

VISUAL BOOKLET

visual content of graduation project Symbiosis Unearthed



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Architectural Engineering studio 23/24

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Engbert van der Zaag

Delegate: Susanne Pietsch

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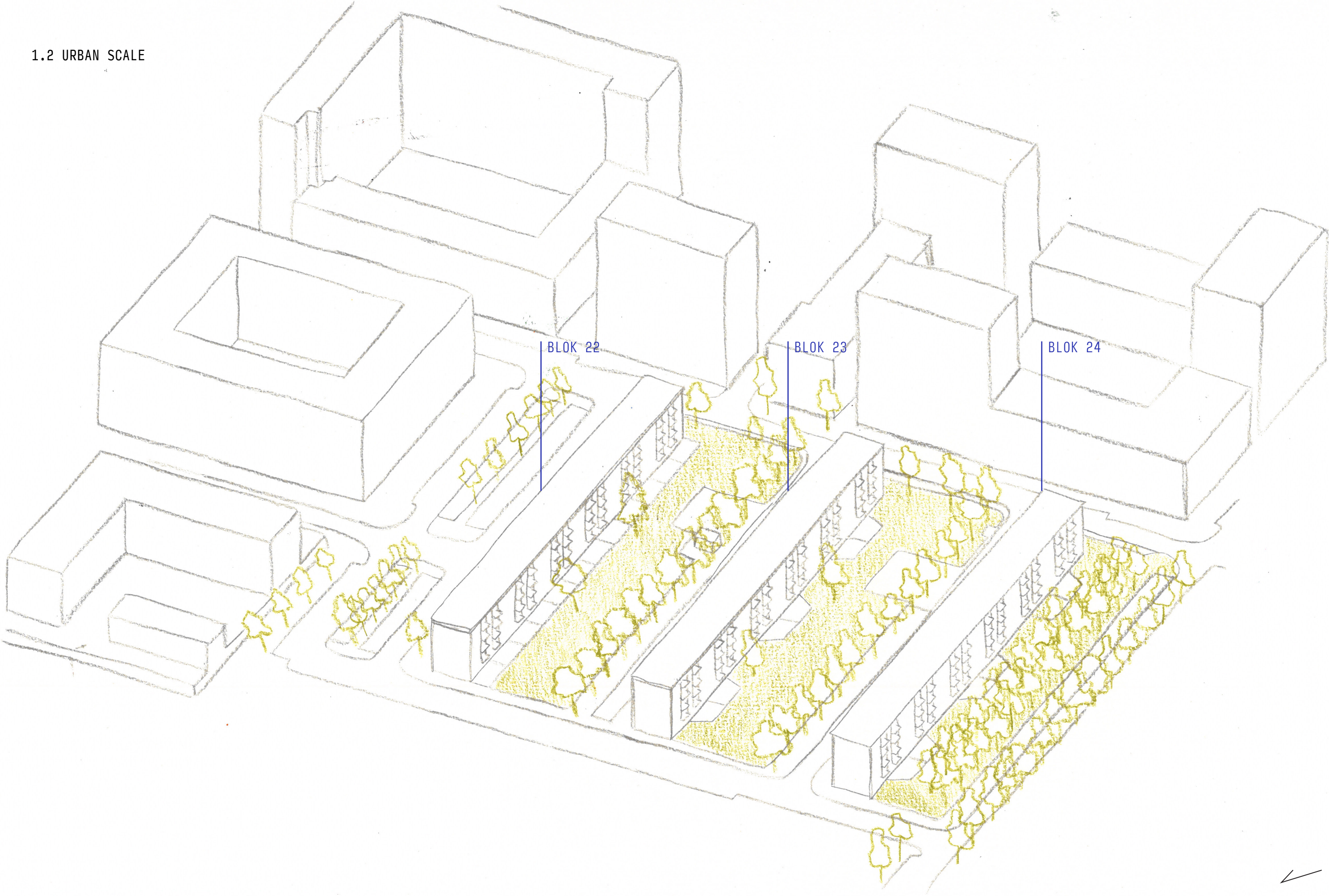
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1.1 PHOTOS



1.2 URBAN SCALE

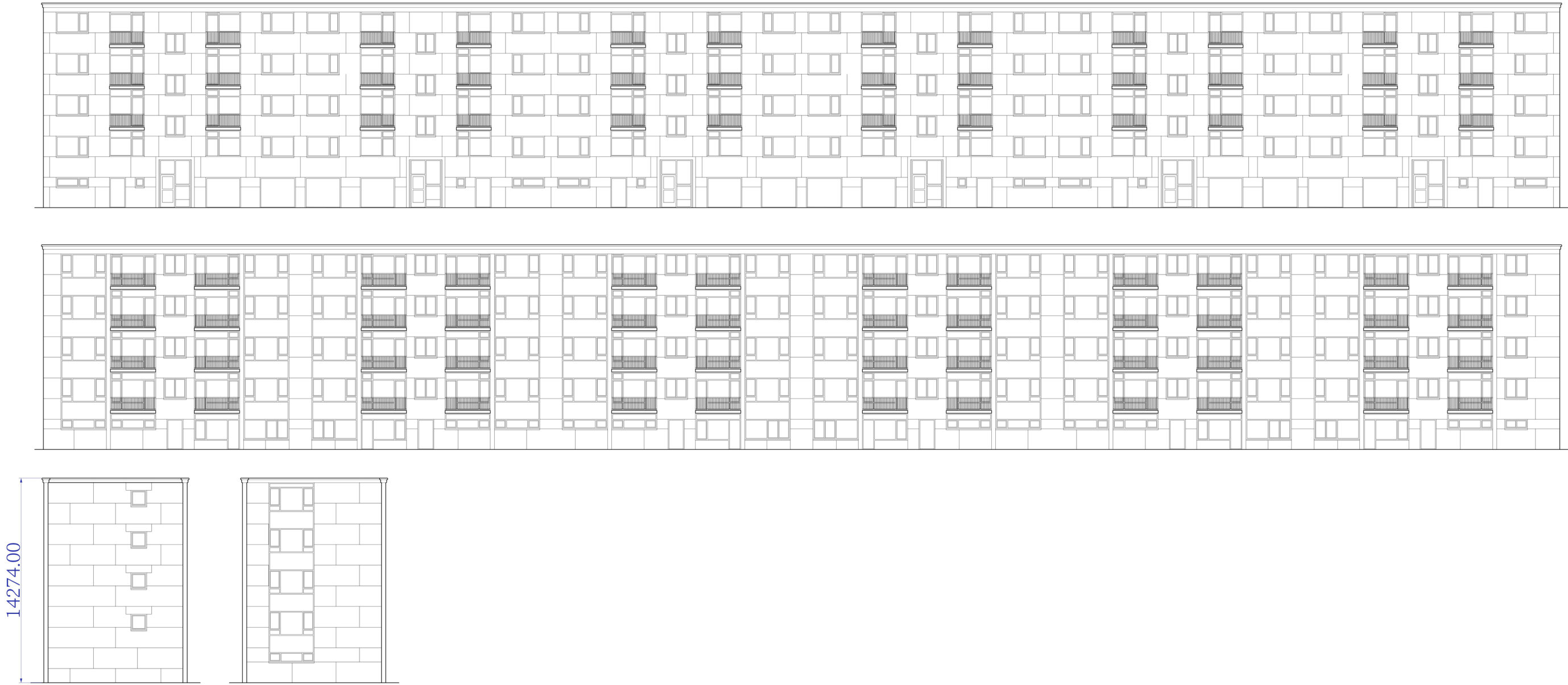


1.2 URBAN SCALE

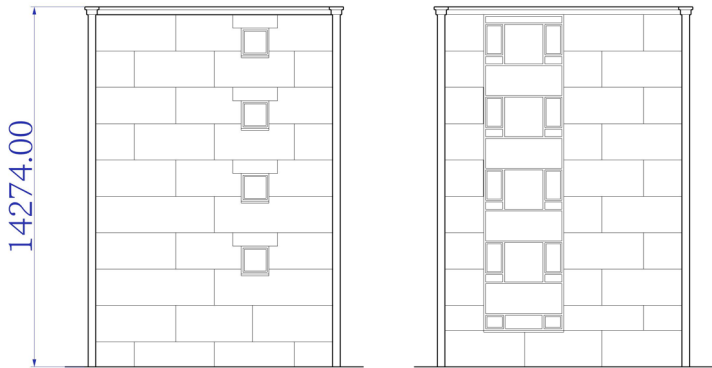
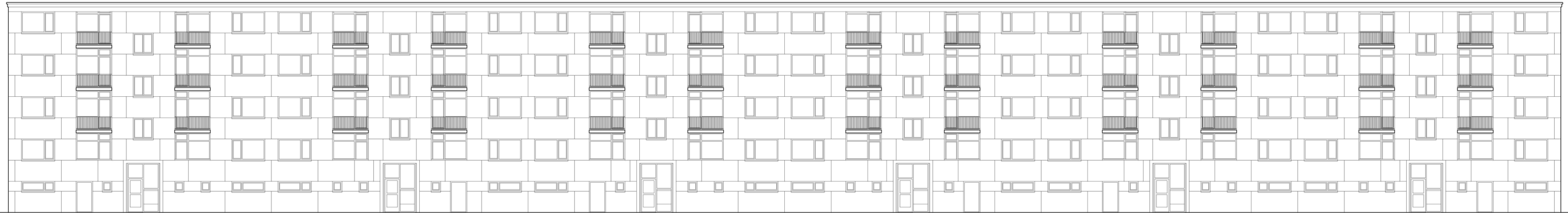


1 existing buildings

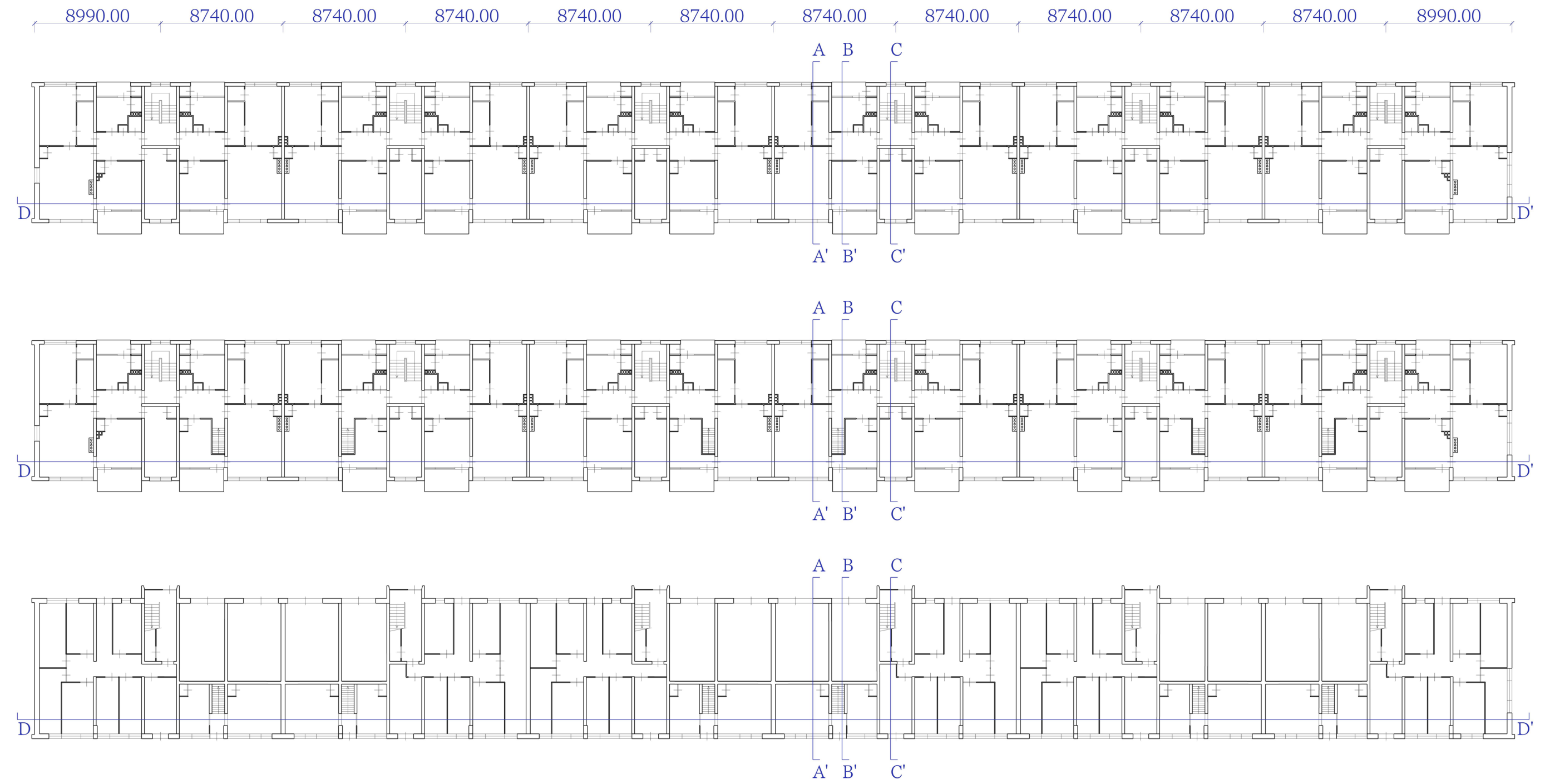
1.3 ELEVATIONS



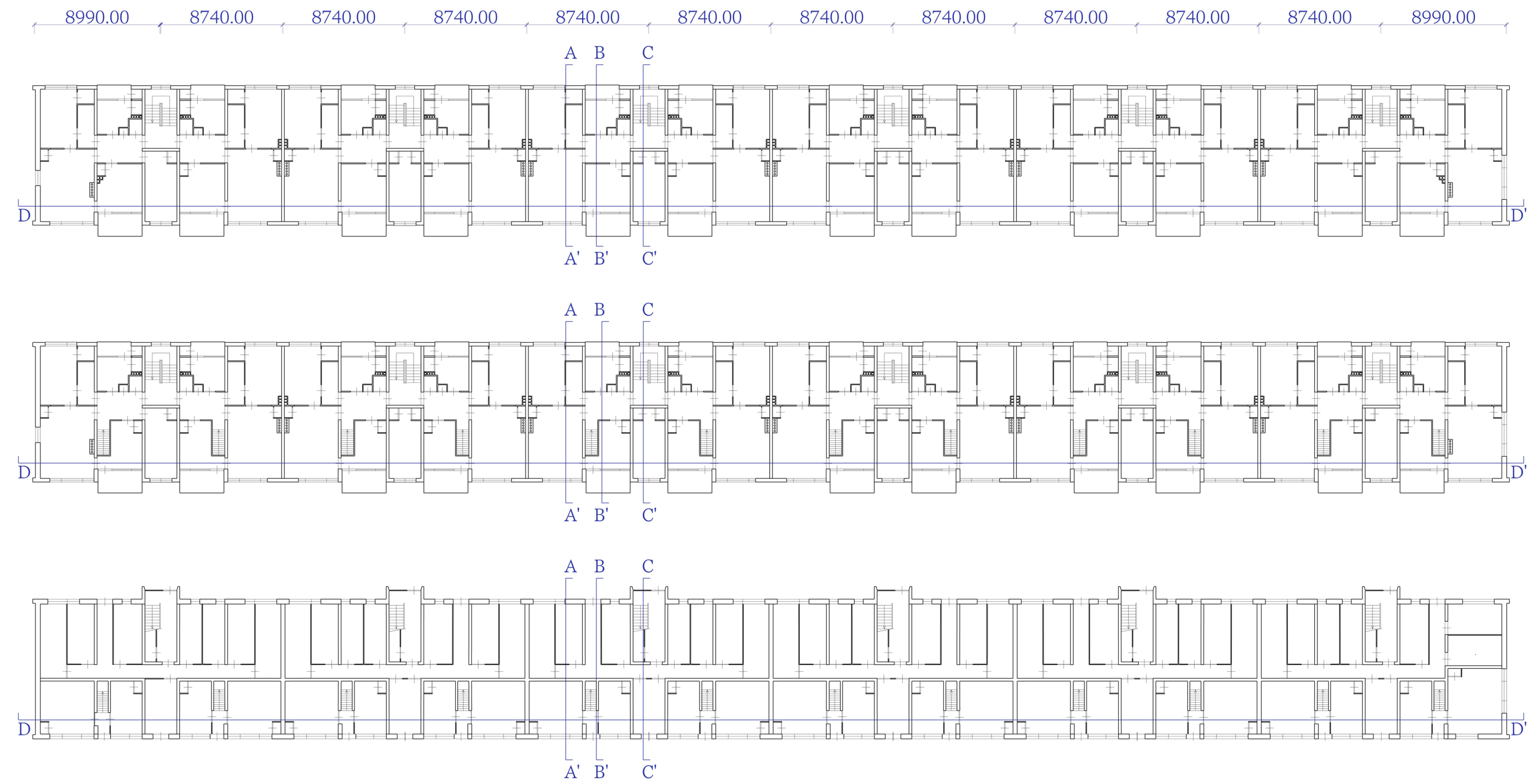
1.3 ELEVATIONS



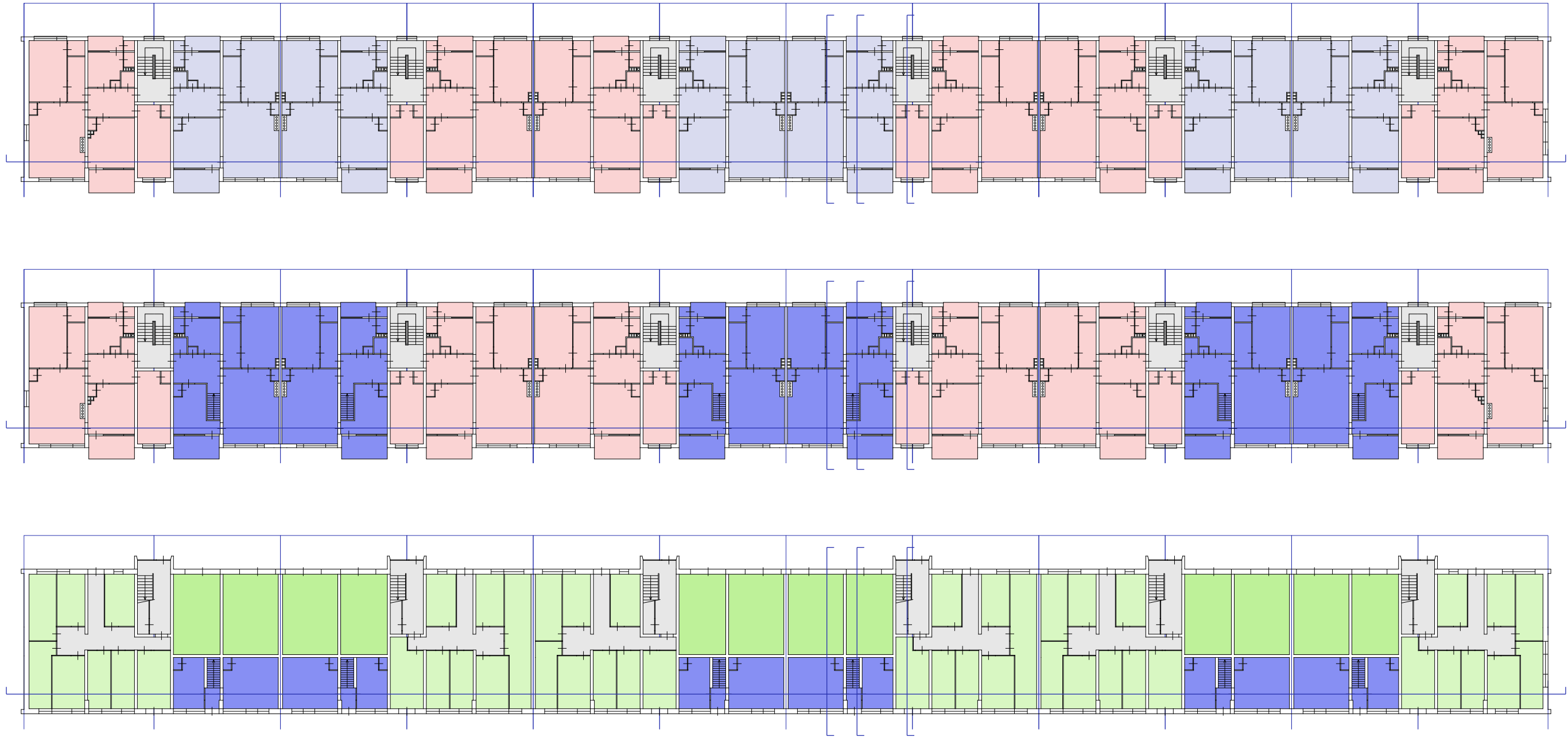
1.4 FLOOR PLANS



1.4 FLOOR PLANS



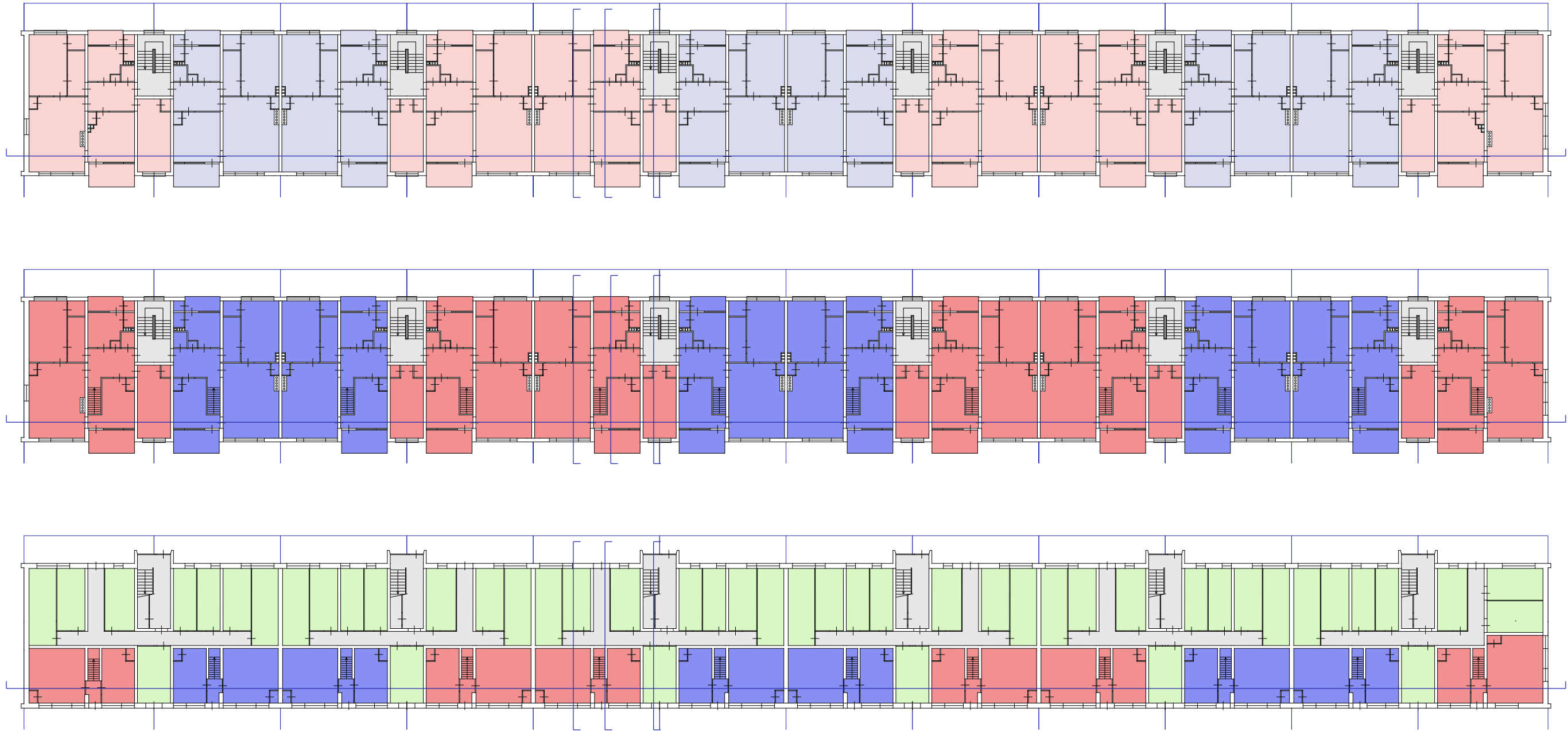
1.5 FLOOR PLANS WITH FUNCTIONS



Legend

- 3-room apartment
- 4-room apartment
- 5-room apartment
- garage
- storage
- circulation space

