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Refurbishment of BURGO PAPER FACTORY through Architecture and landscape Design

Supervisor:ROCCA ALESSANDRO
Assistant Supervisor:Spinelli luigi

Mona Tofighi
Matricola:803816

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Abstract

50s and 60s are the vital and critical period in history of modern Italy. The period named "Economic miracle". After World War II - in twenty years- till 1960s Italy improved rapidly from economical points of view. As a result, southern part of Italy which faced with impoverished, migrated to the north where there was ongoing economic growth. Christian Democracy party was still supported by rural areas, North East and South; whereas, North West of Italy was not due to the majority of working class who working in factories. In this specific age of time BURGO PAPER FACTORY was born. Burgo paper factory might be the symbol of rapid economic growth not only in small town in north east of Italy but also as a symbol of industrialization in whole Italy. Moreover, the work of well-known architect- Nervi - made this project on spot as an architectural point of view.

Anni 50 e 60 e' il periodo vitale e critico della storia di Italia moderna. Il periodo chiamato "miracolo economico". Dopo la seconda guerra mondiale - in venti anni- fino a 1960, l'Italia ha migliorato rapidamente da punto di vista economico. Di conseguenza, parte del sud d'Italia che stava affrontando l'impoverimento, migrato al nord, ove c'era la crescita economica in corso. Partito Democrazia cristiana era ancora sostenuto da zone rurali, a nord est e sud, mentre, a nord-ovest d'Italia non è stato a causa della maggior parte delle classe che stava lavorando nelle fabbriche di lavoro. In questo specifico period del tempo Burgo Paper Factory è nato. Burgo Paper Factory potrebbe essere il simbolo di una rapida crescita economica non solo nella piccola città nel nord est di Italia, ma anche come simbolo di industrializzazione in tutta Italia. Inoltre, l'opera del famoso architetto Nervi da un ponto di vista architettonico ha reso in loco quest'opera.

Abstract

Theme:

Burgo paper factory of Mantua, a work of P.L. Nervi, 20th century heritage building, has functioned as a production plant until February 2013, when it was shut down because of the crisis of the paper industry. Since the University of Mantua is not meeting the need of students properly and the abandon factory is not part of city anymore, our goal is to create a connection with city through the landscape strategy design and functional changes in order to bring the life to the other side of lake.

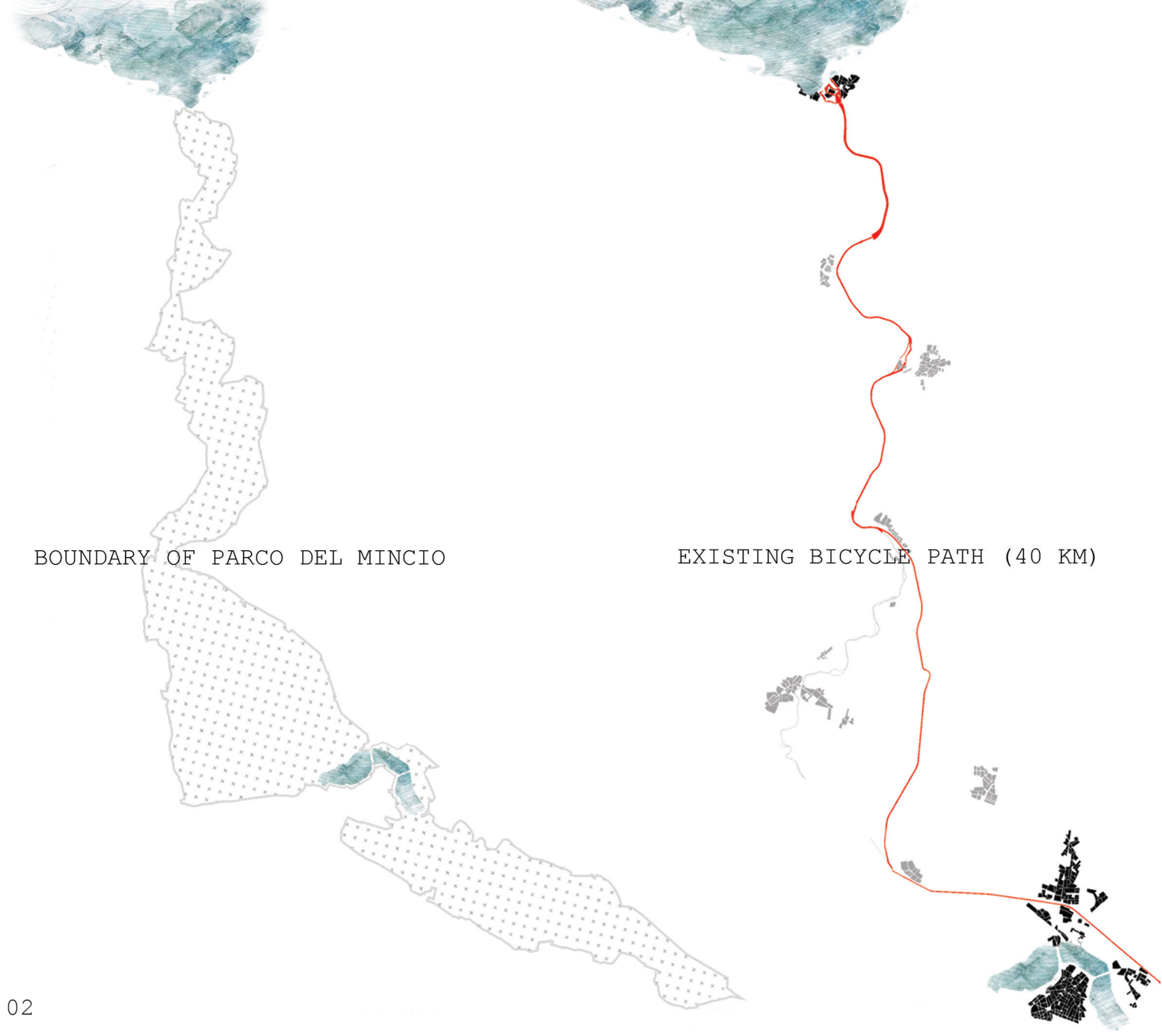
The design exercise aims to propose some possible strategies that would confirm the productive function for the bridge building and that would focus design hypothesis on it and its surrounding areas. Moreover, according to its unique landscape, there is possibility to offer landscape design due to its strong connection with the lake in Mantua. This scenario will allow to start a critical consideration on the relationship between the new and the heritage, on how operate in specific contexts, on shapes and characters of open and built space typology and distribution and on the relationship between this part of the city and the Lago di Mezzo.

La tema

Burgo paper factory di Manova, un'opera di P.L. Nervi - un patrimonio del 20 ° secolo - Funzionava come un'impianto di produzione fino al febbraio 2013, nel tempo in cui è stato chiuso a causa della crisi dell'industria della carta. Poiché l'Università di Mantova non prevede tutte le necessità degli studenti correttamente e la fabbrica abbandonata non fa più parte della città, il nostro obiettivo è quello di realizzare una connessione con la città attraverso la strategia paesaggio e le modifiche funzionali al fine di portare la vita all'altra parte del lago.

La tesi ha lo scopo di proporre alcune possibili strategie che confermerebbero la funzione produttiva per il Bridge Building e che si concentrerà l'ipotesi su di esso e le aree circostanti. Peraltro, secondo il suo paesaggio unico, vi è la possibilità di offrire progettazione del paesaggio per il suo forte legame con il lago a Mantova. Questo scenario permetterà di avviare una riflessione critica sul rapporto tra il nuovo e il patrimonio, su come operare in contesti specifici, sulle forme e caratteristiche degli spazi aperti e costruiti, la distribuzione e sul rapporto tra questa parte della città e il Lago di Mezzo.

Analysis



BOUNDARY OF PARCO DEL MINCIO

EXISTING BICYCLE PATH (40 KM)

This factory has located in between vast area of Parco Del Mincio and near to the significant entrance of Mantua. Therefore, from this point of view, Burgo paper factory has played an important role for both Mantua and the nature surrounded. Since Burgo has surrounded by rich and high potential context, this can be as an opportunity to be consider. To underline these potentials, there are 4 important factors:

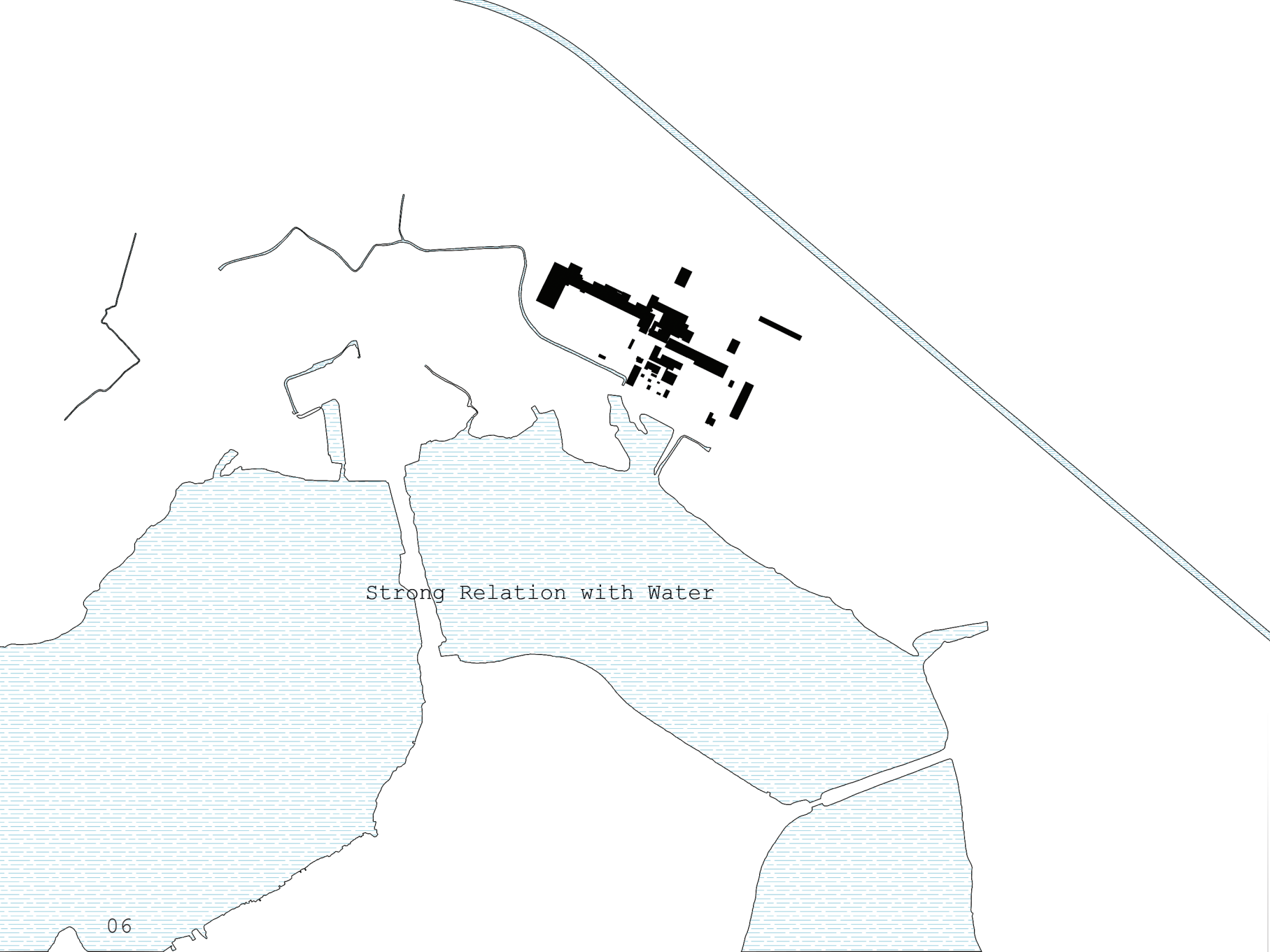
- 1- The 40 Km bicycle path from Garda Lake to the Mantua is passed by Burgo paper factory site
- 2- Parco Del Mincio is indicating presence of advantages of context
- 3- This pathway and Long Park are two vital physical connections between Lago di Garda and Lago di mezzo
- 4- The site location is close to the Mantua and already emphasize on its importance.



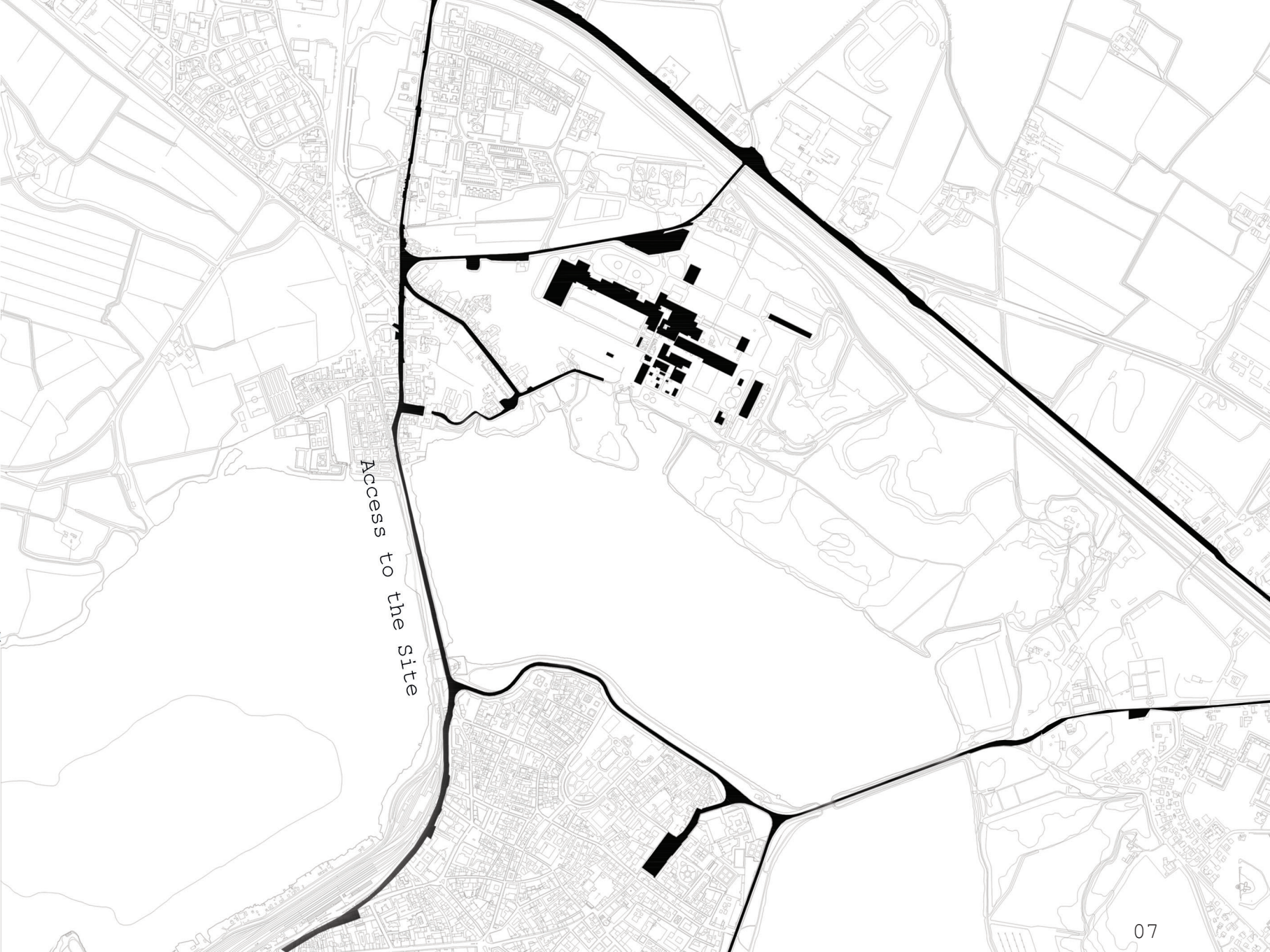
Industrial scale vs residential scale

site location





Strong Relation with Water



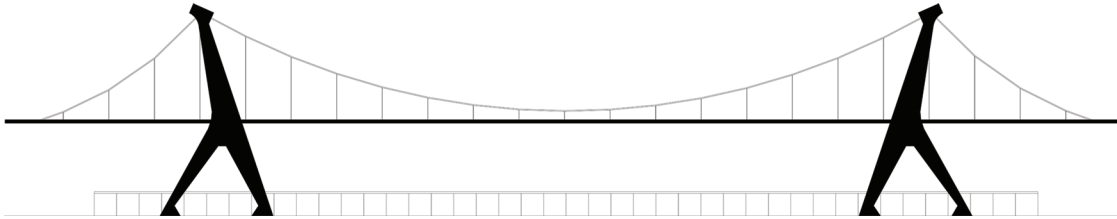
Access to the Site

Characteristics Of Burgo Paper Factory

Independent ground floor structure

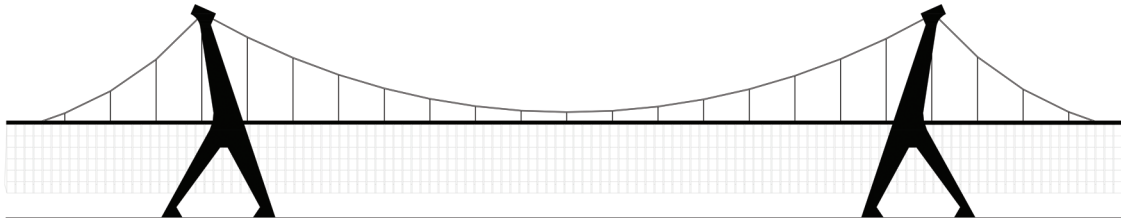
Nervi had designed the ground floor based on the machinery should be located inside.

