

Master Thesis 2016

LYCKHOLMS

Lyckan



Štěpán Matoušek

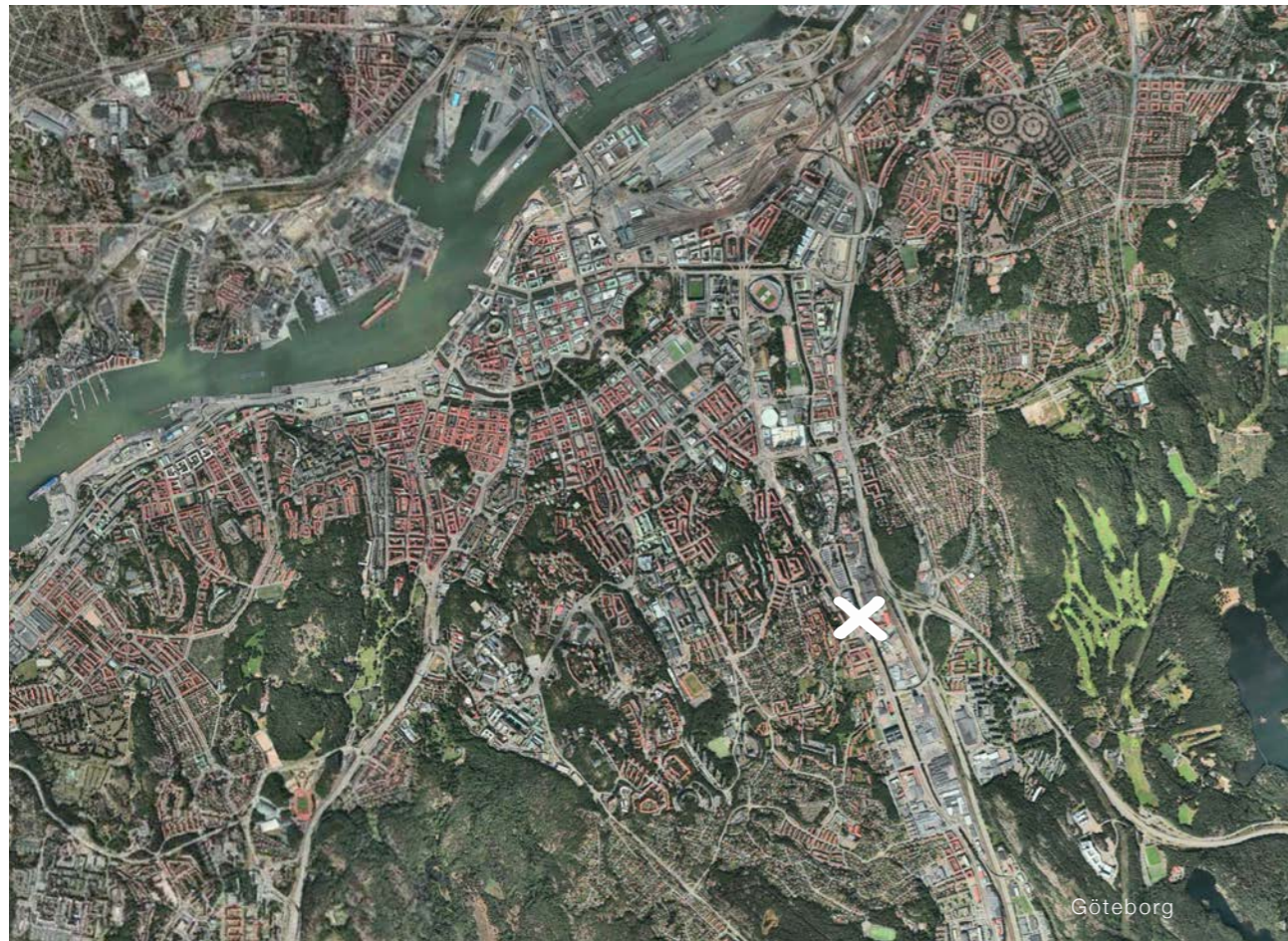
Year by year our planet is more and more urbanised. More than half of the global population live in urban areas and in 2050 three quarters of all the human beings will live in cities. Humans used to be strongly connected to nature. They were completely dependent on weather, season and the surrounding environment. Agriculture was so labour demanding that almost everyone had to be involved. Everyone was part of nature.

In the past decade we have witnessed the impact of our behaviour on the global climate. People have lost connection to the landscape with its ecosystems. They feel invulnerable. Totally insulated from mother earth. Nature has become a commodity to be sold in form of holidays and bio products at farmers markets.

Our behaviour strongly correspond with our personal experience. An environmental friendly life style can not be taught through books and TV shows. It needs to be experienced by everyone and every day. People need again to see the plants and animals, experience the elements and from time to time feel uncomfortable to appreciate the gift which we all got from nature.

Lyckholms Lyckan combines the qualities of living in a flat in the city with the experience of having a house with a small garden. It connects its inhabitants with the natural qualities of the site and on the other hand keeps the high density of a city block. This approach is translated into the rational wooden “towers” with a lightweight “scaffolding” in between. This outer structure provides direct contact to the outside from all of the rooms. Its shape was determinate by an easy access of light to the housing units, privacy and rain water distribution. The ground floor consists of shared spaces facing the garden and commercial spaces towards the public space.

The Lyckholms site is located in Göteborg between Korsvägen and Mölndal along Mölndalsvägen. River Mölndalsån flows through the site and splits it into halves.





Site view

Lyckholms, a distinguished brewery in the forefront of its time. J. W. Lyckholm & Co. was founded by the brewer Johan Wilhelm Lyckholm 1880. The production of beer was launched the following year. Most of the beautiful brick buildings were built between 1881 and 1900, the architect was A. L. Thune. Since 1975 Lyckholm premises stood partially empty.



The old brewery is more or less occupied by small businesses today such as car and bicycle workshops and a small scale brewery. These activities are in a direct contrast to the intentions of the new owner of the site.





The old Lyckholms area is slowly going to be transformed by Peab and Liseberg into a new commercial district with offices and hotels. The SAAB gear box factory is going to make place for new buildings and the historical brewery will be renovated.

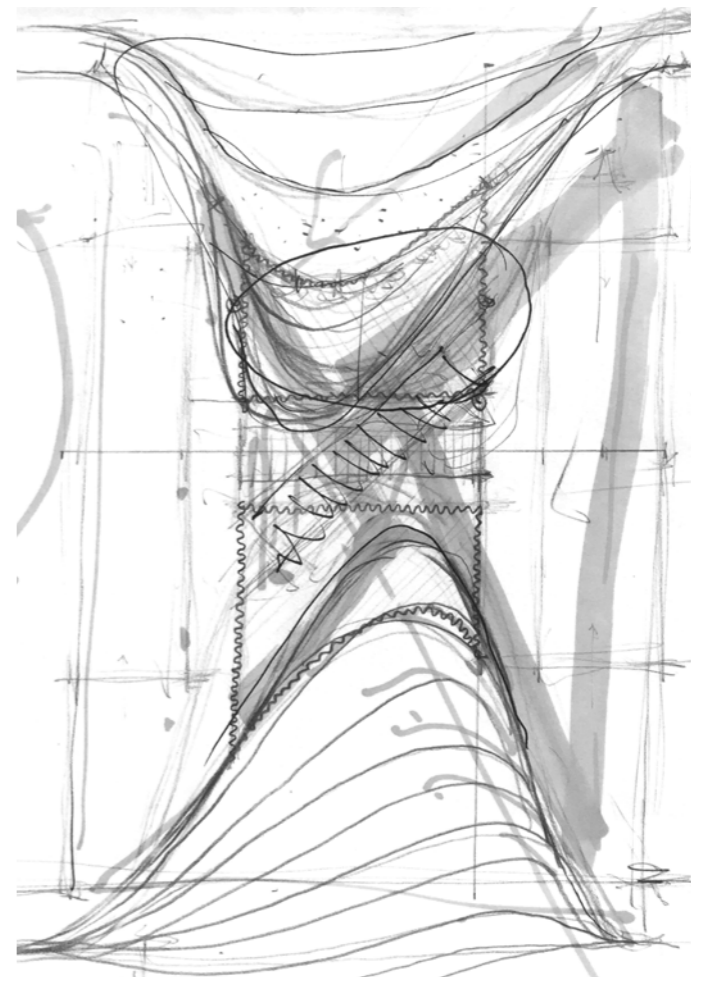
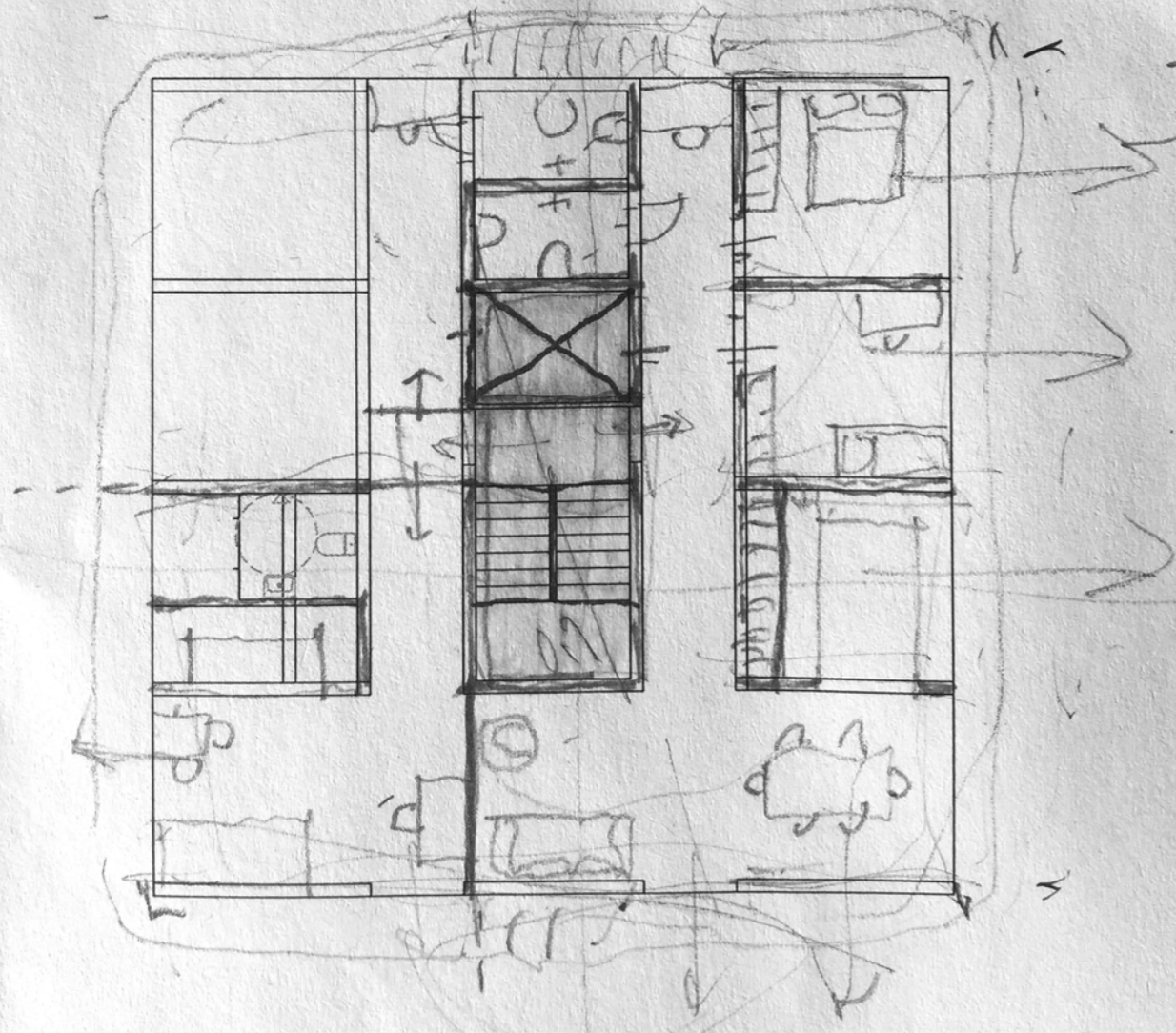
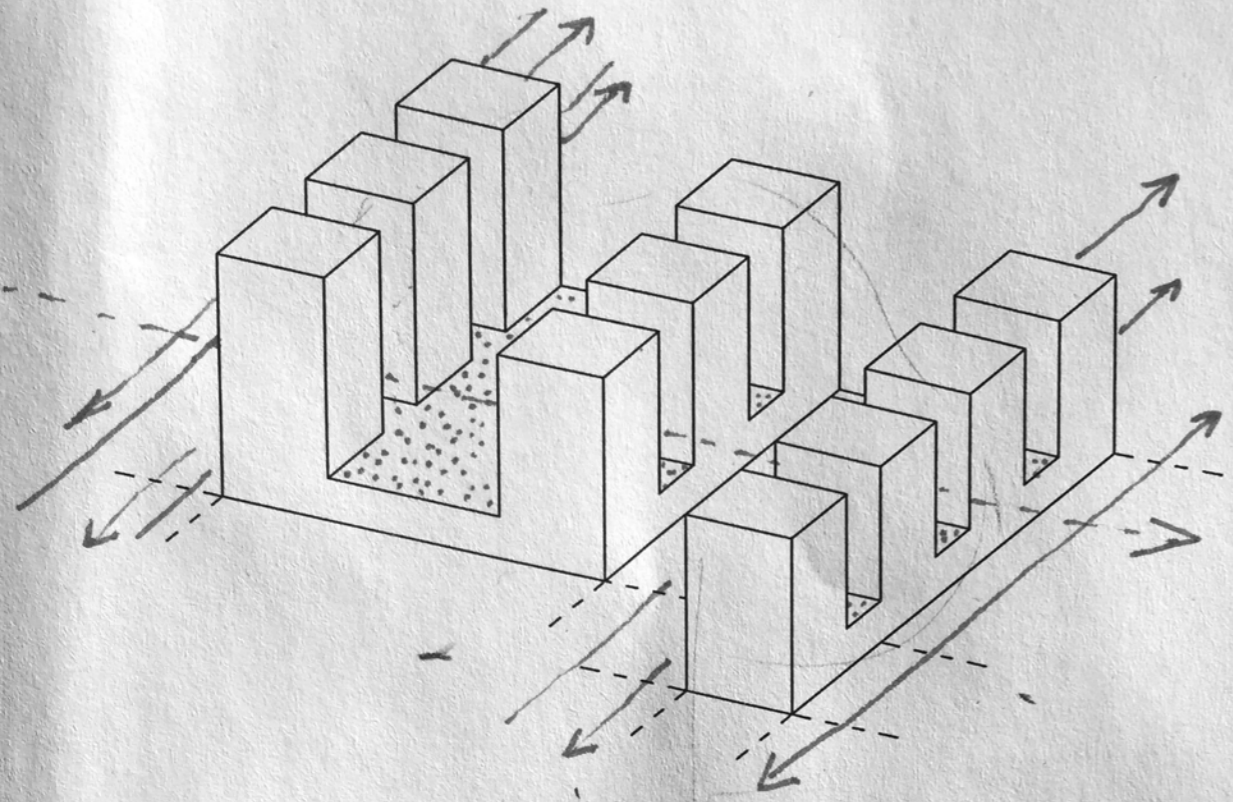


"The feeling when you stay at home, there is a fire in the stove and you are looking at the snow outside with a cup of hot tea in your hands."

Cities do attract people by many aspects such as job opportunities, endless possibilities to spend free time, social interactions, time efficiency, services, culture etc.. But there is a cost for these benefits. Most of the people living in cities feel that they lose physical connection to nature, uniqueness and independency. The particle becomes a part of a system. Some people tried to escape back to the nature, back to the roots. The suburbs were built. But a dream of a family life in a house with a garden has changed into something wrong. Daily commuting takes so much time, money and energy that people have understood that it's a dead end road.

