

ANA-MARIA  
BULUGEA

ARCHITECTURE

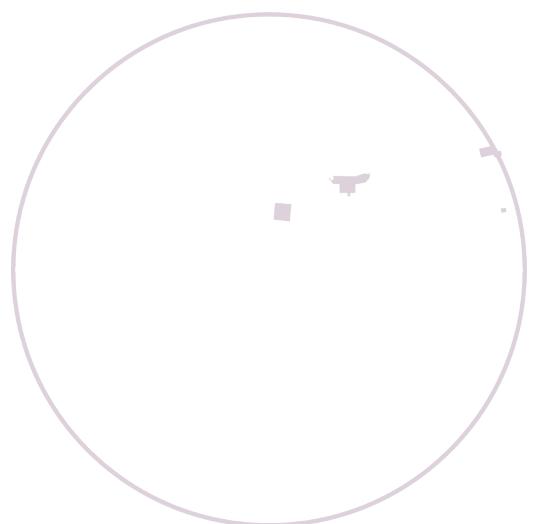
Berlin International University of  
Applied Sciences

P O R  
T F O O  
L I O

2020 - 2024

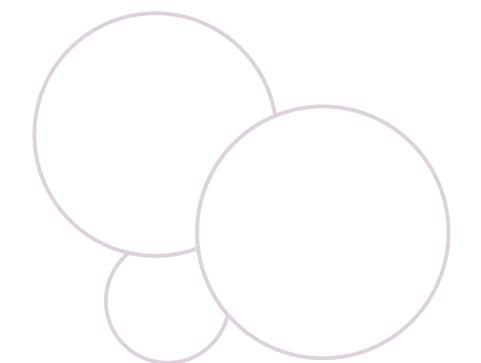
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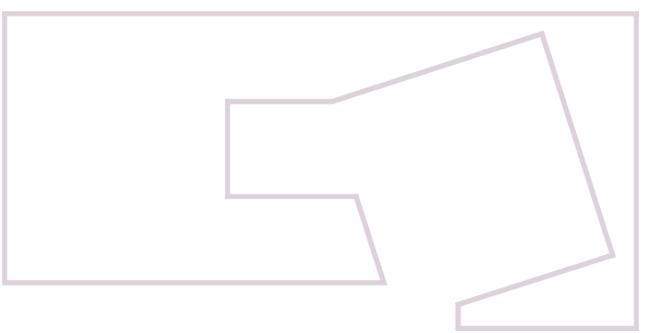
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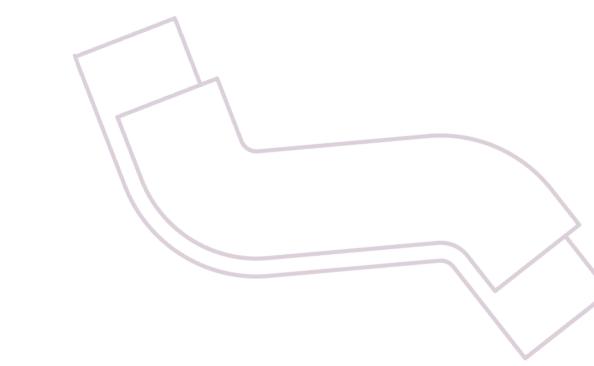
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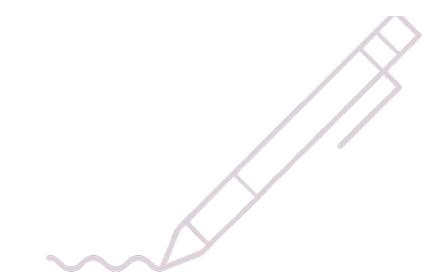
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# I. VERONA 2025-2125

## (SIMULATED SIMULACRA)

6th Semester Project

International Architecture Seminar "Verona. Spirito | Zoo"

Project Partners : Ema Humajova, Liam Moeller, Sofia Escandon, Yana Rudasevschi

Location: Verona, Italy

Professors: Prof. Dr. Giorgia Aquilar, Marzio Di Pace

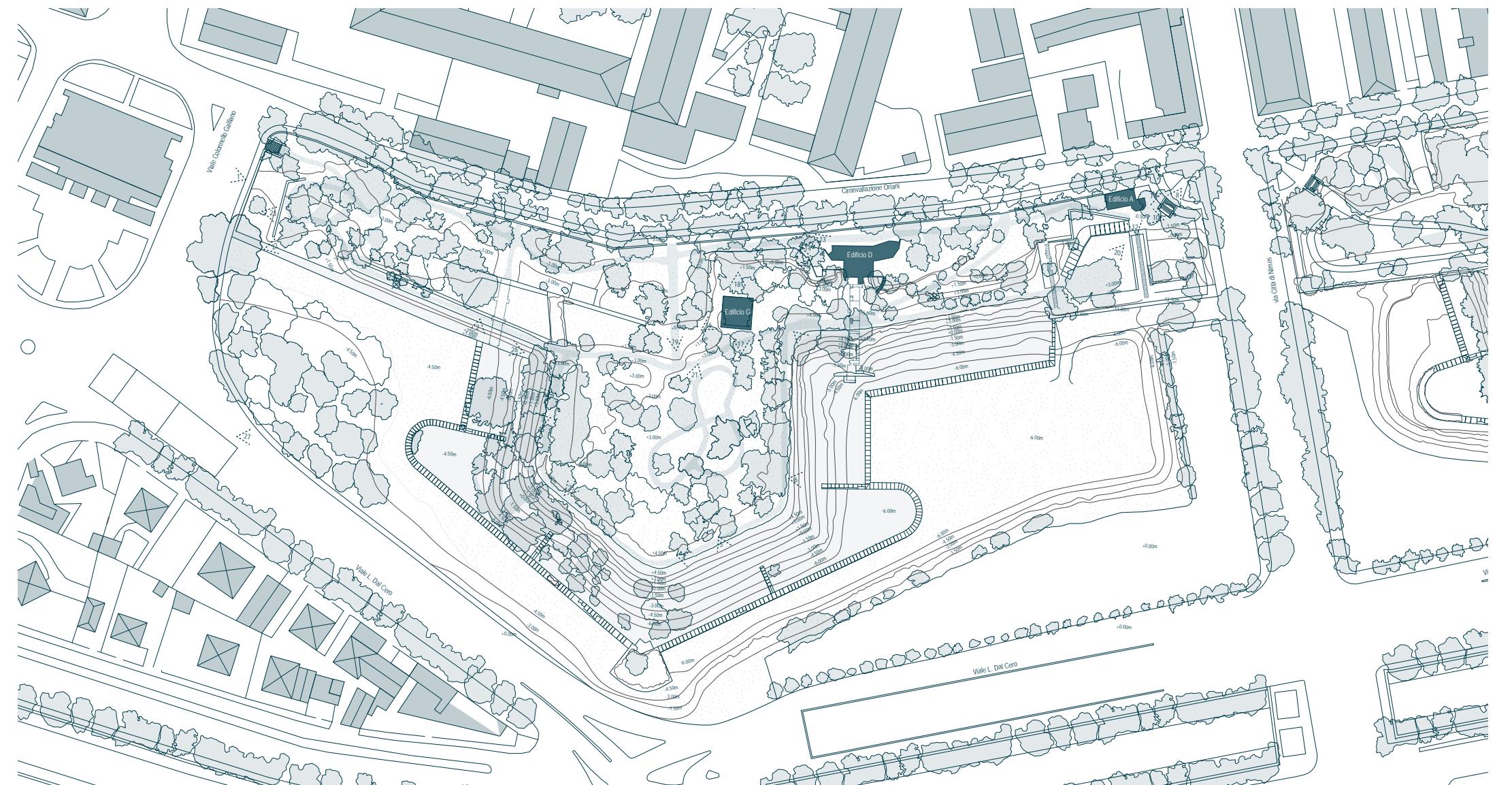
Duration 1st phase (Echo): 5 weeks

Duration 2nd phase (Simulated Simulacra): 2 months

Softwares used: Photoshop, Rhino 3D, Autocad

Main tasks: Concept development, working on everything related to my sector of the undergorund city (doing the 3D model, doing the 2D line-work, photoshopping the view), merging the final line-work view





Site Plan provided by the Municipality of Verona

## INTRODUCTION

Verona 2025-2125 was developed through the participation at the International Architecture Seminar “Verona. Spirito | Zoo”. The Seminar is part of the research project “Laboratorio Verona. Architetture del Made in Italy,” promoted by the Municipality of Verona and the editorial centre PARD of the research infrastructure IR.IDE of the Department of Architecture and Arts at luav.

Verona 2025-2125 envisions future scenarios for the site of the Bastione Santo Spirito, part of the fortification walls of the city, listed as UNESCO World Heritage Site. The area—also known as the ex-Zoo, for the function it hosted between 1962 and 1989—is part of the Parco delle Mura, the city-wall park which has been witnessing the abandonment of its structures over the last twenty years.

Verona 2025-2125 was developed in two phases.

### **Phase 1: Verona 2025. the monumental, the ephemeral, the multispecies (ECHO)**

This phase traces visionary and strategic proposals with regard to the guidelines provided by the real-world requirements defined by the International Architecture Seminar. At the same time, the proposals are intended as statements concerning the topic of the “monumental” and the “ephemeral” in architecture. This phase was part of the Seminar’s final Exhibition in Verona.

### **Phase 2: Verona 2125. future anterior (SIMULATED SIMULACRA)**

This phase outlines a more distant future in which the city would face new challenges, needs, and emergencies to which architecture is called to respond. This phase was developed for the purpose of the academic course.

## CONCEPT DEVELOPMENT

The project showcases a dystopian future-scenario for the next 100 years, in which the climatic conditions have become so harsh that humans are forced to live and develop a society underground. The proposal presents a holistic understanding of the fictional underground city, taking into account not only its physical aspects but also the human experiences and interactions that shape its character.

The design develops in phases of 20 years, in which changes in design, ideology and social constructs are being made by the new human kind generation.

From 2025-2045 the environments starts becoming uninhabitable for long periods of time and humans create geodesic domes around the existing buildings on site for shelter.

From 2046-2065 people are in a "state of emergency", where new bunkers are being built and existing tunnels are being renovated.

Luxuries such as having a public space or privacy are none existent in a situation where staying alive is the most important thing.

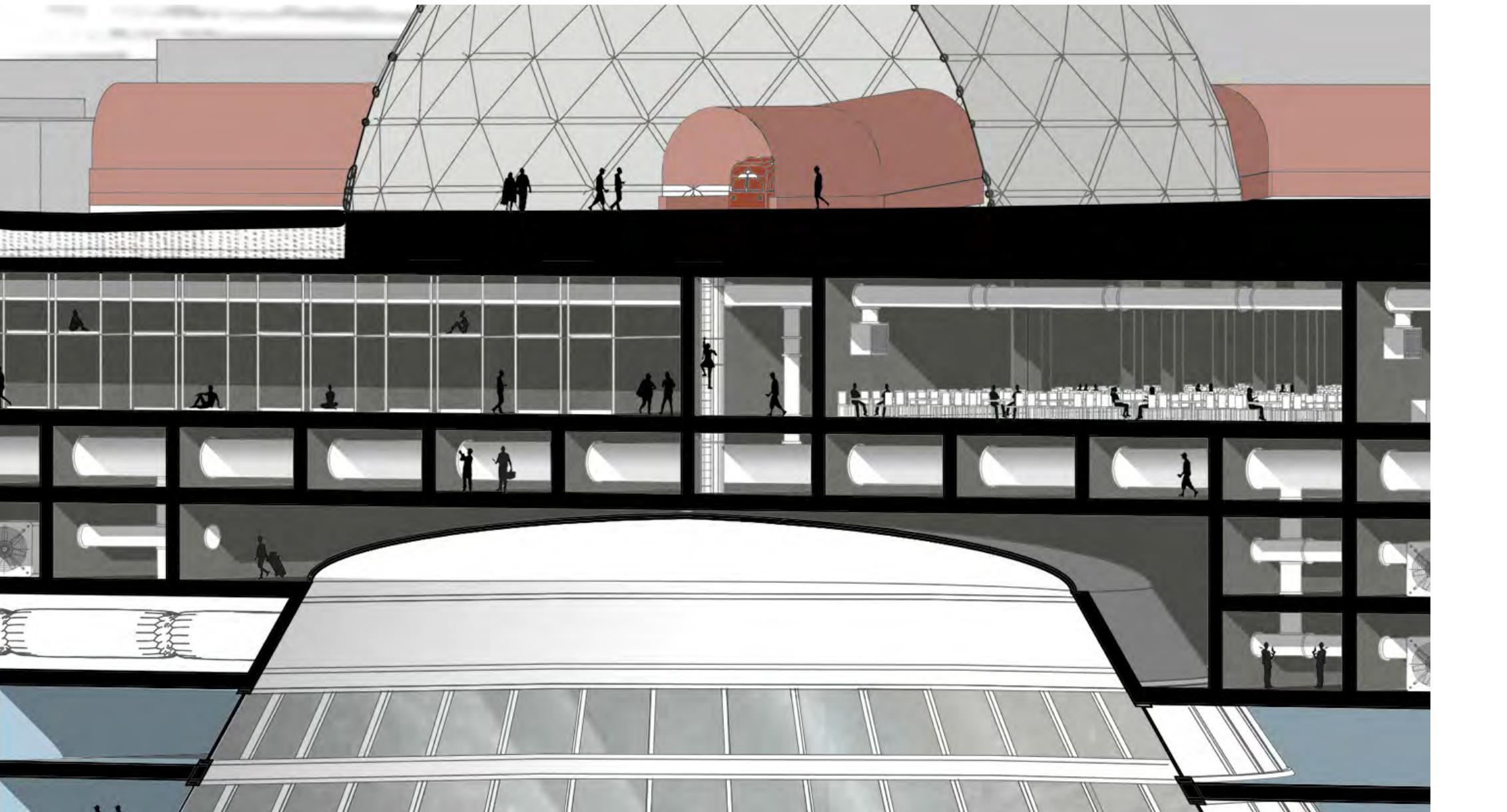
From 2066-2085 going outside without a special suit would kill anyone. People have realized that going back to the earth's surface is not possible so they are trying to develop an underground city that could sustain life. They have built apartments with public spaces in between. They have implemented an industrial sector as well as ways of purifying the outside air. They have created their own inner-environment with giants led screens that resemble a sky-light over a public space. They also build a school in which they can educate the next generation.

From 2086-2105: By this time social classes are starting to form in this new society. A new apartment complex is build for the

richer population, where every block is different and exciting. They also have the luxury of real nature being planted in their new public space. They also build offices for the businesses, as well as a public transport system and a commercial area.

From 2106 - 2125: After 80 years of living only in apartment blocks, the most upper class of society can live in an artificial suburb where they have their own LED dome on which they can program any weather, independent from the rest of the public spaces. Moreover, they could even buy their own individual dome over their house to customise even more their wheather experience.

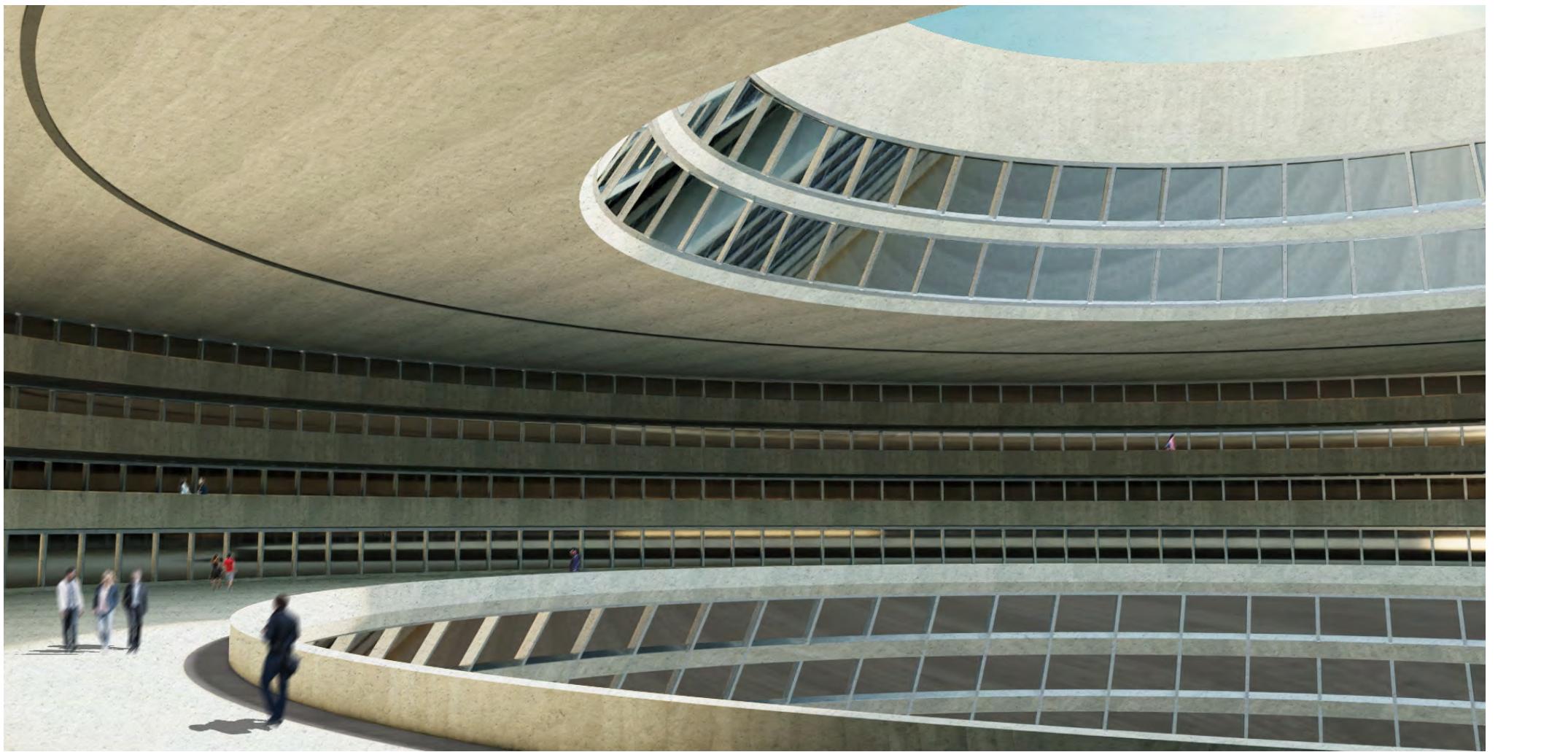
This new society lives in a simulation of the earth from 100 years before. The new generation has never been on the surface of the earth and only knows of it from books or movies.



