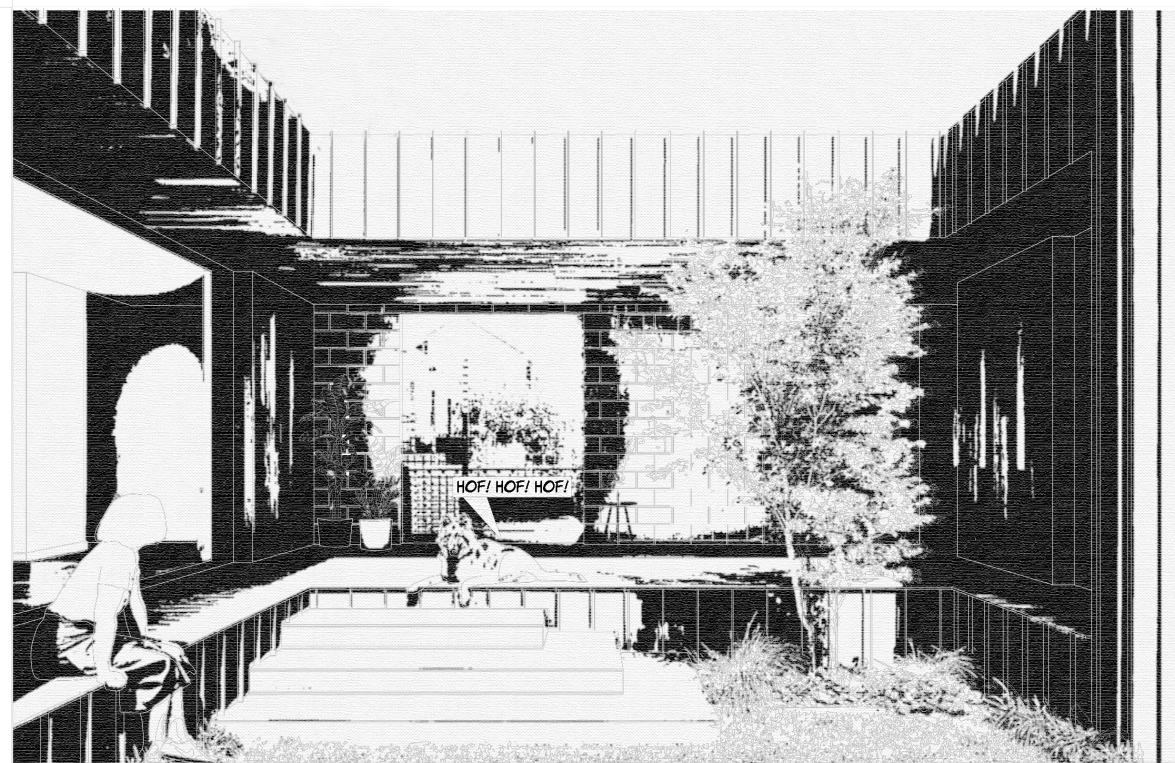


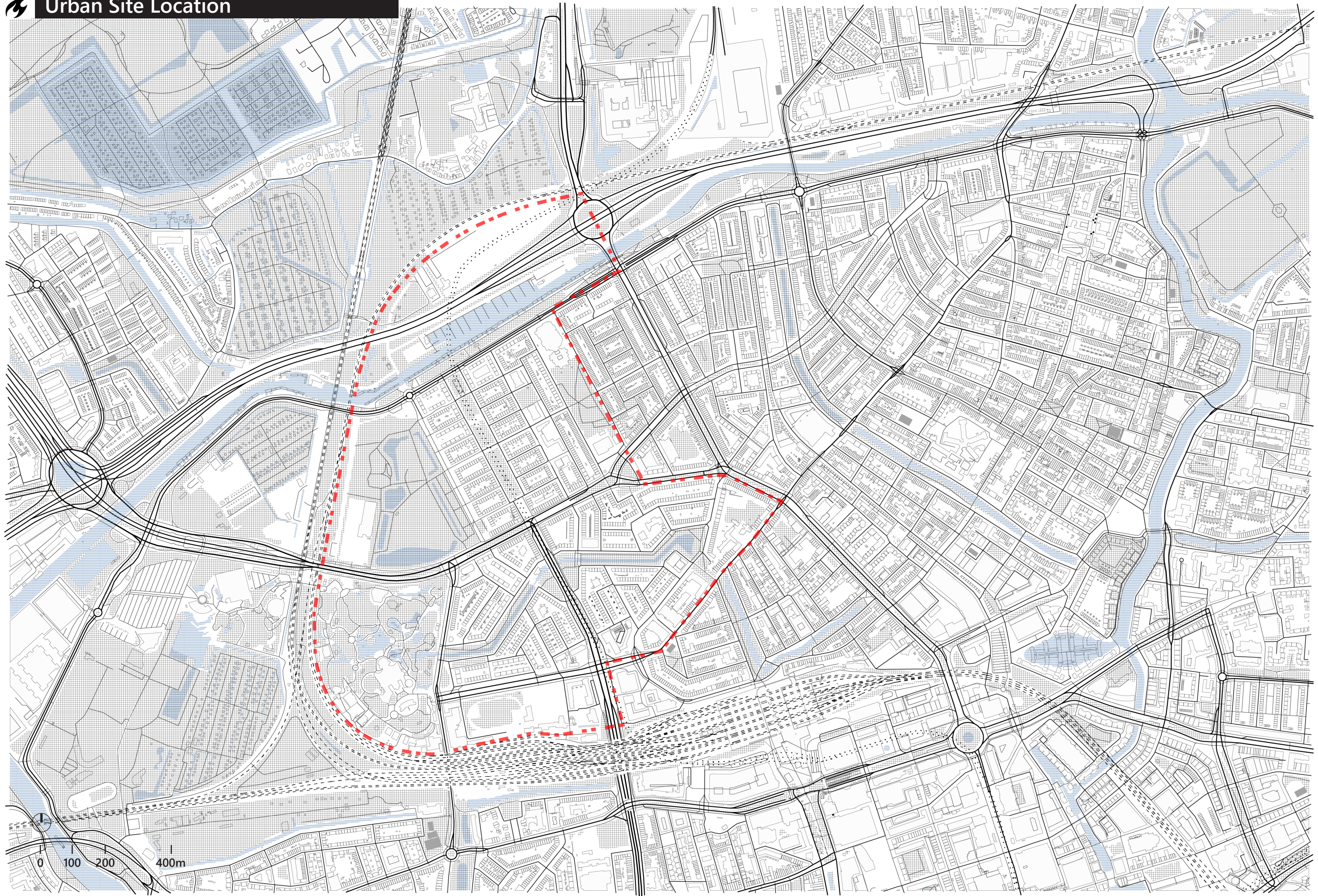
Synanthropic* Habitats

HOFJES AS THRESHOLDS FOR DIVERSE HUMAN AND NON-HUMAN ENVIRONMENTS

*sin-an-'thräp-ik: on the basis of Greek
synanthrōpeúesthai, synanthrōpízein “to live with {others}”

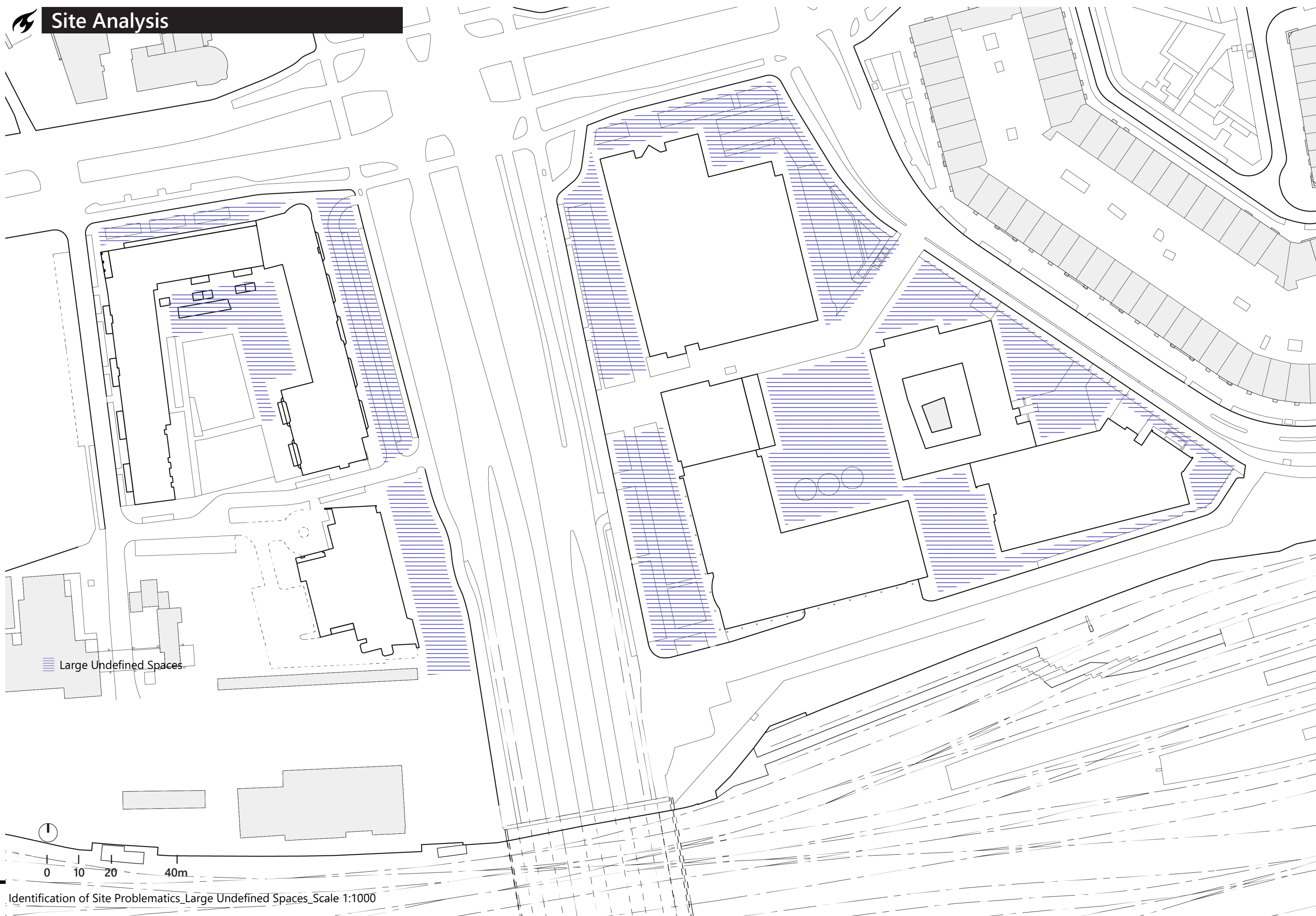


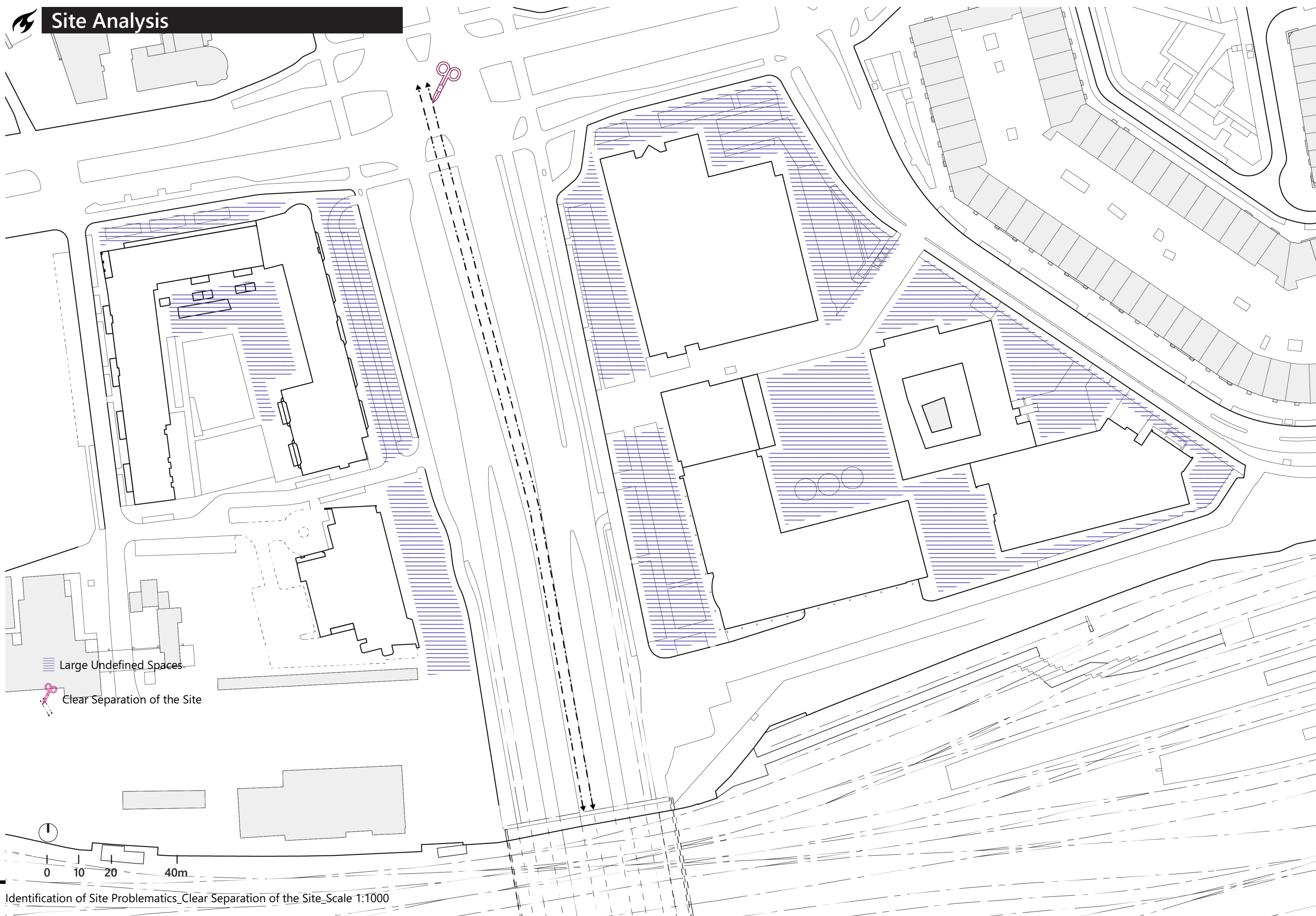
MICHALIS PSARAS
5359171





Mosaic. Bird's Eye View of the Site

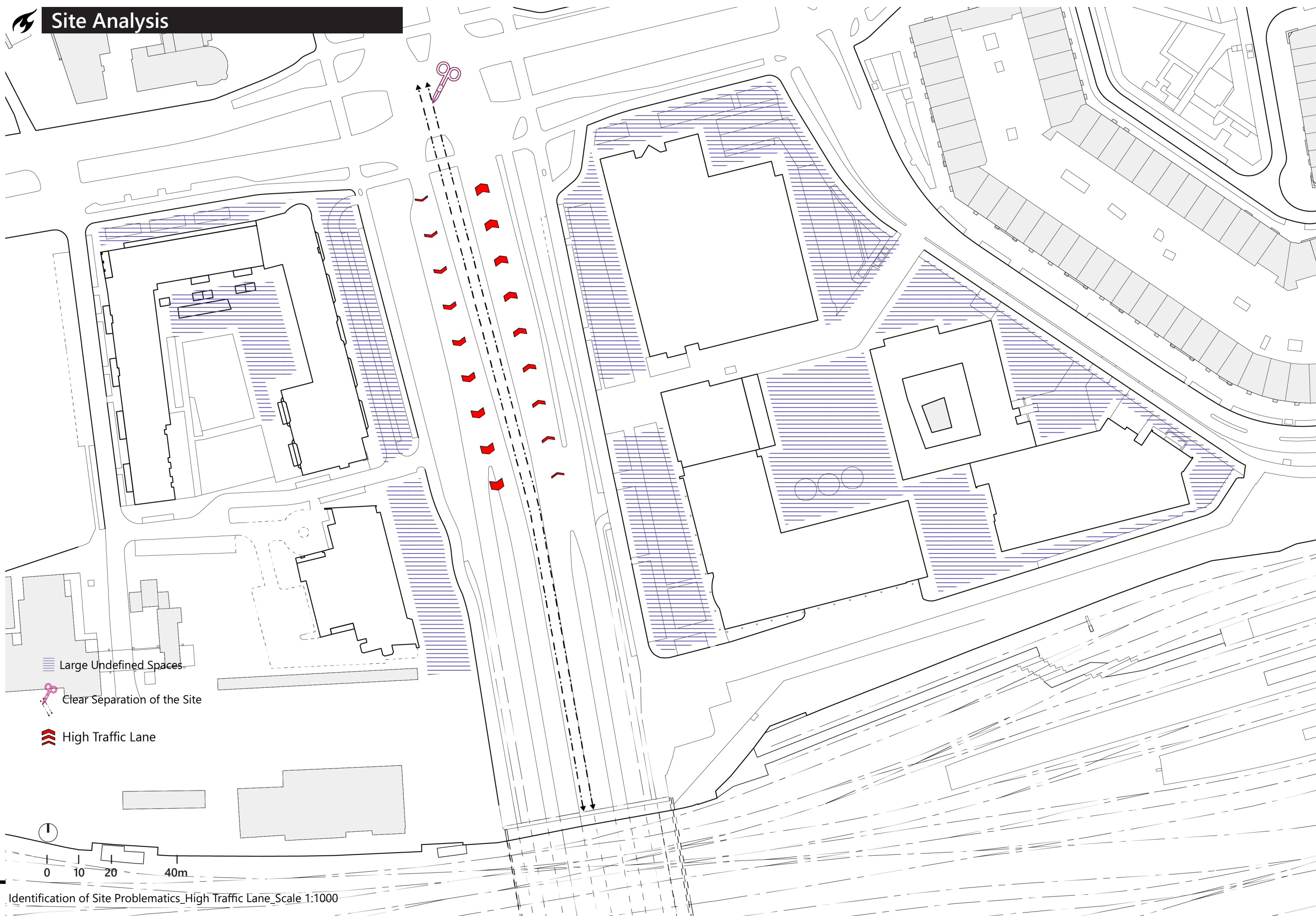






Site Analysis

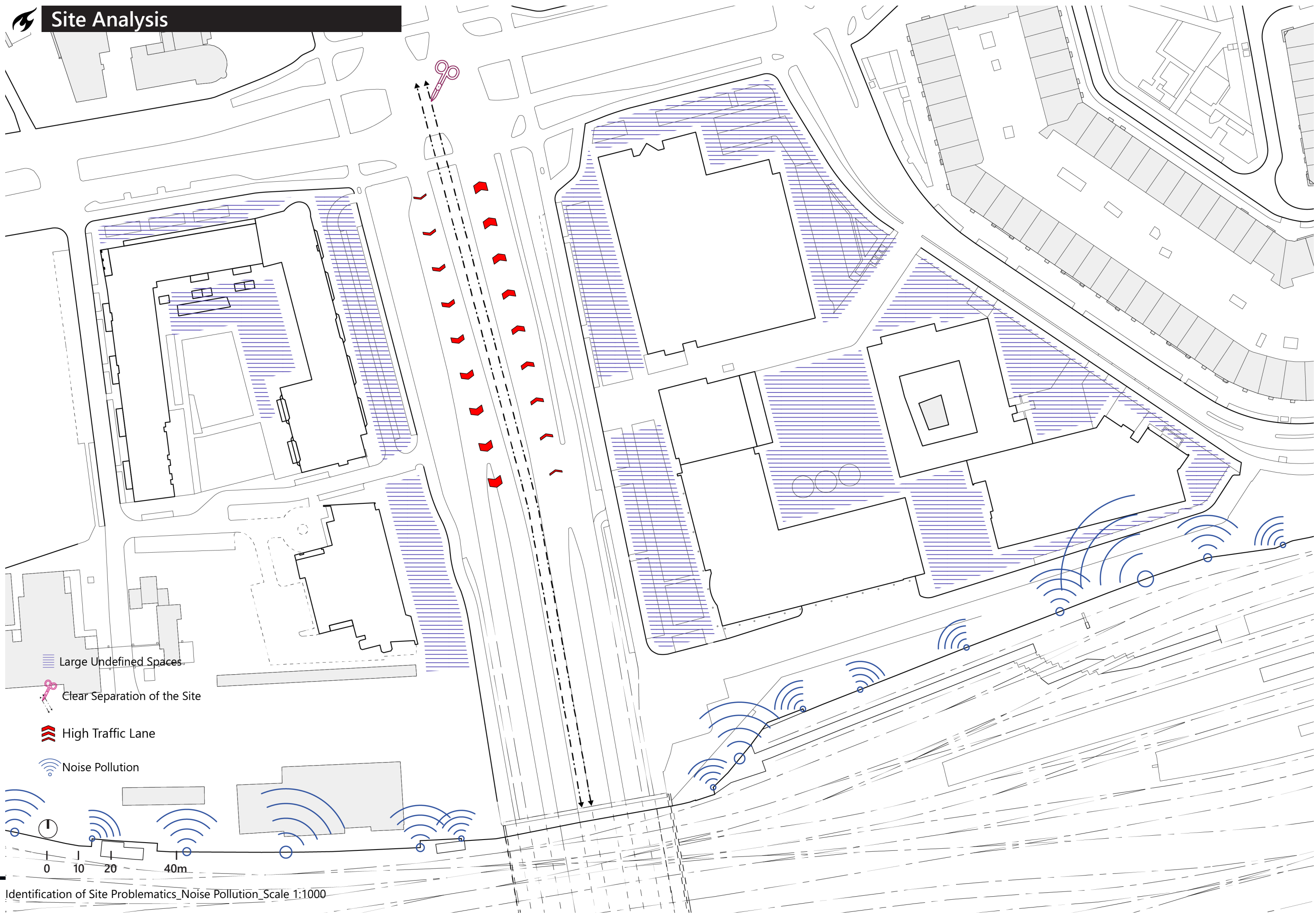
Michalis Psaras





Site Analysis

Michalis Psaras

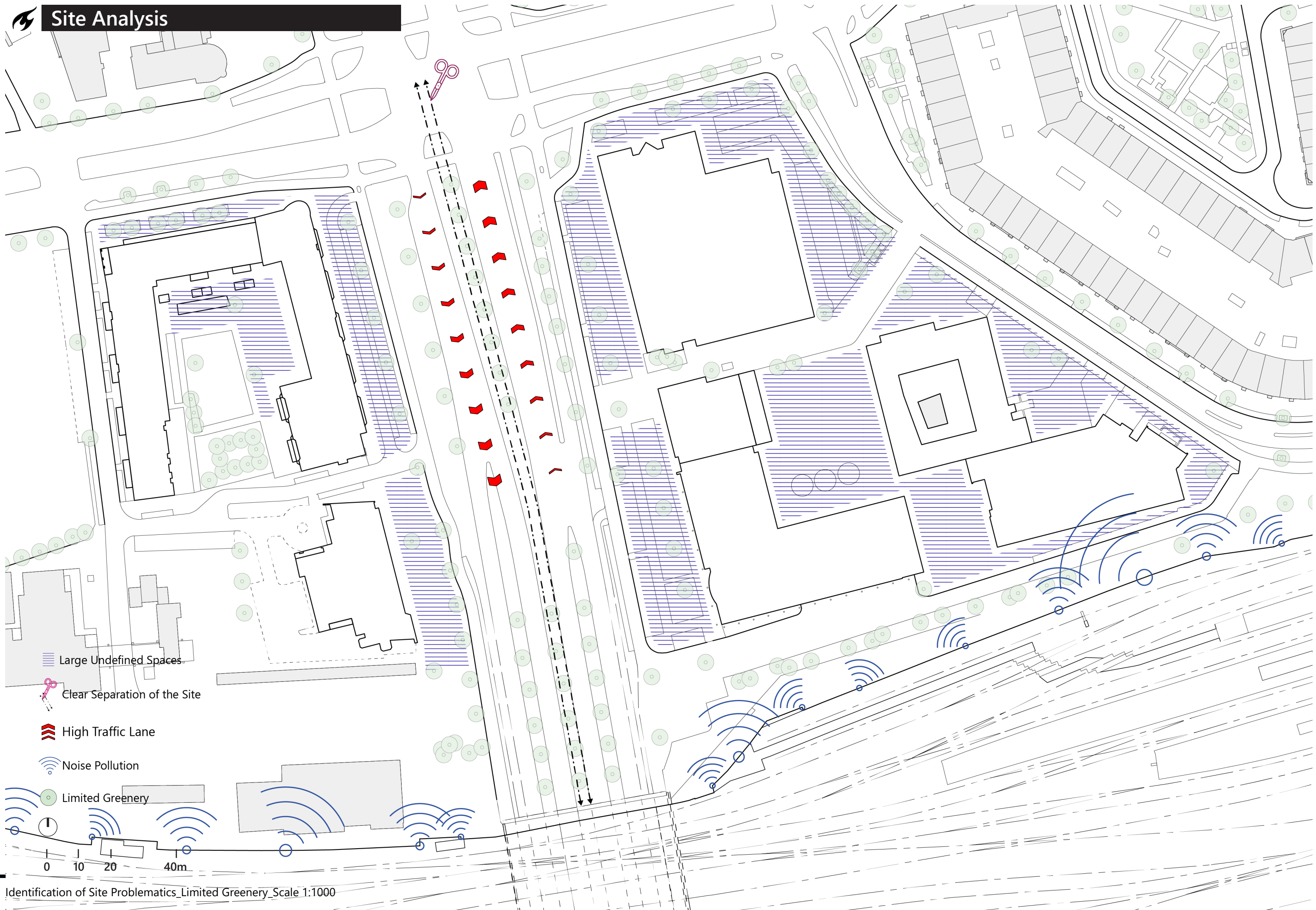


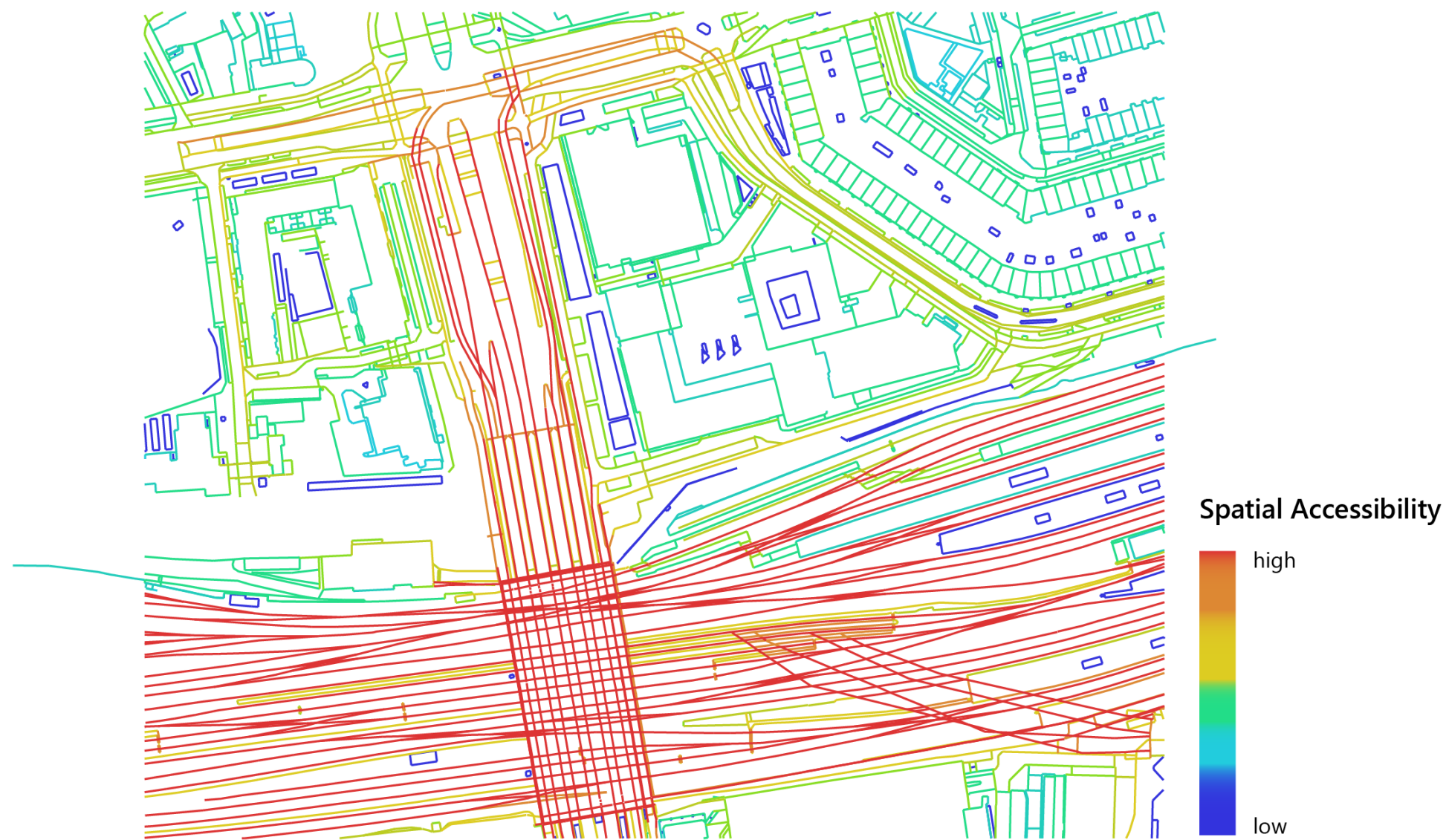
Identification of Site Problematics_Noise Pollution_Scale 1:1000

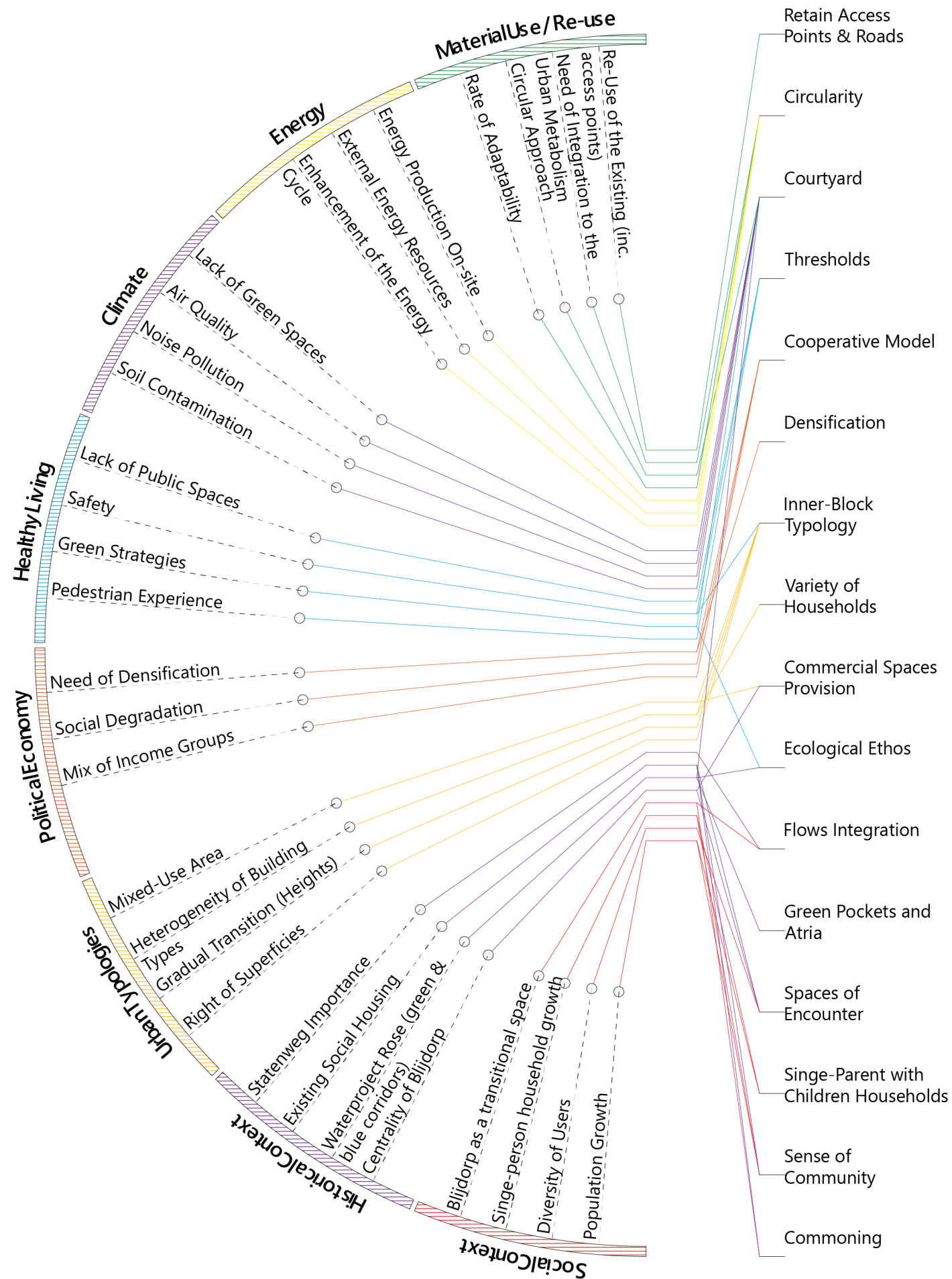


Site Analysis

Michalis Psaras



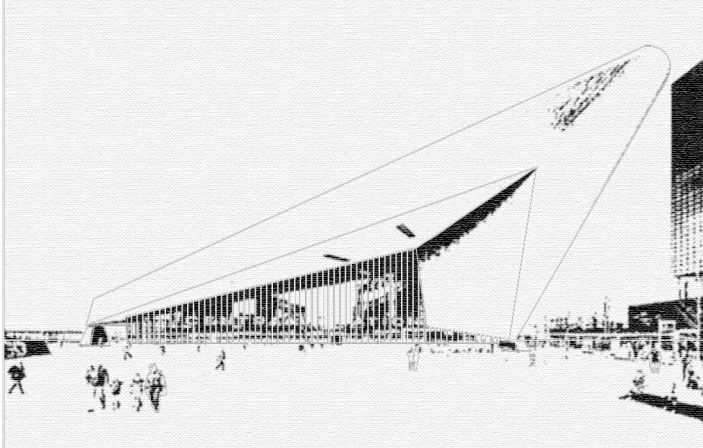




Form an amalgam of problems that constitute the bigger problématique of the need of thresholds as 'eventful' spaces of encounter on the basis of a sustainable (socially, economically, environmentally) and ecological inclusive hofje typology

Co-relation Diagram. From the Urban Analysis Take-Aways to the Design

ROTTERDAM / MARCH 2020
HOUSING FOR PEOPLE, NOT FOR PROFIT! NATIONAL DEMONSTRATION

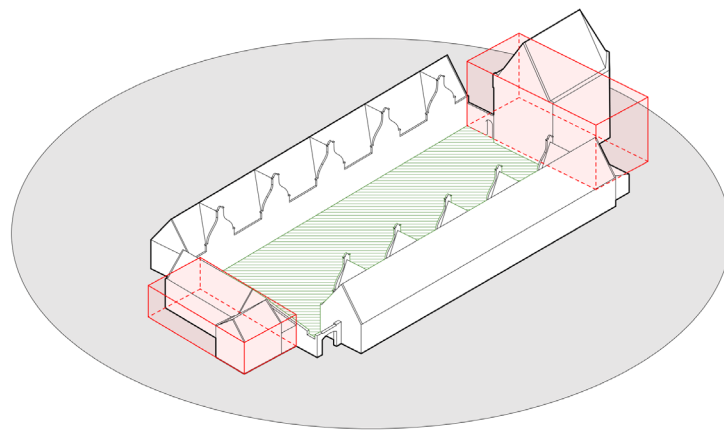




How can the *introduction of thresholds* and a *re-definition of "hofjes"* (dutch courtyard) -as the publicly accessible enclosed space, a shared green place, and a collective infrastructure- allow for the *coexistence* of human and non-human in Blijdorp today?

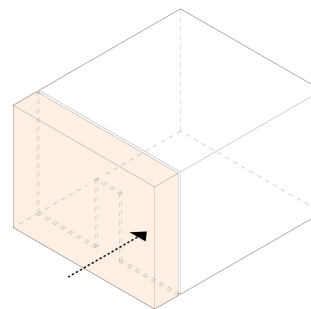
- How can the archetypical space of hofje be revisited within the contemporary context?
- What are the inherent qualities of hofjes that make them a continuously inhabited housing typology since the Middle Ages?
- Which are the epistemologies of threshold and how can be implemented into an architectural design to establish the intermediate zone of encounter?
- What is the role of the courtyard in the cohabitation game, but also in the quotidian human activities?

Hofjes as TYPE



The Archetype of Hofje and the Gate as a Threshold Space

Threshold as INTERFACE



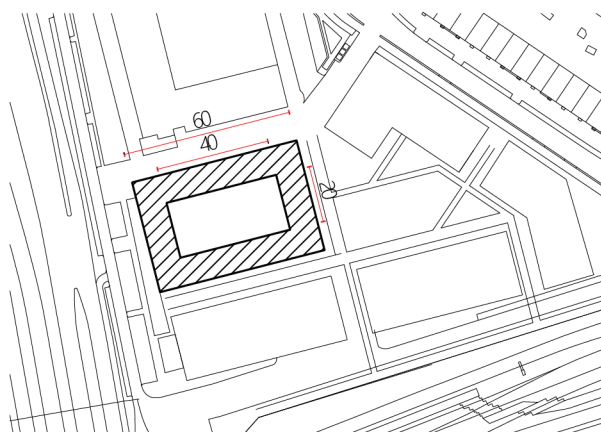
The Typical Representation of the Threshold Space

Cooperative as NOMOS

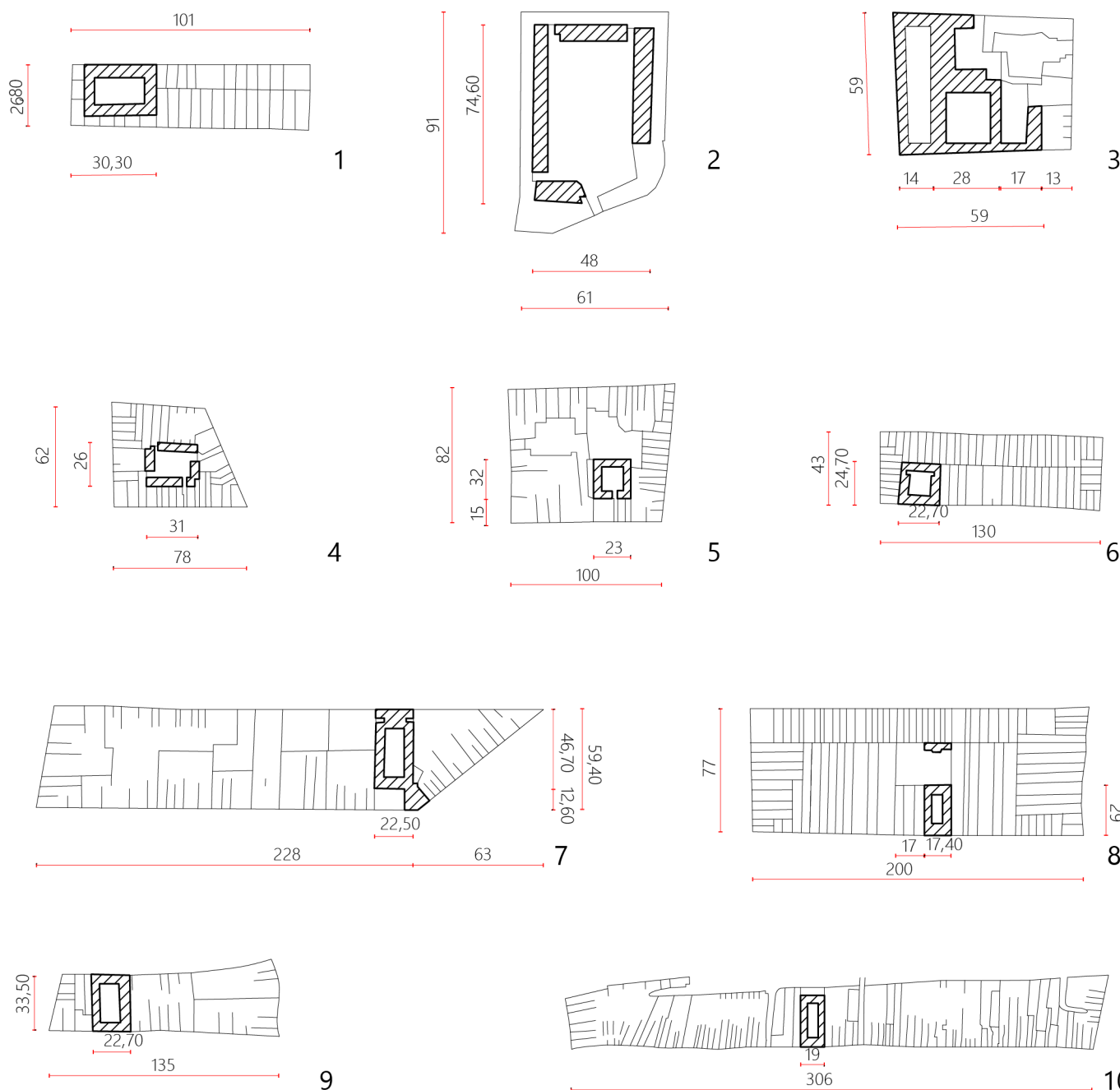


The System Around Co-op Living

(Source: <https://www.thefirstvillagegreen.com/advantages-of-co-op-living/>)



1. Bethlehemshofje/de Houcksteen 1668 Leiden
2. Proveniershof 1707 Haarlem
3. Regenten- en Lenghenhofje 1755-1899 Dordrecht
4. Sint Salvatorhofje 1625 Leiden
5. Van Assendelfthofje 1624 Leiden
6. Sint Andrieshofje 1617 Amsterdam
7. Hofje van Noblet 1761 Haarlem
8. Van Brants Rushofje 1734 Amsterdam
9. van Brouchovenhofje 1639 Leiden
10. Hofje van Cinq 1701 Gouda



Hofjes Sizes Across the Dutch Context.

(Source: edited by the author. Based on the work of Willemijn Wilms Floet)

Brief History of Dutch Hofjes:

1360-1850-the historic hofje: as a concession by the urban elite of the city, in compliance with the imperative necessity of housing provision to the vulnerable

1850-1900(industrial revolution, political modernization) - **the speculative hof**: in the sense of commercial housing for the working class people to serve the increased demand for density in the city.

1900-1990 (the enforcement of the Dutch Housing Act in 1901) - **mass housing hof**: hofjes were seen as the ideal block typology capable to provide density and collectivity through multi-room dwellings around a central green outer space.

1990-2022 (real estate stakeholders taking over the housing assignment) - **profit making hof**: hofjes promoted as a 'thematic living' concept of the urban oasis.

