

**YUCHEN QIU**

*Selected Works 2019-2022*

*Columbia GSAPP M.Arch*

## PROJECTS

*as my lens to examine the world*

01

### *The Loop*

*Housing project located in the  
Melrose neighborhood, Bronx,  
New York.*

02

### *The Third Space*

*Local community center with  
focuse on integration of building  
systems*

03

### *School of Methodology*

*Adaptive reuse of a public school  
in New York City*

04

### *Carbon Island*

*CLT built complex on the Davids  
Island fousing on promoting and  
educating environmental value*

05

### *The X*

*Mobility module for future's scat-  
tered living / working pattern.*

06

### *Extraction Control*

*Experiment of the collapse of hu-  
man's control and extraction over  
other species.*

07

### *The Subterranean Escape*

*Underground bathhouse at the  
entry of 191st Street subway station  
tunnel*



# 01

## The Loop

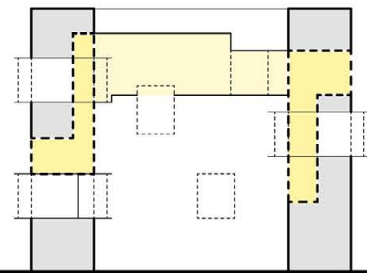
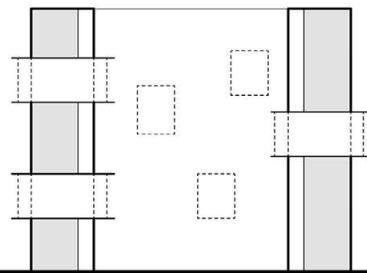
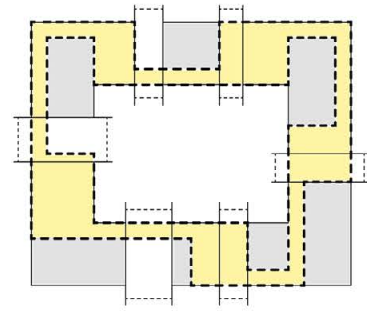
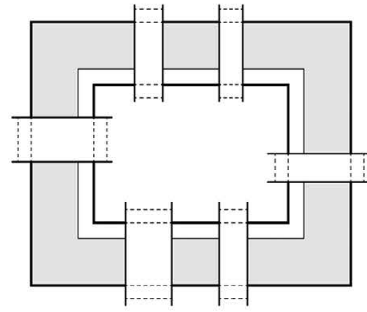
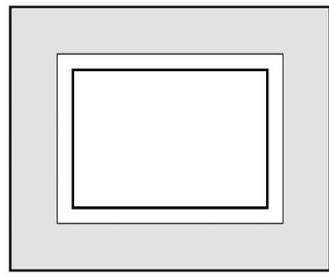
Program: Housing  
 Type: Group- Architecture, Collaborated with Hao Zhong  
 Fall 2020- 3 months  
 Instructor: Erica Goetz

*Responding to the lack of access to fresh air and inadequate public resources in the Melrose neighborhood, which causes a significantly higher rate of respiratory illness and substandard living condition, "The Loop" rethinks the concept of air/ void and uses it as the central organizational device and a public resource carrier in residential design. It prioritizes human health and experience by giving presence to the ethereal material of air. The space of air becomes the main vessel for enhancing health and community life.*

*This proposal for future living in the Melrose neighborhood provides housing for a diverse population which is common to the neighborhood - families with children, single people, and the elderly. The types of public programs are carefully thought out to accommodate the needs of local residents, such as nutrition center, health care, job training, and after school center, etc. The LOOP carries the public programs and spaces (the space of air) that are interspersed among the living units, weaving in and out, up and down within the building to connect public and private, shared and individual space, and create porosity in the building scale. As a result, the LOOP will become an incubator where social interaction and shared programs foster a sense of community.*



### Vision Diagram



Single Loaded Corridor

We propose a single loaded corridor to potentially open up the corridor to air.

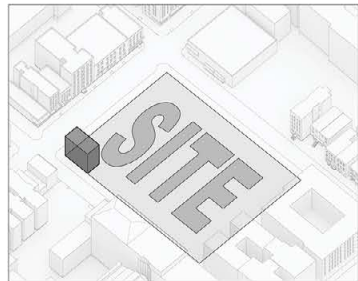
Shared Public Pocket

Shared public pocket will be inserted to provide autonomous space for residents and also as breathing pocket.

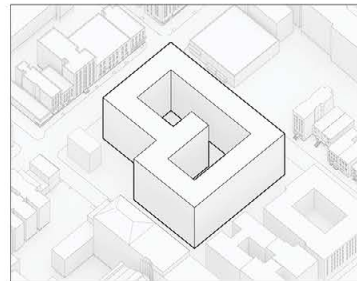
The Loop

A 3-dimensional loop will weave through the massing to encourage dynamics and activity in terms of building programs and building organization.

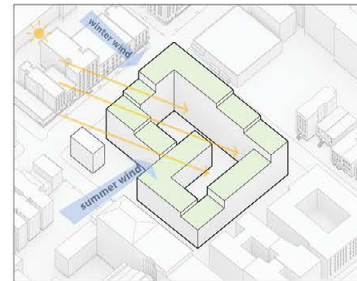
### Concept Diagram



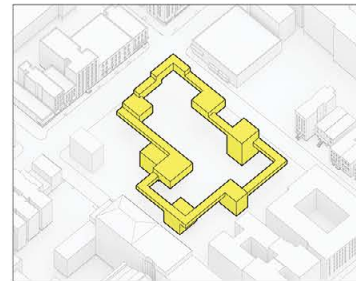
Site



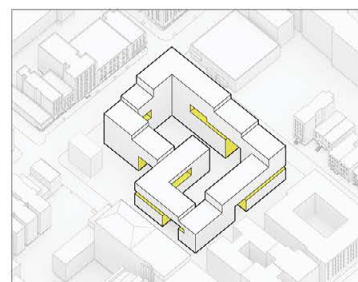
Courtyard Typology



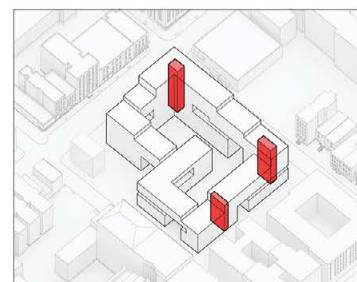
Stepdown Terrace



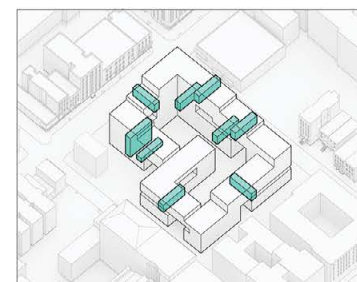
Loop



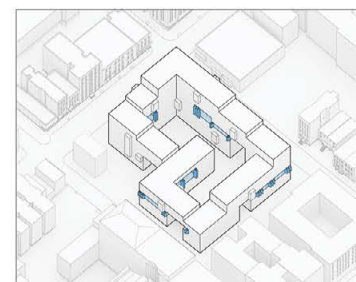
Massing Carved by the Loop



Circulation Cores



Shared Public Pocket

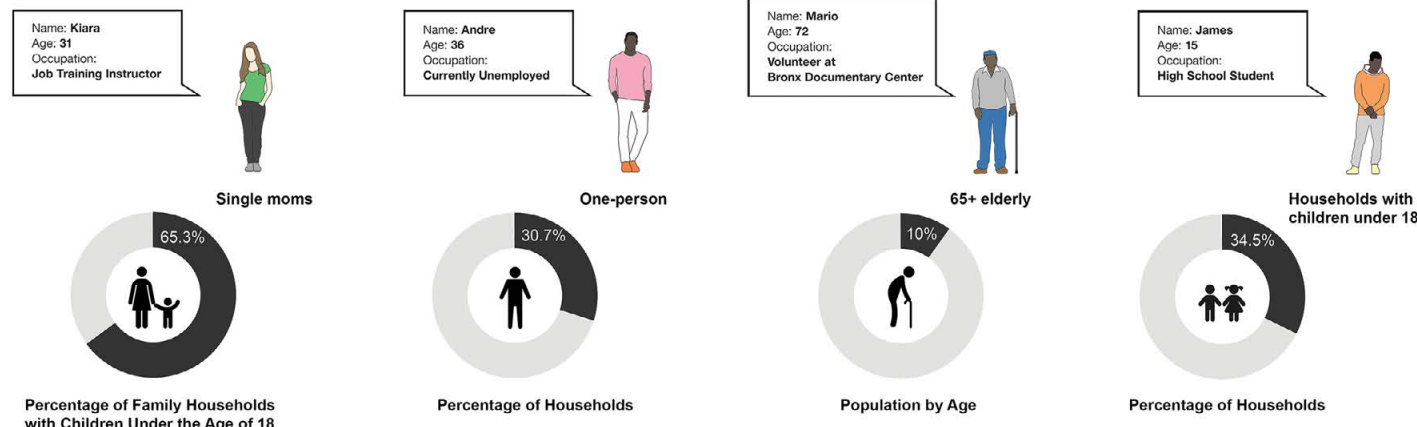


Operable Facade

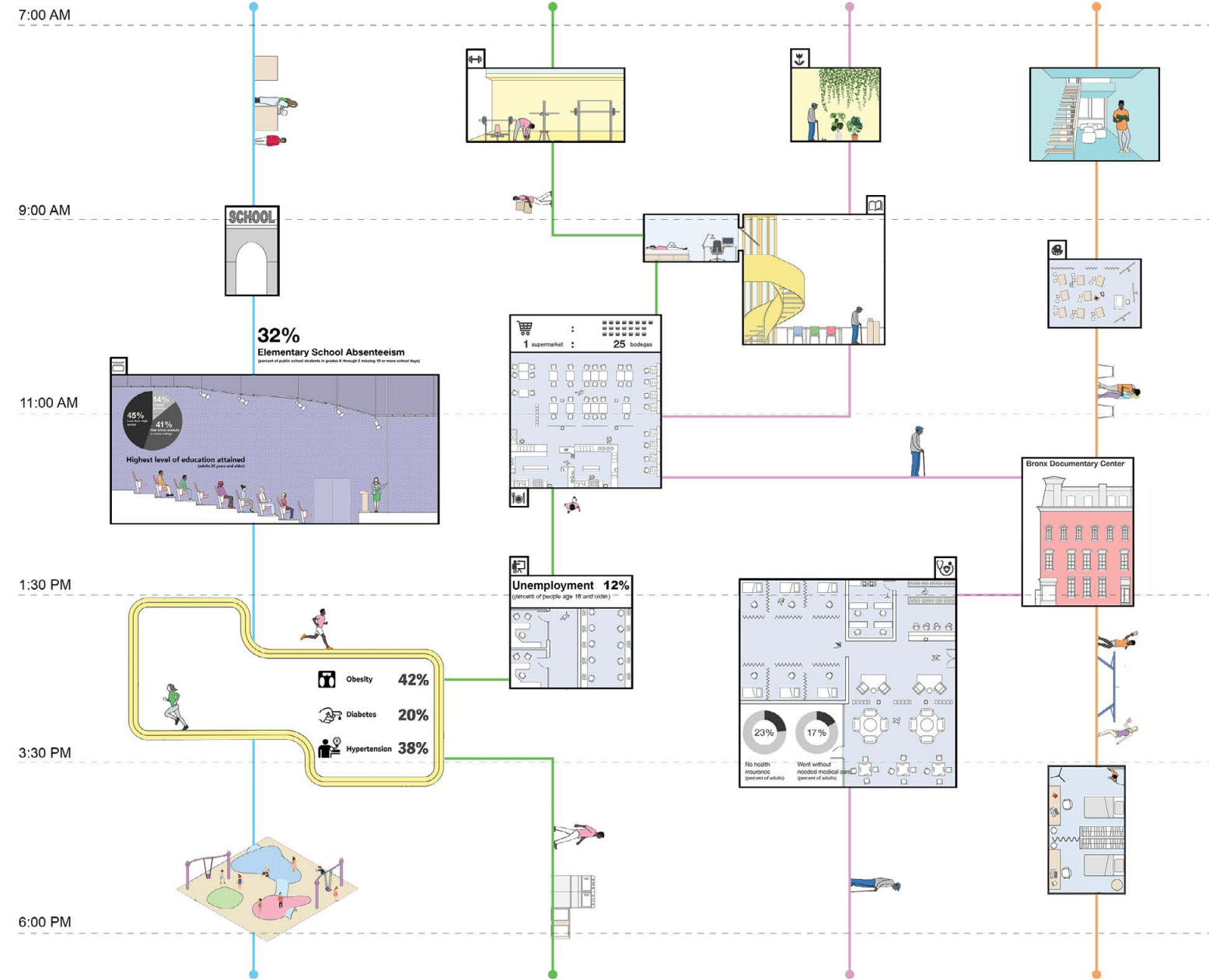




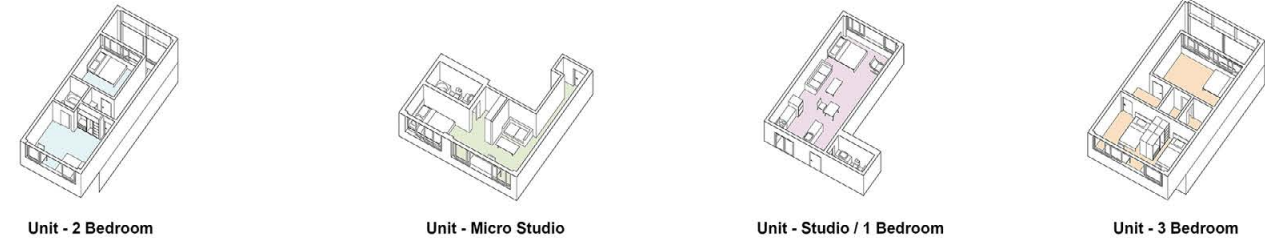
### Residents Types



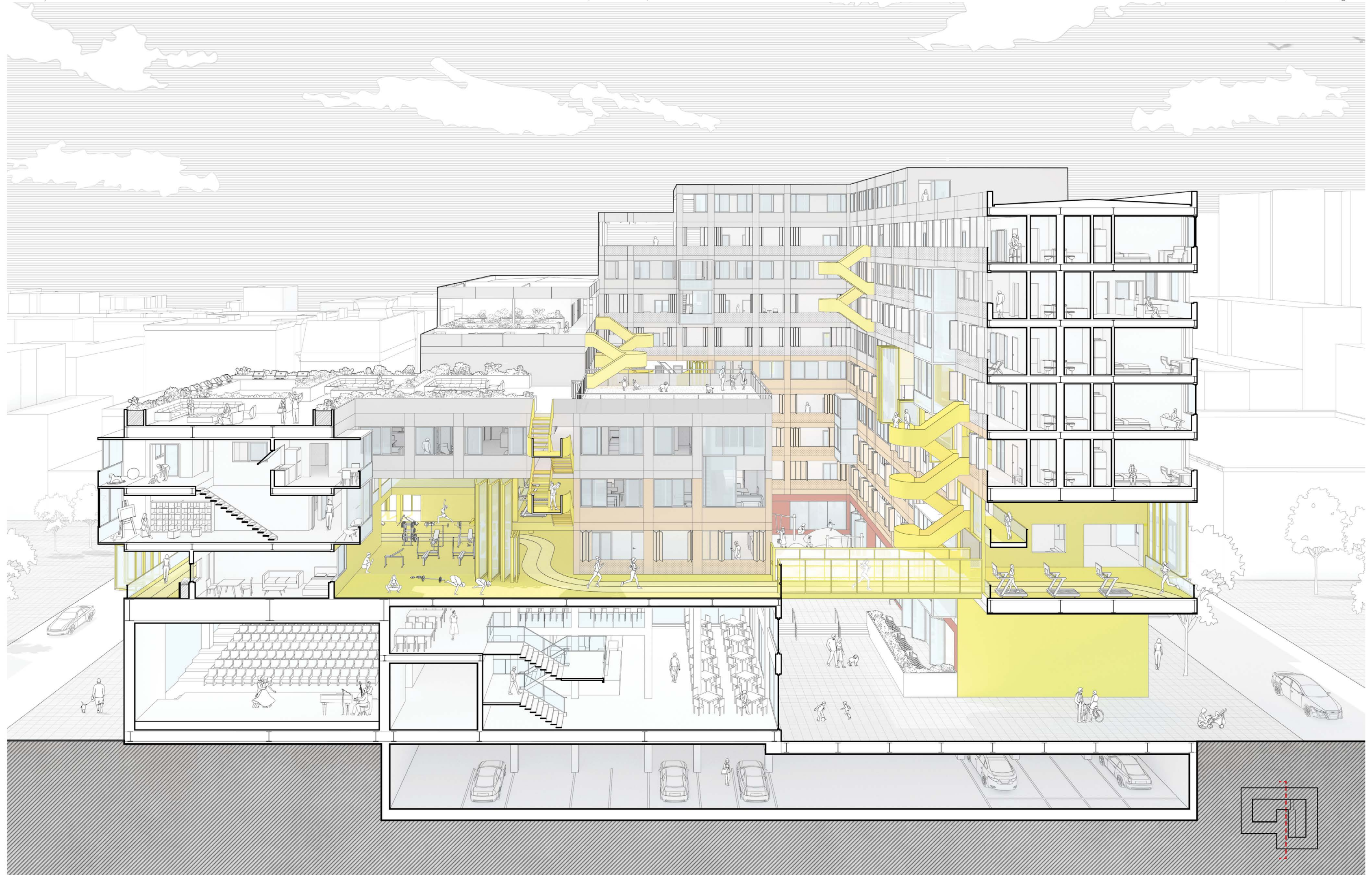
### Day of Life



### Unit Types

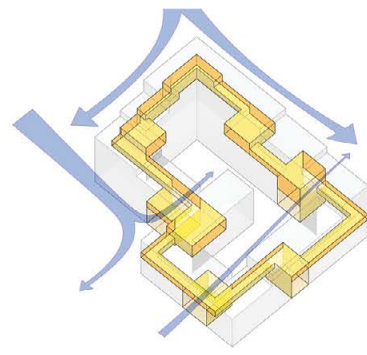
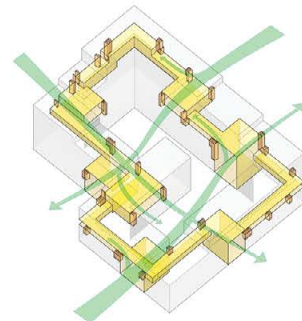
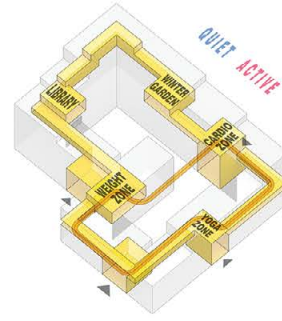
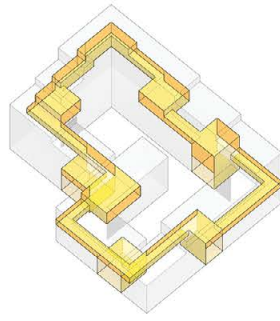








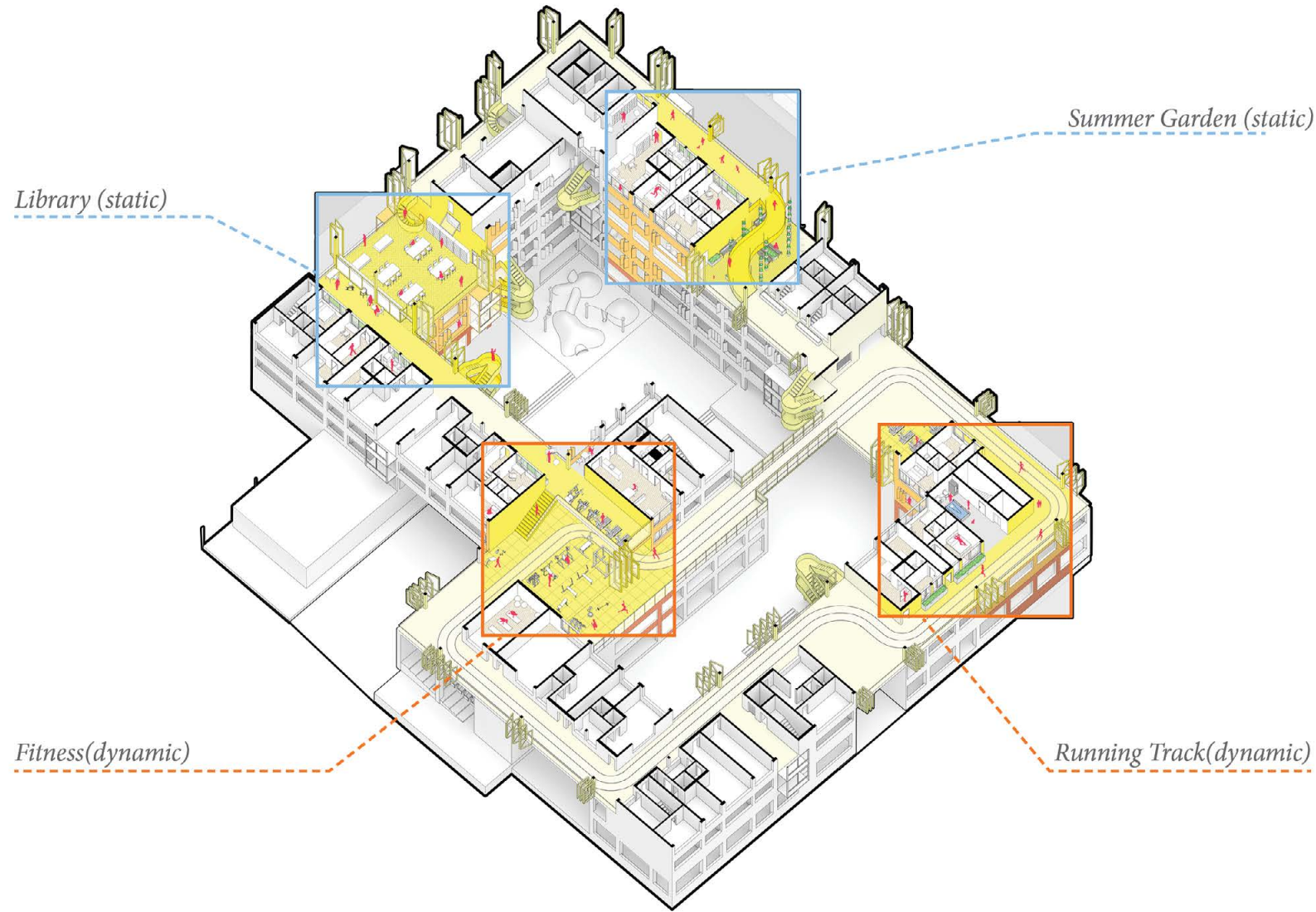
# Loop Diagram



**“Loop” as Organizational Vein**  
The loop influences the arrangement of unit clusters by weaving through the massing.

**“Loop” as Public Resources**  
The loop provides various public programs as it weaves through the building massing.

**“Loop” as Climatic Buffer**  
Because of its operability, the loop can serve as a climatic buffer zone. It could close or open up according to weather, seasons and residents’ demands.



## Operability of the Public Spaces

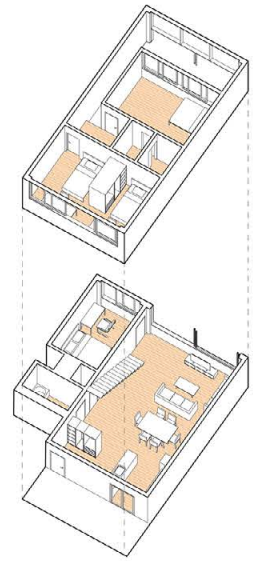


**Third Floor Plan**

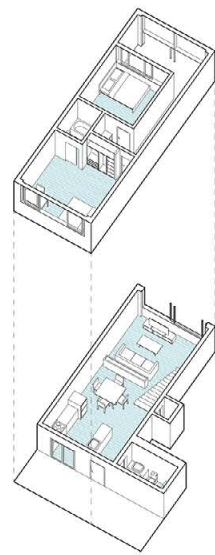
The third floor is one of the floors carved out by the loop. The loop volume on this floor forms the active part of the loop including runway and other exercise programs. It is also an exemplary floor showing how the loop activates the floor plan.