Bunkers and the fake-skylight maintenance rooms



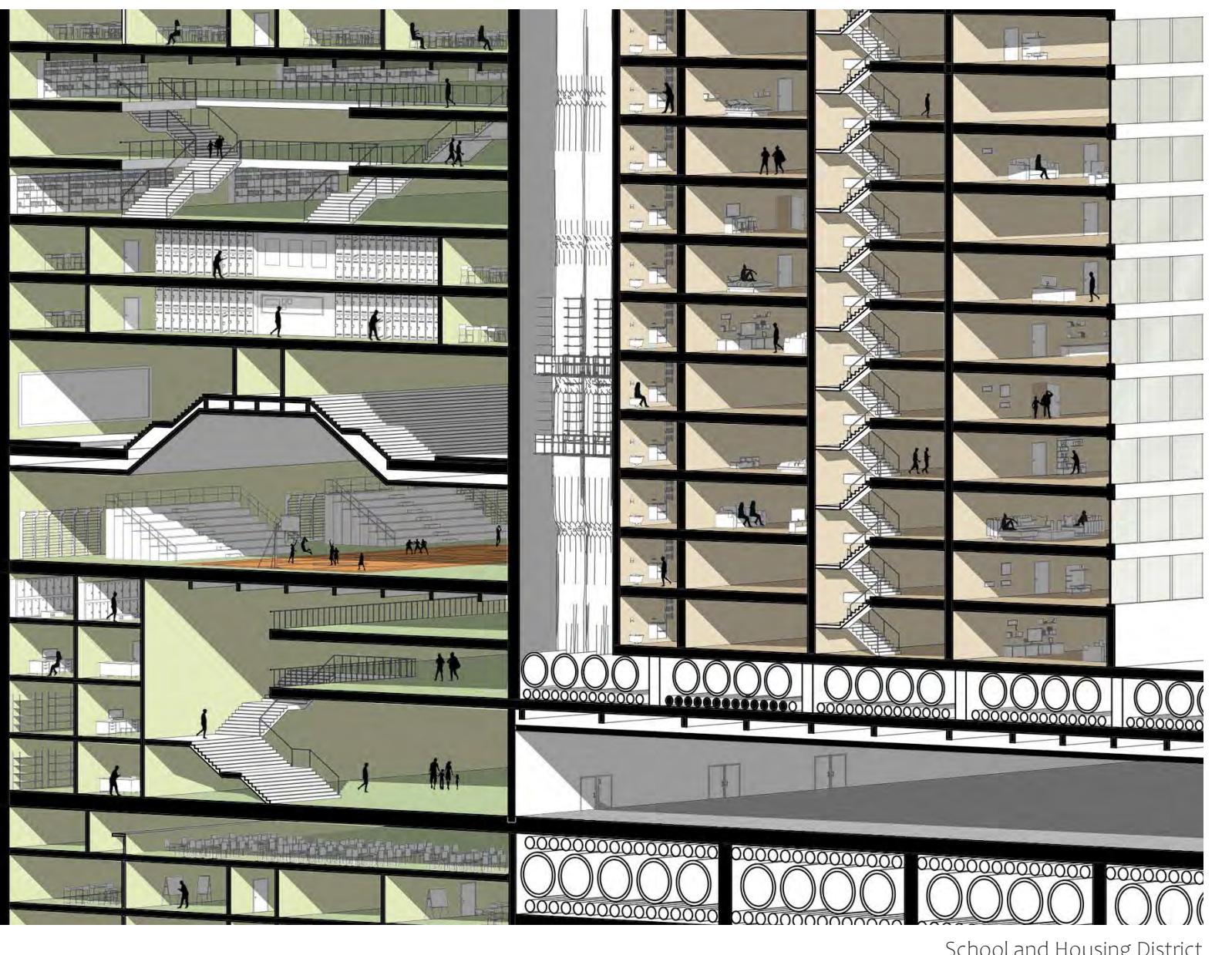
Bunkers view



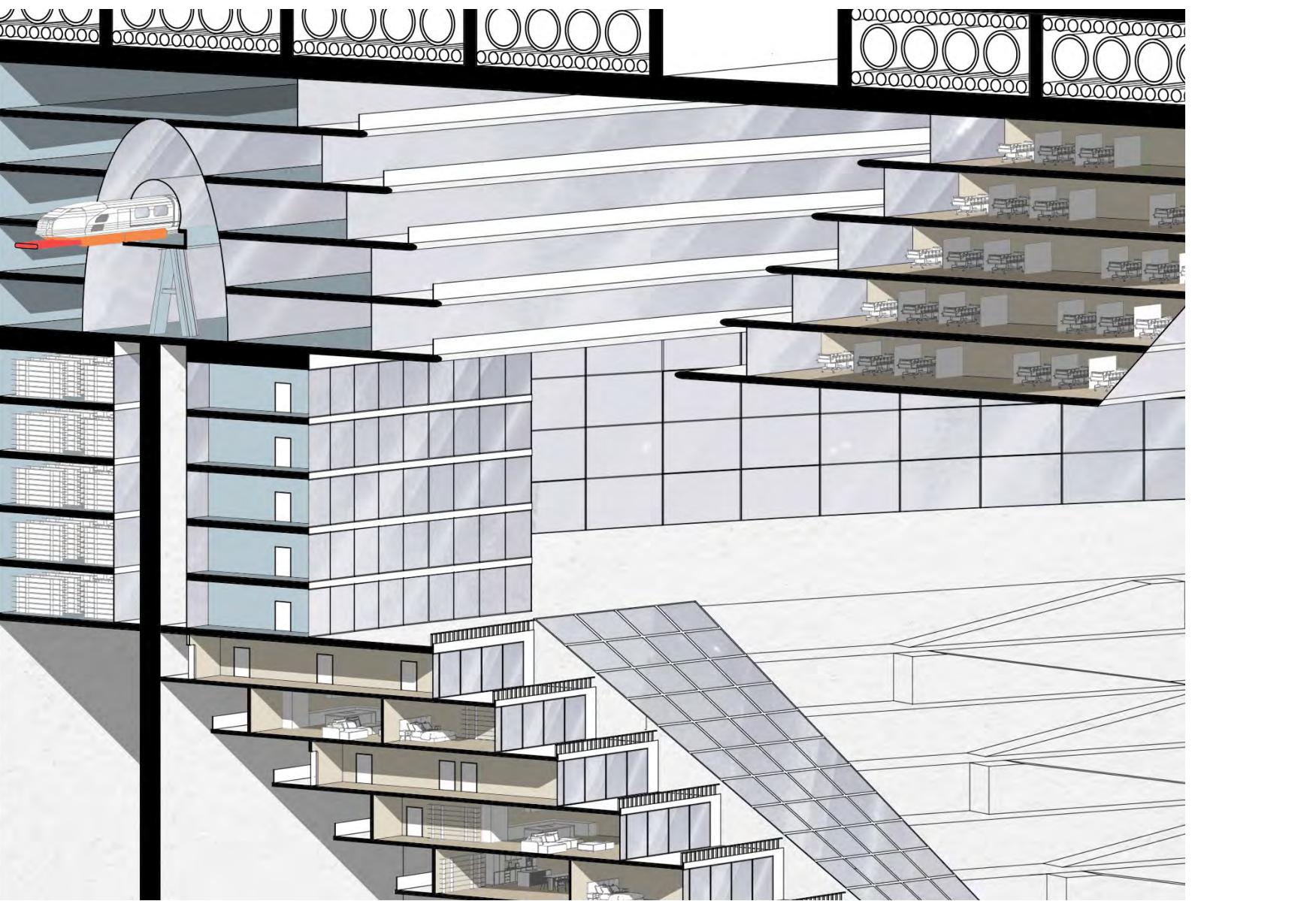
The first Public Space and the fake sky-light view



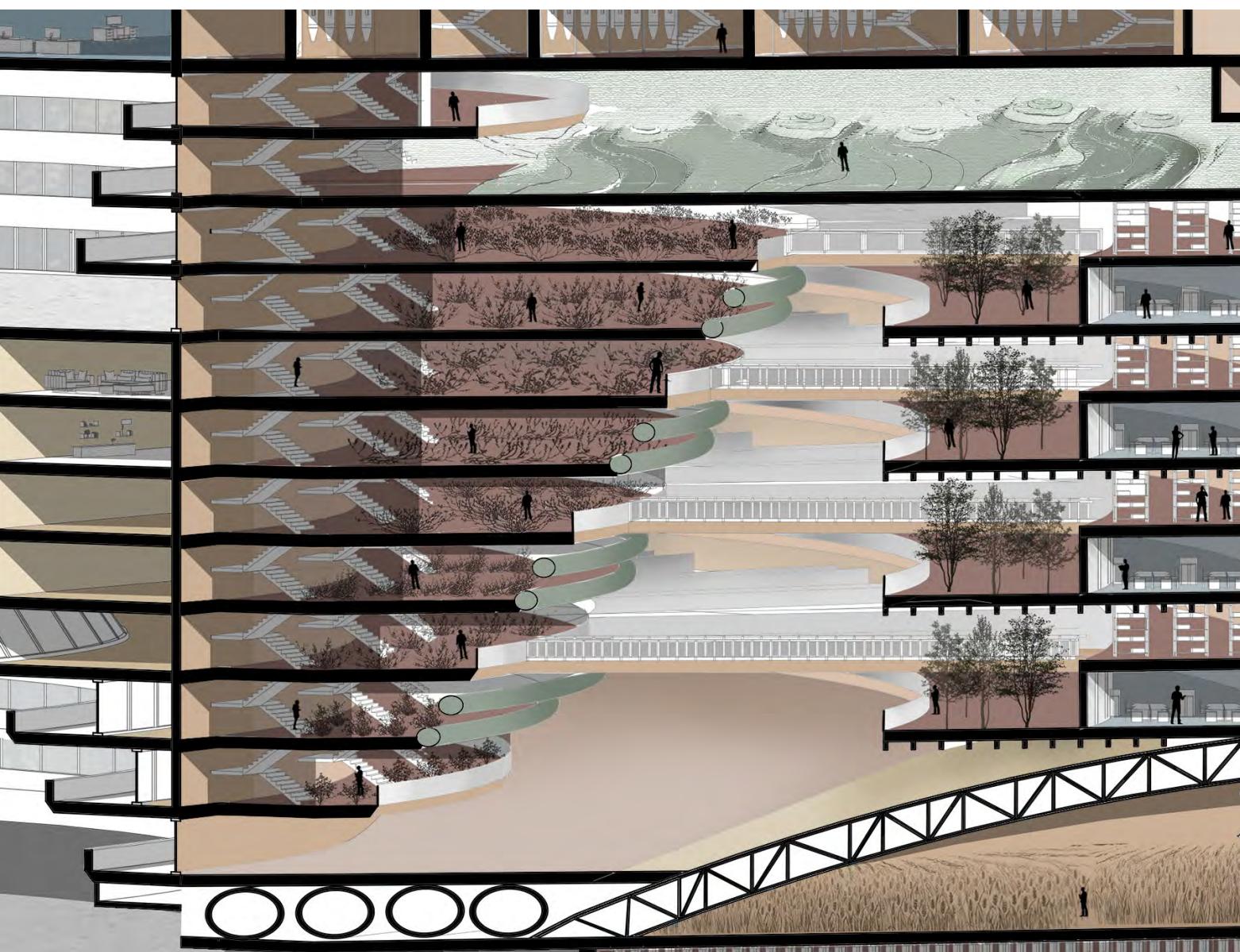
View from the suburbs



School and Housing District



Offices district



Industrial district

# I. VERONA 2025-2125

(ECHO)

6th Semester Project

International Architecture Seminar "Verona. Spirito | Zoo"

Project Partners : Ema Humajova, Liam Moeller, Sofia Escandon,

Yana Rudasevski

Location: Verona, Italy

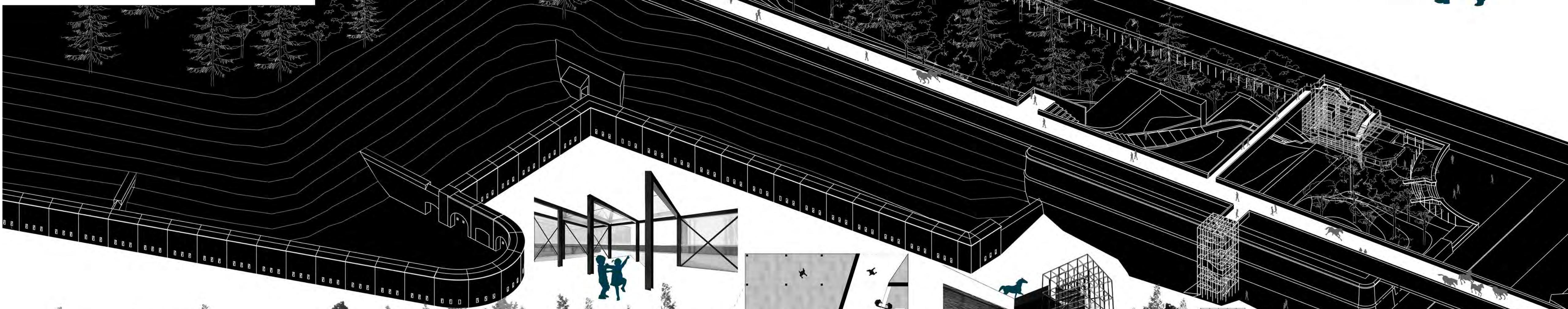
Professors: Prof. Dr. Giorgia Aquilar, Marzio Di Pace

Duration 1st phase (Echo): 5 weeks

Duration 2nd phase (Simulated Simulacra): 2 months

Softwares used: Photoshop, Rhino 3D, Autocad

**Main tasks:** Concept development, preparing the main line-work axonometry and photoshopping it, working on everything related to my assigned building (designing a solution, doing the 3D model, doing the section), preparing the base for the majority of the perspective views for a later post-production by someone else, Working on the topography.





Proposal exhibited in the Exhibition at Porta Palio, Verona



Publication: *Ephemeral and monumental architecture. Verona laboratory* by Sara Marini, Alberto Petracchin, Luca Zilio. Published by Ancore

#### CONCEPT AND DESIGN DEVELOPMENT

For this first phase of the project, the requirements were: to renovate the 3 existing buildings on site, to implement a vertical connection and to design a bridge that would unite the 2 neighbouring Bastione over the street for the horses shows that take place there each year.

The memory of the zoo is held in a much firmer grasp by the memories of the community, which is not reflected in its current state. Despite efforts to revive the site's connection to its past, it still seems forgotten, at least in its own ephemeral memory. The aim of this project is to highlight this act of forgetting as a journey through the site.

To achieve this 'journey of forgetting', the concept of oblivion was taken into consideration. Oblivion, in the topic of memory, is the last stage of the forgetting process. It is the stage of being forgotten, especially by the public - by the collective memory. This collective memory can be represented by a path, that leads to that inevitable oblivion. Along this journey, there are certain ephemeral memories that one comes across. These memories fluctuate between the past and the future. This, we represented through the interventions. Each structure along the path to oblivion is ephemeral - they are all there, but fleeting. These structures use materials that were used in the original zoo: steel, glass, fabric or membranes, hoping to spark some individual memories tied to the site's history.

## II. FLOATING POOL

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6th Semester Project

Project Partners : Rahma Aly Mohamed Aly, Yana Rudasevschi

Location: Floating University, Berlin

Professors: Rasa Weber

Softwares used: Photoshop, Rhino 3D, Autocad

Main tasks: Concept development, doing the 3D model, doing the exploded axonometric, working on the filter prototypes





Site Plan - Scale 1:500

## INTRODUCTION

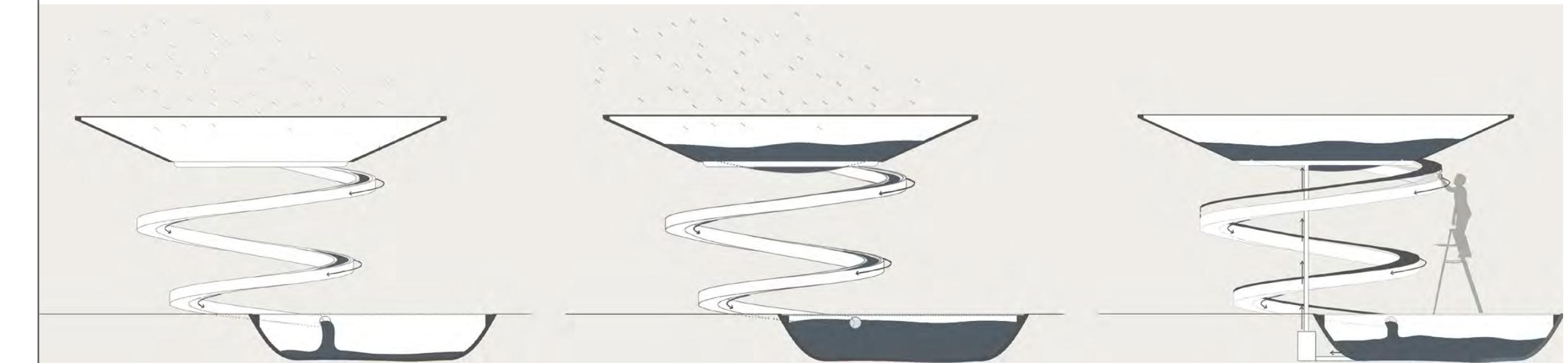
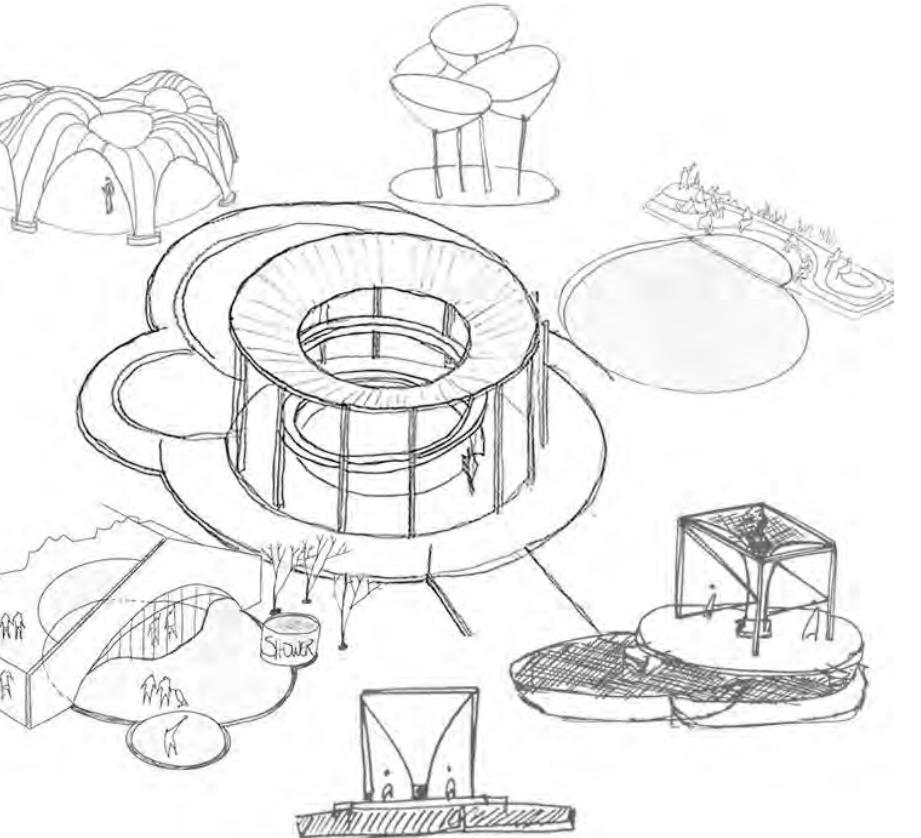
The aim of this project was to create a pavilion at Floating University in Berlin, having sustainability in mind. The project proposes a pavilion that filters rainwater and uses it to create an enjoyable space for the whole community.

## CONCEPT AND DESIGN DEVELOPMENT

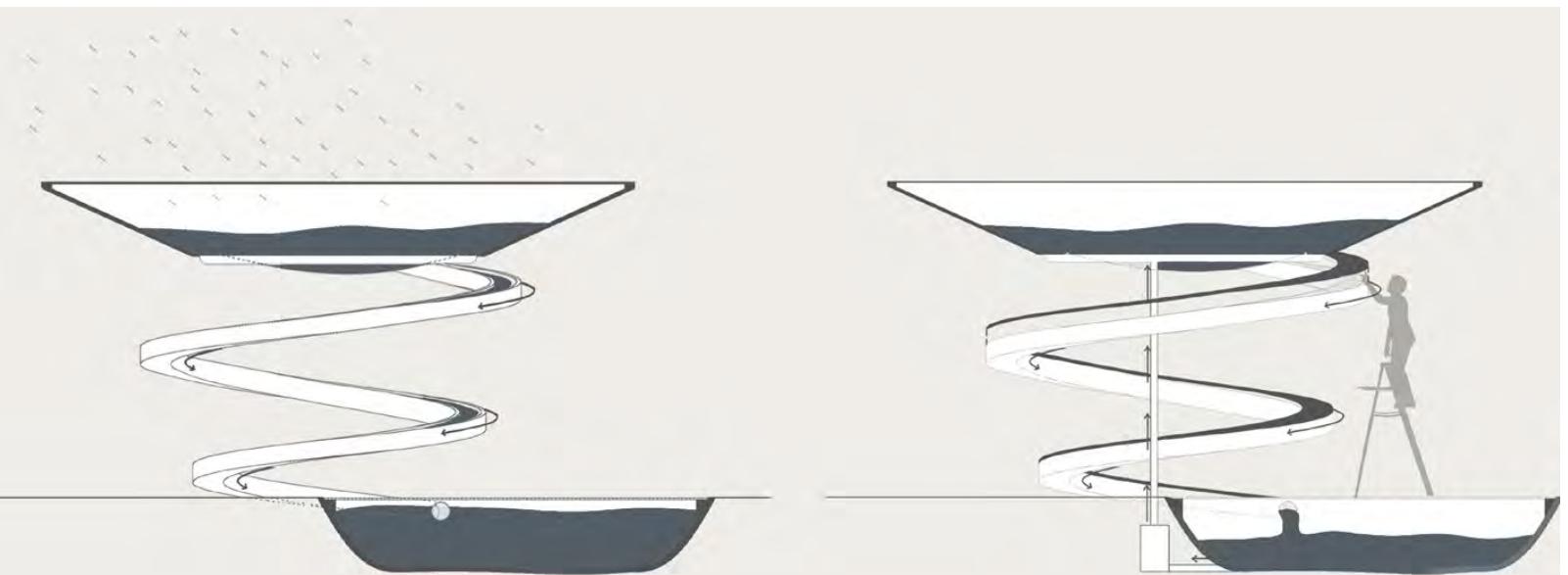
The Floating University is a former rainwater retention basin for the Tempelhof Airport. The idea is to reinvent this idea of a rainwater retention basin into a rainwater floating pool. When needed the pool can be covered and used as a deck.

In terms of materiality, the pavilion is mainly built from recycled wood found at the Floating University. Other materials include steel, cotton textiles and fabric infused in beeswax for waterproofing properties.

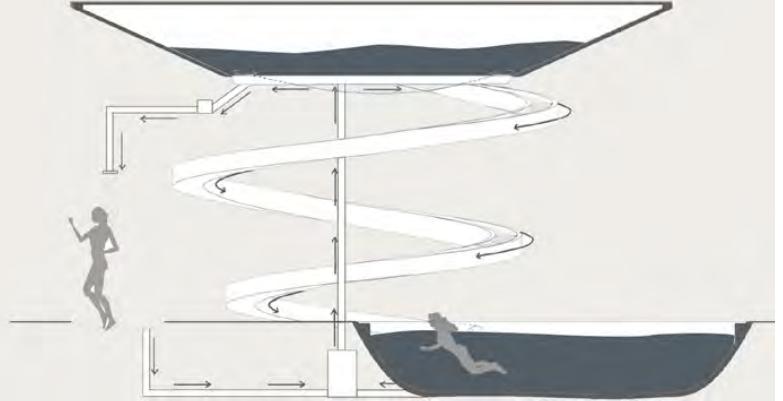
The proposal is to utilize a specially designed pavilion to recirculate rainwater through a process of capturing, storing, filtering, and reusing. By this process we are not only conserving water but also promoting a sense of community and engagement among the visitors of the floating university. The pavilion itself serves as the "filter" for the water.