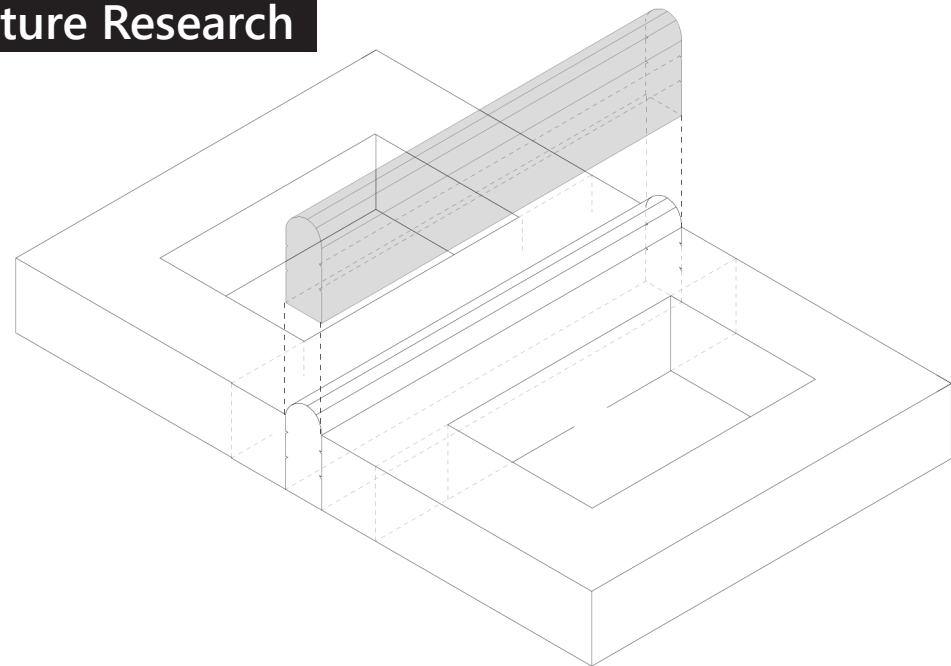
2020-onwards housing crisis, social segregation - **hofje as a type for social and ecological inclusivity in dwelling**

Hofjes Spatial Elements:

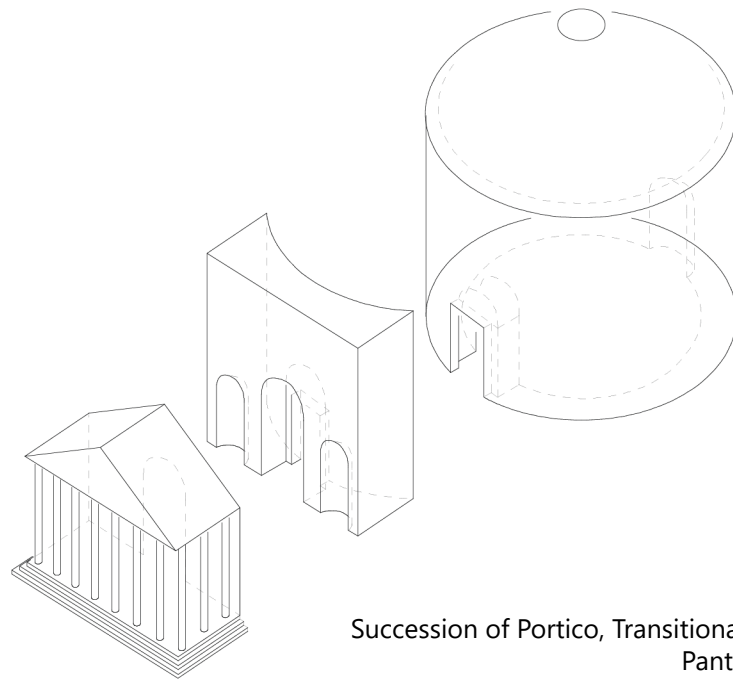
- Independent block, L-shaped or U-shaped spatial configurations
- Houses are oriented towards a central green outer space
- Rhythmic repetition of windows, doors, dormers and chimneys
- Hidden or visible in the urban fabric
- Meticulously designed entrances

Selected Key-Readings:

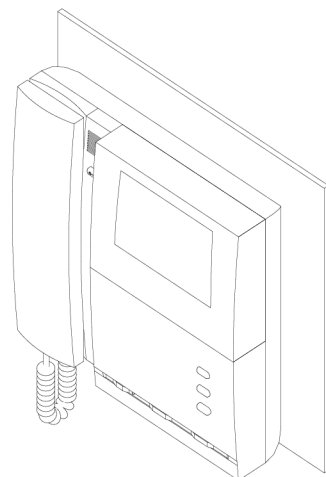
- Wilms-Floet, Willemijn. 2009. "Dutch Almshouses." In *DASH #01 - New Open Space in the Housing Ensembles*, by Dirk van den Heuvel, Olv Klijn, Harald Mooij, Pierijn van der Putt Dick van Gameren, 16-23. Rotterdam: NAI Uitgevers.
- —. 2016. *Het Hofje: Bouwsteen van de Hollandse stad, 1400-2000*. Nijmegen: Uitgeverij Vantilt.



Urban Gallery within a Block of Buildings_Urban Scale



Succession of Portico, Transitional Space and Main Room of Pantheon, Rome_Building Scale



Intercom as a Threshold Device_Microscale

Epistemologies:

Different perspectives on threshold spaces that **allow to theorize the 'between and betwixt'** on every aspect of human life and among other interpretations to acquire also symbolic essence.

Multiscalarity:

In the scale of the city: courtyards, arcades, and stairways

In the scale of the building: processional pathways

In the micro-scale: all sorts of microscale technical devices such as peepholes on doors, body scanners, intercoms, automatic face recognition, windows

Selected Key-Readings:

- Walter Benjamin, Asja Lacis. 2019. "Naples." In *Reflections: Essays, Aphorisms, Autobiographical Writings*, by Walter Benjamin, 167-175. New York: Houghton Mifflin Harcourt.
- Boettger, Till. 2014. *Threshold Spaces: Transitions in Architecture. Analysis and Design Tools*. Berlin: Walter de Gruyter GmbH.
- the Arch+ Journal edition Schwellenatlas

ROTTERDAM | AUGUST 2025
OLIVIA AND HER MUM JOINING THE NEWLY BUILT CO-OP



WELCOME EMMA. I AM THE CARETAKER OF THE CO-OP. HERE WE MEET WEEKLY TO DISCUSS ORGANIZING OR OTHER ISSUES.

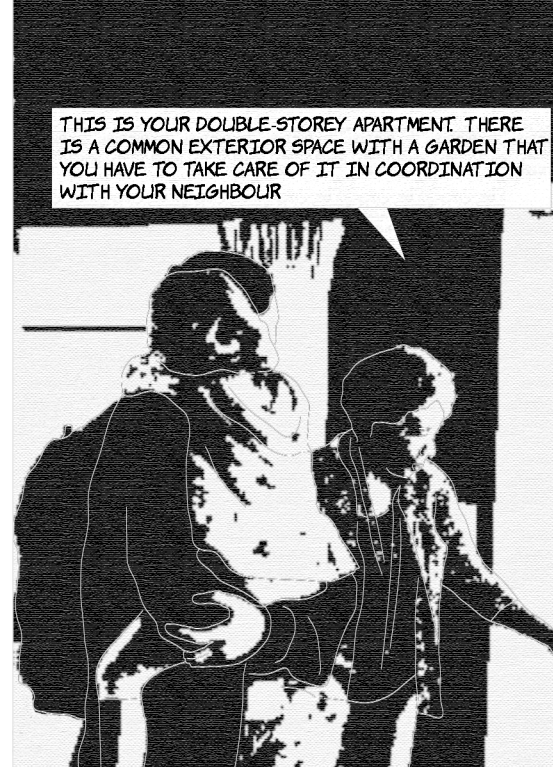


THANKS NORA. I CAN'T WAIT TO CONTRIBUTE IN ANY WAY TO THIS COMMUNITY.

DO YOU LIKE OUR NEW HOME? YOU CAN GO TO PLAY WITH THE OTHER CHILDREN IN THE COURTYARD WHILE I AM TIDYING UP OUR STUFF



IT'S AWESOME.



THIS IS YOUR DOUBLE-STOREY APARTMENT. THERE IS A COMMON EXTERIOR SPACE WITH A GARDEN THAT YOU HAVE TO TAKE CARE OF IT IN COORDINATION WITH YOUR NEIGHBOUR



Main Research Insights_Cooperatives

Michalis Psaras

Limited Equity Cooperatives or LECs as an urban commons.

The limited-equity cooperatives are defined as commons because they fit the principal traits of **collective self-organisation and de-commodification**

Non-capitalistic economic model, **affordable resale-restricted** housing that although it belongs to the broader universe of housing is kept away from the speculative real estate market

Successful dwellings models because they provide i) **different household types provided** (dwelling typologies for couples, solo-dwellers, nuclear families, etc.), ii) **multitude of shared spaces** offered (laundry room, cafeterias, roof terraces, lounges, etc.) that give the sense that the individual space expands to the collective areas of the building and that the person/commuter belongs to a community; as well as because iii) they work under the regulatory framework of 'Gemeinnützigkeit' (commit themselves to **represent the city's average household and income composition** within their housing stock.)

Selected Key-Readings:

- Huron, Amanda. 2018. *Carving Out the Commons: Tenant Organizations and Housing Cooperatives in Washington, D.C.* Minneapolis: University of Minnesota Press.
- Kip Markus, Majken Bieniok, Mary Dellenbaugh, Agnes Katharina Müller, Martin Schwegmann. 2015. "Seizing the (Every) Day: Welcome to the Urban." In *Urban Commons: Moving Beyond State and Market*, by Markus Kip, Majken Bieniok, Agnes Katharina Müller, Martin Schwegmann eds. Mary Dellenbaugh, 9-25. Basel: Birkhäuser.
- Kockelkorn Anne, Schindler Susanne. 2022. "Housing and the Agency of Nonspeculation." In *Cooperative Conditions: A Primer on Architecture, Finance and Regulation*. Zurich: gta verla (forthcoming)

CASE STUDY ONE

Proveniershof

Location
Grote Houtstraat 142, Haarlem

Architect(s)
unknown

Client(s)
unknown

Design Completion Original Building/ Transformation
1414 (convent), 1707 (Provenierhuis)/ 1866 (Proveniershof)

Dimensions
35.60 x 58.80; 2.093 m²

Number of Dwellings Original Building/ Transformation:
86/ 68

Dwelling Sizes
21-52m² / 38-58m²

Amenities Original Building/ Transformation
Communal Courtyard, Dining and Meeting Room/ Communal Courtyard



CASE STUDY TWO

Spaarndammerhart

Location
Krommeniestraat 1, Amsterdam

Architect(s)
Korthtielens (in collaboration with Marcel Lok)

Landscape Design
DS Landschapsarchitecten

Client(s)
Heijmans Vastgoed, Eigen Haard

Contractor
Heijmans

Artwork
Martijn Sandberg

Design Completion
2020 (December)

Dimensions (Usable Surface)
7636 m²

Number of Dwellings
80 (26 social rent, 18 private sector rent, 36 owner-occupied homes)

Dwelling Sizes
44m² - 86m²

Amenities:
1 common space, 56 parking places



CASE STUDY THREE

Carré Lumière

Location
36 Rue Robert Schuman, 33130 Bègles, Bordeaux, France

Architect(s):
LAN Architecture

Client(s)
Ataraxia

Design Completion
2015

Dimensions (Usable Surface)
27m x 39m, ;1,053 m²

Number of Dwellings
79

Dwelling Sizes
25m² - 130m²

Amenities
Commercial Units, Public Courtyard, Parking Places



CASE STUDY FOUR

Zelterstrasse

Location
Zelterstrasse 5-11, 10439 Berlin-Prenzlauer Berg, Germany

Architect(s)
Zanderroth Architekten

Landscape Design
herrburg Landschaftsarchitekten

Client(s)
Bauherrengemeinschaft Zelterstraße 5-11

Design Completion
2010

Dimensions (Usable Surface):
96m x 34m ;3,264 m²

Number of Dwellings
45 (23 townhouses, 10 garden houses, 12 penthouses)

Dwelling Sizes
65m² - 162m² (townhouses 130-155 m², garden houses 139-162 m², penthouses 65-156m²)

Amenities
4 guest rooms, sauna, roof terrace with summer kitchen and barbecue, collective courtyard, underground garage at street level



CASE STUDY ONE

Proveniershof

Location
Grote Houtstraat 142, Haarlem

Architect(s)
unknown

Client(s)
unknown

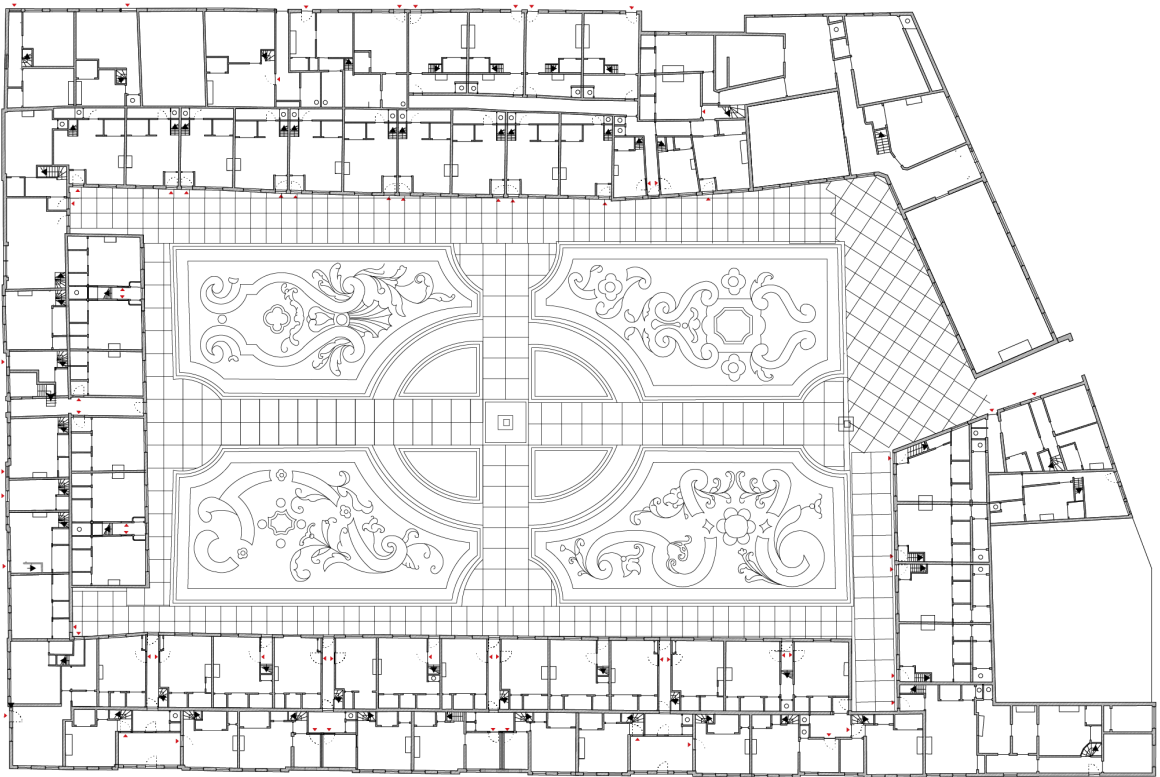
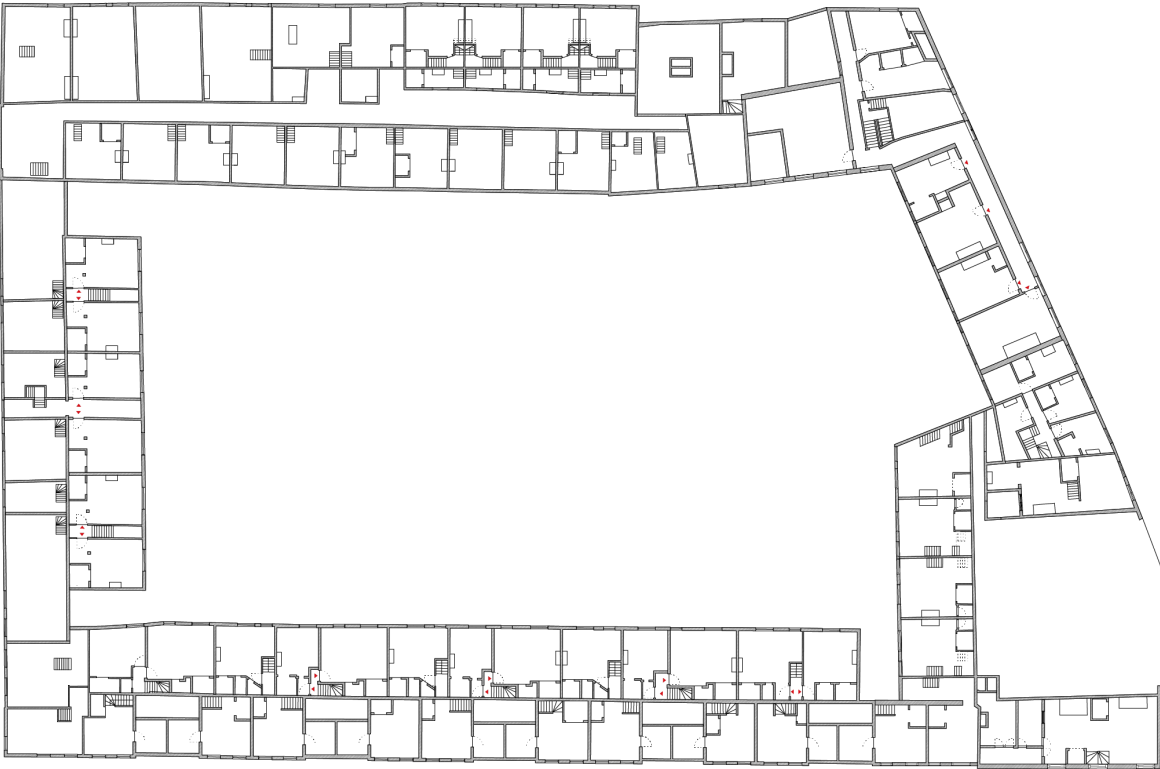
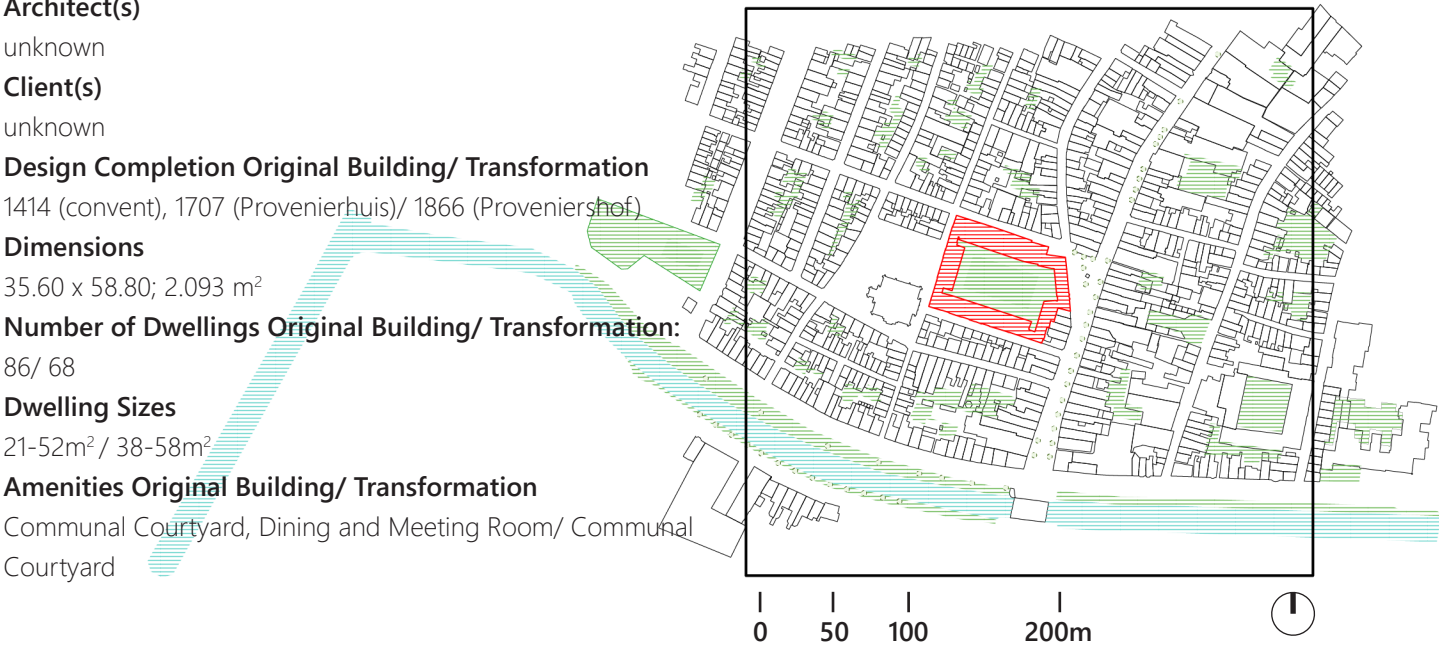
Design Completion Original Building/ Transformation
1414 (convent), 1707 (Provenierhuis)/ 1866 (Proveniershof)

Dimensions
35.60 x 58.80; 2.093 m²

Number of Dwellings Original Building/ Transformation:
86/ 68

Dwelling Sizes
21-52m² / 38-58m²

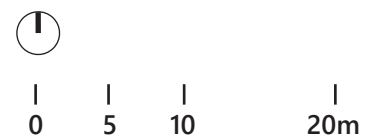
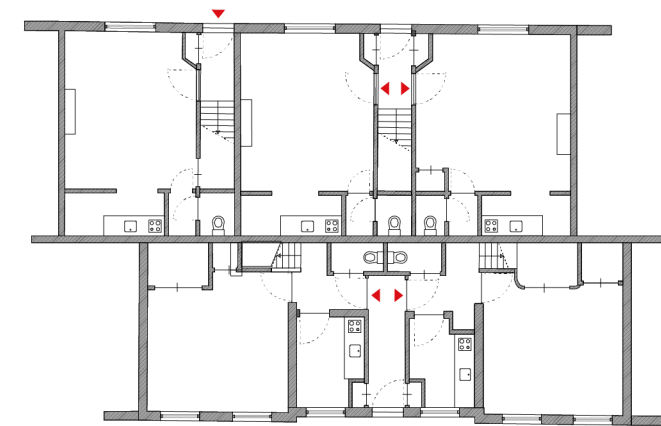
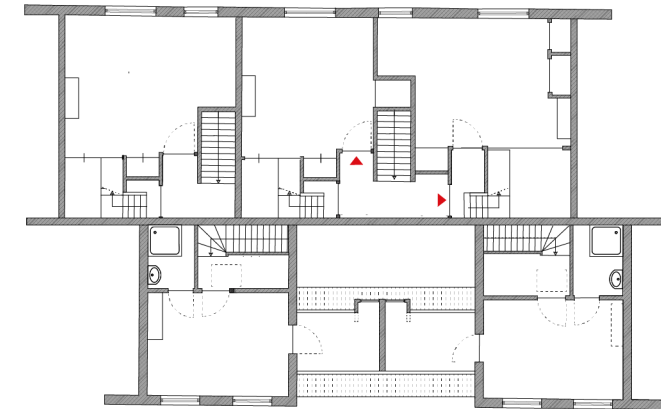
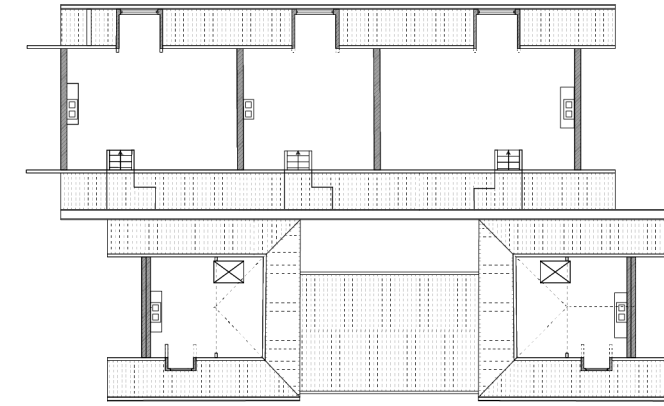
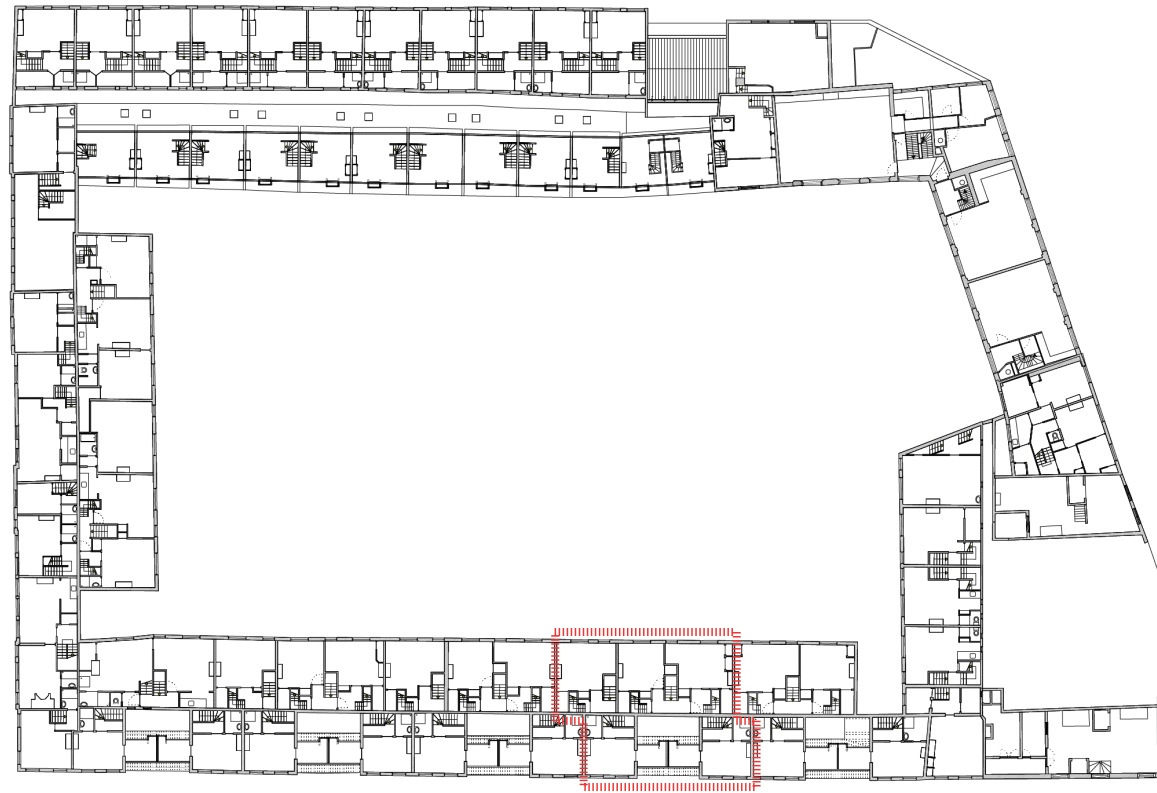
Amenities Original Building/ Transformation
Communal Courtyard, Dining and Meeting Room/ Communal Courtyard



Ground & 1st Floor Plan (1747)_Scale 1:500

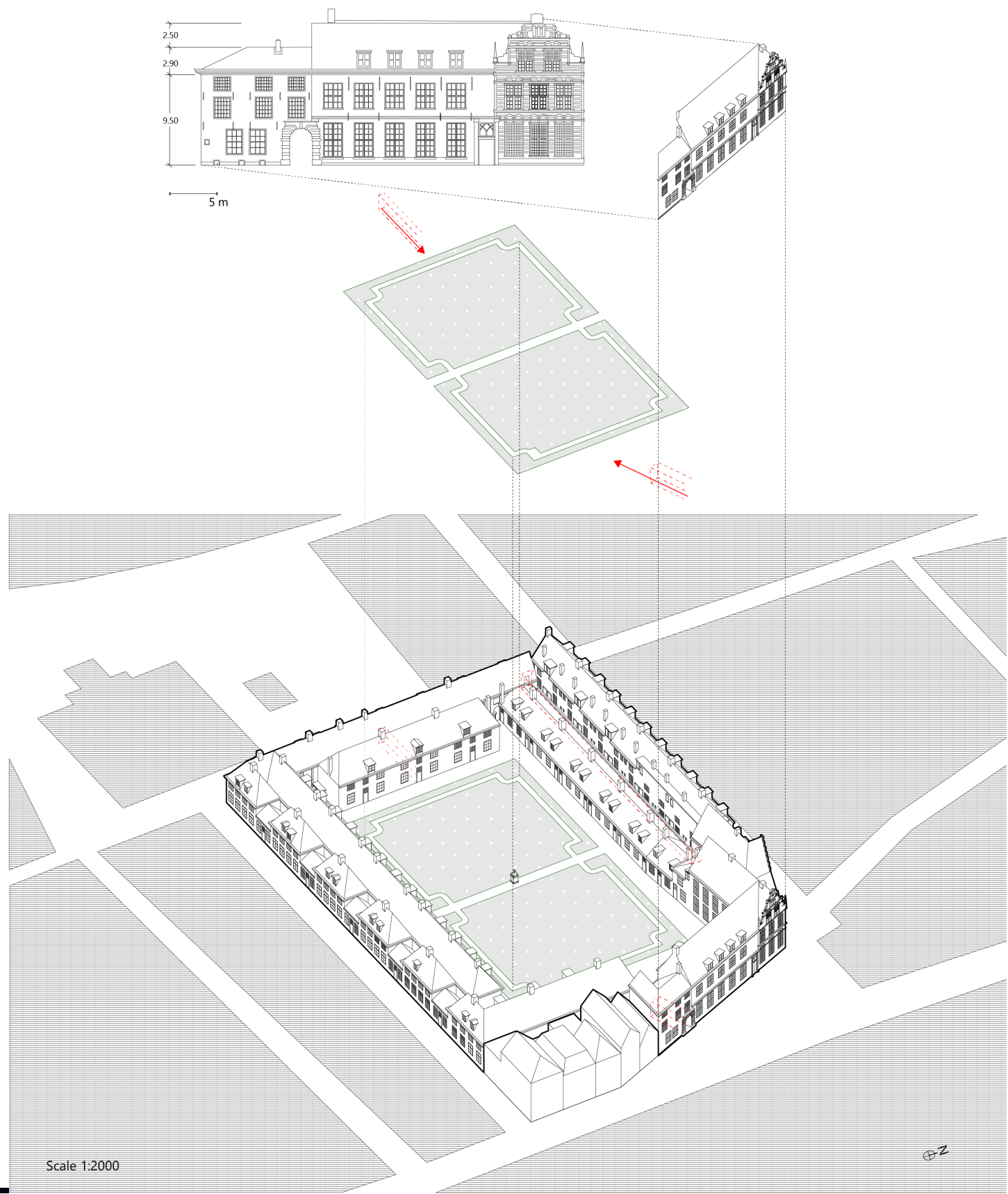
CASE STUDY ONE

Proveniershof / Haarlem, 1707



Ground & 1st Floor Plan (1990)_Scale 1:500

Cluster Typology (Plans of 1990)_Scale 1:200



Key Characteristics of Proveniershof_Scale 1:2000
(Source: Edited by the author. Based on the work of Willemijn Wilms Floet)

CASE STUDY TWO

Spaarndammerhart

Location

Krommeniestraat 1, Amsterdam

Architect(s)

Korthtielens (in collaboration with Marcel Lok)

Landscape Design

DS Landschapsarchitecten

Client(s)

Heijmans Vastgoed, Eigen Haard

Contractor

Heijmans

Artwork

Martijn Sandberg

Design Completion

2020 (December)

Dimensions (Usable Surface)

7636 m²

Number of Dwellings

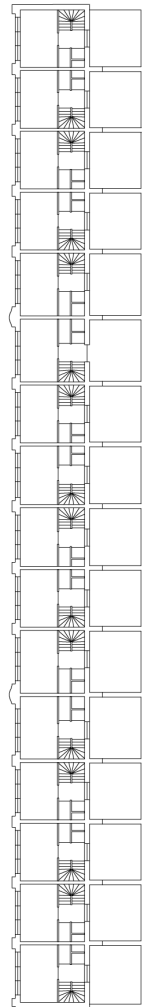
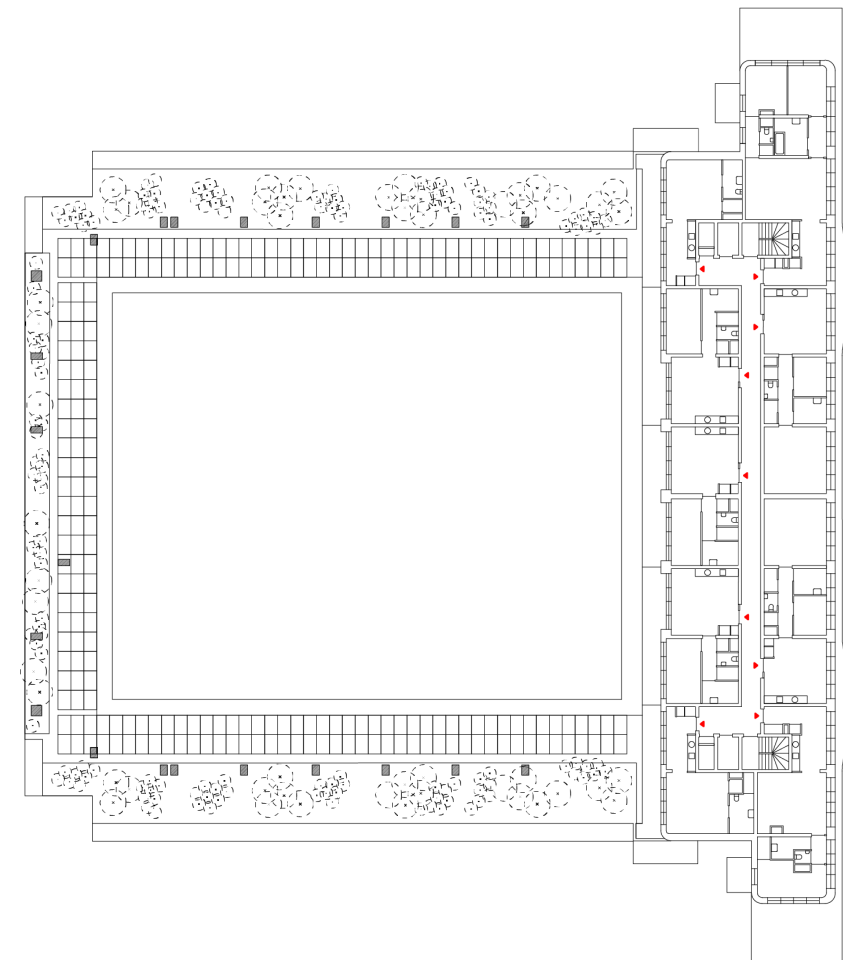
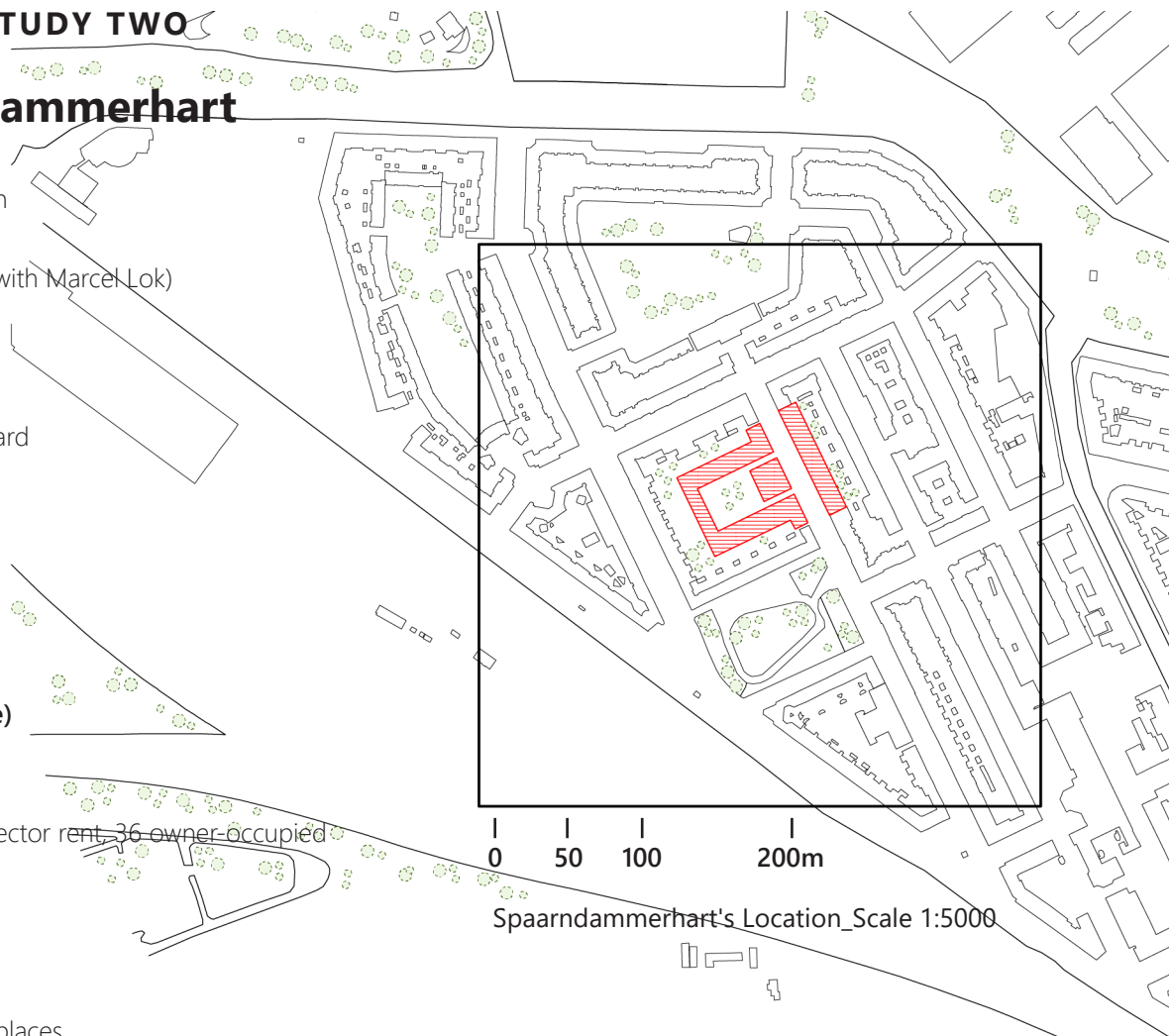
80 (26 social rent, 18 private sector rent, 36 owner-occupied homes)

Dwelling Sizes

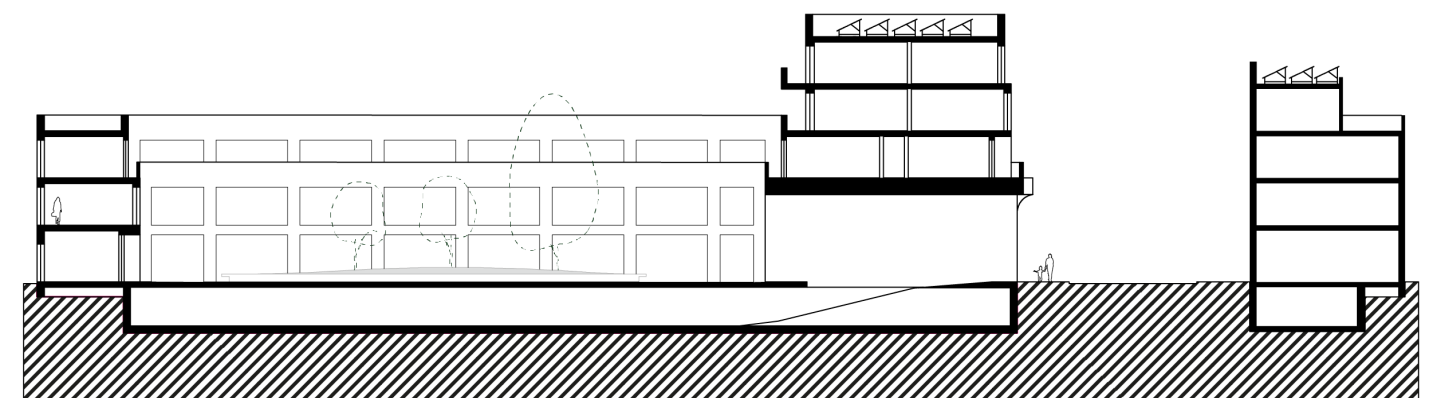
44m² - 86m²

Amenities:

1 common space, 56 parking places



3rd Floor Plan_Scale 1:500



Longitudinal Section of Spaarndammerhart

CASE STUDY THREE

Carré Lumière

Location
36 Rue Robert Schuman, 33130 Bègles, Bordeaux, France

Architect(s):
LAN Architecture

Client(s)
Ataraxia

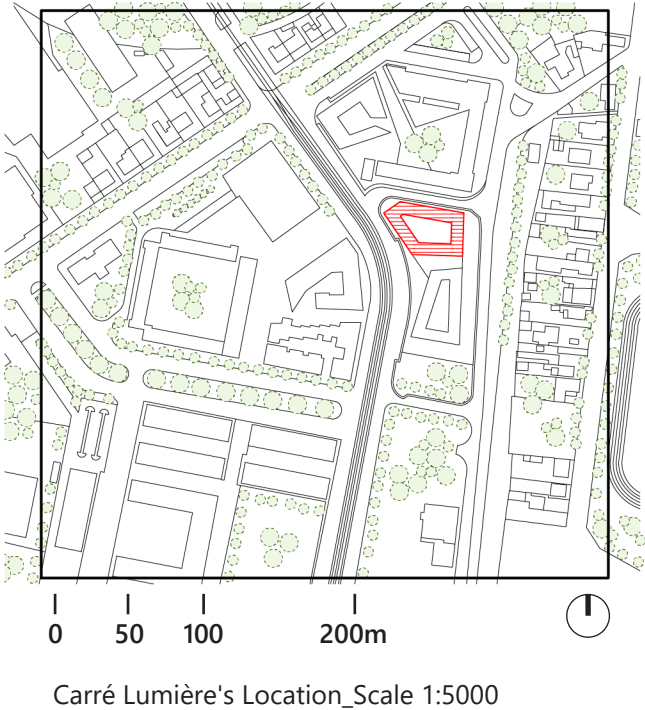
Design Completion
2015

Dimensions (Usable Surface)
27m x 39m, ;1,053 m²

Number of Dwellings
79

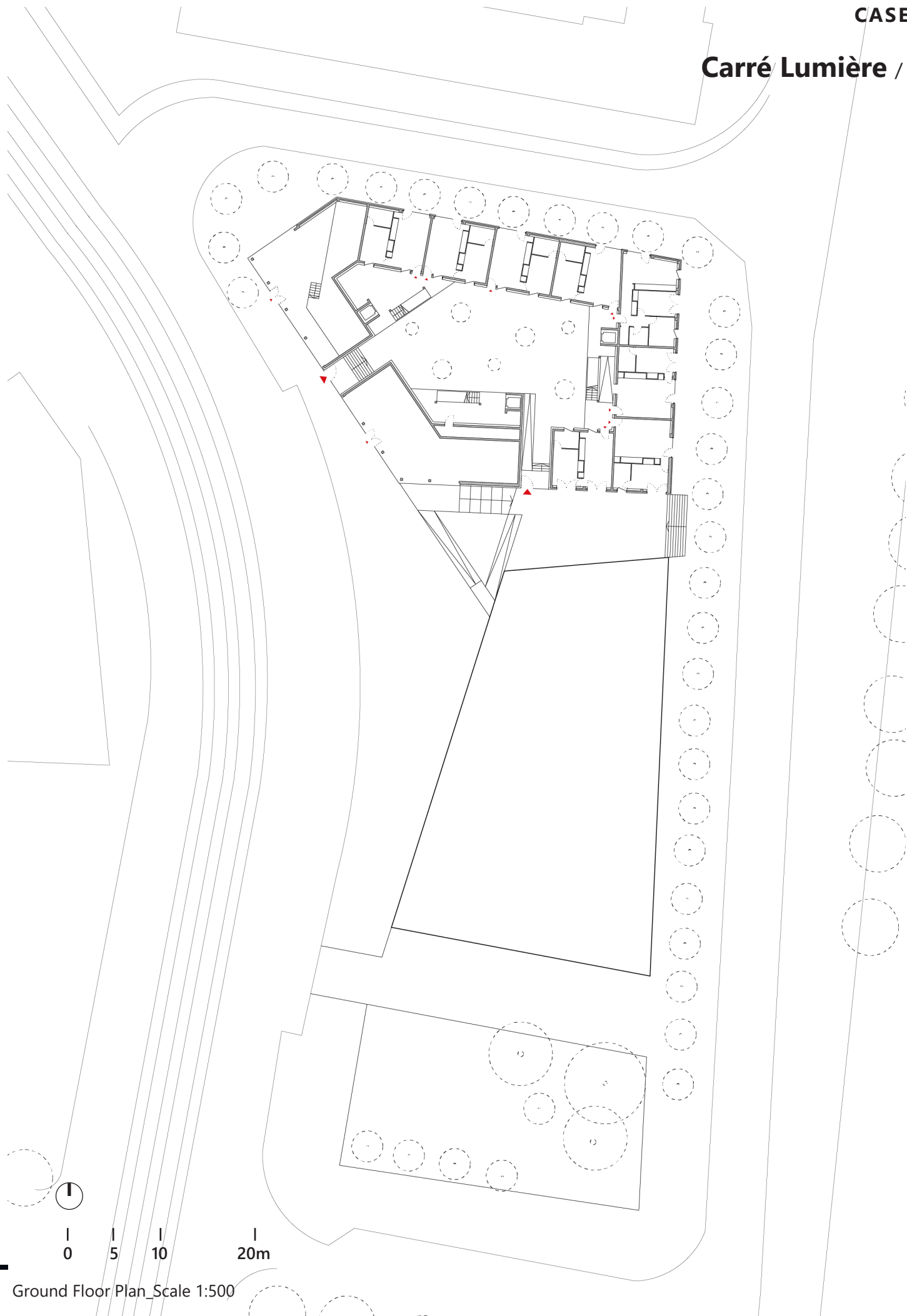
Dwelling Sizes
25m² - 130m²

Amenities
Commercial Units, Public Courtyard, Parking Places

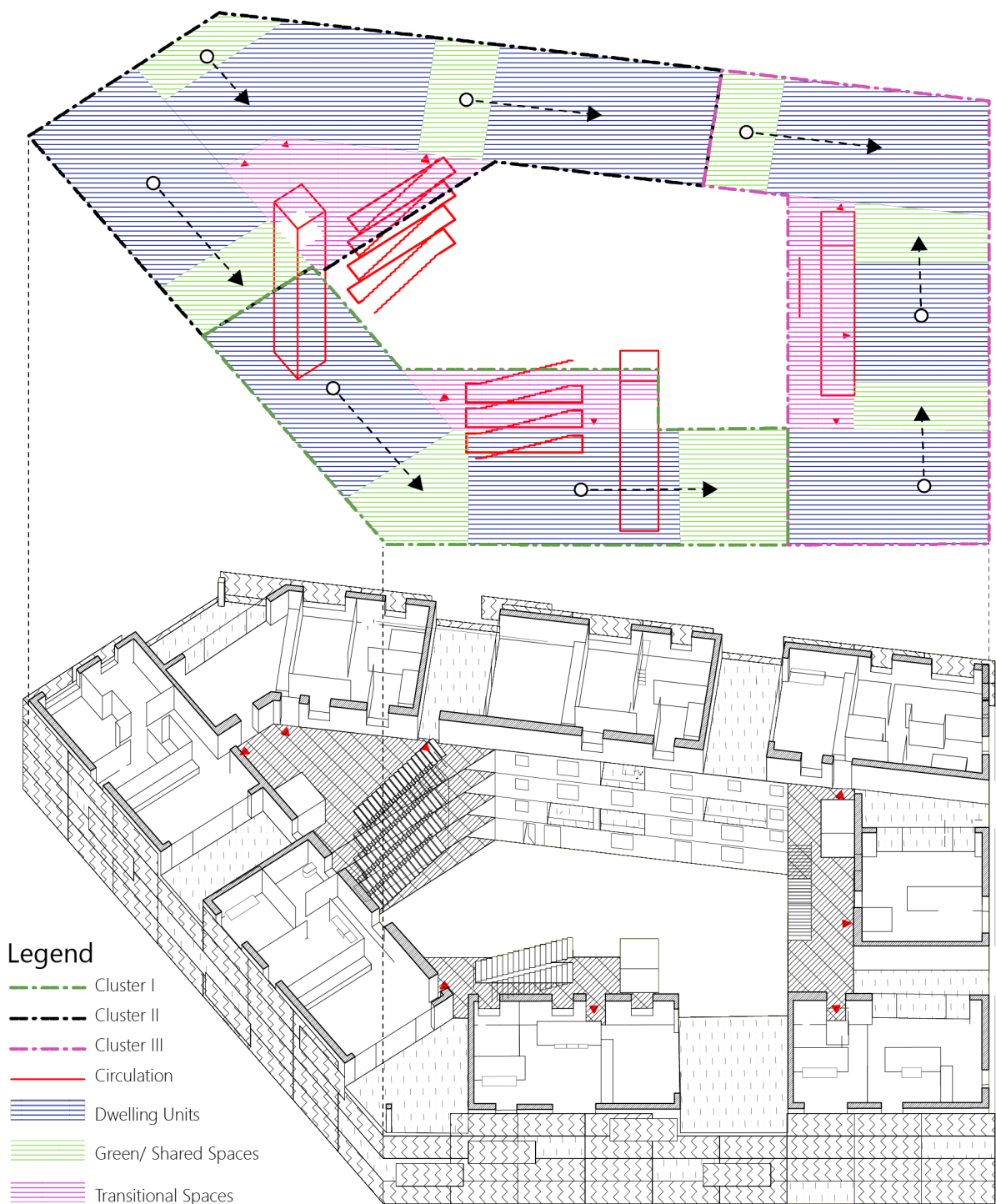


CASE STUDY THREE

Carré Lumière / LAN Architecture, Bordeaux, 2015



Aggregation models ©LAN Architecture
(Source: <https://urbannext.net/le-carre-lumiere/>)



Key-elements of Carré Lumière

CASE STUDY FOUR

Zelterstrasse

Location
Zelterstrasse 5-11, 10439 Berlin-Prenzlauer Berg, Germany

Architect(s)
Zanderroth Architekten

Landscape Design
herrburg Landschaftsarchitekten

Client(s)
Bauherrengemeinschaft Zelterstraße 5-11

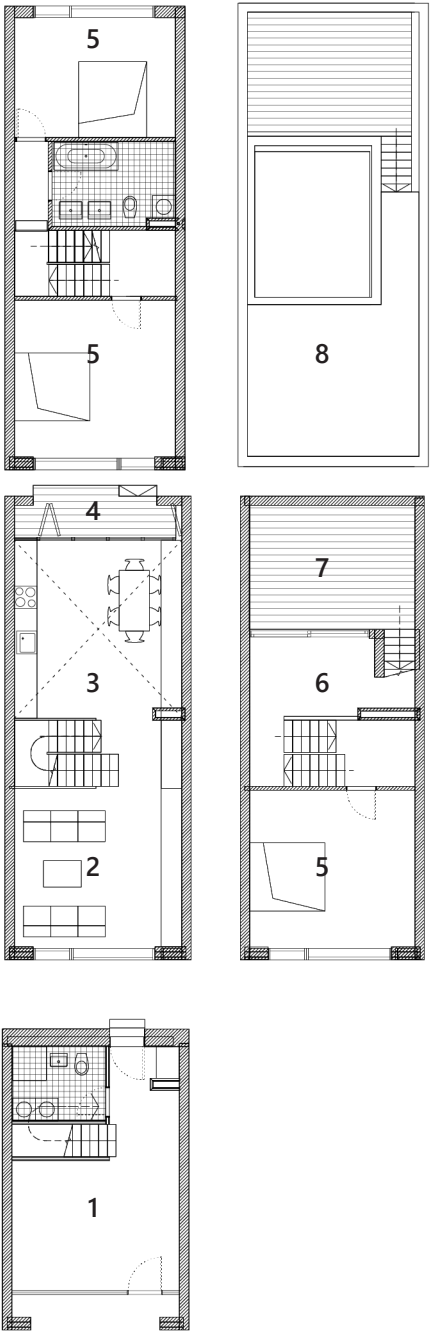
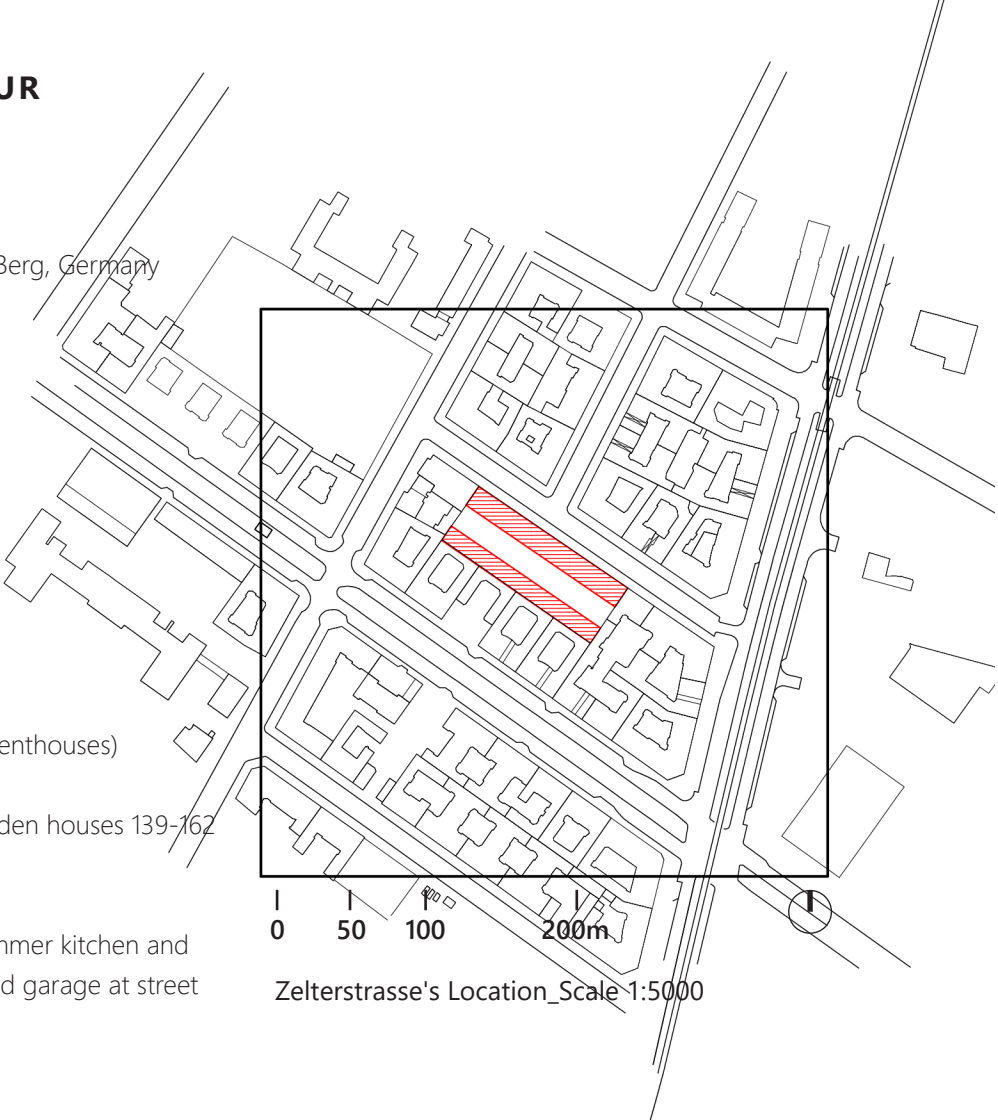
Design Completion
2010

Dimensions (Usable Surface):
96m x 34m ;3,264 m²

Number of Dwellings
45 (23 townhouses, 10 garden houses, 12 penthouses)

Dwelling Sizes
65m² - 162m² (townhouses 130-155 m², garden houses 139-162 m², penthouses 65-156m²)

Amenities
4 guest rooms, sauna, roof terrace with summer kitchen and barbecue, collective courtyard, underground garage at street level

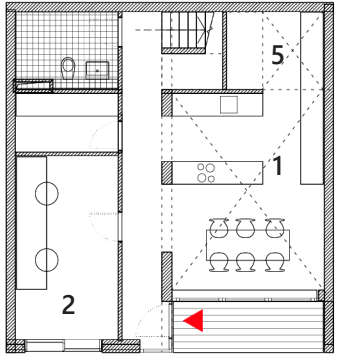
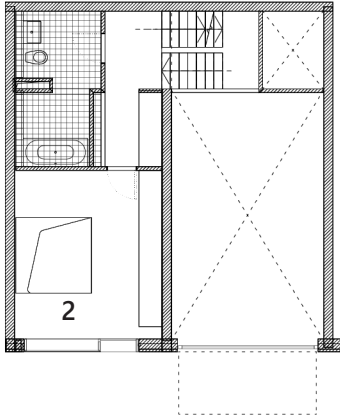
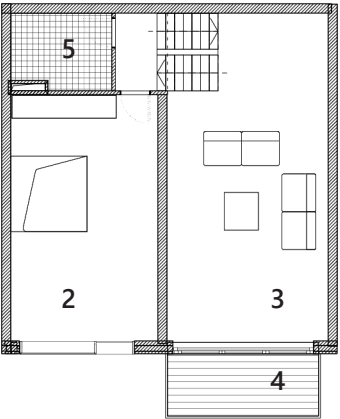


- 1 Entrance
- 2 Living Room
- 3 Kitchen Area
- 4 Terrasse
- 5 Bedroom
- 6 Studio
- 7 Patio
- 8 Roof Terrace



Townhouse Typology_Scale 1:200

Zelterstrasse / Zanderroth Architekten, Berlin, 2010



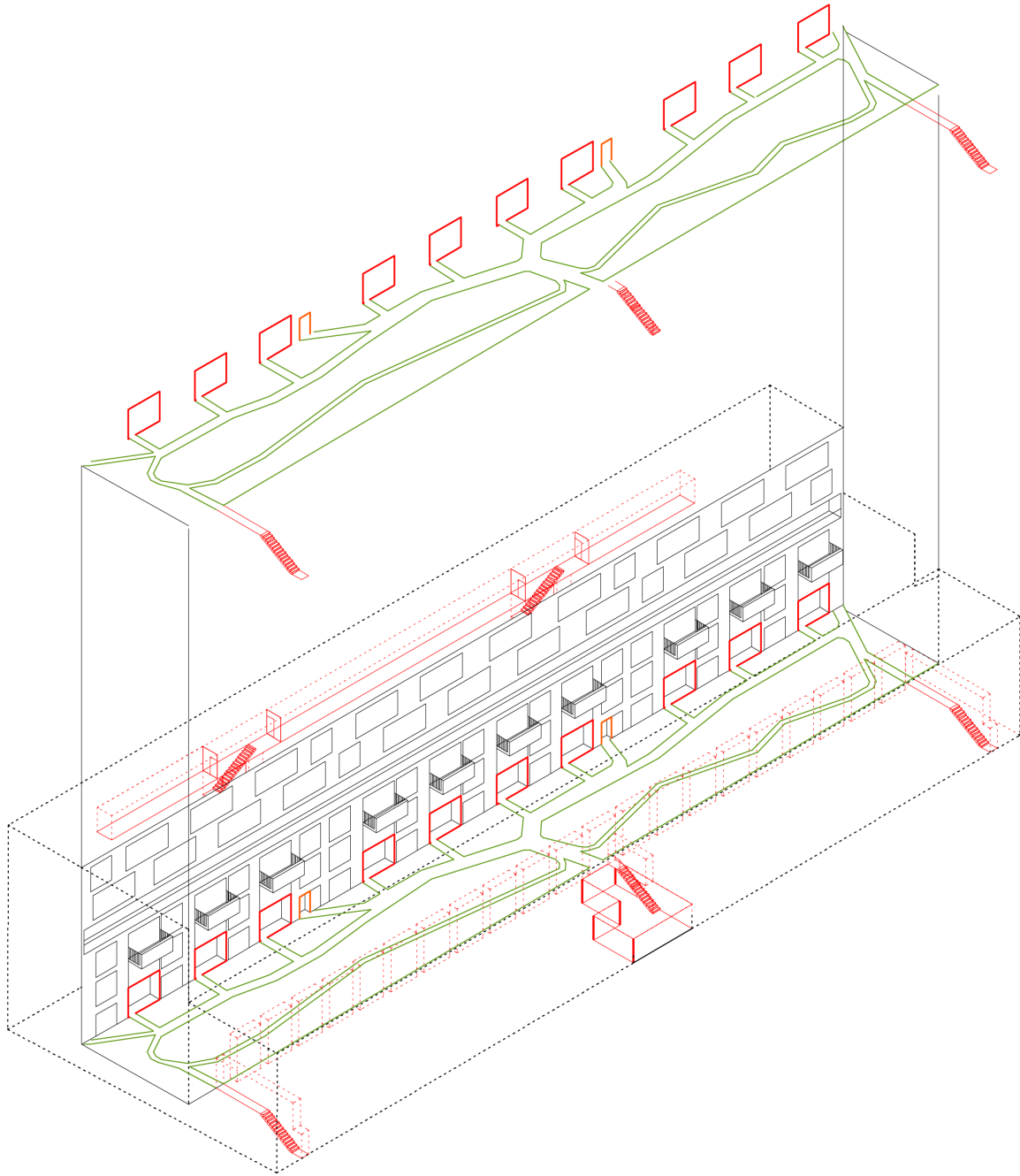
- 1 Kitchen Area
- 2 Bedroom
- 3 Living Room
- 4 Balcony
- 5 Storage Room



0 5 10 20m

Ground Floor Plan_Scale 1:500

Gardenhouse Typology_Scale 1:200



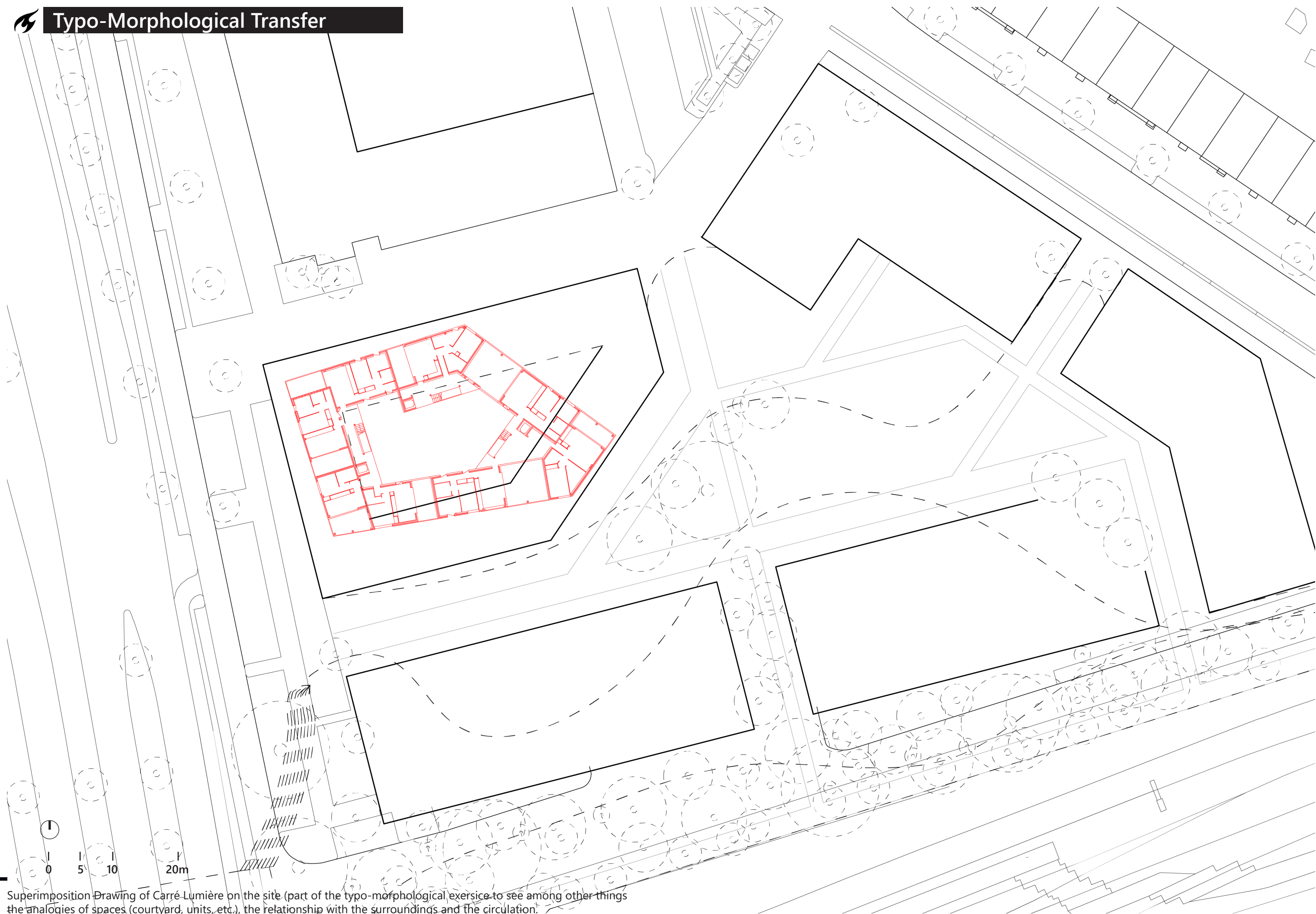
Key-elements of Zelterstrasse



Superimposition Drawing of Proyeniershof on the site (part of the typo-morphological exercise to see among other things the analogies of spaces (courtyard, units, etc.), the relationship with the surroundings and the circulation).



Superimposition Drawing of Spaarndammerhart on the site (part of the type-morphological exercise to see among other things the analogies of spaces (courtyard, units, etc.), the relationship with the surroundings and circulation.



Superimposition Drawing of Carré-Lumière on the site (part of the typo-morphological exercise to see among other things the analogies of spaces (courtyard, units, etc.), the relationship with the surroundings and the circulation).



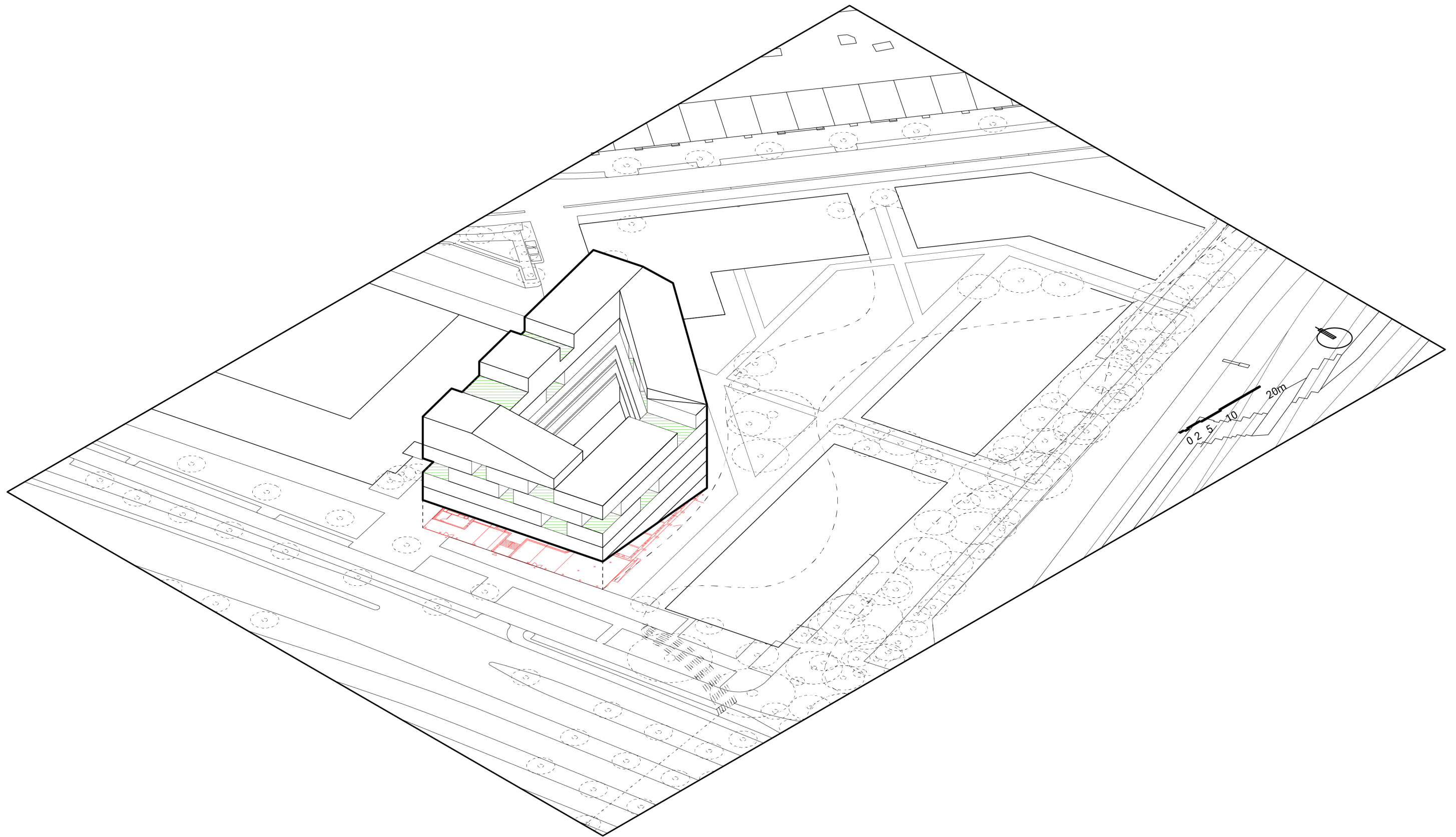
Superimposition Drawing of Zelterstrasse on the site (part of the typo-morphological exercise to see among other things the analogies of spaces (courtyard, units, etc.), the relationship with the surroundings and the circulation.



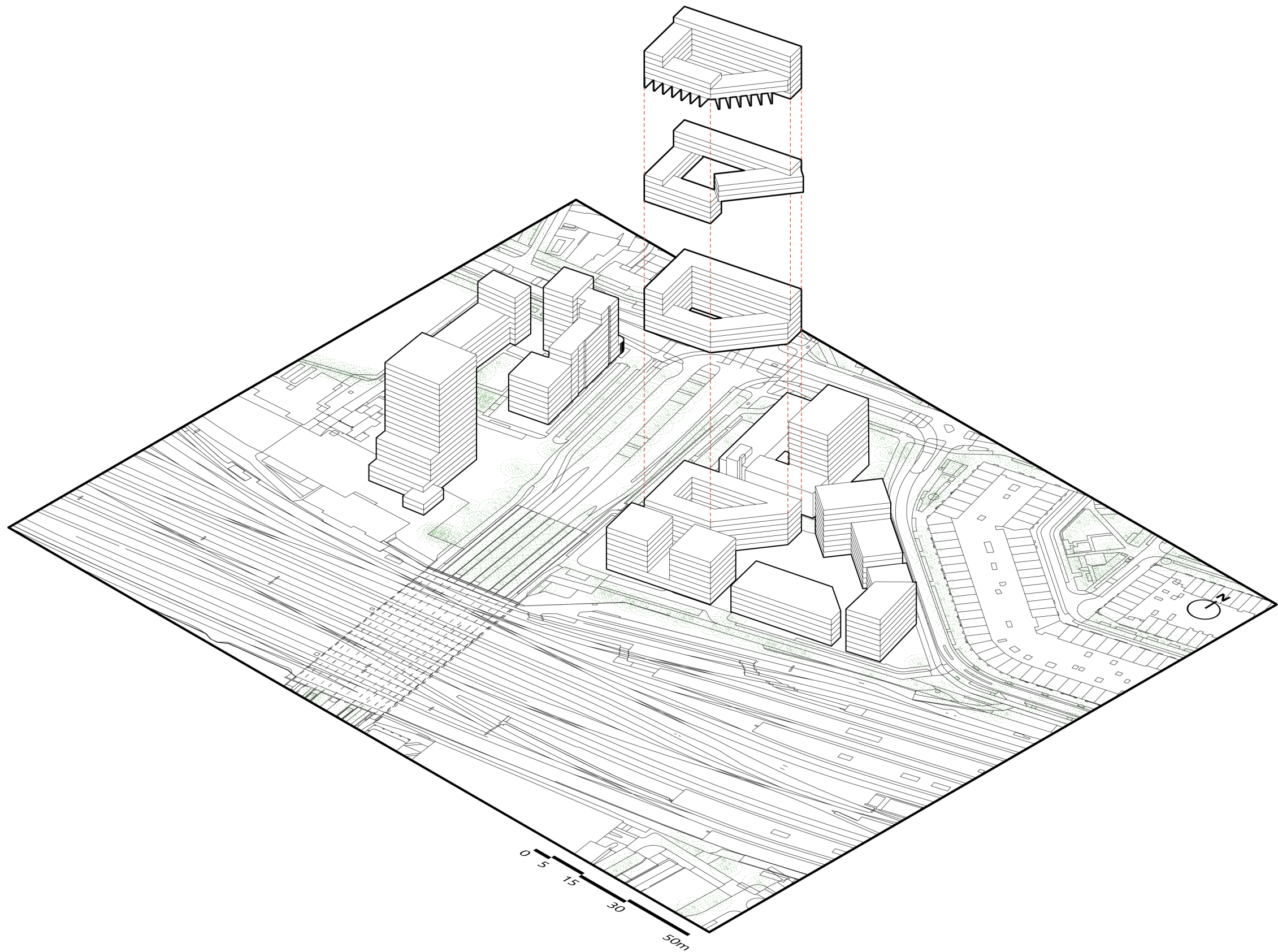
- Proveniershof
- Carre Lumiere
- Spaarndammerhart

0 5 10 20m

Mix and Match (typology transfer) the floor plans of the analysed case studies to invent a new hybrid plan in order to kick-start the design

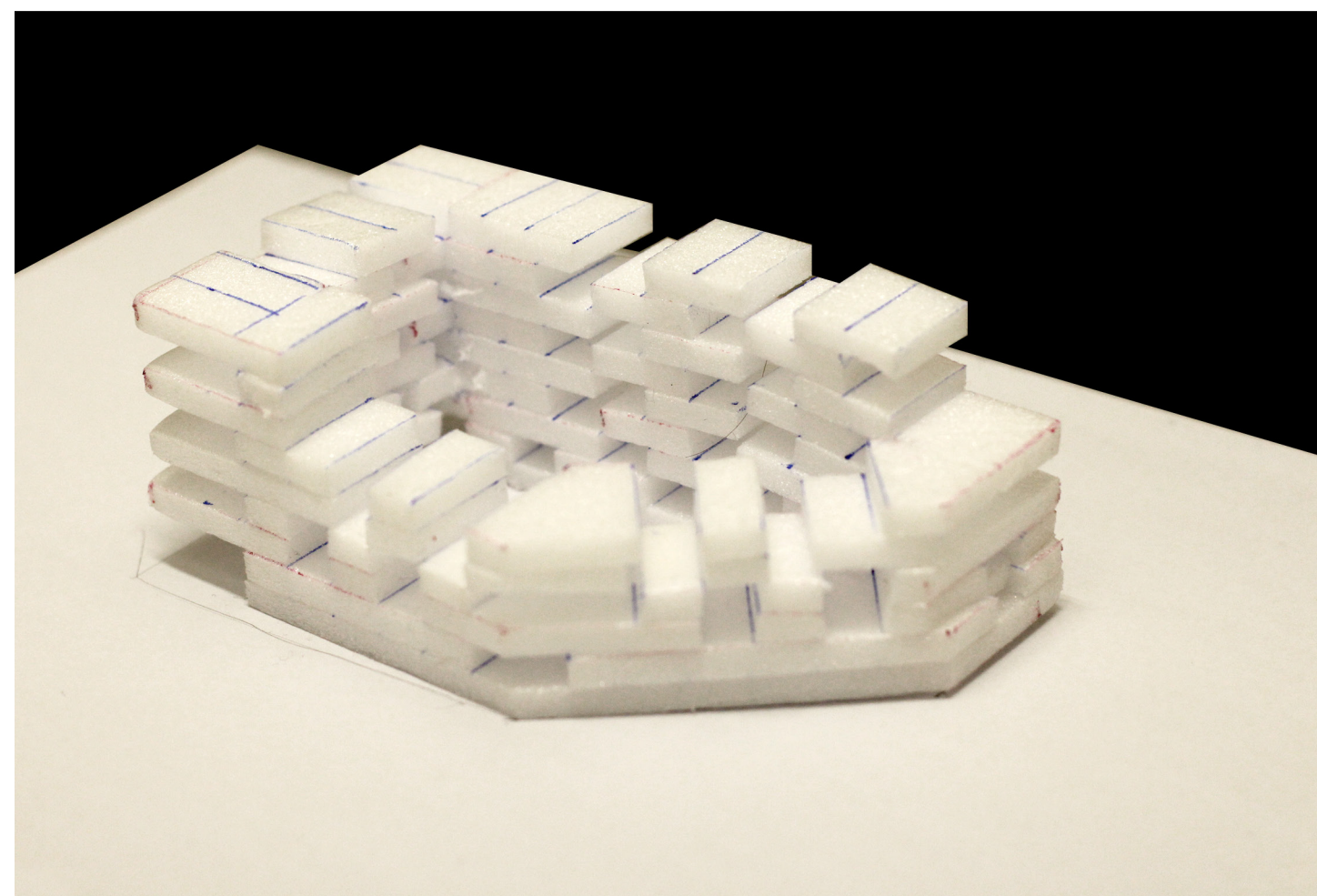


The result of the typology transfer exercise. A 3D model of the hybrid floorplan that combines the spatial layout of the examined precedents and their qualities, suggesting a holistic approach for intervening in Blijdorp.

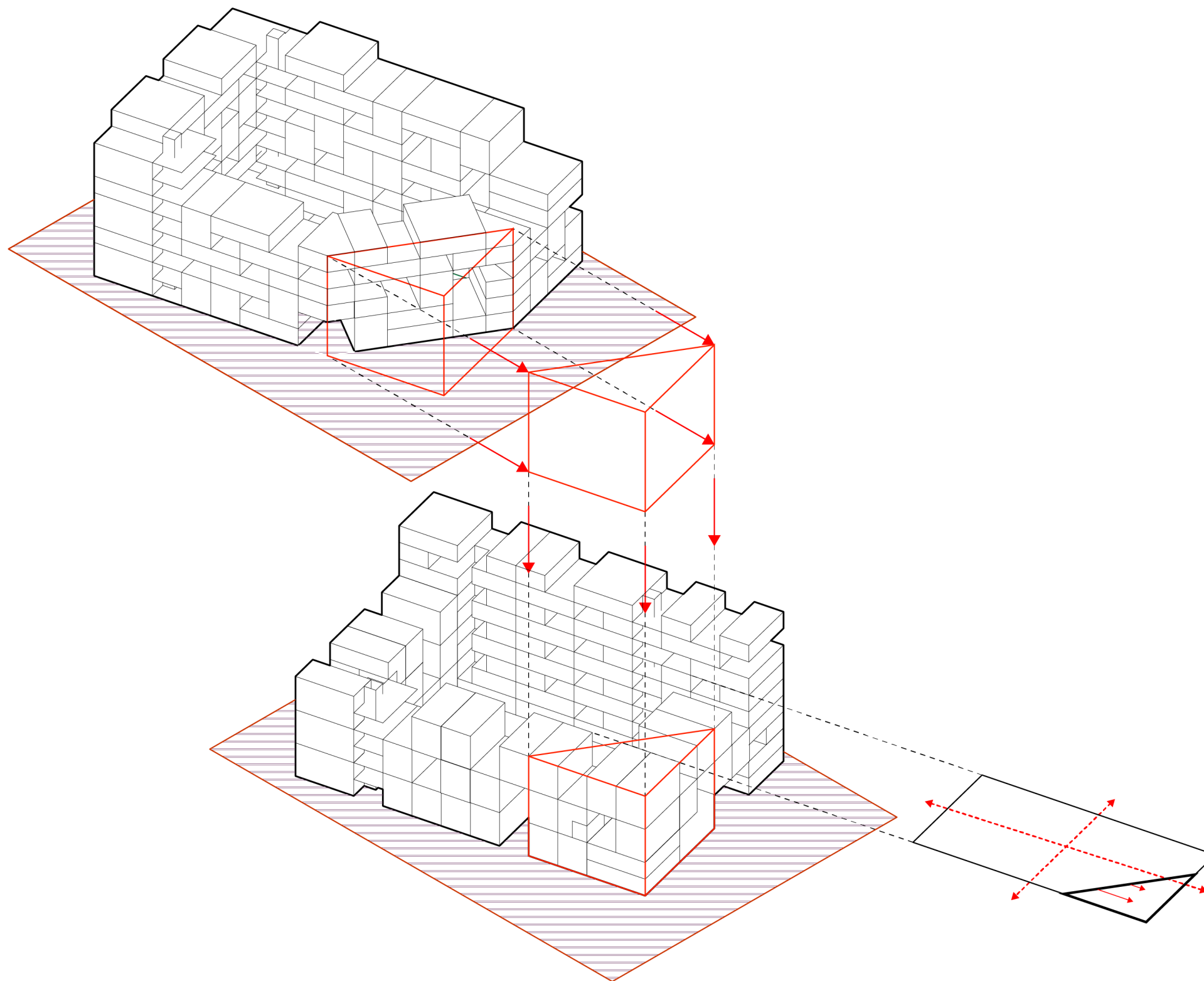


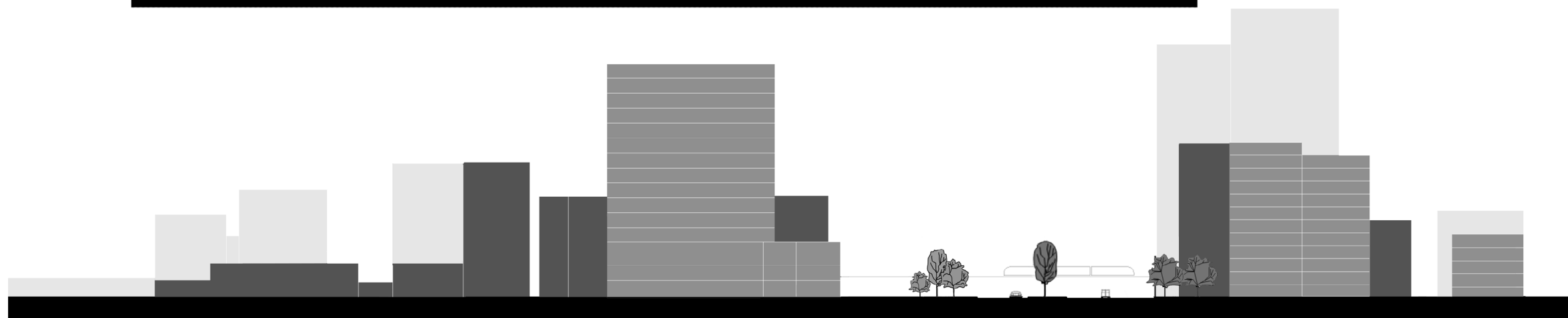
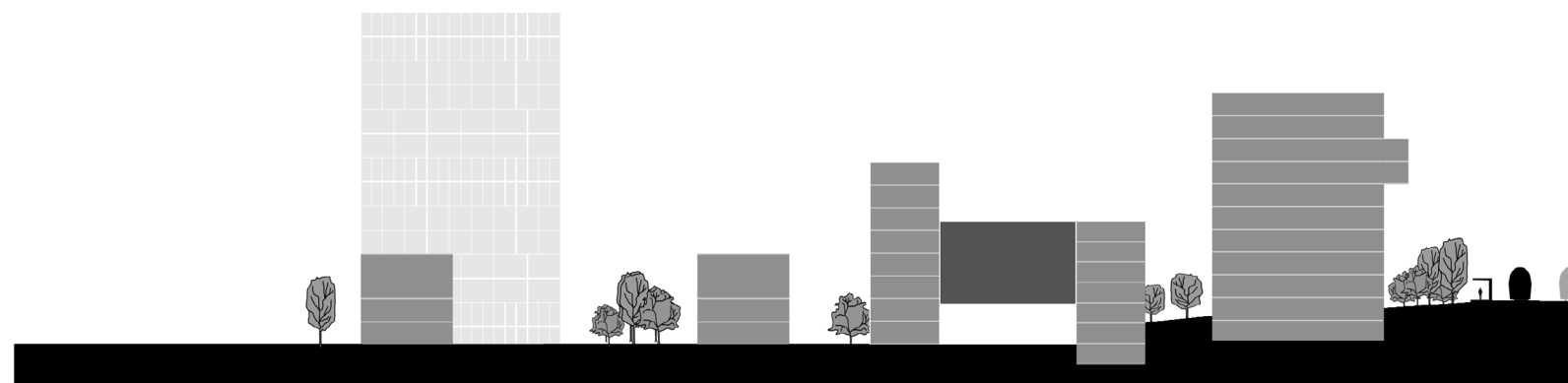
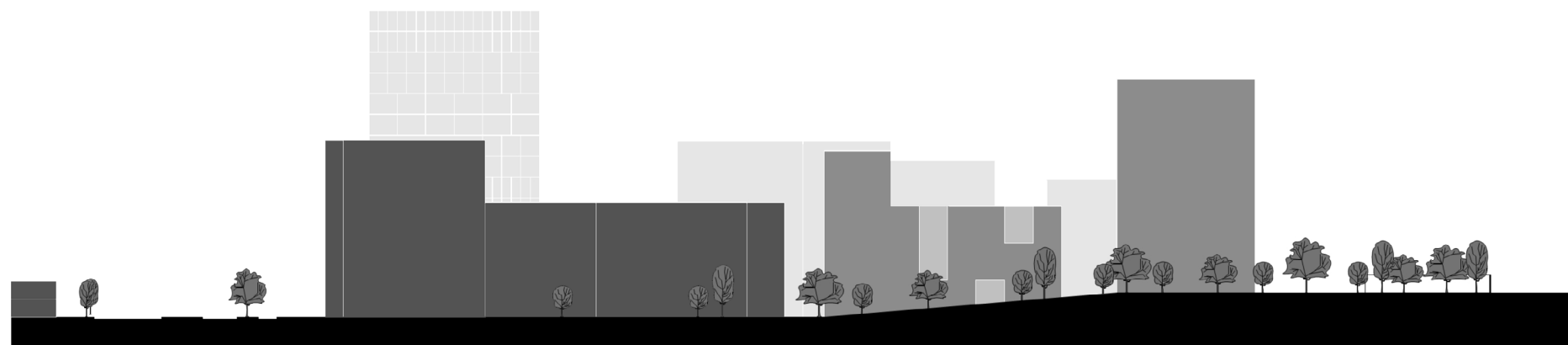
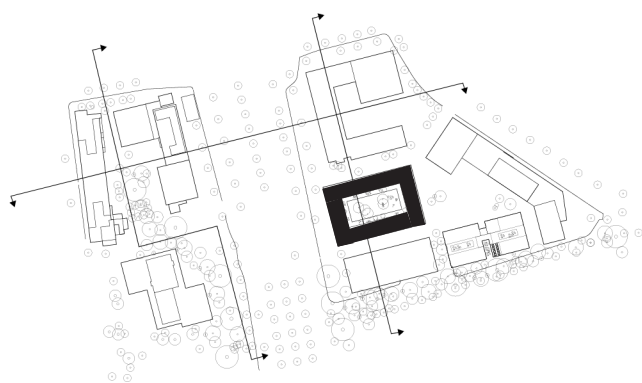