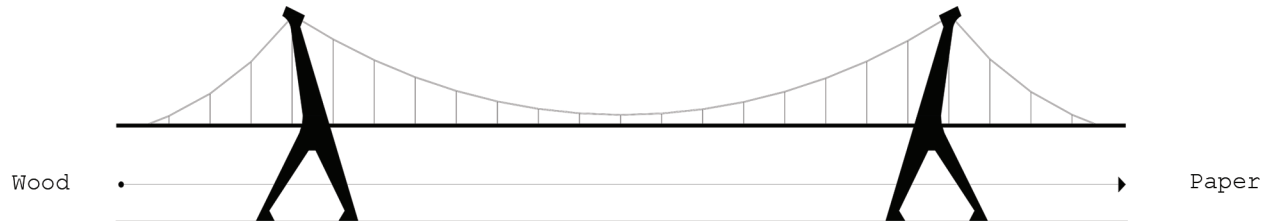
By passing time the machines getting old. and as a result the indepent structure of ground base on machin does not use.



Bridge Structure

The main structure of Burgo paper factory was designed with no column in order to have free space on first floor and for facilities inside. Therefore two dominant mega structure can hold the flat roof. Nothing touch the ground except those column and it seems the huge roof cover the ground for the activiteis.





Production Line

The role of production line in each factory is vital. This is the main theme which explains the importance of transition between two or more different objects. Burgo paper factory same as the other factories has designed in order to answer this question which is process of production from wood to paper. As a result, the concept of design behind this practical theme is movement or transition. X become Y during the direct and clear process.



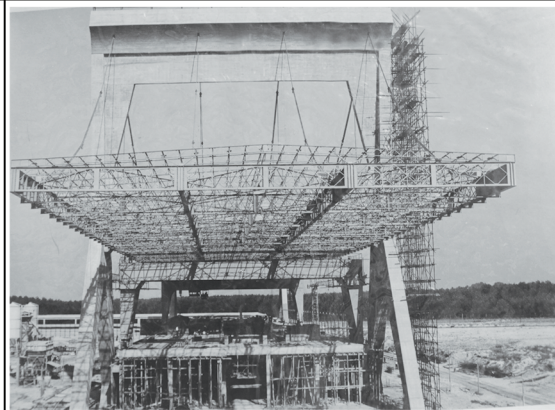
Casabella

651/2

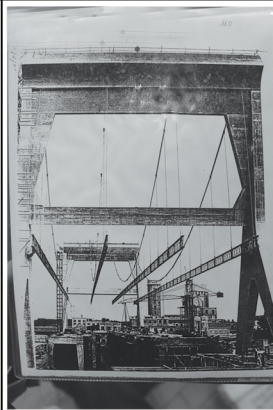
Cartiera Burgo, Mantova Sergio Poretti

Process of Construction & Original Drawings

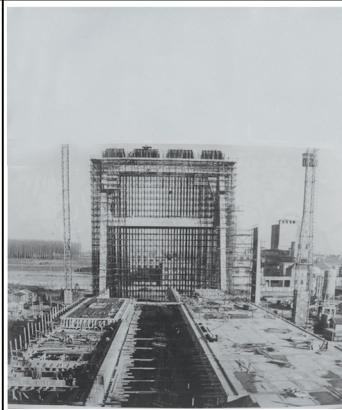
June 1962



June 1962



May 1962



May 1962



ALL IMAGES ARE BELONGING TO THE BURGO FACTORY'S ARCHIVE

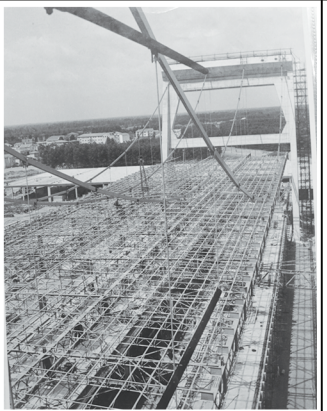
August 1962



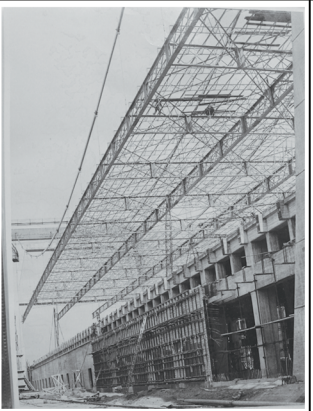
August 1962



July 1962

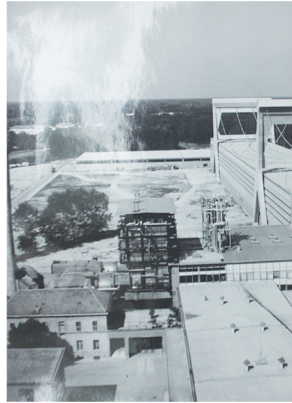


July 1962



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August 1962

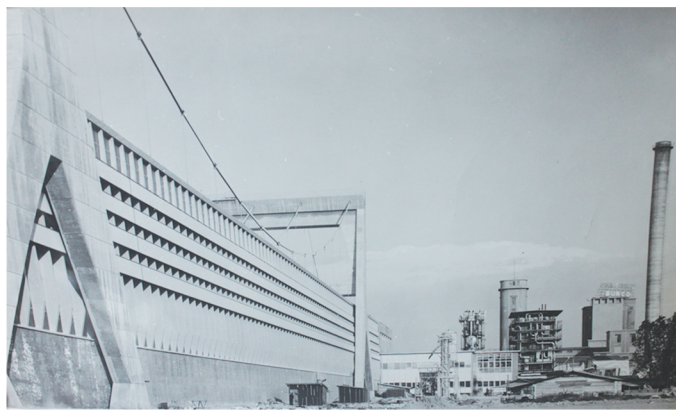


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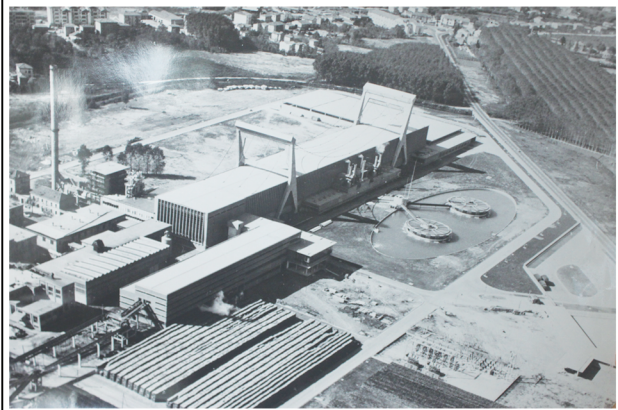
Work Complete



Work Complete



Work Complete



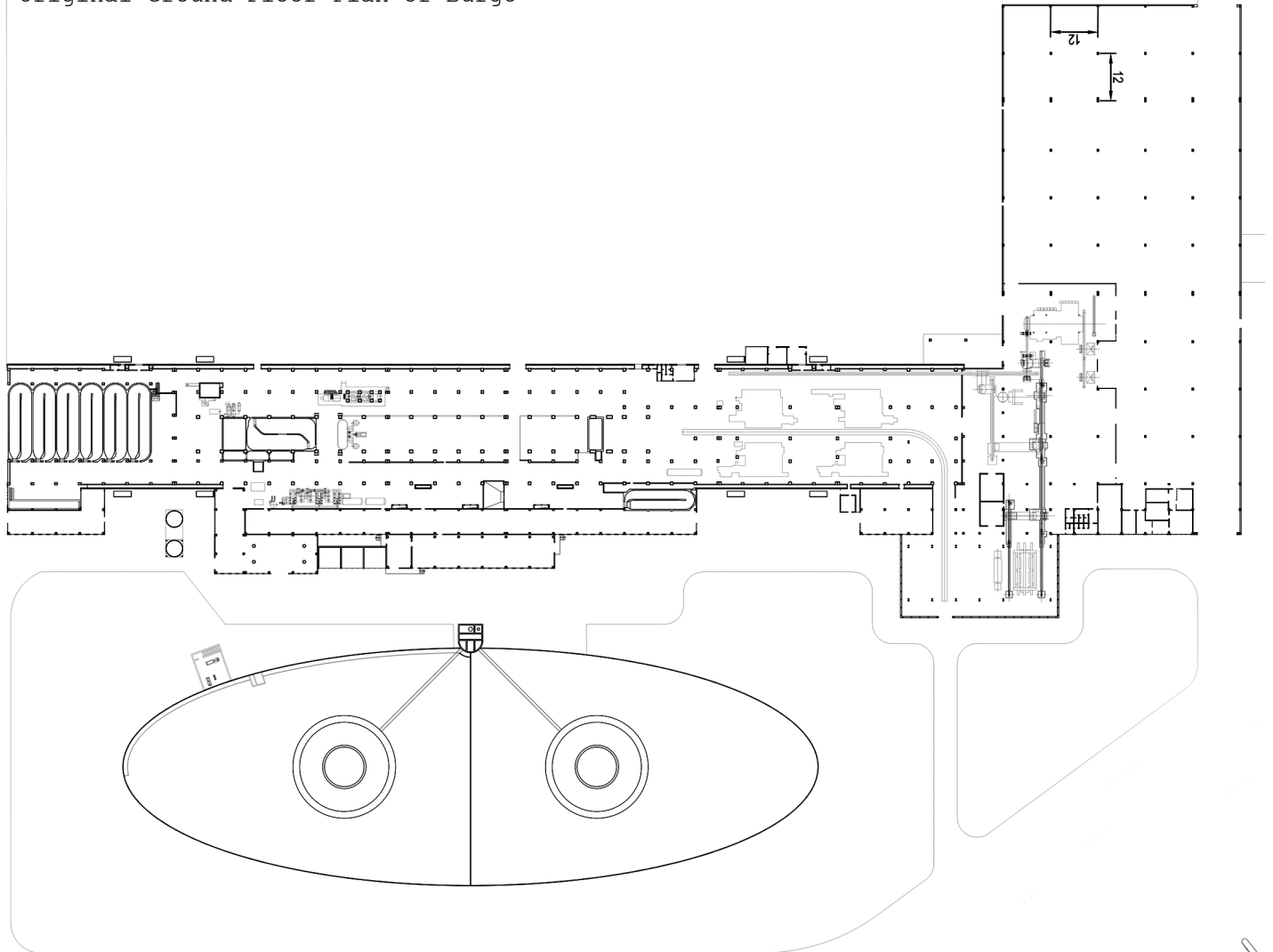
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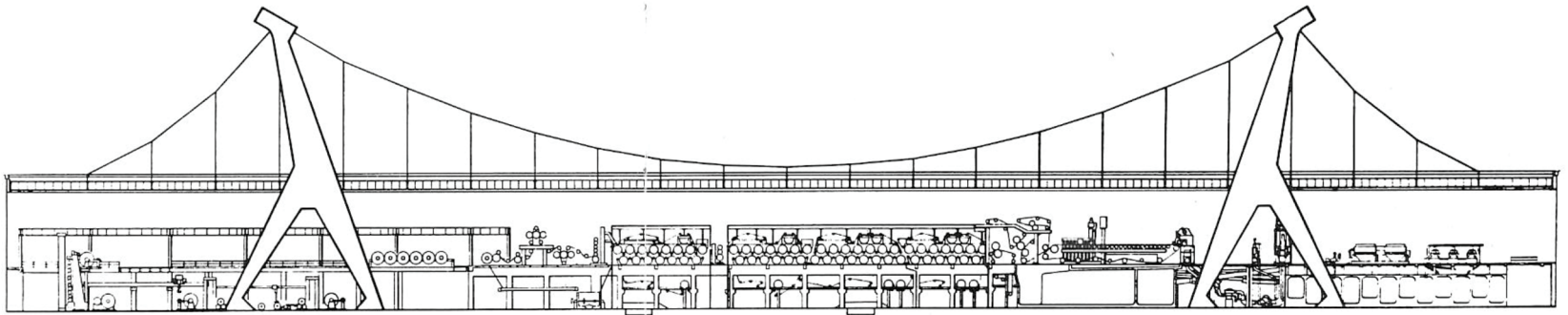
2015





Original Ground Floor Plan of Burgo





The significant needs of each factory are machines which produce different products. Nervi was designed this factory with the conscious of this fact. He was placed all facilities and machines in the ground floor and based on the position of each machines he placed the column. Due to the high height of machines, he designed the architectural voids to connect ground and first floor through the machines. The mega structures column and cables of the roof which have given the strong image to the city are supports the roof of first floor. Therefore, workers can work freely and in case of repair there will be no column to disturb. As a result, the structures of Burgo paper factory are two independent structures which work separately:

- 1- Ground floor full of column based on machines
- 2- First floor free of column.

Unfortunately after more than 40 years the machines are too old to be productive.

Case Studies



SAO PAULO MUSEUM OF ART / 1947 - 57
Lina Bo Bardi



SAO PAULO UNIVERSITY OF ARCHITECTURE / 1962 - 69
Joao Baptista Vilanova Artigas



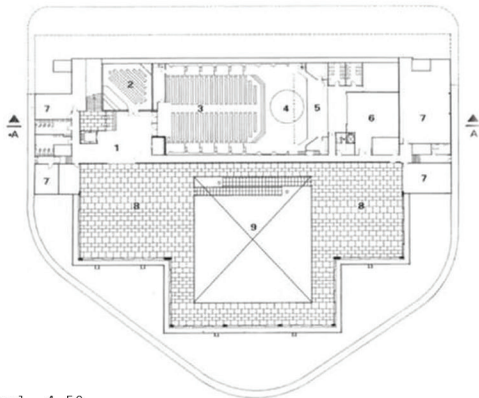
MONDADORI / 1970 - 74
Oscar Niemeyer

Sao Paolo Museum of Art

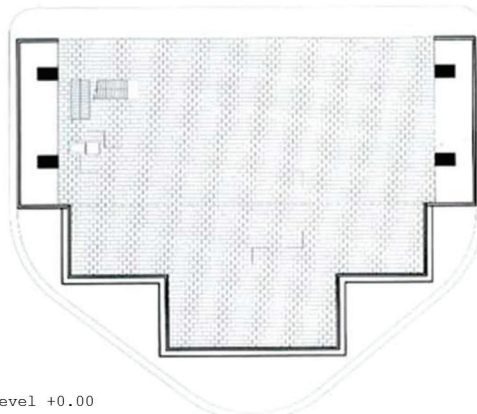


Sao Paolo Museum of Art, São Paulo, Brazil

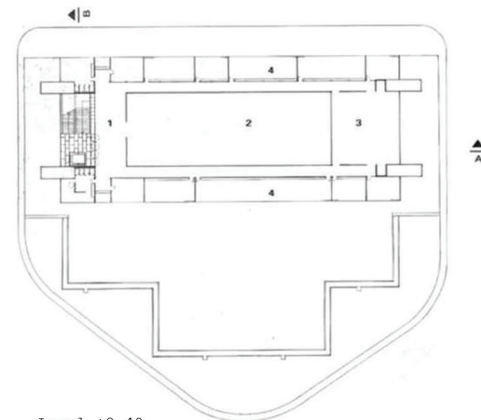
What Lina Bobardi did in this project is elevating the building in order to connect ground floor of this complex as public space which is working with the city as well as visual connection with lower level street. During the time that museum is close, there are children with their mom and grand parents sitting there and give another birth to the place.



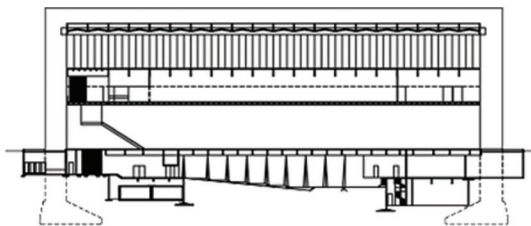
Level -4.50



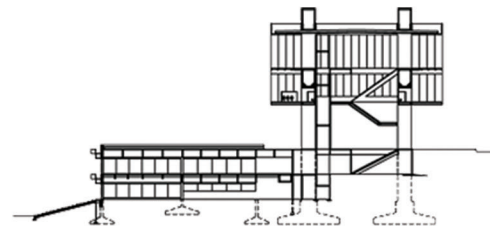
Level +0.00



Level +8.40



Section A-A



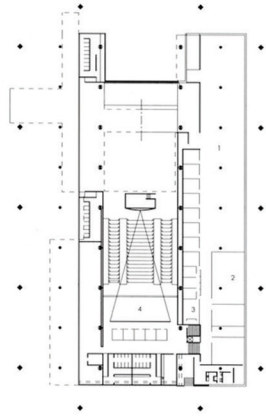
Section B-B

Sao Paulo University of Architecture

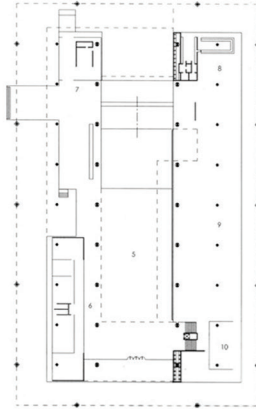


FAU USP- Faculdade de Arqittetura e Urbanismo da USP - São Paulo -SP, (1961-69)

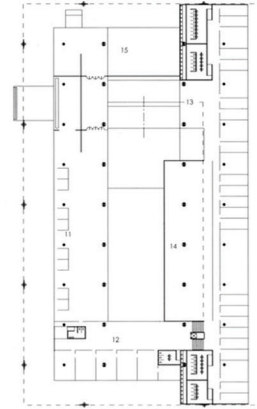
This university designed by Vilanova Artigas with functional areas around a large space which hold the cultural events. This large open atrium used as common space. Different functional area around the main atrium connects with the main ramp in two sides that is visible from the atrium (Caramel hall).