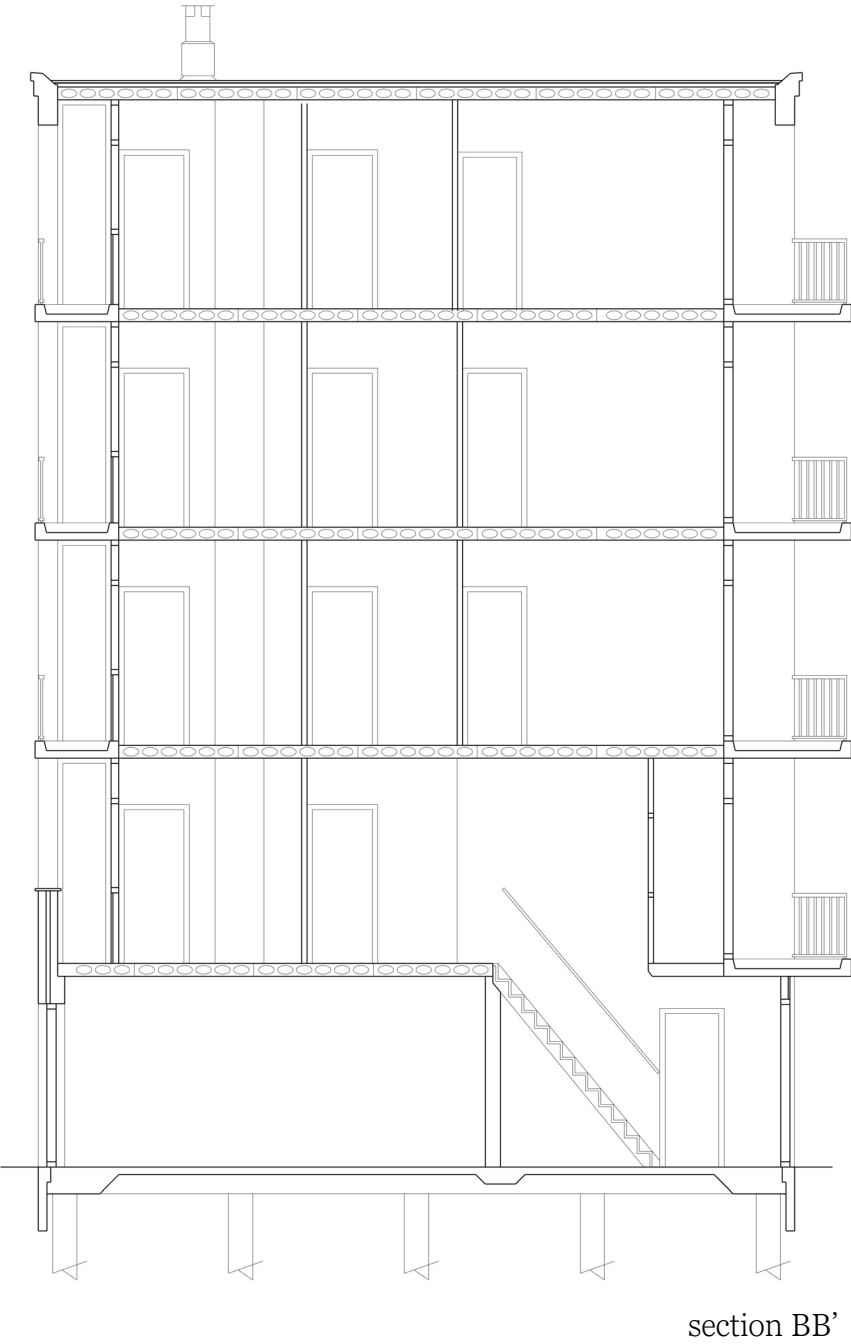
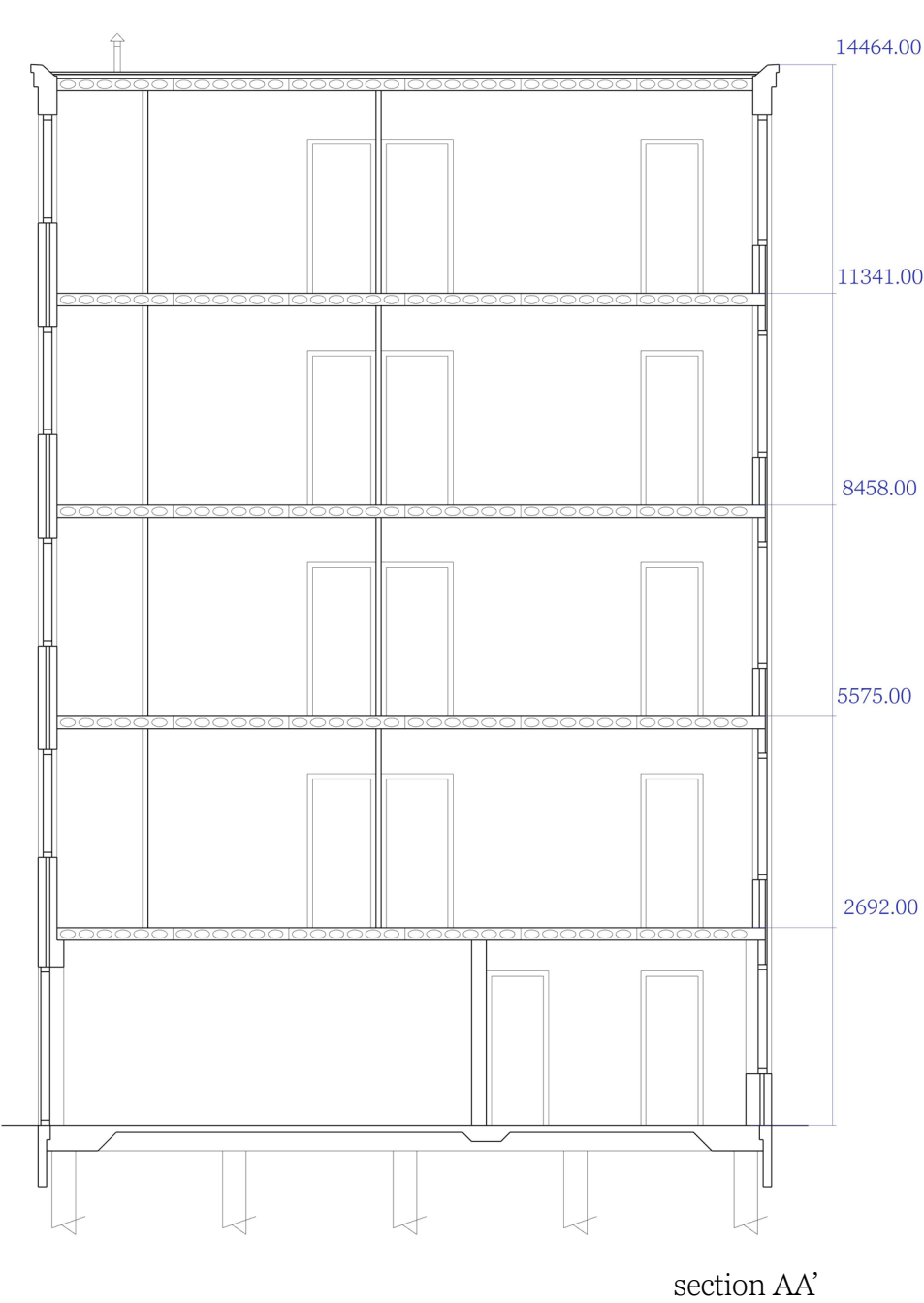
1.5 FLOOR PLANS WITH FUNCTIONS



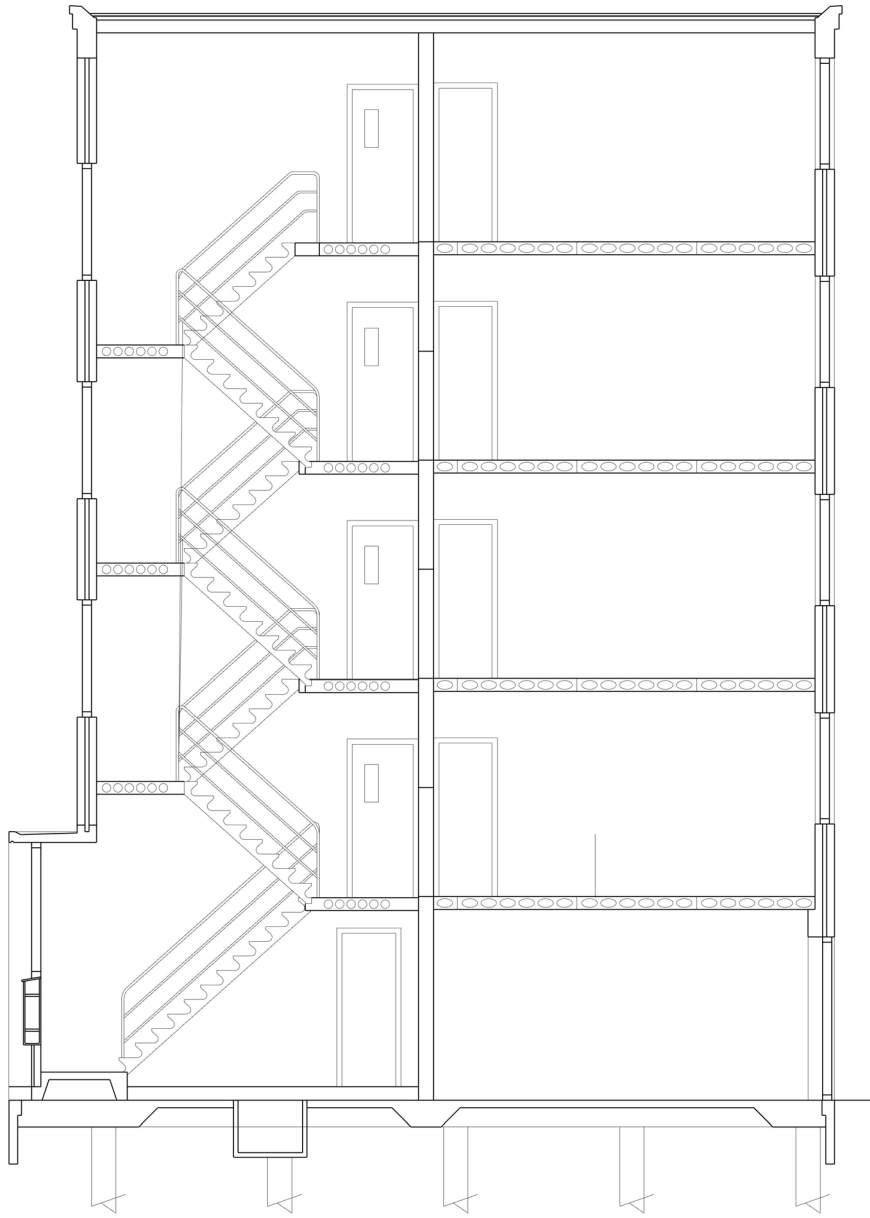
Legend

- 3-room apartment
- 4-room apartment
- 5-room apartment
- 6-room apartment
- storage
- circulation space

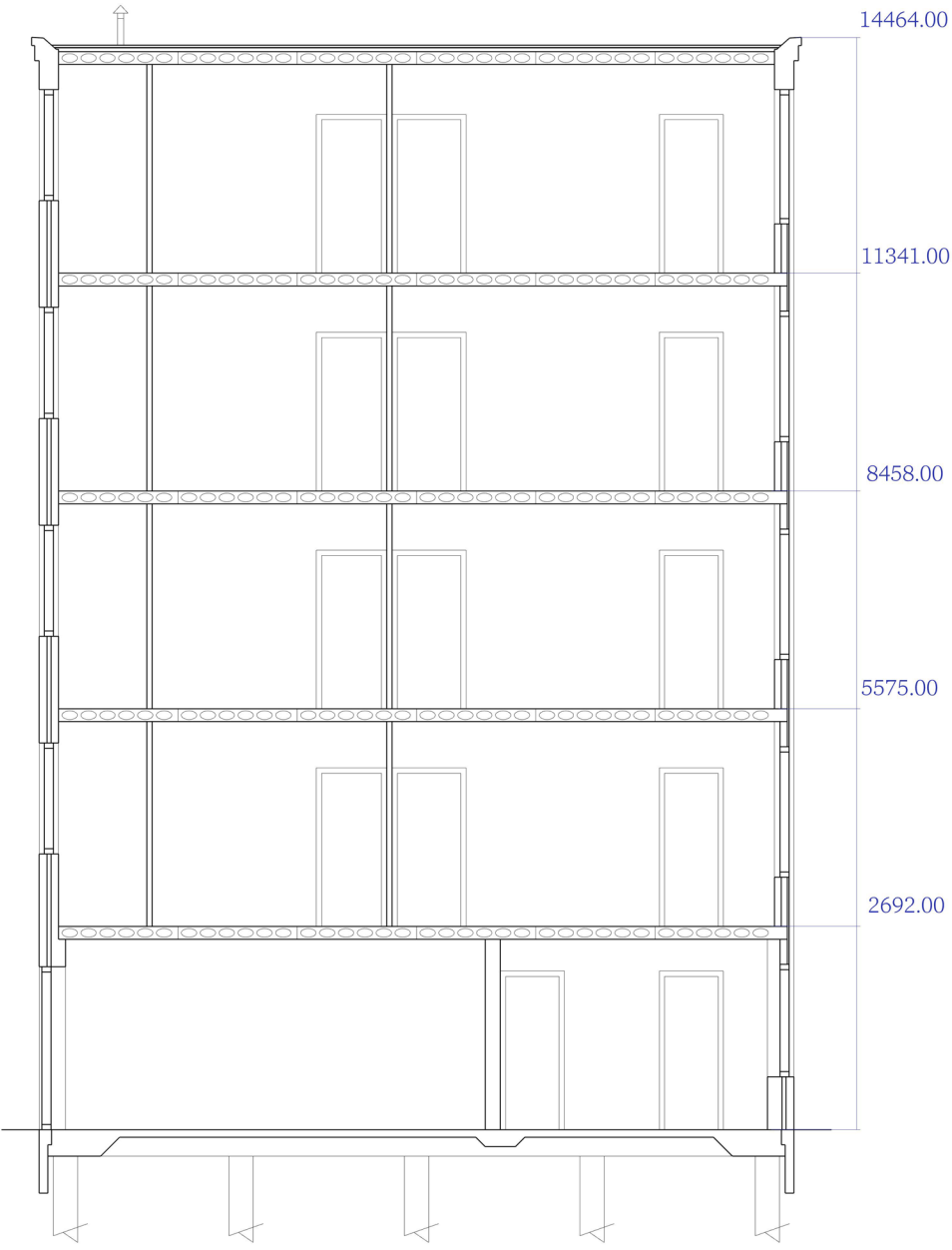
1.6 SECTIONS



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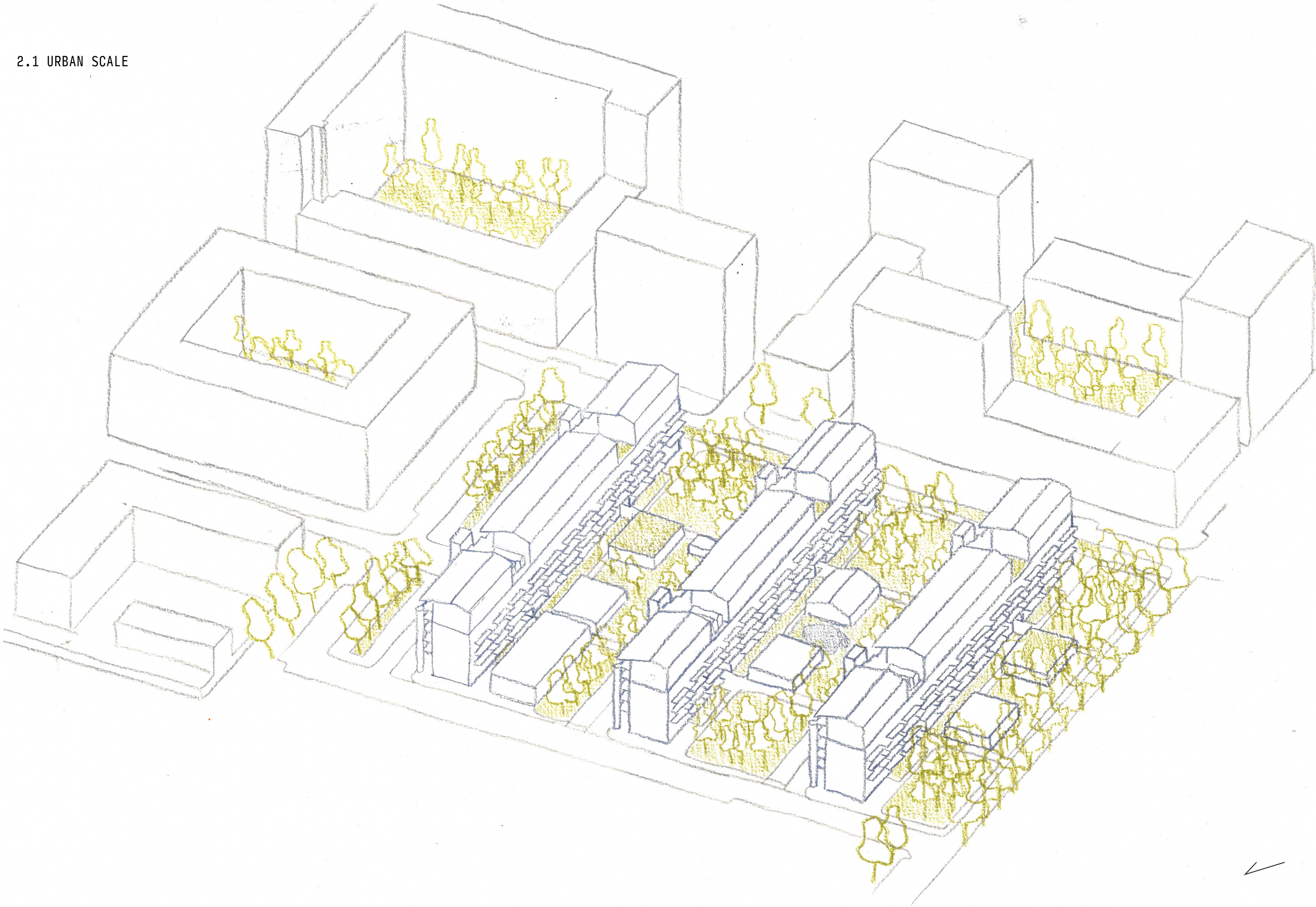


section CC'



section DD'

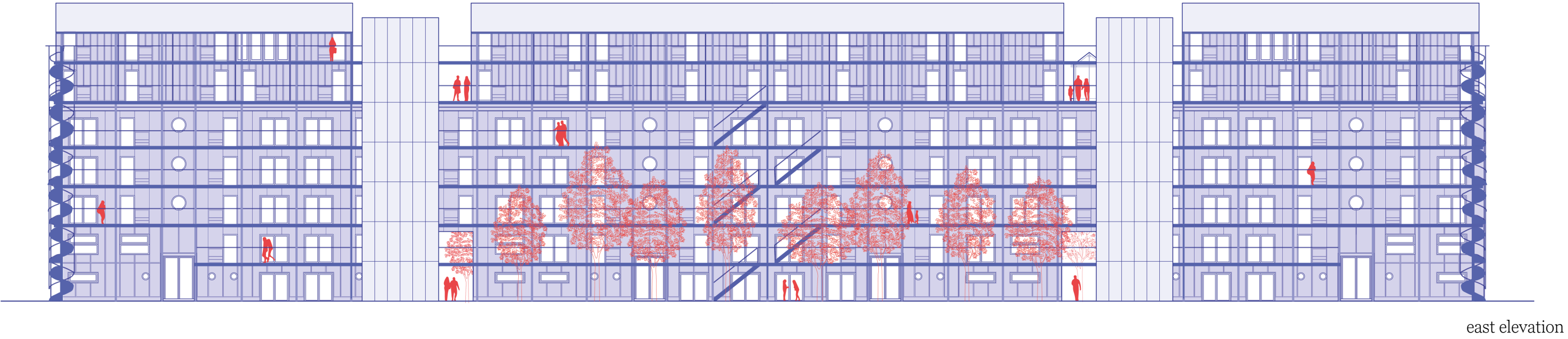
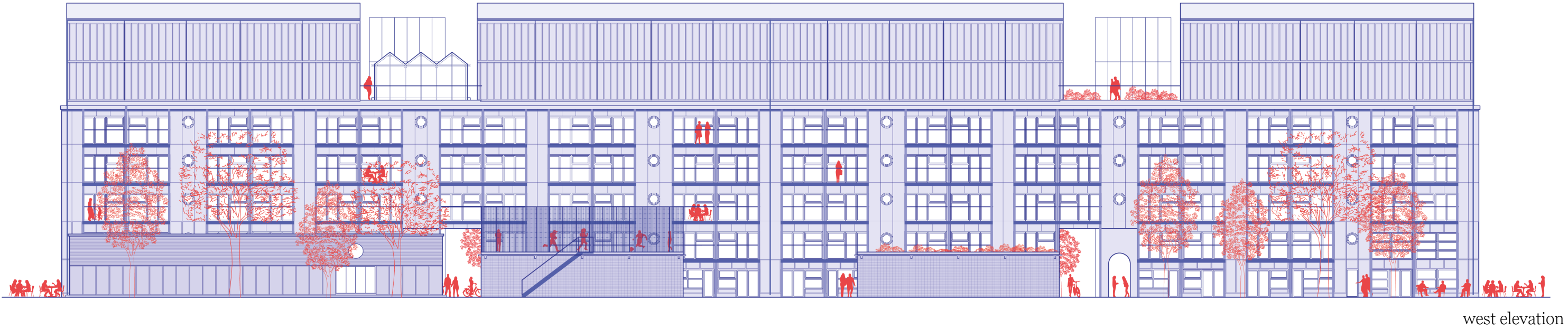
2.1 URBAN SCALE