Study Model 01



Study Model 02





0 10 20 40m

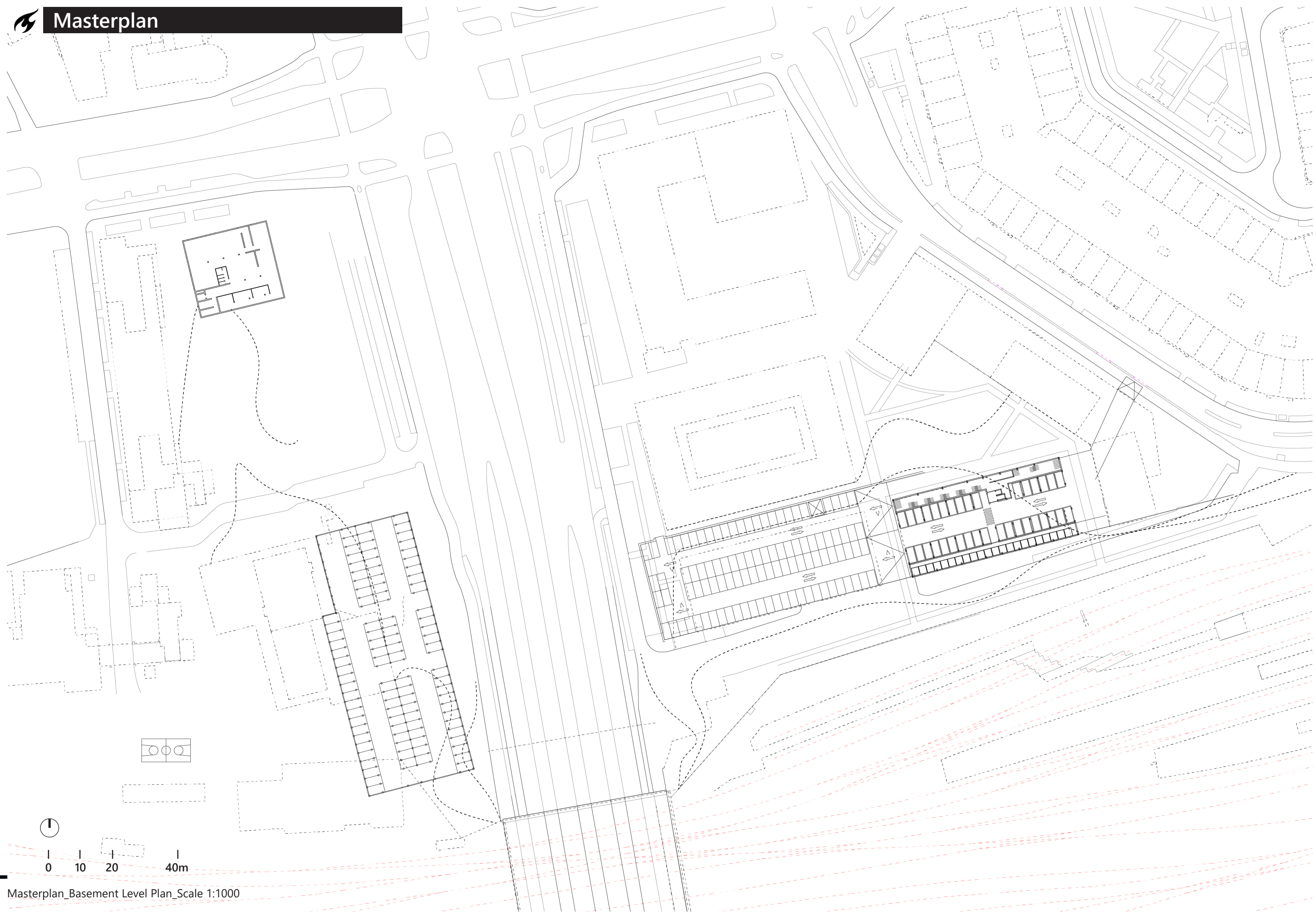
Source: Species Group Work



0 10 20 40m



Masterplan_Basement Level Plan_Scale 1:1000





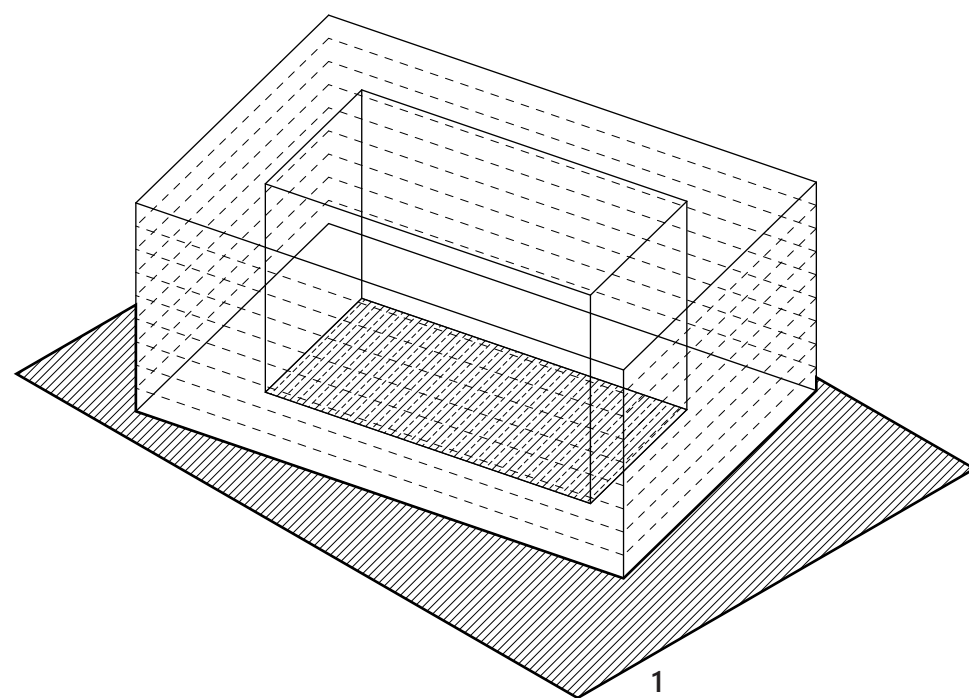
Masterplan



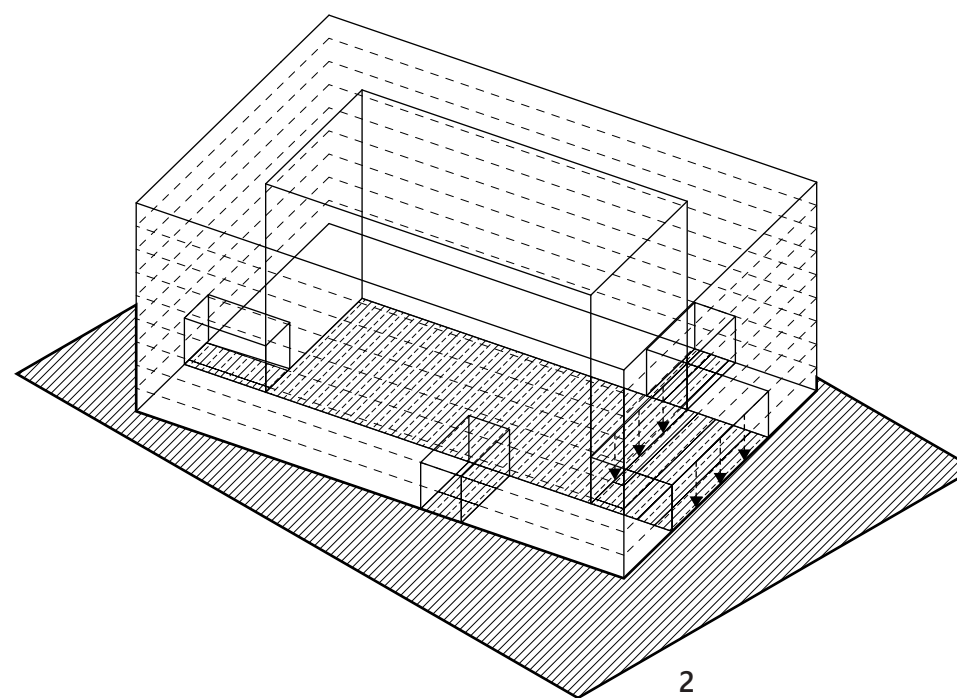


Masterplan

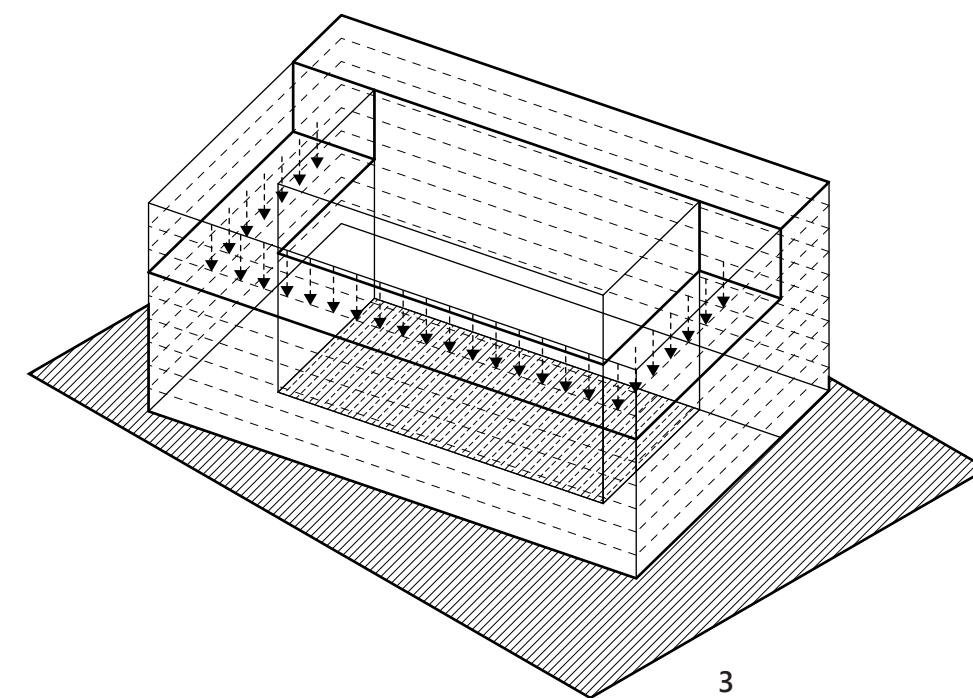




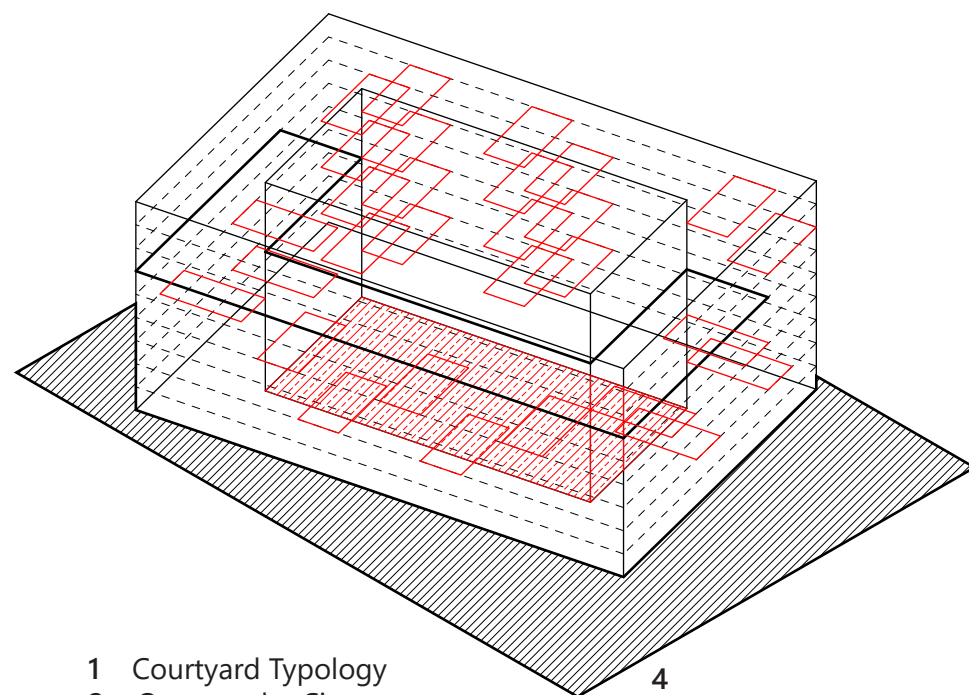
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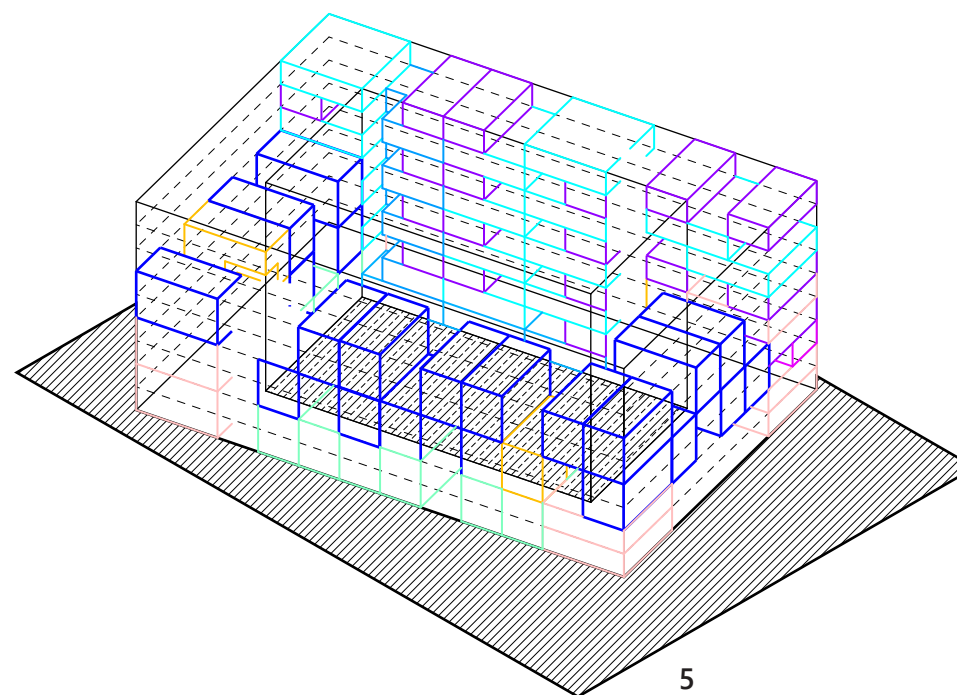
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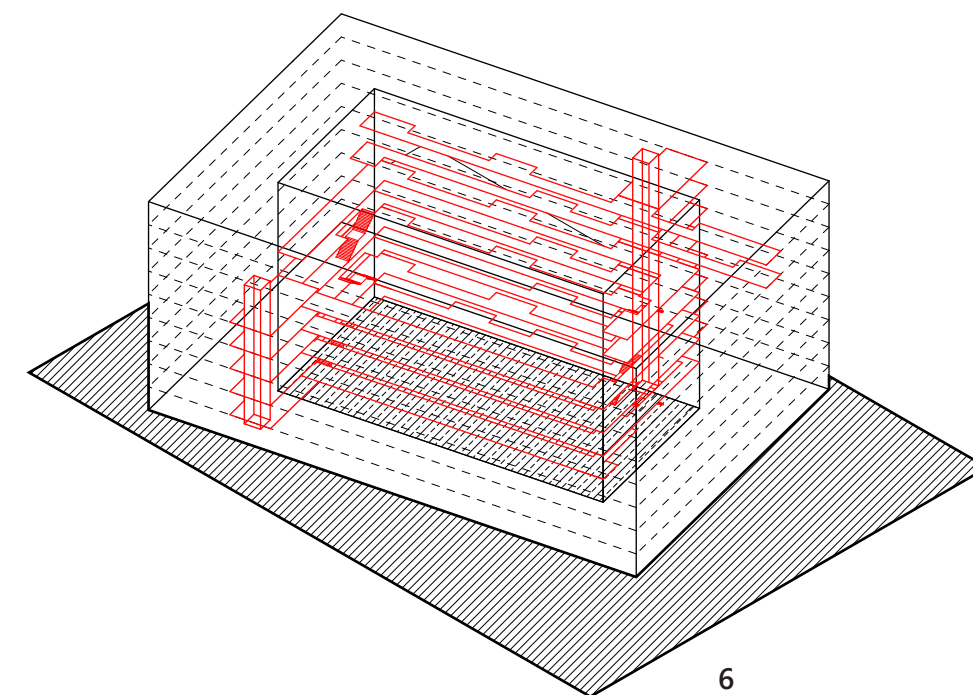
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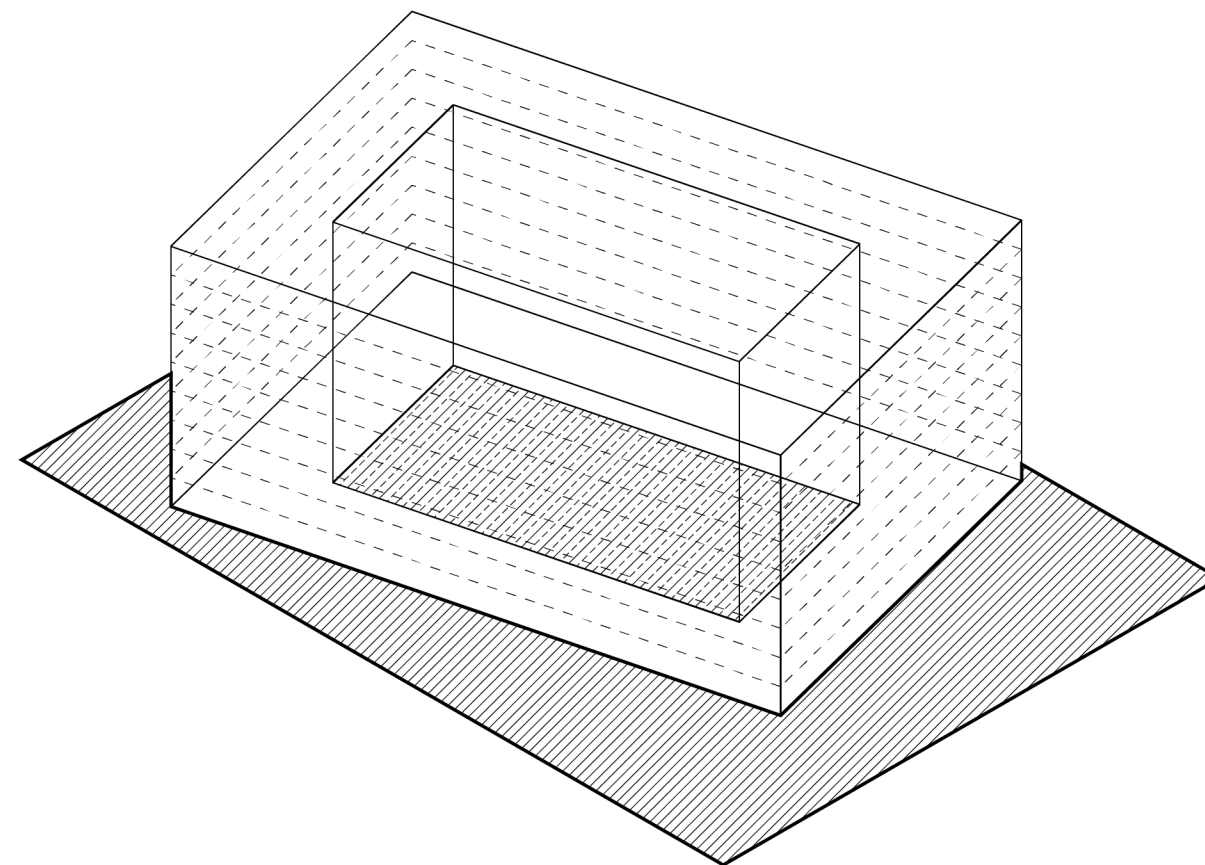


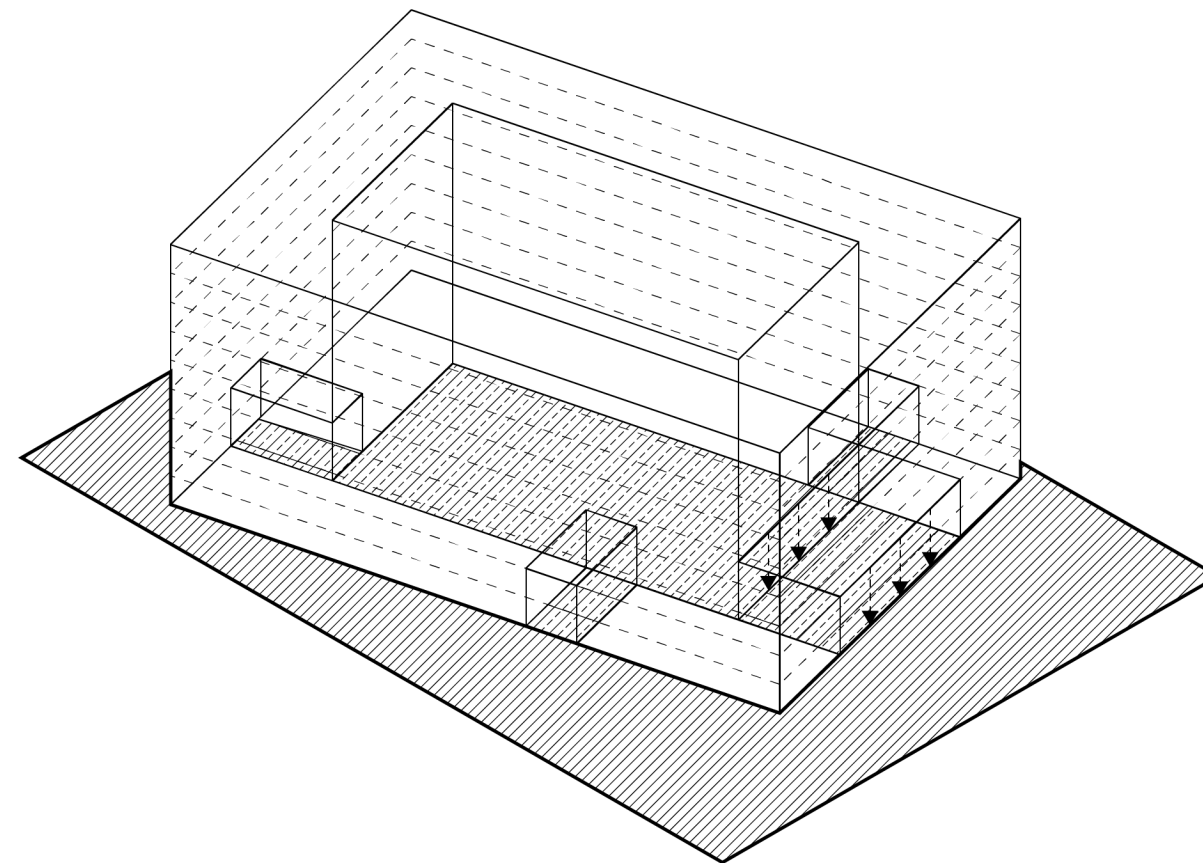
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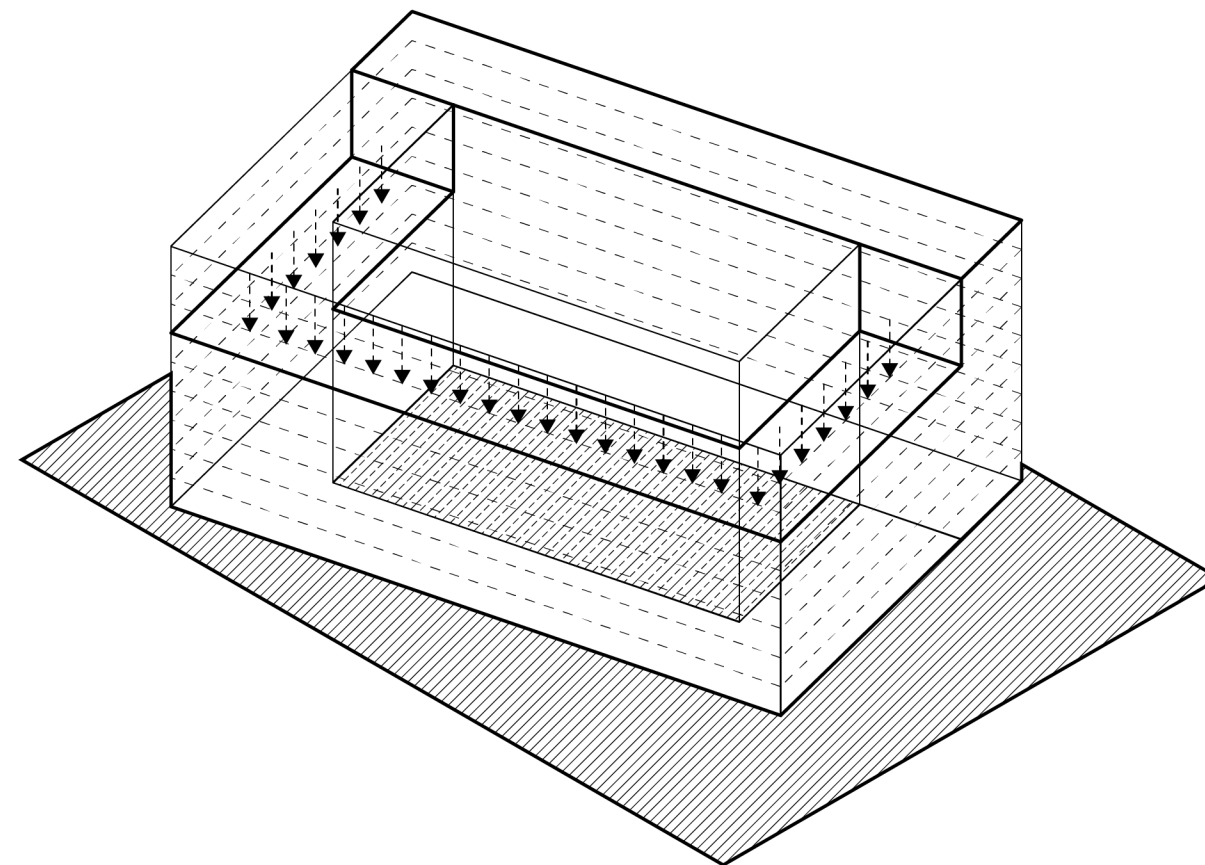


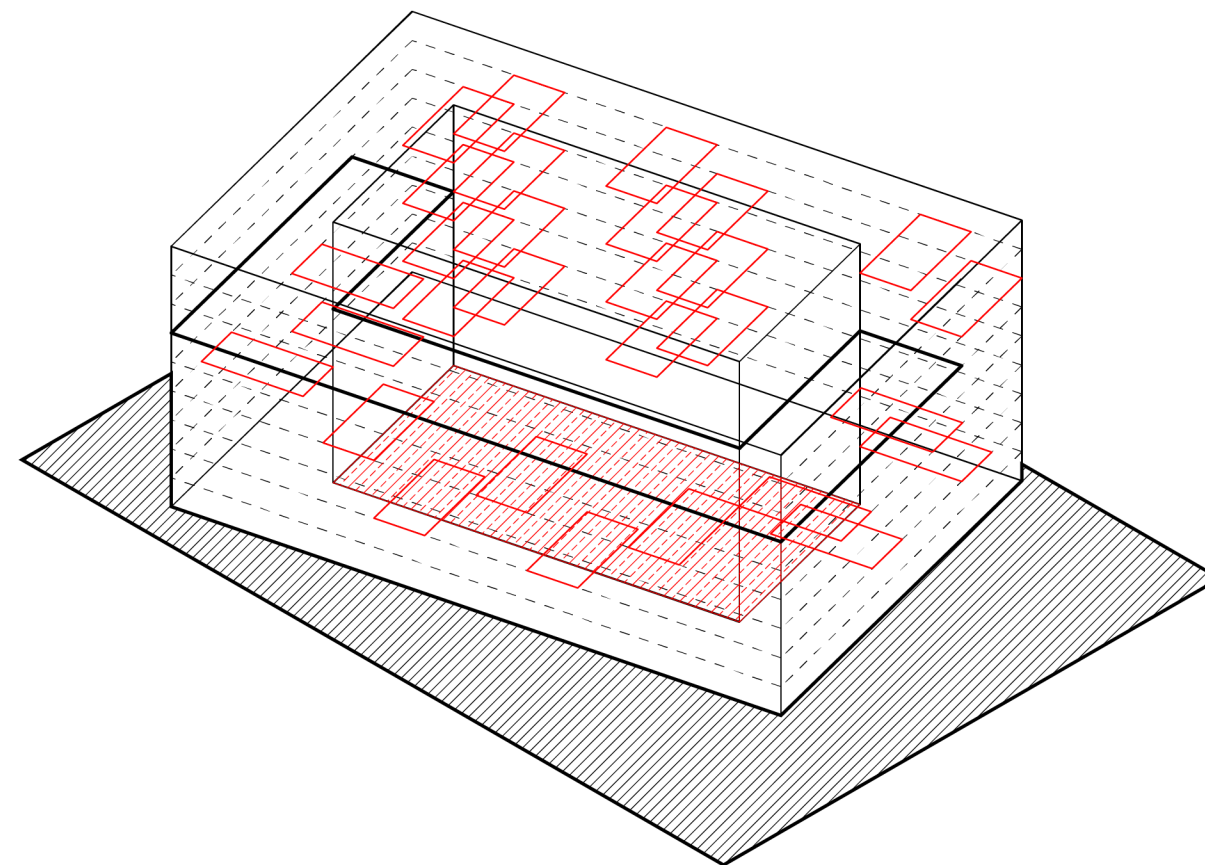
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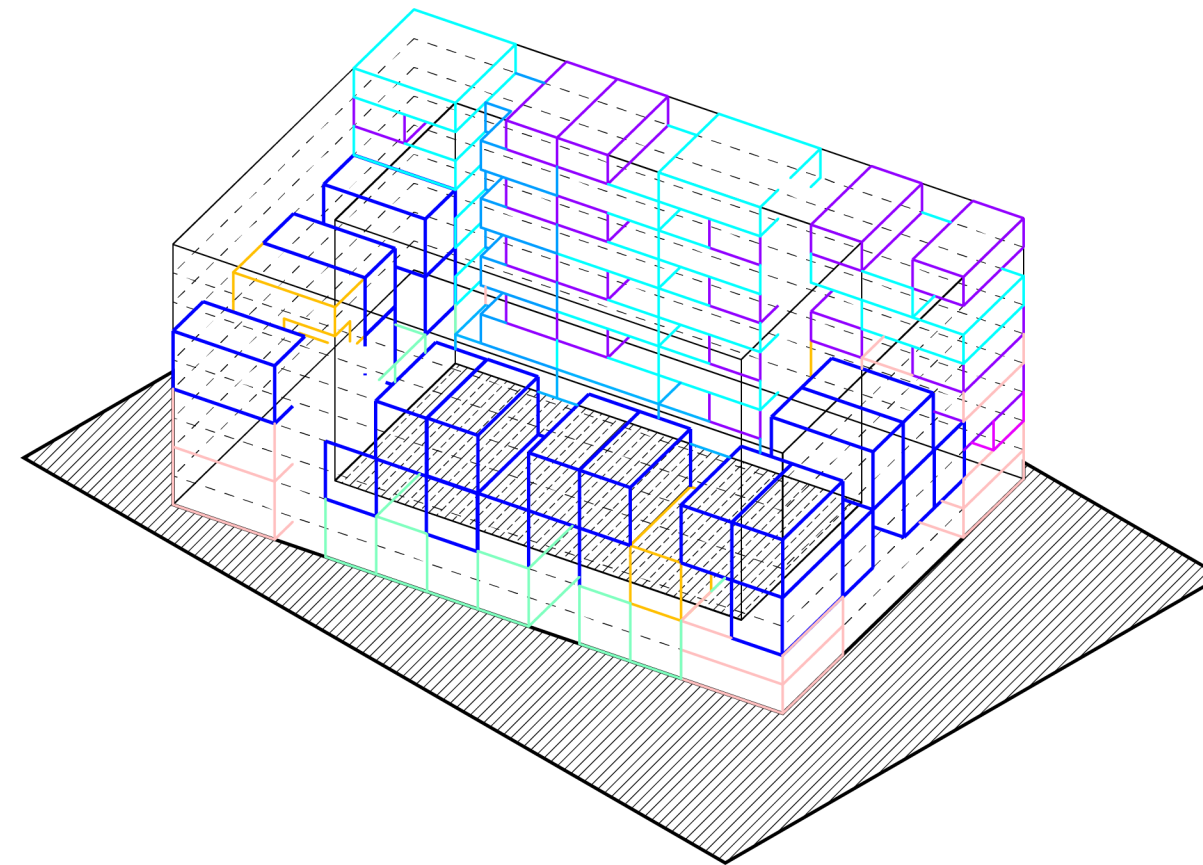
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- 2 Open to the City
- 3 Sunlight Maximization
- 4 Green Spaces Maximization
- 5 Typologies Diversification
- 6 Interior and Exterior Circulation Spaces

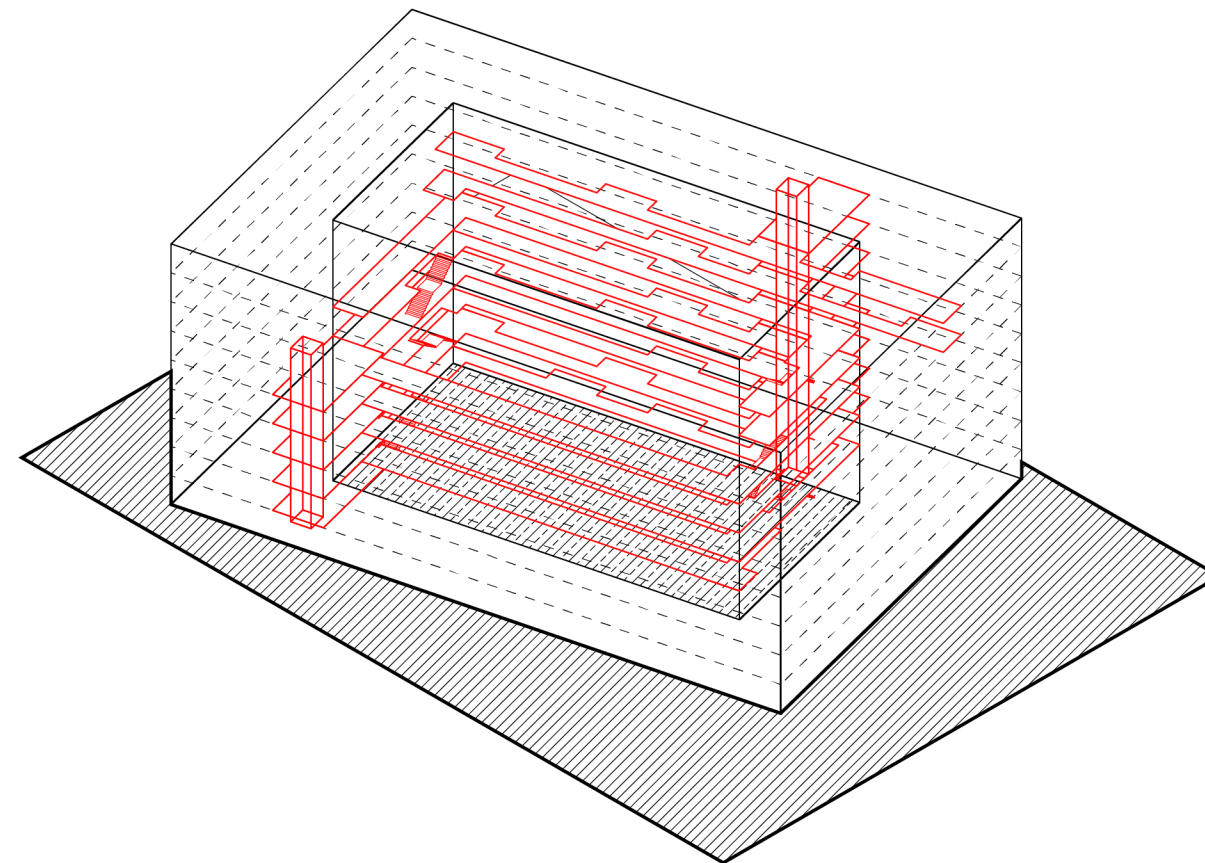


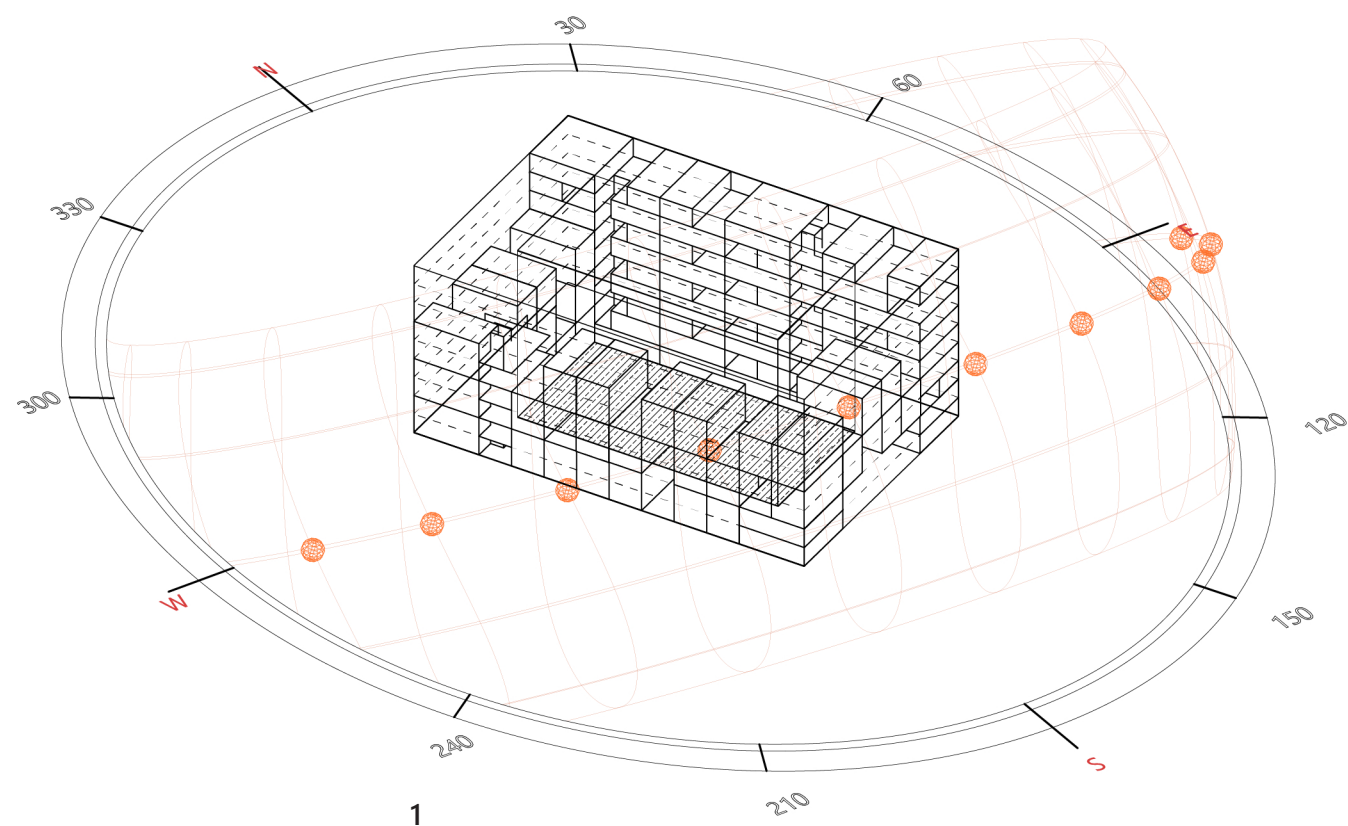






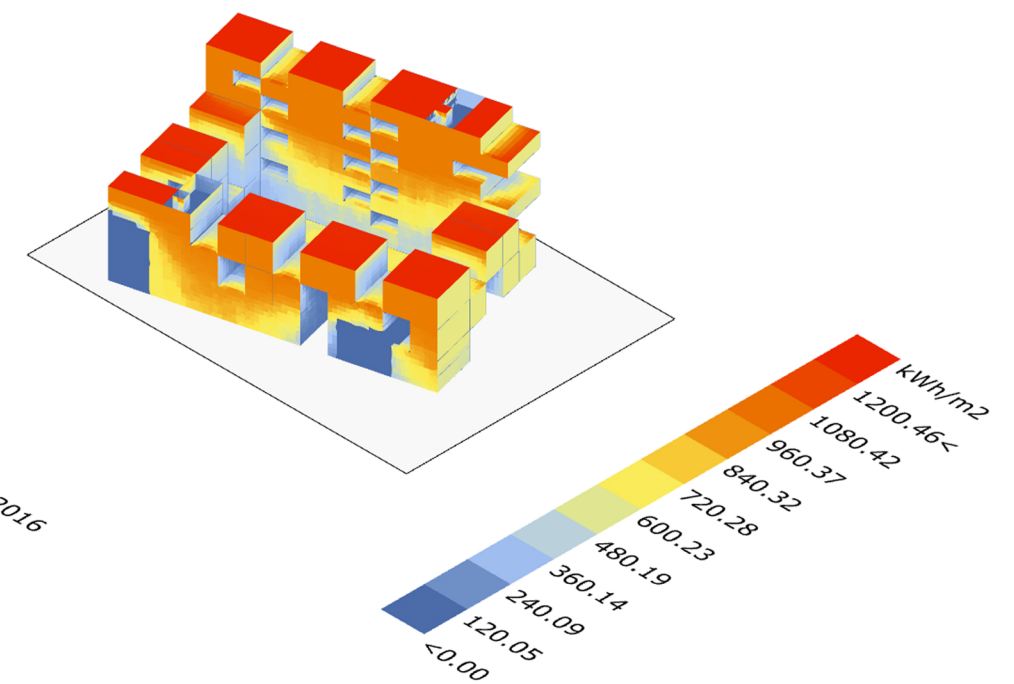






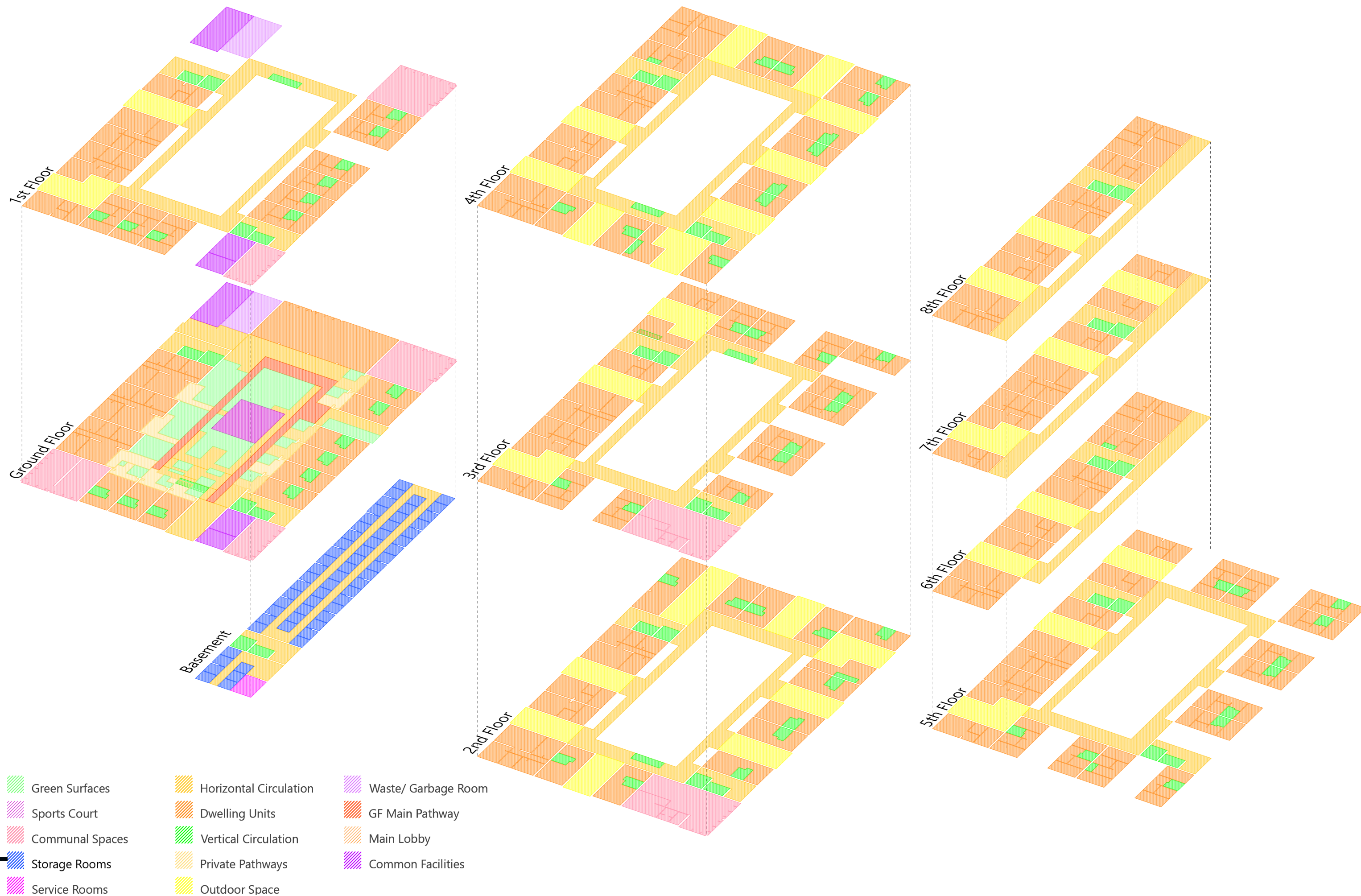
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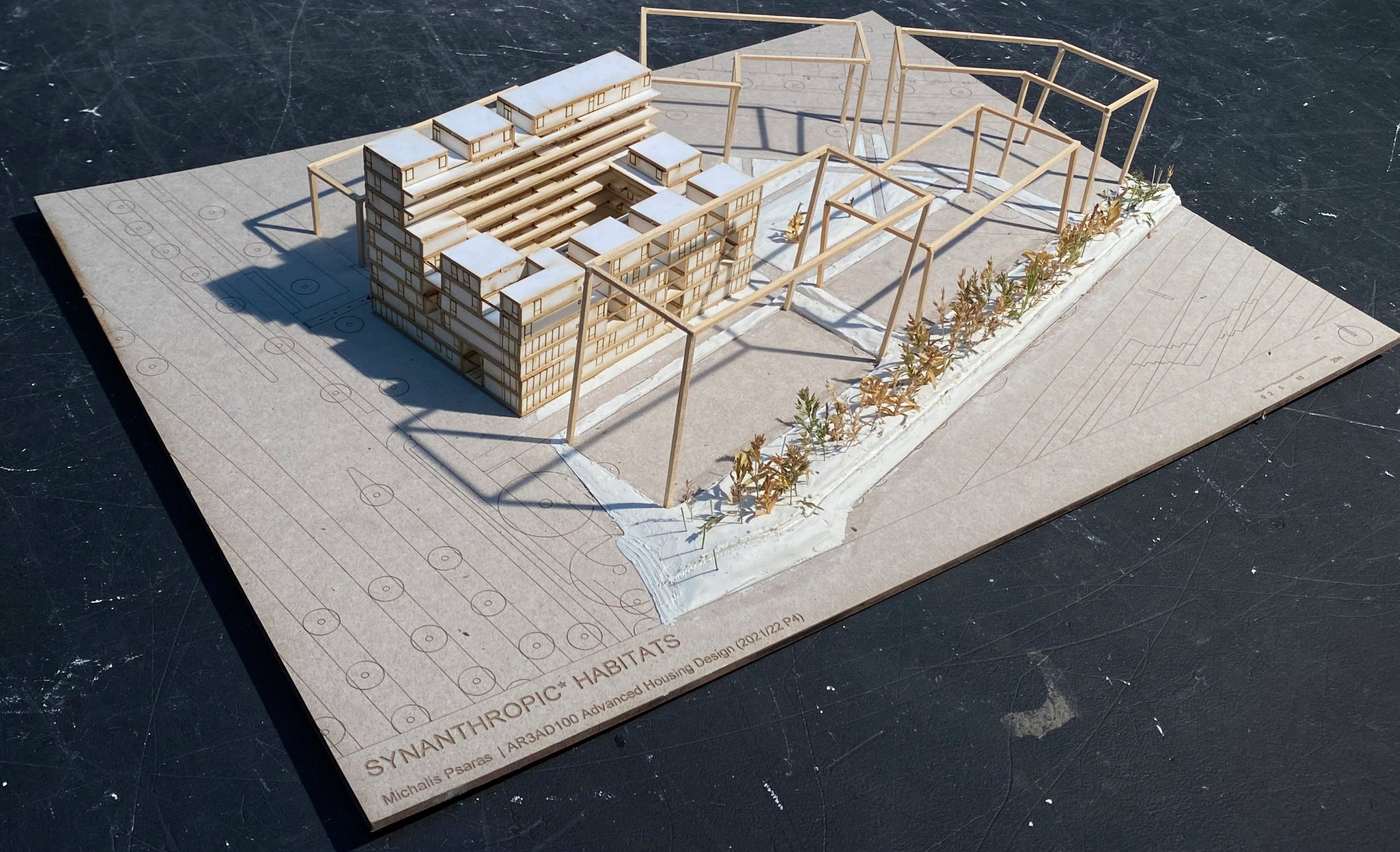
Radiation Analysis
Rotterdam - The Hague AP - ZH_NLD_2016
1 JAN 1:00 - 31 DEC 24:00

