

Into the Abstract

By

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B.S. Architecture
The Ohio State University, 2015

Submitted to the Department of Architecture in Partial Fulfillment
of the Requirements for the Degree of
Master of Architecture
at the Massachusetts Institute of Technology

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To my thesis committee...

Thank you.

**Your brilliant guidance and enthusiasm meant everything
and I am forever grateful.**

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Abstract

“Must we not then renounce the object altogether, throw it to the winds and instead lay bare the purely abstract?” - Vasily Kandinsky, 1911

Abstraction is a form of contemplation. It is a means to produce new, while honoring the essential. It advocates for expression and the non-determined. It is about opportunity.

As such, abstraction has a prolific history that infiltrates most, if not all, forms of creative expression. The act of abstraction has grappled with the issues of representation, the objective and the narrative for the sake of something new. Either in Malevich’s Black Square, Cage’s 4’33” or Man Ray’s Tears, abstraction has been used as a way to engage the zeitgeist and to radicalize our perception, thus propelling us forward. Through abstraction, form has an opportunity to produce a range of effects and emotional responses freed from semantics. Abstraction, instead of controlling the narrative, provides the chance to harness the power of the most essential aspects of a thing in order to prompt new readings and new expectations from our experience with the created world.

Abstraction subverts the conventional method of arriving at the truth in an effort to perceive the truth through new perspectives.

Into the Abstract questions the potential of abstraction as a method and its role in architecture. It seeks out to understand what an abstract method might be, how it can be used and what may be produced. This thesis is not about purism, minimalism, or reductivism. It is not about reduction or removal, but rather about “essentializing.”

This inquiry will take place on the sites of four distinct houses. Each will attempt its own approach to abstraction with results to be determined.

Thesis Advisor: Mariana Ibañez
Title: Associate Professor of Architecture

to my family

**Mama, Papa, Kim en Effi.
zonder jou was het niet mogelijk
dank u**

and to my friends

**Without you, it wouldn't have been the same.
Thank you for your joy, your love, and your genius.
And thank you for sharing it with me.**

Into the Abstract

*an inquiry into abstraction as method and its
manifestations*

a thesis by Cheyenne Vandevoorde

**"Must we not then renounce
the object altogether,
throw it to the winds and
instead lay bare the purely
abstract?"**

- Vasily Kandinsky

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Abstraction manifests itself like no other. It is much easier to say a thing is abstract than it is to say it is not. **Abstraction is a form of contemplation. It is a means to produce new, while honoring the essential.** It advocates for expression and the non-determined. It is about opportunity.

As such, abstraction has a prolific history that infiltrates most, if not all, forms of creative expression. The act of abstraction has grappled with the issues of **representation**, the **objective** and the **narrative** for the sake of something new. Either in Malevich's Black Square, Cage's 4'33" or Man Ray's Tears, abstraction has been used as a way to engage the zeitgeist and to radicalize our perception, thus propelling us forward. Through abstraction, form has an opportunity to produce a range of effects and emotional responses freed from semantics. **Abstraction, instead of controlling the narrative, provides the chance to harness the power of the most essential aspects of a thing in order to prompt new readings and new expectations from our experience with the created world.**

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Abstraction

introduction

Abstraction as a concept is rich with meaning. When thinking about the abstract, one is doing something quite human. The ability to think abstractly is a defining trait for modern humans. It is the ability to take general concepts and frameworks and rationalize them into specific outputs and assumptions.

However, we know that abstraction is also not limited to the metaphysical. **Abstraction is both an act and an output.** The word itself implies a kind "stepping back" from the real concrete thing and giving that thing a broader platform to exist upon. That is, rather than holding objects within the constraints of the literal, abstraction allows for a release, not from reality, but from assigned convention. Abstraction, despite being one concept, has a range of definitions and applications. It is within this range that perhaps there lies an appropriate summation of abstraction resulting in a definition relevant to this thesis. **What follows are various definitions and instances with an attempt to find the common thread.**

Abstraction

as we know it

ab

off, away from

trahere

to draw



abstrahere

***to drag away, detach, pull
away, divert***



abstract

1. A general idea not based on any particular real person, thing or situation; the quality of being abstract.

2. The state of thinking deeply about something and not paying attention to what is around you .

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3. The action of removing something from something else; the process of being removed from something else.

For Plato's Forms are not mental entities, nor even mind-dependent. They are independently existing entities whose existence and nature are graspable only by the mind, even though they do not depend on being so grasped in order to exist.

Reference Plato's Theory of Forms

18

This term defines artwork, whether visual, aural or verbal, that neither represents nor symbolized anything in the mundane world; but, because our abstraction is primarily an idea, it also refers to work that at least approaches the absence of identifiable representation.

Dictionary of the Avant-Gardes, Richard Kostelanetz

Non-representational works of art that do not depict scenes or objects in the world or have discernible subject matter

MoMA's definition of Abstract

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Substitutes for "abstract" such as "non-objective" and "non-figurative" have been advocated as superior. But the image of a square is as much an "object" or a "figure" as the image of a face or a landscape; in fact "figure" is the very prefix used by geometers in naming A or B the abstractions with which they deal.

Alfred H. Barr in Cubism and Abstract Art - Former curator at MoMA

“I don’t care for ‘abstract expressionism,’” he said, “and it’s certainly not ‘nonobjective’ and not ‘nonrepresentational’ either. I’m very representational some of the time, and a little all of the time. But when you’re painting out of your unconscious, figures are bound to emerge.”

Jackson Pollock

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Most commonly, abstraction takes place when a photographer focuses in on a fragment of a natural scene, isolating it from its context.

Standfor Encyclopedia of Philosophy

which is that dance can never be absolutely abstract or non-representational because it is inseparably bound to the human figure.

Vitorio Aureli Intangibility and Concrete

The avant-garde poet or artist tries in effect to imitate God by creating something valid and solely on its own terms, in the way nature itself is valid, in the way a landscape - not its picture - is aesthetically valid; something given, increate, independent of meanings, similars or originals. Content is to be dissolved so completely into form that the work of art or literature cannot be reduced in whole or in part to anything not itself.

21

Clement Greenberg in Art and Culture

Through the process of abstraction, a programmer hides all but the relevant data about an object in order to reduce complexity and increase efficiency. In the same way that abstraction sometimes works in art, the object that remains is a representation of the original, with unwanted detail omitted.

TechTarget - needs academic reference

22

Computer science, insofar as it is concerned with software, is distinguished from the empirical sciences in that none of its models are physically concrete—they are realized in software, and in this nonphysical sense computer science models are abstractions.

Abstraction in Computer Science Timothy Colburn and Gary M. Shute

... abstraction both manifests itself as process and form; as a way to reach specific solutions via generic frameworks

Vitorio Aureli Intangibility and Concrete

23

Most commonly, abstraction takes place when a photographer focuses in on a fragment of a natural scene, isolating it from its context.

Interview with Markus Breitschmid and Valerio Olgiati with Domus 974

... abstraction both manifests itself as process and form; as a way to reach specific solutions via generic frameworks

Vitorio Aureli Intangibility and Concrete

24

Traditional grammar distinguishes the abstract noun 'whiteness' from the concrete noun 'white' without implying that this linguistic contrast corresponds to a metaphysical distinction in what these words stand for.

Standfor Encylopedia of Philosophy

The process of extracting the underlying essence of a mathematical concept, removing any dependence on real world objects with which it might originally have been connected, and generalizing it so that it has wider applications or matching among other abstract descriptions of equivalent phenomena.

Bertrand Russel *The Principles of Mathematics*

25

“One may give up the desire to control sound, clear his mind of music, and set about discovering means to let sounds be themselves rather than vehicles for man-made theories or expressions of human sentiments.”

John Cage

Art

Perhaps the most colloquial use of abstract pertains to art. Specifically referring to Abstract Expressionism, which was a movement primarily led out of New York in the 1940's and 50's. MoMA defines the movement as a time of "non-representational works that did not depict scenes or objects in the world or have discernible subject matter."¹ Artwork from artists like Jackson Pollock, William de Kooning and Mark Rothko aimed to evoke emotion not relay information. Their work, along with that of their contemporaries, antagonized the conventions of art via technique and content. The work was highly personal, self-reflective and individual. Abstraction offered artists a different means of expressing. As the methods became abstracted (action painting, monumental canvases, ad hoc materials) so did the image of the paintings themselves.

26 Critics of the movement were worried, if not appalled, by what appeared to be a complete disregard and disrespect for the technique and history of art. As art critic Lincoln Kirsten put it, "Ambiguity and simplicity that surround modern art often remove it from purpose or successful content altogether. What painting lacks today is what bad painting always lacks: adequate intellectual capacity and manual skill."² Clement Greenberg, an art critic during the rise of Abstract Expressionism, advocated that abstraction can only be judged based on the experience it produces not through the image depicted on the canvas. He said, "...we cannot tell, before the event - before the experience of it - whether the addition or abstraction of conceptual meaning, or of any given factor, will increase or diminish the aesthetic meaning of a work of art."³

1 "Abstraction." MoMA. Accessed August 21, 2019. <https://www.moma.org/collection/terms/3>.

2 "New York City in the '40s." New York City in the 40s. Wesleyan University . Accessed August 22, 2019. <http://chum338.blogs.wesleyan.edu/reactions-to-the-rise-of-abstract-expressionism/>.

3 Greenberg, Clement. Art and Culture: Critical Essays. (Boston, Beacon Press, 2006), 134.

The familiar identity of things must be pulverized in order to destroy the finite associations with which our society increasingly enshrouds every aspect of our environment.
- Mark Rothko

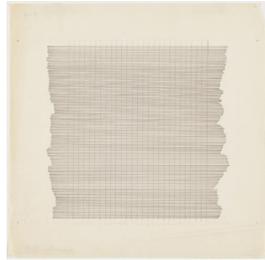
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- Alfred H. Barr in *Cubism and Abstract Art*

"Must we not then renounce the object altogether, throw it to the winds and instead lay bare the purely abstract?" - Vasily Kandinsky, 1911

1.

Untitled

1960
Agnes Martin
Ink on paper
MoMa



1.

2.

Adam

1951
Barnett Newman
Oil paint on canvas
Tate Modern



2.

3.

Pink Landscape

1963
William de Kooning
Oil on board
Moma



3.

4.

One: Number 31

1950
Jackson Pollock
Oil and enamel paint
on canvas
Pollock-Krasner Foundation



4.



5.

5.

Untitled

1968
Mark Rothko
Synthetic polymer
paint on paper
Kate Rothko Prizel &
Christopher Rothko

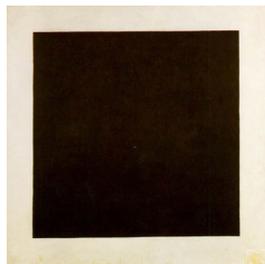


6.

6.

Untitled Rome

1960
Cy Twombly
Oil, graphite, and oil
stick on canvas
Solomon R. Guggen-
heim Museum



7.

7.

Black Square

1923
Kazimir Malevich
Oil on canvas
Erich Lessing Culture
and Fine Arts Archive

Photography

Photography also depends heavily on the method of producing an image. Like in art, abstract photography decontextualized their subjects in order to remove any preexisting conceptions or assumptions. Curator Lyle Rexer defines abstraction as “a departure from or the eliding of an immediately apprehensible subject.”¹ The image captured was to be up for interpretation. By harnessing the ability of the camera to capture a static moment and play with the outputs, abstract photography became about the production of a moment not the image of a thing.

28 Photographers like Man Ray played with subject matter and editing techniques producing images that were sometimes but many times provocative. They mimicked an almost canvas like sensibility. Aaron Siskind photographed peeling paint without revealing the context that would make it obvious. Bill Armstrong blurs his image in an effort to make the subject secondary to the entire composition.

“Nature does not create works of art. It is we, and the faculty of interpretation peculiar to the human mind, that see art.” - Man Ray

*“I may be wrong, but the essential illustrative nature of most documentary photography, and the worship of the object per se, in our best nature photography, is not enough to satisfy the man of today, compounded as he is of Christ, Freud, and Marx.”
- Aaron Siskind*

¹ Rexer, Lyle. *The Edge of Vision: the Rise of Abstraction in Photography*. New York: Aperture, 2009.

1.
Jerome 49
1949
Aaron Siskind
Gelatin silver print
Aaron Siskind Foundation

2.
Larmes (Tears)
1916
Man Ray
Gelatin silver print
Man Ray Trust

3.
Luminograph
1981
Gottfried Jager
Pigment Glossy Print
on Fujicolor
Sous Les Etoiles
Gallery

4.
Vortograph
1917
Alvin Langdon
Coburn
Gelatin silver print
George Eastman
House

5.
Mandala #450
2003
Bill Armstrong
Photographs, Type-C
print
McKenzie Fine Art

6.
Cascading Attica
2011
Yamini Nayar
color photograph
Thomas Erben

7.
cfall109
2011
Jessica Eaton
archival pigment
print
Jessica Eaton



1.



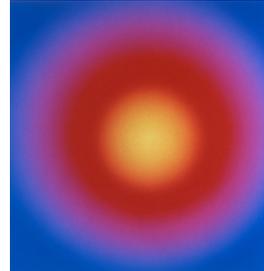
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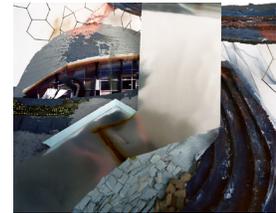
3.



4.



5.



6.



7.

Film

Film and literature are similar. Both depend on language and the production of imagery as a way to convey a message or meaning. Both are also usually directly tied to articulating the human experience. Abstraction becomes about essentializing or focusing the medium without a determined outcome or interpretation - less focus is placed on producing the message, but more on how one arrives there.

Film's like *Un Chien Andalou* explored what defined a film as a film. Having no plot, the short film bounces around time and place without a clear order or narrative.¹ The imagery alone produces the sensorial effect on the viewer. Abstract film played with the production of the image (color, shape, depth, movement, etc.) in order to produce messages not derived from the narrative or cinematic convention.

30

Work produced by Oskar Fischinger, Harry Smith and Viking Eggeling focused on how sound and imagery, not of the real world, would produce new implications surrounding film. Harry Smith's *Early Abstractions* from the 1950's used nondescript geometric animations and music as a way to capture essential compositions and relationships. Eggeling's *Symphonie Diagonale* used repetitive line figures dancing across the screen. Abstract films tended to explore other "structural" and "organizational" models.²

In its purest form, done right, watching an experimental film is the closest you can come to dreaming another person's dreams. Which is why to watch one is, essentially, to invite another person into your head, hoping you emerge haunted.
- Gemma Files

1 Un Chien Andalou. Luis Buñuel. Paris: Billancourt Studios, 1929

2 Film as Film: Formal Experiment in Film 1910-1975. London: Art Council of Great Britain, 1979. 12

1.

Un Chien Andalou

1929
Luis Bunuel and Salvador Dali
black and white film
Les Grands Films Classiques

2.

Composition in Blue

1935
Oskar Fischinger
color film
Center for Visual Music

3.

Early Abstractions

1946-1957
Harry Everett Smith
animated film
National Film Registry

4.

Symphonie diagonale

1924
Viking Eggeling
silent film
Europa Film Treasures.

5.

Opus I

1921
Walter Ruttmann
animated film
Ruttmann-Film

6.

An Optical Poem

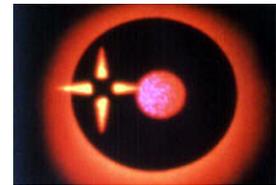
1938
Oskar Fischinger
animated film
MGM



1.



2.



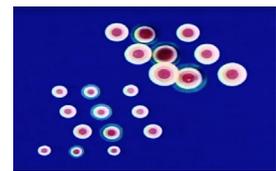
3.



4.



5.



6.

Into the Abstract seeks out the realms of the abstract in architecture. Not in an effort to categorize or specify, but instead in an effort to comprehend abstraction as a method that produces variable yet curious results. What happens when we intentionally exist in the abstract. The following section reveals a series of approaches or methods towards the abstraction of architectural elements.

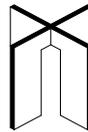
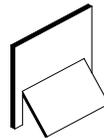
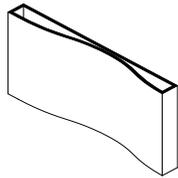
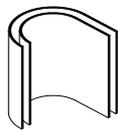
Perhaps slightly tweaking our embedded architectural devices and recombining them to make room for more readings such as, erasing the old, playing with legibility and perception and certainly playing with convention is such a method. Where do we start if not with the basics?

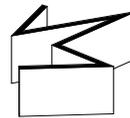
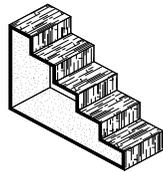
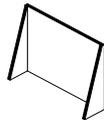
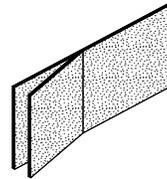
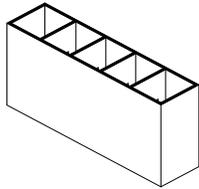
Or might the method consider scale, and the playfulness of an object at 2' or 200'

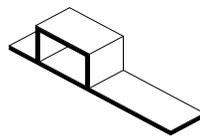
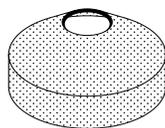
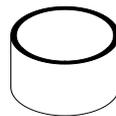
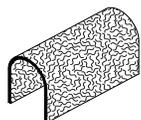
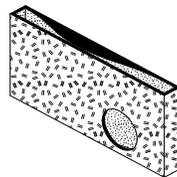
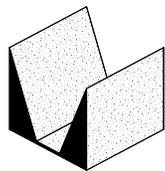
Or might the method reform and remold the image of these devices. Do they remain device or become the shell of a building. Does their legibility as such matter. Does their creation imply their use or are they free to do as they please. Free of meaning - free of agenda.

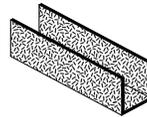
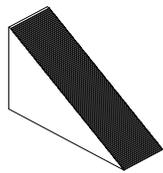
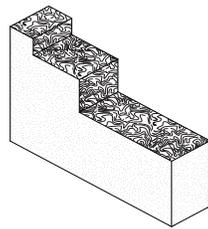
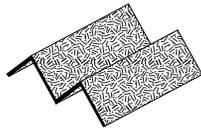
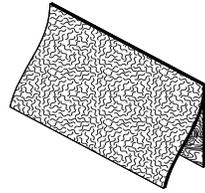
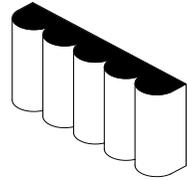
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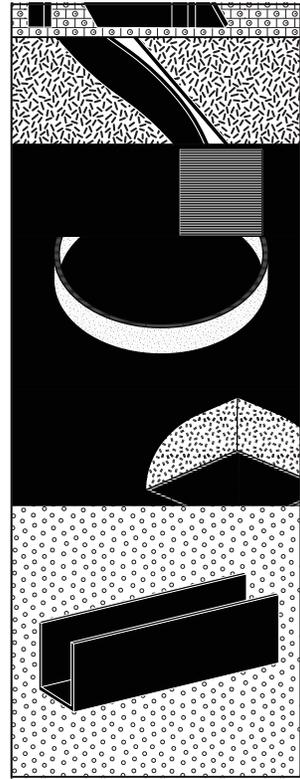
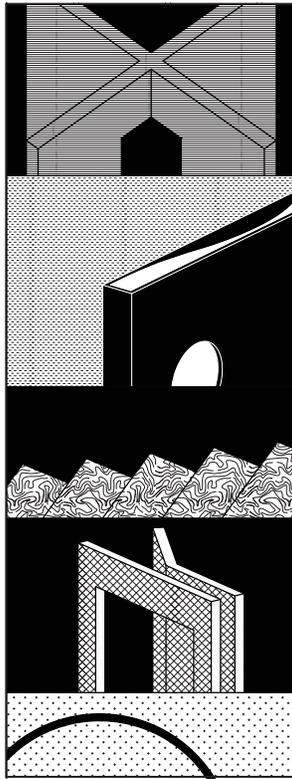
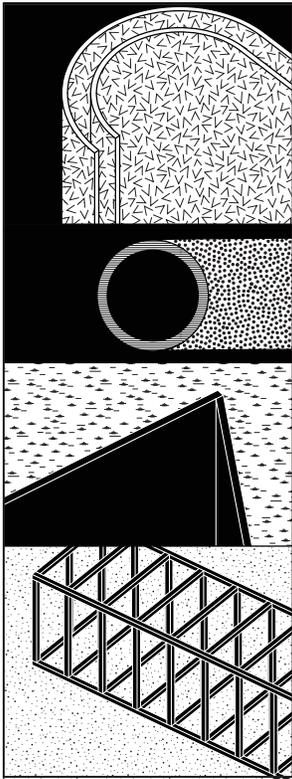
as method

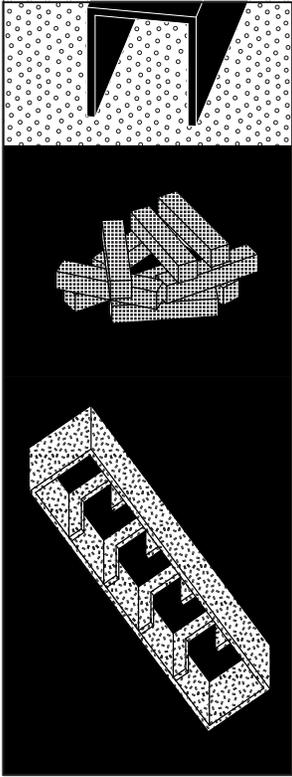
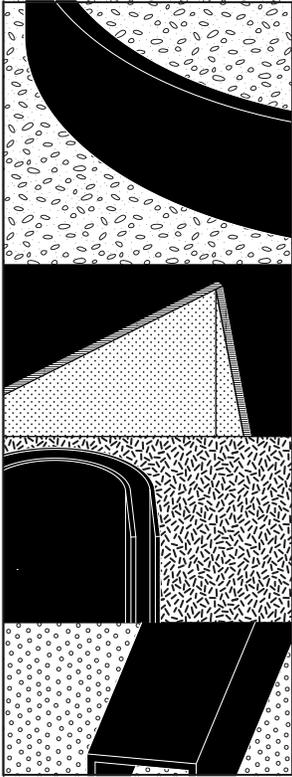
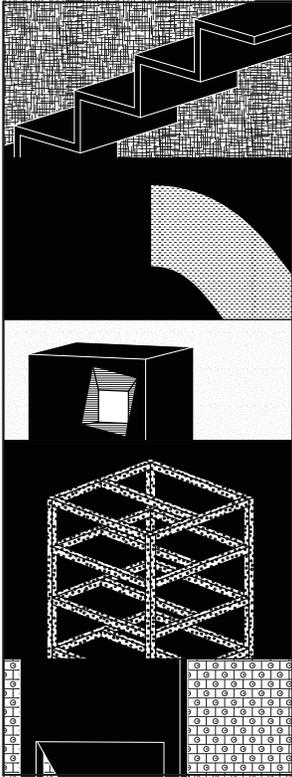


