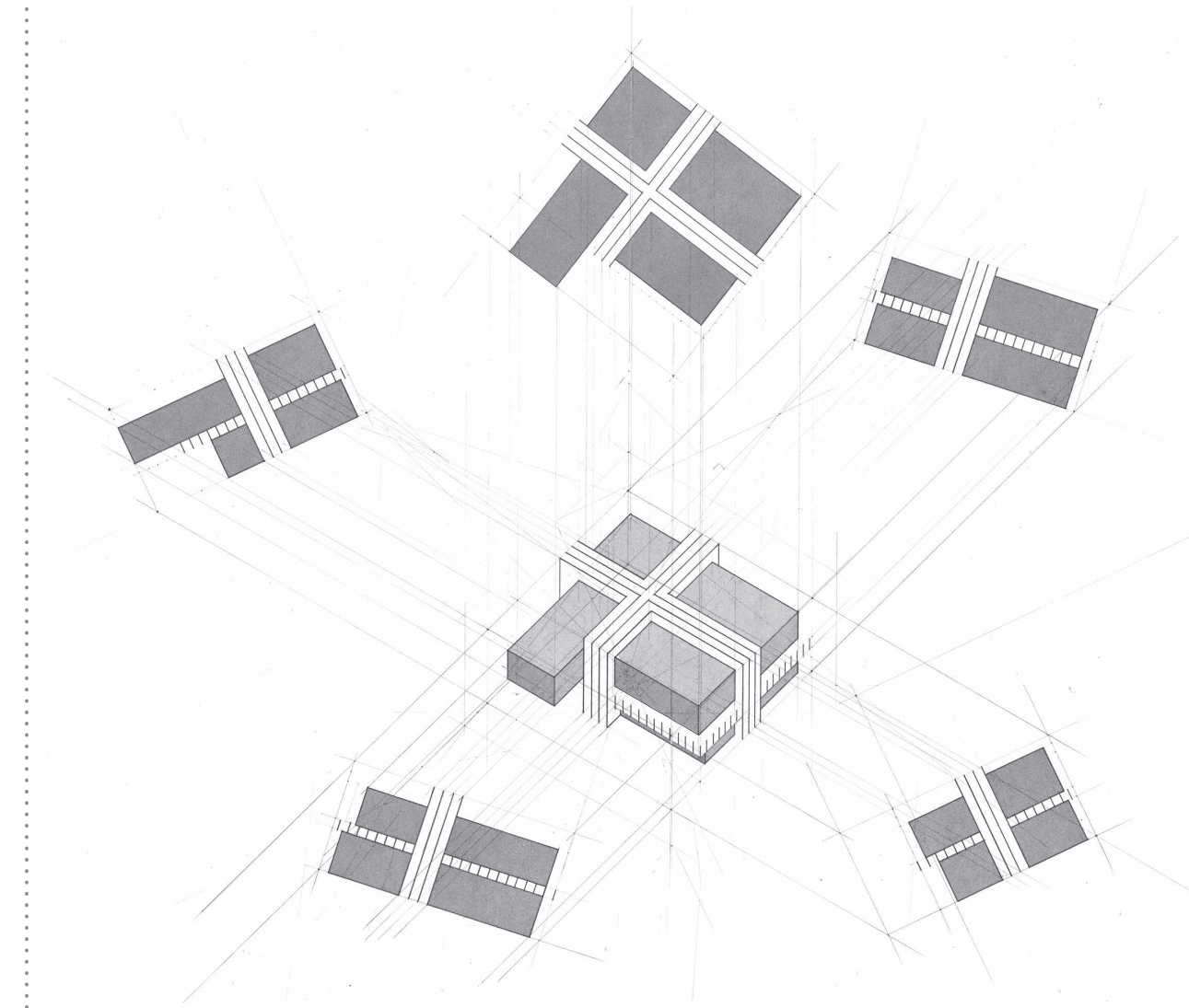


It Doesn't Take Walls

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Thesis submitted to the Faculty
of
the Virginia Polytechnic Institute and State University
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the requirements for the degree
of
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Abstract

Throughout my studio work before this thesis, the consciousness of providing a sense of solitude has always been an underlying force in making design decisions regardless of the program. Consequently, taking a closer look at the idea of solitude in architecture became the starting point of my thesis. The question arises, 'what gives solitude?' Separation by solid walls no doubt gives a feeling of it. It's straightforward and simple. But does it always take walls to do that? Do people always need that level of separateness?

The thesis takes the form of a residential house, exploring different ways of separating a space while answering different needs for solitude. It experimented with a diversity of architectural devices designed to demarcate functional units in the house with respect to their varying demands for solitude. Individual spaces are examined based on where they fall on the spectrum: from the most secluded to the most inclusive. Efforts are made to refrain from resorting to full size walls when not necessary. The actual means of separation used for a certain space is usually a balance between the desire for seclusion and the urge to evade walls.

The form of the house unfolds from the order of an overarching cruciform structure, dividing the space into four quadrants, which are further bisected by a horizontal plane producing a total of eight cubic spaces. Each space is shaped with different dimensions suitable to their respective assigned functions, but all fit into a spatial matrix of two-foot spacing points. A featuring cross is brought out and made visible on the roof, plan and each of the four façades.

To the three years of life.
August 25, 2014 – August 11, 2017

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Acknowledgments

I would never have imagined that during three years I could meet so many people with so much kindness. Having the luxury to indulge myself into this thesis took the right group of people, precious resources and perfect timing, which have collectively paved the road. I express my gratitude to all that have brought me to where I am today. Here I would also like to give special thanks to

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my fellow studio colleagues, for inspiring me on a daily basis, and for making these three years so much more enjoyable;

and my parents, for their understanding.

It was quite a journey and these are all I could ever ask for.

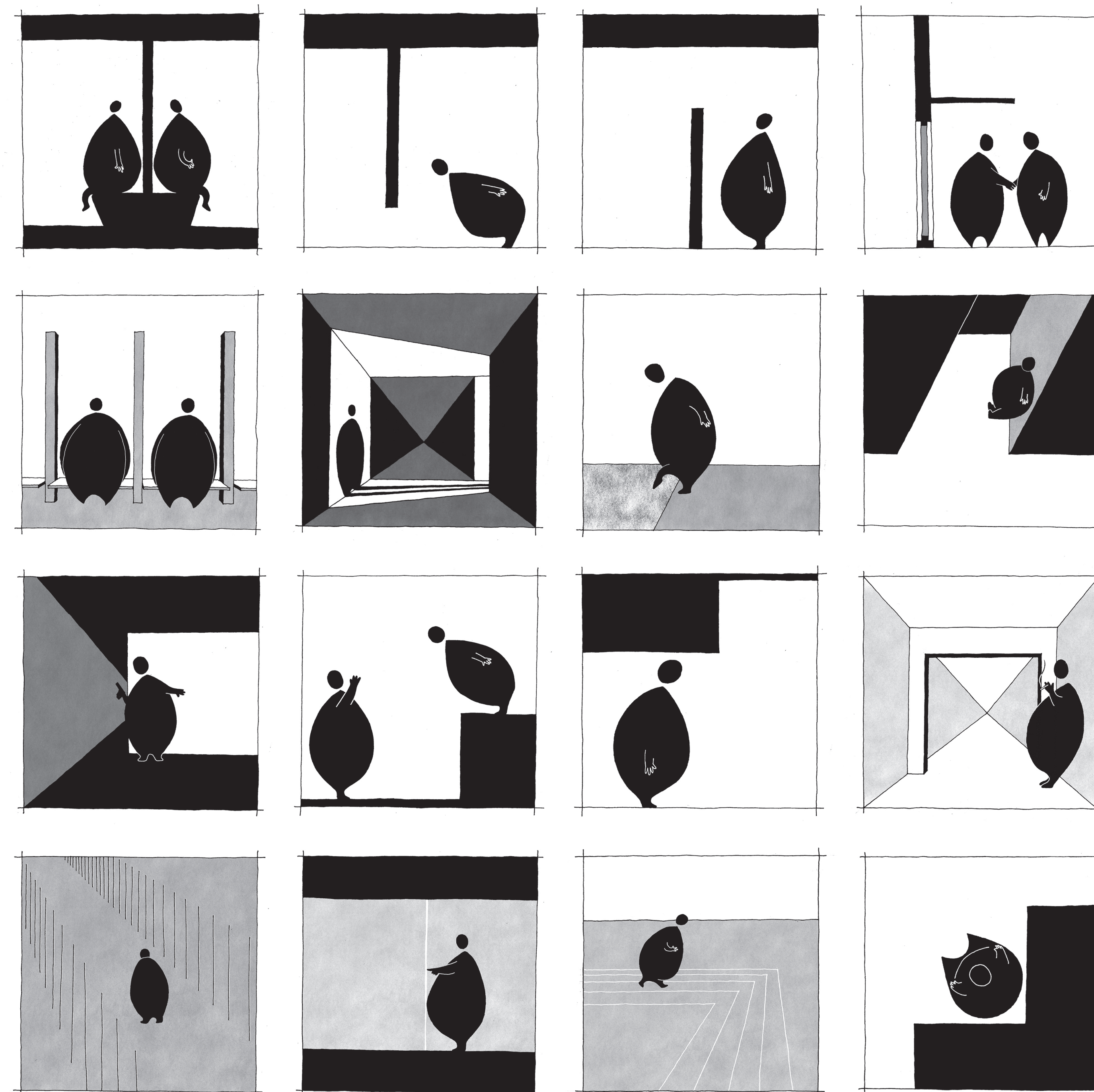
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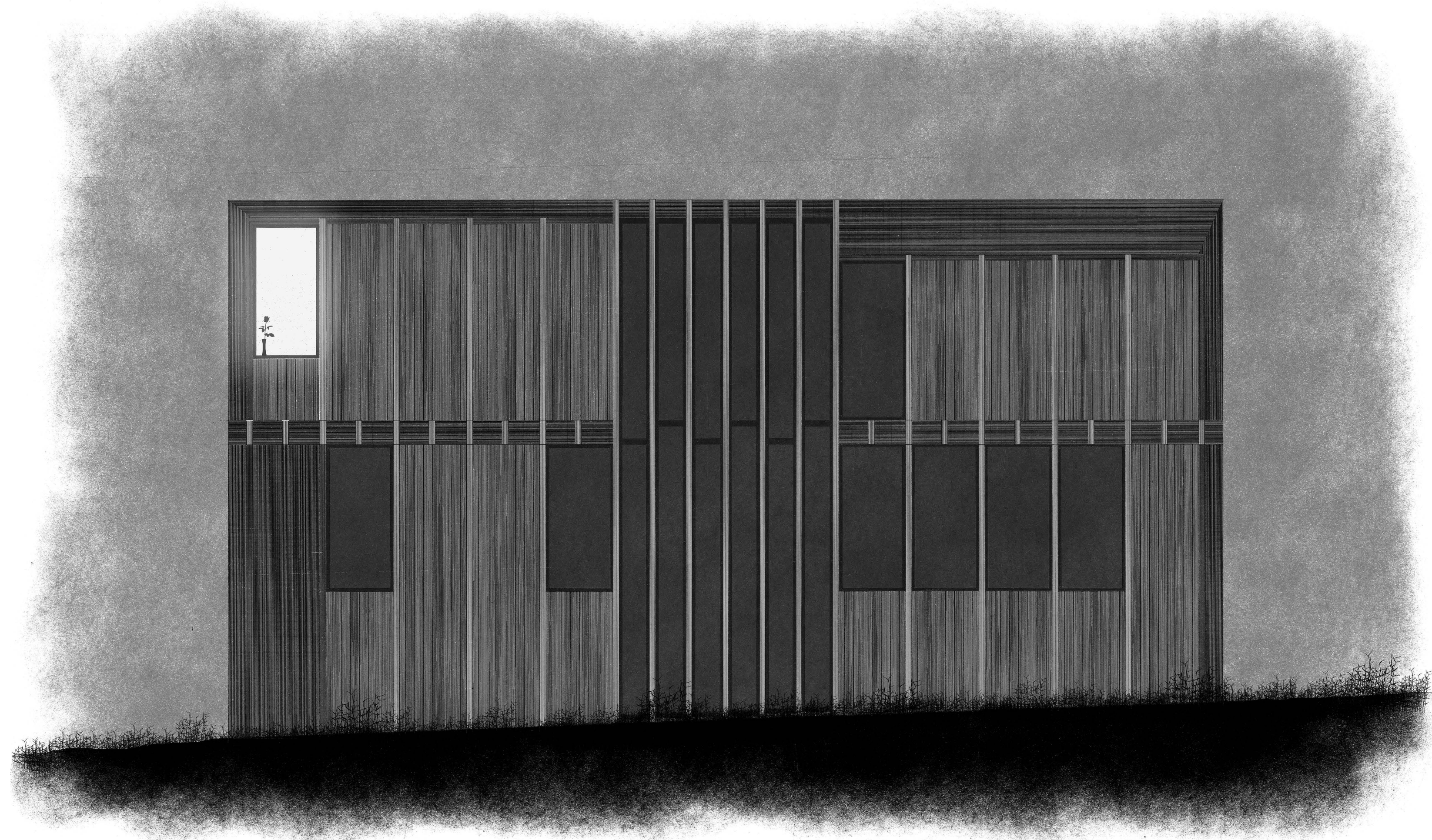
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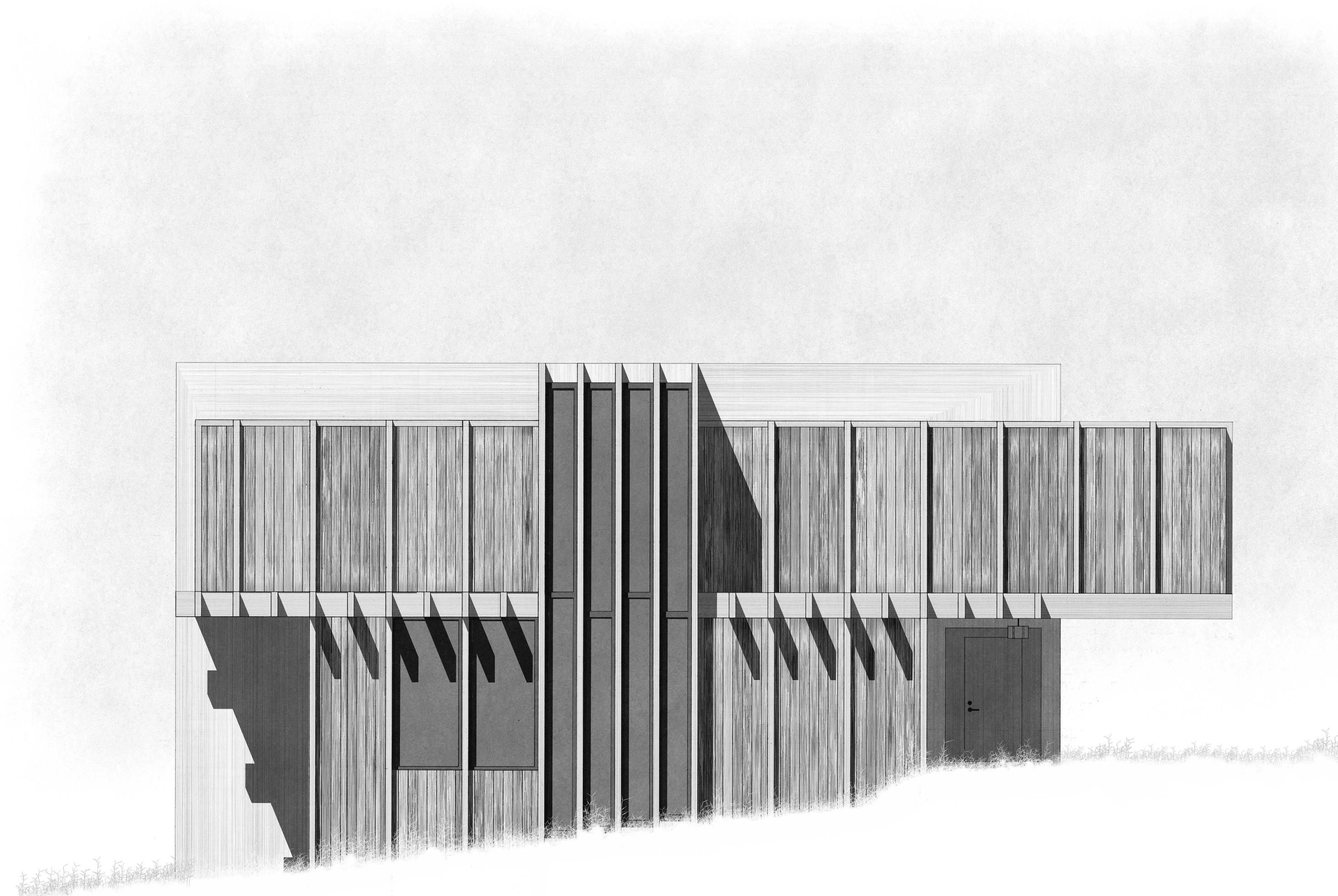
These cartoon diagrams illustrate the following sixteen different architectural devices designed and used to demarcate functional units in the house. In this thesis, a functional unit could be as small as a reading corner within a room, or as large as an entire floor. Each unit is then made distinguishable with one or a combination of these devices, suitable to its function and its desired level of solitude. ▶

- Full-size partition
- Truncated partition hanging from the ceiling
- Truncated partition sitting on the floor
- Overhanging structure
- Post
- Light
- Change of material
- Recessed surface
- Open end partition
- Change of floor level
- Change of ceiling height
- Lintel
- Screen
- Transparent partition
- Change of directionality
- Re-entrant corner

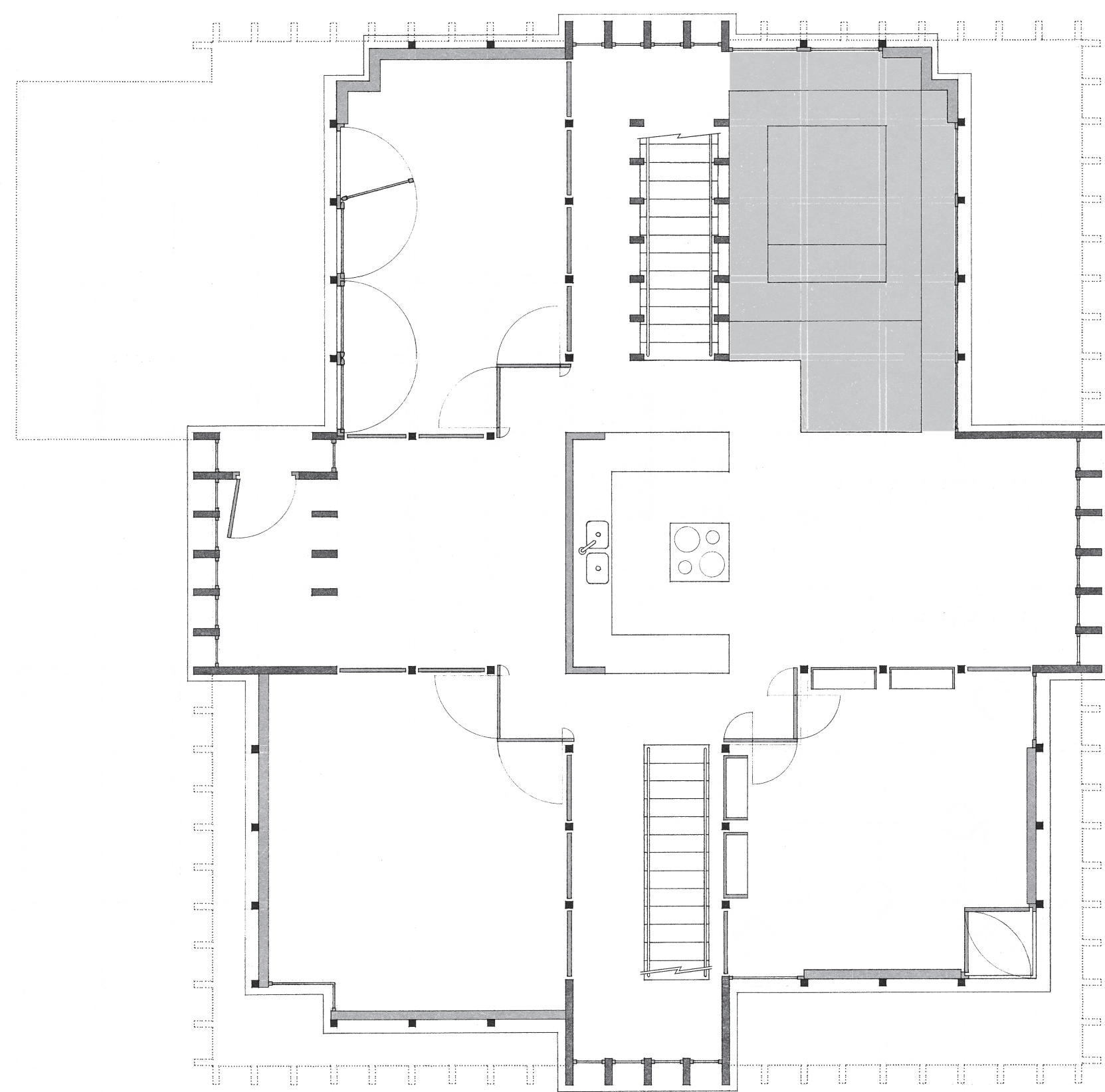




▲ "Spilled from the interior"



