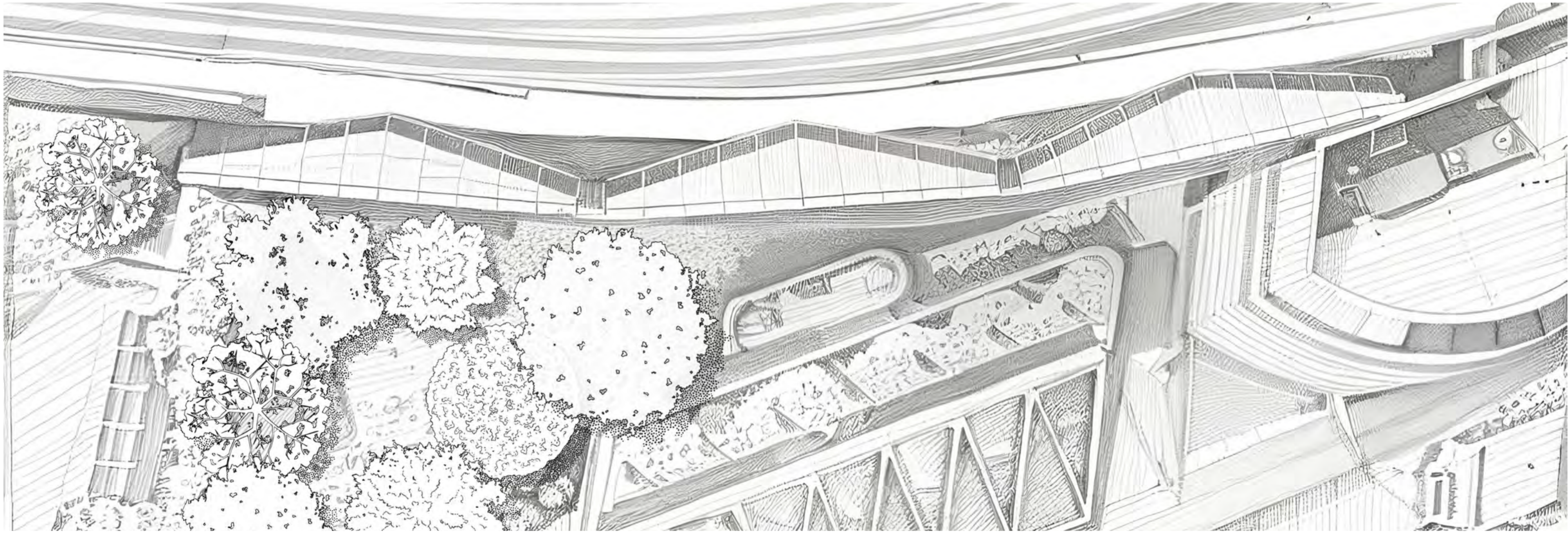


Viewing Instructions

This portfolio contains a large number of line drawings and detailed layers. Previewing the file with certain tools (such as browser-based viewers or quick-look functions) may cause issues such as overlapping, blurring, or missing graphics. For the best viewing experience, please open the file using Adobe Acrobat. Thank you for your understanding and support

Signs for change



Designed by: Zhuoya Guo
Main tutor: Tania Lopez Winkler
Studio: SuperMatter

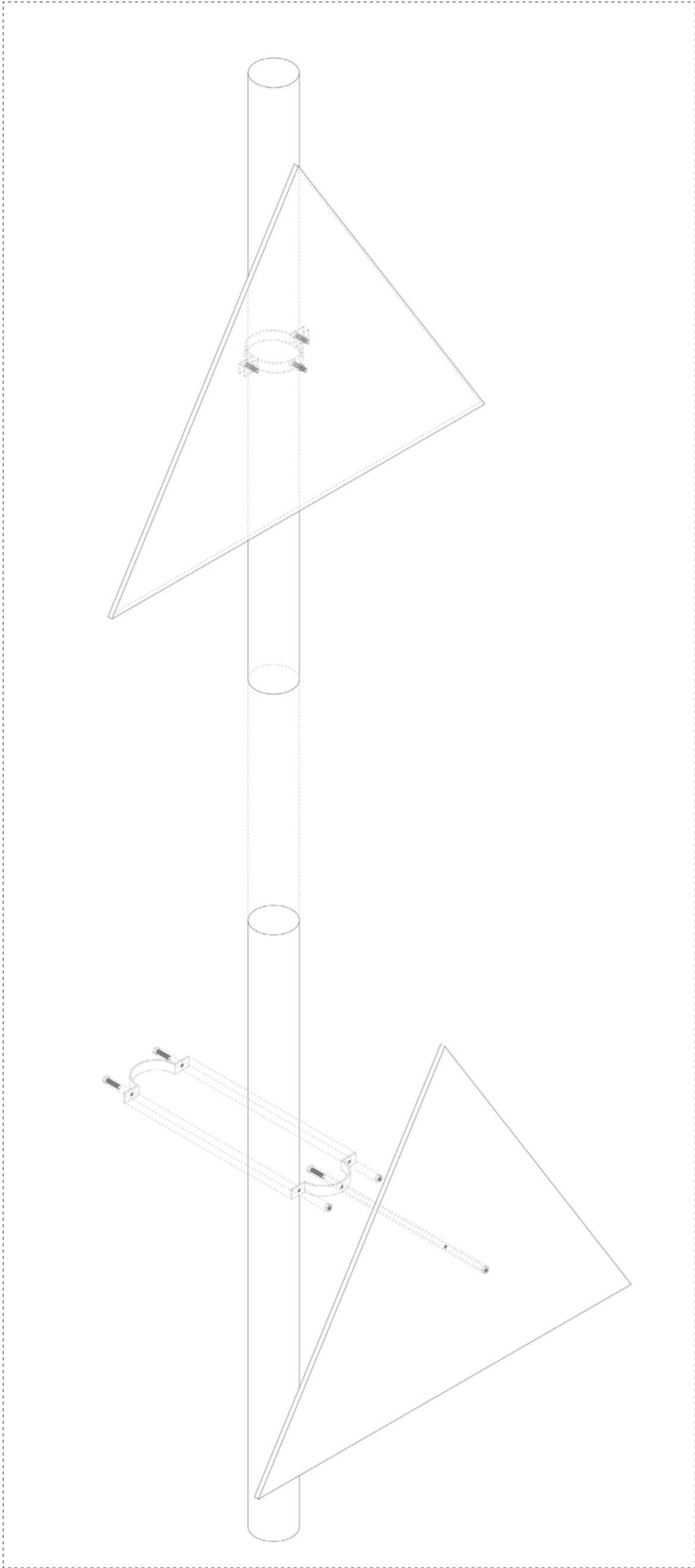
Part I

Initiation Phase

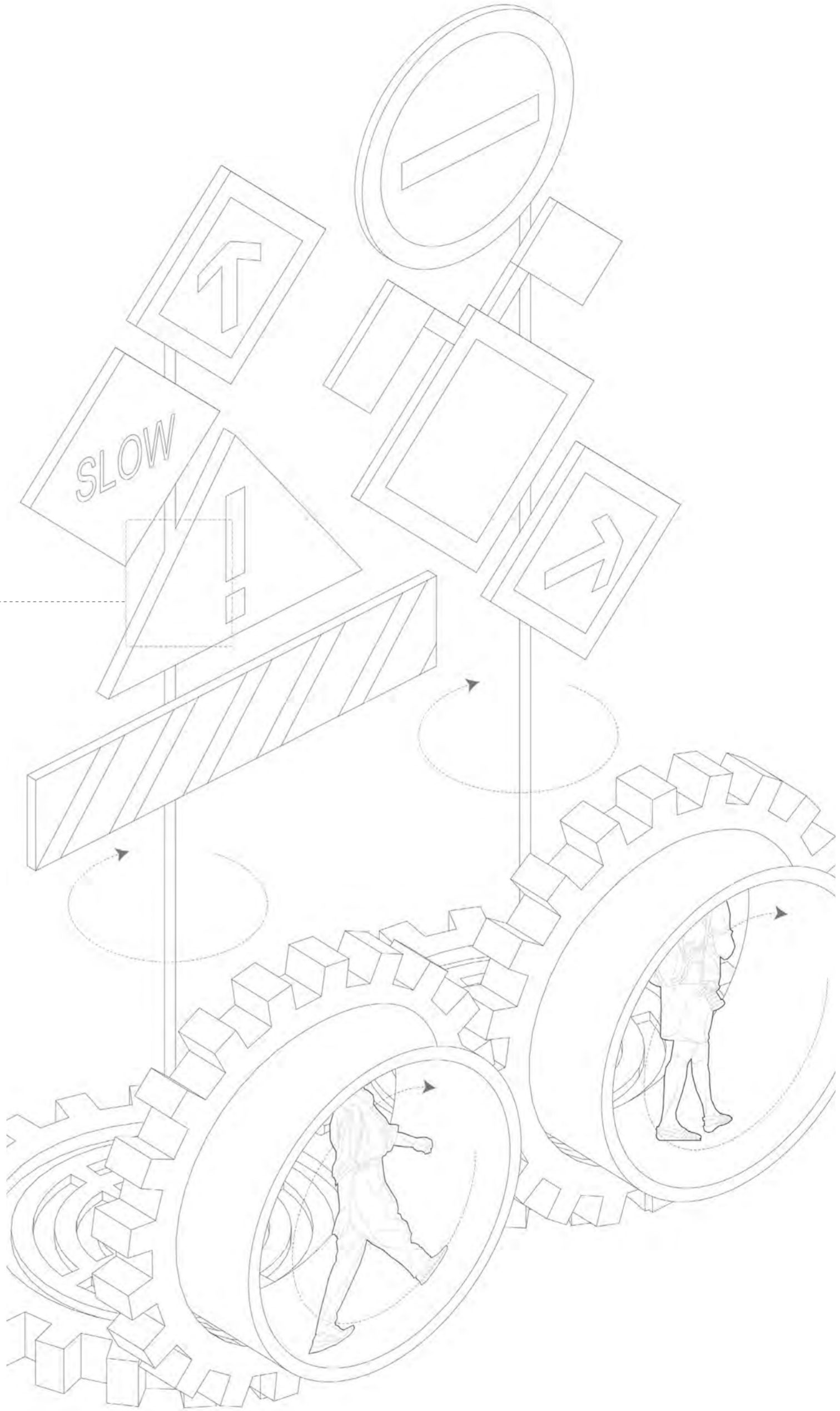
Vision



Operating Scheme



Joint Detail



Operating Principle

Manifesto

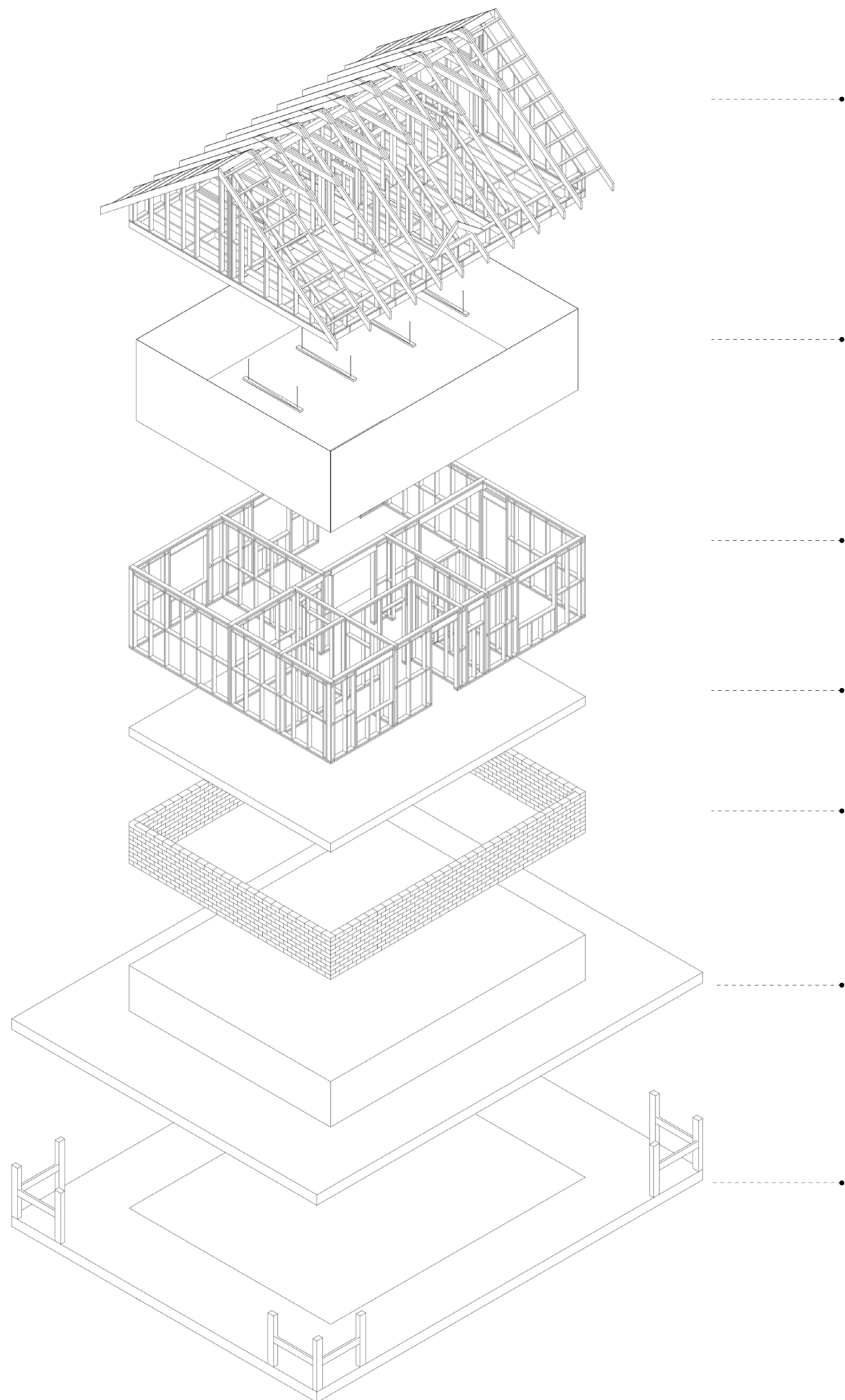
"A critique of cultural commercialization, identifying repetition as a tool. Through dynamic billboards, it visualizes workers' rights demands and provides a platform for workers to express their rights."



