

# STREET IN THE SKY

Reconstruction of San Siro Residences

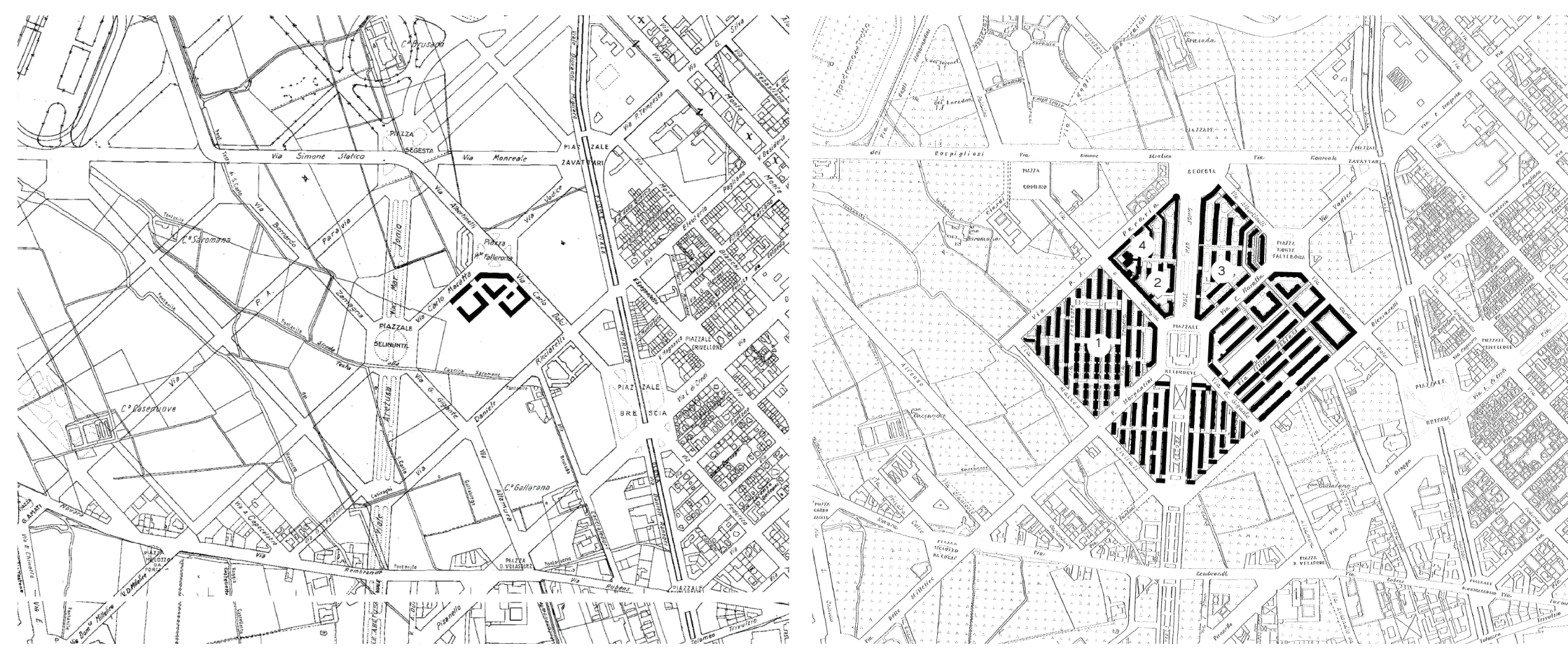
## ANALYSIS, AREA TOPIC



Visualisation of New Urban Facade

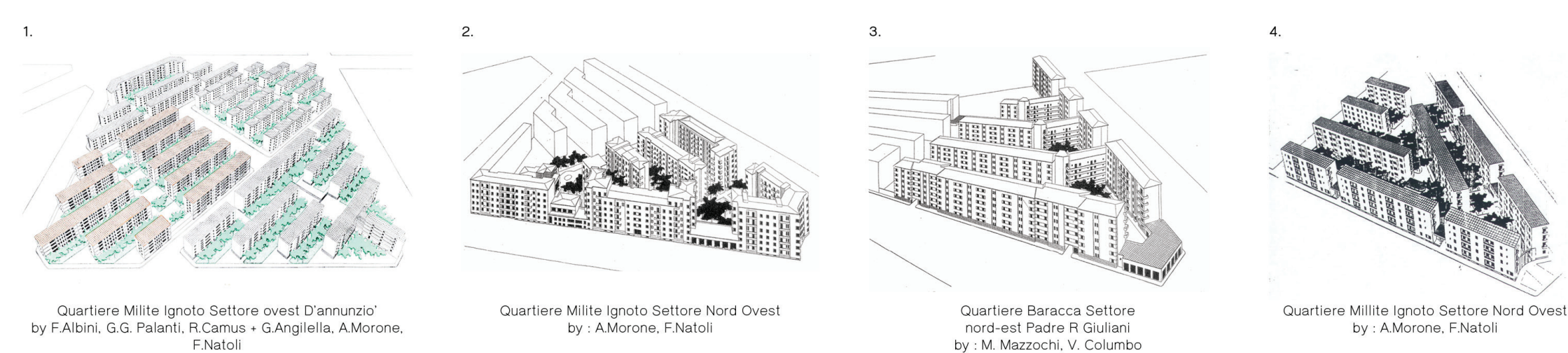


Location of San Siro Residences

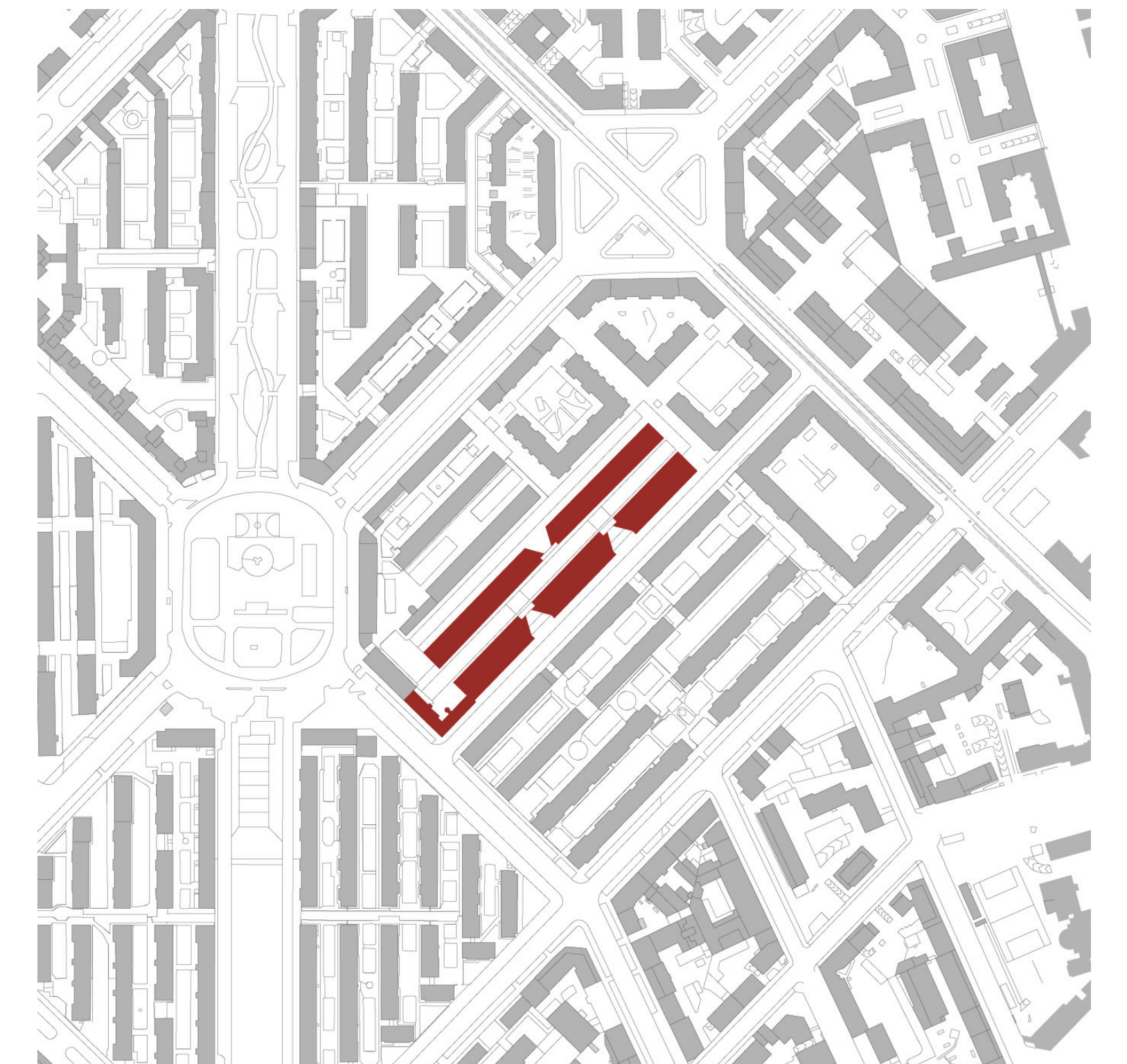


Town Planning - 1930

Town Planning - 1946



Town Planning / Buildings Characteristics



Project Area

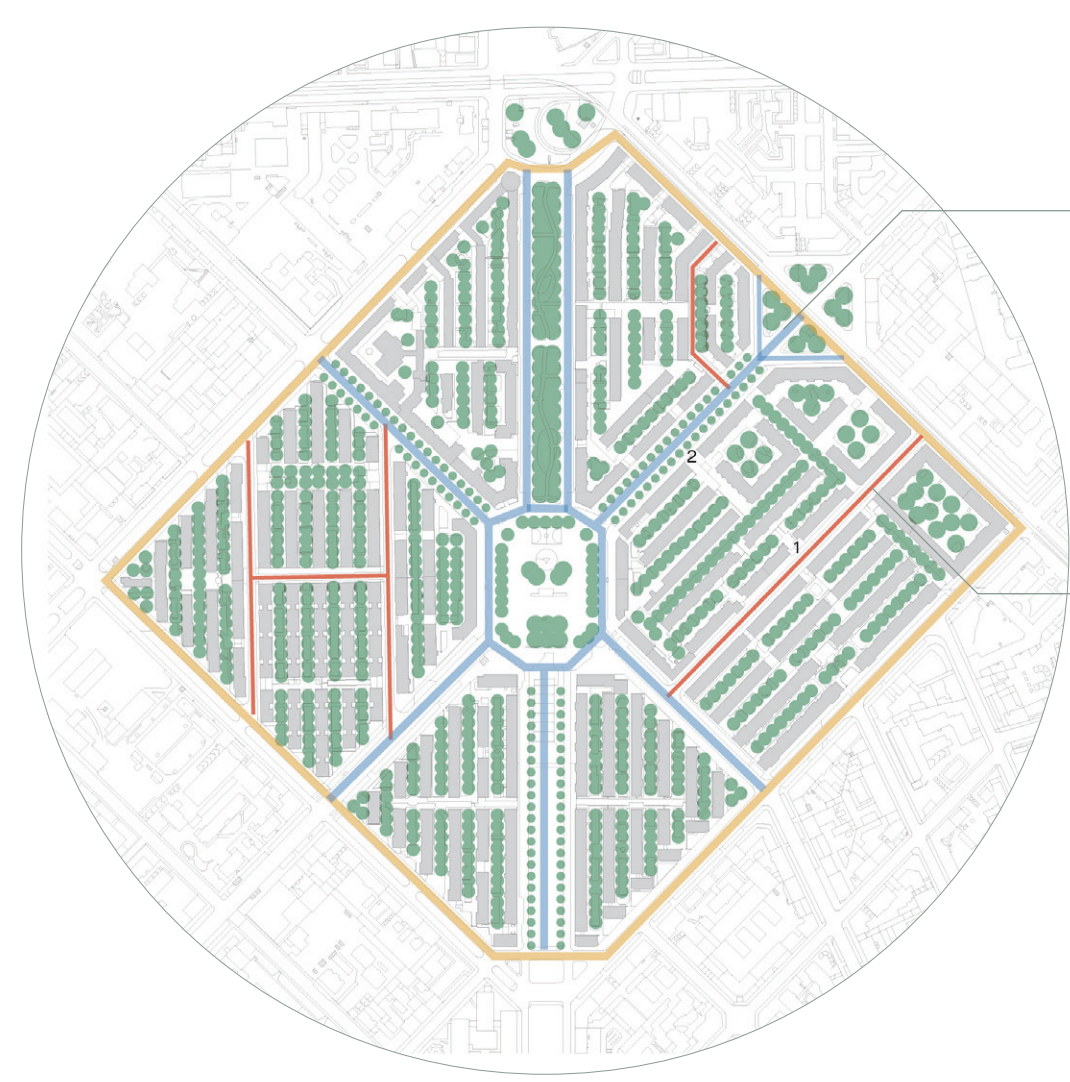


Layout & Sun Orientation



Function Map

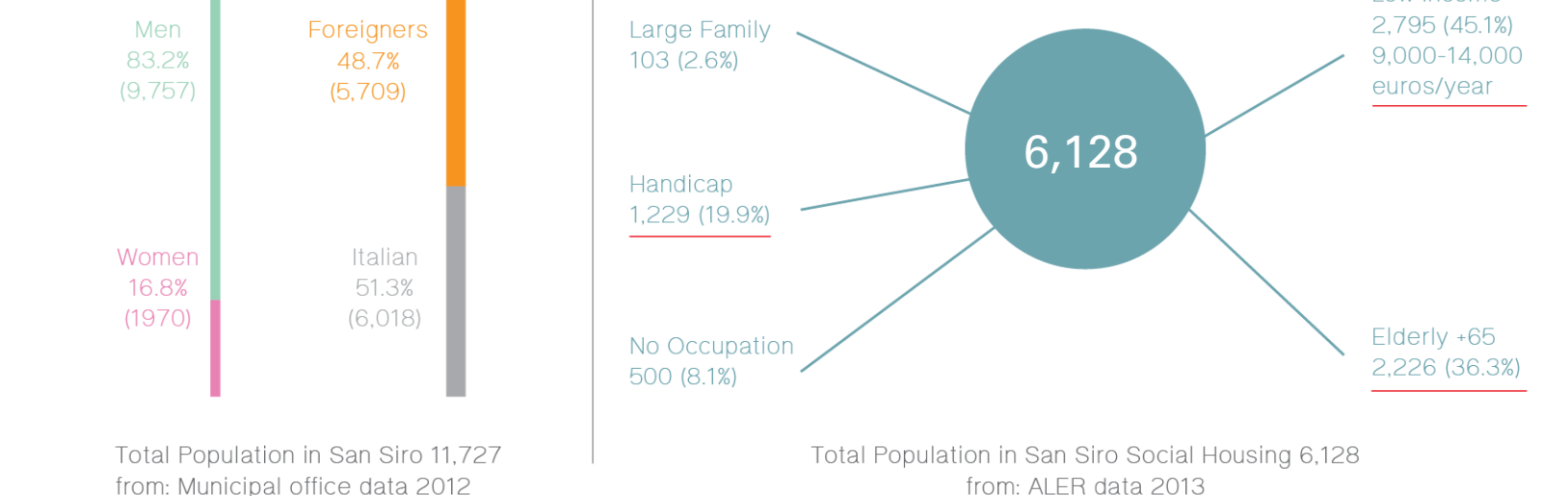
- commercial
- education
- medical
- unused
- association
- public
- church
- commercial



Green Space & Circulation

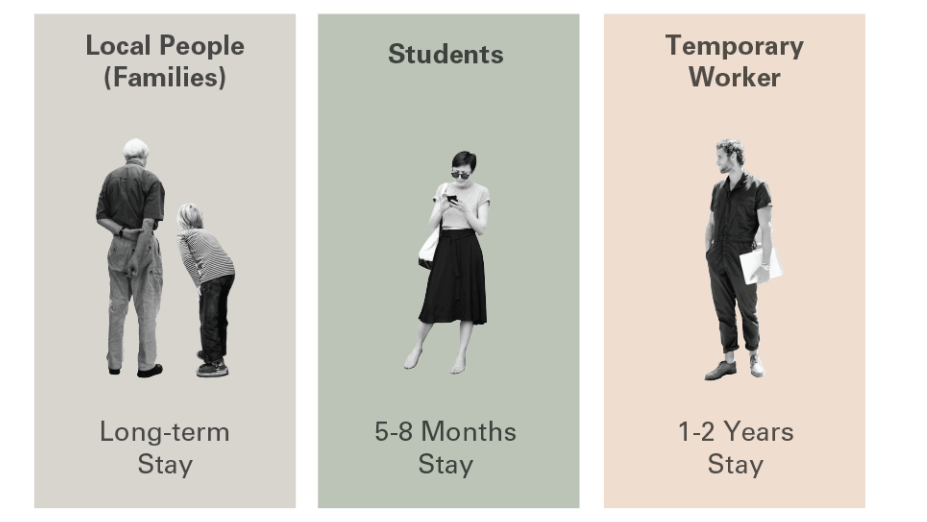


- primary street