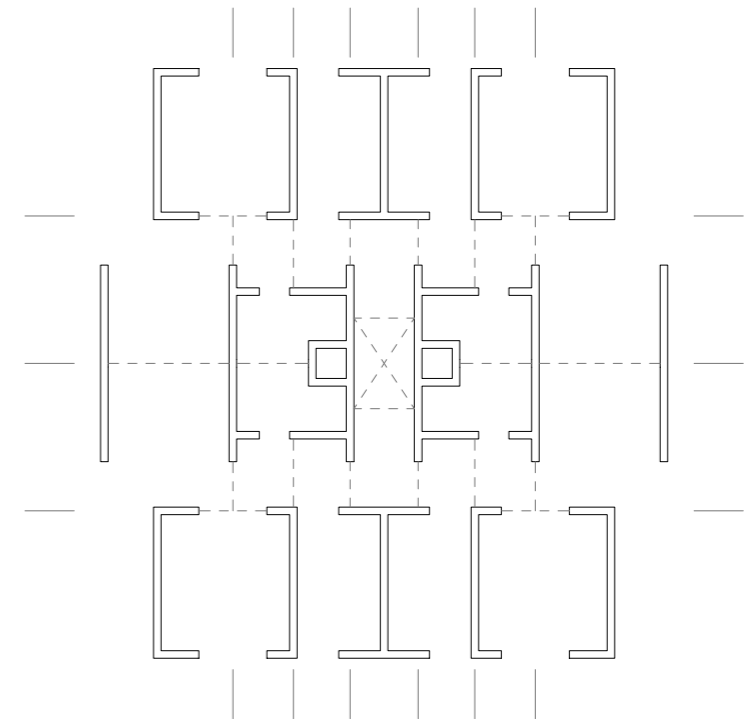
Lyckan aims to become the right mixture of all the benefits of city life and living in the nature. The right proportion of privacy, exibility, independency and also social interaction creates structure for open society of individuals with strong connection to each other. Whenever they like. Placing the project to Lyckholms leaves the high dense street life and creates its own micro climate within its borders. It will become a vital spot for everybody coming in, working and living there or even just passing by. Small scale businesses, natural elements and diverse housing together combine the qualities for a sustainable future development.

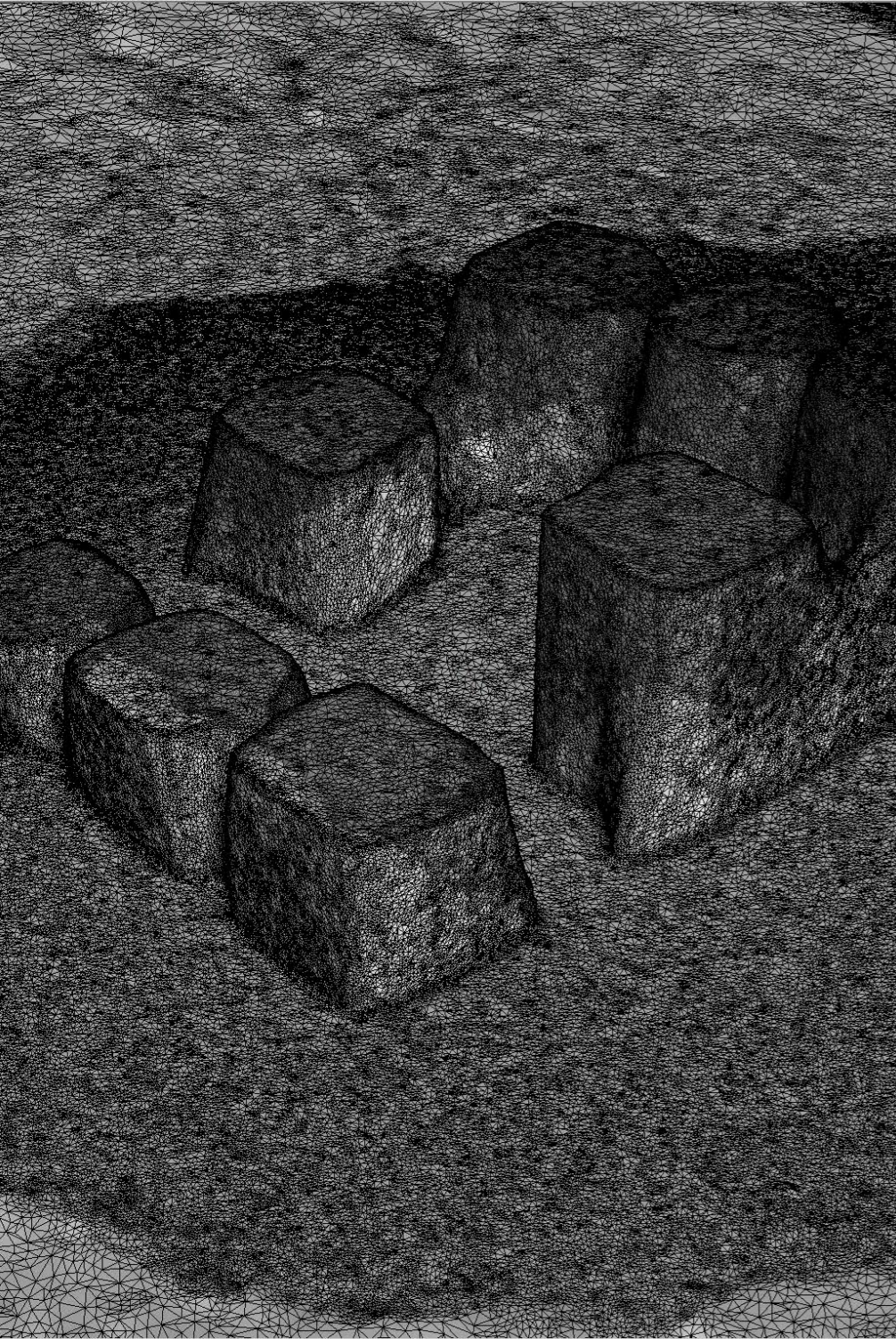




The early stages of the Lyckan idea combines wooden towers with a steel scaffolding in between to maximize outer space without interrupting light conditions in the apartments.

The eight wooden towers are based on a simple and very flexible floor plan layout. It allows the structure to last even if the needs are changing.

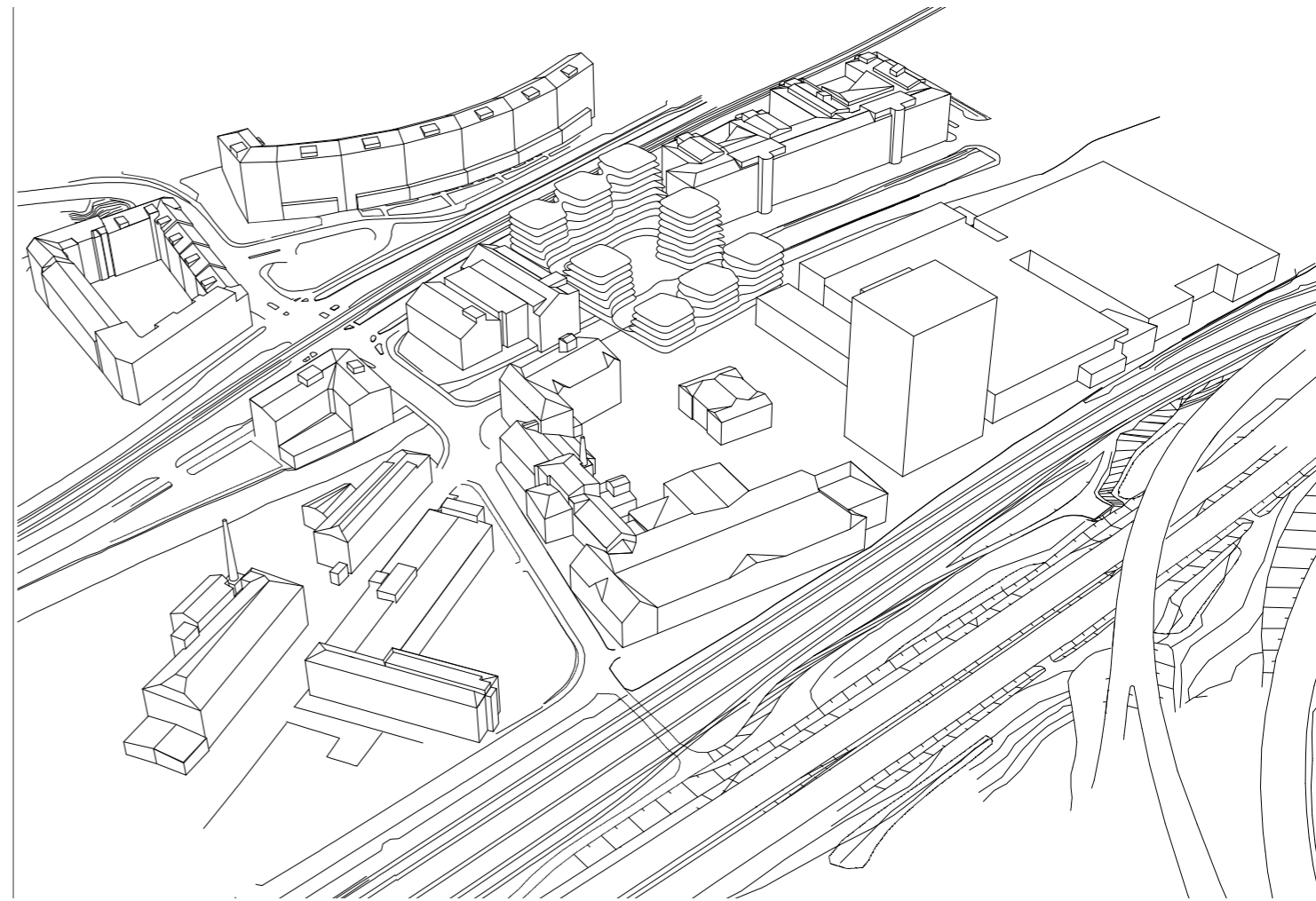




The overall shape has been transformed from the first sketch by many different techniques including hand made models, 3D scanning, physical and digital sunlight simulations and laser cut fabrication.



street view

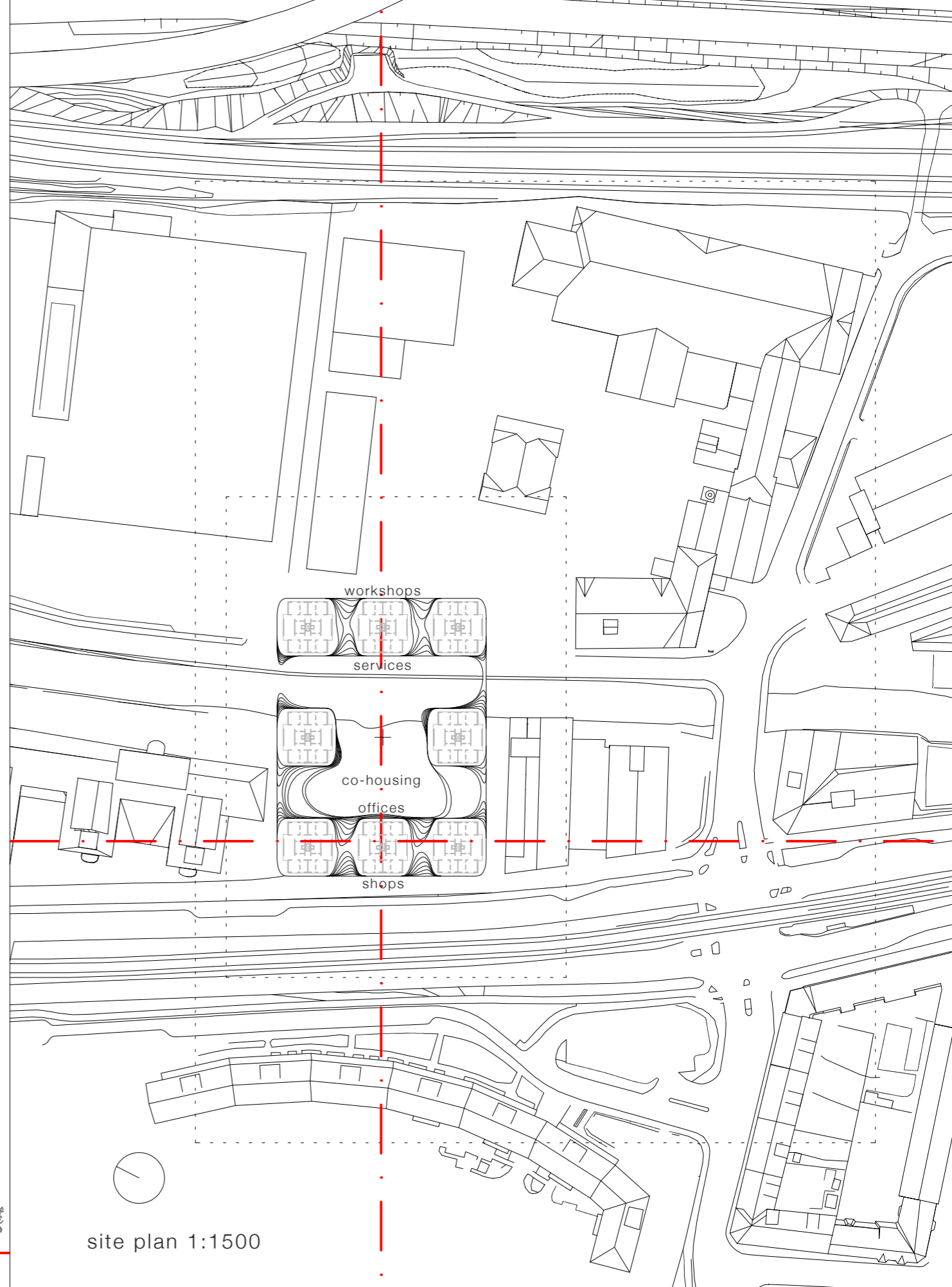
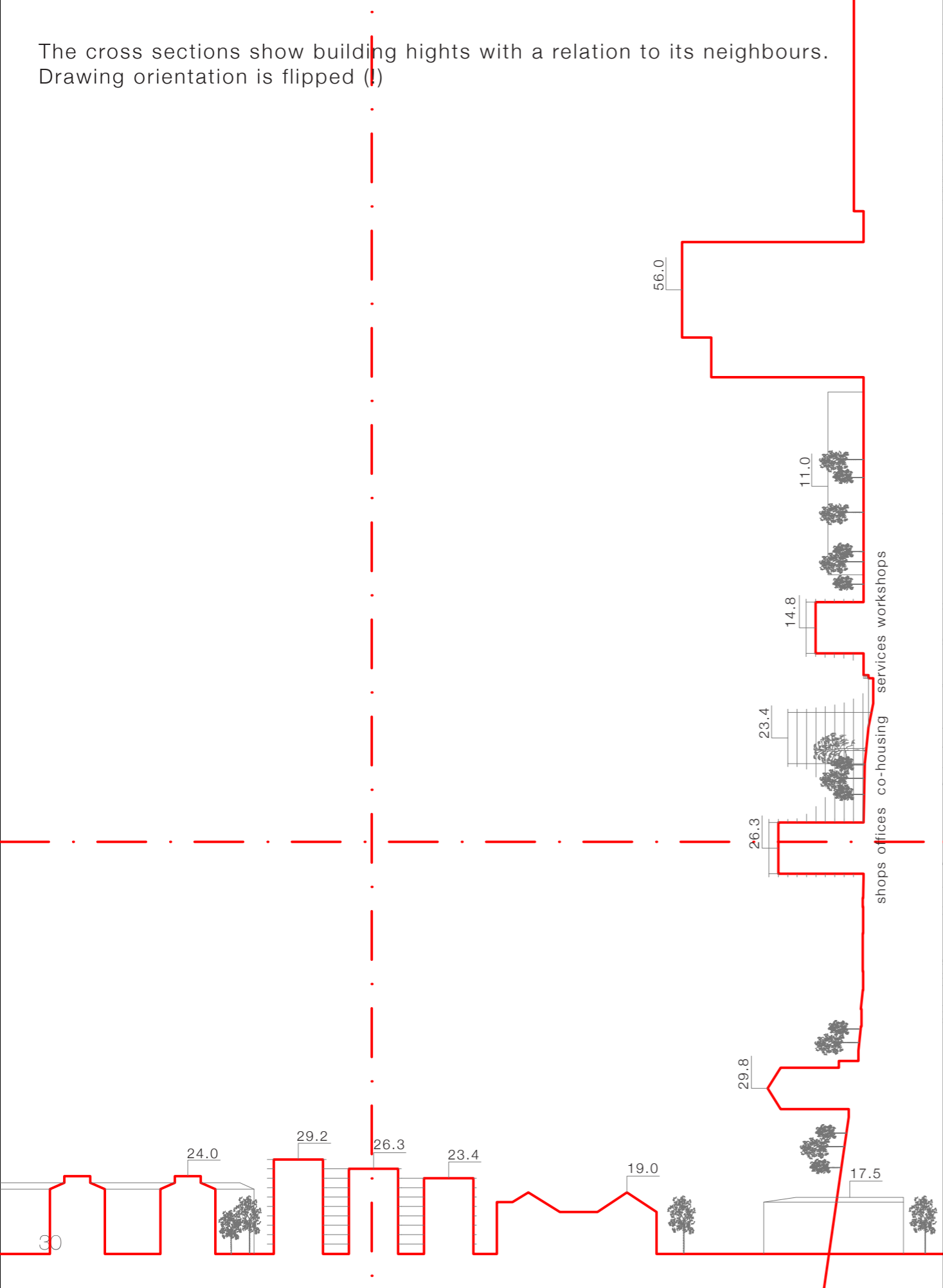




"Live the city, feel the nature."