Part II

Design Strategy

Fcade strategy

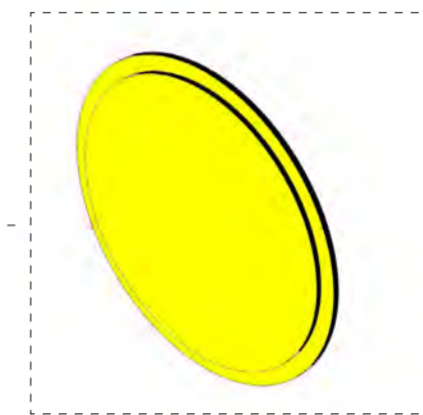


stage of house structural construction

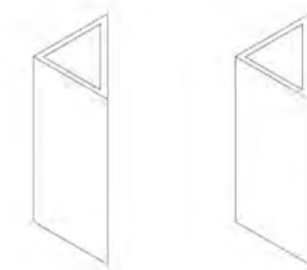
stage 6
roof



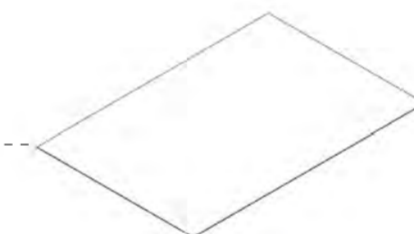
stage 7
finishes



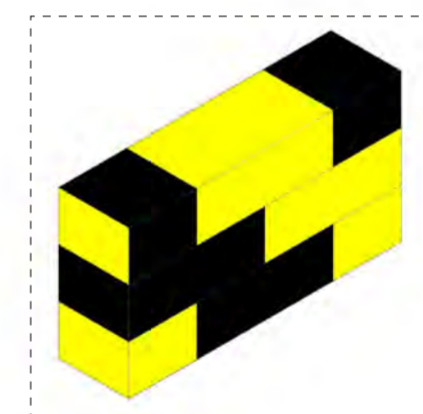
stage 5
wall frame



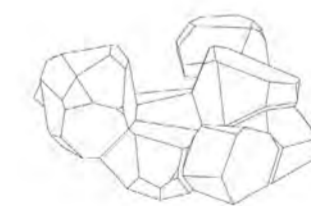
stage 4
floor



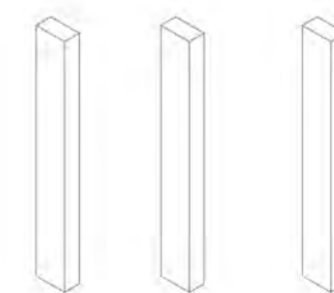
stage 3
base walls



stage 2
footings



stage 1
setting out



Representative Material

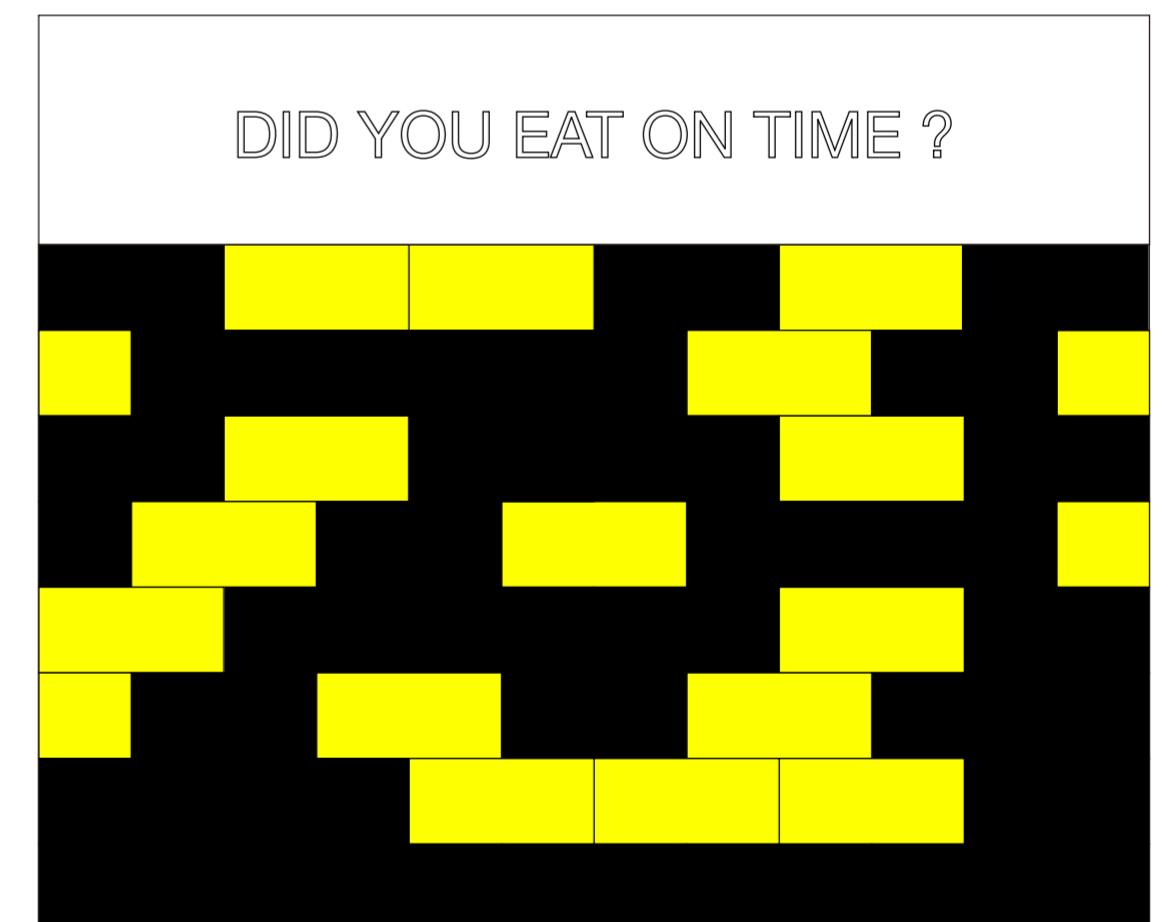
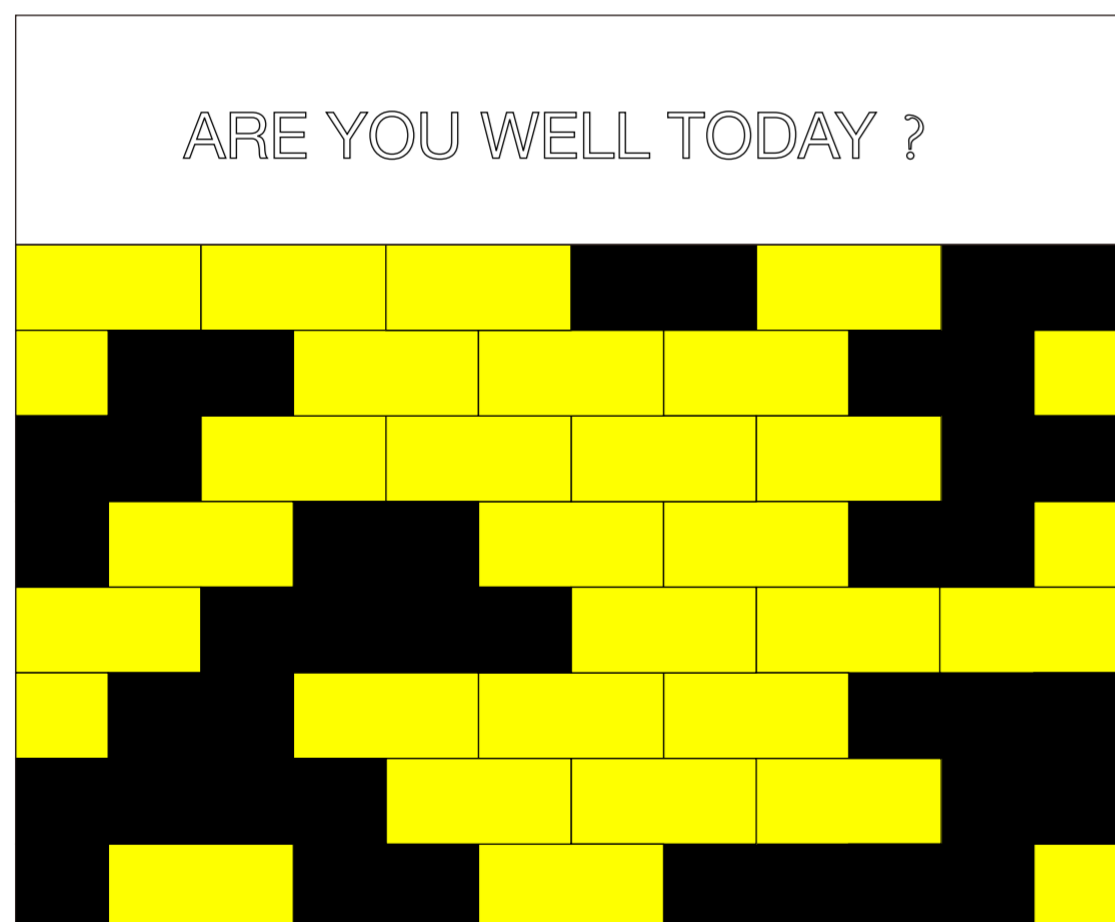
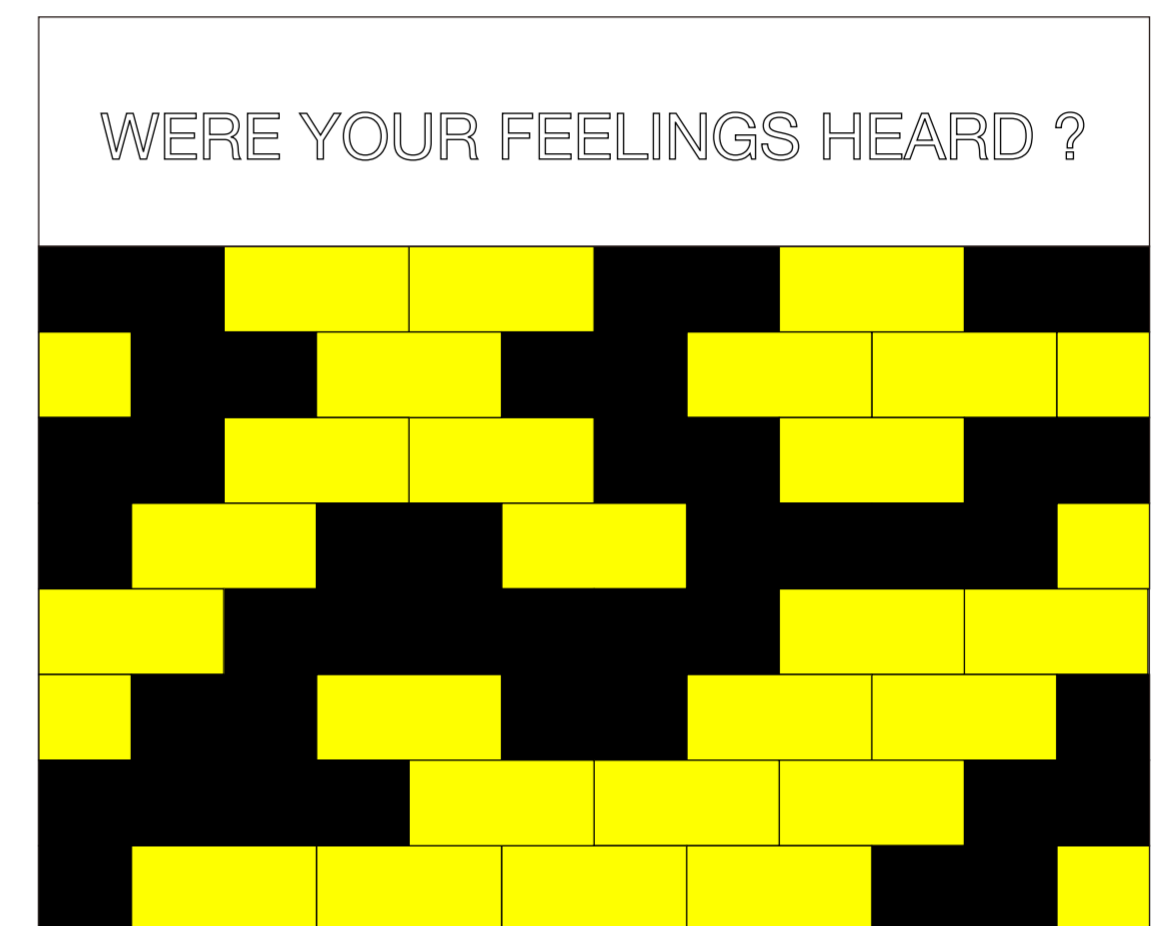
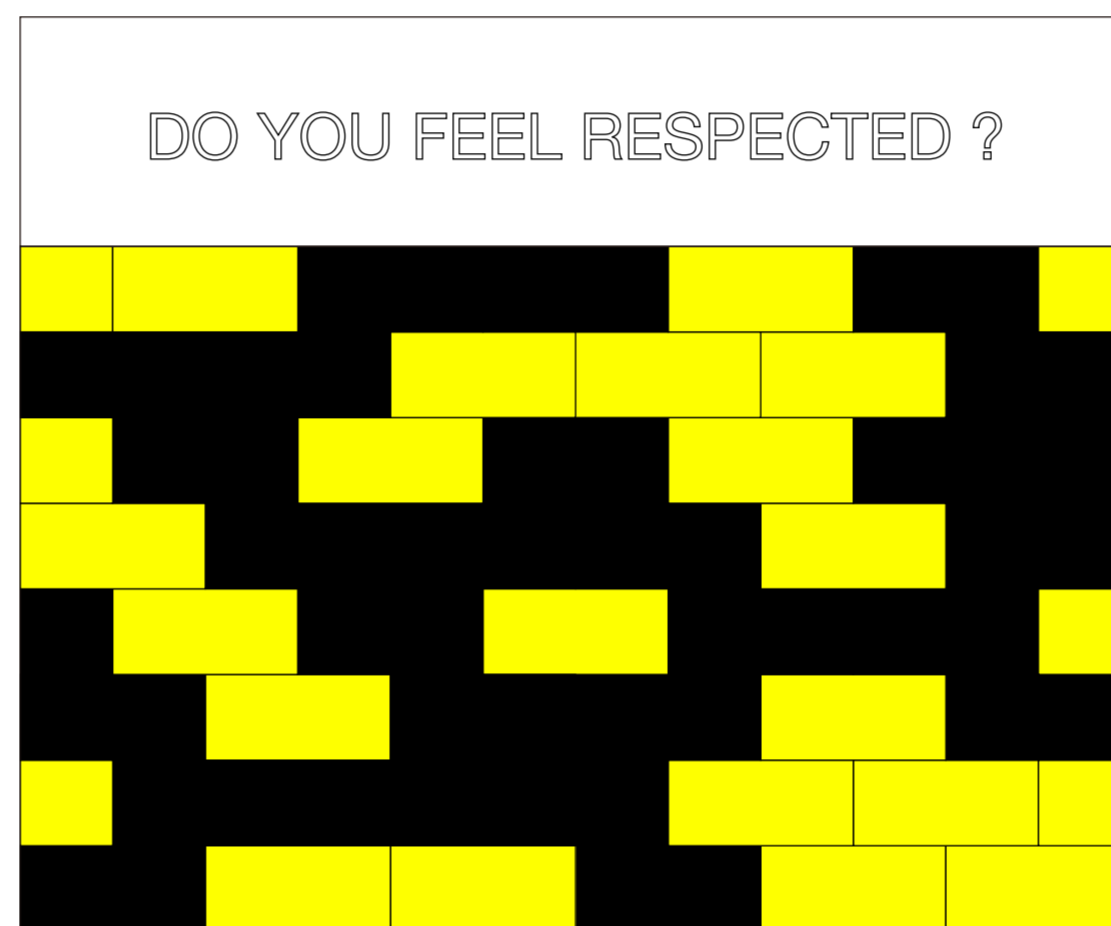
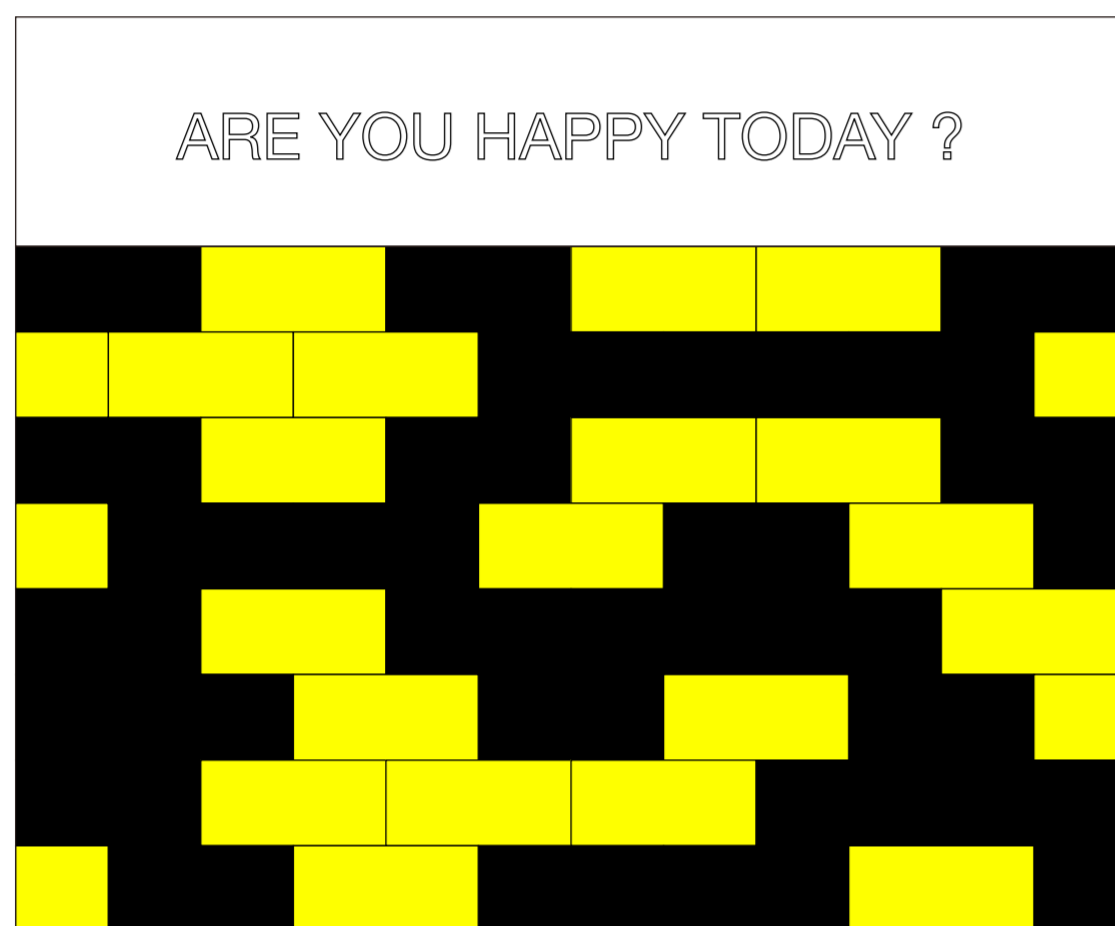
Brick Facade

By rotating the dual-colored bricks, workers express their stance—making collective intentions visible to both management and the public.



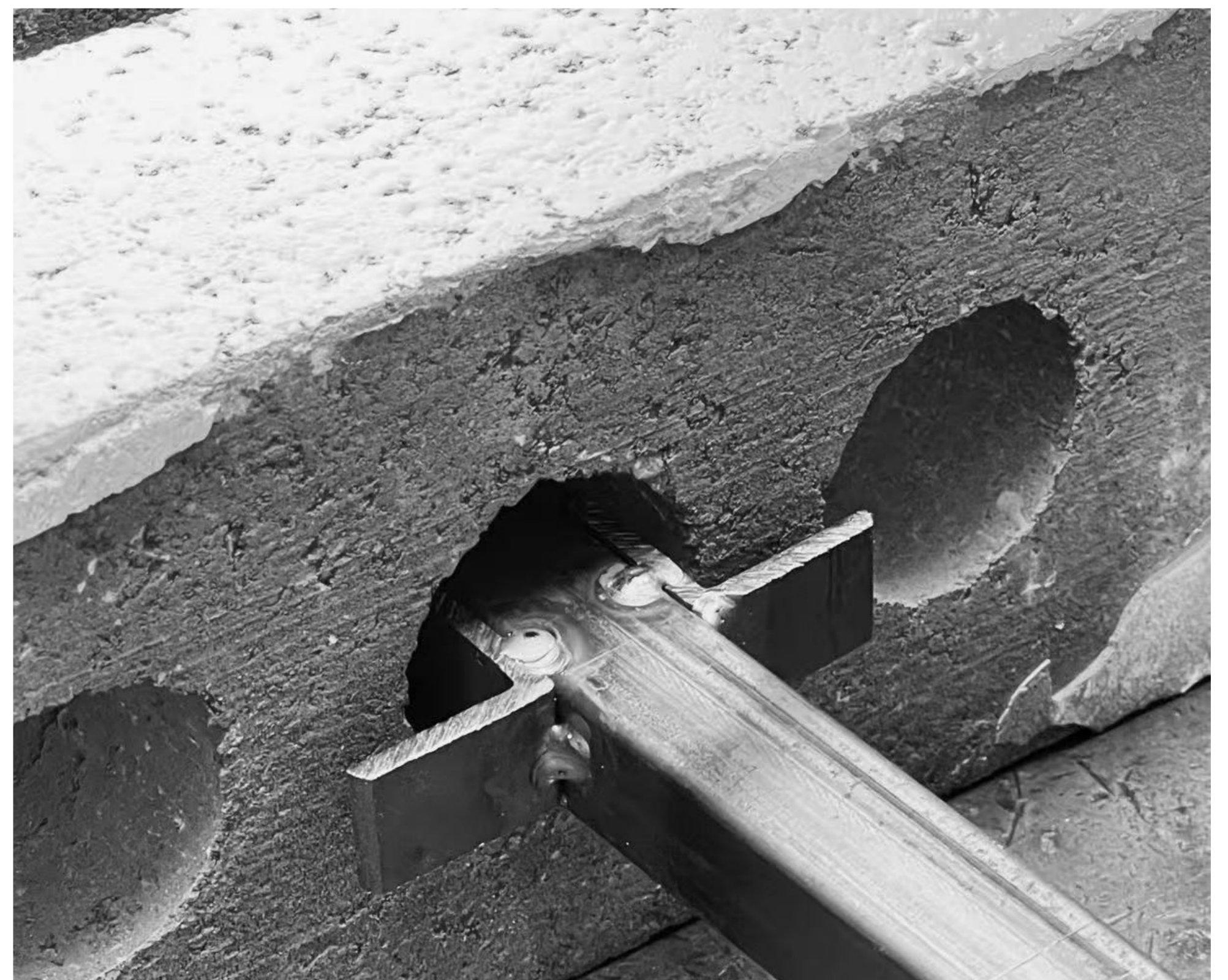
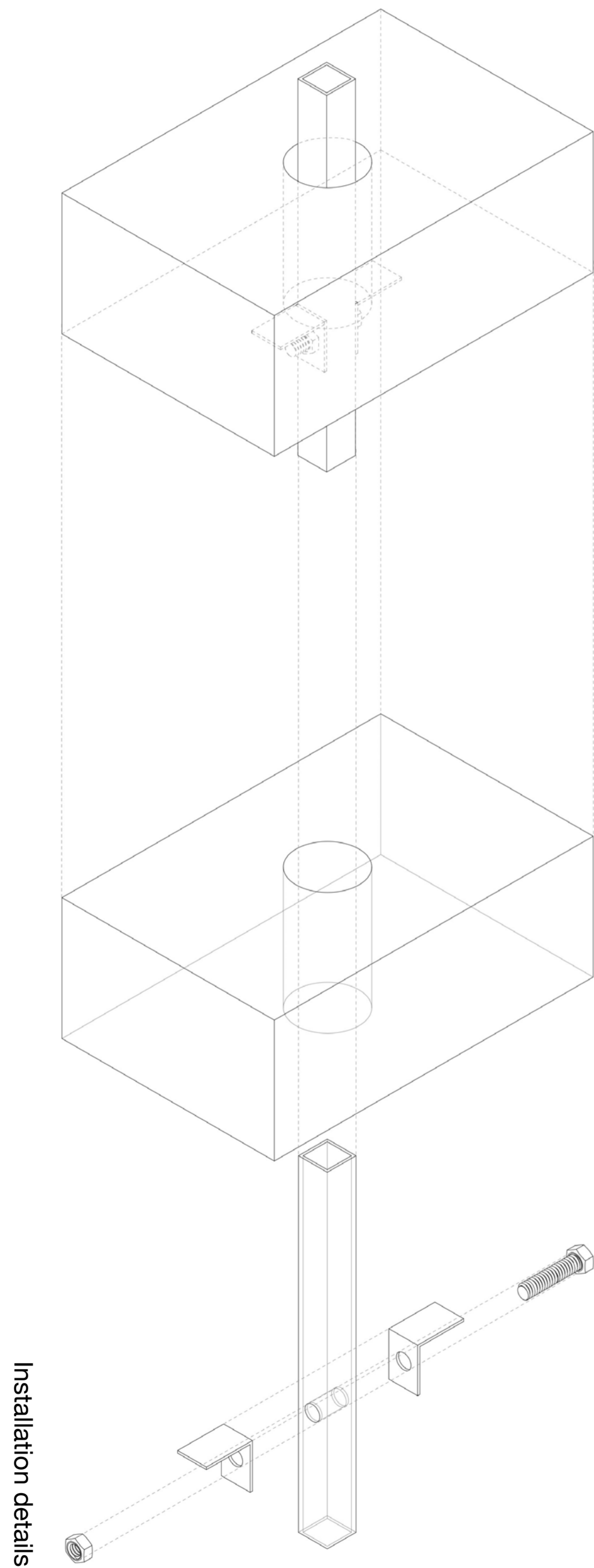
Questions

The questions are displayed and updated daily on the screen to help management and the public better understand workers' emotions and daily lives, strengthen communication, and improve their overall well-being and mental health.



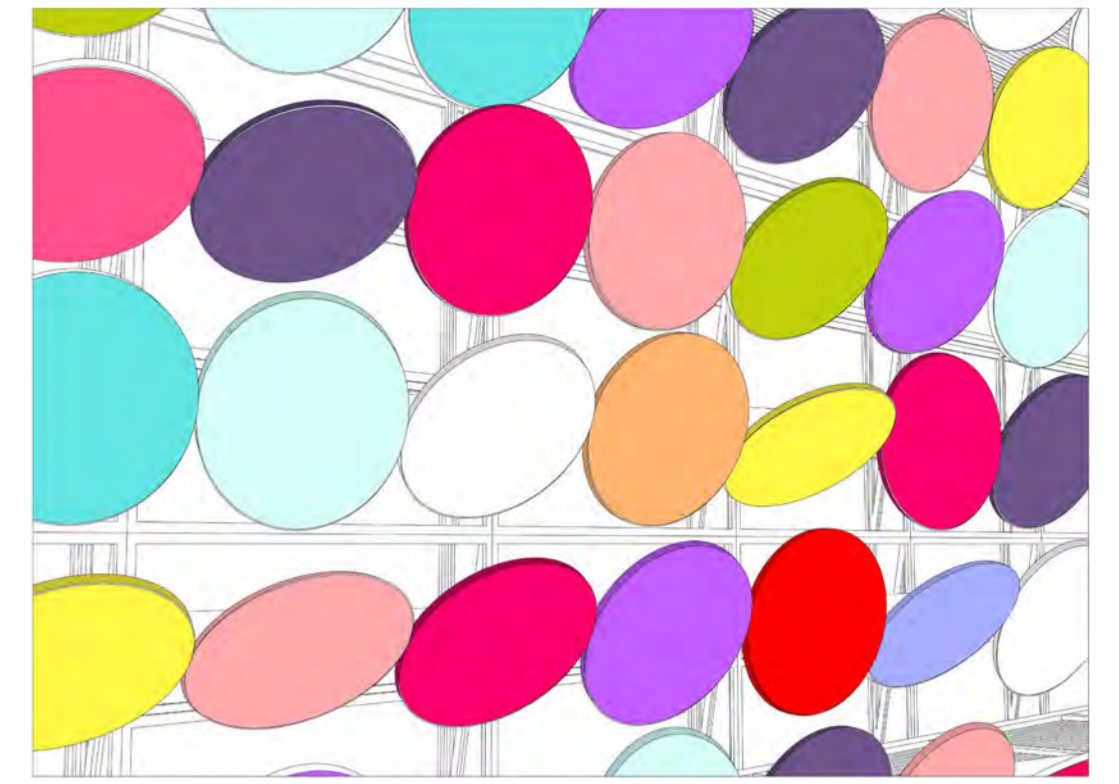
Brick Structure

The rotatable bricks are not only aesthetically pleasing, but also provide maximum privacy while allowing flexible control of light and airflow, and effectively reducing street noise.

