

Washington University in St. Louis  
Sam Fox School of Design  
2019-2024

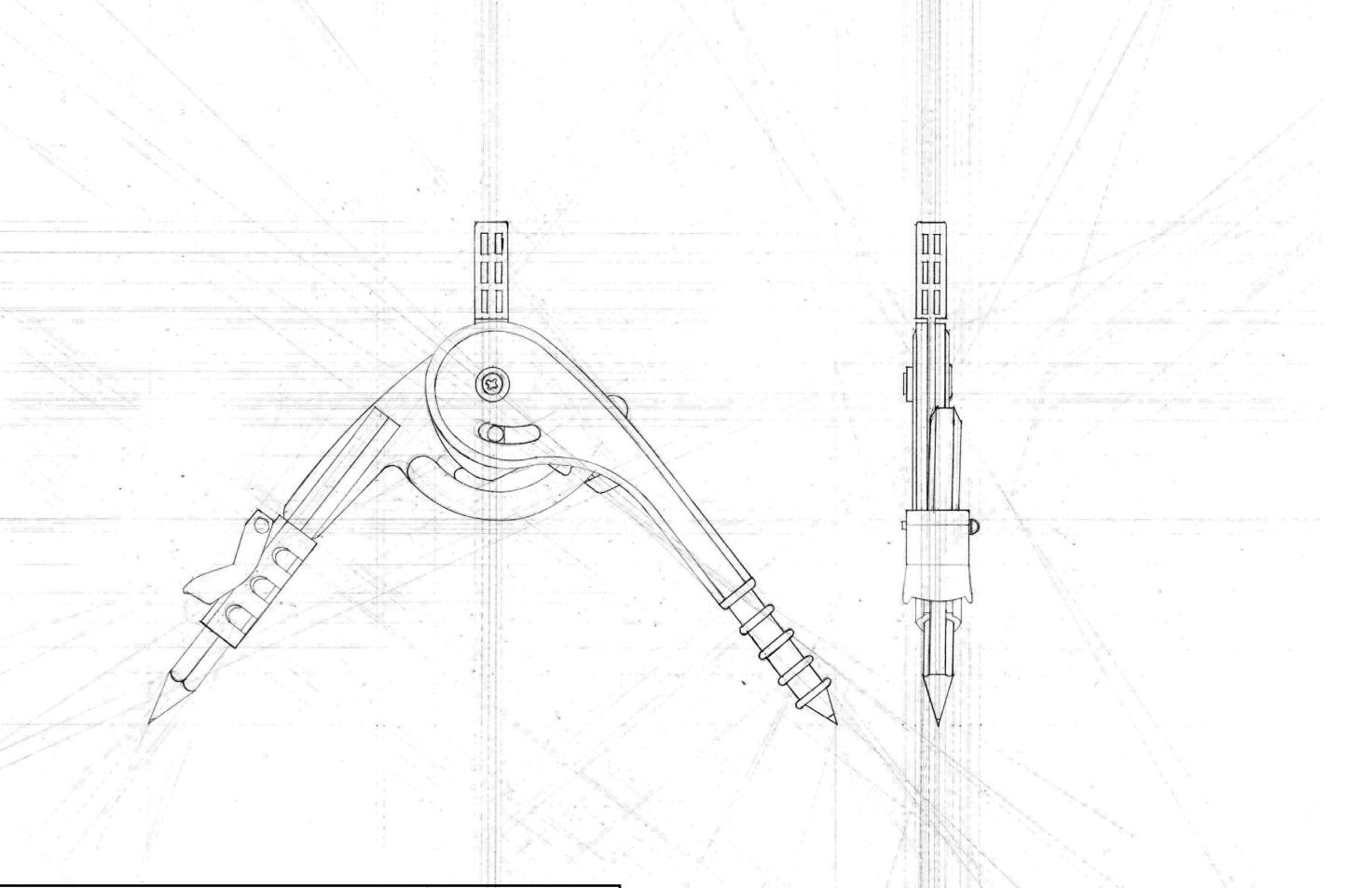
# Haixin Zhou

## Architecture Portfolio



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I

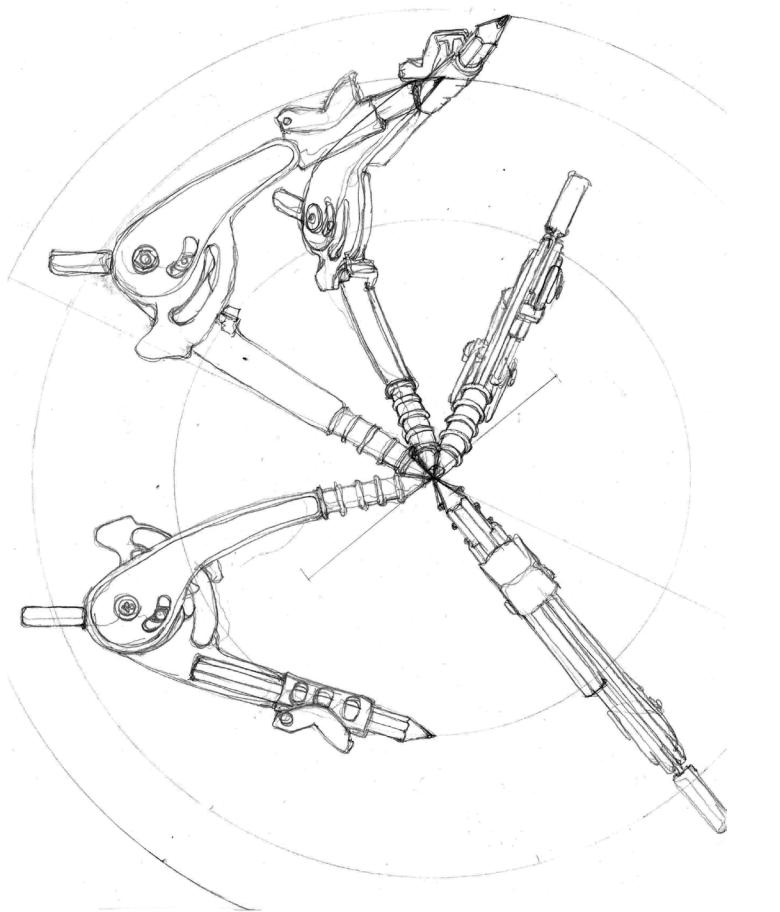
## A Set Of Compass

Fall 2019

Site: Forest Park, St. Louis, MO

A set of compass drawing.

One object can be viewed through  
many different lens.



# II

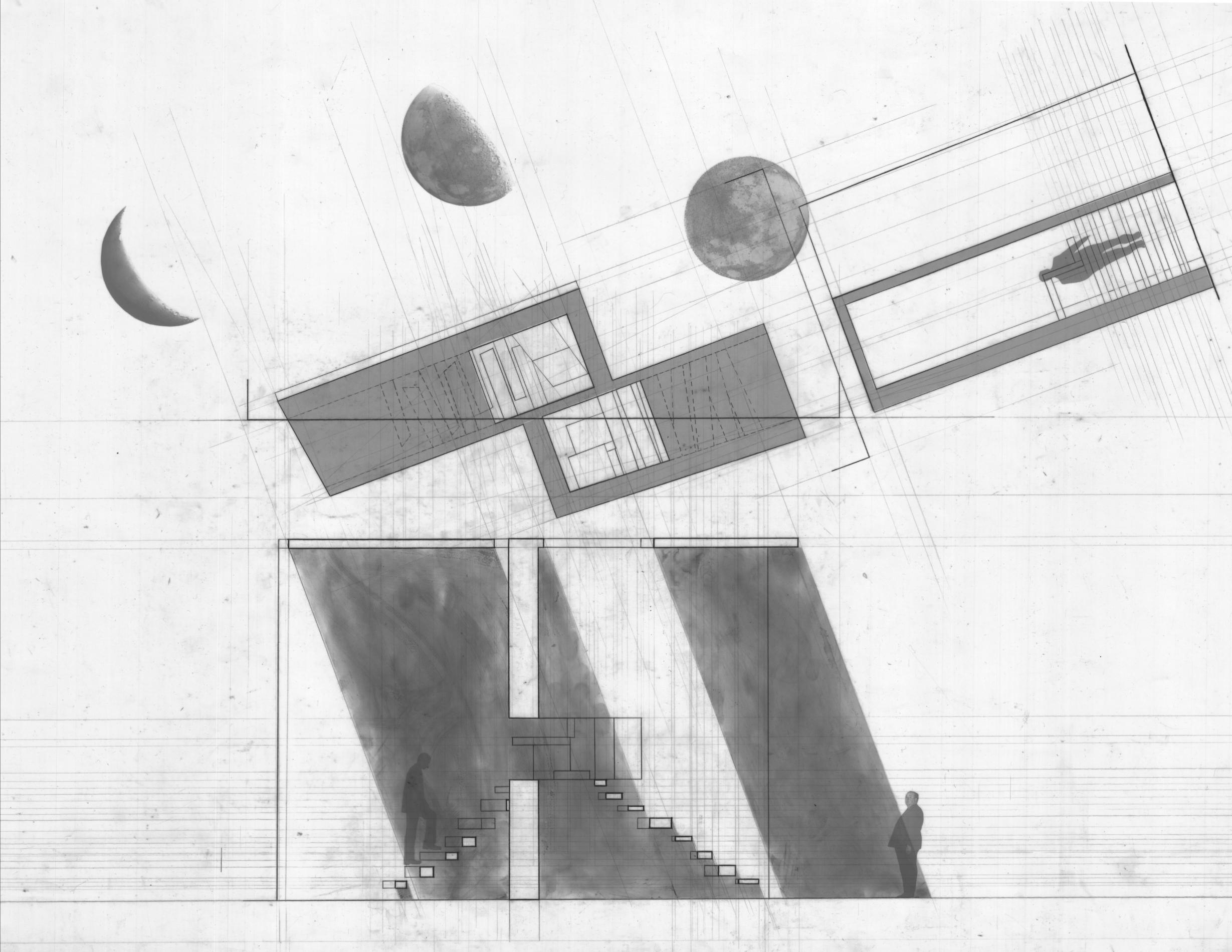
## Chair of Misogyny

Fall 2019

Site: Forest Park, St. Louis,  
MO

A set of chair that is meant to invoke conversation. This chair is designed specifically for director Alfred hitchcock.

There are several design choices that I made in order to highlight the conversation topic of misogyny. It is purposely designed in a way that Hitchcock and whoever is talking to him are unable to see each other completely while discussing the uncomfortable subject of misogyny presents in his films. Symmetry is also absent, adding the sense of oddness and uncomfortableness.





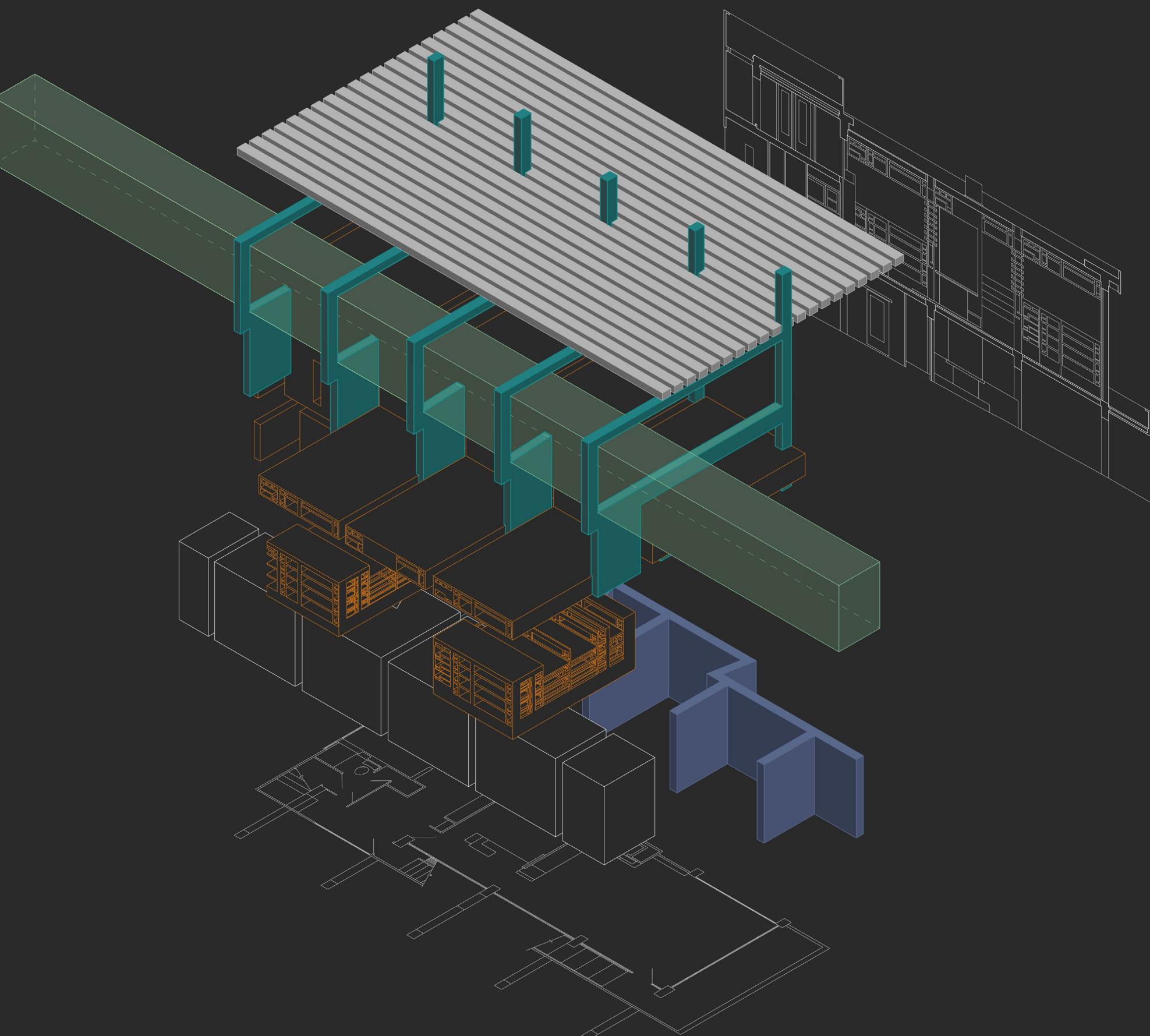
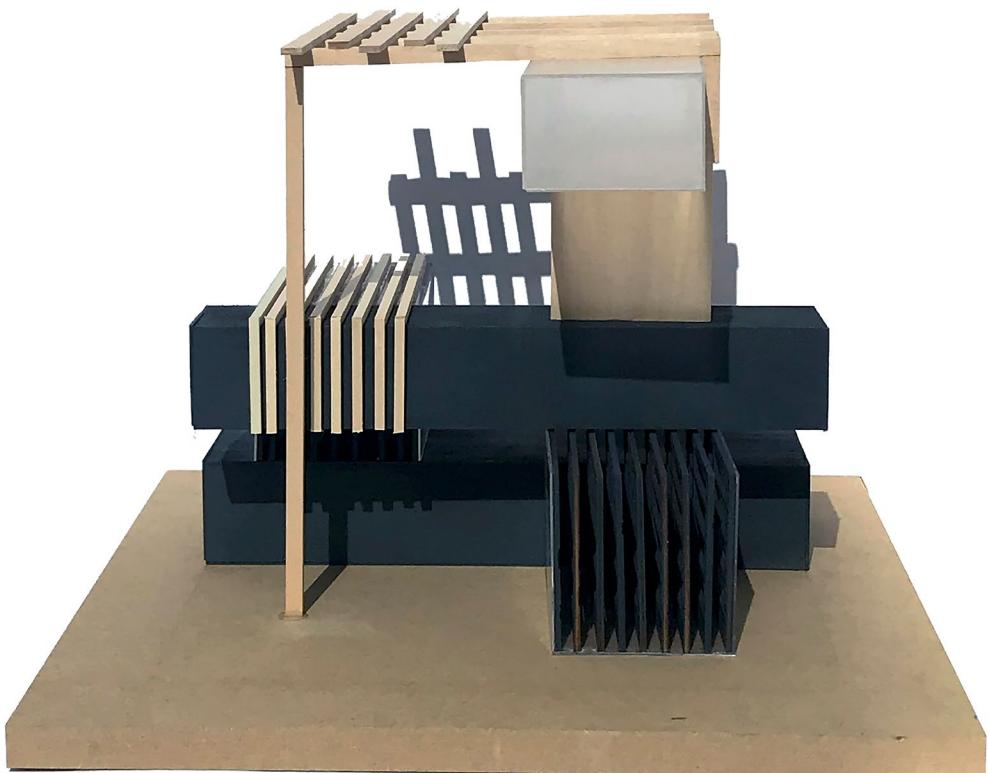
# III