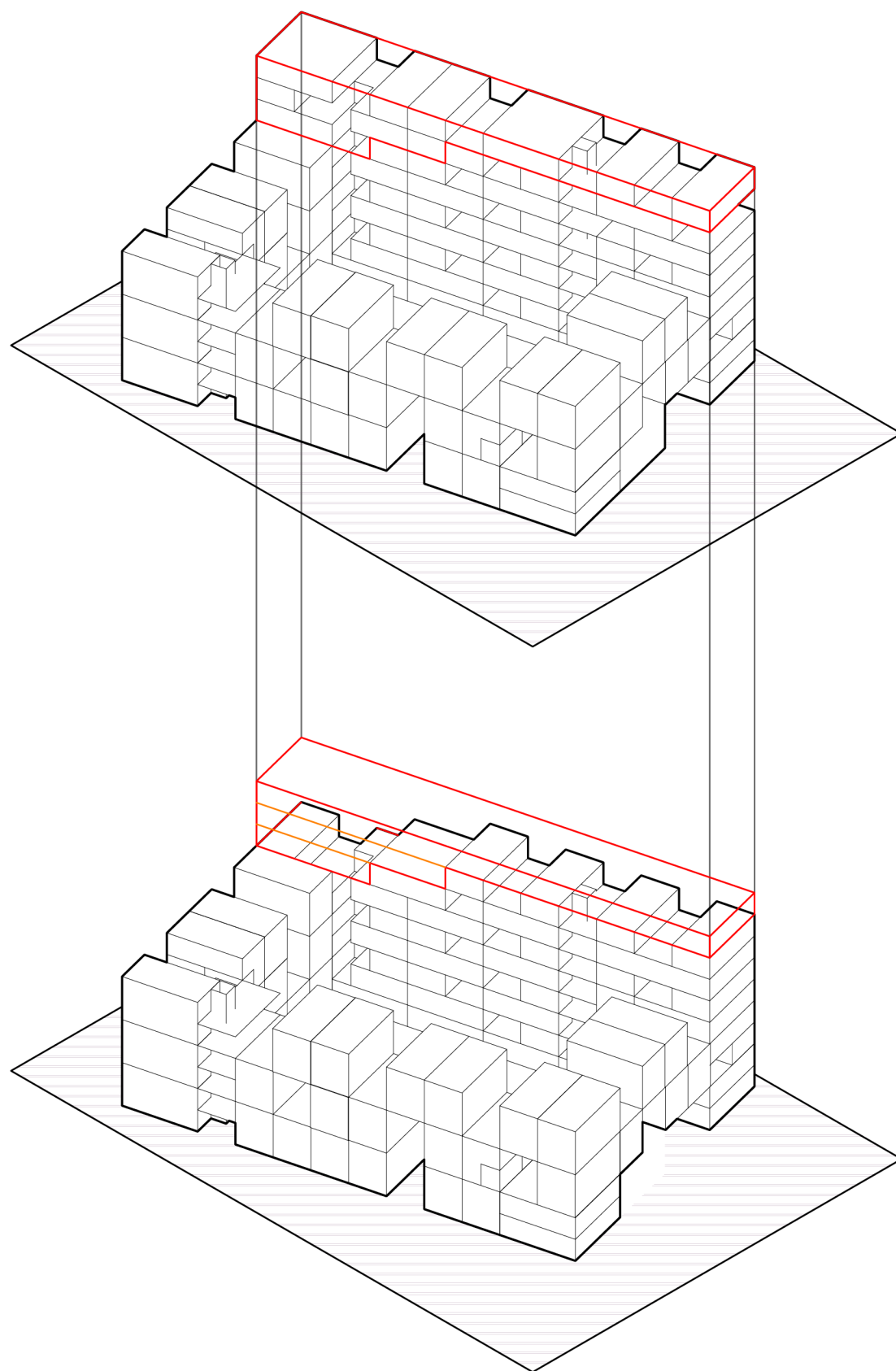


2

- 1 Orientation
- 2 Sun Analysis

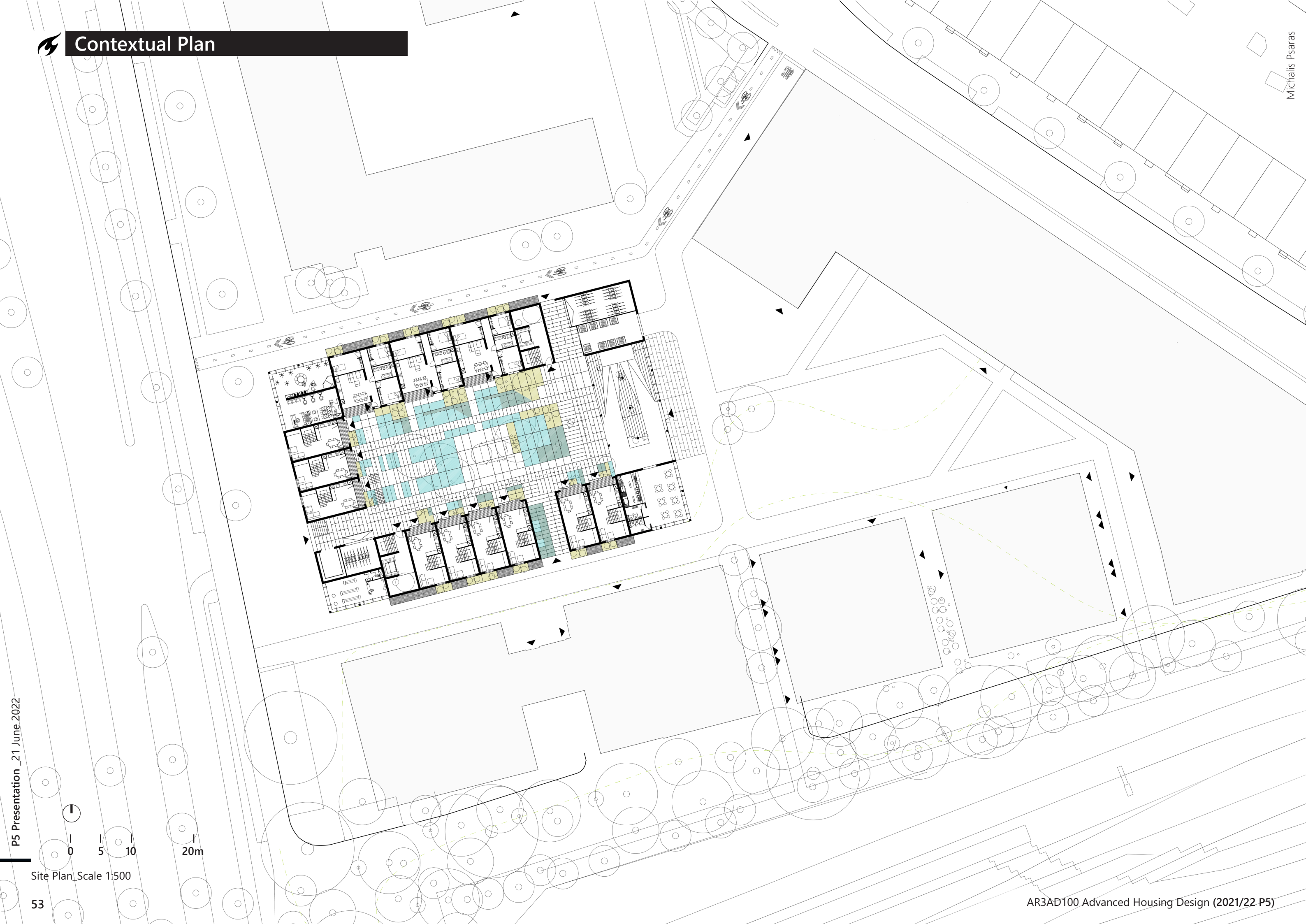


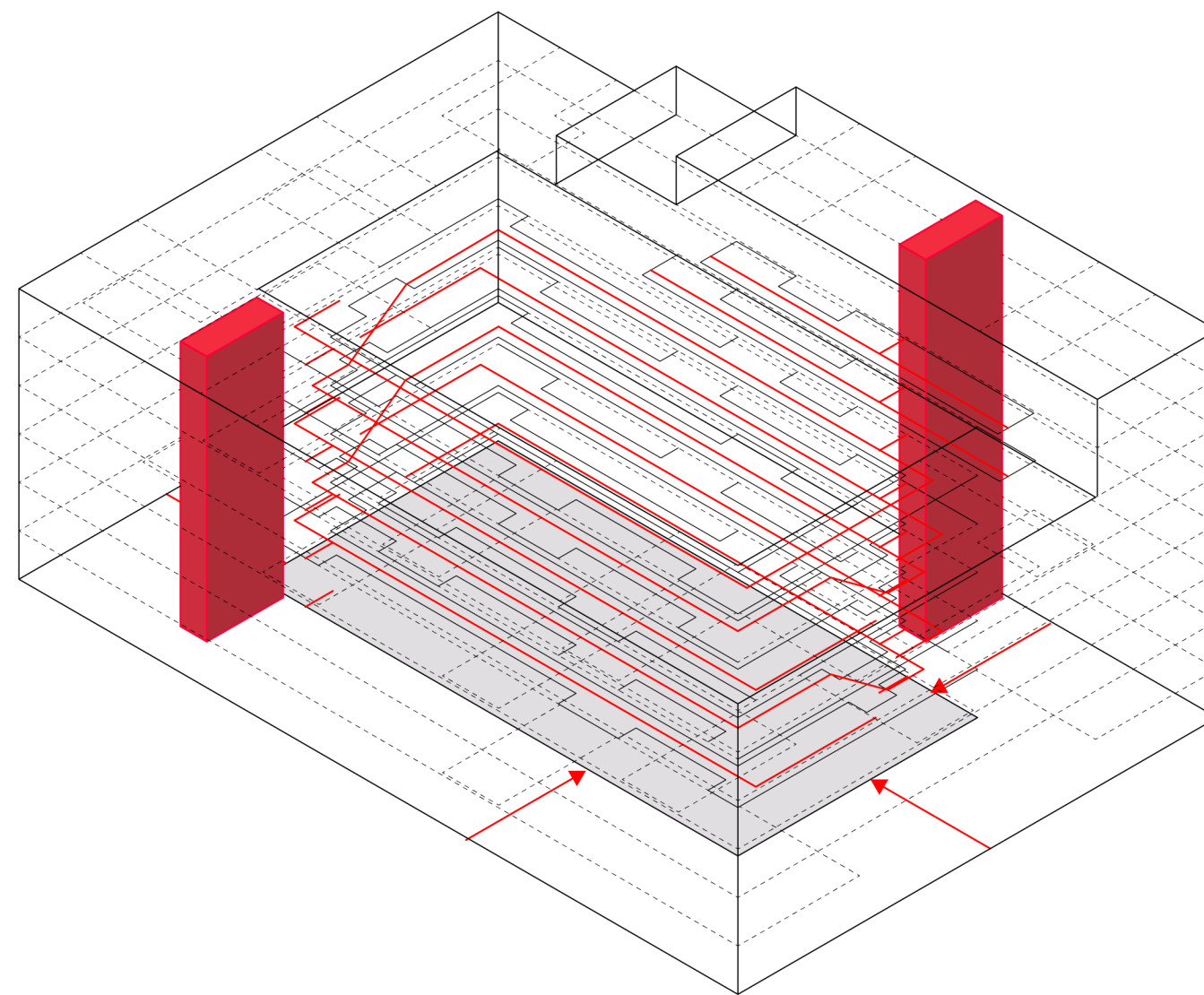




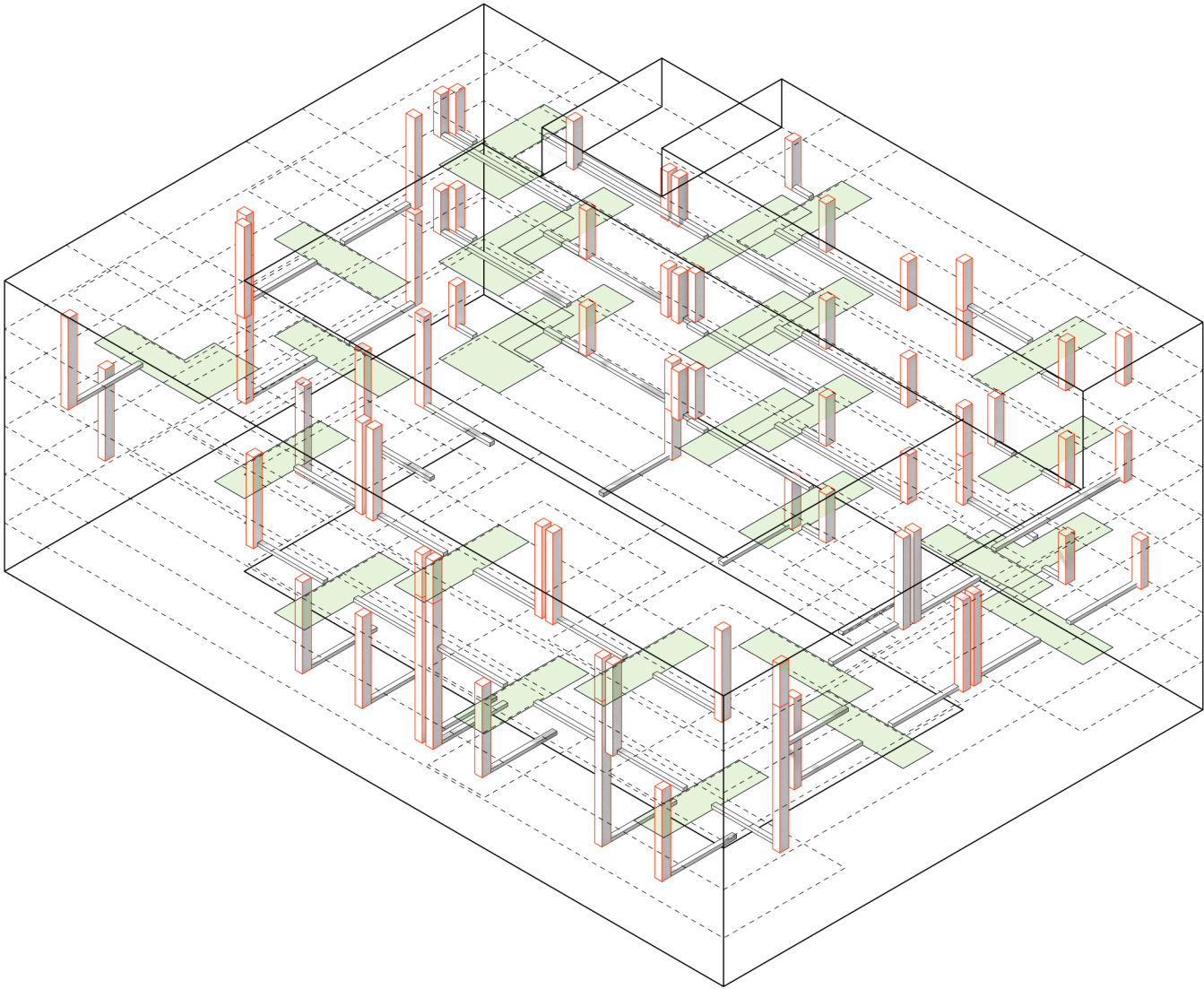


Location of the Building in Relation to the Overall Masterplan

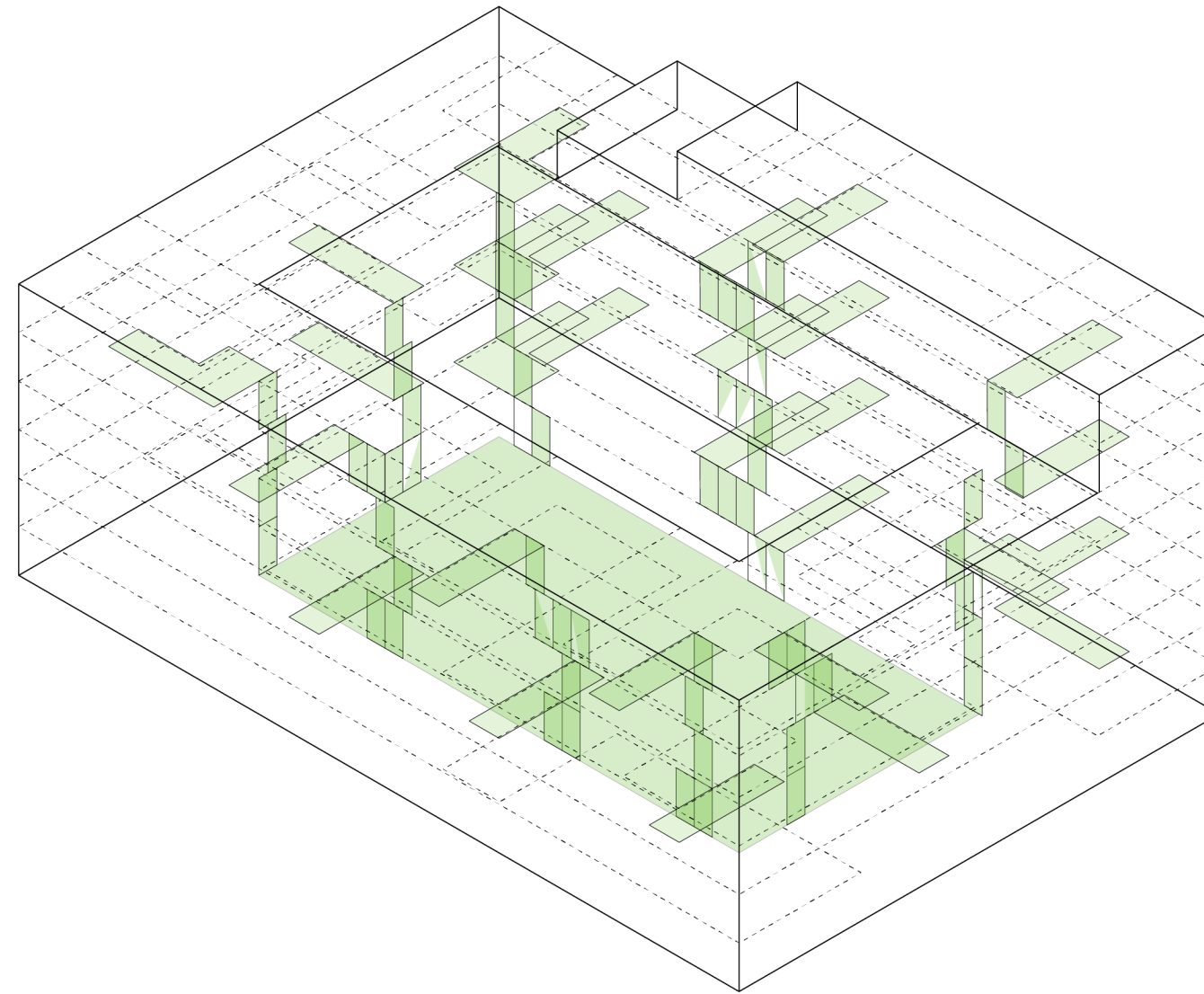




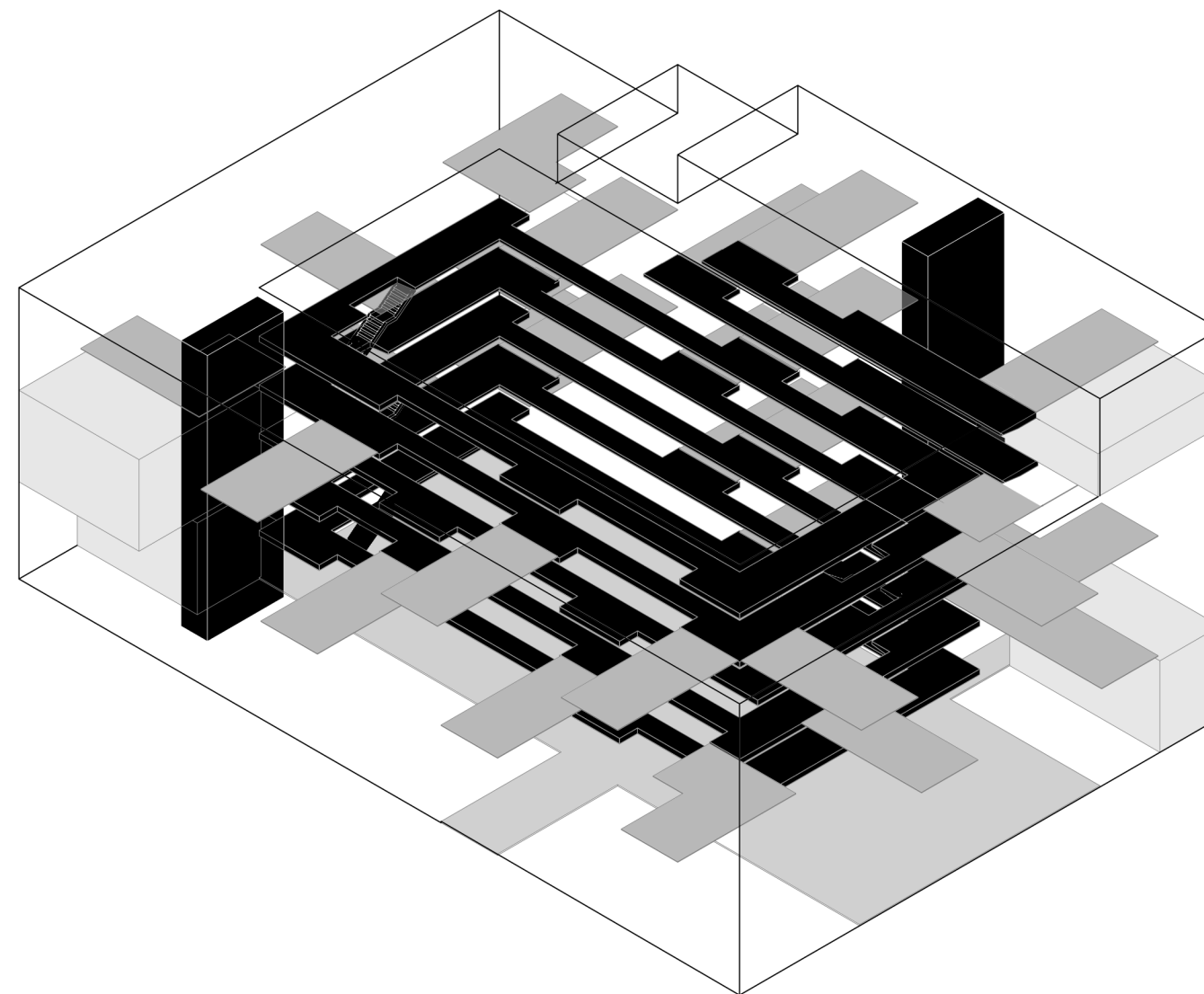
-  Courtyard
-  Vertical Circulation
-  Horizontal Circulation



- Shared Green Spaces
- Rainwater Pipes
- Shafts



 Shared Green Spaces



- Vertical and Horizontal Circulation
- Green Shared Spaces
- Green Public Courtyard
- Common Rooms



- 1 Engine & Meter Room
- 2 Storage Space
- 3 Circulation Space

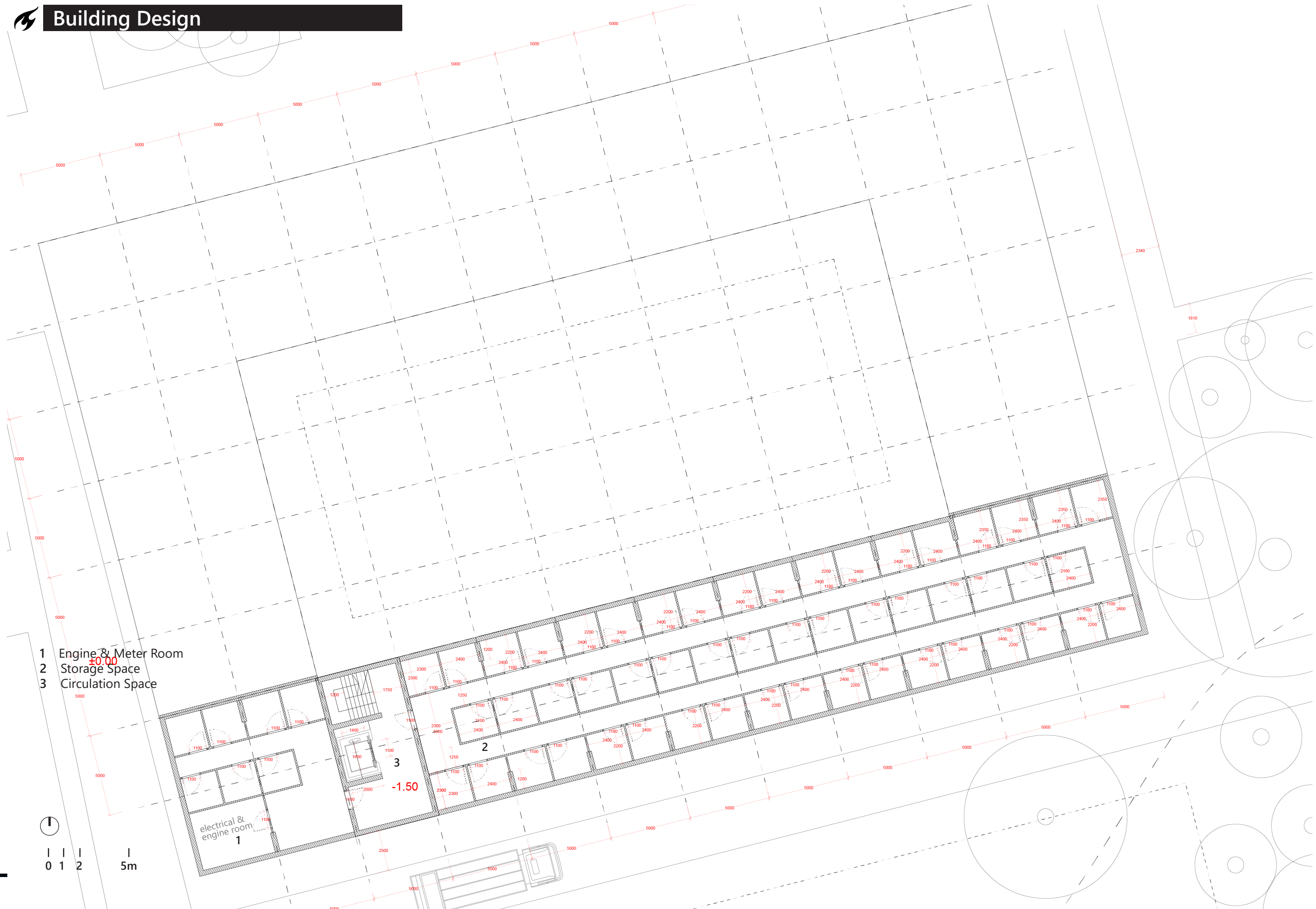


0 1 2

5m

electrical & engine room
1

-1.50





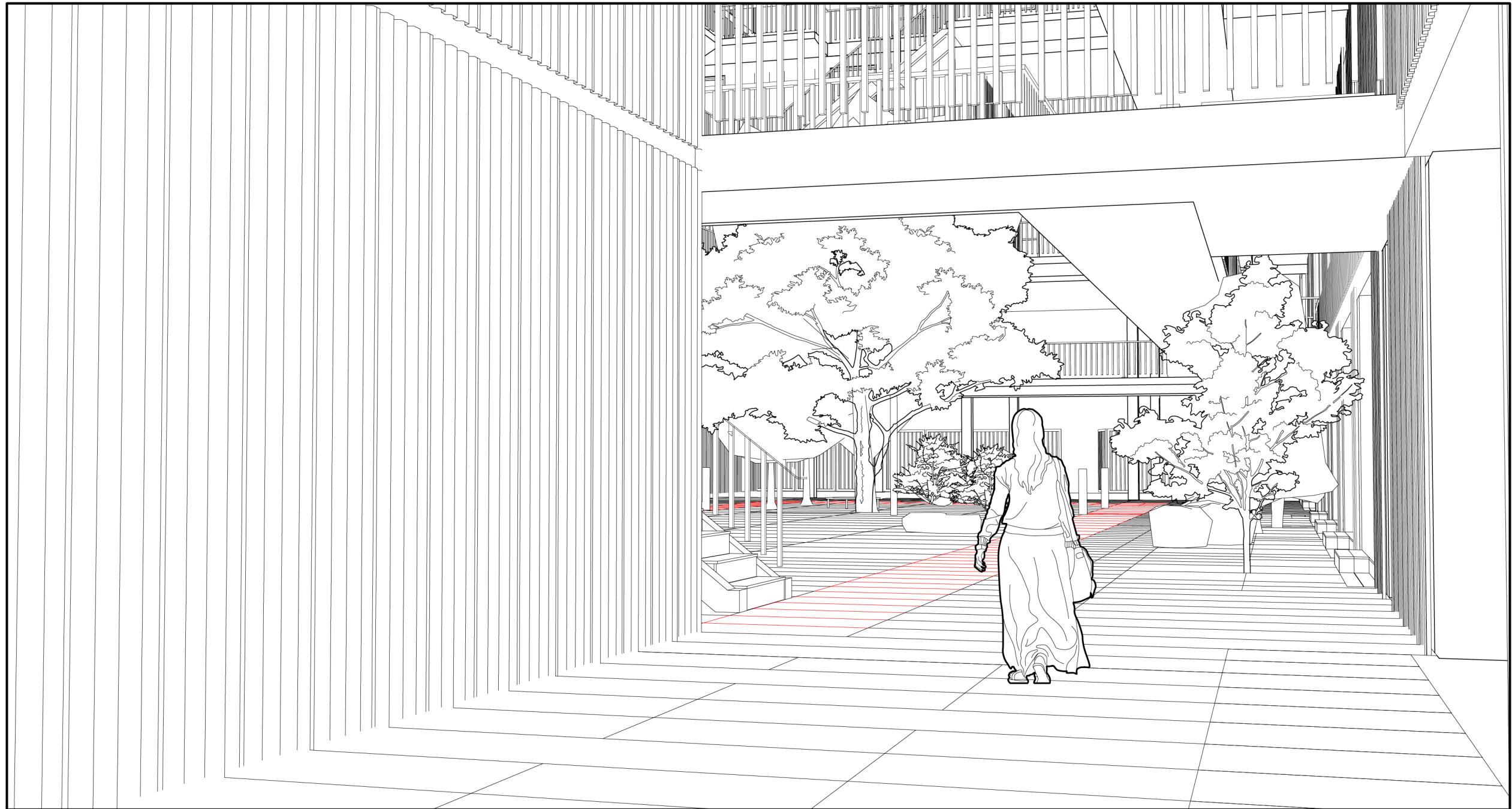
Ground Floor Plan

- 1 Commercial Spaces
- 2 Mail Room
- 3 Bicycle Parking
- 4 Garbage Room
- 5 Housing
- 6 Circulation Space
- 7 Courtyard
- 8 Entrances



5m





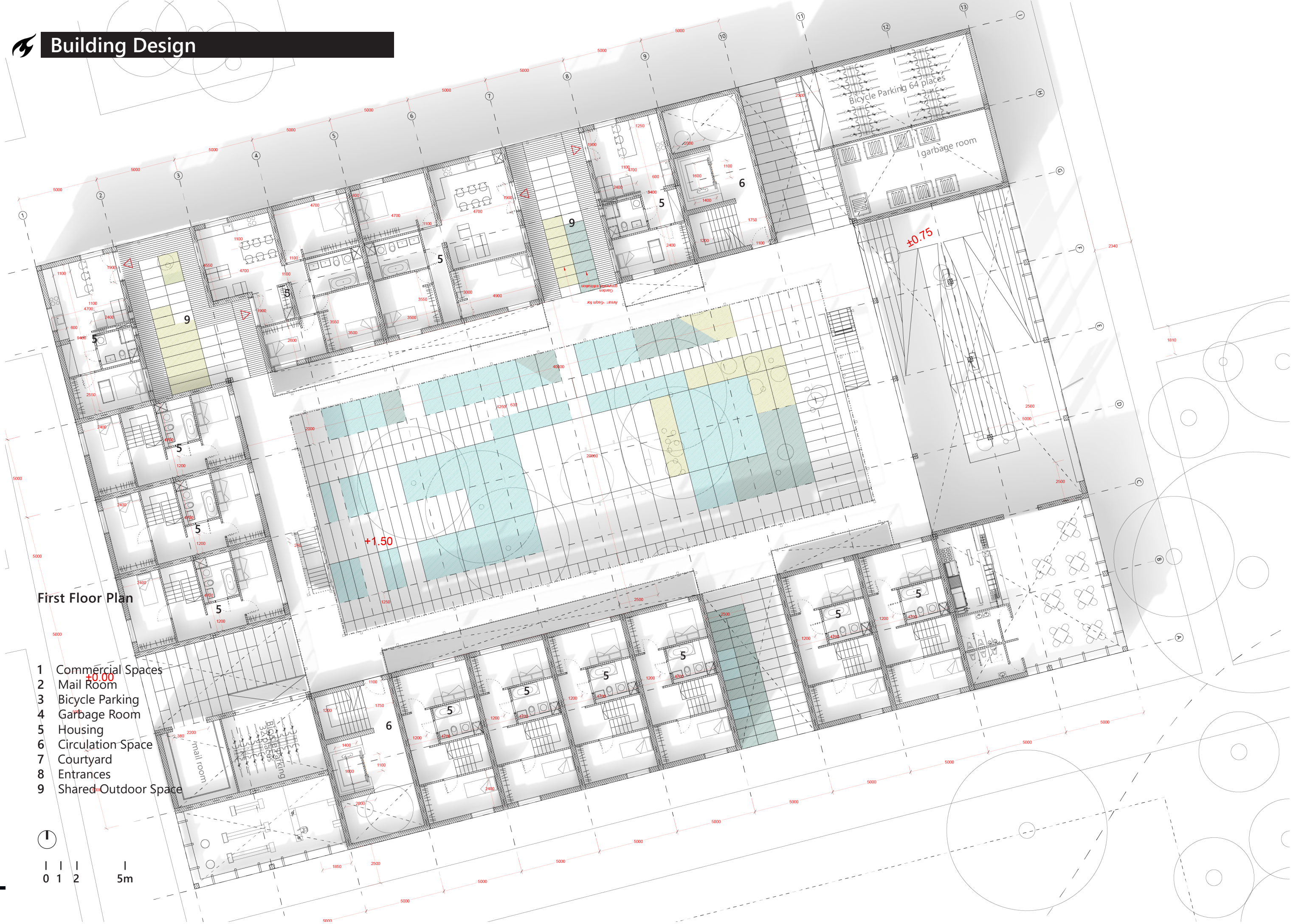


First Floor Plan

- 1 Commercial Spaces
- 2 Mail Room
- 3 Bicycle Parking
- 4 Garbage Room
- 5 Housing
- 6 Circulation Space
- 7 Courtyard
- 8 Entrances
- 9 Shared Outdoor Space



0 1 2 5m





-
- 1 Commercial Spaces
 - 2 Mail Room
 - 3 Bicycle Parking
 - 4 Garbage Room
 - 5 Housing
 - 6 Circulation Space
 - 7 Courtyard
 - 8 Entrances
 - 9 Shared Outdoor Space
 - 10 Common Spaces

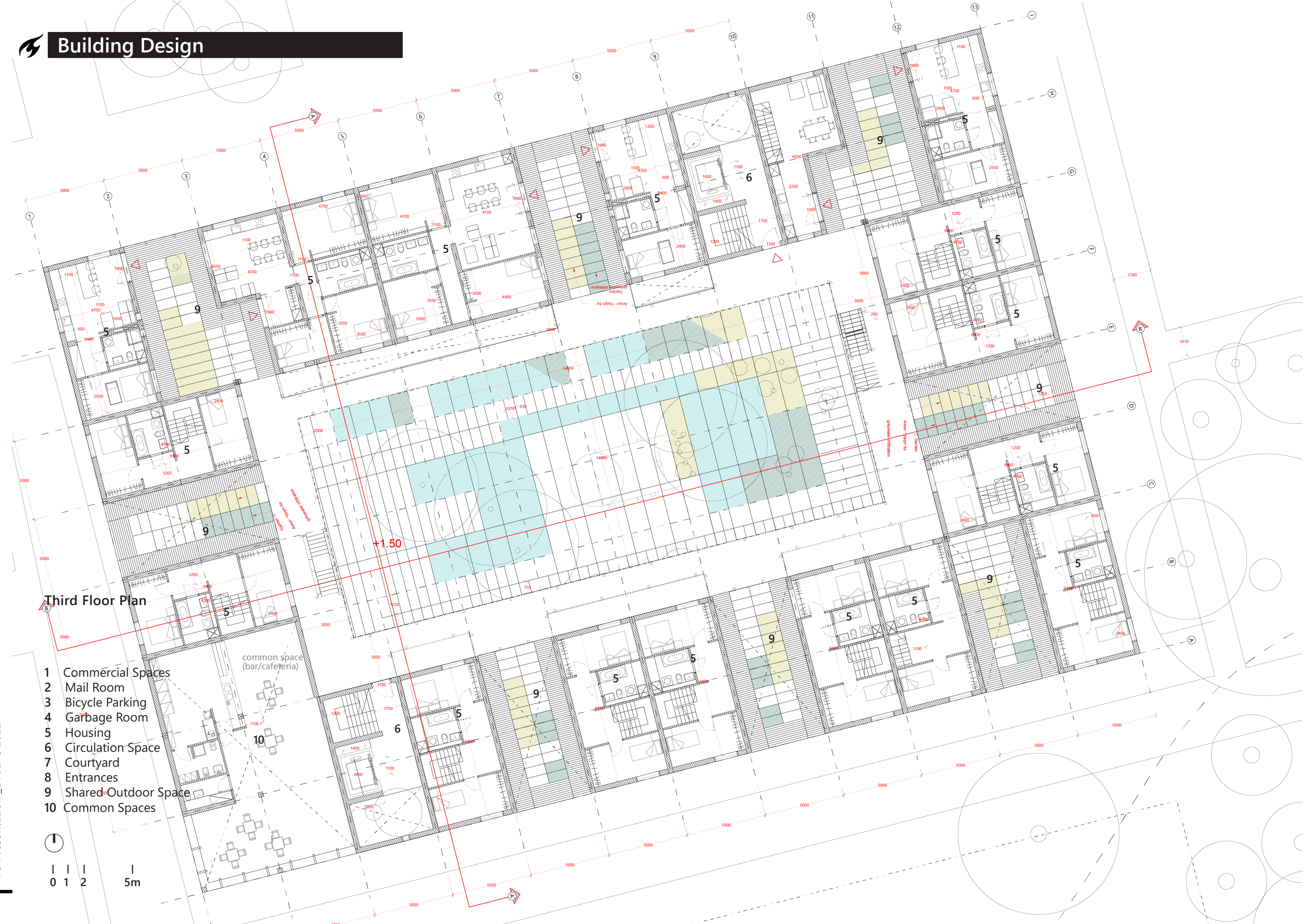
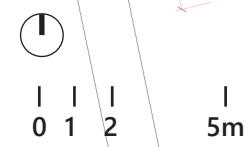


0	1	2	5m
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Third Floor Plan

- 1 Commercial Spaces
- 2 Mail Room
- 3 Bicycle Parking
- 4 Garbage Room
- 5 Housing
- 6 Circulation Space
- 7 Courtyard
- 8 Entrances
- 9 Shared Outdoor Space
- 10 Common Spaces