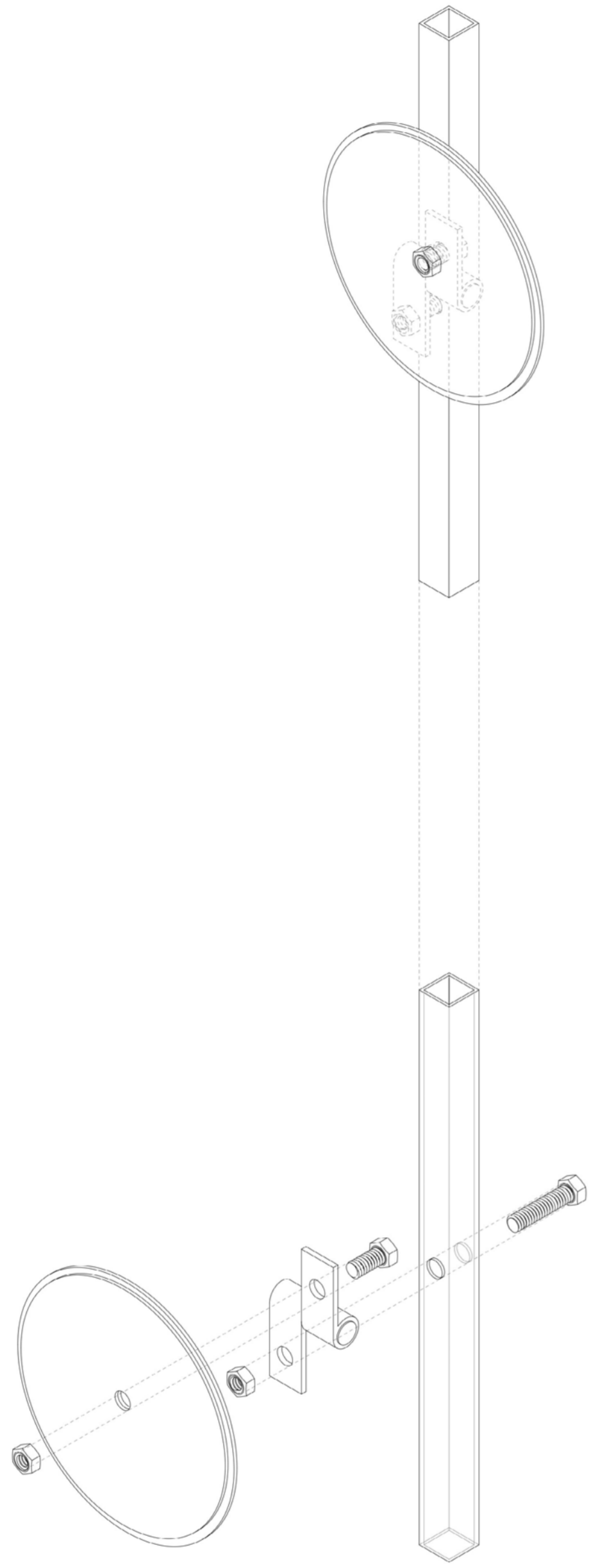


Lid Facade

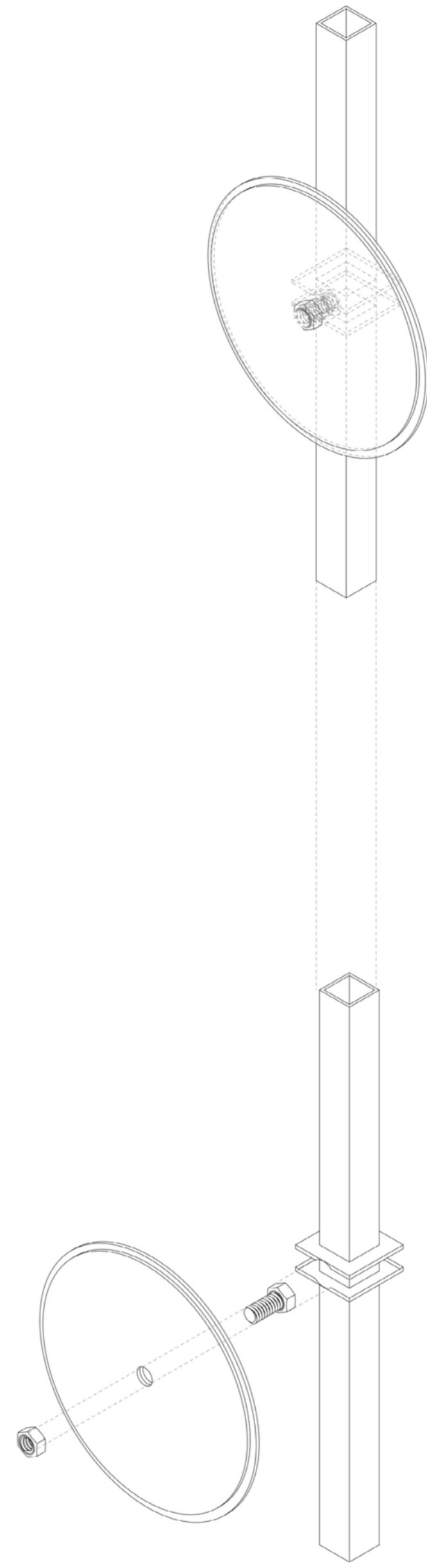
The variation in lid colors symbolizes the diverse national backgrounds of the workers, highlighting the union's international composition.



Detail



Lid structure 1



Lid structure 2

Lid Structure 1



A rotatable lid that can be adjusted according to the angle of sunlight and wind when necessary, in order to regulate indoor lighting and airflow.



Lid Structure 2



An alternative rotation mechanism of the lid enables 360-degree horizontal movement along a track, granting the structure greater flexibility in motion while maximizing the intake of natural light and airflow.



Part III

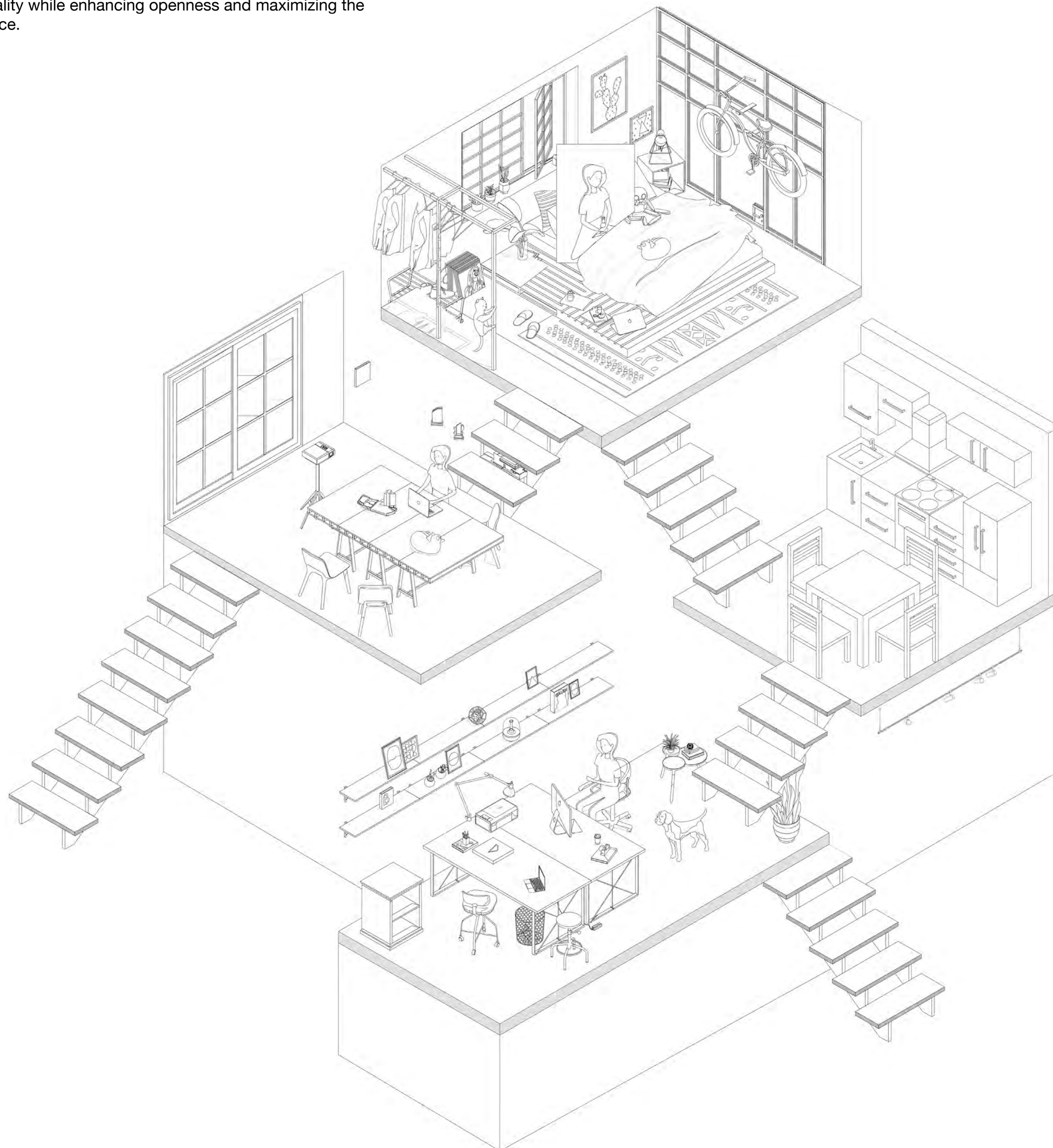
Spatial Strategy



Spatial arrangement 1

Stairs Replace Walls

After carefully observing the conditions of the building, I chose to replace traditional walls with staircases as a means of spatial division. This approach maintains functionality while enhancing openness and maximizing the efficient use of space.



Perspective section

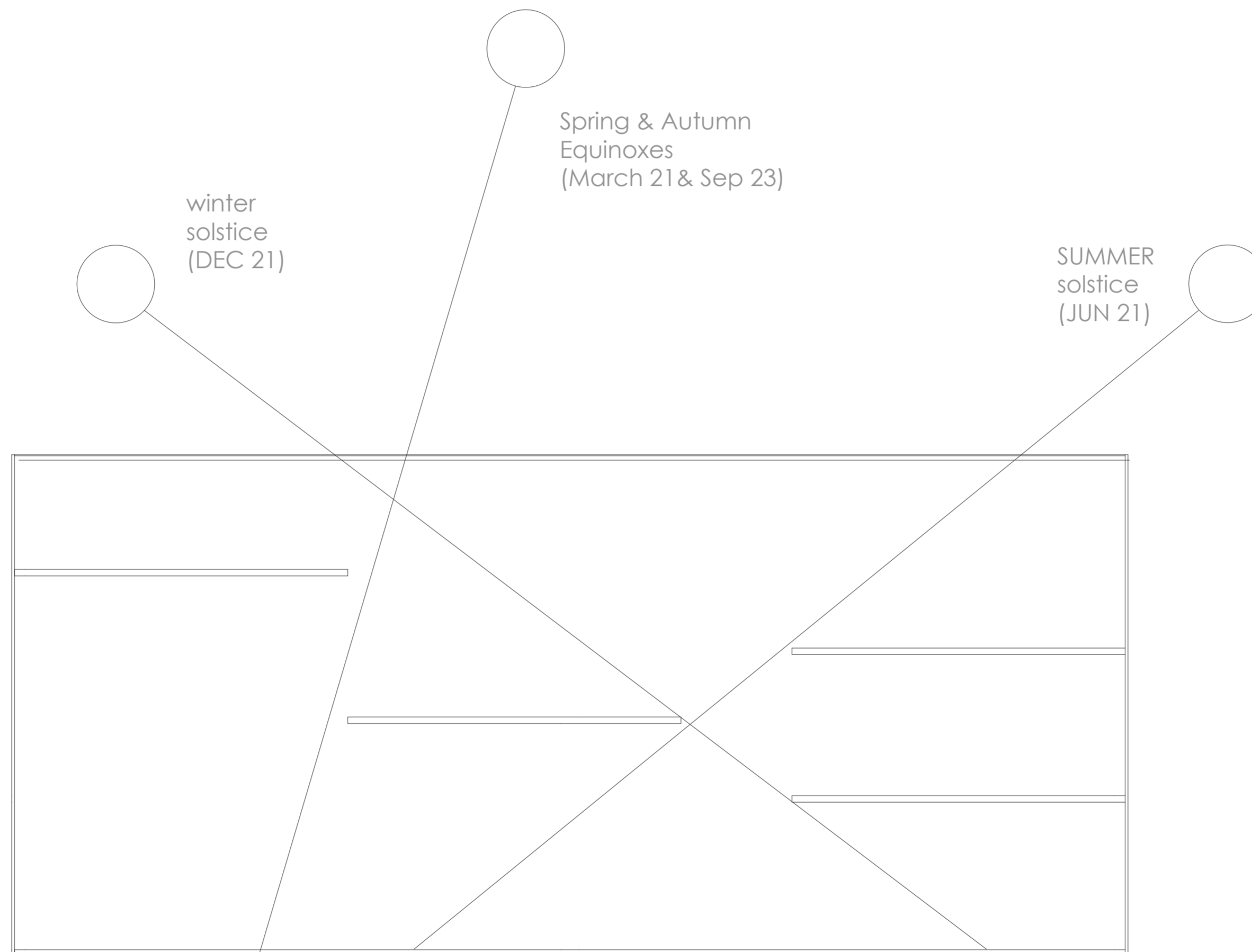


Spatial arrangement 2

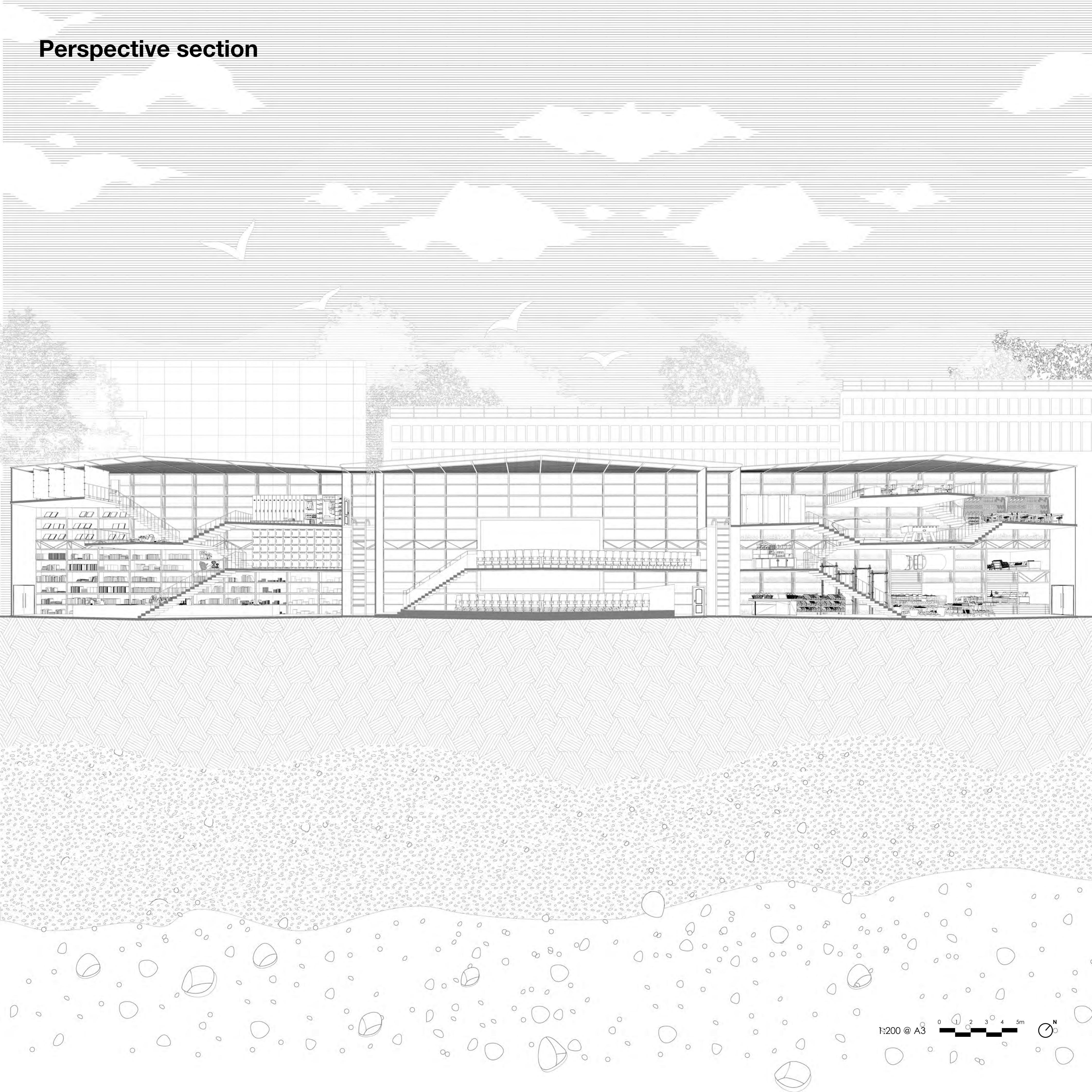
Space Sculpted by Light

This light analysis diagram captures the shifting angles of the sun during the winter solstice, equinoxes, and summer solstice.

Through a seasonal mapping of sunlight, it reveals how light moves through and activates space—shaping not only atmosphere but also informing the spatial configuration and architectural intent.



Perspective section

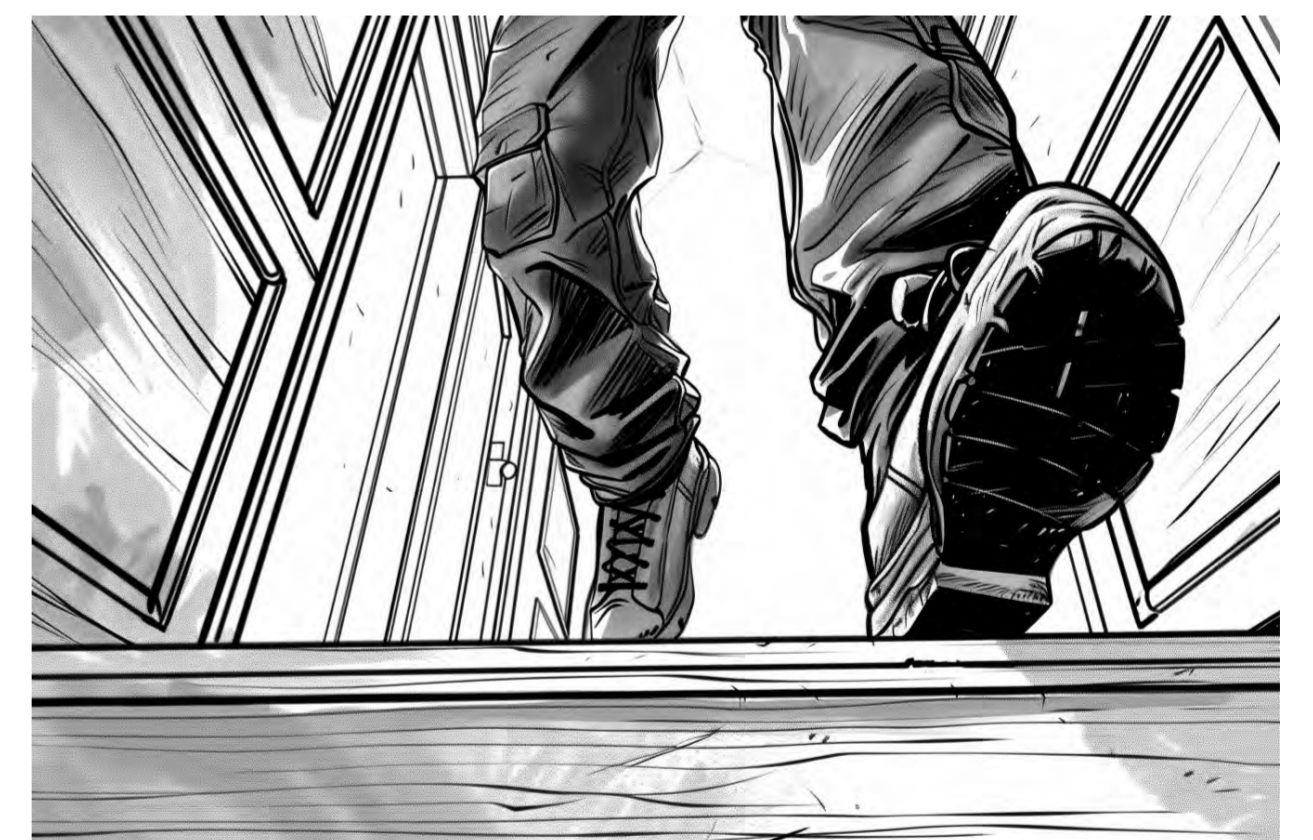
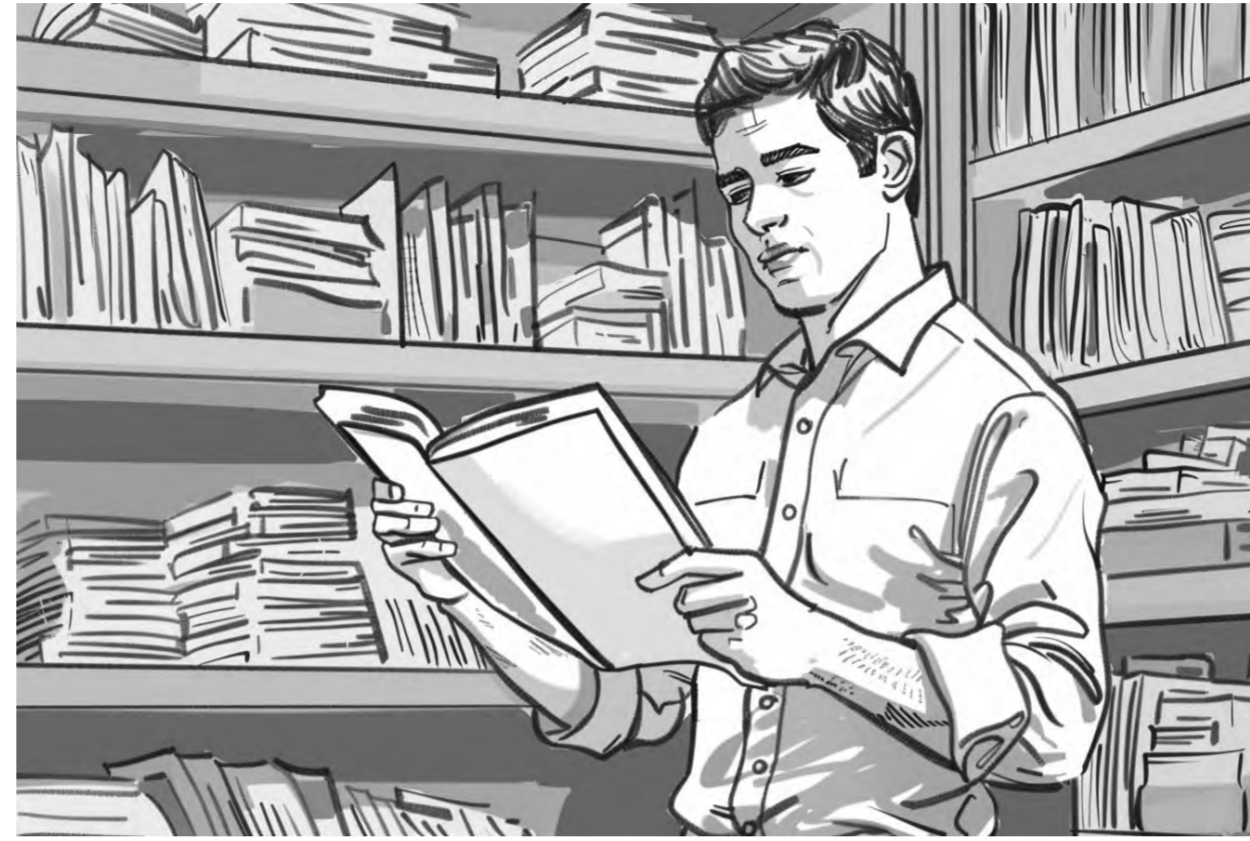


