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BAC Barcelona Architecture Center

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BARCELONA ARCHITECTURE CENTER is an educational organization founded in 1998 and chaired by Miguel Roldán. The BAC was created with the aim of developing academic and research collaborations with other universities and higher education institutions across the globe.

BCN Urban project Barcelona Studio "L'Espigó de Ginebra"

Edited by Barcelona Architecture Center in collaboration with Texas A&M University

L'Espigó de Ginebra, Rethinking the waterfront infrastructure, Summer 2021
BAC, Barcelona Architecture Center



BAC

BARCELONA ARCHITECTURE CENTER

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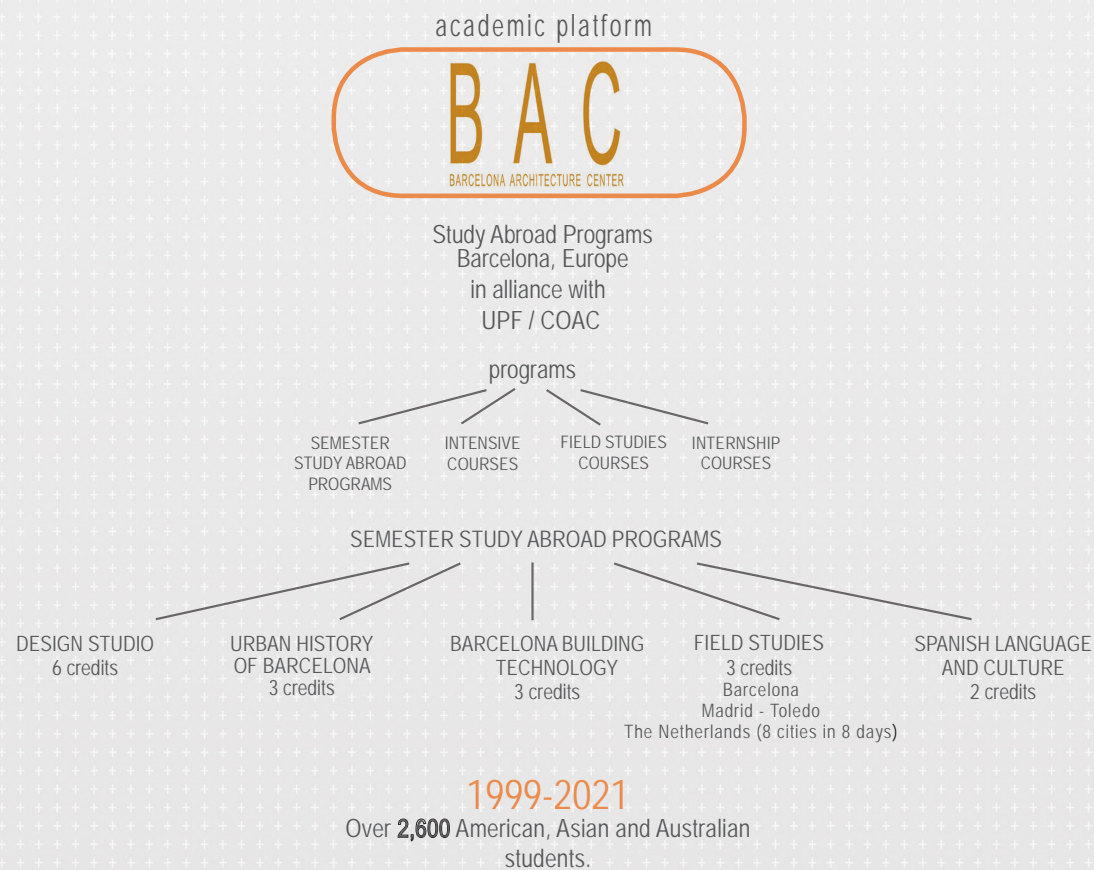
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BAC Barcelona Architecture Center Alumni

Summer 2021

BCN Urban project

“L’Espigó de Ginebra”

Rethinking the waterfront infrastructure #3

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1. Barcelona Design Studio Program

Professors



MIGUEL ROLDAN



ZANA BOSNIC

Site description:

The project site for this Fall 2020 Design studio project will be **L'Espigó del Gas (Gas breakwater)** originally called **L'Espigó de Ginebra**.

The Gas breakwater serves as the boundary between Somorrostro beach to the north; and Barceloneta beach, in the south and on dividing point between Barceloneta neighborhood and Villa Olímpica in the Poblenou neighborhood.

Like many others on the Barcelona litoral, L'Espigó del Gas remain unused as a potential privileged piece of the city thanks to the confluence of legislation, economical or climatic vectors. These sites need to be re-interpreted, re-thought, and re-used into a new landscape located in the urban condition on the edge of the city and the Mediterranean Sea.

It's a challenge, in this context not being in Barcelona but online, to replicate the work of a **global architect**, to be able to work in a site that is absolutely contextual, even if there is no context. Site that is not in the city but where the city will be looked from.

This FALL 2020 project contains a **site condition opportunity**. It is not like any other BAC's Design Studio projects that we have worked in our previous programs. Frequently our design challenges had historical, social and programmatic precedents and that constitute a scenario of enormous complexity to deal with. Our Fall 2020 confront precisely the opposite urban condition.: the **lack of such complexity**.

Therefore, may be architects and landscape architect can join their voice in this **architecture opportunity**.

Site location: La Barceloneta

Barceloneta neighborhood is the classical seafaring district. The narrow and closed streets and the family lifestyle protect it from the big transformation other areas of the city have 'suffered'. The facades darkened by sea salt, the boats that unload at sunset and the unmistakable smell show the

Mediterranean character, very similar to that of any fishing village on the Catalan coast.

This marine neighborhood, has always been linked to the sea. Its history goes back to the 18th century, when it was established as a new, planned neighborhood, with a Baroque grid layout that has been preserved almost intact. At that time, it was a sandy area on the outskirts of the old walled city, which was reached through the Portal del Mar, the gate located approximately where the Museu d'Història de Catalunya is today, in the Palau del Mar.

Notable features from its early days are the long streets and terraced houses open to the sea, as well as the Baroque Sant Miquel church, which presides over the square of the same name, in the center of the neighborhood.

Barceloneta's houses were occupied by sailors, fishermen, tradespeople linked to the sea and others from all over that came looking for cheap rents. Citizens all, who gave a unique character to this neighborhood designed around the sea.

In the mid-19th century, fishermen gave way to workers from the metallurgical trades. The Catalana de Gas tower, an impressive pre-Modernista structure, still remains from this era, as well as Barceloneta market, which has been remodeled by the team of the late architect Enric Miralles, renovating the wrought iron structure and combining it with modern architecture. A place that is destined to become a reference in the neighborhood and the city.

The Barcelona Olympics in 1992 meant another revolution for Barceloneta. The construction of the Olympic Village surrounded the traditional fishermen's quarter with sculptures and modern buildings. Today, flanking the neighborhood's coastline is the El Peix sculpture by Frank Gehry, an enormous golden fish that seems to float above the sea, while on the other side there is the huge sail-like silhouette of Hotel W. Two features that frame tradition with their modernity.

L'Espigó del Gas

The function of a breakwater as L'Espigó del Gas is to protect beaches from erosion by trying to dissipate the wave energy (usually forced breaking waves). These types of structures form barriers trap sand that moves along the coast. They increase the width of the beach upstream and reduce it downstream structure.

Without these artifacts the artificial regeneration of beaches consisting in putting sand on a beach replacing the sediment lost by erosion will be highly inefficient. Today considerable resources are invested in protecting coastlines to offer wide sandy beaches to the urban population.

Nowadays such structures could be completed with submerged dikes or exempt that retain the sand and allow to reduce the periodicity of contribution. Some of the drawbacks are the need for periodic regeneration, if possible environmental impact on the source area and its high cost

These perpendicular breakwaters (espigones) and the like are usually built of many materials including wood, steel, concrete, rock, gabions, geotextiles or tire mattresses and oriented approximately normal the shoreline.

Together with coastline sand movement management, L'Espigó del Gas is part of the wastewater system of the municipality of Barcelona. The Barcelona rain urban collectors converge into the Besos system.

After a plant of biological treatment drainage, raining water goes to a main outfall where the effluent is discharged offshore. This outfall is located on the beach of the Northeast Park of Sant Adrià, in front of the port of Sant Adrià de Besòs.

The system also has an emergency outfall parallel system to the main one which can be put into operation in cases of torrential rains. L'Espigó del Gas is one of the four outlets located in the different breakwaters (Gas, Bogatell, Bac de Roda and Prim).

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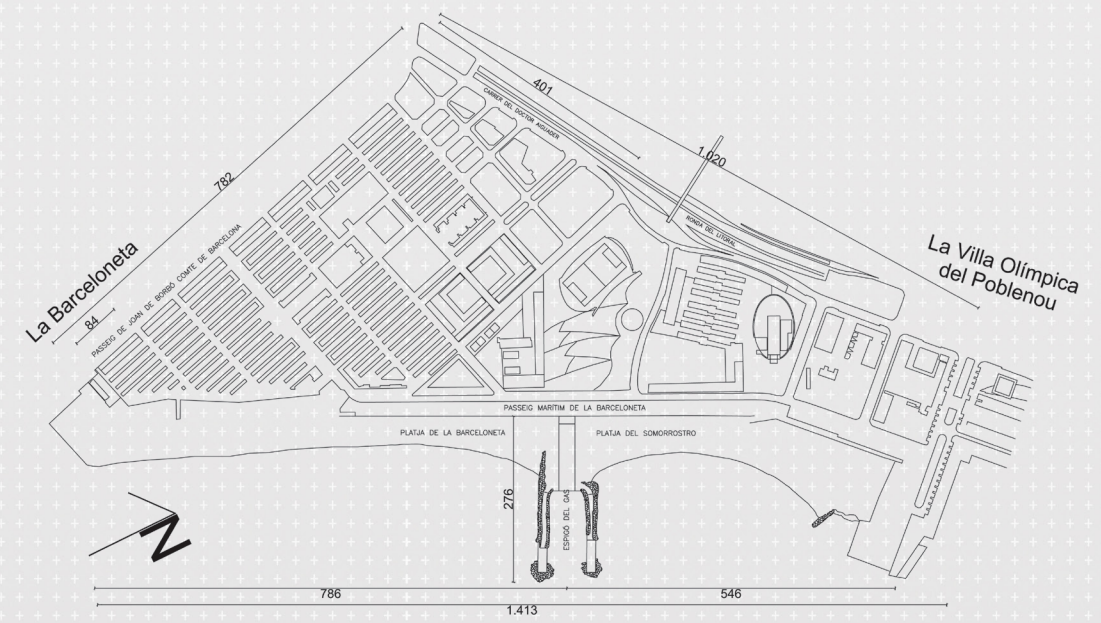
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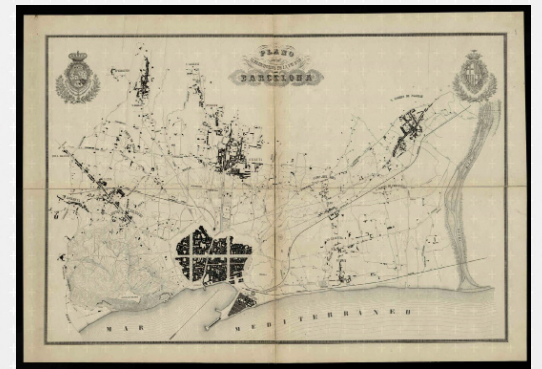
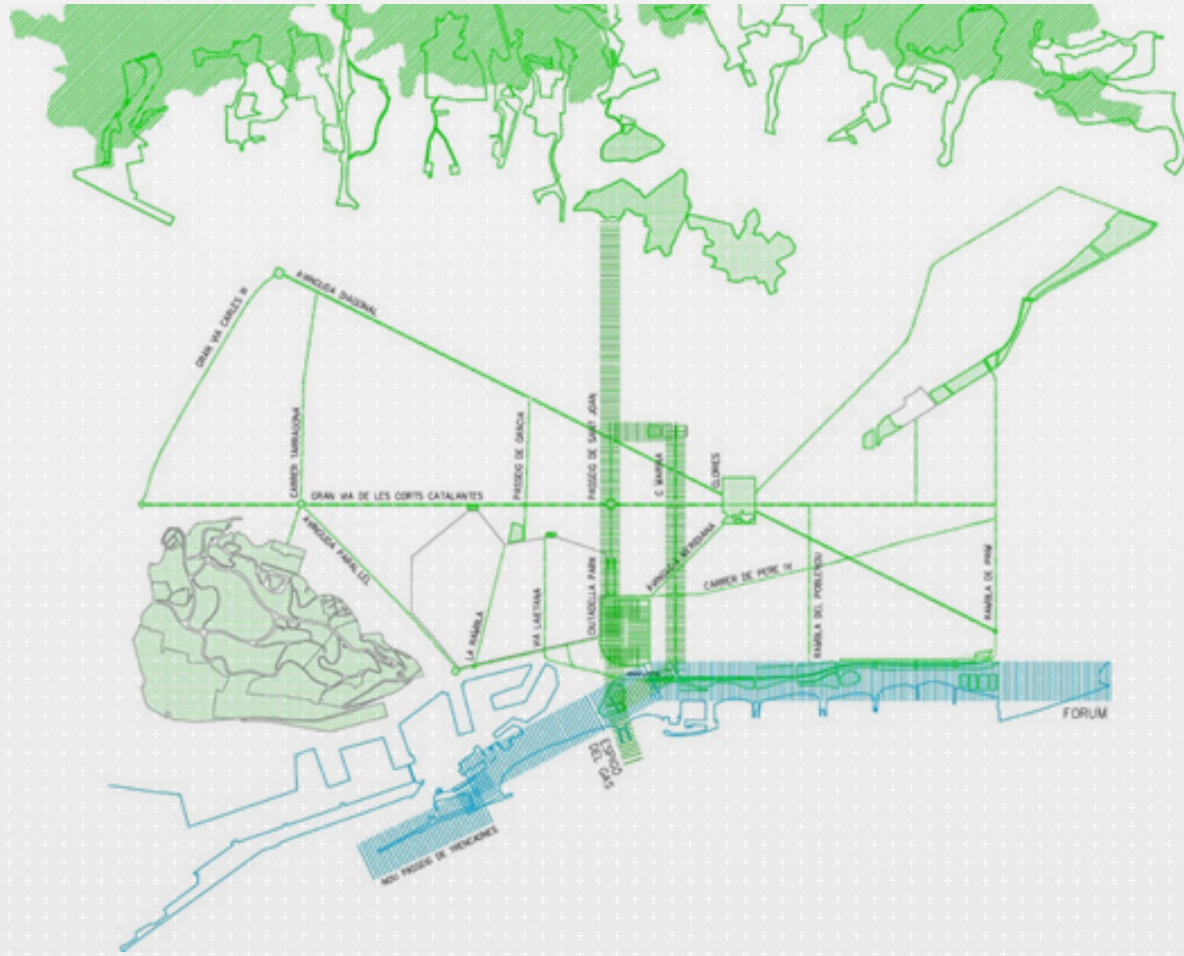
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_google link: <https://goo.gl/maps/ScPkQnQ1jTCLzvVA>

_bcn map link: <https://w33.bcn.cat/planoBCN/en/guia/address/Esp-Gas/zoom/3/angle/44.4/position/432630,4581451/>



TOPOGRAPHIC MAP, 1855



4. Theme description.

Following the municipality Coastal Plan and the reactivation of the Barcelona waterfront and its direct connection with the adjacent neighborhoods, BAC proposes to FALL 2020 students to re-design and re-define once again the Barcelona coastline at one specific point of the waterfront. The point is located on the crossing between 2 axis and opportunities.

The first axis is the **corridor mountain-sea** coming from the connexion future bridge from Ciutadella park. The second is the linear public space **from Forum until the recently extended "Nou Passeig de Trencaones"**, New Breakwater Walkway.

On this spot the **two largest green urban areas in Barcelona**, the green path from Ciutadella park and the beach **will be connected**.

The breakwater is an infrastructure that answers ecological, climatical and economic issues.

Most of the times these essentials artifacts are hidden, remain invisible pieces of the urban scenario and the urban memory. In this specific case, the breakwater, due to its position, out of the strictly condition of the 'urban', became part of the **geography**.

We ask to architects and landscape architects to participate in the debate. The course, within a simulation of a competition, could be a chance to test the role of our professional practice in this regard above the sea level.

This project theme will be strongly based on the site discussion, at a functional, historical and social components, paradoxically, in a place where it seems that there is no urban footprint.

Students will redesign the structure in terms of a **new landscape with strong ecological component**.

Even though 80% of this landscape should remain public, a 20% of it will be programmed for private use. The future generations of this economic profit should be calculated to reimburse the total construction and maintenance work on the area. This area for private uses program could contain a building small medium in size. The construction with the maximum height of 7m above the sea level.



7. ANNEX Historical background

Barcelona waterfront: area in permanent transformation

Since its beginning, the history of Barcelona has been closely linked to the sea. The coastline it has been transformed over time from a landscape of lagoons and marshes to one of heavily anthropized, with a predominance of industrial facilities in the 19th century, up to the front consolidated urban we know today. Opening Barcelona to the sea has been, without any kind of undoubtedly one of the great challenges and achievements of municipal policies of the last 40 years.

Barcelona's contemporary, vibrant waterfront was largely influenced by the 1992 Olympics and changing economic activities. This worldwide event provided the momentum and resources the city needed to revitalize the distressed industrial waterfront. Old warehouses were demolished for commercial uses and tourism.

Barcelona was cut off from the waterfront by a medieval wall that surrounded the city up until its demolition in the 1870s. In the 18th century, industrialization, fundamentally in the textile sector, began in Barcelona.

As from the second half of the 19th century, this development received a strong and renovating boost.

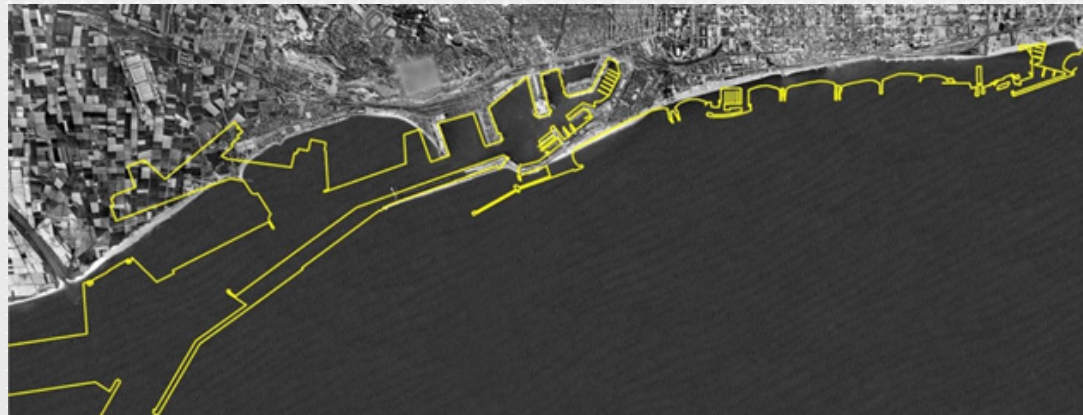
The availability of water and the city's condition as a port, among other strictly economic and social reasons, facilitated industrial development and diversification, with a large part of the industry concentrated near to the port. Industrial infrastructure, such as docks and warehouses, were built along the waterfront to accommodate the increasing amount of sea trade happening in and out of Barcelona.

During the course of the 19th century and the first half of the 20th century, between the railway line and the sea, an isolated area was created which soon reached levels of extreme degradation. Later, industrial activity in the area began to decrease until the majority of the large installations were abandoned and the coastal strip of the districts of Poble Nou and St. Martí de Provençals became an uncontrolled tip, and large quantities of urban and industrial waste waters were poured into the sea.

The current relationship between the city and the sea began to develop in the early eighties with the advent of the first democratic councils. The port reform was seen as an important element in the reform of the adjacent Old Town, but also for the entire city. The sea was behind the wall and had to recover as indicated, the Olympic times Barcelona mayor Pasqual Maragall. In 1986, in the occasion of the preparation of the bid for the 1992 Olympics boosted the need for comprehensive reform of the port and also its connection with the area of the Olympic Village through the Coastal belt.

From the urban project linked with the 1992 Olympic Games, until the Forum in 2004 has been built a completely new waterfront with different elements and structures but with a decisive goal: to link definitively the coast to the people and to the city neighborhoods. One of the main elements that have facilitate to achieve this objective, have been the recovery of the beaches.

Barcelona transformed in order to prepare for the influx of spectators, athletes, and tourists for the 1992 Olympics. The Olympic Village was constructed along the waterfront and was located north of the center city. The waterfront was further developed into a walkable park system for access between the Olympic Village and the district of Ciutat Vella. Port Vell was redeveloped from industrial uses to a commercial and tourist hub.



8. ANNEX Municipality agenda

A significant volume of problems has been detected in relation not so much to transformations urban areas that had coastal spaces during the 80s and 90s, but with the management that has been done since.

The city opened to the sea and reclaimed areas of the port and beaches by removing coastal huts and regenerating obsolete industrial areas to create new public spaces, all while betting on tourism as to key economic activity. But this model of coastal transformation has become obsolete and now it is unable to respond to the set of problems and conflict situations that have gone on appearing in areas adjacent to the port, beaches and coastal neighborhoods that are difficult to manage with the classical mechanisms.

The list of problems and needs of the coastal area is long, and to remedy it is necessary to glimpse a new model as concerted as possible with all the agents involved in the coast. Like this, the Barcelona Municipality Strategic Plan for the city's coastal areas (the Coastal Plan) is to achieve a "reconquest" of the coastal front as a quality public sphere, open and enjoyed by to everyone and a pact around the new coastal model of the city with all the agents concerned. It is therefore a planning tool that aims to order and manage all spaces urban areas of the city's seafront, and therefore covers coastal neighborhoods, ports, beaches, equipment and open spaces. So far no one was able to send in the perfect solution, which is not strange which encompassed all these areas of the city's coastline.

The Municipality Coastal Plan is specified in a set of projects and strategic actions in the field of the coast from the city. By their very nature, some of these actions can be controversial different actors involved (institutional administrations, citizens, companies, etc.) for in many cases there are different views and even conflicting interests.



LAS PUERTAS DEL LITORAL



<https://www.bcnregional.com/ca/category/projects/>

6. Program

. Public space (program activities to be defined by students) 15,000 m²

. Private use space (tickets entrance-build or unbuilt /program activities to be defined by students) maximum surface 3,000 m²

. Volume limitations: none
 . Maximum high 7,00 m
 (same elevation as Passeig Marítim above the sea level de la Barceloneta).

Exceptions to this rule will be discussed in class.

Conditions

. The public space maintenance and consumptions together with the building should be nZEB (nearly Zero-Energy Building), requiring very low needs of energy in its operation and production of renewable energy. Preeminent use of the natural light in all interiors is suggested.

. Any transformation or construction process should be planned with low Grey-Energy expense, taking in account all the construction processes: the demolition of the existing elements, the excavation, the construction of the new volume.

. Use of renewable, recycled, local and sustainable materials is mandatory. An ecological and local approach on the selection of the materials (structure, roof...) and species (trees, plants), both for the building and the public space is also compulsory.

This Barcelona Design Studio have confronted with the following questions which might be divided in different scales/titles:

A. City scale

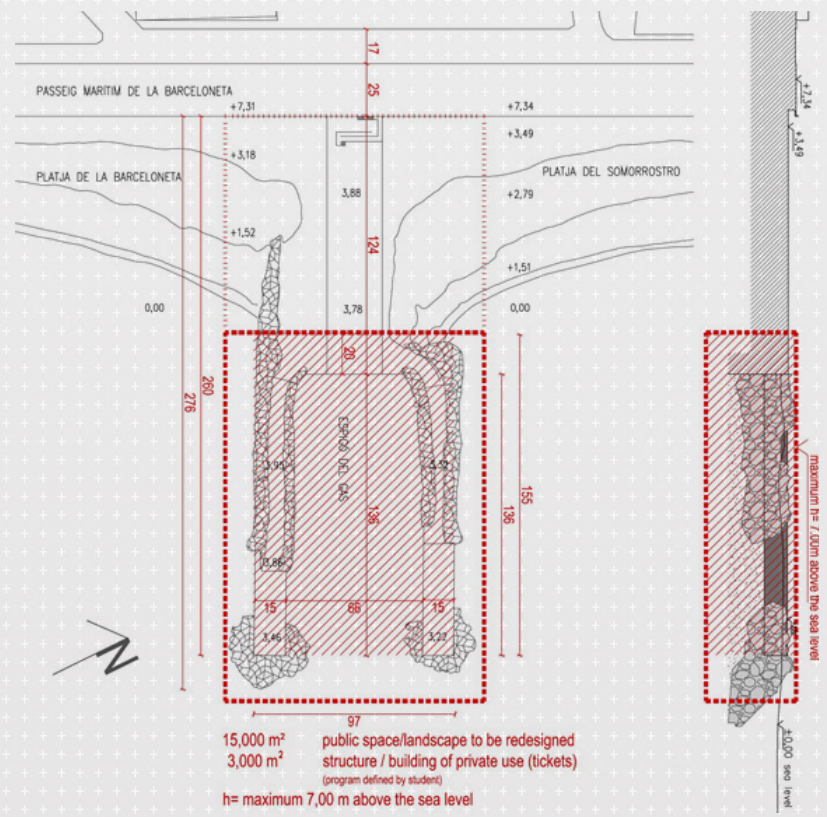
1. Which opportunities do you see in this site?
2. Is this area connected to existing Barcelona green / public space system?
3. Can you trace main circulations around our Espigó del Gas?
4. How the accesses and timetable of each work in this site?
5. Would it be possible that your projects had different timetable and accesses?
6. Can our strategy be equally useful for the all three scales involved in this design challenge?

B. Urban scale

7. Could be consider this piece of the park new viewpoint of the city?
8. Would it be possible to re-interpret the idea of the beach in terms of uses and environmental improvement?
9. What is the role of the public space and landscape in this transformation?
10. Which program should this public structure/building and in order to have social impact on the rest of the city or Barceloneta neighborhood?
11. Can this structure have an energetical impact on the rest of the city or Barceloneta neighborhood?
12. Could we call this balcony of the city? Which is/are the viewing direction/s of this balcony?

C. Architecture scale

13. Are we able to add new layer to Barcelona waterfront that has been in continued change during the history of Barcelona and that is contemporary and specific for this place and time?
14. What does it mean that this structure needs to be Mediterranean?
15. Why do we need to understand the layers of transformation of Barcelona waterfront in order to design this structure?
16. Which program should this structure have?
17. Which materials would you add to this new architecture and to be in symbiosis with maritime palette of the existing structure?
18. Can we add in our design the complexity of a renovated discourse about energy, water, biological cycles, fauna and materials?



D. DESIGN STUDIO

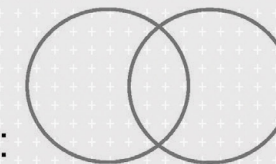
TOPICS : COMPLEXITY



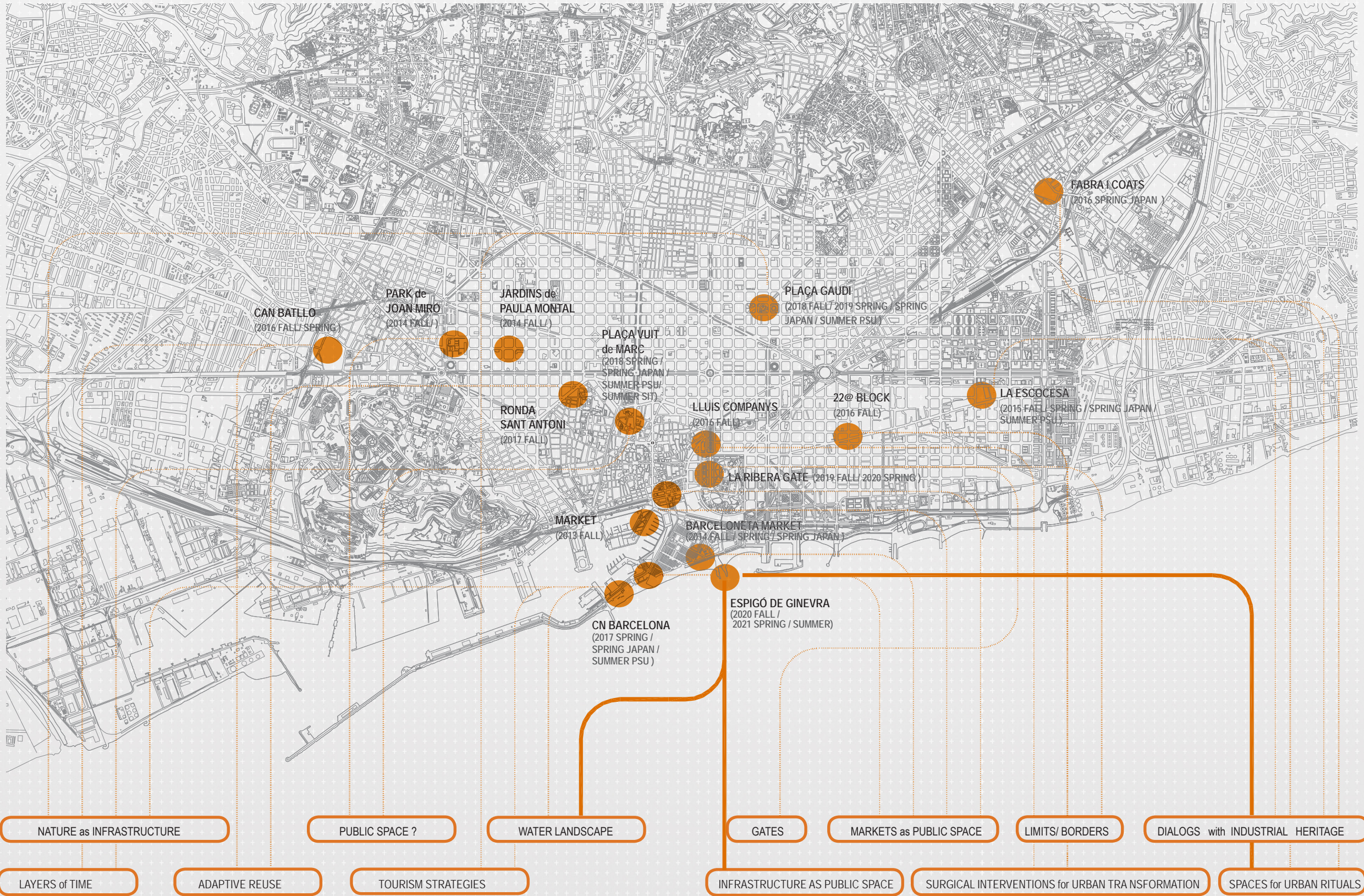
1. OBJECT s ... SITE s
2. OBJECT s ... EFFECT s
3. SHAPE s ... ARCHITECTURE s

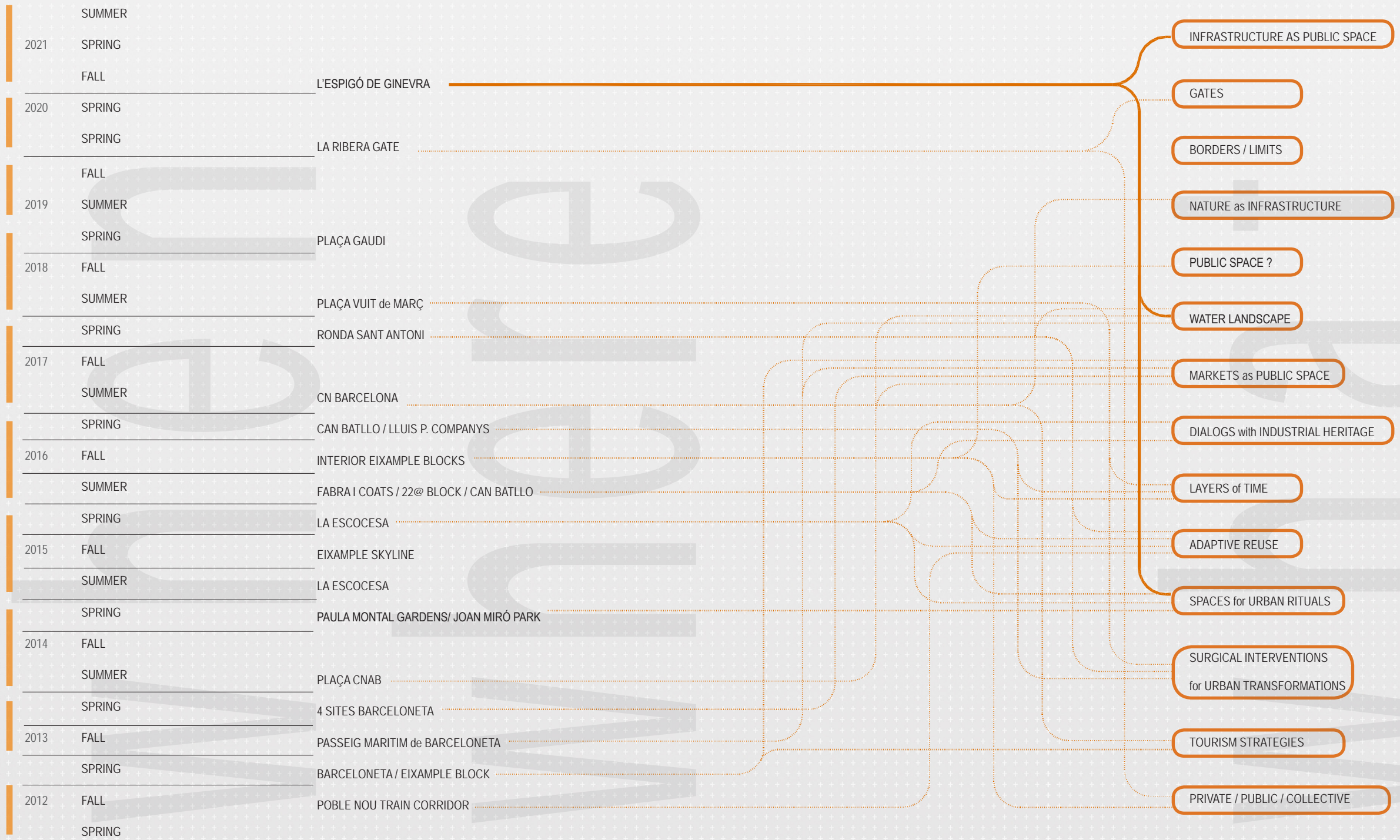
D. DESIGN STUDIO

TOPICS : VENN



1. PUBLIC / PRIVATE... COLECTIVENESS
2. IN / OUT..... IN BETWEEN
3. OLD / NEW..... LAYERs





Design Studio: Student Teams

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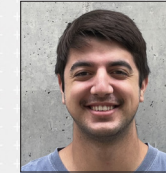


