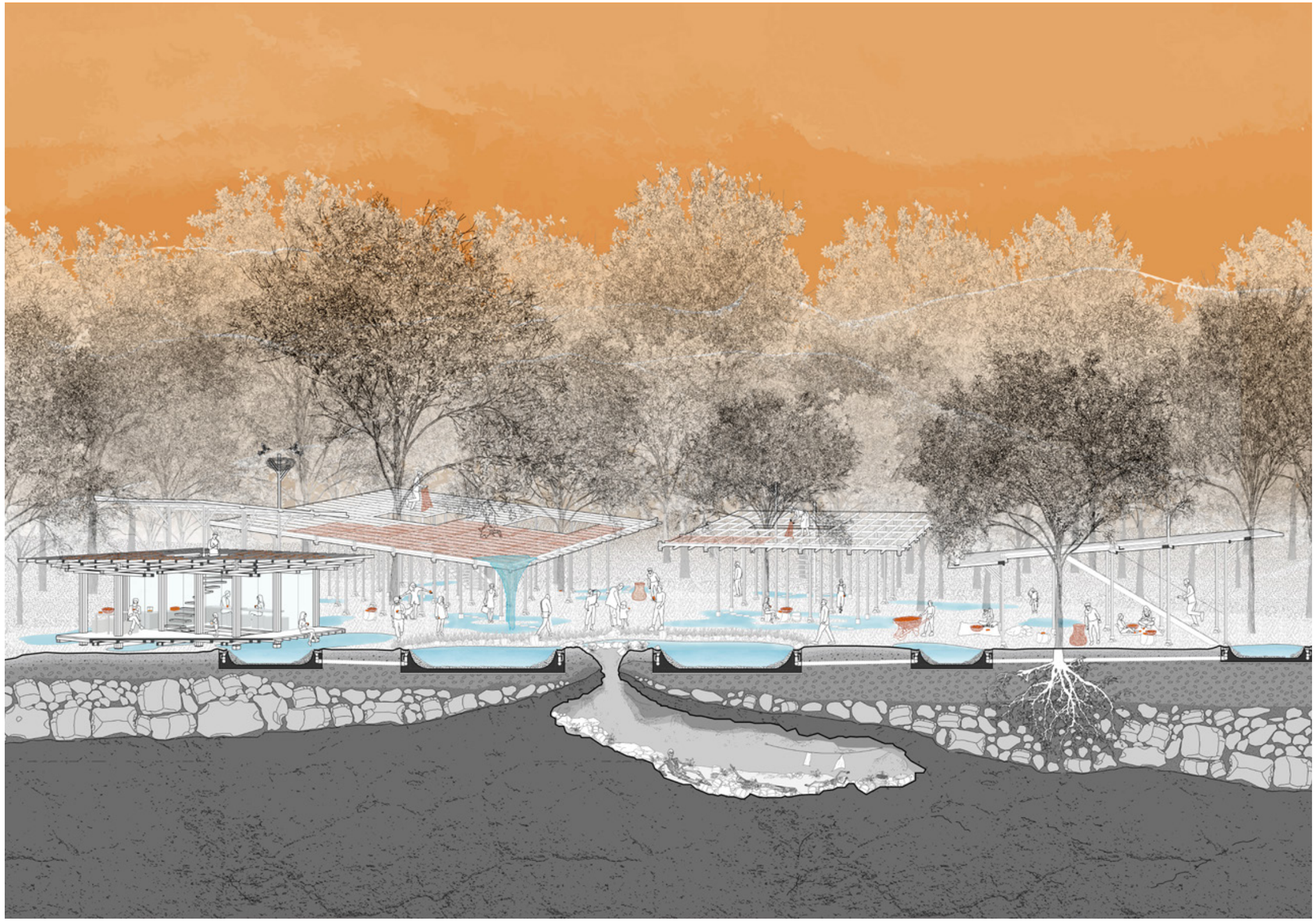




Section Perspective: New Landscape as Everyday Commons

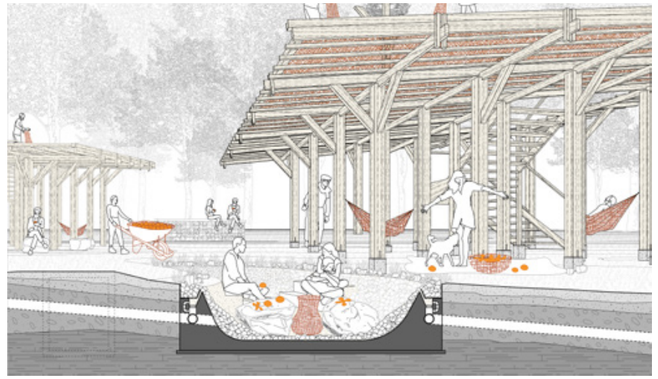
The cave anchors a communal terrain where ponds structure movement and light program masses gather in the forest. The cave remains intact while its surroundings become a shared landscape for activity and pause.

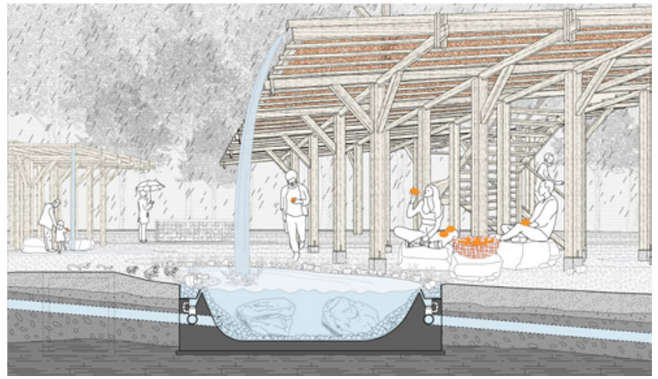
To further enhance this sense of contrast, the flowing curves are meticulously crafted using materials and forms that evoke lightness and brightness. These include the smooth texture of white stucco, the transparency and elegance of glass, and the subtle sophistication of white architectural mesh, all working in harmony to create an airy and luminous aesthetic.