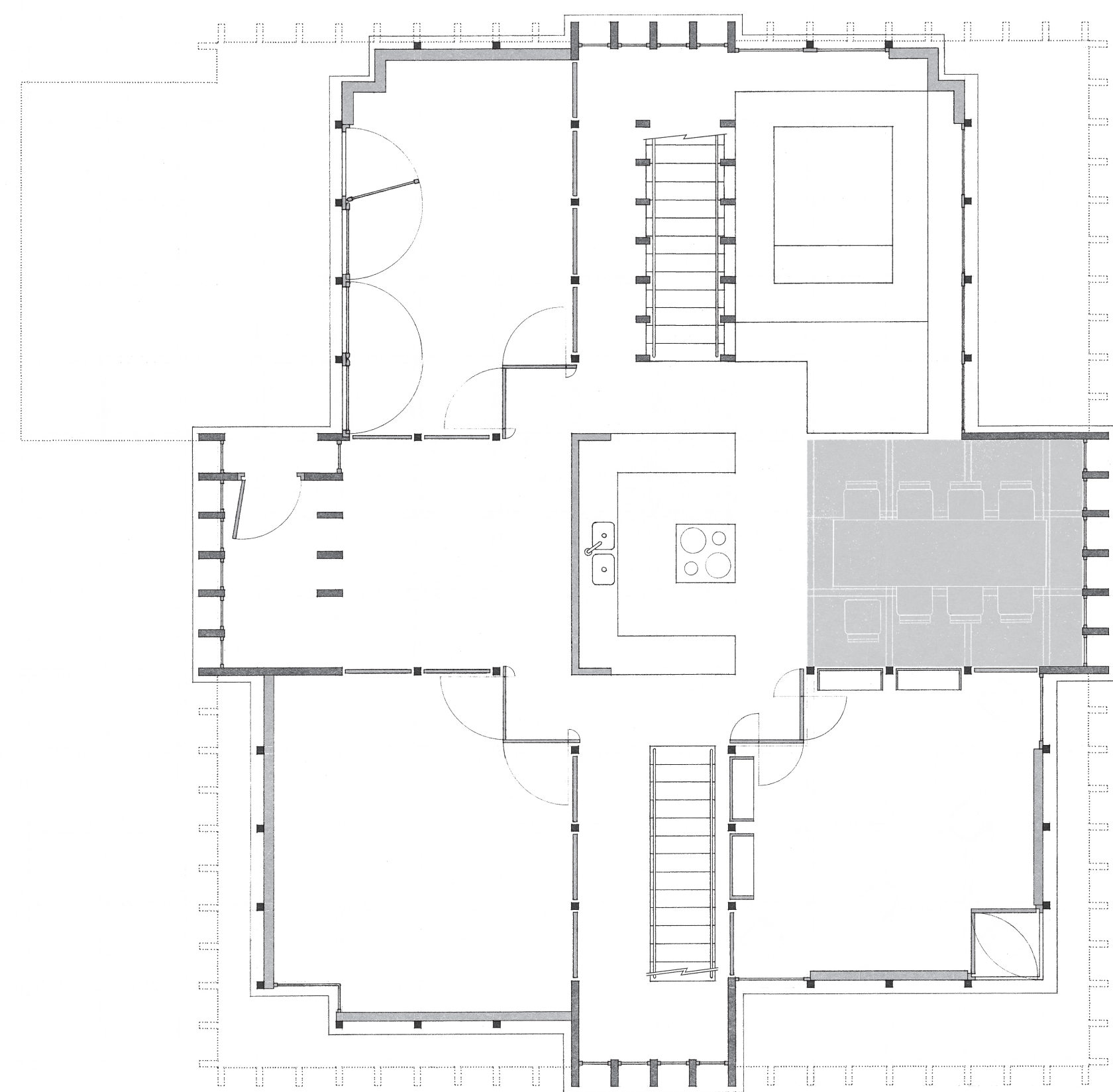
"Hidden behind the exterior" ▲



▲ First floor plan with the illustrated area highlighted



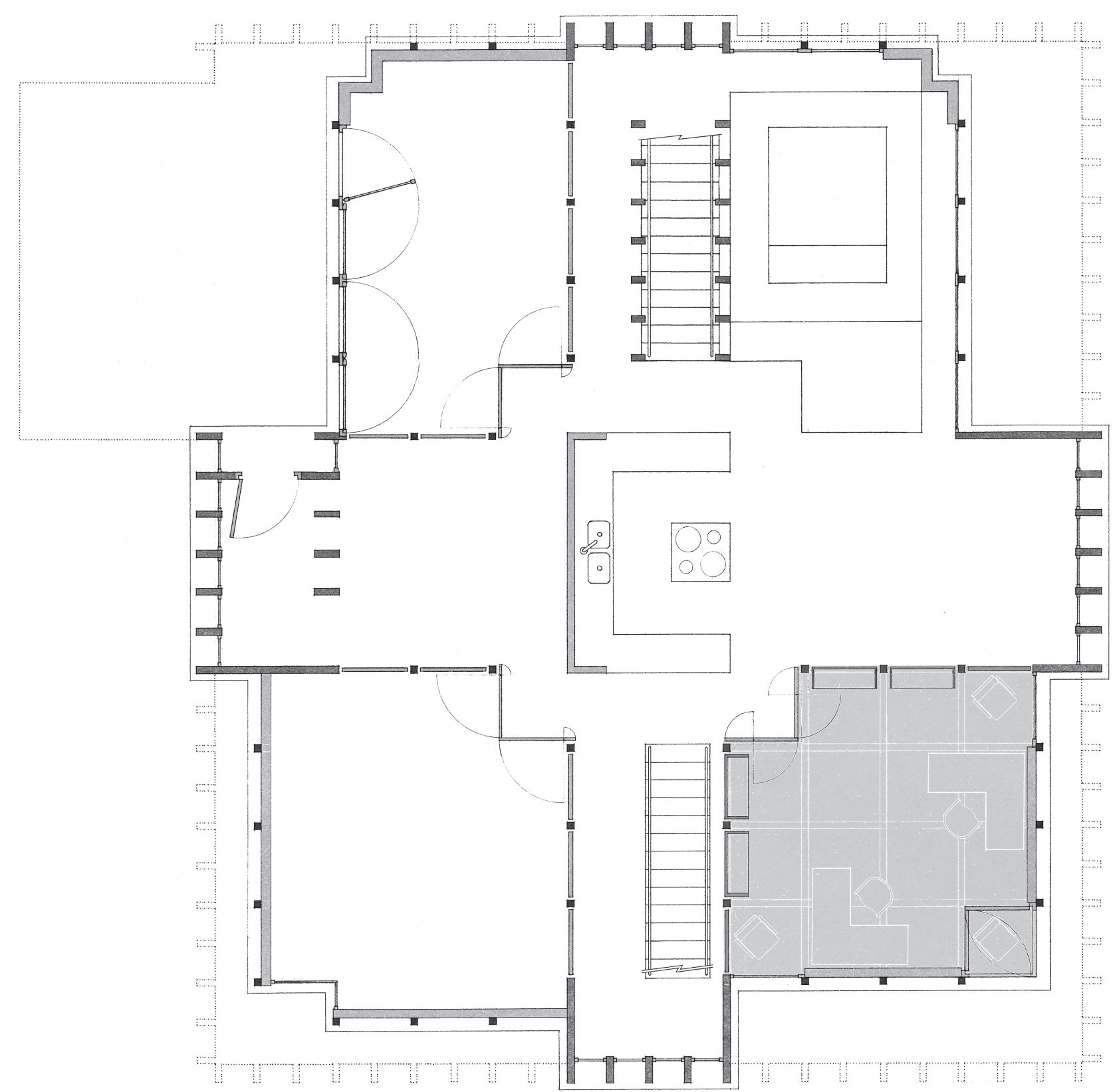
"When you enjoy others around" ▲



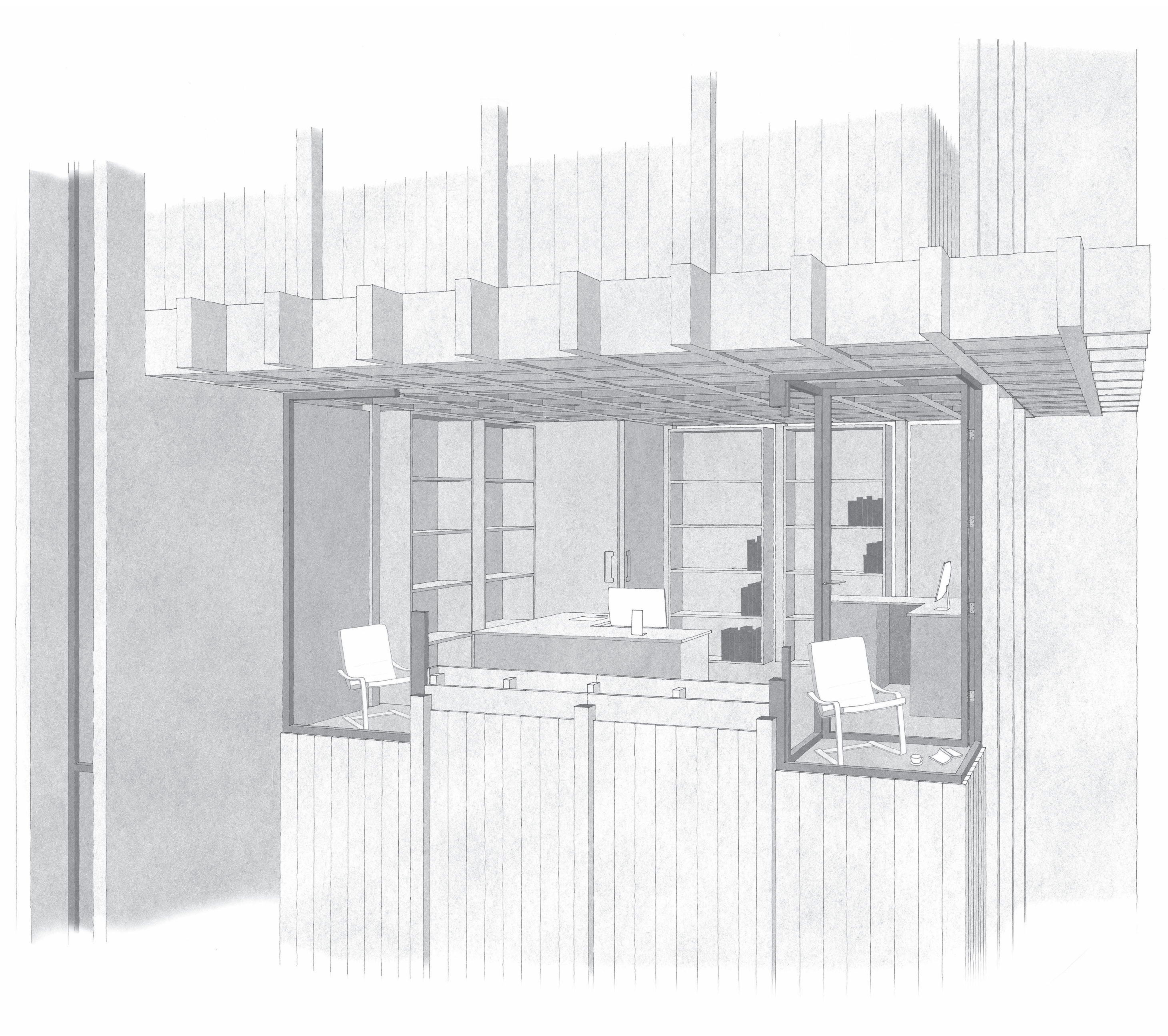
▲ First floor plan with the illustrated area highlighted



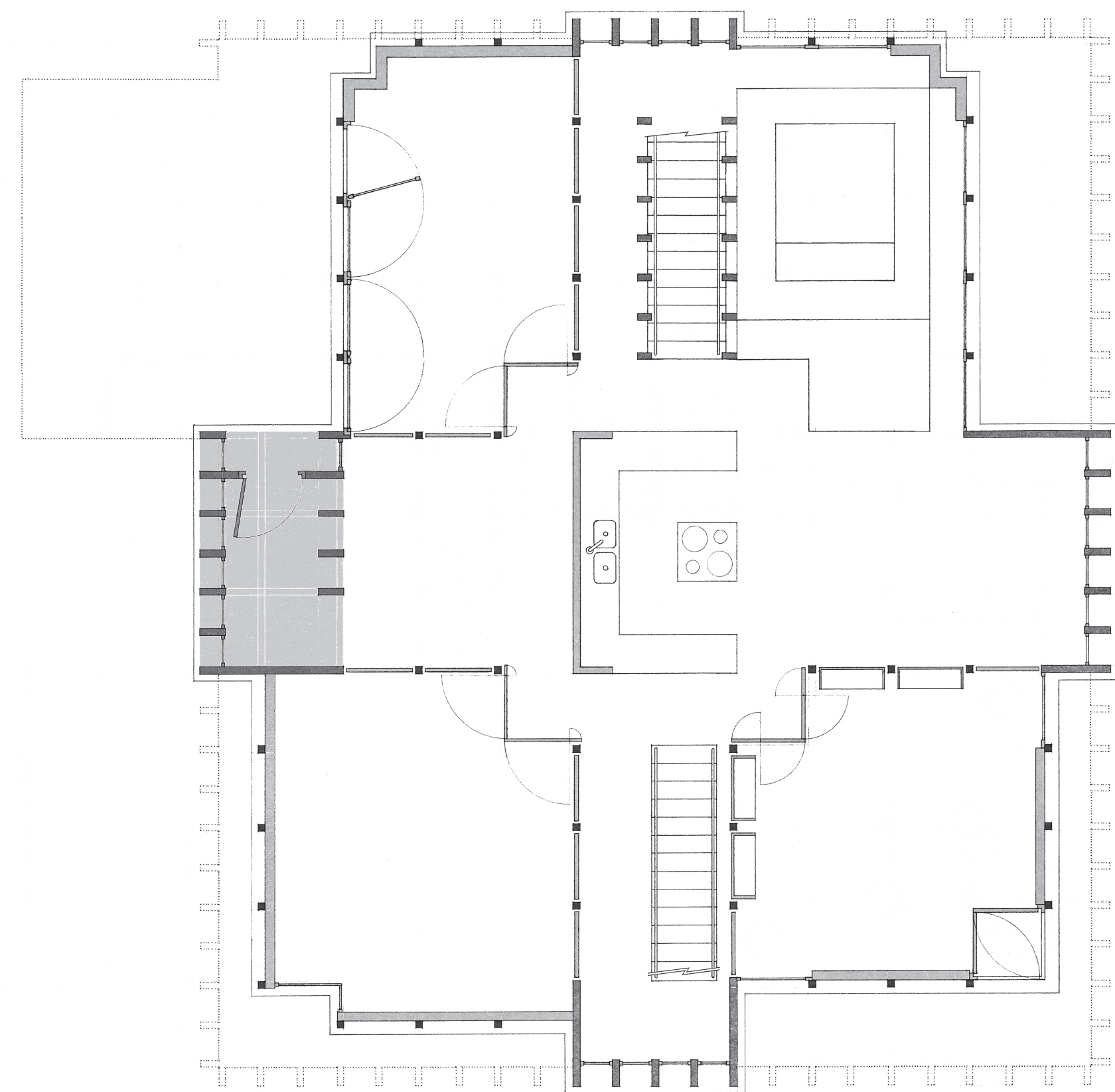
"Where guilty pleasures happen" ▲



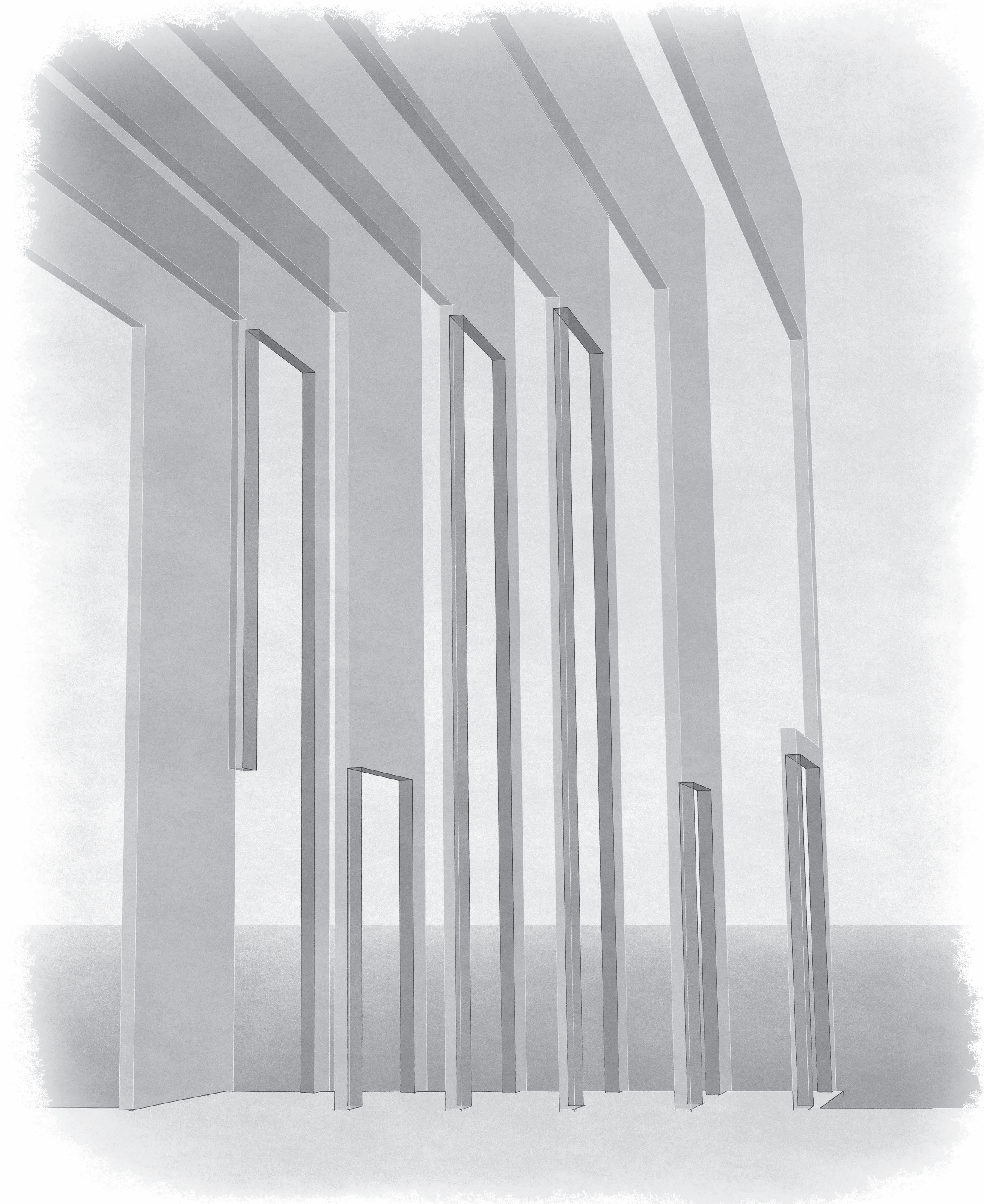
▲ First floor plan with the illustrated area highlighted



