



# THE SOCIAL AGGREGATE:

PROMOTE THE SOCIAL INTERACTION OF PEOPLE  
BY REACTIVATING URBAN SPACE

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# ABSTRACT

Contemporary life is strongly associated with the quality of urban space. Due to the influence from flowing economic status, increasing population density, worsening ecological environment, unbalanced employment market, act of war and etc., urban environment has been undergoing significant impacts. Function of buildings become obsolete as the strategy of urban development updates. More and more small towns are turning into empty nest as young people go out for work, which leads to the increasing of underused and empty houses. Group-oriented leasing becomes a common phenomenon in large cities which not only causes security problem but also potential social hazard. Lacking refugee camp and effective management, immigrants occupy public urban space as accommodation. In this circumstance, architecture is no longer able to answer to the need of the society by itself. Instead, architectural and urban renovation is the key to explore the potential opportunity and give life to the urban society.

This portfolio involves a series of design projects featuring various scales and functions, ranging from civic, public landscape architecture, office and renewed urban space. Each project answers to the subject: How to promote the social interaction of people by reactivating urban space?



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# City of Soul

## The Rebirth Of The Prosperous Palmyra

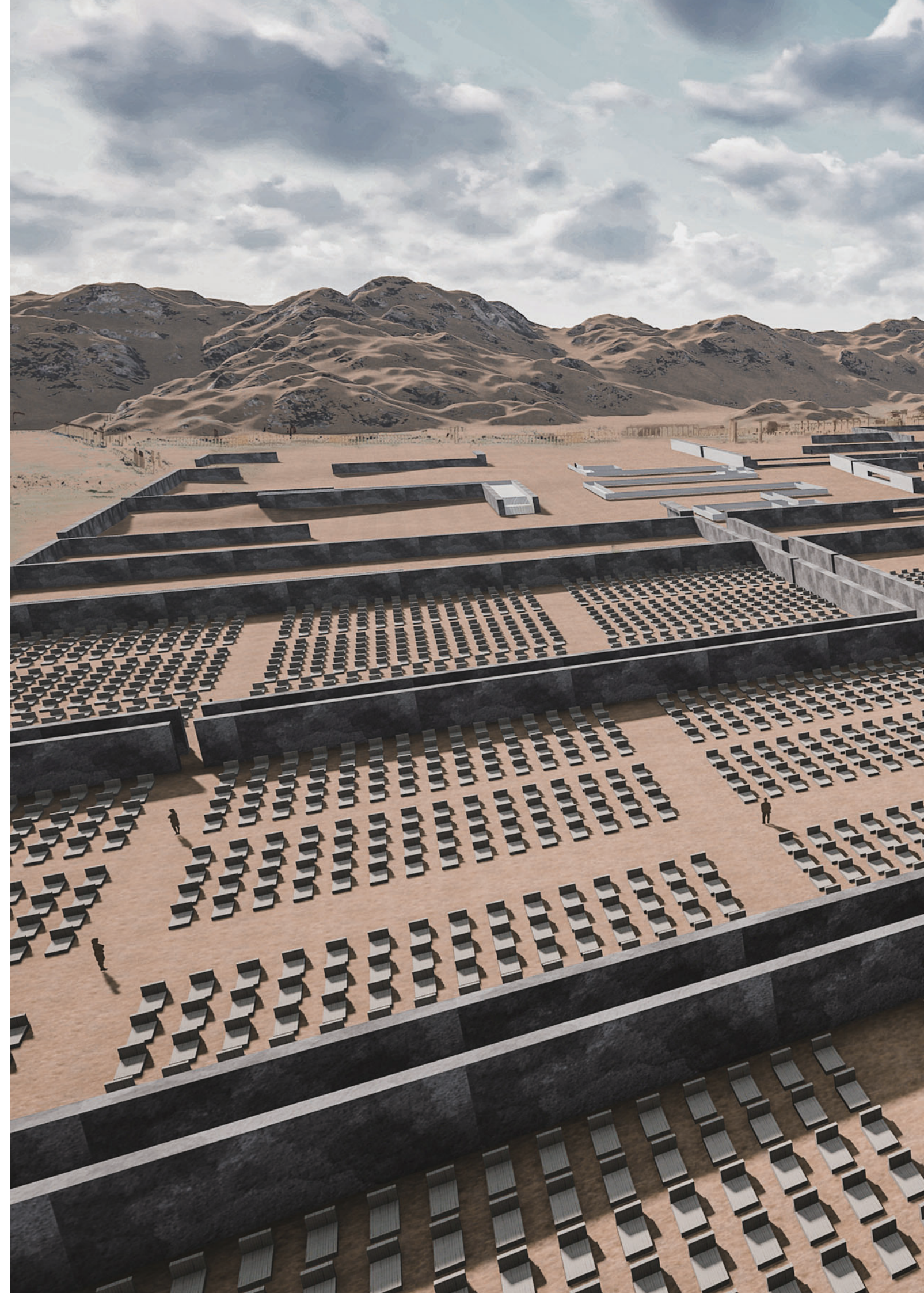
Palmyra, Syria

Design studio 3

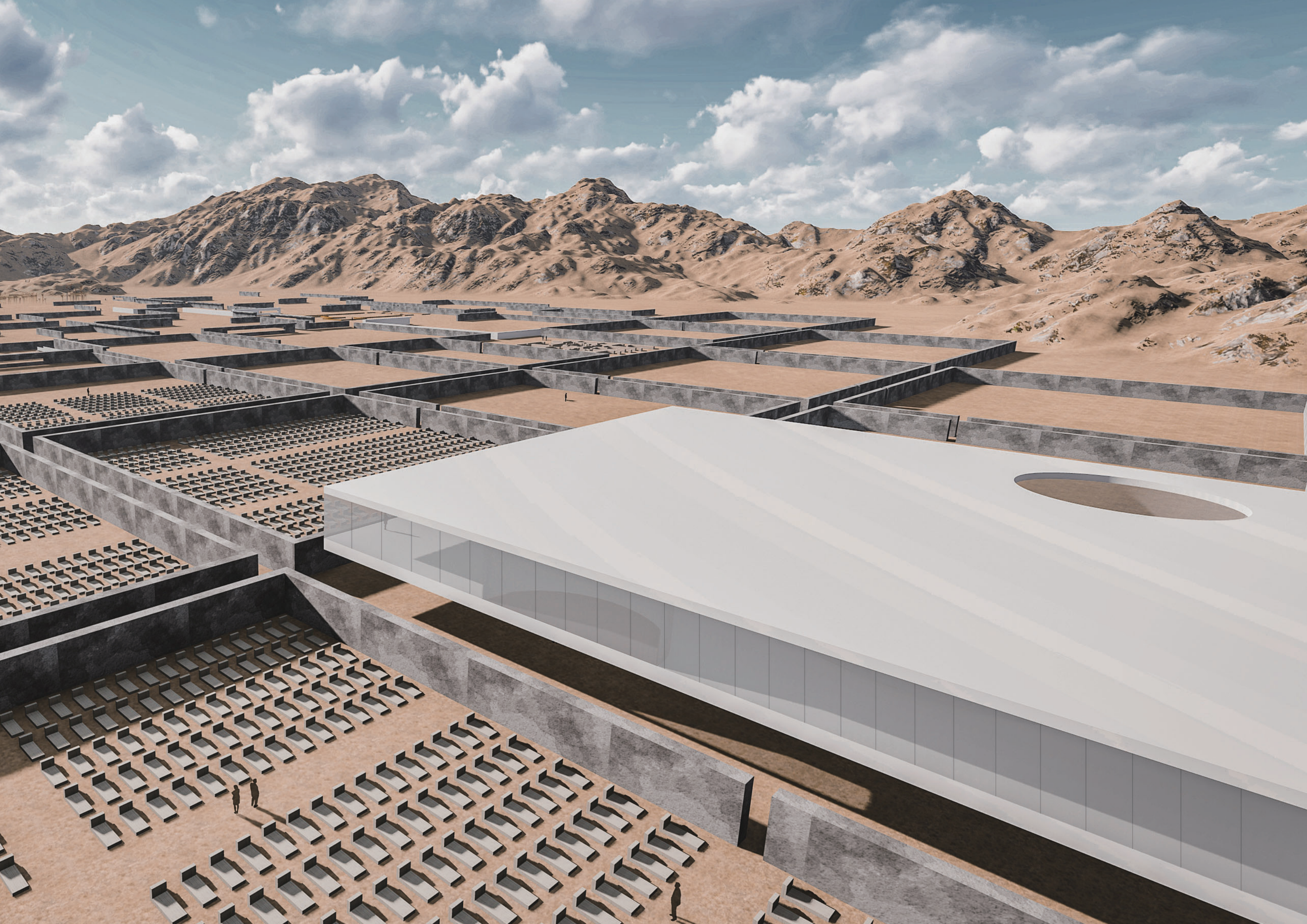
Team: Wu Yaochen, Zhang Yaolin, Song Linchen

2017-2018

City of Soul cemetery project happened in the ruins of ancient Palmyra, an UNESCO World Heritage Site, situated just about 500 meters southwest of the modern city center. Once called the “Pearl of the desert”, Palmyra, due to the outbreak of the Syrian Civil War and the rise of ISIS, has been badly damaged. Ancient wonders such as the Temple of Bel, the Temple of Baal Shamin, the Arch of Triumph, and columns in the Valley of the Tombs were destroyed. On this occasion, an oxymoron was pointed out: How to answer to the need of reconstruction and the memory of deconstruction?









# Design Strategy

Looking back into the historical timeline, we found out that Palmyra has been destroyed multiple times in the history. Therefore, it is our understanding that the reconstruction should not merely memorize the death and destruction caused by ISIS but reconstruct the prosperous palmyra.

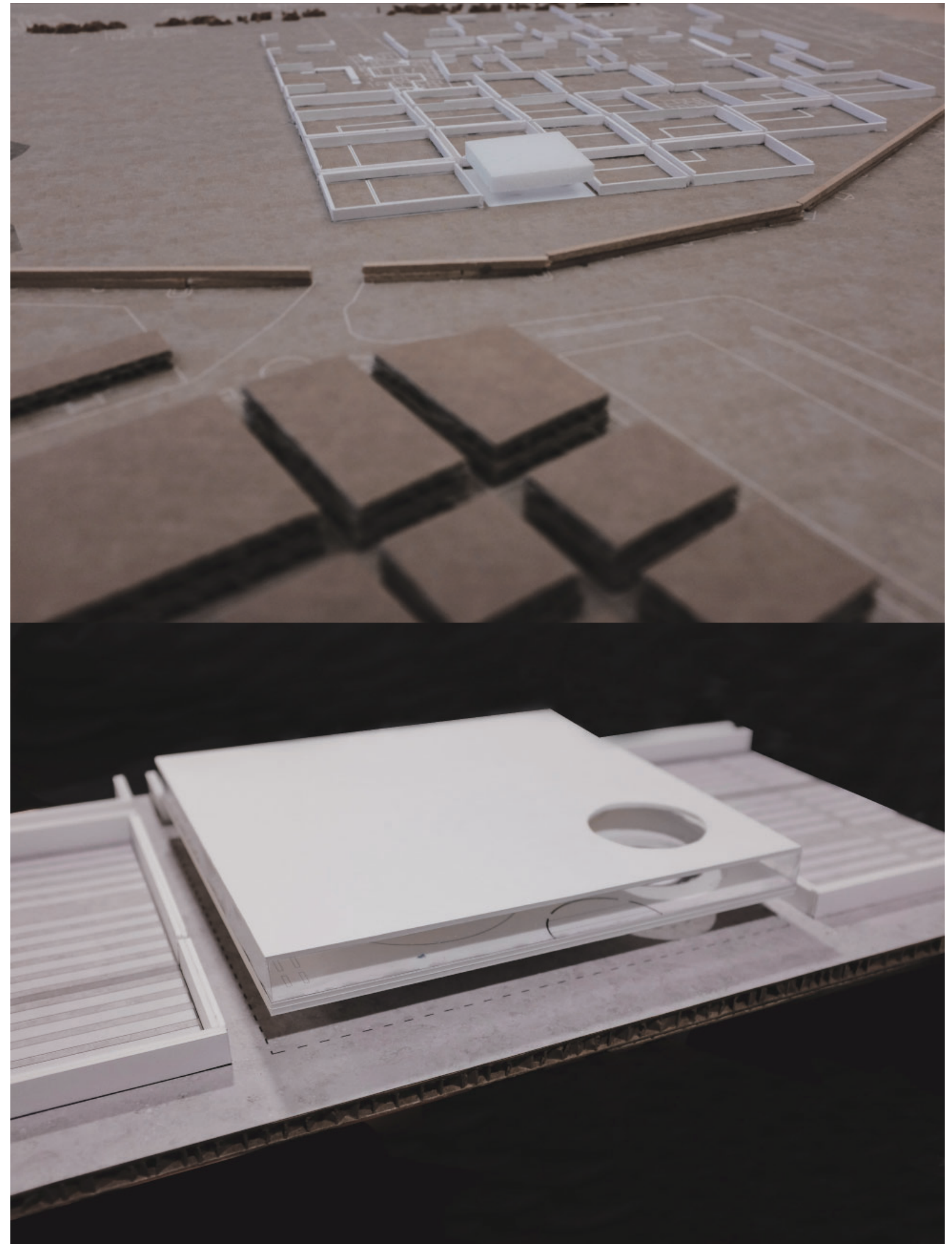
Taking funeral parlor as the axle center, the project with the design following the ancient City planning, looked northeast at the modern city center. The project was divided into 3 stages: built cemetery, archeology park and future development.

The first stage, built Cemetery, carried out by blocks, surrounded the funeral parlor. It was divided into three regions, Islam, Christian and unknown. Entrances on the enclosure walls connected the blocks consistently, creating a parallel path together with the main flow.

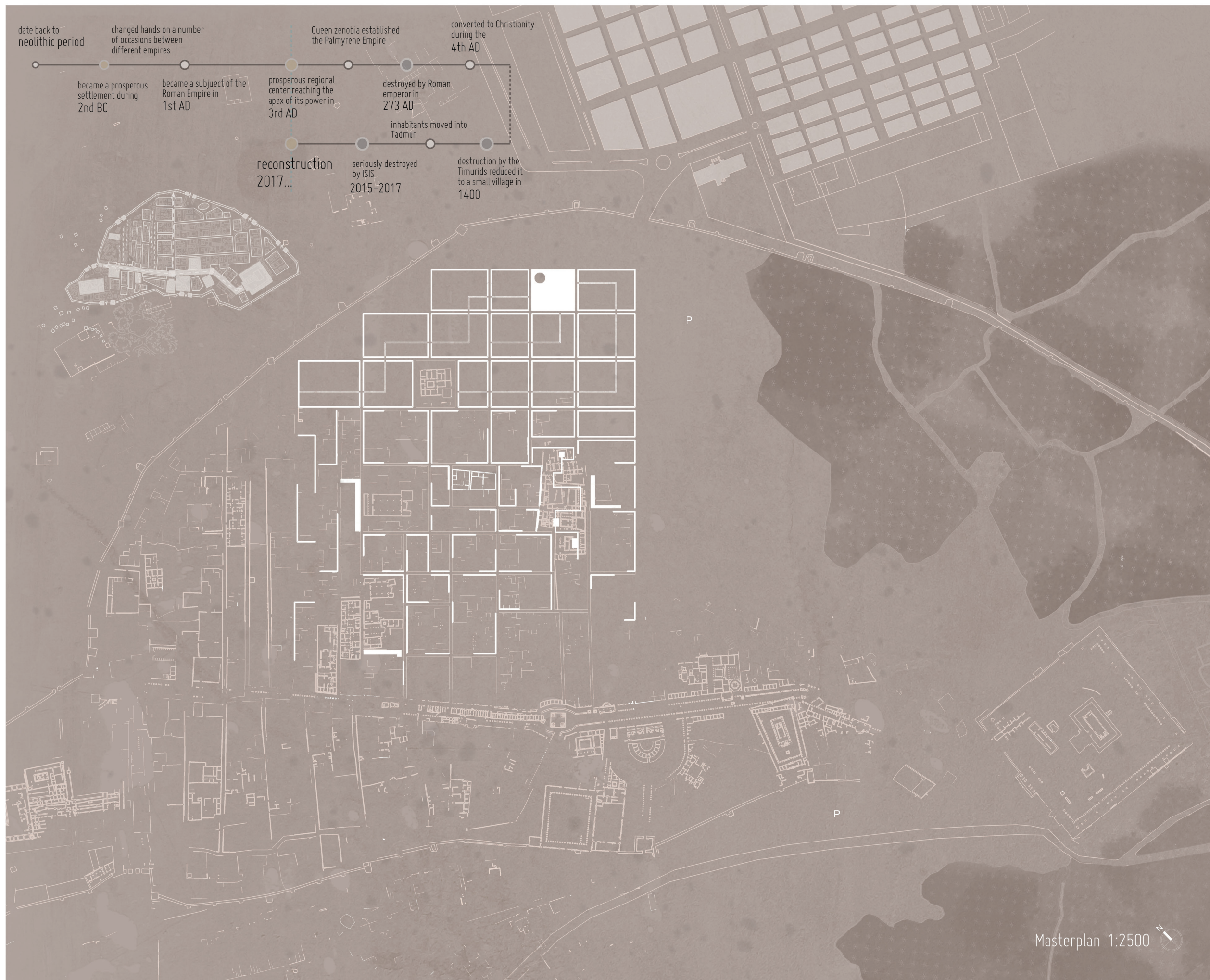
Walls in the second phases were carefully designed to distinguish the area. Drew inside the memory of the place, these walls marked the new entrance and invited people to contemplate from a new angle the monument. They were also used as guidelines for the people inside. Openings on the wall facing the ruins highlighted the passing time. Ancient wonders were protected. By building bridges and overwatches, restoration and recovery work could be carried out. Visitors may see them again.

The third stage will lead people to a growing city, letting the citizens enlarge and finish the project in their way, bring the people back, bring the ancient palmyra back.

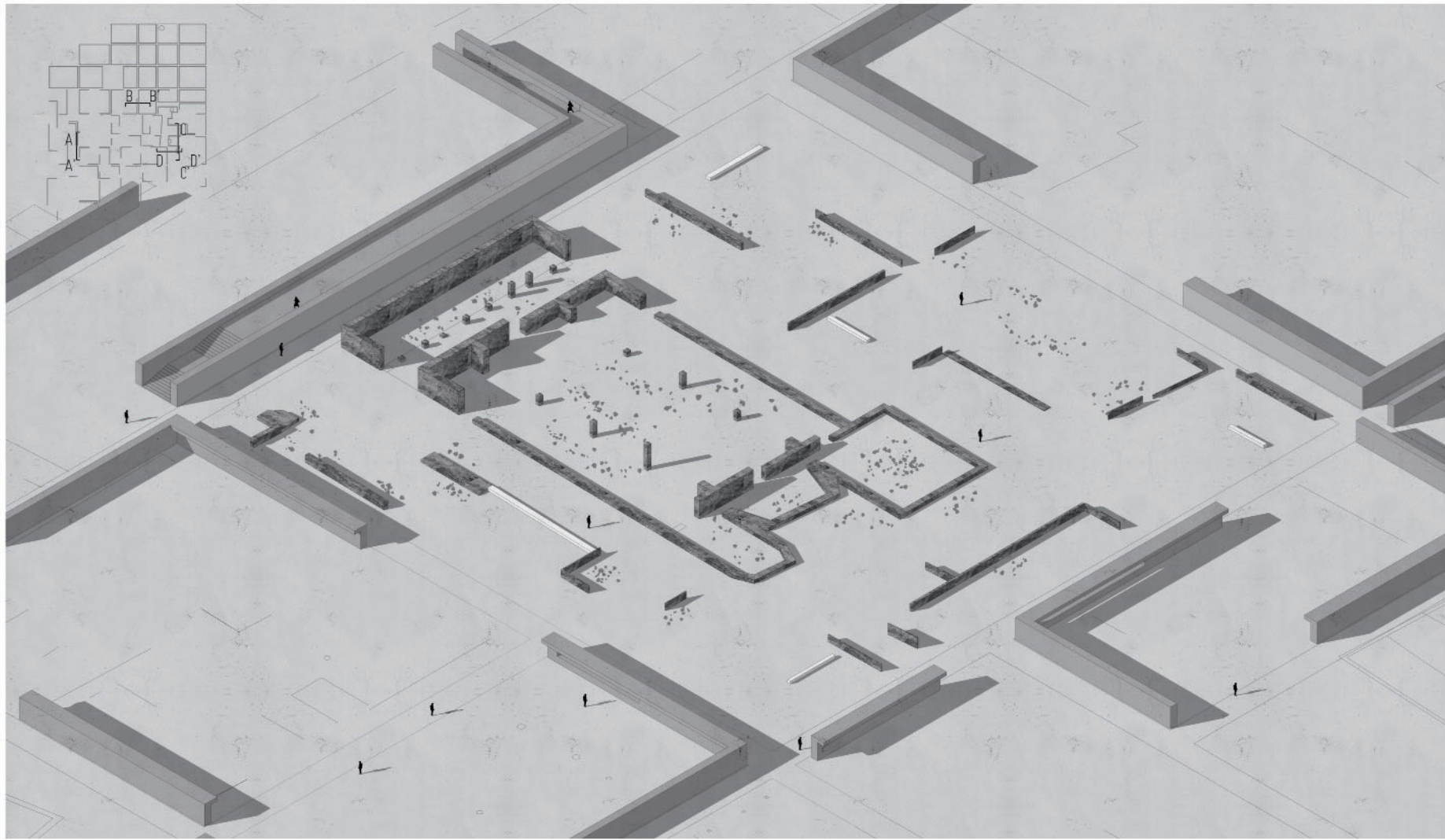
City of soul created two different human experiences from two altitudes. From the mountain top, City of soul restored the shape of ancient palmyra, turning the project into a huge sculpture. From the ground level, the cemetery blended into the archeology site, revealing the relationships with the environment, where any path is a succession of changing sequences, drawing different perceptions and allowing to re-read and re-understand the same surrounding landscape.



