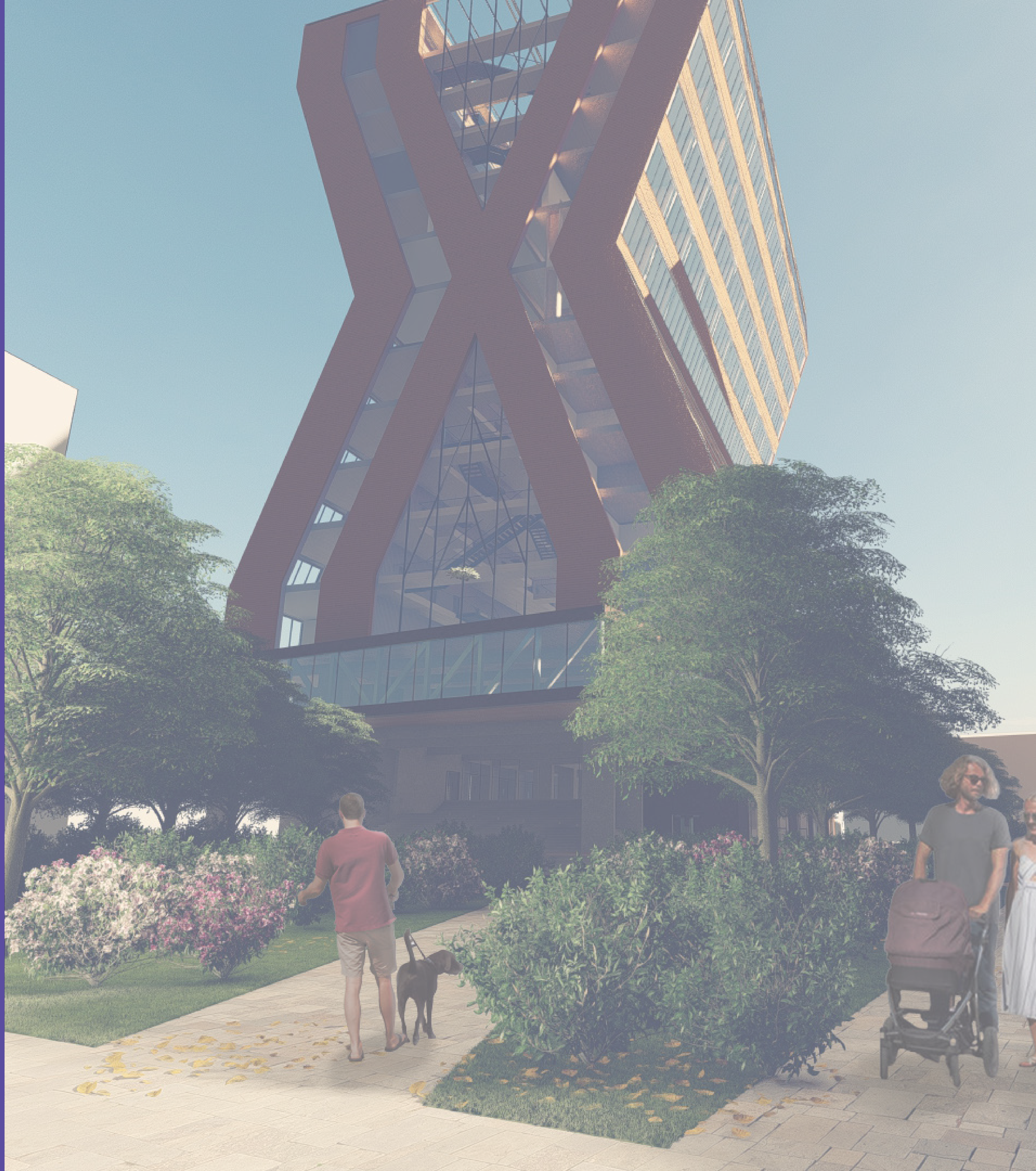
aXESS

Dylan Machgeels

4603427



CONTENT

Assignment

Urban setting

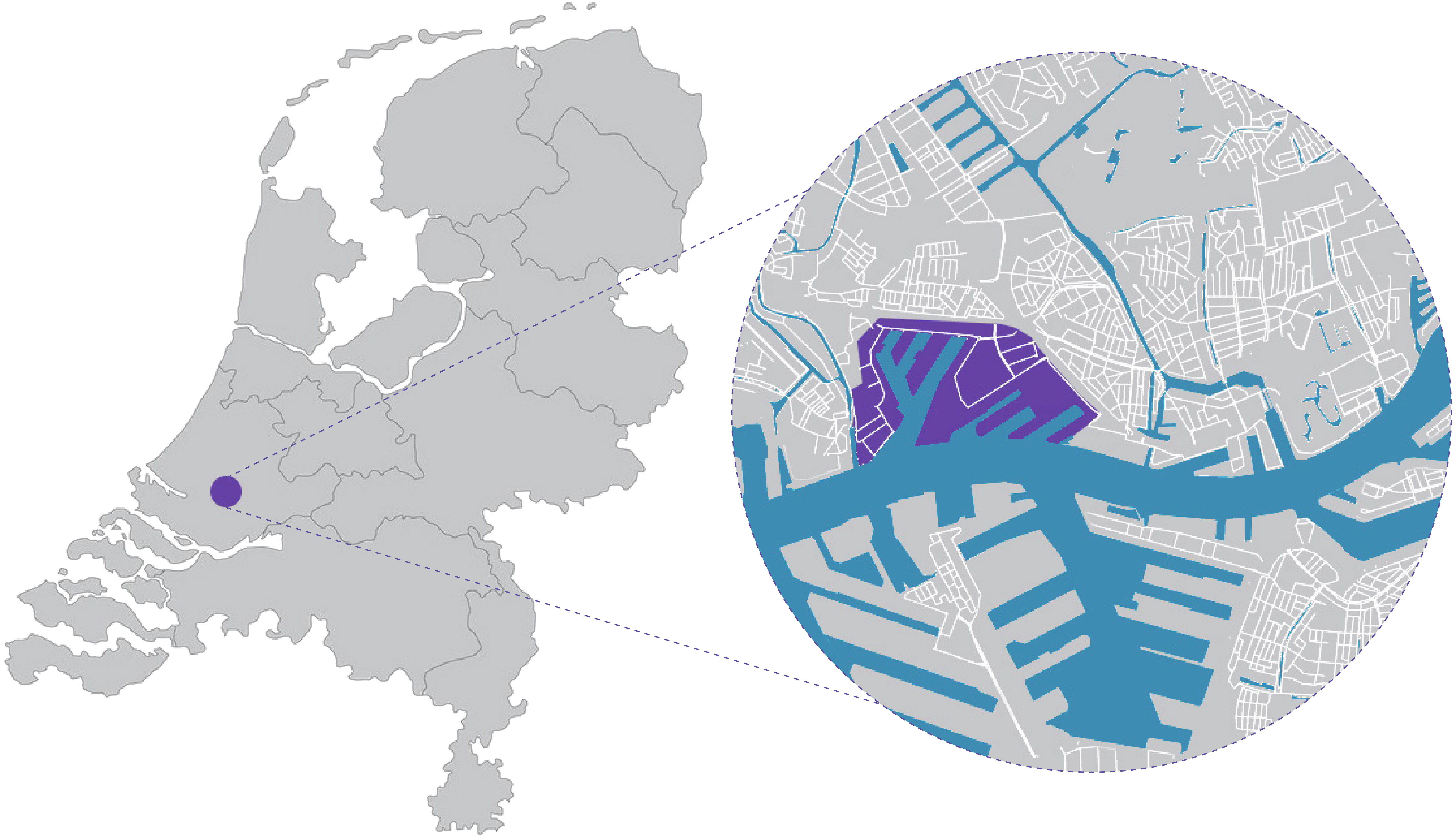
Target group

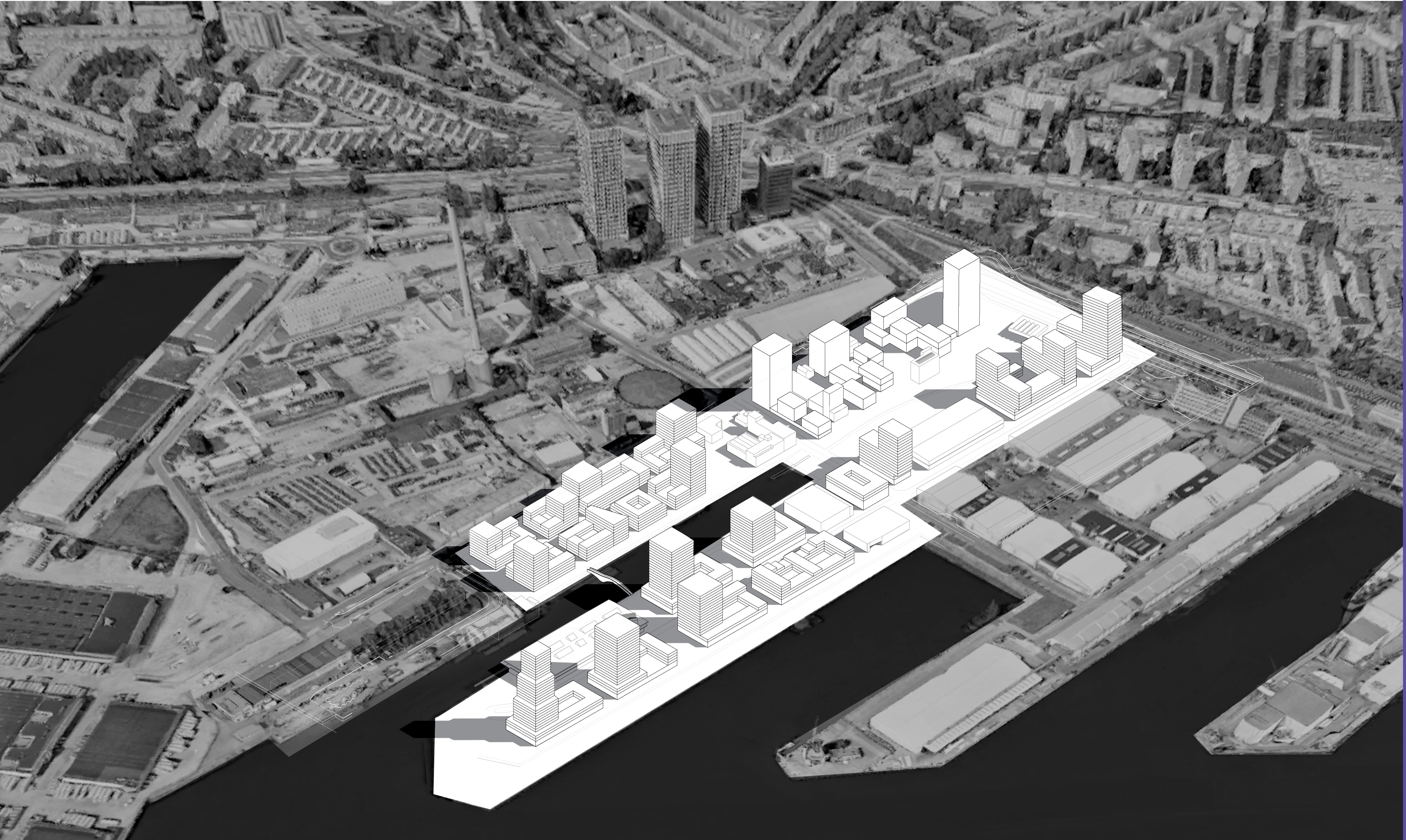
Design

- Location
- Principles
- Ciruclation
- Construction
- Climate
- Façade
- Walkthrough

1 MILLION HOMES

M4H : NEW MAKERS





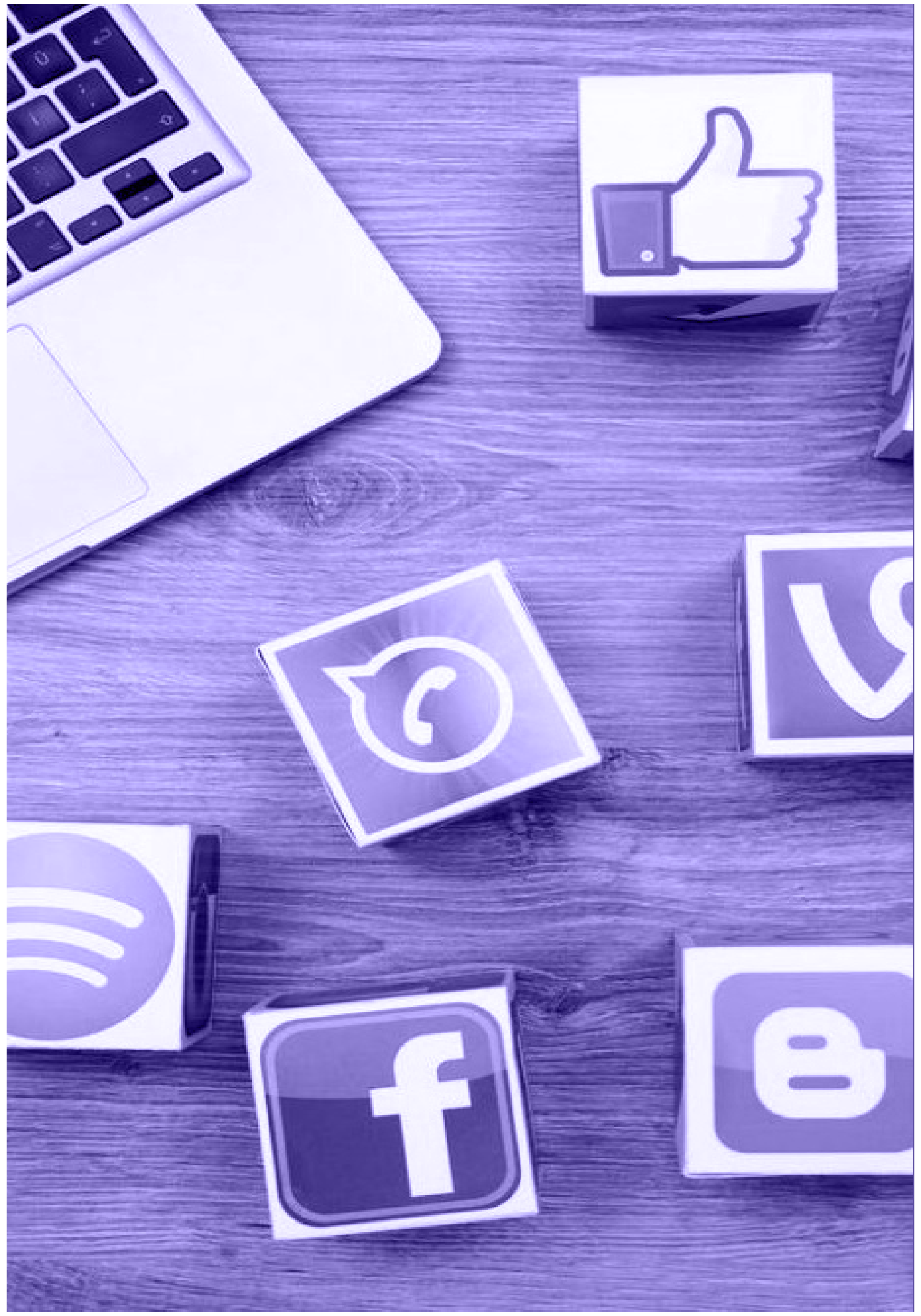
CIRCULATION

COMMERICAL PLINTH

MONUMENTS


LEGEND
plot border
obligatory facade
facade can't cross this line
possible overhang
commercial ground floor
plot number
building's max. height
tower placement
residential
workspace
existing building
green/open space

NEW MEDIA

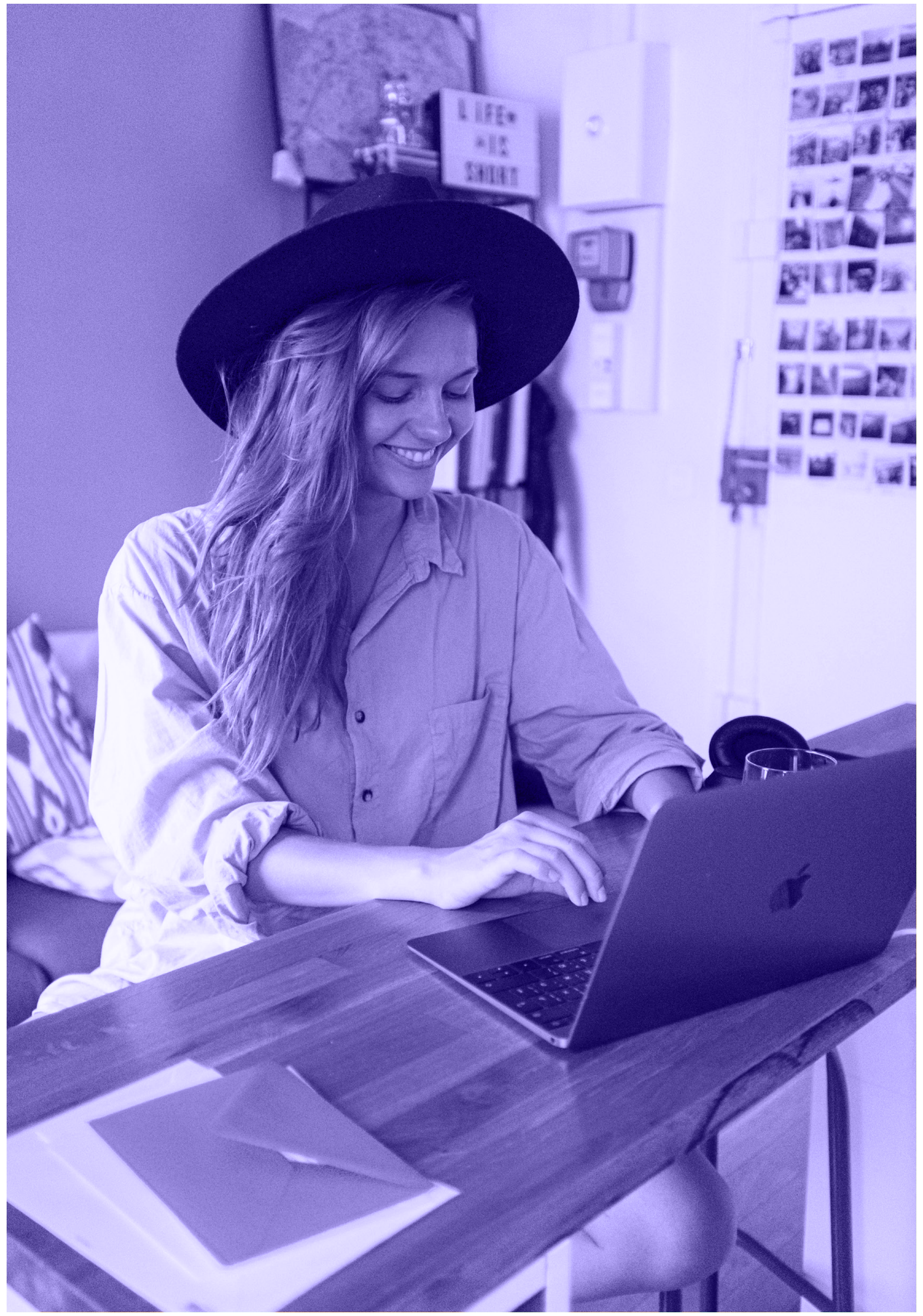


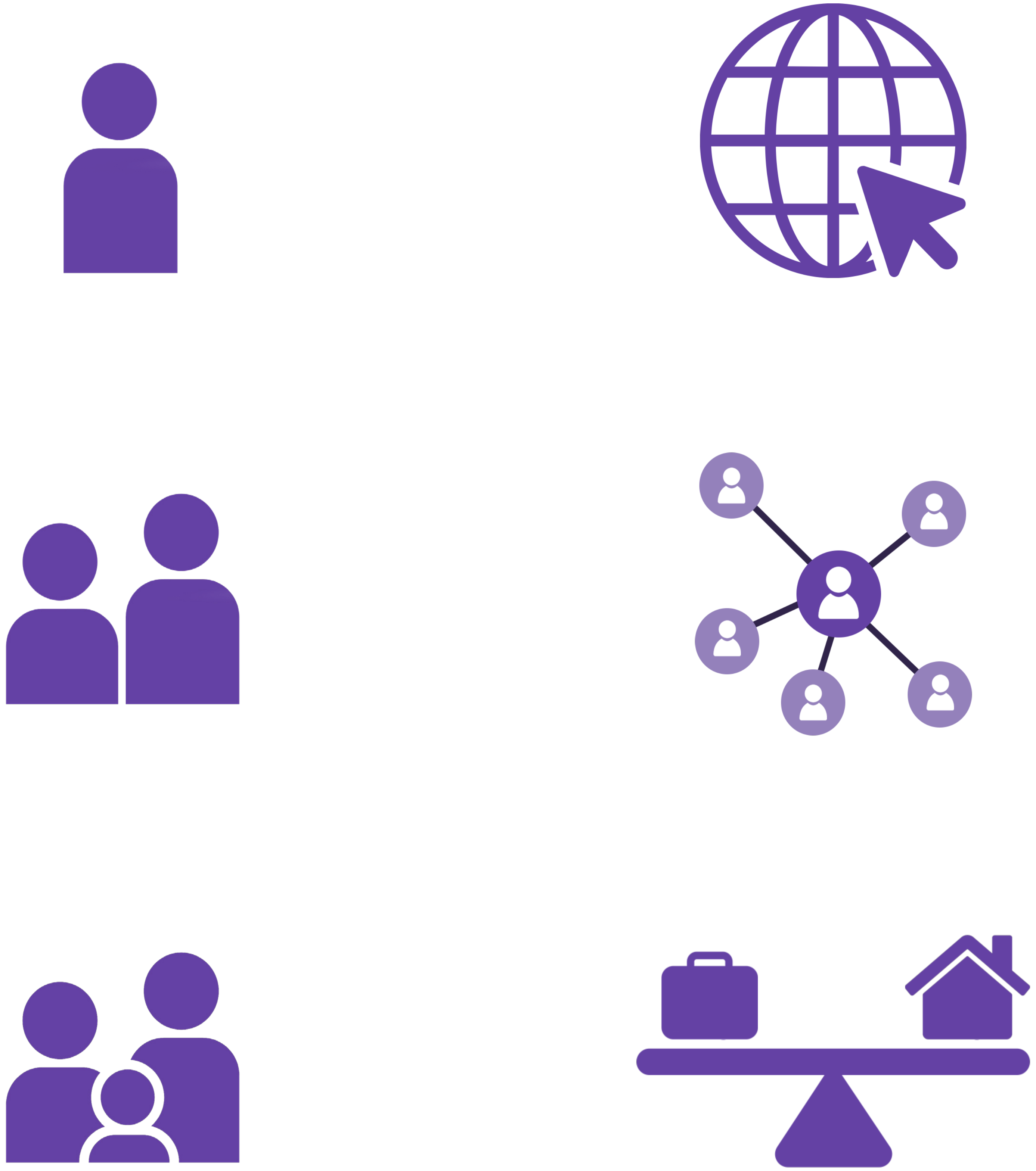
COVID-19

LACK OF WORKSPACE

How do you make a high-quality, affordable workspace in a workhome? / How do you make a high-quality, affordable workhome?