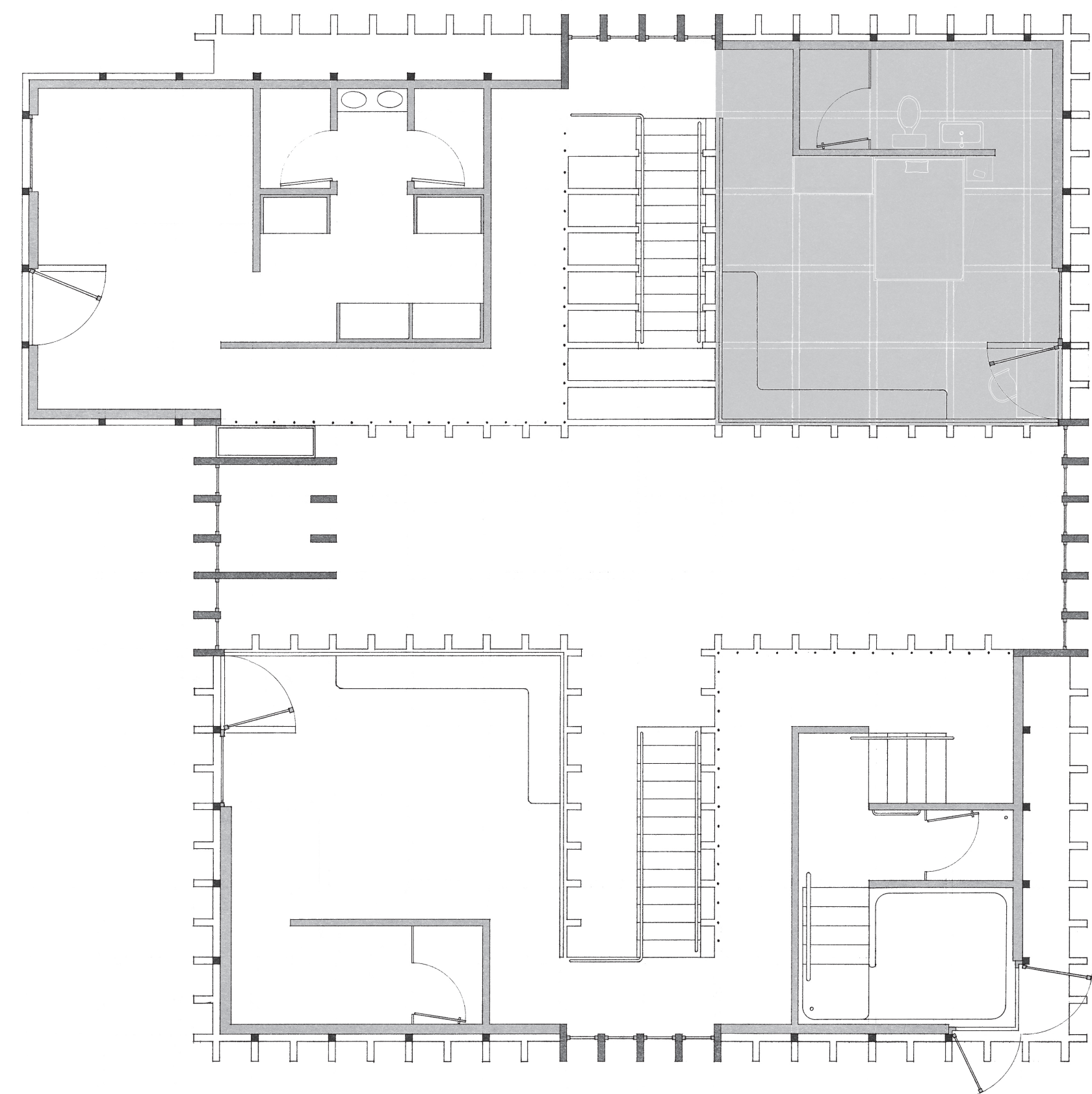
"With man's best friend" ▲



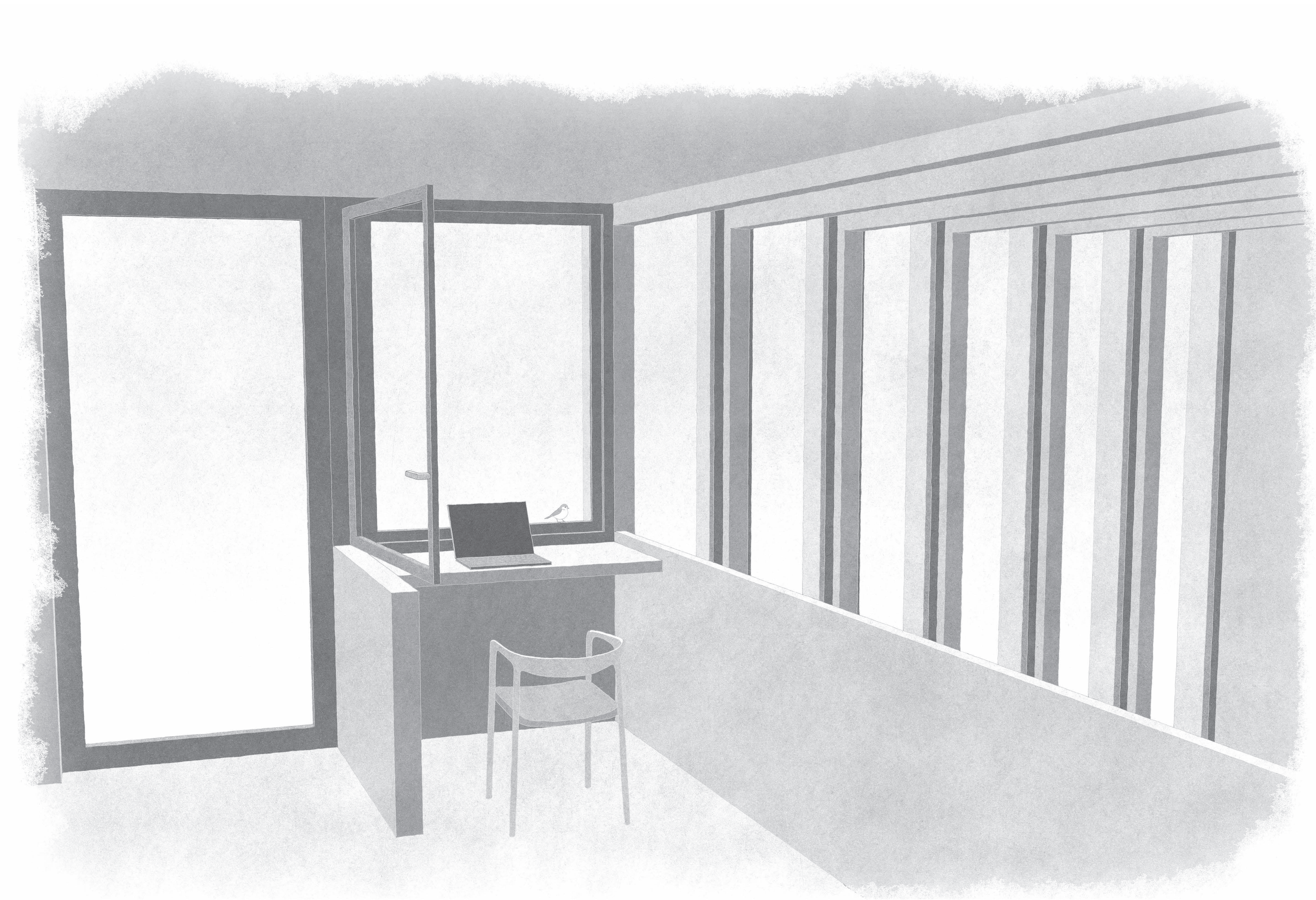
▲ First floor plan with the illustrated area highlighted



"Rite of passage" ▲

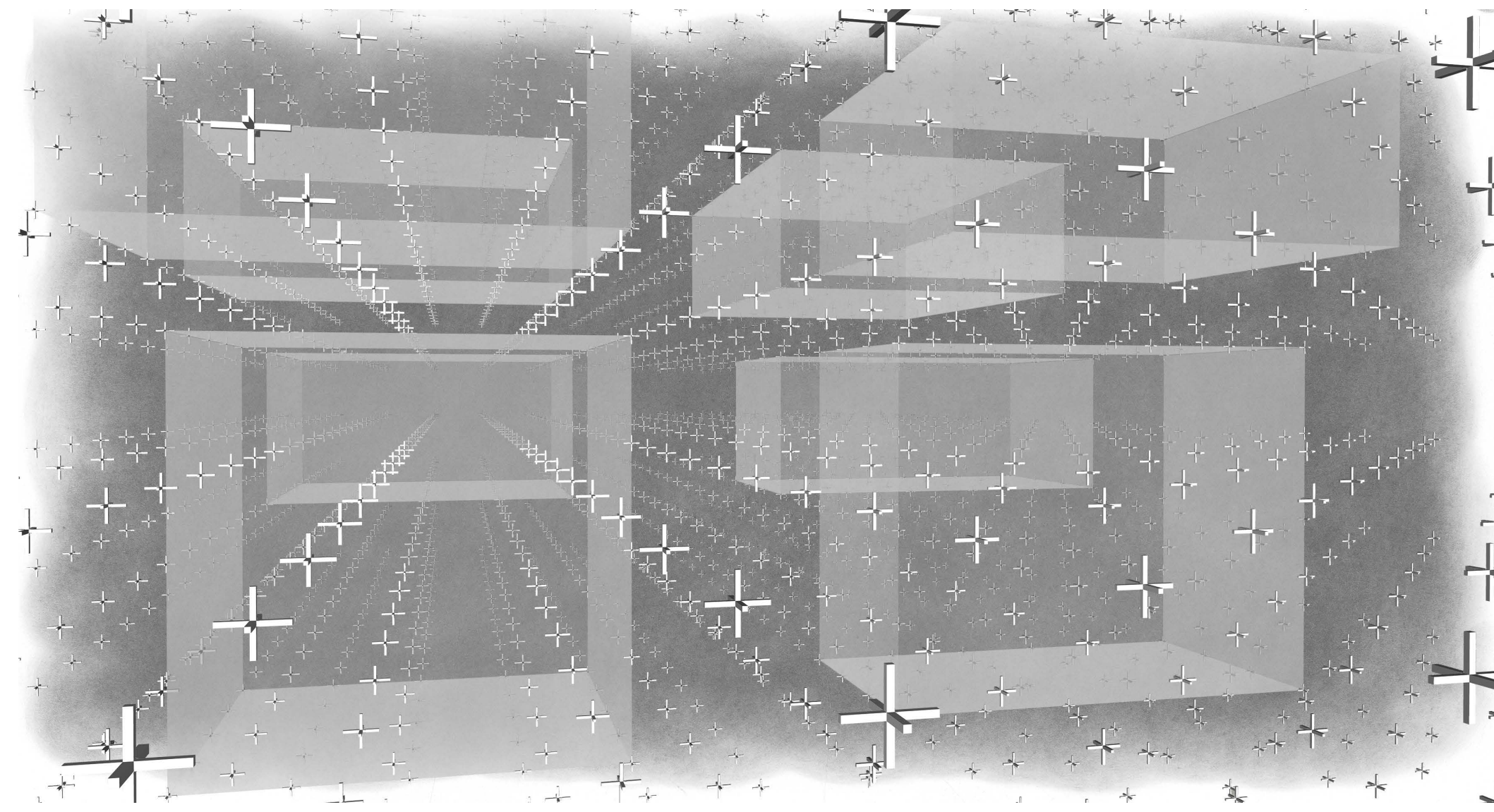


▲ Second floor plan with the illustrated area highlighted

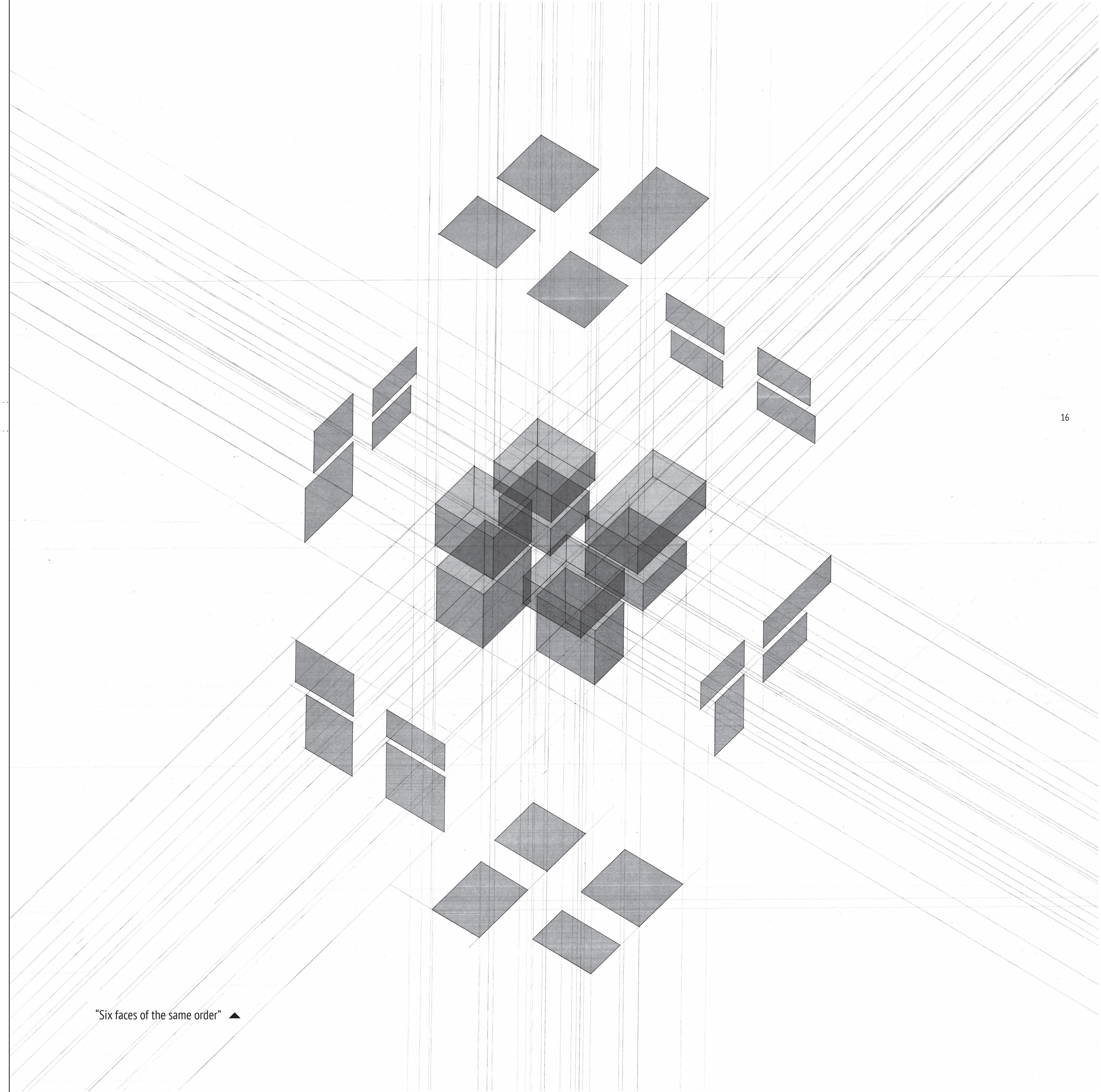


"Quality time alone" ▲

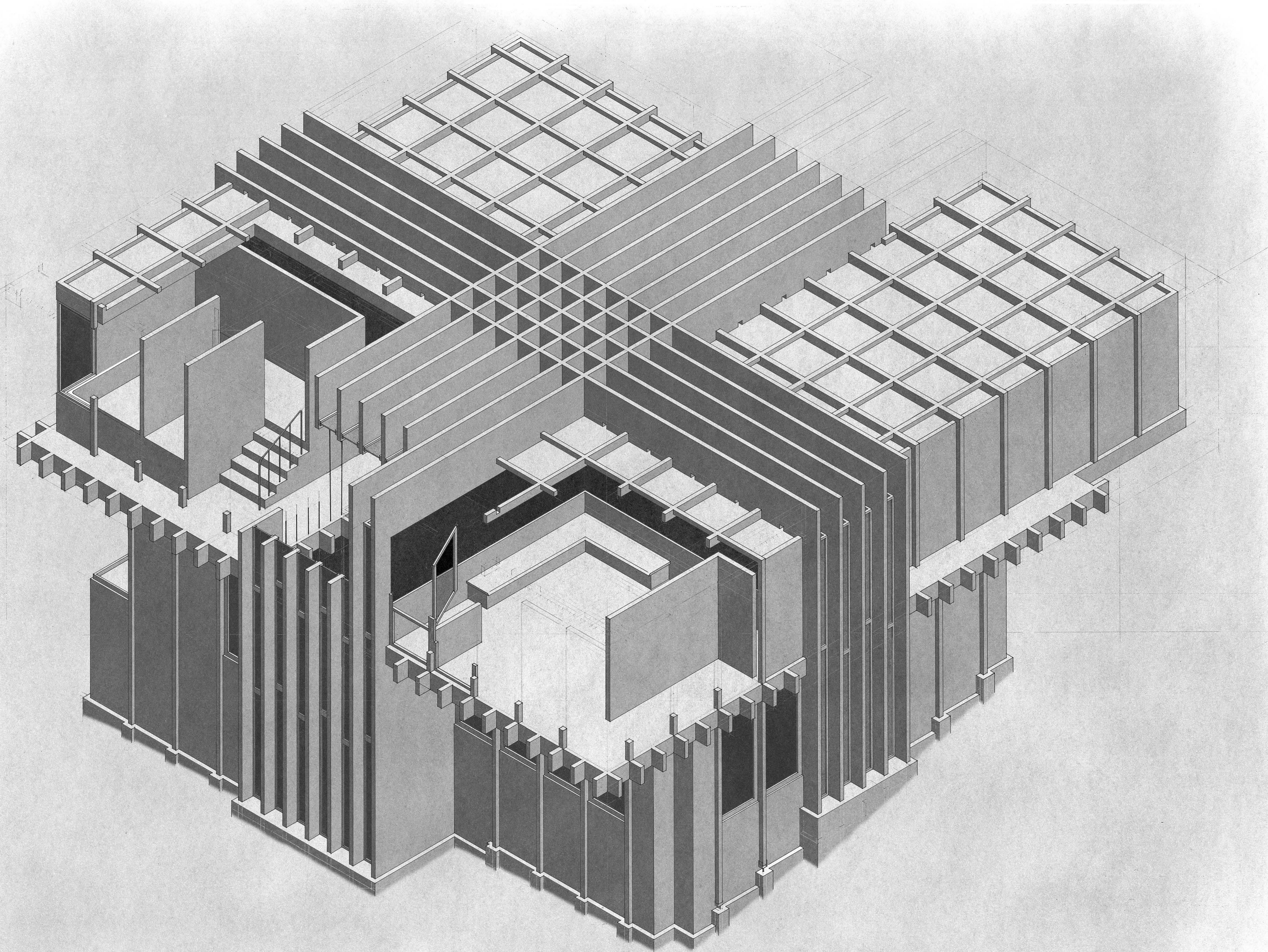
Both images demonstrate the massing of the house with the central cross treated as a void. In the perspective, a matrix of stars is placed in the Cartesian space at four-foot spacing. It is superimposed on the volumes, showing how each volume fits into the matrix. In the axonometric, a frontal view in each direction is projected from the volumes, revealing the underlying cross on each face. ▶



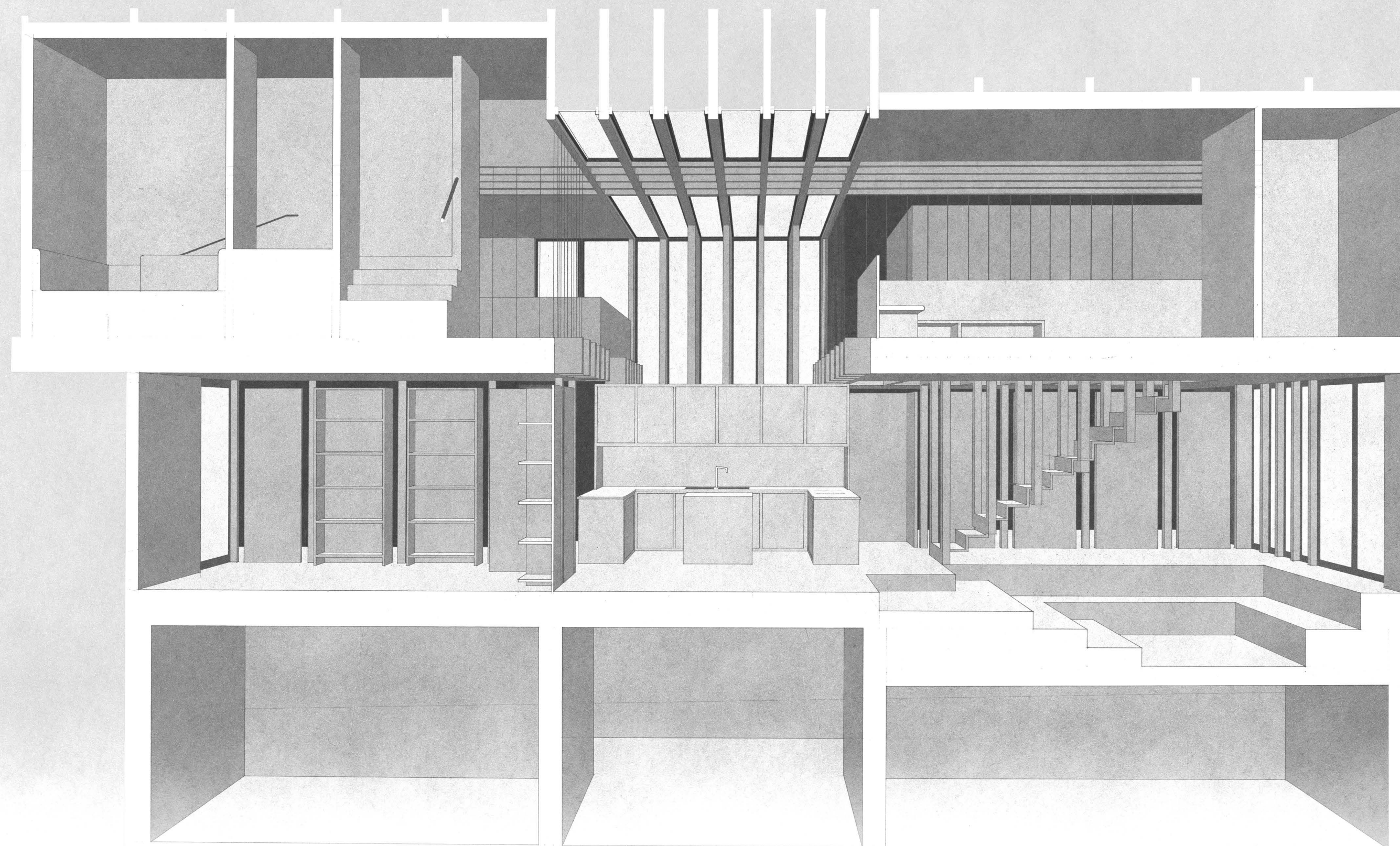
▲ "Lost in matrix"