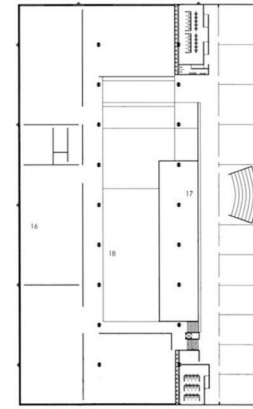
UNDERGROUND/OFFICE/AUDITORIUM



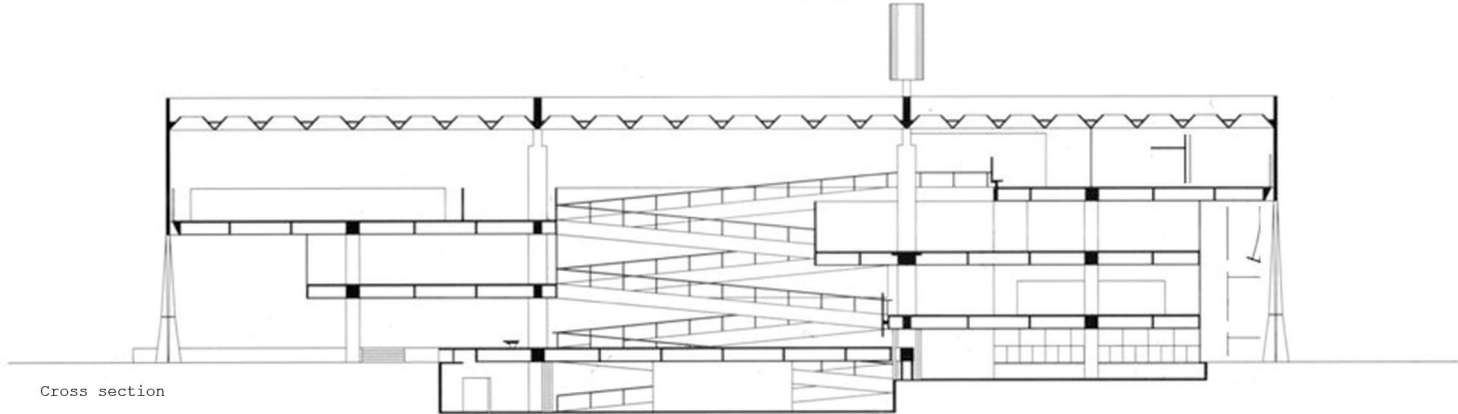
GROUND Floor/Social



Library/Departements



Studios/Classrooms



Cross section

Mondadori

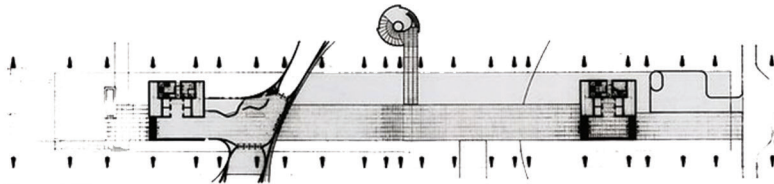


The Mondadori building, Segrate (Milan)

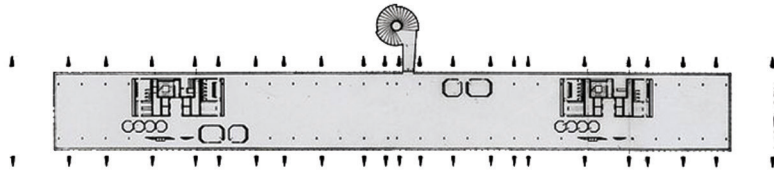
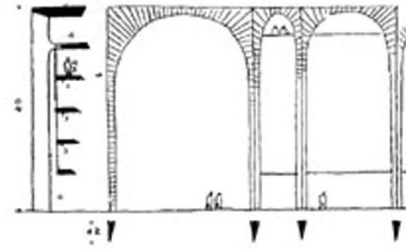


Oscar Niemeyer, Sede Mondadori (1968-1975). Foto di Stefano Surianotra

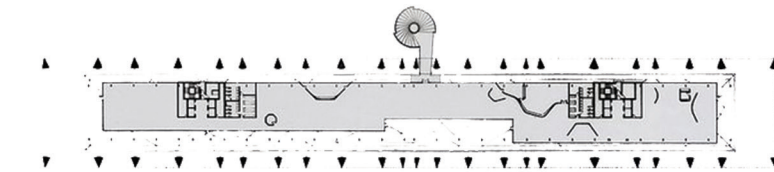
The building of Mondadori in Milan represents the innovative idea of space in which inhabitant could communicate with each other and work in harmony.



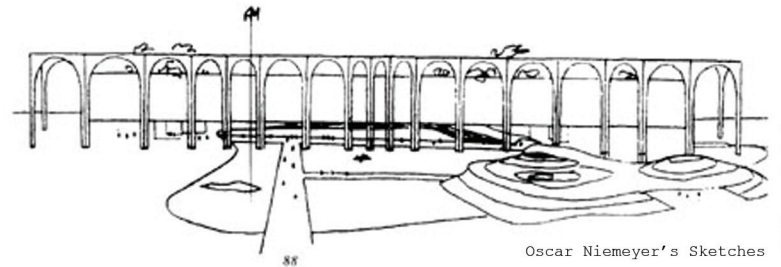
Ground Floor



first Floor

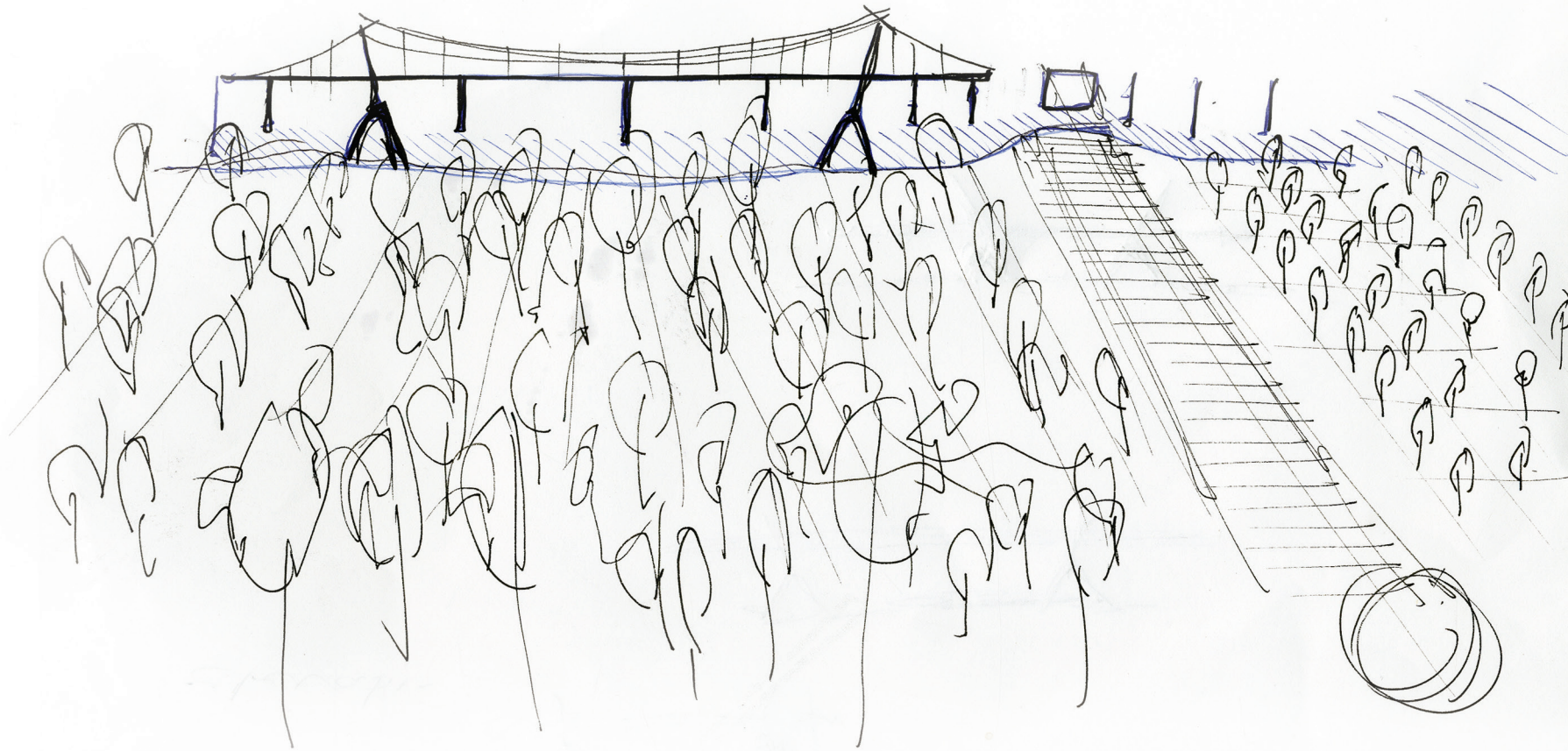


Second Floor



Oscar Niemeyer's Sketches

Design Process



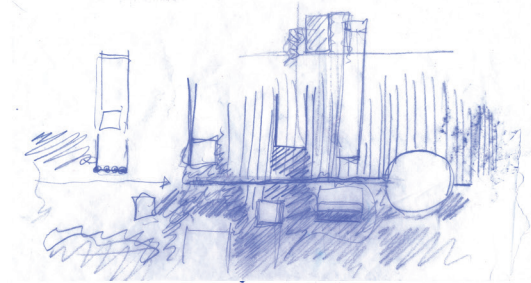
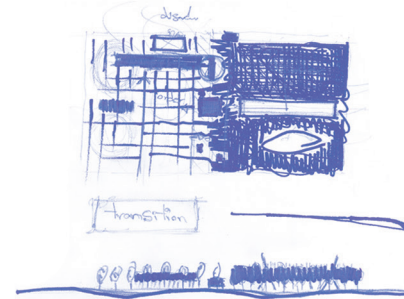
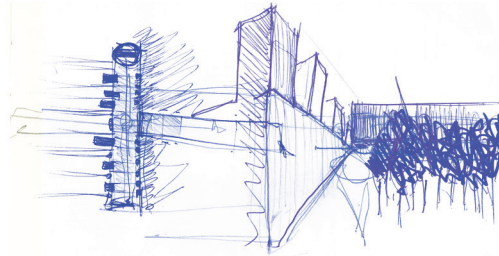
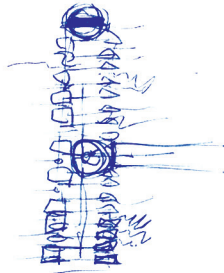
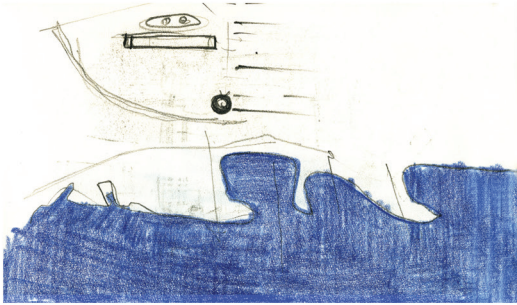
Sensation of order in disorder

Burgo is based on woods not wood.
it creates order out of natural disorder.

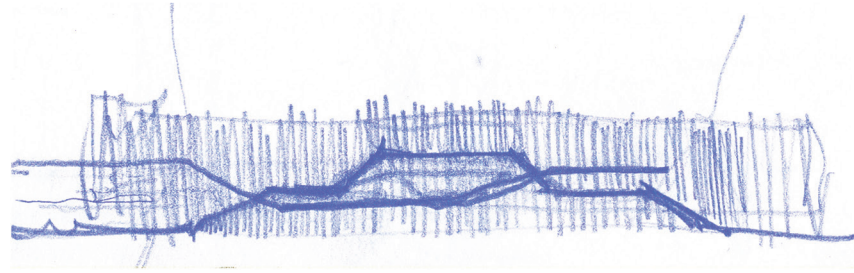
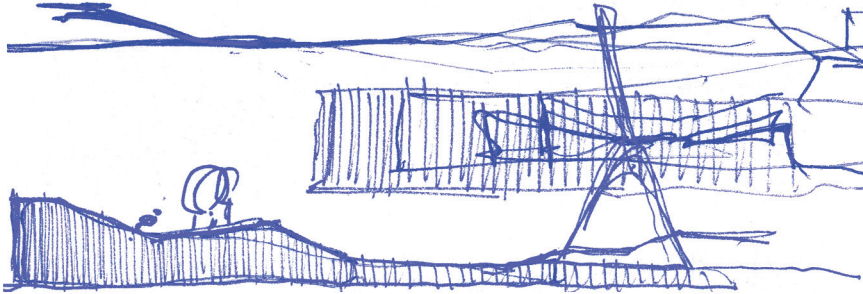
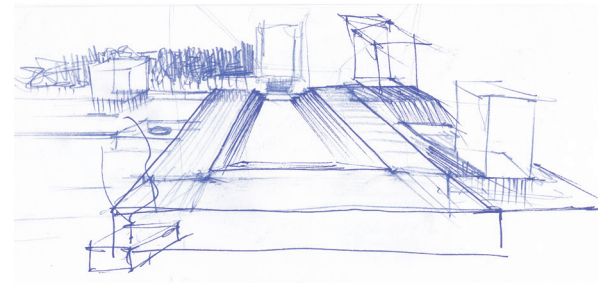


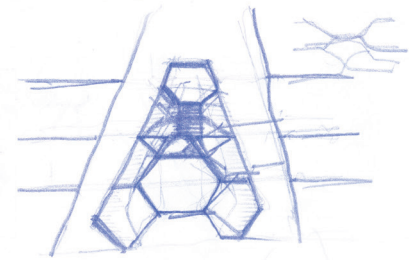
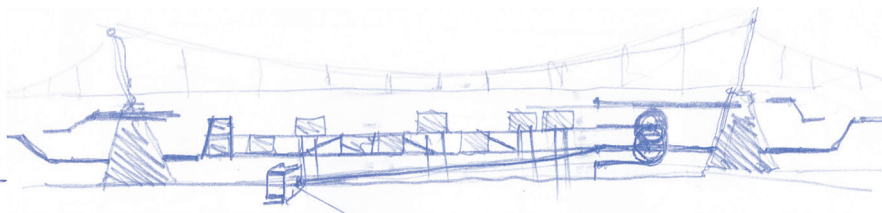
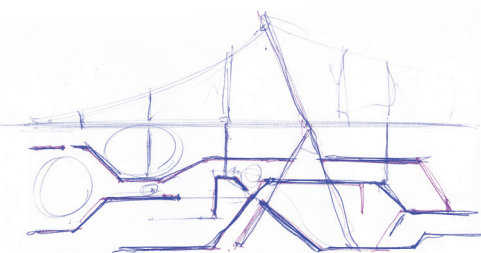
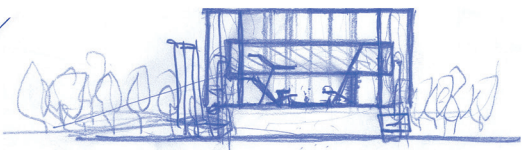
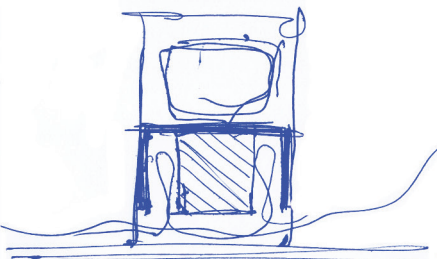
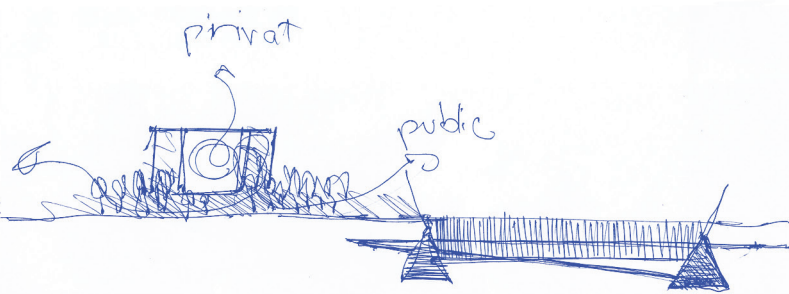
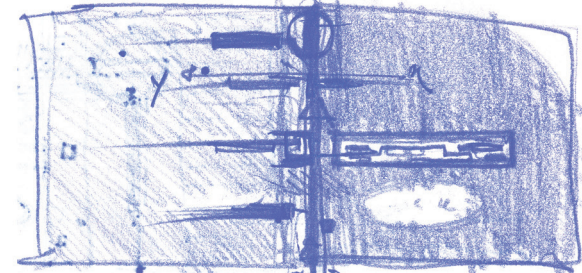
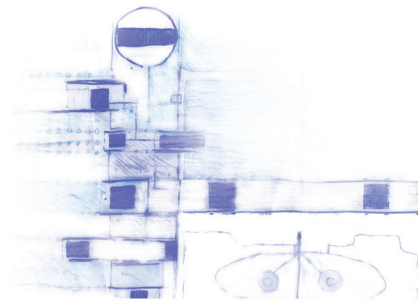
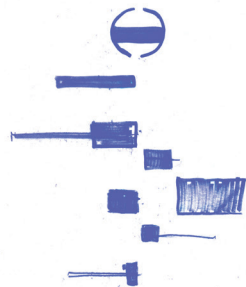
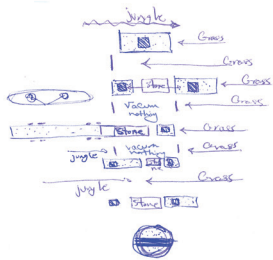