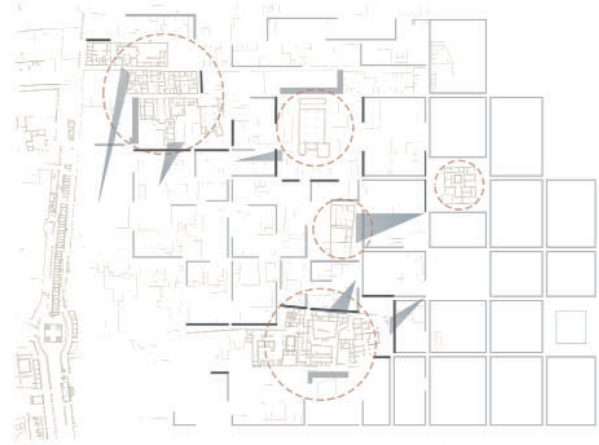




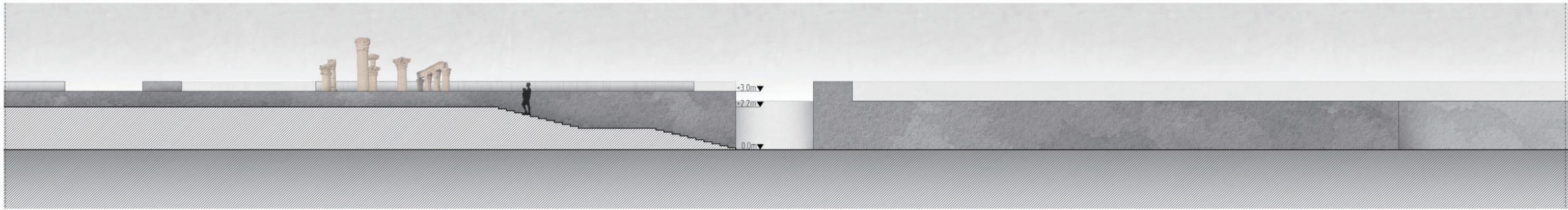
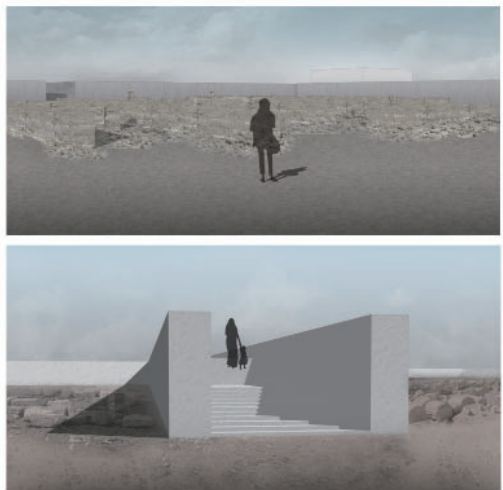




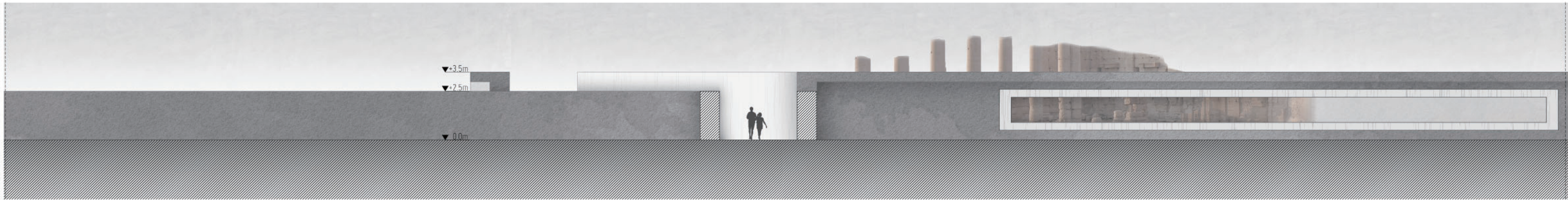
Park axonometric



Park diagram

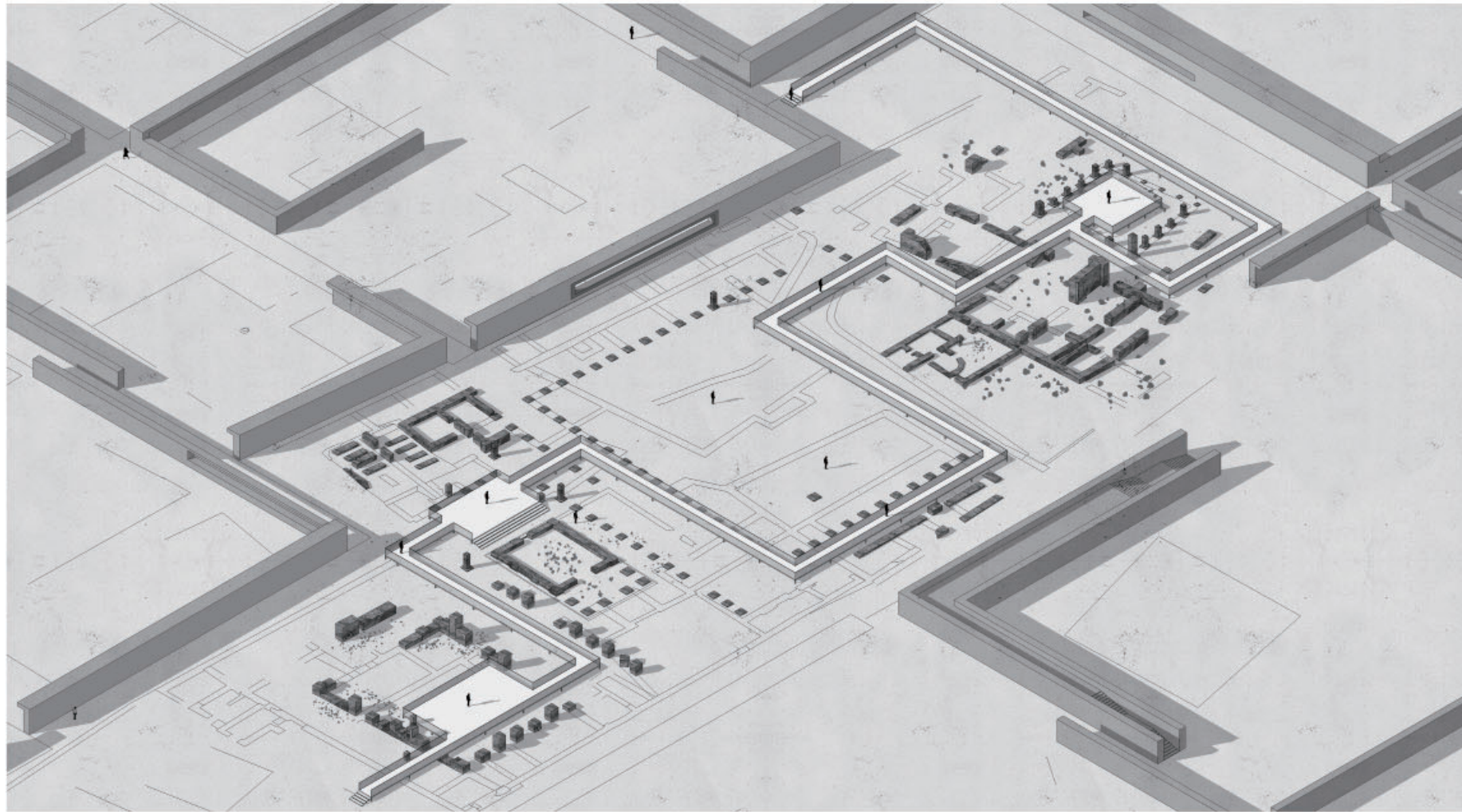


Section AA' 1:100

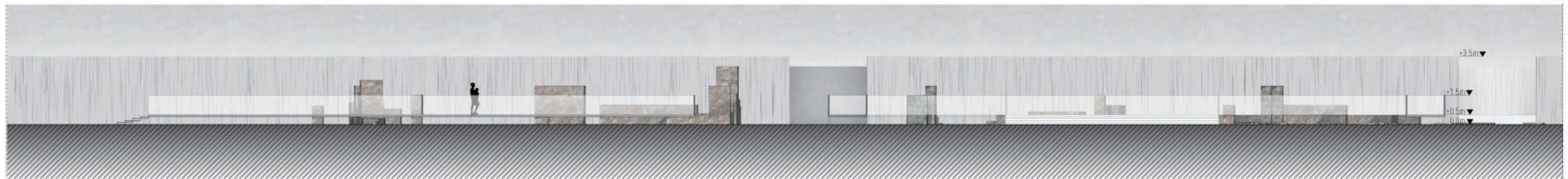
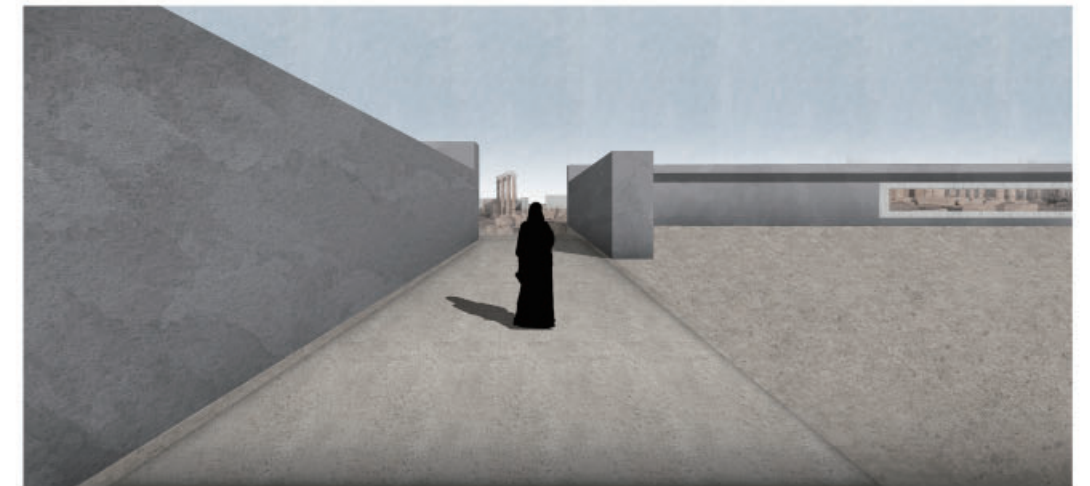
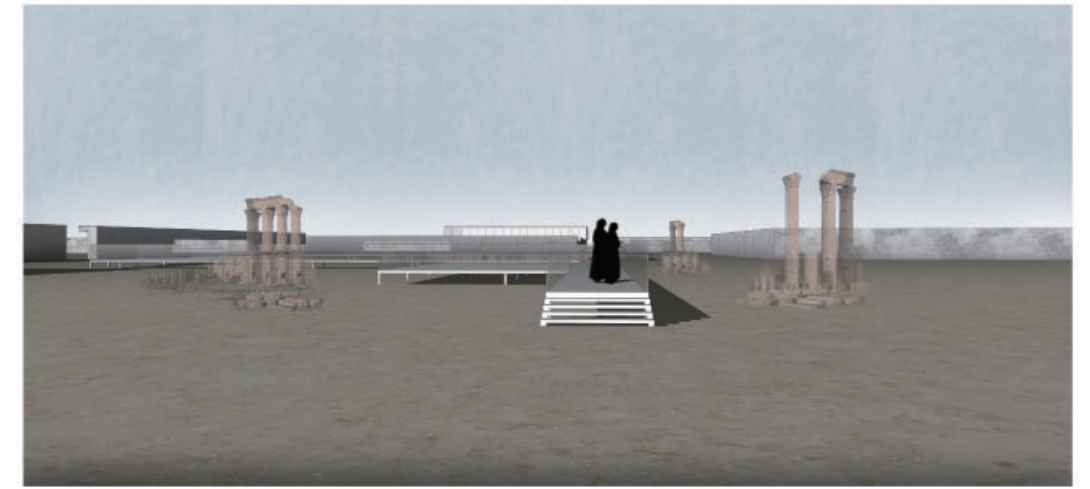


Section BB' 1:100

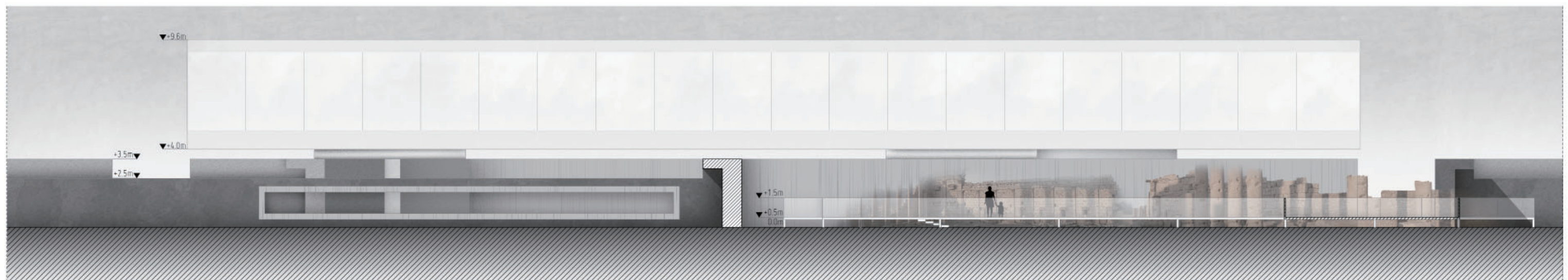




Bridge axonometric

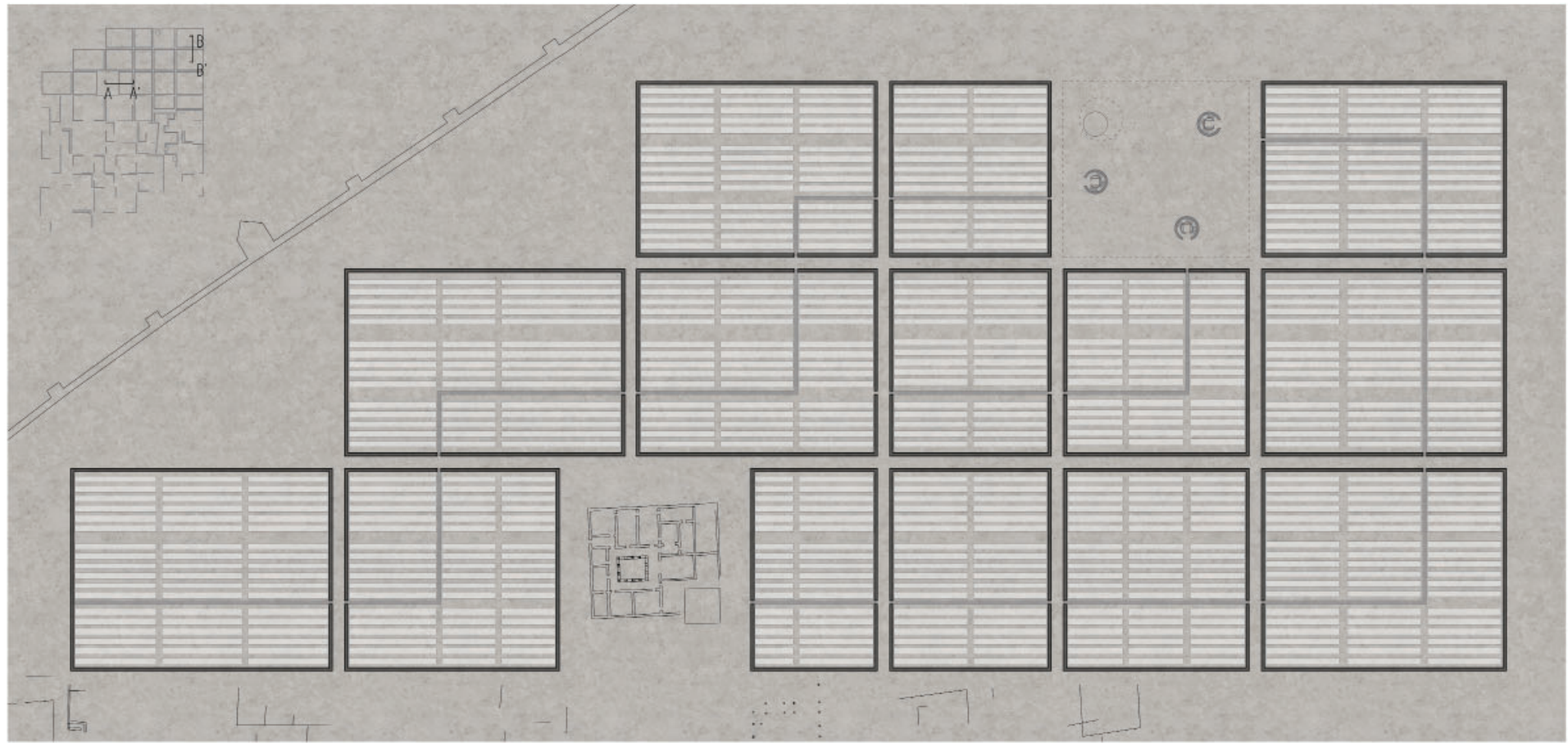


Section CC' 1:100

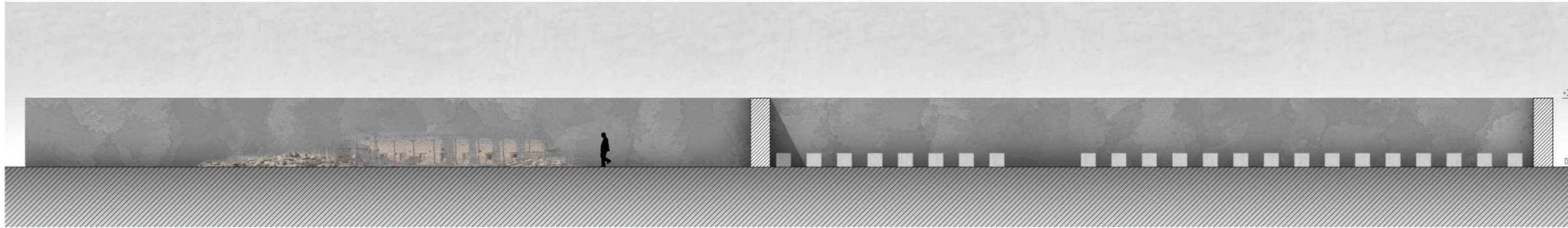


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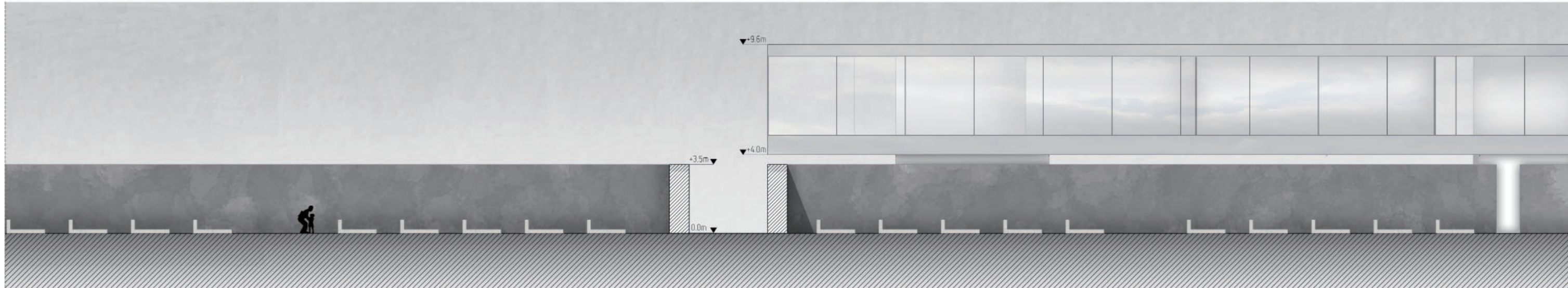