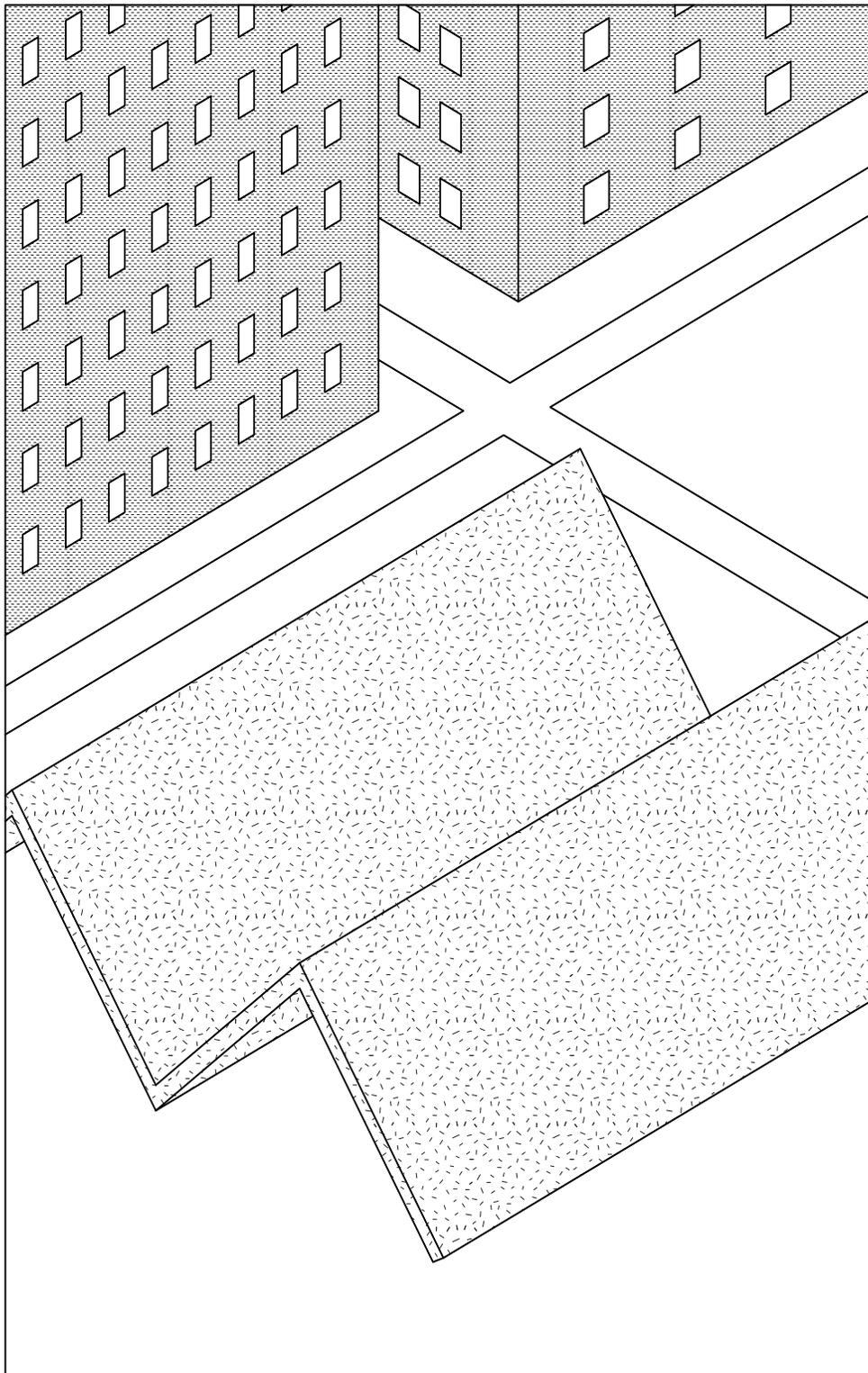


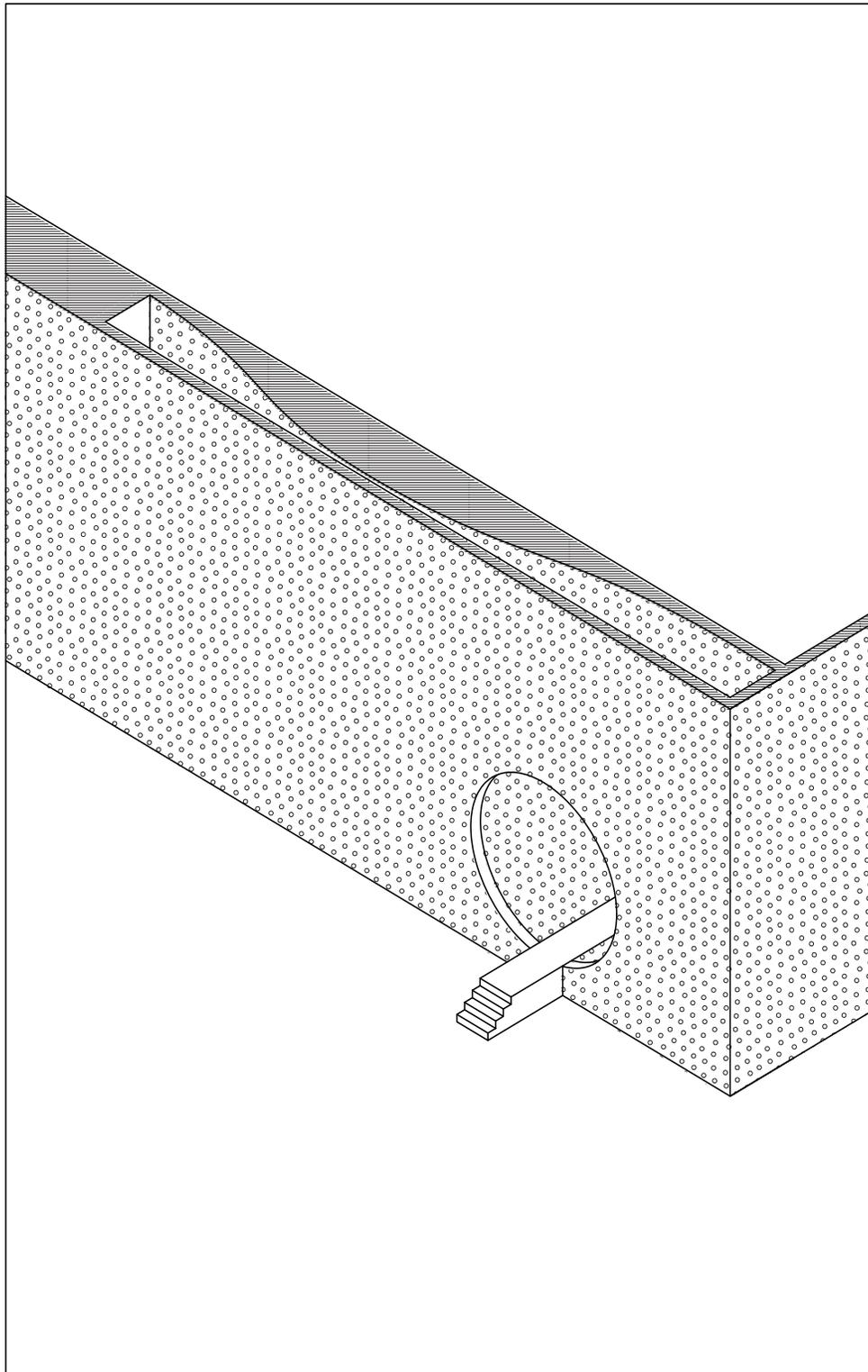


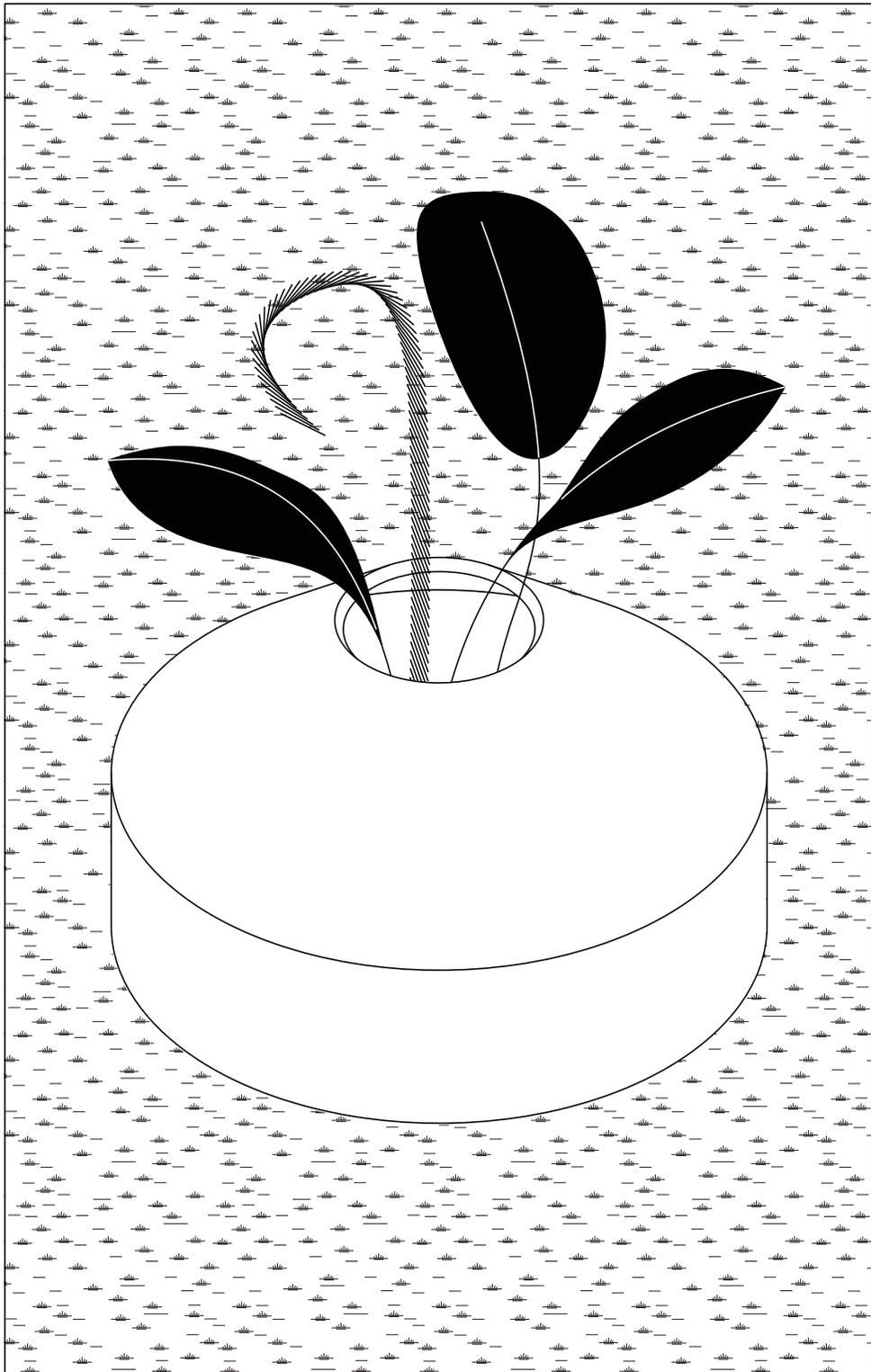


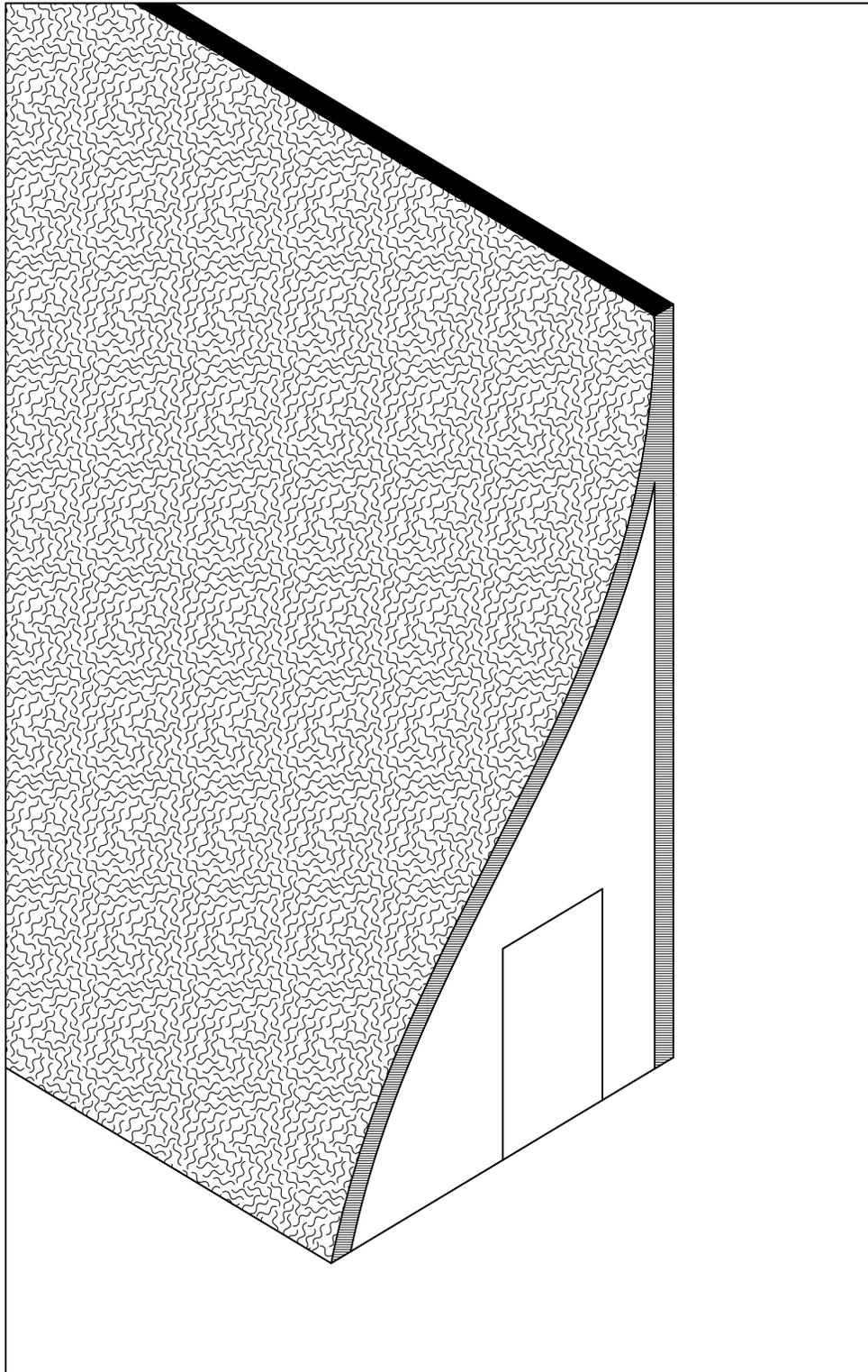


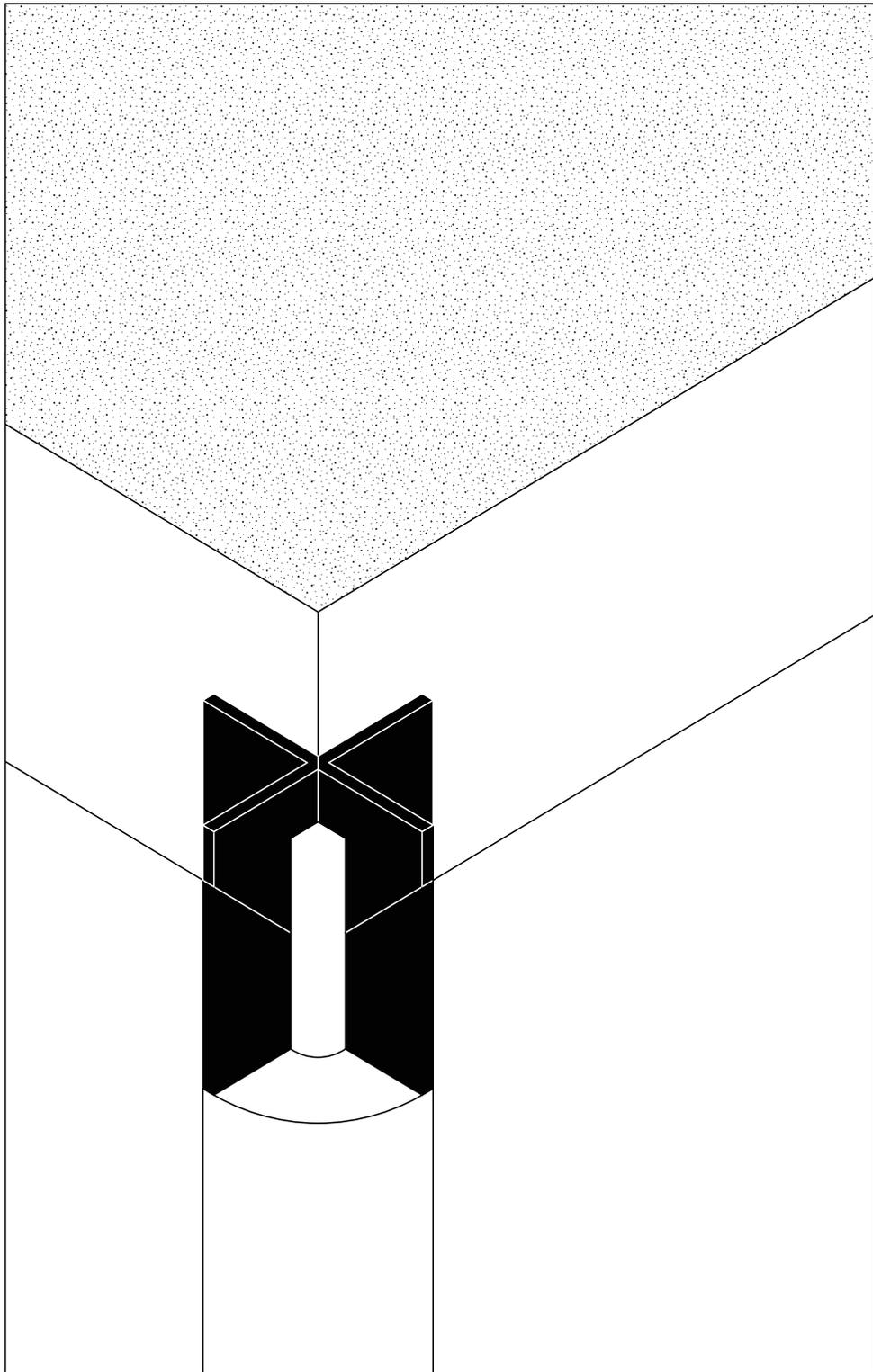


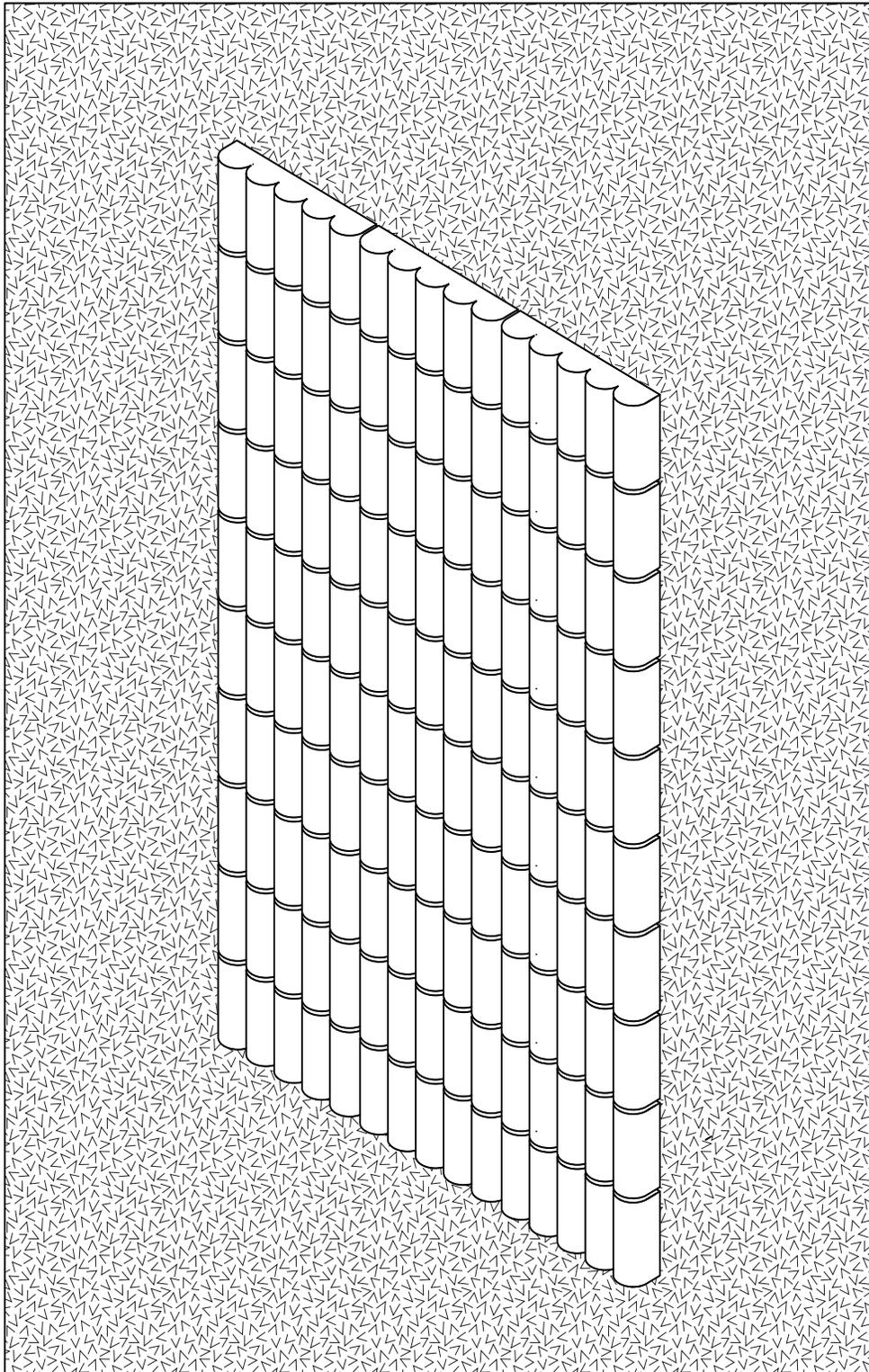




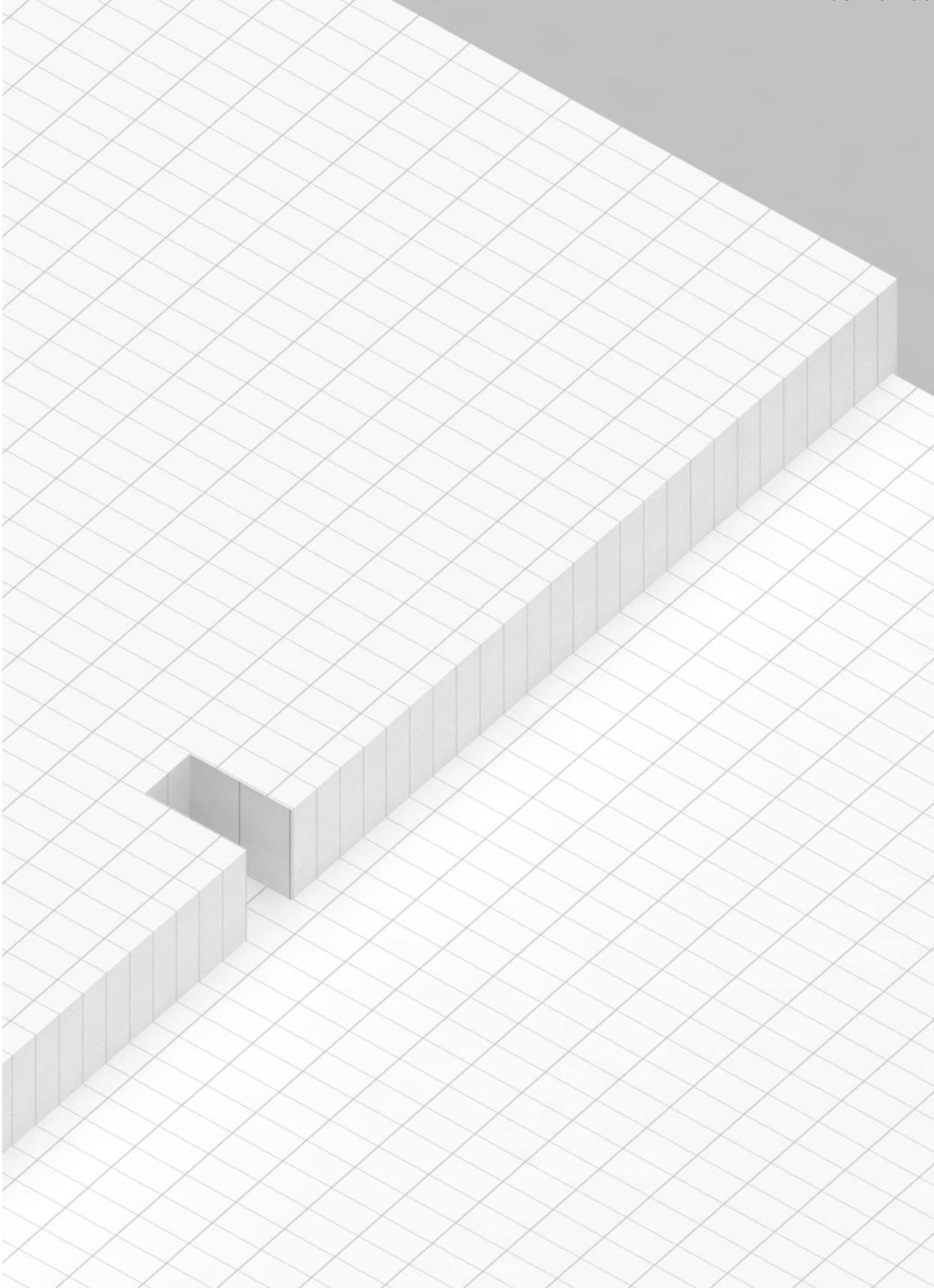


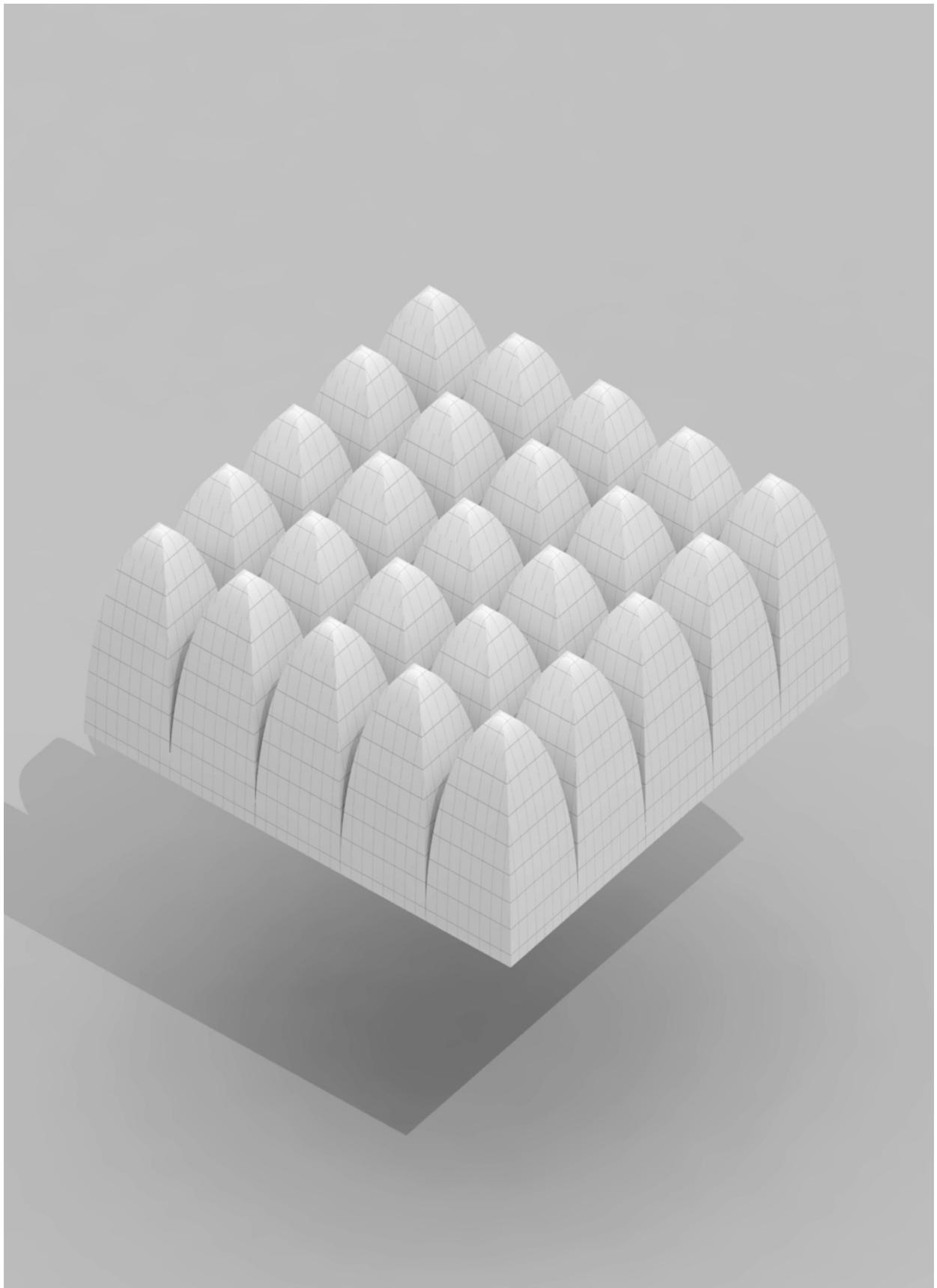


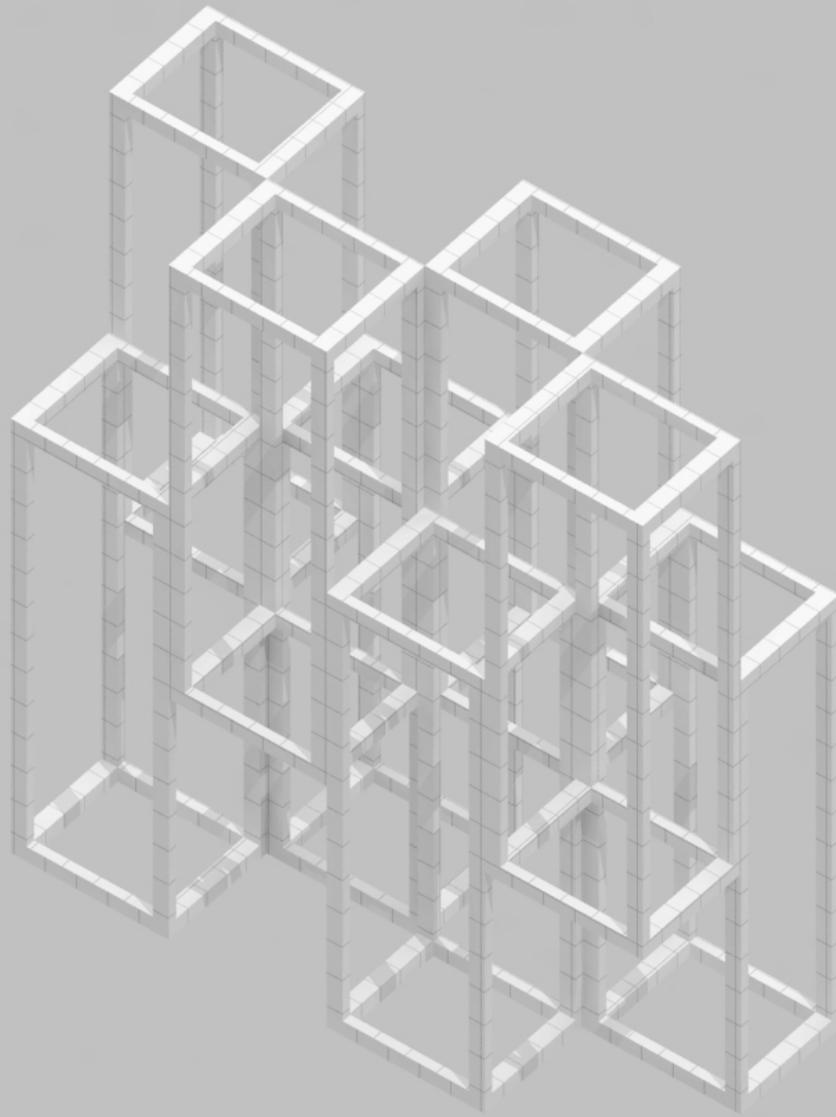


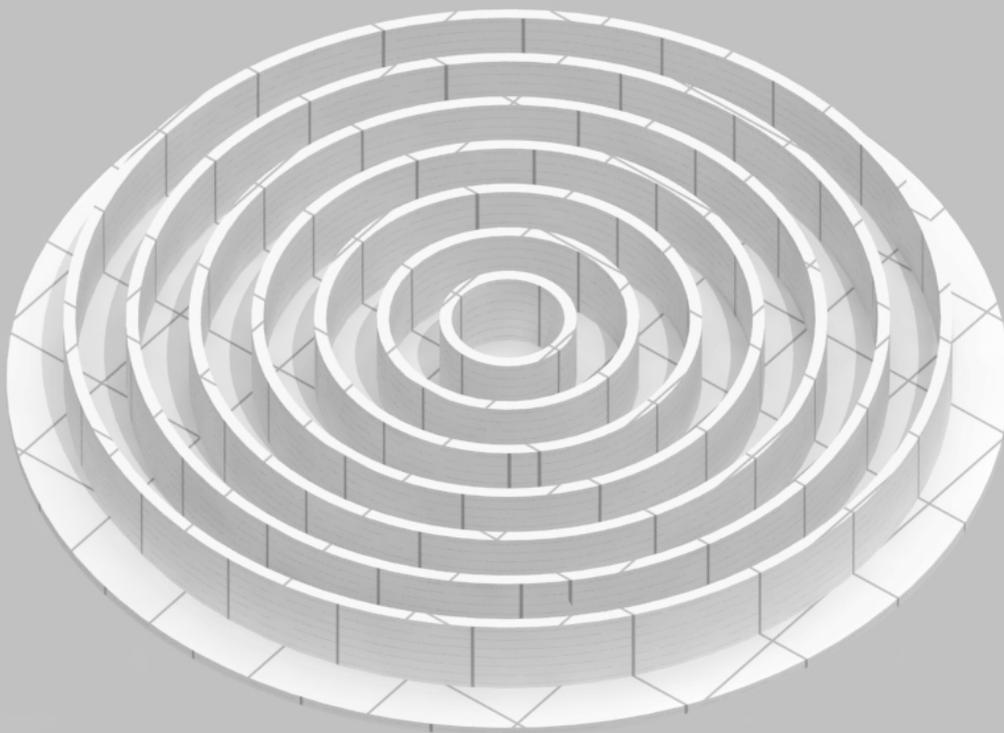


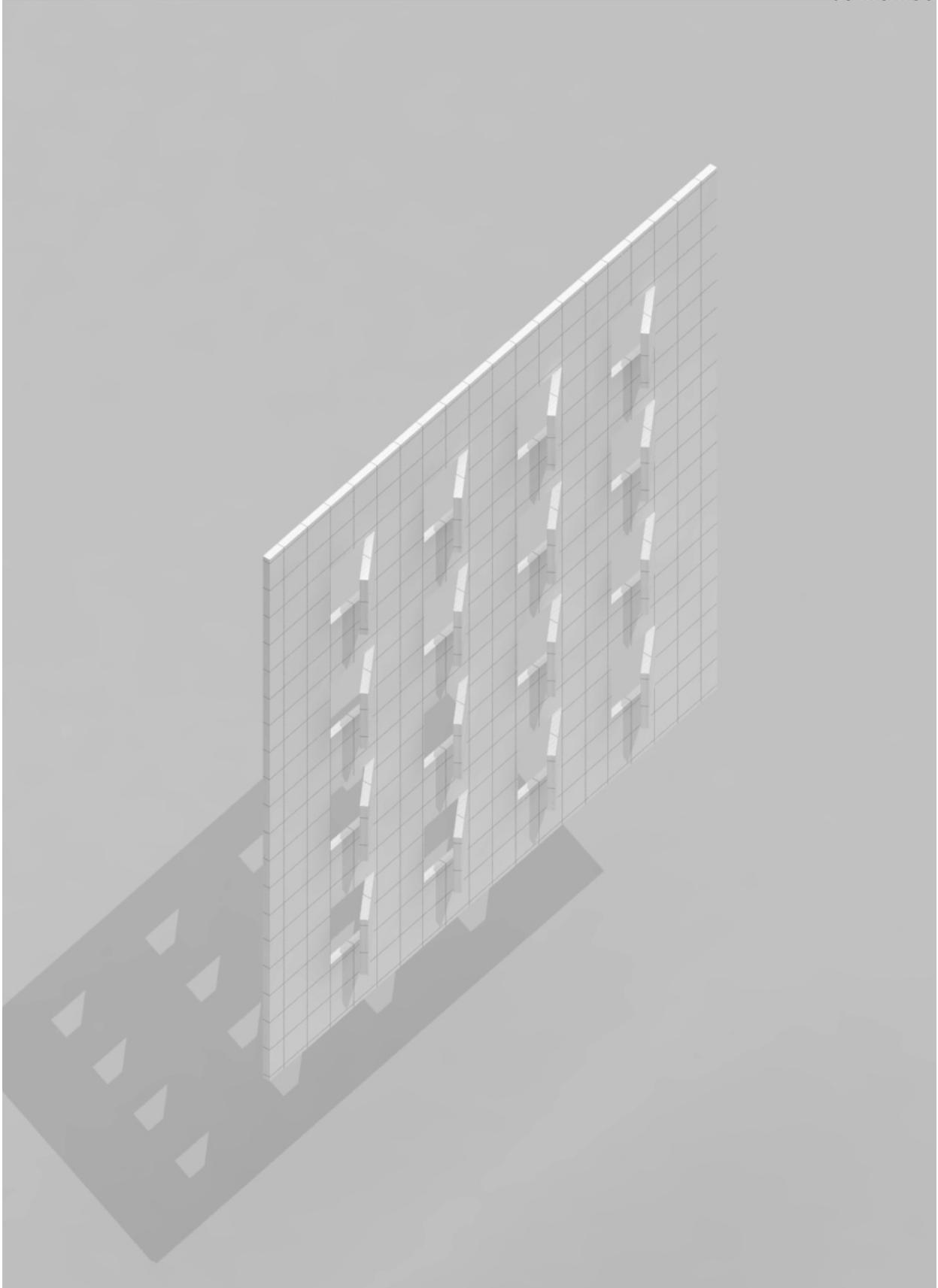


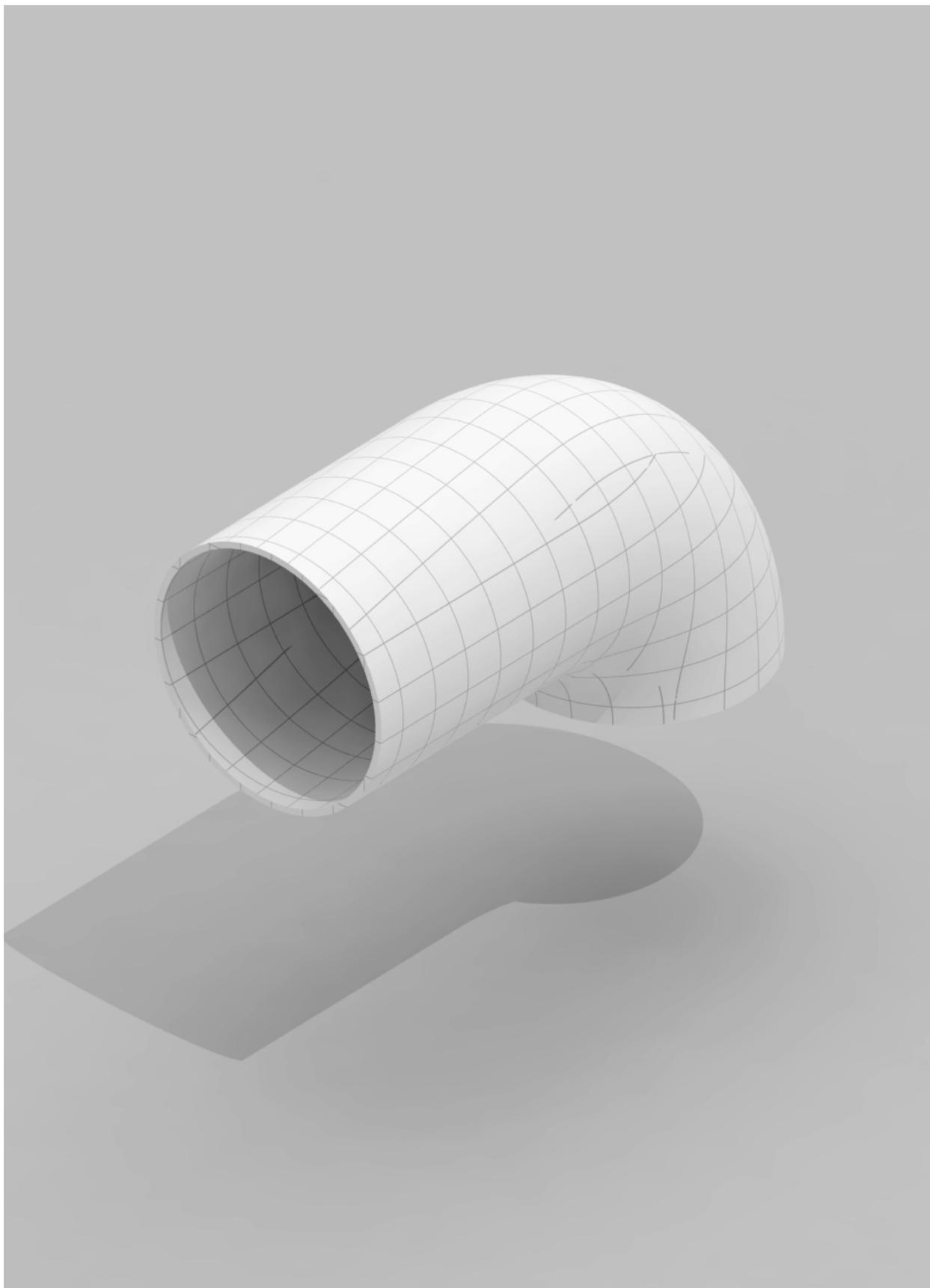


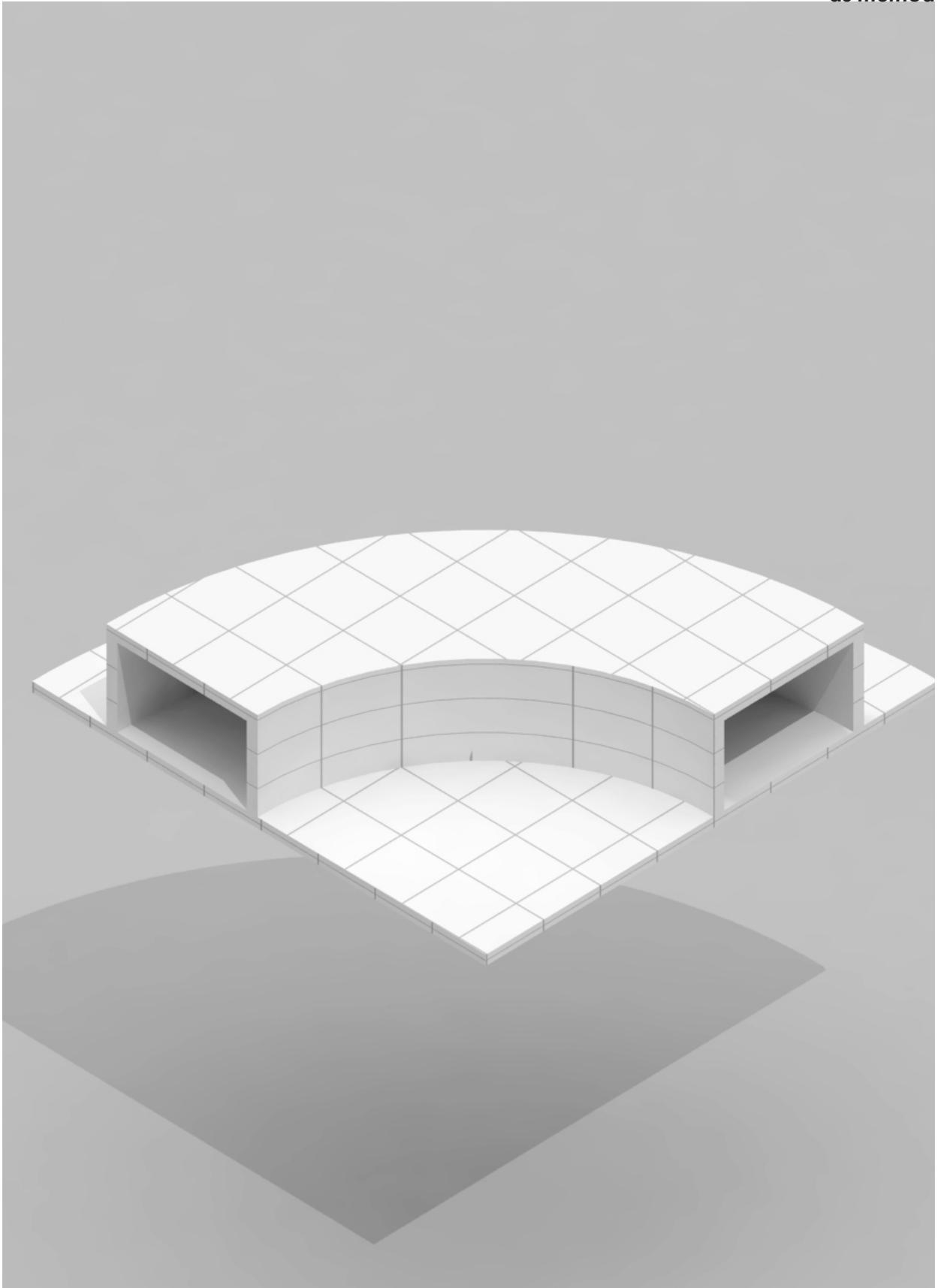


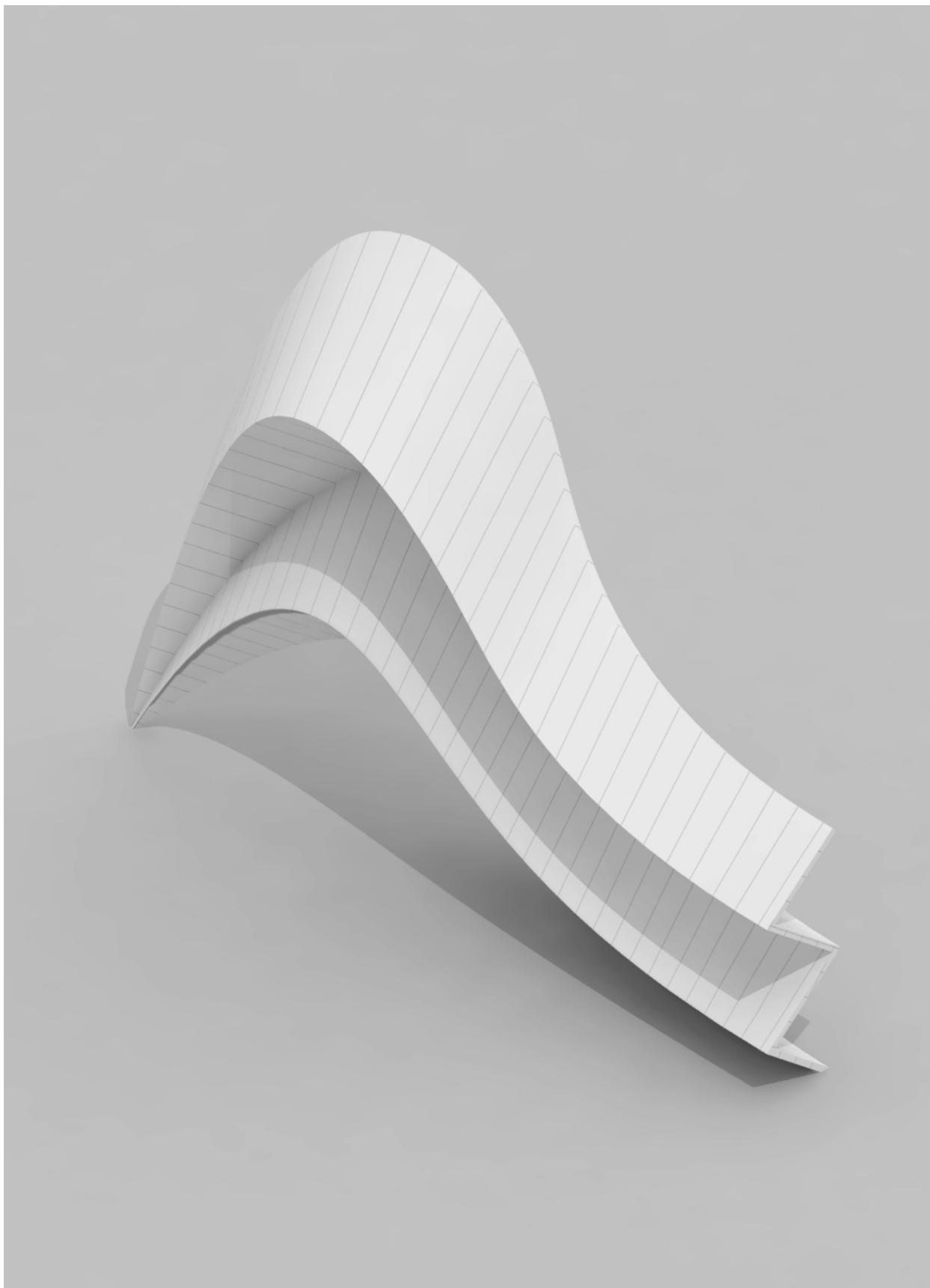


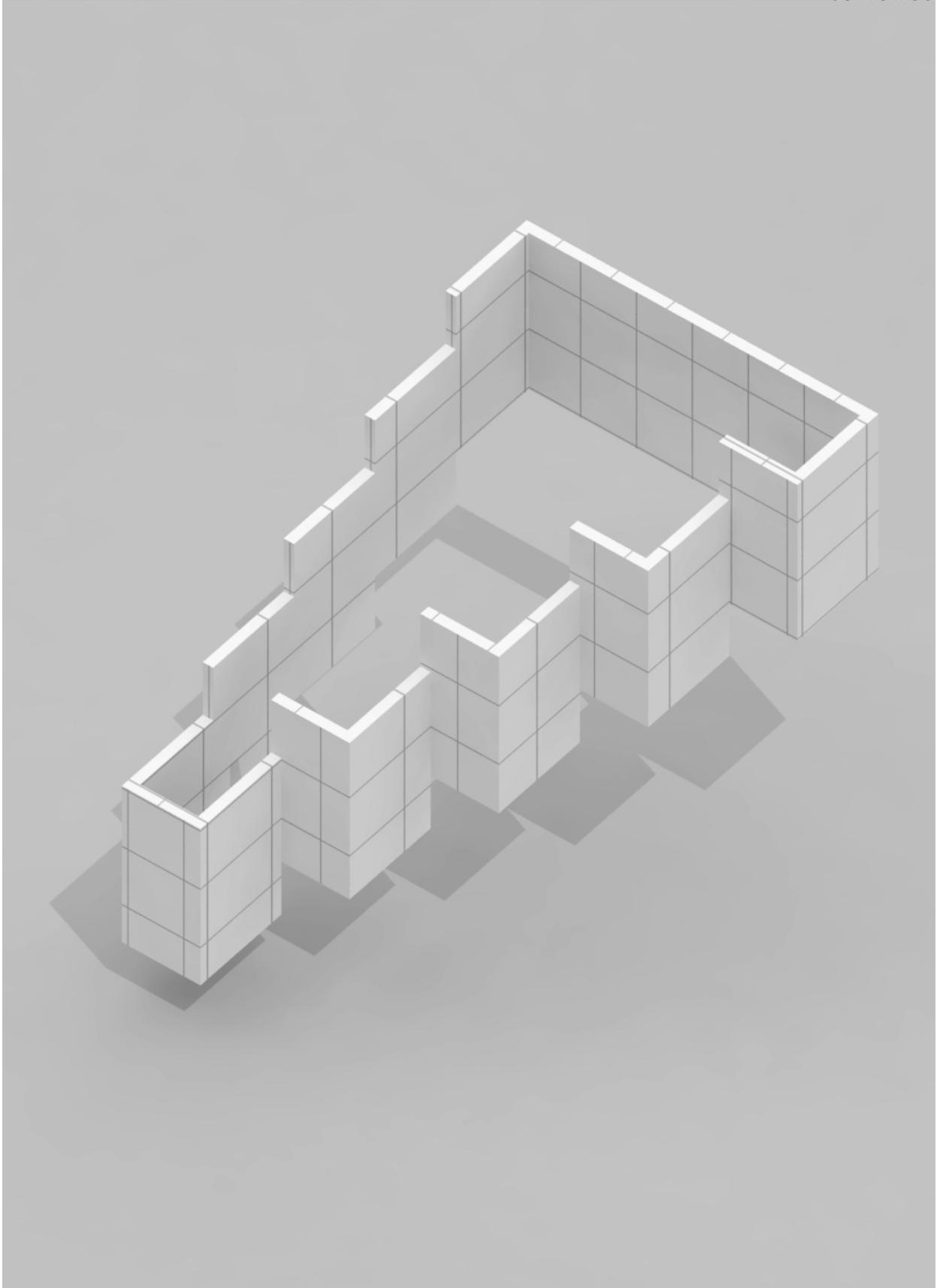


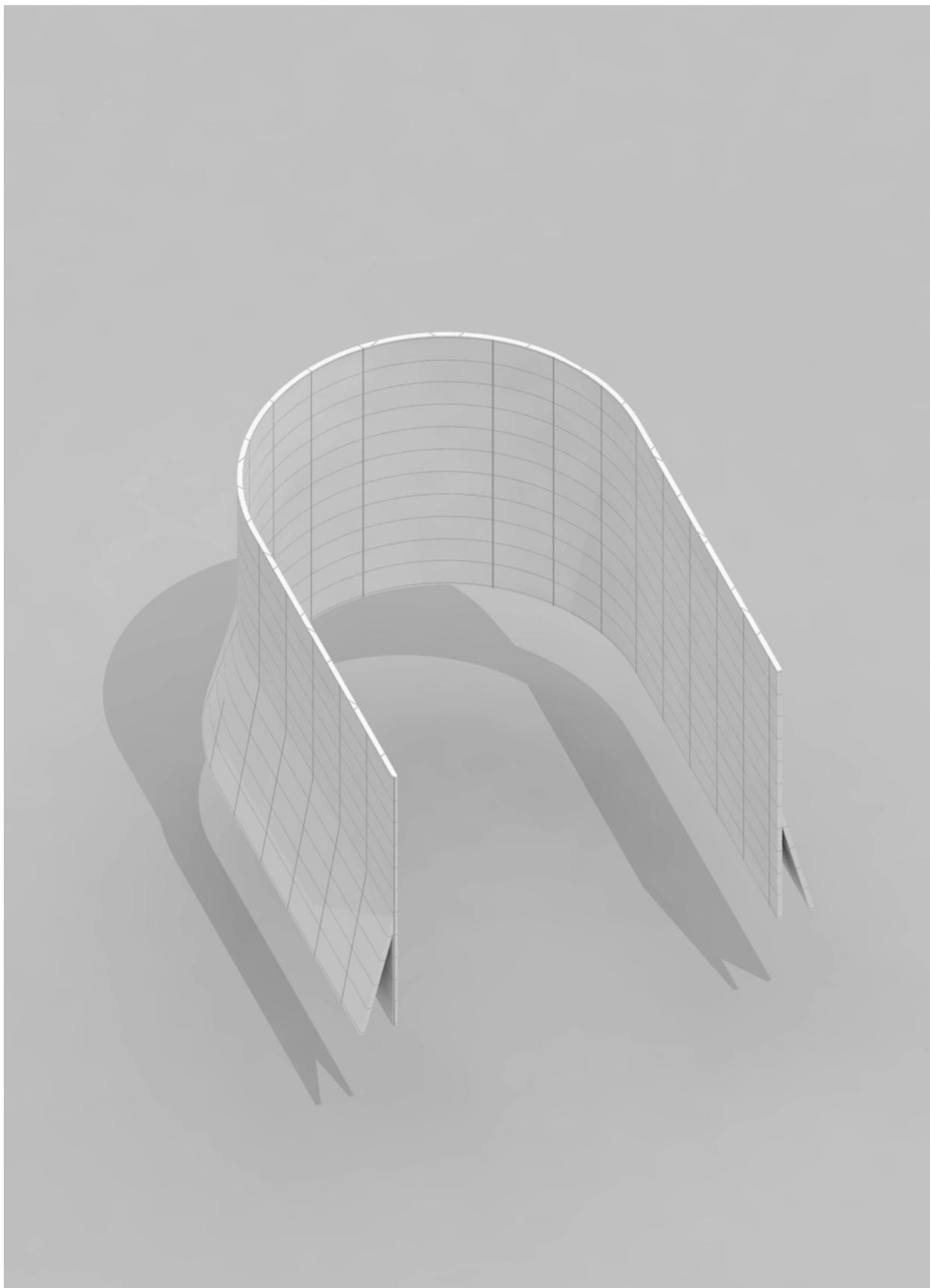


