

# Sacred Space

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in  
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## Abstract

This thesis is an exploration of the historical, societal, and individual as well as material factors that contribute to the constructing of space, and in particular, sacred space. With the idea that the making of sacred space is simultaneously a material construct and a construct of the mind, both postures were considered and studied throughout the research and design process of the thesis.

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Sincere gratitude to my committee: Scott Gartner, Patrick Doan, and William Galloway for your wise insight, support, and guidance throughout the exploration of this thesis project and my time at Virginia Tech.

Thanks to my friends and classmates, especially Cong Guo, Weiran Cheng, Maxwell Werner, and Edwin Baruch for being my family away from home and inspiring me every day.

I would also like to thank Steven and Cathi House for helping me to see more clearly, listen more attentively, smell more vividly, feel with my soul, and taste with my heart. Your CASA program provided me with inspiration when I needed it most.

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## Introduction

I began the study of this thesis with a particular interest in sanctuary spaces. Since my early years, I have been fascinated by the feeling of transcendence I have experienced in sanctuary spaces, particularly those in which I do not share the religion of those who worship there. The sanctuary for me has always been a place of escape, peace, and reflection. It is a place where I can suspend time and evade the troubles and chaos that frequent daily life. Consequently, it has become a place of fascination and wonder. It is a place that I and many others deem sacred. The reason for this, however, has always seemed mysterious and unclear. It is with this thesis that I intend to explore the idea of the sanctuary and more specifically the idea of sacred space and discover what architecture's role is in the creation of sacred space.

### Architecture's role in sacred space

Why are people drawn to old churches, mosques, and temples? Is it the history and tradition, the generations of people who have prayed there before? Is it the hard work and skilled labor, the dedication that was required to build such a place? Is it the physical space, the proportions, the material, the light, or is it in fact our psychological connections to these places that define them as sacred?

Much like art, writing, and the spoken word, architecture has long been involved in the making of sacred ideas and sacred space. Throughout history, many civilizations have used architecture to represent and express their notion of the sacred.

The ancient Chinese developed the practice of Feng Shui, a design process that seeks a harmonious balance through a specific set of laws and design principles. The Puebloan people used subterranean structures referred to as Kivas for their ceremonial spaces. Many Gothic churches built during the Middle Ages were designed in a grandiose fashion, compelling a sense of awe and a romanticism of something built for a force of unlike proportions to our own. The grand expressions of the Gothic cathedral, however, are greatly contrasted by the Quaker meeting house. Simple in its design, it lacks any of the extravagant architectural elements and iconography often found in other religious structures, relying instead on modest and local methods of construction. Absent of any kind of ineffable space, the Quaker meeting house emphasizes the ceremony and traditions of the Quaker people to create its unique sense of place and the sacred.

Each individual understands the world in a different way, bringing a set of prior historical, societal, and individual experiences to each new interaction with their physical and metaphysical worlds. The places we go, the people we meet, and the stories we hear have an undeniable effect on the human persona.

Many years ago, a night club in the heart of Mexico City burned down, tragically taking many lives. This place of excitement and pleasure became a place of mourning and devastation overnight. Confronted with a new scare, the city decided to build the Ave Fenix fire station, named after the phoenix (a mythological bird reborn through fire), to commemorate those who had lost their lives. More than just naming the building with respect to that event, the design of the building serves as a more than adequate memorial. A staircase, ascending the full height of the building, is saturated with a deep red color and forms the shape of a teardrop. It is expressive of much more than its utilitarian drives. During a visit to this building, I felt an undeniable presence of the sacred. Although the physical presence of the building itself is enough to warrant an architectural pilgrimage, the story affords it a unique connection with the city, the site, the people, and the fire station. Upon reflection of my visit, I cannot help but think it was a harmonious connection between the physical and psychological elements of the space that provoked a sense of the sacred within me.

The story of the tragic fire was inherent to the site and the subsequent construction of the Ave Fenix fire station. This is a type of connection that is analogous to many of the old churches, mosques, and temples which are tied to rich traditions and histories. My interest then turns to new construction, buildings without any apparent tradition or history. Can the application of certain physical elements like proportion, material, and light connect us with previous experiences that elicit us to connect with that space on a deeper level? Do aspects of these elements themselves carry psychological connections?

**Chapter I**  
Inquiries of sacred space



The following work began as an exploration of sanctuaries and led to an inquiry of sacred space. The final proposed building is simply a space, made of lines and material. It serves to study the ways in which proportion, material, and light may generate a sense of sacred space.

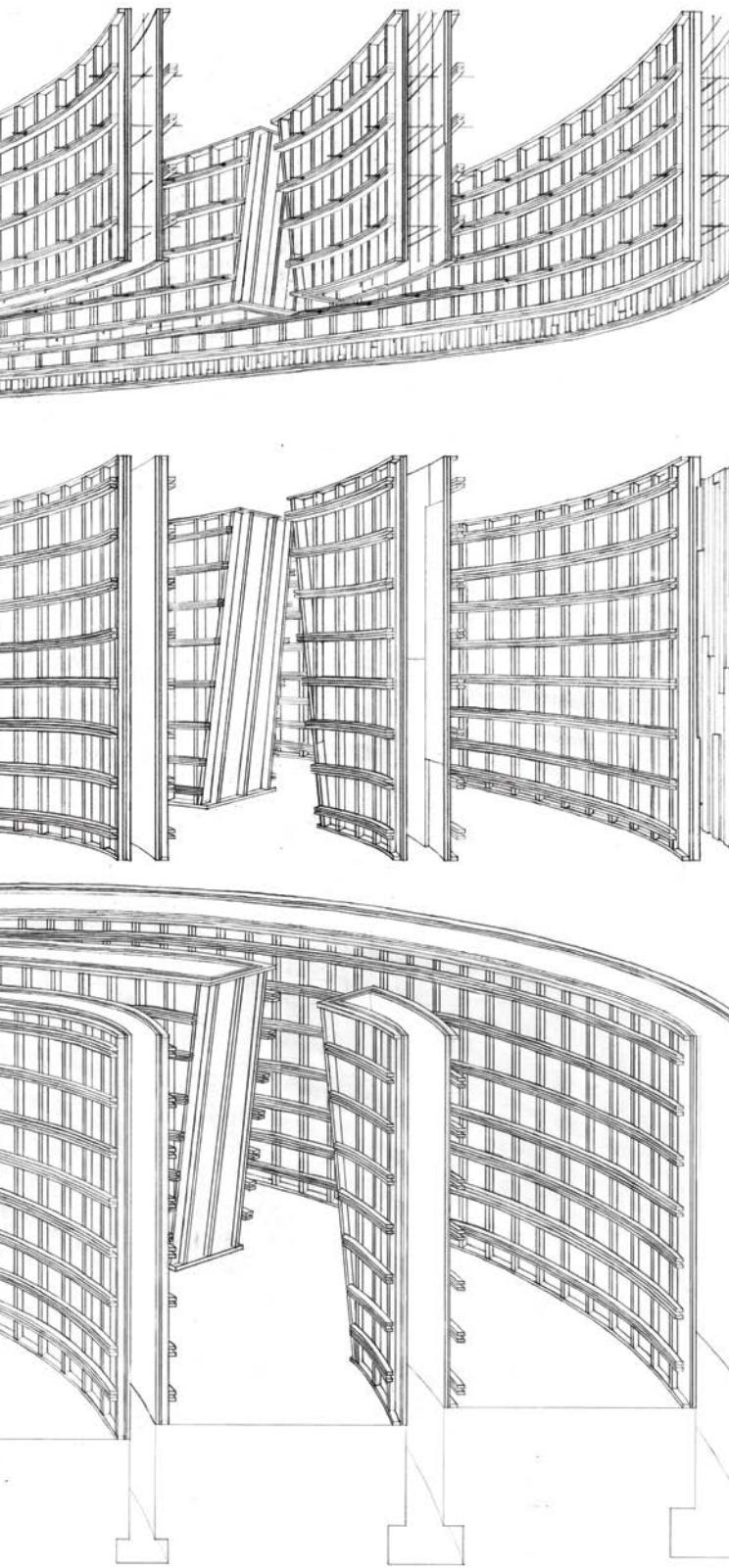
The following work began as an exploration of sanctuaries and led to an inquiry of sacred space. The final proposed building is simply a space, made of lines and material. It serves to study the ways in which proportion, material, and light may generate a sense of sacred space.

### What is a wall?

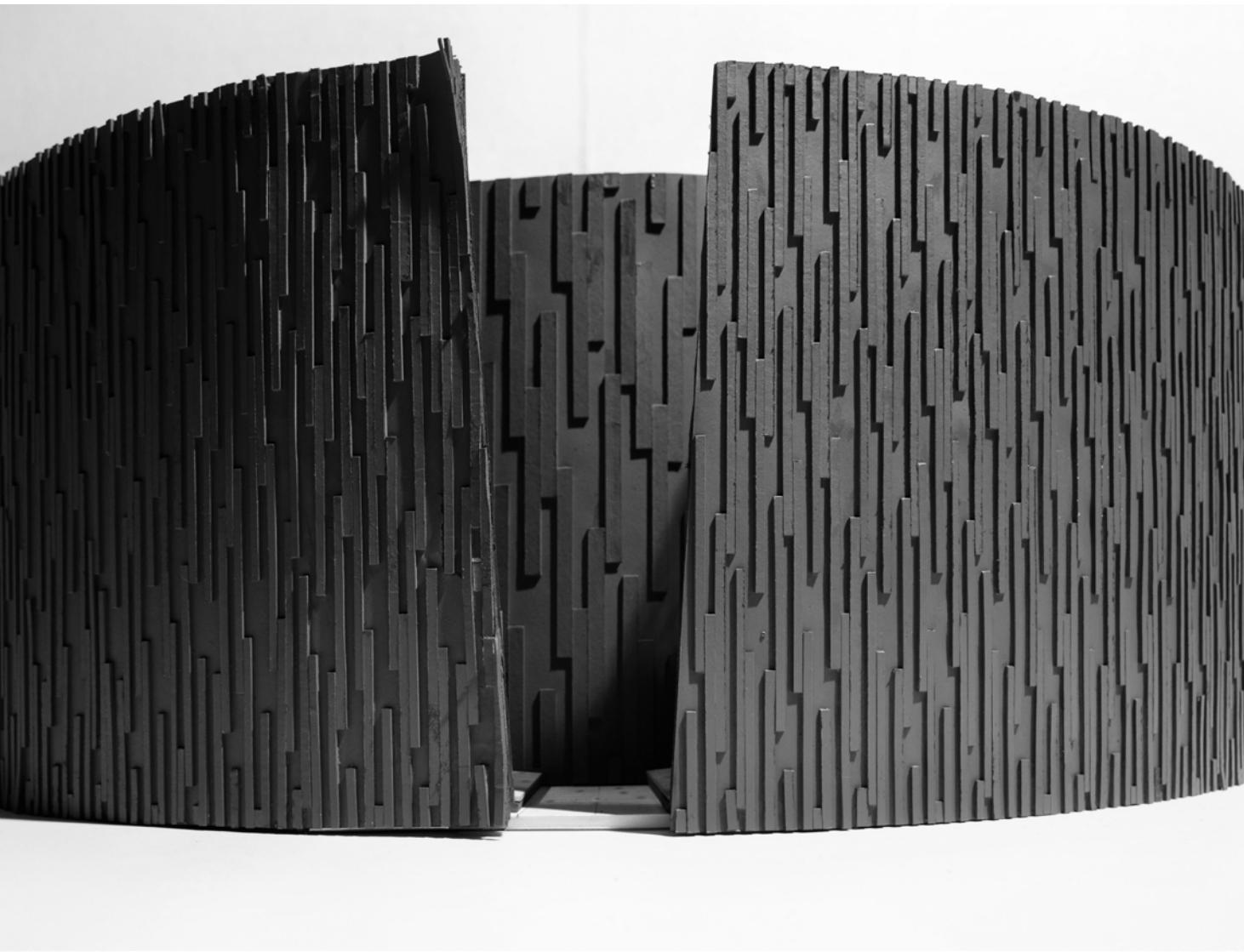
Who makes the wall? Where does the wall come from?  
Where does the wall start? Where does it end? How does the

wall feel? Is it cold? Is it solid? Is it heavy? How does the wall touch the ground? the floor? the ceiling? the sky? the hand? the eye? How does the wall open? Does it provide shelter? Does it define movement? space? Where does the wall go? Does the wall demand attention? What is the wall's relationship with other walls? spaces? objects? How does light affect the wall? Is it absorbed? reflected? does it cast shadows? What is the sound of the wall? Is it loud? Is it quiet? How is the wall touched? Who uses the wall? How does time affect the wall? How does weather affect the wall? How are the joints made in the wall? What forms the wall? Does the spirit of construction live on with the wall? Is the wall revealing? Does the beauty and or life of the wall begin before construction? after construction? years after construction? Does the wall have to be a certain angle? Can it lay flat? Does it have to be a certain height? a certain width? Can the wall be made from any material? What are the parts of the wall? Does the wall have parts? Is the wall living? Is the wall changing? Is the wall growing? What is the lifespan of the wall? What is the character of the wall? What is the harmony of the wall? What is the finish of the wall? What are the guts of the wall? Where does the wall come from? How did the wall get there? Who brought the wall there? What is the purpose of the wall? Is the spirit of the wall embodied in

the material? the formwork? the builder's hands? the architect's pencil? the occupant's soul?





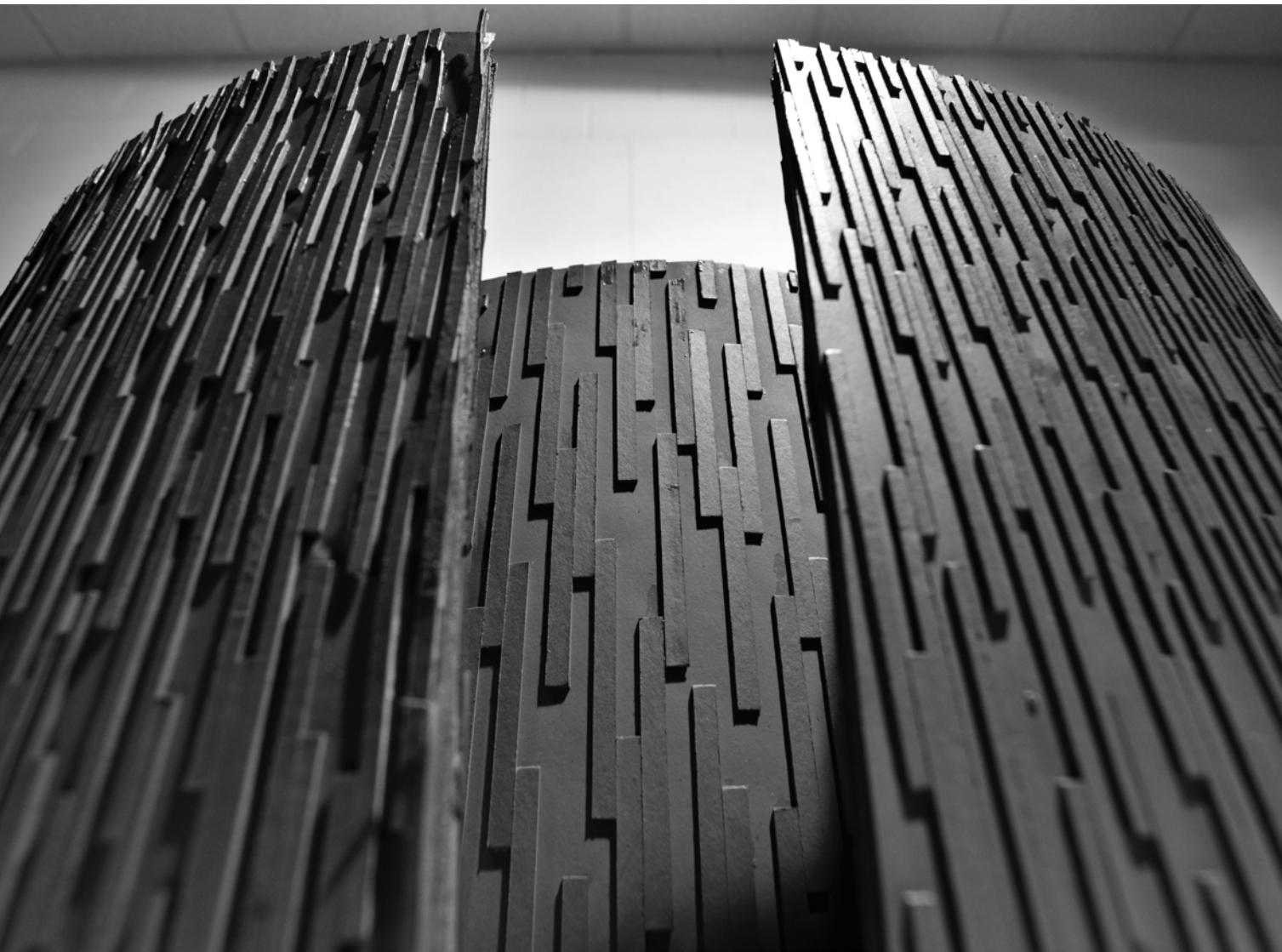


From a distance, the building appears to be fairly linear. The surface of the dark concrete walls, however, is contradictory with a strong vertical orientation.

The strength in presence of these contradicting elements, true dimension and material surface, changes as one approaches closer. Once in reach of the building, the walls develop a strong sense of verticality and perspective as the edges of the building begin to disappear. The undulating surface takes on a scale, which at its base relates to the human body.

The outer wall parts on four sides symmetrically, opening up to a second layer of walls. Once through each of these openings, an offer to enter on either side is presented.

The openings in the outer layer widen at the top, providing a sense of entrance, separation, and height.



Each of the eight entrances consist of a doorway with a tall glass surface supported by black steel mullions with the pattern and dimensions of the second wall. The attachment and sealing of the glass surface to the walls, floor and ceiling are hidden with each of those surfaces, allowing the connections to remain out of sight and for the materials to appear flush.

Despite the building's prominent use of concrete as a material, a dialogue between a wealth of materials takes place at the entrance. Glass, metal, wood, and concrete all come together, each sharing many of the same expressions while still contributing their unique qualities.

Each of the entrances are identical except for the light and shadows they capture from the sun above. The orientation of the building, season, and time of day can be perceived like a sundial.

On the other side of the tall nine foot doors with handles that extend the entire height, is a tall space capped off at 36 feet with a concrete roof. Beyond that, the ceiling drops down to nine feet changing the dimensions and proportions of these 12 foot wide spaces. At this point, the wood floor transitions into a highly reflective polished concrete floor. A strong cast of light can be seen in the distance, but its source is still unknown.







The floor steadily rises as the light becomes closer and brighter.  
The reflection of the floor begins to expand the space. The  
walls continue past the floor, enhancing this sense of expansion  
and verticality in a space that is becoming more horizontal.





Once under the light, the ceiling opens toward the sky. A narrow opening frames the clouds above. The intensity of the light changes as clouds move by, creating a dynamic moment within the static structure.



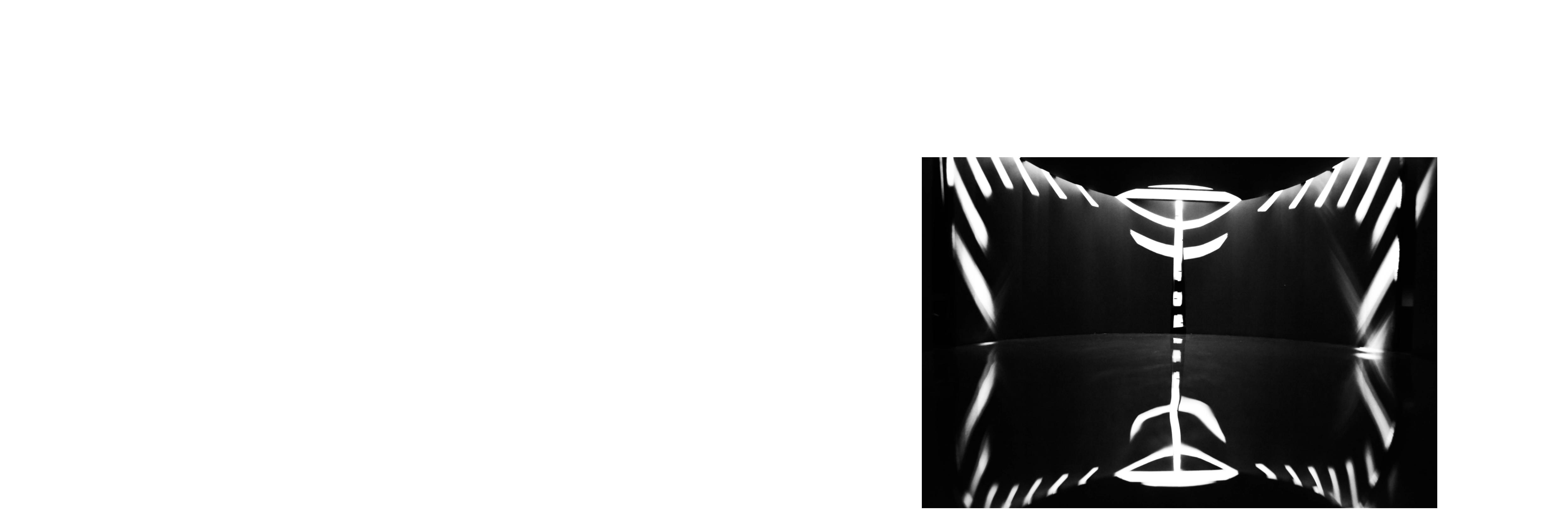
Continuing on, the ceiling drops down again, highlighting the next source of light. The curvature of the walkway places an emphasis on the continuing progression toward a central space. An opening within the second wall leads to a third. This one is also concrete, but has a smooth texture like the floor.



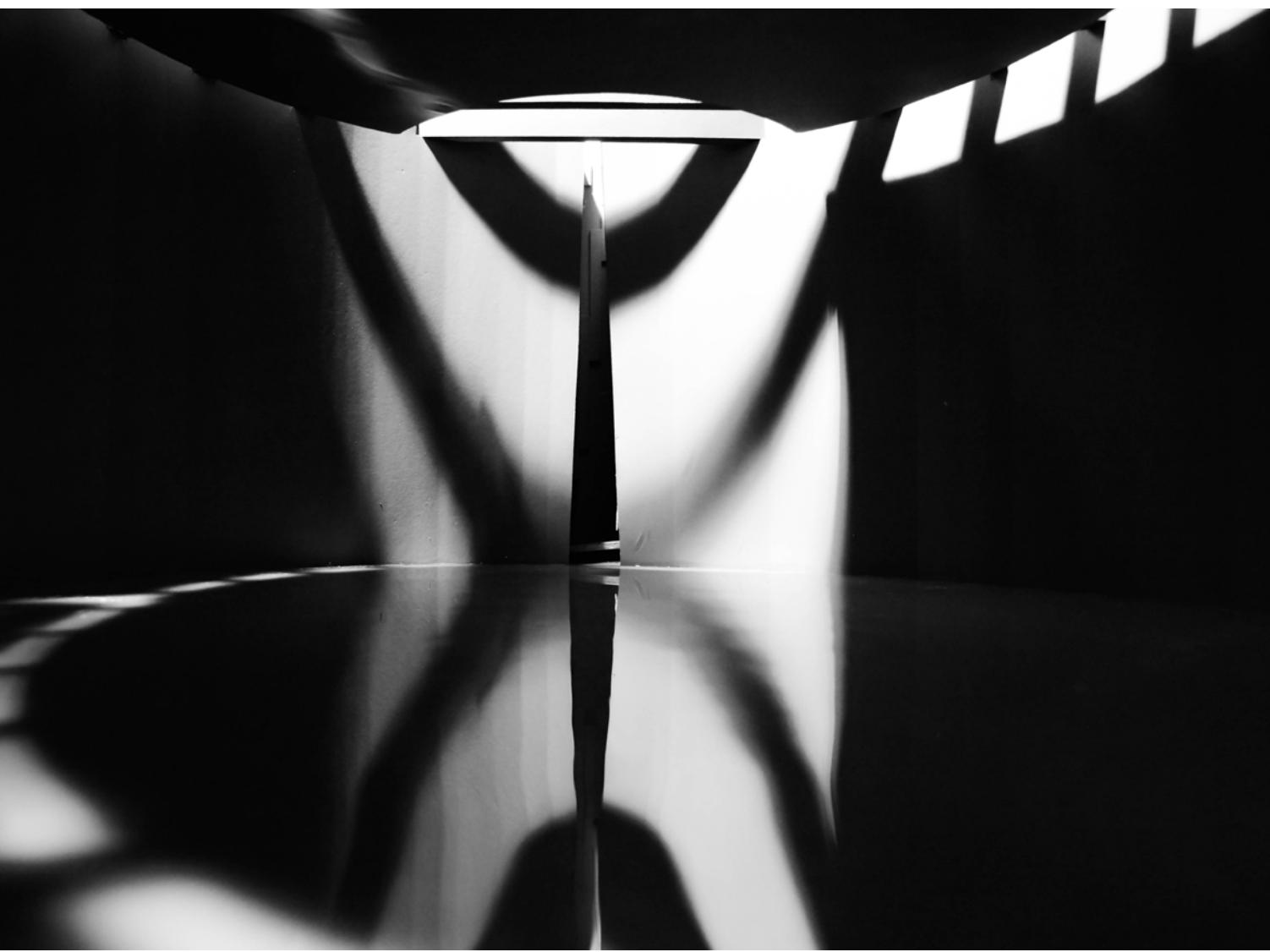
The ceiling opens up again. Now feeling very distant from the outside world, this offering of the sky allows the slightest connection.

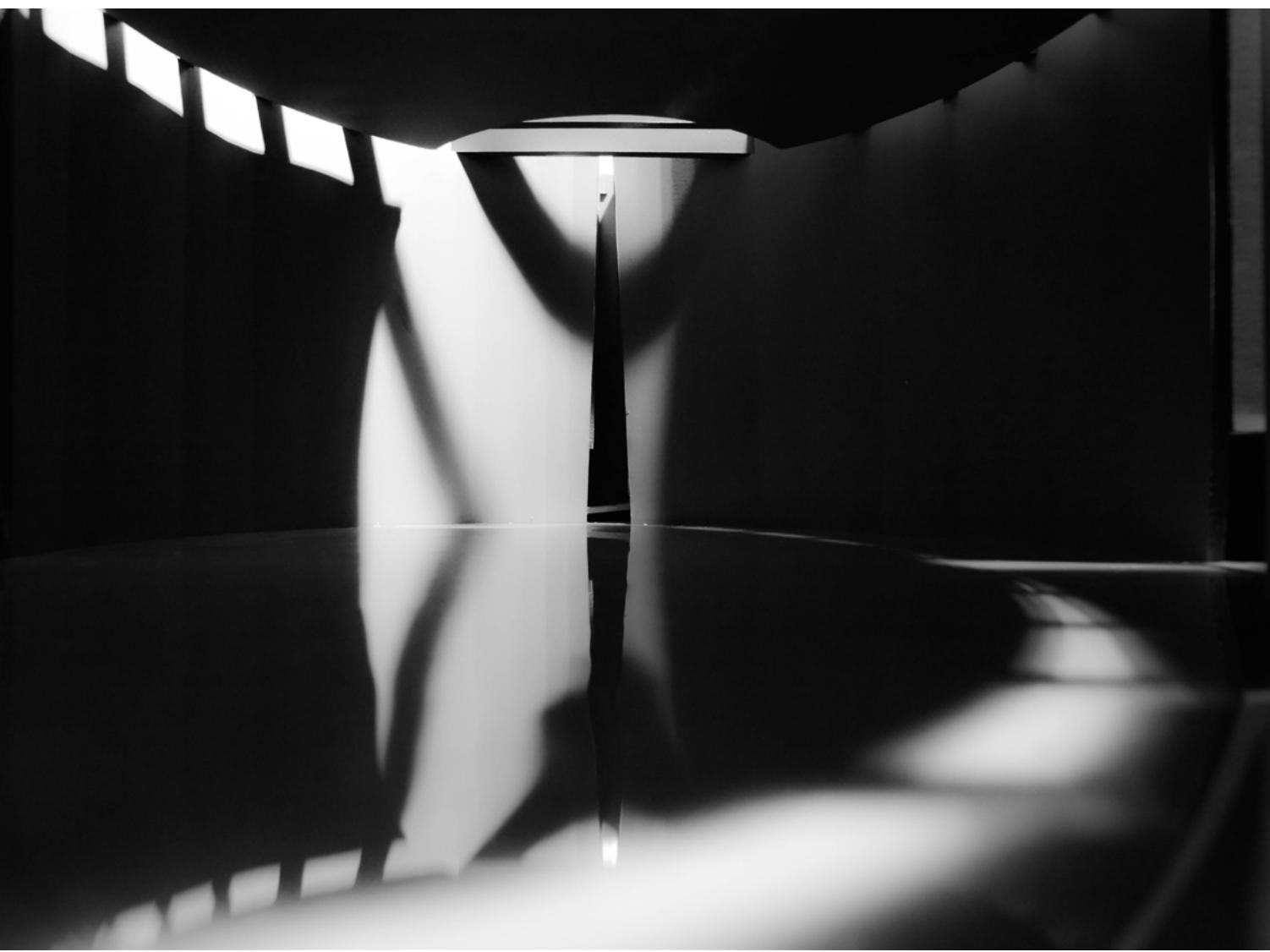


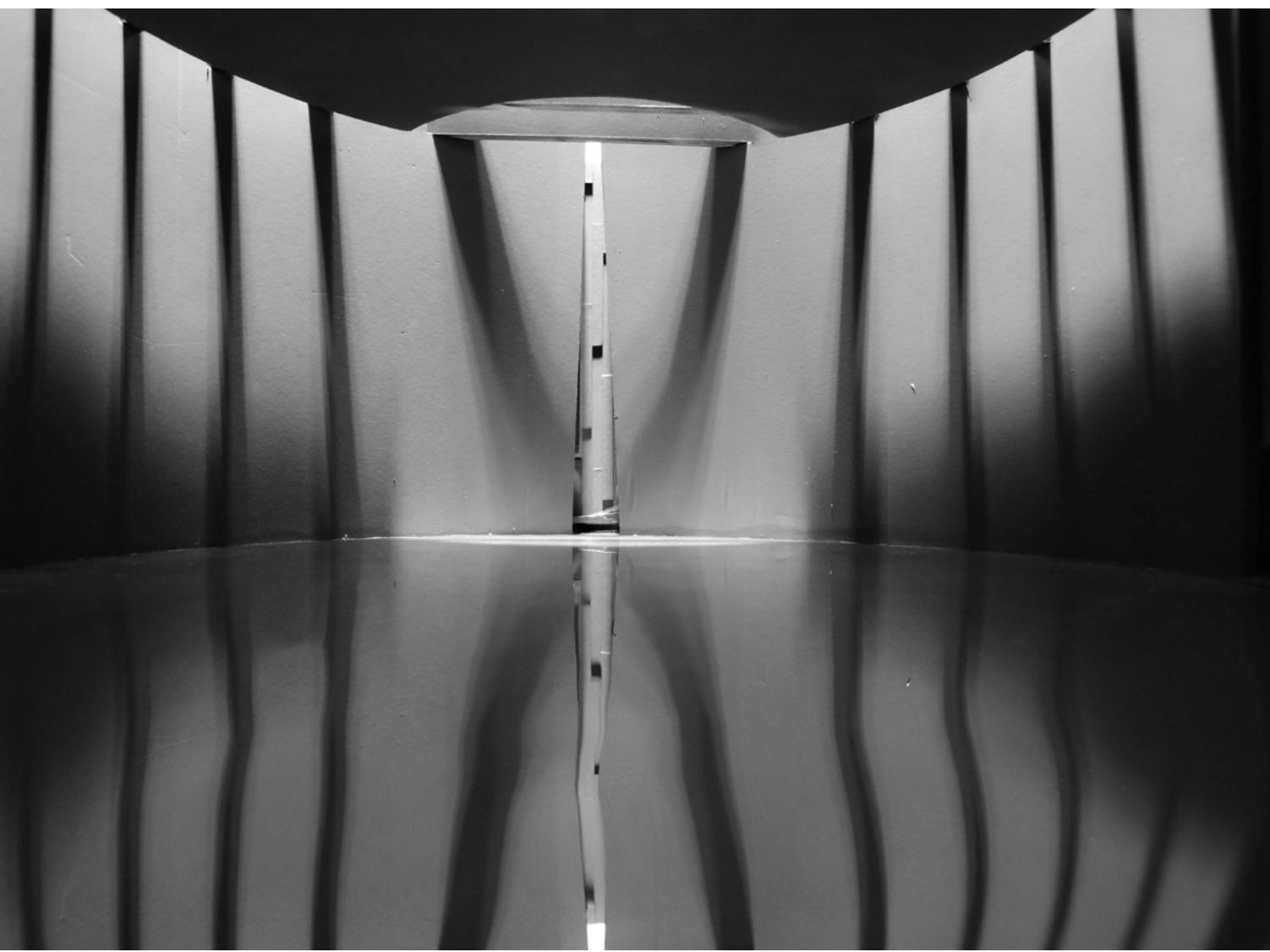
Now reaching the opening in the third wall, the ceiling is only 7 feet high. The low space opens up dramatically as the much anticipated central space finally presents itself. Passing through the four foot wide opening, the space expands significantly into a circular space 60 feet wide and 30 feet tall.



The central space is empty. The simple combination of lines and material, however, allows the light from the sun to fill it. The light activates the space differently depending on the weather, the time of day, and the season of the year. An opening in the ceiling on the northern side provides the room an orientation and exposes the roof structure above.