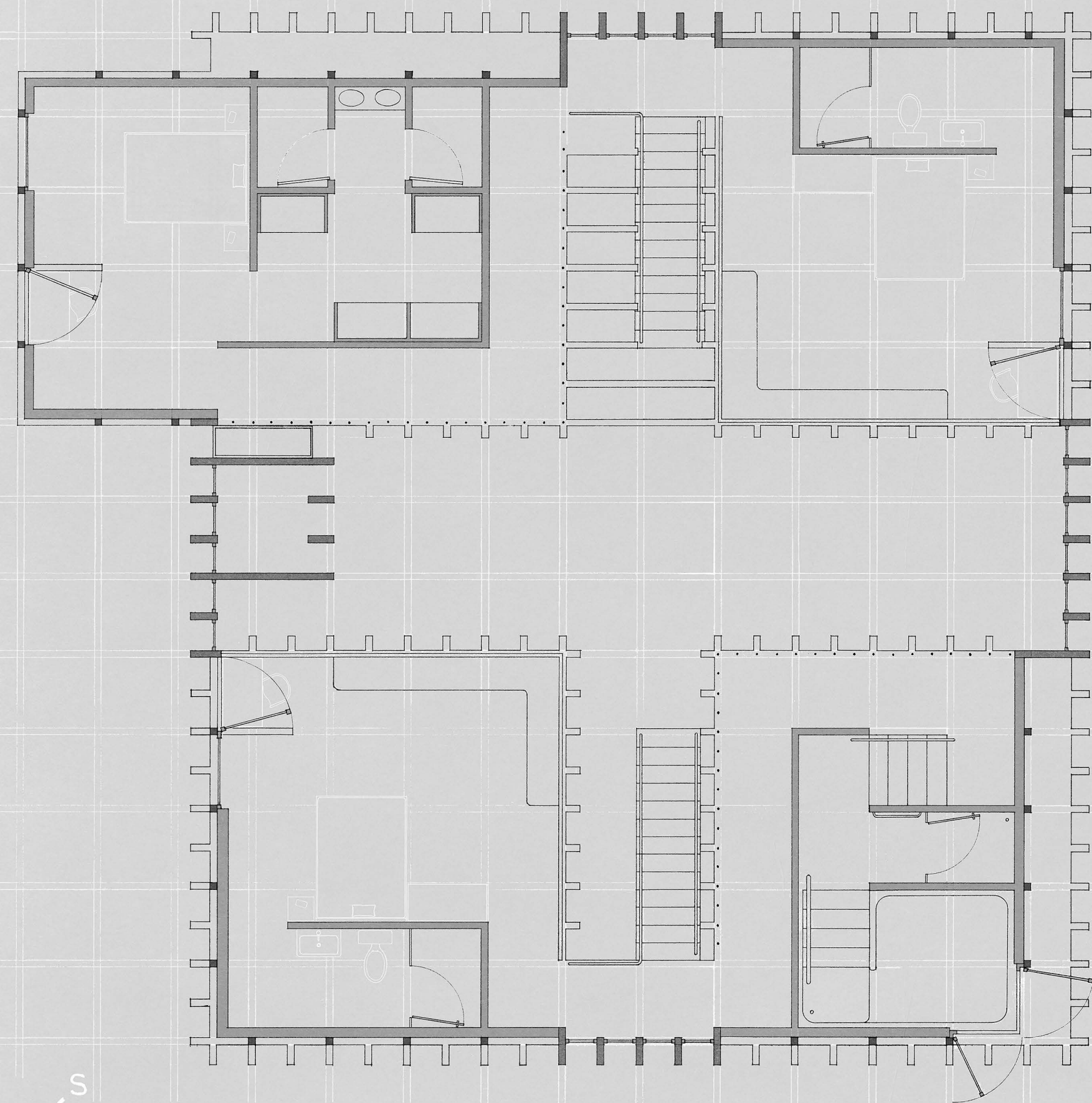
"Six faces of the same order" ▲



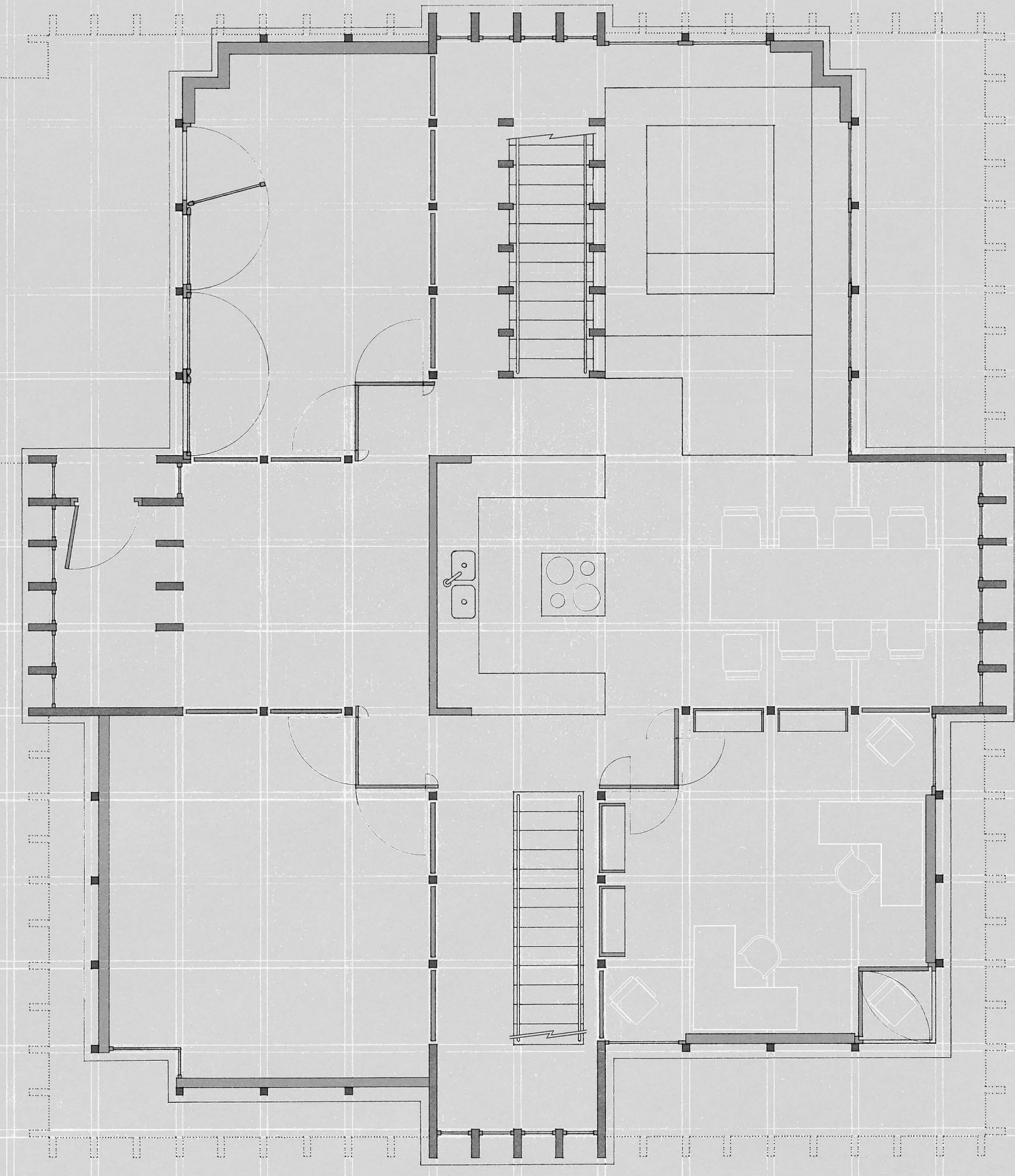
▲ "Hole on the whole"



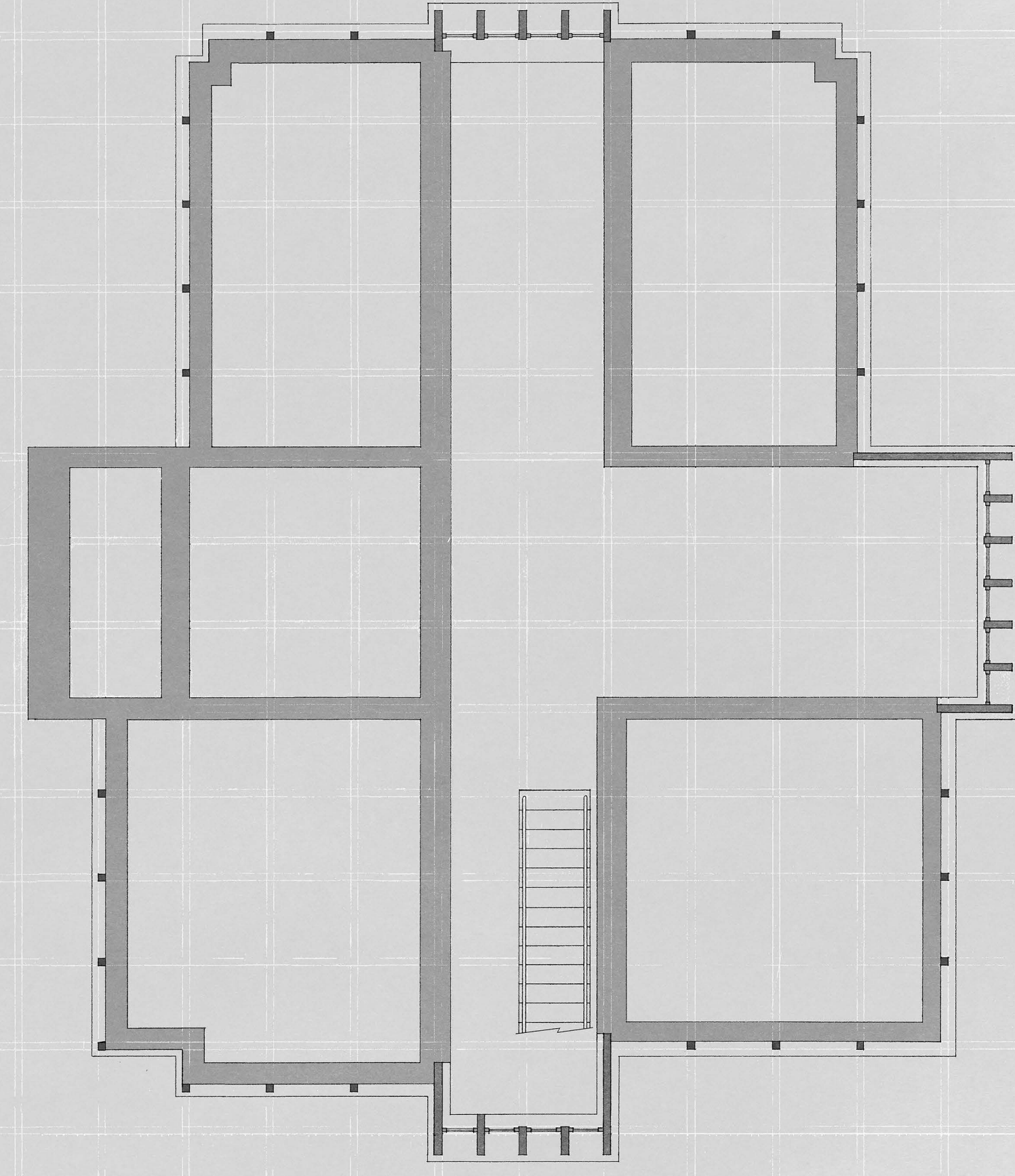
"X-ray imaging" ▲



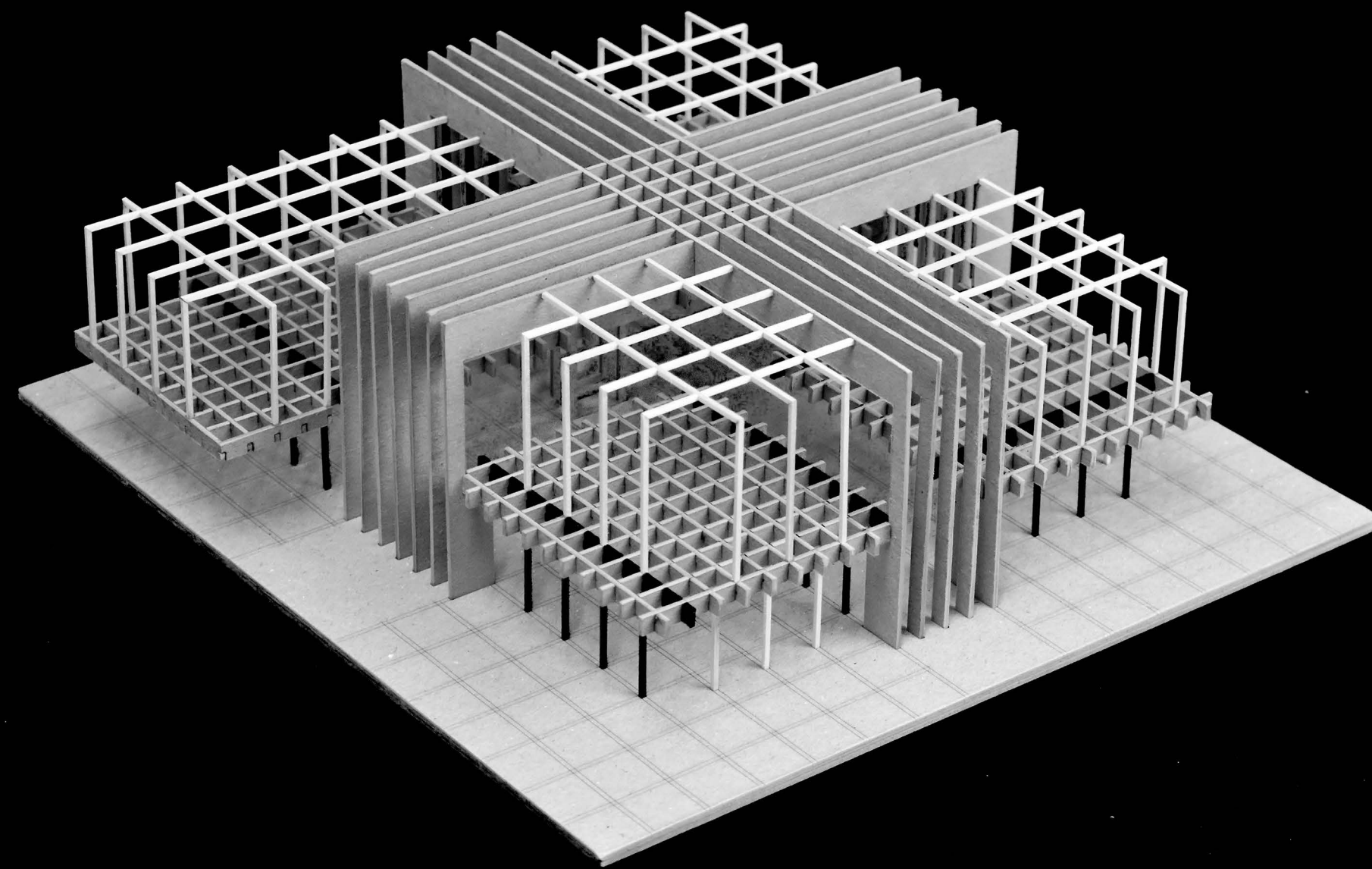
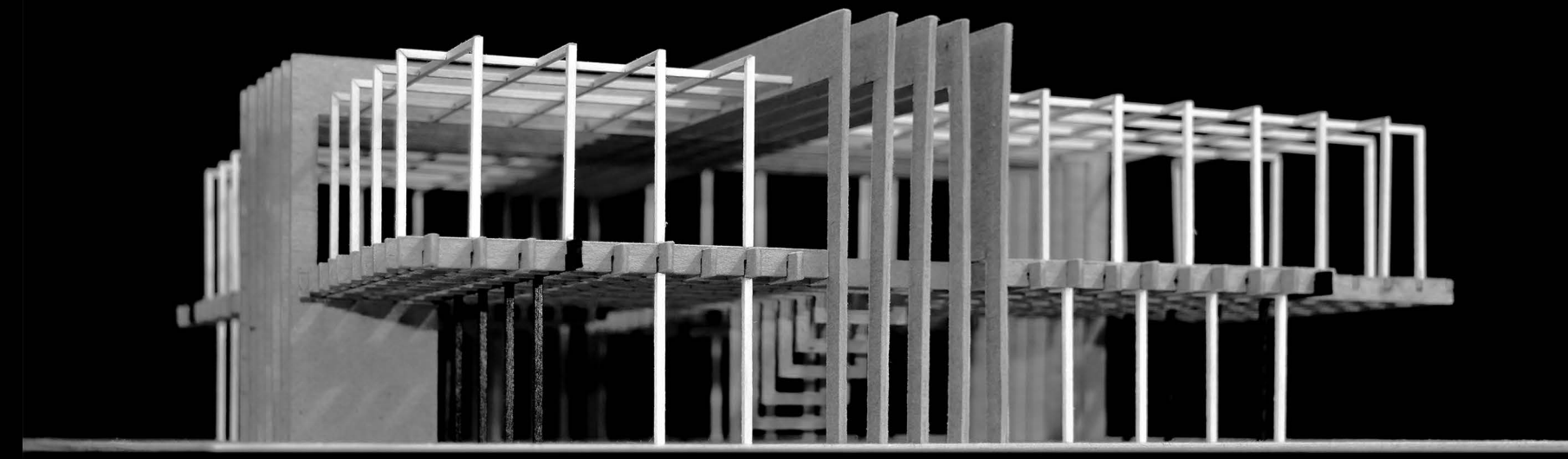
2nd Floor



1st Floor



Basement



▲ "Flattened model"



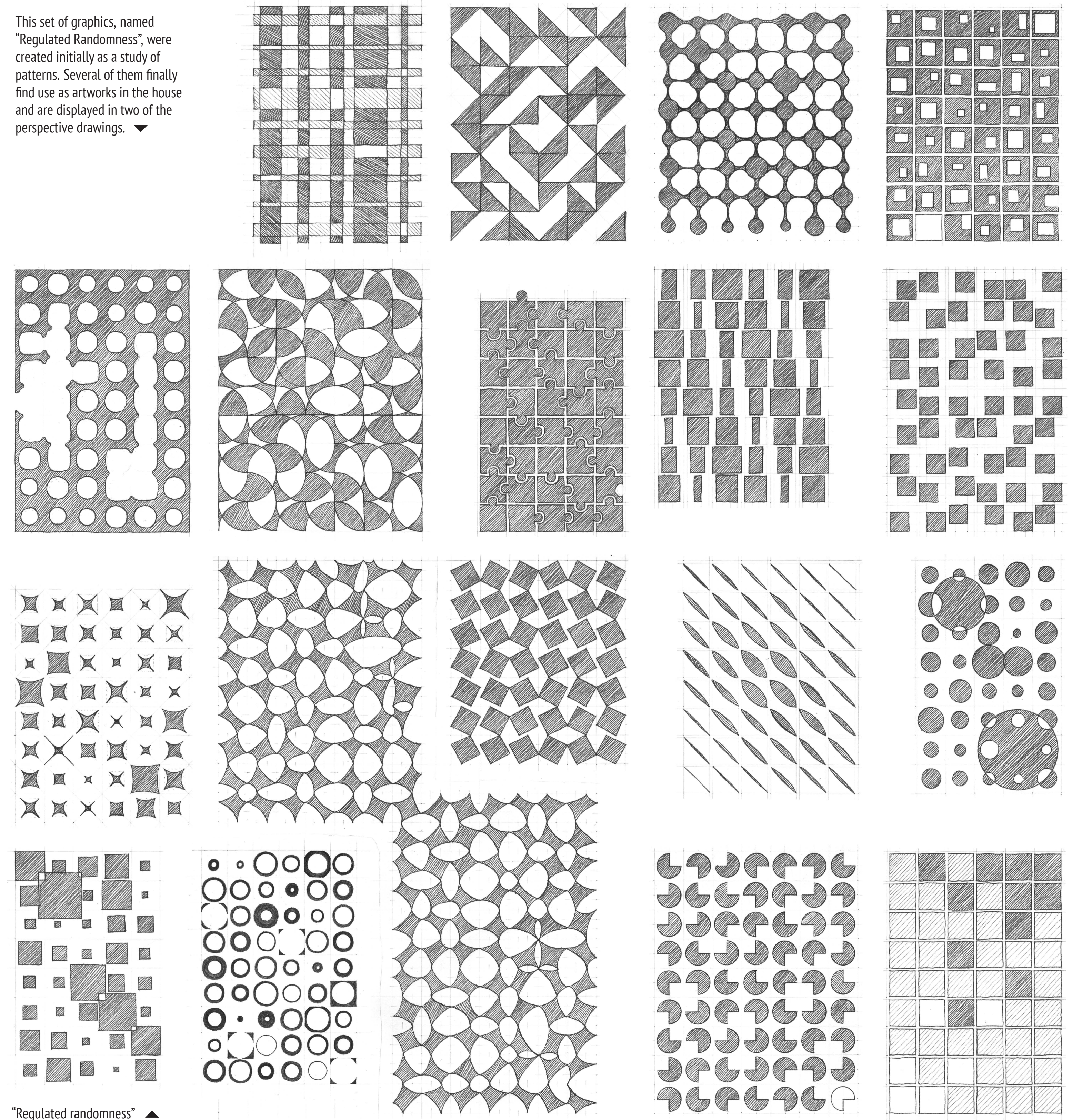
▲ "The Mutated"



▲ The site of the house overlooks the Westview Cemetery in western Blacksburg, Va., selected due to its proximity to the author's then apartment, borrowing especially its green field and its topography as design opportunities.

