

HANWEN MIAO

SELECTED WORKS | 2023 - 2026

Columbia University GSAPP

Master of Architecture 26'



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Living As Learning

Housing in New York



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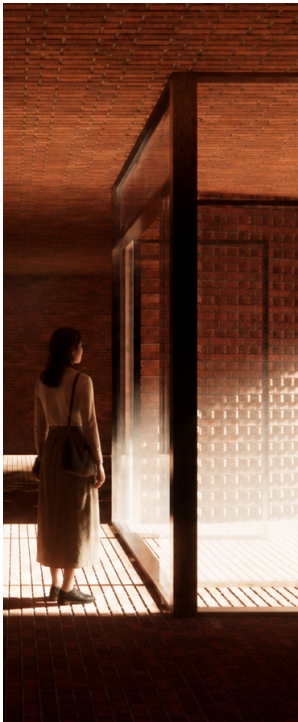
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LIVING AS LEARNING

-THE SCHOOL WITHOUT WALLS

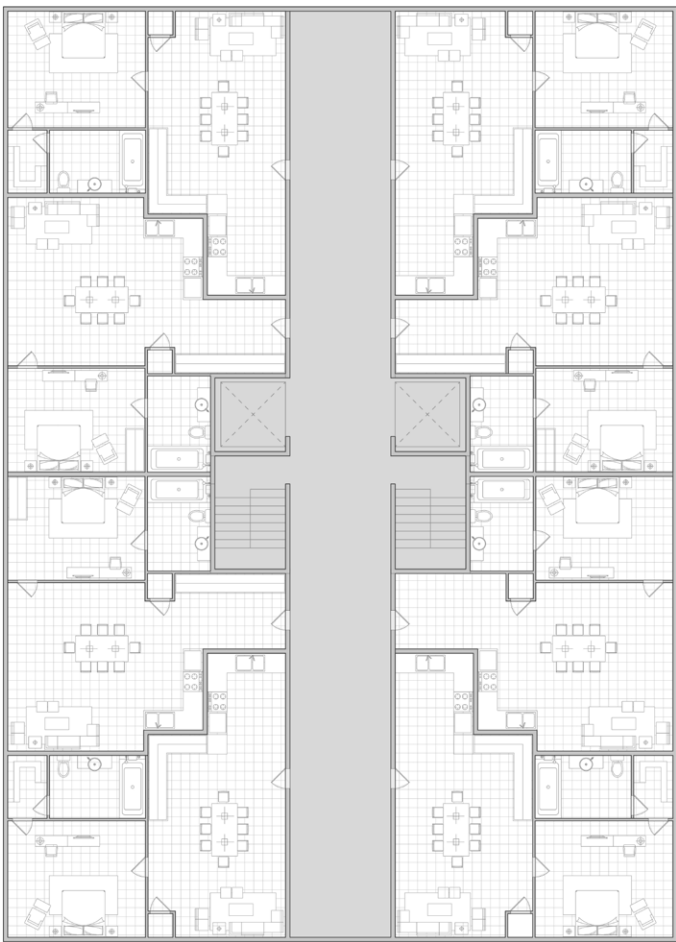
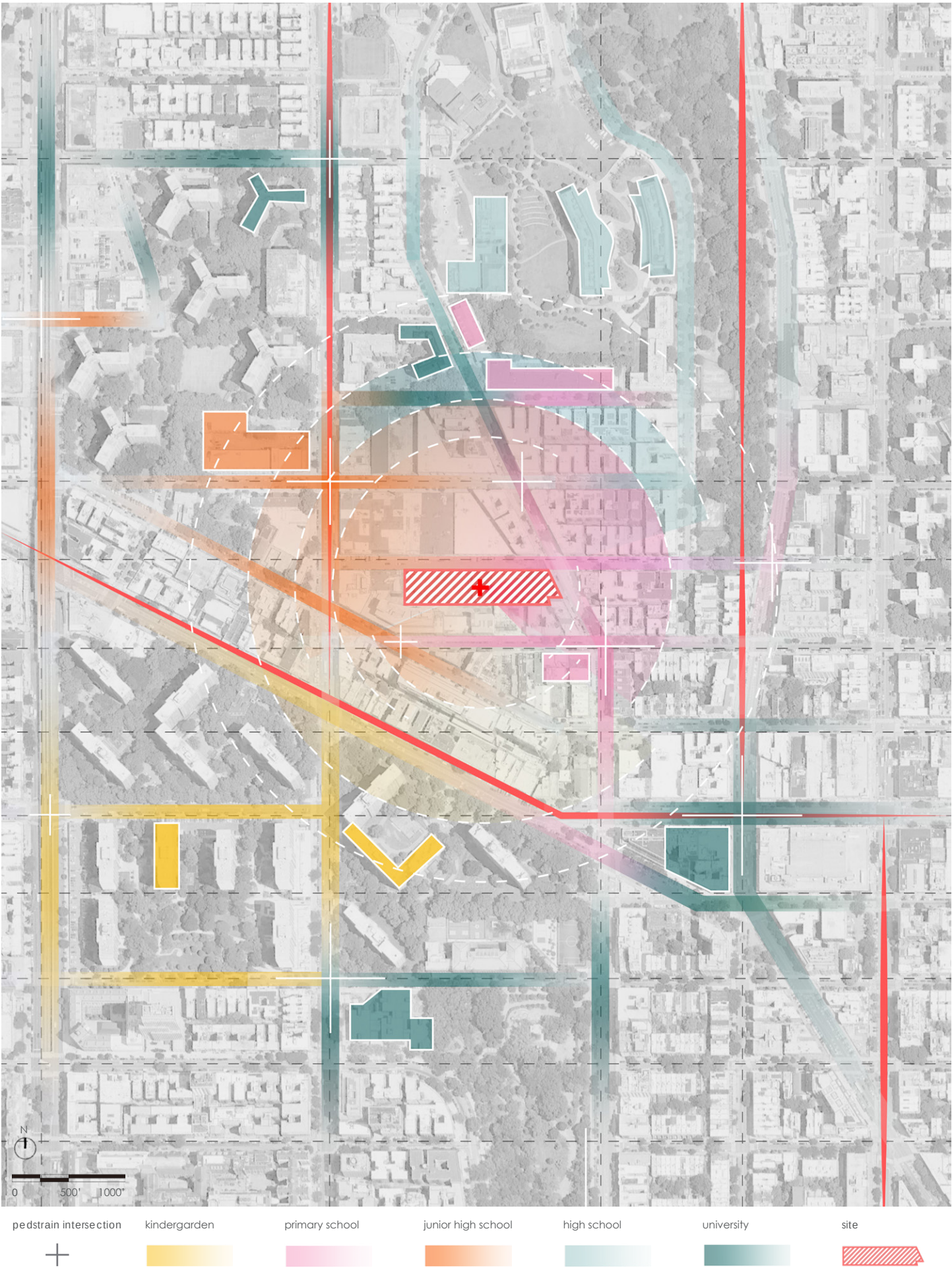
HOUSING | EDUCATION
LOCATION: 128 st HARLEM, NEWYORK, NY
YEAR: FALL 2024 (CORE III)
INSTRUCTOR: Gary Bates
TYPE: Group(Haoming Zhu)

“Each teacher can be a learner, each learner can be a teacher”

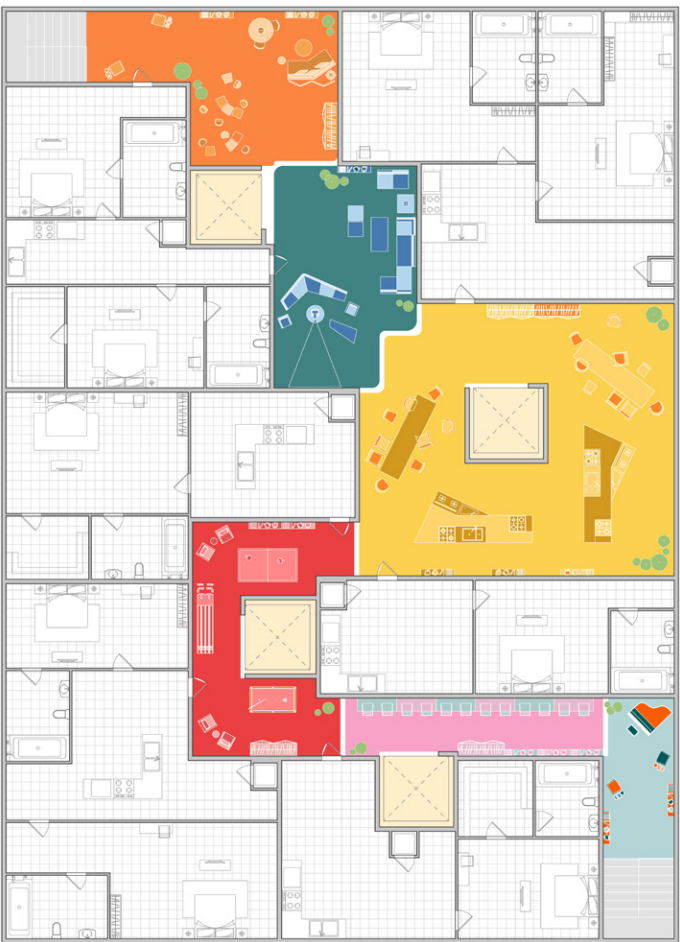
This philosophy defines School Without Walls, a housing project integrating intergenerational learning into daily life. Located at Convent Avenue and West 128th Street, New York, the project prioritizes spatial efficiency and community-building, redefining housing as a platform for lifelong education, adaptability, and human connection.

The design, based on six spatial types, generates 57 unit variations, refined to 41 flexible unit types after defining circulation areas. Residents are grouped by age-based learning exchanges, fostering a dynamic educational ecosystem. Columns, walls, slabs, and stairs shape the architecture, while corridors, thresholds, and edges enhance connectivity. Shared spaces—a kitchen, gym, garden, lobby, and laundry—serve as interactive learning hubs.





Conventional Housing Floor Plan



Reprogrammed Circulation Space

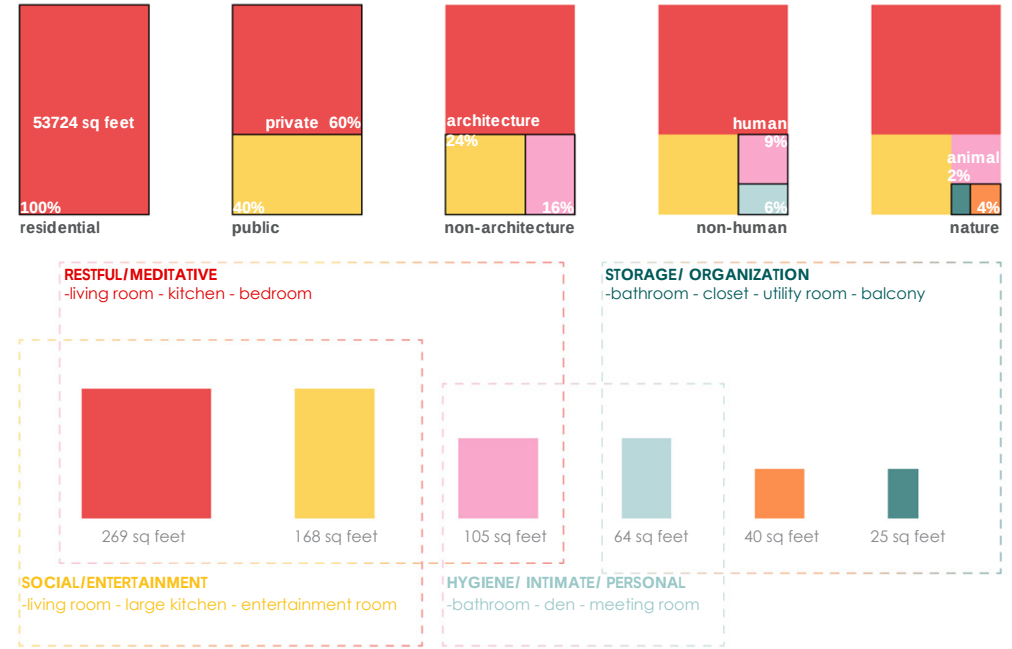
This comparison highlights the shift from underutilized circulation ("grey waste") to activated space for learning, play, and community exchange—turning movement into meaningful interaction.

Reclaiming Circulation: From Grey Waste to Shared Learning Space

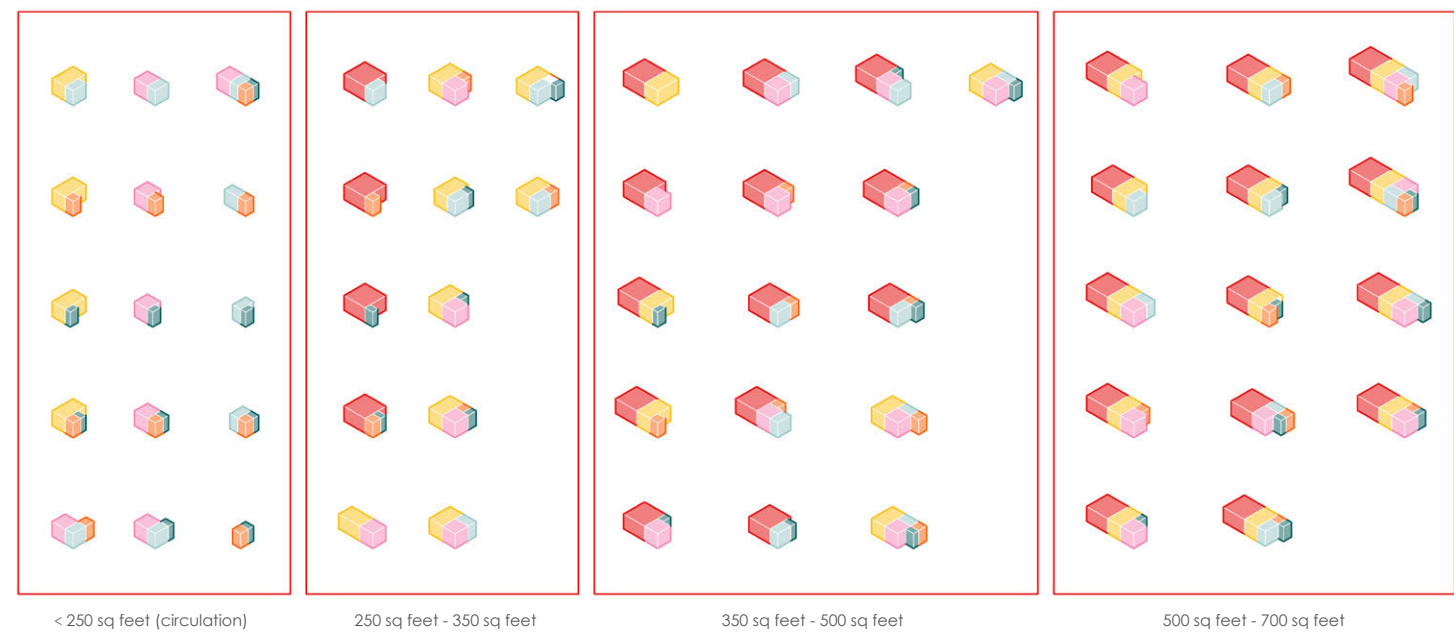
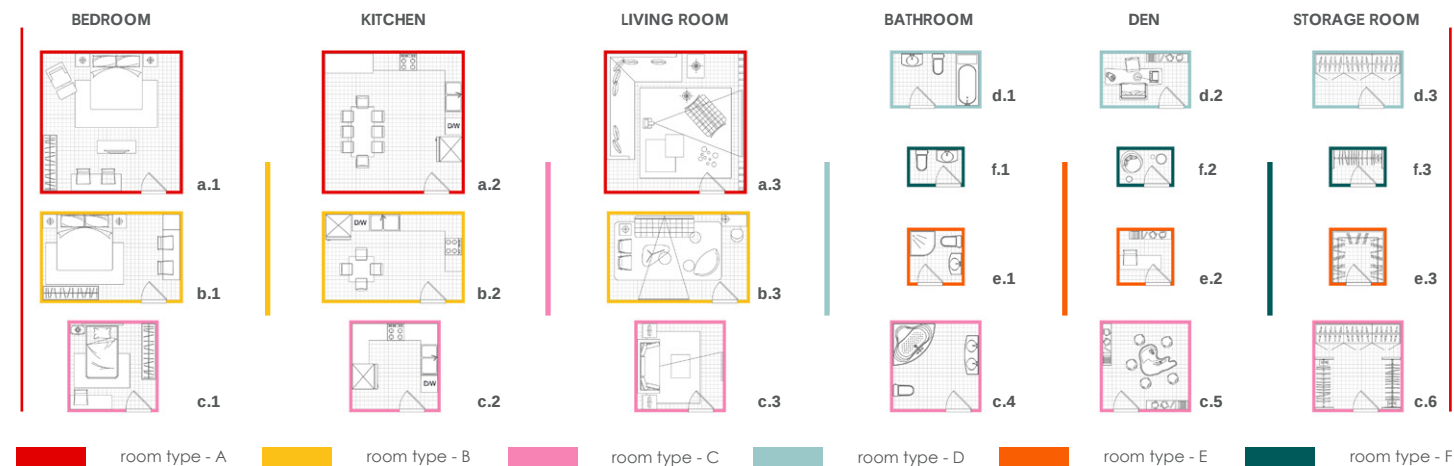


Programmatic Breakdown and Spatial Typology of Site Allocation

Starting from the total site area, the diagram filters spatial logic through a 60% private and 40% public split, further divided into architecture, non-architecture, and non-human categories. From this breakdown, six modular room types emerge, allowing residents to customize units based on diverse spatial needs.



