

L U C A S
D e
M E N E Z E S
P E R E I R A

Portfolio GSAPP

March

2020 - 2023

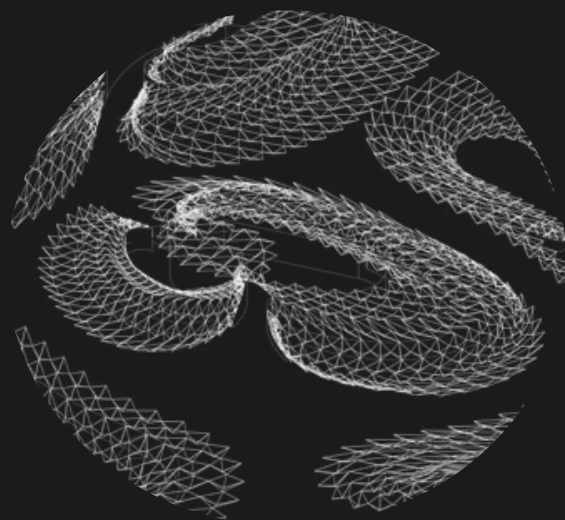
This body of work has no conclusion. It is instead a result of internal and external influences and individual and collective aspirations that are to be perpetuated. At any shape, capacity, and scale I encounter in the future, I look forward to revisiting the questions, discoveries, and explorations that I developed during my three years at GSAPP.

Ultimately, this portfolio aims to convey **Intentionality**, even if I fall short on articulating these three years of meaningful, non-linear experiences.

S T U D I O

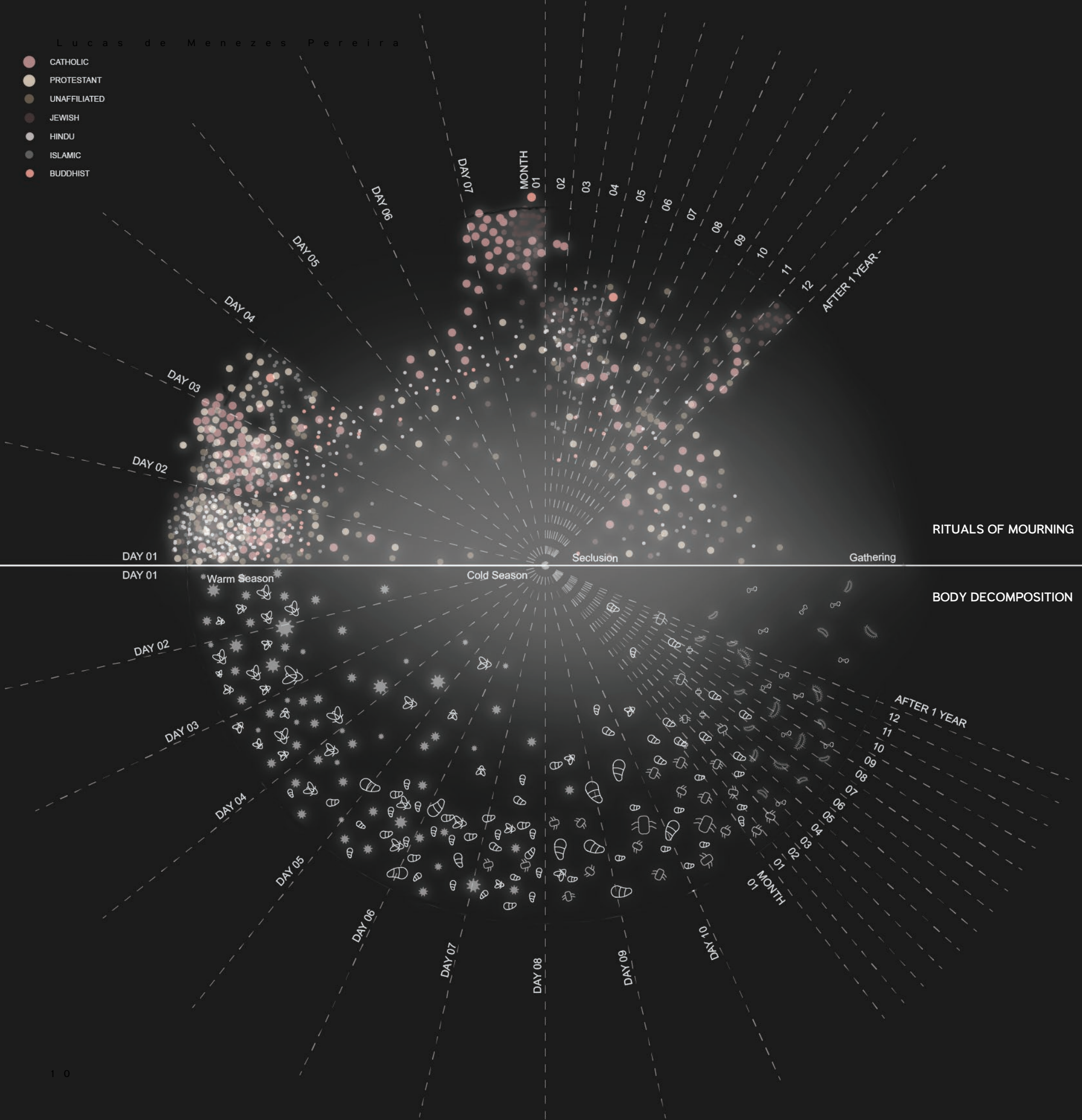
OUROBOROS OF
MASS GRAVES

Spring 2023/Columbia GSAPP
New York, NY
Adv VI/ Instructor: Karla Rothstein
In partnership with: Amity Singh



This project aims to transform Hart Island - a mass burrial site in the Bronx - into a safe haven, where New York City residents and visitors can experience loss, remembrance, and healing through spiritual and physical connections with both landscape and architecture. In addition to engaging with burials, the site is vulnerable to sea-level rise. So, our project reimagines the practice of burials on Hart Island, both ecologically and spiritually. Referencing the ancient technique of burial mounds, we are restructuring/ elevating the exercise of mass burials on the island while prolonging the time that the island takes to reconcile back into the water. Through a spatial performance between delicate space frames and earth, these mounds continuously morph to respond to the change in time/burials, variations of grief, human/ non-human loss, and temporality of models of marking life<->death of that loss. And thus, we want to reinterpret Hart island's new identity as a public sanctuary.

- CATHOLIC
- PROTESTANT
- UNAFFILIATED
- JEWISH
- HINDU
- ISLAMIC
- BUDDHIST



The process of grief and decomposition creates a liminal cycle of life and death both spiritually and materially, tying to the concept of **OUROBOROS**: an ancient symbol depicting a serpent eating its tail. It expresses the cyclic nature of time and creation, which never disappears but perpetually changes form in an eternal cycle of destruction and re-creation. **Hart Island**, close to the city island and Bronx, is a land where the understanding of Ouroboros is less conventional.

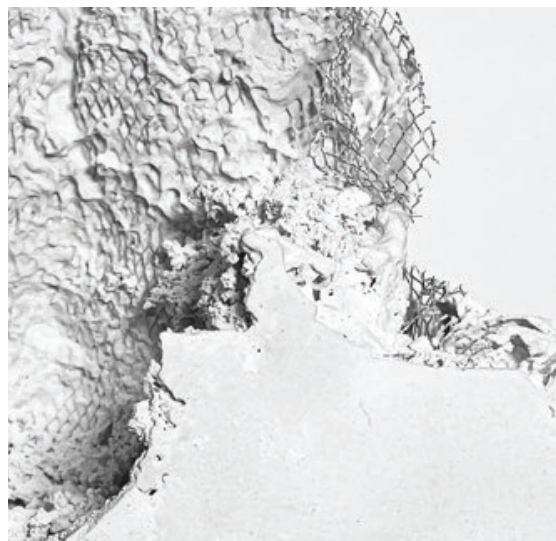


HART ISLAND

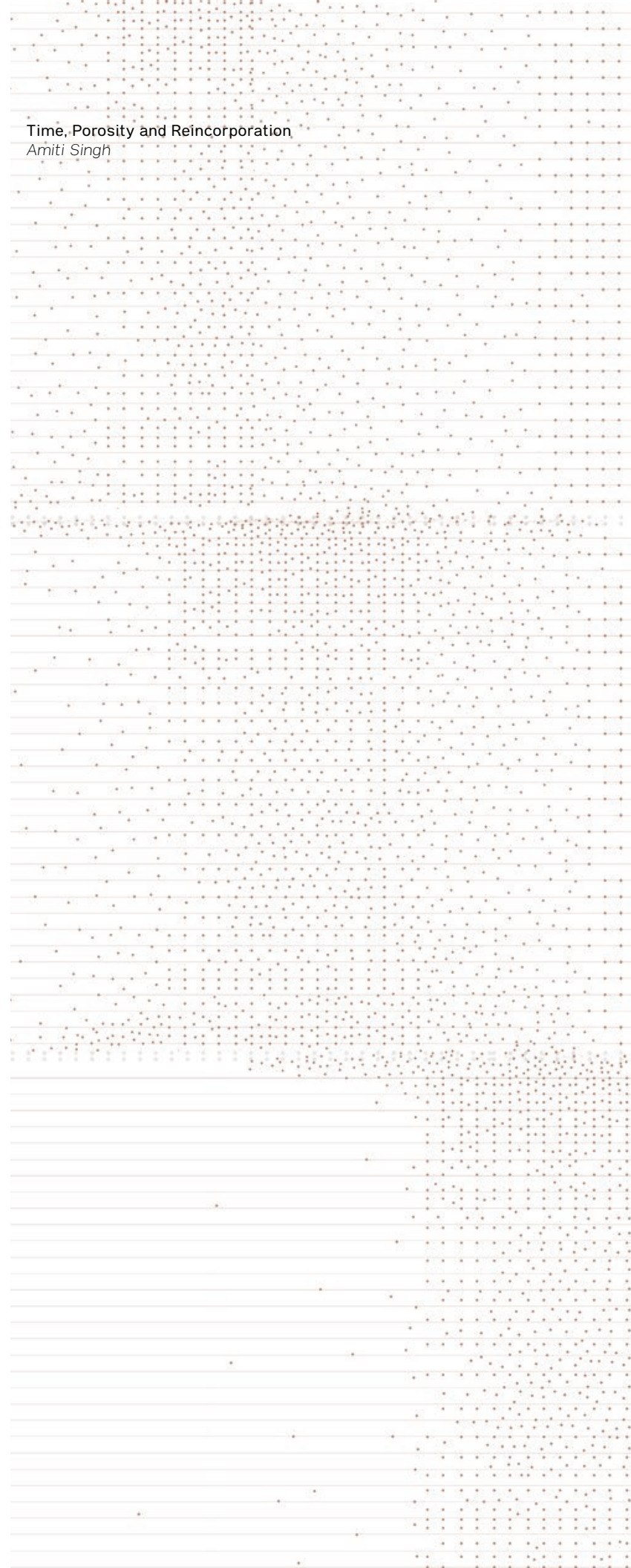
- Used for mass burials since 1869.
- Received more than 2000 bodies during Covid-19.
- Over the last 150 years, over 1 million people have been buried on the island.
- The majority burried in the island are unclaimed.



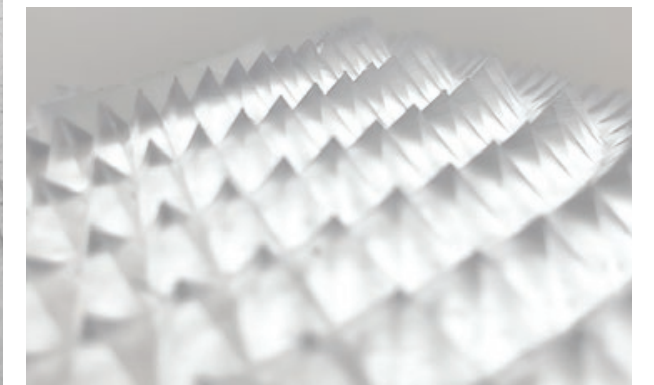
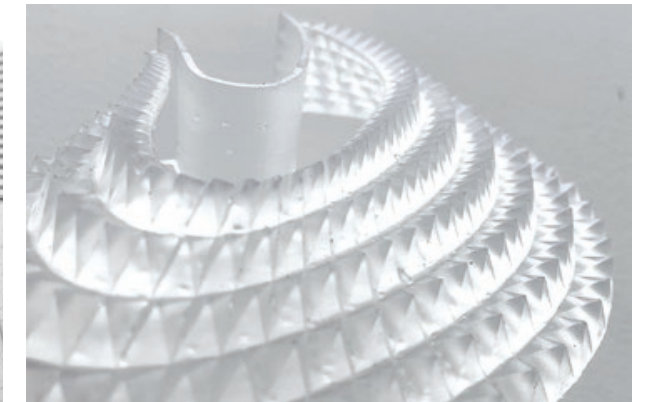
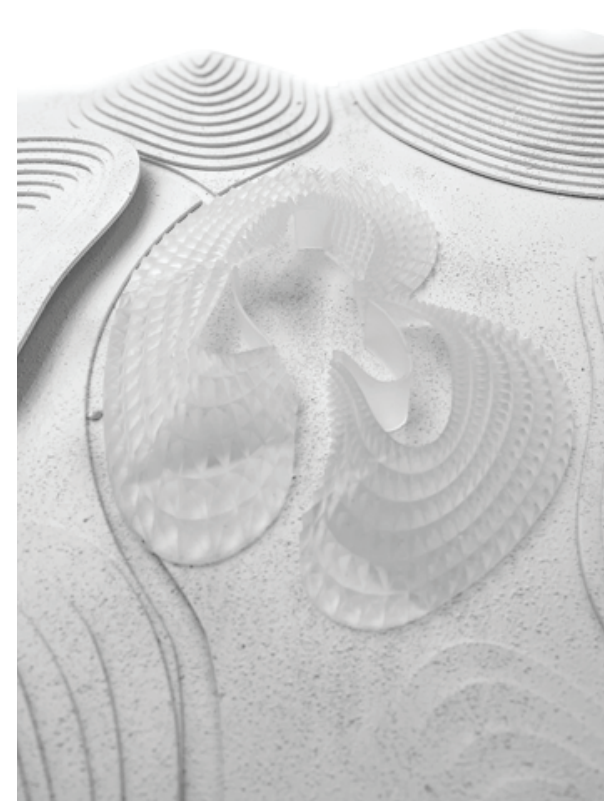
Material Studies - Ice and Rockite
Lucas Pereira and Amiti Singh



Time, Porosity and Reincorporation
Amiti Singh



Geometry Study - Creating the System
Lucas Pereira and Amiti Singh

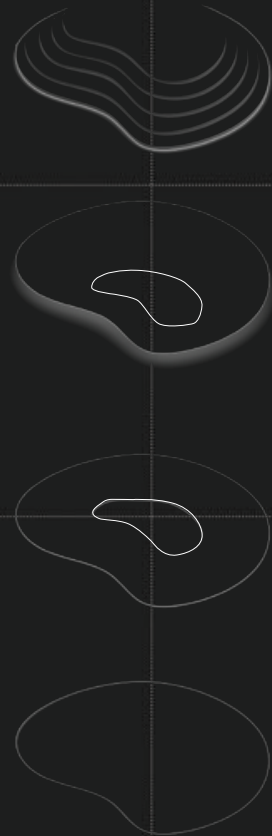


0.1 MILES 0.1 MILES 0.1 MILES 0.1 MILES

Site Plan
Lucas Pereira, Amiti Singh

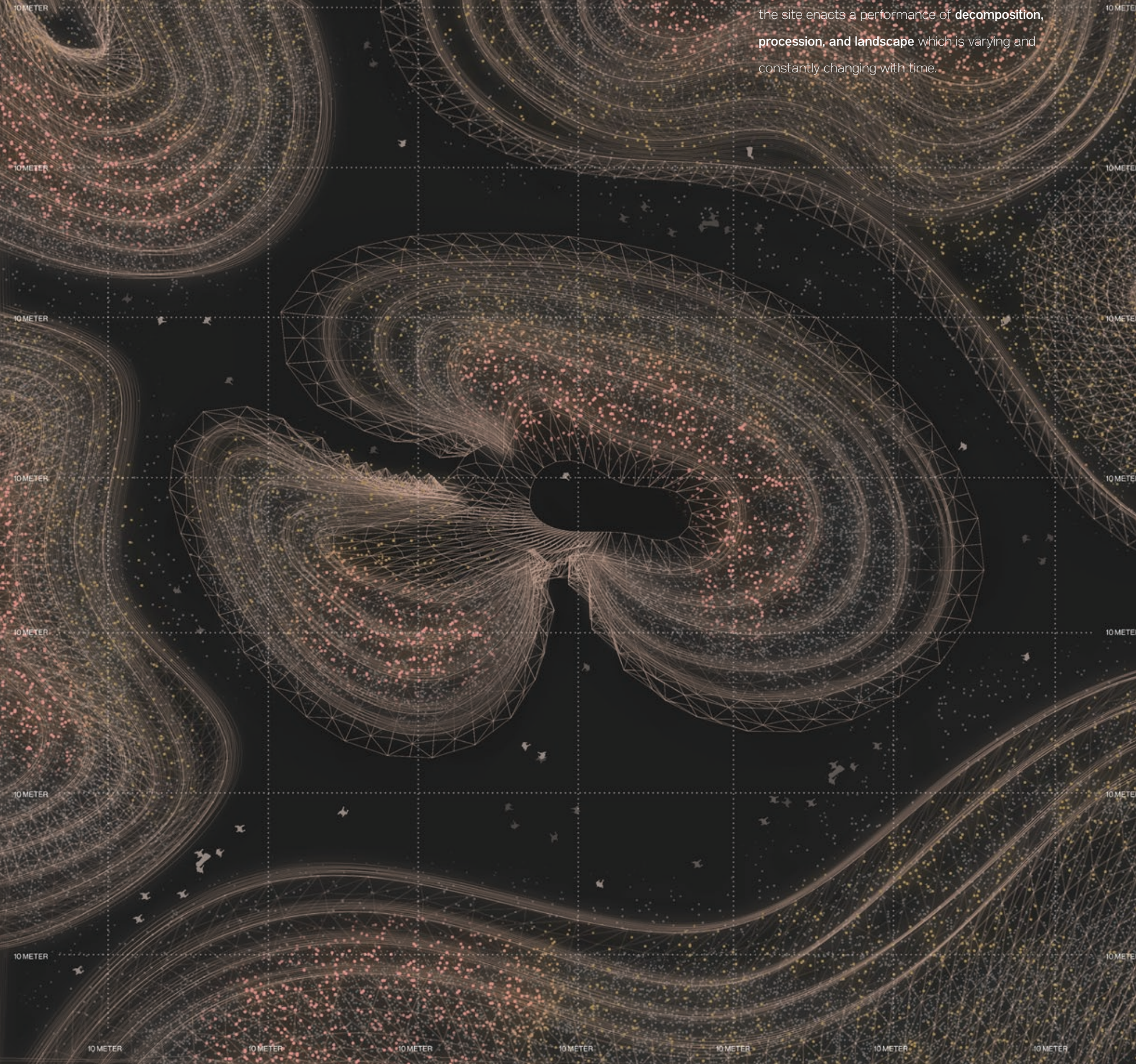


Mound Taxonomy
Amiti Singh



0.1 MILES 0.1 MILES 0.1 MILES 0.1 MILES

Mound Cluster
Lucas Pereira, Amiti Singh



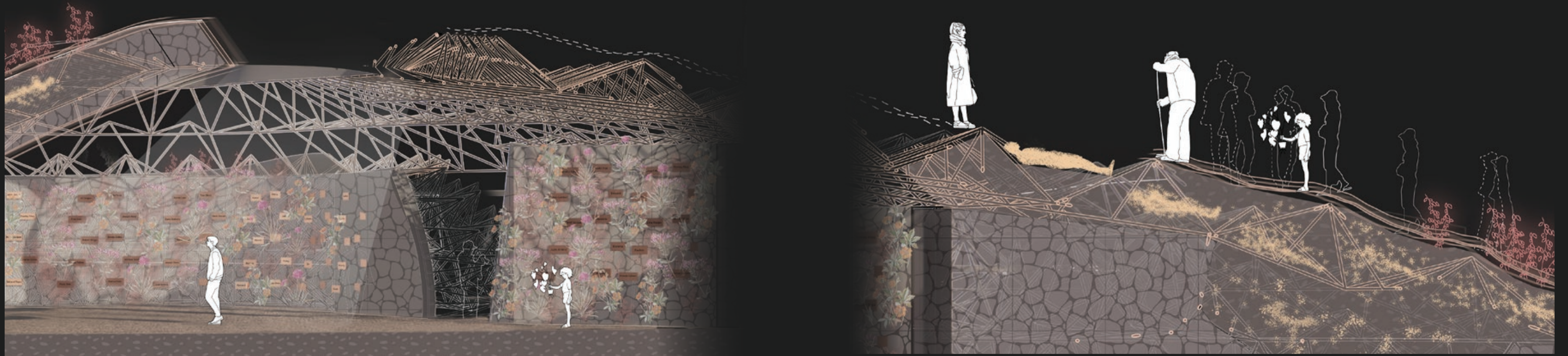
the site enacts a performance of **decomposition, procession, and landscape** which is varying and constantly changing with time.

The upper half of the site converts the older burial site into spaces of rituals, large gatherings, and collective yet intimate spaces between mounds.

On the lower half of the site, this performance blends with the newer burial sites and carefully activates the otherwise dilapidated and abandoned buildings into the programs of different functions

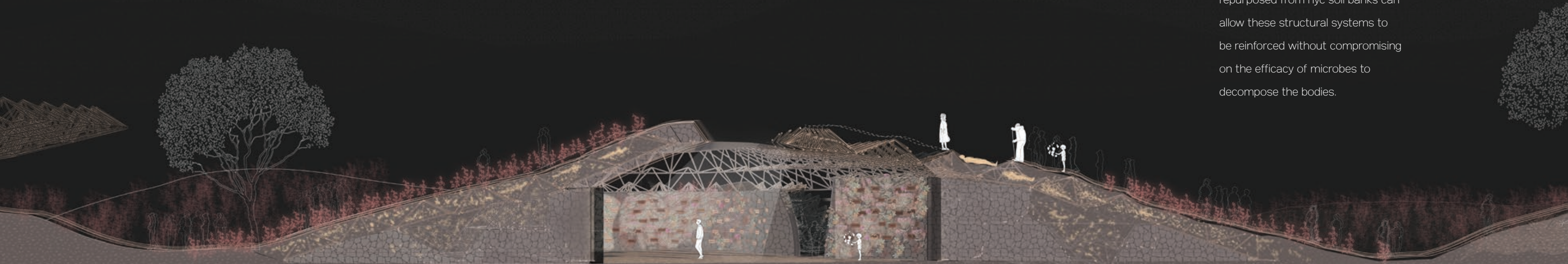
Rituals - Día de los muertos
Lucas Pereira

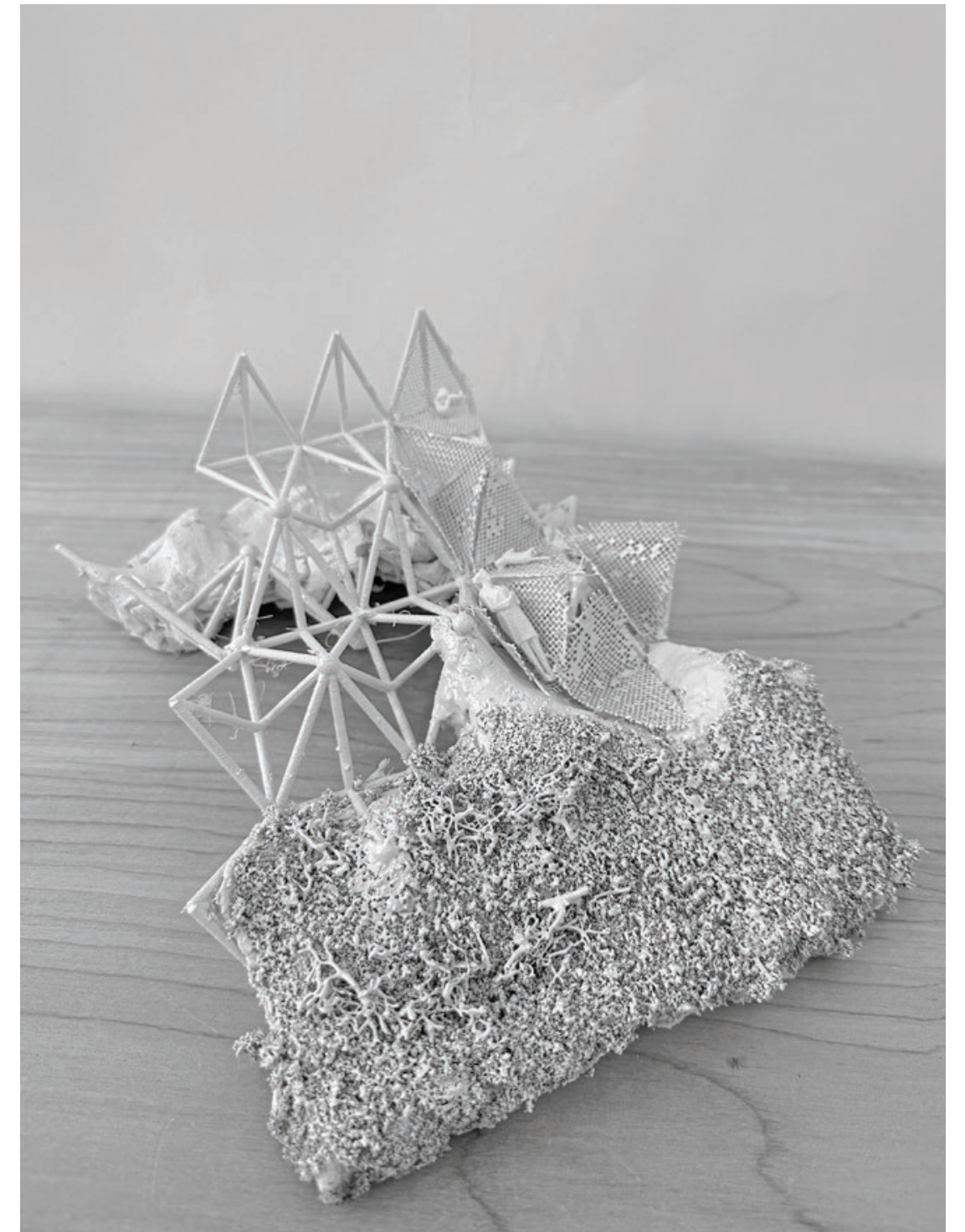




Section
Lucas Pereira

The structure provides opportunities for programs to be inserted into the mounds. Structurally, the construction debris and soil from repurposed from nyc soil banks can allow these structural systems to be reinforced without compromising on the efficacy of microbes to decompose the bodies.

