

ART CENTER ON THE LAKE

XU ZHANG

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Master of Architecture
in
Architecture

Paul Emmons, Chair

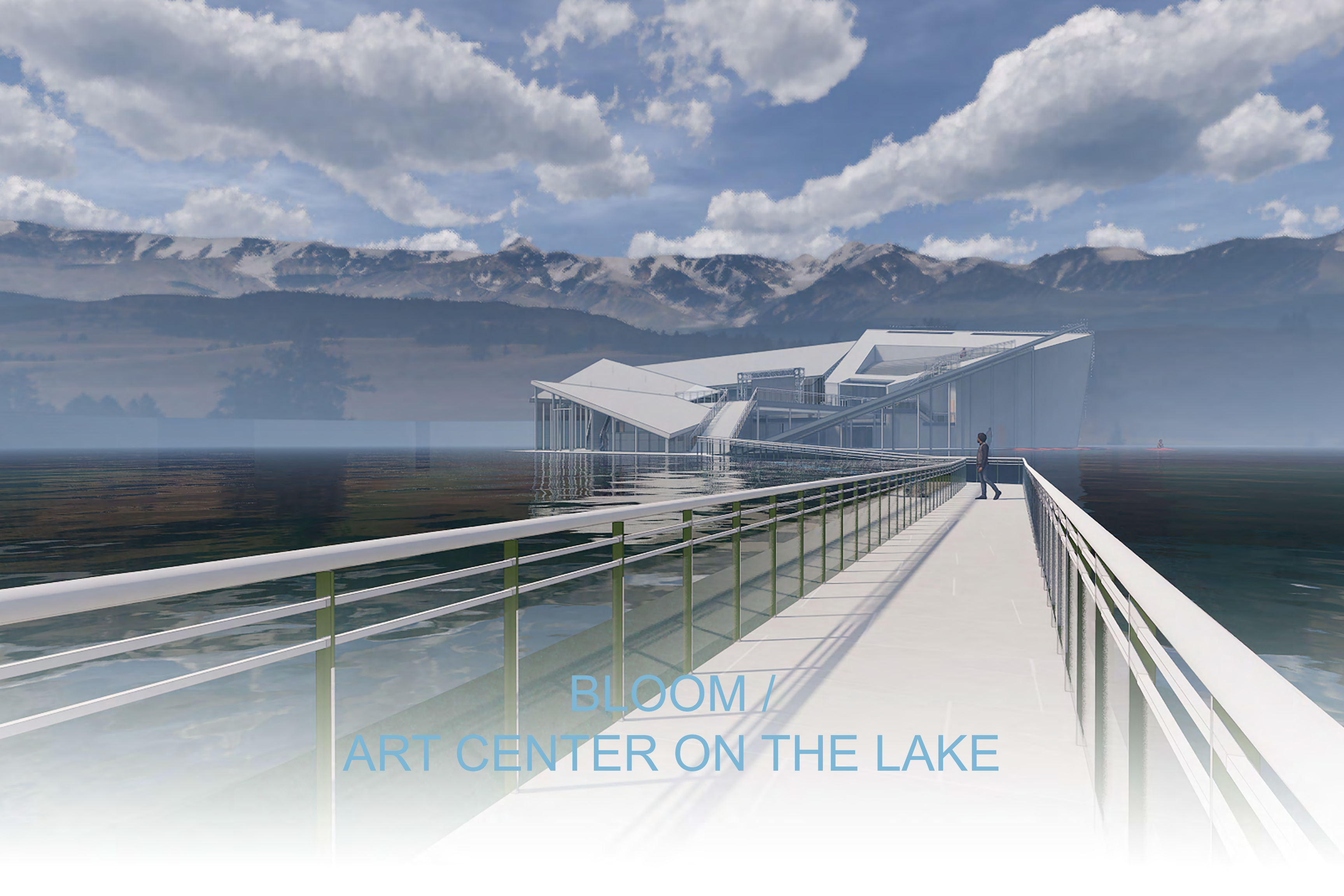
Marcia F. Feuerstein

Matthew Dreher

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Alexandria, Virginia

KEY WORDS:

Art, Nature, Daily life, Architecture, View, Multi-function Hall, Lake, Gallery



BLOOM /
ART CENTER ON THE LAKE

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ABSTRACT

The water's shore, used for defense, trade, transportation and industry, always plays an important role in a city's development. Buildings were built there to fulfill related practical functions, such as barns, factories or piers. However, at the present time, the functions mentioned above are not the only purpose of the shore, now more entertainment activities happen along the water's edge. Therefore, architecture's roles are changing.

The site is in a small town called Riva San Vitale, which is located at the south end of Lake Lugano, Switzerland. For this small town, lake's shore is usually used by local people as a place for relaxation. Based on my four-month long living experiences there, I decided to design an art center on the lake to enrich residents' daily life.

A folding method was used in form processing to reflect the mountains' shapes surrounding the town. Through this whole process, my thesis explores how the architecture is used as an instrument to bring art into people's daily life and, at the same time, extend people's life into nature. As a result, the Art Center will become a new plaza of Riva San Vitale.

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GENERAL AUDIENCE ABSTRACT

This thesis explores what role architecture can play in people's daily life. After four-month's experiencing local people's life in Riva San Vitale, a multi-function hall, a cafe & restaurant, a gallery and an entertainment space for birds, those four main functions were included in art center's designing process. Those functions of this art center not only were built to satisfy basic necessity of residents' life there, but also to enrich people's daily life with art. At the same time, architecture plays like a bridge connecting people's life with nature by extending humans' activities to the lake.

DEDICATION

Deeply grateful to my mom, without your constant support I cannot follow my dream.
And my friends, who are always on my side, listening to my complaints as well as encouraging me
to chase my dream.

ACKNOWLEDGEMENTS

I would like to thank Heinrich Schnoedt at the very beginning, for leading me to the right track, and for letting me have a good start in Riva San Vitale, Switzerland.

Then, I would like to thank my committee members Paul Emmons, Marcia F. Feuerstein and Matthew Dreher. Most of my thesis was developed, ended in one semester at WAAC. Without your advice, support and sometimes challenging me to go a little further, it would not be achieved.

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01 SITE

SITE VIEW

Riva San Vitale is located between Monte San Giorgio and Monte Generoso, on the west of Lake Lugano's south end, which gives this small town a stunning view of nature. Both people and different kinds of birds like to "hang-out" along the lakeshore.



SITE PLAN

People coming from different directions gather along the shore. They drink and talk there, and children usually play in the playground.

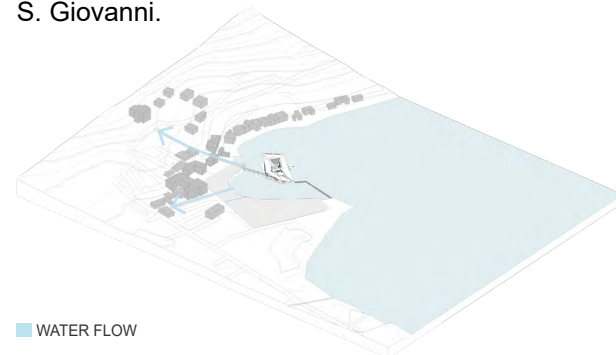
Residents like the arts. They listen to concerts in a small backyard of the municipality, children practice ballet in a small dance room and drawing at school. There are several mini bars which are always full of people all year round drinking wine.

There are two main churches----Church of S. Croce and Baptistry of S. Giovanni, which are located along the two axes created by drainage channels. The Art Center is located in the shallow water on the intersection point of extending the lines of the axes, linking the churches with meeting-up shore and people's daily life.



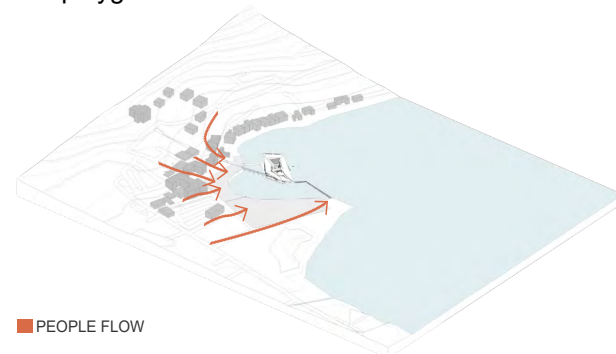
Water & People Flow Analysis

If it rains or the snow melts, water will flow into two drainage channels. One points from the Church of S. Croce. The other one goes from the Baptistry of S. Giovanni.



■ WATER FLOW

Residents come to the lake from different directions. They drink and talk, their children play in the playground there.



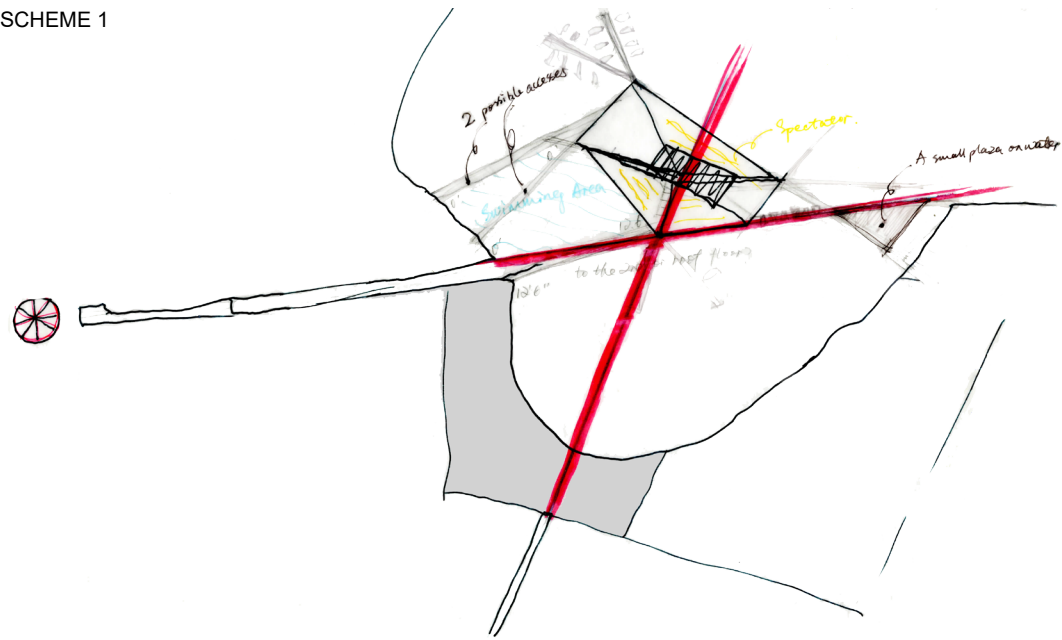
■ PEOPLE FLOW



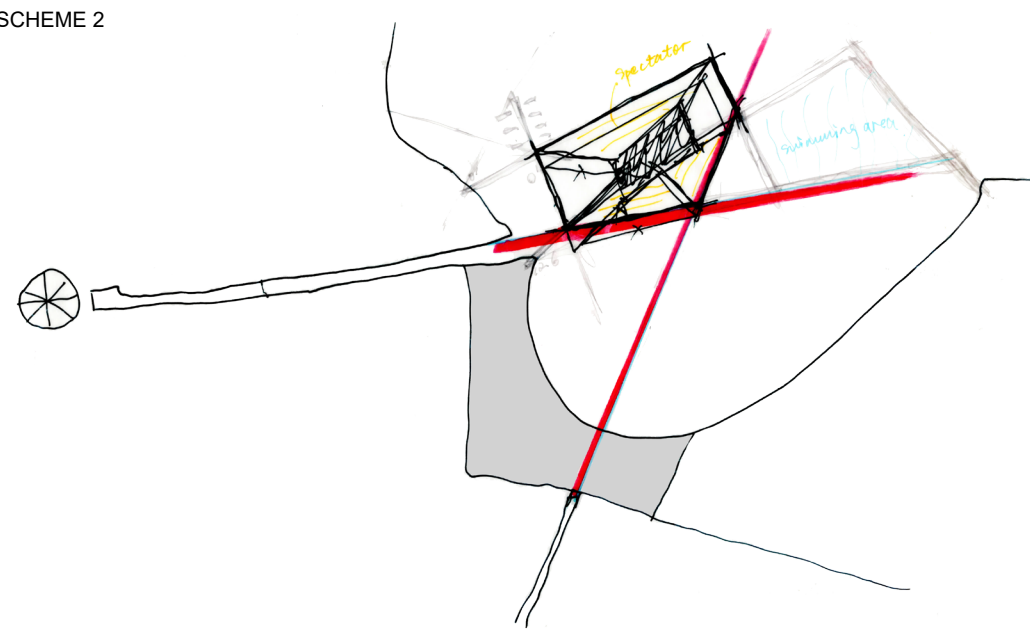
- Two Main Churches
- Musical places
Small concerts or performances were usually held in Municipality's backyard.
- Bars
- Elementary School
Children love drawing and post their works in school.
- Virginia Tech
- Residential & Others