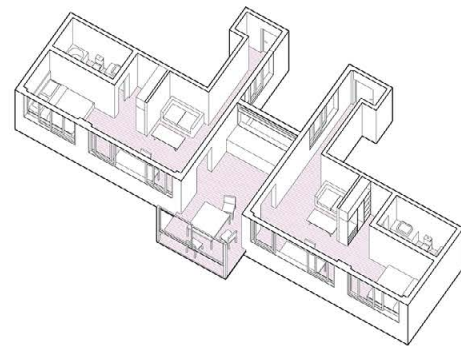
### Unit Types



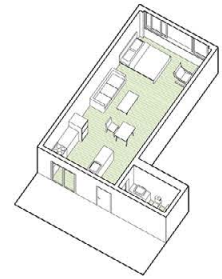
3 Bedroom / 1452 sqft / 3-5 people  
Family with Children



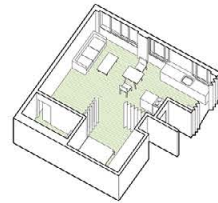
2 Bedroom / 952 sqft / 2-4 people  
Family with Children



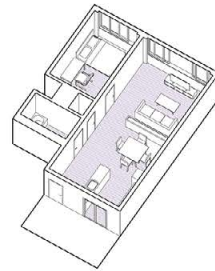
Micro Studio / 345 sqft +  
Shared Kitchen 190sqft / 1-2 people  
Single Person



Studio / 490 sqft / 1-2 people  
Single Person



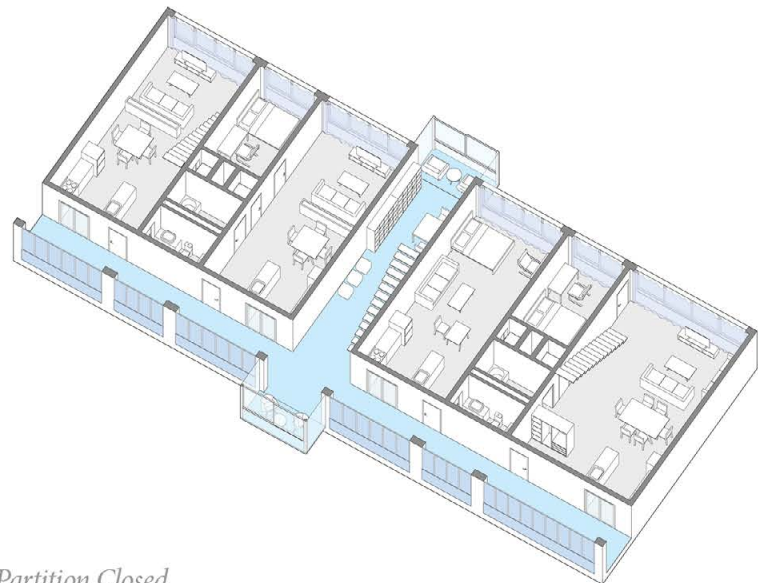
Studio / 586 sqft / 1-2 people  
Single Person



1 Bedroom / 709 sqft / 1-2 people  
Elderly

### Unit Partition Diagram

In order to free the apartments from confining into its own boundary, we play with the interfaces/ facades between different spaces - between units and corridor, between corridor and the outside, and between interiors and outside. We intend to make these 3 layers of facade operable so that the units have the autonomy to free itself from its confinement in terms of spatial quality and ventilation.



Partition Closed



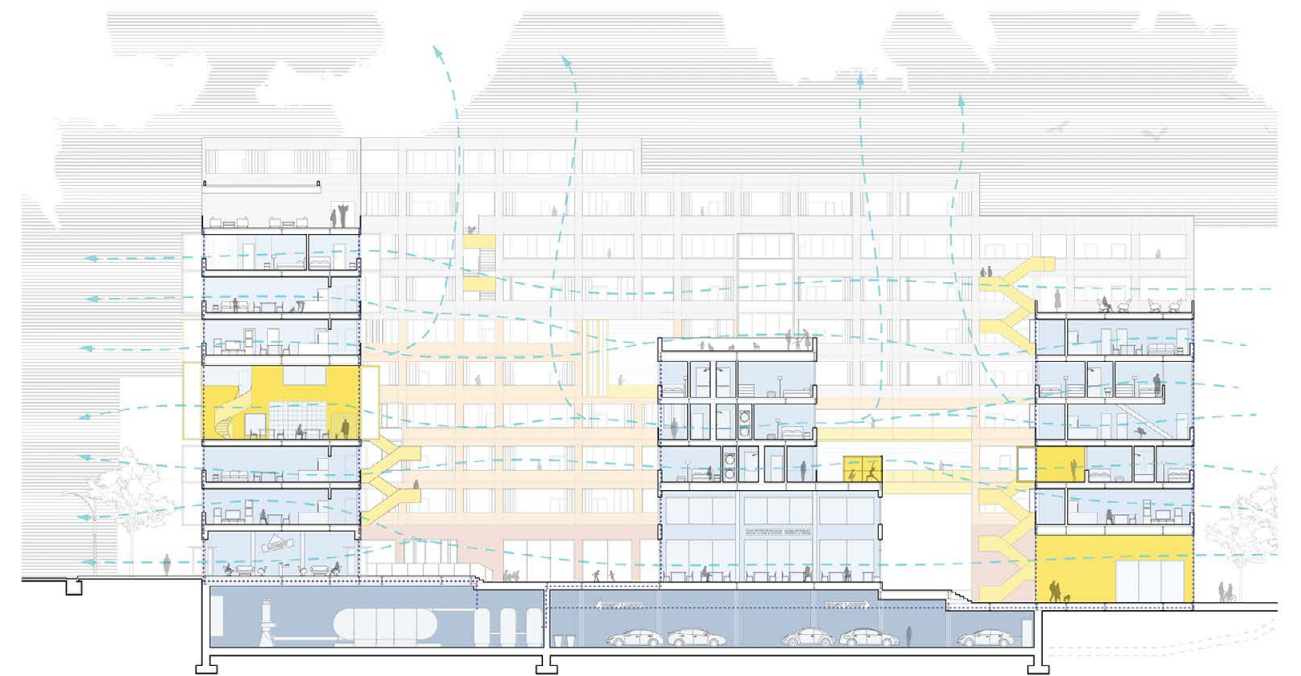
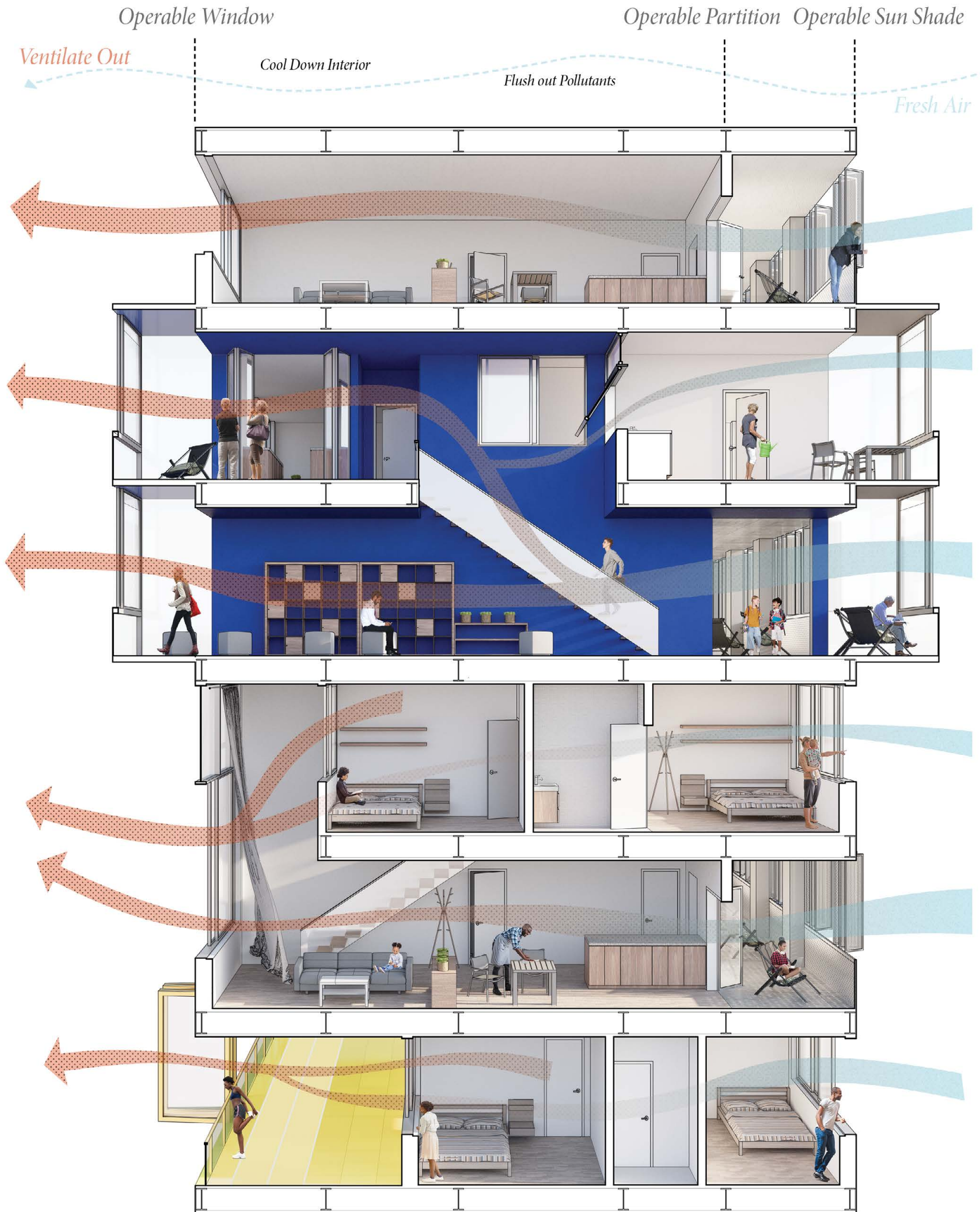
Partition Open



### Fifth Floor Plan

The fifth floor plan shows how two-storey units juxtapose with single-storey units horizontally. This floor also intersect with the static portion of the loop. It shows how the loop becomes public amenity at certain floors.

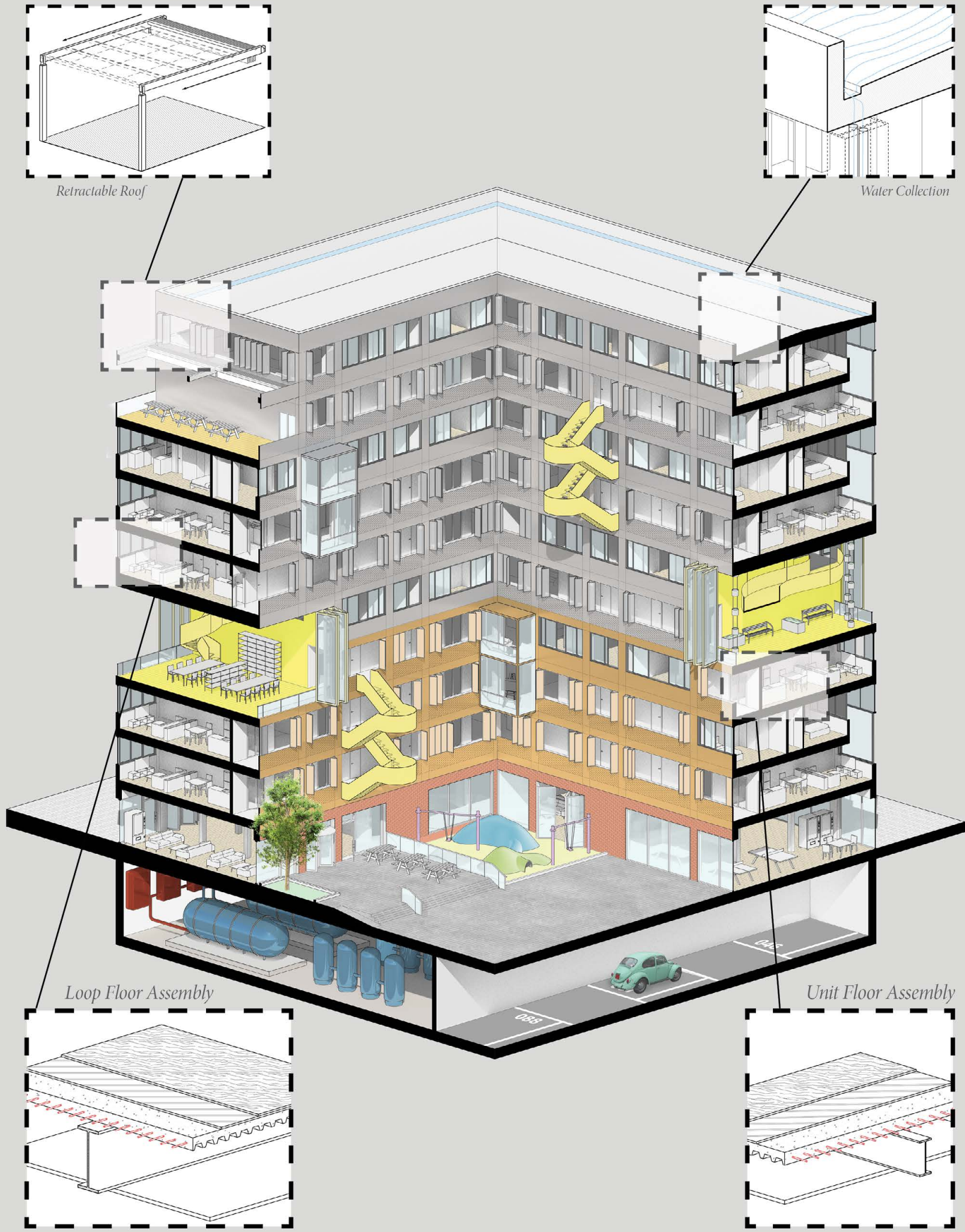




### Porosity

The porosity of the building is a key concern during the design phase. Both the public spaces and private spaces are designed with porosity to maximize ventilation potential, open up views, and blur the boundary between interior and exterior to offer a sense of openness.





**Community**

*The design aims to provide generous public resources for the community to enjoy, and creates a vibrant neighborhood. The design of the vertical stairs and the loops open up more 3-dimensional circulation, which creates more potential for the residents to interact.*



## 02

**The Third Space**

Program: Local Cultural Center

Type: Group- Architecture, Collaborated with Minghan Lin, Xuanyi Chen, Qing Hou, Shuhan Liu

Fall 2020- 3 months

Instructor: Stephan Potts, Aaron Campbell, Berardo Matalucci, Teel Riggs

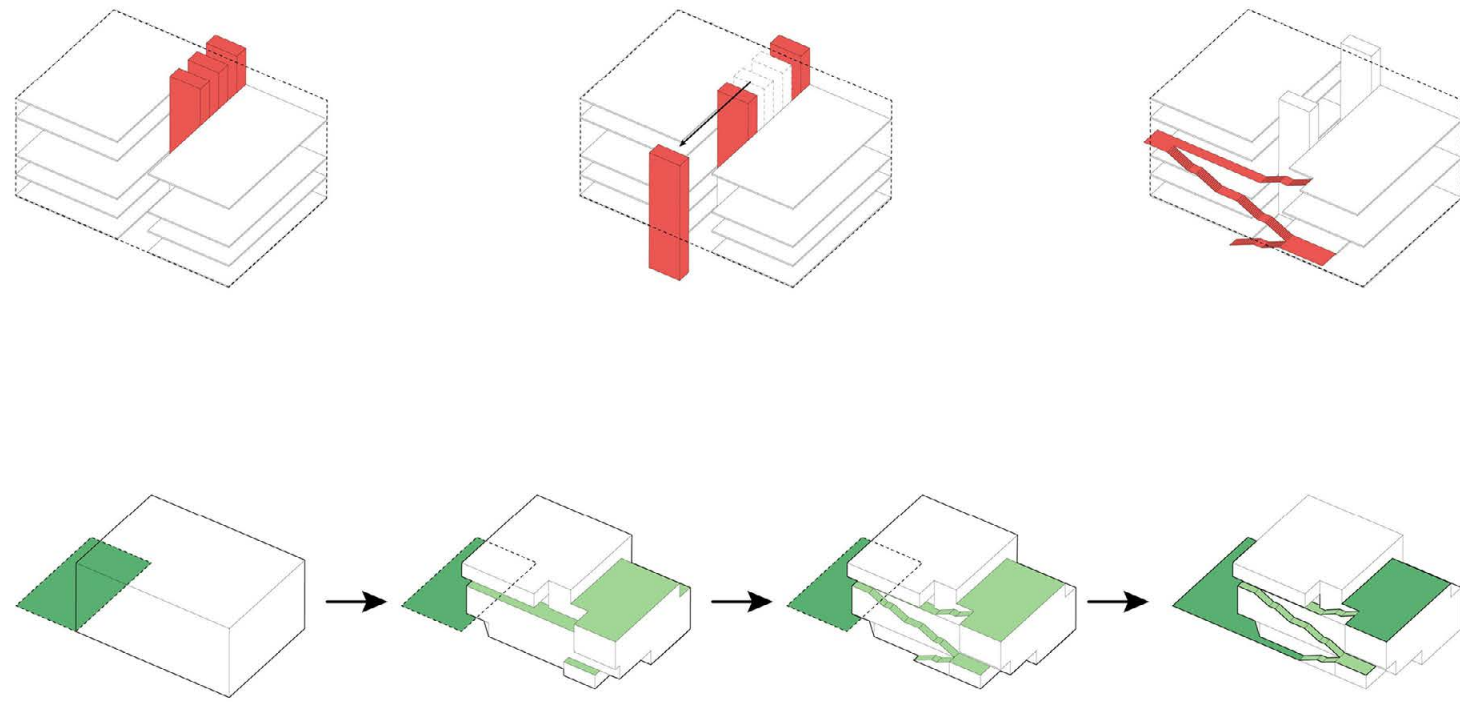
*Lack of access to adequate amenities and communal spaces has been one of the key issues to the Melrose neighborhood in Bronx, New York. The proposal envisions a third space acting as a buffer zone between space of work and space of living to create a space for the community to connect and interact.*

*The functional balance and synergy with the building system is the key concern behind the design. We, as a team, intend to employ integrated approach to inspire our design proposal, new spatial paradigms, and creative solution to solve the complex problems posed by the design proposal.*

*Therefore, systems are carefully designed to integrate with our design proposal so that it presents a creative and rational integrity. The circulation system of the proposal is purposefully categorized into three to increase interior traffic efficiency, to create a more pedestrian experience, and to create a more public gesture to the community. The structure system is designed to minimize structural depth and create a unique interior experience with intersecting structure. The facade system is designed to minimize glare and solar gain while maintaining transparency to an extent and also maintain a clean exterior.*







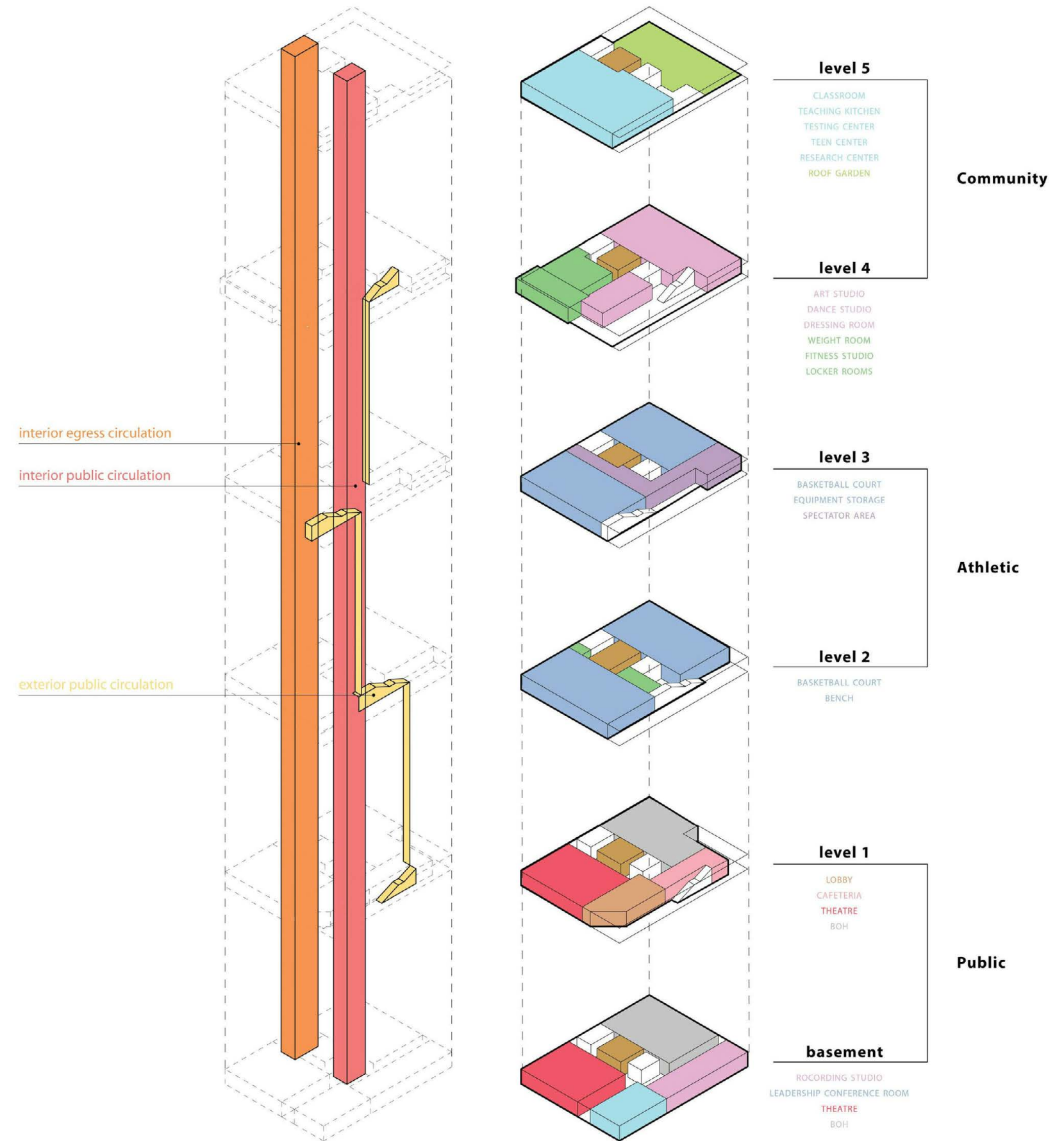
Concept Diagram

The driving concept behind this proposal is to move one of the required egress stair to the exterior and stretch it horizontally so that it not only serves as a circulation route but also becomes a ribbon-like terrace on the facade and creates a more public gesture to the community.



Section Diagram

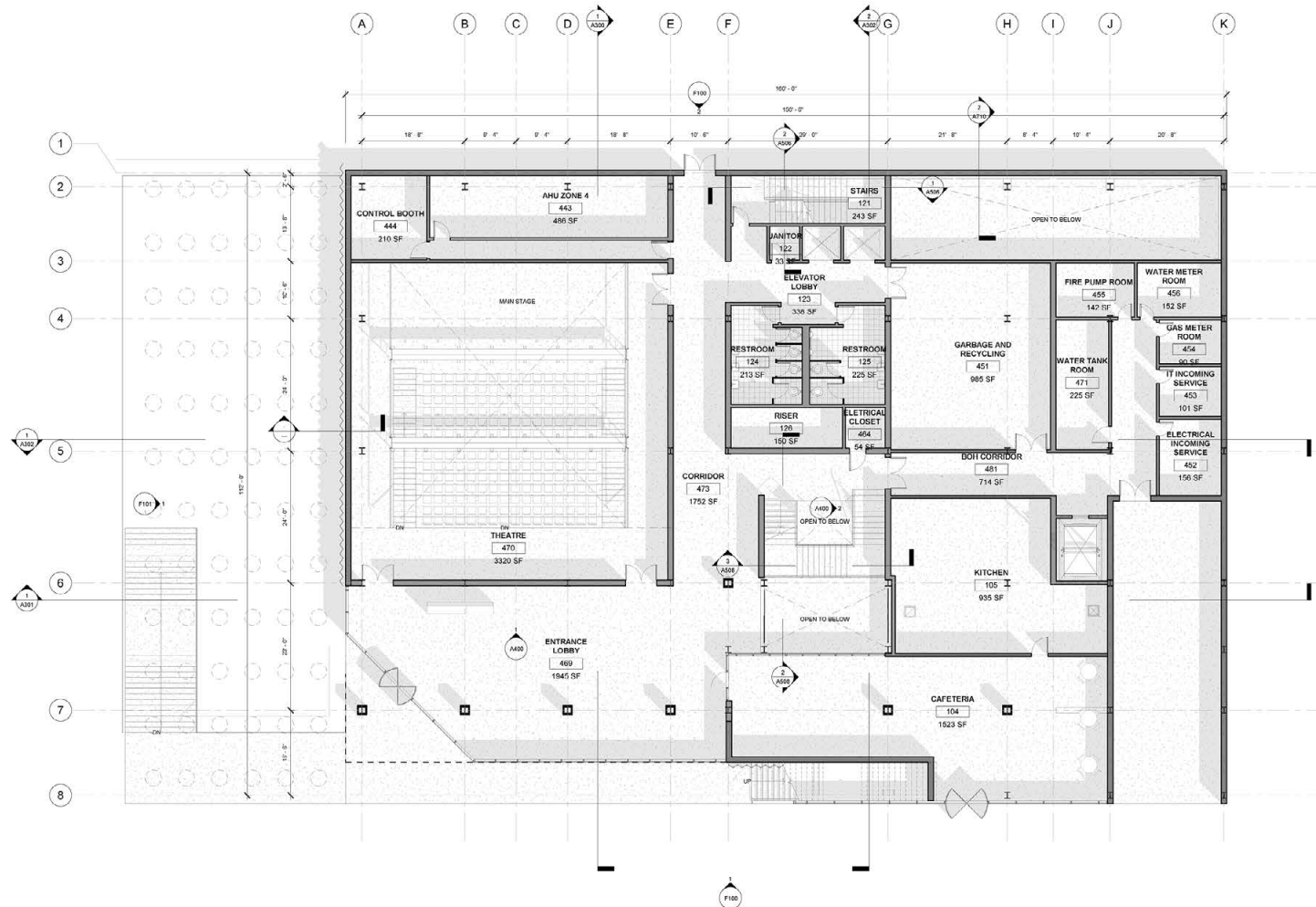
The sectional layout of the project vertically follows the hierarchy from programs that are more public to programs that are less public so that a vertical sequence is established.