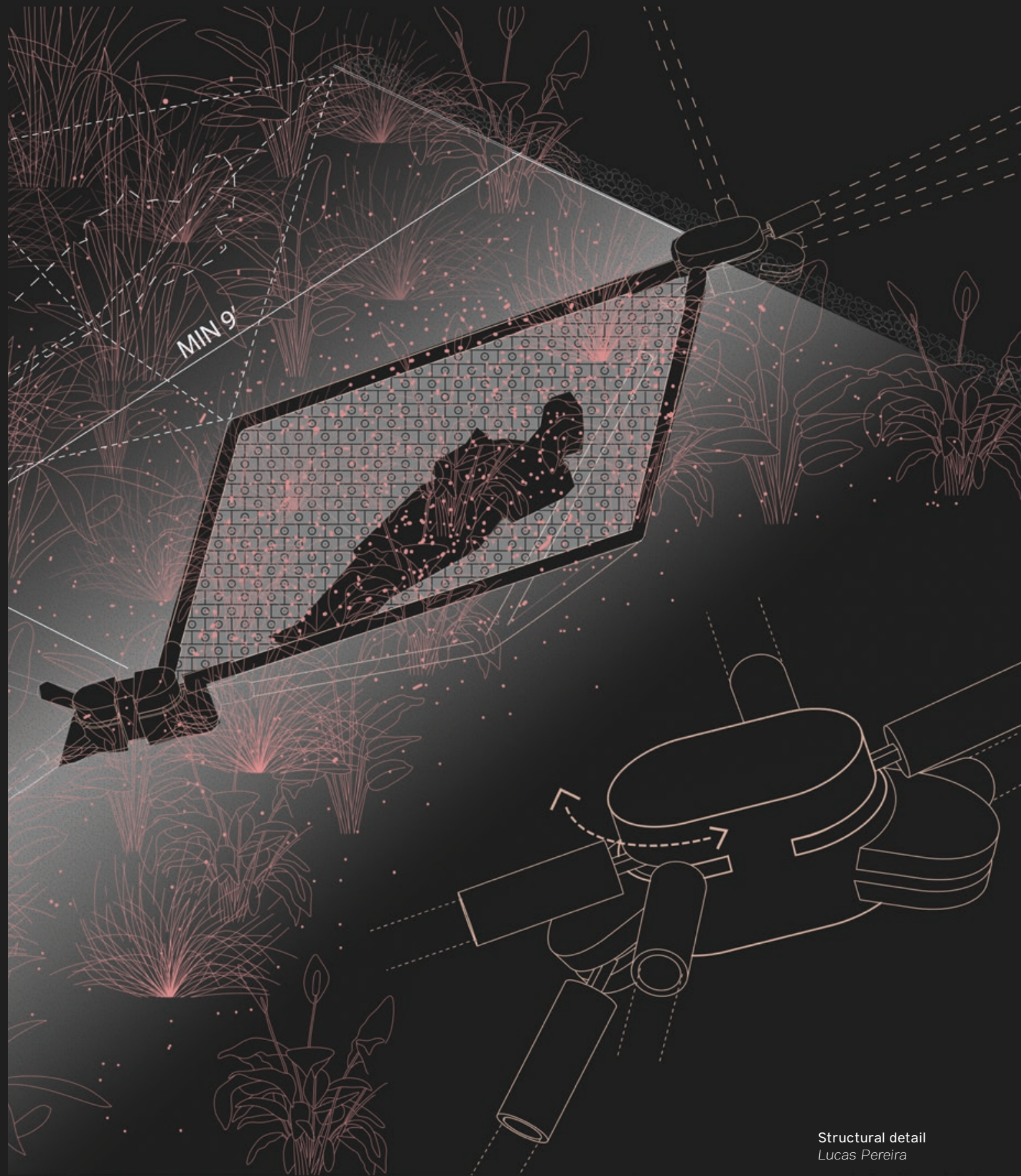




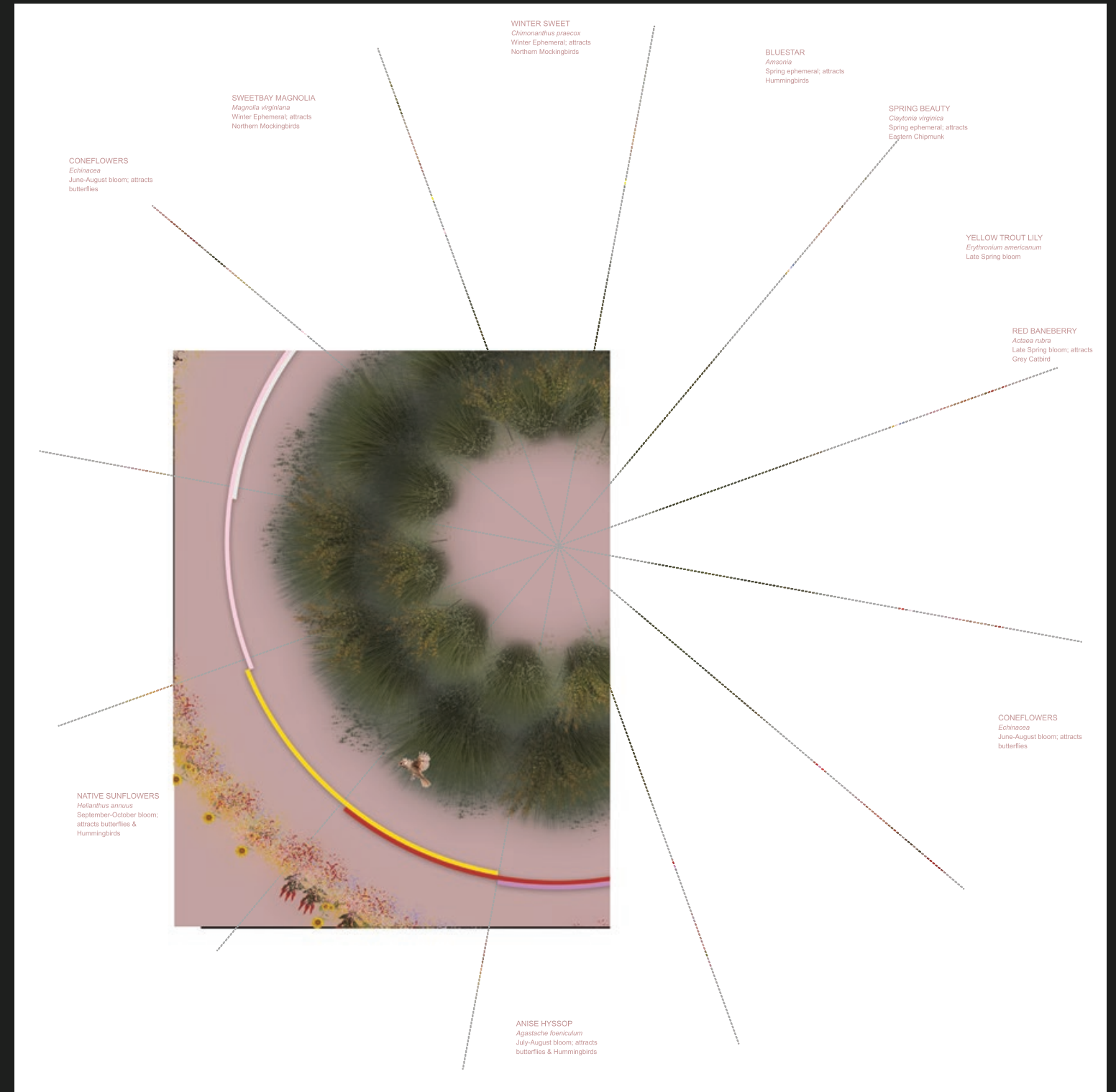
Structure and Time
Lucas Pereira and Amiti Singh

The mounds through seasons
Lucas Pereira

The mounds will react to the increase in the timeline of the island and the reconciling bodies submerging back in the water and ultimately give itself back to the water culminating itself within the cycle of life and death.



Structural detail
Lucas Pereira



Flowers - Seasonality
Amiti Singh

Exterior Perspective
Lucas Pereira



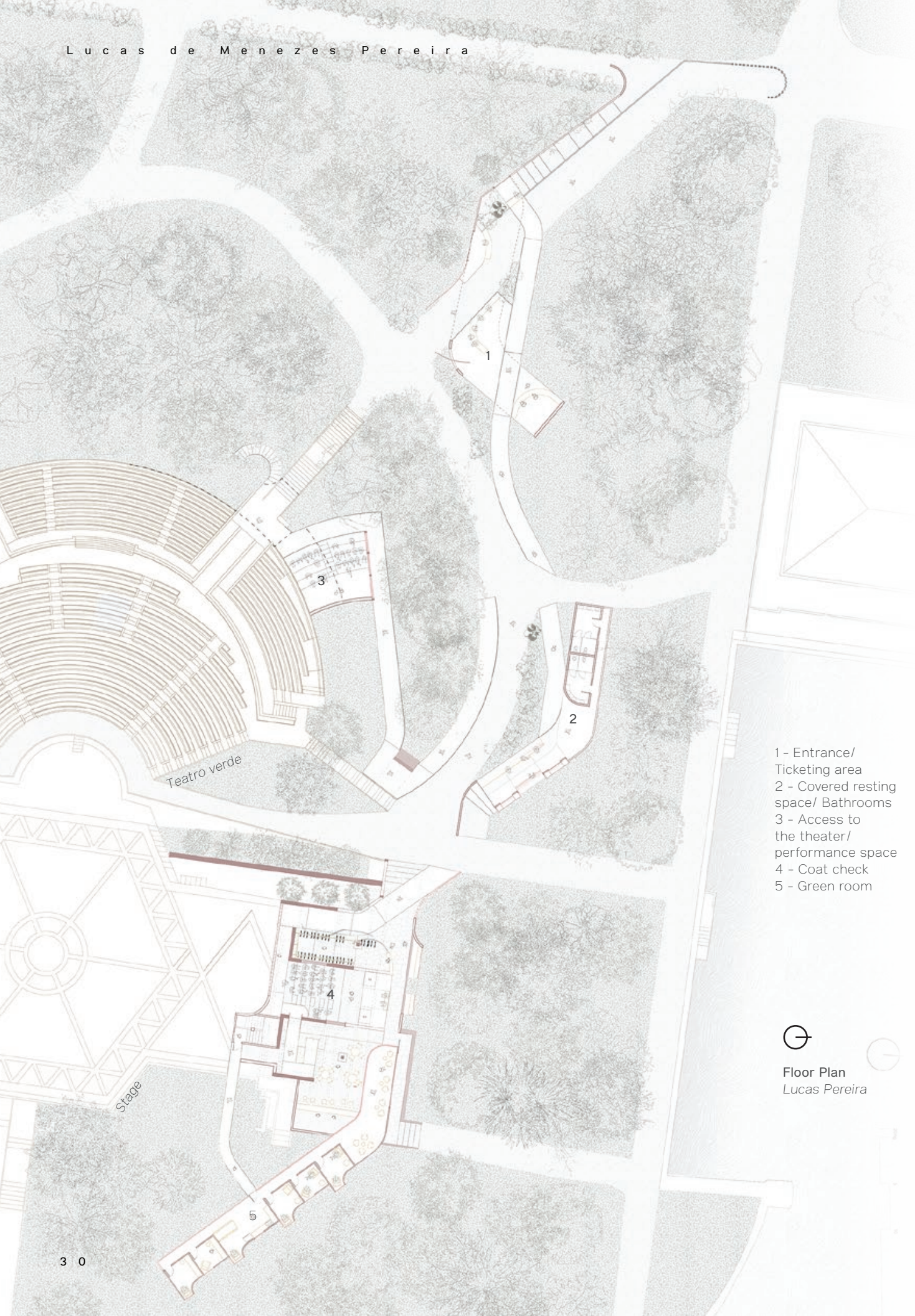


Current state of the theater - October 2022
Lucas Pereira



Archive Pictures - Construction and Design
Cini Foundation Archive

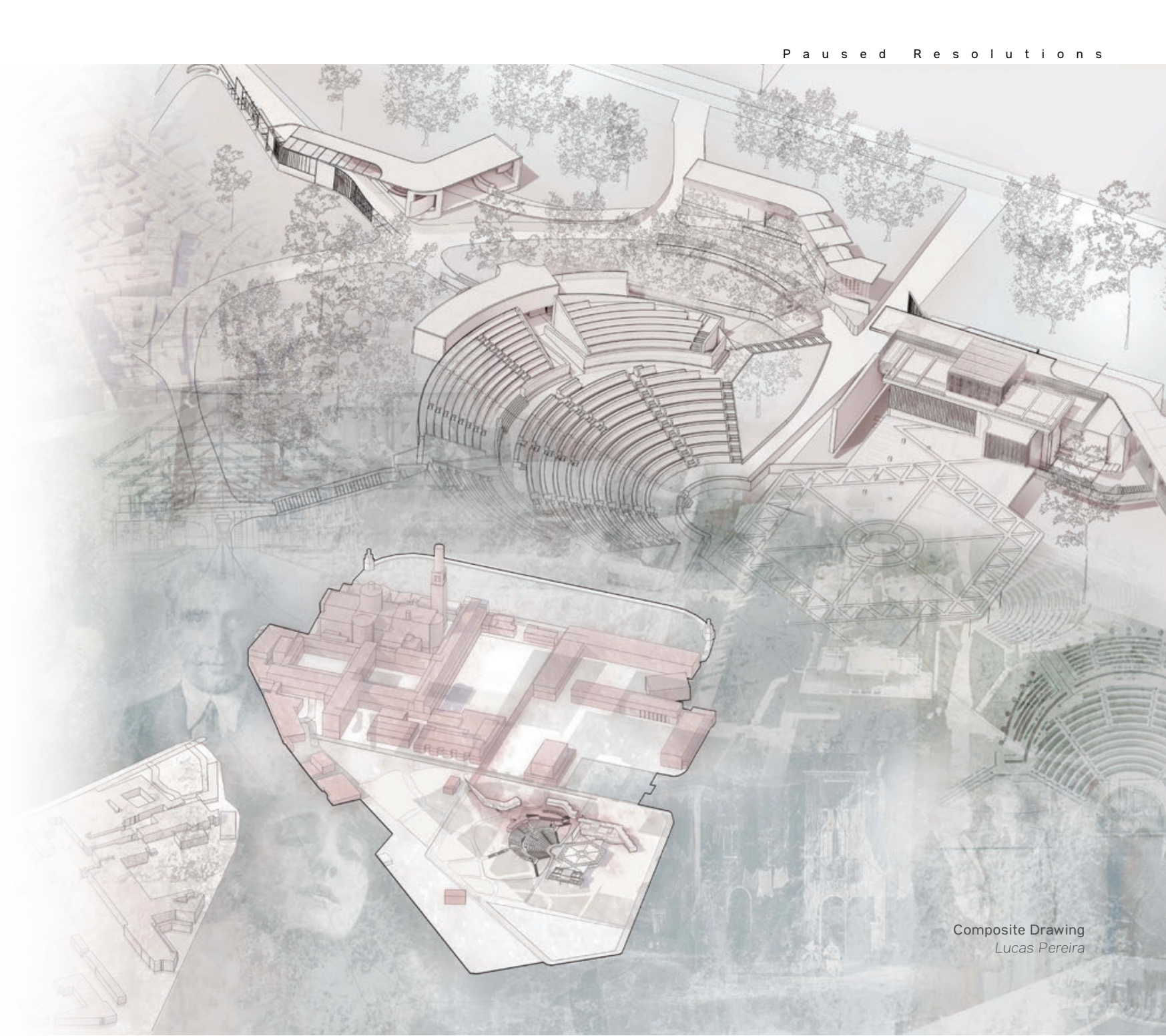




- 1 - Entrance/
Ticketing area
- 2 - Covered resting
space/ Bathrooms
- 3 - Access to
the theater/
performance space
- 4 - Coat check
- 5 - Green room



Floor Plan
Lucas Pereira



Composite Drawing
Lucas Pereira

The sequence of this experience happens on the northernmost side, with interconnected new programs that demarcate the pathways. This movement reinforces the idea that the **Teatro Verde is not only the built artifact**, but it starts from the back, with the pathways and the landscape surrounding it, having the park embedded into the theater's tectonics.

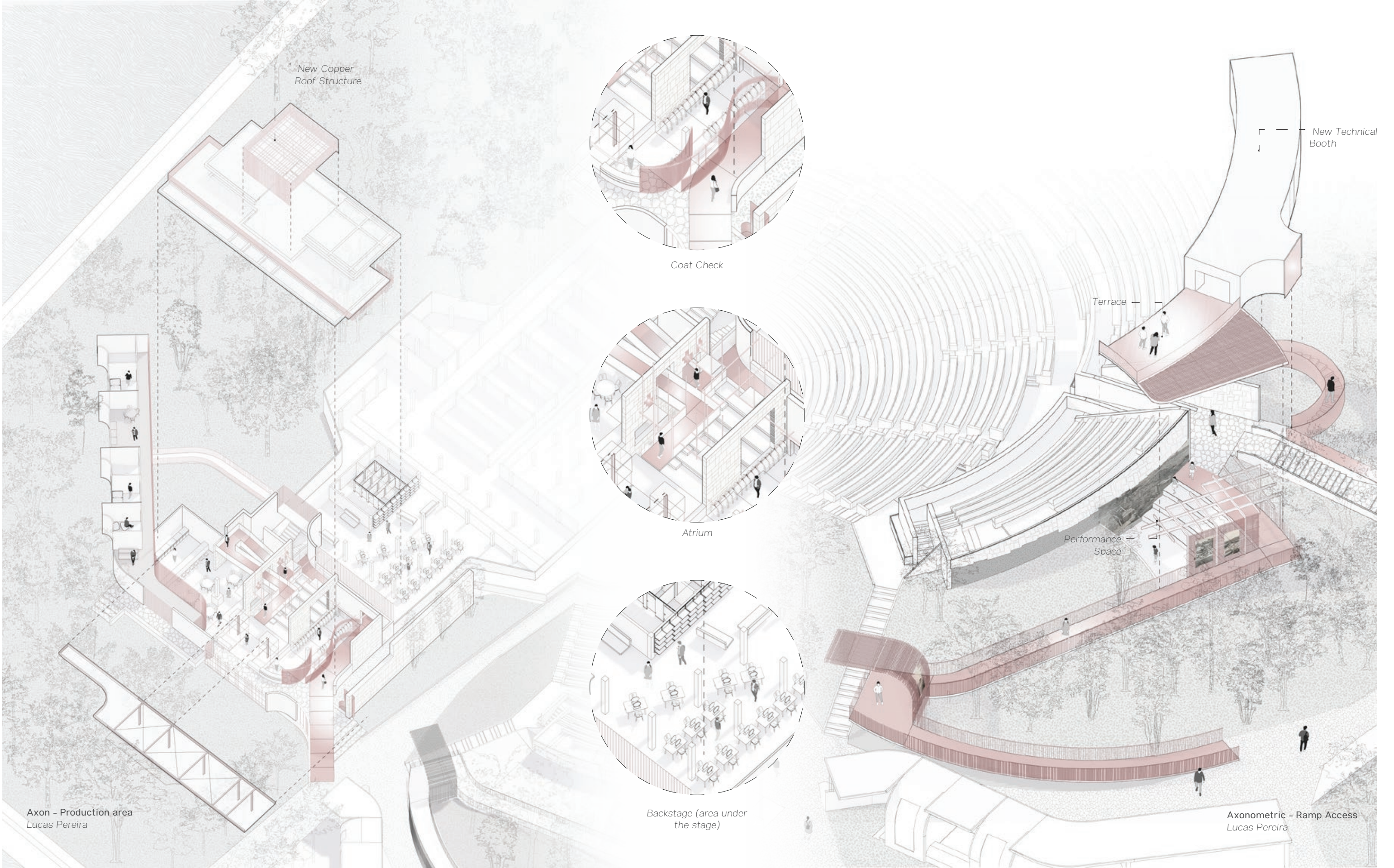


Eleonora Duse
(19th century Italian
actress)

Picture of the Theater's
construction

Transition space
Lucas Pereira

Entrance, Ticketing area
Lucas Pereira



Axon - Production area
Lucas Pereira

Backstage (area under
the stage)

Axonometric - Ramp Access
Lucas Pereira



Titina Rota: Italian costume designer of the 20th century.

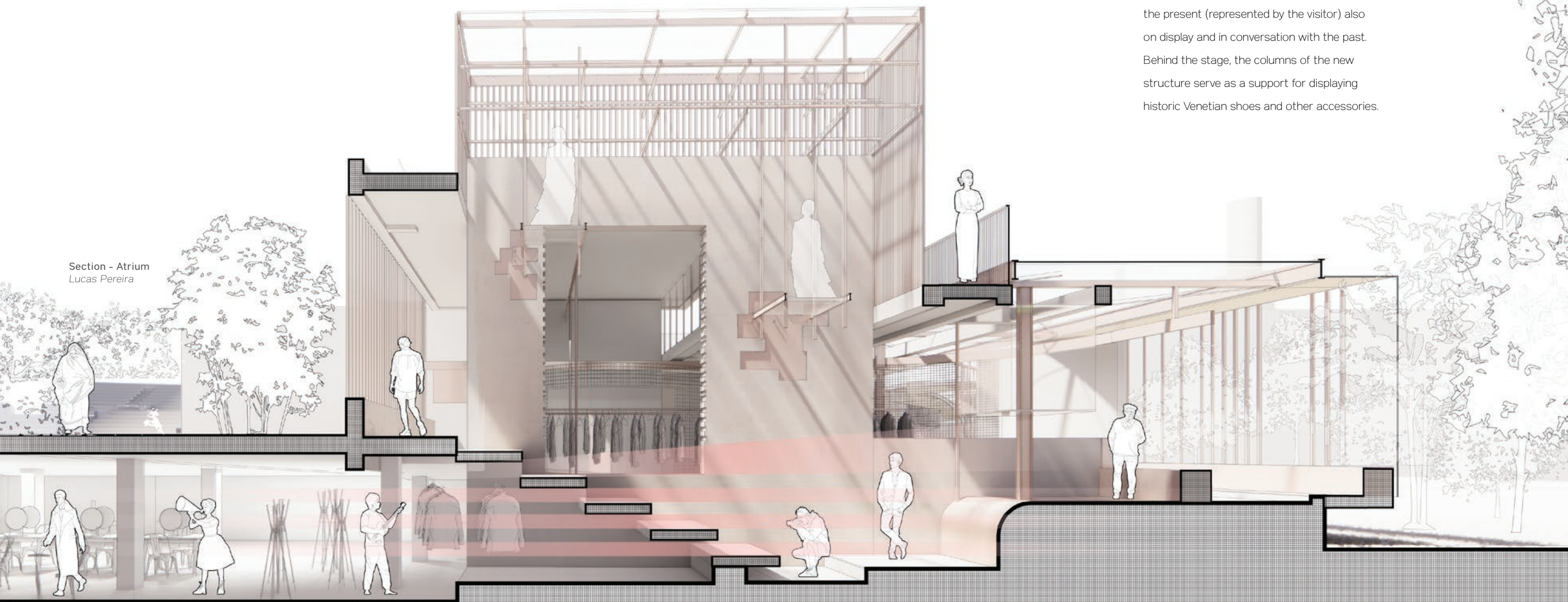
Aurel M. Milloss, choreographer of 20th century.

Santuzza Cali: costume and set designer from the 60's

Il Teatro Illustrato, magazine covers.

Coat check area
Lucas Pereira

Section - Atrium
Lucas Pereira

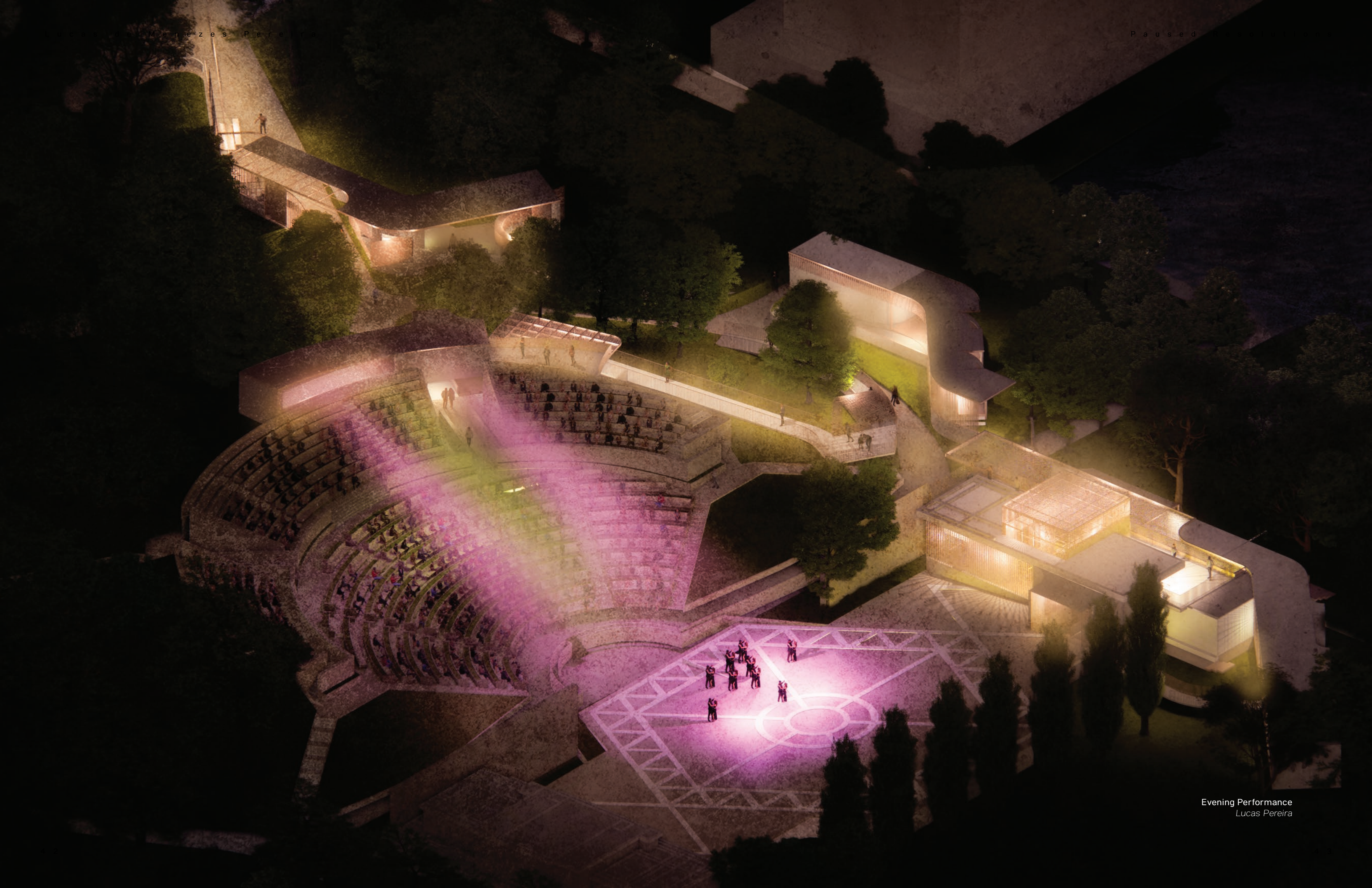


In the middle of the procession towards the open roof, the atrium displays costumes used by Eleonora Duse. They are placed at the level of the pathway with the idea of putting the present (represented by the visitor) also on display and in conversation with the past. Behind the stage, the columns of the new structure serve as a support for displaying historic Venetian shoes and other accessories.