Site Area Breakdown and Modular Room Typologies

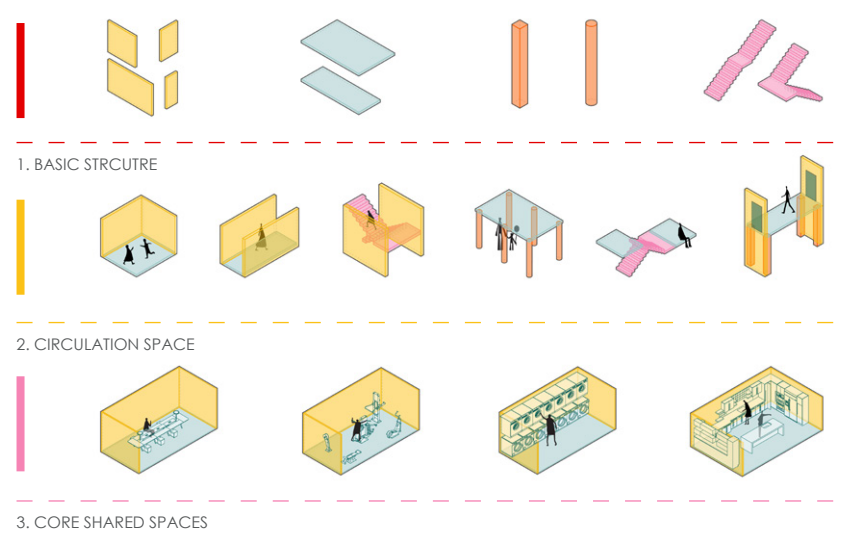


Modular Room Logic and Unit Typologies

Six room types combine into 57 unit typologies. Units under 250 sq ft are repurposed as circulation; the rest are grouped by size to explore scalable, flexible housing layouts.

From Element to Ecosystem

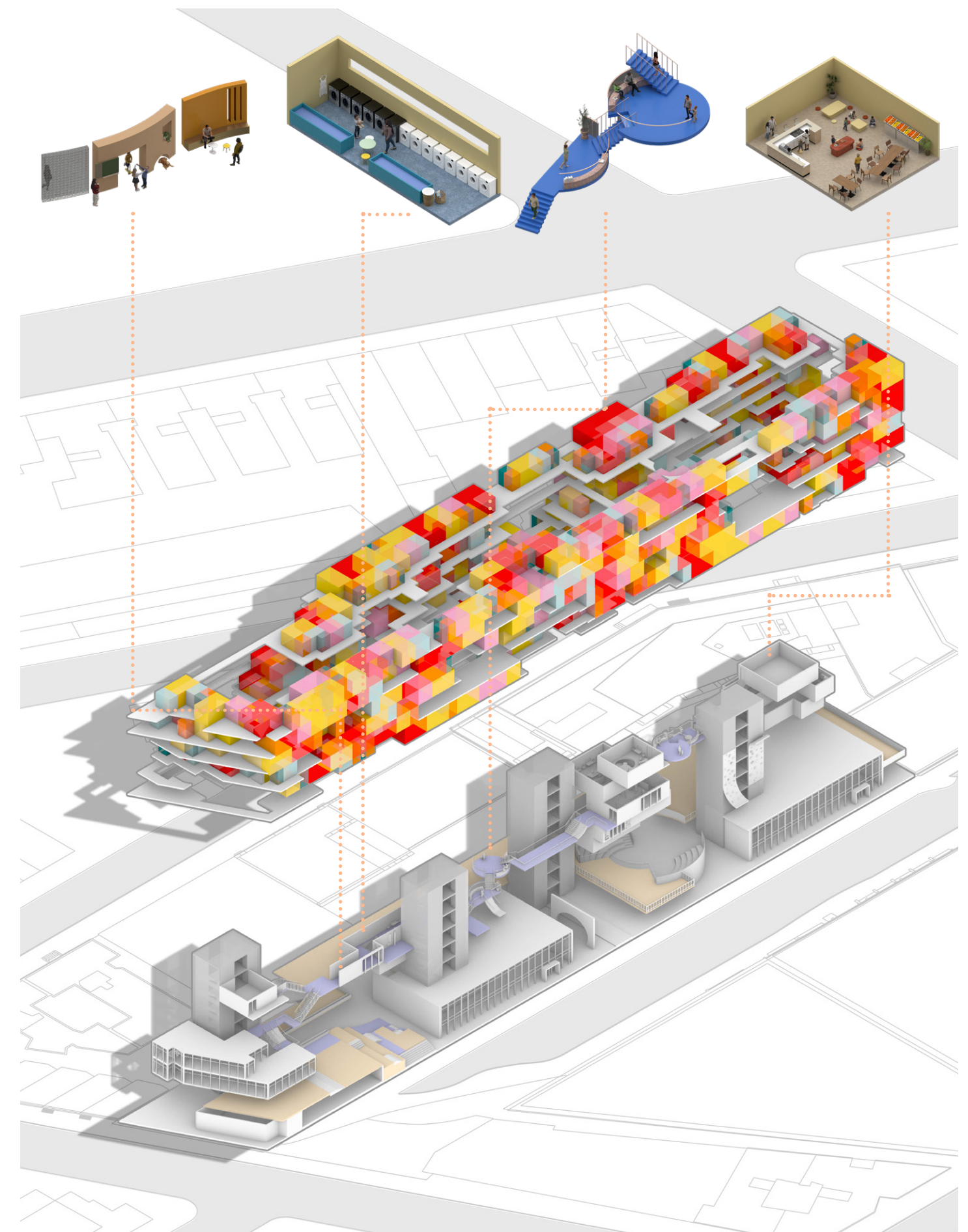
A three-tier design strategy: structure generates circulation, and circulation is activated with shared programs like kitchens, gyms, and info hubs. This transforms basic elements into a flexible system for communal living.



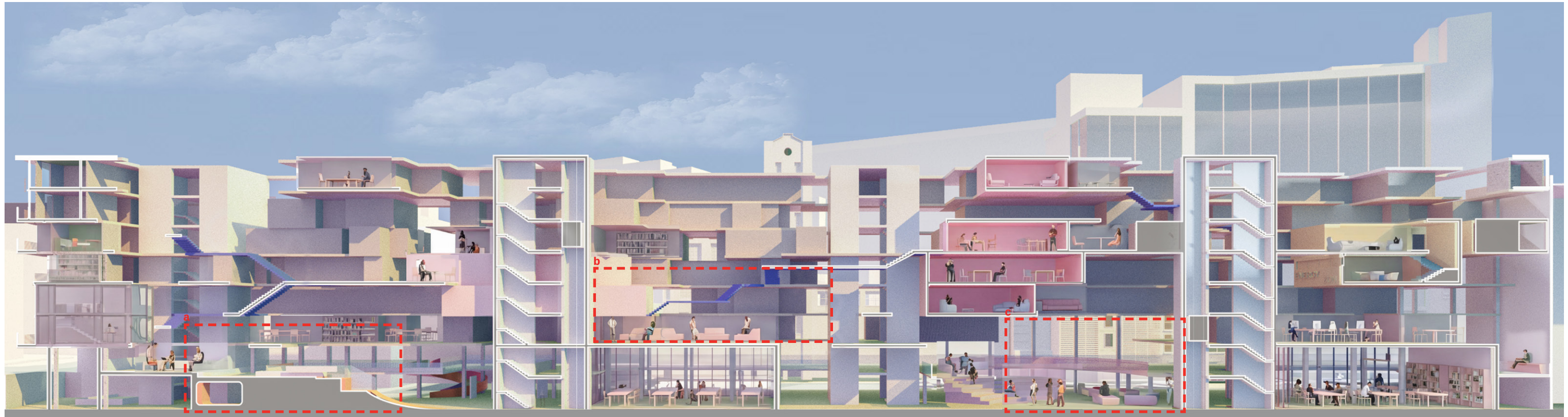
57 Unit Typologies Through Modular Room Combinations



Three-Layer Spatial System: From Structure to Shared Activation



From Frame to Fabric: Axonometric Exploration of Modular Aggregation and Shared Spaces



Sectional Strategy: Activating Spatial Layers Through Structure, Circulation, and Shared Programs



Render a: Threshold as Anchor, Circulation Framing Community Encounters



Render b: Vertical Commons, Learning Across Generations in a Shared Core



Render c: Civic Interior, the Atrium as Cultural and Social Stage

FROM EMBASSY TO EXPRESSION

- FROM CENSORSHIP TO EXPRESSION: WOMEN'S VOICE

ADAPTIVE REUSE | MUSEUM

LOCATION: FORMER US EMBASSY, DUBLIN, IRELAND

YEAR: Fall 2025 (ADV V)

INSTRUCTOR: Jorge Otero-Pailos, Mark Rakatansky

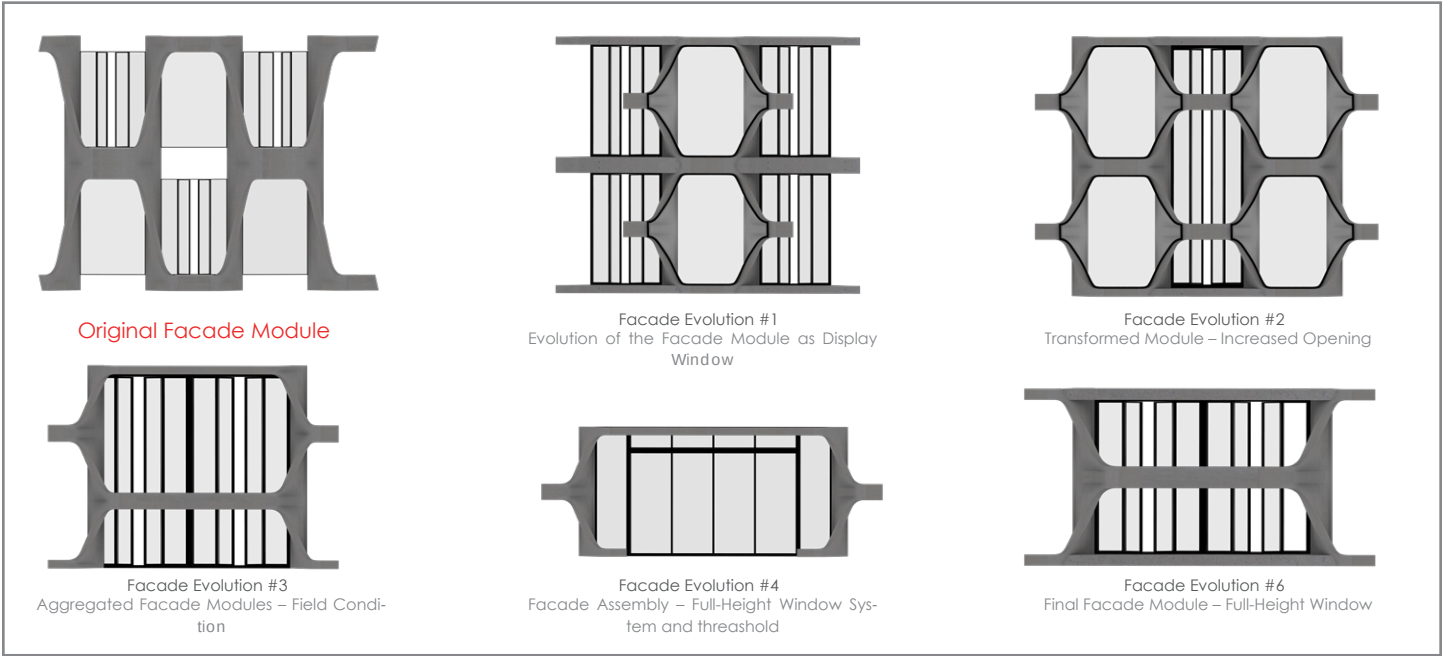
TYPE: INDIVIDUAL

This project transforms the former U.S. Embassy in Dublin into an Irish–American Women's Museum that traces how women's voices and bodies have been censored across both nations. The design contrasts the embassy's heavy, enclosed structure with a new transparent extension, using split-level circulation to reflect the uneven evolution of women's rights—moments of progress, setback, and resurgence.

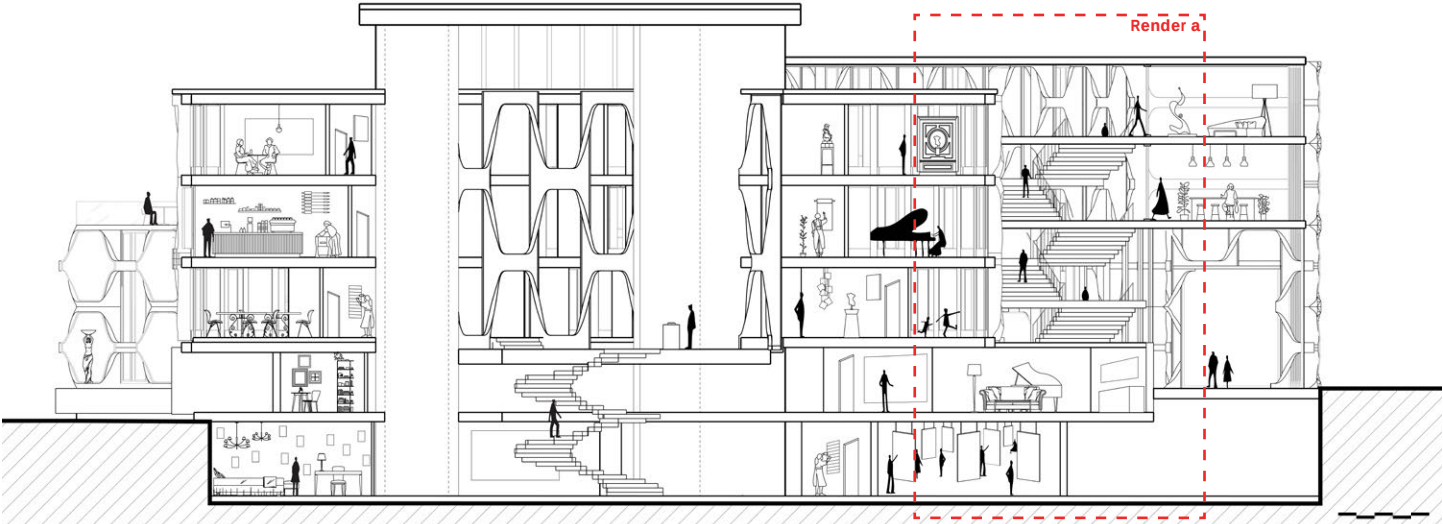
Within the old building, visitors confront histories of restriction: legal prohibitions, banned publications, and the underground networks women created to share information and support one another. The new extension opens into light-filled spaces for learning, dialogue, and artistic practice, representing the emergence of public voice and collective expression.

Moving through corridors and shifting levels, visitors weave between past and present, experiencing the building as a spatial narrative of interruption and renewal. From underground silence to open expression, the architecture mirrors the ongoing struggle for visibility, agency, and empowerment.