- secondary street
- surrounding street

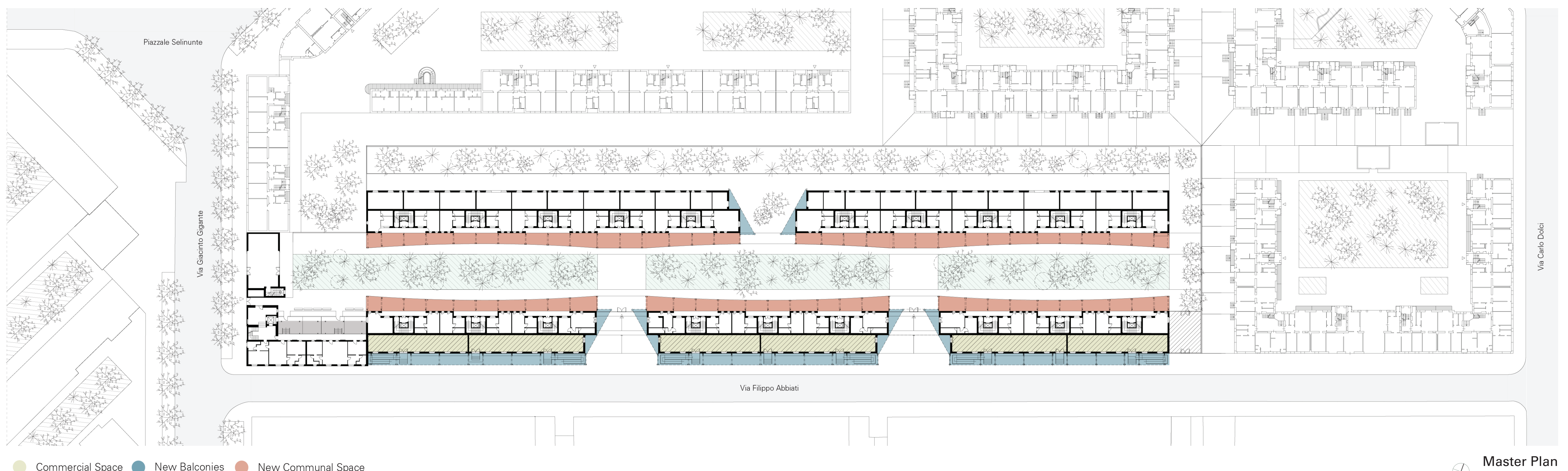


San Siro is composed of various types of inhabitants living together. Some parts are occupied by middle-class families which are organized by the private sector and some are occupied with immigrants, low-income families, the elderly, and handicaps. The latter has fewer opportunities to maintain the building's status due to their condition, and it influences the poor public spaces in the neighborhood.

This project aims to develop the poor part of the campus with new programs that reflect existing needs together with an opportunity to have new users in order to create well-being to all San Siro residents.