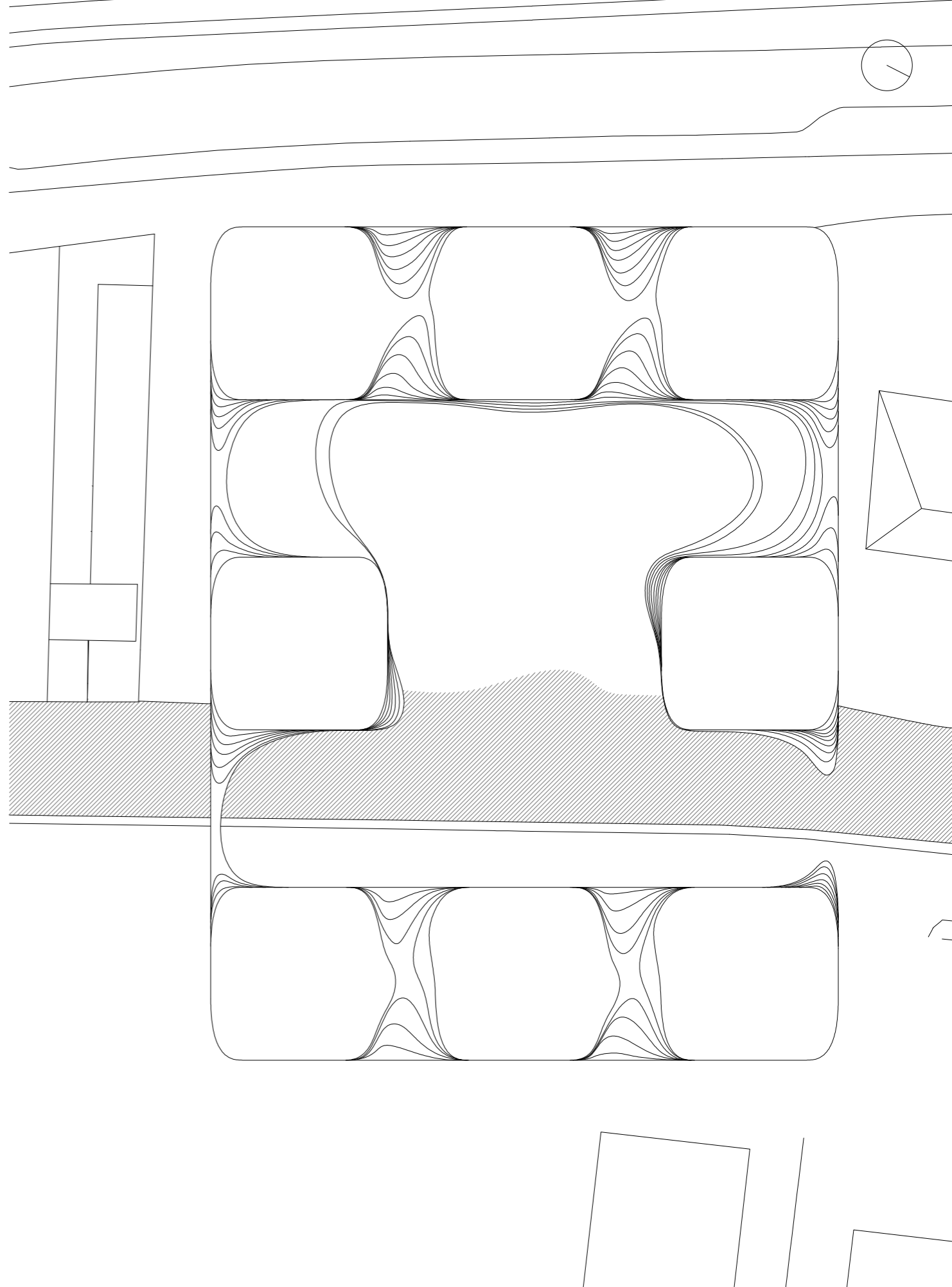


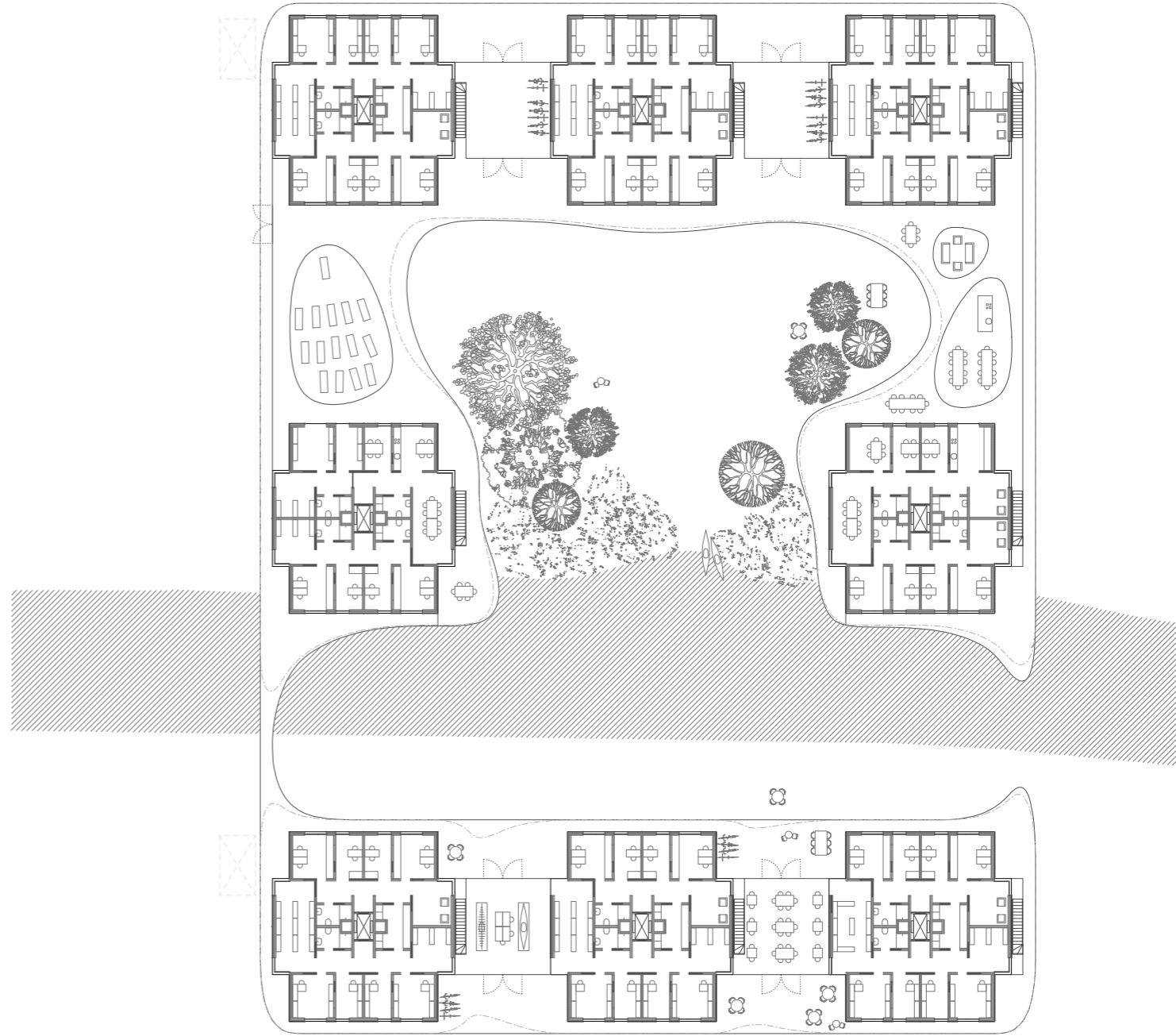
The cross sections show building heights with a relation to its neighbours.
Drawing orientation is flipped (!)



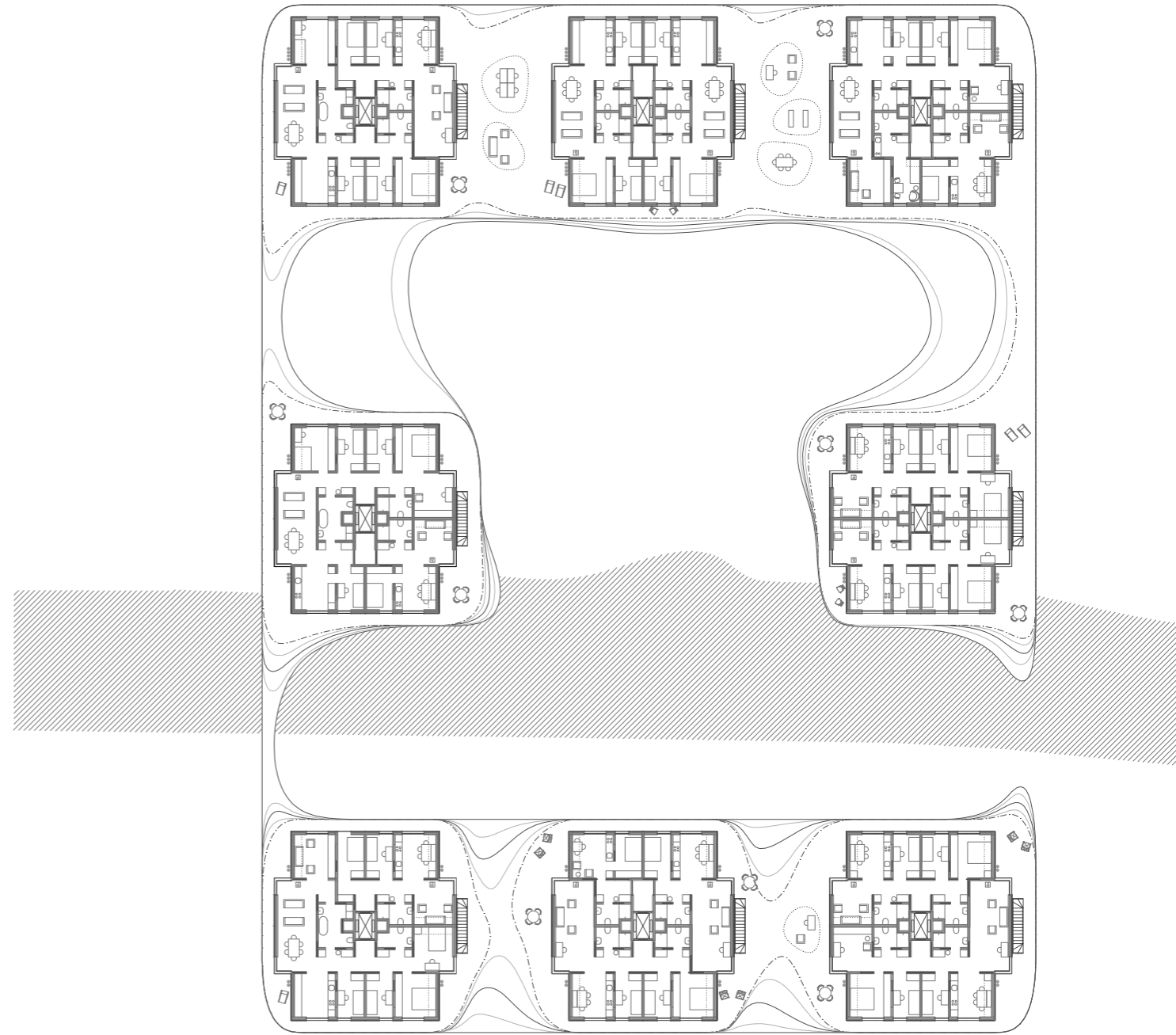
"The feeling when you don't really care if you are inside or outside. A gentle breeze and the smell of pine trees is all around."