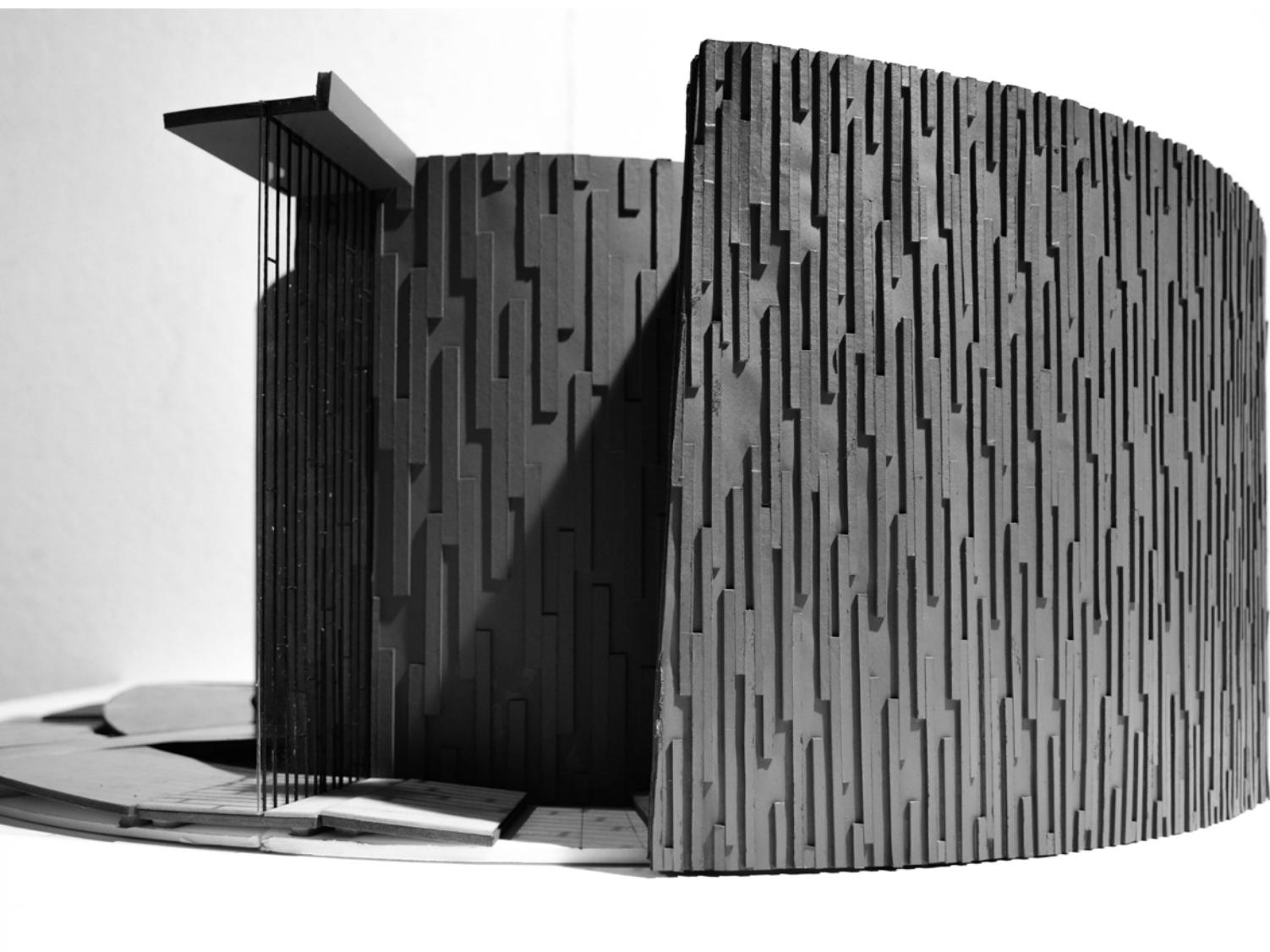


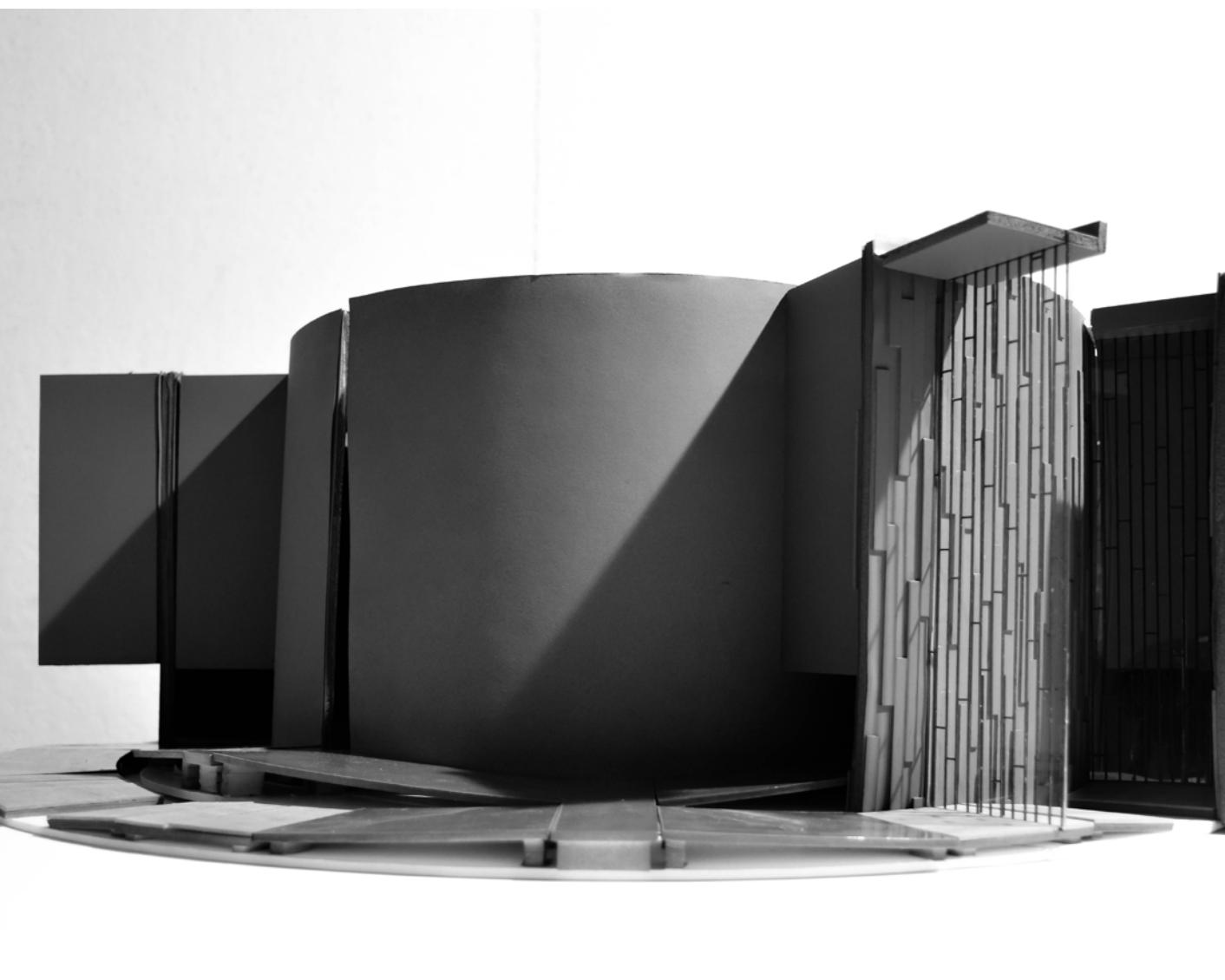


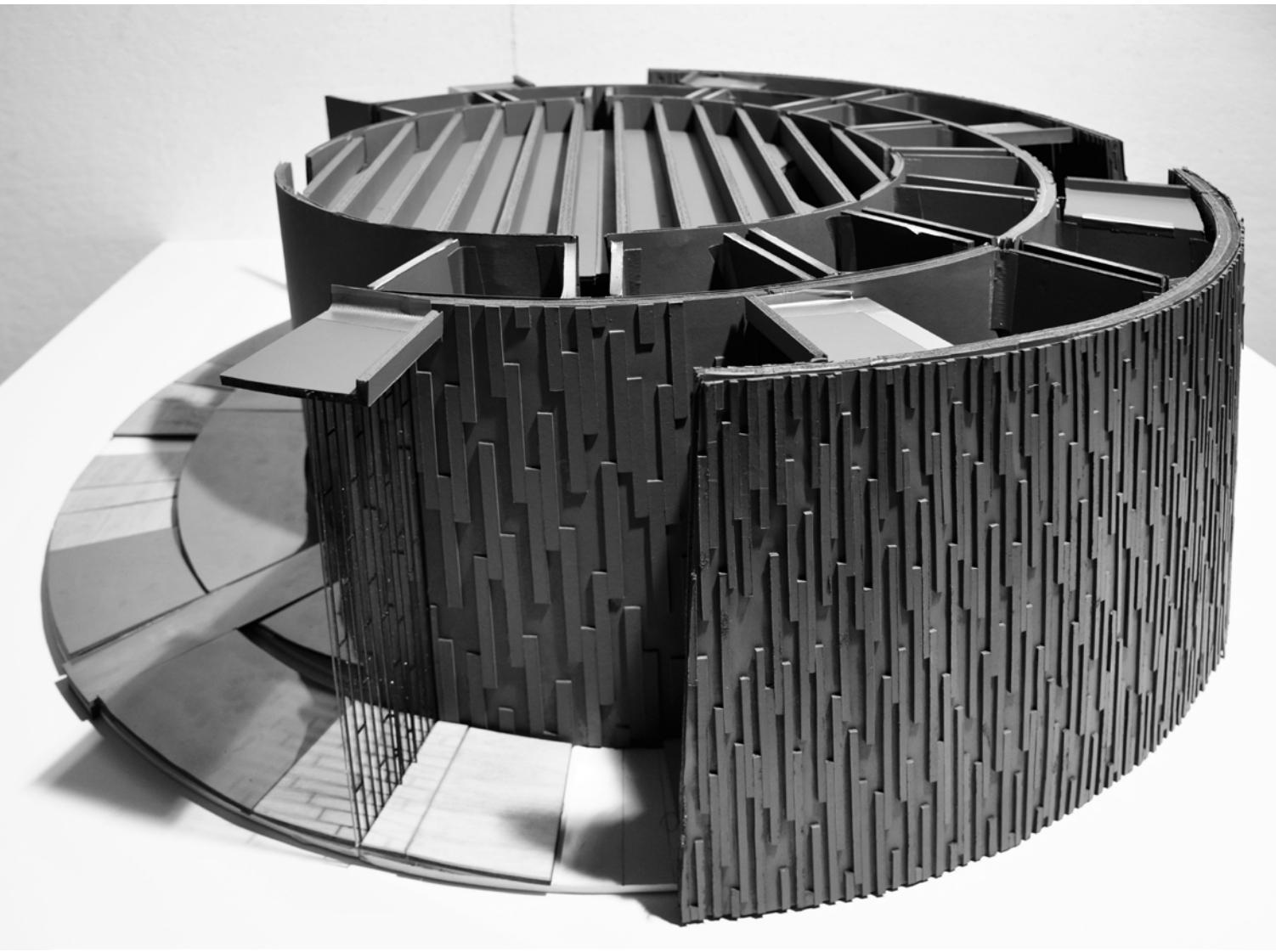


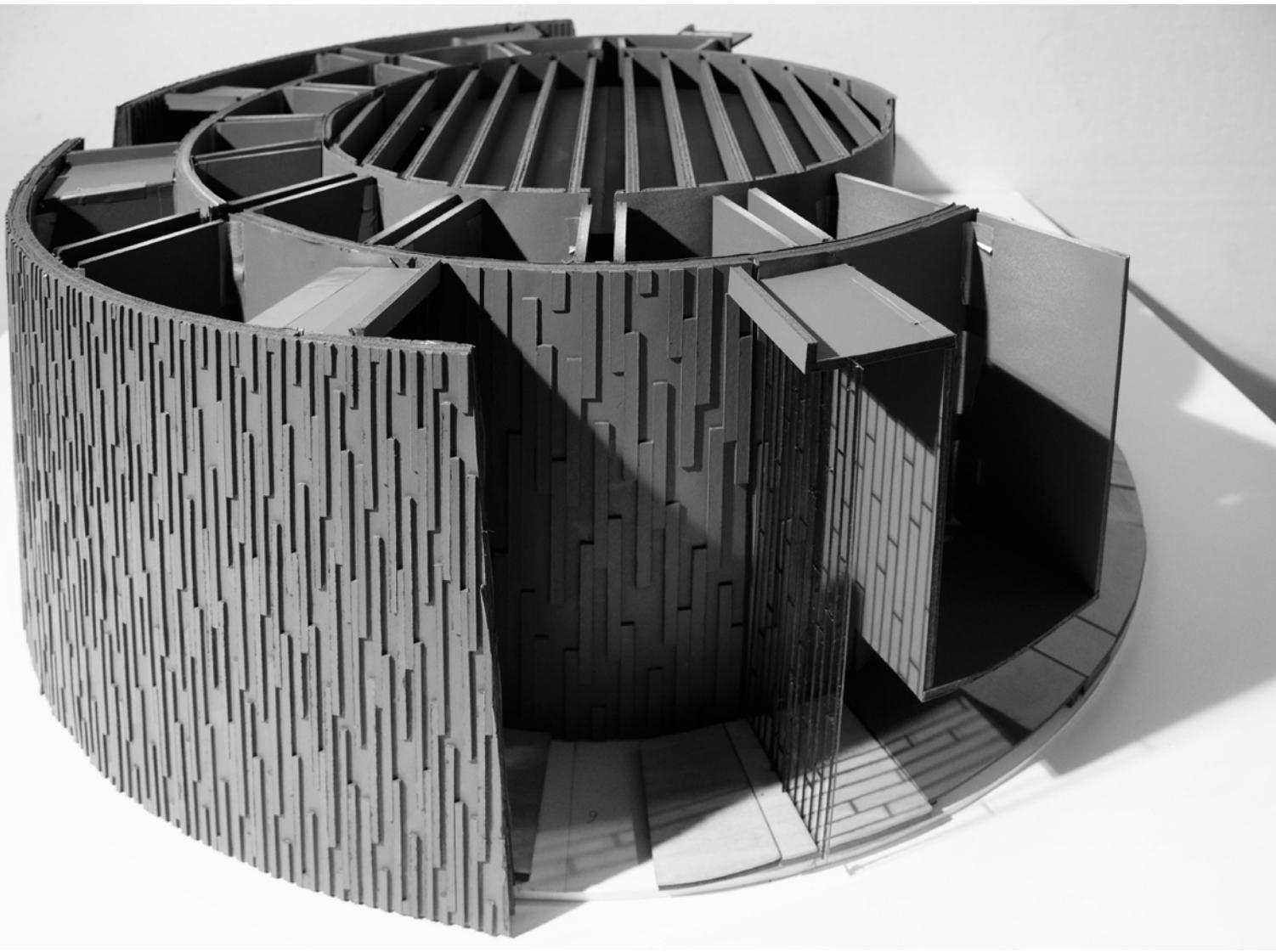
Travelling back though the path, the entrance reappears, opening up to the rest of the world. Upon walking through the door, time begins to tick once more.

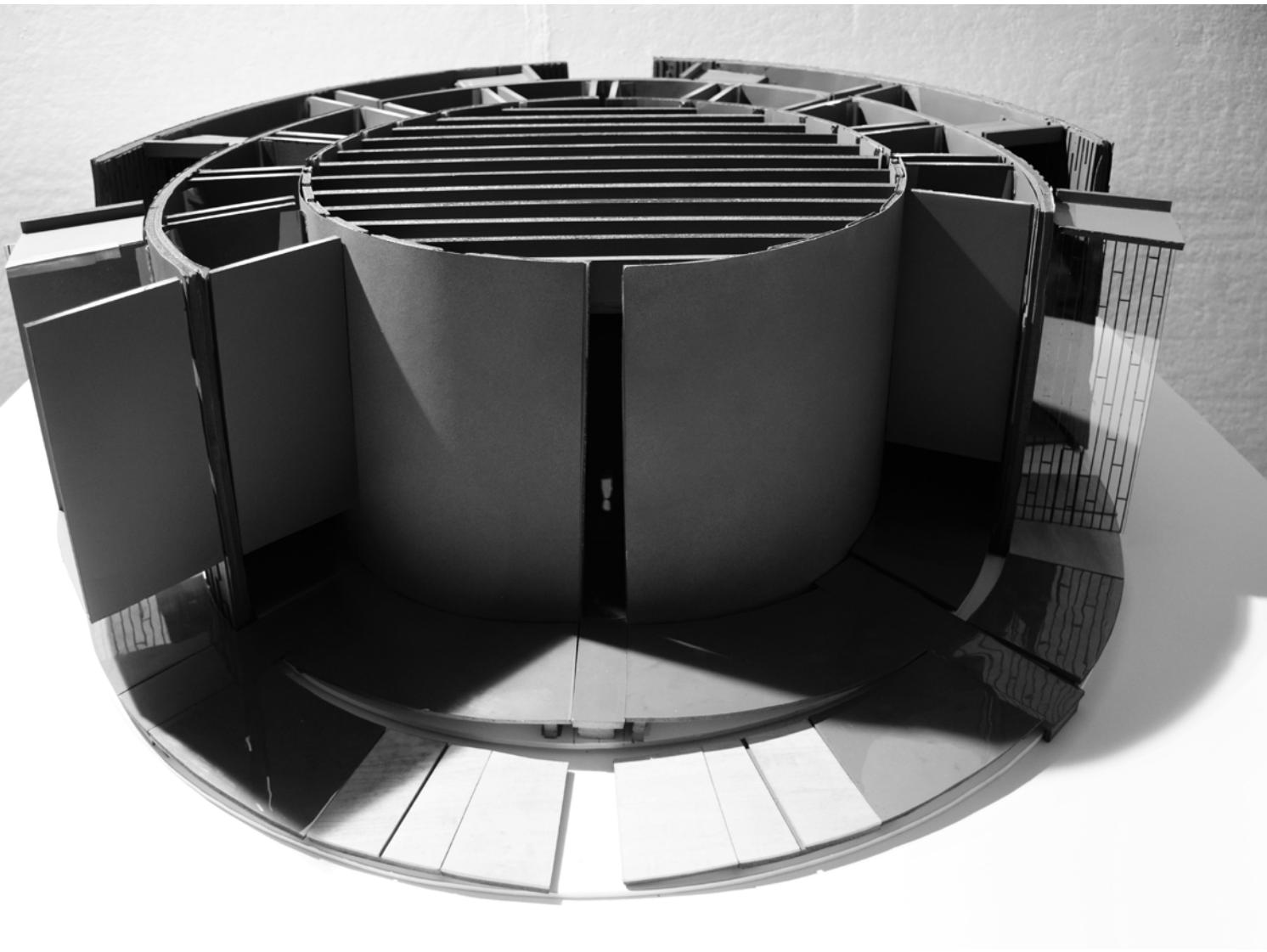


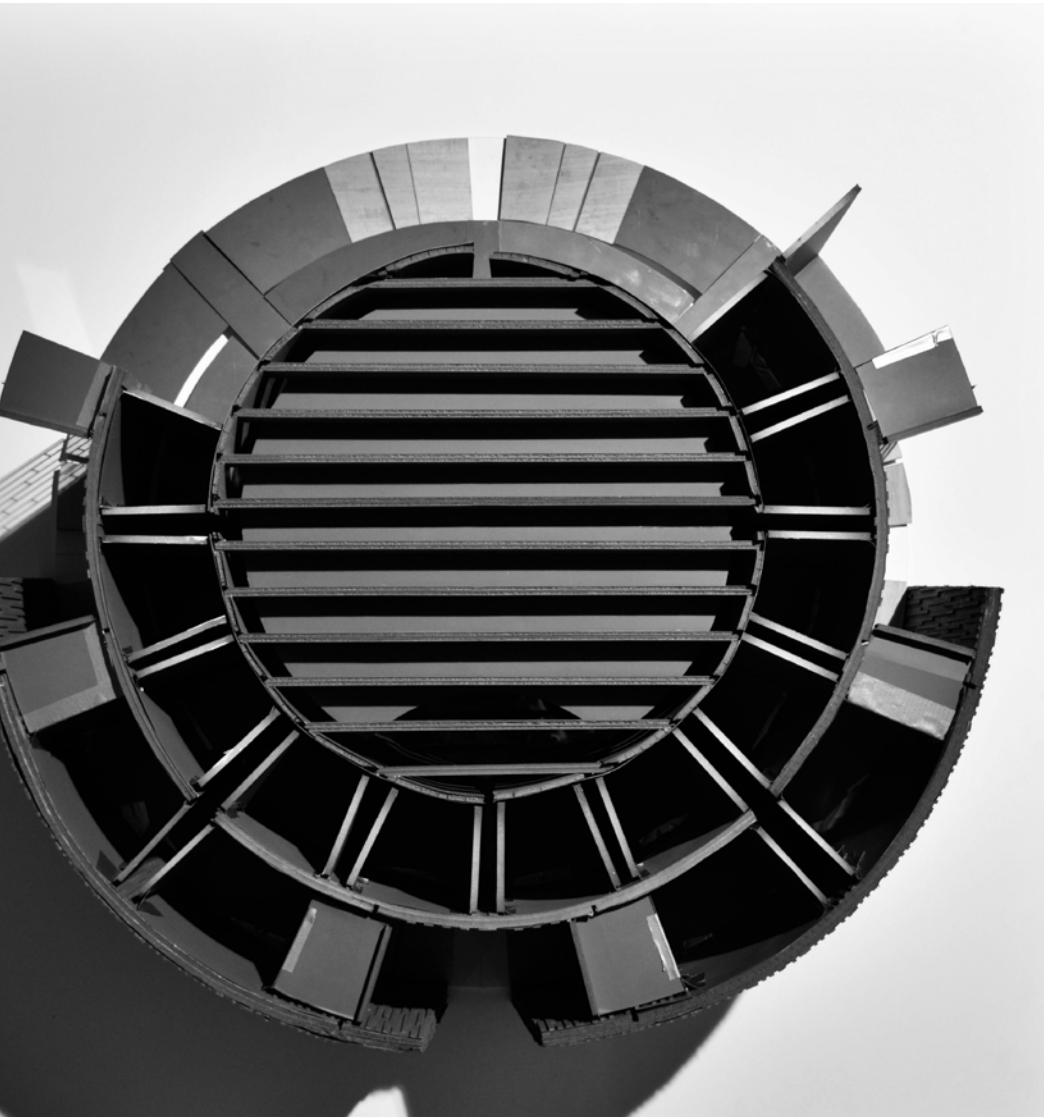


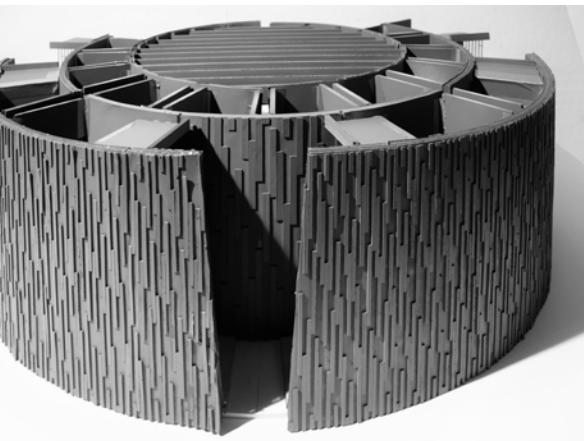
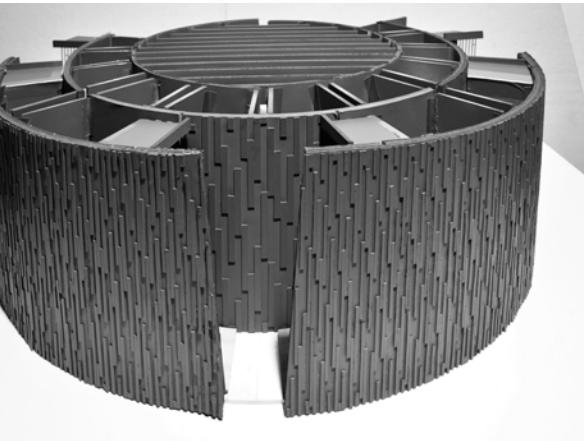
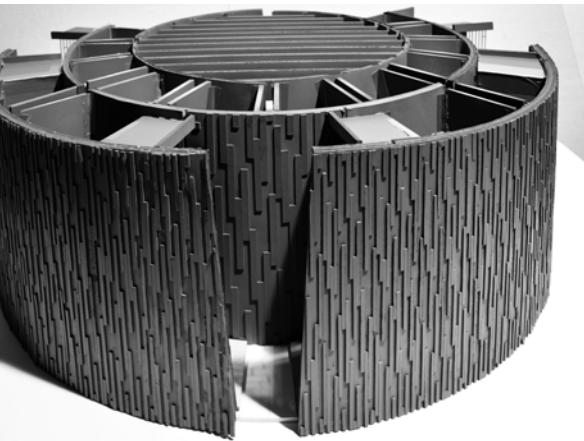










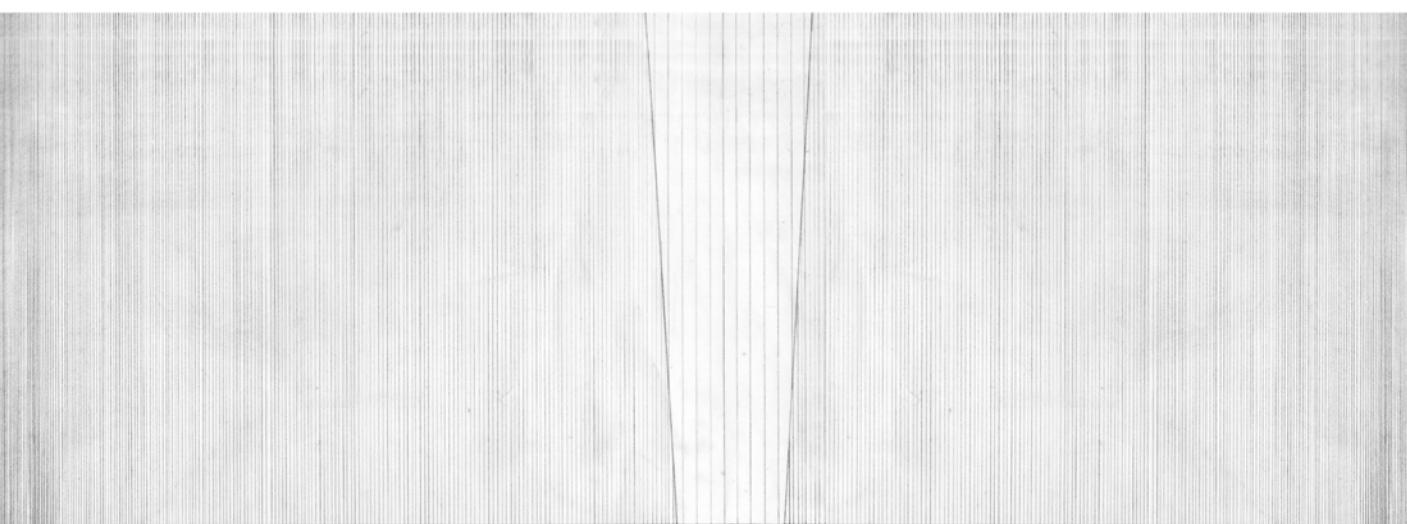


These three photographs show how the light throughout the day changes the conditions of the building and interacts with the surfaces of the walls.

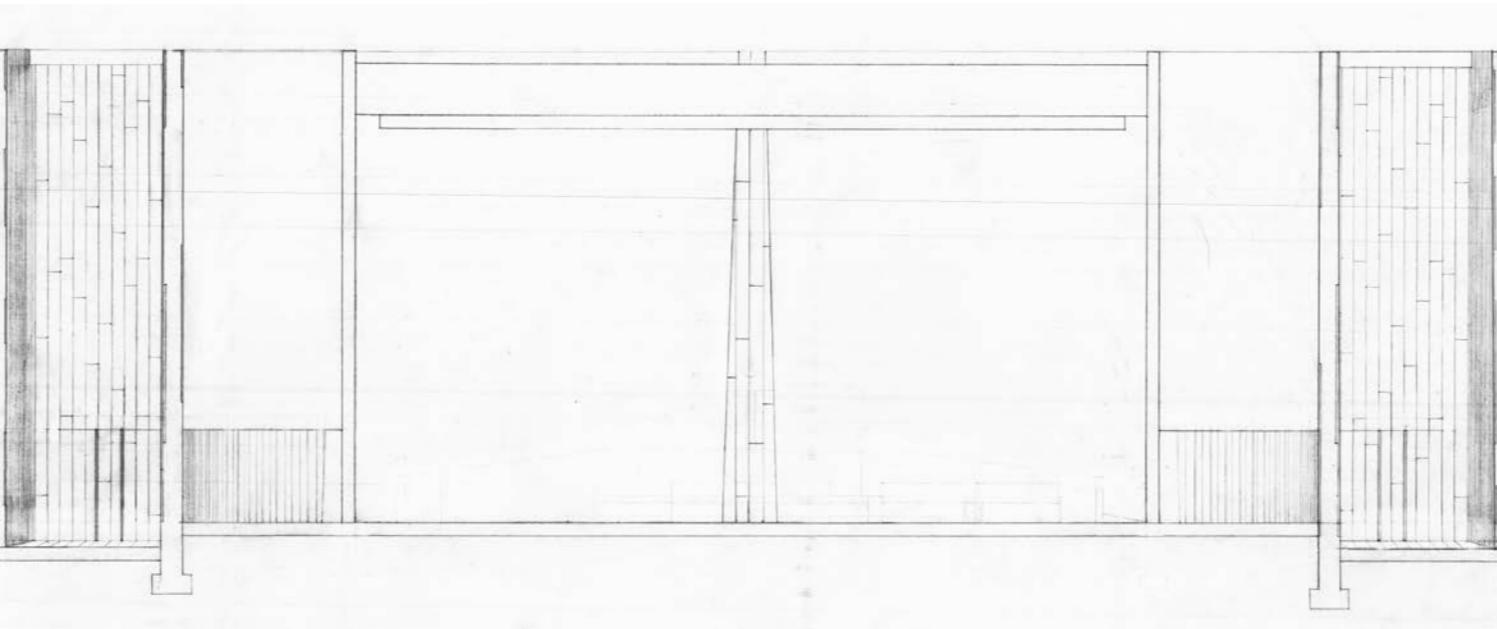


Final drawings

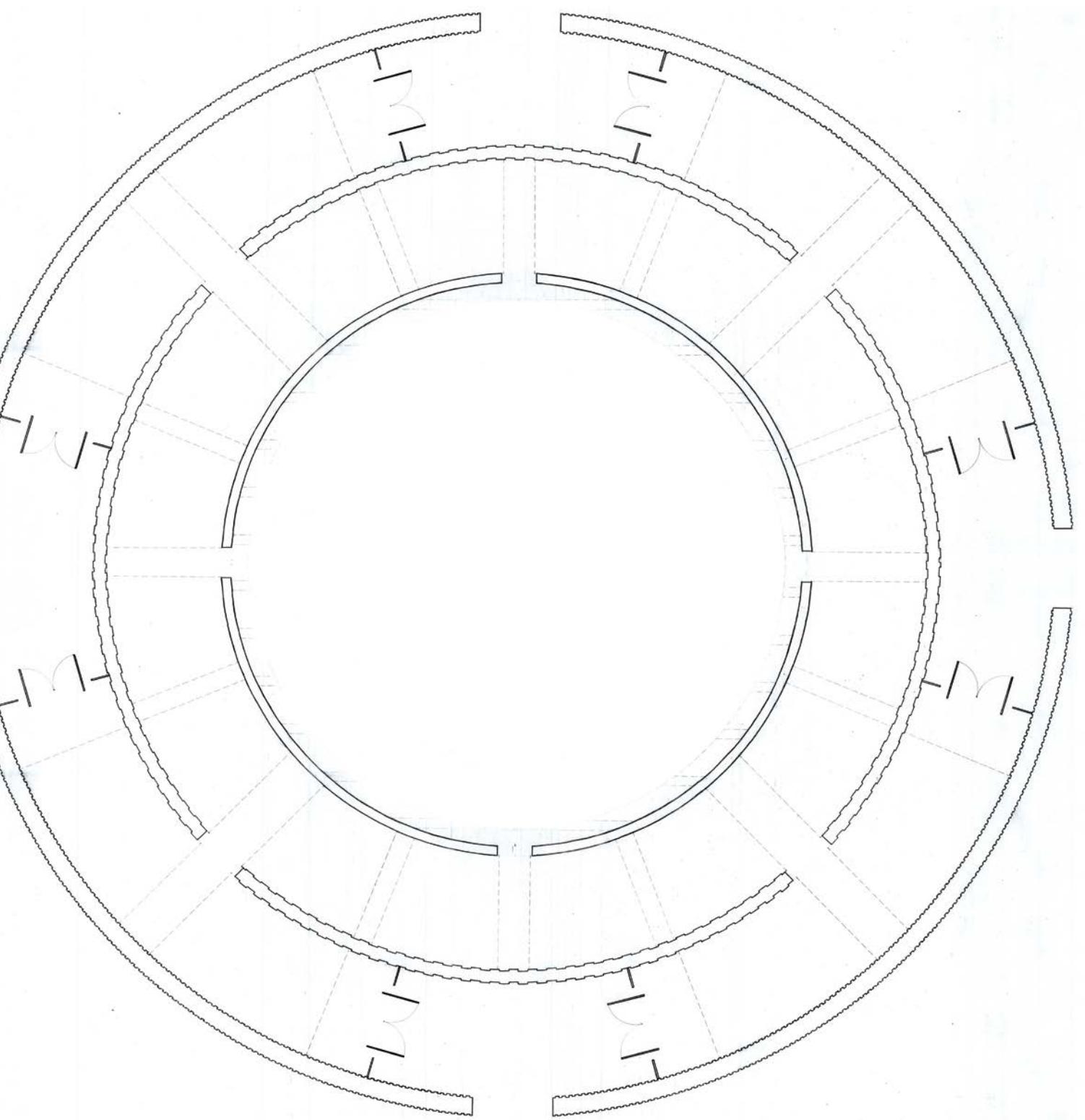
The final drawings consist only of the lines that form the spaces. The drawings are intended to see what remains after the reduction of material and light.



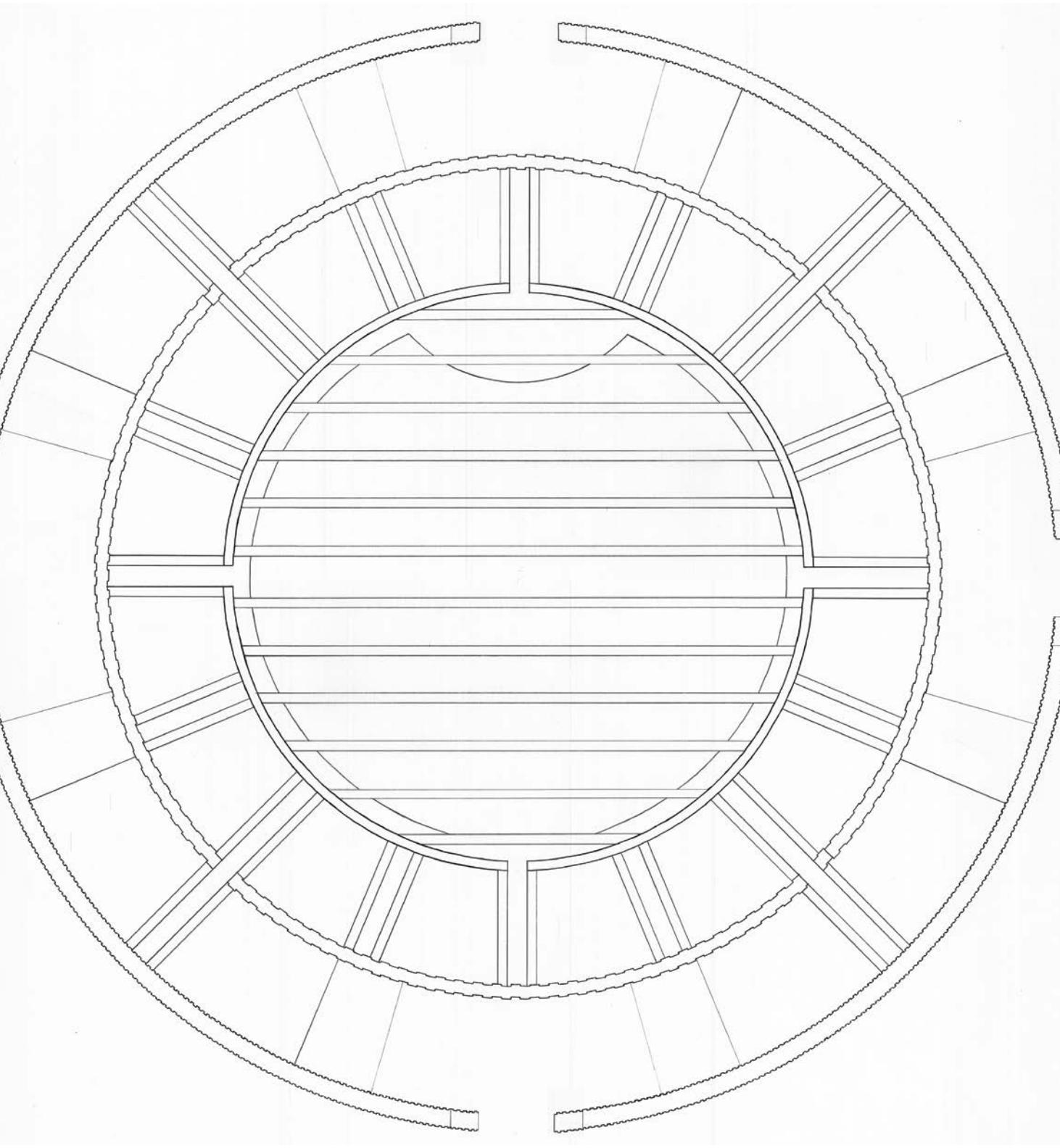
Elevation



Section



Floor plan



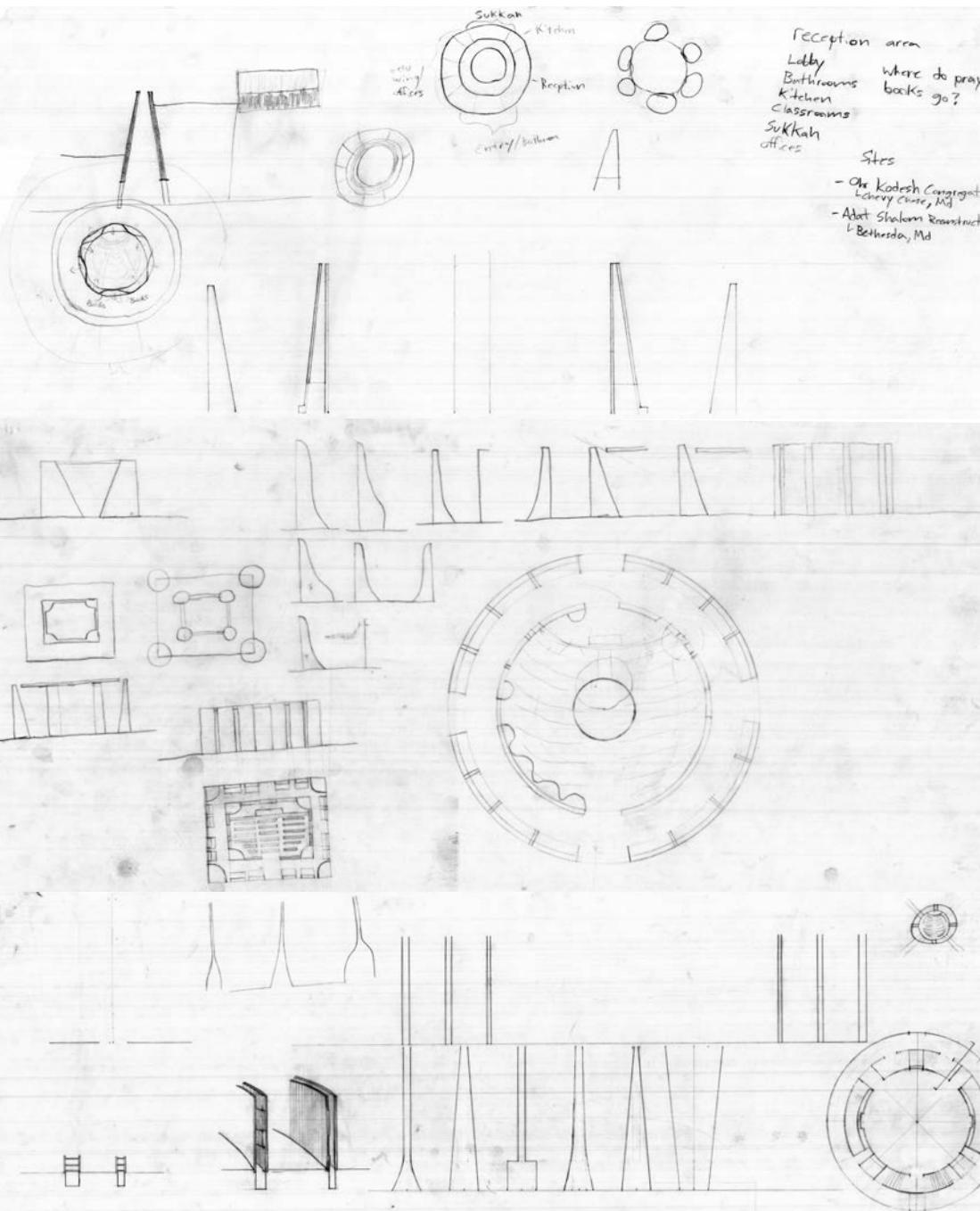
Roof plan

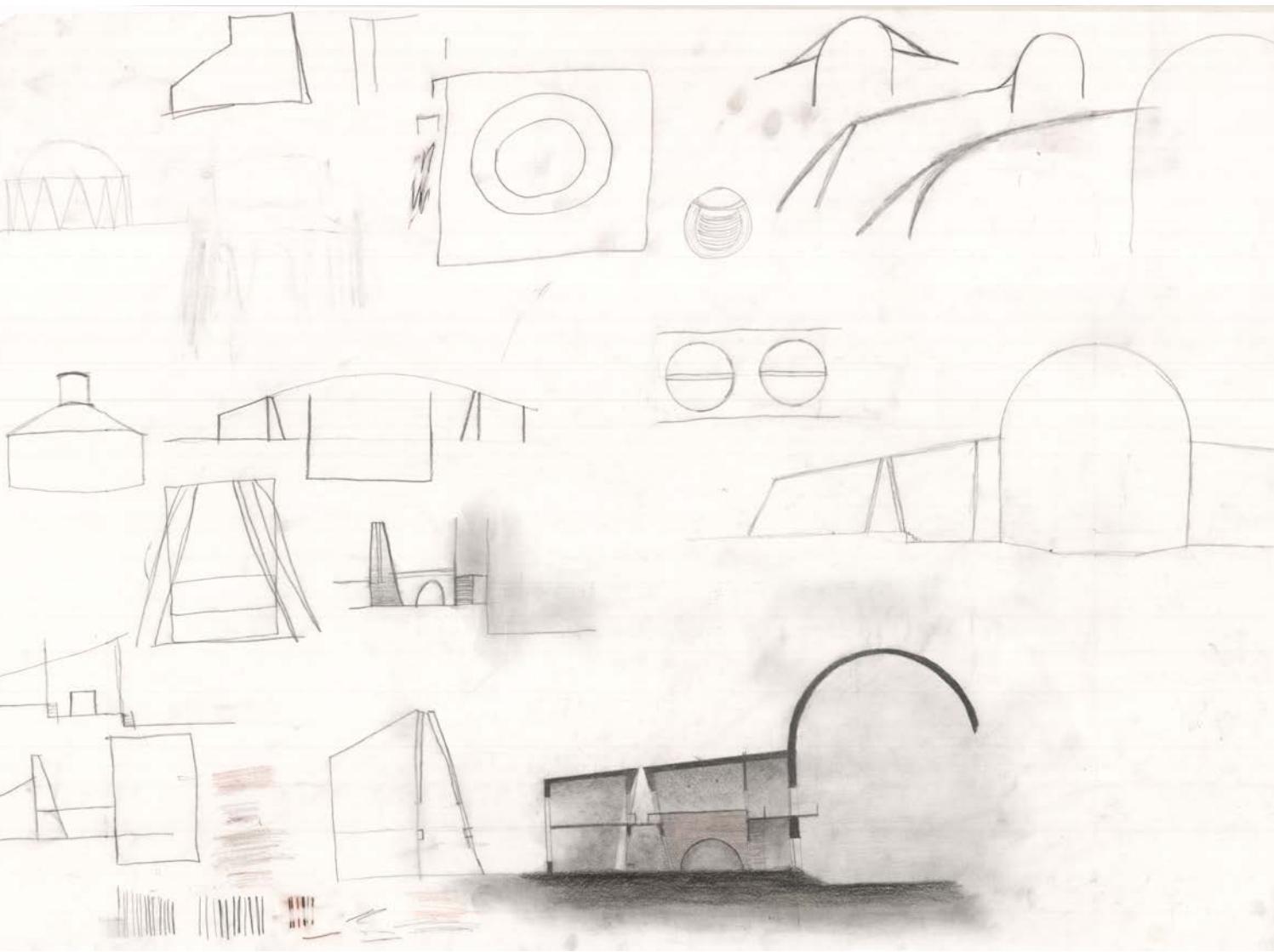
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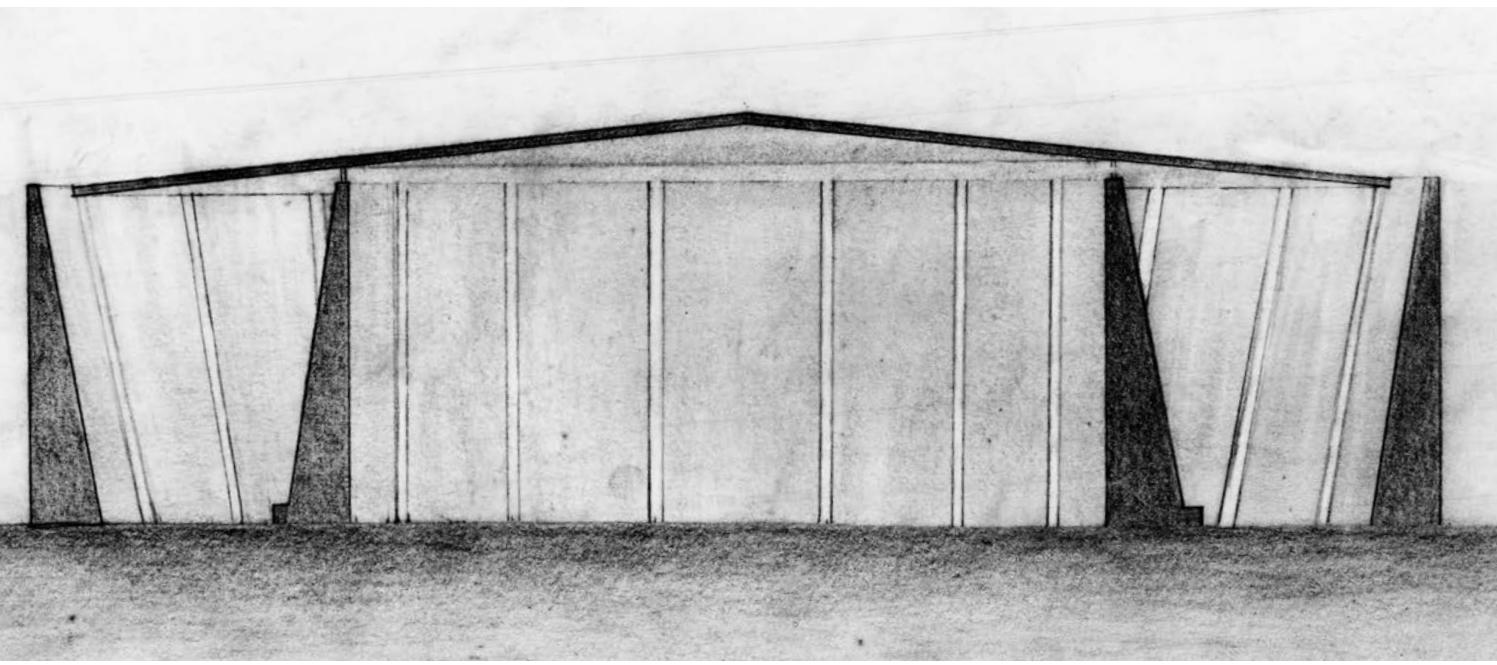
Process drawings