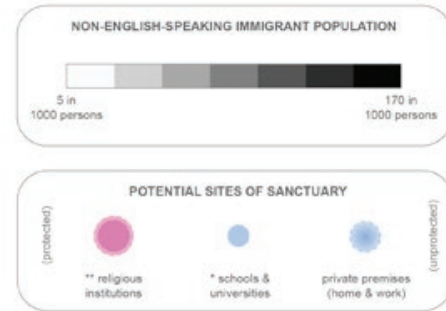
Where the supporting structure that holds the path and costumes meet the existing stone wall, a cooper panel is introduced in place of the stone, displaying architectural drawings from Vietti's design of the Teatro Verde.

Atrium - Costume Display
Lucas Pereira

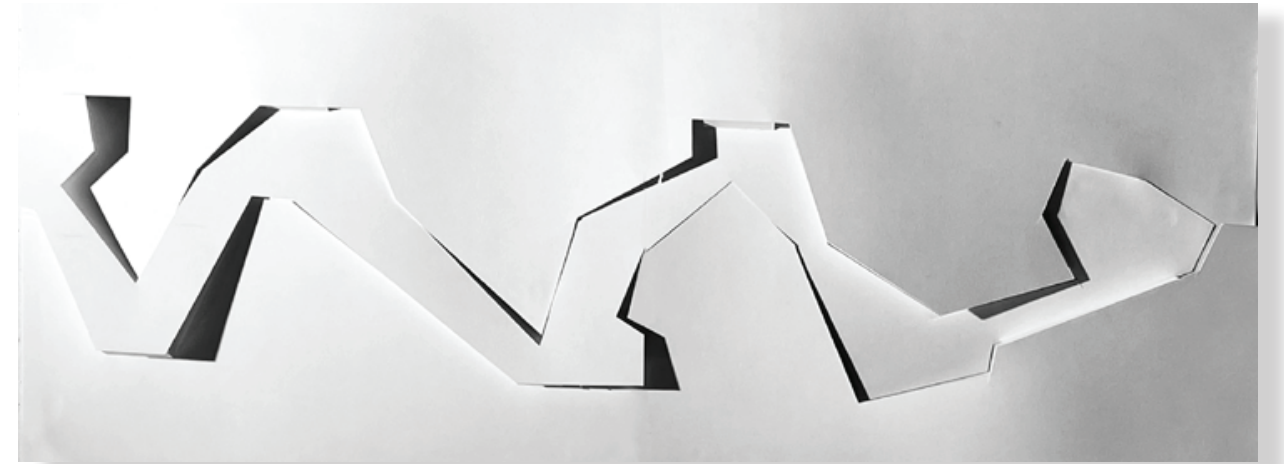




Through a mapping exercise, it was evident that there is a lack of geographical congruence between the areas of non-English speaking population without citizenship, versus the institutionalized forms of sanctuaries, such as the churches and universities that provide both physical and psychological protection against the fears of deportation.



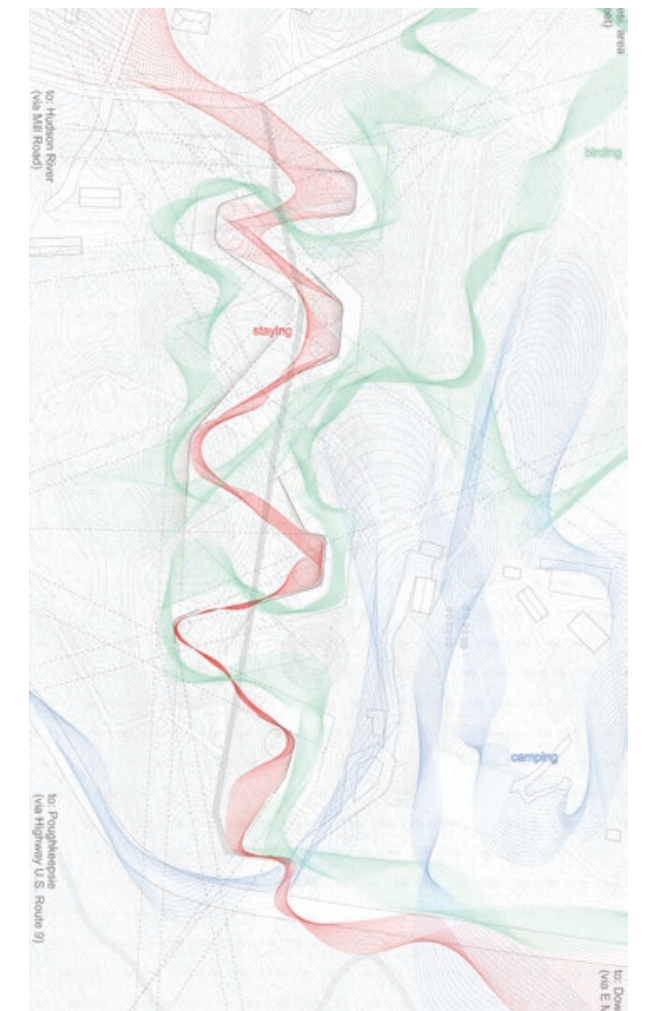
Existing and potential sanctuaries in Hudson Valley
 Jonghoon Park, Lucas Pereira



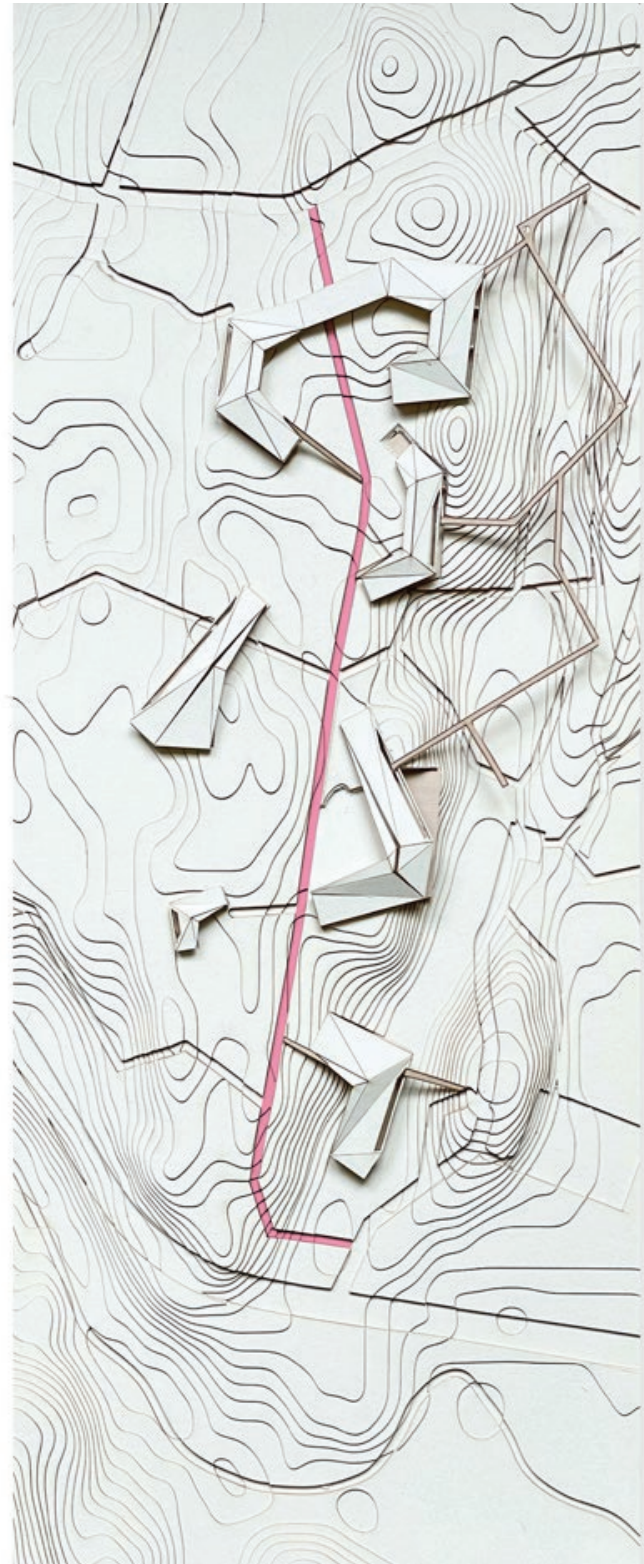
Paper model - site engagement
 Lucas Pereira, Jonghoon Park



Development- site strategy
 Jonghoon Park



User experience - movement
 Jonghoon Park



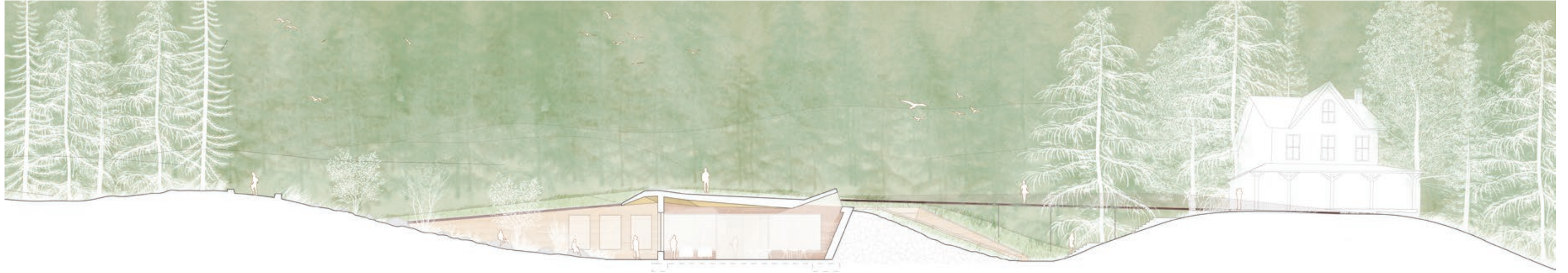
Freedonia lane



Site Model
Lucas Pereira, Jonghoon Park

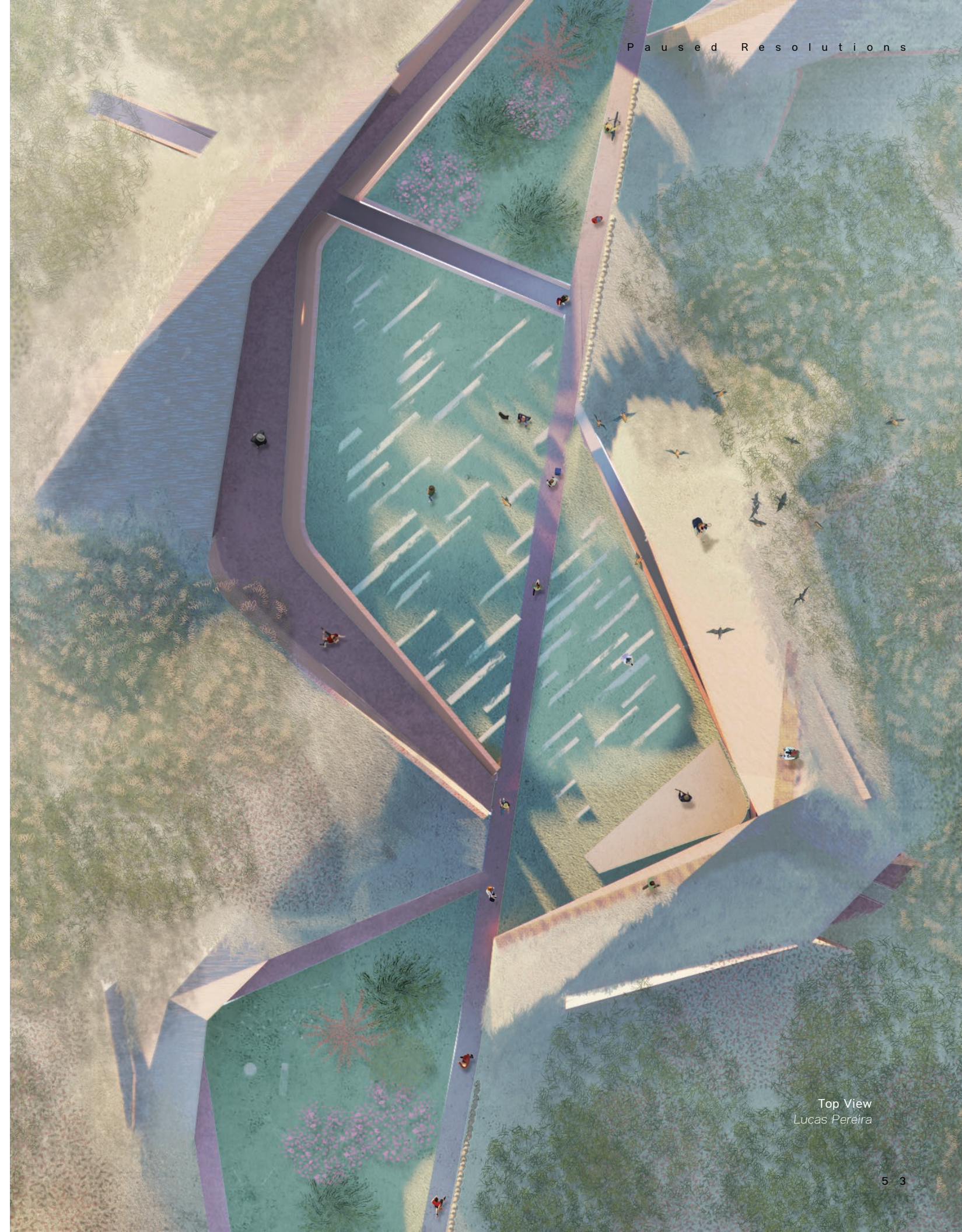


Floor Plan
Lucas Pereira, Jonghoon Park





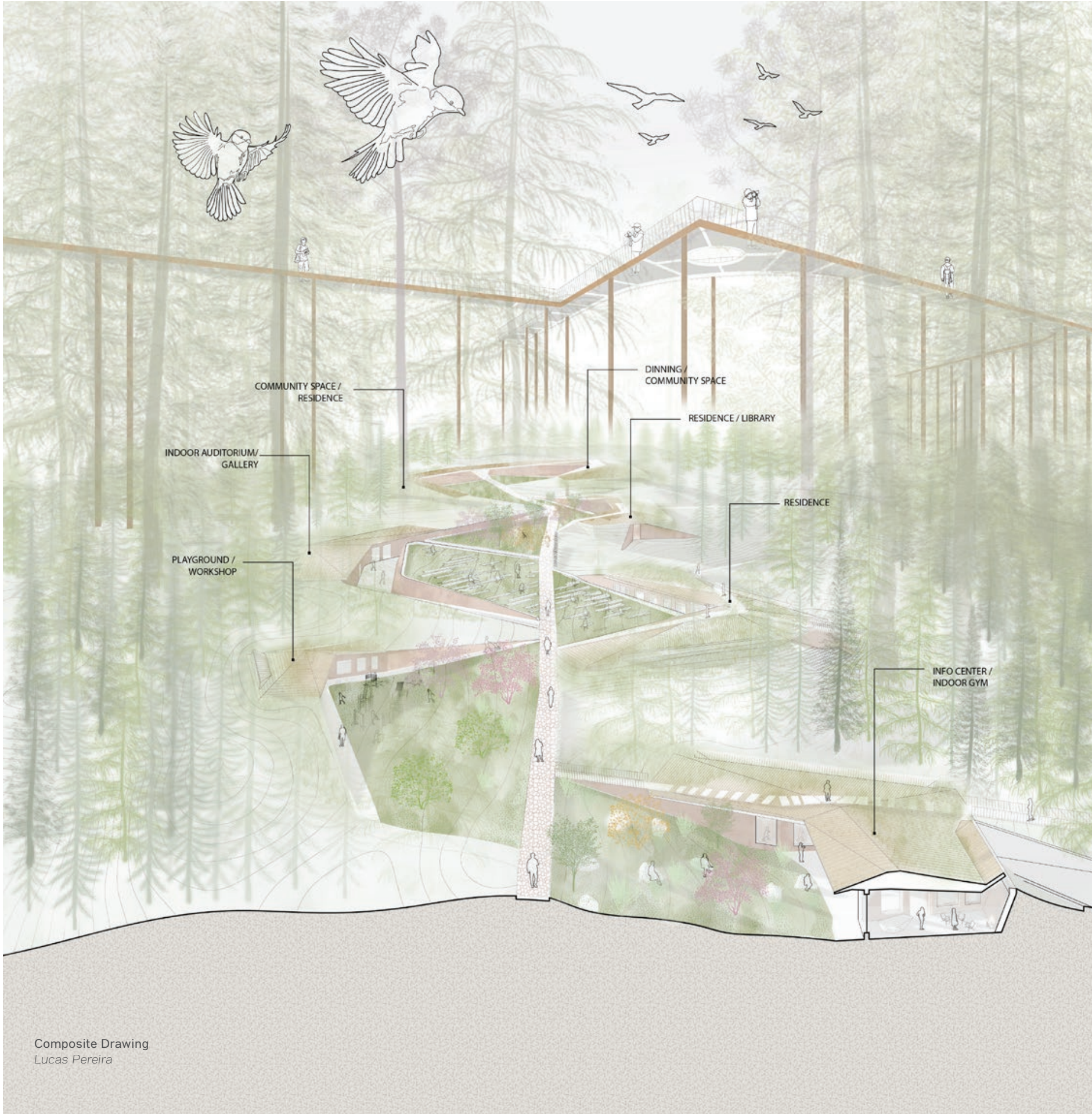
Cultural node - Floor Plan
Jonghoon Park



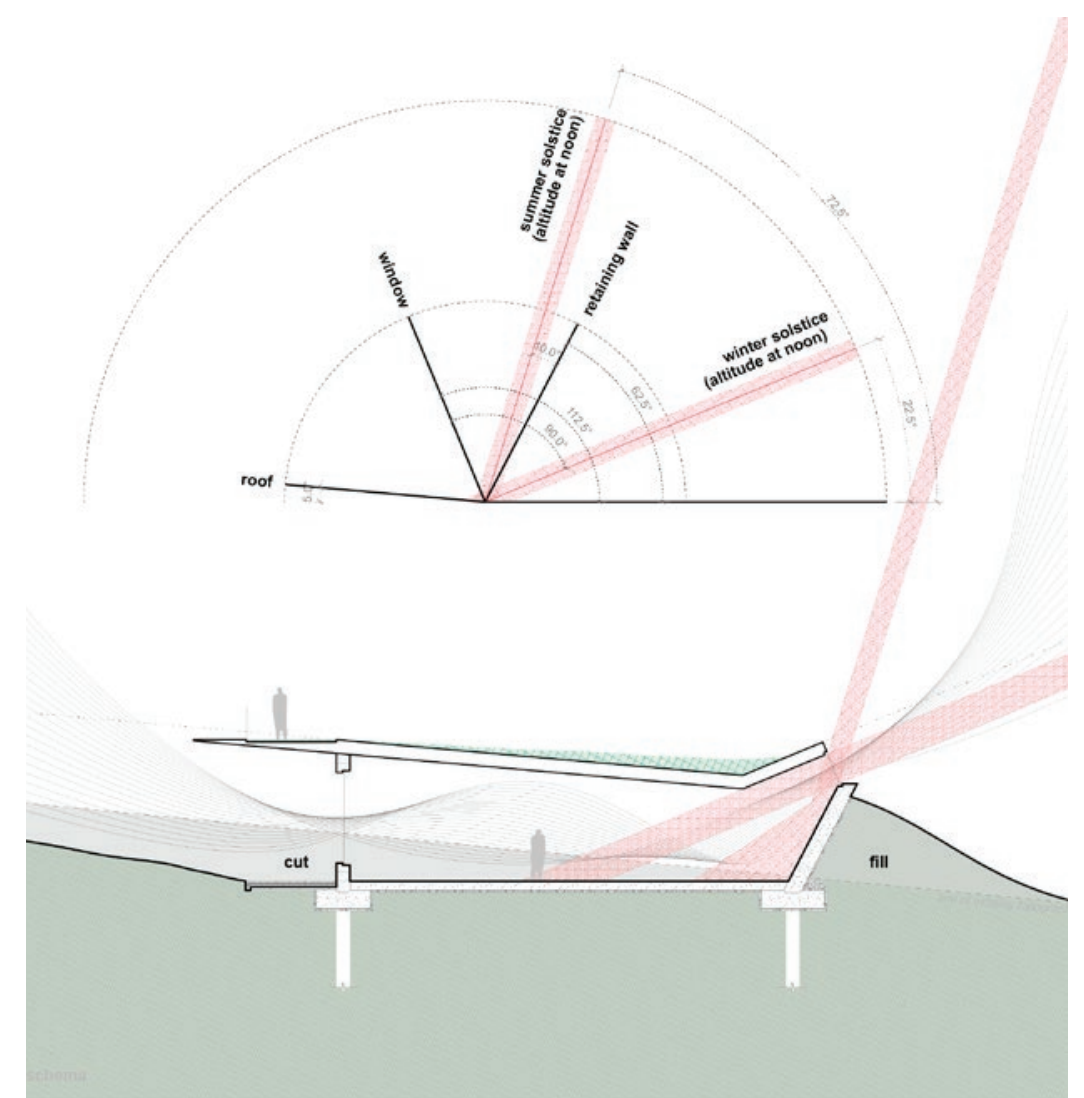
Top View
Lucas Pereira



Birding path
Lucas Pereira



Composite Drawing
Lucas Pereira



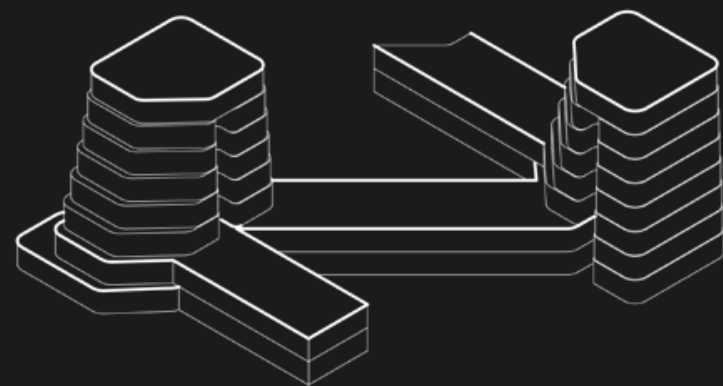
Structural Rationale
Jonghoon Park, Lucas Pereira

Sectionally, the land is removed to make room for interior spaces, only to be relocated elsewhere around these new volumes in order to create a continuous surface from the landscape to the roof. There are skylights along the outer perimeter and the idea is that the angle of the skylight and its alignment with the sloped retaining wall would allow for indirect sunlight from the high-altitude sun in the summer months and direct sunlight in the winter.



GROUND:UP

Fall 2021/Columbia GSAPP
South Bronx, NY
Core 3/ Instructor: Galia Solomonoff/
Partnership with: Michael Lau

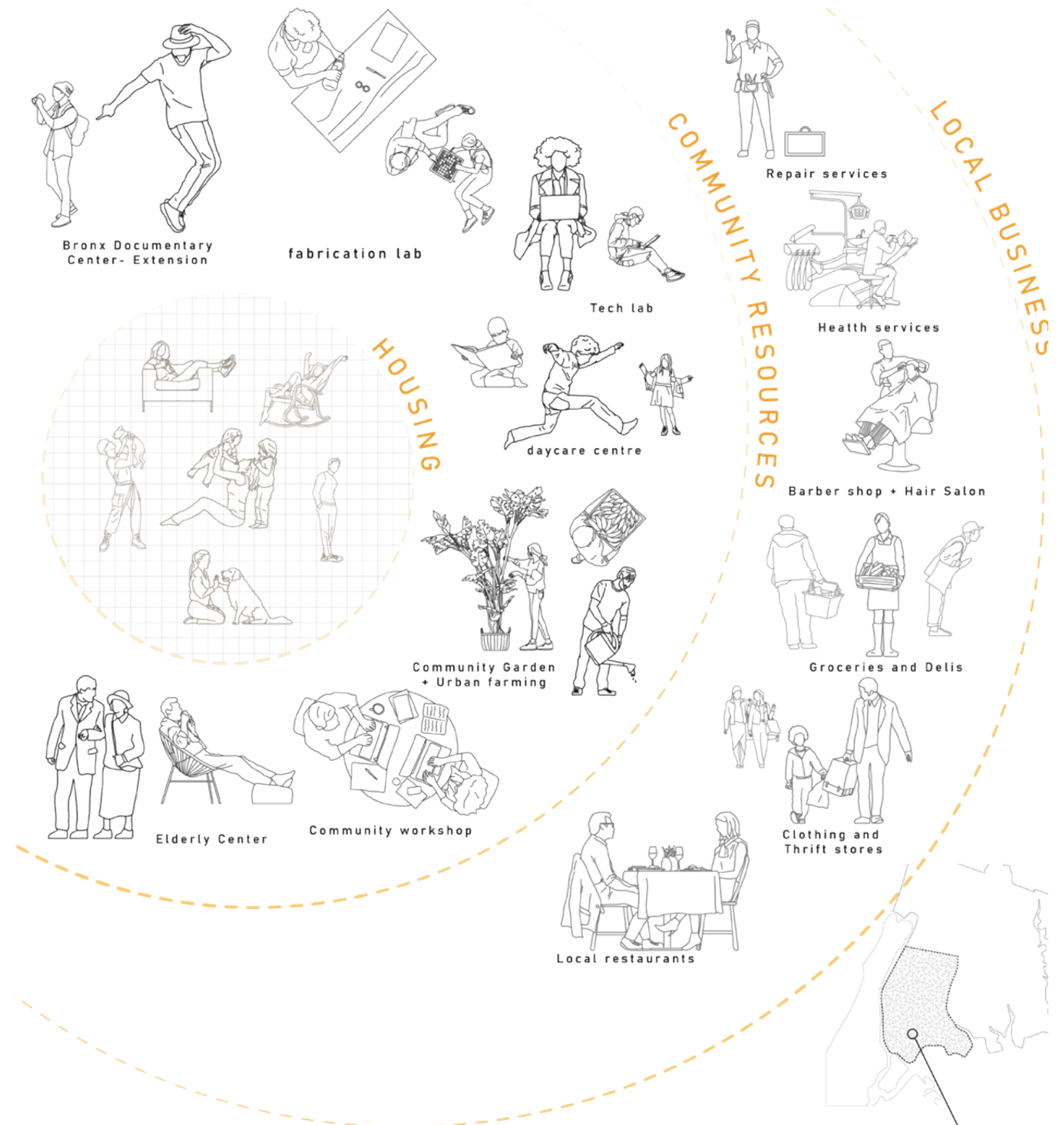


The South Bronx, In New York City, is marked by ongoing gentrification, leading to a lack of pride from the locals in where they live. The following housing proposal aims to revert this trend by creating a hub that will harness a democratic economy and strengthen the local identity.