LOCATION SCHEMES

SCHEME 1



SCHEME 2



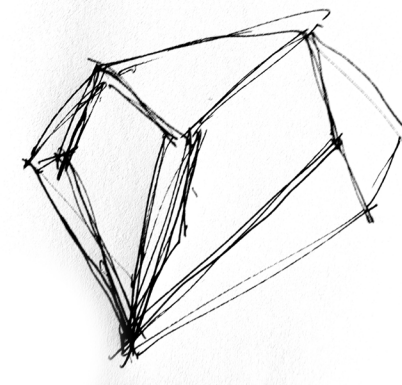
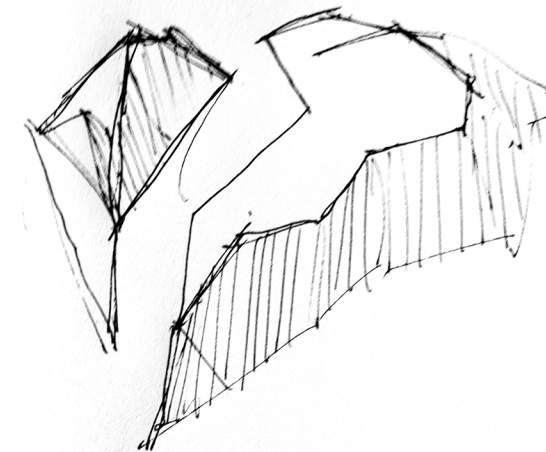
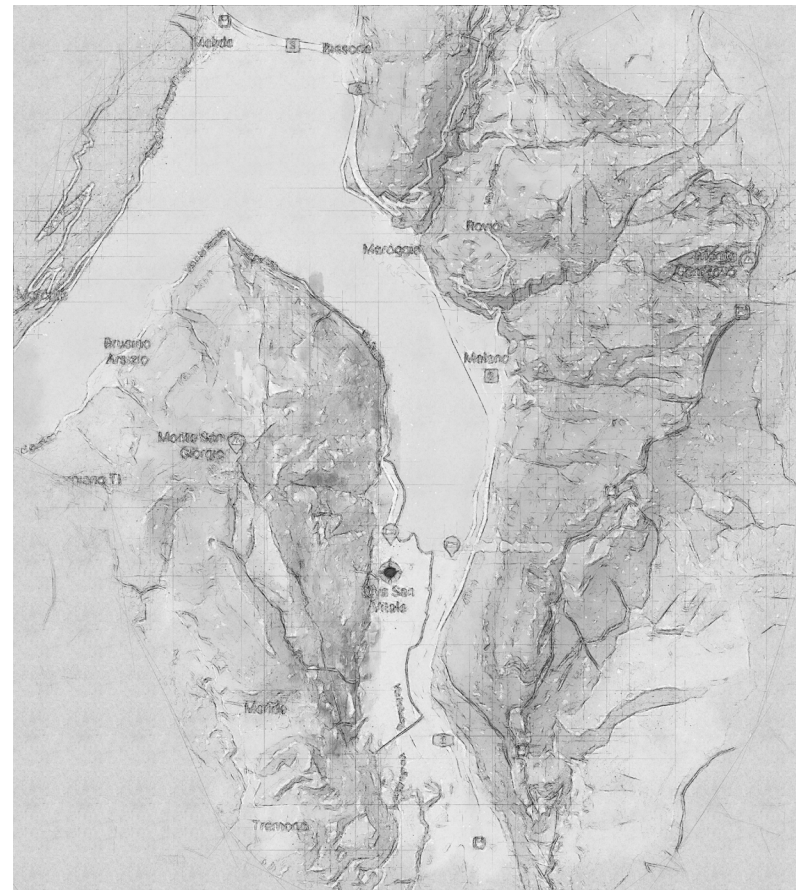
SCHEME 3



02 FORM

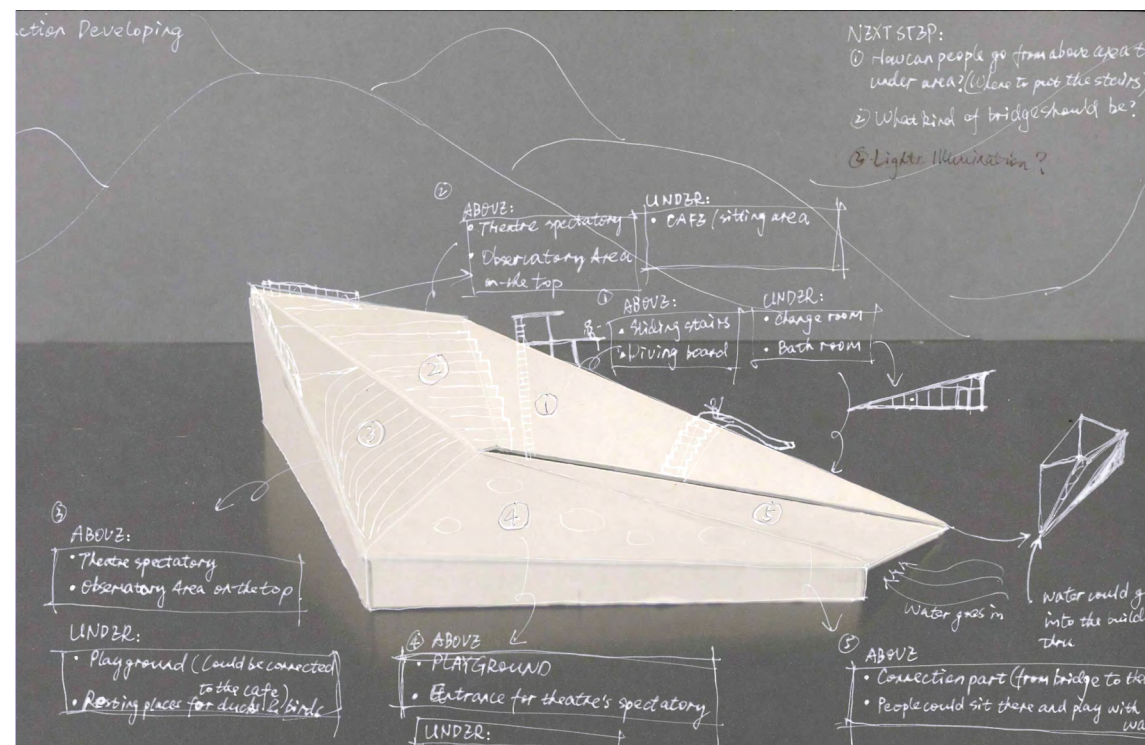
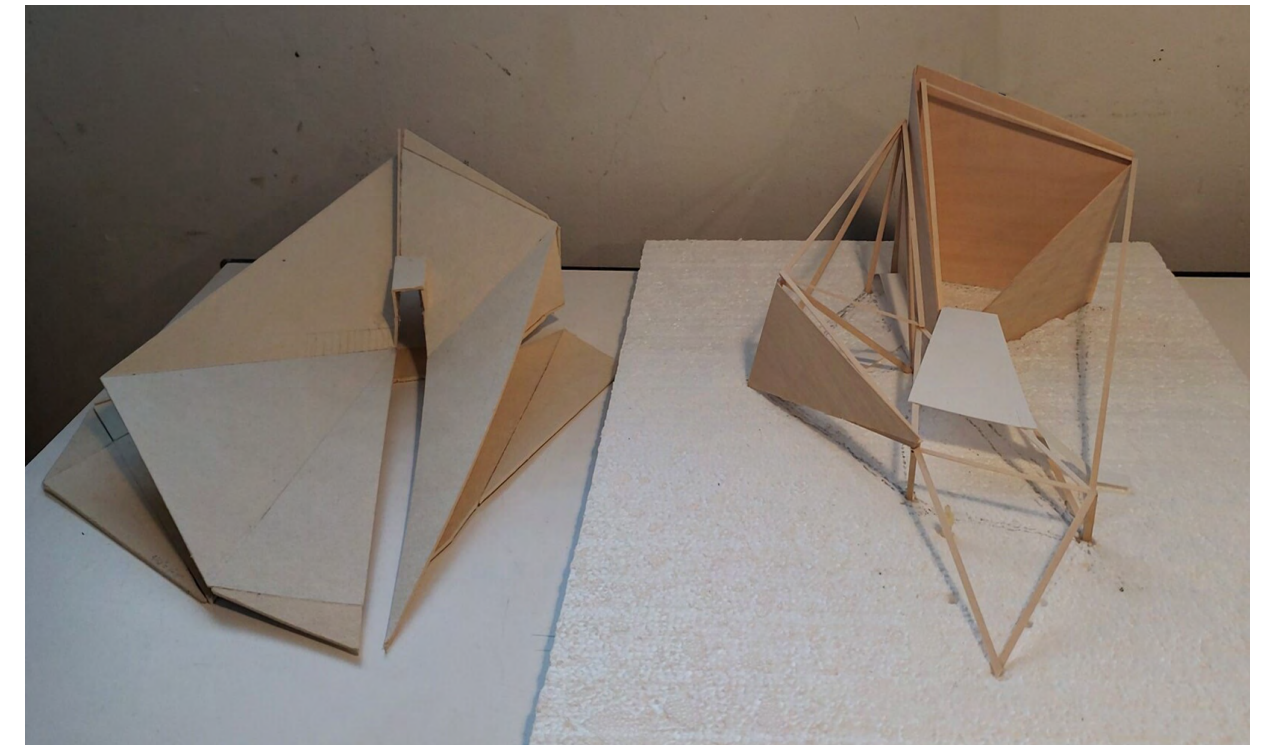
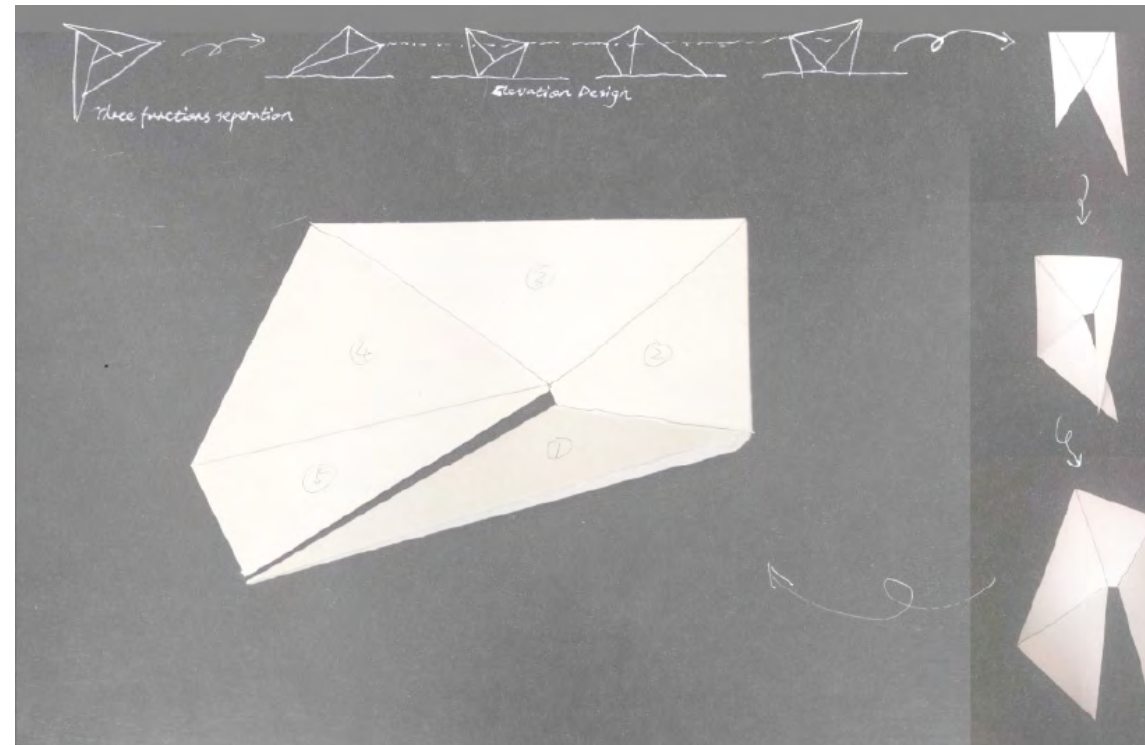
THE VISION

Inspired by Eugene Viollet-Le-Duc's geometrical drawings of mountain peaks, form was extracted from the peaks surrounding Riva San Vitale.



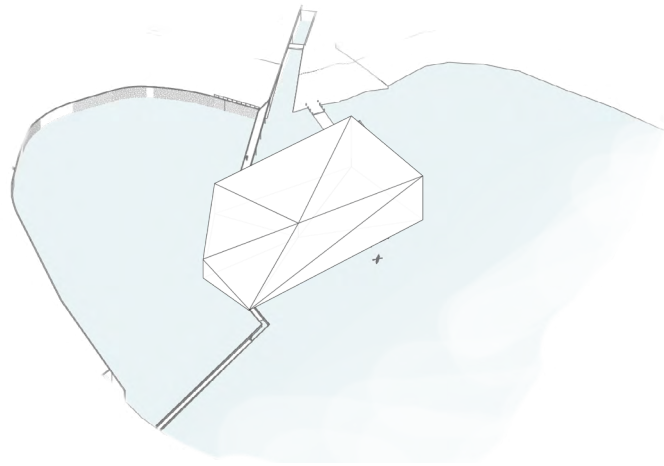
MASSING PROCESS

The form was developed by folding papers. As a result, the Art Center has a continuous roof surface which is like the continuous mountain peaks. Then, through further development, the entrance bridge location was defined.