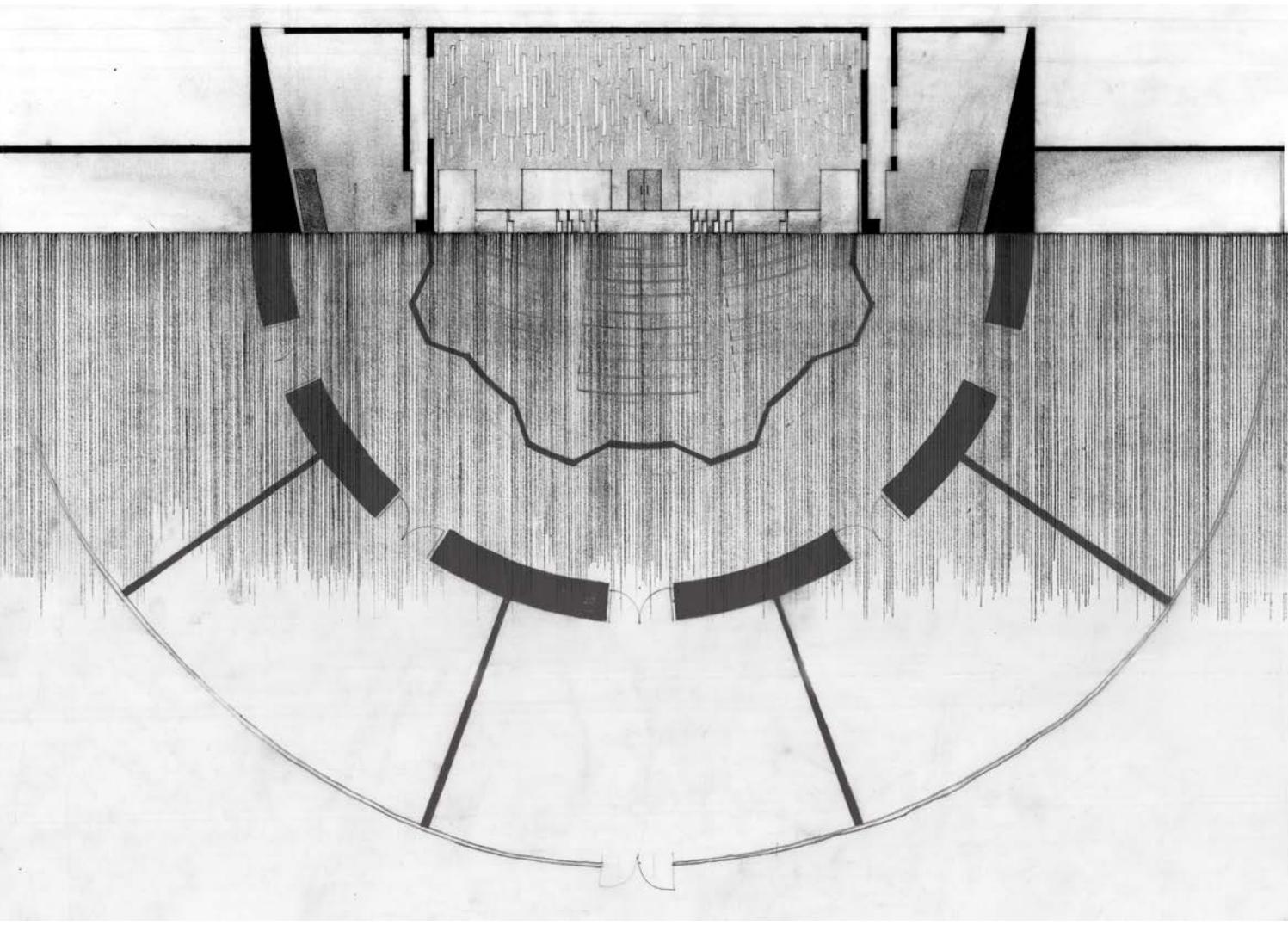
Sukkah  
Kitchen  
Classrooms  
Offices

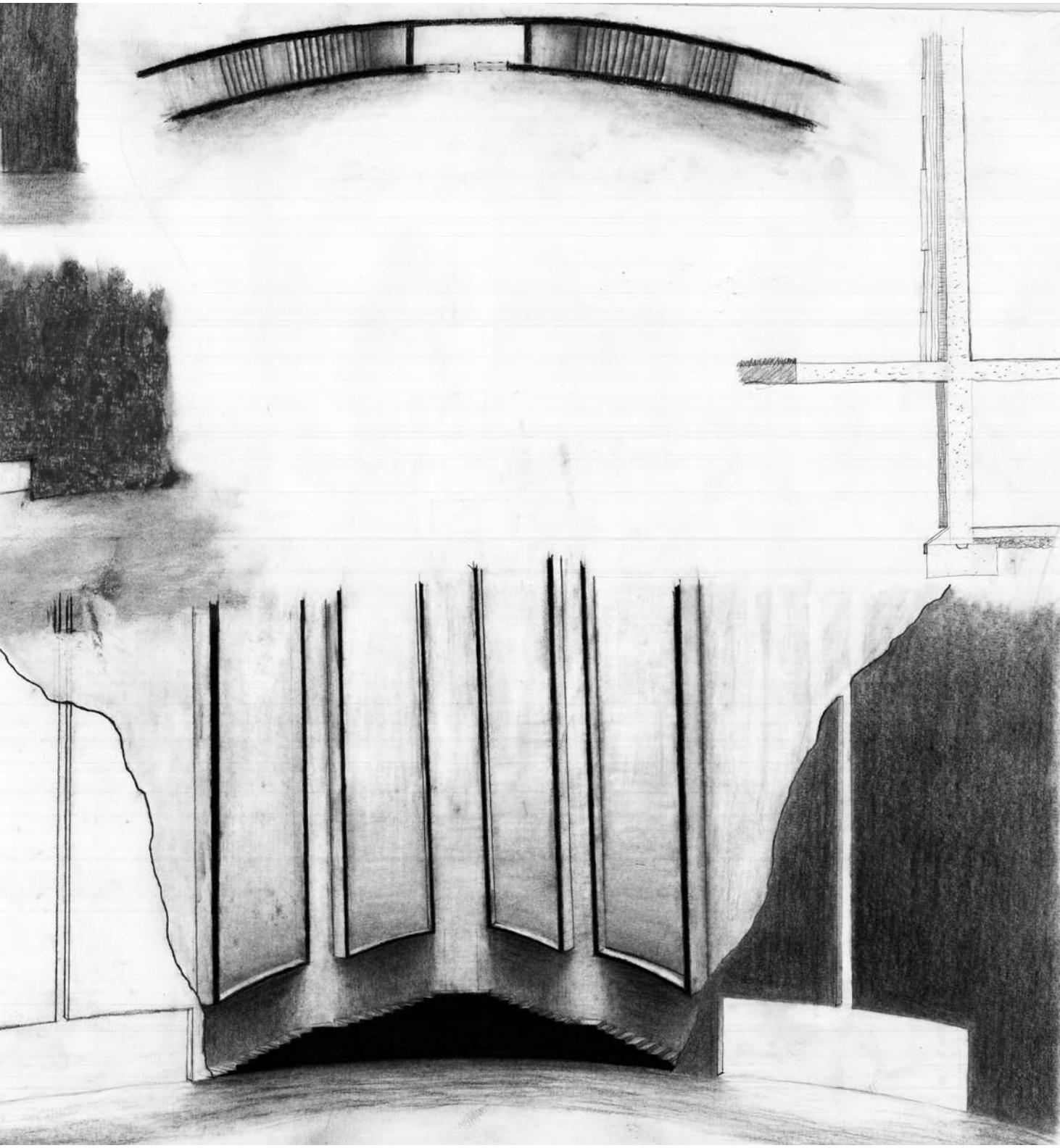
- Chabad Congregation  
- Ahav Shalom Reconstruction  
- Bethesda, Md

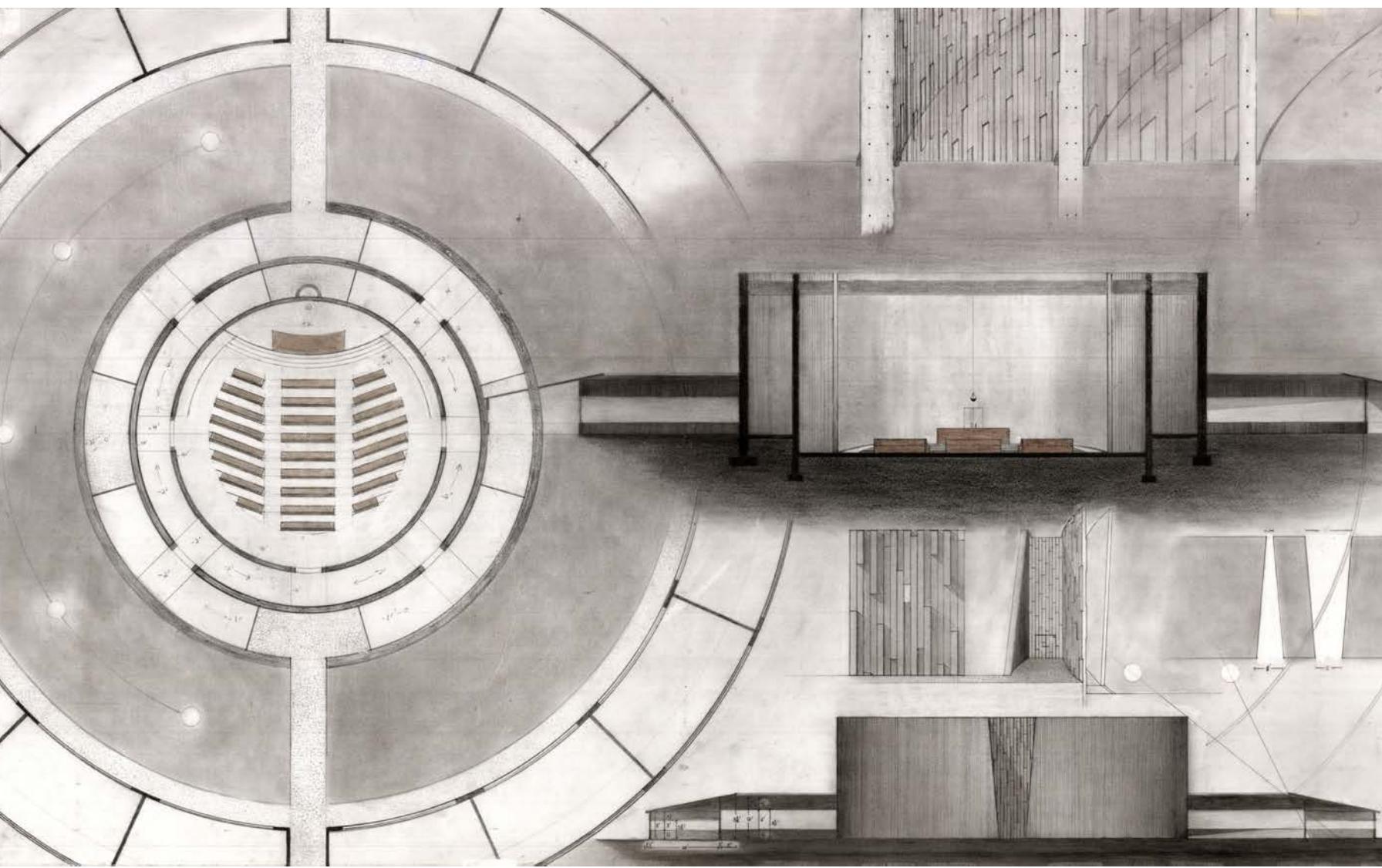


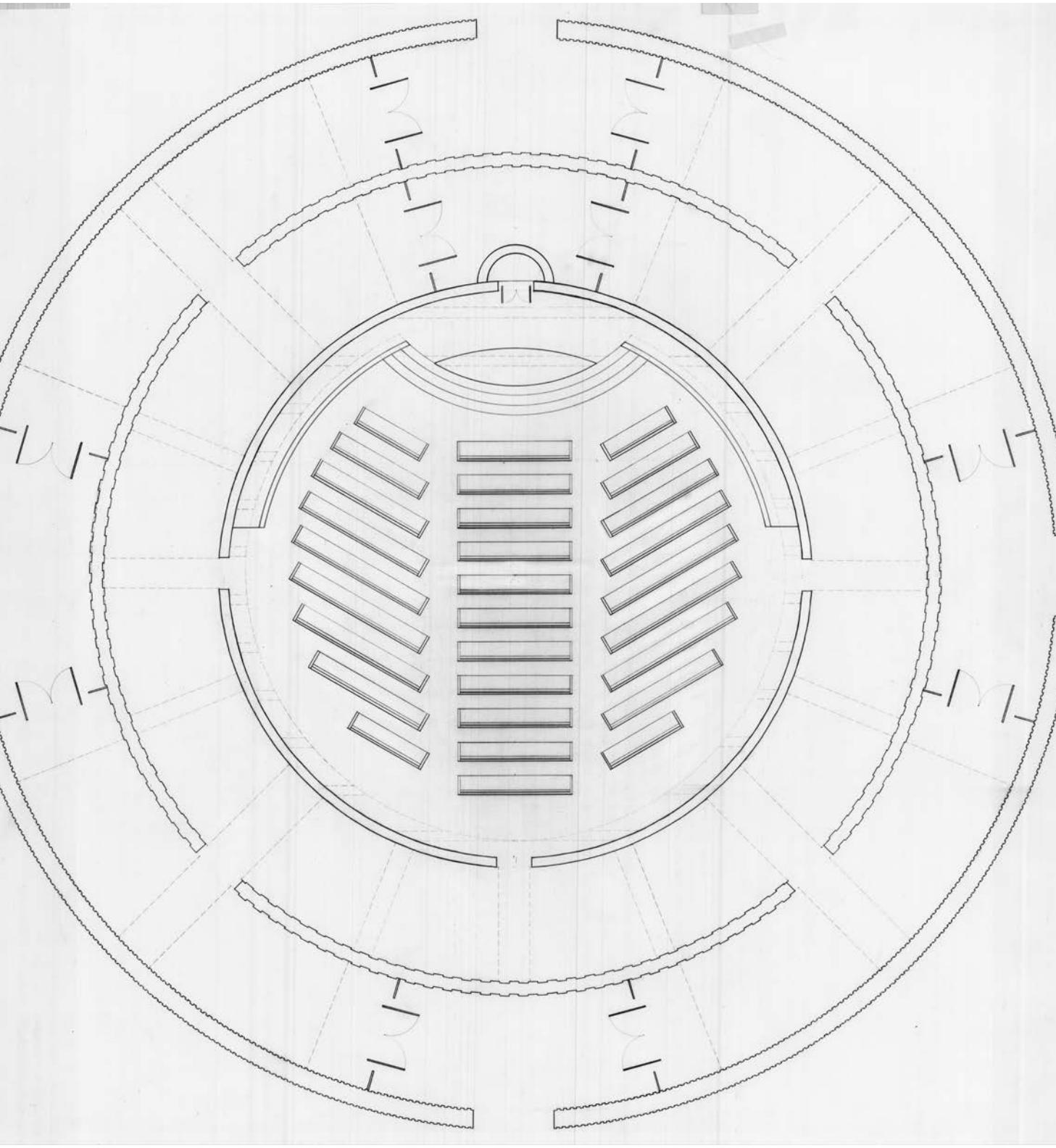


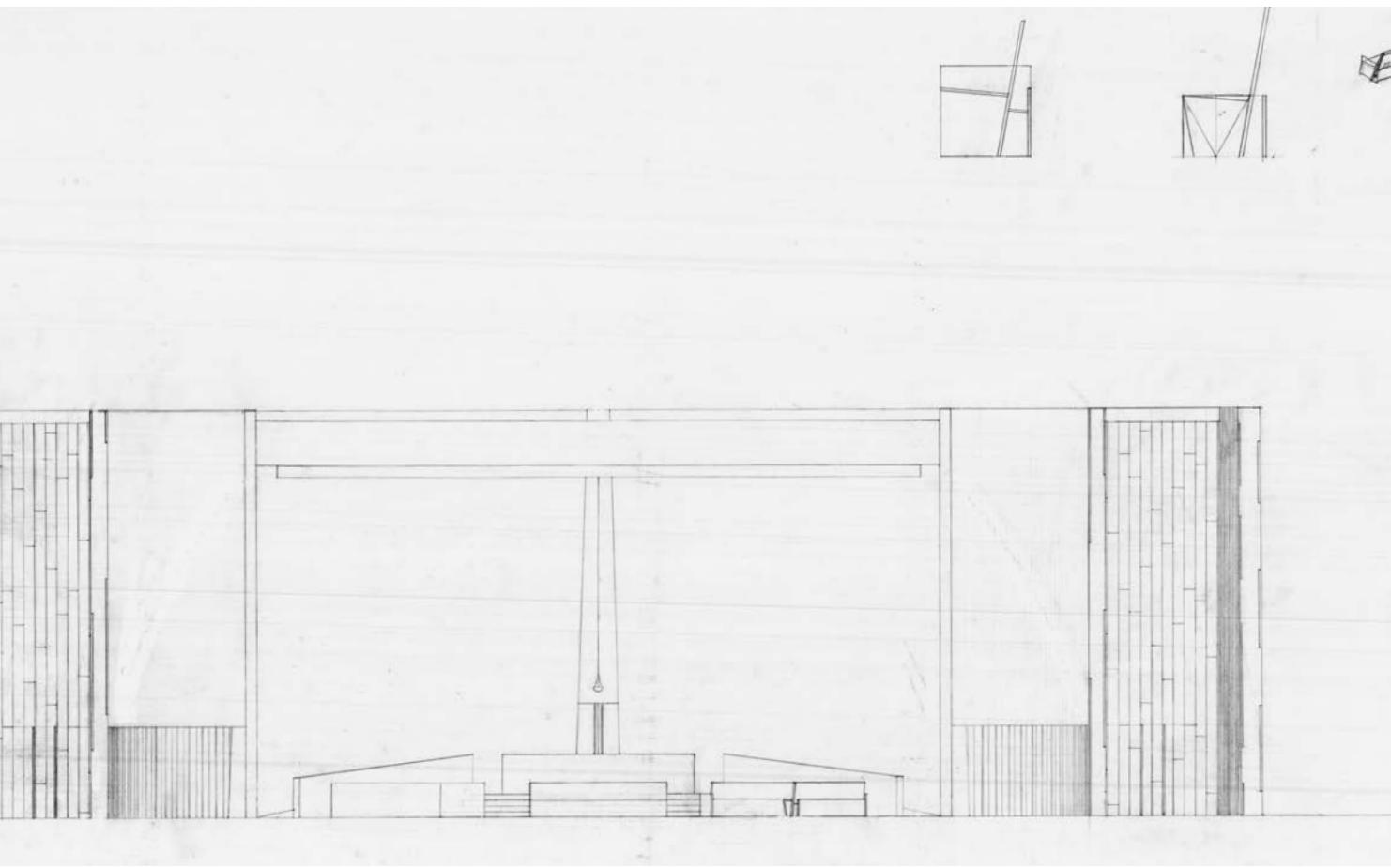


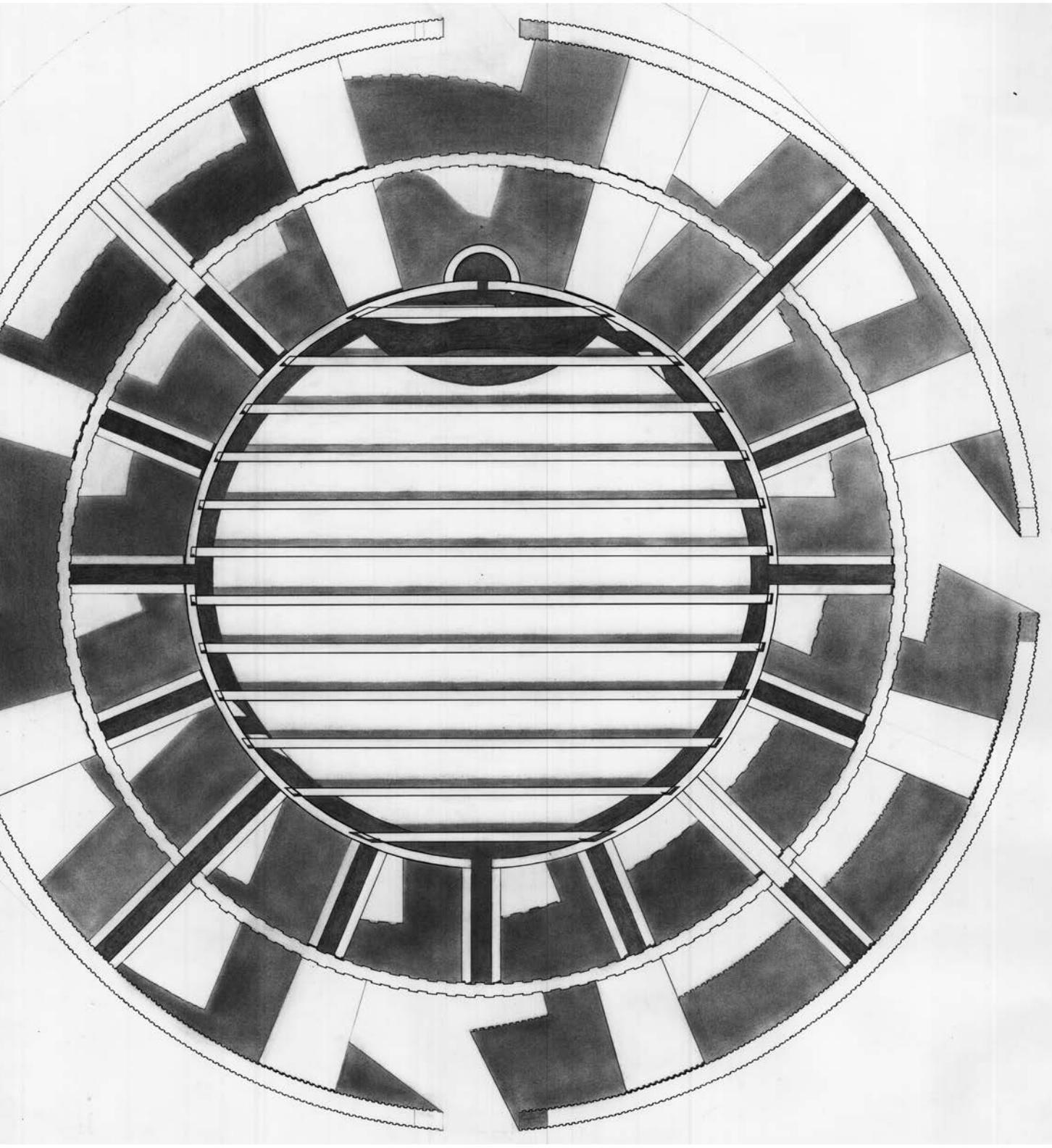


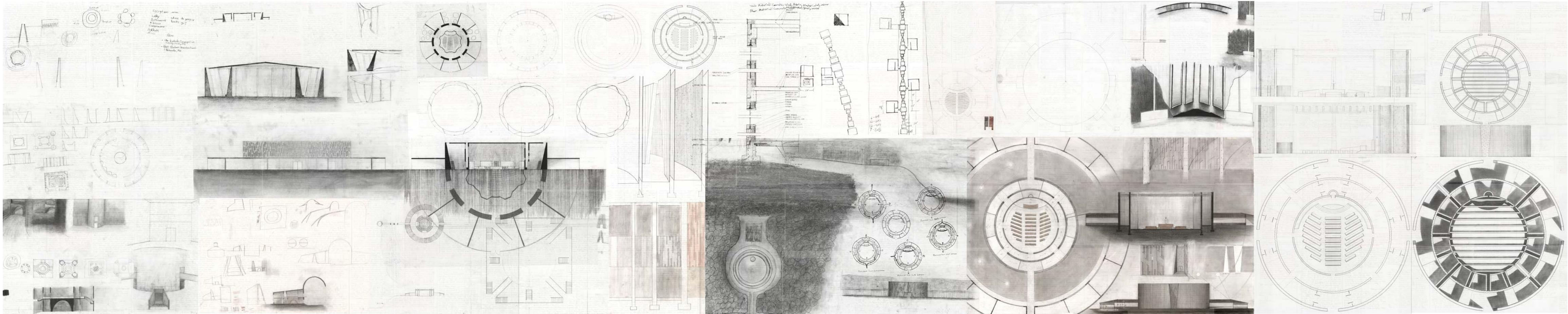












**Chapter II**  
Mexico through my eyes

During the study of my thesis, I participated in a five week study abroad program in Mexico. This trip provided me with much needed perspective and inspiration toward life, architecture, and my curiosity regarding sacred space. Through a series of projects, writings, and photographs I found new understanding in many of the ideas I had been studying in Blacksburg.

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## 95

### Moments of inspiration

In order to develop an understanding of sacred space as a general concept, it was important for me to discover my own sensibility of what constitutes sacred space.

With a notebook always in hand, I experimented by writing whatever first came to mind whenever I felt a sense of sacred space.

Each one of the places I wrote about became apparent as sacred for me for different reasons. The prominent elements and emotions present themselves through the pen. I was particularly interested in the locations in which the inspiration to write would appear. To my surprise, many of them were in unexpected or unassuming places.

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As I pass through the large wooden doors I think to myself  
what makes this place different?

I sit down and begin to hear the sounds of dim whispers blending together  
shoes tapping across an uneven stone floor  
and wooden benches creaking as people adjust

These sounds carry through the cool heavy air in a grand echo  
to be heard by all  
and to be heard by none

I begin to wonder

Is this the quality that makes a space sacred?  
Is this the sound that makes you feel alone, but part of something greater?  
Is this the white noise that brings peace to those in need?  
The quality that puts the human scale into perspective and isolates the outside world?  
That blocks out all existence outside that moment and creates a moment  
in time, and in space?

- Mexico City Metropolitan Cathedral, Mexico City



*Red, grey, white, light, dark, transparent, translucent,  
opaque, formal, informal, ceremony, tradition, respect,  
memory, reflective, representative, communal*

It is a space that keeps growing  
a place to remember, to be, to exist  
timelessly in time

*- Ave Fenix fire station, Mexico City*



WHITE, GREY, ORANGE

anything outside of this color palette becomes an

*ACCENT*

breaking the repetition and rhythm of the space

*- Centro Nacional de las Artes, Mexico City*



The power to make you look up  
The power to silence your voice  
The power to make your eyes grow wide  
The power to make those without spirit feel  
Spiritual

Thresholds created by the architecture  
by the material  
by the people

Stone and wood  
worn away by hundreds of years of  
*Hope*  
*Dreams*  
*Prayers*

- Santuario De Jesús Nazareno de Atotonilco, San Miguel de Allende



As I sit in the Parroquia  
observing a woman mopping the altar  
I am overcome with a sense of  
    peace  
    meditation  
    clarity

It is early morning, midway between 8 and 9  
The city is quiet, with just the faint sound of birds breaking the silence  
There are a few others here praying. They are quiet and mostly out of sight  
It's just me, in this space, and the woman mopping

I feel comfortable  
    safe  
    alone  
    disconnected

The only thing that reminds me of time and the outside world is ironically the church bells  
I enjoy their chime when I am outside of the church  
    but not while I am inside

- Parroquia, San Miguel De Allende



To incite goosebumps on the skin  
a flutter in the heart  
and peace through the soul

A quality matching world class symphonies  
playing perfectly in sync

As the door opens  
time stops  
life halts

The space cleanses the soul  
celebrates life  
and motivates those to live it to the fullest

- Capilla de las Capuchinas, Mexico City



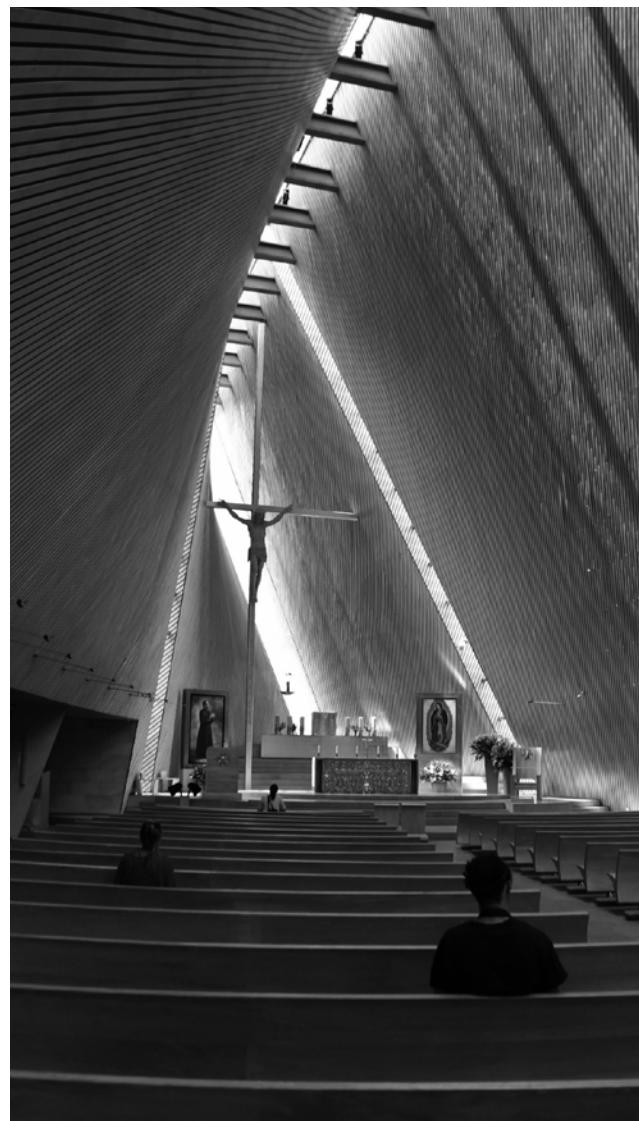
There is light  
a soft light  
a happy light  
a light that shifts  
and lifts the spirits

Shadows cast dramatically  
in perfect contrast to the light  
It is this synthesis of light and shadow  
that provides peace in this place

it is quiet  
it is calm  
it is home

Home to all in need  
of a place like this

- *San Josemaría Escrivá Church, Mexico City*



Journey through a hot spring

All of these moments that I experienced could have easily been passed by or overlooked with a different approach to the space. It is important for the individual to take notice of the things around them, to appreciate, understand, and contemplate. For some, it just takes the right place or situation. For others, more guidance is necessary.

While reflecting on my own interactions with these places, I found my journey through a hot spring to be perhaps the most influential.

The following is my experience.

The warm Mexican sun shines down, heating up the already warm natural water from the springs. The setting is casual, with people lounging around, sipping on their sangria or pina colada. There are several pools on the grounds, but one of them is different.

This water is mysterious, with a character the other pools don't share. Stones stacked upon one another surround the pool, confining those who enjoy it to the water's boundary and the sky above.

In the corner, the stacked stones give way. As I pass through the threshold of the stone arch, the water warms instantly. It takes on a different life, as does the place.



As I move deeper into the portal, thoughts of the outside world begin to escape me. My mind, my thoughts, my feelings become more responsive to the immediate. I am fully consumed by the space.

The portal is long, dark and deep. A light guides me as I move slowly through the water. My body becomes more aware of the space and more cognizant of itself. My senses are heightened. I am confronted with my own scale, feeling the width of my body anytime someone passes by. The flow of the water responds to my movements and the movements of others, allowing me to feel their presence without touching them.

A gradient of light emanates from a single source, casting from what seems to be the middle of the portal. I am drawn to it until I am under it. The light is the sun, shining through a hole in the stones. I am connected to the outside world again, but only for a moment. The light creates a pause in my progression. I soak up the warm rays of the sun for a second longer, then continue on.

The light at the end of the tunnel comes into focus. I begin to hear the sound of falling water. Not much is in sight except for one stone column in the center of my view.

I reach the end of the portal and am met with steps leading above the waterline. As I begin to ascend from the water, I become conscious of my body's weight. The air thickens with moisture. I am finally confronted with the entirety of them space.

There are many people, more than I had expected, but the peaceful atmosphere remains. I dip my foot into the water again, noting immediately that it is much warmer. A sense of relief comes over me as I submerge my body into the water once again, relinquishing it from the forces of gravity.



The light is tangible, it is an object, focused and accessible to touch. It drifts around the space as the day continues on, recording the change of time like the hands on a clock. The idea of time and its passing becomes a physical element of the space.

I feel connected to these things unlike ever before. I sense the changes of minutes, hours, days, seasons, years. I feel the sun, the source of all light in the space. I sense the clouds, as they occasionally shade the sun. I feel the earth beneath, the stones stacked up around me, and the water that stabilizes my body.

The space is round and symmetrical, with just a single column in the center. The casting light creates dynamic spaces, solid and void, depending on how you interact with it. It creates a temporary order, unique to each moment of the day.