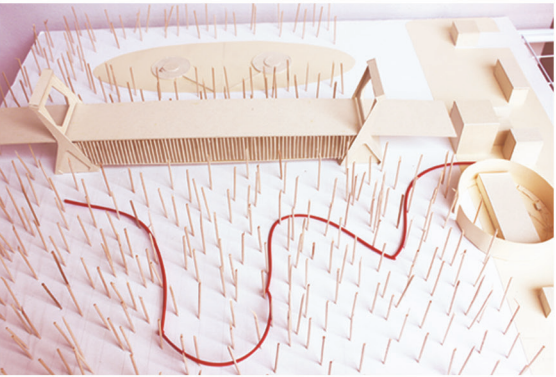
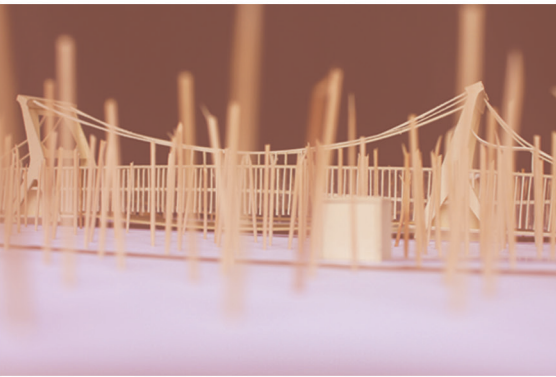
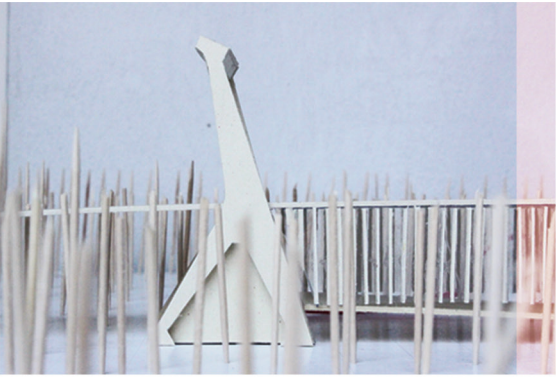
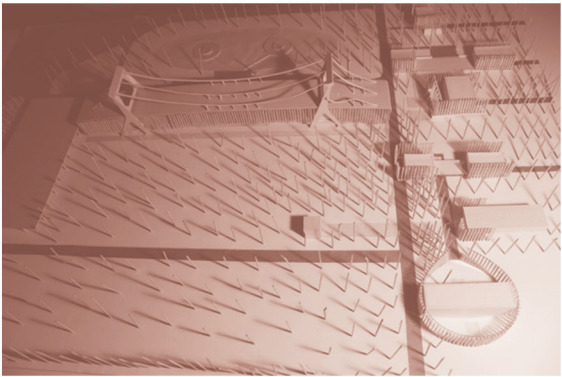
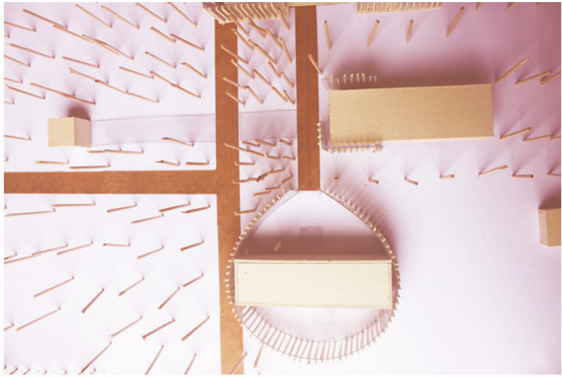
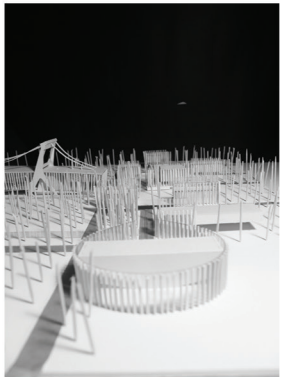
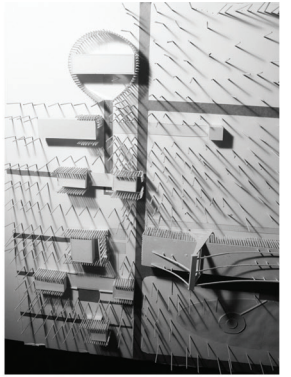
Brain Storming



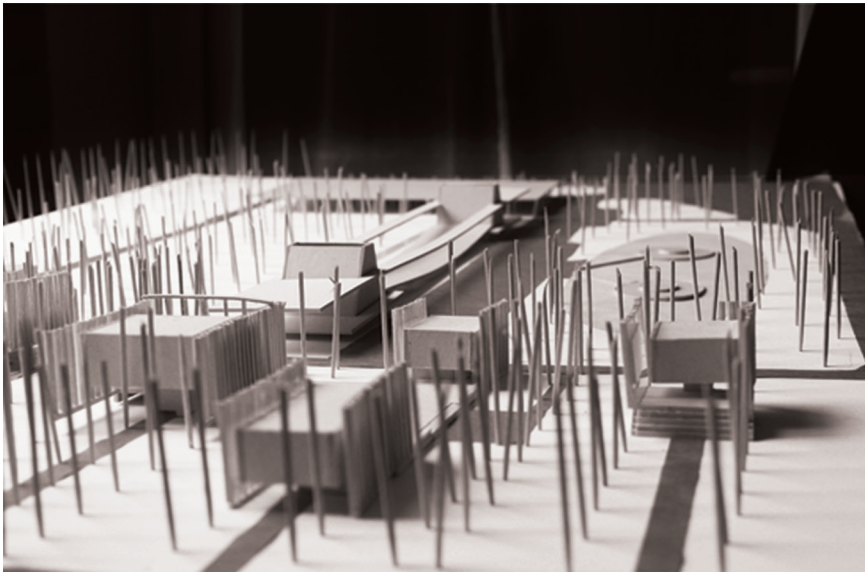
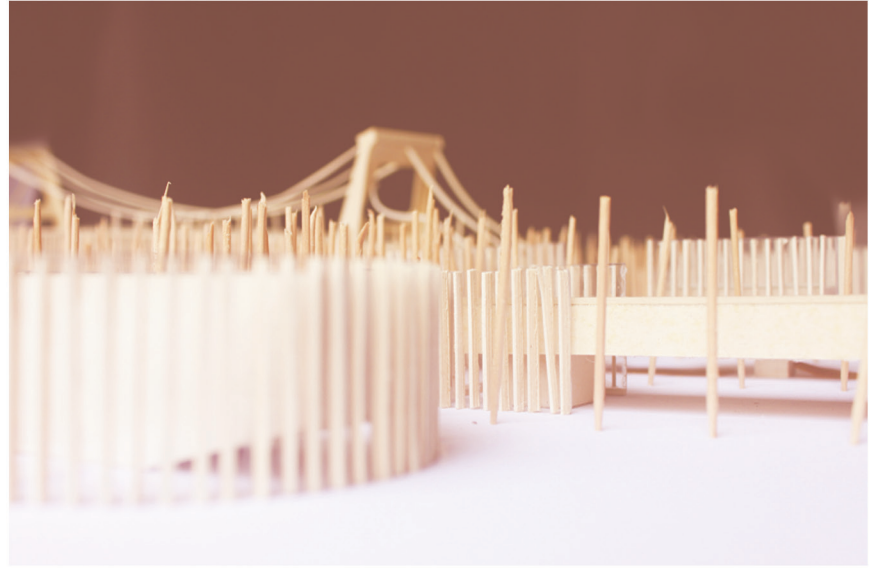
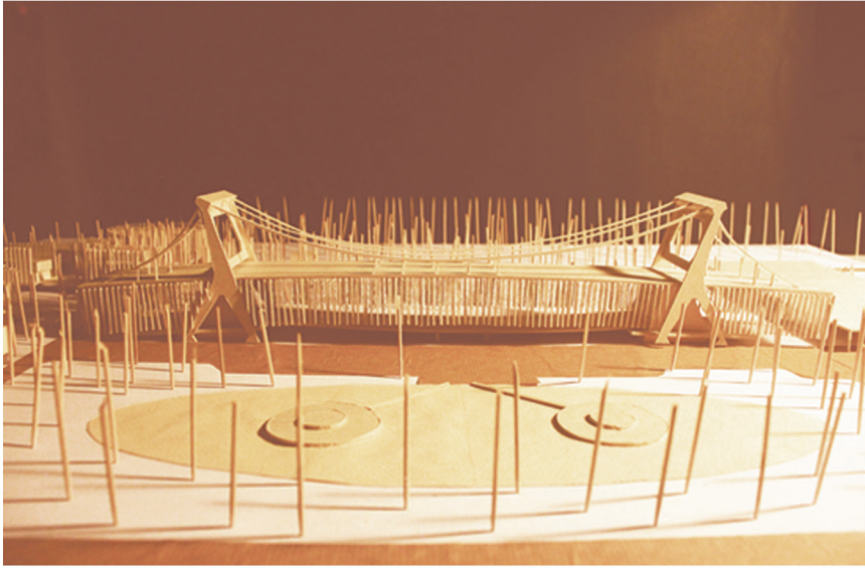
what is jungle? ① an irregular wild nature
 what is Oasis? ② an order in which human try to
 show his power to Control disorder
 what is Stone? ③ an in between strategy where
 human made an action
 plaza (Court)
 what is vacuum space? ④ just nothing.
 a space that time
 should pass smoothly
 (Point)