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2.2 ELEVATIONS



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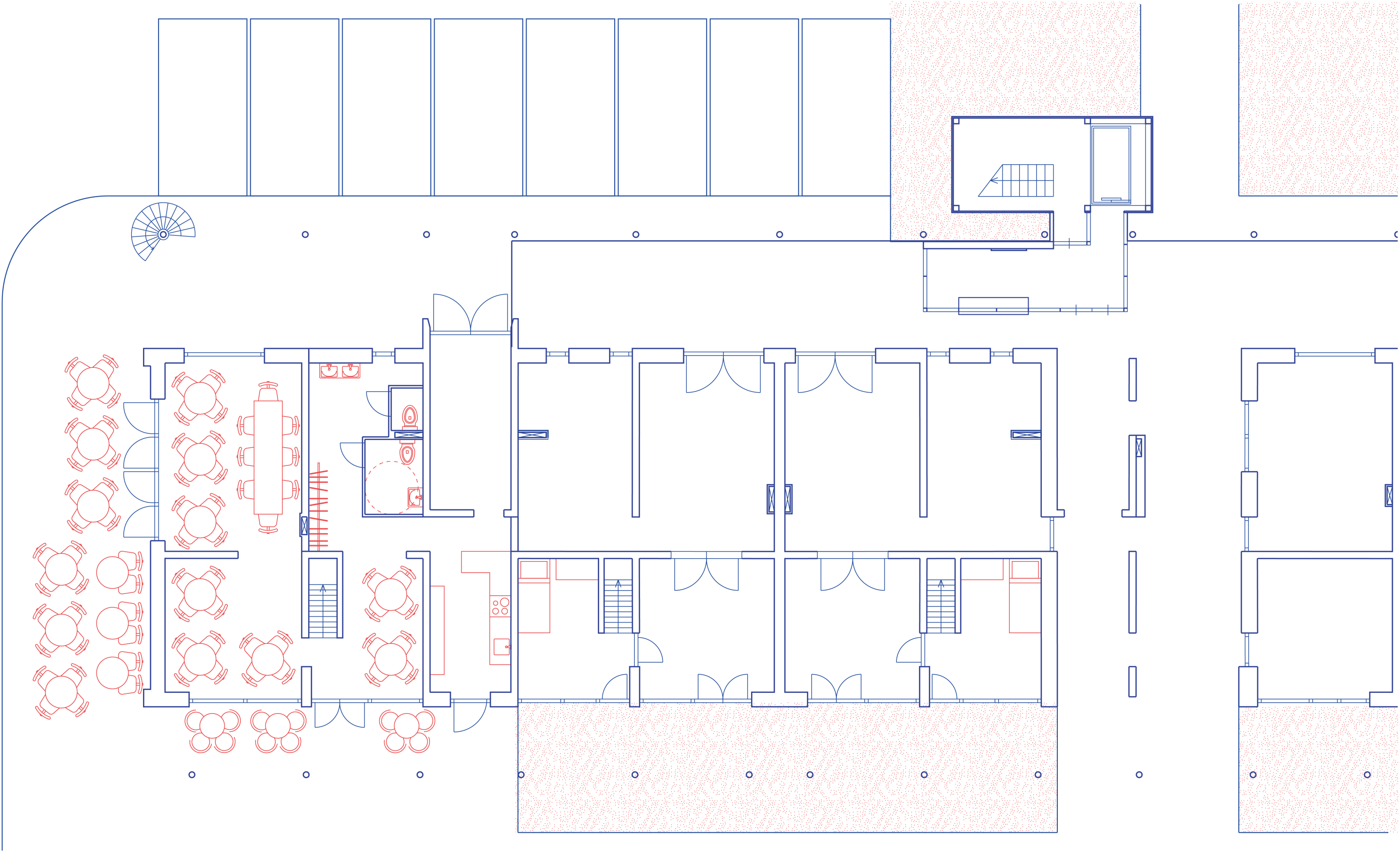


2.2 ELEVATIONS

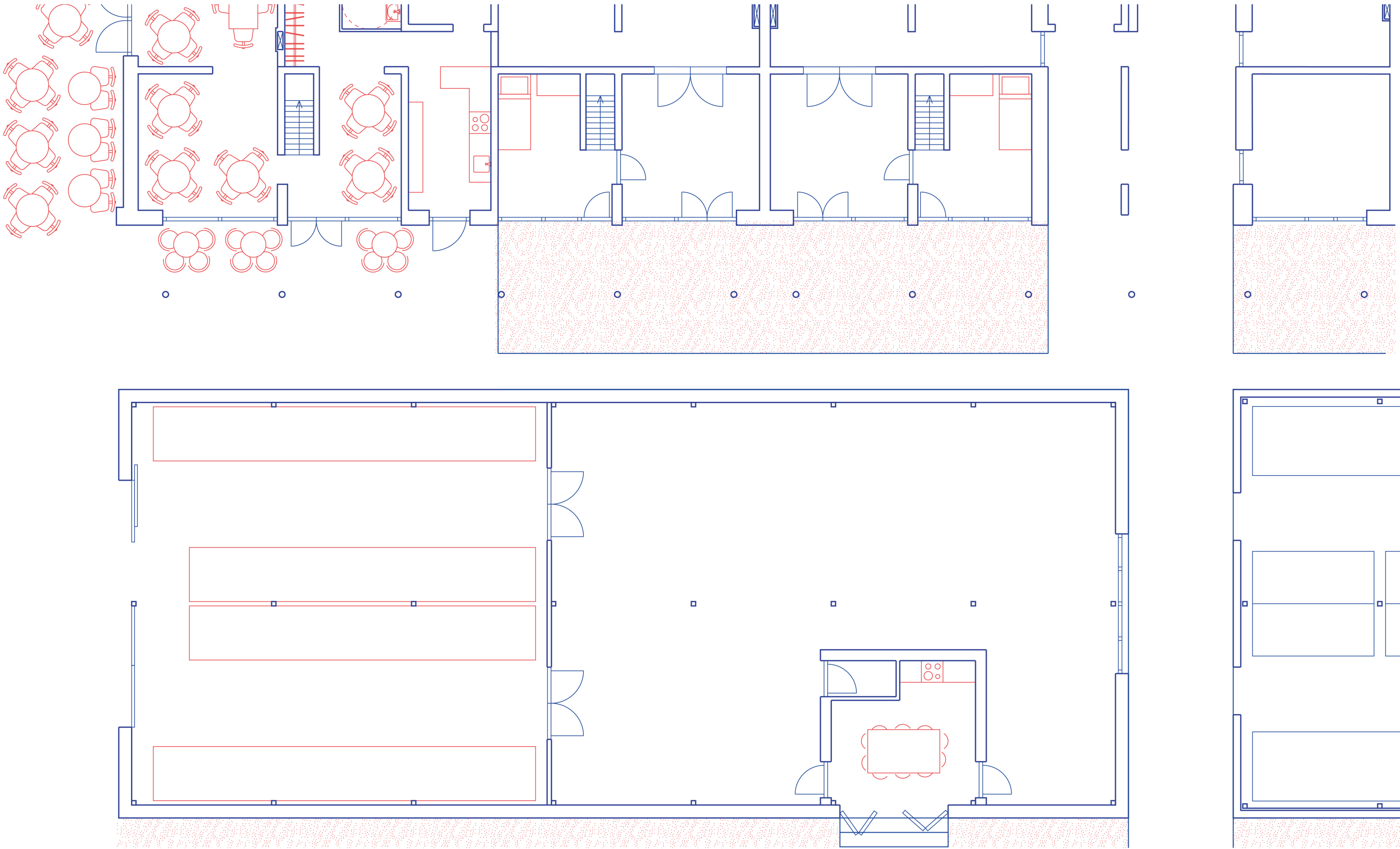


north elevation
1 : 100

2.3 FLOOR PLANS

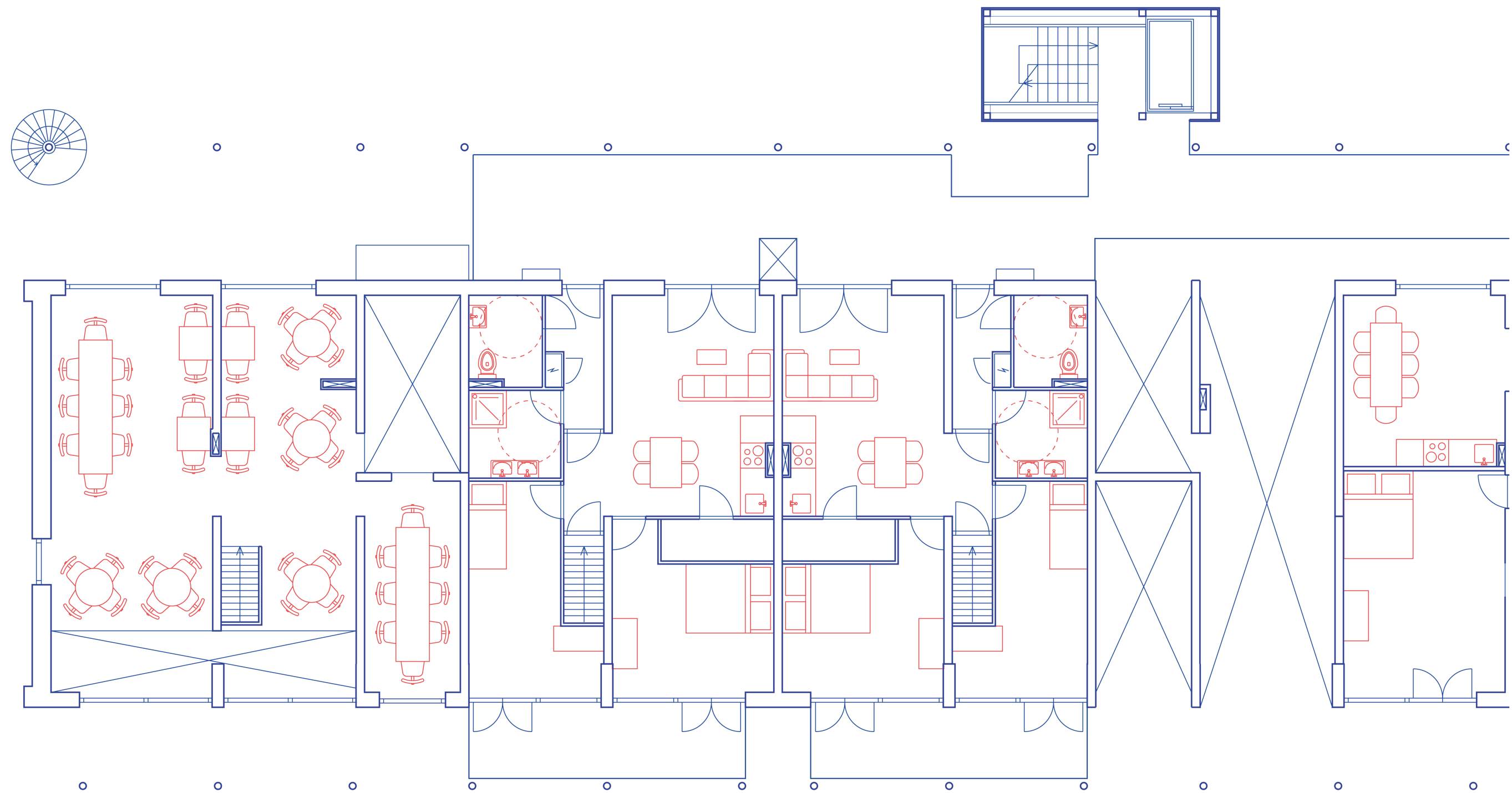


2.3 FLOOR PLANS

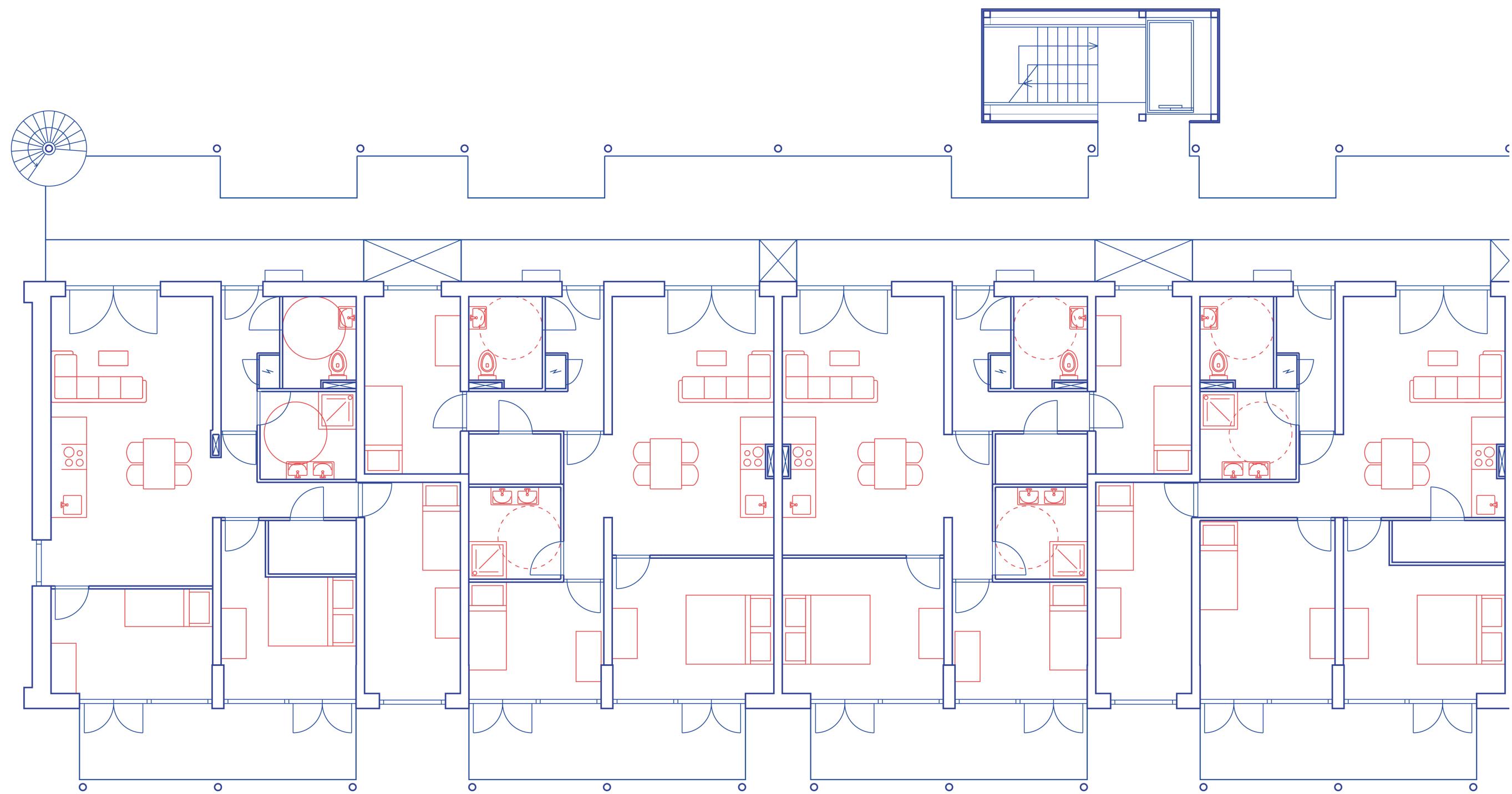


ground floor (wood workshop and bike storage)

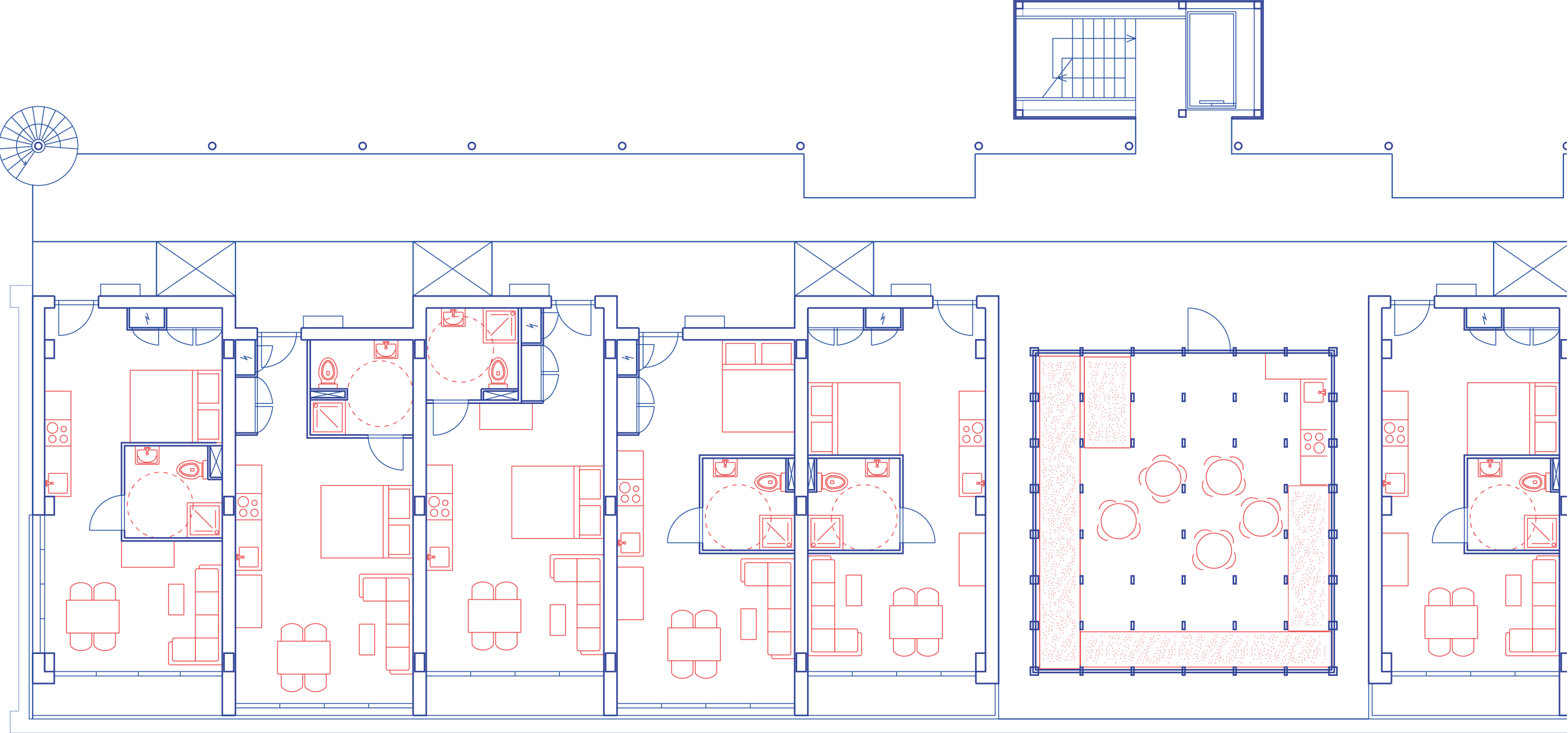
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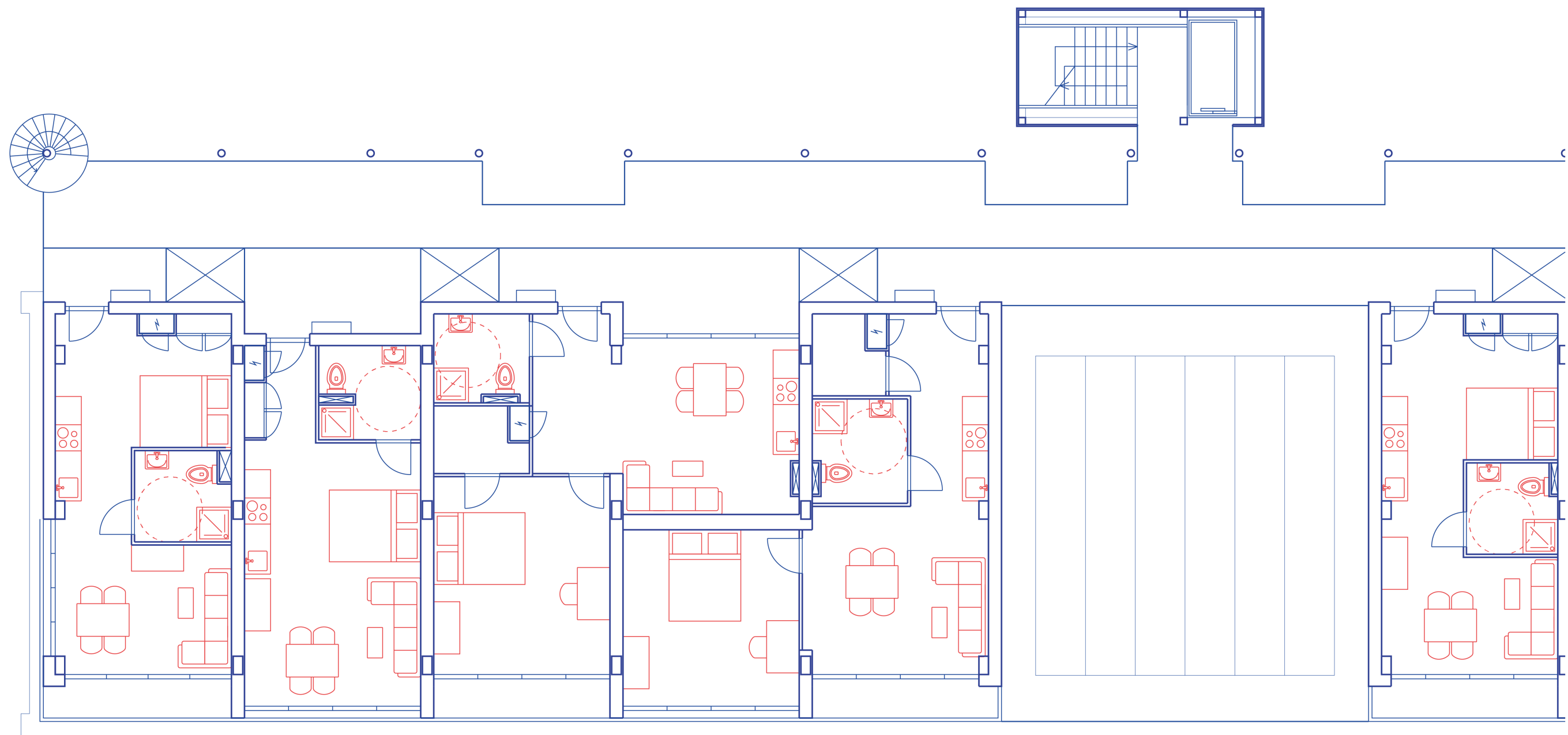
2.3 FLOOR PLANS



