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Master of Architecture I AP

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01

DUO

Architecture at a Crossroads

Four Buildings at a crossroads, NYC, US

Critic: Preston Scott Cohen

Harvard GSD Architecture Option Studio, Fall 2022

Distinction

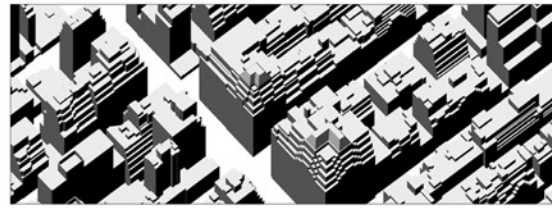
The studio discusses the relationship between architecture and its urban context. Around the crossroads of 7th Ave and 23rd Street in New York City, four buildings altogether contribute to the urban argument. Due to the unprecedented collaboration of four sites, the project is conceptual yet practical.

With the 1916 zoning laws, NYC depicts an aggregation of buildings with a solid wall along the streets and the setback terrace above. The City inherits this formal language till more and more entropies appear. Those entropies tend to break this aggregated whole. Now, architecture is at a crossroads. It can follow the existing totality of the urban image or speak louder for the designers' authorship as one of the entropies.

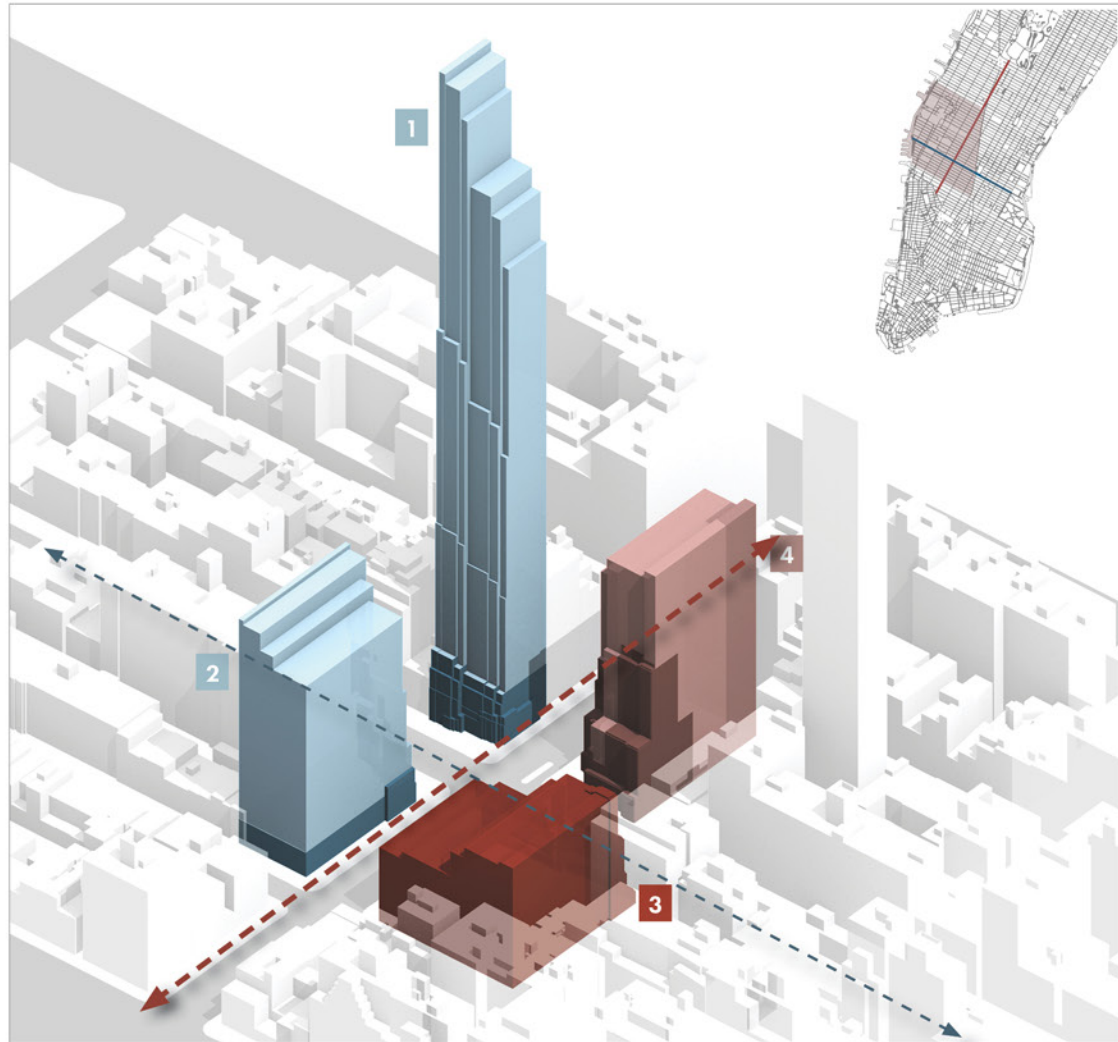
The four sites are located at the intersection of 7th Avenue and 23rd Street in Chelsea Neighborhood, populated by mid-rise or high-rise residential buildings. The DUO complexes provide one residential tower, one residential high-rise, one office high-rise, and a warehouse-like public community center equipped with a public library, art galleries, and music rooms.

DUO complexes reinterpret the wall and setback from the NYC urban texture and form its argument with a duality along 23rd Street and 7th Avenue. Connecting to Time Square, the facade along 7th Avenue takes the modern strategy with glass cladding, revealing the indoor life of the city. However, along 23rd Street, it immerses into the quiet neighborhood by the brick facade with repetitive window puncture. The setback is a formal gesture to bring the urban into domestic life.





NYC Aggregation -- Wall and Setback



<p>1</p> <p>L76 - 79 Penthouse</p> <p>L5 - 75 Residential Housing [Studio one bedroom two bedrooms]</p> <p>L1 - 4 Retail Residential Lobby Gym Study Room</p>	<p>2</p> <p>L21 - 23 Penthouse</p> <p>L3 - 20 Residential Housing [Studio one bedroom two bedrooms]</p> <p>L1 - 2 Retail Lobby Restaurant</p>	<p>3</p> <p>L5 - 7 Area open for event hosting and public usage</p> <p>L3, L4 Art Gallery, Artist work space Chelsea Music Hall, Music practice room</p> <p>L B1 - 2 Public Library, Retail Cafe</p>	<p>4</p> <p>L3 - 18 Open office with meeting rooms Public conversational space near the crossroads</p> <p>L1 - 2 Retail Office Lobby Cafe</p>
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Public Program ■

Office ■

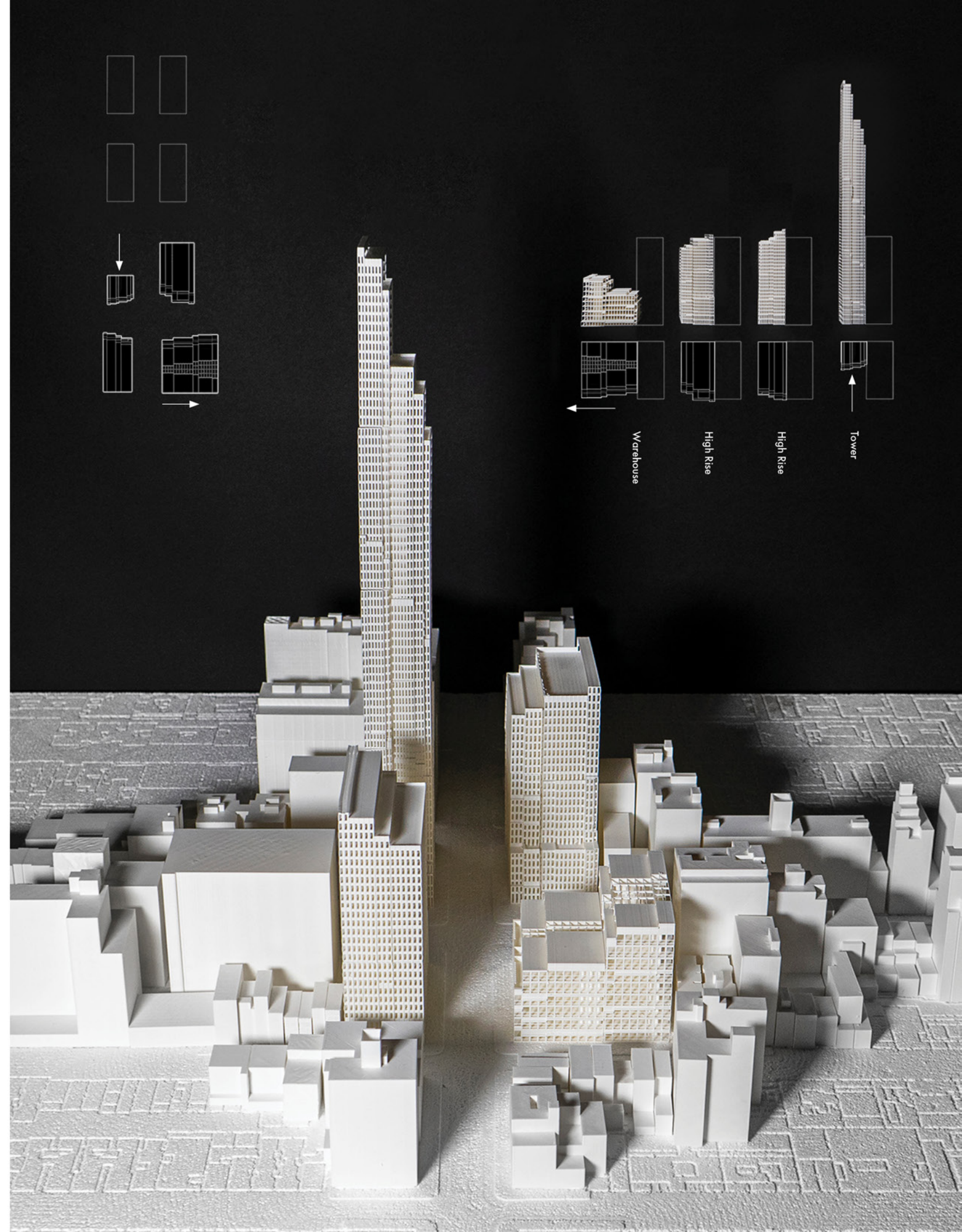
Common Space in office ■

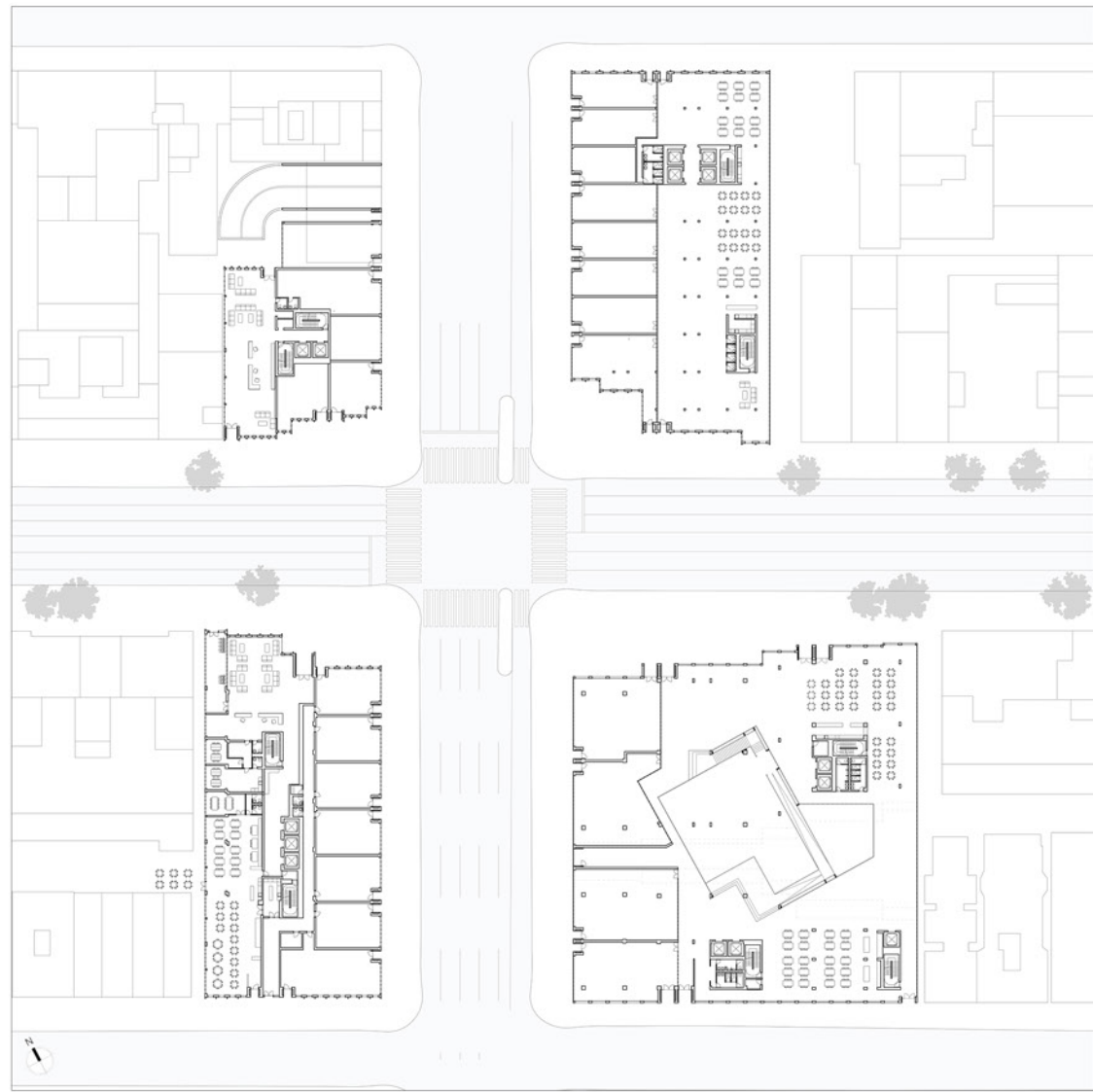
Residential ■

Common Space in housing ■

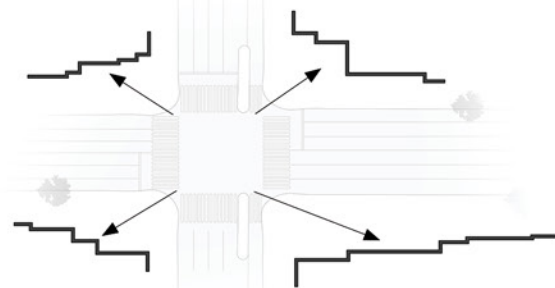
Slice and Scale

The massing starts from the equal treatment of the four corners, with volume spread equally among the four sites. The actual site constraints sculpt the building heights that the northwest volume grows higher to the tower typology; the southeast volume is pressed to allow more public flow on the ground floor, which reconciles with the warehouse typology. Inspired by Rockefeller center slices, an algorithm generates elastic slices. The different site dimension creates those slices in various scales, from facade relief to room size to building size.