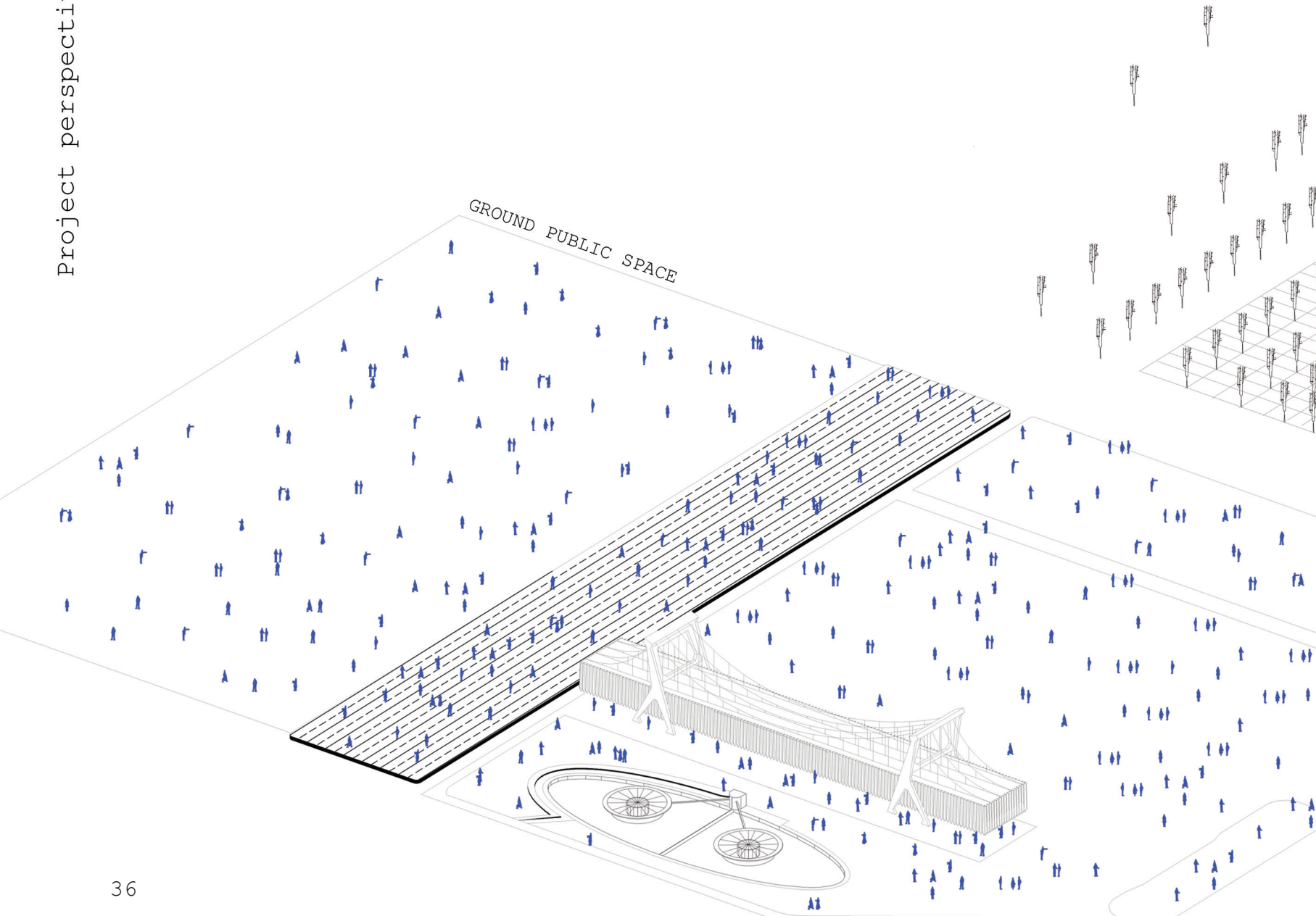




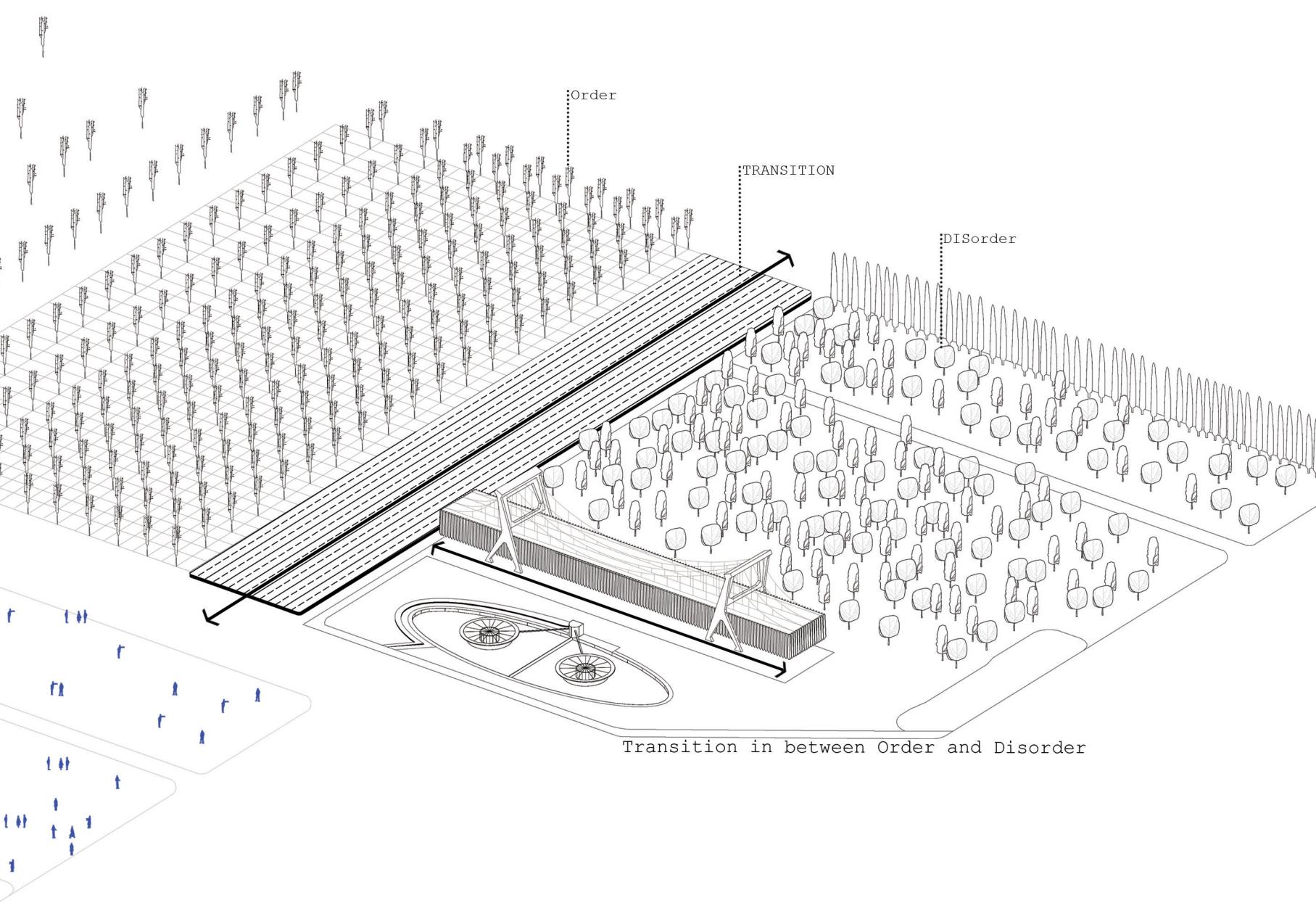


Model in Process



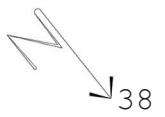
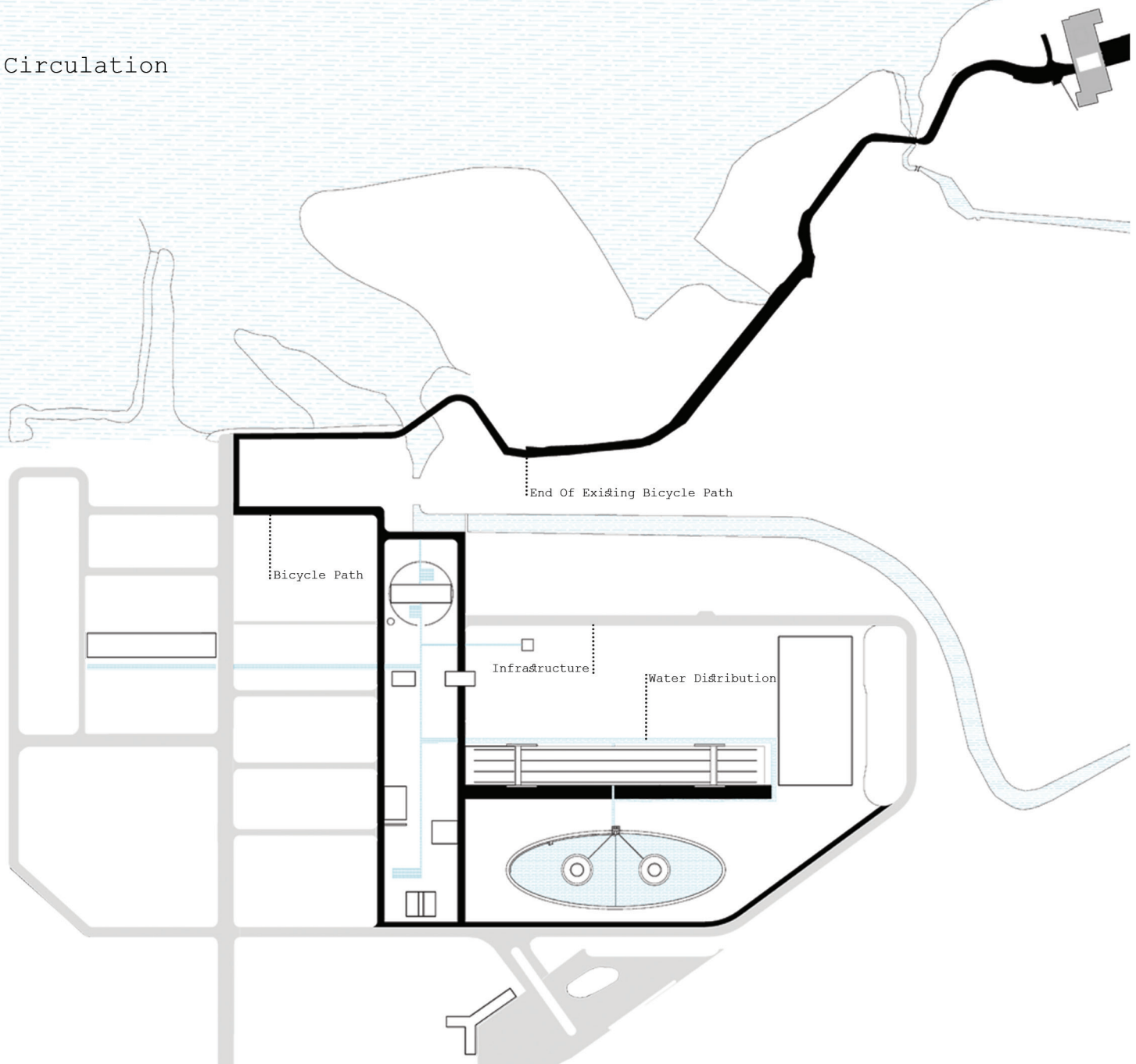


GROUND PUBLIC SPACE

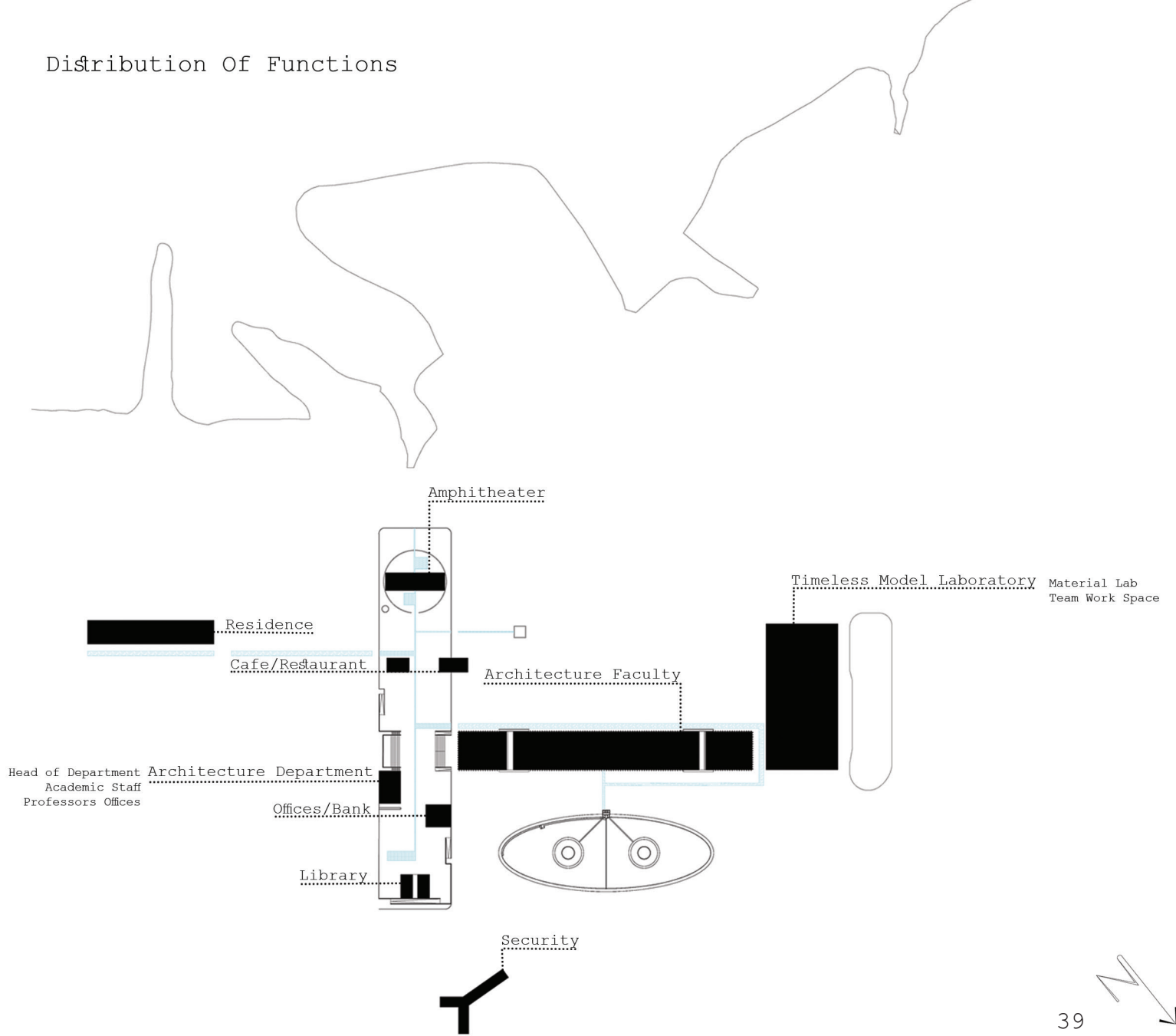


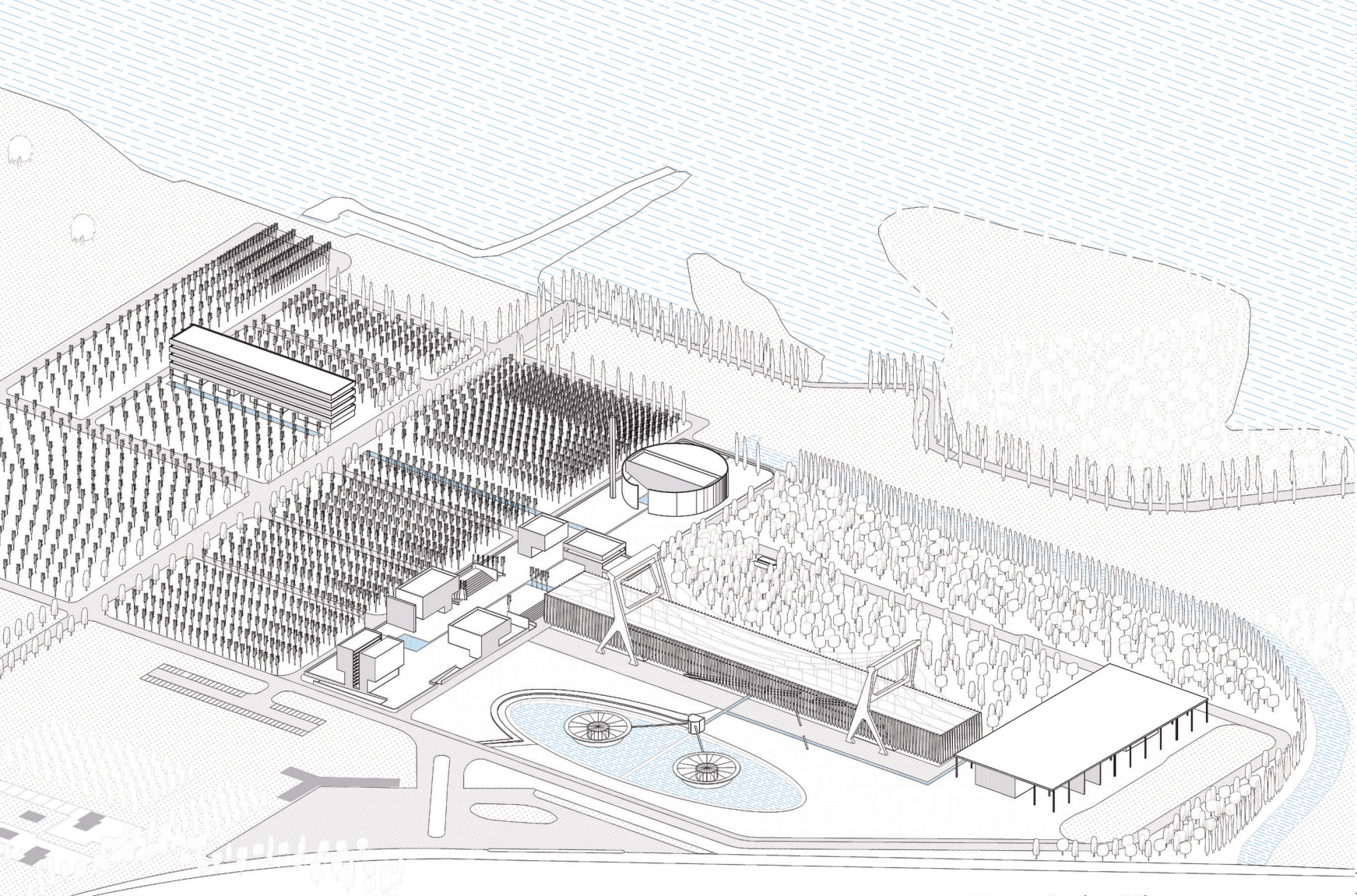
Transition in between Order and Disorder