1:200 @ A3



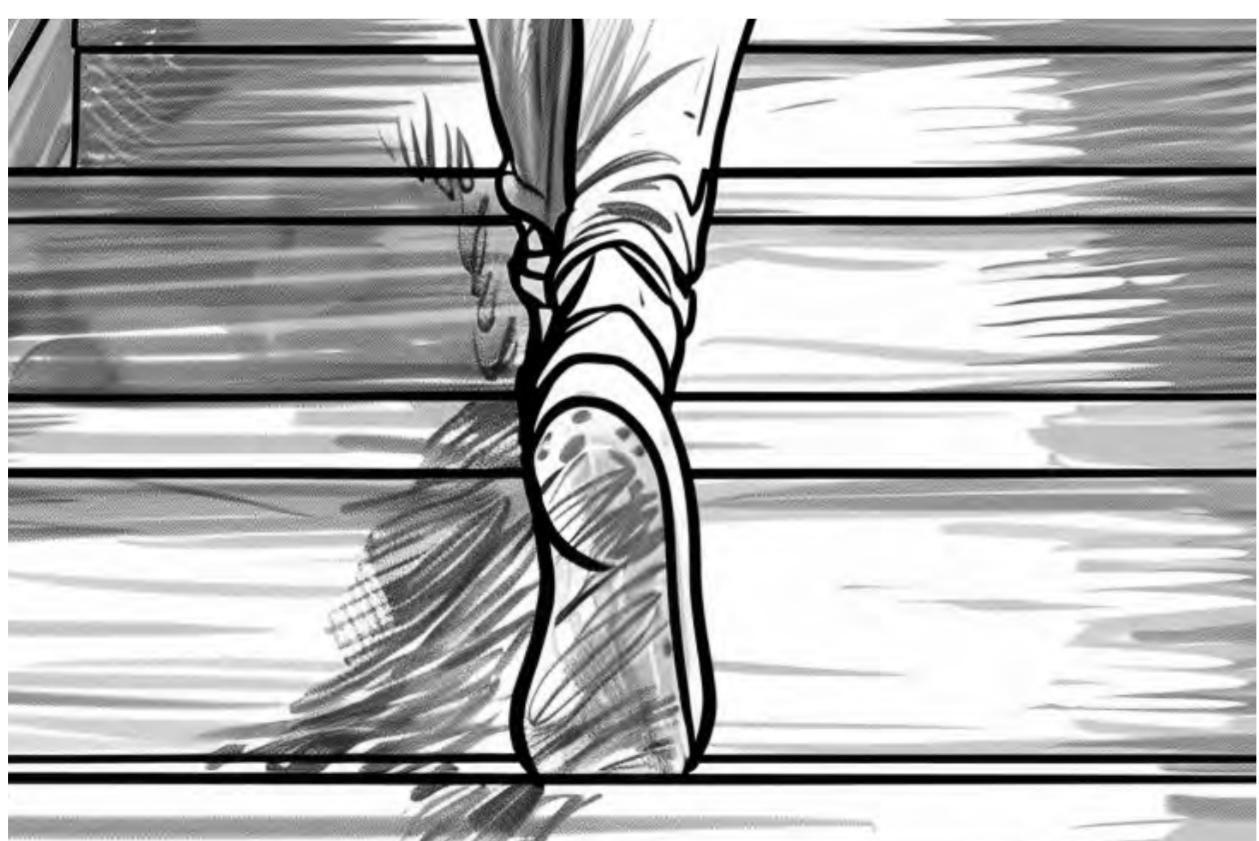
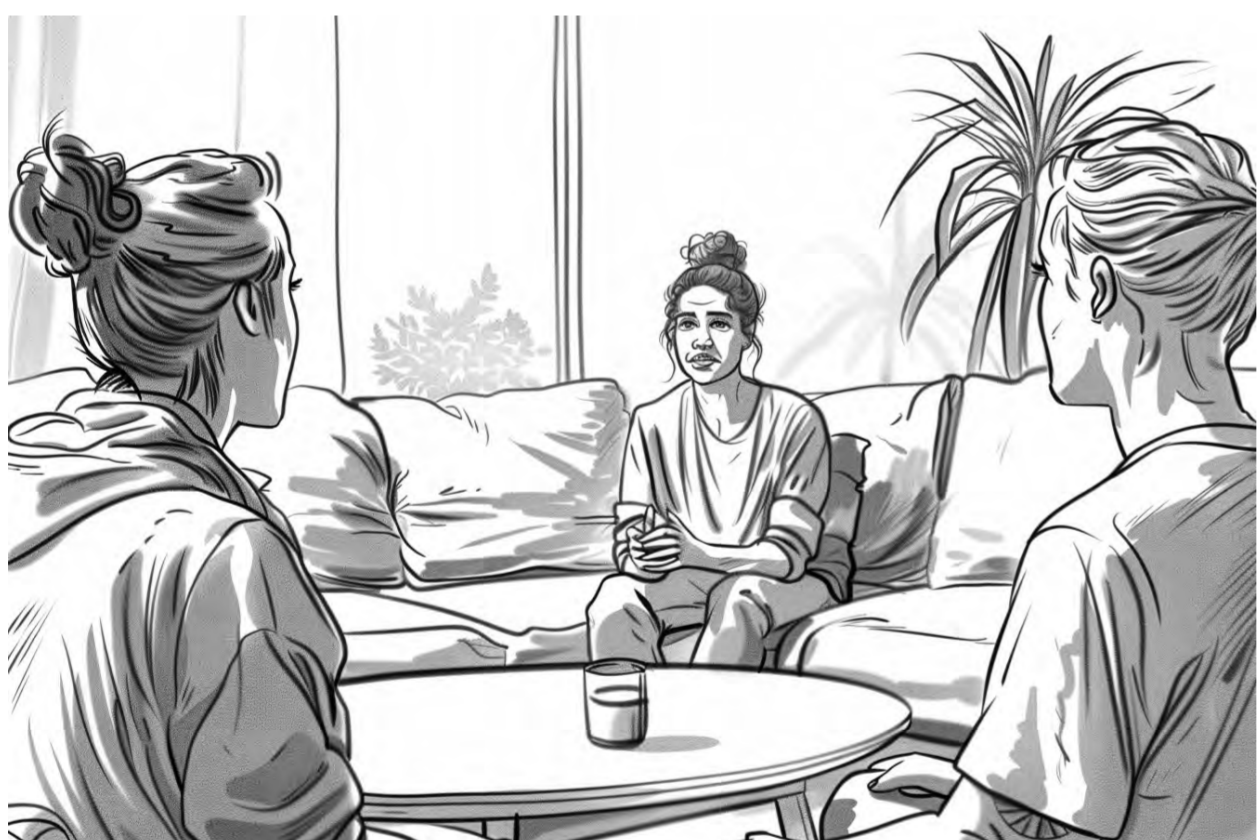
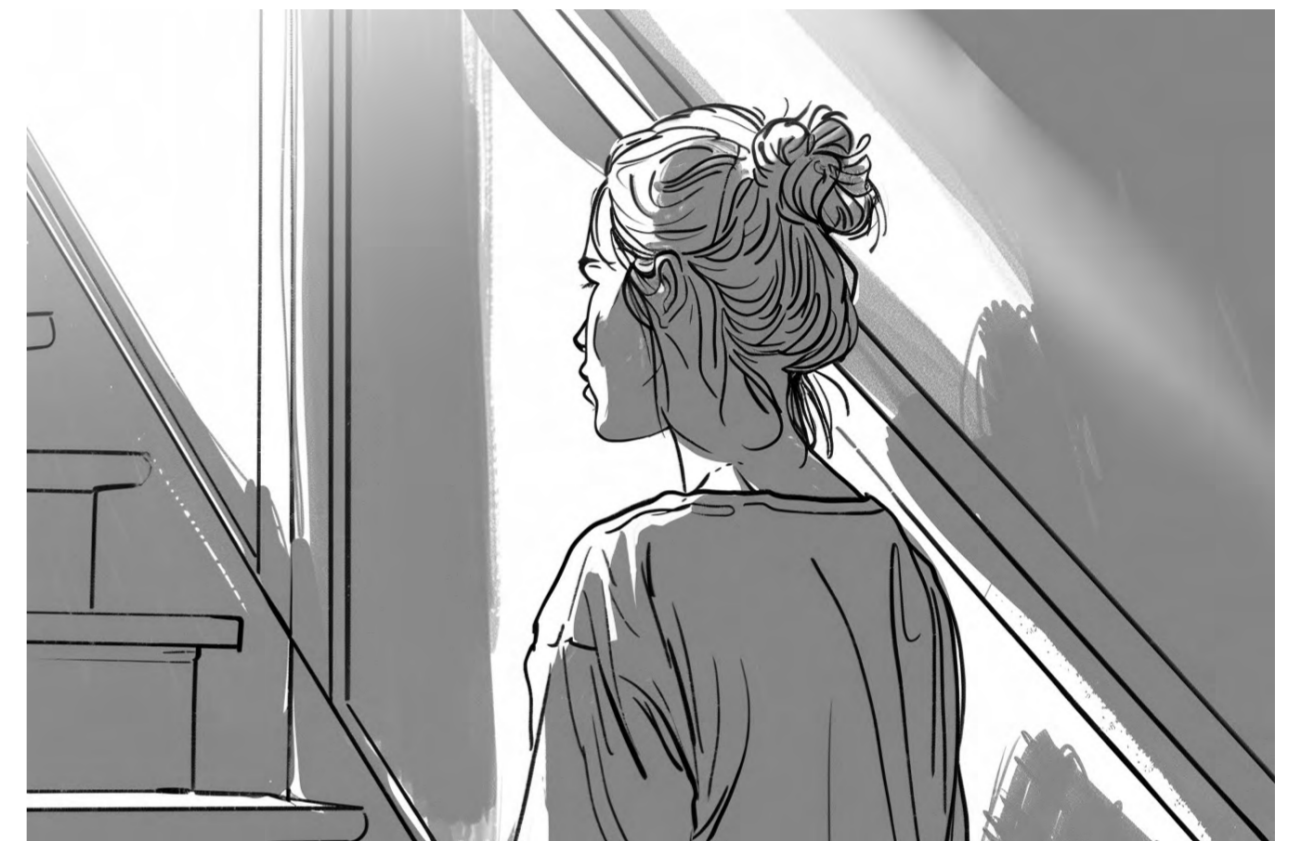
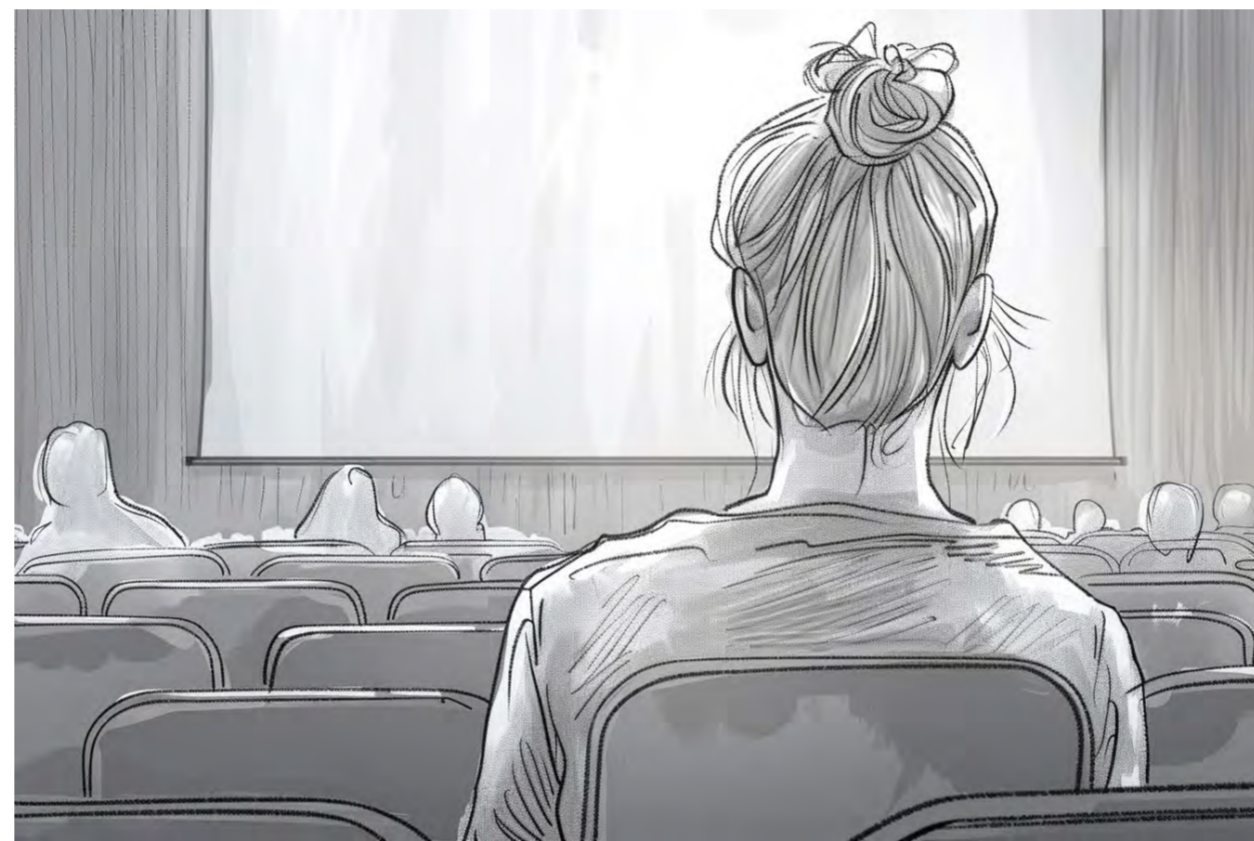
Story board