Ground Floor Plan

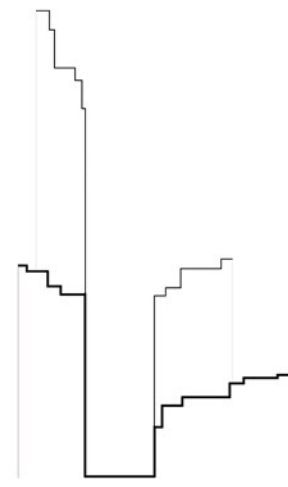
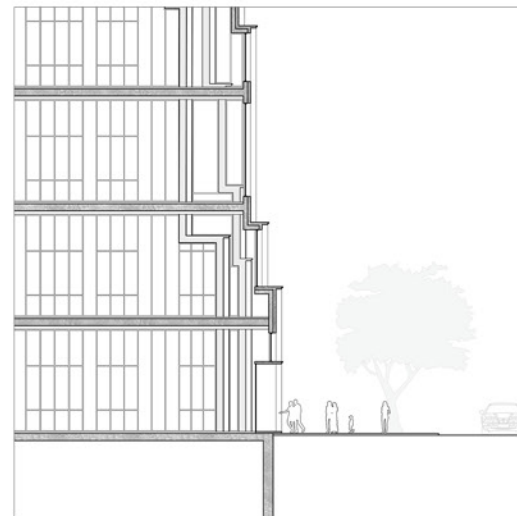
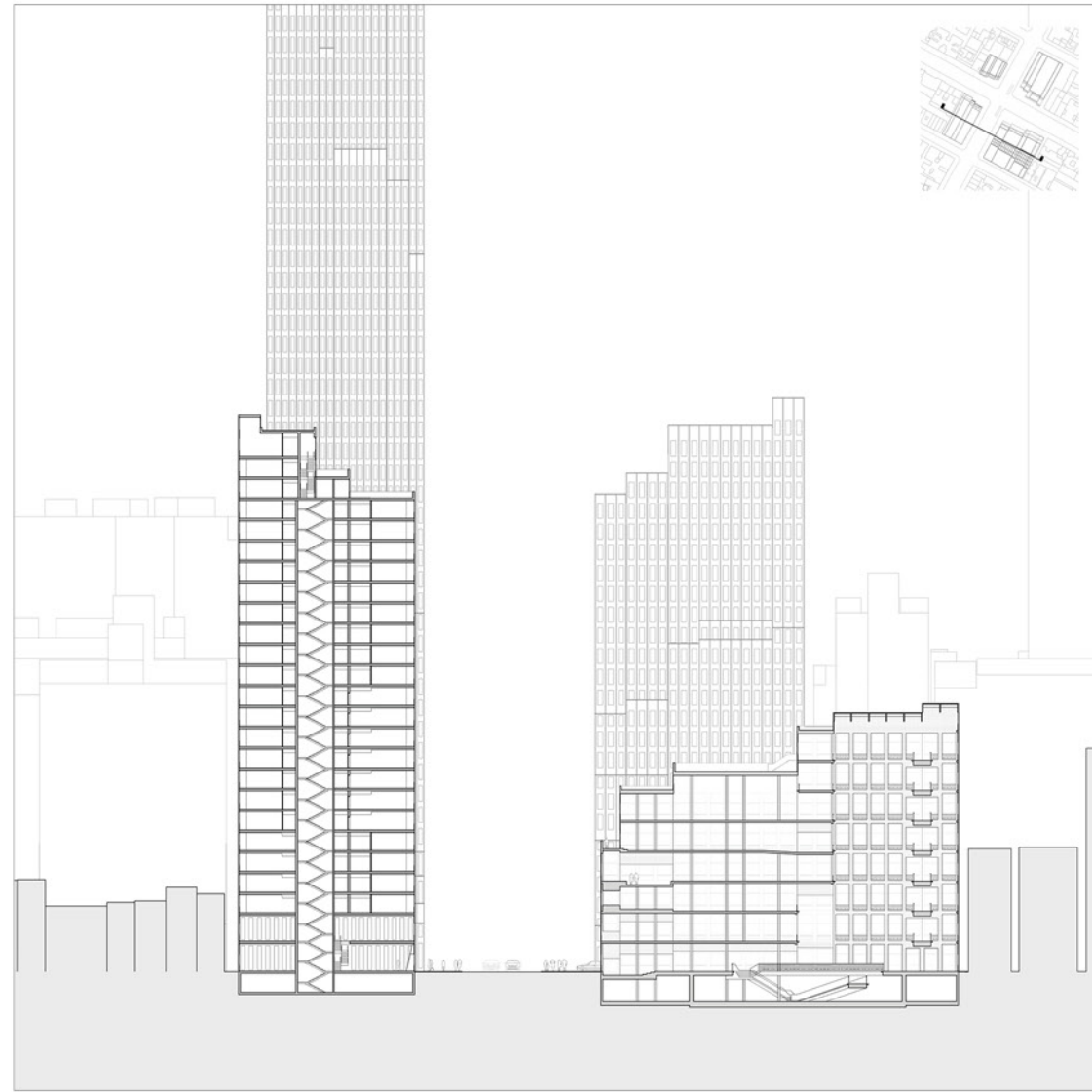


Domestic Out

Along 7th Ave, glass panels share the same vertical plane as the wall and display domestic life to the public. The alternation of operable windows, fluted glass, and translucent panels projects the interior as a pattern to the facade. The gap of slices is also filled with glass, allowing the domestic life to come out in layers.



Views at the crossroads



Urban In

The setback folds on the facade, especially for the public building on the southeast corner, influence the space inside. Inner space responds to urban intrusion with localized adjustments, like the double-height void, outdoor terrace, and balcony. Public space is sculpted by the urban force and creates playful bits to facilitate its function. The urban influence is not limited to the facade but merges into the inside.



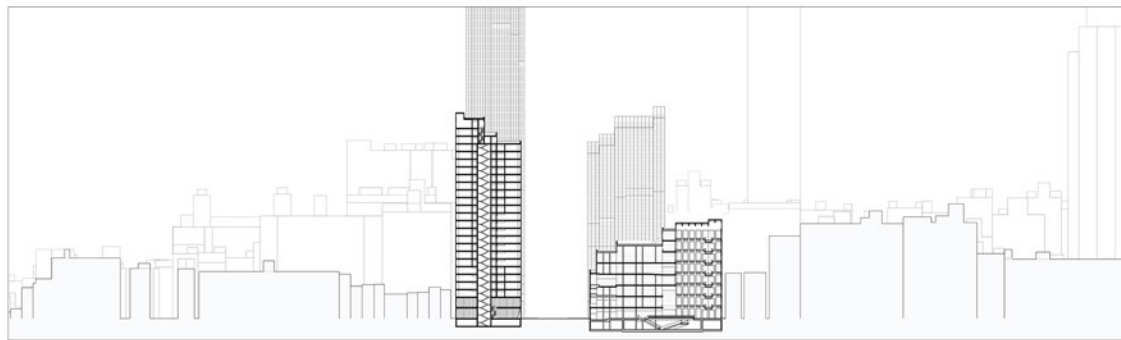
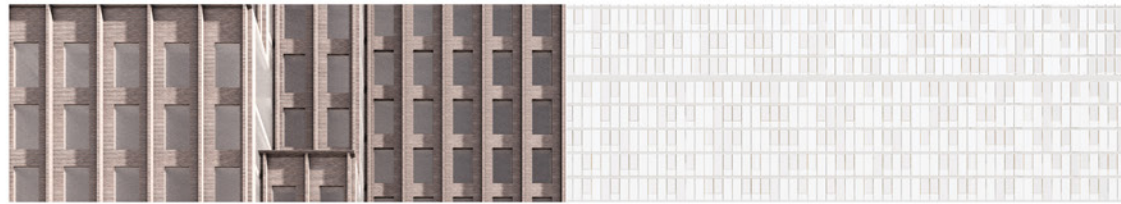
Top: Residential view to outside
Bottom: Public space with step seating to balcony



A. Intimate Playground Area
B. Sunken Seats

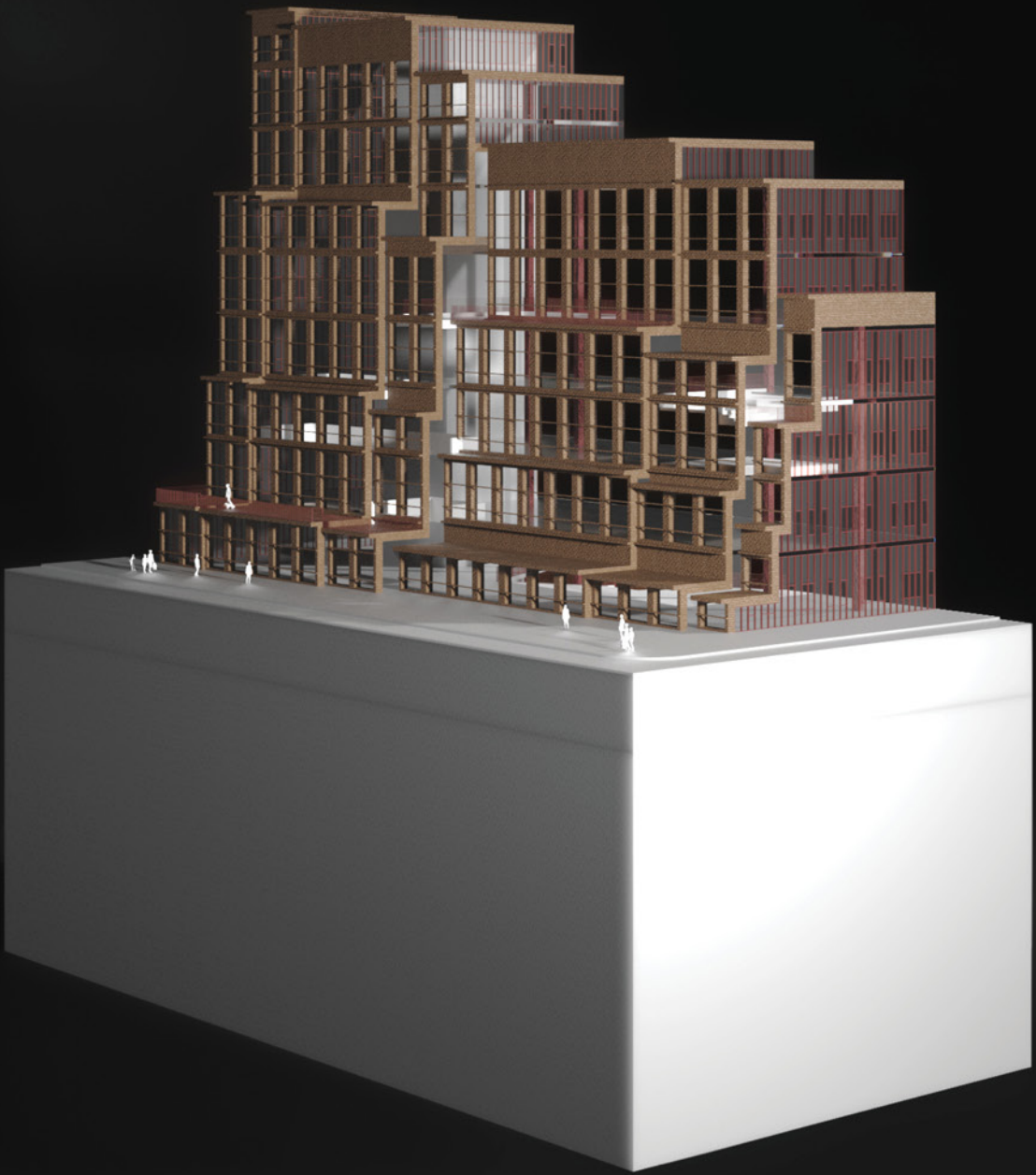
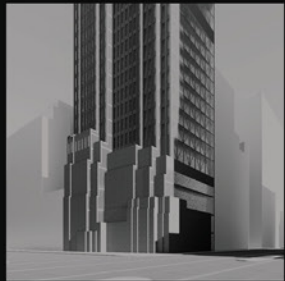
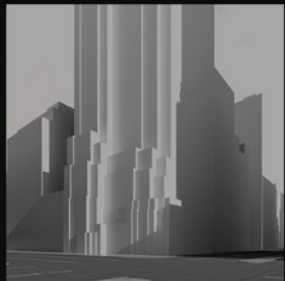
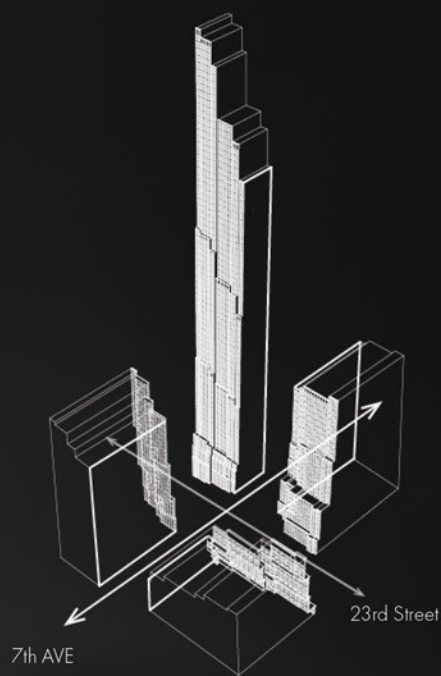
C. Outdoor Terrace
D. Outdoor Cafe

E. Vertical View Penetration
F. Step Seating to Balcony



DUO, A Crossroads

Along the 7th Ave, operable windows alternates with fluted glass panels and clear glass panels, writing its domestic pattern on the urban scale. In contrast, the brick material along the 23th street recaptures the pre-war architecture aggregation in NYC. The duality extends from form (the "Wall" and the "Setback") to materiality, introducing the duo concept in various scales so that people approach it in different scenarios.



02 HOME

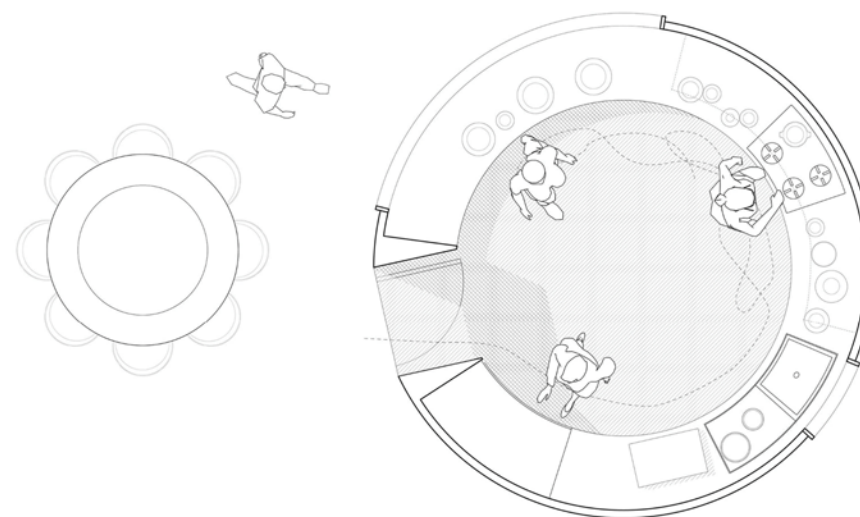
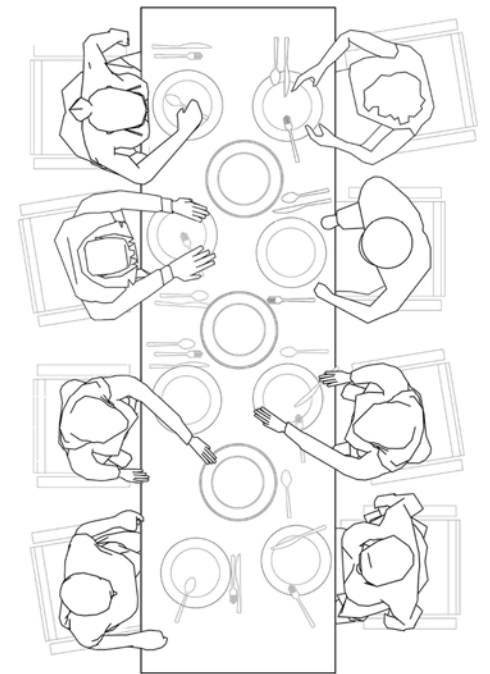
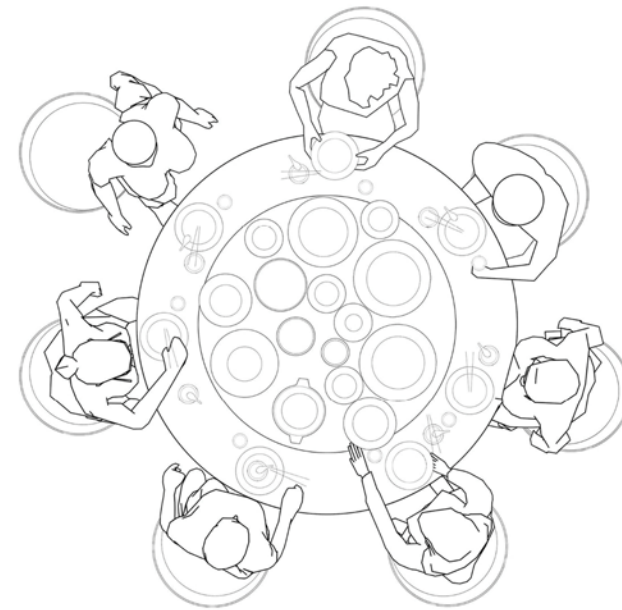
Home Away From Home