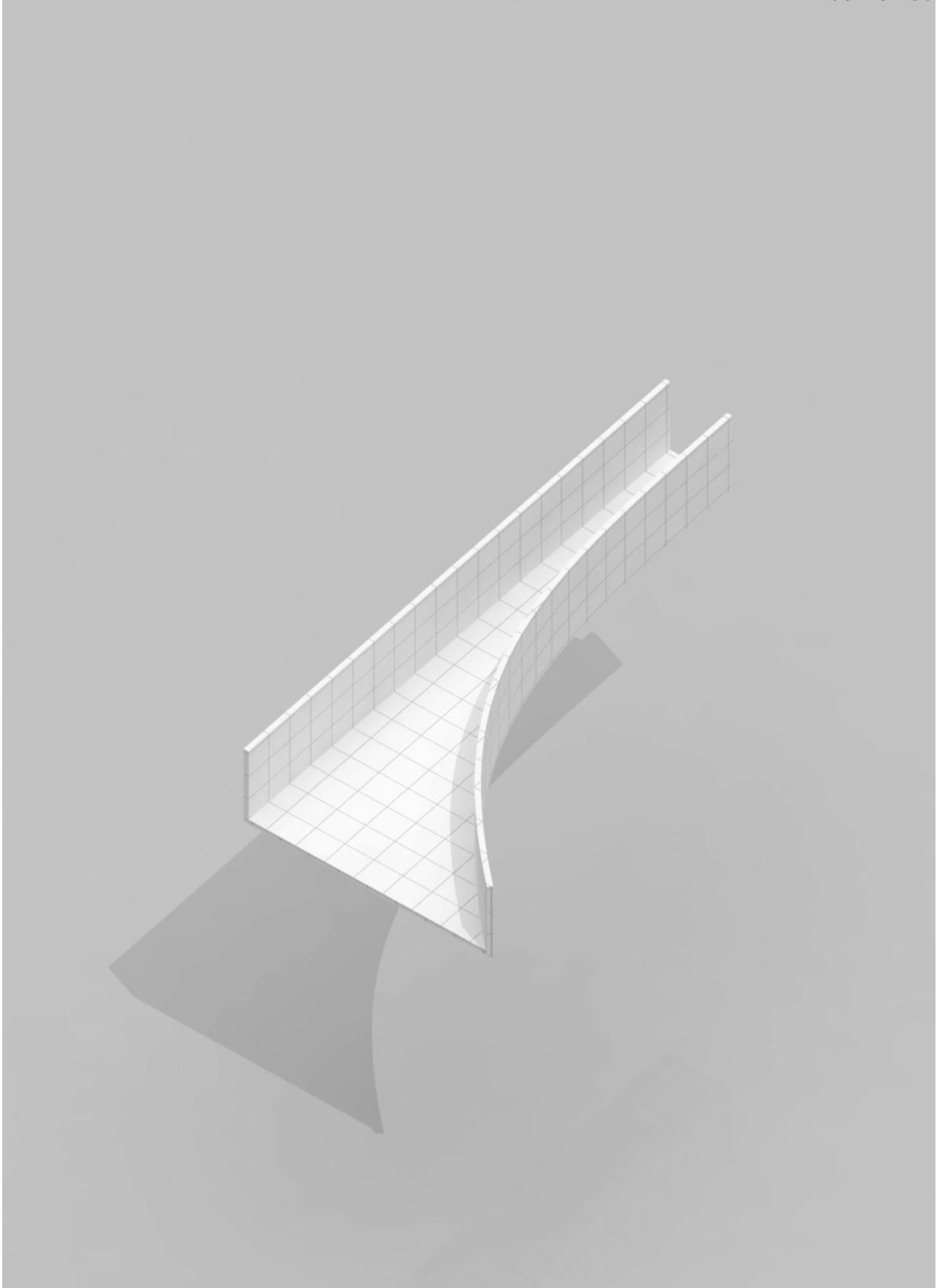












With these considerations, practices and approaches in mind the final products of this project are four houses, on four sites, doing some hopefully abstract things.

Each house is a case study of what certain abstractions might be. They do not prescribe abstraction, but are simply attempts at. **Into the abstract is an inquiry after all.**

Within each house, The Wall House, The Step House, The Grid House and The Solid/Void House there is an attempt to consider the formal production of the abstract by playing with legibility, reading and misreading and ambiguity.

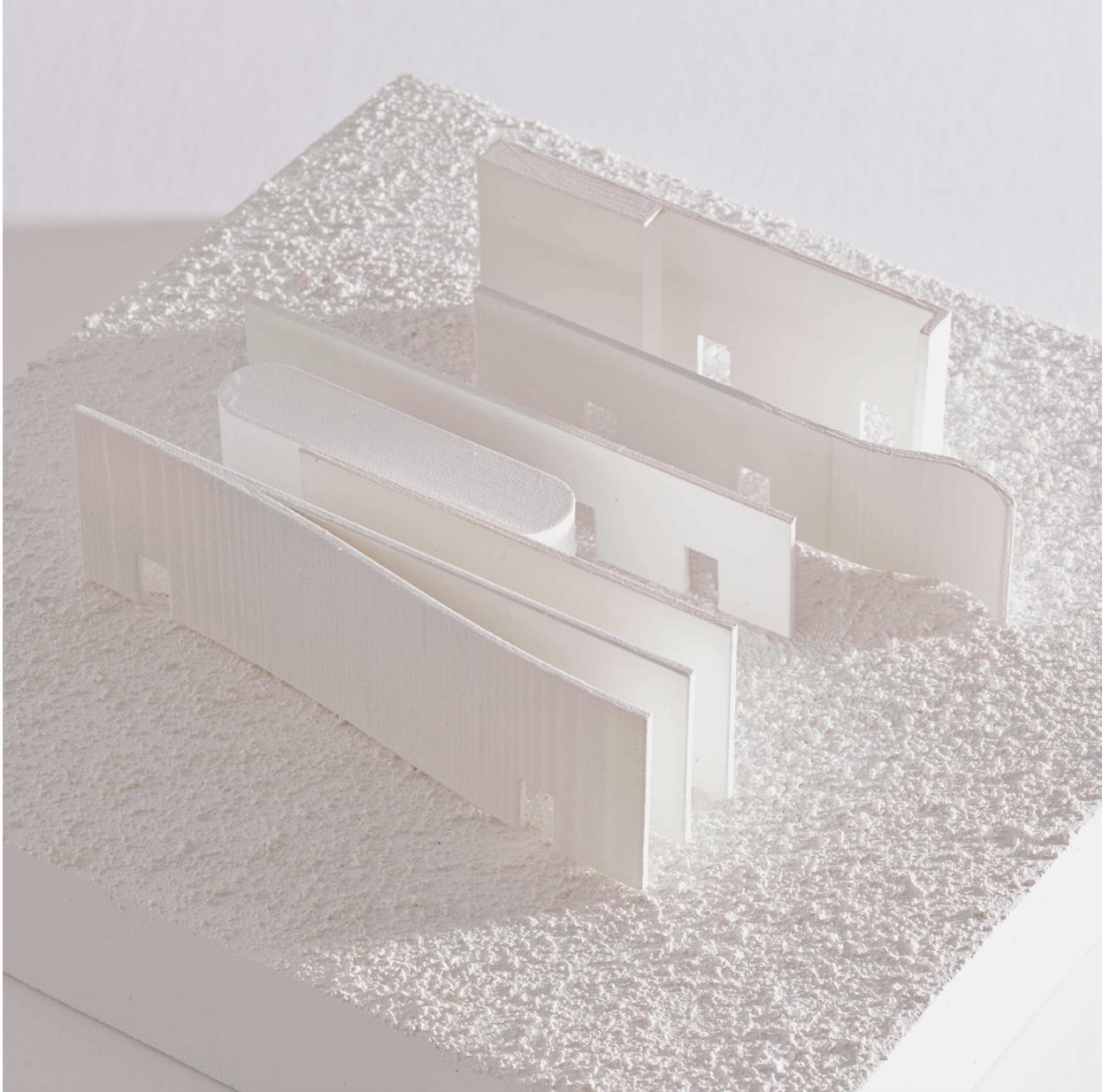
As the names imply, each house is focused on one kind of architectural trope.

While the form and matter of these house are real, they are produced in an effort to play with perception and assumption and open up our built environment to new experiences. Drawing allows the houses to exist in a further abstracted state where their physicality becomes unclear and less determined. The houses can run free in a way.

These houses are concerned with the essence of themselves, sometimes teetering on the absurd, but still remaining thoughtful and intentional.

Whether these case studies are successes or failures or whether they somehow come full circle, **they are reflections.** They ponder our ability produce an architecture based on an abstract method.