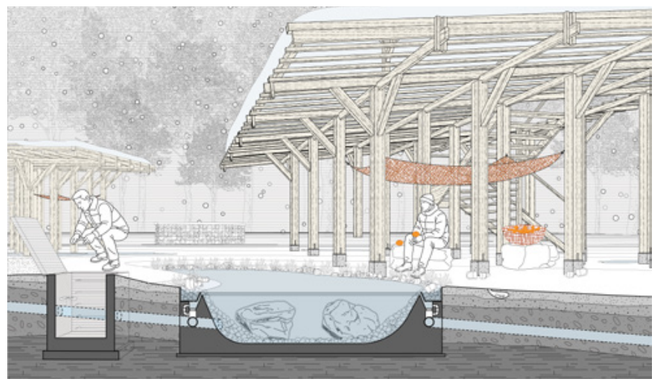


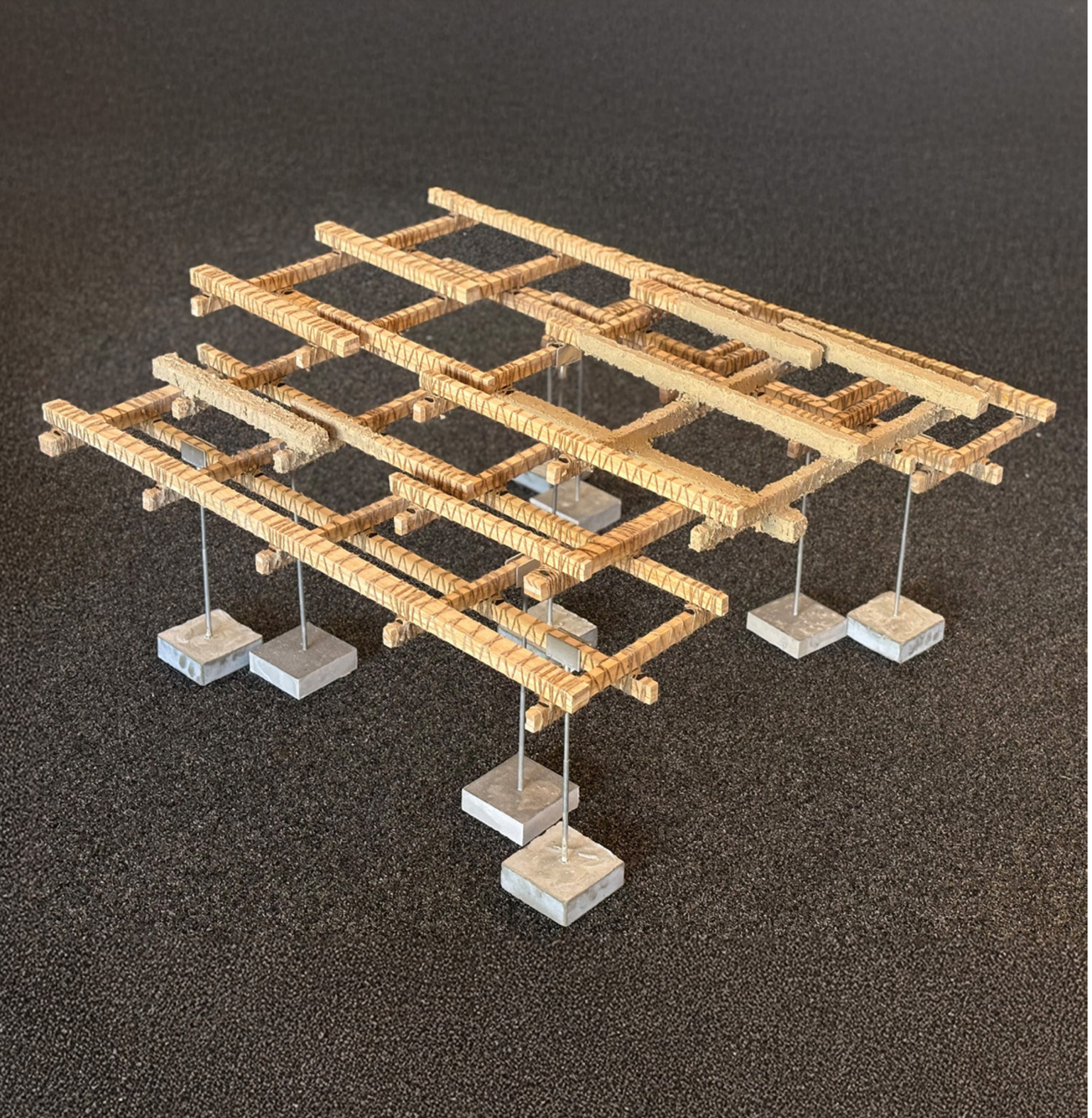
Water as Time

The pond cycles through dry, rainy, and freezing states: when dry, water sits low and the ground stays porous as birds perch and amphibians hide; when it rains, the canopy channels water into the pond, darkening the soil and activating both wildlife and visitors' attention; when it freezes, ice and frost quiet the site as birds seek shelter and amphibians remain dormant underground.









Spring Studio - Columbia University GSAPP MS.AAD

Reassembling the Irregular

[An Assembly System for Reclaimed Timber]

This project explores how irregular reclaimed timber can become building structure again without being fully cleaned, cut, and standardized. While deconstruction can preserve more material than demolition, the recovered timber still requires a large amount of labor before it can be reused. Sorting, denailing, and processing often become major bottlenecks, reducing both the length and the usability of the material.