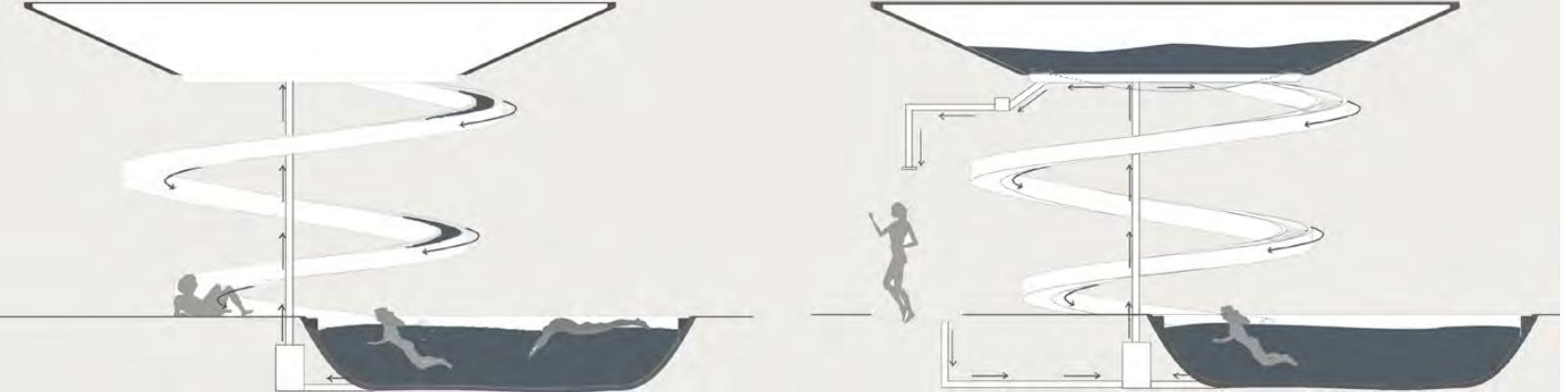
In winter, rain gets collected in the gutter  
The water running within the gutter runs down the looped path  
Rain water is directed to the pool and is collected there  
Pool is covered throughout the winter season to protect collected



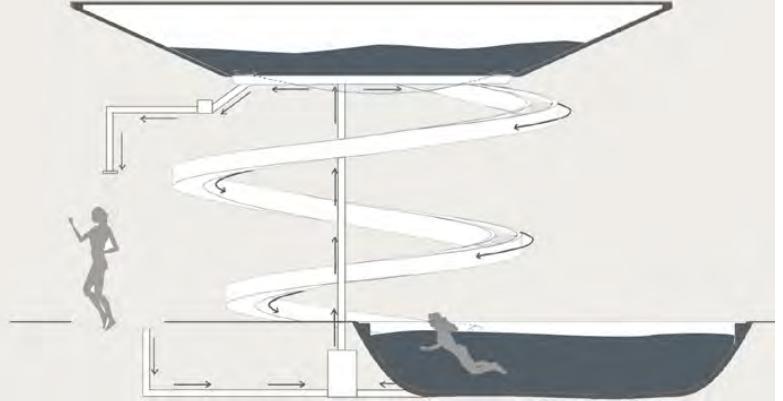
If more water needs to be collected a sheet is added to seal the roof  
More water is collected on the roof, it runs down to be stored in pool



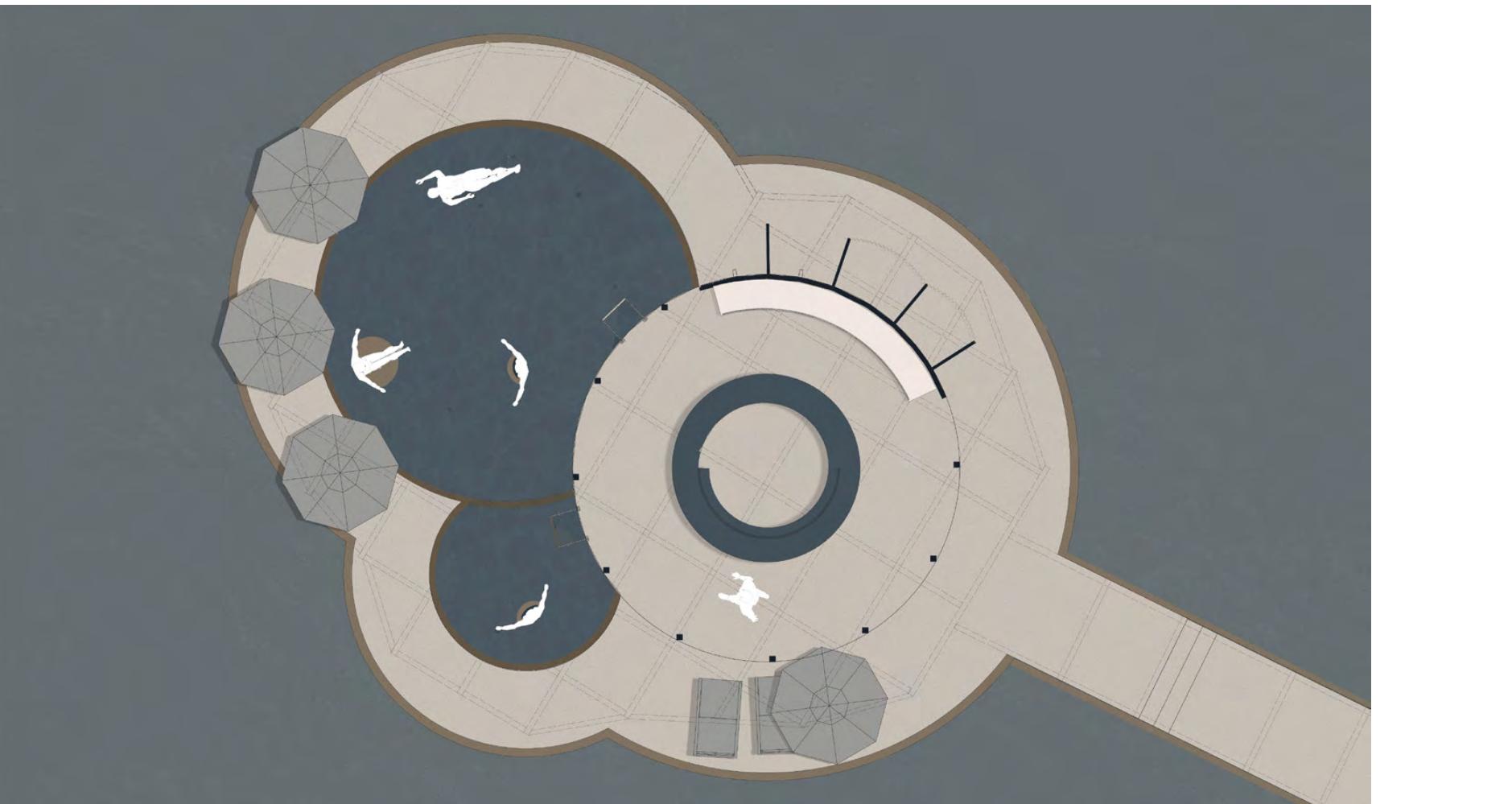
The water filtration cycle continues throughout the season  
In summer after several filtration cycles, water is ready to be swum in  
Pool cover is removed, Filters from loop are removed to prevent water blockage



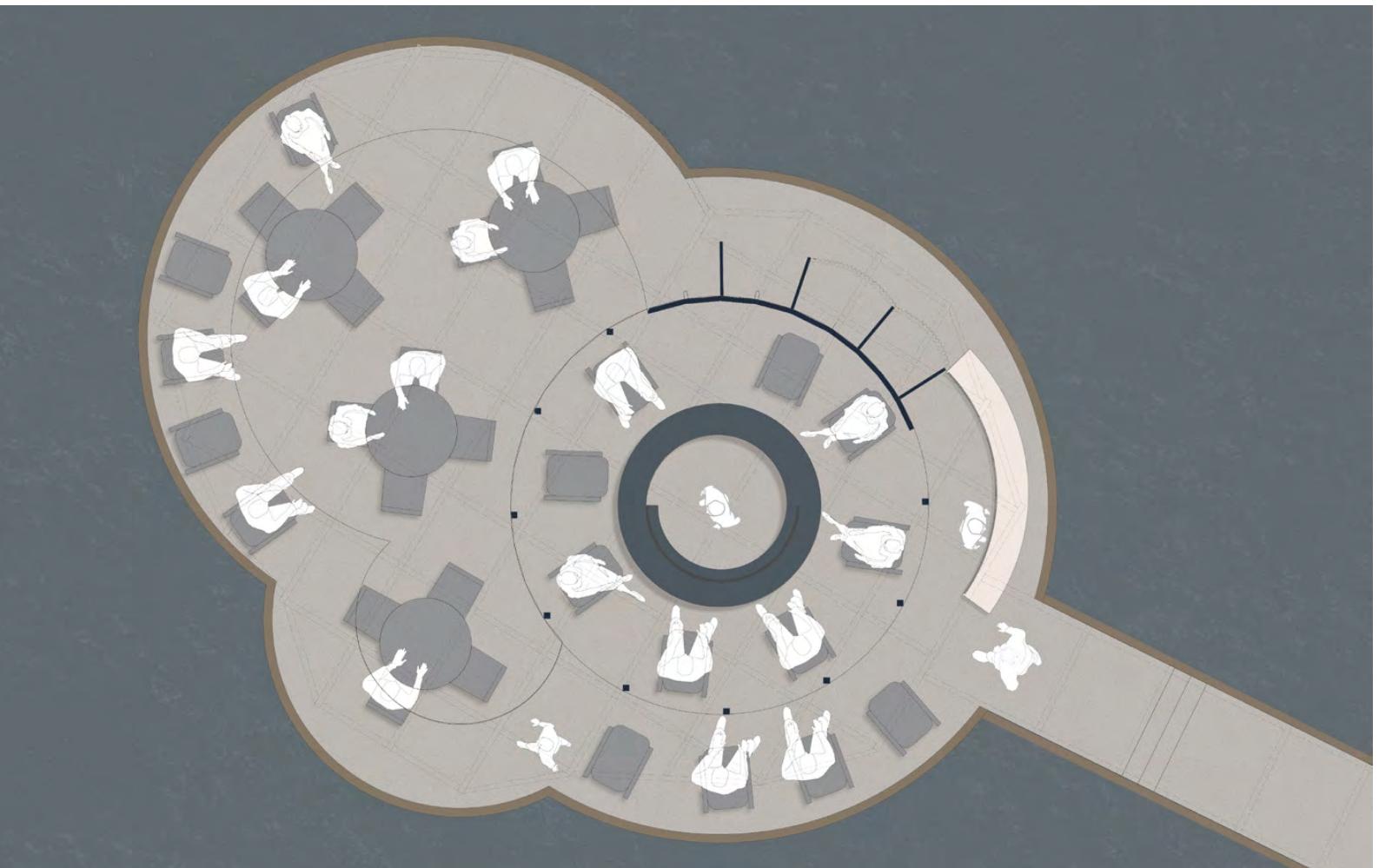
In summer, pool water is ready for swimming  
The cycle continues without filtration for aesthetic reasons  
To save energy, pump can be switched off and cycle stops



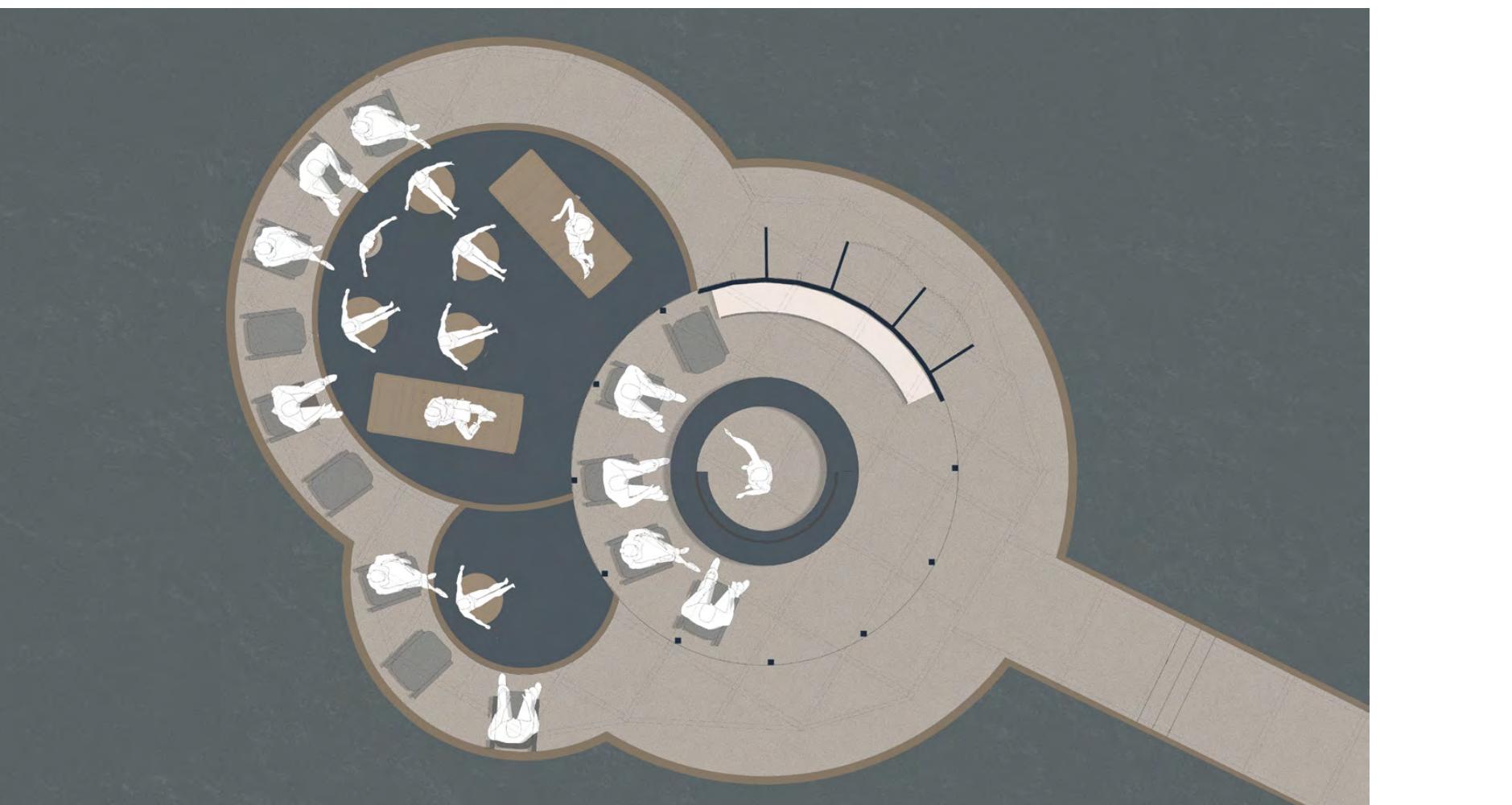
For showering before and after the pool, pipes are connected to the gutter  
Cycling water can be redirected to shower heads  
Roof is sealed and filters are installed in roof  
Water used for shower is pumped up the roof, run down the loop to be filtered



Summer Scenario - Scale 1:100



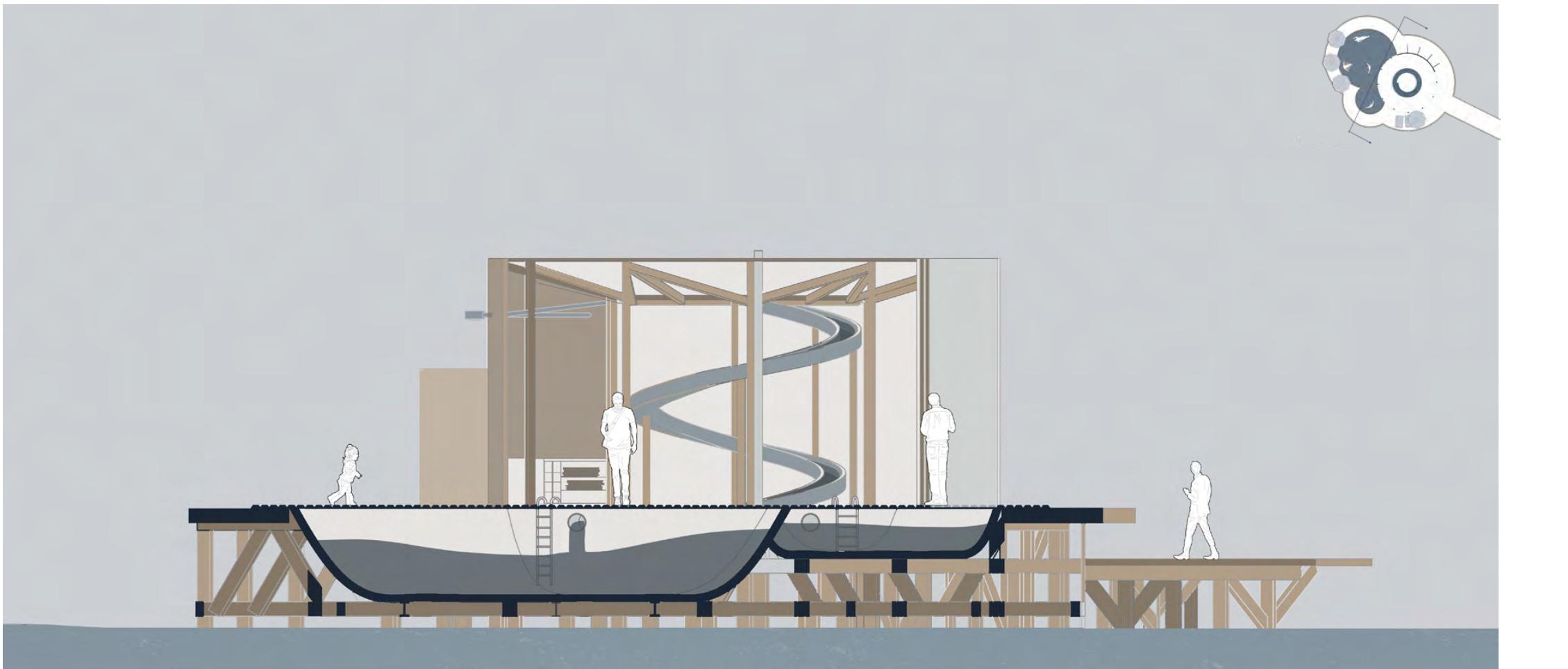
Workshop/Lecture Scenario - Scale 1:100



Summer Lecture Scenario - Scale 1:100



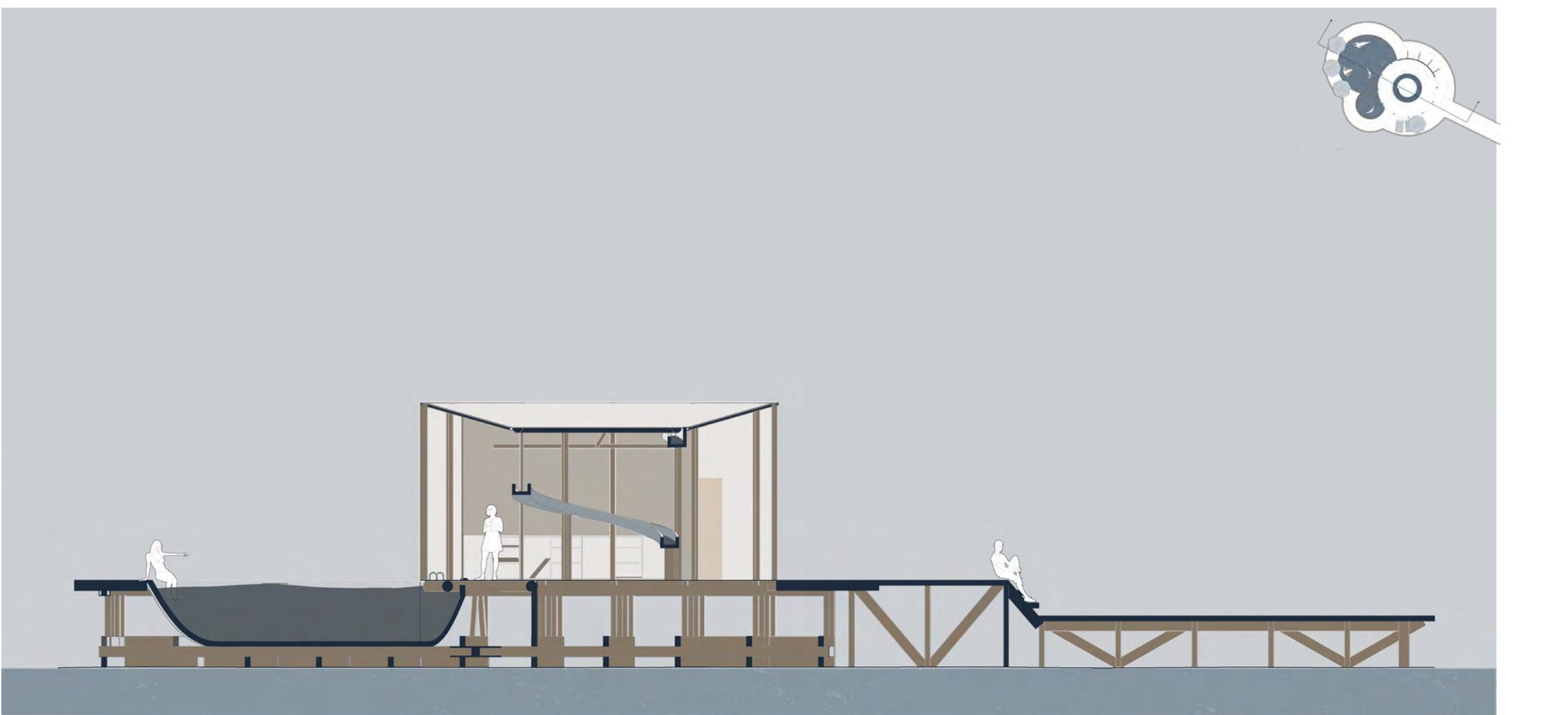
Movie night Scenario - Scale 1:100



Covered Pool Section - Scale 1:100



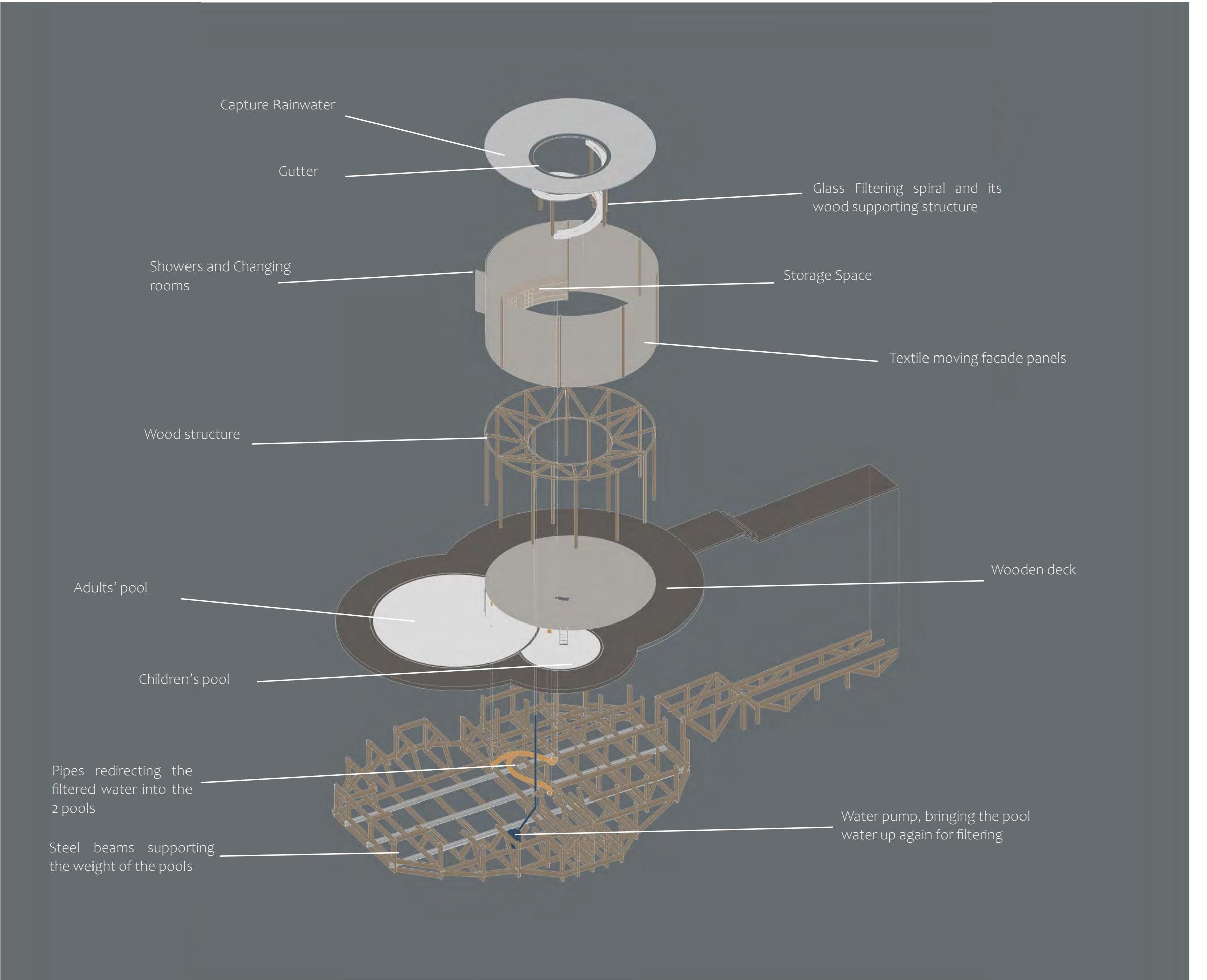
View from the pool



Open Pool Section - Scale 1:100



View Approaching the Pavilion



Filter prototypes using Sand, Gravel and Charcoal

### III. BLANK CANVAS

5th Semester Project

Interdisciplinary Project - Project Partners : Alice Brindemark,  
Luna Gilly, Nina Lopac (interior architects); Rena Sawaed, Viviana  
Wilhelm (architects); Katsiaryna Horbava, Lia Tarakji (graphic  
designers)