Four Houses



Credit: Andy Ryan Photography

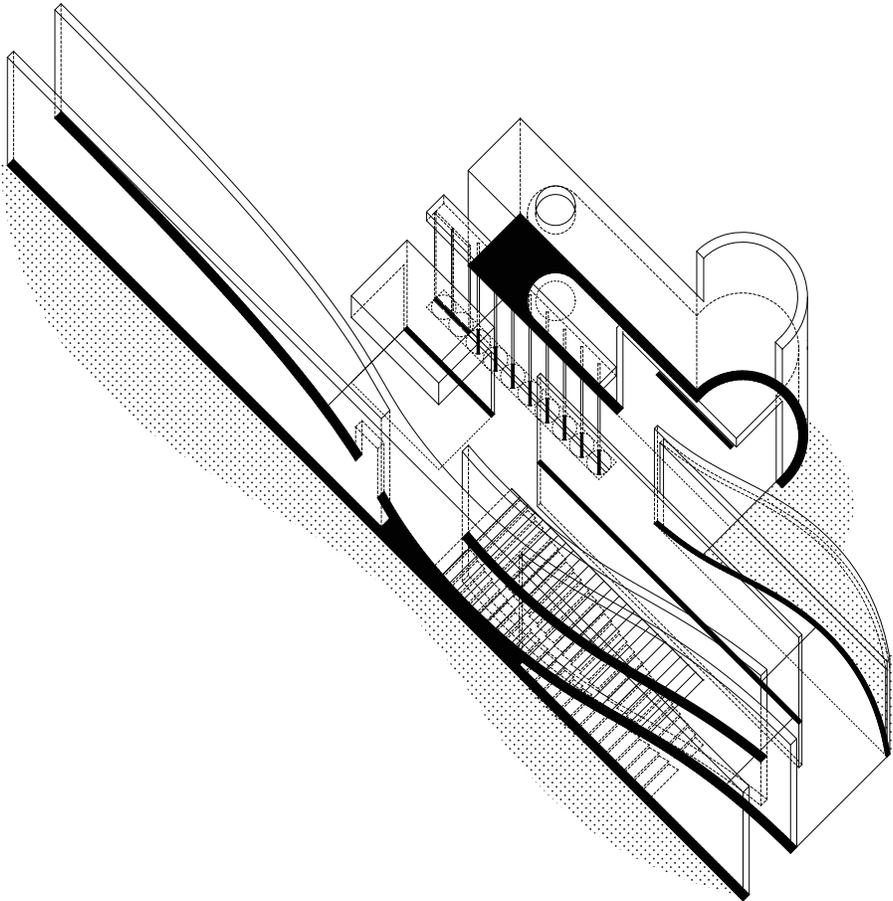
The Wall House

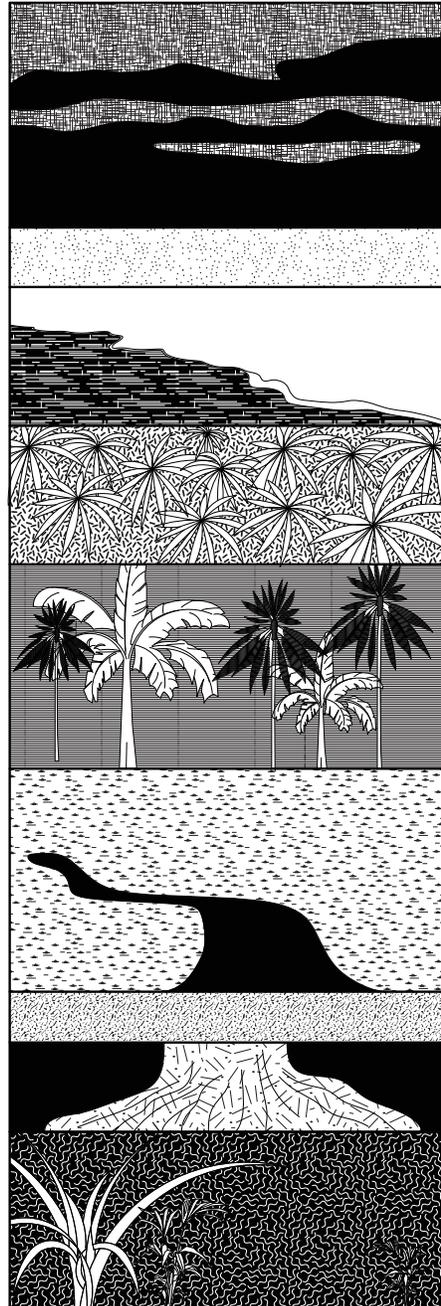
by the sea

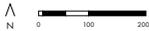
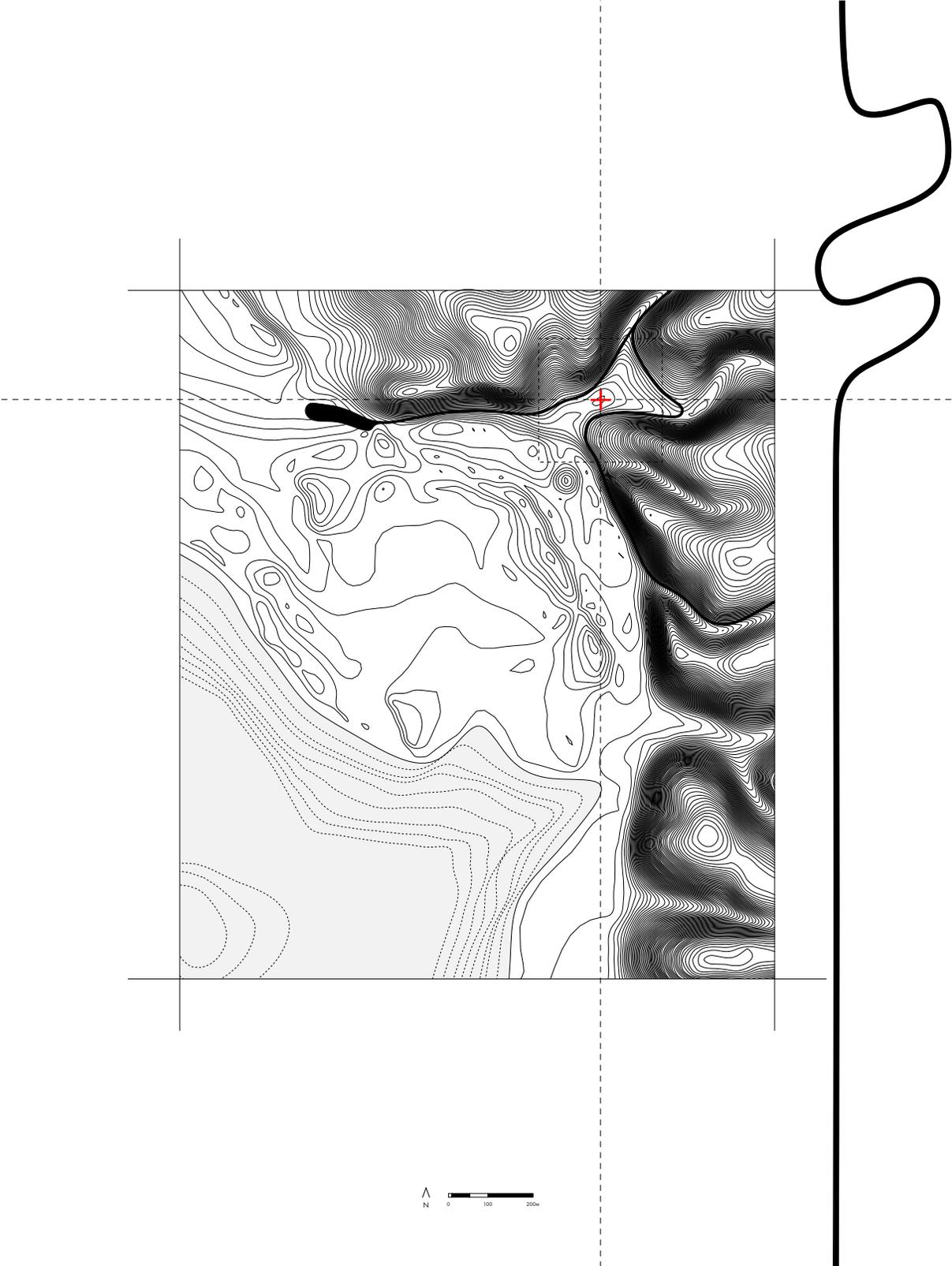
The Wall House sits on a grassy beach near a salty ocean tide.

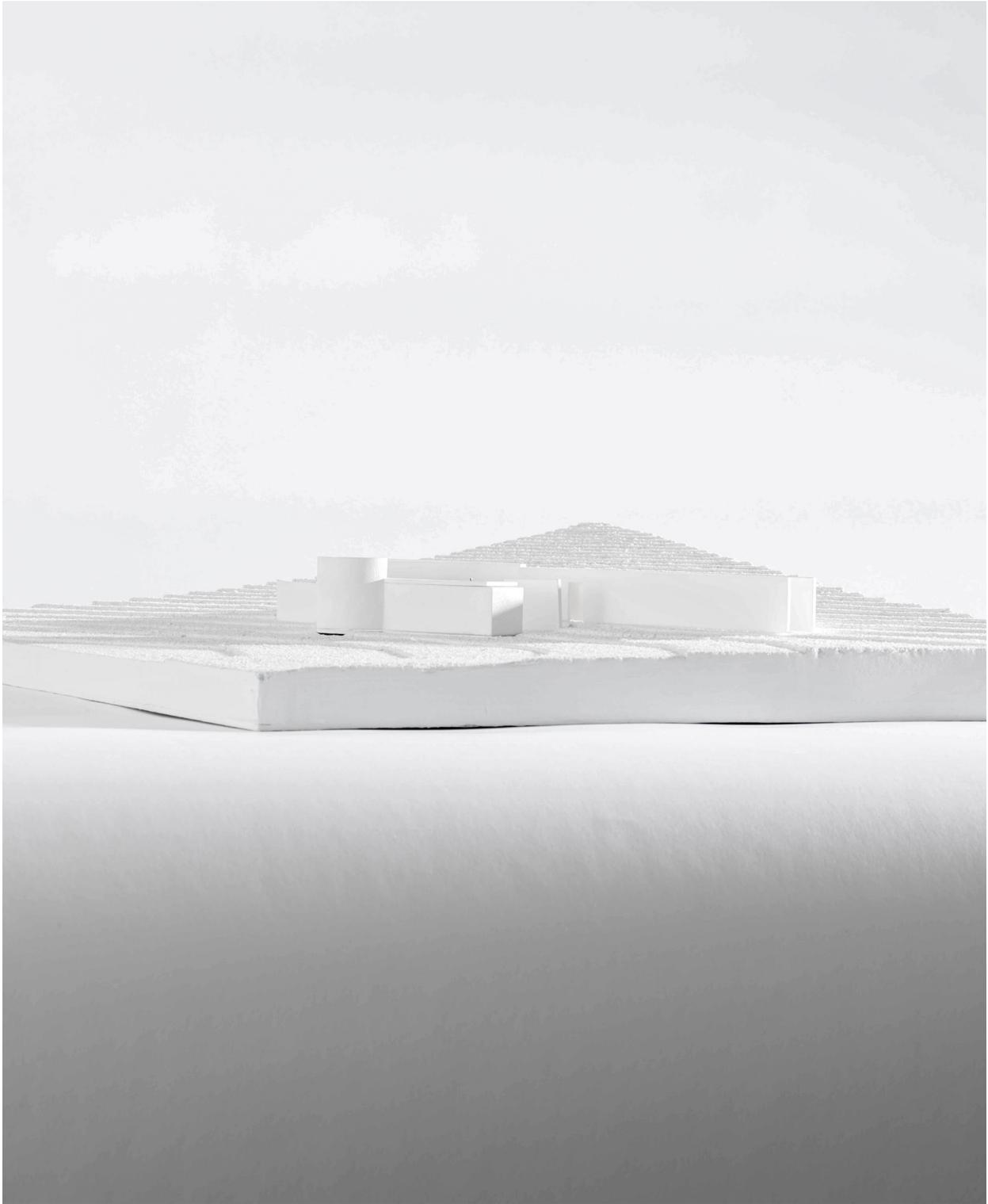
The walls create divisions and portals across the site, looking onto the water.

Some walls are meant for occupation, while others simply hide among the others.