NEW MEDIA WORKER





INDEPEDENT DWELLINGS

ADAPTABILITY

ACCESS

AFFORDABILITY

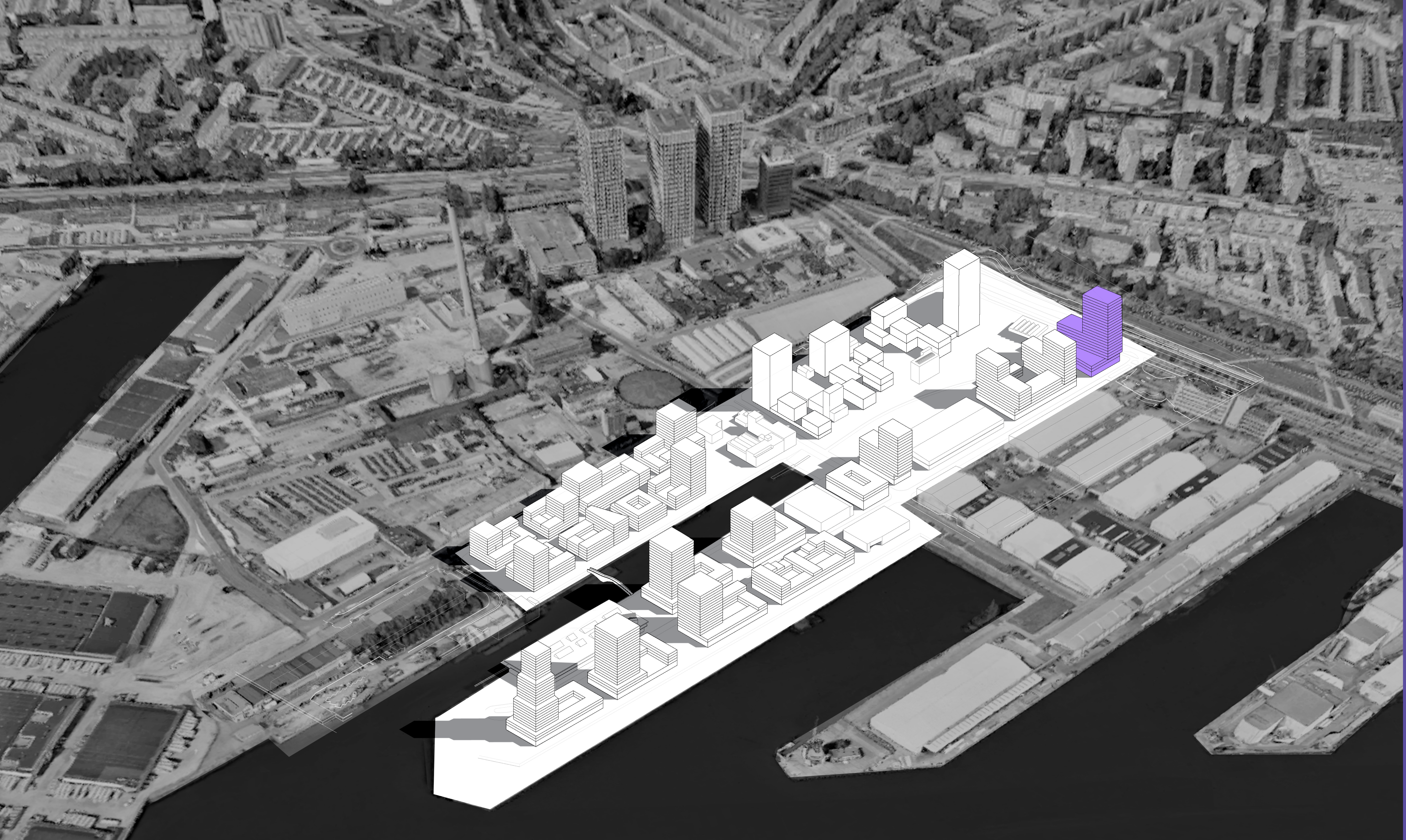
BALANCE

COLLECTIVE FUNCTIONS

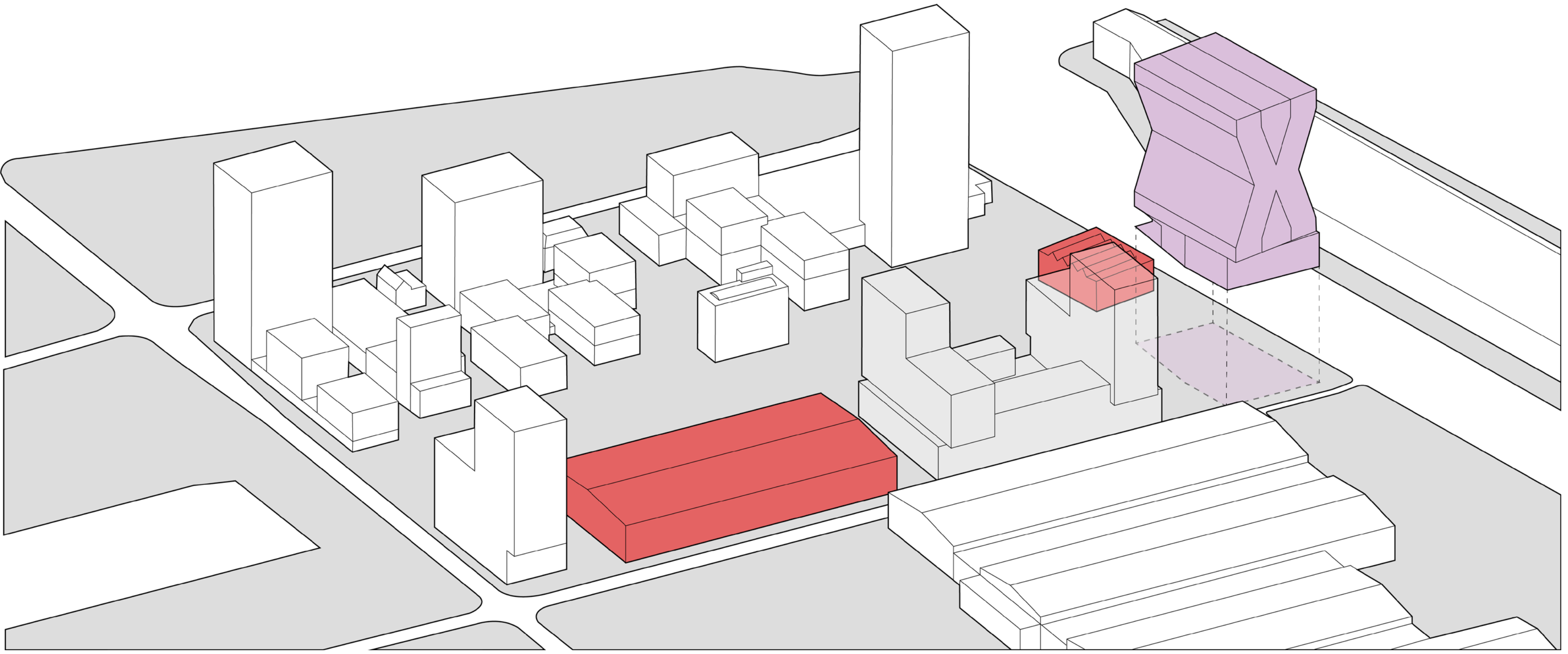
CO-LIVING

WORKSPACES

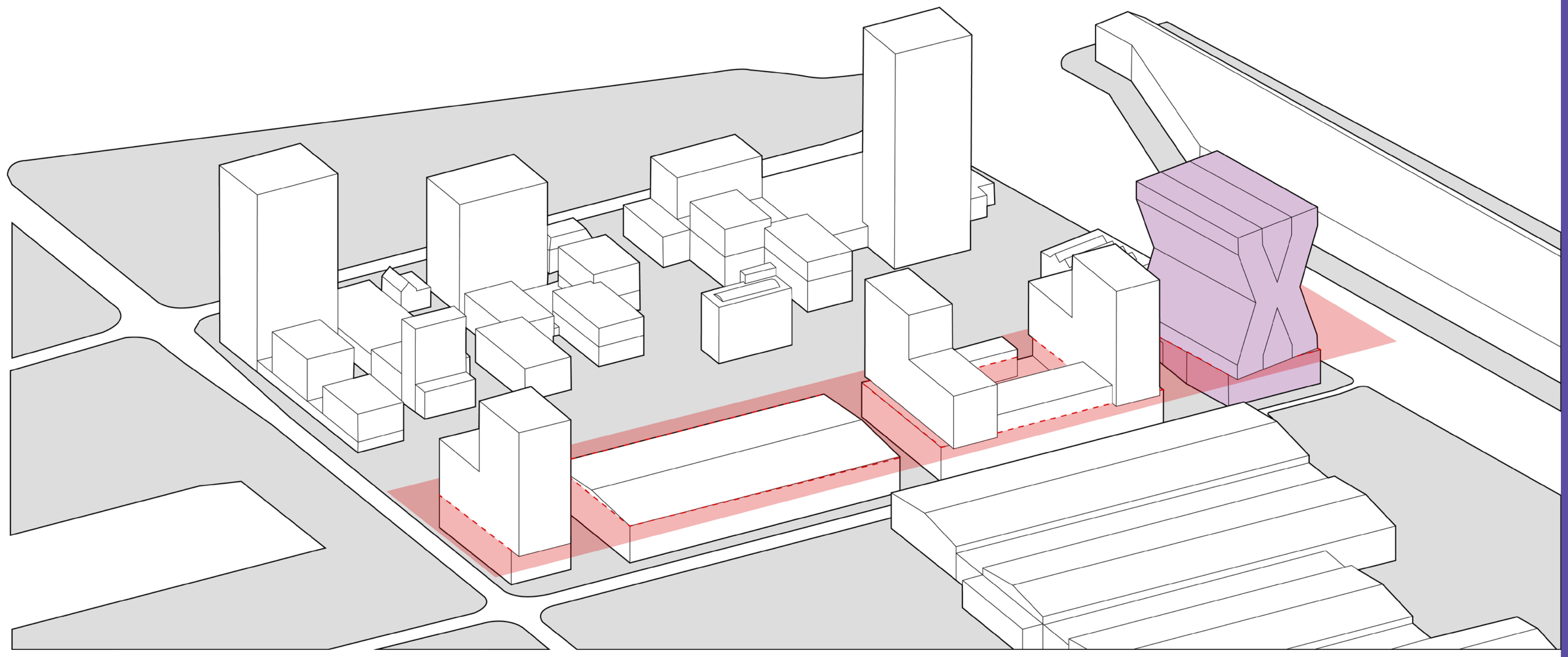
PUBLIC FUNCTIONS



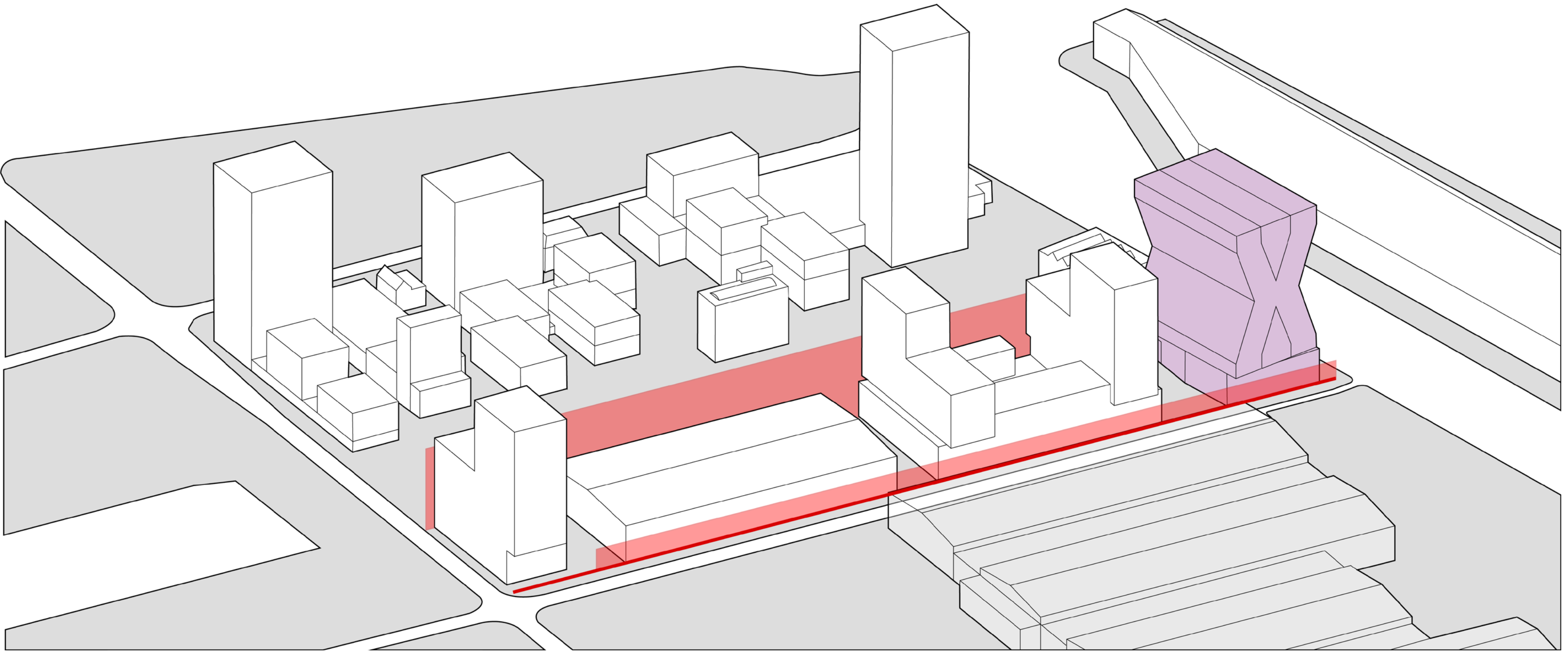

38.0
20.0
82.0
15.0
100.0
47.0
18.6
22.0
N



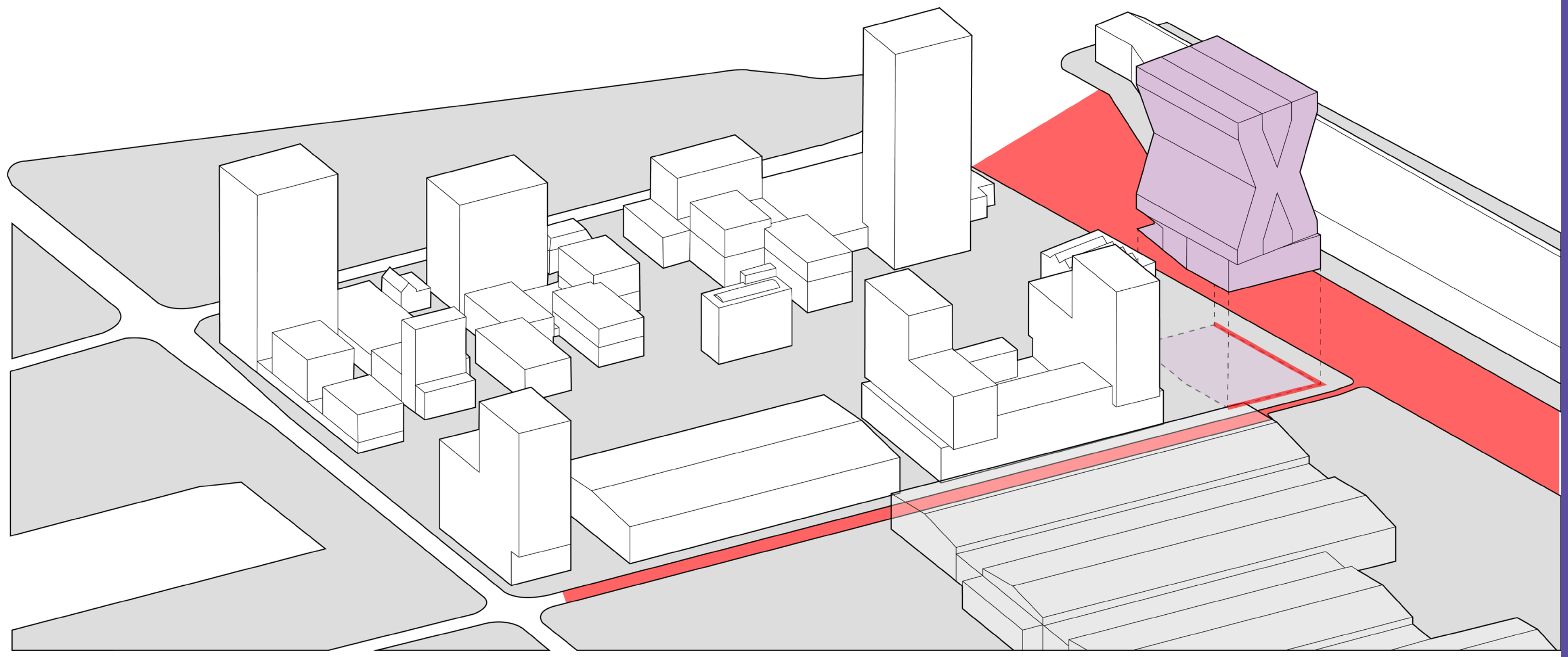
KEEP MONUMENTS



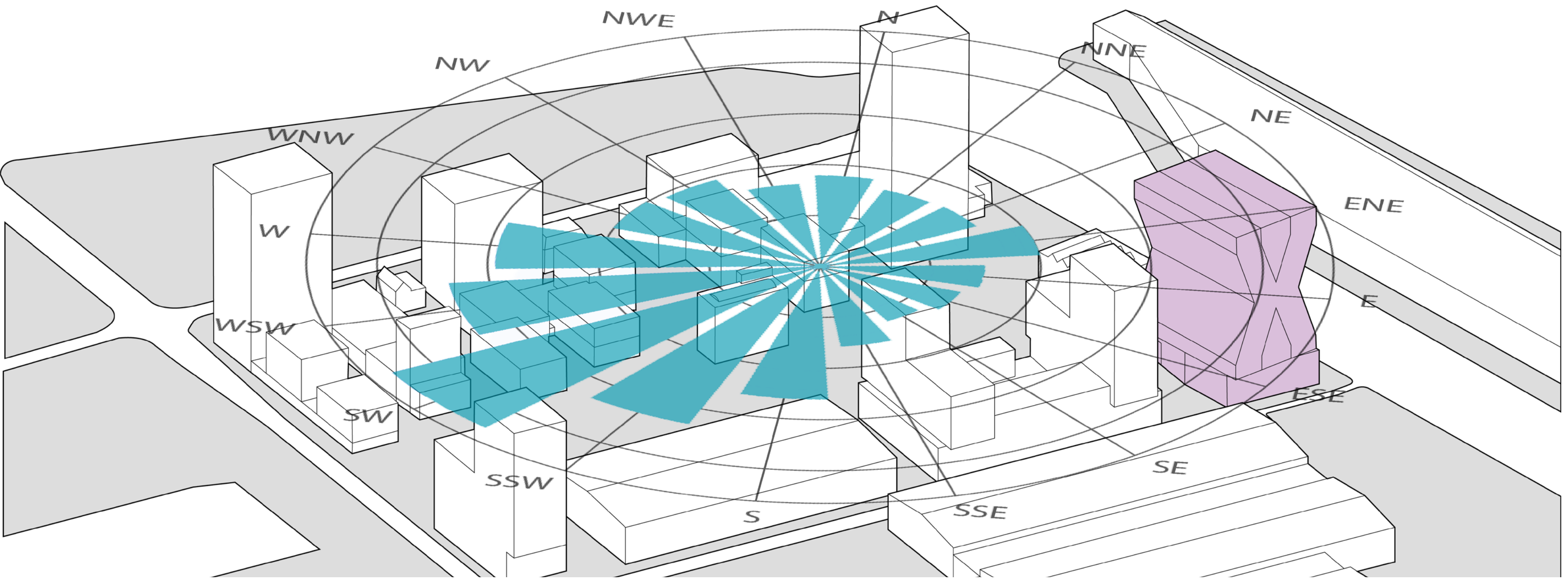
FOLLOW THE WAREHOUSE HEIGHT



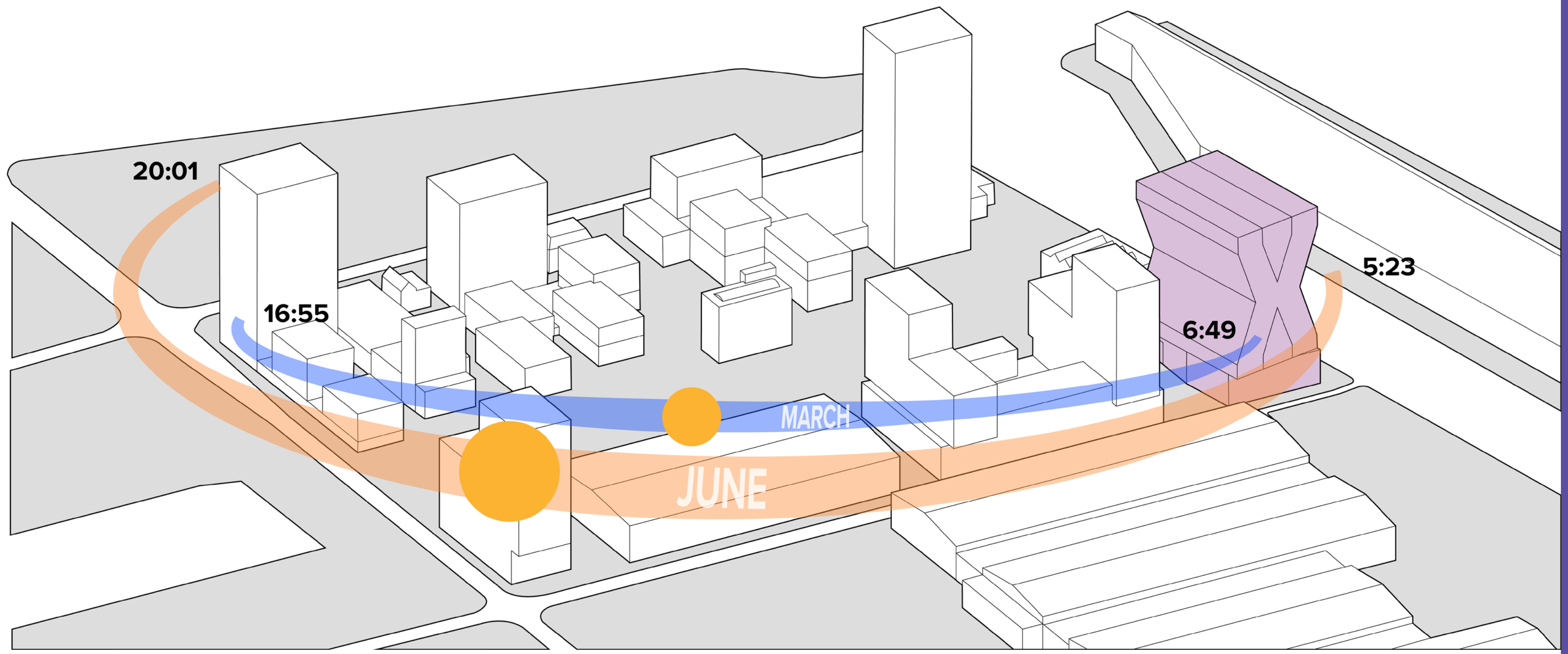
ALIGN TO THE WAREHOUSE



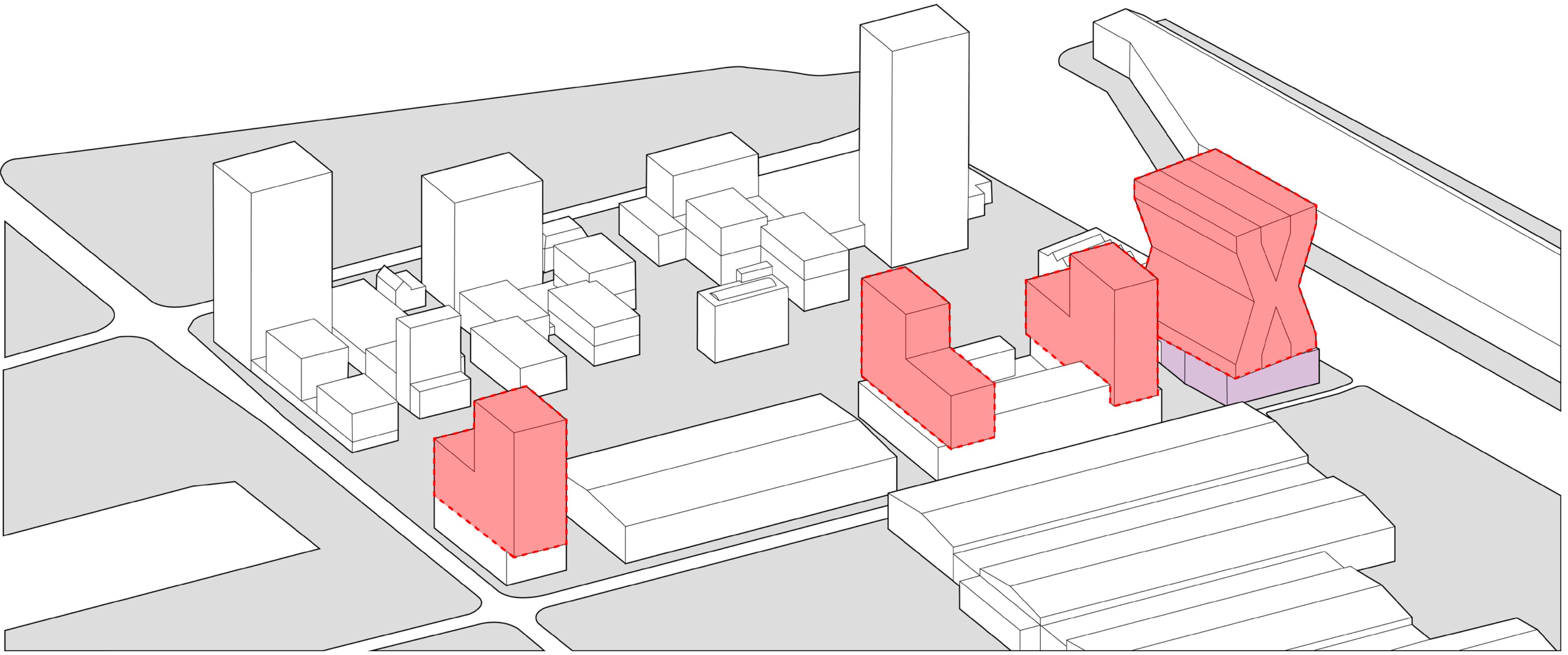
FOLLOW THE STREET LINES



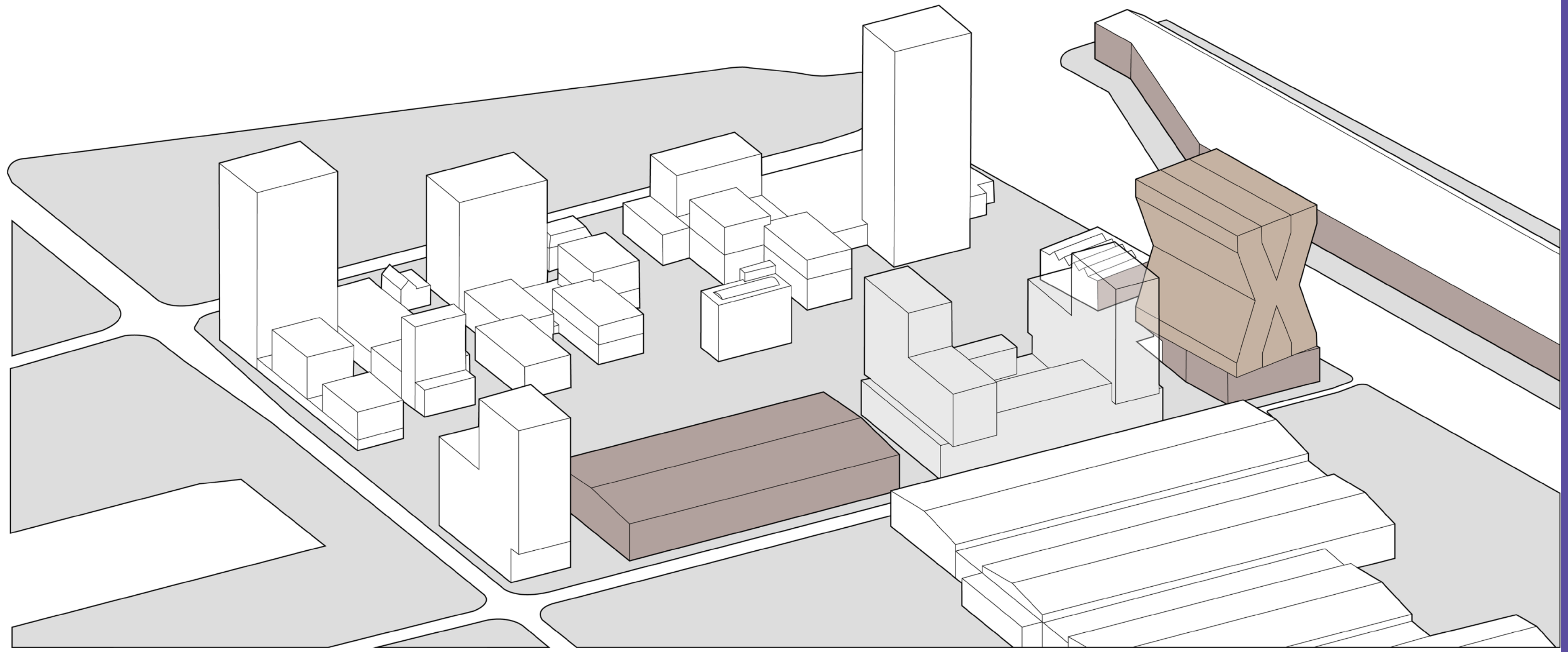
WIND IN THE AREA



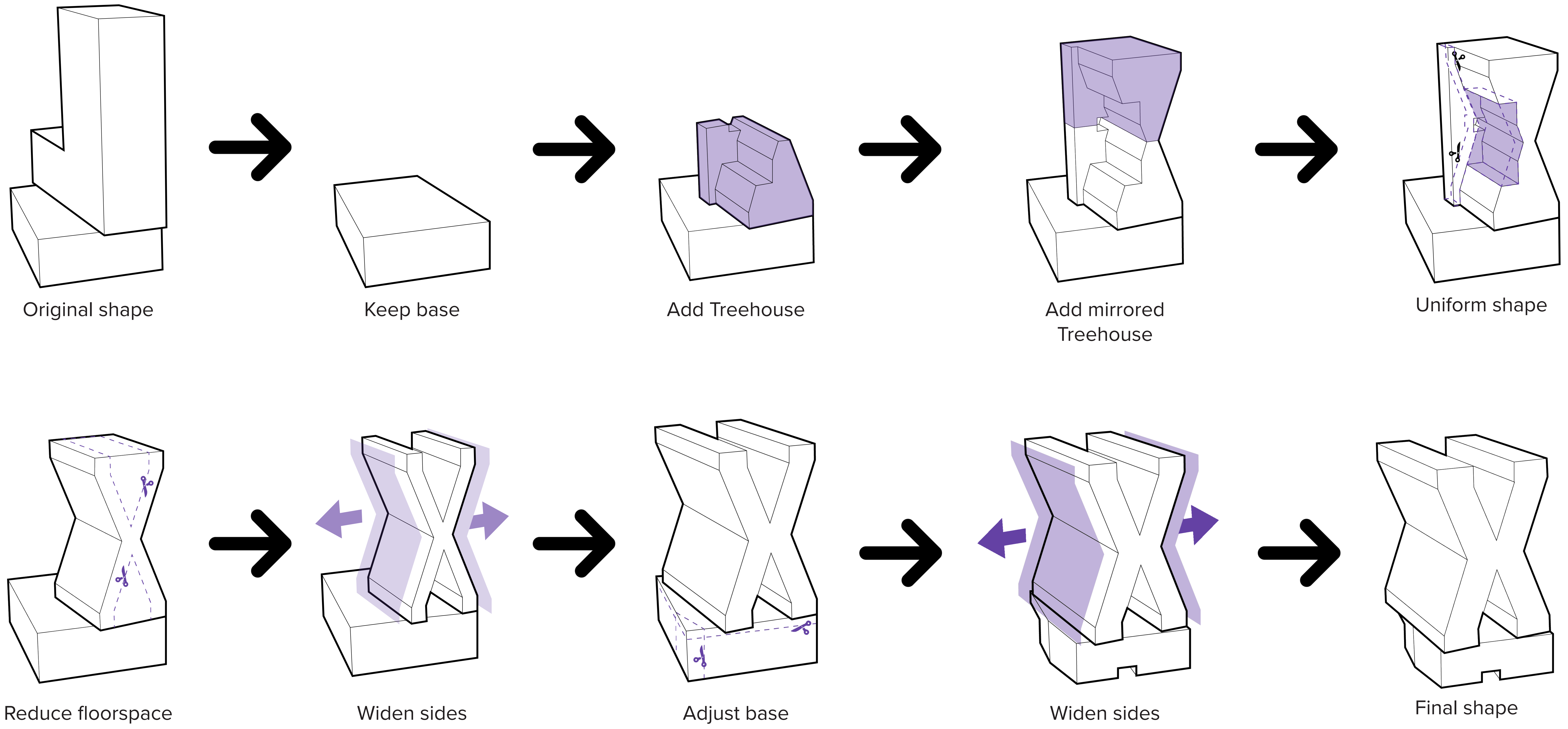
SUN PATH IN AREA



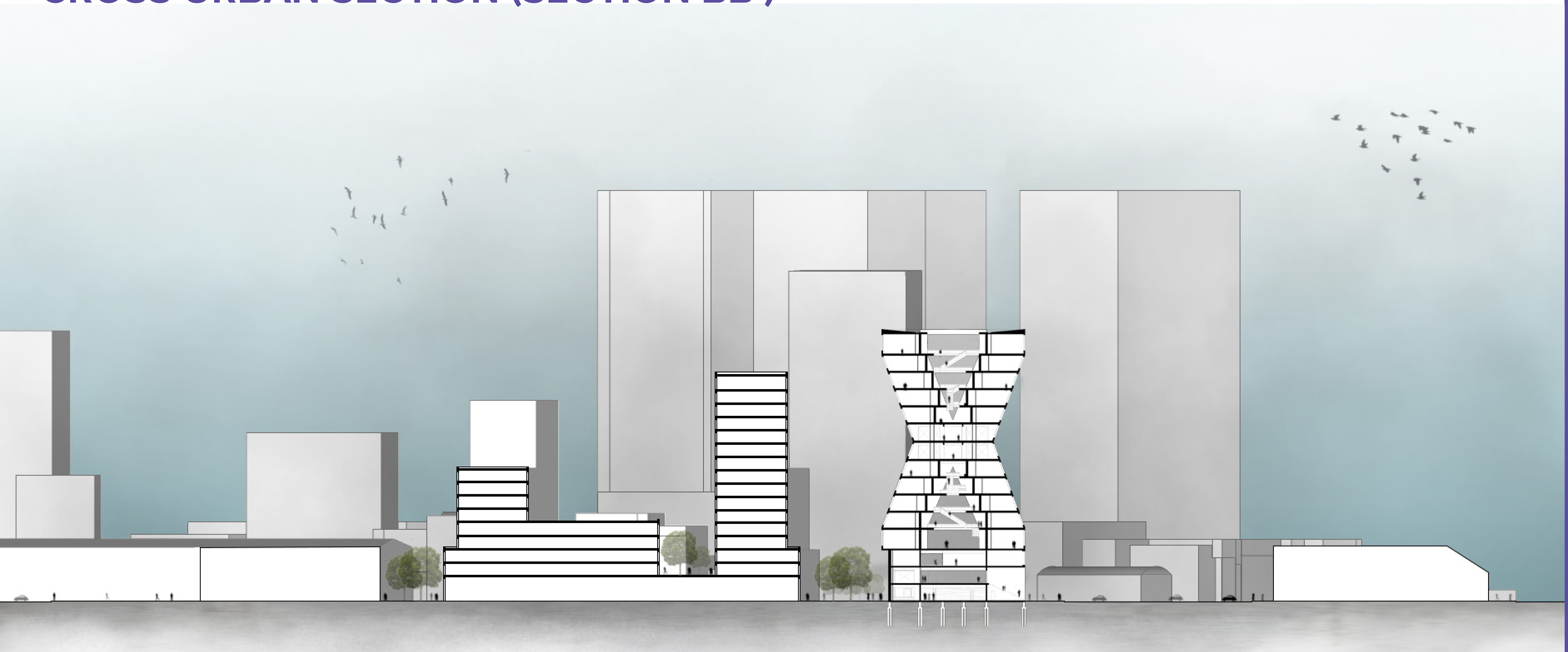
TOWER PLACEMENT INSPIRED BY SUN AND WIND

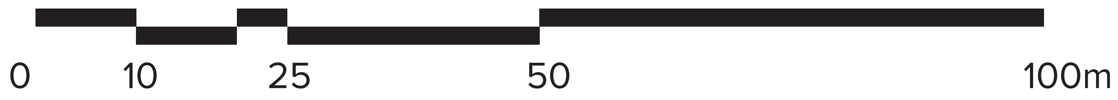


USE SIMILAR COLOR / COLOR PALETTE AS BUILDINGS IN THE AREA

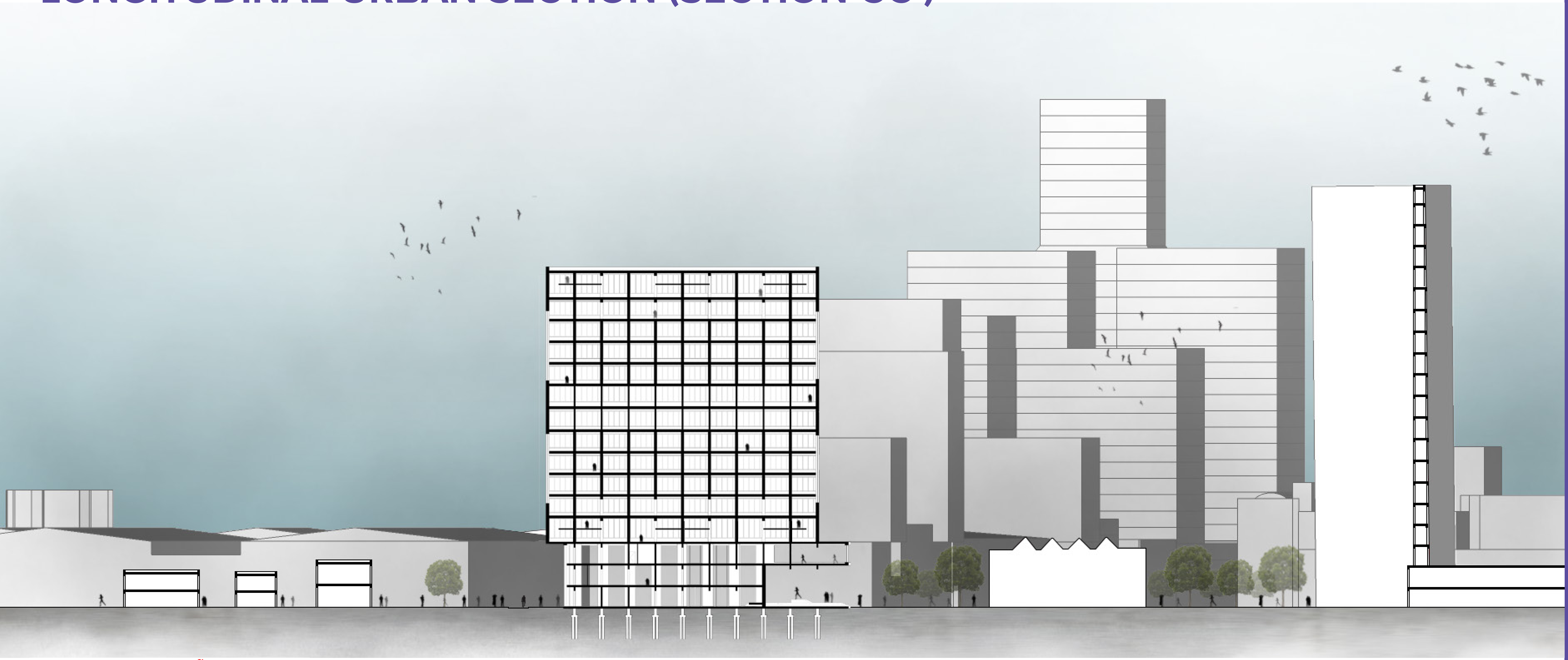

Original shape
Keep base
Add Treehouse
Add mirrored Treehouse
Uniform shape
Reduce floorspace
Widen sides
Adjust base
Widen sides
Final shape

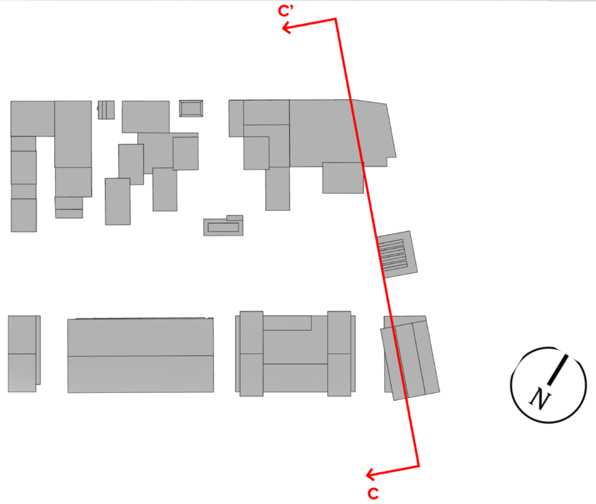
CROSS URBAN SECTION (SECTION BB’)

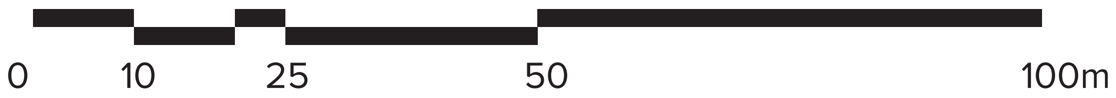




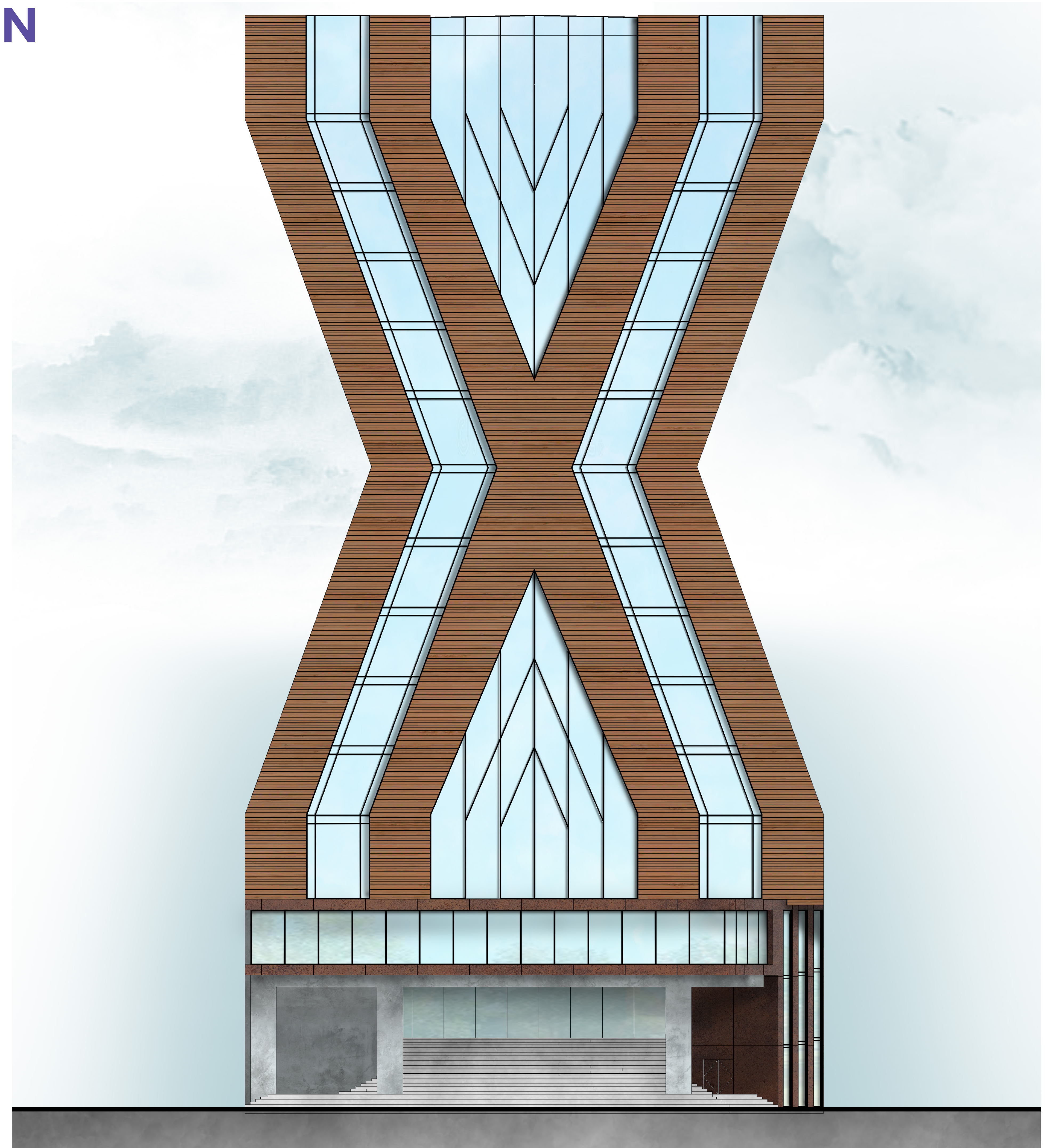
LONGITUDINAL URBAN SECTION (SECTION CC’)





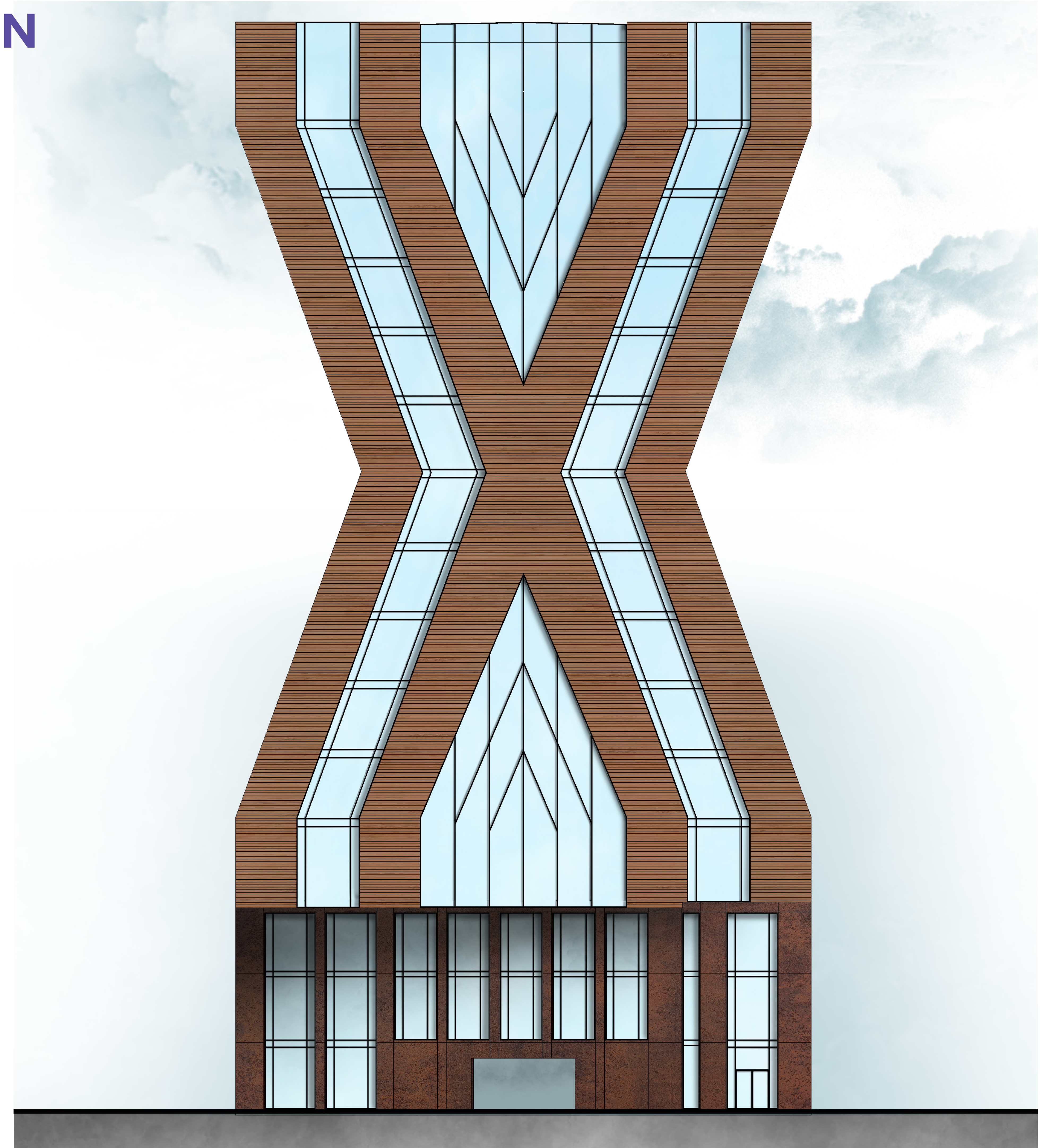


NORTH ELEVATION



EAST ELEVATION

SOUTH ELEVATION



WEST ELEVATION

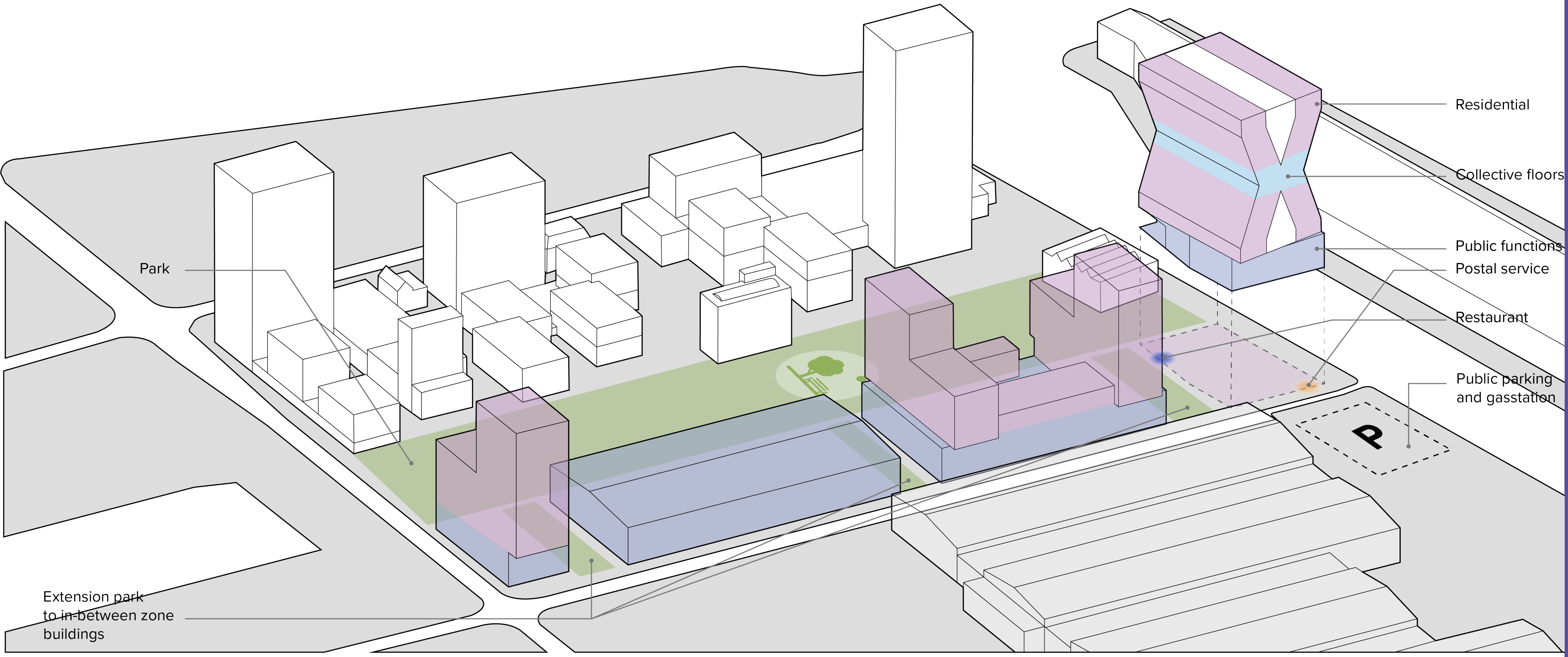
Design brief
Plot size: 1719 m^2
Gross floor area: 16.562 m^2

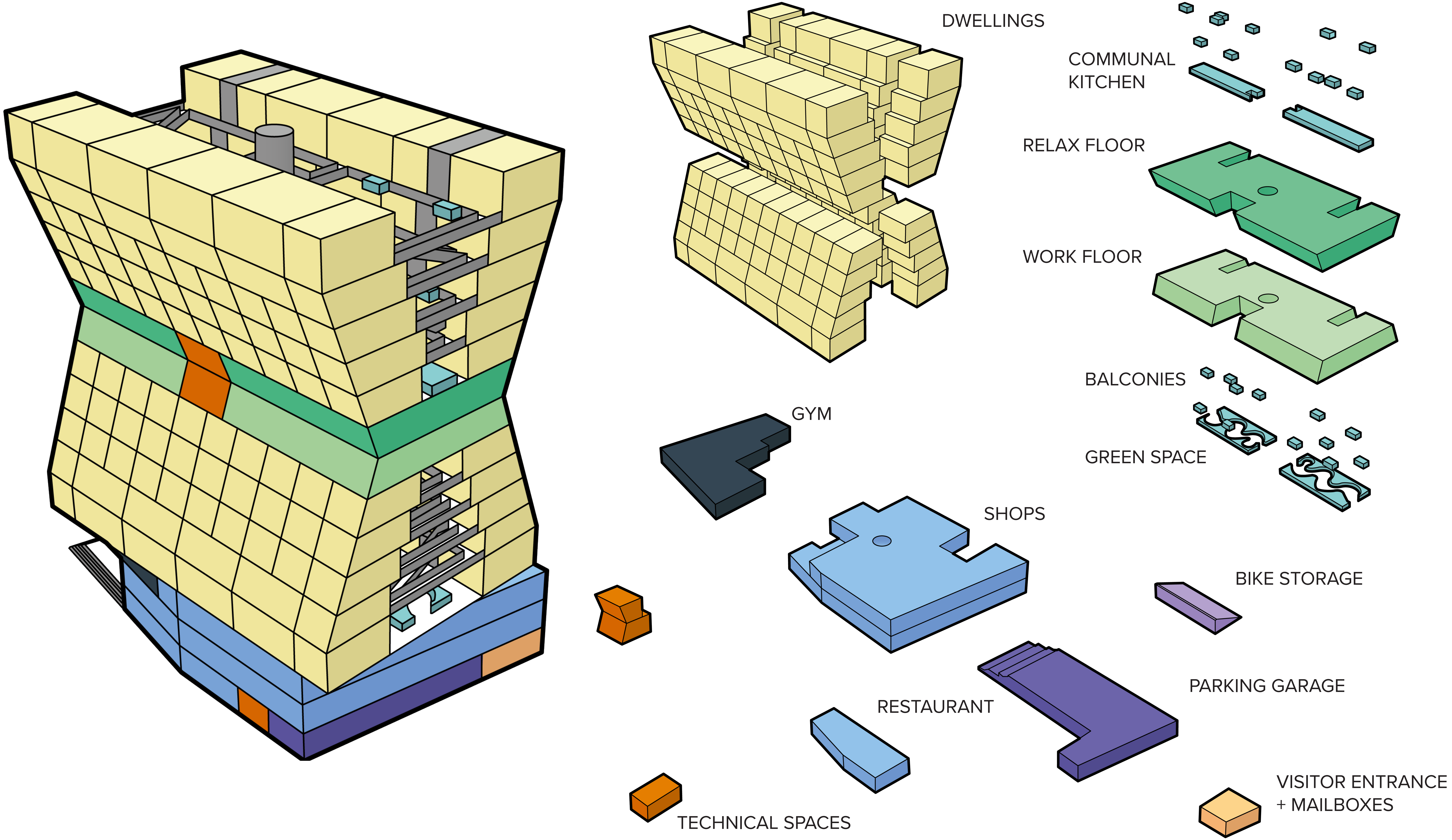
Dwellings

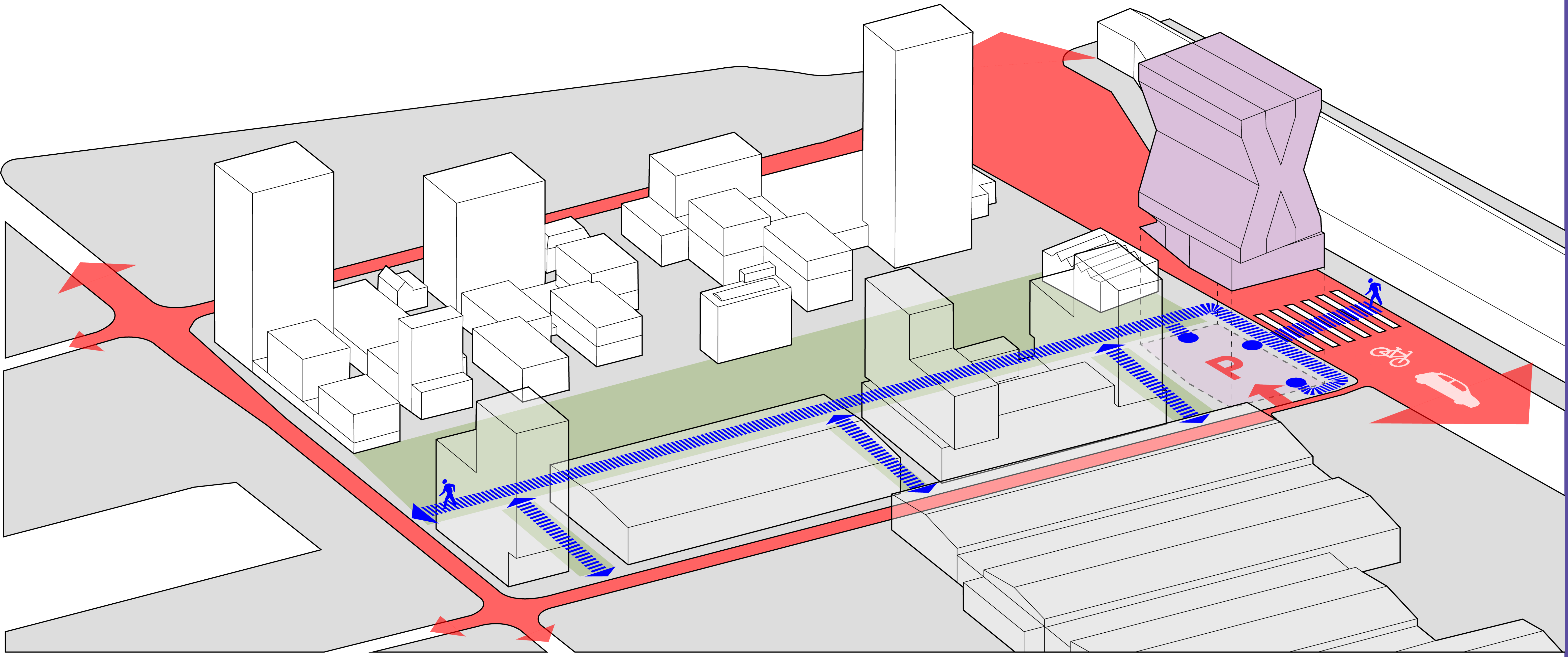
Amount of dwellings	156
Dwelling typology	Co-living apartment (27 m^2) Studio+ (36 m^2) Studio+ (38 m^2) Corner co-living dwelling (40 m^2) Corner apartment (52 m^2) Corner apartment (55 m^2) Loft (60 m^2) Multilayer corner apartment (75 m^2) Large apartment 2 (77 m^2) Large apartment (82 m^2) Multilayer large apartment (116 m^2)
Size of dwellings:	27 - 116 m^2