Cemetery plan 1:1000

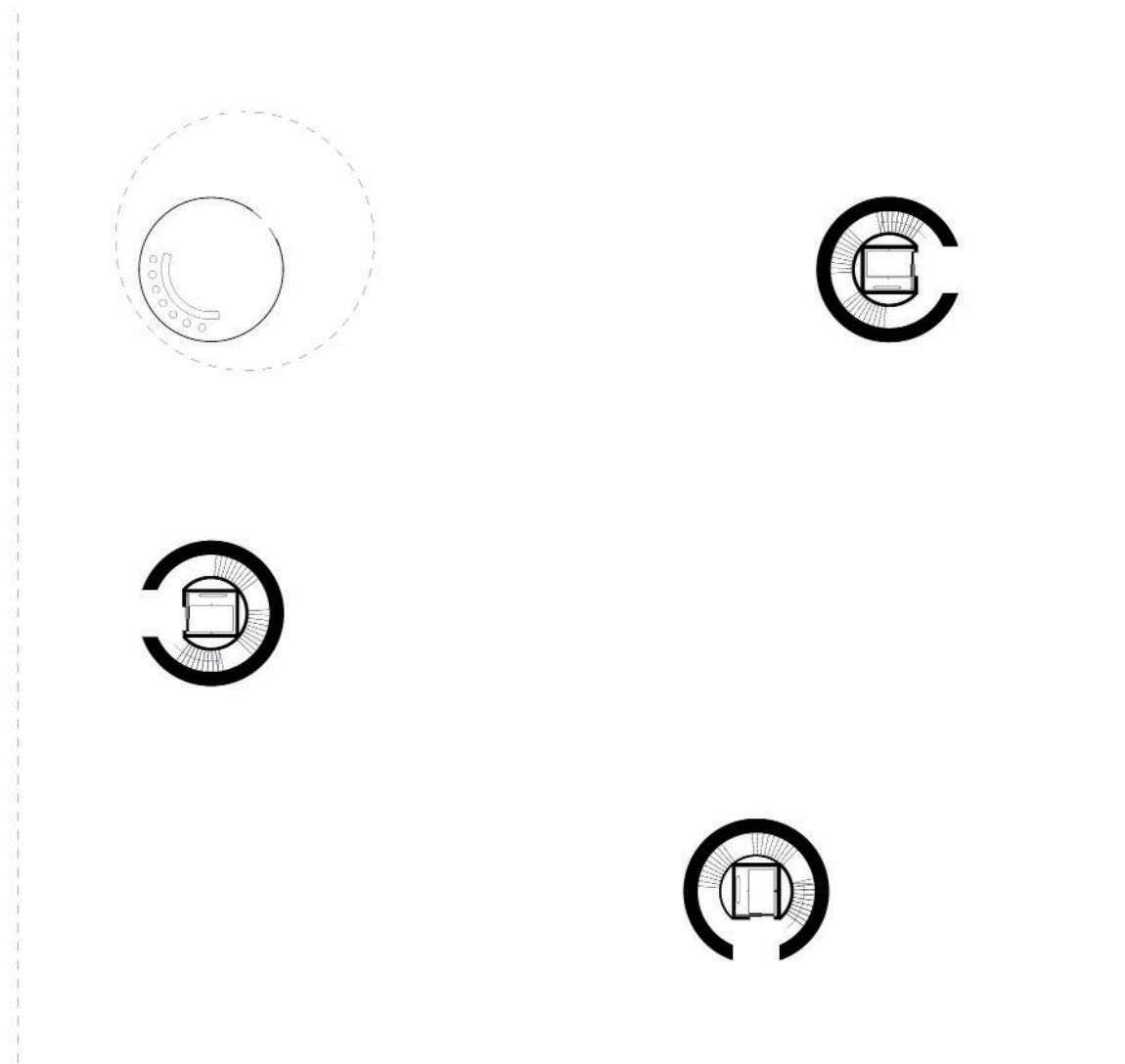


Section AA' 1:100

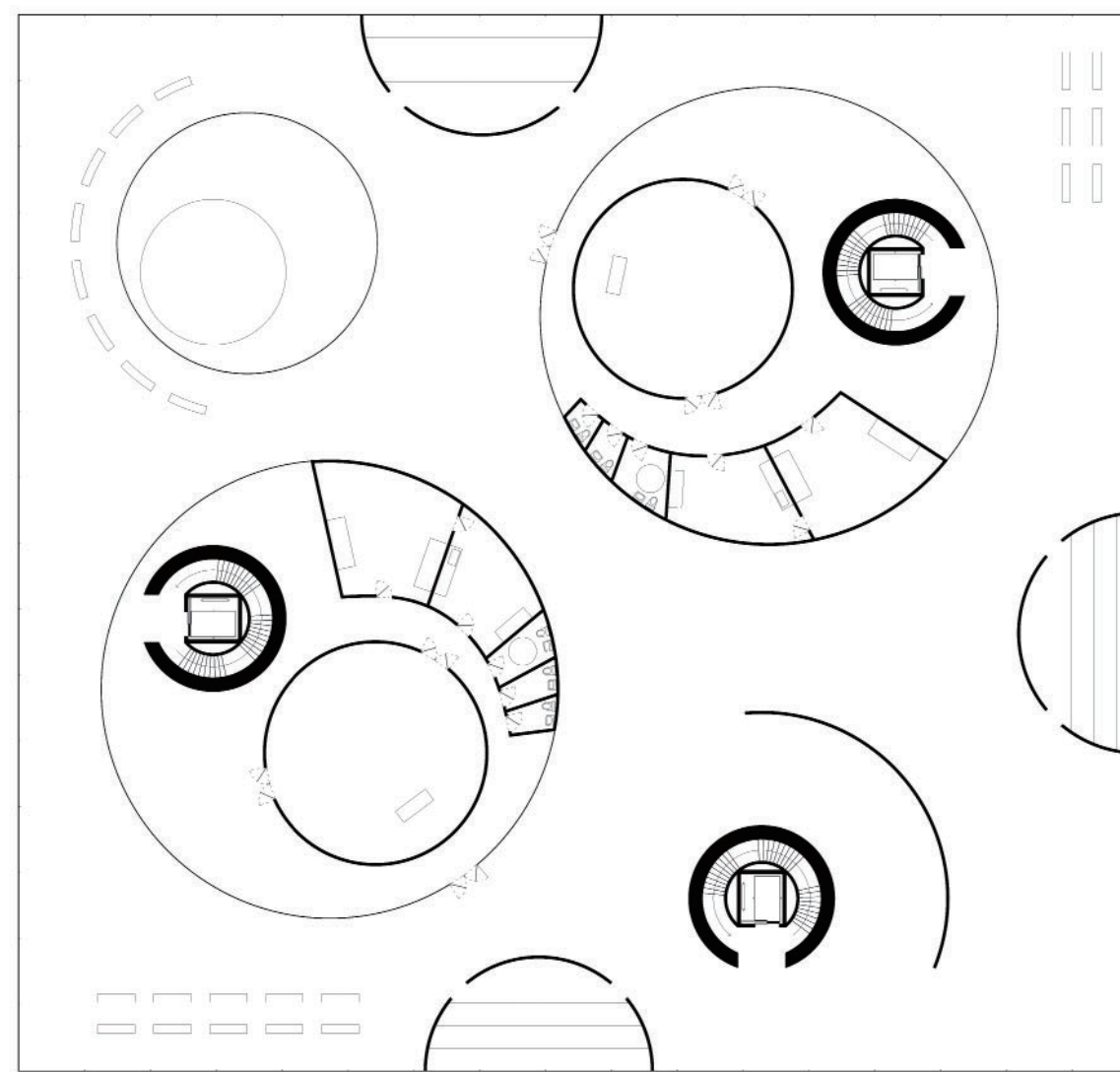


Section BB' 1:100

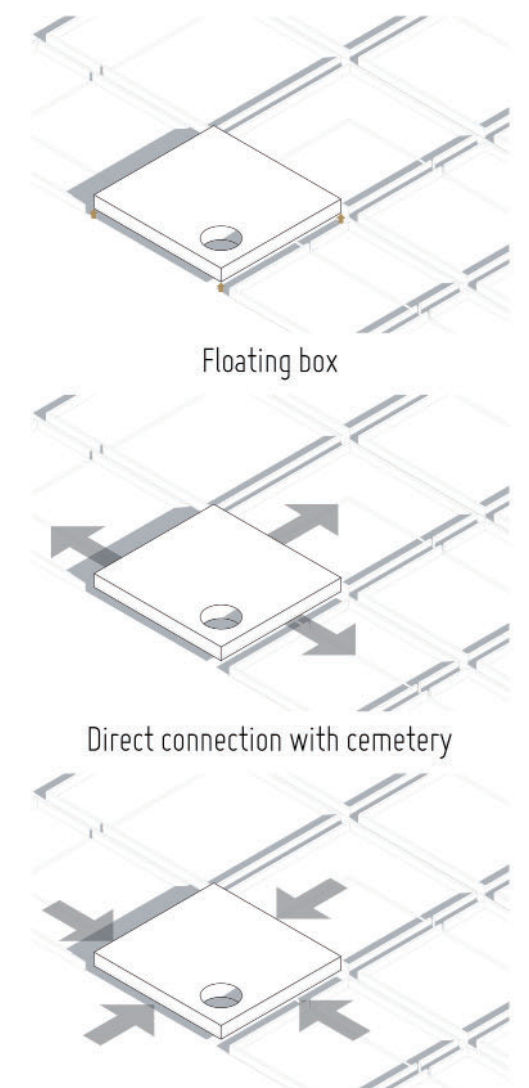




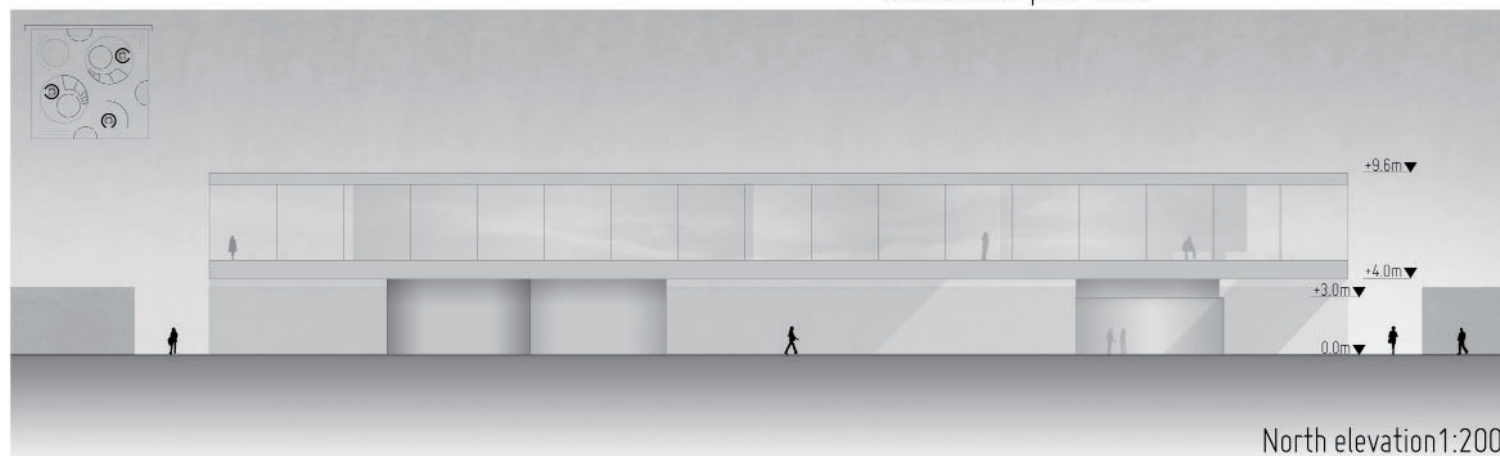
Ground floor plan 1:200



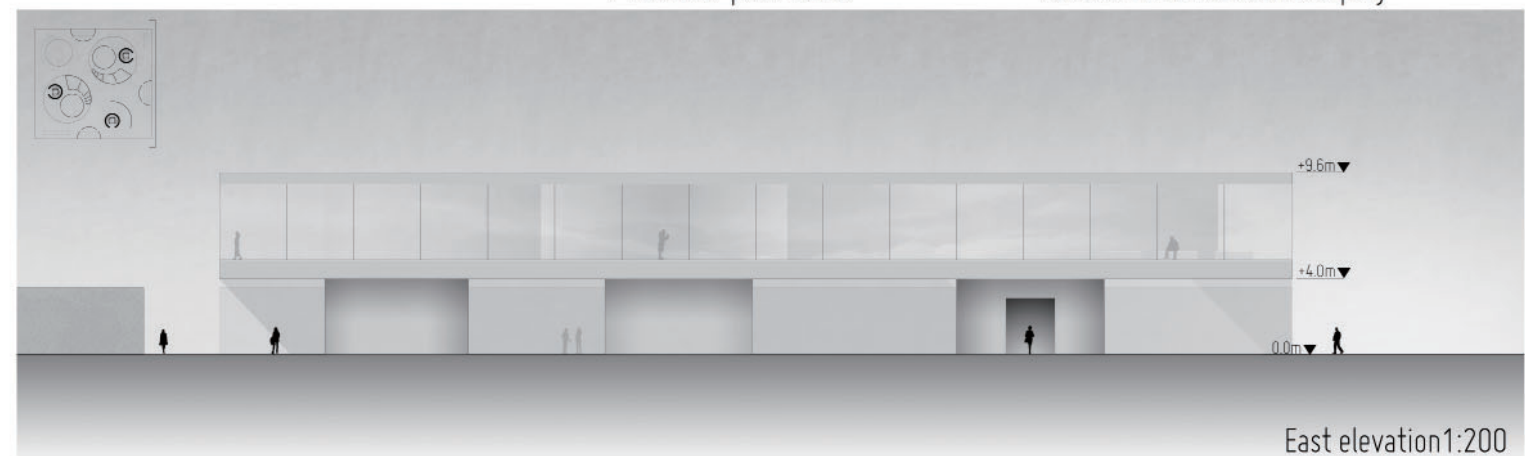
First floor plan 1:200



Function as attraction and pray



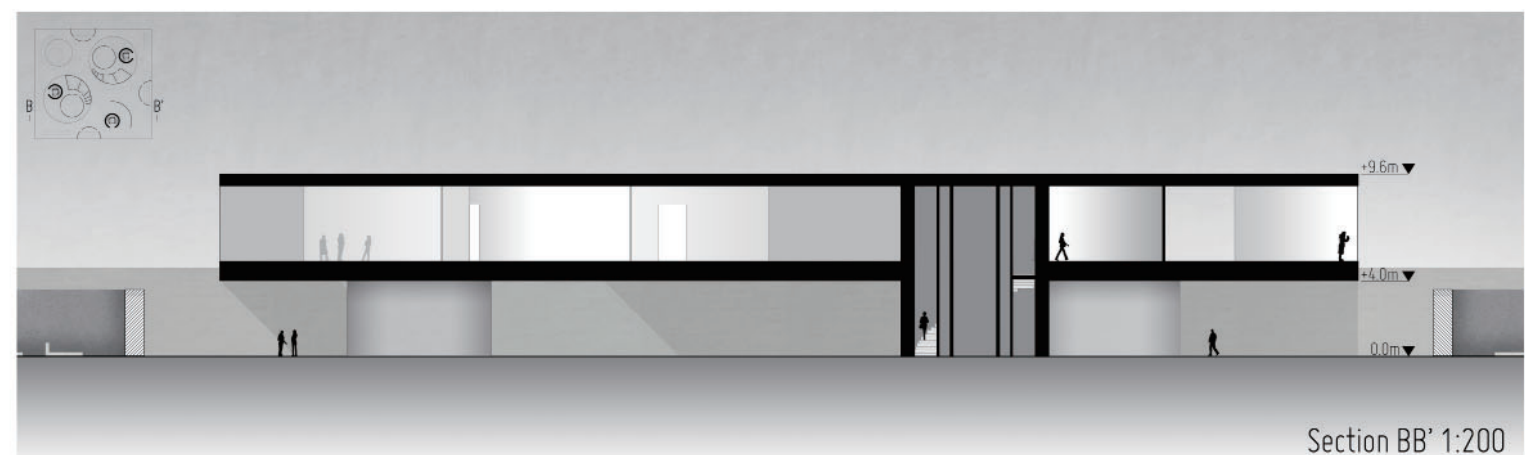
North elevation 1:200



East elevation 1:200



Section AA' 1:200



Section BB' 1:200



# Moscova Civic Center

Milano, Italy

Design studio 2

Team: Wu Yaochen, Zhang Yaolin, Zuo Lei

2016–2017

The Moscova Civic Center is an extension and optimization of two existing facilities: Play More and Media library of S. Teresa. It is located in the historical center of Milan, at the cross of Duomo di Milano–Garibaldi and two most important parks of Milan: Park Montanelli and Park Sempione.

The project aims to reopen and reconnect this area to urban life, meanwhile, providing a better environment for social activities, sports, entertainment, education and exhibition. The project comprises five elements: glass façade exhibition center, piazza with shallow water, underground basketball and soccer field, underground interior entertainment and a sport pavilion with volleyball and swimming pool. All innovations, emerging with the old church and highlighting the identity of the site, create a modern piazza for the community.





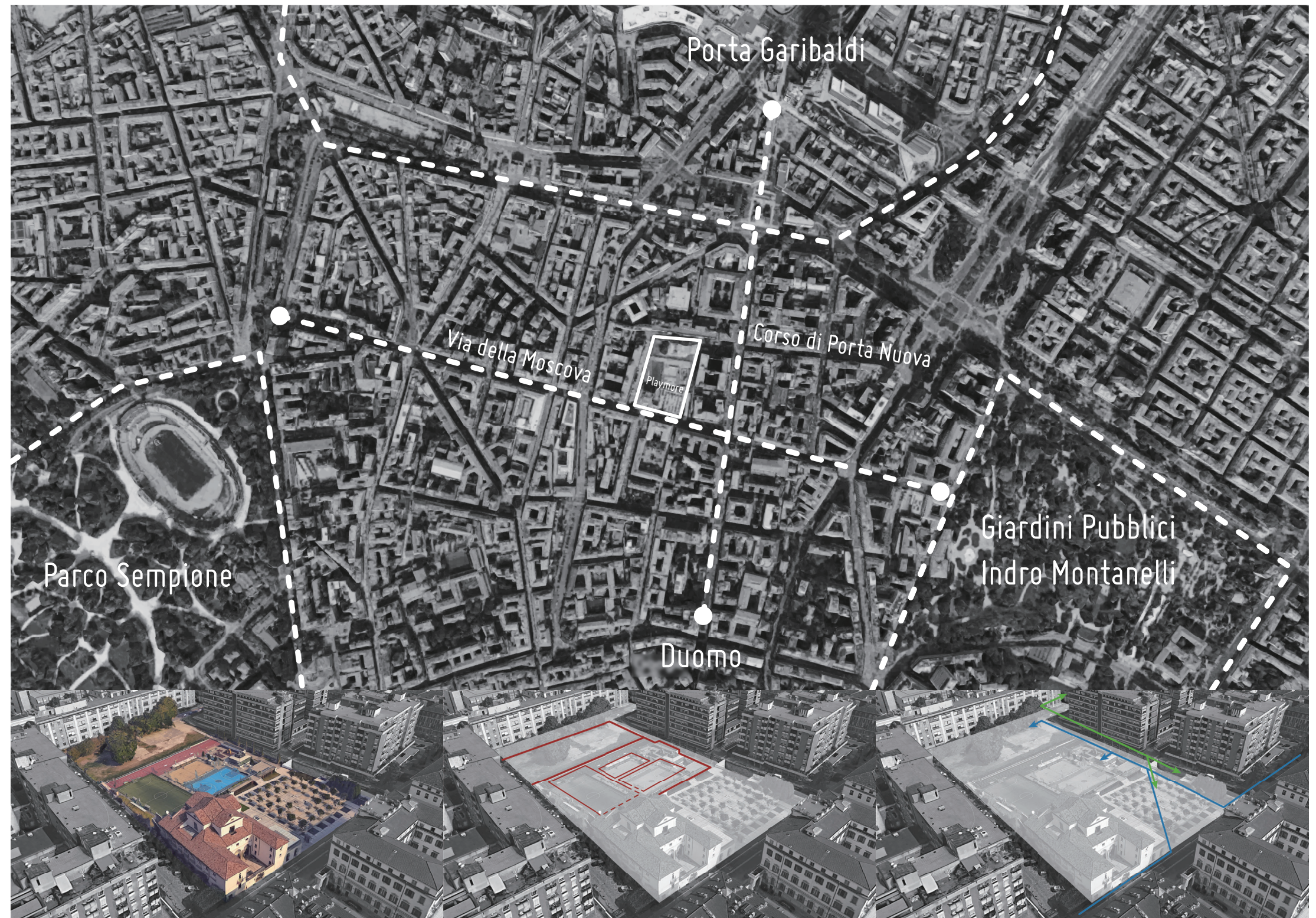




# Site Analysis

The project is located in Via Della Moscova and Corso di Porta Nuova. The rectangular site is sitting above a four-level underground parking lot surrounded by apartment buildings and a hospital at the back. The old church at south west corner was renovated into a media library, with a piazza with trees and benches on the east of it. Play more is an open sport facility hidden behind a huge staircase enclosed by the boundaries. These visual and physical boundaries block the site from urban life. As majority of people visit with public transportation (Metro and bus), main flow of visitors is from Via Della Moscova. However, due to the accesses are from both front and back, the path on the right of Play more has becoming a shortcut. Pedestrian, children, wanderer and patients to the hospital are using the same path, which becomes a potential risk of the site.