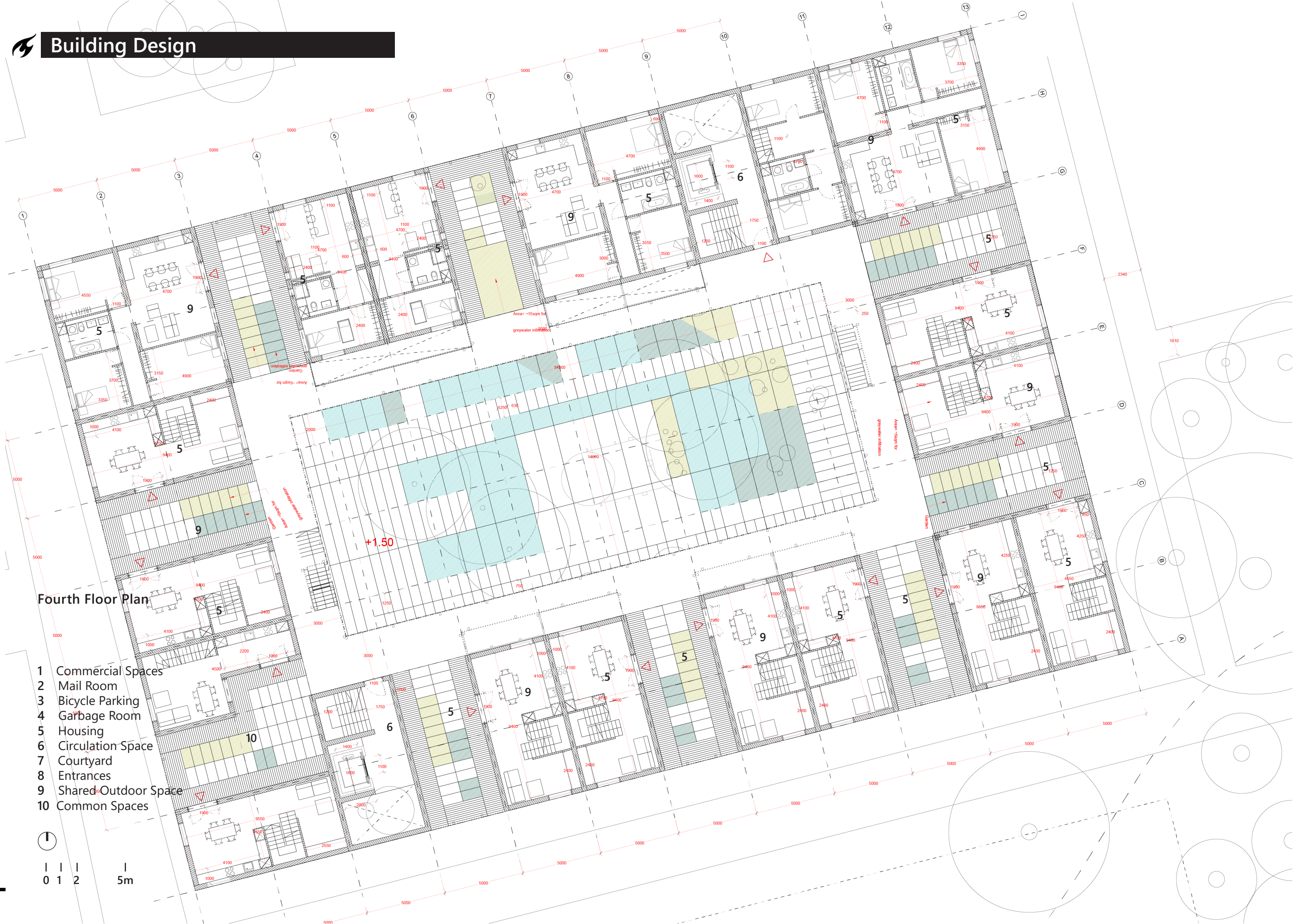


Fourth Floor Plan

- 1 Commercial Spaces
- 2 Mail Room
- 3 Bicycle Parking
- 4 Garbage Room
- 5 Housing
- 6 Circulation Space
- 7 Courtyard
- 8 Entrances
- 9 Shared Outdoor Space
- 10 Common Spaces



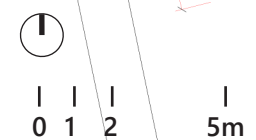
0 1 2 5m

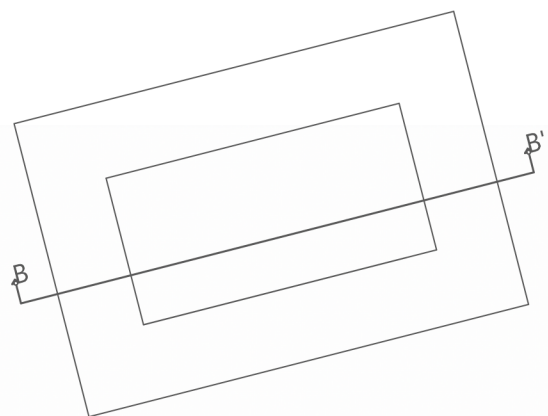




Fifth Floor Plan

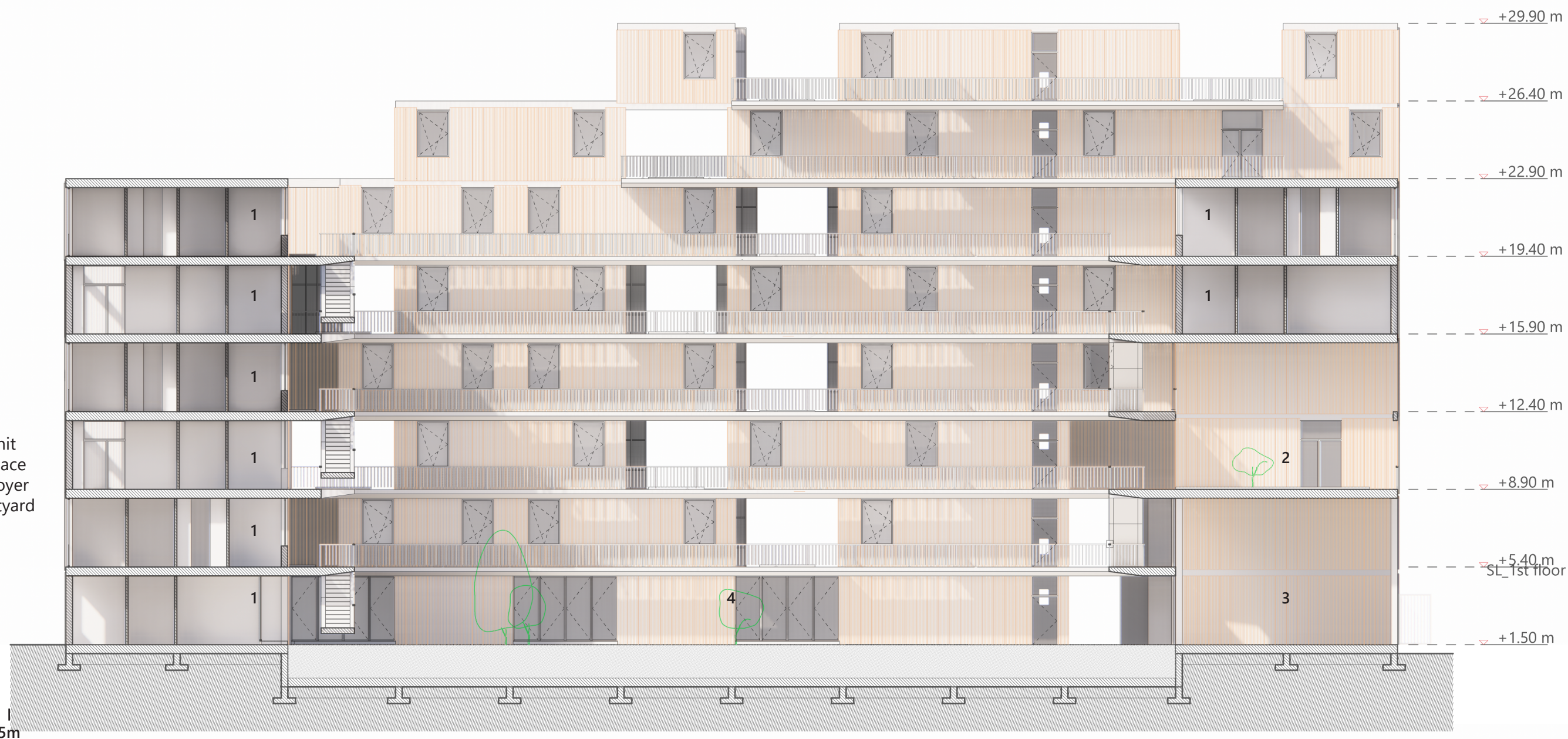
- 1 Commercial Spaces
- 2 Mail Room
- 3 Bicycle Parking
- 4 Garbage Room
- 5 Housing
- 6 Circulation Space
- 7 Courtyard
- 8 Entrances
- 9 Shared Outdoor Space
- 10 Common Spaces

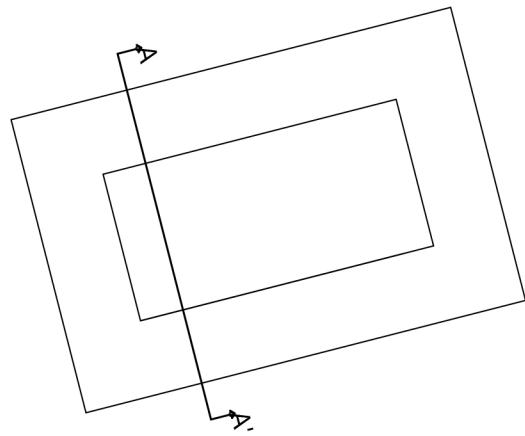




Longitudinal
Section BB'

- 1 Dwelling Unit
- 2 Outdoor Space
- 3 Entrance Foyer
- 4 Main Courtyard





Tranverse Section AA'

- 1 Dwelling Unit
- 2 Outdoor Space
- 3 Entrance Foyer
- 4 Main Courtyard
- 5 Storage Space

0 1 2 5m







| | |
 0 1 2 5m

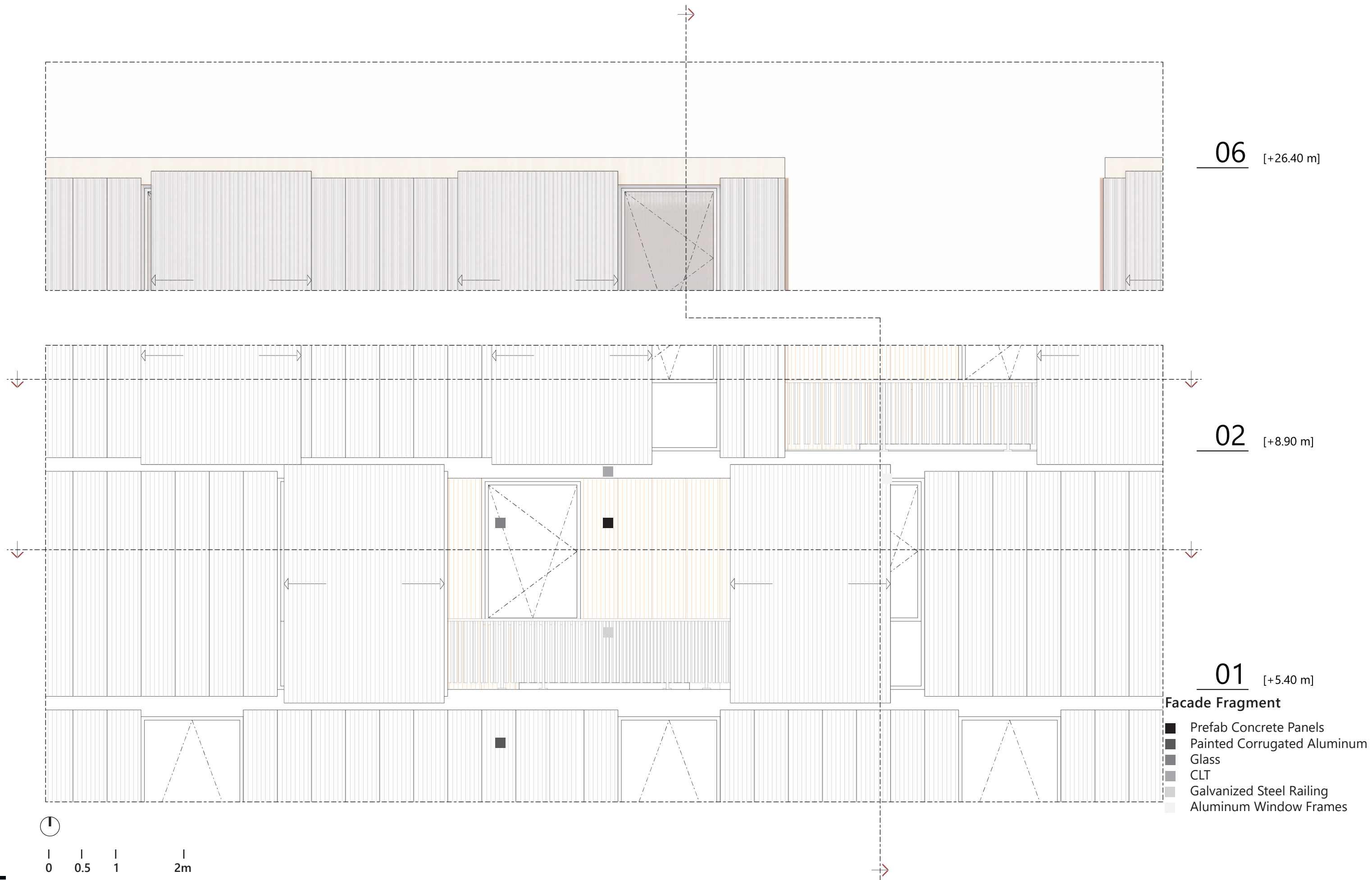
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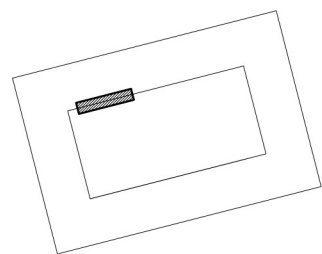


0 1 2 5m

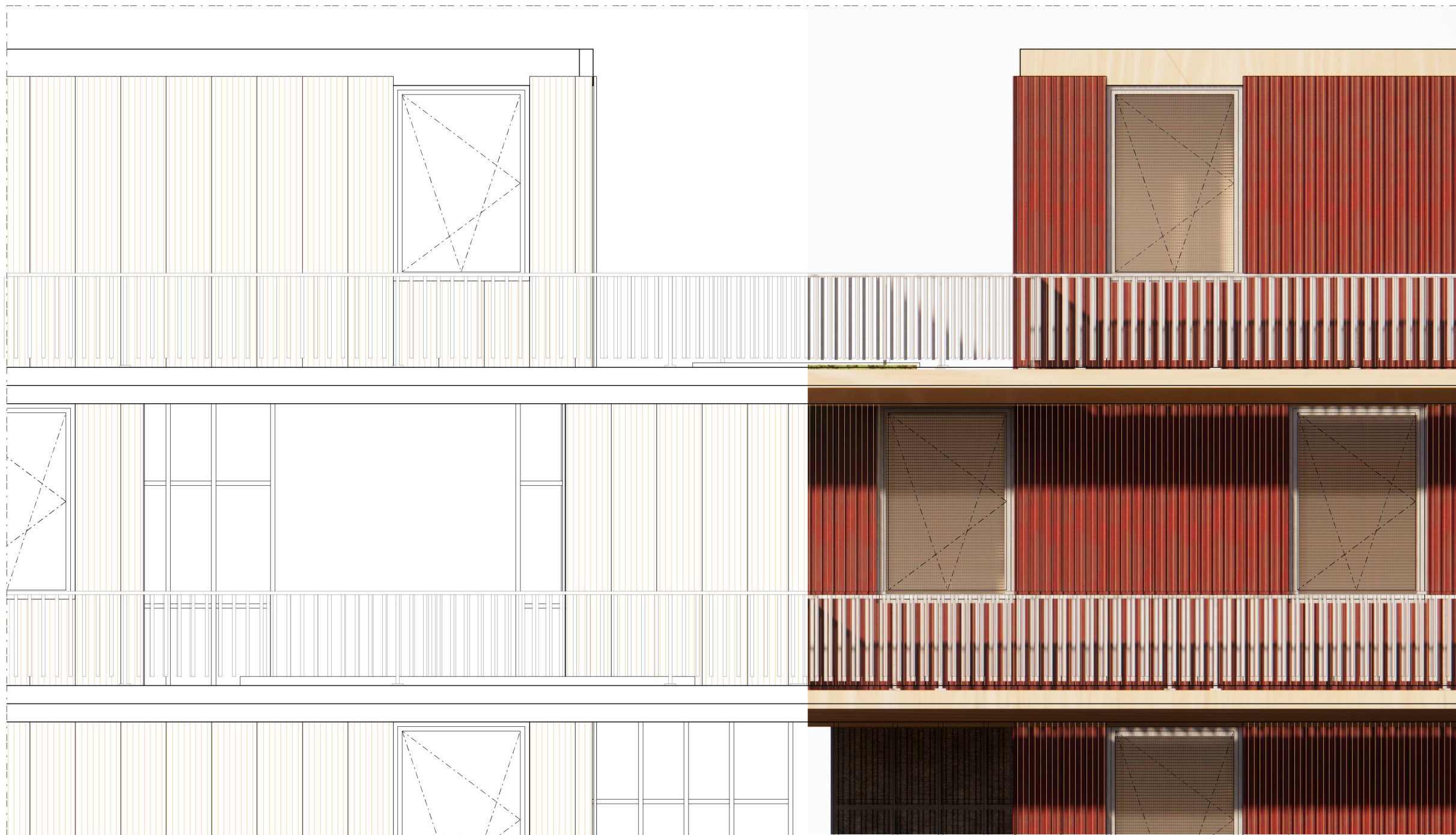
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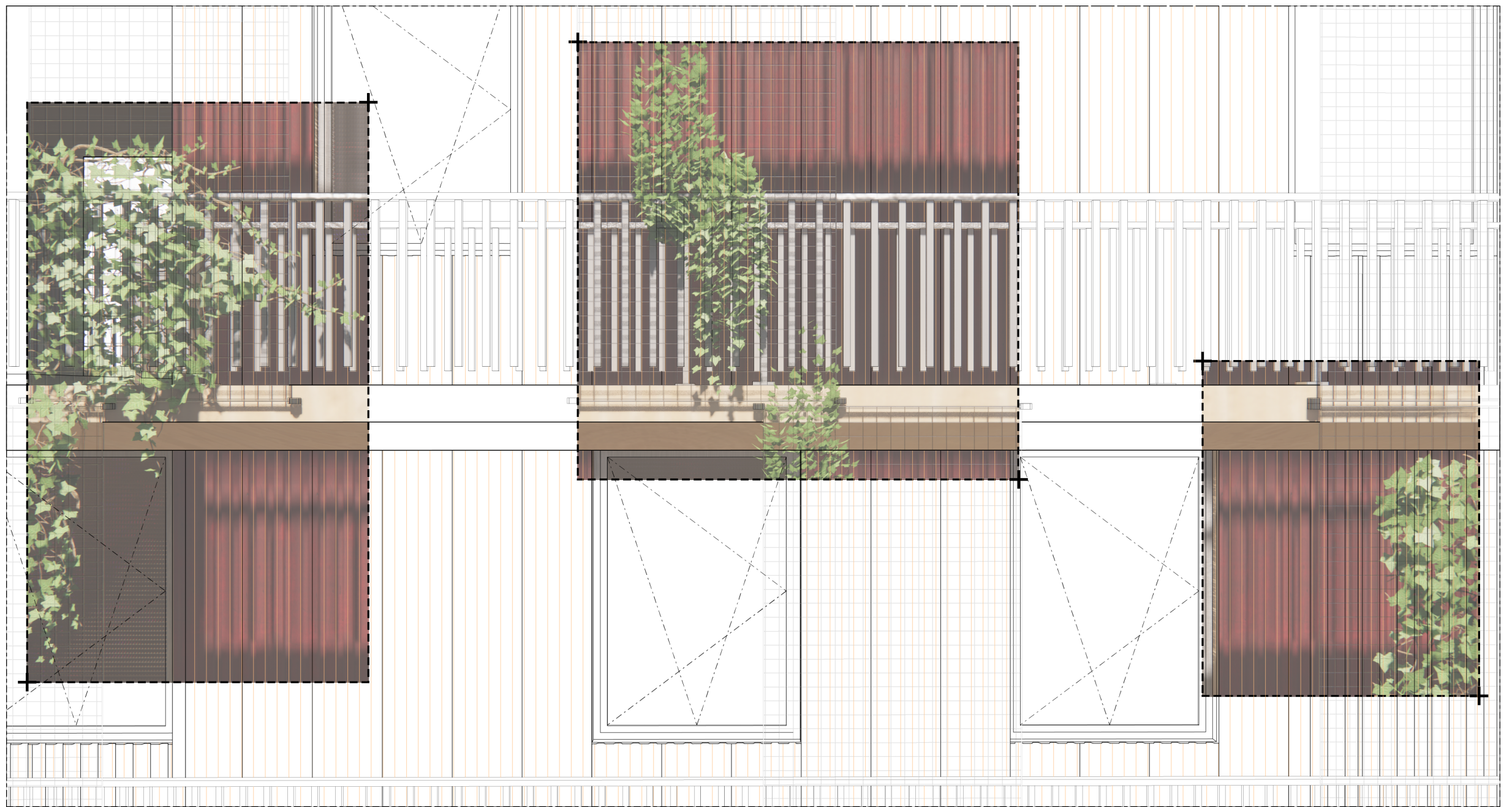
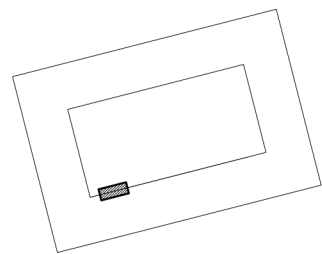


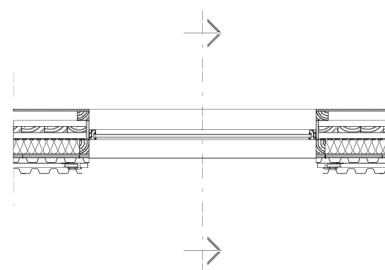
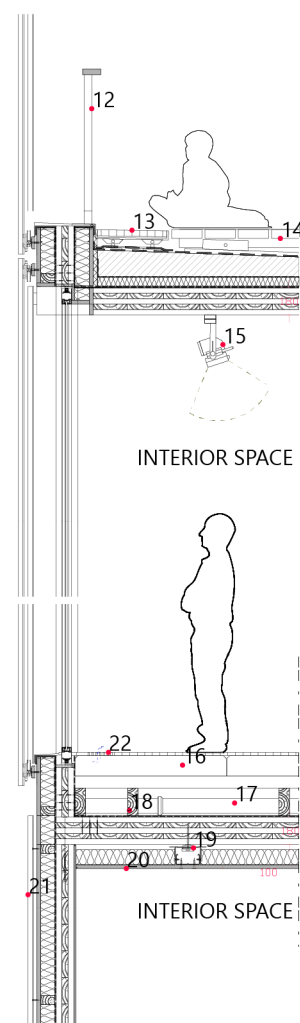
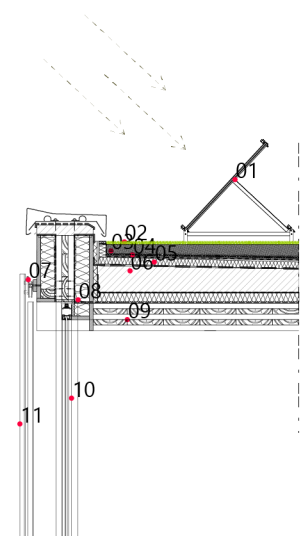




0 0.5 1 2m

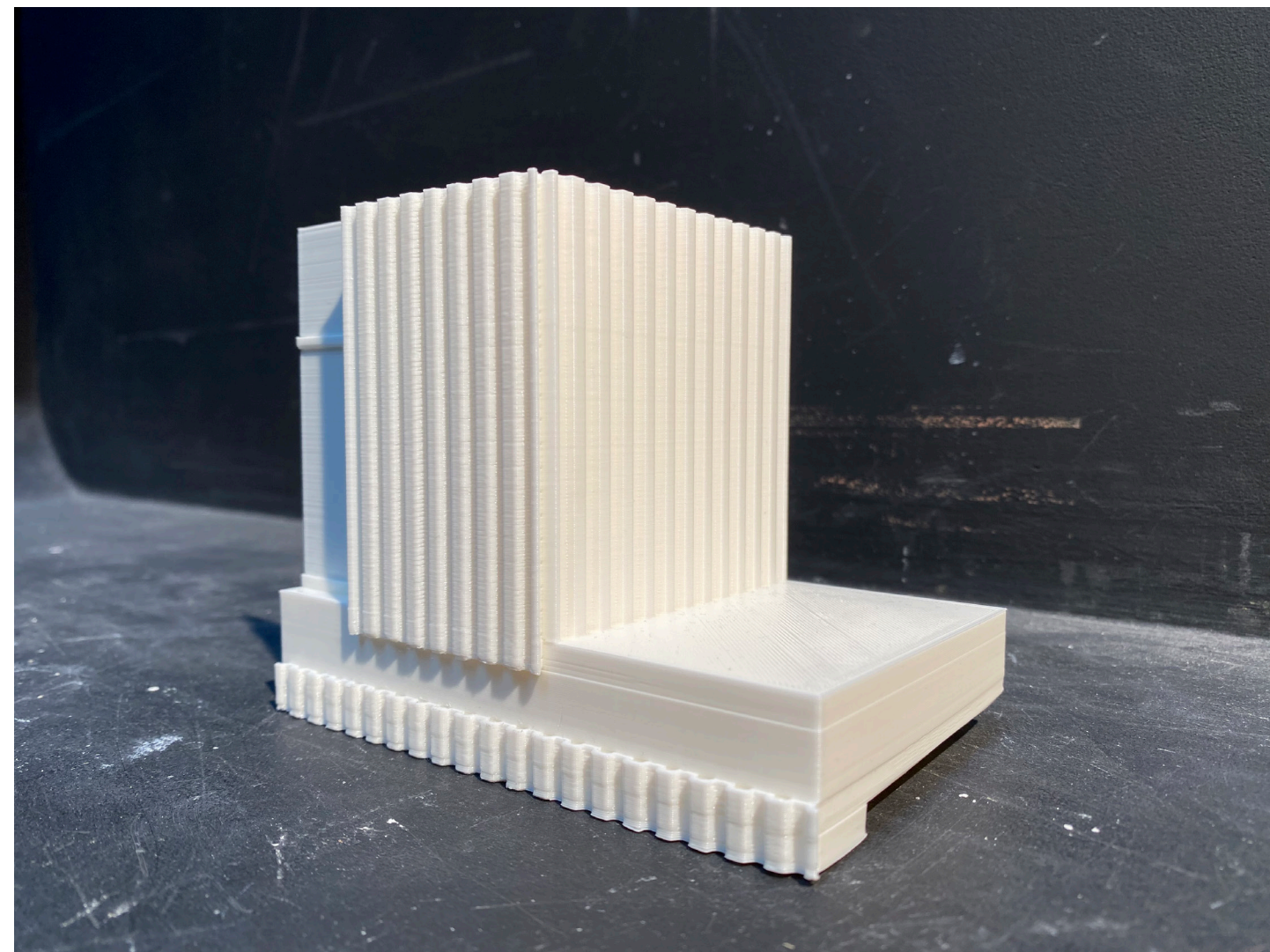






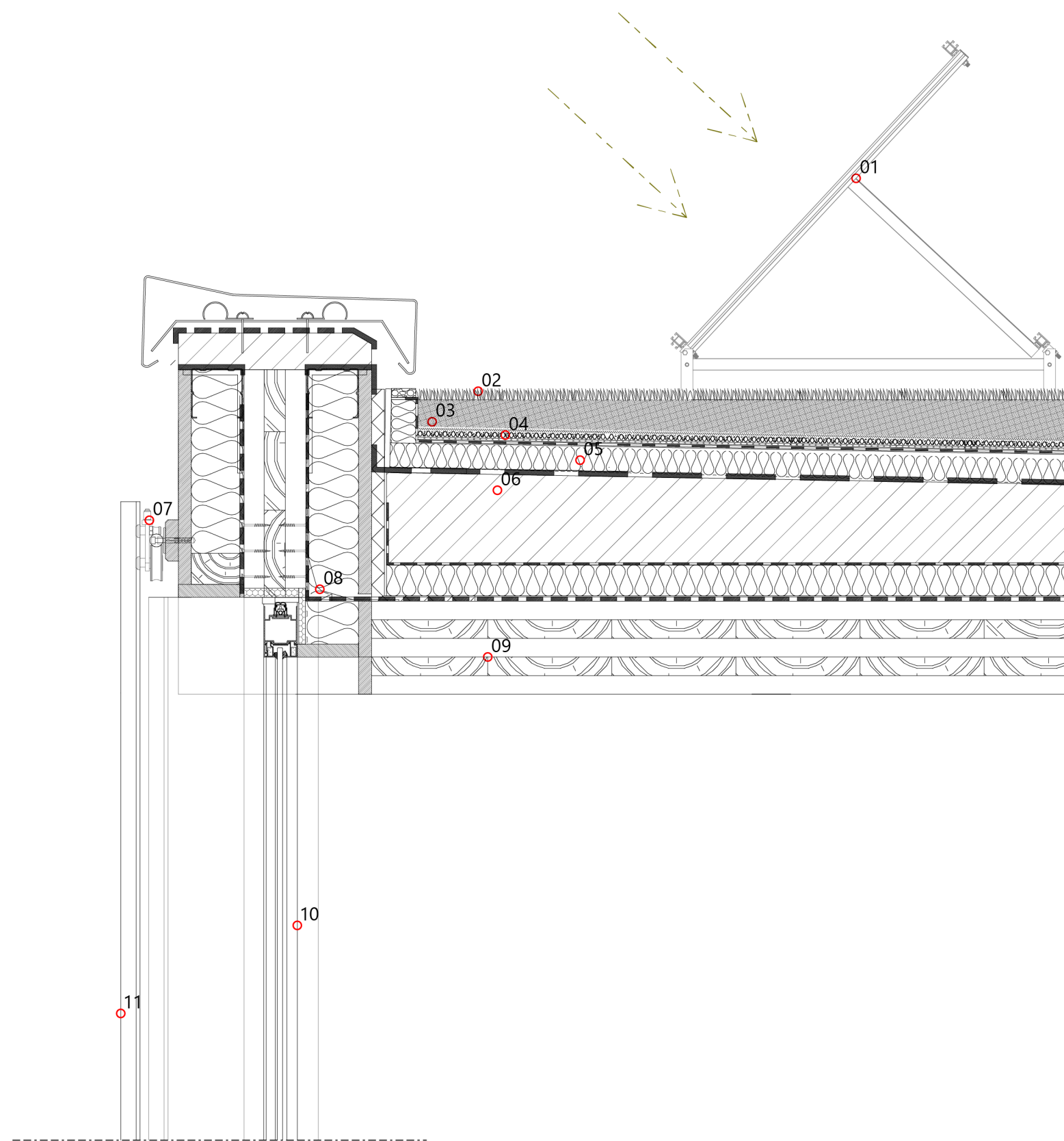
- 1 PV Panel
- 2 Selected Vegetation
- 3 Substrate
- 4 Layer with Gravel Infill
- 5 Root-Resistant Waterproofing
- 6 Screed
- 7 Railing Mechanism
- 8 Fastening
- 9 CLT Slab
- 10 Schüco Door System
- 11 Sun Protection Movable Corrugated Aluminium Panels
- 12 Painted Metal Railing
- 13 Wooden Threshold
- 14 Wooden Decking
- 15 Directional Light
- 16 Sub-Floor
- 17 PVC Pipes/ Grey-Water Installation
- 18 Sub-Construction Timber Purlins
- 19 Elastic Hanger
- 20 False Ceiling Plasterboard
- 21 Corrugated Aluminium Cladding
- 22 Ventilation Grill

0 0.5 1 2m



- 1 PV Panel
- 2 Selected Vegetation
- 3 Substrate
- 4 Layer with Gravel Infill
- 5 Root-Resistant Waterproofing
- 6 Screed
- 7 Railing Mechanism
- 8 Fastening
- 9 CLT Slab
- 10 Schüco Door System
- 11 Sun Protection Movable
Corrugated Aluminium Panels

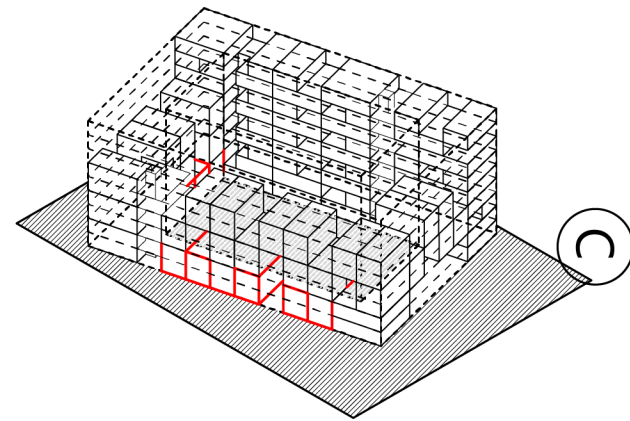
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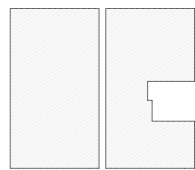
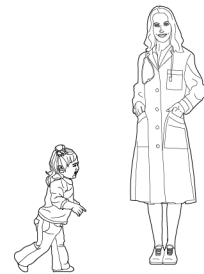
5

6



C

5000



B

5000

Module 1

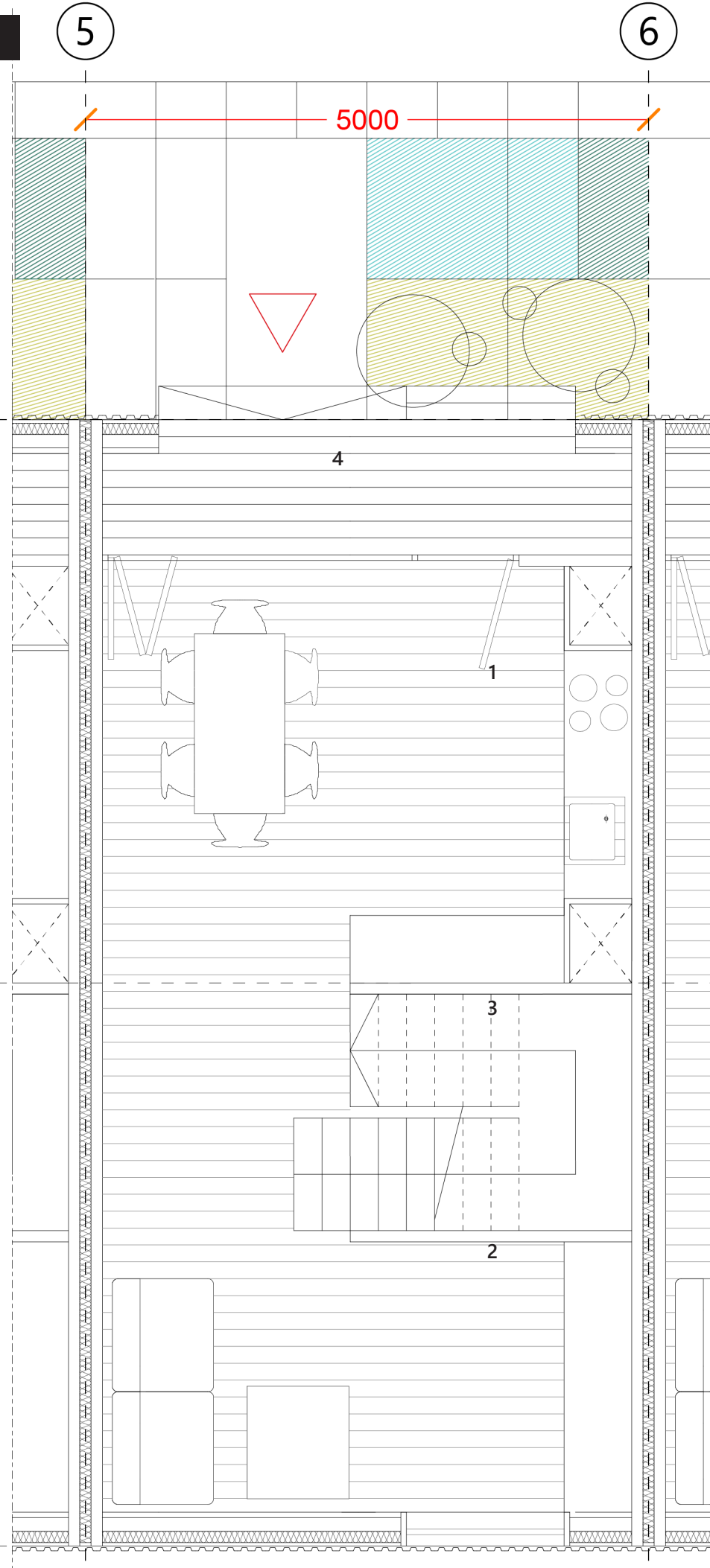
79m²

- 1 Kitchen Area
- 2 Living Area
- 3 Staircases
- 4 Transitional Space
- 5 Bathroom
- 6 Bedroom



0 0.5 1 2m

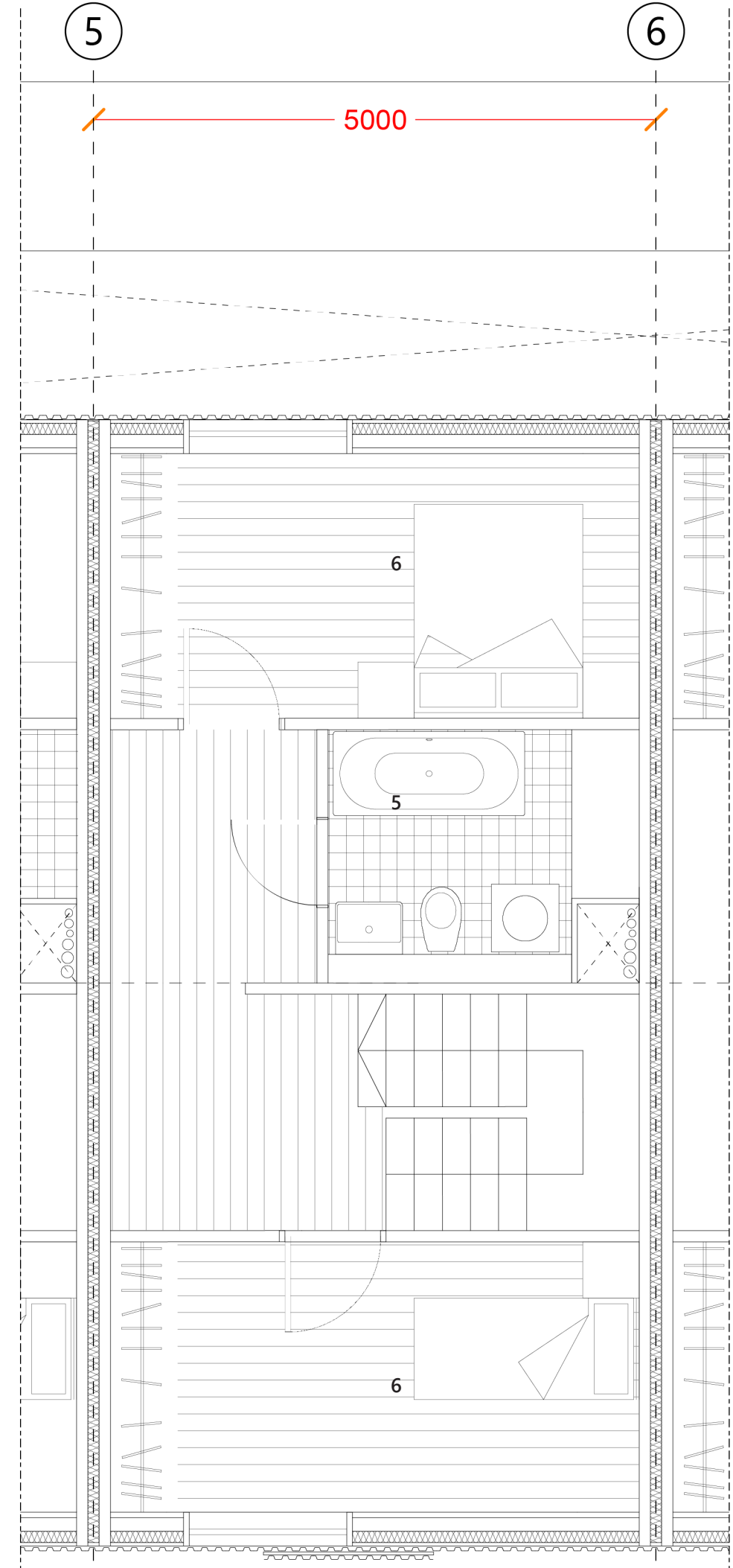
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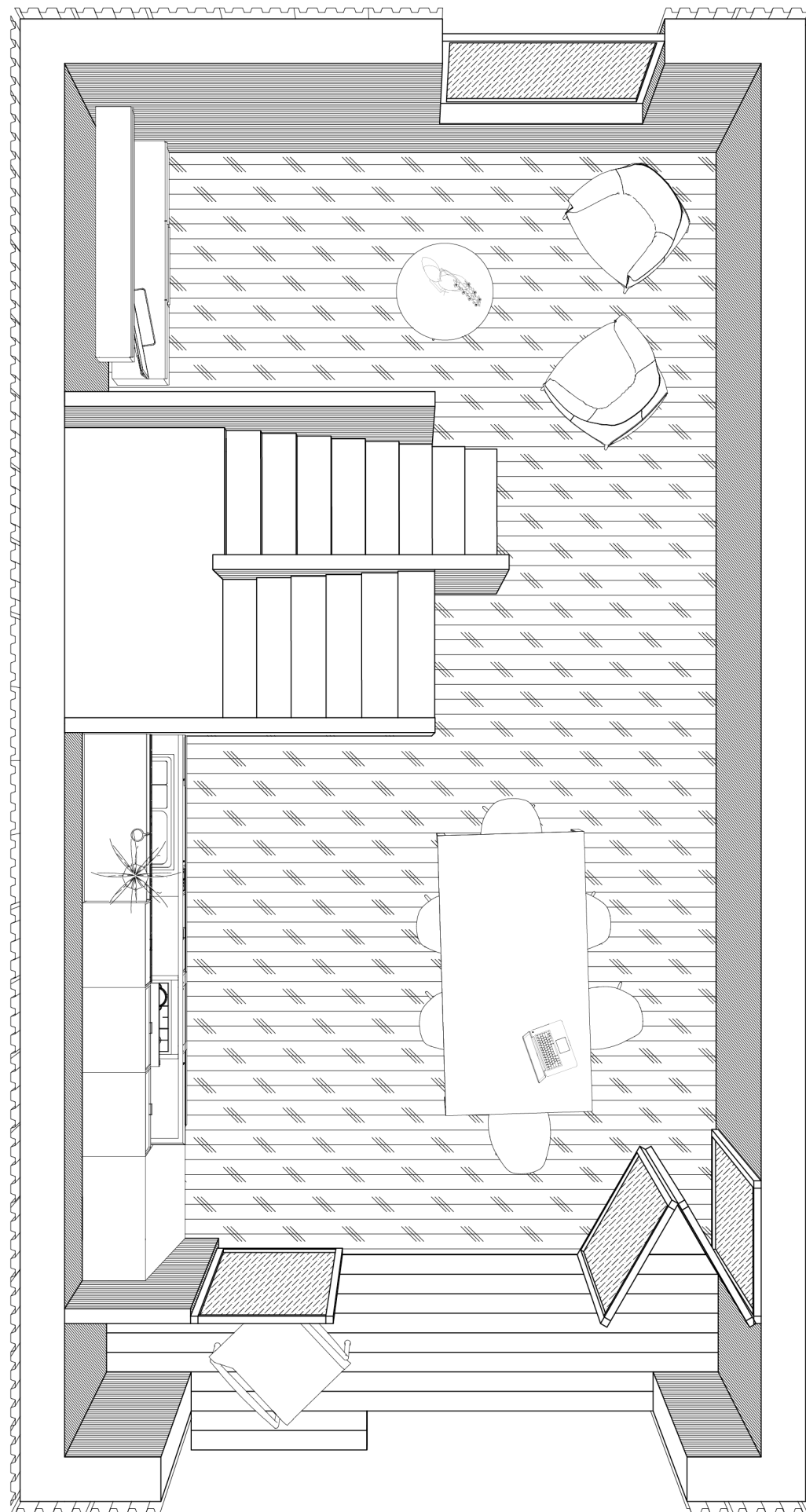