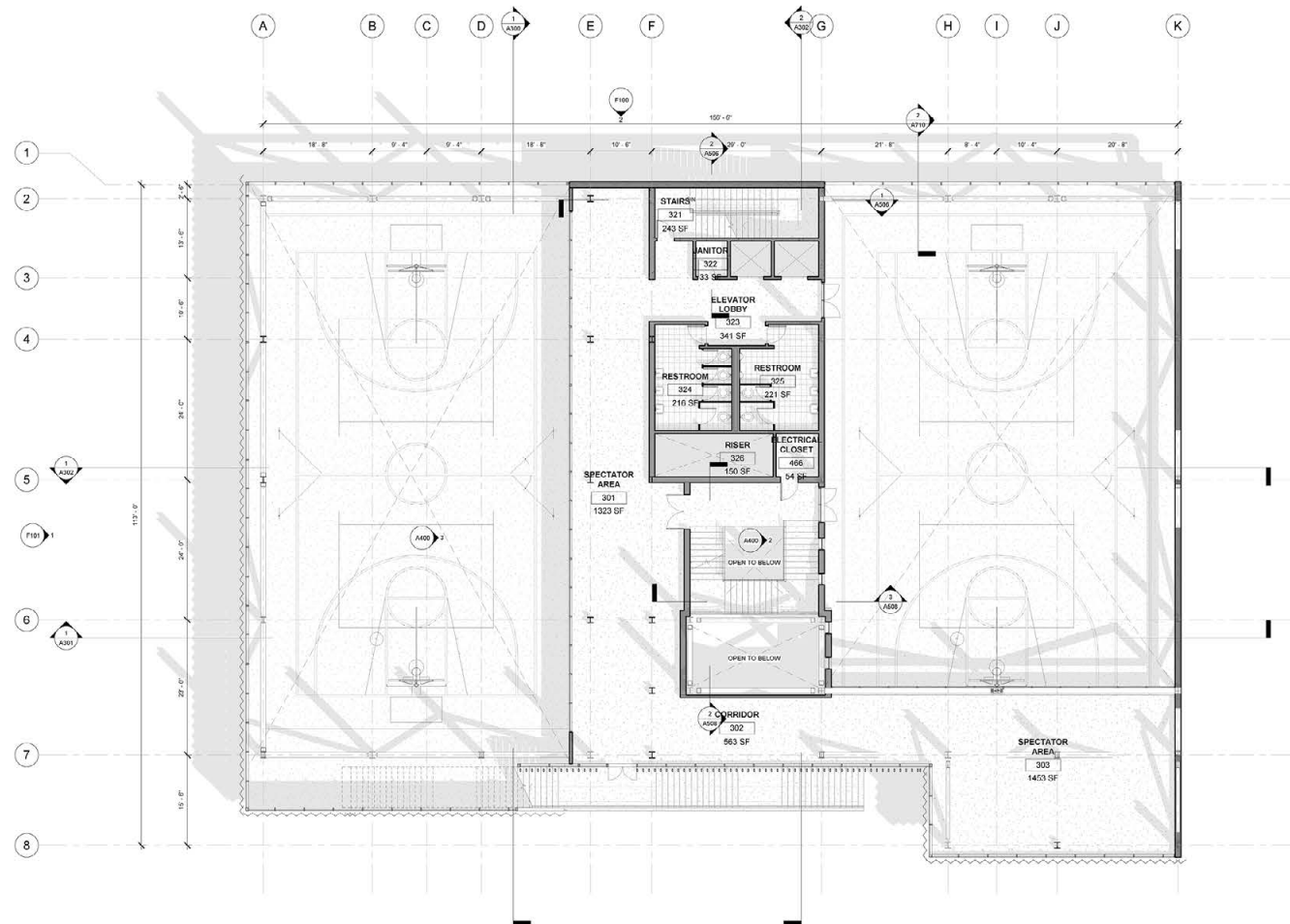
Circulation & Program Diagram

Main circulation of the proposal will be divided into three - interior egress circulation, interior public circulation, and exterior public circulation. These three circulations will connect programs vertically, especially the exterior circulation will serve as a vertical walking street of the building to offer a more pedestrian experience to visitors.

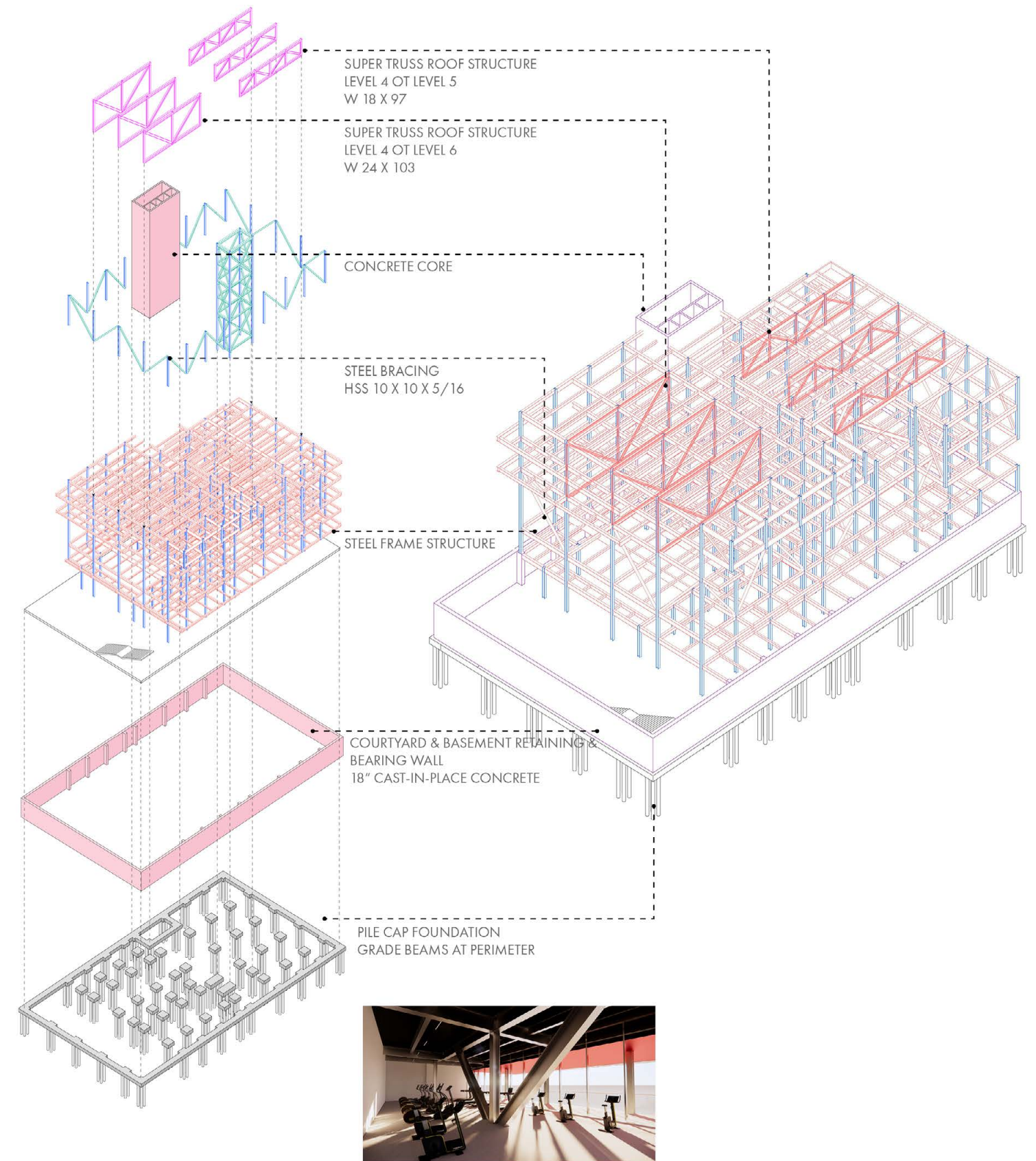




Ground Floor Plan



Third Floor Plan



### Structure System

The proposal is a steel frame construction with concrete core. In order to decrease the depth of structure created by the large column-free basketball court, we propose a super-truss structure which takes the whole level 4 to level 6 as a gigantic truss. Besides meeting structural requirement, the truss becomes a walking truss which creates an unique spatial experience when walking under the truss.













## 03

## School of Methodology

Program: School (Adaptive Reuse)

Type: Individual- Architecture

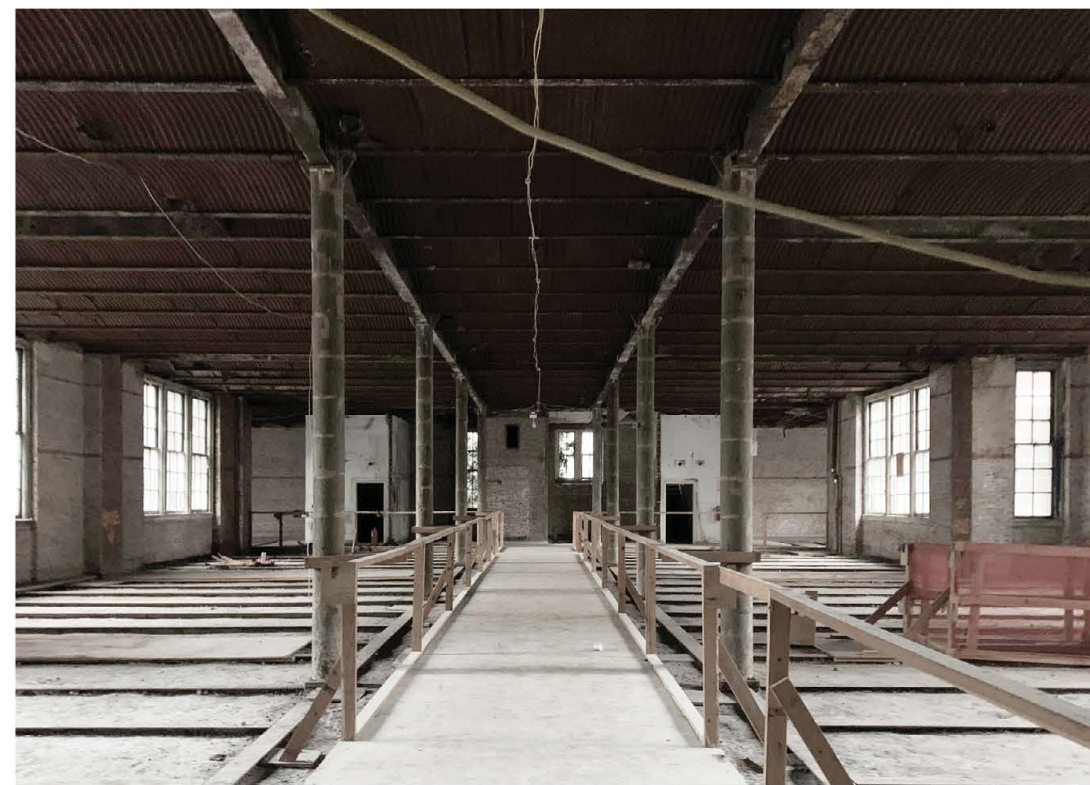
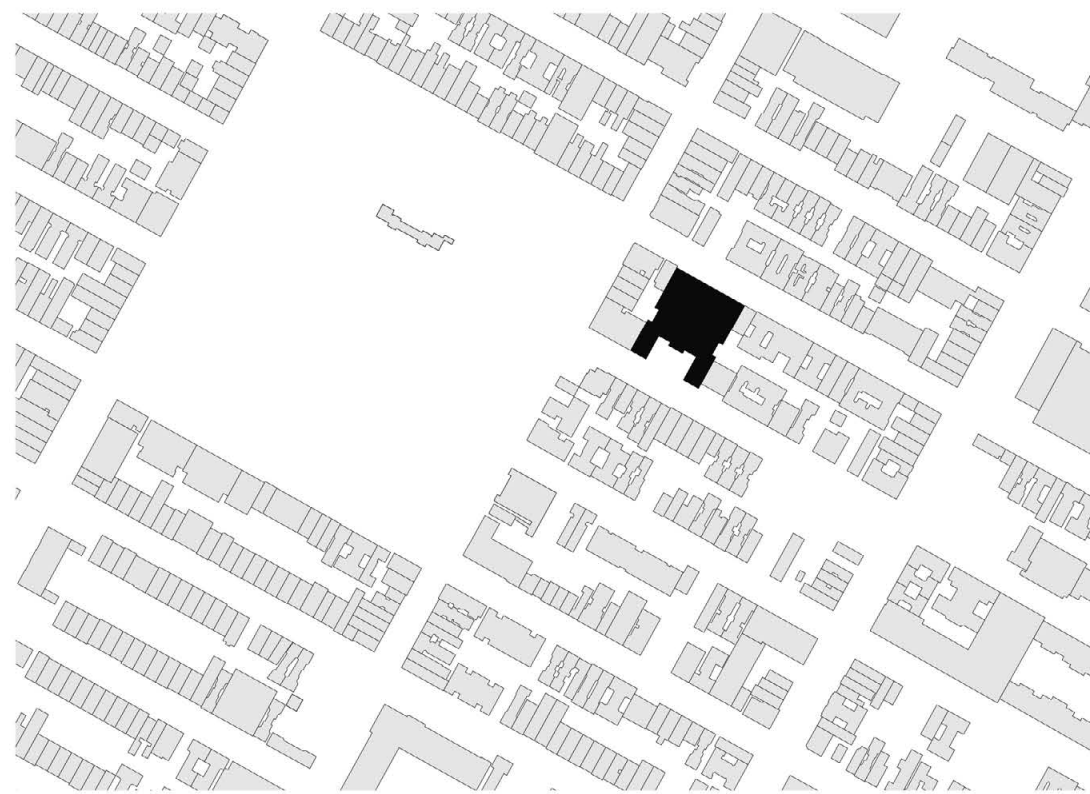
Spring 2020- 2 months

Instructor: Daisy Ames

*The human learning process consists of three activities - instruction, practice, and discussion/reflection. The School of Methodology reoccupies the two existing wings as instruction on the west side, and practice on the east side. This new dynamic of learning weaves these methodologies together at the center. The intervention creates a dynamic flow throughout the building and becomes a communal space for students to be able to be constantly exposed to an atmosphere filled with communication and discussion.*

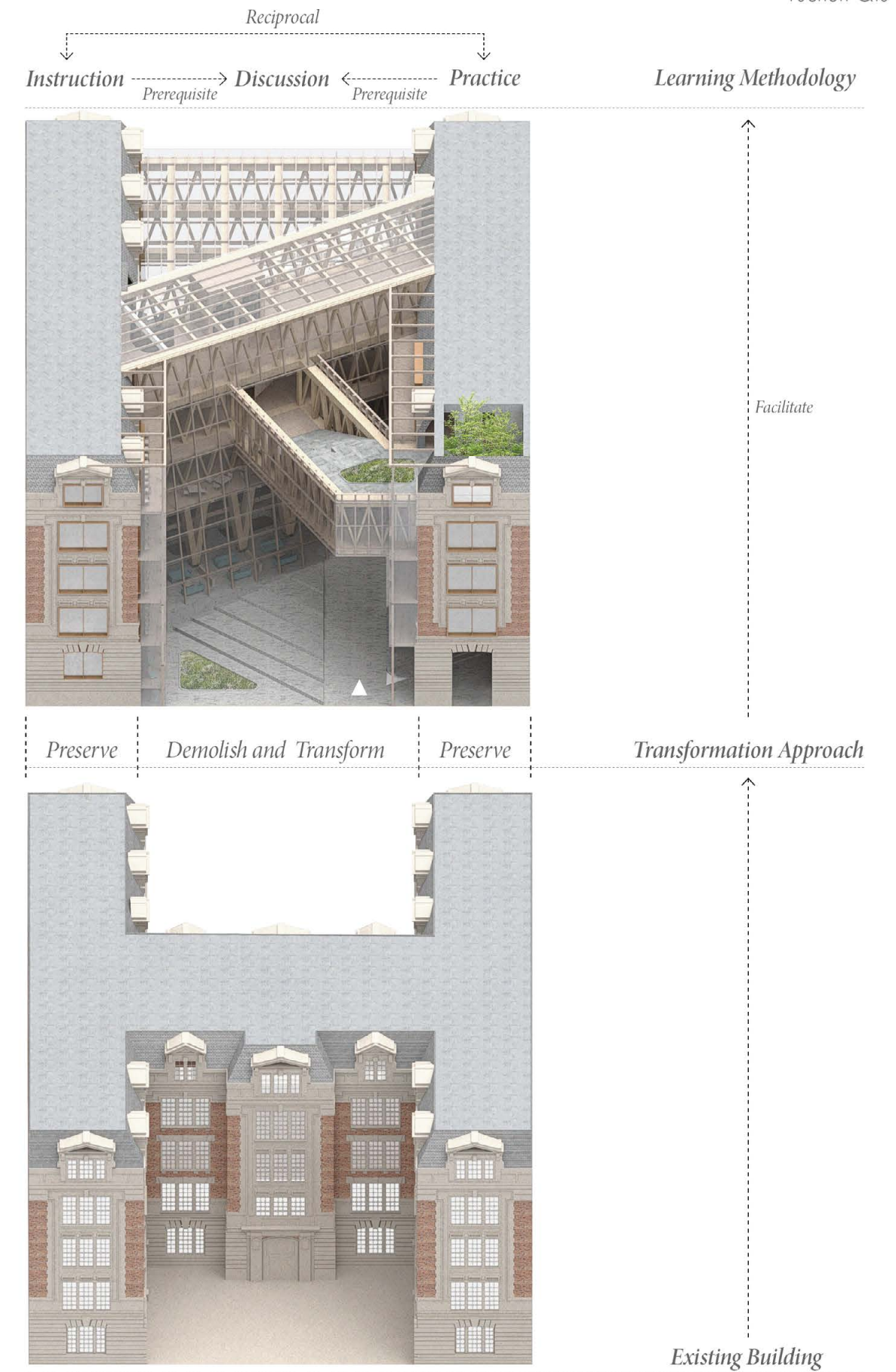
*Therefore the design of my proposal is laid out in three zones – instruction on the west wing, practice on the east wing, and the central reflection/discussion zone weaving between these two wings (because I imagine reflection and discussion should always happen in between these two activities). In the INSTRUCTION zone, the kids will receive more of theory education. The typical attention span for children is 15-20 mins, and a typical class span is 45-50 mins. There're researches shown that a change of environment (for example from indoor to outdoor) could help students focus so the existing windows on the instruction zone will be extruded outwards to create outdoor spaces. Hence students will be able to experience both the indoor and outdoor environments in their classrooms. In the PRACTICE zone, which will the kids will experiment with the theories they just learned. At the central DISCUSSION/REFLECTION zone, the kids will reflect upon the knowledge they learned and discuss with each other and this will be the most important part of the school.*





**Site - P.S. 64 School**

The project site is on the lot of a vacant CBJ Snyder school, P.S. 64, located at 605 East 9th Street in the East Village. It served as a public school from 1907 until 1977 but now remained vacant.



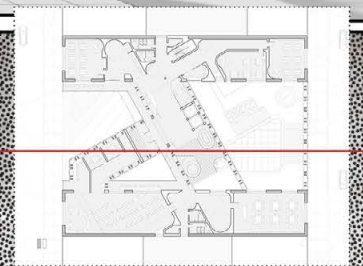
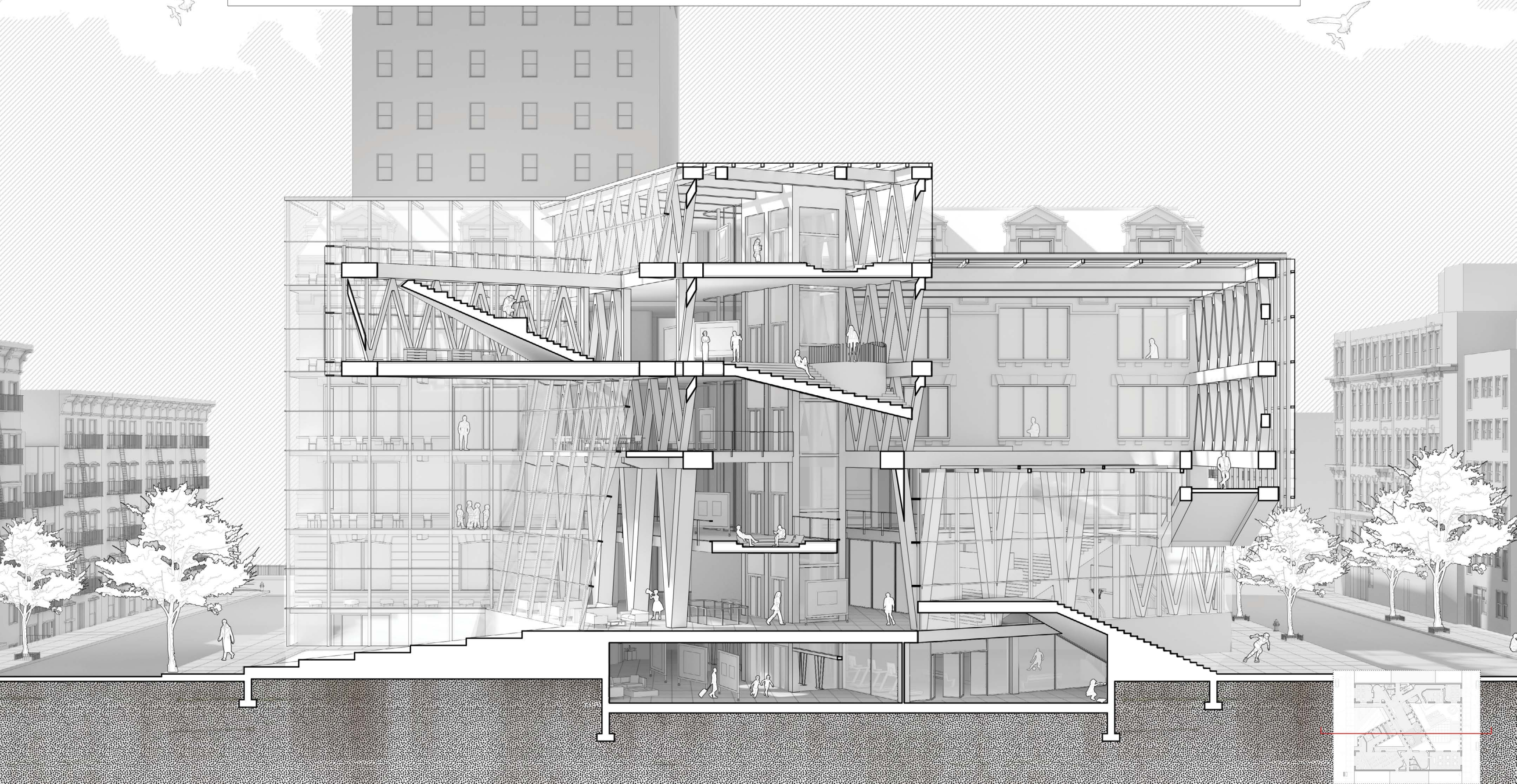
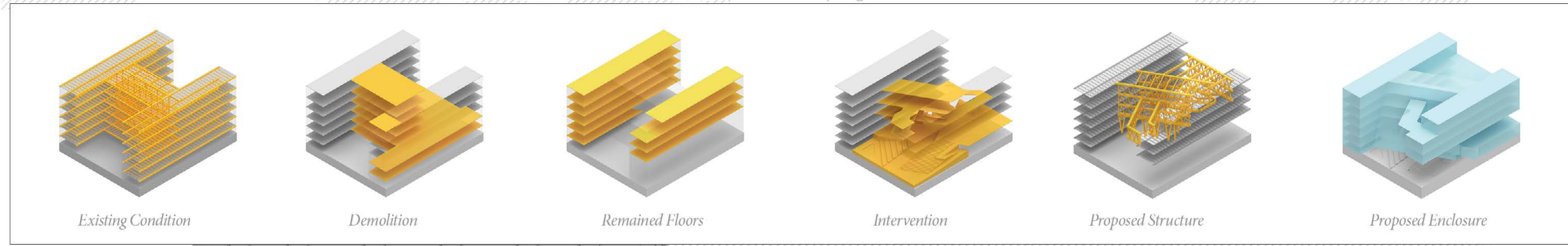
**The Transformation**

Built in 1906, the building is a classic Snyder H-block plan. In order to facilitate the human learning process of instruction-practice-discuss/reflect, the project aims to demolish the center portion of the existing building and transform it to a transparent and vibrant discussion core while preserve the two wings as instruction wing and practice wing.