The design was conceived from the ground up. The ground floor is destined for community resources and local commerces that are linked to anchor institutions in the Bronx. The shophouse typology allows the owners of small businesses to live in the complex. Finally, The massing creates density in mound-shaped volumes, allowing less shadow projection area onto the facade, and maximizing the number of units with access to sunlight and ventilation.



Inspirational drawing
Lucas Pereira, Michael Lau

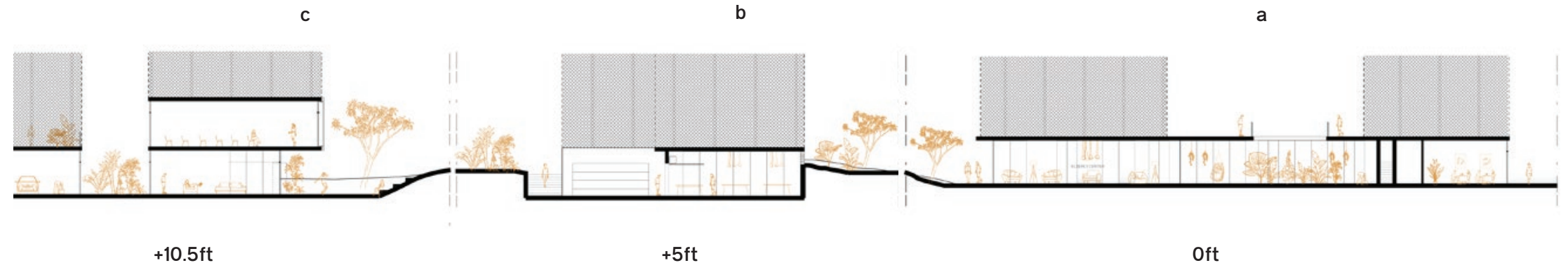


Aspirational drawing - The Local Network
Lucas Pereira, Michael Lau

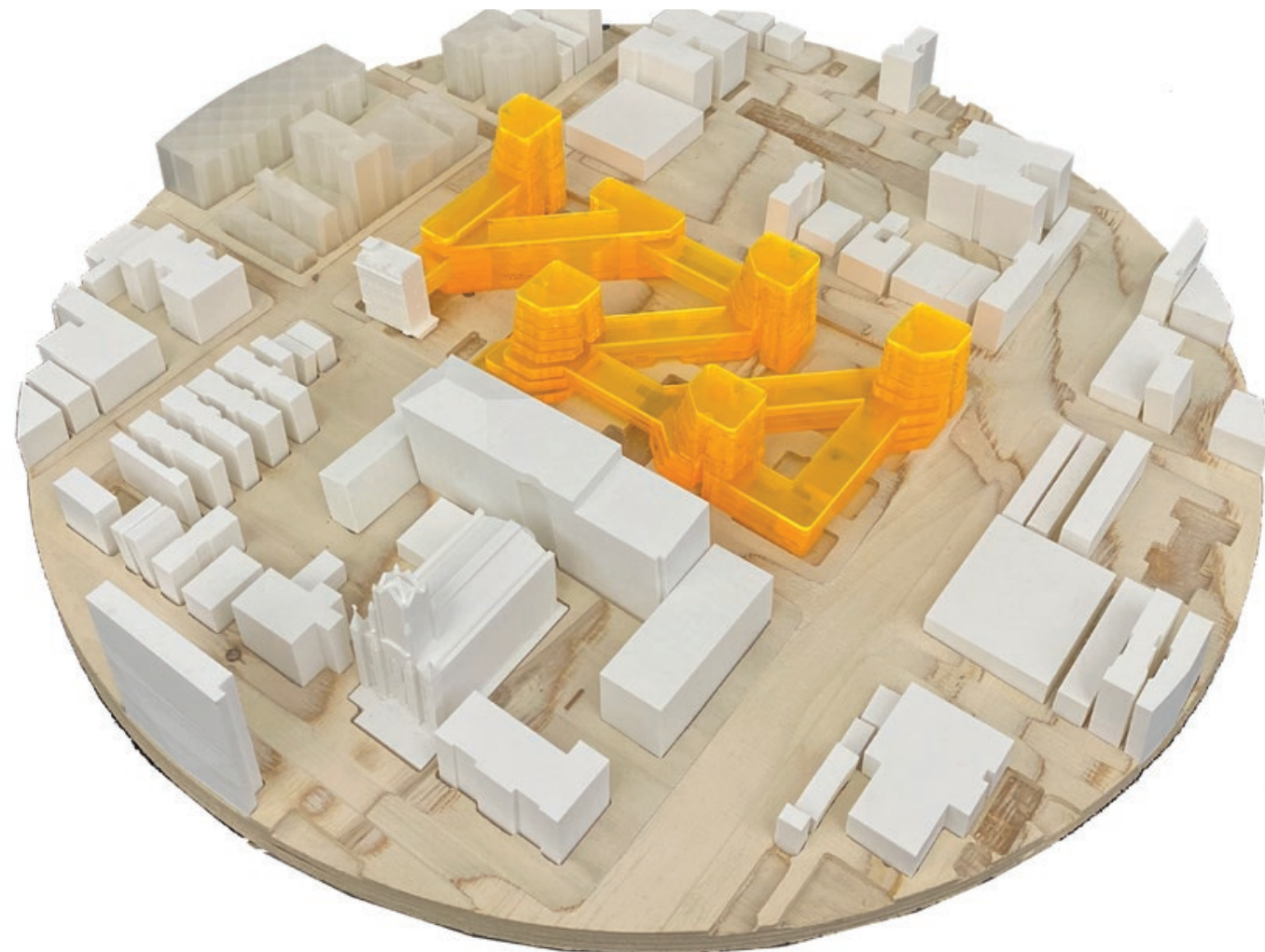
SOUTH BRONX

The final massing provides an interconnected plan, with varied densities and public spaces that grounds the entire project.

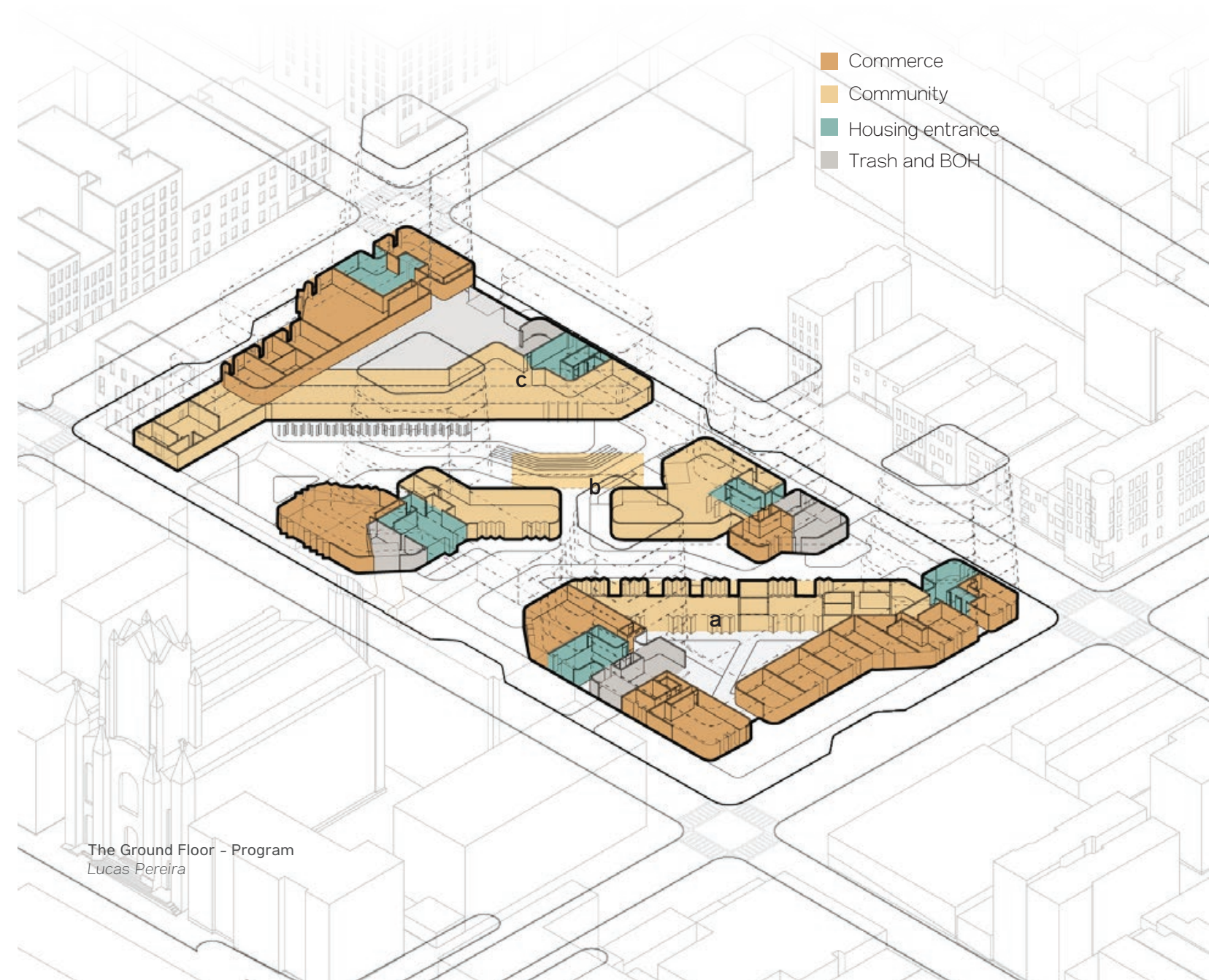
The relationship to the streets and to the inside projects great importance to the ground floor. That being said, the ground and the landscape became the foundation of the project.



The Ground and Topography
Lucas Pereira

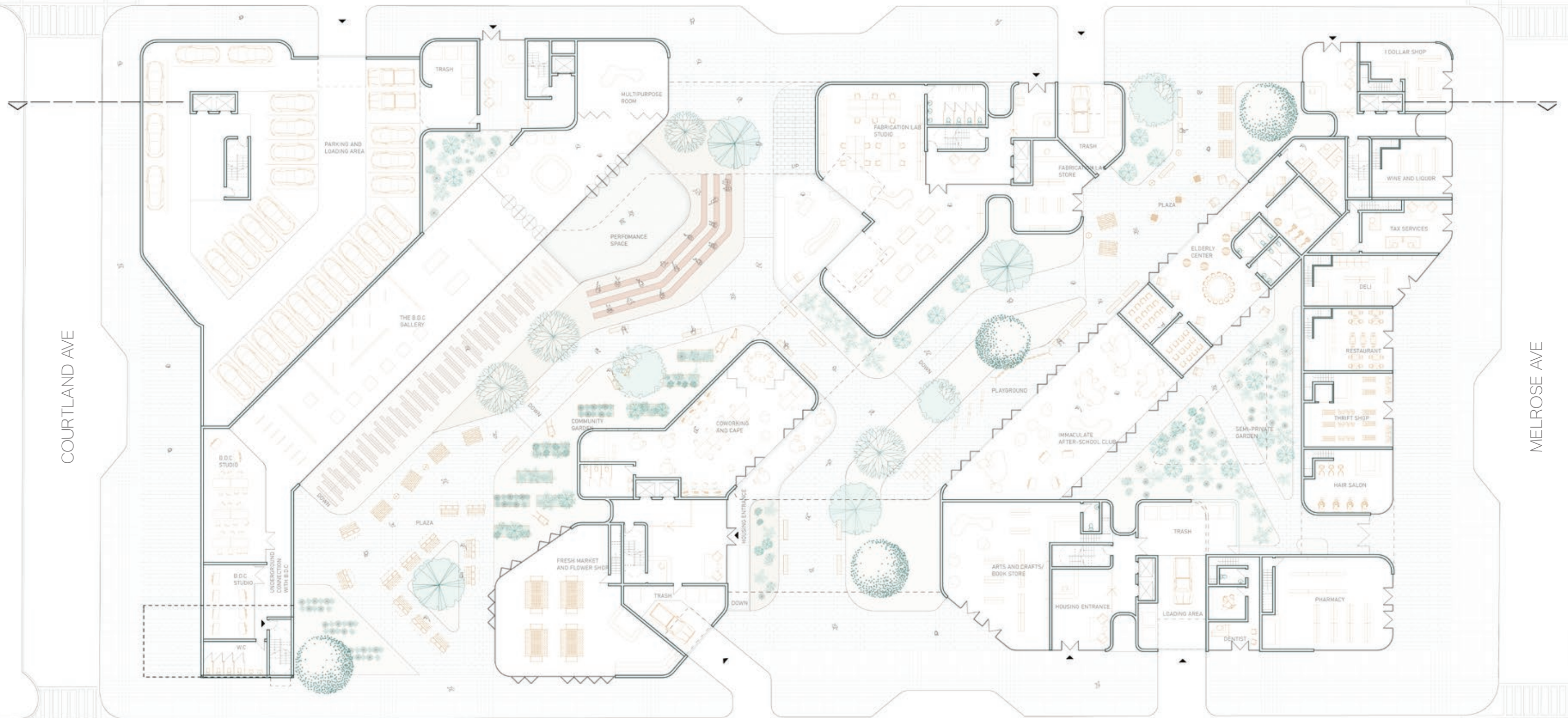


Site Massing Model
Lucas Pereira, Michael Lau



The Ground Floor - Program
Lucas Pereira

E 152nd ST



COURTLAND AVE

MELROSE AVE

Ground Floor
Lucas Pereira, Michael Lau

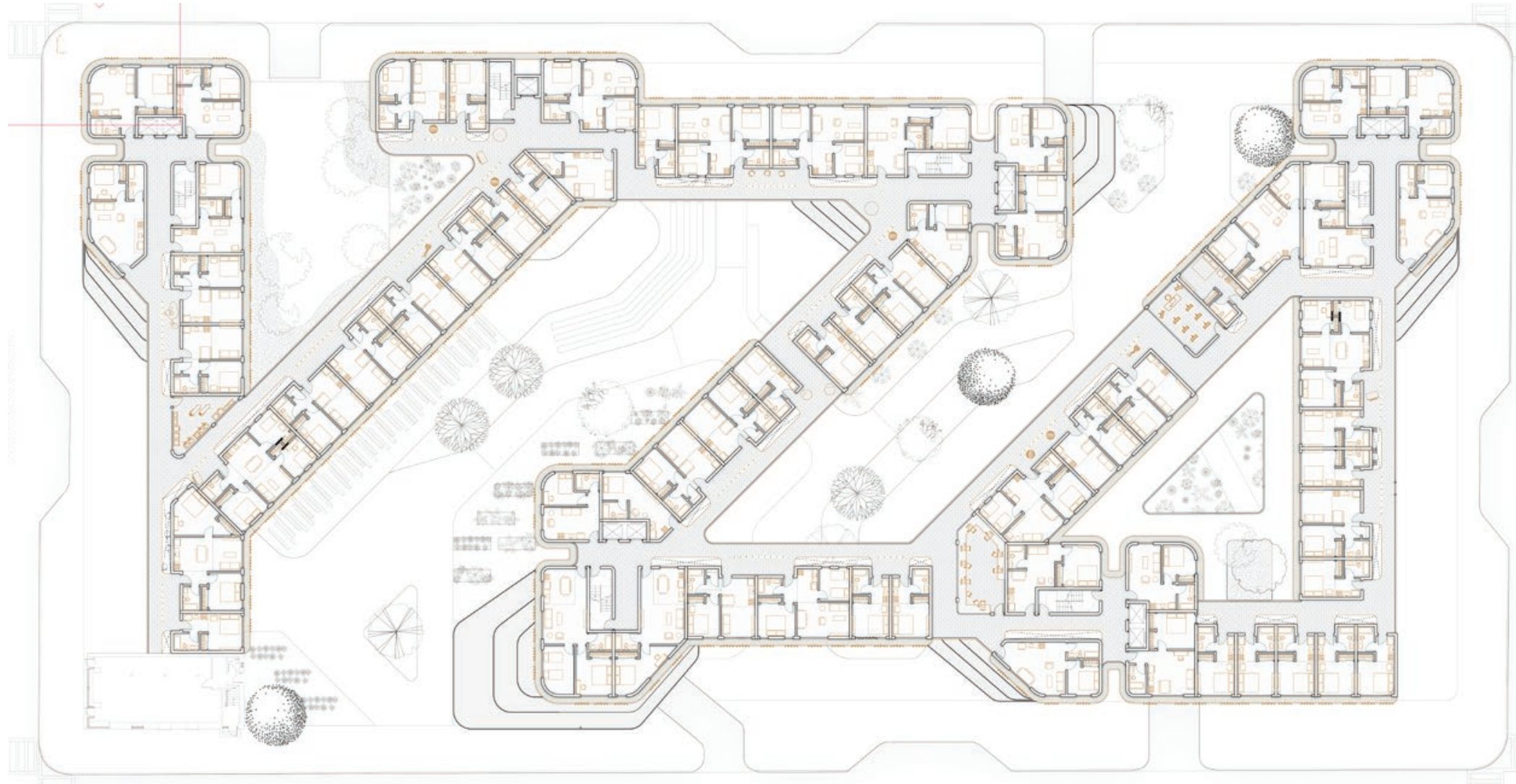
E 151st ST



FLOOR PLAN - GROUND
1" = 1/8"

Exterior Perspective
Lucas Pereira

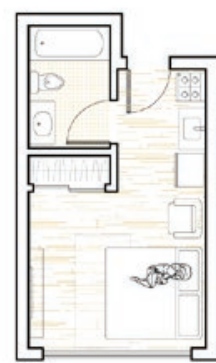




Floor plan - Residential typ. floor
Lucas Pereira, Michael Lau



Detail model - Facade operation
Michael Lau



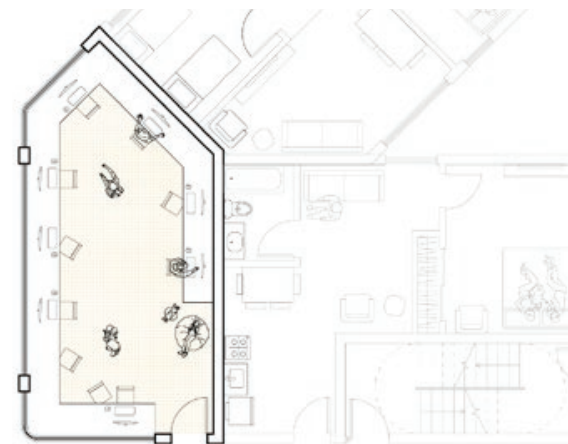
Studio



1 Bed



2 bed



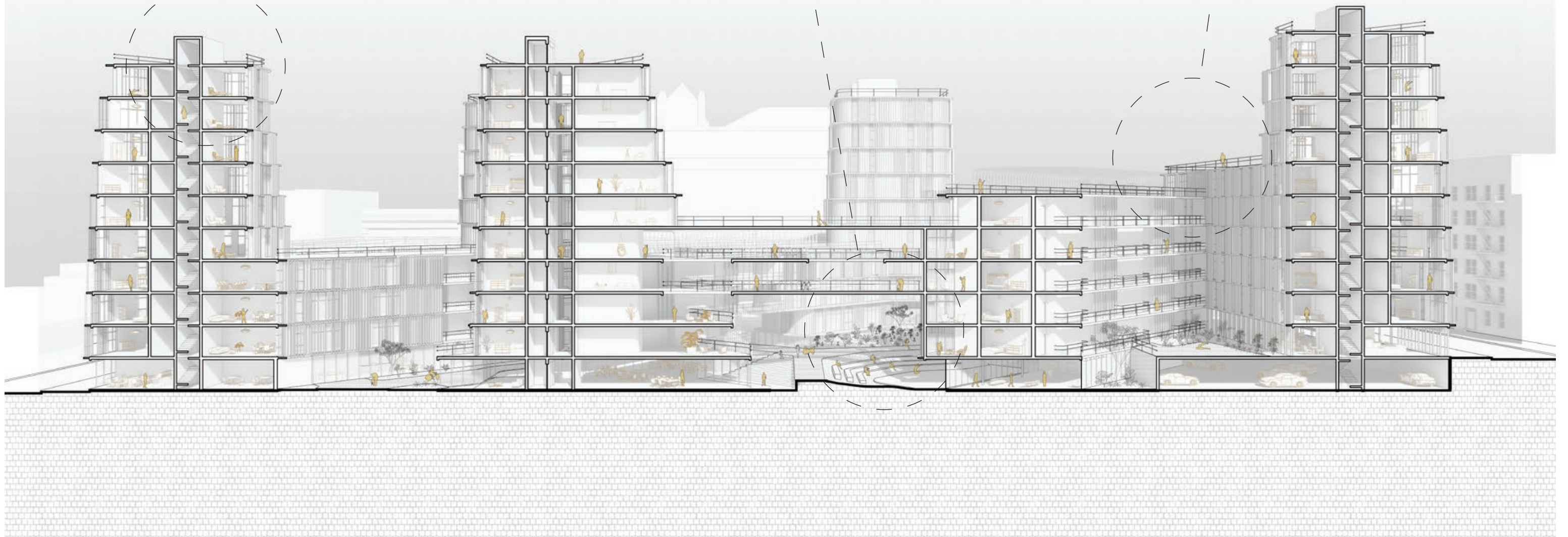
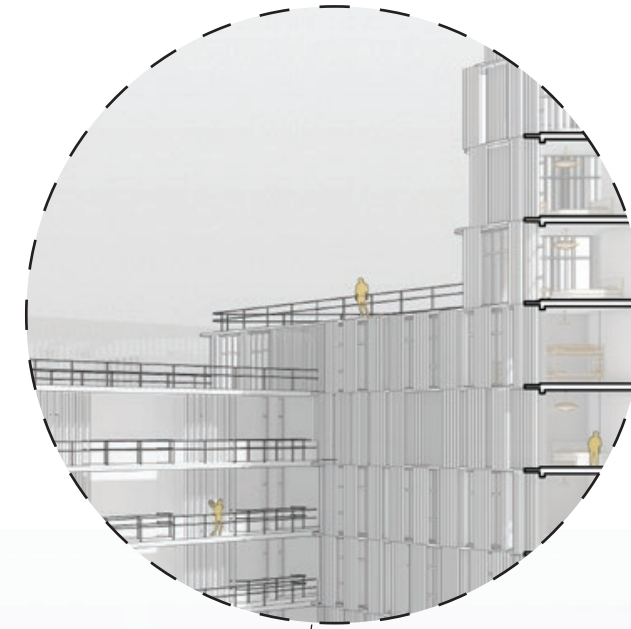
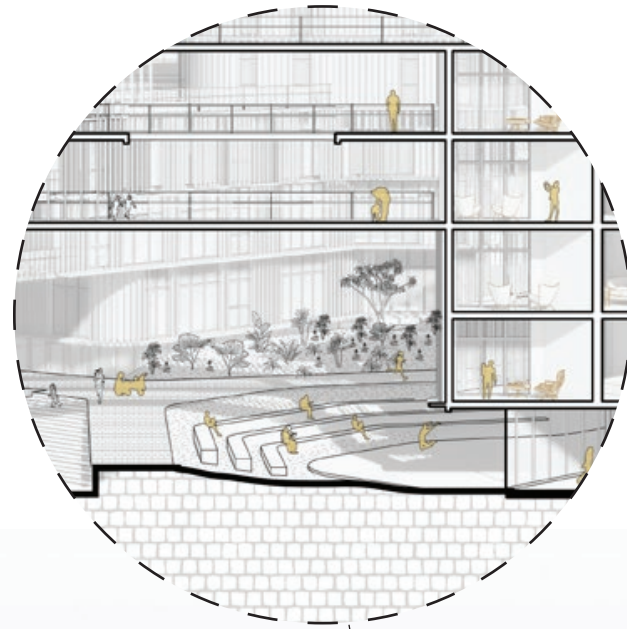
The 'Switch'

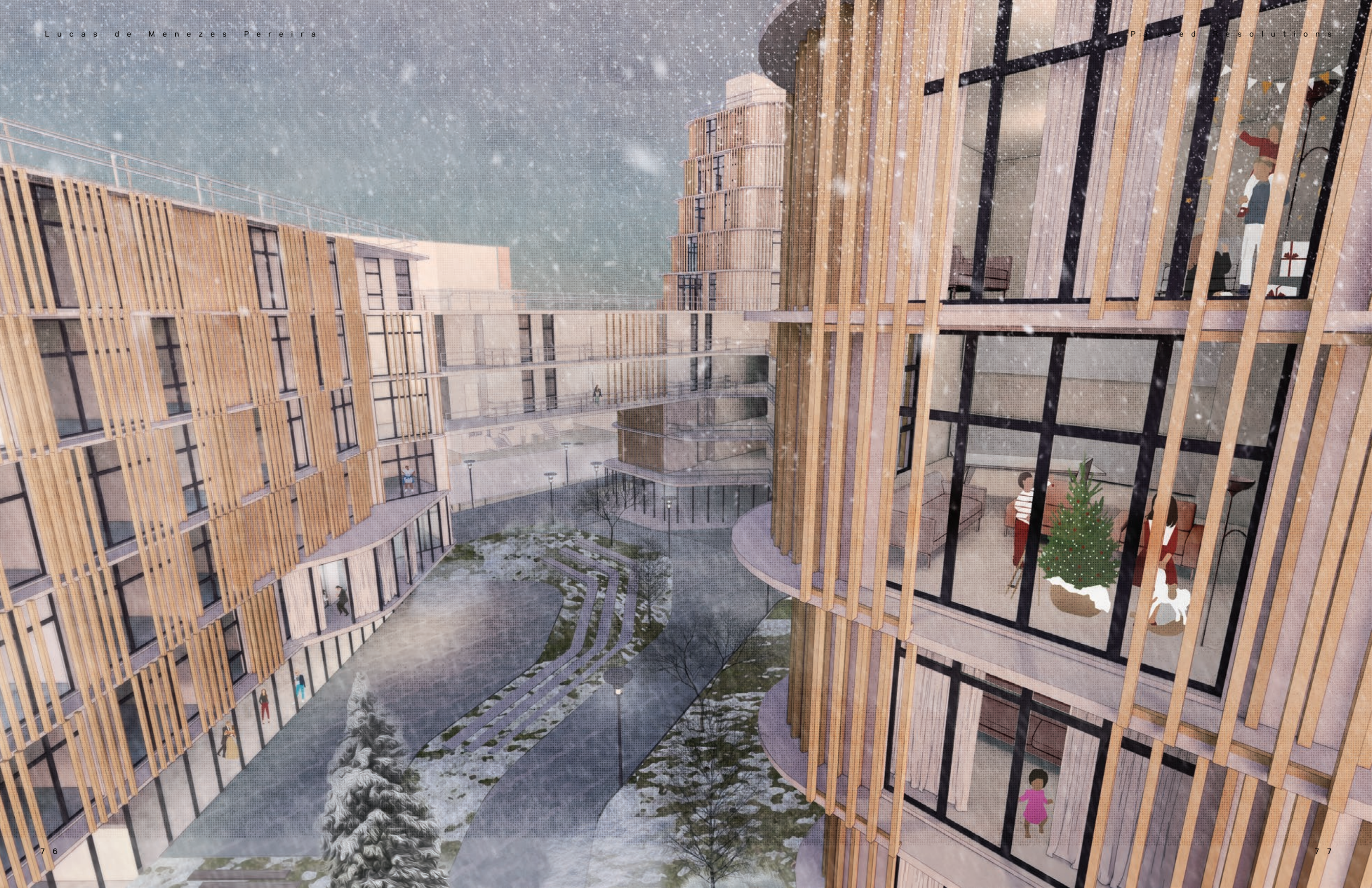
Unit layout
Lucas Pereira

The units range from a studio to three bedrooms. Where the volume is linear, they follow typical designed layouts. In the 'mounds', the units become customized, changing per floor. Where there is a switch on corridor paths, the adjacent rooms become community rooms, such as art rooms, computer, and laundry rooms.