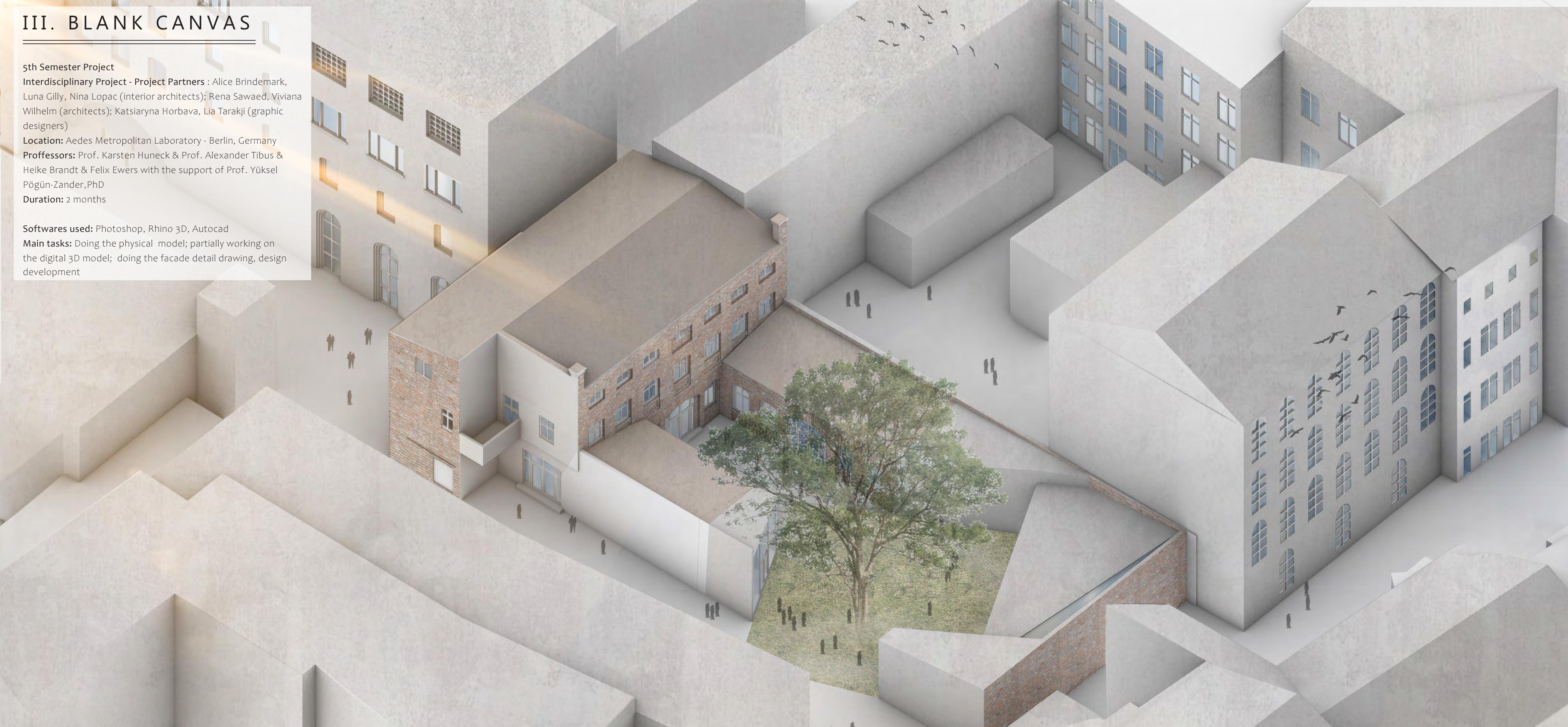
**Location:** Aedes Metropolitan Laboratory - Berlin, Germany

**Professors:** Prof. Karsten Huneck & Prof. Alexander Tibus &  
Heike Brandt & Felix Ewers with the support of Prof. Yüksel  
Pögün-Zander,PhD

**Duration:** 2 months

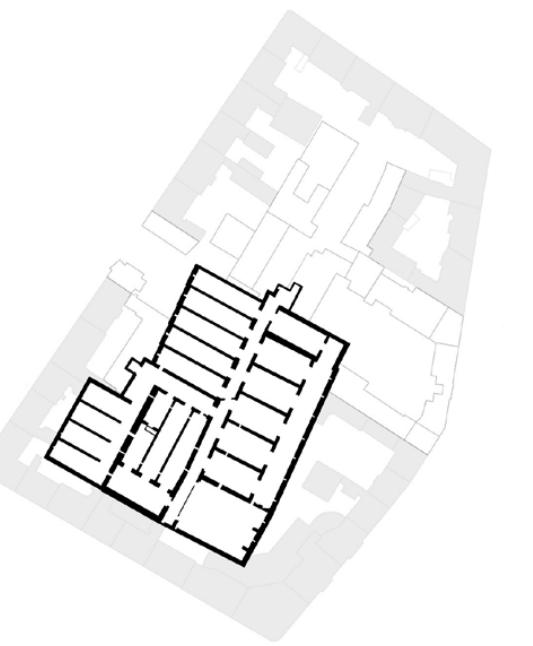
**Softwares used:** Photoshop, Rhino 3D, Autocad

**Main tasks:** Doing the physical model; partially working on  
the digital 3D model; doing the facade detail drawing, design  
development



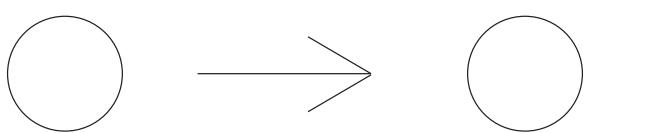


Pfefferberg Diagram showing the people's paths around the site



Existing Kellers which are not seen from above

## SITE FUNCTIONS DEVELOPMENT



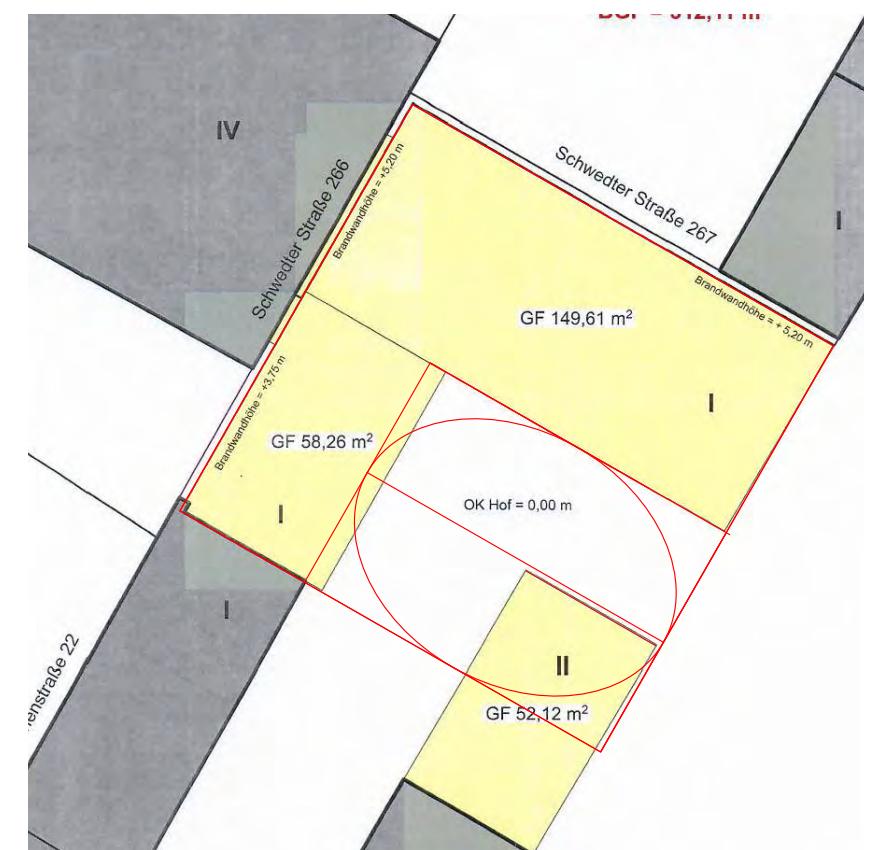
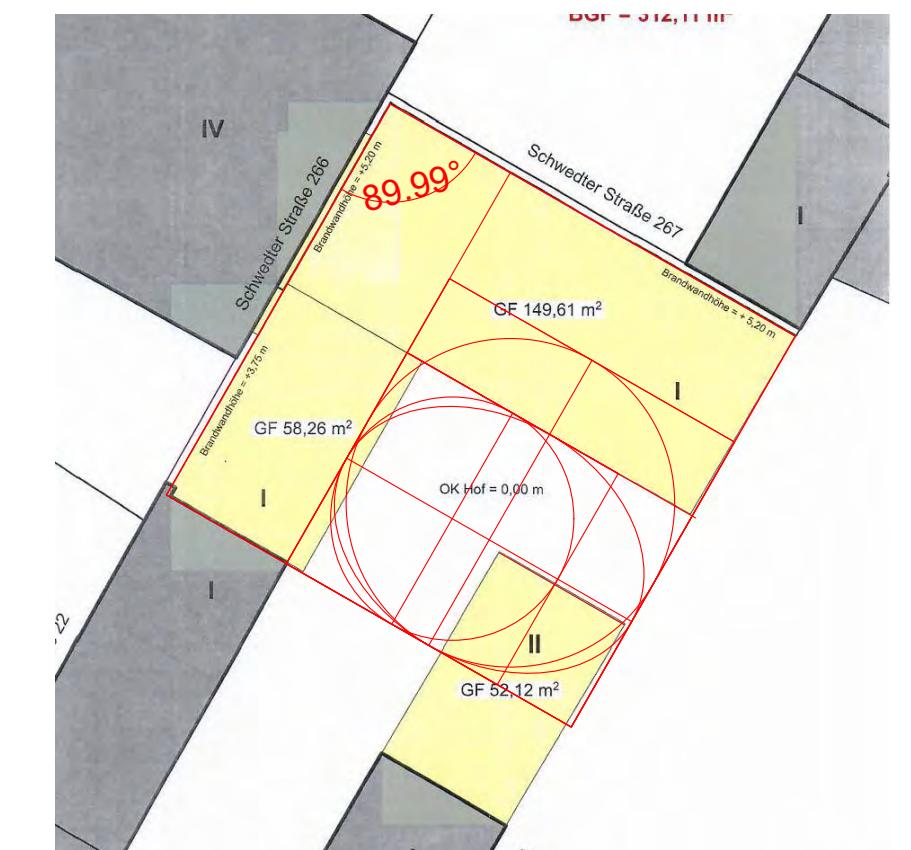
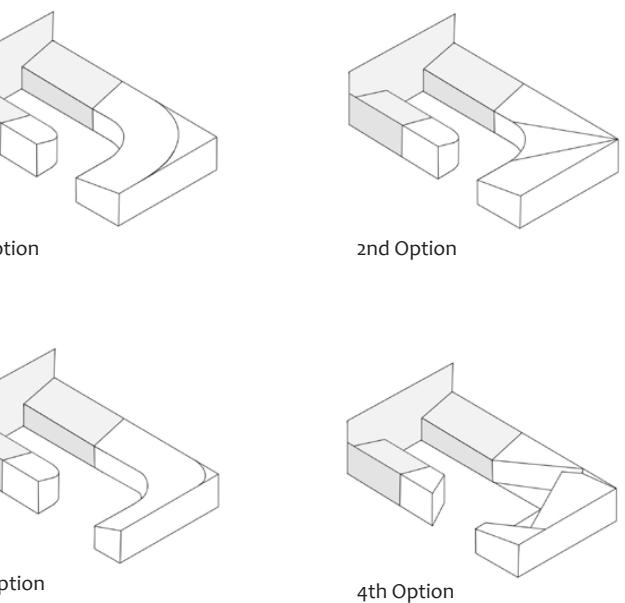
## INTRODUCTION

For this project we worked together with the Aedes Architecture Forum and the Aedes Metropolitan Laboratory to design an extension in their backyard which will serve as a Communication Hub . This was an interdisciplinary course, where I worked together with other 2 architecture students, 3 interior architecture students and 2 graphic design students which re-designed their branding strategy.

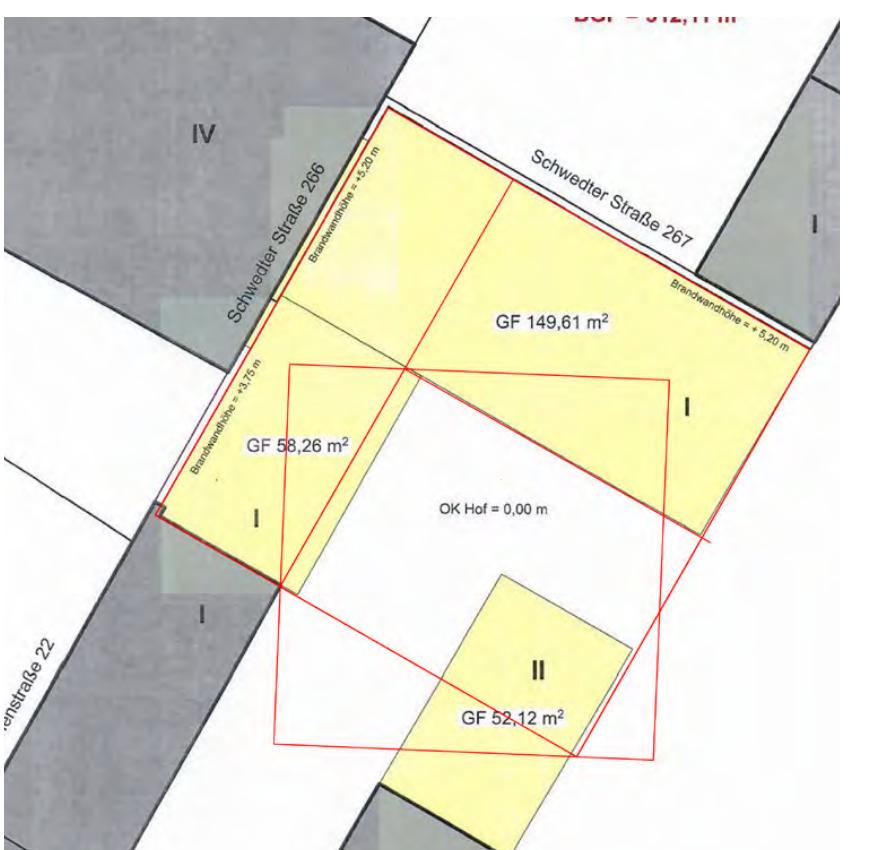
## SITE ANALYSIS

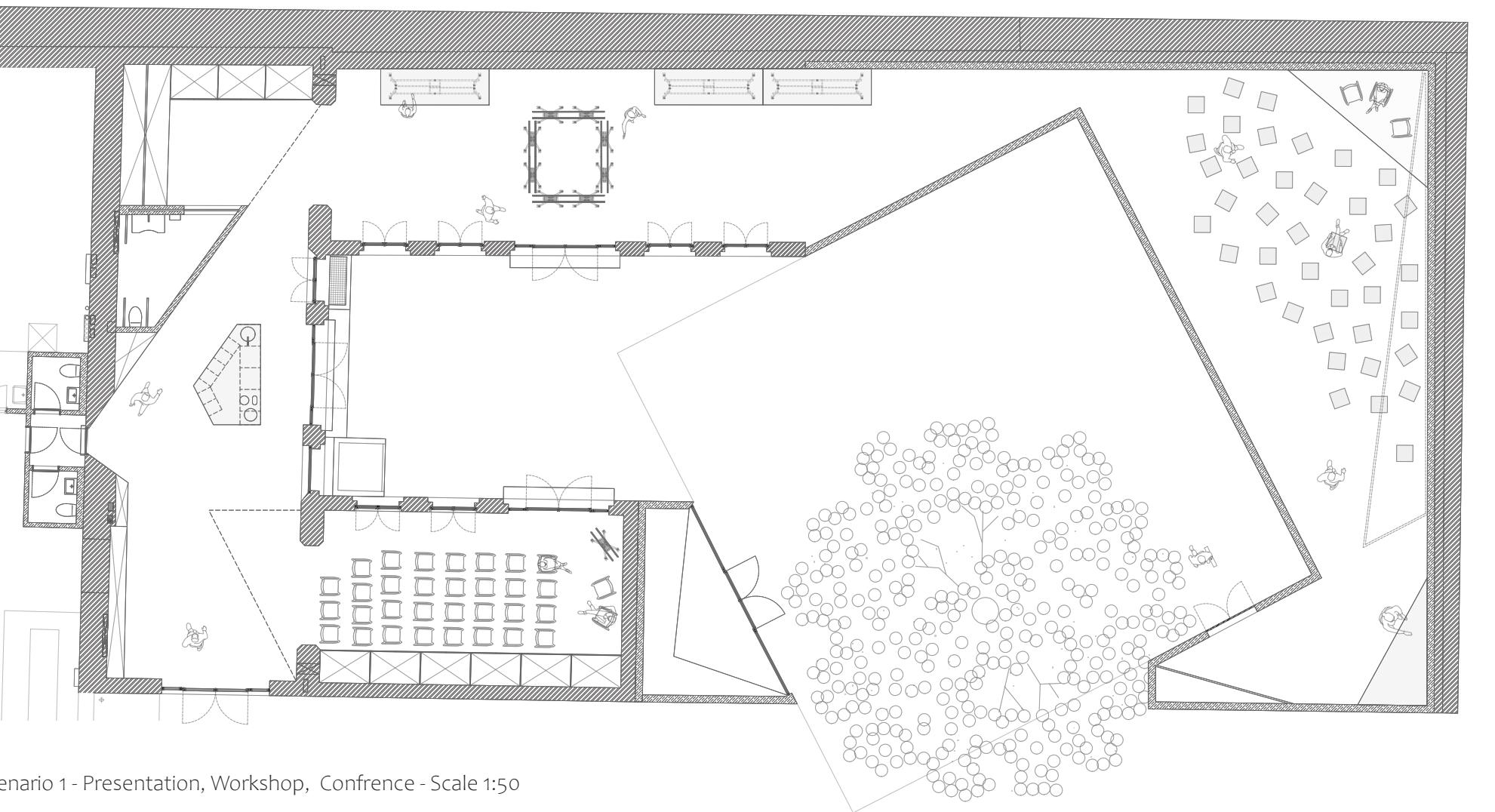
Aedes is located in the Pfefferberg complex, in units 8 and 10.

Pfefferberg was a former brewery established in 1982 and along the years it hosted many functions. From the site analysis we came to the conclusion that there's more to it than meets the eye. It has an explorative characteristic due to the arrangement of the buildings on the site, always requiring you to go over a corner to explore more of it. The site itself embodies the ideas of creation and innovation, being rethought as a cultural and artistic center. It's ever changing functions show it's flexibility.