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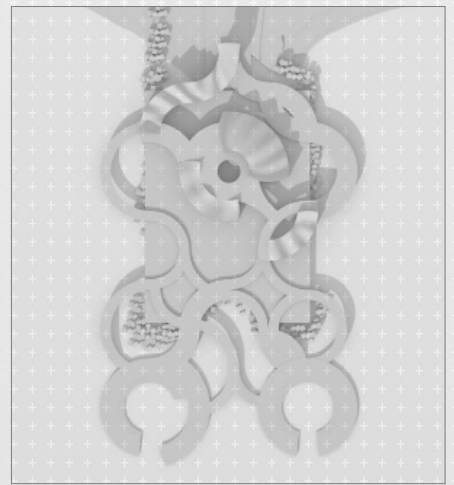
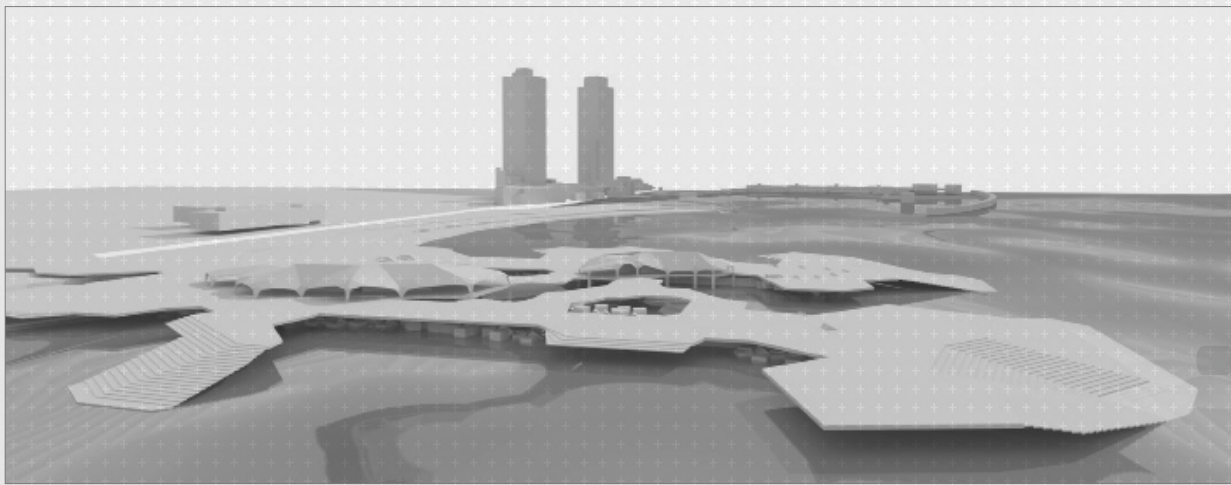
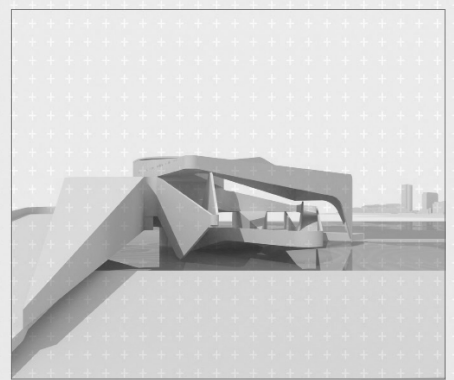
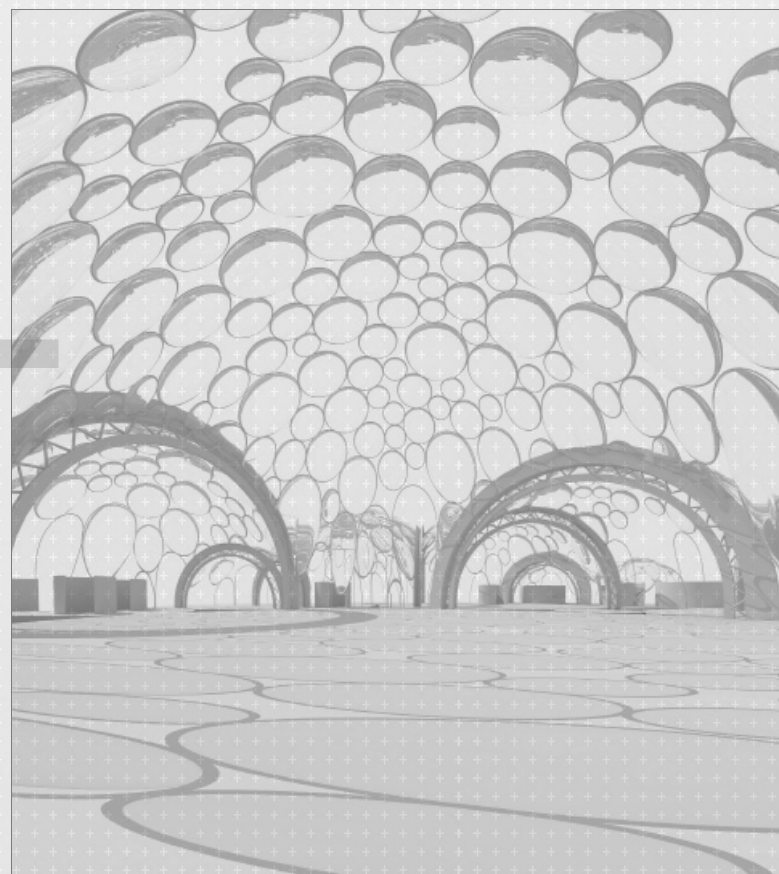
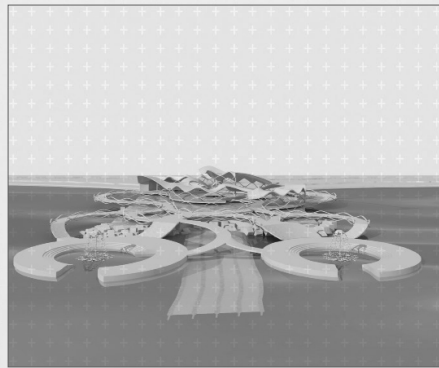
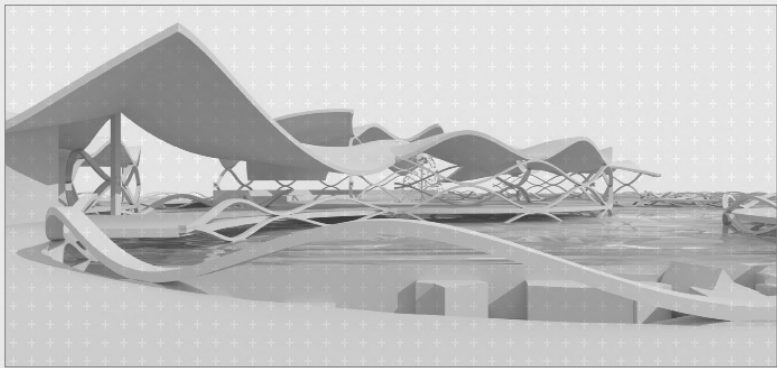
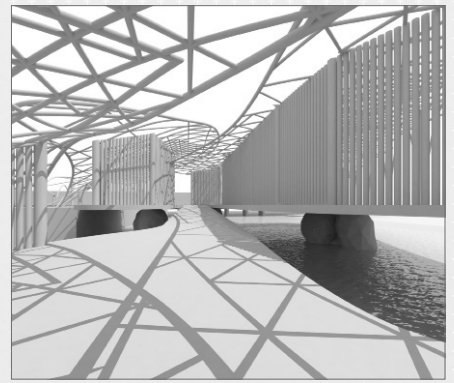
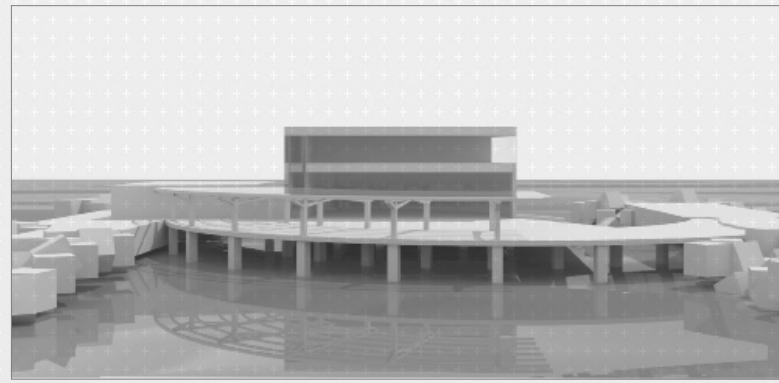
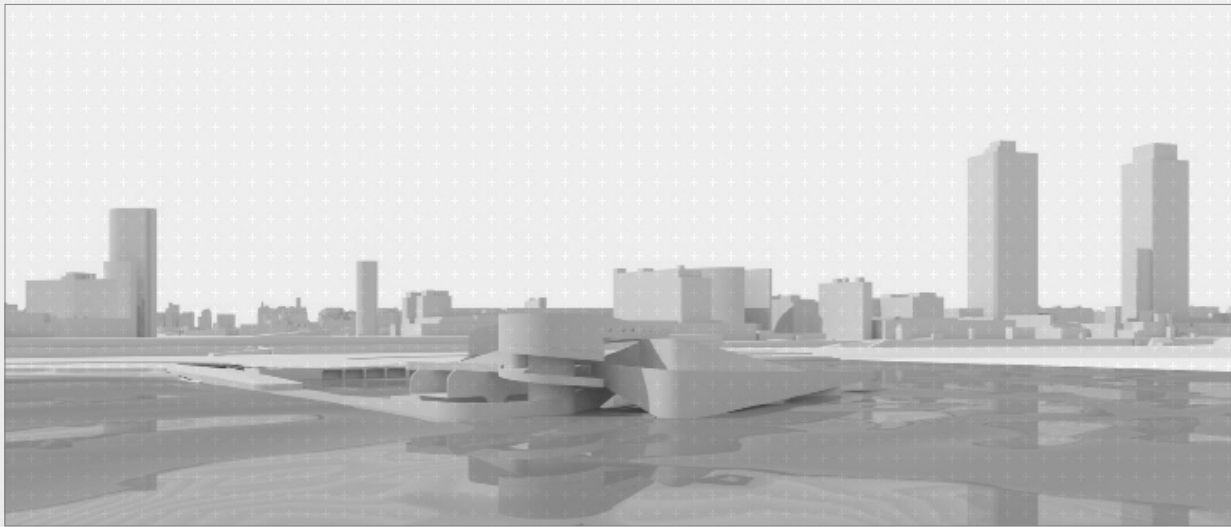
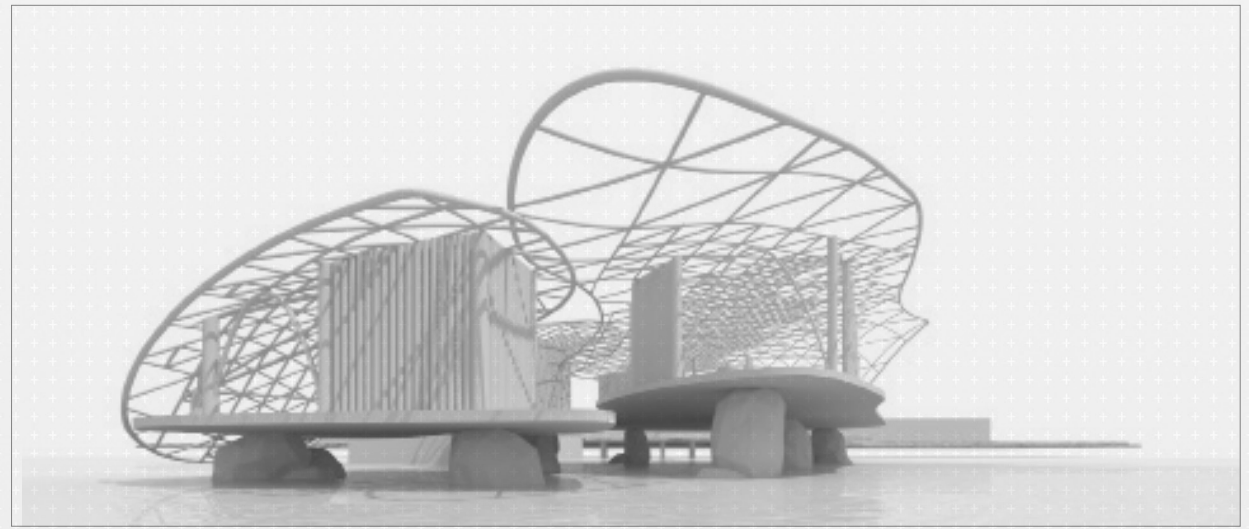
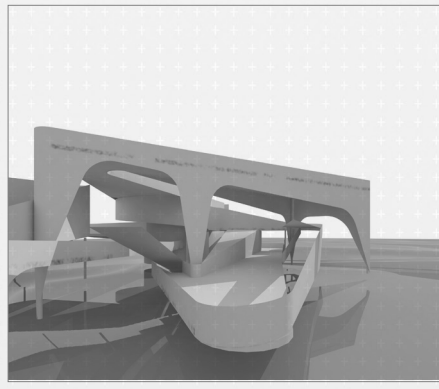
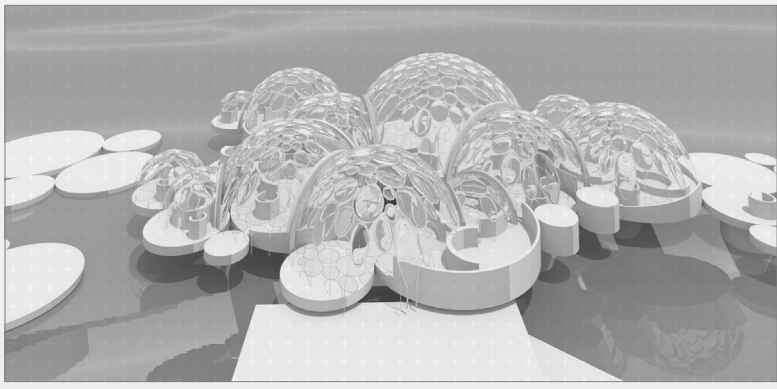
group 6



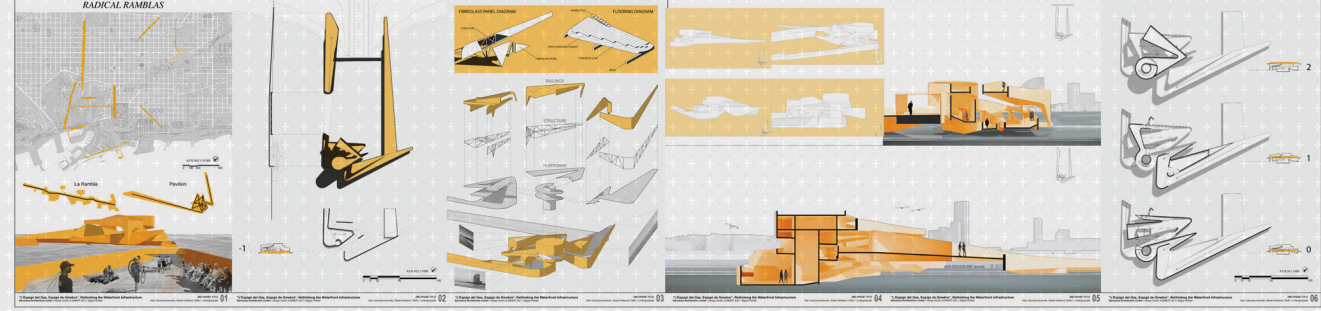
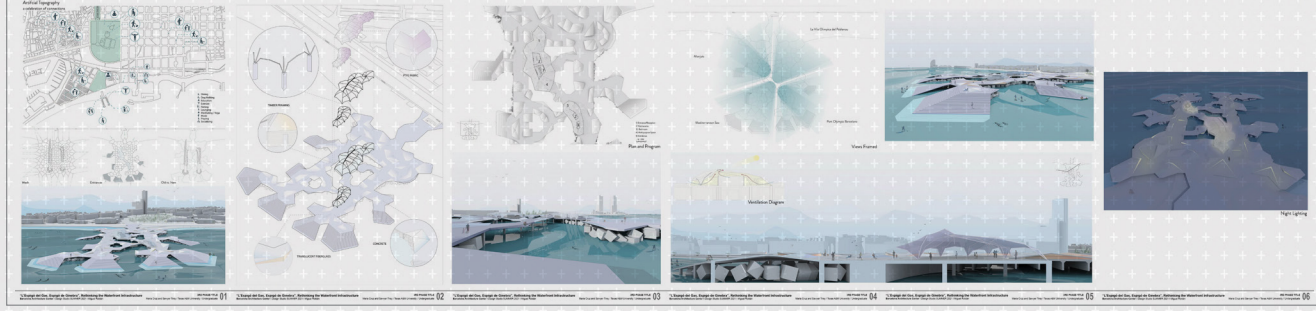
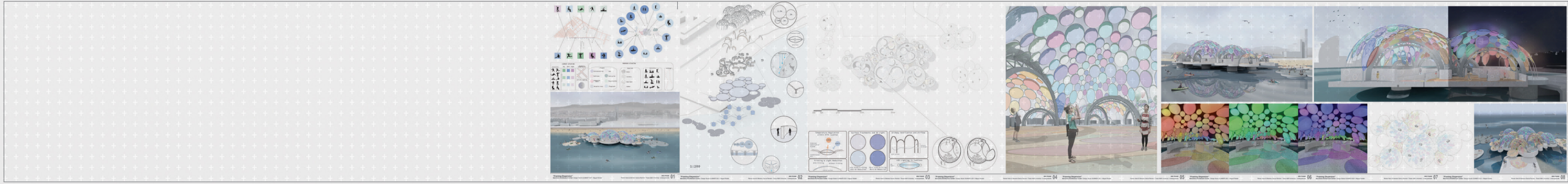
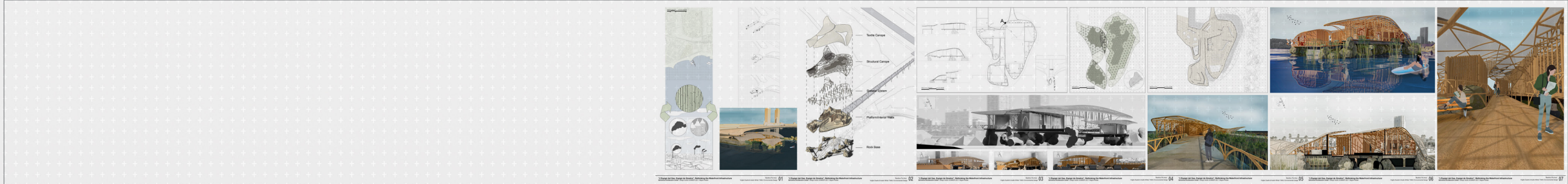
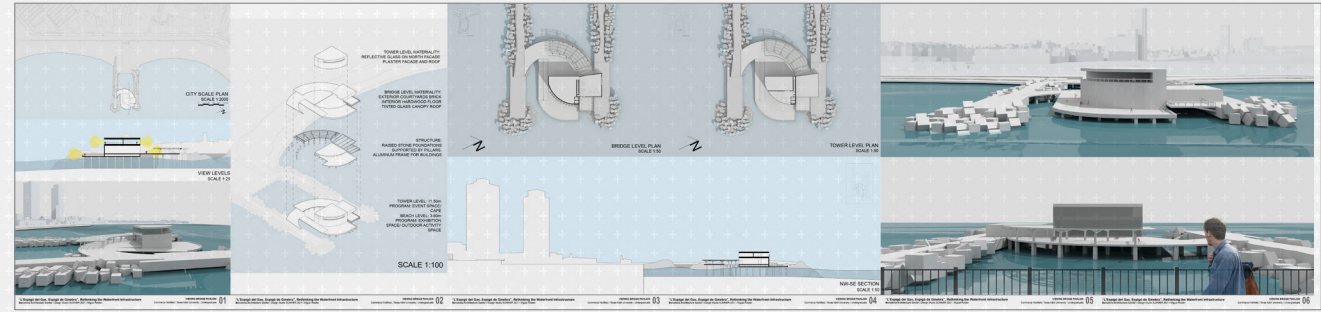
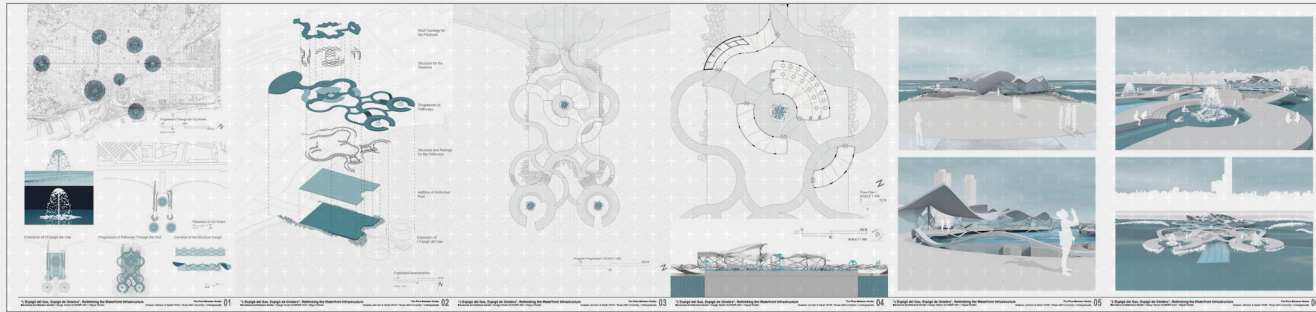
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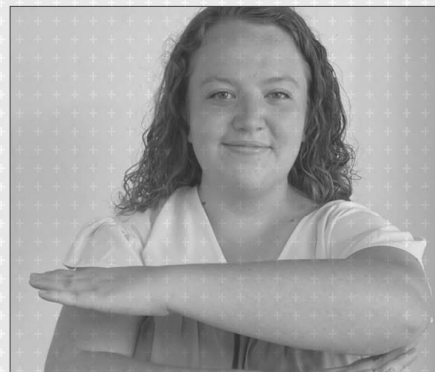
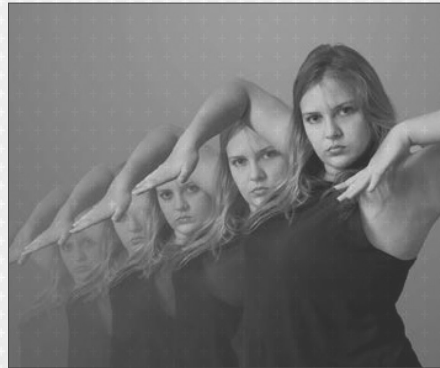


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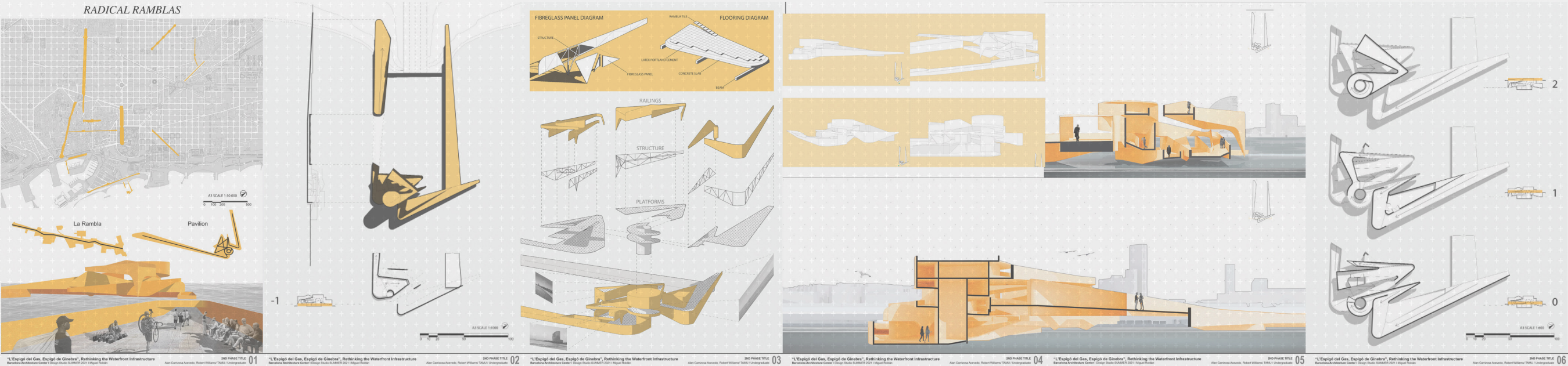






RADICAL RAMBLAS

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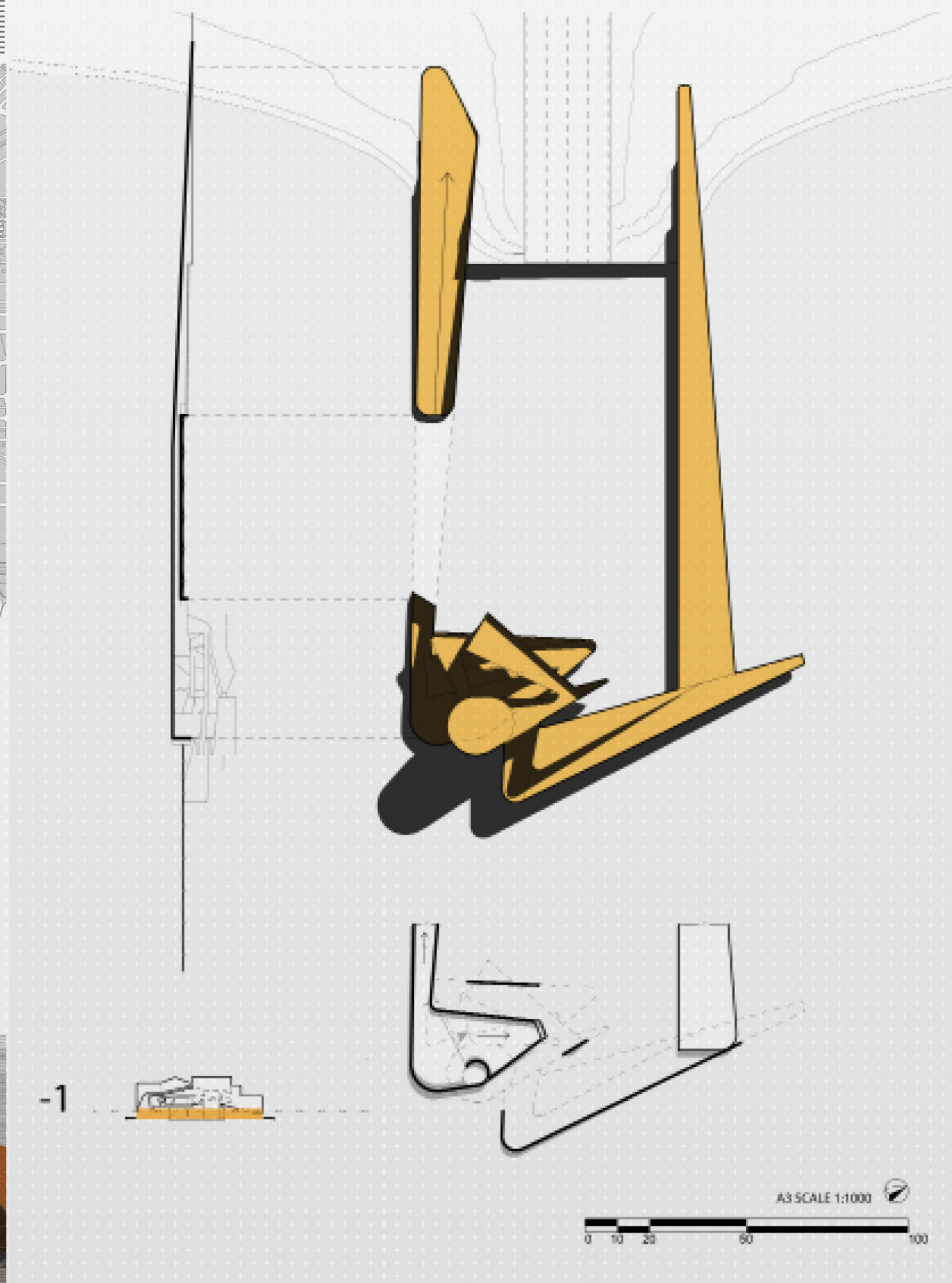
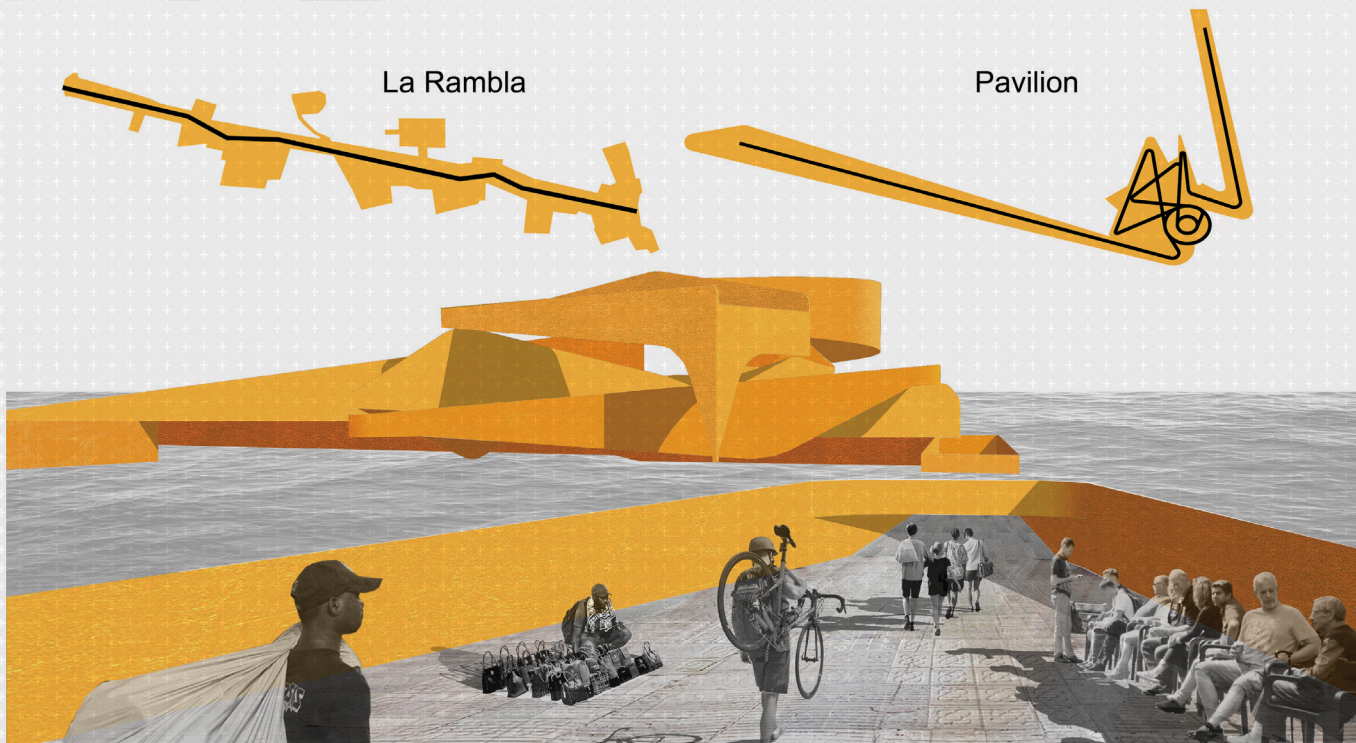
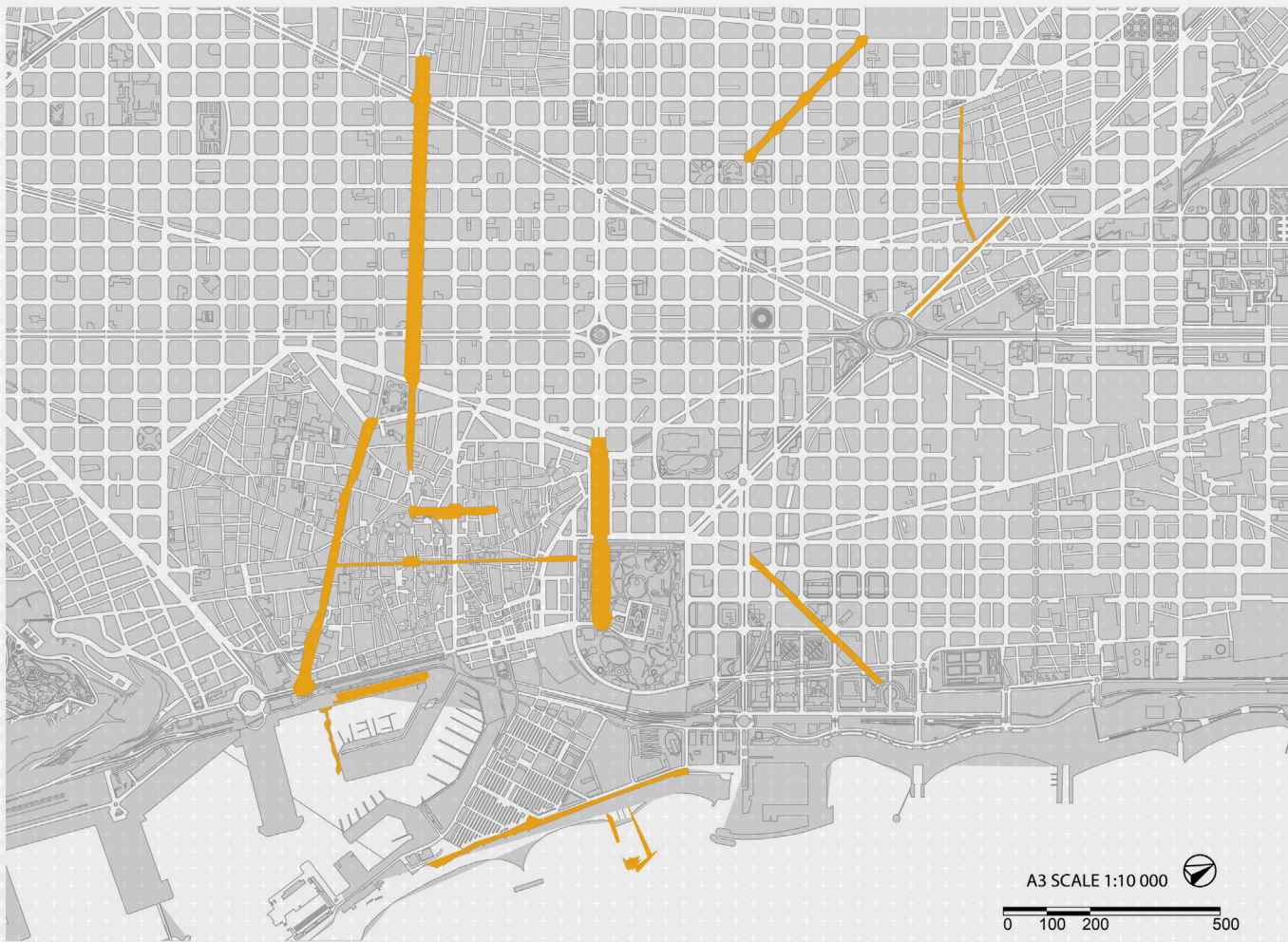
In Barcelona the Rambla is an urban space which fills in the space between two significant points in the city. This fill allows for pedestrian traffic which in turn creates an extremely dynamic environment through different activities including shopping and leisure. Radical Ramblas is a proposal of a pasarela that gives a new sensibility to architecture in Barcelona through the collection of wrapping promenades.