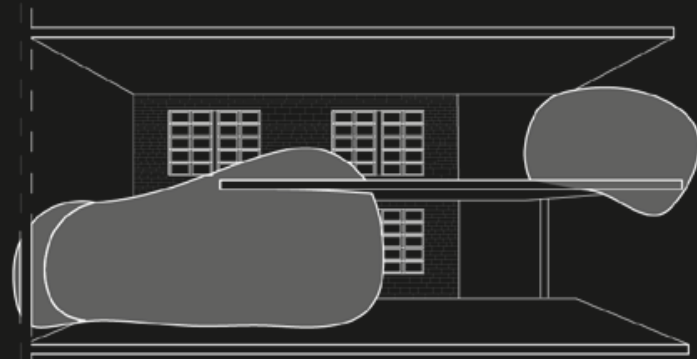
Section
Lucas Pereira





THE VARIANT SCHOOL

Spring 2021/Columbia GSAPP
New York, NY
Core 2/ Instructor: Lindy Roy
Individual project



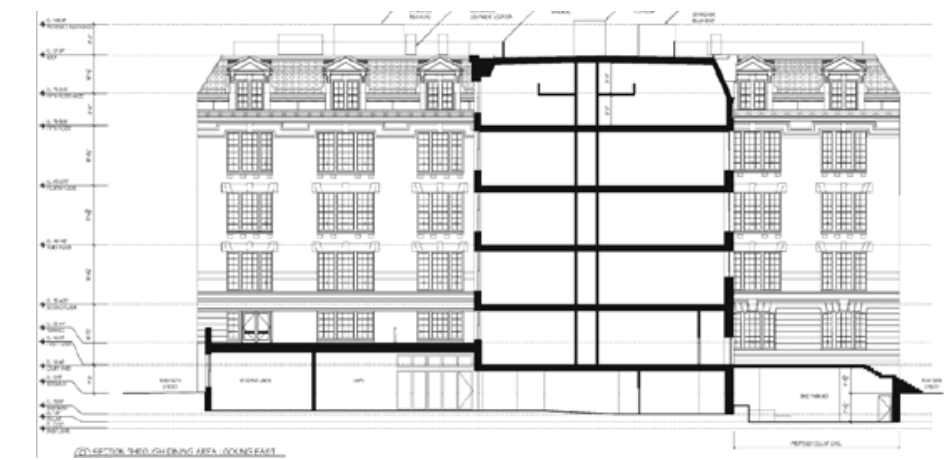
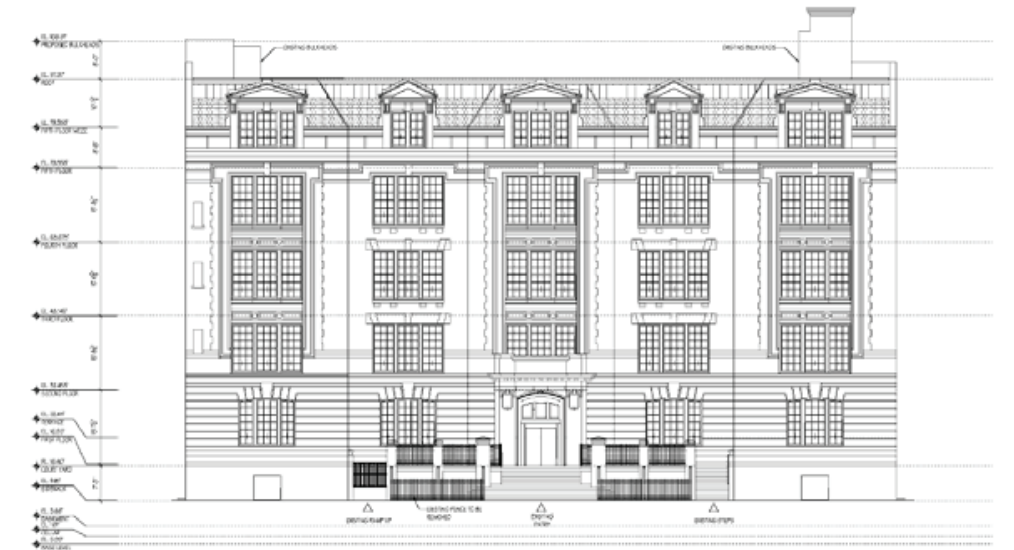
This project introduces a new pedagogy to the school based on Montessori education, focusing on the individuality of the student and sensorial sensitivity.

Operating with an outside-in approach, new topological structures were strategically introduced to the current building. They create new field conditions, taking into consideration light, movement, and accumulation.

Overall, the new P.S. 64 should create a ludic and stimulating environment that embodies diversity and praises the complexity of our human neural system.



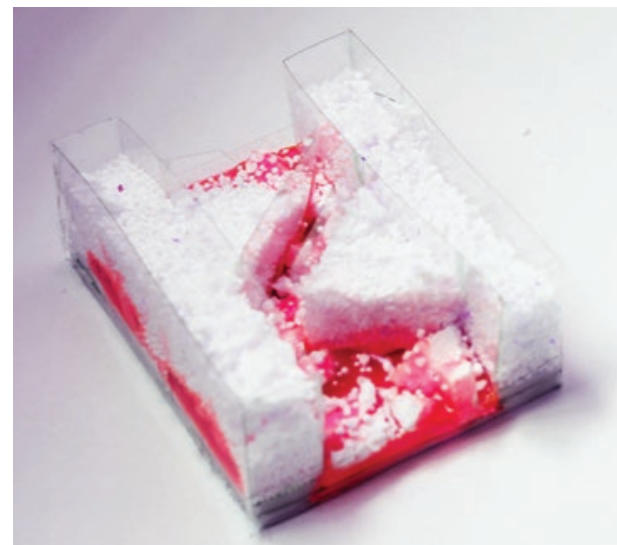
PS 64
nypost.com



South Elevation and East Section
Landmarks Preservation Commission

"P.S. 64 served as a public school from 1907 until 1977 and then went on to house a variety of community organizations, but the building is currently vacant. Over the past few decades, the property has been in the political spotlight due to the activity of its various tenants, the proposed plans by the current owner to convert the building into a dormitory, and the speculative plans of the mayor to maneuver the building into the ownership of a wealthy benefactor."

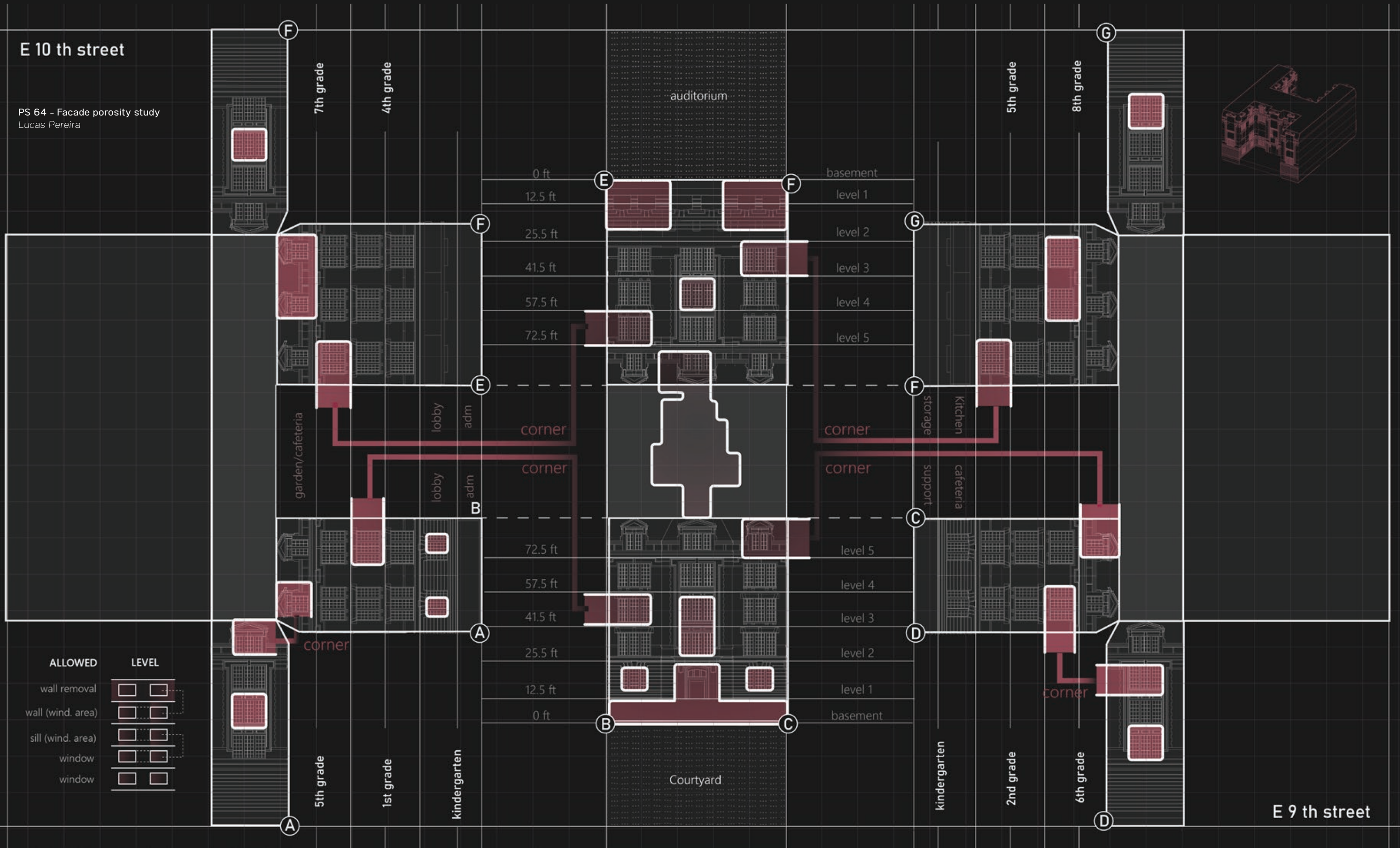
*Extracted from syllabus



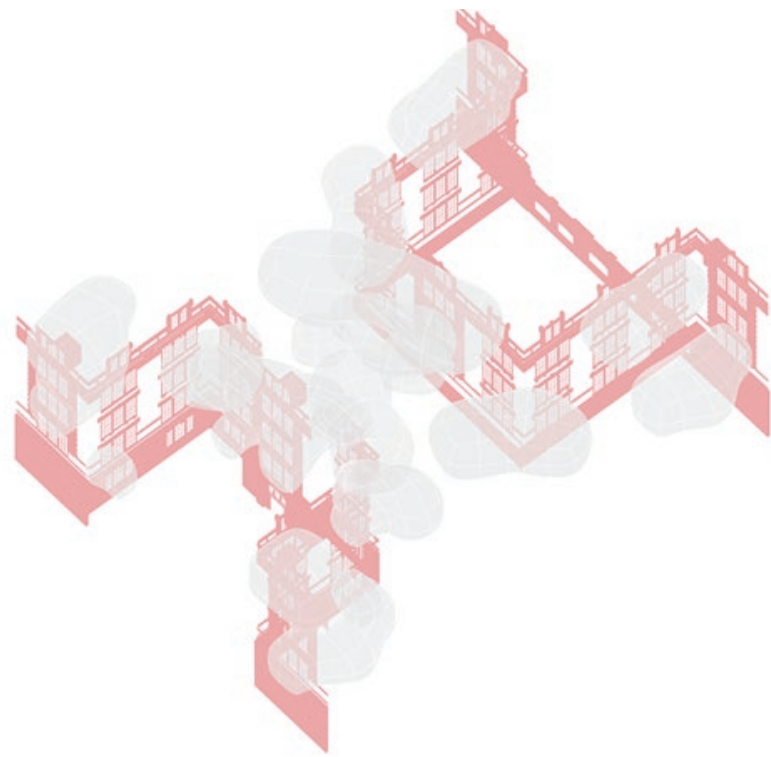
Site Study models - Flows and Porosity
Lucas Pereira

E 10 th street

PS 64 - Facade porosity study
Lucas Pereira

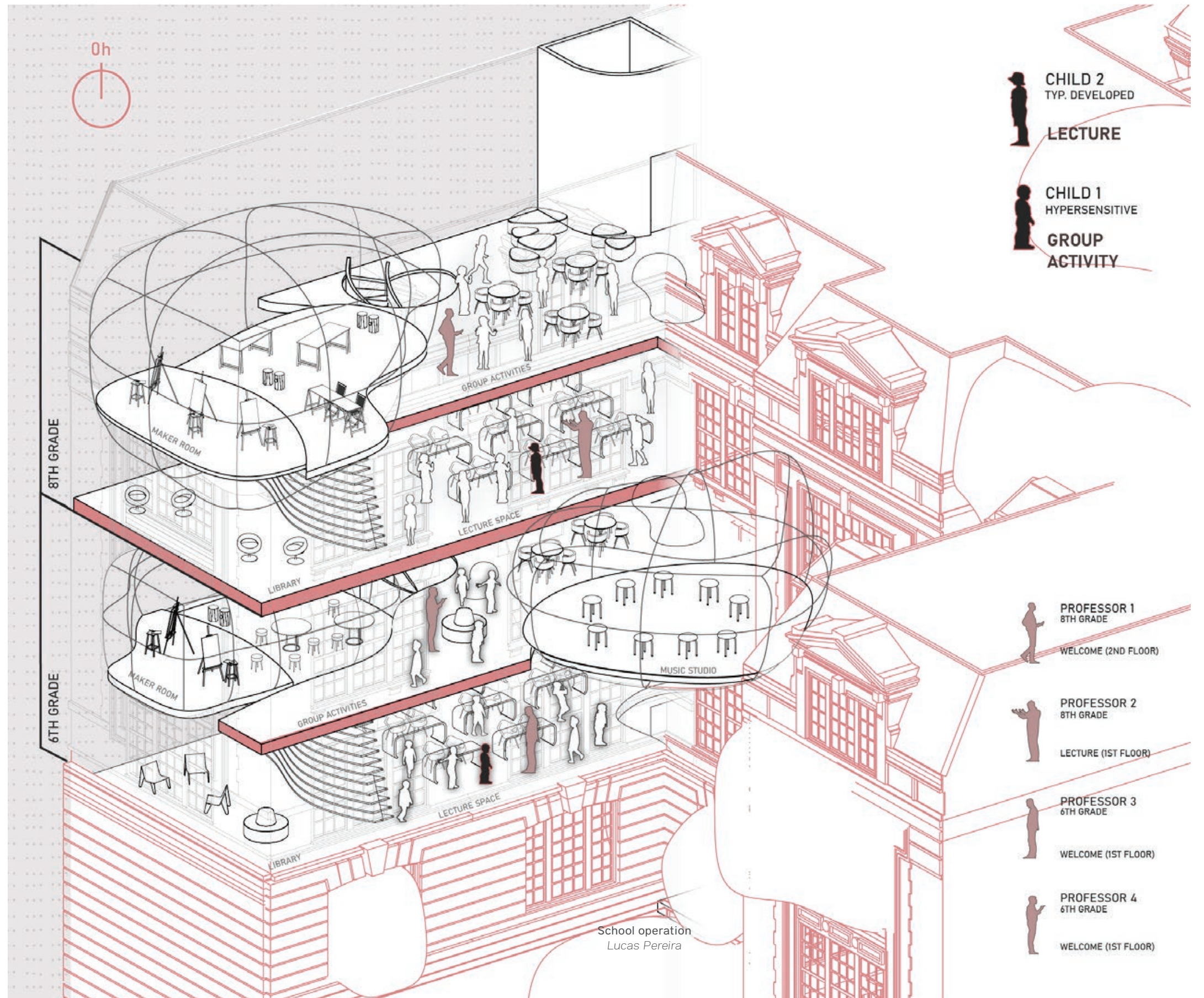


E 9 th street



The cells
Lucas Pereira

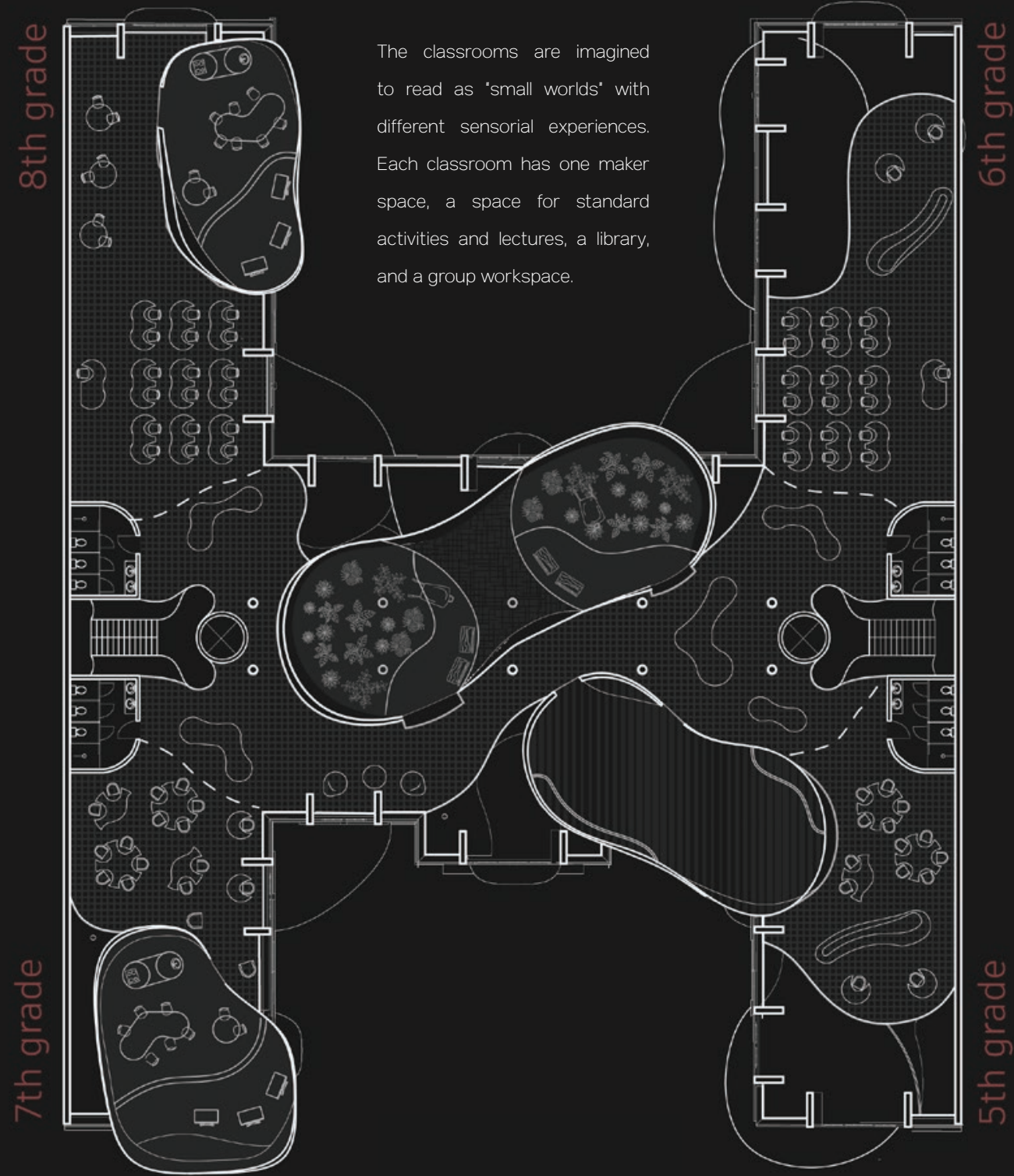
The organic cells are structures embedded in the existing building, working as agents for creating a variance in the overall experience of the students. They will host programs that are more specific to the school experience and will have different material properties, allowing control of different levels of sensorial loads to different responses to stimuli. Depending on the program the cells interact with the structure in different ways.



School operation
Lucas Pereira

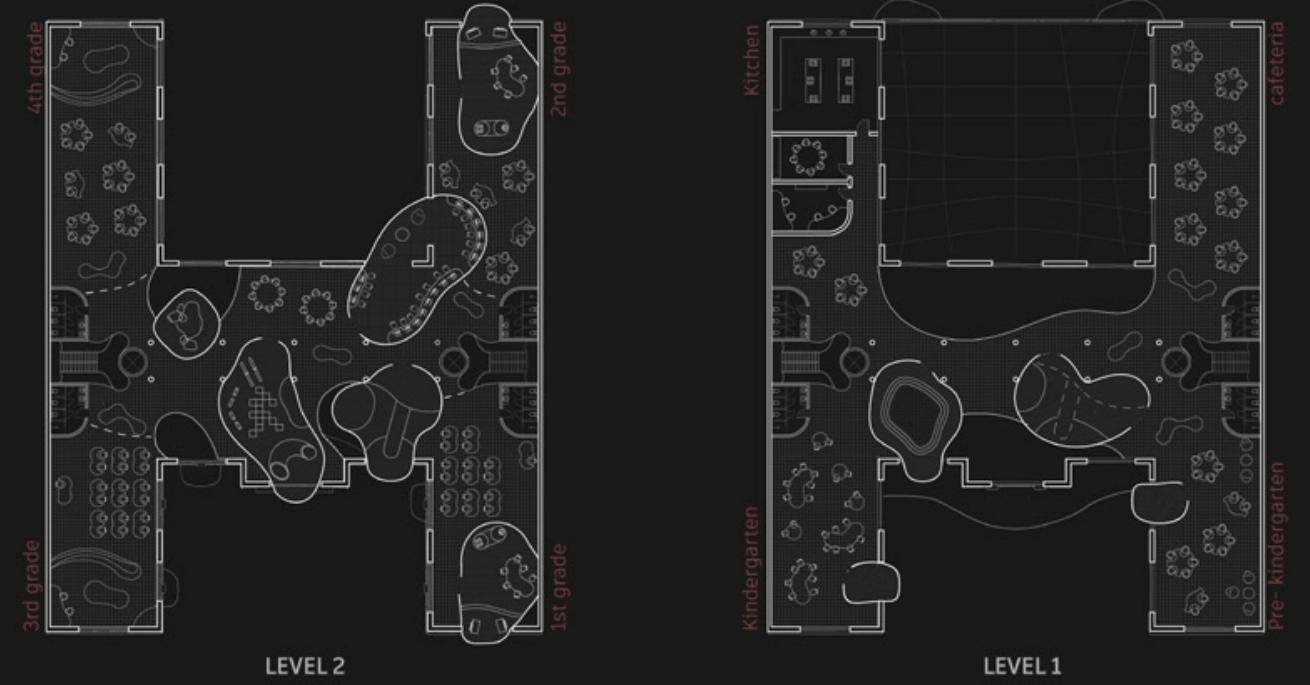
Exterior perspective
Lucas Pereira





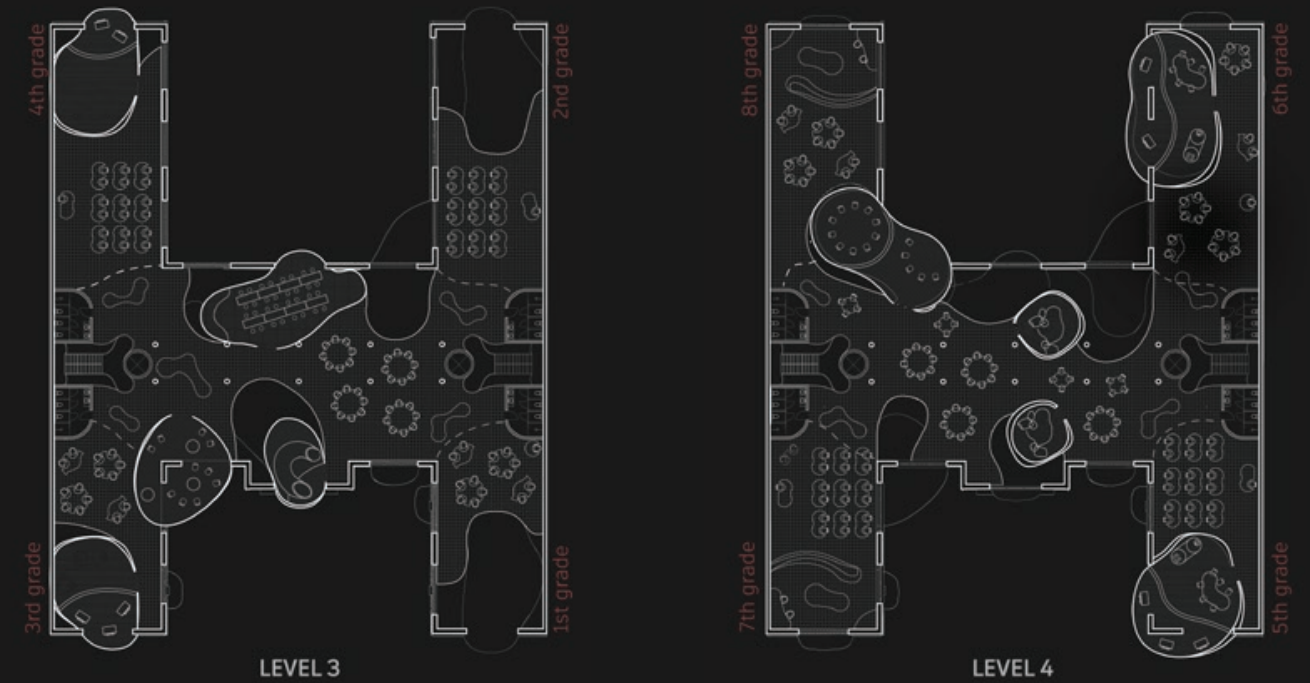
The classrooms are imagined to read as 'small worlds' with different sensorial experiences. Each classroom has one maker space, a space for standard activities and lectures, a library, and a group workspace.