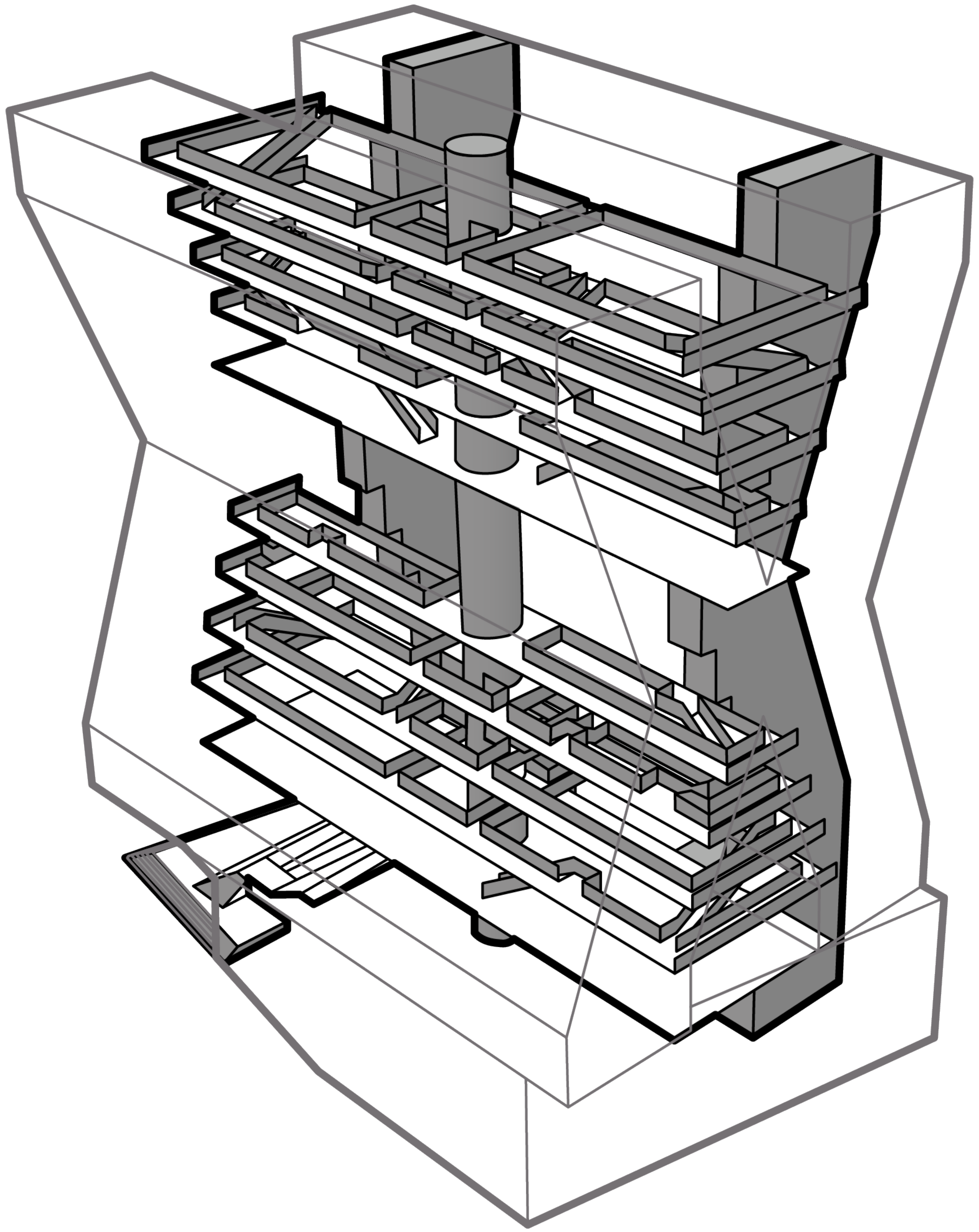
Collective functions
Entertainment floor, includes laundry room (820 m^2)
Communal workfloor (968 m^2)
Bike storage
Mailboxes

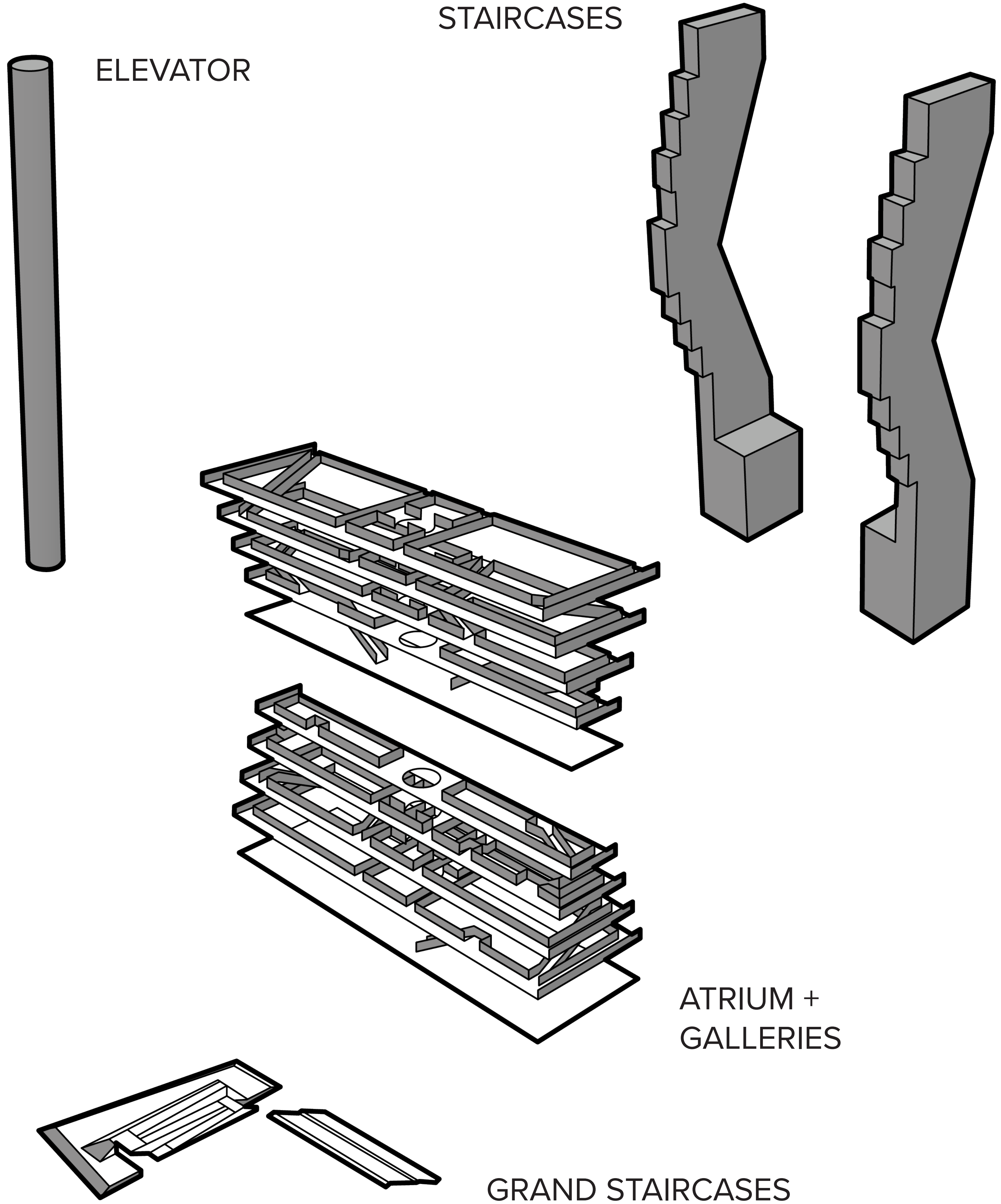
Public functions
Electronica, ICT and repair shop (130m^2)
Restaurant (200 m^2)
Fitness (370 m^2)
Rentable commercial space on first and second floor

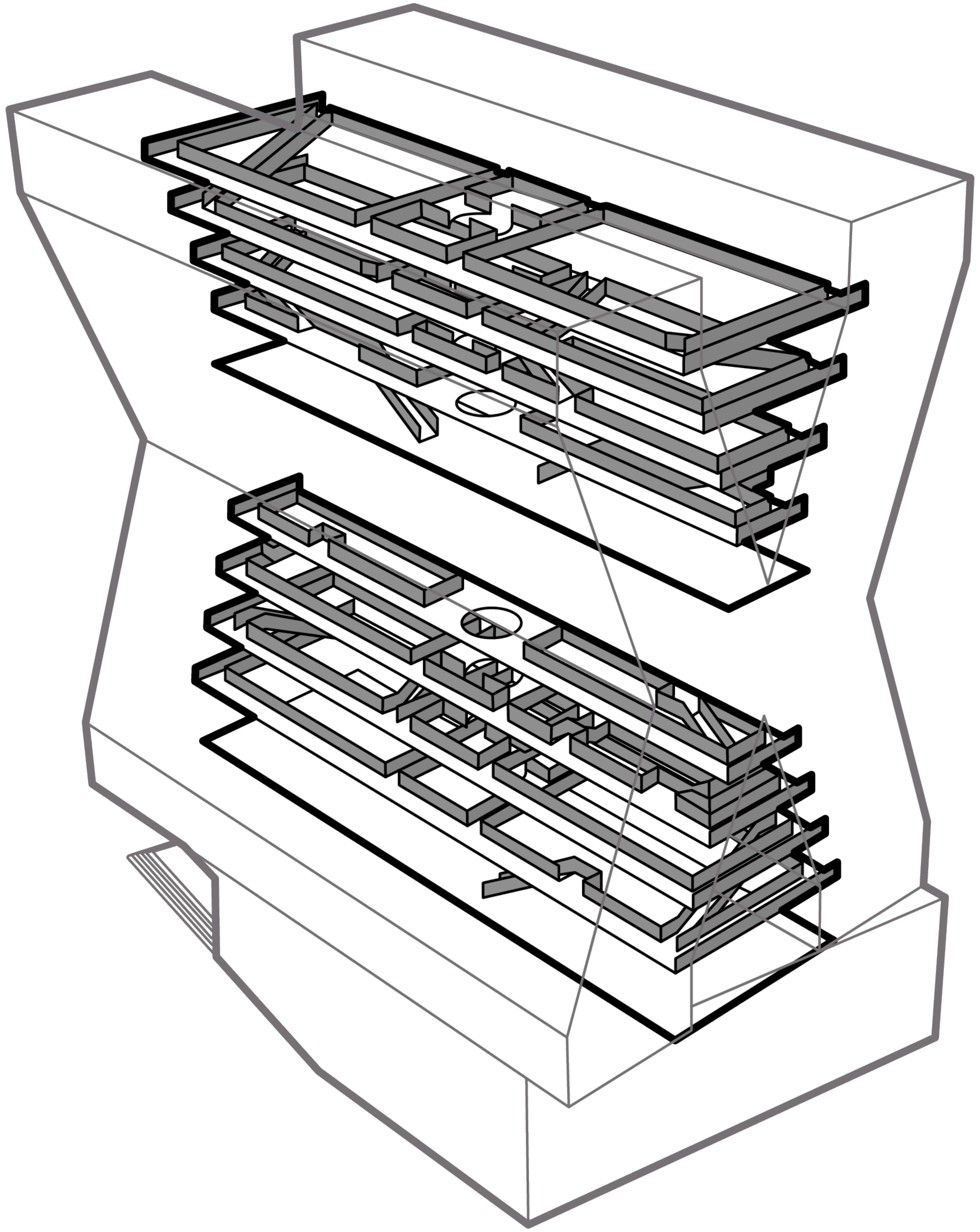

Residential
Collective floors
Public functions
Postal service
Restaurant
Public parking
and gasstation
Park
Extension park
to in-between zone
buildings

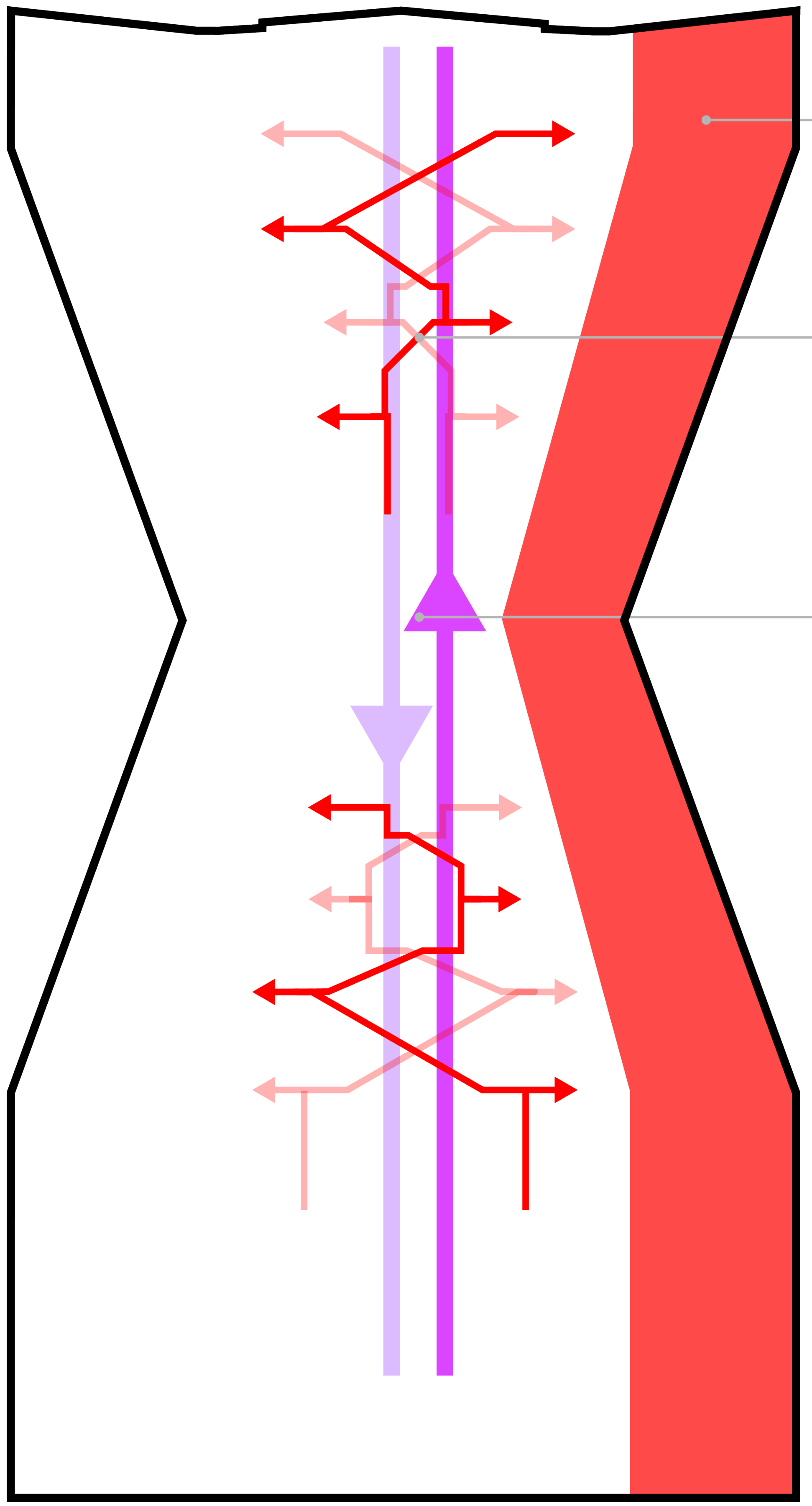

DWELLINGS
COMMUNAL
KITCHEN
RELAX FLOOR
WORK FLOOR
BALCONIES
GYM
GREEN SPACE
SHOPS
BIKE STORAGE
PARKING GARAGE
RESTAURANT
VISITOR ENTRANCE
+ MAILBOXES
TECHNICAL SPACES


P




STAIRCASES
ELEVATOR
ATRIUM +
GALLERIES
GRAND STAIRCASES

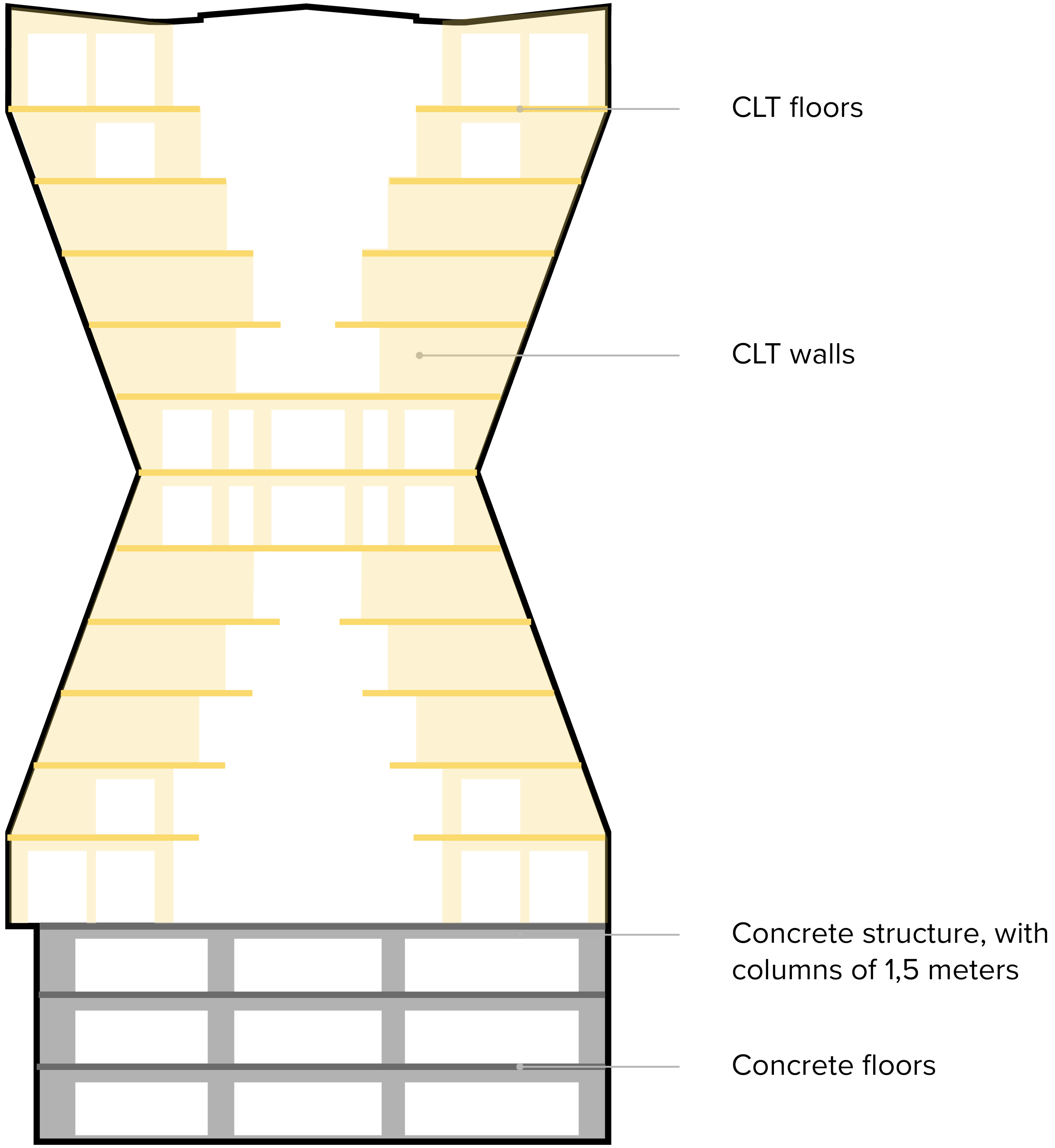


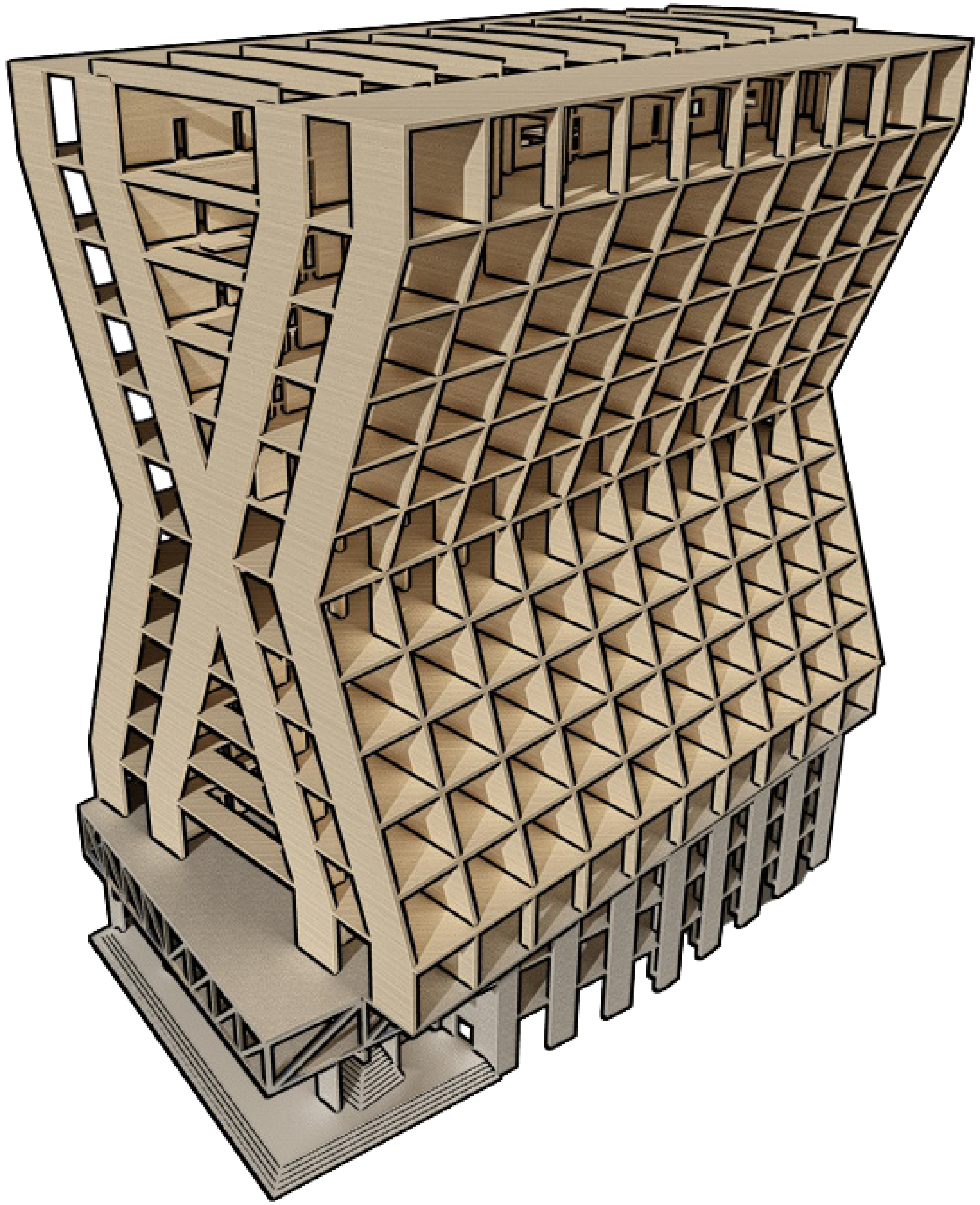


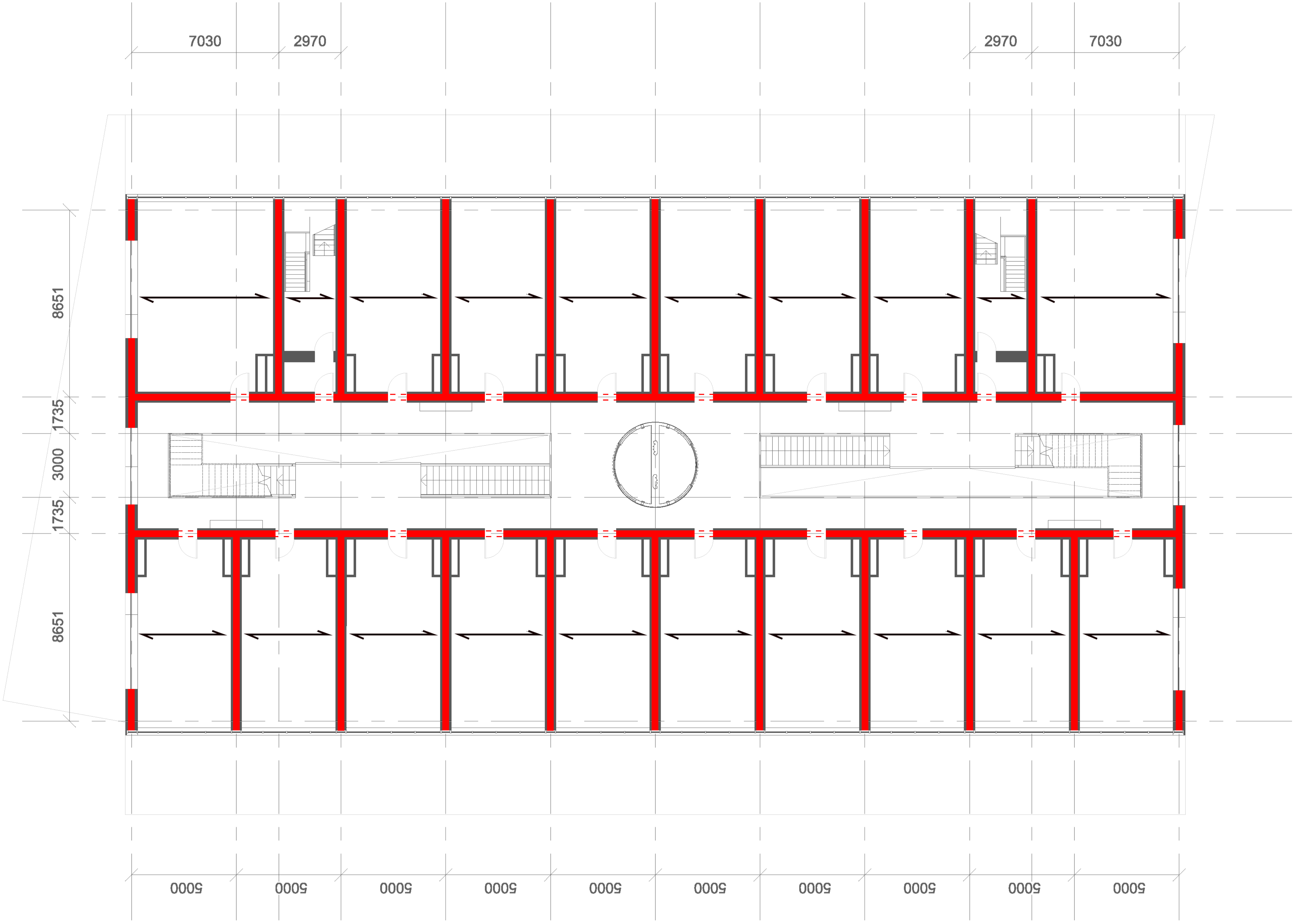
Staircases

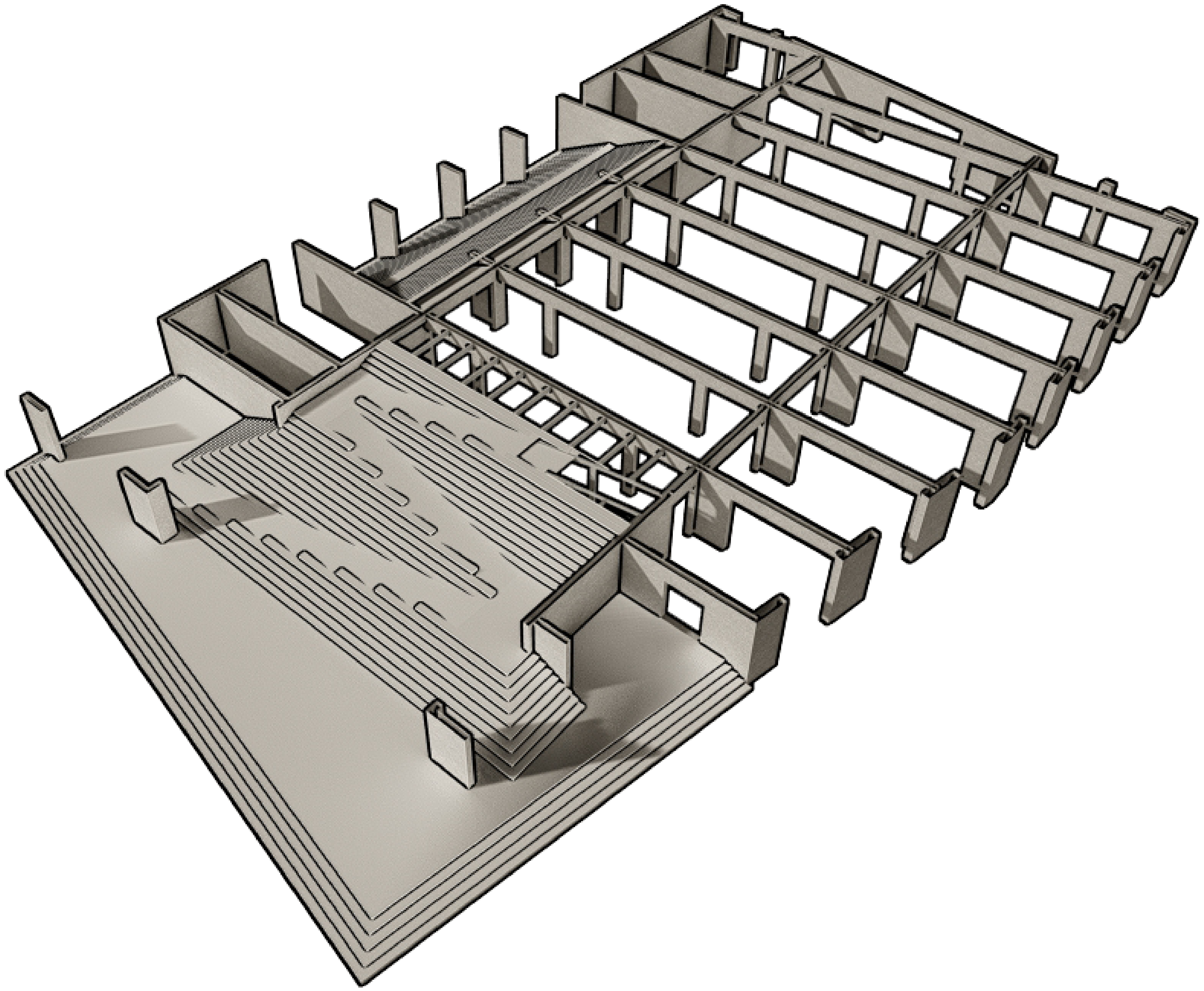
Atria circulation system consisting out of 2 separate systems within 1 atrium

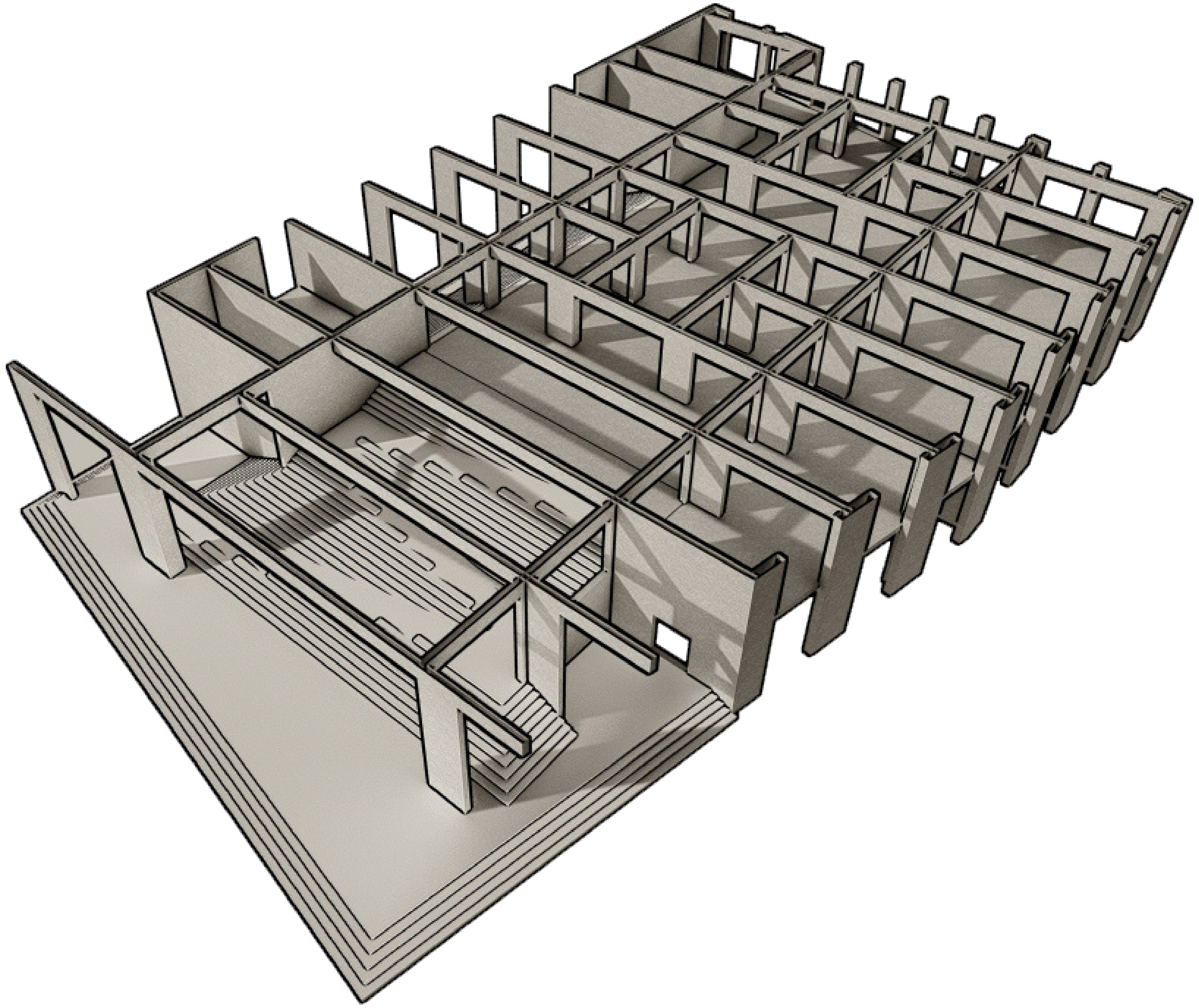
Central circular elevator allowing movement between 1st - top floor

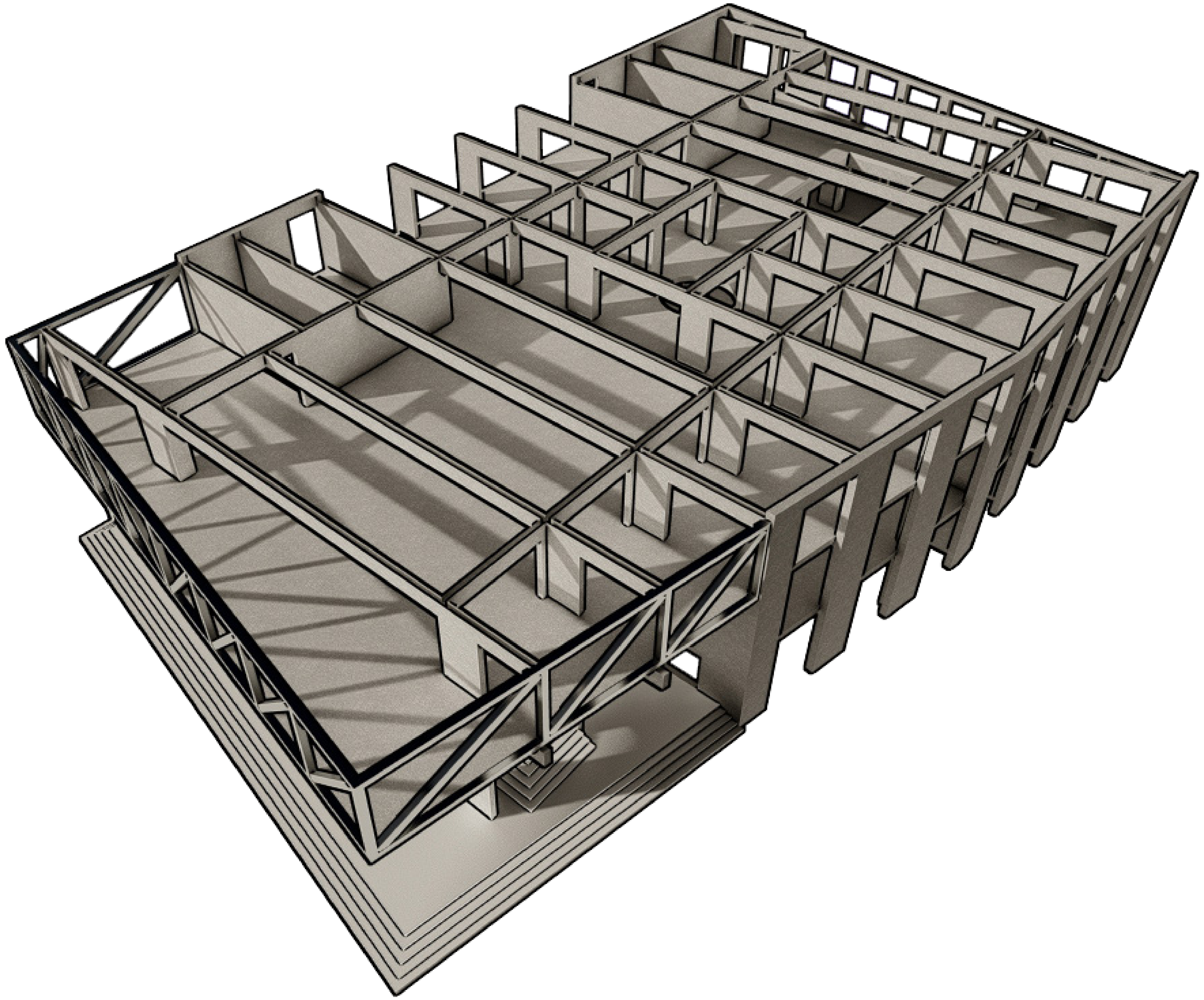

CLT floors
CLT walls
Concrete structure, with columns of 1,5 meters
Concrete floors