▲ "The bigger picture"

This set of graphics, named "Regulated Randomness", were created initially as a study of patterns. Several of them finally find use as artworks in the house and are displayed in two of the perspective drawings. ▼

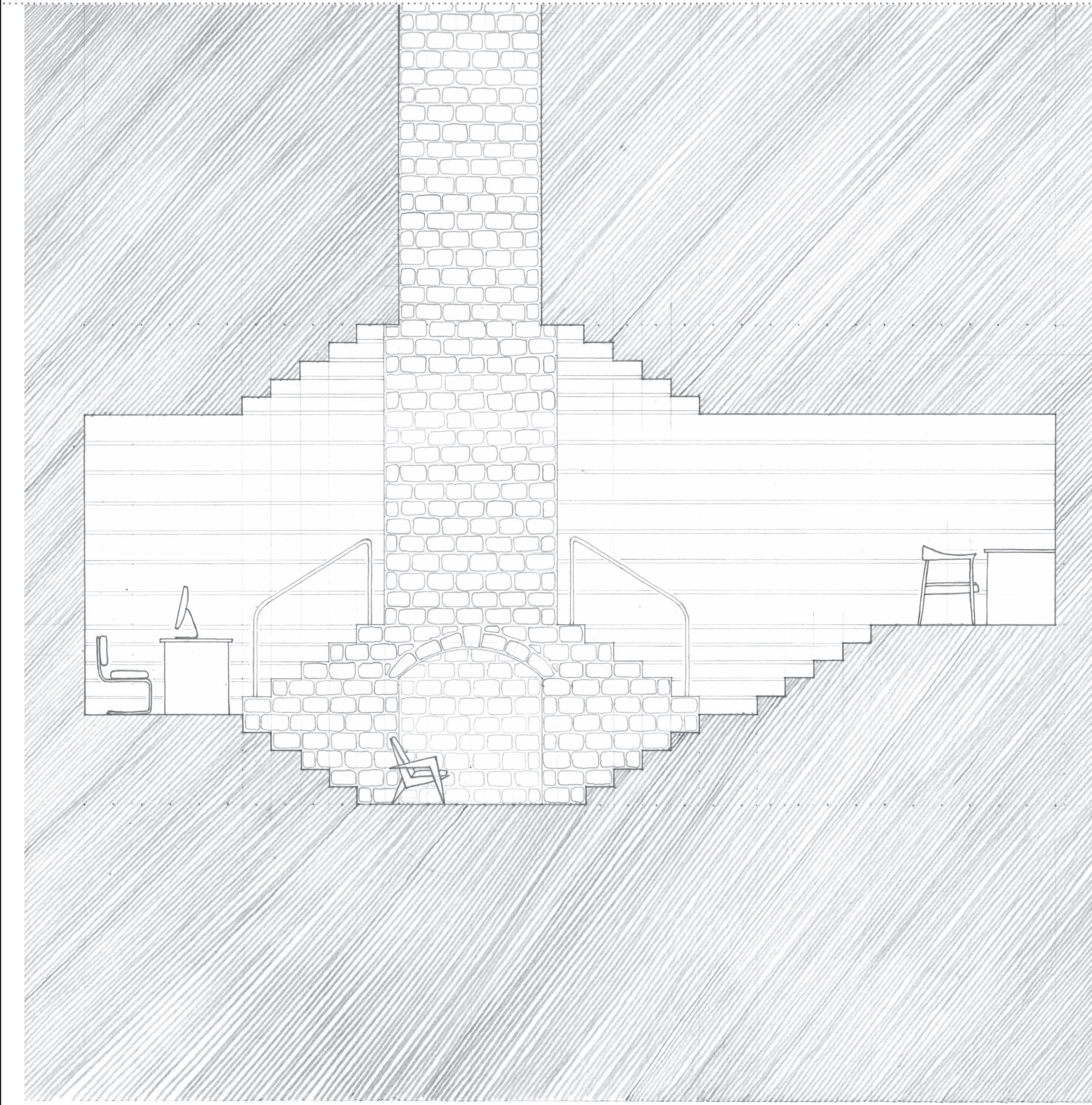
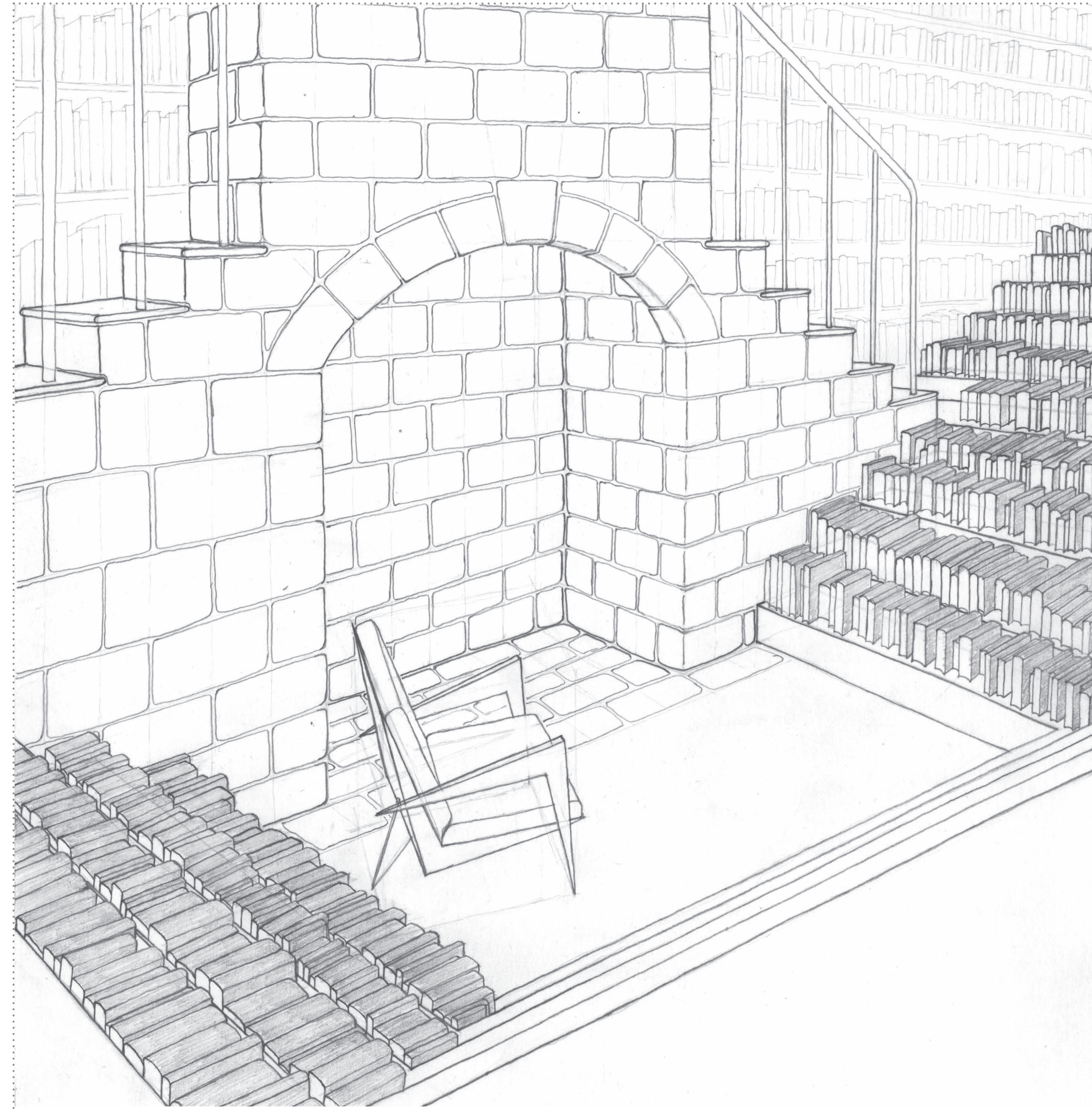
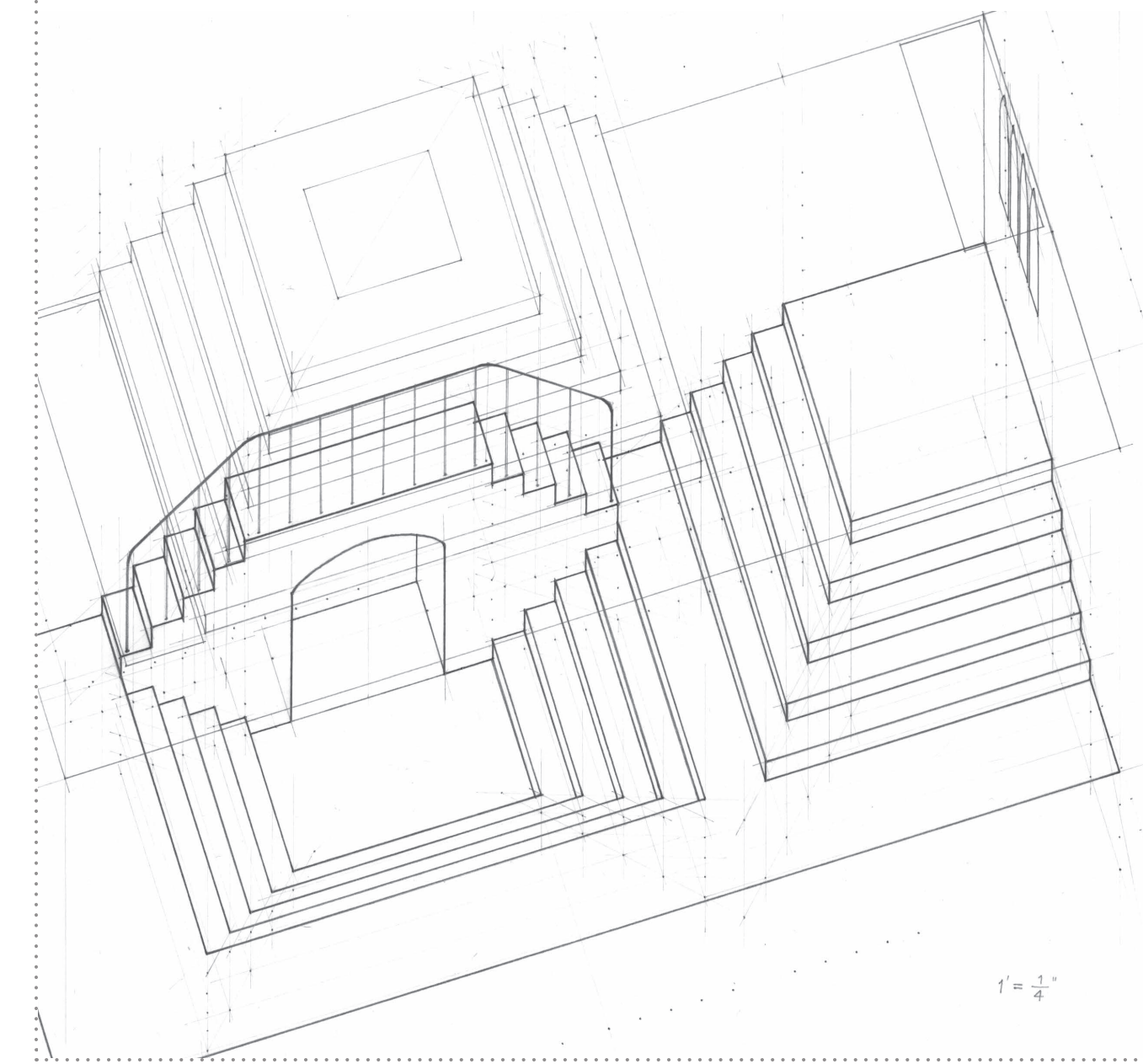


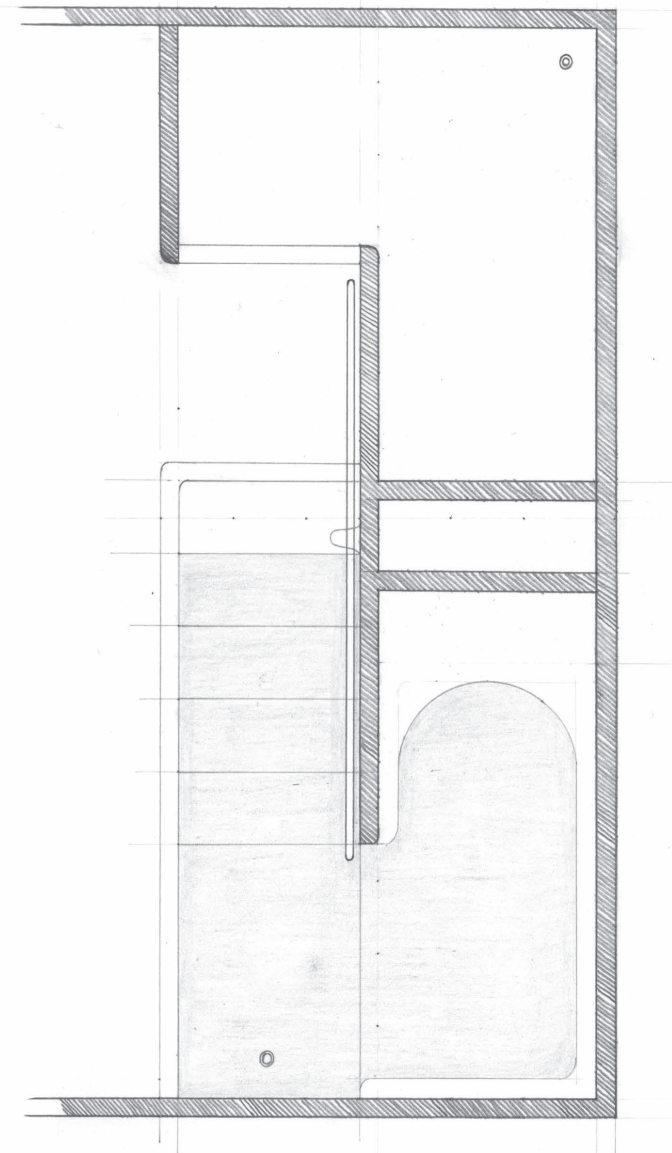
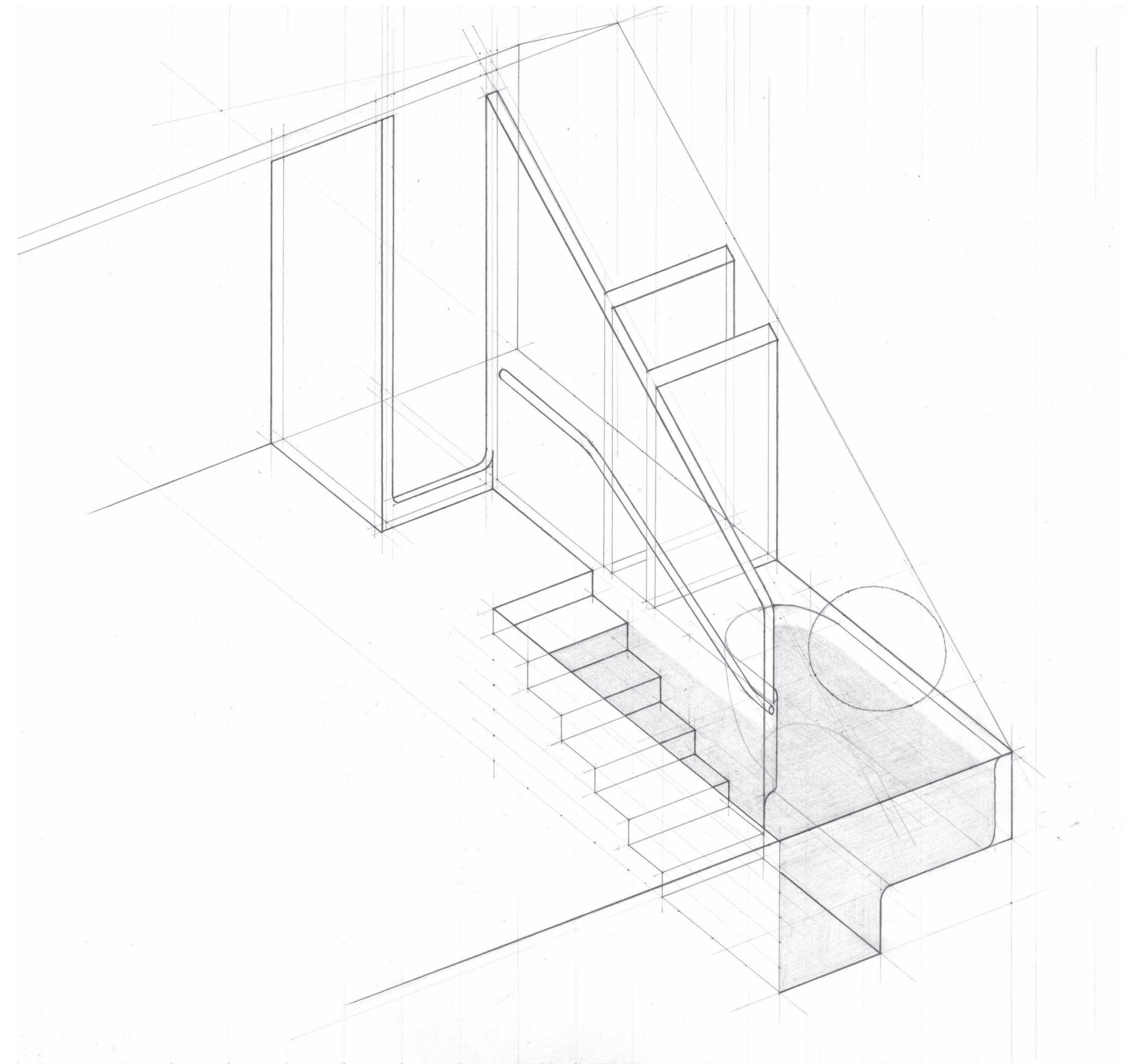
"Regulated randomness" ▲