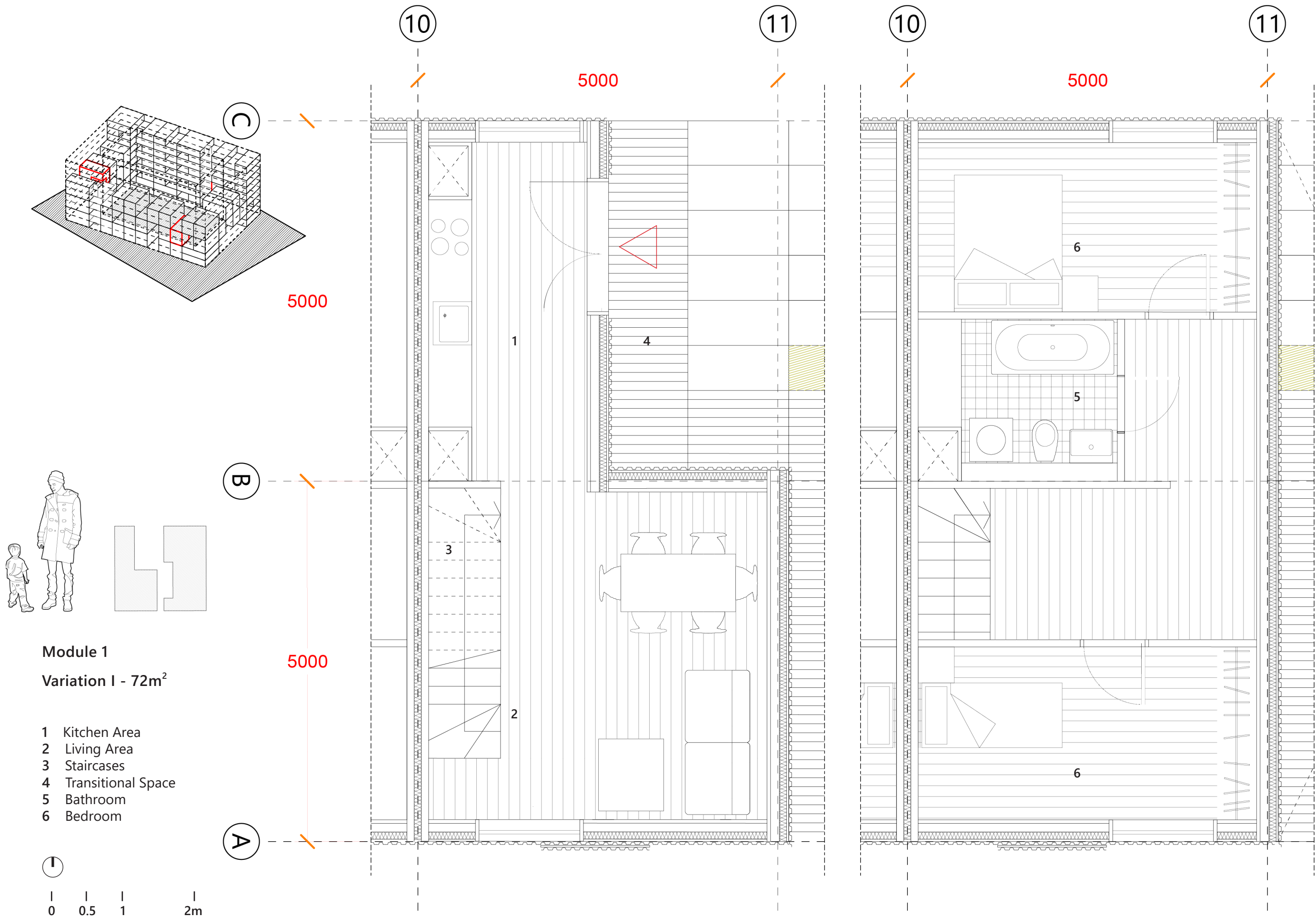
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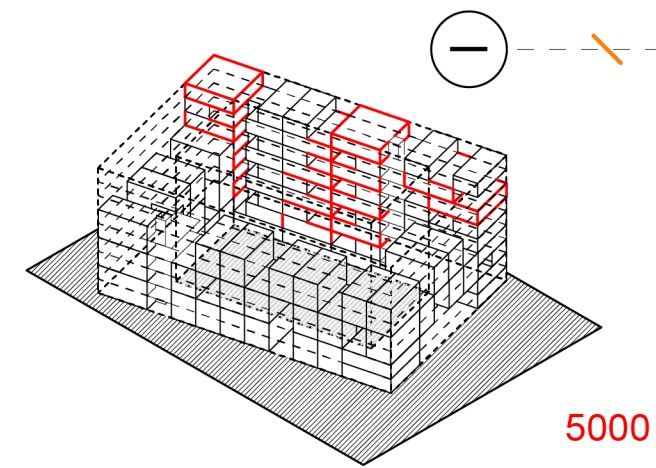
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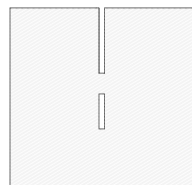
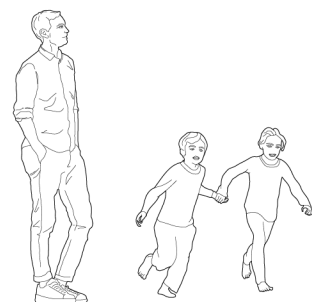








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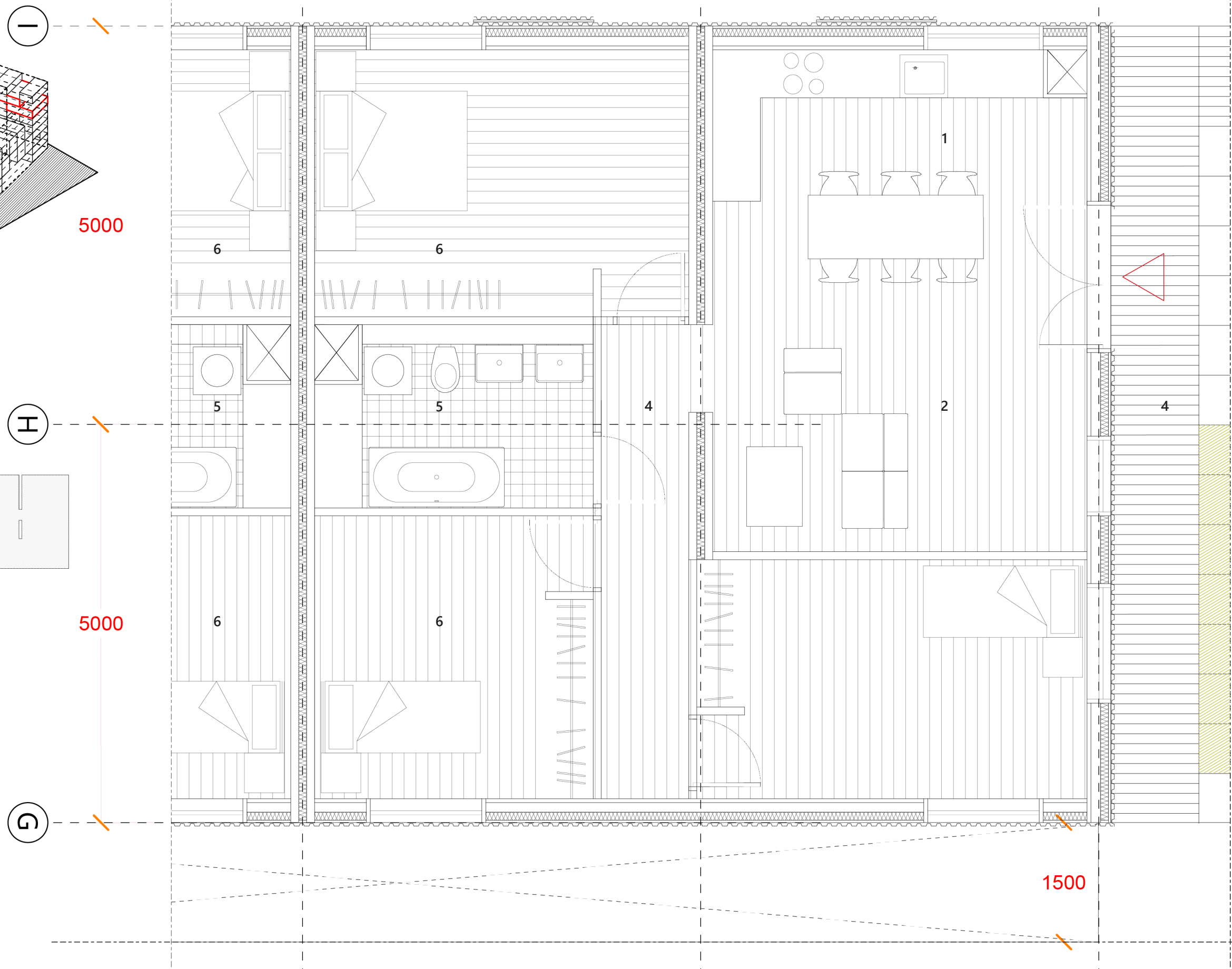
Module 2

Variation I - 89m²

- 1 Kitchen Area
- 2 Living Area
- 3 Staircases
- 4 Transitional Space
- 5 Bathroom
- 6 Bedroom



0 0.5 1 2m



1 Sliding panels on the exterior facades provide shade and direct winds upwards to escape through the building's voids on the upper floors.

2 Boilers (one smaller and one bigger) are located in the kitchen and bathroom to provide warm water for daily use by the users.

3 Underfloor electrical heating and cooling contribute to the indoor climatic thermal comfort

4 Windows in each room provide the needed sunlight to the indoor spaces and cross ventilate the unit.

5 A planted green surface adjacent to every unit act as a grey-water purification system for re-using the water for the plants

6 Shafts are located in all the bathrooms containing the water supply and sewage pipes.

7 The electricity closet is located within 3 meters reach of the main entrance for the building's electrical circuits

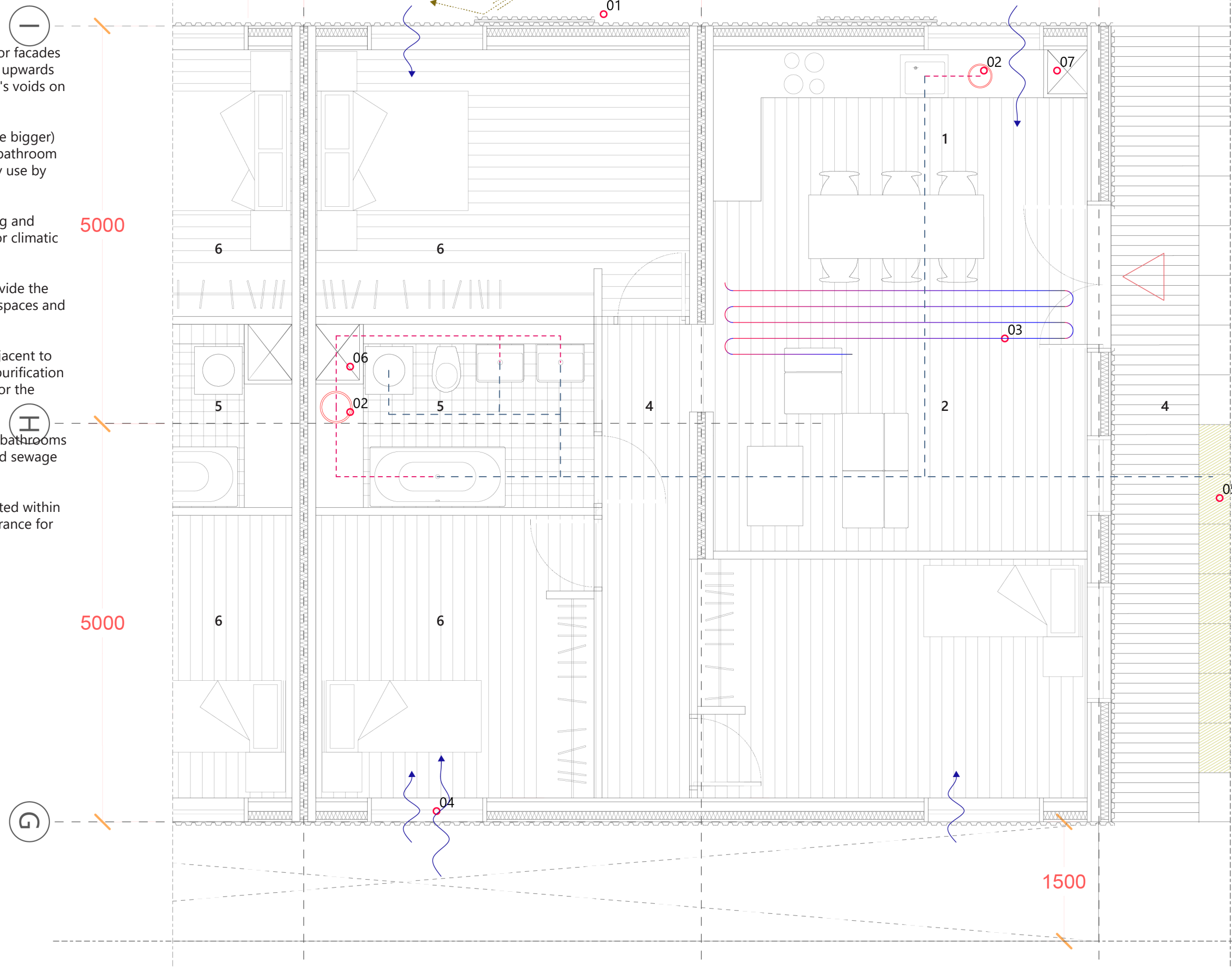
Module 2

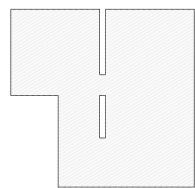
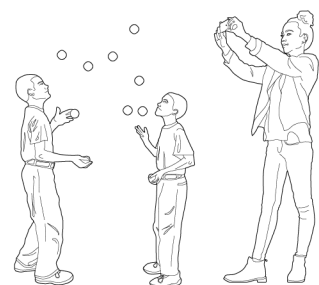
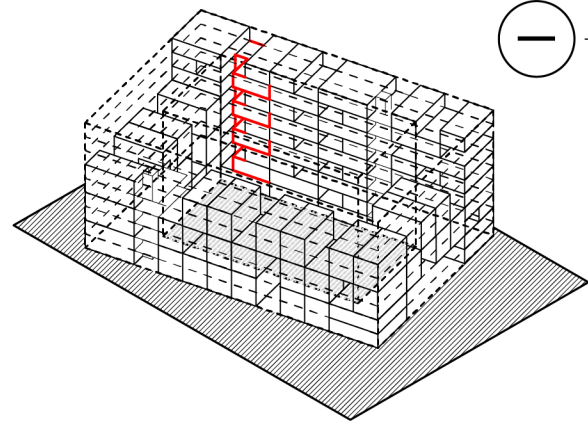
Variation I - 89m²

- 1 Kitchen Area
- 2 Living Area
- 3 Staircases
- 4 Transitional Space
- 5 Bathroom
- 6 Bedroom



0 0.5 1 2m





Module 2

Variation II - 77m²

- 1 Kitchen Area
- 2 Living Area
- 3 Staircases
- 4 Transitional Space
- 5 Bathroom
- 6 Bedroom



0 0.5 1 2m

400 1250 5000 5000

5000

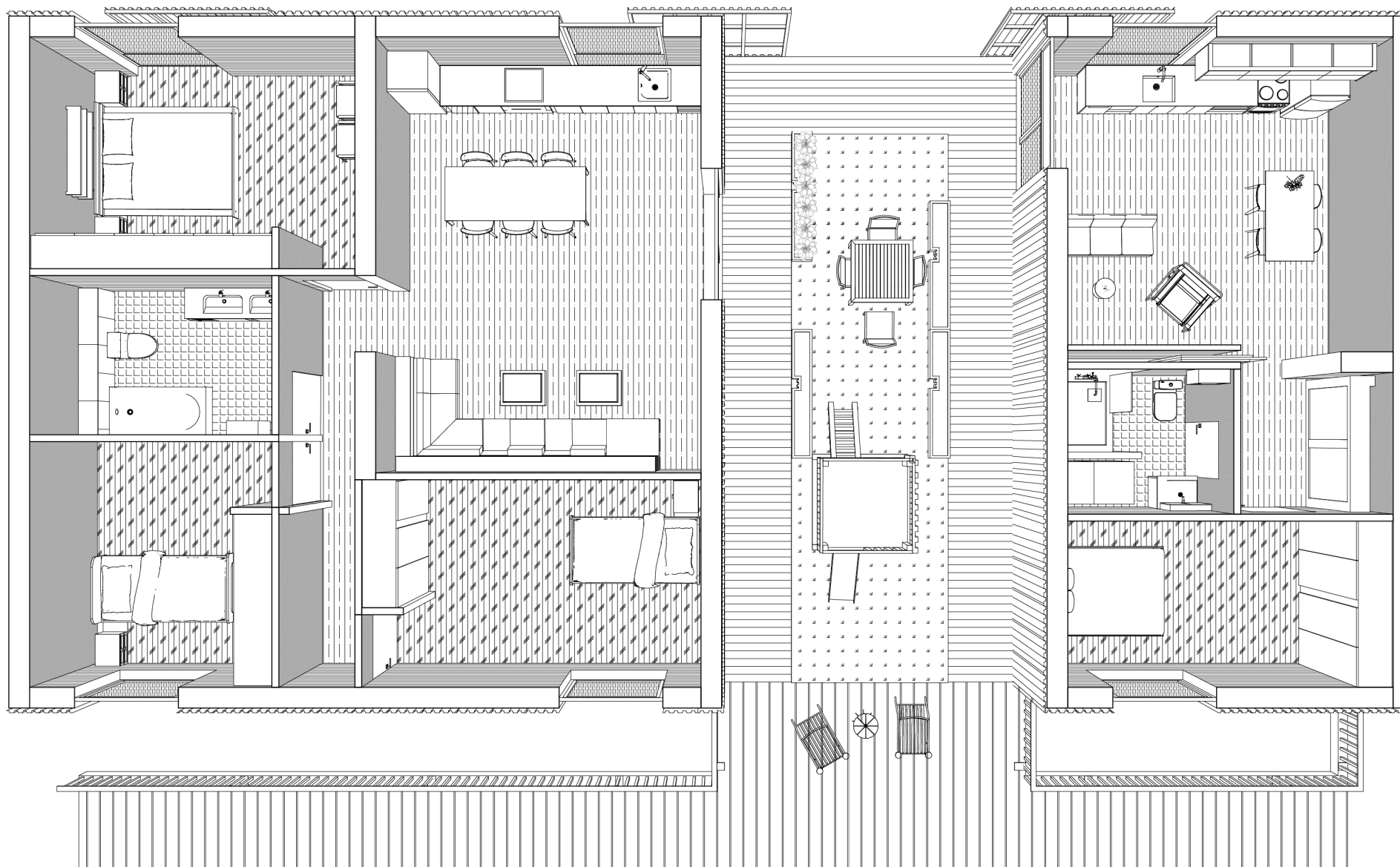
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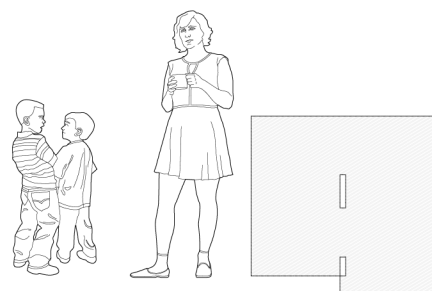
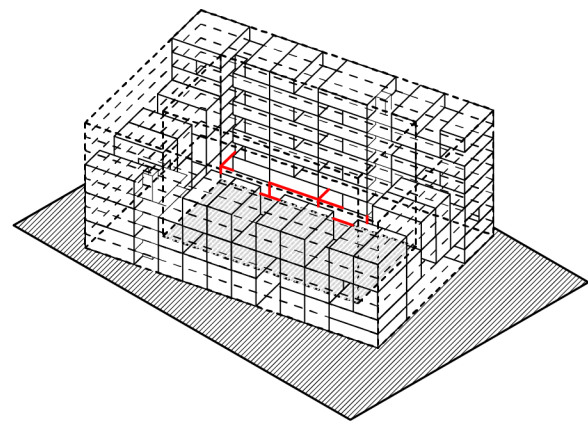


3

4

5





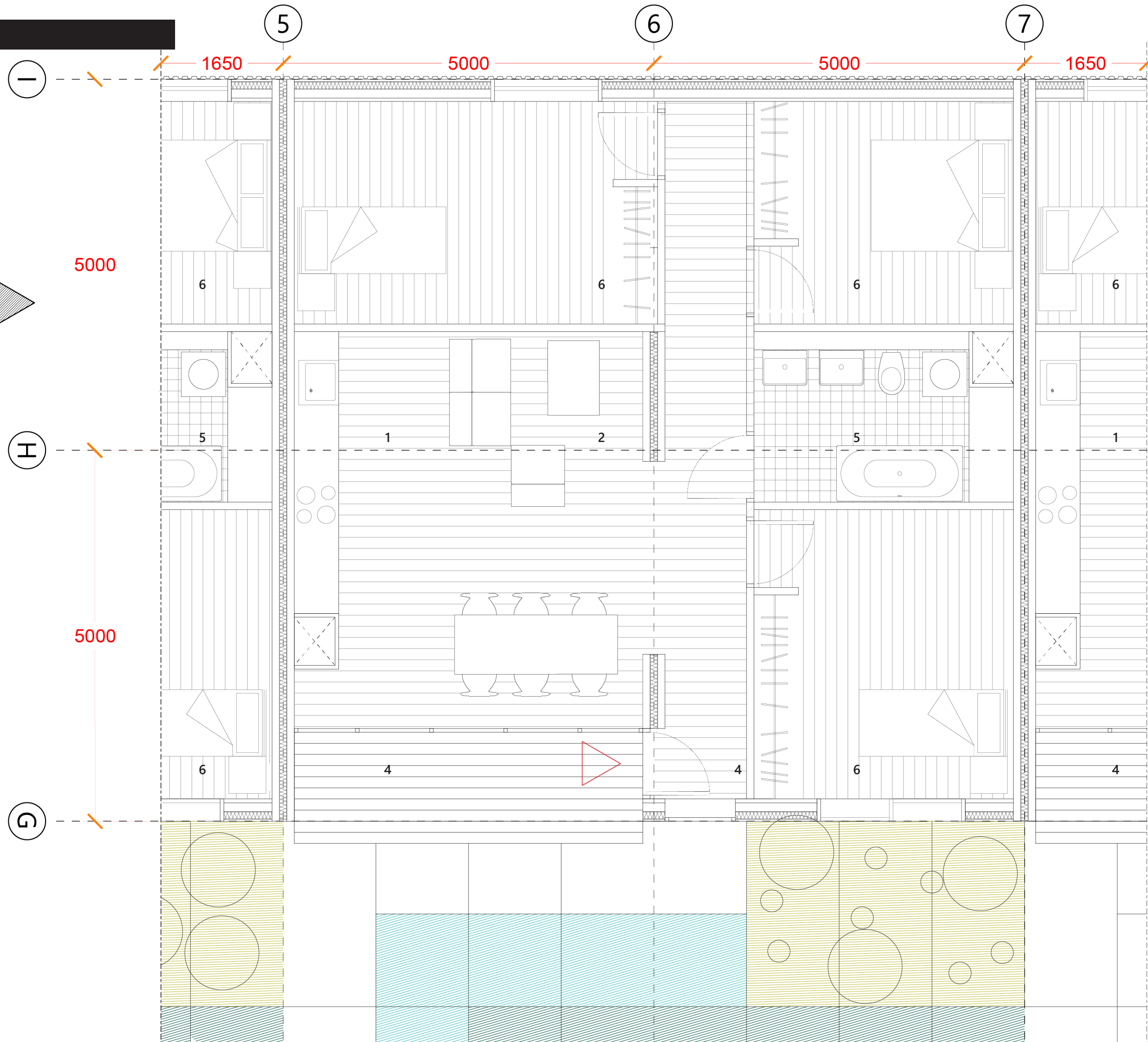
Module 2

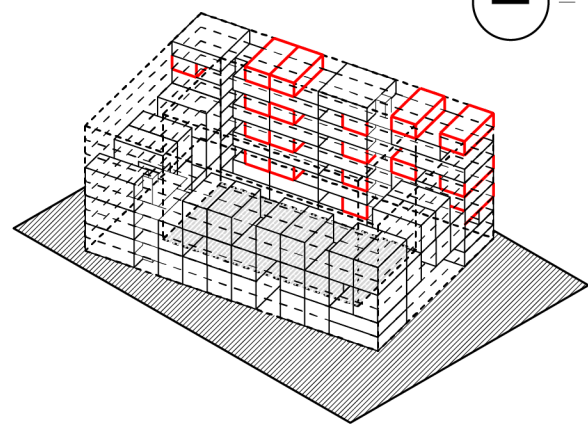
86m²

- 1 Kitchen Area
- 2 Living Area
- 3 Staircases
- 4 Transitional Space
- 5 Bathroom
- 6 Bedroom



0 0.5 1 2m





5000

2

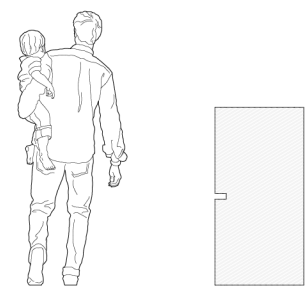
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I

II

5000

G



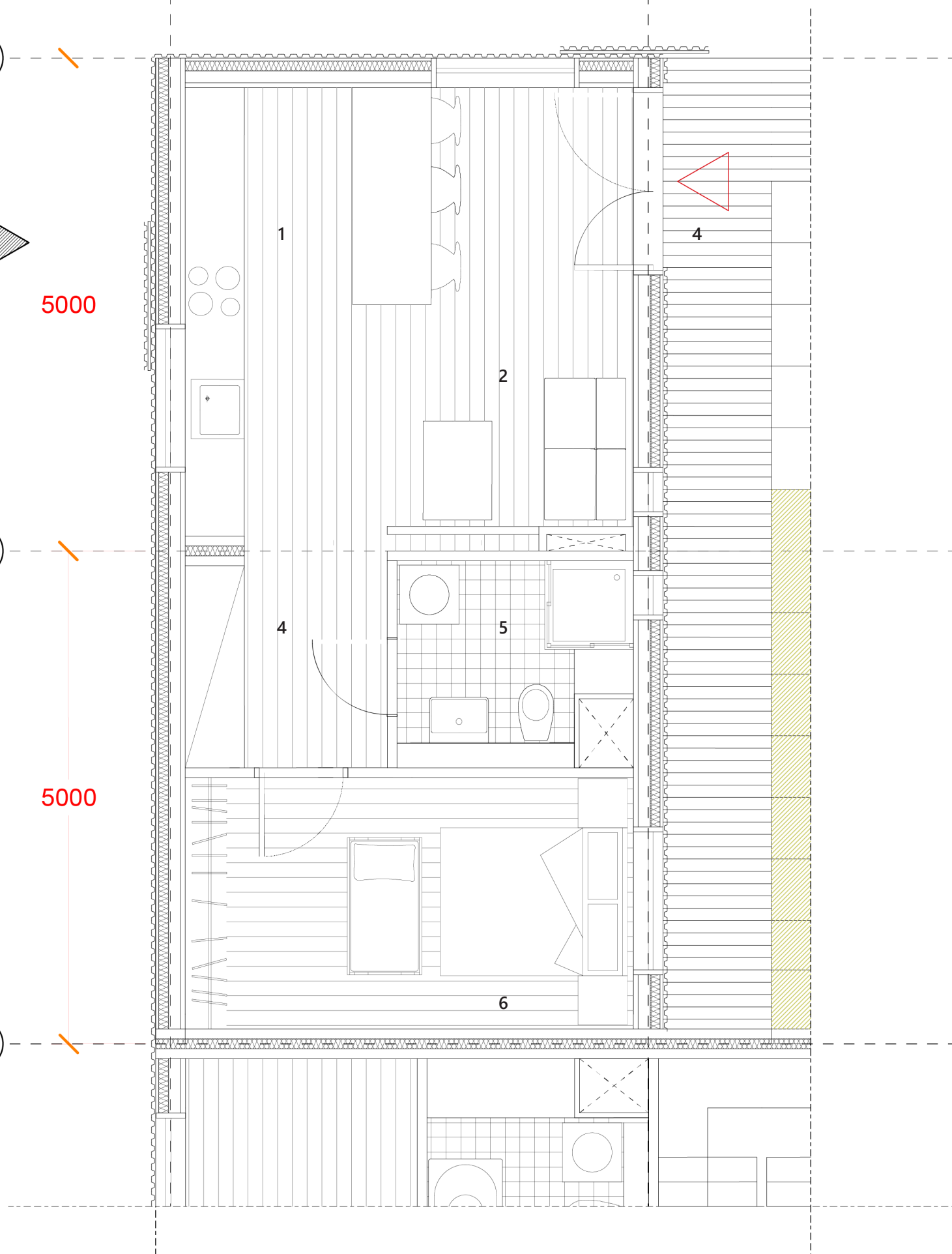
Module 3

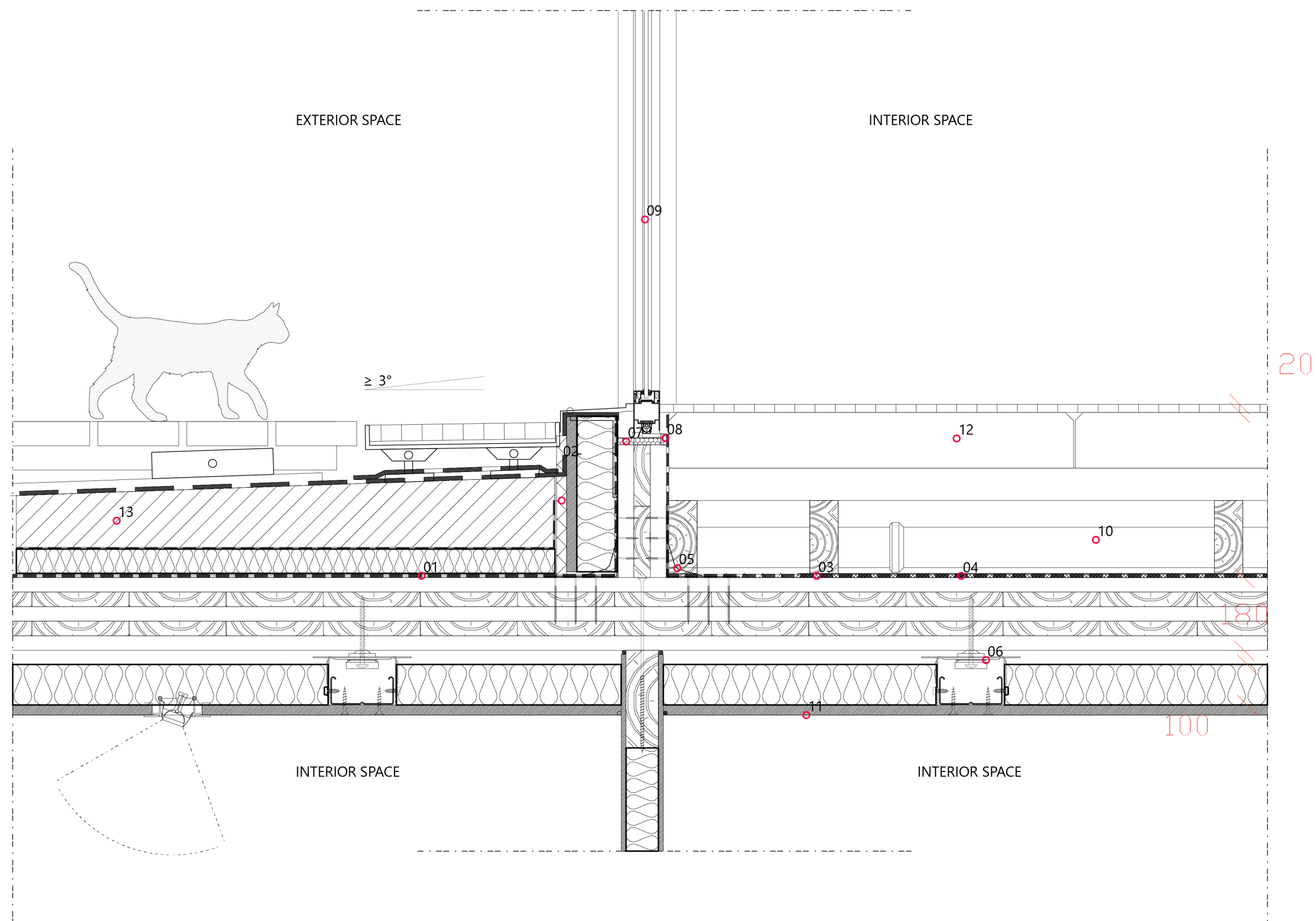
44m²

- 1 Kitchen Area
- 2 Living Area
- 3 Staircases
- 4 Transitional Space
- 5 Bathroom
- 6 Bedroom



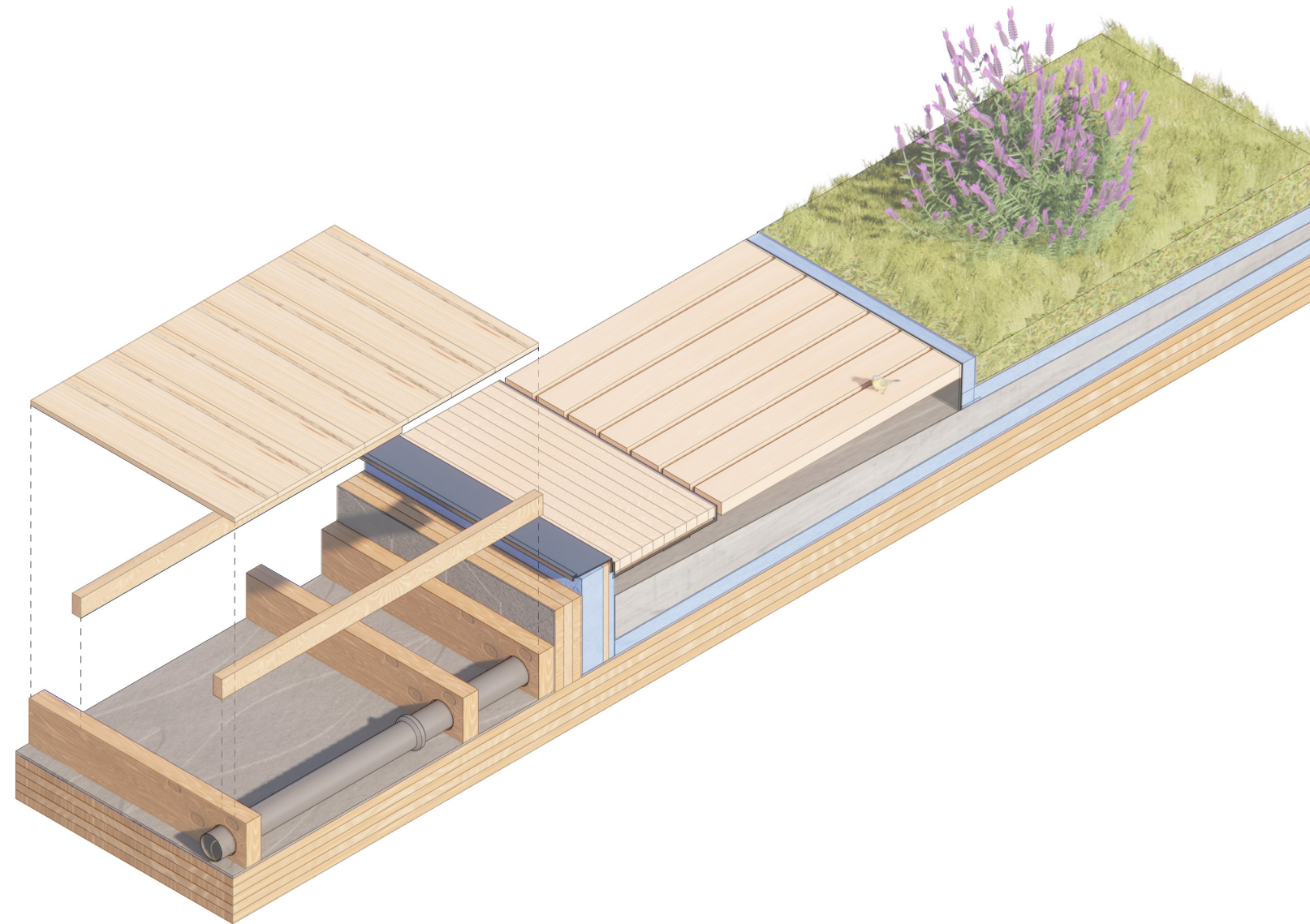
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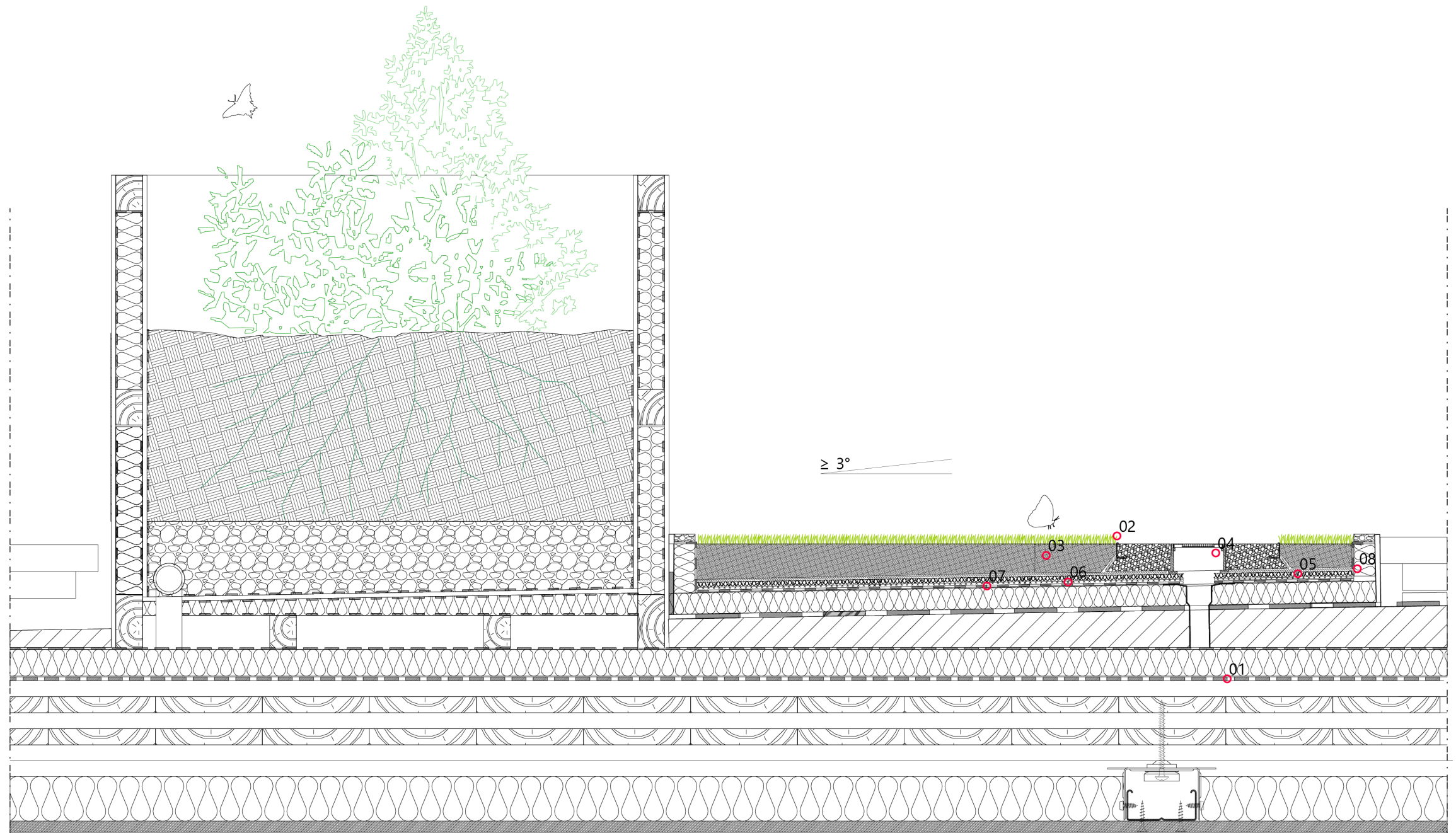
- 1 Vapour Barrier
- 2 Edge Rubber Stripe
- 3 Foam Mat/ Acoustic Foil
- 4 Trickle Protection
- 5 Fastening
- 6 Elastic Hanger
- 7 Bonded Vapour-Tight
- 8 Elastic Joint
- 9 Schüco Door System
- 10 PVC Pipes/Grey-Water Installation
- 11 Ceiling Board
- 12 Sub-Floor
- 13 Screed