These silent sensations of light are contrasted with the roar of the natural spring water pouring into the pool. People gather around the perimeter waiting for their chance under the small falls. The serene state of the space eases the anticipation of those in line. The wait allows for the moment of pause that is necessary to absorb everything around you.

Once my turn under the spring arrives, a moment of excitement flows through my body in anticipation. I begin to ease into the falling water. Its weight and force becomes immediately apparent. As I move further into the cascading water, the roar becomes louder and louder.

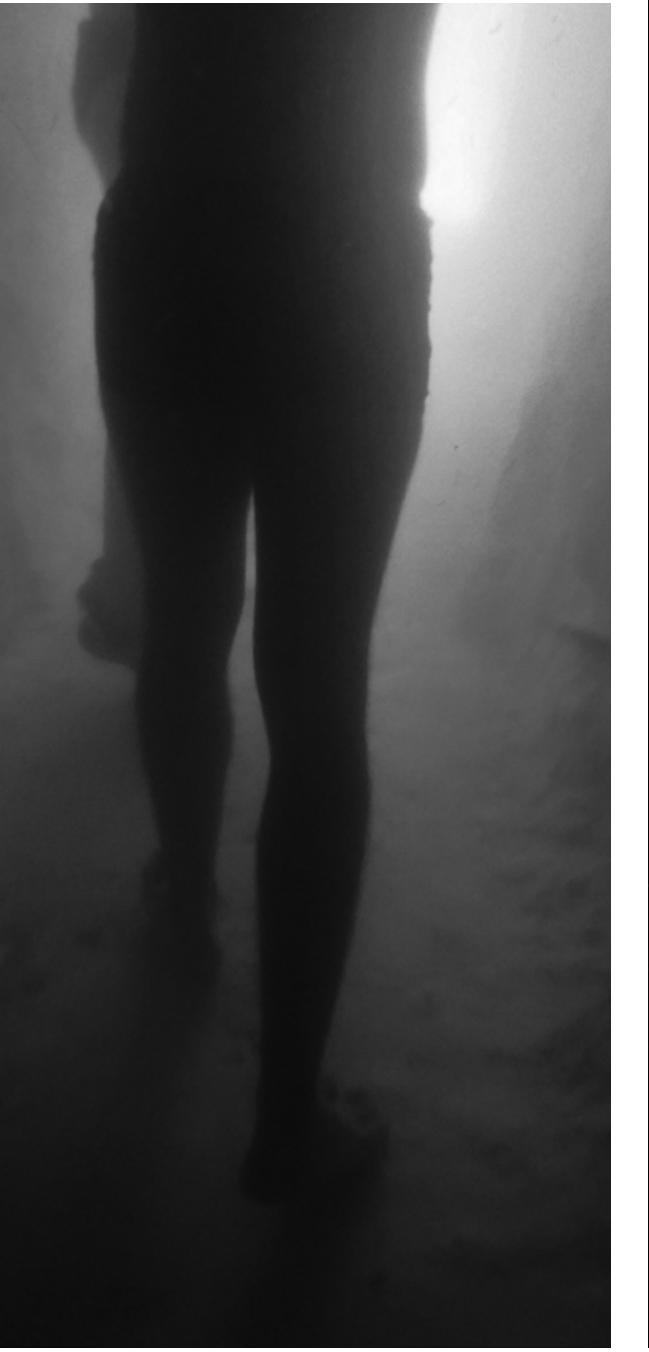
My legs begin to tense, stabilizing my body. The eyes of the other people waiting in line disappear. My thoughts and feelings become aware only of the space that I now occupy.



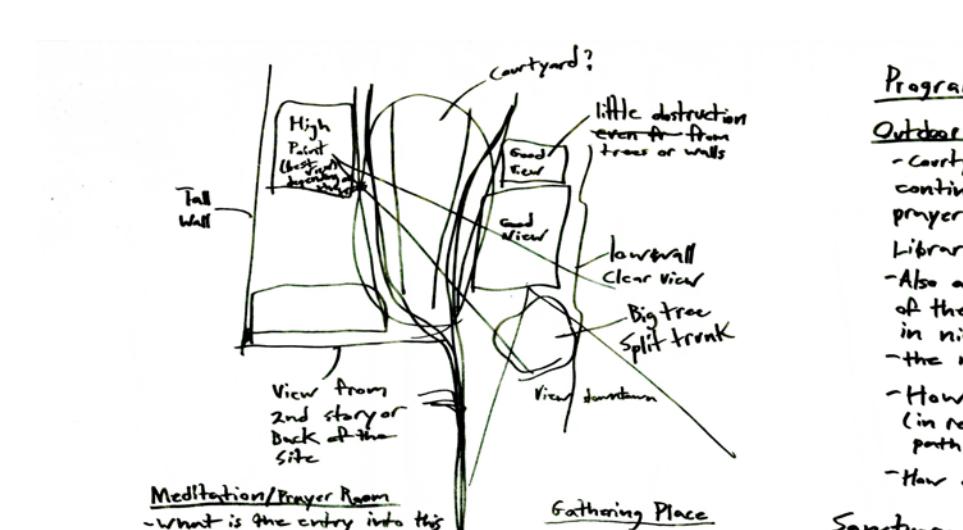
As I part from the falling water, everything rushes back. My body feels weightless. It takes a moment for me to regain my bearings. Slightly dazed, I begin to question how long I was under the water.

Feeling refreshed, I begin the journey back to the outside world, heading back through the same portal that brought me here. My senses are now fully engaged, sensitive and receptive to everything that surrounds me.

Wading through the water, my movements become in sync with the movements of the water. My feet sense the uneven and mysterious ground beneath them as I walk across it blindly. The light becomes brighter, my world becomes bigger. The way I see it, however, is never the same.







#### Meditation/Prayer Room

- what is the entry into this space like?
- Is the lighting dramatic?
- How intimate is the space?
- What's in the space? Is there seating?
- Is this space isolated?
- Views are probably not necessary. Maybe a rooftop with views though

#### Entry passage

- How can the entry be modified to be more suitable for residents and new inhabitants to the Chapel meditation center?
- Can the entry be a source of meditation?
- How does it link to the various paths?

#### Gathering Place

- How does the space inform its intention?
- Should be comfortable
- What type of gatherings will take place and who are the people that will be gathering?
- How should it relate to the other buildings/spaces?
- Should it face into an outdoor gathering space?
- What kind of views and light should the space have? Should it have an accessible roof?

#### Sanctuary

- Biggest space/building
- How big should the library be?
- How does the light come in?
- What's the quality of the light?
- How does the space feel?
- Doesn't necessarily need gardens
- How is it oriented?
- Its orientation to the light (direct/indirect) may be most important
- Does it stand out from the rest of the buildings?
- Spaces or does it blend in?
- How big does it have to be to fit 50 people?

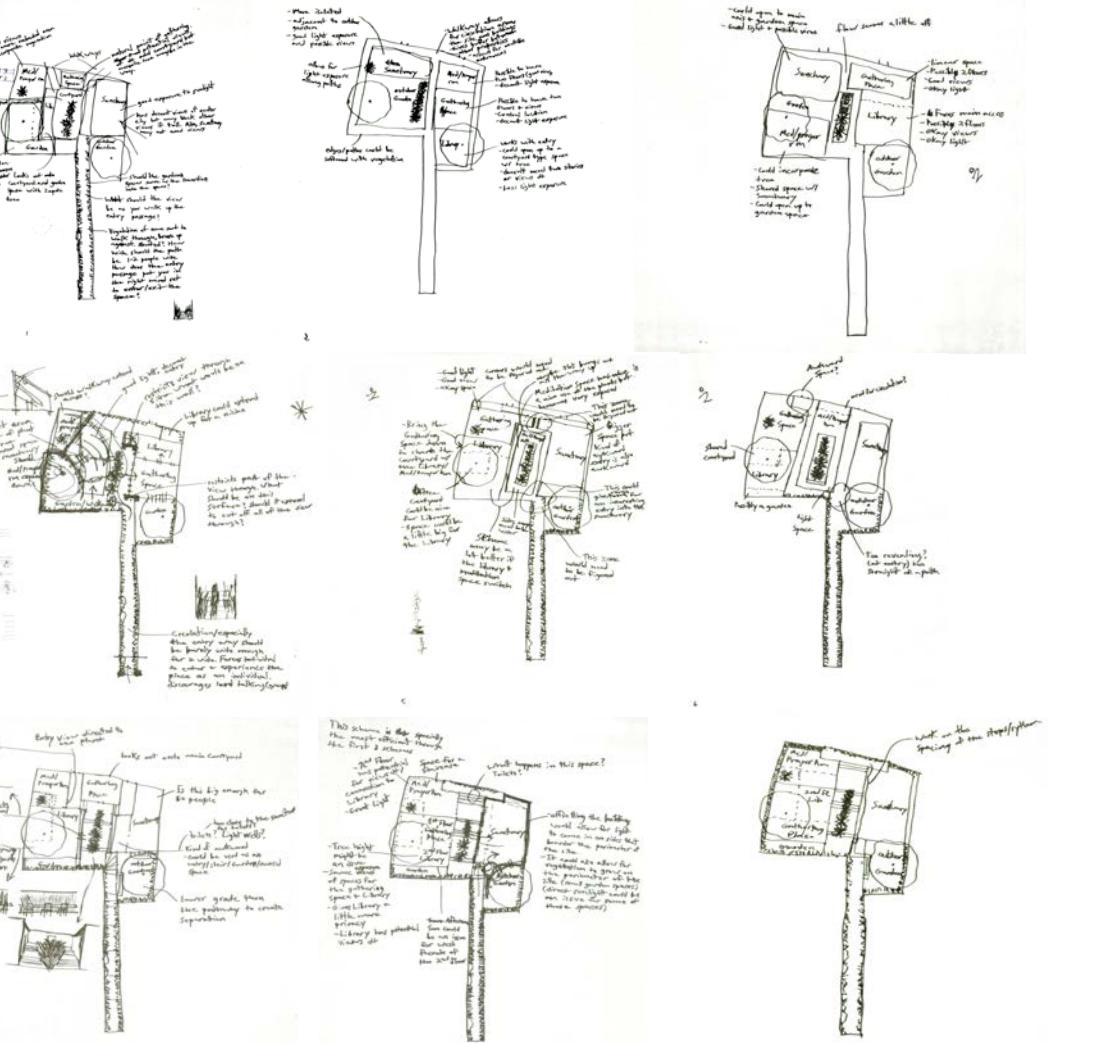
#### Library

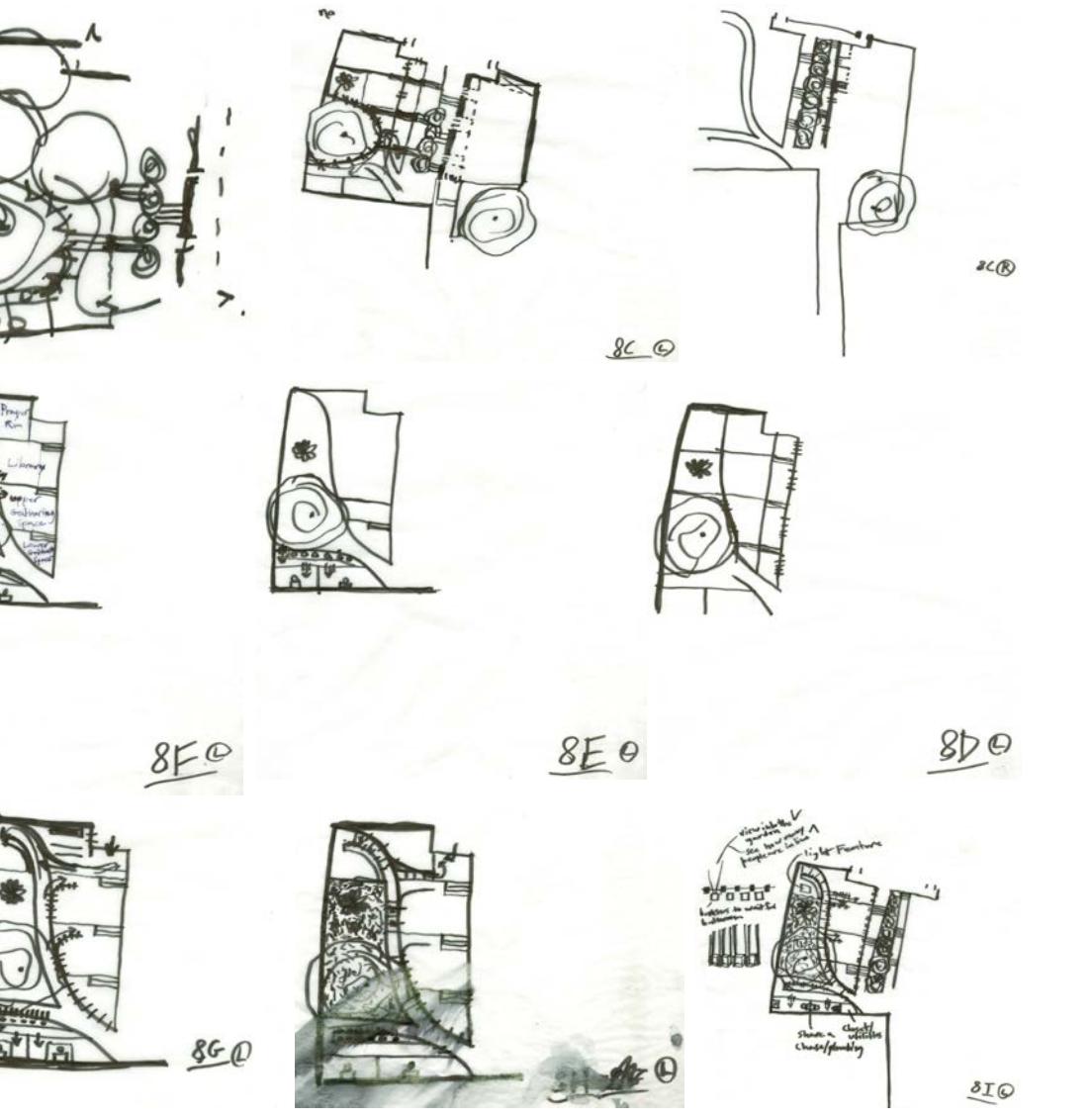
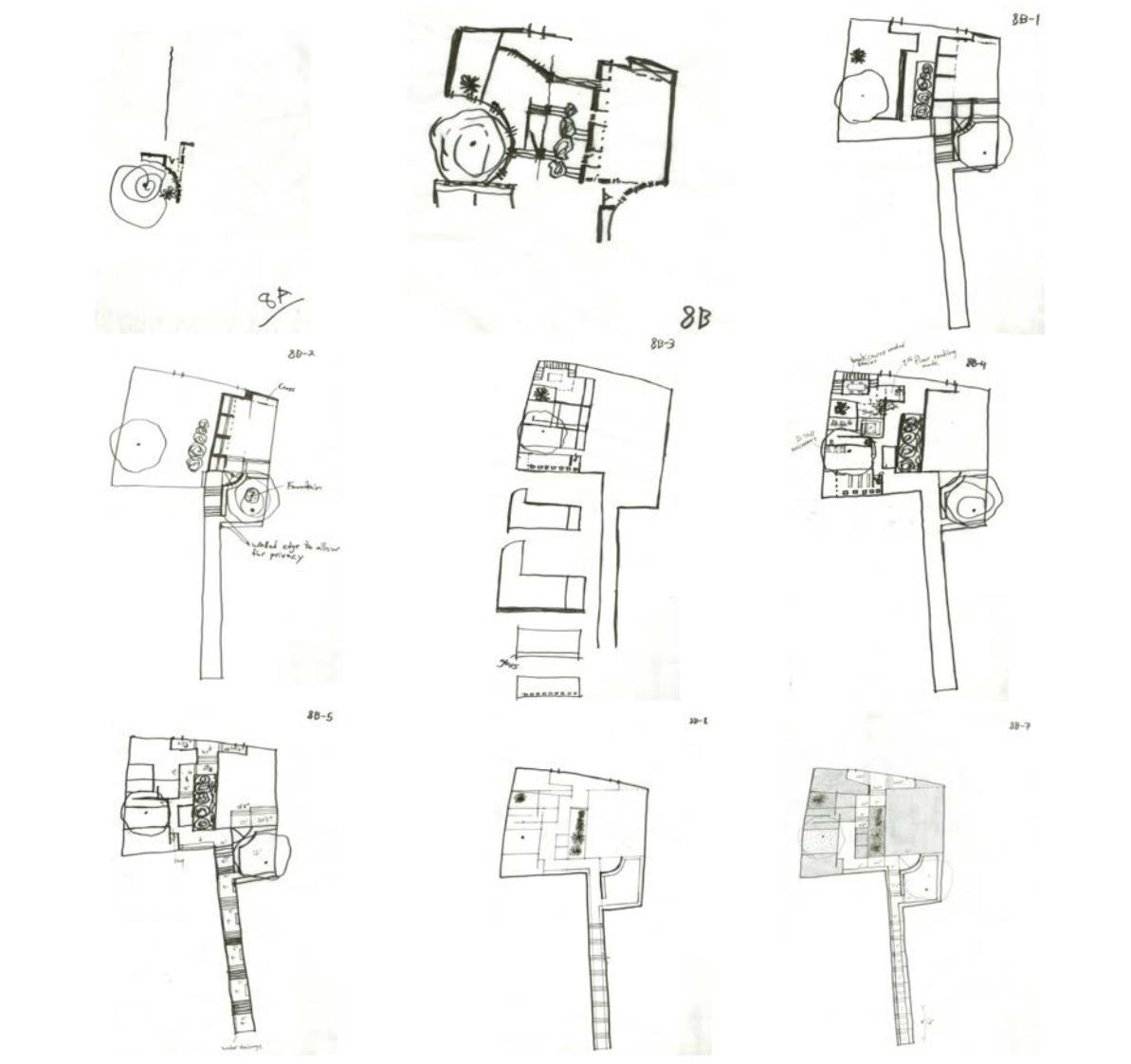
- Could be a very interesting space for lighting (direct/indirect)
- Look out onto the views
- Should it be a public space or a private space?

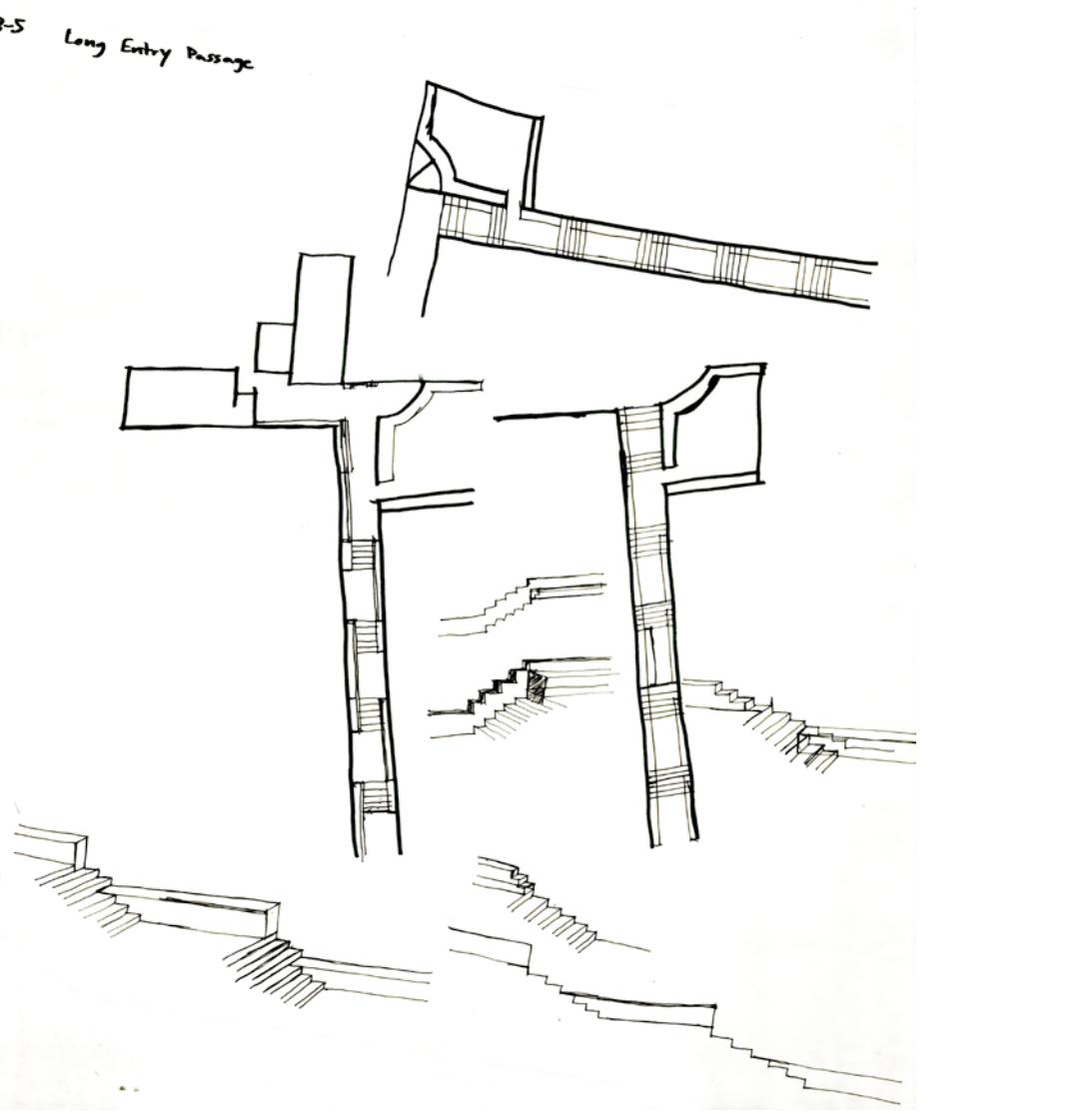
#### Program

##### Outdoor Garden

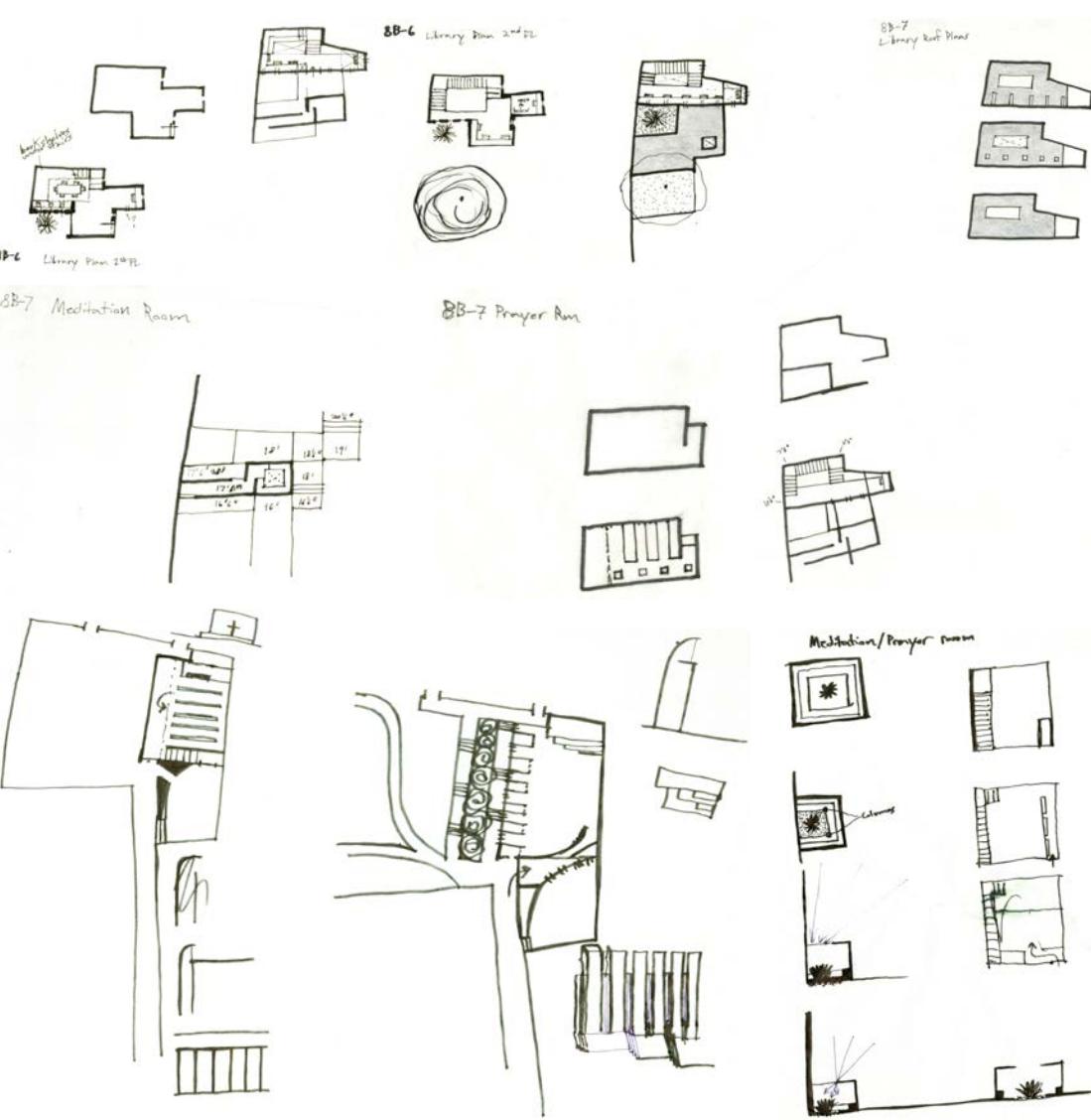
- Courtyard type space, pathway, continuation of the meditation prayer room space and/or the library.
- Also an outdoor continuation of the gathering space, especially in nice weather
- the main connecting space?
- How are benches arranged? (in relation to sun, views, buildings, pathways)
- How do the toilets fit in?

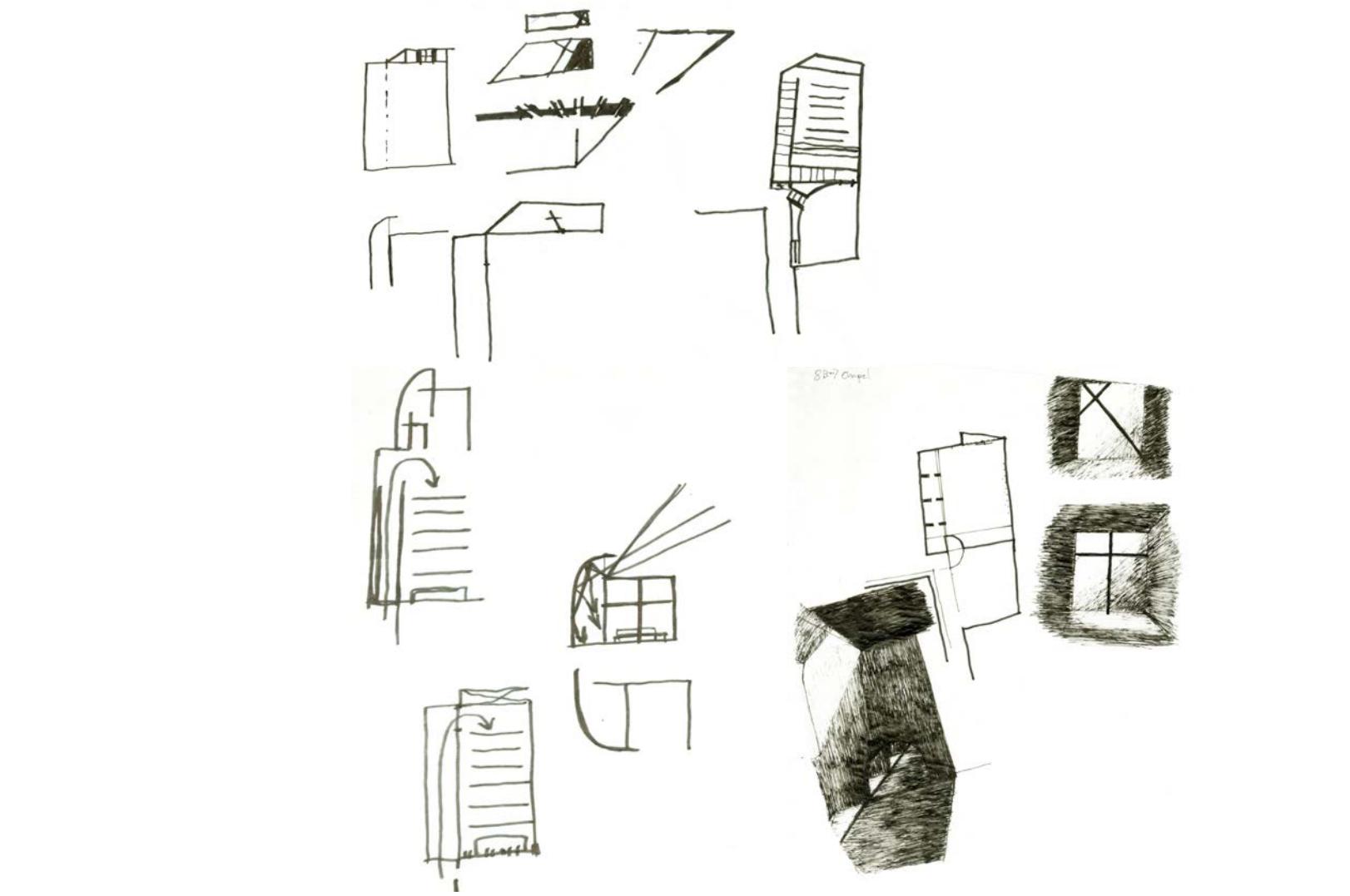




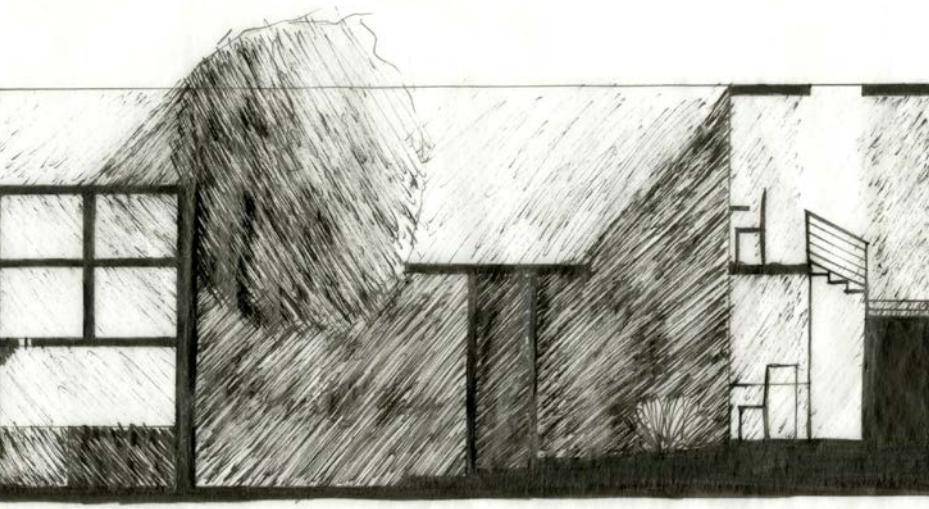


Planning of Entry Passage and Development of Program





## Study of Light



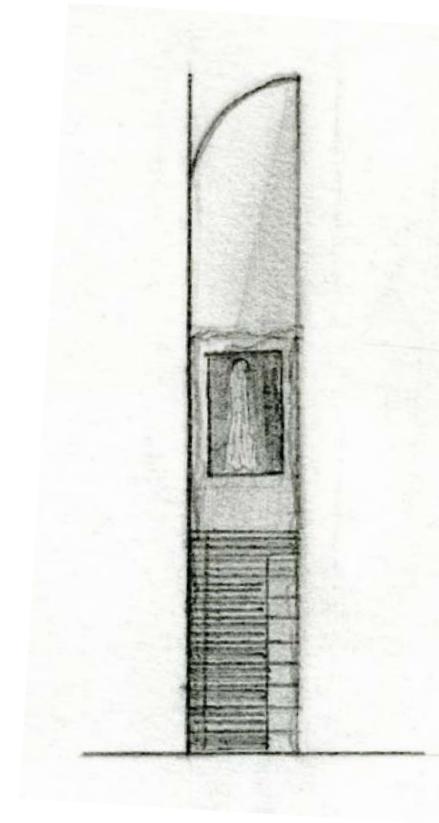
The steep rolling hills have been increasingly difficult for the old woman as she walks back to her home from the city center. Getting closer, she makes her way through the narrow alley. Bright blue banners strung overhead blow gently in the breeze as the neighbor's dog barks, defending its owner's home from intrusion. Stepping around puddles formed by the rain the night before, she turns the corner and gazes up. A smile begins to grow as she looks upon her beloved Guadalupe. Her legs gain new energy as she begins her ascension toward her.

She is nearly home. A trellis with vegetation provides her with some reprieve from the sun. The light squeezes through the gaps, making it to its final resting place on the wall to her left. The light dances throughout the day, making interesting patterns influenced by the porous sticks and leaves above. She takes her first steps. Left, right, left.

She develops a rhythm, three steps at a time. These days it's difficult for her to do much more without rest. Left, right, left.

A channel of water steps down the length of the wall on her left. The sounds of gravity pulling gently on the water that flows by coupled with the sweet melody of the birds above soothes her thoughts. Left, right, left.

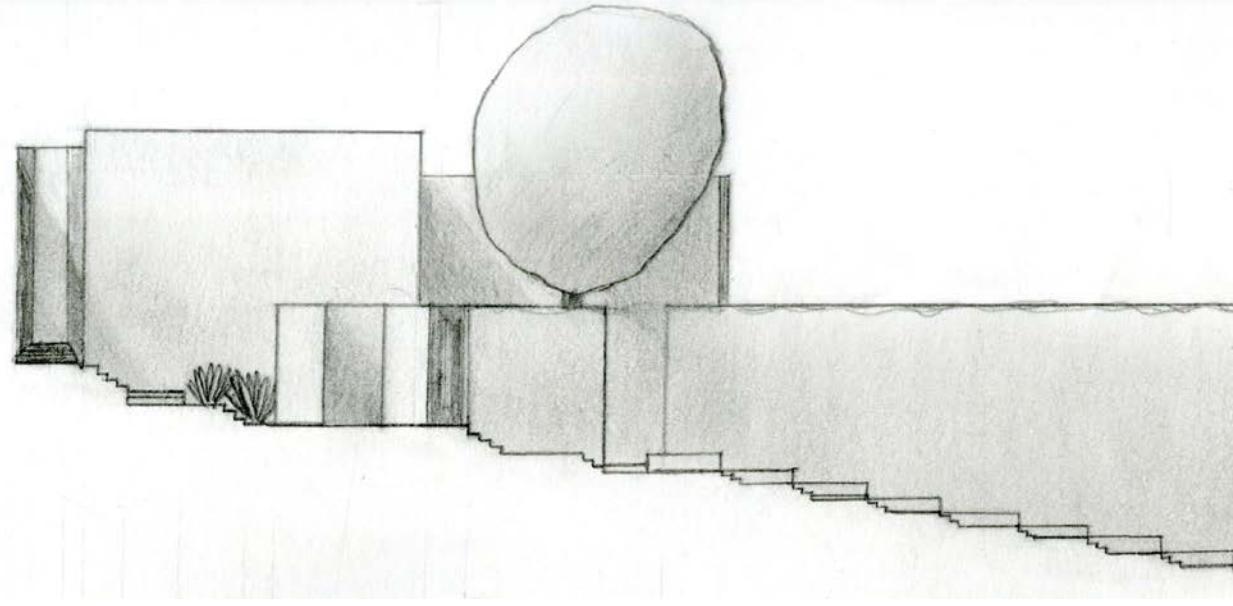
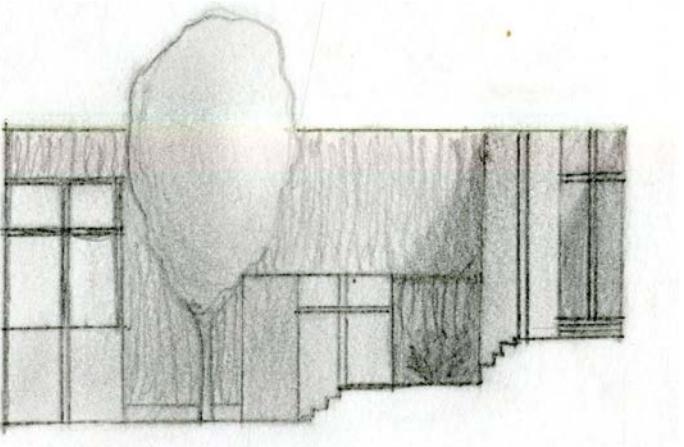
She begins to tire. Finding relief on the bench to her right, she places next to her the bag of fresh fruit that had been weighing her down since she left the market. A man turns up from the alley and begins his way up the steps. He greets the old woman with a warm smile as he makes his way toward the chapel. She begins again. Left, right, left.

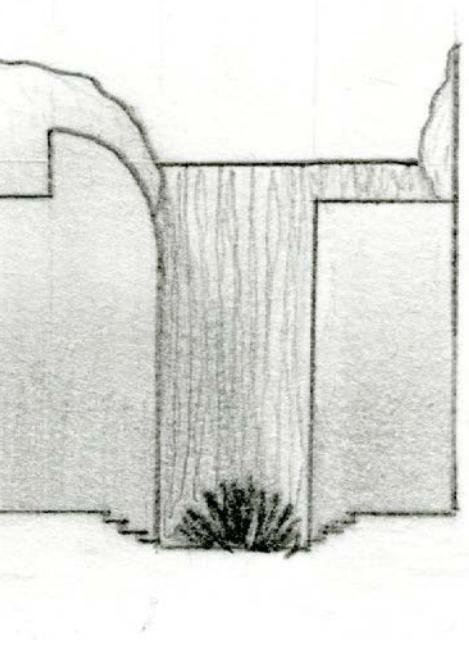


The wall on her right parts, opening onto a small tucked away garden. Several people from the neighborhood are gathered together, keeping a watchful eye on their kids as they play under the tree. The old woman acknowledges them with a wave, then continues on.