Instead of forcing reclaimed timber to behave like new standardized lumber, the project proposes a three-layer beam system that works with irregularity. Timber pieces with different lengths, sections, and uneven surfaces are layered together, while earth or clay increases the contact area between members. Jute wrapping provides tensile resistance and holds the assembly together, and lime coating is tested as a protective exterior layer that can stabilize the surface and reduce exposure to harmful residues.

The project then expands from a single beam into an assembly system. Inspired by the spacer logic of traditional East Asian timber structures, rubber joints are introduced to increase contact area, absorb small tolerances, and connect irregular members before the final coating is applied. The result is an early prototype for rebuilding after deconstruction, where reclaimed timber does not need to become new material again in order to become structure.

Year	Sping, 2026
Type	Design as Research
Category	Individual
Professor	Lydia Kallipoliti
	[lk2495@columbia.edu]

Six Wood-Frame Houses: A Deconstruction Labor Analysis

supervise

Decon

process (denailing)

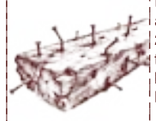
Demol

Clean

Non-Pro

Load

Process (Denailing)



Processing (denailing) accounted for an average of 21.62% of total labor, showing that post-processing is a major burden in making reclaimed lumber reusable.

Waste Wood from a Balloon-Frame Wooden House

Labor

Labor

Disposal

Hazardous

Other

Avg. 7.57%

Avg. 26.13%

Avg. 21.62%

Avg. 9.57%

Avg. 6.18%

Avg.

2x10 (4%) 126 Board Feet

2x4 (1.8%)

2x4 (2.1%)

Others(4%)

3x8 x 24' 188 Board Feet Sill(5.3%)

2x4 x 12' 627 Board Feet 1st floor joists(19.9%)

2x4 x 12' 627 Board Feet 1st floor Joists(19.9%)

2x4 x 18' 756 Board Feet Full-height exterior studs (24%)

2x6 x 4.5 692 Board Feet Common rafters(21.6%)

Net Deconstruction Cost

$53.19/SF

Greqing

Sales&Facality

Storage

Disposal

Average Salvage Value

Hazardous

Other

$5.36/SF

$6.47/SF

0.0($/sf)

9.0(%/sf)