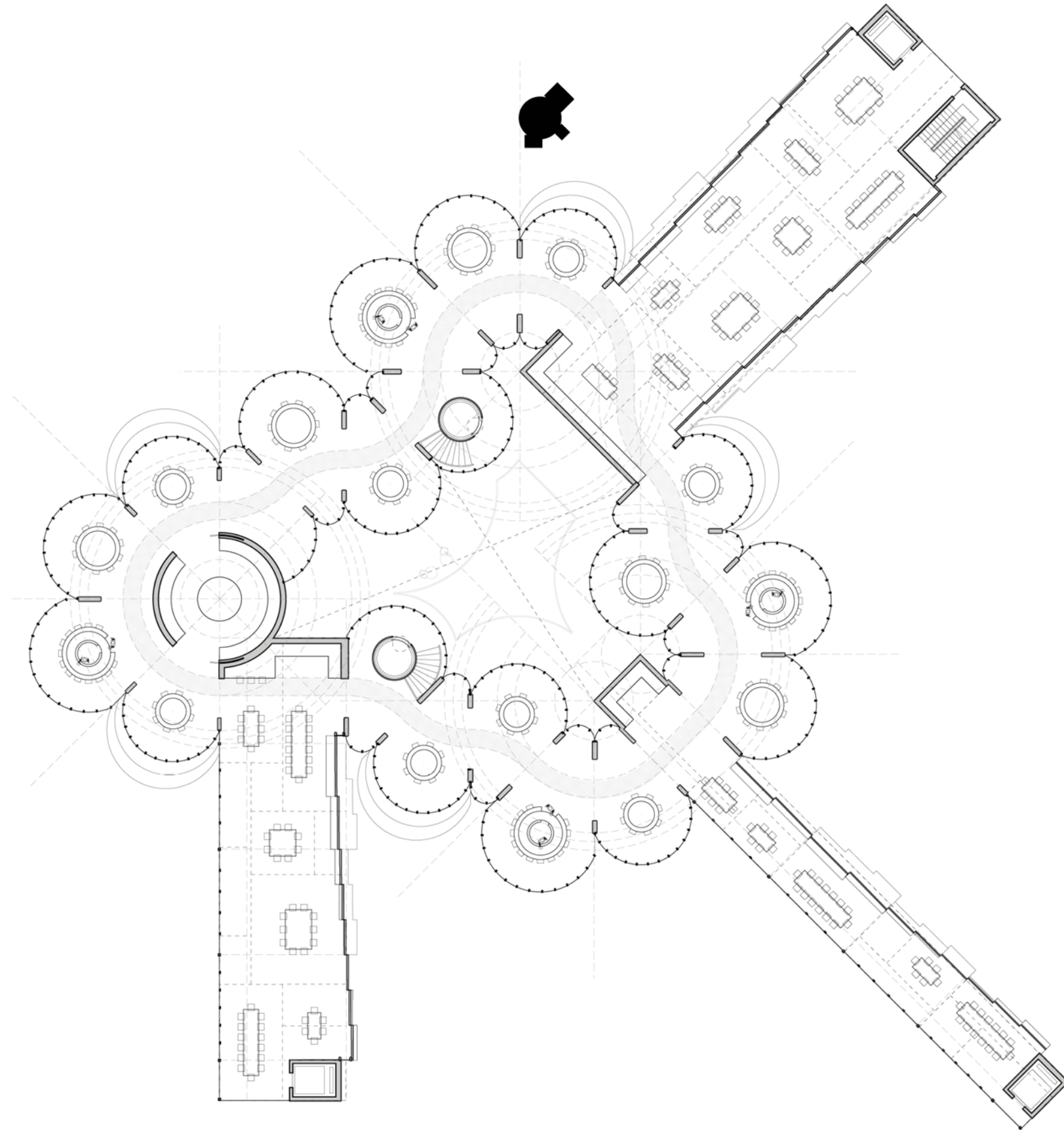
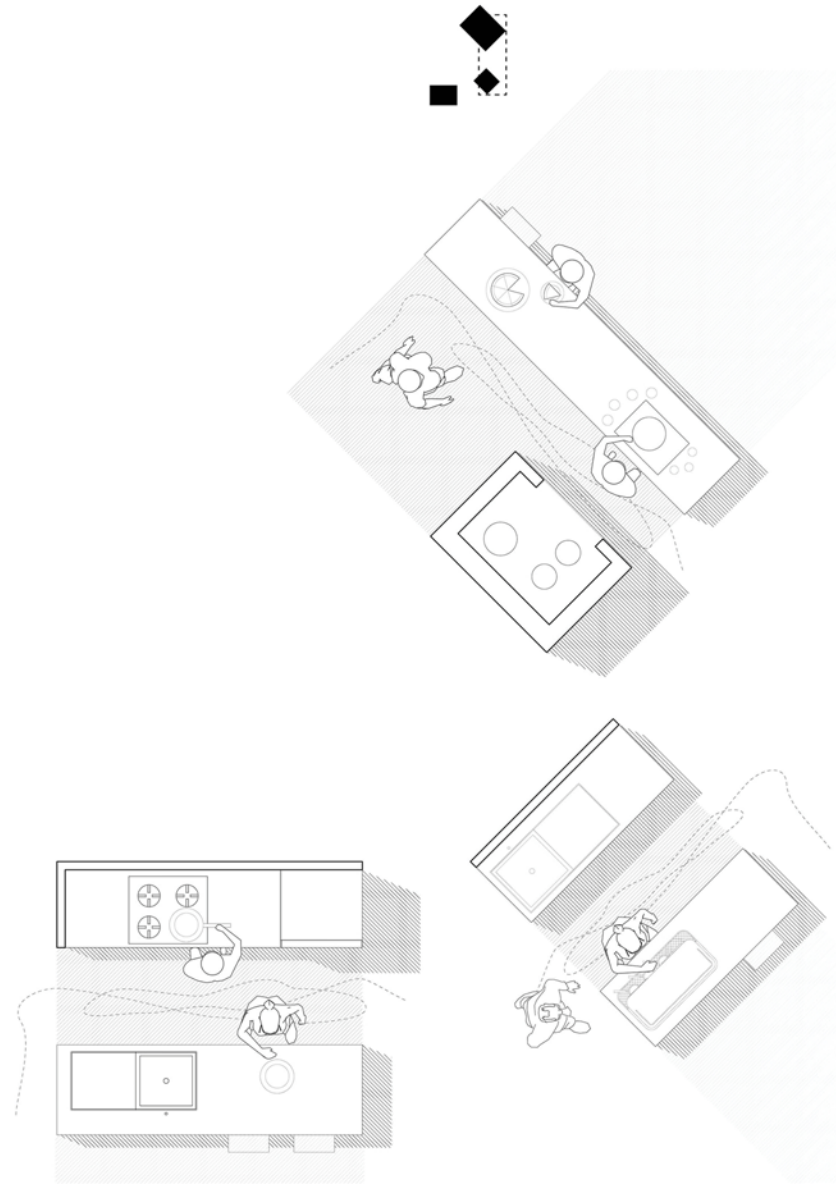
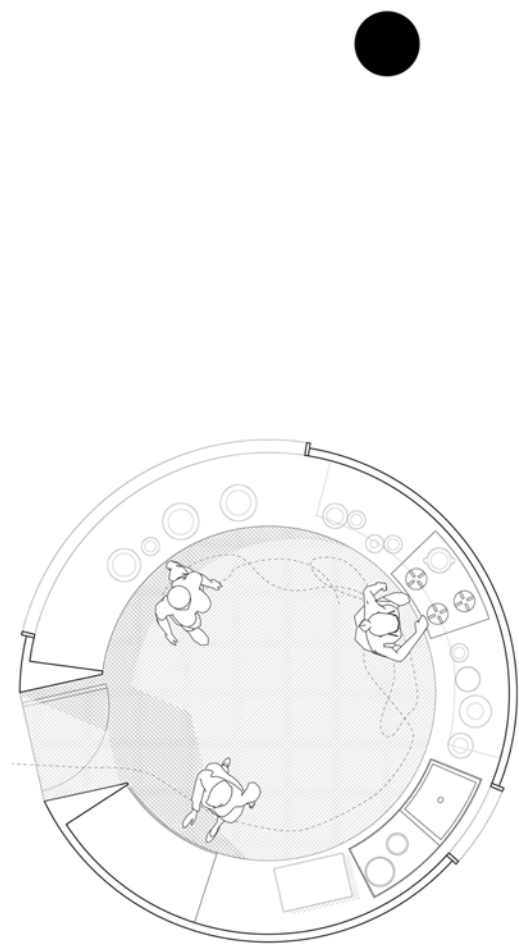
Senior Immigrants' Culinary Nostalgia, Boston MA, US
Thesis Advisor: Preston Scott Cohen
Harvard GSD Architecture Thesis, Fall 2023

A group of senior immigrants in the United States, who left their home countries decades ago and have since established themselves here, often find themselves immersed in nostalgic moments, reliving their childhood memories. The dishes prepared in their homes, deeply rooted in the flavors of their hometowns, create a profound connection to their cultural heritage. Their culinary skills were acquired through hands-on guidance from the older generations within their families, evolving into a cherished tradition.

With society aging, the "Home Away from Home" thesis project aims to foster a unique bond among seniors from diverse ethnic backgrounds, nurturing a culinary and conversational community that uses food as a means to both rekindle and preserve the memories of the elderly. Drawing inspiration from Eastern and Western cooking and eating rituals, the project, located in Boston's Jamaica Plain neighborhood, artfully incorporates the essence of social and cultural essence into a modern architectural language.

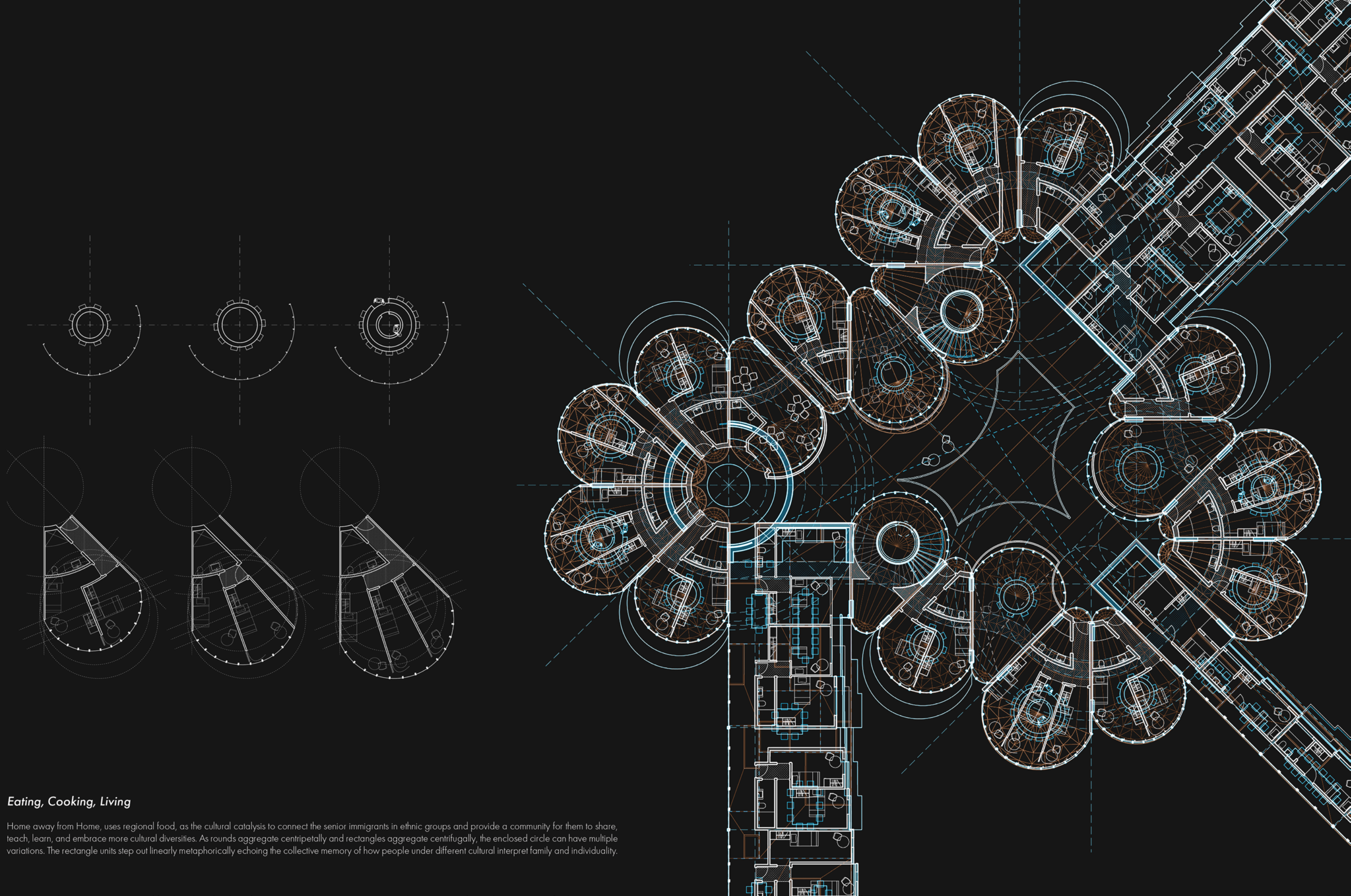
The kitchen and the act of cooking serve as practical repositories of cultural memory, capturing the very essence of their heritage through tangible methods. A common dining space on the top floor promotes a vibrant and inclusive community, celebrating diversity and tradition.