Inhabitant and User Analysis



- Commercial Space
- New Balconies
- New Communal Space

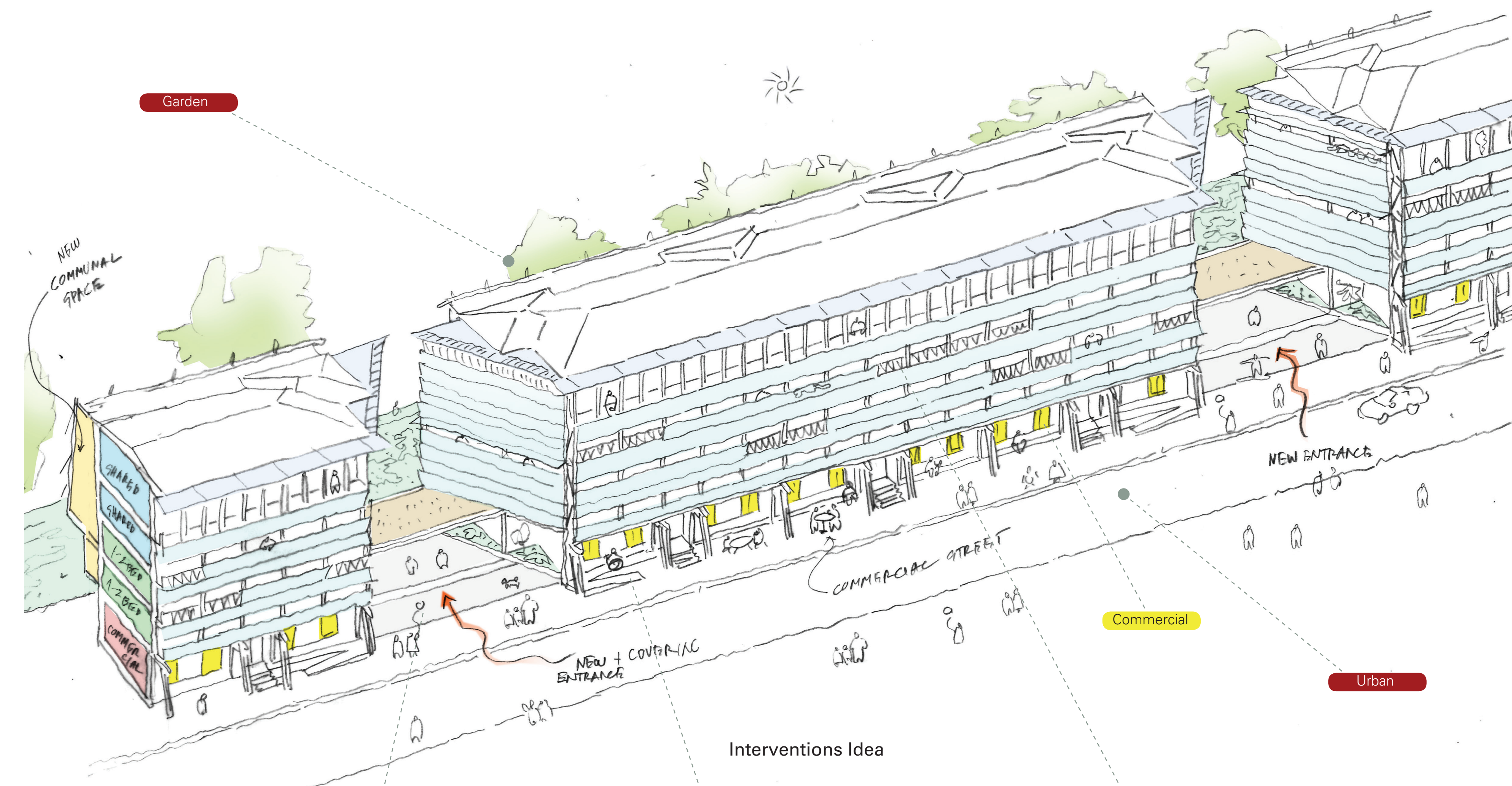
Master Plan Scale 1:500

## MASTER DEGREE THESIS

Student : Asrin Sanguanwongwan 936540  
Supervisor : Professor Marta Averna

Politecnico di Milano / Academic Year 2020-2021  
Master Degree in Architecture - Built Environment - Interiors  
Scuola di Architettura Urbanistica Ingegneria delle Costruzioni

### PROJECT IDEA



Interventions Idea



Existing Residence Entrance

problem : the entrance building obstructs inner garden visibility and create discontinuity of urban space  
 solution : replace with large and light entrance, it creates front piazza, allow more visibilities in all directions.



Existing Ground Floor Facade

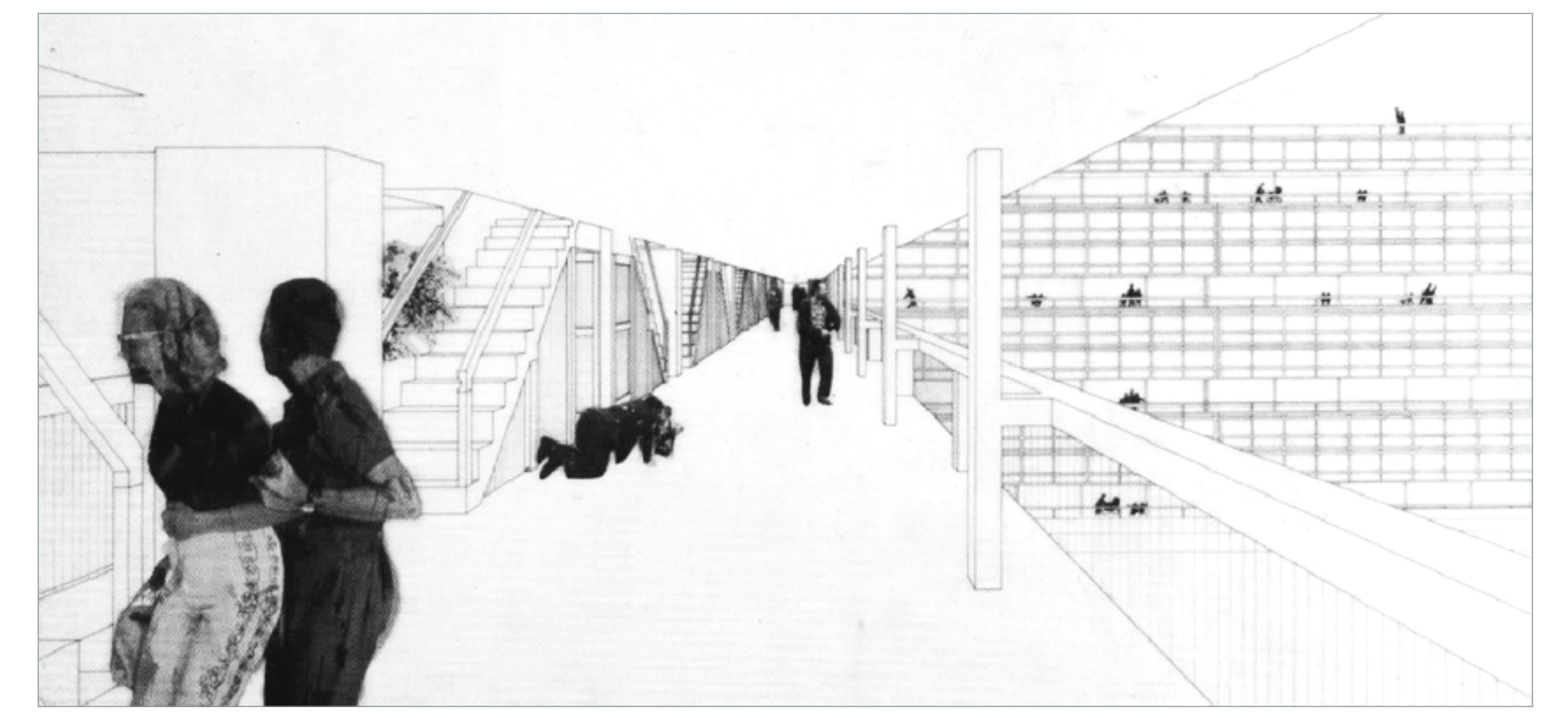
problem : no accessibility from the street, the residences disconnect to the city  
 solution : enlarge all openings to the limit, create additional stairs and ramp for all accessibilities. Insert commercial and public function to activate urban life



Existing Urban Facade

problem : Lack of balcony and space to face urban side of the residence.  
 solution : add extra balconies to every floor, generate new facade with light and large outdoor space.

### THE NEW INTERVENTION, "STREET IN THE SKY"



Elison & Peter Smithson, photo-montage of "street in the sky" of the Golden Lane estate.

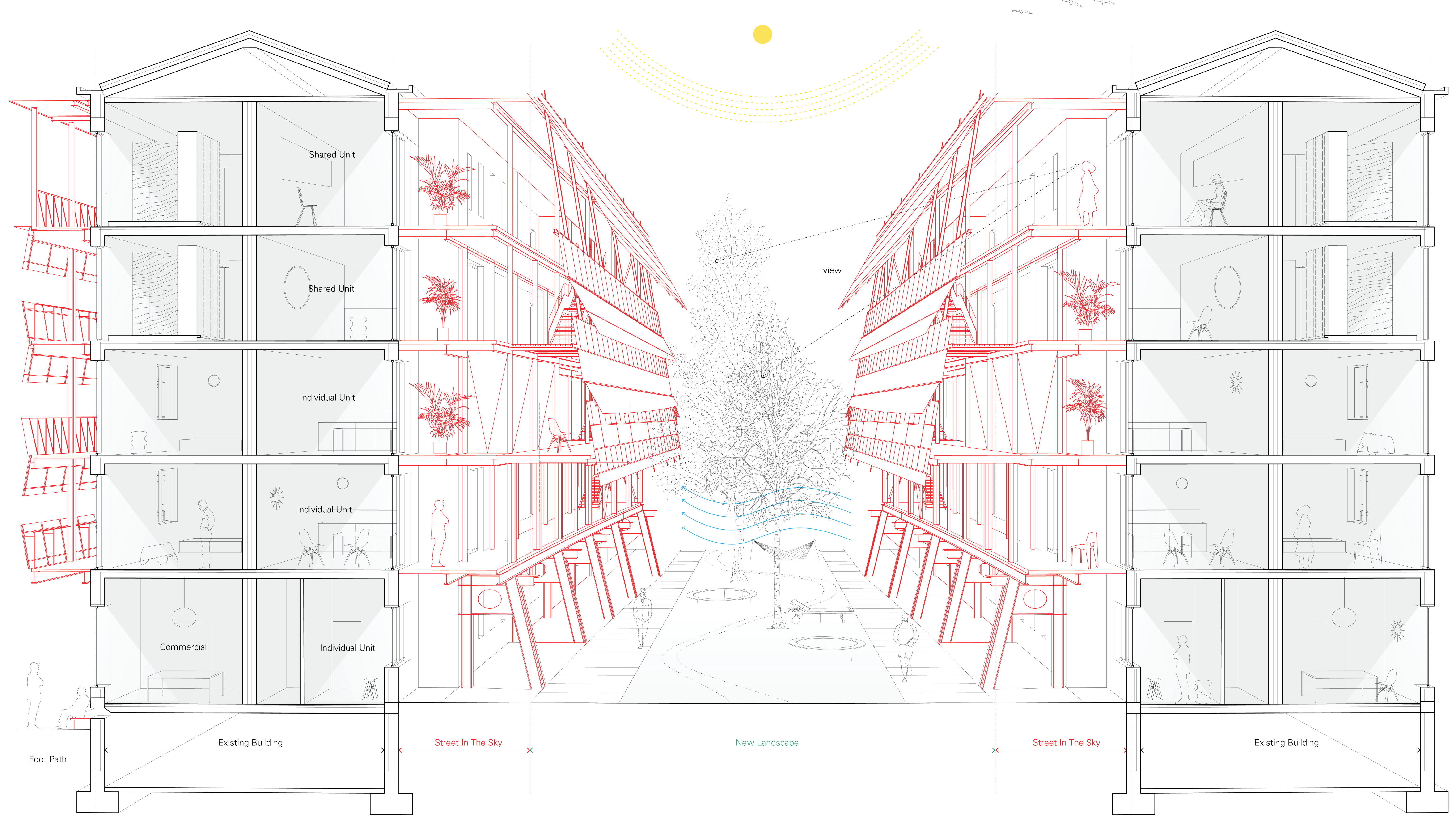
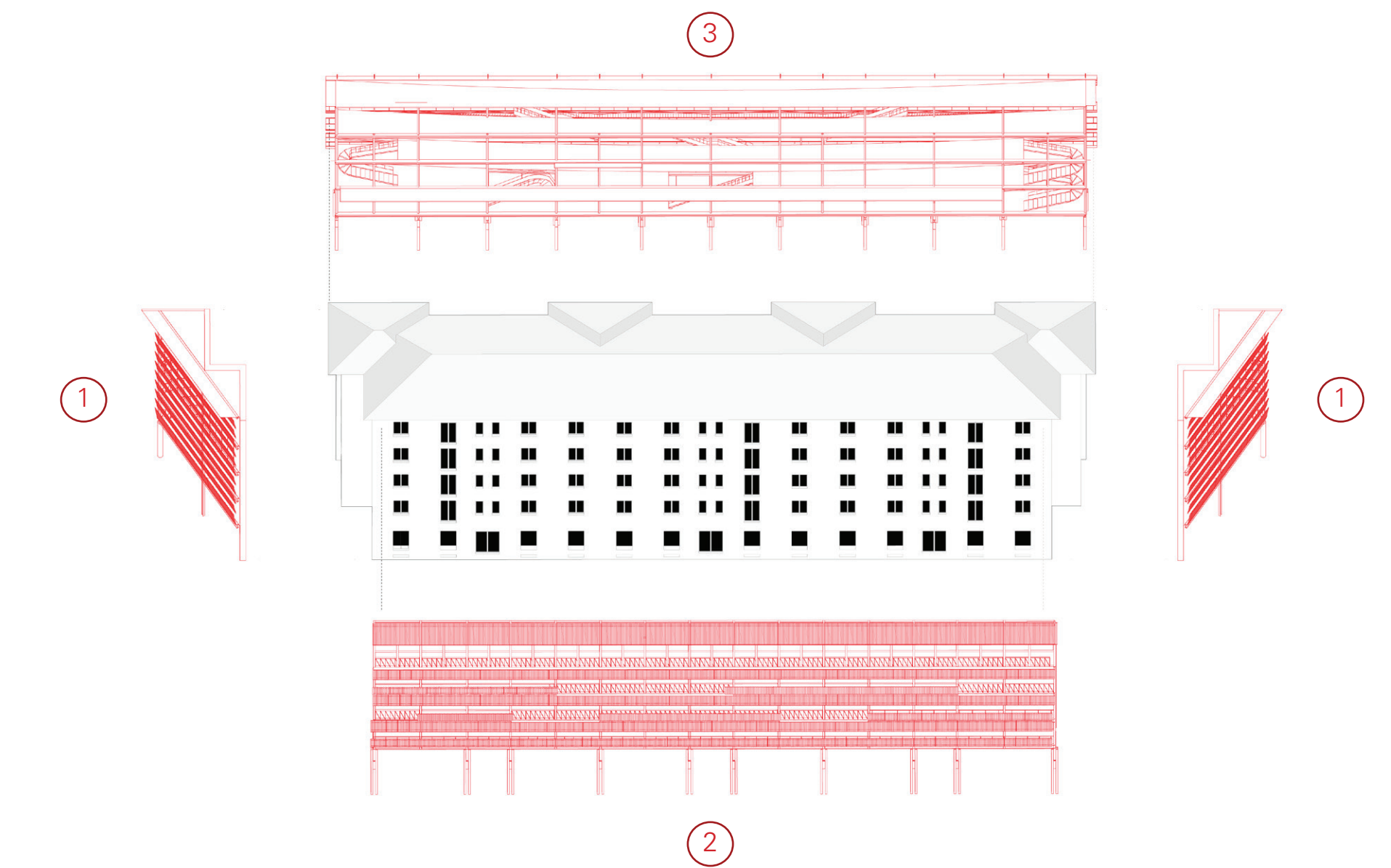
The life of the San Siro estate contains a flourishing and complex way of living. Local people's lives integrate with immigrants, middle-class, and low incomers, they inhabit the same street but have entirely different cultures. These conditions reflect on the San Siro neighborhood, when one arrives in the estate, one can see several huge housings, repeated all over the area creating urban fences to the inhabitants. Nevertheless, honest and beautiful things always happen behind those fences in a magnificent courtyard, different religious statues stand next to mixed-culture objects, local people are sitting and taking care of their garden, the young and the old are sharing their thought while the mother is feeding her newborn baby. These charming scenes can be perceived only through the small gap in between the buildings in reason of the closeness of the architecture. The high level of ground floors are completely disconnected from the street, the entrances are unwelcoming and degenerated, the inadequate of commercial and public spaces, San Siro inhabitants are lacking places to share their lives.