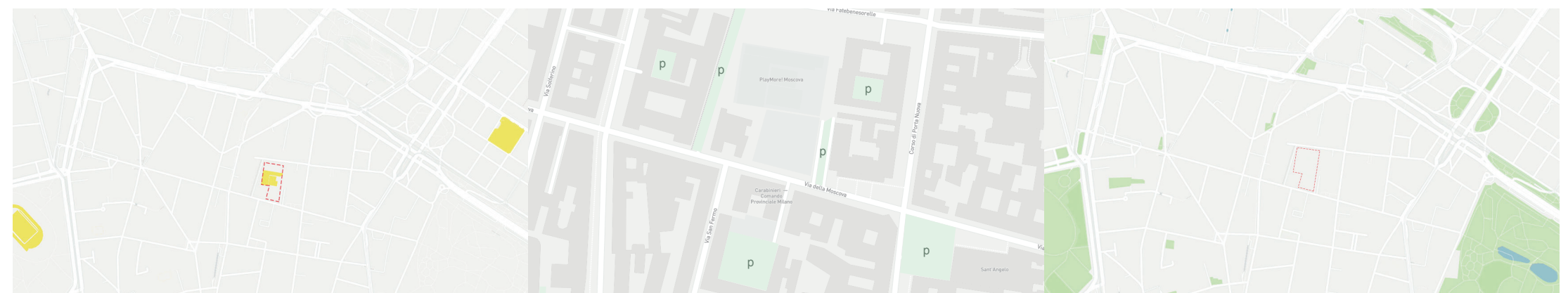
By analyzing the built forms, public sport facilities percentage, flow of pedestrian and traffic, Usage frequency, site history, space of relation, parking, urban green system and historical alignment, we saw the potential of renovating the original site as part of the social life of the community. Through the enhancement of its accessibility, openness, publicity and key identity, more and more people can benefit from it regarding fitness, communication, health, integration, happiness, knowledge, art and life quality.



Current situation

Boundaries

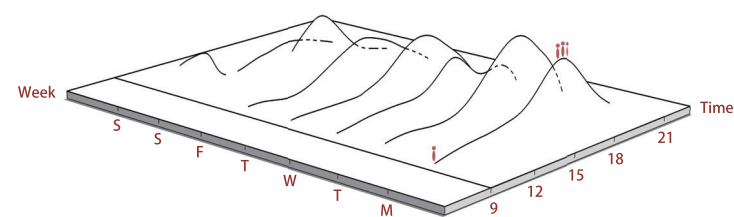
Circulation



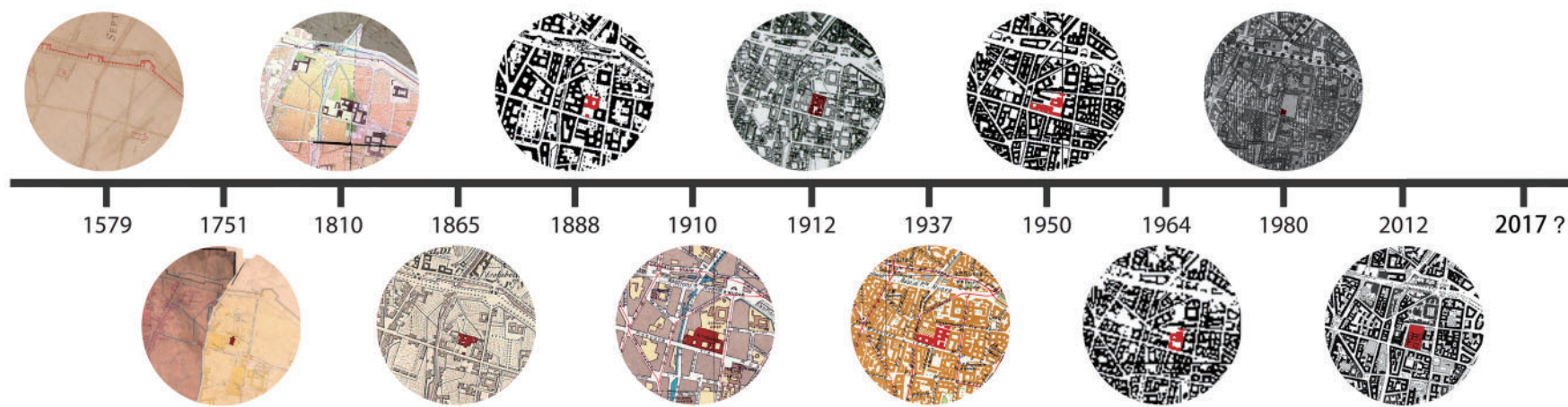
Public sport facilities

Parking

Urban green system







There were two architectures built on the site in the history. The church of San Carlo was built in 1615. The plan of the church is a Latin cross with an apse to the north. In 1802, the church was transformed into a tobacco factory to manufacture pipe tobacco, cigars and finally cigarettes. The building was further expanded in 1841 and 1856. The factory was badly damaged due to the bombing in 1943. The site was redeveloped as an underground parking in 2008. In addition with a piazza with trees, public seating and fountain. In place of the convent and the church, a soccer field, basketball and athletics tracks are built.



Photographic survey and sketches



Typology

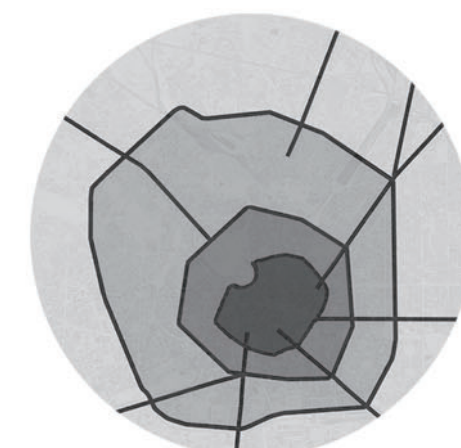
Residential building types in Milano before 1930



Urban Fabrics



Space of Relation



Viability



Alignments



Directions

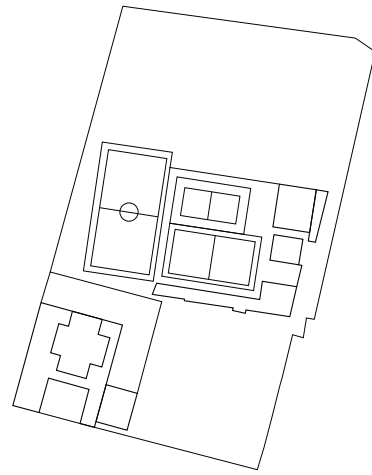


Block

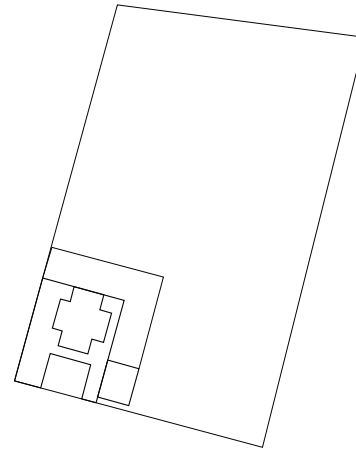


# Design Strategy

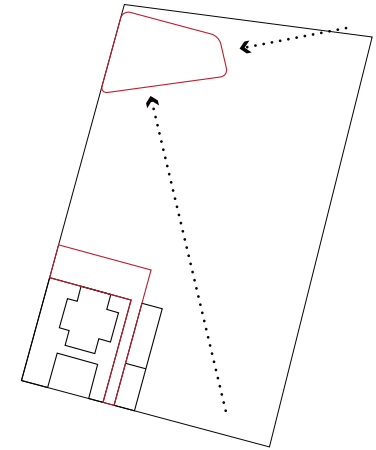
The design strategy of the project is to open up the piazza by eliminating all the physical boundaries primarily. Activities and space that are visually and physically accessible are more attractive and noticeable. Second step, we create a key building as an attraction point guiding visitor inside the piazza and make a restoration to the old church by adding a new glass façade architecture. This not only alleviate the abruptness of the strong religious identity to the site, but also harmonize the minimalistic design language. Third, in order to follow the alignment of the street and bring an entrance to the open piazza, an air corridor is designed aligning with the back façade of the exhibition center. It serves both as an entrance to the exhibition and open piazza. There is a great opportunity to overview the entire site from the air corridor. Fourth, the path, air corridor and the remaining shortcut shape the underground playground. By taking the advantage of level difference, we no longer need to create physical boundaries, so that people are able to experience a clear view to the site and activities.