Site Worker

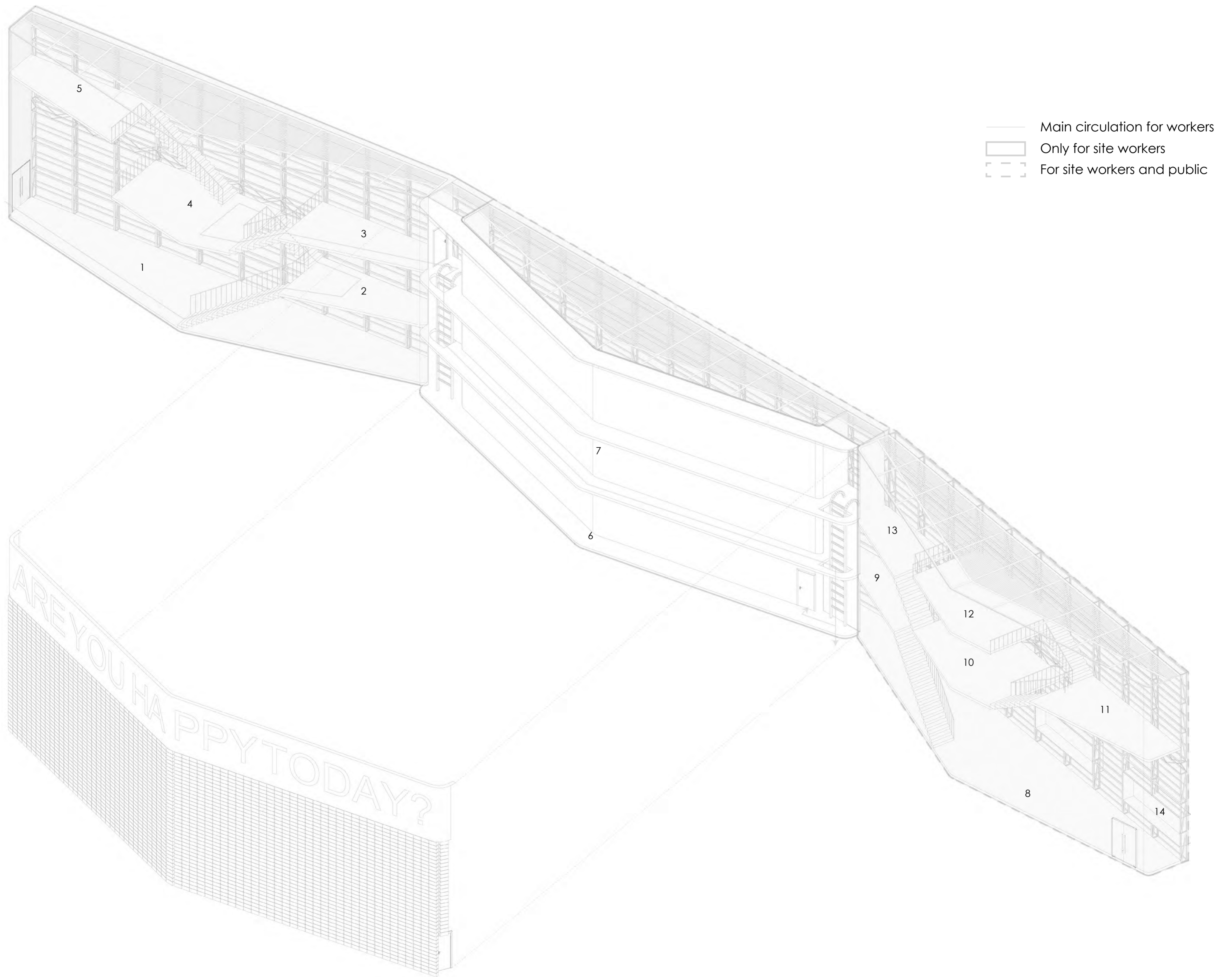


Story board

Public Access



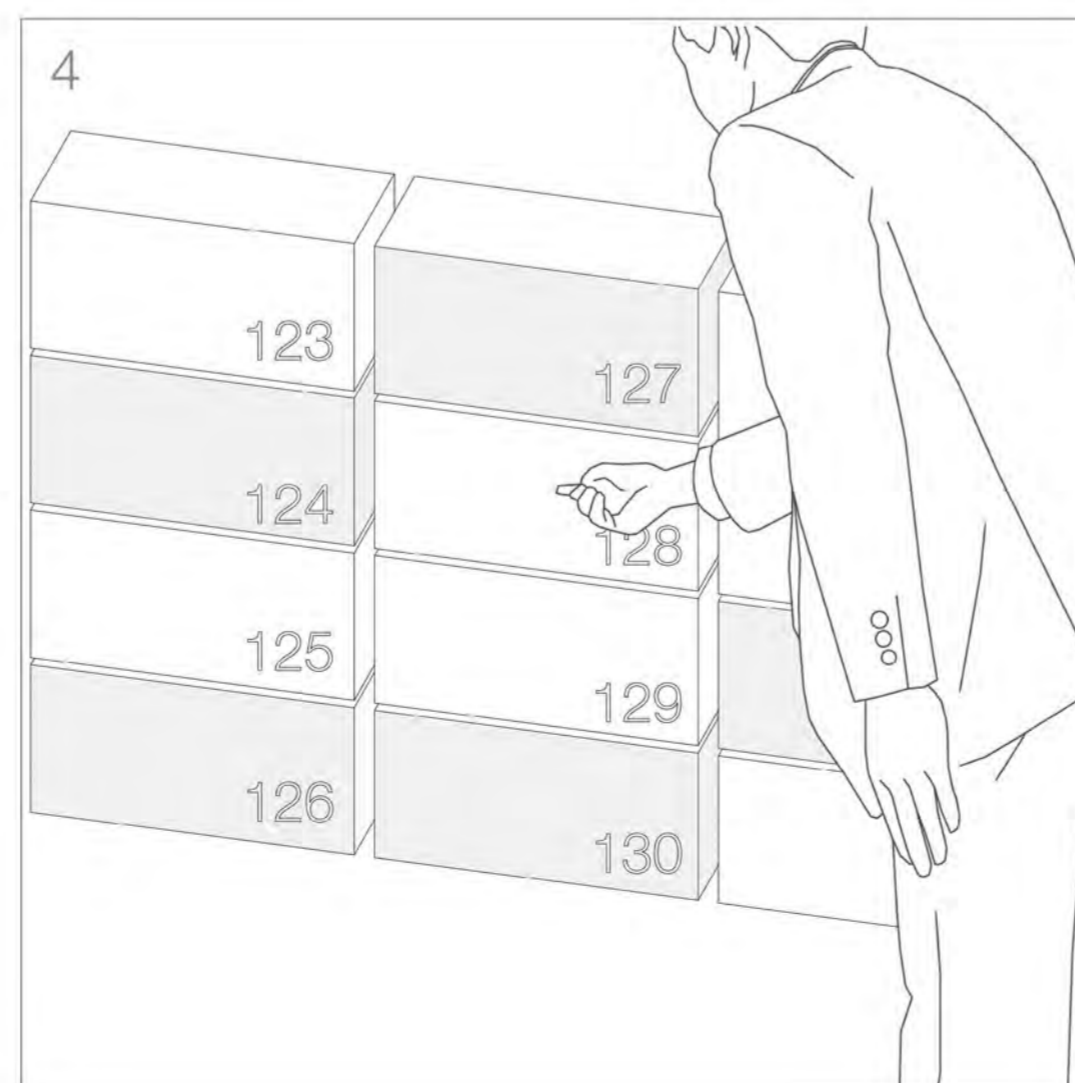
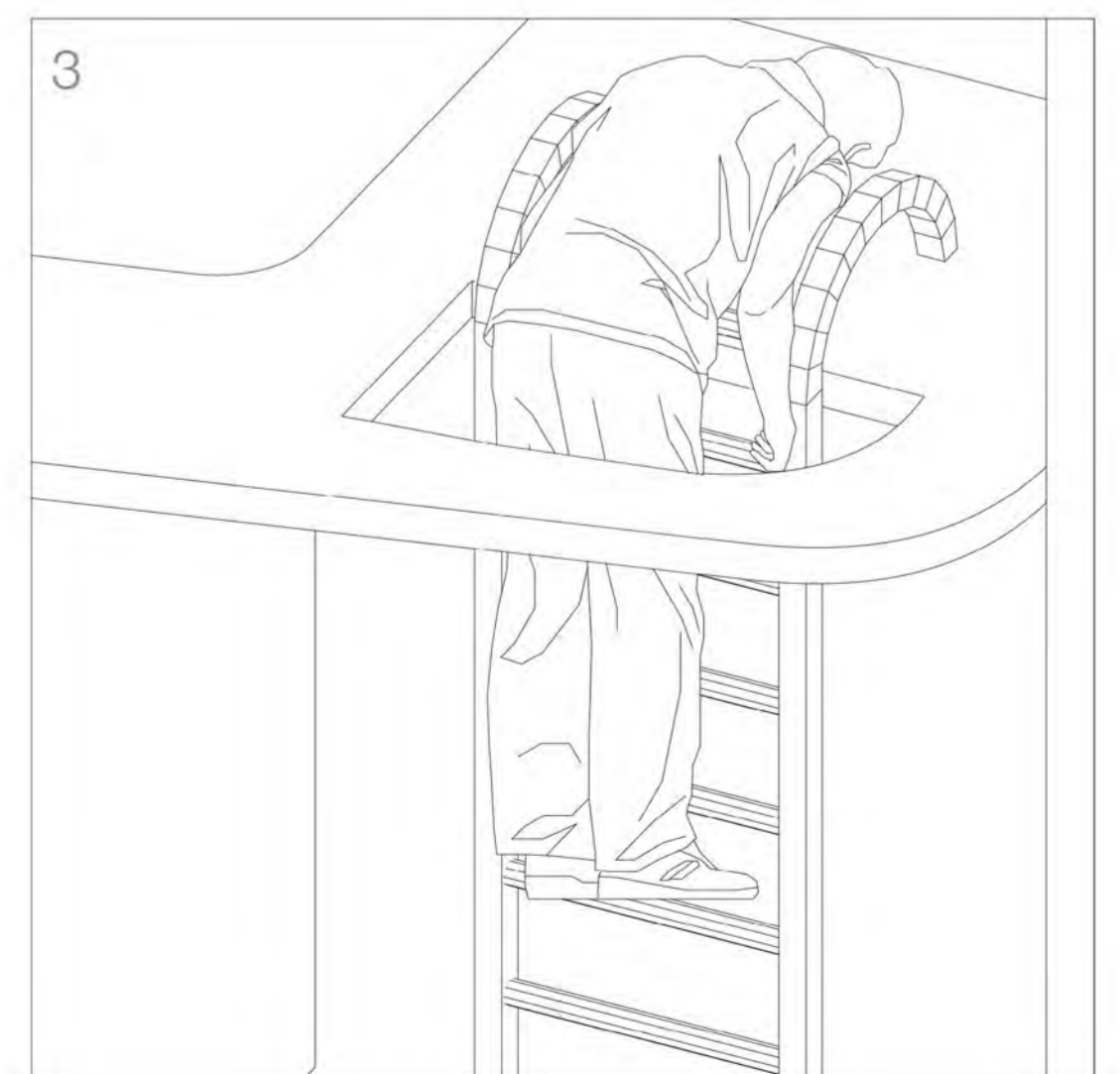
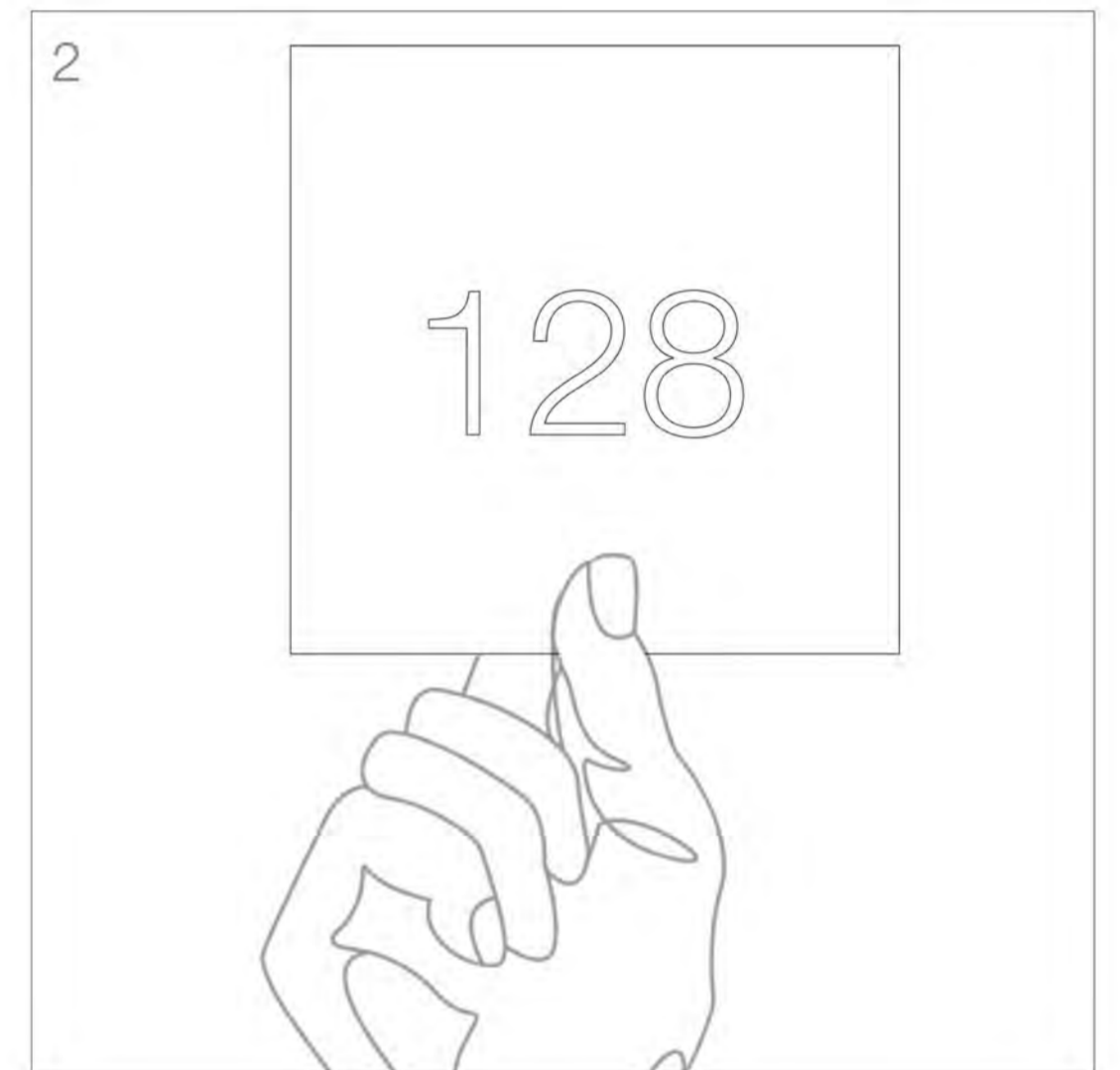
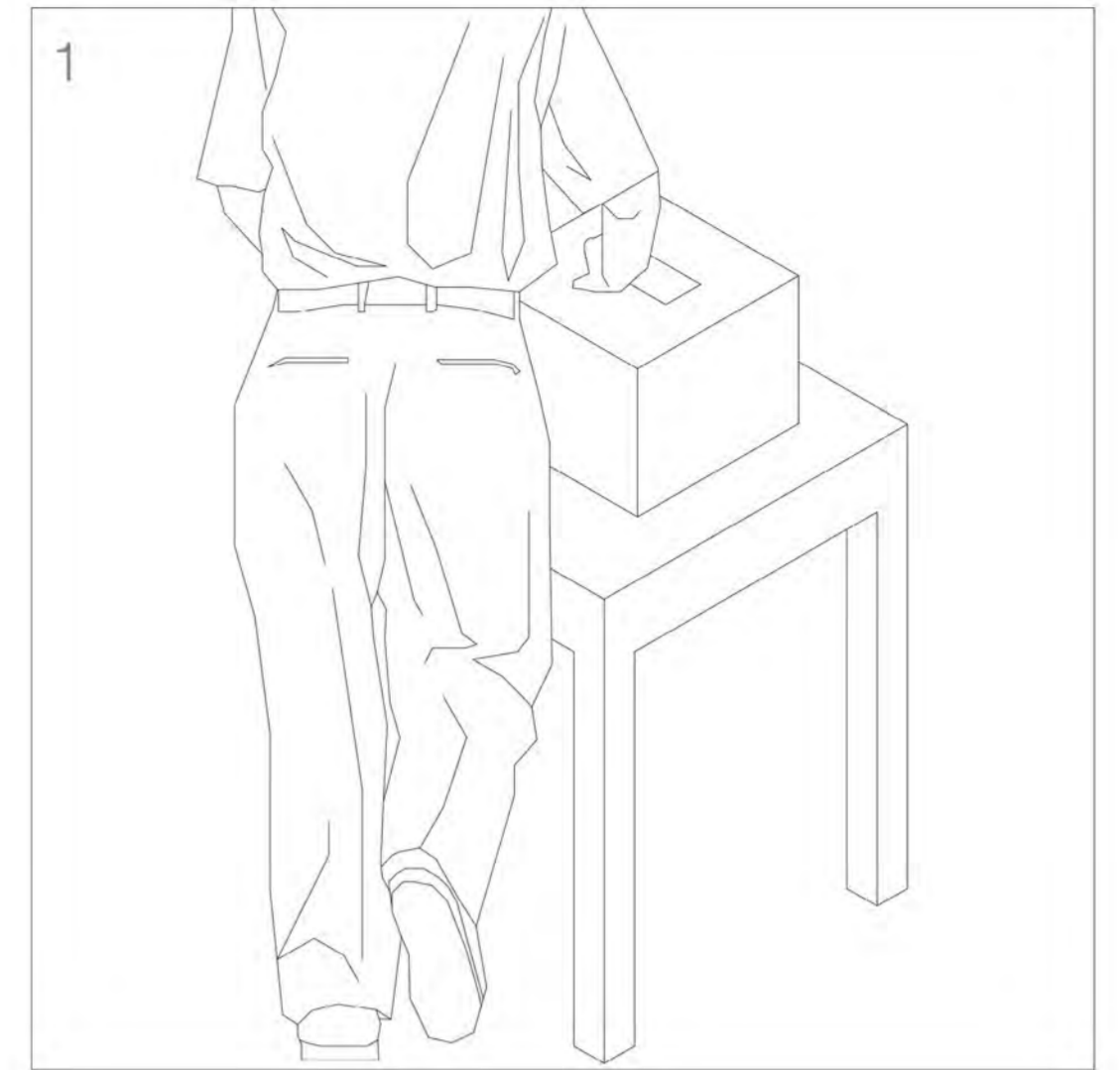
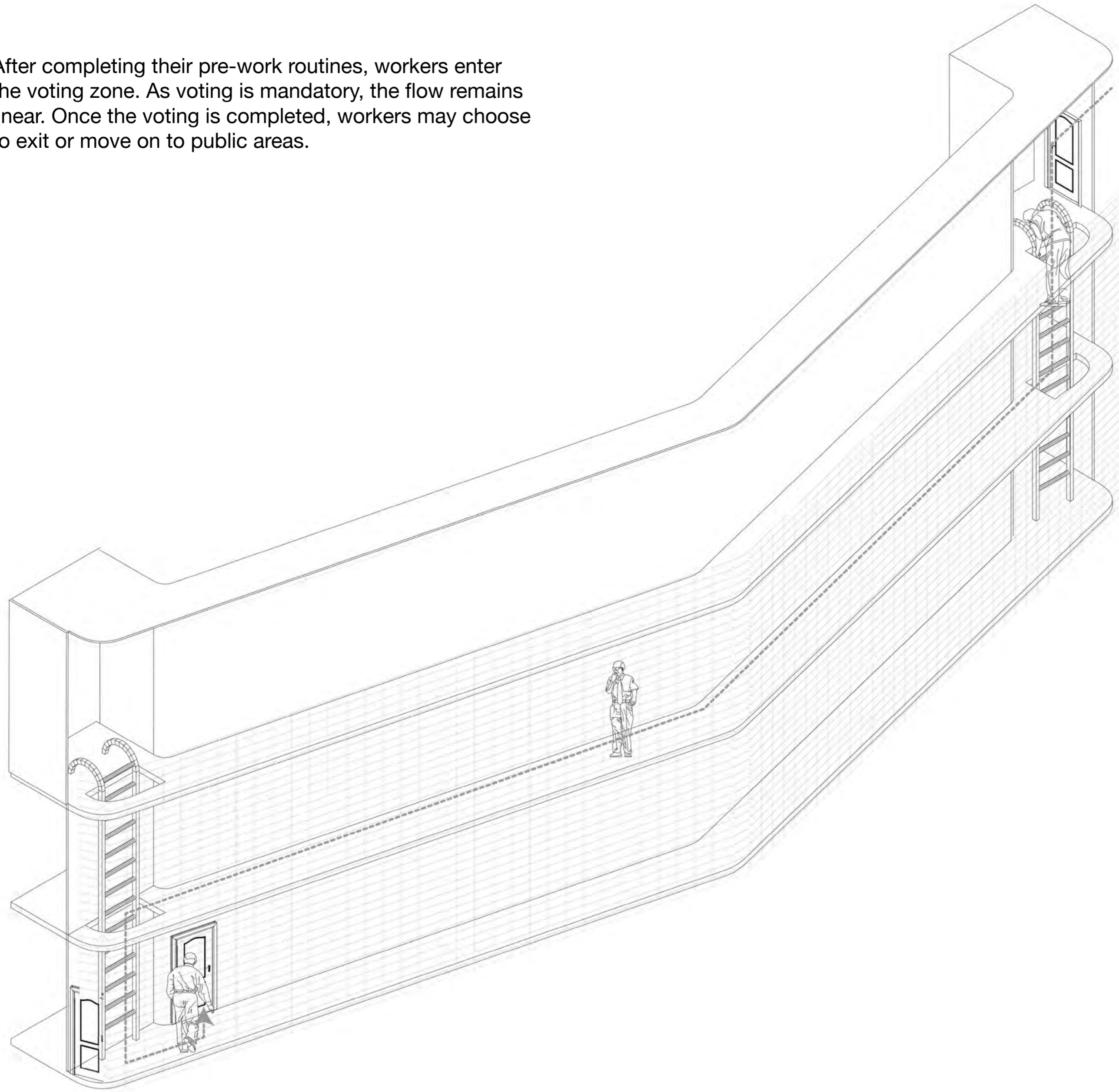
Exploded diagram



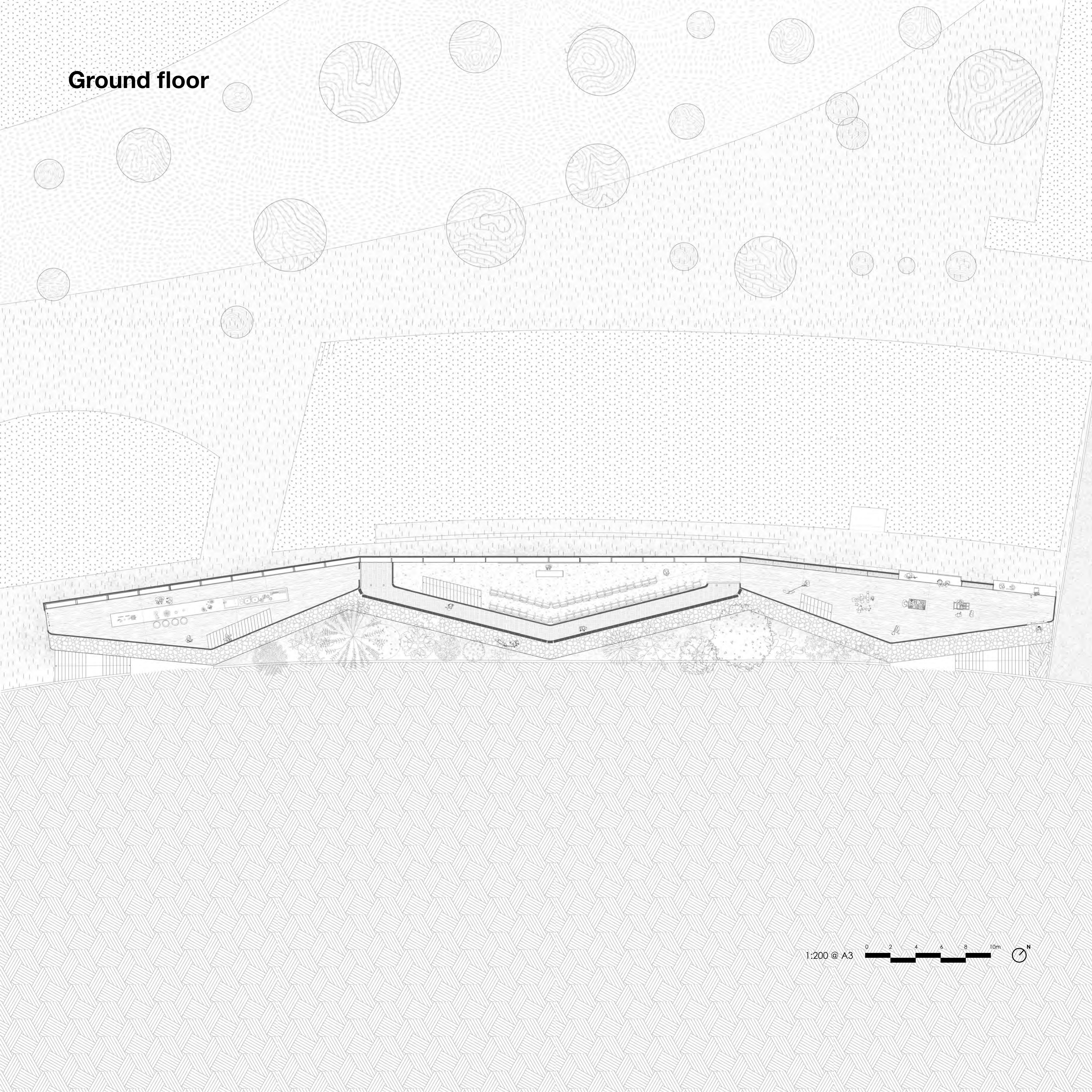
1. main Hall 2. storage room 3. changing room 4. rest area 1 5. toilet 6. voting corridor 7. auditorium
8. market 9. coffee bar 10. multipurpose room 11. workshop 12. office 13. public toilet 14. extra space

Voting Process Diagram

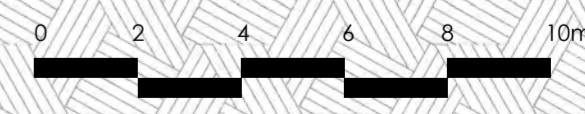
After completing their pre-work routines, workers enter the voting zone. As voting is mandatory, the flow remains linear. Once the voting is completed, workers may choose to exit or move on to public areas.