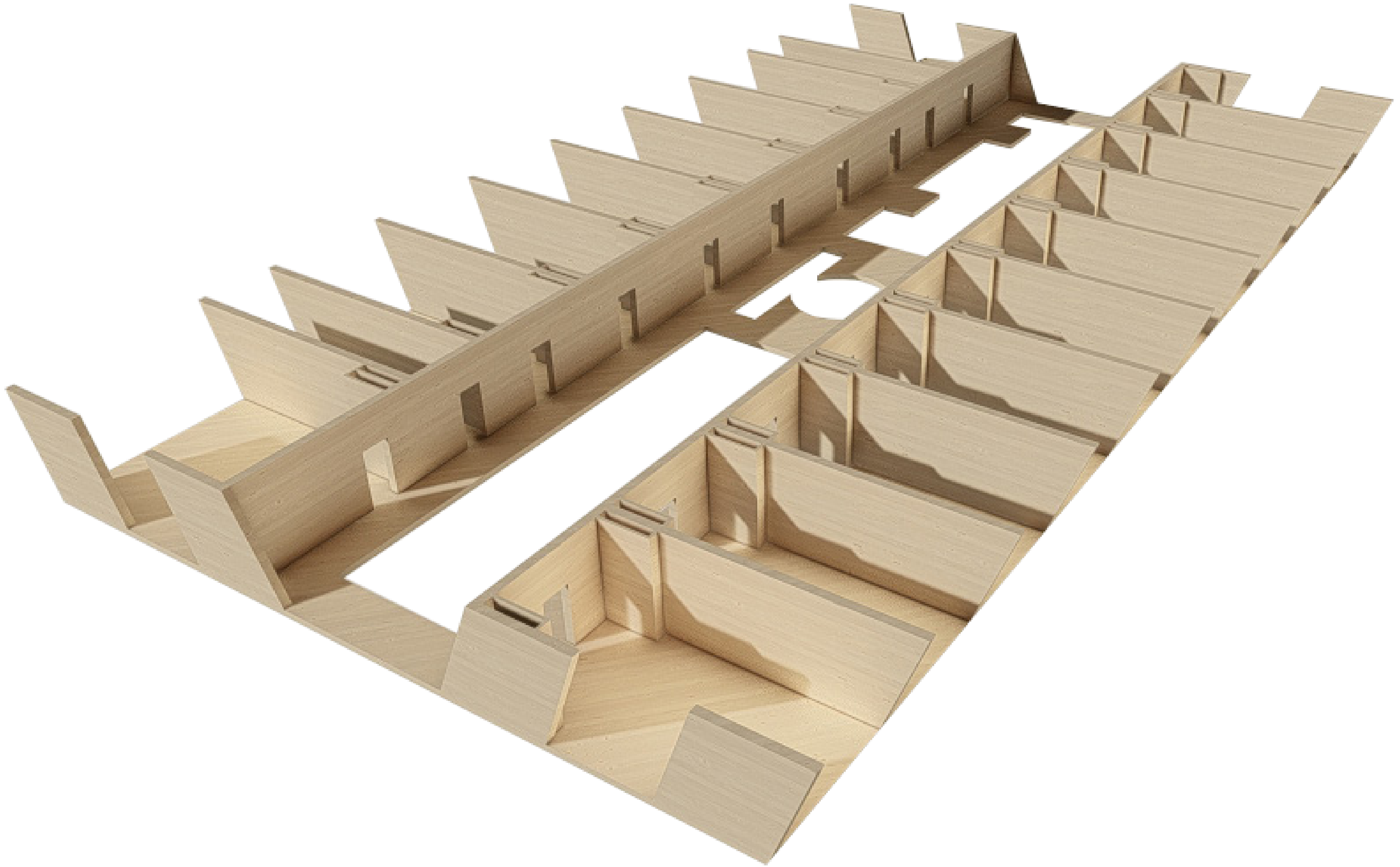


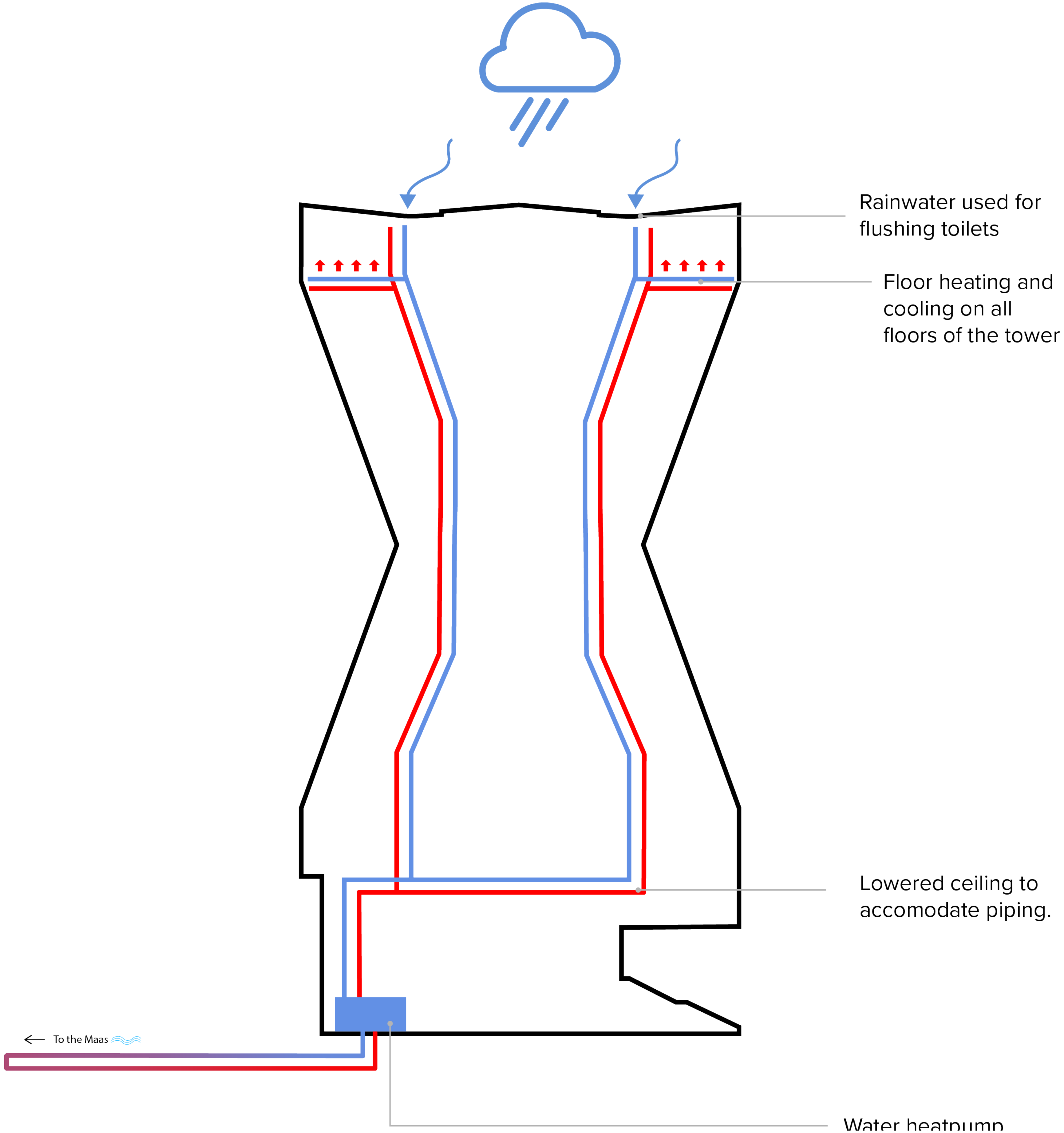

7030
2970
2970
7030
8651
1735
3000
1735
8651
5000
5000
5000
5000
5000
5000
5000
5000
5000
5000

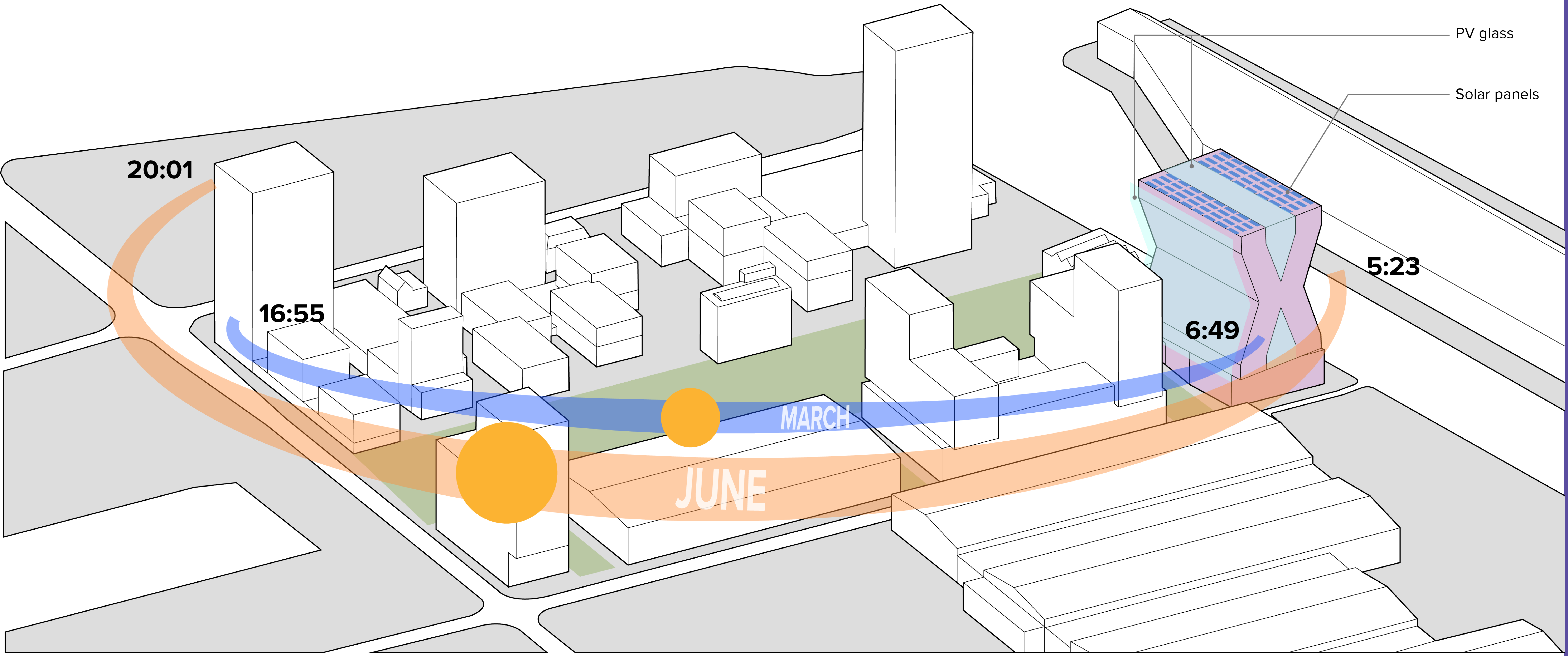


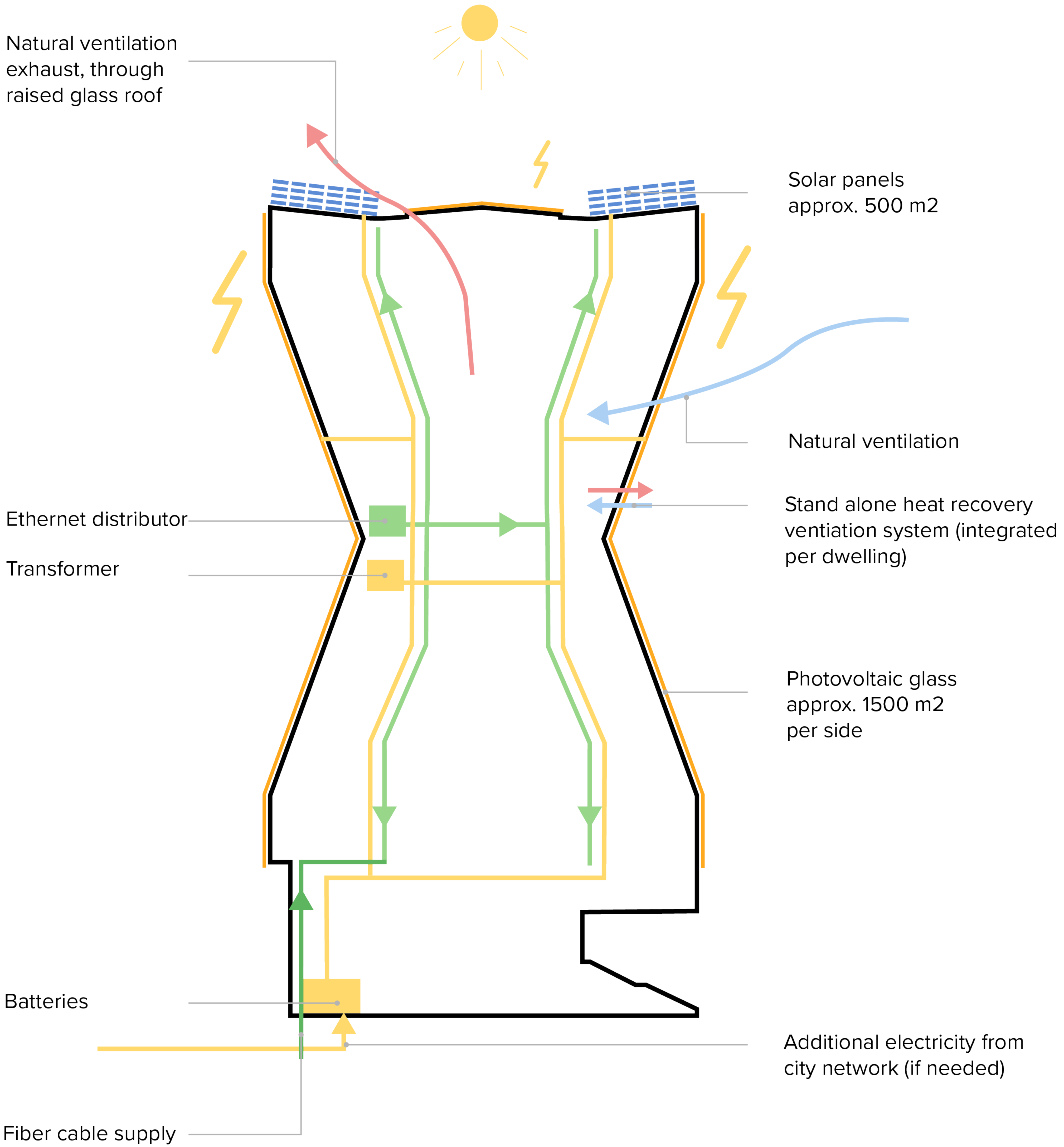




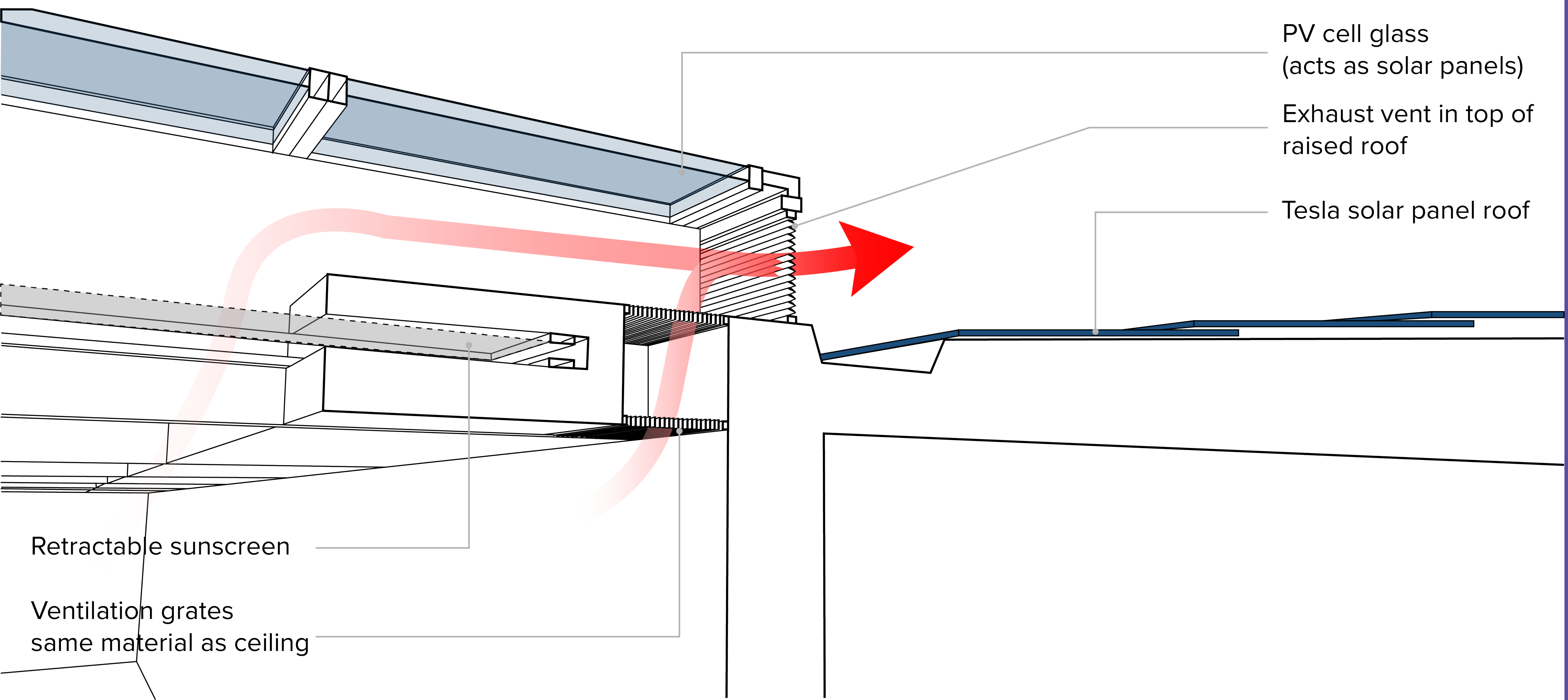



Rainwater used for
flushing toilets
Floor heating and
cooling on all
floors of the tower
Lowered ceiling to
accomodate piping.
Water heatpump
To the Maas

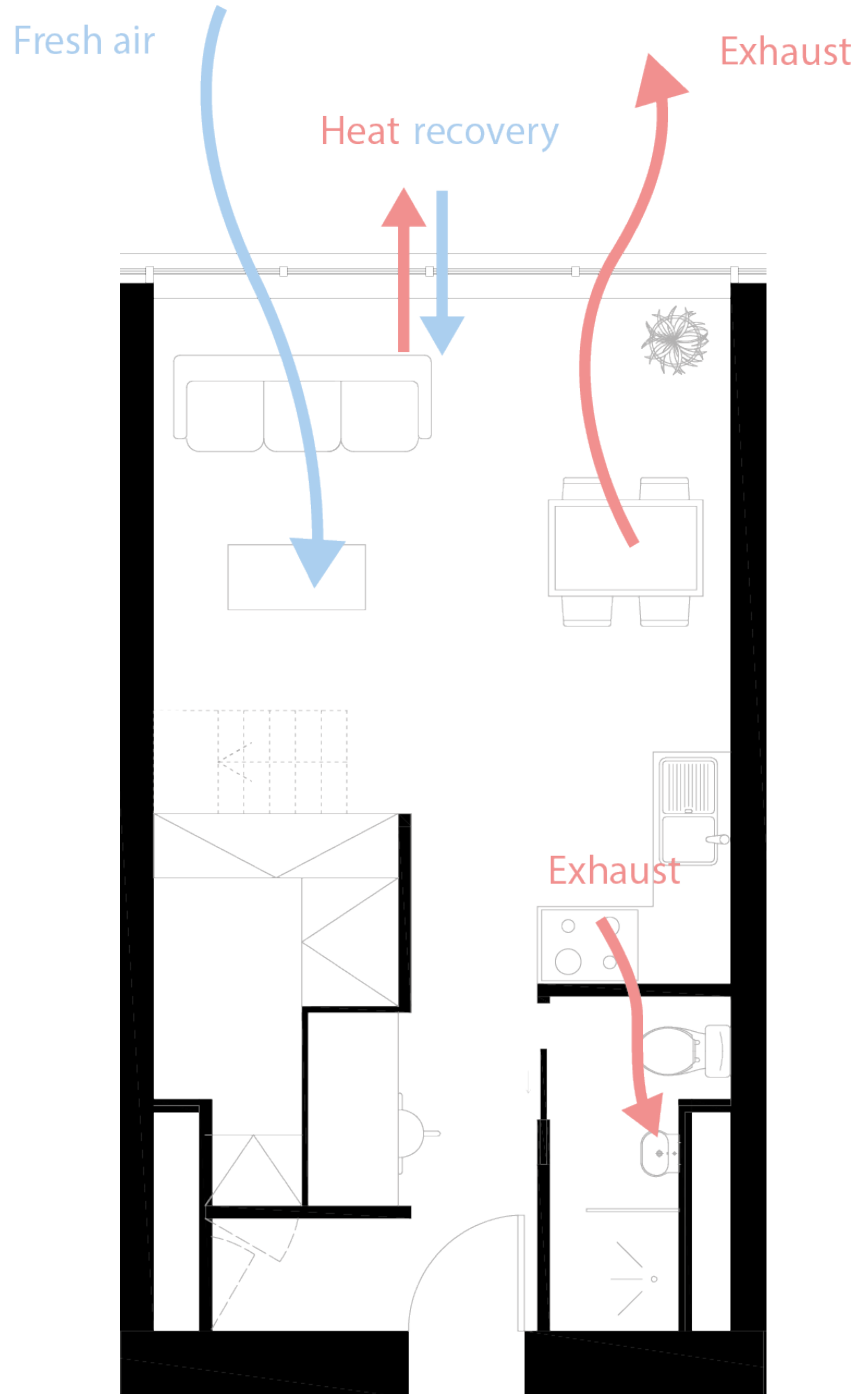

PV glass
Solar panels
20:01
16:55
5:23
6:49
MARCH
JUNE

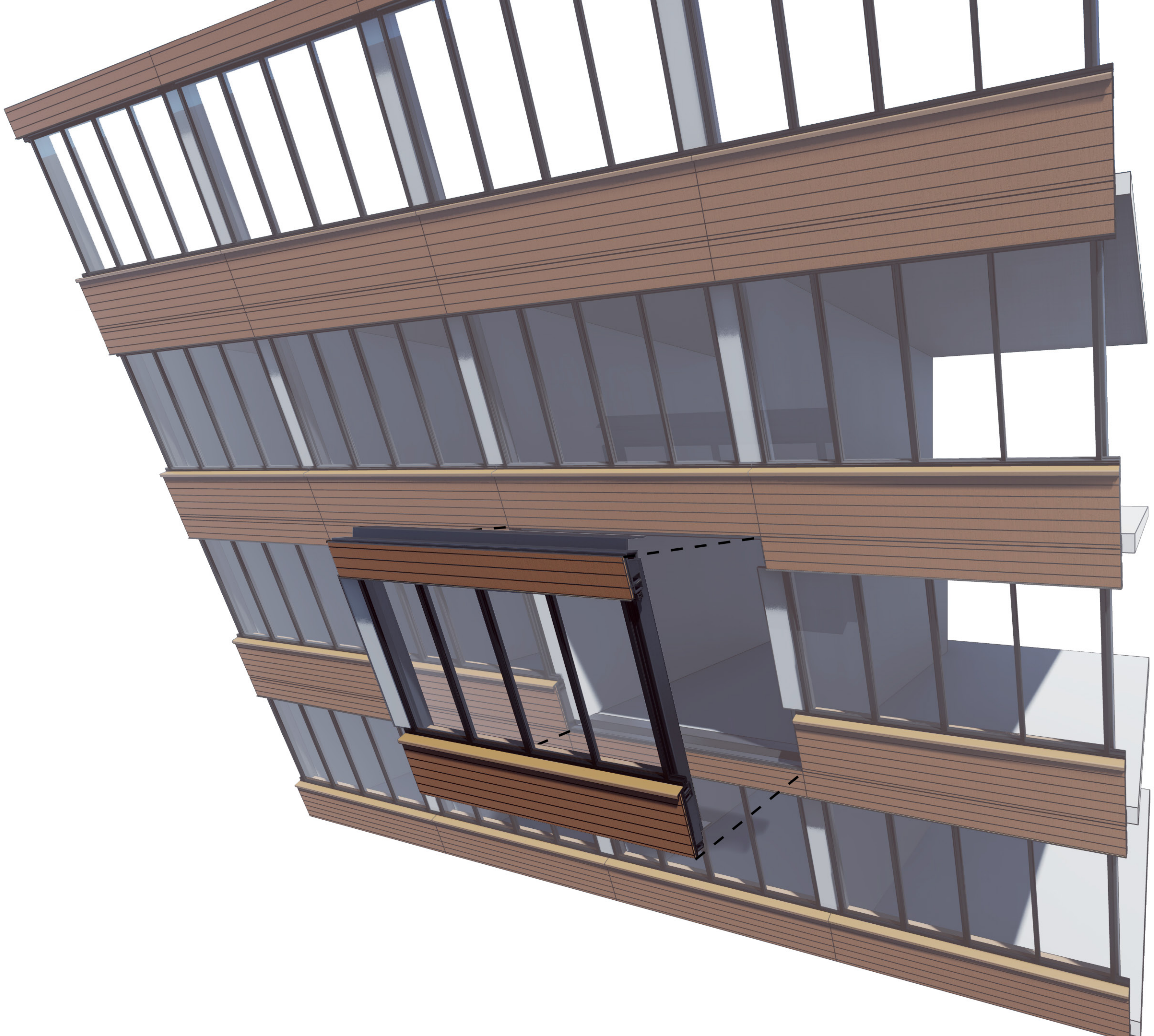


Natural ventilation exhaust, through raised glass roof
Solar panels approx. 500 m2
Natural ventilation
Stand alone heat recovery ventiation system (integrated per dwelling)
Ethernet distributor
Transformer
Photovoltaic glass approx. 1500 m2 per side
Batteries
Additional electricity from city network (if needed)
Fiber cable supply

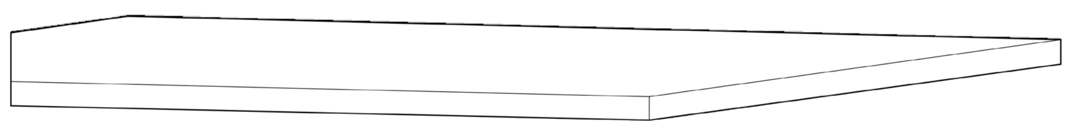


PV cell glass
(acts as solar panels)
Exhaust vent in top of
raised roof
Tesla solar panel roof
Retractable sunscreen
Ventilation grates
same material as ceiling

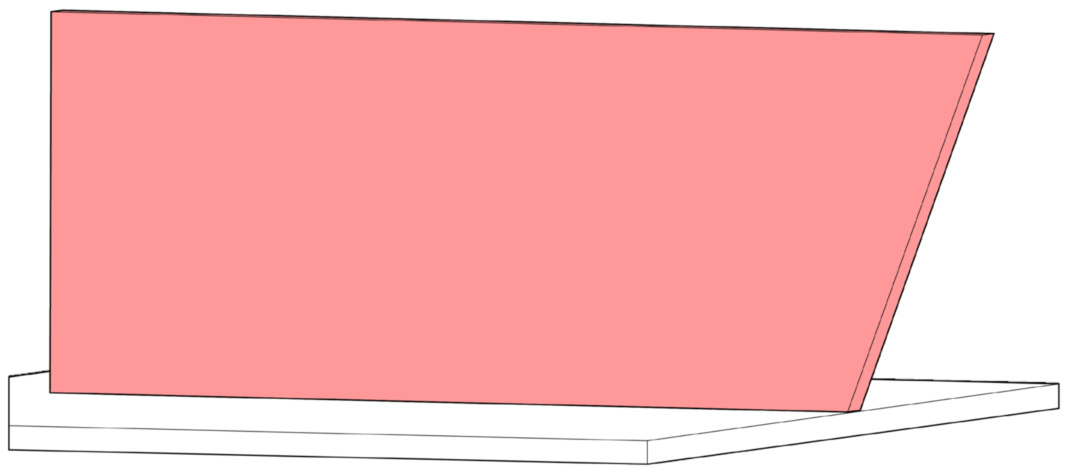

Fresh air
Heat recovery
Exhaust
Exhaust



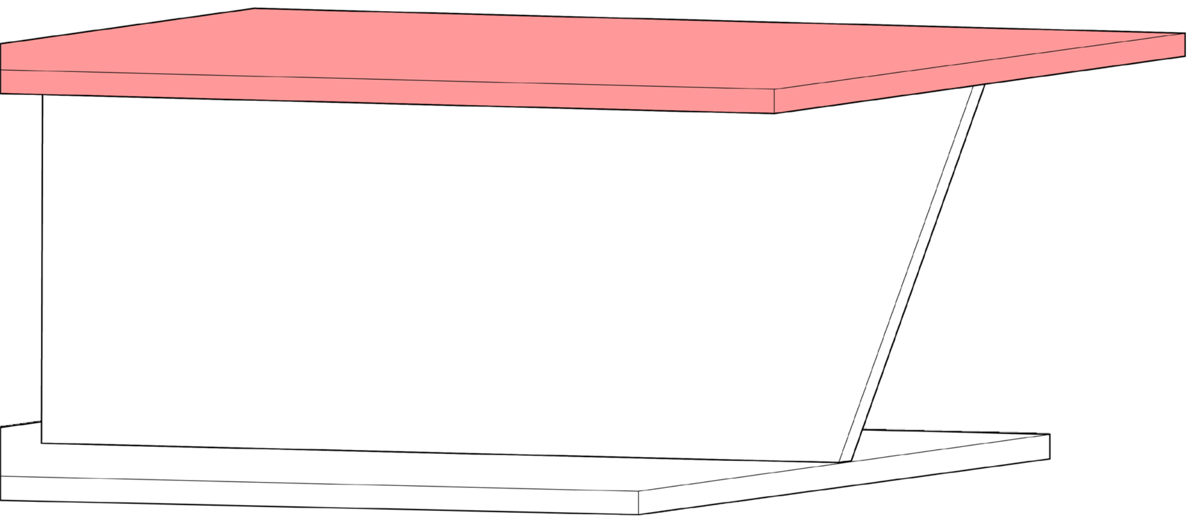
1. PLACE FLOOR



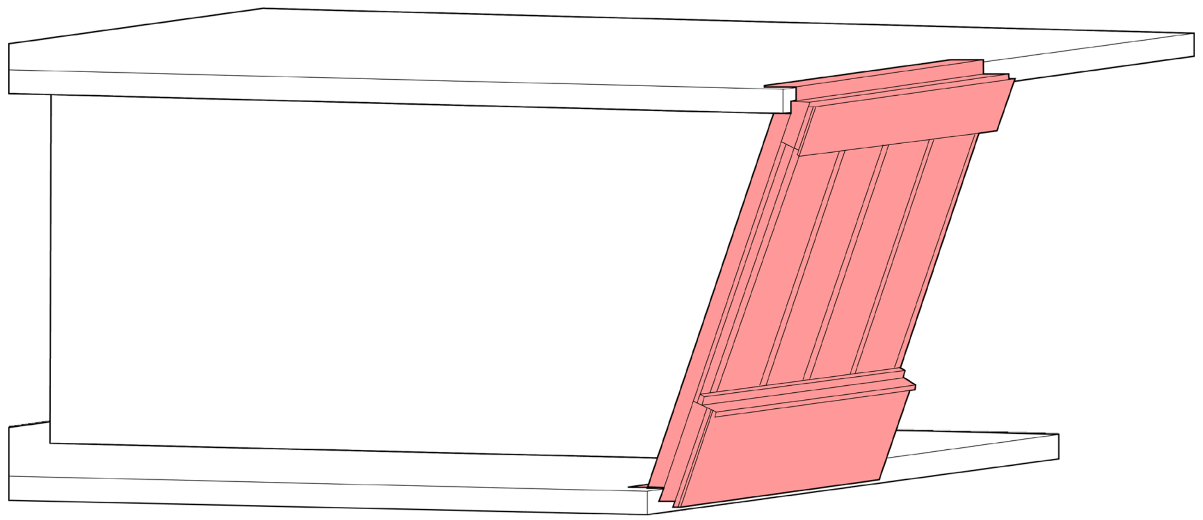
2. ADD WALLS



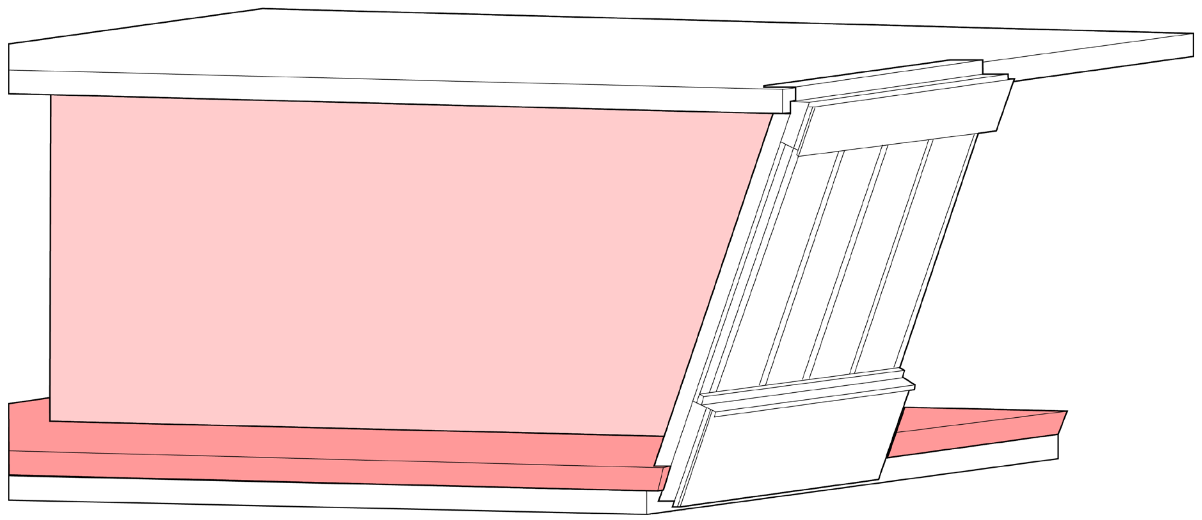
3. PLACE SECOND FLOOR

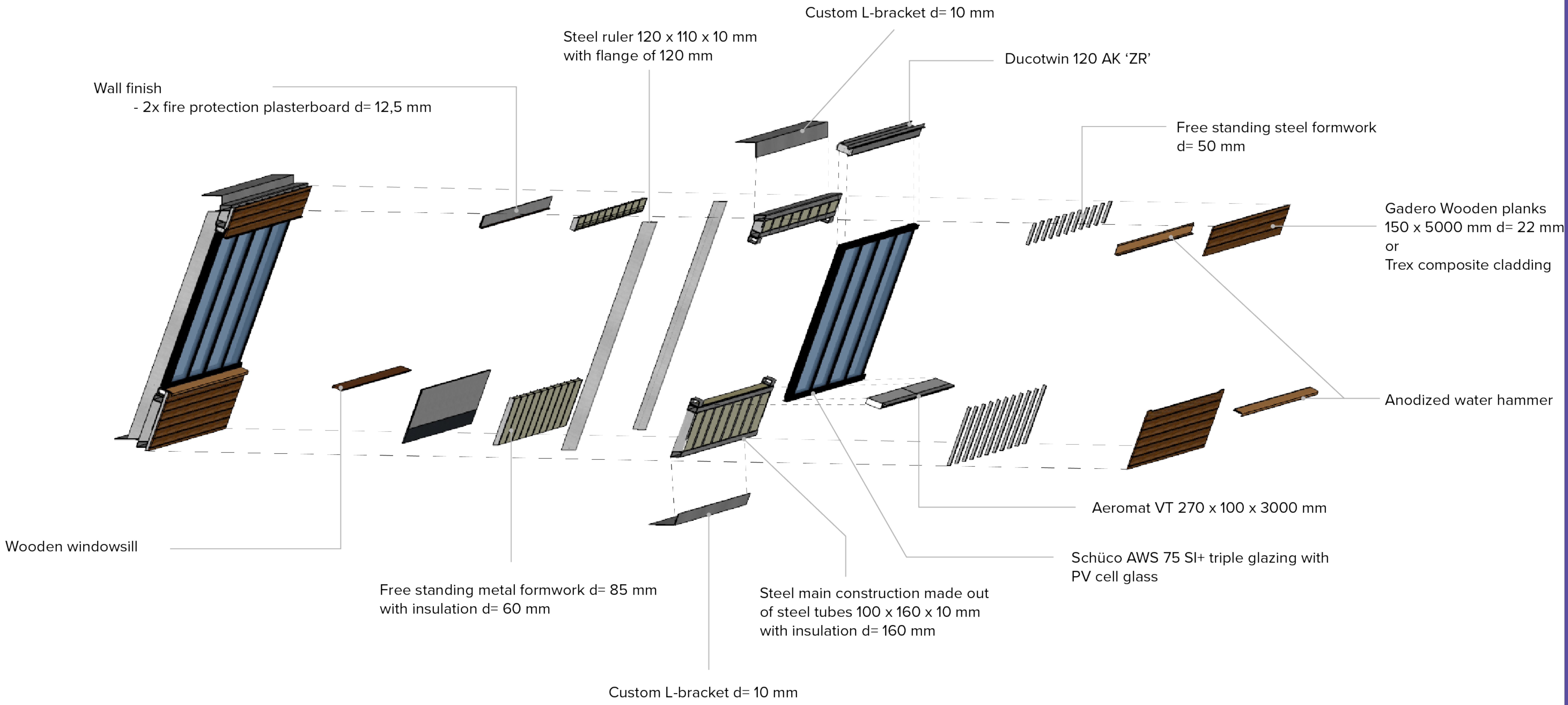


4. PLACE PREFAB FAÇADE ELEMENT



5. FINISH THE INTERIOR, BY ADDING FLOOR AND WALL FINISHES

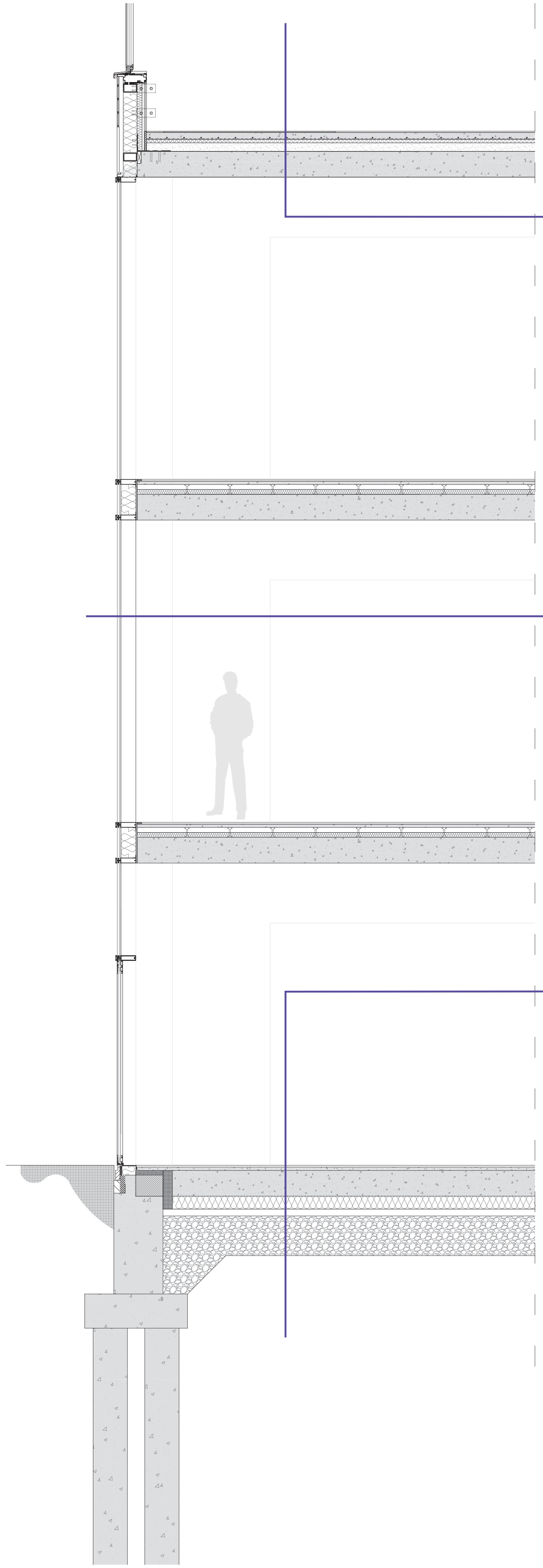



Custom L-bracket d= 10 mm
Steel ruler 120 x 110 x 10 mm
with flange of 120 mm
Ducotwin 120 AK 'ZR'
Wall finish
- 2x fire protection plasterboard d= 12,5 mm
Free standing steel formwork
d= 50 mm
Gadero Wooden planks
150 x 5000 mm d= 22 mm
or
Trex composite cladding
Anodized water hammer
Aeromat VT 270 x 100 x 3000 mm
Wooden windowsill
Schüco AWS 75 SI+ triple glazing with
PV cell glass
Free standing metal formwork d= 85 mm
with insulation d= 60 mm
Steel main construction made out
of steel tubes 100 x 160 x 10 mm
with insulation d= 160 mm
Custom L-bracket d= 10 mm