It takes the line created from a rambla and becomes wrapped and morphed by the sea in order to create this new network of passages which will serve to activate the space. Our new Rambla takes on the infrastructure of Barcelona by transforming the current existing breakwater/piers and initiates a dance of descent into the water via the beach.

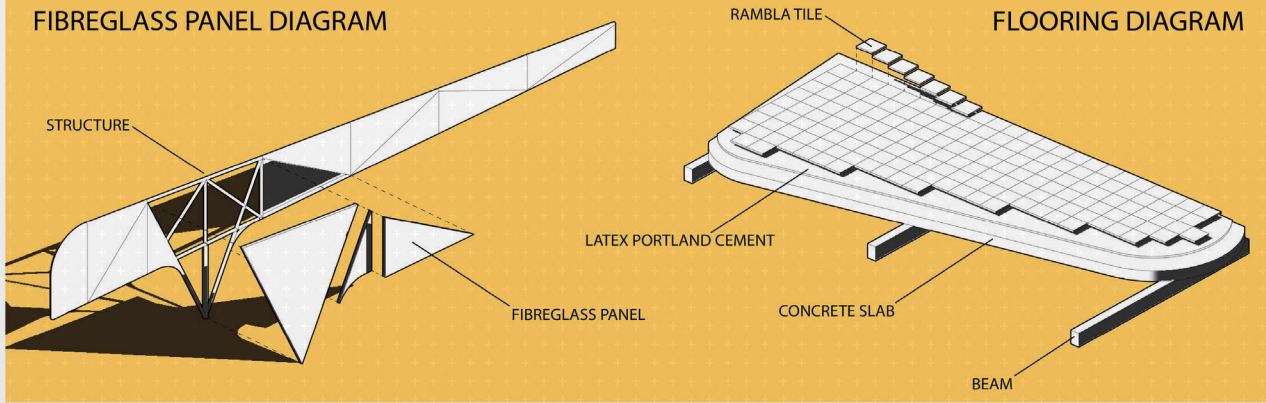
Similar to how a swimmer must submerge themselves in the water, the user of our pavilion must submerge themselves and ascend the rambla itself. By doing this we disconnect from the city and from the beach to promenade through a pasarela that takes in the nature of the sea and celebrates its intrusion.

In following the concept of the line, we create multiple vantage points that take us to moments above the water, underwater, and in between which follows the same dance of descent and ascent through varying elevation points.

RADICAL RAMBLAS



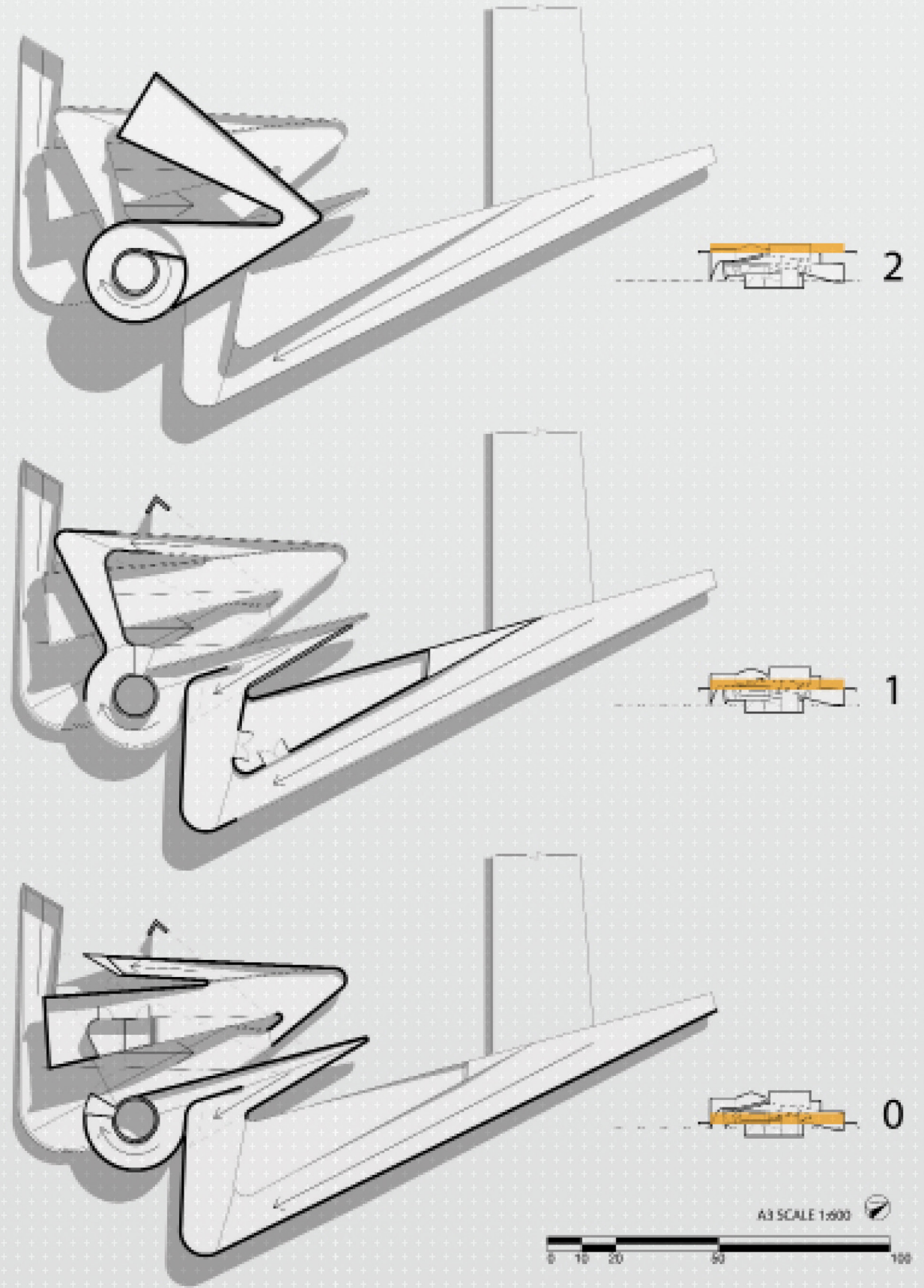
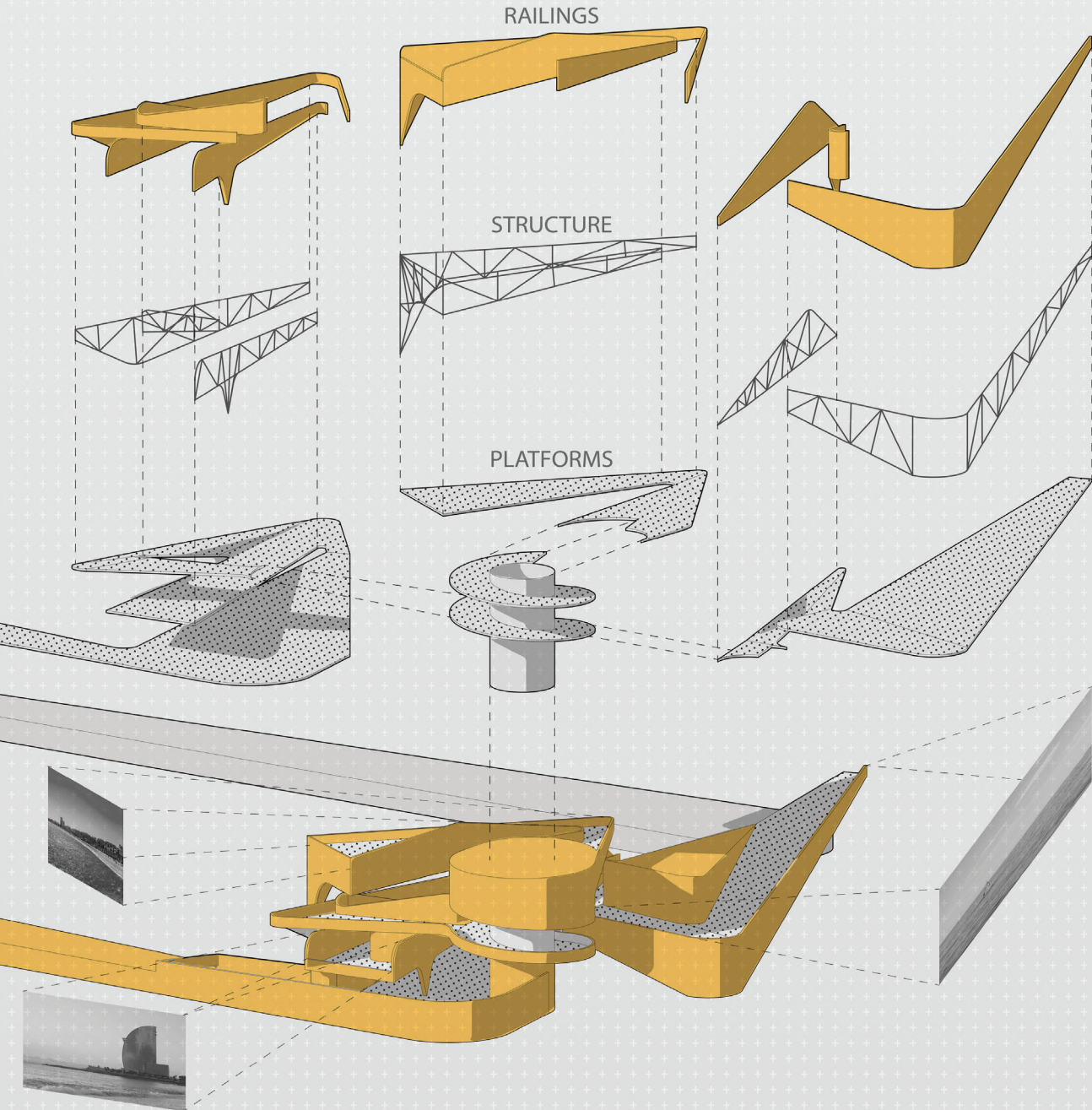
FIBREGLASS PANEL DIAGRAM

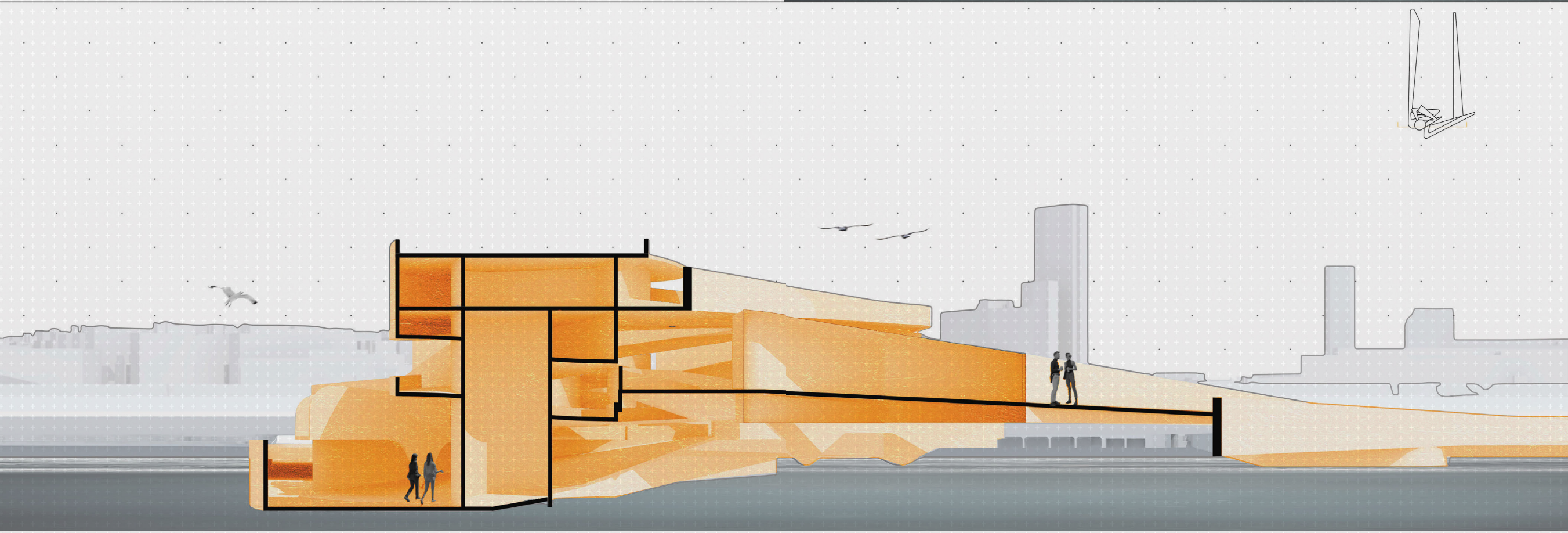
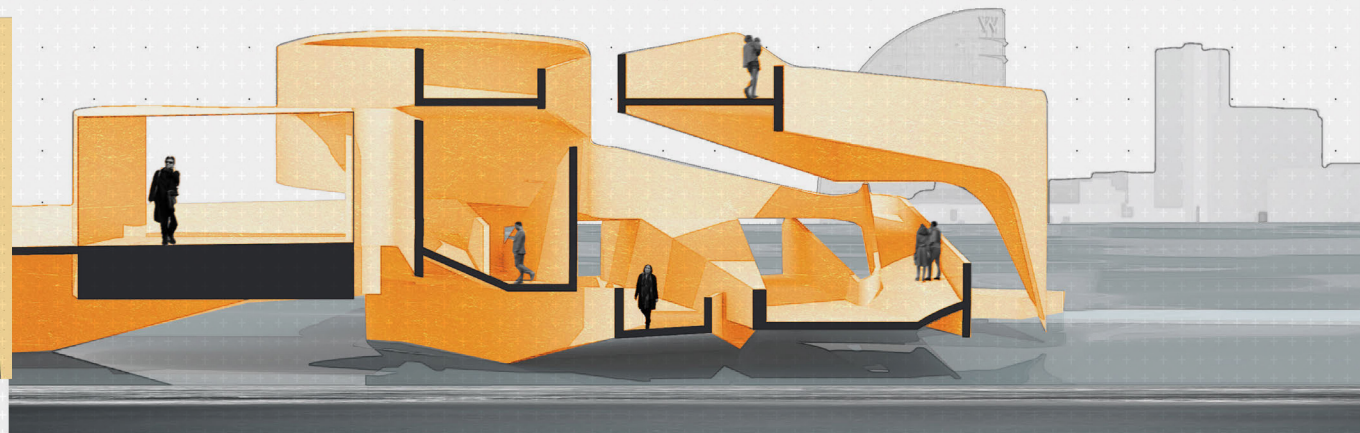
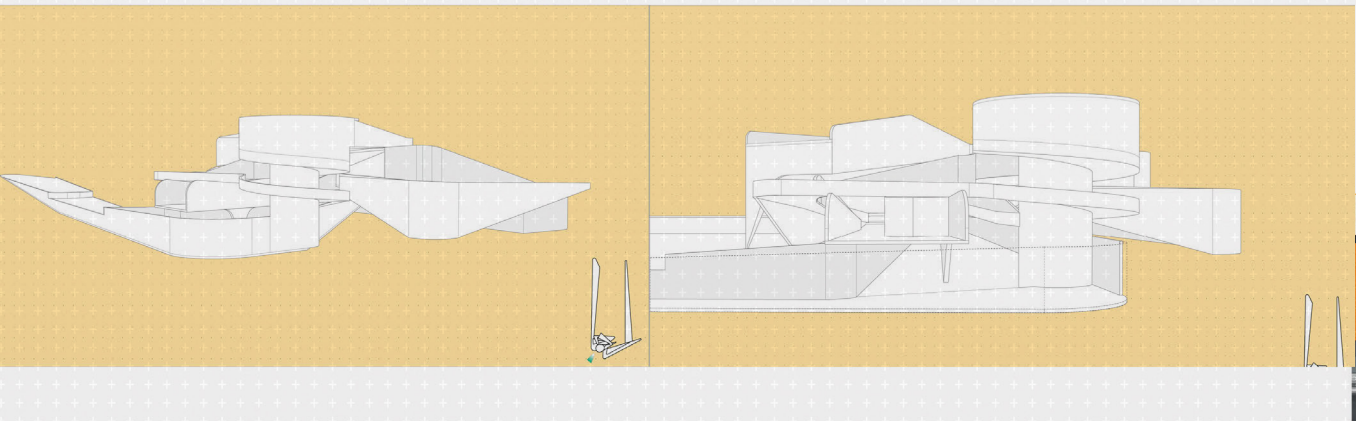
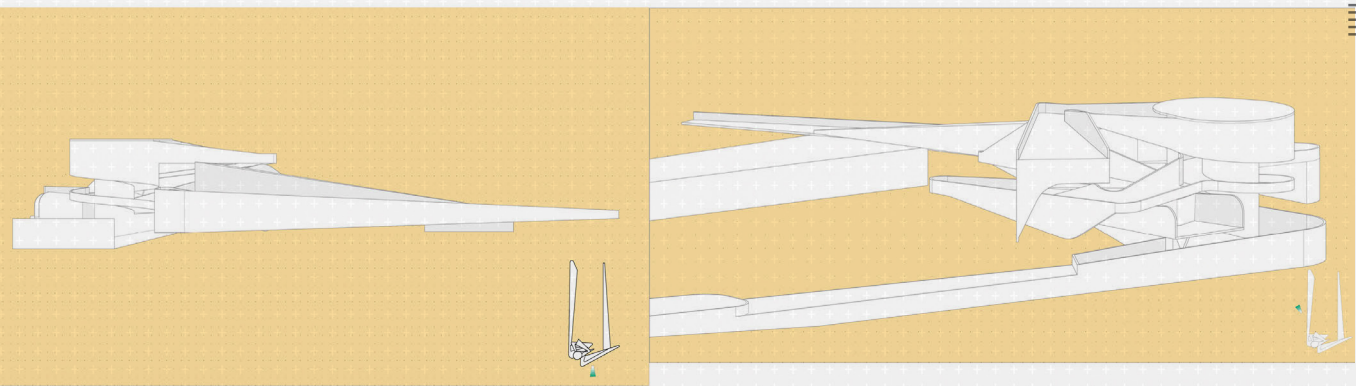


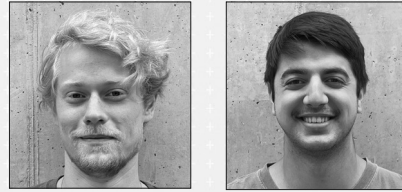
RAILINGS

STRUCTURE

PLATFORMS

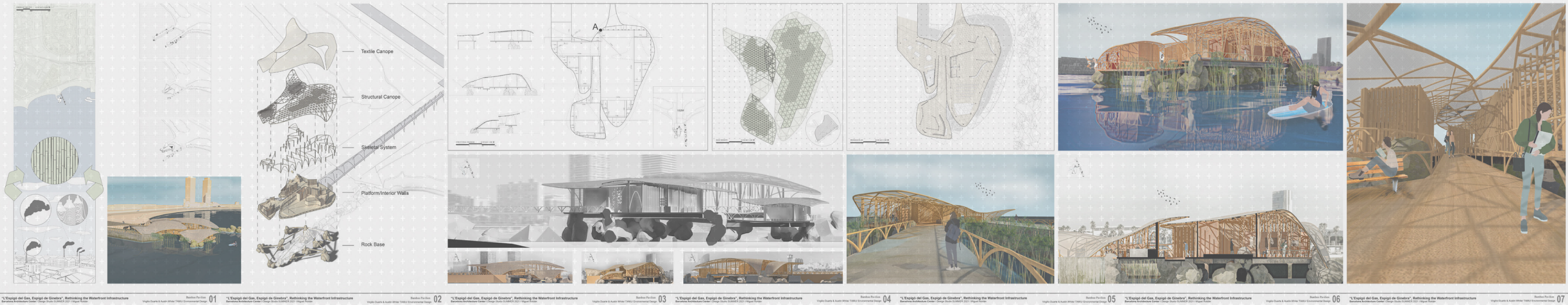






JUXTAPOSITION

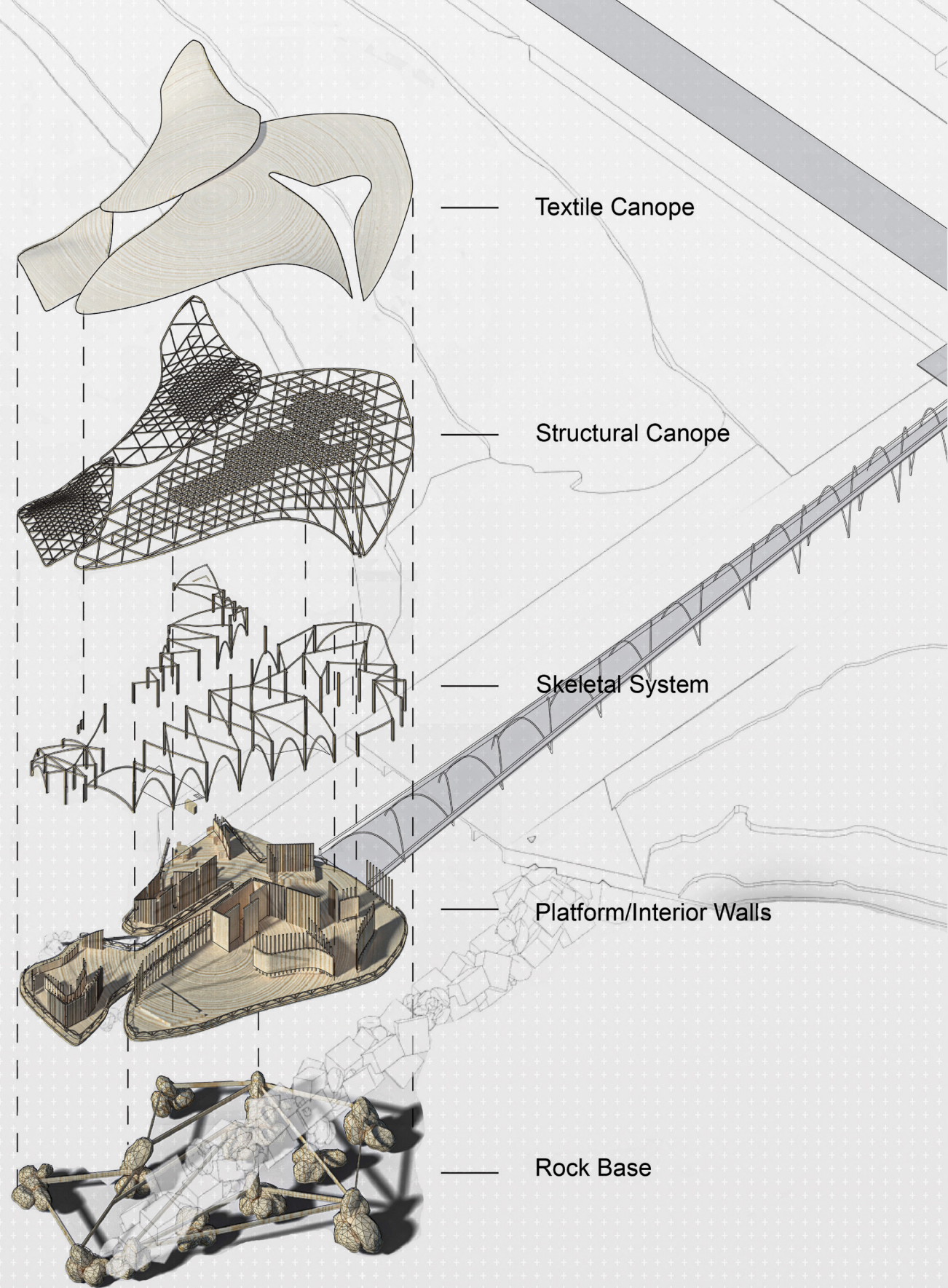
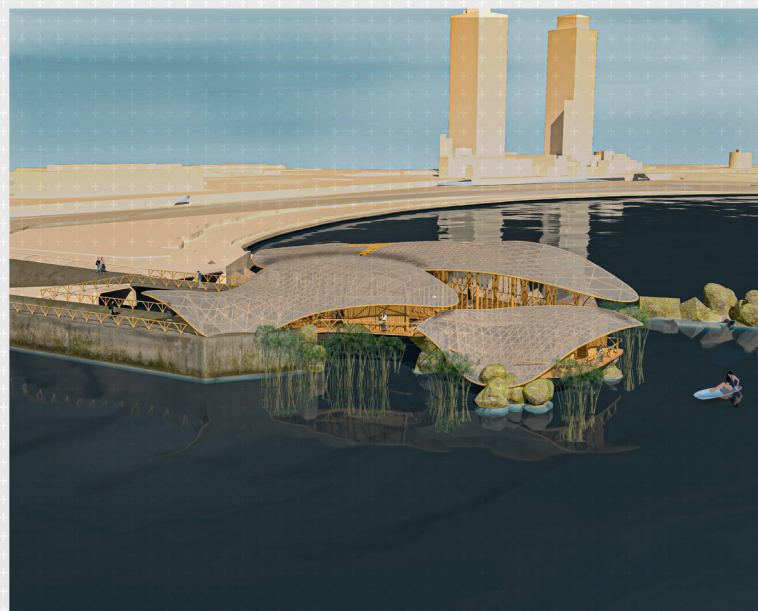
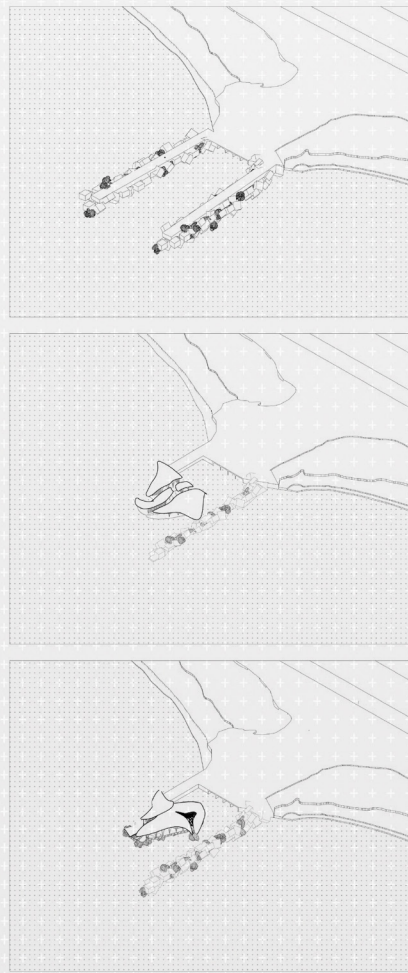
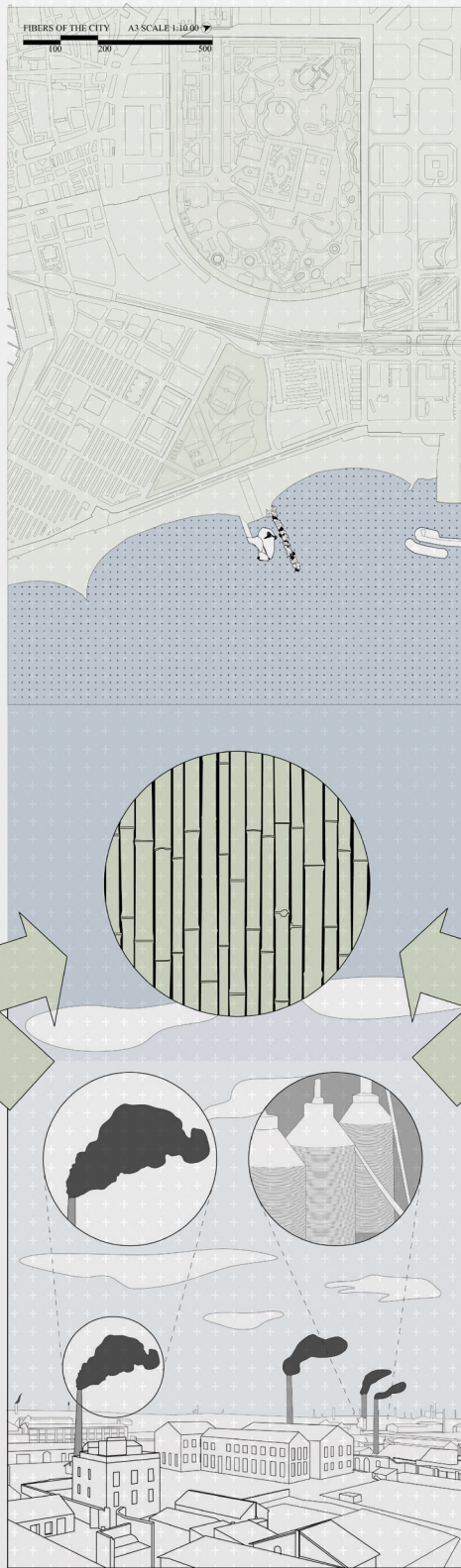
Austin Lee White, Texas A&M University, Architecture Undergraduate
 Virgilio A Duarte, Texas A&M University, Architecture Undergraduate