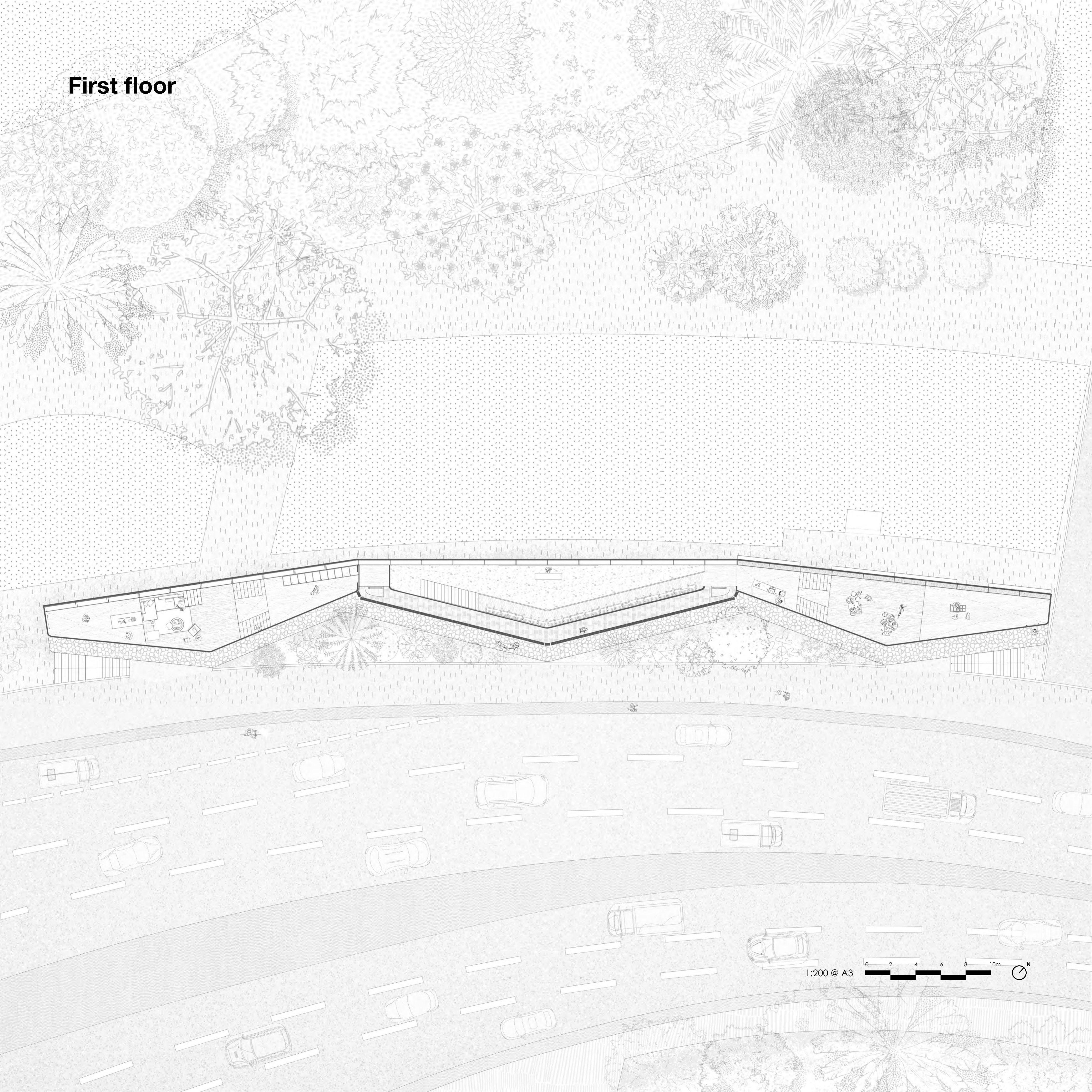
Ground floor



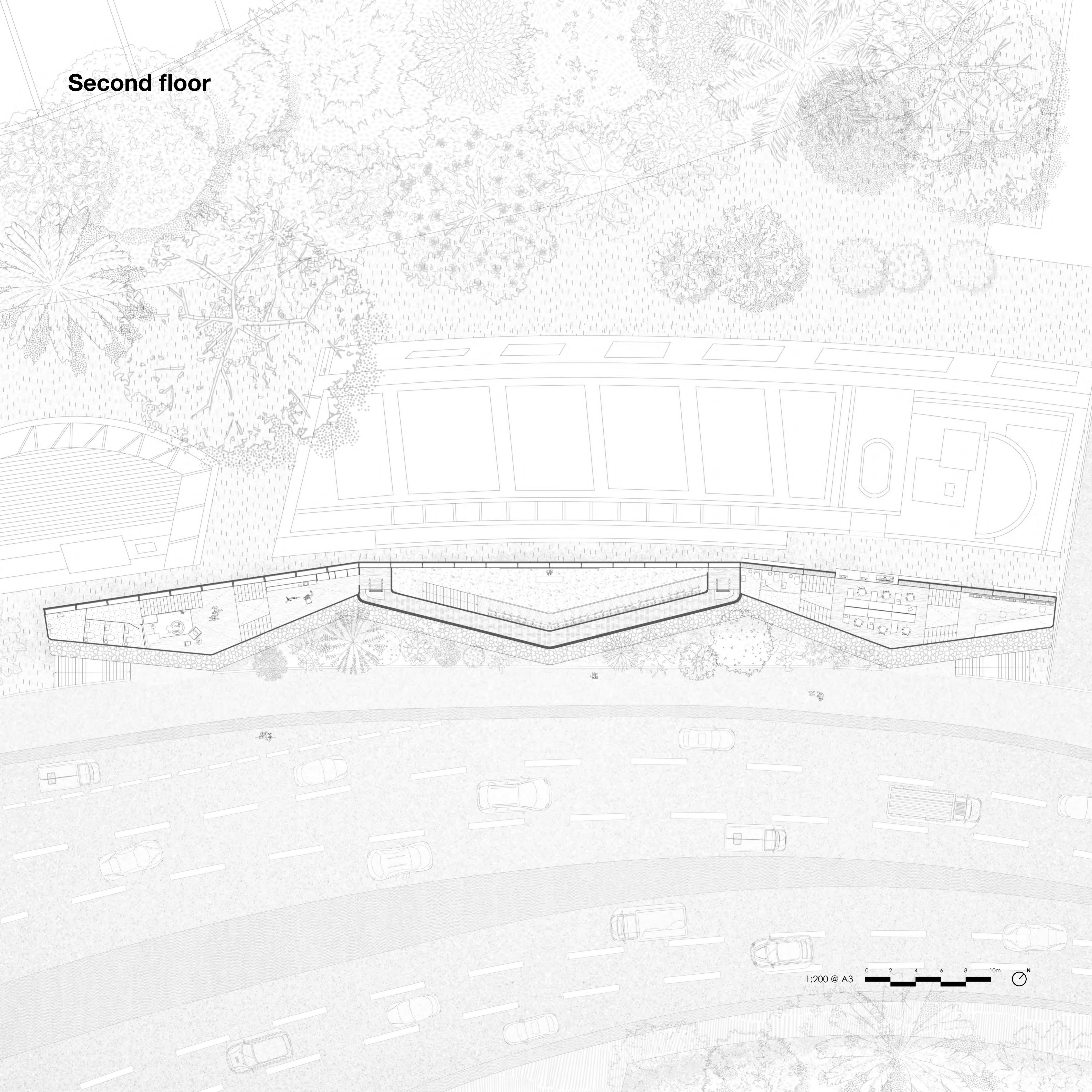
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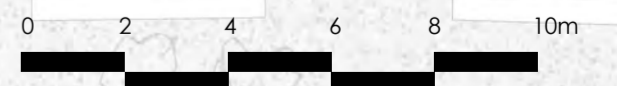
First floor



Second floor



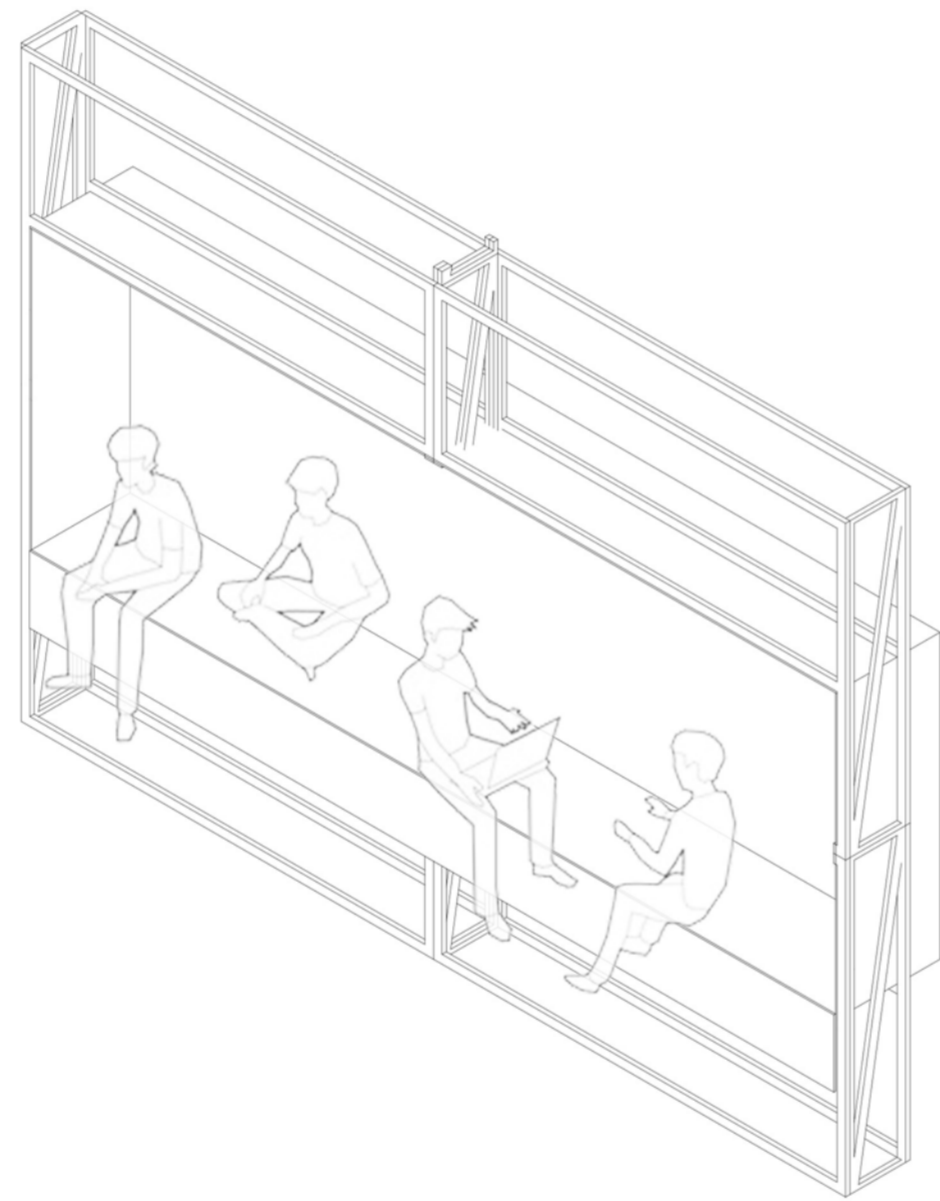
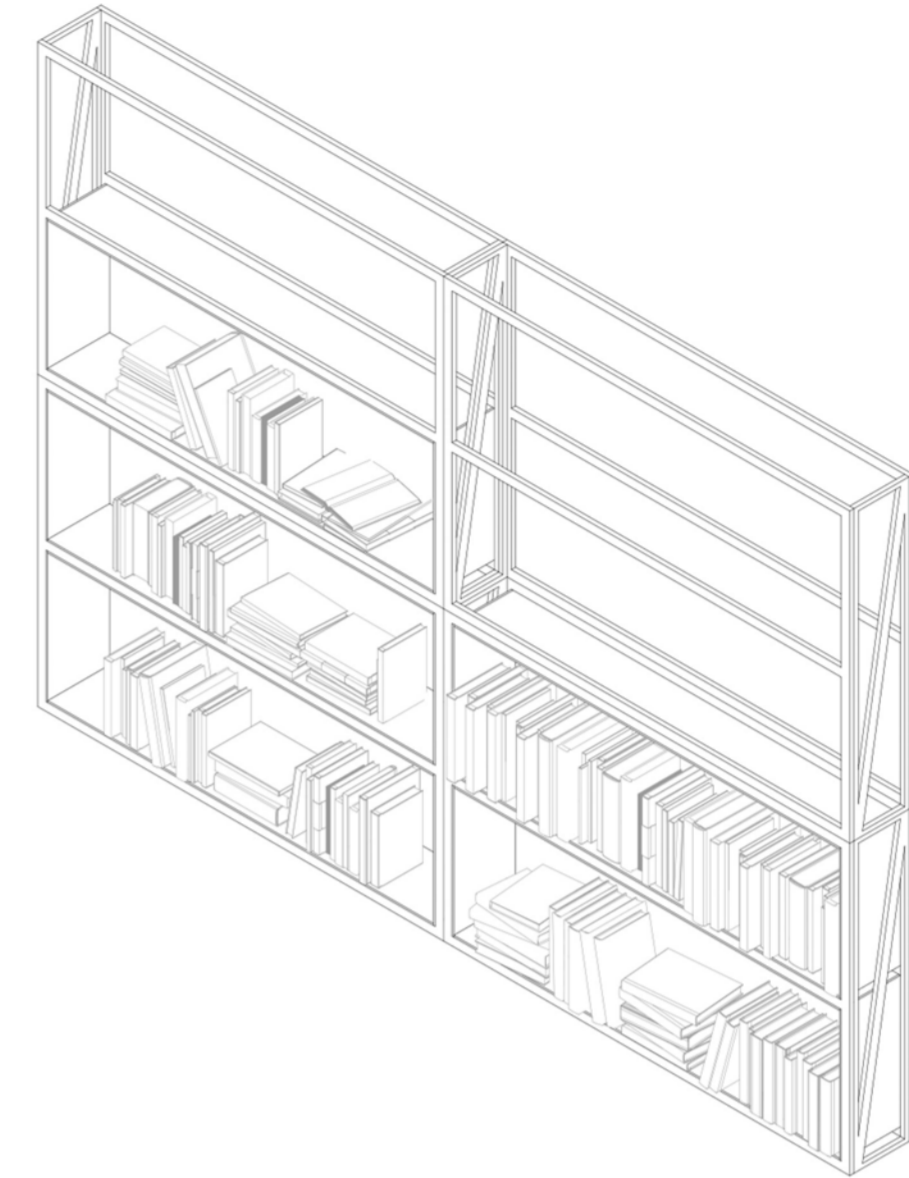
1:200 @ A3



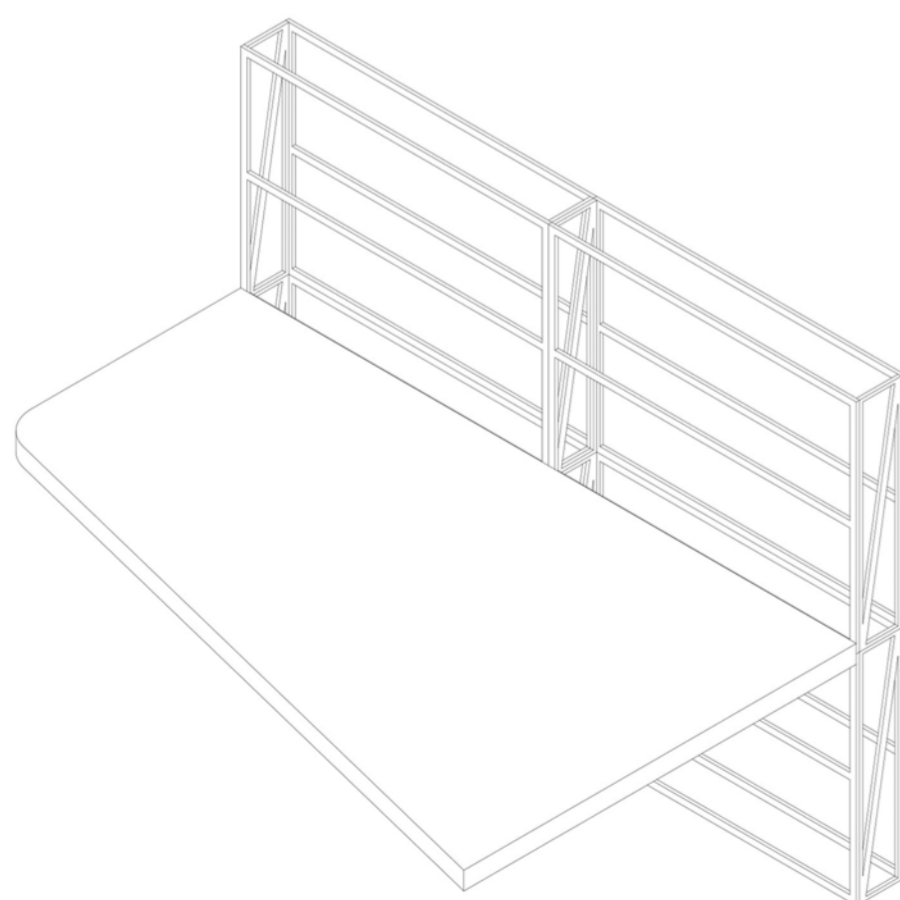
PLUG-IN

While preserving the integrity and inherent order of the original structure, i utilize existing resources to unlock additional space and functionality.

Storage cubby
Used for storing books,
documents, and tools.

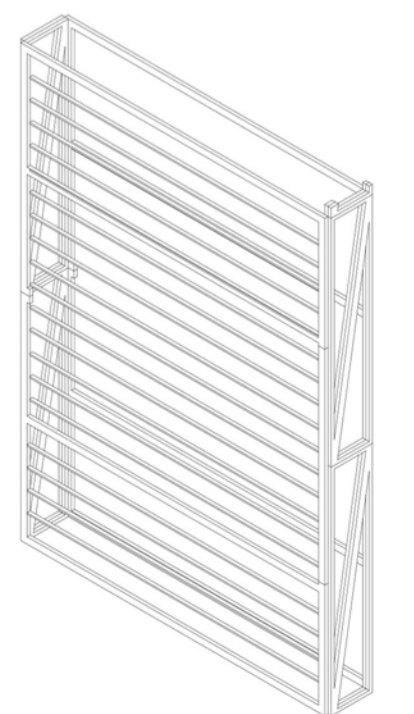


Extra space
Provides multifunctional spaces
for rest, dining, meetings, and
other activities.



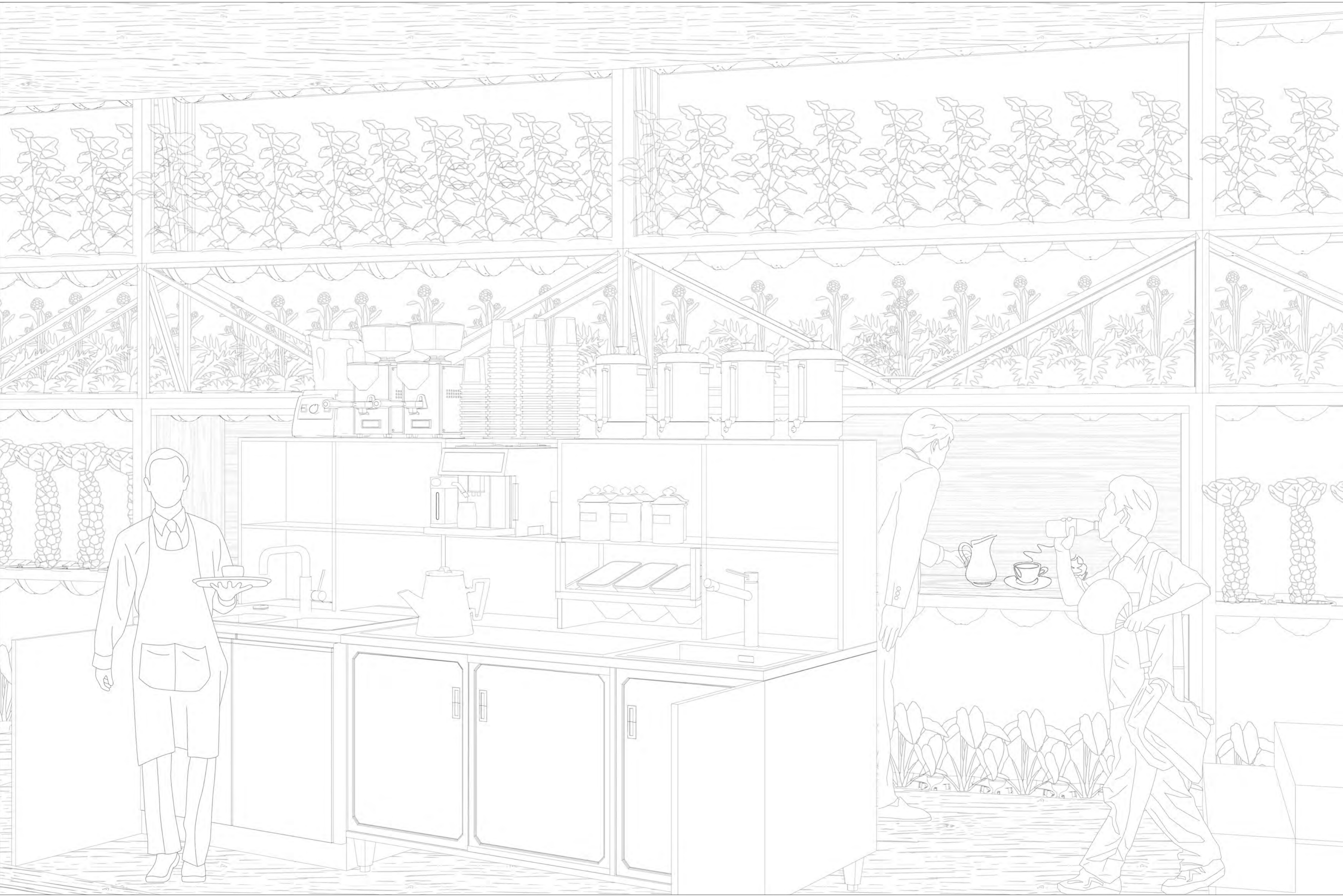
Platform
Mounted onto the existing structure,
making it easy to install and dismantle.

Ladder



Coffee bar

Before entering the auditorium, visitors can pause briefly at the café, enjoy a cup of coffee, and let their minds settle—preparing themselves for the public discussion ahead.