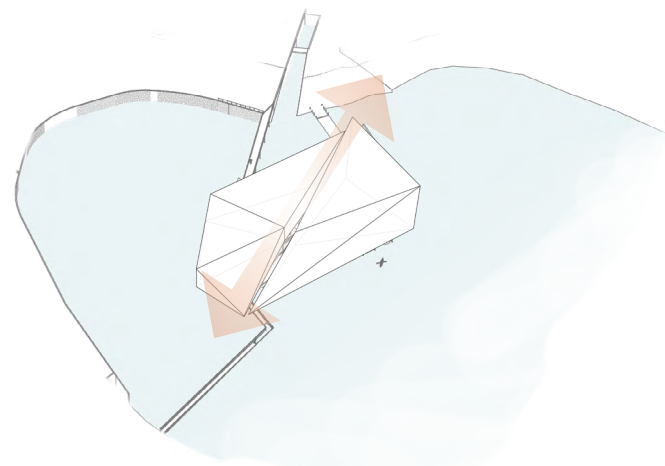


CONCEPT DEVELOPMENT

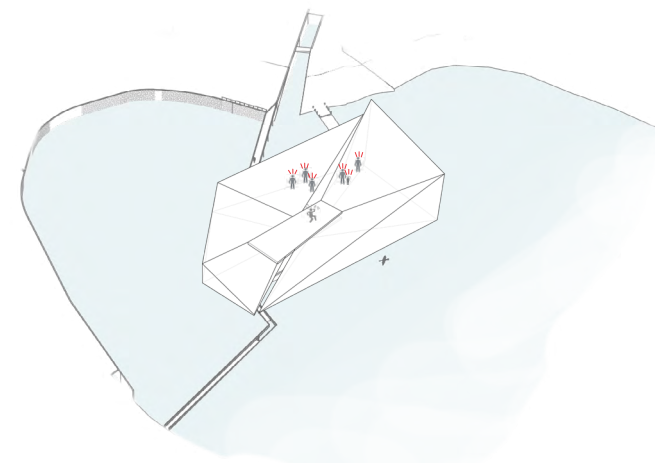
1. EXTRACT from the mountain



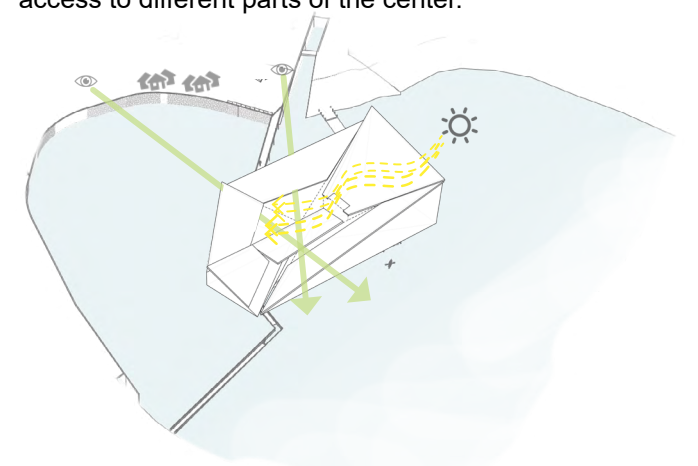
2. CRACK to let people come through



3. LIFT middle part as an outdoor stage

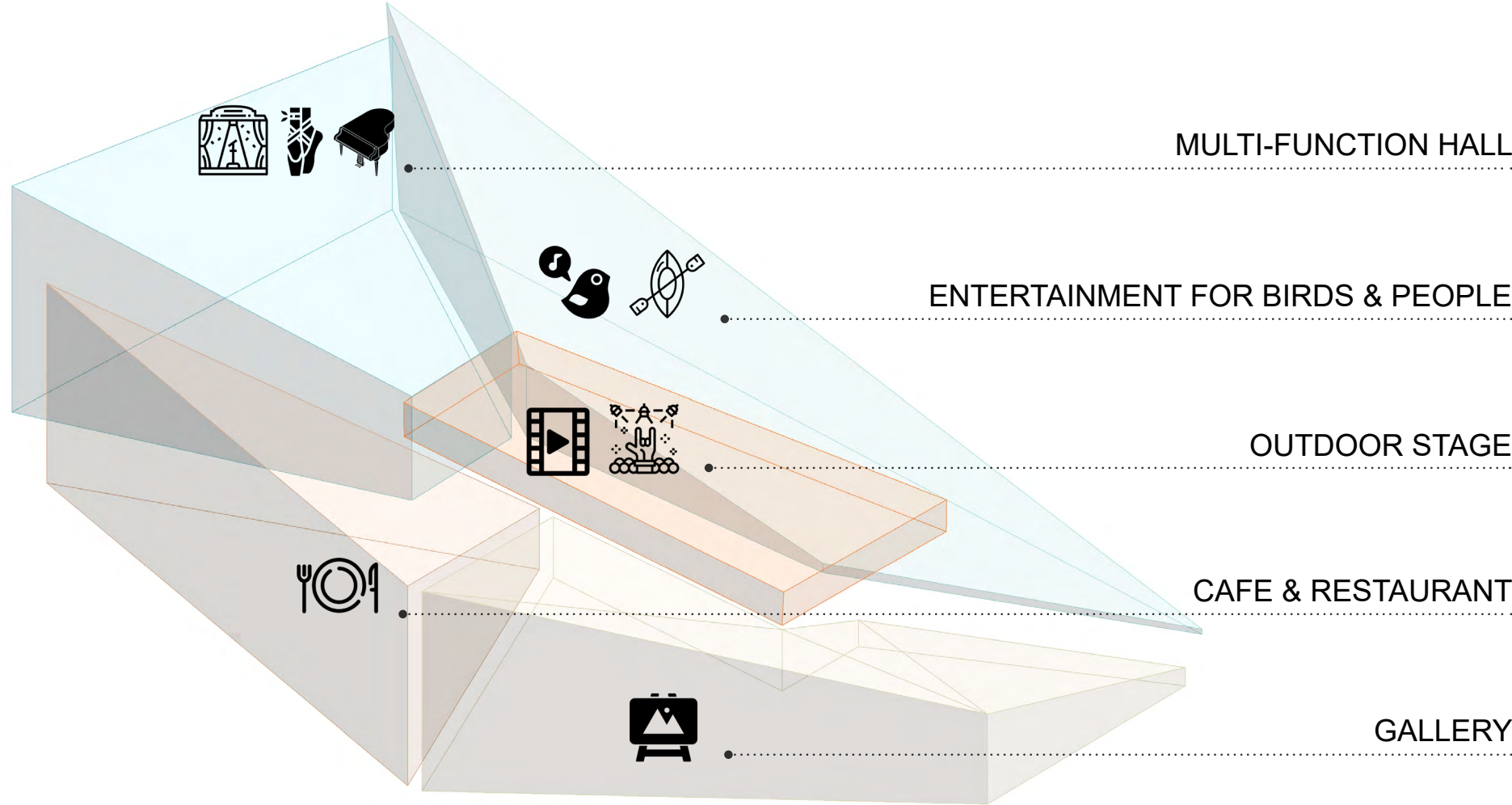


4. CUT & TILT the roof to get better view, make access to different parts of the center.



ACTIVITY PROGRAMMING

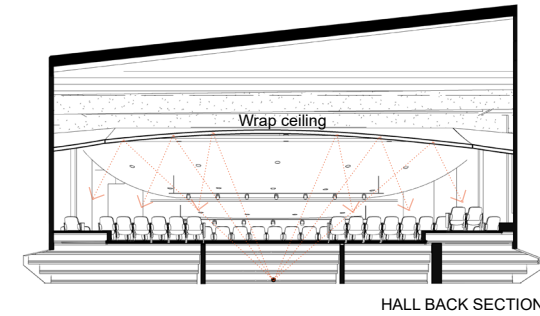
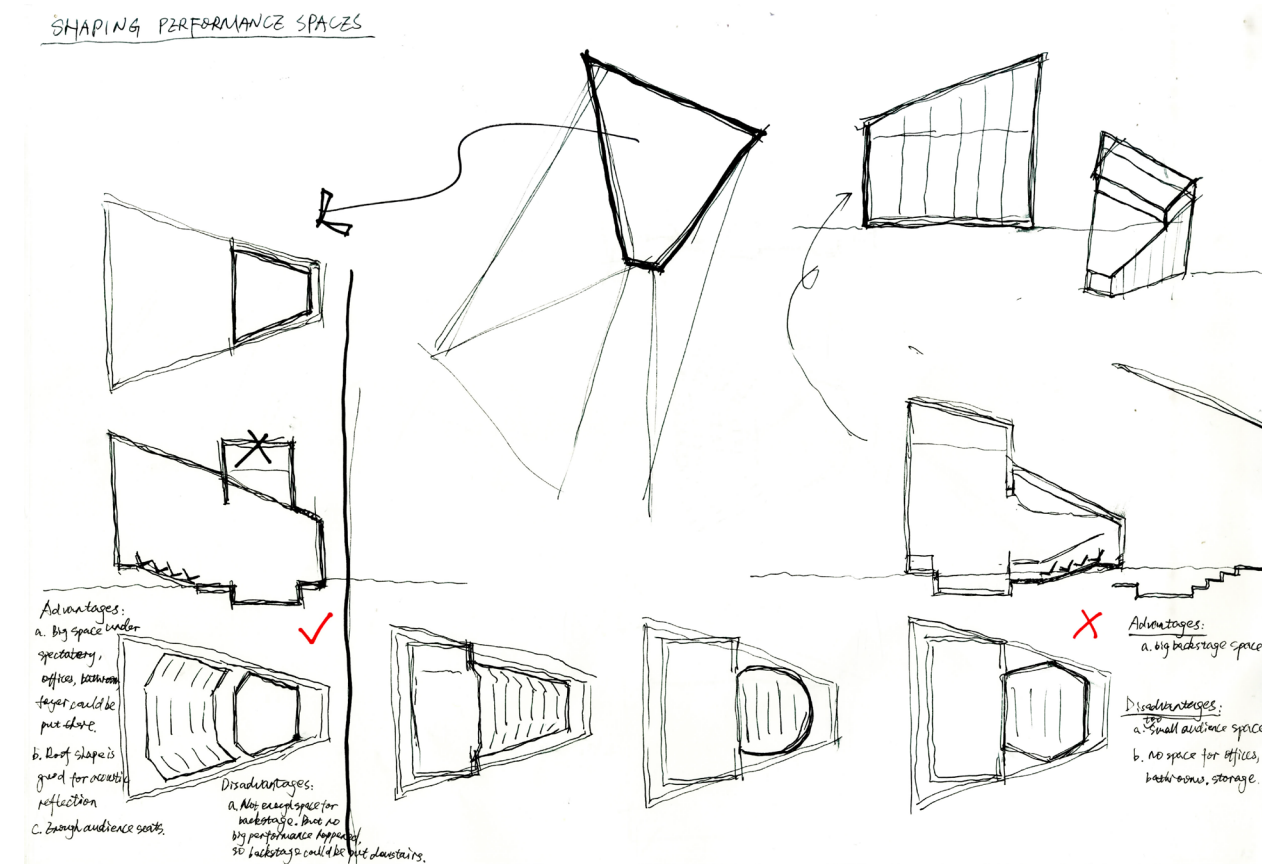
Each triangle piece of the building has a certain function to satisfy residents' affection for arts. At the same time, the art center also provides local people a place for their own performances or art shows, thereby, it will enrich their lives with art.



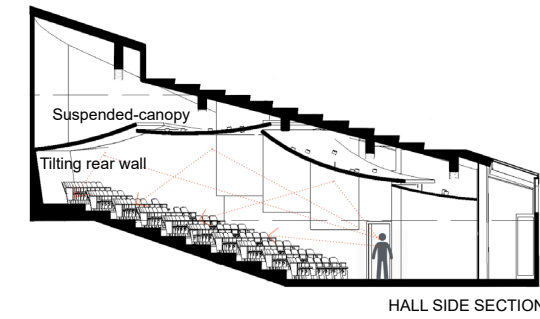
03 MULTI-FUNCTION HALL DESIGN

FORM DEVELOPMENT & ACOUSTIC ANALYSIS

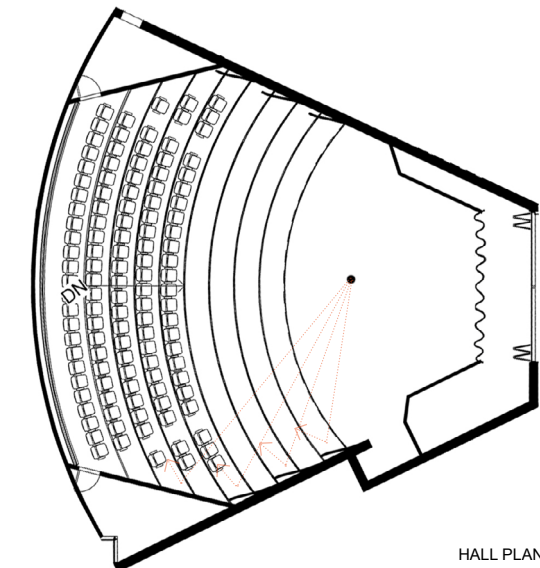
Taking advantage of available space, offices and green rooms were located under audience seating. A large storage space is located under the stage.



Interior walls and ceilings were designed according to acoustic analysis.



Side wall was designed to avoid fan-shaped wall's bad lateral sound reflection.