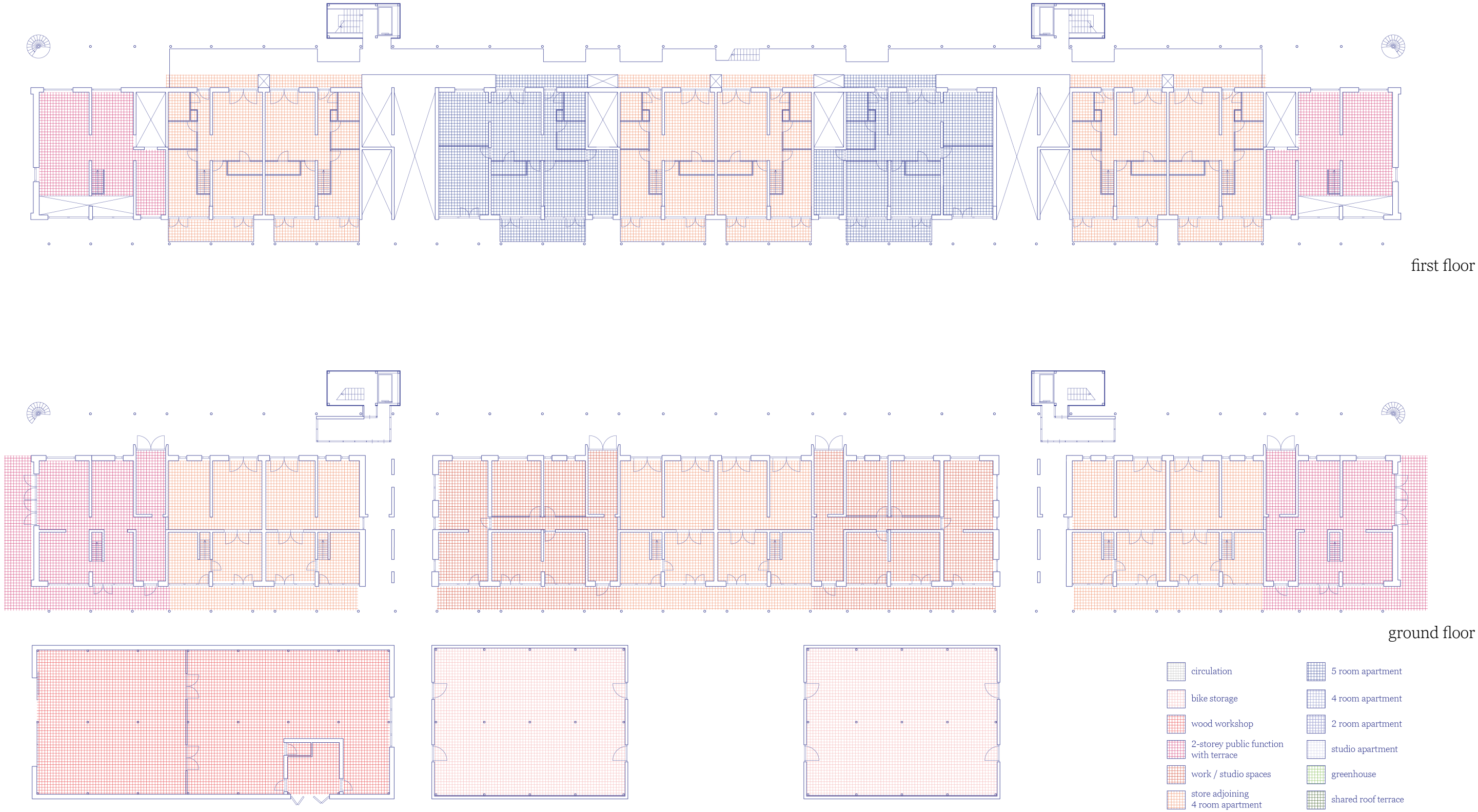
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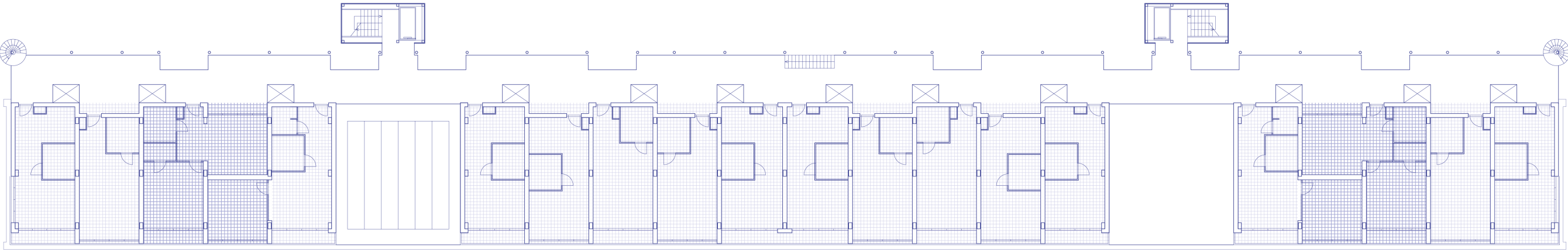
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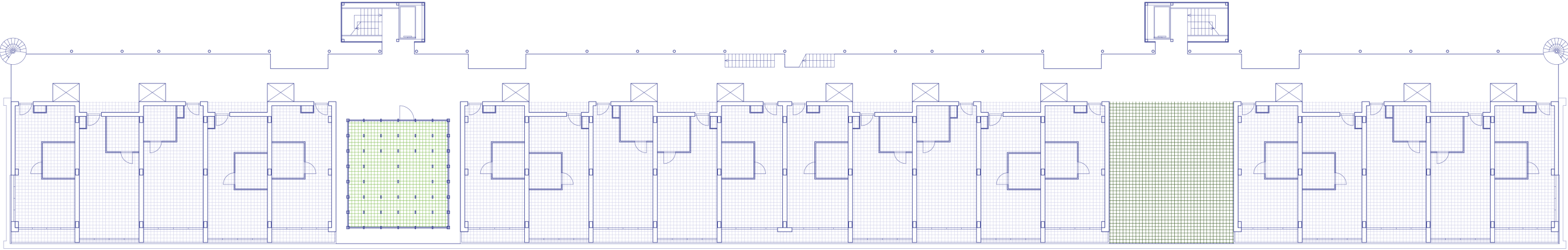
2.4 FLOOR PLANS WITH FUNCTIONS



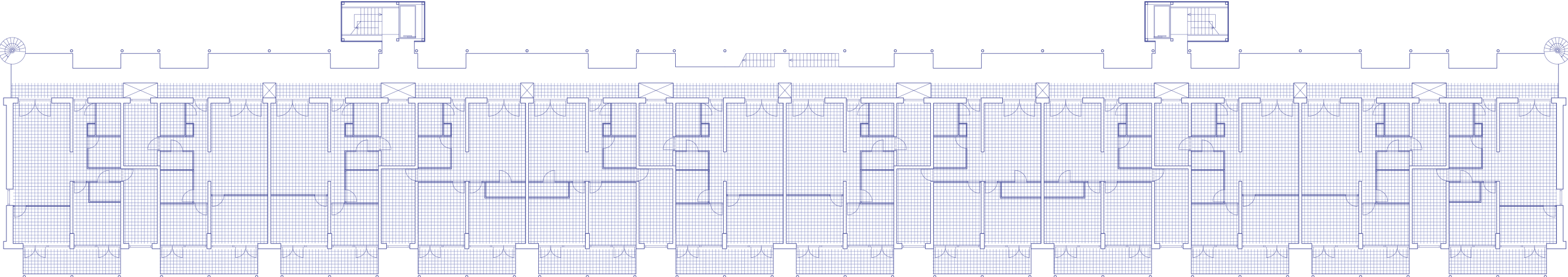
2.4 FLOOR PLANS WITH FUNCTIONS



sixth floor

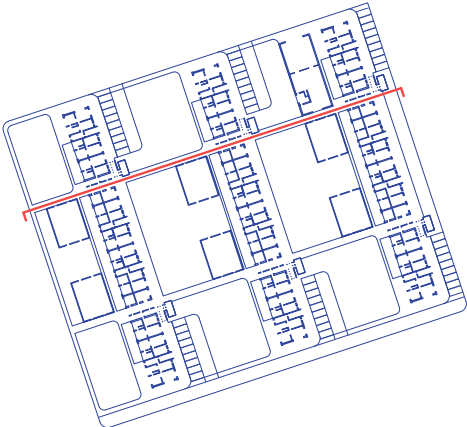
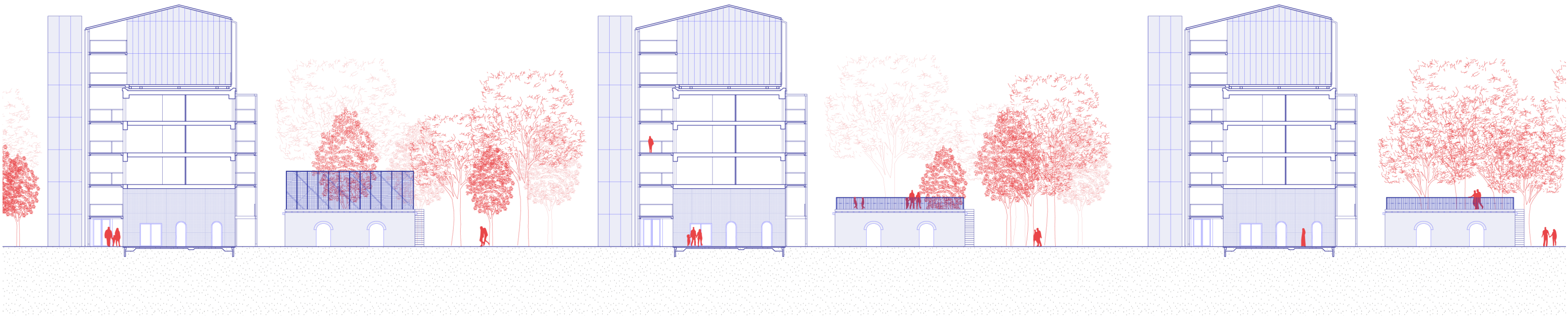