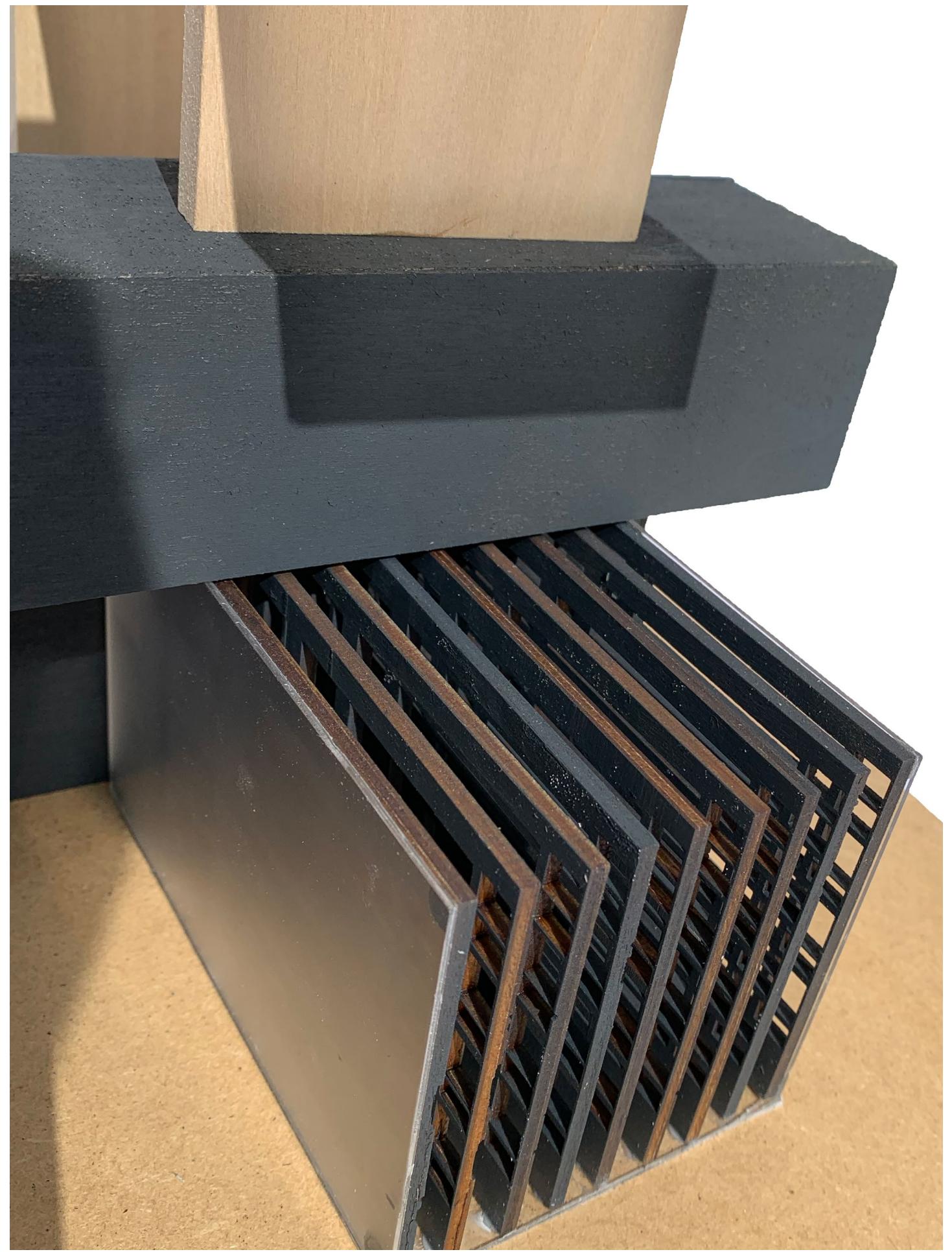
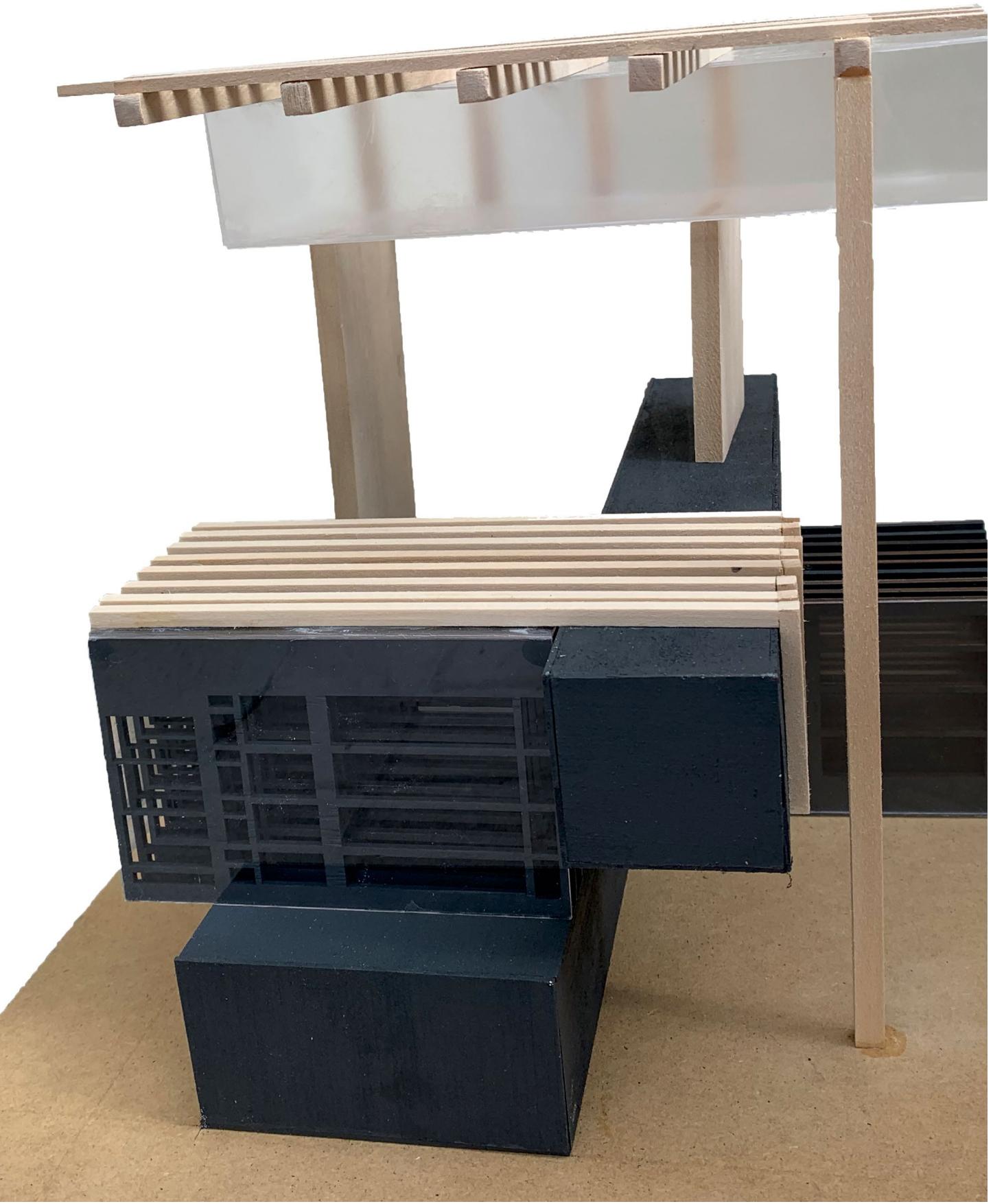
## Case Study: Lovell Beach House

Spring 2020

Study of Lovell Beach House by architect Rudolf Schindler. I examined the structure, lighting, circulation, negative space, and massing of the house. From the study, I was able to extruded the corresponding spaces and create an entirely new drawing.

From the new drawing, I rearranged the massing and redefined the Lovell Beach House and the result is an entirely new structure, showing the other potential of the structure.