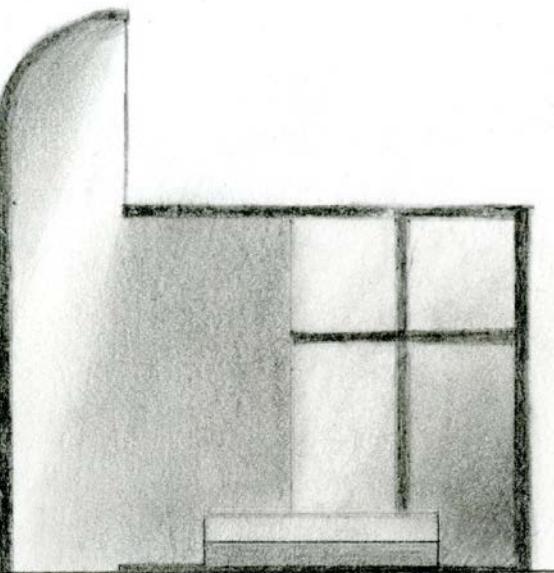
She pauses in front of the Guadalupe shrine as she always does, crosses herself, says a quick prayer, and then turns with the path to the left.

Passing by the chapel, she admires the agave plants to her right. She has watched them grow into the mature plants that now line the path. Every time she passes them by she is amazed by their size, remembering back to when they were a fraction of their current self.





Finally reaching the end of the path, she glances back. She can now see the distant city over the tall wall. The sun is setting, she is home. Just in time for dinner.



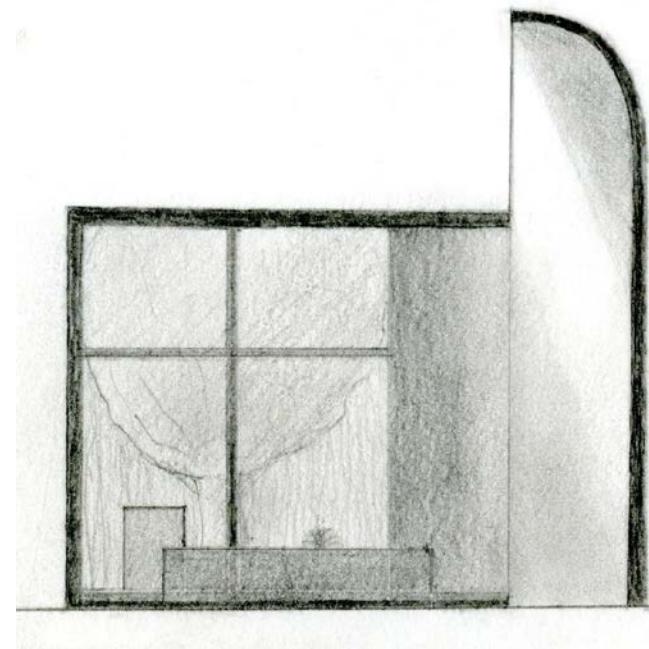
A little boy, 10 years old, turns the corner as he enters the sanctuary. He is greeted with a still light, casting from above, washing all the way down the tall wall. He glances to the far corner at the silhouette of the cross. The soft light eases in, between the opening of the walls.

The boy takes a seat in one of the middle rows. He looks out past the windows to the tree, closes his eyes, and begins to listen.

Silence

He keeps his eyes closed. After a while, he begins to hear the congregation that surrounds him every Sunday reciting the prayers, the pastor offering words of wisdom in his sermon.

There are many things the boy still does not fully understand, but he can feel the spirit in the air. To him, this place is special, this place is safe, this place is home.

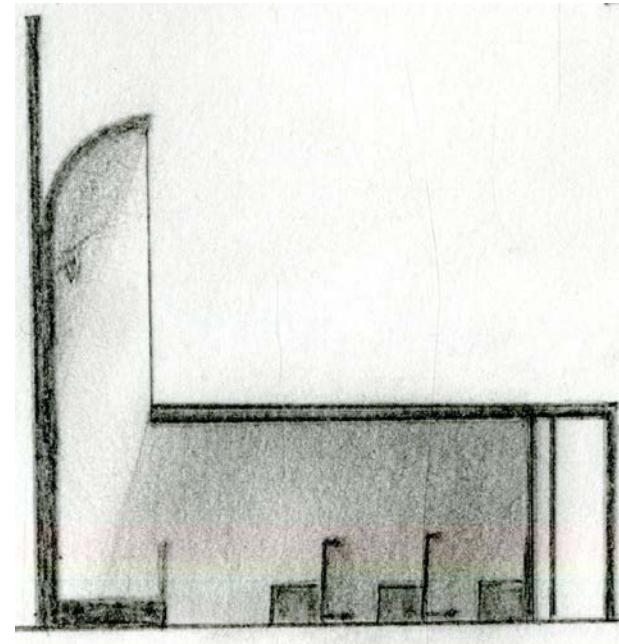


Every day on the man's way home from work, he stops by the chapel. It has become a necessary part of his routine.

As he pushes through the door of the chapel, he is received by darkness. He begins to feel his way through the small corridor. Before his eyes can adjust to the dim light he turns and sees the back wall illuminated by the sun. A shadow of a cross is cast on the wall, moving around the room as the day grows older.

The space is empty, for the moment it is all his. The man favors the small intimate space of the chapel. It allows him to connect, reflect, and pray on a more personal level.

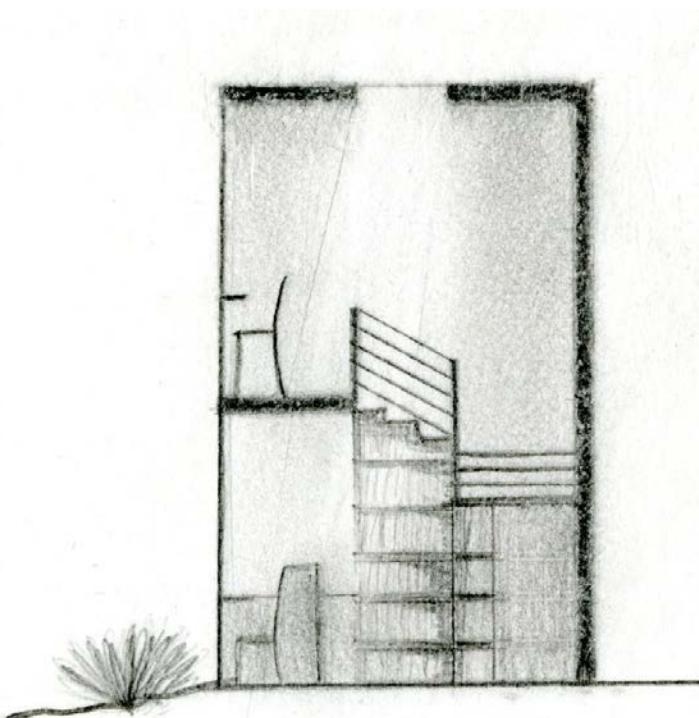
He kneels before the alter, looks up to the light, and begins to pray.

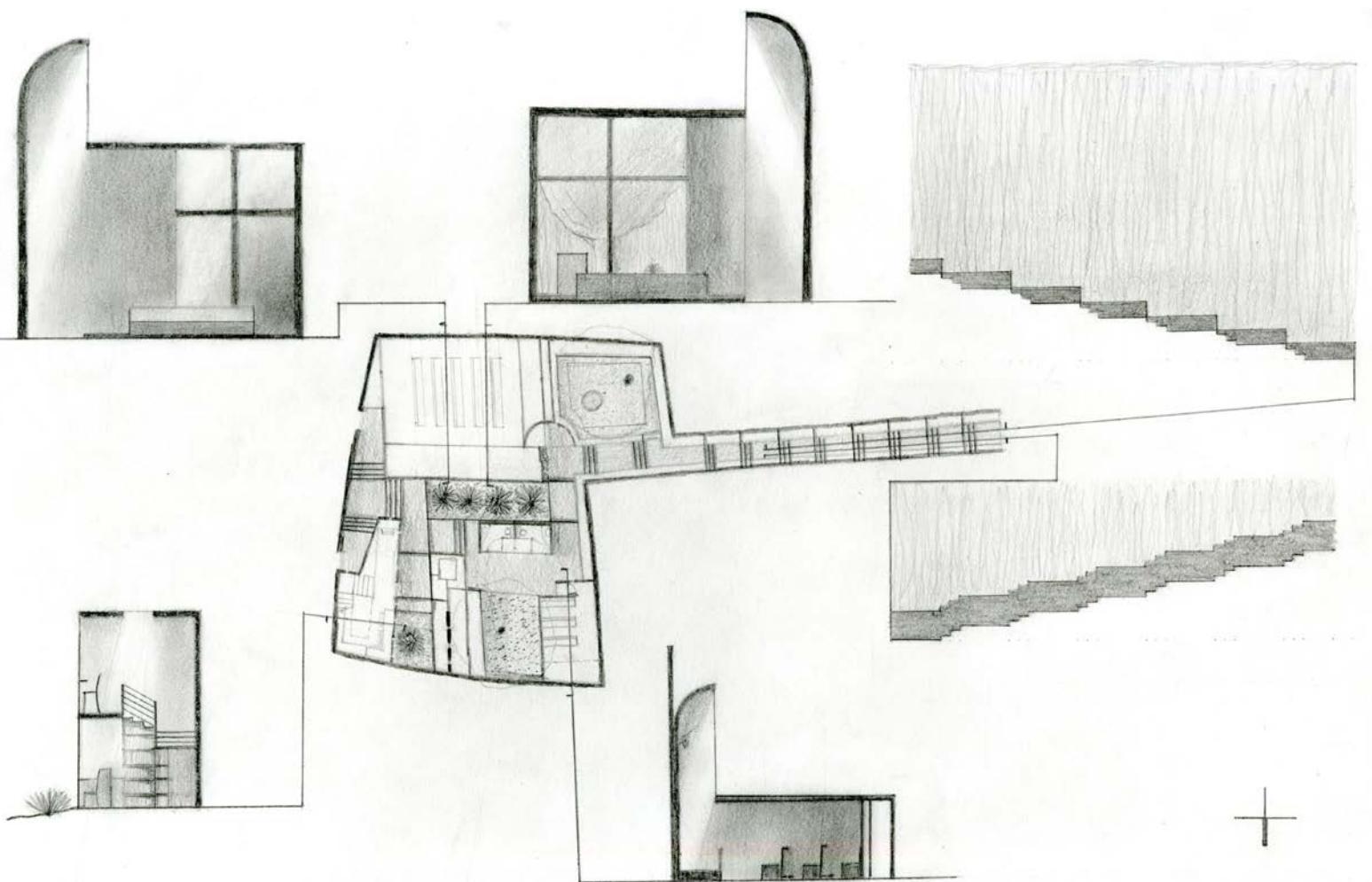
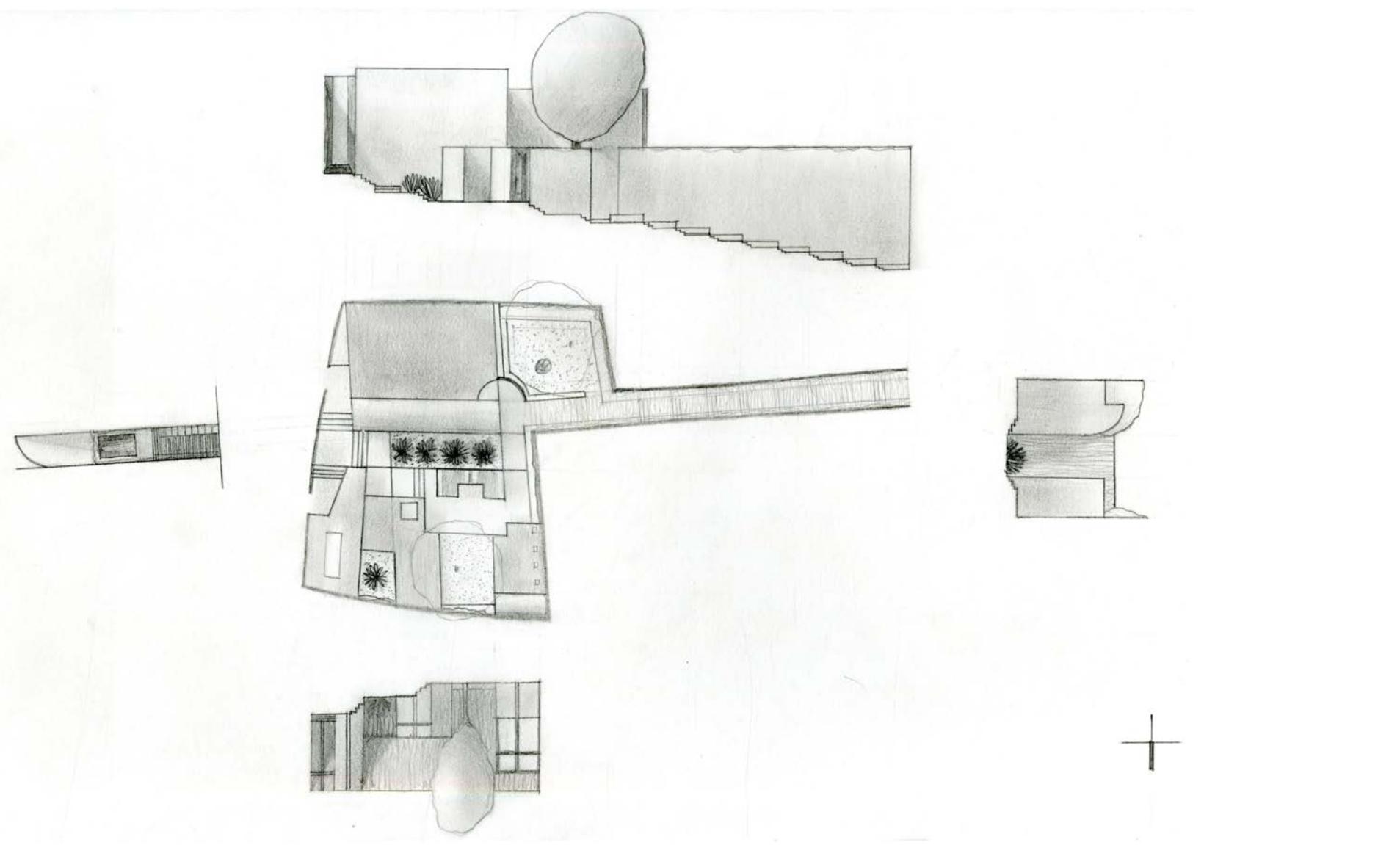


A recent widow has fallen on hard times. Still adapting to life without her husband, she seeks out answers in the library, in hopes she will find the motivation and courage to continue on.

Making her way to the center of the room, she begins looking through several books. She feels the warm embrace of the summer sun from the sky light above. Finding a book that she hopes will provide her with the inspiration she needs, she makes her way up the steps and settles in a seat by the window looking over the city.

She opens the book, and begins to read.

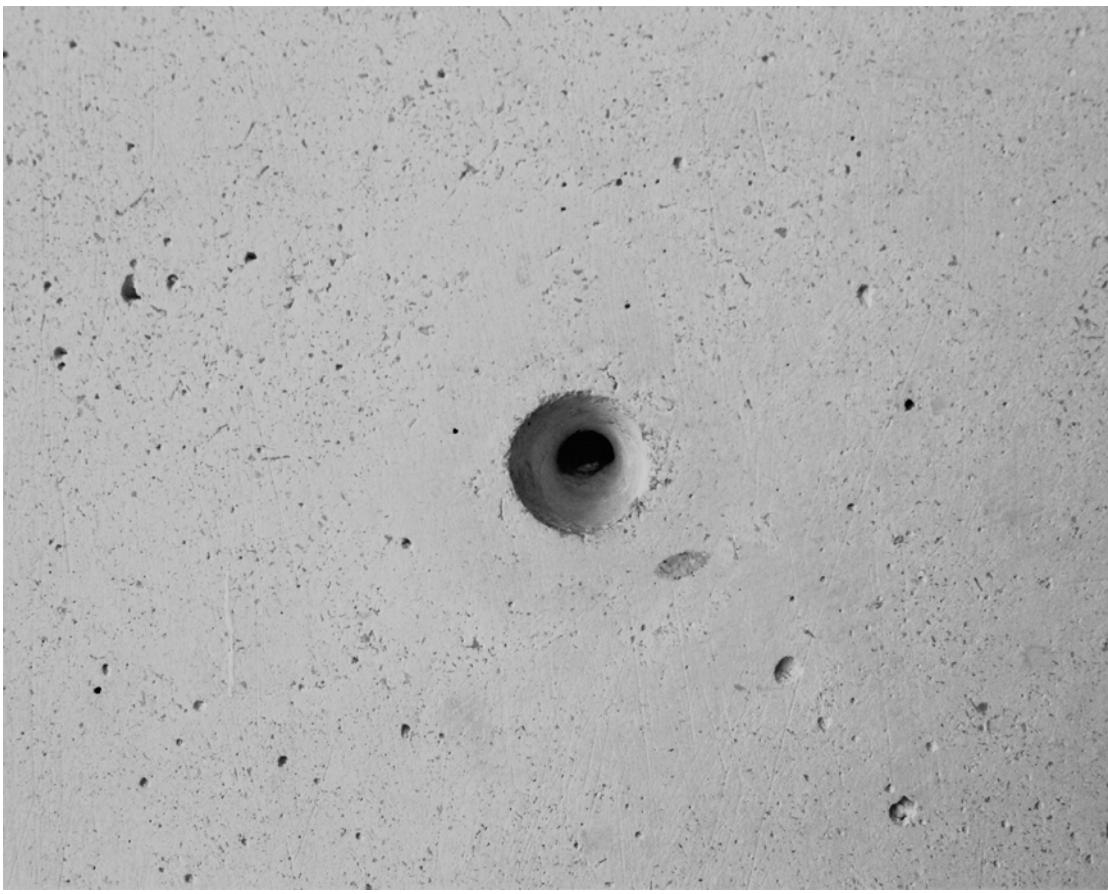






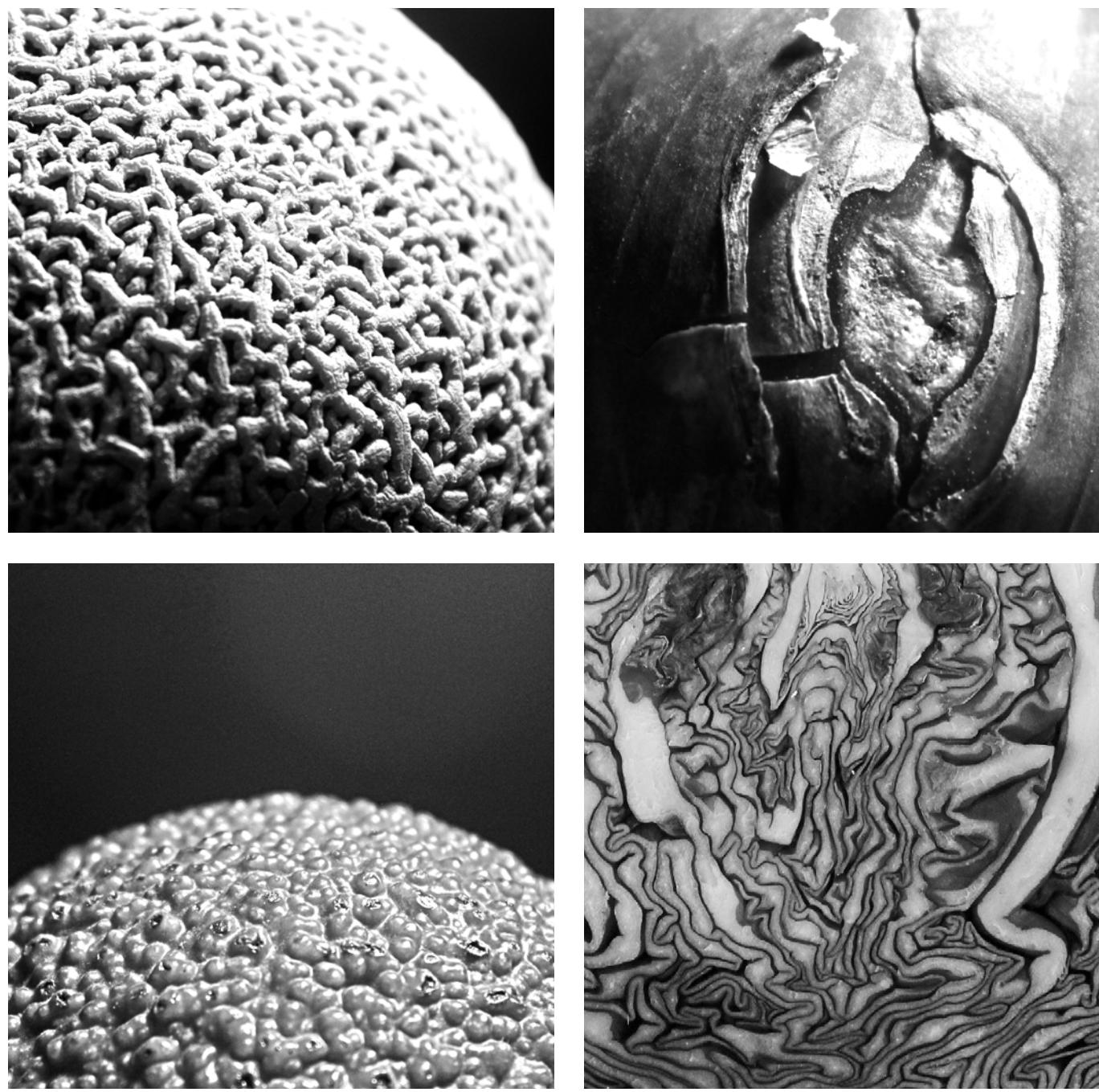


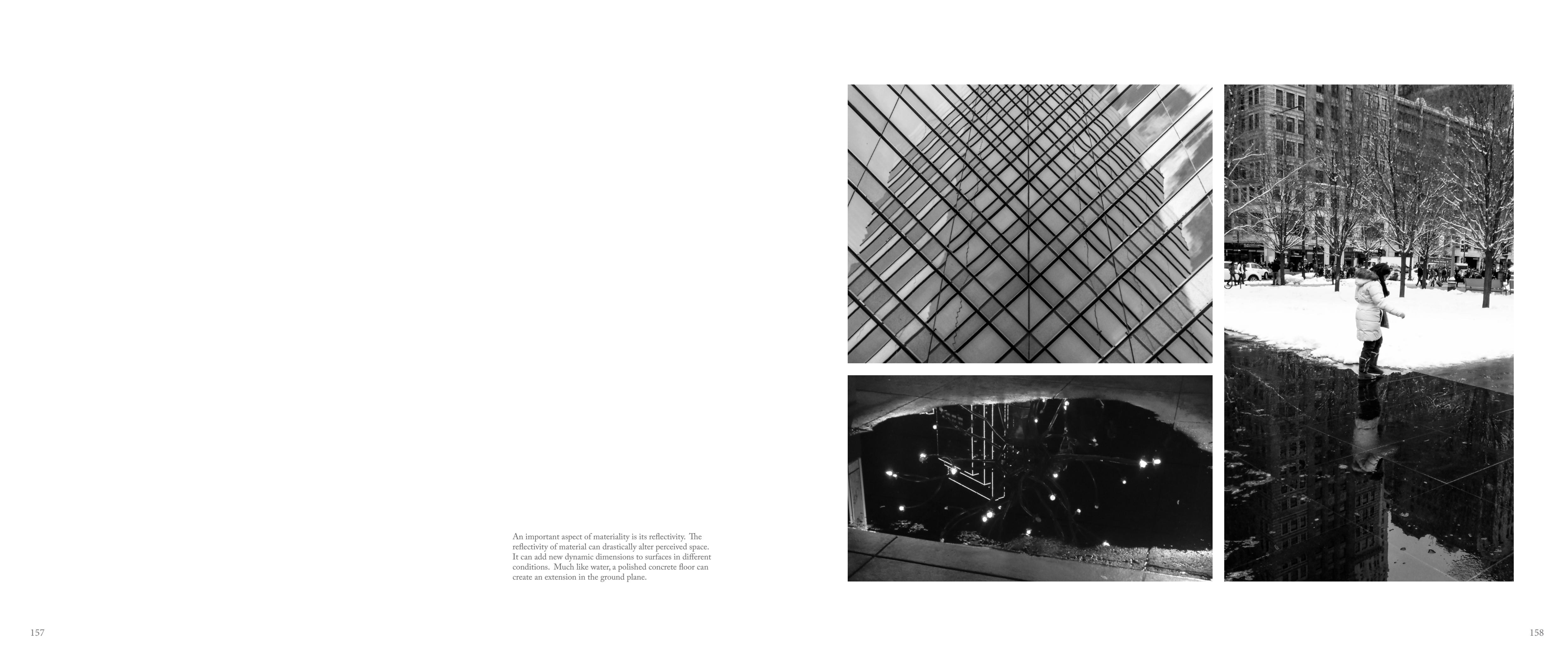
The following studies on material, perspective and proportion, and light were conducted and explored using sensible, logical, and aesthetic judgement. These various studies proved vital to the understanding of the thesis and the final building proposal.



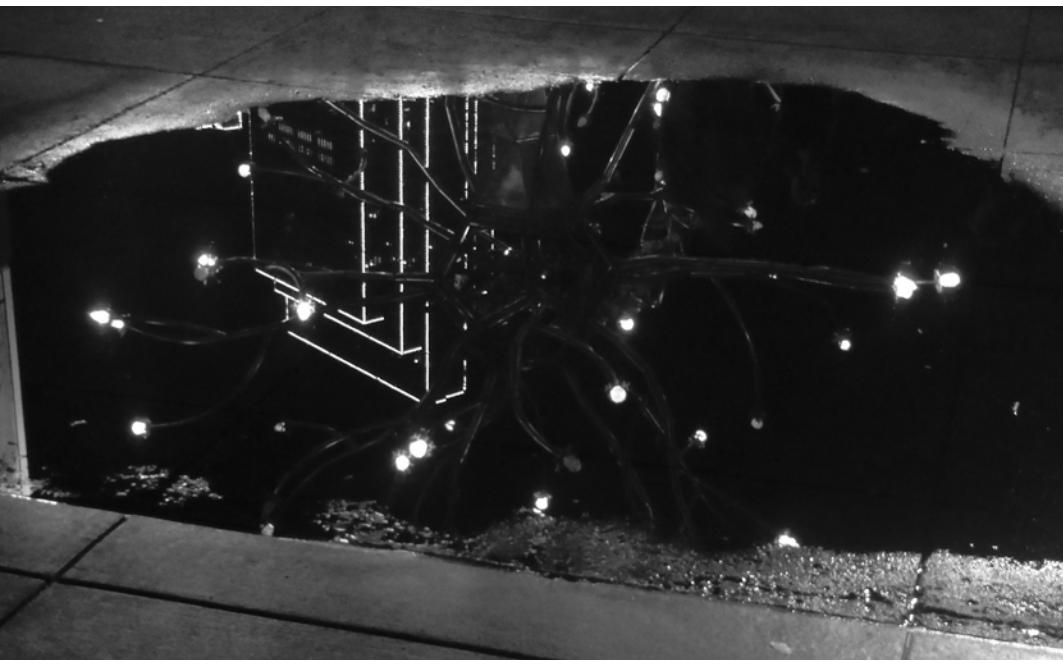
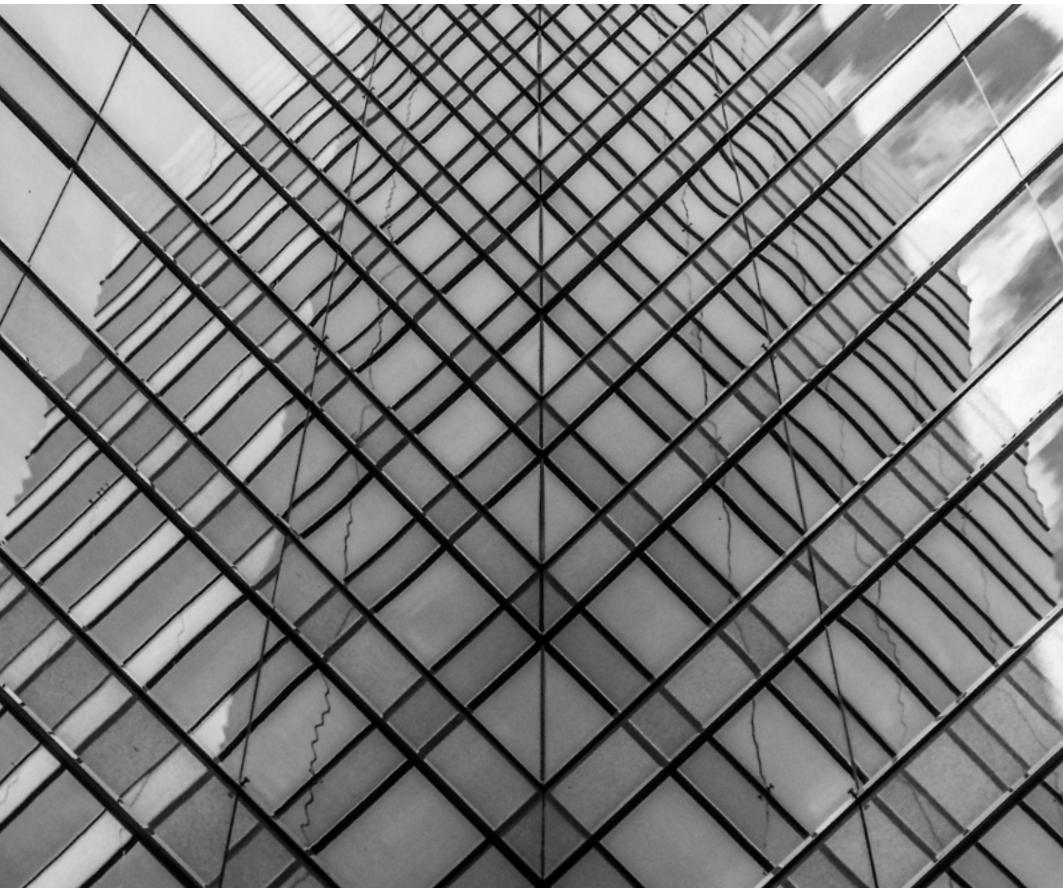
Material

Is the sentiment people have toward building materials similar to that of food? Are there certain preconceptions of 'taste' we develop as a result of our sense of touch and vision?





An important aspect of materiality is its reflectivity. The reflectivity of material can drastically alter perceived space. It can add new dynamic dimensions to surfaces in different conditions. Much like water, a polished concrete floor can create an extension in the ground plane.



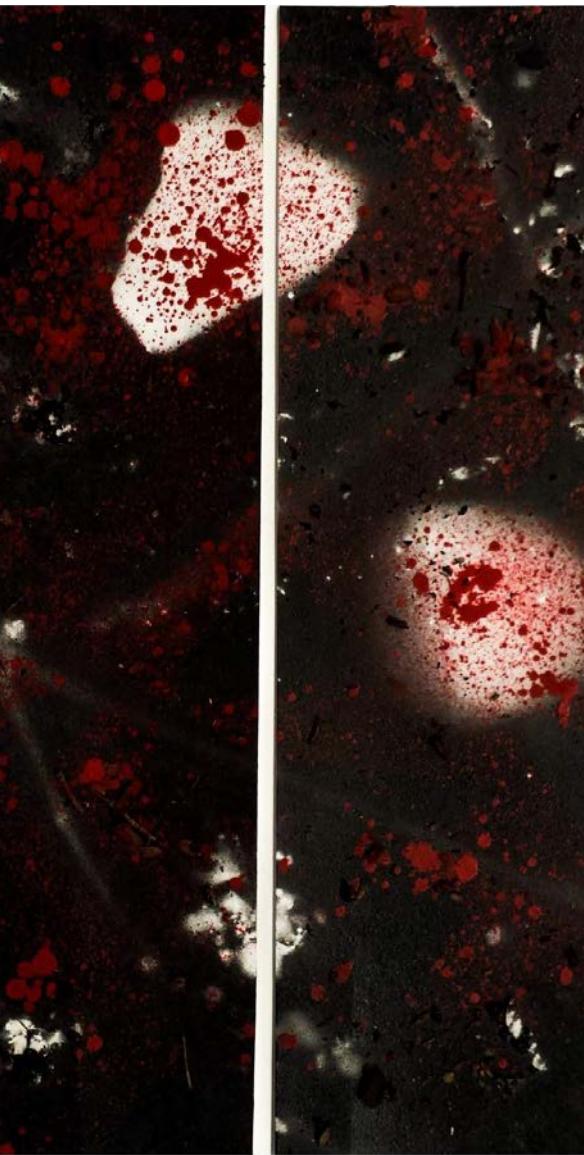


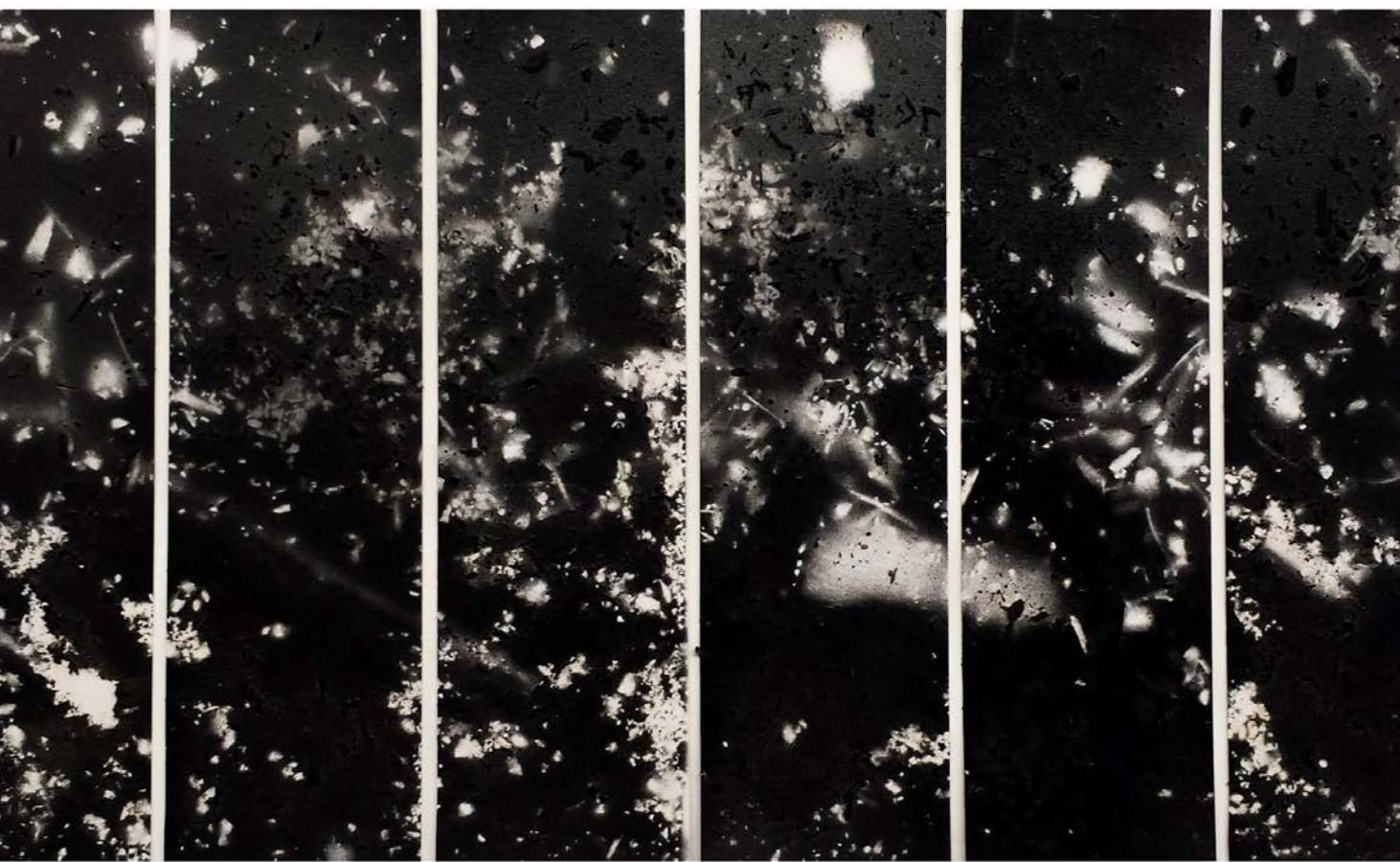
#### Spray paint study

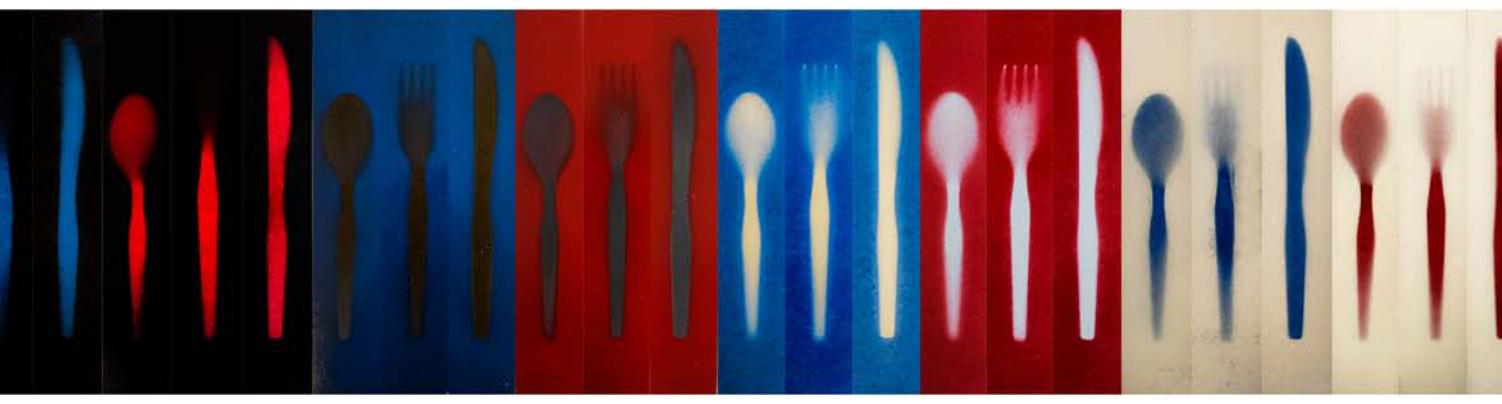
These pieces originate from an exploration of recording objects that are no longer present. Influenced by the idea of photograms, formwork, and fossils, I experimented with spray paint in an attempt to record various objects arranged on paper.