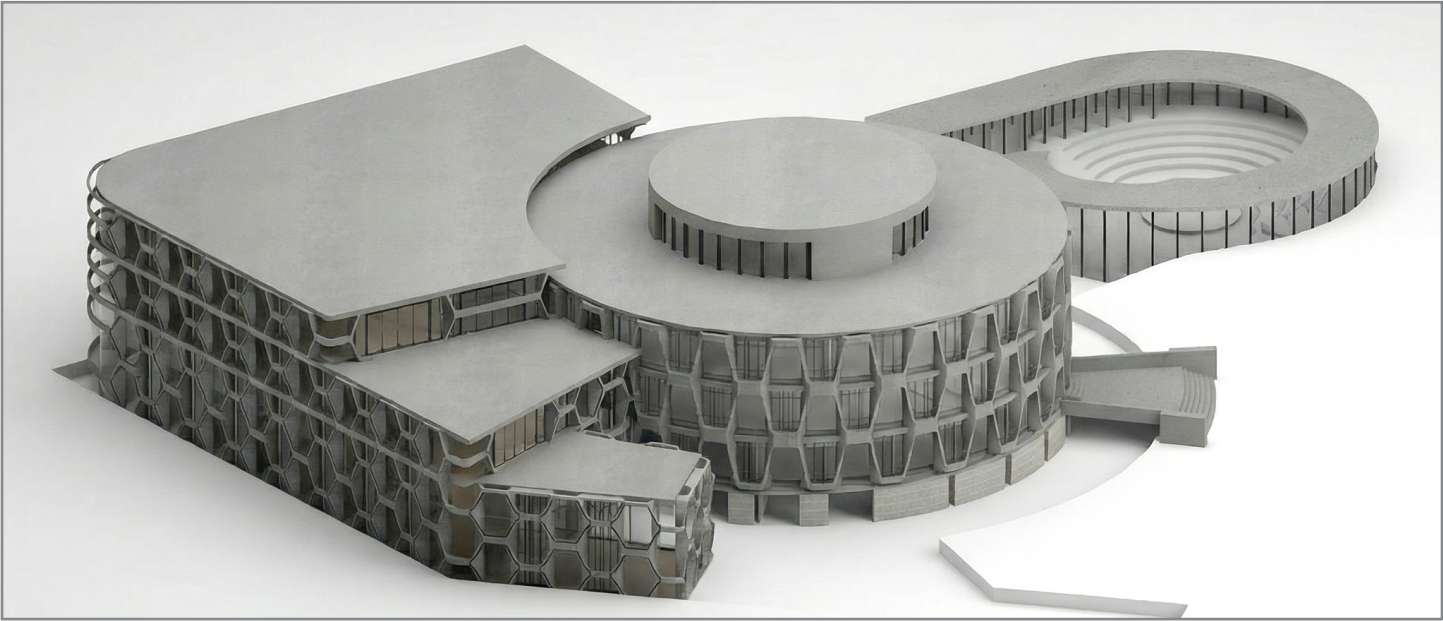




Facade Module Evolution - From Standardized Structure to Adaptive Forms



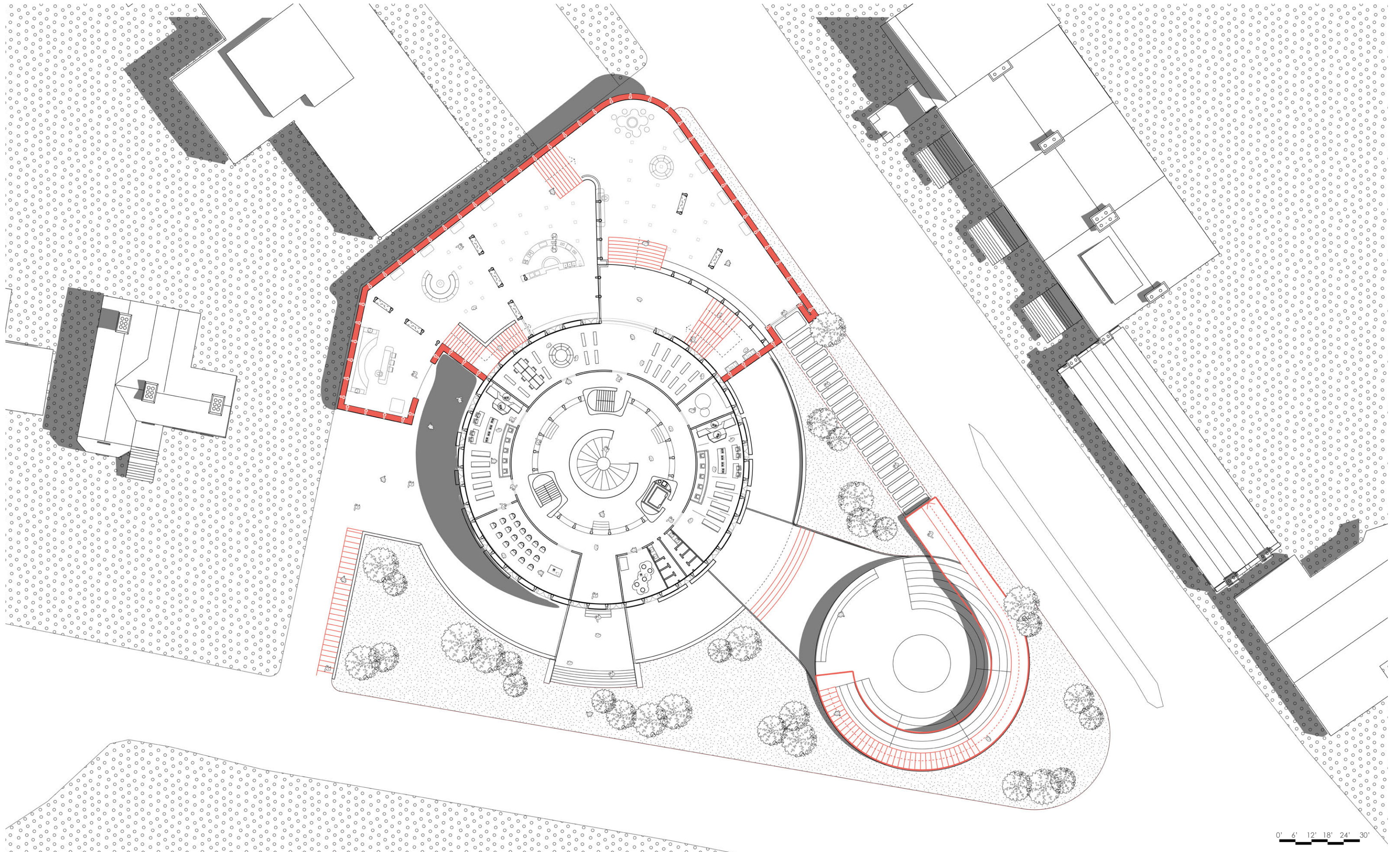
Section- A split-level strategy mediates between the historic and new volumes



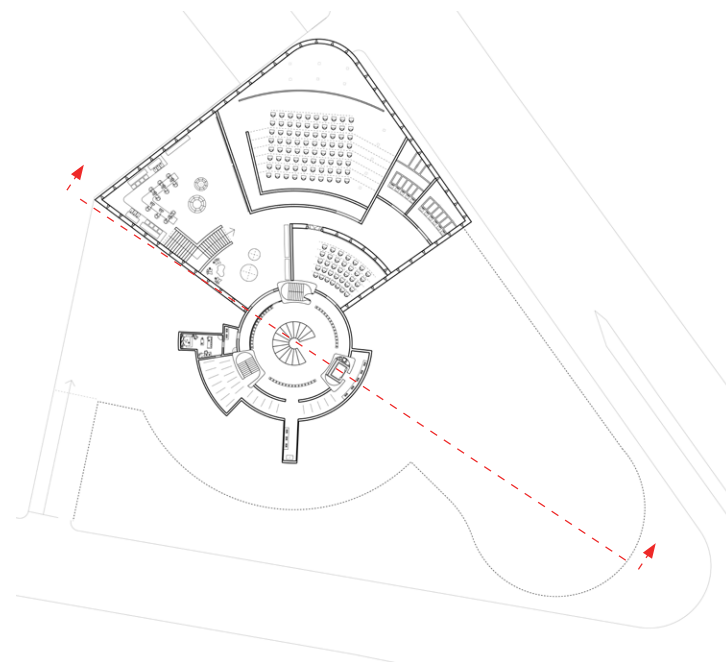
Overall Massing Model - Structural Skin and Programmatic Volumes



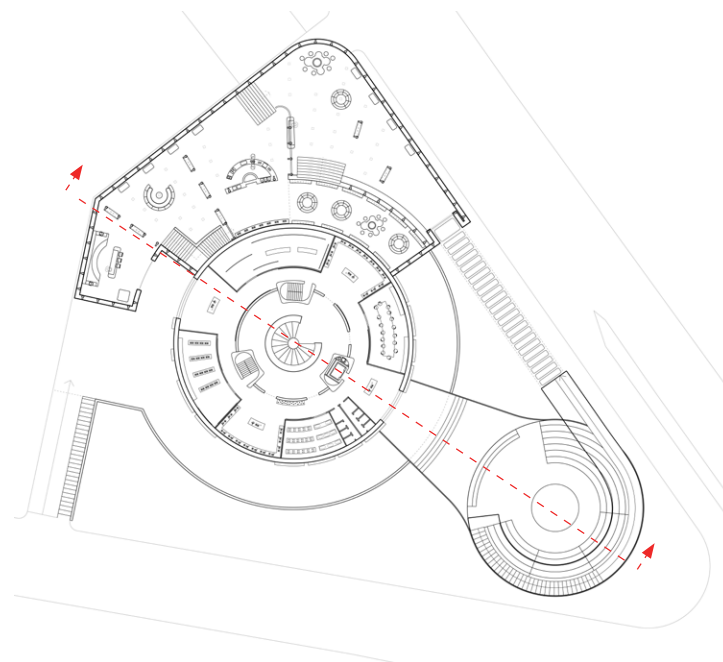
Render a- Interior View - Stair-Led Circulation Across Split Levels



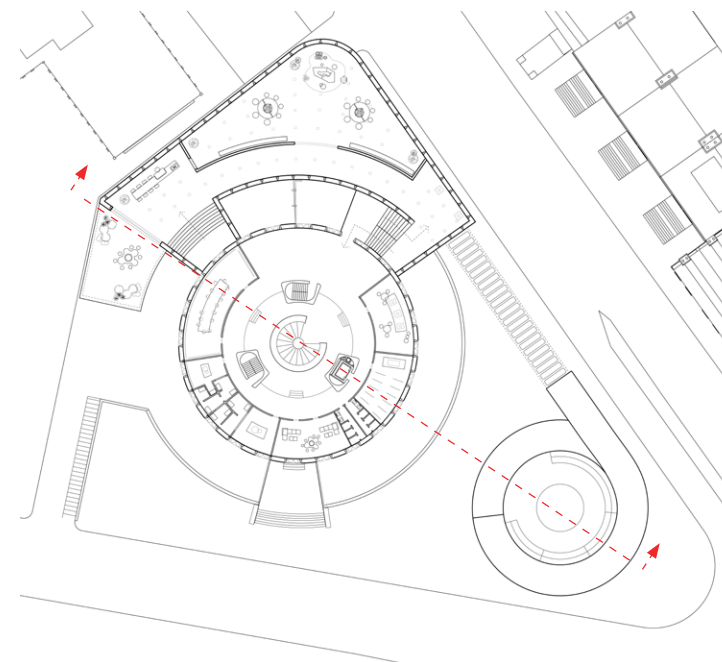
First Floor Plan – Circulation and Public Interface



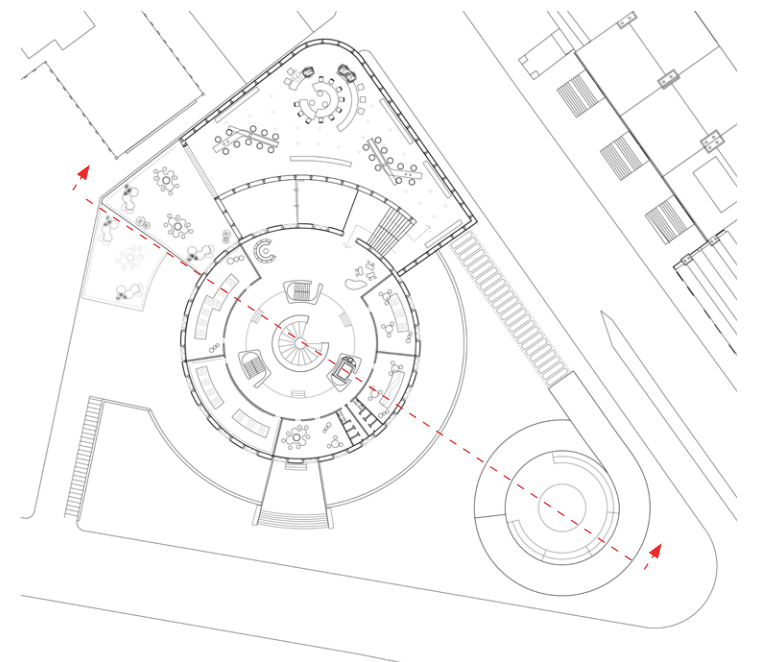
Basement Plan
Underground Theater and Exhibition Support Spaces



Ground Floor Plan
Museum Bookstore and Public Exhibition Interface



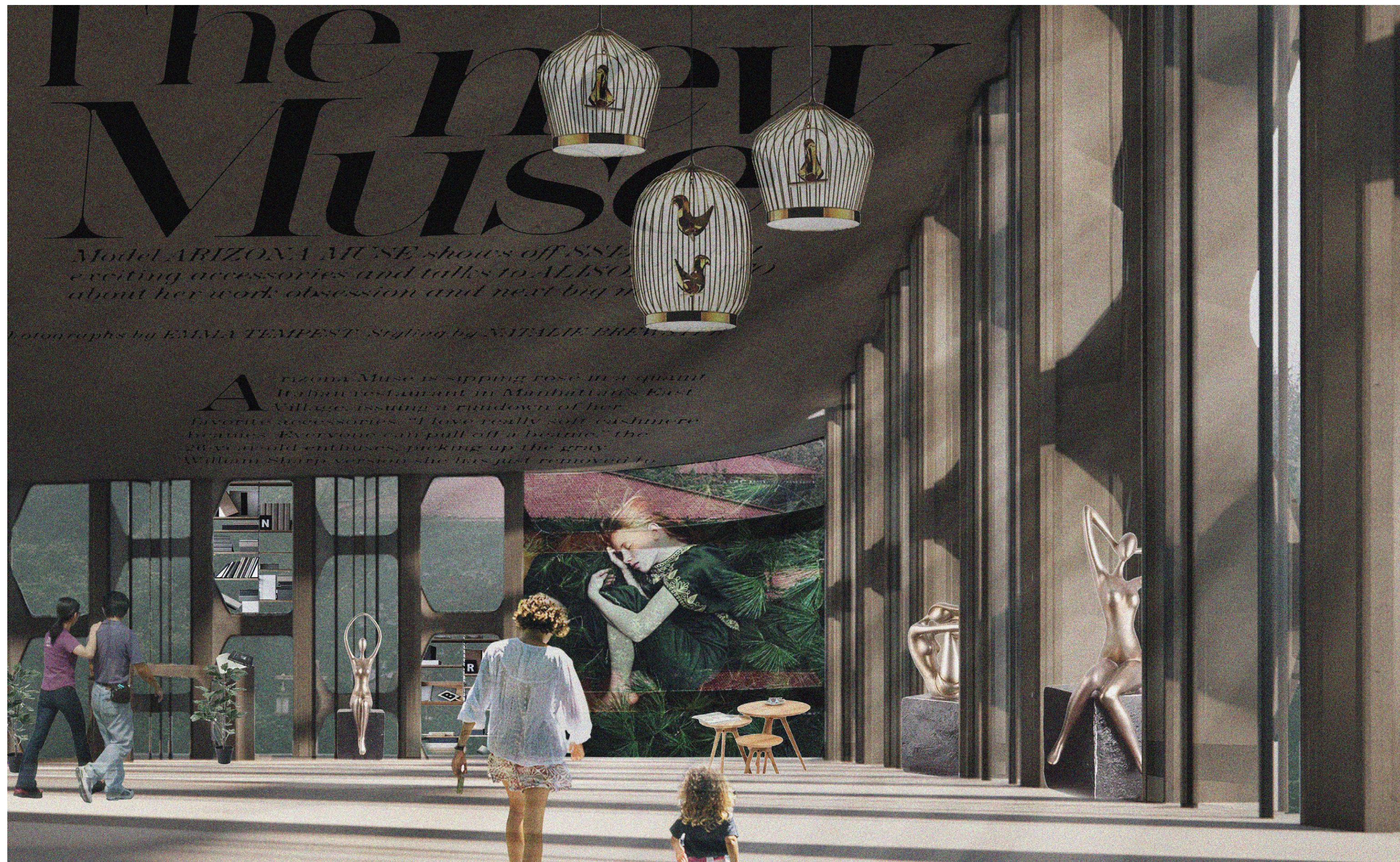
LEVEL -2 & 2.5 PLAN
Exhibition, Art Workshop, and Learning Spaces



LEVEL -3 & 3.5 PLAN
Third Floor Plan – Exhibition and Learning Spaces



Longitudinal Section – Vertical Organization of Exhibition, Learning, and Performance



Interior Perspective – Ground Floor Bookstore and Public Gallery Space

VENDOR WEAVING WALL

- AN ARCHITECTURE OF EXCHANGE BENEATH THE BRIDGE

INSTALLATION | COMMUNITY

LOCATION: Manhattan Bridge, NEW YORK, NY

YEAR: Fall 2023 (CORE I)

INSTRUCTOR: Gregory K. Melitonov

TYPE: Individual

VENDOR WEAVING WALL transforms the residual space beneath the Manhattan Bridge into a flexible marketplace and community platform for Chinatown. Instead of treating the bridge as a boundary, the project reimagines it as an active urban threshold where vendors, residents, and passersby can gather, exchange, and participate in everyday public life.