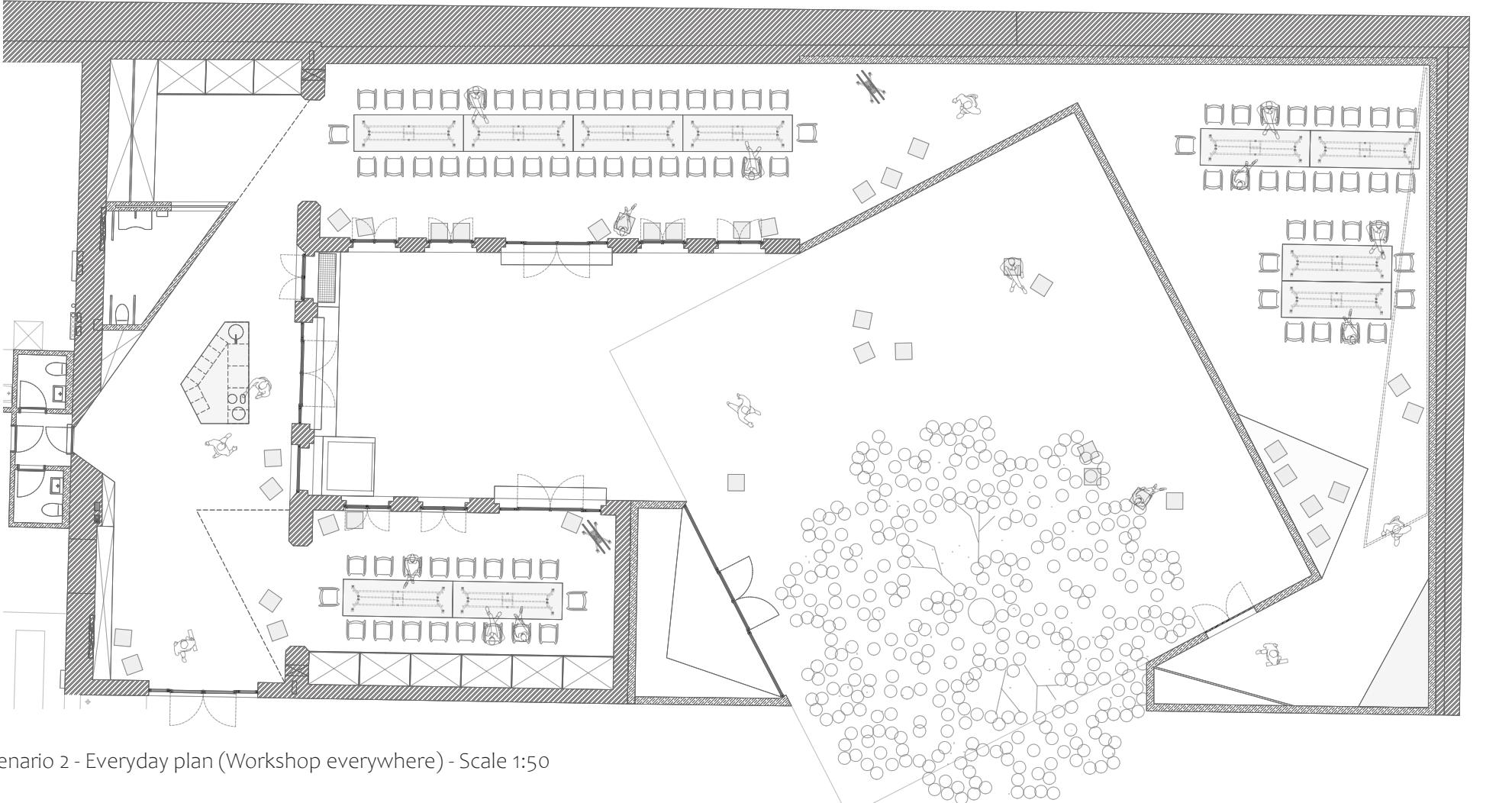


Site Geometry exploration



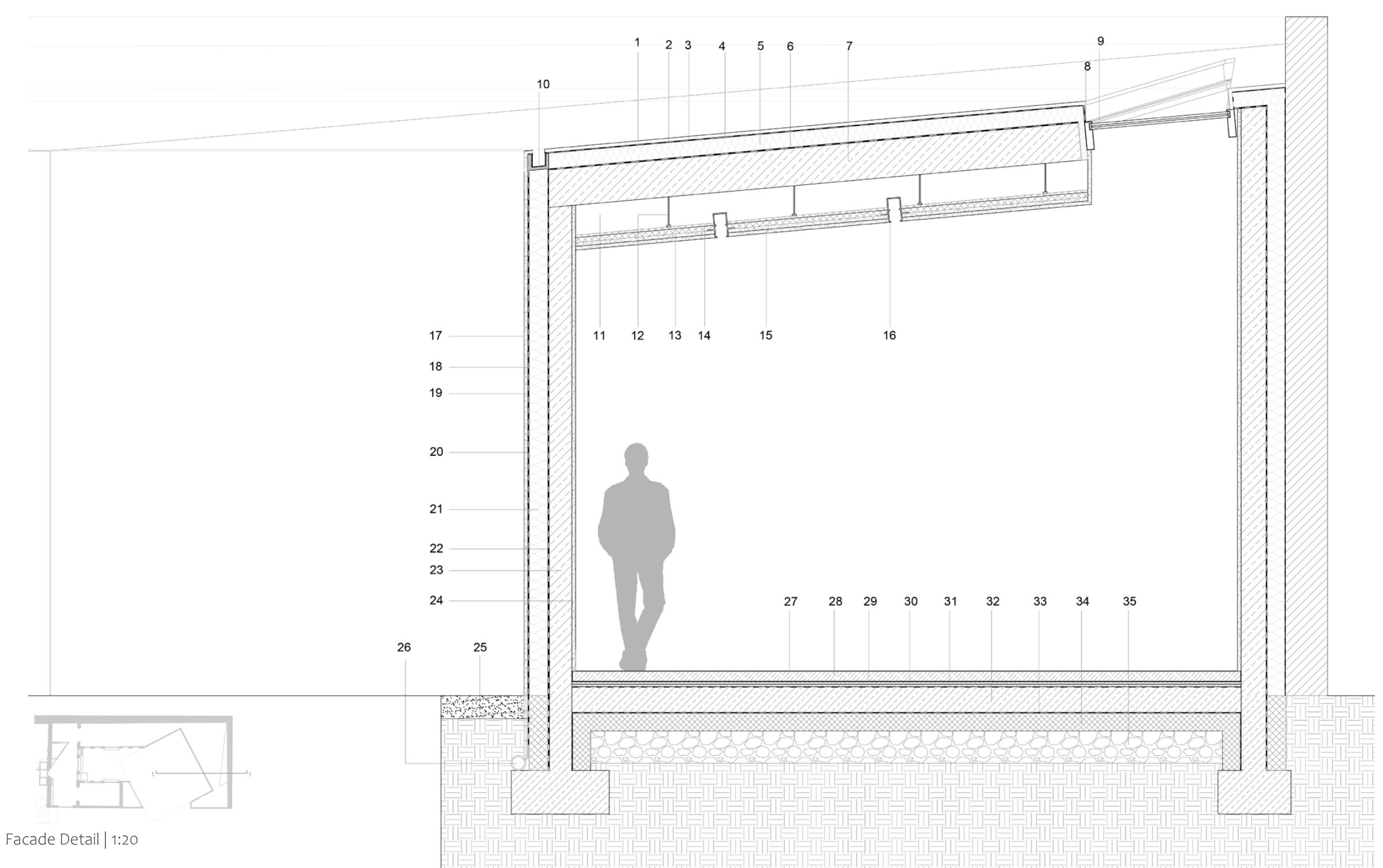


Floorplan Scenario 1 - Presentation, Workshop, Conference - Scale 1:50



Floorplan Scenario 2 - Everyday plan (Workshop everywhere) - Scale 1:50

Roof built up (from top to bottom):		Suspended ceiling:		Wall build up (outside - inside):		Floor build up:	
1. Plaster-cement	30 mm	11. Clear Opening	240 mm	17. Plaster-cement	30 mm	27. Microcement	3 mm
2. Primer		12. Hanger		18. primer		28. Screed	80 mm
3. Metal lash		13. Supporting profile	40 mm	19. Metal LASch		29. Separation Plastic layer	4 mm
4. Waterproof layer	3 mm	14. Acoustic Insulation	60 mm	20. Waterproofing layer	2 mm	30. Sound insulation	20 mm
5. Insulation	150 mm	15. Plasterboard	60 mm	21. Insulation	150 mm	31. Vapour membrane	4 mm
6. Vapourbarrier	4 mm	16. Lights Track		22. Vapour Barrier	2 mm	32. Concrete slab	200 mm
7. Load-bearing concrete	300 mm	Total	360 mm	23. Load bearing concrete	200 mm	33. Vapour Barrier	4 mm
8. Window drainage gutter		Total	487 mm	24. Plaster-cement	30 mm	34. Insulation	
9. Skylight				25. Filter layer	30 mm	35. Gravel	
10. Hidden gutter				26. Drainage		Total	315 mm





View to the courtyard - Outdoor Presentation/Event Set-up



Workshop area - Workspace set-up



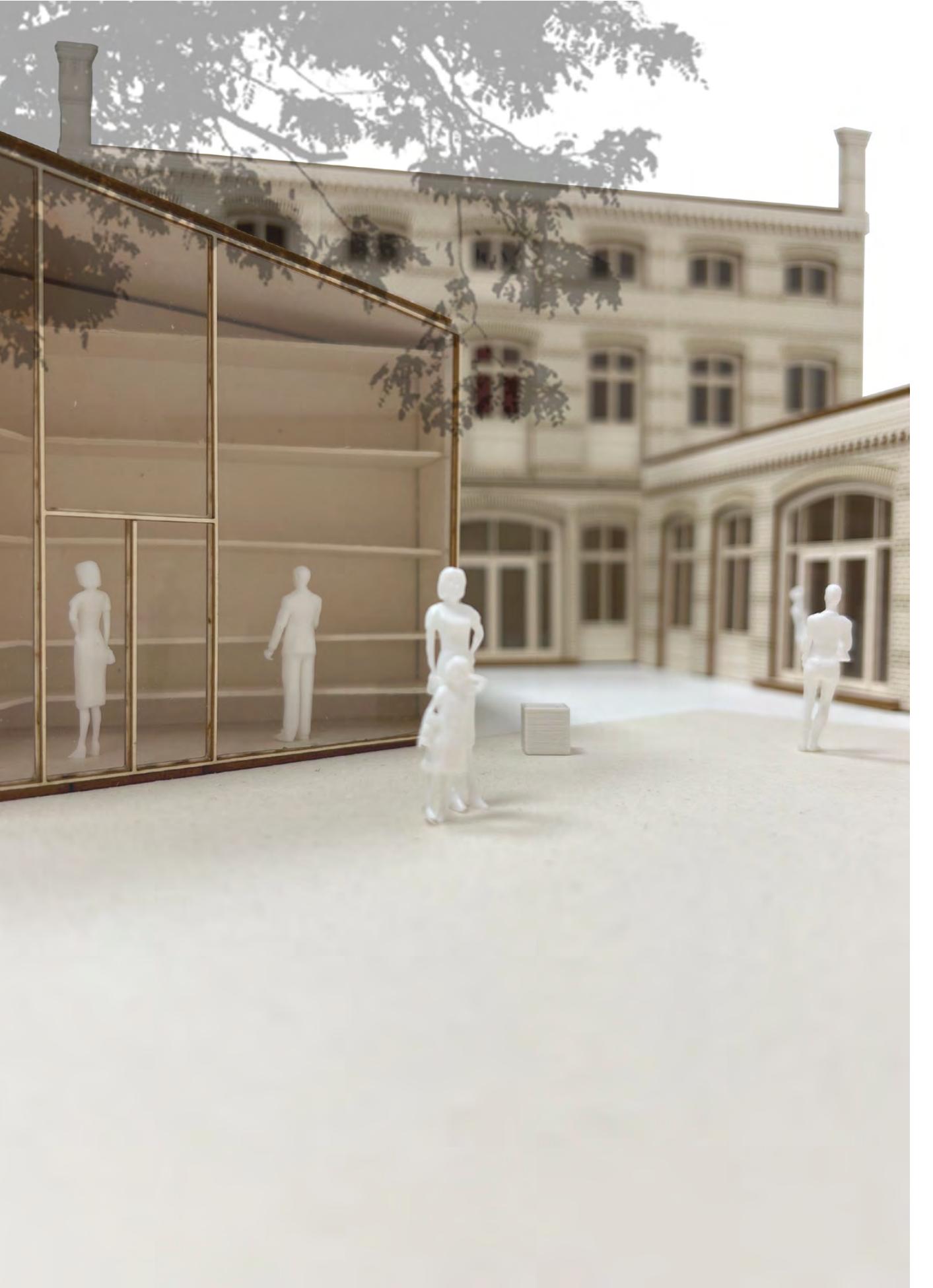
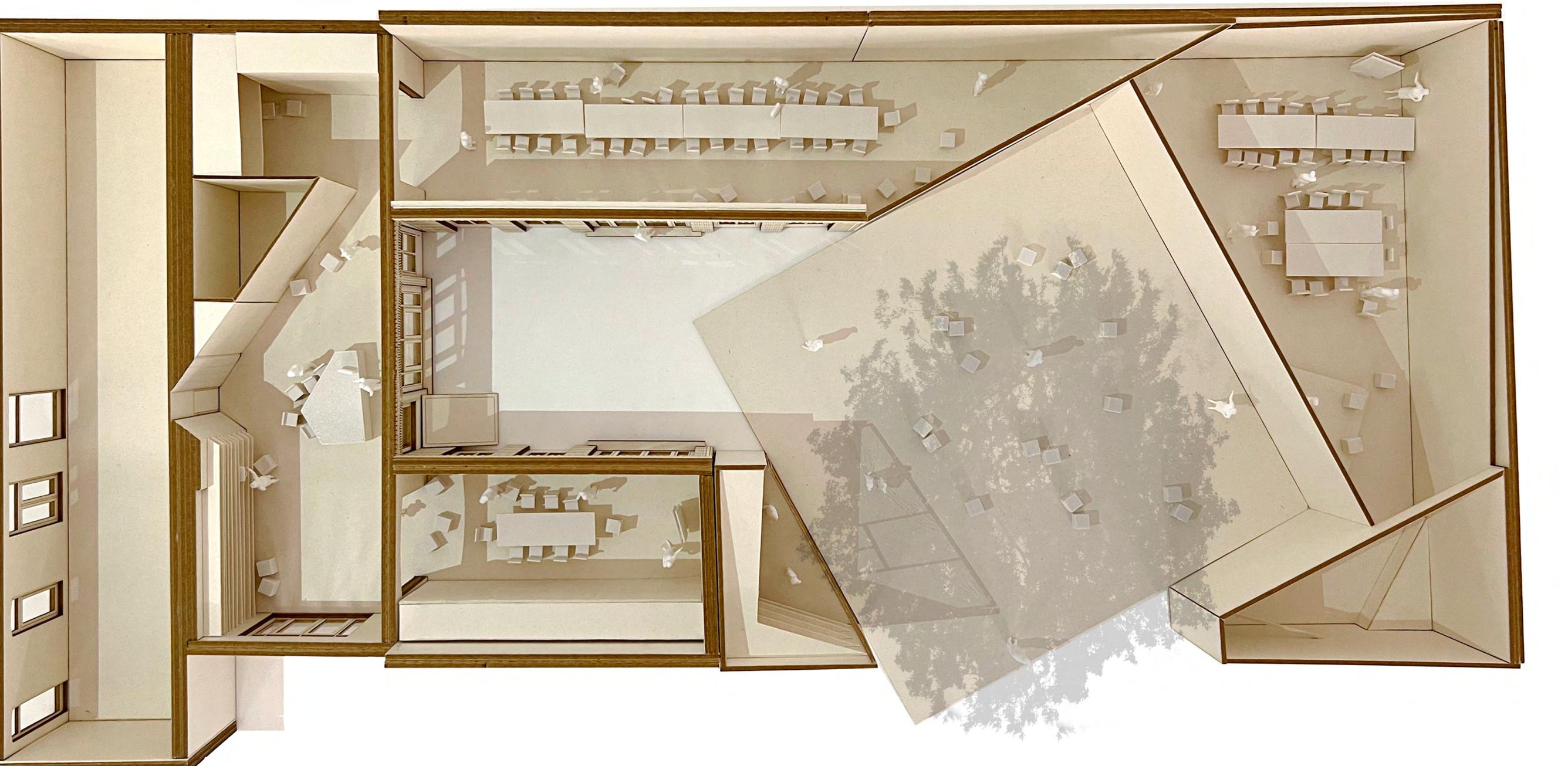
Model Pictures



The new extension - Exhibition set-up



Physical Model | Scale 1:50



Extension area - Exhibition set-up

## IV. CREATIVE CLOUD

3th Semester Project 2022 - Group work  
Project Partners: Yana Rudasevschi, Acelya Goegce  
Location: Berlin, Germany  
Professors: Prof. Jeanne Fischer, Elena Kasumova, John Tubles  
Duration: 4 months

**Softwares used:** Rhino 3D, Photoshop, Autocad

**Main roles:** Doing the digital 3D model; Working on the visuals;  
Working on the physical model; doing the facade detail drawing,  
design development

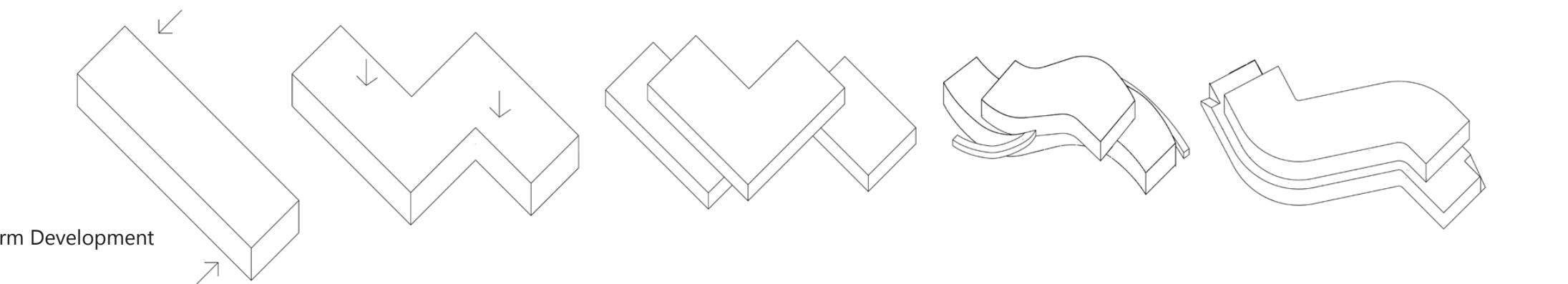




Site plan showing the path and location of the graffitiies



Site plan showing the lights at night



Form Development

**SITE ANALYSIS**

Because of the particular delimitation and its narrowness, it conveys a sense of start and ending, tha can also be interchangeable. The walking path gives a sense of fluidity, which is then reinforced by the various organic shapes of the playground equipment.

The site is very colorful which can be in contrast with the grey tones of the neighbouring buildings. The various paintings and graffiti seemed to tell a story of their own about the place. People left their mark there and you can see the different approaches and styles.

This approach comes again into contrast with the straight lines and shapes of the buildings and the surrounding streets, it is a universe of its own. Circular shapes vs the straight lines of the buildings and how it tries to mimic the nature through mostly unnatural materials, such as: concrete and steel.

It is very dark, the only thing seen is the lights that come from the neighbouring buildings and the main street.

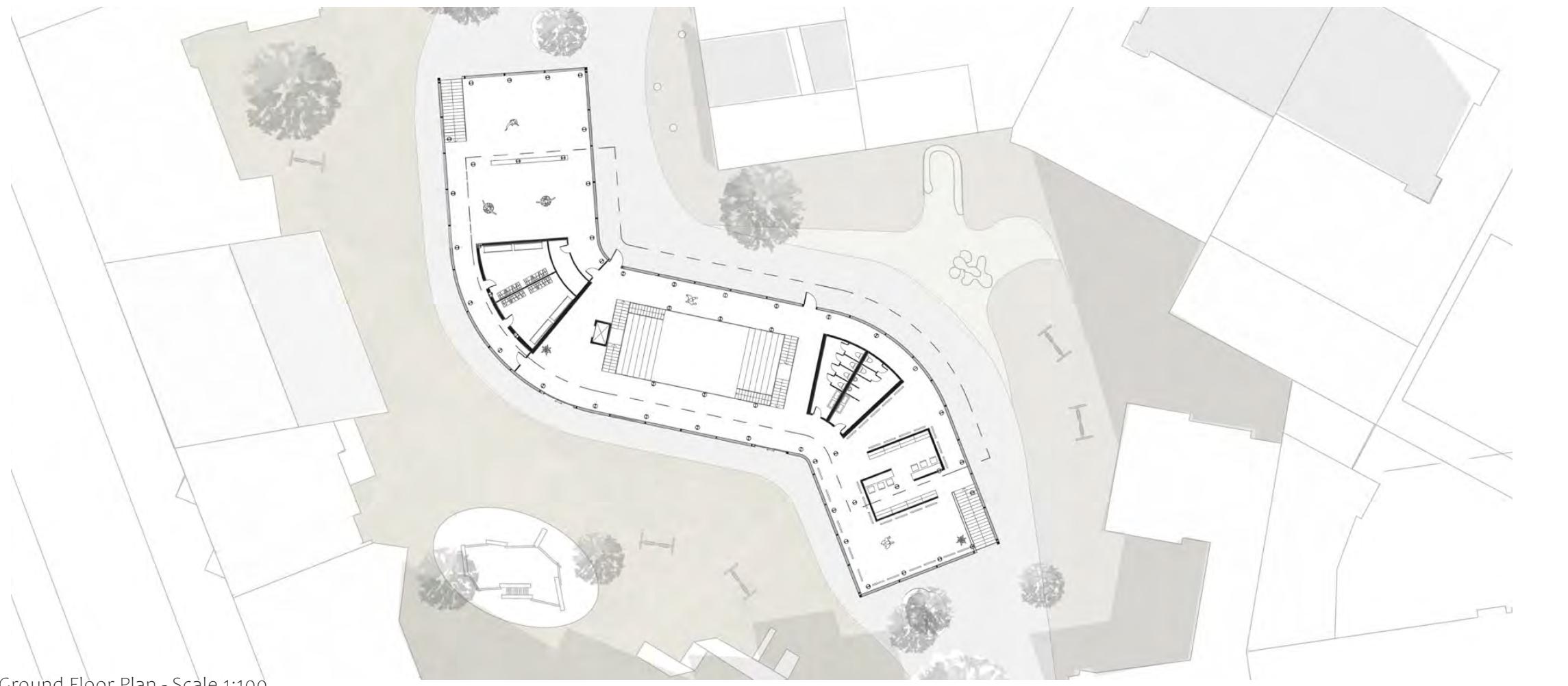
**OUR PROPOSAL**

The shape of our proposal is inspired by the existing path, which connects the two main entrances. We implemented the building into the path itself, creating new ways of experiencing the site. The linearity of the original path is maintained as we wanted to keep.