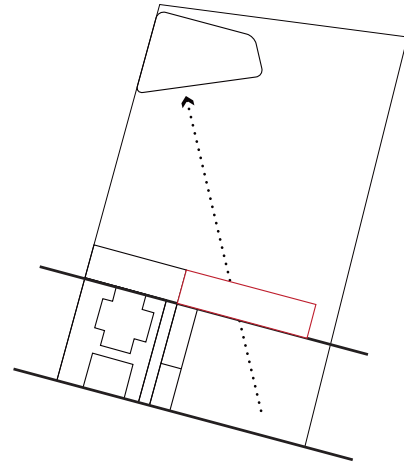
Exsiting Plan



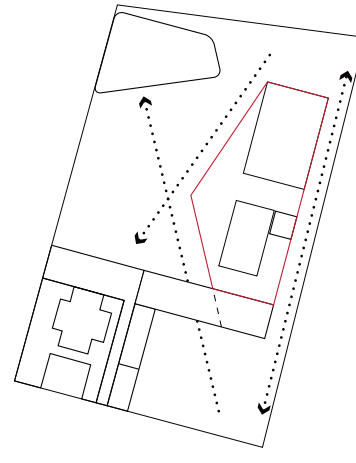
Eliminating Boundaries



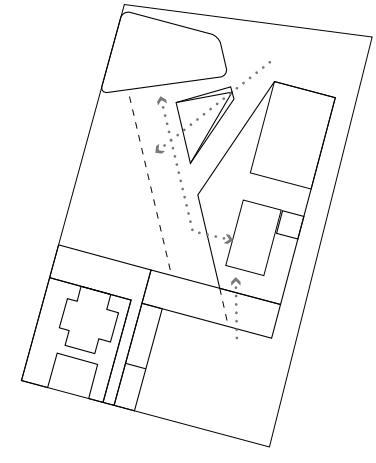
Intervention and Attraction



Alignment



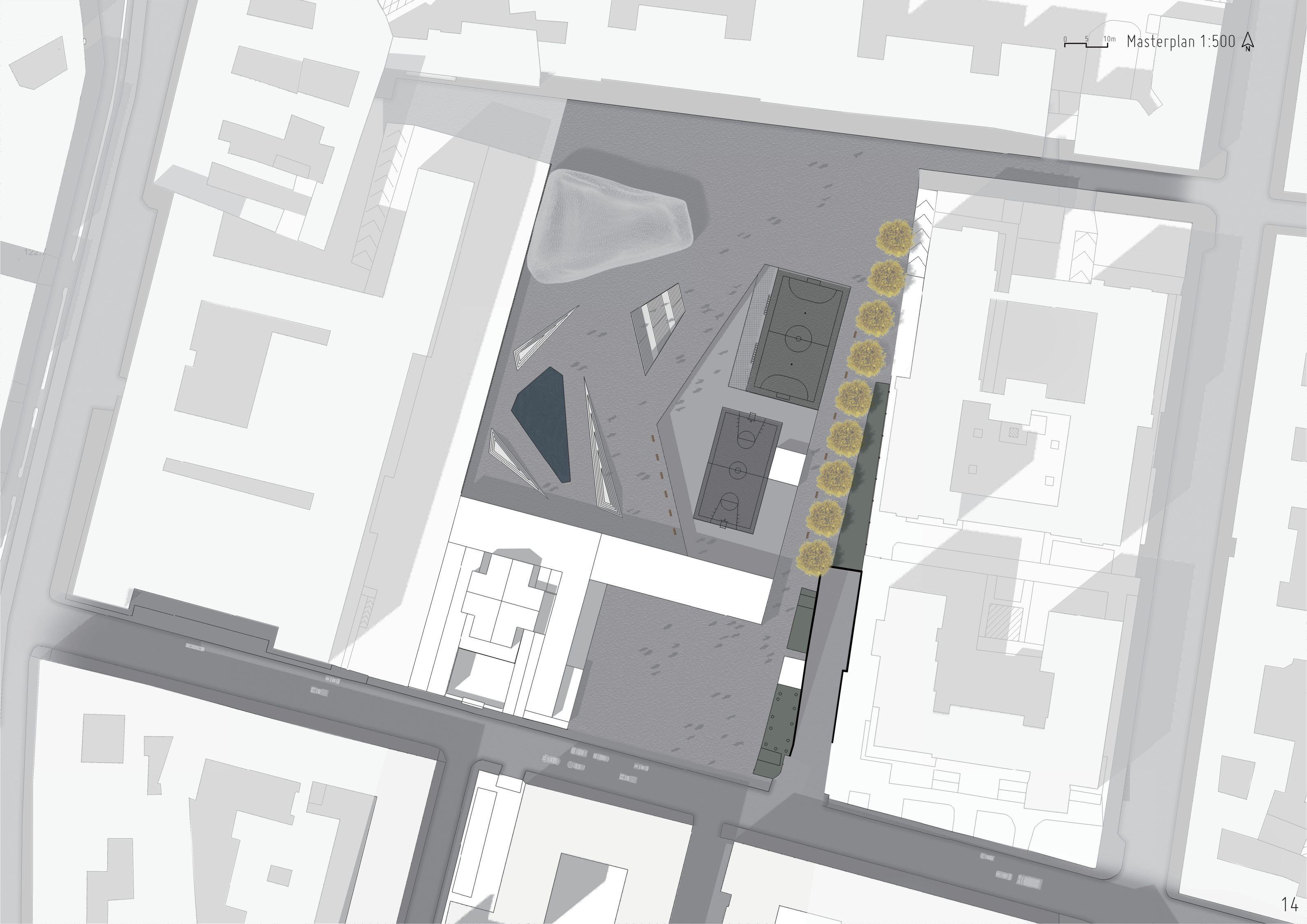
Sunk Playground



Circulation and Connectivity









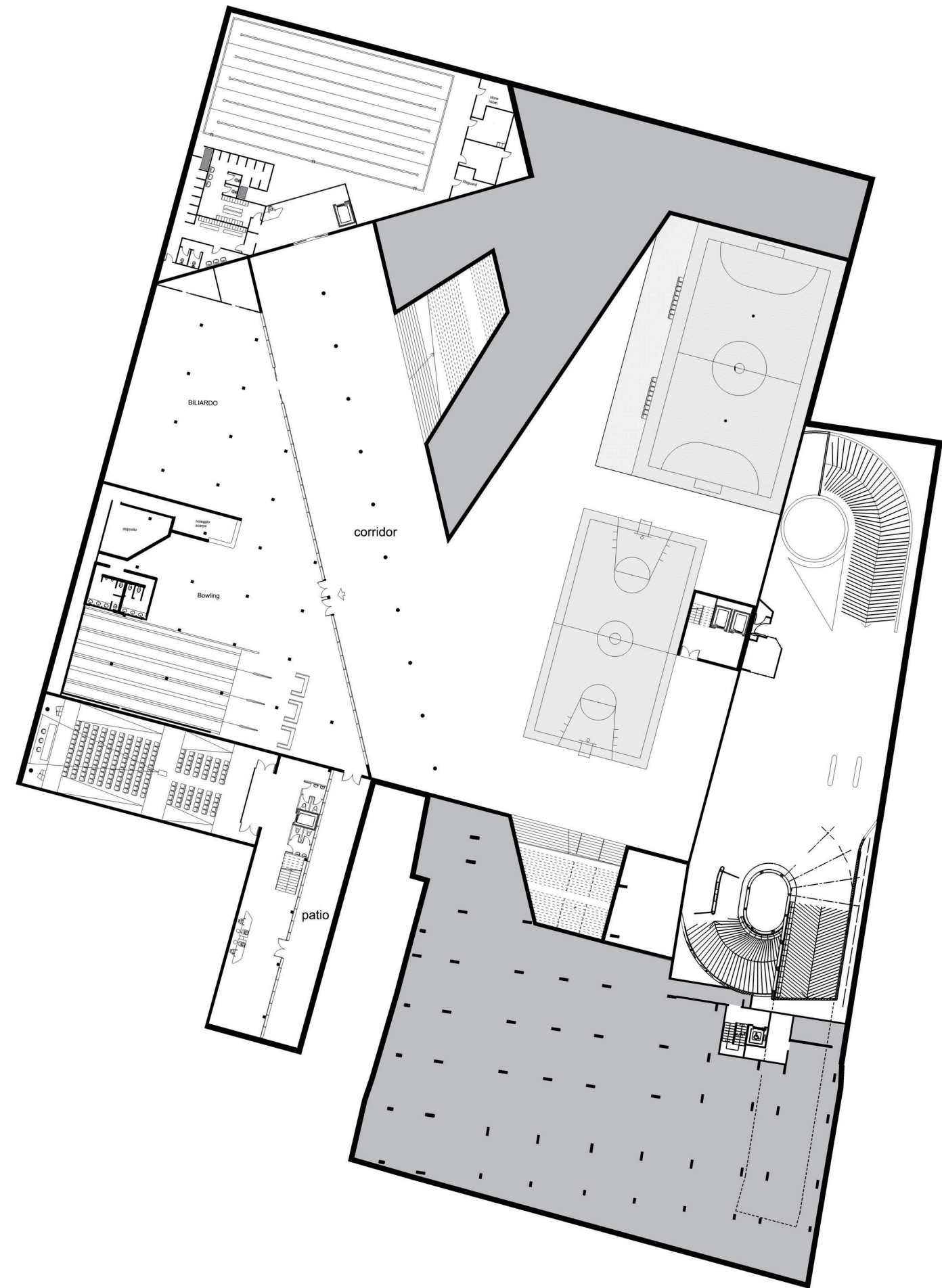




First Floor plan 1:200



Underground plan 1:200



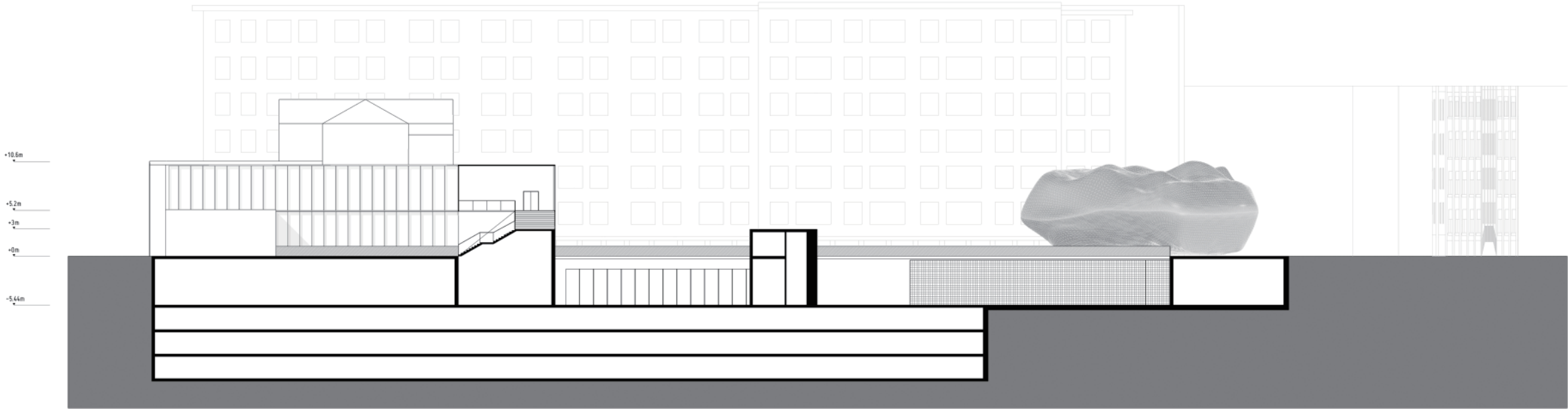




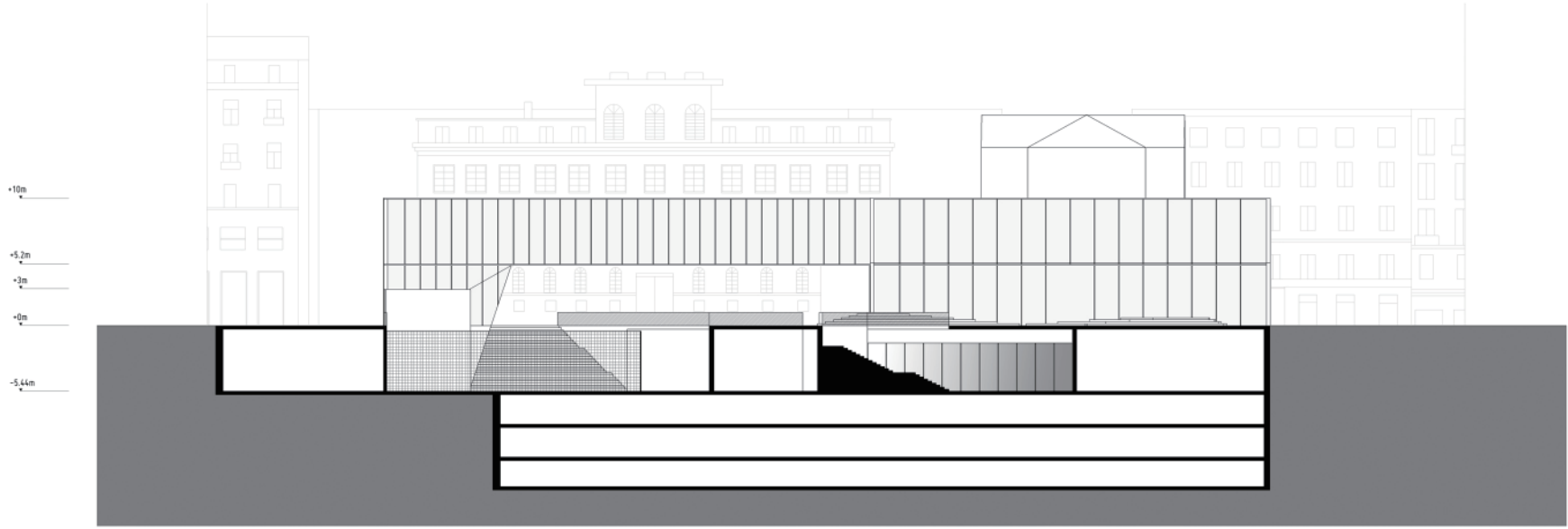
+10m  
+5.2m  
+3m  
+0m  
Elevation



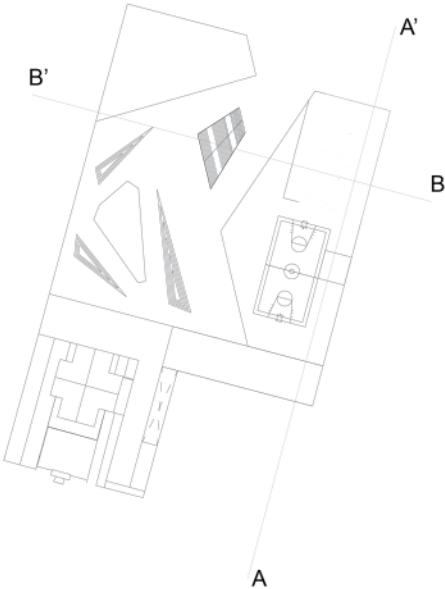
Elevation



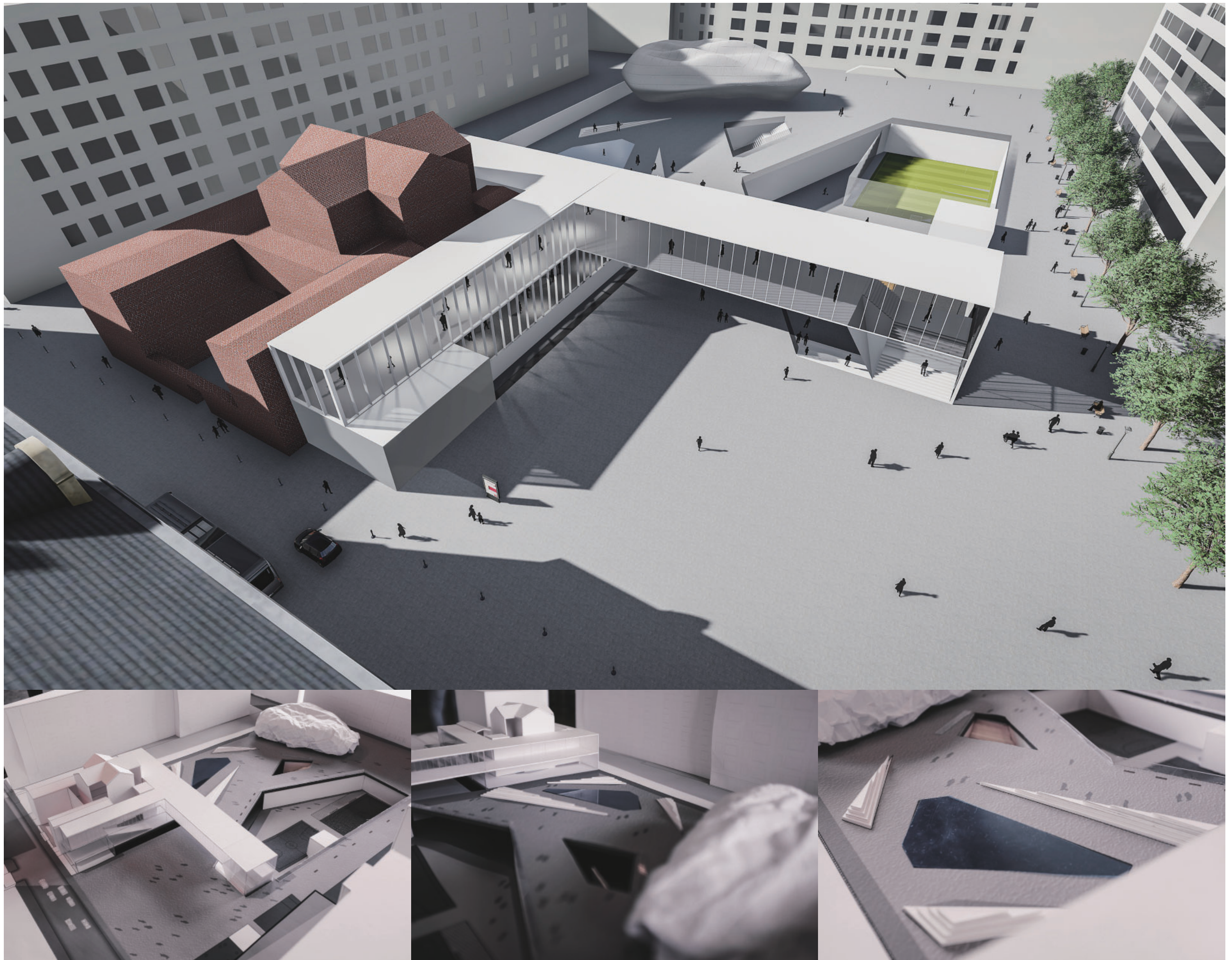
Section AA'



Section BB'









# Backyard Pool

Orani, Sardinia, Italy

Third Year Workshop

Team: Wu Yaochen, Zhang Yaolin

2018–2019

Backyard pool is a public service developed together with a new hotel center. It aims to promote local tourism by reusing and reactivating the underused space in Orani which is caused by low population and lacking development. The swimming pool is not only dedicated to tourists, but also provide a new way of social activity for local people.

Backyard pool is redesigned on the site of Rosa Garden in the historic center of Orani. Rosa Garden, as one of the two main green space, serves as a crucial meeting point of the community. The strategy is to create a more functional space for all ages and improve the effectiveness of gathering space. Residents and tourists can enjoy the playground, a casual swimming pool, a cozy chatting space and a lifted square with great view of the Nivola Foundation and nature landscape.

It is also designed to be a new landmark of Orani drawing attention of tourists from the Nivola museum to the historic center. The lifted square which is visible from the museum gives a general directional orientation. Meanwhile, surrounded by residential buildings and Nivola's publicity photo, this lifted open space creates a highly recognizable contrast with the surrounding.

Backyard pool is a Biological swimming pool. The system consists of a constructed body of water, where the water is contained by an isolating membrane or membranes, in which no chemicals or devices that disinfect or sterilize water are used. All clarifying and purifying of the water is achieved through biological filters and plants rooted hydroponically in the system.









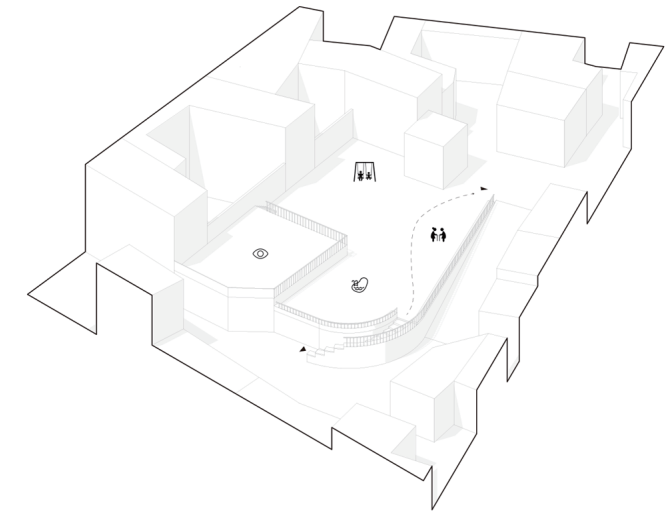
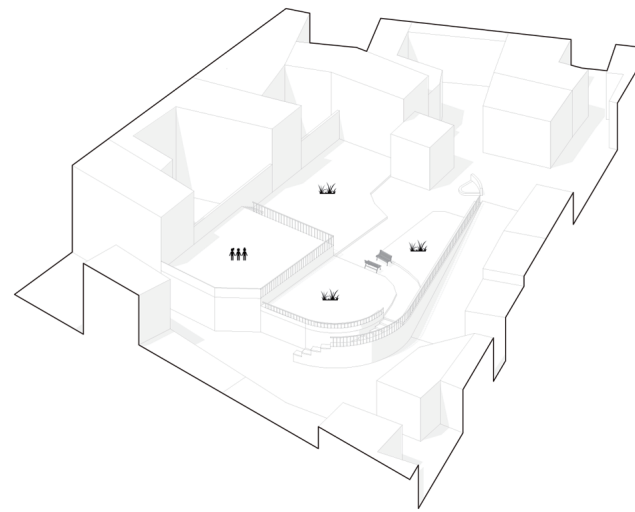
# Site Analysis

## Problems of the site:

- 1) Underused Green Space. The site functions as a garden nowadays. Due to lacking management and maintenance, lawns are not periodically cut, and they have overgrown with weeds. These lawns are physical boundaries where nobody is able to use.
- 2) Weak Circulation. There are two entrances of the site: a staircase at Via Alfonso Lamamora and a direct entrance at Via Barisone which are connected with one narrow path. In the center of the garden, two benches are placed along the path, thus making the path even less comfortable to walk. Second, no visible path is designed towards the lifted square so that the playground is physically disconnected with the main flow as a boundary.
- 3) Ineffective Gathering Space. Functions provided by the garden are very limited. First, two benches serve as the only seating area in the garden. As an urban public space, insufficient and low quality seating decreases the possibility of people gathering around the space. Second, lawns are merely benefit for urban environment and climate. There are no functions and facilities for aggregation. People will not use the space if there is nothing to do. Third, the children's playground has no facilities for children to play and it has a potential risk of falling since the space is lifted along the street.

## Potential of the site:

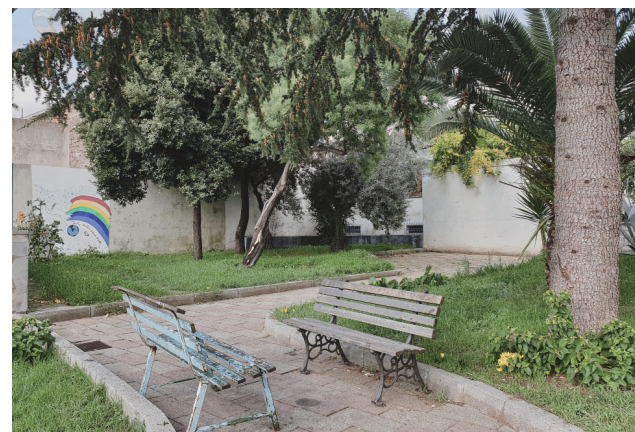
- 1) Heart of the Community. The site is located in the historic center of Orani surrounded by neighborhoods. Residents and tourists are able to reach the site in two or three minutes on foot. Besides, local people take this place for granted as it is one of the two important greeneries, which makes the site a landmark in Orani.
- 2) Reactivate Underused space. The entire garden has great potential to be reactivated with different functions thanks to the openness and simplicity of the site. Children's playground and seating zone can be combined with large green area. By adding a biological swimming pool, local and tourists have a stronger purpose towards the site. This activity can certainly increase the popularity of the space and boost the frequency of visiting. In addition, the lifted square has a great view of the Nivola Foundation and nature landscape creating a cozy seating area.
- 3) Viewpoint and Landmark. One of the design strategies of this project is to create connection between the Nivola Foundation and the historic center. The purpose is to bring the tourists from the museum to local town and eliminate the boundaries between them. In coincidence, the museum and backyard pool which both are recognized as landmarks overwatch each other. People sitting at the lifted square have direct visual connection with the Nivola Foundation.
- 4) Different layers. As the site is surrounded by residential buildings with different height, the façades of these architecture create different layers in the background. We see this as a potential for gallery, advertisement and art display.