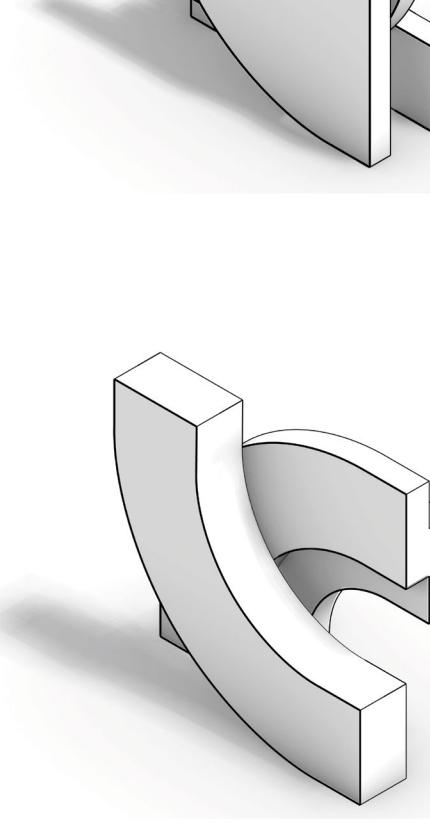
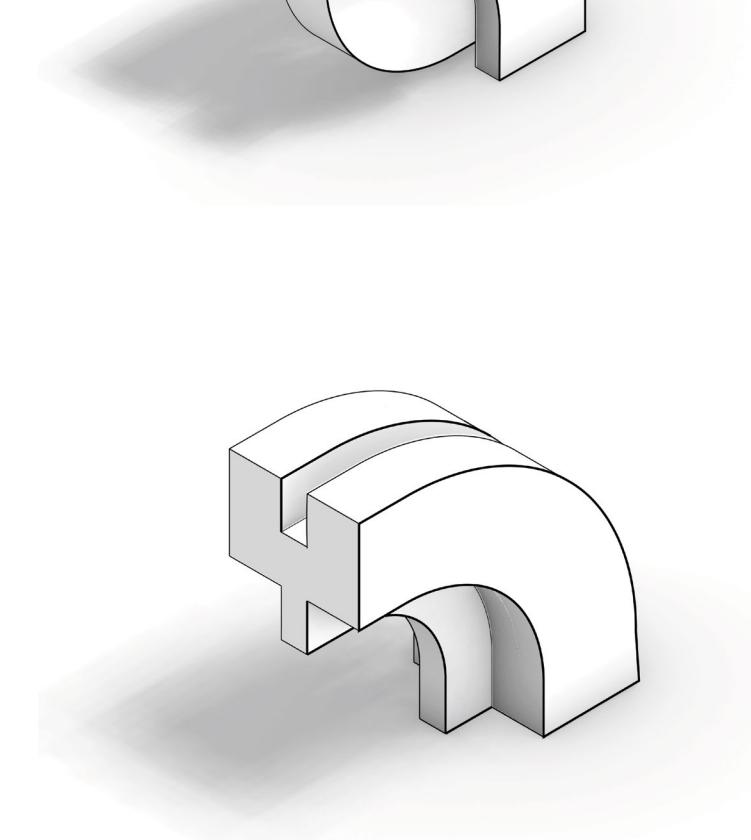
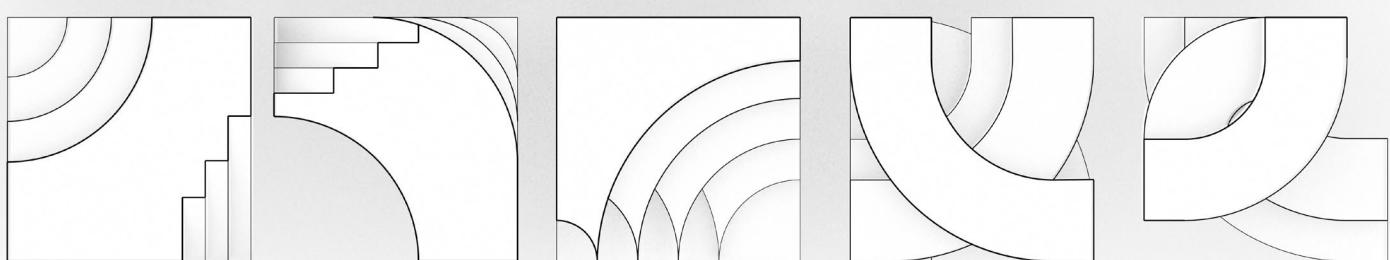
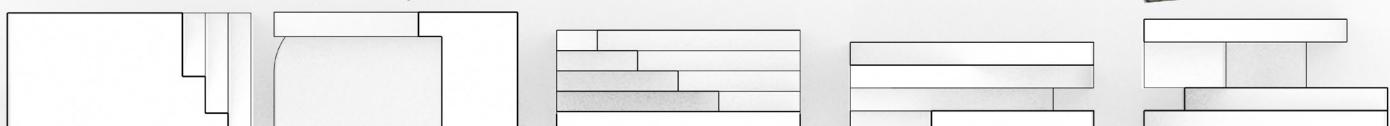
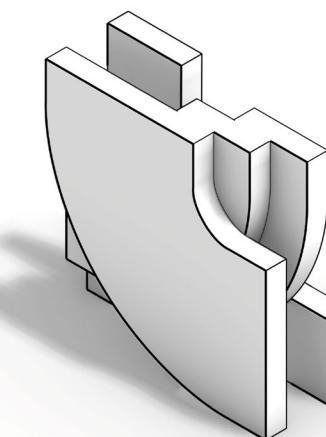
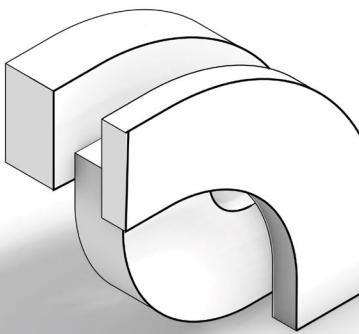
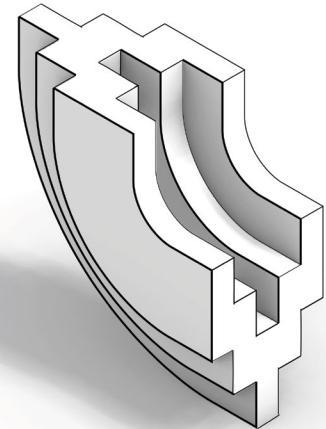
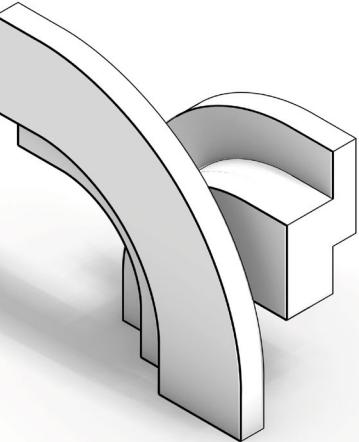
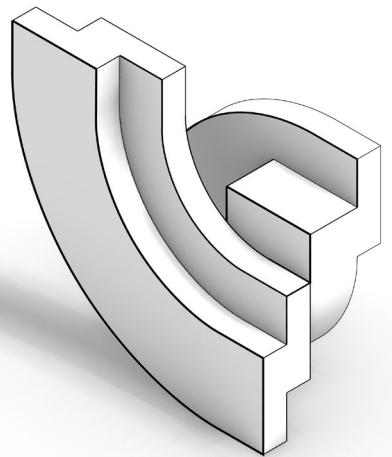
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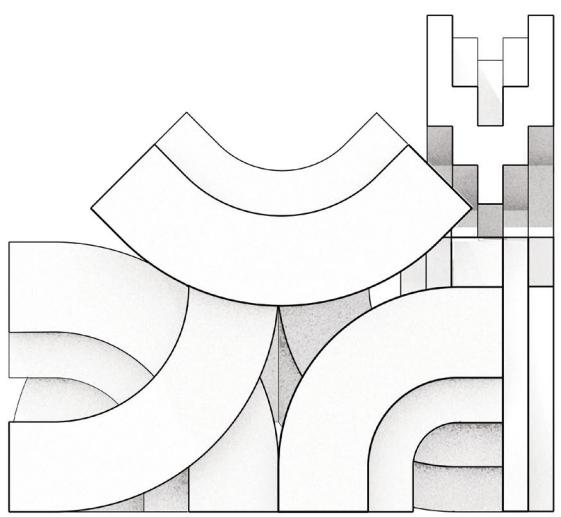
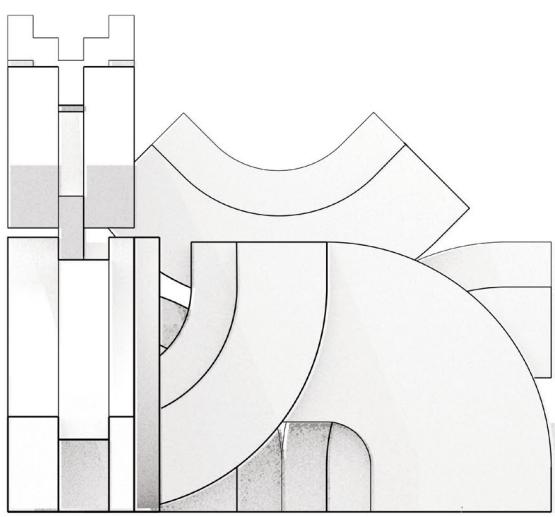
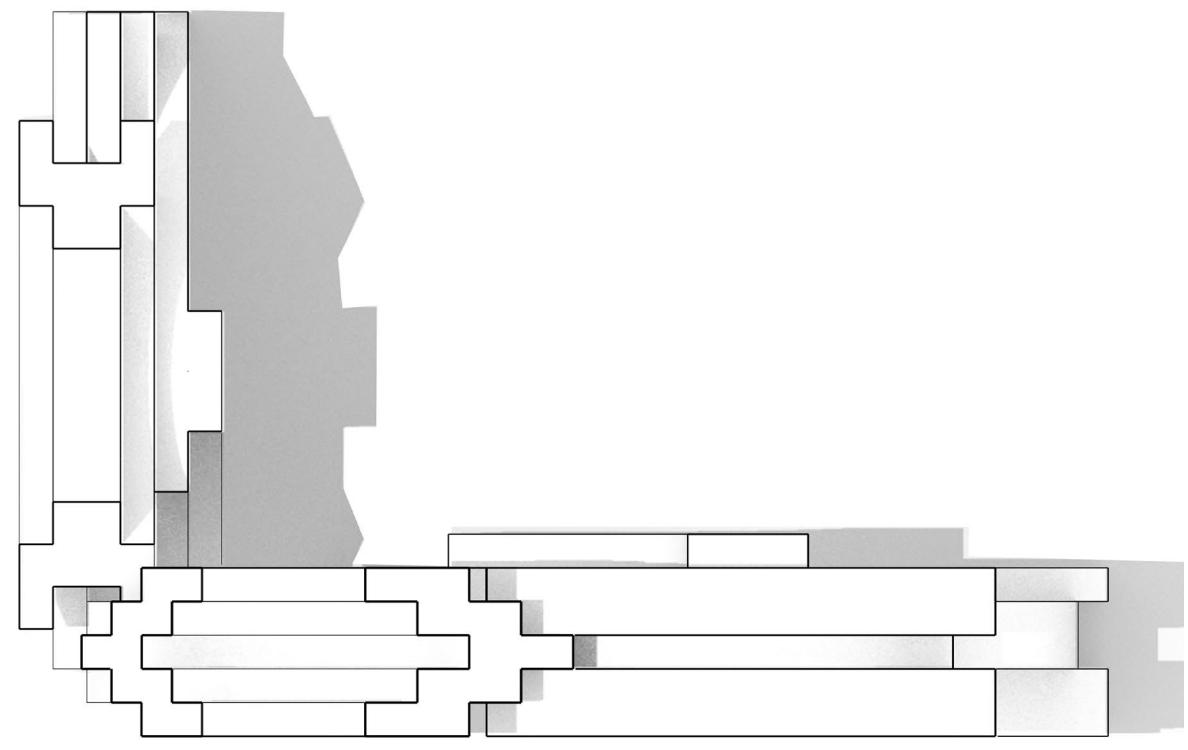
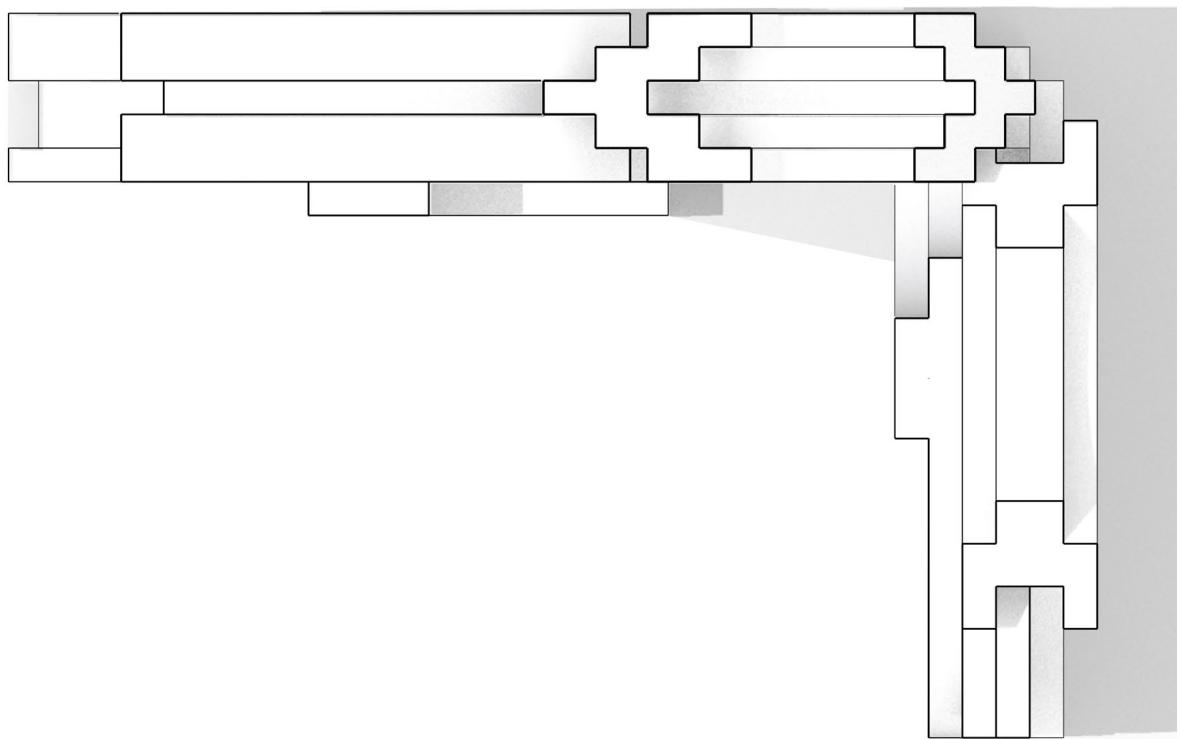
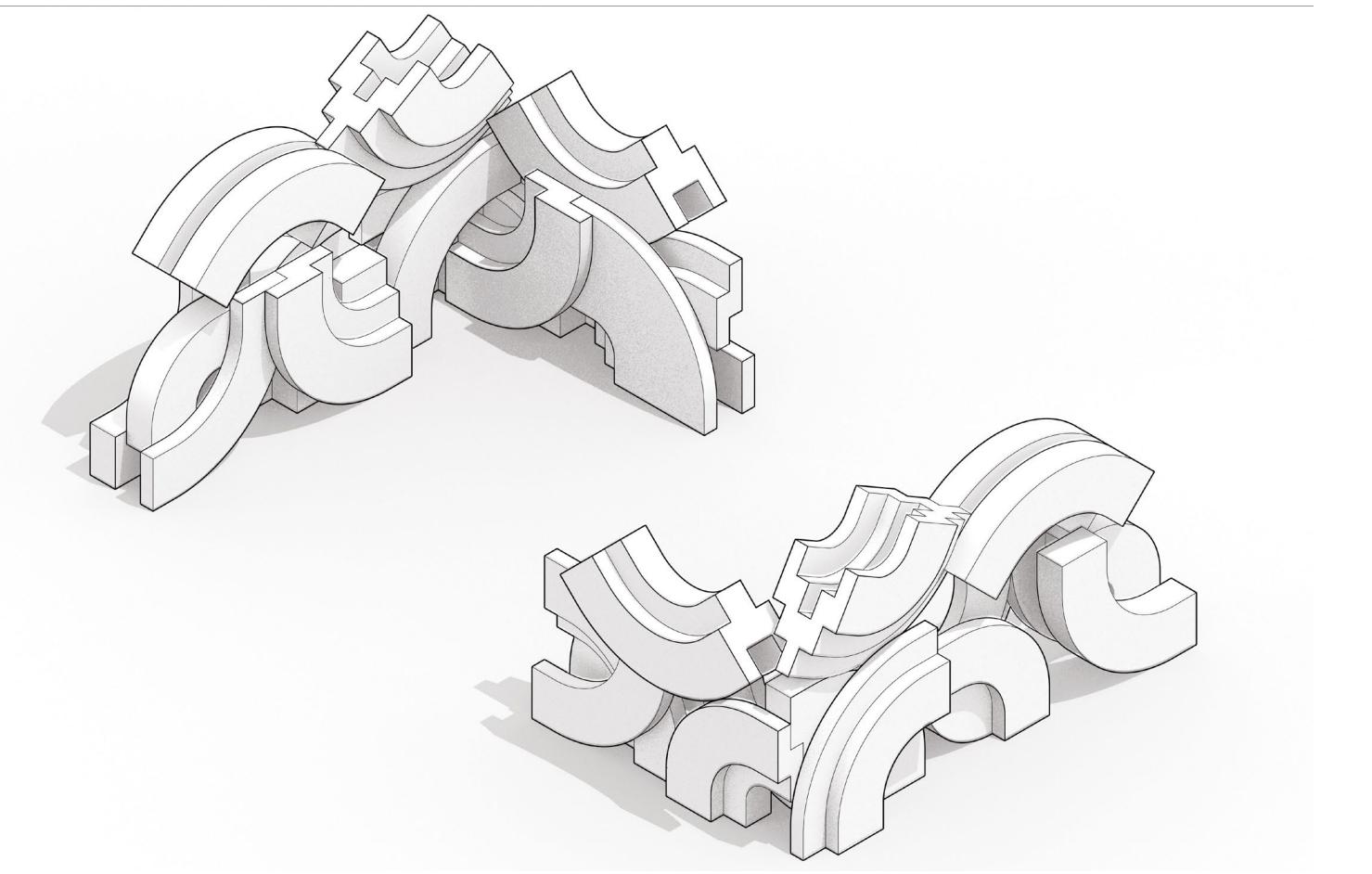
## Artist Residency: The Hugging House

Fall 2021

Site: 3724 Grandel Square, Grand Center Arts

The entire project started with concrete wall enclosure design. I have multiple sizes of quarter circles stack together to form different pieces.







After finishing designing multiple variations of the individual pieces, I started to find a logical arrangement for all the pieces to work together, forming a corner piece of a wall.

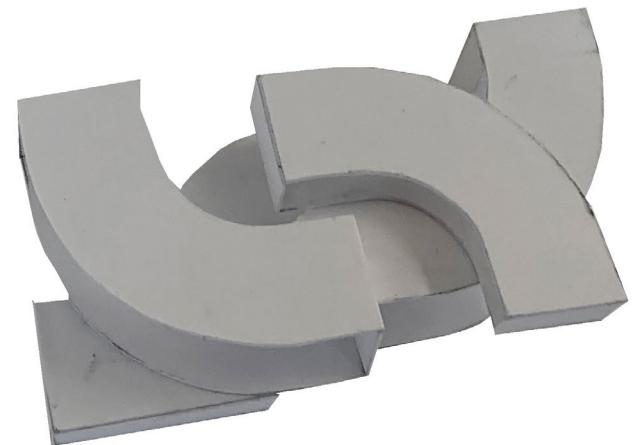
Because I used many similar sizes quarter circles to create these individual pieces, many of them stack perfectly together. One snuggle with the other, creating an illusion of the pieces “hugging” together, thus is where the later name of the project coming from, the Hugging House.





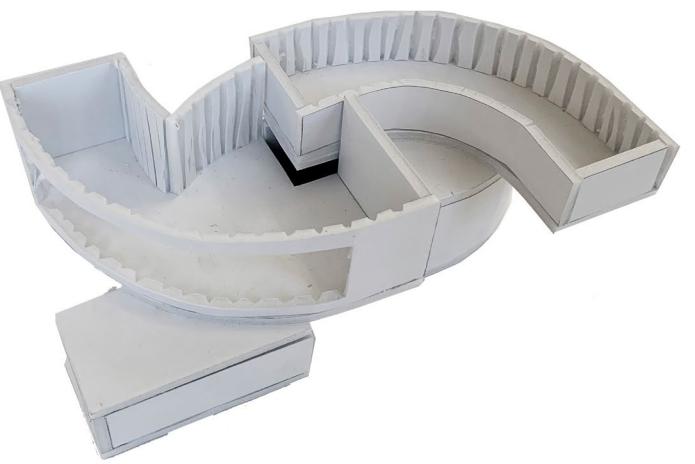
Study Model I:  
1/16" = 1' 0"

This is the very first study model that I created. I was simply playing with the arrangement of the concrete pieces I have.



Study Model II:  
1/16" = 1' 0"

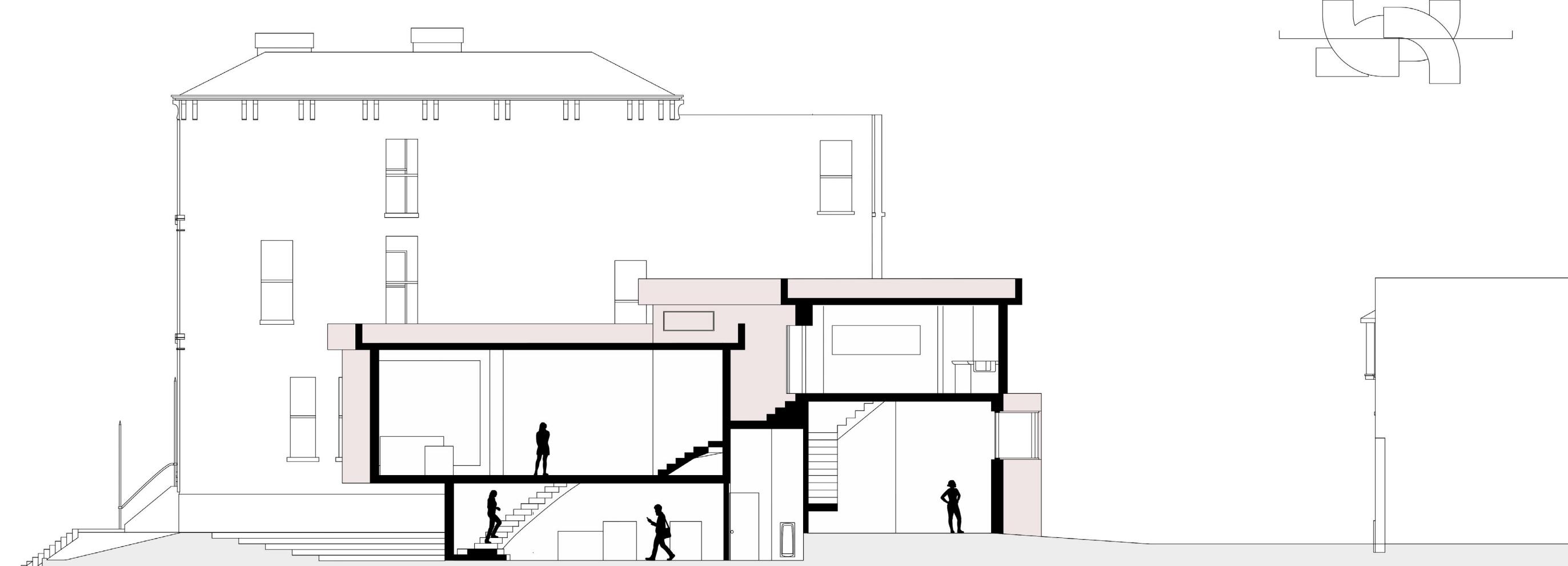
I was not happy with the way I arranged the quarter circles last time, so I rotated the top part, making it appear inversely to the bottom one.