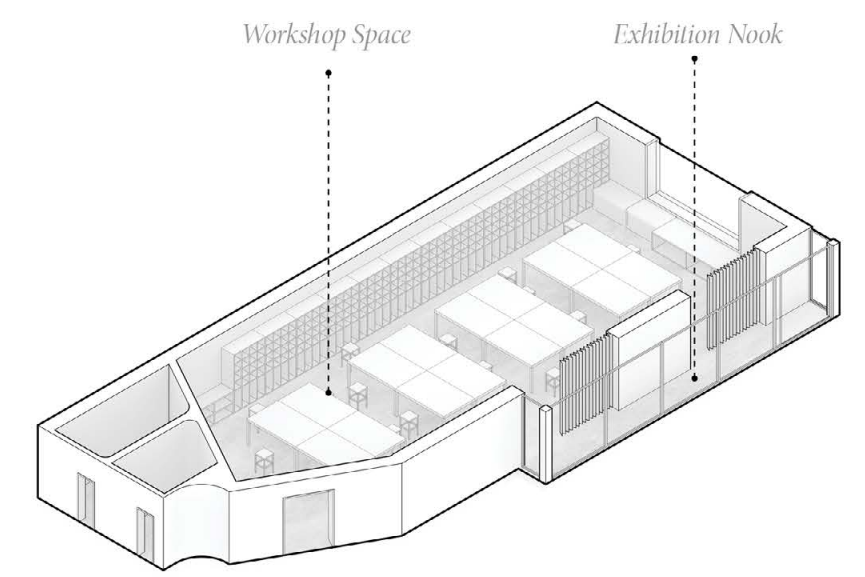
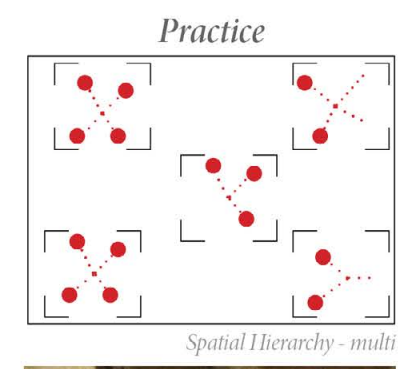
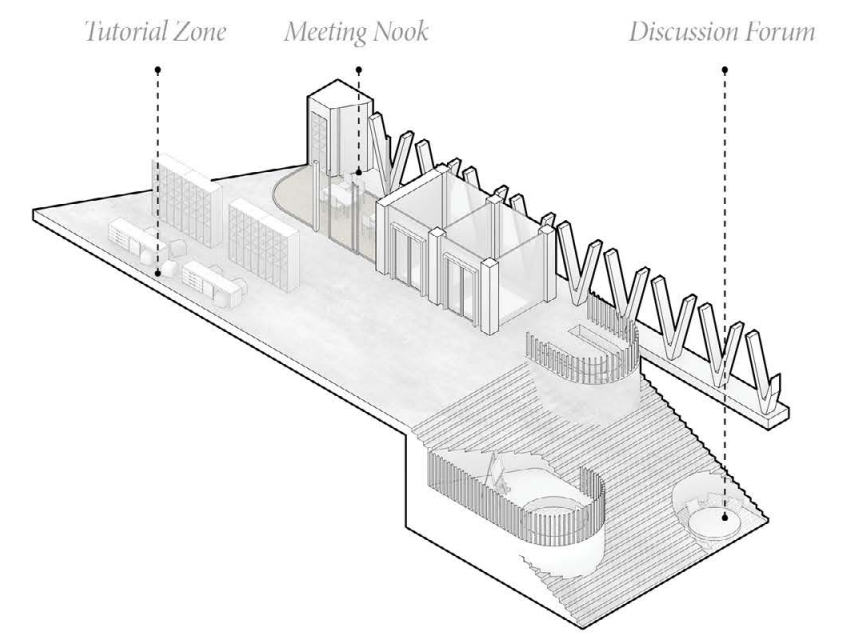
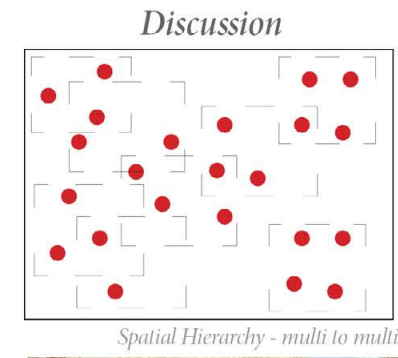
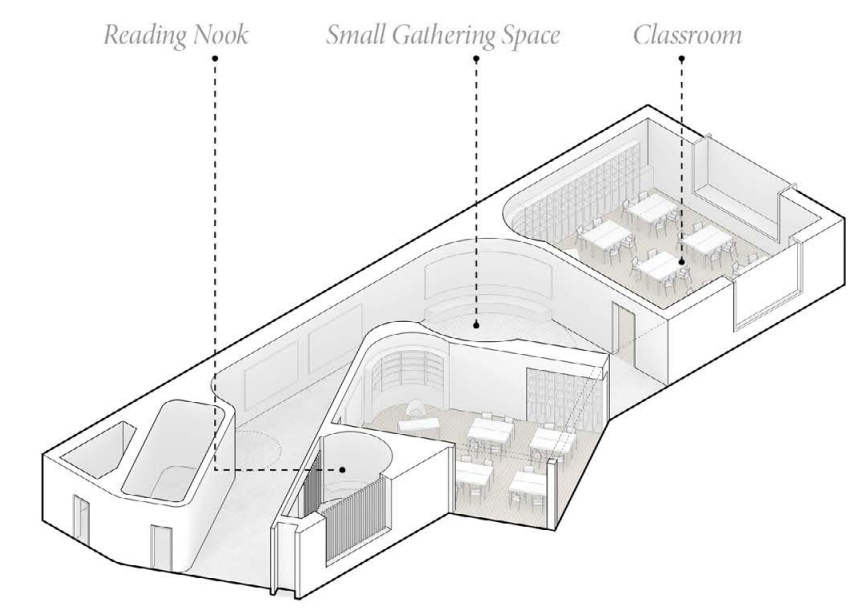
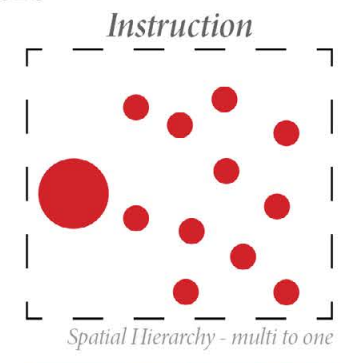
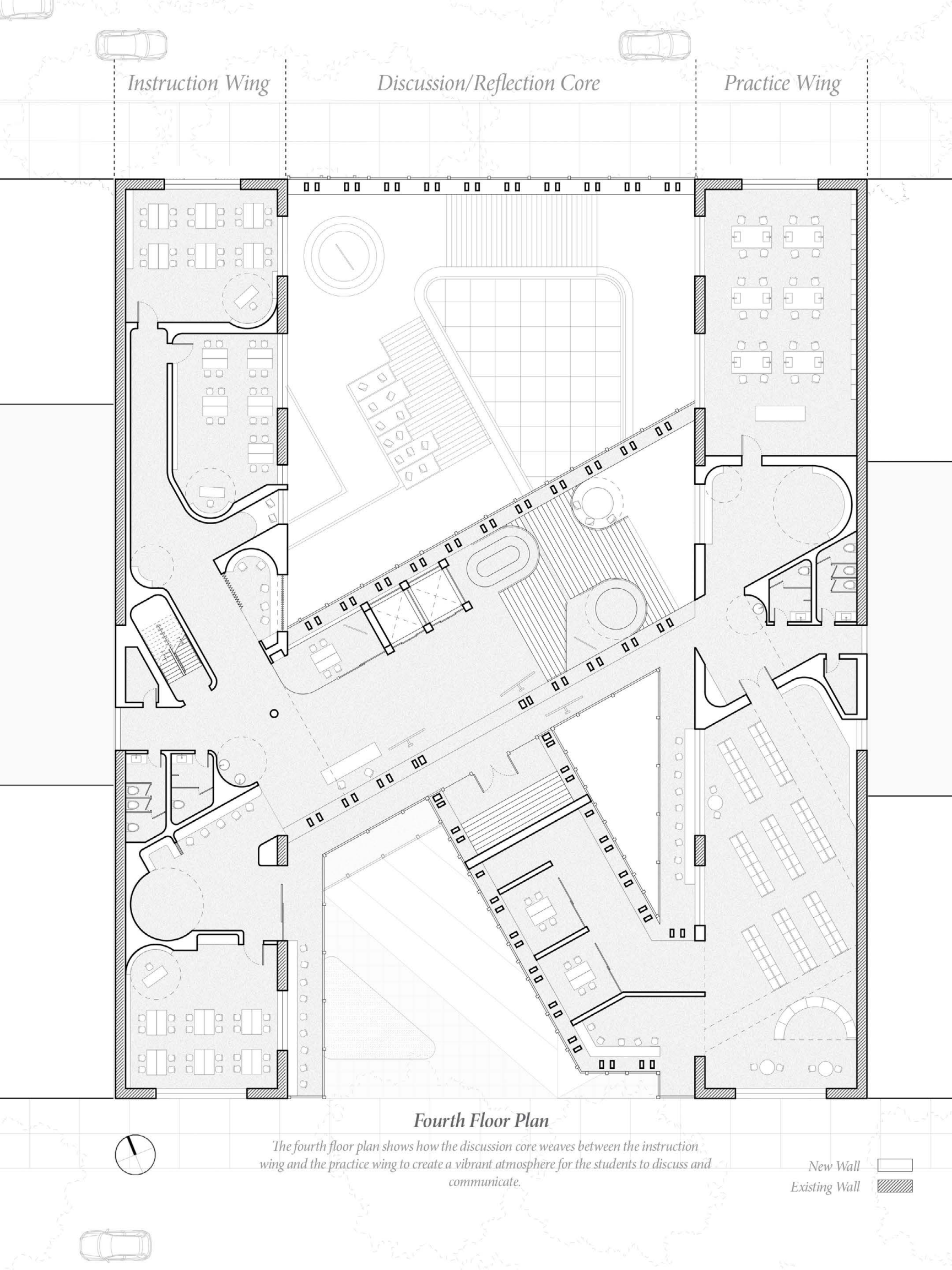




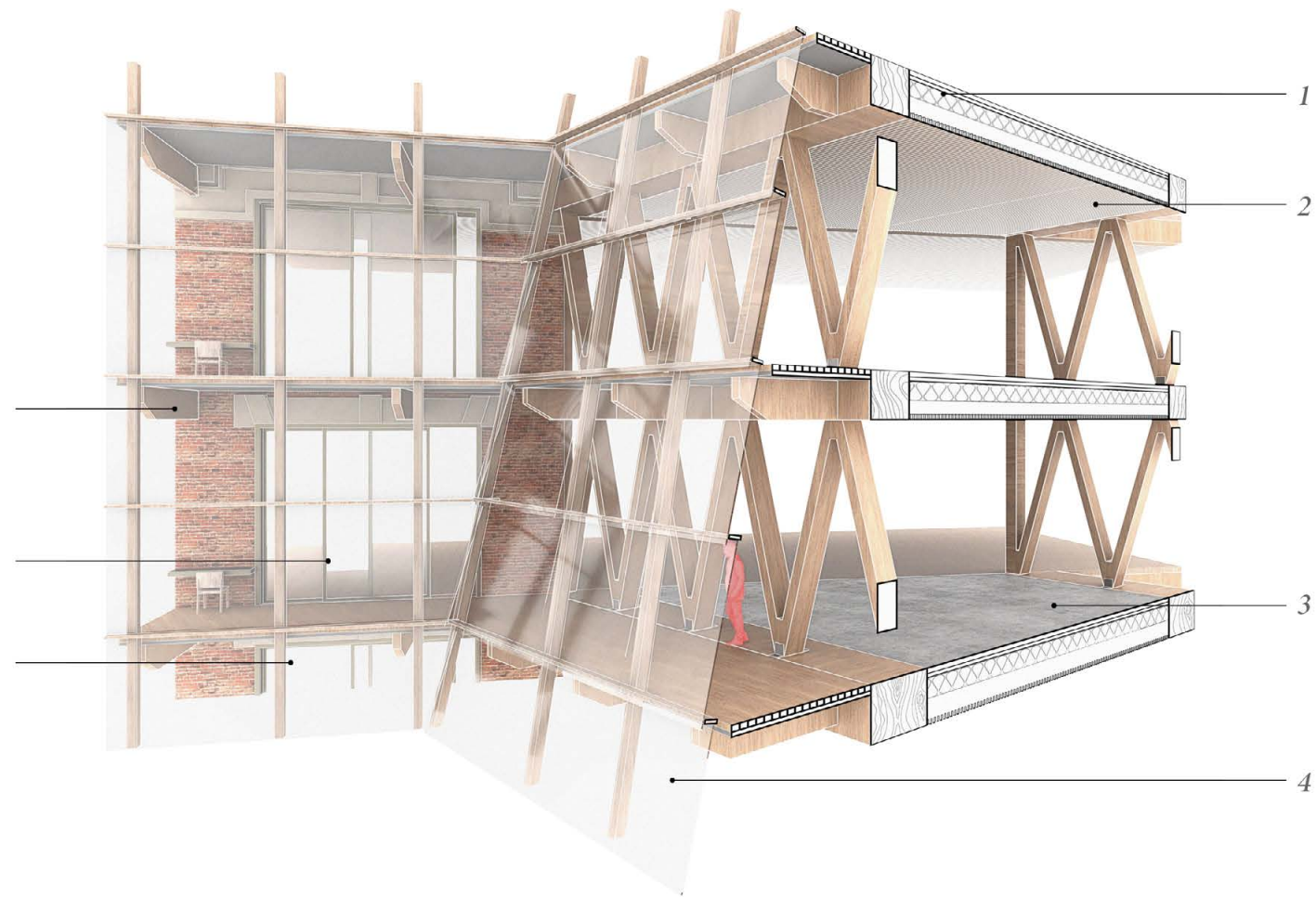












- 1. Insulation
- 2. Wood Slats Ceiling
- 3. Concrete Floor
- 4. Wood Beam
- 5. Sliding Door
- 6. Wood Mullion
- 7. Transparent Facade

### Section Swath

*The section swath shows how the transparent facade of the intervention creates interplay between the new structure and the existing structure. Besides structural purposes, the timber trusses also become a spatial divider to create soft boundaries between spaces. The intervention also becomes an facade outside of the existing facade, which creates opportunities for the children to interact with the existing facade.*







## 04

**Carbon Island**

Program: Experiential Complex

Type: Group- Architecture

Spring 2021- 2 months

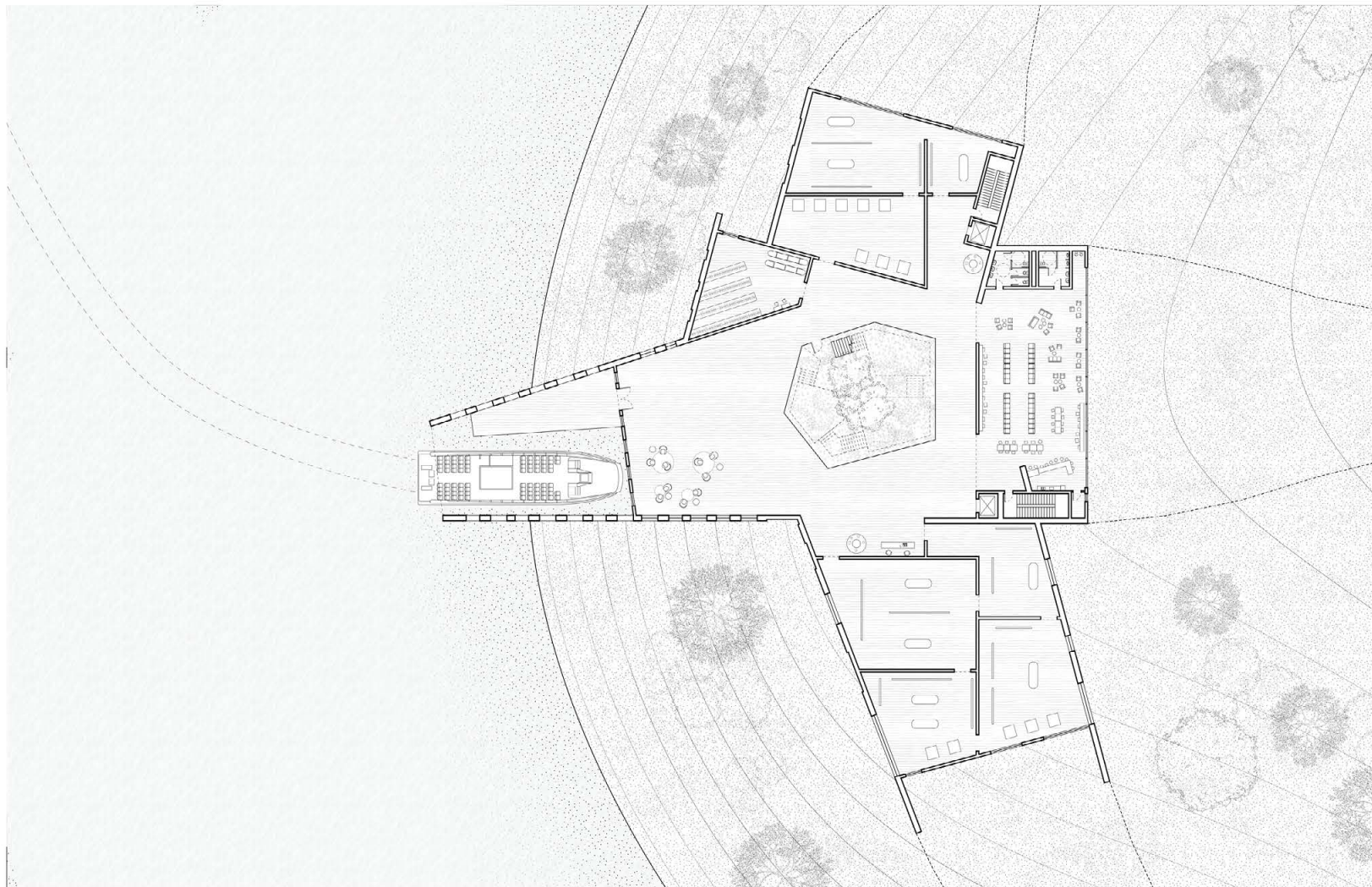
Instructor: Lindsey Wikstrom

*The monetary value system has long reigned the way the world has operated. This project aims to explore other forms of value system that could address the environmental value that has been neglected in the traditional monetary system. The proposed value system on this island based on carbon footprint and use this project as an experiment. The Davids Island is selected as our site because we think it serves as an accurate geographic metaphor of a testbed outside of the mainstream.*

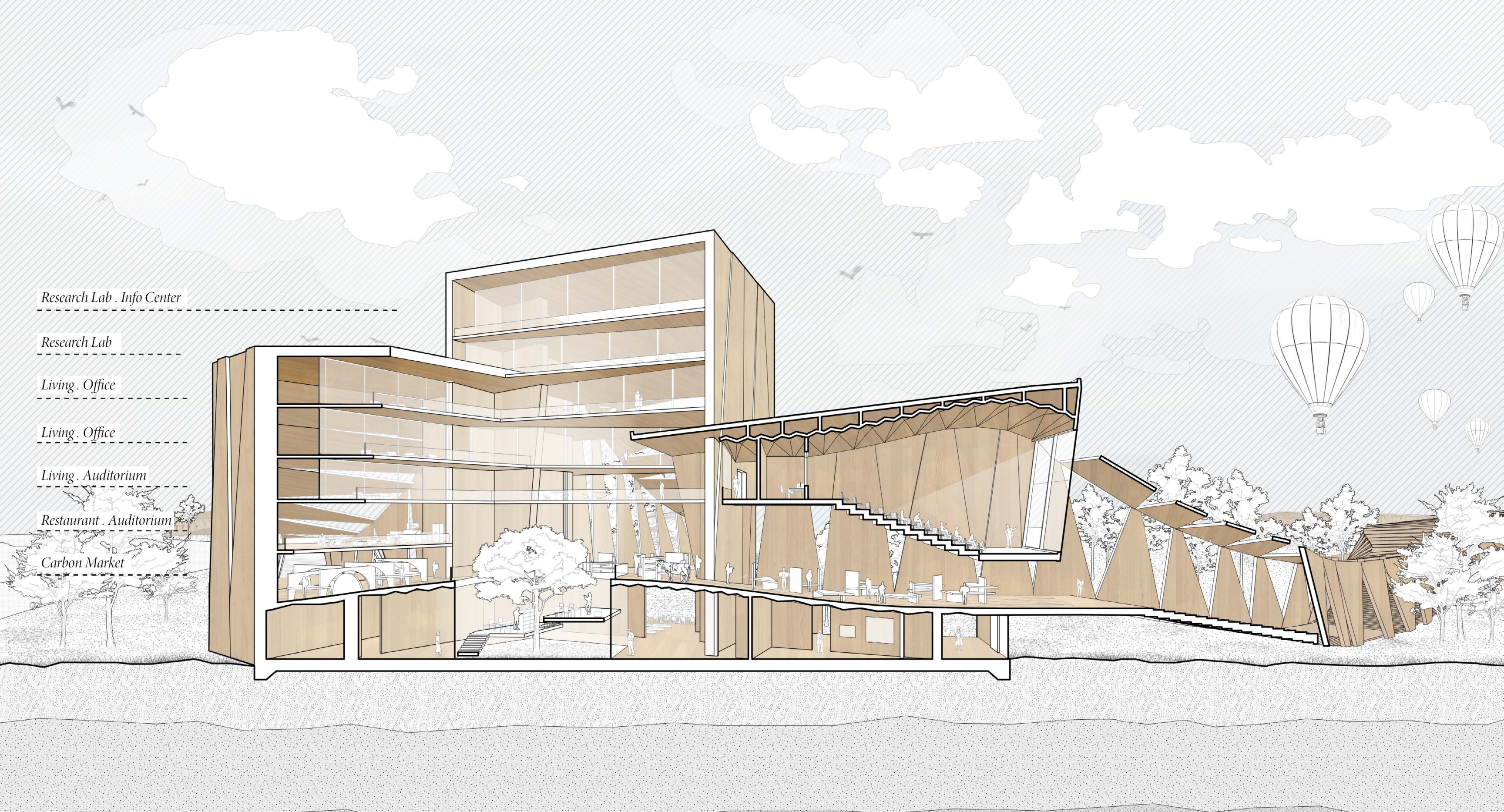
*The programs will be divided into two parts, labor, and leisure. The labor part will include activities of agroforestry, which aims to reduce tension between agricultural land and forest land. The participants will earn what we call carbon coin that they can use on the island by working in the labor programs. In order to enjoy the leisure programs such as spa, pool, or upgrade to a better room/food, they have to use the carbon coin to pay for the leisure. For example, the person working in the mushroom farm in the drawing earns carbon coins to upgrade the meal. The price of leisure activities will be based on the equivalent carbon emission. Imagine that the more you work, you're able to level up and unlock better leisure. No matter the participants rich or poor, once they step on this island, their wealth will depend on the carbon offset they do.*

*Through these experiences, the intention is to subconsciously educate the visitors with the proposed value system with a focus on environmental value. As a result in the long term, the intention is to transform people's activities by this immersive experience.*









Research Lab . Info Center

Research Lab

Living . Office

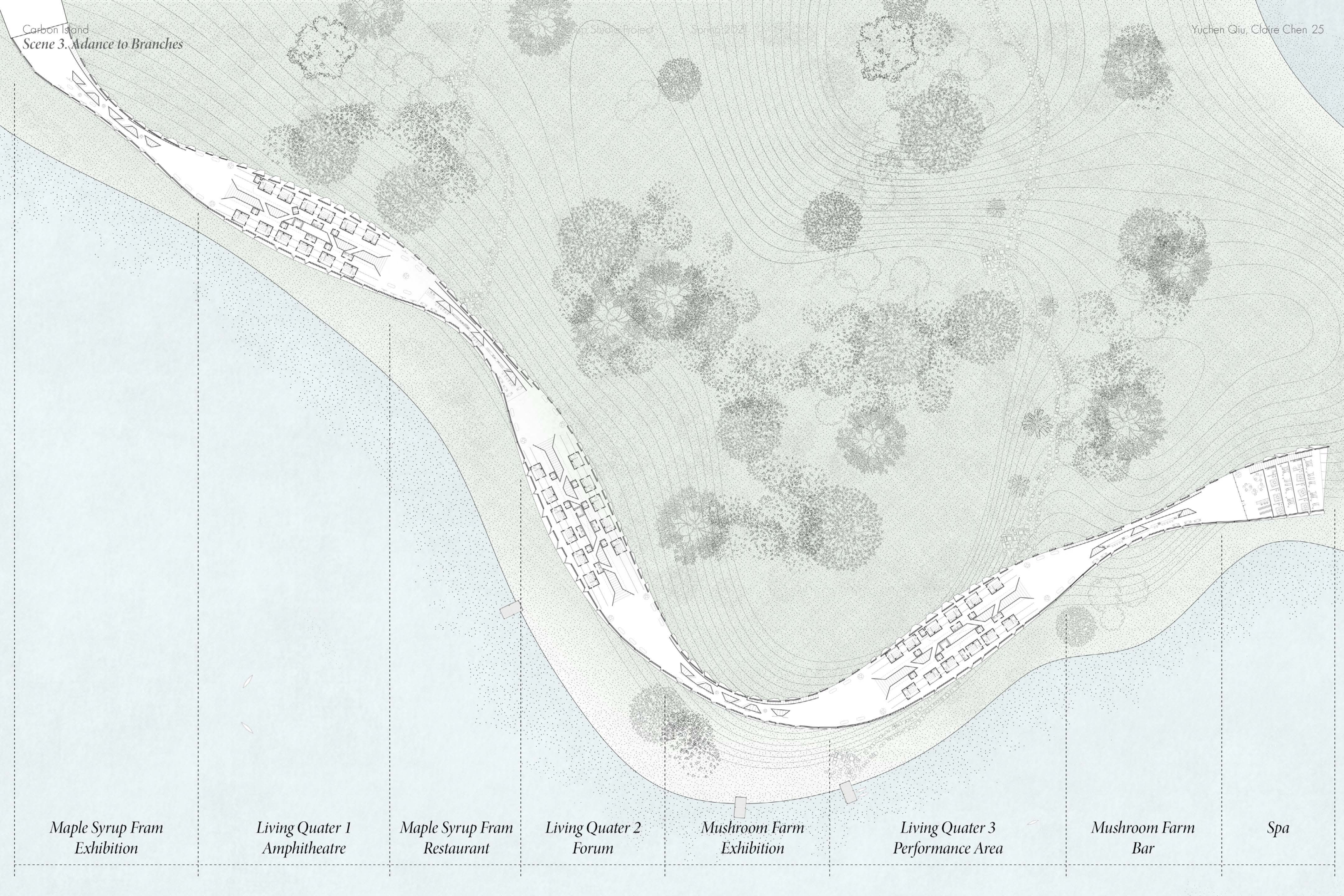
Living . Office

Living . Auditorium

Restaurant . Auditorium

Carbon Market





Maple Syrup Fram  
Exhibition

Living Quater 1  
Amphitheatre

Maple Syrup Fram  
Restaurant

Living Quater 2  
Forum

Mushroom Farm  
Exhibition

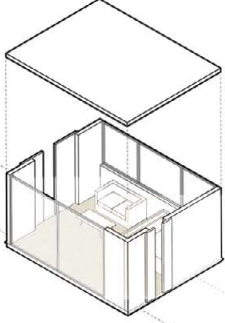
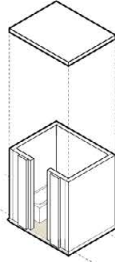
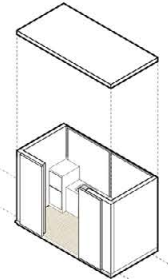
Living Quater 3  
Performance Area