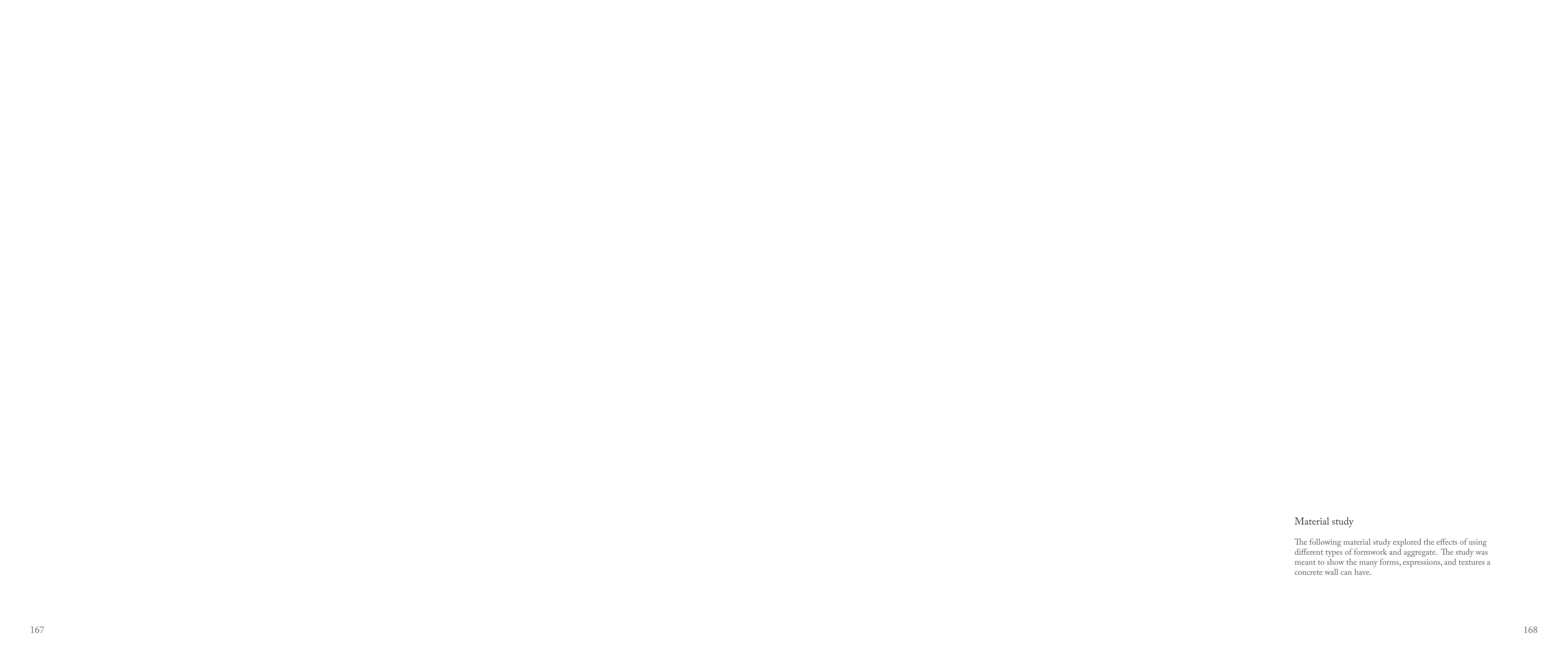
The use of color, via mixing and contrasting, provides each piece with different life. The colors help inform the objects of record as well as the mood and movement of the composition. They provoke ideas of layers, composition, and density.

Abstract studies like these help stimulate my design work. They force me to ask tough questions and take on new perspectives, allowing me to be more thoughtful and deliberate with the things I do.









#### Material study

The following material study explored the effects of using different types of formwork and aggregate. The study was meant to show the many forms, expressions, and textures a concrete wall can have.

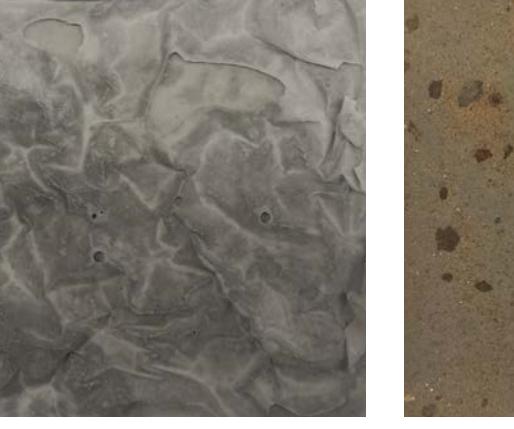
Mix:  
2 parts rockite  
1 part plaster  
1 part sapphire blue dye  
sand

Formwork:  
mylar



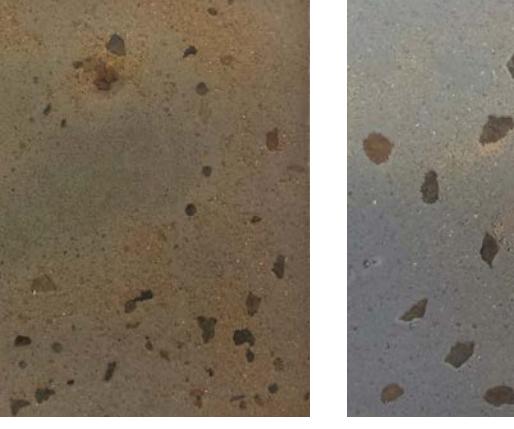
Mix:  
2  $\frac{1}{2}$  parts rockite  
3 parts slate color dye

Formwork:  
yellow foamboard (bumpy, hard, rough)  
small pebbles and sand lightly covering  
the surface



Mix:  
2  $\frac{1}{2}$  parts rockite  
3 parts slate color dye

Formwork:  
plastic bag draped over with rocks  
dropped on top



Mix:  
2 parts rockite  
3 parts navy blue dye

Formwork:  
yellow foamboard (bumpy, hard, rough)  
large pebbles and sand covering the  
surface



Mix:  
2 parts rockite  
3 parts silver morning dye

Formwork:  
packing tape on foamboard



Mix:  
2 parts rockite  
2 parts black dye

Formwork:  
2 pieces of a coffee cup hand protector



Mix:  
2 parts rockite  
2 parts black dye  
3 parts silver morning dye

Formwork:  
metal sheet completely covered with  
sand



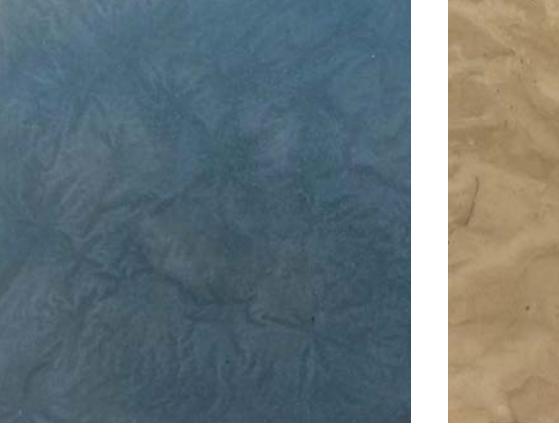
Mix:  
3 parts rockite  
3 parts black dye

Formwork:  
metal sheet



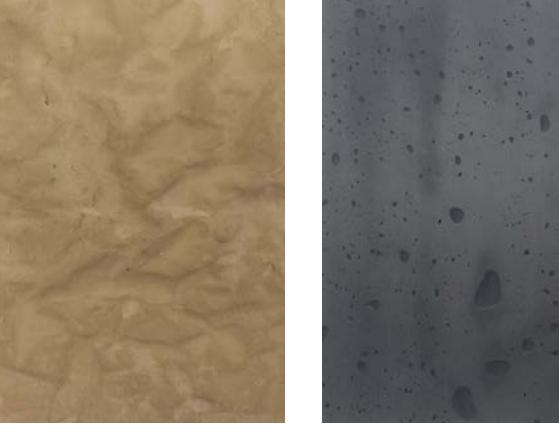
Mix:  
2 parts rockite  
3 parts sapphire blue

Formwork:  
plastic wrapping



Mix:  
1 part rockite  
1 part plaster  
sand

Formwork:  
wrinkled paper



Mix:  
2 parts rockite  
3 parts navy blue dye

Formwork:  
basswood laid on top



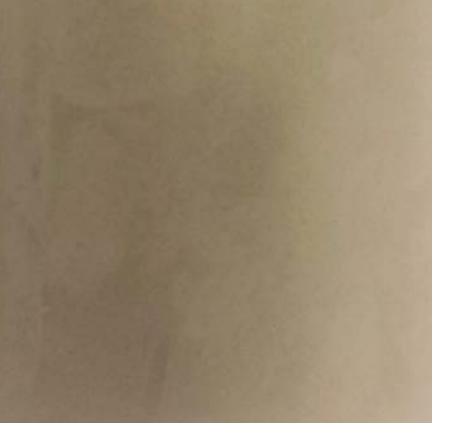
Mix:  
1 part rockite  
1 part plaster  
sand

Formwork:  
acetate



Mix:  
2 parts rockite  
sand

Formwork:  
plastic acetate



Mix:  
2 parts rockite

Formwork:  
sood strips and form board



Mix:  
2 parts rockite

Formwork:  
covered with white electric tape





Proportion and Perspective







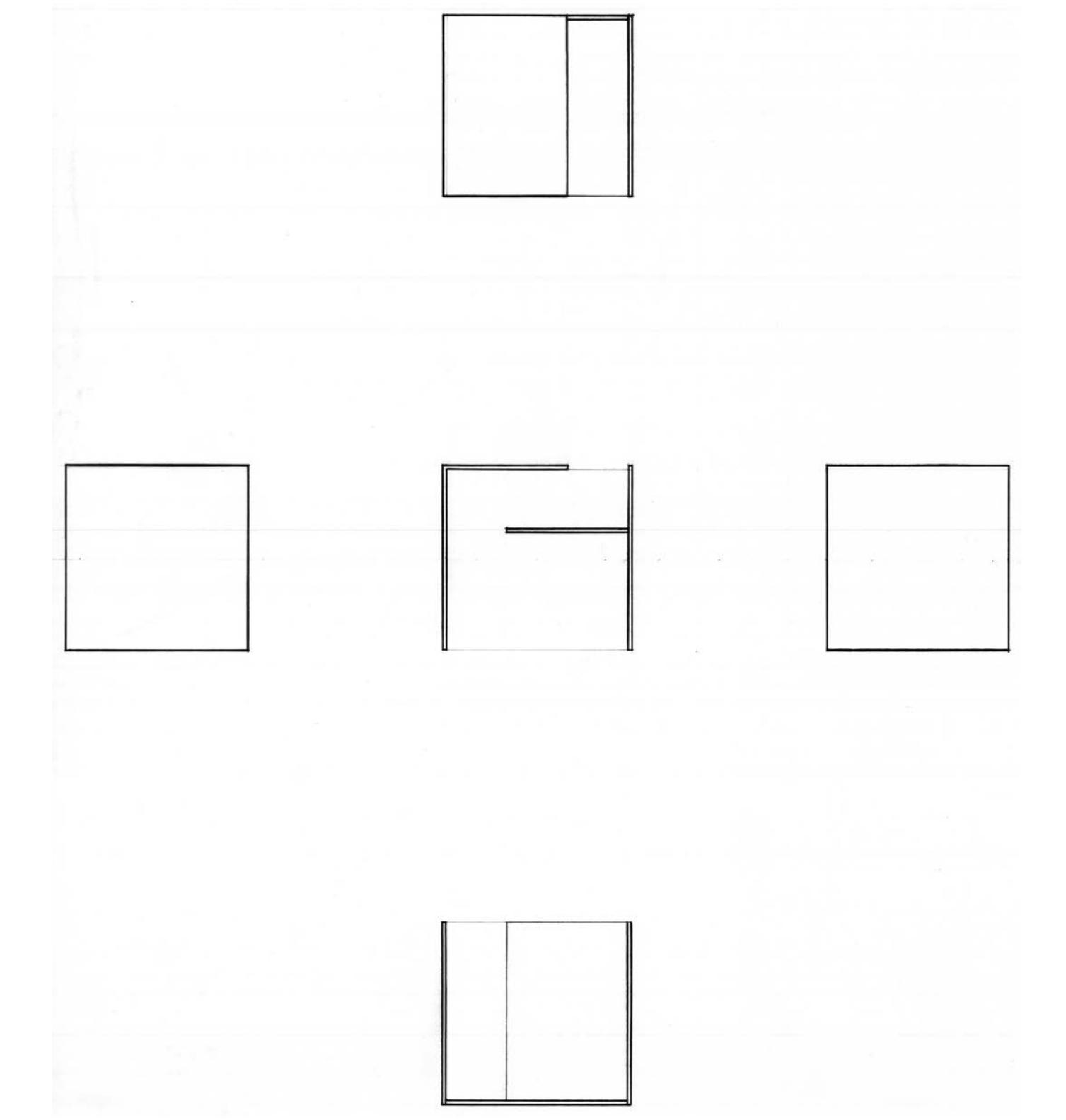




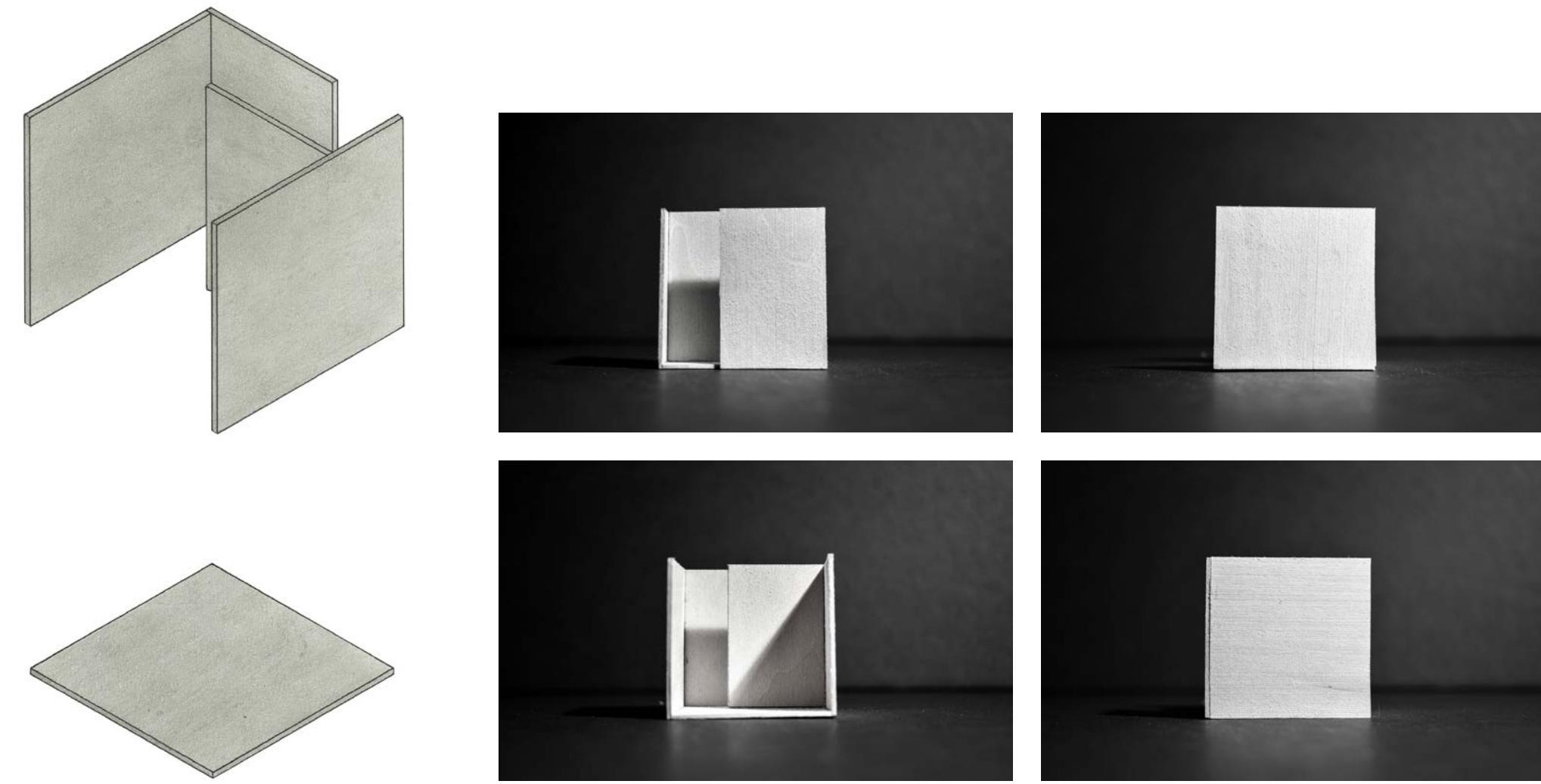




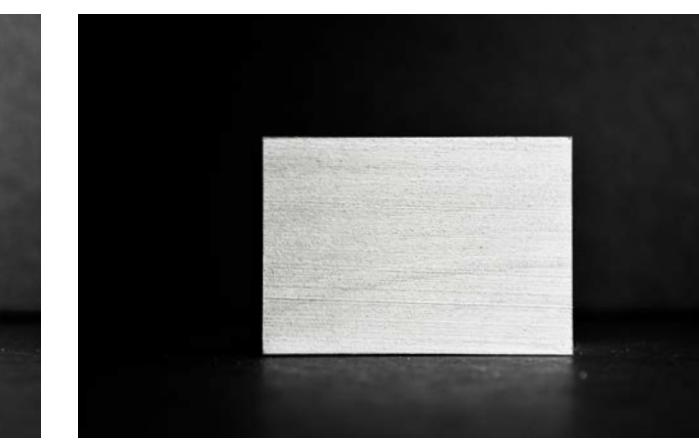
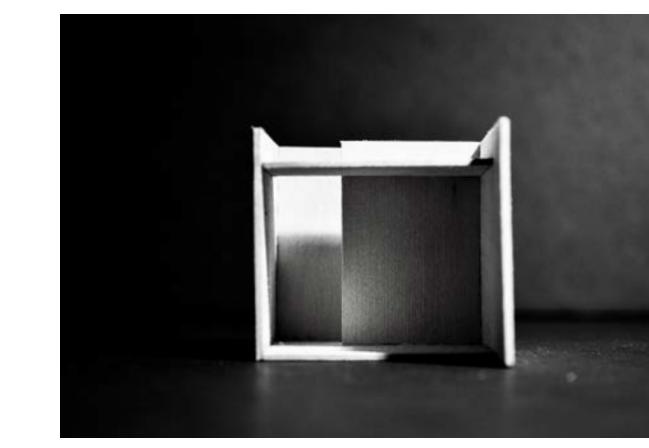
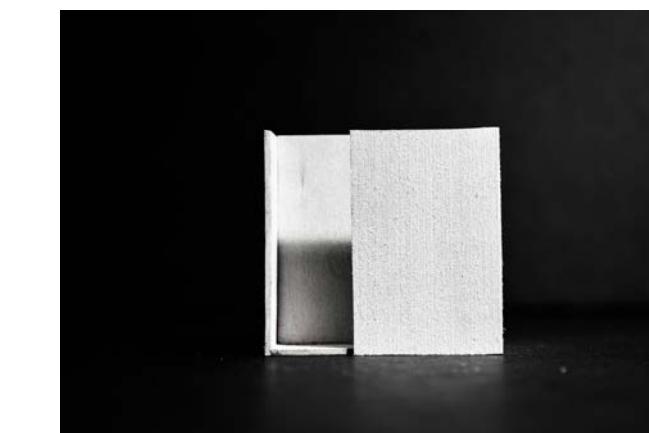
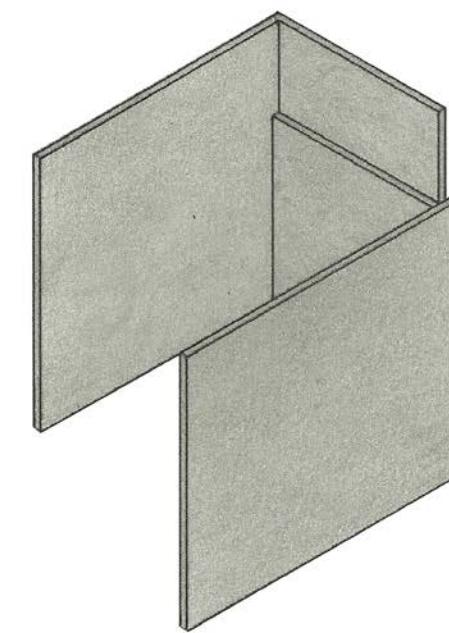
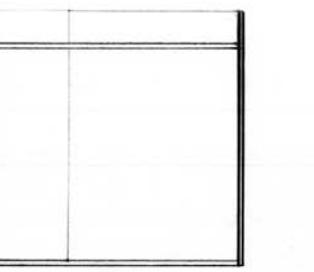
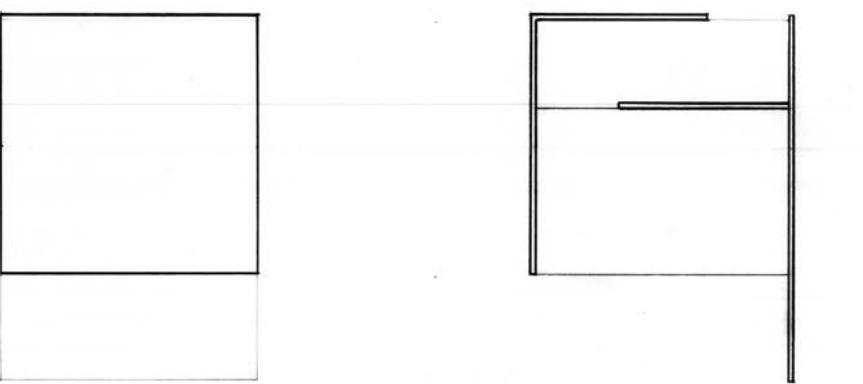
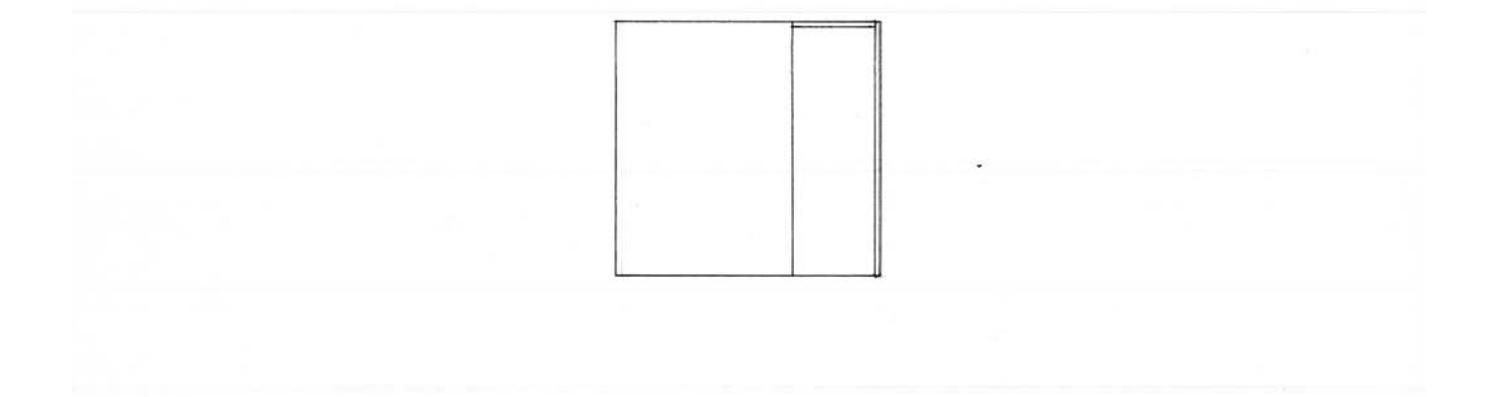


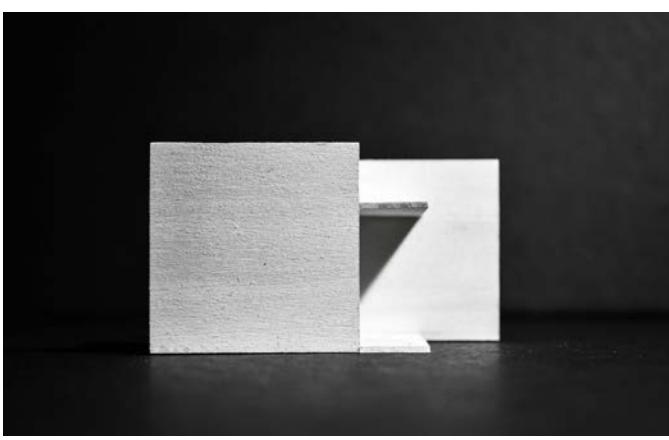
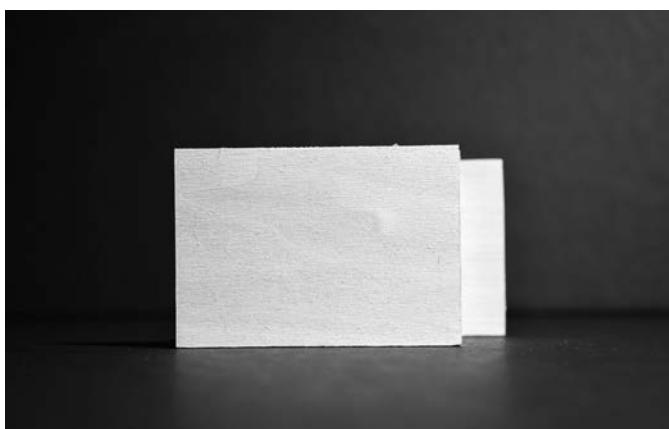
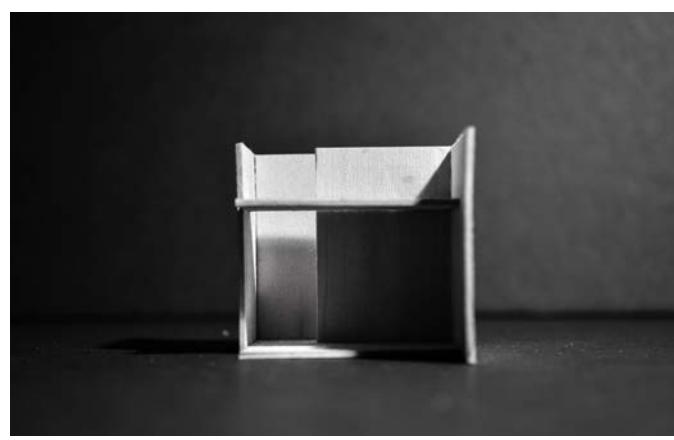
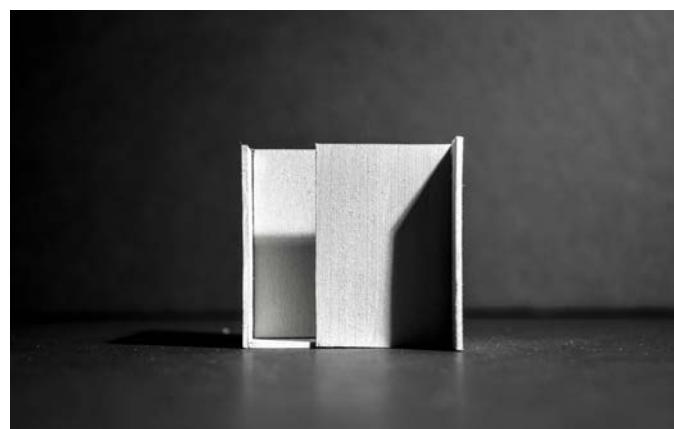
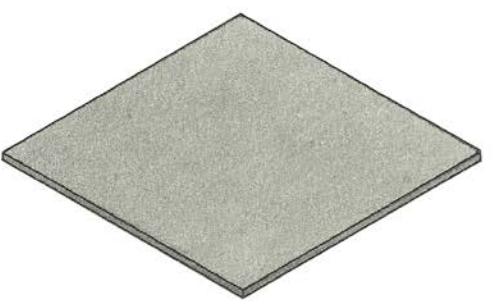
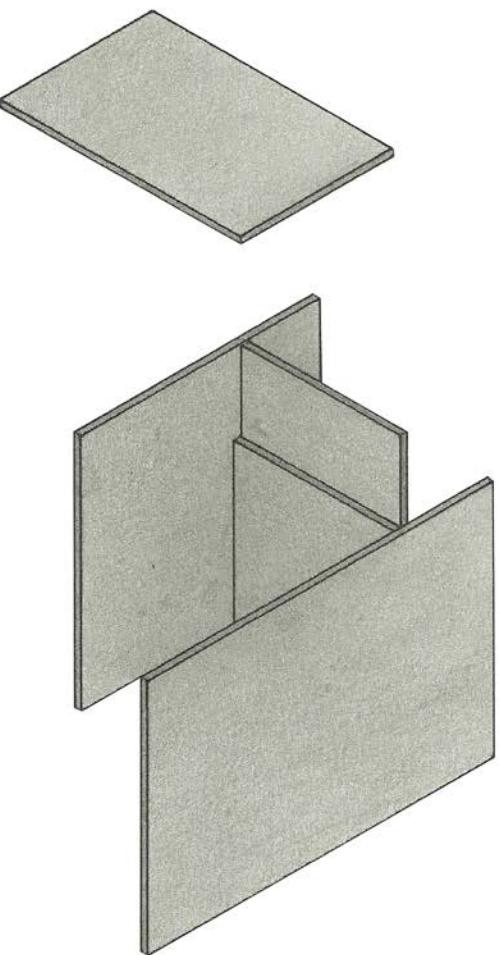
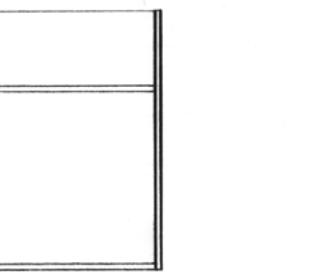
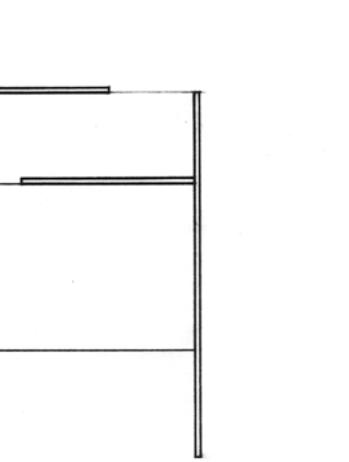
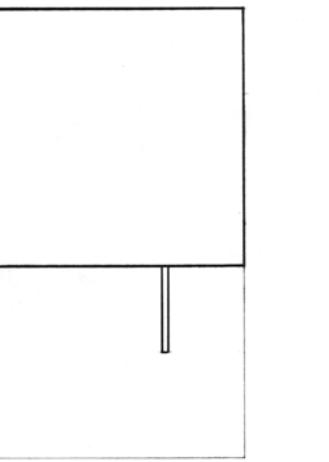
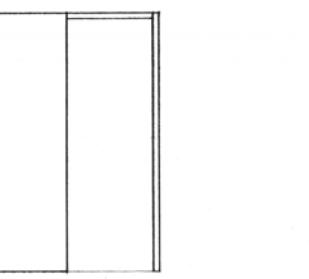