MULTI-FUNCTION HALL, SPECTATORY



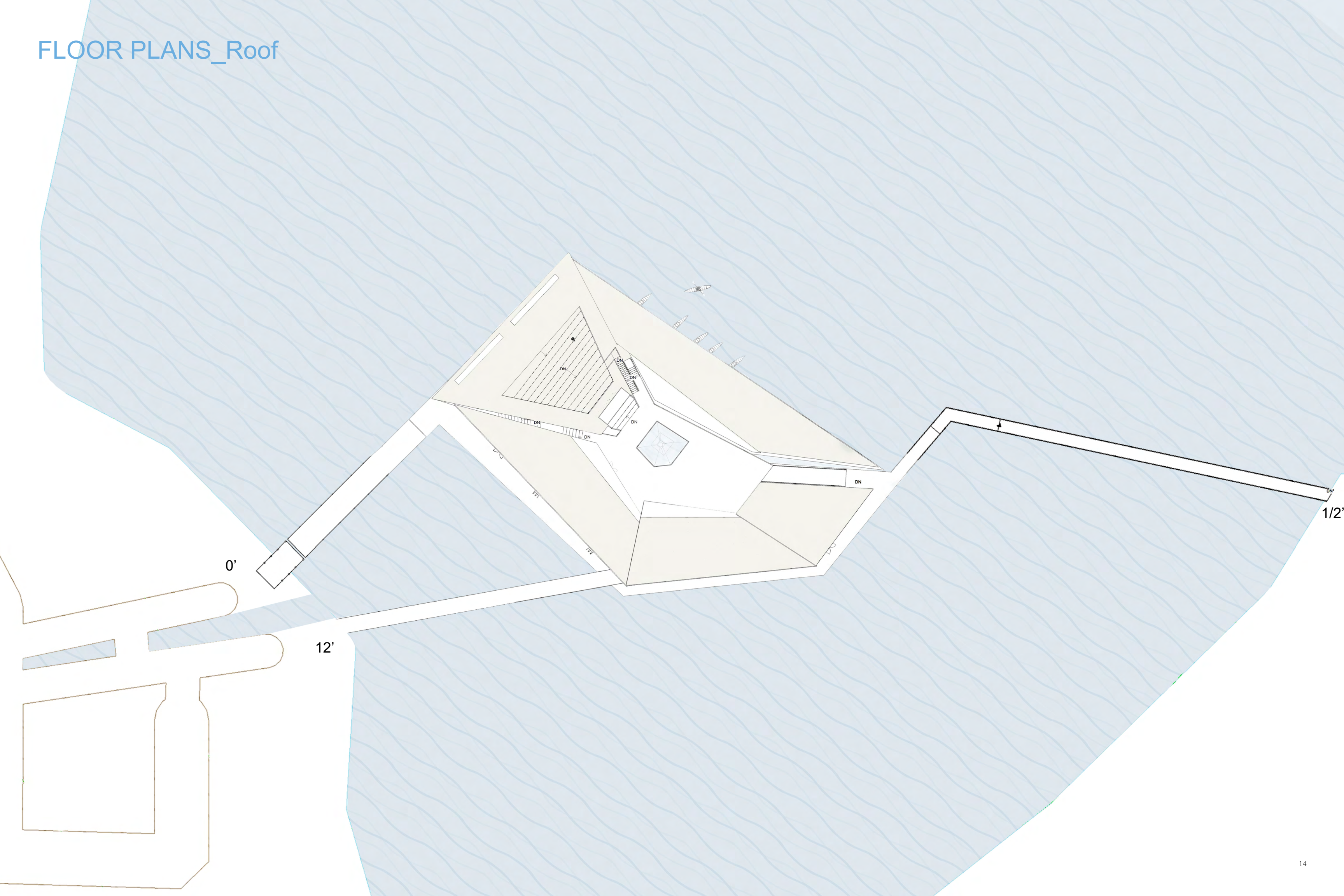
MULTI-FUNCTION HALL, CURTAIN CLOSED



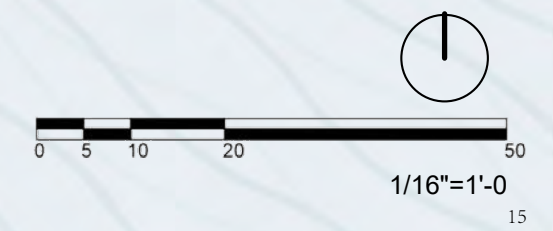
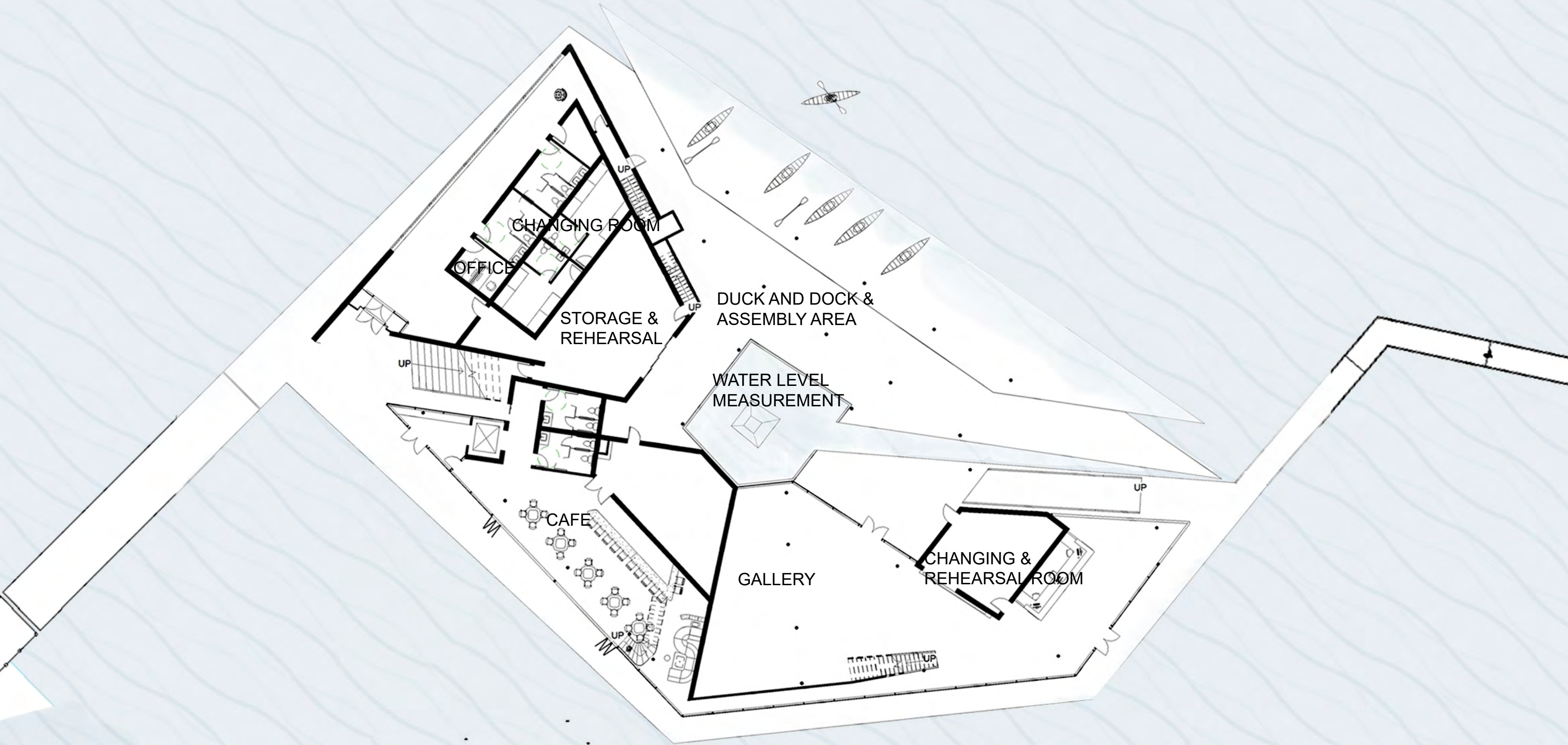
MULTI-FUNCTION HALL, CURTAIN OPENED

04 FINAL DESIGN

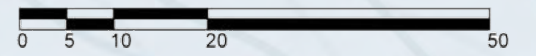
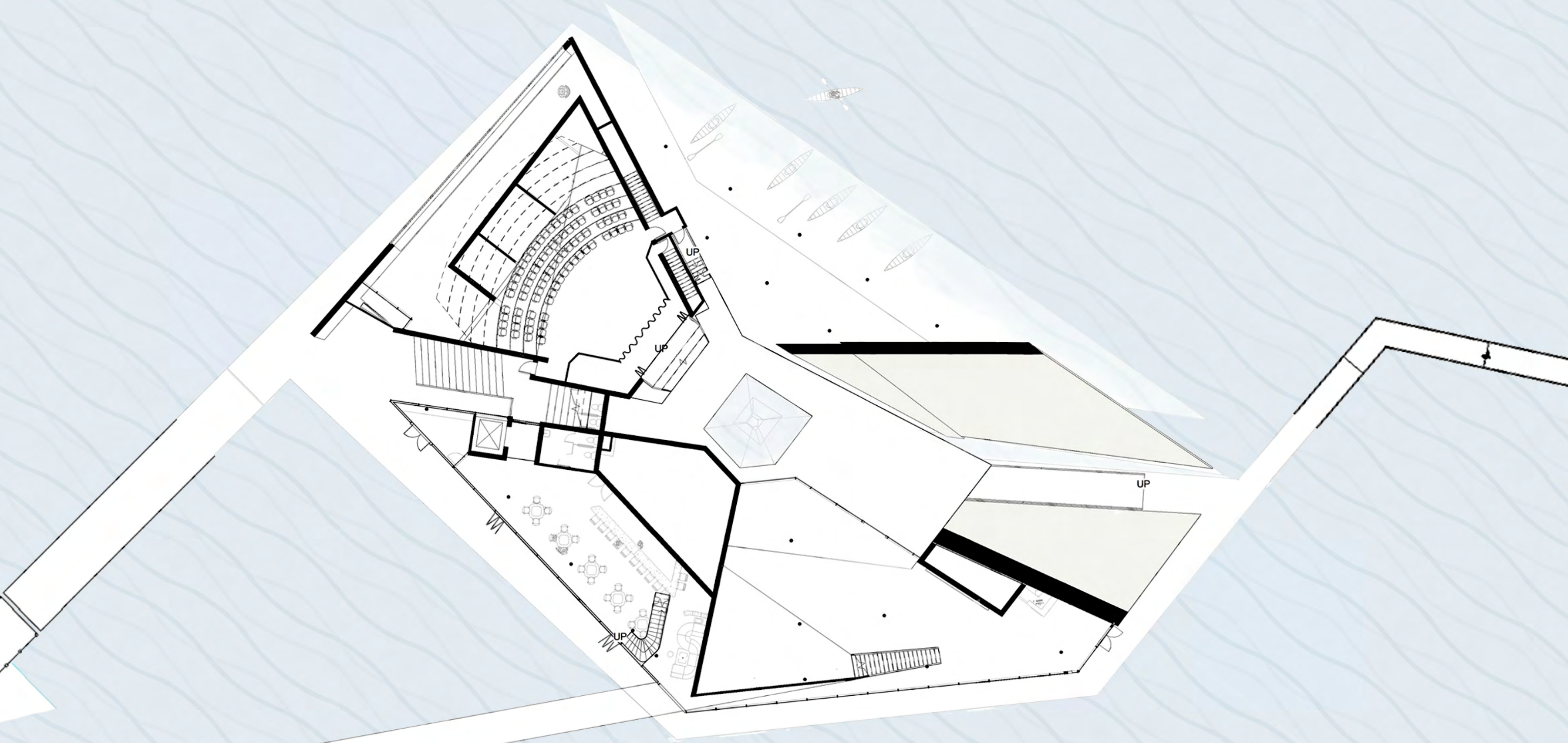
FLOOR PLANS_Roof



FLOOR PLANS_1st Floor

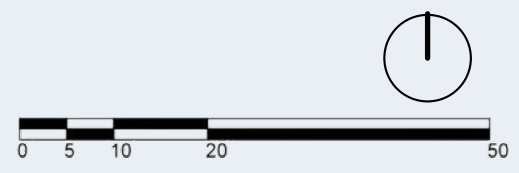
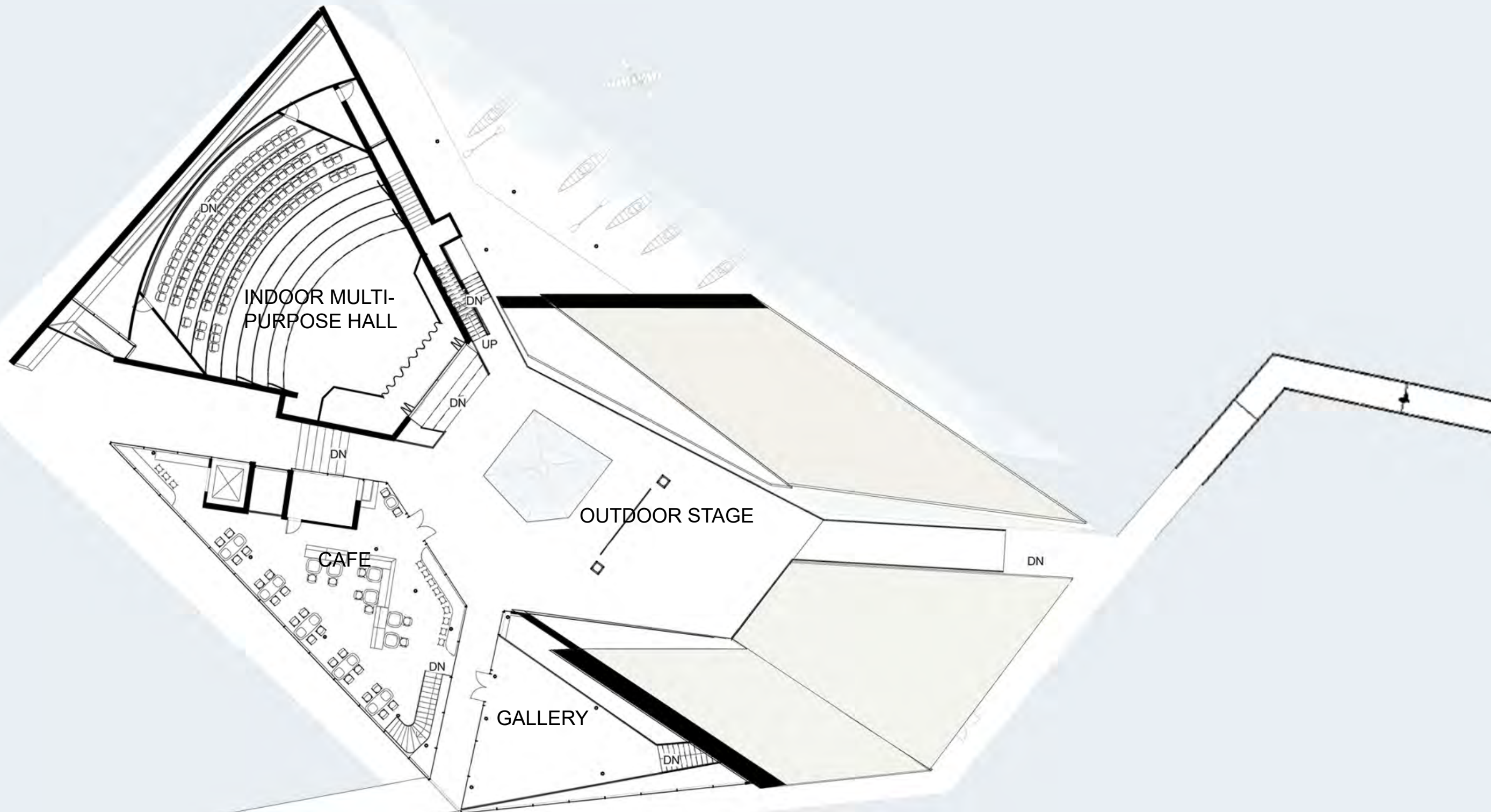