Floor plan - Level 5
Lucas Pereira



LEVEL 2

LEVEL 1



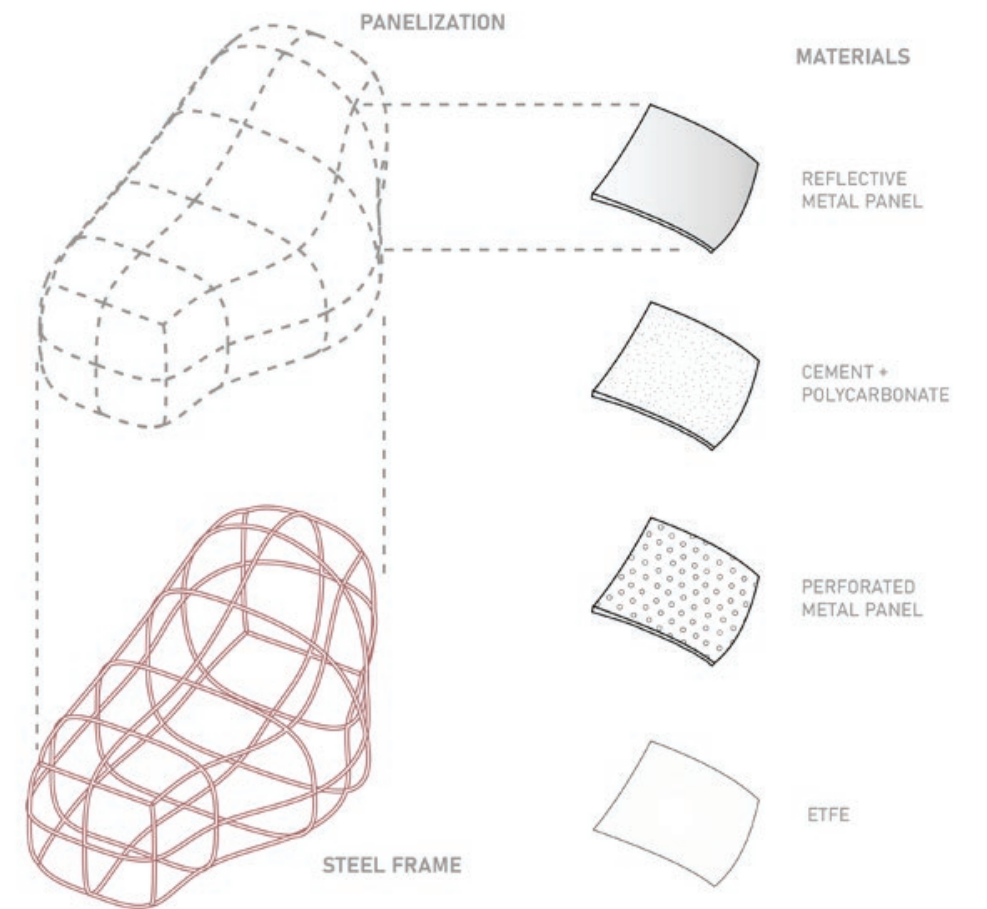
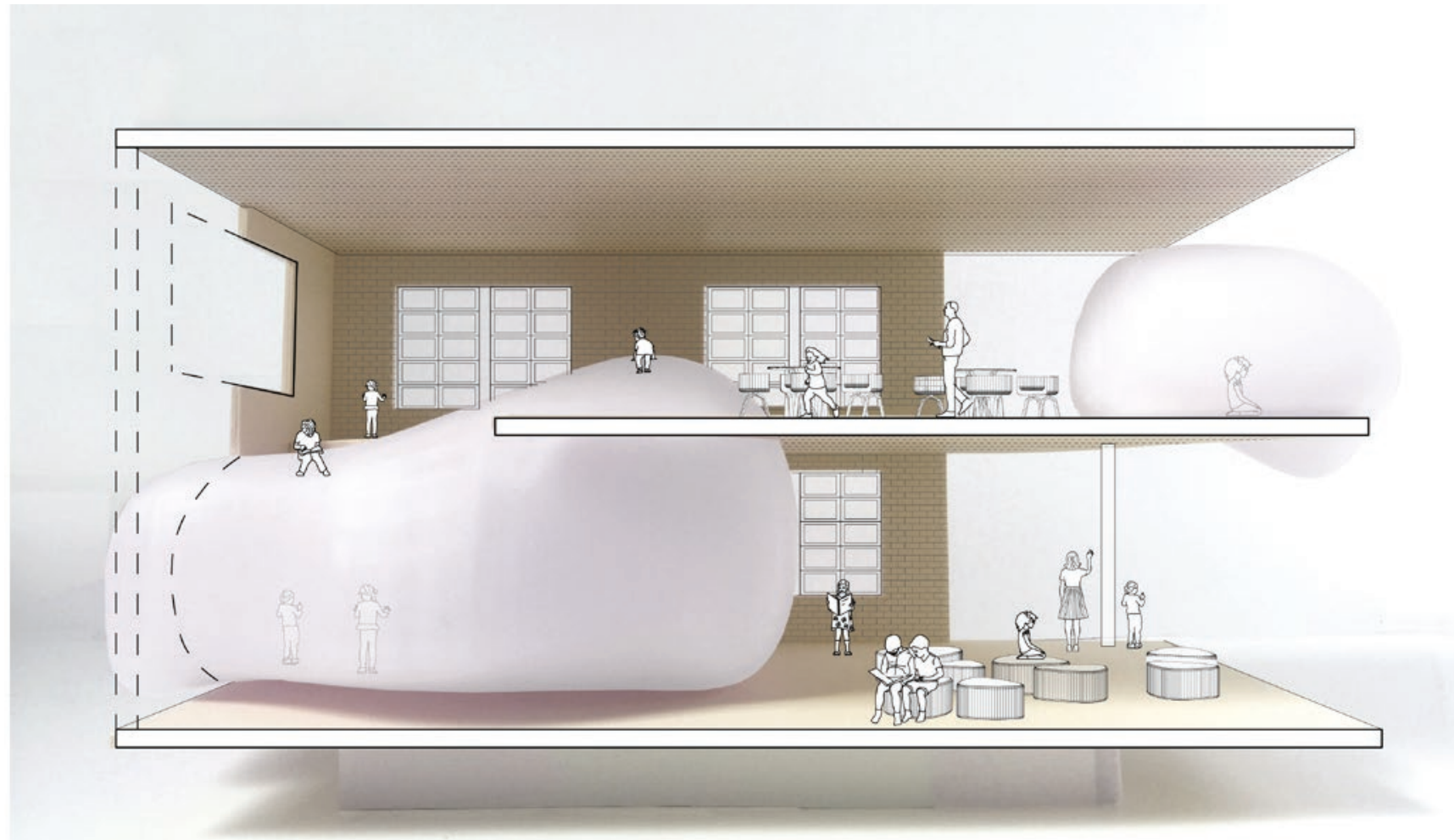
LEVEL 3

LEVEL 4

Floor plan - Levels 1-4
Lucas Pereira

Section
Lucas Pereira

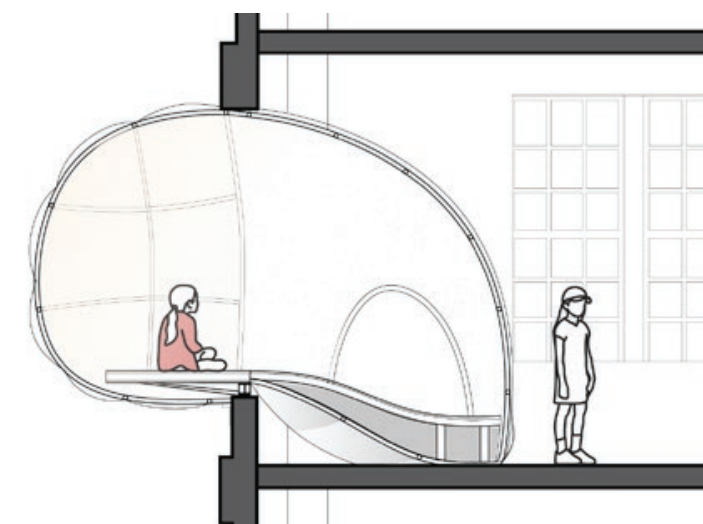




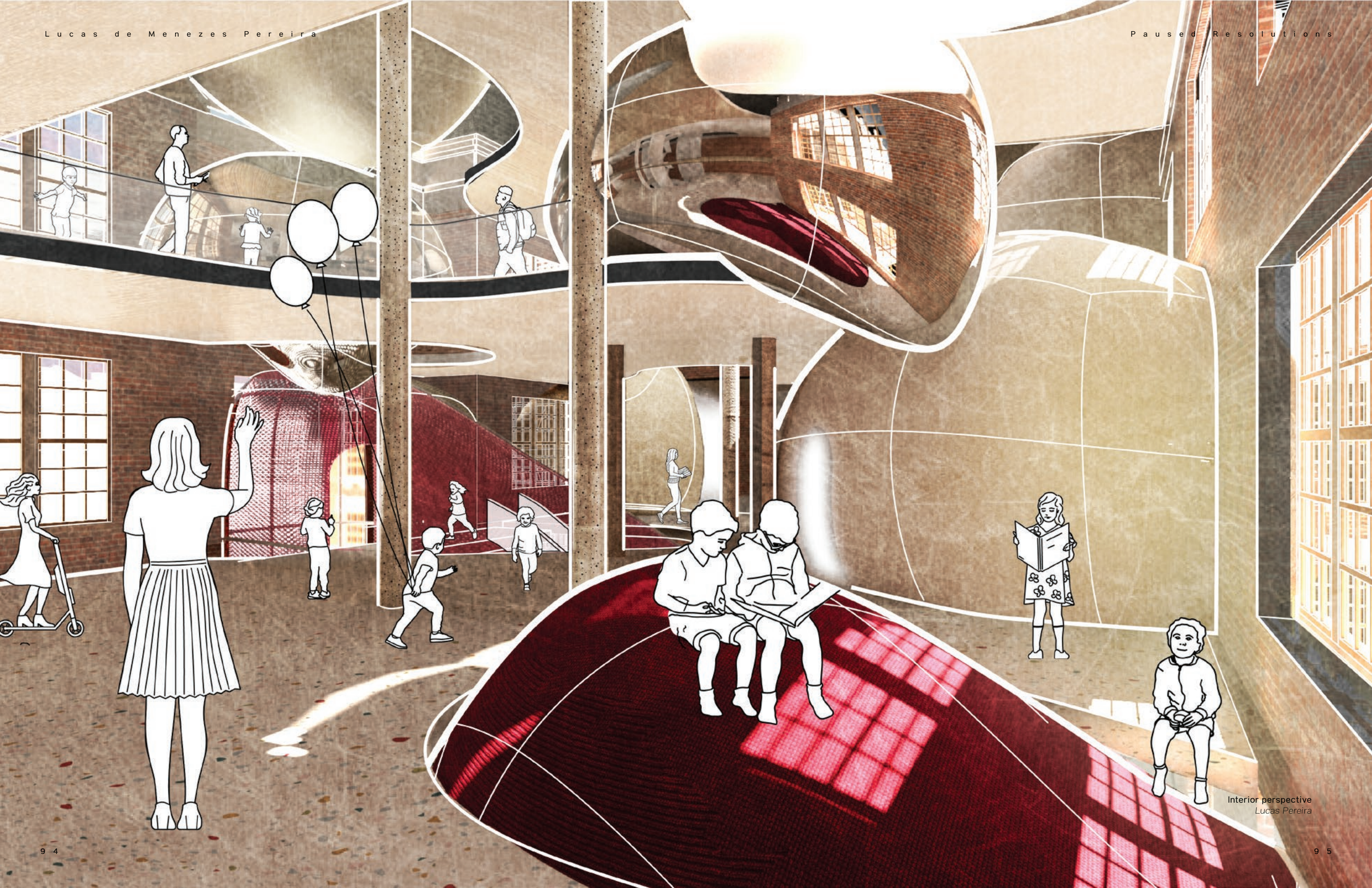
The cell - structure
Lucas Pereira



The classroom - physical models
Lucas Pereira



The cell - detail section
Lucas Pereira



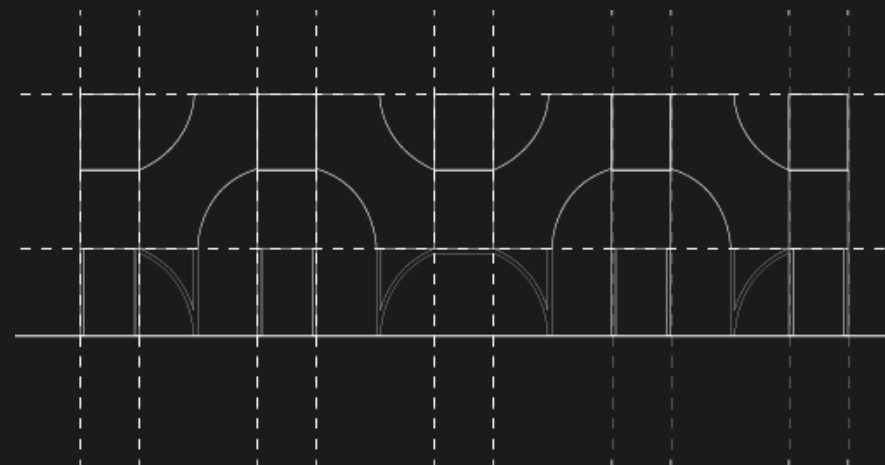
Interior perspective
Lucas Pereira

FIRST GENERATION HOME

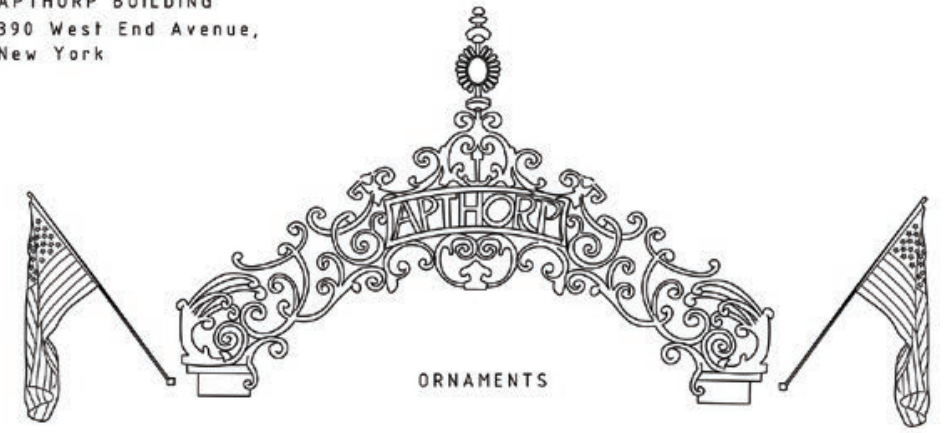
Spring 2021/Columbia GSAPP
New York, NY
Core 1/ Instructor: Anna Puigjaner
Individual project

This proposal is destined for first-generation college students in the Upper West Side of New York City. Ultimately, it performs as a catalyst for creating a mutual and perpetual sense of belonging between students and the local community.

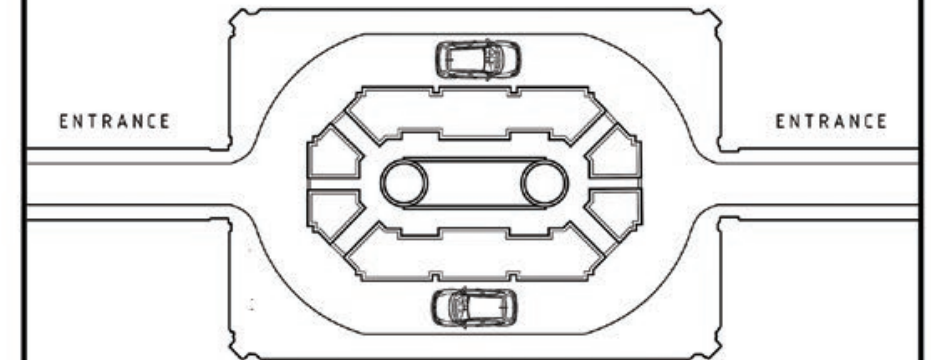
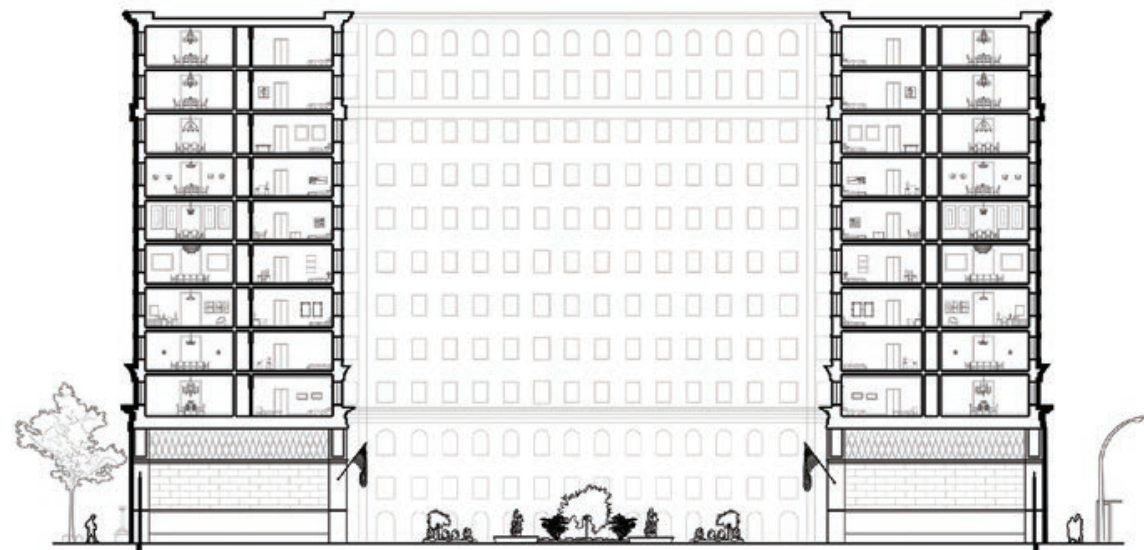
These hubs are placed on the rooftops of existing residential buildings in the neighborhood, with the intent to challenge the exclusivity of these places, and encourage healthy community living by hosting a community garden together with the student housing.



APTHORP BUILDING
390 West End Avenue,
New York



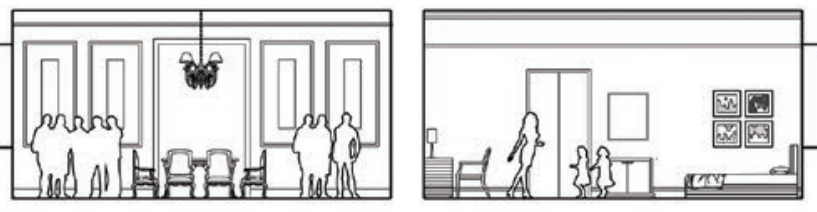
ORNAMENTS



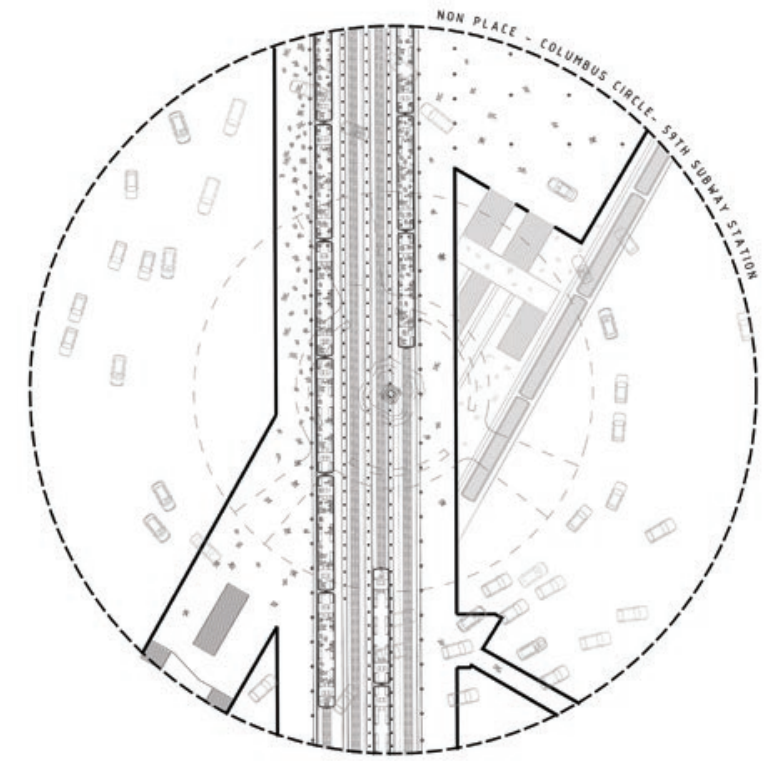
ENTRANCE

ENTRANCE

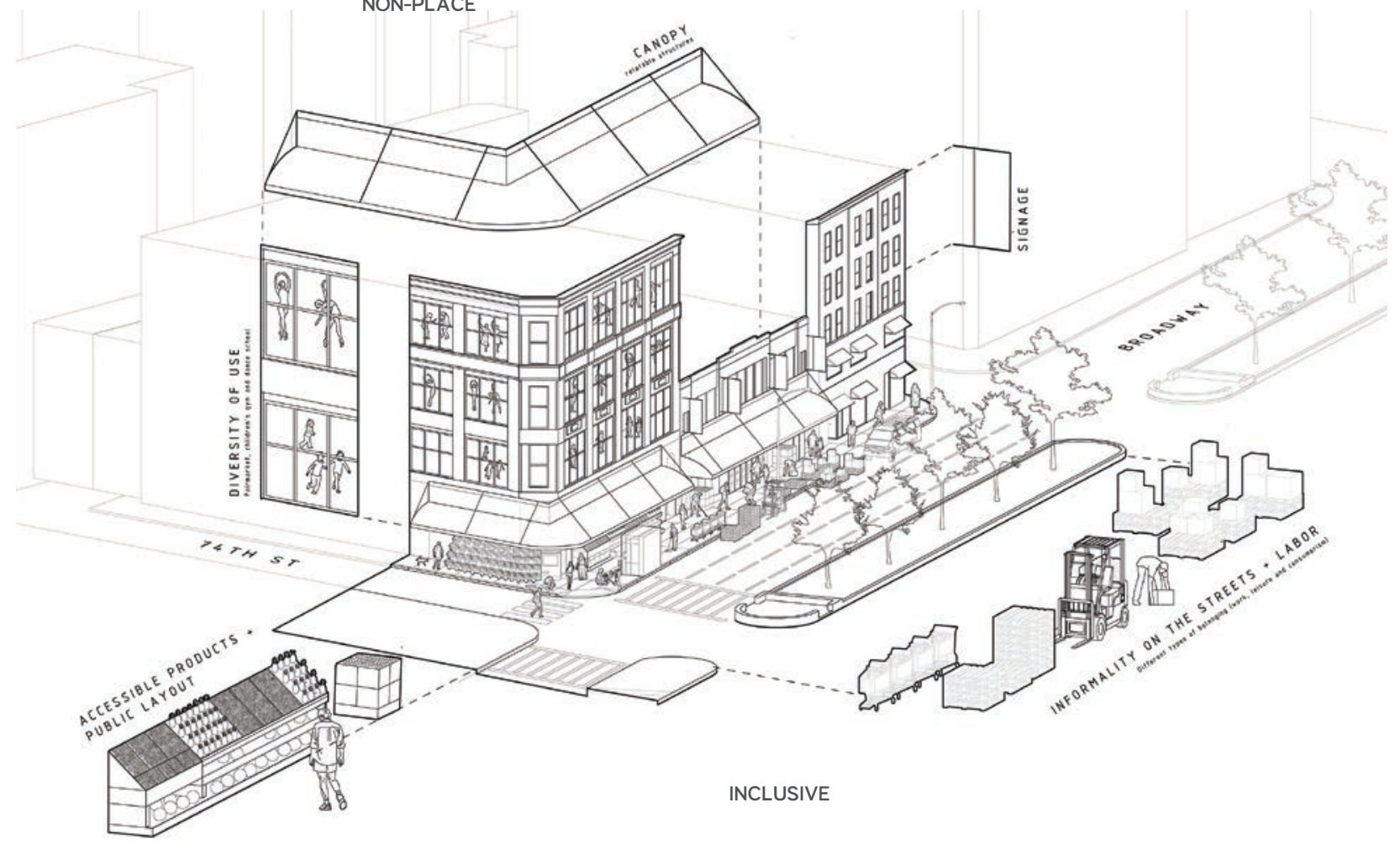
VOID - COURTYARD



EXCLUSIVE



NON-PLACE



ACCESSIBLE PRODUCTS + PUBLIC LAYOUT

DIVERSITY OF USE

74TH ST

CANOPY

SIGNAGE

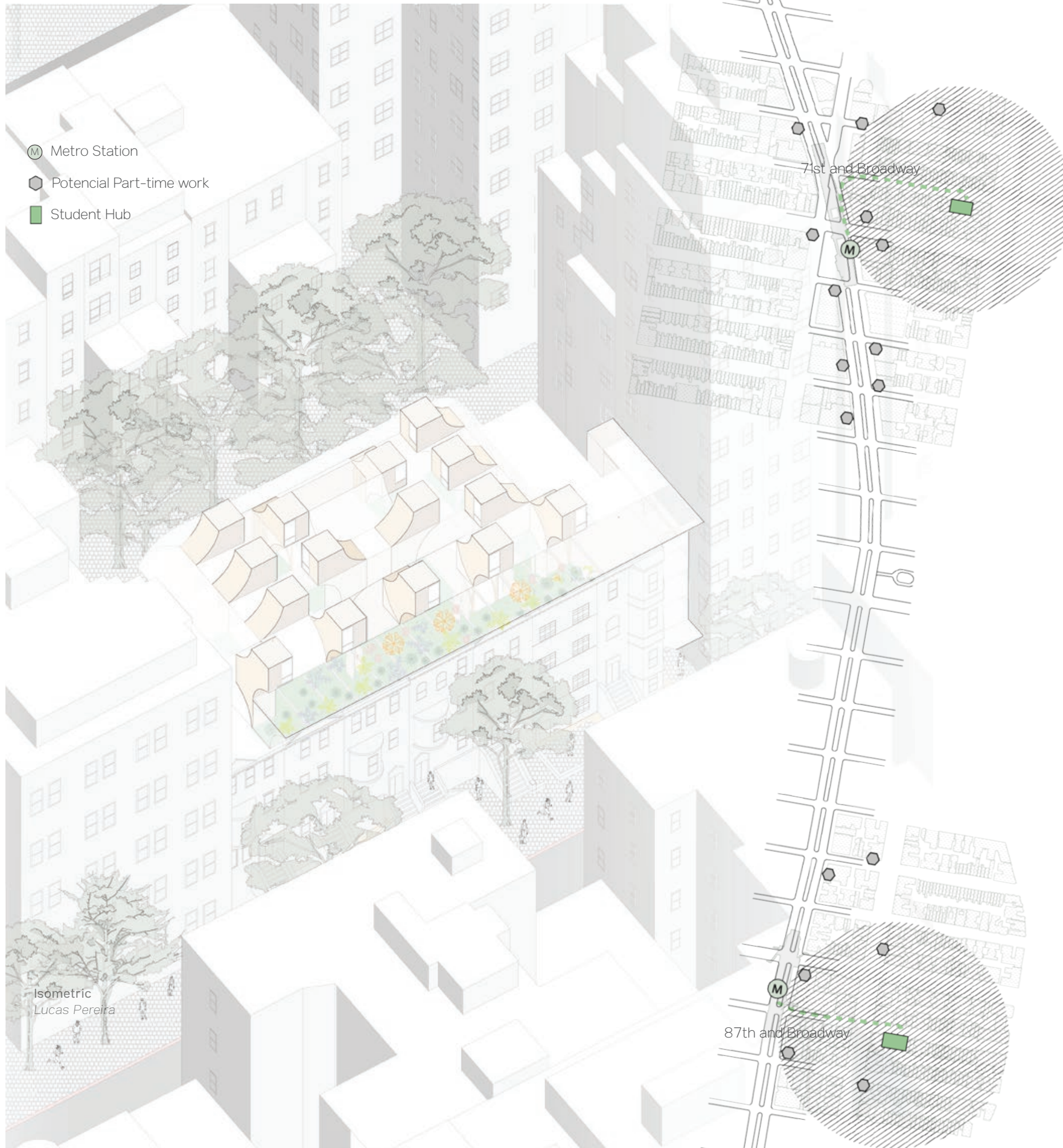
BROADWAY

INFORMALITY ON THE STREETS + LABOR

INCLUSIVE

BELONGING IN THE UPPER WEST SIDE

My analysis of the UPW was guided by the concept of **belonging**. Through virtually walking in the area and gathering current demographics and historical data, I analyzed ways in which architecture and urban spaces can help with the sense of belonging to the place. The initial qualitative and quantitative research implies that the Upper West Side nowadays belongs mostly to white high-income people.