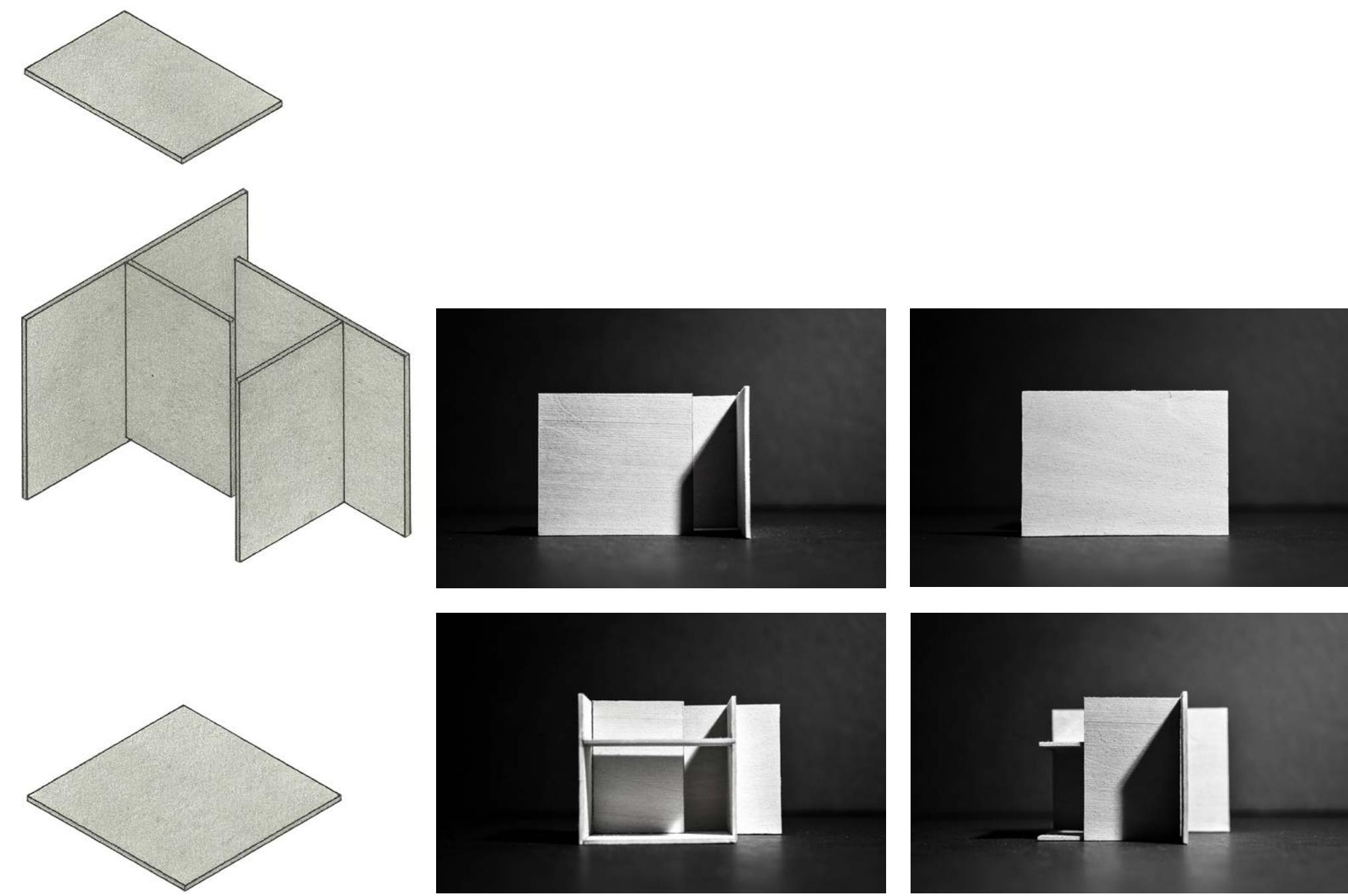
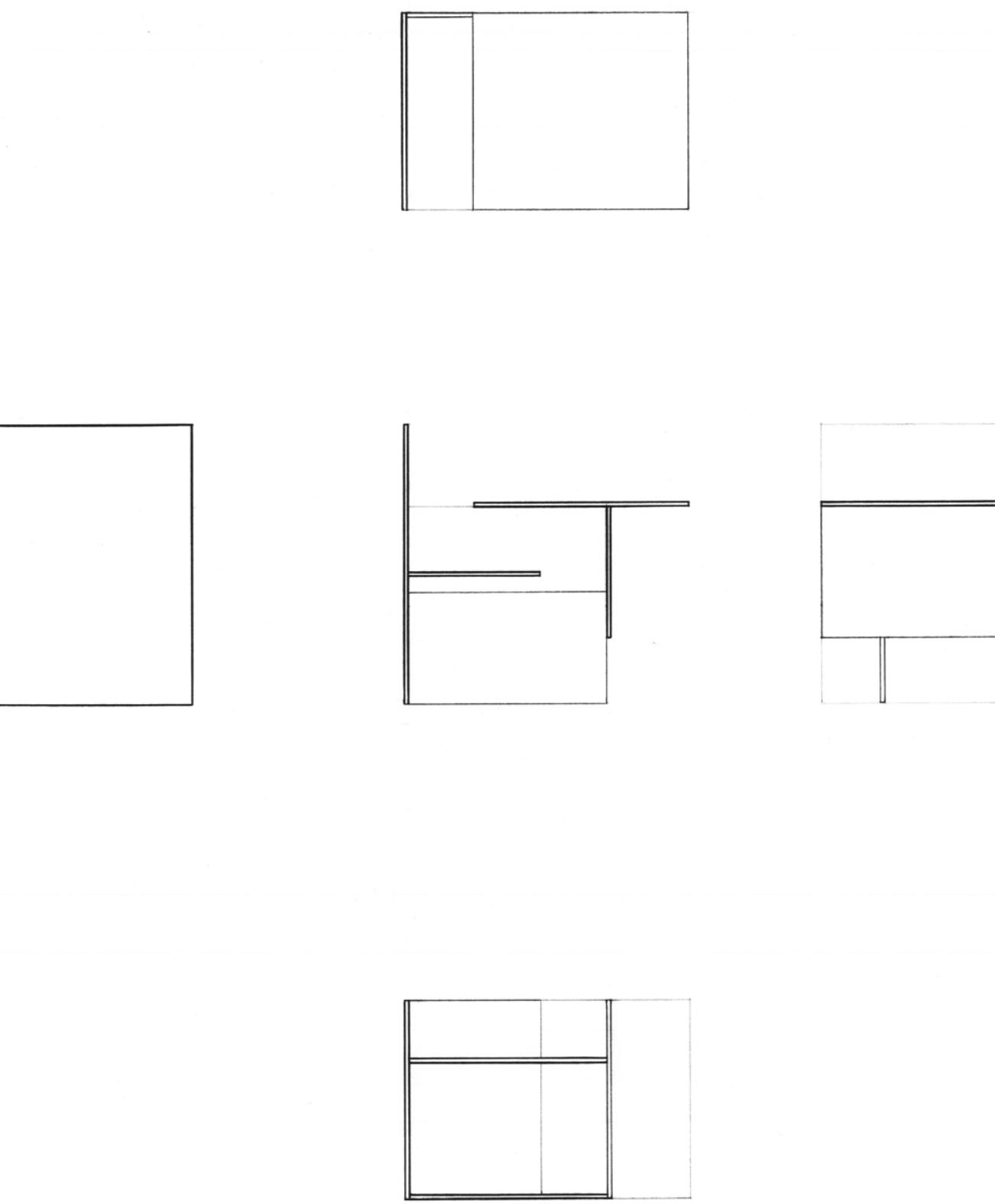
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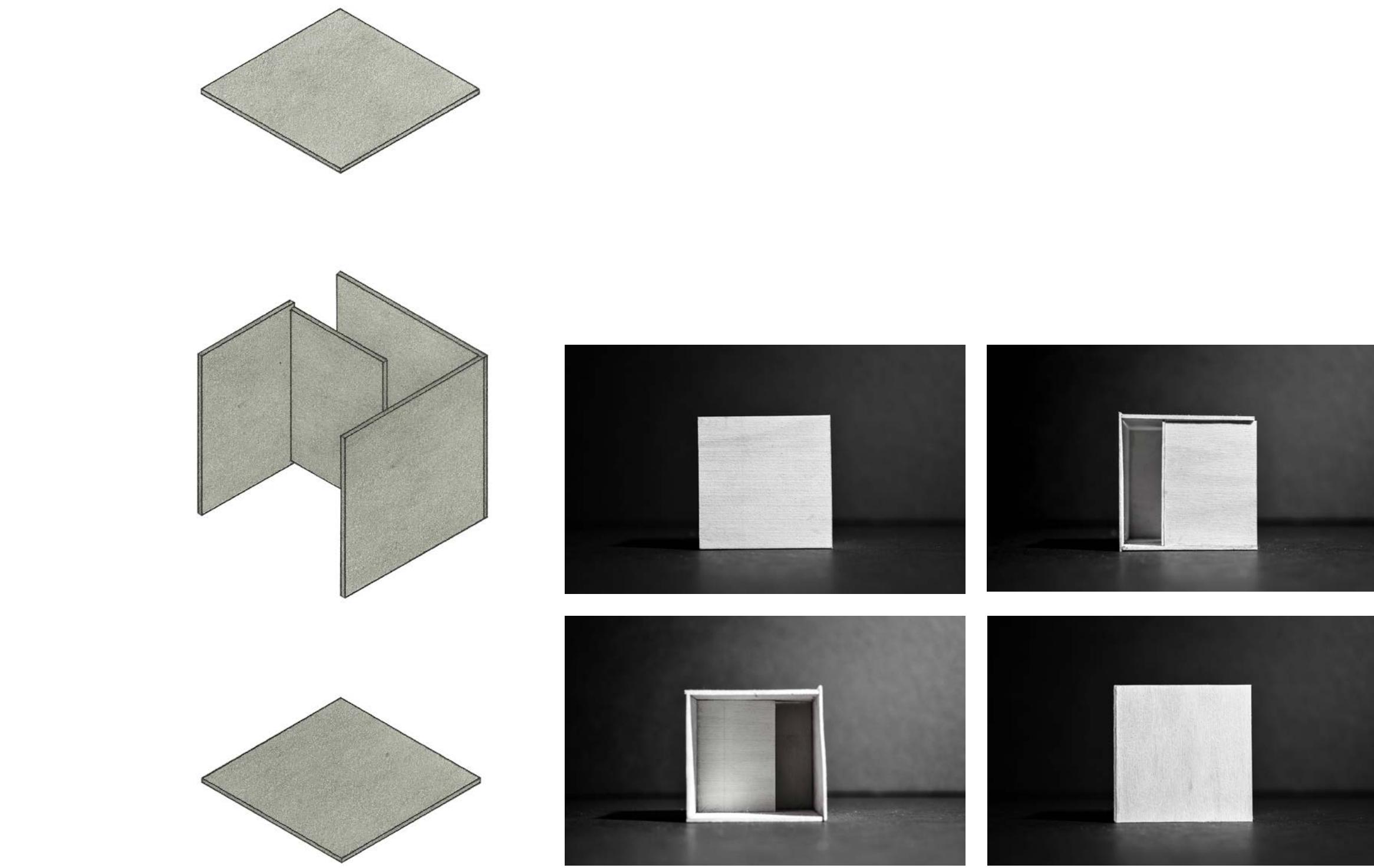
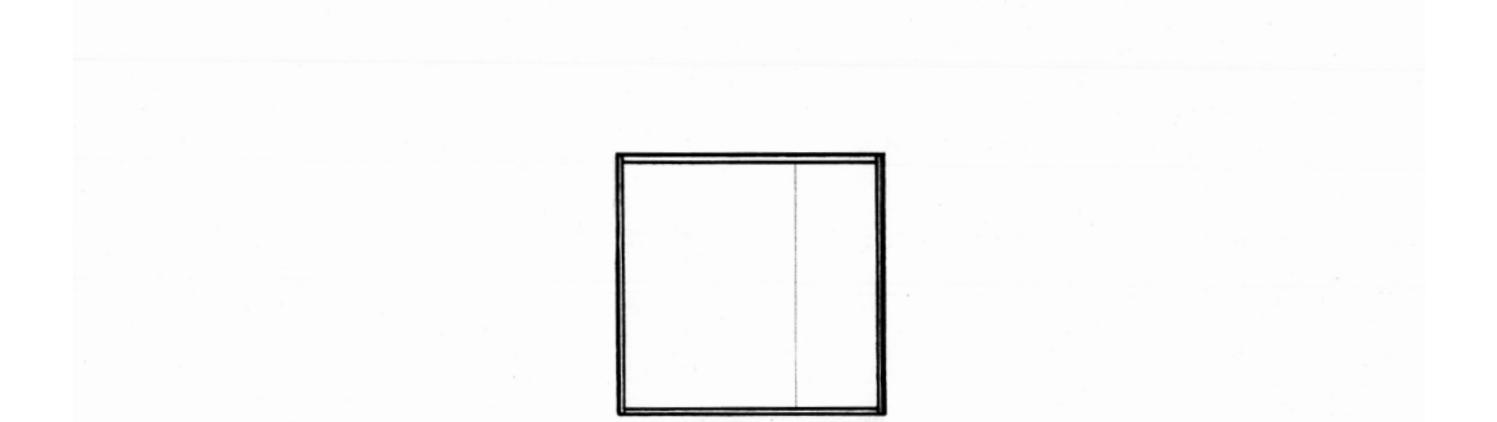
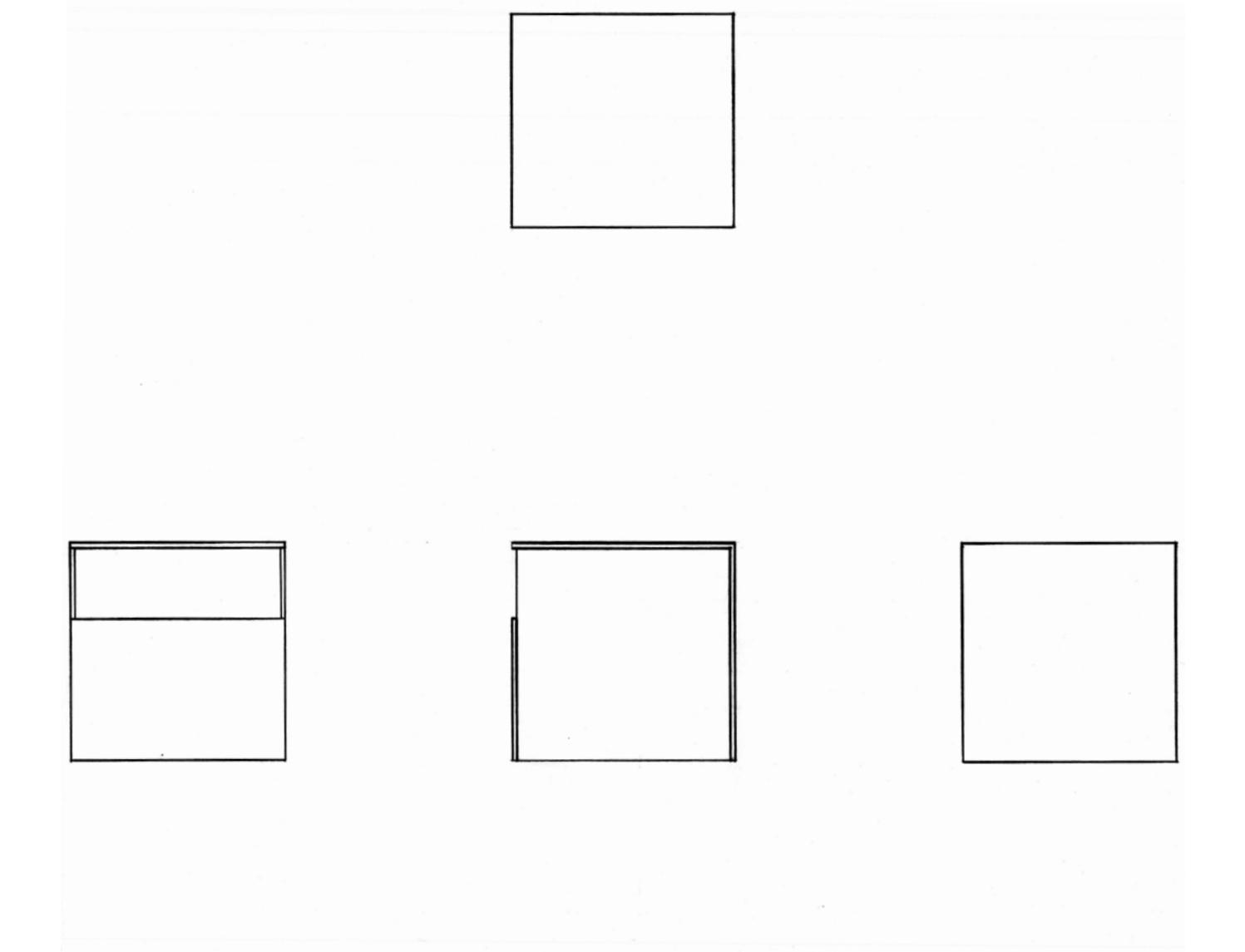


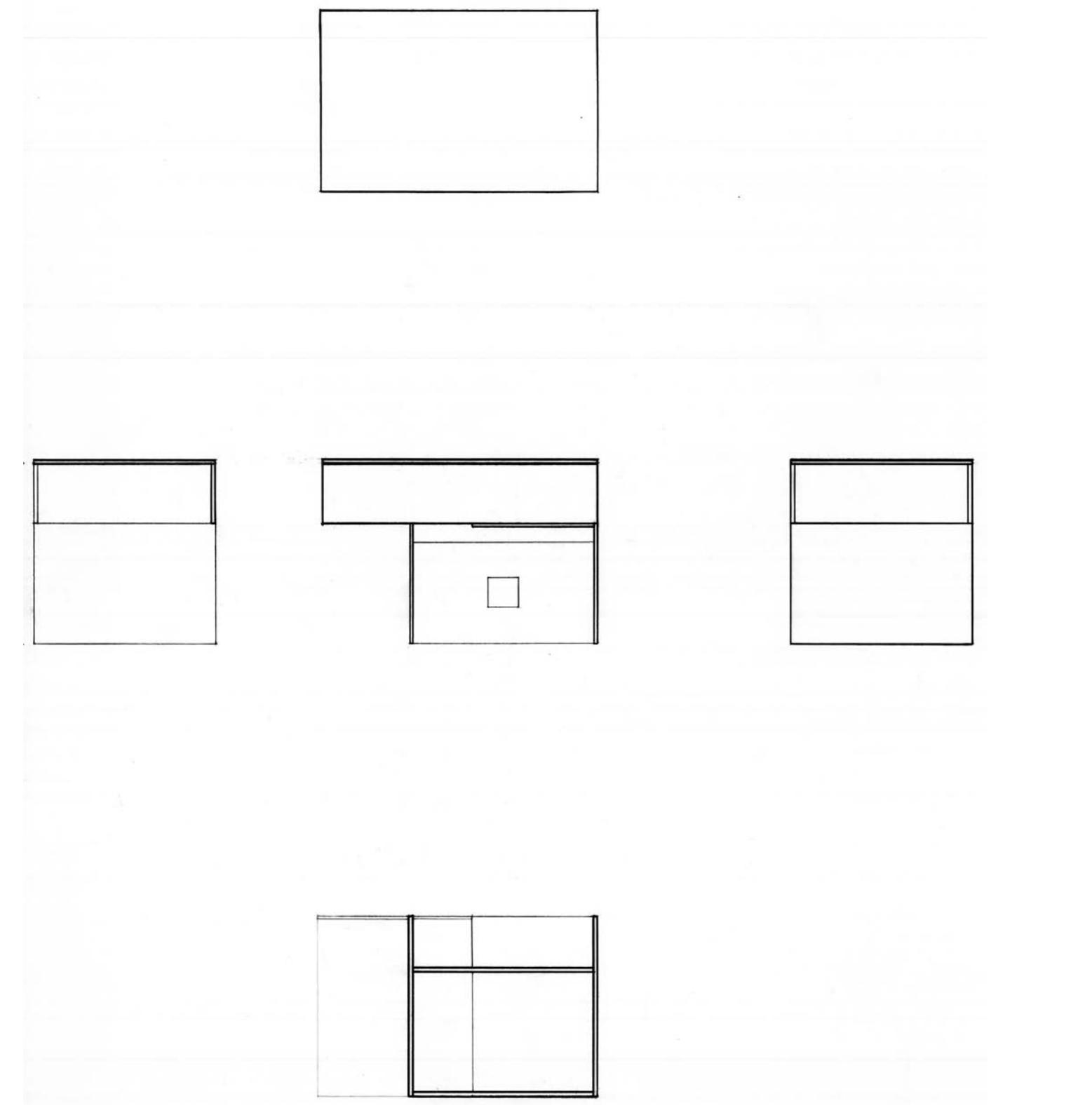
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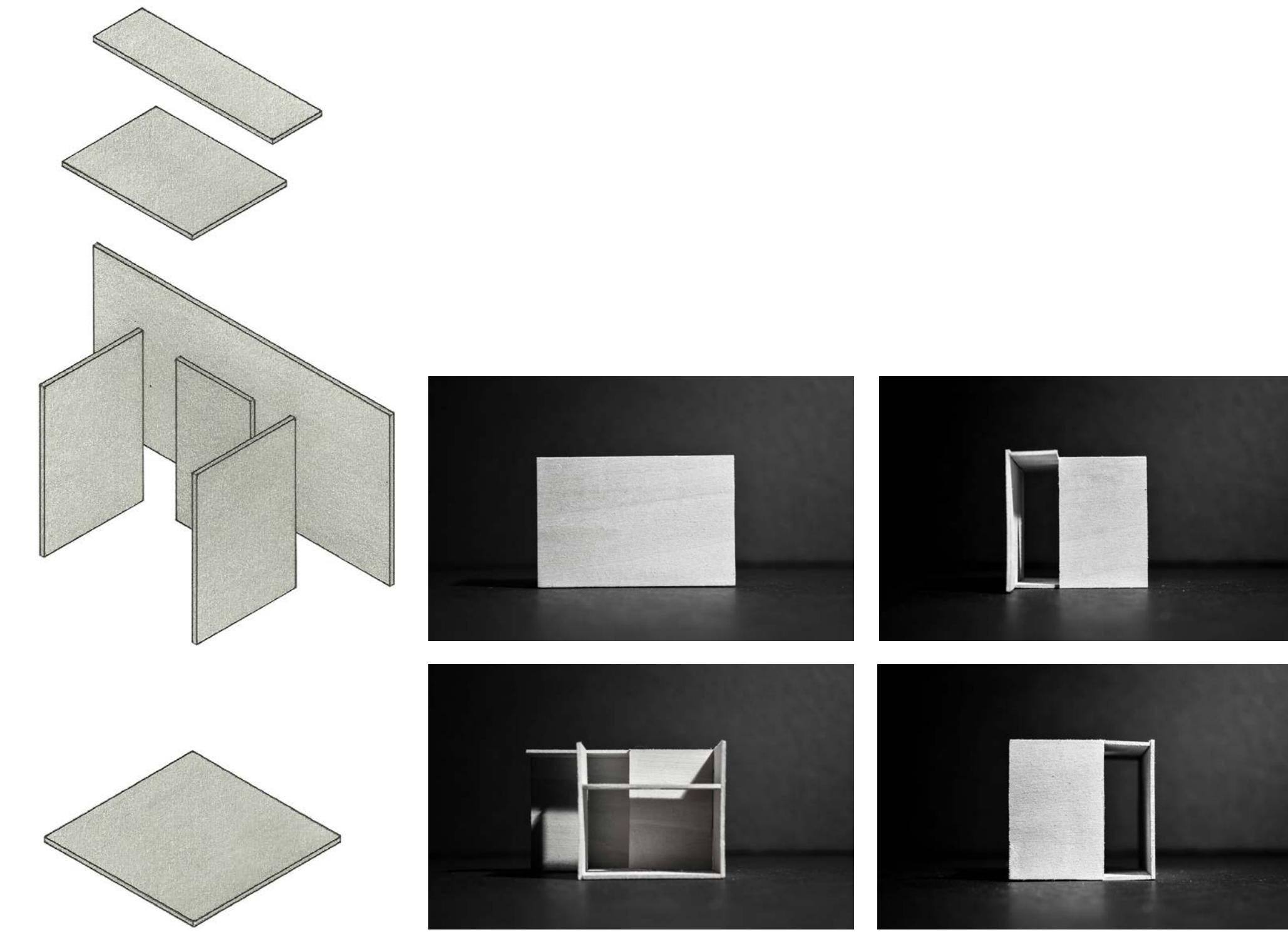




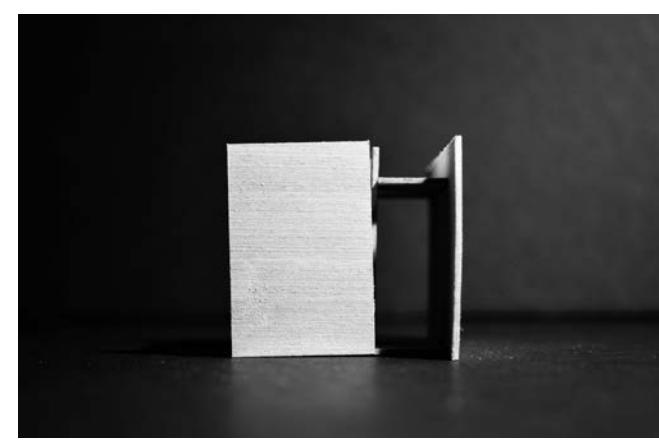
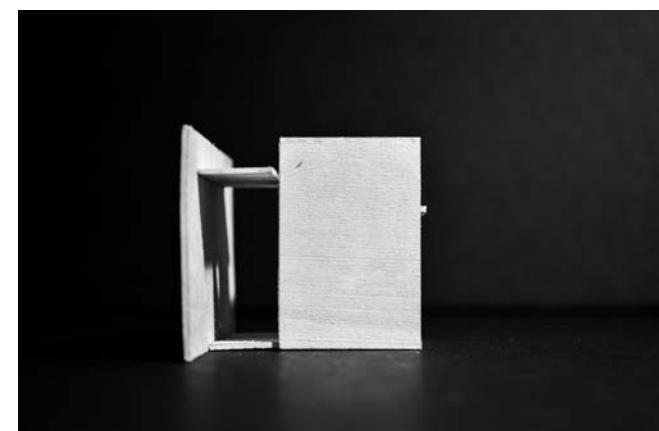
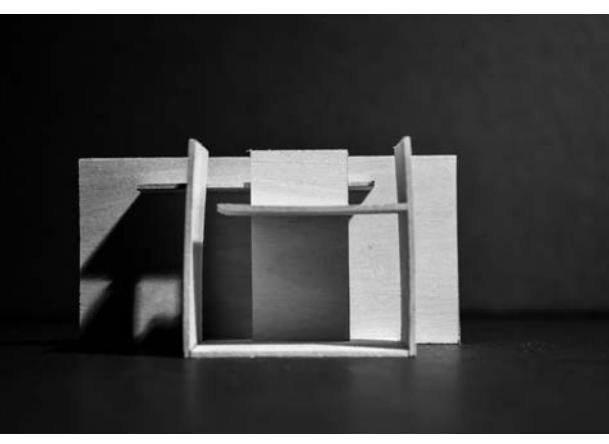
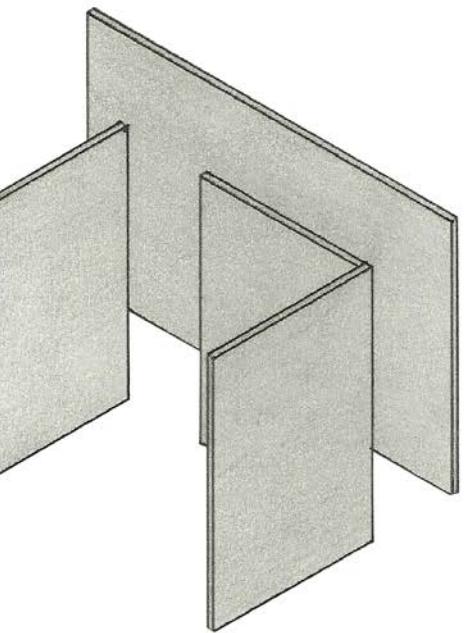
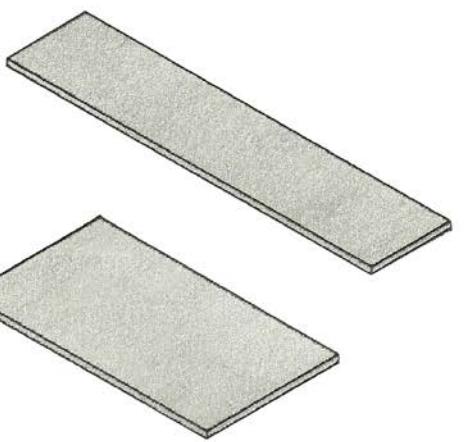
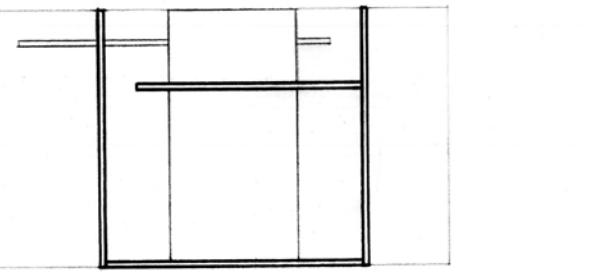
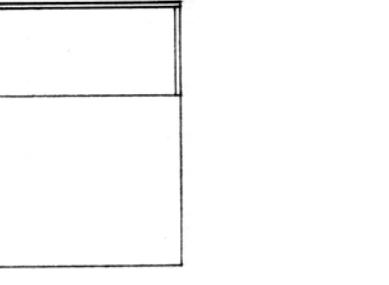
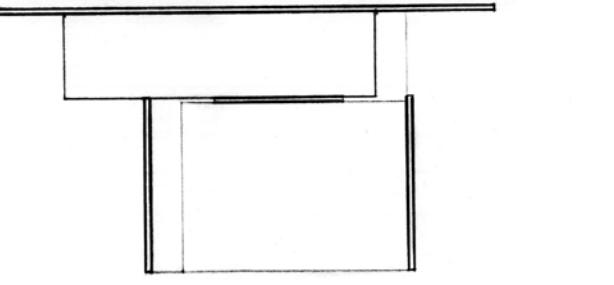
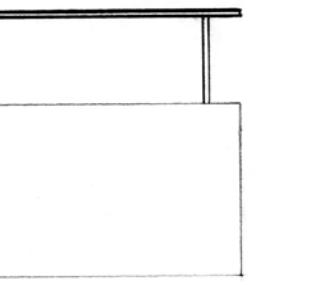
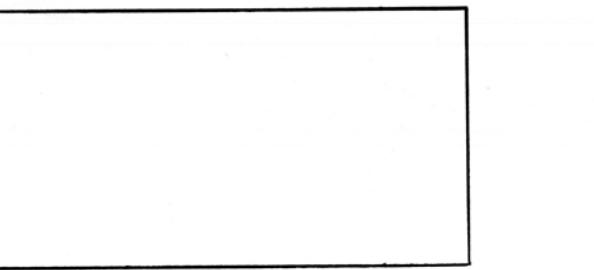


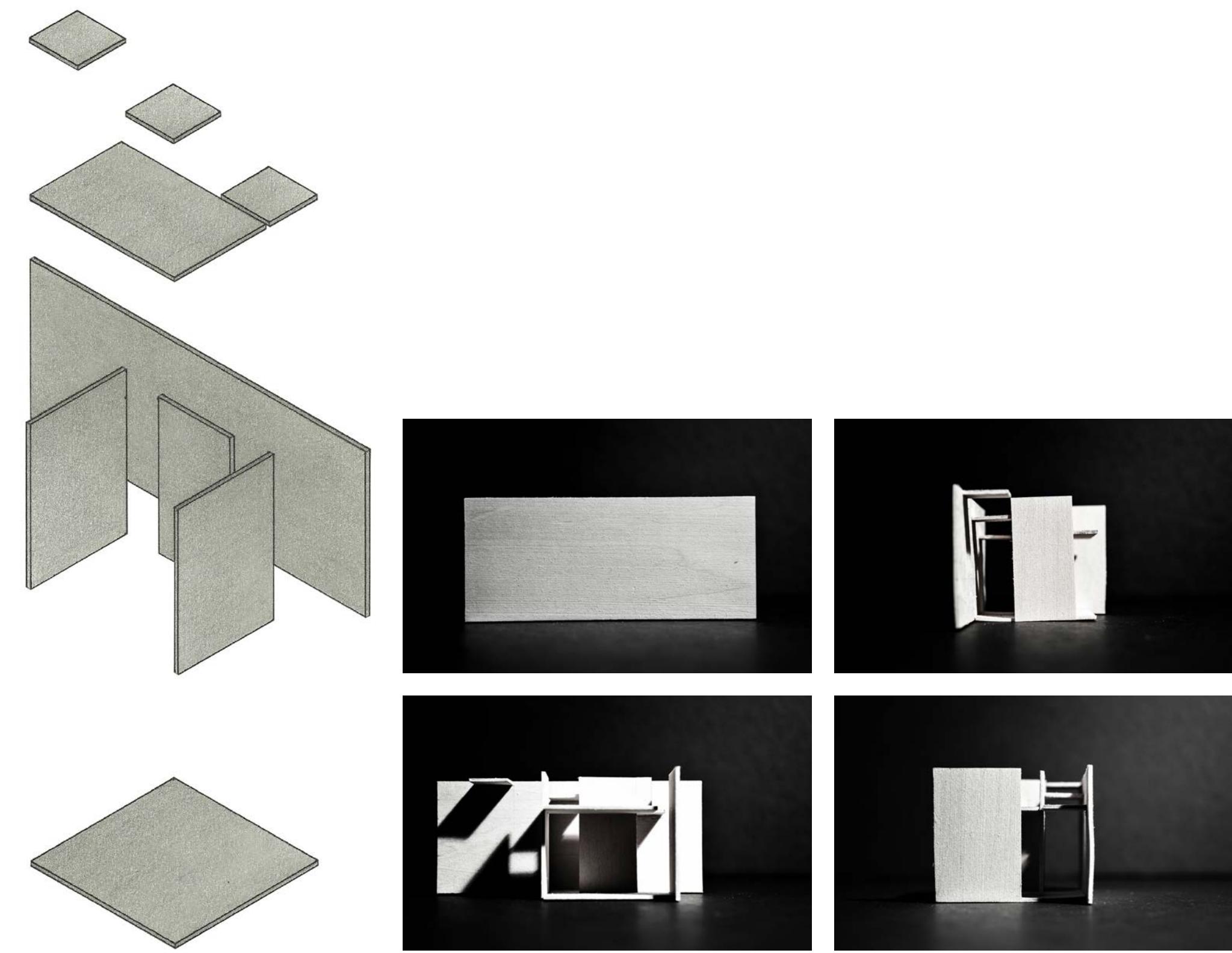
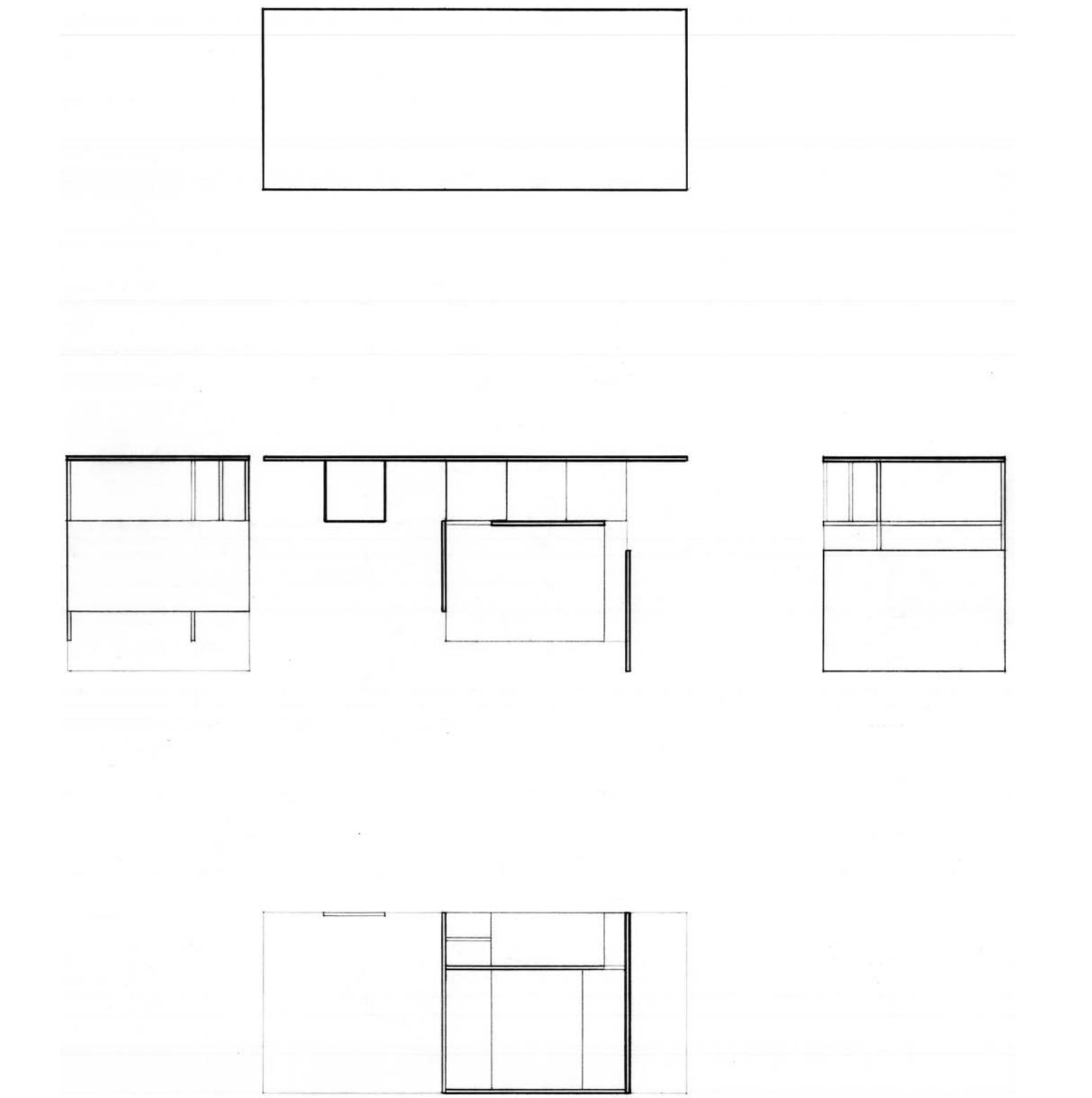