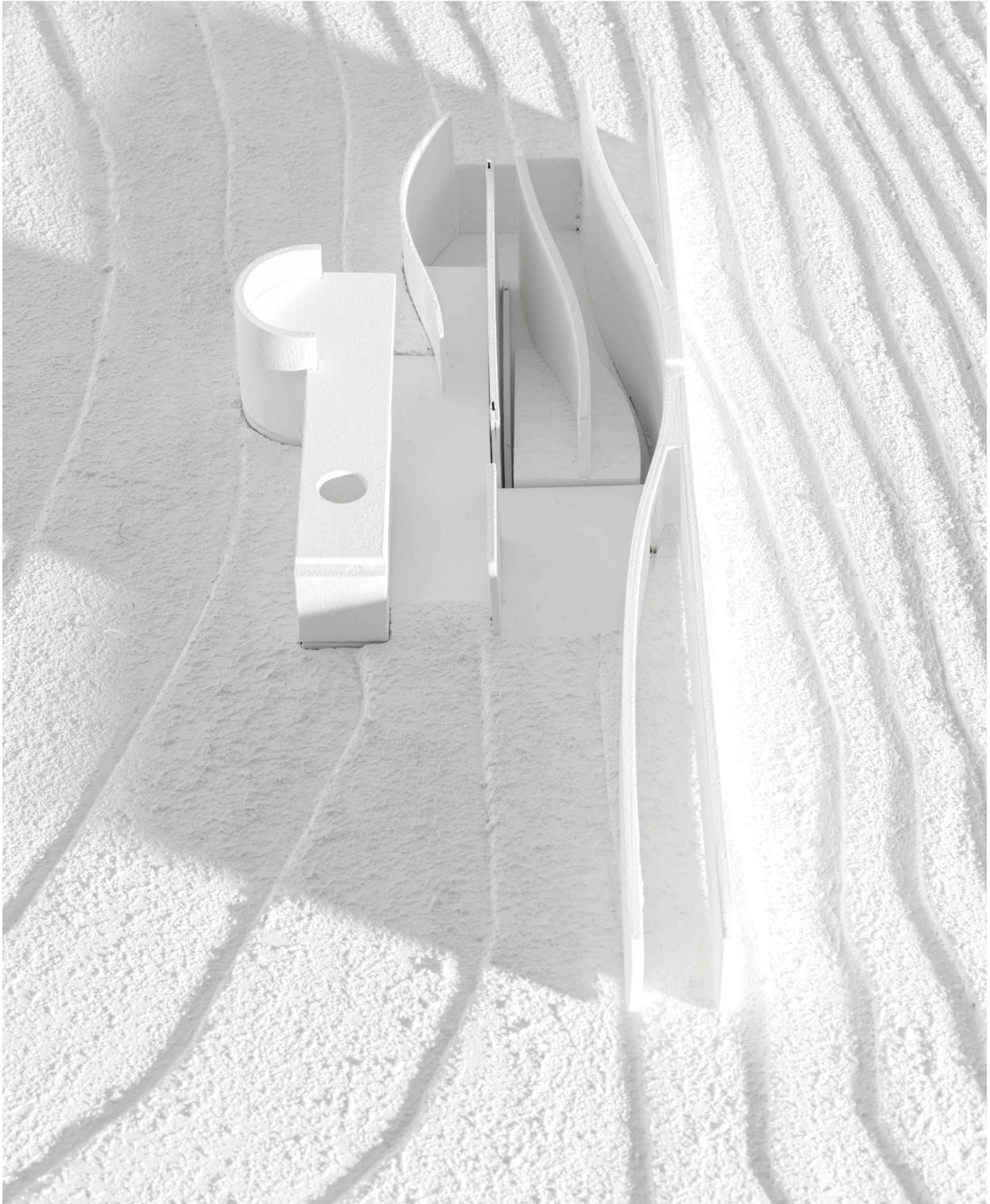




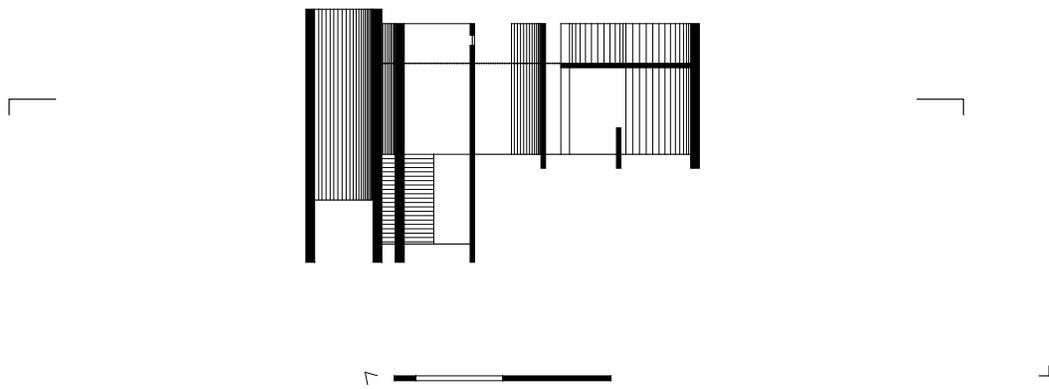


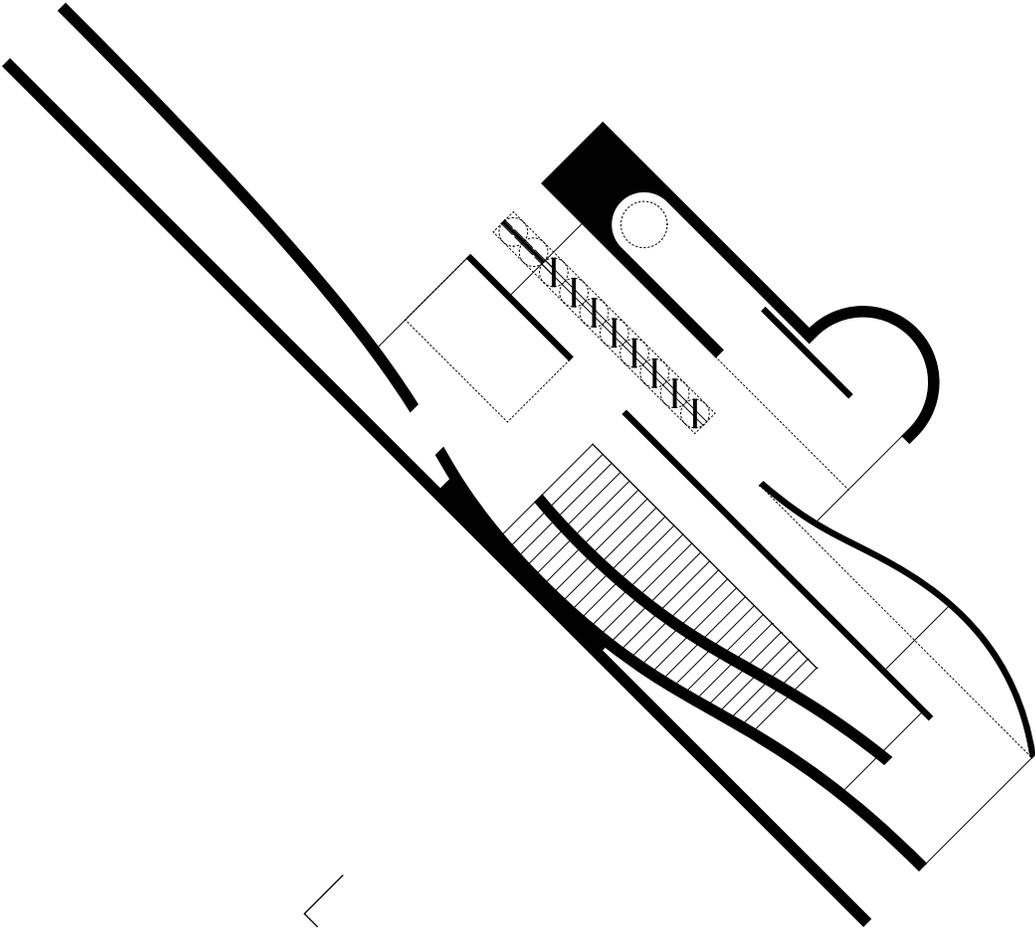
Credit: Andy Ryan Photography

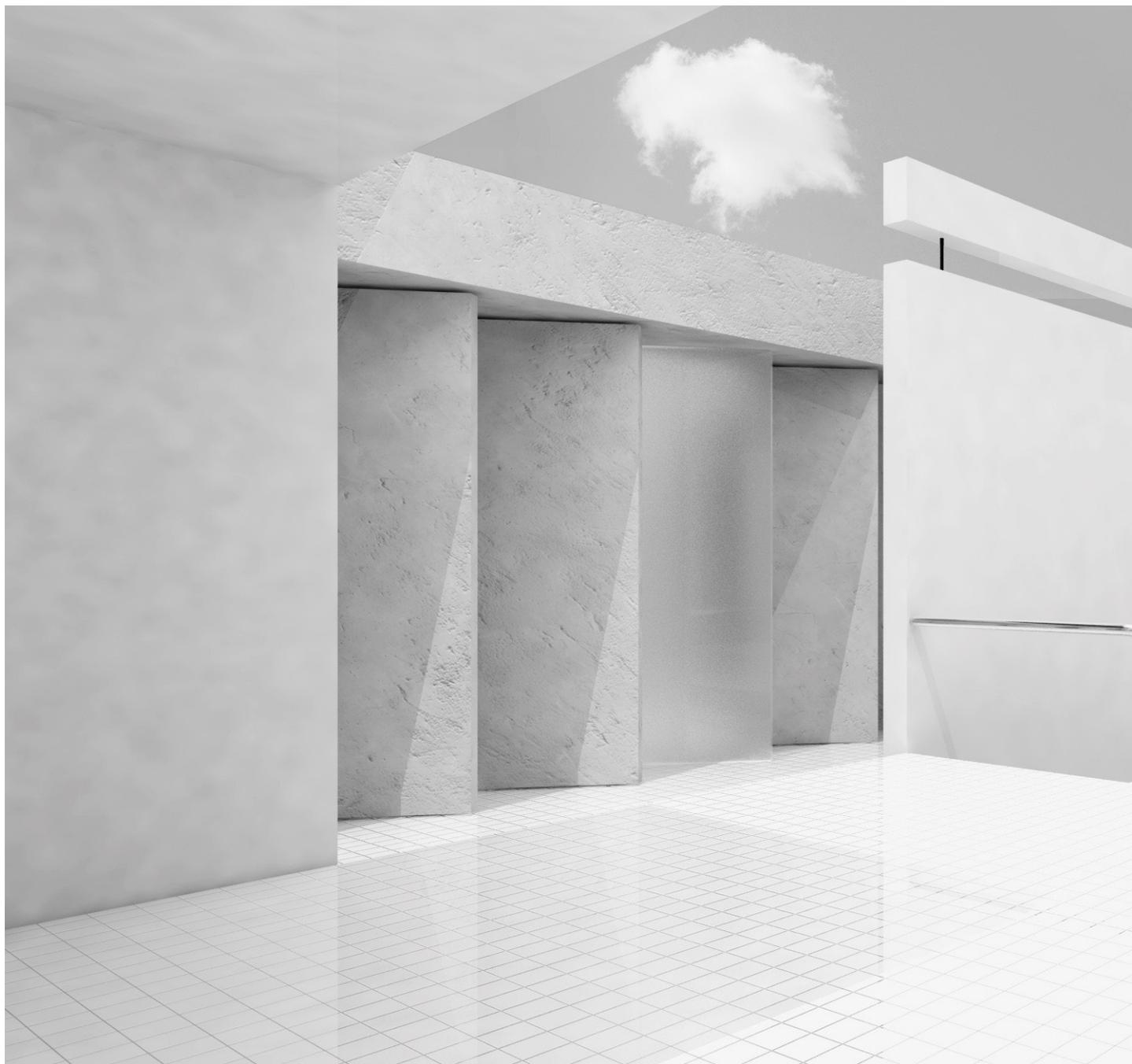
Wall House

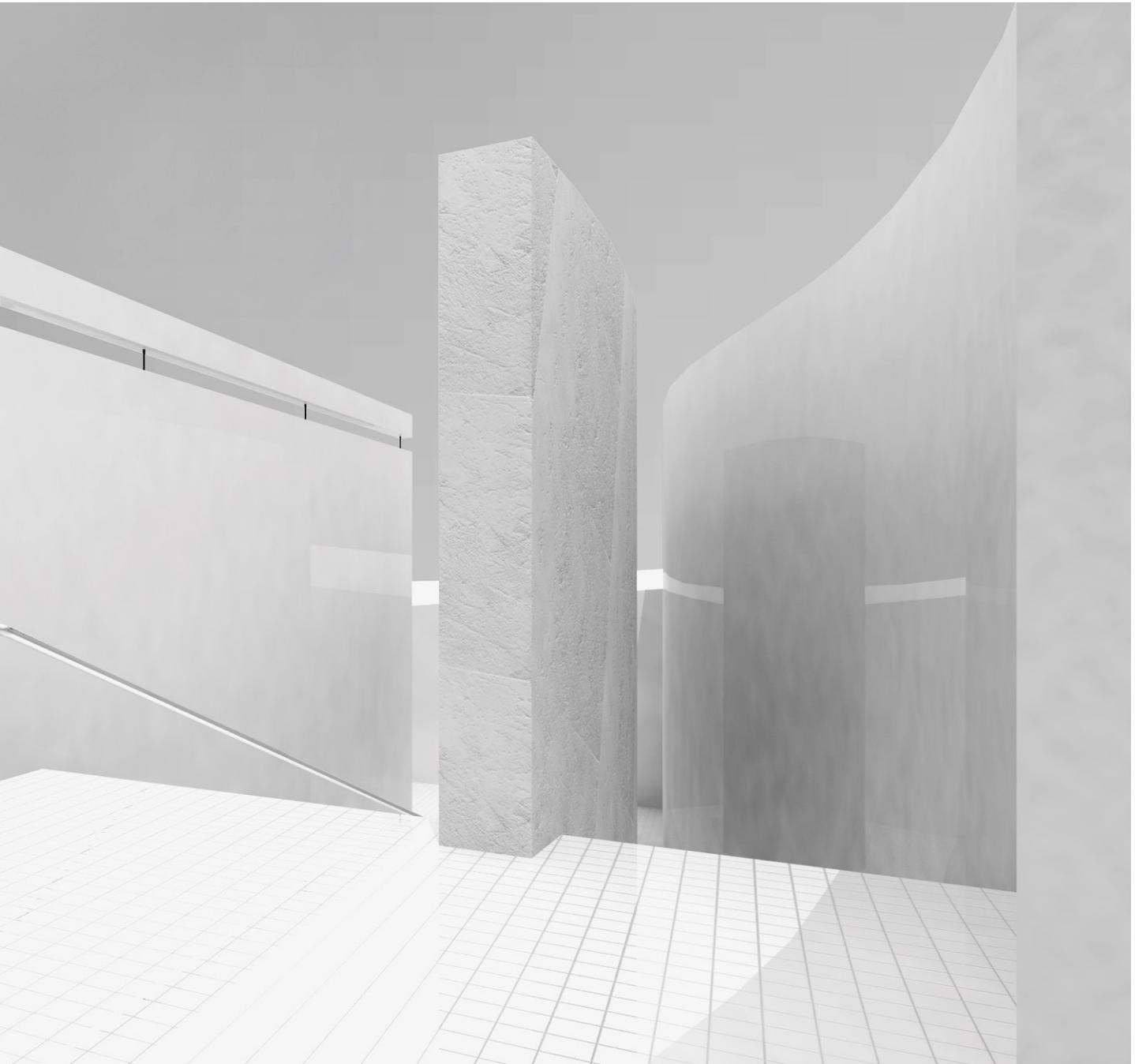


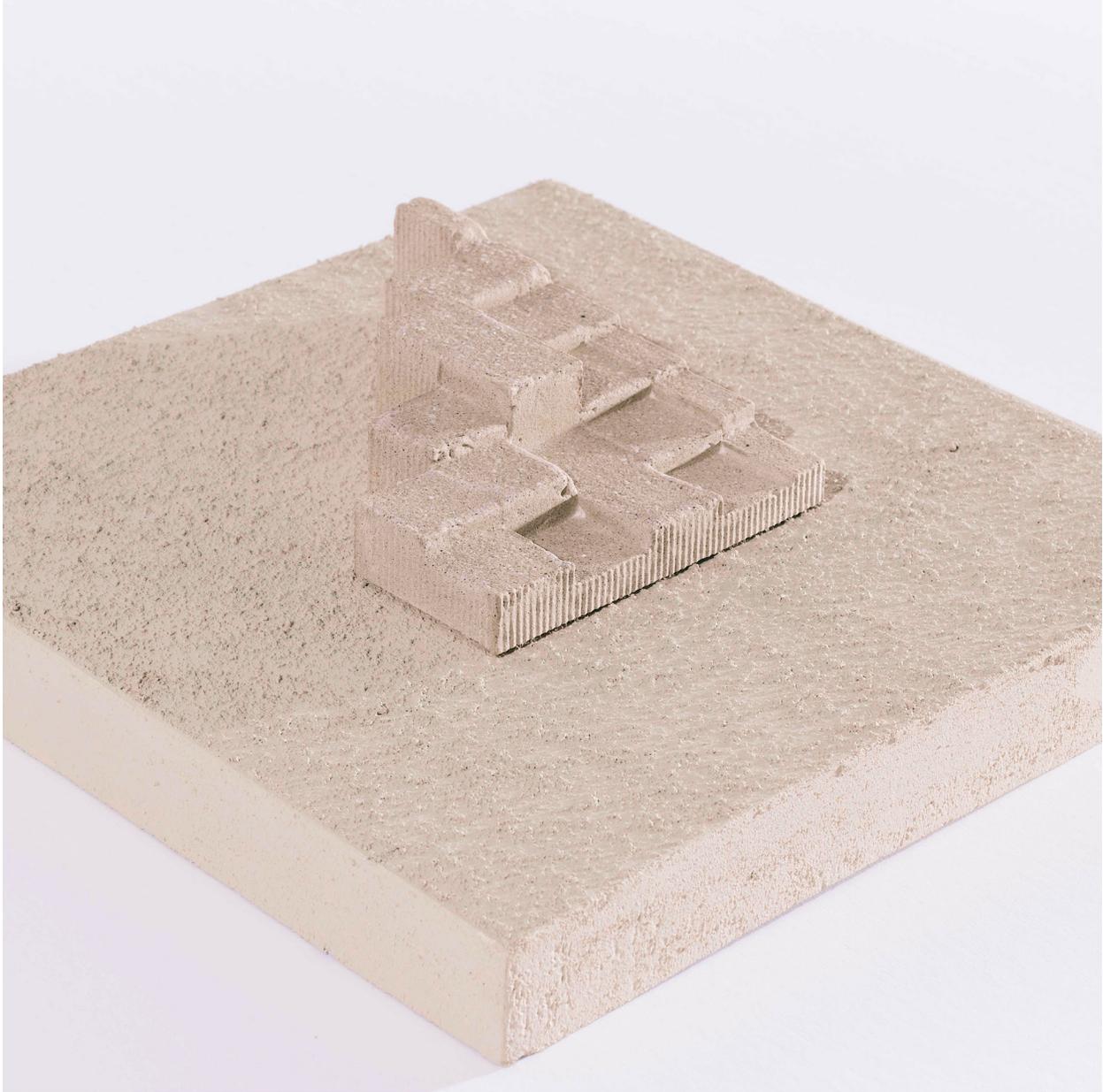
Credit: Andy Ryan Photography











Credit: Andy Ryan Photography

The Stair House

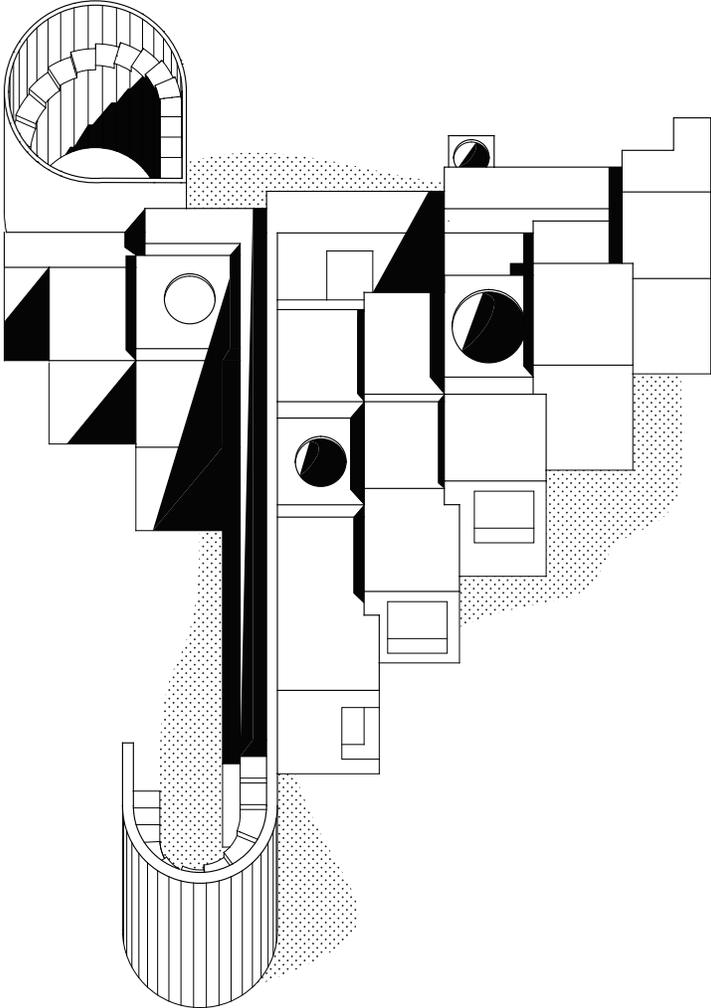
on a hillside

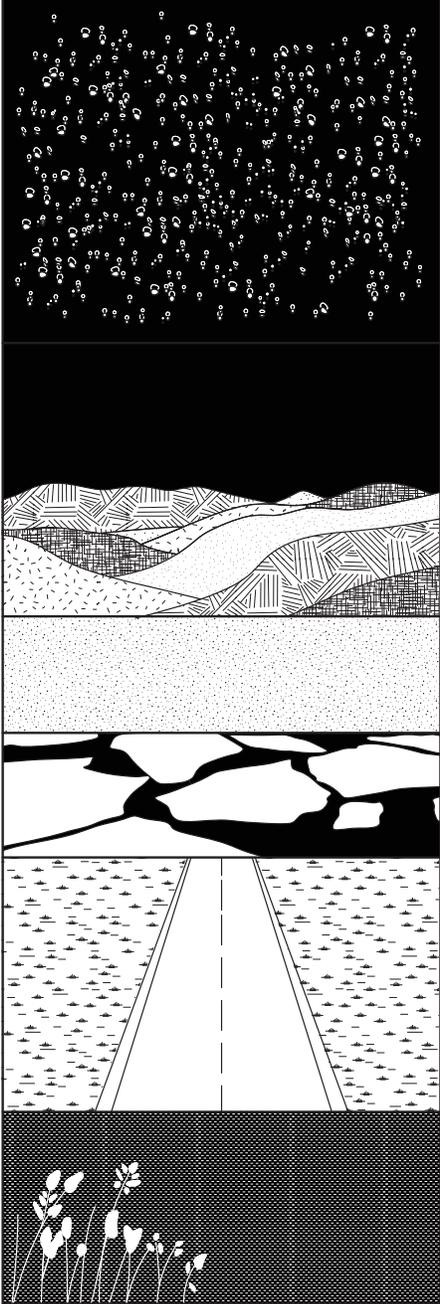
The Stair House cascades down the hillside, not far from the rushing river.

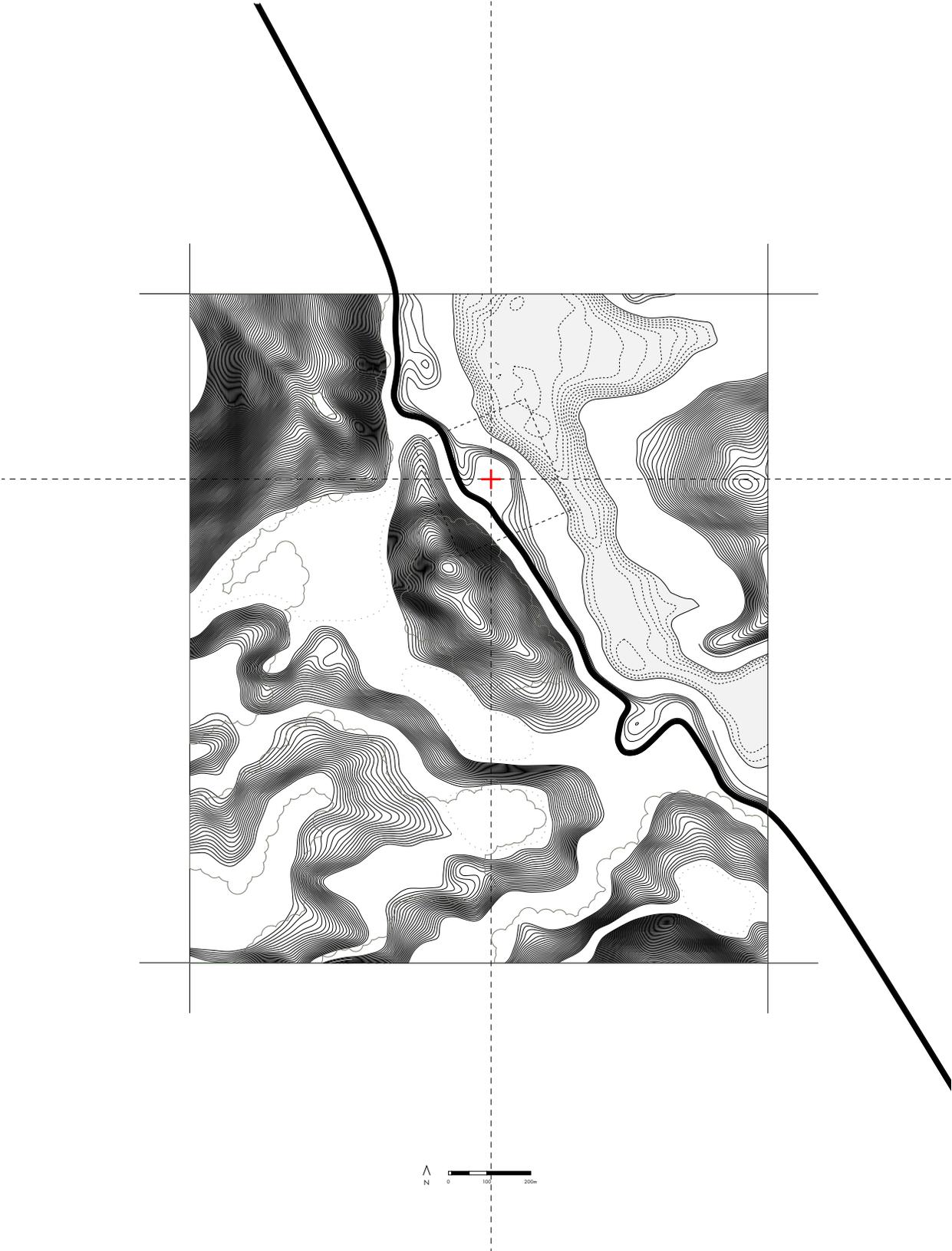
The steps hug the sloping landscape and lose specificity as the house sinks deeper into the earth.

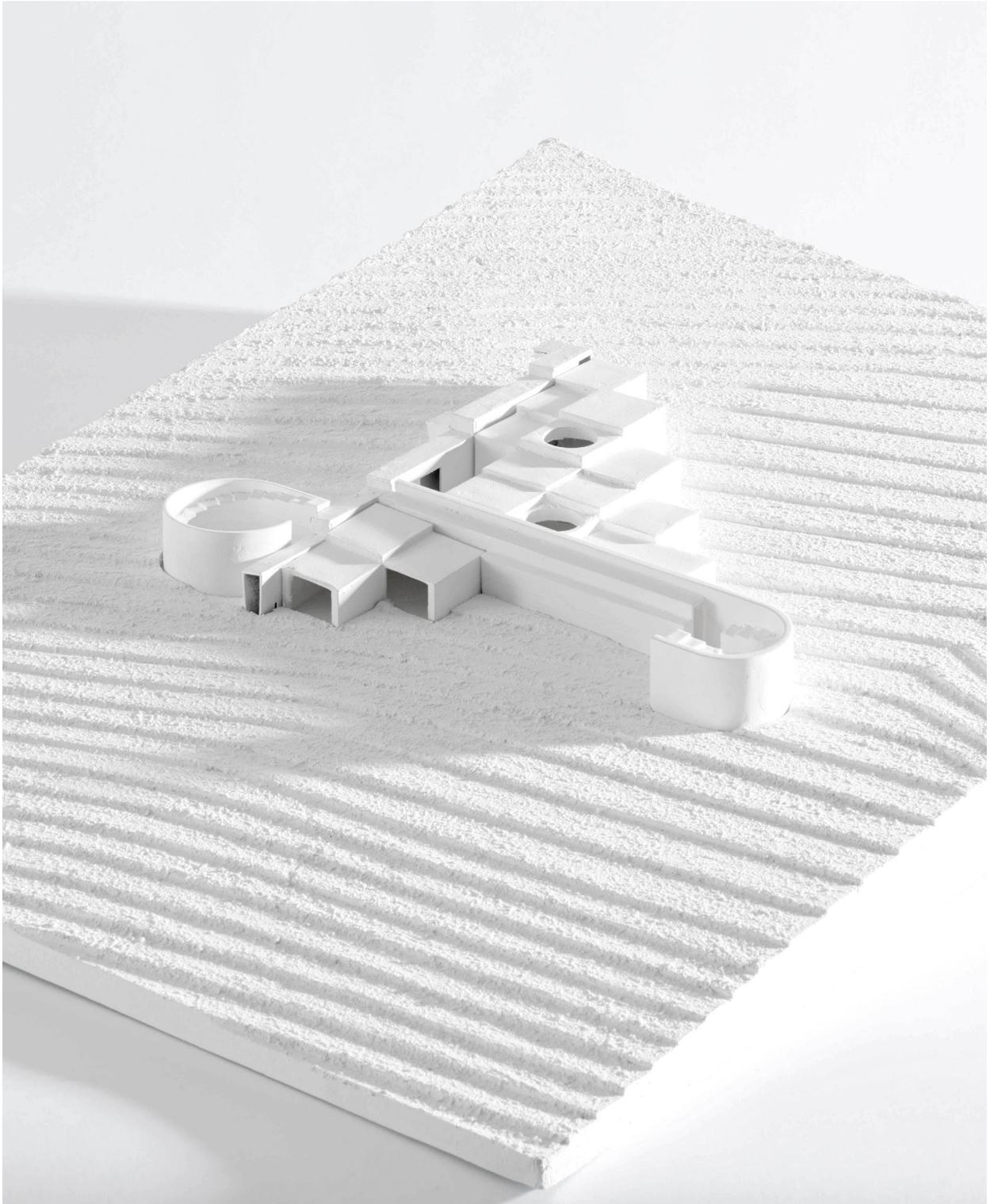
Stairs become rooms and rooms become stairs.

Two strong armlike corridors keep the parts from falling away.