Weeds



Reactivate Underused Space



Narrow Path



Viewpoint and Landmark



Ineffective Gathering Space



Different Layers







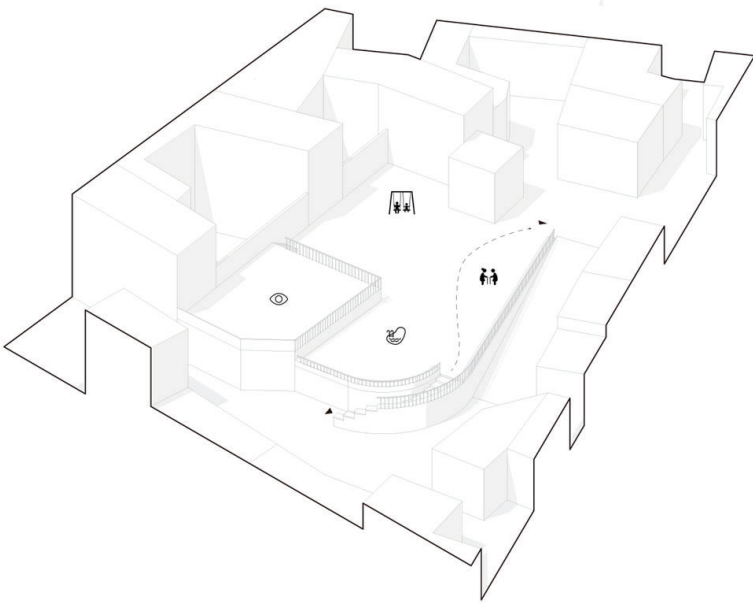
# Design Strategy



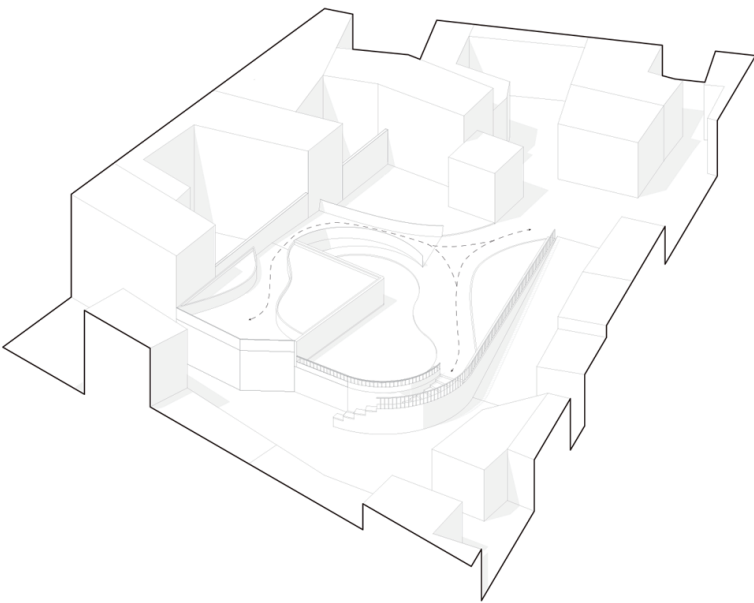
Urban green system

Accessibility

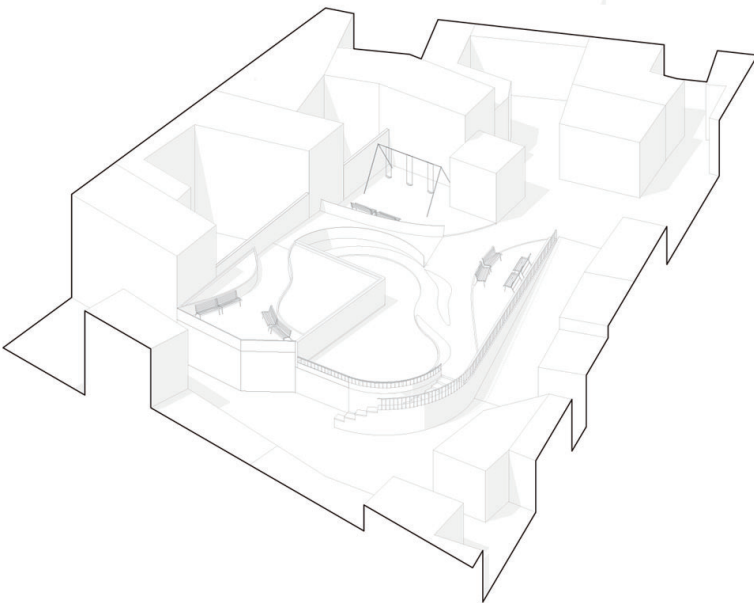
Heart of community



Potential social activities

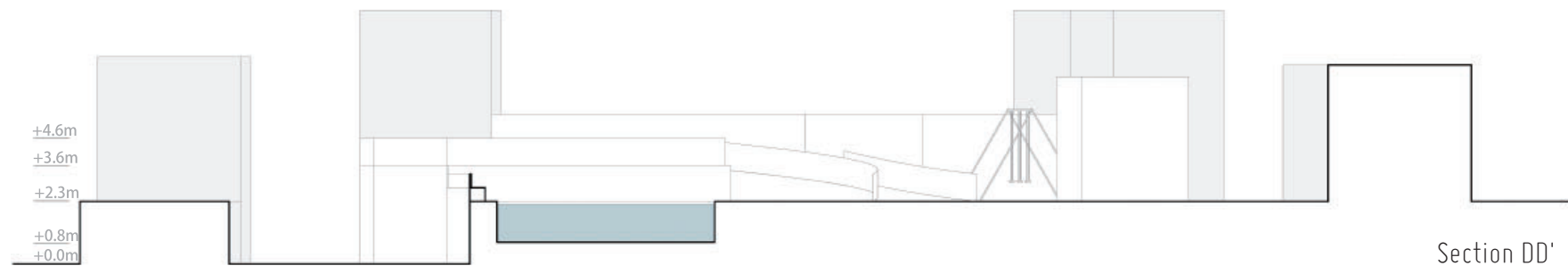
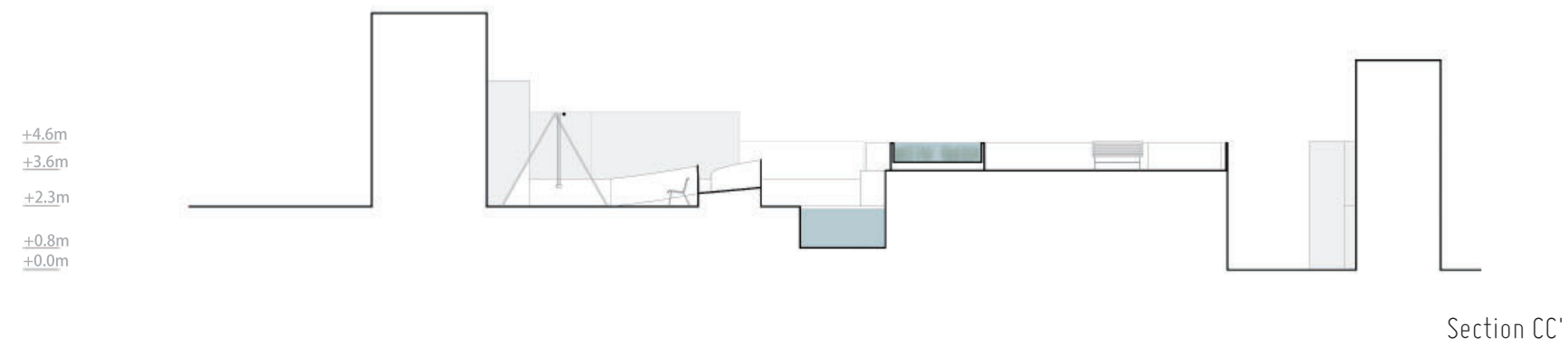
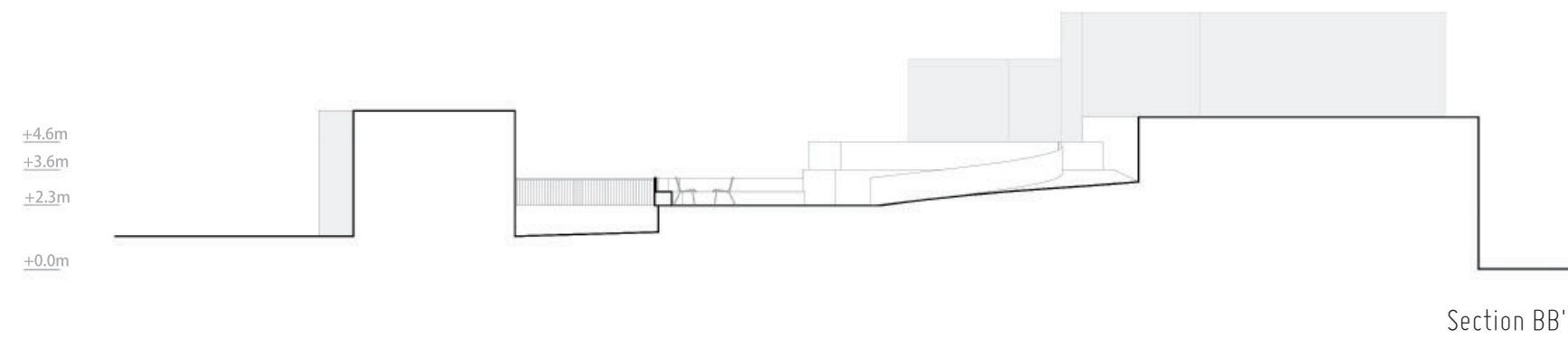
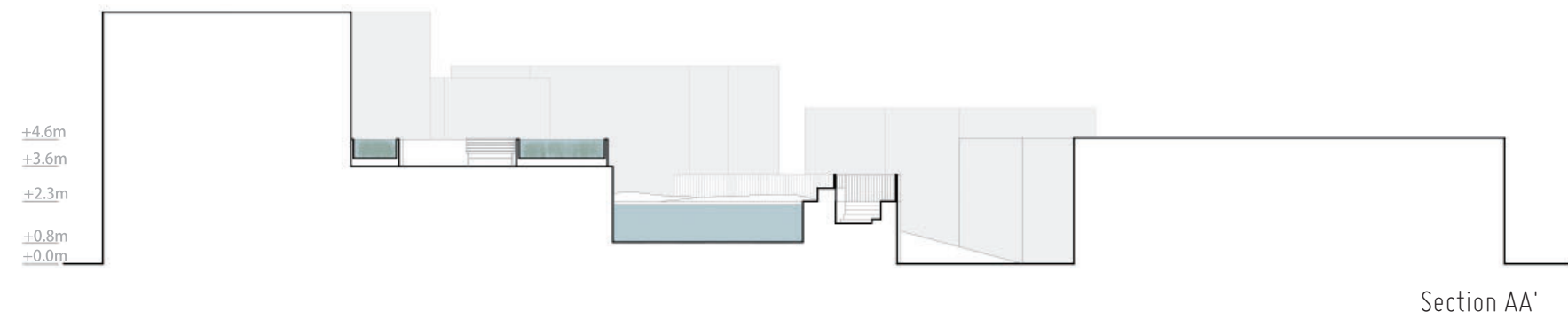
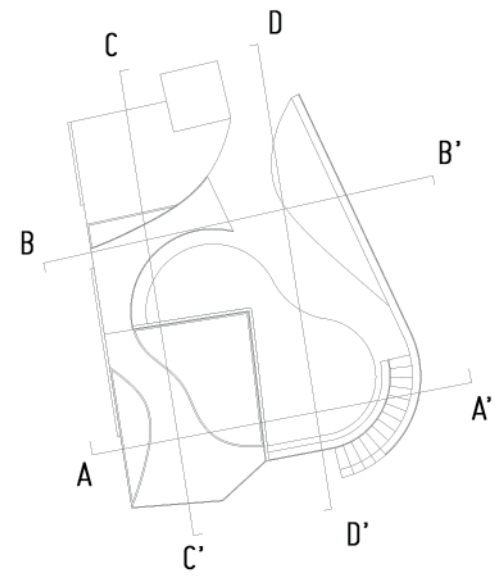


Circulation

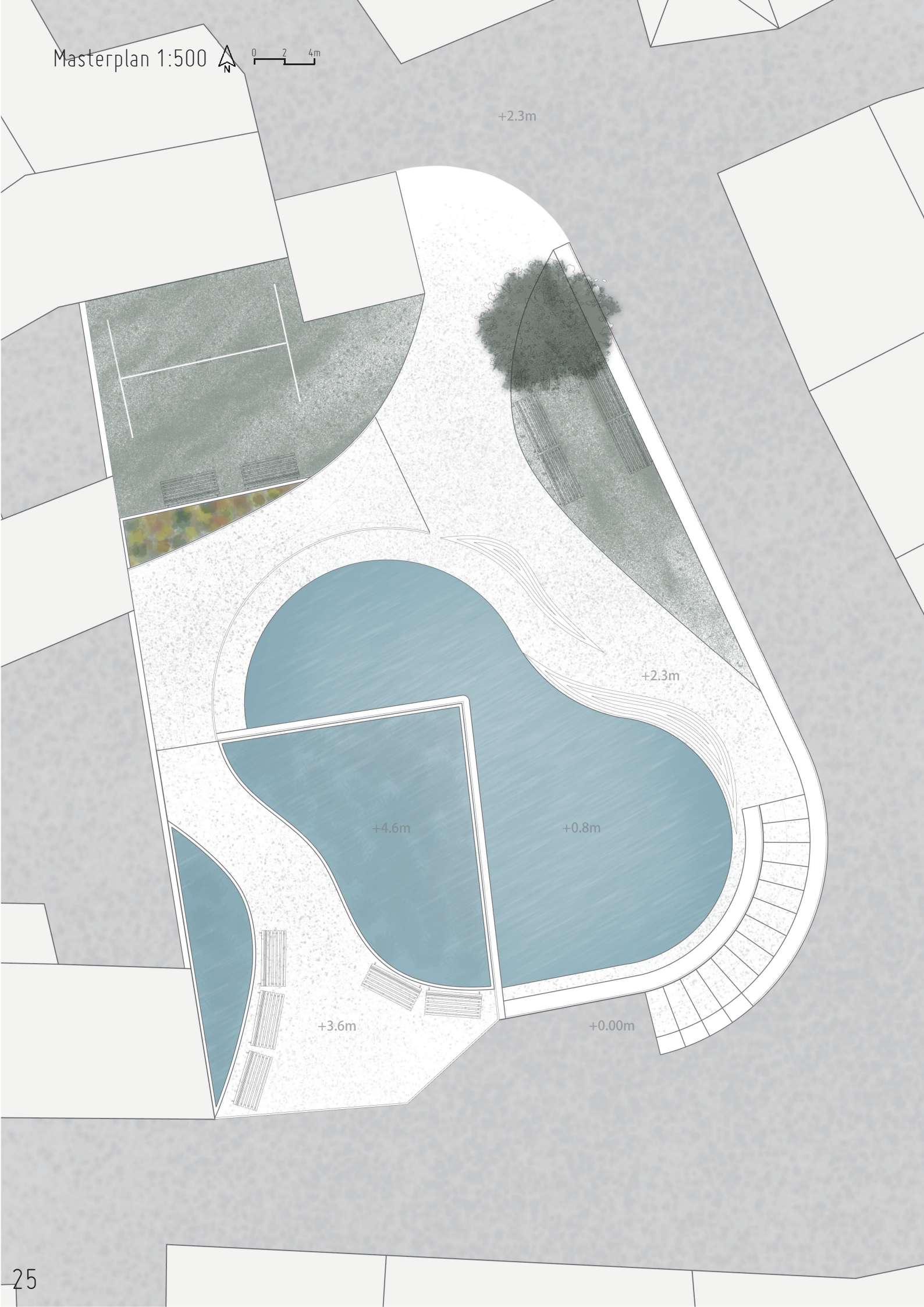
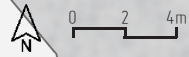


Design

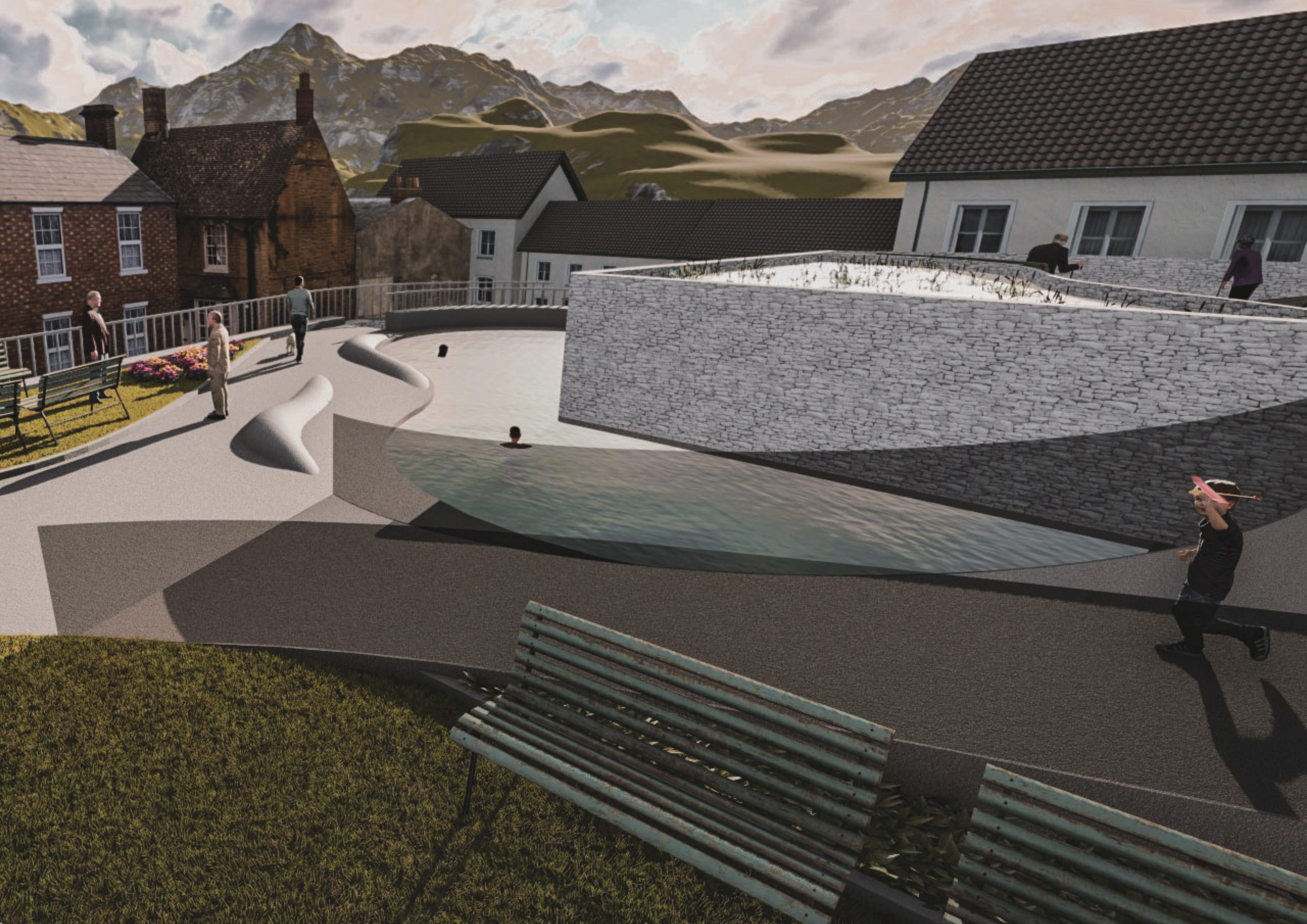














# ART & FRAME

Milano, Italy

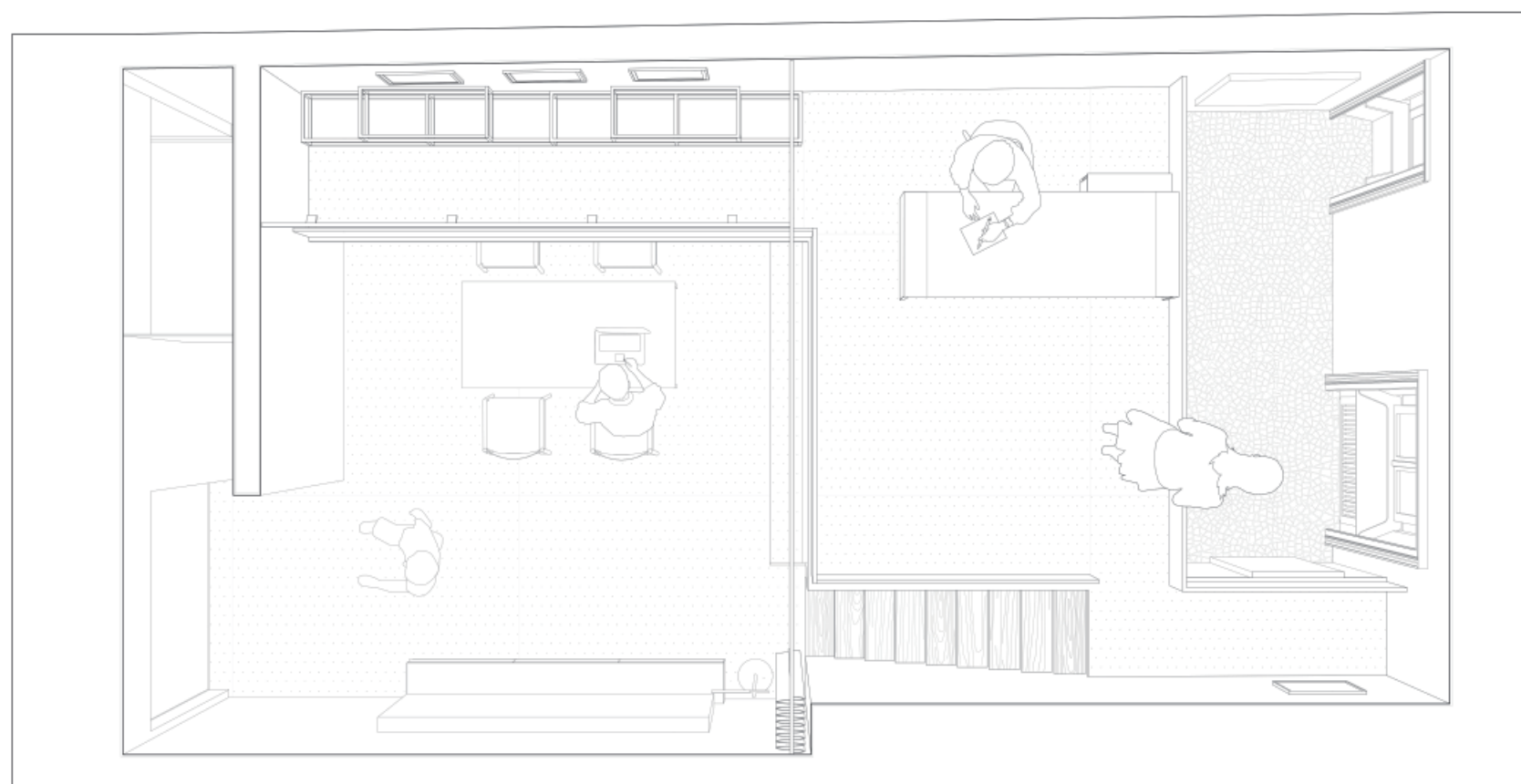
Interior Design studio

Team: Wu Yaochen, Zhang Yaolin, Kuang Kejin

2017-2018

Art & Frame is a renovation project studied to meet the client's desire to have multiple scenes into a sole interior: a workplace, a venue for the cultural association "Looking at Art" and a temporary art gallery to exhibit a collection of art pieces signed by young artists. Due to the special location of the association and the requirement of privacy of the client, the threshold becomes determinant. To highlight the significance of the transition from a public to a private sphere, the project presents a minimalistic double-façade system which directly announces the nature and function of the space: the centre is first and foremost a place devoted to study and host cultural meeting, but the façade system also suggests the possibility of displaying temporary art exhibitions. The real entrance is set on the diagonal corner of the void, which visually extends the dimension of the interior. The spatial configuration allows to create a relatively versatile space. A mezzanine divides the horizontal space into a public and a more intimate area, furnished with tables, armchairs, kitchenette facilities and a concealed drinks bar. The full-height public area allows a good communication with the mezzanine level, reserved to more private activities. Getting rid of the vertical wall in the middle, also means the sunlight is brought back again to the front. The use of off white polished concrete enhanced this idea. Metal frames, blank walls and the ending of the corridors are designed to maximise the hanging space. The colour palette is kept minimalist and neutral to align with the gallery's sensibility. The original floor texture and rear windows design are maintained, to preserve the identity that Piero Portaluppi conferred to the interior. The design emphasises the connection of the diagonal spaces.

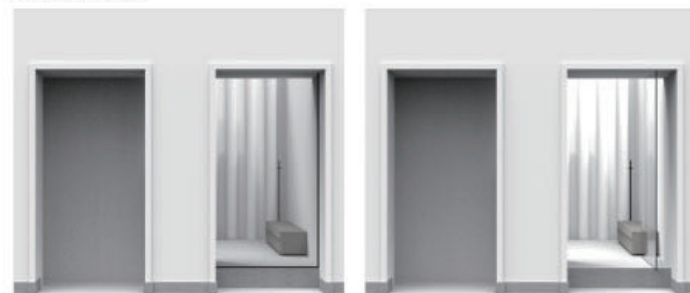
## STREET FRONT INTERIOR







FACADE 1:20



CLOSED FACADE

OPEN FACADE



LOCATION MAP



ELEVATION RENDERING



The double-façade system allows you to see the interior and directly announces the function as an office. It keeps the privacy of the office and also suggests the possibility of displaying temporary art exhibitions.



The entering space highlights the significance of the transition from a public to a private sphere. The mirror brings the sunlight back to the front and create a special human experience before you enter the office.