FLOOR PLANS_Mezzanine Floor

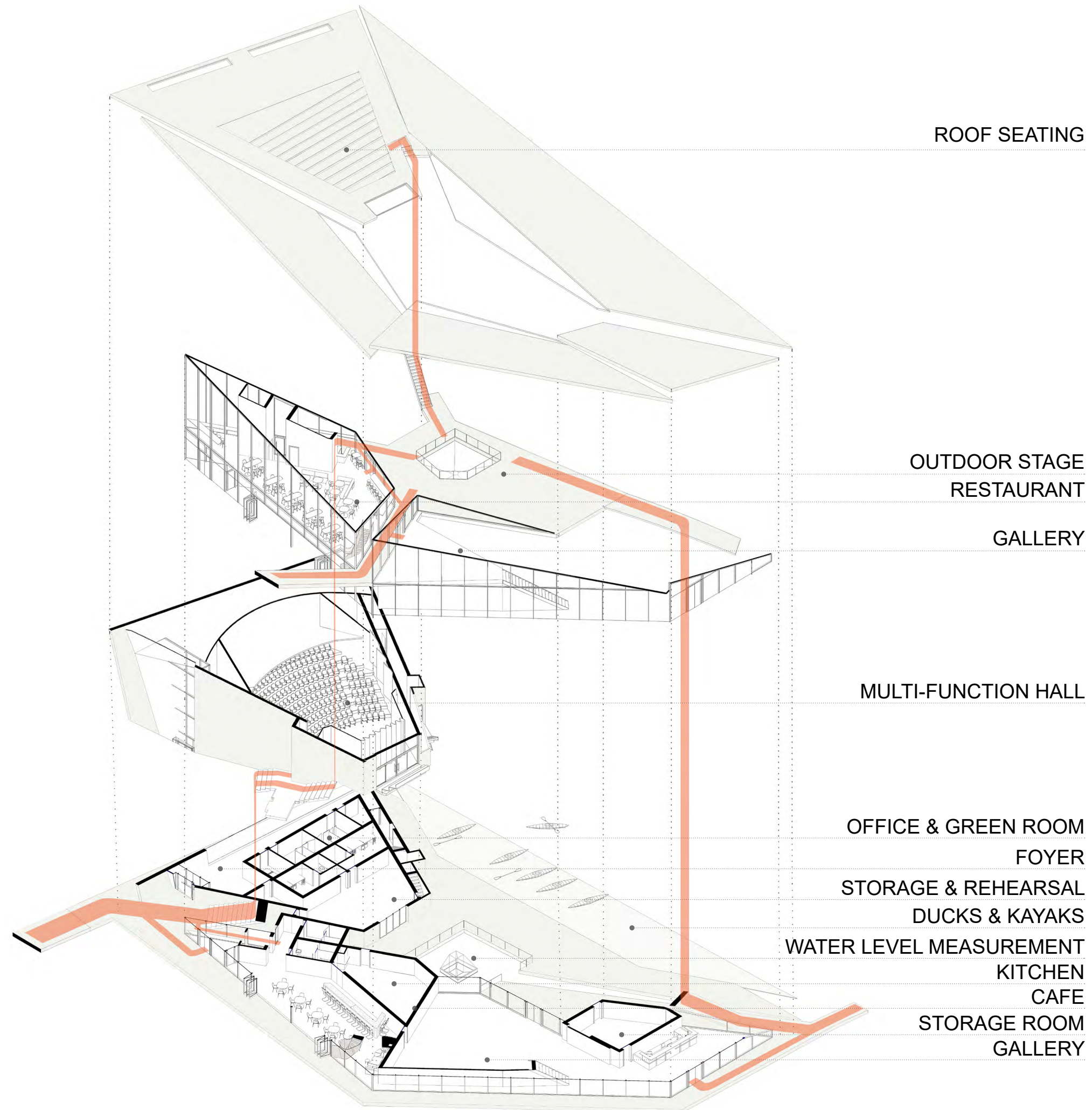


1/16"=1'-0"

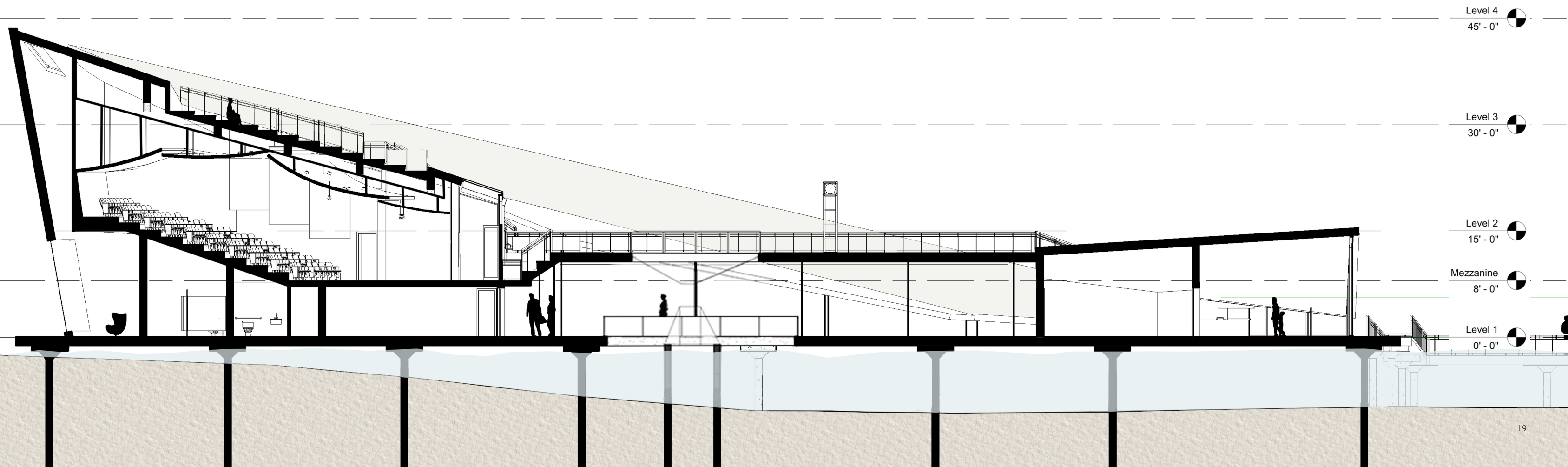
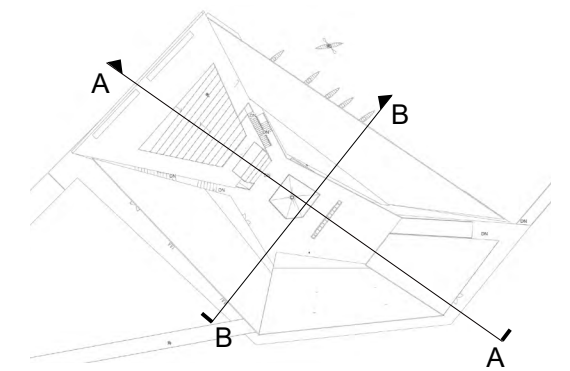
FLOOR PLANS_2nd Floor



CIRCULATION



SECTIONS_Section A-A



Level 4
45' - 0"

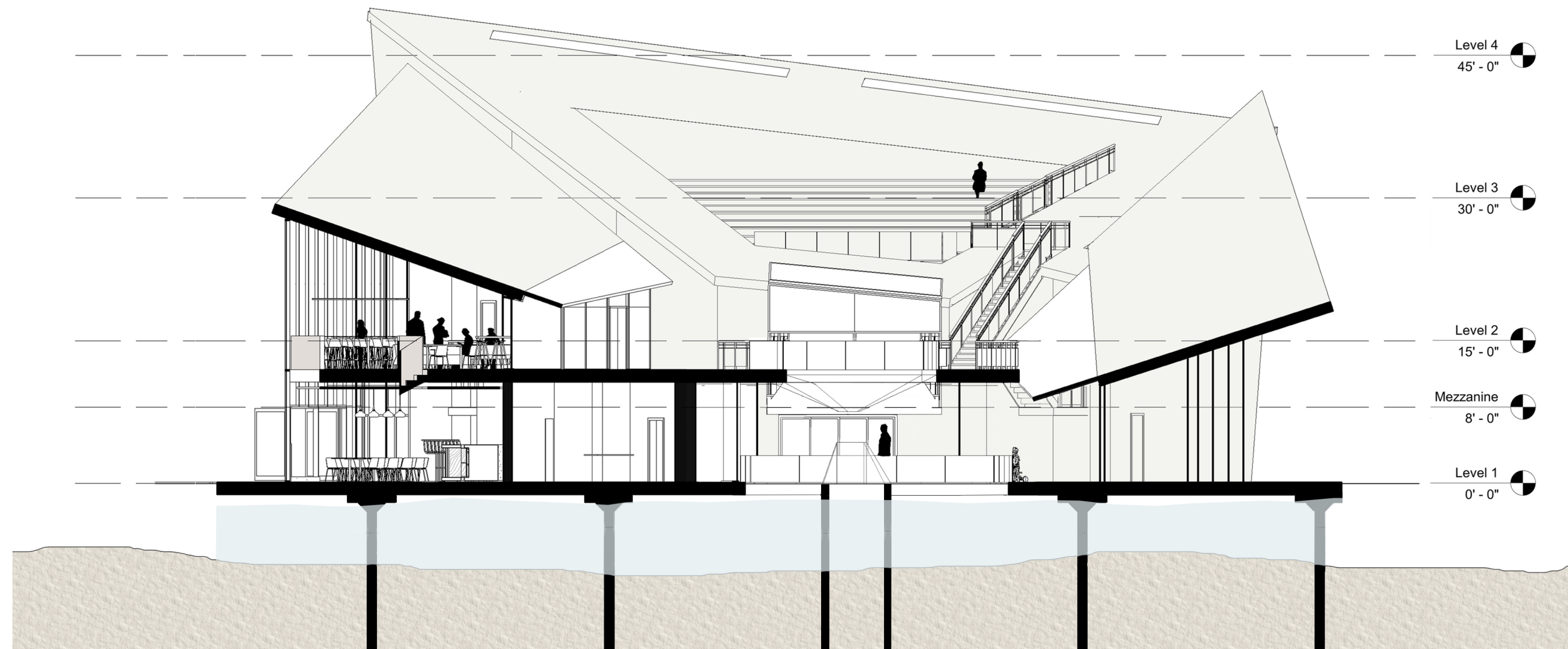
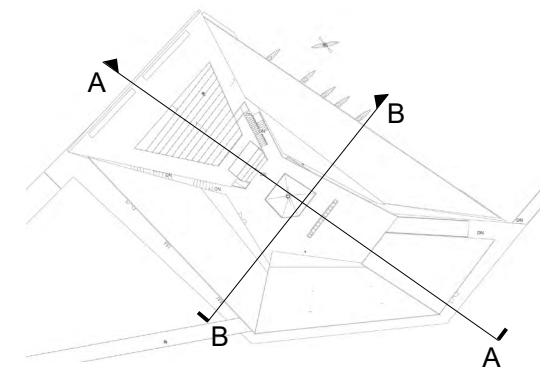
Level 3
30' - 0"

Level 2
15' - 0"

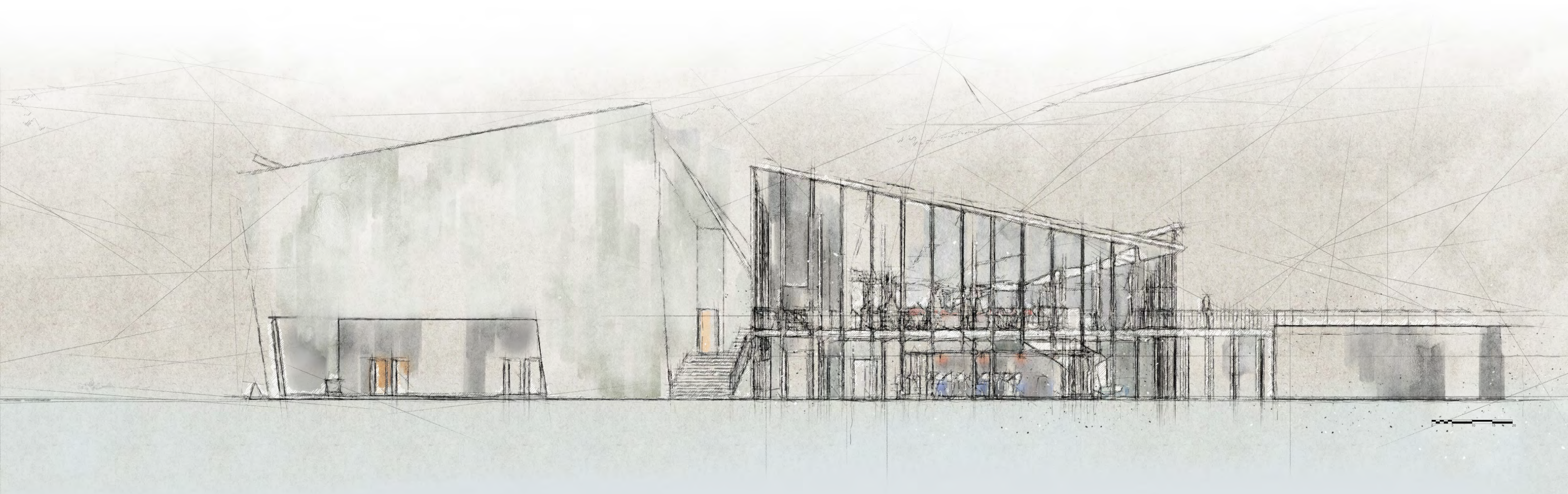
Mezzanine
8' - 0"

Level 1
0' - 0"