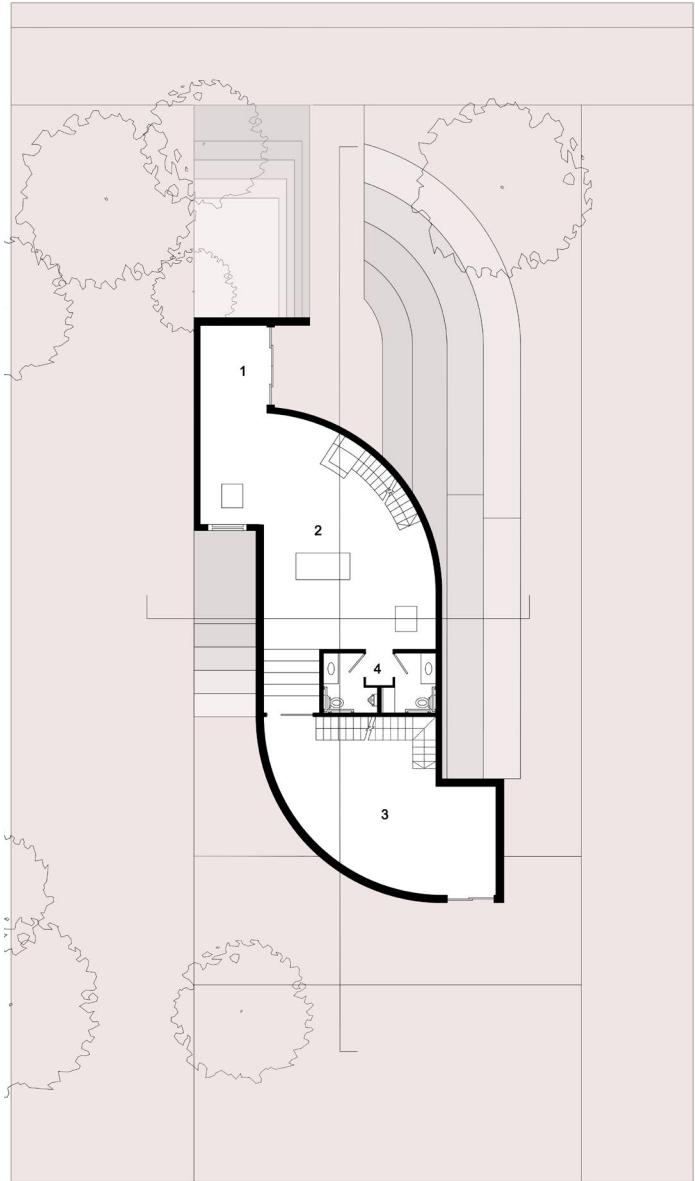
Study Model III:  
1/16" = 1' 0"

This is the final study model that I have. I adjusted some minor details of the space, making the circulation within the building more fluid.



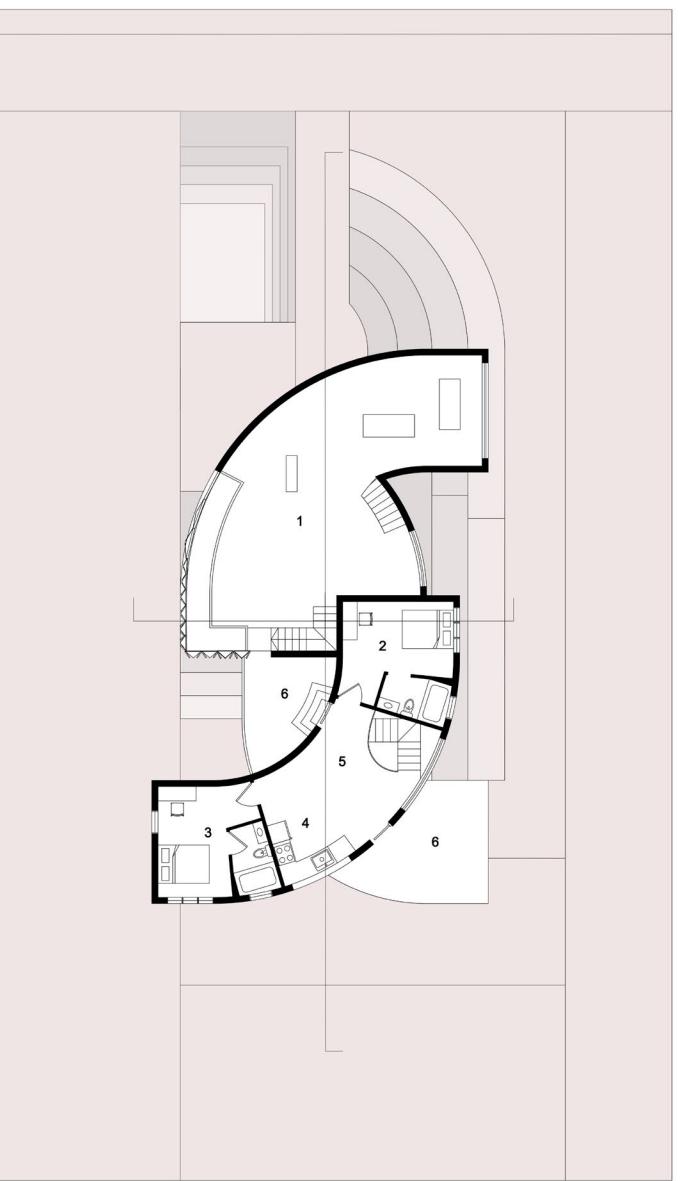


Hugging House: Longitudinal Section

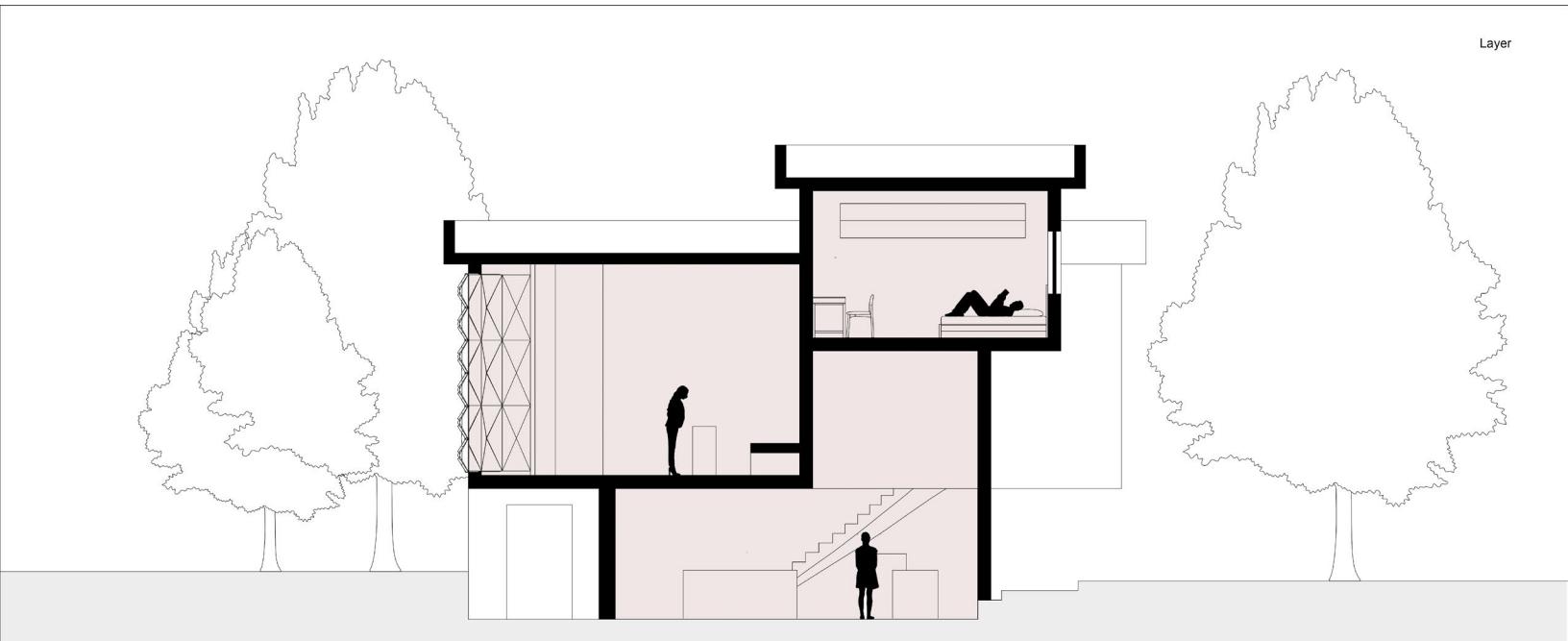


1

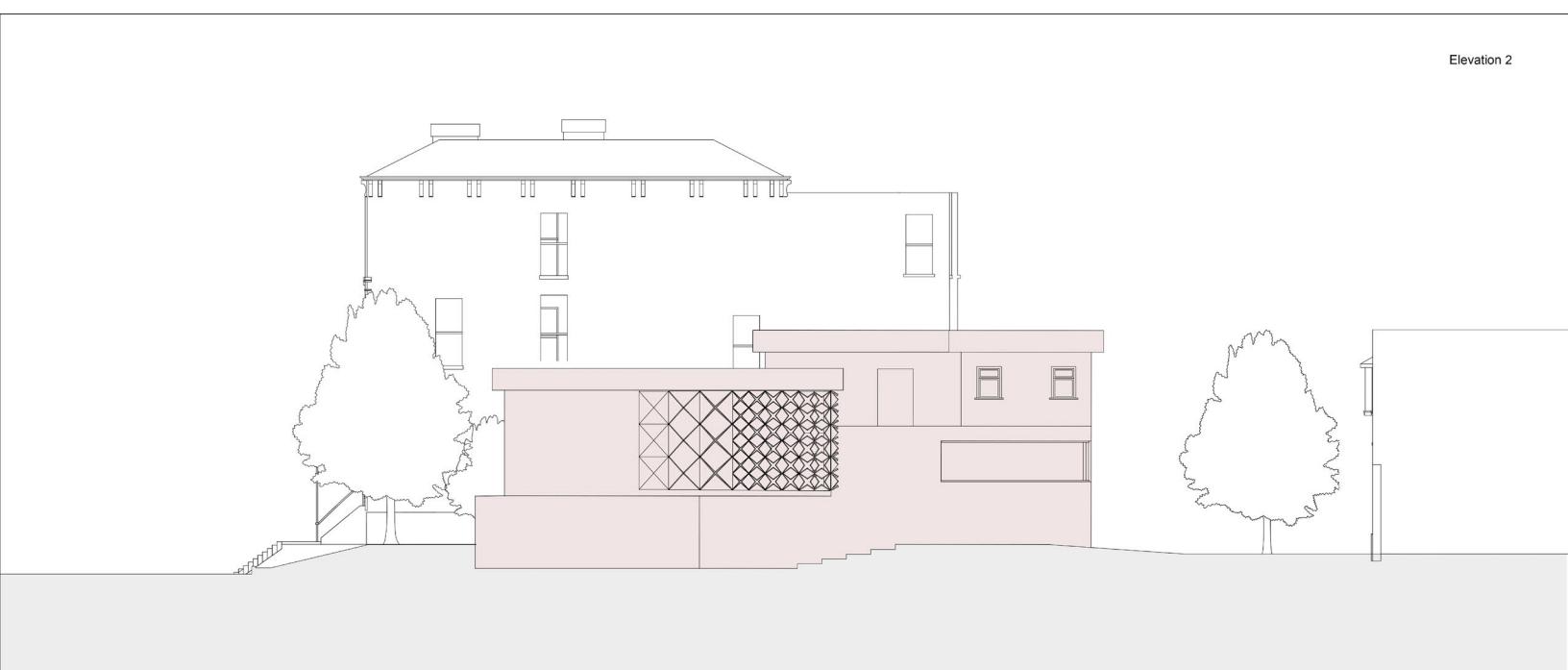
1. First Floor Plan
  2. Second Floor Plan
  3. Cross Section with Facade
  4. Longitudinal Elevation