Our program consists of: a dance studio, a workshop, a cafeteria/night bar, exhibition space, library/reading areas and a theater. The aim of this proposal is to encourage the people from the neighborhood to showcase and enrich their creativity through various forms of art, being it music, dancing, plastic arts or writing. The performance hall and exhibition space are meant to be used for sharing this creativity.



Site Plan 1:500



Ground Floor Plan - Scale 1:100



First Floor Plan - Scale 1:100

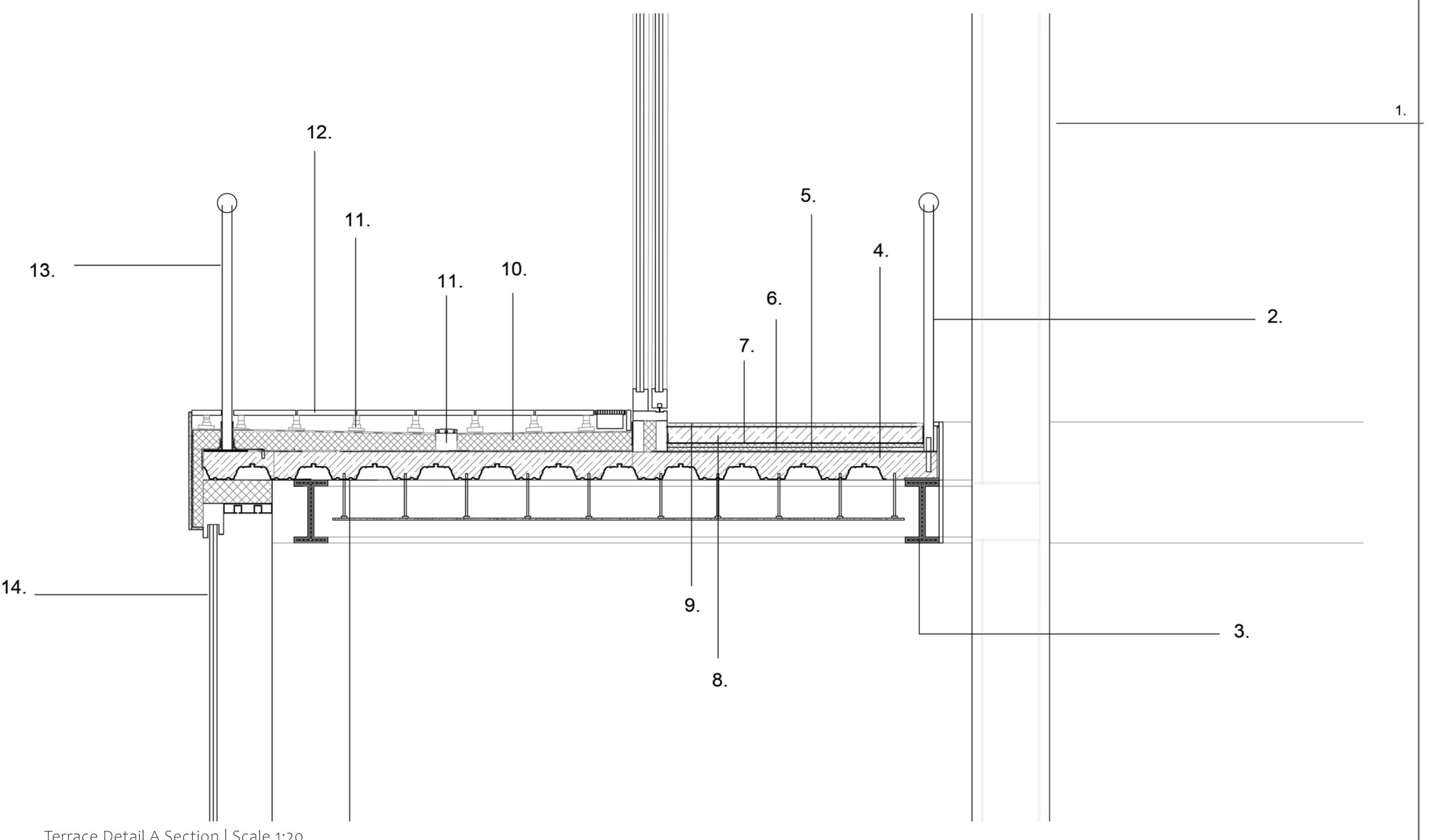


Workshop view



Model views





## Construction:

1. Column with steel core
2. Interior steel balustrade
3. Steel beam

IPE 300  
40 mm  
IPE 300

## WALL CONSTRUCTION:

4. Composite floor slab
5. Vapour barrier
6. Sound insulation
7. Plastic layer
8. Screed
9. Concrete overlay

150 mm  
2 mm  
2 mm  
2 mm  
8 mm  
15 mm

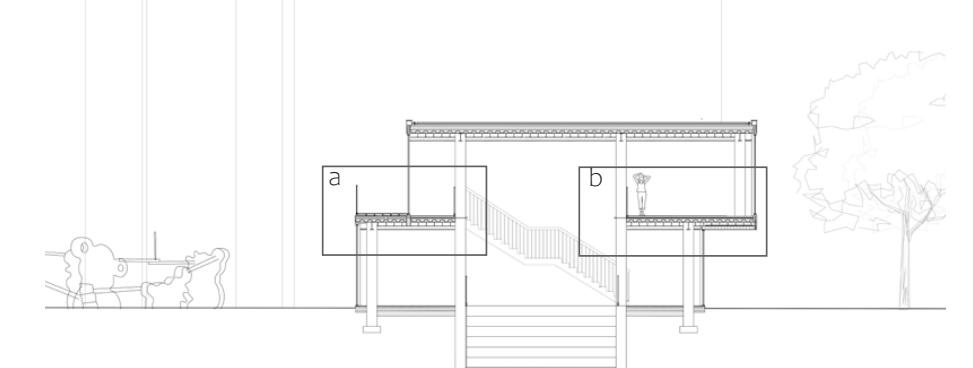
## TERRACE CONSTRUCTION:

10. Insulation
11. Drainage system
12. Concrete tiles
13. Outside steelbalustrade

110-120 mm

## WINDOW CONSTRUCTION:

14. Double Glazing



Cross Section showing details A and B



Cantilever Detail B Section Model | Scale 1:20

# V. NATURE AS A WAY OF LIVING

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2th Semester Project 2022

Individual Project

Location: Berlin, Germany

Professors: Prof. Karsten Huneck, Juan Almarza

Anwandter, Kay Fingerle

Duration: 4 months





The site seen from across the Spree



Green paths across Berlin

## SITE ANALYSIS

Germany has recognized the benefits of living a balanced lifestyle in concordance with the nature around, by taking care of implementing a lot of green spaces in which people can enjoy the natural elements.

Berlin is no different from this statement, having an Inner Parkring of 20 main green routes. Their aim is to “link residential areas with the diverse recreational opportunities in parks and local recreational areas in Berlin and Brandenburg” (Senate Department for Urban Development and Environment). One of these paths runs across our site.

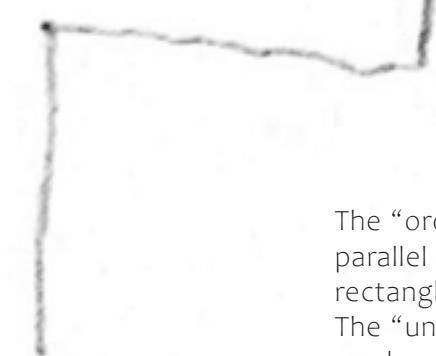
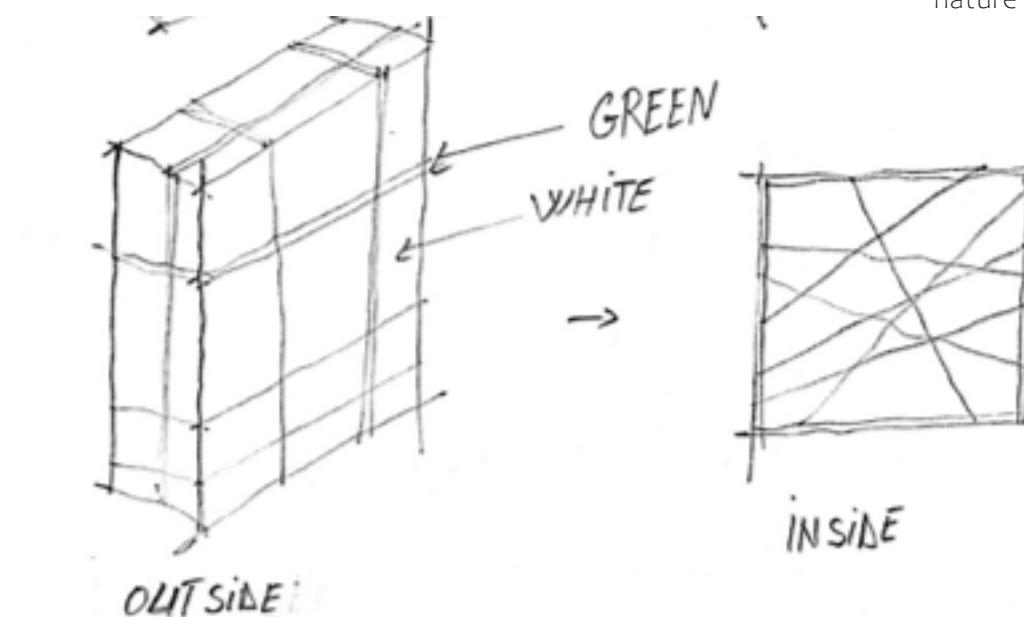
My proposal aims to continue the strategy of reconnecting people with nature, not only through the outdoor spaces, but also through architecture. It translates the concept of nature as the need to live a balanced lifestyle and to have access to the essential joys. (Fresh air, light, sun, greenery). On this note, my design embodies also the ambiguous character of nature, catering for every individual's needs and providing moments of enjoyment of the surrounding nature.



## CONCEPT MODEL



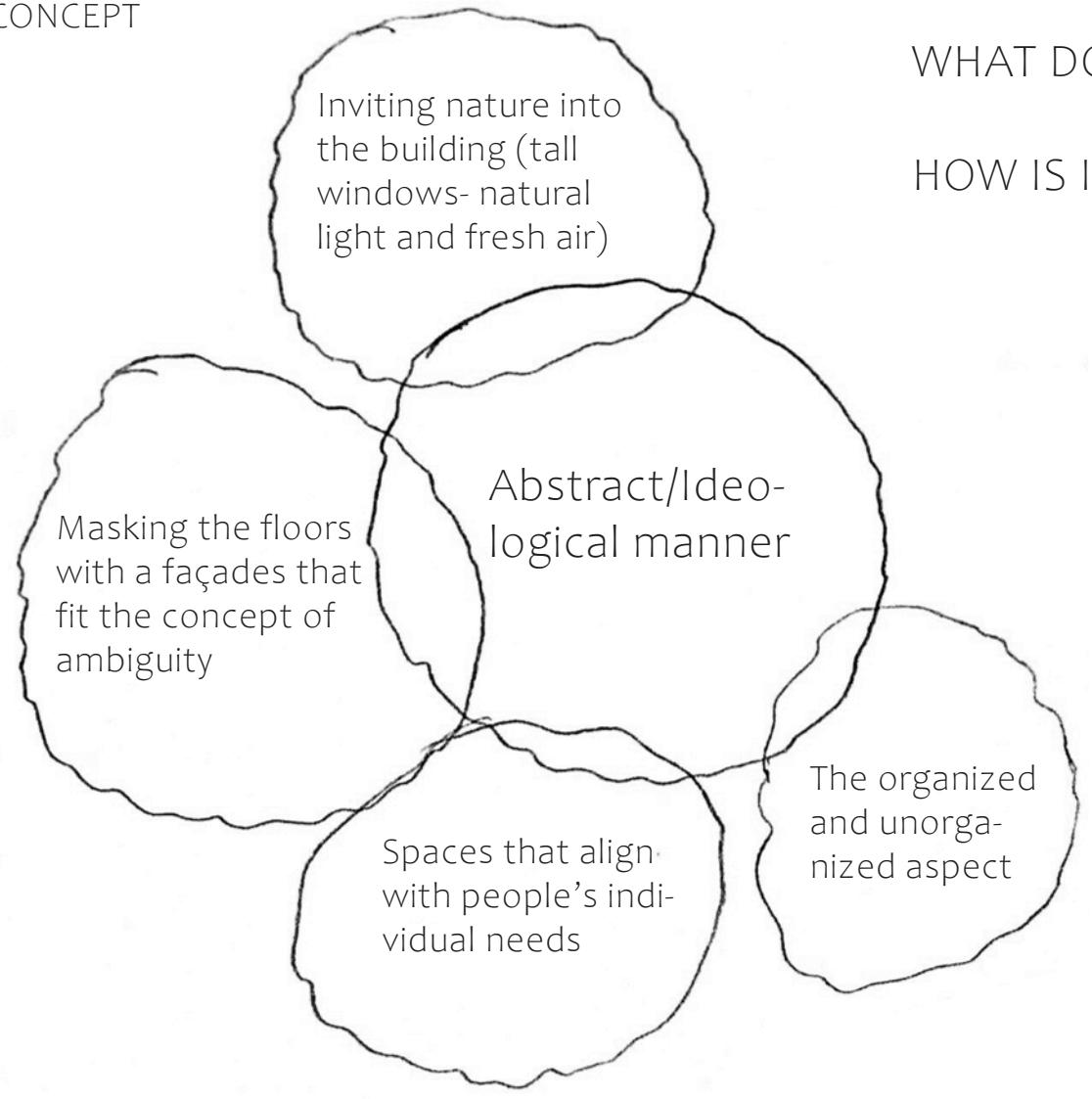
My concept embodies the ambiguous character of nature, and its ordered and unorganized aspects.  
A structure that doesn't let the viewers from outside to identify what is happening on the inside.  
Emphasize the colors of the surrounding nature by having a white building .



The “ordered” aspect is translated into the parallel and perpendicular lines, that form rectangles.  
The “unorganized” aspect is given by the random intersections of the thread, that are seen only from the inside.

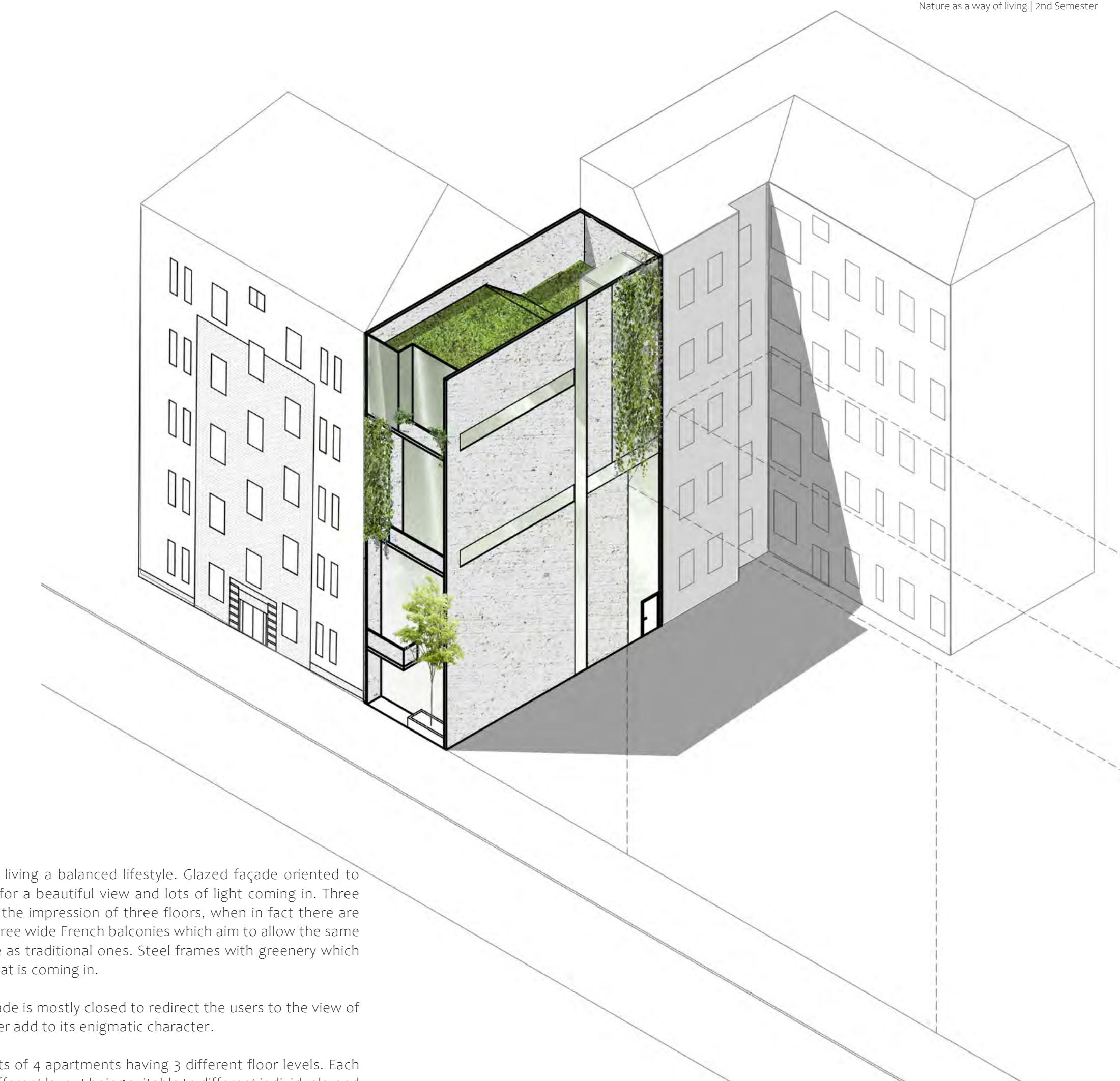
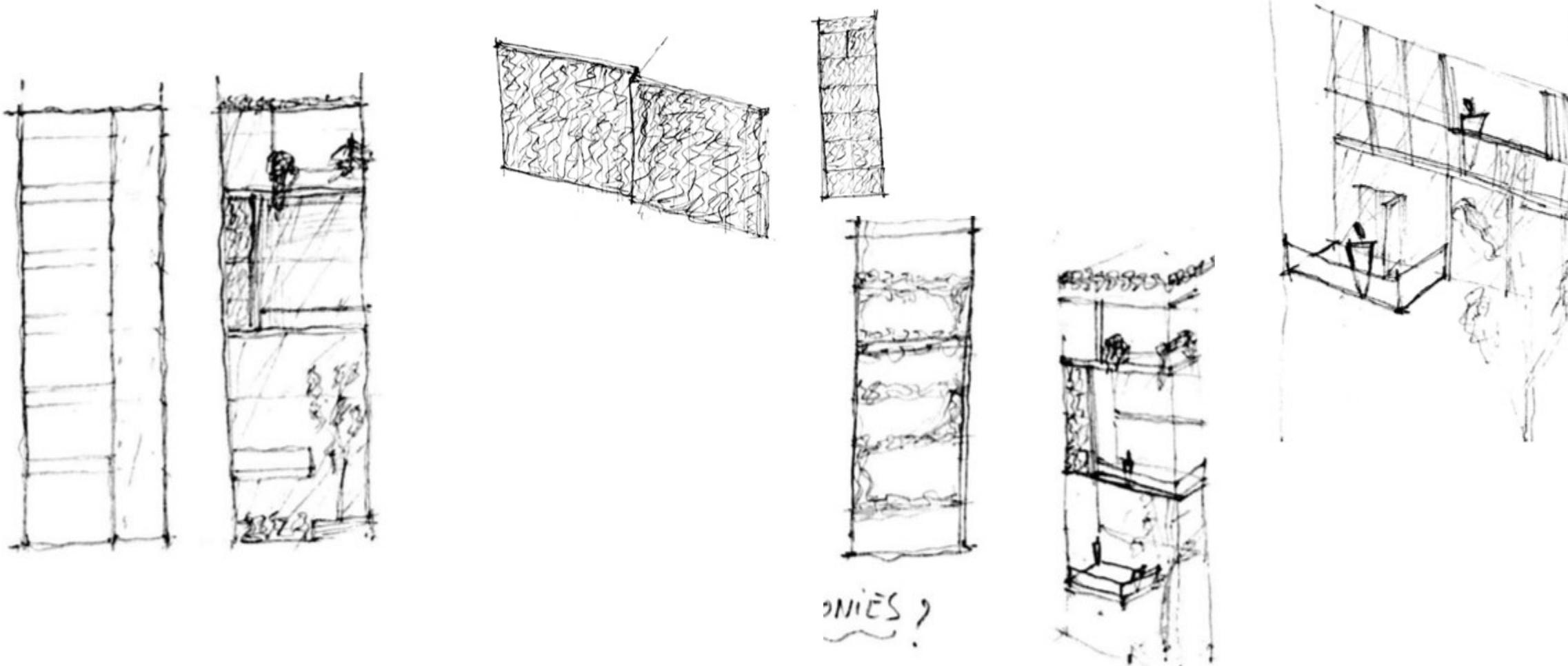
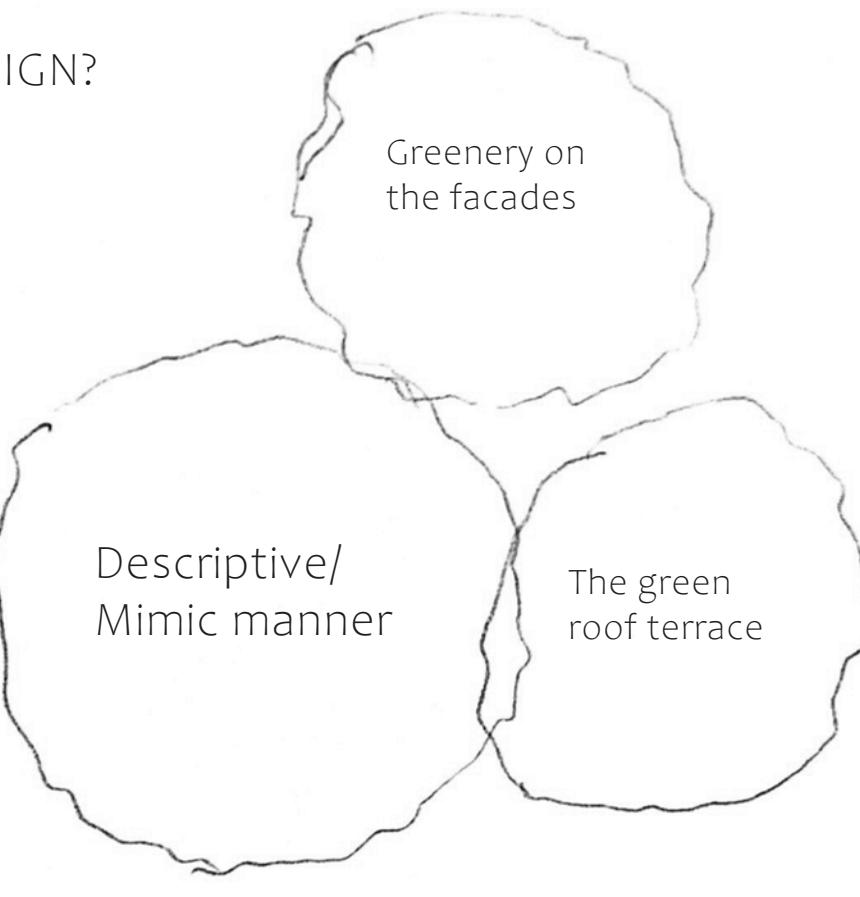


## CONCEPT



WHAT DOES NATURE MEAN TO ME?