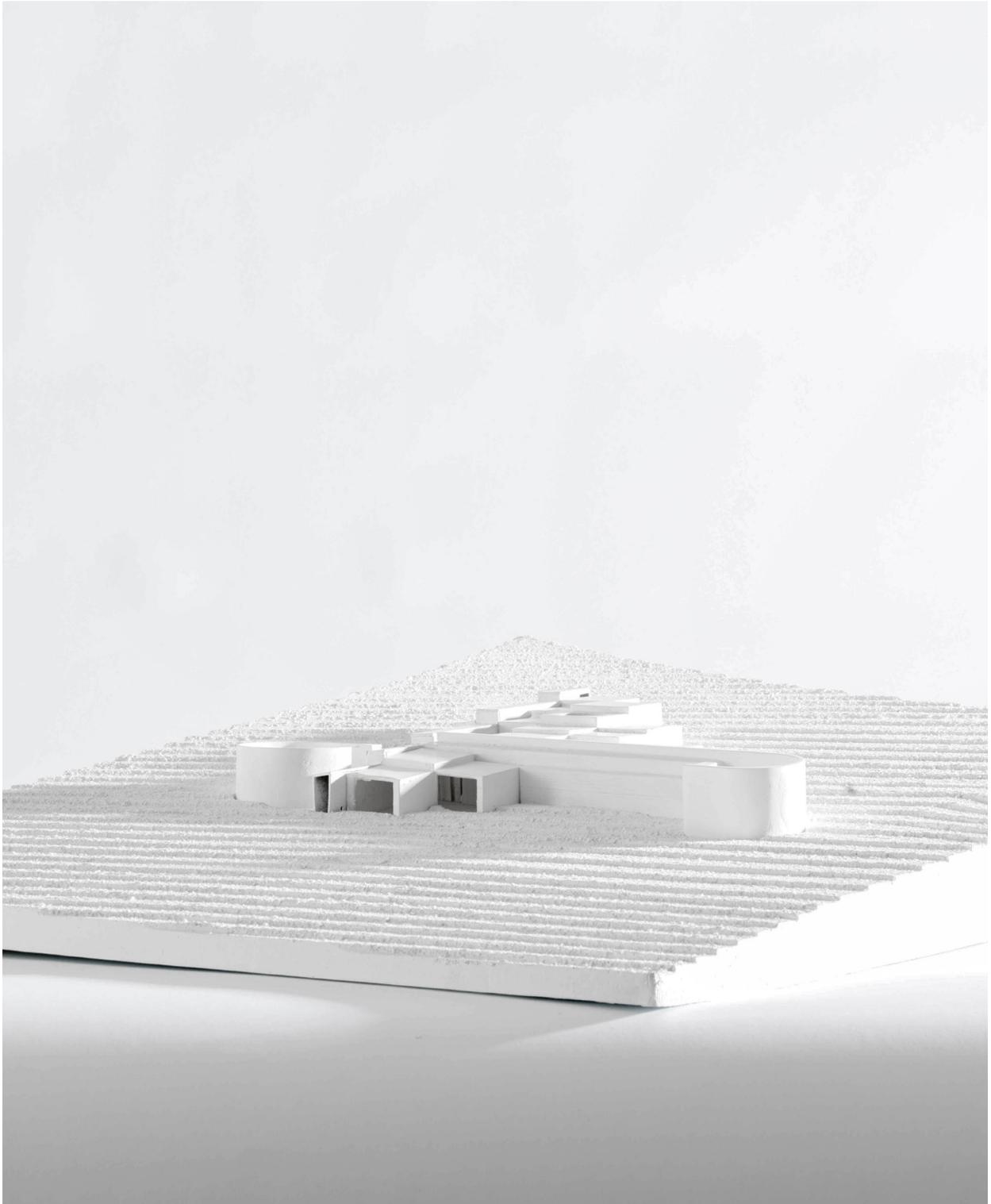






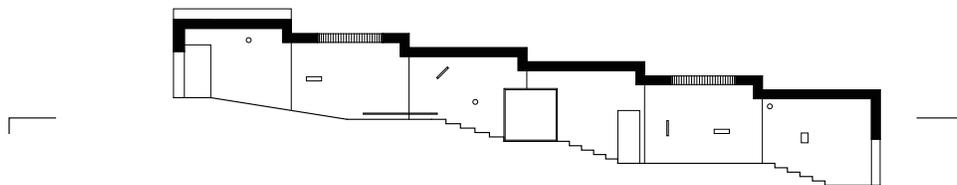
Credit: Andy Ryan Photography

Stair House



Credit: Andy Ryan Photography

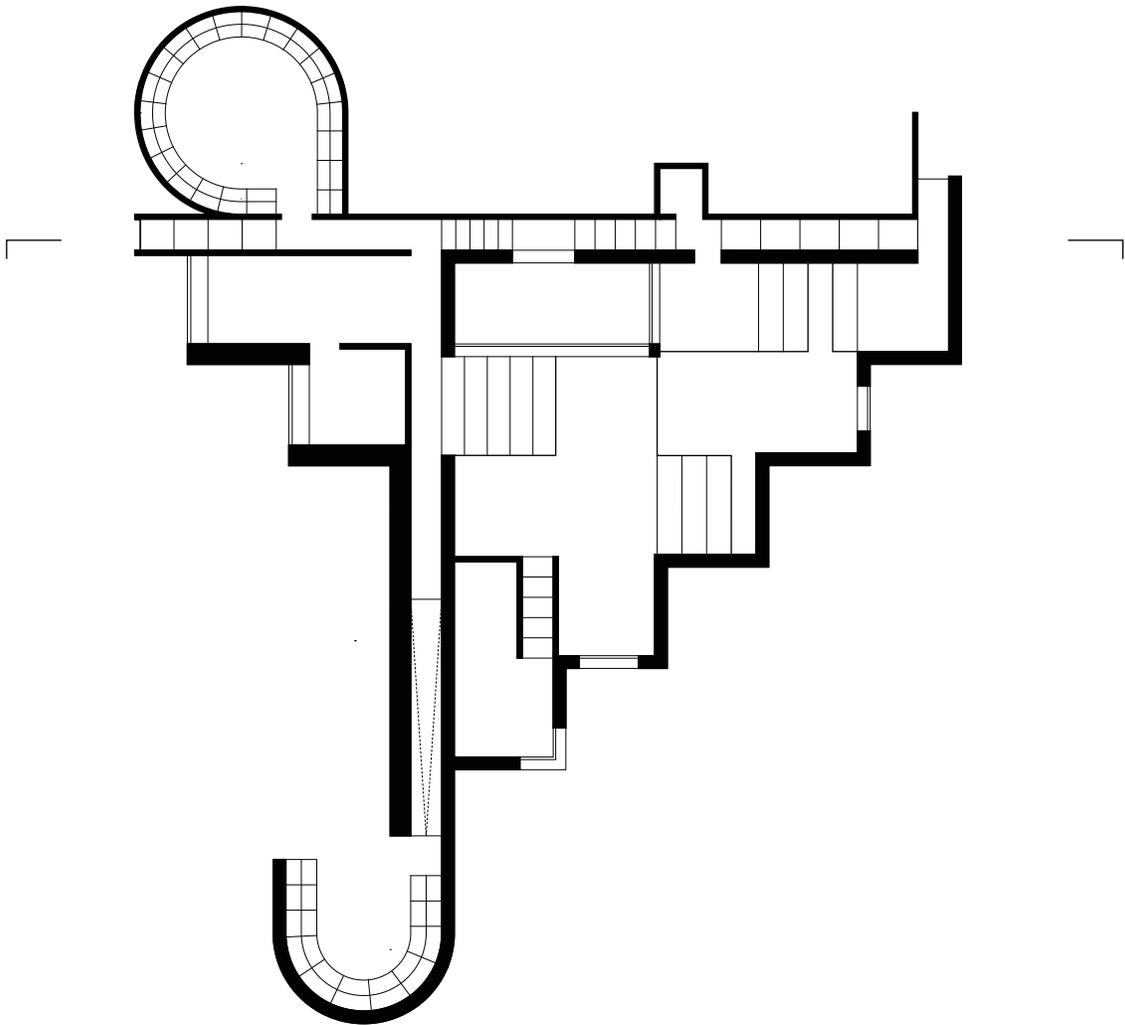
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Credit: Andy Ryan Photography

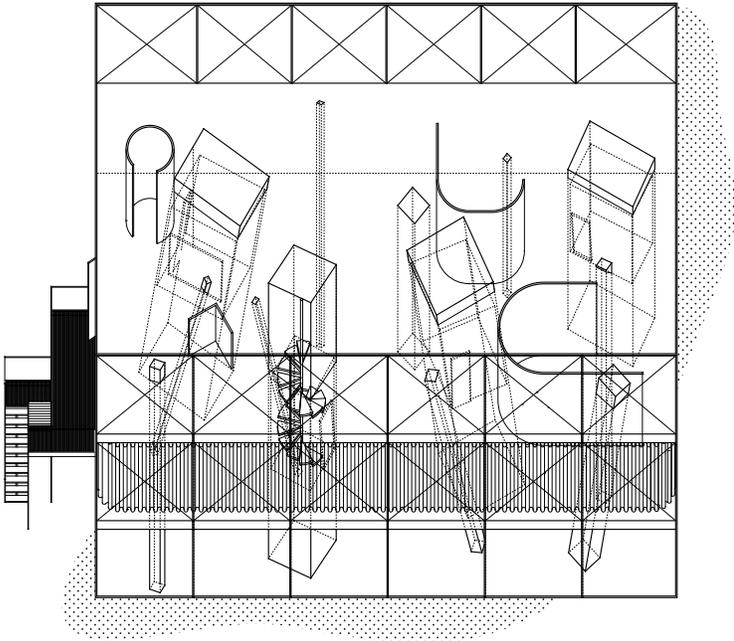
The Grid House

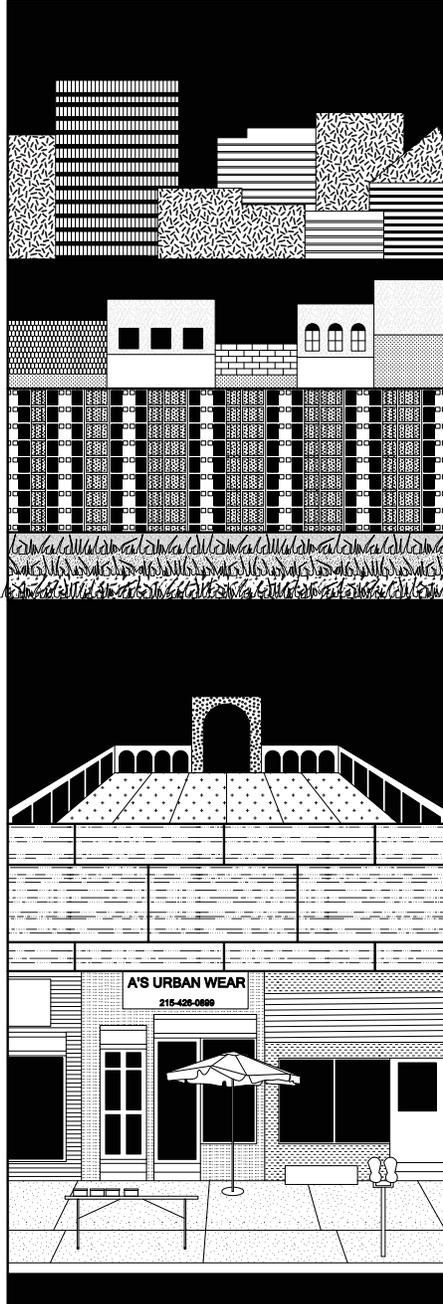
in the city

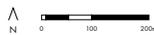
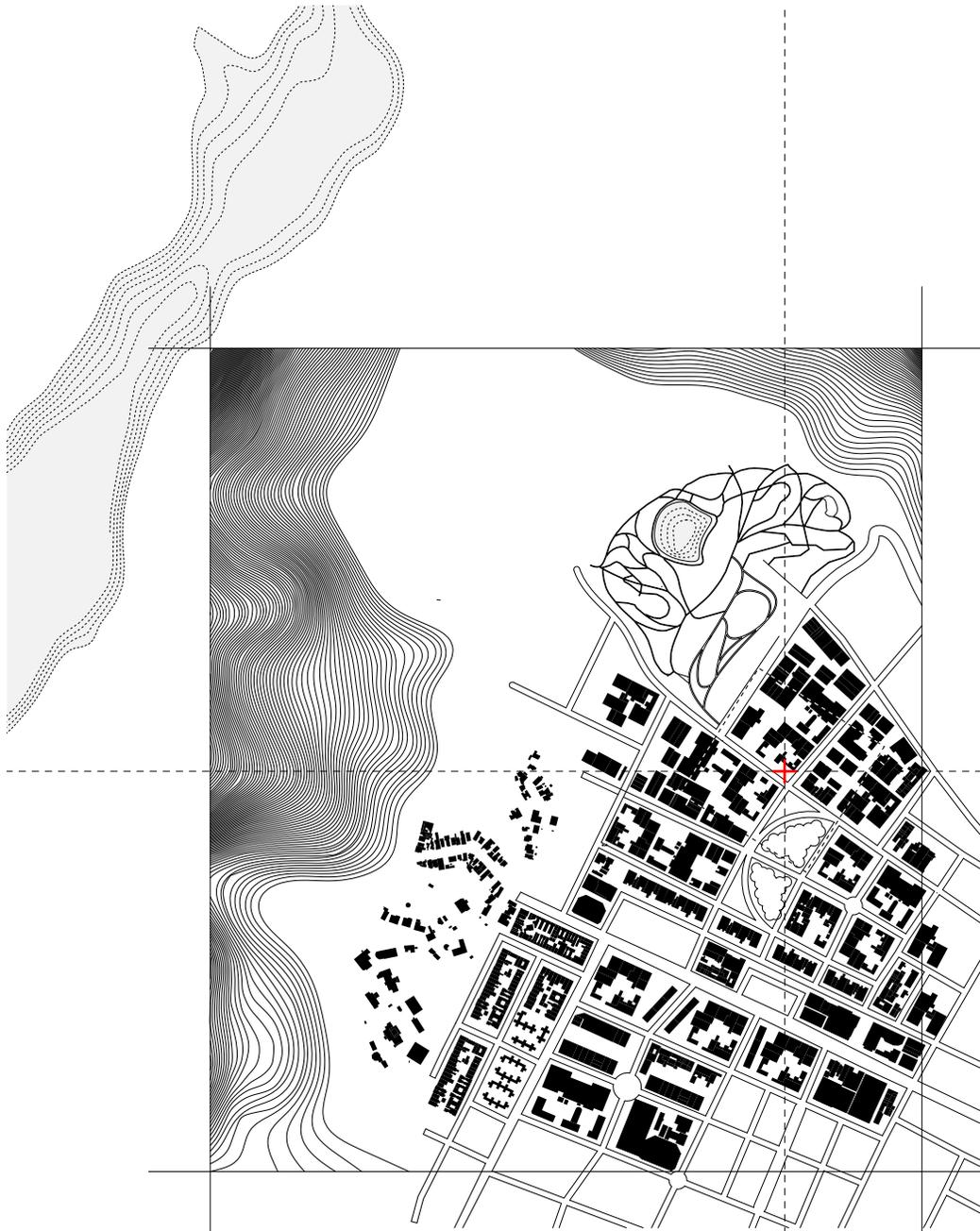
The Grid House is a city house. It can't be bothered by ground or openspace. By vastness.

The structure of the house is loose and free. It dances from here too there. Sometimes thin, sometimes fat.

A mystery as to where to be and where to stand, the Grid House is an understated urban labyrinth.