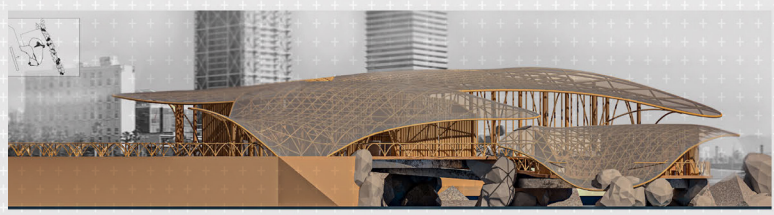
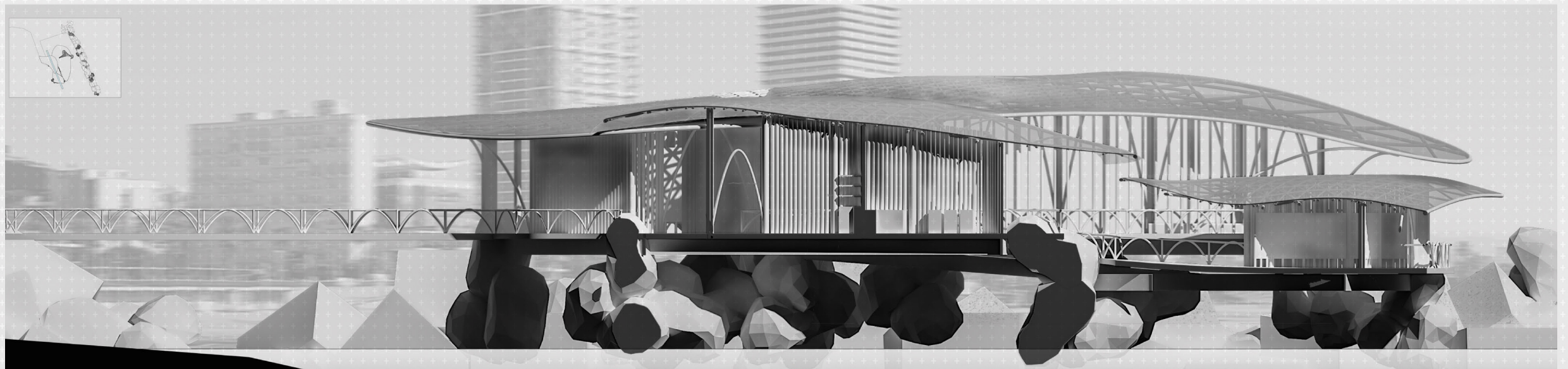
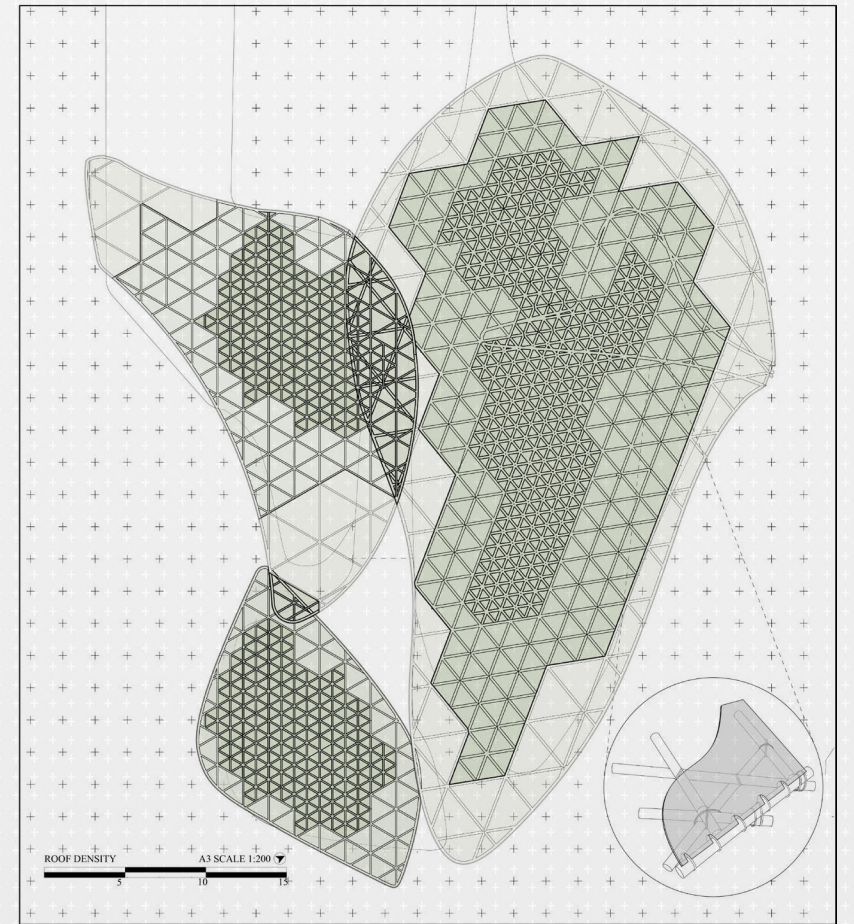
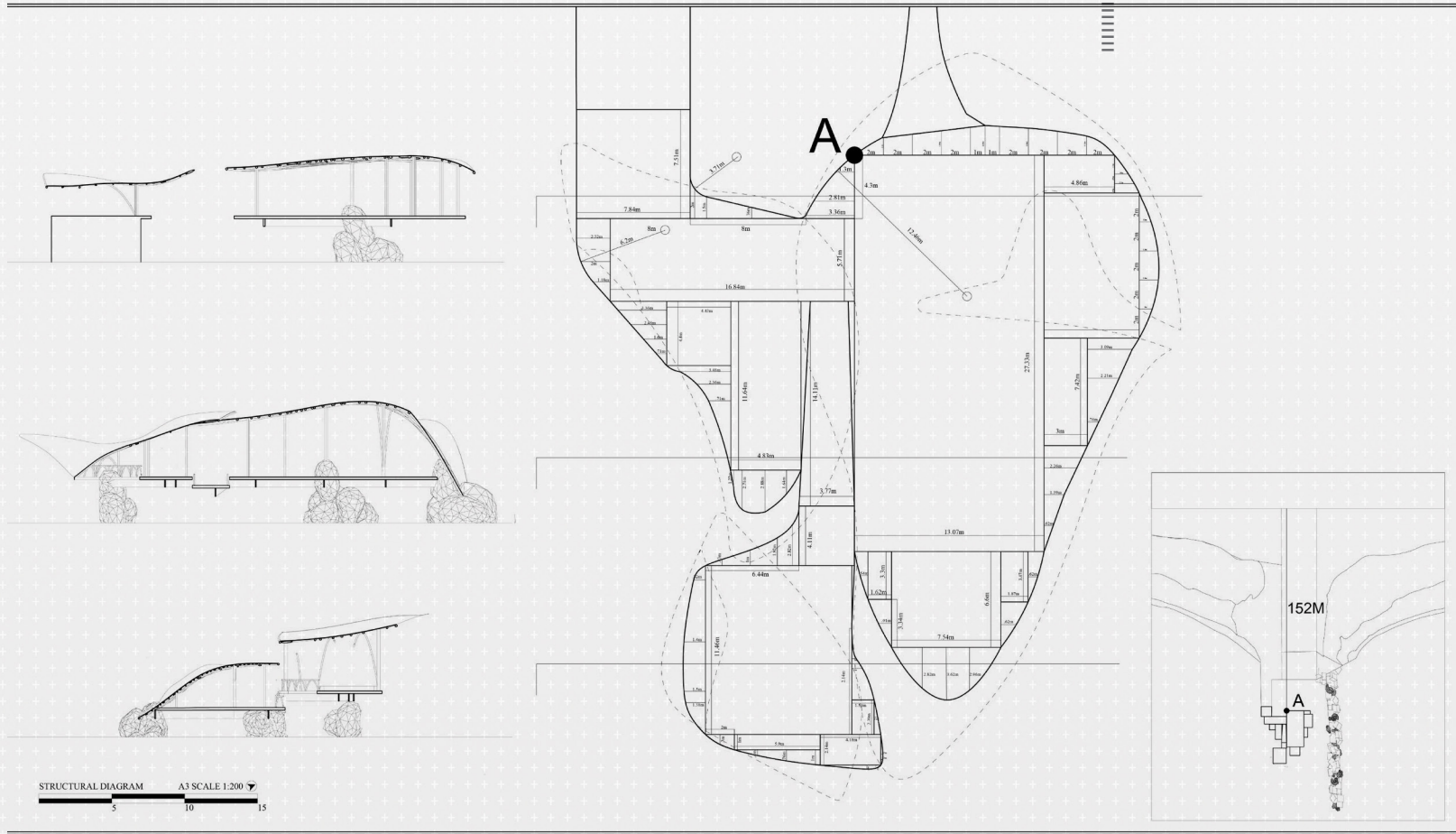


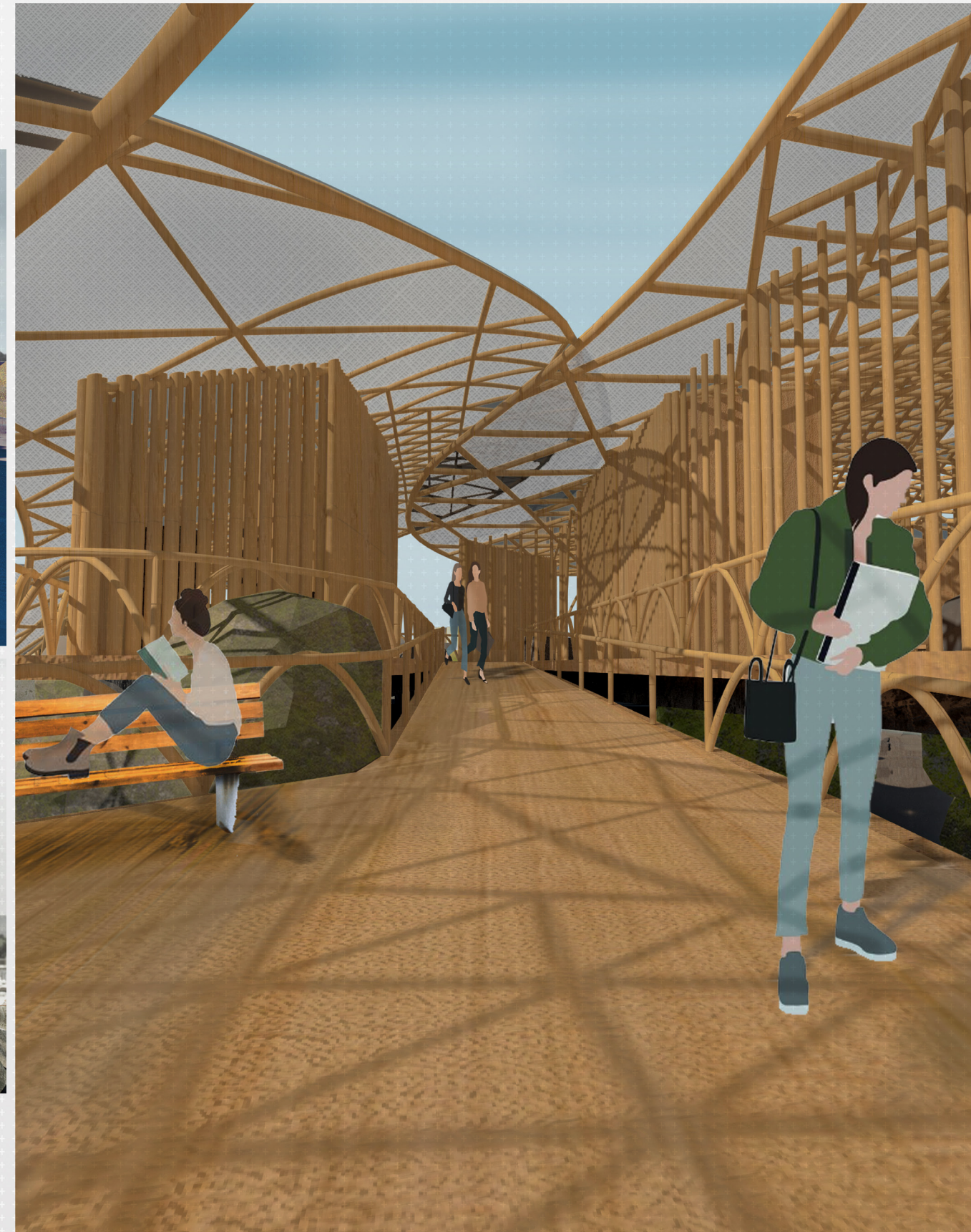
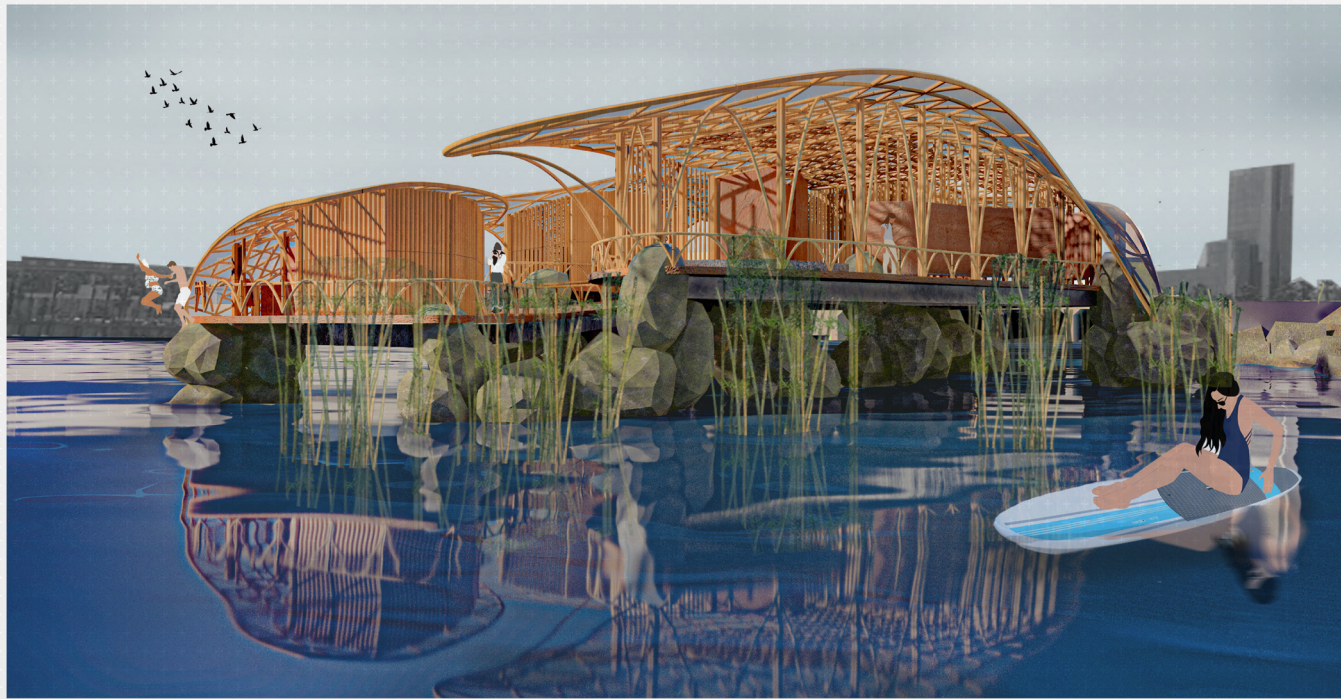
Our project reflects on the juxtaposition of Barcelona's past and its future. A city that grew as an industrial giant and supplier of textiles would now be realized through our projects as an adaptation to a green textile, or fiber if you will, in the form of Bamboo.

With this realization, we designed a Bamboo Pavilion in order to suggest a change from Barcelona's past into a promising, sustainable future. After deciding to push the green textile of bamboo the building was designed using multiple structural fibers such as the canopy, skeloton, and platform. Taking in consideration bamboo only has a 4-7 year life span, growing bamboo in between int breakwater will allow for more sustainability as the site propogates its own material.

The fibers of the three main bamboo textiles are overlaid to cast shadows on the spaces below, as the density of the fibers in more consintrated over the main spaces. The pavilion rests above the sea on rock columns to mediate between the platform and the site.



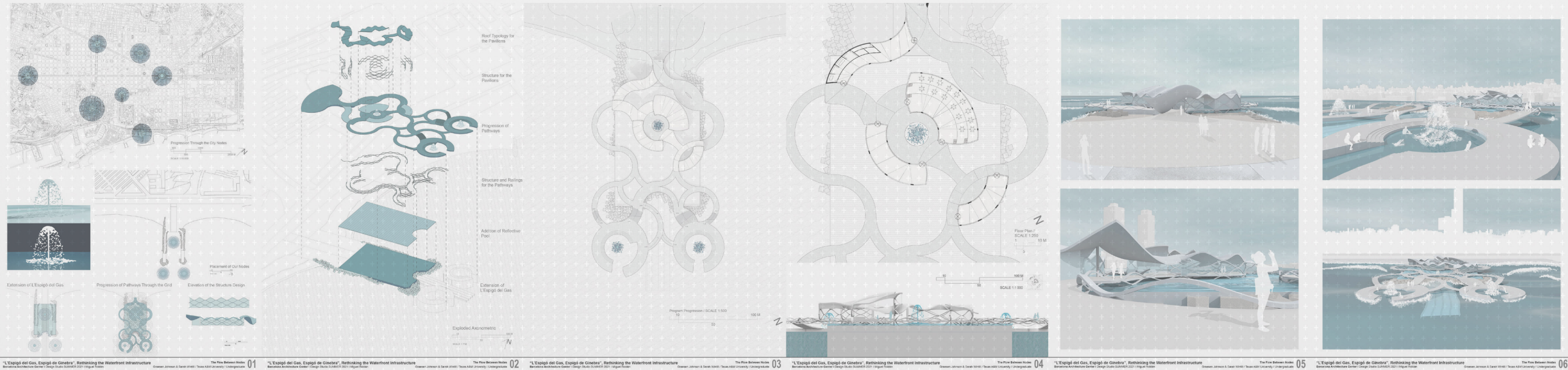






THE FLOW BETWEEN NODES

Sarah N Wintill, Texas A&M University, Architecture Undergraduate
 Graesen Elisabeth Johnson, Texas A&M University, Architecture Undergraduate



Throughout the city of Barcelona, there are many different areas that are denser than others due to various activities happening. Transitioning between each area of the city can take however long one would like due to the infinite options of directional choices within the Eisanche District of the Cerda Plan. On our site, we decided to place three fountains as nodes that would dictate our program.

The first fountain would be central to the pavilion while the outer two would be used as an area to swim under. Our decision to extend L'Espigó del Gas past this area of swimming allowed for the renovation of the breakwater by filling in the middle of area and adding a pool of water on top. This way the water and natural reflexions experienced throughout the site and not just over the sea.

The progression to the first fountain and later the outer two fountains involves many different options within the site, similar to the urban layout of Barcelona. We chose a circular grid to meticulously place our pavilion and pathways, therefore increasing the time taken to experience the progression of the site to the outer fountains. Similarly, the structure is in a curvilinear nature to emphasize the horizontal progression of the pathways and decrease the need for vertical structure such as columns. The roof typology of the pavilion space acts in a similar manner.

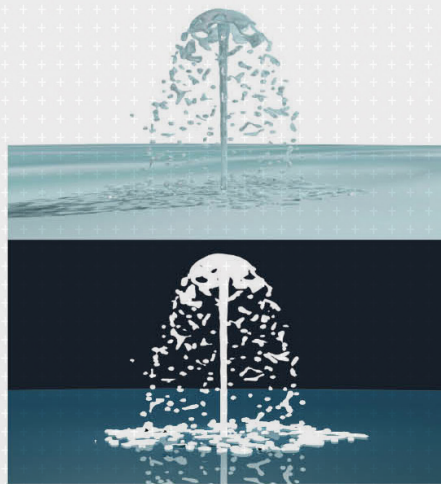
Upon entrance to the site, the decision of how one will experience the site is up to them. The left option continues the progression of the pathway while the right option allows for a different experience of entering the first interior pavilion space. This holds kitchenette, bathrooms and other services but is easily walked through in order to experience the site more. The other interior spaces of the pavilion allow for banquets, exhibition space and flexible room for other uses if needs to be.

As the progression heads more towards the sea, the waves of the railings draw one out to experience the rest of the site. These railings and structural elements are reflected in the water below, amplifying the experience of the natural element throughout full site. The fountains also amplify this experience of the natural sea and can be swam under or just looked at in the space around. These fountains also act as a light source and can be experienced at any point of the day. The flexibility of both the program and path of progression allows for a unique experience in views, time, and use.

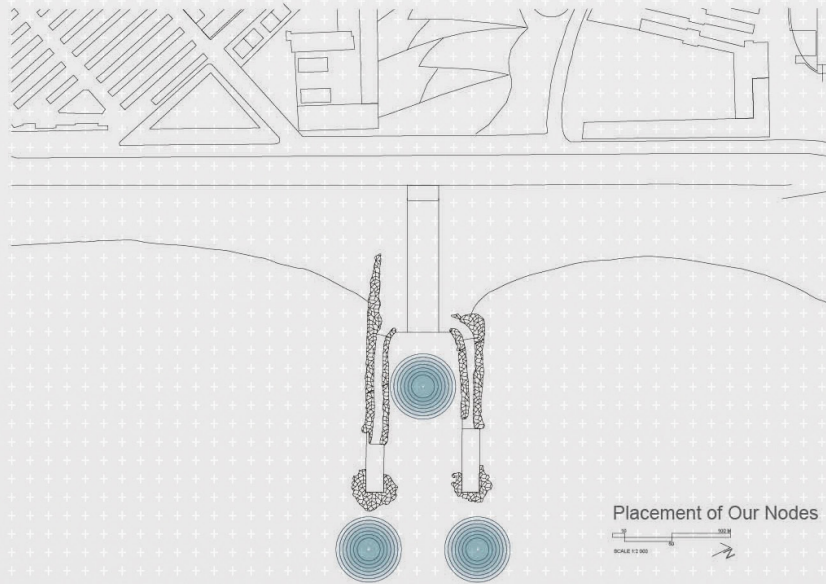
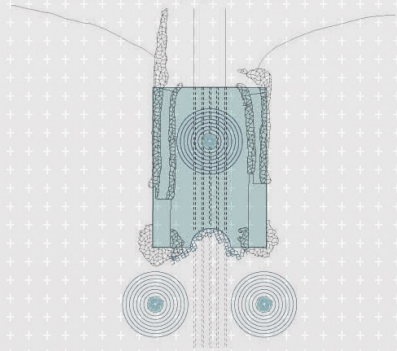


Progression Through the City Nodes

100 500 1000 2000 M
SCALE 1:15 000



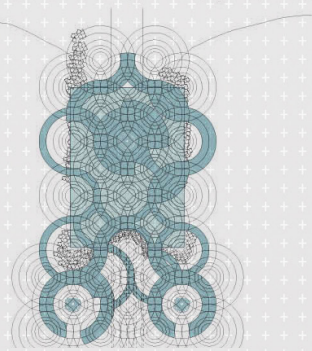
Extension of L'Espigó del Gas



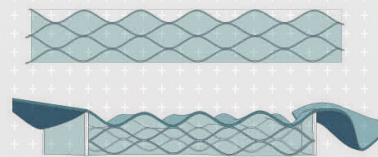
Placement of Our Nodes

SCALE 1:200

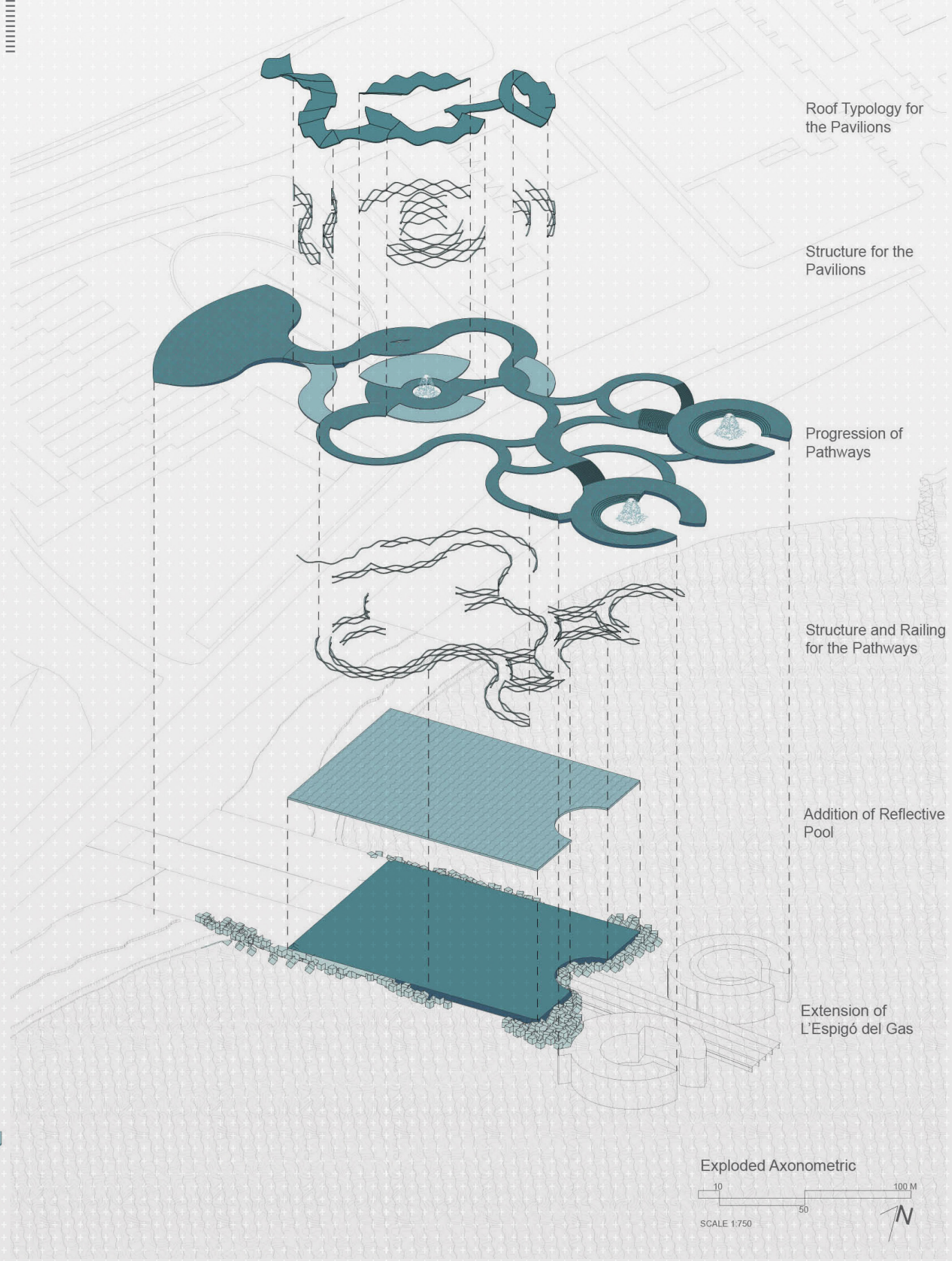
Progression of Pathways Through the Grid