The project introduces a modular wooden system that can be assembled, expanded, and reconfigured according to different needs. It supports vending, seating, display, storage, and informal gathering, allowing the market to grow through daily use rather than fixed programming.

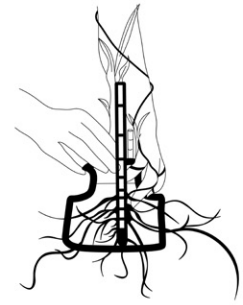
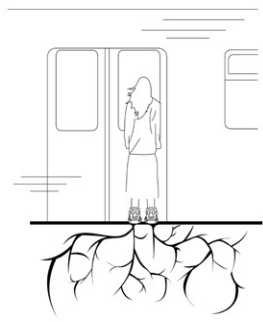
By weaving commerce, movement, and social interaction into the underused infrastructure, the project gives visibility to informal economies and local communities. The bridge becomes more than a passageway—it becomes a shared civic space shaped by exchange, memory, and collective occupation.





Arrival / Waiting / In-Between

Moments of waiting beneath the bridge become spatial thresholds between movement and pause. The project begins from the experience of invisibility within transit infrastructure, transforming overlooked moments into opportunities for occupation, encounter, and visibility.



Growth Through the Void

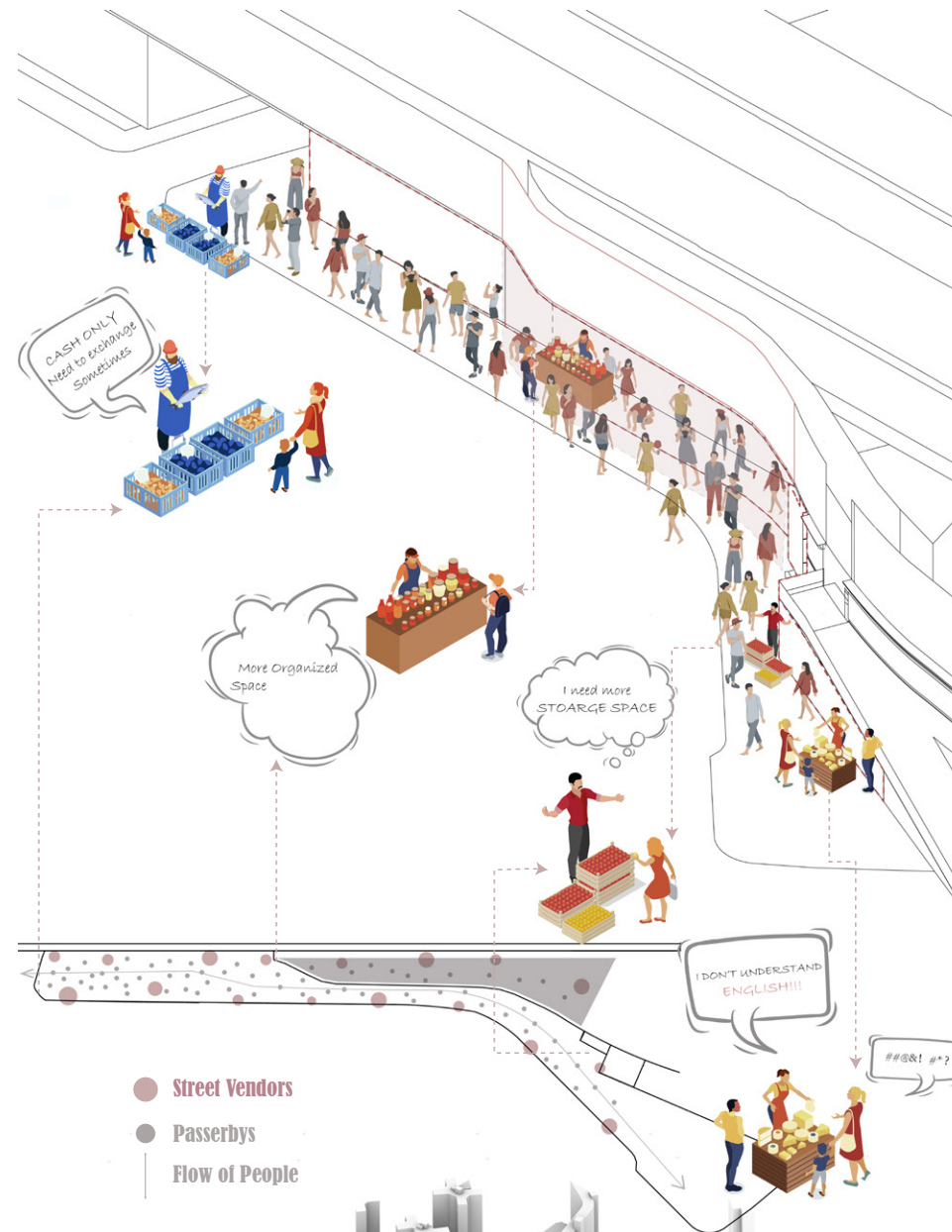
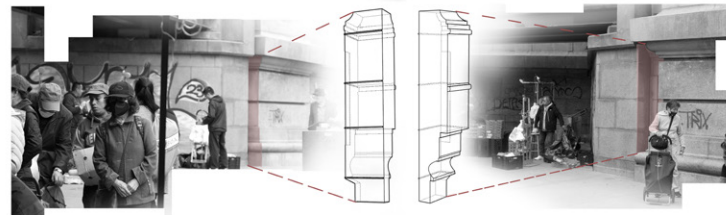
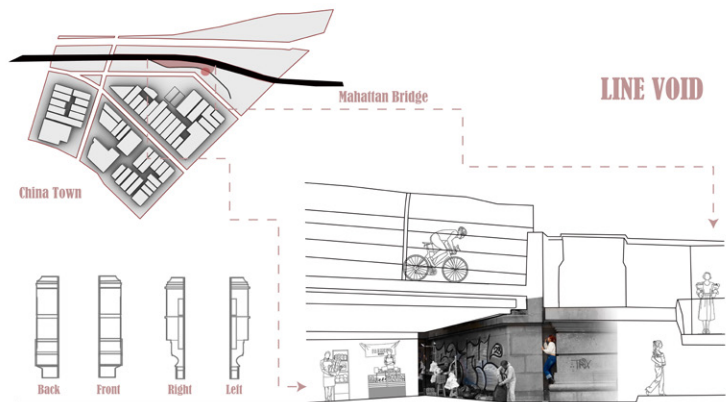


Inspired by the logic of roots penetrating cracks and hidden ground conditions, the intervention treats the bridge void as a living urban ecology. Small insertions attach, spread, and adapt within the existing structure, allowing informal activities to gradually occupy residual space.



Collective Memory / Urban Isolation

The project maps the psychological condition of Chinatown's transient communities through fragments of expression, silence, and observation. Personal emotions become spatial drivers, shaping an architecture that responds to displacement, language barriers, and social invisibility.



THE LIVING SHED

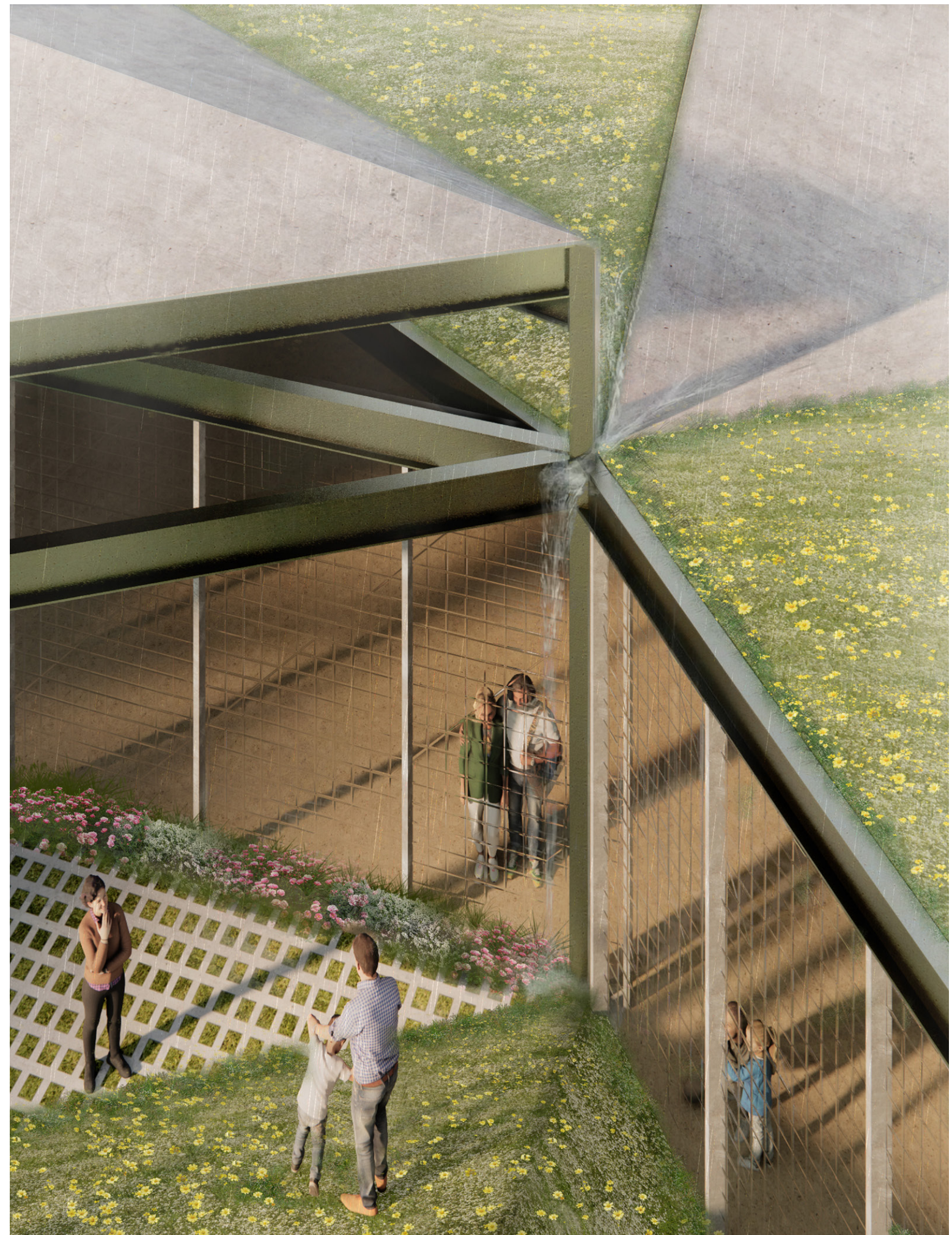
-BORANIC GARDEN REIMAGINED

Adaptive Reuse | Botainc Garden
LOCATION: Liberty State Park, Jersey City, NJ
YEAR: Spring 2025 (ADV IV)
INSTRUCTOR: Mimi Hoang
TYPE: Group(Haoming Zhu)

This project reimagines the historic train shed at Liberty State Park as a regenerative botanical and civic infrastructure that fosters ecological restoration and public engagement. Inspired by the layered ecologies of the site—from tidal wetlands to upland woodlands.