Mushroom Farm  
Bar

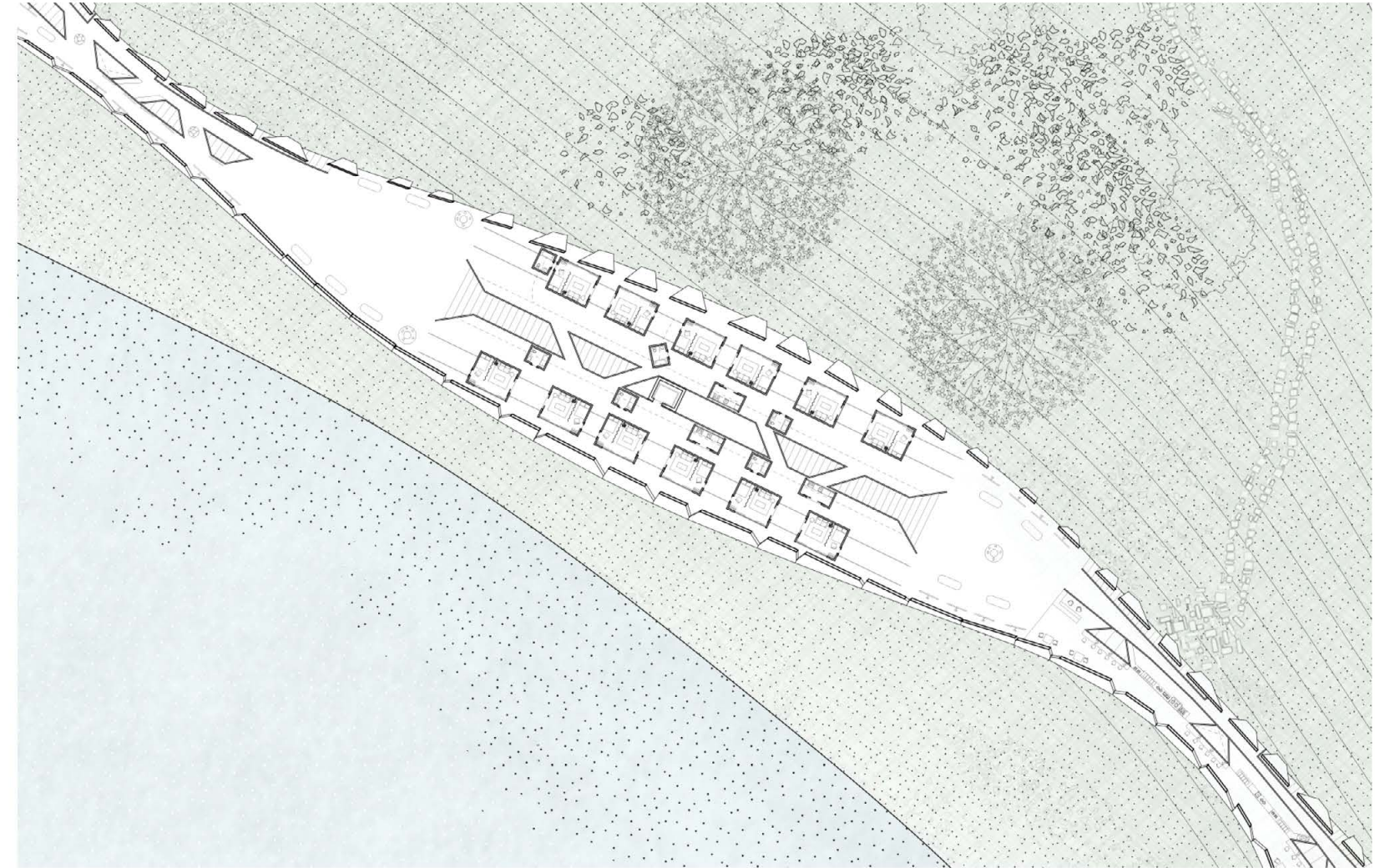
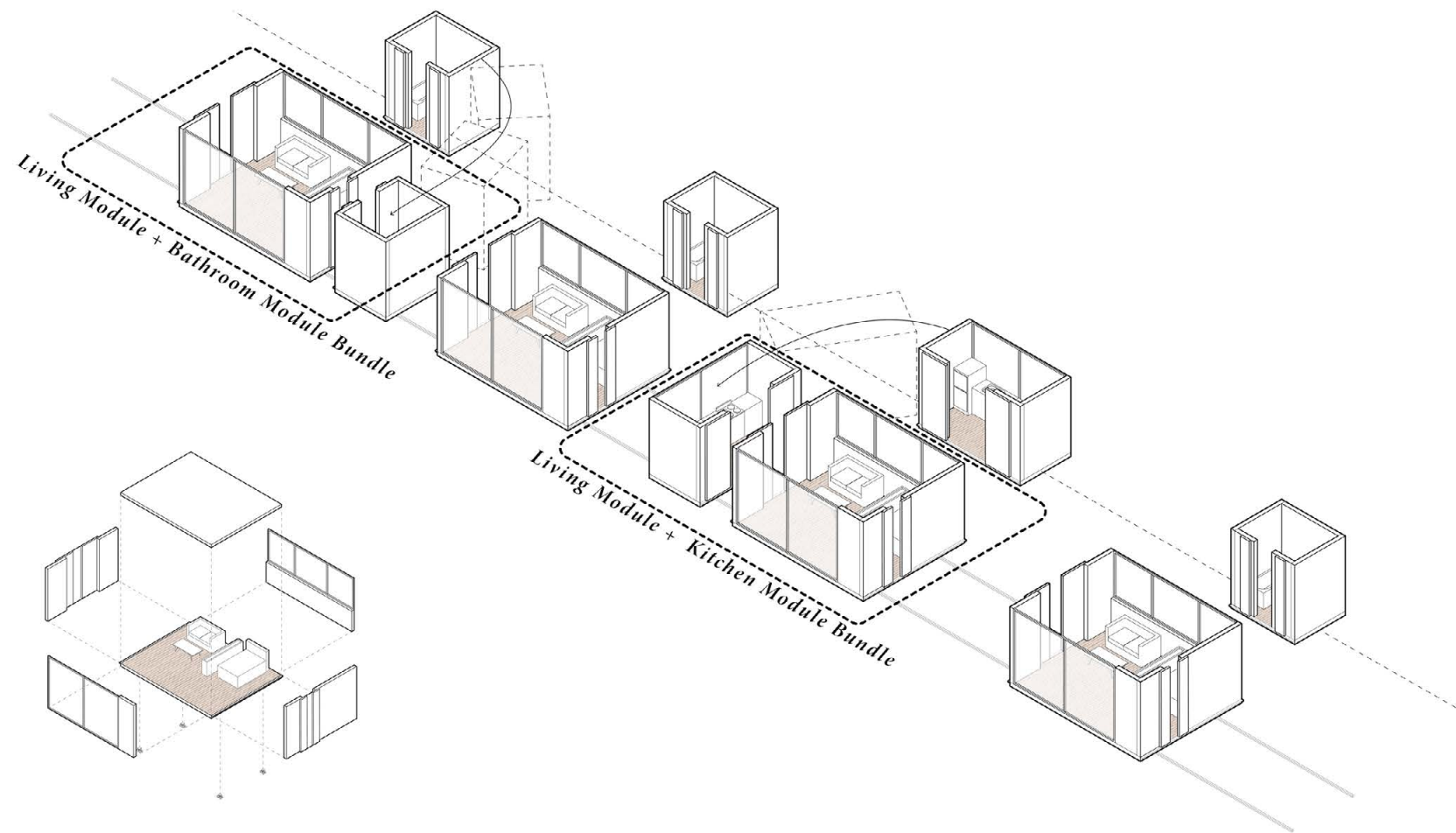
Spa



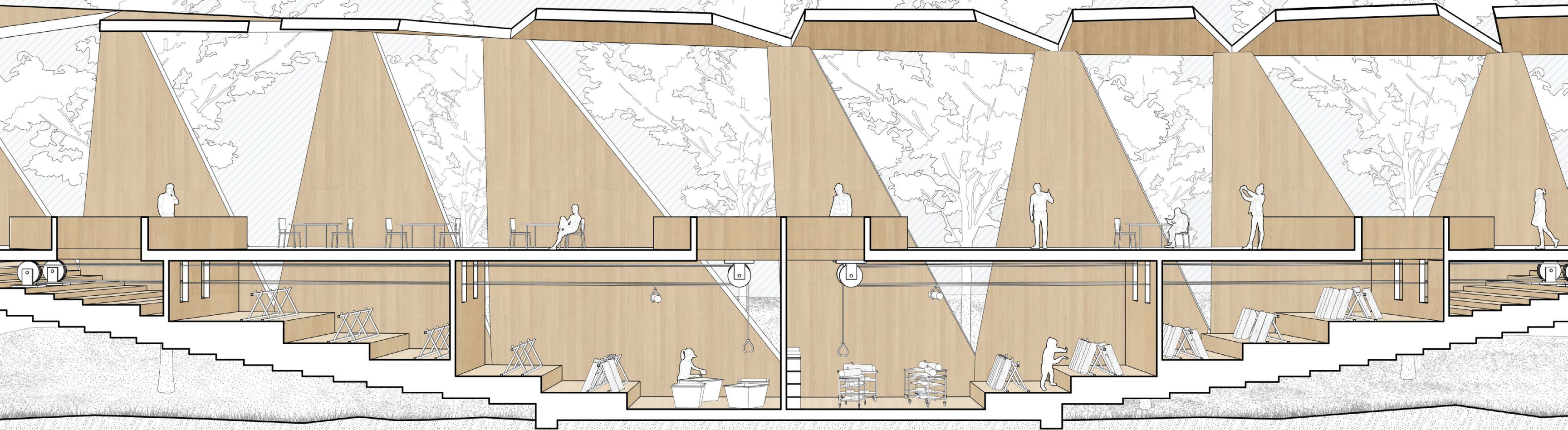
Living Quarter Modules

	<b>Living Module</b> Carbon Price: 30 € - 4824 Board Feet of Timber - 68 Eastern White Pines at 50' Height and 12" Wide		<b>Bathroom Module</b> Carbon Price: 12 € - 2268 Board Feet of Timber - 31 Eastern White Pines at 50' Height and 12" Wide		<b>Kitchen Module</b> Carbon Price: 21 € - 2460 Board Feet of Timber - 35 Eastern White Pines at 50' Height and 12" Wide
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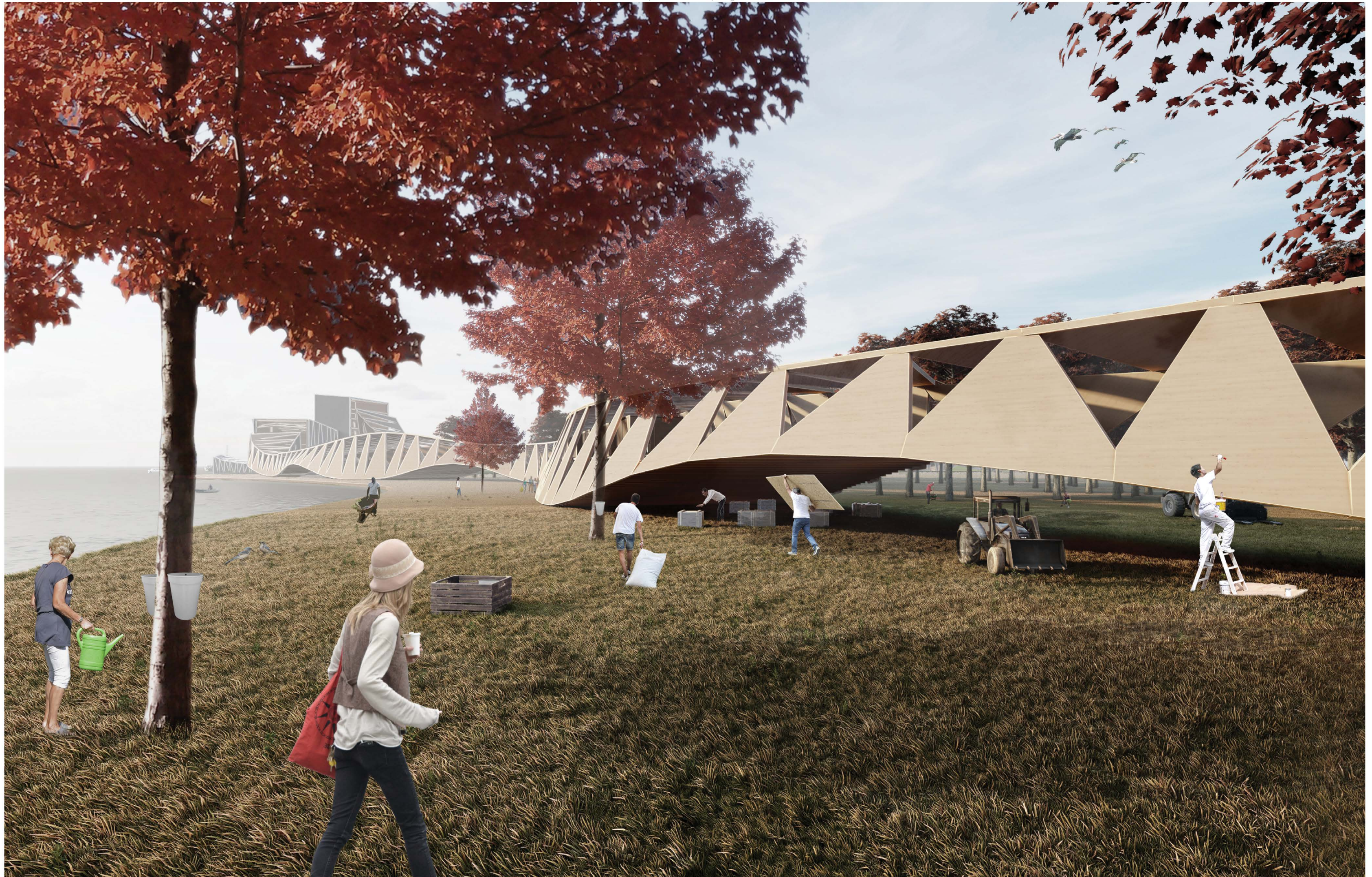
Living Quarter Moving System



















## 05

## THE X

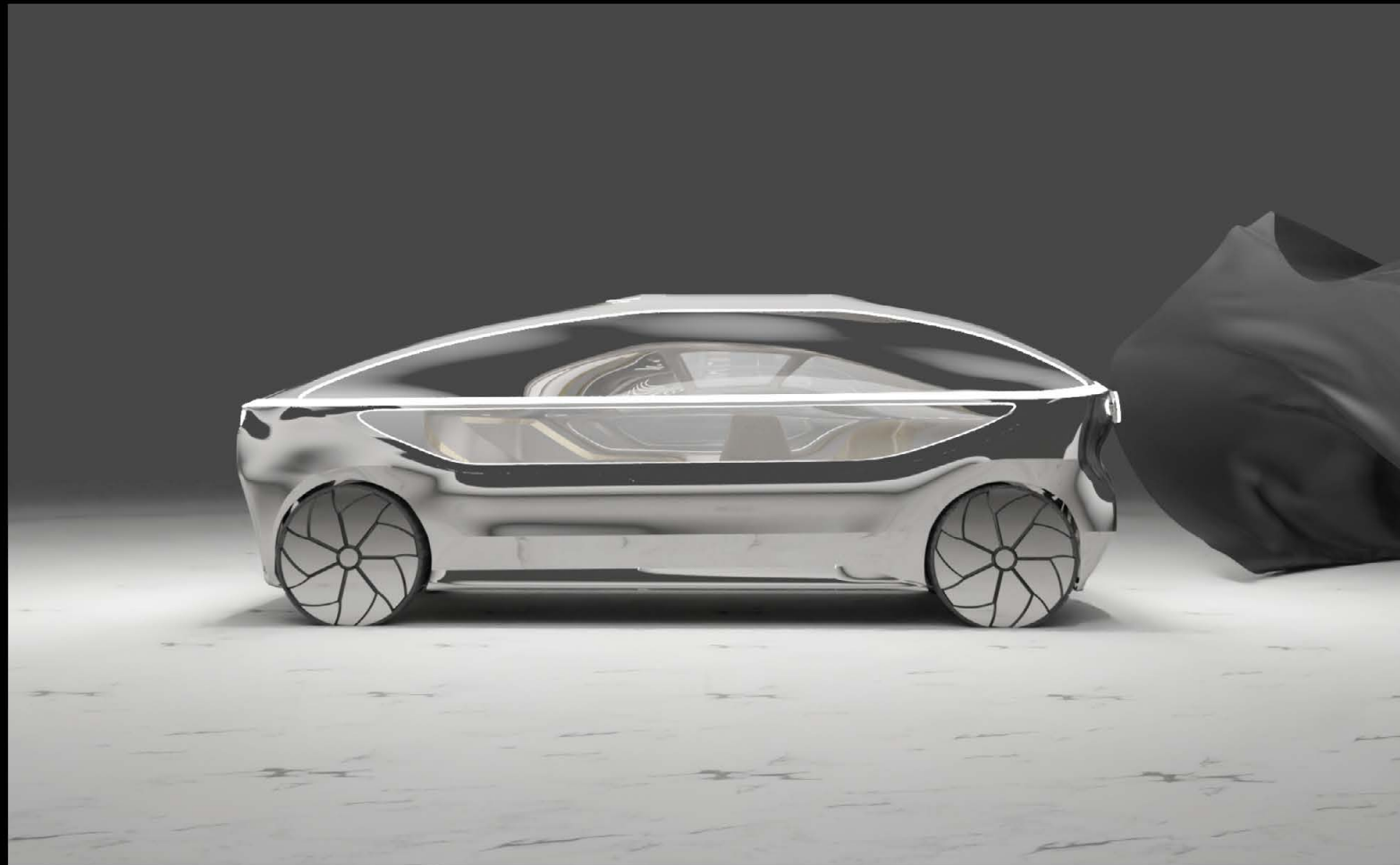
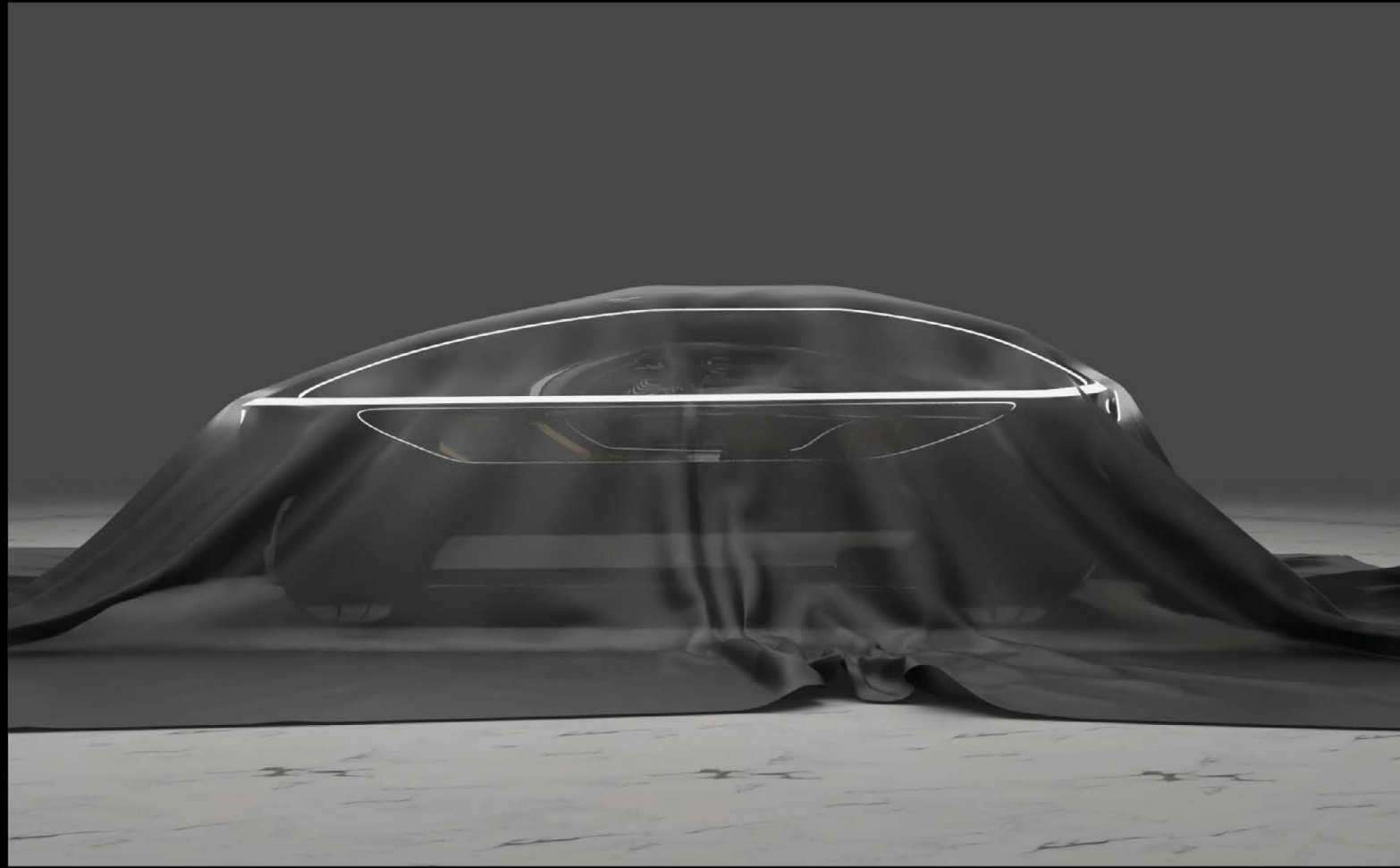
Program: Living in Mobility  
Type: Individual- Architecture  
Spring 2022 - 2 months  
Instructor: Michael Bell

*The project tries to imagine a future where people's living patterns will totally be transformed by technology and innovation. The workforce and living patterns will be more scattered. More and more people will live as "digital nomads", which will give them more opportunities to be close with nature while avoiding paying the high land prices for their residence in the condensed urban area.*