Elevation of the Structure Design



SCALE 1:500



Roof Typology for the Pavilions

Structure for the Pavilions

Progression of Pathways

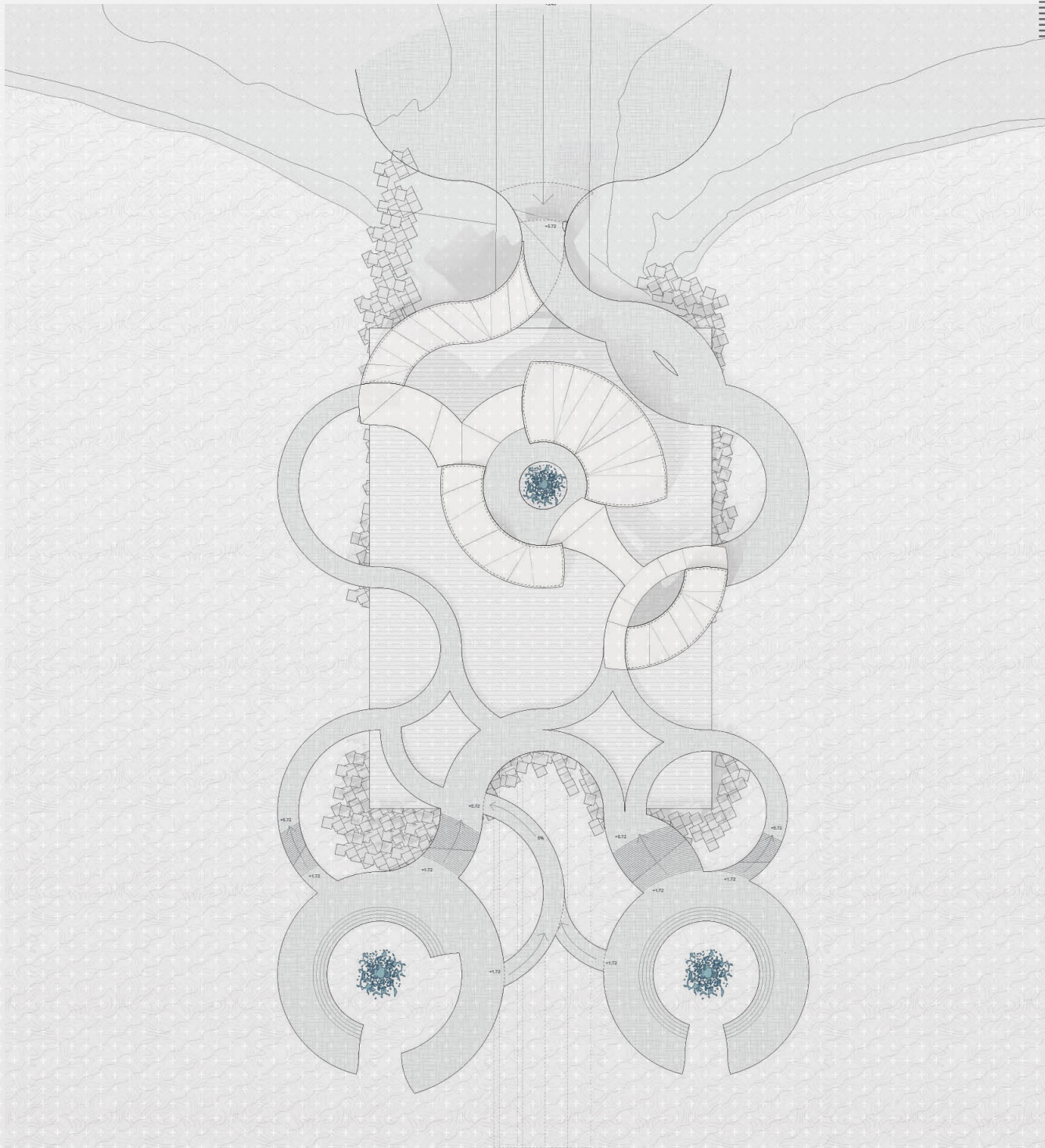
Structure and Railing for the Pathways

Addition of Reflective Pool

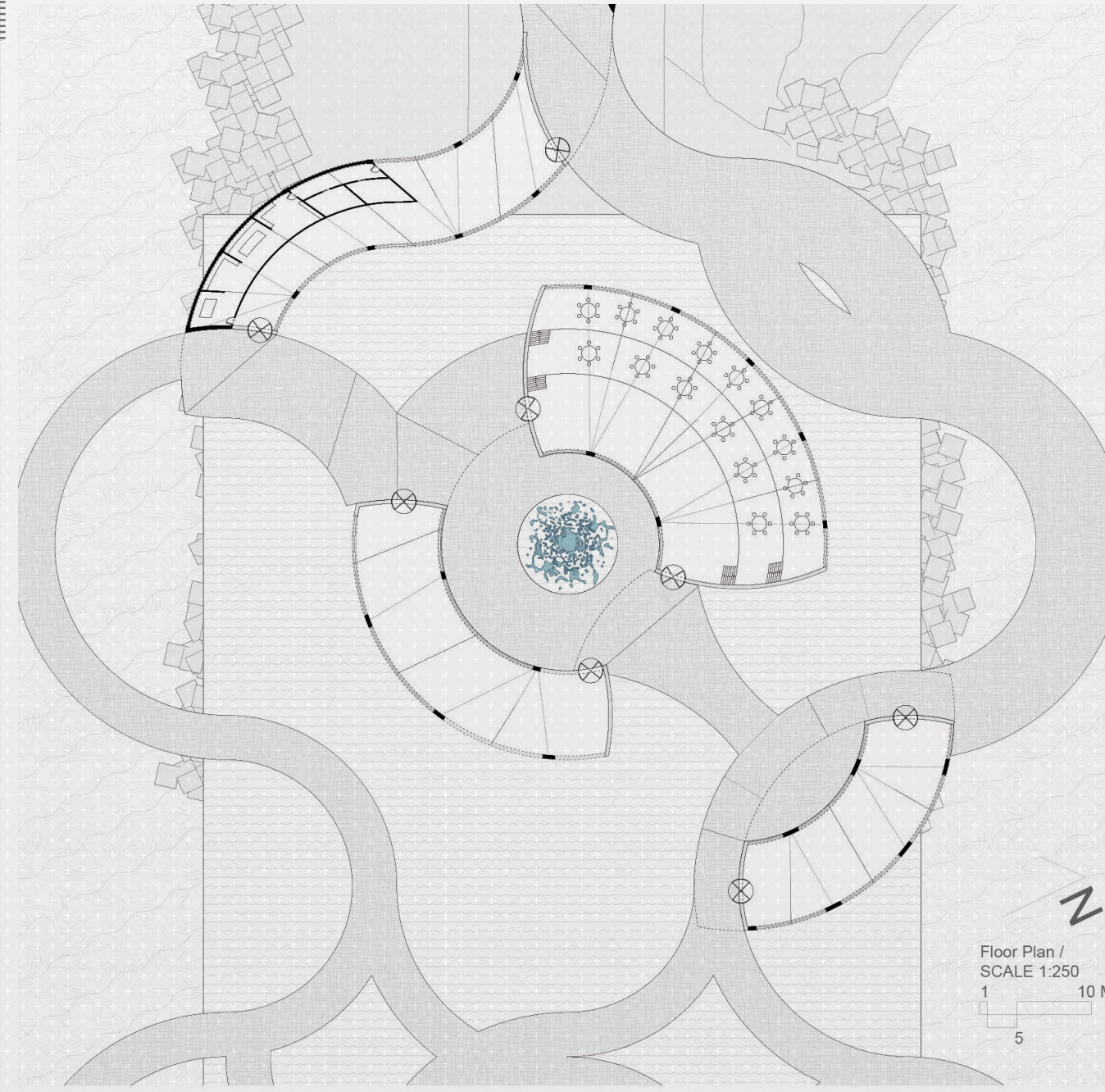
Extension of L'Espigó del Gas

Exploded Axonometric

10 50 100 M
SCALE 1:750

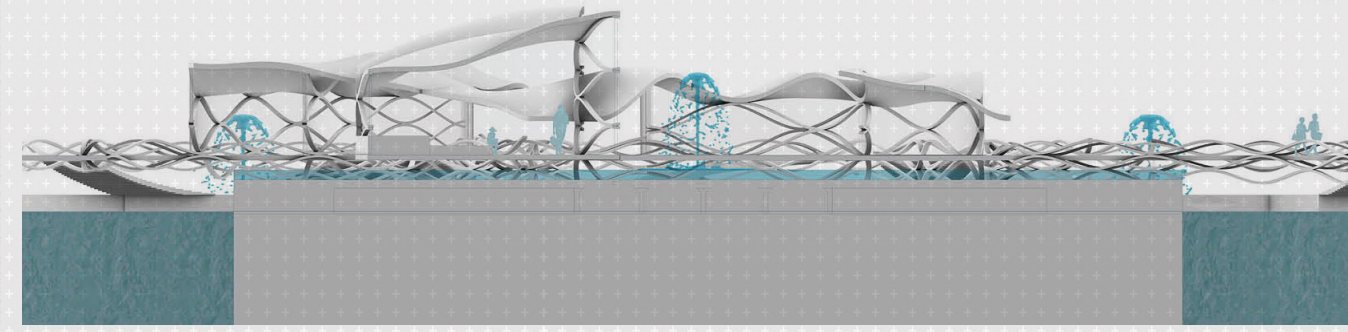


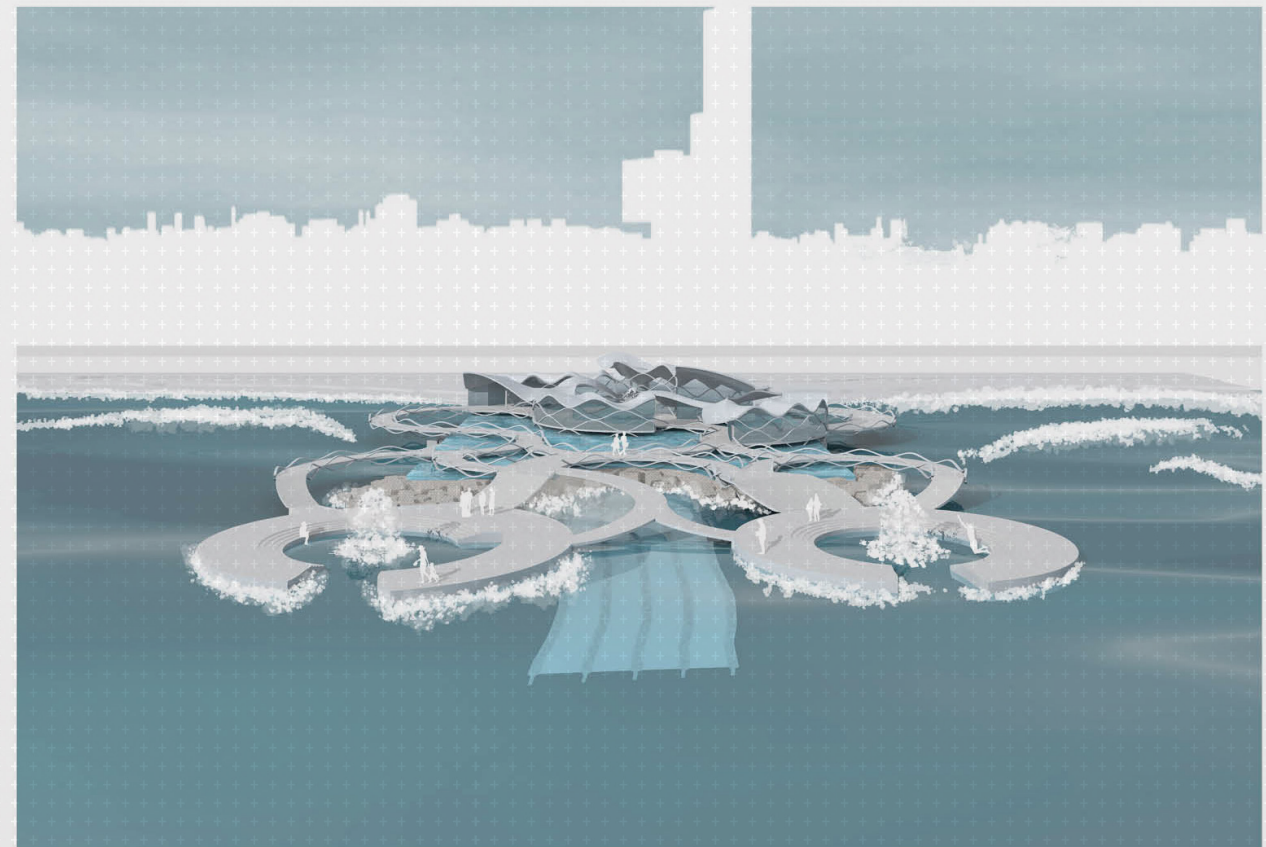
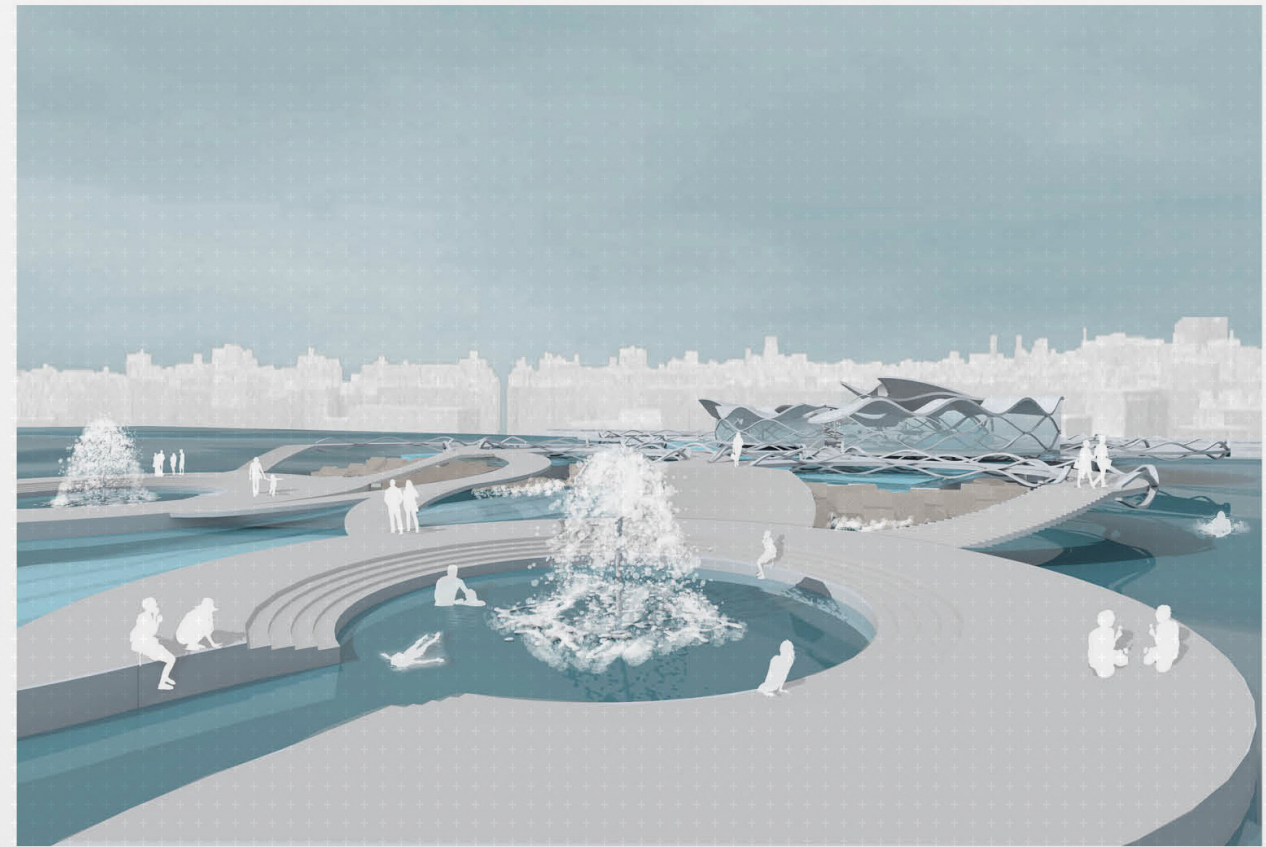
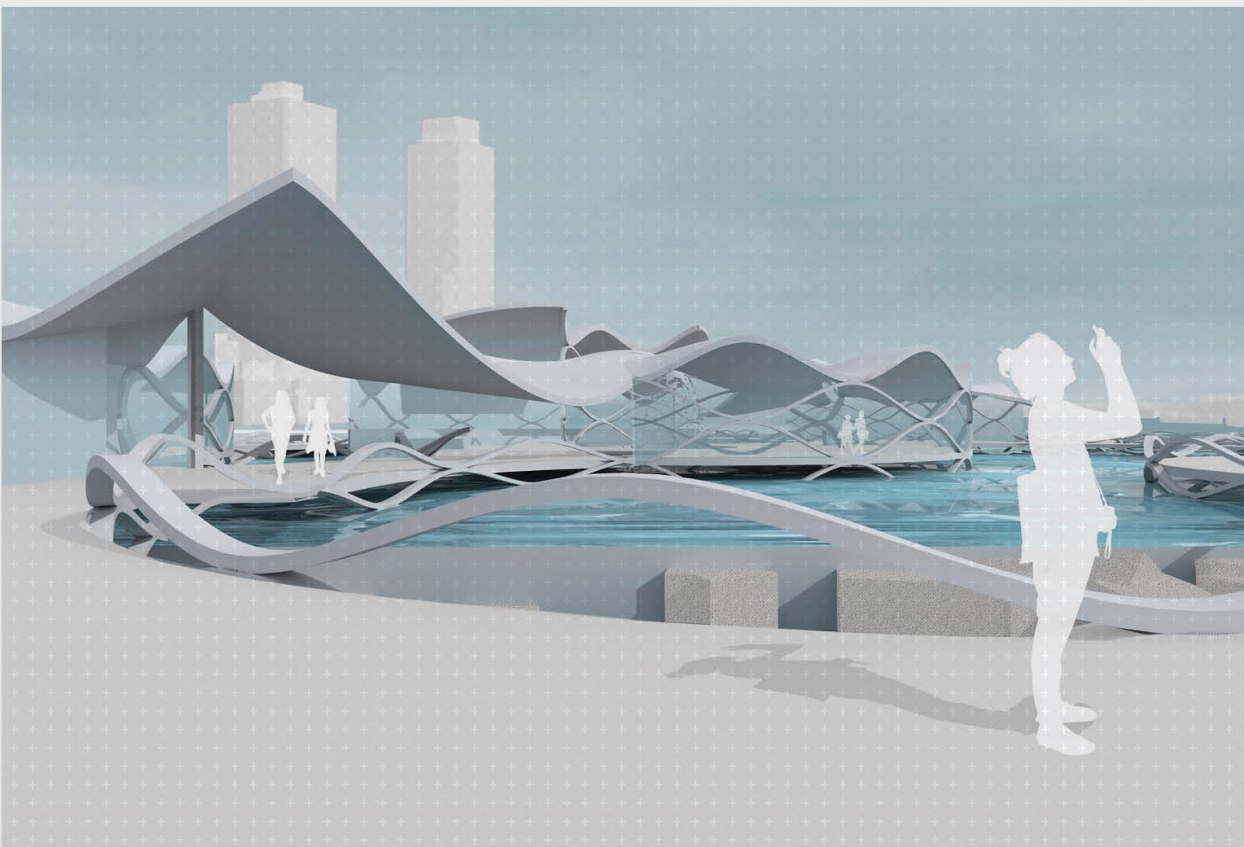
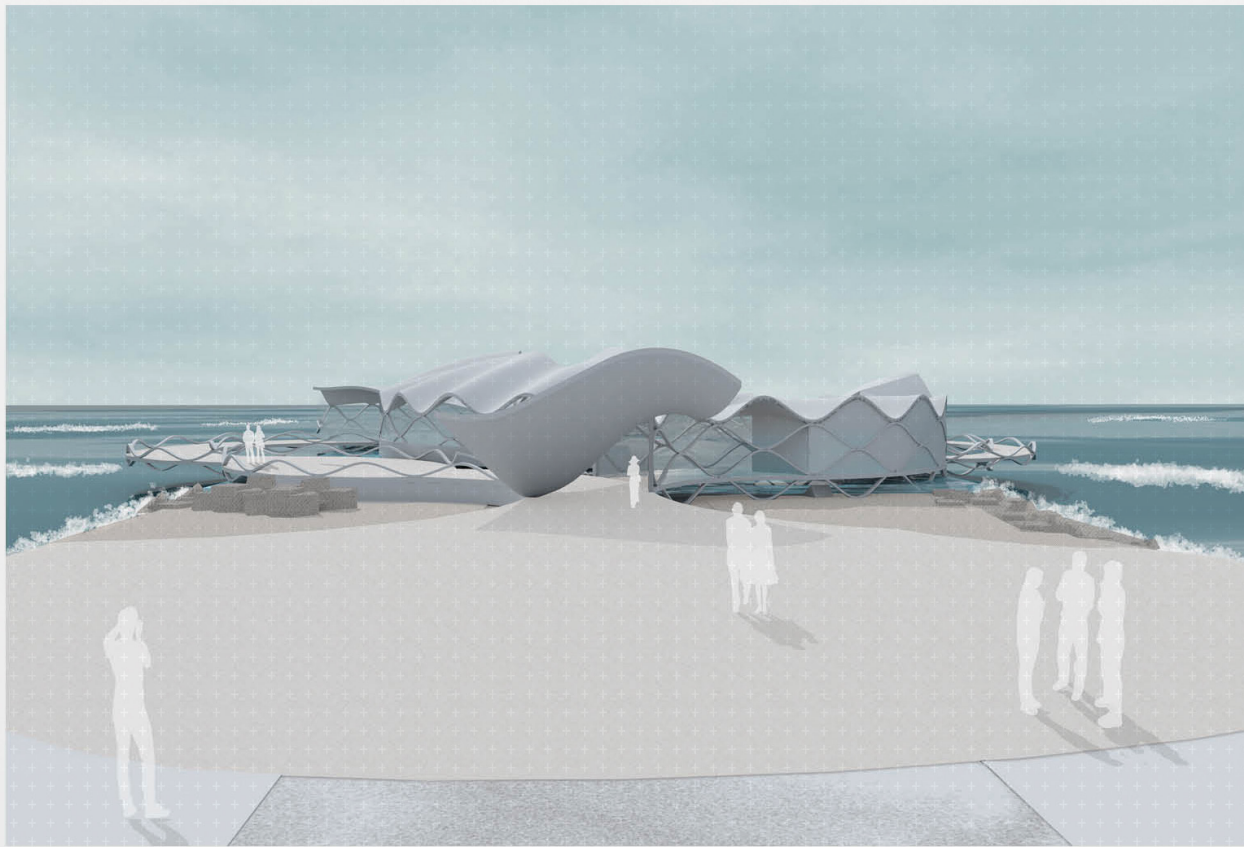
Program Progression / SCALE 1:500
 10 50 100 M

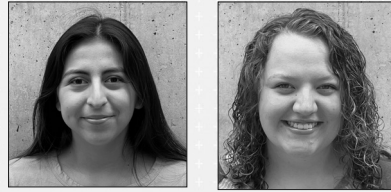


Floor Plan /
 SCALE 1:250
 1 5 10 M

10 50 100 M
 SCALE 1:1 000

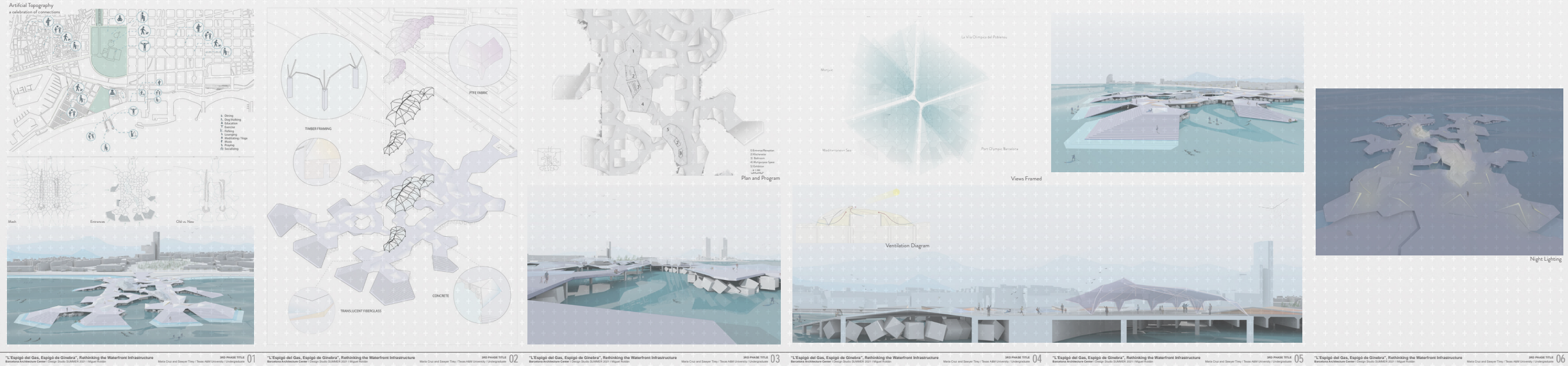






ARTIFICIAL TOPOGRAPHY, A CELEBRATION OF CONNECTIONS

Maria Fernanda Cruz Ochoa, Texas A&M University, Architecture Undergraduate
 Sawyer S Tirey, Texas A&M University, Architecture Undergraduate

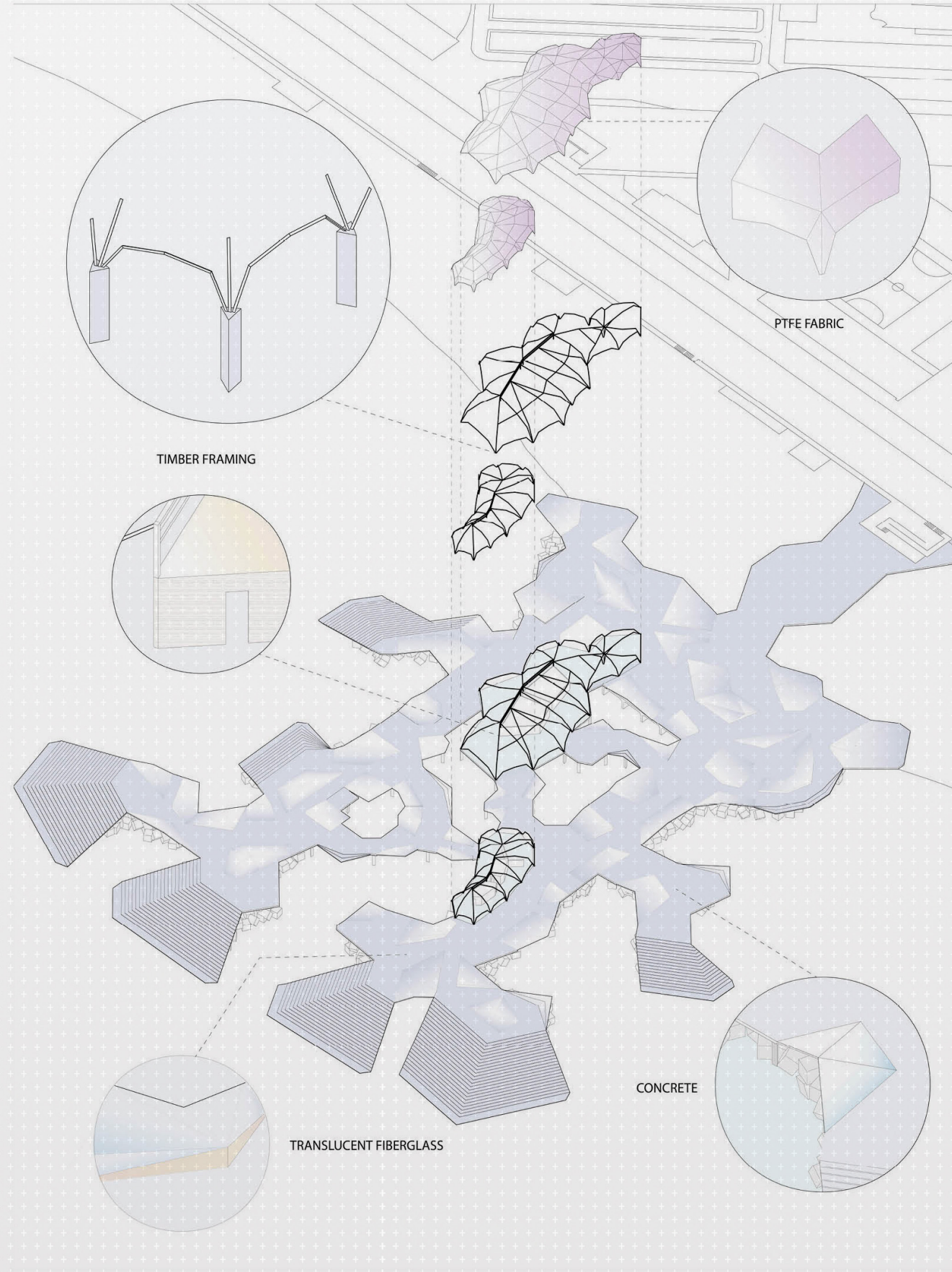
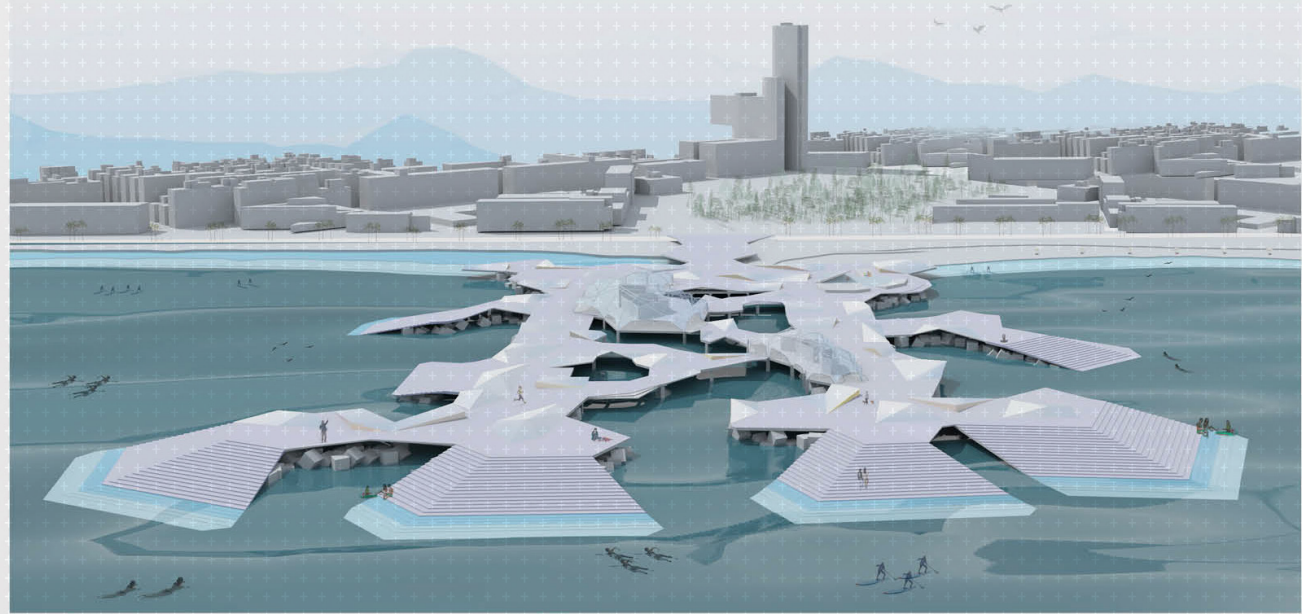
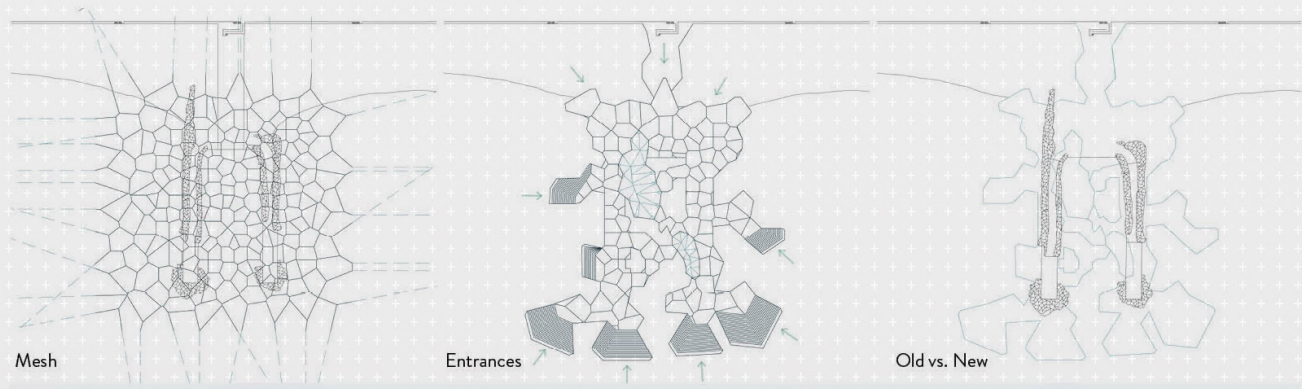


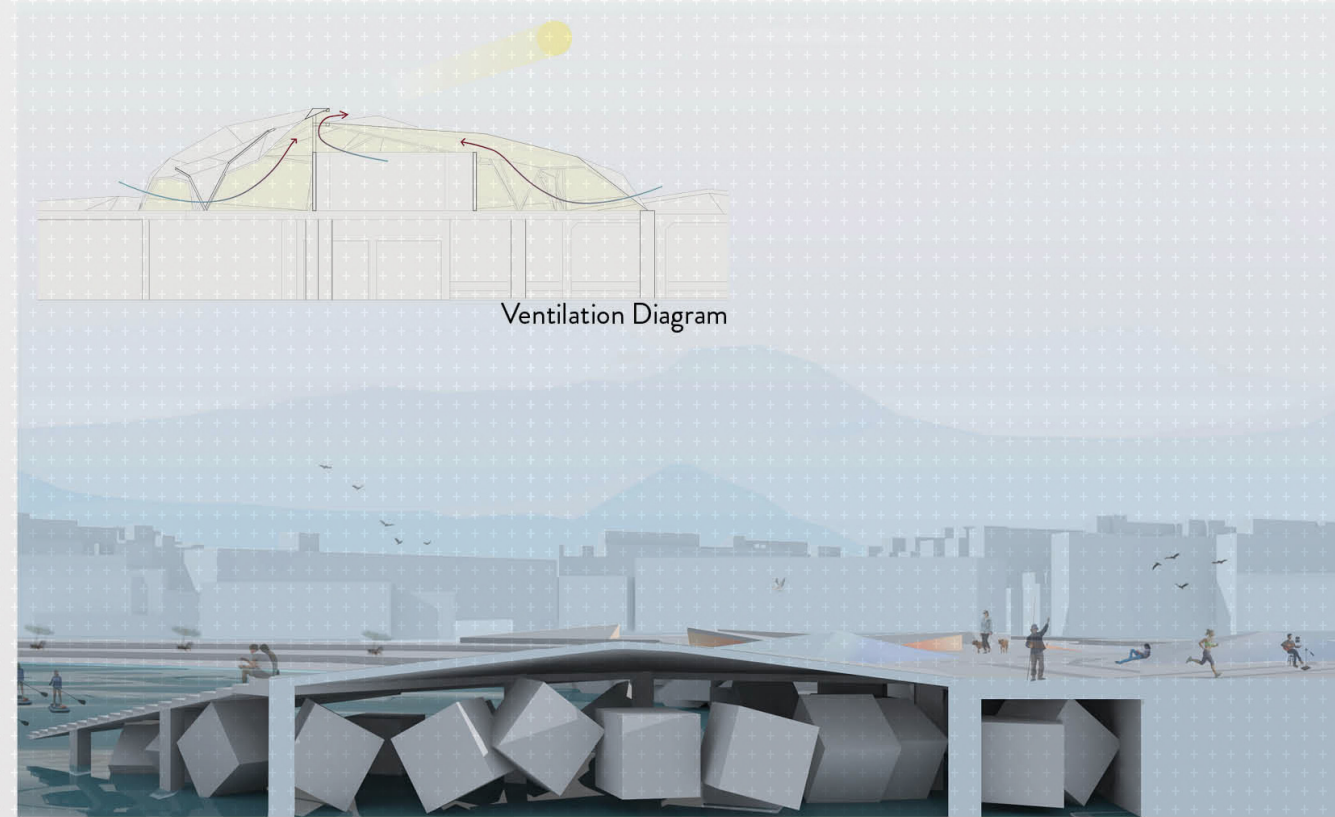
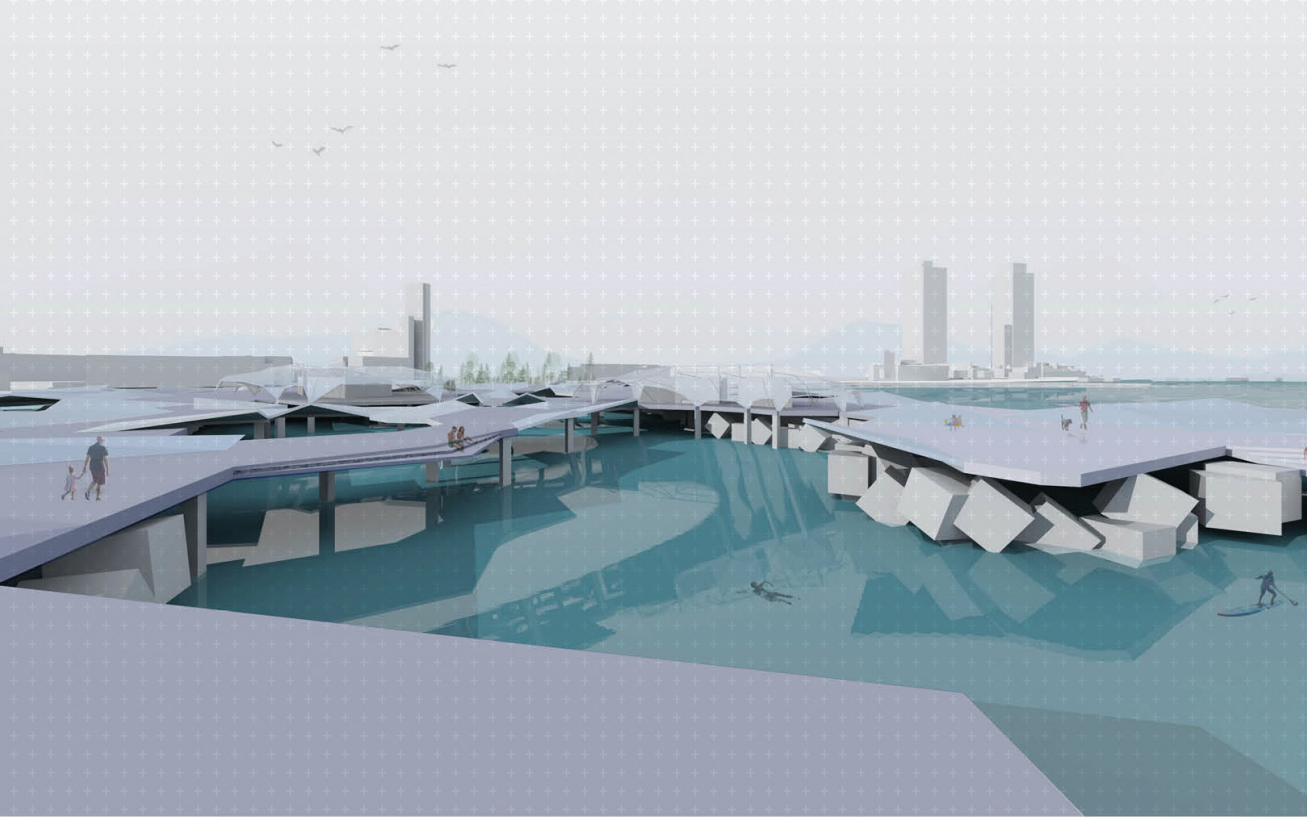
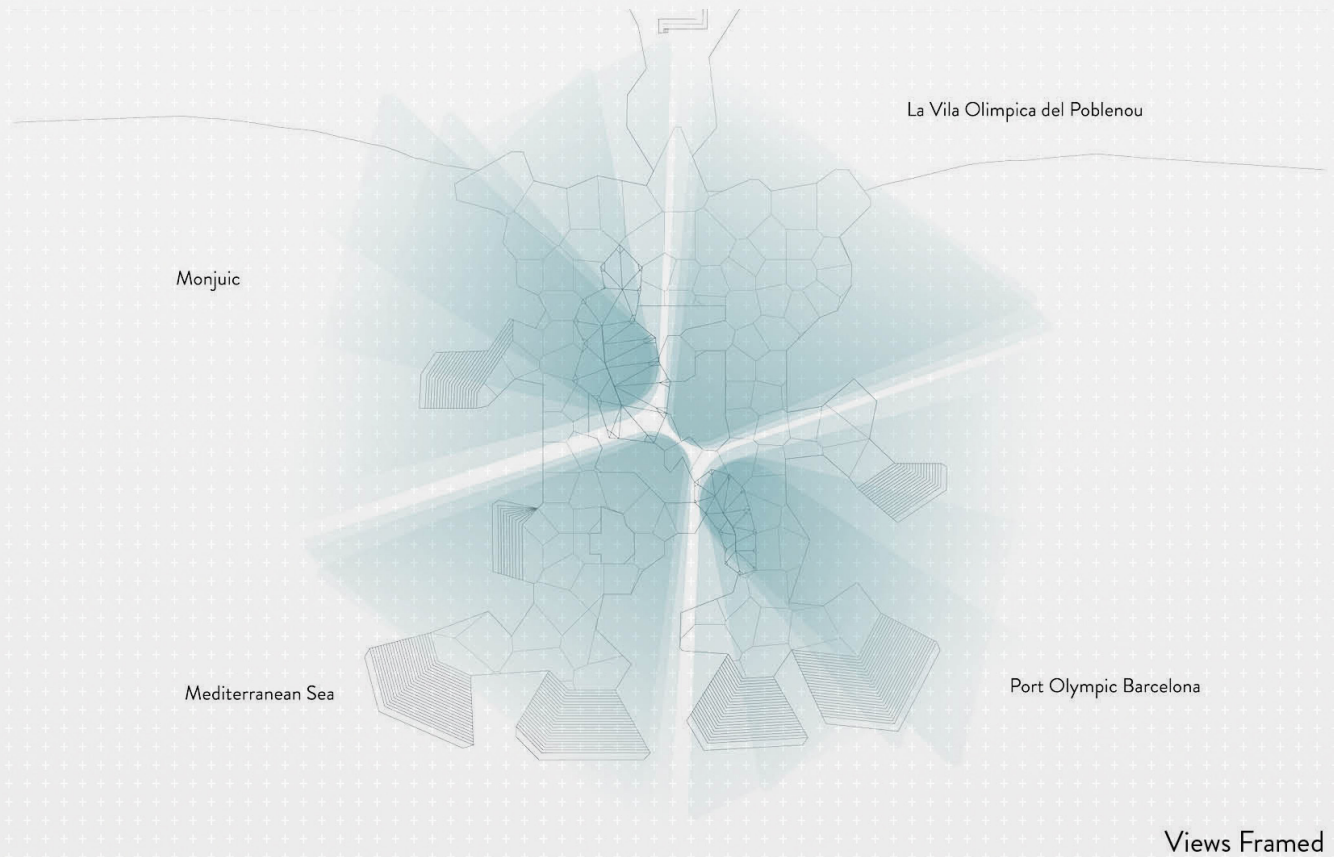
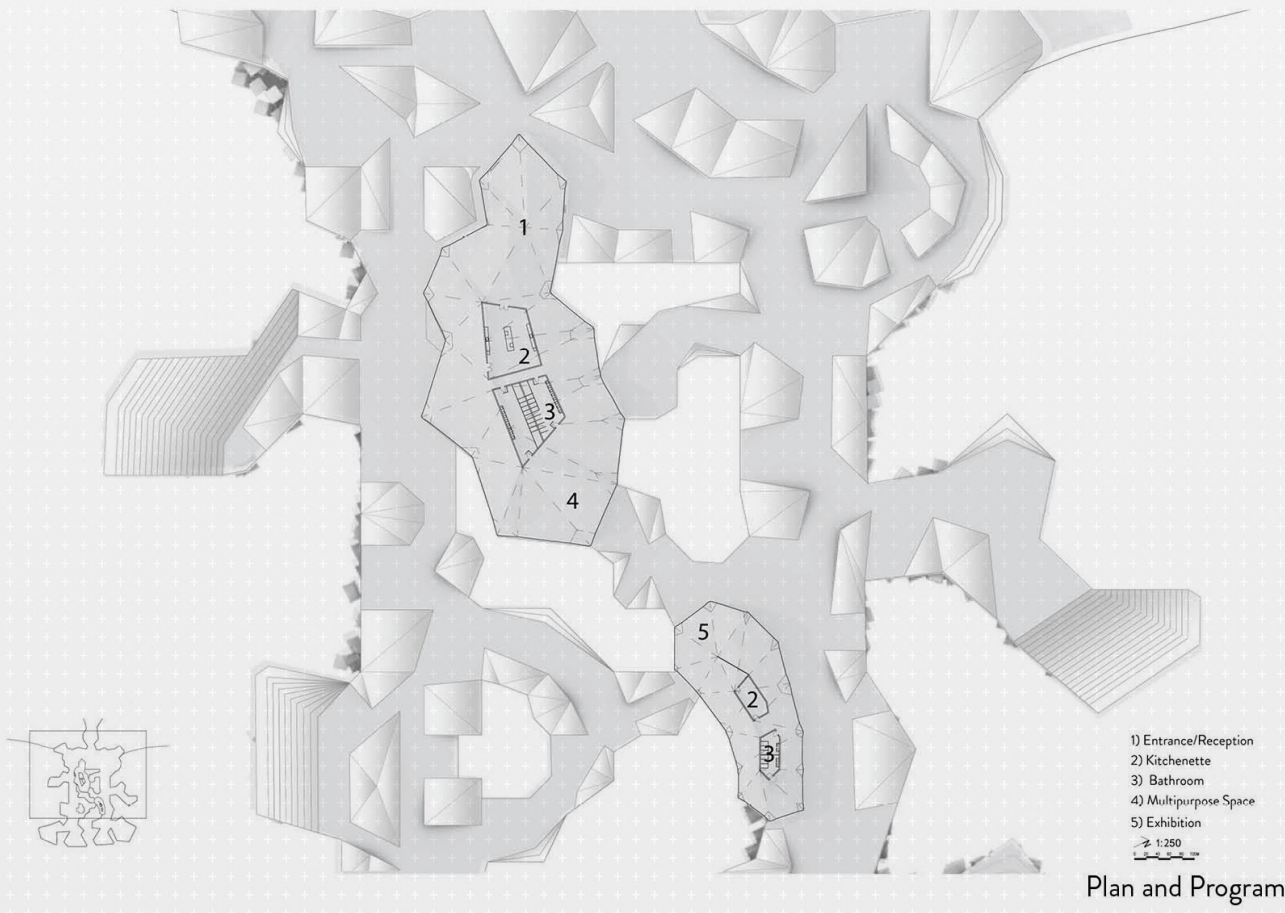
Artificial topography is a celebration of connections between the city and sea, transforming and reshaping the existing breakwaters into a new topographical field that enhances connections and provides a meeting point for activities of the city and the sea. Our proposal challenges the notion of wayfinding and program, through the study of pre-existing activities and the use of a metaphorical mesh that provides regularity for the site transformation acting as a connection between the city and sea providing multiple access points to the site.