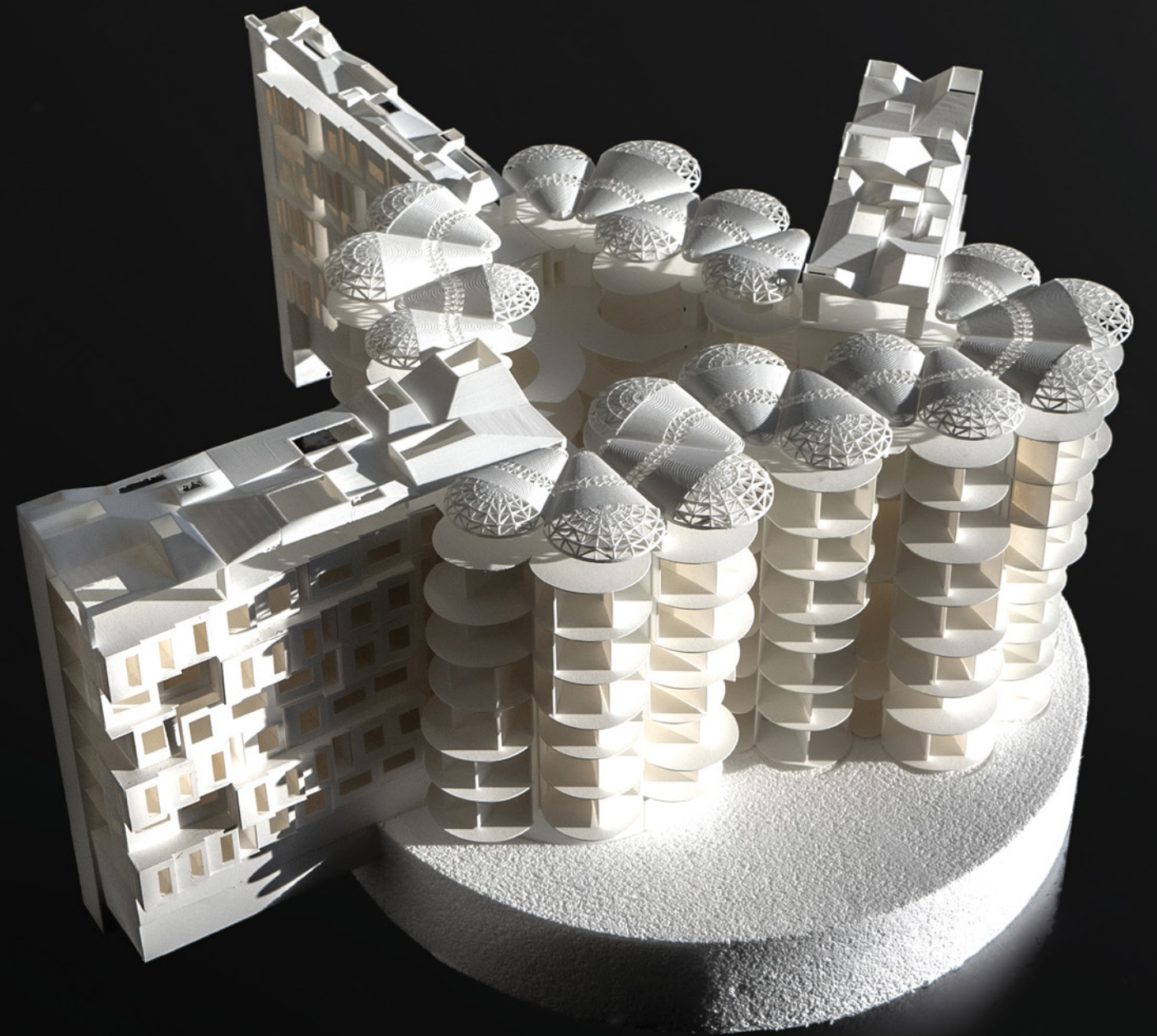
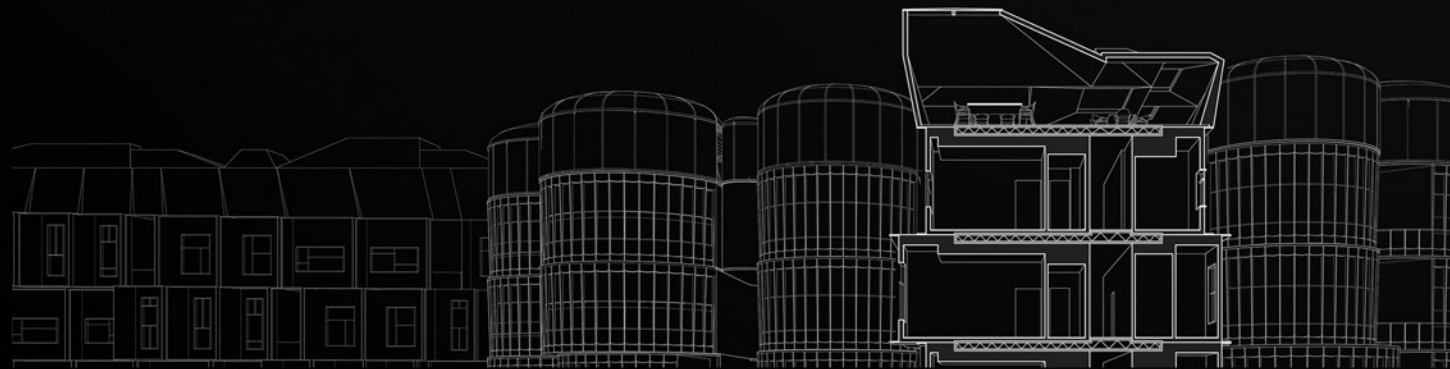
Eastern | Western

Home away from Home, is the recognition of a physical location's change, and the reconstruction of a sense of home to capture past experiences and resonate collective memories. Chinese cuisine is the art between fire, water, and oil. Everything is kept a short distance for easy reach, thus, a round kitchen. Western kitchens are always open to the dining room or living room. Cooking is an conversational and collective effort. The boundary of space is blurred.



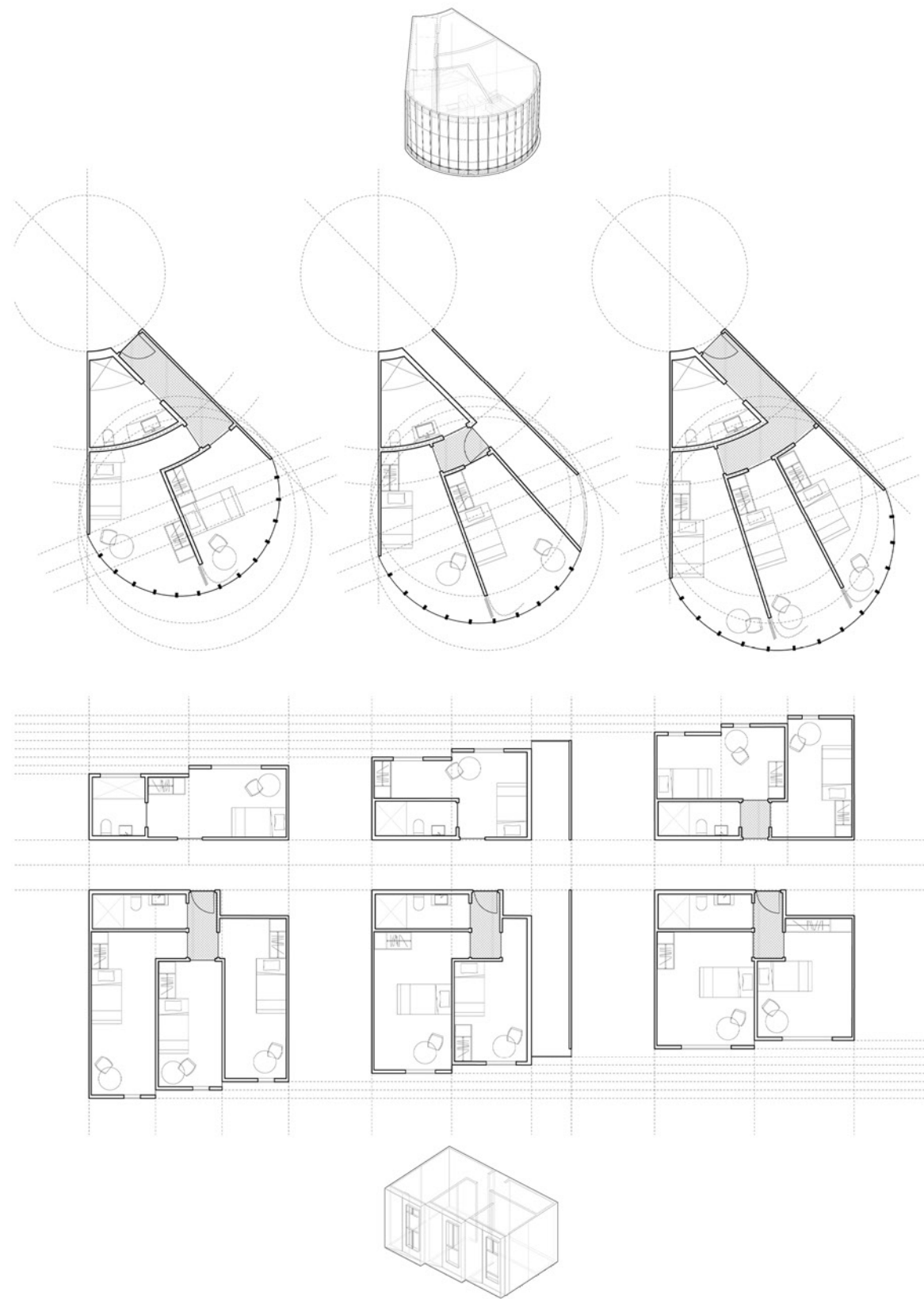
Eating, Cooking, Living

Home away from Home, uses regional food, as the cultural catalysis to connect the senior immigrants in ethnic groups and provide a community for them to share, teach, learn, and embrace more cultural diversities. As rounds aggregate centripetally and rectangles aggregate centrifugally, the enclosed circle can have multiple variations. The rectangle units step out linearly metaphorically echoing the collective memory of how people under different cultural interpret family and individuality.



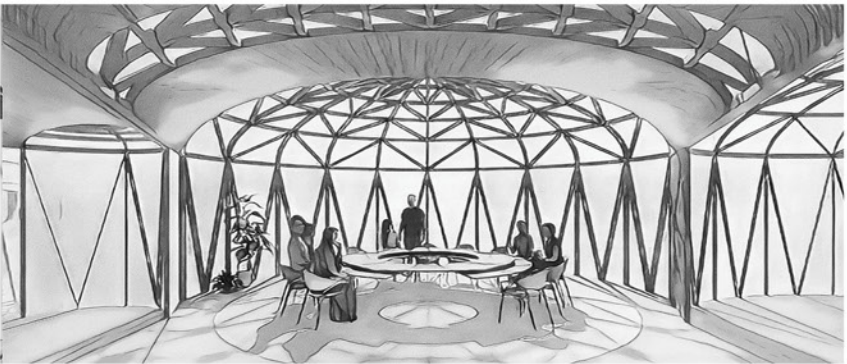
Culinary Nostalgia | Senior's Community

The building contains housing units for seniors, their activity space, a collective cooking and eating floor on top, and a daycare program on the ground level. For seniors, eating is one, if not the only one, biggest collective celebrative event for the day. Through this community-based approach, the project simultaneously allows for memories to link back to their past while introducing groups to more regional cuisines.



Pre-fabricated Unity | Diversity

Both the round modules and rectangular modules can be prefabricated while maintaining diversity in spatial quality in rooms. All senior living units are the same size with a wide range of room proportions and shapes. The round room works the same way as each room shares different portions of the circle in various diameters. Inside the living rooms, we can feel the transformative power of the cooking/eating system from the top.



03 **DISTRIBUTED GROUNDS** *Collective Space on Multiple Strings*

Housing Complex for 100 Units, Boston, MA
Critic: Ron Witte
Harvard GSD Architecture Core Studio, Spring 2021
Collaborate with Inhwai Hwang

The studio aims to explore the dynamic interplay between small-scale and large-scale spaces. By reimagining the dynamics of domestic living, communal spaces, and urban environments, it seeks to redefine affordable housing solutions that foster vibrant communities.

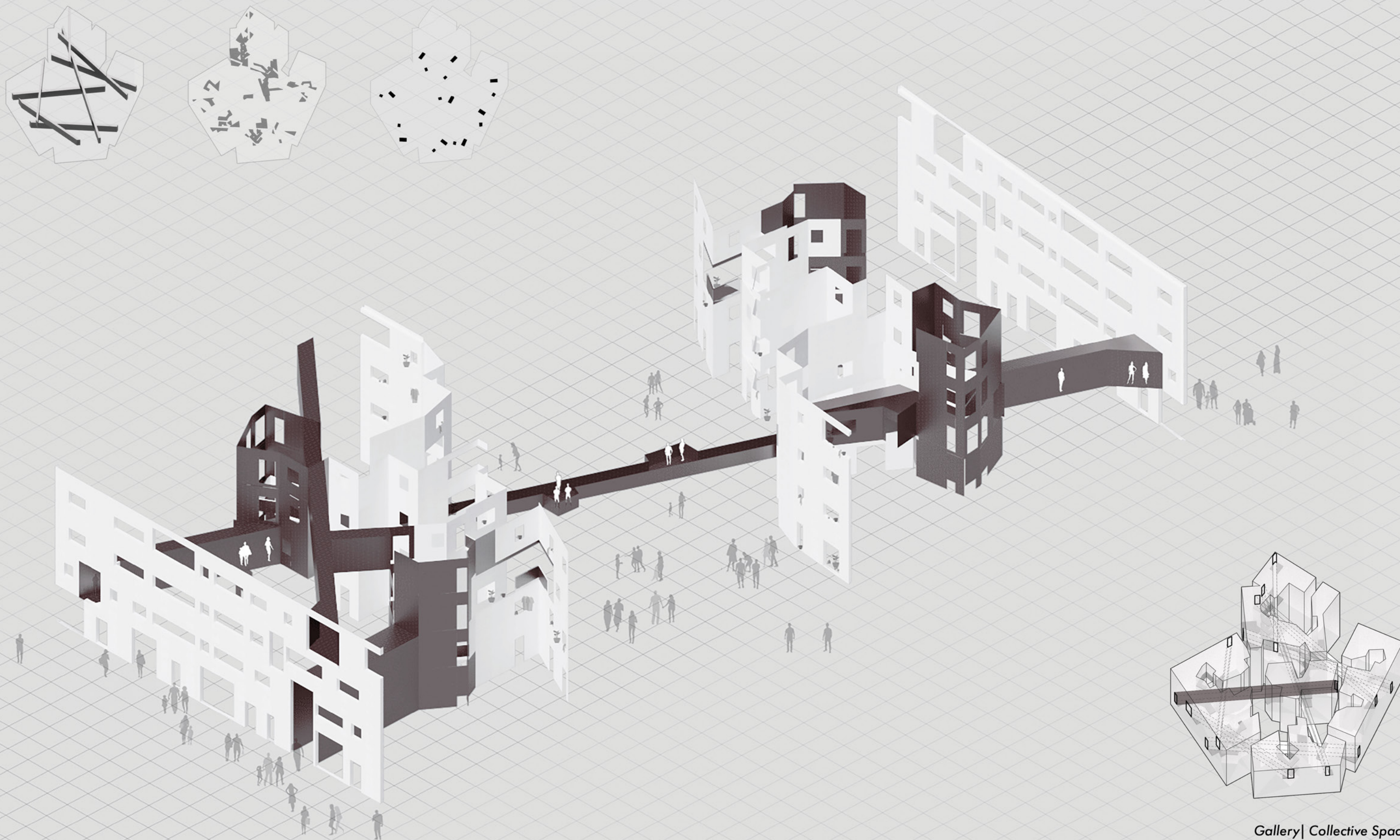
The project addresses pressing issues in modern urban living, notably the lack of communal spaces and resulting isolation within neighborhoods. Its design proposes a novel approach to public life by fostering multi-scalar public engagement while embracing the diversity of private life. Through an innovative wall configuration, the design fosters small pockets of communal activity, generating diverse scenes of public interaction.

Galleries serve as curated collections of communal moments, weaving them into a cohesive urban experience. By traversing these galleries, individuals immerse themselves in a dynamic public environment. The uniform matte white brick facades provide a cohesive framework for the diverse collective spaces interconnected by galleries. Meanwhile, the glazed brick finishing of the galleries allows the urban landscape to permeate the clusters' existing public life, enhancing connectivity.

By synthesizing various scales of public engagement, the project establishes spaces for communication ranging from intimate encounters within living units to broader urban interactions. The galleries serve as conduits, seamlessly stitching together different facets of public life into a cohesive urban tapestry.

Here, life is public, and public is life.





Gallery | Collective Space

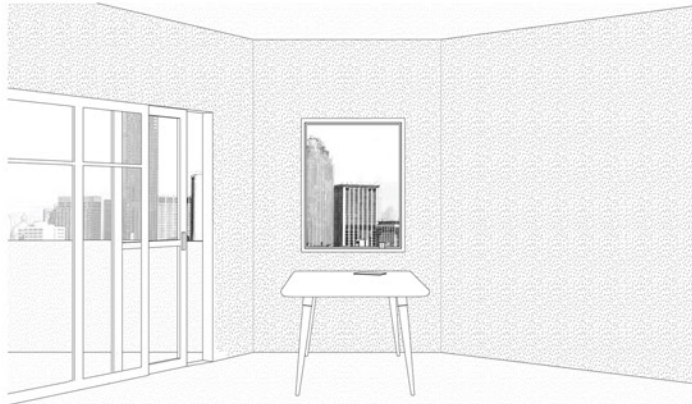
A set of galleries slices through diverse housing blocks. These galleries string together individual apartments, small beads of collective life, and views to the city beyond. Across multiple scales, the sequence of shared spaces creates a diversified domesticity and dynamic publicness.