2



3

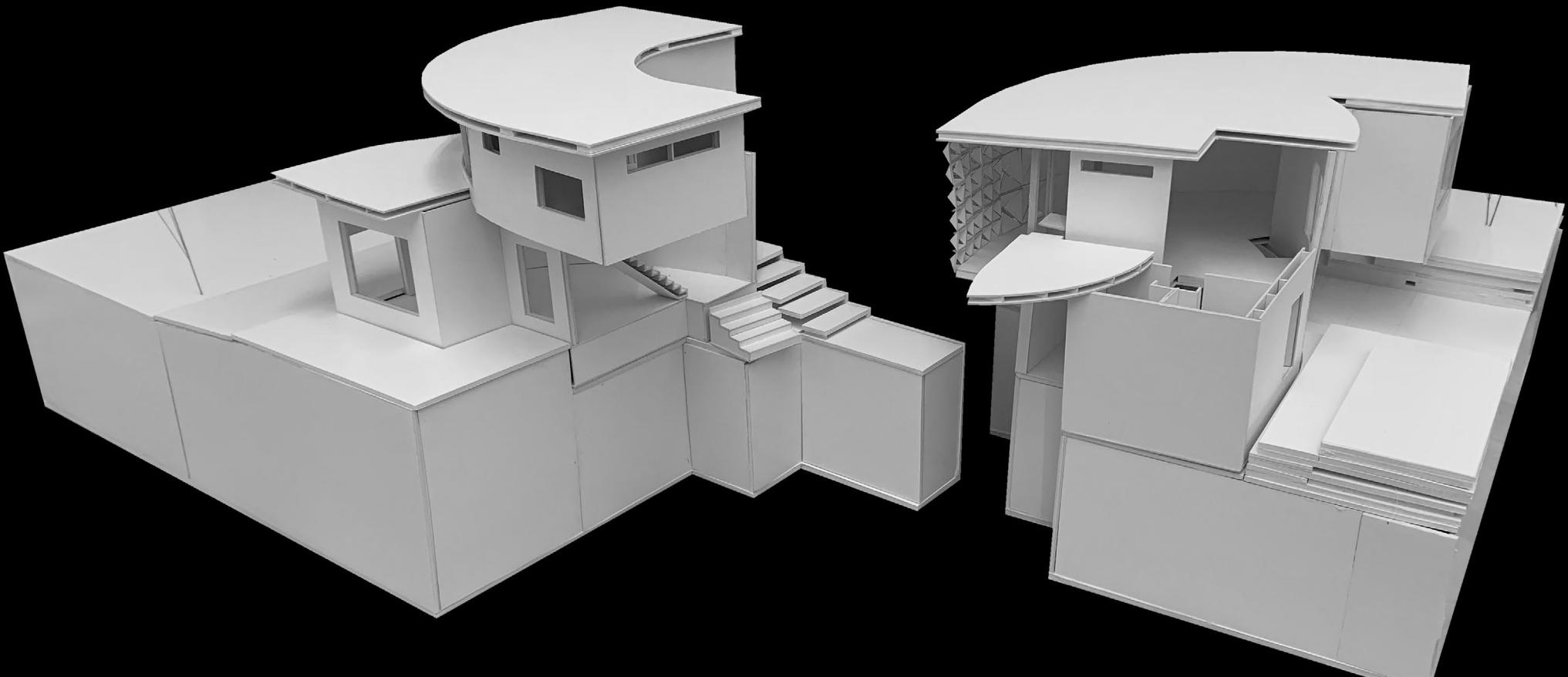


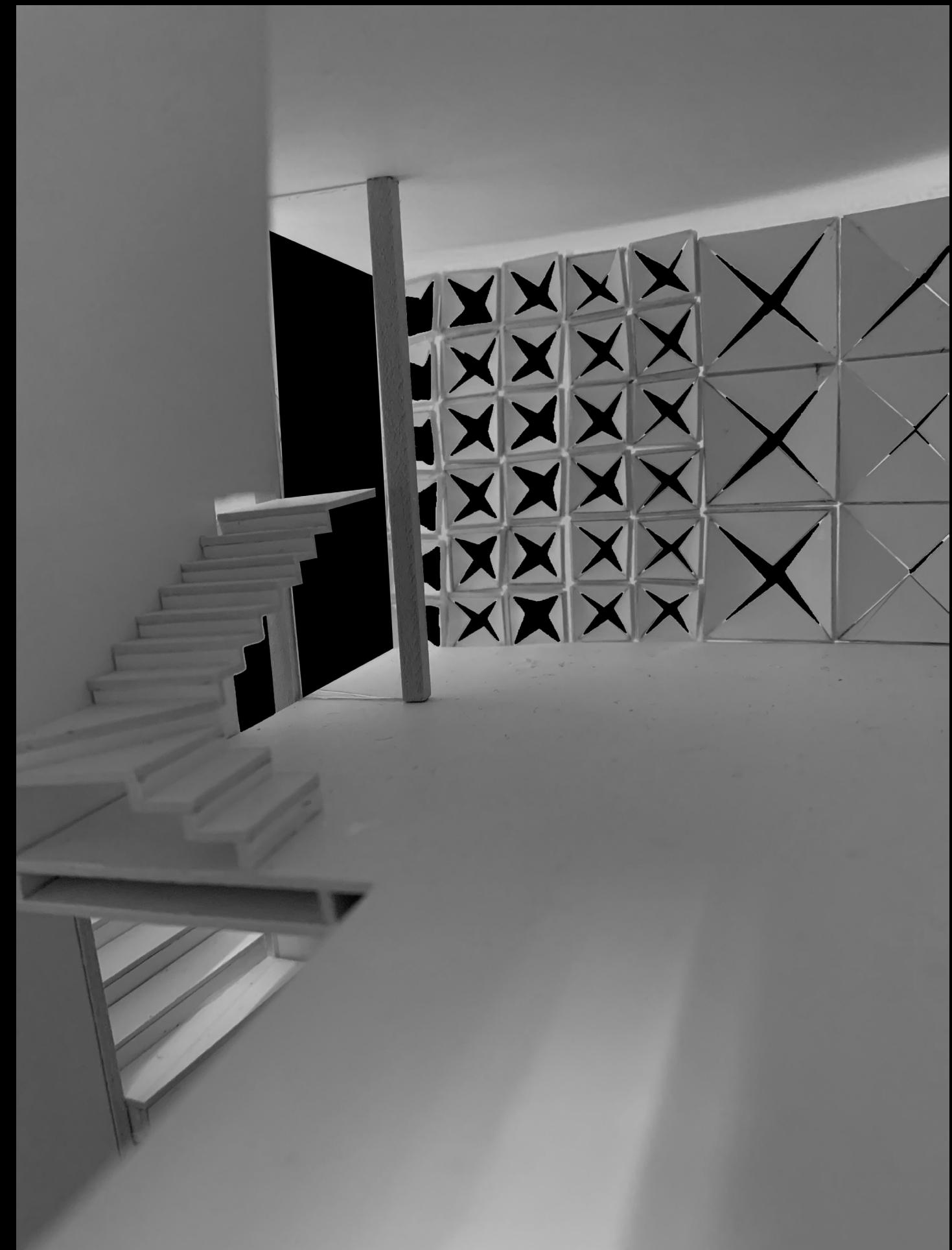
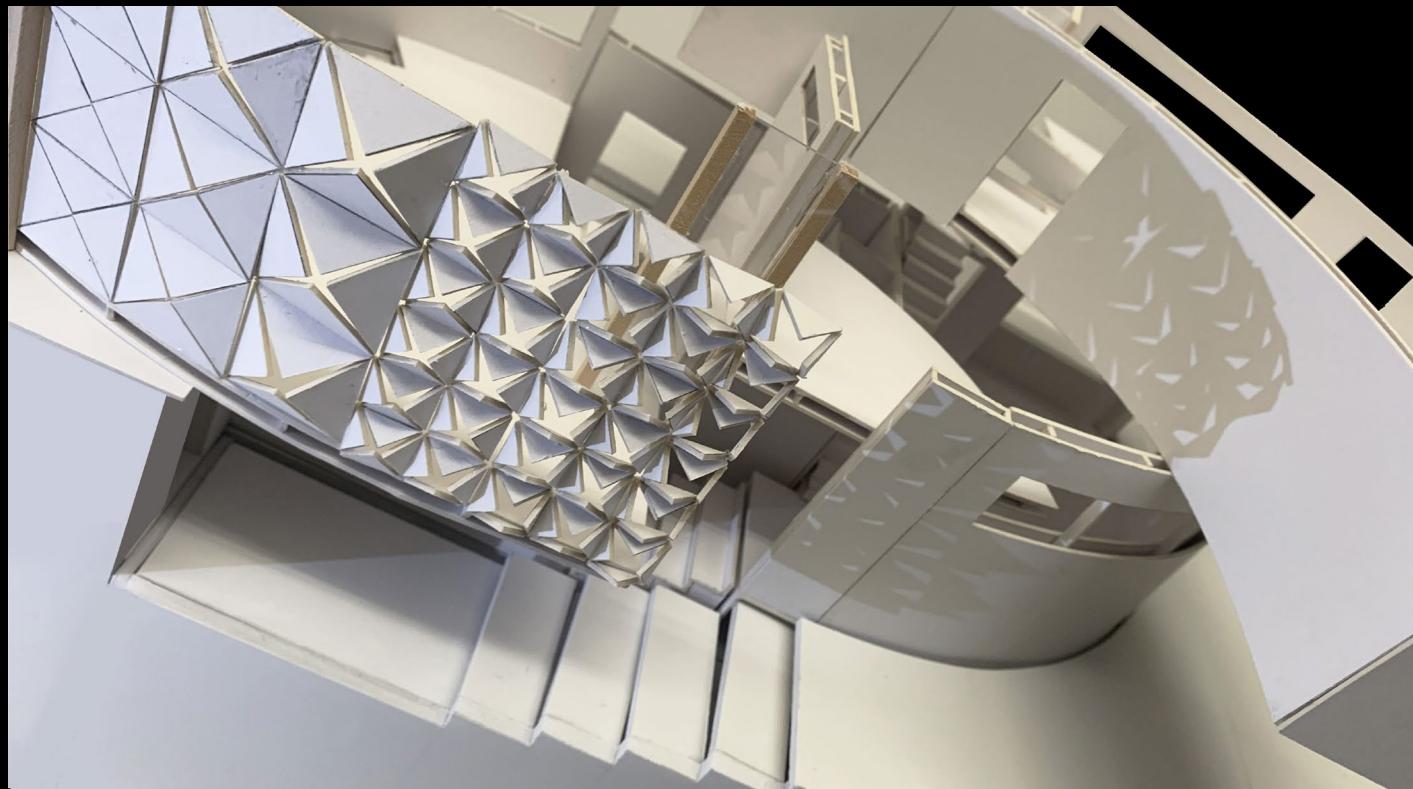
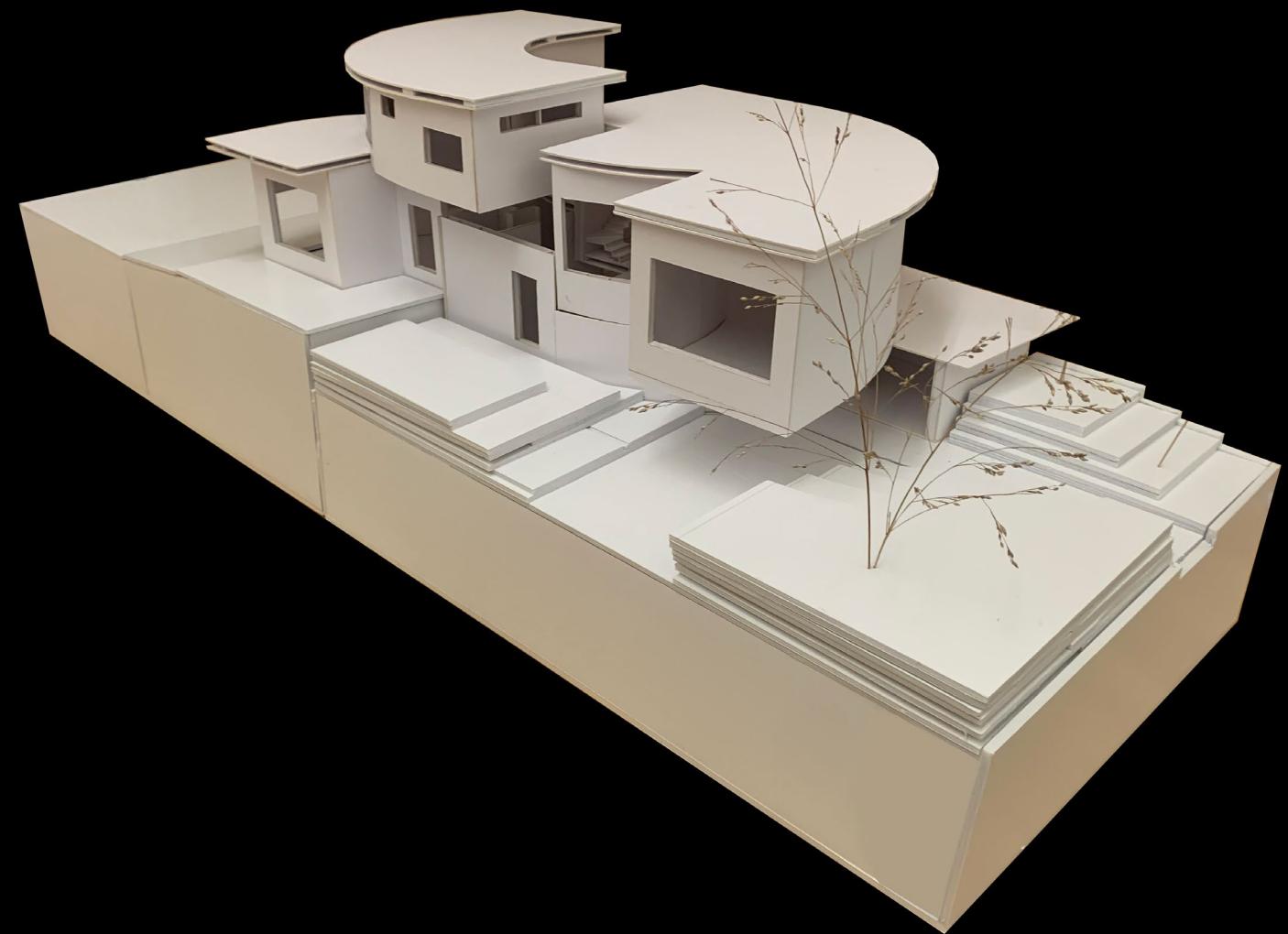
4

From earlier concrete enclosure project, we took inspiration of the individual shapes to create an artist residence that can host up to two artists at a time.

I designed my building with 4 quarter circles, each rotating ninety degree to form an “S” shape. This residence consists three components: gallery, studio, and residential area. Together, all the components also divided into public space and private space from the most public space, gallery, the intermediate space, studio, to the intimate and private space, residential area.

Even though there are two floors, there are in total four different heights such that there are “half floors”. Each space, even though has very different functionality, embrace each other, weaving together the public space and private space. The interlocking shapes of the entire resident represents the intersection between artists public and private life, weaving their private artistic inspiration into their public display of their talent.





Chop Chop

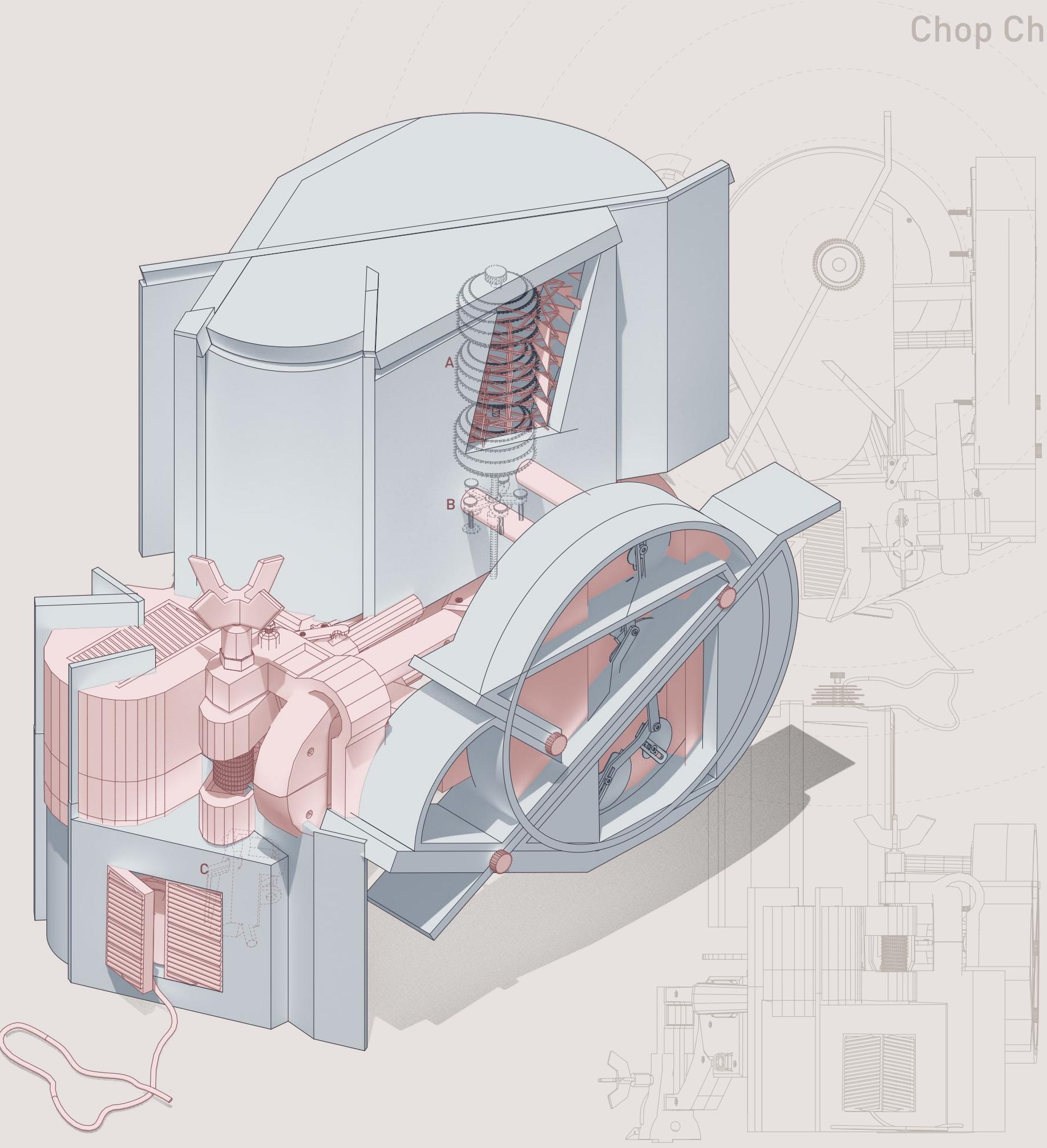
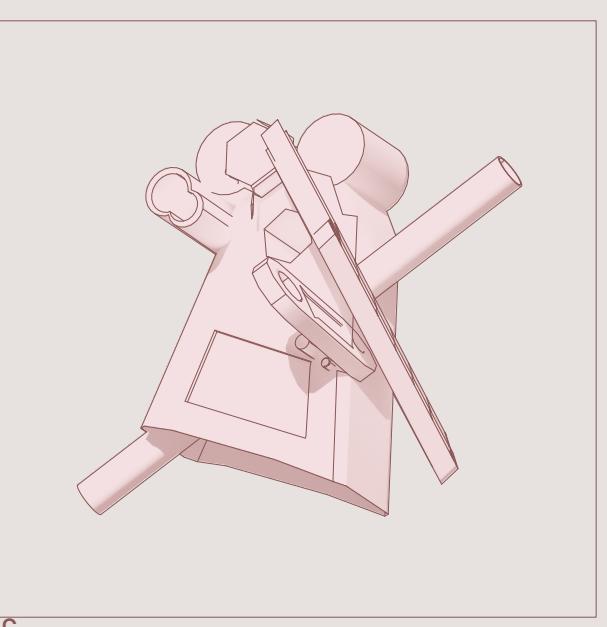
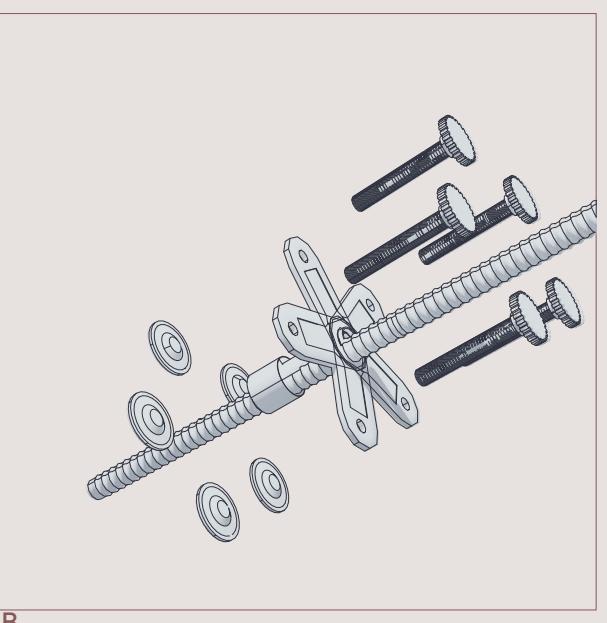
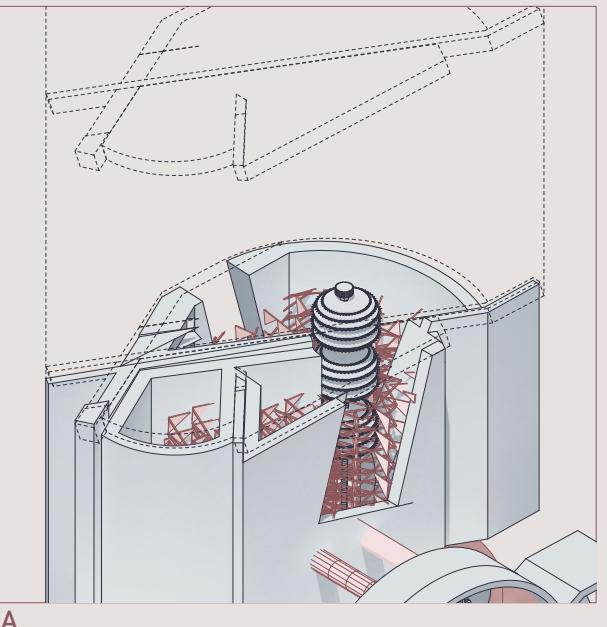
V

# Toy That Made of Band Saw

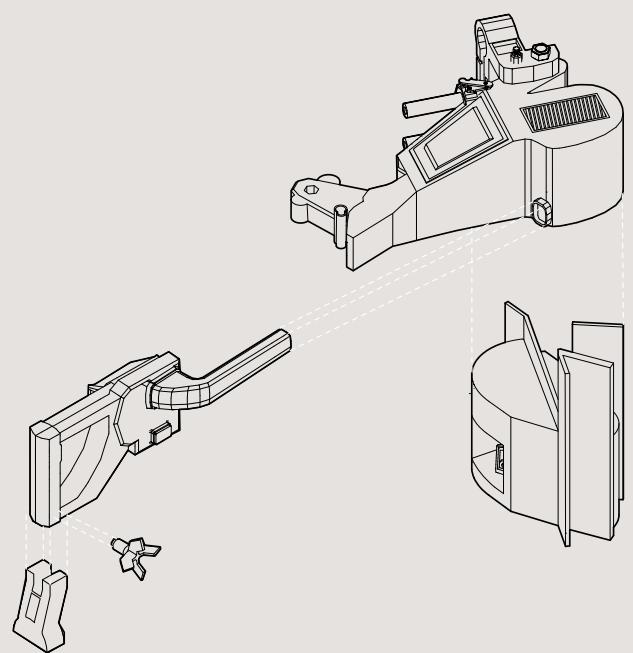
Spring 2022

Competition:  
Create a toy that is  
made of multiple  
tools of choosing  
and each piece  
should fit together  
like a puzzle toy.