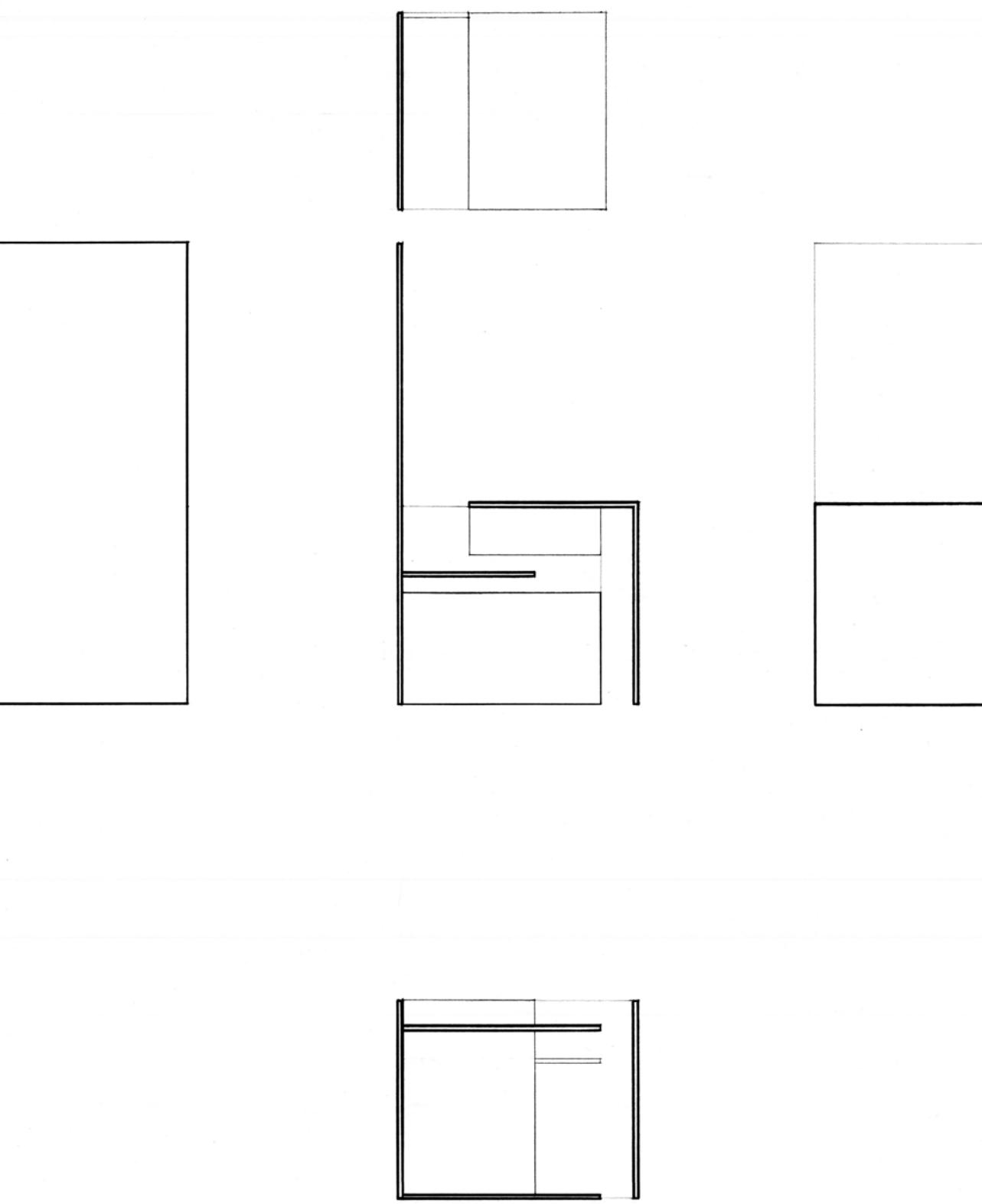
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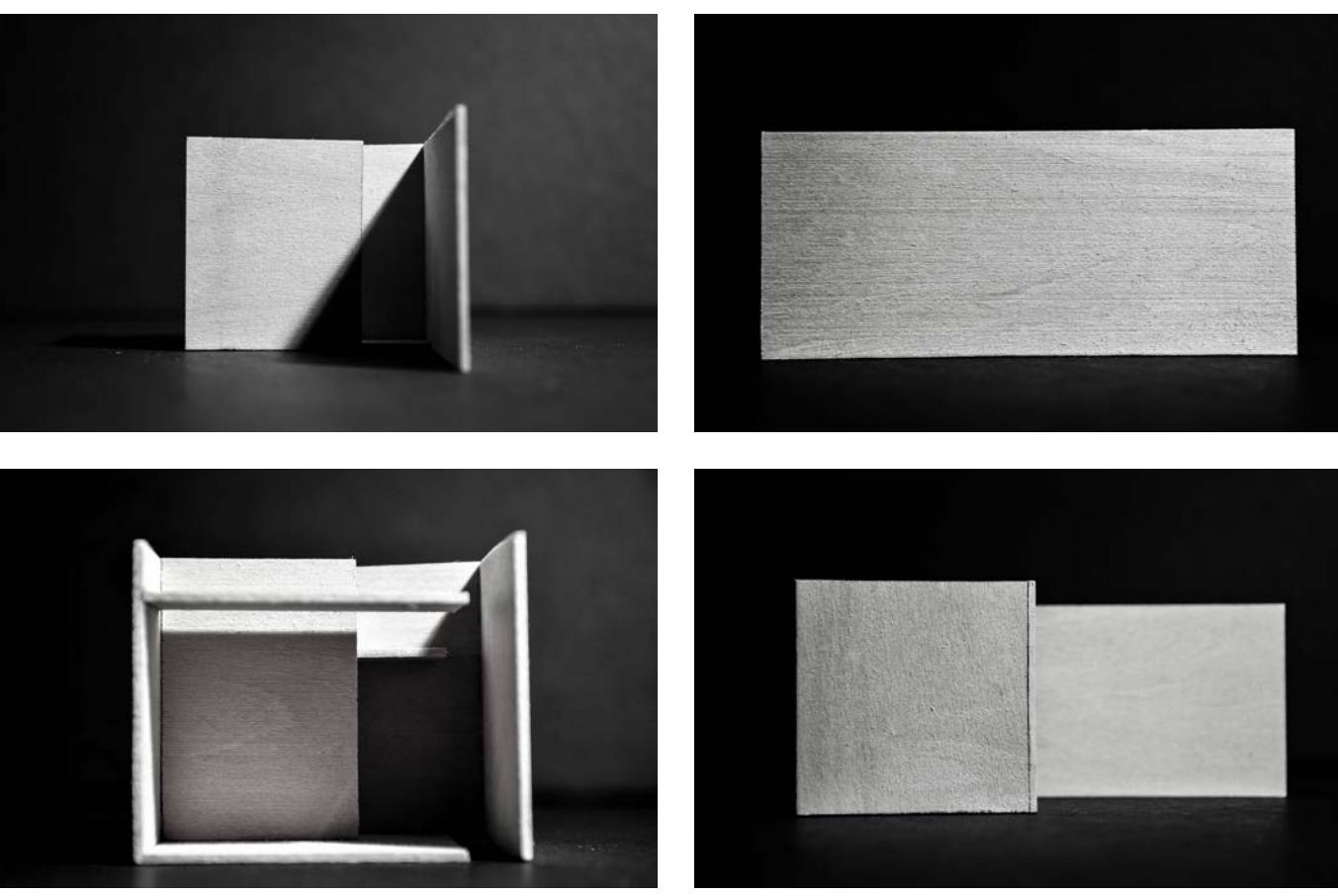
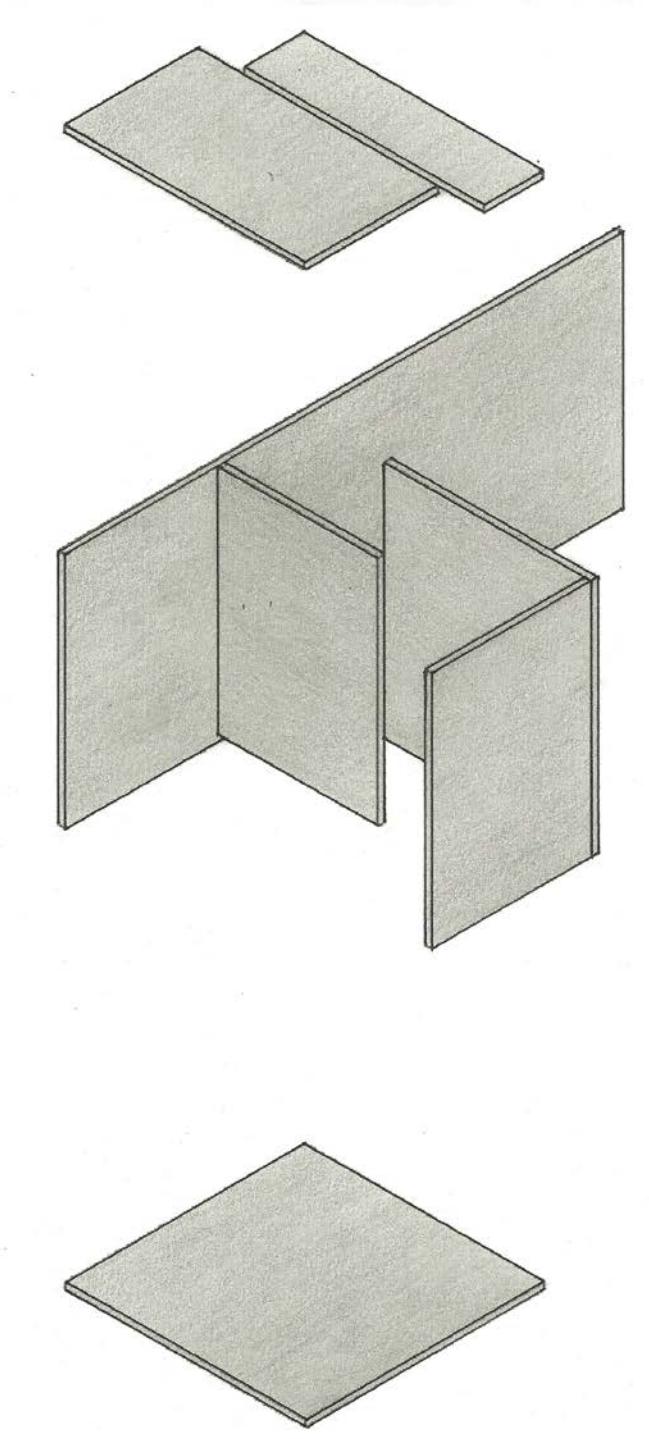
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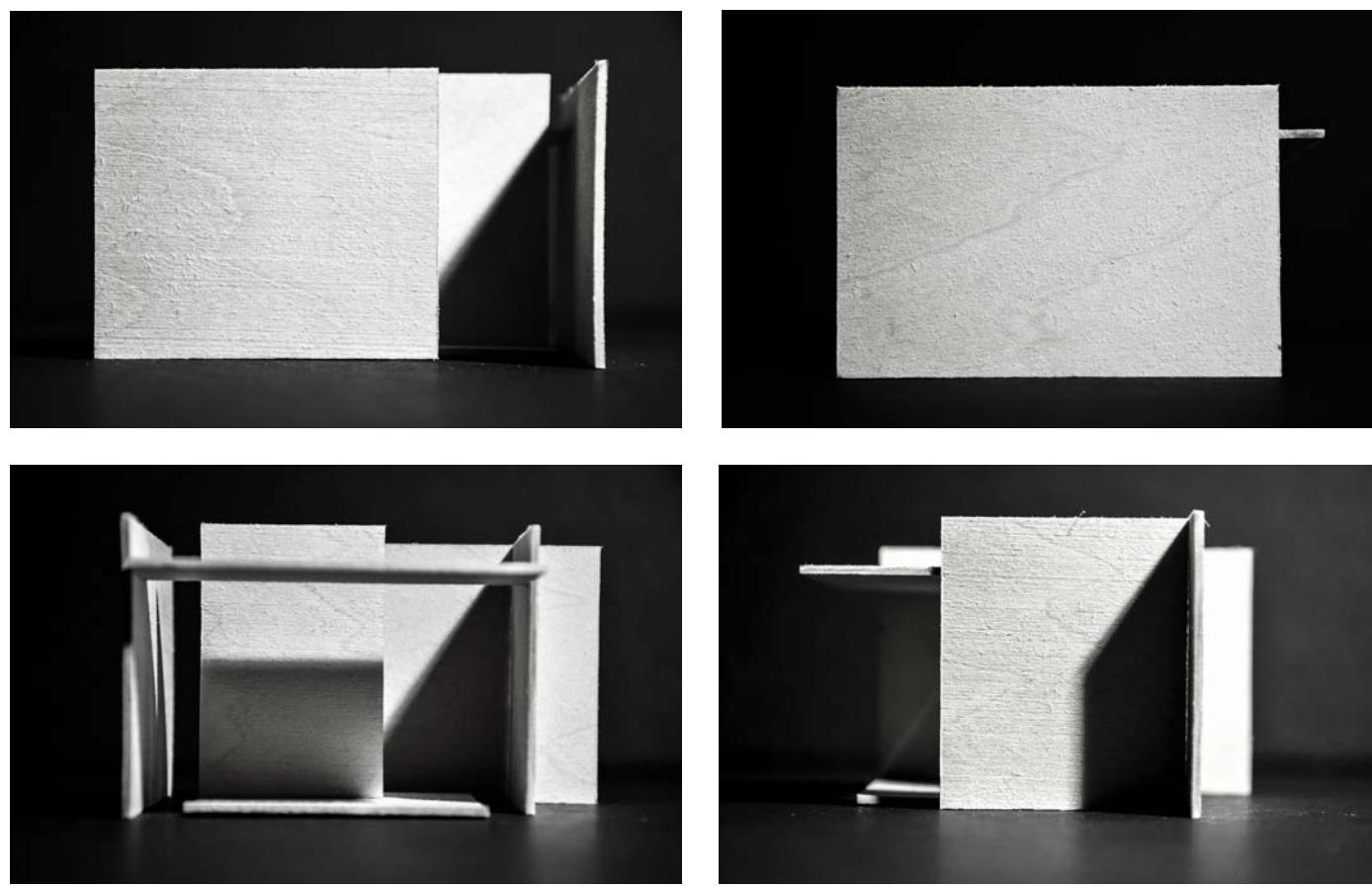
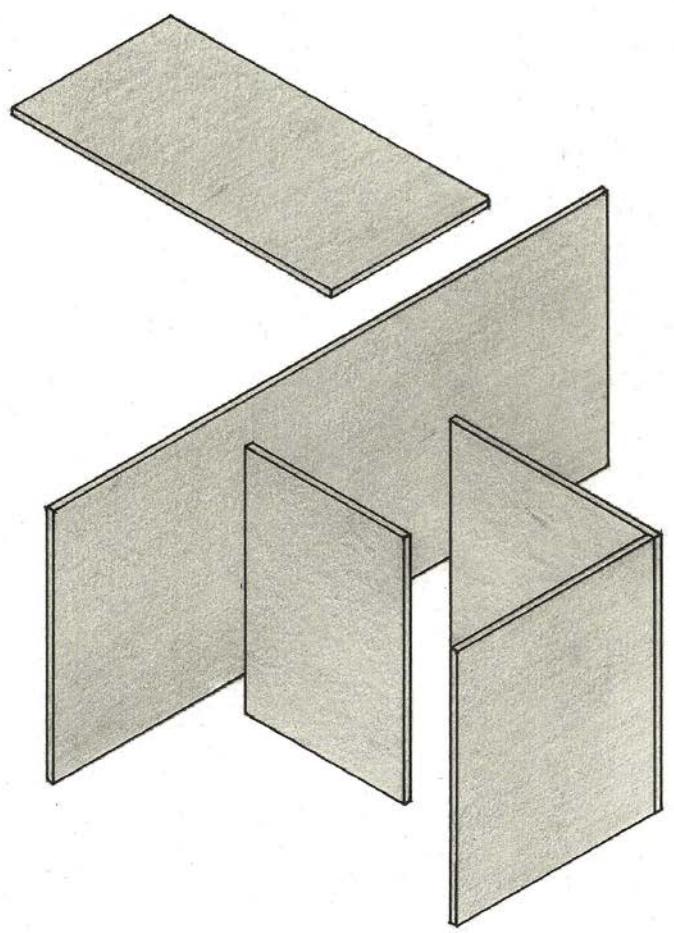
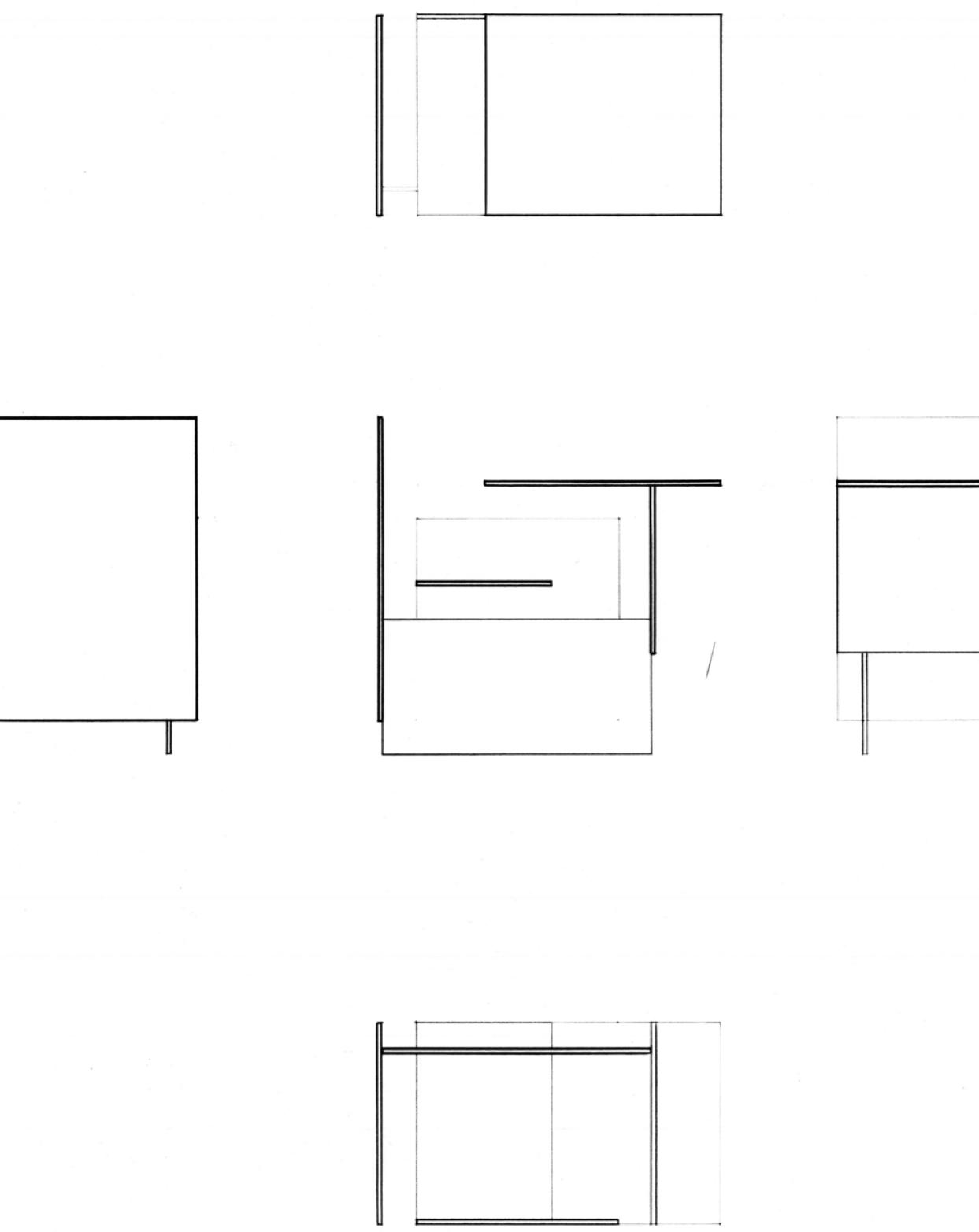


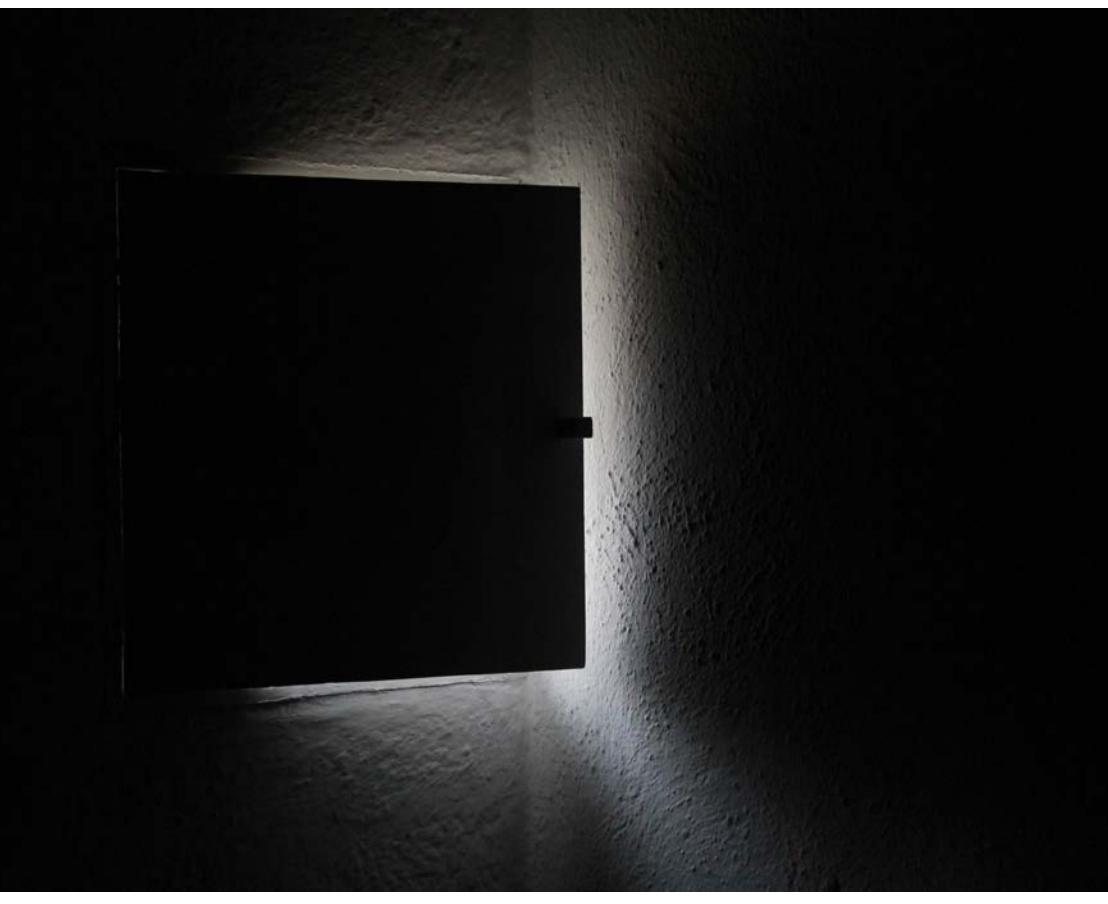


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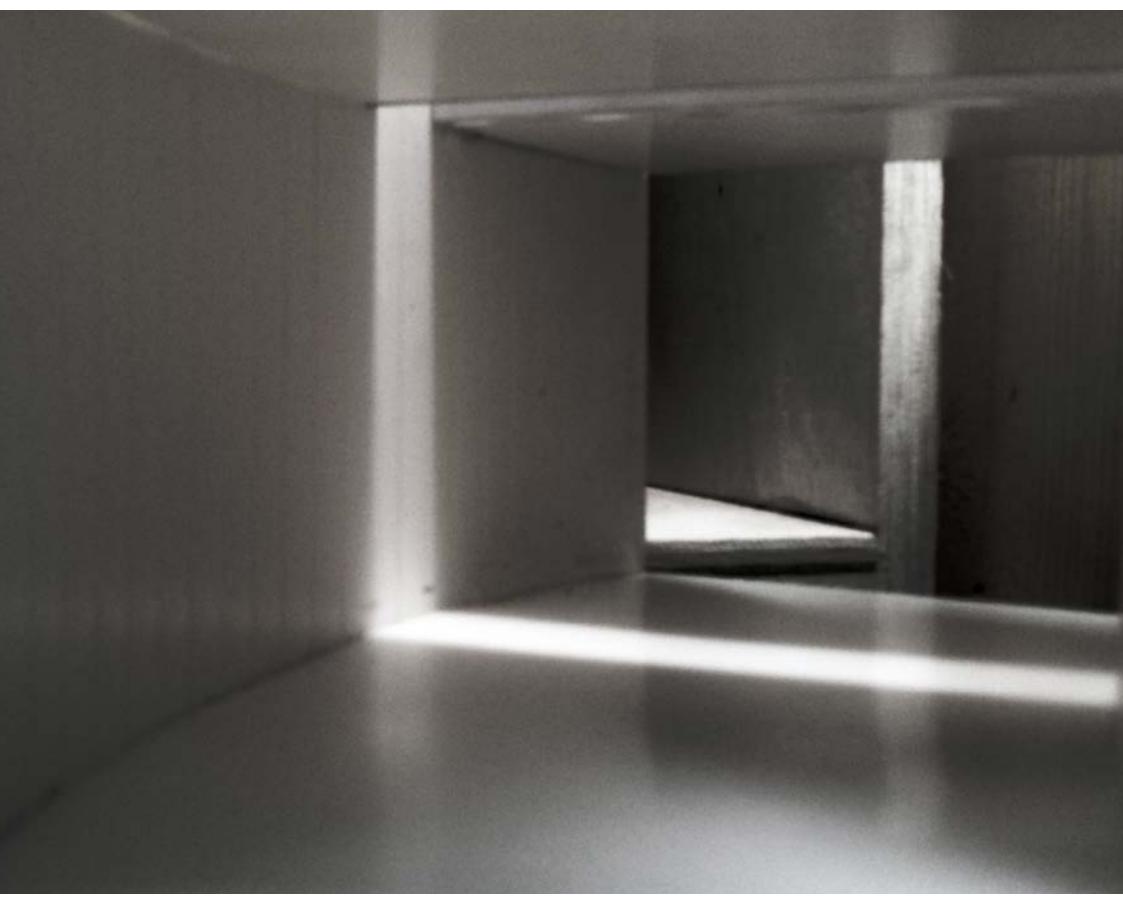


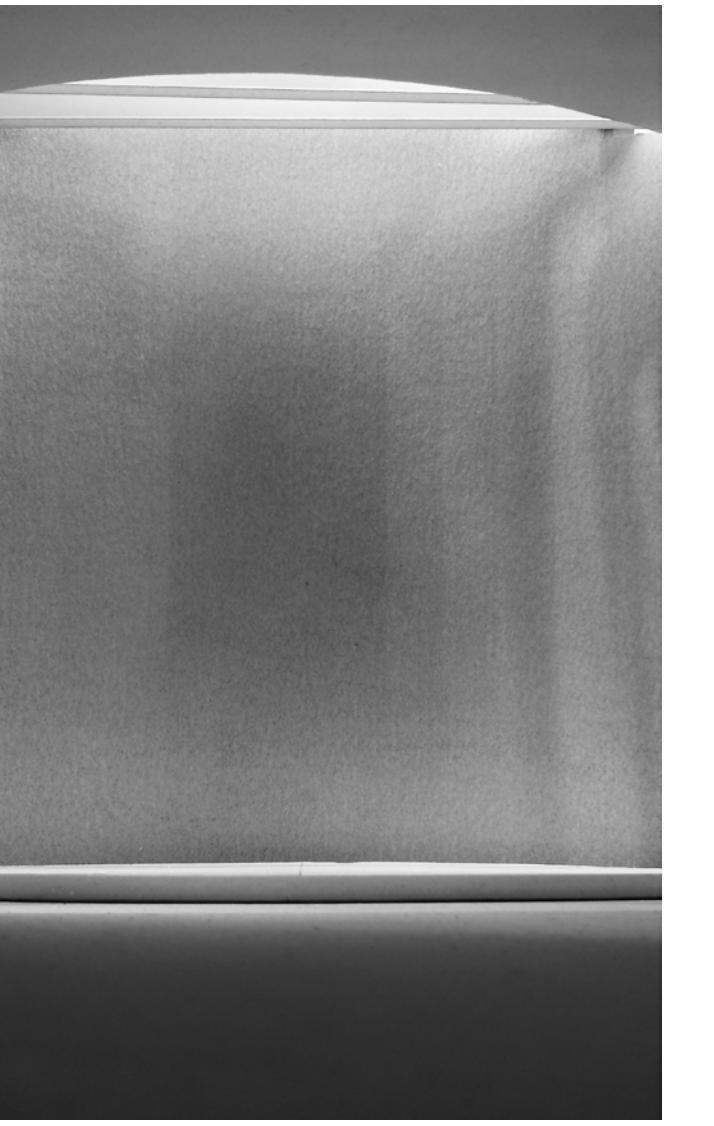
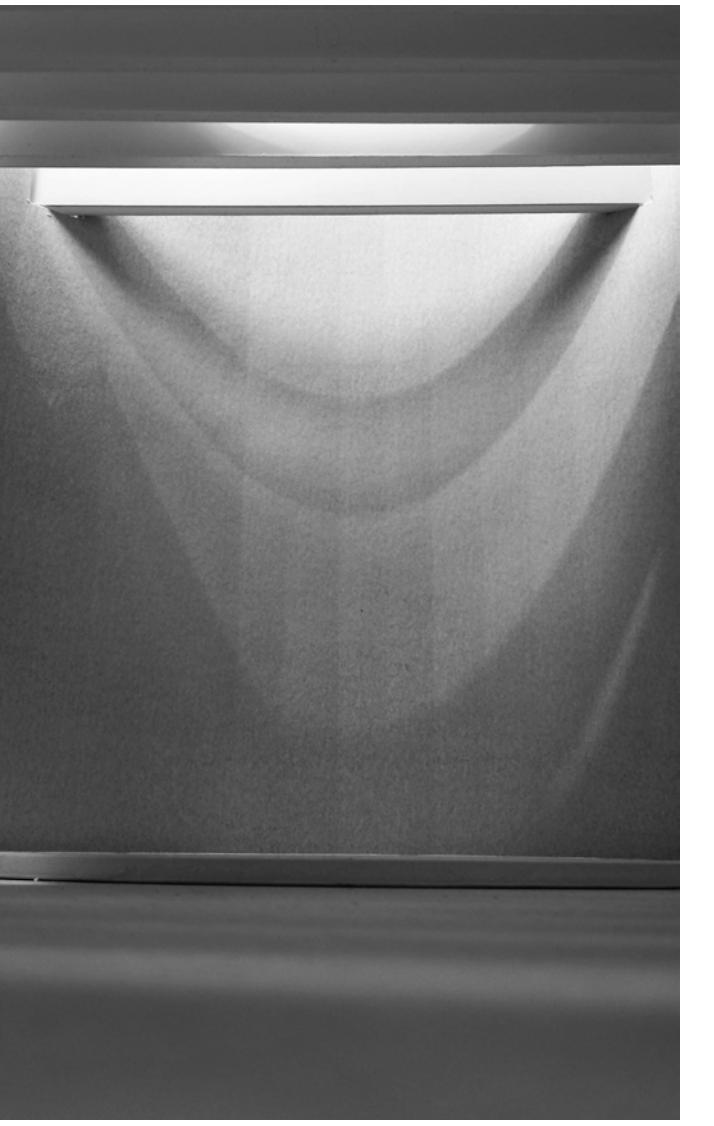
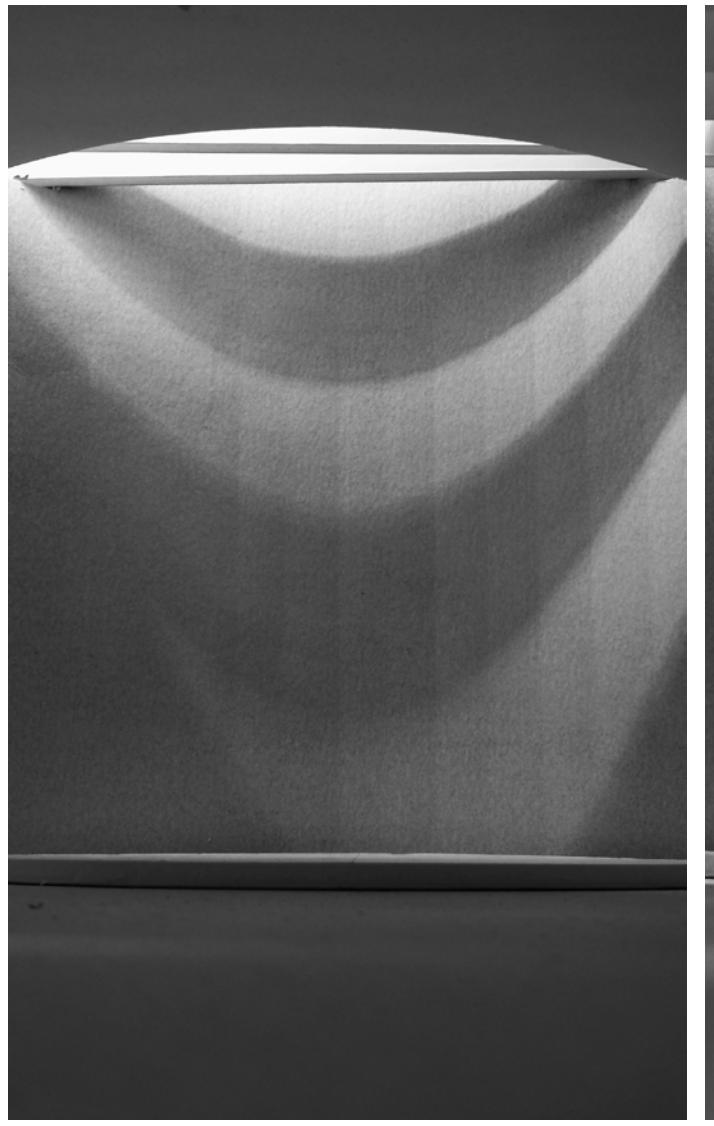
Light

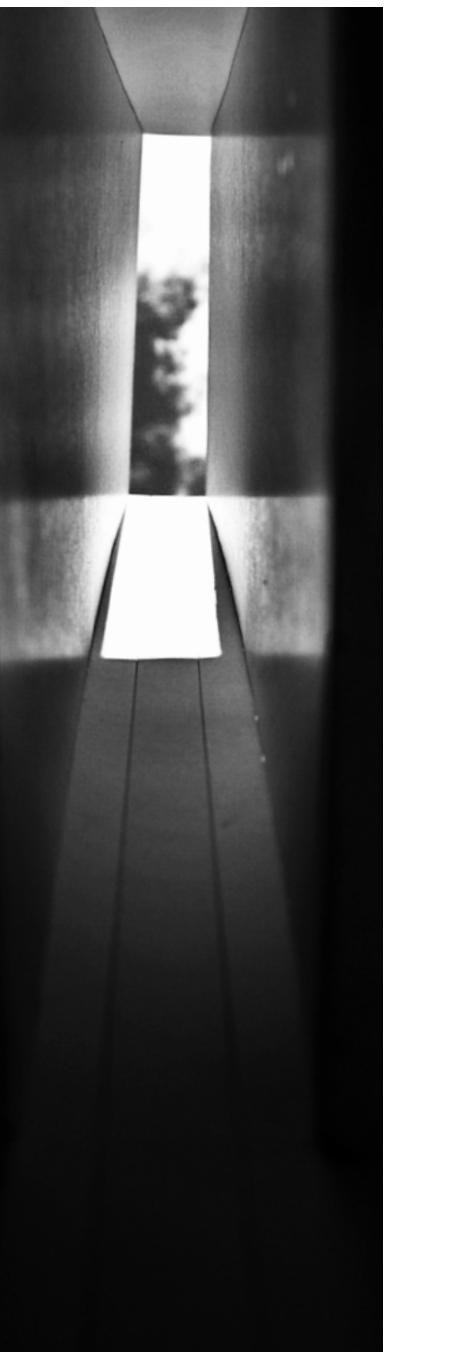
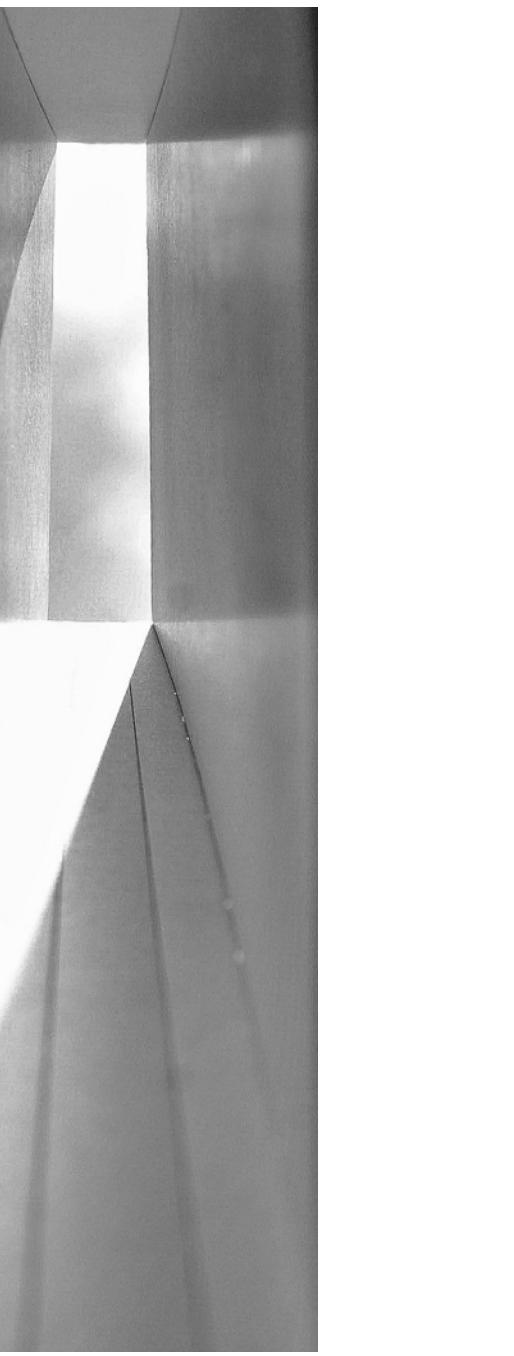
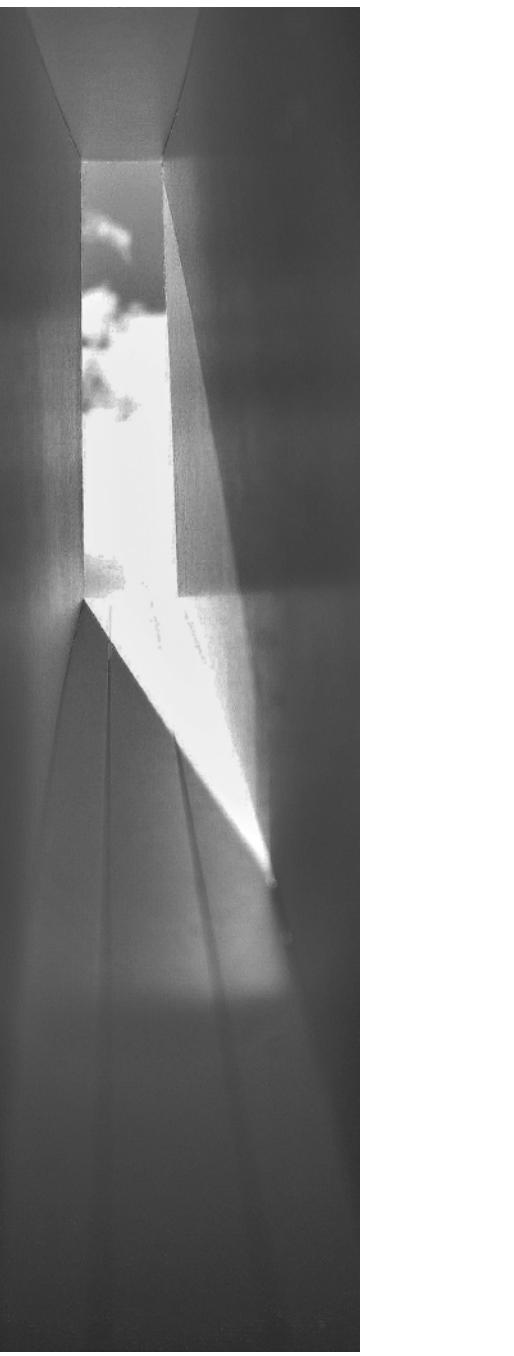
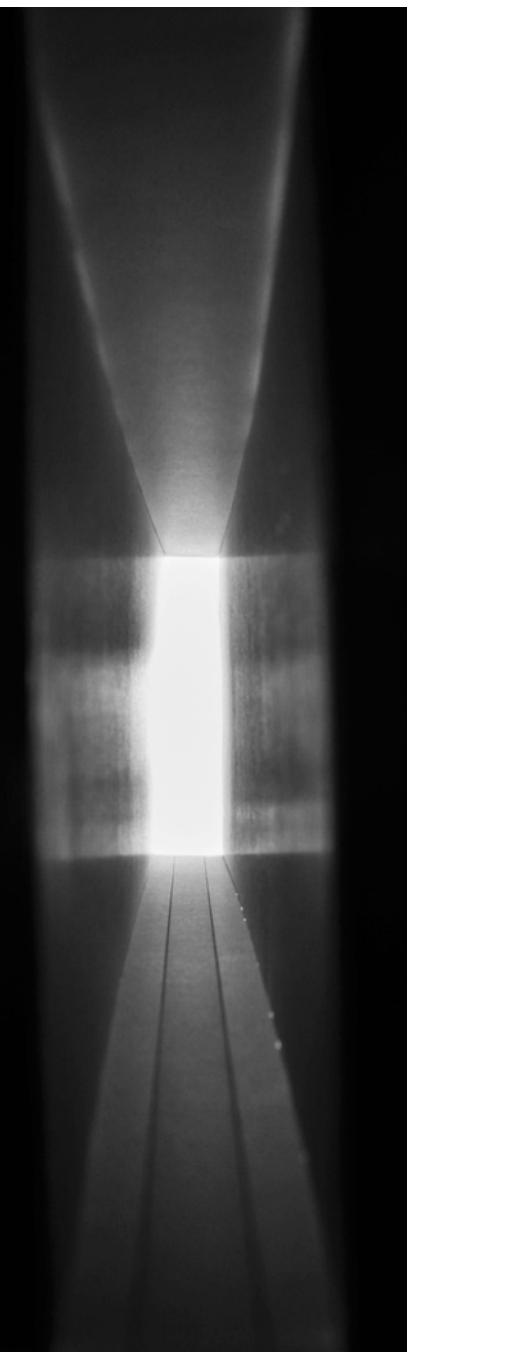


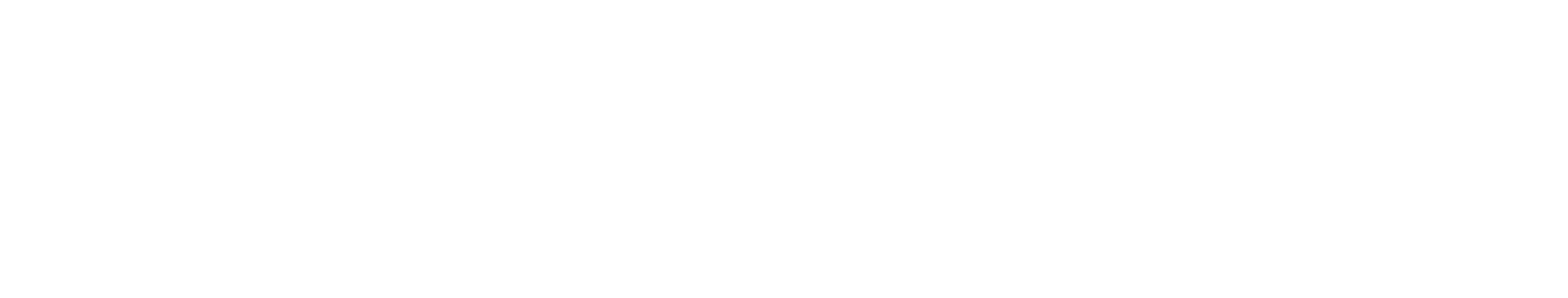
After the lines have been drawn and the material is filled in, the light is what ultimately activates a space. It is a critical element, necessary in the creation of space and has historically played an important role in the idea of sacred space. The following photographs are of study models built to see the effects that light would have in certain spaces or with different roofs at various times of the day.

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### Conclusion

Words are powerful because of the emotions they evoke. Architecture is the same. It is not the words that people use to describe architecture, but rather the emotions it induces, the explorations it suggests, the beauty and ideals that are revealed.

The role of the architect becomes an important one as he or she is entrusted with the opportunity and responsibility to make meaningful spaces for others to inhabit. It is incumbent on the architect to design in a manner that will engage the individual and bring this awareness to the surface. The architect should not design with the masses in mind, but rather the individual. Thinking critically about each individual is akin to thinking about each detail of a building. As evidenced by any good building, the beauty lies in the details.

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