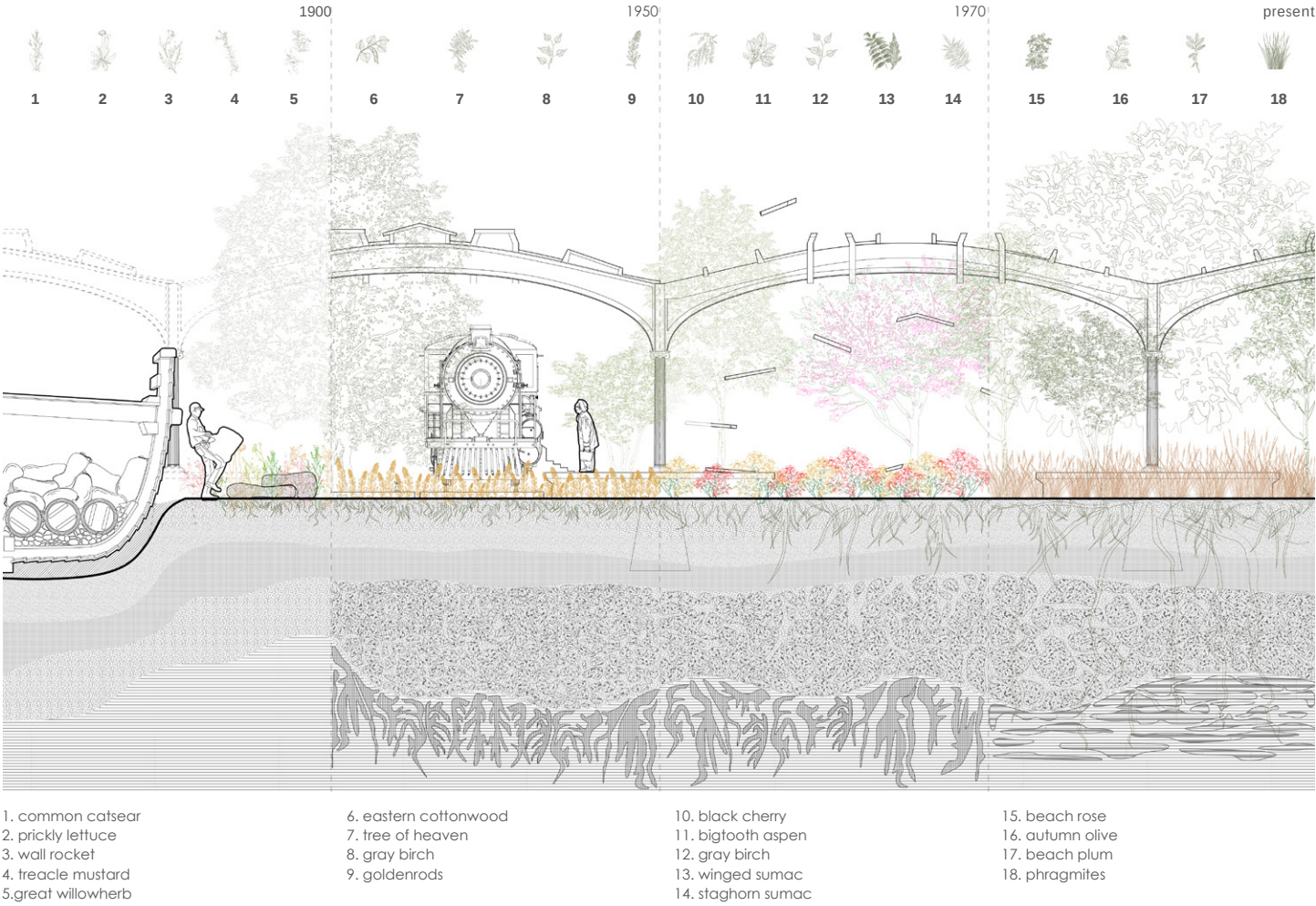
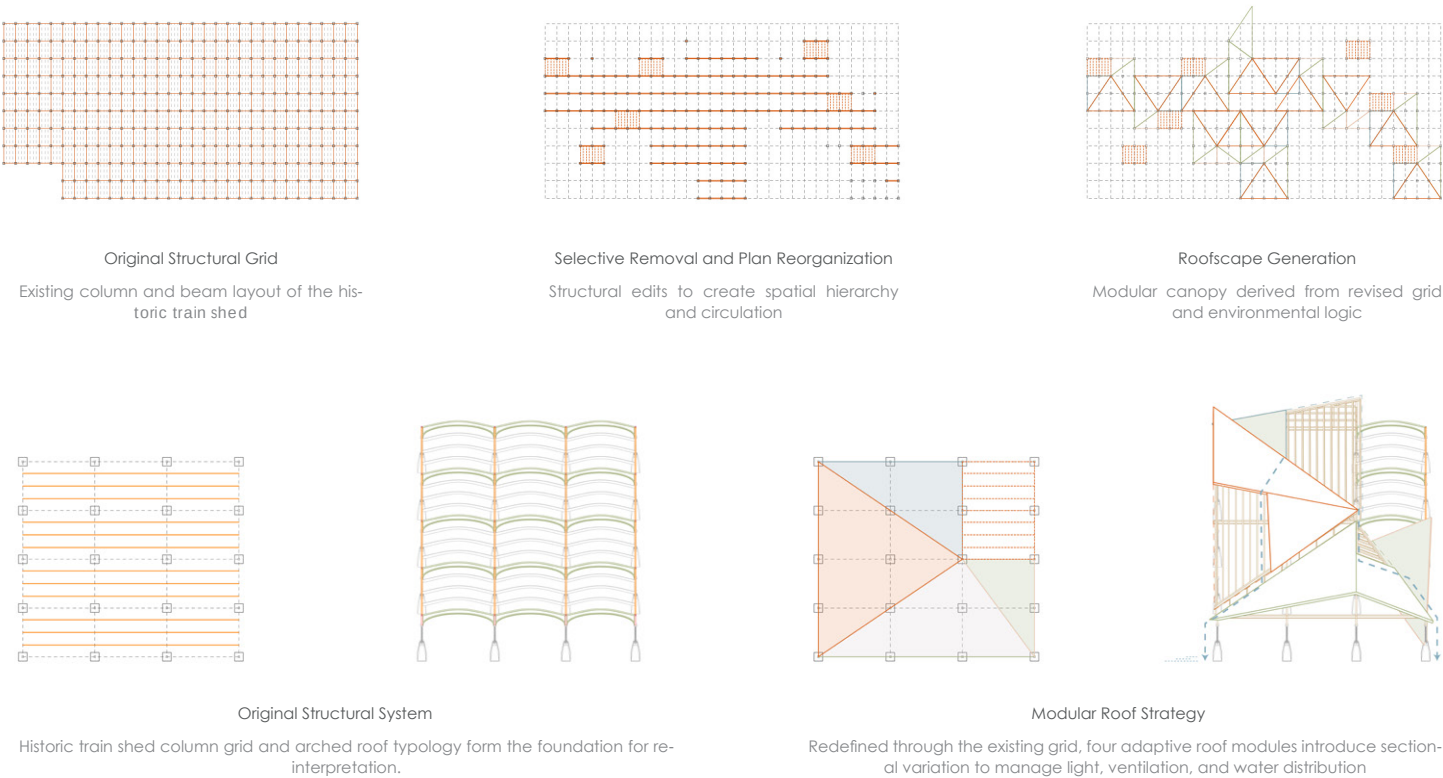
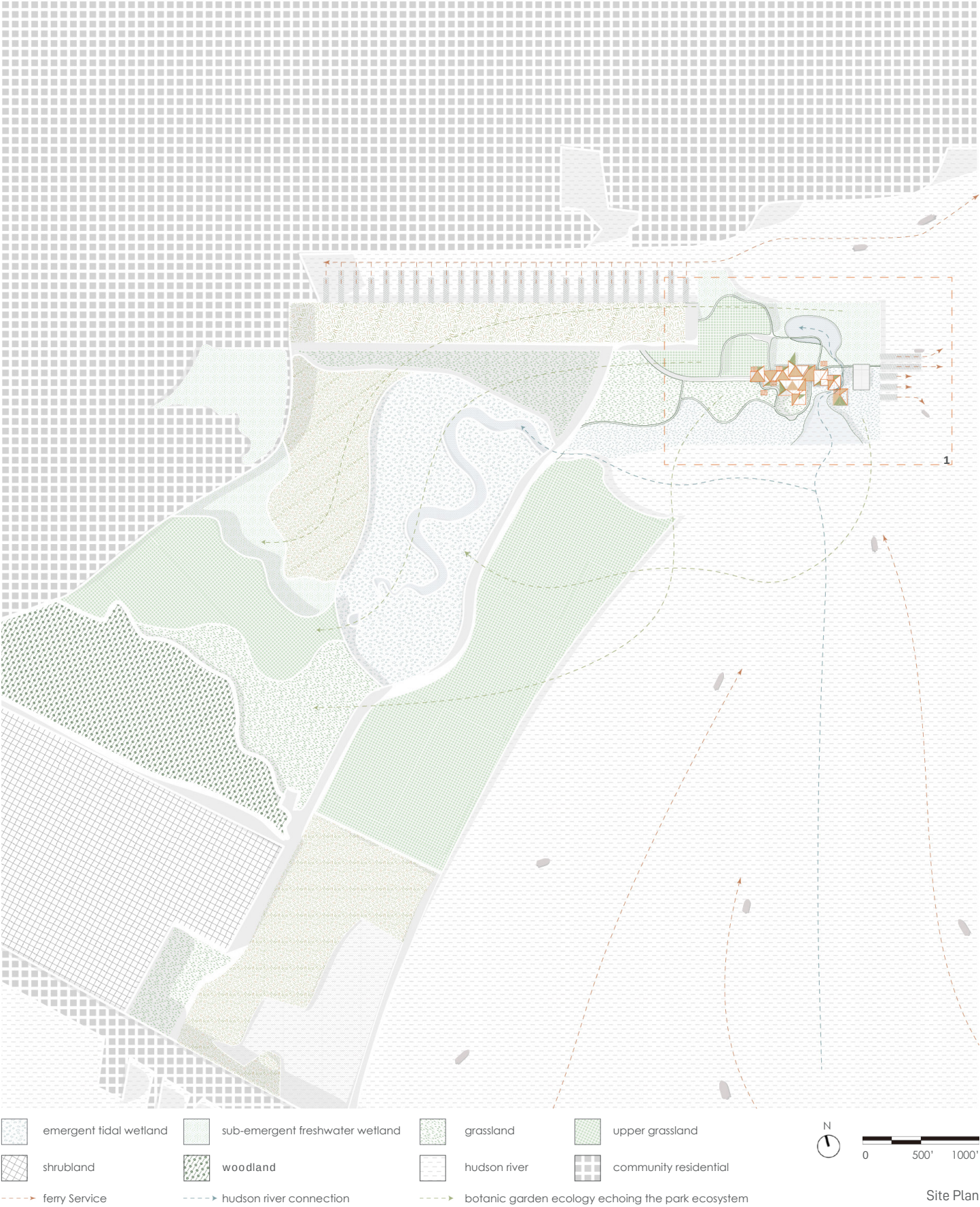
The Living Shed redefine a prototype of botanic garden that responds dynamically to environmental conditions through modular roofscapes, water management, and adaptive reuse. Programmatically, the design integrates a visitor center, science pavilion, seed lab, greenhouse exhibition, and community workshop to form an open-access landscape for research, education, and cultivation.

Acting as both a prototype and a microcosm of the surrounding park, the project transforms a site of industrial ruin into a living matrix of renewal, where architecture becomes a medium for collective stewardship and ecological thinking.



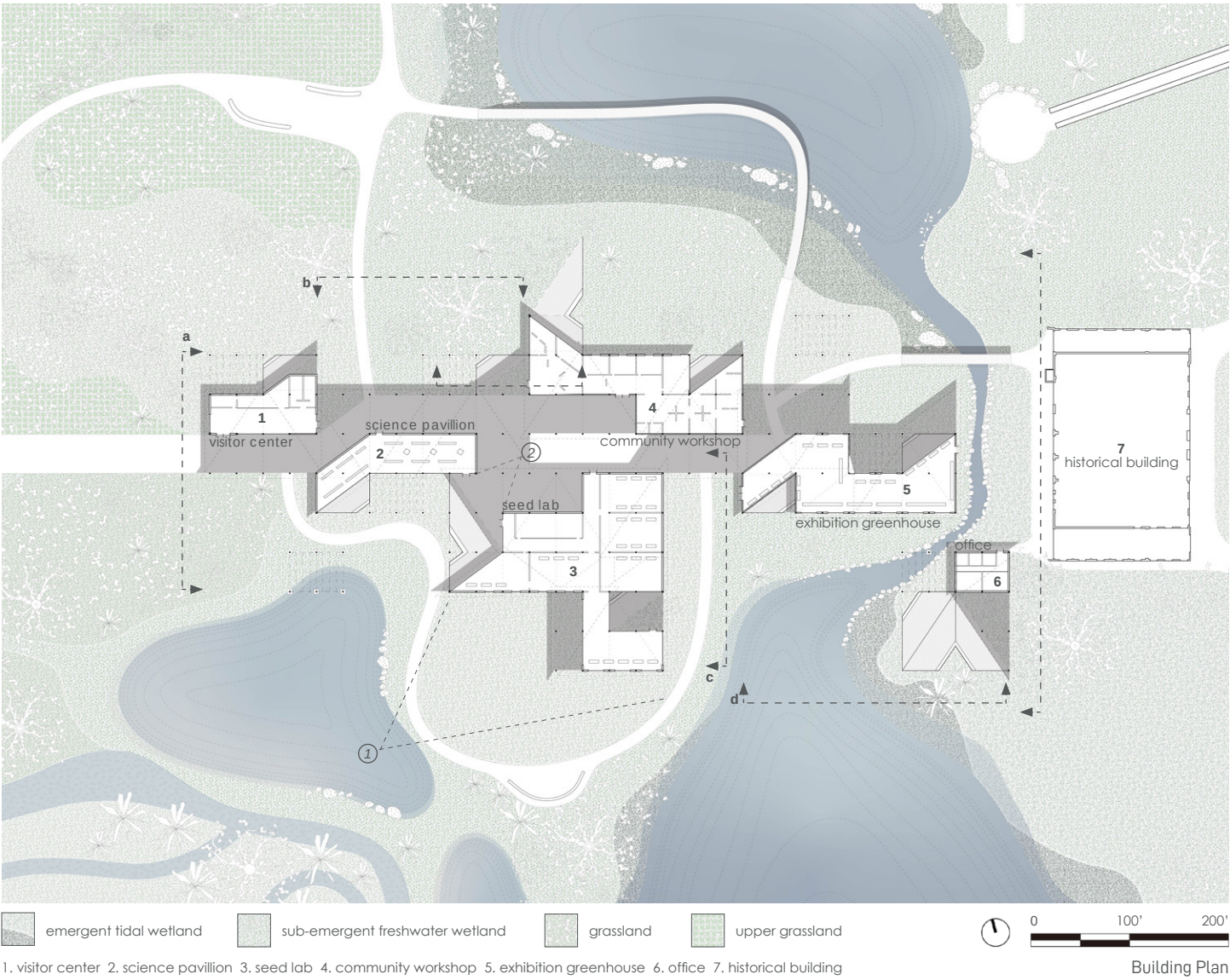
A Microcosm of Liberty State Park

Liberty State Park's diverse ecological zones—tidal wetlands, grasslands, and woodlands—serve as the foundation for The Living Shed. The design transforms the abandoned train shed into a microcosm of the park's ecosystems, reintroducing it as a new prototype of the botanic garden that integrates architecture with environmental regeneration.



This site section research traces how changing soil and industrial change over time have shaped local plant communities and informed adaptive reuse.