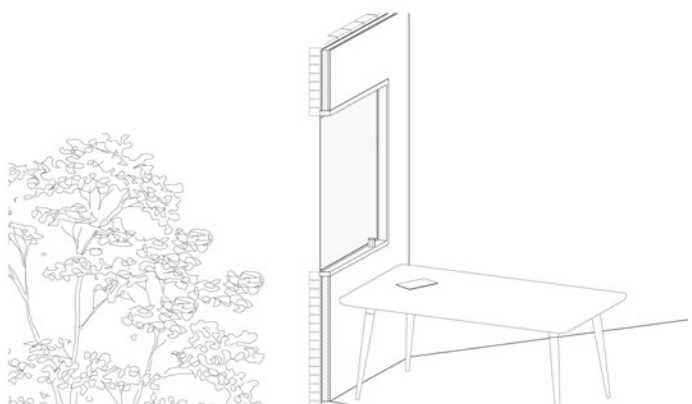
Multiple Grounds

Localized public life come into a holistic experience by a series of galleries. They go across different clusters and connect various scales of collective spaces including ground courtyard, roof terrace, and small beads of collective life. End of the galleries are toward the city, thus providing open views regardless of where people are located. Series of clusters are in different height to represent variety in individual life, while monochromatic white brick material adds unity.

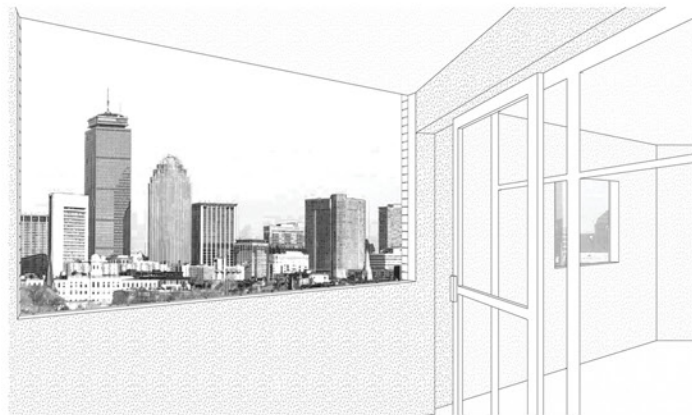
Massing Model Rendering



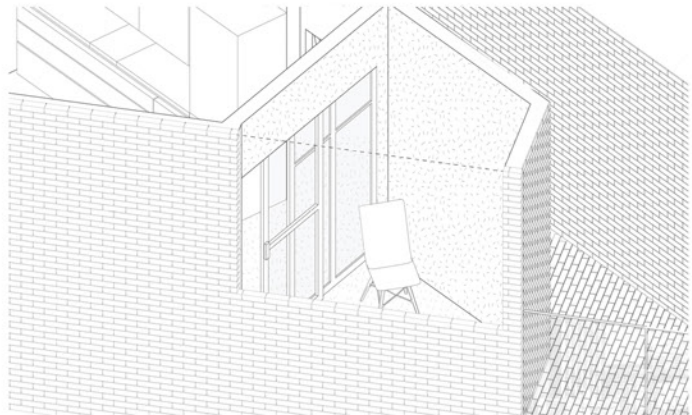
A. City View through Window



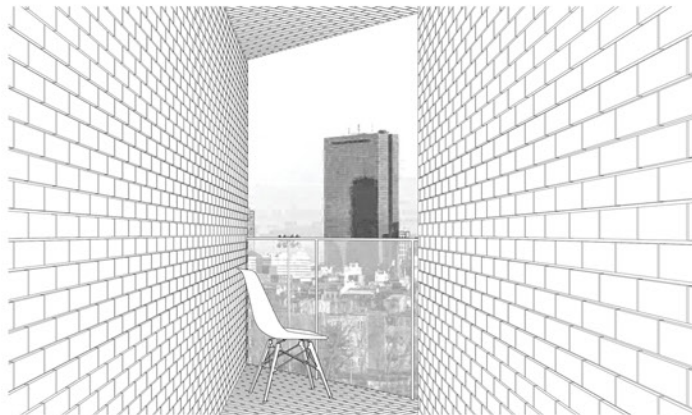
A. Window Detail



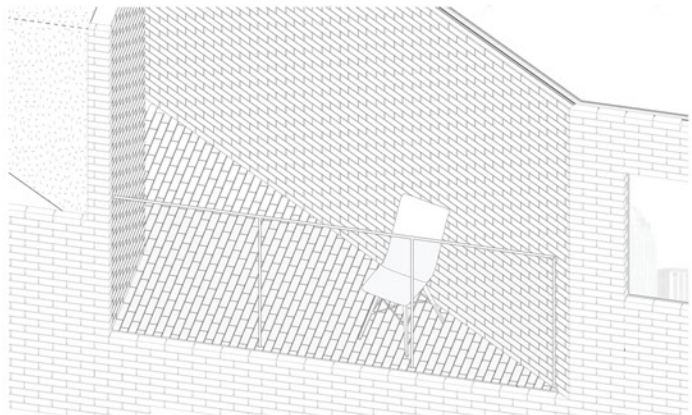
B. City View through Balcony



B. Balcony Detail



C. City View through Gallery



C. Gallery Detail

Gallery | Balcony | Window

The plan zooms into a cluster scale. There are three sets of punctures establishing the relationship between the interior space and the city: private balcony, end space of gallery, and glazing in individual apartment. Each space has really nice view out toward the city but differently framed. These spots are in proximity. Dynamic publicness thus embeds deeply in private life.



Local Gallery within a Cluster
A. Balcony | B. Gallery | C. Window

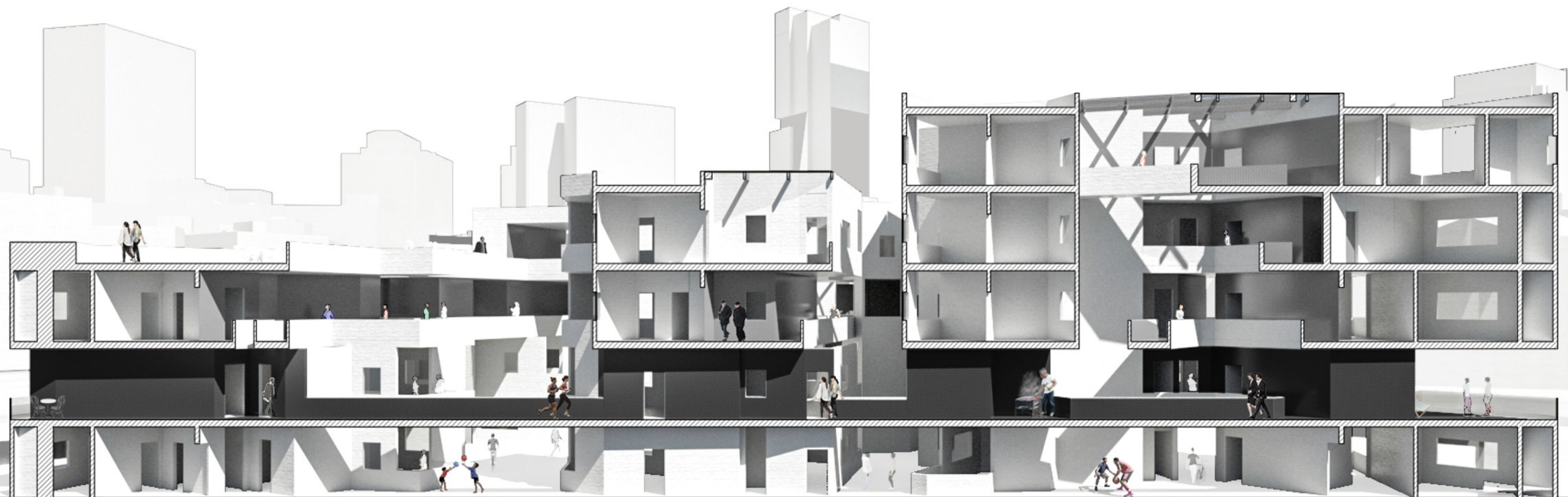
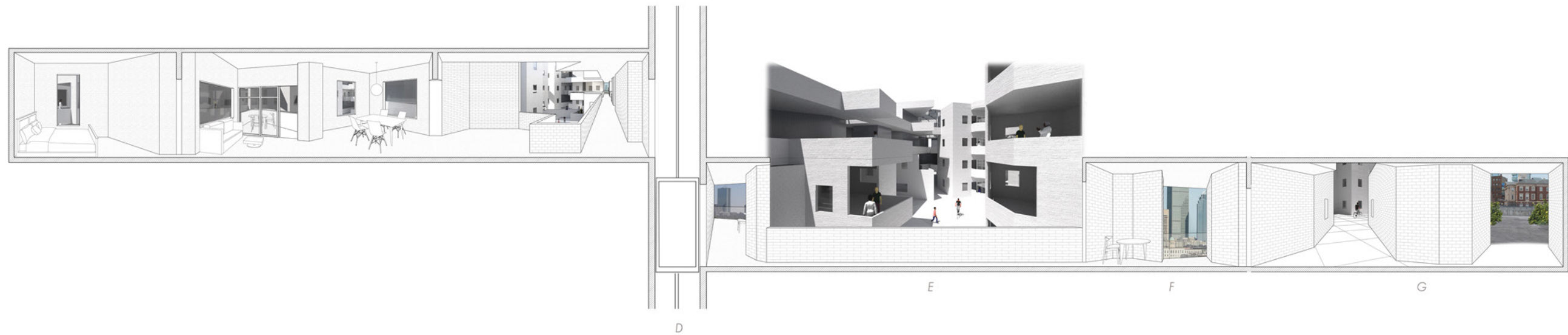


Views | Material

Galleries are defined by dark glazed brick cladding while the outer façade is finished by matte white bricks. The reflective material brings the urban views closer to the domestic life. People can see collective activities along the gallery. Random encounters pop up while they are walking along the gallery. The gallery provides people chance to communicate with neighbors, also the opportunity to experience novel public life.



Third Floor Plan with Three Galleries | Gridded Hard landscape on the Ground



A Gallery | Collection of Galleries

The collection of galleries links different clusters through the central courtyard. With strong directionality, galleries create a continuous sequence of public life present in the cluster. Simply by walking through a gallery, people situate themselves in dynamic publicness. All the rooms are generalized in a similar scale and shape. Along the way, gallery links the domestic life, the city and and different scales of collective space.

Section Along the Second Floor Gallery

04 AGUA

Water Project in Siekopai Commune

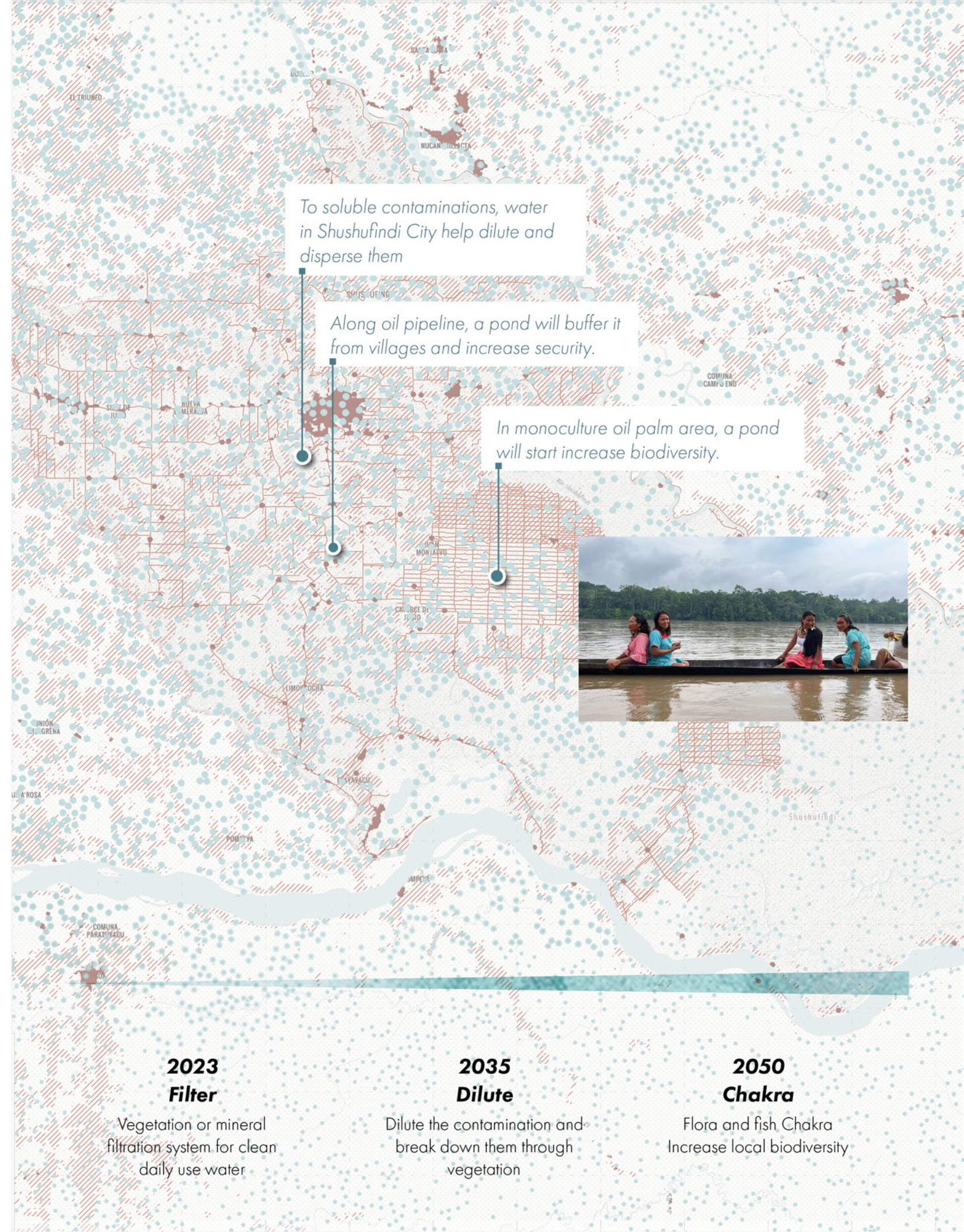
Future Water Strategy in an oil boom town, Shushufindi, Ecuador
Critic: Ana Maria Duran Calisto
Harvard GSD Architecture Optional Studio, Spring 2023

The Municipal Art Society (MAS), a champion of livability in New York City (NYC), seeks a new headquarters. MAS envisions a shared space on the northwest corner of Washington Square Park, fostering collaboration among multiple associations.

Privately Owned Public Space (POPS), a unique initiative in New York City, reflects the city's urgent need for accessible public areas in its bustling metropolis. The concept of a Floating Piazza boldly challenges traditional notions of private property by integrating a vibrant public space within a private lot, sparking ongoing discourse about the city's public realm.

NYC is organized in a grid. Buildings are dots and flows are arrows. However, the Floating Piazza proposes a radical departure by envisioning buildings that float above ground level, inviting pedestrians to traverse freely below. This innovative approach reimagines public flow, disrupting the conventional boundaries between private and public spaces.

Floating Piazza encourages the public to penetrate the building. Horizontally, ground level, middle green floor, and rooftop are Privately Owned Public Space. Vertical oblique public core and penetrated atrium builds the thermal, visual, and acoustic connection between private office levels and public levels. The suspended structure achieves the openness of Floating Piazza. The construction process is a performance to the city.

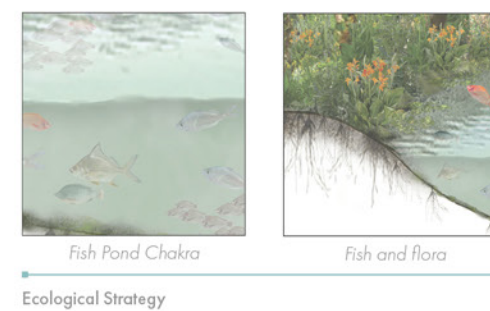




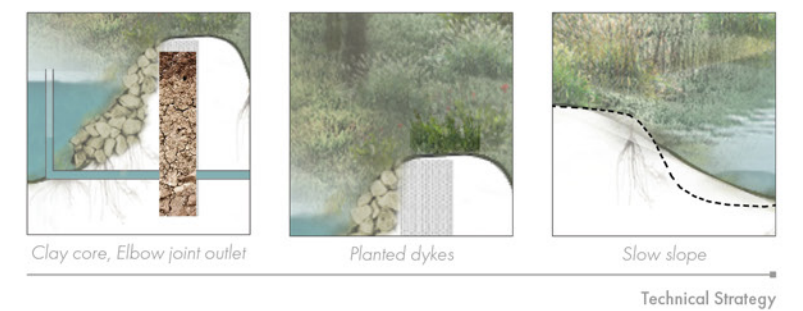
Siekopai Commune | Ecuadorian Amazonia

The field visit encounters the aquatic chakras meticulously crafted and maintained by the Siekopai, drawing on ancient wisdom akin to Andean lake management practices. Just as each tsió on land is thoughtfully designed to foster a unique blend of plant and animal life, so too are the aquatic tsiós, nurturing a diverse ecosystem that includes various fish and amphibians. Water features in the commune includes the natural Rio Aguarico and back stream and created fish ponds.