ground floor 1:500





east elevation 1:500



south elevation 1:500



AA section 1:500



axonometrical AA section

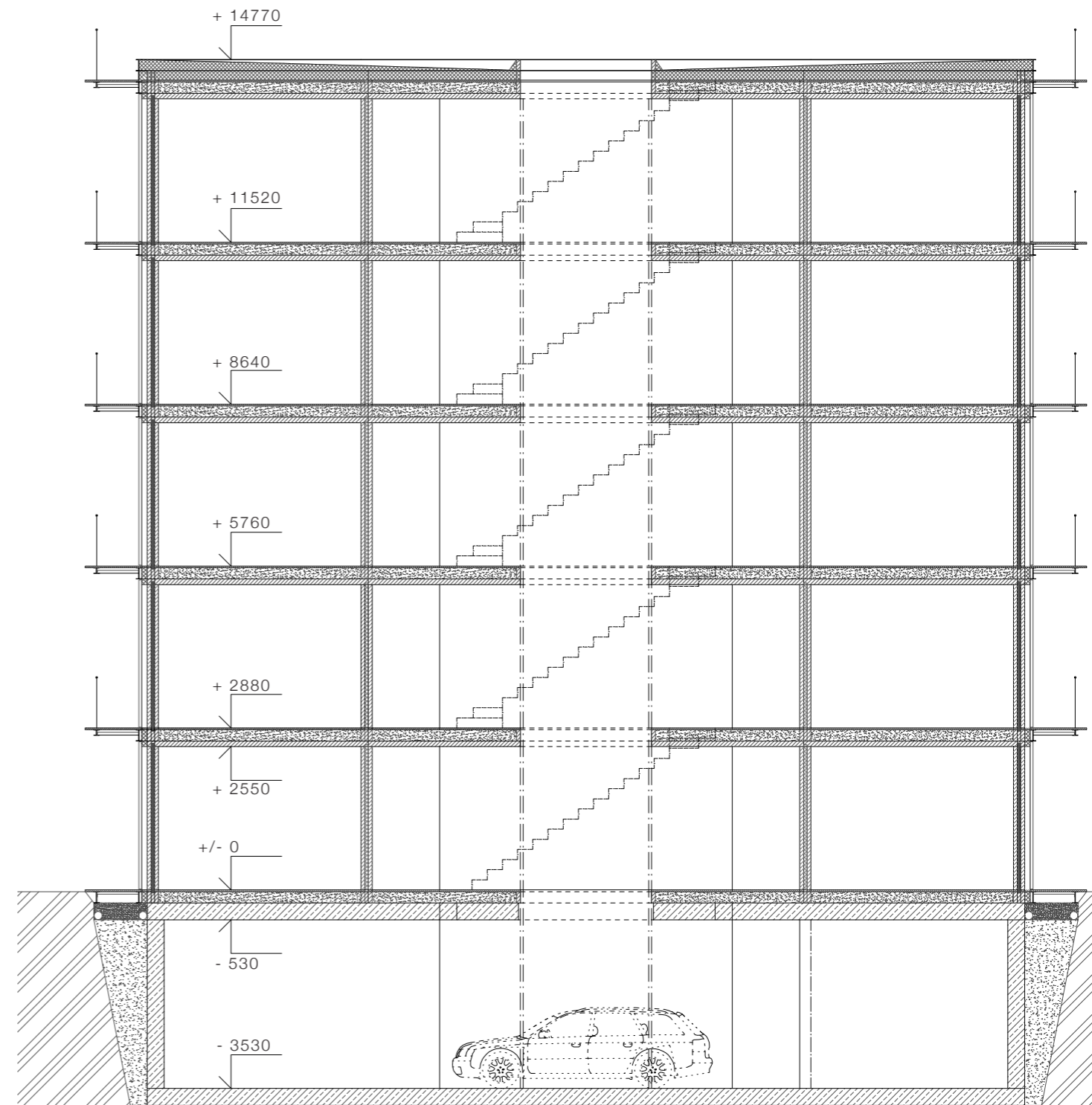


wooden terraces, black steel facade & suspended structure



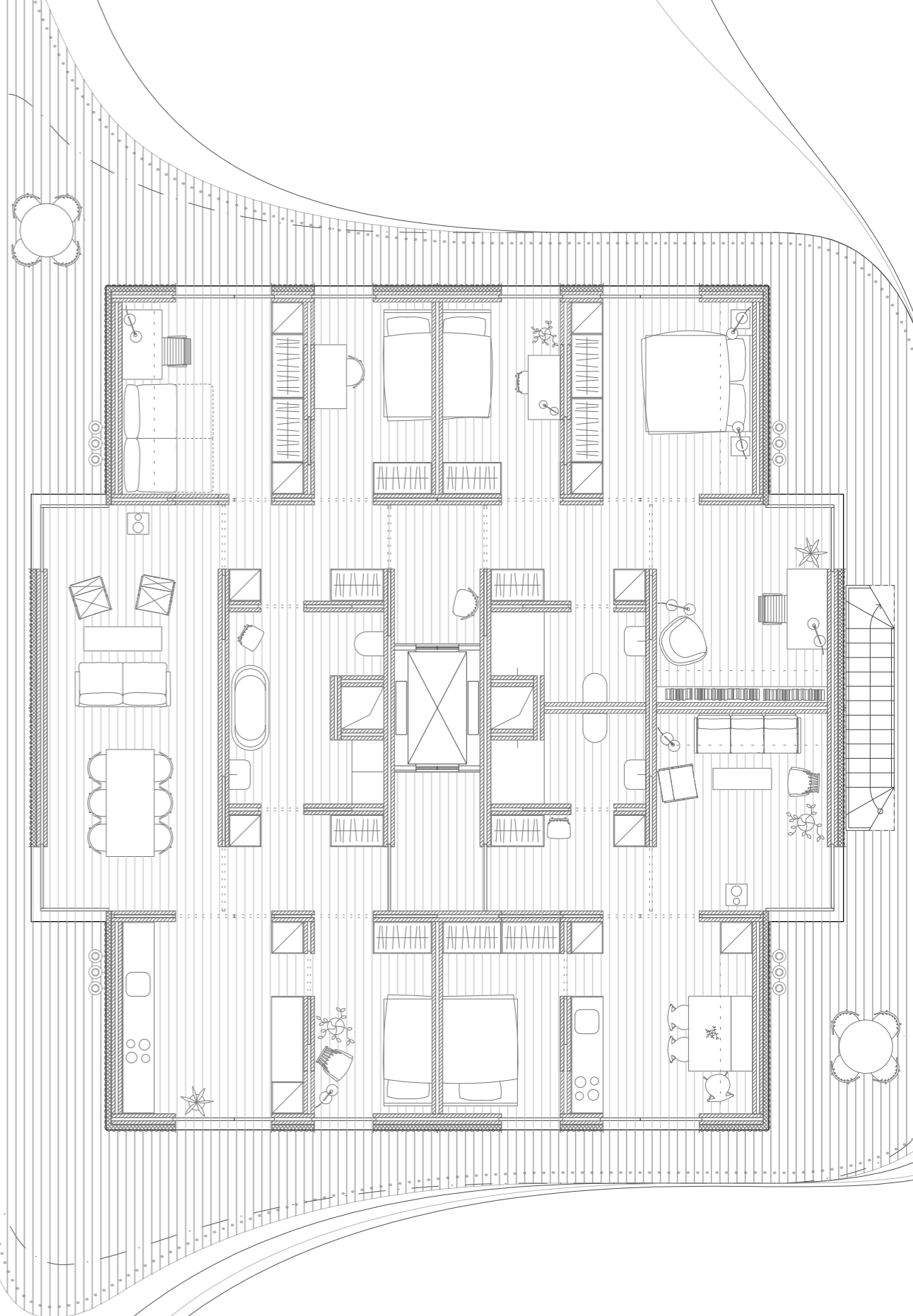


concrete base, garden, river






section 1:100

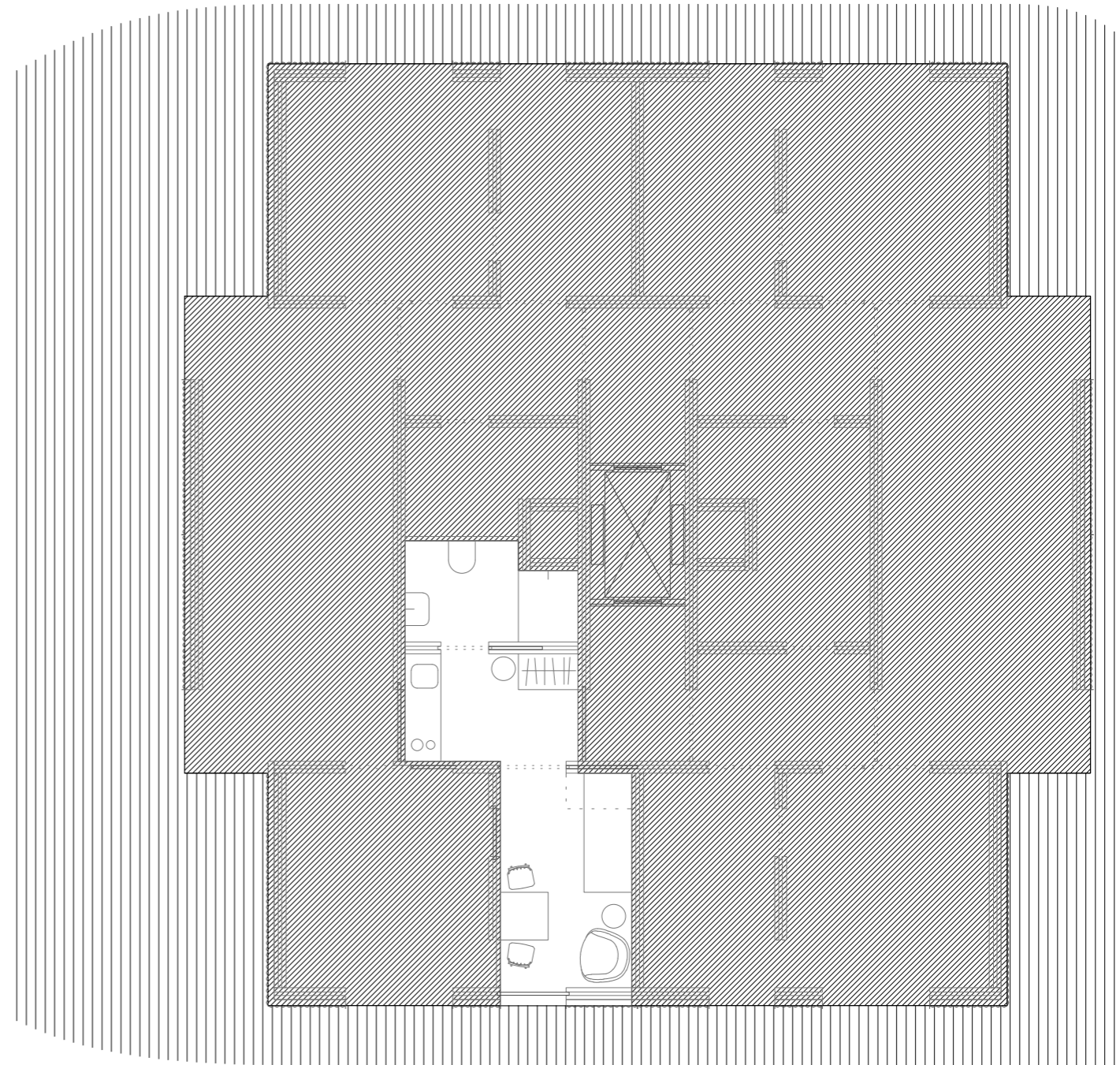







1rk	1rok	2rok	3rok	3rok	3rok	4rok	5rok	type	4rok	4rok	5rok	6rok	5rok	6rok	7rok	9rok
								shape								
19	33	49	65	63	79	87	103	SQM	101	99	117	131	124	140	153	208
								person								
								bath rooms								
								entrances								
								views								
								tower								
3	9	24	6	9	5	6	12	amount	4	11	6	3	5	6	5	1
								floor								
								balcony								
-	-							terrace								
-	-							stove								
19	33	49 - 25	32	31	39 - 26	29 - 22	26 - 21	SQM P.P. - Σ + guest	25	25	29 - 23	33 - 22	25	28 - 23	25 - 22	28 - 23
								total comfort								
1	2	3	4	5	6	7	8	order	9	10	11	12	13	14	15	16

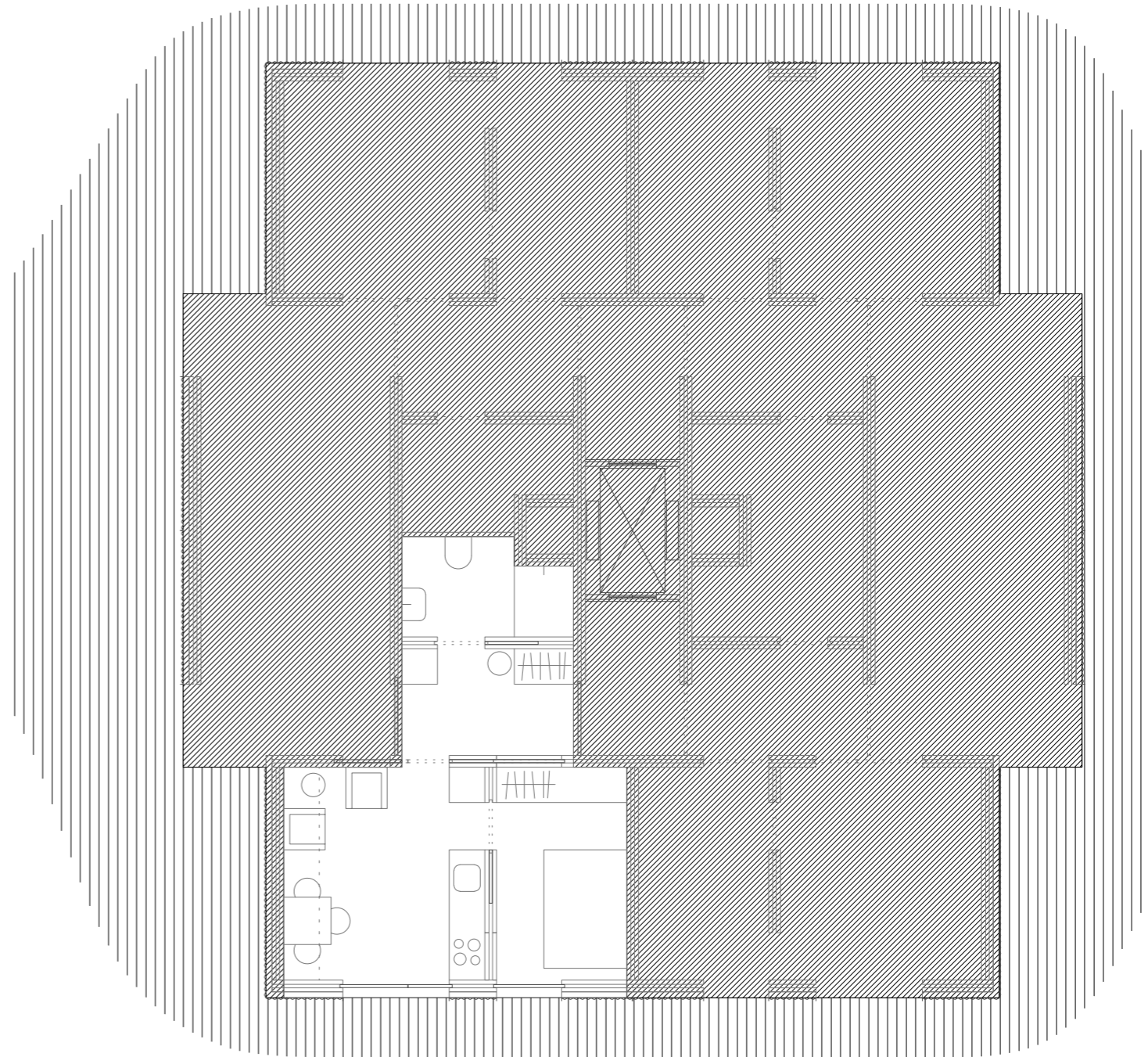
1

1rk	type
	shape
19	SQM
•	person
•	bath rooms
•	entrances
•	views
	tower
3	amount
	floor
•	balcony
-	terrace
-	stove
19	SQM P.P. - Σ + guest
•	total comfort
1	order



2

1rok	type
	shape
33	SQM
•	person
•	bath rooms
•	entrances
•	views
	tower
9	amount
	floor
•	balcony
-	terrace
-	stove
33	SQM P.P. - Σ + guest
••	total comfort
2	order