HOW IS IT PART OF MY DESIGN?



## PROPOSAL

Is centered around living a balanced lifestyle. Glazed façade oriented to the Canal allowing for a beautiful view and lots of light coming in. Three balconies that give the impression of three floors, when in fact there are seven floors, and three wide French balconies which aim to allow the same outdoor experience as traditional ones. Steel frames with greenery which filter the sunlight that is coming in.

The north-west façade is mostly closed to redirect the users to the view of the Canal and further add to its enigmatic character.

My proposal consists of 4 apartments having 3 different floor levels. Each apartment has a different layout being suitable to different individuals, and a green roof terrace which is accessible to everyone in the building through the main staircase. The access to the building is made from right side of the north-west façade, provided with light by the glass glazed panels.



Side Elevation



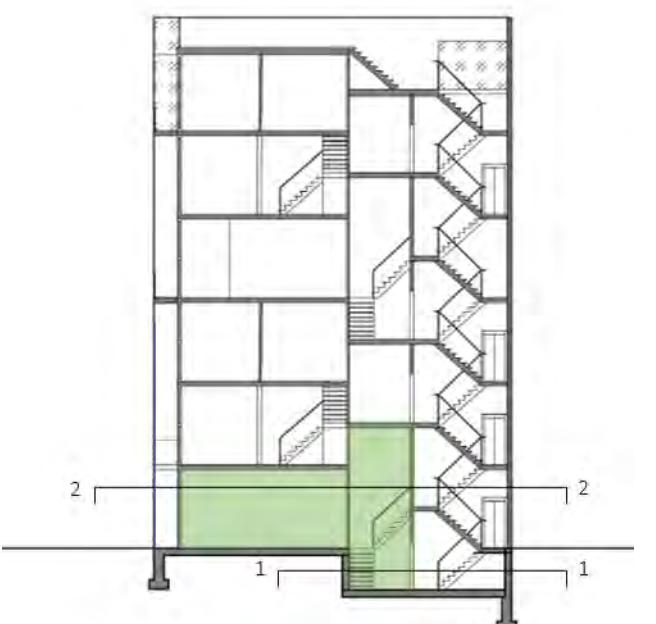
Section



Front Elevation



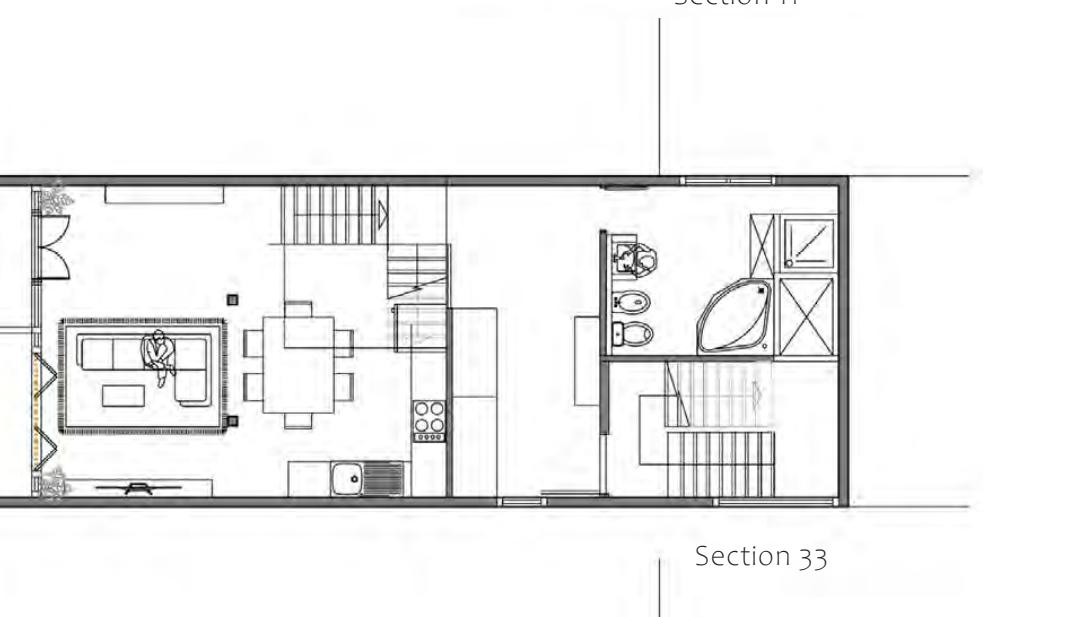
Site Plan



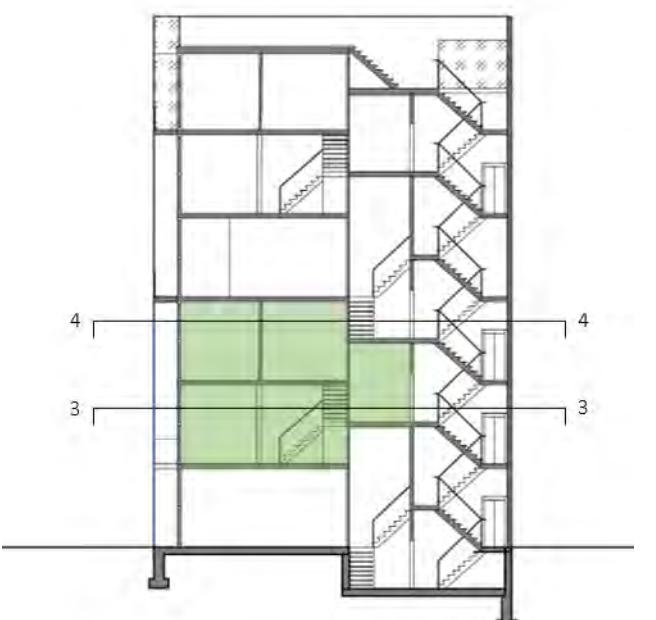
1st Apartment



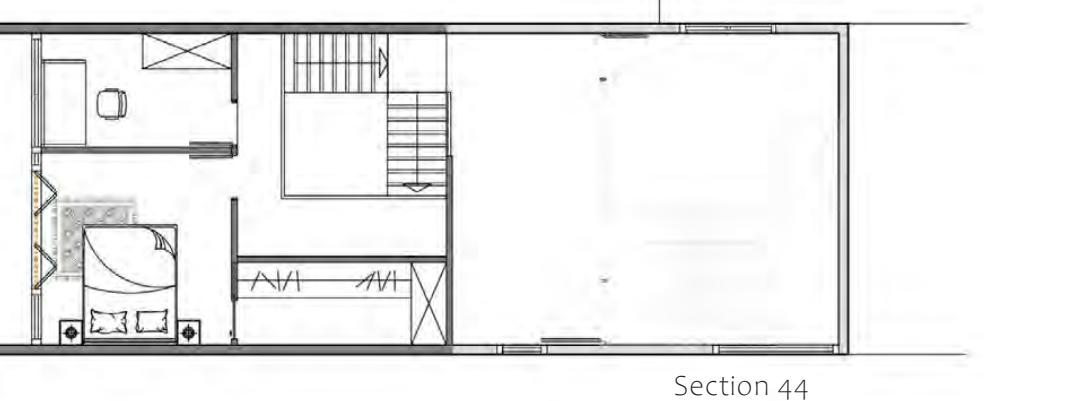
Section 22



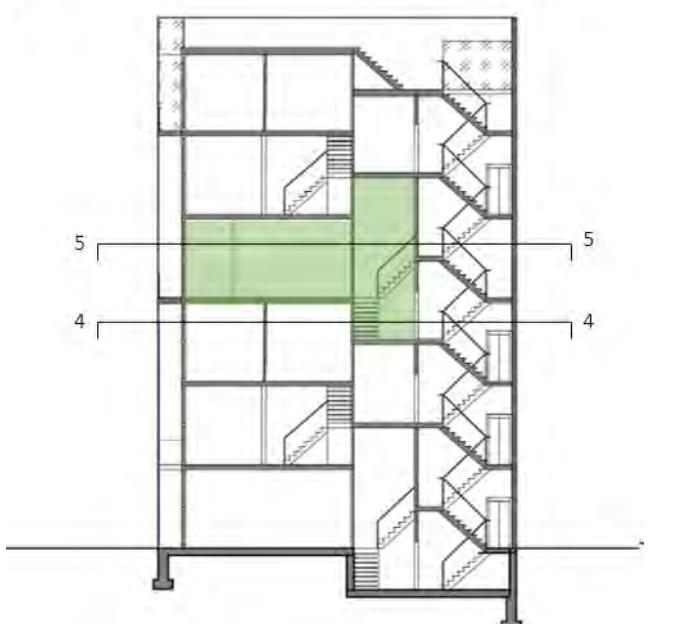
Section 33



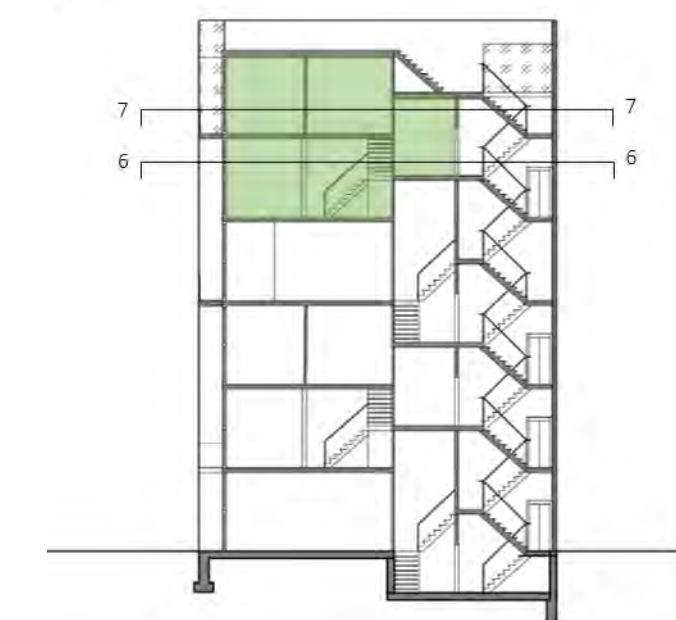
2nd Apartment



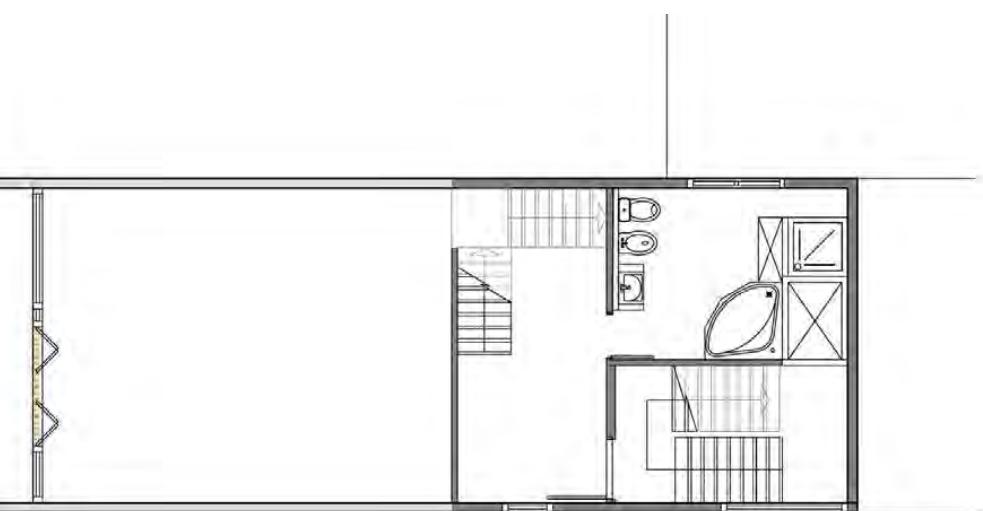
Section 44



3rd Apartment



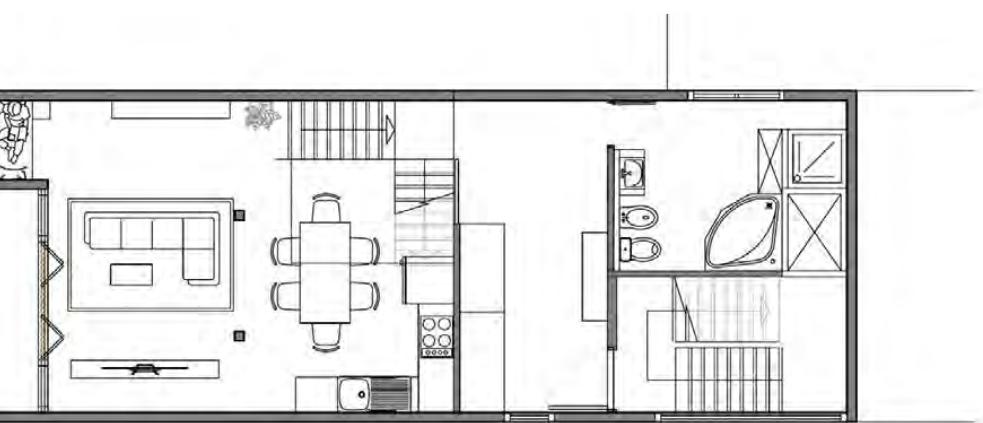
4th Apartment



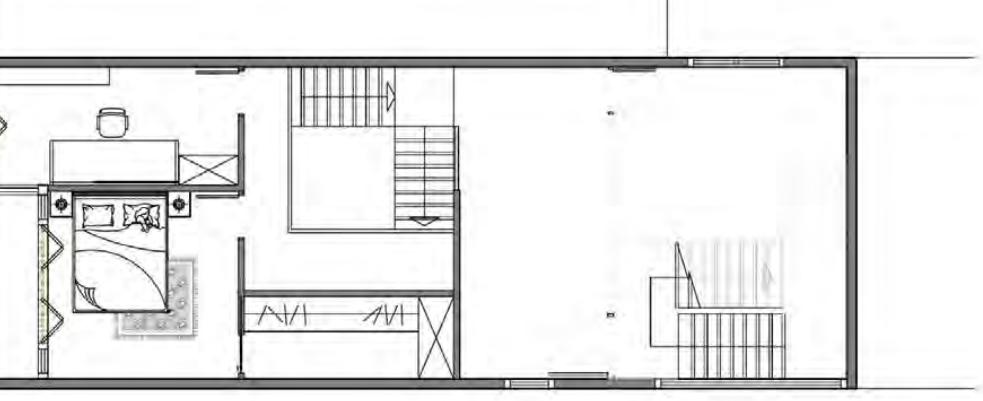
Section 44



Section 55

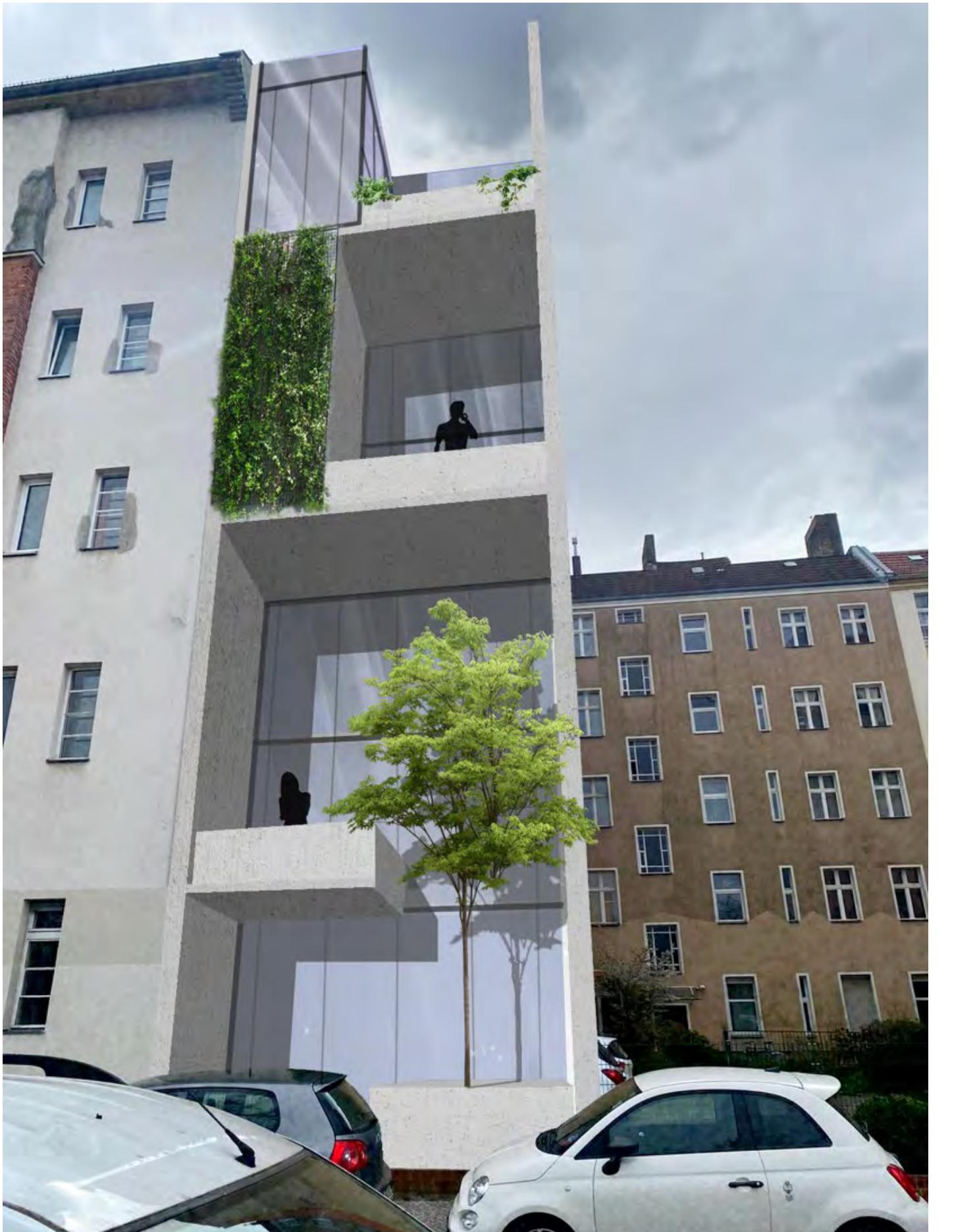


Section 66



Section 77

## FAÇADE DETAIL



## ROOF CONSTRUCTION

- |                             |            |
|-----------------------------|------------|
| 1. Gravel                   |            |
| 2. Topsoil                  | 80 mm      |
| 3. Filter Layer             |            |
| 4. Drainage / Reservoir     | 45 mm      |
| 5. Waterproof Membrane      | 6 mm       |
| 6. Bitumen roofing, 2layers | 8 mm       |
| 7. Thermal insulation       | 200-240 mm |
| 8. Vapor barrier            |            |
| 9. Concrete slab            | 240 mm     |
| 10. Plaster                 | 30 mm      |
| 11. Curtain Wall Anchor     |            |
| 12. Glazed Balustrade       |            |
| 13. Transom                 |            |