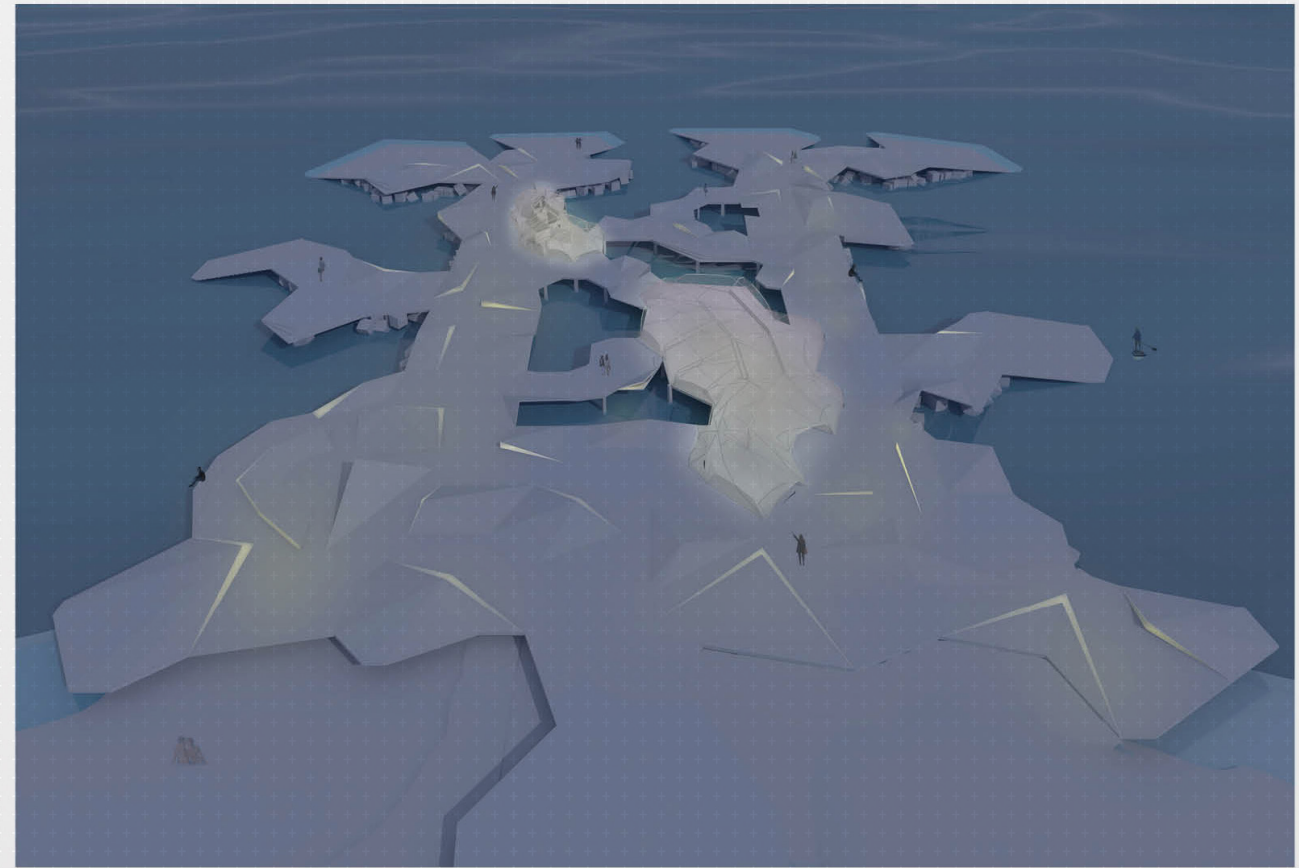
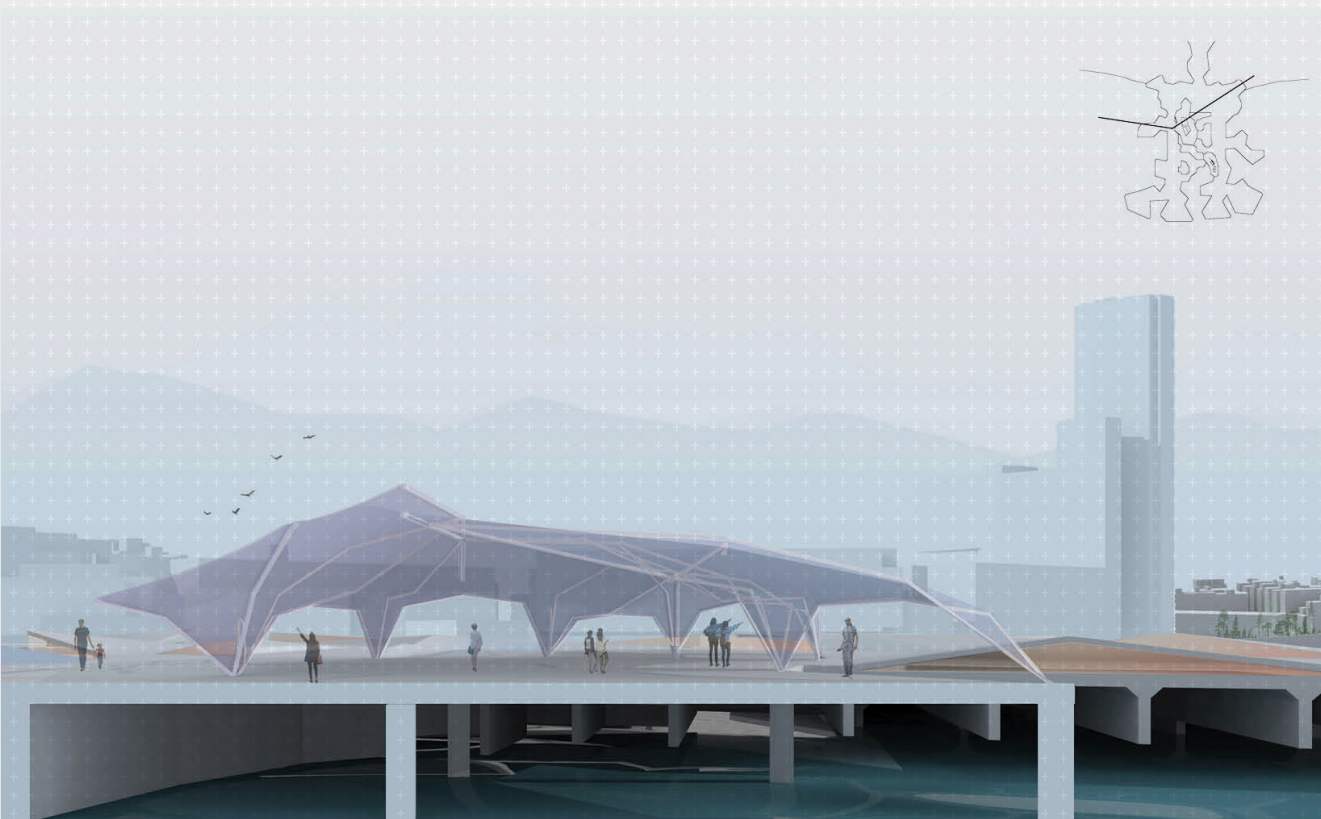
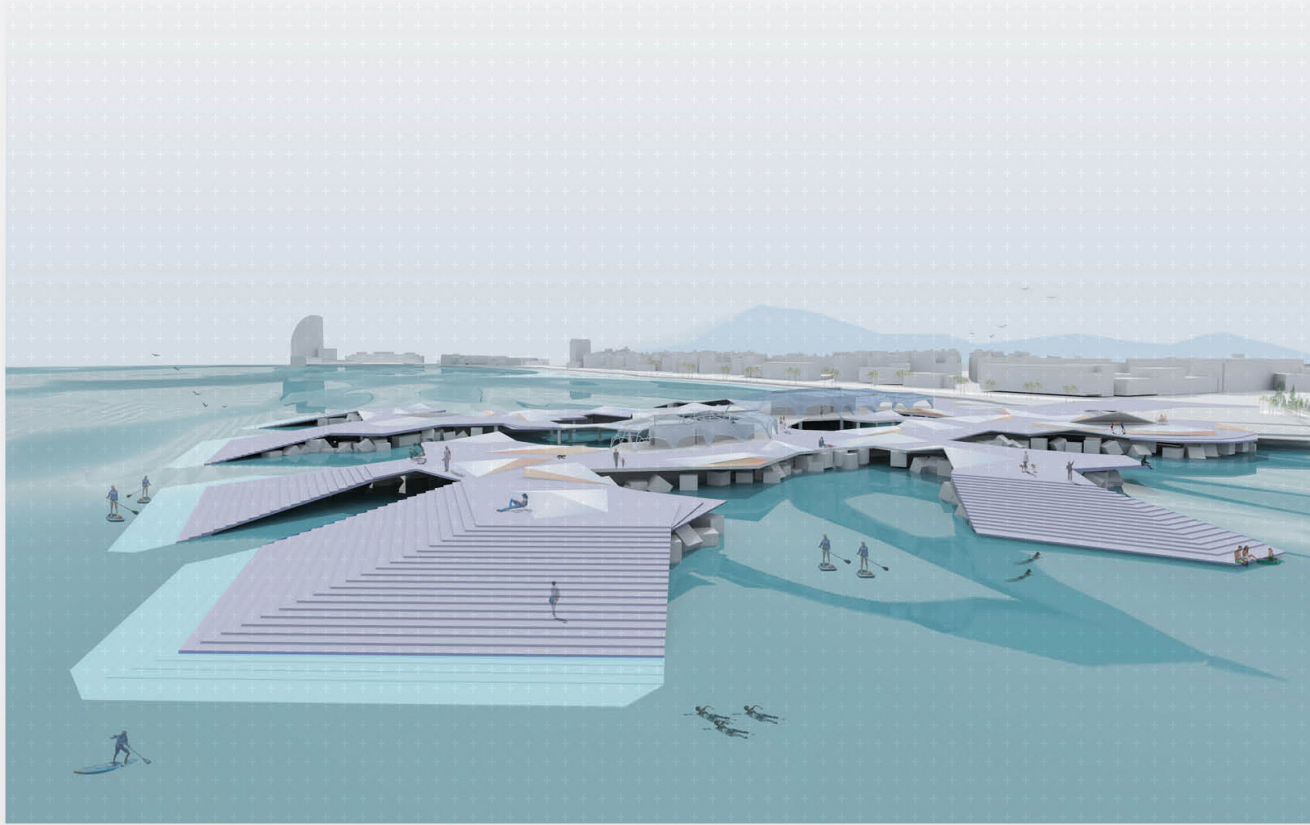
The transformation of the breakwater is artificial and natural at the same time, through the materiality and design decisions. We have extended the breakwater out into the sea to create a direct connection creating areas of leisure and recreation. The new topography works with pre-existing material to provide support and structure to the artificial. We are representing nature through a tree-like structure, to create a series of arches that then are enveloped in a PTFE fabric.

An architectural and programmatic arrangement allows different uses and appearances of the site between day and night. The pavilion is split into two in order to diminish the mass, blocking views from within the site. The program was readapted in order to provide services to each. The pavilion openness allows for adaptability to the user.

Artificial Topography
a celebration of connections





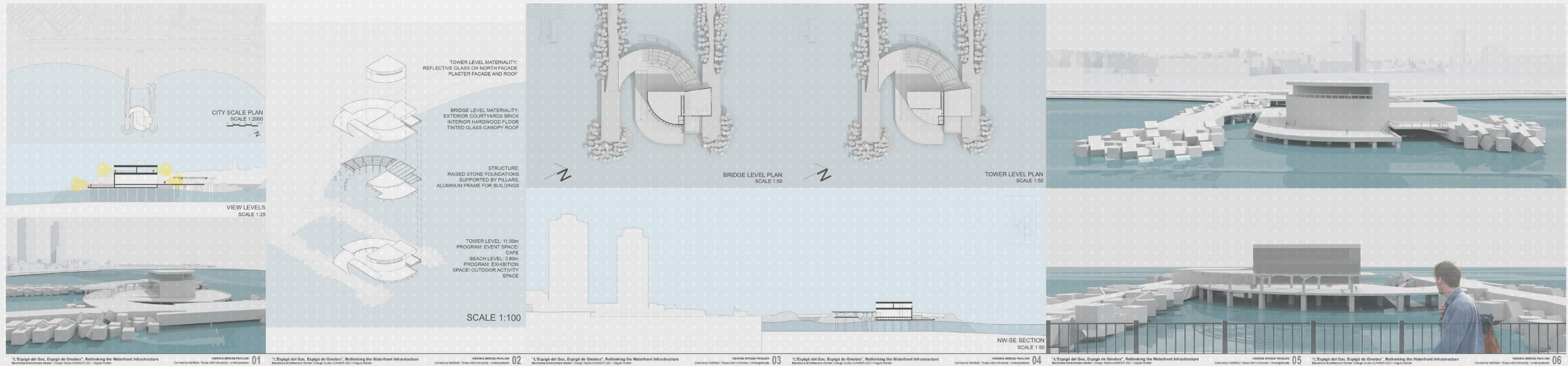


Night Lighting



VIEWING BRIDGE PAVILION

Commerce A Hollifield, Texas A&M University, Architecture Undergraduate

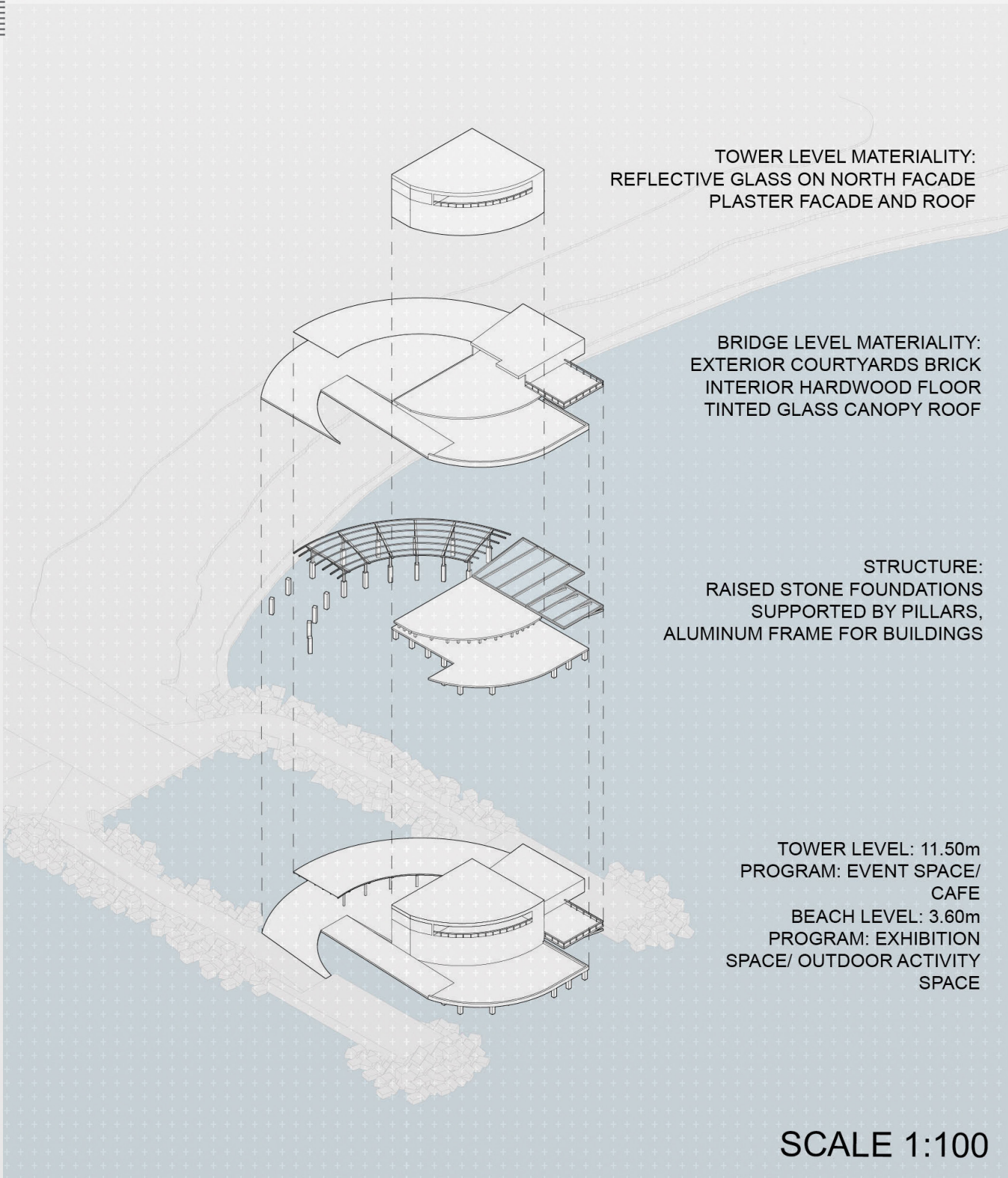
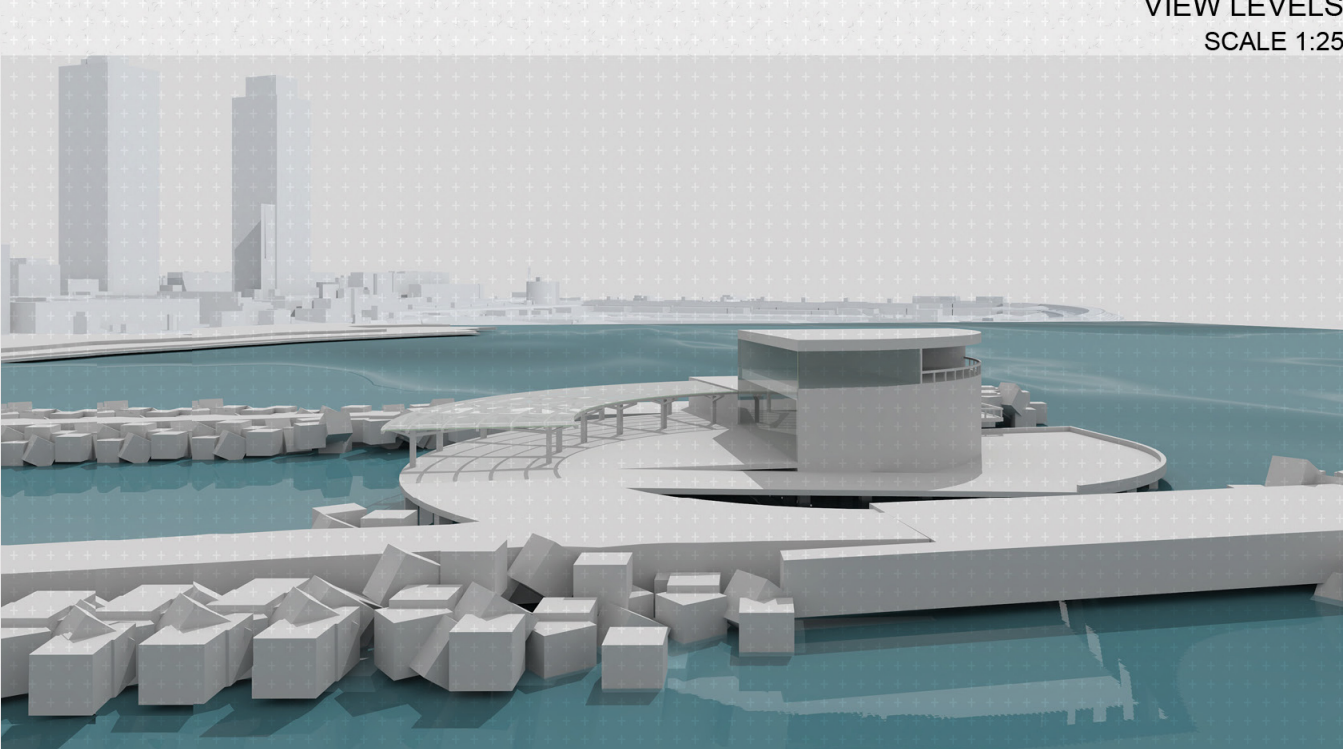
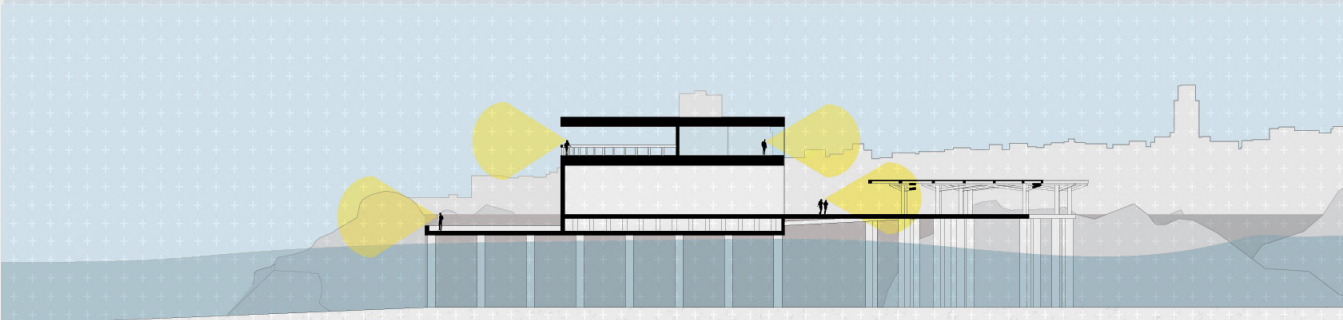
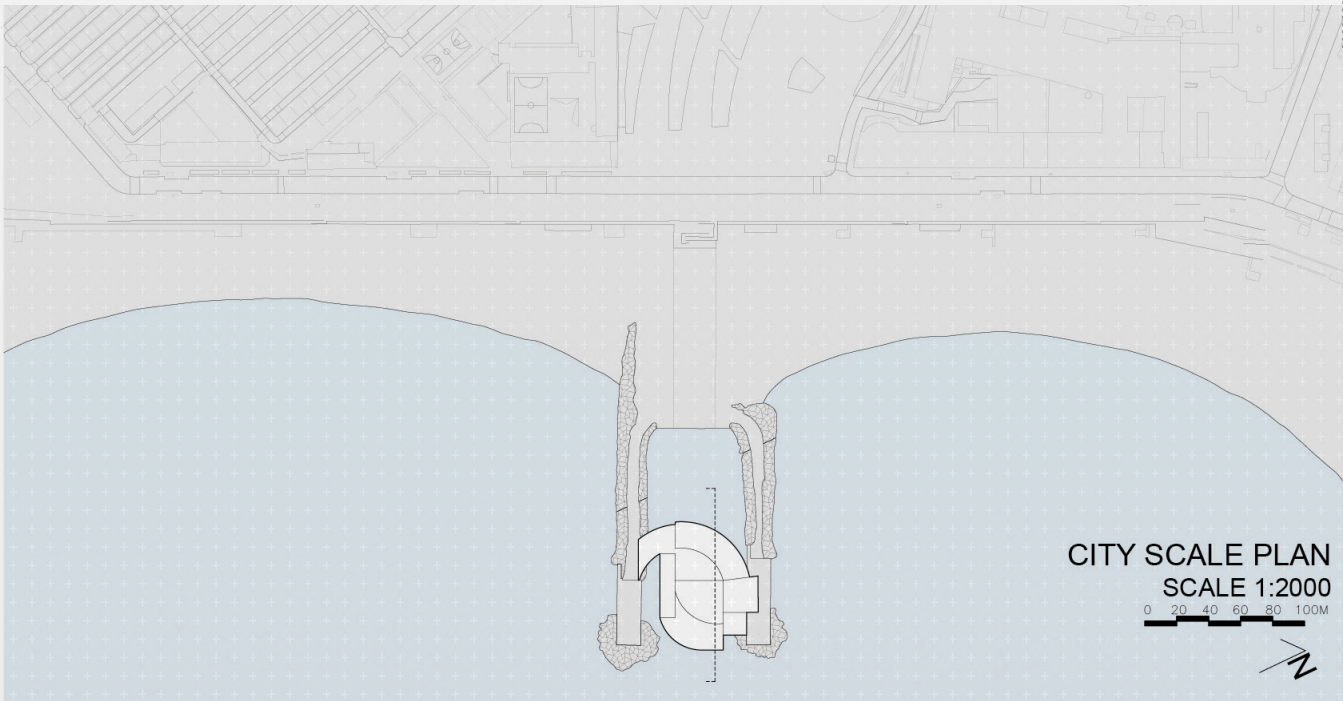


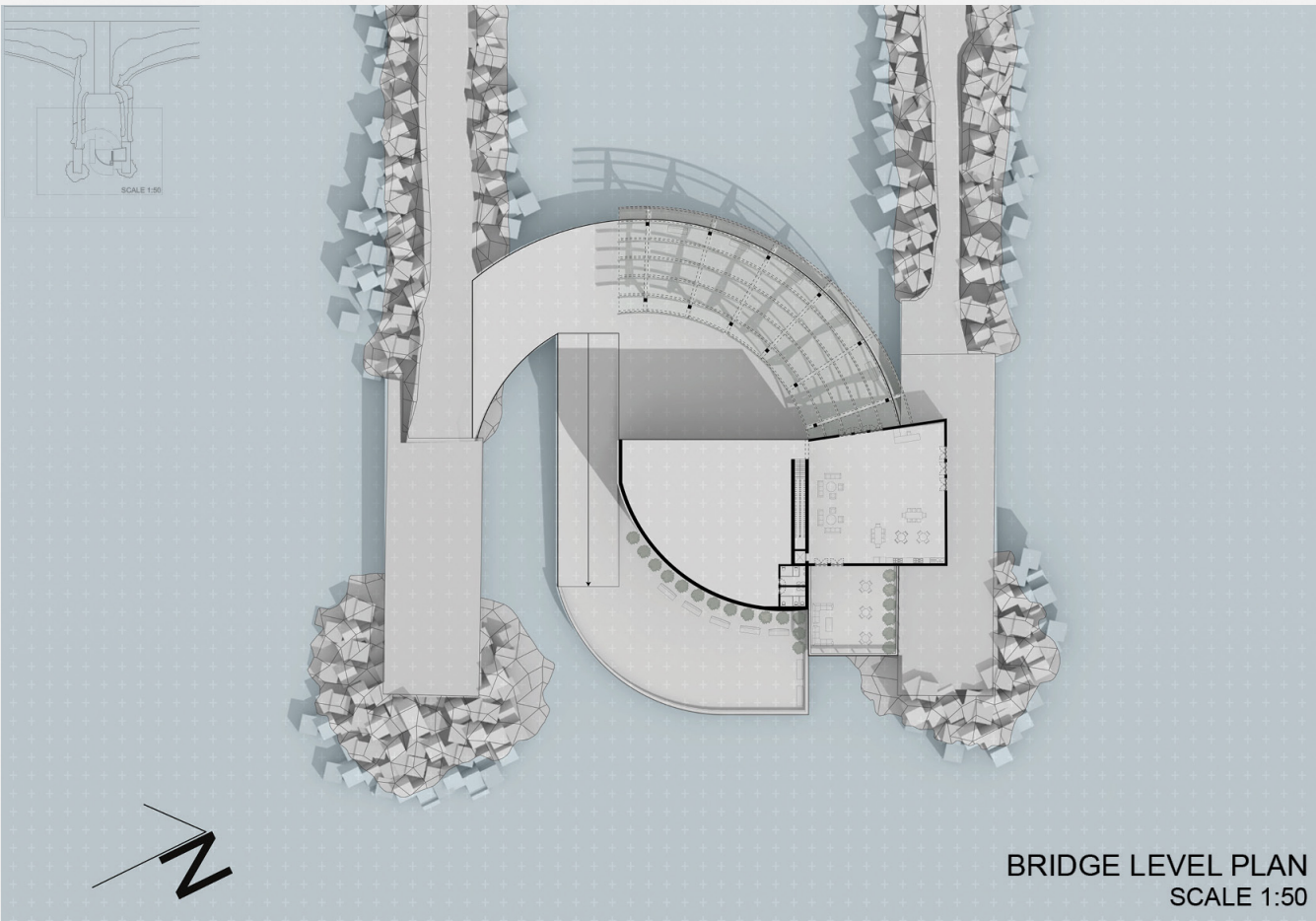
The Viewing Bridge Pavilion serves as a gathering space on the currently unused breakwater on the Barcelona beach, giving it a function for the public as well as improving the aesthetic of the current infrastructure.