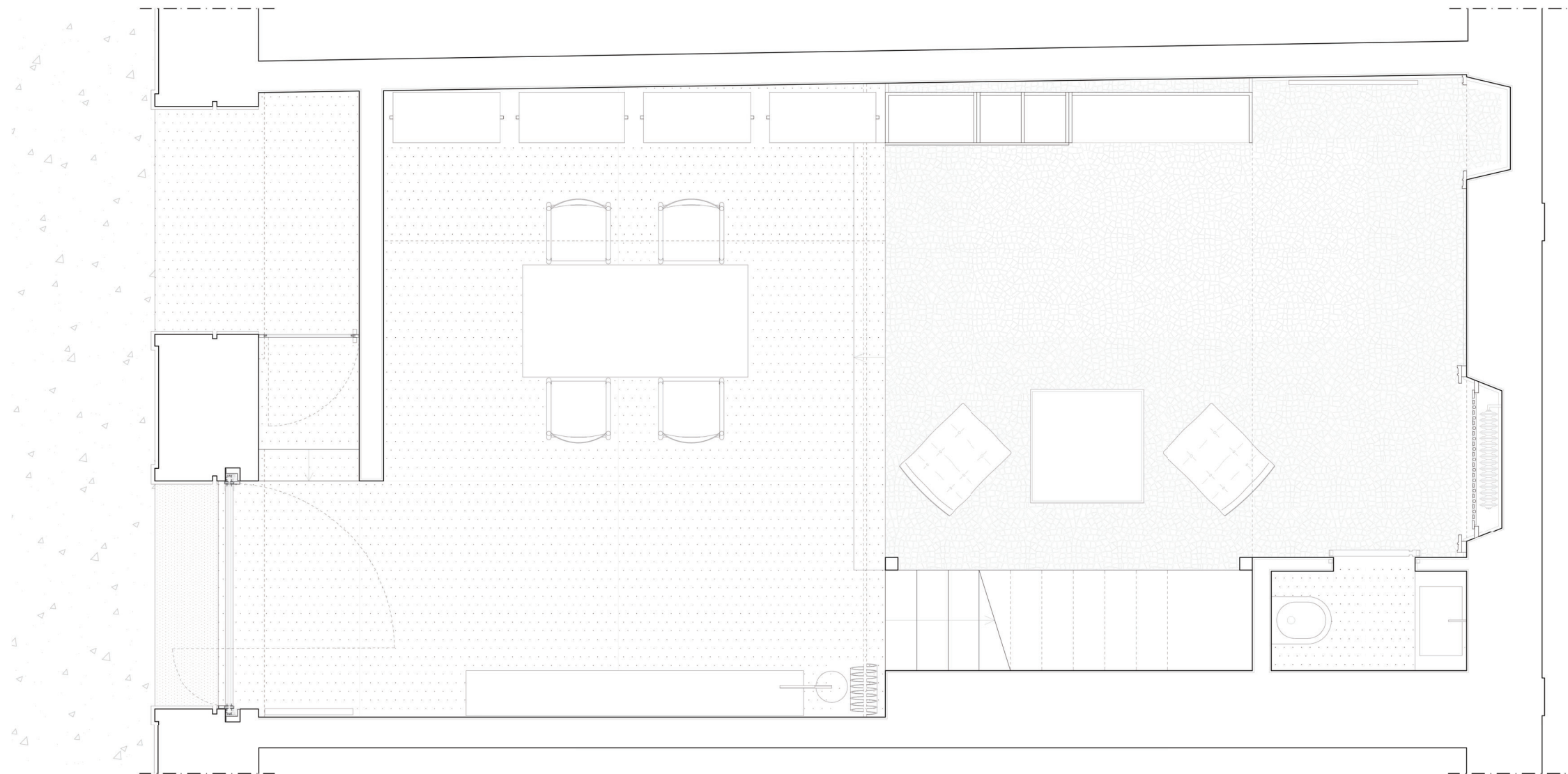


The thick curtain lower the general light level for the inner space and provide the privacy for the study area.



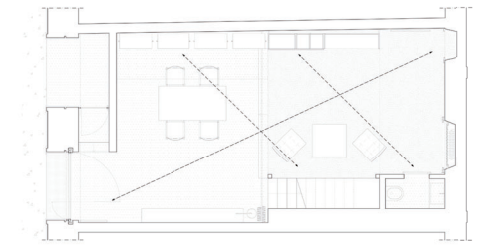
By opening the curtain, we create a continuous space without any physical boundaries.





Ground Floor Plan Scale 1:20

## Echoing Design



## Original Design

Cabinet with movable panel

Material: Marble



Product Name : So (armchair)

Designer: Naoto Fukasawa

Producer: DePadova

year: 2017

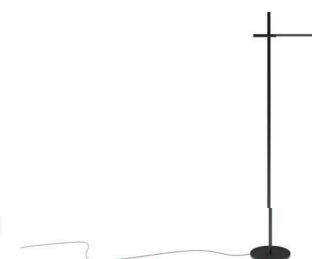


Product Name : Cabinet SC16

Producer: DePadova

year: 2016

Finishing : Smoked Oak



Product Name : Twig (LED lamp)

Designer: Keiji Takeuchi

Producer: DePadova

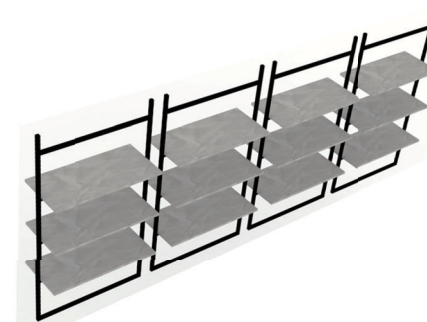
year: 2017

Product Name : Muti-Lane

Producer: Vitra

year: 2017

Material : Steel and Wood



Product Name : LC 03

Designer: Maarten Van Severen  
Fabian Schwaerzler

Producer: DePadova

year: 2003

Material : leather



Product Name : Quadrato

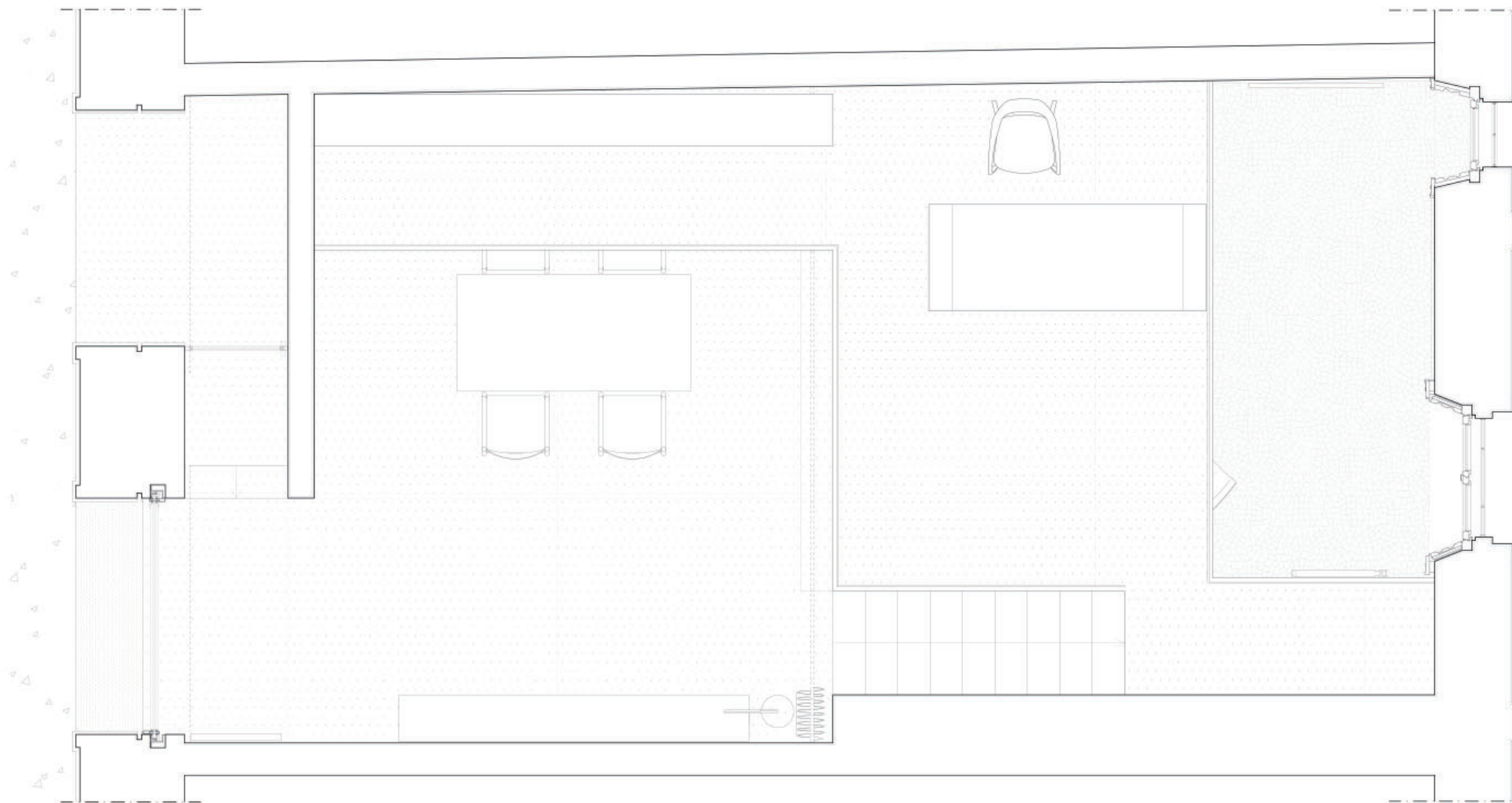
Producer: DePadova

year: 1986

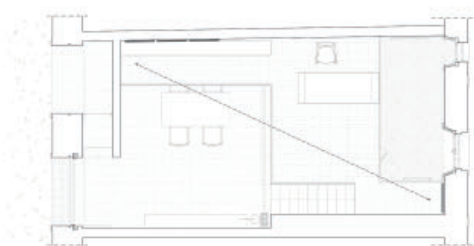
Material : Steel and Wood



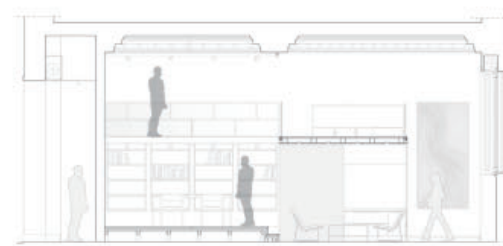




MEZZANINE PLAN 1:20



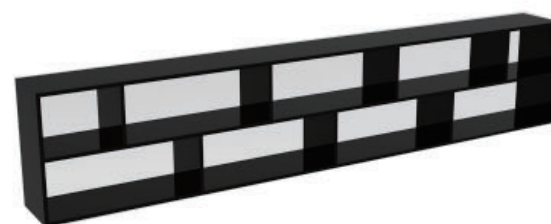
Paintings at diagonal space  
create visual guide



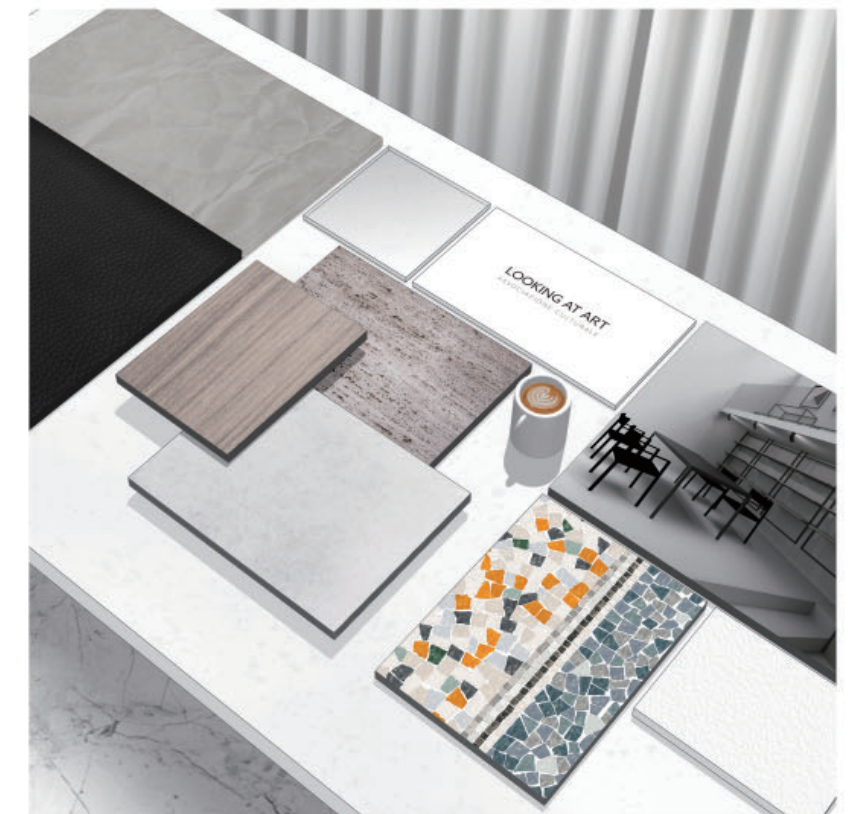
Mezzanine creates vertical  
interaction



Product Name : Loop  
Designer: Kazuhide Takahama  
Producer: Cassina  
year: 1977



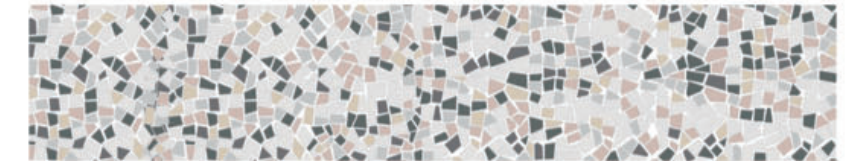
Original Design  
Bookshelf  
Material: Steel  
Color: Black



Moodboard



White Plaster



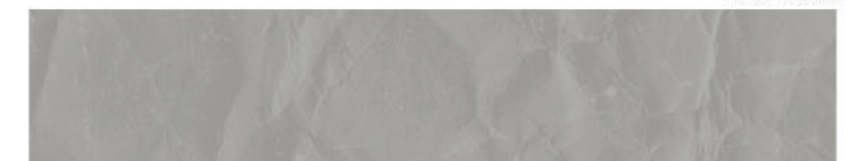
Original Mosaic



Off White  
Polish Concrete



Oak Wood

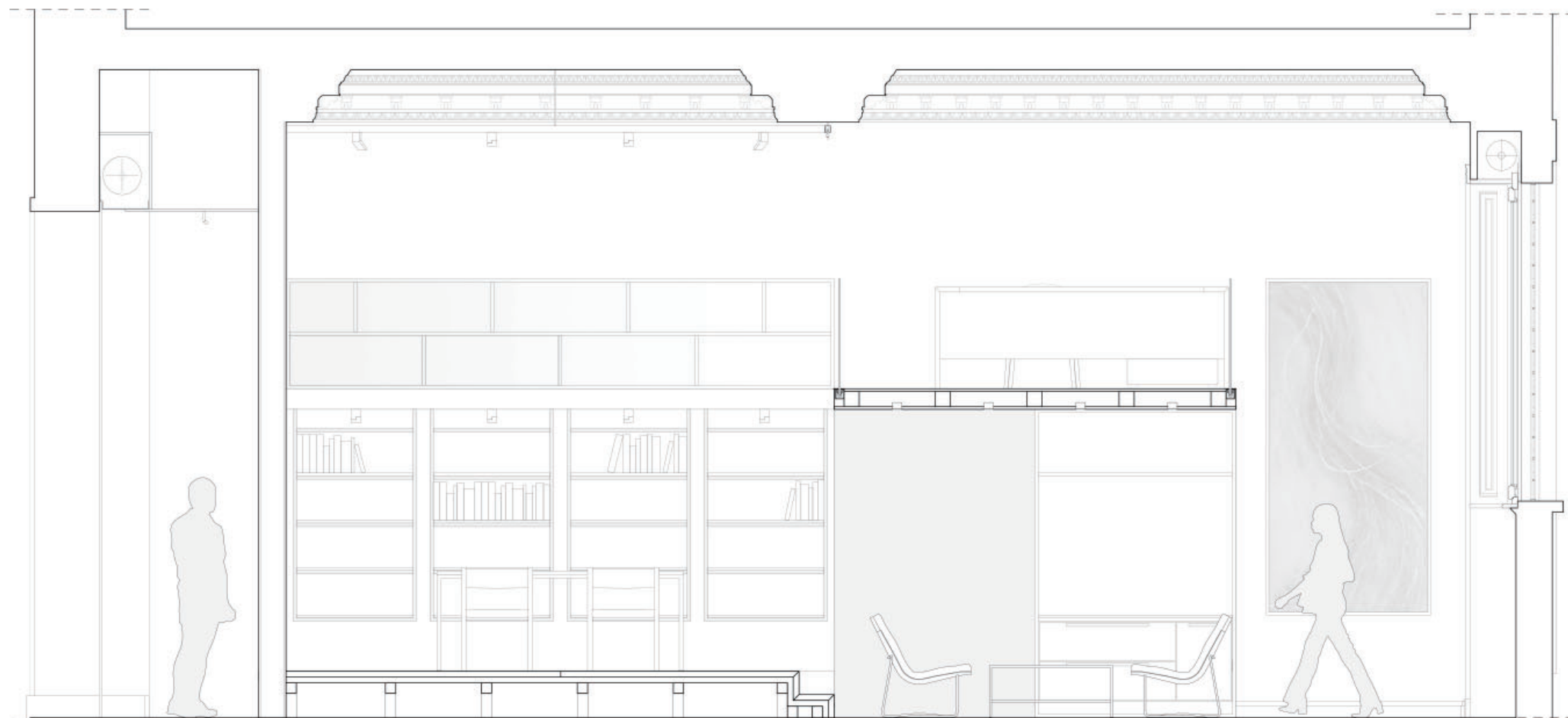


Marble

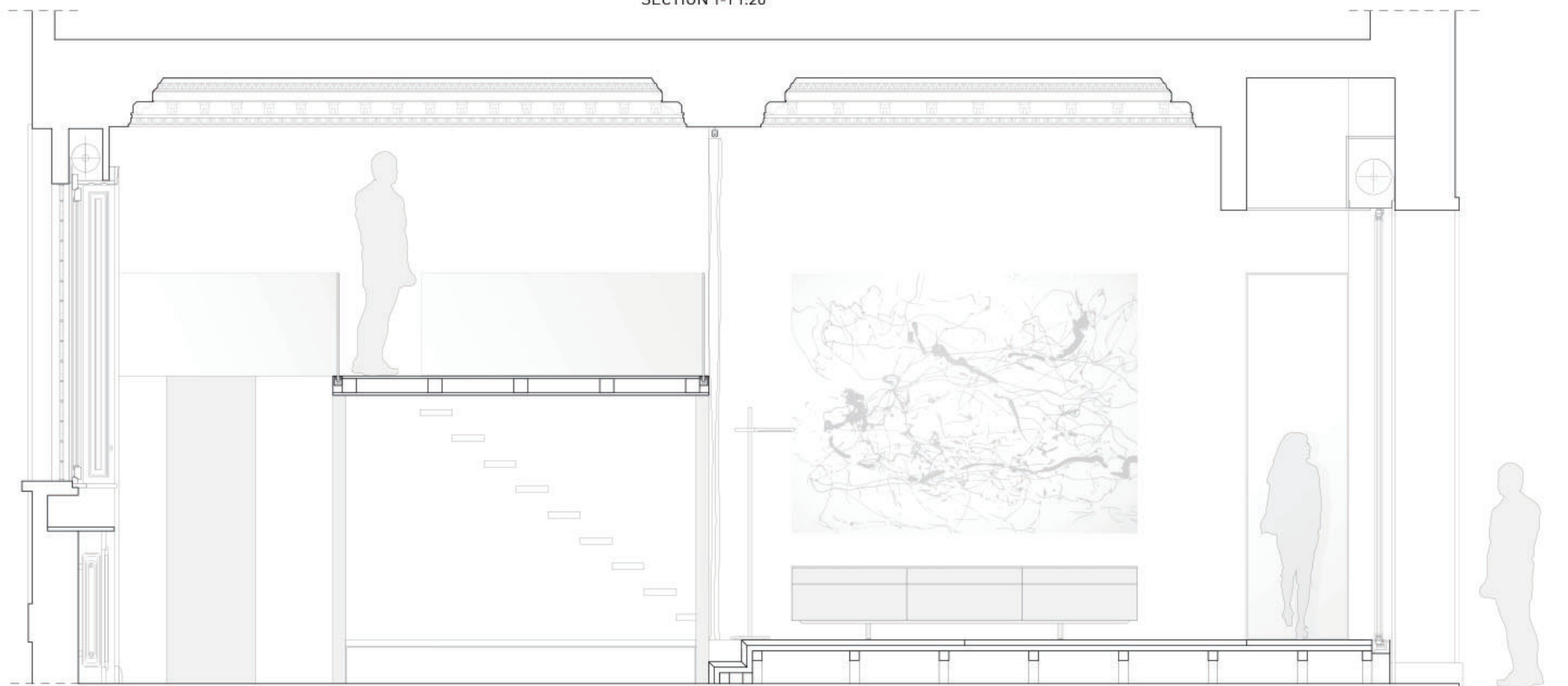


Leather

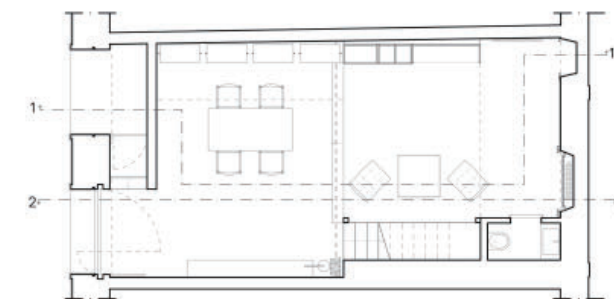




SECTION 1-1 1:20

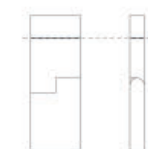


SECTION 2-2 1:20



## LIGHTING SYSTEM 1:5

### turn



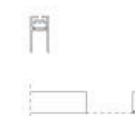
material	aluminium coated
weight	380gr / 0,83lb
voltage	24Vdc
cri	>90
wattage	9,6W
dali	supported (option) DT6
rotation	355°
inclination	90°