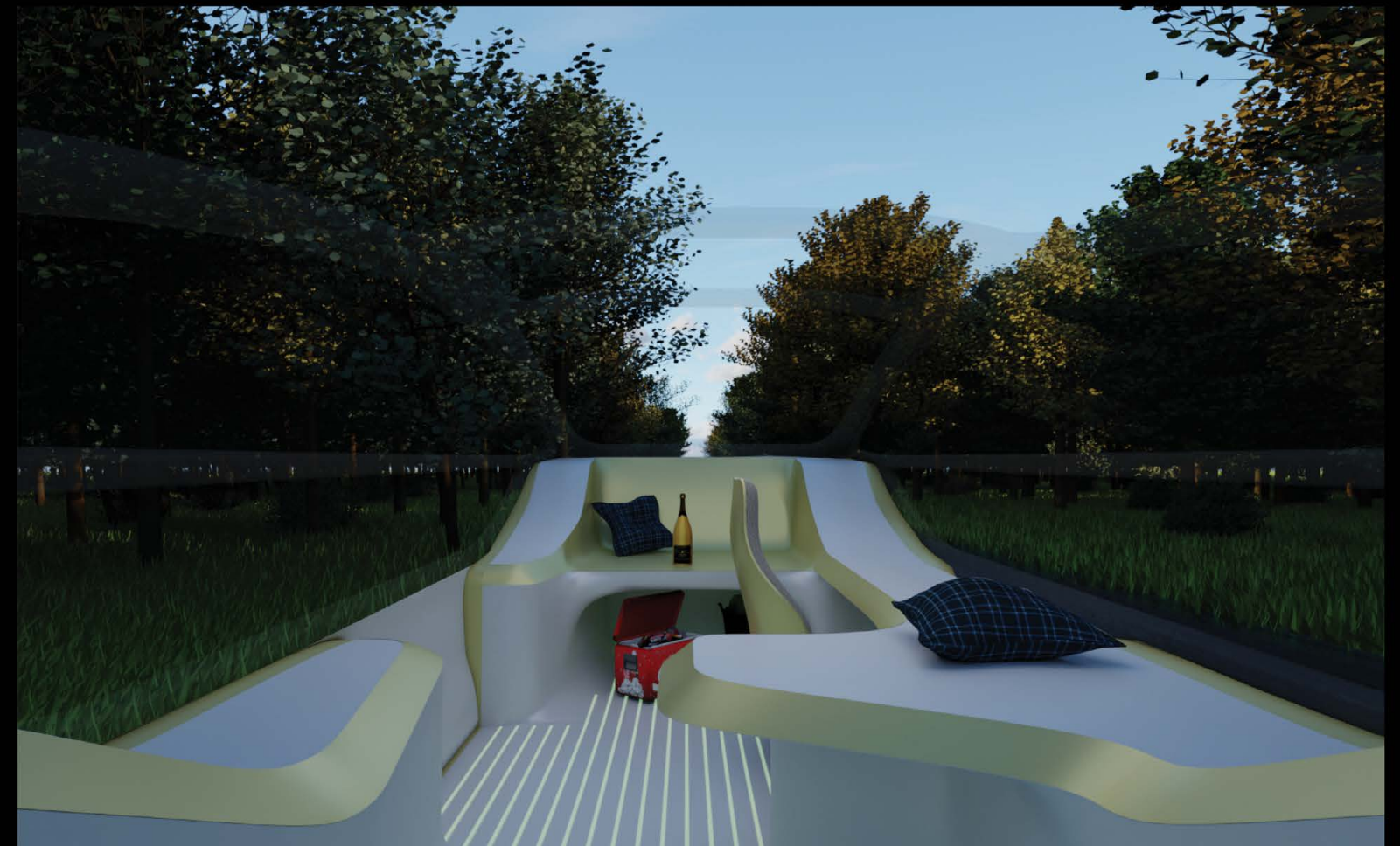
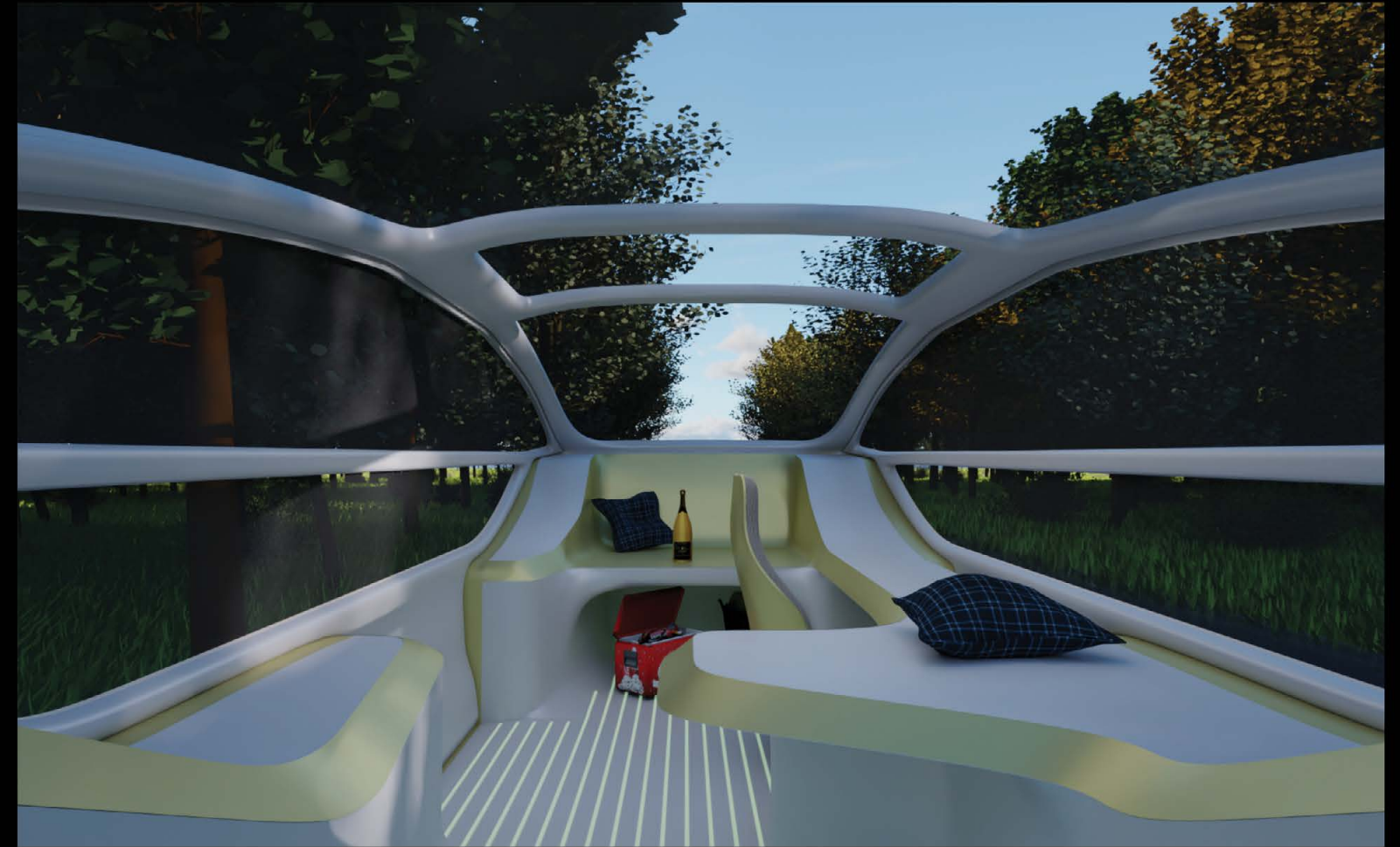
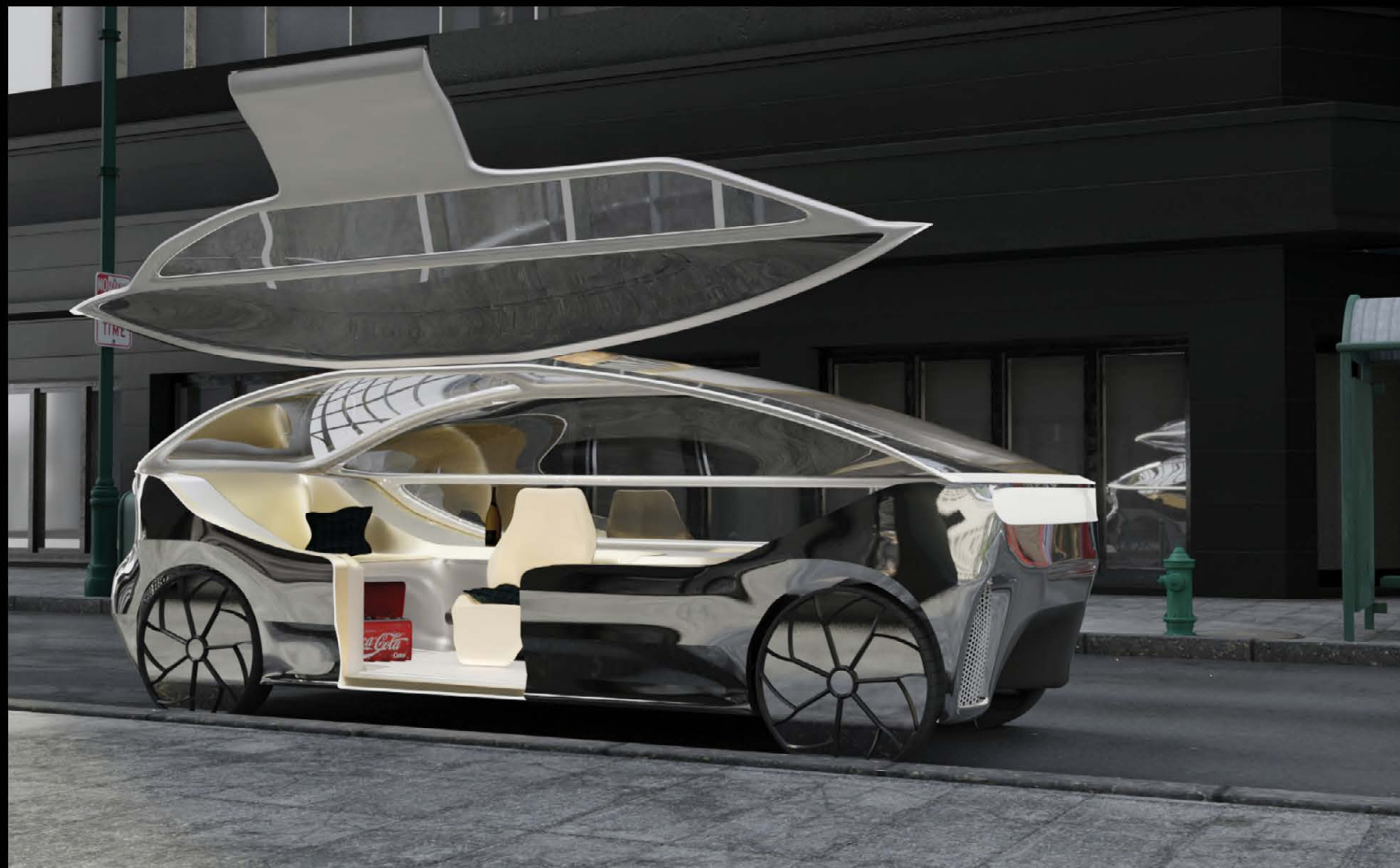
*Under this projection of the future, the project tries to imagine and convey such living experiences through the product "The X". The imagination of "The X" follows the following guidelines: "Imagine - the departure without anxiety; Imagine - the journey without boundary; Imagine - the adventure without terrain; Imagine- the sustainability without constraints; Imagine - the flexibility without compromise; Imagine - the definition of working/living born anew."*

*The complete video of the project could be found: <https://youtu.be/nZtJsFAZ5k4>*

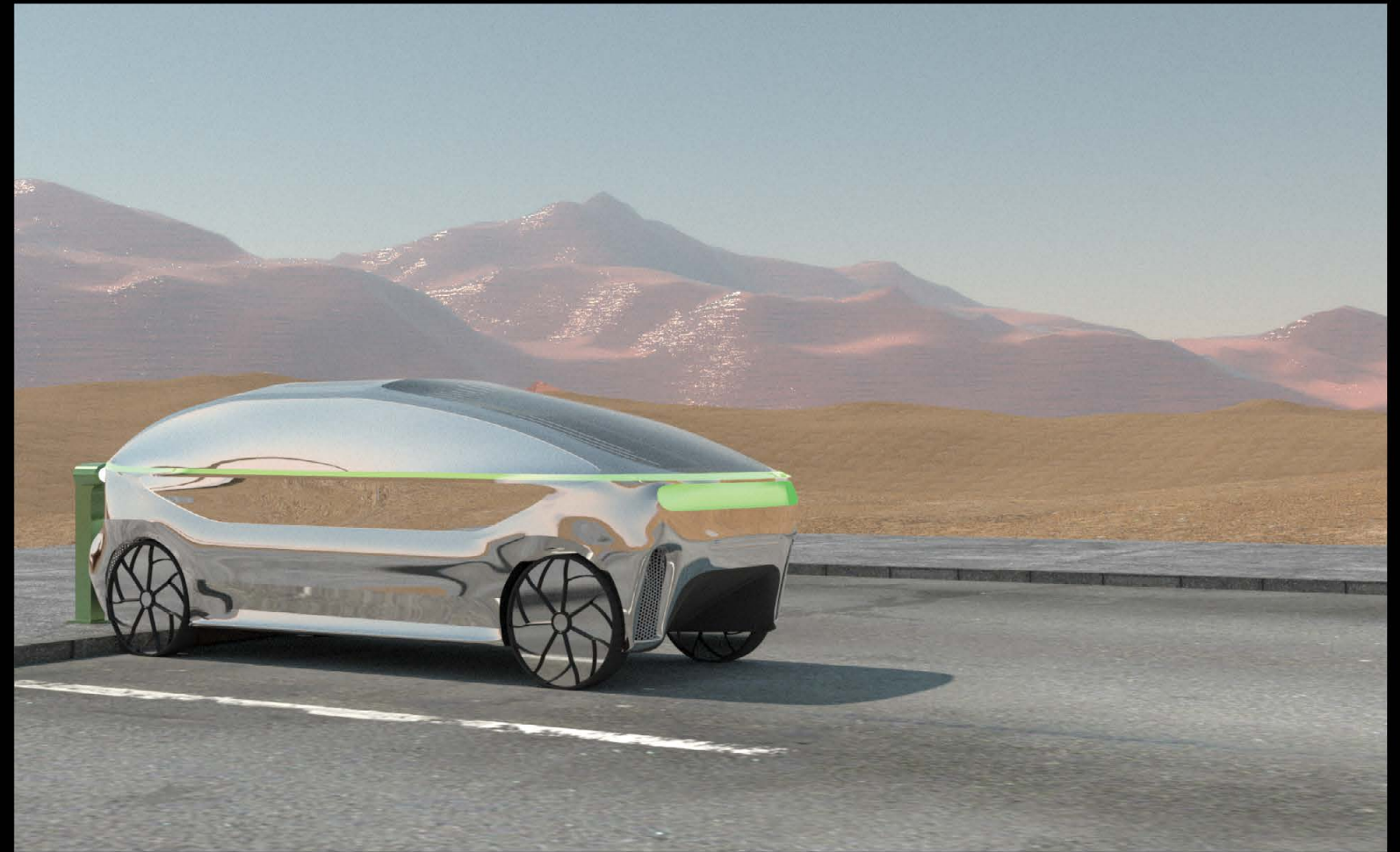
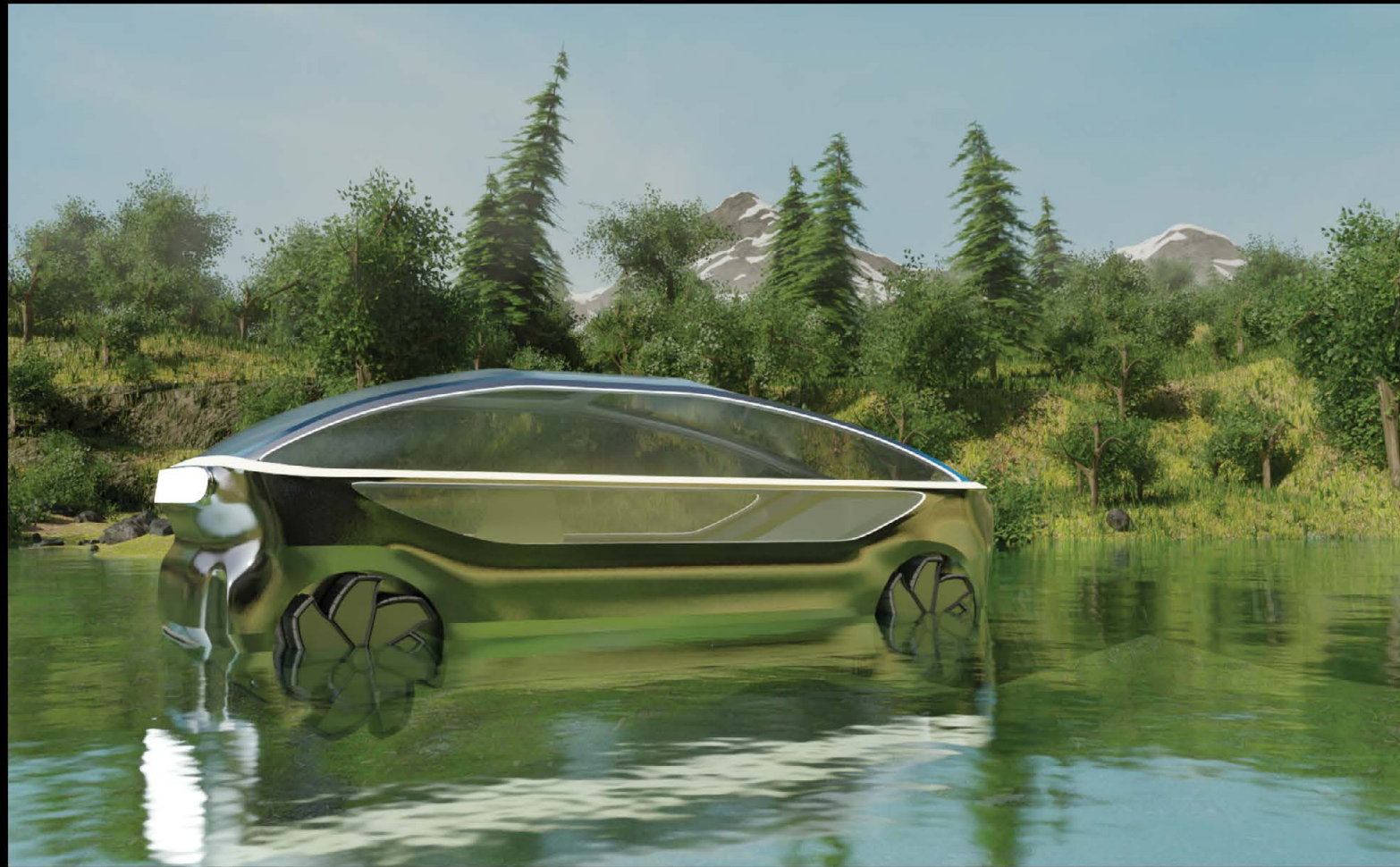




















06

**EXTRACTION CONTROL**

Program: Experimental  
Type: Individual  
Fall 2021 - 3 months  
Instructor: Andres Jaque

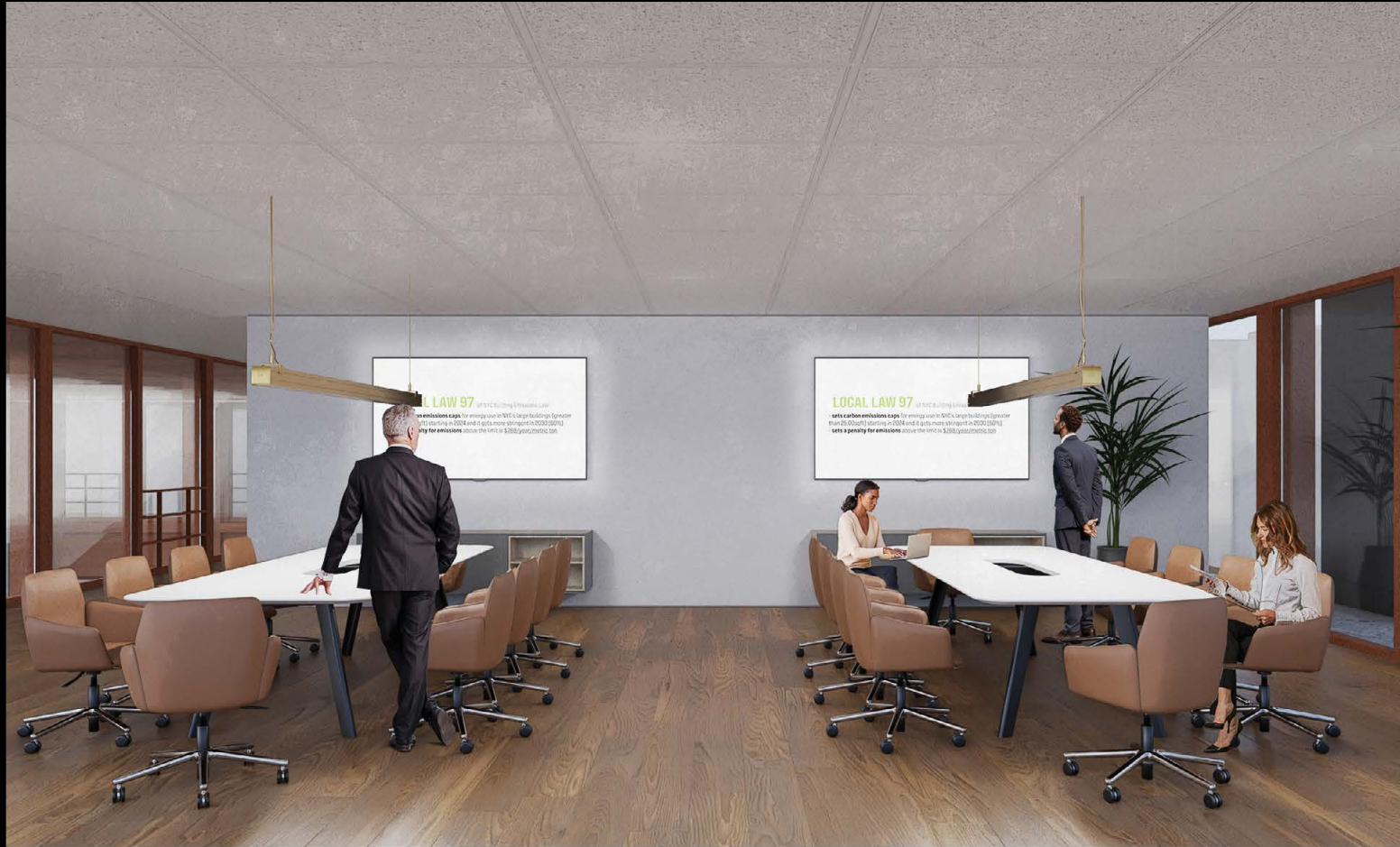
*This project, rather than a traditional architecture project, is actually a research and an experimental project imagining the collapse of the Ford Foundation Center for Social Justice.*

*Throughout the research process, the direction gradually point to the fact that the construction and the later renovation of the Ford Foundation Center for Social Justice is essentially emblematic of the global extraction enabled by increased transportation facilitated by the expansion of the petrochemical industry of its time while risking the death of other species. Such unequal extraction and excessive control over other nature must end. Therefore, in the project, a collapse is envisioned, which will eventually leads to a new balance between human and nature. The project also imagine a state of architecture where maintenance is retreated due to energy constraint with the introduction of the Local Law 97.*

*The complete video of the project could be found: <https://youtu.be/dV9j5tTw1r8>*



### Scene 1. The Start of Everthing - the retreat of maintenance



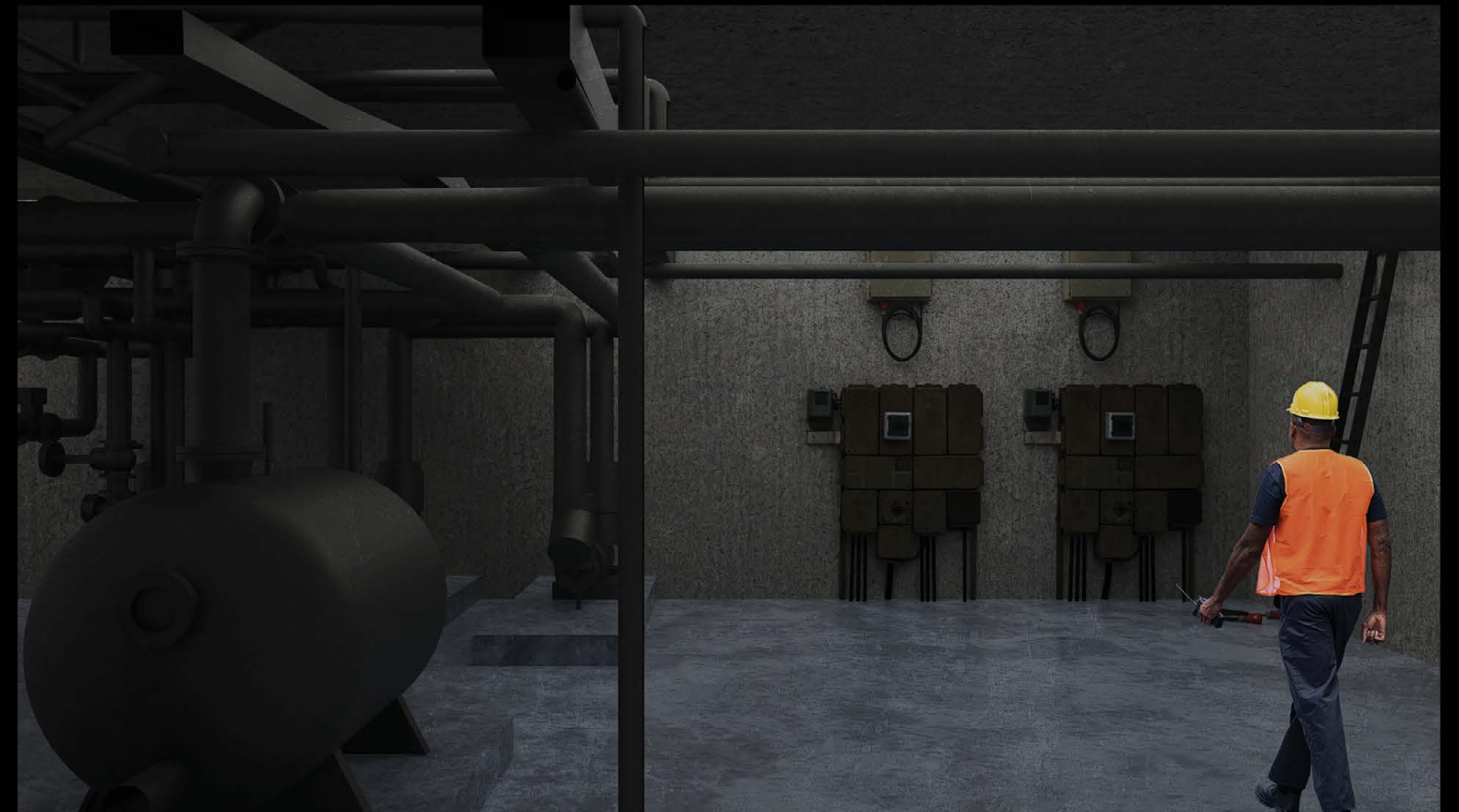
1.1. The introduction of Local Law 97: When time comes to summer 2024, as a response to the Local Law 97 which place heavy penalty on buildings not complaint to the emission cap, the Ford Foundation decides to stop air conditioning and maintaining the central garden atrium space and give autonomy to it.