The project focuses on providing viewpoints, utilizing various levels and facing both the city and the sea to provide flexible experience and show off all the strengths of the site. The lower level serves as a bridge that connects the two breakwaters, and features an interior space for exhibitions and other events within the ground floor of a central tower, as well as an entry area featuring a kitchenette and interior lounge space, as well as a reception for whatever events may be held in the tower. Surrounding the tower are two courtyards, one facing the sea and one facing the city. The courtyard facing the sea is lowered to be almost at the sea, providing views of the sea at eye level and also serving as an area of refuge from the more interconnected spaces elsewhere in the project. The courtyard facing the city is directly connected to the bridge, which also has a canopy that provides shading and seating. There is also a terrace that serves as a space for more private gatherings.

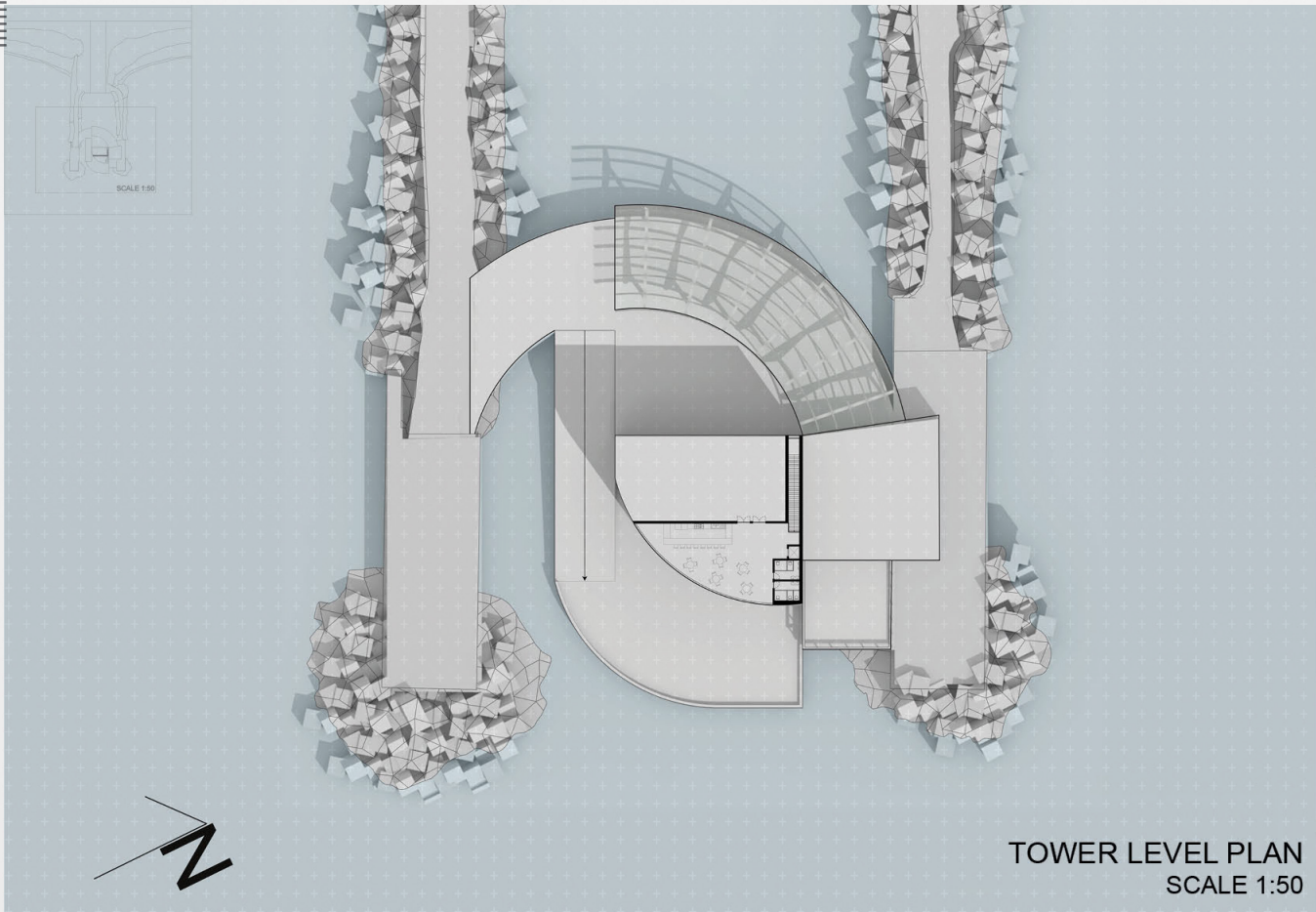
The upper level of the tower serves as a higher viewpoint for the sights, allowing the user to view the sea from above and the city at the closer level.

There are two main functions featured in the upper floor, an open-air cafe facing the sea and an interior space used for smaller events facing the city. On the façade of the tower facing the city, there is a large piece of reflective glass, making the imagery of the city visible on the courtyard regardless of the user's orientation. The project is ultimately dictated by the viewpoints provided by the site, and the best ways to provide diverse viewpoints within the site.

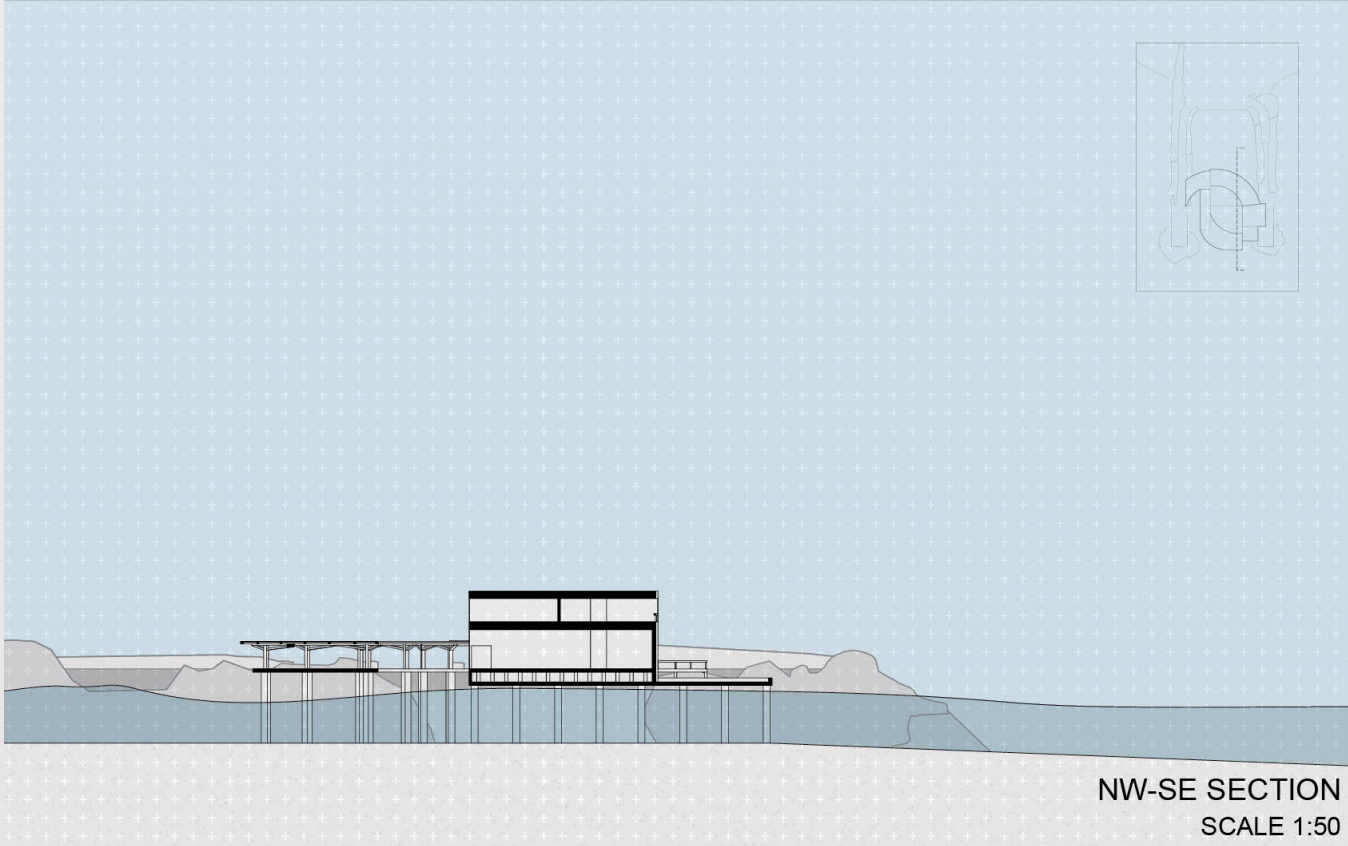
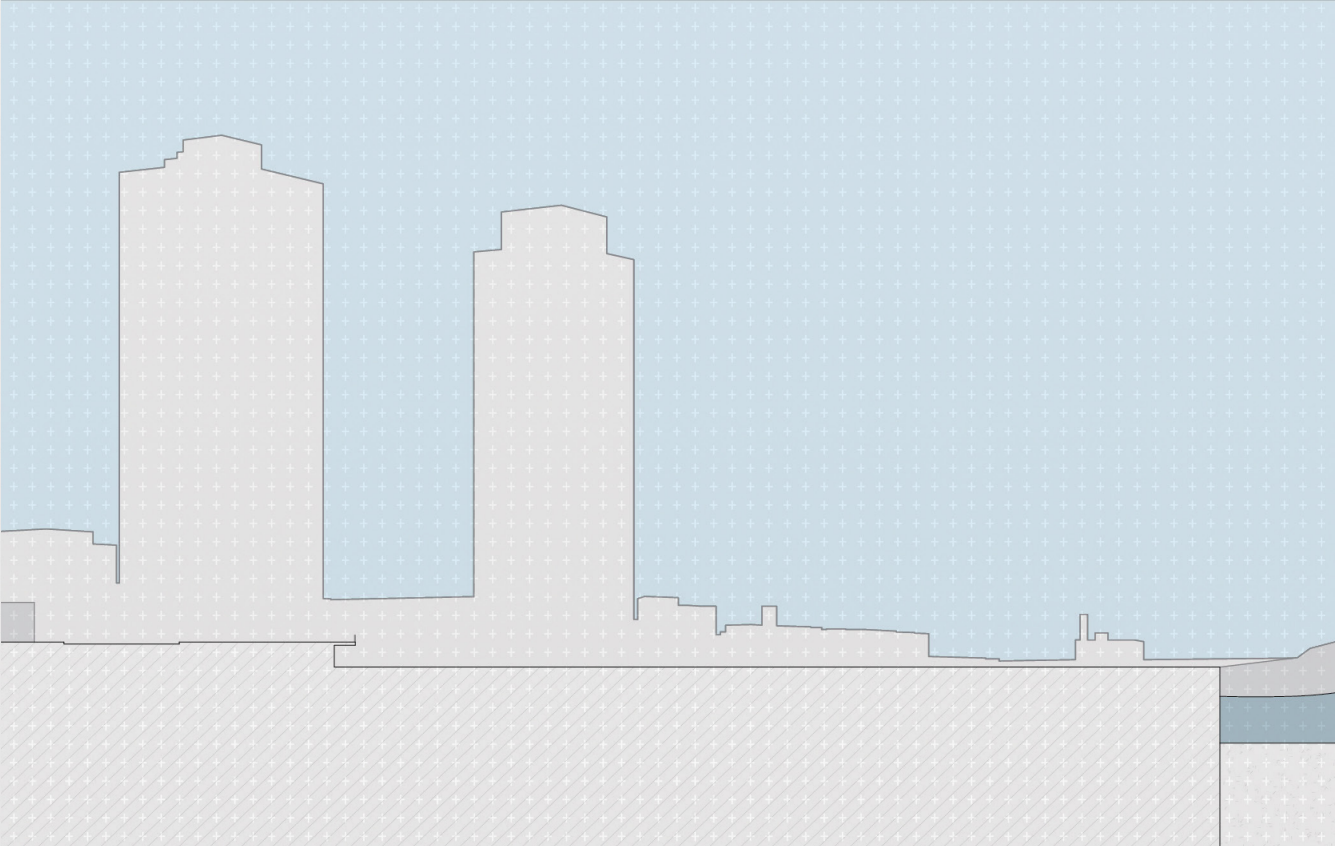




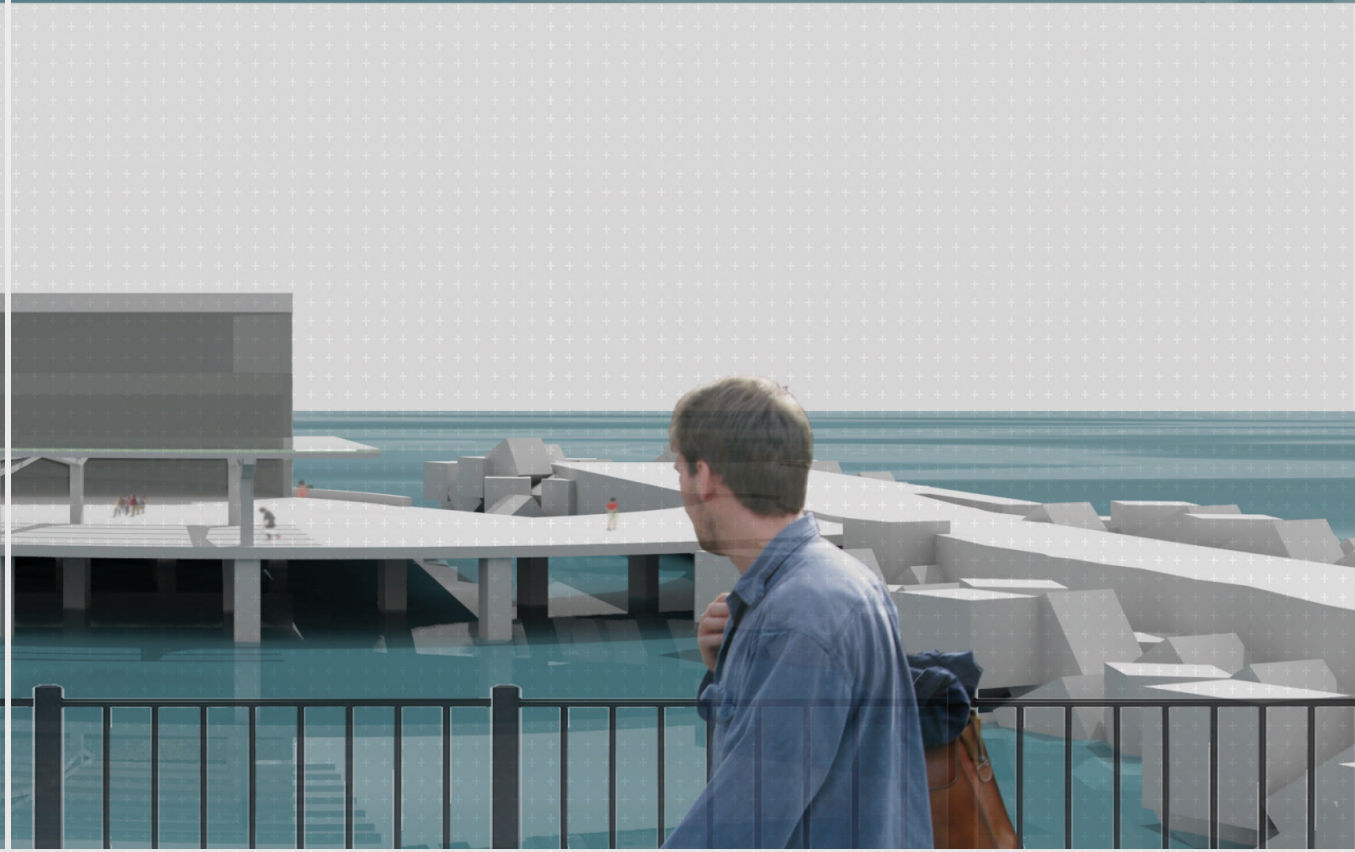
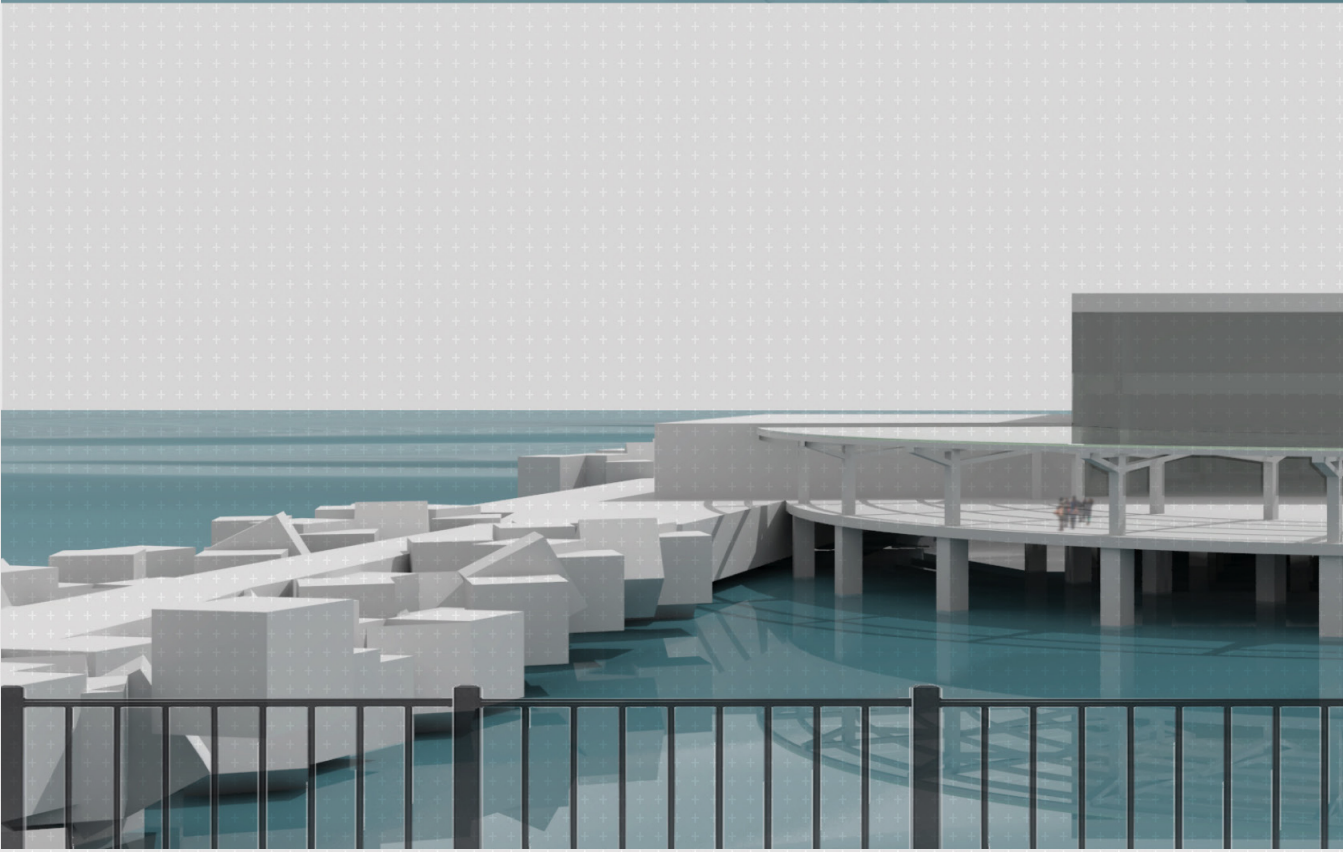
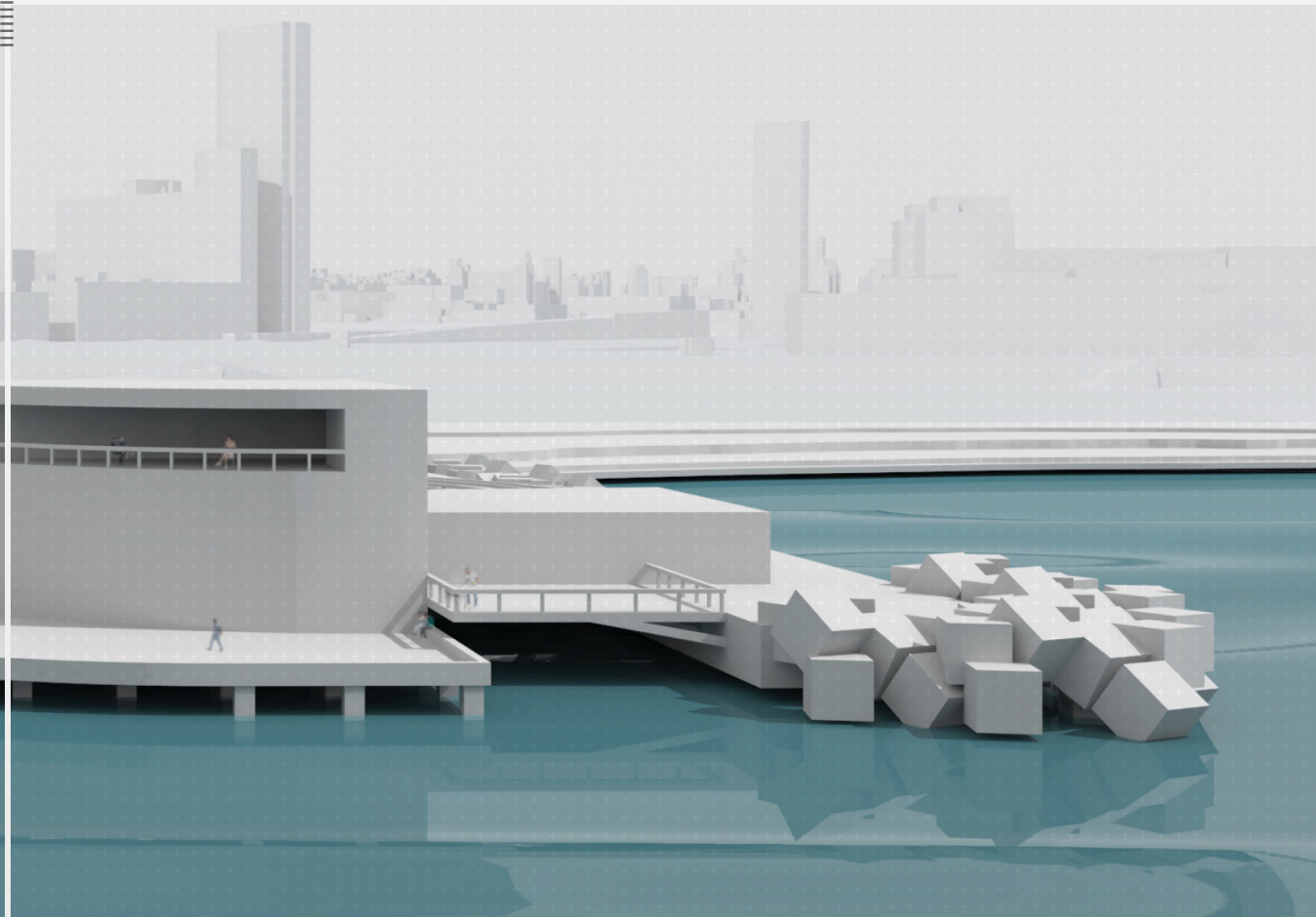
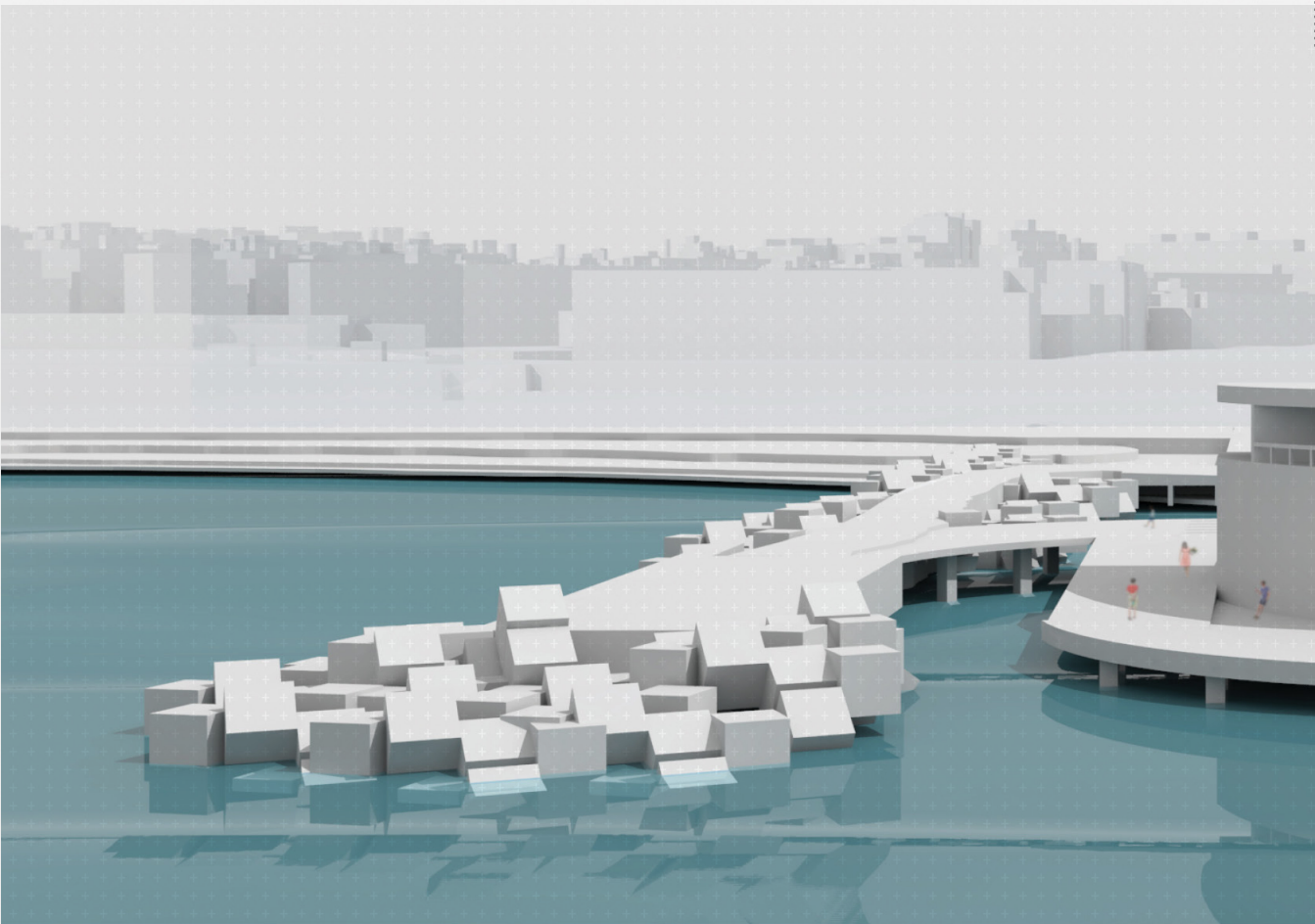
BRIDGE LEVEL PLAN
SCALE 1:50