fifth floor

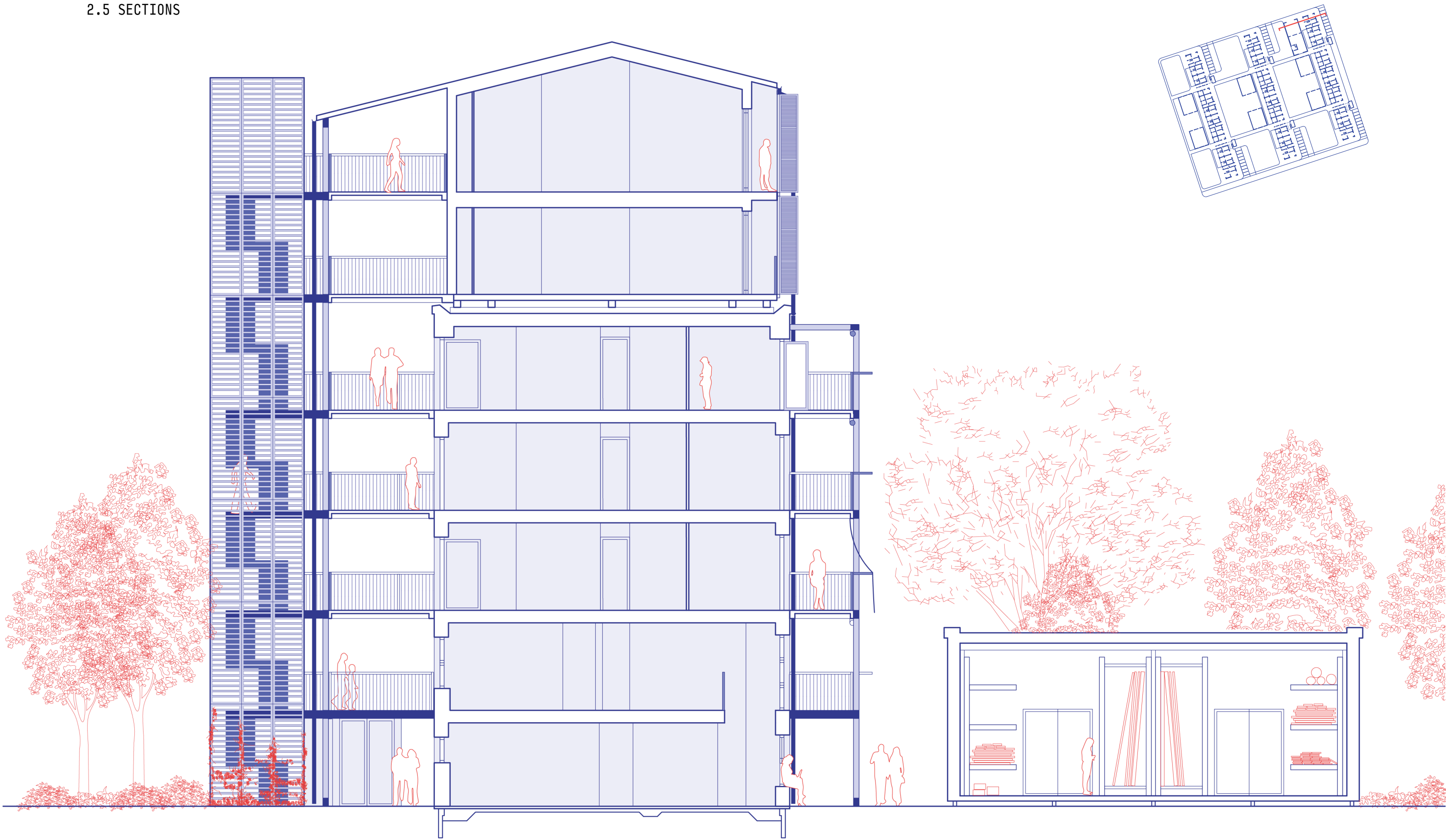


second-fourth floor

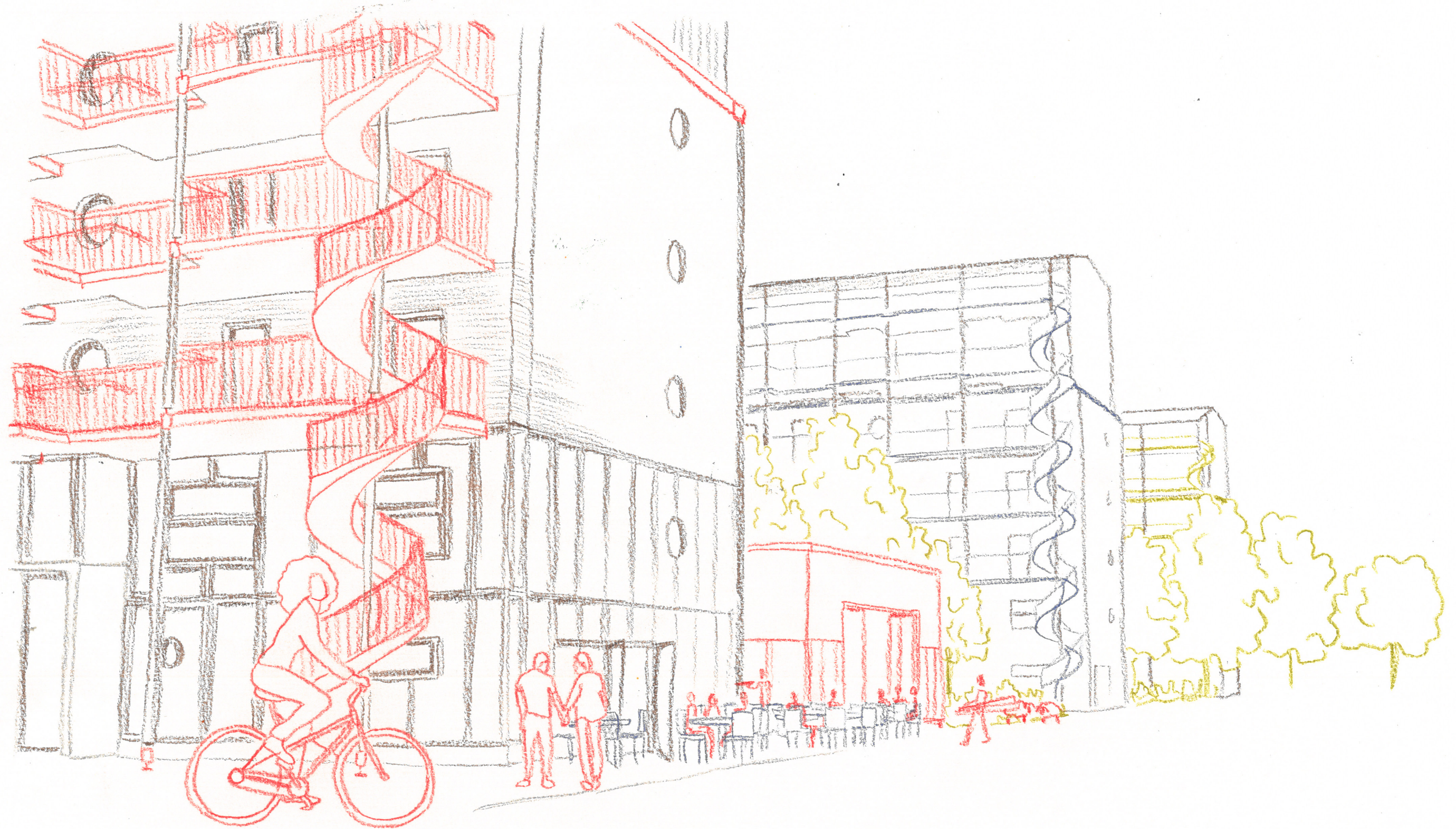
2.5 SECTIONS

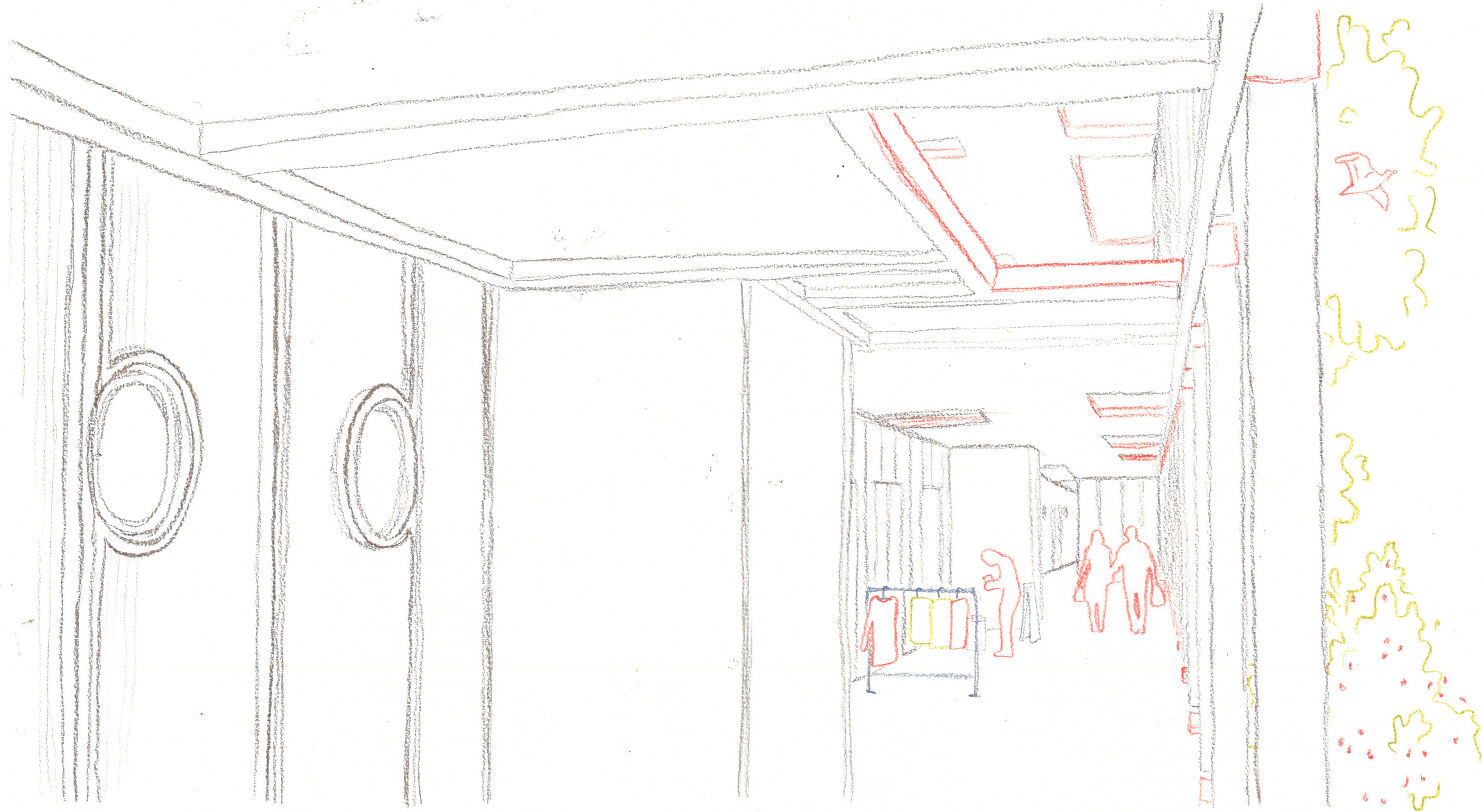


2.5 SECTIONS

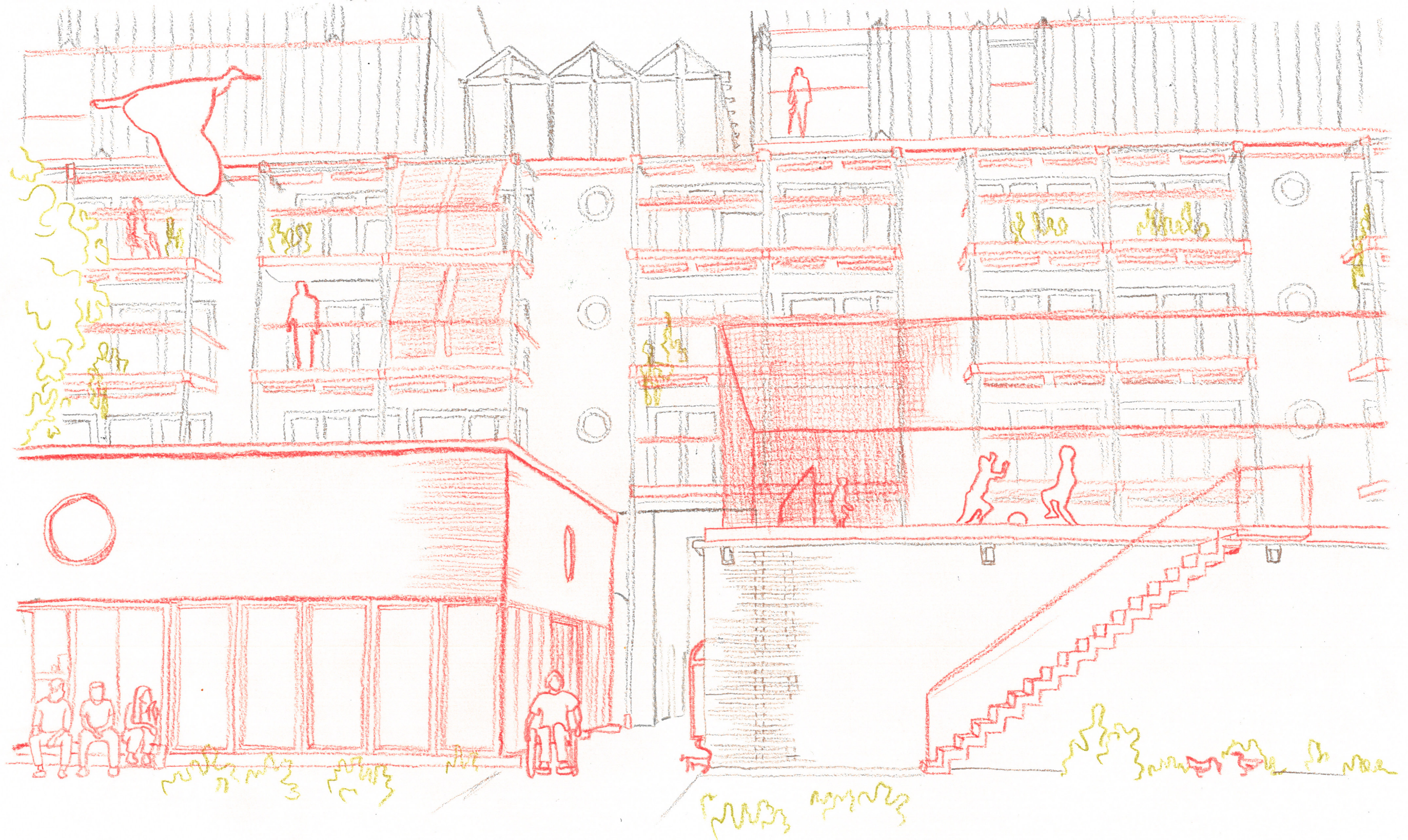


2.6 IMPRESSIONS

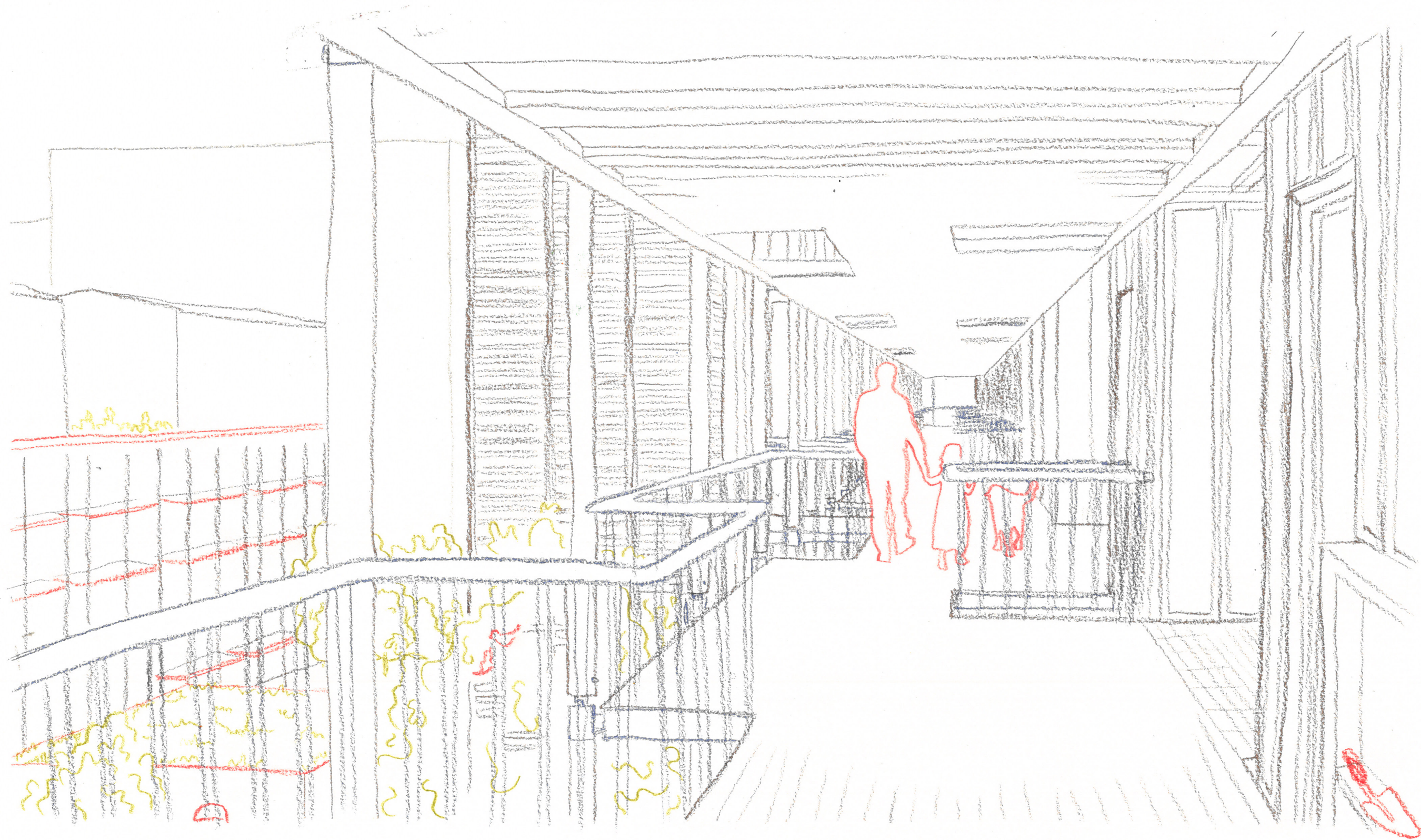




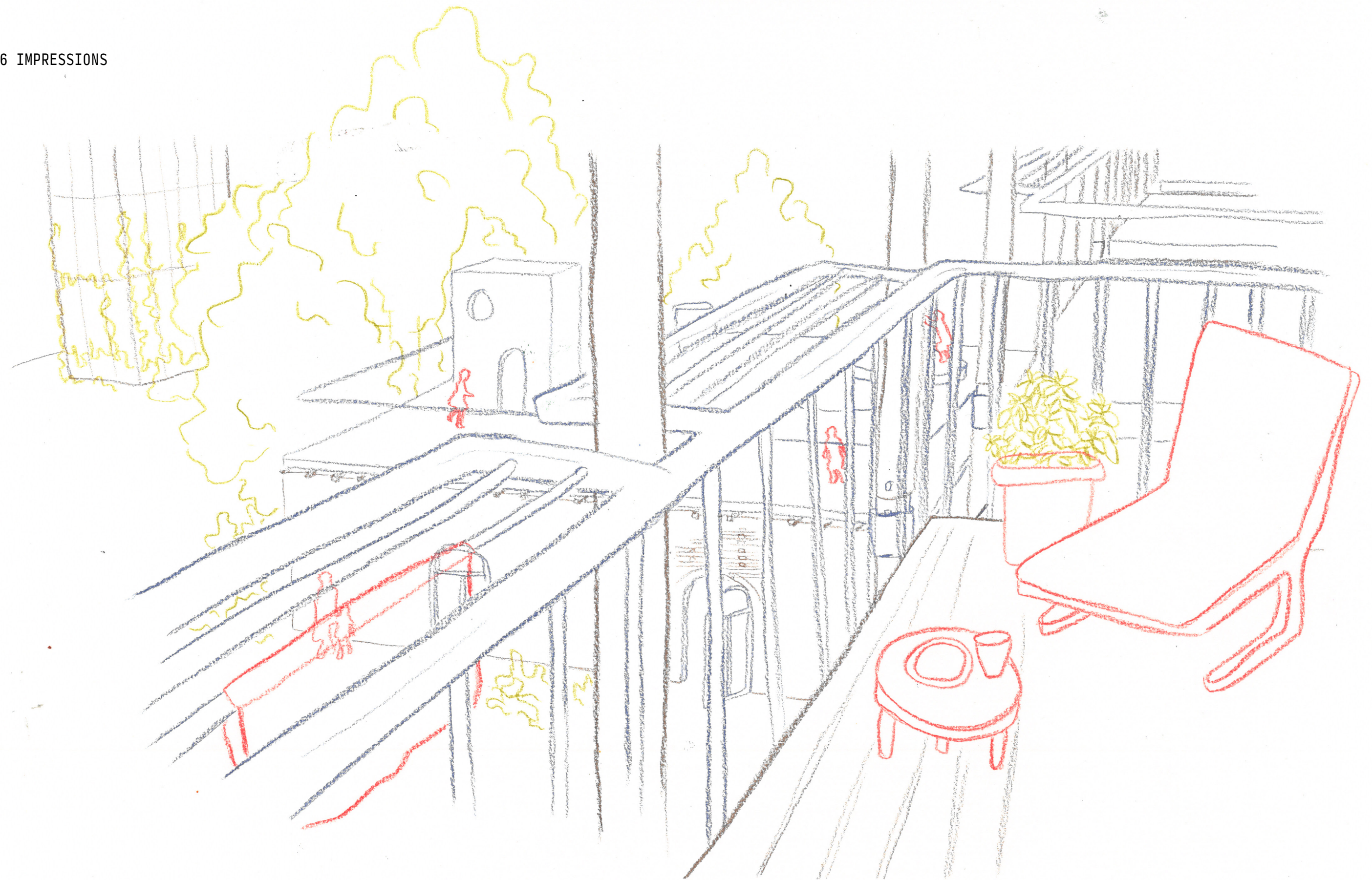
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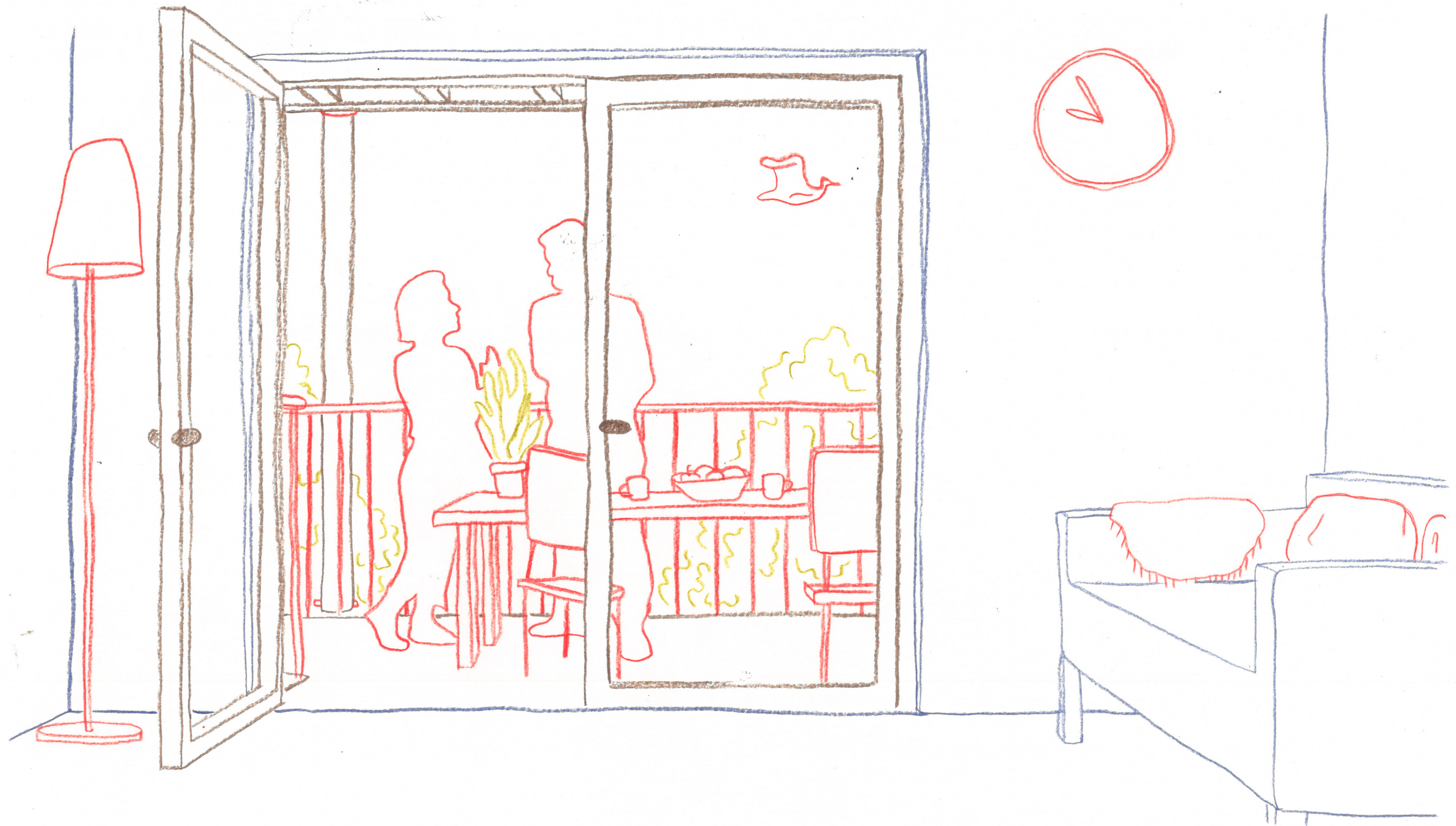
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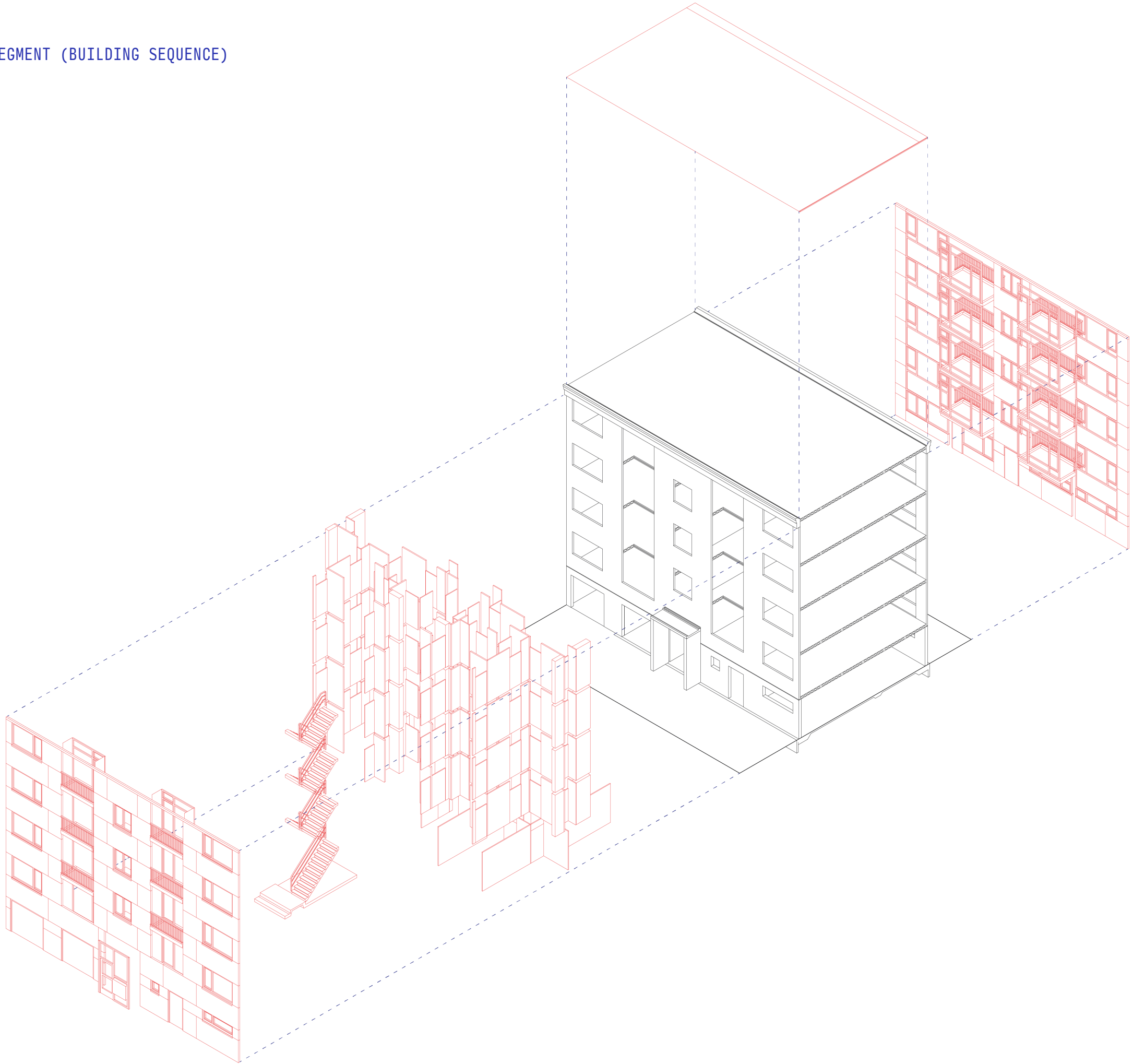
2.6 IMPRESSIONS



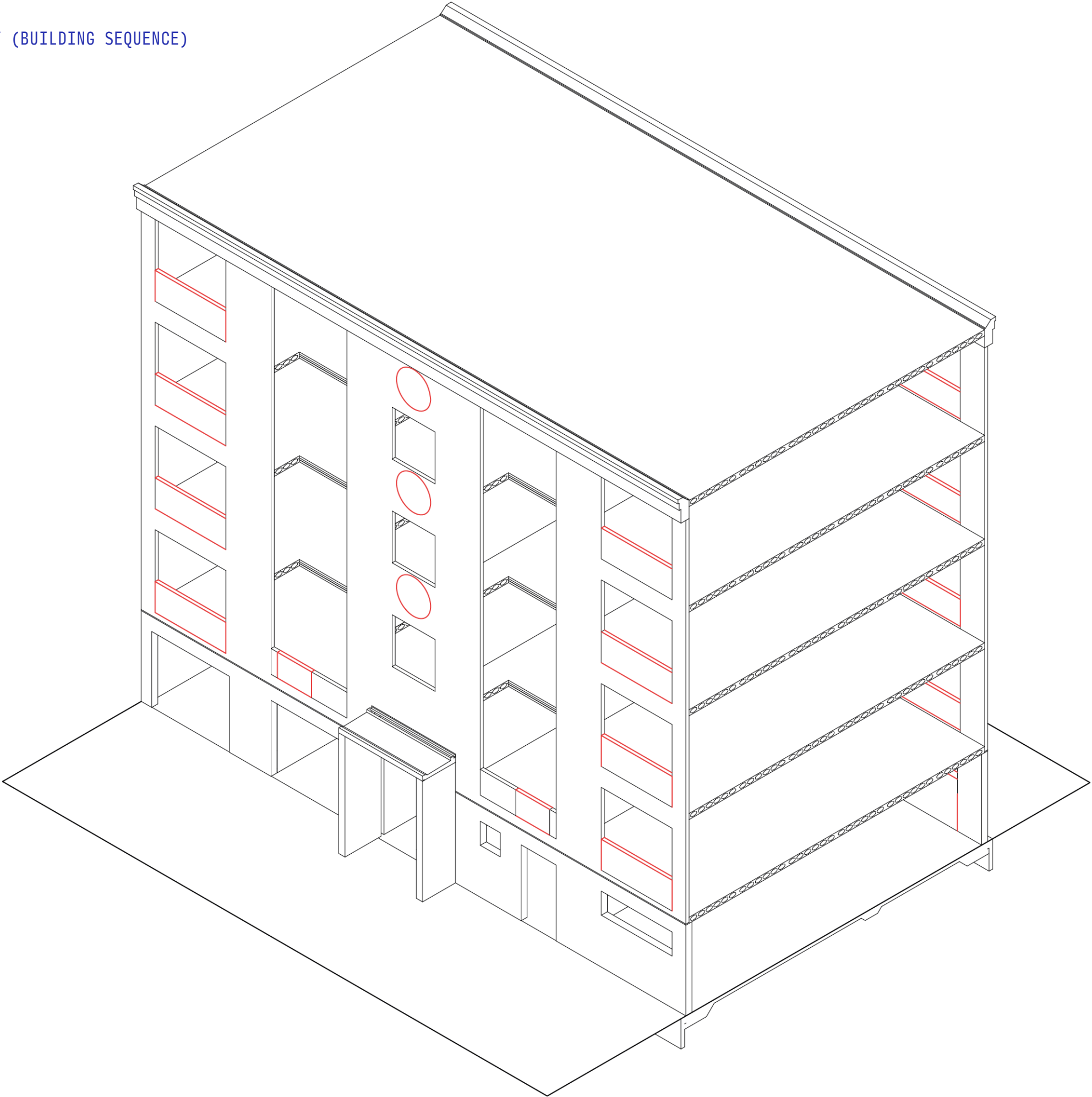
3.1 ISOMETRIC OF SEGMENT (BUILDING SEQUENCE)