3

2rok type



shape

49 SQM

●○ person

● bath rooms

● entrances

●● views



tower

24 amount



floor

● balcony

● terrace

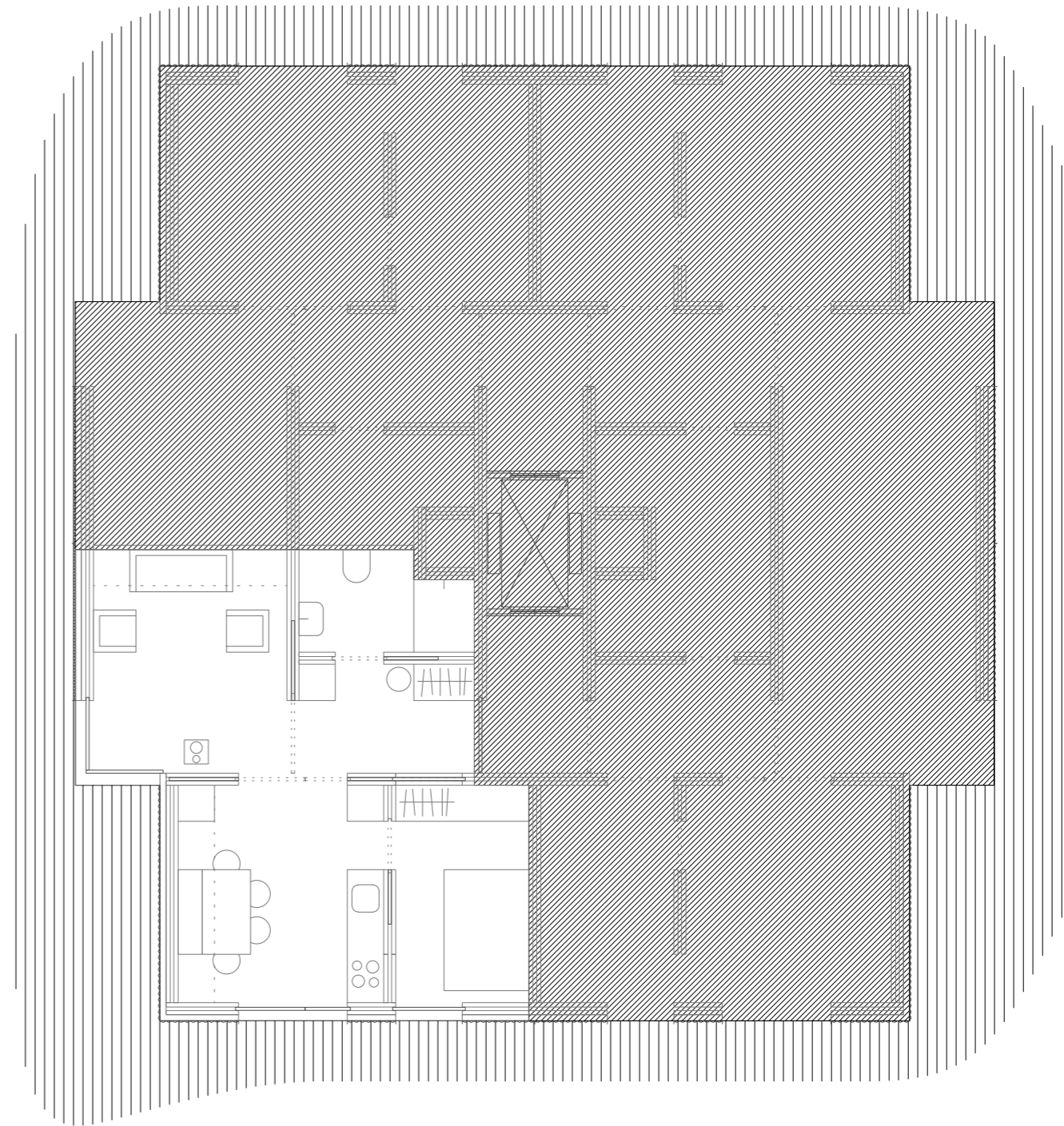
● stove

49 SQM P.P.

-
25 Σ + guest

●●● total comfort

3 order



4

3rok type



shape

65 SQM

•• person

• bath rooms

• entrances

•• views



tower

6 amount



floor

• balcony

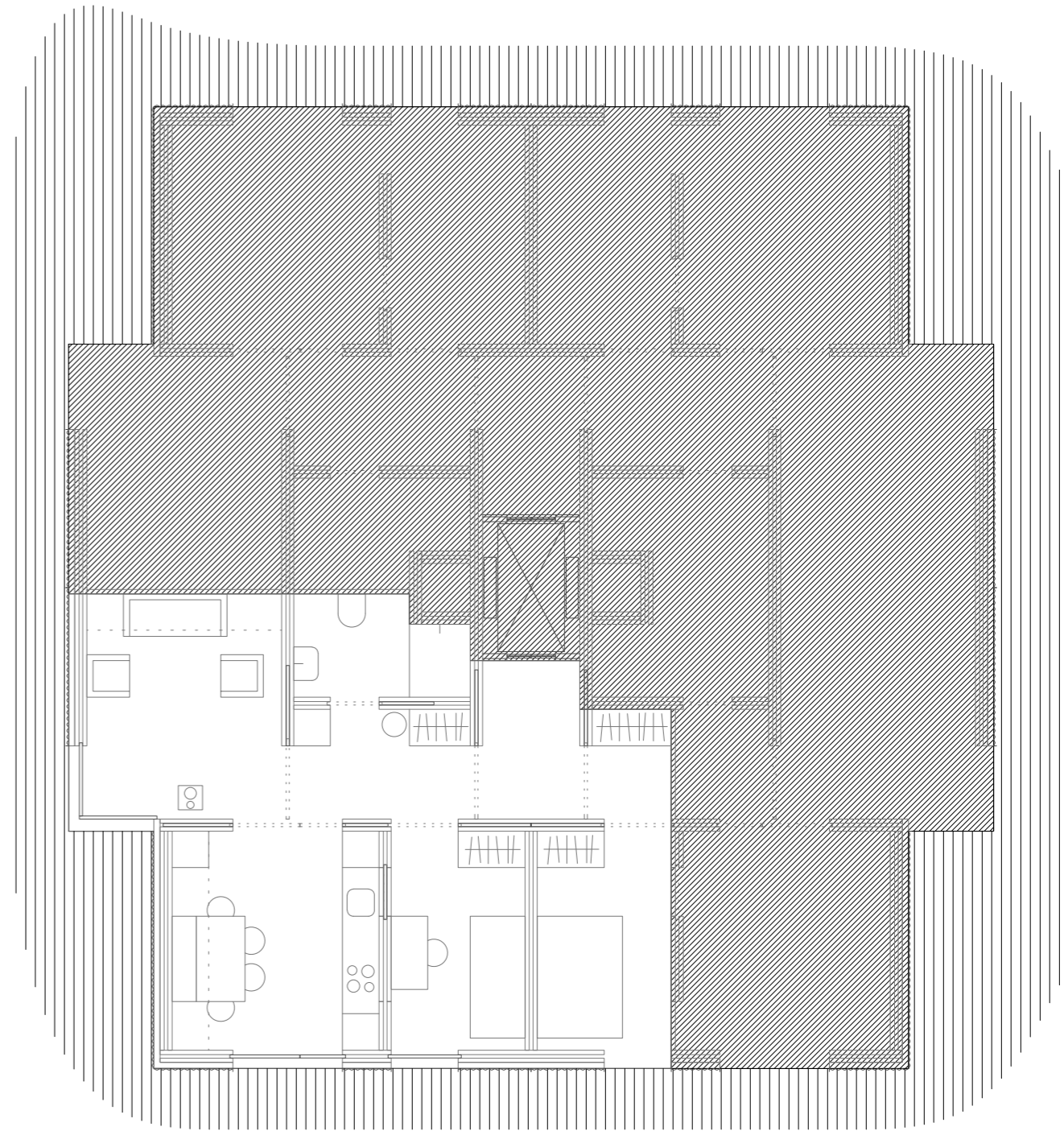
• terrace

• stove

32 SQM P.P.
-
Σ + guest

••○ total comfort

4 order



5

3rok type



shape

63 SQM

●● person

● bath rooms

● entrances

●●● views

○●● tower

9 amount

○●● floor

● balcony

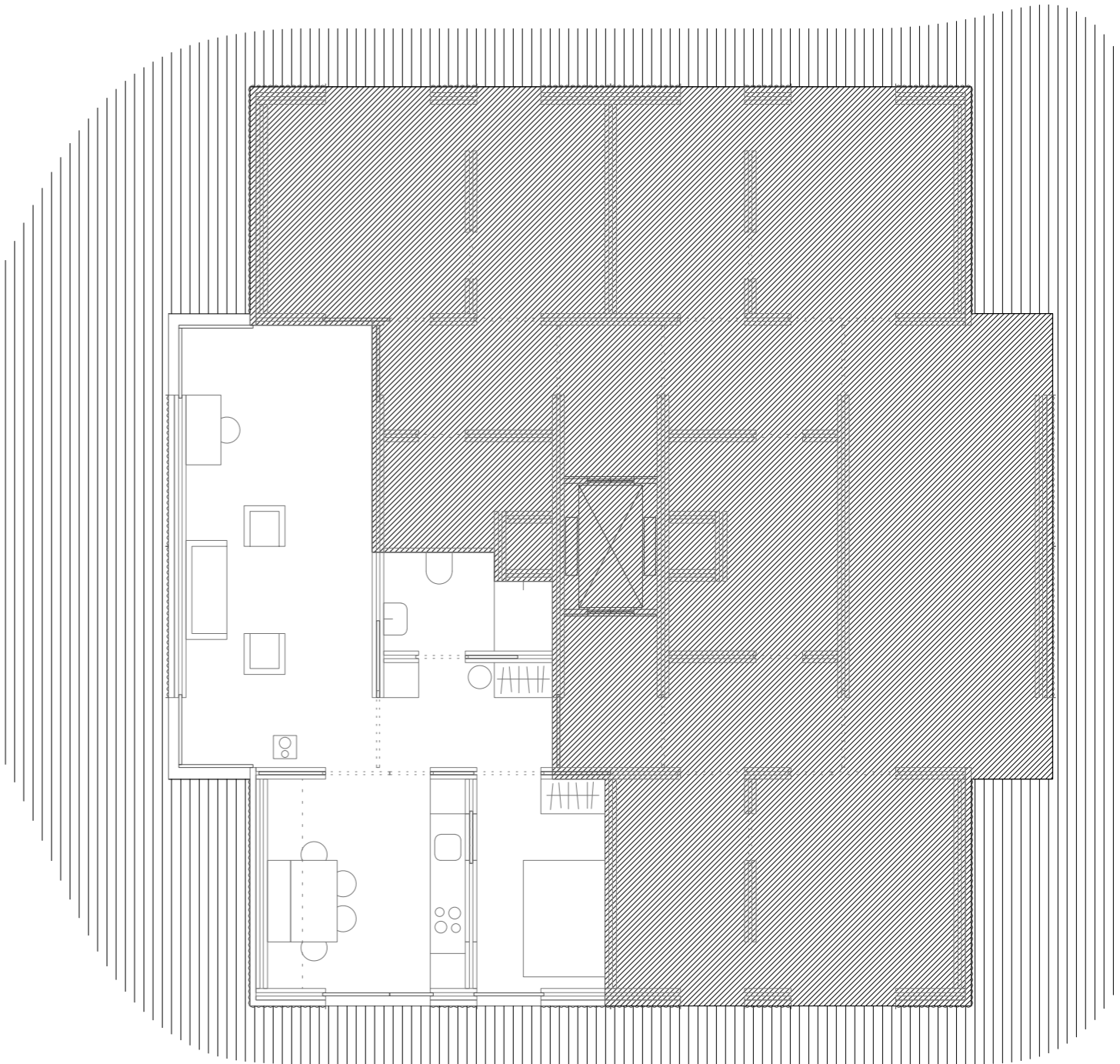
●● terrace

● stove

31 SQM P.P.
-
Σ + guest

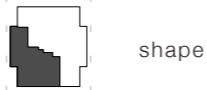
●●● total comfort

5 order



6

3rok type



shape

79 SQM



person



bath
rooms



entrances



views



tower

5 amount



floor



balcony



terrace



stove

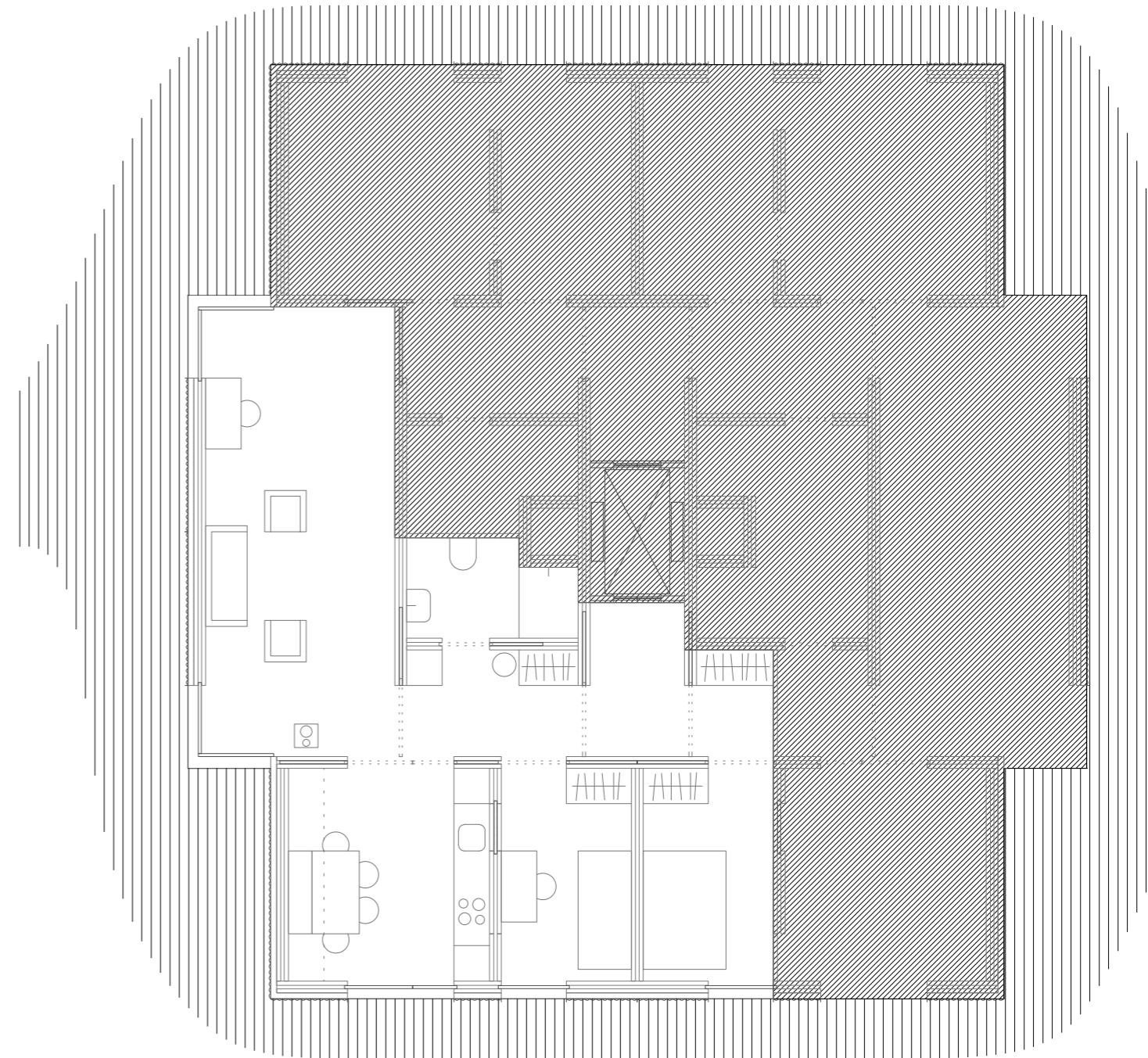
39 SQM P.P.