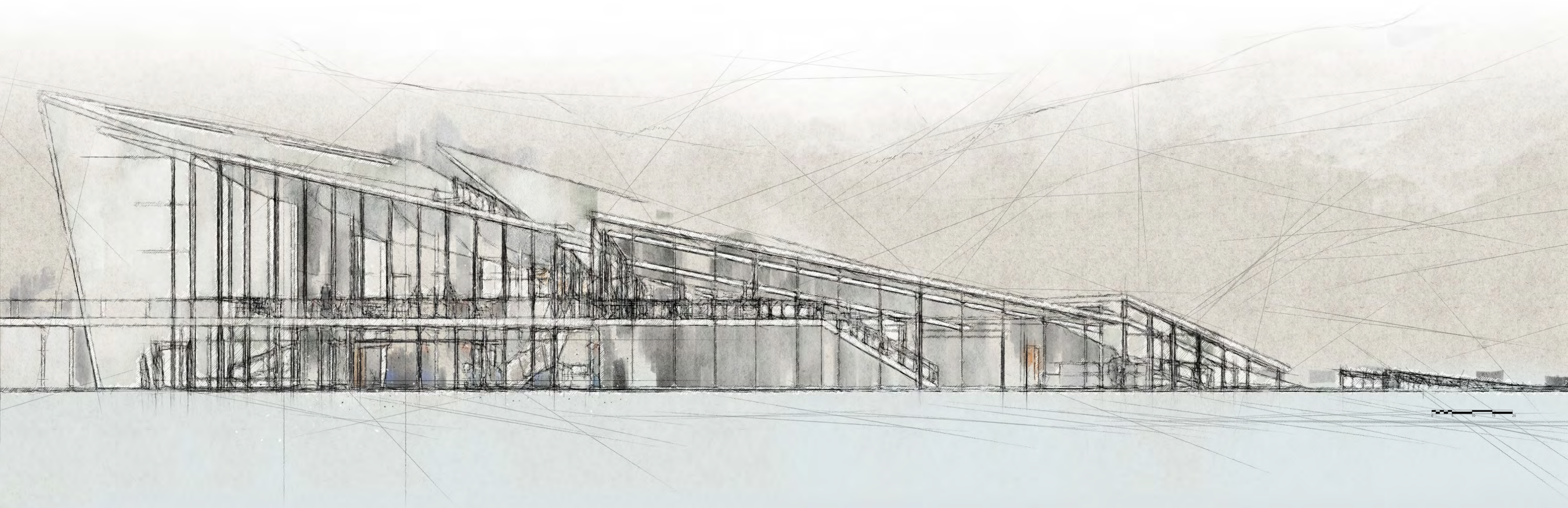
SECTIONS_Section B-B



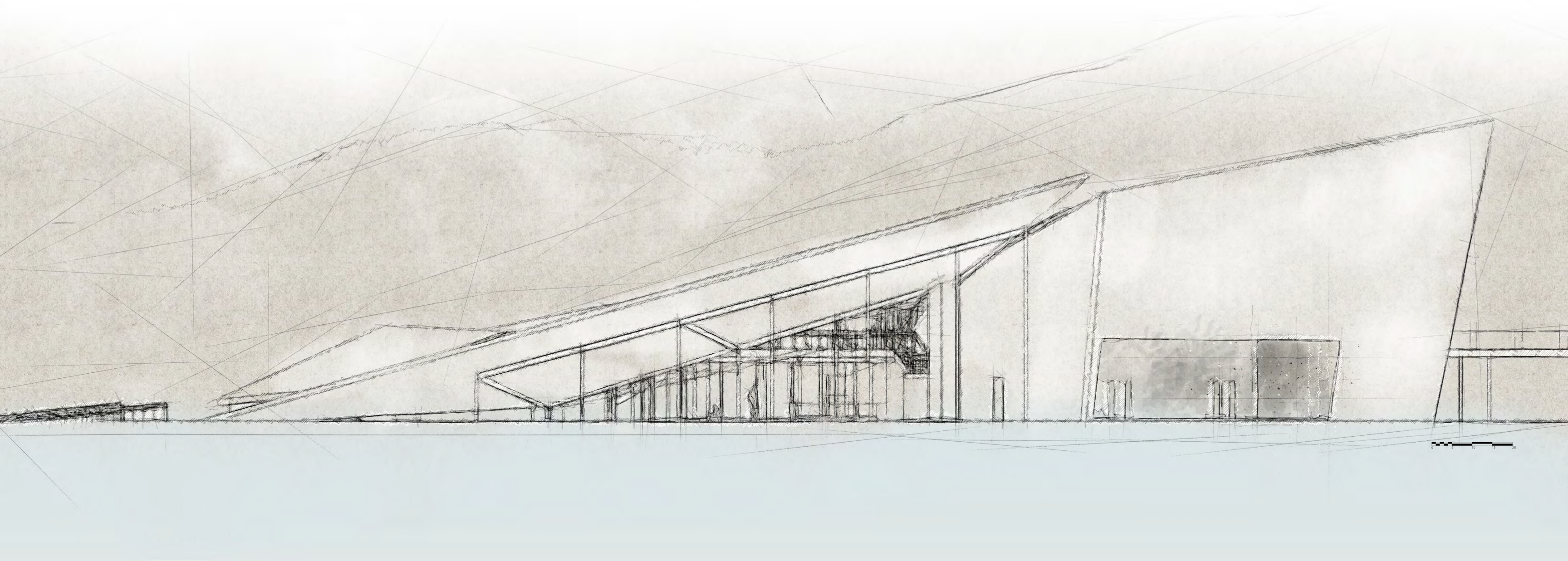
EAST ELEVATION



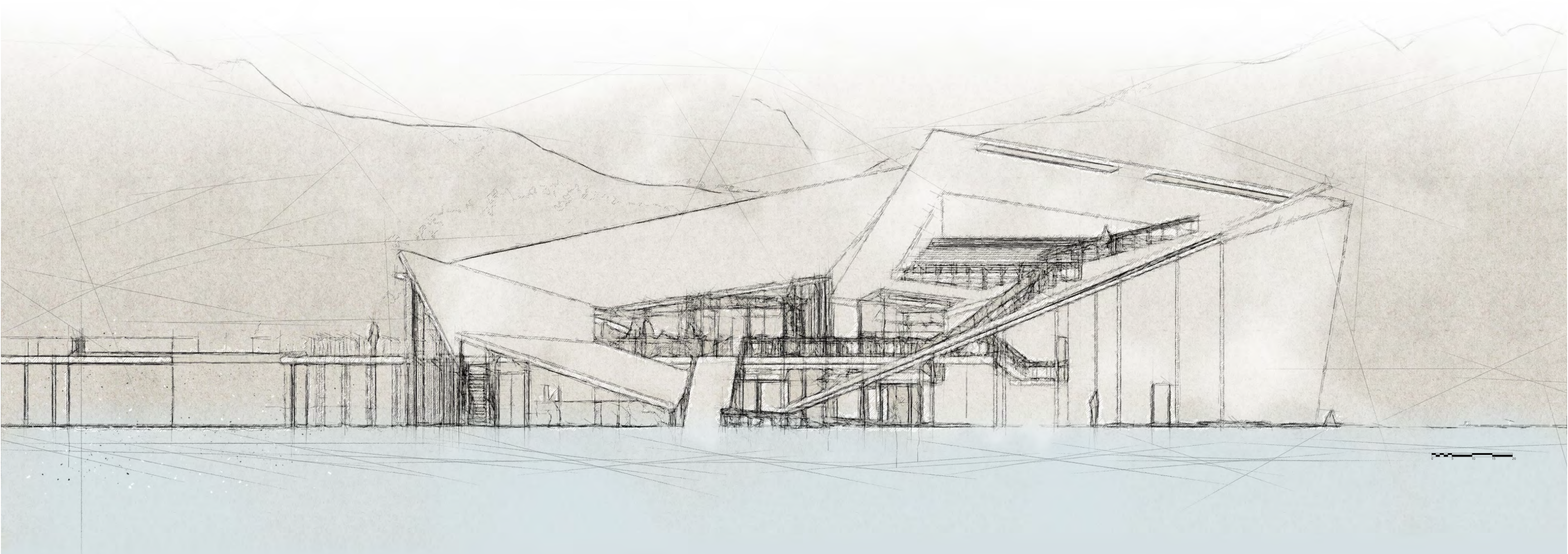
NORTH ELEVATION



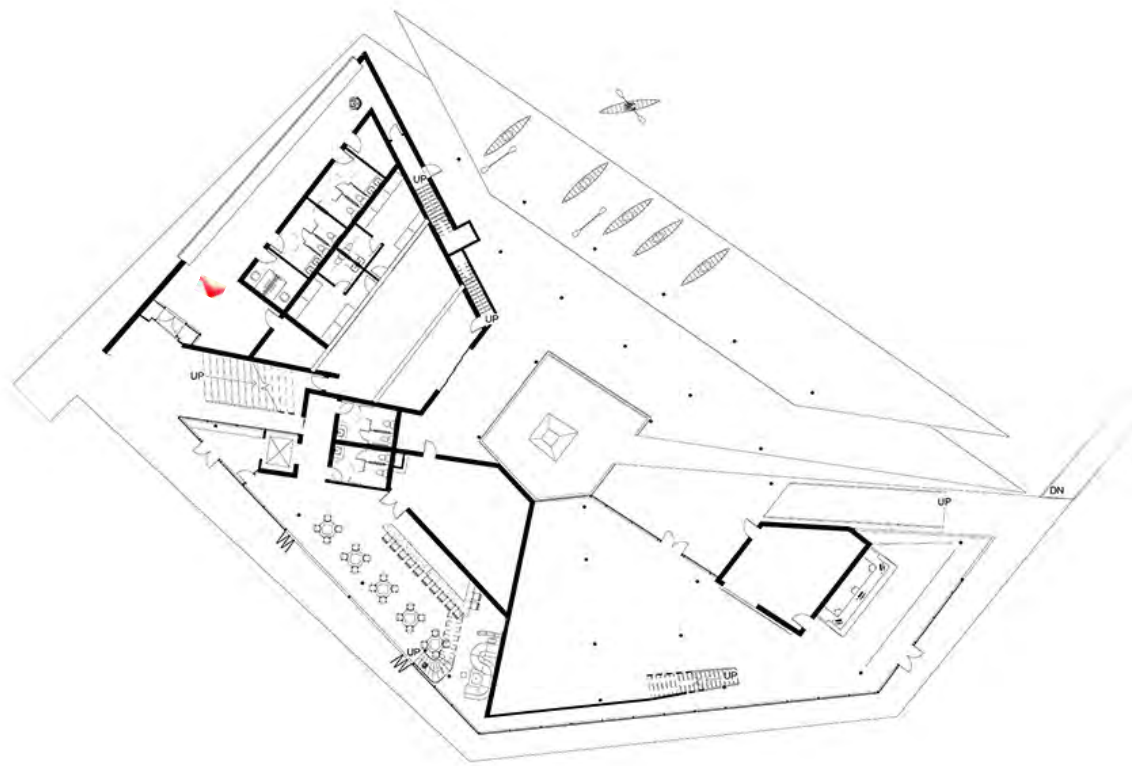
WEST ELEVATION



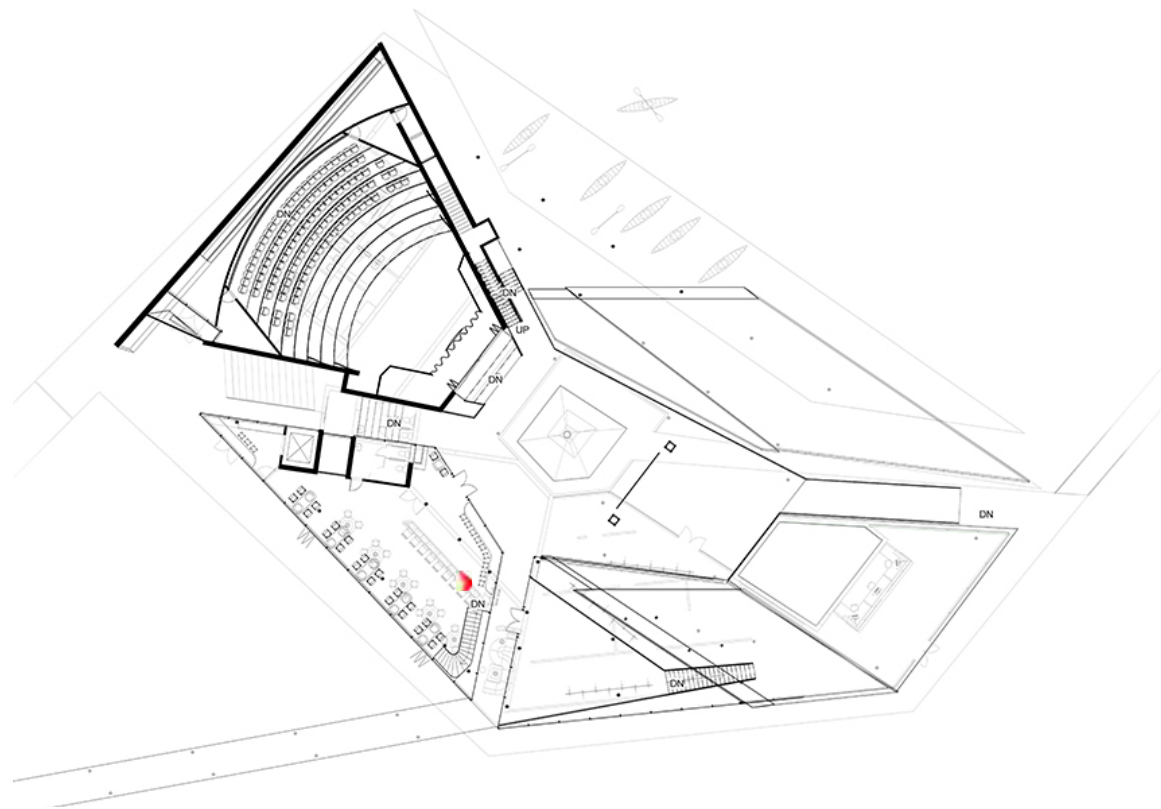
SOUTH ELEVATION



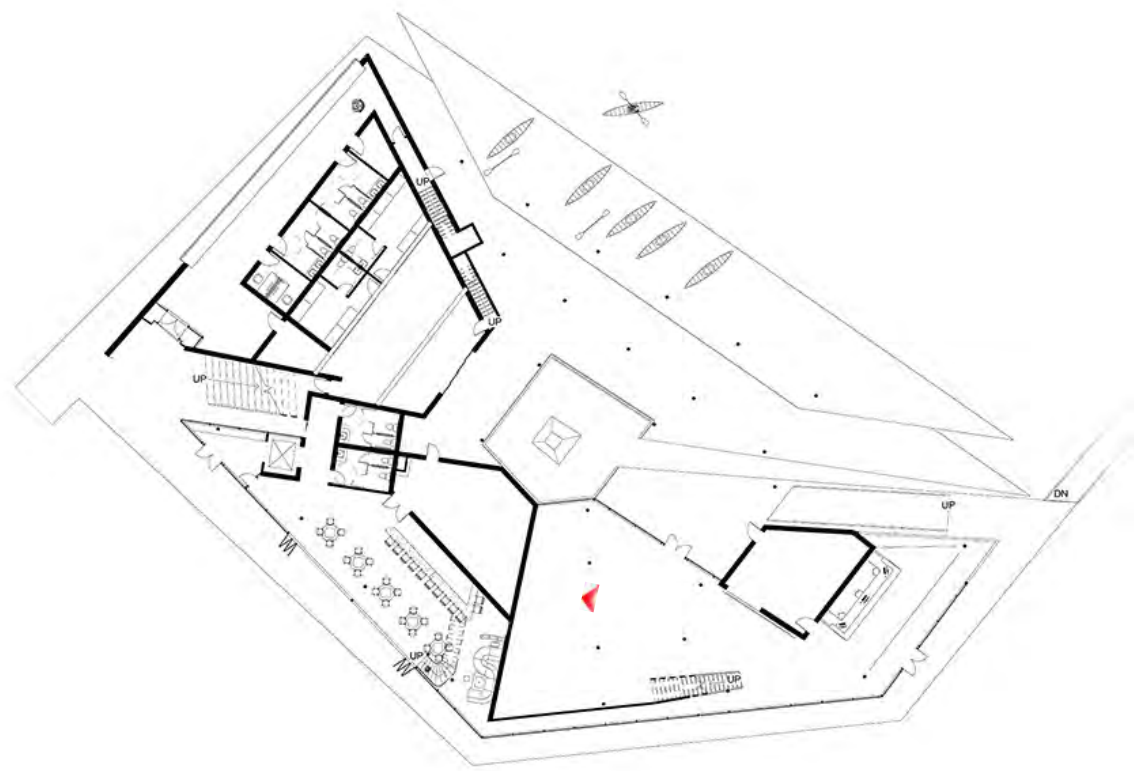
05 EXPERIENCES



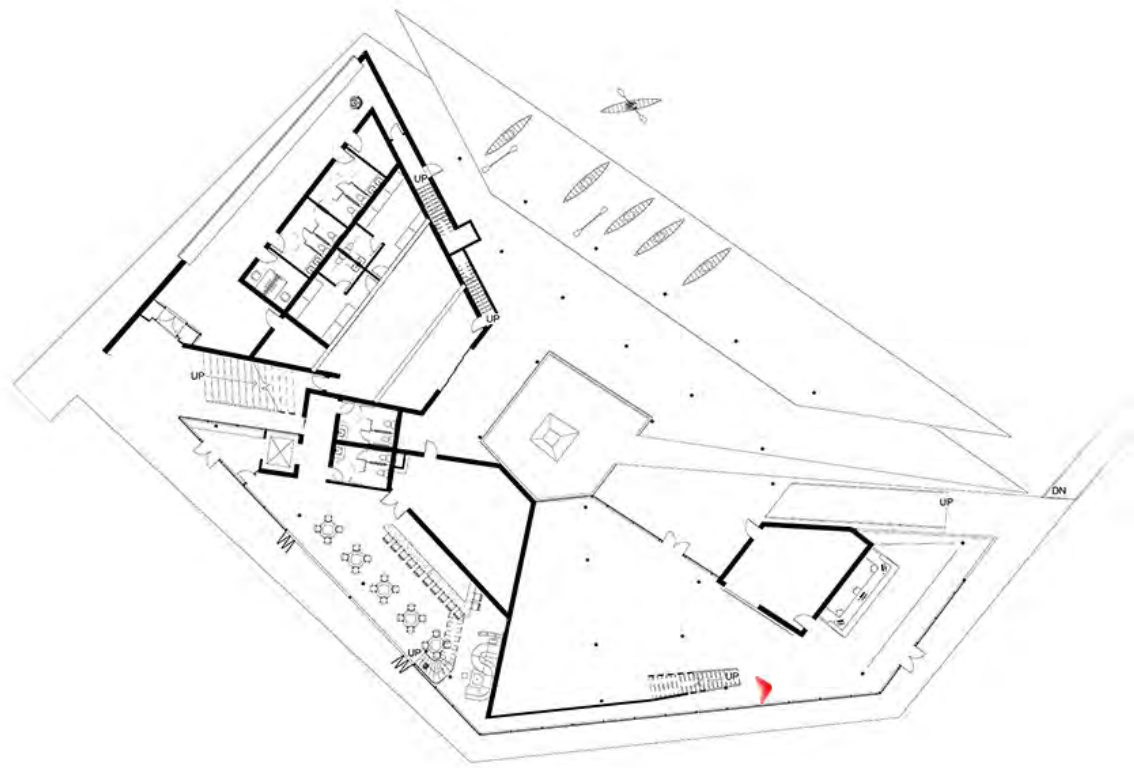
1ST FLOOR MULTI-FUNCTION HALL LOBBY



2ND FLOOR RESTAURANT



1ST FLOOR GALLERY



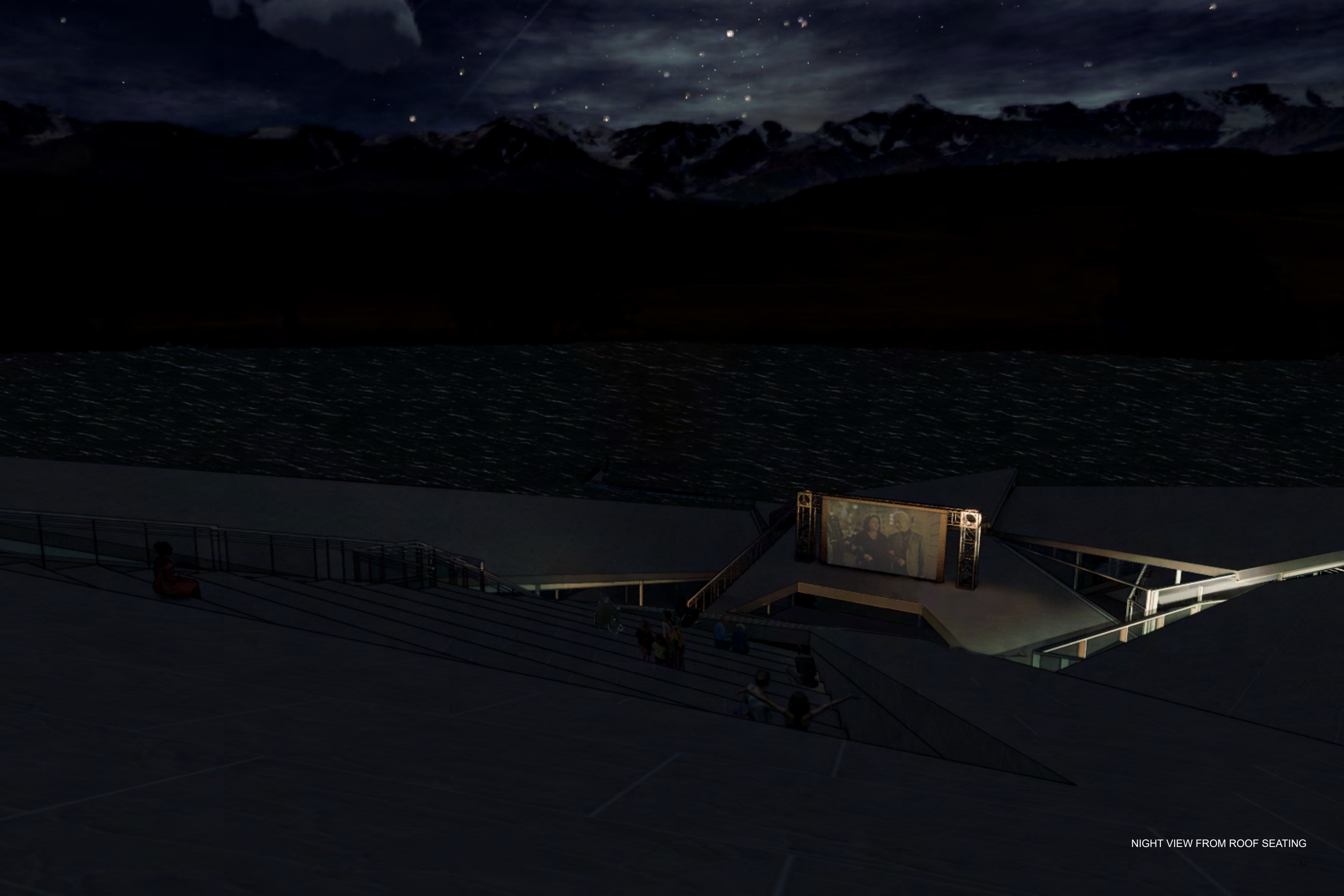