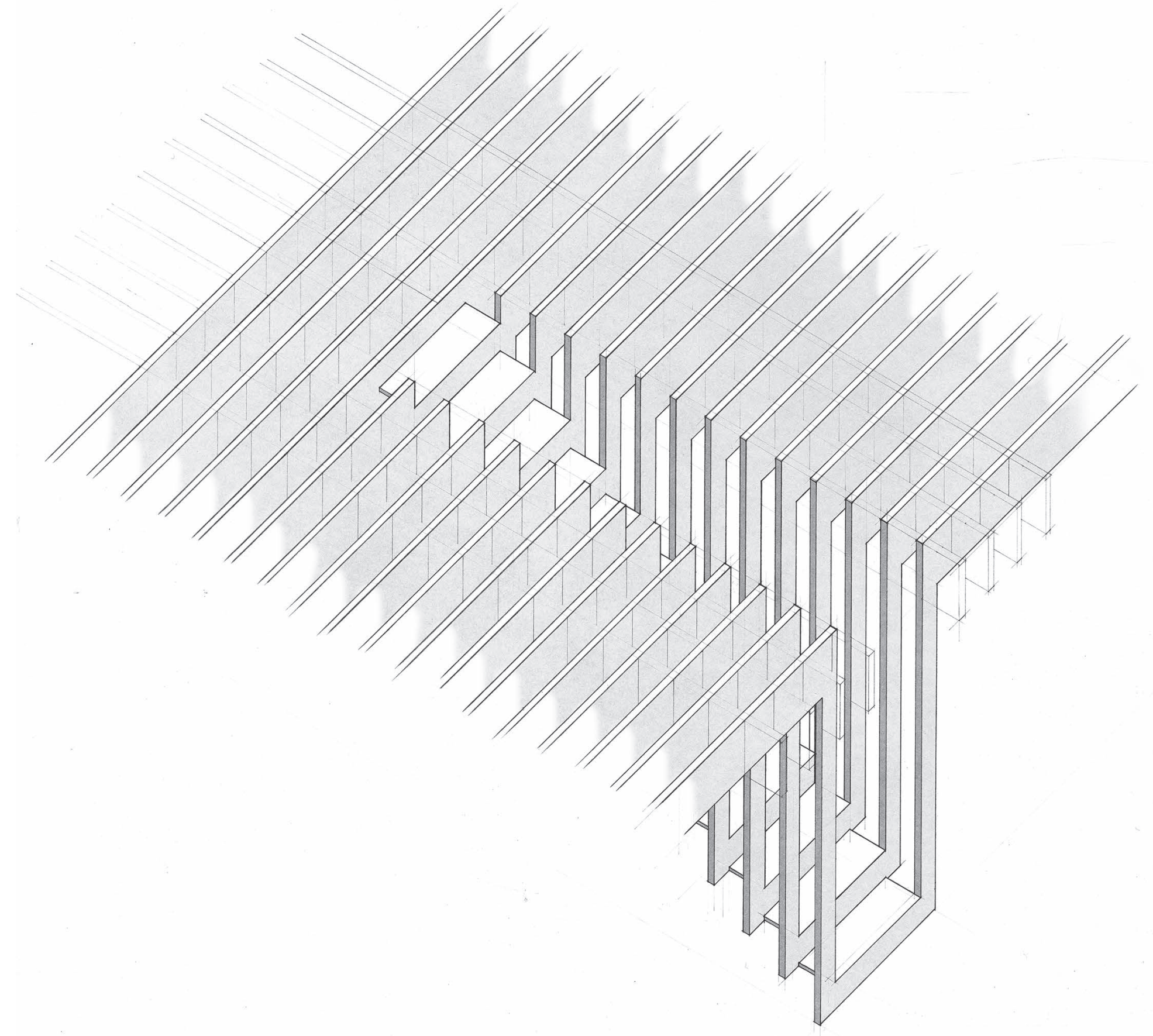
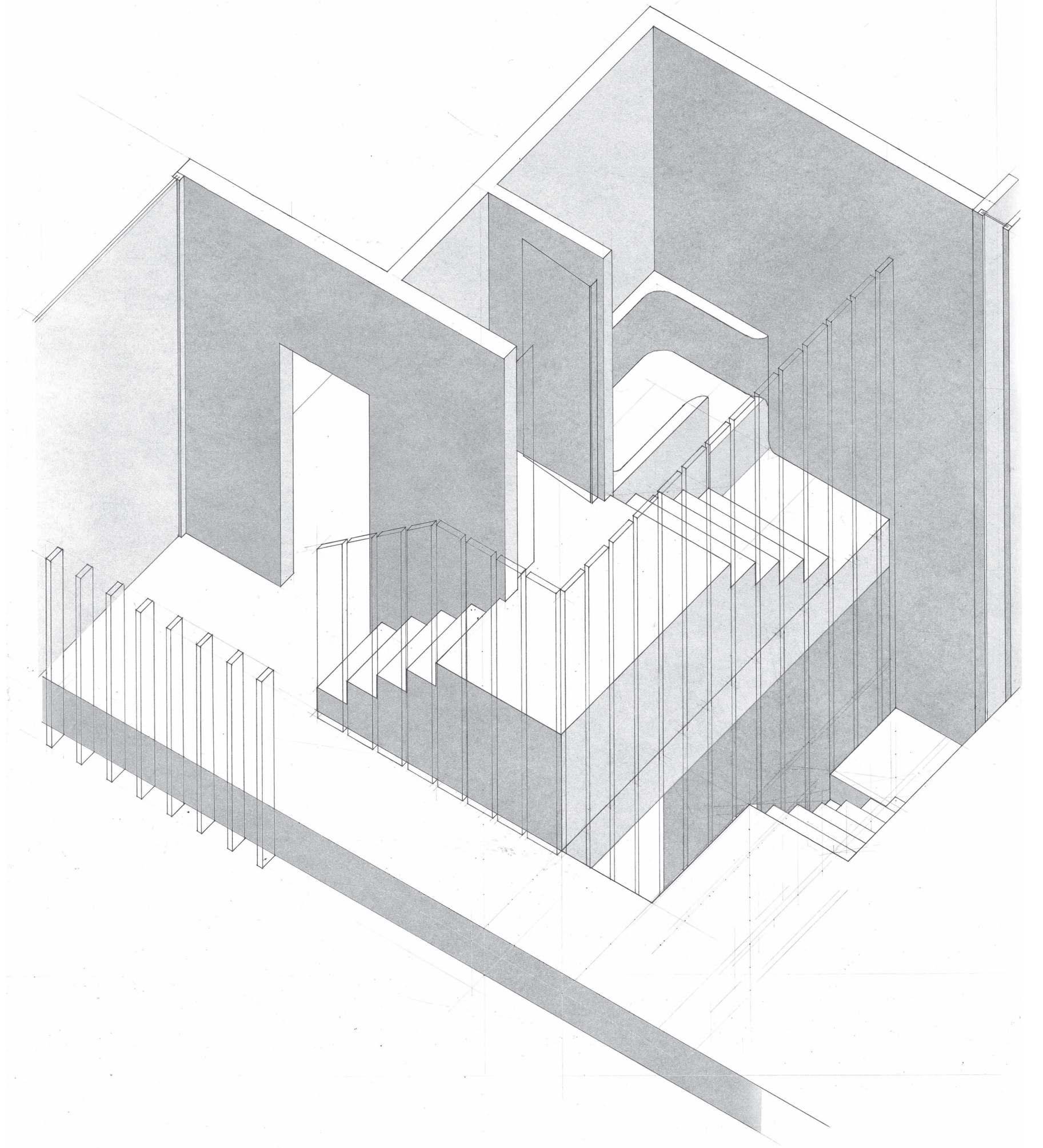
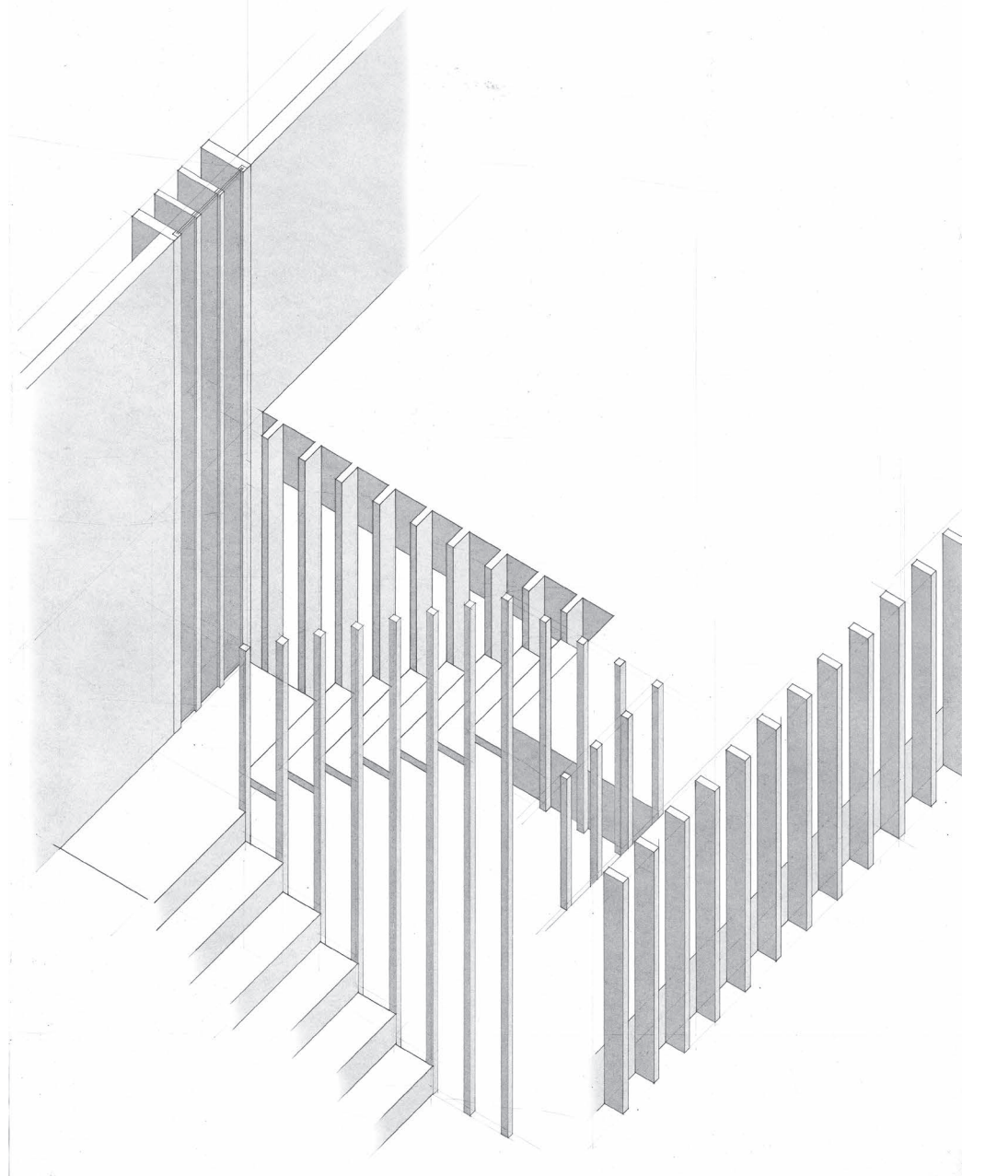
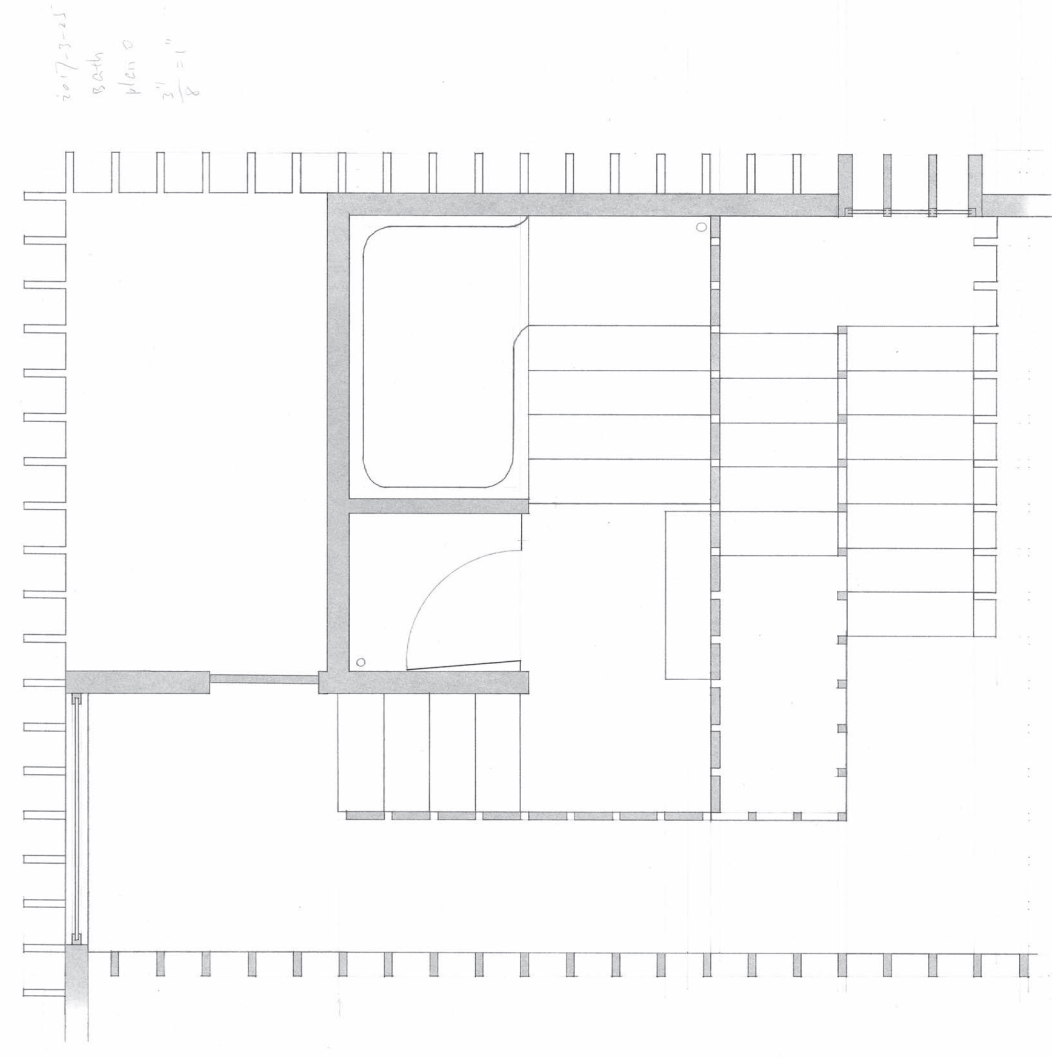


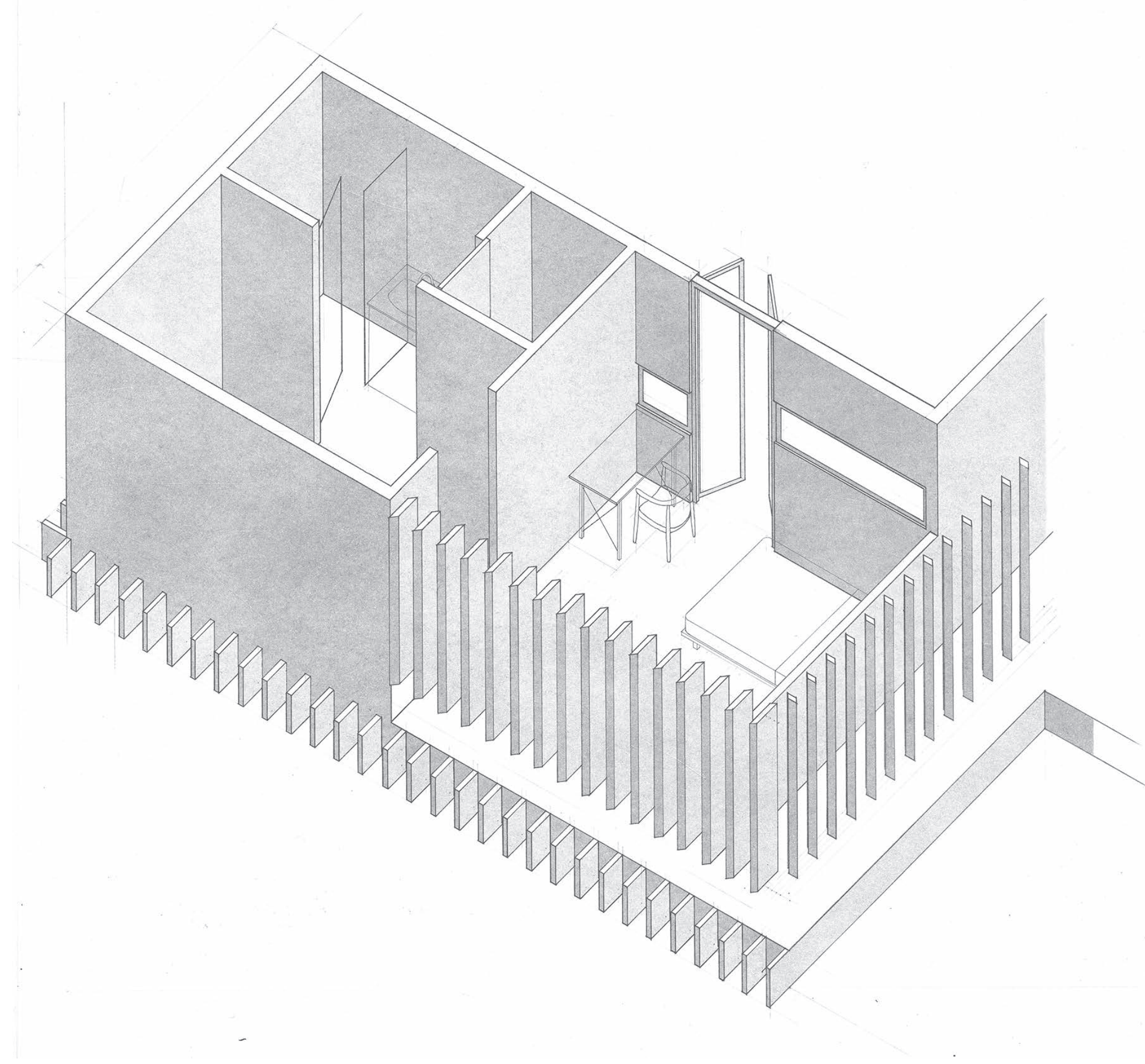
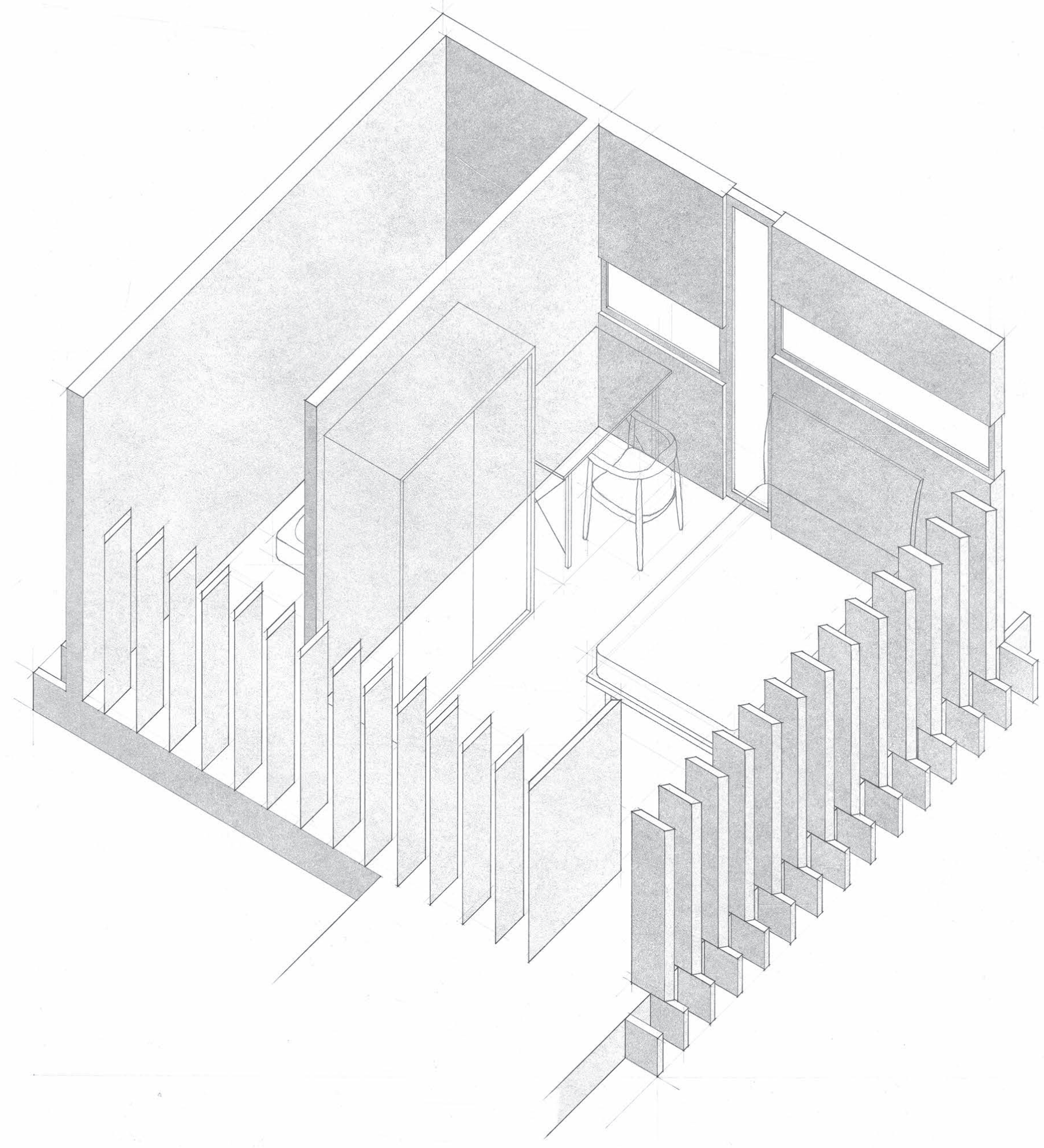
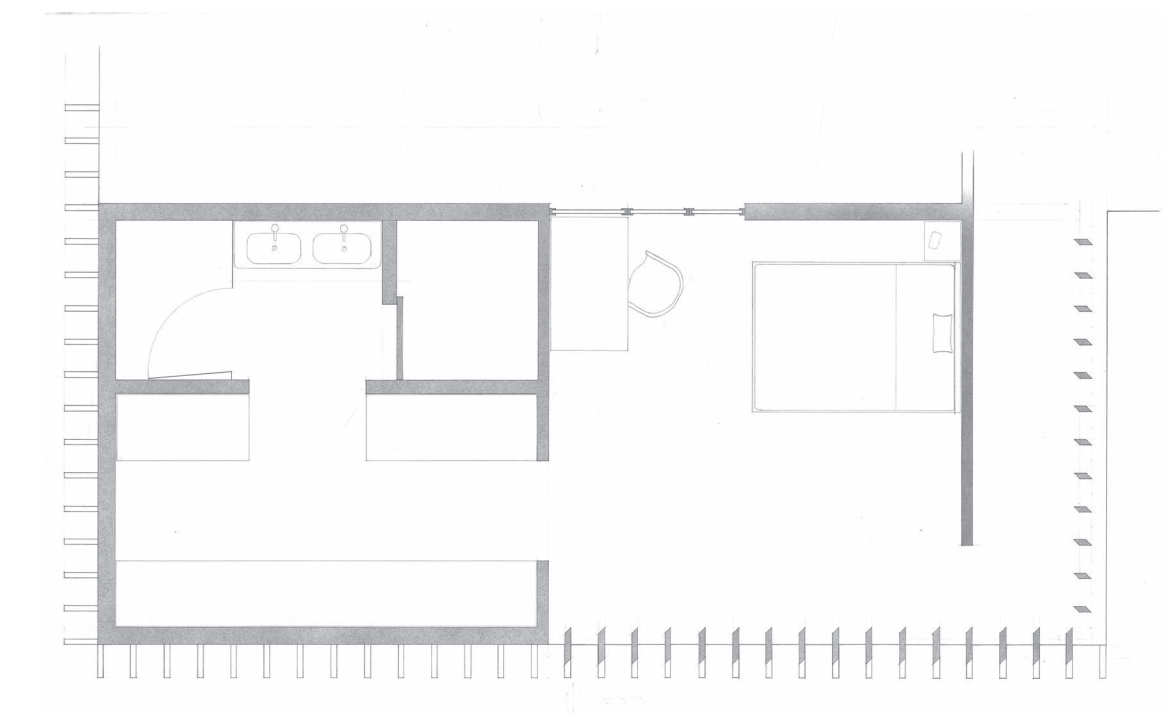
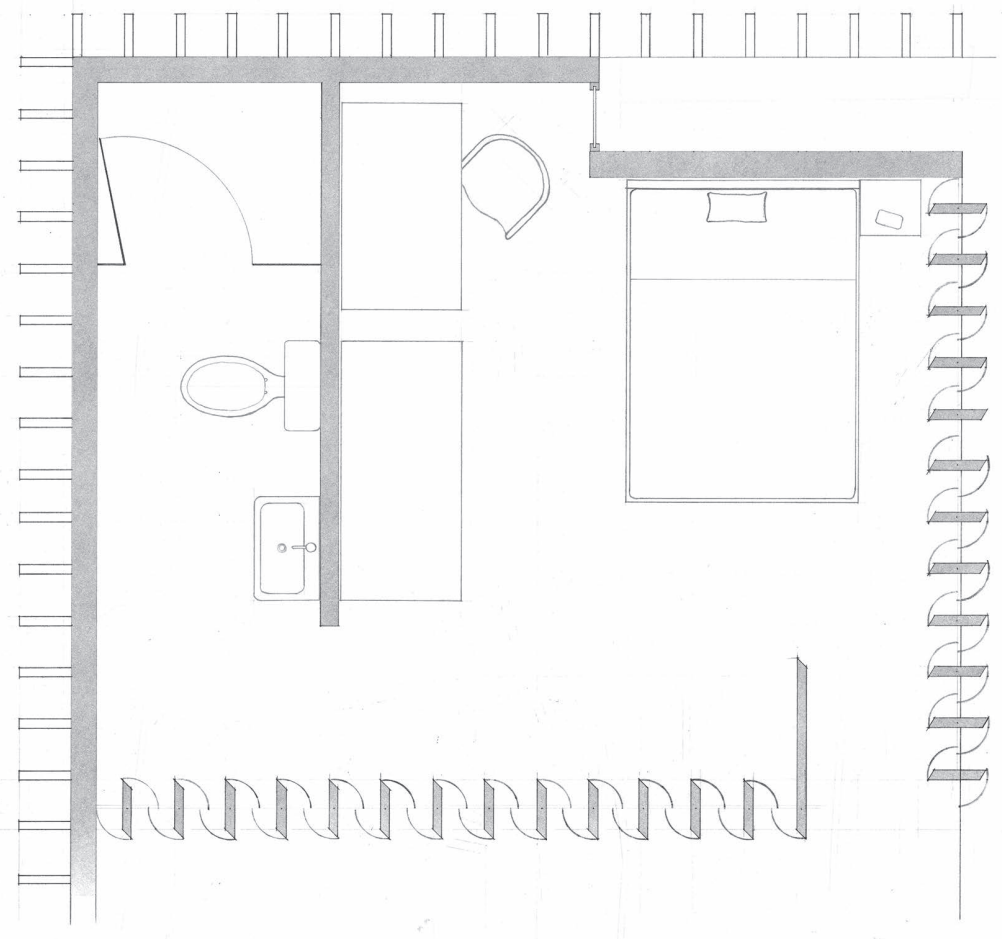
Process

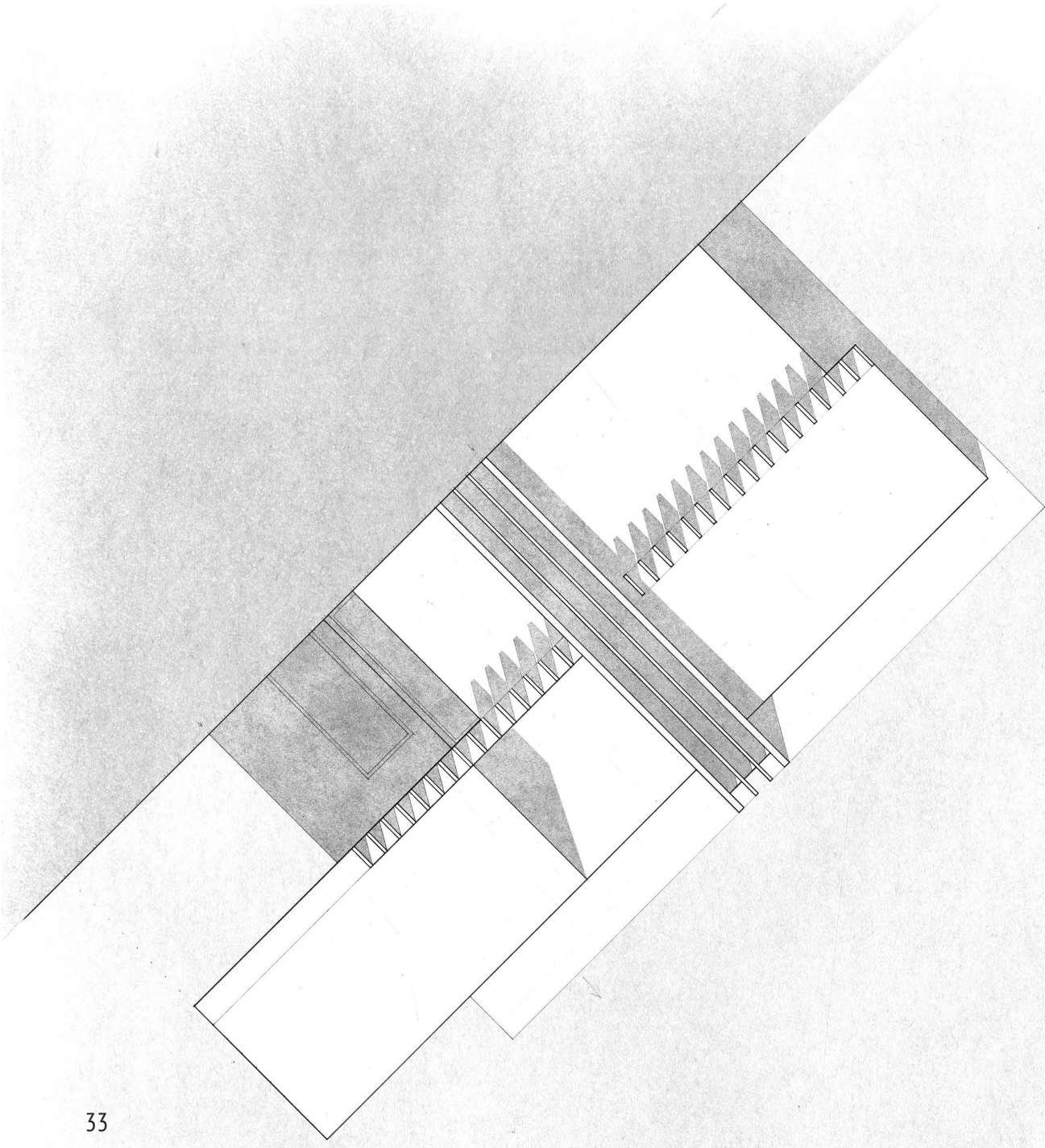
The drawings collected in this book were made during the course of one year. They were originally hand-drawn and then edited digitally. The set of drawings before this chapter is the latest and collectively reflects the final status of the design, though individual drawings may have details that do not agree with each other due to changes made afterwards. This chapter includes drawings from earlier stages that record important moments in the process of the design.