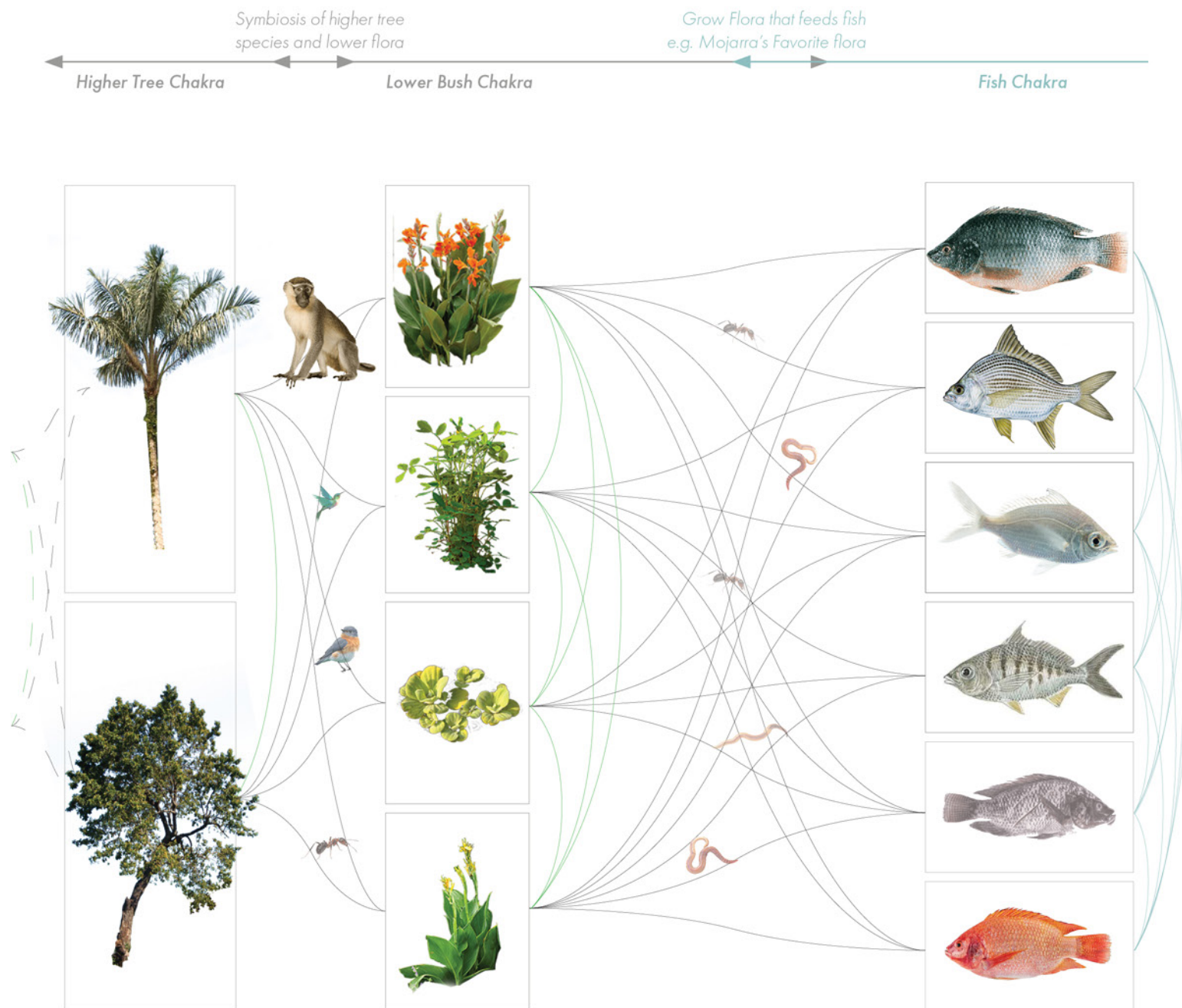
- | | | | |
|-------------------------|---|-----------------------------|---|
| Chakra System -- Plants | 1 | Chakra System -- Fish Ponds | 4 |
| Slow Slope | 2 | Designed Dyke | 5 |
| Designed Fish Pond | 3 | Stream | 6 |
| | | Chakra System -- Plants | 7 |



Ecological Strategy



Technical Strategy



1 *Astrocaryum Chambira*

2 *Persea Americana*

1 *Canna Indica Orange*

2 *Arachis Hypogaea*

3 *Pistia Stratiotes*

4 *Canna Indica Yellow*

1 *Tupuwani*

2 *Waniduju*

3 *Socowani*

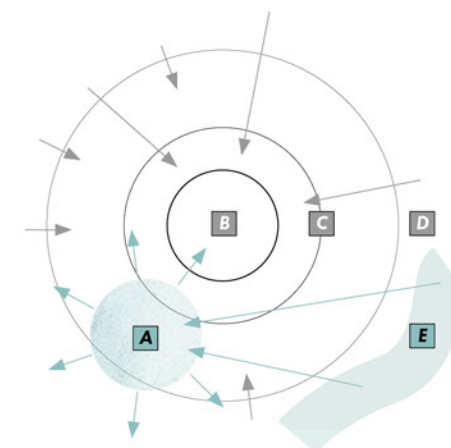
4 *Yajiwani*

5 *Yaupa*

6 *Suara*

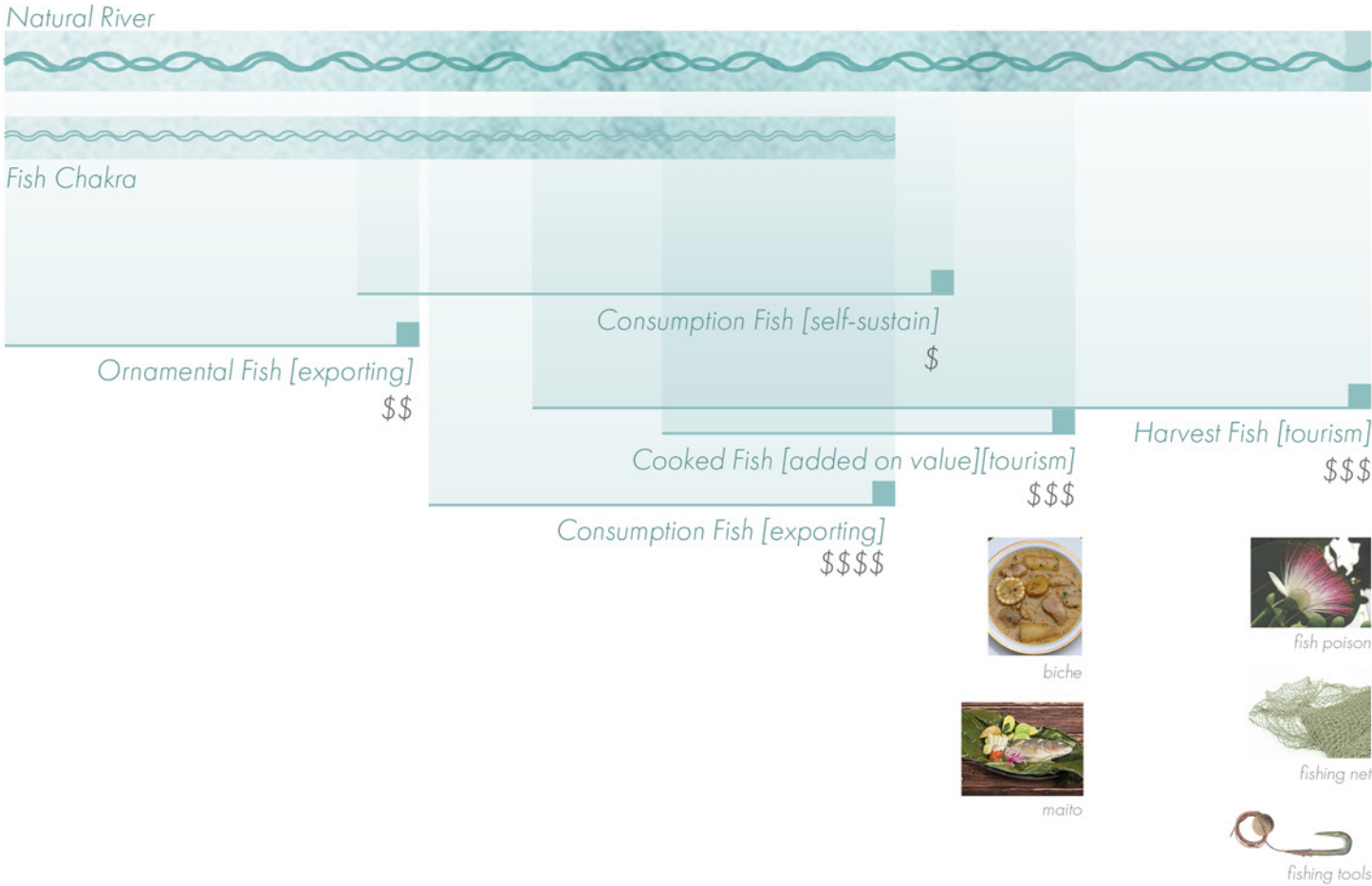
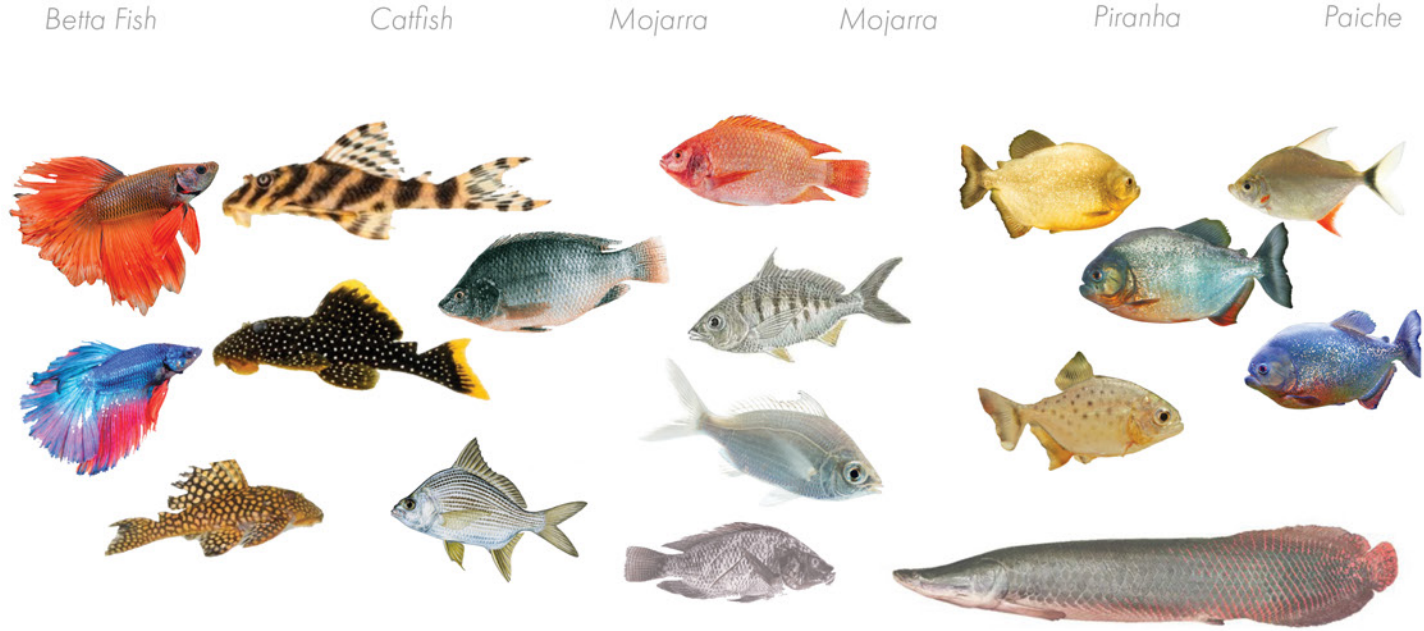
Fish Chakra | Flora Chakra

Employing their deep ecological understanding, the Siekopai manipulate their surroundings to create water reservoirs that not only store water but also function as polycultures. These microenvironments are abundant with fruits, seeds, and other nourishment, enriching the diets of the fish cultivated in their cochas (cages in Paicoca). By intertwining the Fish Chakra and Flora Chakra, the Siekopai amplify biodiversity and foster biosymbiosis for a vital ecosystem.



A Fish Chakra
B Living Area
C Flora Chakra
D Flora Mother Chakra
E Fish Mother Chakra

... Fish jumped out to get their favorite fruits planted around the fish pond ...

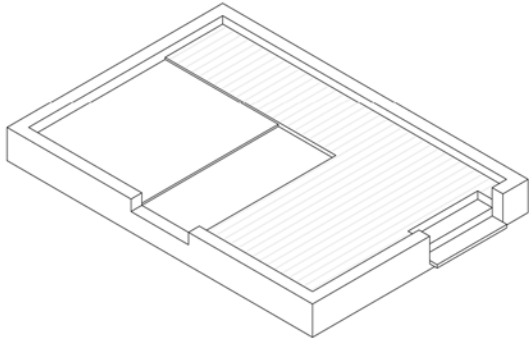


Fish Management | Infrastructure

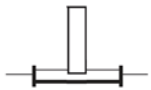
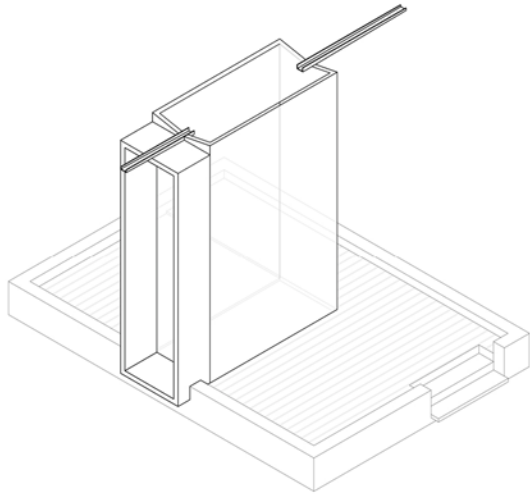
In conversation with the Siekopai locals, one of the main problems related to the management of the reservoirs is the overflow In the rainy season and the Siekopai lose all their fish, an important source of protein in the community. To improve the fish management to expand revenue income, ecological strategies above aand technical strategies including clay core, elbow joint outlet , planted dykes , and slow slope, will help mitigate this problem.