Site Circulation

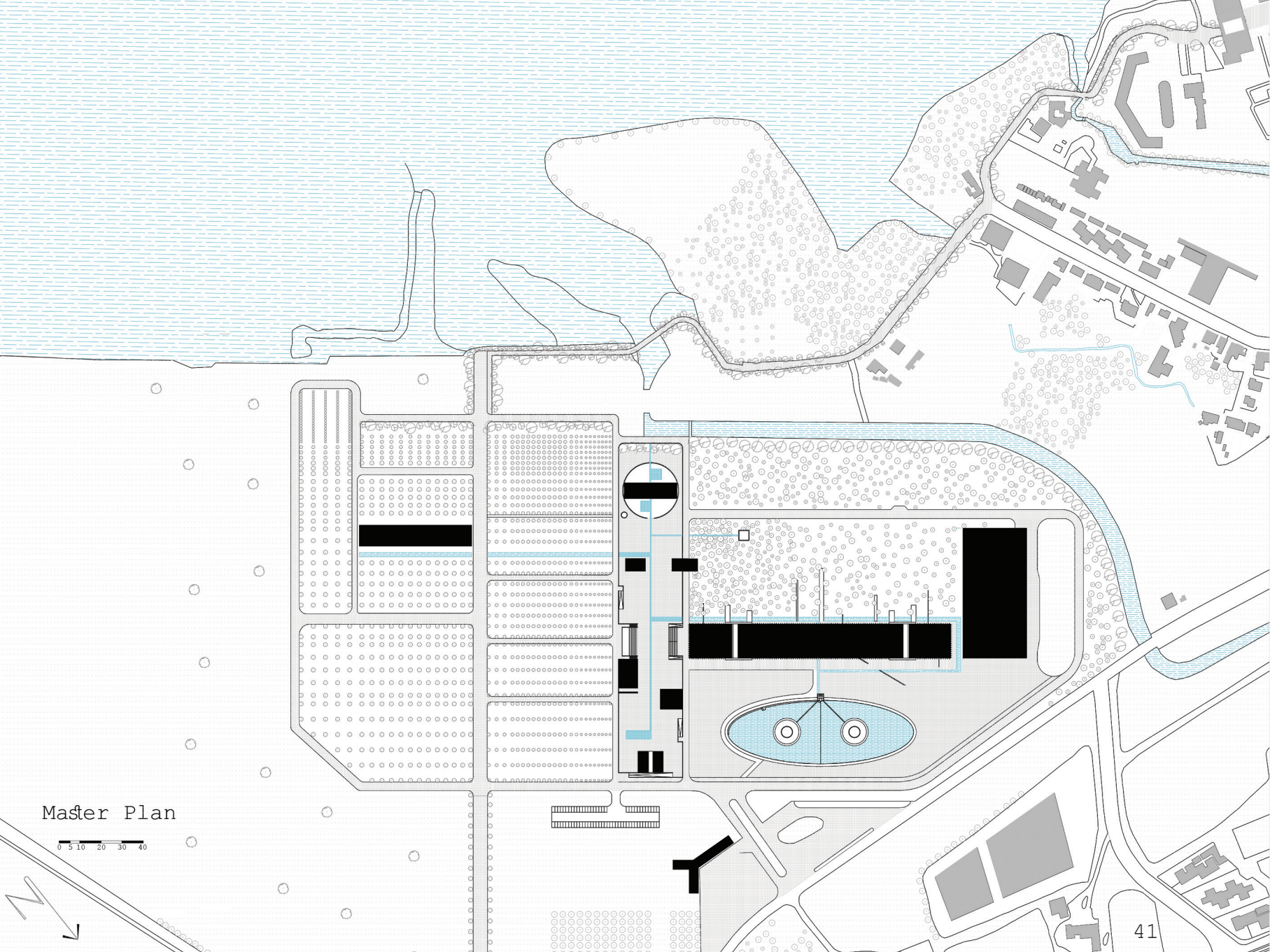


DiStribution Of Functions





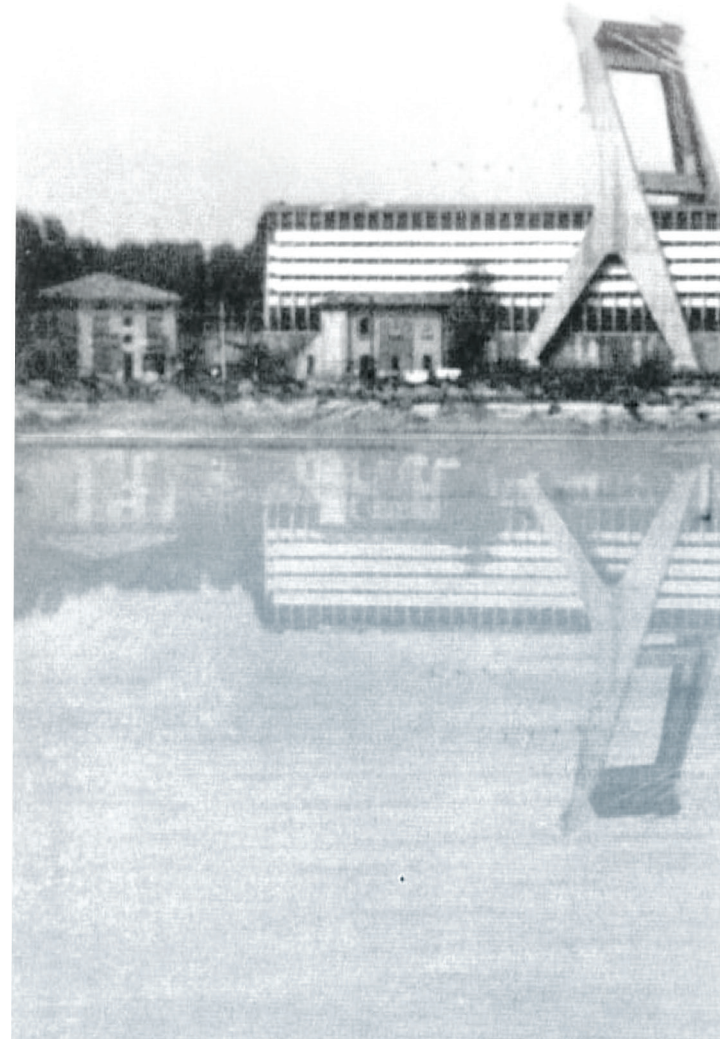
Isometric View



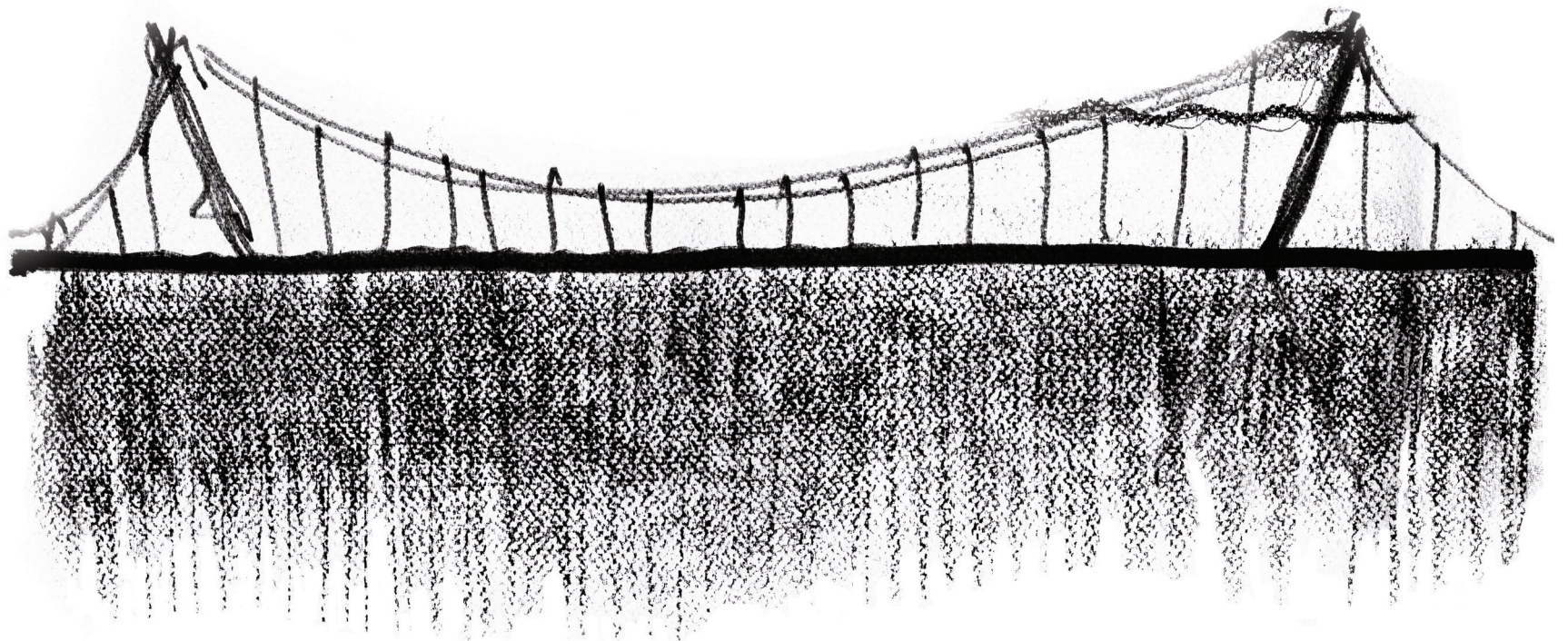
Master Plan

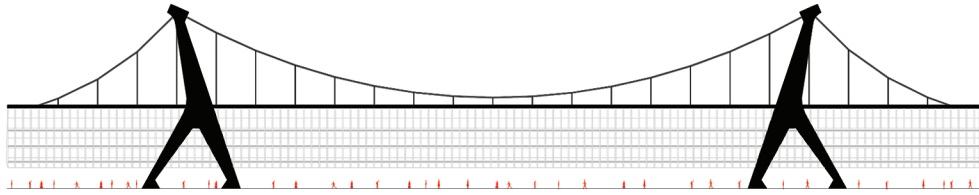
0 5 10 20 30 40

One of the first images that we created after our analysis were based on the relation of Burgo with water and how Burgo will react in confronting with water. Is Burgo afraid of seeing himself in water or will be proud of him.



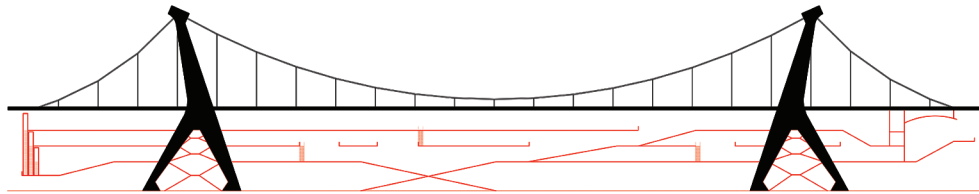






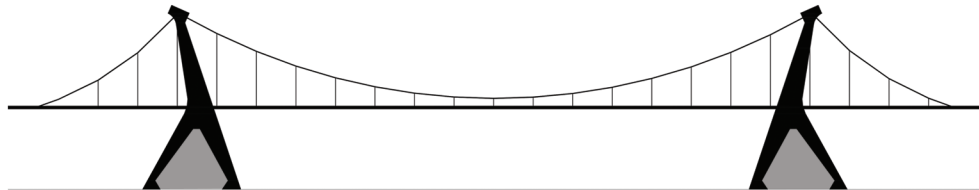
Less Gravity

Following the idea of bridge structure the new proposal should keep the distance with ground floor in order to emphasize on the importance of burgo original structure and making public ground floor. Therefore, Burgo looks hanging by two Mega Structure.



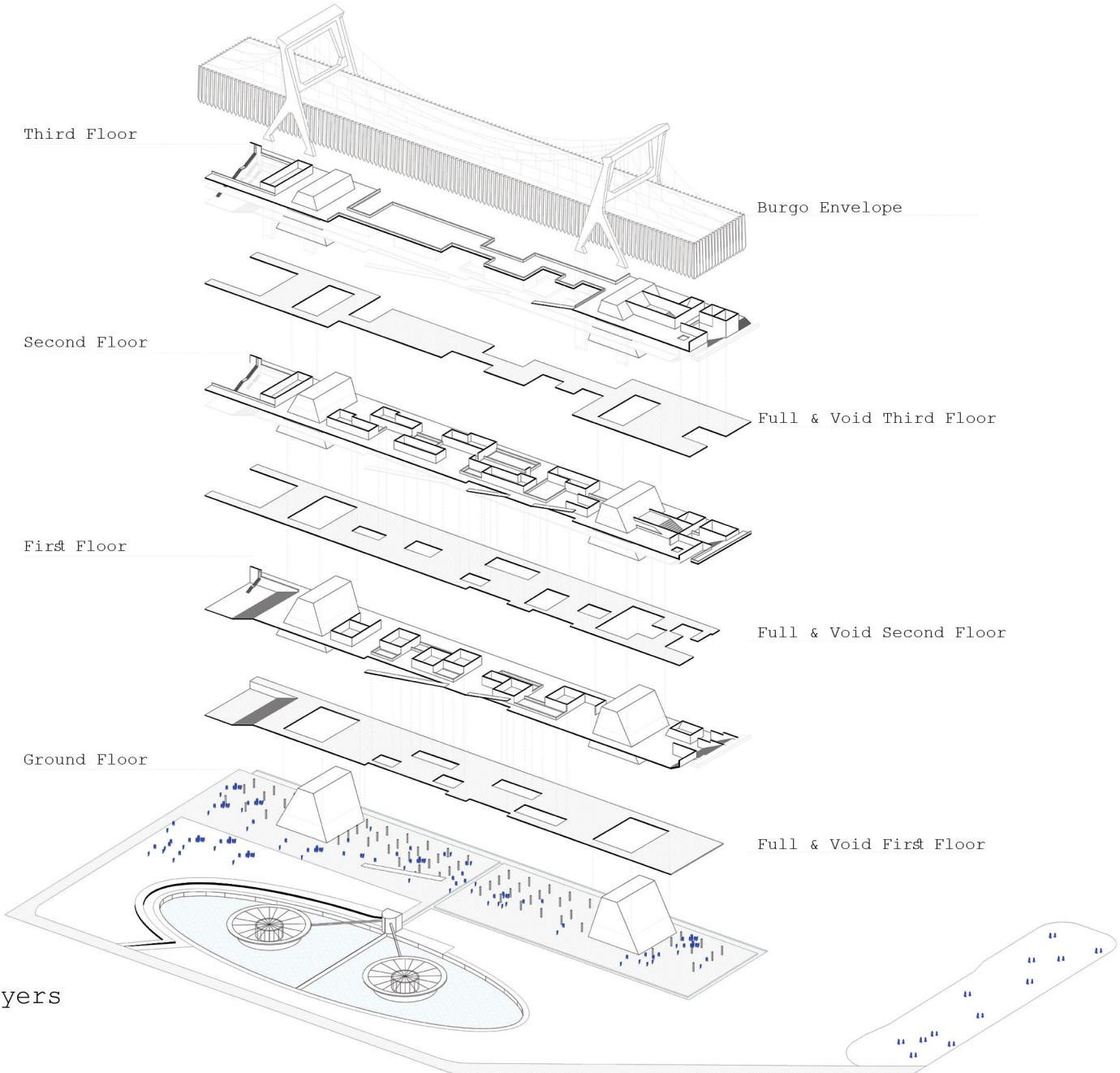
Movement

Ramp and Stairs are the architectural elements that define the Movement of the space.

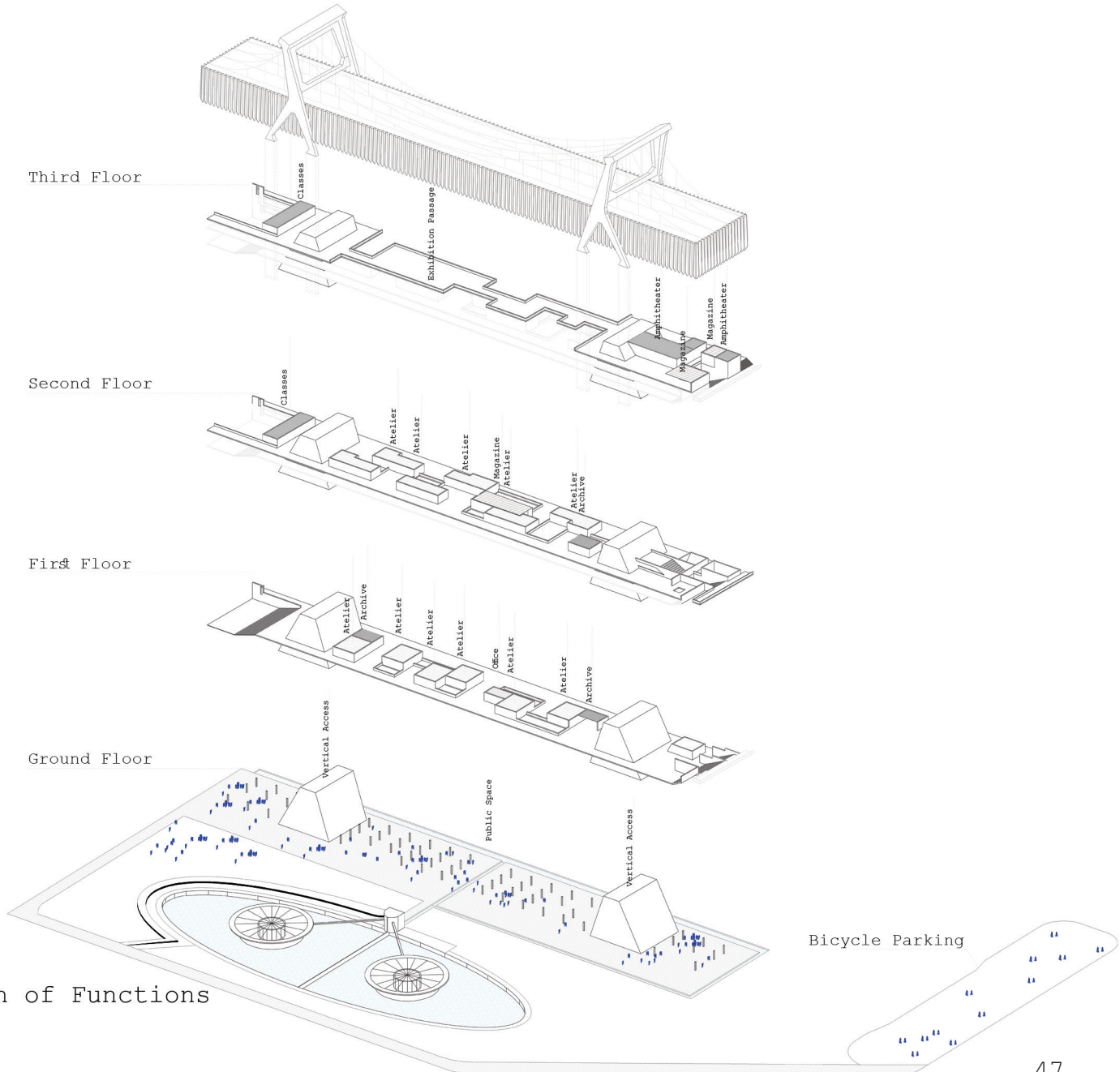


Entrance Definition

Emphasize on two significant features of Nervi's Design by introducing it as an Entrance.



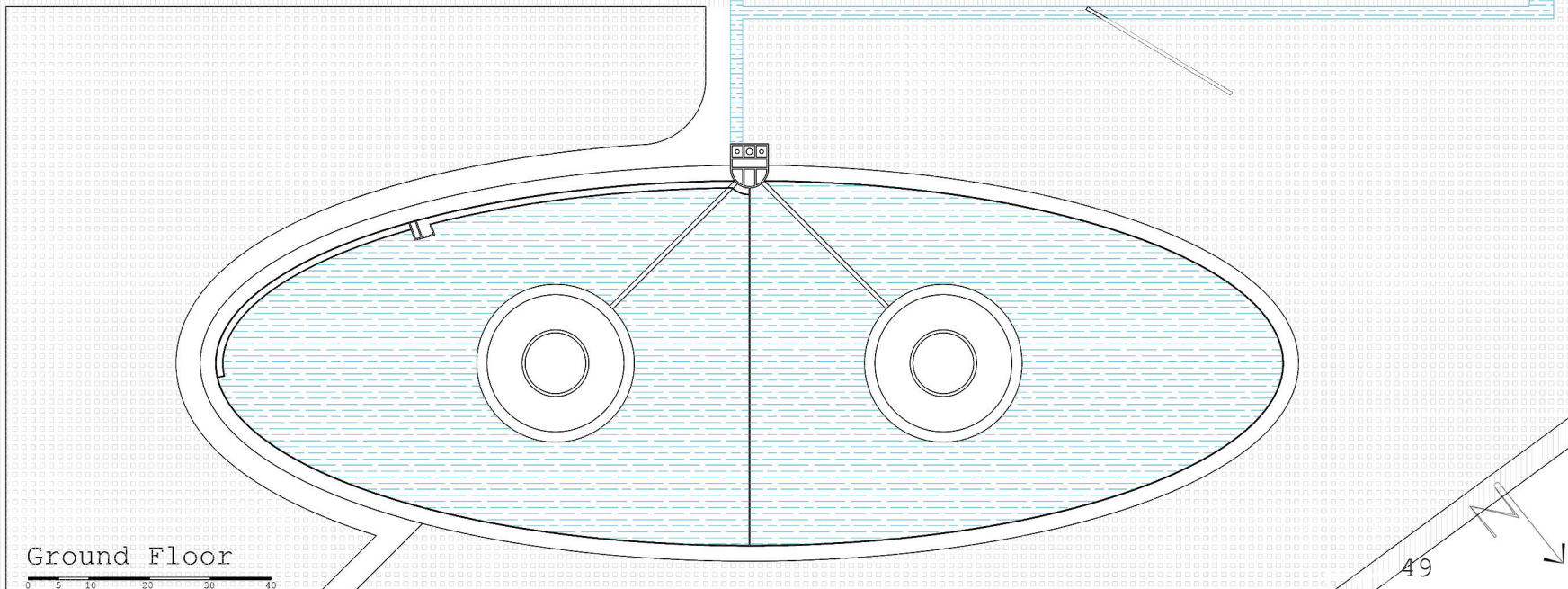
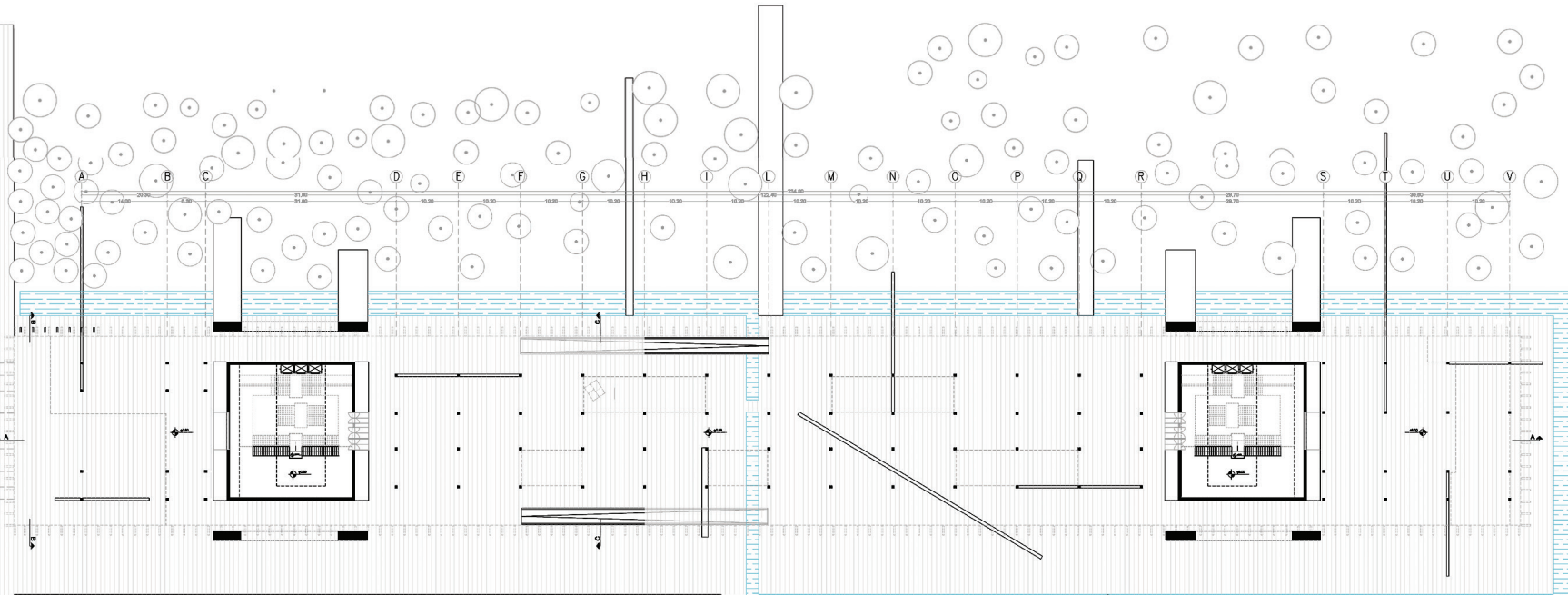
Intervention Layers