The project aims to dissolve the existing obstruction and generate connectivity to the neighborhood on an urban, architectural, and interior scale. By taking Elison & Peter Smithson's "street in the sky" as a reference for communal space in social housing, the project has developed 3 types of streets adjusted to each condition of buildings. They are constructed by steel structure with the light translucent skin and attach to the existing facade with the least modification of the previous opening.

The first is the "entrance streets" they provide a larger and more welcoming entrance thanks to the facade angle that embrace the continuity from the street, canopy and gentle slope circulation are equipped to have more functional accessibilities. The upper facade is an angled canopy for the inhabitants that could be used for observing the passerby or for leisure purposes.

The second is the "urban streets", on the ground floor, the new portico is created by an animal-like steel structure, it generates characteristics to the street while giving shade for the people. The upper levels are 1.50 meters width full-length balconies, they support the inhabitant's activities in urban life such as plantings, eating, drinking, and socializing.

The third is the "garden streets", by exploiting the existing beautiful garden, the new streets provide semi-outdoor communal space looking to the greenery. They contain new circulation and stairs in the brighter space, this solution maximizes the apartment space by substituting the previous stair space. The skins are made from transparent corrugated polycarbonate panels, they allow maximum natural light for the space while maintaining some privacy from the outside. These panels are openable and could be adjusted to the temperature and season. During winter, they work like glass houses, containing the sun heat with close skin, and during summer, they work like a garden, the opening facade allows ventilation and the breeze from the city.



Perspective Section / Scale 1:50

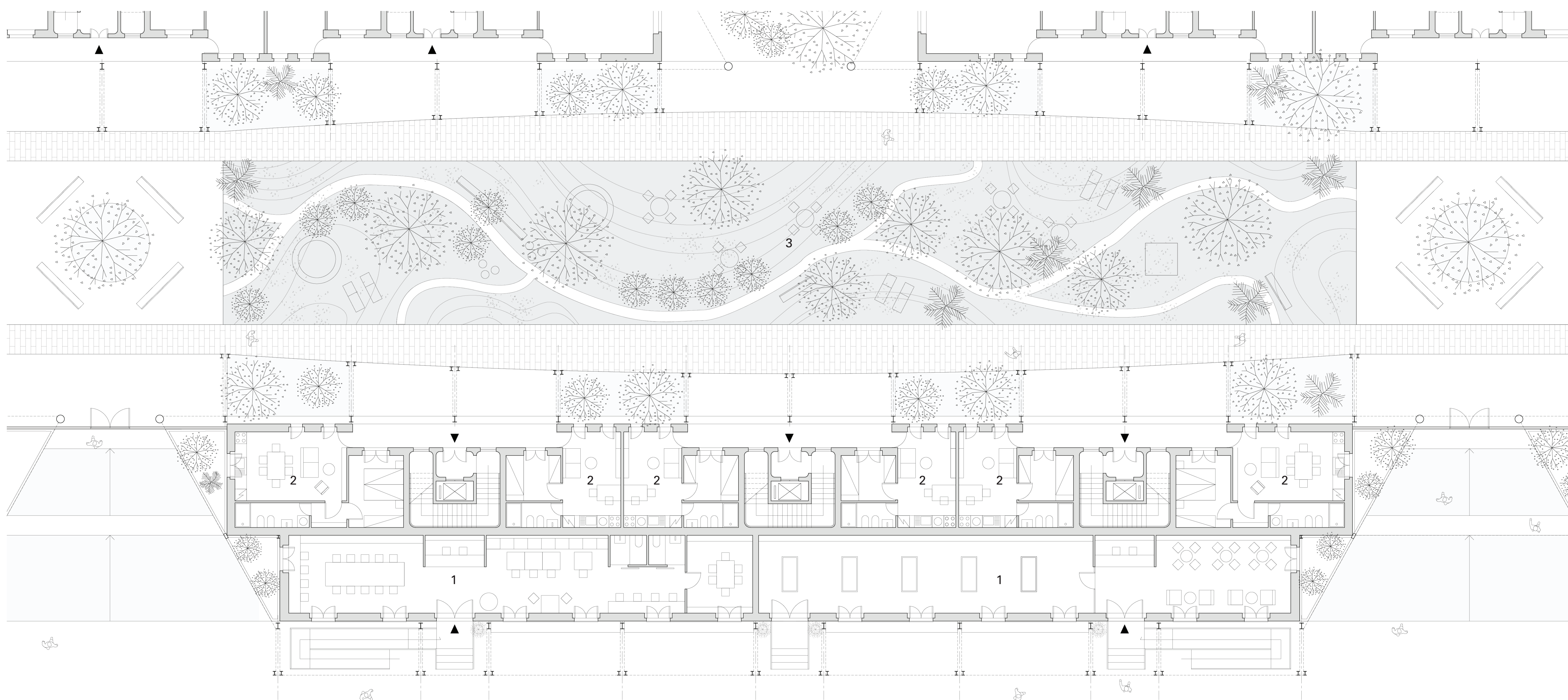
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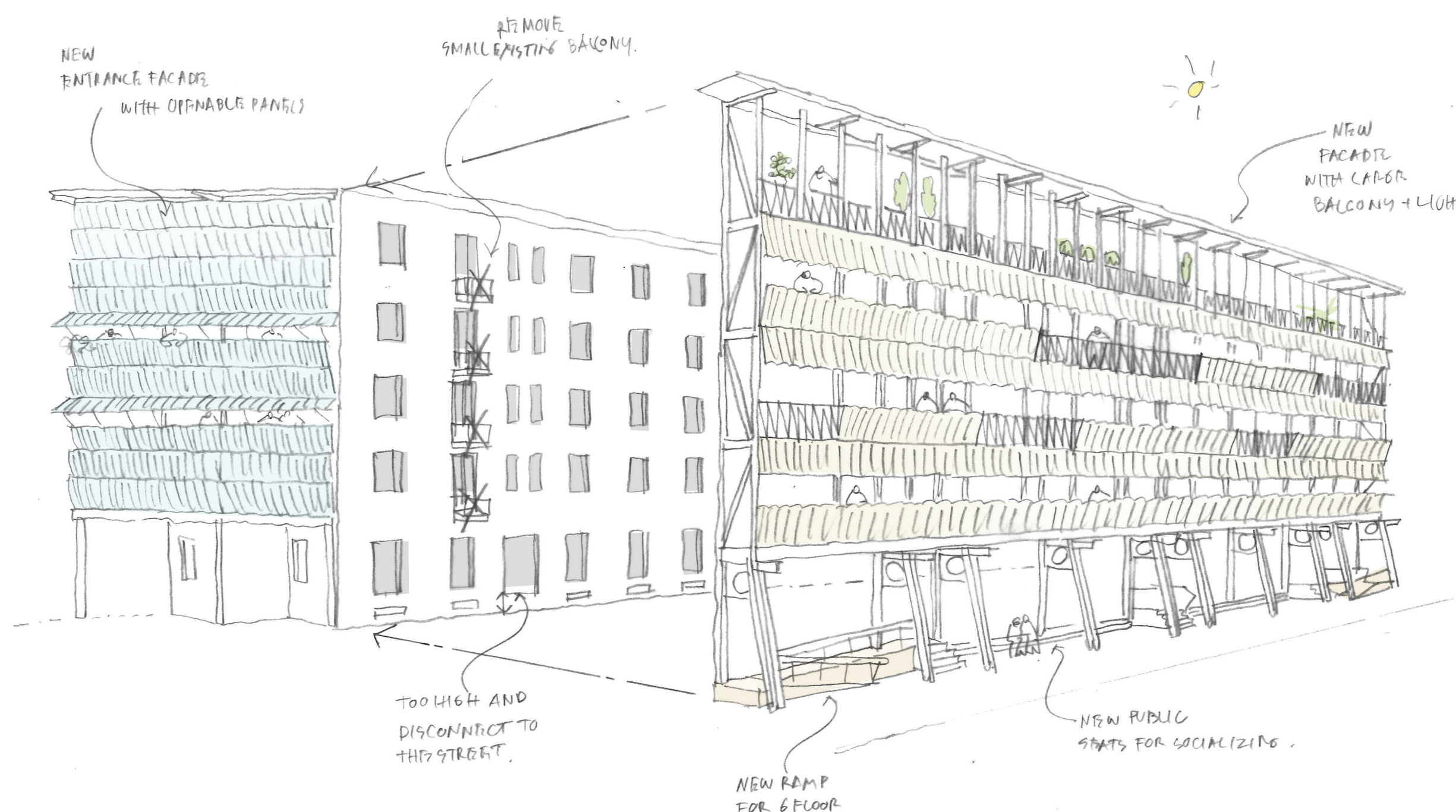
South Elevation  
Scale 1:100