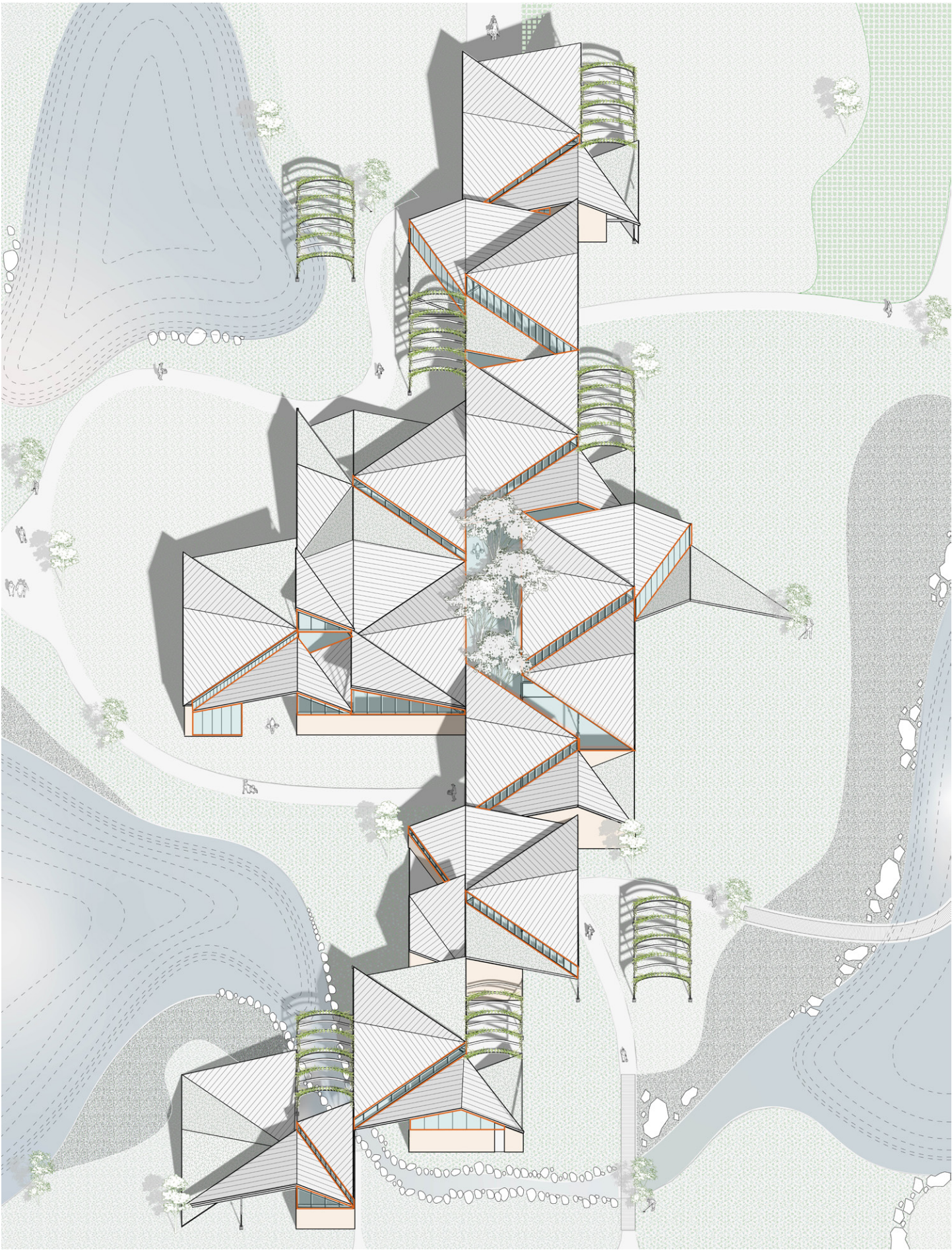
Time-Based Research Site Section



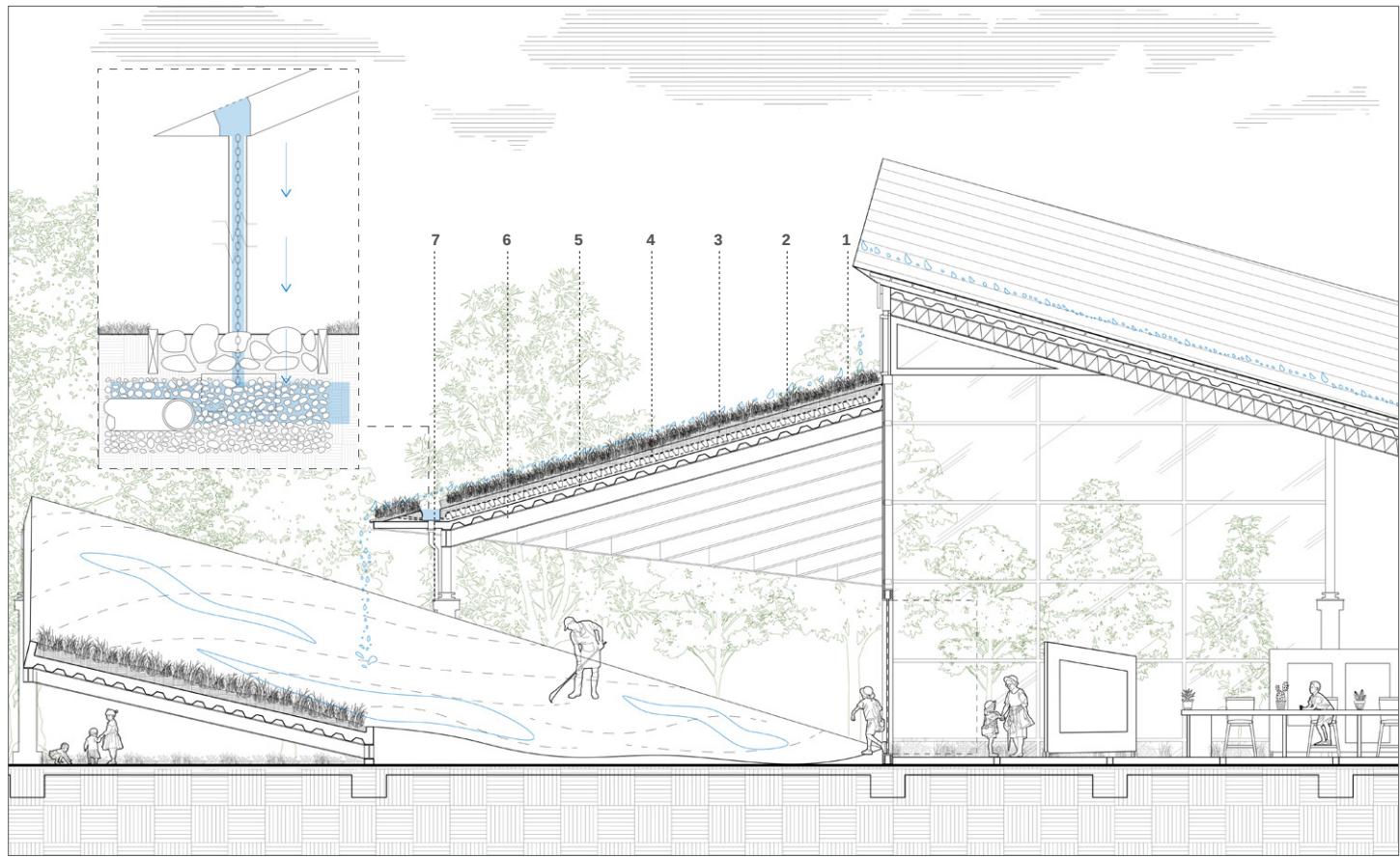
Building Plan



Perspective Render from Waterview at Node 1



Oblique Plan



1. Green roof substrate 2. Non-woven geotextile fabric 3. Drainage and water retention element 4. Exposed concrete eave
5. Metal deck 6. Steel Beam 7. Original Column

0 4' 8'
Partial Section



a. Perspective Moment A: Visitor Arrival and Entrance Canopy



b. Perspective Moment B: Circulation Spine and Lobby Interface



Interior Render — Green Roof as Usable Landscape at Node 2



c. Perspective Moment C: Mid-Building Circulation and Transition to Landscape



d. Perspective Moment D: Usable Green Roof and Waterfront Edge

SILO REMAINS BECOME US

- THE REBIRTH OF A CITY MONUMENT THROUGH COMMUNITY

RENOVATION | COMMUNITY CENTER
LOCATION: 419 29th AVE SE , MINNEAPOLIS, MN
YEAR: Spring 2024 (CORE II)
INSTRUCTOR: Maria Linares Trelles
TYPE: Individual

SILO REMAINS BECOME US proposes a phased deconstruction and adaptive reuse of the United Crushers Grain Elevator in Minneapolis—once a monumental figure of the city's milling industry, now a forgotten structure standing in the middle of a dynamic, youth-driven neighborhood.

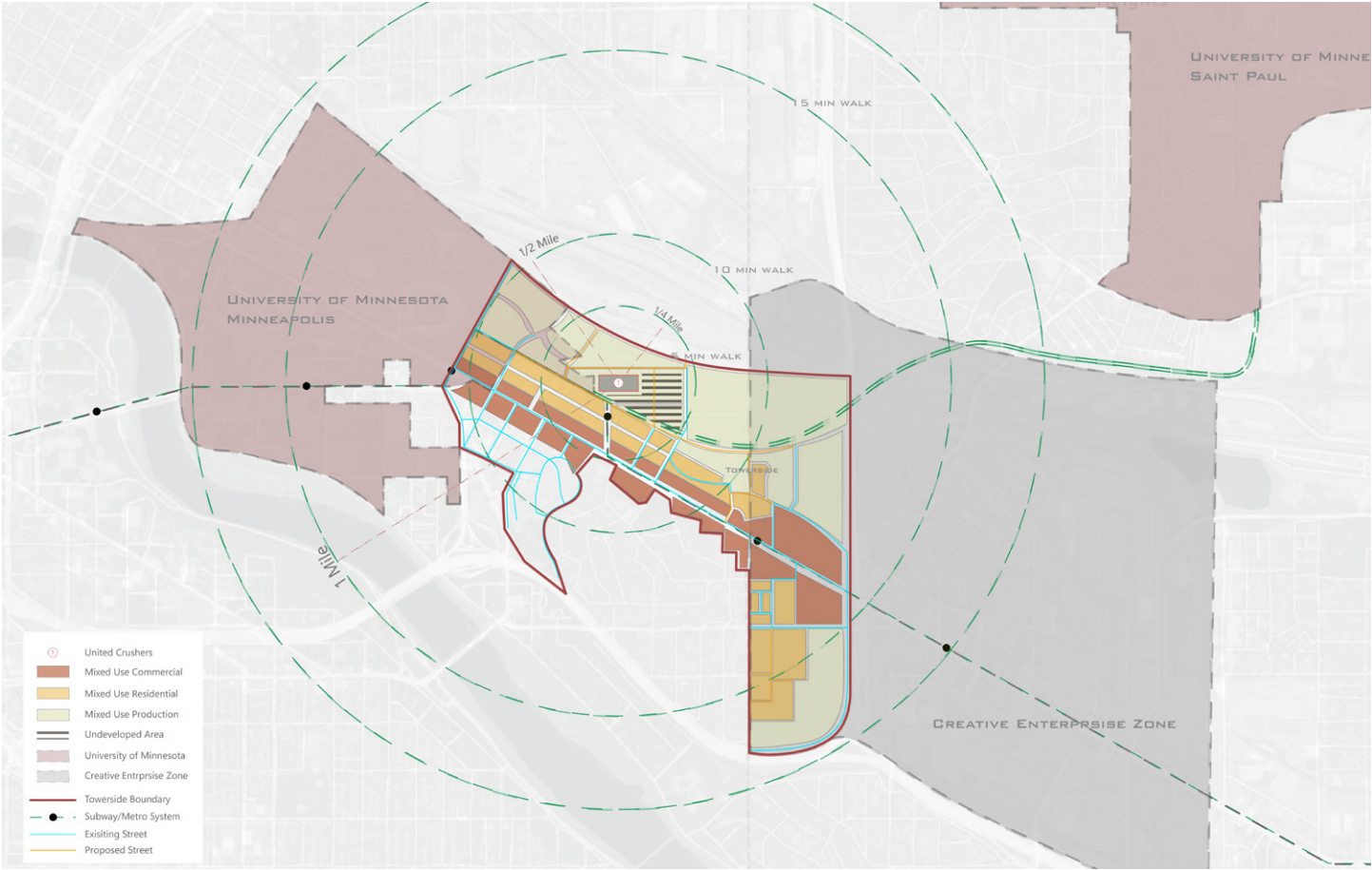
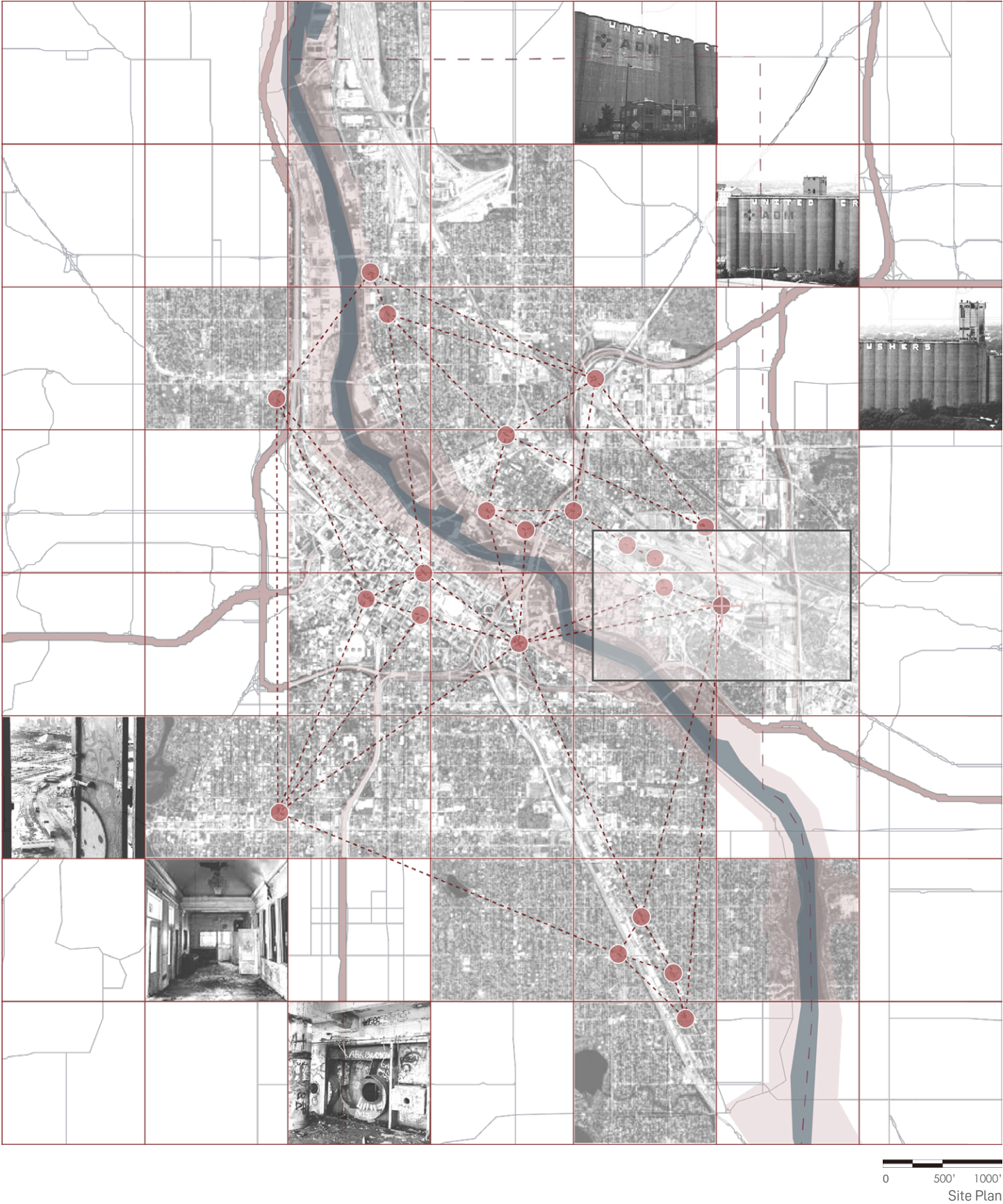
The design unfolds over 15 years in three phases. First, a scaffold-supported Urban Explorer Tourline invites the public to safely navigate the building as it's gradually dismantled, turning decay into education and access. In the second phase, recovered materials are used to create a Neighborhood Forum, where residents gather, reflect, and co-author the site's future. Finally, the remaining silos are transformed into a community center, public plaza, and milling history gallery—spaces shaped by participation, memory, and reuse.

SILO REMAINS BECOME US imagines architecture not only as a relic of the past, but as a process of return—where demolition becomes dialogue, and ruins become a foundation for community.