26 Σ + guest














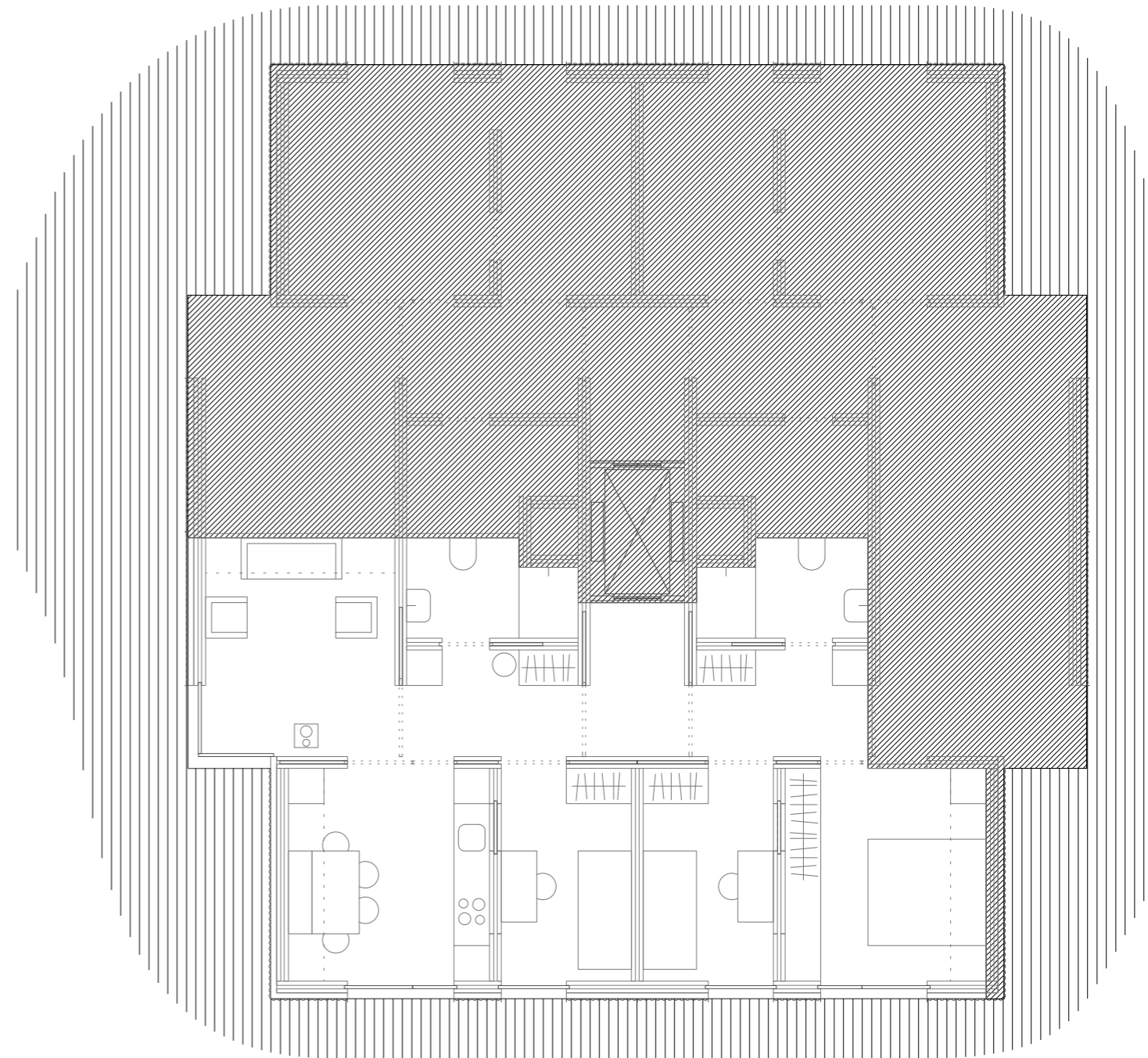
total
comfort

6 order














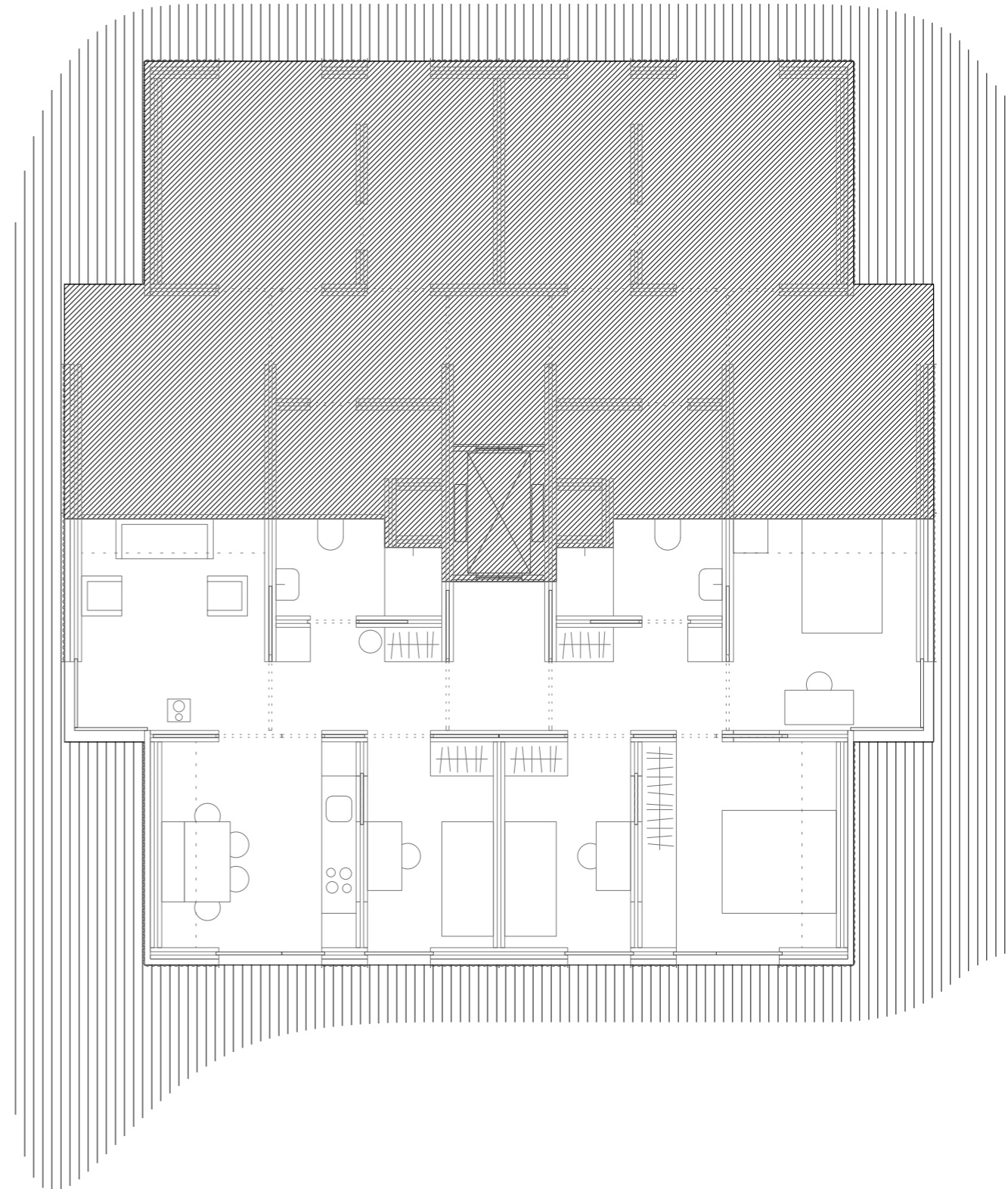
7

4rok	type
	shape
87	SQM
	person
	bath rooms
	entrances
	views
	tower
6	amount
	floor
	balcony
	terrace
	stove
29	SQM P.P.
22	Σ + guest
	total comfort
7	order














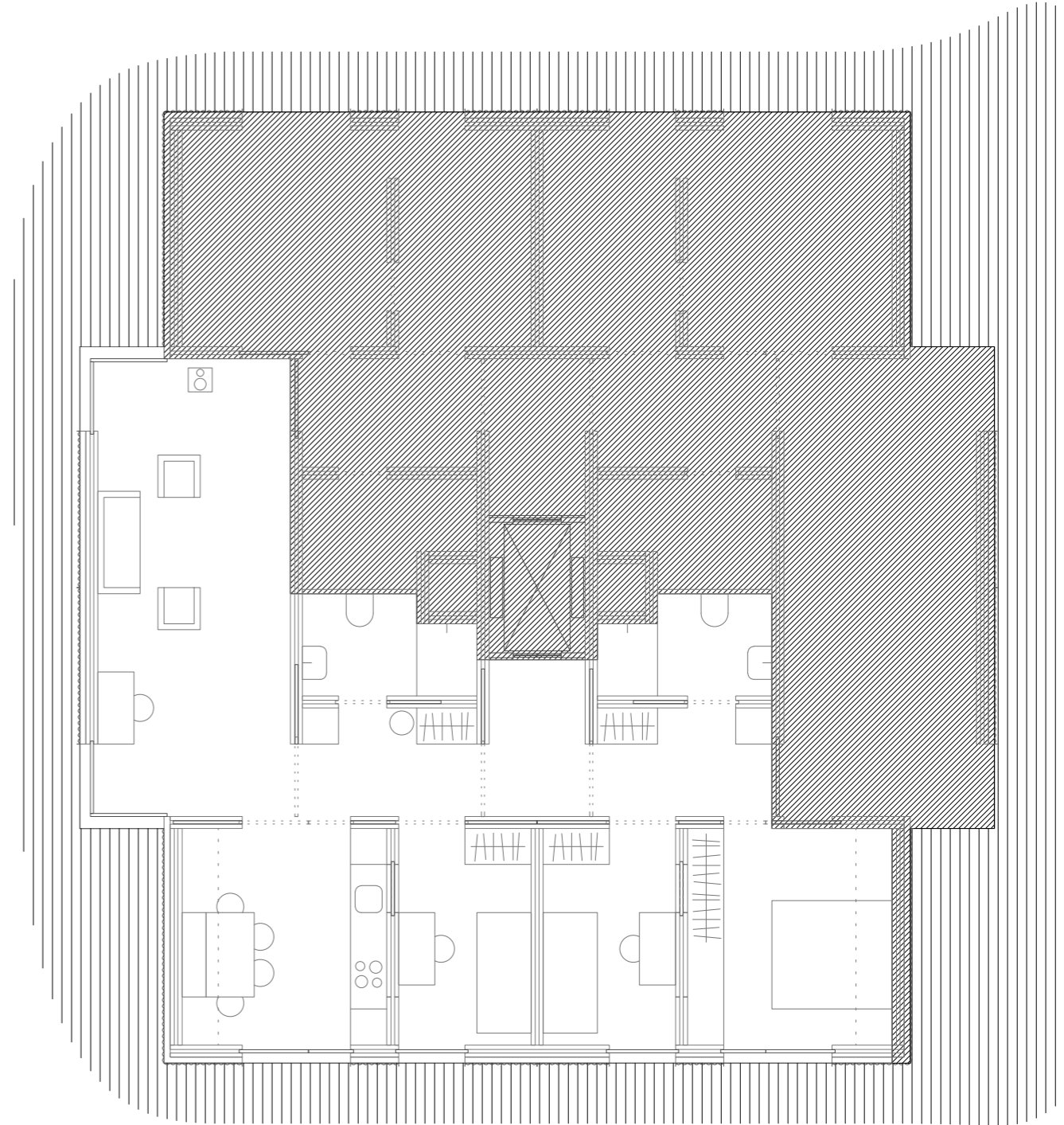
8

5rok	type
	shape
103	SQM
	person
	bath rooms
	entrances
	views
	tower
12	amount
	floor
	balcony
	terrace
	stove
26	SQM P.P.
21	Σ + guest
	total comfort
8	order



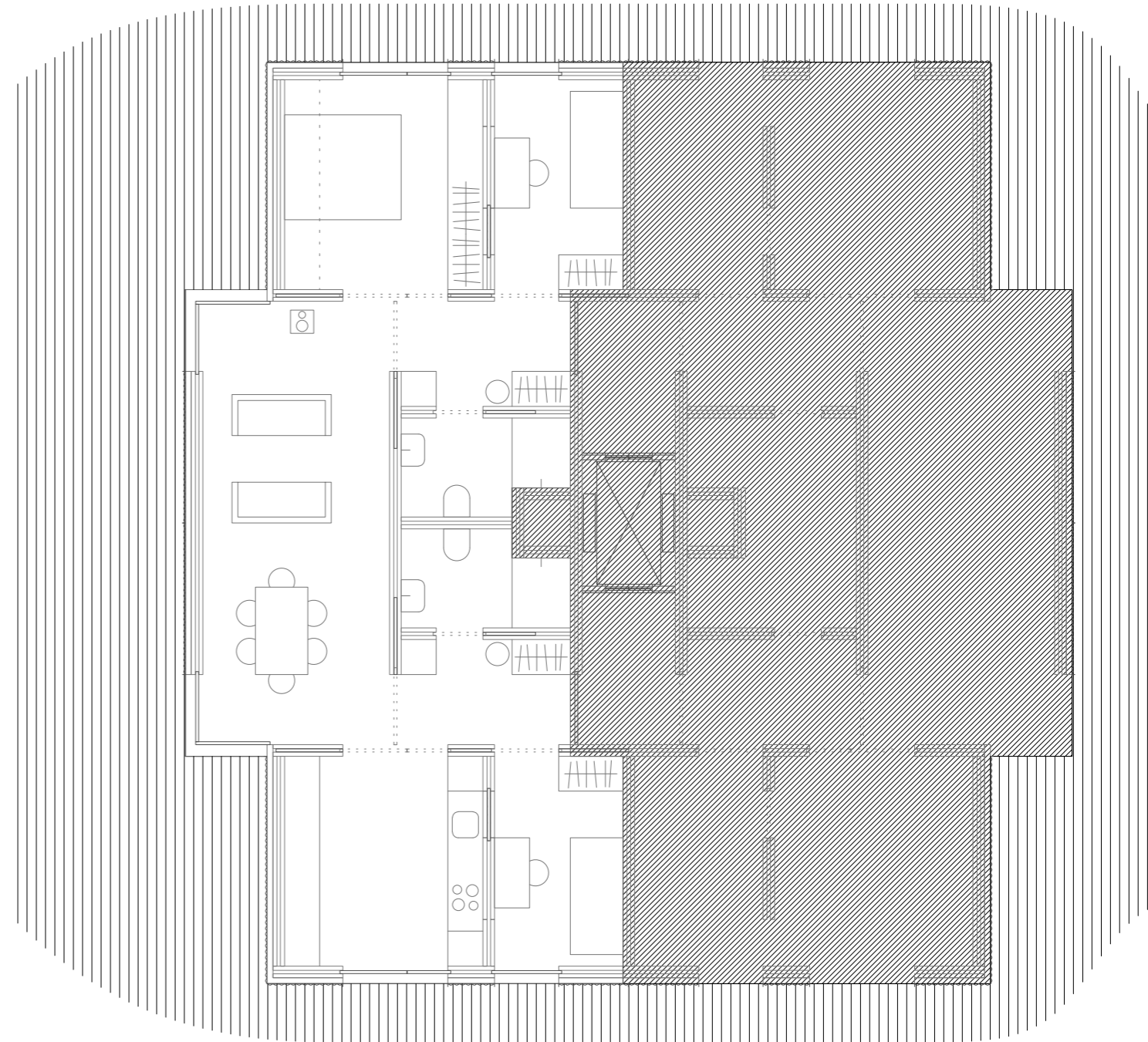
9

- 4rok type
-  shape
- 101 SQM
-  person
-  bath rooms
-  entrances
-  views
-  tower
- 4 amount
-  floor
-  balcony
-  terrace
-  stove
- 25 SQM P.P.
-
Σ + guest
-  total comfort
- 9 order