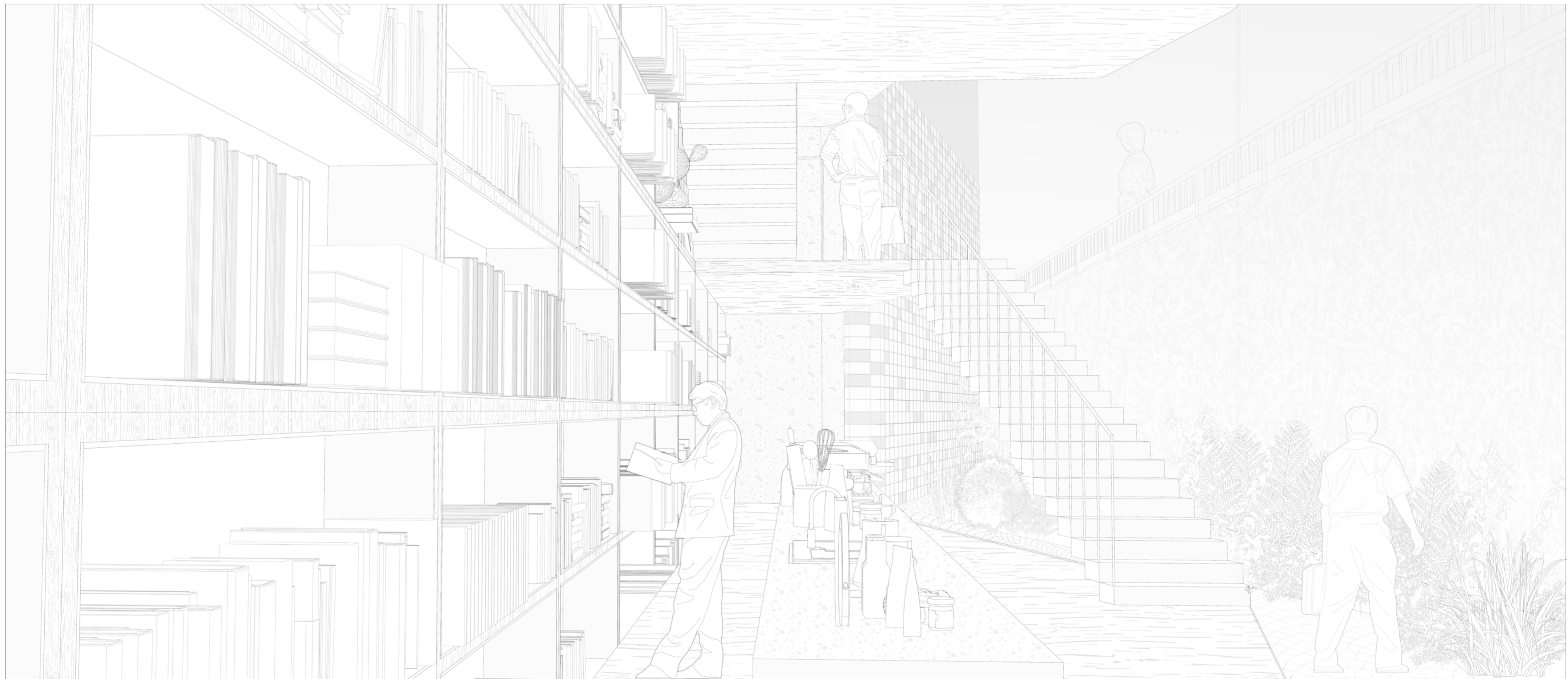
Exterior Garden



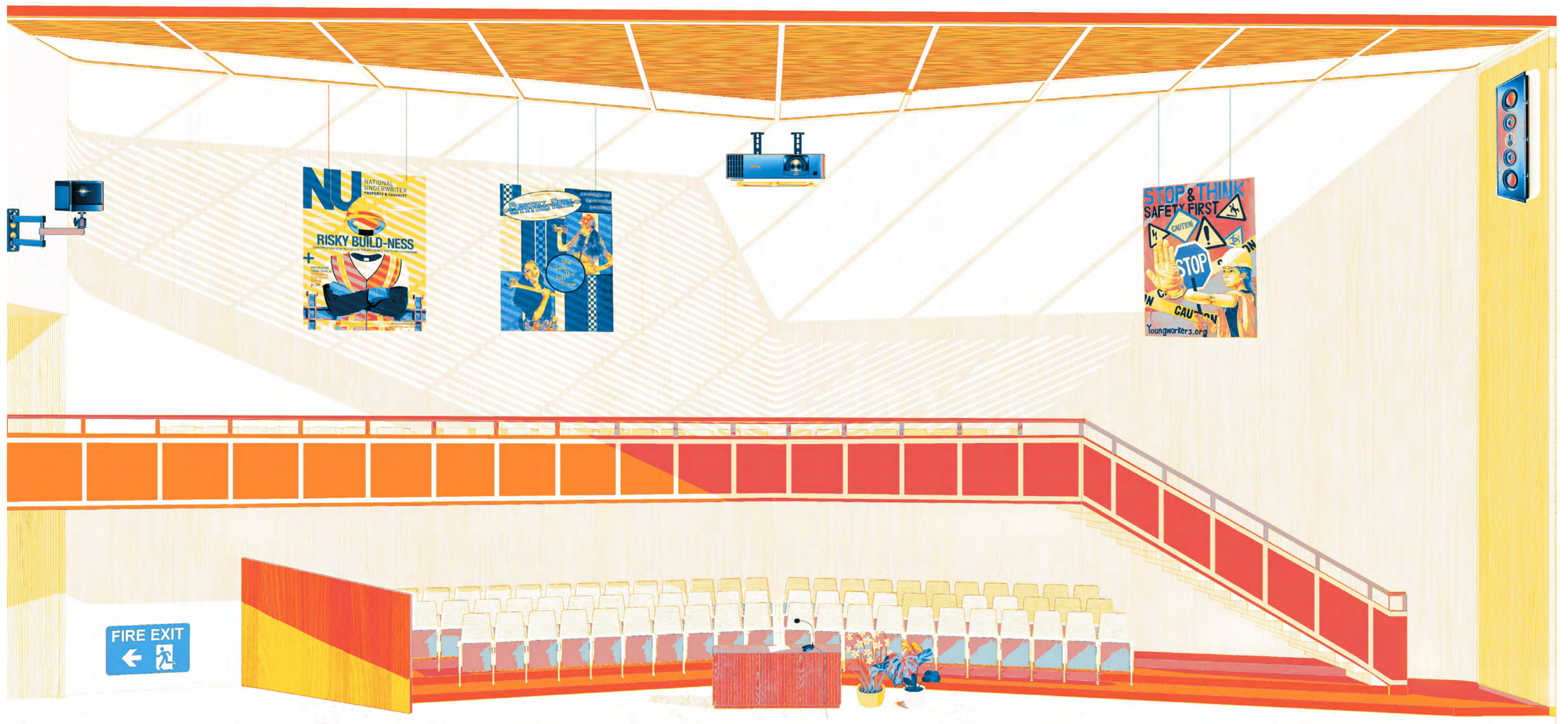
The garden along the roadside blocks out traffic noise while offering pleasant views and privacy, creating a quiet and layered spatial atmosphere. It also encourages community members to connect through gardening, fostering interaction and a sense of belonging.

Main hall

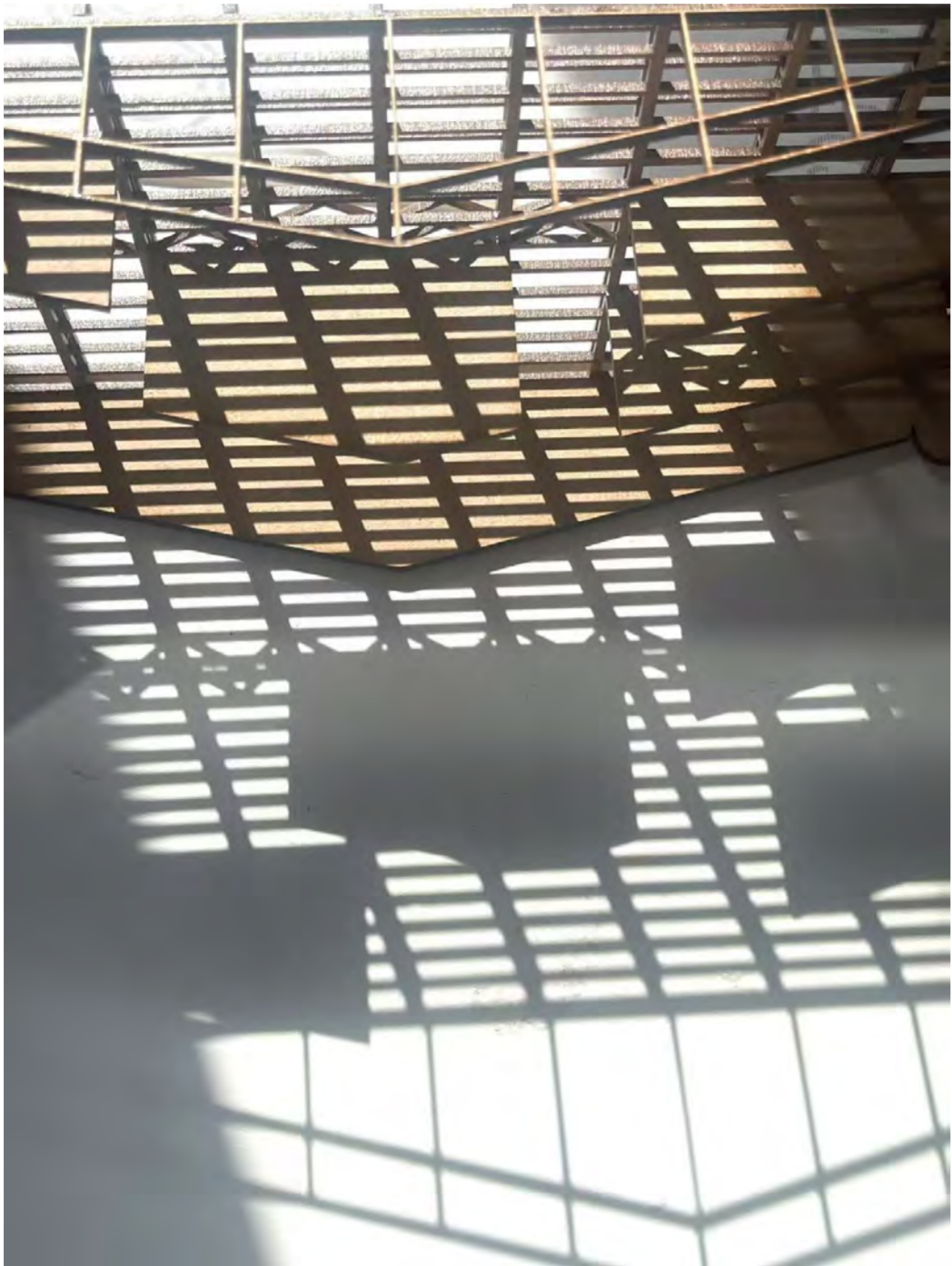
In the following semester, I will further refine the cubby by exploring its formal possibilities, experimenting with material choices, and redefining its modes of use to better integrate with the overall spatial narrative.



Auditorium



Physical model



Light Effects of Steel Structures

The "Yes or No" rotating brick wall creates a contemplative space by casting unique patterns of light and shadow onto the corridor walls through the gaps between the bricks.



voting corridor

Physical model



vertical garden



transparency



exterior garden



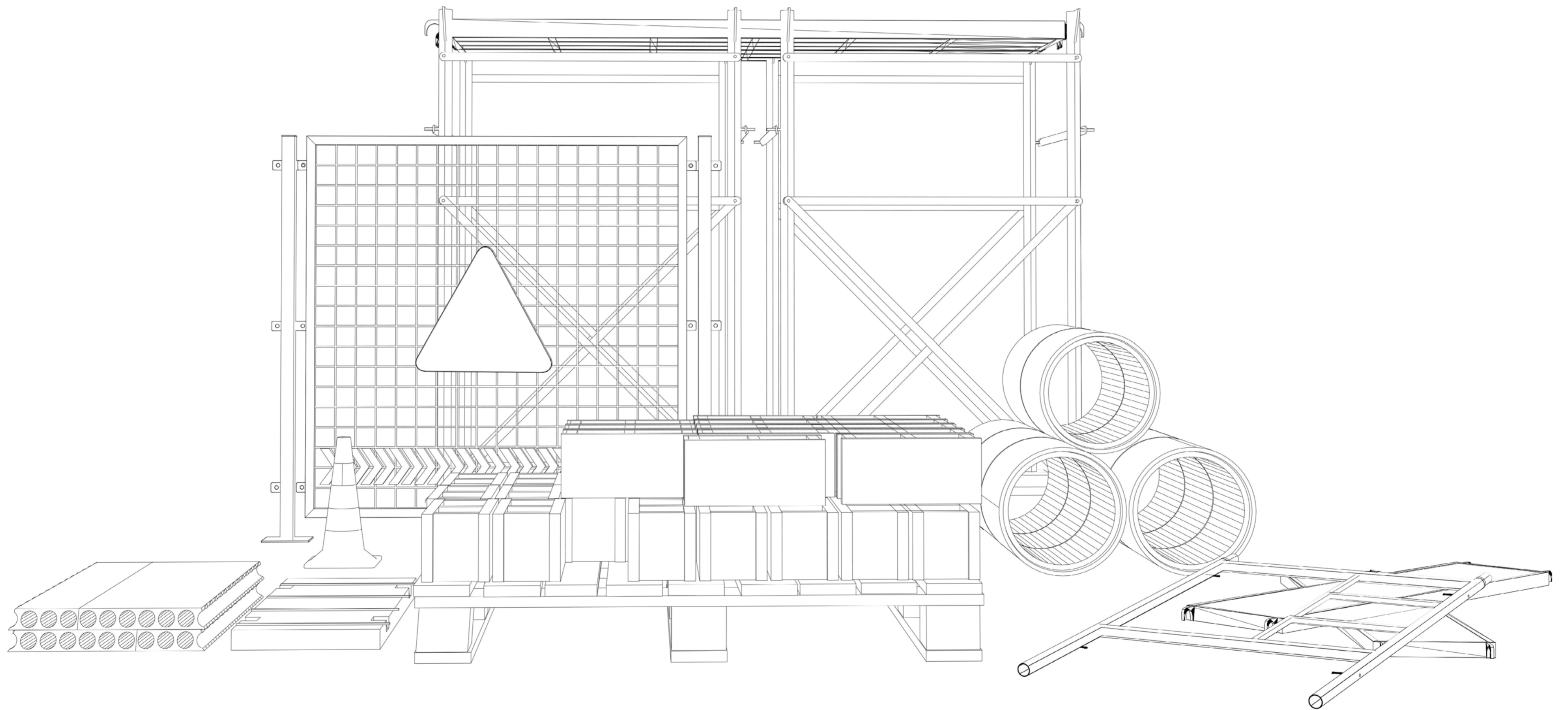
The integration of vertical greenery and outdoor gardens, combined with transparent glass façades, extends the natural landscape toward the street. This not only enriches the interior environment but also offers passersby and visitors a calming, immersive streetscape—blurring the boundary between architecture and the city.

Part IV

Furniture Design

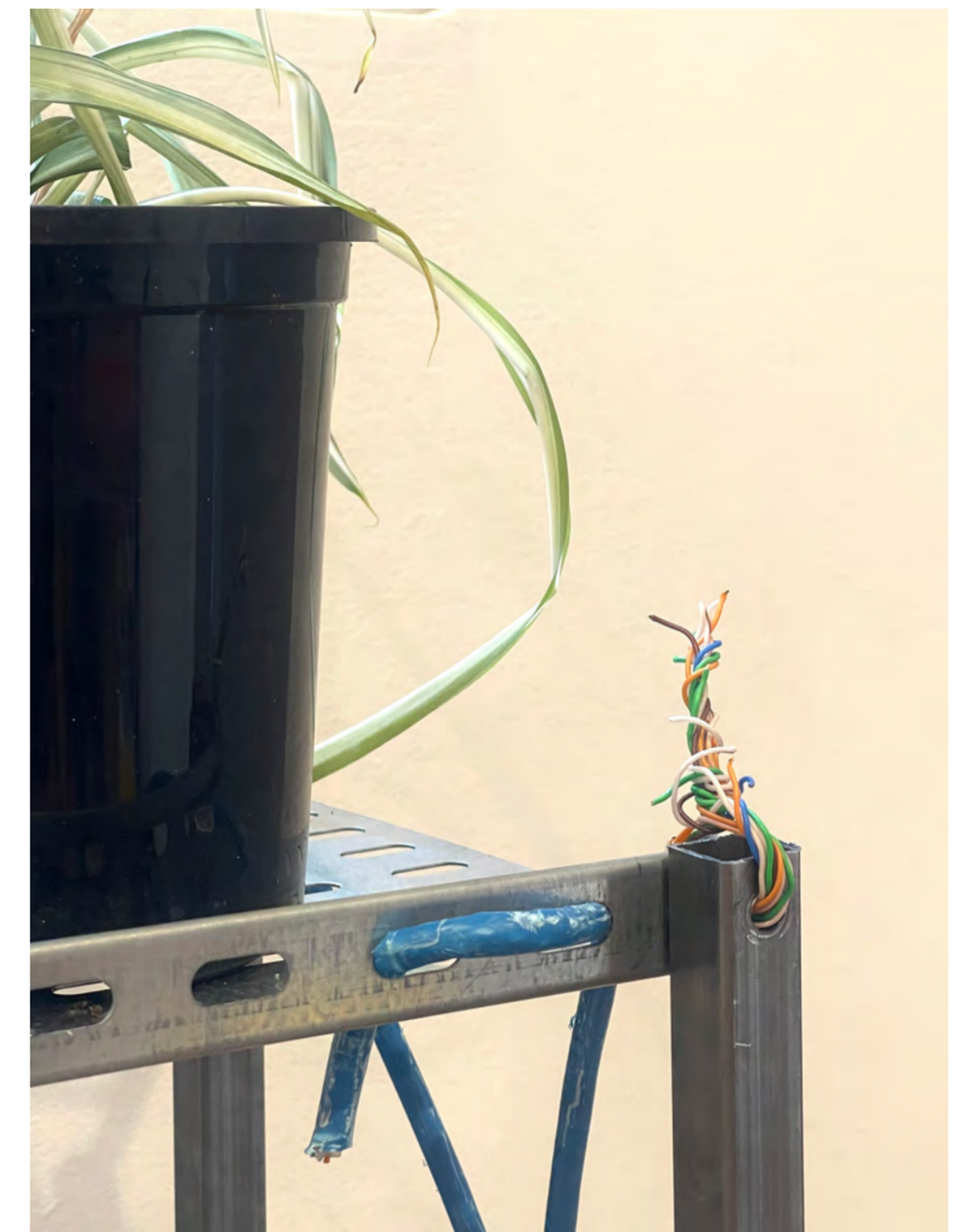
Strategy

The furniture design strategy repurposes construction site waste through reuse and redesign, giving new function and life to materials that were once discarded. This approach not only reflects a commitment to sustainability but also preserves the traces of the building process, allowing the space to carry the memory of labor and strengthening the emotional connection between workers and their environment.



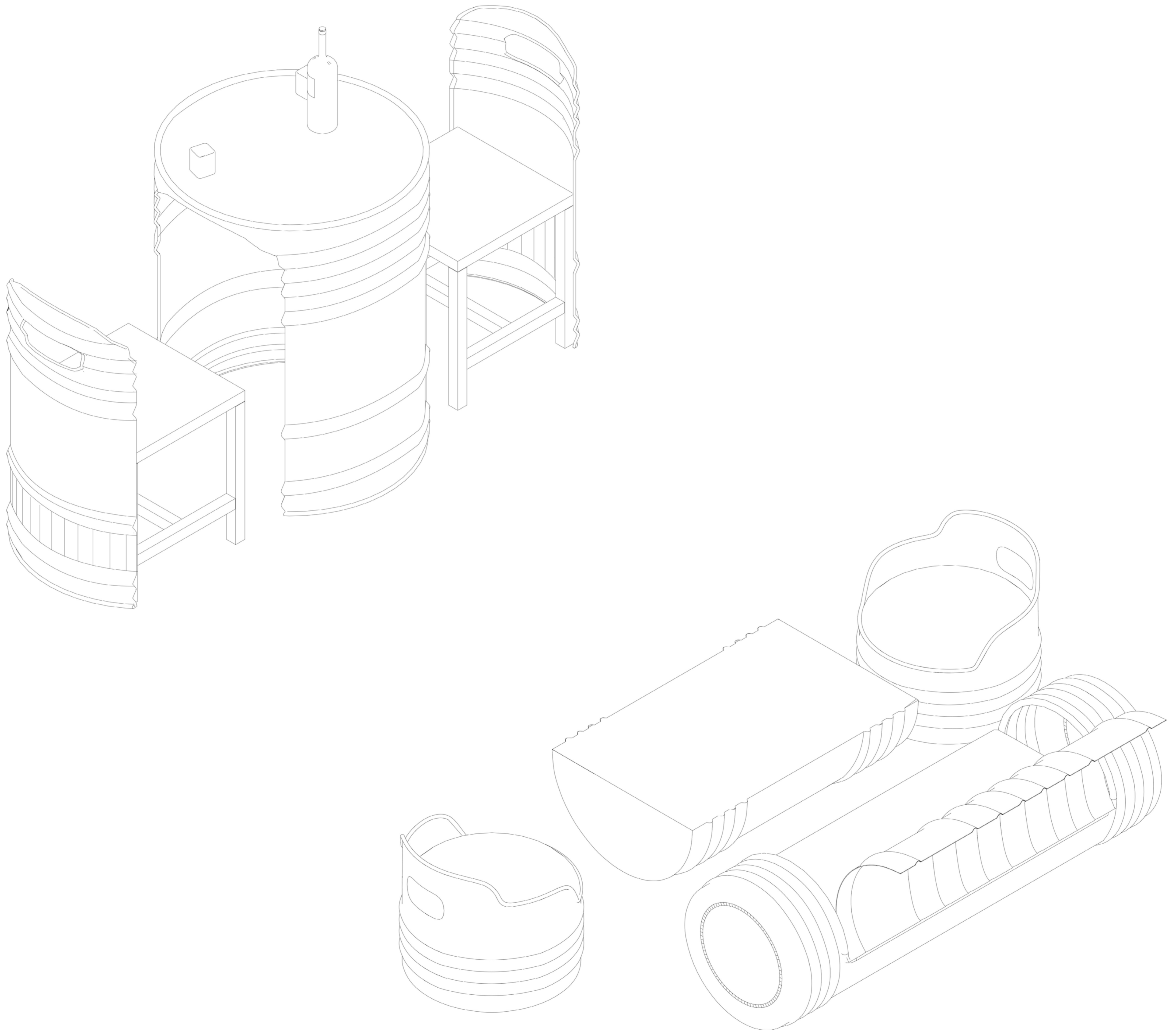
Racking

Discarded electrical wires thread through perforations and coil tightly around joints, where tension and restraint intertwine. Each hole becomes an anchor point, each winding a gesture of repair. These remnants have found new purpose—every connection openly declares its rebirth.



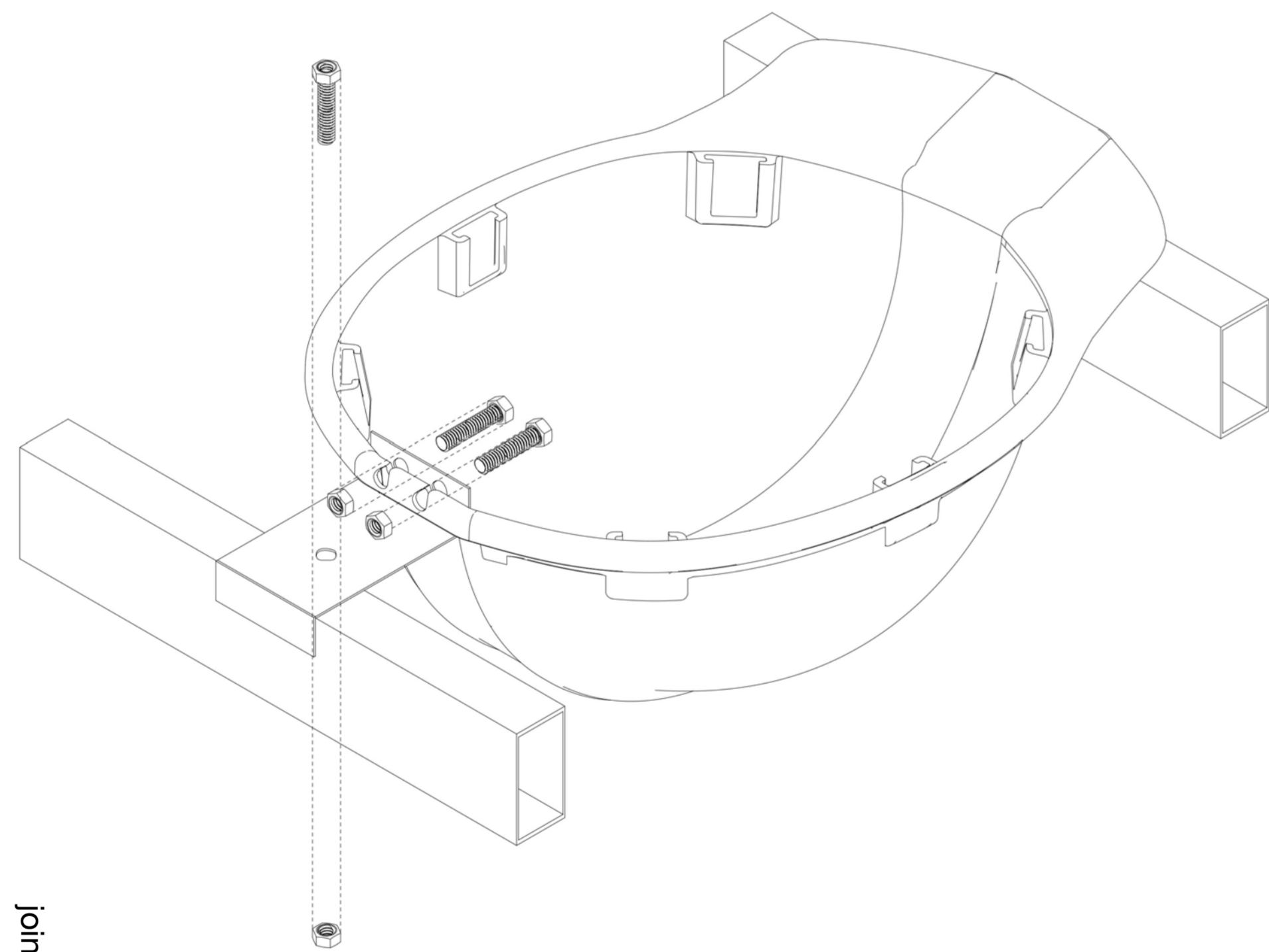
Tables and Chairs

Surplus paint buckets from the construction site are repurposed into functional tables and chairs through cutting and reassembly.