Total 609-649 mm

## GREEN INSTALLATION CONSTRUCTION

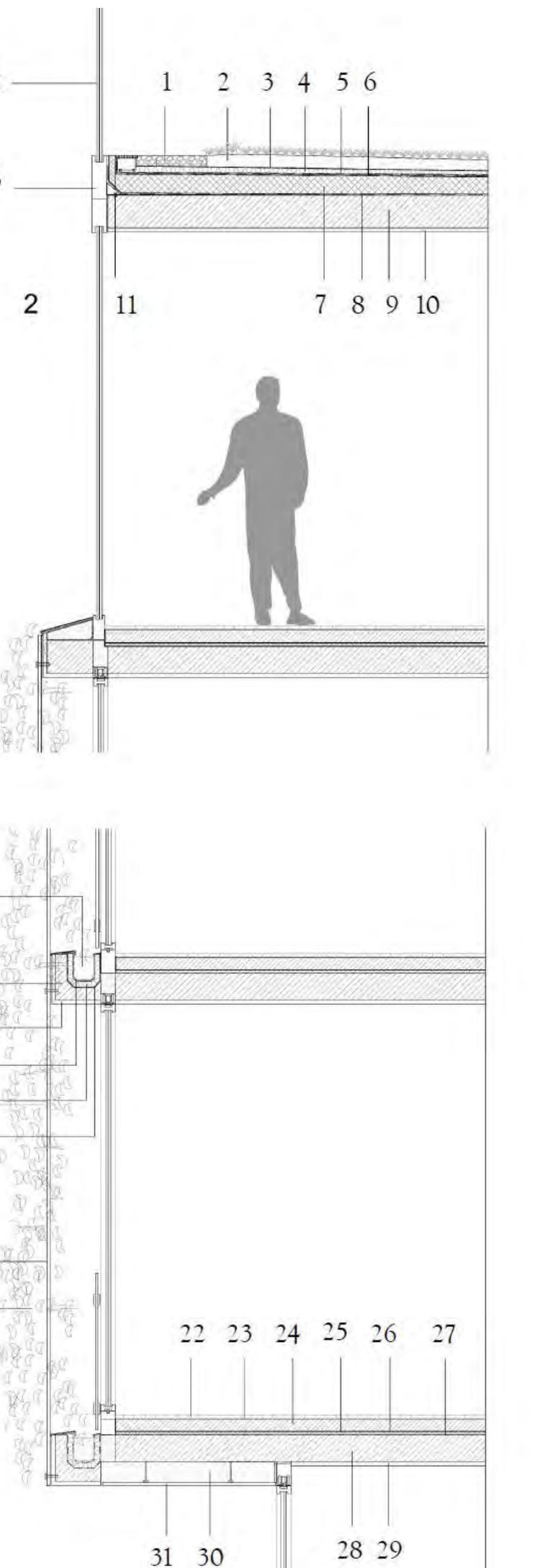
- |                         |       |
|-------------------------|-------|
| 14. Soil                |       |
| 15. Geotextile fiber    | 8 mm  |
| 16. Drainage Layer      | 35 mm |
| 17. Waterproof Membrane | 8 mm  |
| 18. Reinforced Concrete | 90 mm |
| 19. Plaster             | 30 mm |
| 20. Galvanized Steel    |       |
| 21. Greenery            |       |

Total 171 mm

## FLOOR CONSTRUCTION

- |   |        |
|---|--------|
| 22. Parquet Flooring                            | 23 mm  |
| 23. Foam (Pad)                                  | 9 mm   |
| 24. Screed                                      | 88 mm  |
| 25. Separation Plastic Layer                    | 4 mm   |
| 26. Sound Insulation                            | 20 mm  |
| 27. Damp proof membrane                         | 4 mm   |
| 28. Concrete slab                               | 200 mm |
| 29. Plaster                                     | 30 mm  |
| 30. Insulation (outside)                        | 130 mm |
| 31. Suspended ceiling (outside) (Plaster board) | 30 mm  |

Total 538 mm



## Roof Construction

- |                             |            |
|-----------------------------|------------|
| 1. Gravel                   |            |
| 2. Topsoil                  | 80 mm      |
| 3. Filter Layer             |            |
| 4. Drainage / Reservoir     | 45 mm      |
| 5. Waterproof Membrane      | 6 mm       |
| 6. Bitumen roofing, 2layers | 8 mm       |
| 7. Thermal insulation       | 200-240 mm |
| 8. Vapor barrier            |            |
| 9. Concrete slab            | 240 mm     |
| 10. Plaster                 | 30 mm      |
| 11. Curtain Wall Anchor     |            |
| 12. Glazed Balustrade       |            |
| 13. Transom                 |            |

Total 609-649 mm

## Green Installation Construction

- |                         |       |
|-------------------------|-------|
| 14. Soil                |       |
| 15. Geotextile fiber    | 8 mm  |
| 16. Drainage Layer      | 35 mm |
| 17. Waterproof Membrane | 8 mm  |
| 18. Reinforced Concrete | 90 mm |
| 19. Plaster             | 30 mm |
| 20. Galvanized Steel    |       |
| 21. Greenery            |       |

Total 171 mm

## Floor Construction

- |   |        |
|---|--------|
| 22. Parquet Flooring                            | 23 mm  |
| 23. Foam (Pad)                                  | 9 mm   |
| 24. Screed                                      | 88 mm  |
| 25. Separation Plastic Layer                    | 4 mm   |
| 26. Sound Insulation                            | 20 mm  |
| 27. Damp proof membrane                         | 4 mm   |
| 28. Concrete slab                               | 200 mm |
| 29. Plaster                                     | 30 mm  |
| 30. Insulation (outside)                        | 130 mm |
| 31. Suspended ceiling (outside) (Plaster board) | 30 mm  |

Total 538 mm

## Loggia Flooring Construction

- |                                    |          |
|------------------------------------|----------|
| 32. Tiles                          | 20 mm    |
| 33. Pedestals for terrace flooring | 70-82 mm |
| 34. Waterproof Membrane            | 4 mm     |
| 35. Thermal insulation sloped      | 30-50 mm |
| 36. Vapor Barrier                  |          |
| 37. Concrete slab                  | 20 mm    |
| 38. Plaster                        | 30 mm    |

Total 206 mm

## Balustrade Wall Construction

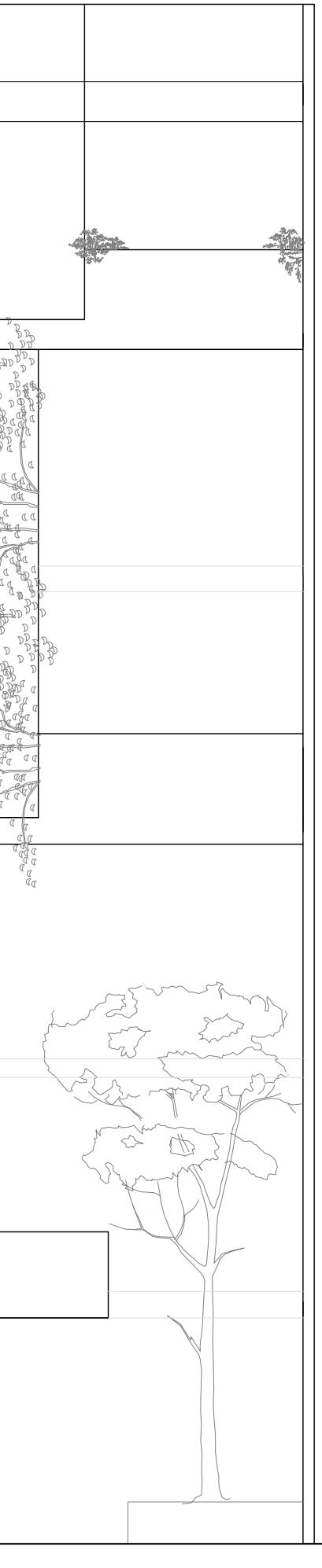
- |              |        |
|--------------|--------|
| 39. Plaster  | 15 mm  |
| 40. Concrete | 170 mm |
| 41. Plaster  | 30 mm  |

Total 215 mm

## Wall Construction

- |   |        |
|---|--------|
| 42. Glass frame                                 | 100 mm |
| 43. Frameless glass balustrade (French Balcony) | 20 mm  |

Total 120 mm



## VI. DRAWINGS & MODEL-MAKING

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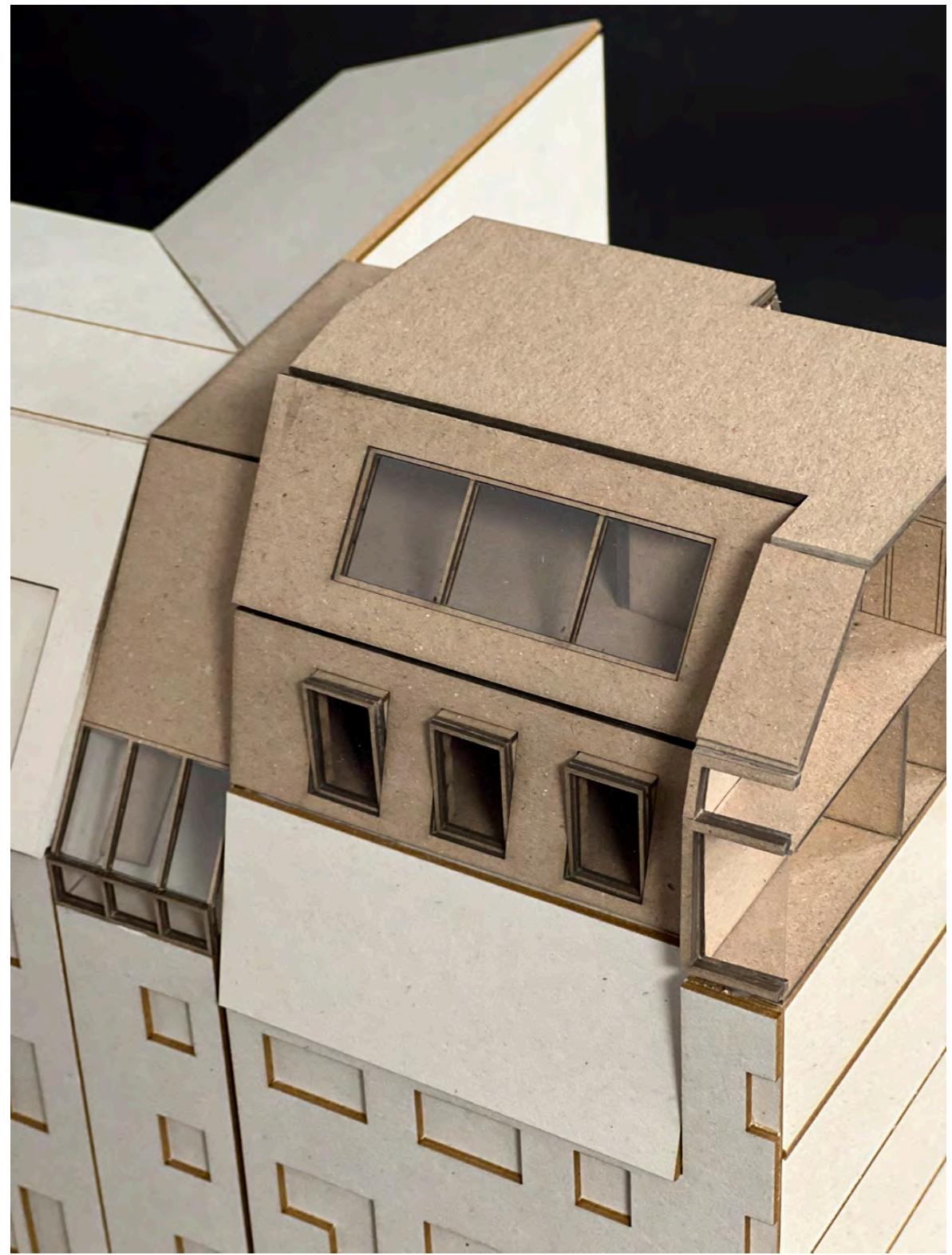
Models for the 7th semester. Individual work.



Traditional Romanian house model

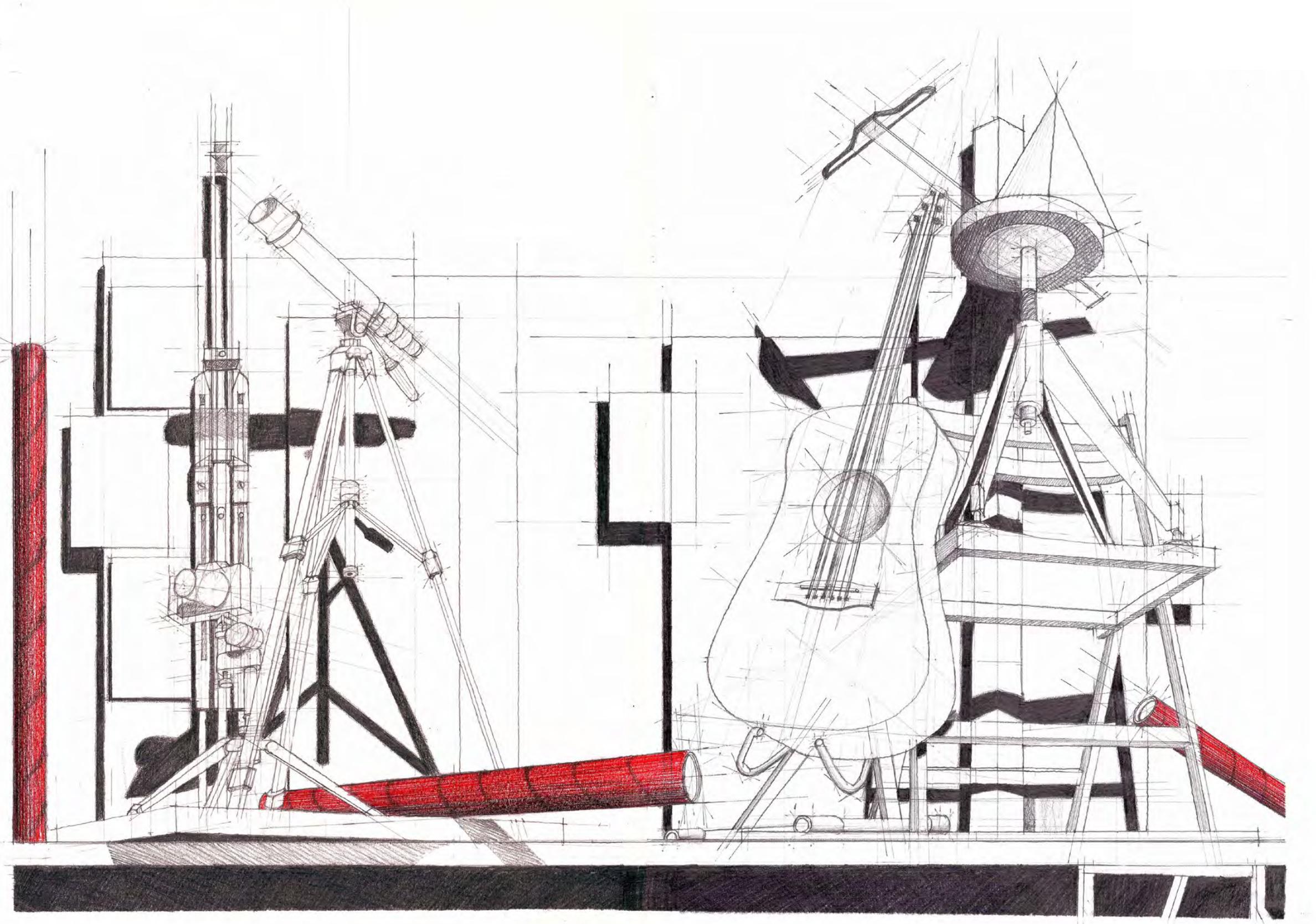


Rooftop extension model

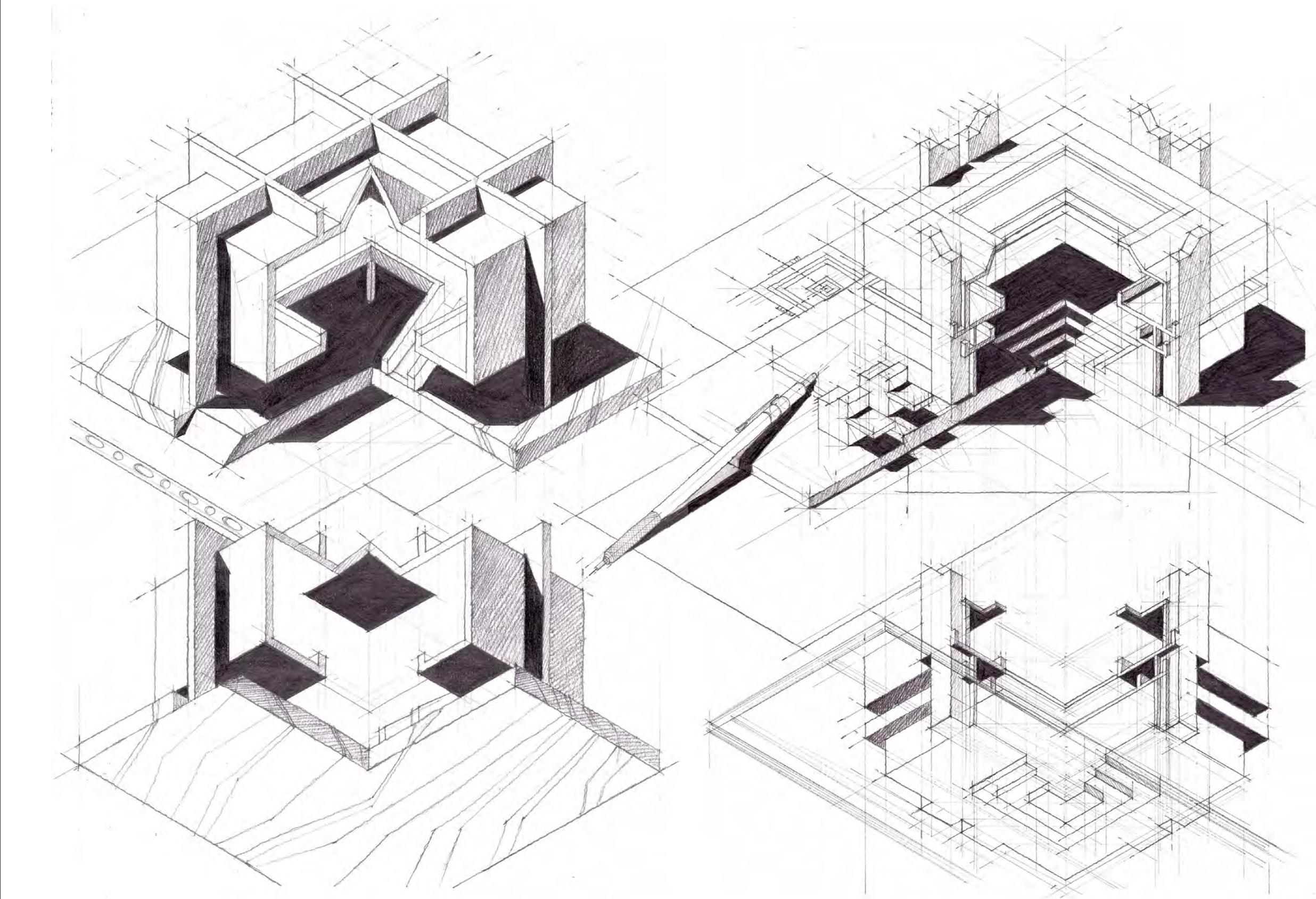


## VI. DRAWINGS & MODEL-MAKING

Hand drawings



Observation drawing of the objects displayed



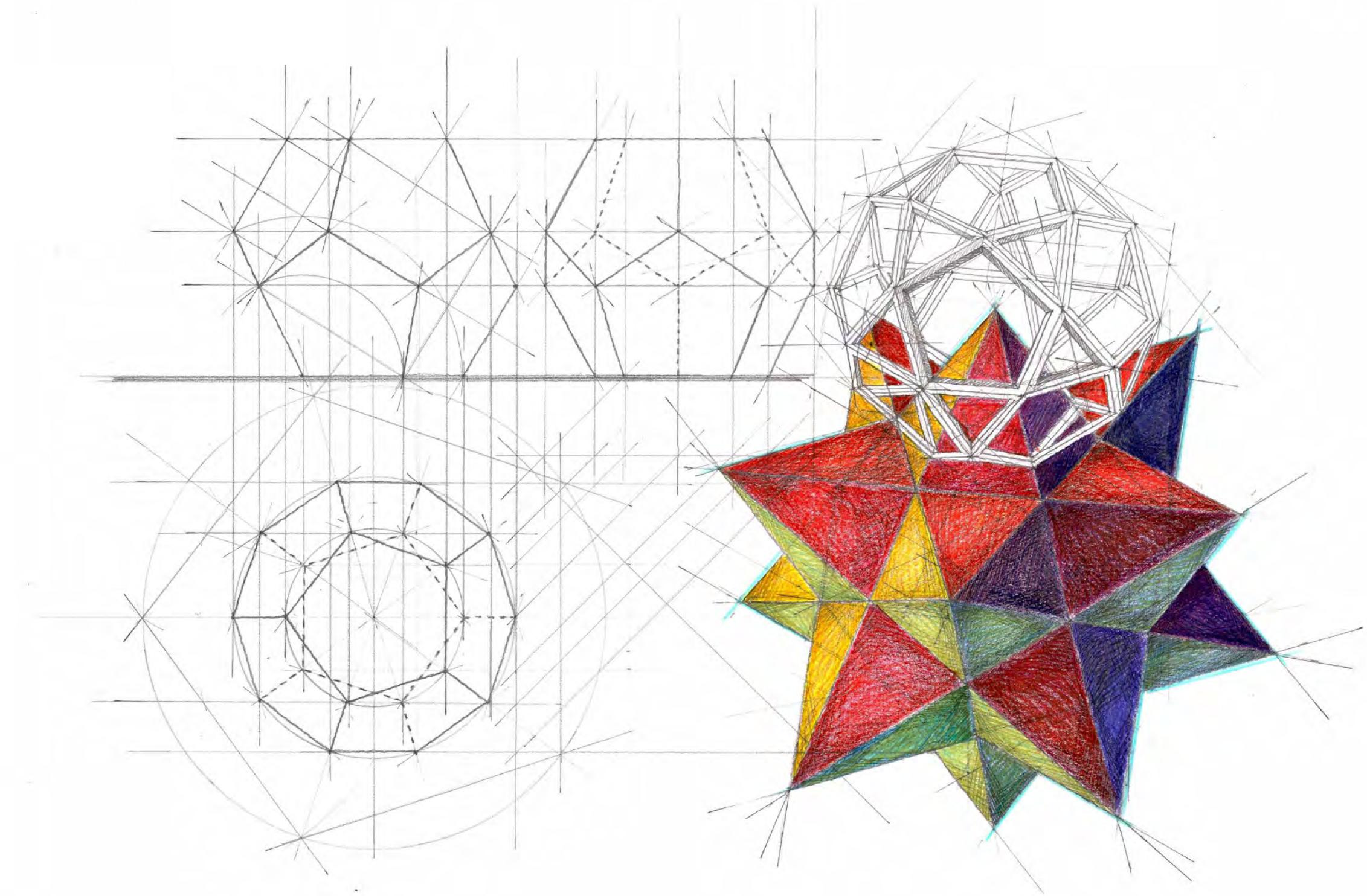
Isometric drawing

## VI. DRAWINGS & MODEL-MAKING

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Traditional Romanian Architecture drawing



Descriptive geometry exercise - drawing

THANK YOU !

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Ana-Maria Bulugea

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