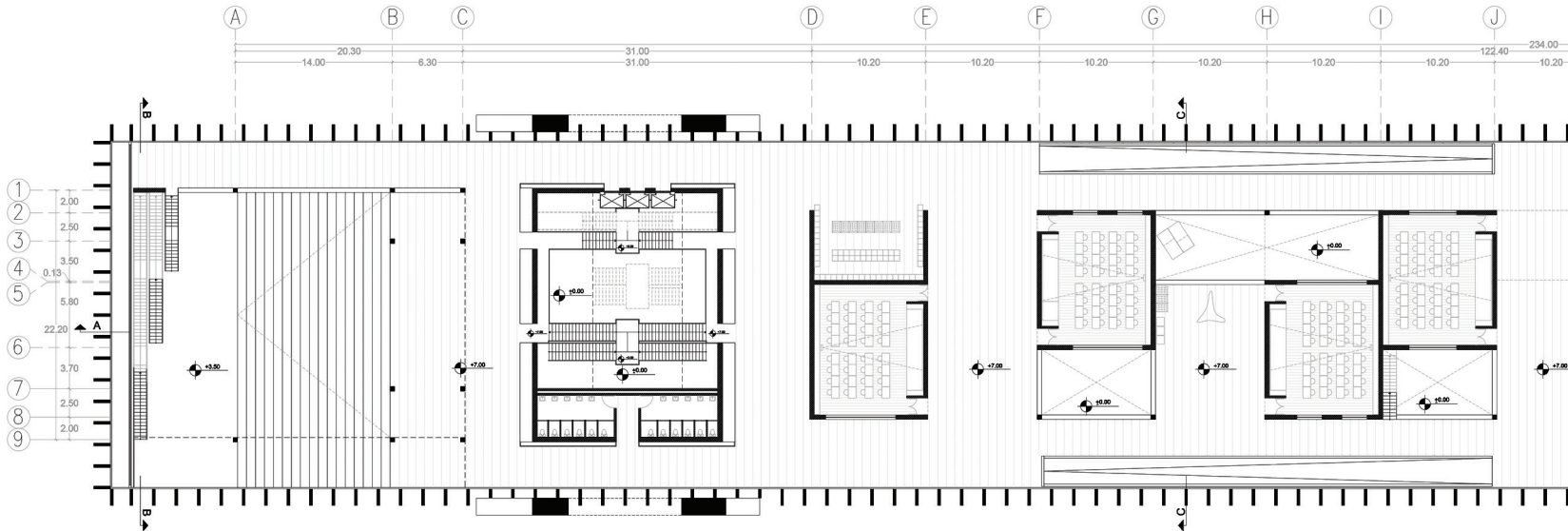
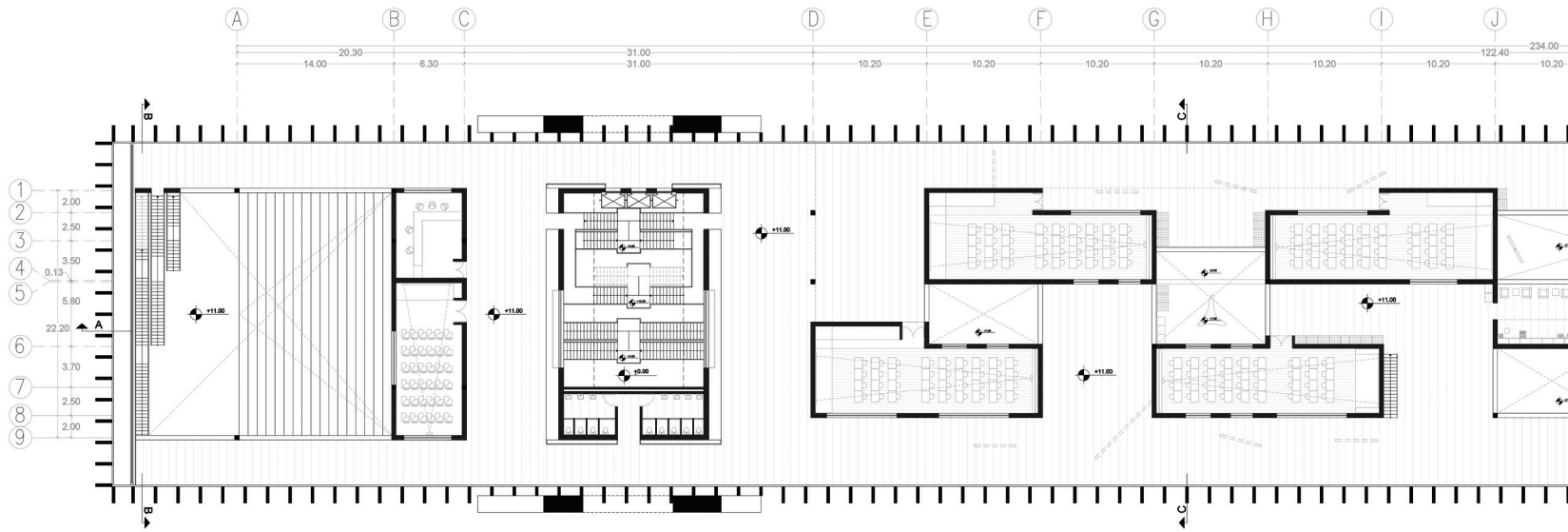
Distribution of Functions
In Burgo

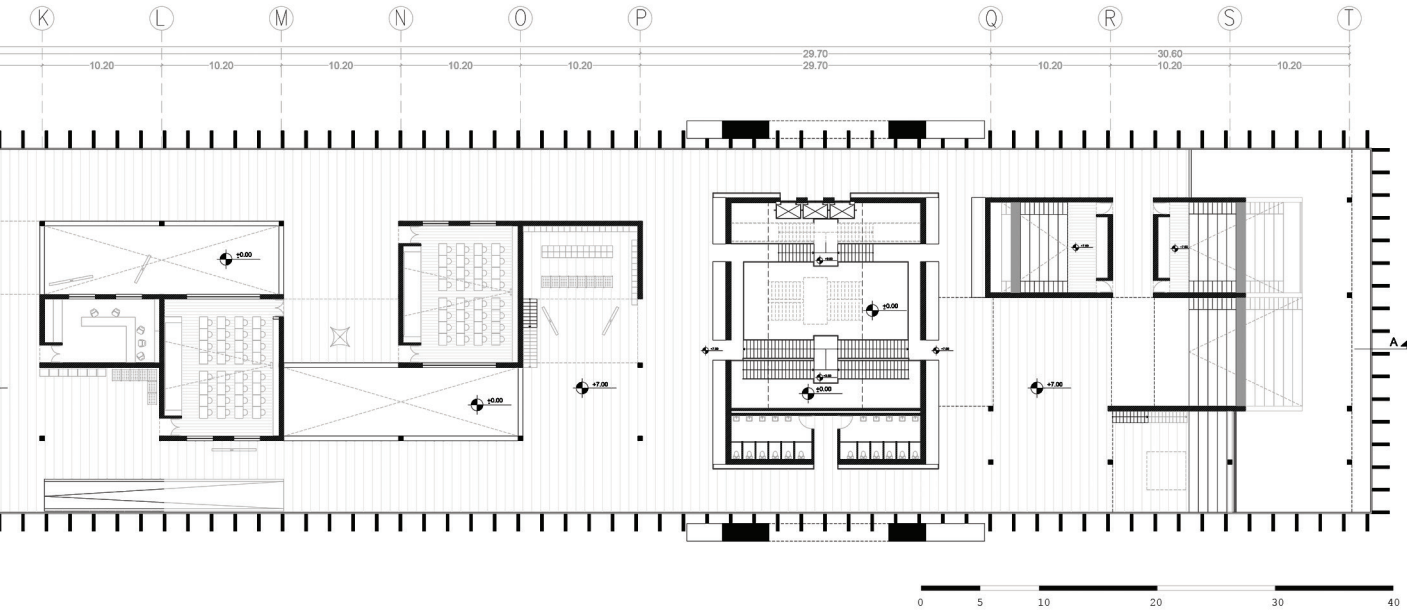
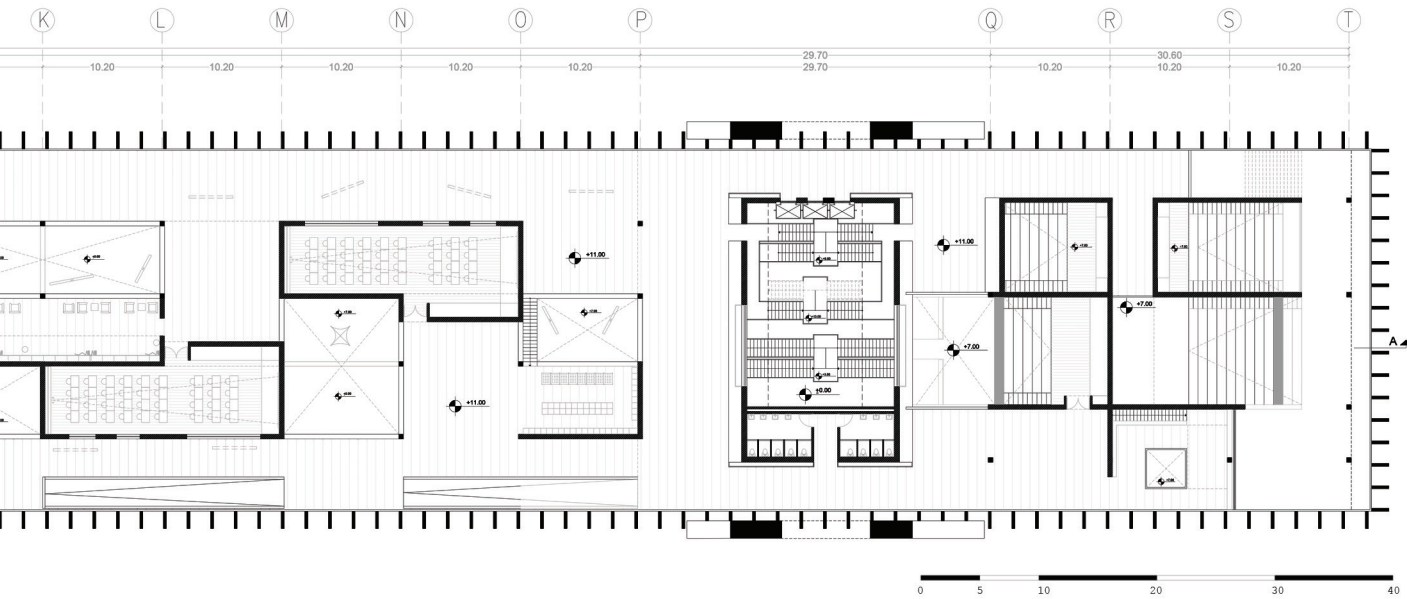
Drawings

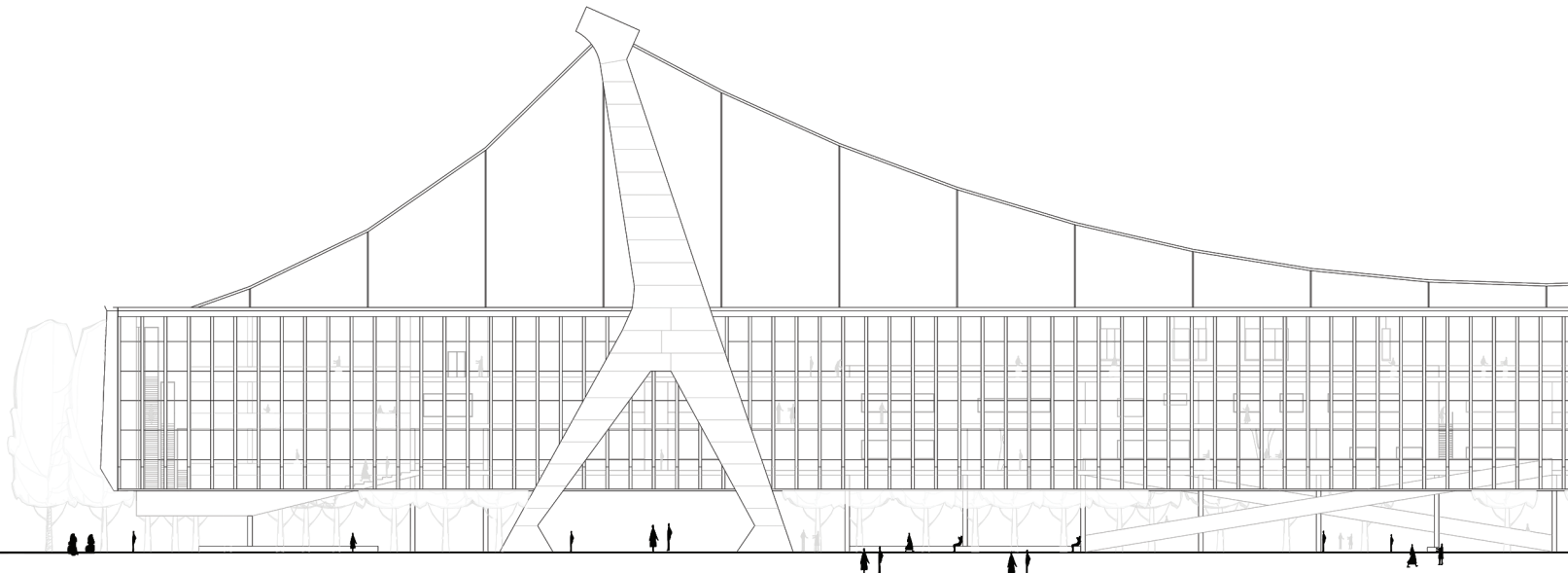
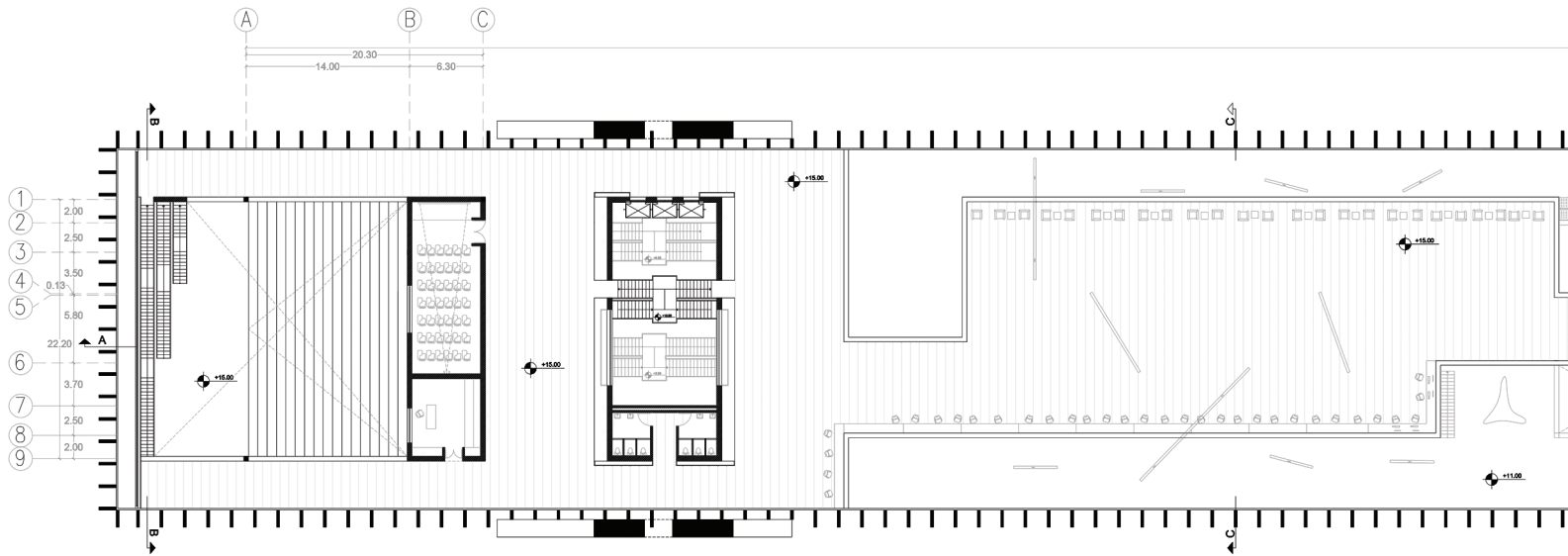
- 1 2.30
- 2 3.00
- 3 3.70
- 4 4.30
- 5 4.90
- 6 5.50
- 7 6.10
- 8 6.70
- 9 7.30