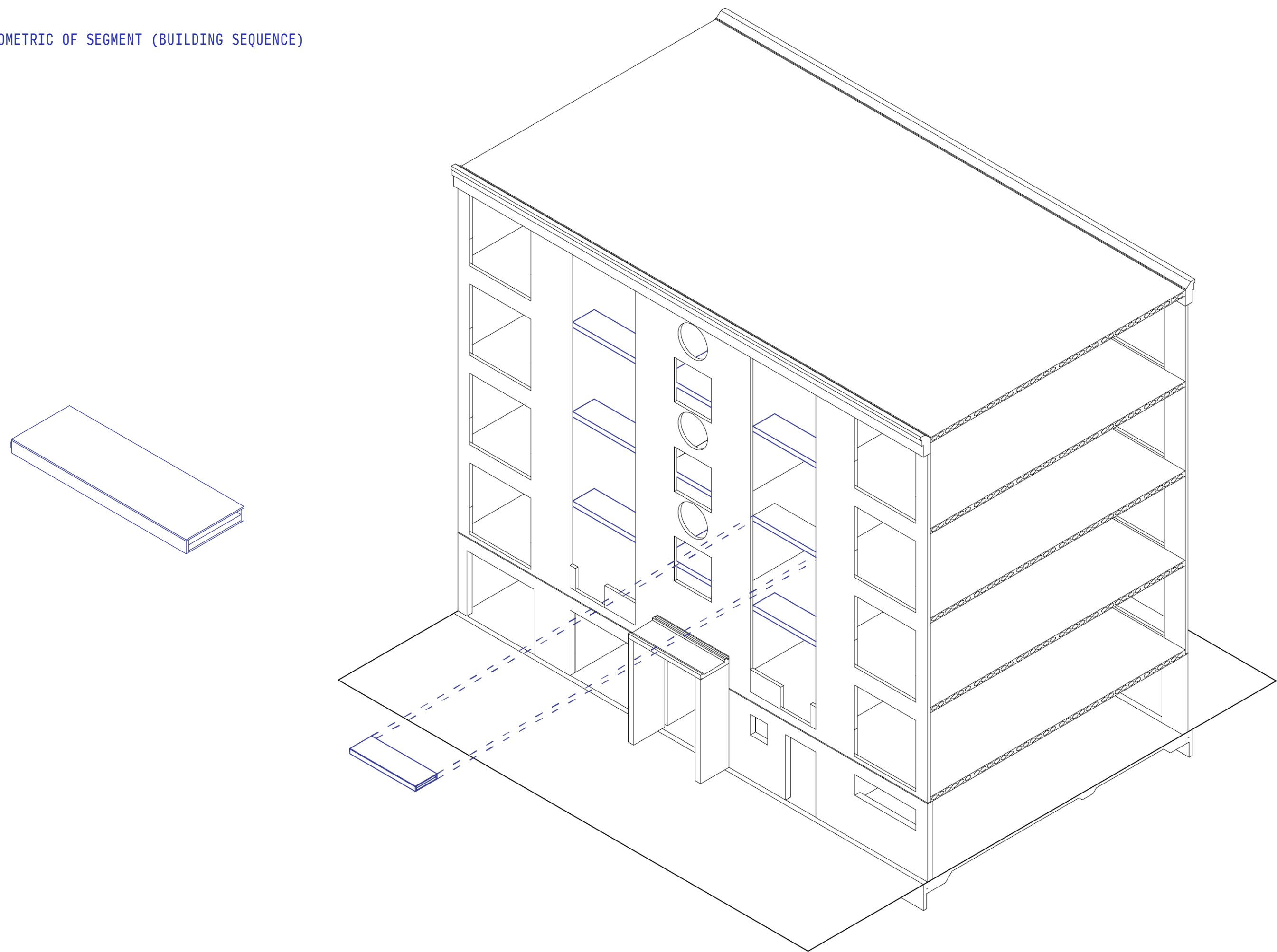
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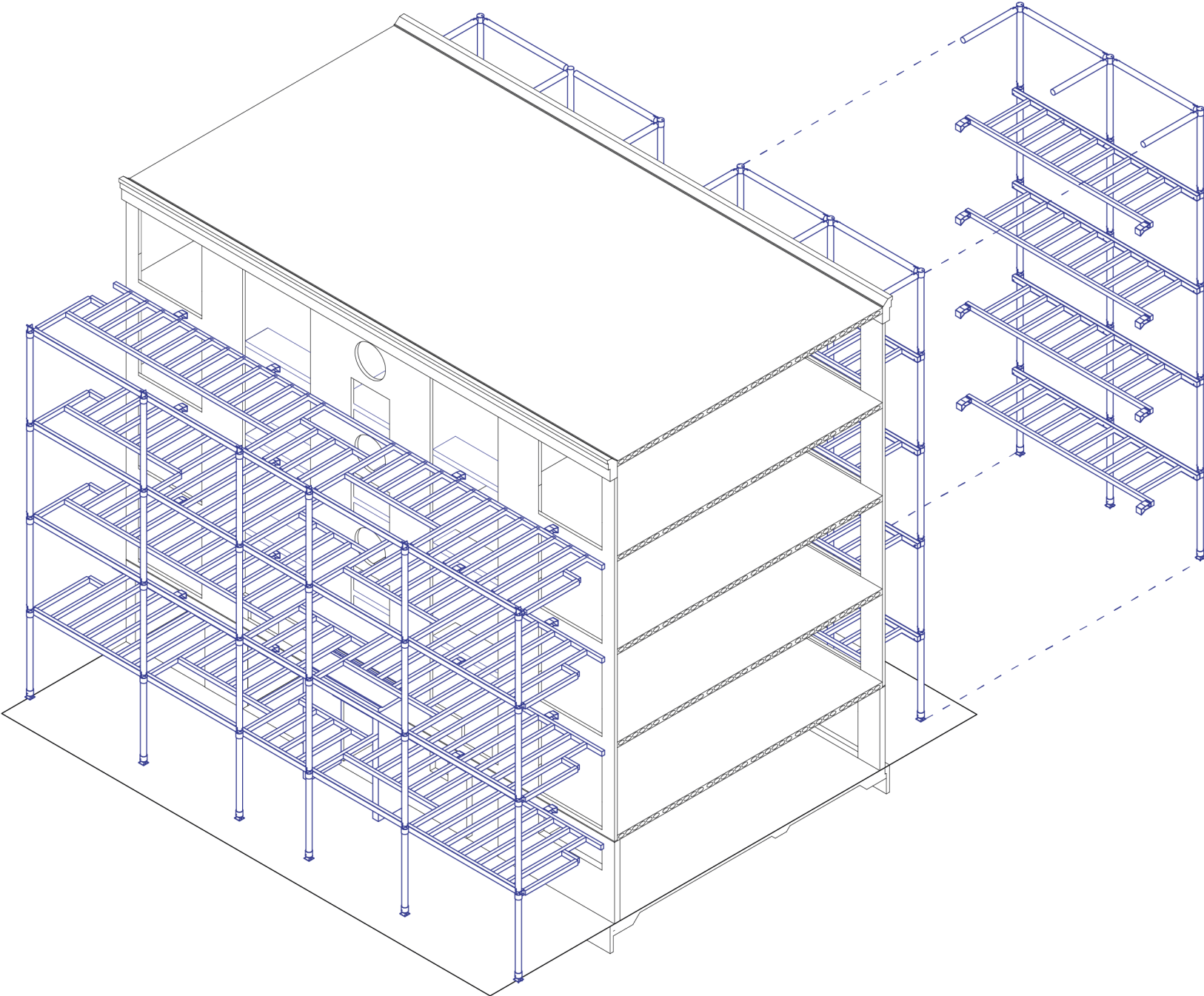
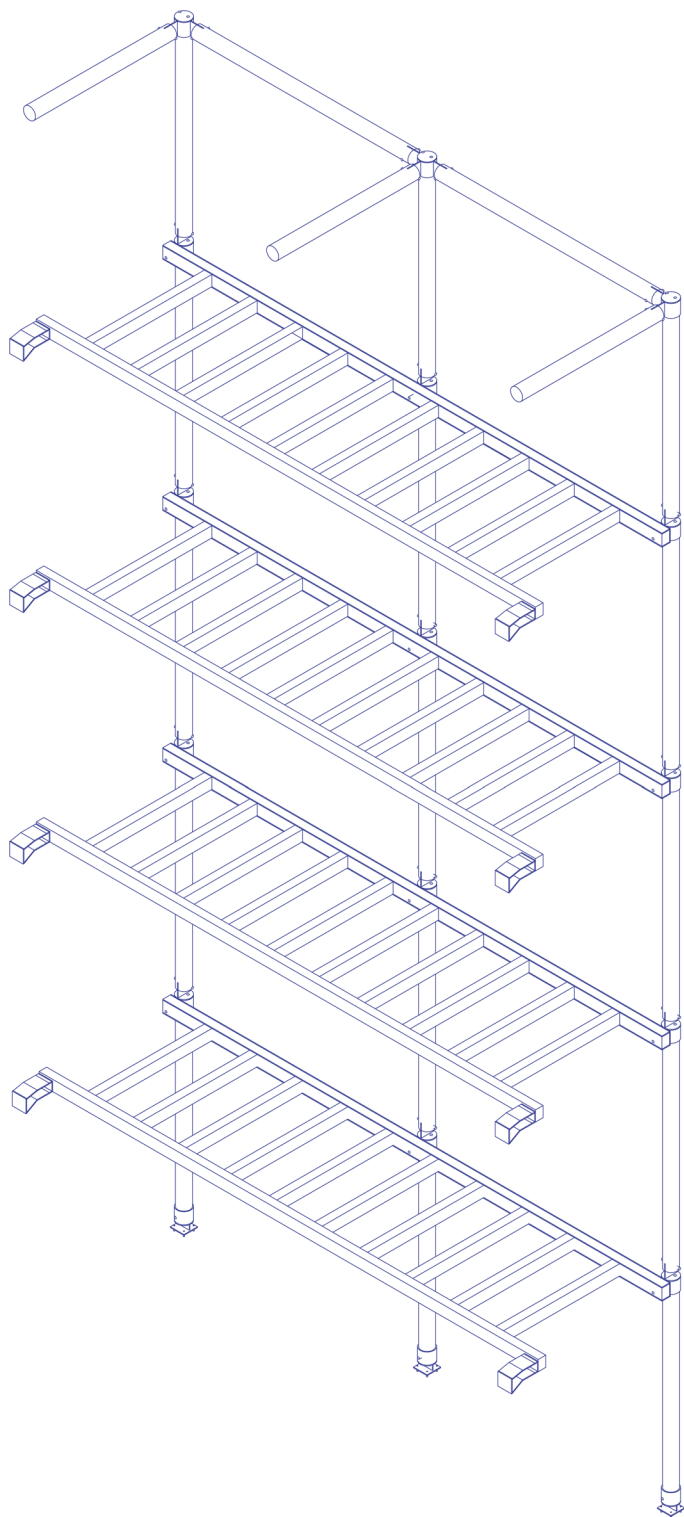
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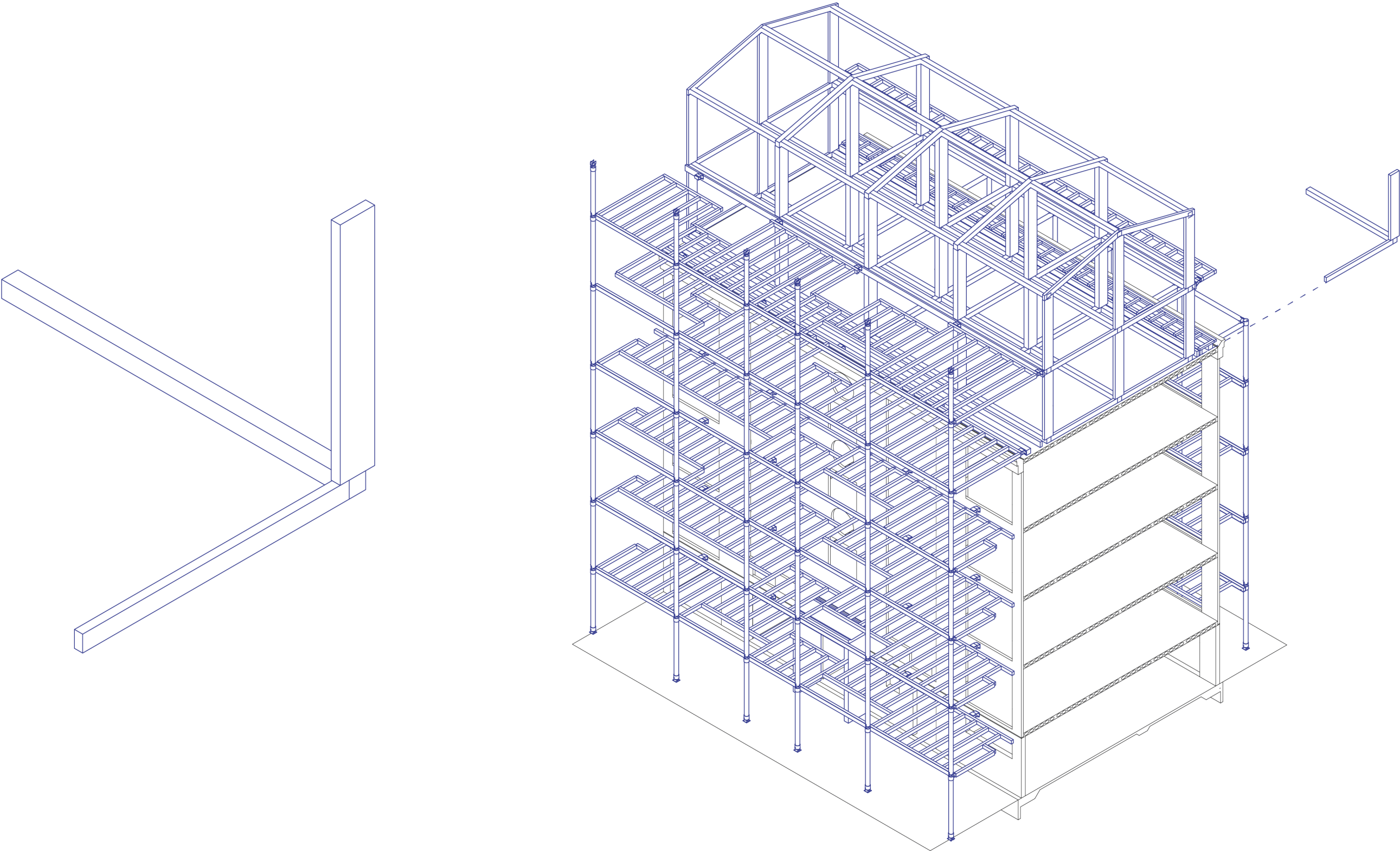
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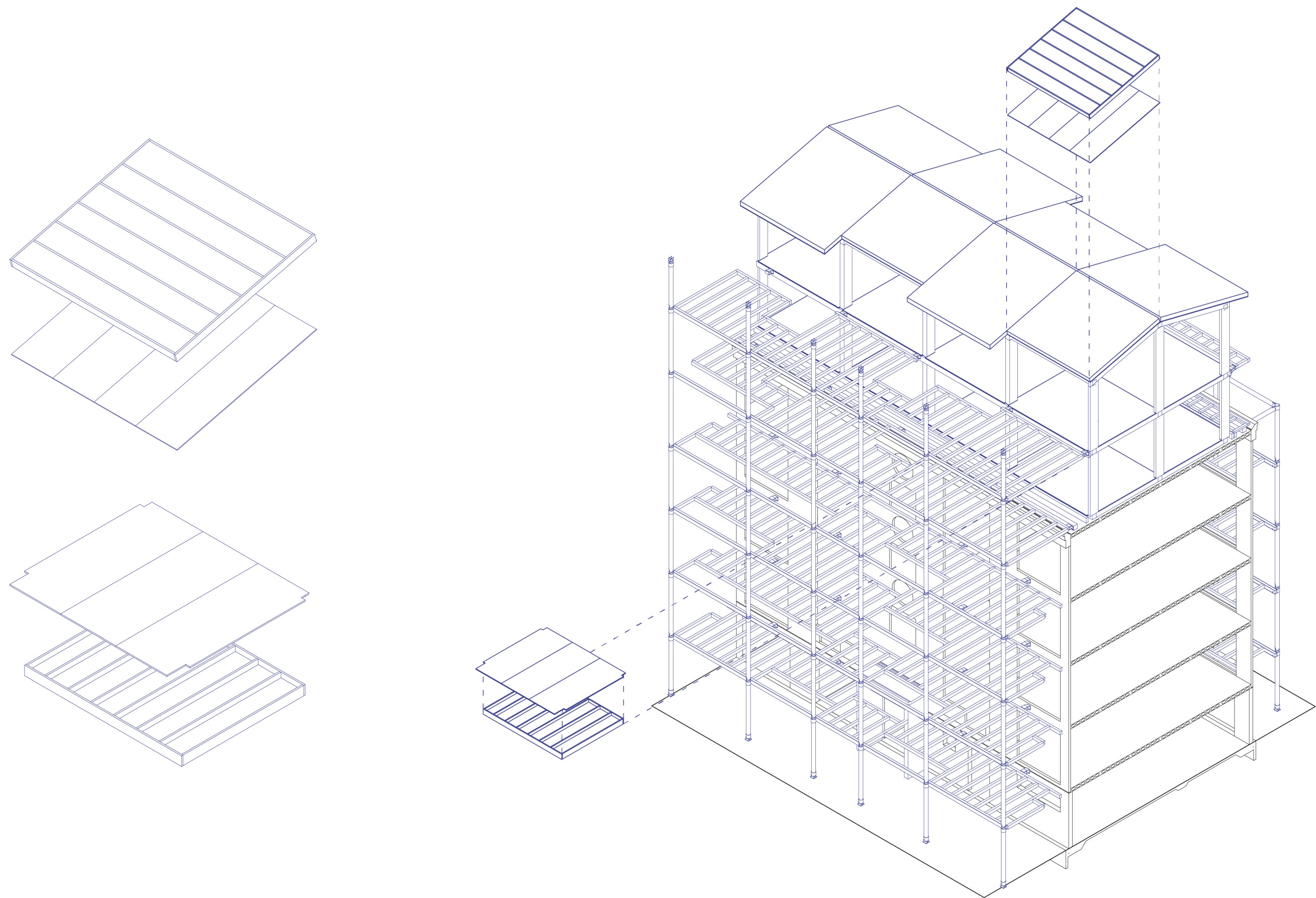
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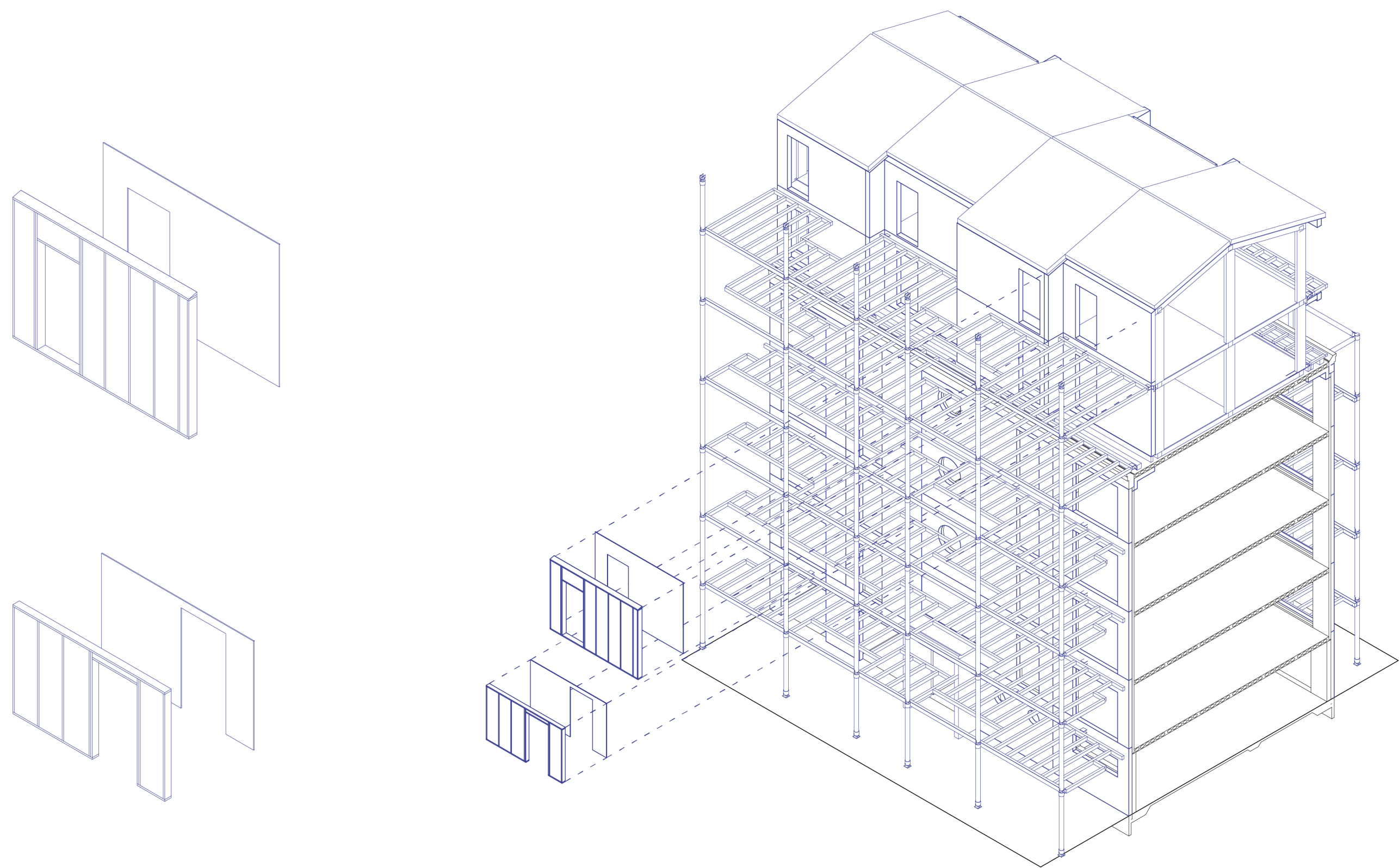
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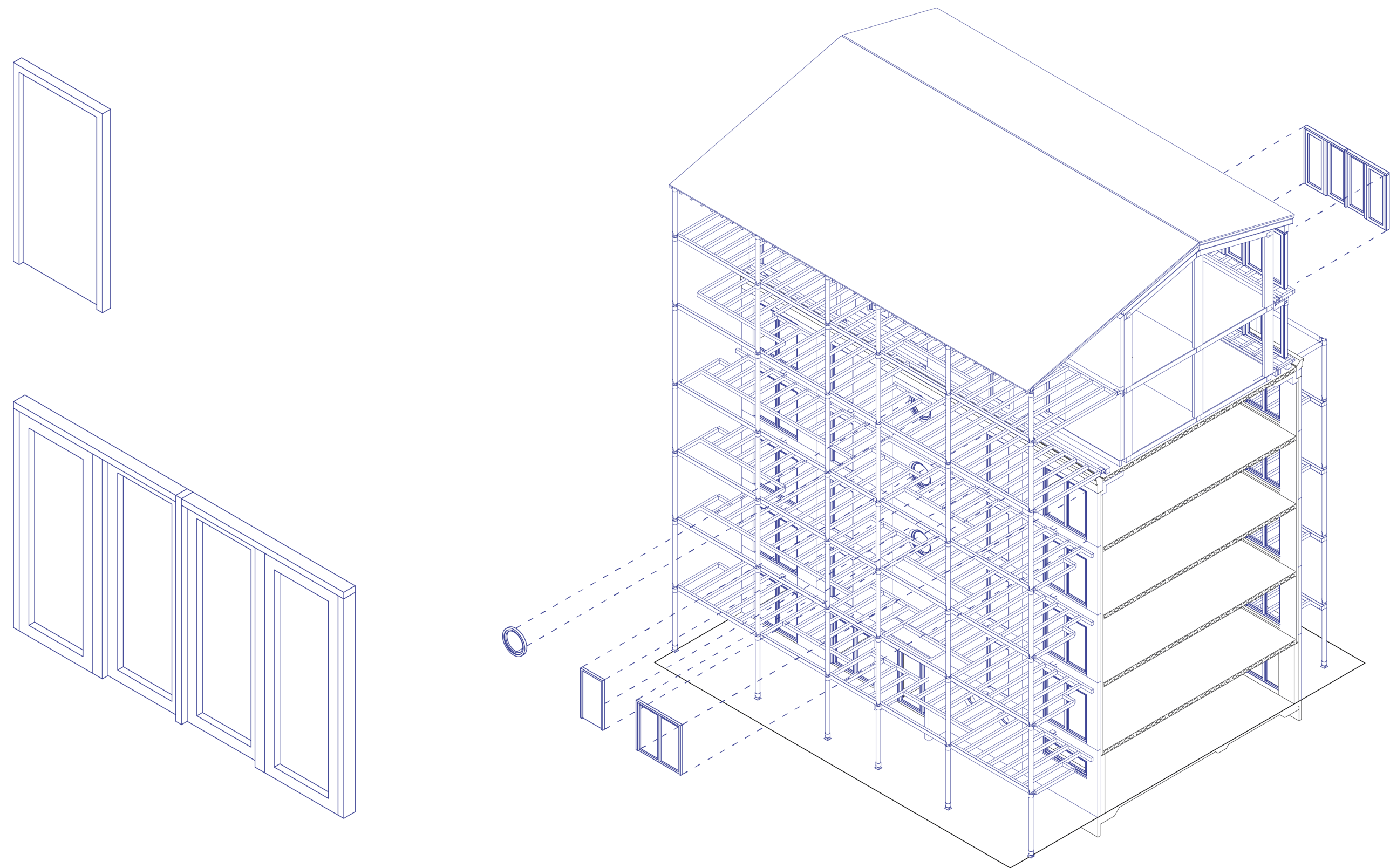
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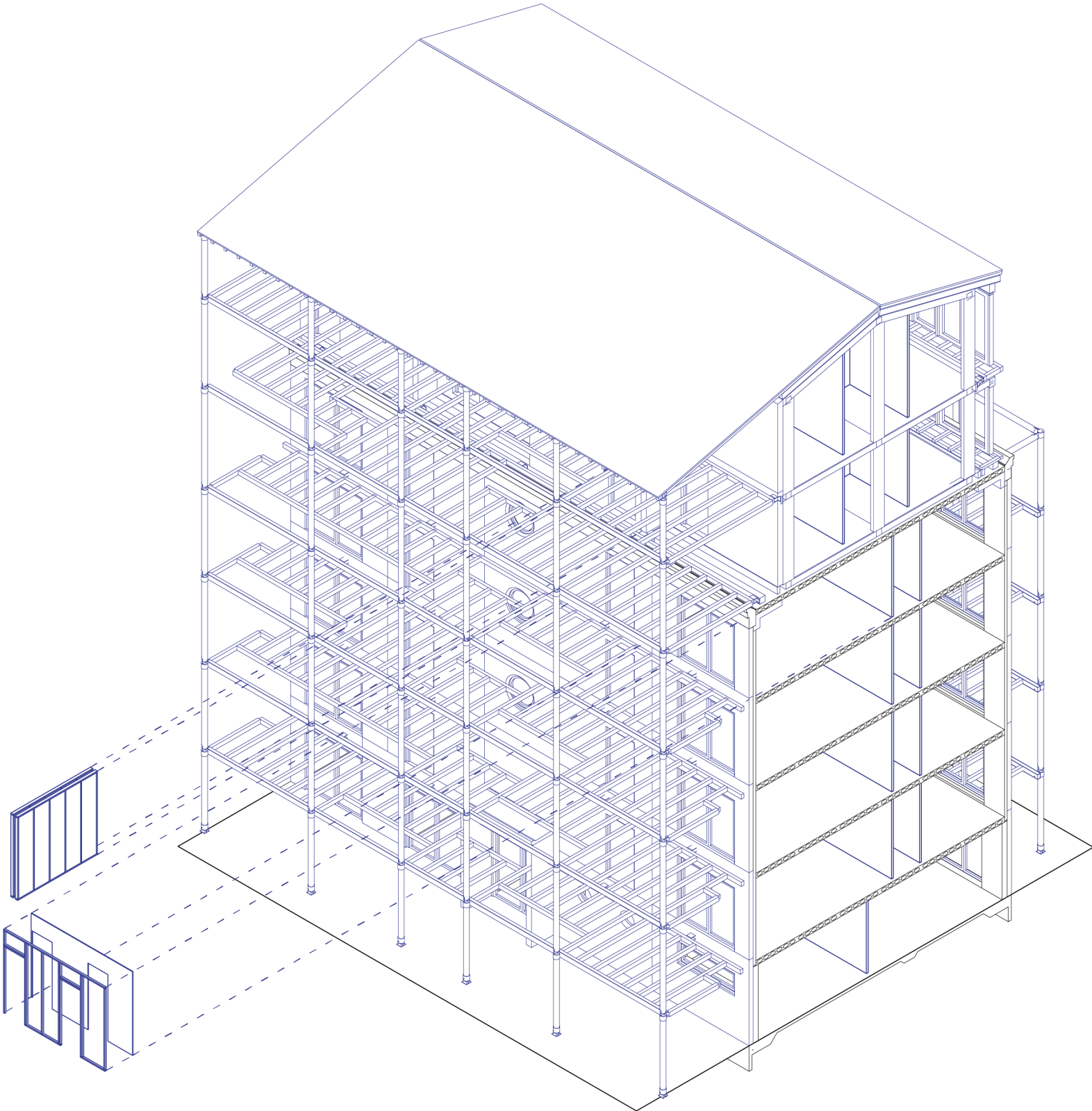
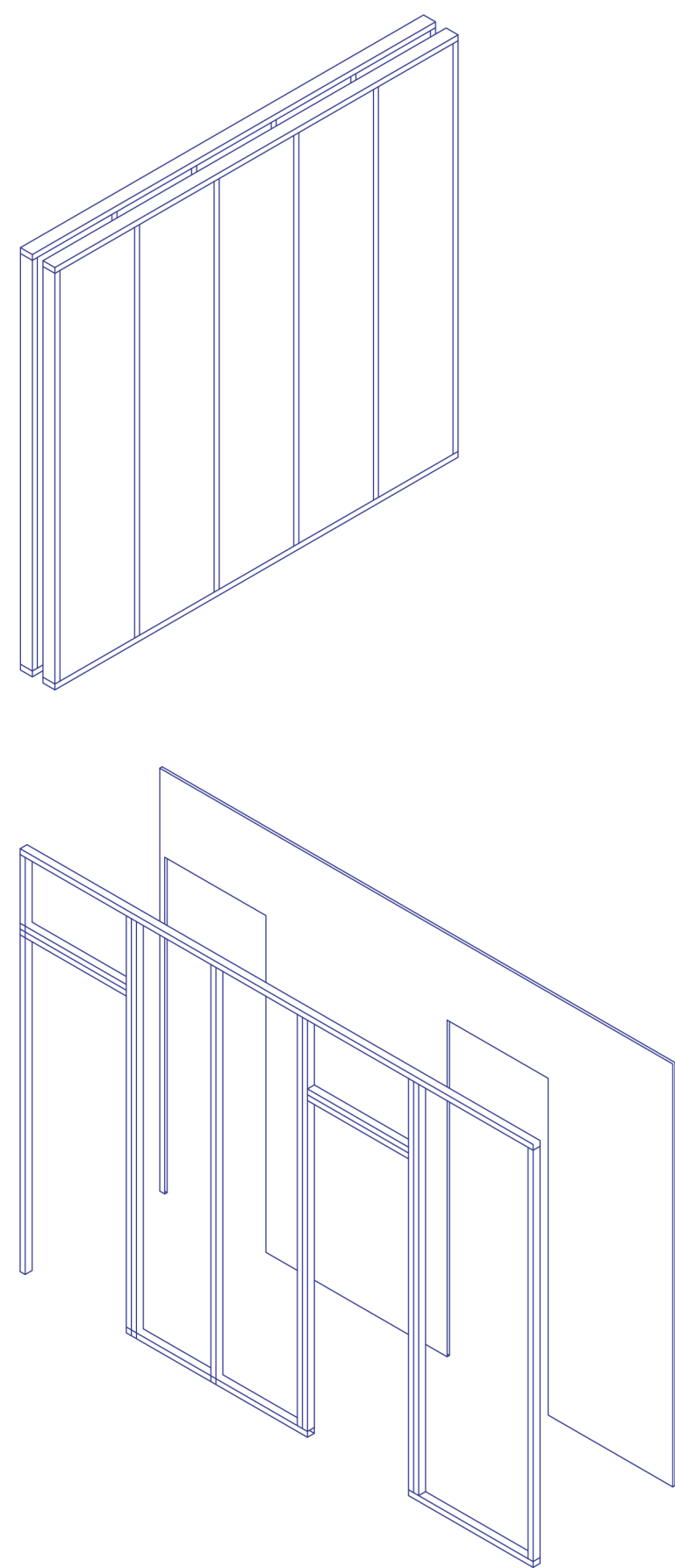
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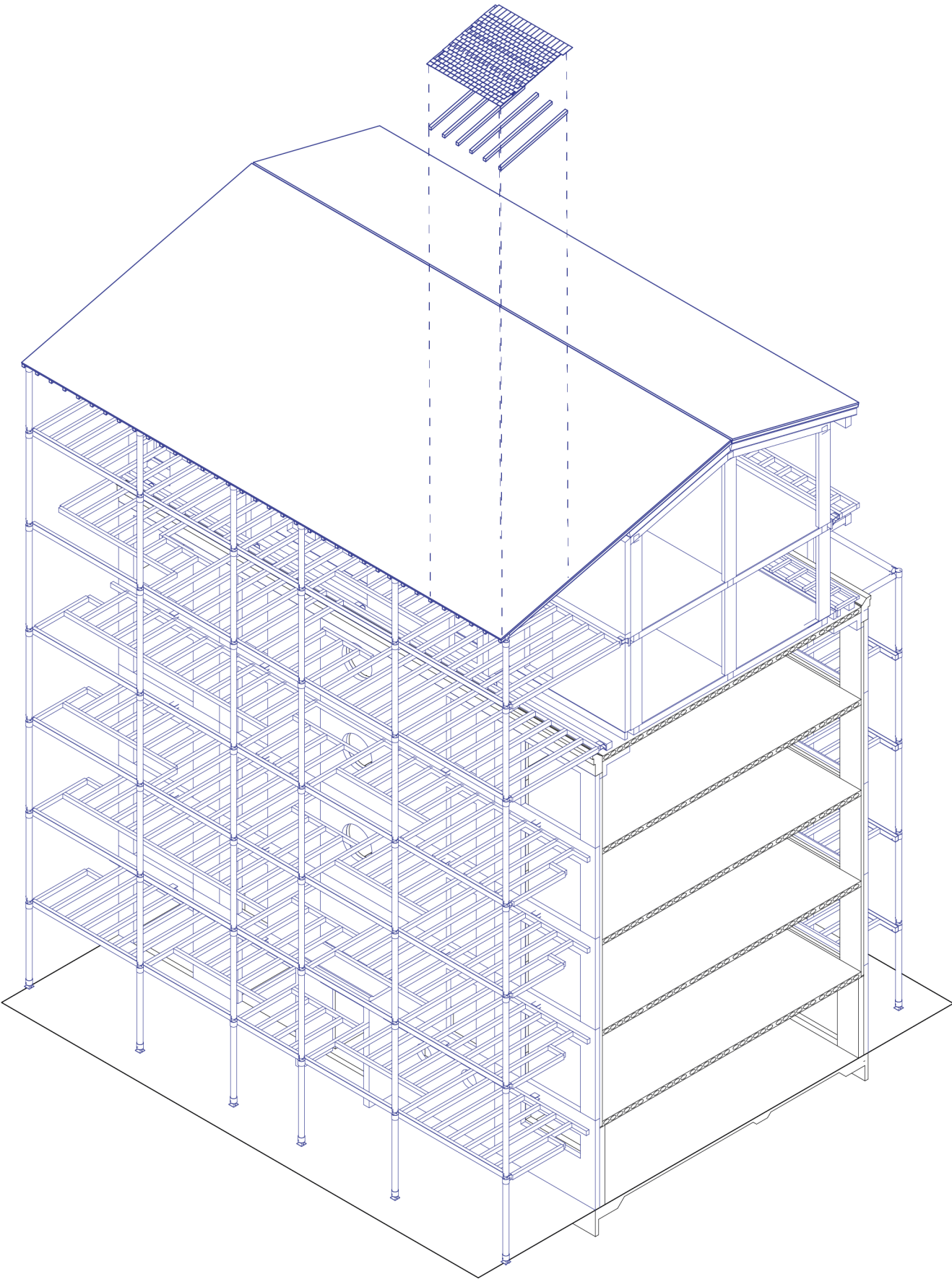
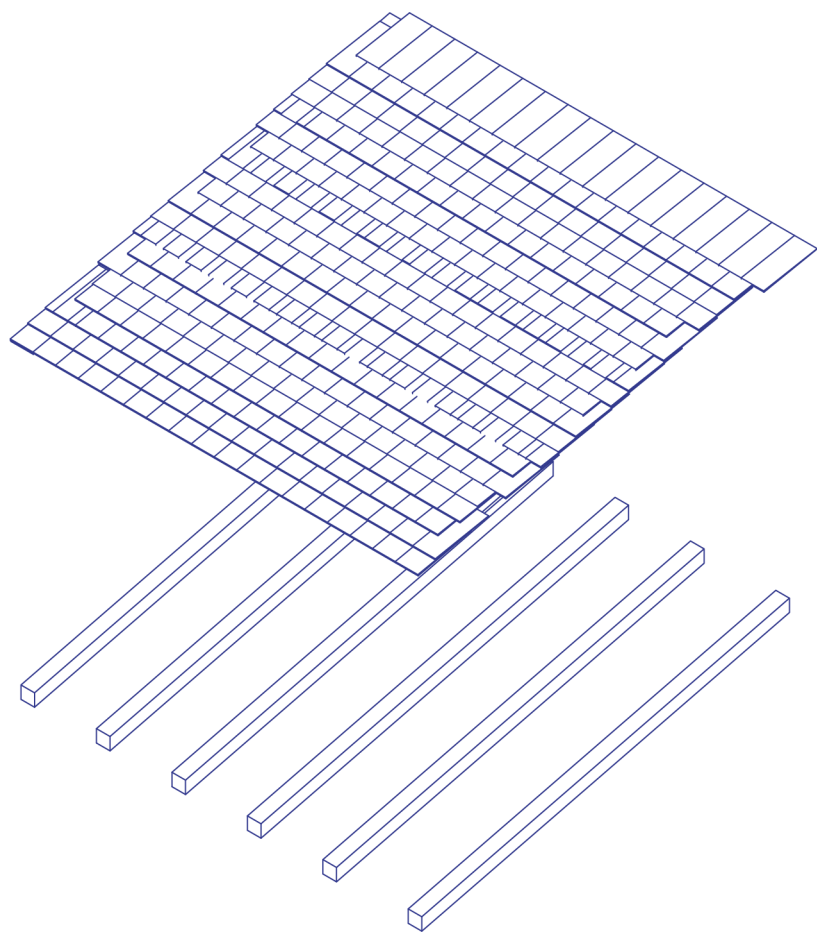
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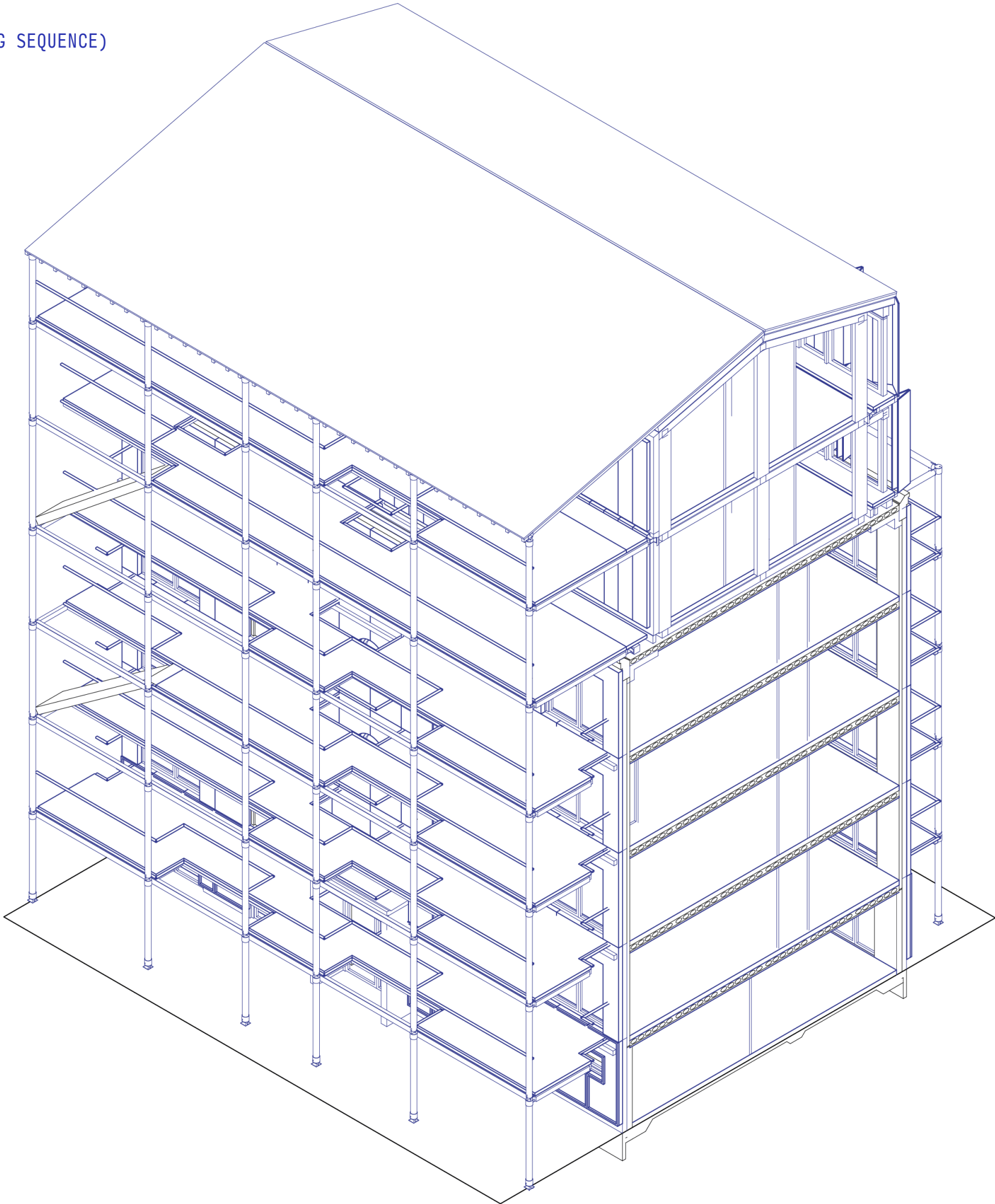
3.1 ISOMETRIC OF SEGMENT (BUILDING SEQUENCE)