1.2. The retreat of the enclosure: For the purpose of fresh air, the workers first took off the roof enclosure.



1.3. The retreat of the maintenance workers: The maintenance workers are laid off due to no more need of maintenance



1.4. The retreat of the HVAC system: The HVAC system for the atrium is turned off to preserve energy.



Scene 2. *The Cracking of the Architecture - the Invasion from other species*



2.1. *The cracking of glass: Without the maintenance, the front glass wall begins to develop dirt and stain, which cumulates and deteriorates the sealant of the glazing unit. Humidity and condensation form and ultimately the glass cracks and breaks.*



2.2. *The rebellion of the trees: The tropical trees in the garden are ecstatic to find themselves expose to the fresh summer air, and they thrive and grow. Tree roots start expanding and growing.*



2.3. *The invasion of the trees: They grow horizontally between the gaps of the bricks and they grow downwards to compress the earth and eventually break the drainage pipes.*



2.4. *The frogs' party: The pond at the center start to grow algae and the American bullfrogs find it an ideal space to gather, especially algae pond is a perfect space for the tadpoles.*



Scene 2. *The Cracking of the Architecture - the Invasion from other species*



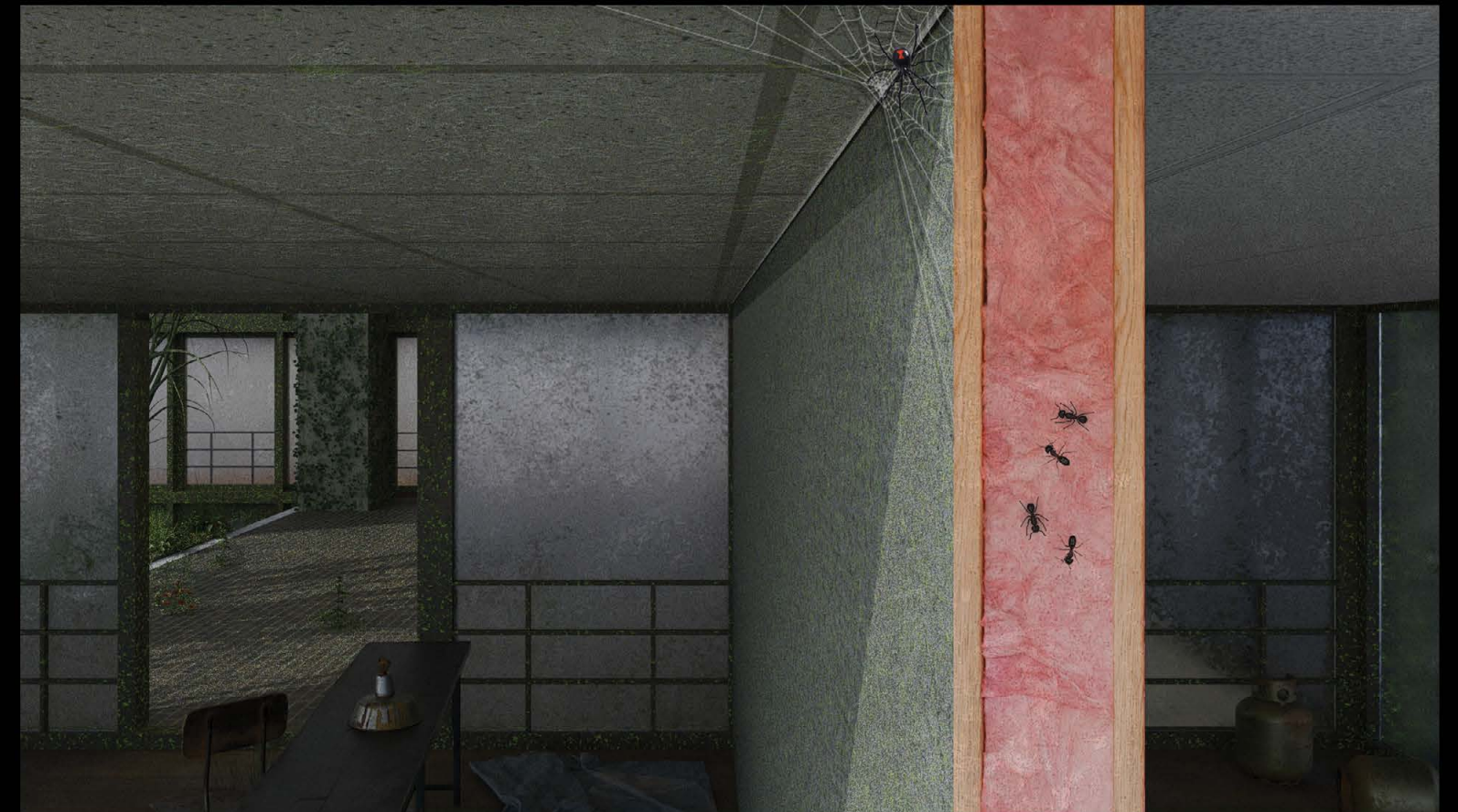
2.5. *The squirrels' party: Squirrels also want to join the party. They find a nice spot right next to the irrigation pipe to dig holes so that their baby can grow safely in August. Also some weed are growing next to the existing plants.*



2.6. *The monarch butterflies: When summer gets to the end and the autumn comes, the Monarch butterflies come to the garden for a short visit before they migrates to Mexico and bring pollen with them.*



2.7. *The basement's party: The party also goes on in the basement, where trash are left in piles. Rats and the cockroaches are enjoying themselves in this moment of darkness.*



2.8. *Ants & Spiders: As time goes by, moss and moisture start to develop on the floors, walls and ceilings, especially in spring. Carpenter ants find a nice place for a feast in the insulation while they have no idea their predator, the spider is on the other side of the wall.*

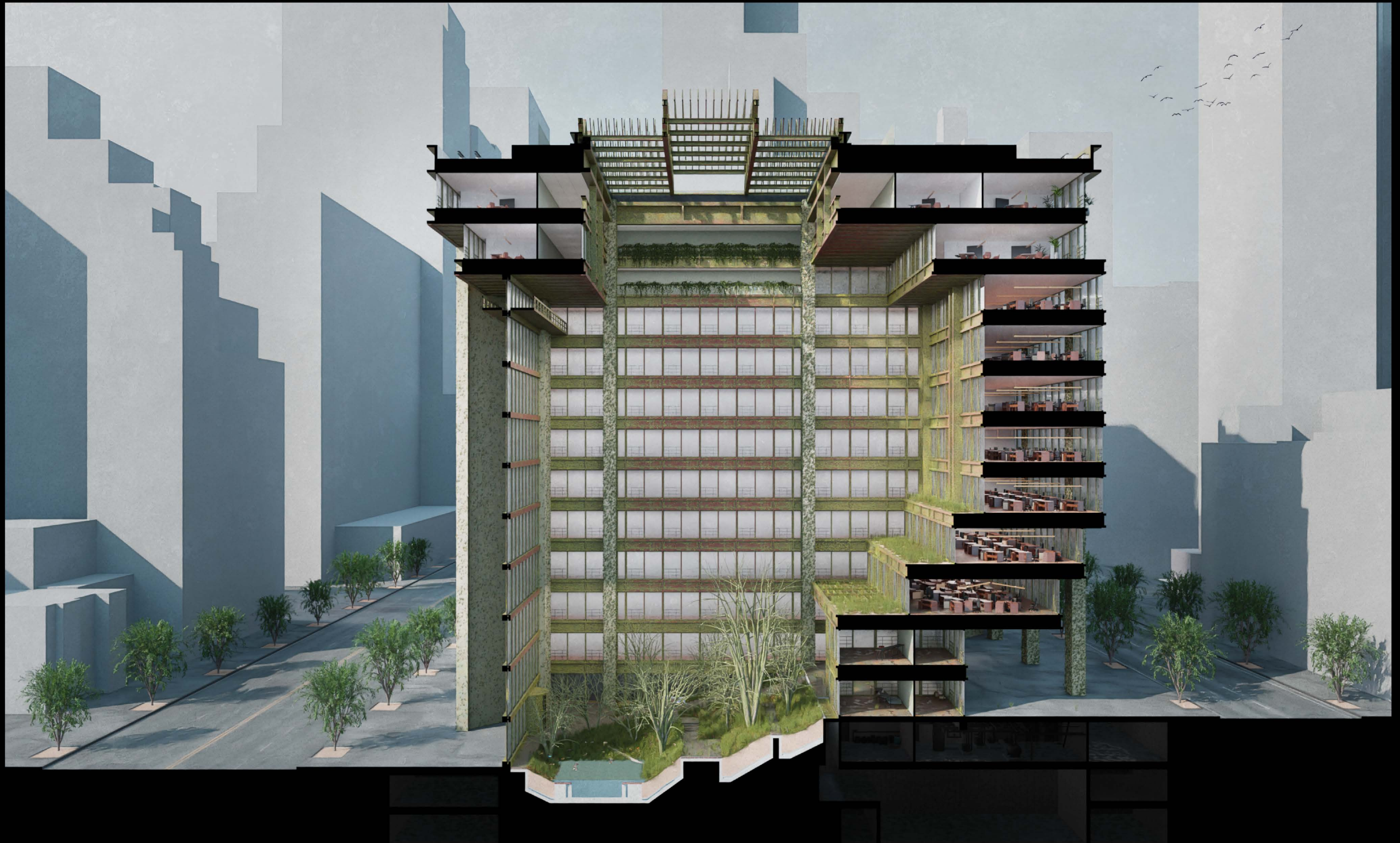


*Scene 3. The Collapse of the Ford Foundation Center for Social Justice*

3.1. By the time of next summer comes, most of the original plants and trees are dead because they can't survive the winter. The pond floods because of the failure of the drainage pipes. Weeds, mosses, and wildlifes are taking over the garden spaces.



Scene 3. The Collapse of the Ford Foundation Center for Social Justice



3.2. It's a party and it's a party for the other species. A party that's not based on extraction and control.



07

## Subterranean Escape

Program: Bath House  
 Type: Individual- Architecture  
 Fall 2019 - 2 months  
 Instructor: Josh Uhl

*Nearly two-thirds (64 percent) of New Yorkers say personal health concerns are a cause of stress for them. The goal of this project is to create a healing space at the 191st metro station tunnel at the Inwood neighborhood, which is a space neither home nor work. It serves as a buffer zone between works and home.*

*The strategy of the bathhouse is to create a healing space is to appeal to human senses. The project tries to play with light, sound, heat. The bathhouse is situated right next to the underground tunnel so it has the opportunity to interact with the existing tunnel as the bathhouse develops. The existing tunnel with being vertically divided into two portions, the upper portion still serves for direct circulation from the metro platform to the street level and the lower portion will become the central axis to organize the bathhouse.*

*For the organization of the bathhouse, an interior wall is constantly curving around and hugging and intersecting with the lower part of the tunnel. The spaces it encloses with the central axis become the main program spaces. The circulation sequence will always start with an entry area where the phone must be stored away and followed by a changing room and shower area. Following that, there will be a larger public bath with a larger aperture penetrating to the ground, smaller individual pools with smaller apertures, sauna spaces, and some gathering and resting spaces. The quality of these programs is also determined by their distance to the ground. When it is deeper into the ground, it might have darker atmosphere, when it's closer to the ground and maybe its ceiling get eroded by the ground surface and it completely opens up, it creates more of a brighter atmosphere.*



Entry  
Phone Storage

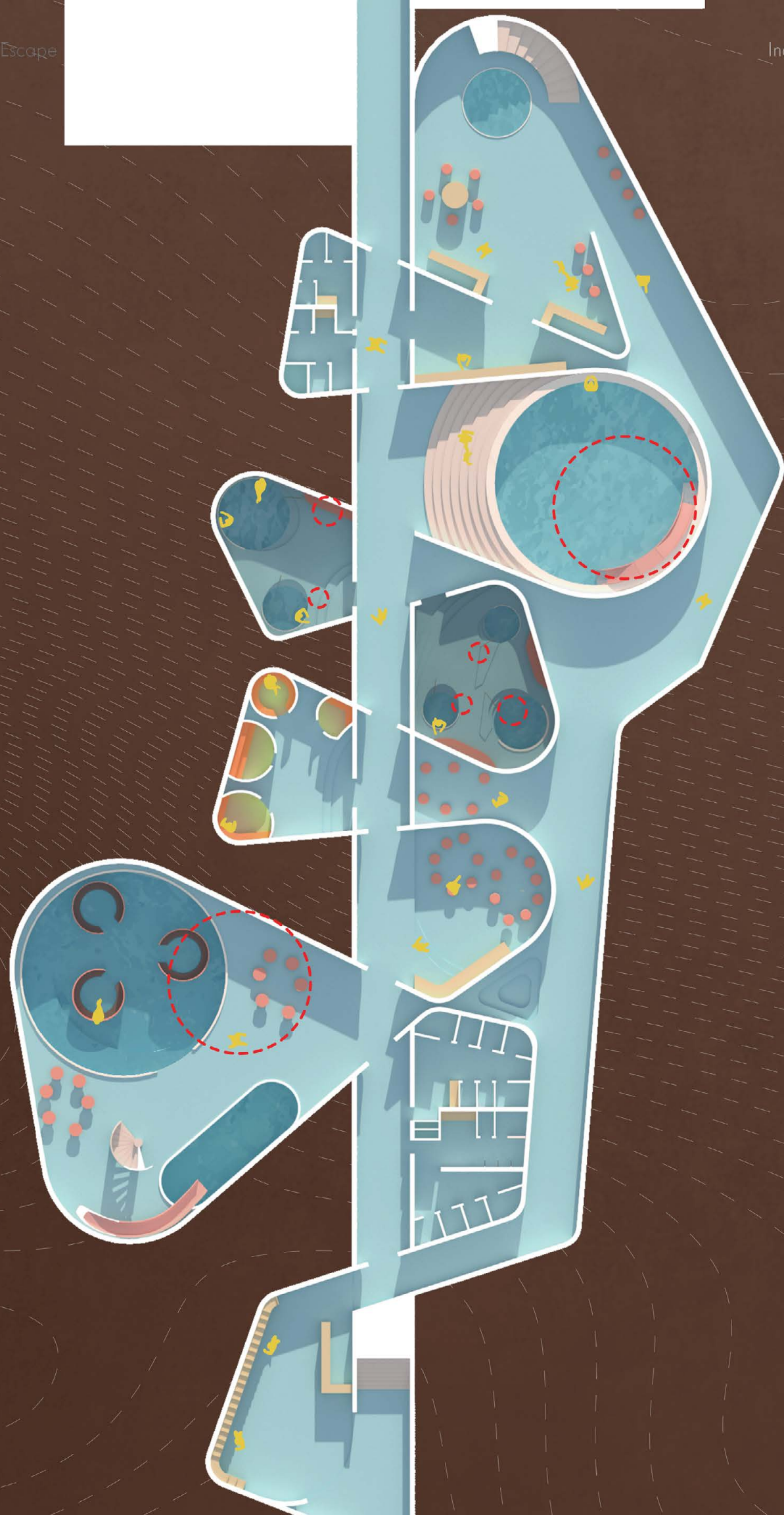
Sky Pool

Individual Pool

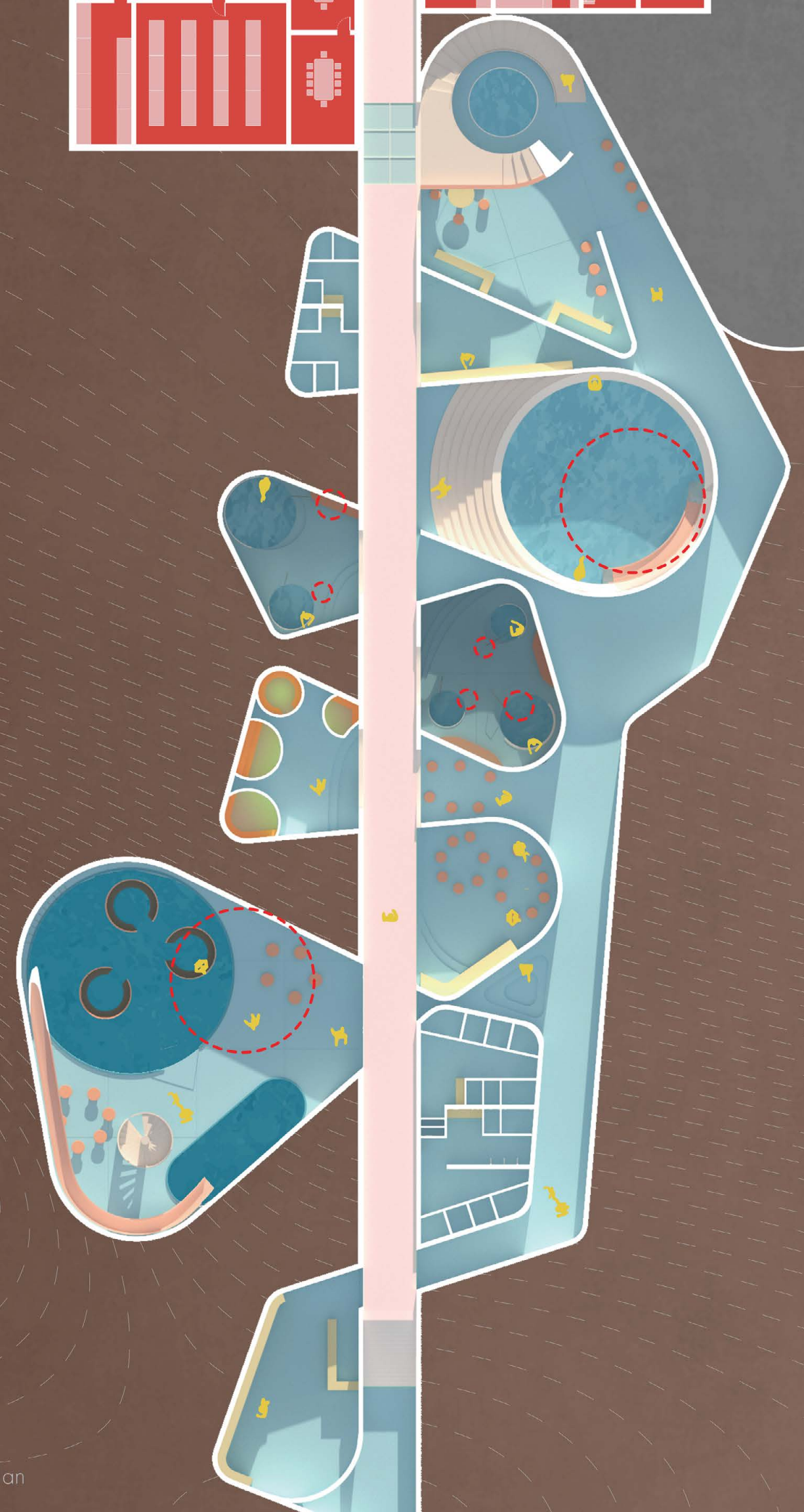
Rest Area

Changing Room  
Shower





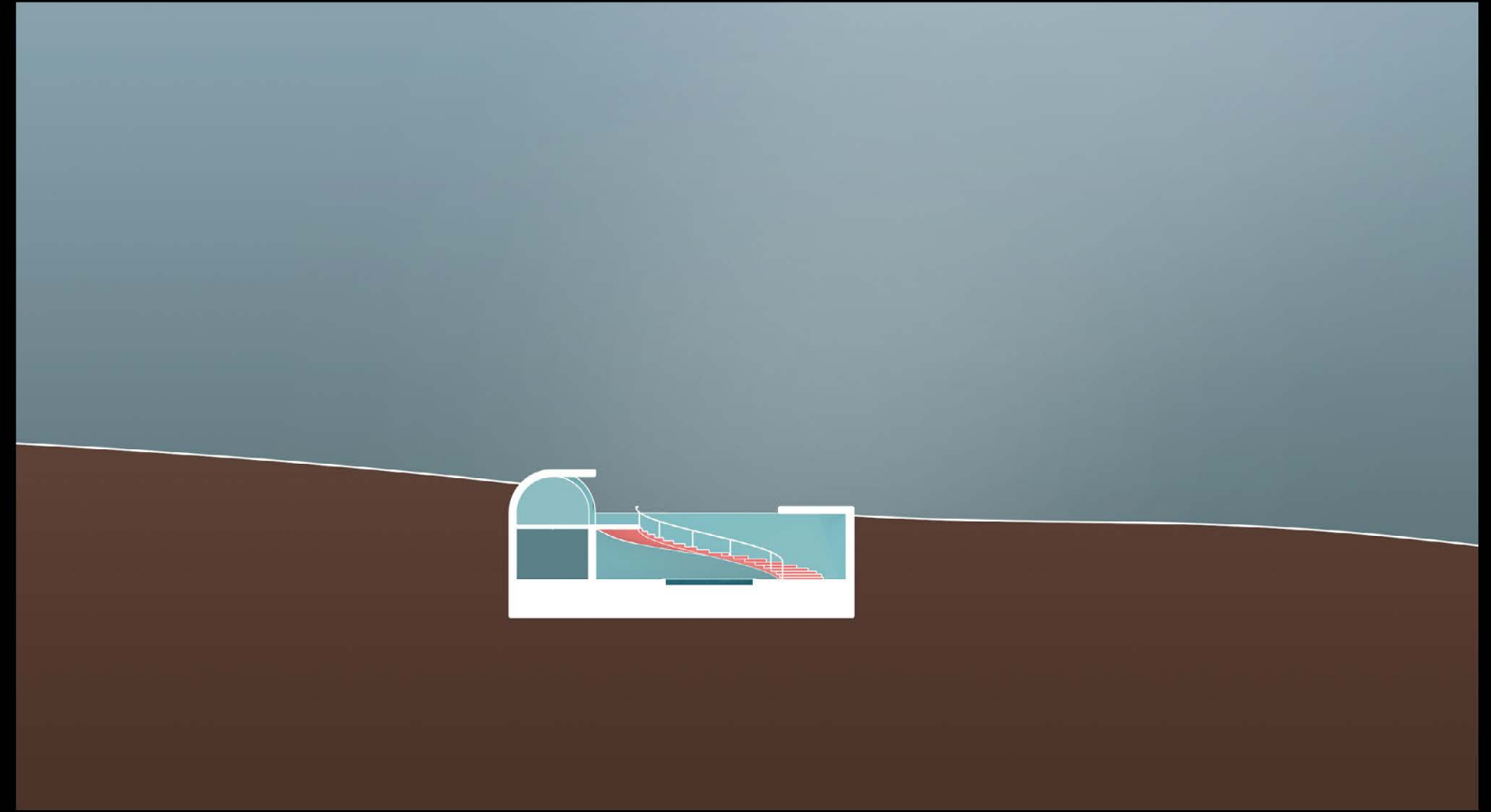
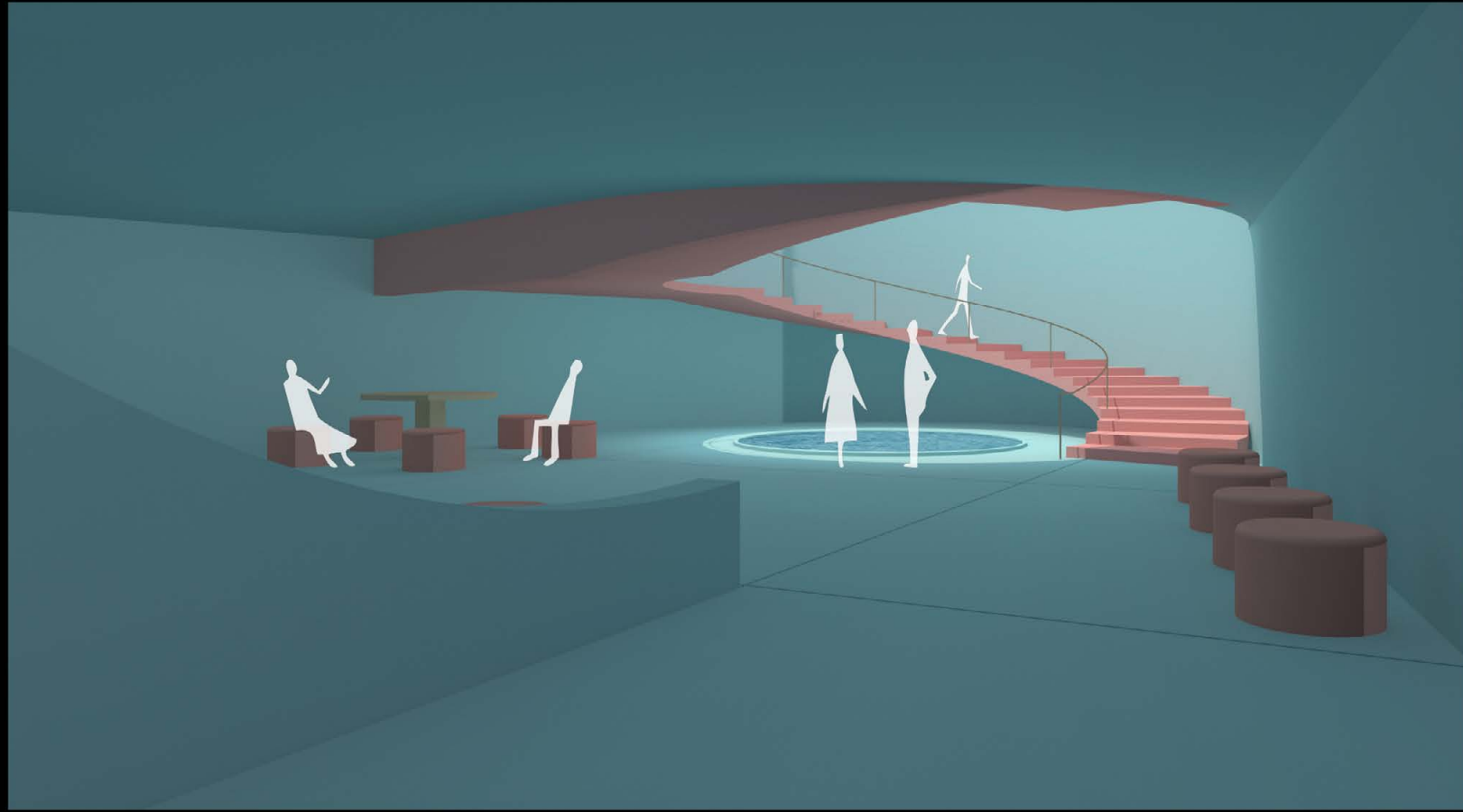
Lower Level Plan