24' X 36' 2Fl Balloon Frame House

Comparison Between Demolition and Deconstruction Costs

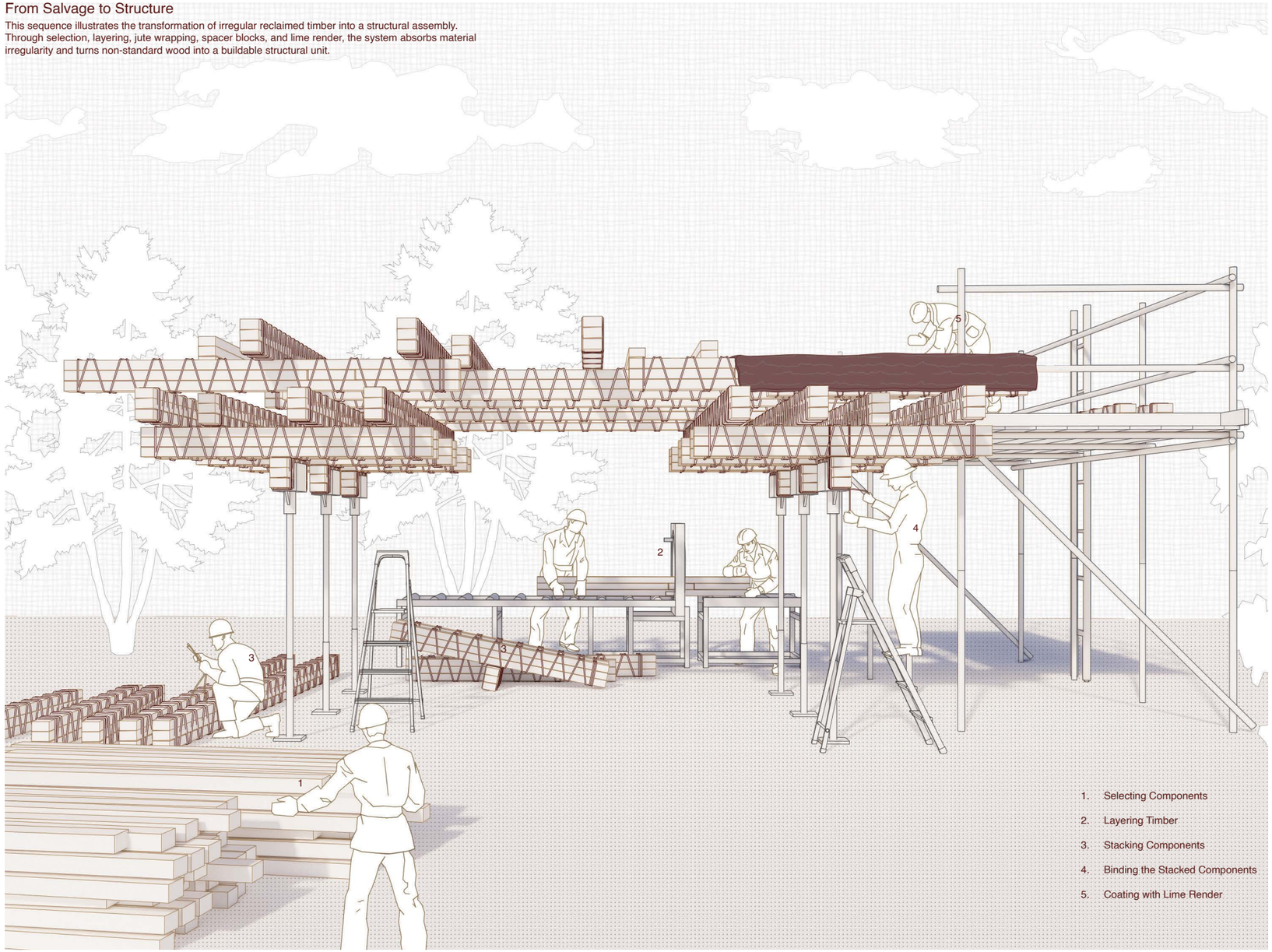
House Case Index

901	3650
711	14
2930	2812

0 5 10 15 20 25 30 35 40(%)

From Salvage to Structure

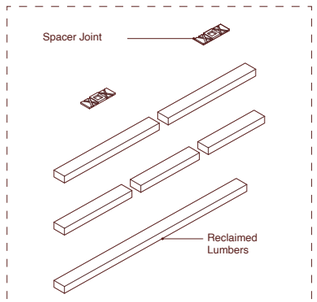
This sequence illustrates the transformation of irregular reclaimed timber into a structural assembly. Through selection, layering, jute wrapping, spacer blocks, and lime render, the system absorbs material irregularity and turns non-standard wood into a buildable structural unit.



1. Selecting Components
2. Layering Timber
3. Stacking Components
4. Binding the Stacked Components
5. Coating with Lime Render

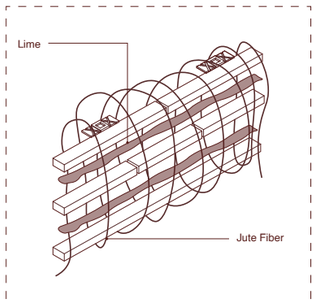
1.Selecting Components

Reclaimed timber pieces, spacer blocks, and binding materials are selected according to their size, condition, and structural potential.



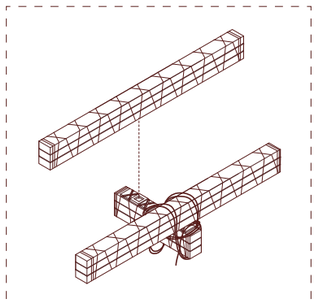
2. Layering

Timber, jute rope, lime between Timber and spacer blocks are layered together to absorb uneven surfaces and create contact between irregular pieces.