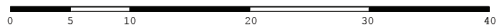
Ground Floor

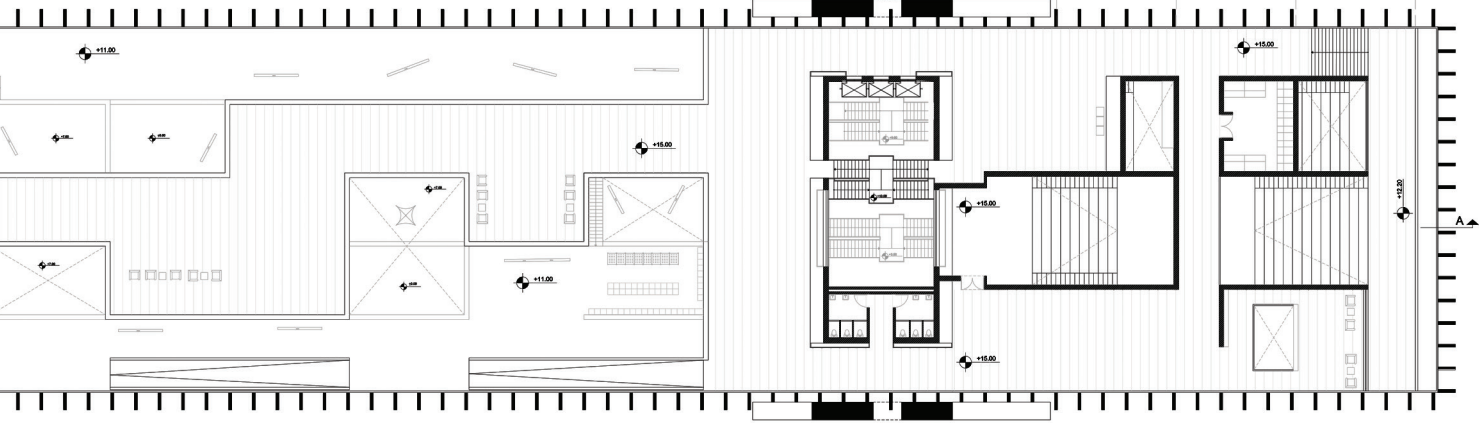




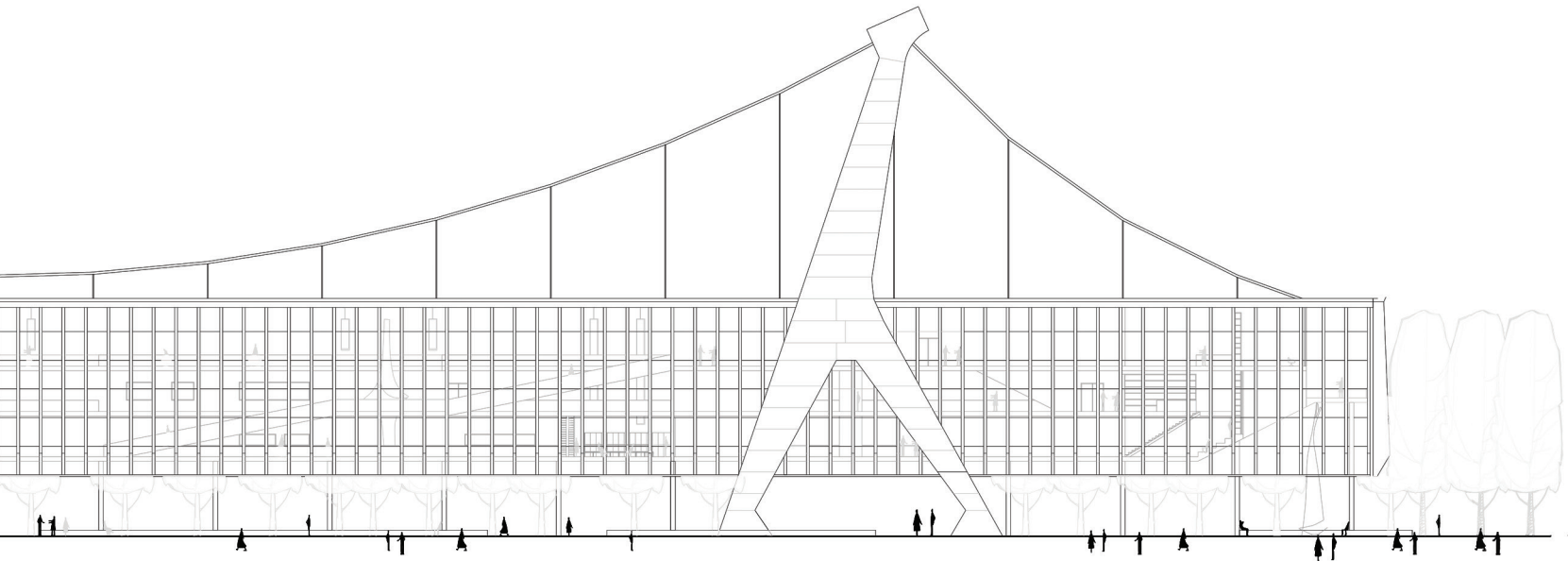


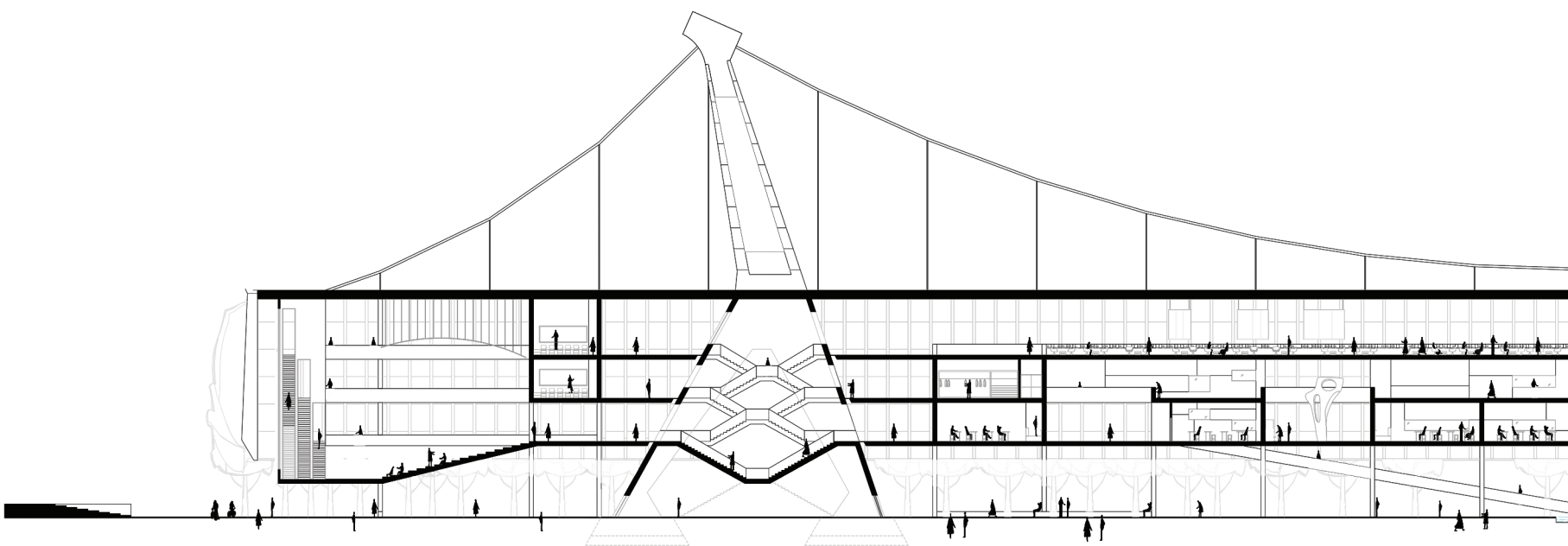
North Elevation



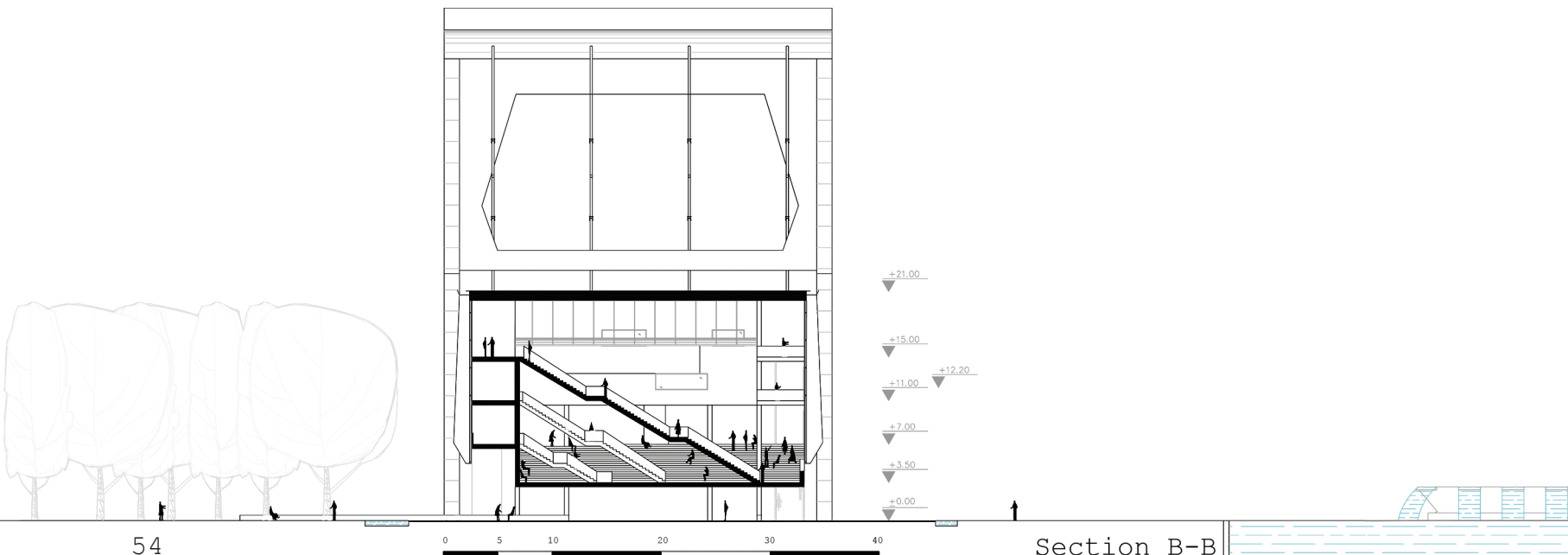


Third Floor

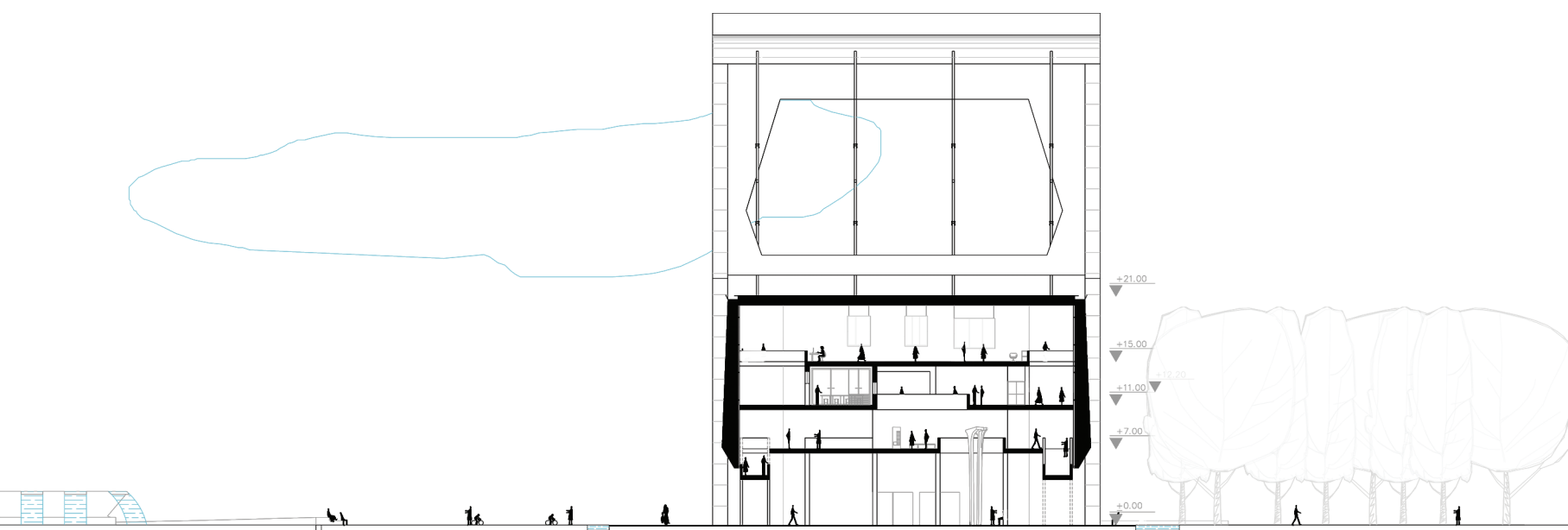
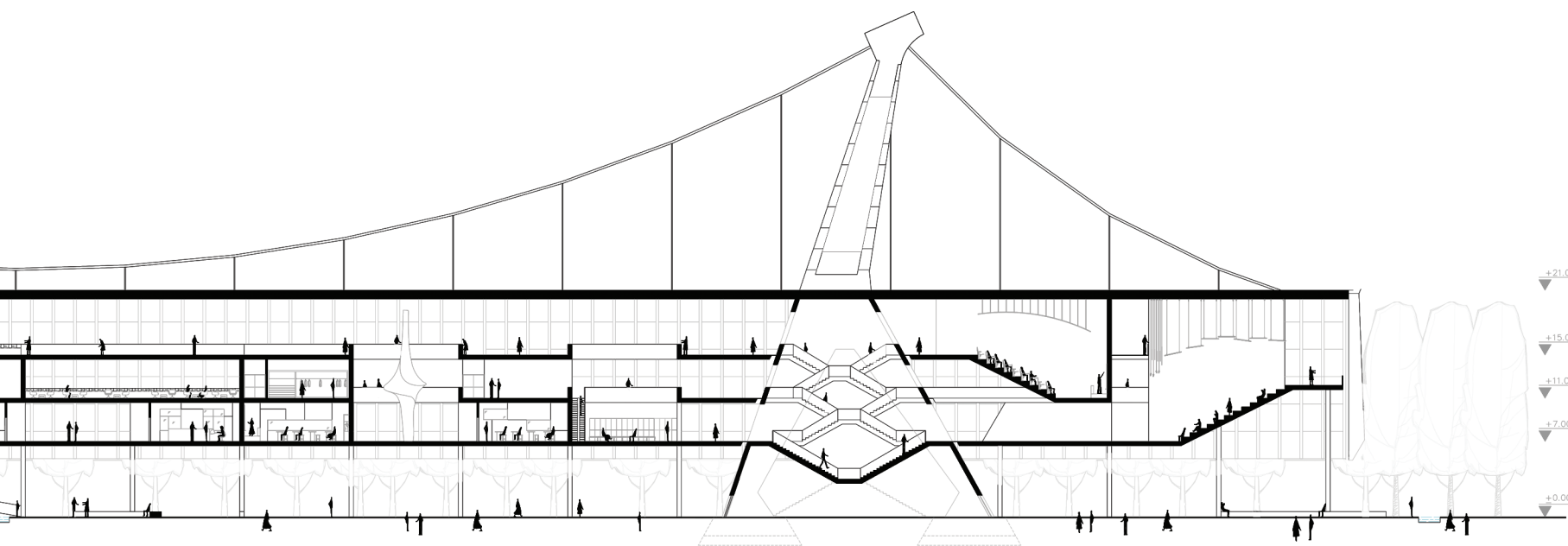




Section A-A

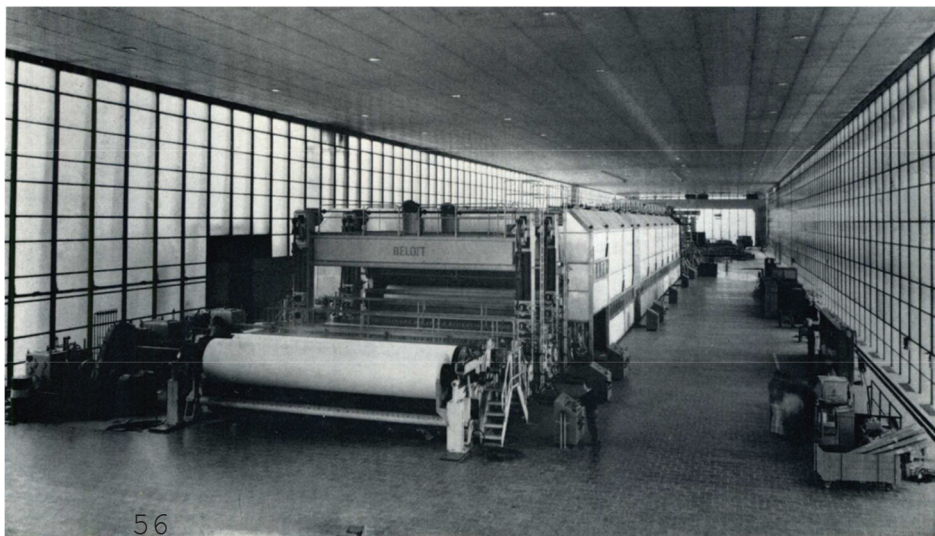


Section B-B



Section C-C

The complexity of this factory was linked with its machines which were in the core of the factory. For us the core of University is the combination of Public Space and Ateliers. The place that you learn and communicate. And this is the complexity of our project.





Magazine Point

Its located in between of ateliers where you can have the view of nature(disorder) and at the same time skyline of Mantova .





Exhibition passage

In the last floor of the project you will find yourself over the bridge which give you the sense of less gravity, and also the hanging stands which duplicate this sense.





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