TOWER LEVEL PLAN
SCALE 1:50



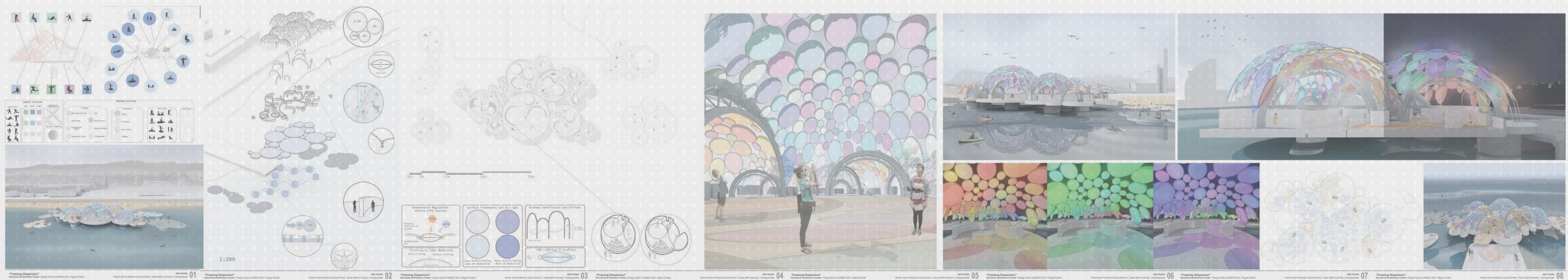
NW-SE SECTION
SCALE 1:50





VIEWING BRIDGE PAVILION

Commerce A Hollifield, Texas A&M University, Architecture Undergraduate

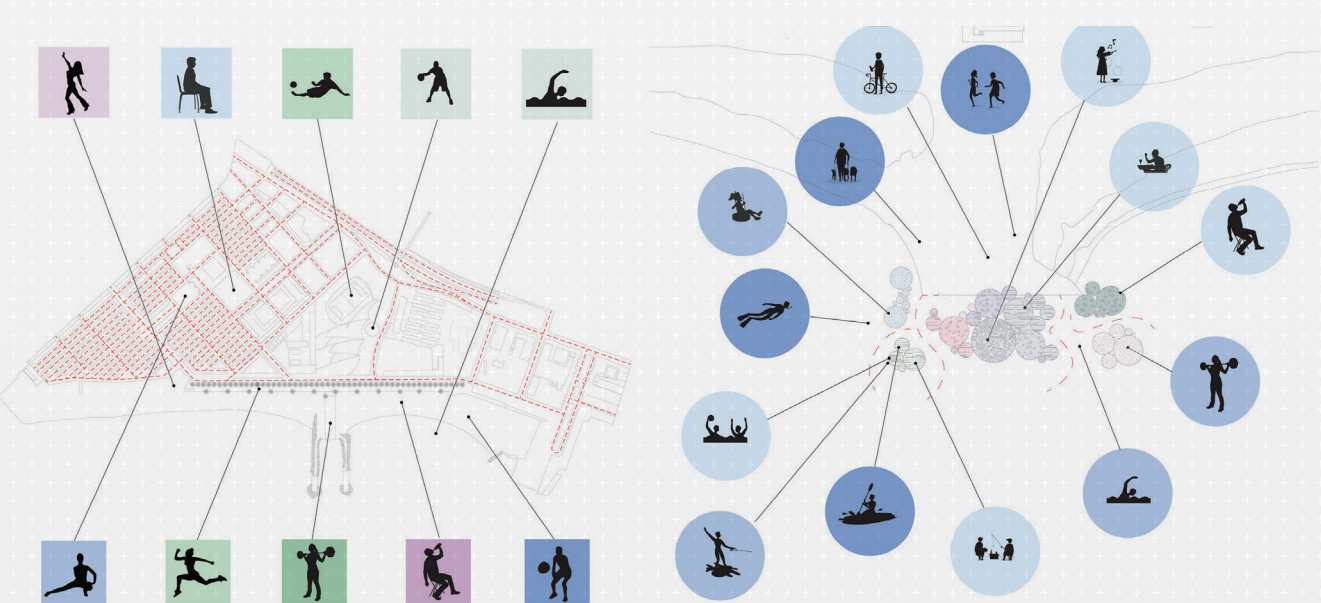


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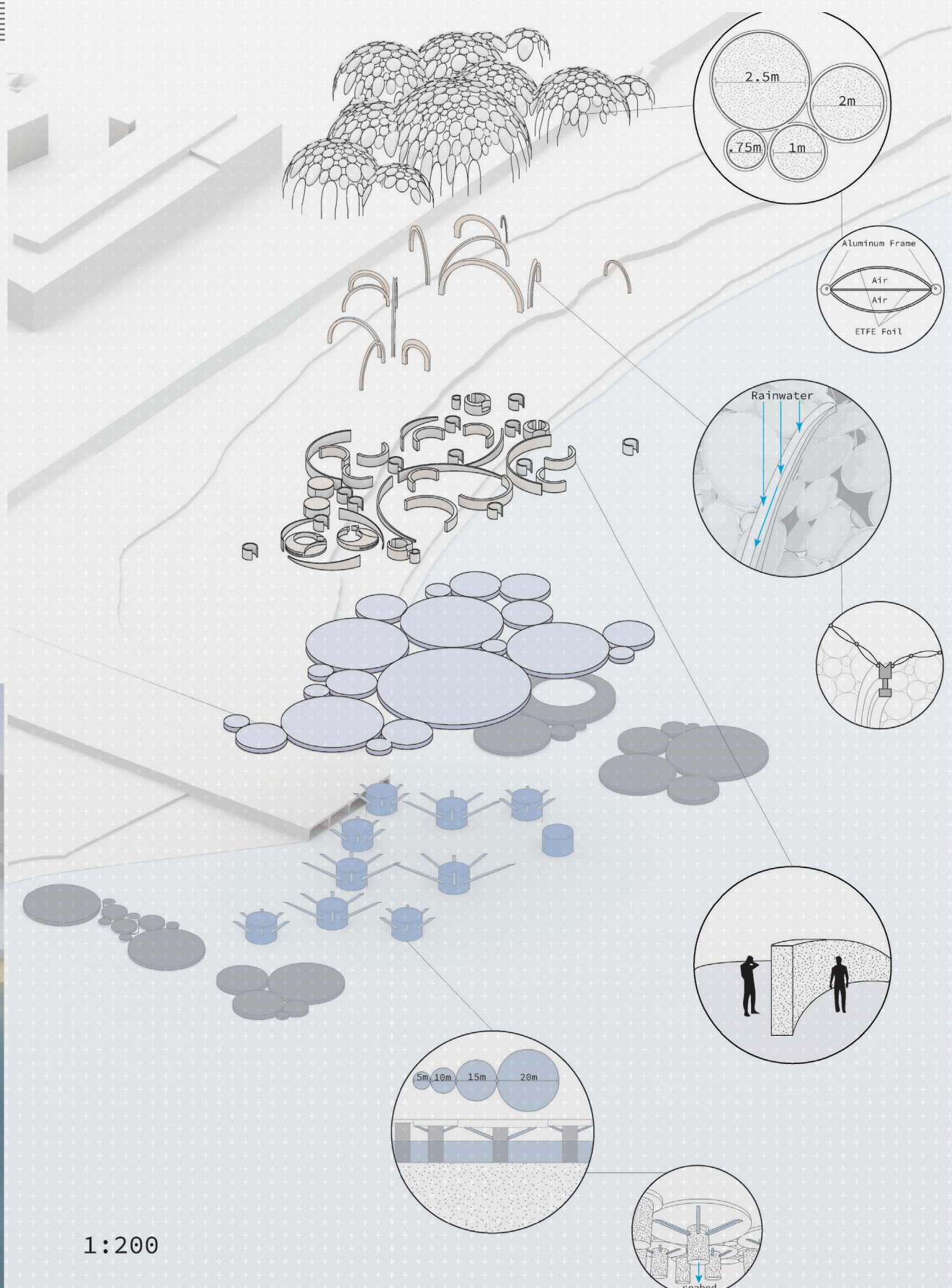
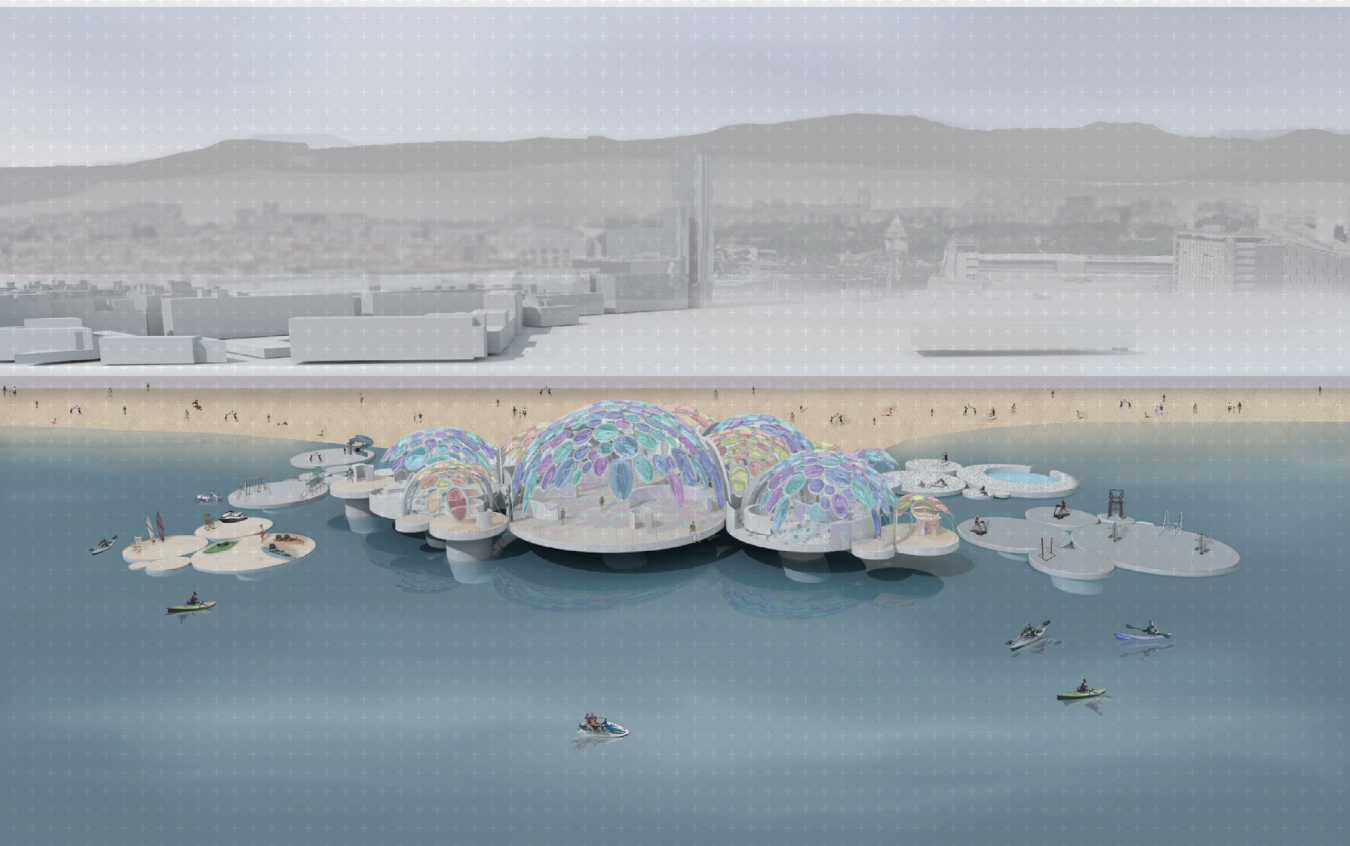
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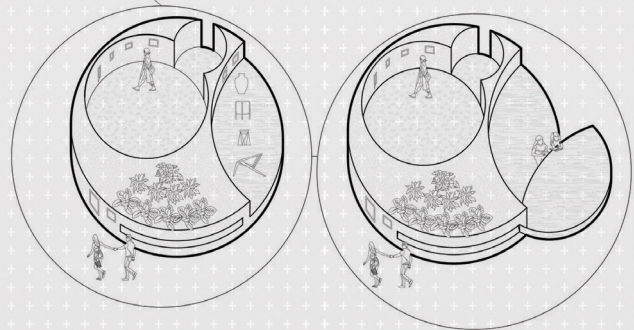
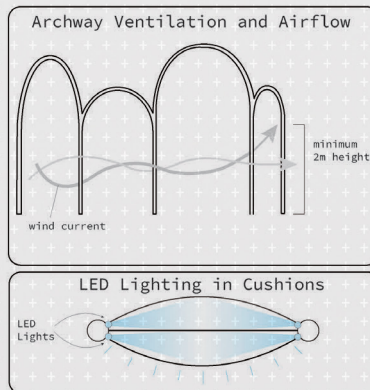
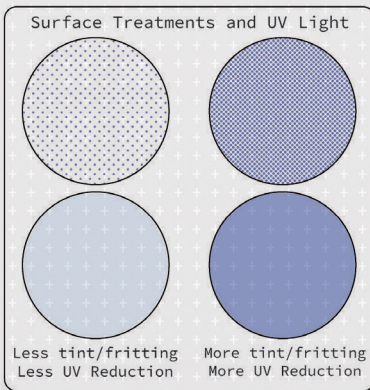
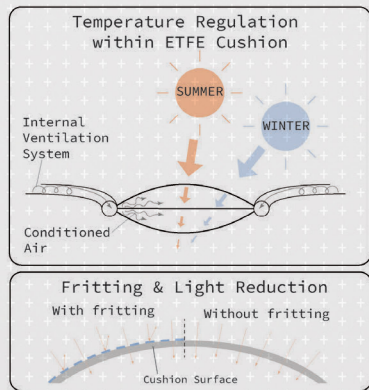
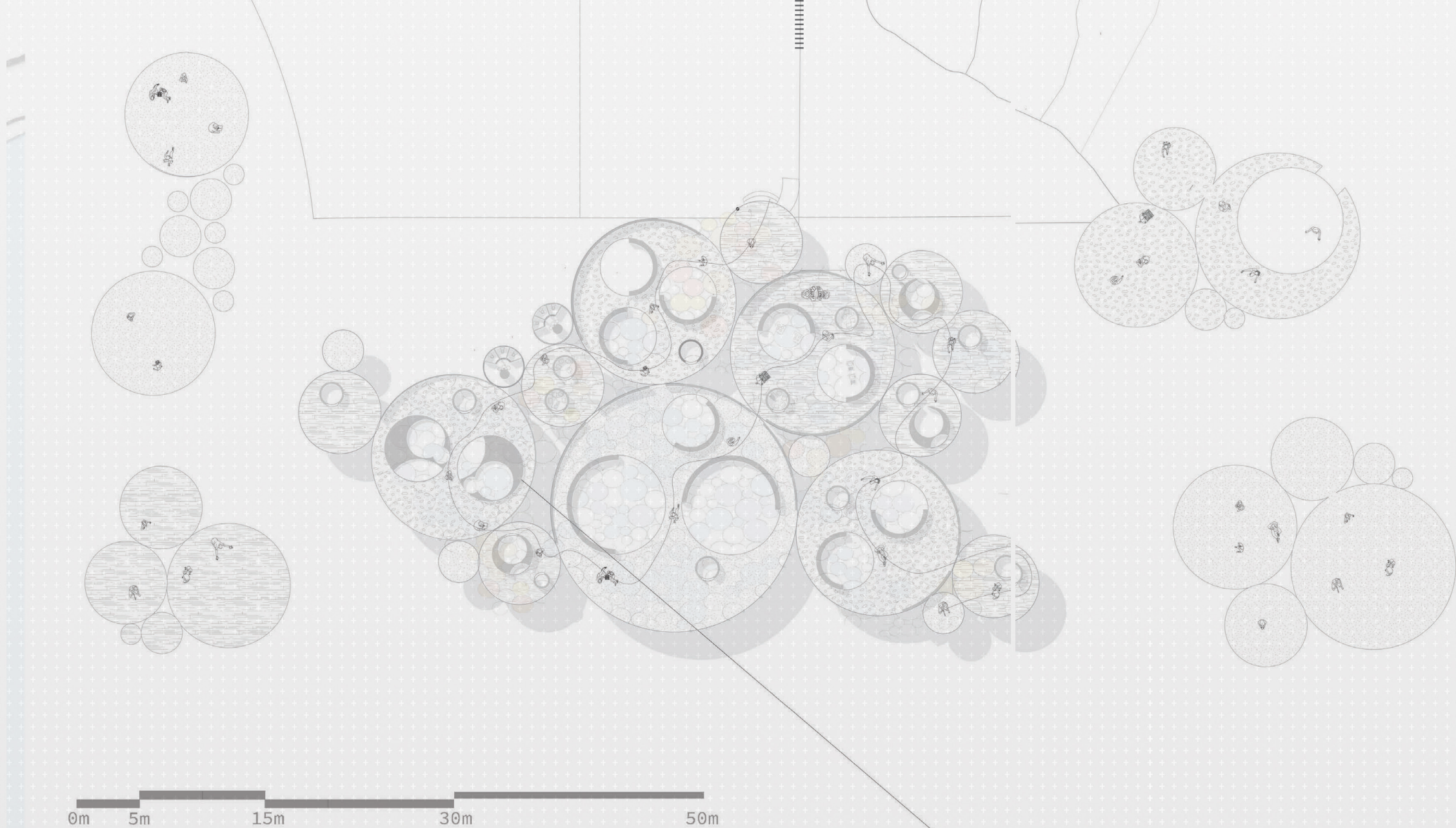
The upper level of the tower serves as a higher viewpoint for the sights, allowing the user to view the sea from above and the city at the closer level.

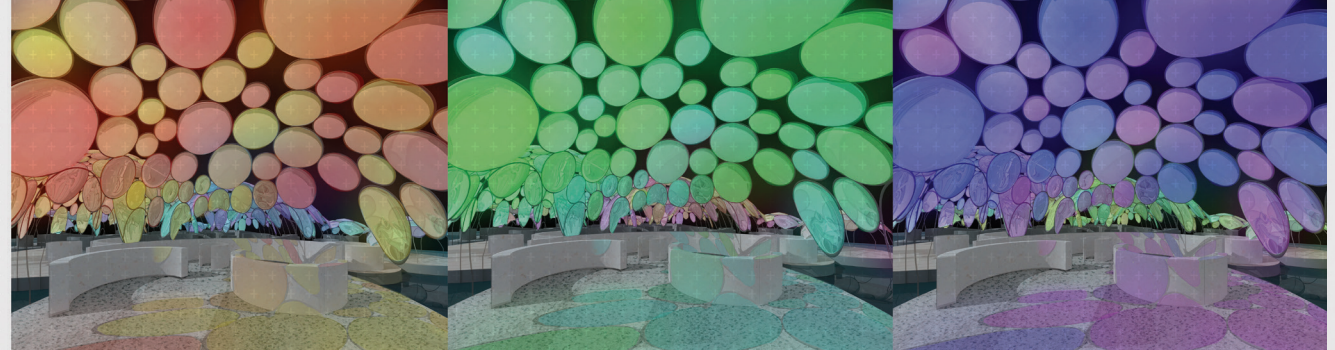
There are two main functions featured in the upper floor, an open-air cafe facing the sea and an interior space used for smaller events facing the city. On the façade of the tower facing the city, there is a large piece of reflective glass, making the imagery of the city visible on the courtyard regardless of the user's orientation. The project is ultimately dictated by the viewpoints provided by the site, and the best ways to provide diverse viewpoints within the site.

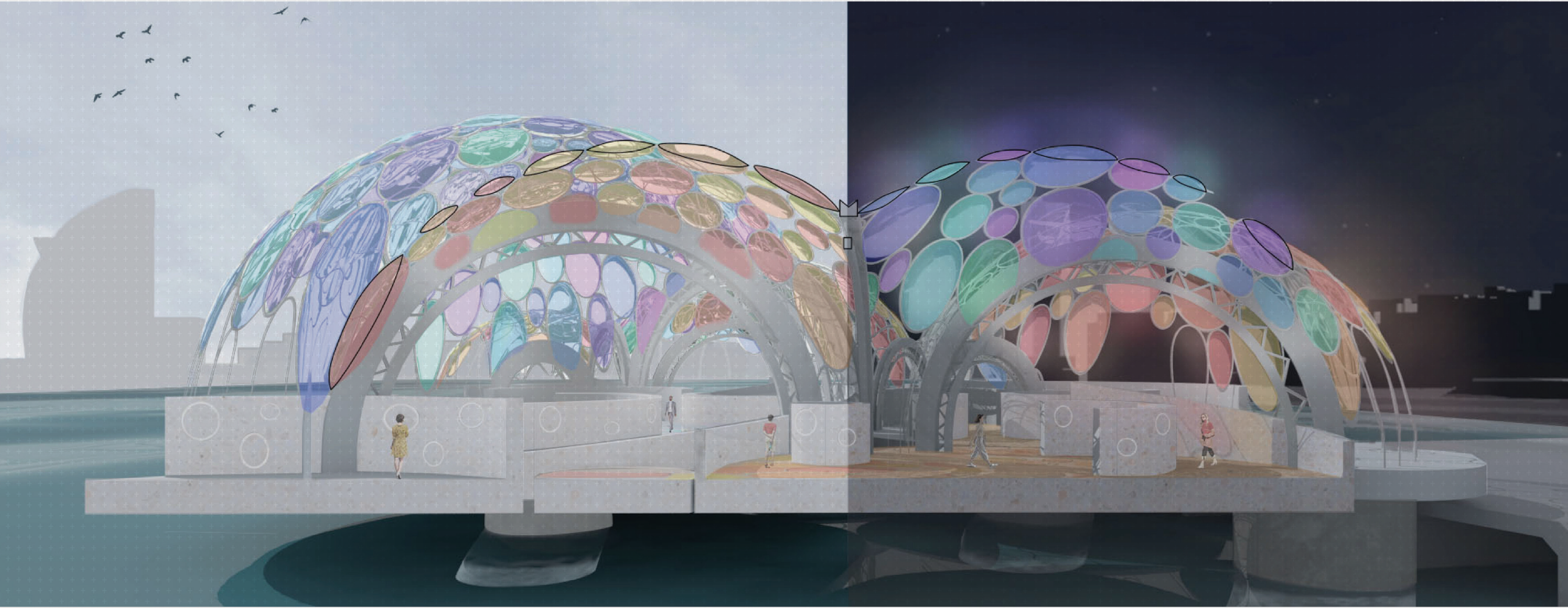


CURRENT SITUATION				PROPOSED SITUATION			
Activities	Day	Both	Night	Program	Materials	Activities	Drainage
				<ul style="list-style-type: none"> Entrance/Atrium Bathrooms Exhibition Space Reception Area Gym Swim-up Bar Kayak Rentals Playground 	<ul style="list-style-type: none"> Stone Ceramics Wood Deck Rubber 		











Professor



JELENA
PROKOPLJEVIC

2. Barcelona History Research

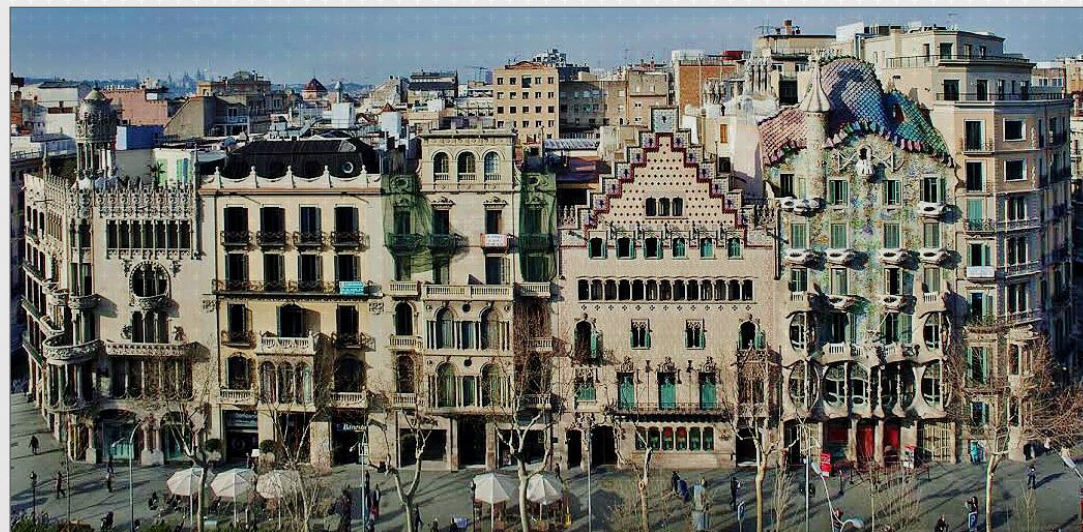
The architectural history research course in Barcelona will be a sum of lessons learned through three different approaches to examining the diversity of topics related to the principal theme of the history of Barcelona, the European context and the critical analysis of key European examples. The intention of the course is for the student to build a map of Barcelona, key European cities and works within the cultural, urban, historical and theoretical contexts.

The course will be structured into 3 blocks, each focusing on a distinct theme. Daily classroom discussions and activities will be directed at exploring key questions related to each lesson in order to generate a dialog around the different theoretical concepts which may be applied to the design process. Students are expected to inform the classroom discussions with outside knowledge gained through library research and visits to sites and buildings.

BLOCK B: Urban History of Barcelona – Layers of urbanity

Instructor: Jelena Prokopljevic

This block pretends to explain the development and the urban history of Barcelona by linking it to the general urban planning concepts and strategies and changes that took place simultaneously throughout Europe. The accent will be placed on concepts rather than on specific historical facts in order to provide the students with the general relations and analytical tools that can be used in the process of rethinking and intervening in the existing urban tissue. Benefiting from the multi-layered urban history of Barcelona, visible and tangible in today's city, the course will drive special attention to the memory sensible projects that enhance the coexistence of structures from different times, often built for different uses.



Just as Parthenon was once used as an ammunition storage or a Cristian church was built in the centre of the Roman Emperor's palace in Split, several residential houses of Barcelona or Tarragona have absorbed portions of Roman walls as their supporting structure or 19th century factories have been converted into education o cultural facilities, maintaining and adapting the original structure. This idea of juxtaposed layers of urban history: of material and sensible rests that form part of contemporary city, will give us an insight of the ways of envisioning the future cityscape by Catalan architects. The last part of the course will address the current problems and new solutions for re-naturalization of the urban space.

Part ONE. ORIGINS OF MODERN CITY

- Session 1. Introduction and Roman city
- Session 2. Defining urban referents
- Session 3. Industrial city

Part TWO. FUNCTIONALIST UTOPIA

- Session 4. Expanding the city
- Session 5. The New Century
- Session 6. The International style

Part THREE. THE CITY OF ARCHITECTS

- Session 7. Postwar reconstruction and new models
- Session 8. Barcelona model
- Session 9. New challenges

Professor



PIA
WORTHAM

3. Barcelona's Building Technology

Barcelona Building Technology course in Barcelona will be a sum of lessons learned through three different approaches to examining the diversity of topics related to the principal theme of materials, construction and technology. The intention of the course is for the student to build a map of methods for identifying, contextualizing and analyzing buildings and their construction in order to apply these concepts to the design process.

The course will be structured into 3 blocks. Within each block, there will be lessons, each directed at critically examining the topic of discussion. Students are expected to inform the classroom discussions with outside knowledge gained through library research and visits to sites and buildings.

BLOCK B: Barcelona Building Technology - BUILDING SCALE

Instructor: Pia Wortham

The introduction of this block will be the signature of the timeline and dictionary of Barcelona building technology. Following the introduction this block will look at 7 buildings in Barcelona from a technological point of view. We will examine the materials and technology of each period in history, as well as the kind of tools the builder/craftsman, and later architect had at his disposal. We will place the buildings in their historical context in terms of structural analysis and innovations in building technology. We will explore how all buildings fit into a social and economic context by looking at the history that surrounds these five examples.

How were the programmatic needs of each project met in terms of appropriateness of structure? Architectural history is often taught as a timeline of changes in style, without taking into account the scientific side to architecture. This class hopes to answer the question of how architecture is built to inform and reinforce what the architectural student faces in the design studio.

Session 1. Intro - Technology: a brief history

Session 2. Intro - Structure: basic building elements

Session 2. Intro - Structure: basic building elements

Session 4. Gothic: Santa Maria del Mar to the enlightenment

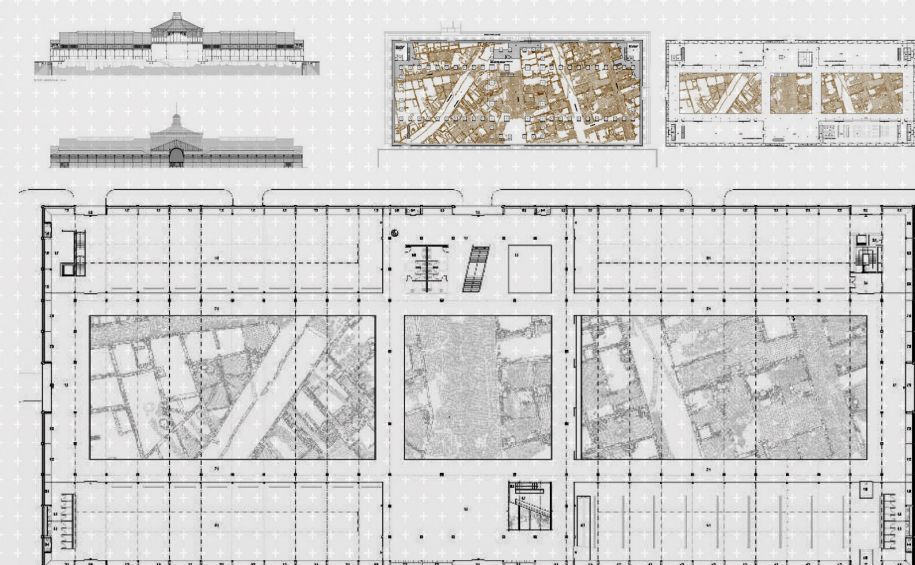
Session 5. Born: Mercat del Born and the industrial revolution

Session 6. Gaudi: Geometry and Structure

Session 7. Caixa forum: industrial buildings and the catalan vault

Session 8. Palau Sant Jordi and a history of domes

Session 9. Hotel Me and a history of towers



Study Travels Catalonia and Spain:

Barcelona is the departure point to understand how visiting a city can be done in many different ways. Visits to its periphery: plaça Europa, Forum and Vall d'Hebron; to its elevated areas: Montjuïc, Parc del Laberint and Turó de la Rovira; and to its infrastructures: port, airport, "rondes" and Rambla de Sants-train system; will be complement with visits to some of Europe's most important cities such as Amsterdam, Berlin, London, Madrid and Paris.

The Field Studies in Barcelona will examine the diversity of topics related to the principal theme of the history and present of Barcelona, the European context and the critical analysis of key European examples.

The program will be series of lectures about the places and cities that students will be virtually travelling during the program: Barcelona, Madrid and the selection of other European Urban Capitals. This series of lectures will constitute a potential guide for students to visit Europe in future years.

This course is designed to allow students to build a historical map of Barcelona, to immerse into, see, understand and document the identity, urban and natural landscape of Barcelona and its region in the European context. We will seek to trace these connections between Barcelona and Europe, bringing students into contact to create a forum for conversation and debate on current topics.

Madrid



Professors



IVAN
BLASI



ZANA
BOSNIC

Catalonia

3 different day long field visits in the context of Catalonia.

Through the visits students will be able to define the different landscape and climate conditions, history background, gastronomy and customs of the 3 selected areas in Catalonia.

GIRONA

OLOT

TARRAGONA

Madrid, Spain

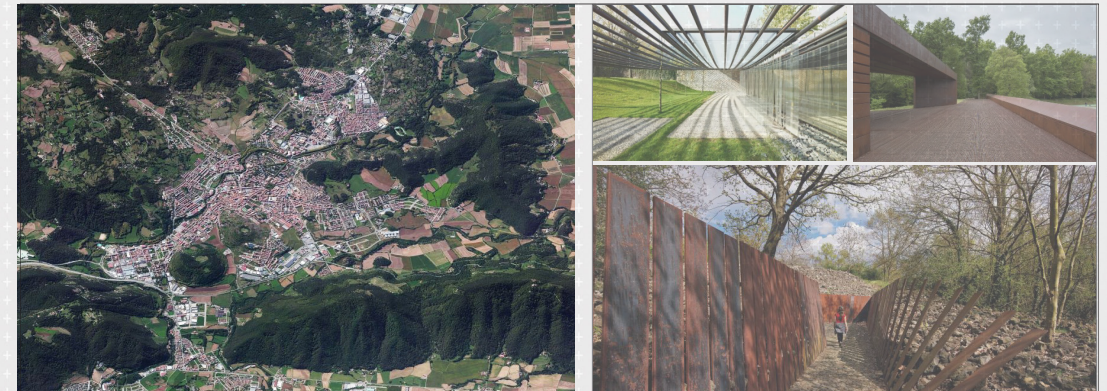
Madrid, one of Europe's biggest metropolis.

This territory is rich in history, culture, landscape and architecture. Public facilities, competitions and spaces are not exclusive of Europe but they have shaped the continent's territory over the centuries. The last years have brought important changes and cities have adapted according to political, economic, cultural and above all social transformations. European towns continue being attractive mostly because of their history but also because of their vibrancy. Madrid is a great example since it has historically constituted a strategic area of intense exchange, dialogue and conflict.

travel 1. Girona



travel 2. Olot



travel 3. Tarragona



Semester moments:

Mies van der Rohe Pavilion, Barcelona



Mies van der Rohe Pavilion, Barcelona



Bunkers of Carmel, Barcelona



Urban History seminar, BAC



Olympic ring, Barcelona



MNAC, Barcelona



Roldan + Berengué arqts, Barcelona



Roldan + Berengué arqts, Barcelona



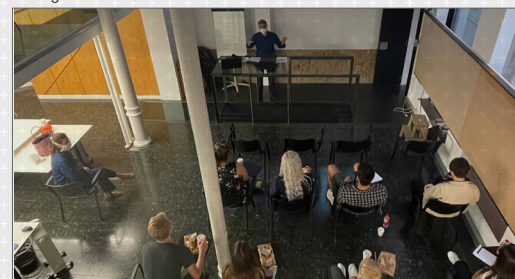
Park Güell, Barcelona



Park Güell, Barcelona



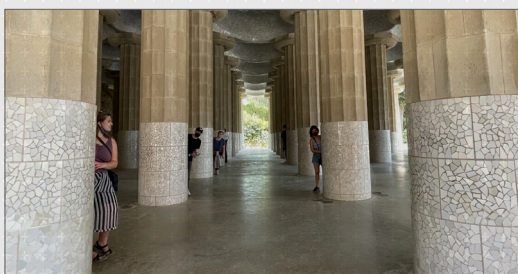
Design Studio, BAC



TSH



Park Güell, Barcelona



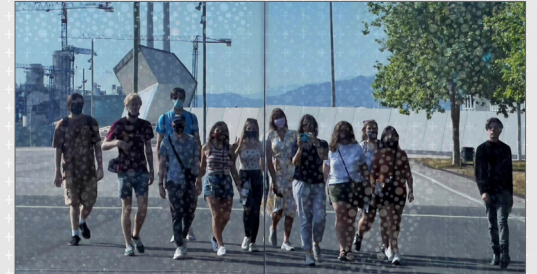
Park Güell, Barcelona



Mirador de l'alcalde, Montjuic, Barcelona



Forum, Barcelona



Semester moments:

Cathedral of Girona



Banys Arabs, Girona



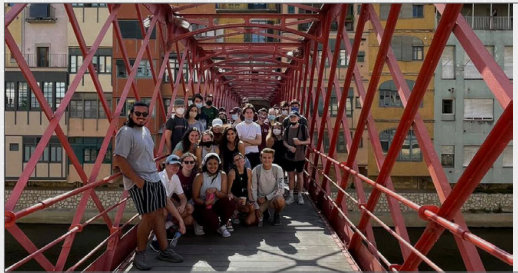
Caixa Forum, Madrid



Retiro Park, Madrid



Pont de les Peixateries Velles, Girona



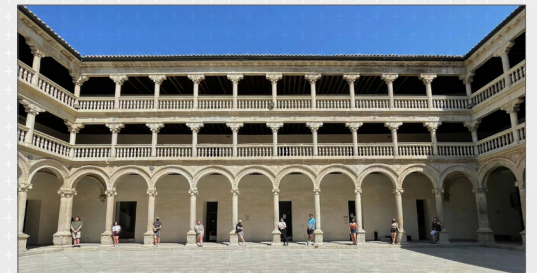
Tarragona



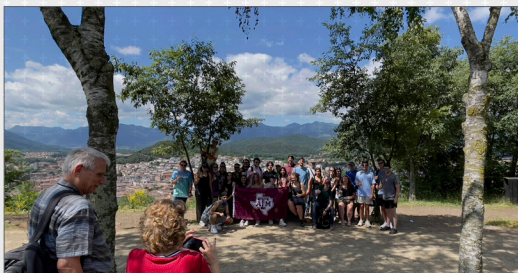
Toledo University



Toledo University



Montsacopa Volcano, Olot



les Cols, Olot



Toledo



Toledo



Les Cols, Olot



Montsacopa Volcano, Olot



Bosc de la Marquesa, Tarragona

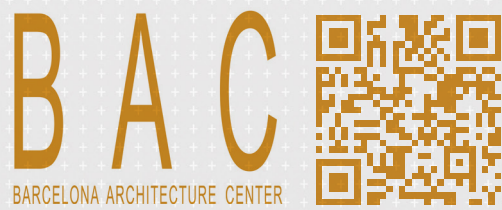


Sant Pau Hospital Complex, Barcelona





thank you all!



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BARCELONA ARCHITECTURE CENTER is an educational organization founded in 1998 and chaired by Miguel Roldán. The BAC was created with the aim of developing academic and research collaborations with other universities and higher education institutions across the globe.