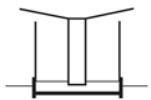
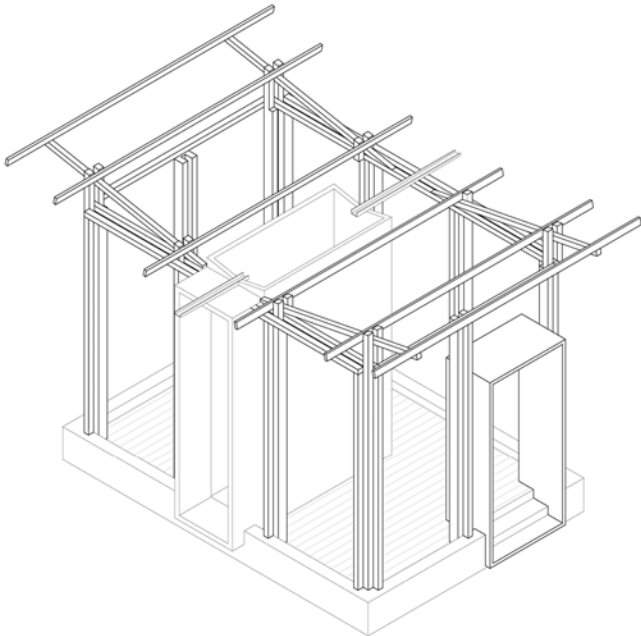
- Entrance **1**
- Sink / toilet **2**
- Water filtration display **3**
- Shower / laundry **4**



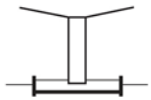
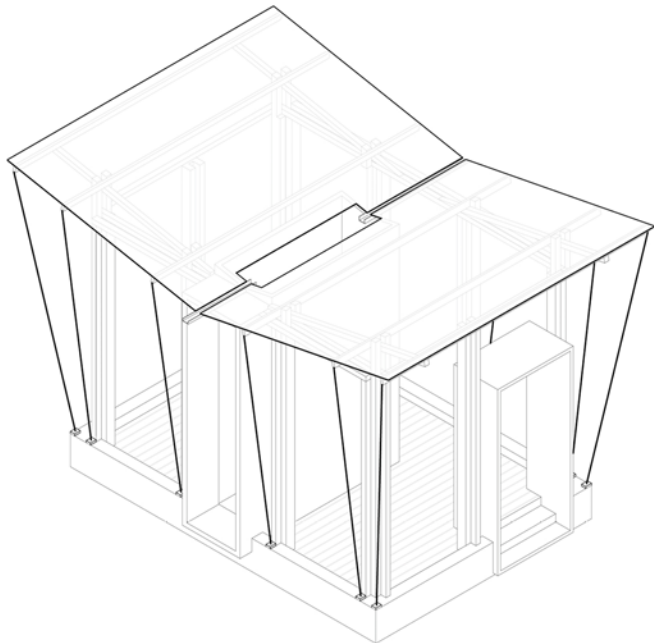
1 Water Treatment Base



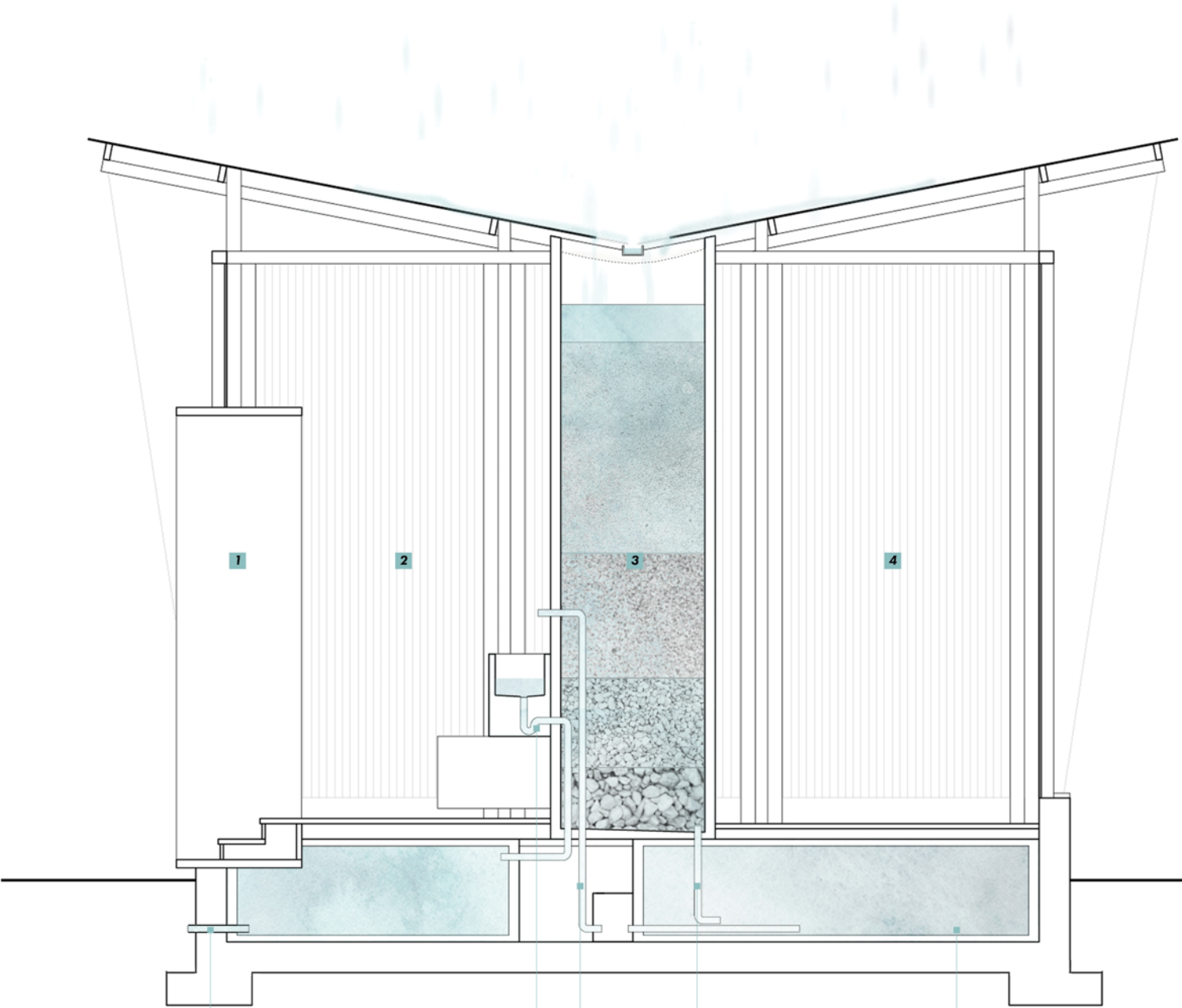
2 Water Filtration Tank



3 Occupiable Area
Sink / toilet / bath / laundry



4 Water Collection System



Modu-Loo -- A Self-Sustaining Bathroom System

Create a modular hygiene unit that is customizable to fit centralized commune use or de-centralized household function. It collects the rainwater, filters with minerals and gravels. After people use it, a sewage treatment system process water before discharge it back to nature. Modu-Loo harmonizes water input and output. Its modular design facilitates easy assembly, disassembly, and mobility, making it a versatile and user-friendly solution for diverse hygiene needs.

05

FLOATING PIAZZA

Liberated Space with Suspended Structure

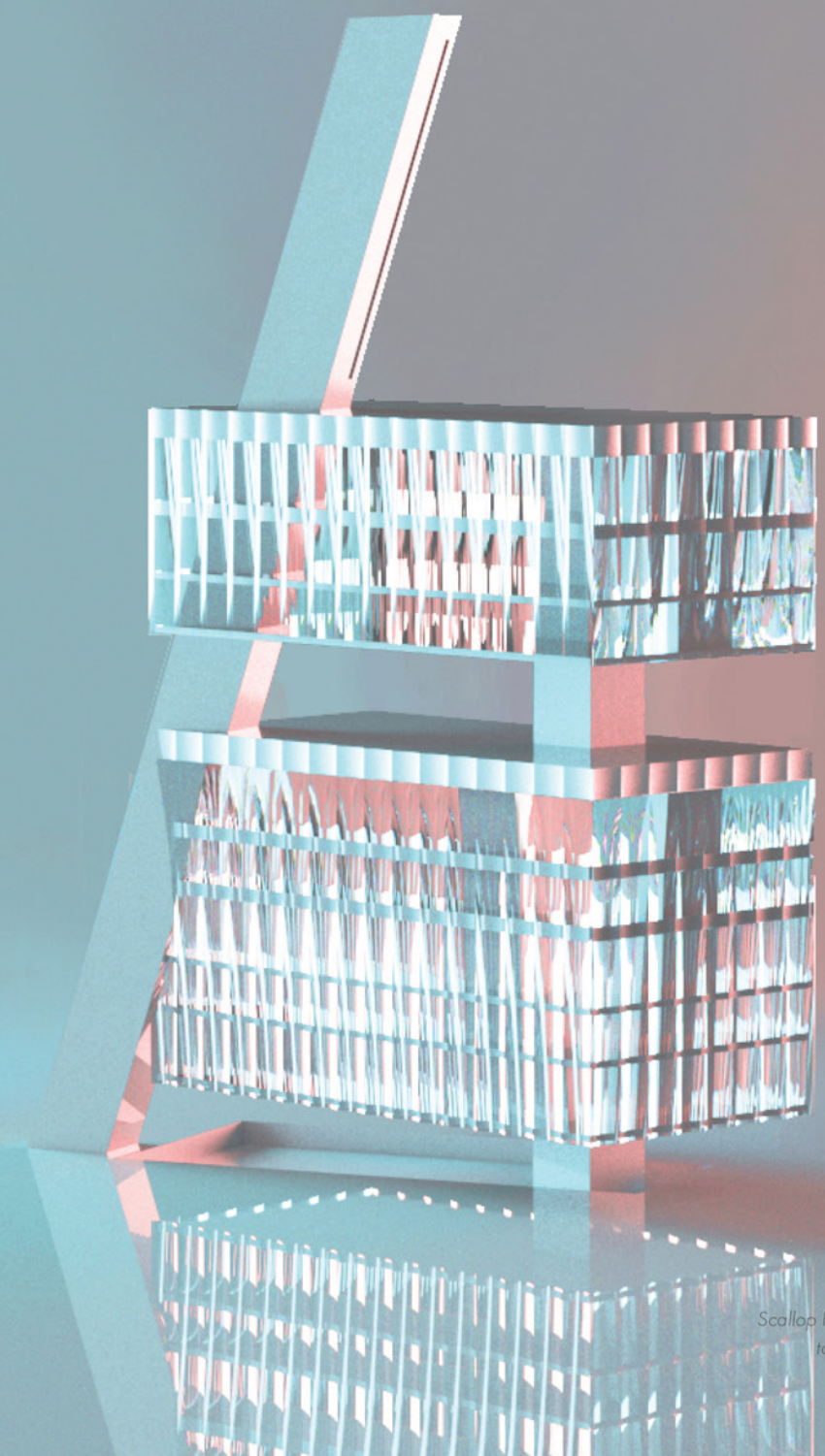
Office with Rental and Public Library, NYC
Critic: Jennifer Bonner
Harvard GSD Architecture Core Studio, Fall 2020

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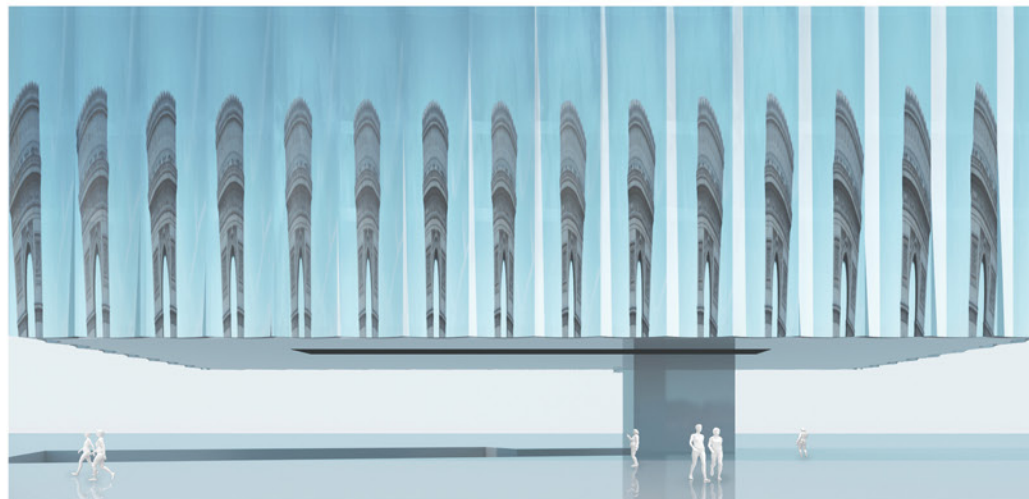
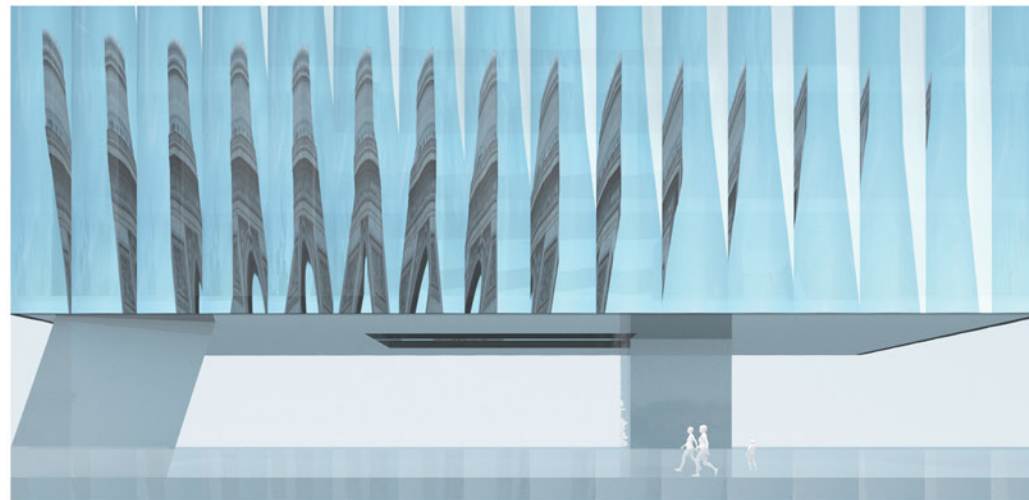
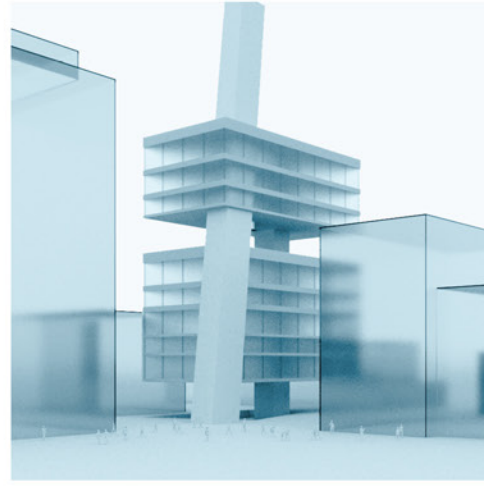
Privately Owned Public Space (POPS), a unique initiative in New York City, reflects the city's urgent need for accessible public areas in its bustling metropolis. The concept of a Floating Piazza boldly challenges traditional notions of private property by integrating a vibrant public space within a private lot, sparking ongoing discourse about the city's public realm.

NYC is organized in a grid. Buildings are dots and flows are arrows. However, the Floating Piazza proposes a radical departure by envisioning buildings that float above ground level, inviting pedestrians to traverse freely below. This innovative approach reimagines public flow, disrupting the conventional boundaries between private and public spaces.

Floating Piazza encourages the public to penetrate the building. Horizontally, ground level, middle green floor, and rooftop are Privately Owned Public Space. Vertical oblique public core and penetrated atrium builds the thermal, visual, and acoustic connection between private office levels and public levels. The suspended structure achieves the openness of Floating Piazza. The construction process is a performance to the city.