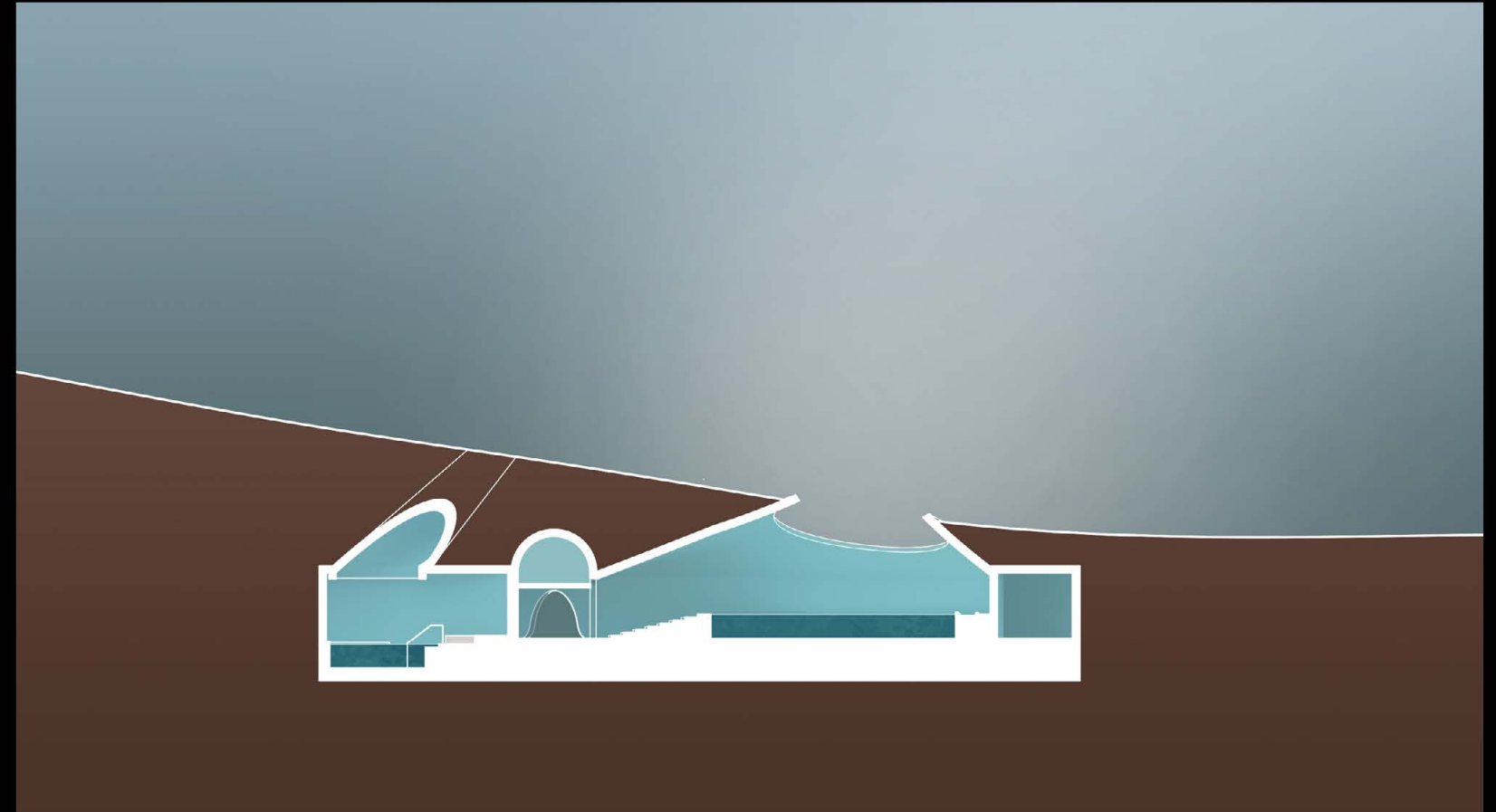
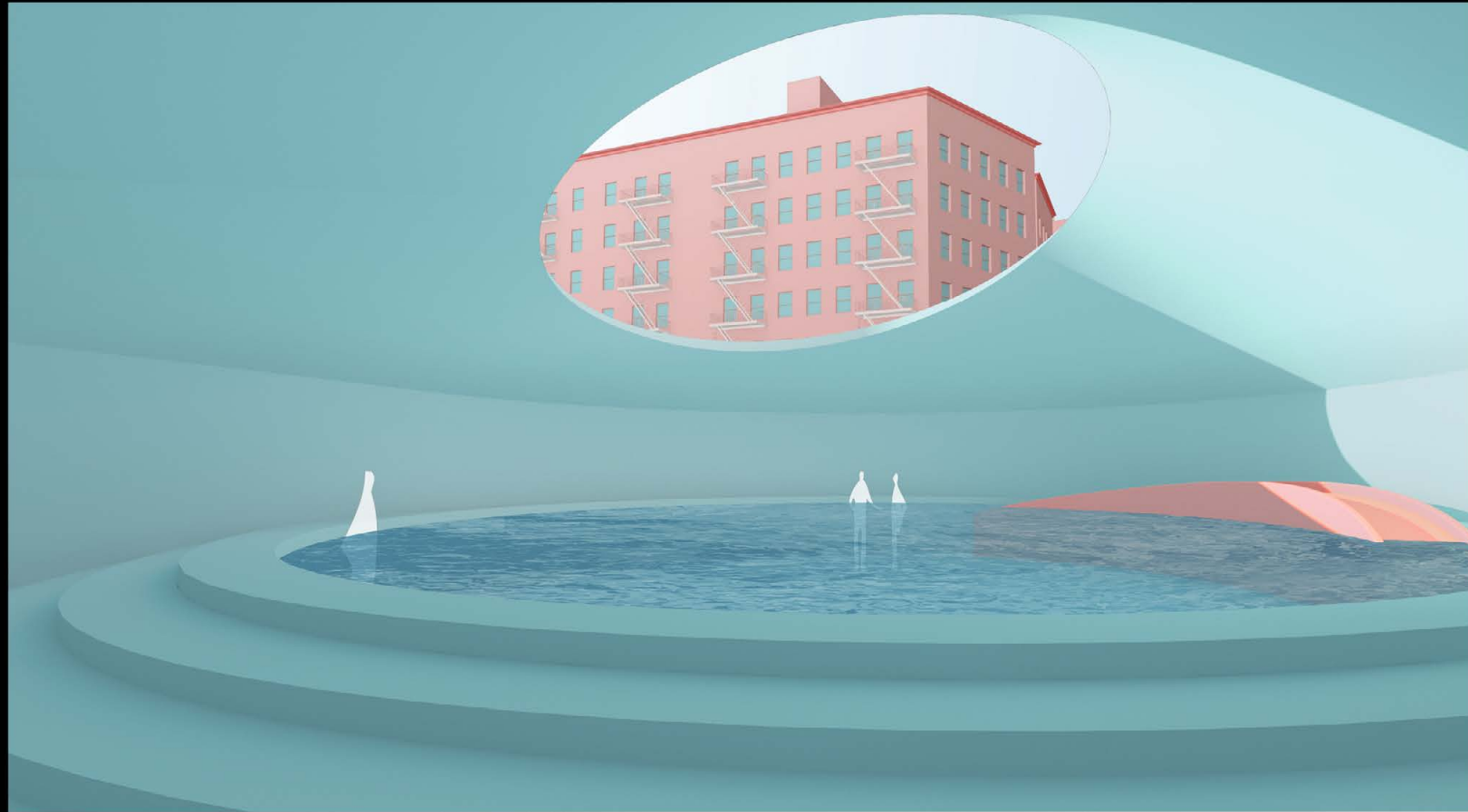
Upper Level Plan



*Entry*

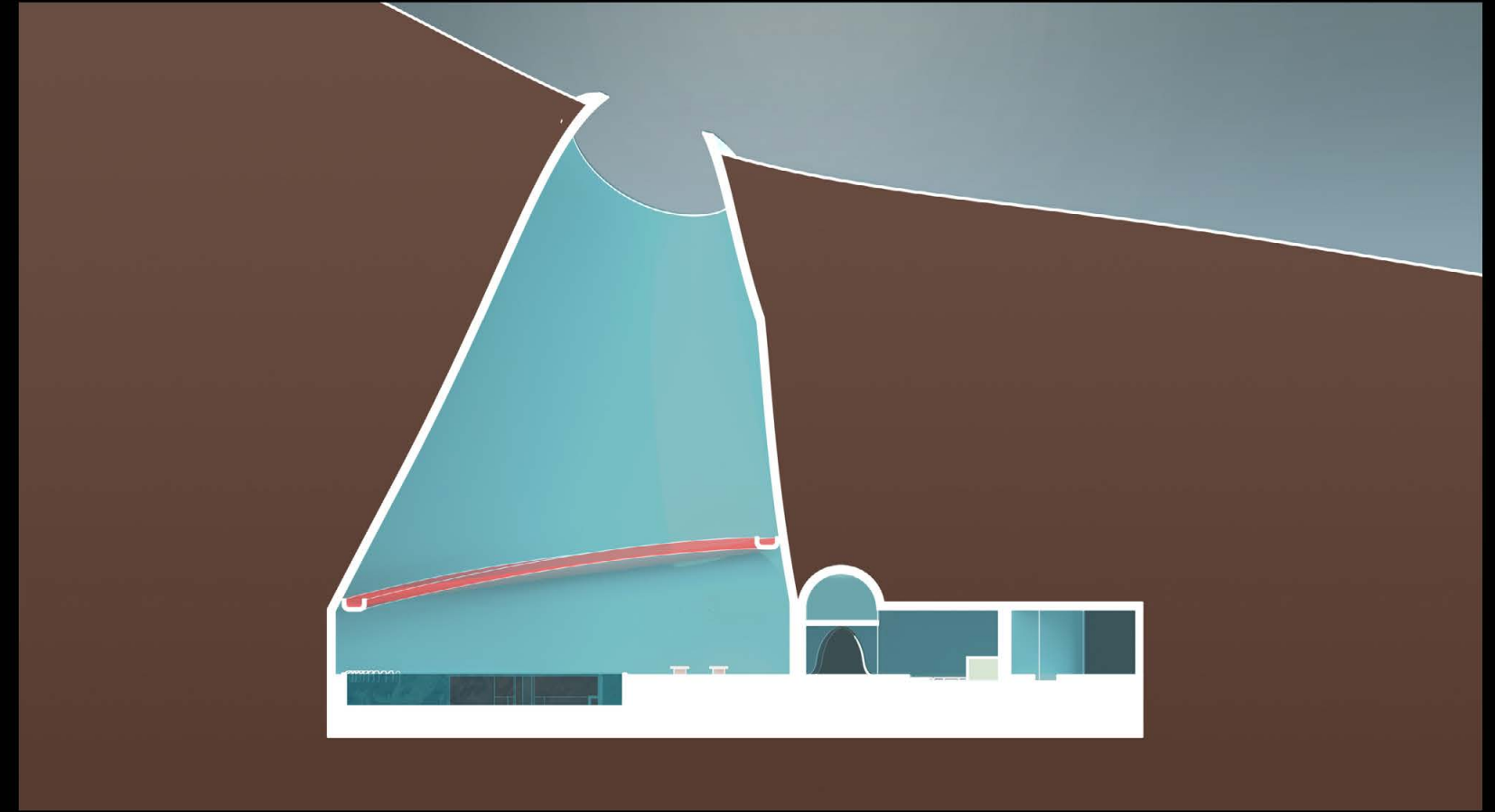
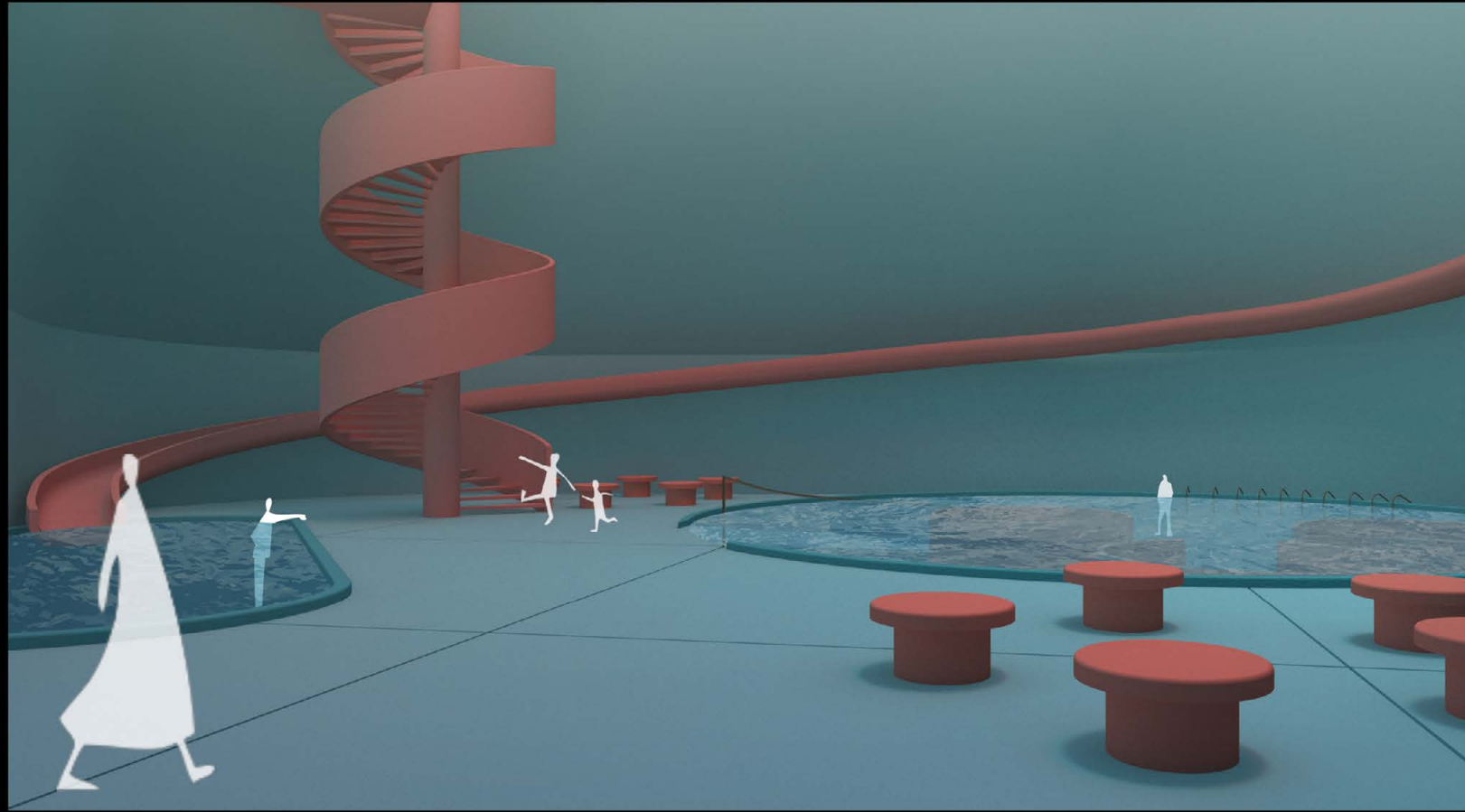


*The Sky Pool*

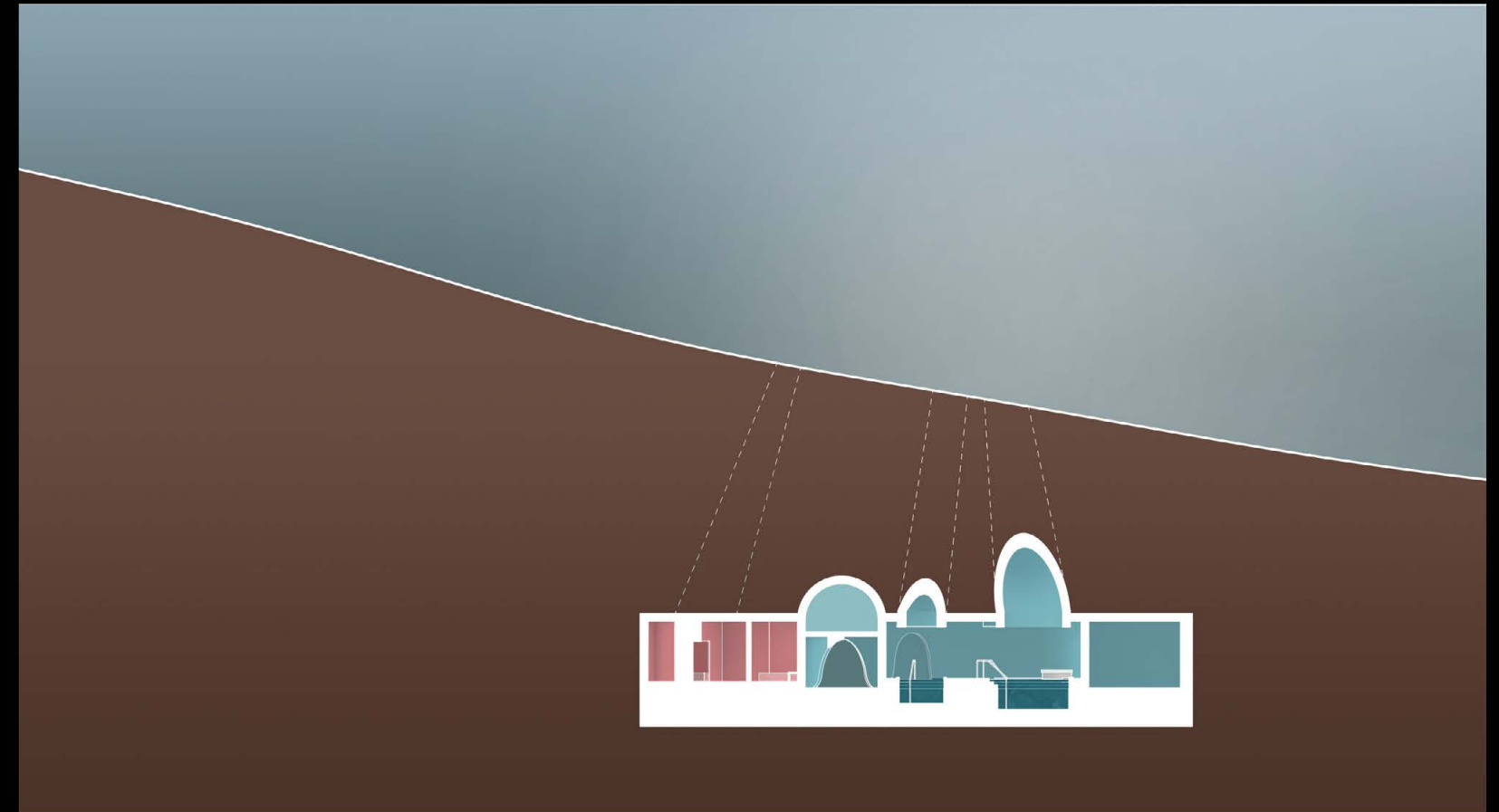




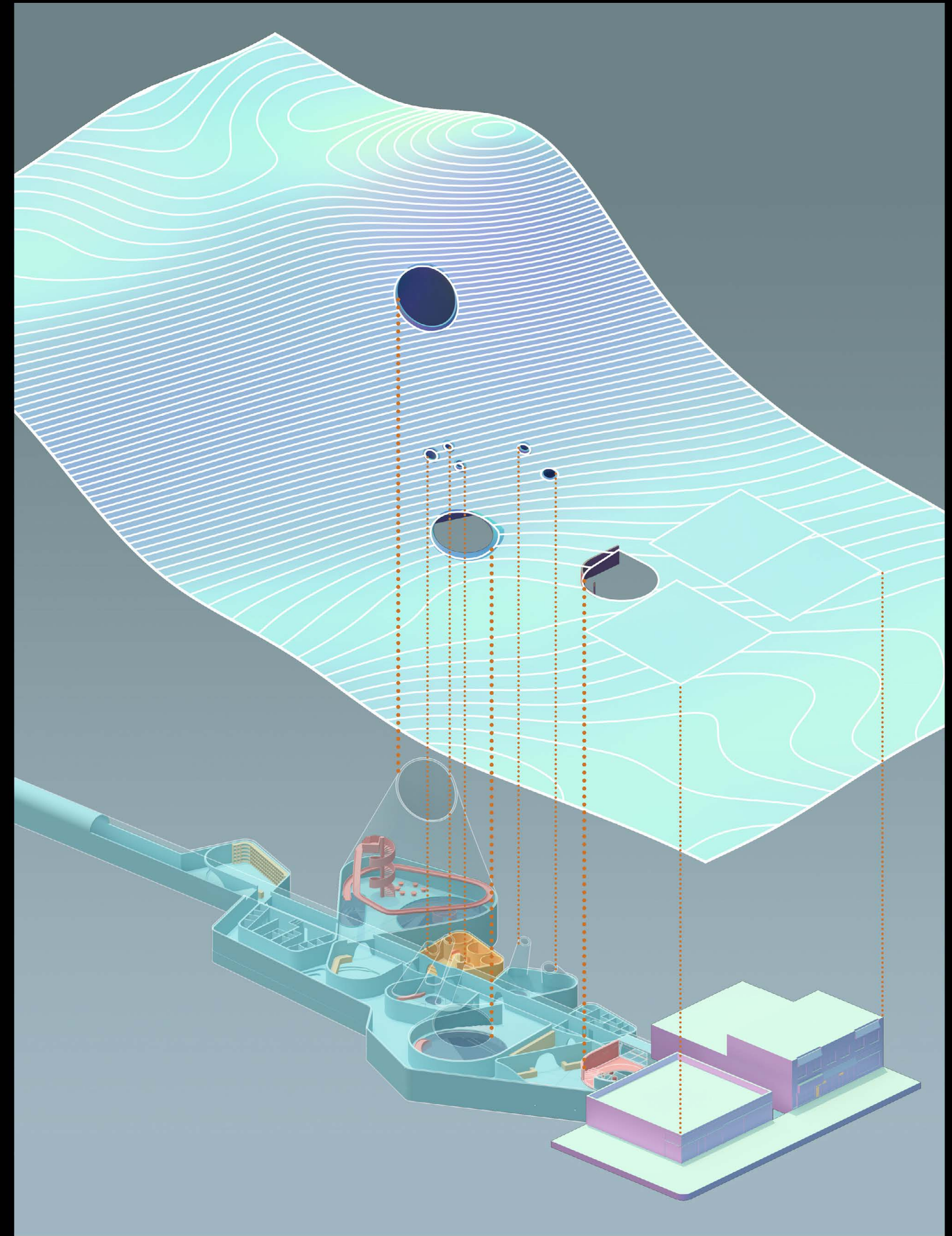
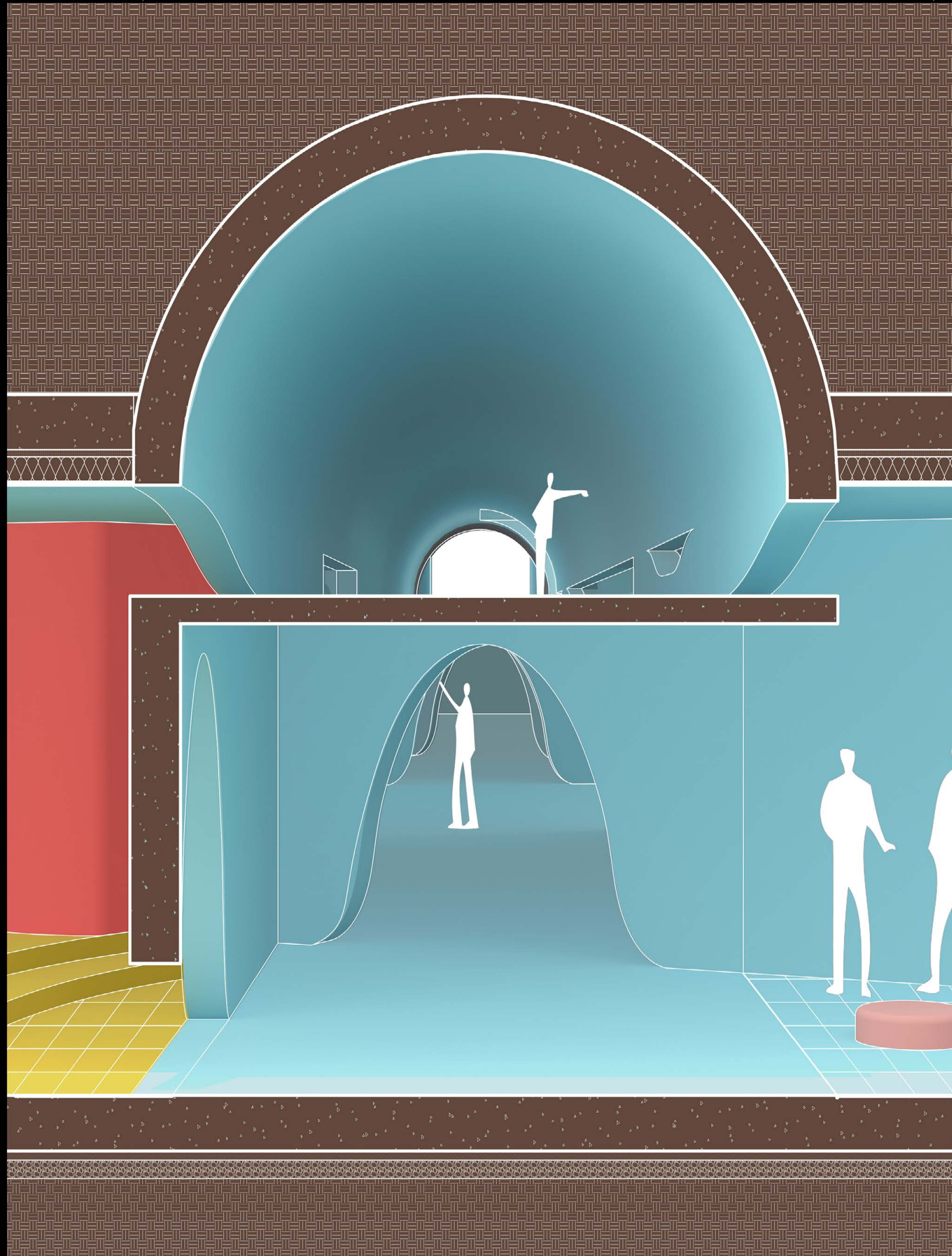
*The Fun Pool*



*Sauna*









*THANK YOU*