0 0.1 0.2 0.4m



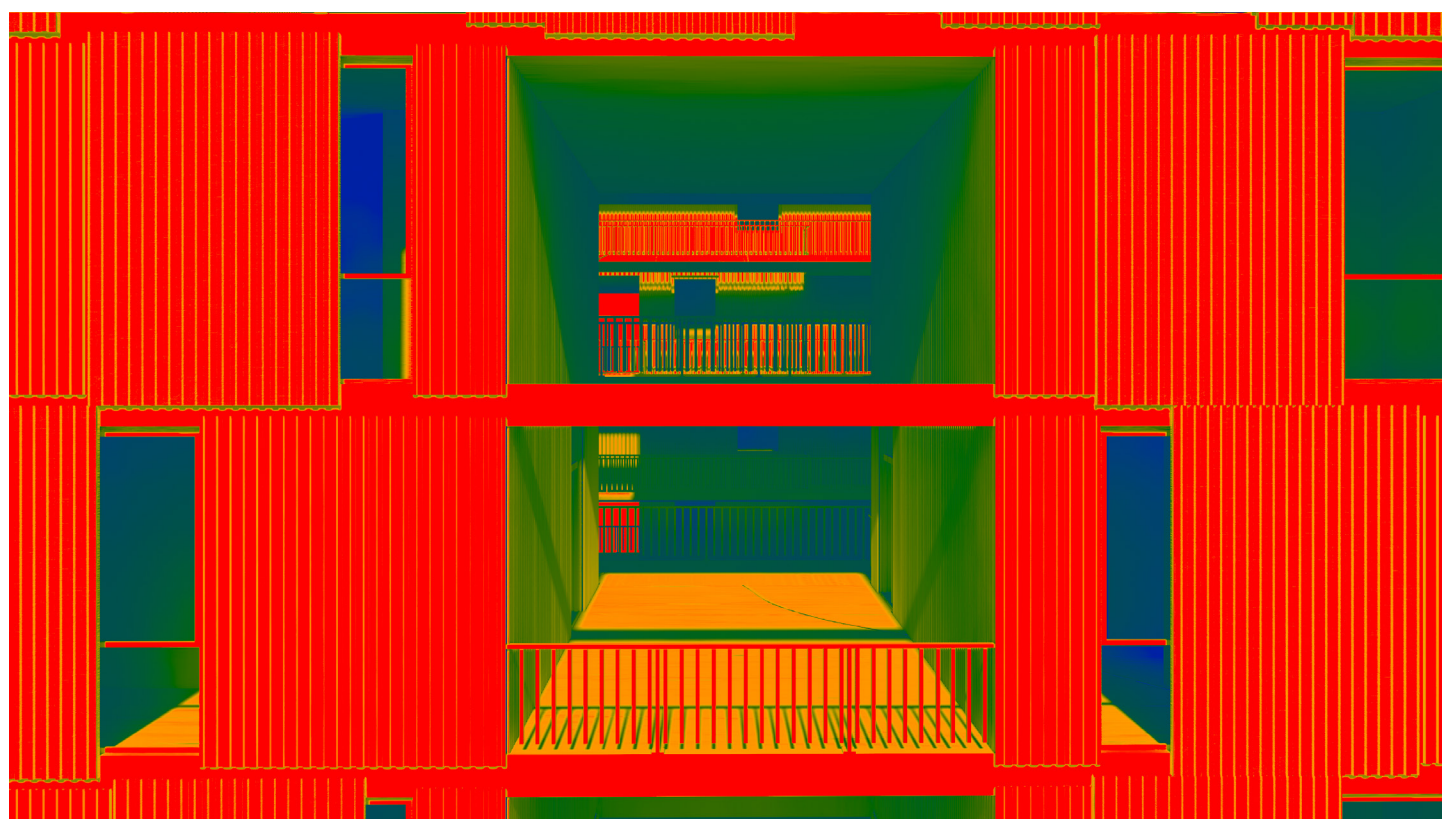




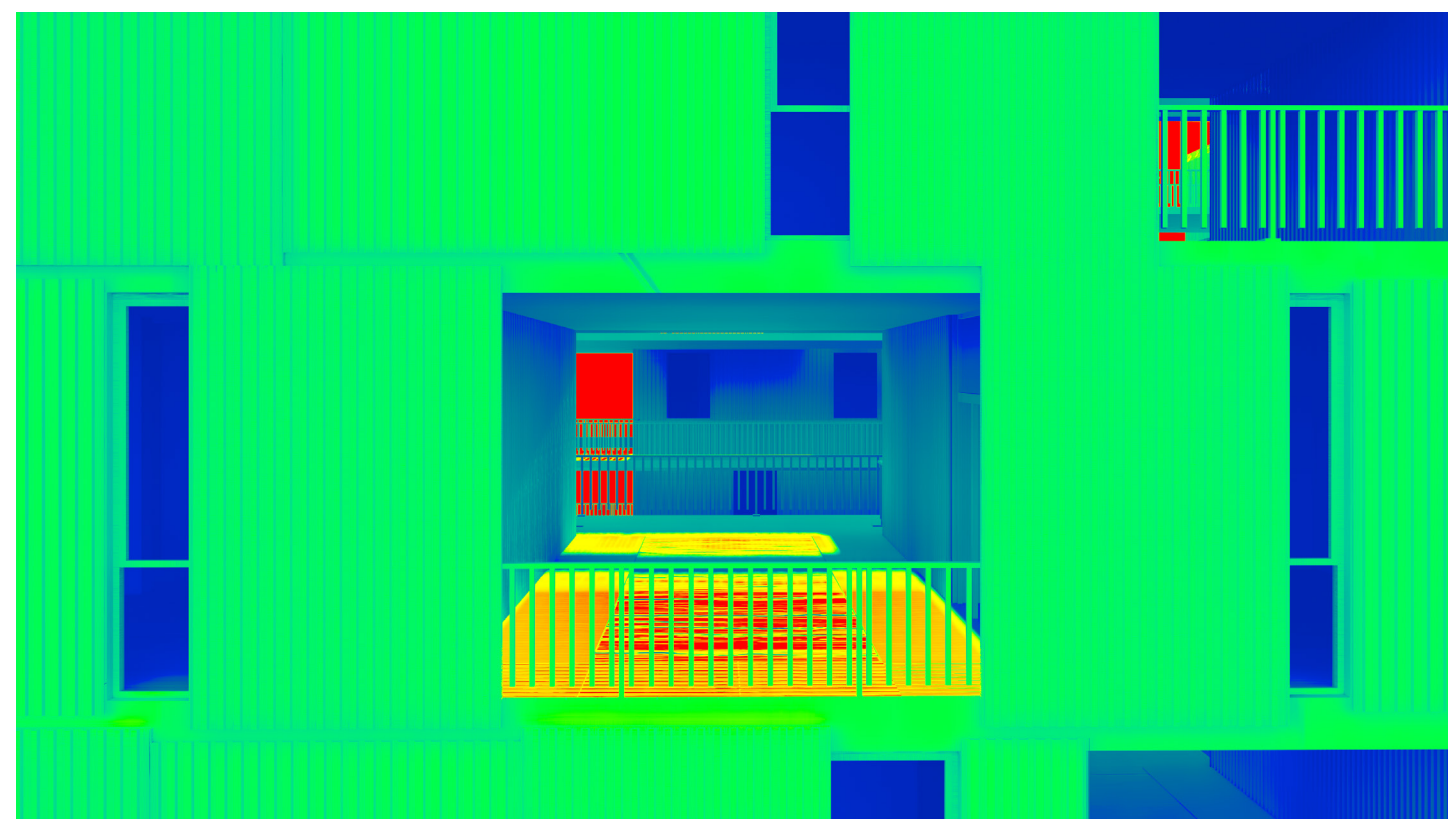


- 1 Vapour Barrier
- 2 Selected Vegetation
- 3 Substrate
- 4 Inspection Chamber
- 5 Layer with Gravel Infill
- 6 Protection Layer
- 7 Root-Resistant Waterproofing
- 8 Water Reservoir and Drainage

0 0.1 0.2 0.4m



South-facing Shared Outdoor Spaces

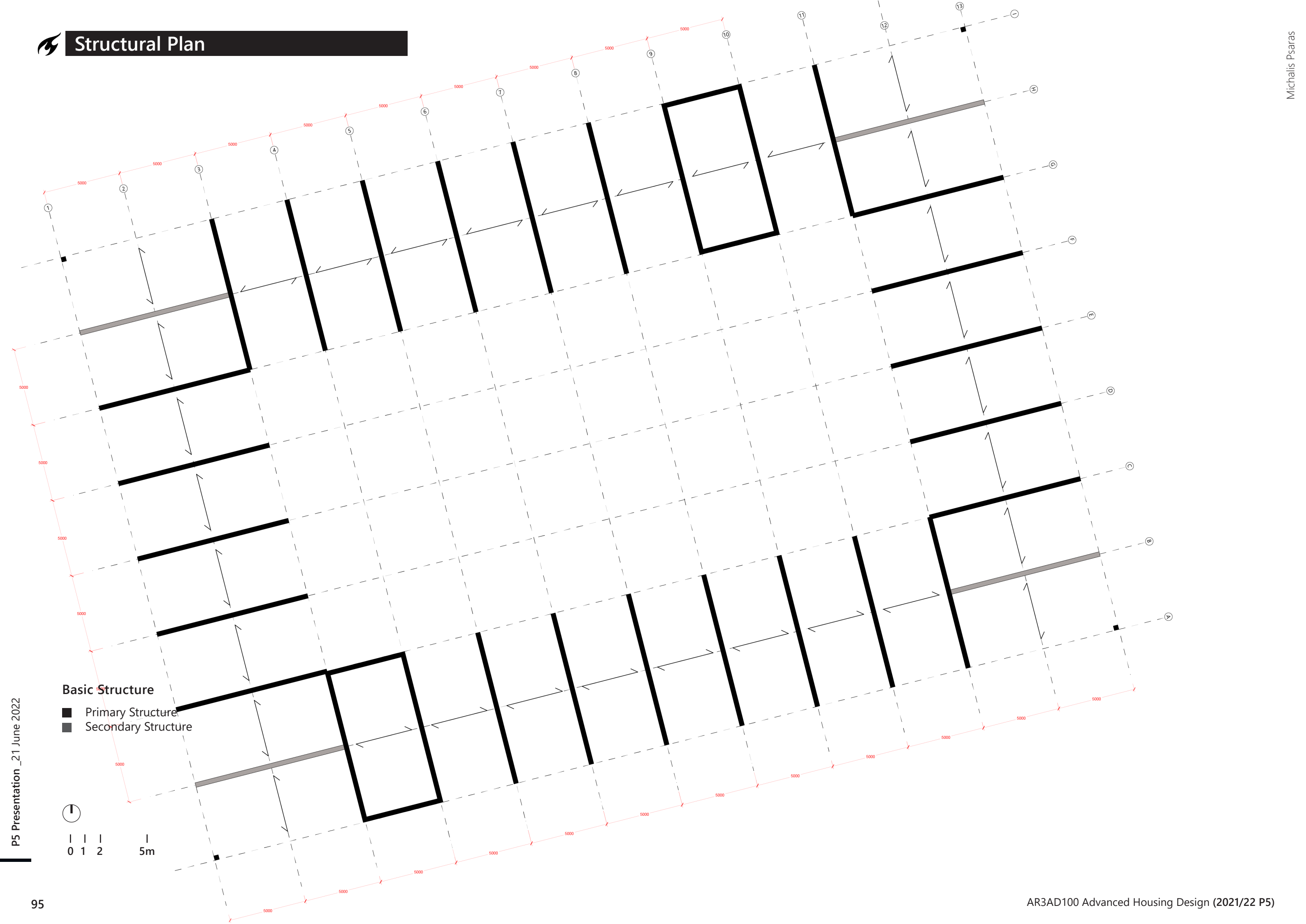


North-facing Shared Outdoor Spaces



Structural Plan

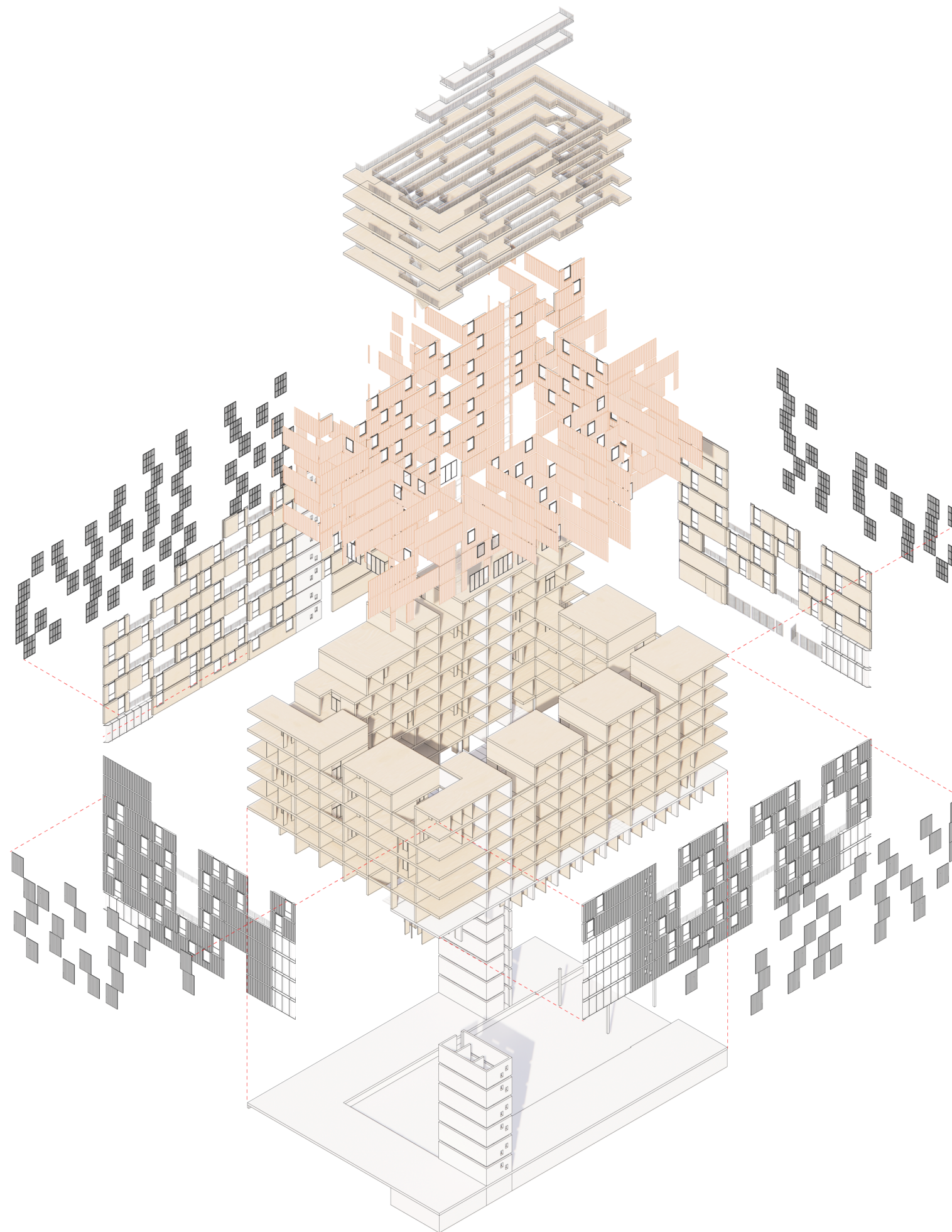
Michalis Psaras







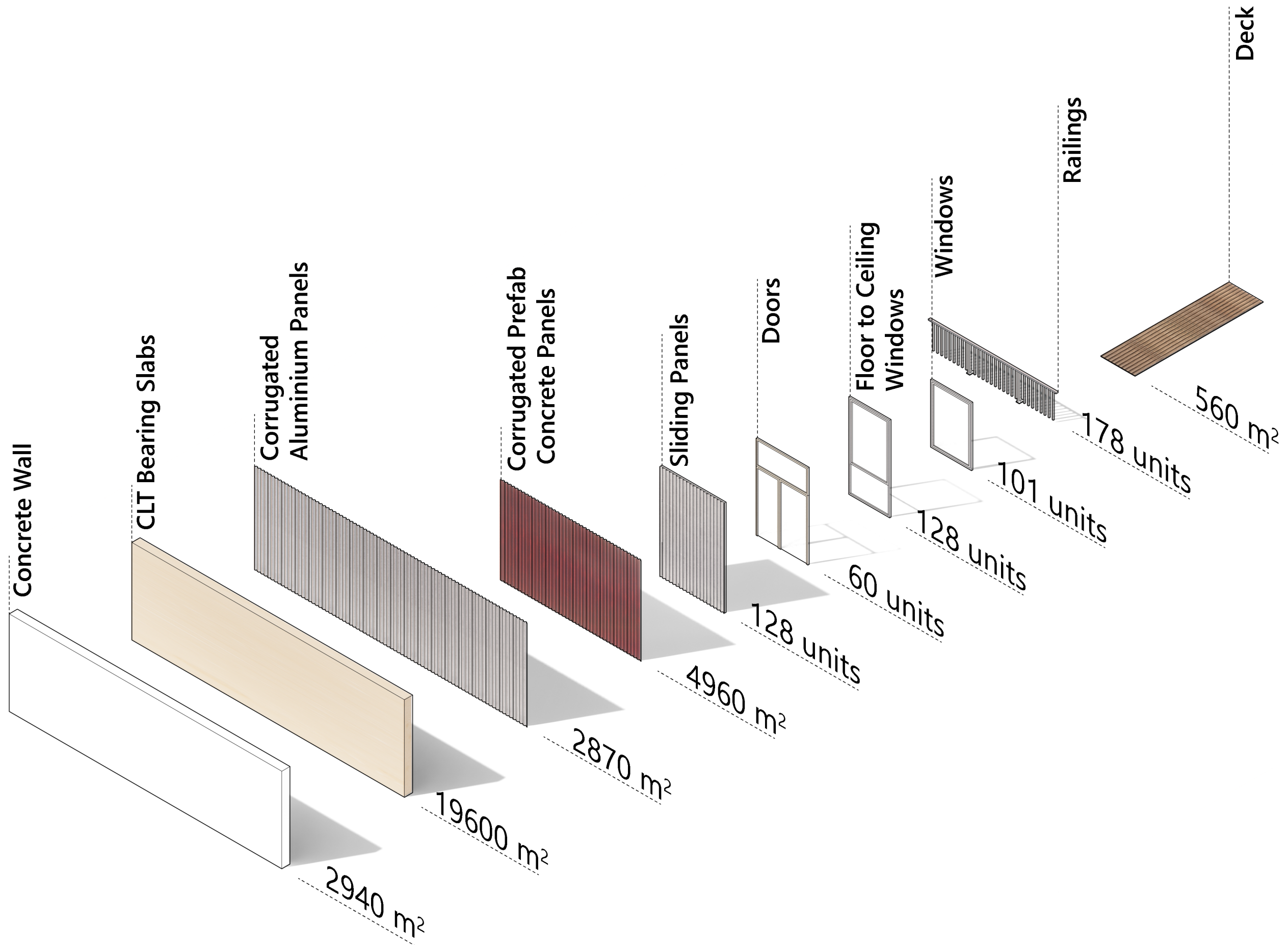
Basic Structure

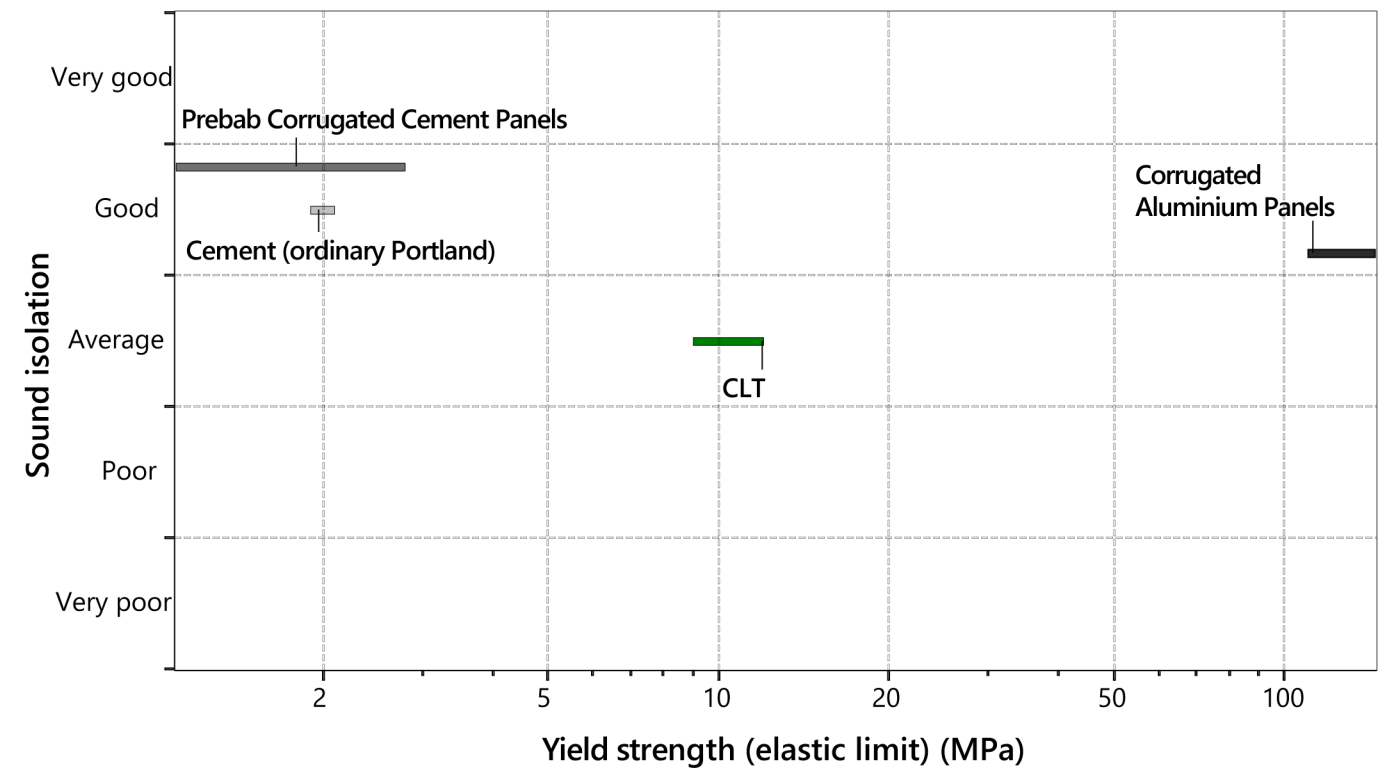
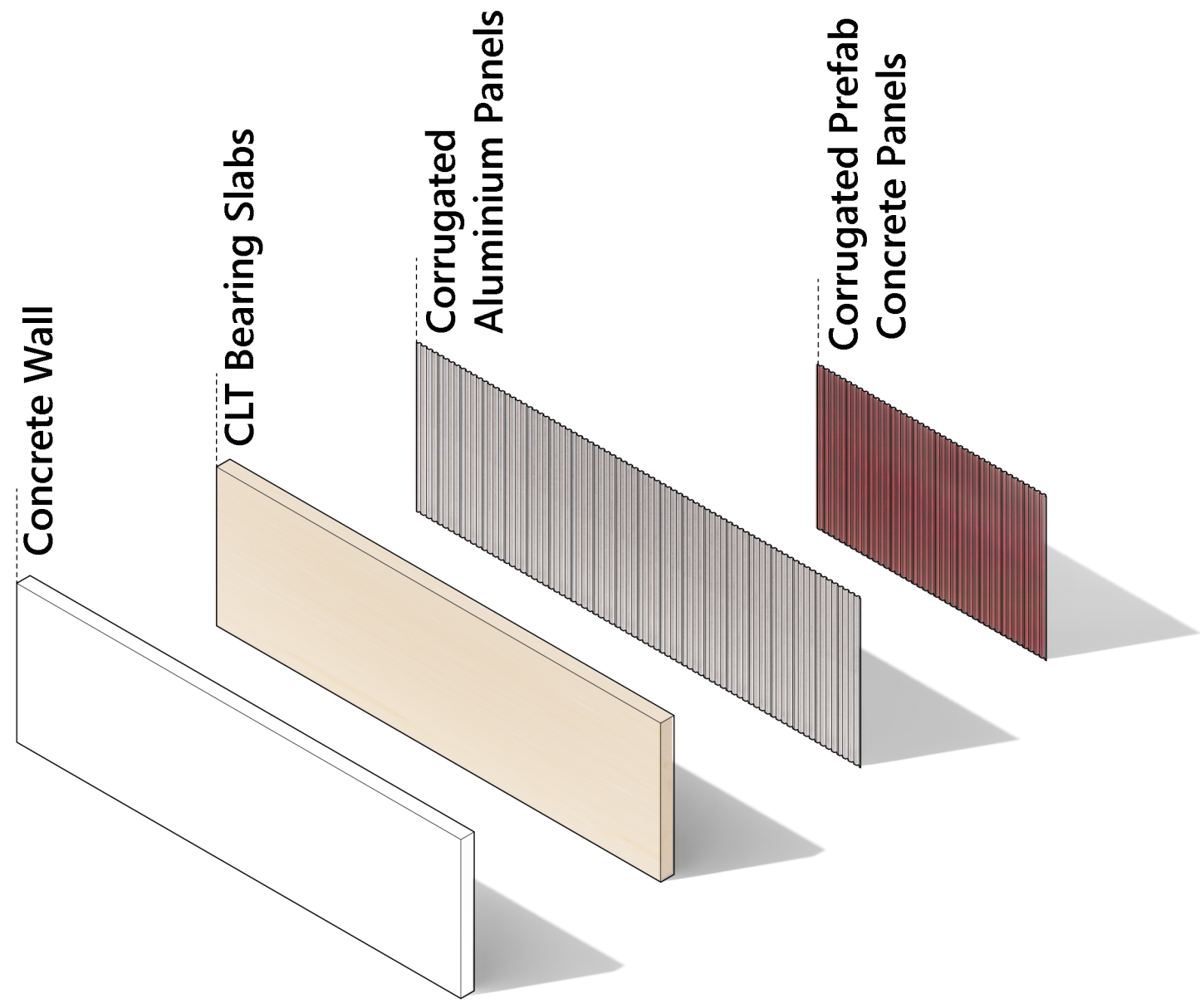
- Primary Structure
- Secondary Structure

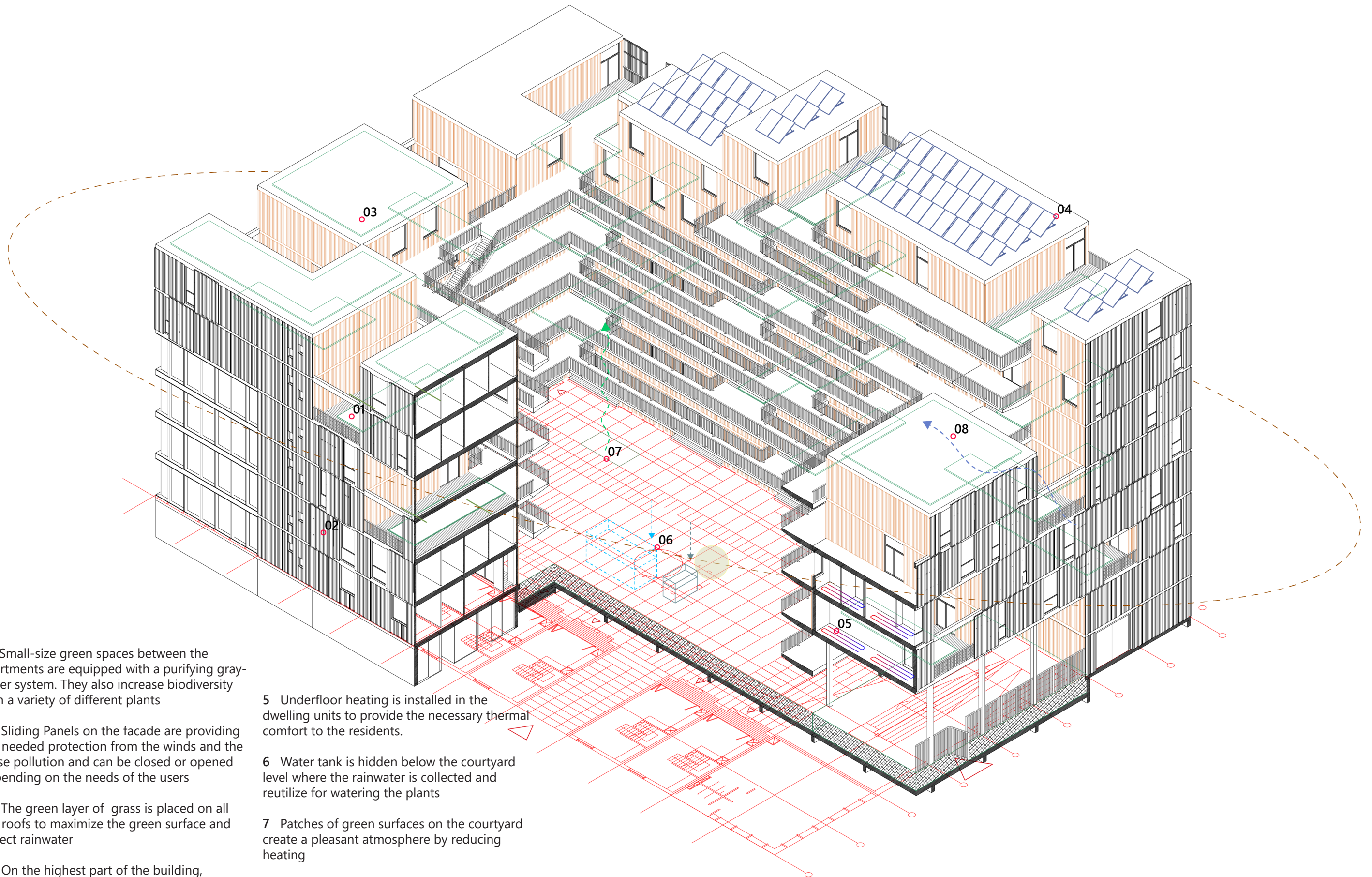




-  Corrugated Aluminium Panels
-  Corrugated Prefab Concrete Panels
-  Concrete
-  CLT Structure







1 Small-size green spaces between the apartments are equipped with a purifying gray-water system. They also increase biodiversity with a variety of different plants

2 Sliding Panels on the facade are providing the needed protection from the winds and the noise pollution and can be closed or opened depending on the needs of the users

3 The green layer of grass is placed on all the roofs to maximize the green surface and collect rainwater

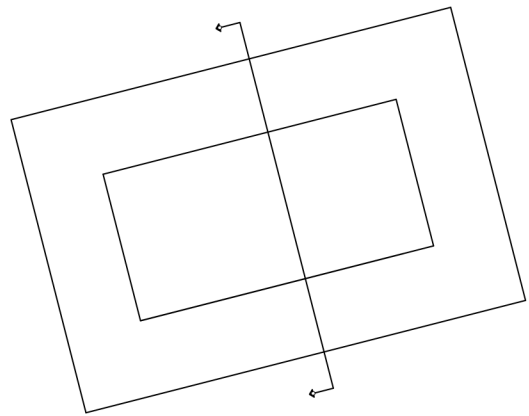
4 On the highest part of the building, photovoltaic panels are installed facing south-eastern to absorb the solar energy and generate electricity independent of the national grid

5 Underfloor heating is installed in the dwelling units to provide the necessary thermal comfort to the residents.

6 Water tank is hidden below the courtyard level where the rainwater is collected and reutilize for watering the plants

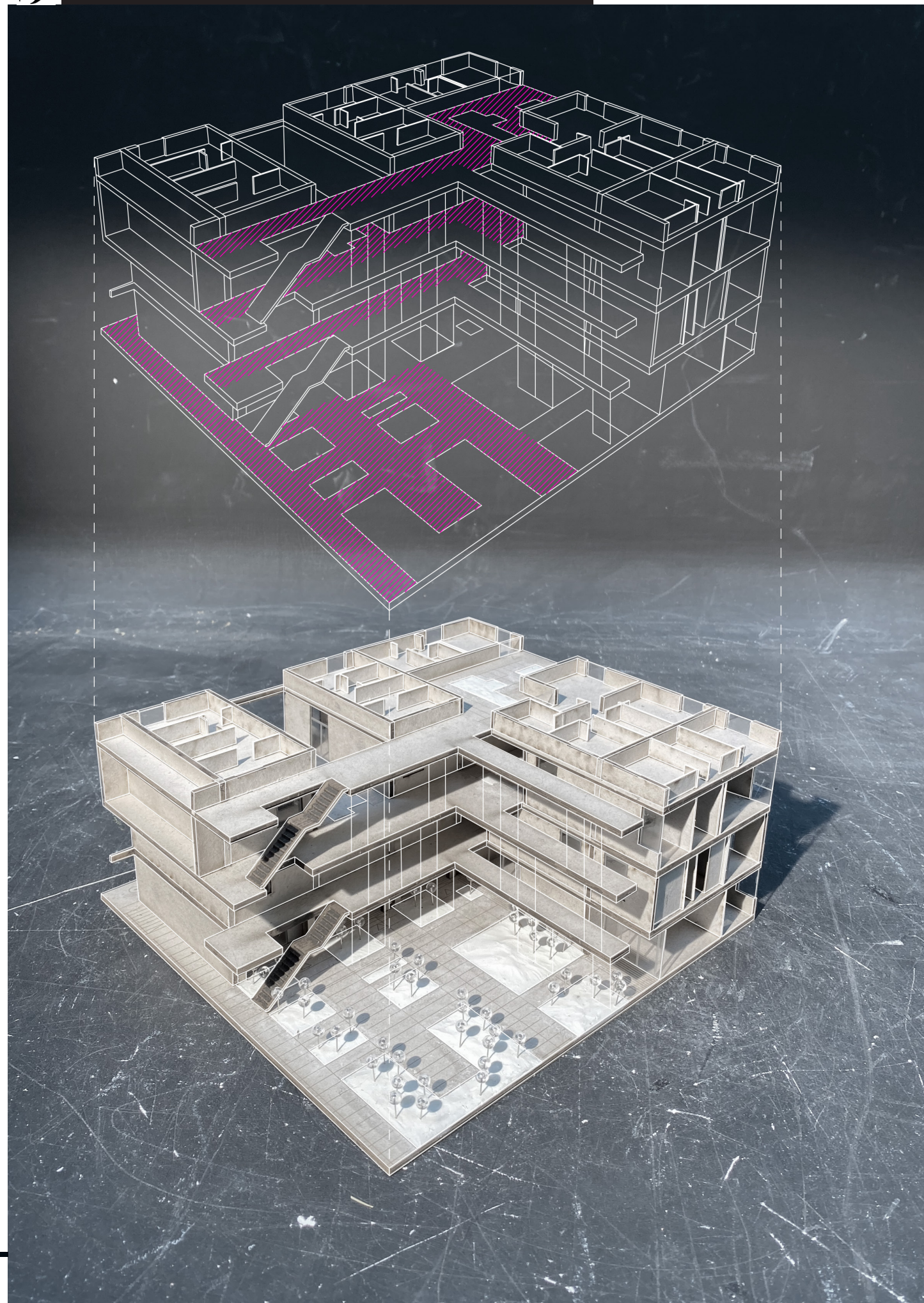
7 Patches of green surfaces on the courtyard create a pleasant atmosphere by reducing heating

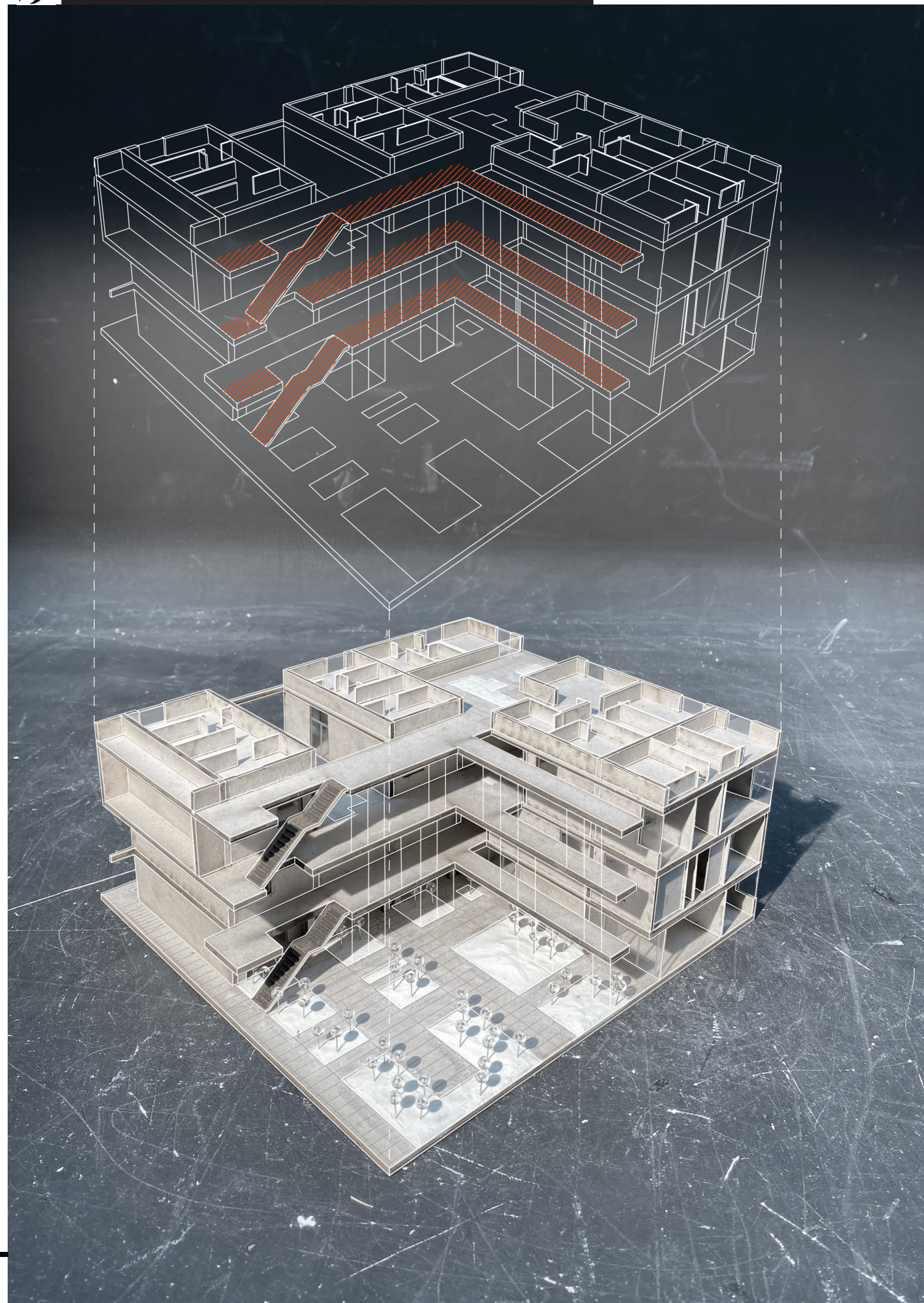
8 Ventilation escapes through the voids of the building, reducing wind loads on the structure.

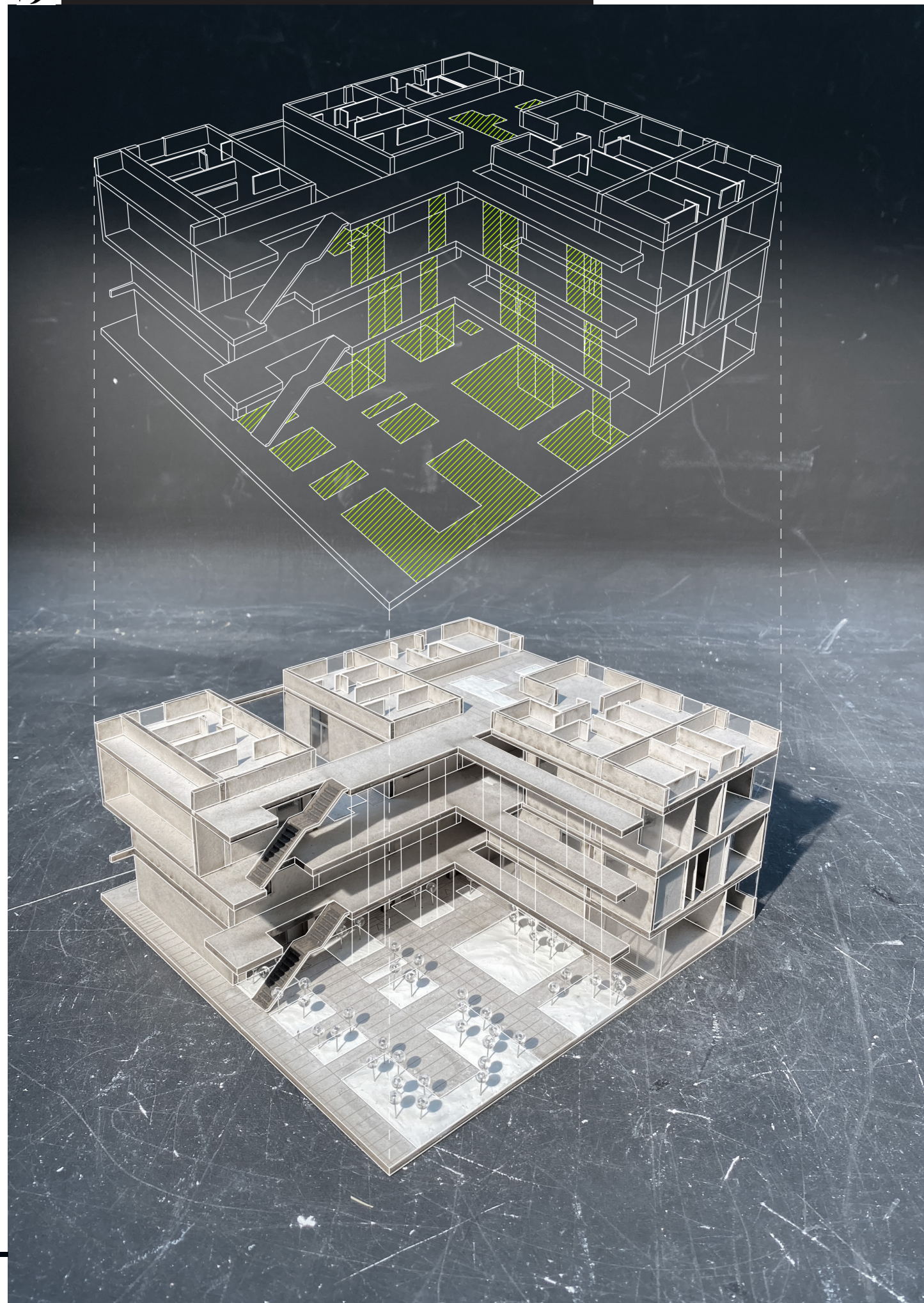


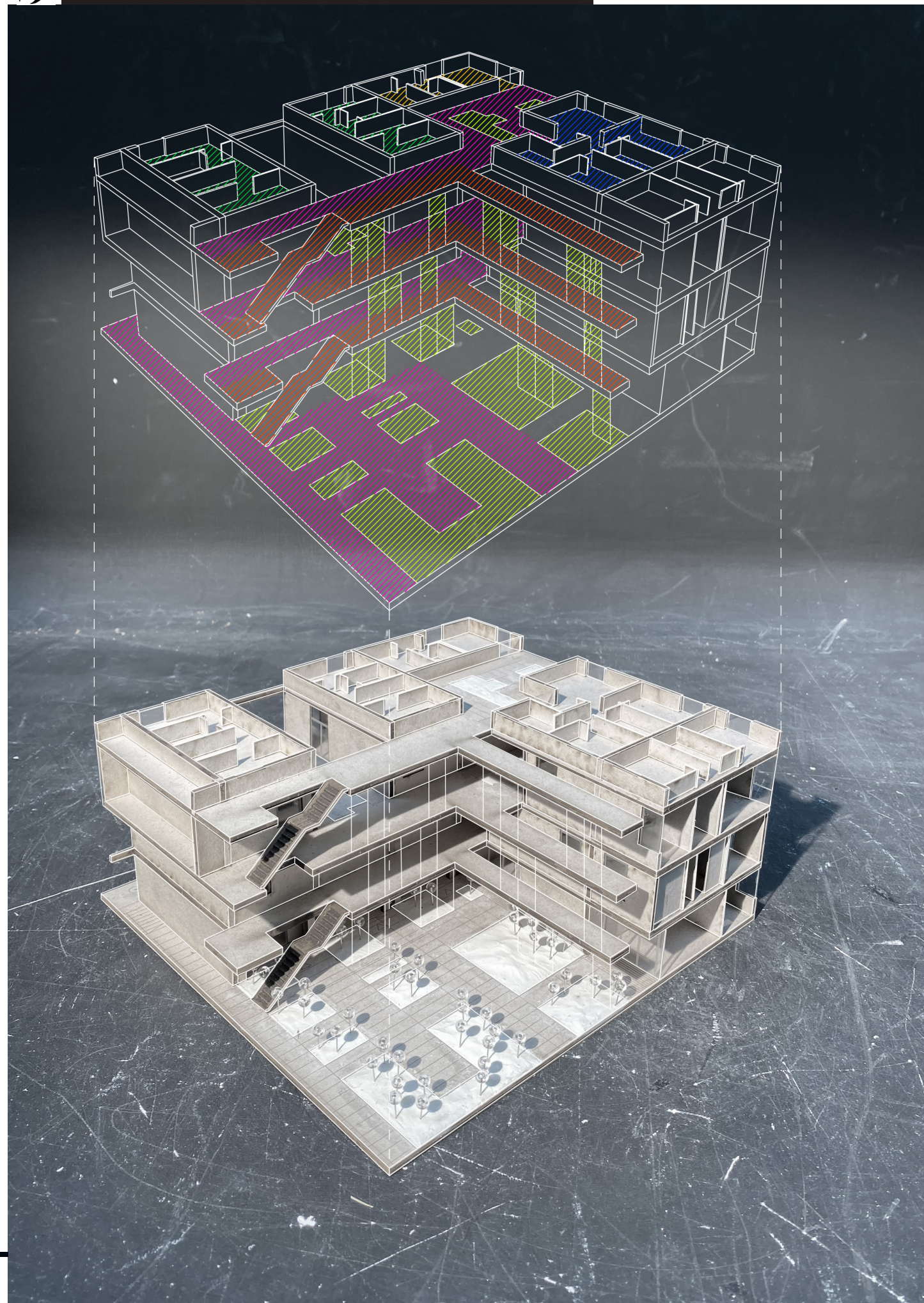












Thank you!