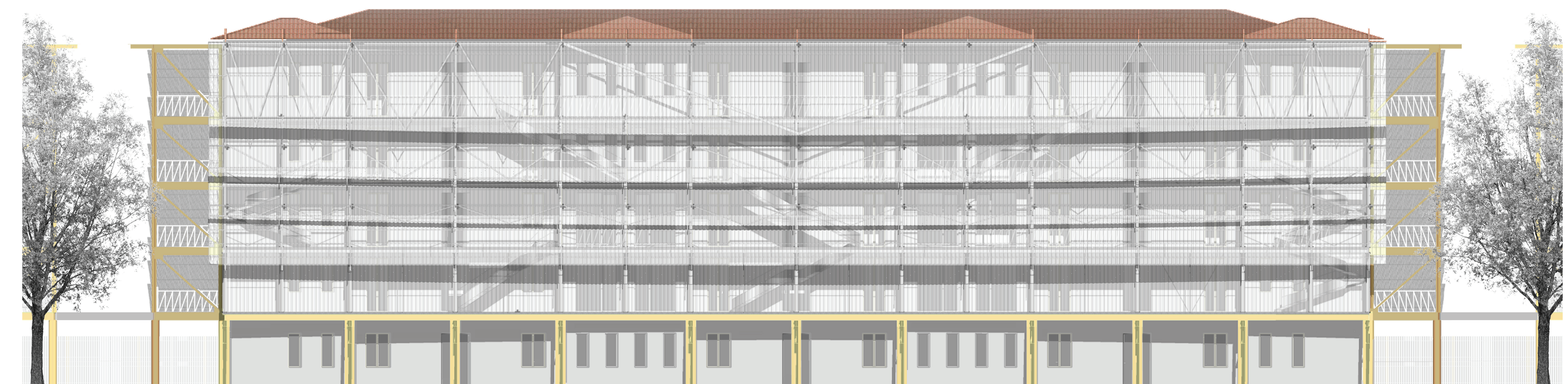


- 1) Commercial Space / Social Club
- 2) 1 Bedroom Unit
- 3) New Communal Garden

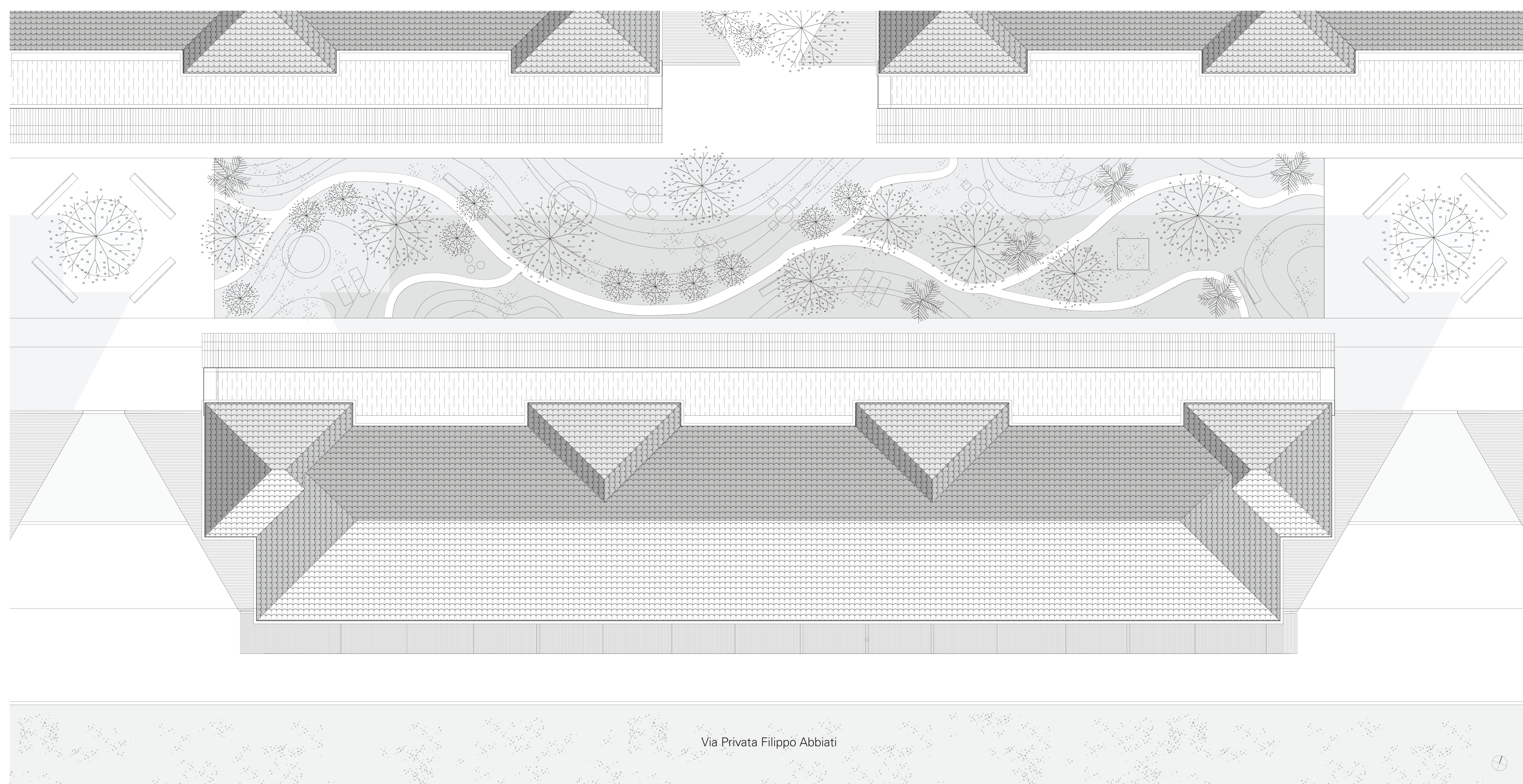
Via Privata Filippo Abbiati

Ground Floor Plan  