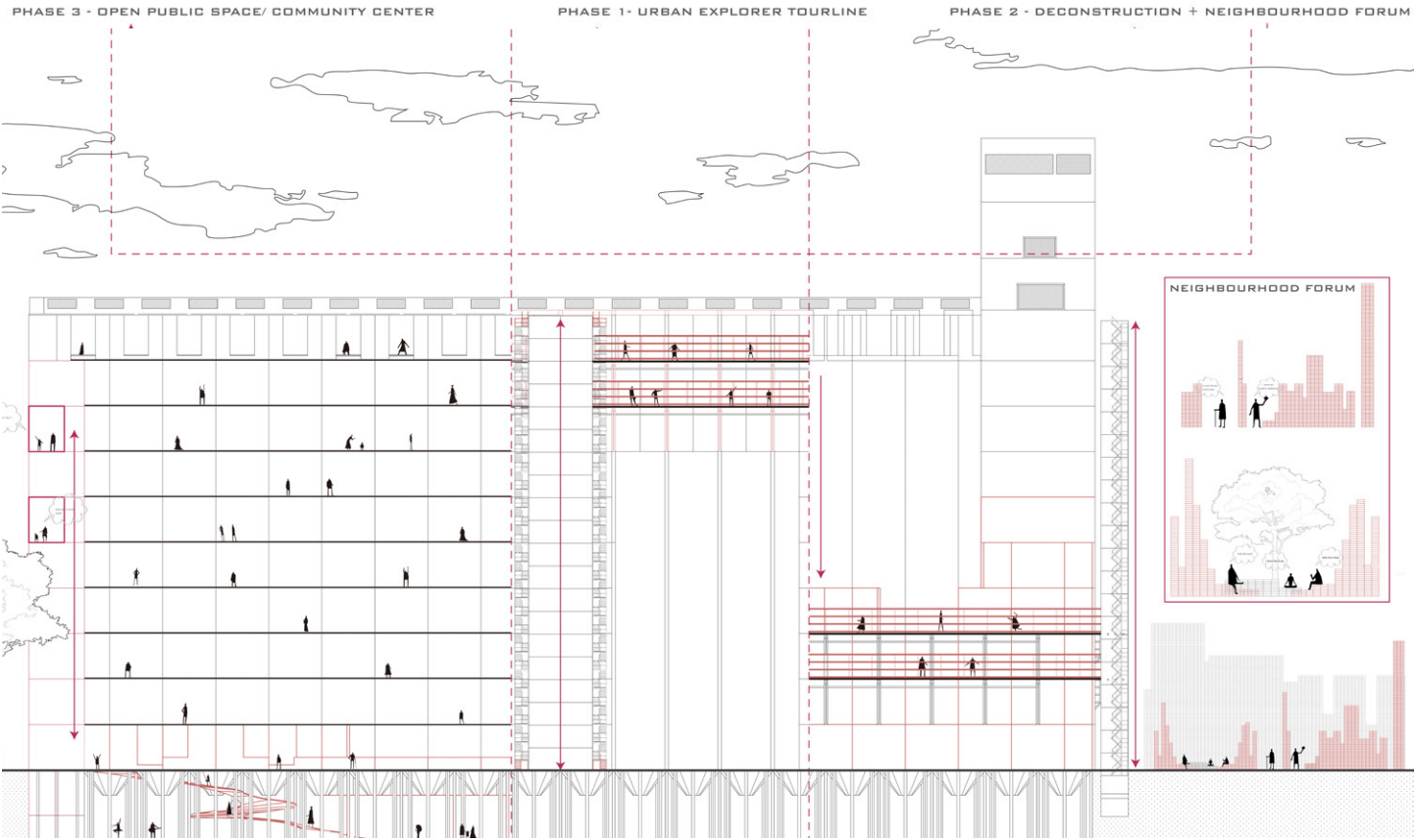


Mapping the Remains of an Industrial City

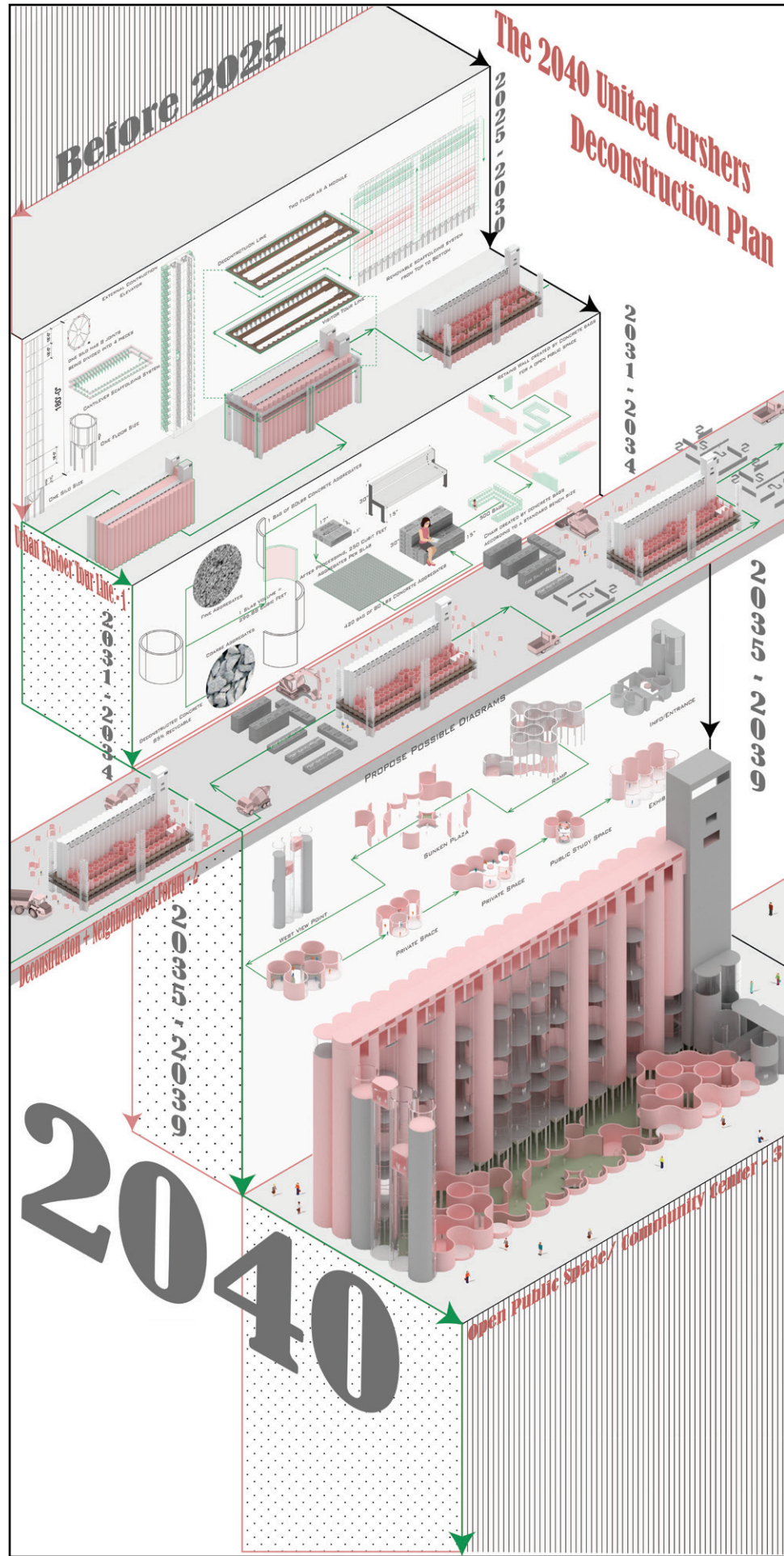
Minneapolis was once shaped by its milling industry, where grain elevators stood as part of the city's productive infrastructure. This mapping traces the scattered remains of that industrial history—abandoned silos, rail corridors, river edges, and forgotten interiors—to understand United Crushers not as an isolated ruin, but as one fragment within a larger urban memory. These traces become the foundation for reimagining the grain elevator through deconstruction, material reuse, and community return.



Urban Networks Around United Crushers



Concept Diagram- Phased Deconstruction as Public Participation



TO CURVE

-THE BERGGRUEN INSTITUTE HUDSON VALLEY

ACADEMIC | HIGER EDUCATION

LOCATION: 552 Union St, HUDSON, NY

YEAR: Spring 2026 (ADV VI)

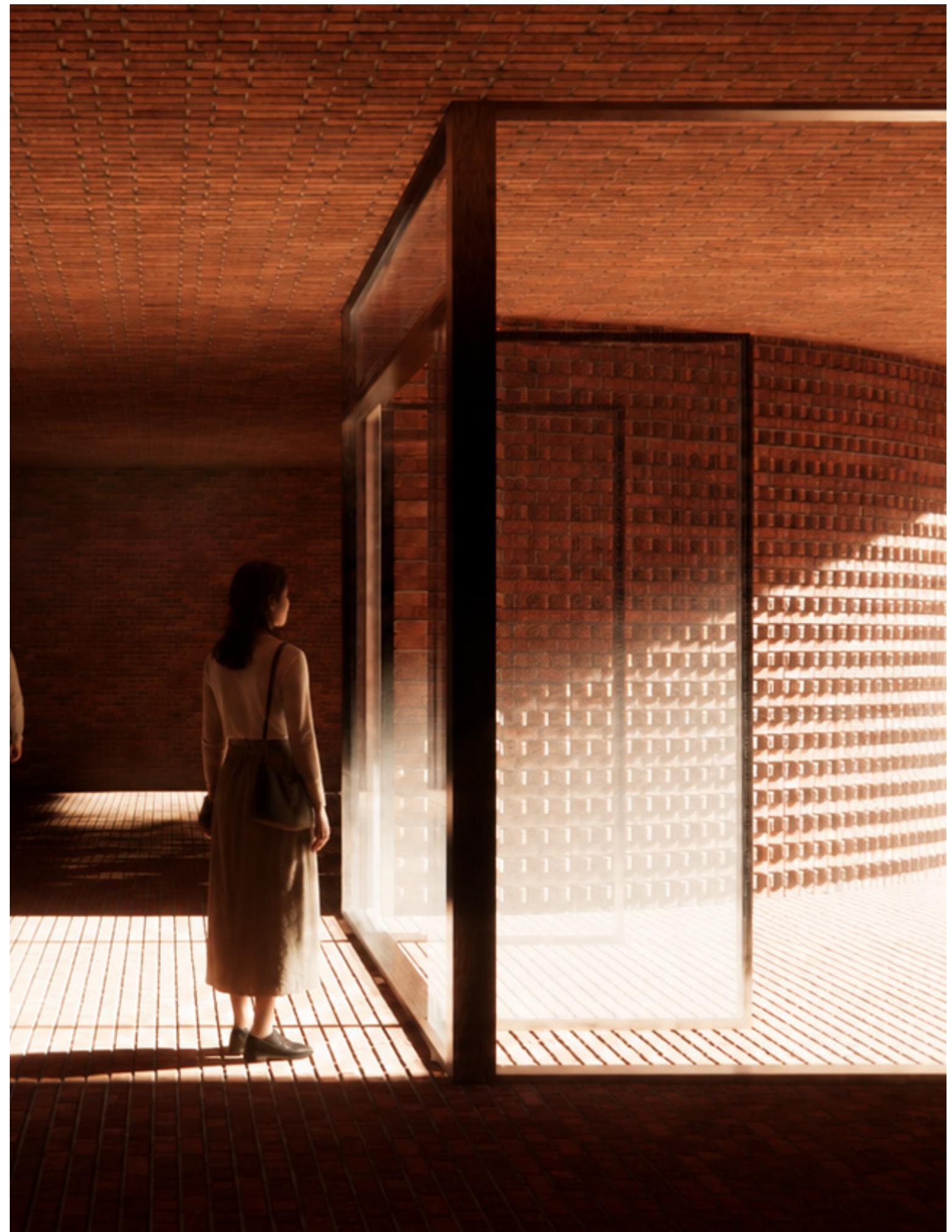
INSTRUCTOR: Steven Holl, Garrick Ambrose

TYPE: Group(Haoming Zhu)

TO CURVE begins with a simple gesture: a wall bends. Through this act of curving, the wall is no longer only an edge, but a device that gathers space, guides movement, and draws light into the building.

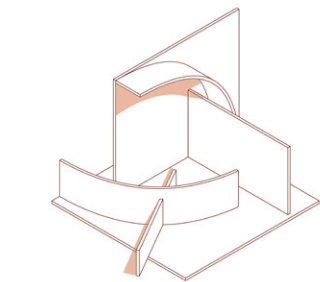
Two load-bearing brick volumes shift across the site, opening the ground between them into two gardens: one public, one private. The public garden invites exchange, events, and collective life, while the private garden offers a quieter atmosphere for residence, work, and reflection. Between these two landscapes, the building forms a gradual transition from openness to retreat.

Brick gives the project weight and permanence, while the curve softens that weight into movement. Studios, residences, offices, and public programs are held within two distinct volumes, yet connected through the shared experience of light, landscape, and circulation. TO CURVE becomes a place where solid walls begin to move, and architecture frames both gathering and contemplation.

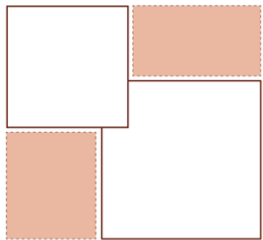




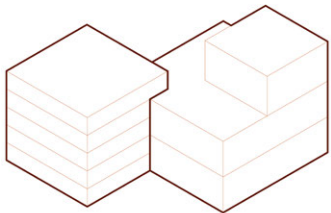
Site Plan



Curving surfaces define space and shape entrances, circulation, and light.



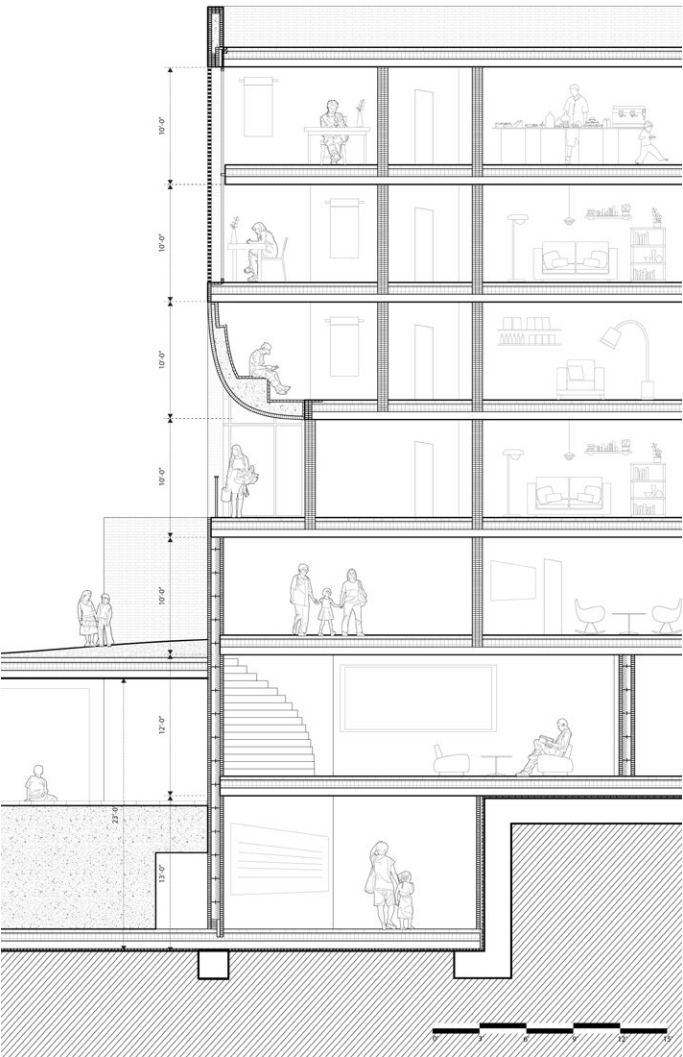
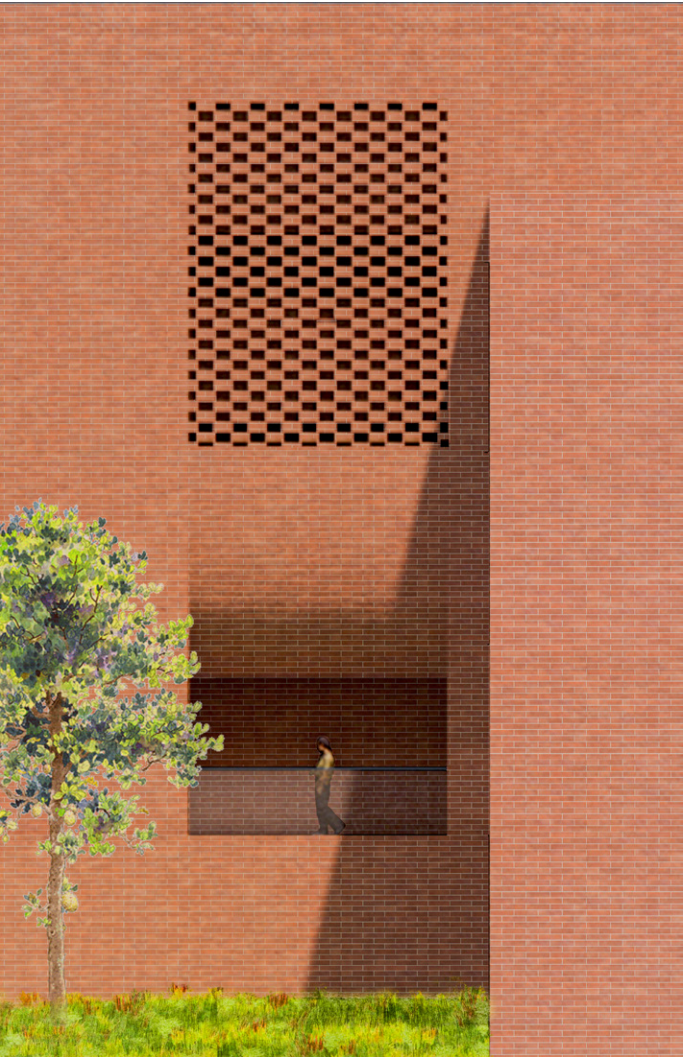
Two volumetric load bearing brick cubes shift on the site to create two gardens. One private garden and one public garden.



One volume is for fine grain program-studios, residences and offices. The other volume is for the public programs.