1ST FLOOR GALLERY STAIR



BRIDGE VIEW FROM THE SHORE



VIEW TO THE KAYAKS AND DUCKS SIDE



NIGHT VIEW FROM ROOF SEATING

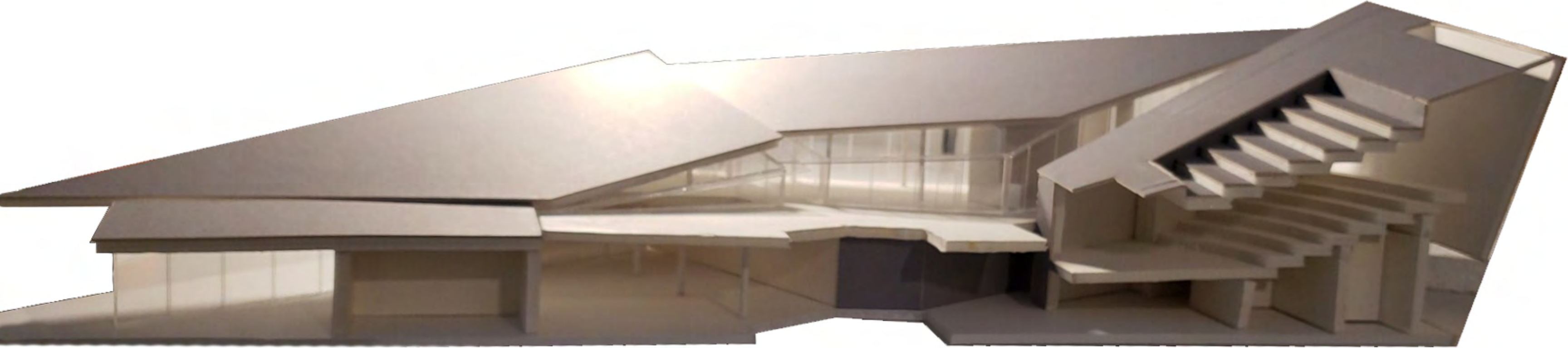


NIGHT VIEW OF CAFE

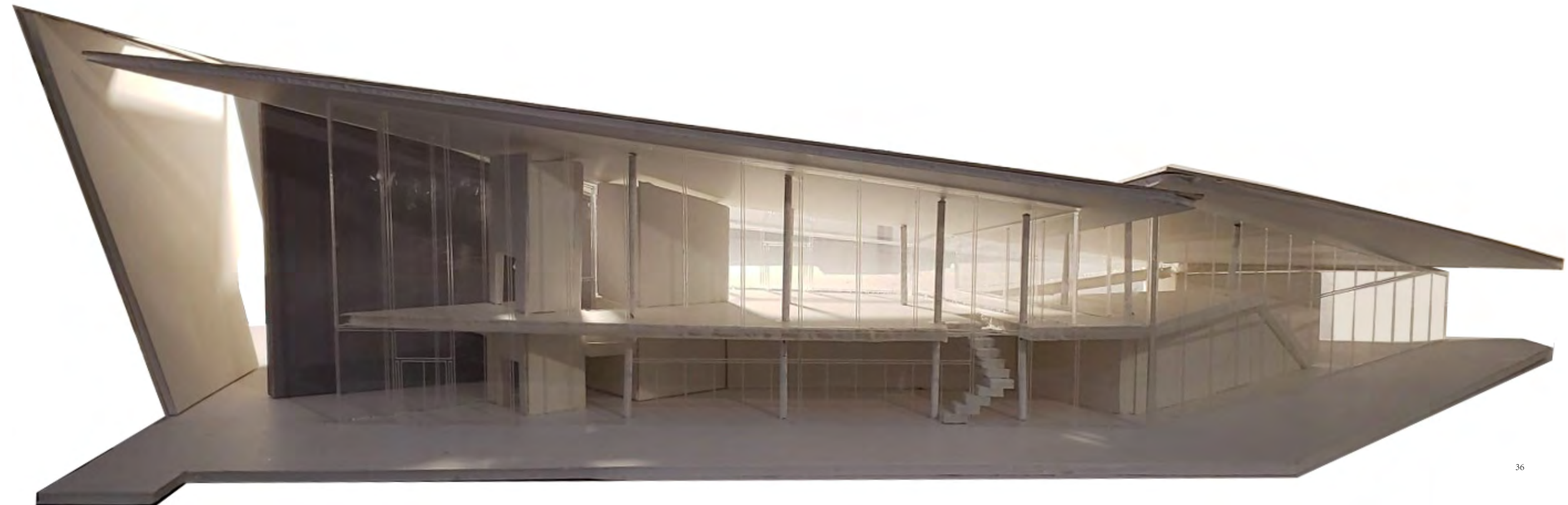


NIGHT VIEW FROM LAKESHORE

SECTION MODEL_View of the West to East Section

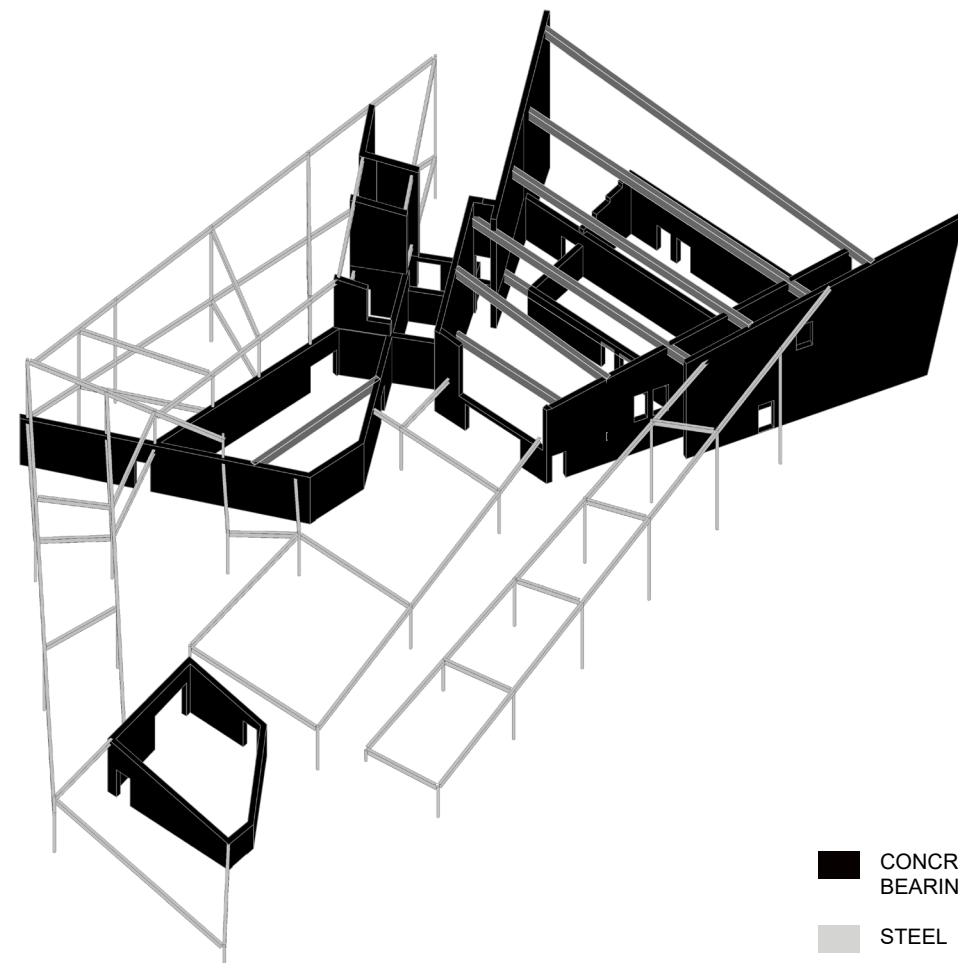


SECTION MODEL_View of the South Elevation

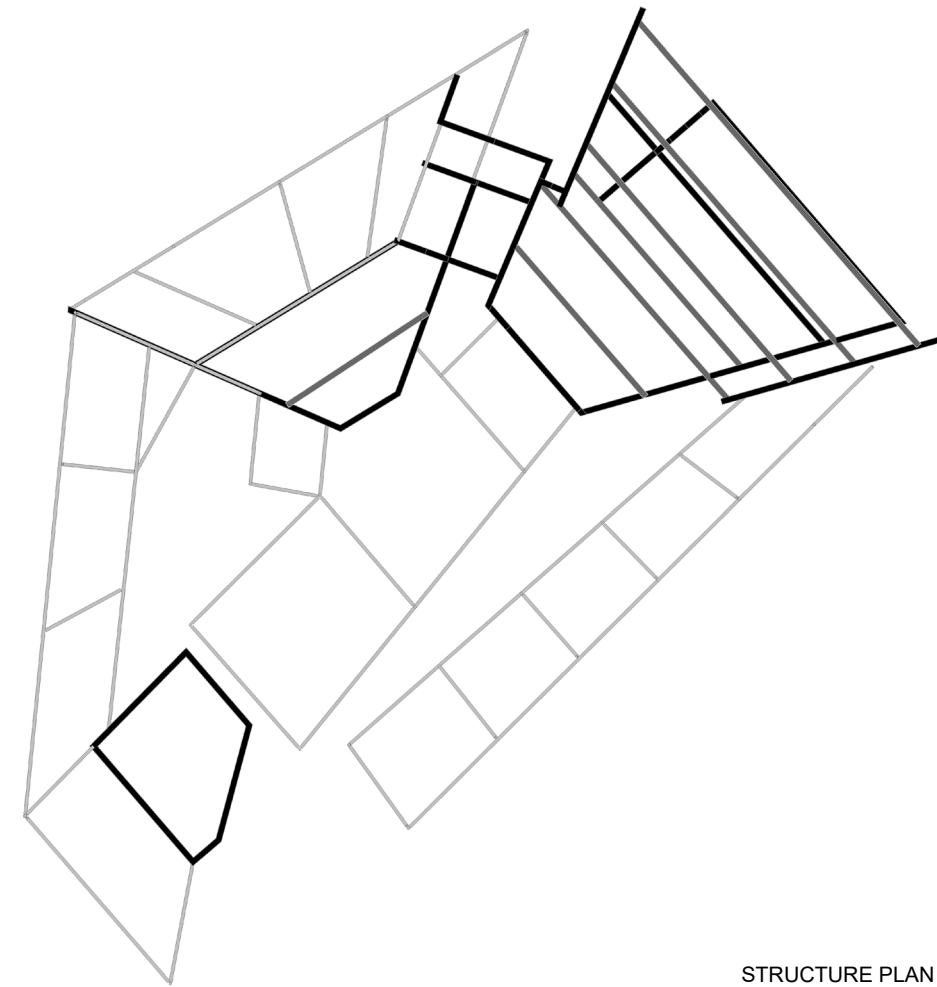


06 DETAILS

STRUCTURE

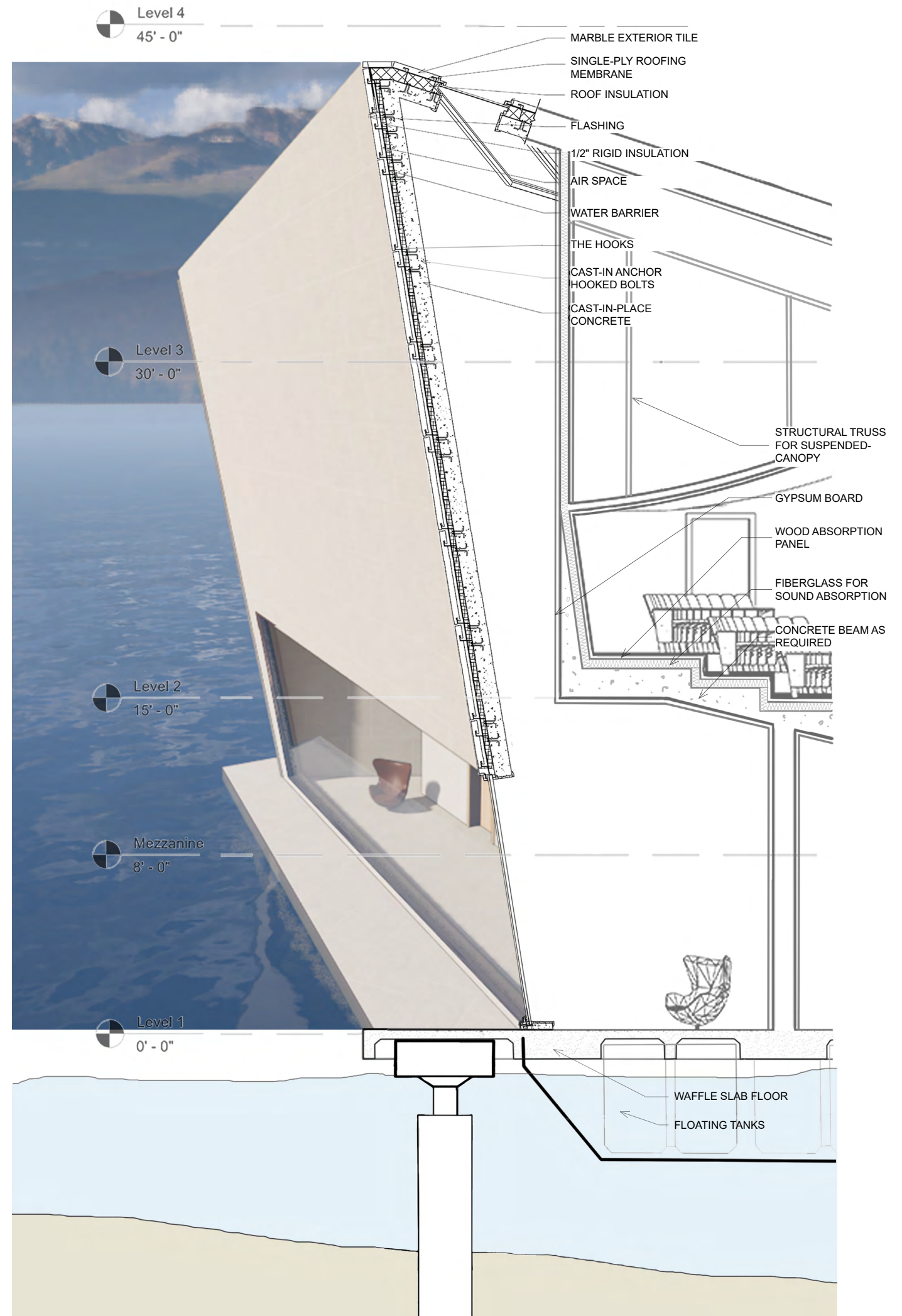