ROOF
- Tesla solar roof panels d= 15 mm
- Solar roof framework d= 20 mm
- Water vapor barrier
- Rigid insulation d= 128 - 740 mm
(thickness depends on where on the roof)
- Insulation (Mineral wool) d= 100 mm
- CLT d= 240 mm
FAÇADE
- Gadero Wooden planks 150 x 5000 mm d= 22 mm
or Trex composite cladding (uses the same dimensions
and attachment method)
- Free-standing facing formwork d= 50 mm
- Water vapor barrier
- Main steel construction (100 x 160 mm) d= 160 mm
- Insulation (Mineral wool) d= 160 mm
- Free-standing facing formwork d= 85 mm
- Insulation (Mineral Wool) d= 60 mm
- Fire protection board d= 12,5 mm
- Fire protection board d= 12,5 mm
DWELLING FLOOR
- Laminate d= 25 mm
- Screed d= 80 mm
- Floor heating
- Water vapor barrier
- Insulation d= 40 mm
- Gravel d= 110 mm
- Drainage d= 110 mm
- Water pipes
- CLT d= 240 mm
PARTITION WALL
- Fire protection board d= 12,5 mm
- Fire protection board d= 12,5 mm
- Free-standing facing formwork d= 85 mm
- Insulation (Mineral wool) d= 60 mm
- CLT d= 300 mm
- Free-standing facing formwork d= 85 mm
- Insulation (Mineral wool) d= 60 mm
- Fire protection board d= 12,5 mm
- Fire protection board d= 12,5 mm
GLASS FAÇADE
- Schüco AWS 75 SI+ (Triple glazing)
- PV cell glass

FAÇADE

- Schüco FW 60+ SI with 174 mm ruler
  - Double glazing (frosted glass)



DWELLING FLOOR 2

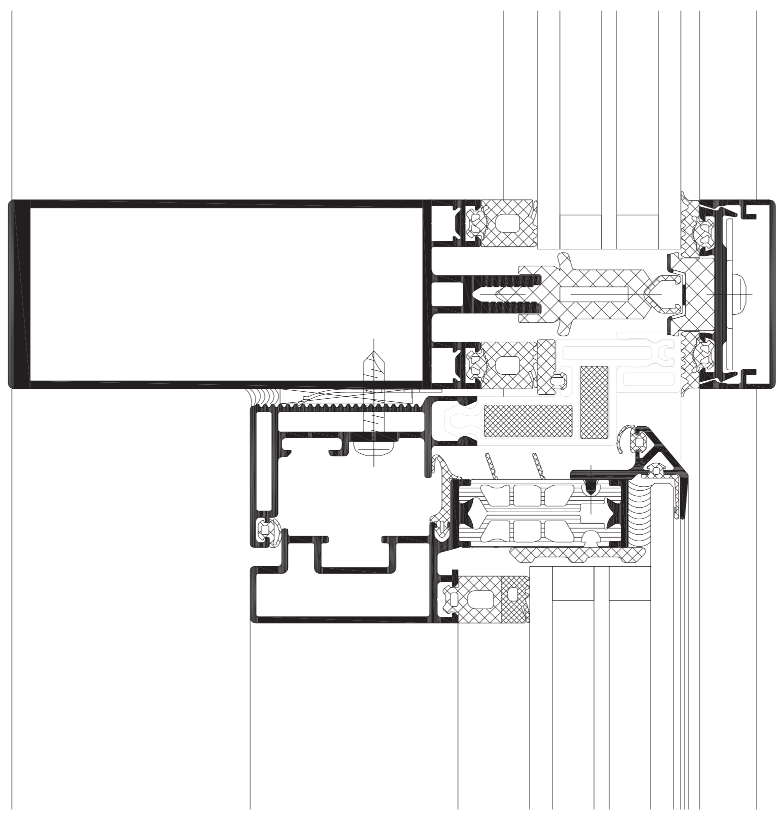
- Laminate d= 25 mm
- Screed d= 80 mm
  - Floor heating
- Water vapor barrier
- Insulation d= 40 mm
- Gravel d= 110 mm
  - Drainage d= 110 mm
  - Water pipes
- Concrete d= 300 mm

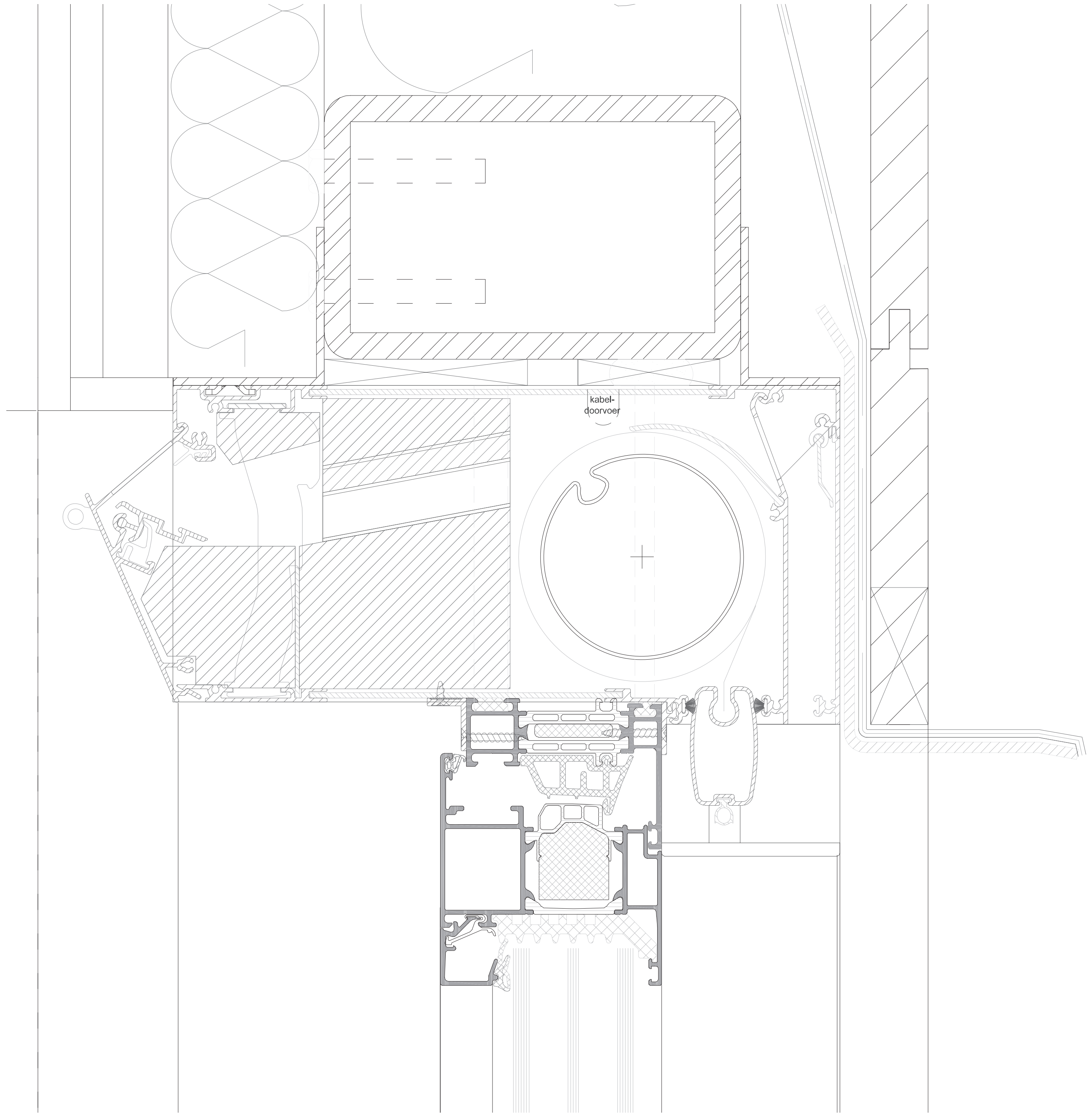
FAÇADE

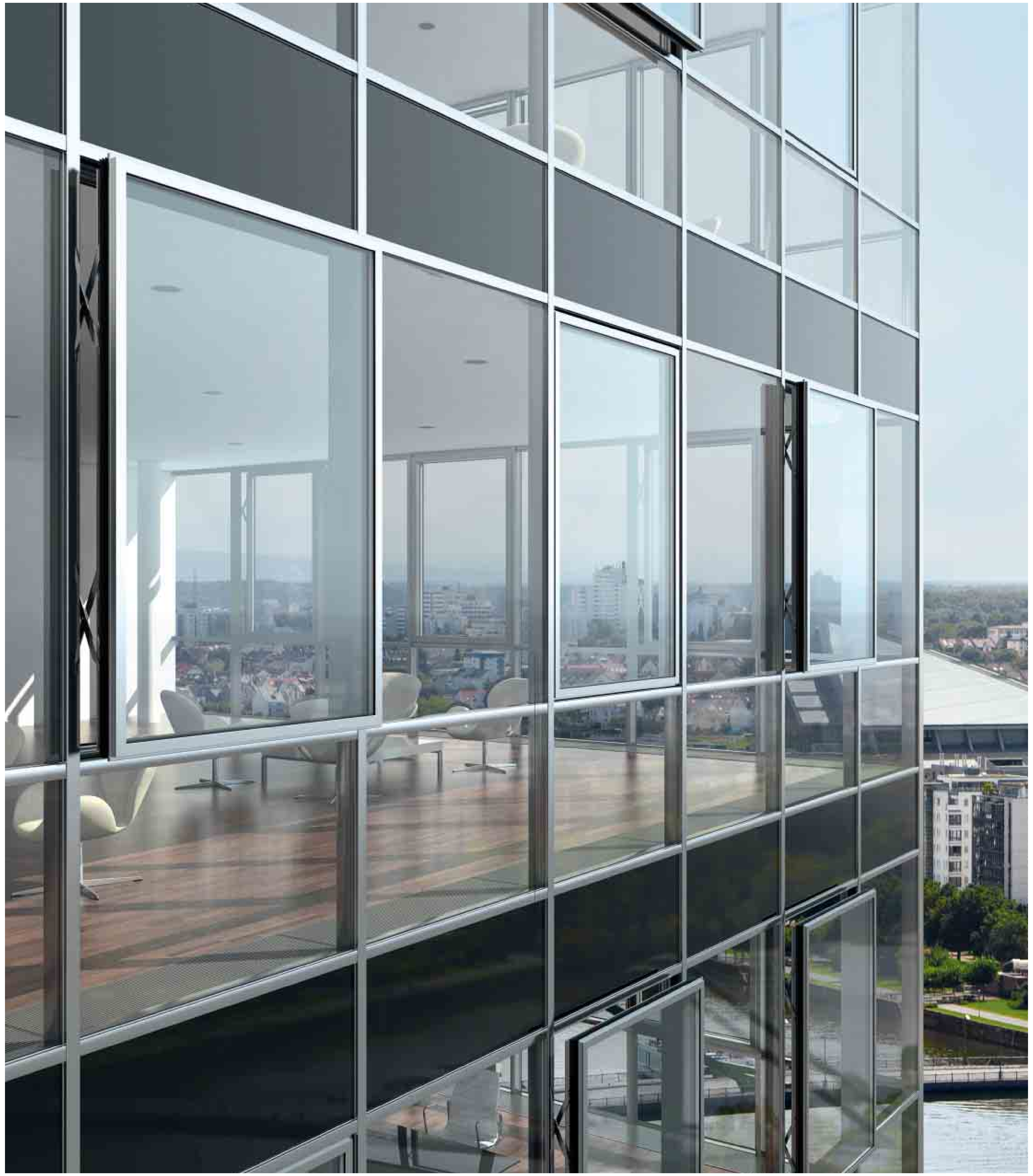
- Schüco FW 60+ SI with 174 mm ruler
  - Double glazing (frosted glass)

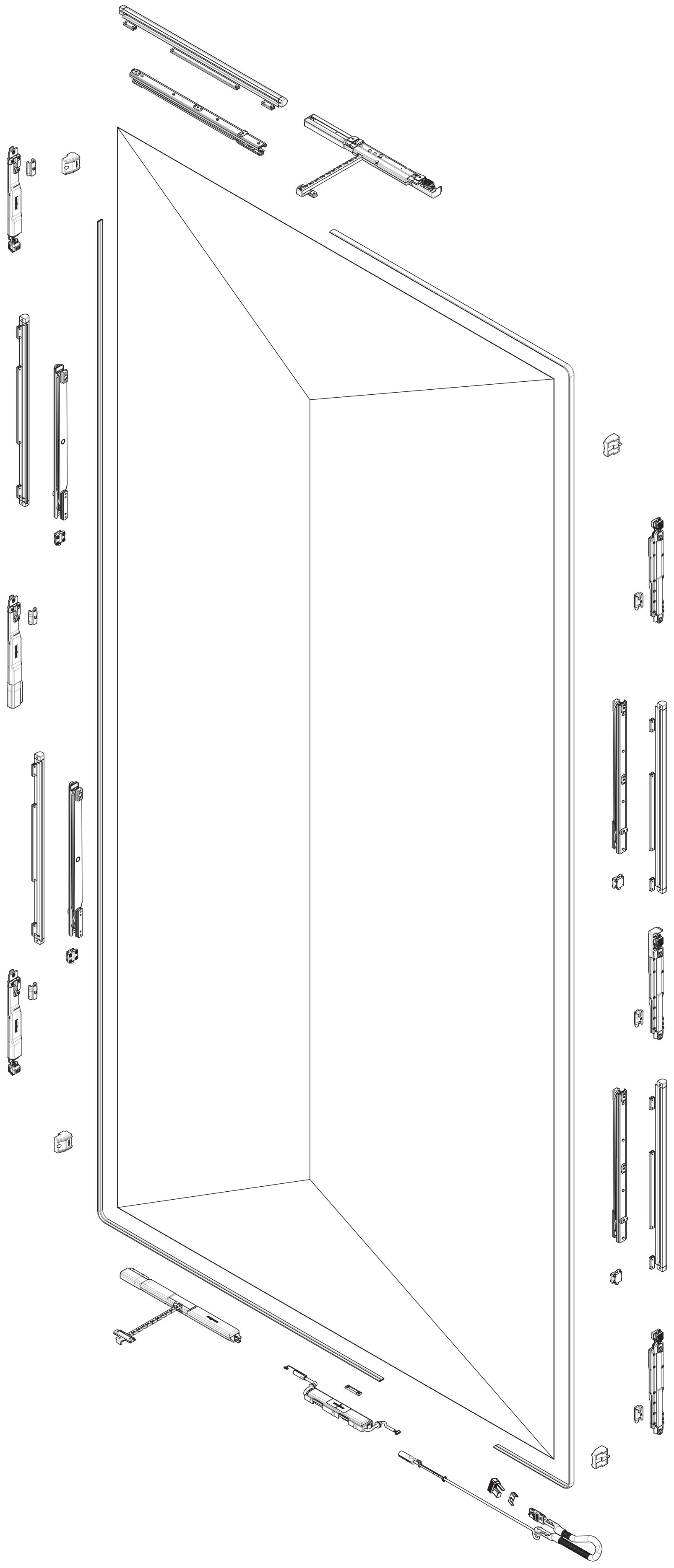
GROUND FLOOR

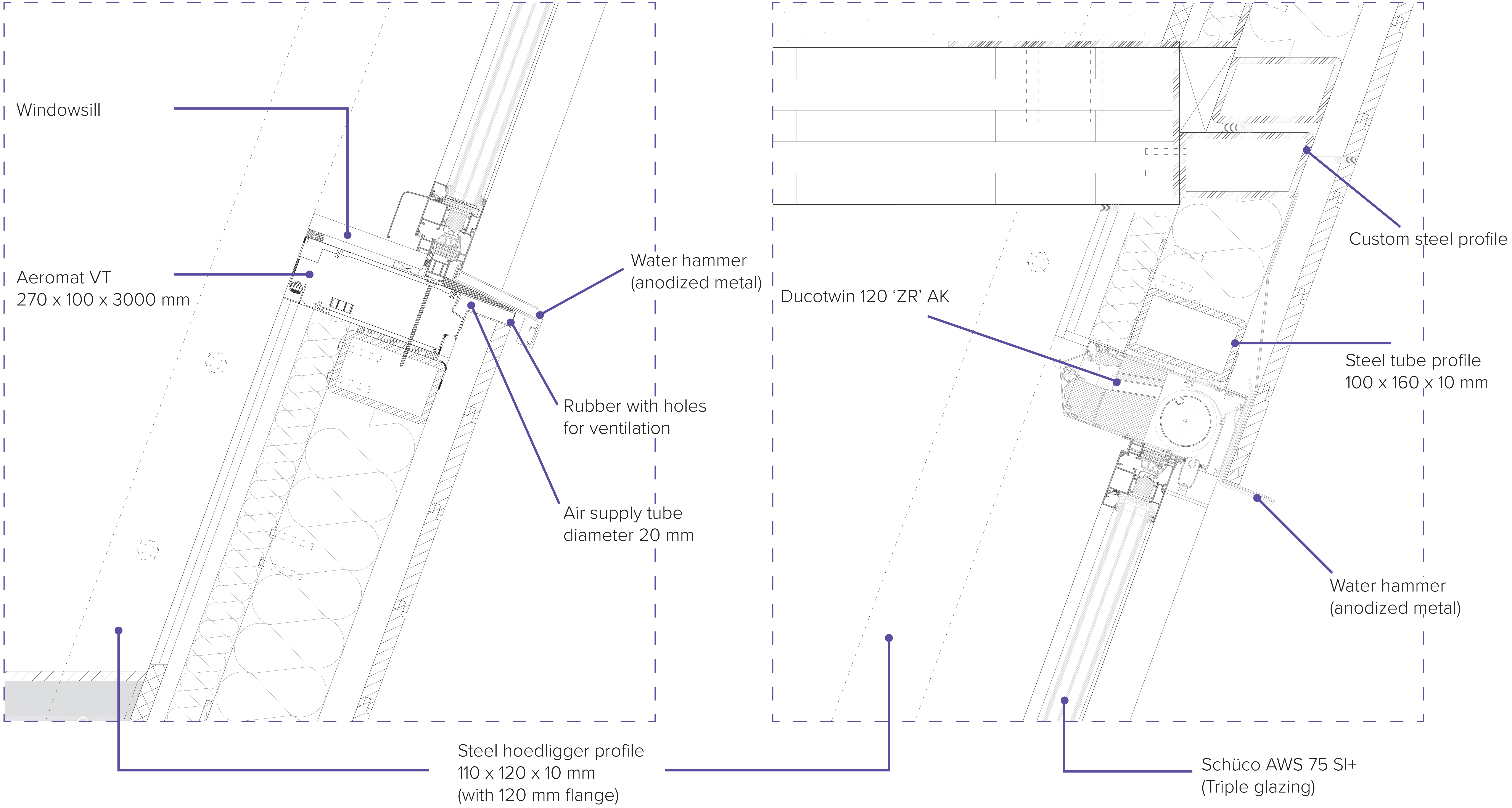
- Floor finish d= 20 mm
- Screed d= 40 mm
- Concrete d= 300 mm
- Rigid insulation d= 150 mm
- Water vapor barrier
- Sand gravel layer d= 80 mm

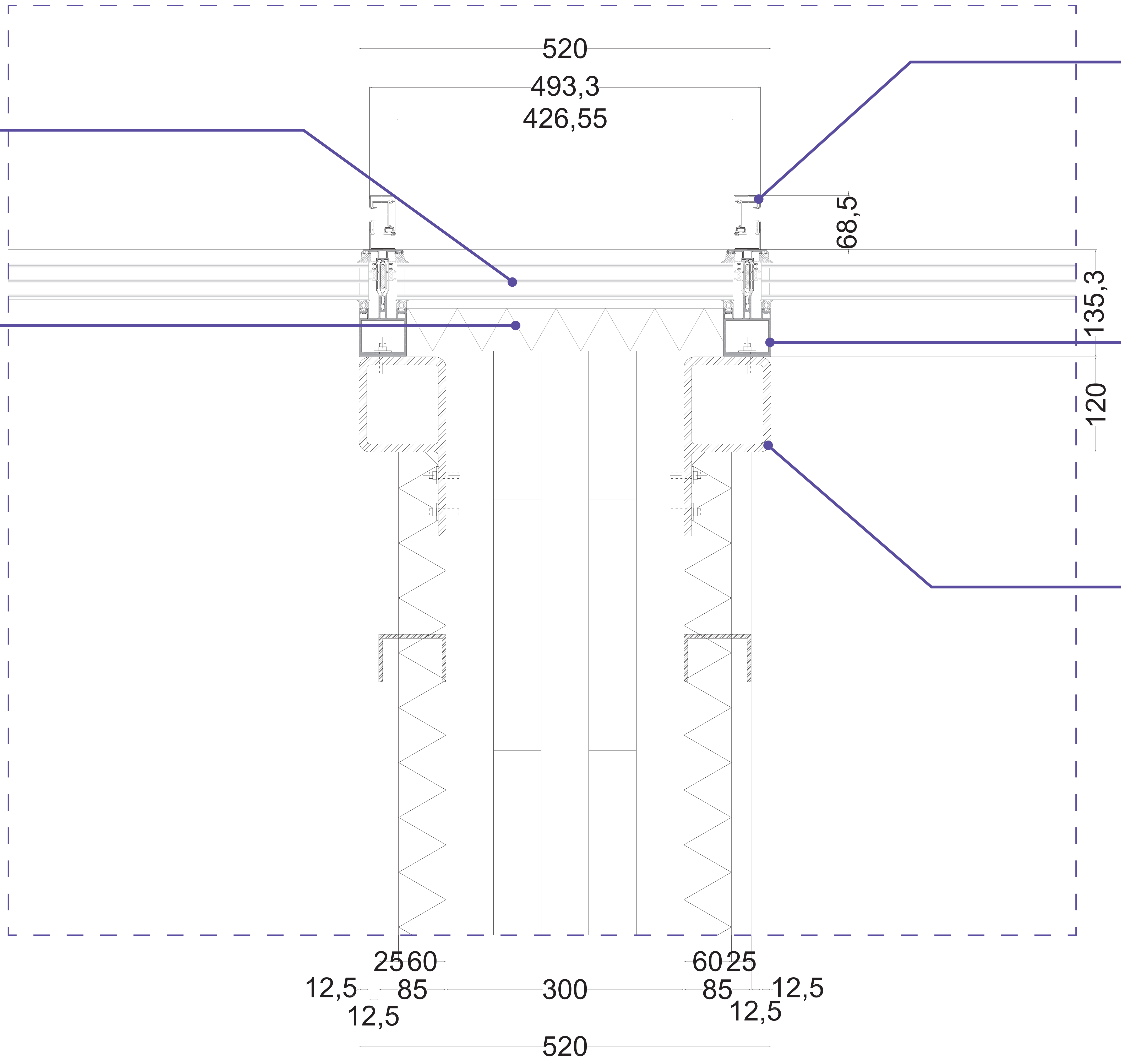



kabel-
doorvoer






Windowsill
Aeromat VT
270 x 100 x 3000 mm
Water hammer
(anodized metal)
Rubber with holes
for ventilation
Air supply tube
diameter 20 mm
Ducotwin 120 'ZR' AK
Custom steel profile
Steel tube profile
100 x 160 x 10 mm
Water hammer
(anodized metal)
Steel hoedligger profile
110 x 120 x 10 mm
(with 120 mm flange)
Schüco AWS 75 SI+
(Triple glazing)



Frosted glass panel

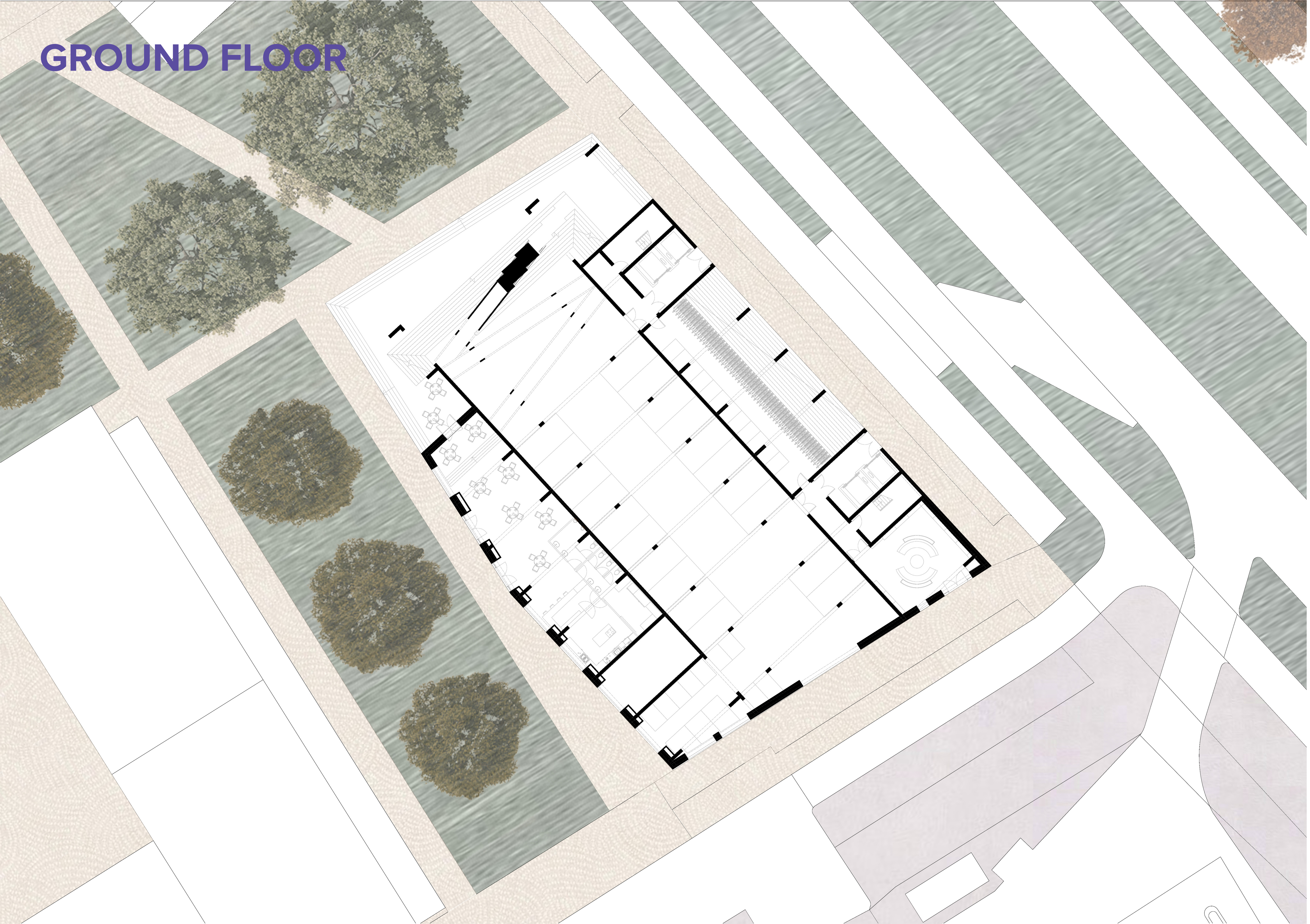
Rigid insulation panel
d= 54 mm

Guiding rails sunscreen
69 x 33 mm

Schüco FW 60+ SG
profile (curtain wall rail)
+ Schüco AWS 75 SI+
(Triple glazing)

Steel ruler (hoedligger)
110 x 120 x 10 mm
(with 120 mm flange)

GROUND FLOOR



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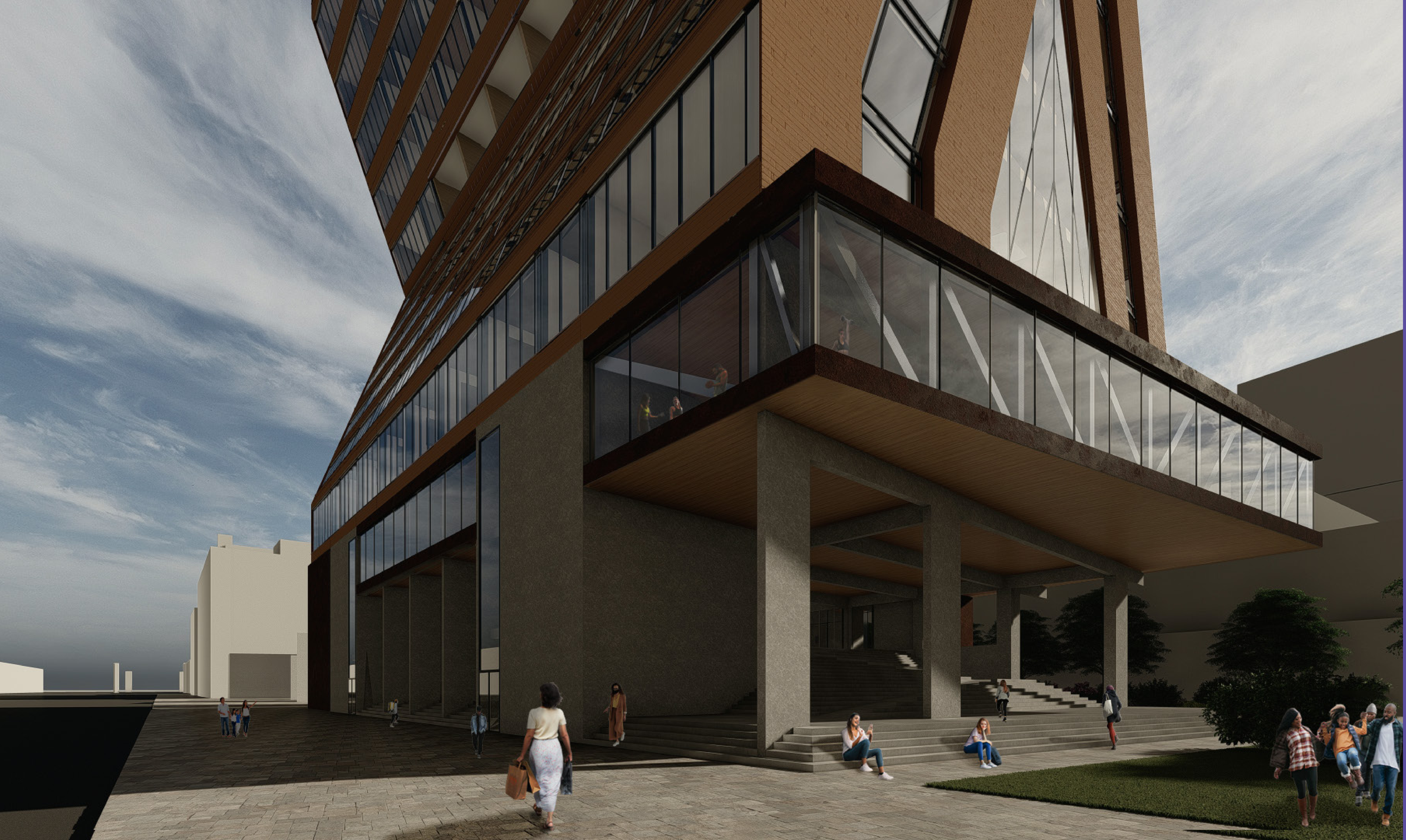
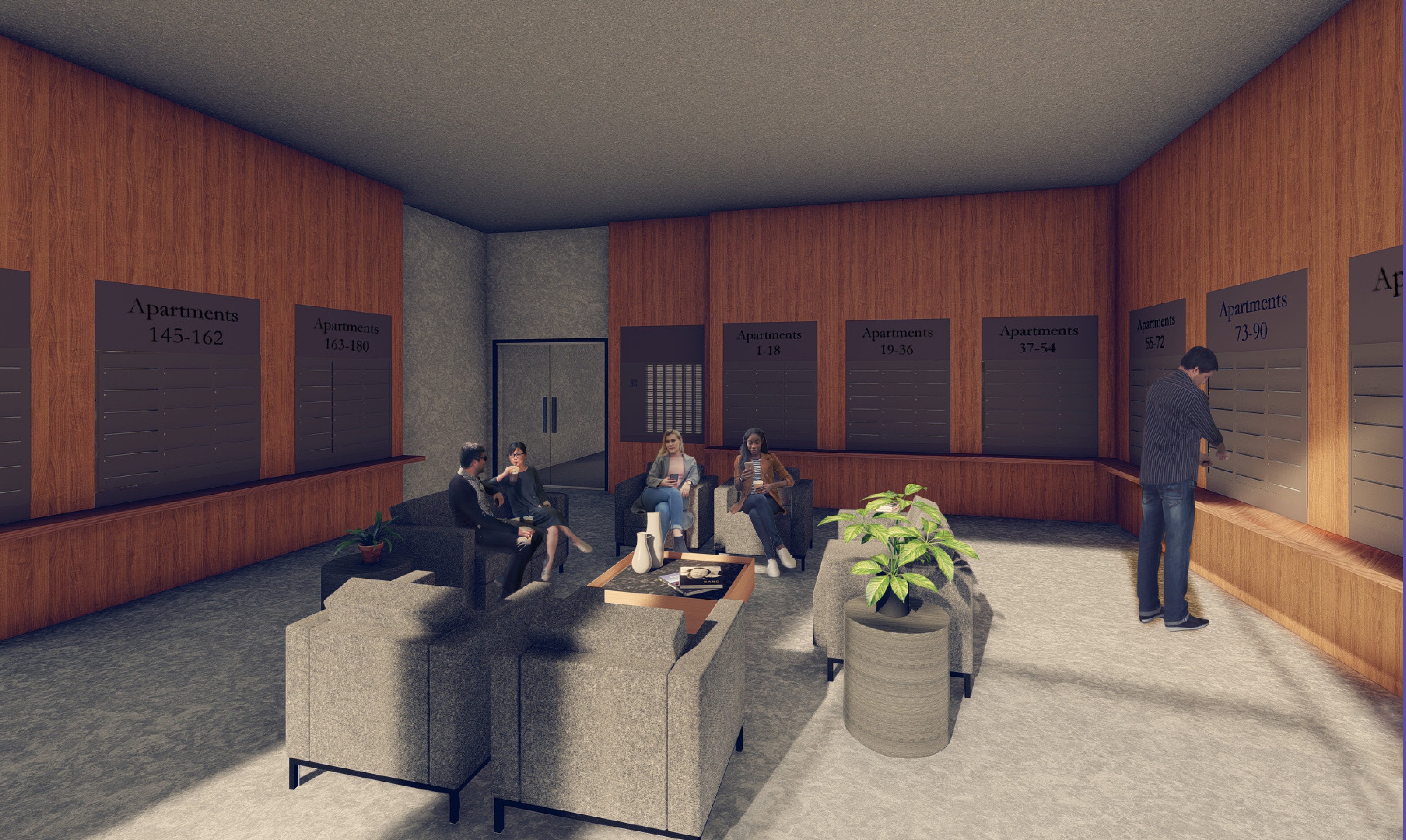
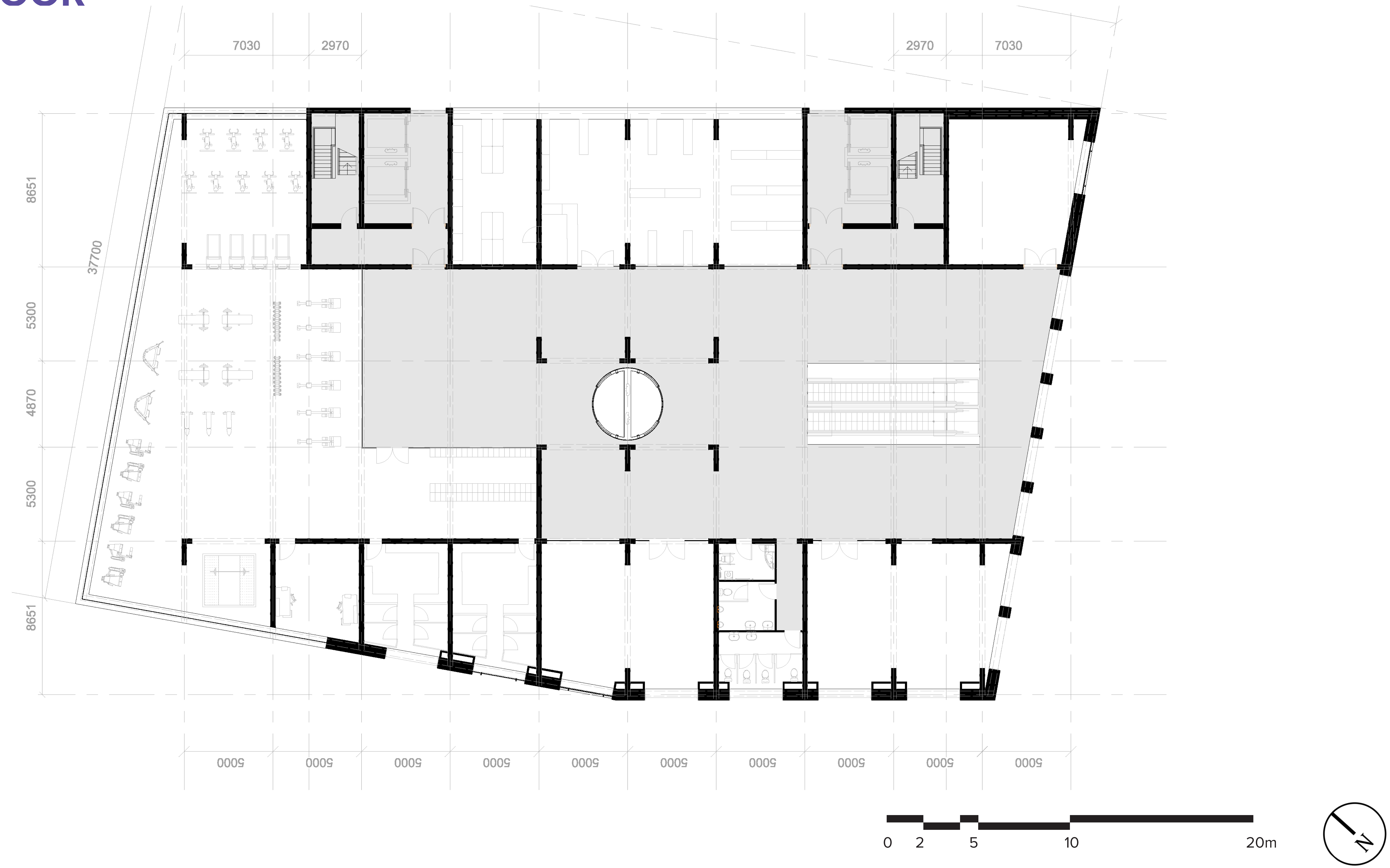



Apartments 145-162
Apartments 163-180
Apartments 1-18
Apartments 19-36
Apartments 37-54
Apartments 55-72
Apartments 73-90

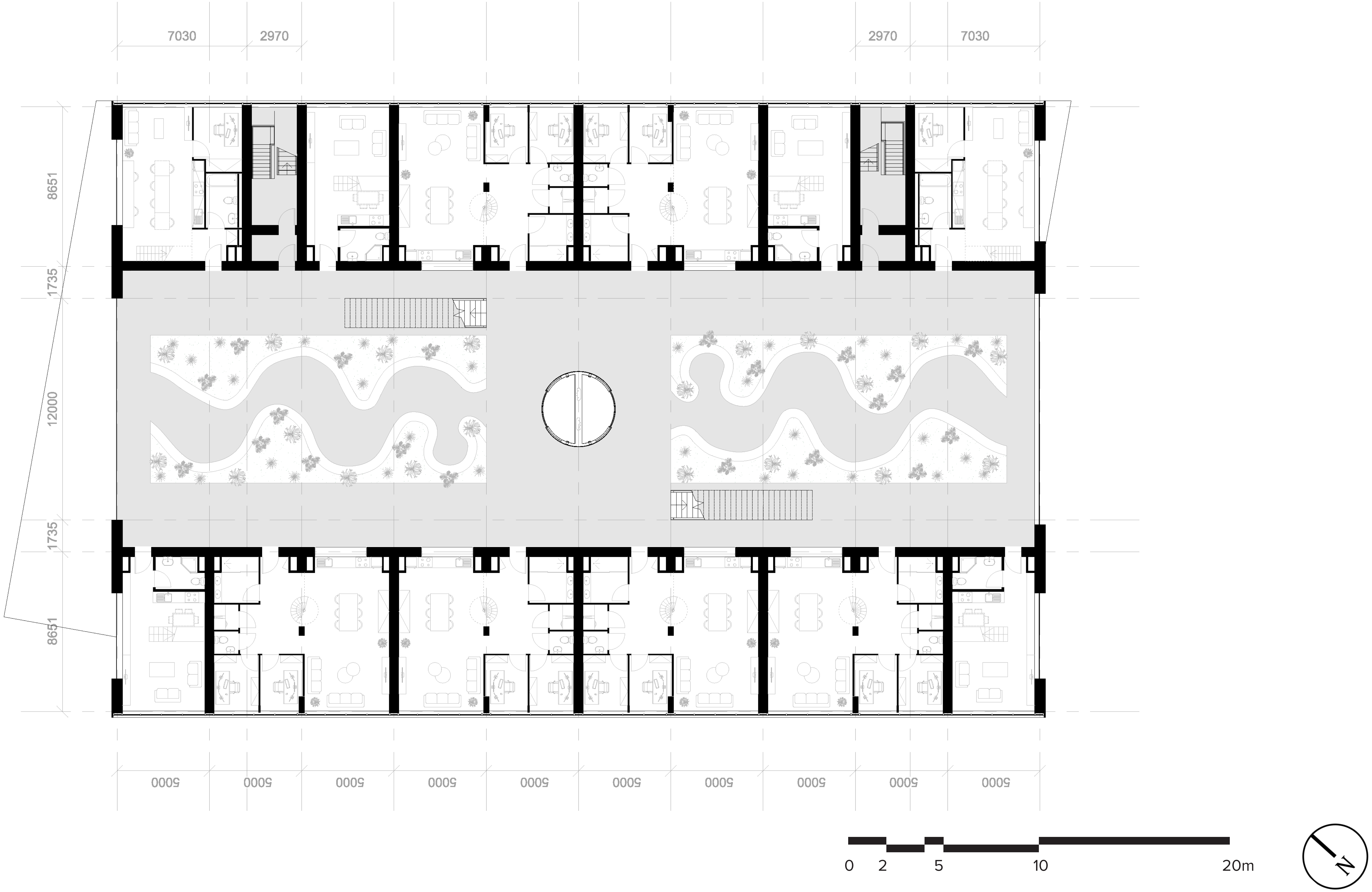
FIRST FLOOR

2ND FLOOR



7030
2970
2970
7030
8651
5300
4870
5300
8651
37700
5000
5000
5000
5000
5000
5000
5000
5000
5000
5000
0
2
5
10
20m
N