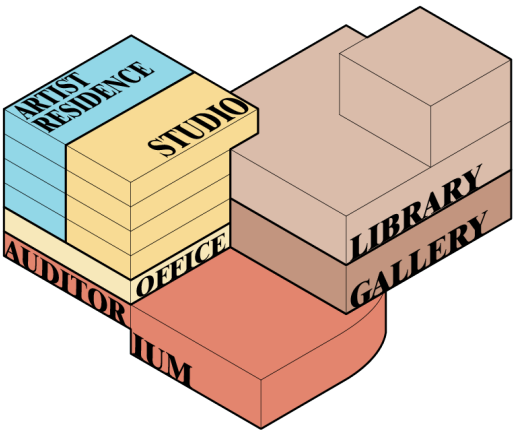
Building Elevation



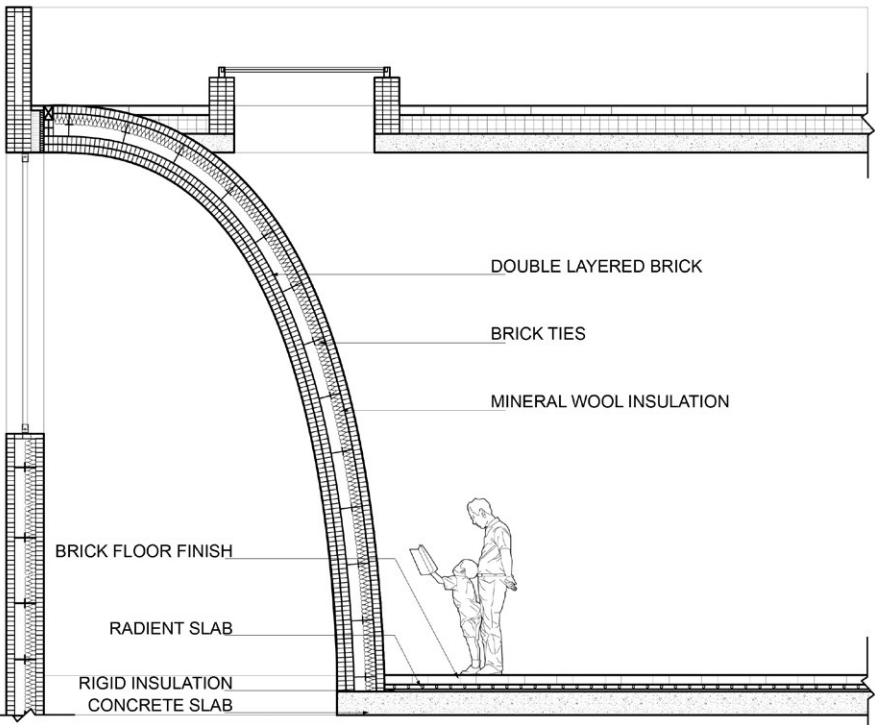
Curved Brick Wall Becomes Structure, Screen, and Space

Brick as Program, Structure, and Atmosphere

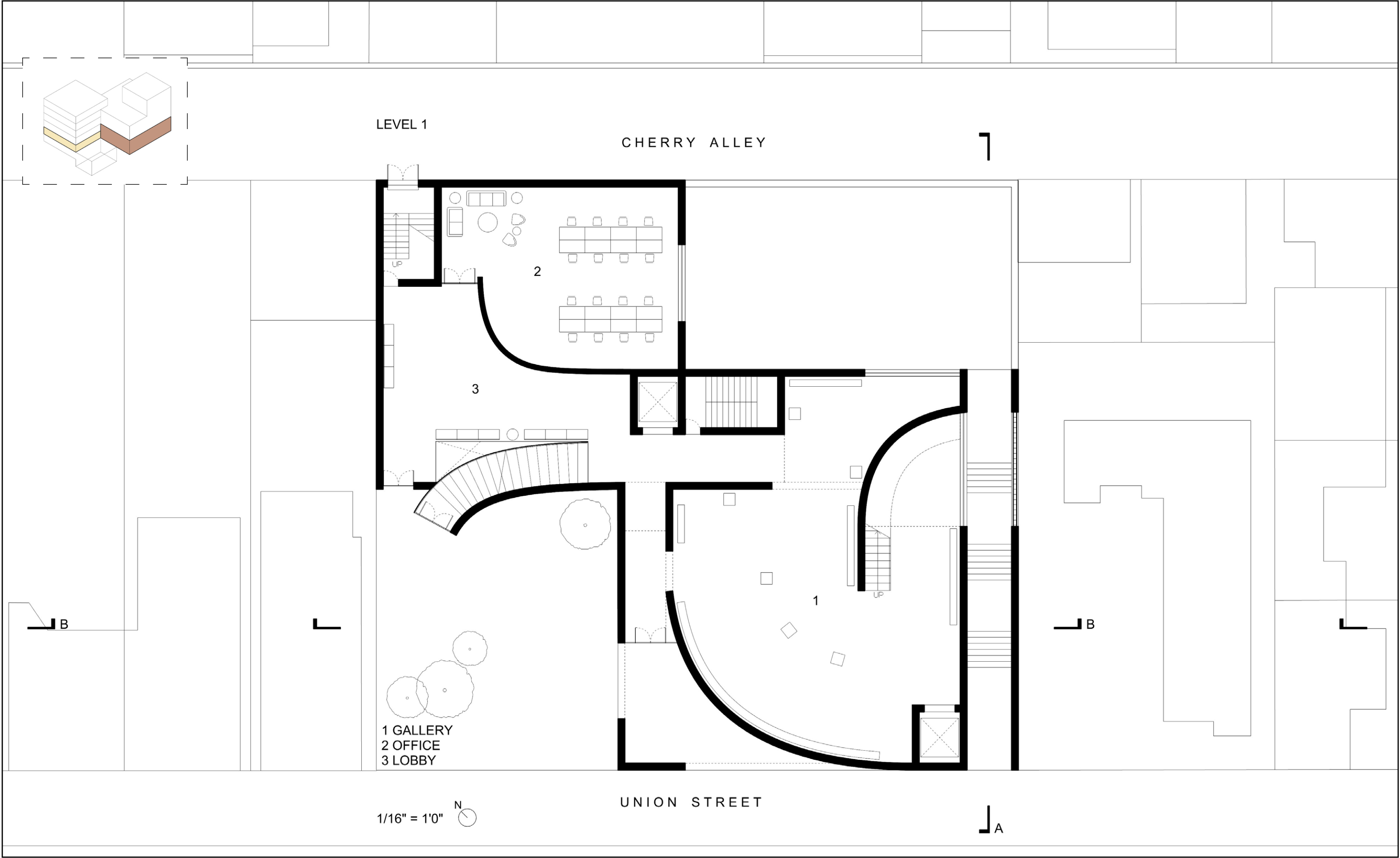
Two shifted brick volumes organize the institute into public and private programs. The curved brick wall becomes the key architectural element: it supports the building, defines the interior, and filters light. Through its double-layered construction, brick is transformed from a static envelope into a structural and atmospheric system.

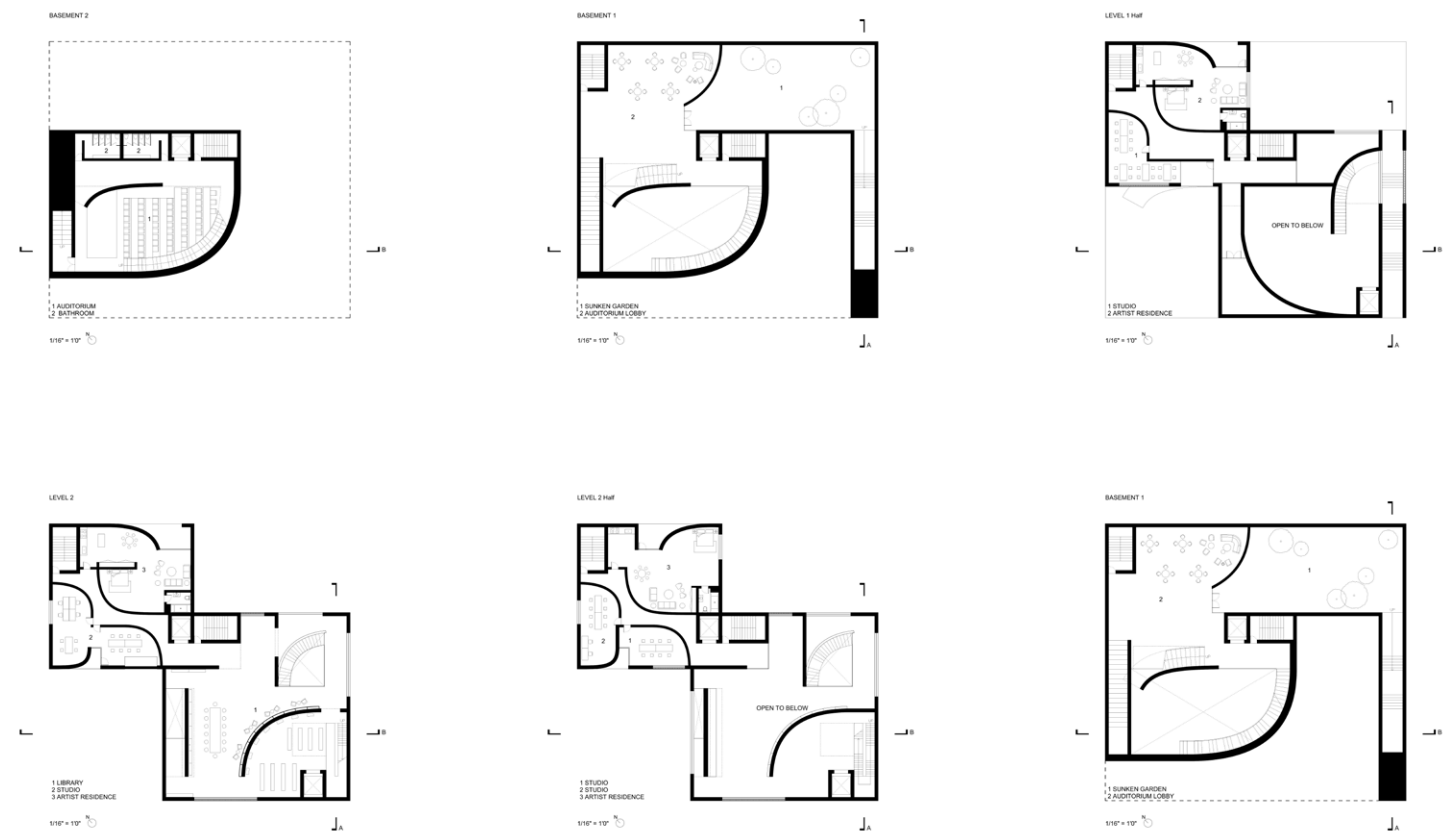


Program Volumes Organized by Public and Private Life

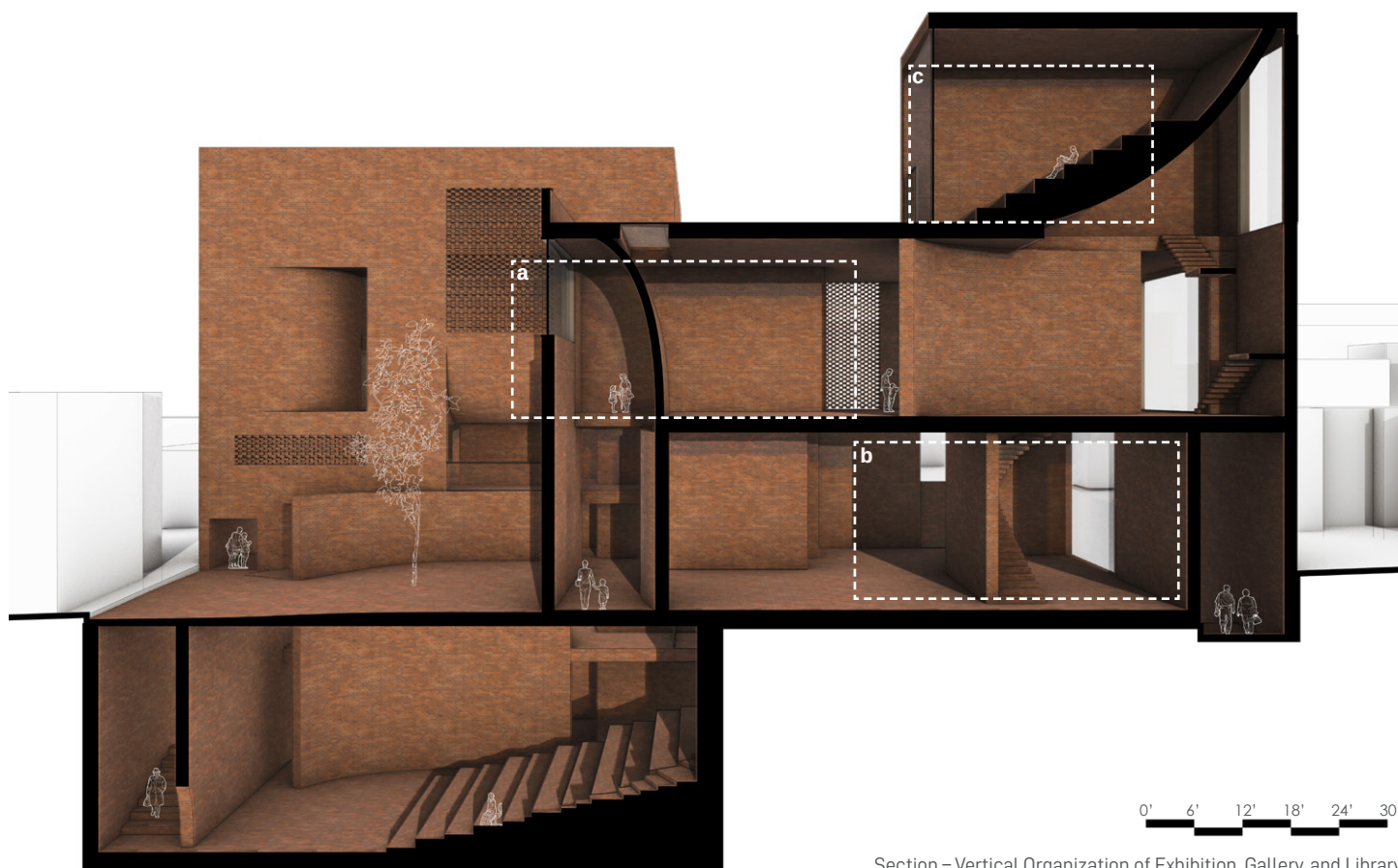


Partial Section Detail

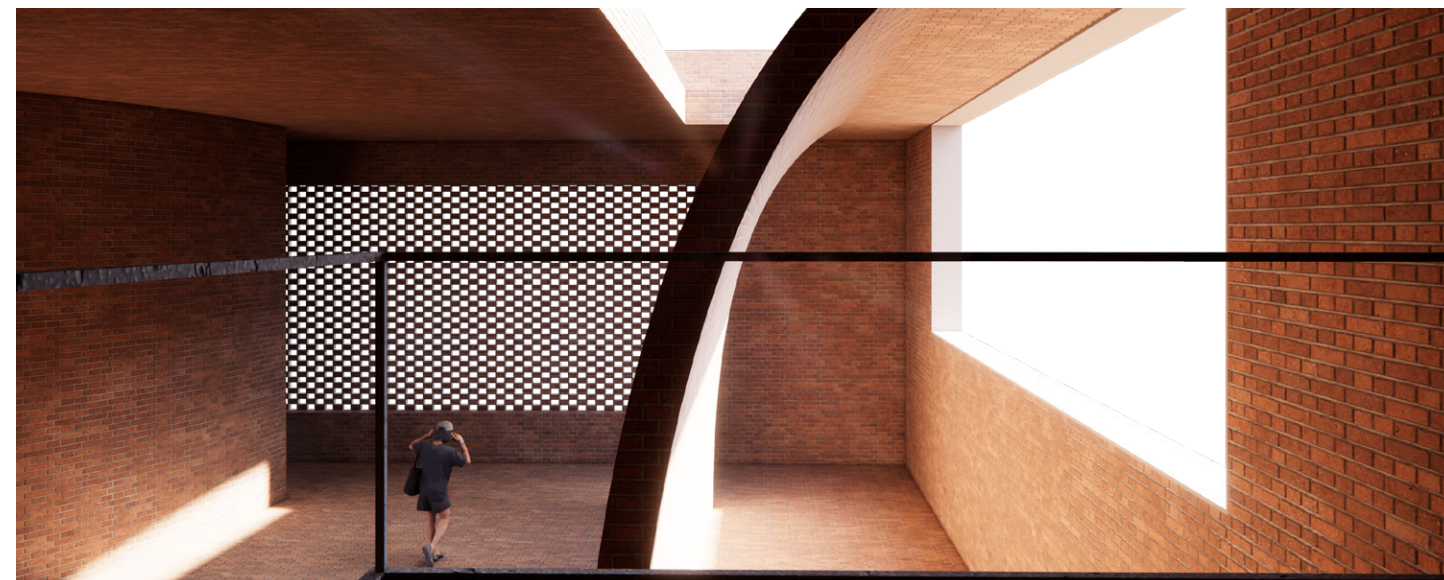




Floor Plans: Public and Private Program Distribution



Section - Vertical Organization of Exhibition, Gallery, and Library



a. Light Gallery- filtered light enters through the perforated brick screen and curved wall



b. Stair Atrium- the stair connects public levels through movement, shadow, and vertical light



c. Library- stepped seating forms a quiet reading ground for gathering and reflection