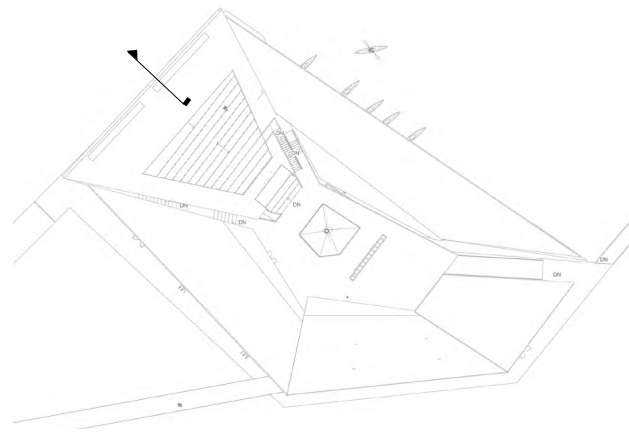


- CONCRETE BEARING WALL
- STEEL



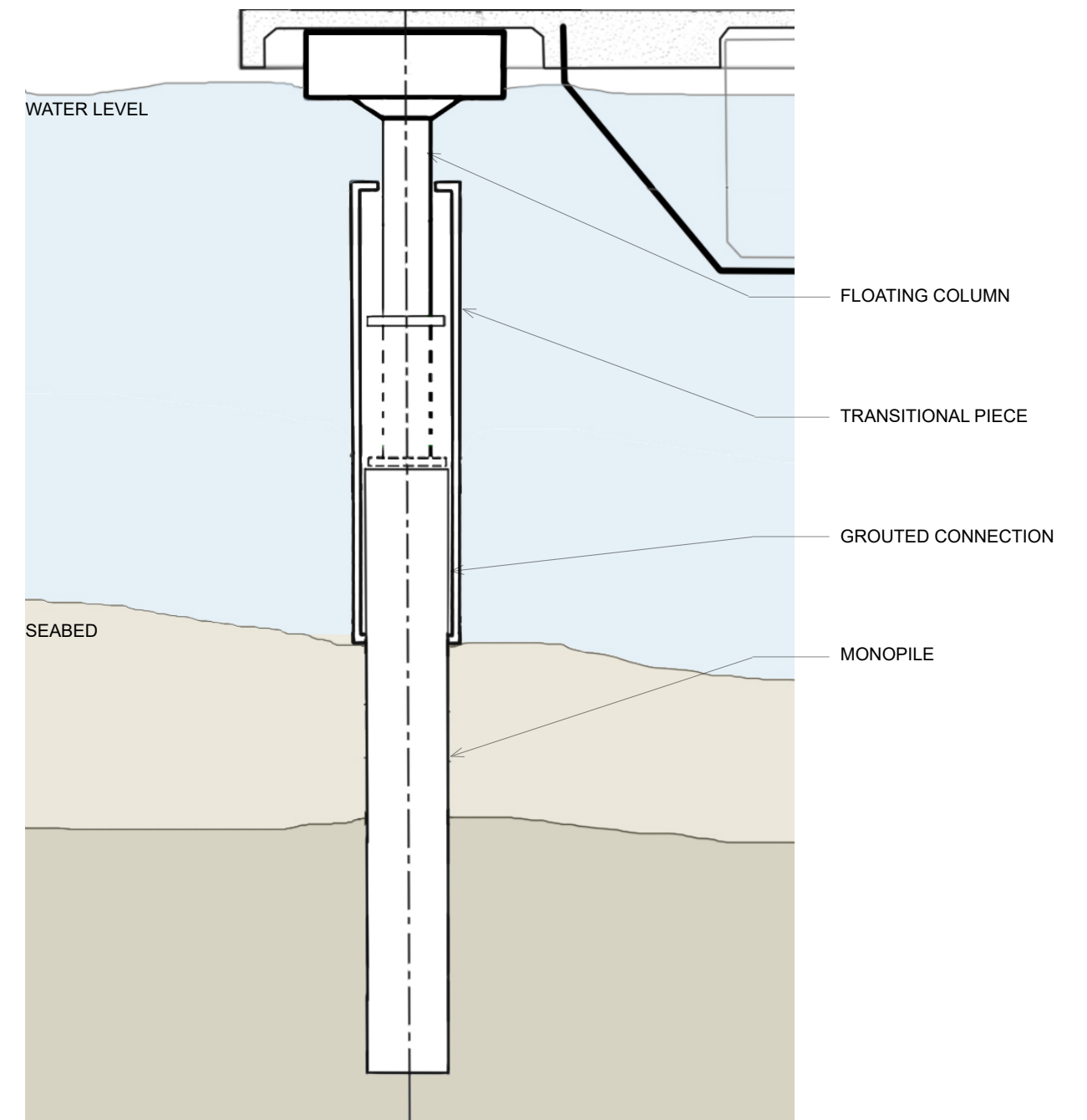
STRUCTURE PLAN

WALL DETAILS



FLOATING COLUMN DETAIL

This floating column is inspired by windmill's structure. The footing (monopile) could dig into the seabed's bottom. The head part of the column was connected with whole building's floor. The whole building supported by those floating columns could go up and down, while the water goes up and down.



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