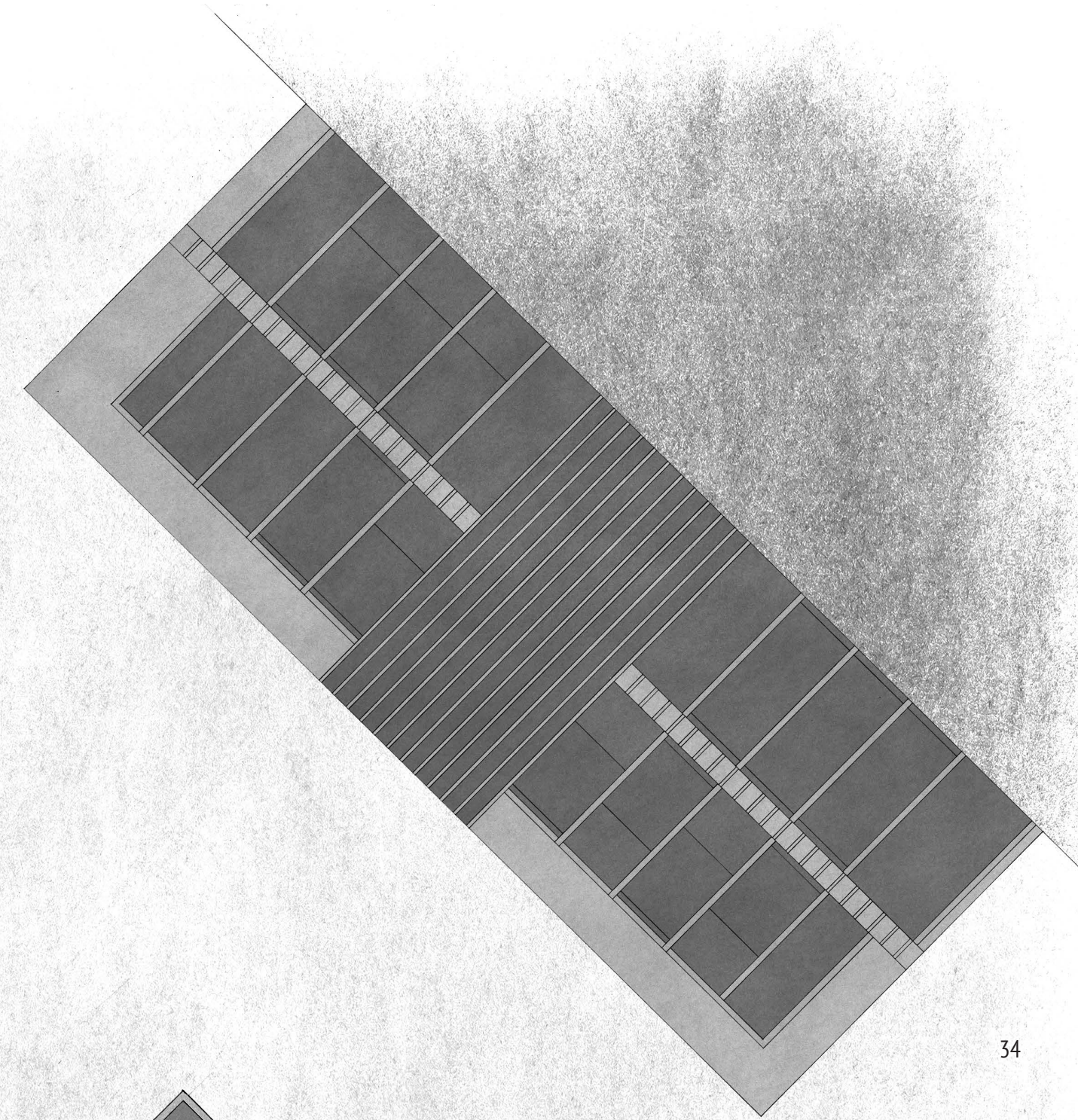
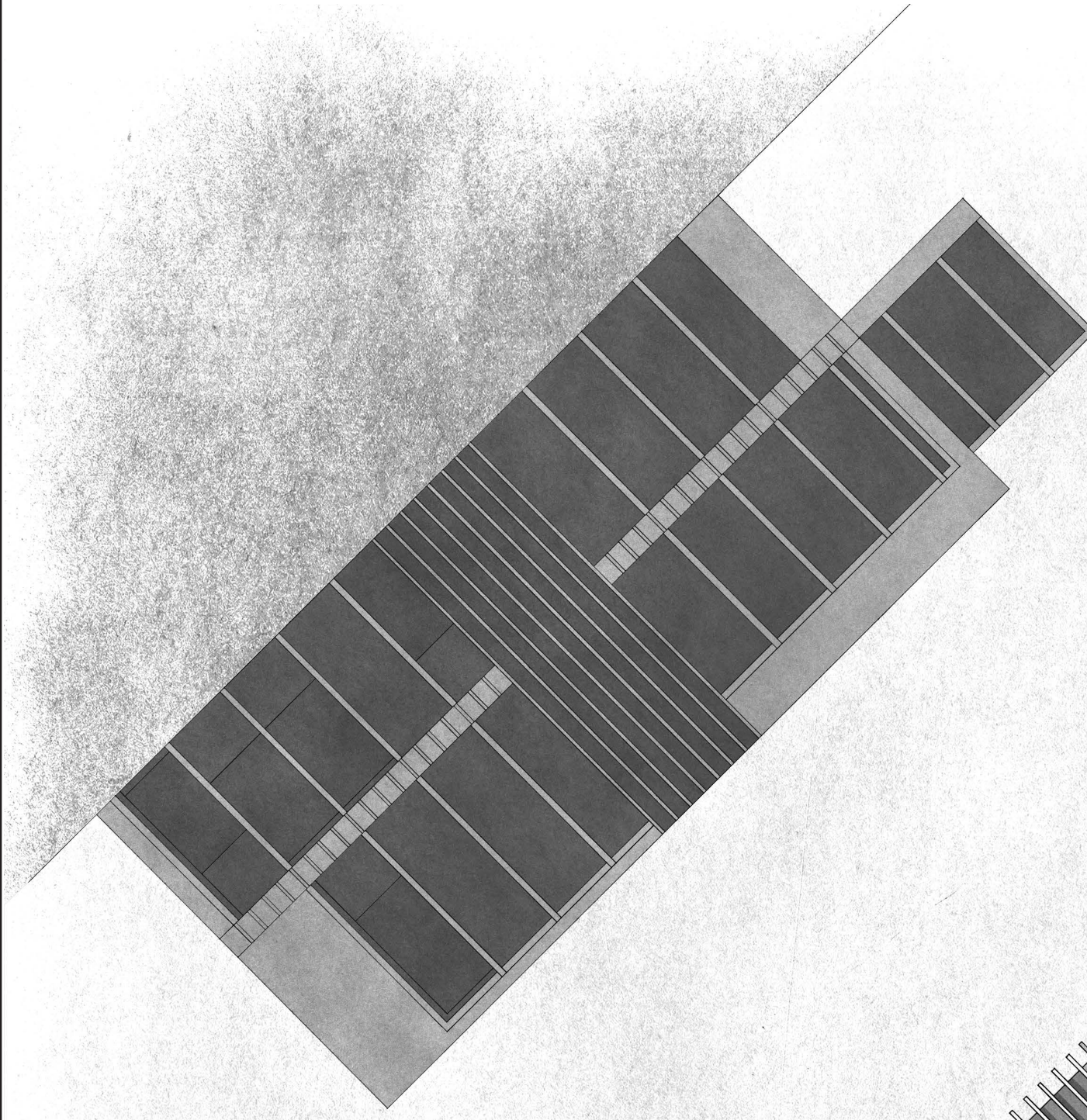
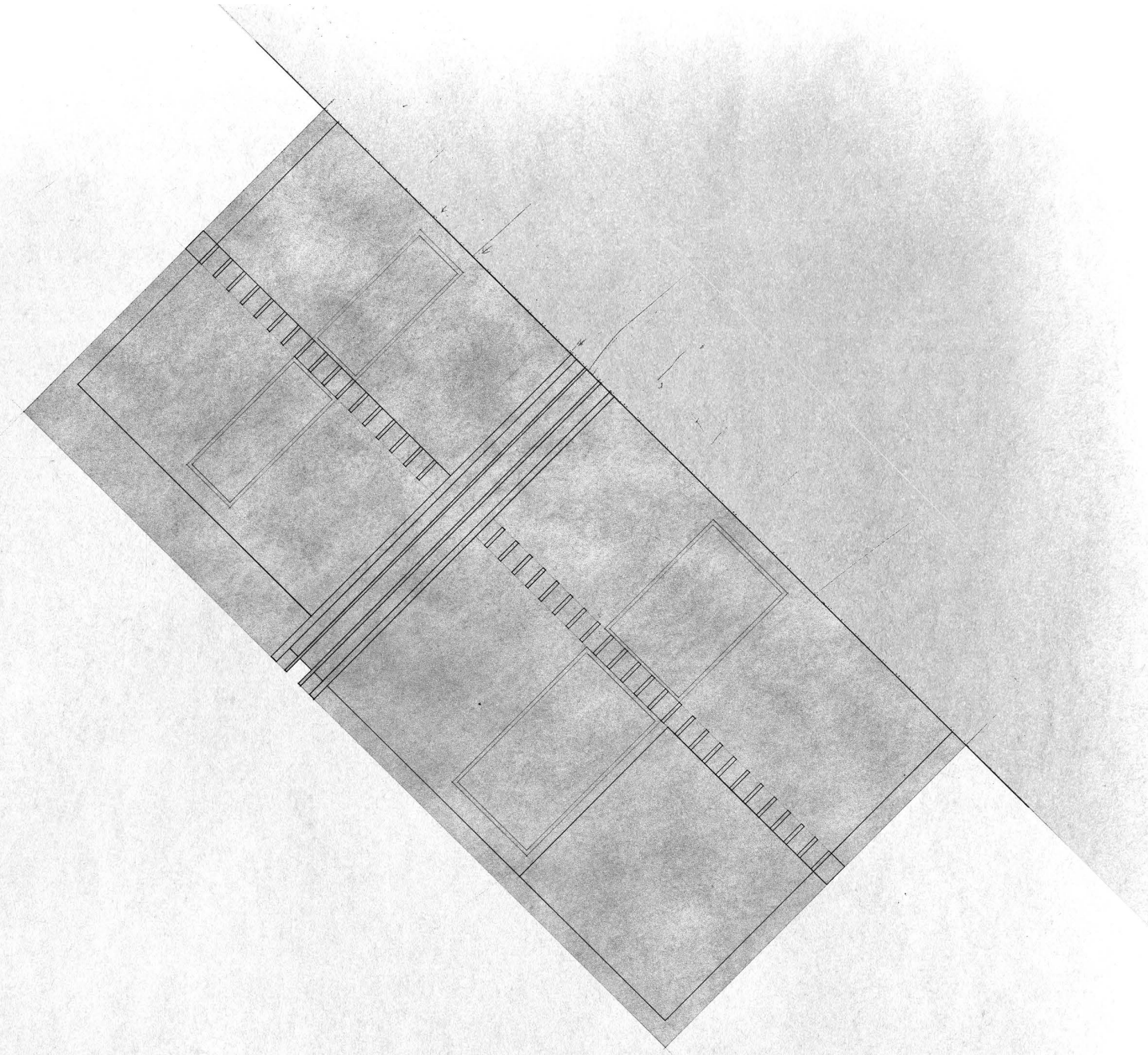