### dot



material	aluminium coated
weight	80gr / 0.17lb
voltage	24Vdc
cri	>90
wattage	3,6W
dali	not supported
rotation	4 steps of 90°
inclination	90°

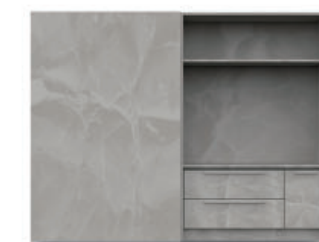
### in



material	aluminium coated
weight	260gr / 0.57lb
voltage	24Vdc
cri	>90
wattage	16,5W
dali	supported (option) DALI DT8
	tunable white



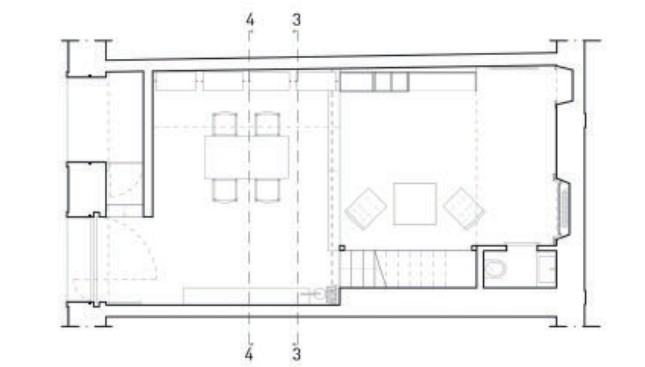
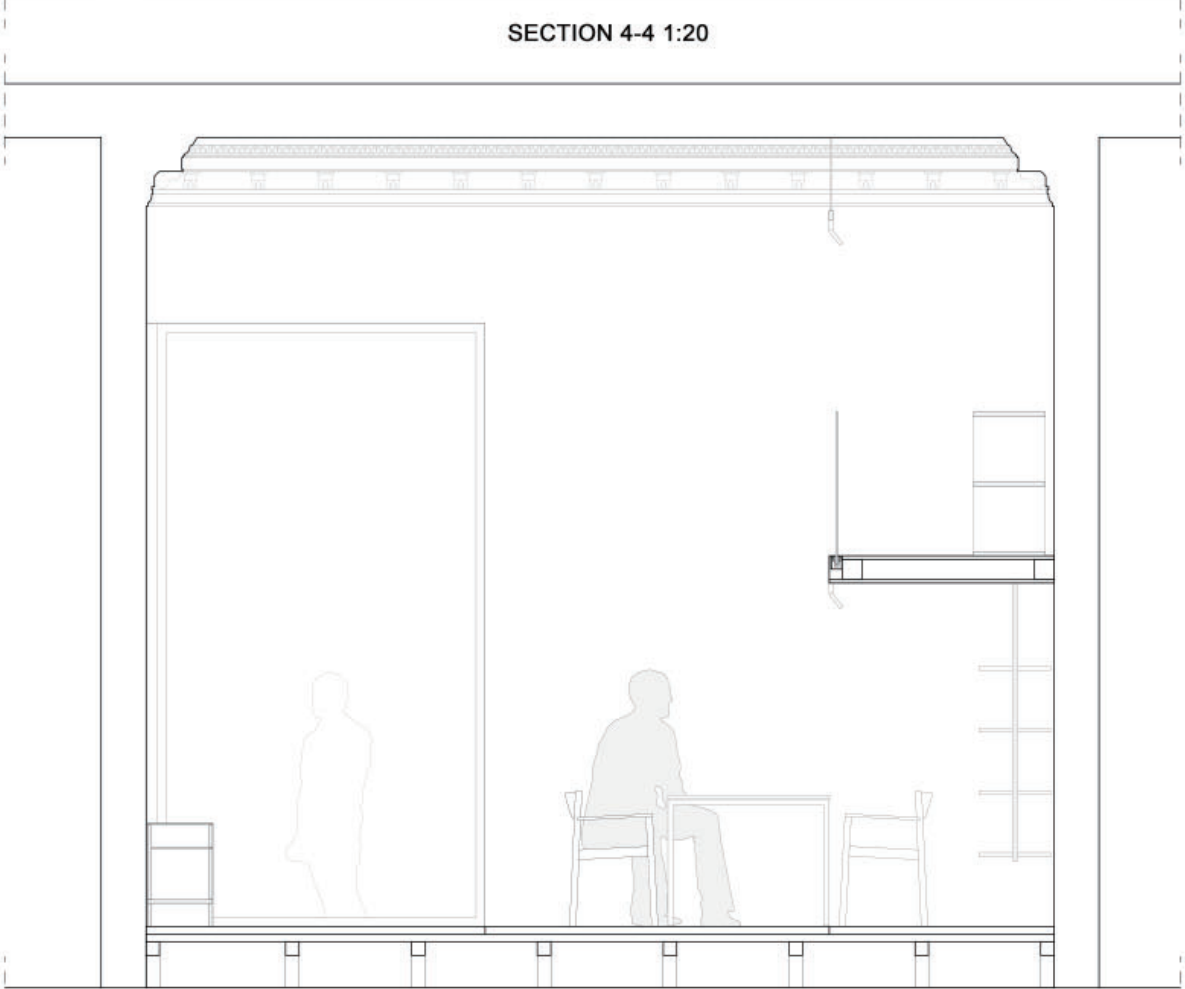
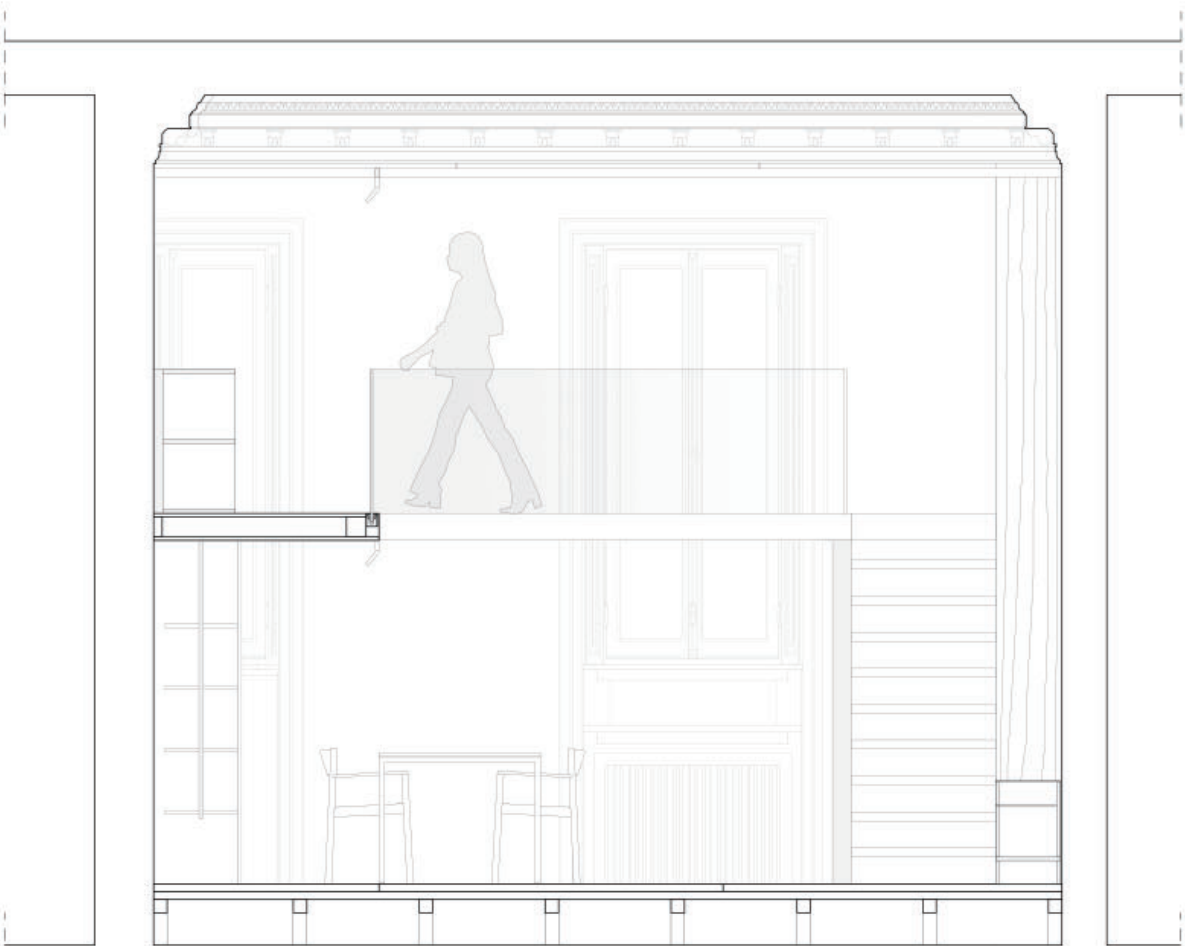
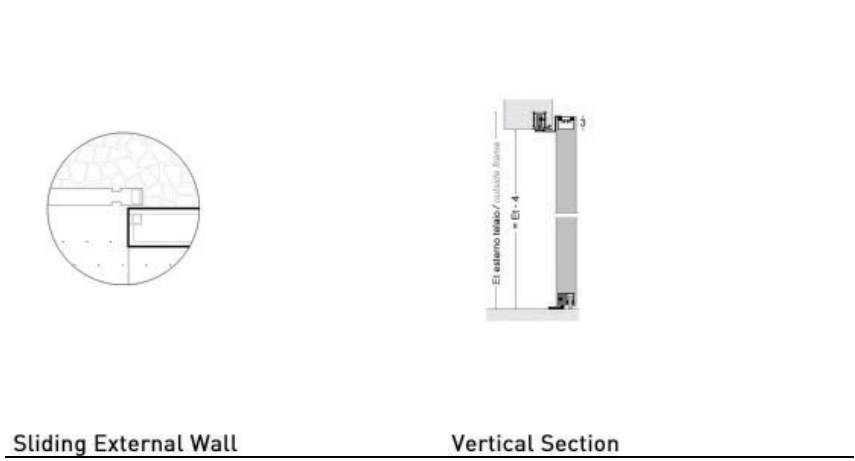
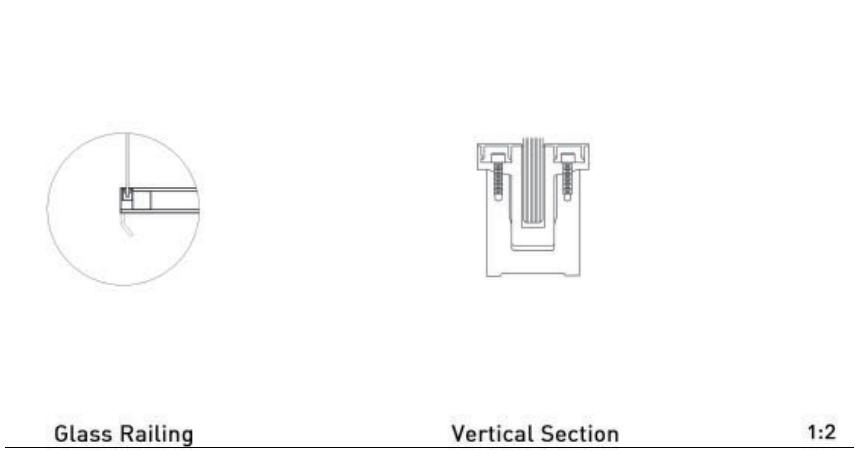
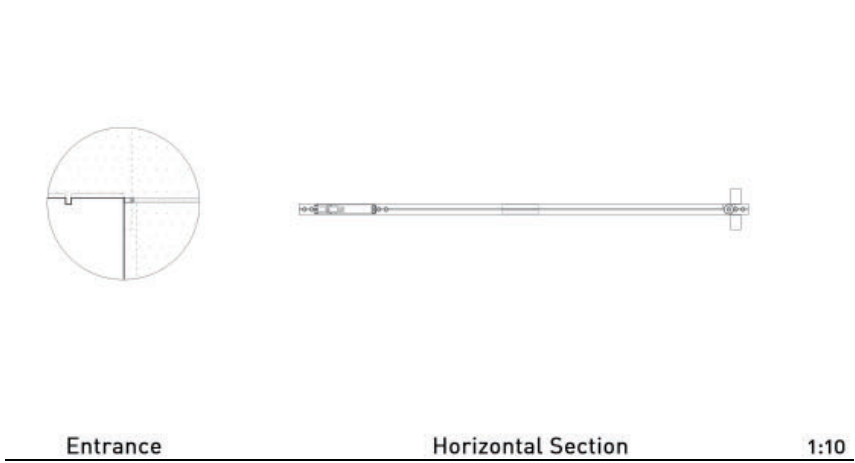
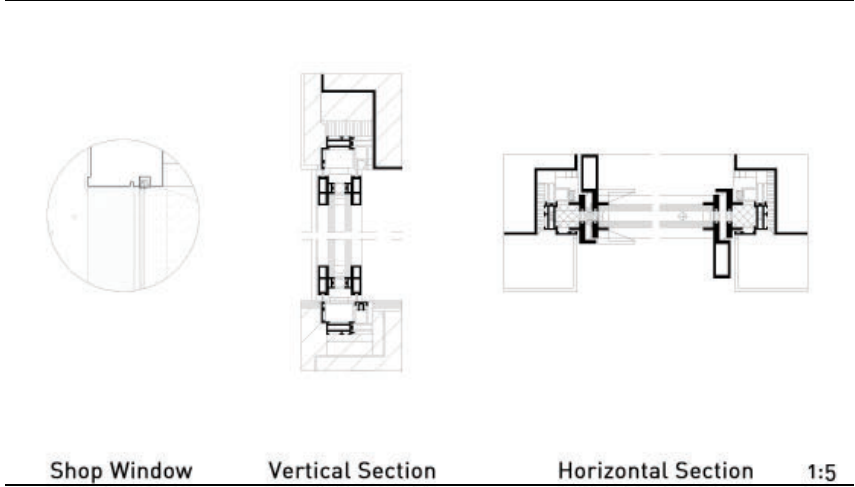
HIDDEN TOILET



ECHOING CABINET DESIGN



DETAILS





# Conclusion

Urban space has an intimate relationship with people's life. They provide opportunities and possibilities for people to daily communication, outdoor life and social activity. If we consider street as the basic Scenario for people to interact with each other, urban public space acting as social aggregation enhances the contact interactivity and relationship between human beings and urban society. Thus, the quality and influence of the urban space decide whether people like to use the space and if they are able to play a positive social role in the scale of street, region and urban scale.

Nowadays, urban environment is facing serve challenges. Function of the buildings become obsolete as the strategy of urban development updates. Old buildings are abandoned without further planning carried out. More and more small towns turn into empty nest as young people go out for work, which leads to the increasing of underused and empty houses. Group-oriented leasing becomes a common phenomenon in large cities which not only causes security, health problems but also potential social hazard. Lacking refugee camp and effective management, refugees occupy public urban space as accommodation. As a result, social problems occupy certain area of urban space and enclose them with invisible boundaries. These boundaries imply insecurity, uncertainty and discontinuity, which block people out of the region.

At the same time, inappropriate planning and design of urban space can also create negative social impacts on the relationship between people and city. An open space without specific

activity and urban furniture can be possibly transformed into a chaos parking lot. A street with façade only is not able to bring color to urban life. A public playground with fences and undefined entrance can hardly attract people's attention. A seating area with urban furniture sitting beside each other in a line is hard to create a communication scene. Urban life will become tedious or even dangerous when well functioned social aggregation disappears. Furthermore, urban space losing capabilities of activity and aggregation is hardly able to be reactivated by itself.

Under this circumstance, it is crucial to explore the potential of urban space and vitalize it. Reactivating and creating a friendly public space has the ability to aggregate population, connect perimeter zone, drive community development and optimize the social interaction of people ultimately. In this conclusion, I list out three key factors that are essential for designing urban space.

**Design of urban space requires abundant Preliminary urban analysis.** We are able to devise project strategies and determine social characteristics by analyzing culture background, built forms, infrastructures, green areas, functions, building typology, morphology, traffic flow, pedestrian flow, identification of actual uses and livability issues, alignment, urban fabric, space of relation and etc. A photographic survey is helpful to document the situation of current site. Therefore, designers can conclude the problems and potential of the site during analysis.

As an example, through the survey of Backyard pool in Orani, we seek and analyzed potential urban space with various aspects, namely accessibility, openness, good visual, aggregation.

**Accessibility** is one major concern of site selection. First, as the swimming pool belongs to the hotel center, tourist should be able to reach the pool within two or three minutes on foot from their accommodations. Due to the fact that the whole town was built along the mountain, level variation of topography may cause obstacle by steep slope and staircases. Thus, a site with better reachability is fundamental. Second, backyard pool is serving for the community as well. It is designed to be a casual public space where residents living nearby could have convenient access. We imagined that children with swimwear run towards the pool in hot summer as they treat it as their back garden.

**Openness** is essential for the success of creating a positive urban space. In *Life Between Buildings Using Public Space* by Jan Gehl, he mentioned that 'Social activities are all activities that depend on the presence of others in public spaces. Social activities include children at play, greetings and conversations, communal activities of various kinds, and finally – as the most widespread social activity – passive contacts, that is, simply seeing and hearing other people.' Activities and space that are visually and physically accessible are more attractive and noticeable. In good weather condition, people go to garden to chat, eat, play, swim or simply enjoy the weather. In urban context, open space makes contrast to surrounding buildings by the absence of its



volume. The new Apple Piazza Liberty opened in Milan in 2018. Openness of the piazza highlights the existence of the retail shop. At the same time, it emerges with the community by bringing costumers to a social space instead of retail shop.

**Good Visual** improves the experience of the site. People are able to enjoy the nature landscape and beautiful sunset. It is also one of the design strategies of this project which is to create connection between the Nivola Foundation and the historic center. The purpose is to bring the tourists from the museum to local town and eliminate the boundaries between them. In coincidence, the museum and backyard pool which both are recognized as landmarks overwatch each other. People sitting at the lifted square have direct visual connection with the Nivola Foundation.

**Aggregation** is key to this project which is to remodel this place as the heart of the community. Both tourists and residents can find pleasure and relaxation in this backyard surrounded by nature. Besides, we want to create a positive social space where people use it on daily basis. The swimming pool serves as a crucial activity that draws people's attention. By introducing this important node to Orani, it will bring life to the community and promote activities, economics and business, art and entertainment gradually in the near future.

**Pedestrian-dominated street life pattern and people-oriented design are vital in optimizing the social interaction of people and urban space.** Walking is the most direct

and convenient way to get involved into social activities. People can interact with urban space intuitively with the sense of sight, hearing and smell. Nowadays, social network and automobile traffic badly weaken the social interaction of people and urban space. People choose their destination on purpose, commute from point to point. Interaction like this is harmful for people to observe and explore the city. Besides, multitudinous vehicles also increase the risk of street and public urban space.

In terms of urban design, distinct spatial flow, space division and functional zoning is friendlier and more attractive to people. Pedestrian street is one of the most successful examples of urban design. Life in the public spaces has increased markedly and a comprehensive social and recreational city life has developed.

As human being is the emphasis of pedestrian-dominated street life pattern, design of urban space should be coherent with human scale. Walking space should be natural, safe and intuitive. Continuity of space, placement of important joint, selection of material, level of height change, arrangement of seating should be well considered and designed friendly. It is crucial to form a practical, harmonious, user-friendly urban space in order to optimize social interaction of people.

**Activity is the essence of urban space.** Pedestrians pass on the street, children play and chase each other in the playground, old people sit together enjoying the good weather, teenagers play skateboard in open square. As mentioned

by Jan Gehl in his 'Life between buildings using public space', people attract people. In another word, people won't enter into an urban space without purpose or event going on the site.

Outdoor activities in public spaces can be divided into three categories, each of which places very different demands on the physical environment: necessary activities, optional activities, and social activities. Among the three, optional activities are those pursuits that are participated in if there is a wish to do so and if time and place make it possible. They happen only under favorable exterior conditions. And this type of activity is the key feature measuring the quality of urban space. Urban space with good quality has unlimited potential of carrying out activities. People tend to stay longer outdoors and spend more time with their companion. However, when the quality of urban space is not ideal, there is only necessary activities happen. People have no reason to stay outside, needless to enjoy any urban life.

When we design an urban space, we are actually creating activities. We need to design architecture and urban space with life scene putting ourselves in the project as they are designed for people and the city.

### ***Cited bibliography***

1. Gehl, Jan 'Life between buildings : using public space / Jan Gehl; translated by Jo Koch' Copenhagen: The Danish Architectural Press, c2006
2. Lynch, Kevin, 'The image of the city' Cambridge, Mass. : MIT Press, ©1960.
3. Whyte, William H. 'The Social Life of Small Urban Spaces.' Santa Monica, CA: Direct Cinema Ltd, 2005.