Exterior perspective
Lucas Pereira



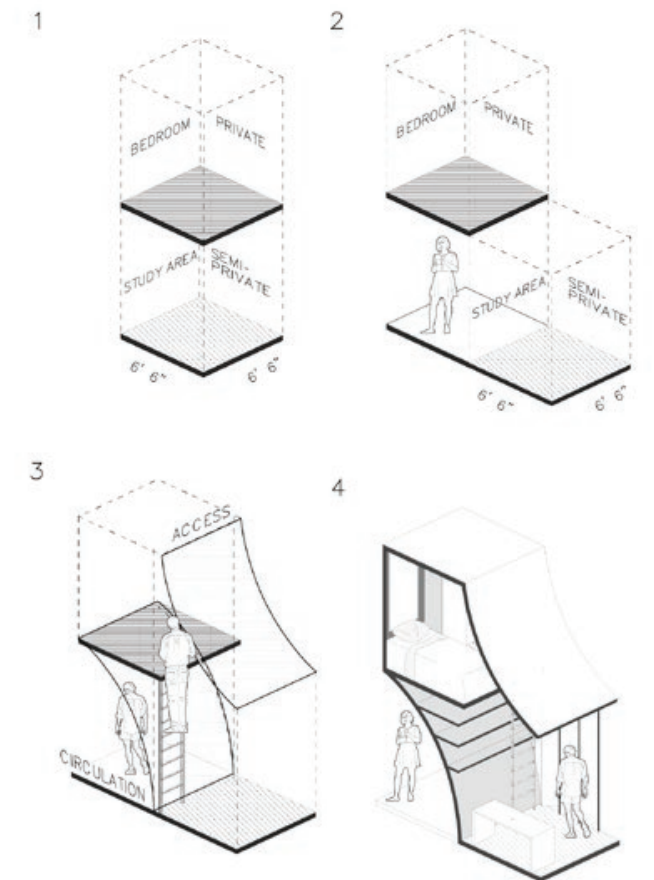
Floor Plan
Lucas Pereira

Section
Lucas Pereira

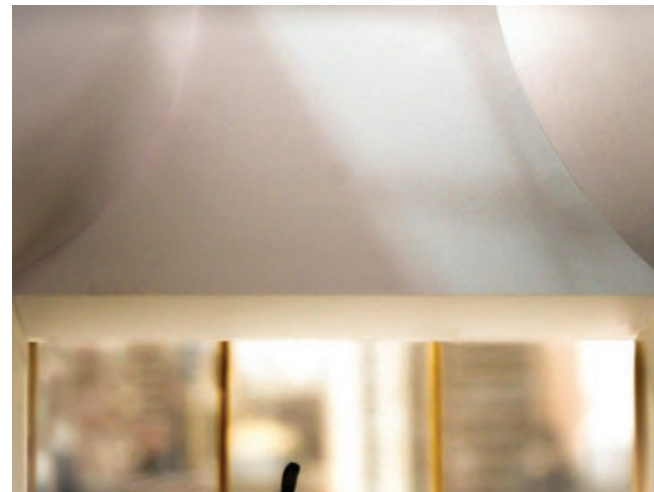


The first floor hosts an elevated community garden, which will be maintained by the students. That way, a sense of ownership can be stimulated and community engagement encouraged.

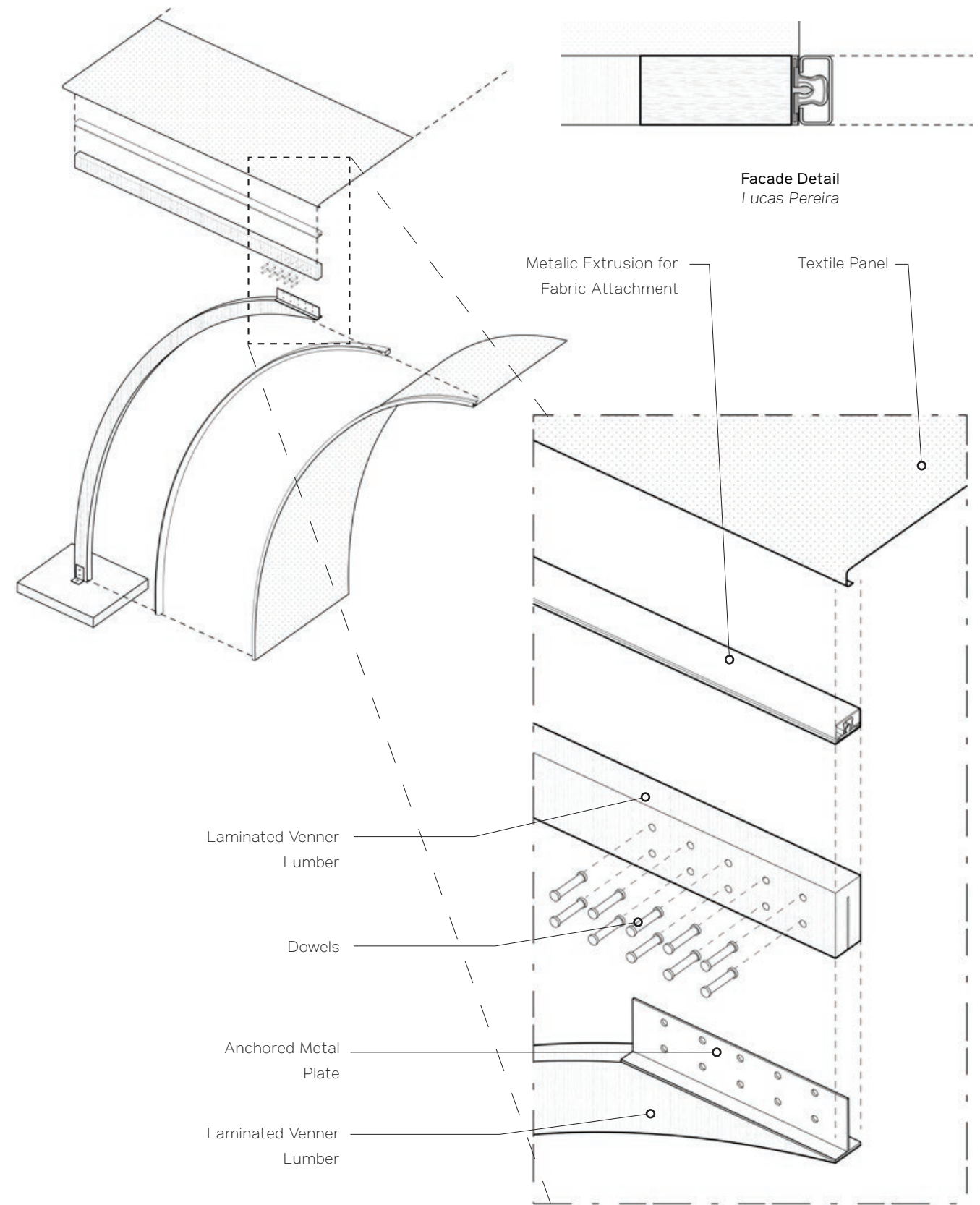
The second level host the communal student space for those who will live there. It is an agglomeration of 15 units designed with the essentials of privacy, that connects to a common area, where the kitchen, dining room, and bathrooms are.



Private Units
Lucas Pereira

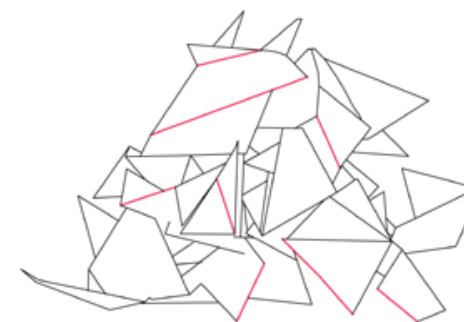


Interior models
Lucas Pereira





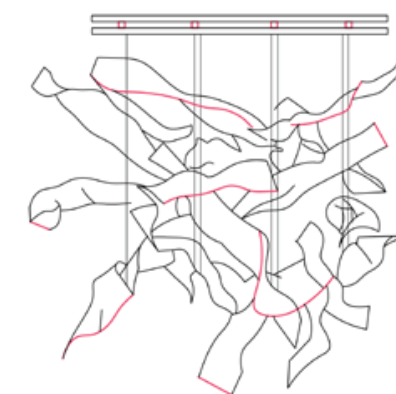
A N D



MAKE

Fall 2022/Columbia GSAPP
MAKE/ Instructor: Ada Tolla and Giuseppe
Lignano (LOT-EK)
Individual work

The following pieces are a product of a semester of experimenting with different materials every two weeks. They are a result of observing what is around and being sensitive to what's within. An introspective experience.



Air

Material: Melted acetate + Acrylic



Encounters

Material: White burlap



Folds

Material: 12"x12" (x4) Sheets of metal



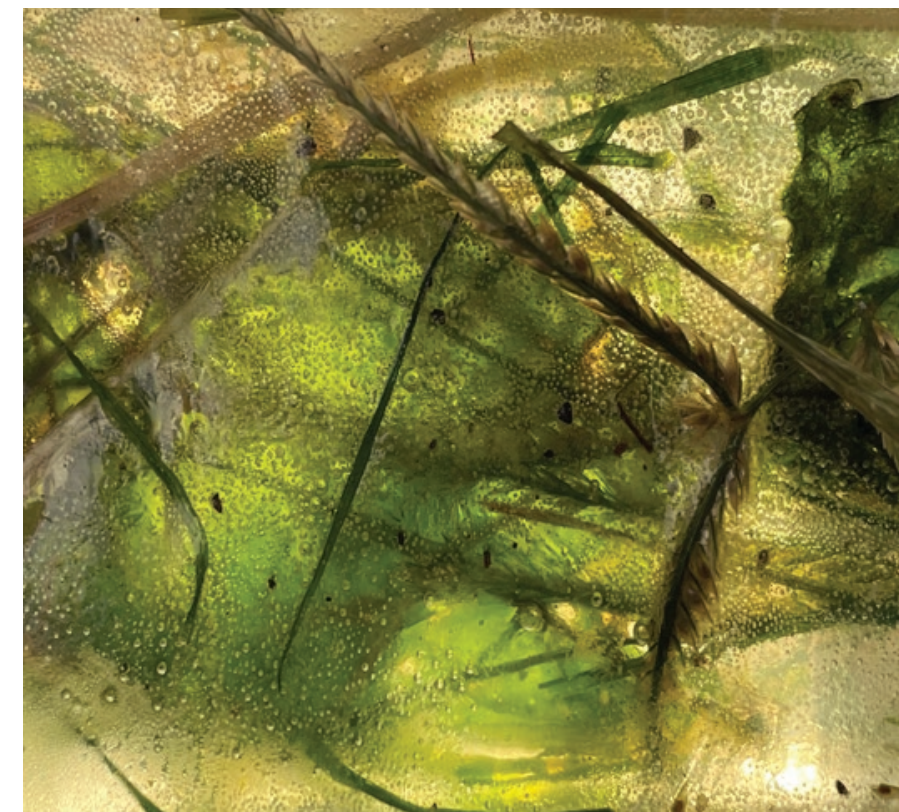
Breeze

Material: Wooden reeds.





A moment in time in Riverside
Material: Casted glycerin, Natural materials gathered.

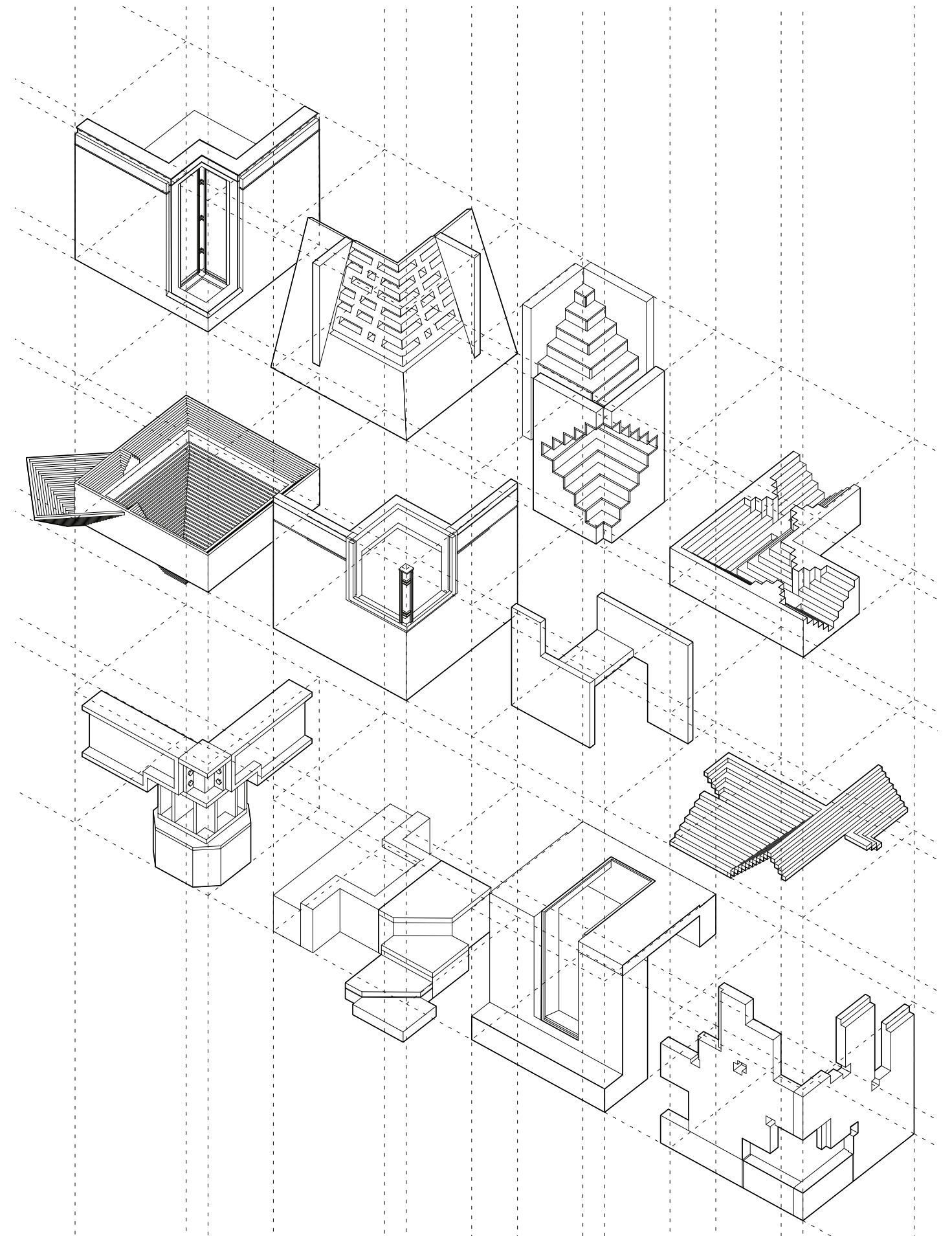


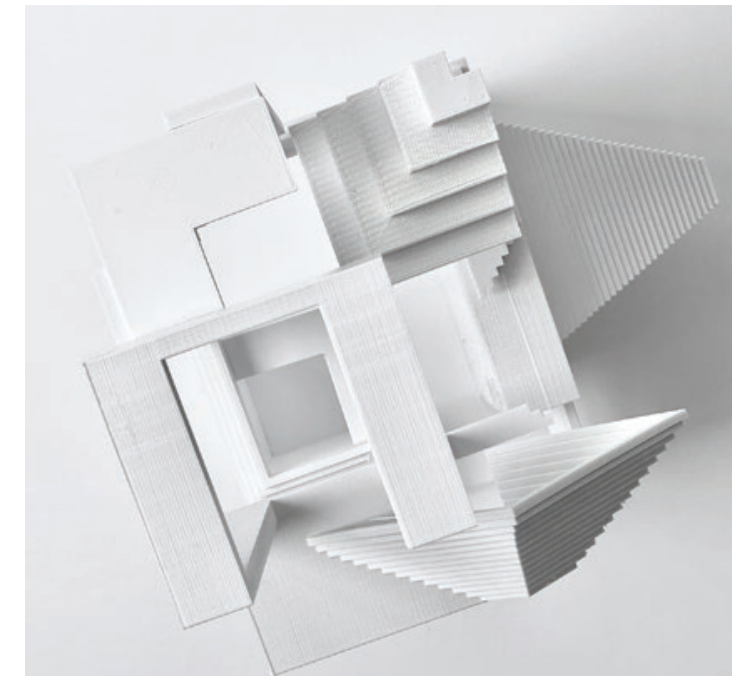
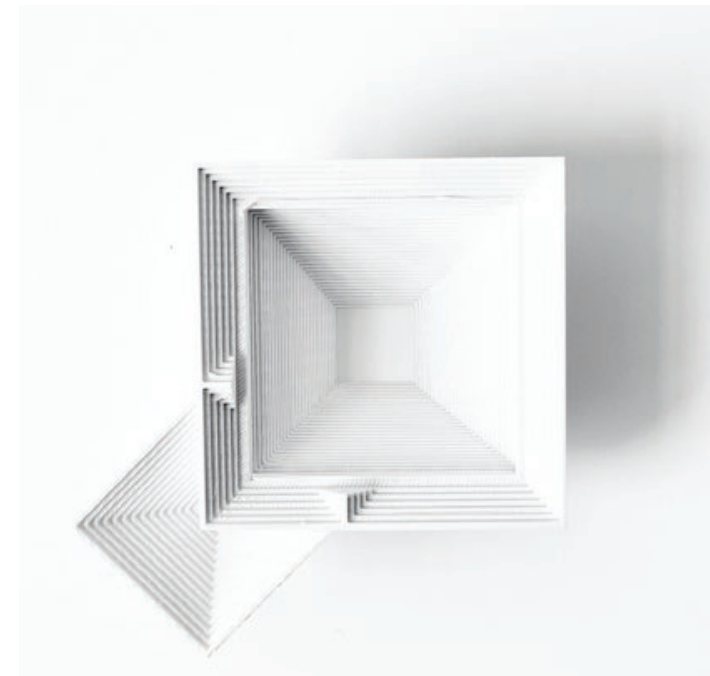
CARLO SCARPA: UNLAYERED CORNERS

Spring 2022/Columbia GSAPP
Architecture Apropos Art/
Instructor: Steven Holl and
Dimitra Tsachrelia
Individual work

Scarpa's work is full of layerings. His design praises traditional craft and attention to detail. In the details is where the dialog between present and past happens. His mastery lies not in mere juxtapositions nor framing history with modernity but in utilizing detail to create a liminal architecture with a constant dialog with time.

Through his work, I realized that where edges meet is where his proficiency is mainly revealed. Therefore, going through an exercise of cataloging corners in different scales of his most acclaimed projects and by unlaying the geometries from the materiality of his details, I investigate concepts embedded in his work, which are full of continuity, interruptions, insertions and interpositions.





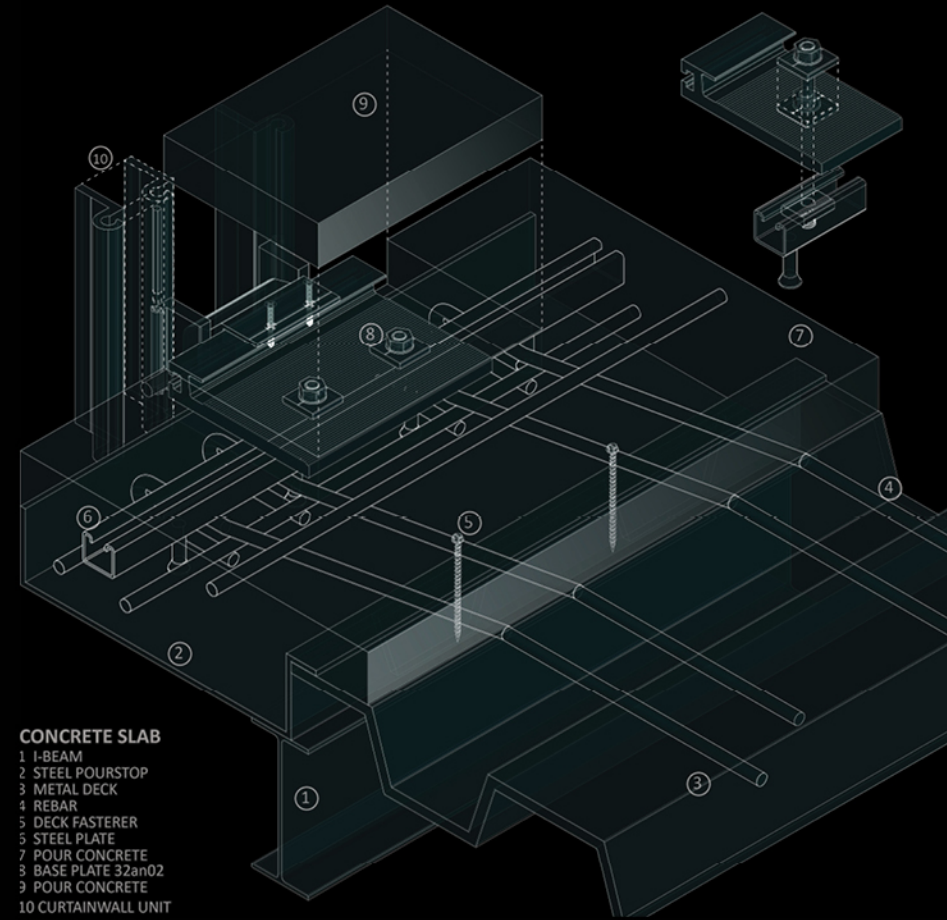
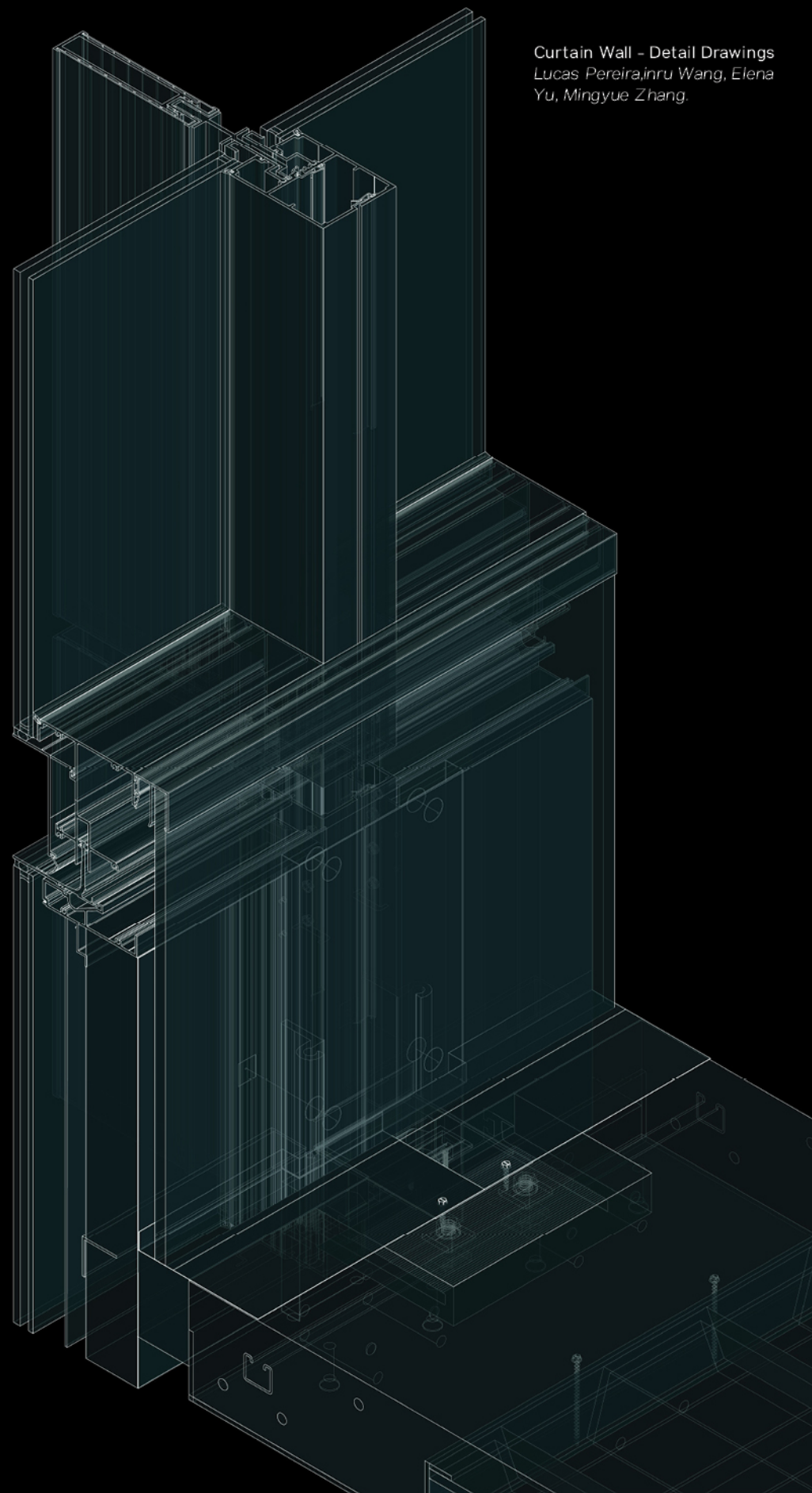
CURTAIN WALL: 4-WAY INTERSECTION

Spring 2022/Columbia GSAPP
Spring 2022/ Instructor: Nicole Dosso
In collaboration with: Linru Wang, Elena
Yu, Mingyue Zhang.