3RD FLOOR



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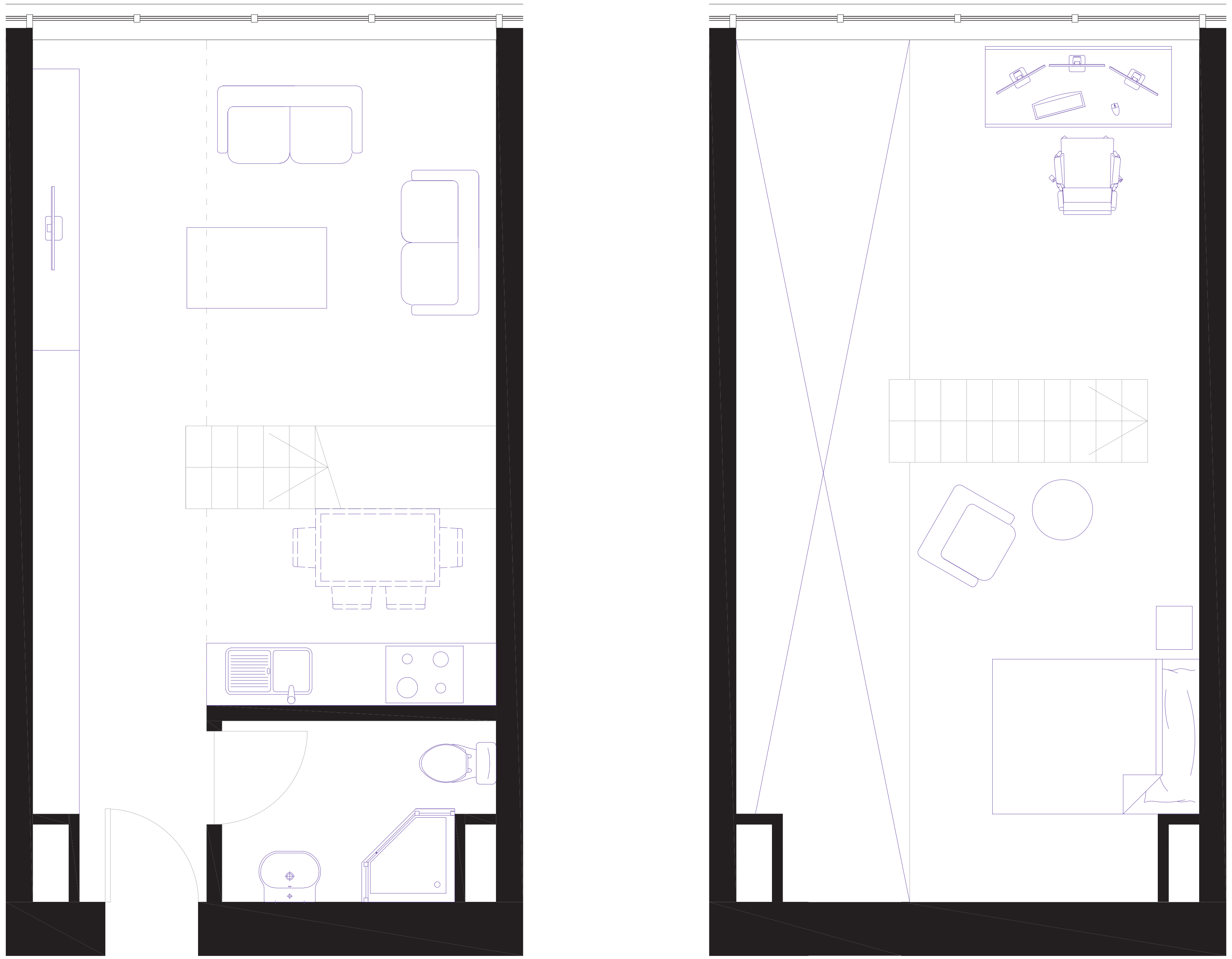
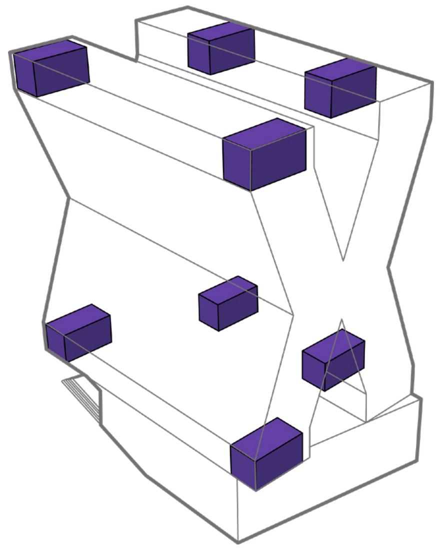
2970
2970
7030
8651
1735
12000
1735
8651
5000
5000
5000
5000
5000
5000
5000
5000
5000
5000
0
2
5
10
20m
N

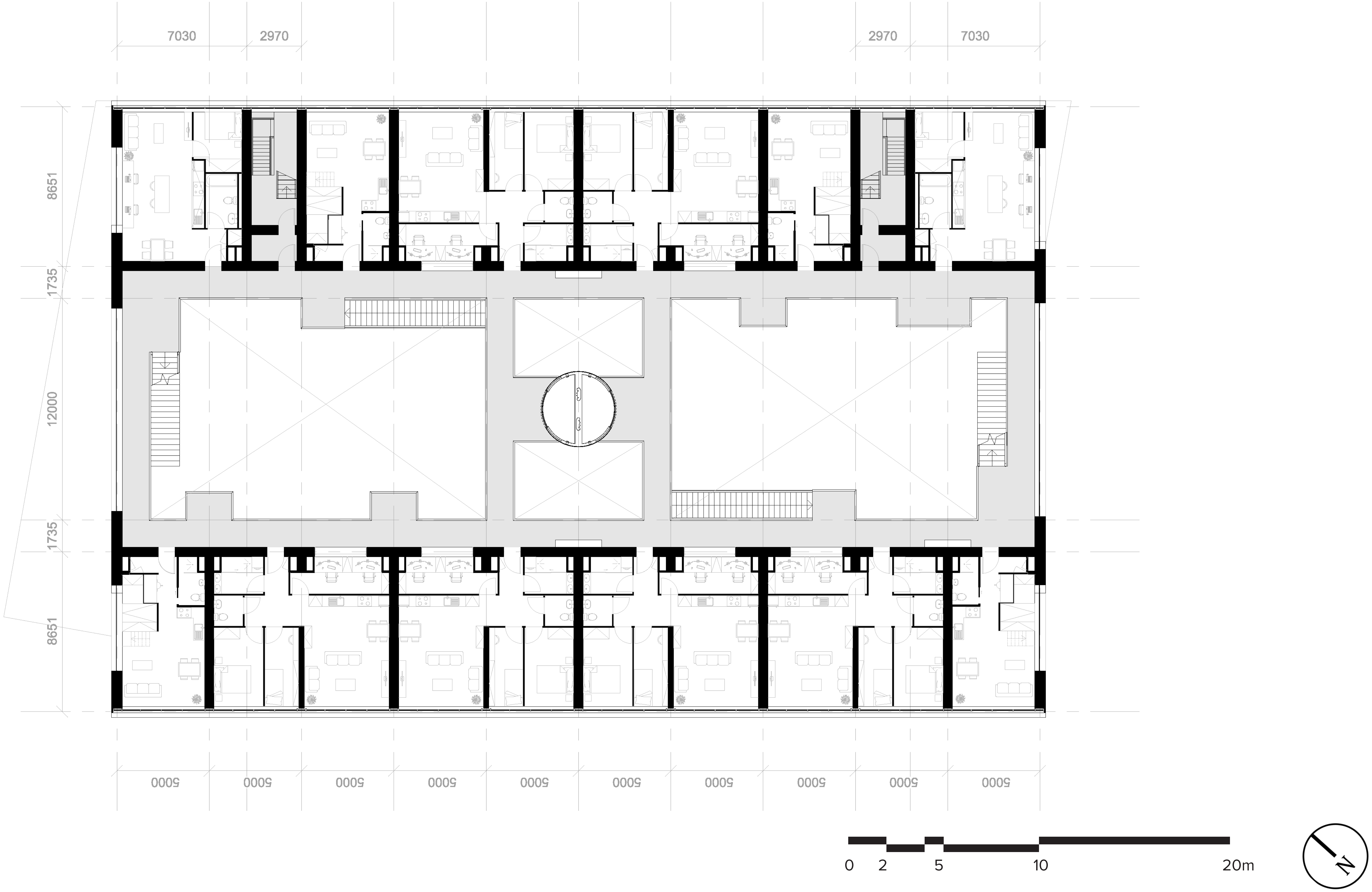
LOFT





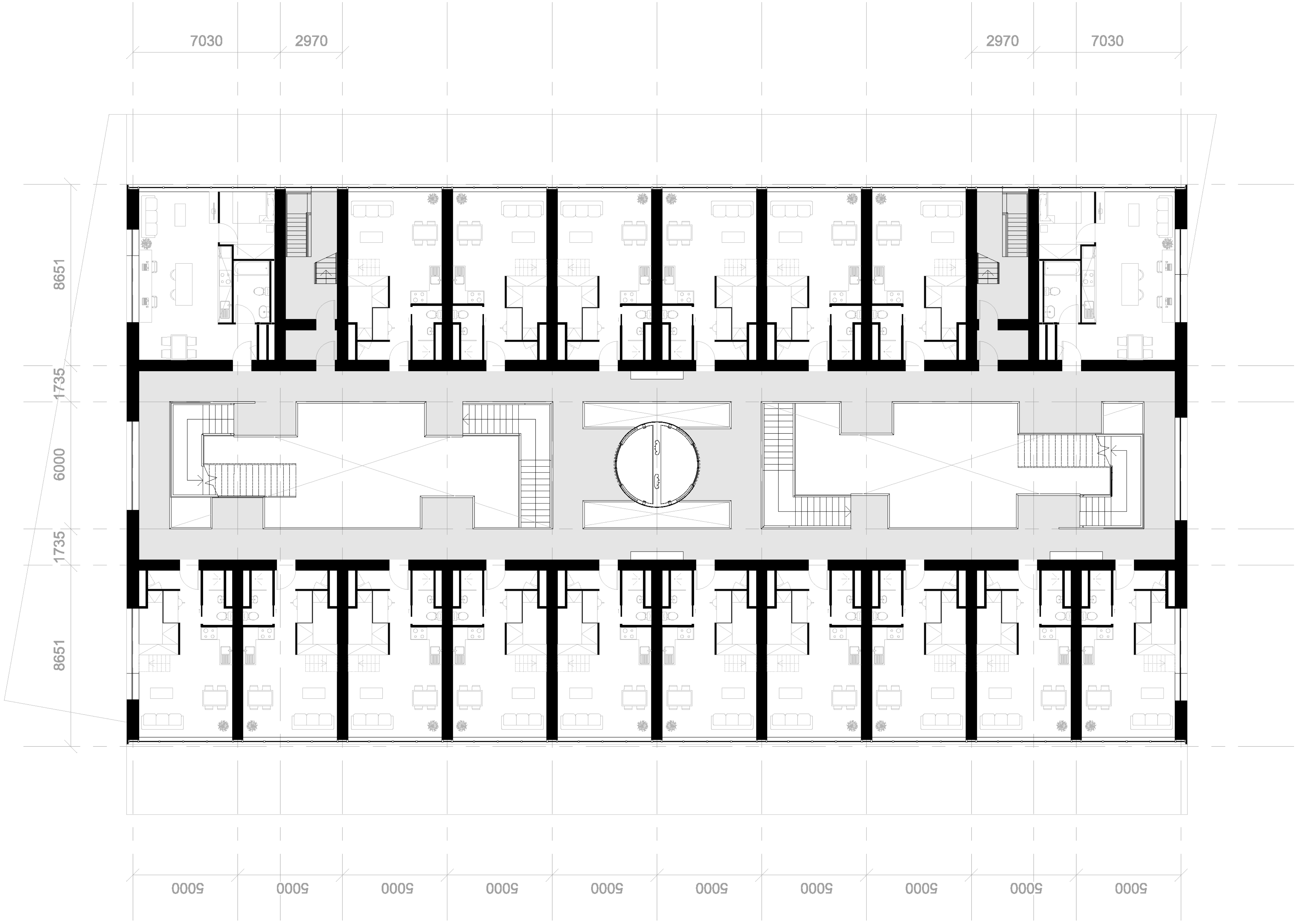

鋼の錬金術師

4TH FLOOR



7030
2970
2970
7030
8651
1735
12000
1735
8651
5000
5000
5000
5000
5000
5000
5000
5000
5000
5000
0
2
5
10
20m
N

6TH FLOOR



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2970
2970
7030
8651
1735
6000
1735
8651
5000
5000
5000
5000
5000
5000
5000
5000
5000
5000

0
2
5
10
20m
N

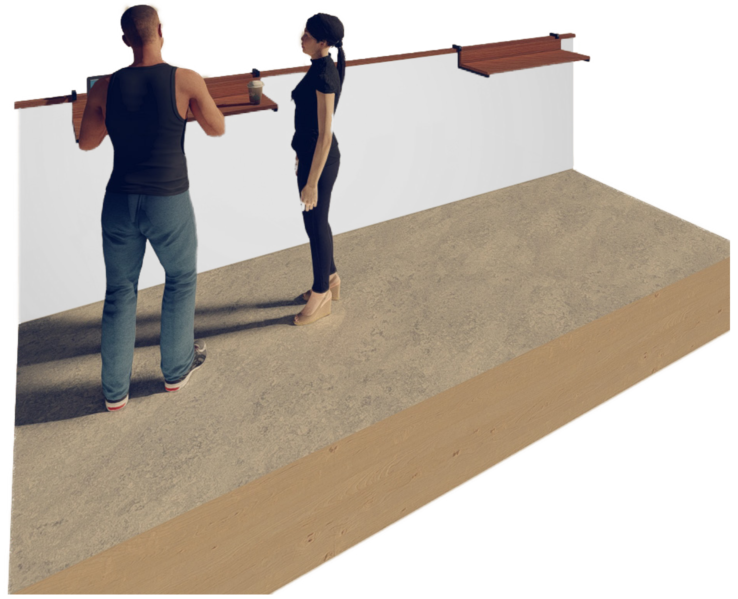


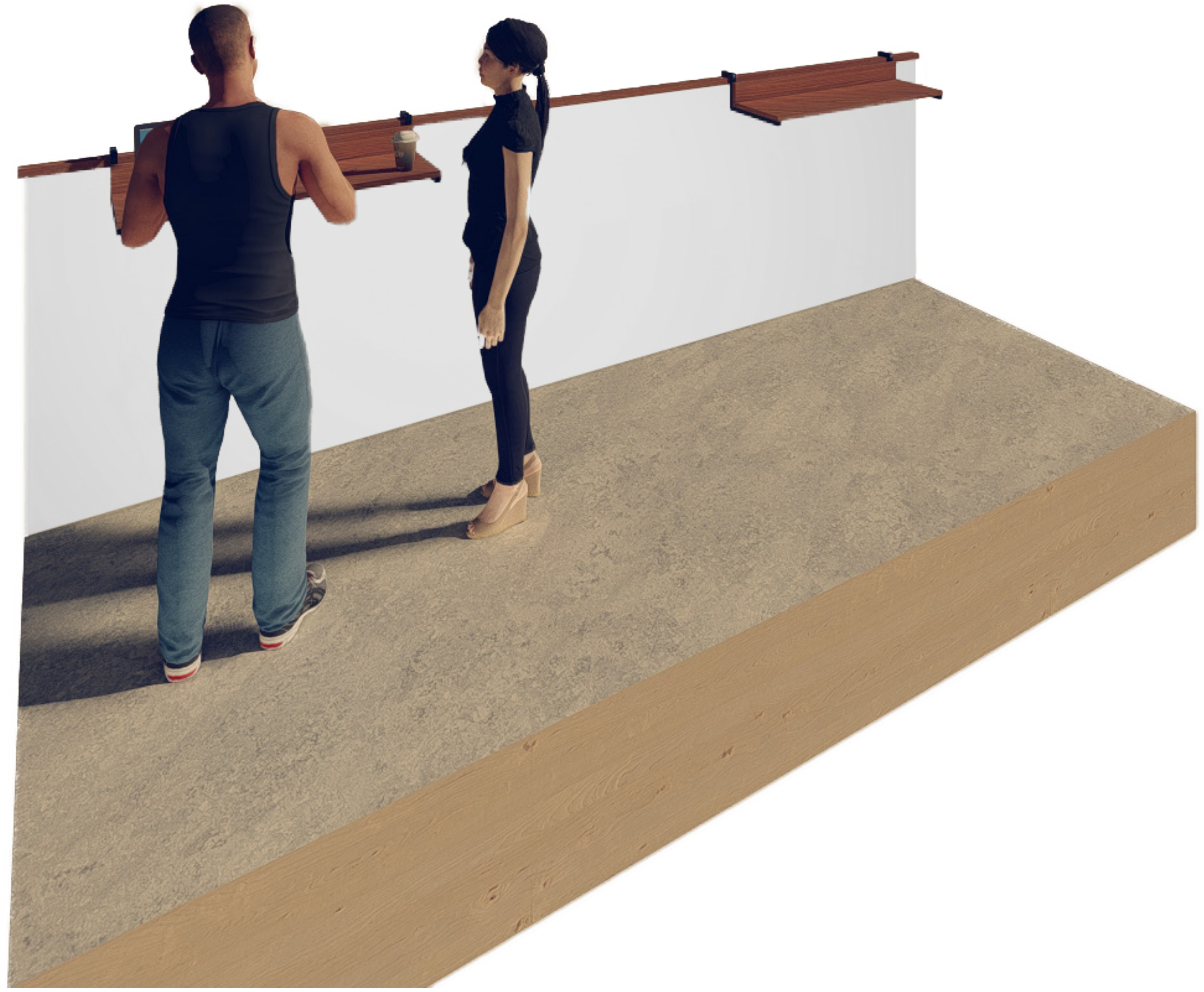




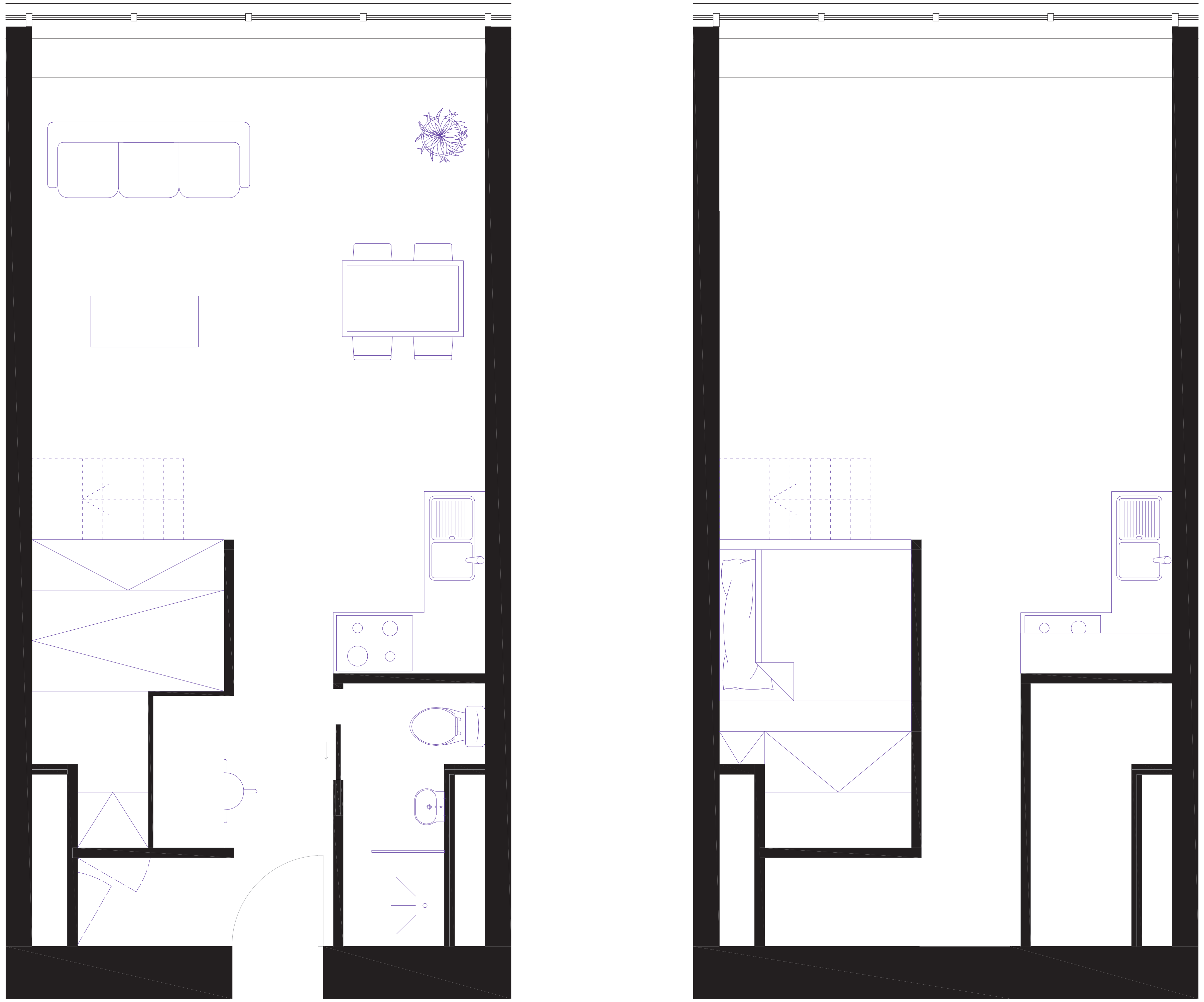


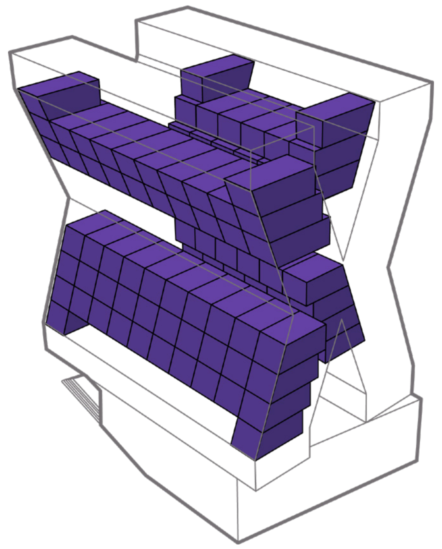


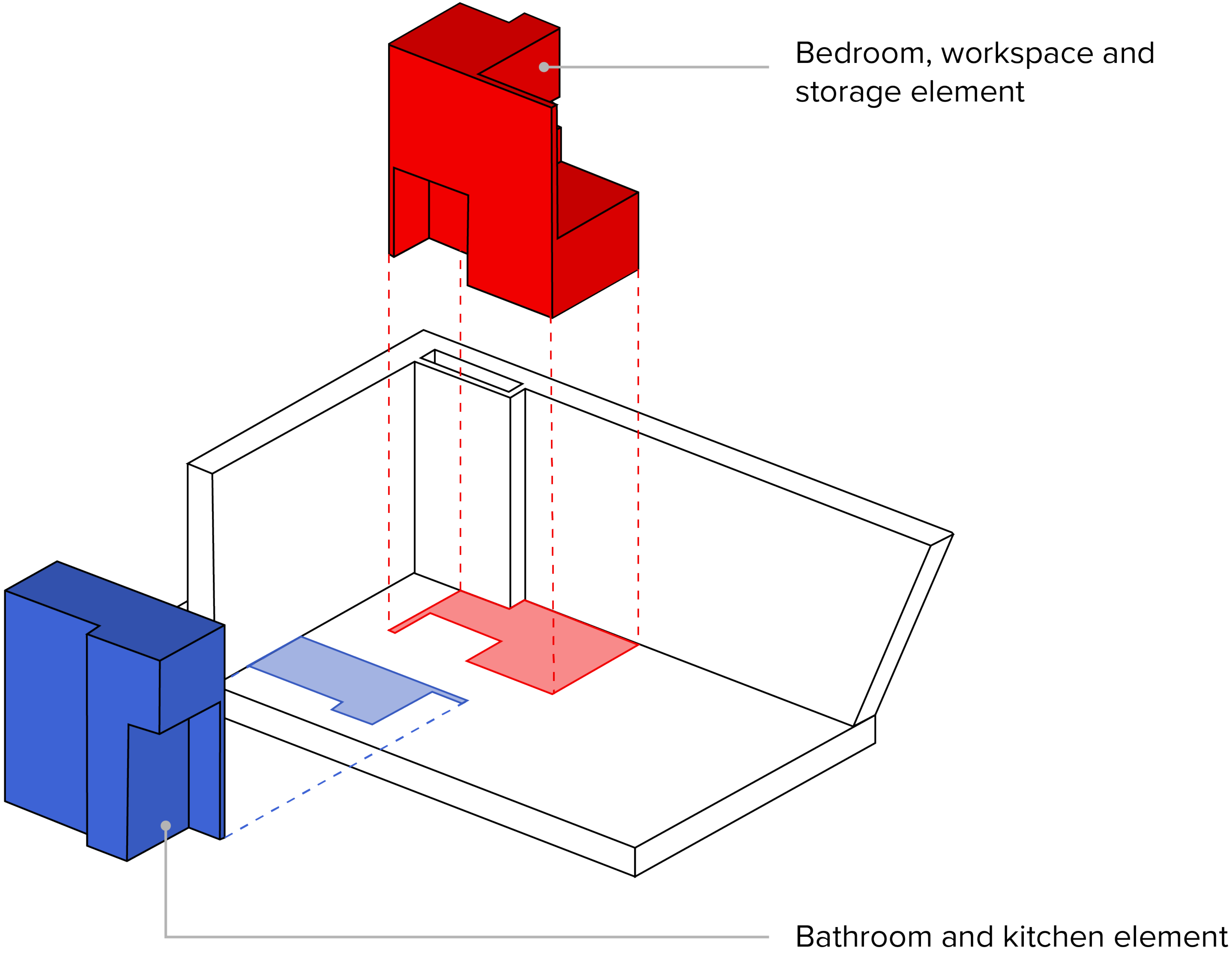




STUDIO+

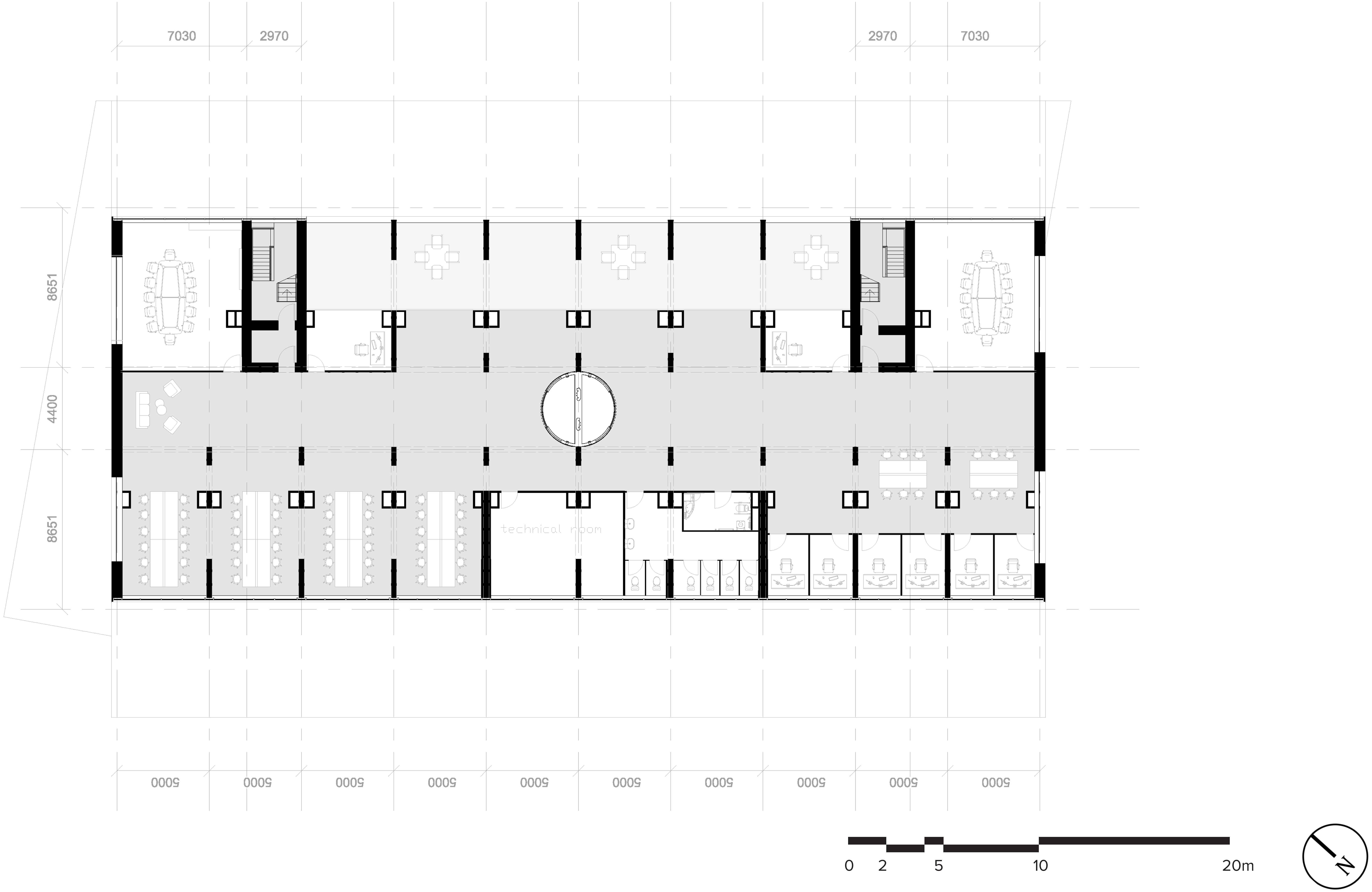





Bedroom, workspace and storage element
Bathroom and kitchen element


鋼の錬金術師

8TH FLOOR



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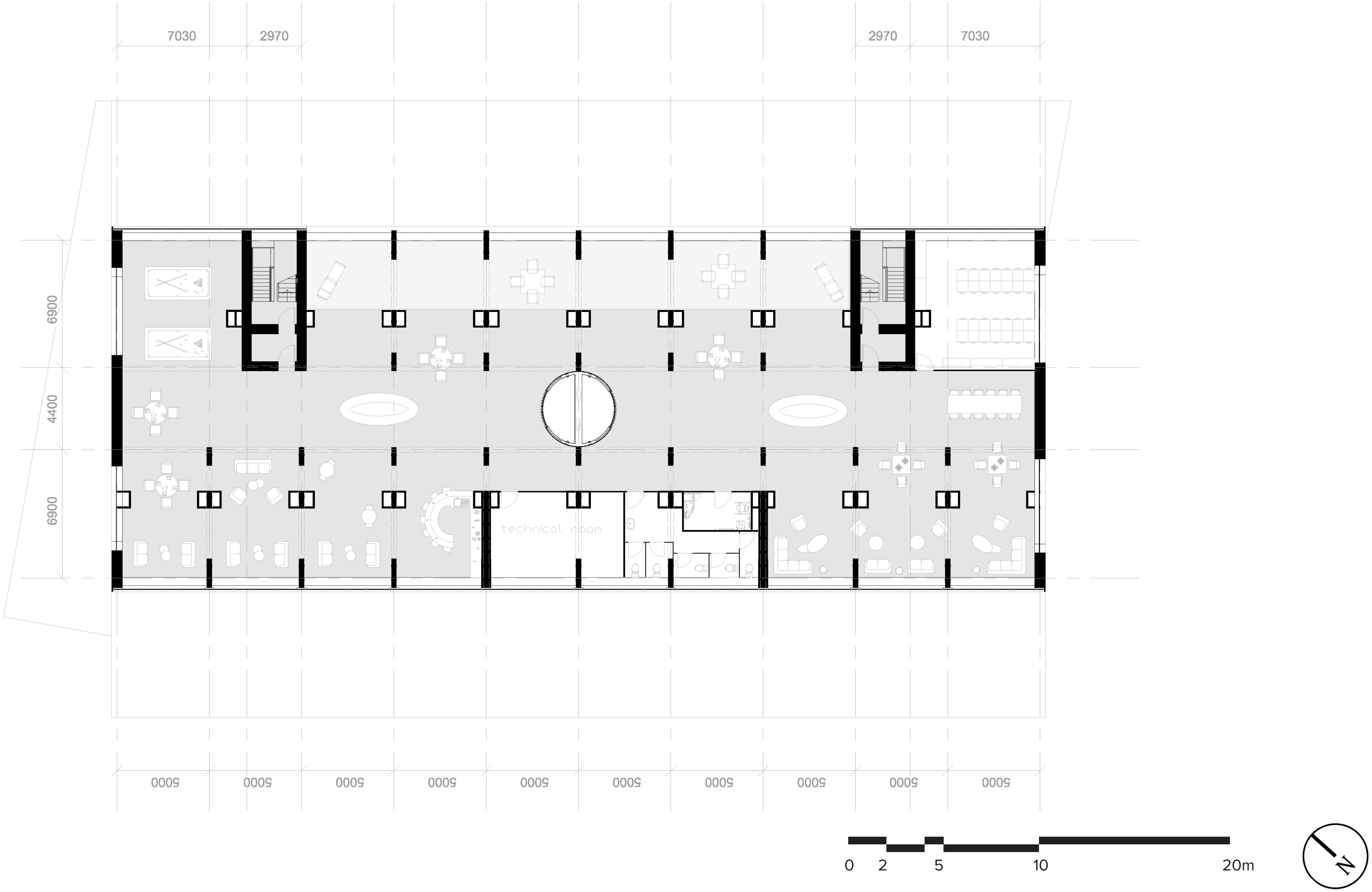
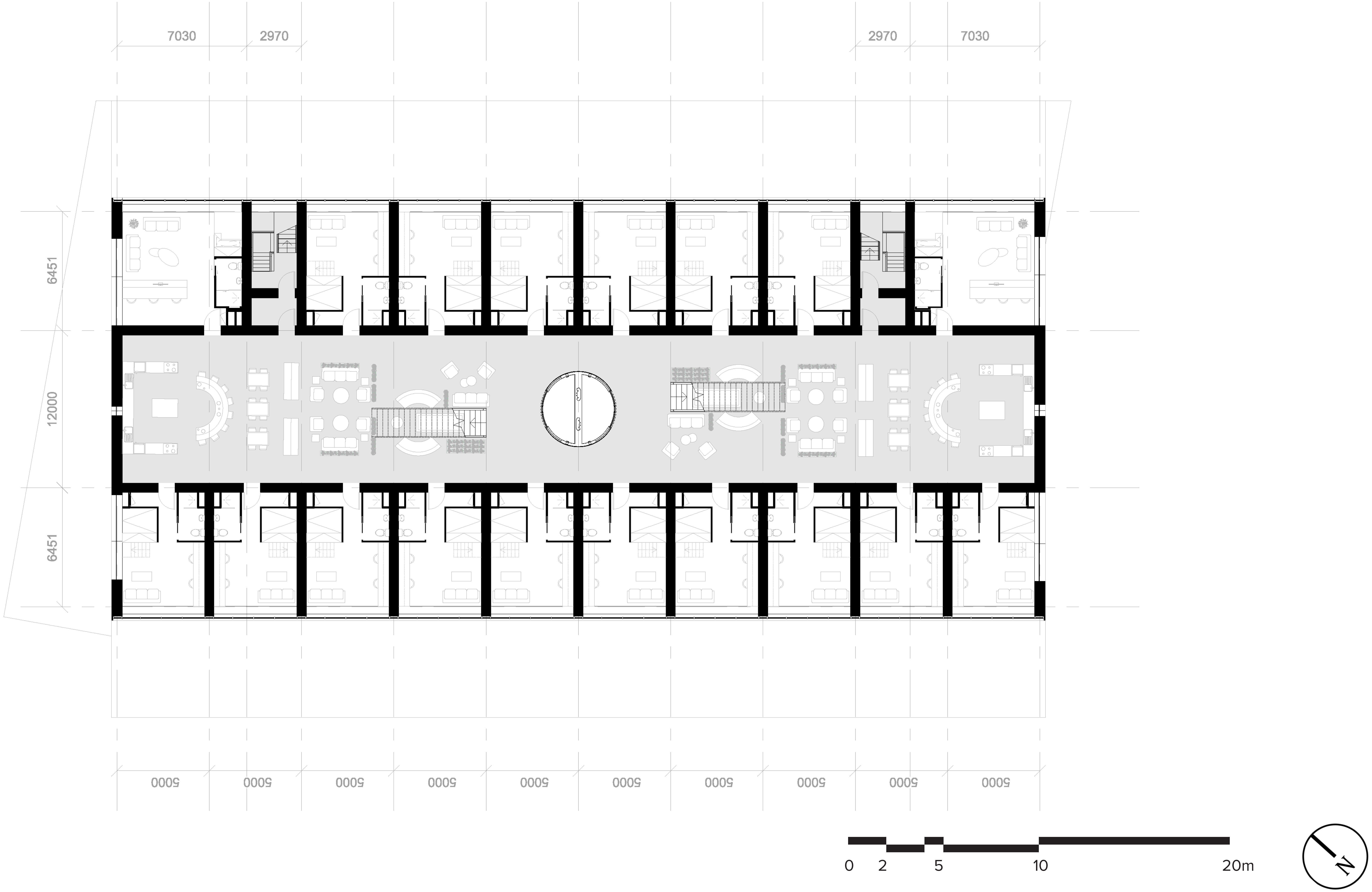
2970
2970
7030
8651
4400
8651
technical room
5000
5000
5000
5000
5000
5000
5000
5000
5000
5000
0
2
5
10
20m
N

9TH FLOOR


7030
2970
2970
7030
6900
4400
6900
technical room
5000
5000
5000
5000
5000
5000
5000
5000
5000
5000
0
2
5
10
20m
N