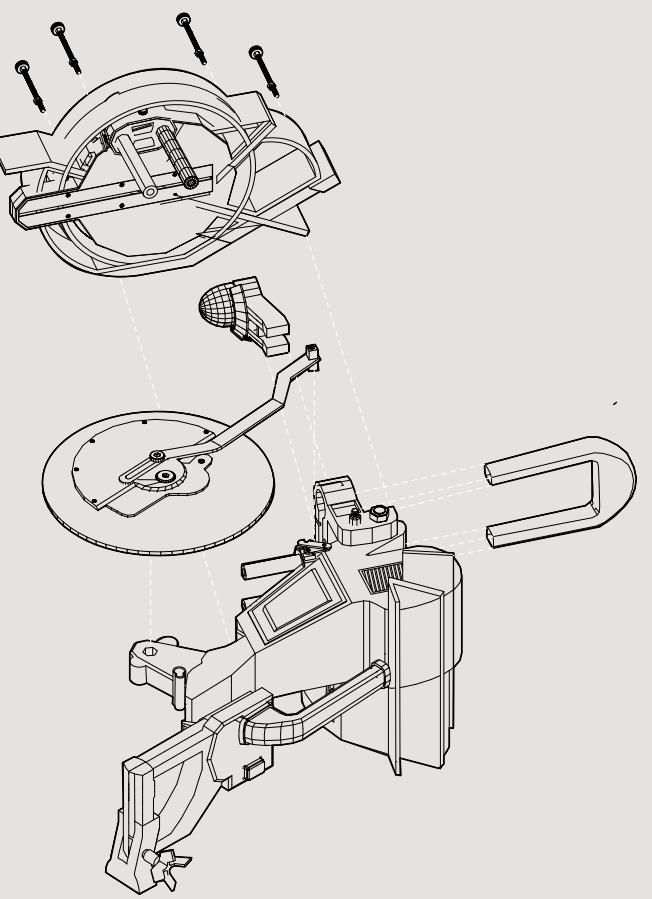
My team and I  
chose band saw, ta-  
ble saw, and vaccum  
machine. We disas-  
sembled these tools  
and found parts of  
them that will fit  
together like a toy.



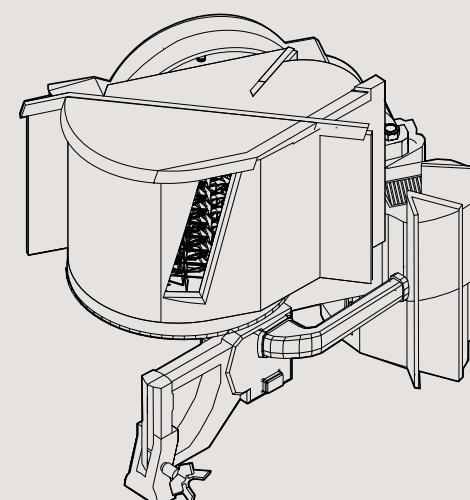
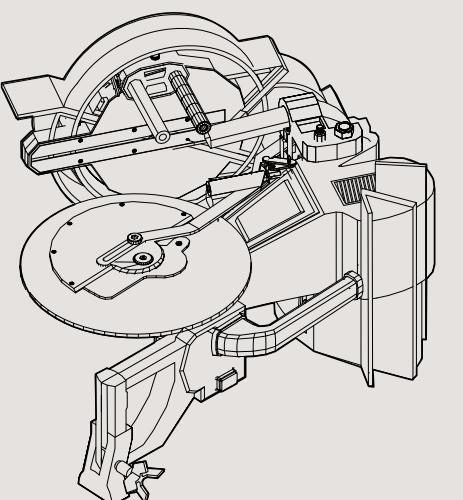
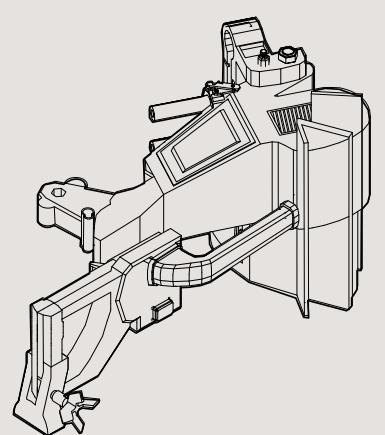
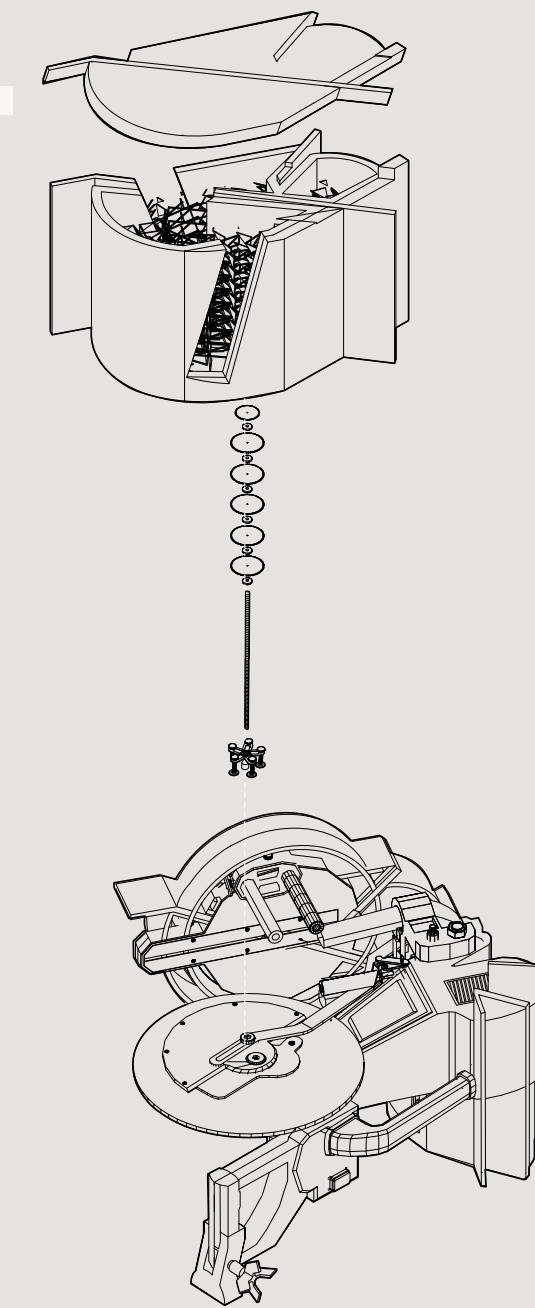
1.



2.



3.



# VI

## Sequential Casting and The Spiral House

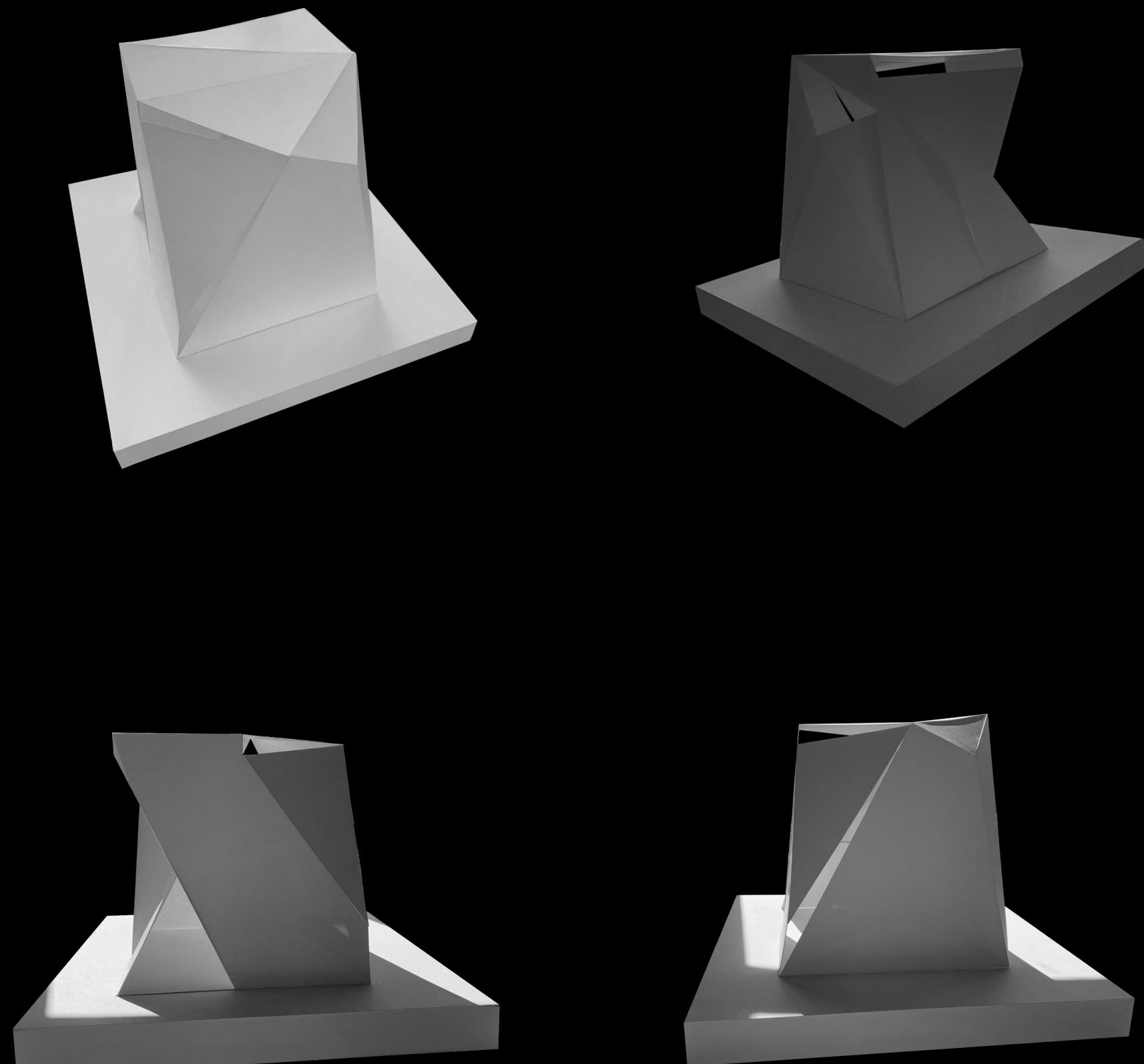
Spring 2022

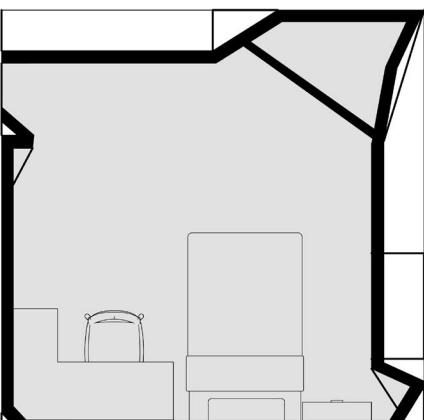
Site: Miller Township, Berlin, MO

The whole project started with a facade design practice. I took inspiration from the precedent study the Chapel of Valleaceron, folding my facade to create intentional slits that let the natural light shine through the structure. However, this is still the very first draft of my final design. The model on the right is a study model of the idea that I have described, walls folding, sometimes gently, sometimes dramatically, inwards and outwards.

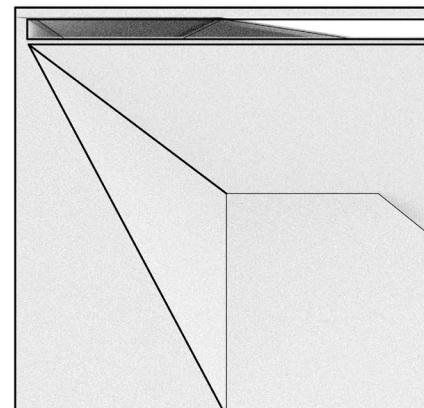
The goal of this study model is to have a physical model that allows me to manipulate the orientation of the model and study the amount of natural light that this model can receive.

There are still problems within the design such as having an overwhelming amount of skylights that may not be so beneficial in the end. These problems will be addressed in the later study of the project.