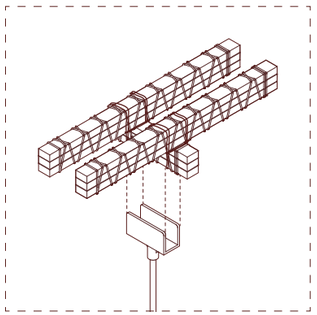
3.Stacking Units

The repeated stacking process transforms short or uneven reclaimed members into a larger structural system.



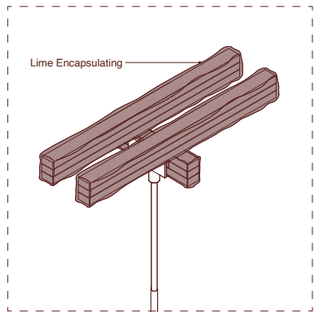
4.Placing on Columns

The assembled units are placed onto columns, turning the material experiment into an architectural support system.



5.Encapsulating

Lime render encapsulates the reclaimed timber, limiting direct exposure to possible contaminants, old coatings, and residues within the salvaged wood.



Three-Layer Timber Assembly

This system explains the three-layer timber assembly of the project. Irregular reclaimed wood is organized as layered timber lamellae rather than one standardized member.

Clay is placed between the lamellae to fill gaps, adjust uneven surfaces, and increase contact area. This allows reclaimed wood with some remaining metal hardware to be used, reducing the need for high-resolution denailing.

Jute fiber wraps and binds the layered timber, while clay encapsulation covers the surface, reducing exposure and turning separate pieces into one continuous material body.

Timber Lamellae

Layered reclaimed timber pieces that form the main structural body of the assembly.

Timber Lamellae

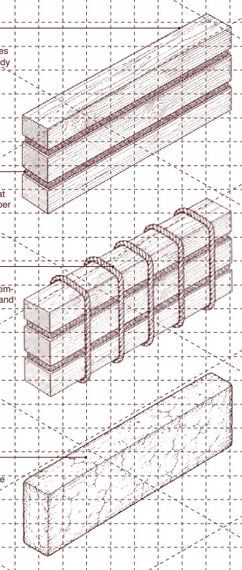
A leveling and contact layer that fills gaps between irregular timber surfaces.

Jute Fiber

A binding layer that wraps the timber, holds the pieces together, and adds tensile support.

Clay Encapsulation

An outer coating that covers the reclaimed wood, reduces exposure, and turns separate pieces into one continuous assembly.



1. Clay Between Timber Layers

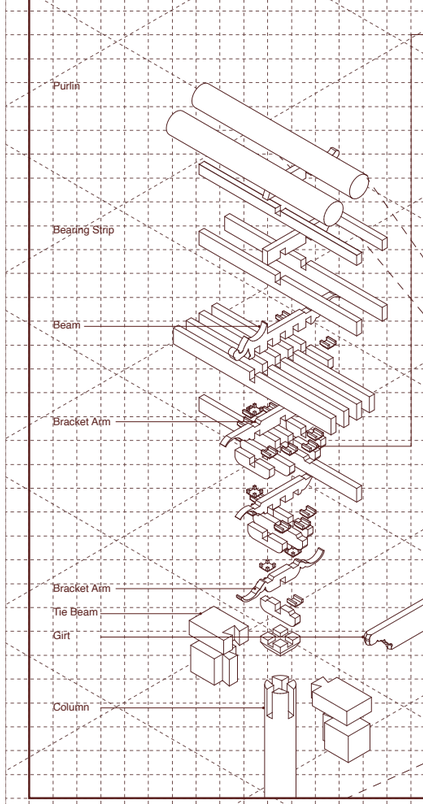
At this stage, clay is placed only between the timber lamellae. It fills gaps between irregular wood surfaces, adjusts small height differences, and increases the contact area between pieces. The assembly is not fully bound yet, but the clay begins to turn uneven timber into a more stable layered structure.