10TH FLOOR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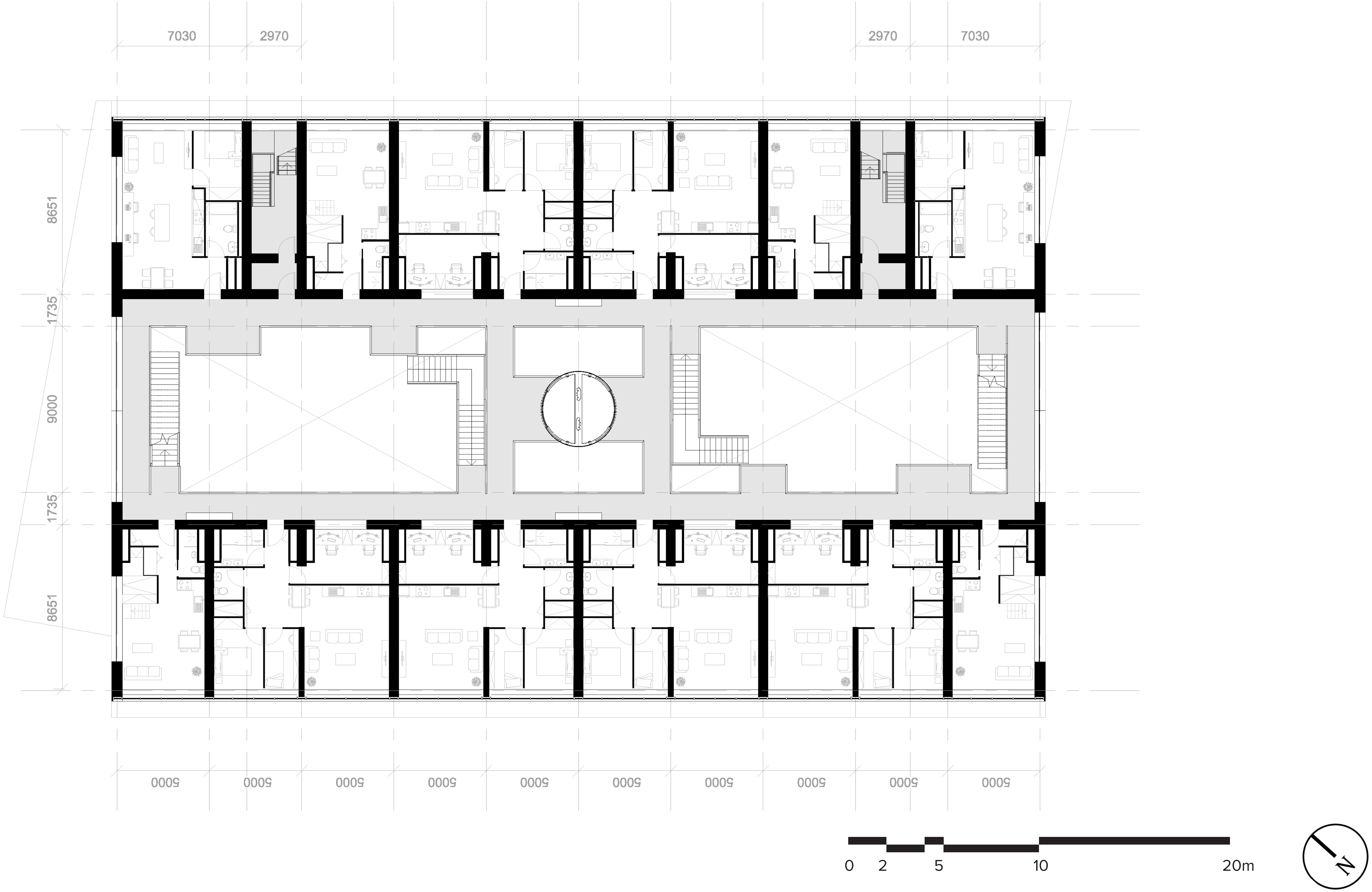
2970
2970
7030
6451
12000
6451
5000
5000
5000
5000
5000
5000
5000
5000
5000
5000
0
2
5
10
20m
N

13TH FLOOR



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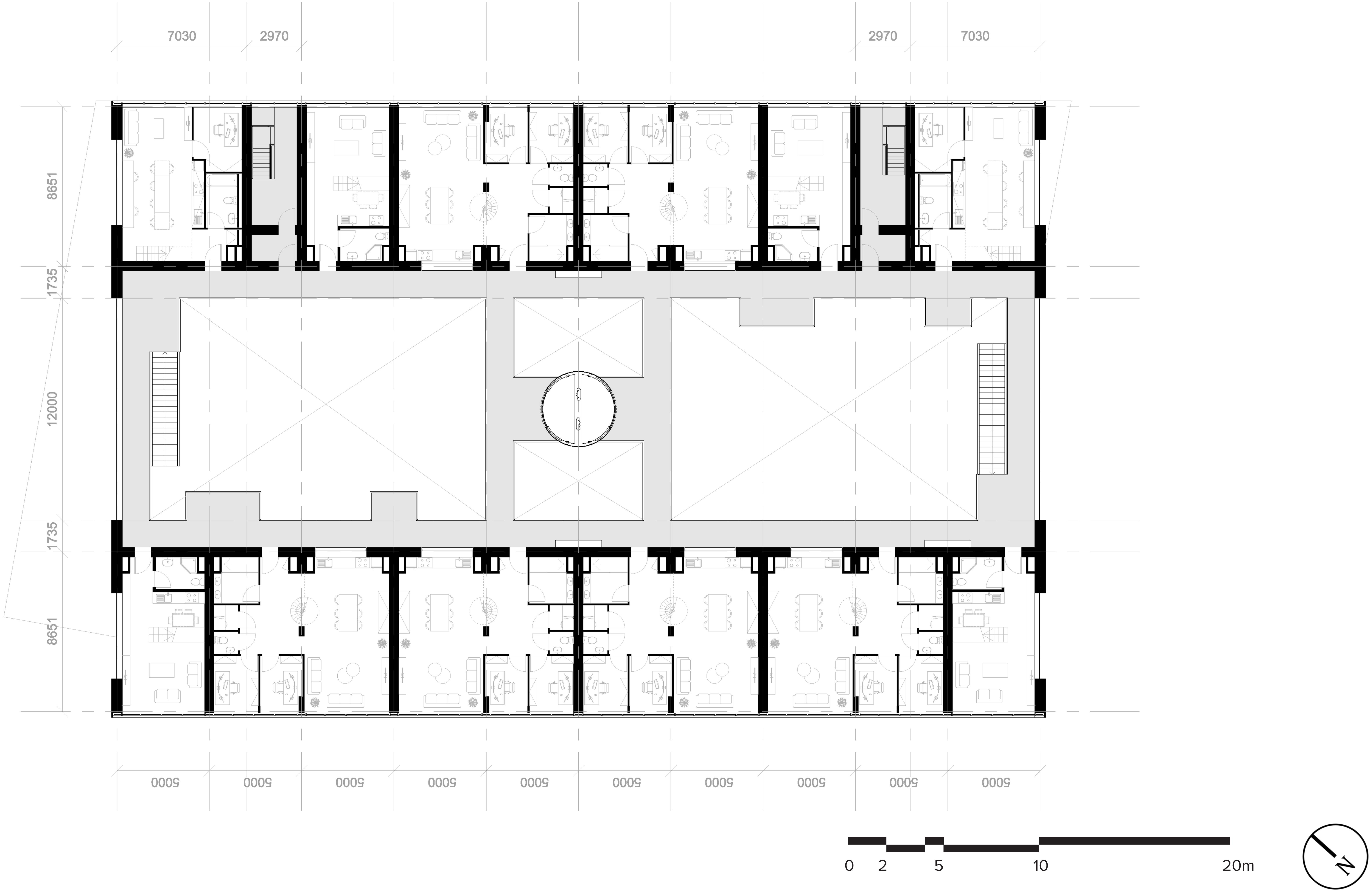
2970
2970
7030
8651
1735
9000
1735
8651
5000
5000
5000
5000
5000
5000
5000
5000
5000
5000
0
2
5
10
20m
N

14TH FLOOR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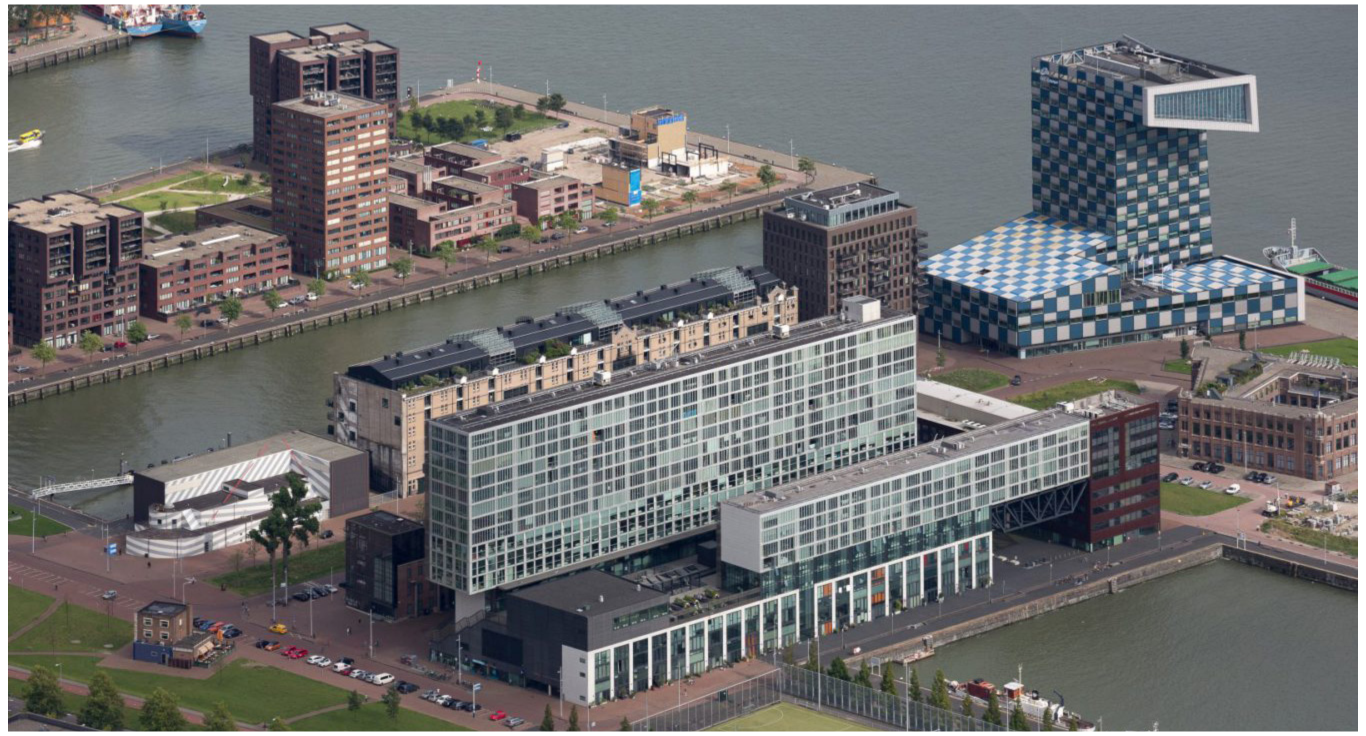
2970
2970
7030
8651
1735
12000
1735
8651
5000
5000
5000
5000
5000
5000
5000
5000
5000
5000
0
2
5
10
20m
N


THANK YOU FOR LISTENING


Zoom
Admin
Marius Ciocirlan
End Meeting

TREEHOUSE

SCHIECENTRALE 4B



TIETGEN DORMITORY

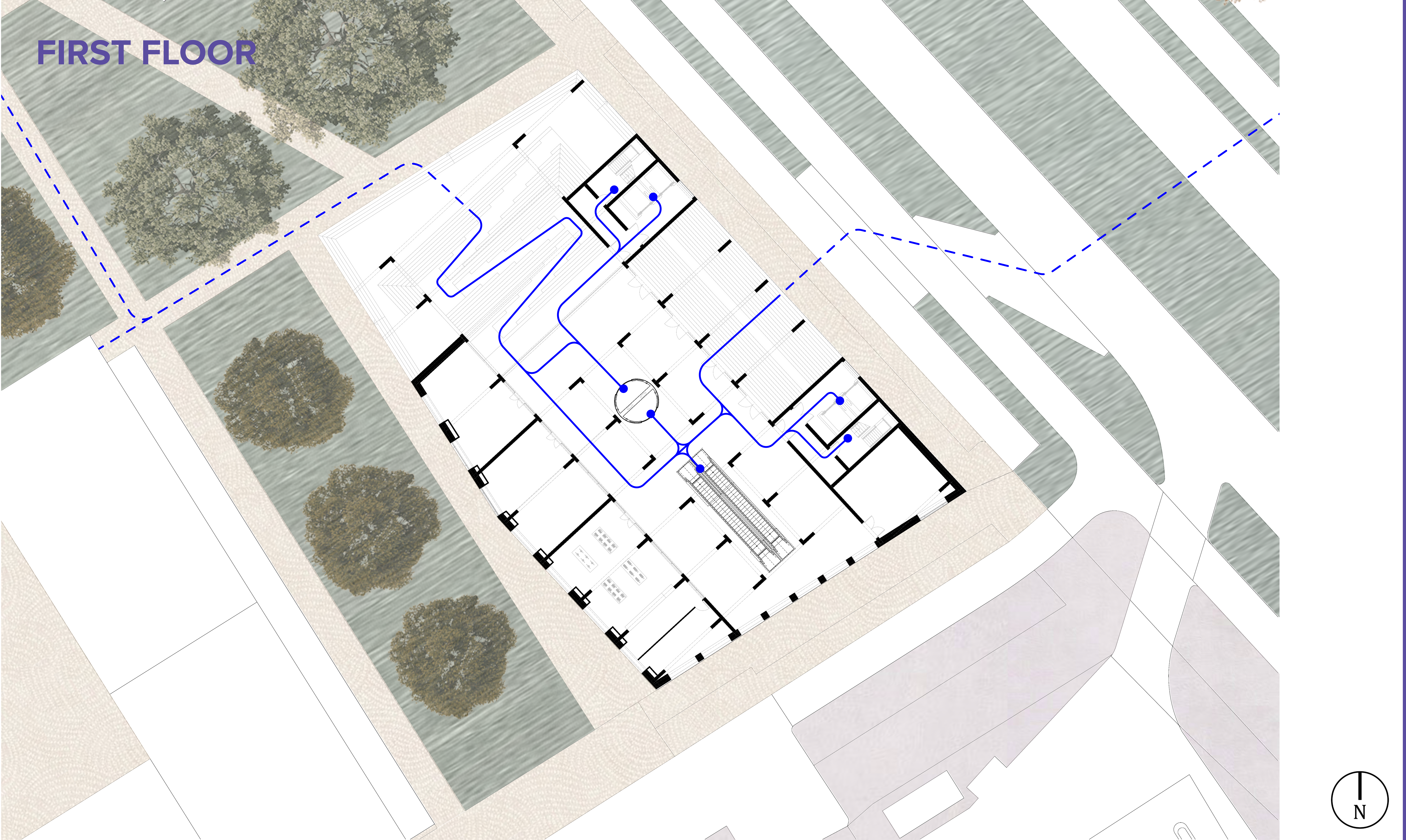
ANNA VAN BUEREN

GROUND FLOOR

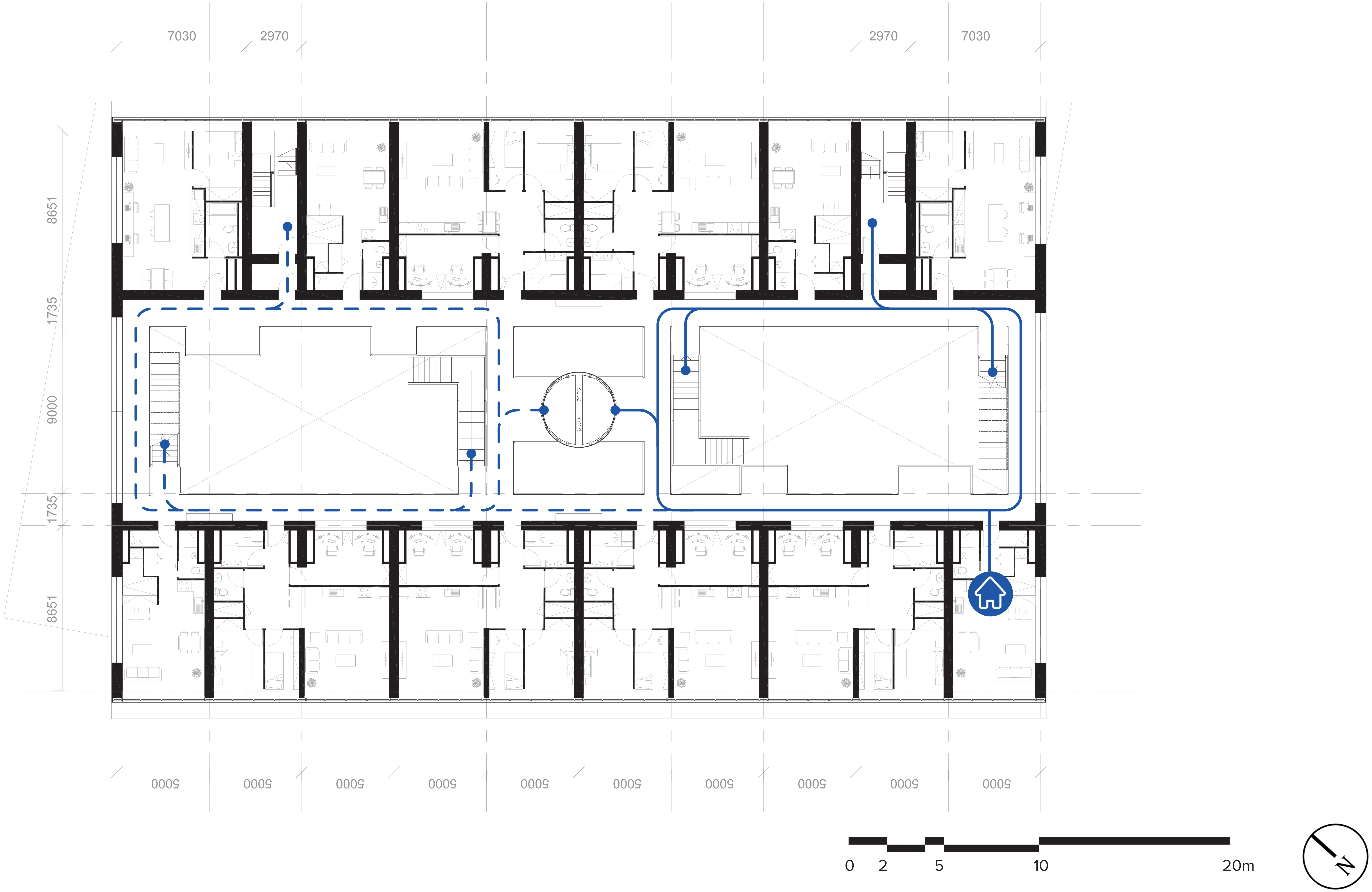
Legend:

- ● / ● Rising point
- Pedestrians / shoppers
- Residents by car
- Residents by bicycle
- Postal services / visitors

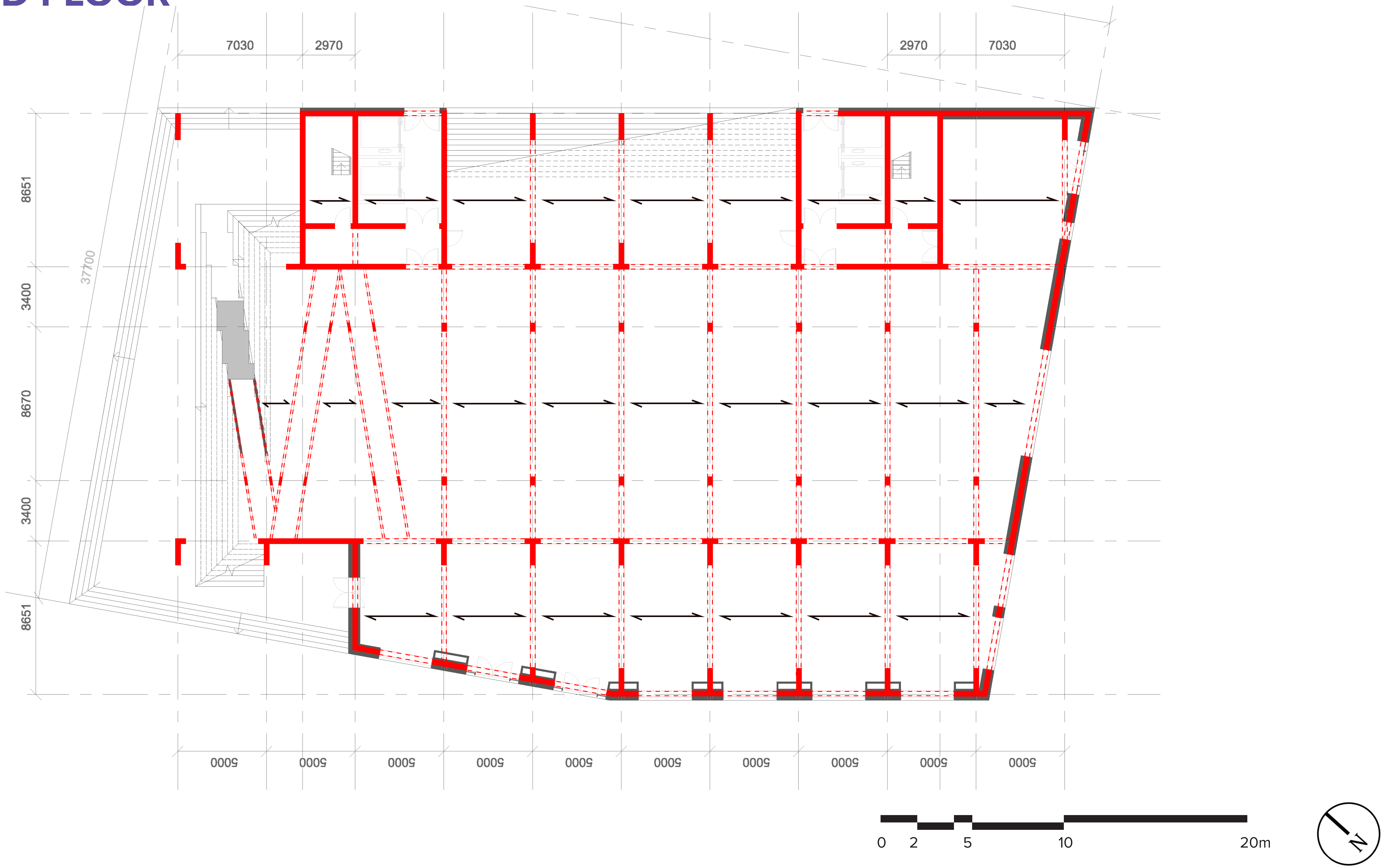
FIRST FLOOR



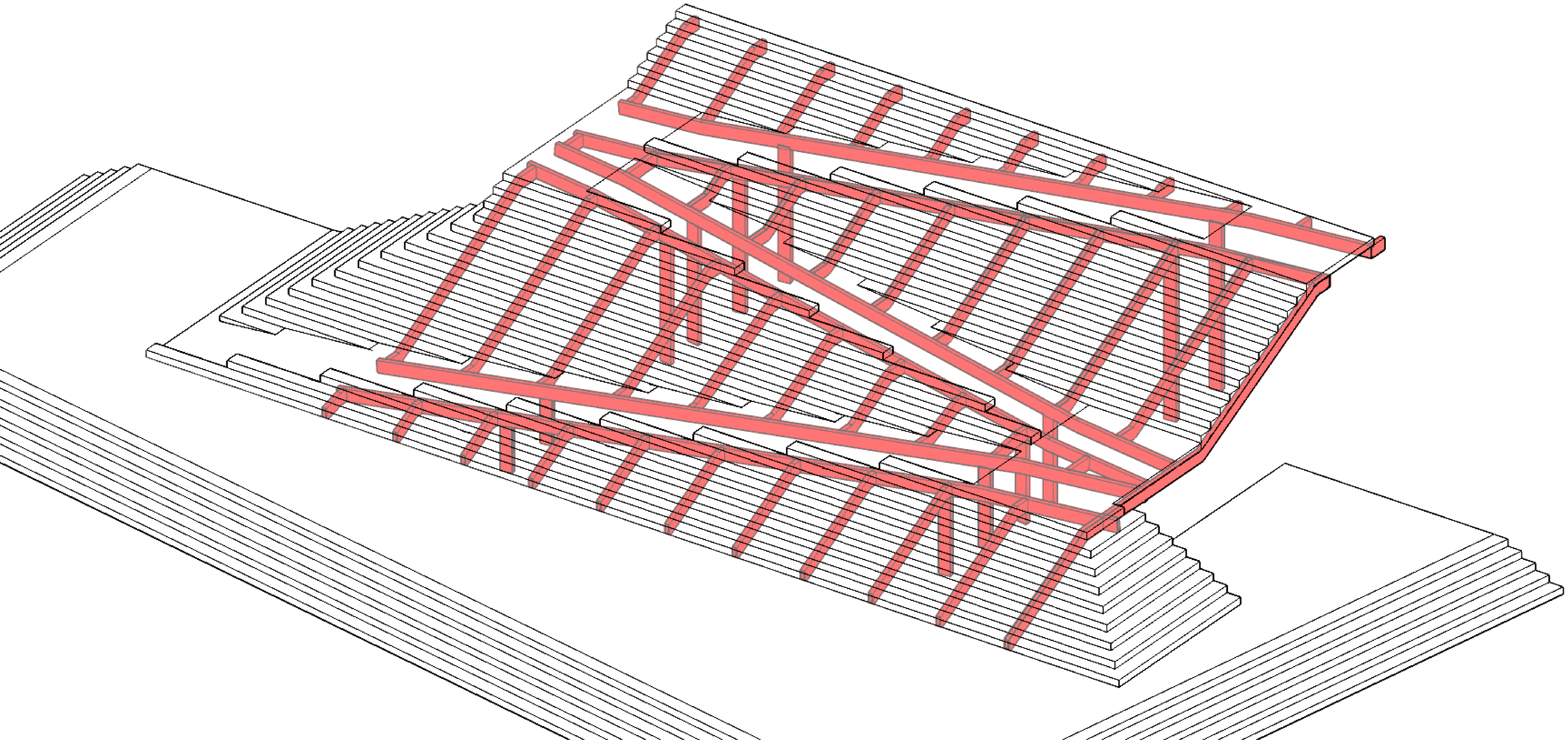
AVERAGE FLOOR



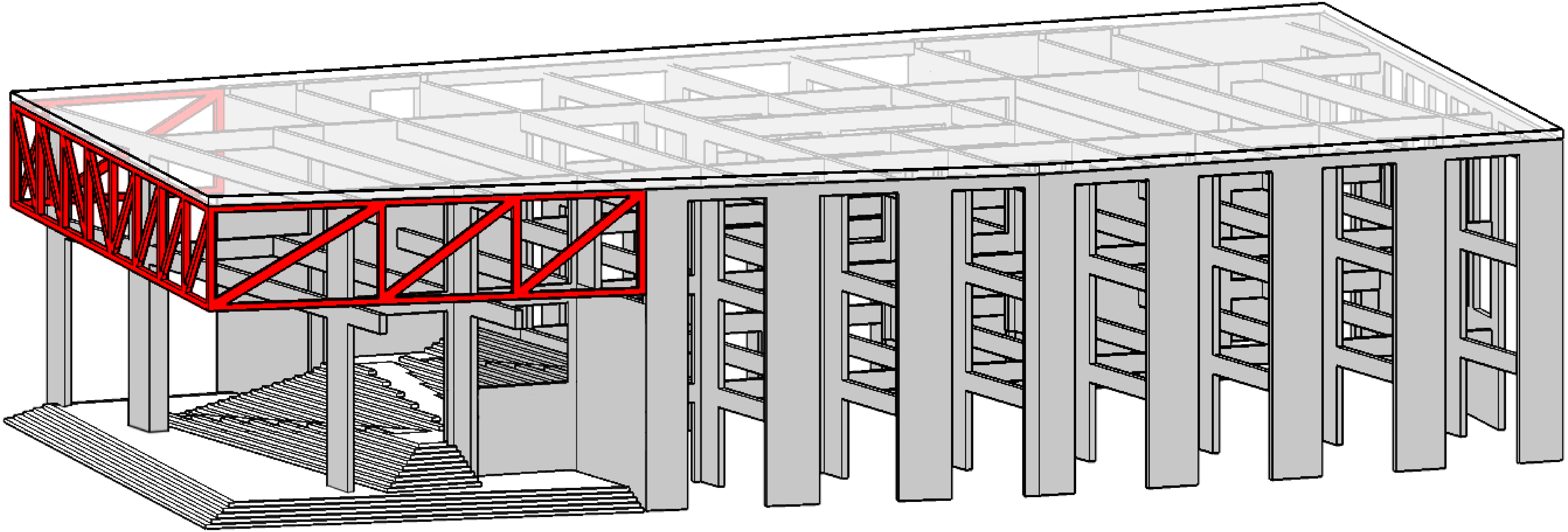
GROUND FLOOR



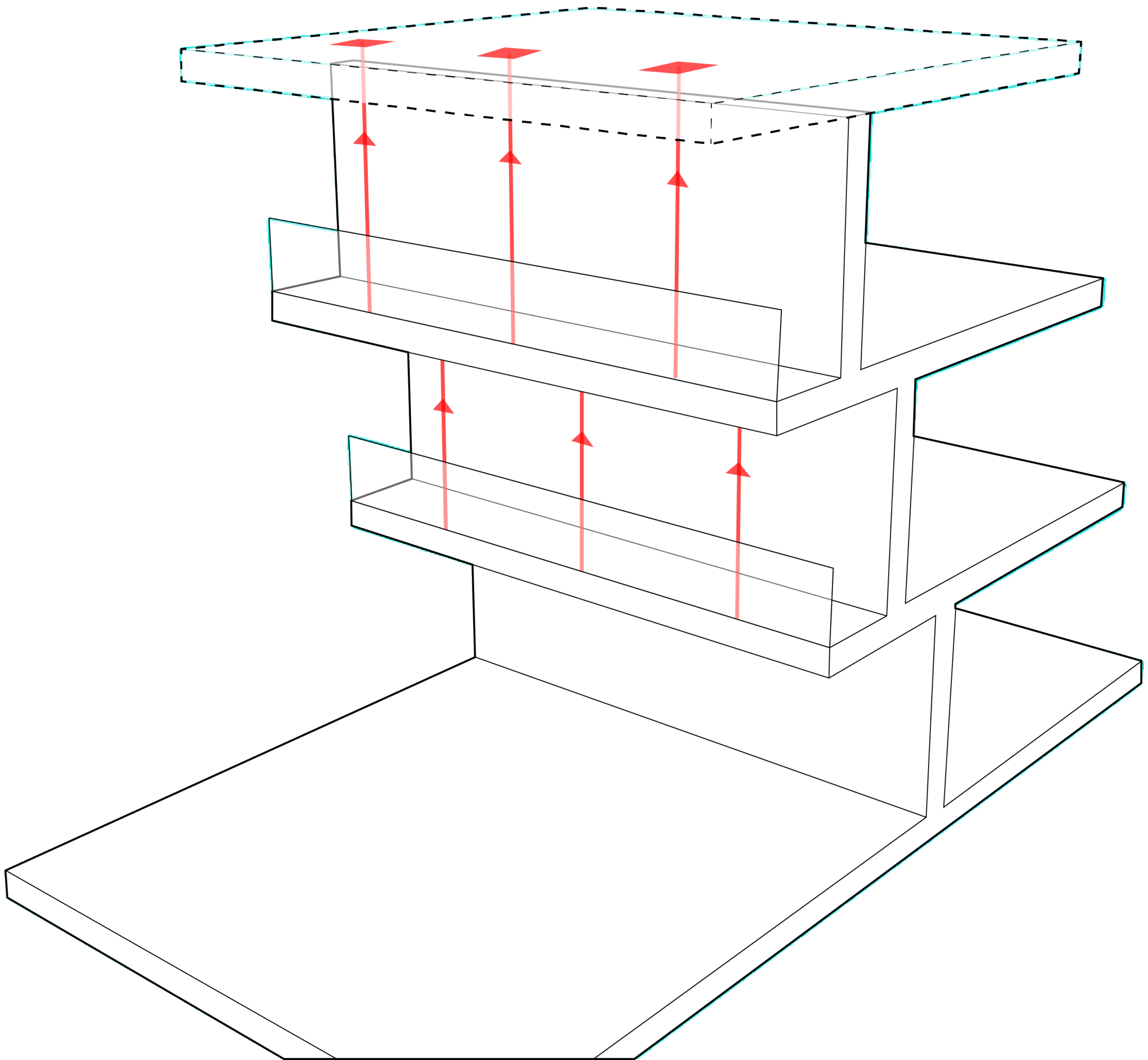
STAIRS



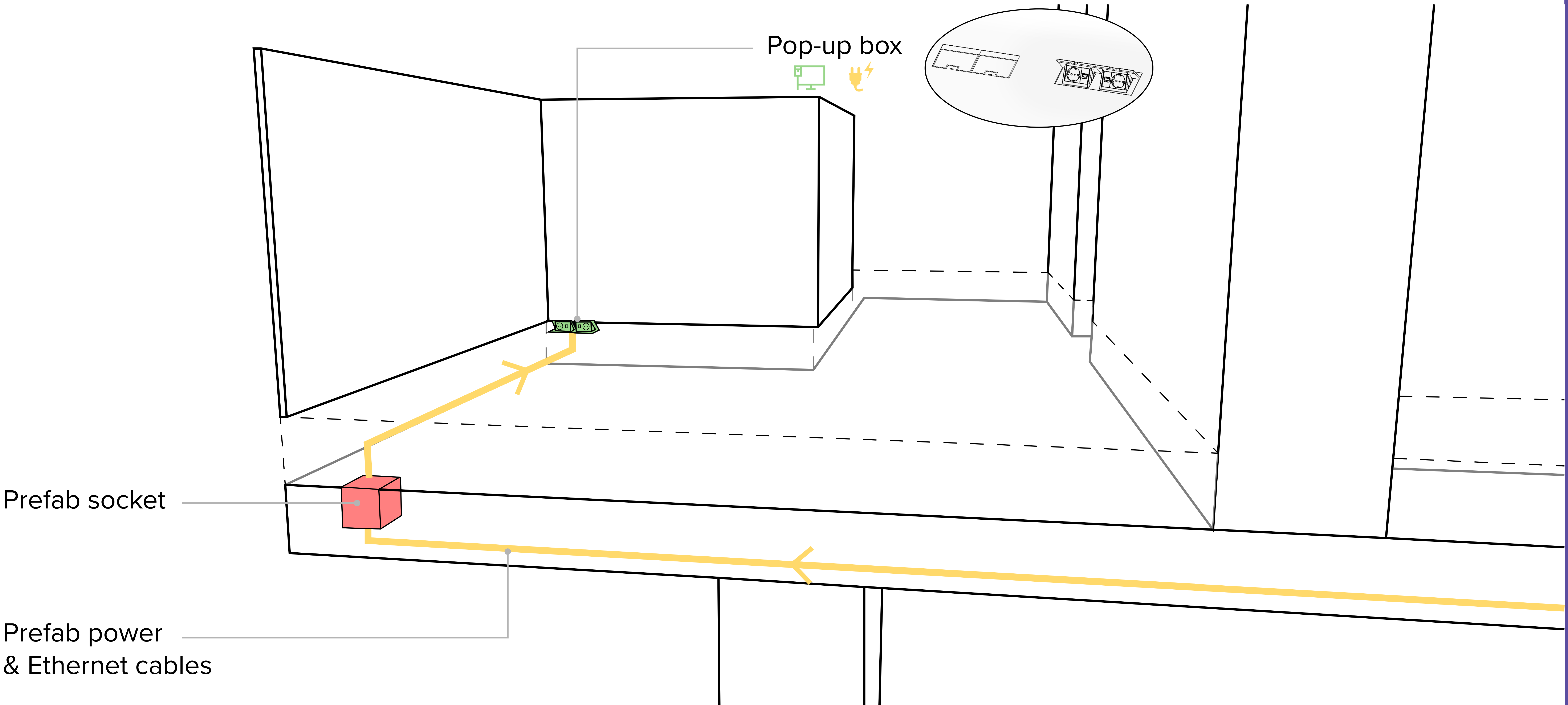
CANTILEVER ROOF



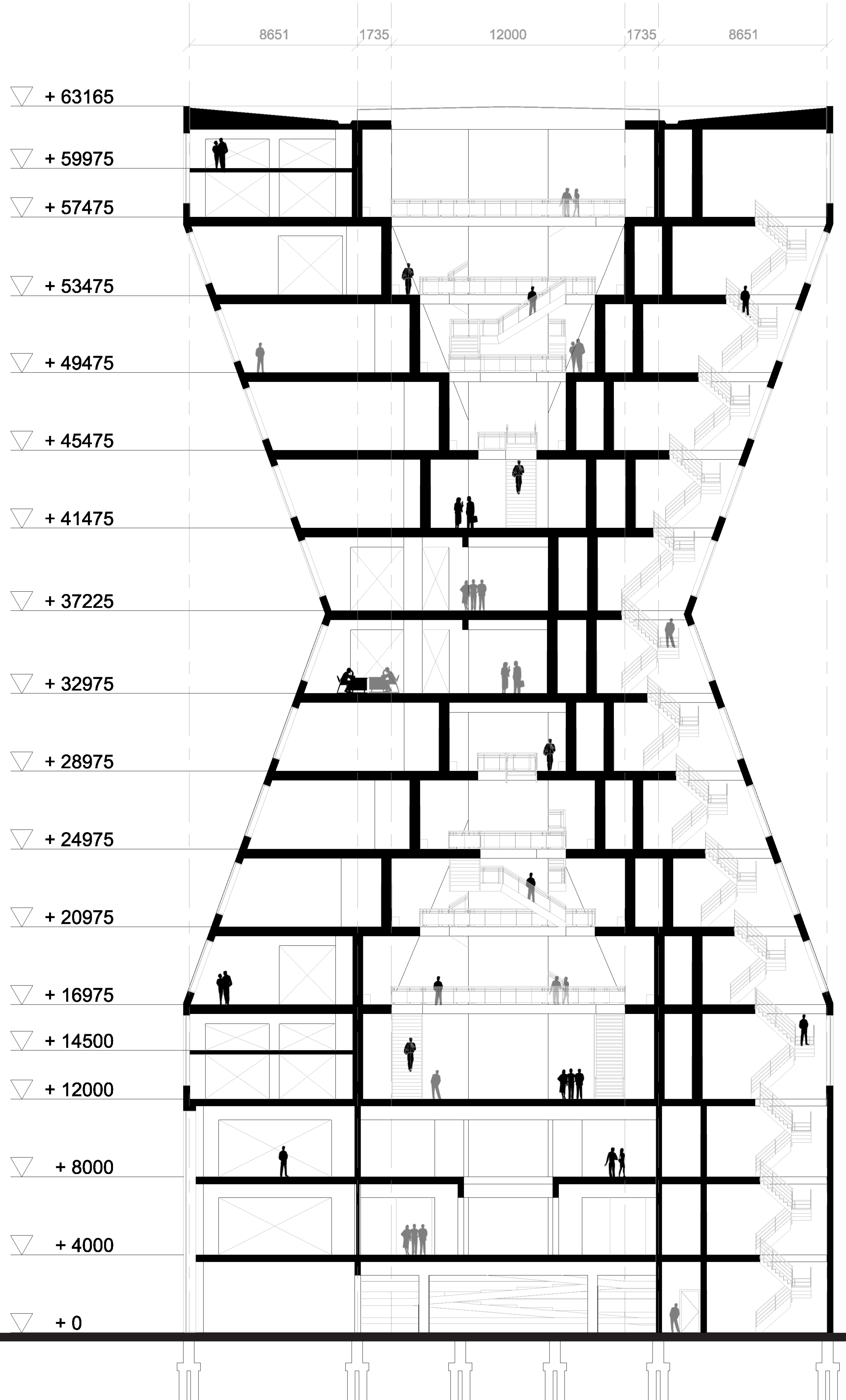
BOTTOM GALLERY



POWER TO BALCONIES



SECTION


8651
1735
12000
1735
8651
+ 63165
+ 59975
+ 57475
+ 53475
+ 49475
+ 45475
+ 41475
+ 37225
+ 32975
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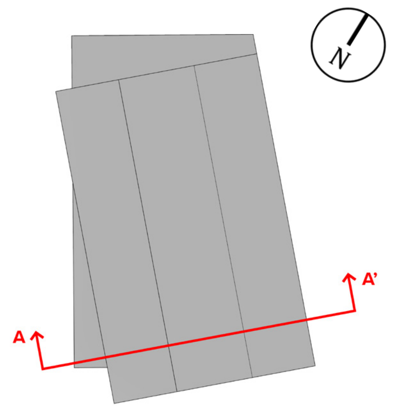
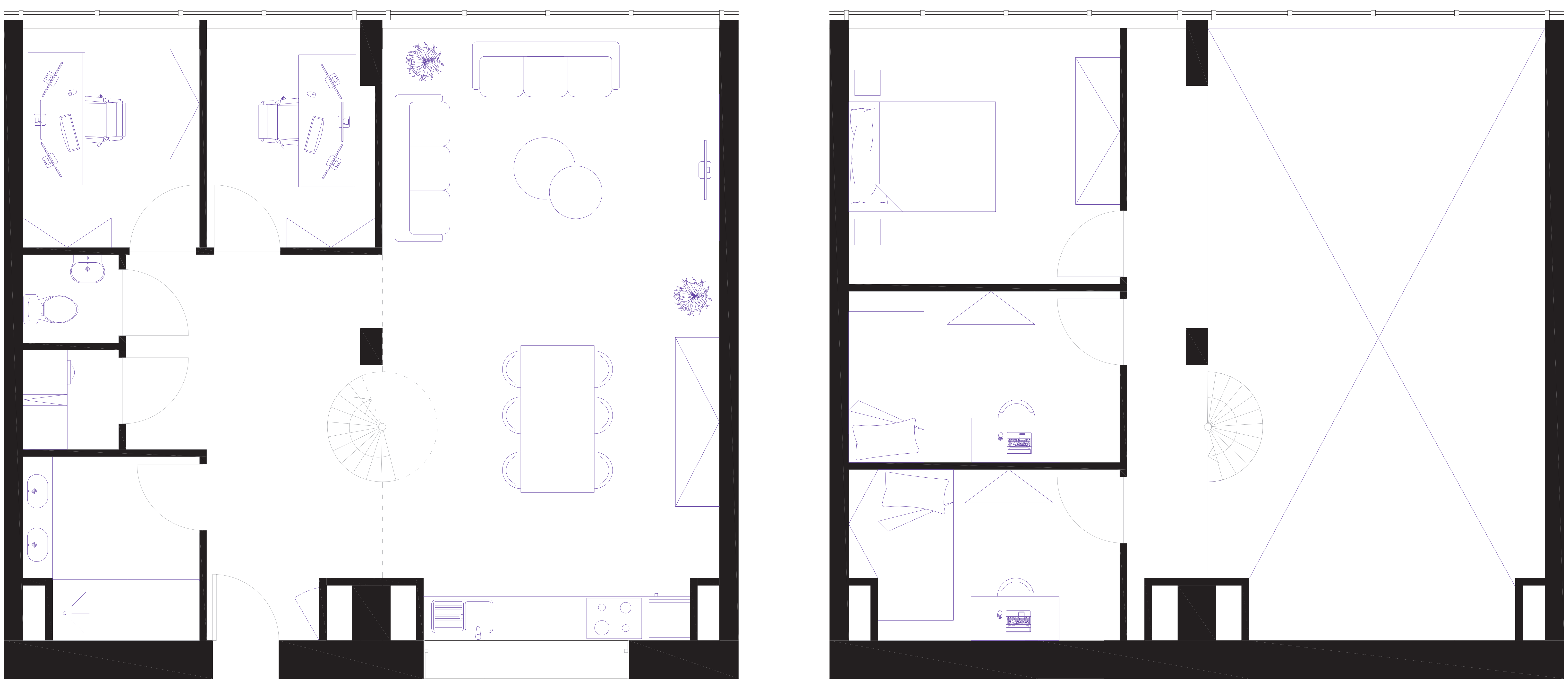
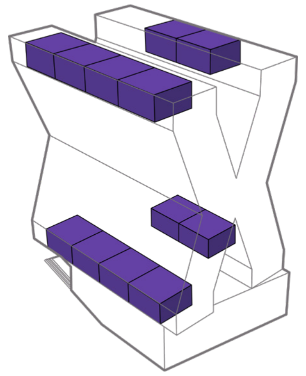
+ 14500
+ 12000
+ 8000
+ 4000
+ 0