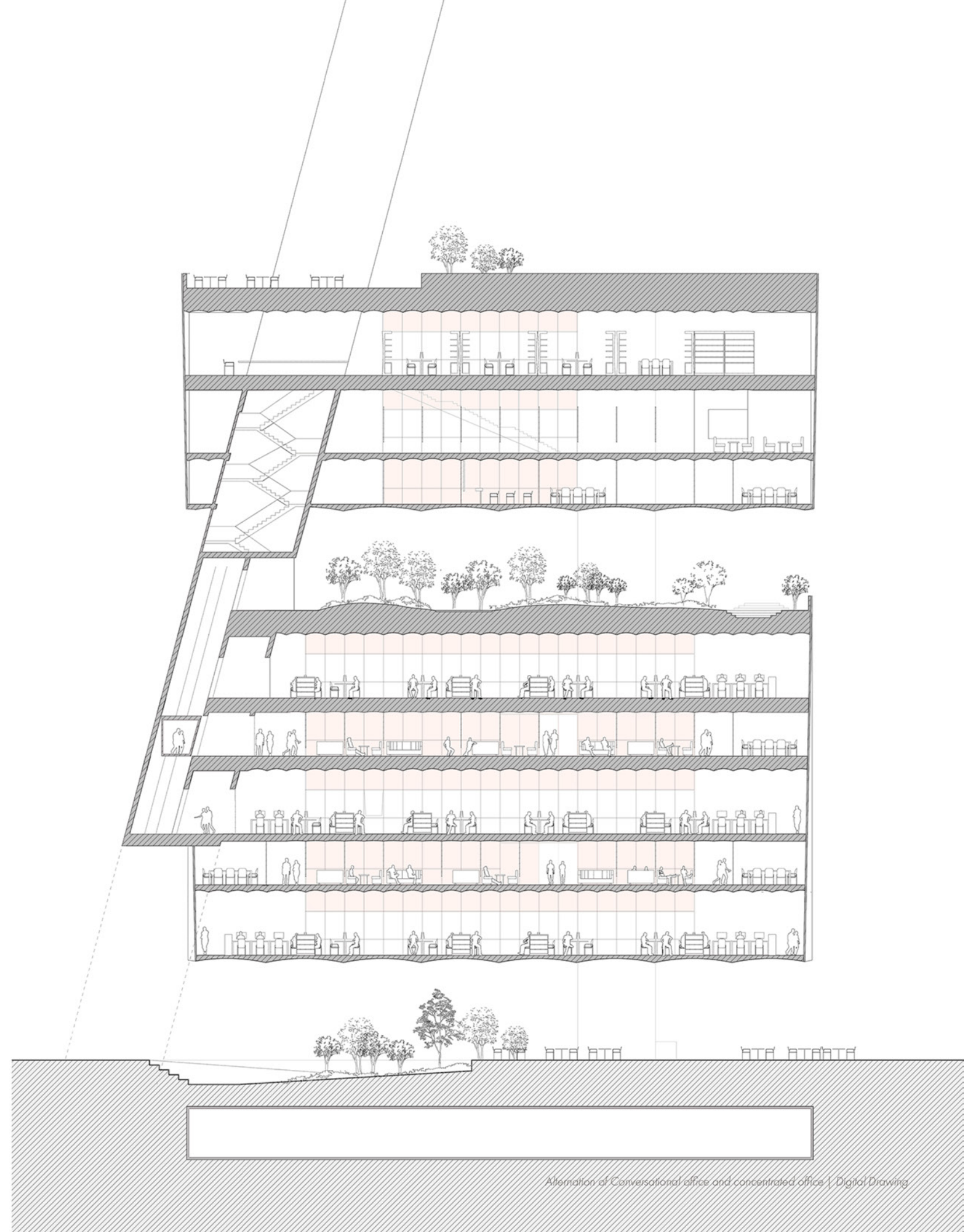
Scallop Facade Transit from Concave
to Convex | Digital Rendering

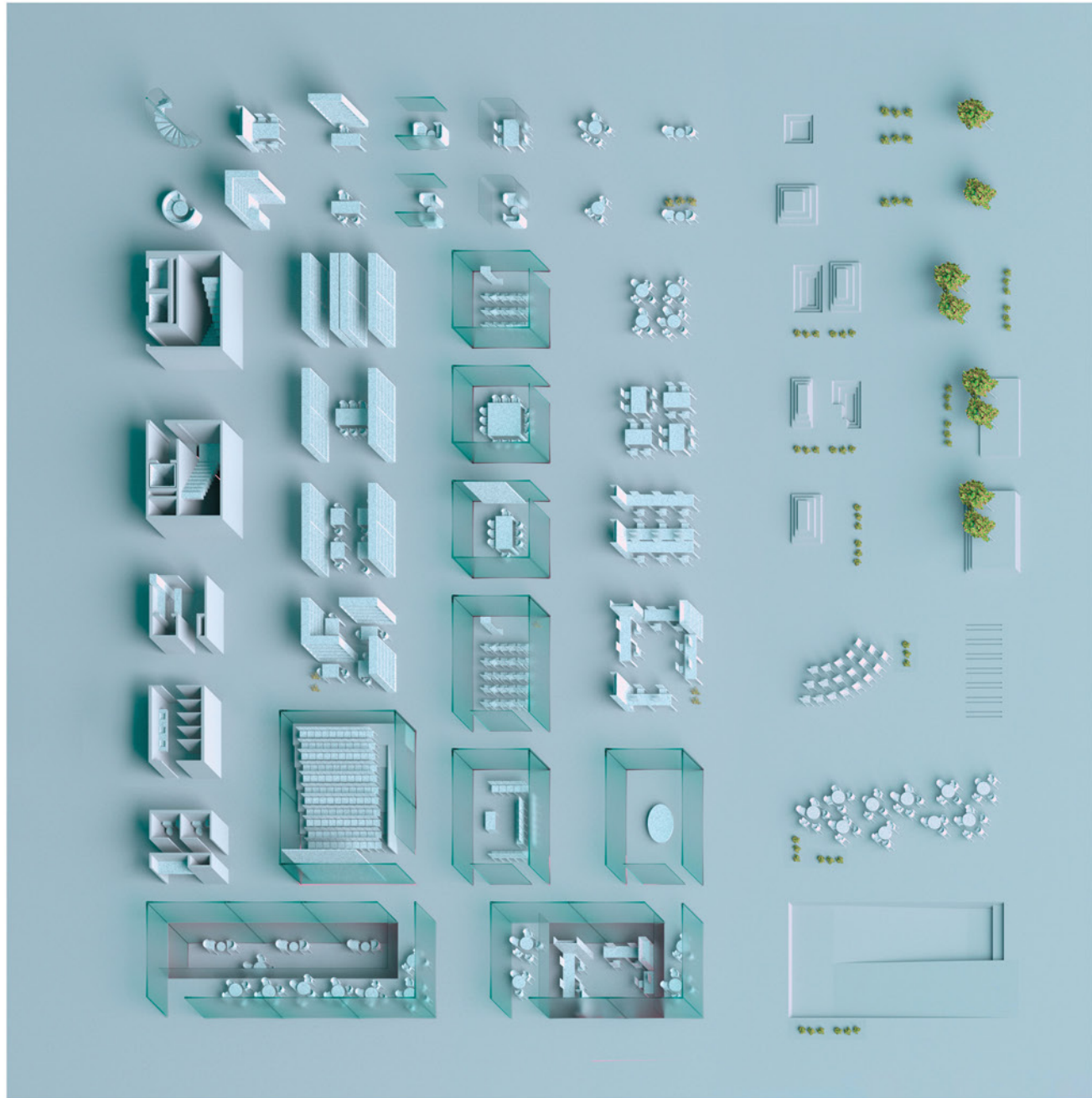


Upper Left: Scallop Façade Details
 Upper Right: Dichroic Atrium Façade
 Lower: Transitional Scallop Façade with reflection of context

Scallop Façade | Dichroic Atrium

The scallop façade system and dichroic atrium are aimed to activate office life. Transit from concave to convex as going from bottom to top, the scallop façade provides distortion to the city and transforms how people read the city through lens, mimicking the process of MAS that reinterpret NYC and public lives by decoding it. The atrium activates the office space with a catalyst of color. The dichroic glass is used to create different colors according to the lighting condition. The constant changing color of the inner space creates a dynamic office life.

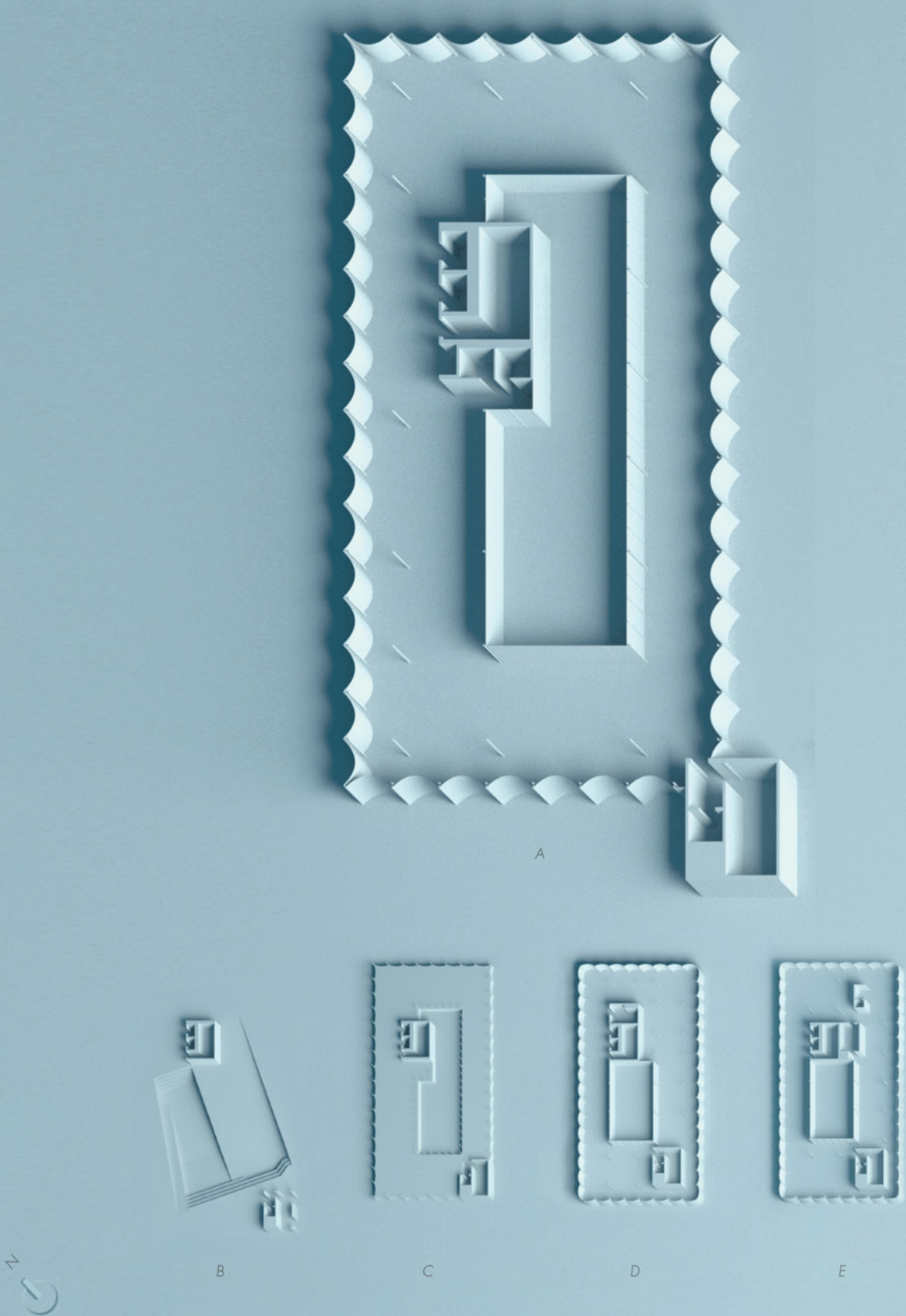




A spectrum of objects that define space | Digital Rendering

Suspended Structure | Object-defined Space

The suspended structure with hanging cables achieves the openness of Floating Piazza to reduce architectural elements like walls and columns. It allows daylight penetration from both facade and atrium. During construction, suspended structure is a performance to the city. Without walls or columns, the object is the new space activator. Objects, organized in an opacity spectrum, are laid in grid associated. The opacity gradient is also correlated with the extent of publicity.

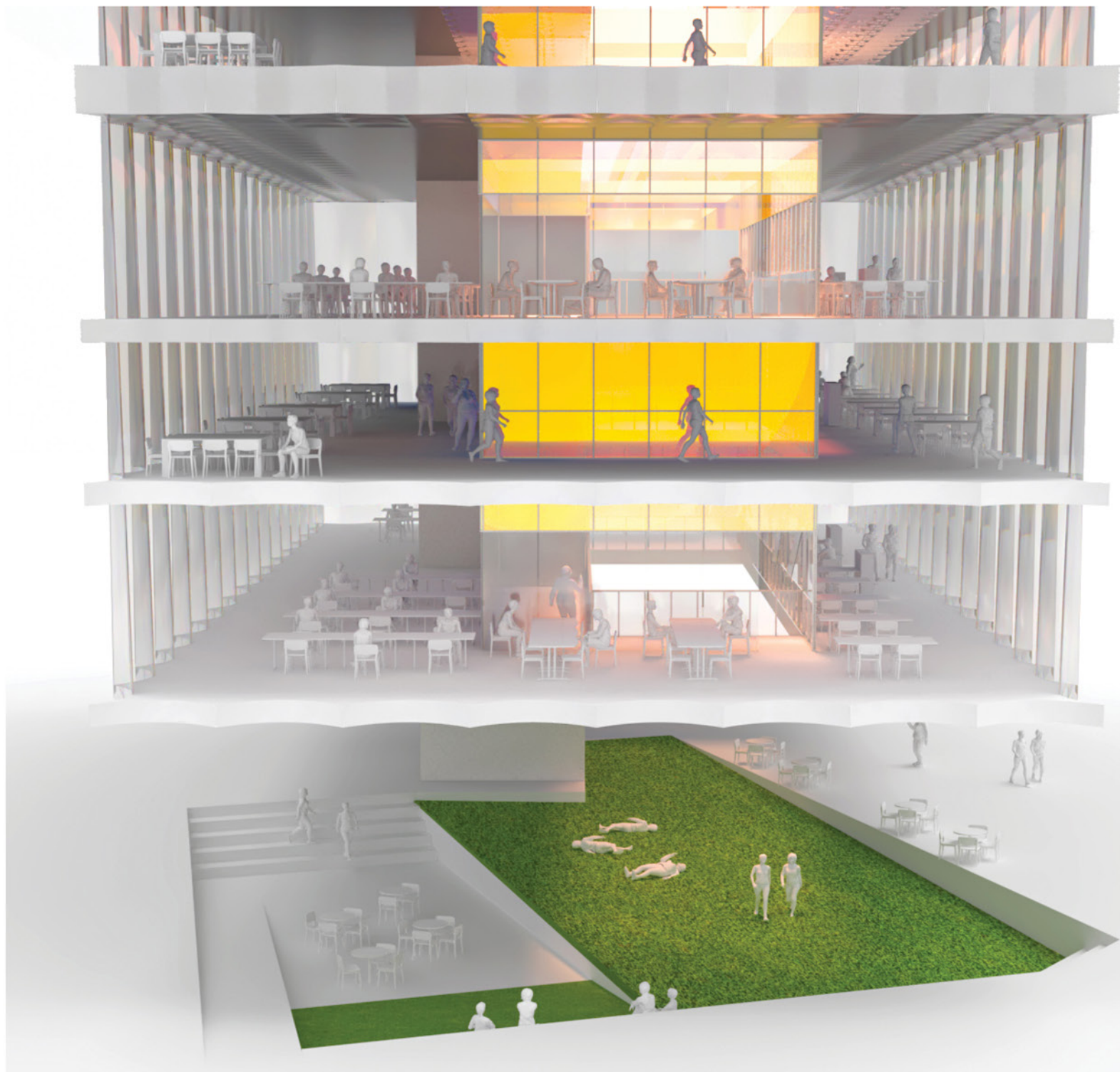


- A. Second Floor
- B. Ground Floor
- C. Sixth Floor
- D. Seventh Floor
- E. Eighth Floor



Privately Owned Public Space

As intrusion of the public activated office level. POPS levels push the publicity to an extreme. Ground POPS level returns its private space to the city; meanwhile, the whole ground floor works as the lobby. By introducing public circulation into the private site, they work as an event trigger throughout time. With path moves and forth between façade and atrium on the Green POPS level, people meander to enjoy both the urban and the office lives.



Upper Left: Middle Green Level POPS | Digital Drawing
 Lower Left: Ground Level POPS | Digital Drawing
 Right: Activated office life with scallop facade and dichroic atrium | Digital Rendering