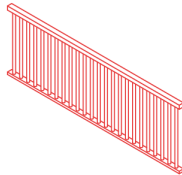
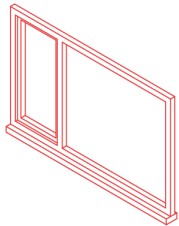
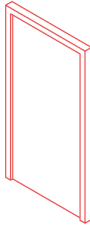
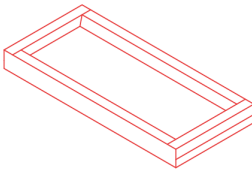
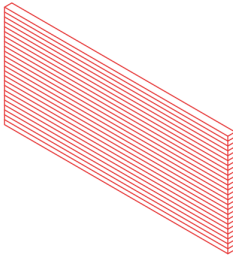
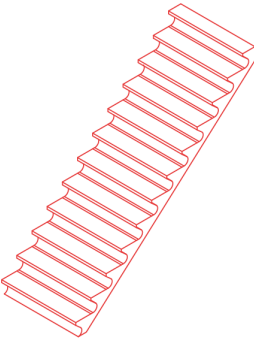
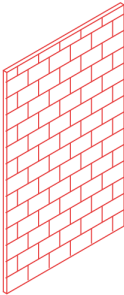
3.1 ISOMETRIC OF SEGMENT (BUILDING SEQUENCE)



3.1 ISOMETRIC OF SEGMENT (BUILDING SEQUENCE)



3.2 REMOVED MATERIALS

							
	BALUSTRADE metal	WINDOW FRAME plastic	EXTERIOR DOOR wood	BALCONY concrete	BRICK FAÇADE ELEMENTS / WALL	STAIRS concrete	INTERIOR WALL honed masonry
QUANTITIES							
per segment/portiek	21 pieces	49 pieces	1 piece	7,2 m³	28 m³	3,7 m³	20,6 m³
per flat	126 pieces	303 pieces	12 pieces	43,2 m³	192 m³	22,2 m³	123,6 m³
in total	378 pieces	909 pieces	36 pieces +12 garage doors	129,6 m³	576 m³	66,6 m³	370,8 m³
				total: 772,2 m³			

POTENTIAL
REPURPOSING

100% reuse

- 126 balustrade pieces can all be reused in the 6 new staircases of the project (only 6 new balustrade pieces would need to be produced)
- The removed balustrade pieces from the balconies make up a length of 935 meters in total. If these are reused for the new project, galery and balcony balustrades for almost 4 segments/portieken would be provided.

repurpose outside of project

According to a technical analysis of the existing buildings, the window frames are mainly outdated. Hopefully these frames could be reused with a different purpose, inside for example.

100% reuse/repurpose

The exterior doors are made from wood. The single doors can be reused as apartment front doors. The garage doors do not fit in the new design in their current state, but after reprocessing the material could made into new doors.

100% reuse/repurpose

whole bricks

brick walls
bike storages
127,2 m³

crushed and concrete
+brick and processed
into new bricks

stone paving project
site park
± 600 m³

whole bricks

galery tiles
45,9 m³
see detail .3

100% reuse/repurpose

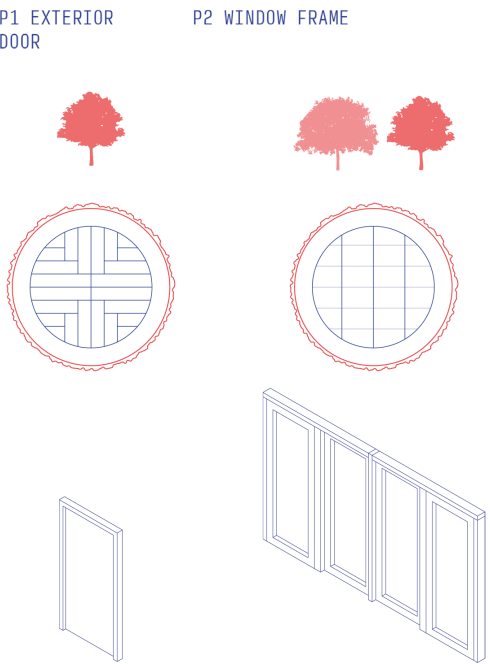
crushing and processing
into powder

sideboard stucco
ground floor
69 m³
see detail .1

reuse whole bricks as
much as possible

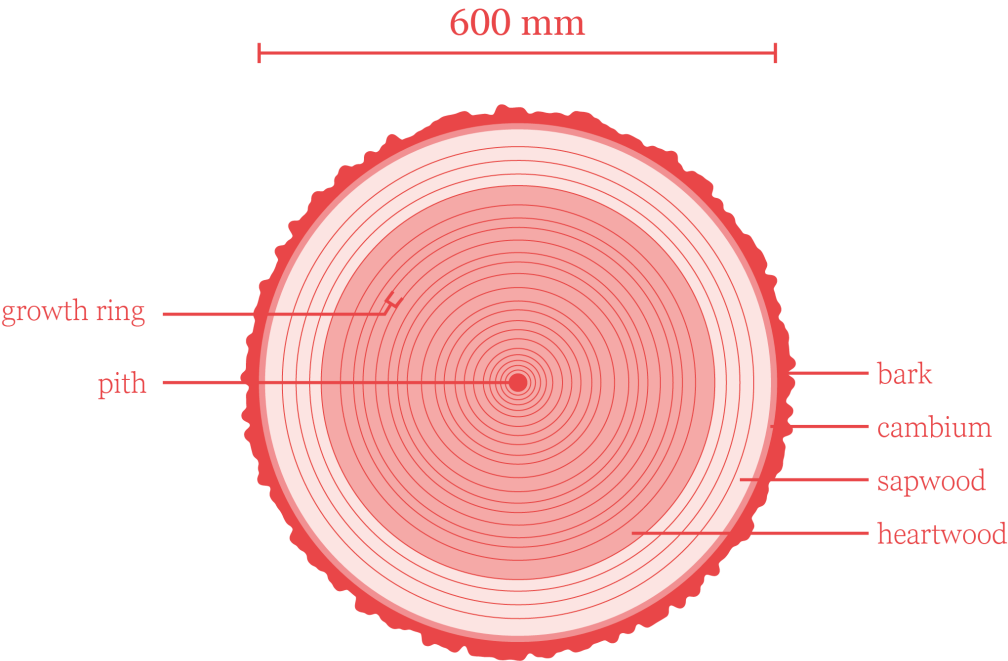
interior walls
27,56 m³ per segment/portiek
301,8 m³ (11 segments)
This was not implemented in the design.

3.3 BUILDING PARTS & SAWING PATTERN

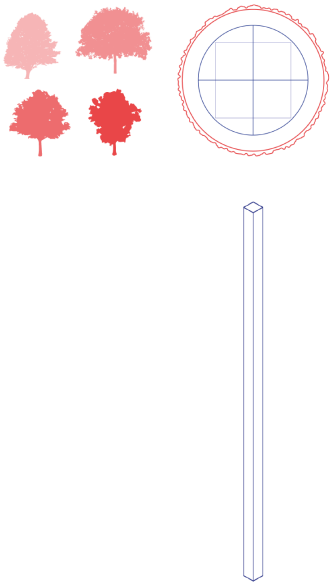


TREE TRUNK

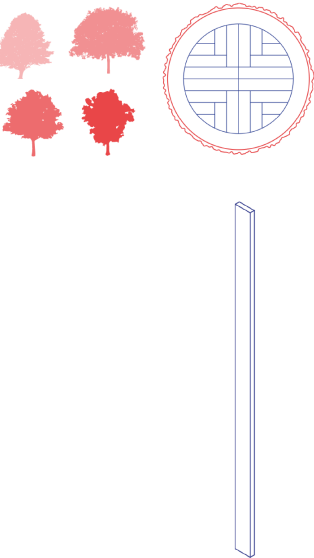
Trees are usually harvested after the trunk has reached a diameter of 60 cm. Approximately 50% of the trunk remains as useable building parts after processing. Sapwood is the part of the tree that transports water and sap when the tree is still alive. This part of the tree contains more moisture; therefore it shrinks more when it dries than the heartwood of the tree, and it is more susceptible to fungus and woodworm. Thus, heartwood is a lot more suitable for woodwork than sapwood. If the sapwood is used for building parts, interior applications are desirable. The small pieces that remain after the wood processing can be applied in specific, fitting products (like interior cladding) or can be further processed into wood chips for the production of OSB.