Scale 1:100

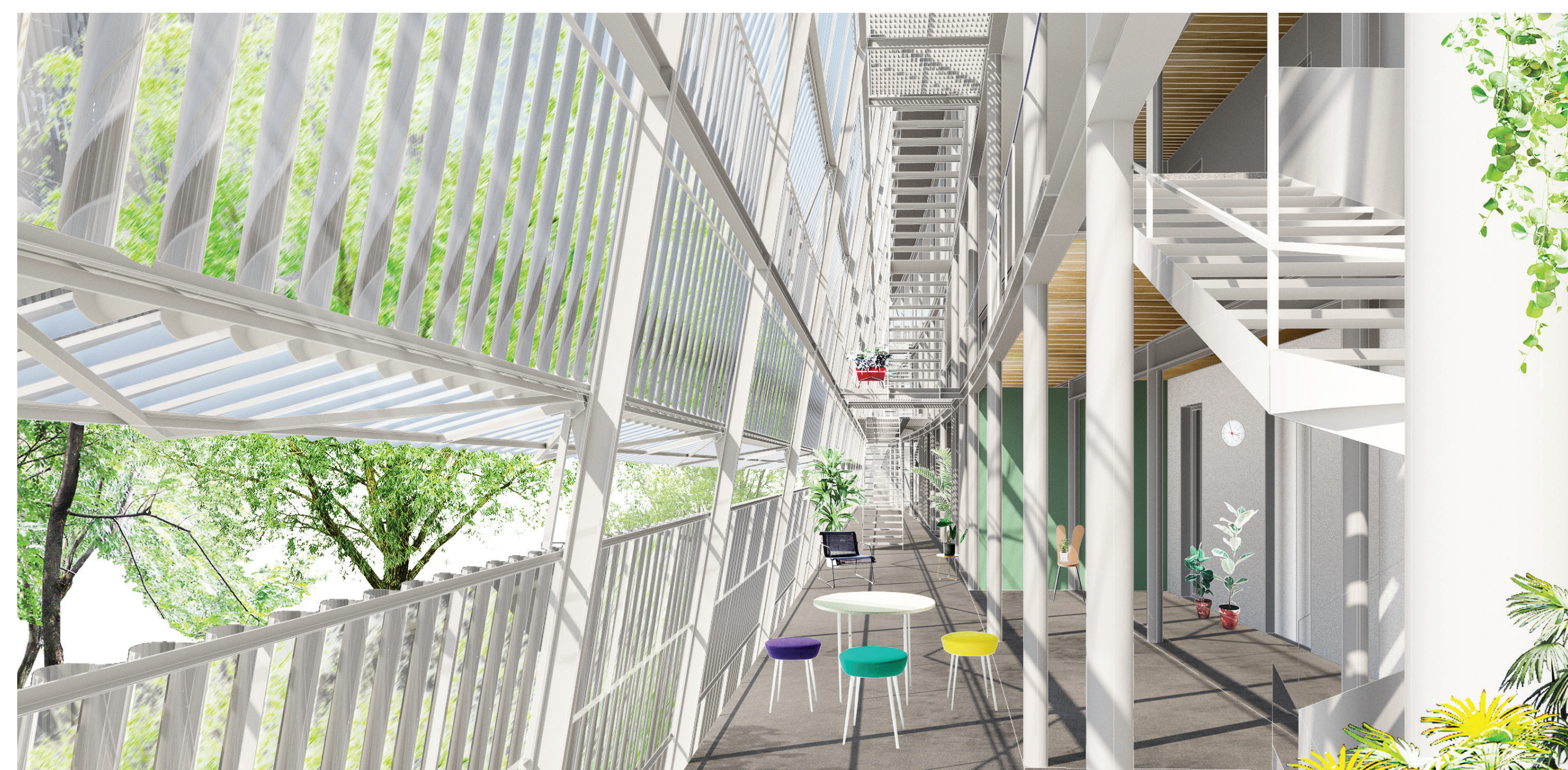
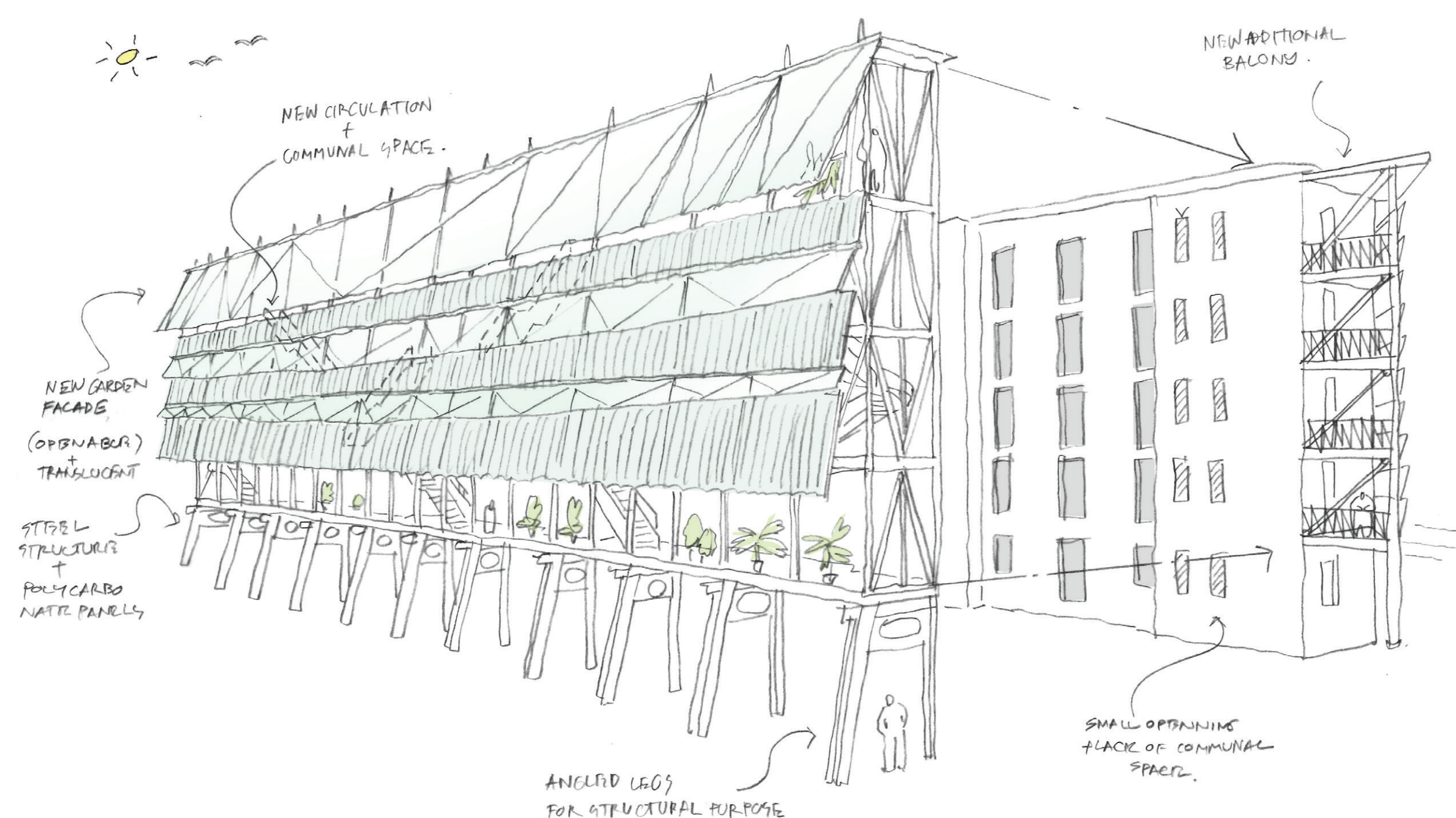




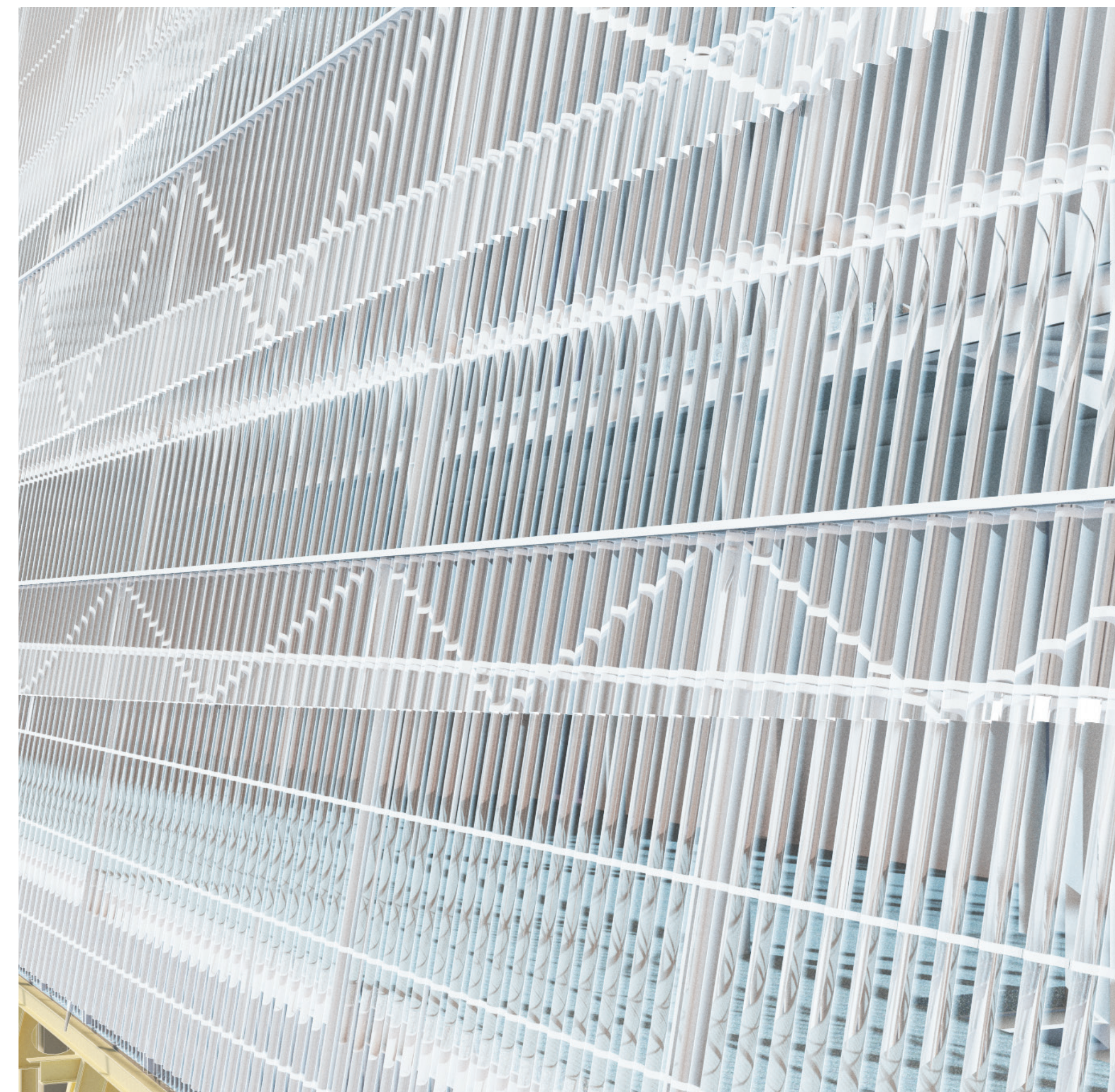
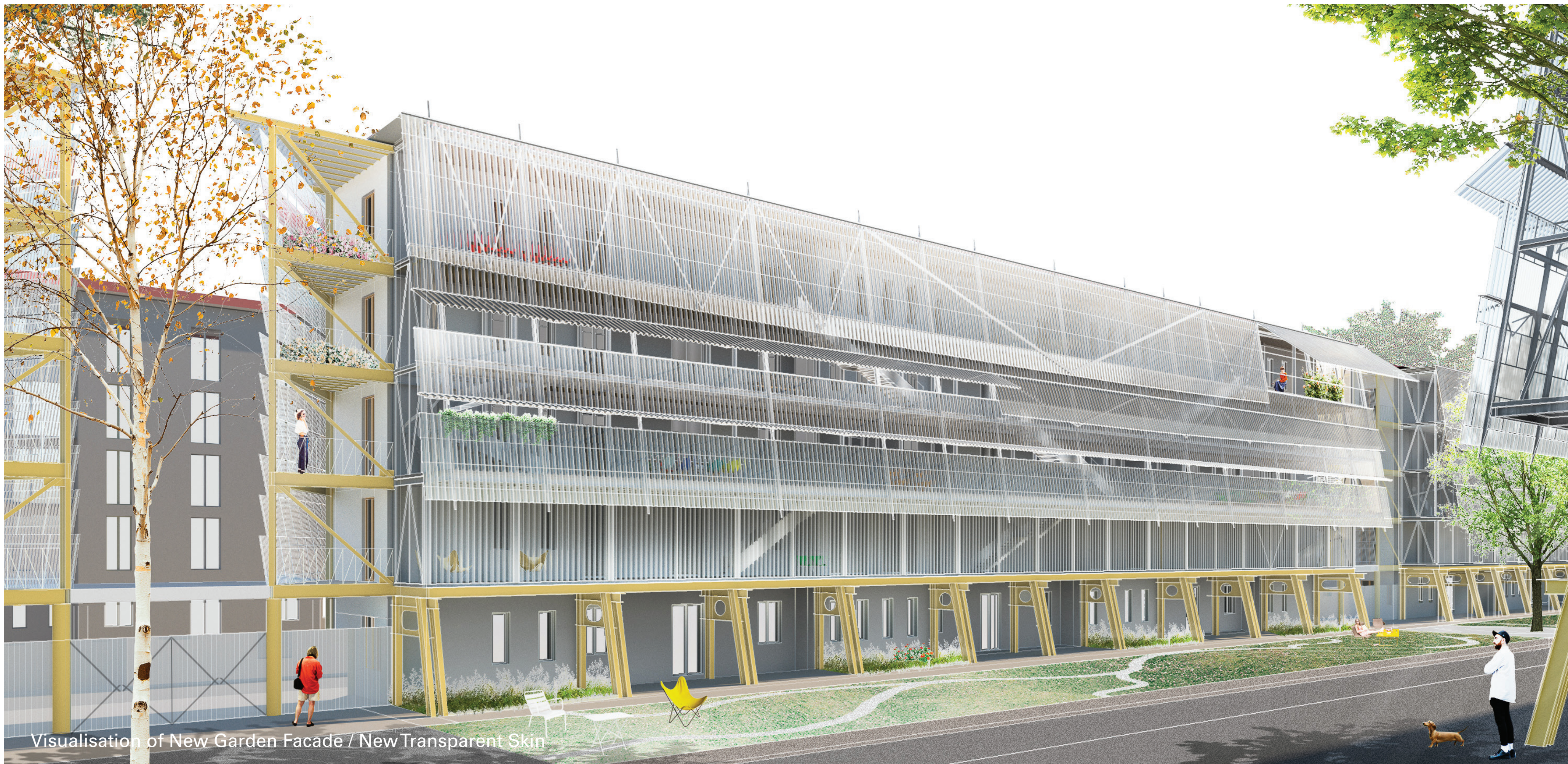
North Elevation  
Scale 1:100