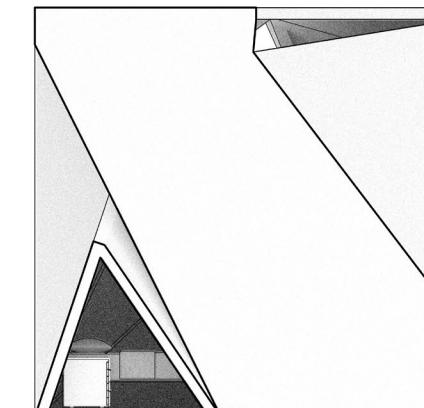




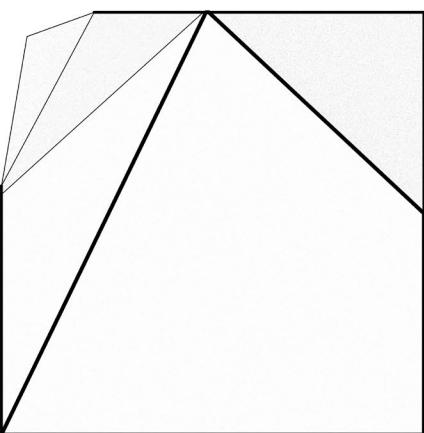
△ Plan



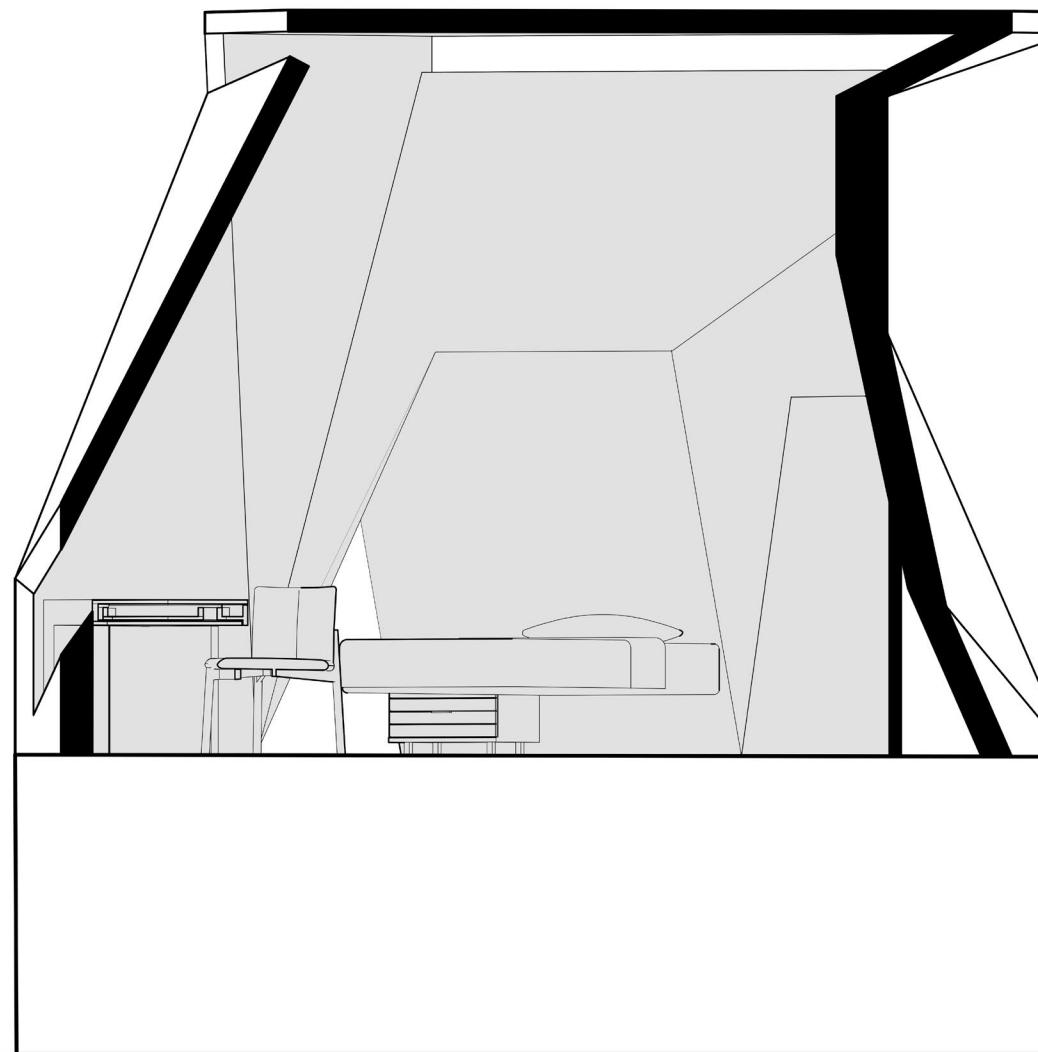
△ Front elevation



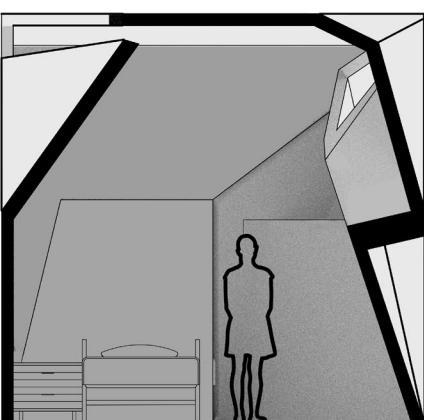
△ Side elevation



△ Top view

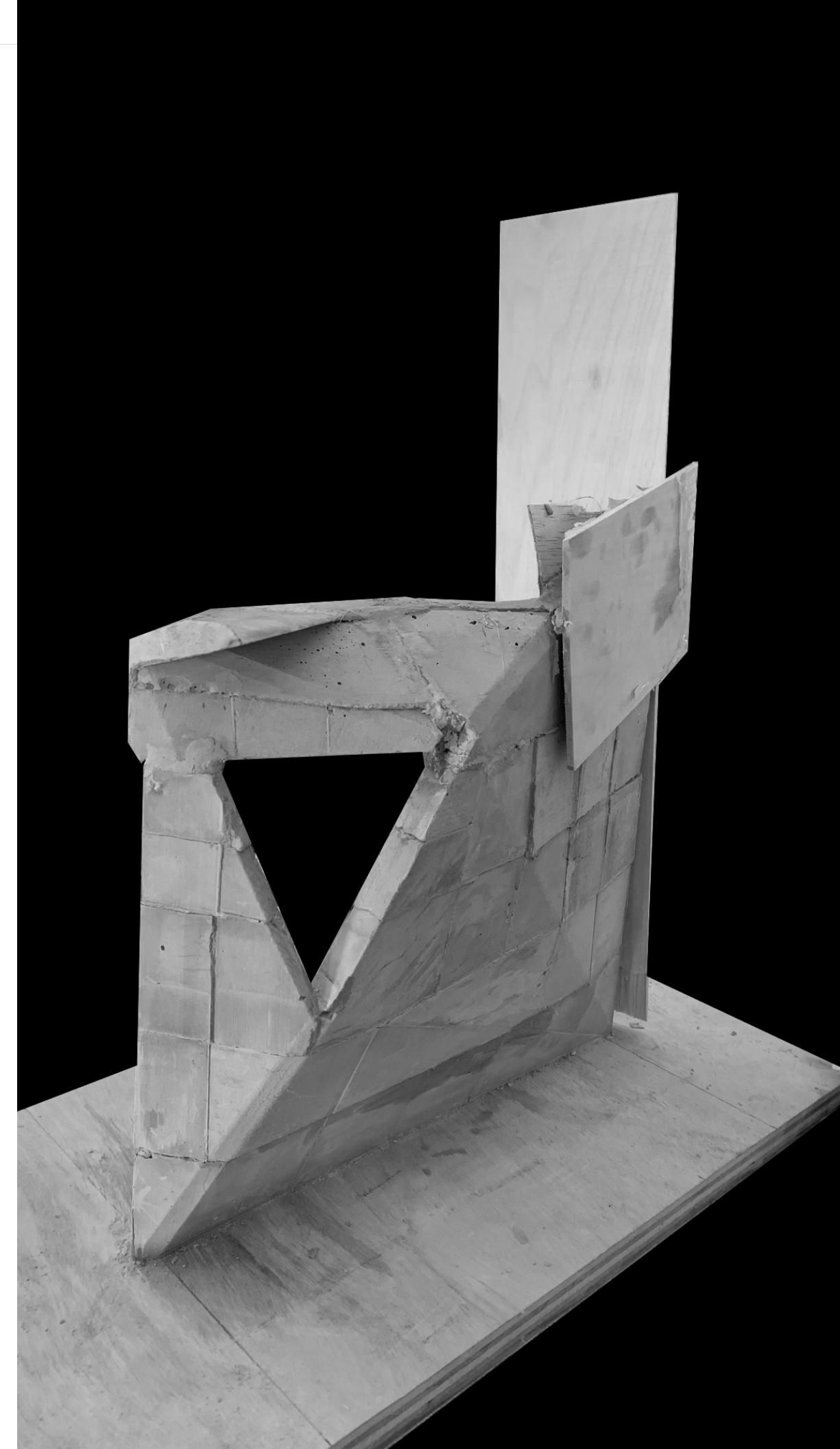
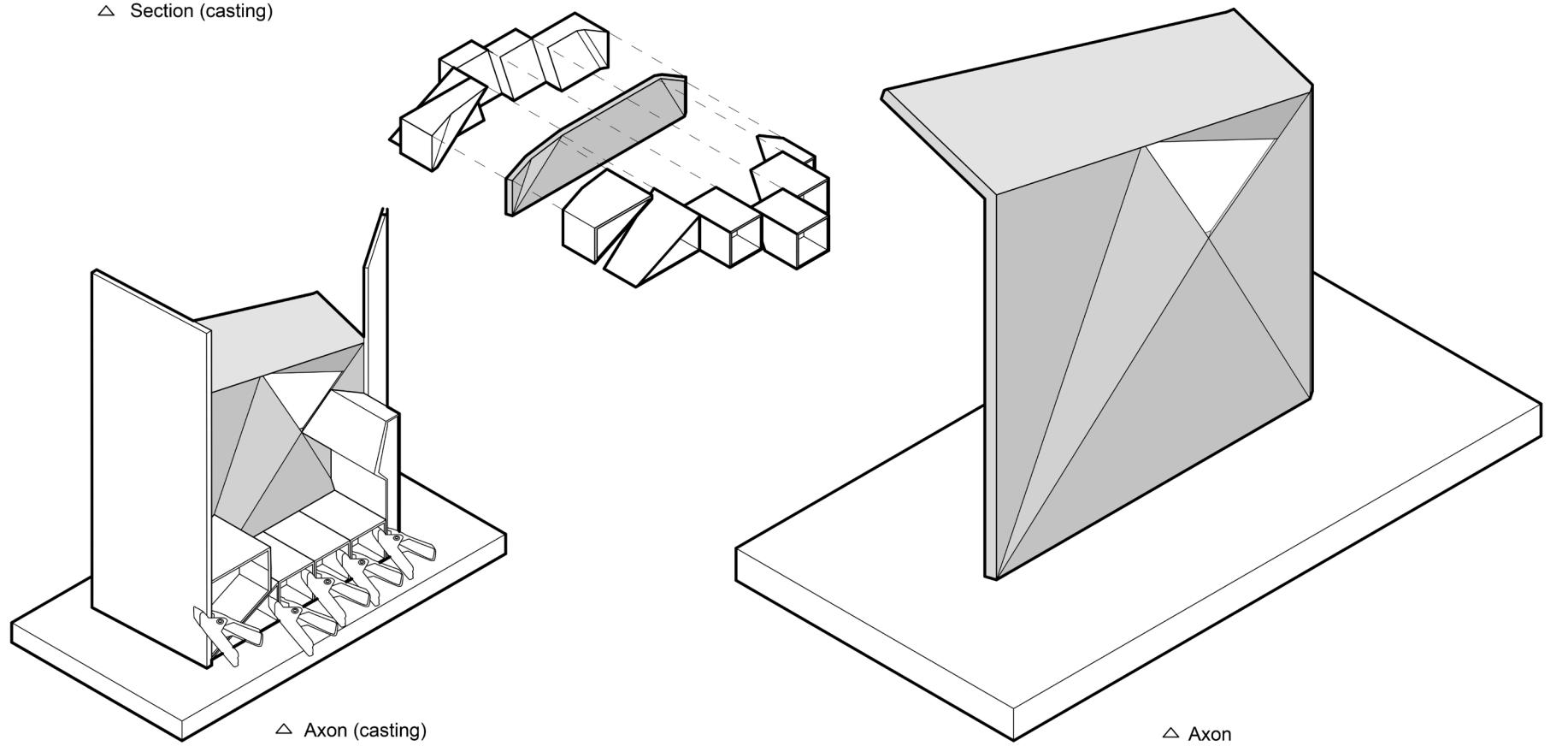
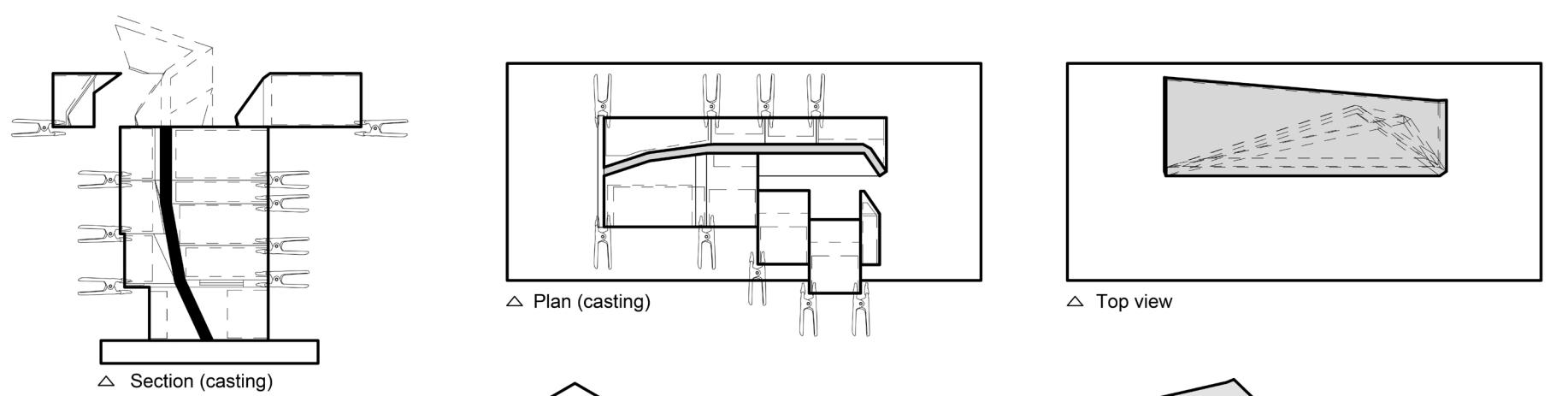
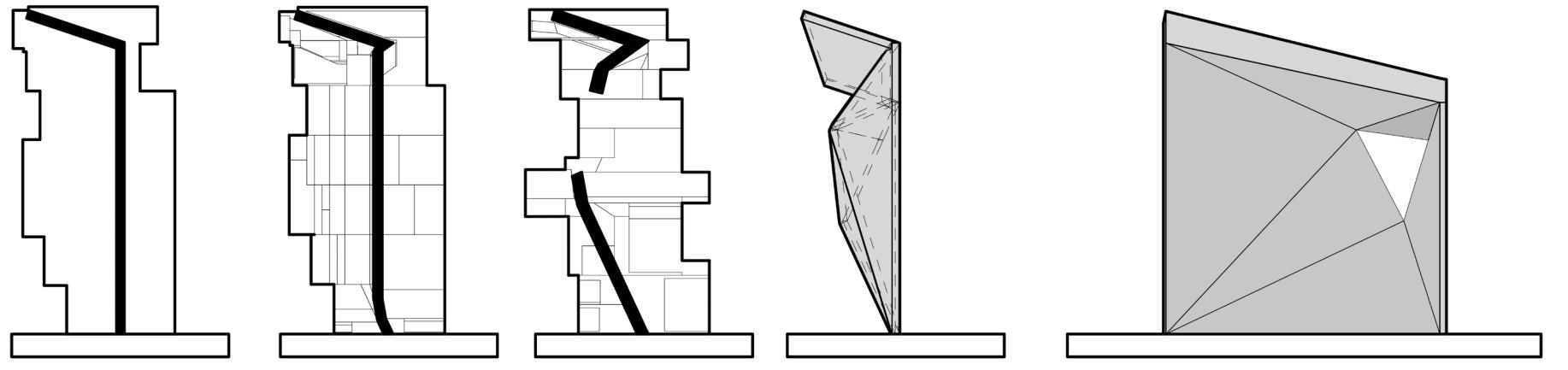


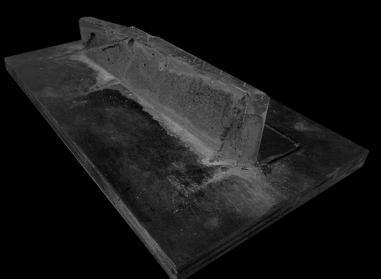
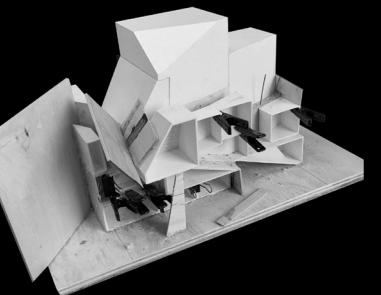
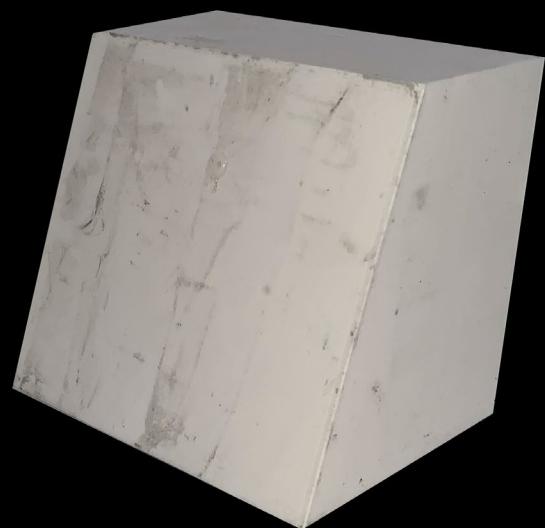
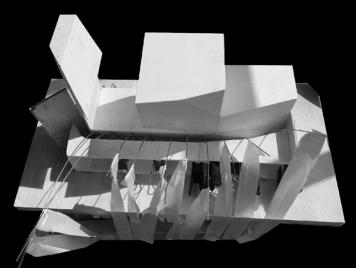
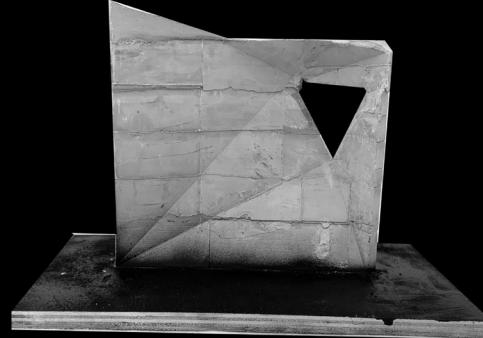
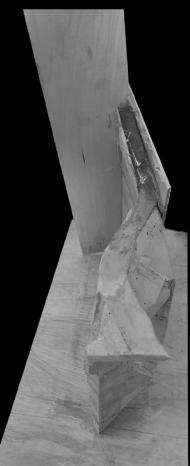
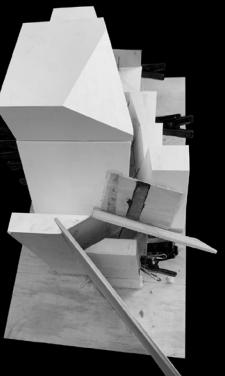
△ Section perspective



△ Front section

Interior arrangement of the model as an imagined room.