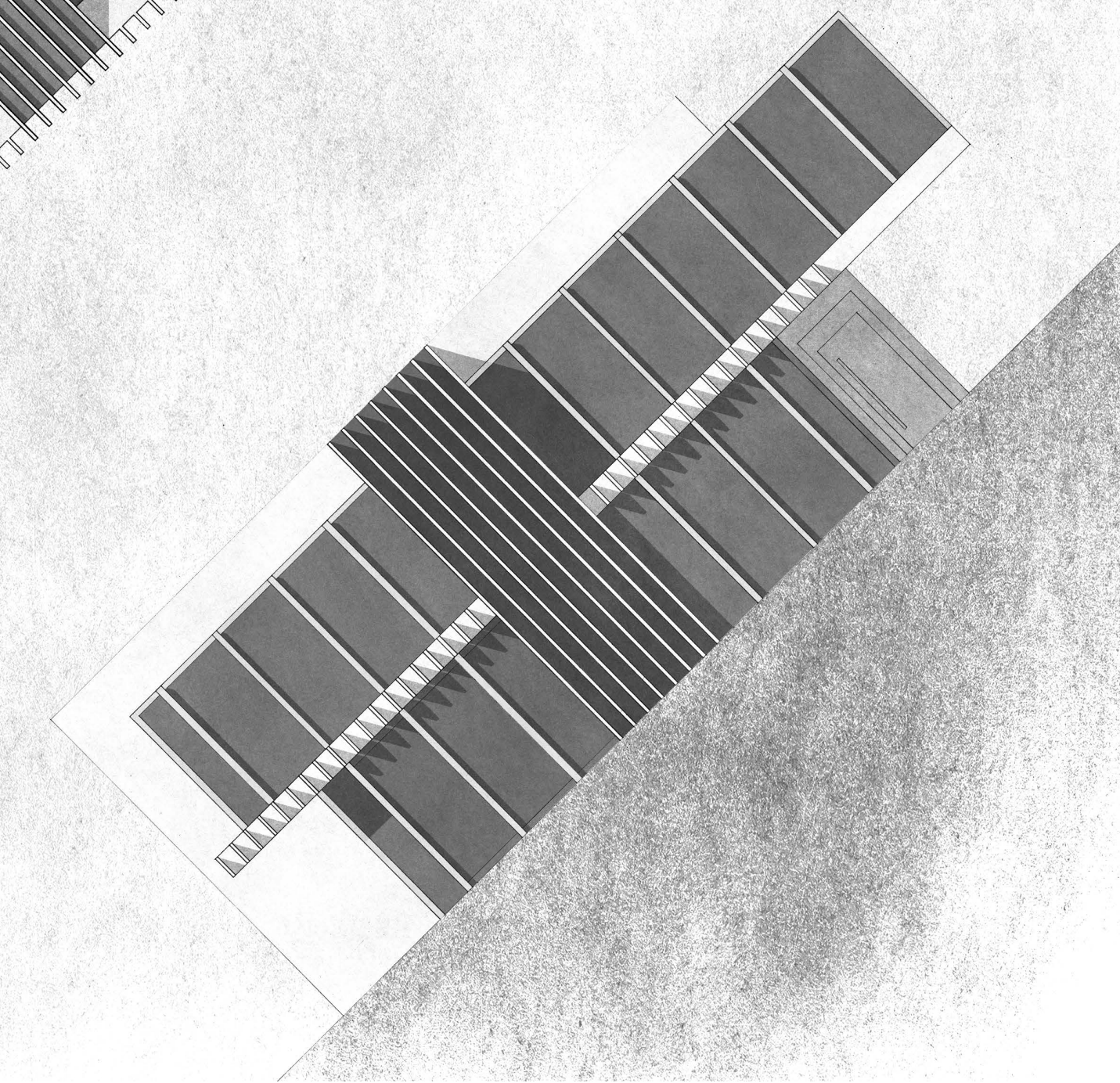
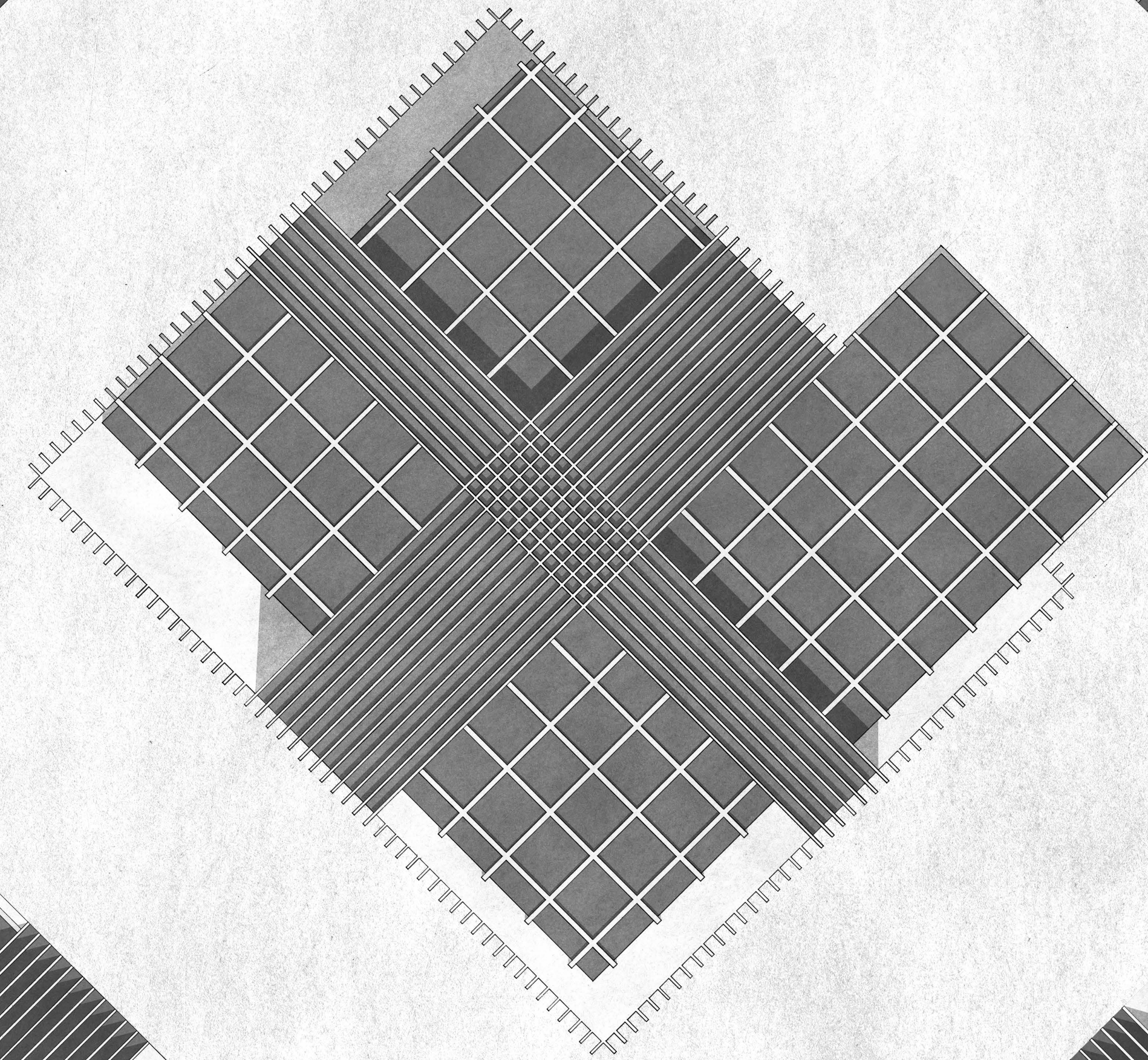
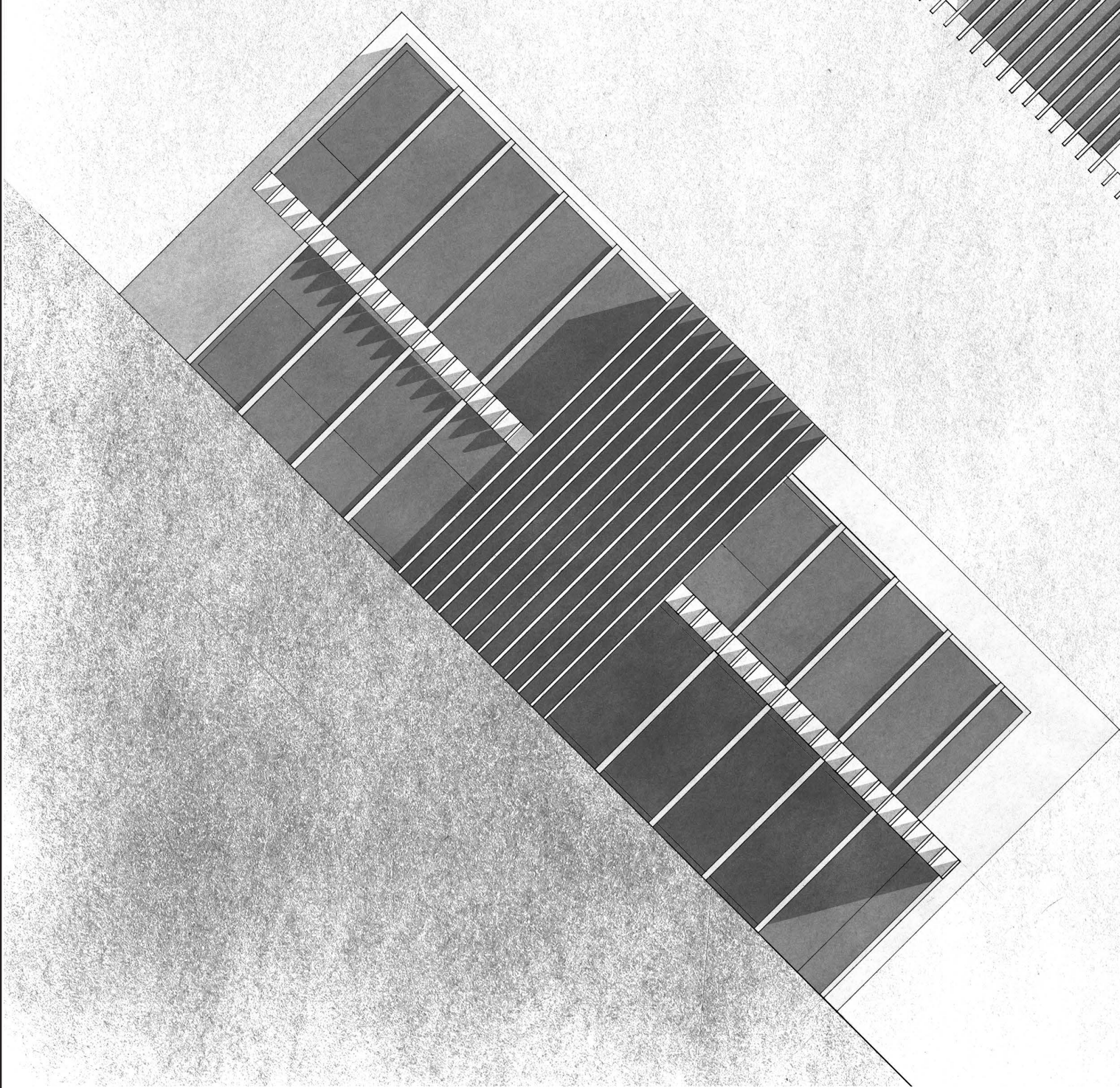
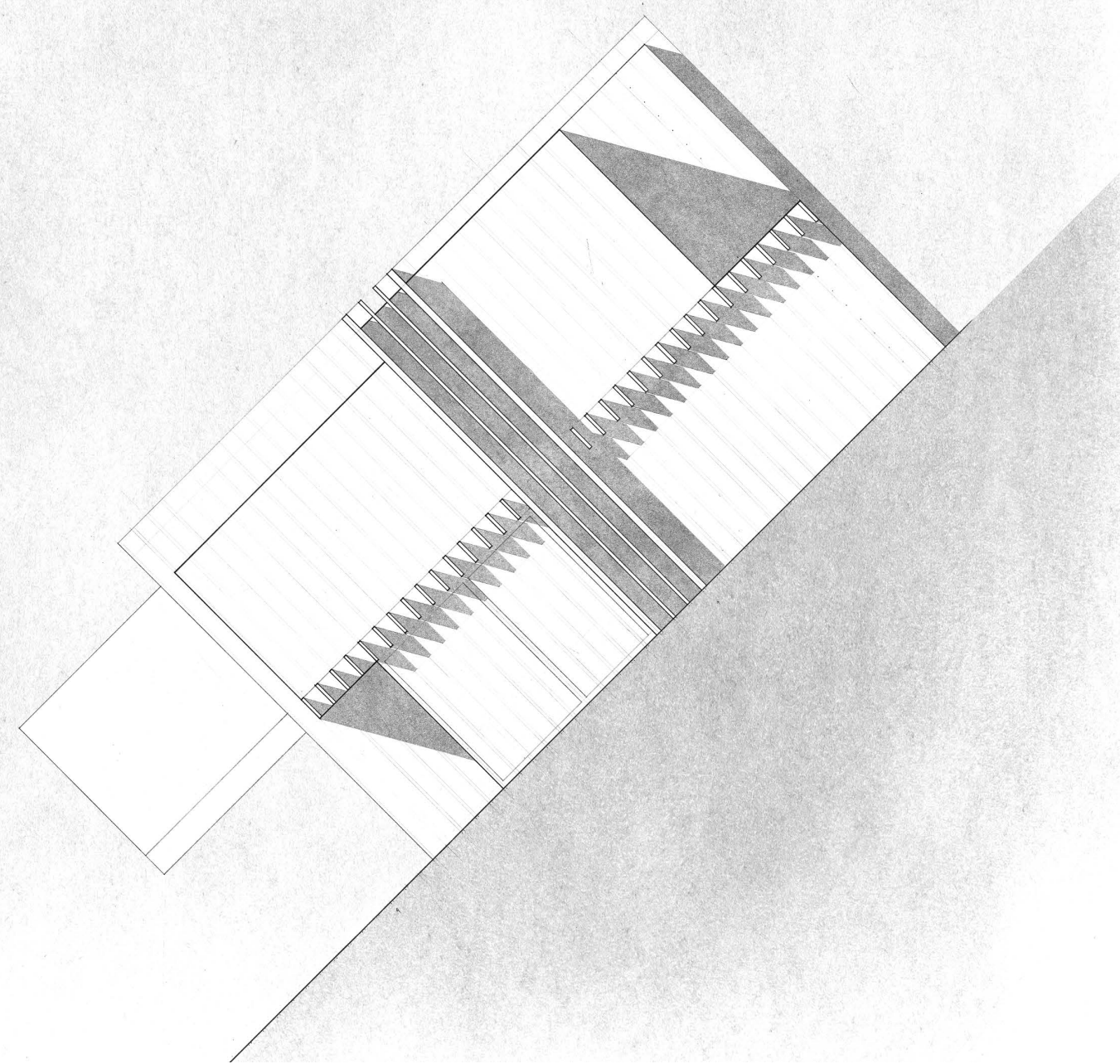
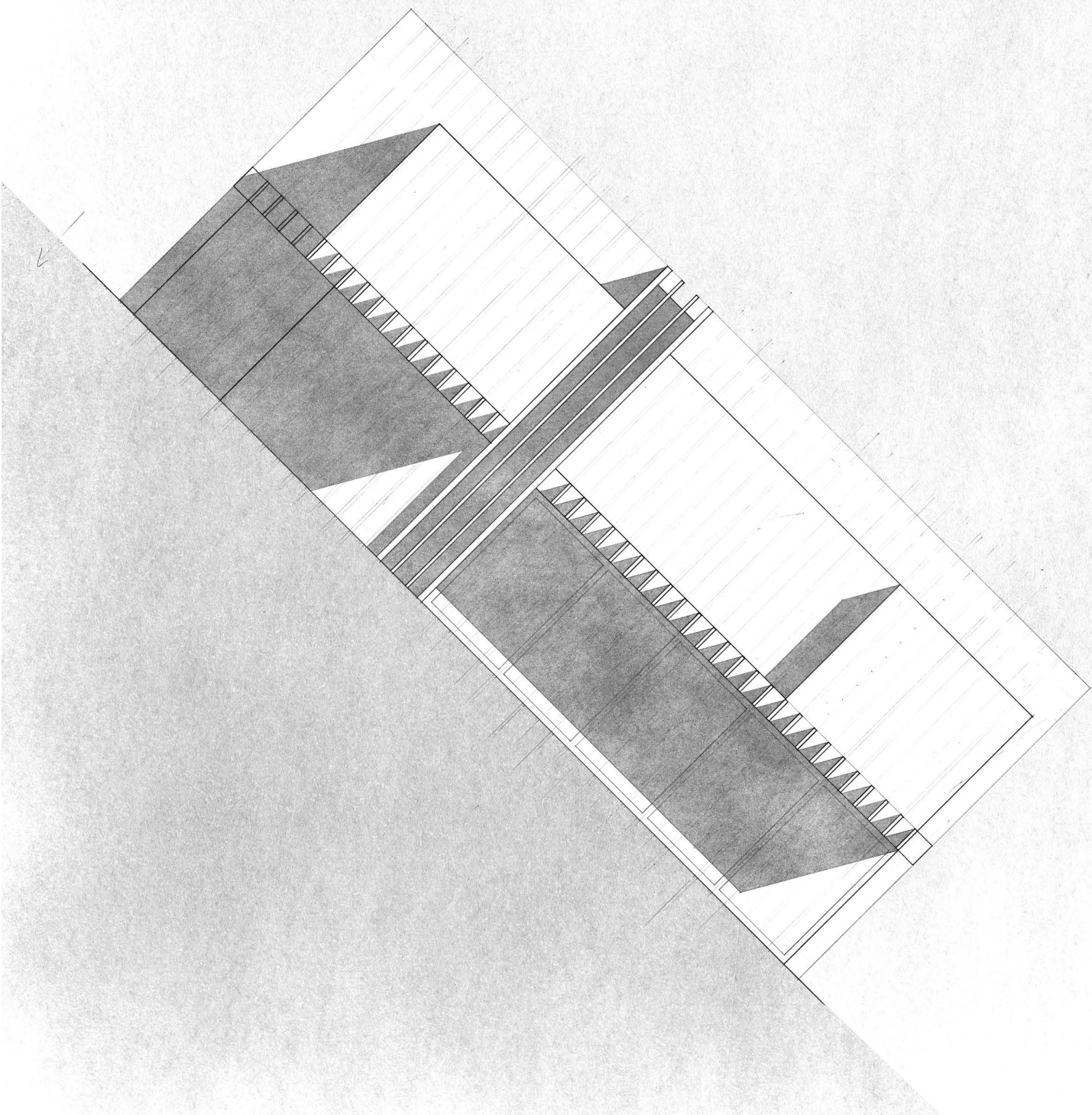


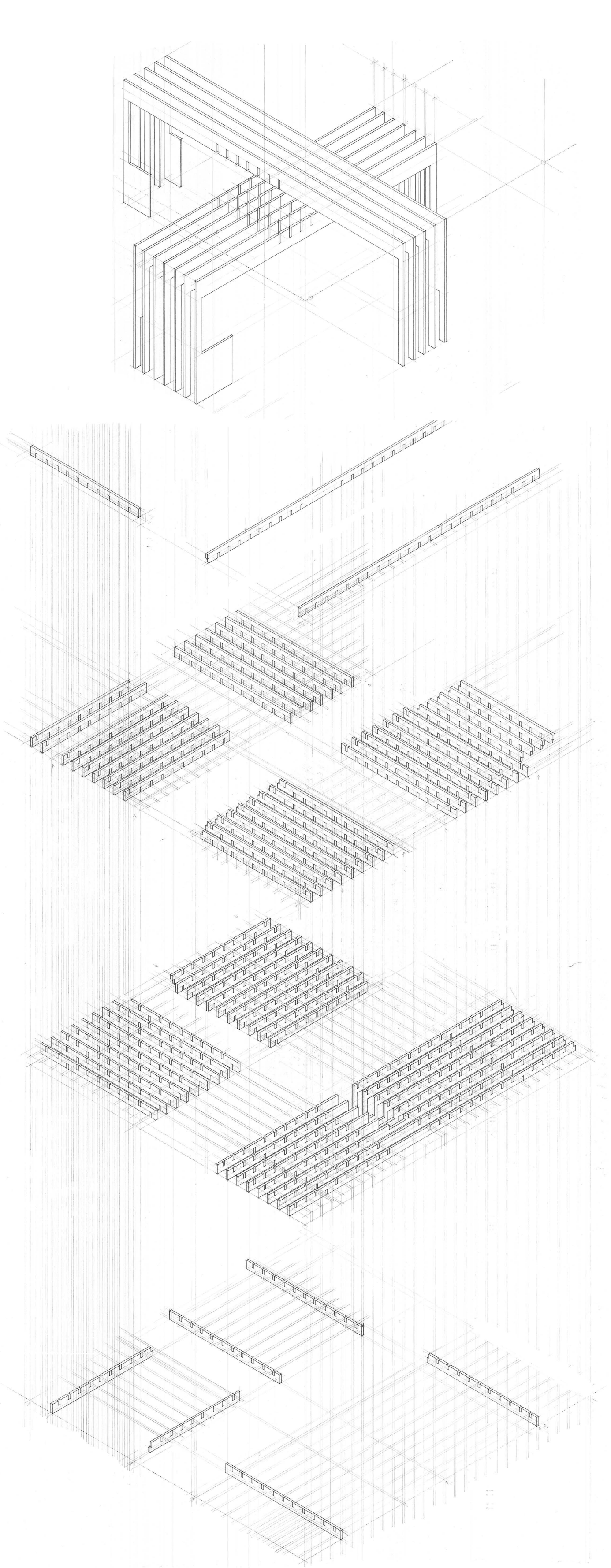
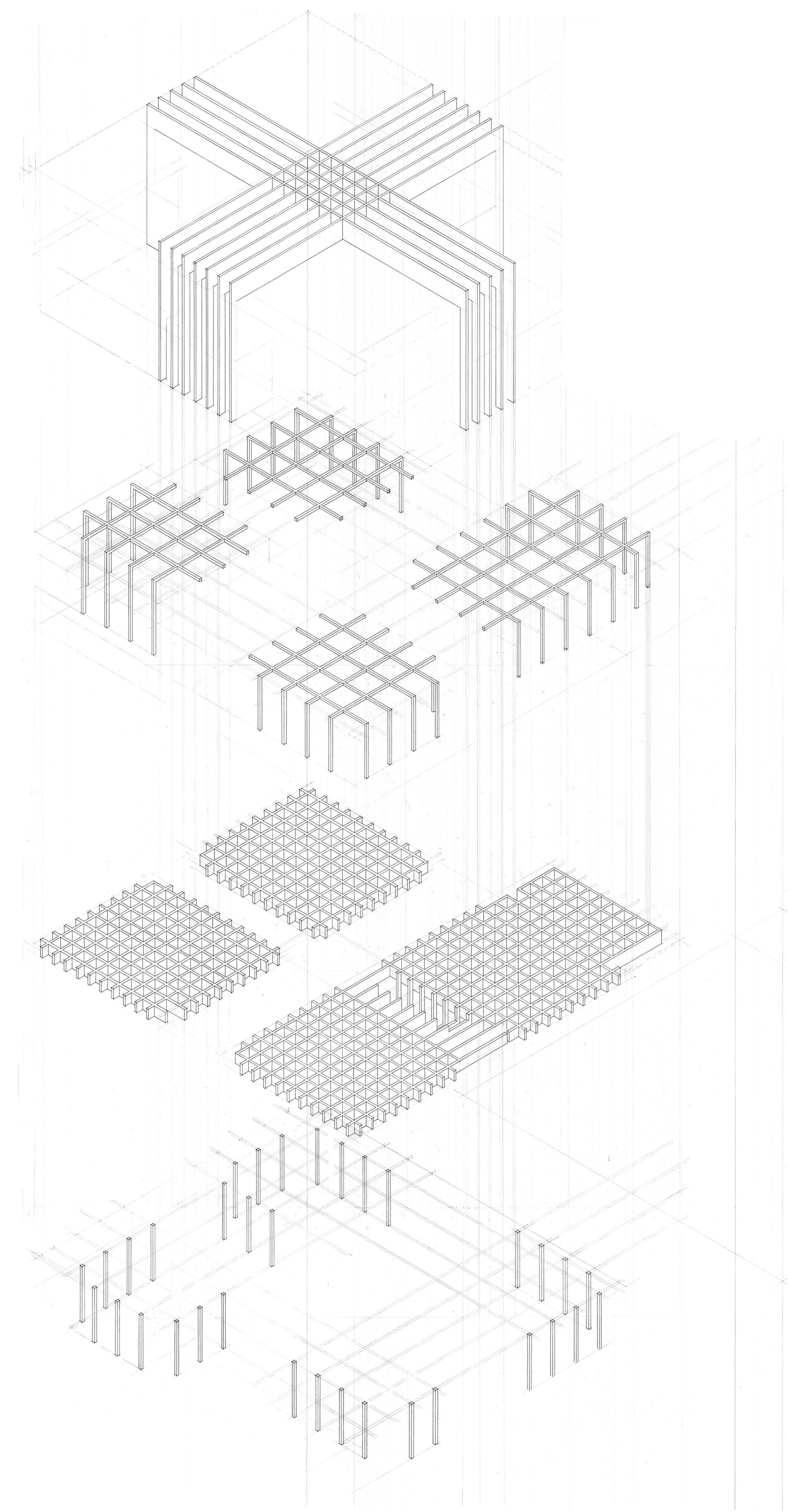
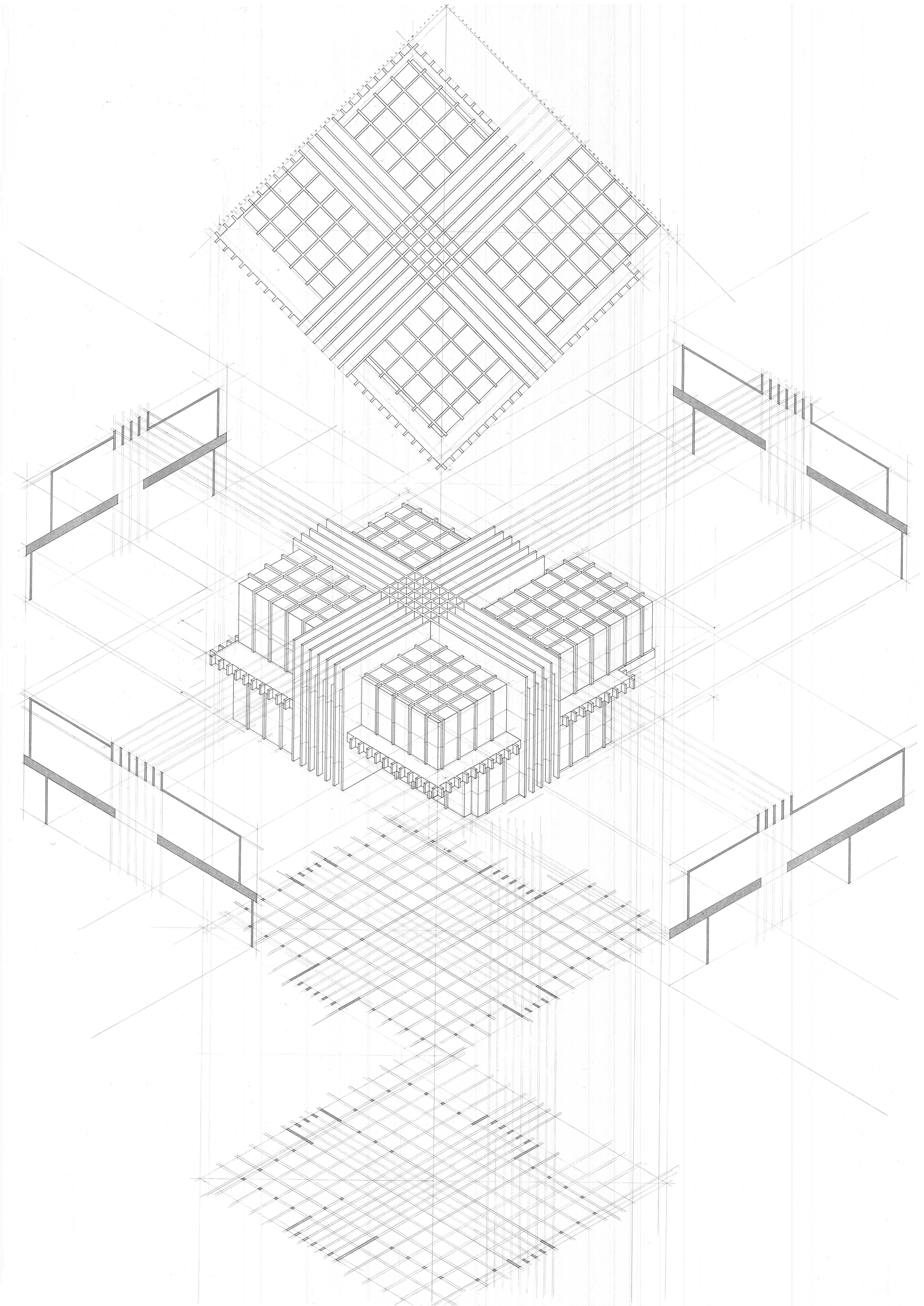


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▲ "Construction with lines"

- "I think we may need to divide the space here."
- "No worries. I'll put a wall there."
- "Do you think the sun might be too strong on this side though?"
- "No worries. I'll put a wall there too."
- "A little bit privacy here would also be nice. Don't you think so?"
- "No worries. I'll put a wall there."
- "Do you have anything else other than walls?"
- "Define a wall."
- "I call it a wall when it's solid and provides total blockage."
- "What if it doesn't?"
- "Then it's not a wall."
- "What's wrong with walls?"
- "Walls are great!"
- "Then why do you take issue on them?"
- "I think we should make proper use of them."
- "What do you mean?"
- "Make them not the default choice for any separation."
- "How?"
- "Use a wall only where it best serves."
- "Why make such a nuance?"
- "Because life is subtle."
- "Why does it have to be so complex?"
- "Because life is so colorful!"