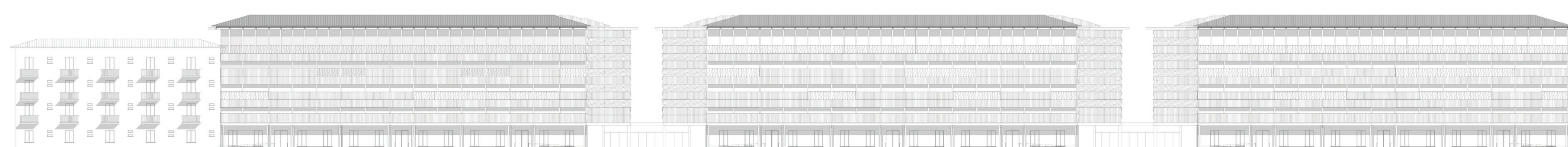
Roof Plan  
Scale 1:100



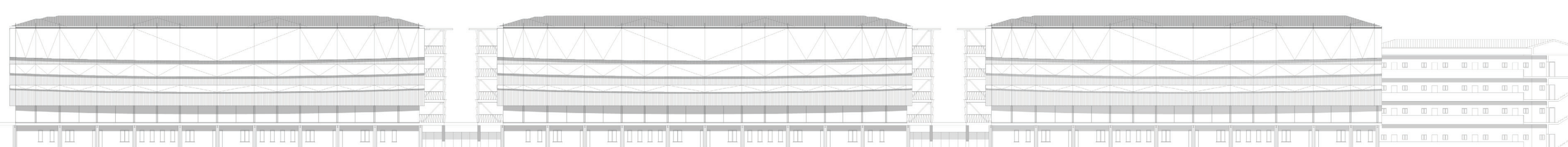
## STREET IN THE SKY DETAIL



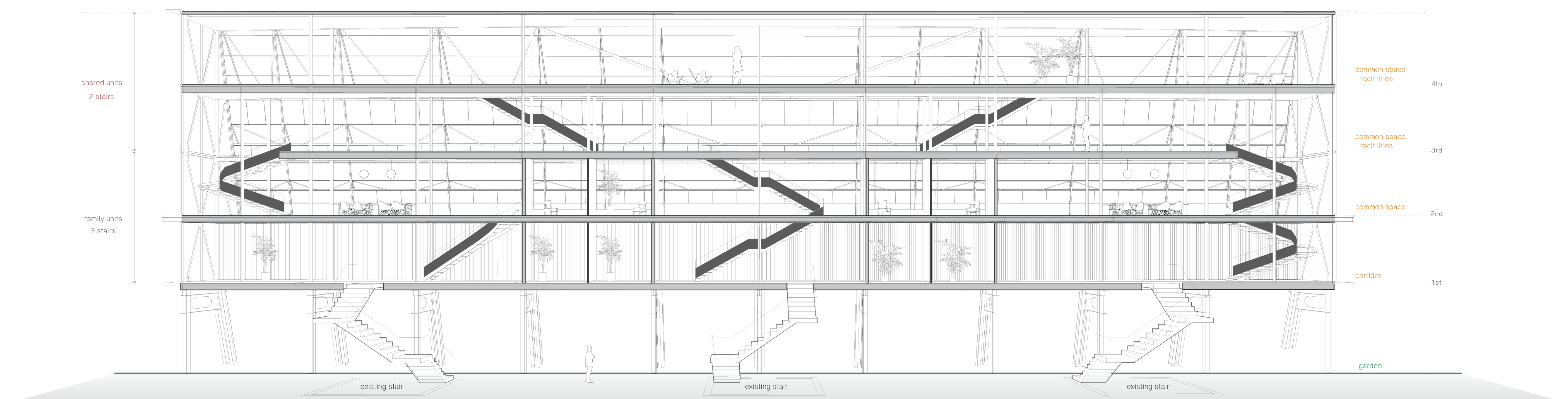
Visualisation of New Garden Facade / New Transparent Skin



Urban Facade (New & Existing)  
Scale 1:500



Garden Facade (New & Existing)  
Scale 1:500



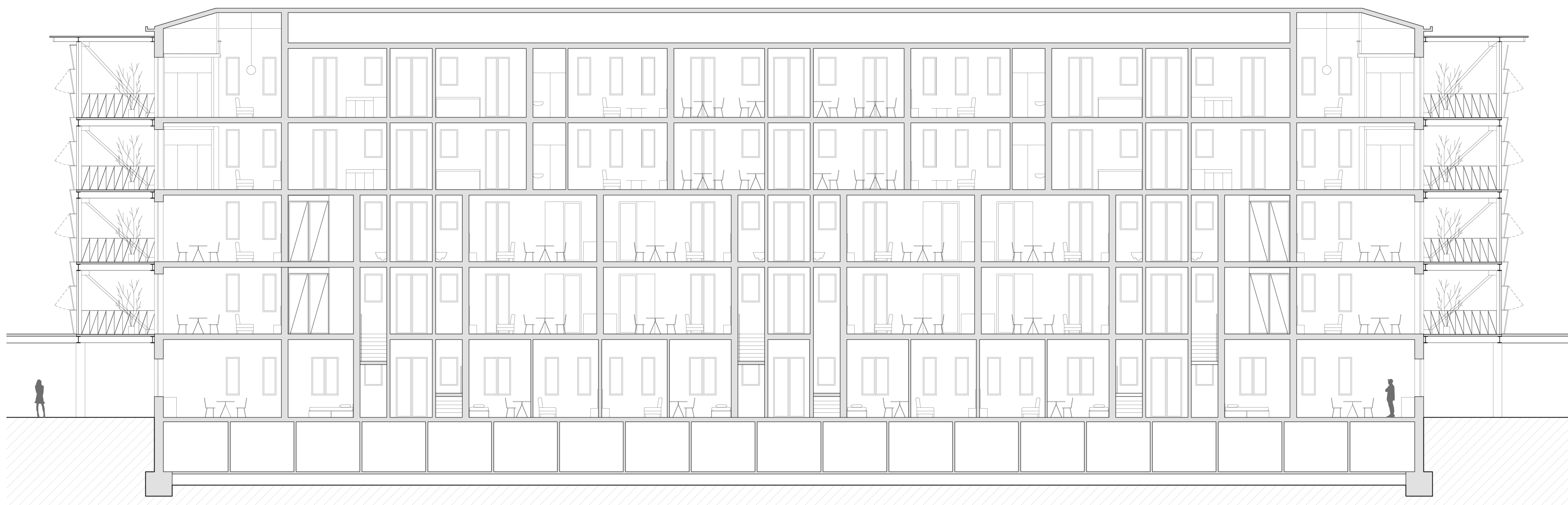
Street InThe Sky - Circulation Diagram  
Scale 1:100