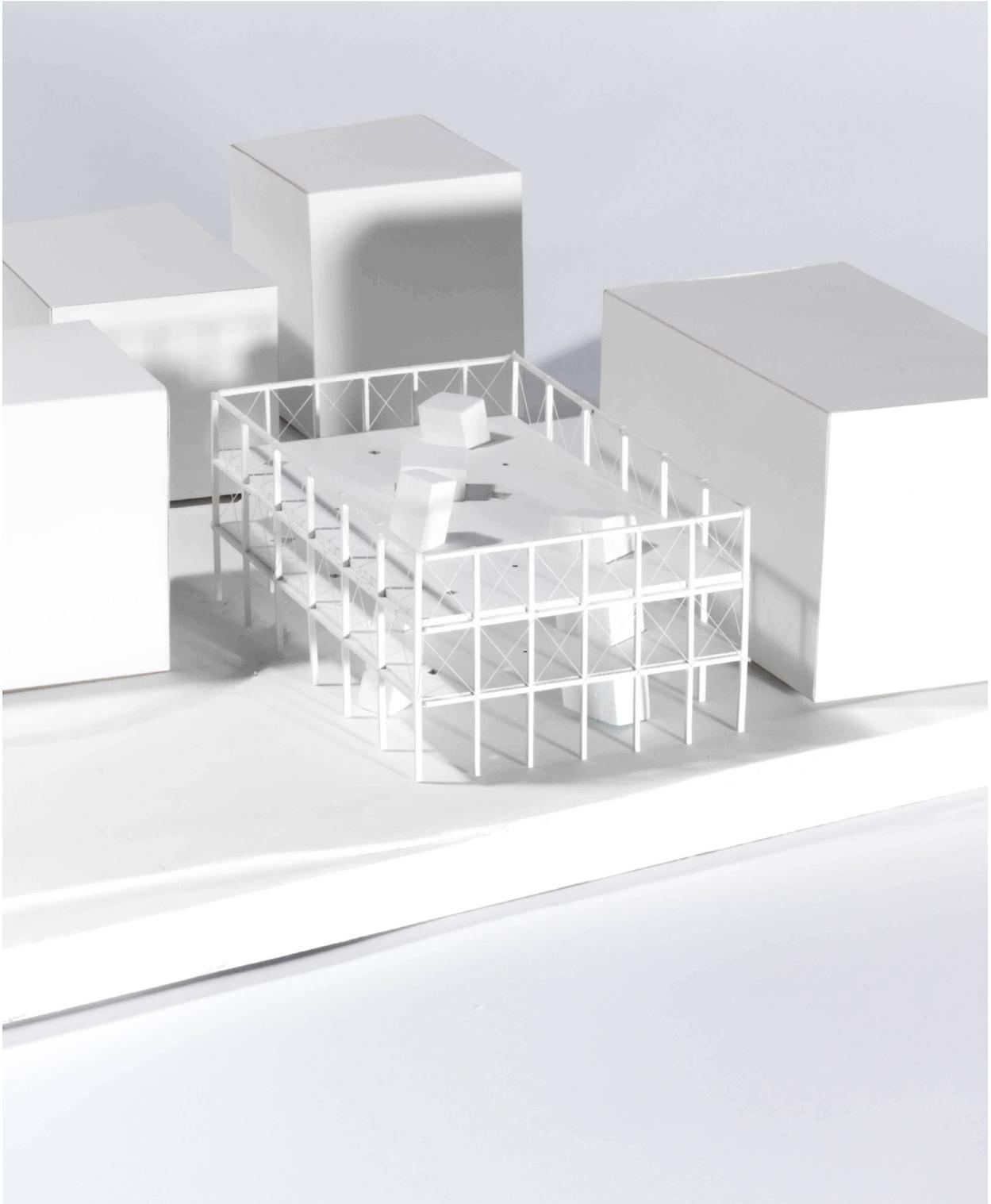




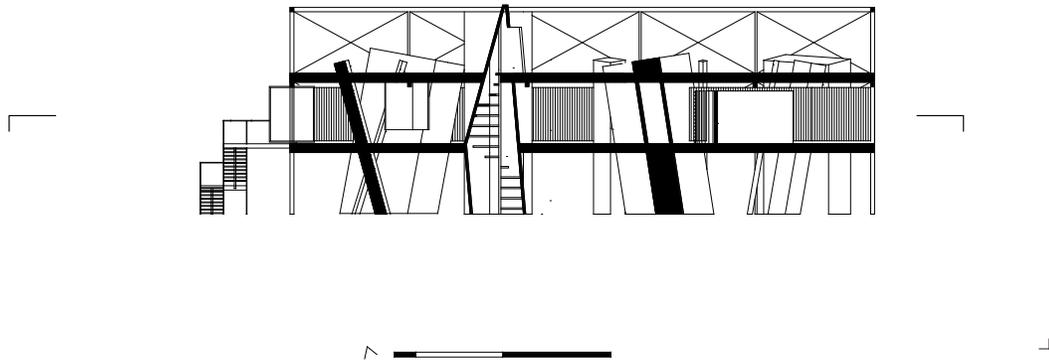


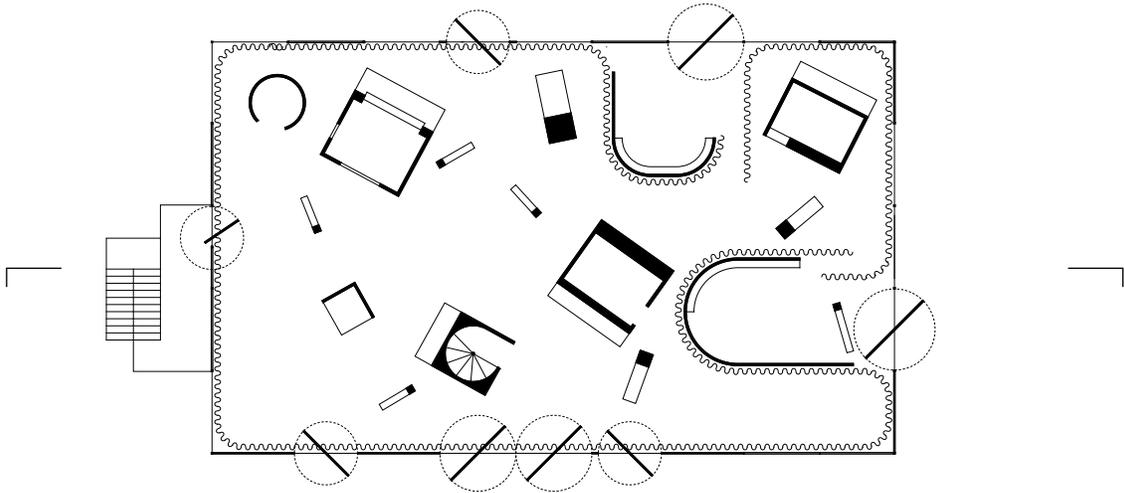
Credit: Andy Ryan Photography

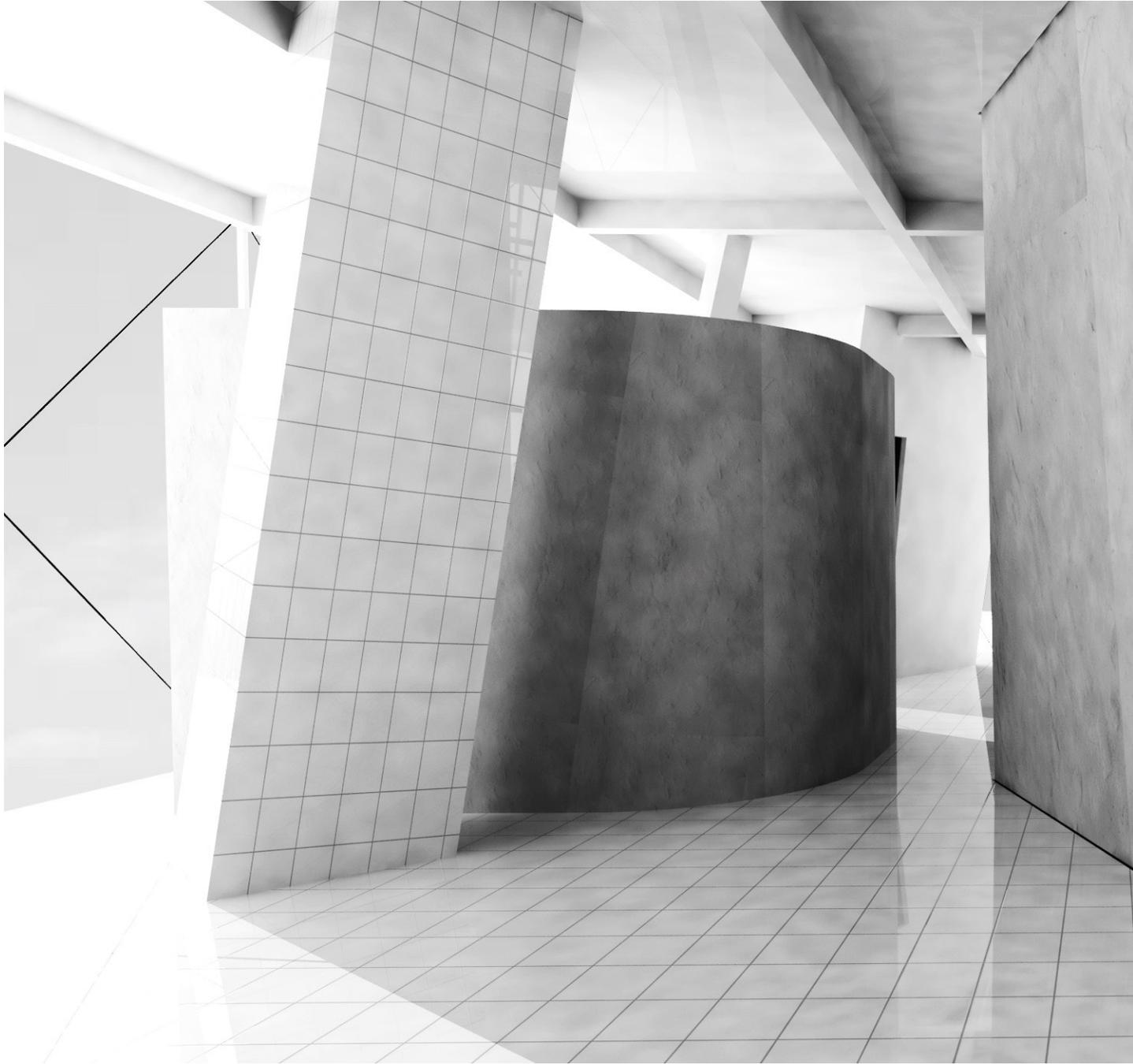
Grid House

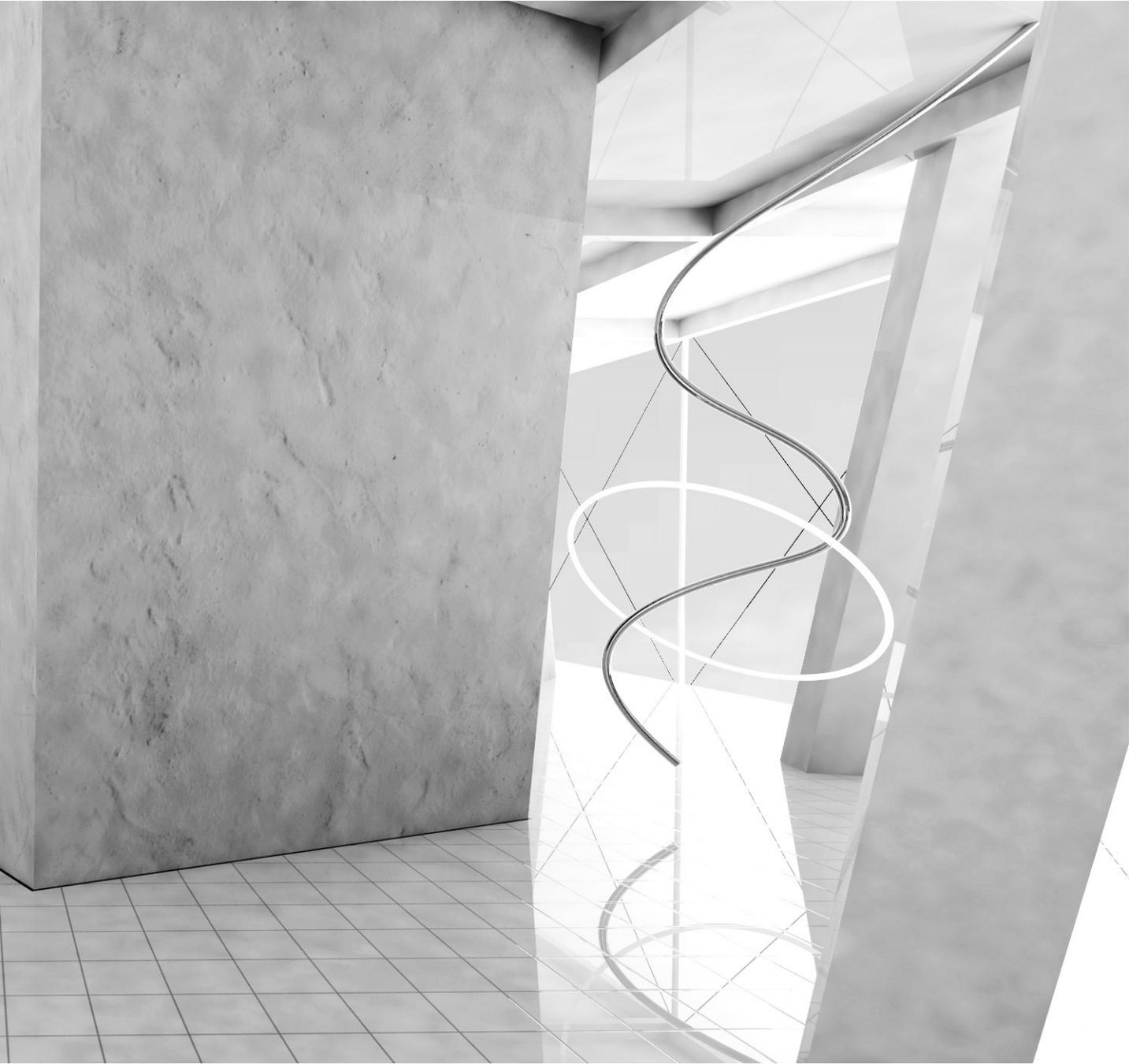


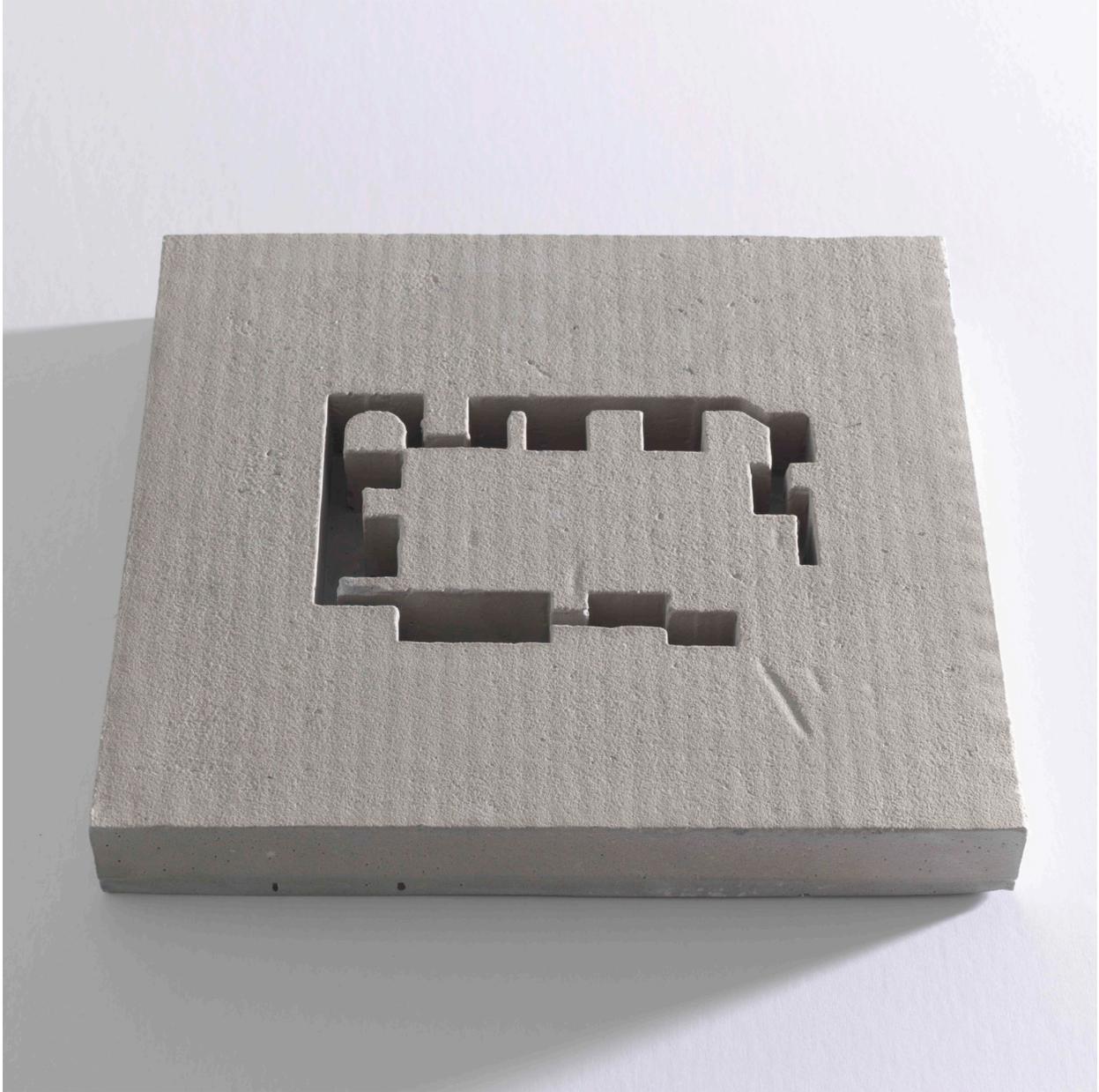
Credit: Andy Ryan Photography











Credit: Andy Ryan Photography

The Solid/Void House

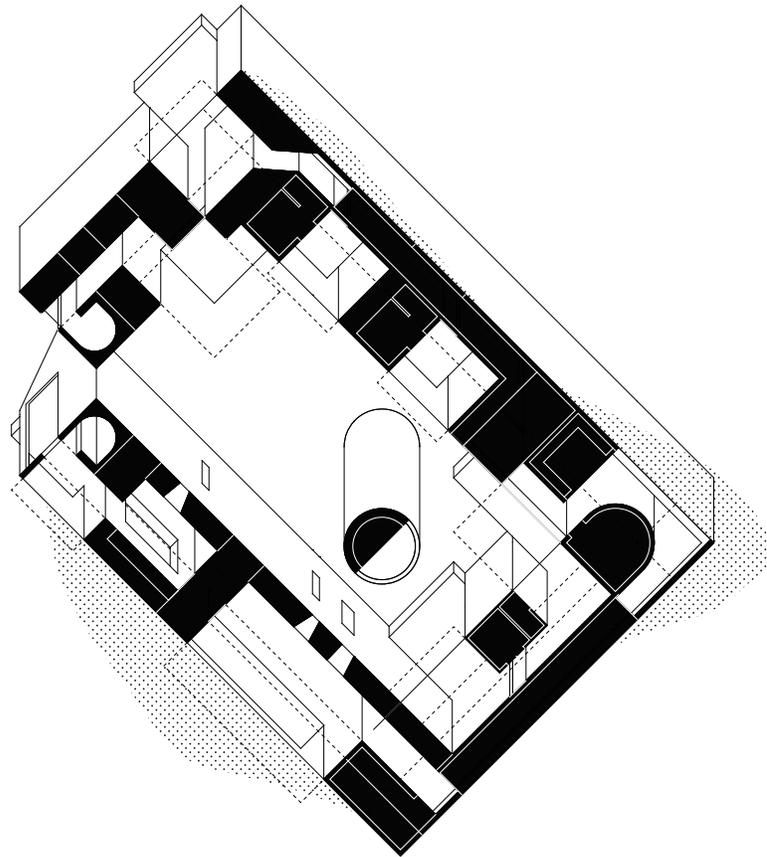
in the country

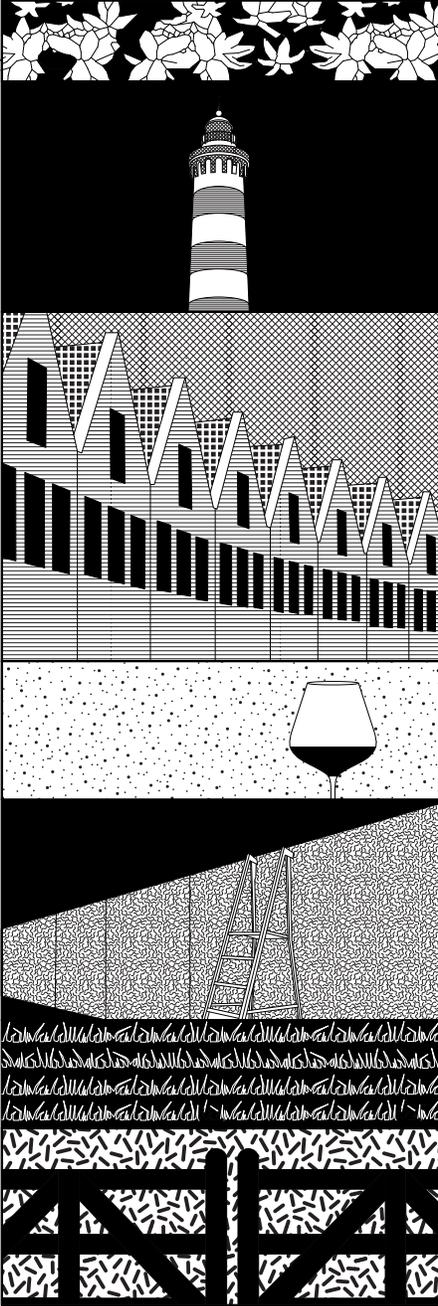
The Solid/Void House sits nestled in with its neighbors. It's discreet by nature, keeping to itself.

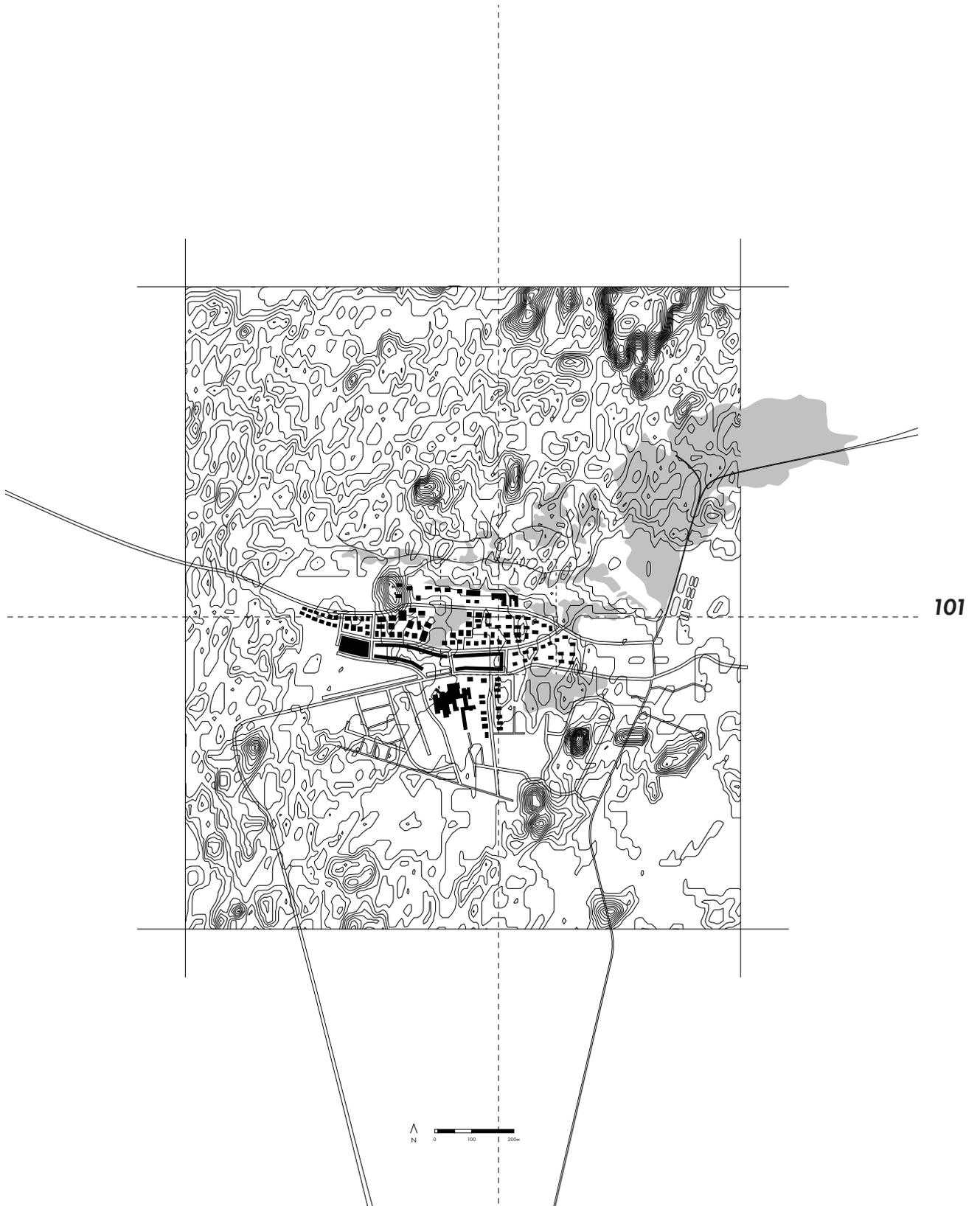
Watching from a distance.

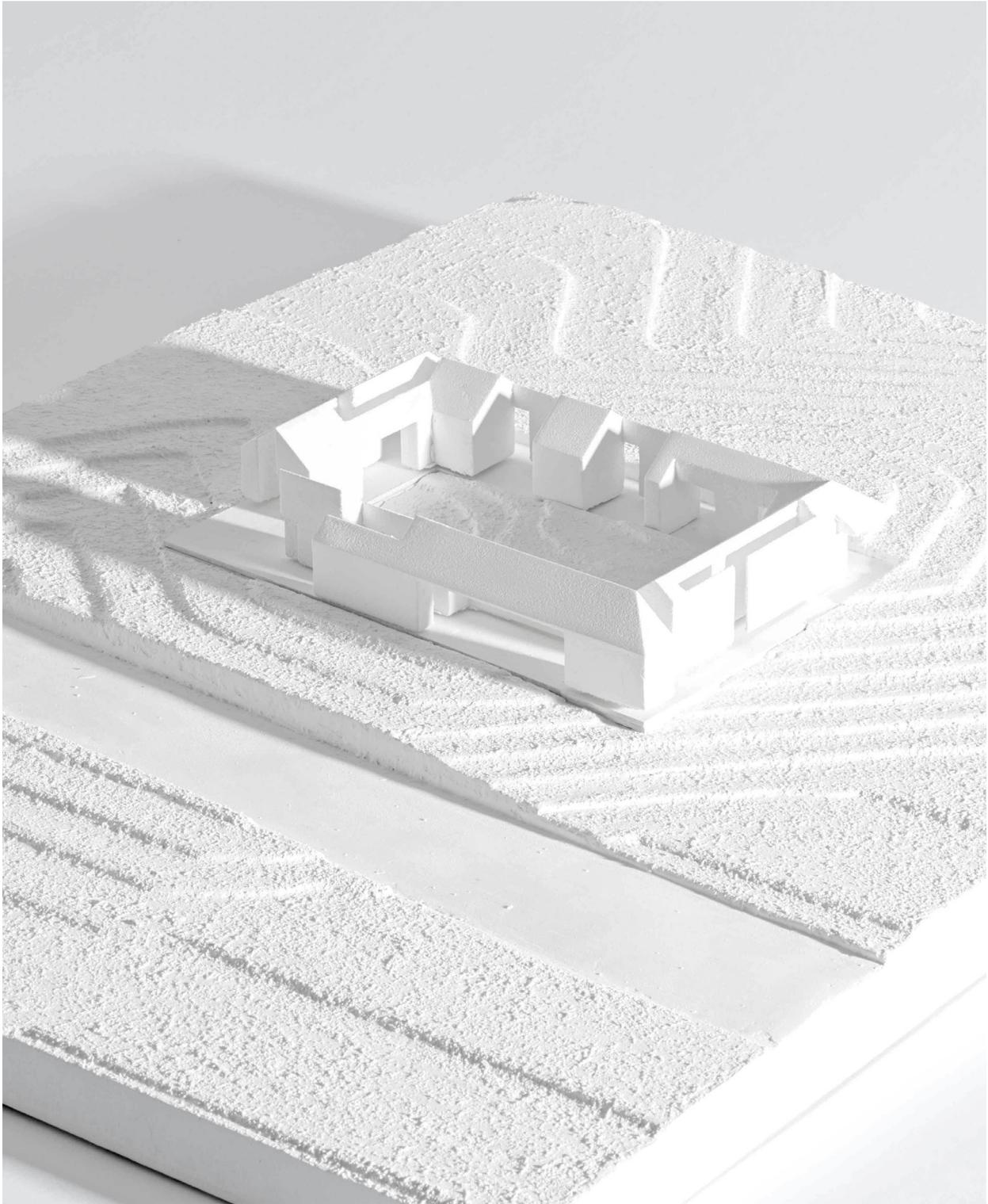
Interior hidden volumes exposes the inner matter of the house. Tucked away from the town gossip.

Solid Void House









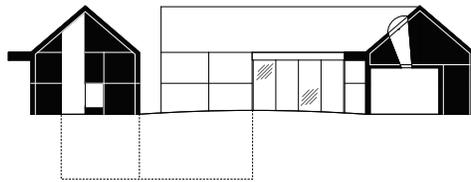
Credit: Andy Ryan Photography

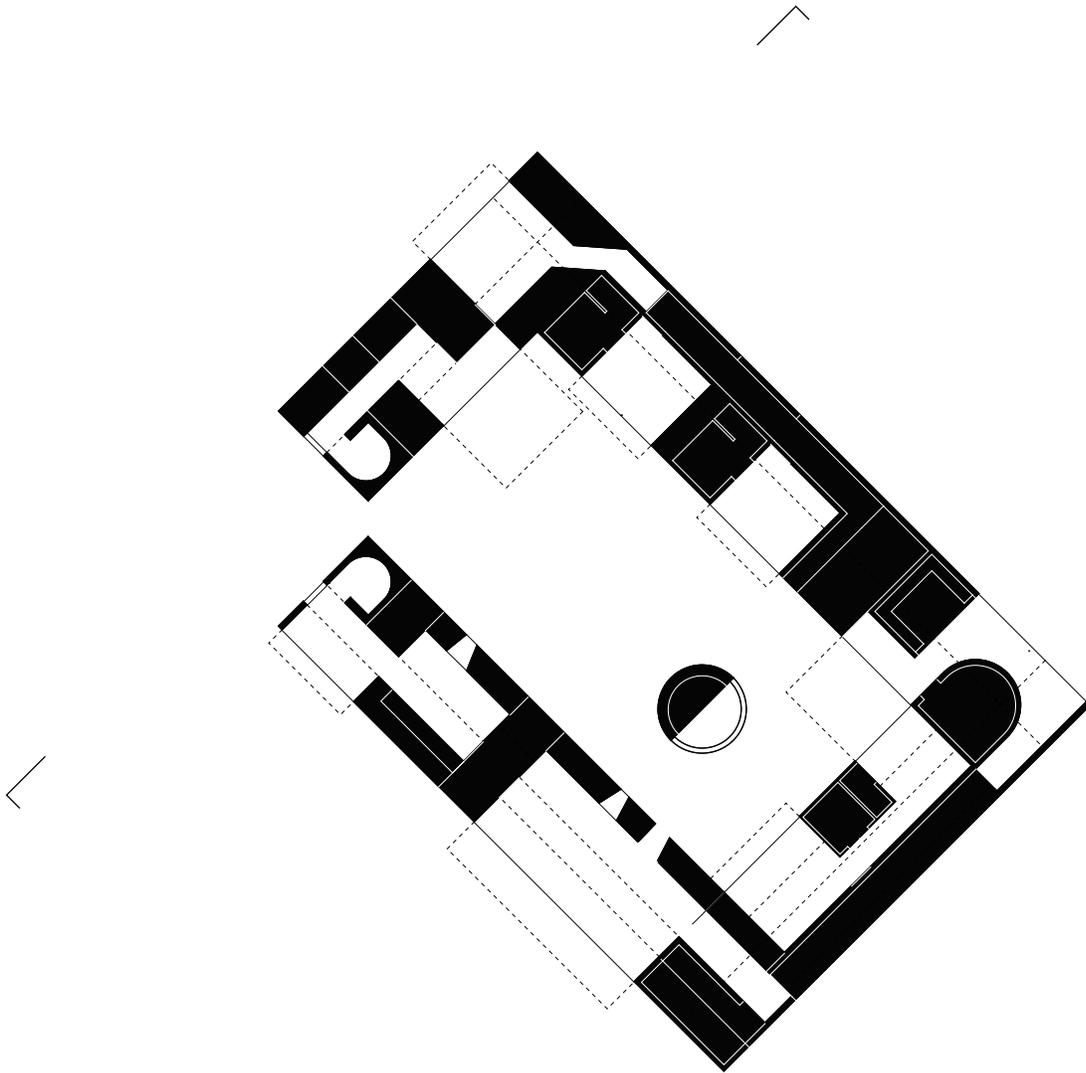
Solid Void House



Credit: Andy Ryan Photography

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