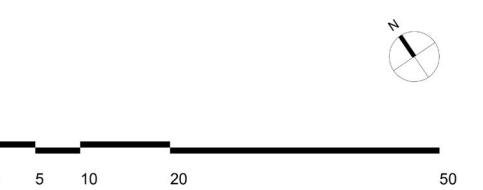




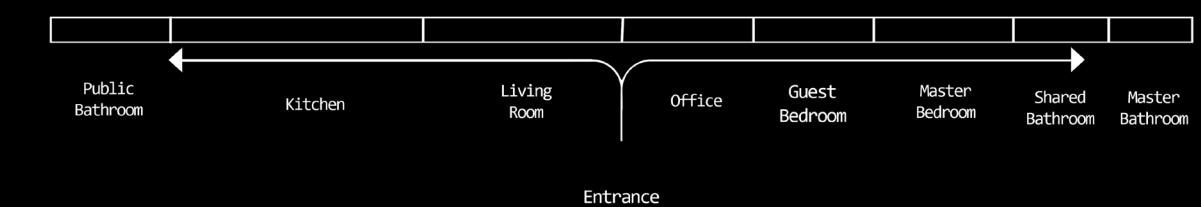


Floor Plan

- 1. Living Room
- 2. Kitchen
- 3. Dining Room
- 4. Office
- 5. Master Bedroom
- 6. Guest Bedroom
- 7. Patio



Circulation



1. Spiral as inspiration

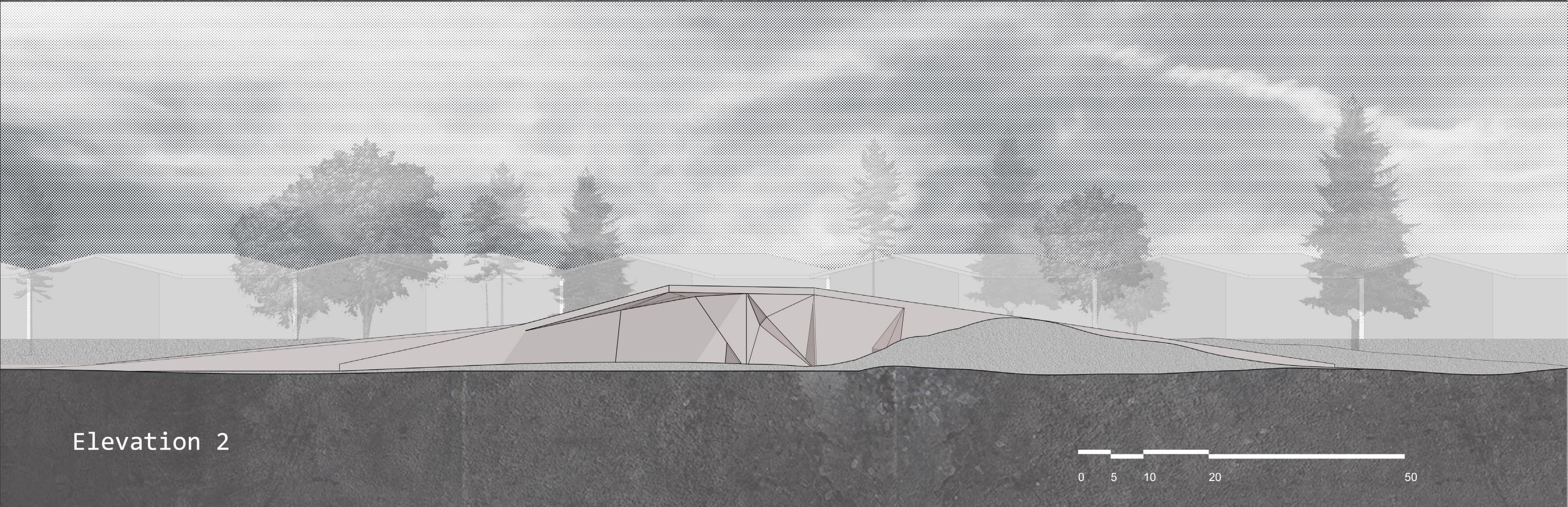
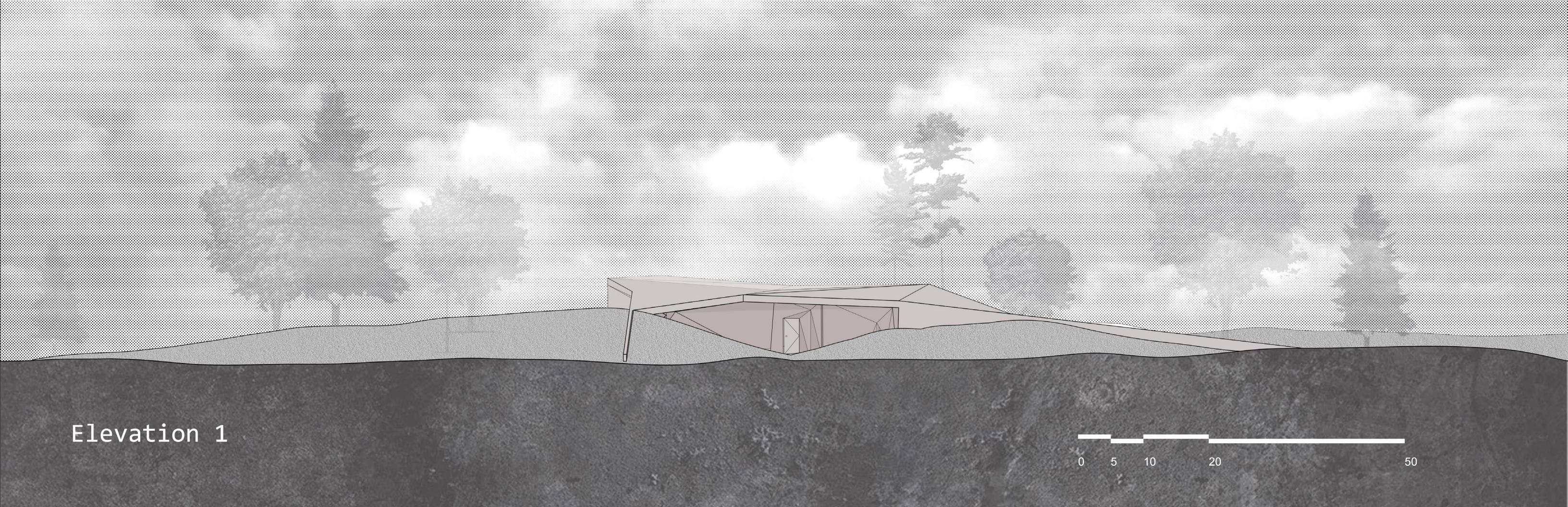
2. Adding edges

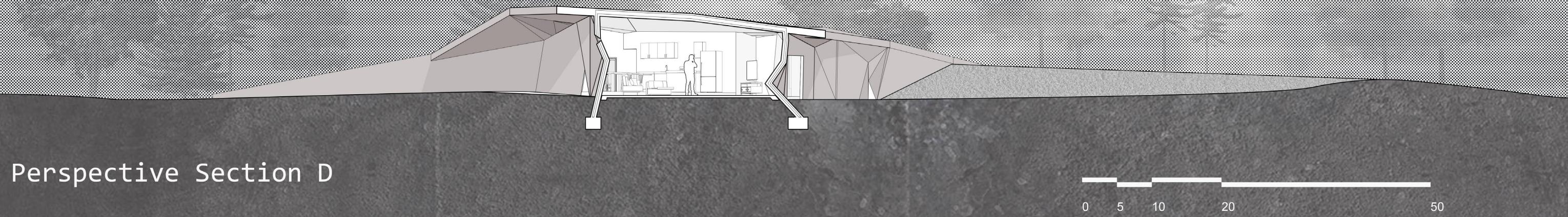
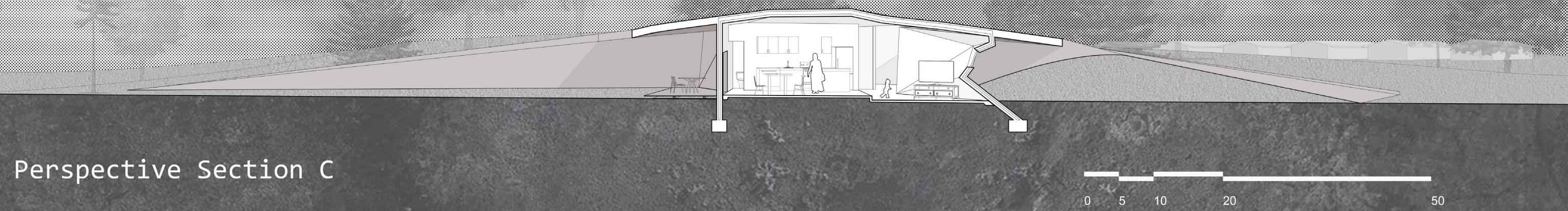
3. Repeating exterior walls

4. Repeating interior walls

5. Tilting the wall.

6. Extending retaining walls

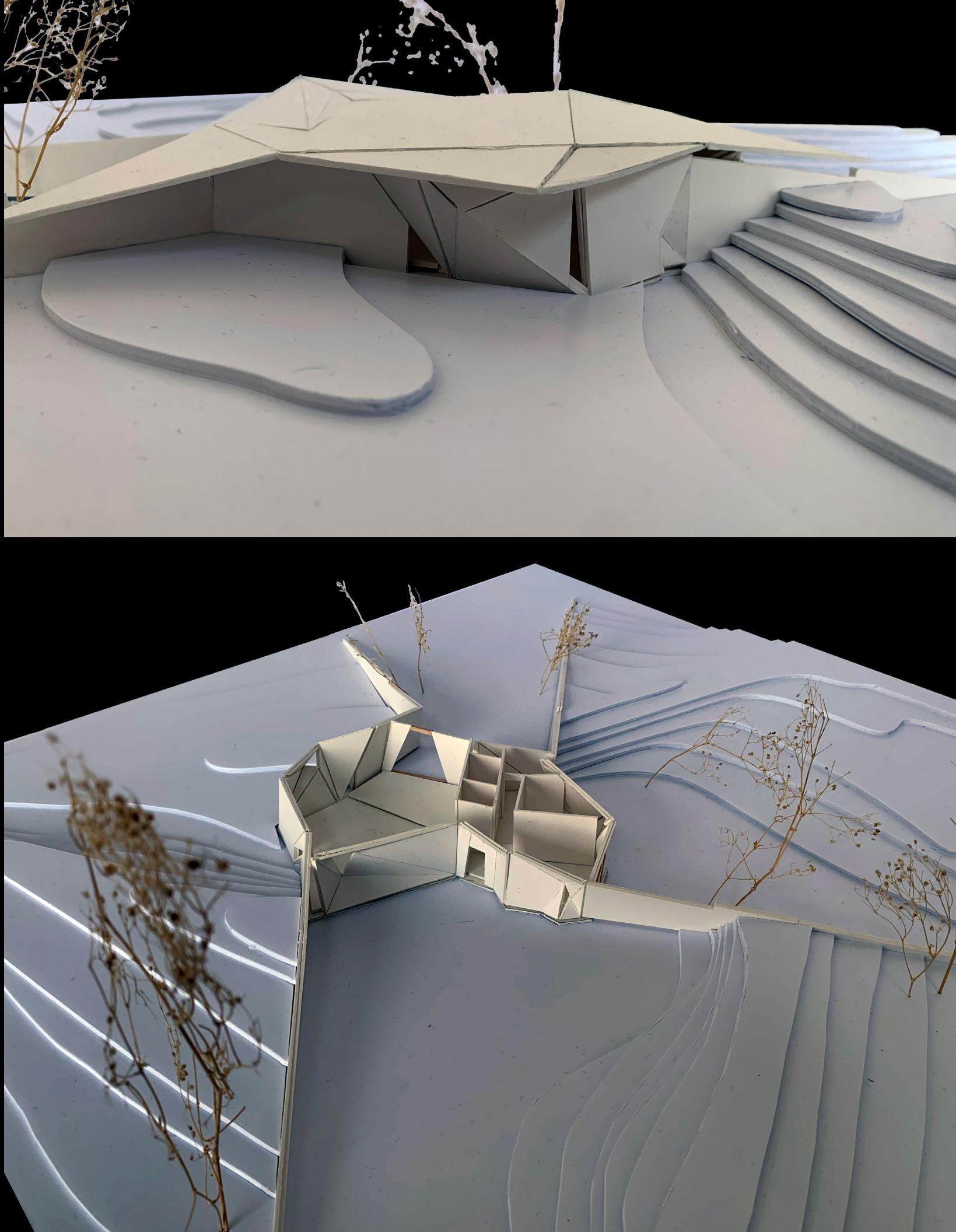


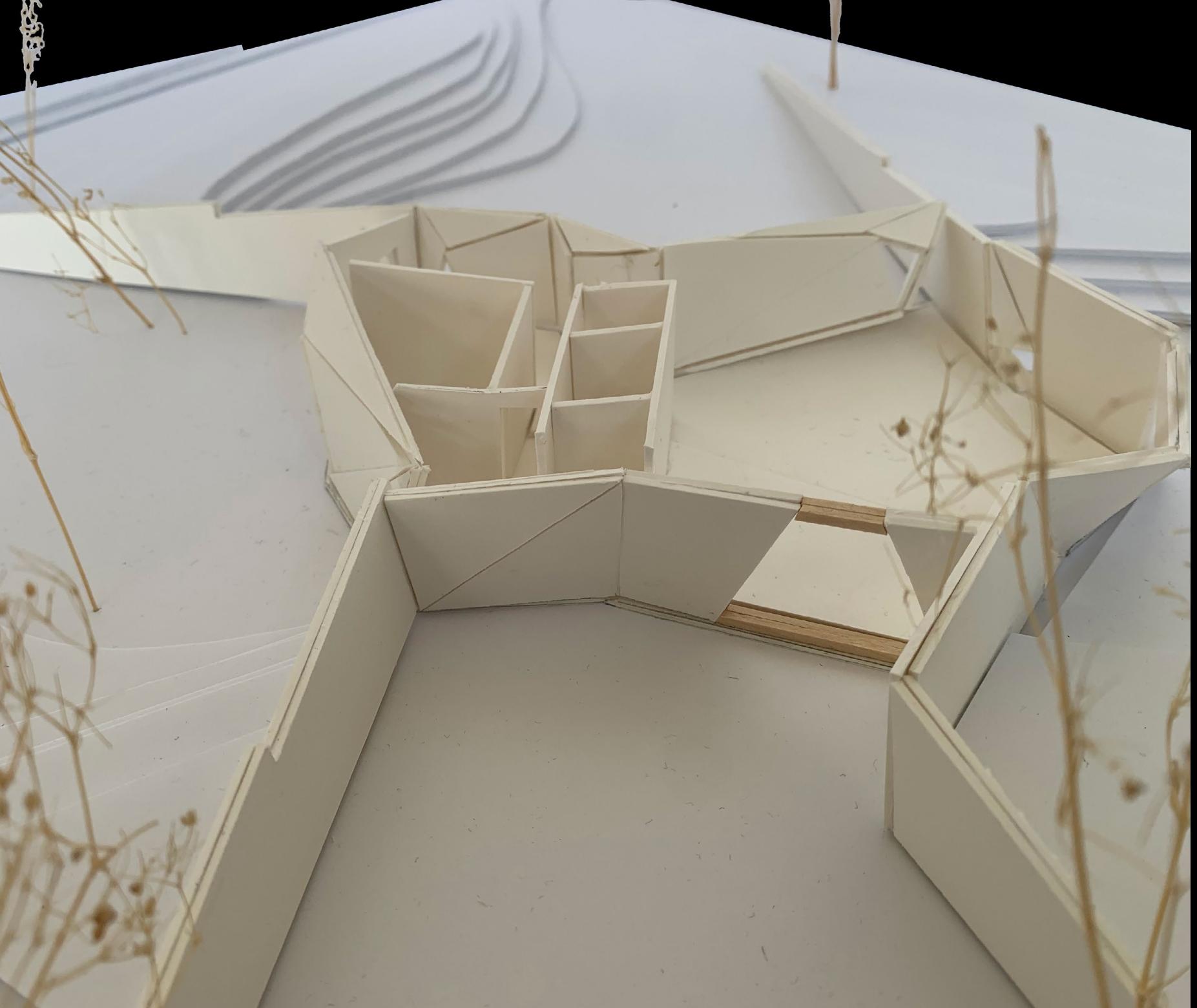






This is the final design/model of the Spiral House. I have multiple similar elongated wall facade grouping together. The elongated parts of the wall extrude out, forming retaining walls for the project. The house itself is half embedded into the landscape which is an advantage against tornades and such natural disasters.





The recurring element of having folding walls that create slits is still present in this project. It is the main source of natural sunlight. Learned from my previous mistakes, I created many more smaller slits to avoid too much direct sunlight, making the house more comfortable to live in.

It is called the Spital House because the interior of the house spirals in, having the kitchen and bathrooms in the center and other living spaces surround it. Such design choices were made because having all the water using spaces together will also save water.



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