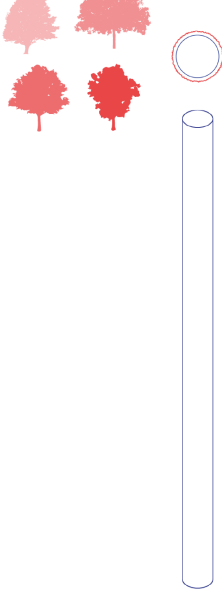
P3.1 STRUCTURAL BEAM
(±200x200 mm)



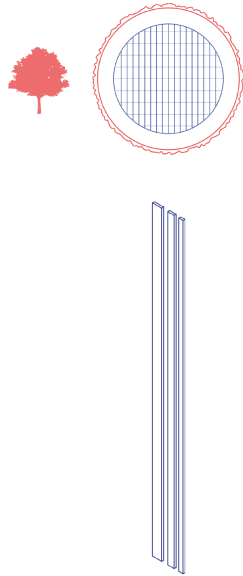
P3.2 STRUCTURAL BEAM
(±38x140 mm)



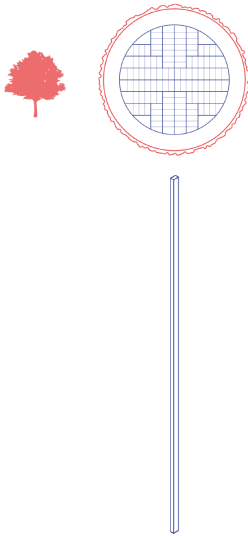
P3.3 ROUND TIMBER
(Ø160 mm)



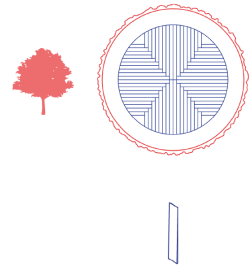
P4.1 CLADDING SLAT
(±18x50 mm)



P4.2 SMALL BEAM FOR CLADDING
(±28x45 mm)



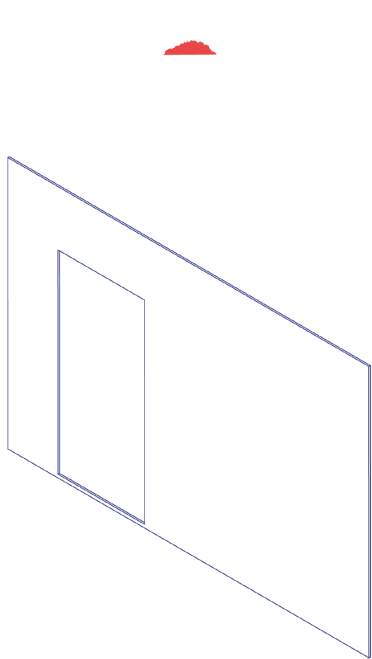
P4.3 CLADDING SHINGLE
(±360x120x1-8 mm)

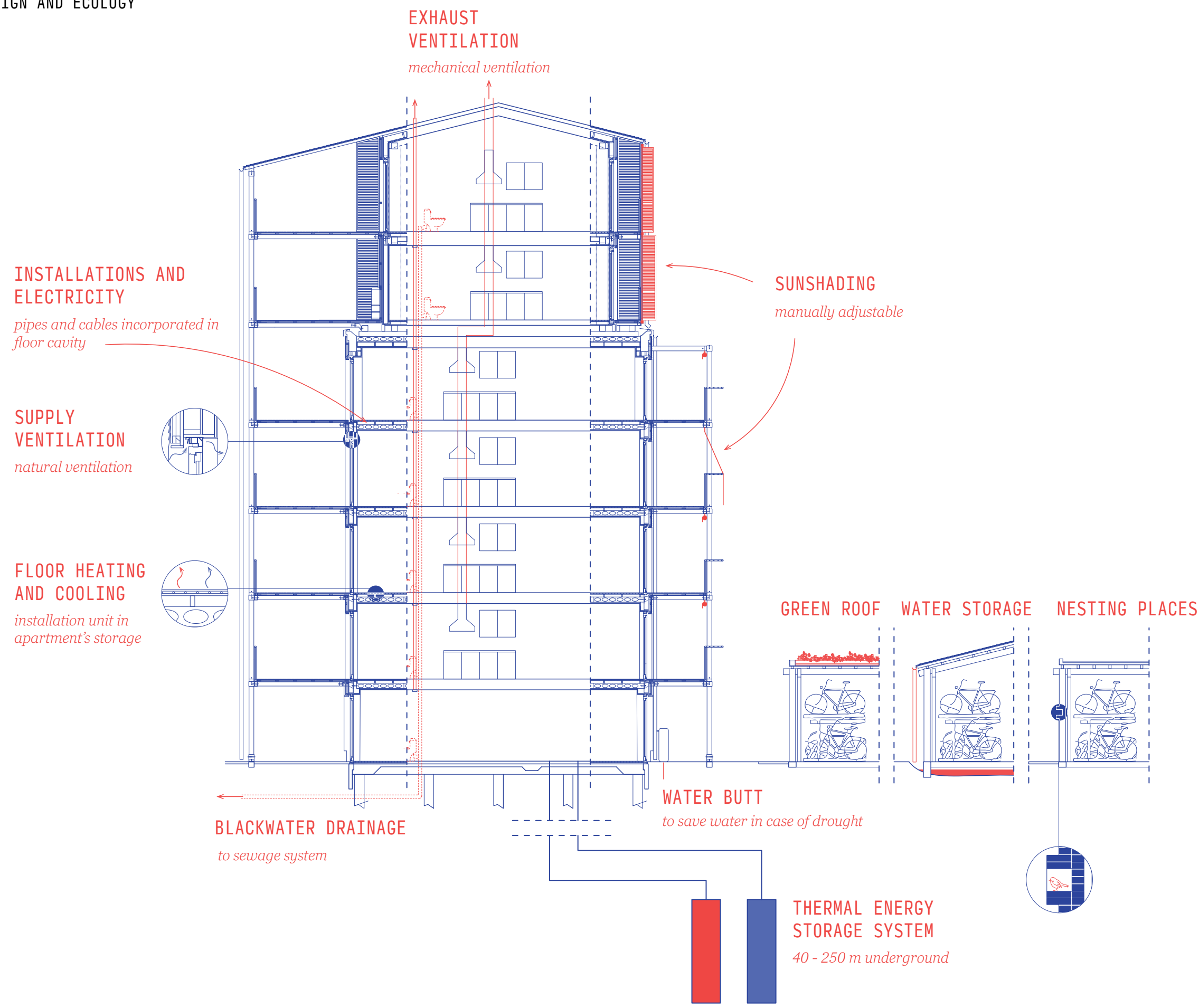


P5 WOOD FIBER INSULATION
(140-184 mm thick)

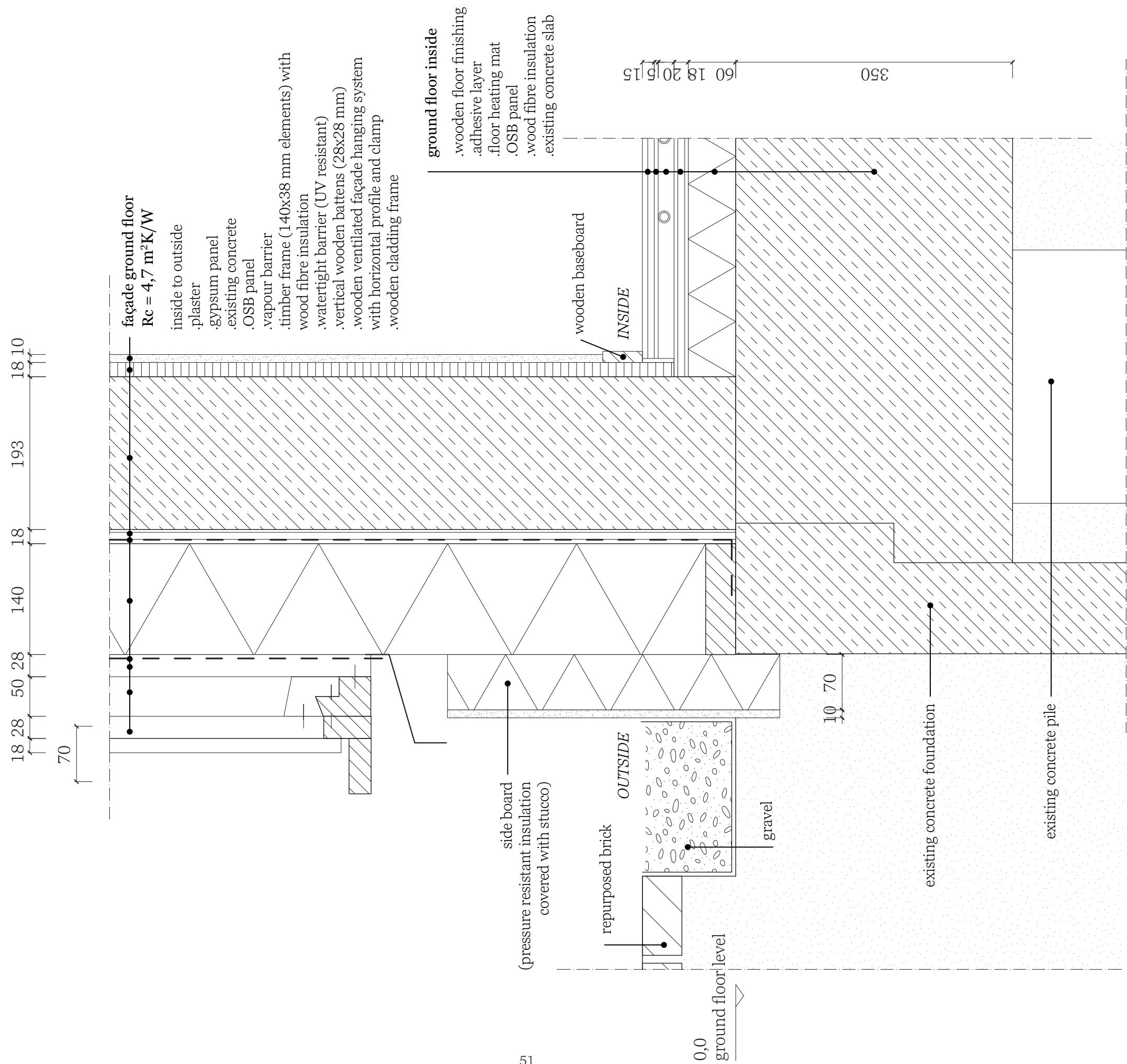


P6 OSB PANEL
(18 mm thick)



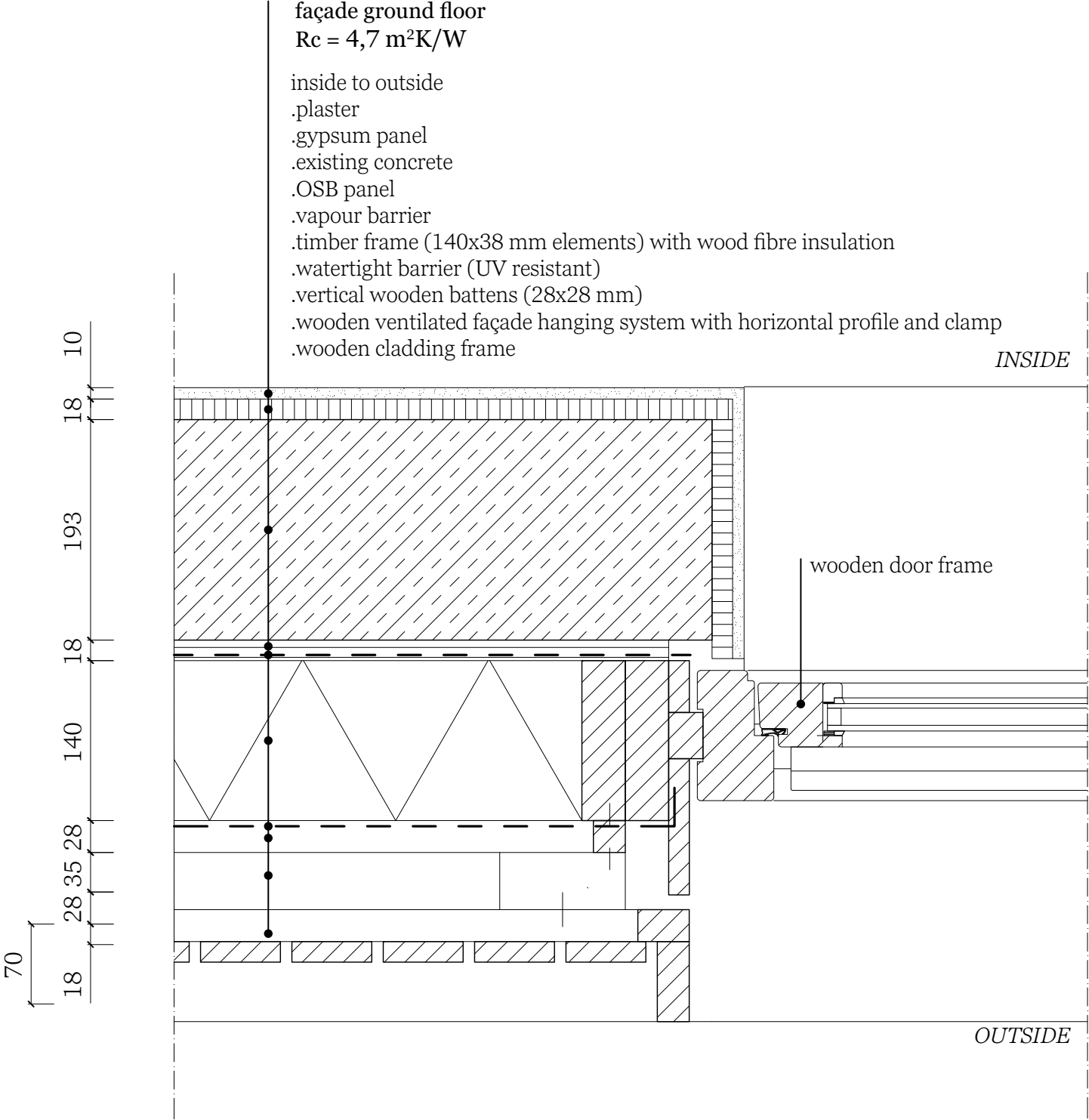


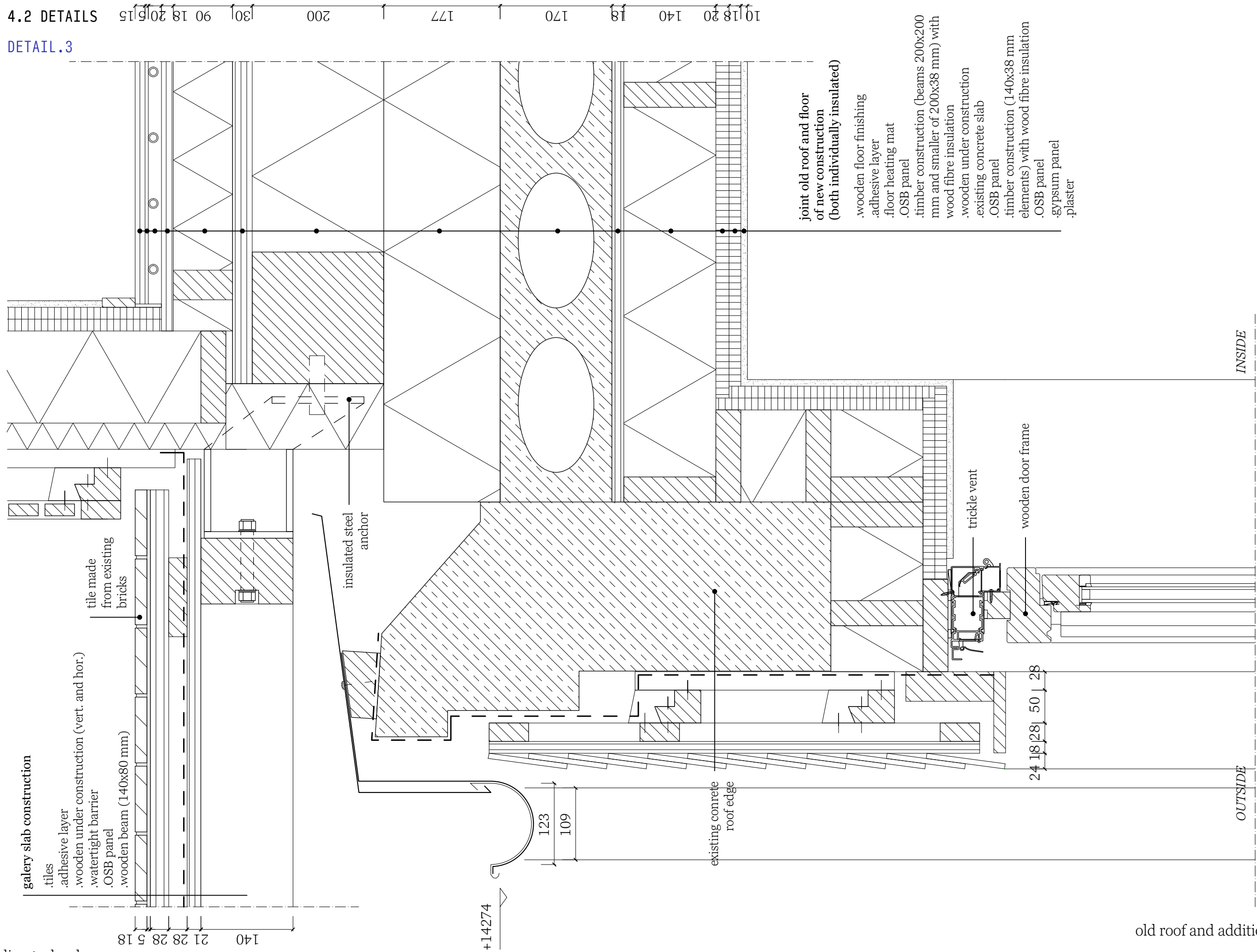
4.2 DETAILS
DETAIL.1



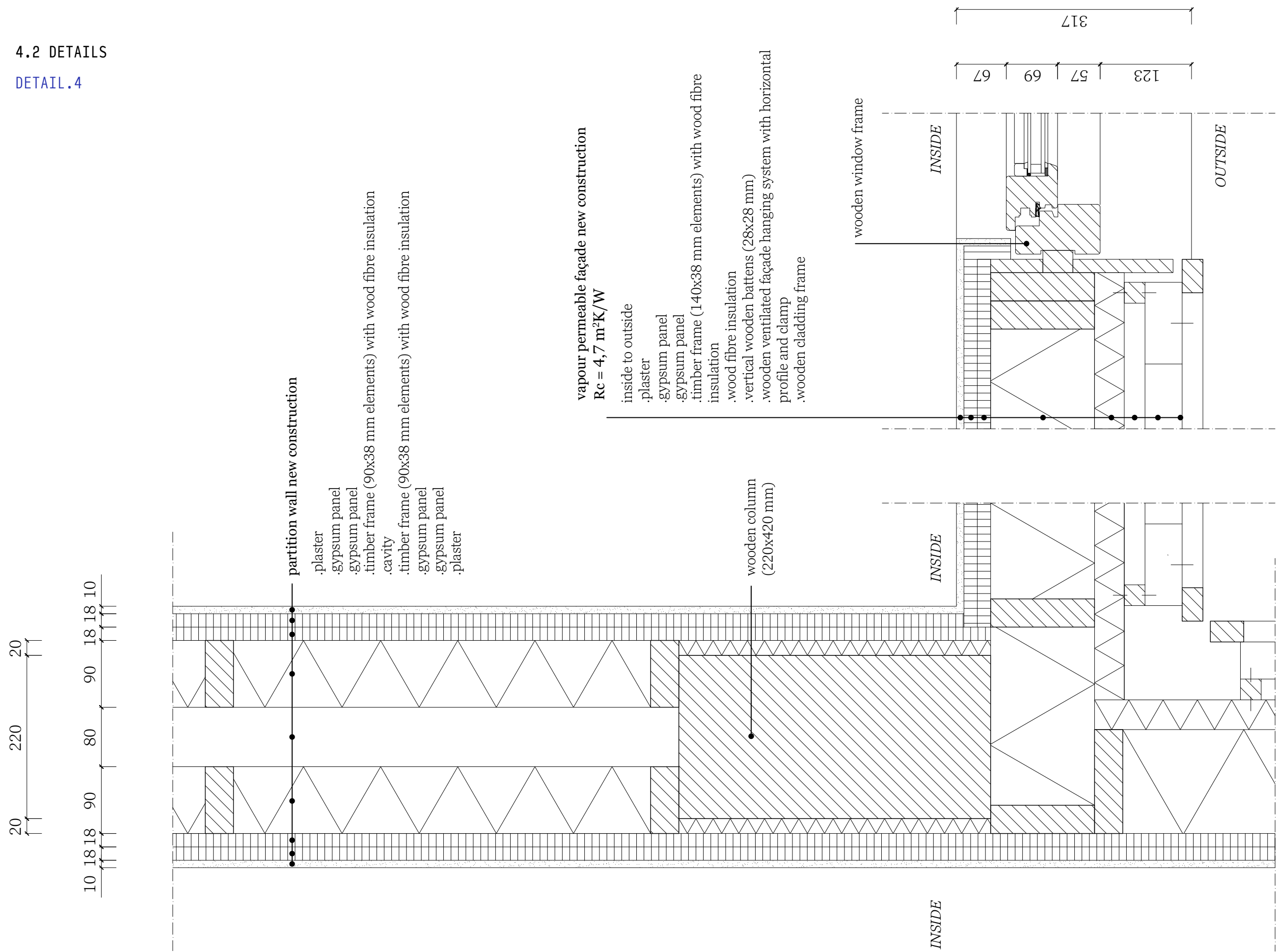
4.2 DETAILS

DETAIL.2



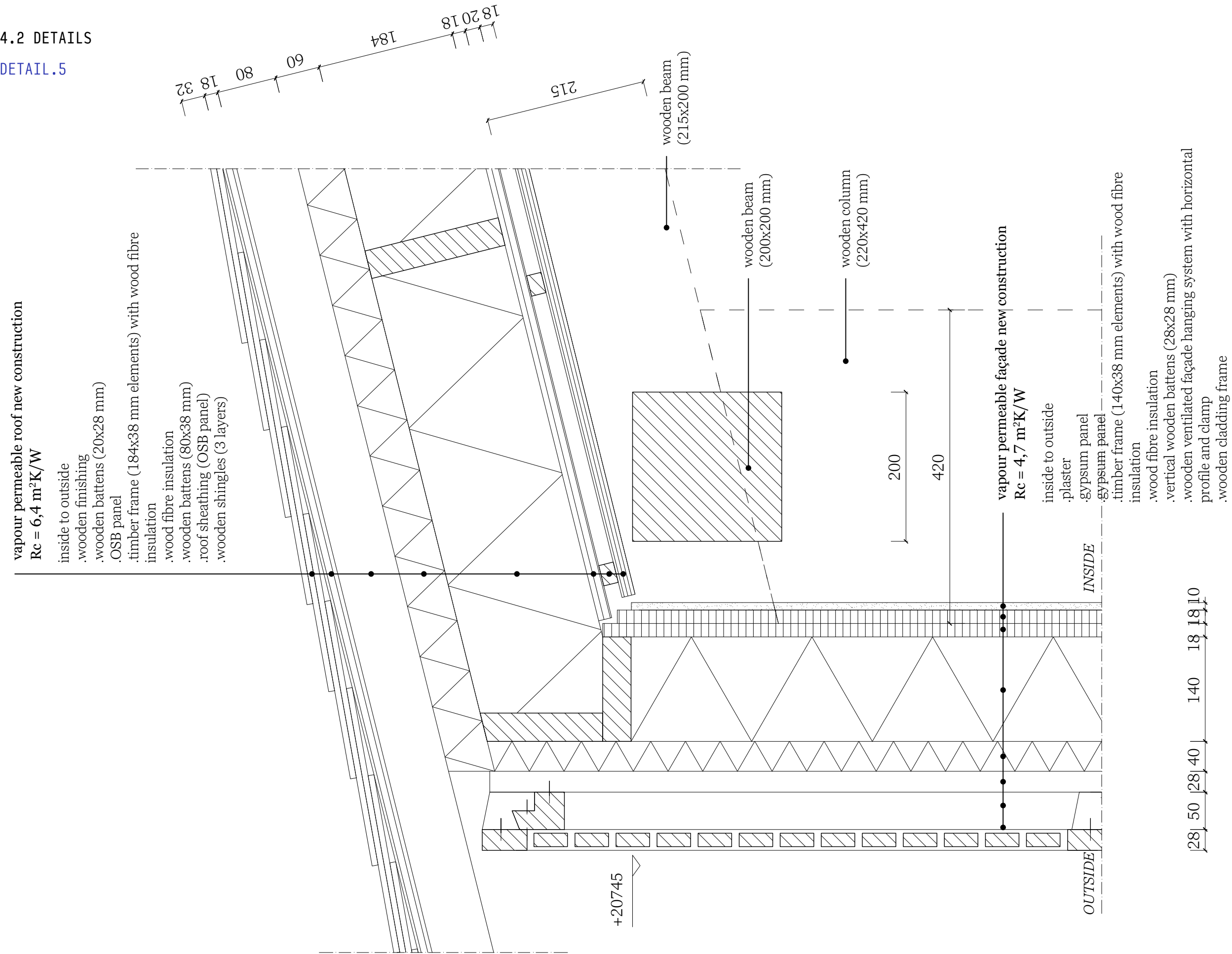


4.2 DETAILS
DETAIL.4



façade additional storeys - horizontal

4.2 DETAILS
DETAIL.5



roof additional storeys - vertical