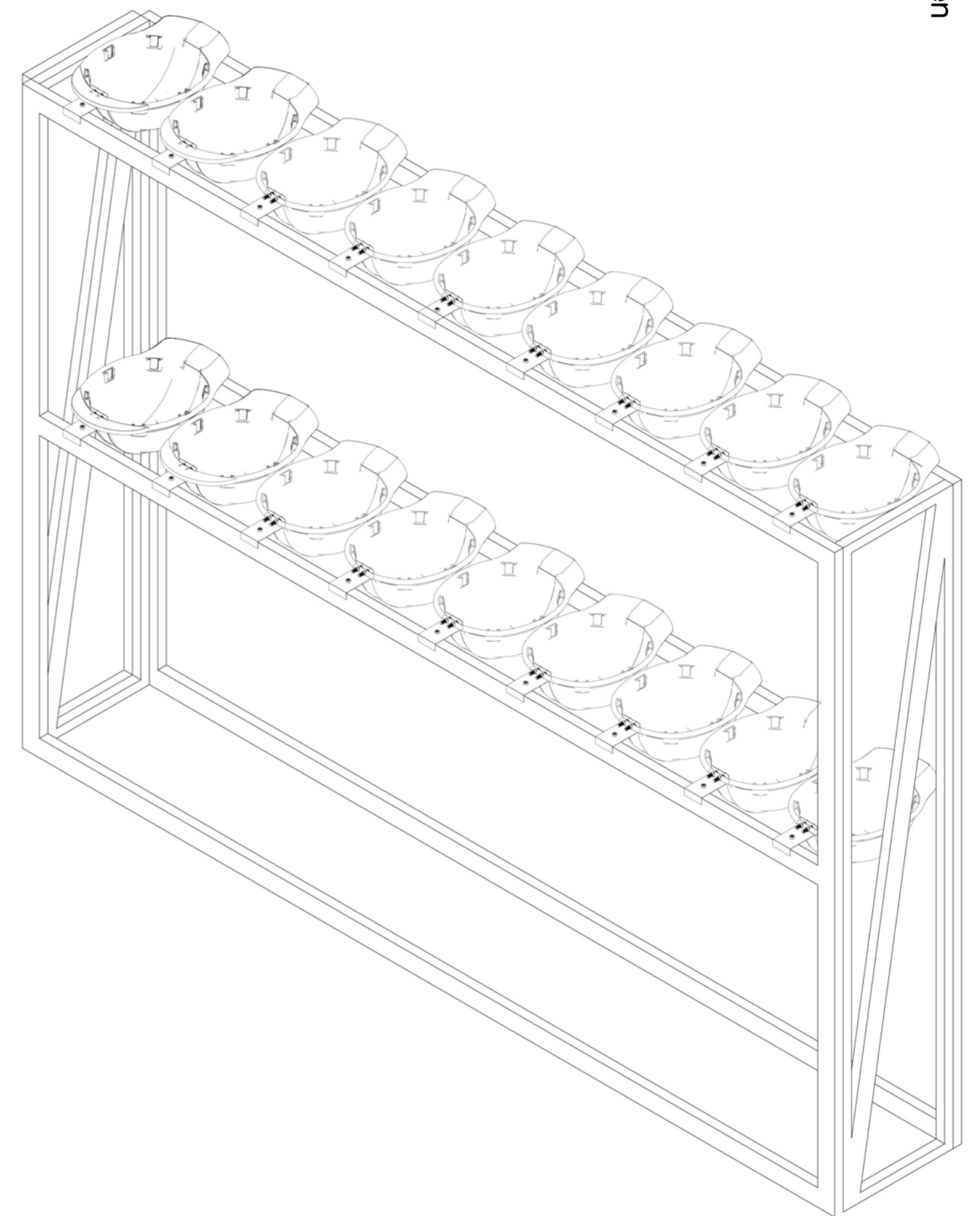


Vertical garden

The vertical farm aims to achieve a triple benefit: generating income for the union by growing cash crops, beautifying the space with green plants to improve environmental comfort, and using the regulating function of plants to mitigate the greenhouse effect of the glass curtain wall and optimize the building's microclimate.



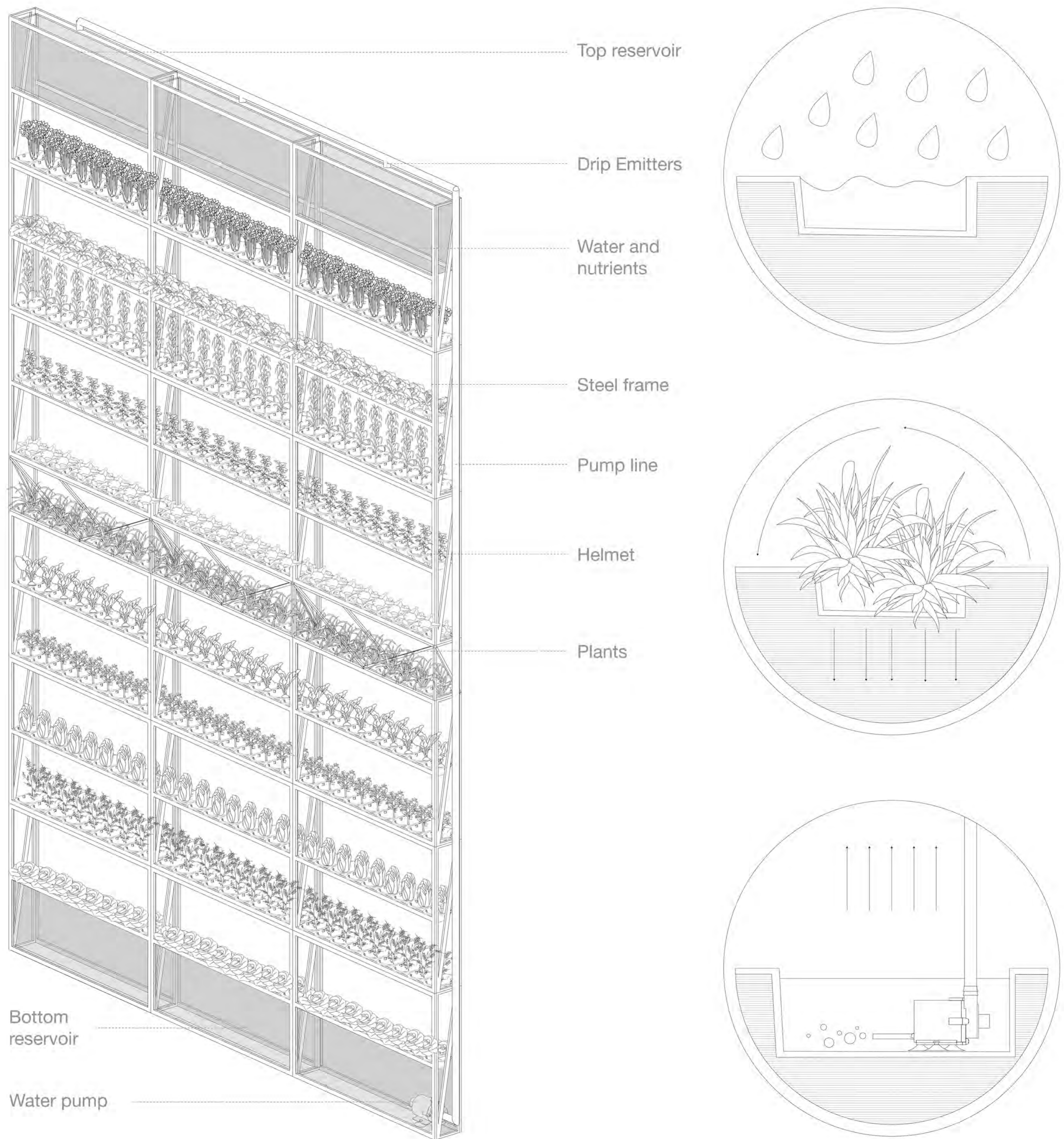
joint and junction



vertical garden

Integration of helmet and existing steel frame structure

Vertical Garden



Vertical Garden

The public can pay to take home vegetables still growing in the helmet, simply lifting them by the straps below. The helmet acts like a vase, making it easy to carry and care for the plants.



junction



plants

The openings at the bottom of the helmet effectively drain excess water, helping to maintain proper moisture and promote healthy plant growth.



SOIL: The World at Our Feet, Somerset House



Photograph by Tania

Tutors:

Dr. Tania Lopez Winkler, Ella Doran, Ian Hunter, Jim Eyre

Workshop Leaders:

Neng Xu (Qno), Qisen Yang, Jianan Wang, Zhuoya Guo

Soil



When you walk on the ground, do you ever stop to wonder what lies beneath your feet? To most, soil is just dirt—a dull, unremarkable substance. But what if this "dirt" holds the key to life itself? Soil is one of Earth's most undervalued yet indispensable resources. It sustains the food we eat, supports ecosystems, and even shapes the production of the goods we use daily. Yet, we rarely stop to appreciate it.

In this program, we're diving deep into the secret life of soil through two hands-on activities. These activities are designed not just to teach, but to challenge participants to critically reflect on the overlooked importance of soil in our world. Soil isn't just the background of life—it's the foundation.

Soil

Activity 1: How Much Soil Does It Take?

Objective

This activity exposes participants to the invisible cost of everyday products by highlighting how much soil is consumed to produce the things we use. The goal is to help participants think critically about resource consumption and understand that soil, often dismissed as inconsequential, is essential for sustaining life and industry.

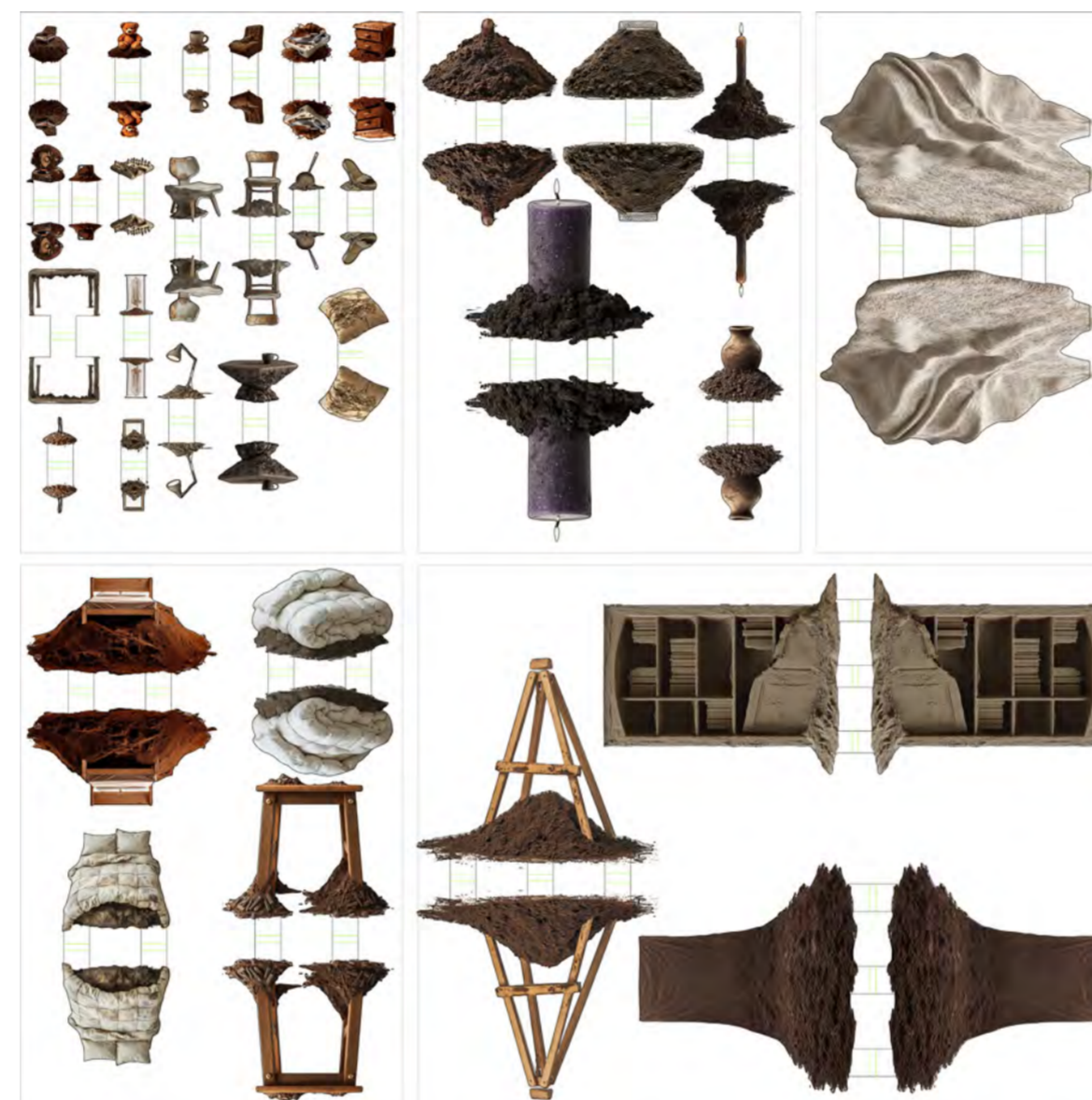
Gameplay

The activity centers around five boxes, each labeled from 1 to 5, where 1 represents the highest soil usage and 5 the lowest. Inside each box is a visual representation of the soil required to produce an item, displayed through scaled pictures of the products recreated with soil materials. The size of each picture correlates to the amount of soil needed to produce that item.



Soil

This activity is grounded in data reflecting the soil volume required to produce each item. The measurements are based on soil consumption for raw materials and expressed in cubic meters. The following rankings reveal just how much soil goes into creating these everyday objects (The data and calculations are provided by ChatGPT):



Photograph by Tania

Soil

Activity 2: Build Your Own Space

Objective

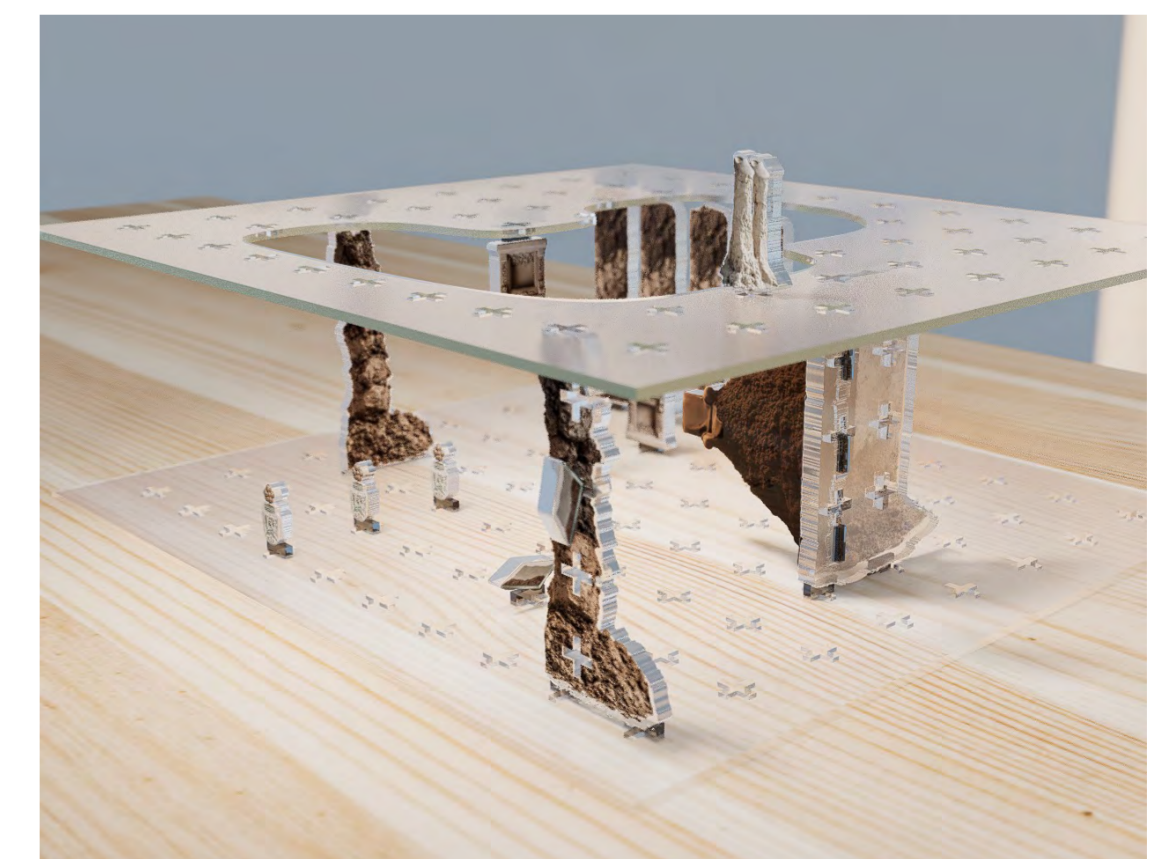
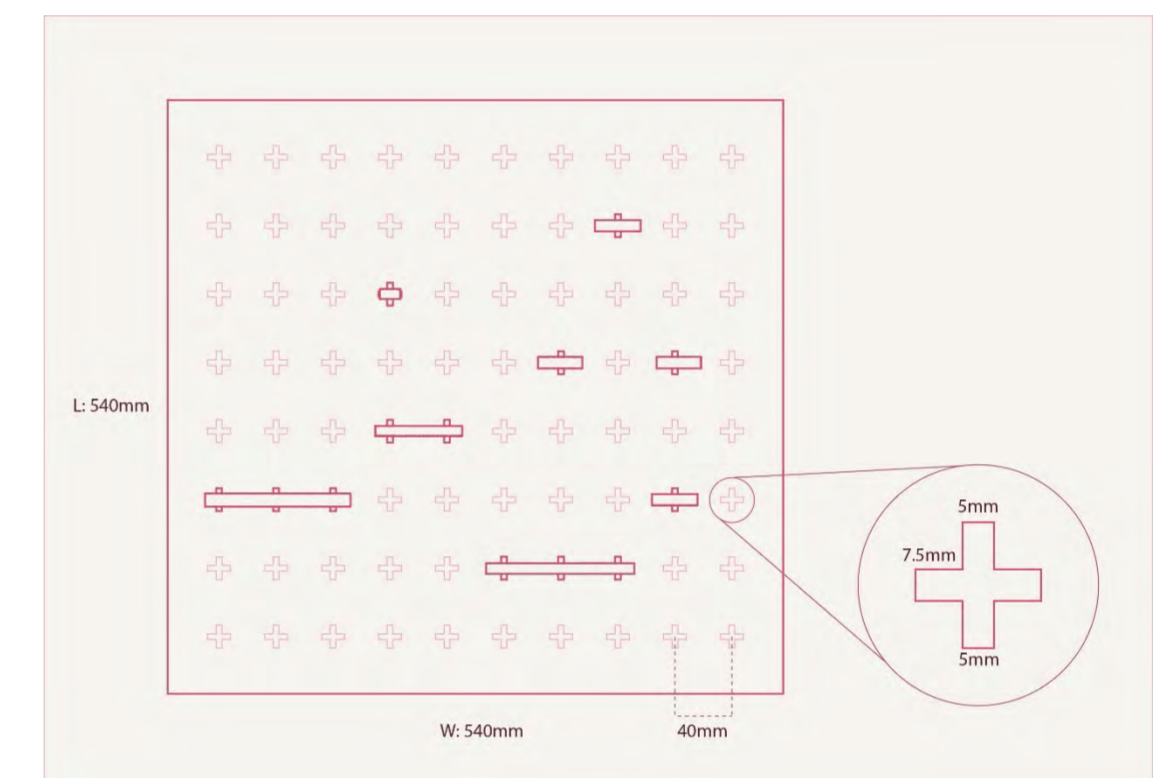
In this activity, participants will use soil-inspired materials to build rooms and spaces. By using furniture pieces made from re-soiled models, they'll reflect on how soil connects to the objects we use every day. The activity encourages rethinking consumption and exploring the link between soil, design, and sustainable living.

Gameplay

Participants can choose from three modes of play:

1. Free Design: Create any space using your imagination—no rules, just creativity. 2. Task Mode: Pick a challenge card (e.g. "Design a cozy living room for a family of three") and build accordingly. 3. Collaboration Mode: Work with parents or peers to design a shared space, like a family home or community room.

The activity promotes creativity, teamwork, and critical thinking, helping participants become more aware of the materials and resources behind everyday environments.



Photograph by Tania

thank you