2. Jute Fiber Wrapping

In this state, jute fiber wraps around the layered timber and clay. The wrapping holds the pieces together, prevents the layers from separating, and adds tensile support. Before the outer coating is applied, it works as a binding system that stabilizes the assembly.

3. Full Clay Encapsulation

In the final state, clay covers the entire assembly. This outer coating helps reduce the exposure or leakage of harmful paint and lead that may remain on reclaimed wood surfaces. It also covers remaining metal hardware and works as a protective layer, making the assembly safer to handle.

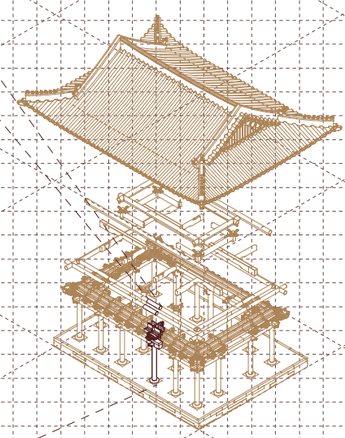


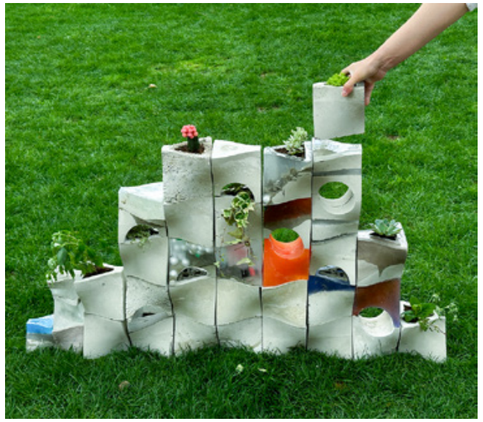
Spacer Block

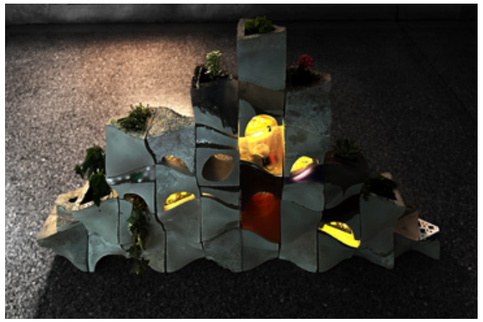
The spacer block in the traditional timber bracket system acts as a small but important intermediate element.

It sits between larger timber pieces, adjusting height differences, increasing contact area, and helping compression forces move through layers.

In this project, the same logic is applied to irregular reclaimed wood. By mediating differences between uneven members, the spacer block stabilizes contact and turns irregular pieces into a buildable structural system.







Project IV - Columbia University GSAPP MS.AAD

Modular_1: Living Block!

[A Shelter Designed with Thickness-Independent Origami Techniques]

This project reinterprets the concrete block, traditionally used only as a structural element, as a living wall. The designed living wall produces a façade that continuously changes over time.

Each concrete block is formed with soft, curved geometries that capture shifting light and shadow, allowing the façade to constantly present different expressions. At the same time, each block functions as a planter box, becoming a habitat for vegetation. As plants grow and change with the seasons, they further amplify the transformation of the façade.

The system is composed of two modules: a base module and an upper module. The base module can integrate lighting, while the upper module forms a reflective concrete surface that softens, diffuses, and retains light. This lighting system supports plant growth as plant lighting and, at night, illuminates the pavilion.

The project is realized as a pavilion based on this modular system. Two modules combine into a single set to form space, and after the exhibition, each set can be separated into individual units that operate independently.

Each block begins with a base mixture of concrete with perlite and is further developed through the inclusion of materials such as resin, cork, and recycled concrete byproducts. This approach creates material diversity while introducing a more playful and lively urban atmosphere through the integration of vegetation.

Year	Spring, 2026
Location	Anywhere
Type	Flower Pot, Lighting Box
Category	Group of 4