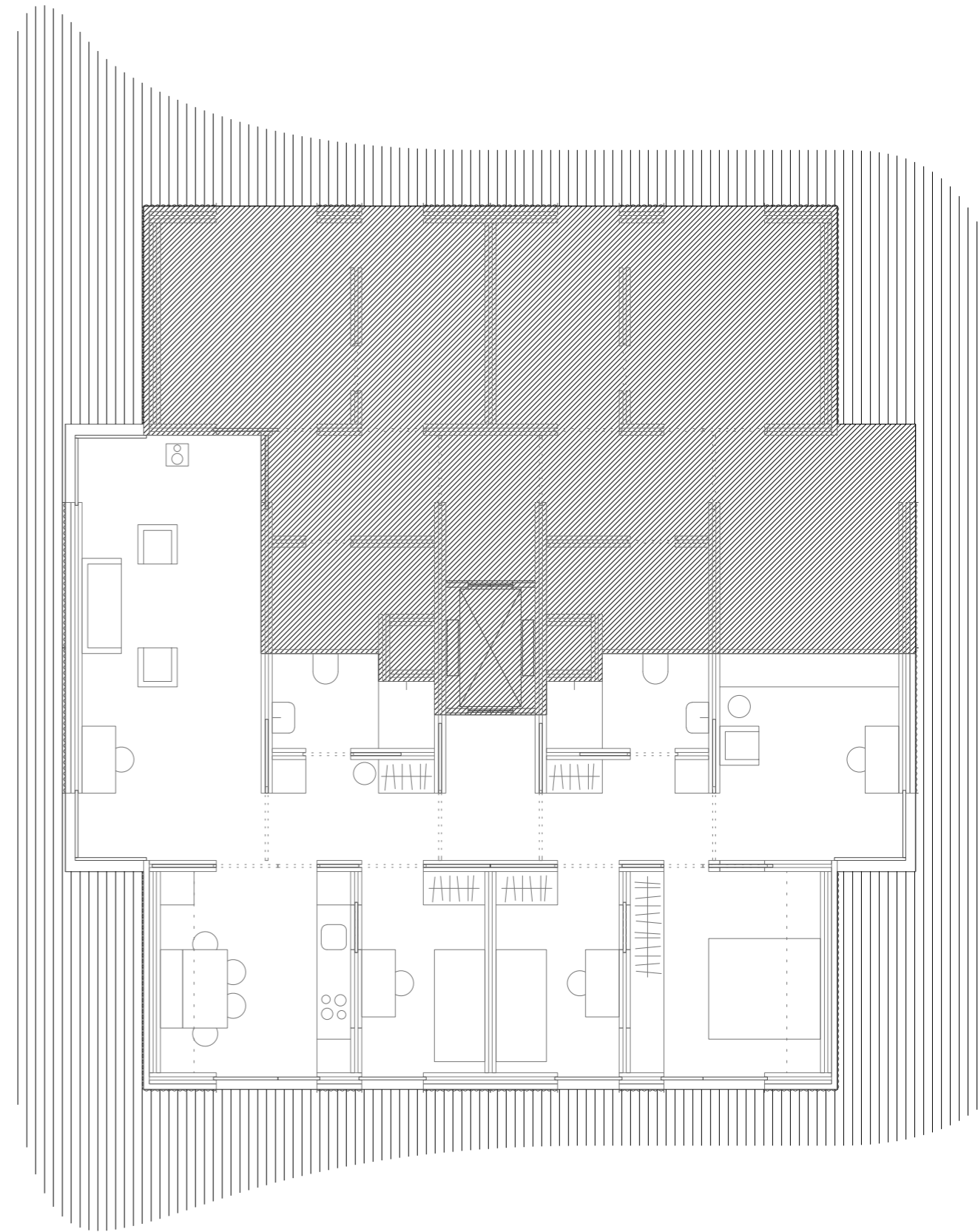
10

- 4rok type
- shape
- 99 SQM
- person
- bath rooms
- entrances
- views
- tower
- 11 amount
- floor
- balcony
- terrace
- stove
- 25 SQM P.P. - Σ + guest
- total comfort
- 10 order














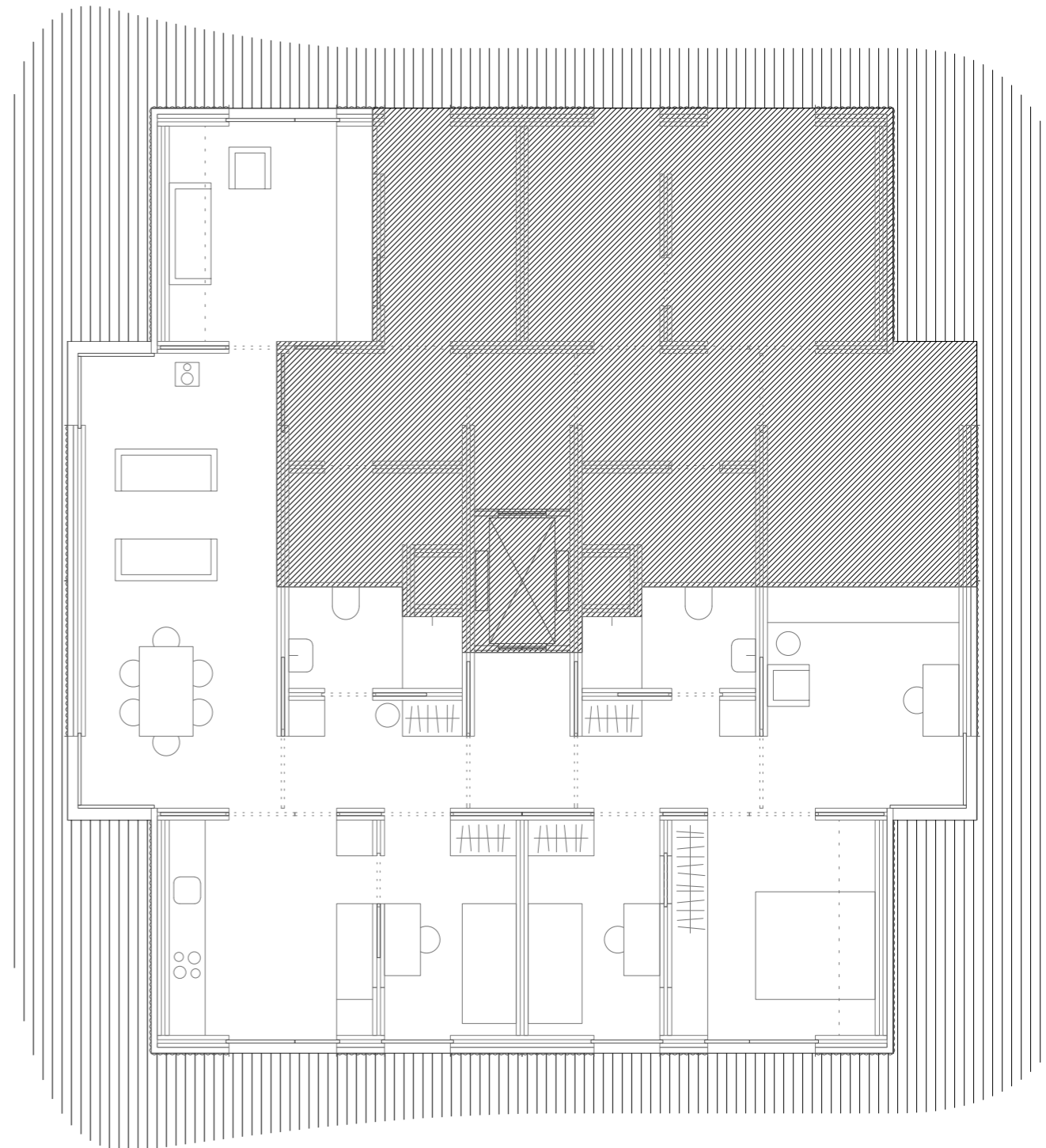
11

5rok	type
	shape
117	SQM
	person
	bath rooms
	entrances
	views
	tower
6	amount
	floor
	balcony
	terrace
	stove
29	SQM P.P.
23	Σ + guest
	total comfort
11	order














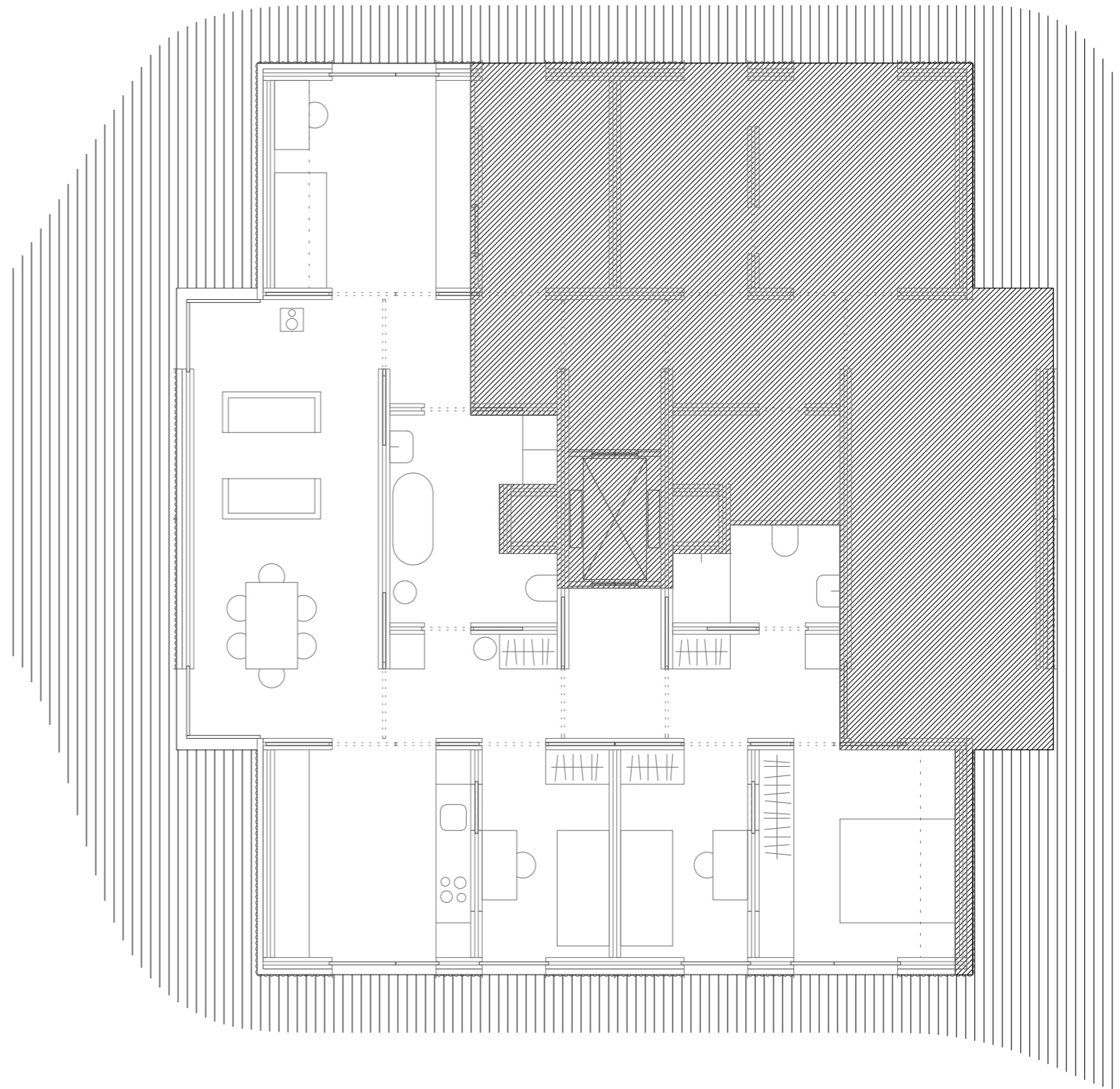
12

6rok	type
	shape
131	SQM
	person
	bath rooms
	entrances
	views
	tower
3	amount
	floor
	balcony
	terrace
	stove
33	SQM P.P.
22	Σ + guest
	total comfort
12	order














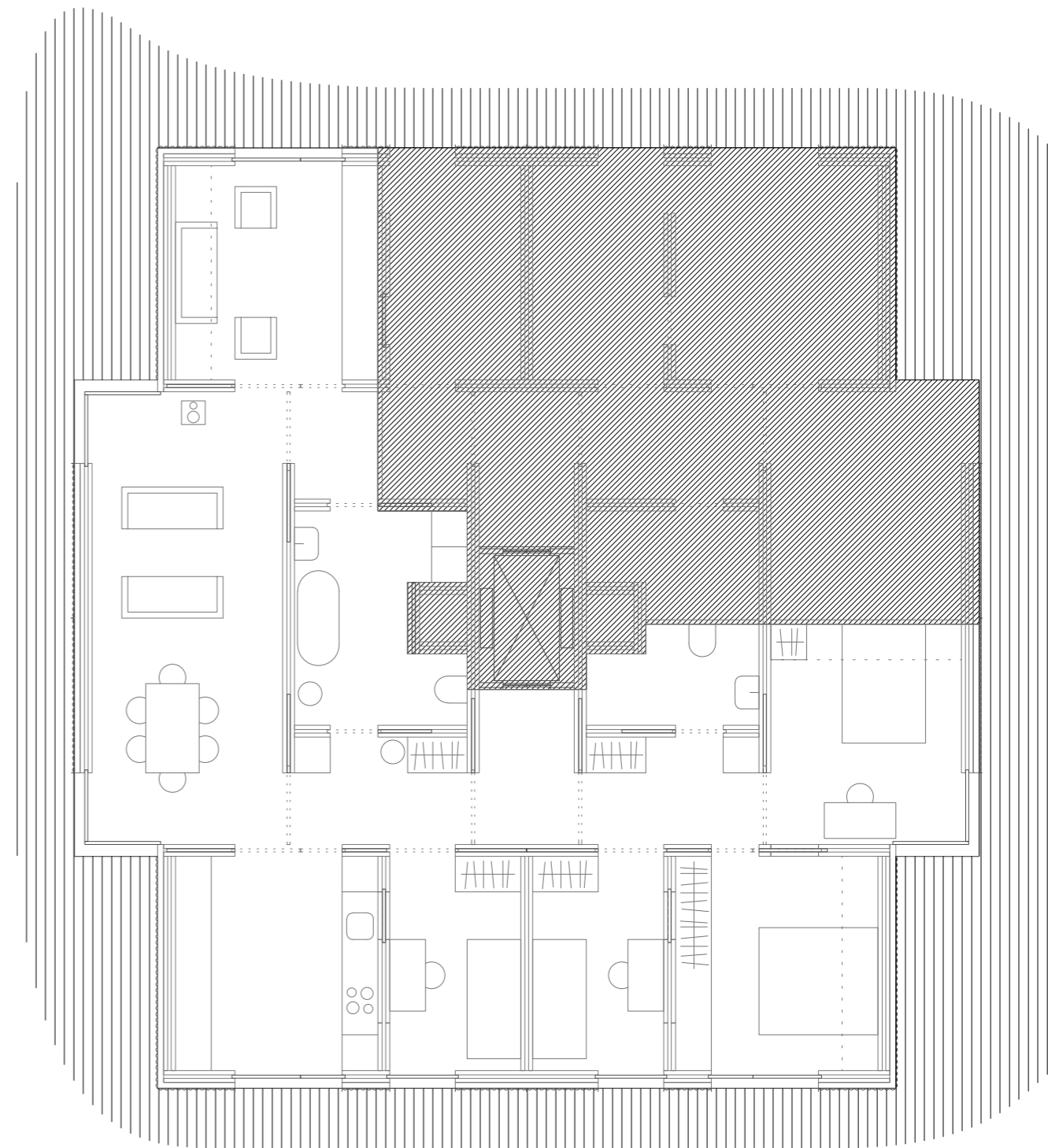
13

- 5rok type
-  shape
- 124 SQM
-  person
-  bath rooms
-  entrances
-  views
-  tower
- 5 amount
-  floor
-  balcony
-  terrace
-  stove
- 25 SQM P.P.
-
Σ + guest
-  total comfort
- 13 order