A
A'
N

MULTILAYER LARGE APARTMENT

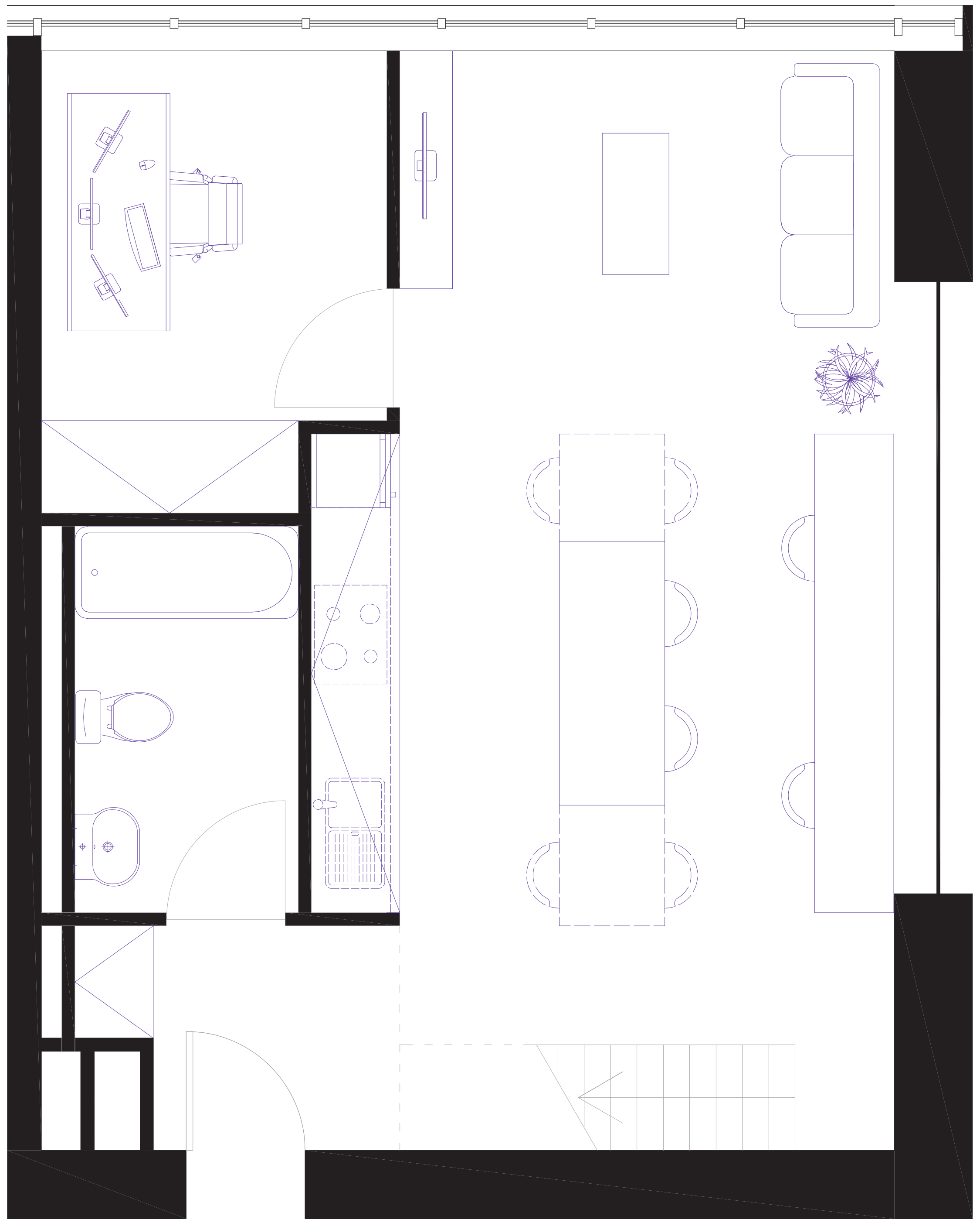


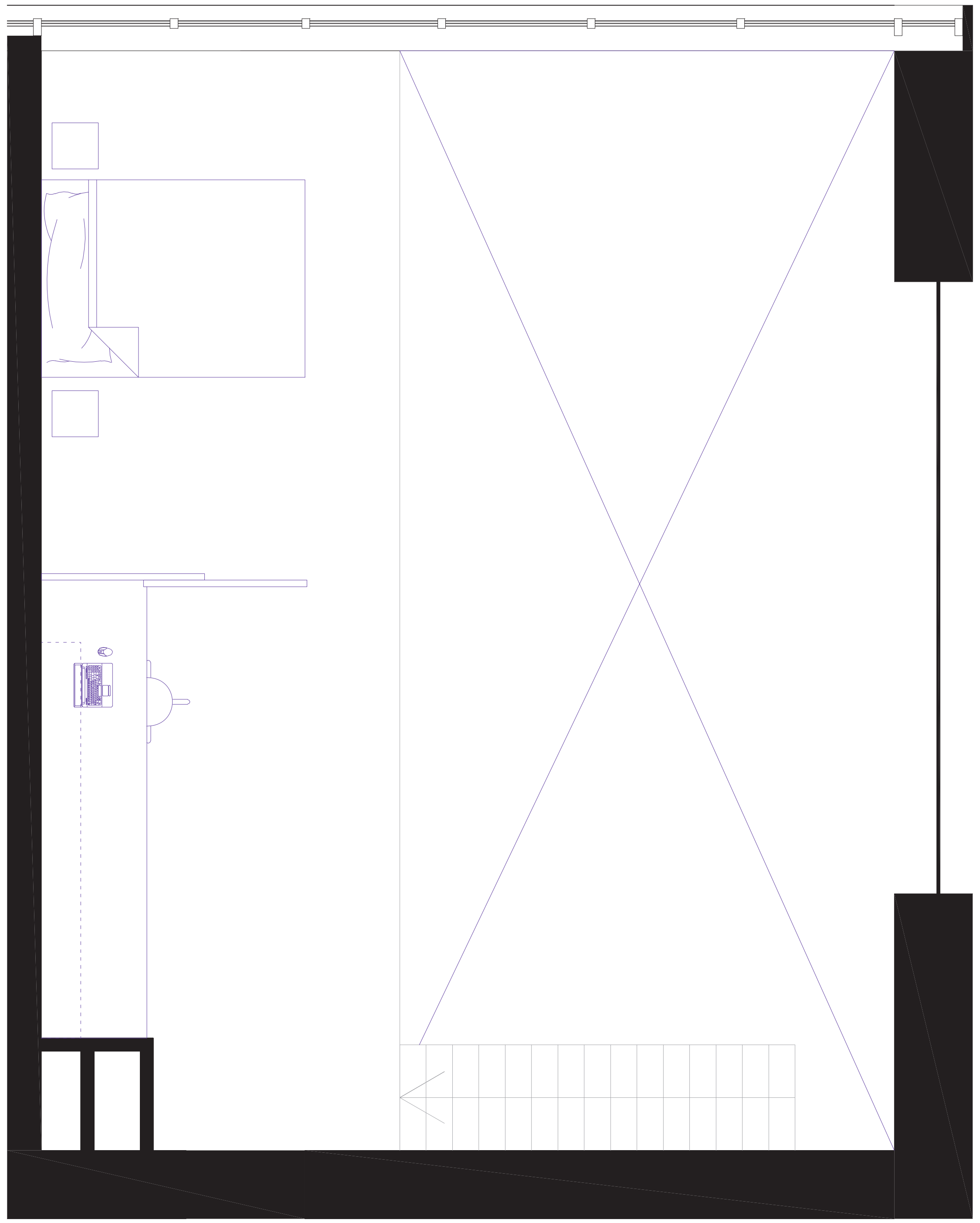


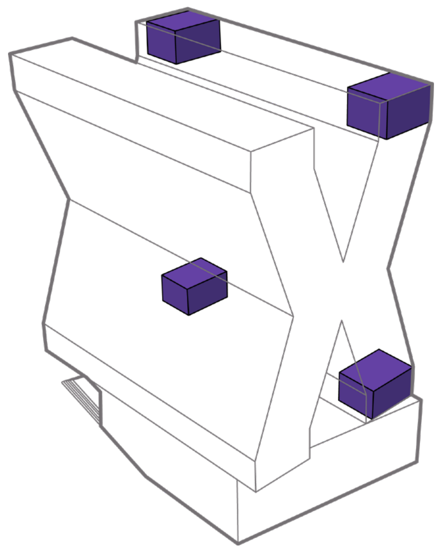
6 room(s)

115 m^2

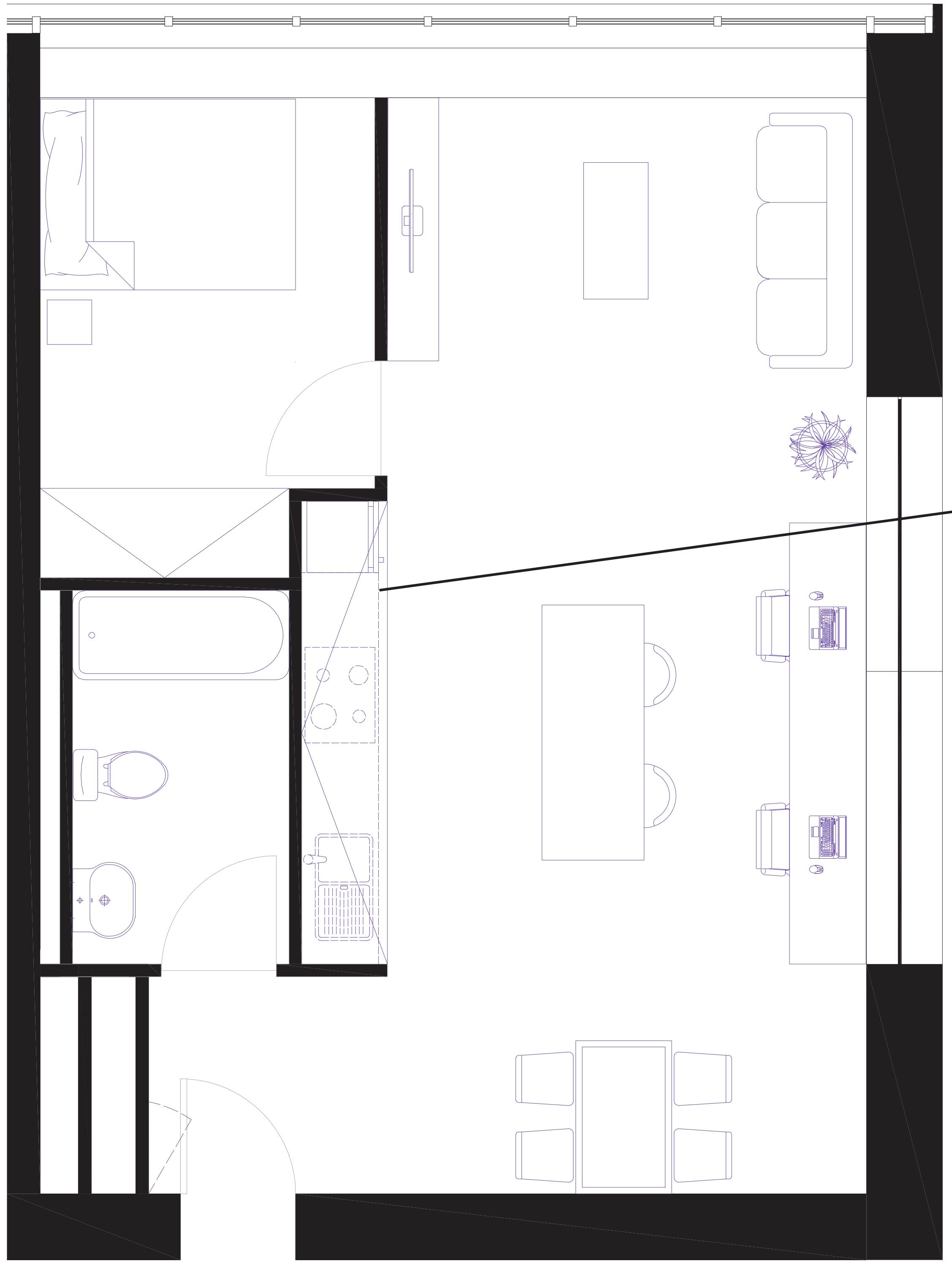
MULTILAYER CORNER APARTMENT

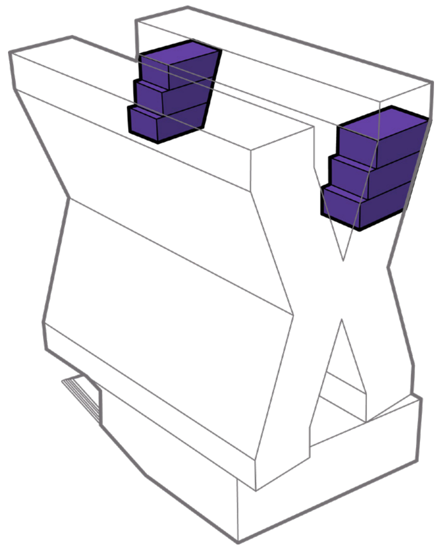






CORNER APARTMENT (TOP PART TOWER)

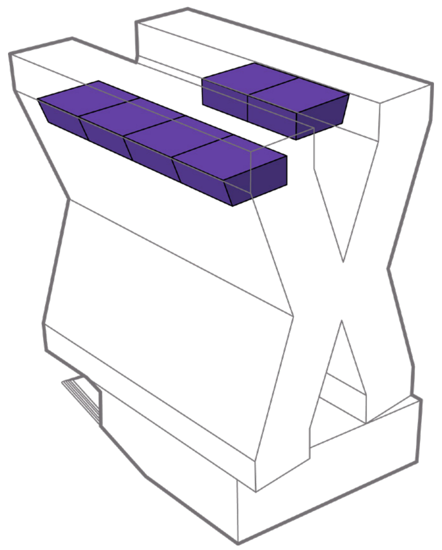




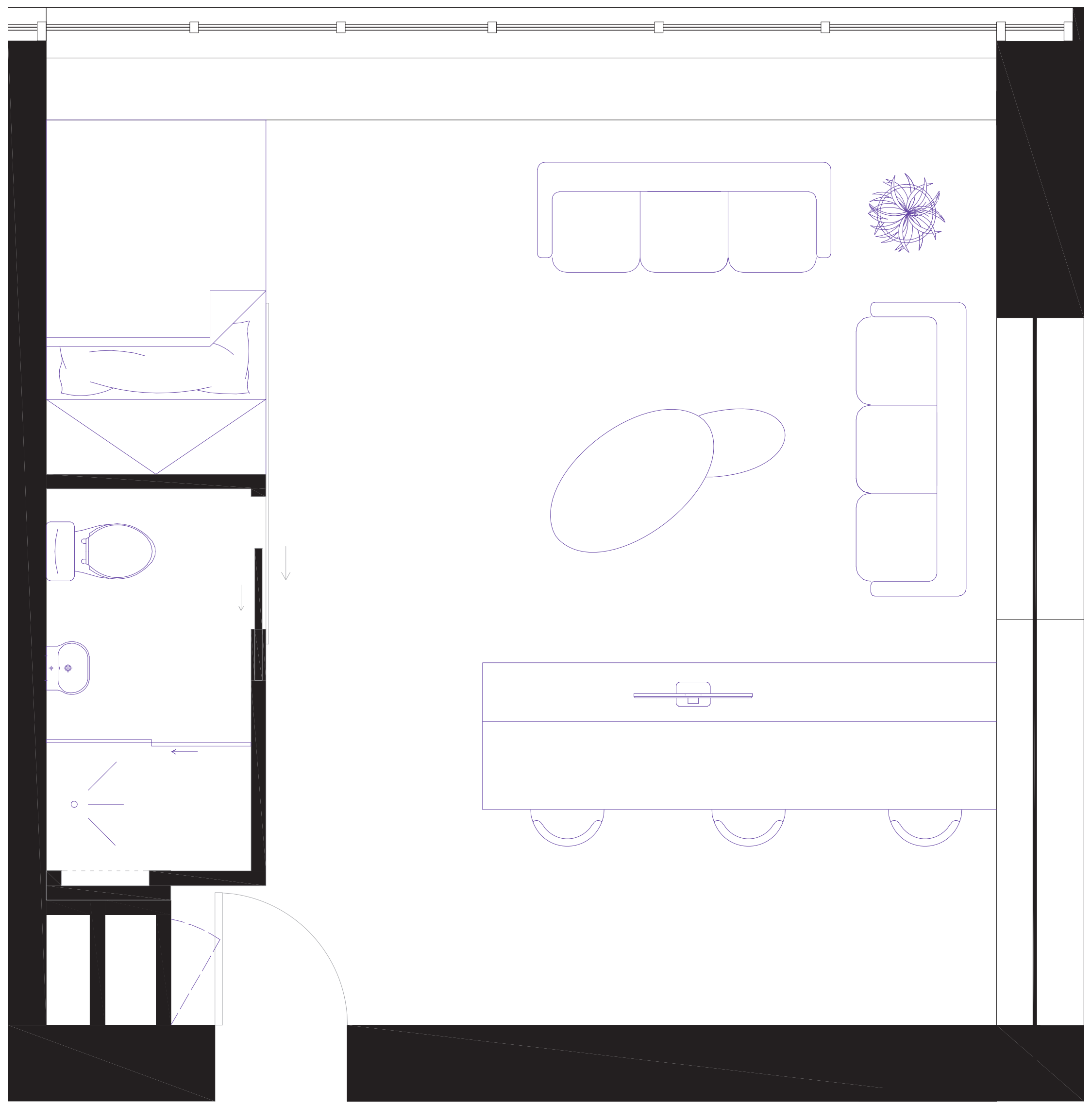
2 room(s)

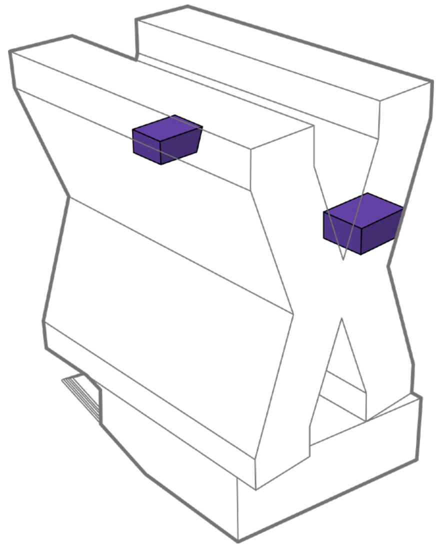
55 m²

LARGE APARTMENT (TOP PART TOWER)

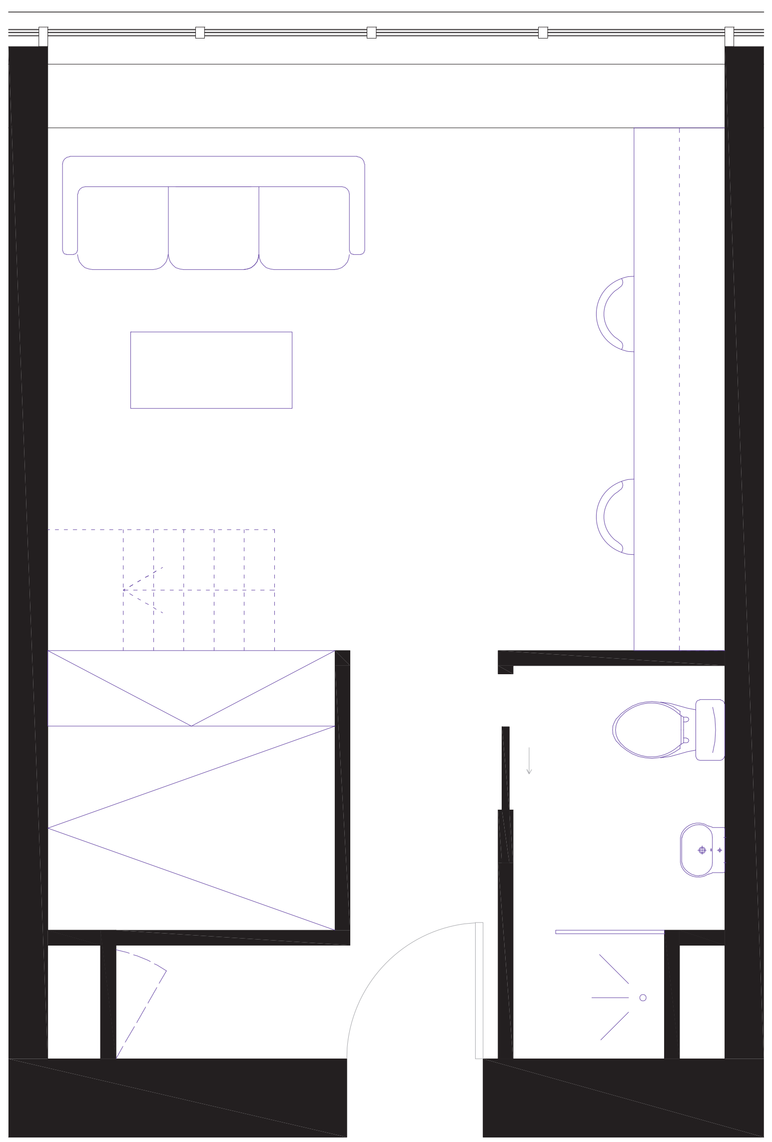


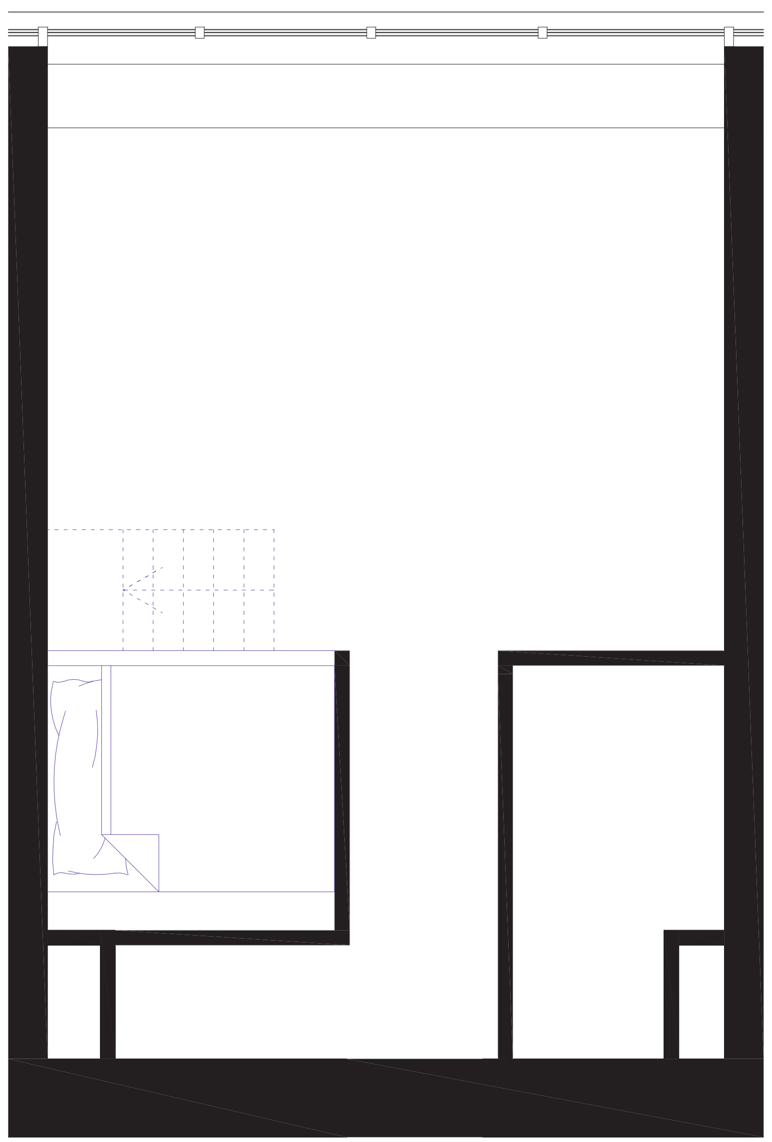
CO-LIVING CORNER APARTMENT

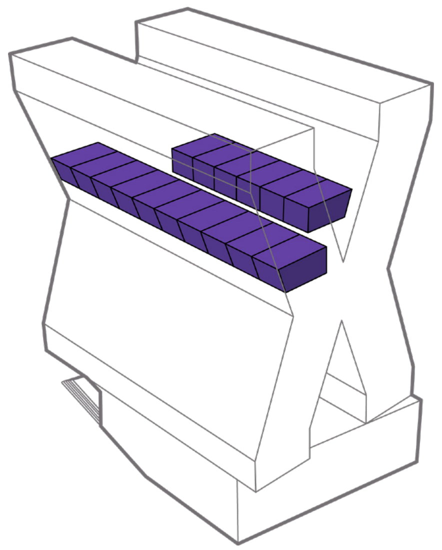




CO-LIVING APARTMENT



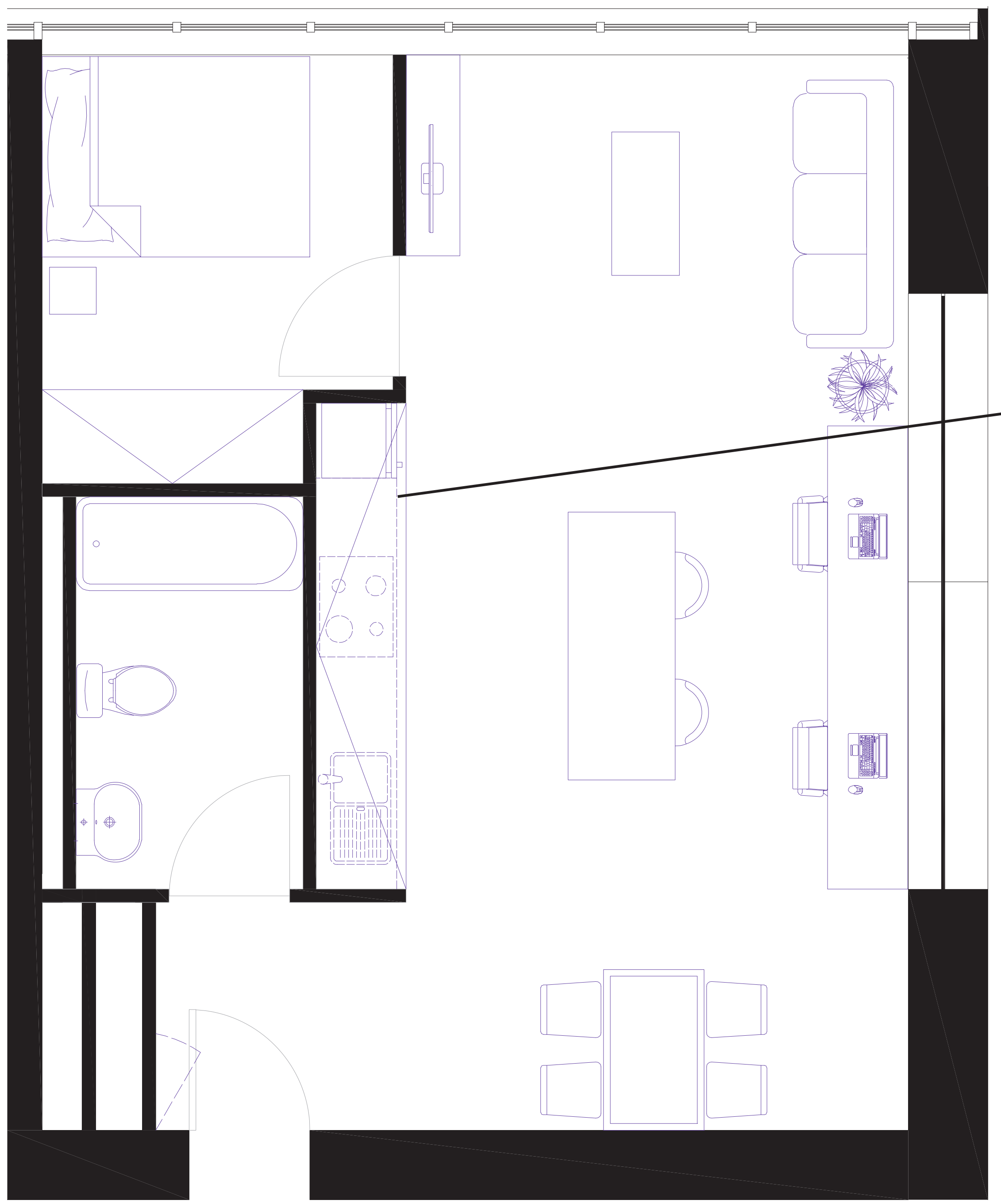


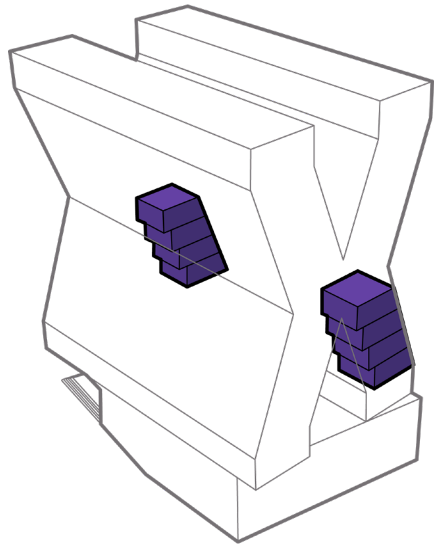


1 room(s)

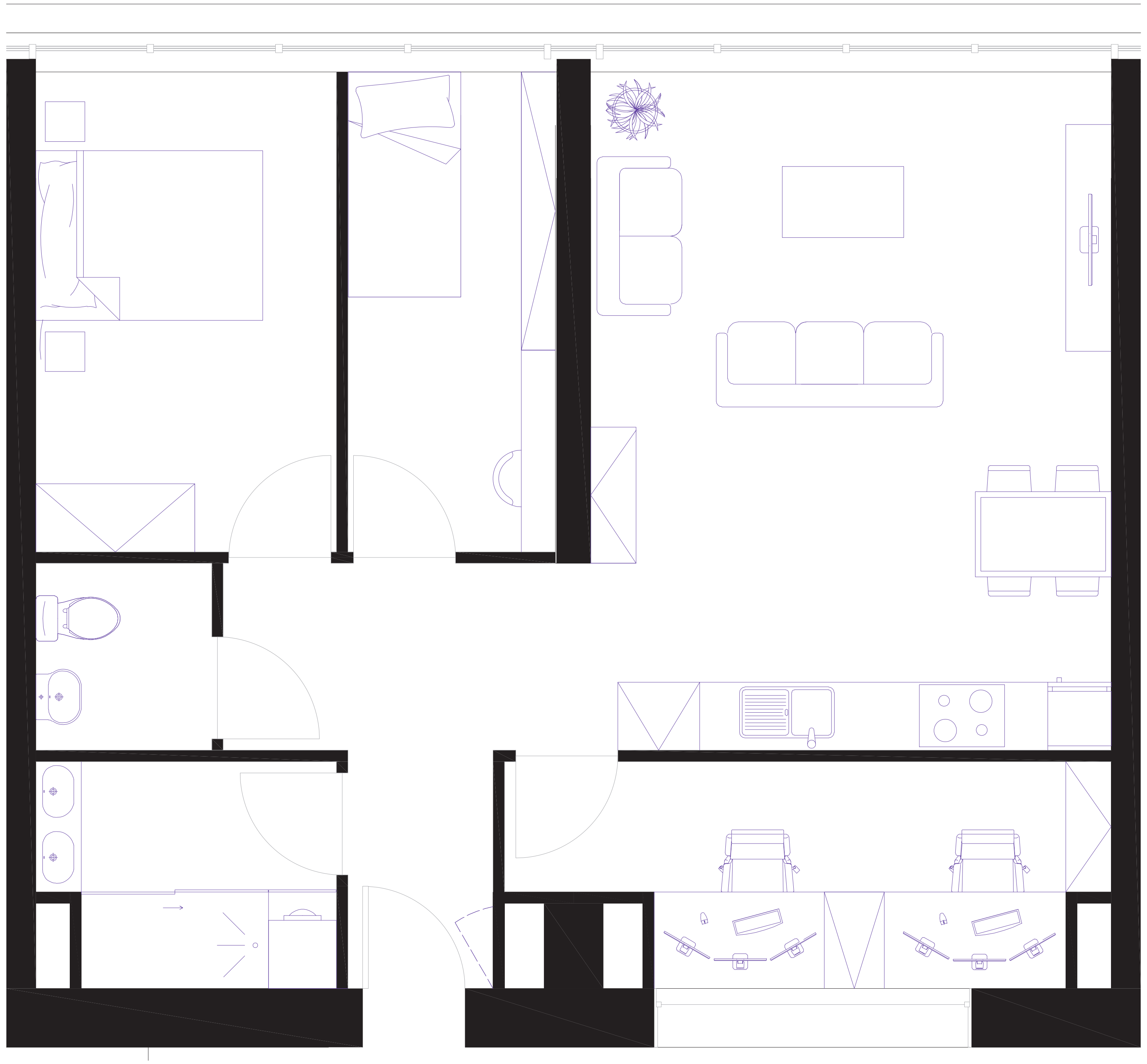
27 m²

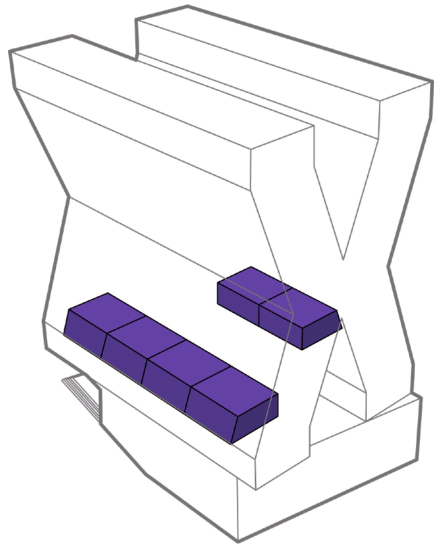
CORNER APARTMENT (BOTTOM PART TOWER)





LARGE APARTMENT (BOTTOM PART TOWER)

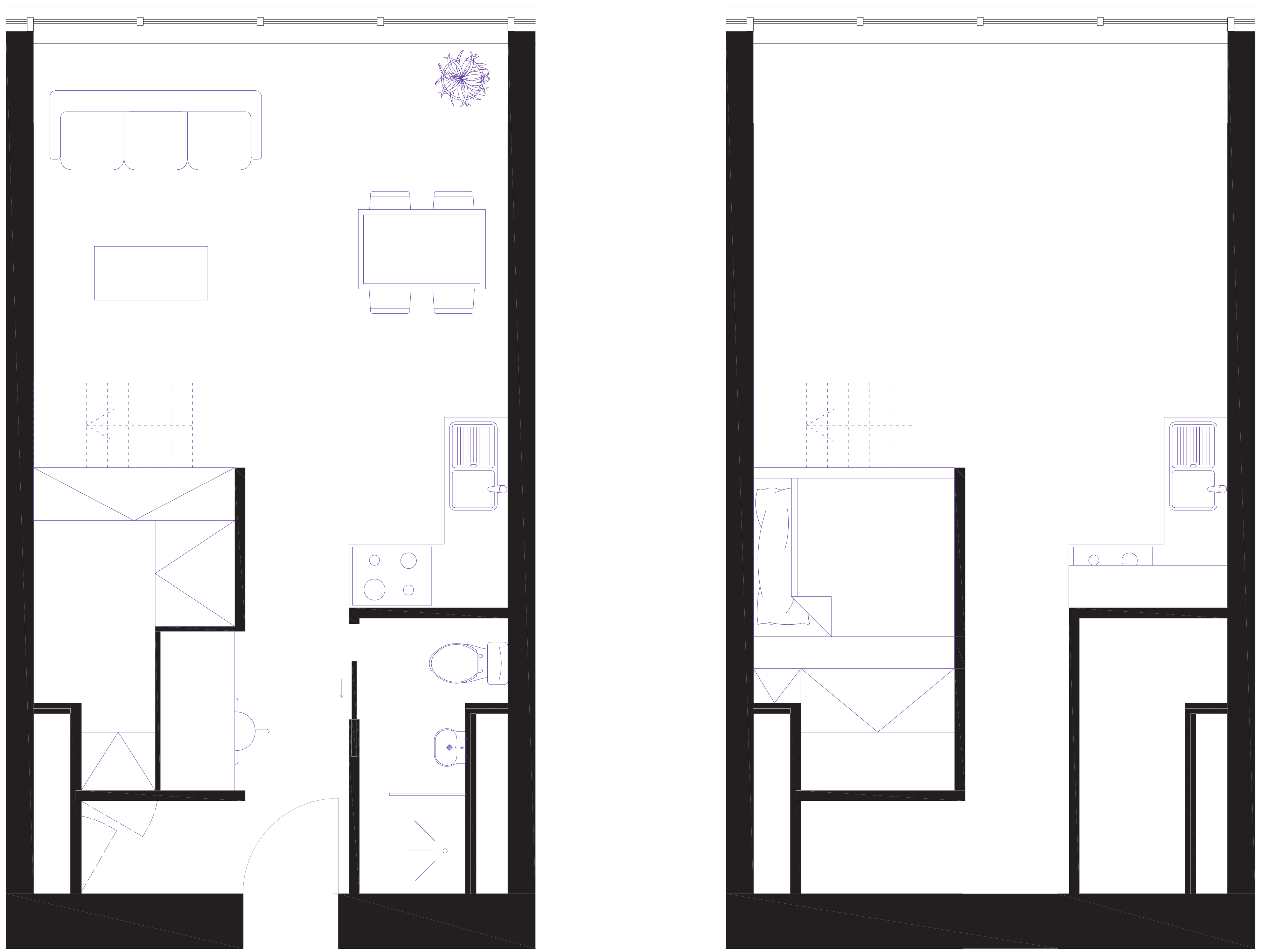


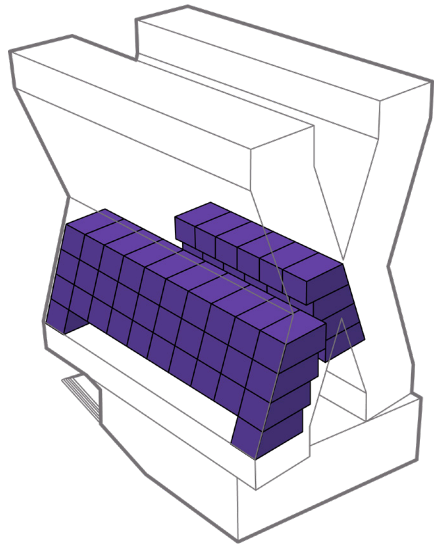


4 room(s)

77 m²

STUDIO+ (BOTTOM PART TOWER)





1 room(s)

36 m²