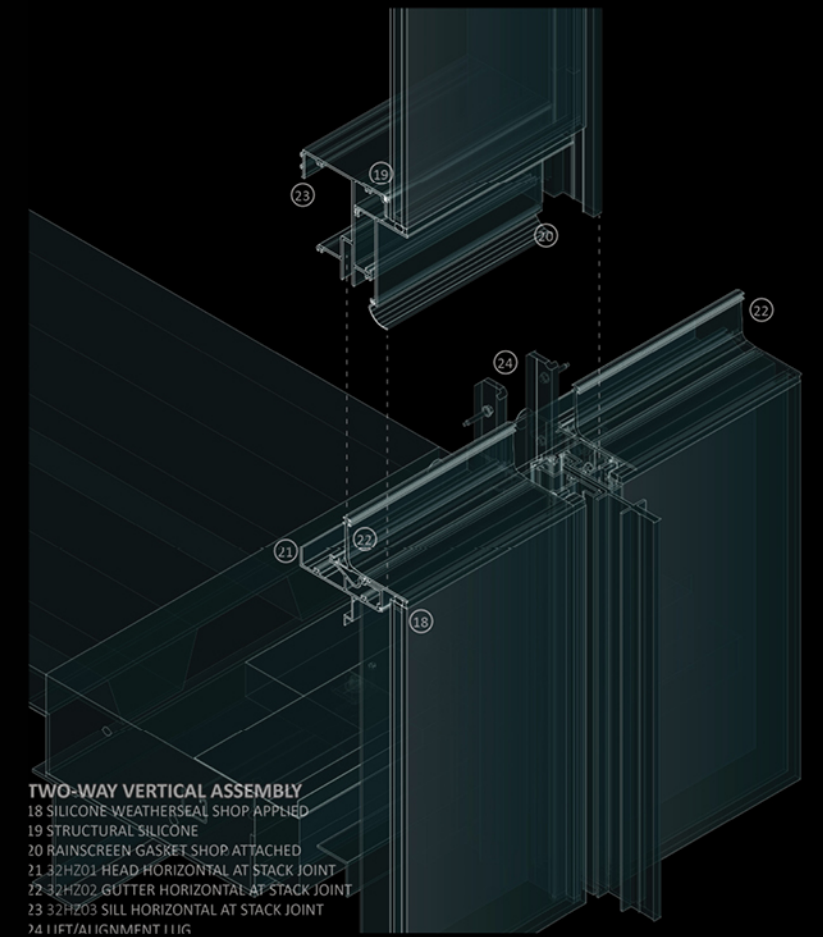
The following model and drawing are part of the final assignment for the Architectural Technology V course. The model is an evolution from in-depth research about the 4-way intersection in commercial curtain walls. Shop drawings were analyzed, redrawn, and modeled in a new fashion.



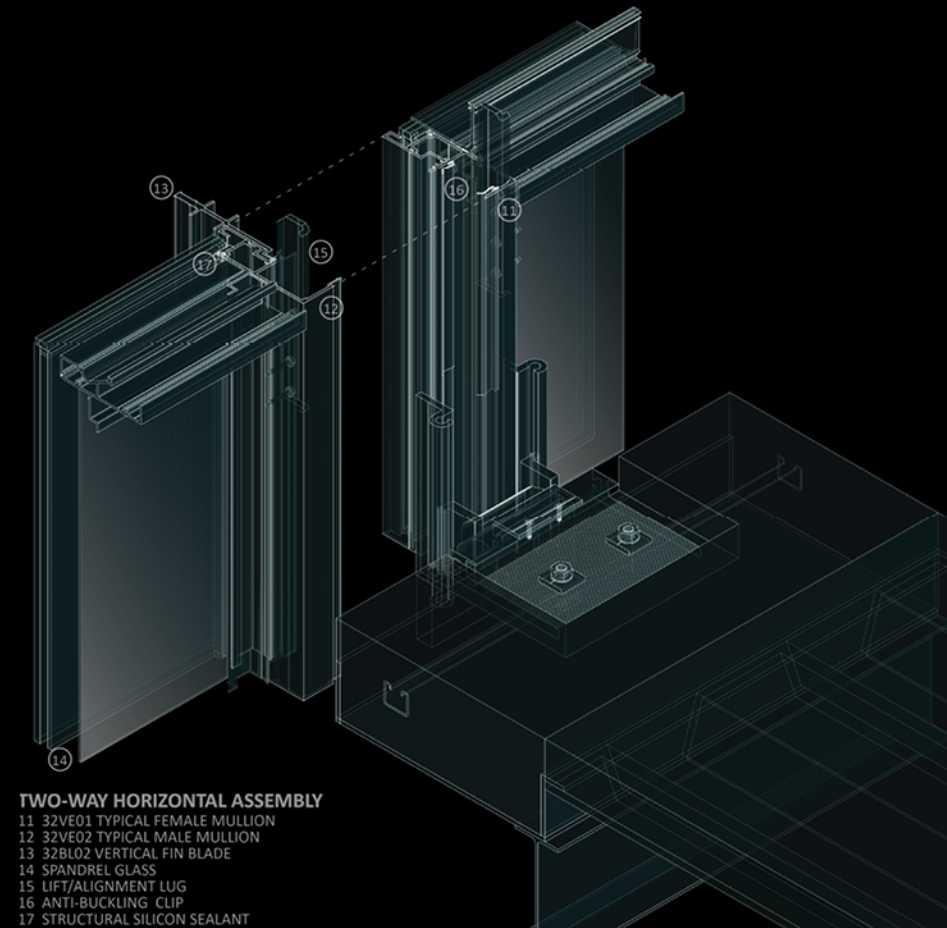
Curtain Wall - Detail Drawings
 Lucas Pereira, Inru Wang, Elena Yu, Mingyue Zhang.



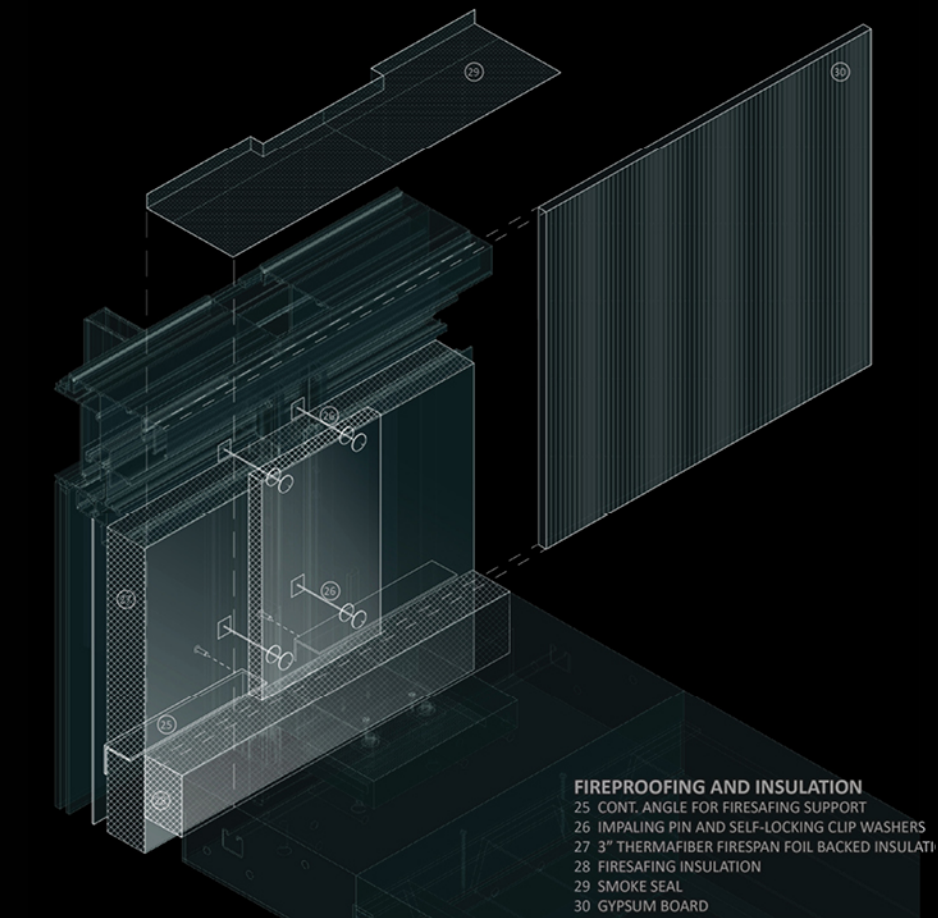
CONCRETE SLAB
 1 I-BEAM
 2 STEEL POURSTOP
 3 METAL DECK
 4 REBAR
 5 DECK FASTERER
 6 STEEL PLATE
 7 POUR CONCRETE
 8 BASE PLATE 32an02
 9 POUR CONCRETE
 10 CURTAINWALL UNIT



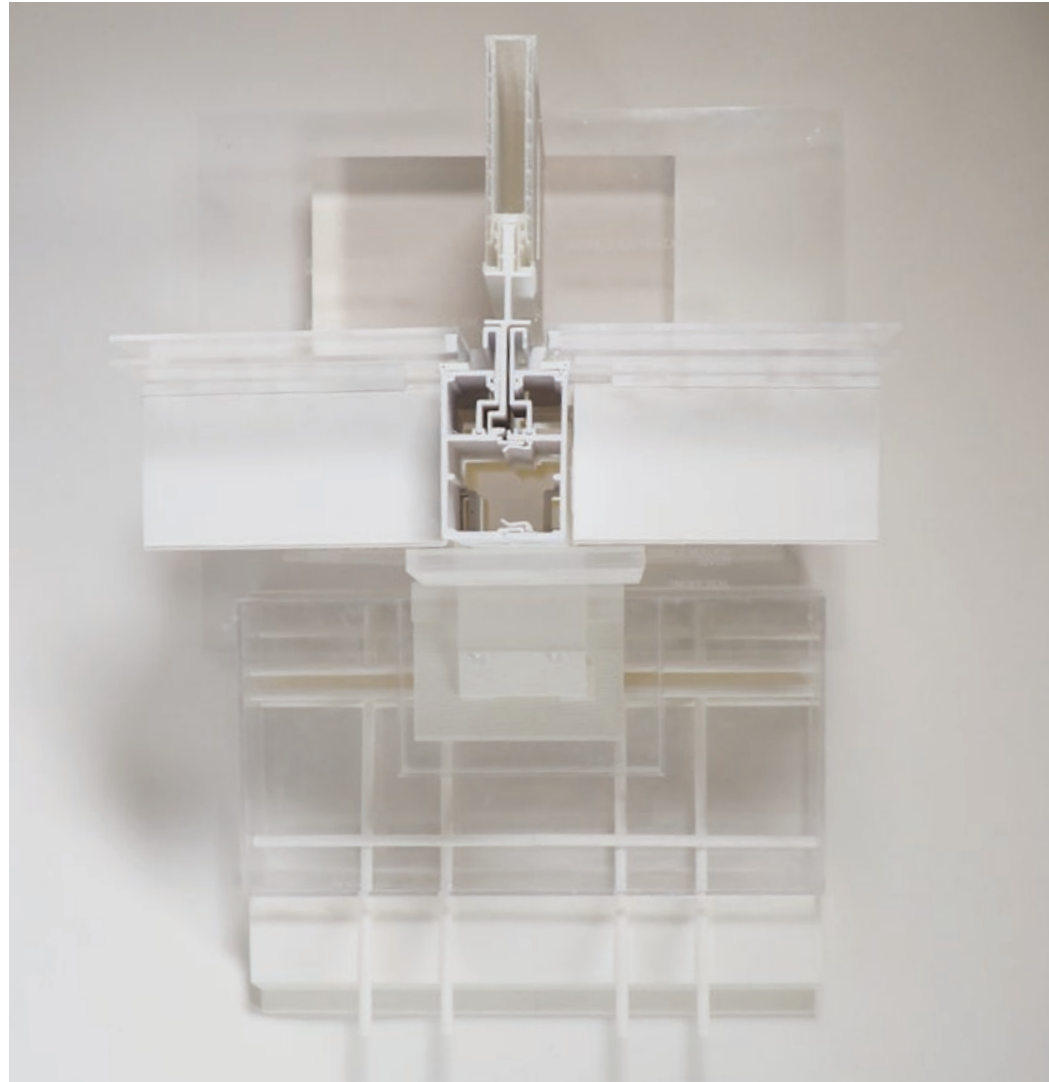
TWO-WAY VERTICAL ASSEMBLY
 18 SILICONE WEATHERSEAL SHOP APPLIED
 19 STRUCTURAL SILICONE
 20 RAINSCREEN GASRET SHOP ATTACHED
 21 32HZ01 HEAD HORIZONTAL AT STACK JOINT
 22 32HZ02 GUTTER HORIZONTAL AT STACK JOINT
 23 32HZ03 SILL HORIZONTAL AT STACK JOINT
 24 LIFT/ALIGNMENT LUG



TWO-WAY HORIZONTAL ASSEMBLY
 11 32VE01 TYPICAL FEMALE MULLION
 12 32VE02 TYPICAL MALE MULLION
 13 32BL02 VERTICAL FIN BLADE
 14 SPANDREL GLASS
 15 LIFT/ALIGNMENT LUG
 16 ANTI-BUCKLING CLIP
 17 STRUCTURAL SILICON SEALANT

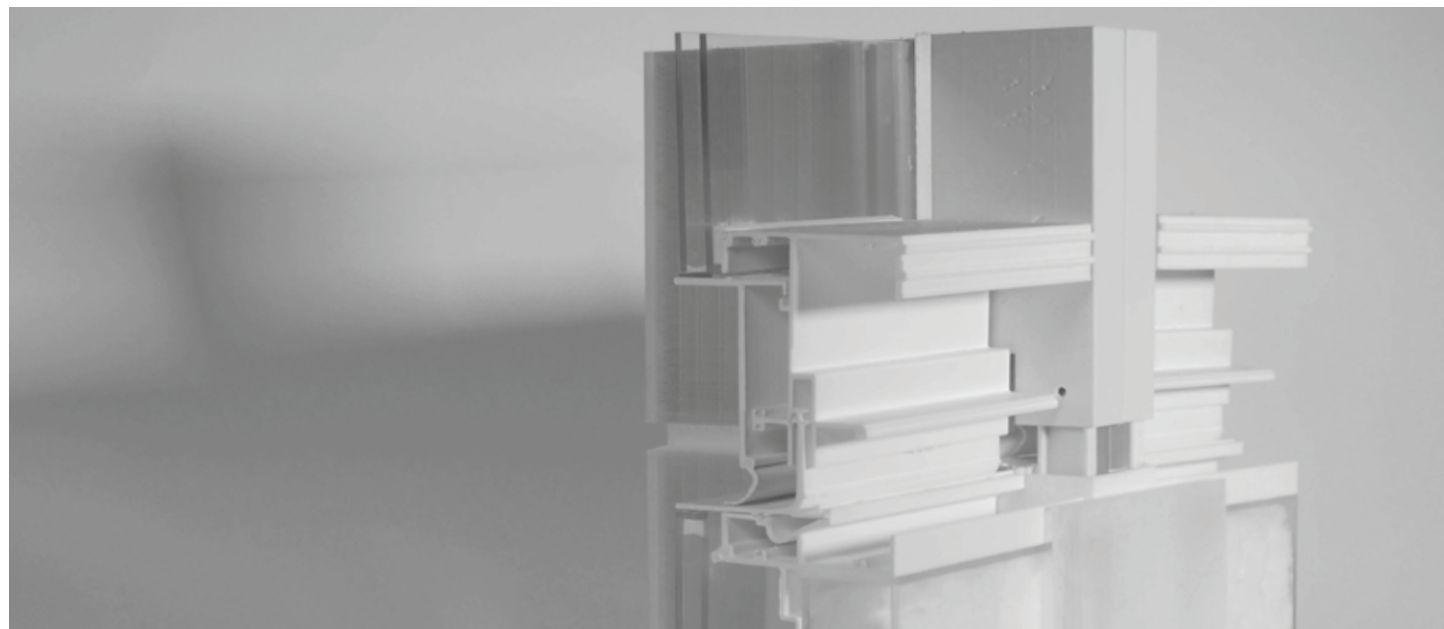


FIREPROOFING AND INSULATION
 25 CONT. ANGLE FOR FIRESAFING SUPPORT
 26 IMPALING PIN AND SELF-LOCKING CLIP WASHERS
 27 3" THERMAFIBER FIRESAFING FOIL BACKED INSULATION
 28 FIRESAFING INSULATION
 29 SMOKE SEAL
 30 GYPSUM BOARD



Curtain Wall - Model
Lucas Pereira, Inru Wang, Elena
Yu, Mingyue Zhang.

Assembly Video



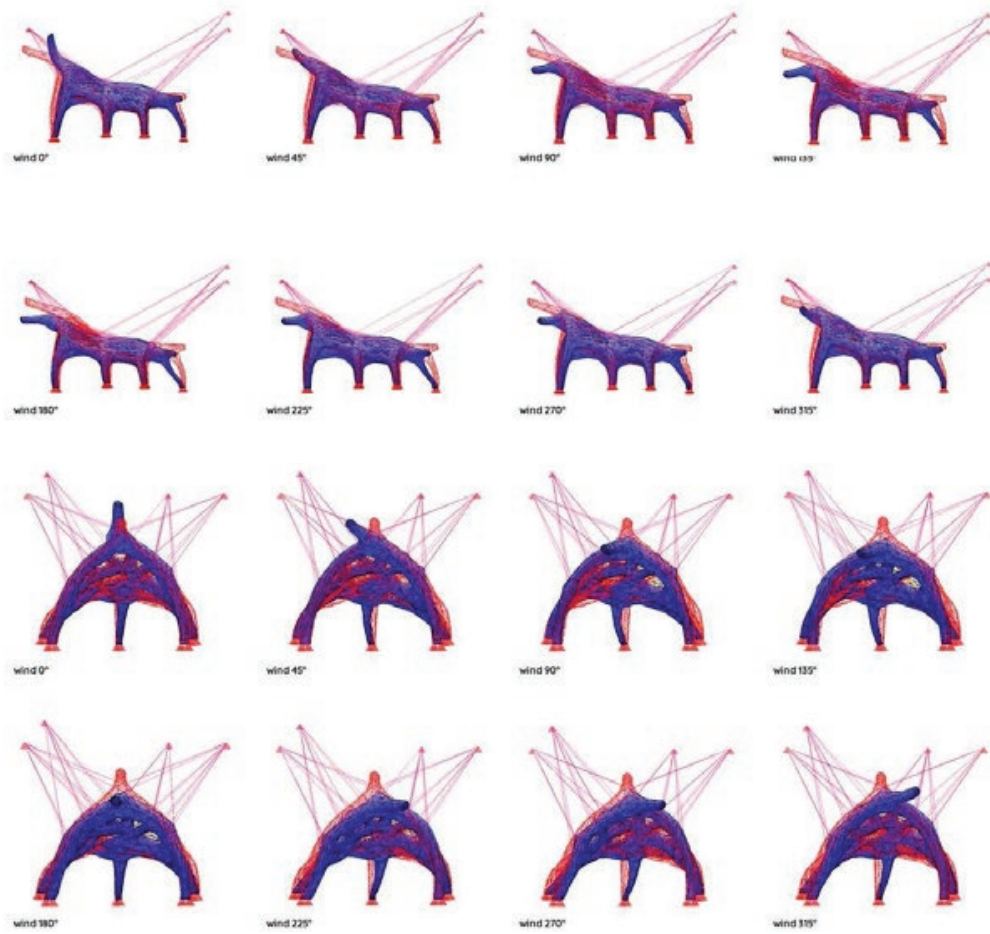
THE WEB

Spring 2022/Columbia GSAPP
New York, NY
The Outside In Project/
Instructor: Galia Solomonoff, Laurie Hawkinson.
Assistant: Zina Berrada

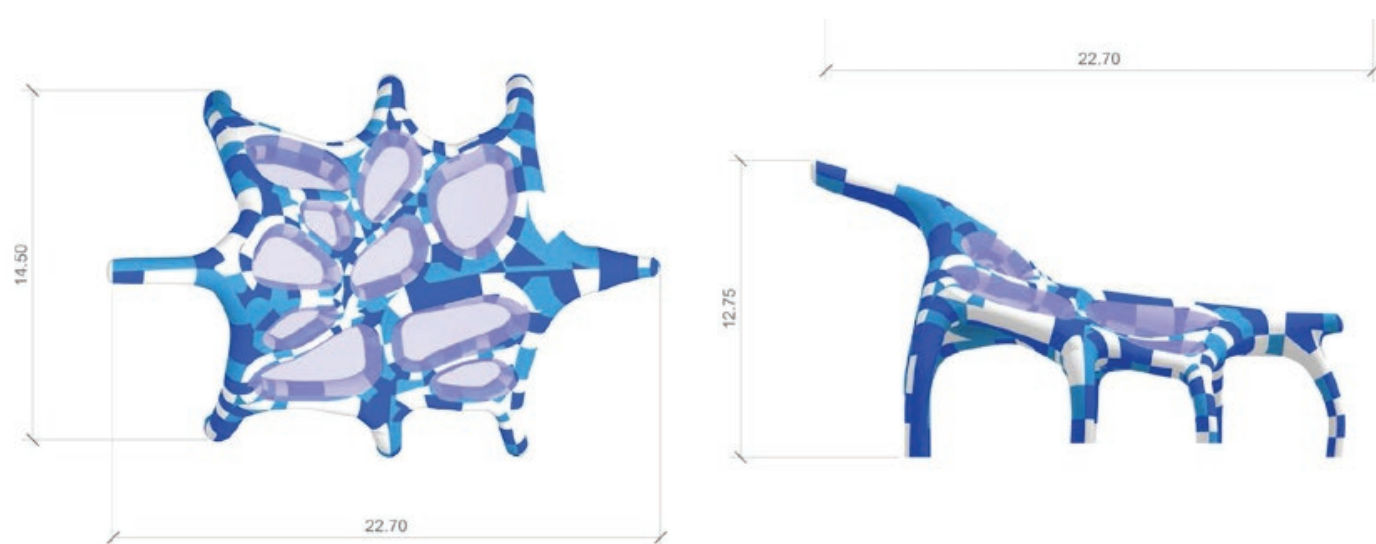
Collaborative project: Abriannah Aiken, Ata Aksu, Priscilla Auyeung, Omar Badriek, Aahana Banker, Rourke Brakeville, Ece Cetin, Kurt Cheang, Lucas de Menezes Pereira, Anoushae Eirabie, Ryan Hansen, Bisheng Hong, Sunghyun Kim, Yining Lai, Vasco Li, Gustavo Lopez Mendoza, Andrew Manion, Eugene Massey, Zakios Meghrouni-Brown, Risa Mimura, Keneilwe Ramaphosa, Maria Ramirez, Hannah Stollery, Jordan Trager, Yusuf Urlu, Hazel Villena, Hyosil Yang.

This Pavillion is a result of a design-build seminar, A collaborative initiative to design, build, and program a temporary structure that was designed and erected by the students at Columbia GSAPP, in the area between Avery, Fayerweather, and Schermerhorn Halls during the Spring semester of 2022. My participation included concept design, schedule, cable support structure installation, and inflatable installation.





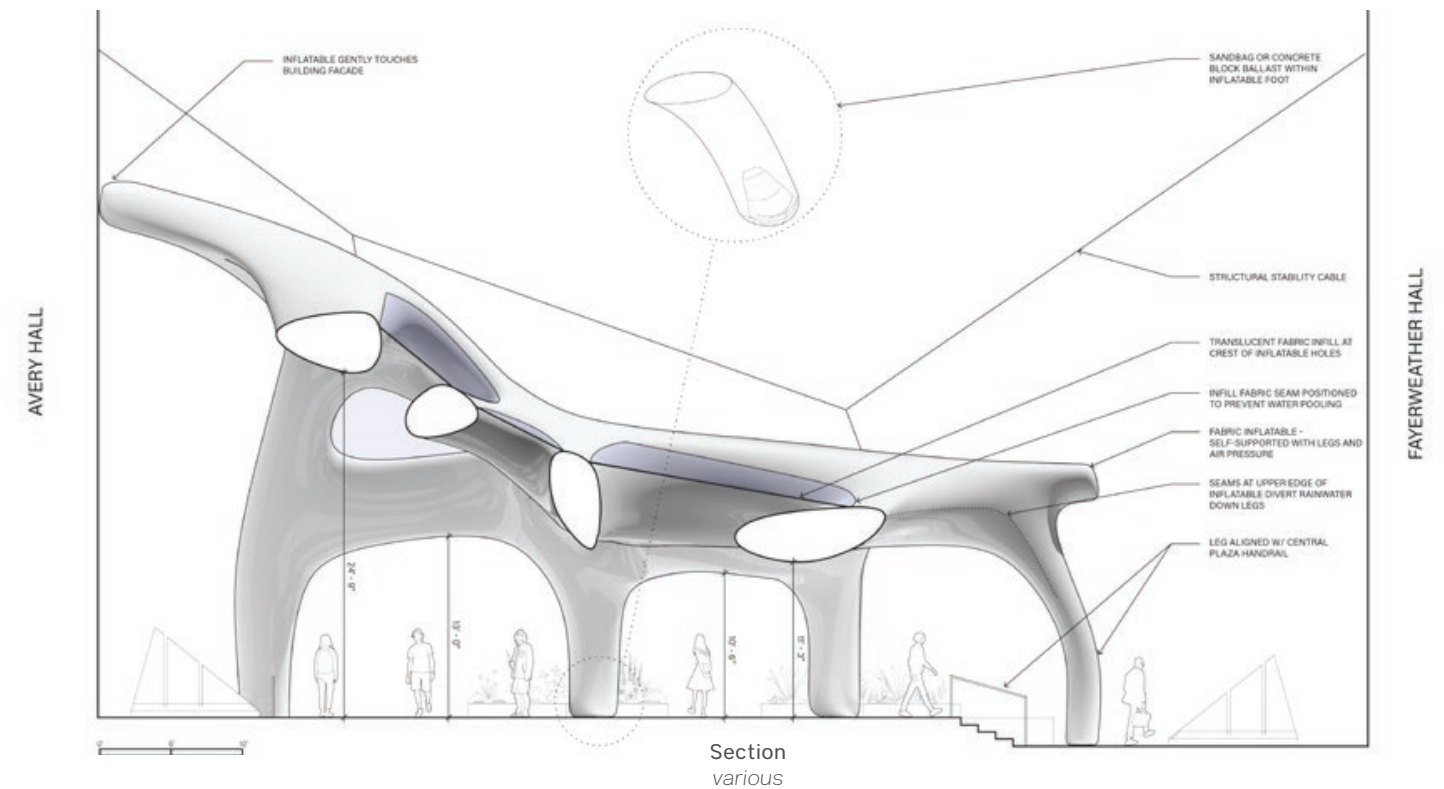
Wind studies
aeracubica



Dimensions
various



Installation
various



Section
various