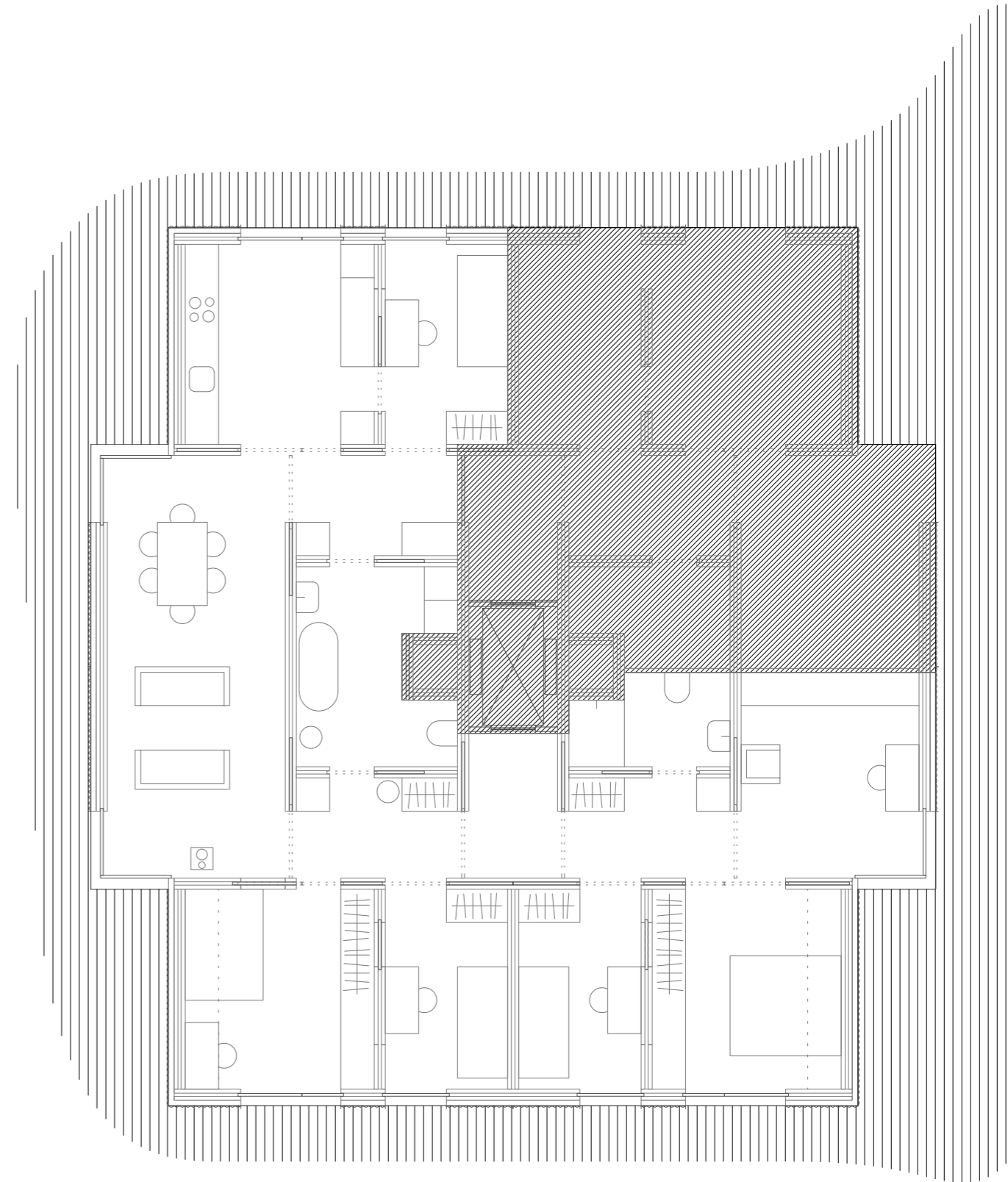
14

6rok	type
	shape
140	SQM
	person
	bath rooms
	entrances
	views
	tower
6	amount
	floor
	balcony
	terrace
	stove
28	SQM P.P.
23	Σ + guest
	total comfort
14	order














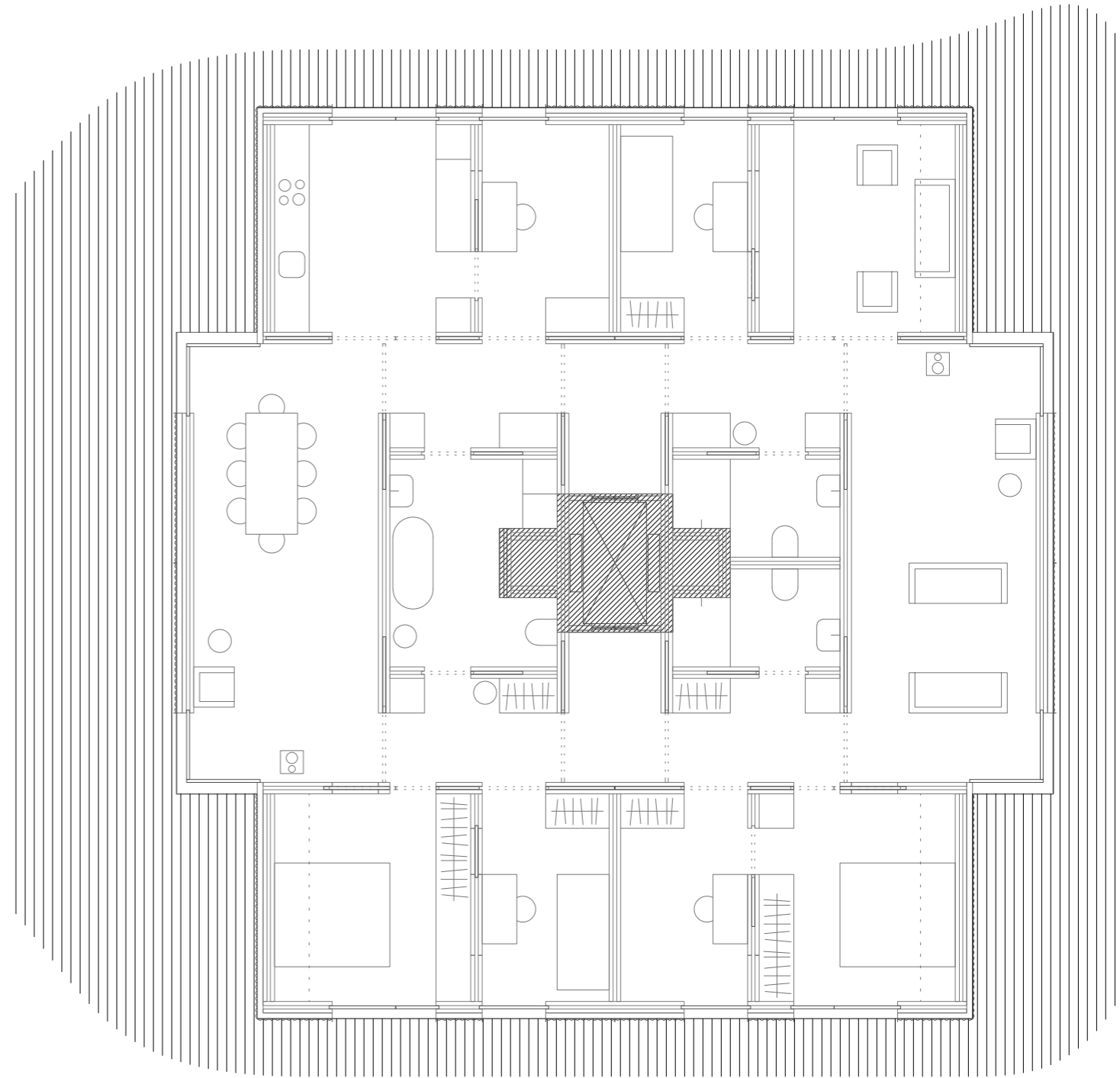
15

7rok	type
	shape
153	SQM
	person
	bath rooms
	entrances
	views
	tower
5	amount
	floor
	balcony
	terrace
	stove
25	SQM P.P.
22	Σ + guest
	total comfort
15	order

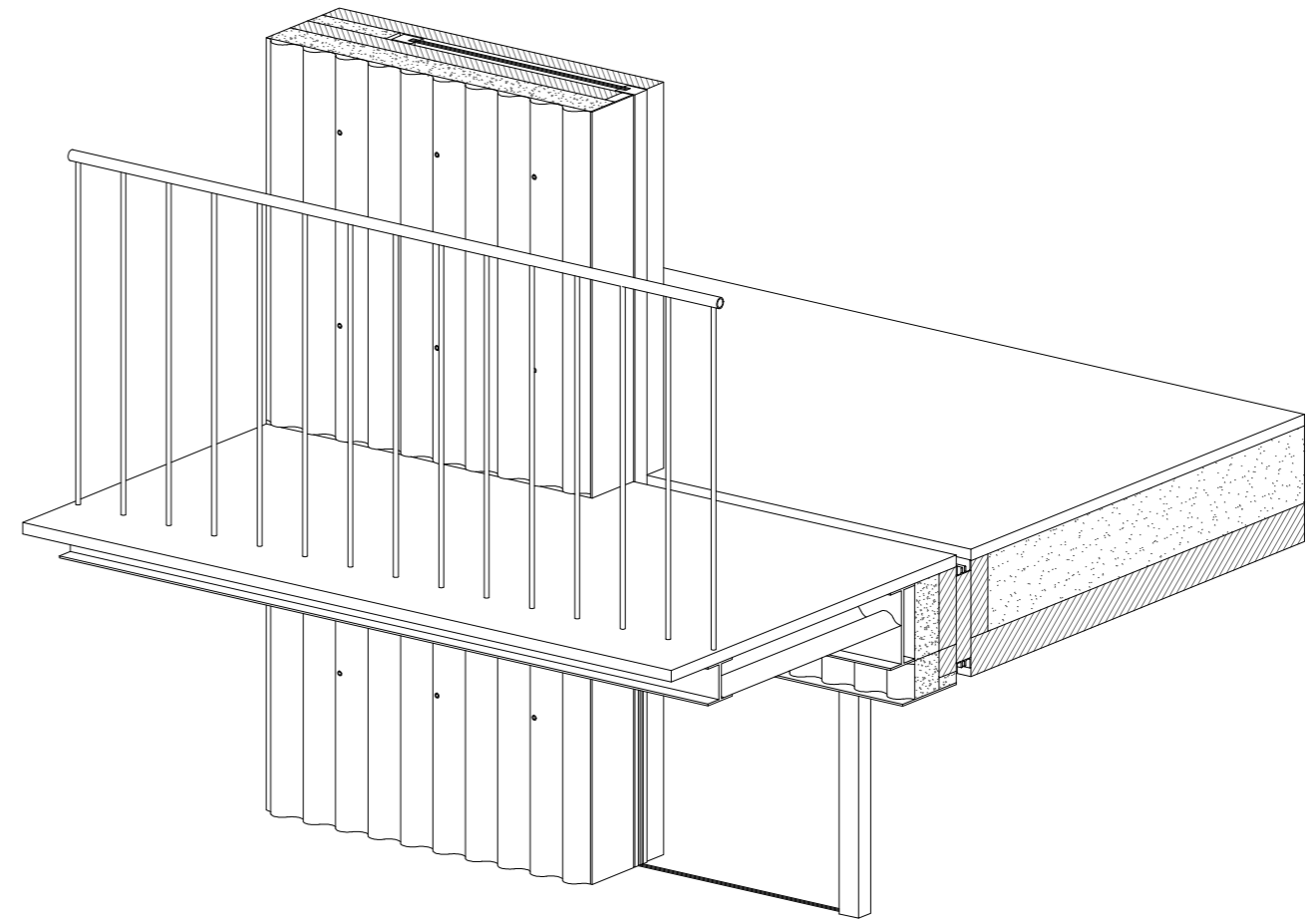


16

9rok	type
	shape
208	SQM
	person
	bath rooms
	entrances
	views
	tower
1	amount
	floor
	balcony
	terrace
	stove
28	SQM P.P.
23	Σ + guest
	total comfort
16	order



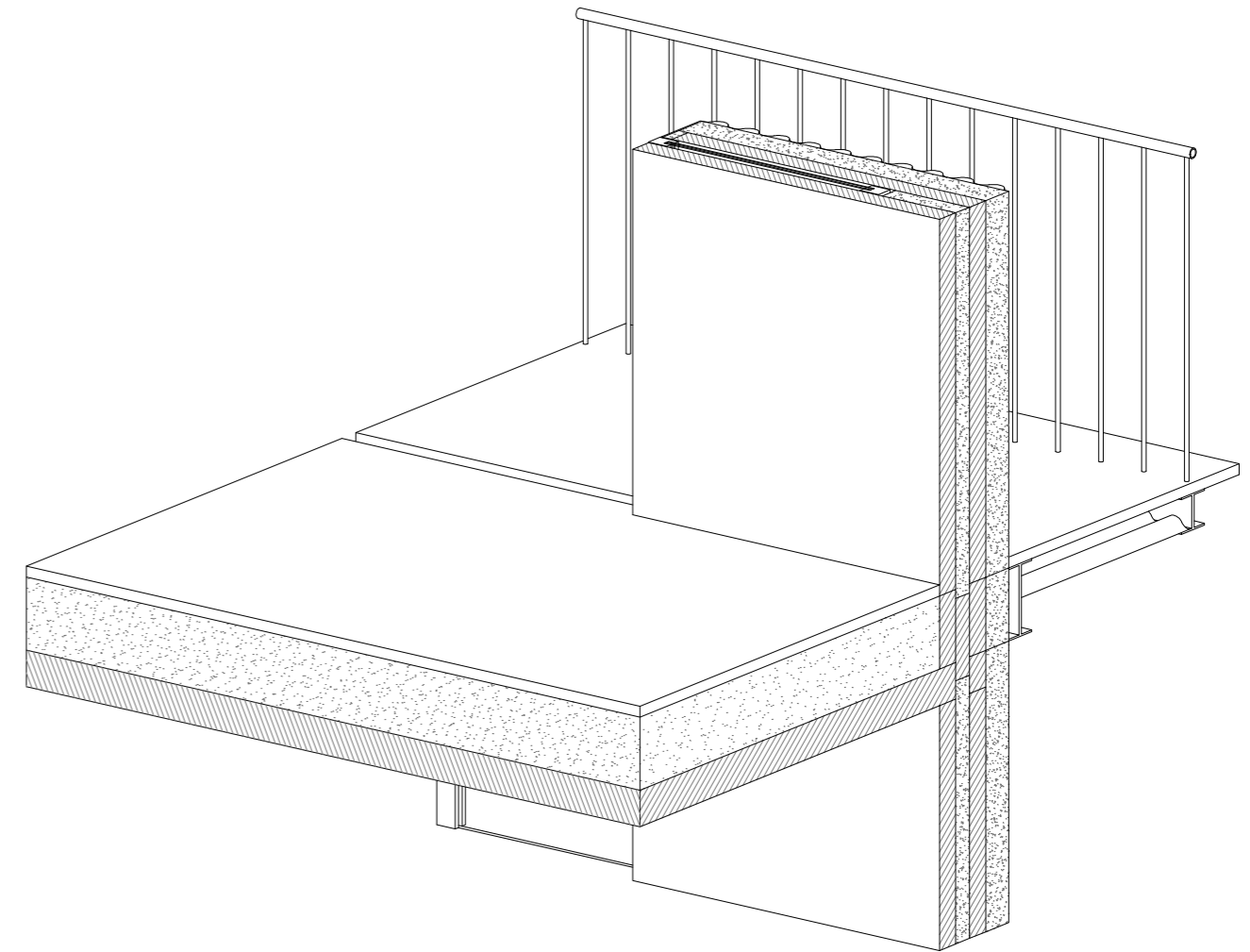




an axonometrical detail of a sliding window with an "invisible frame" technology

(corrugated iron facade, fireproof outer ceiling)





an axonometrical detail of the cross-laminated timber structure with a
suspended steel terrace

(recycled cashed bricks backfill, hemp insulation)







CHALMERS