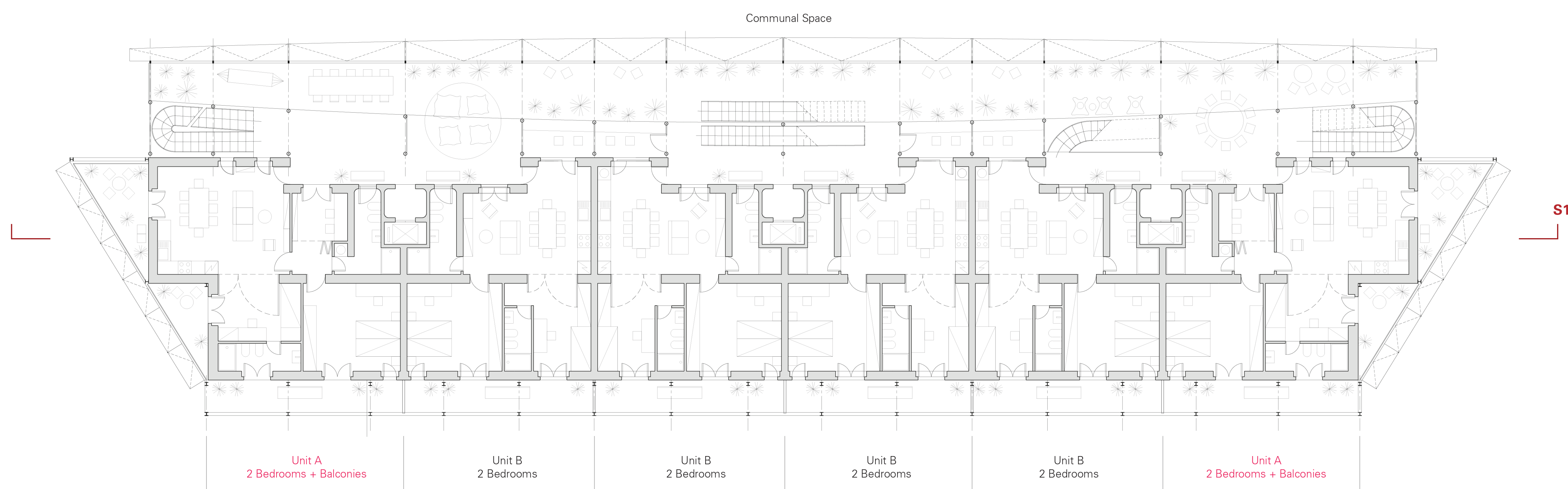
New Entrance



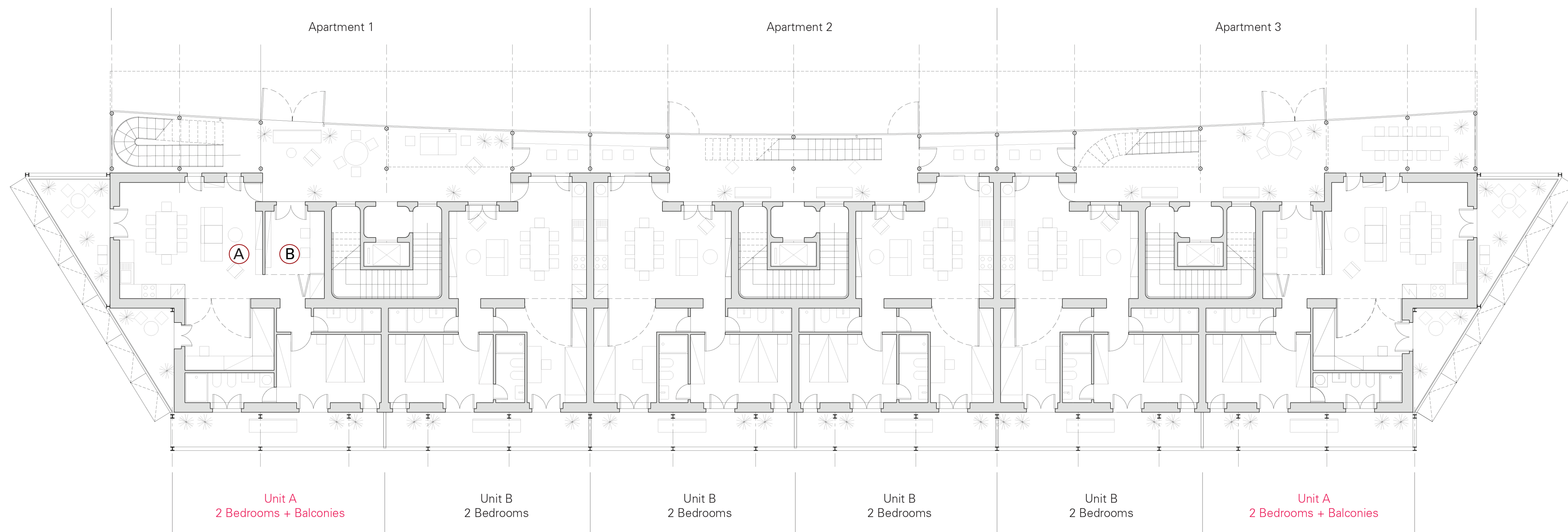
West & East Elevation / Scale 1:100



Longitudinal Section (S1)  
Scale 1:100



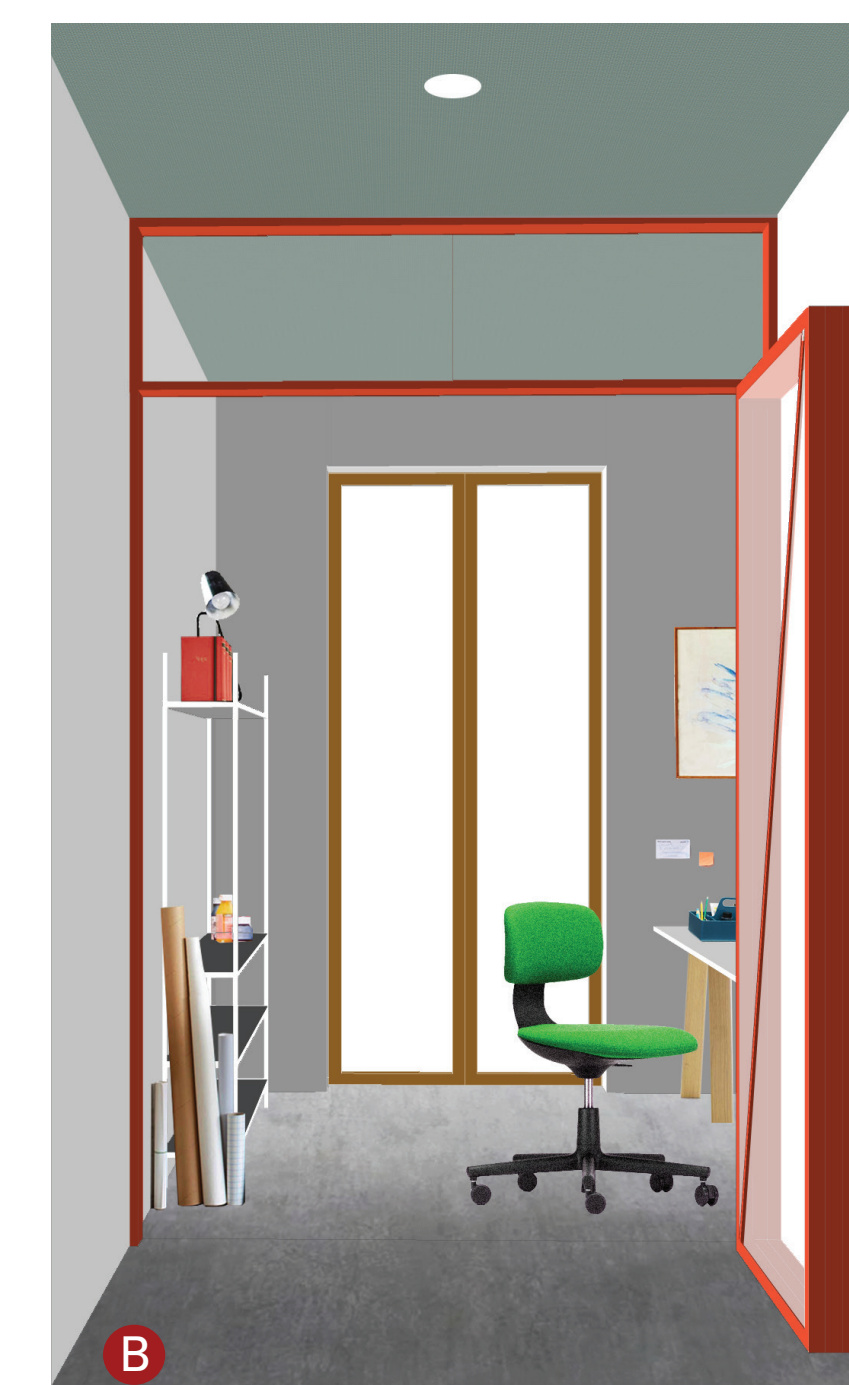
2nd Floor Plan  
Scale 1:100



1st Floor Plan  
Scale 1:100

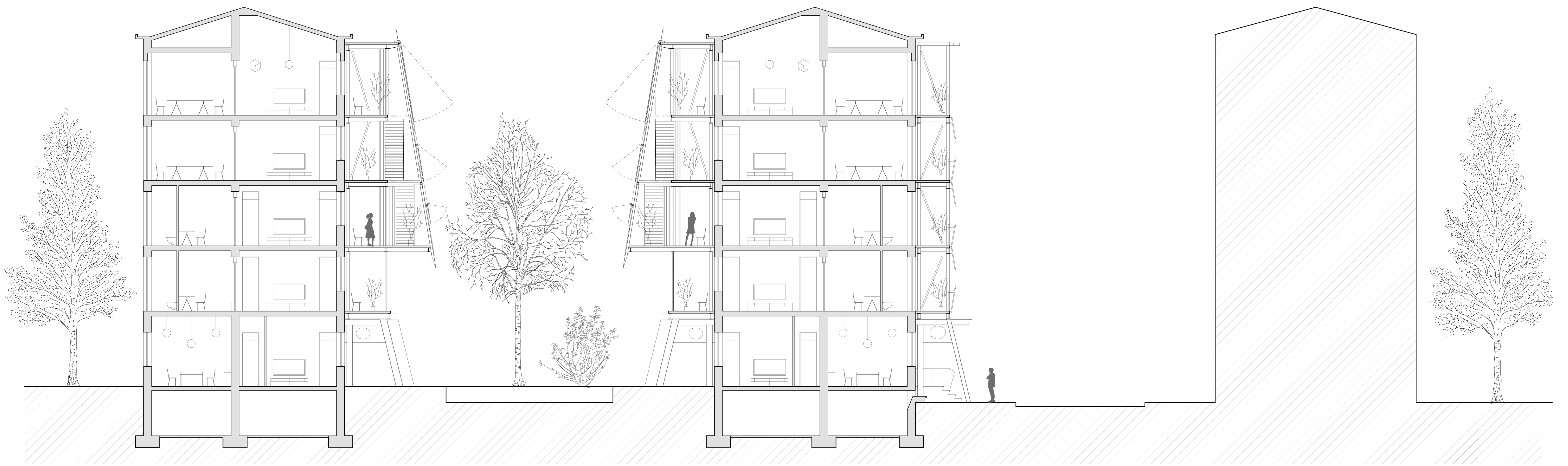


Living / Dining Area

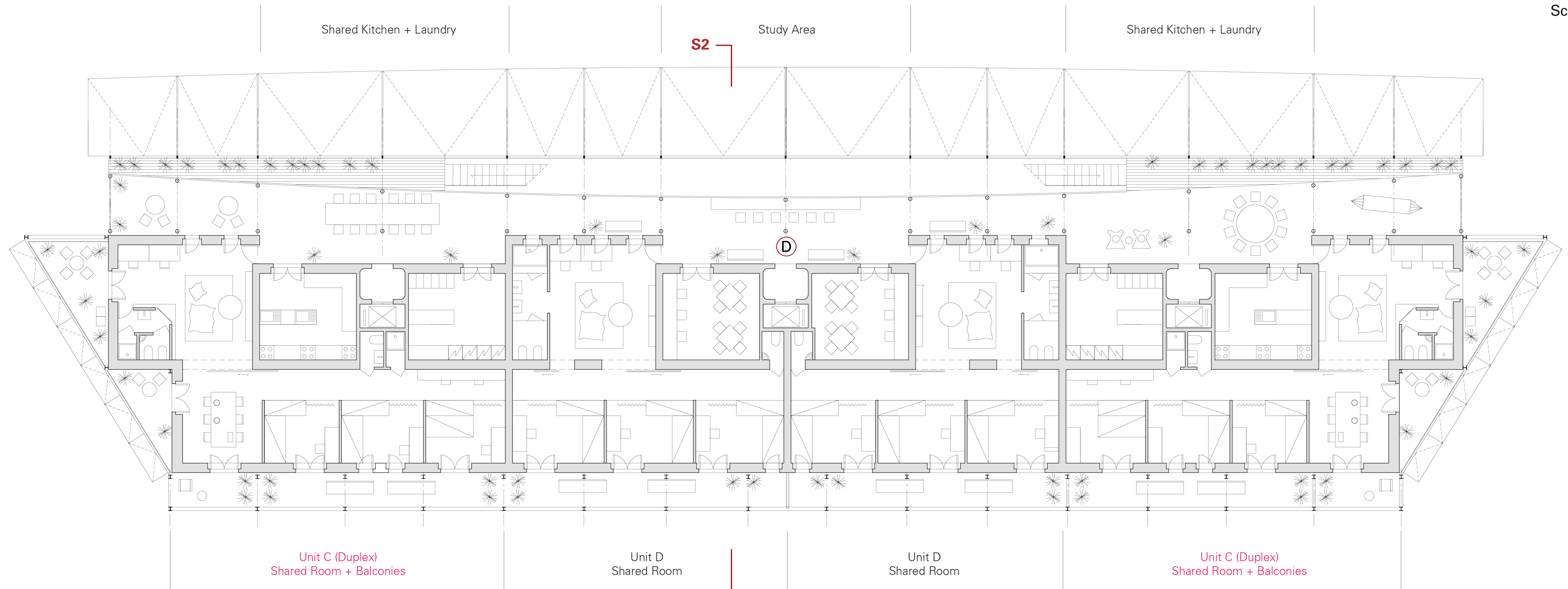


Home Office

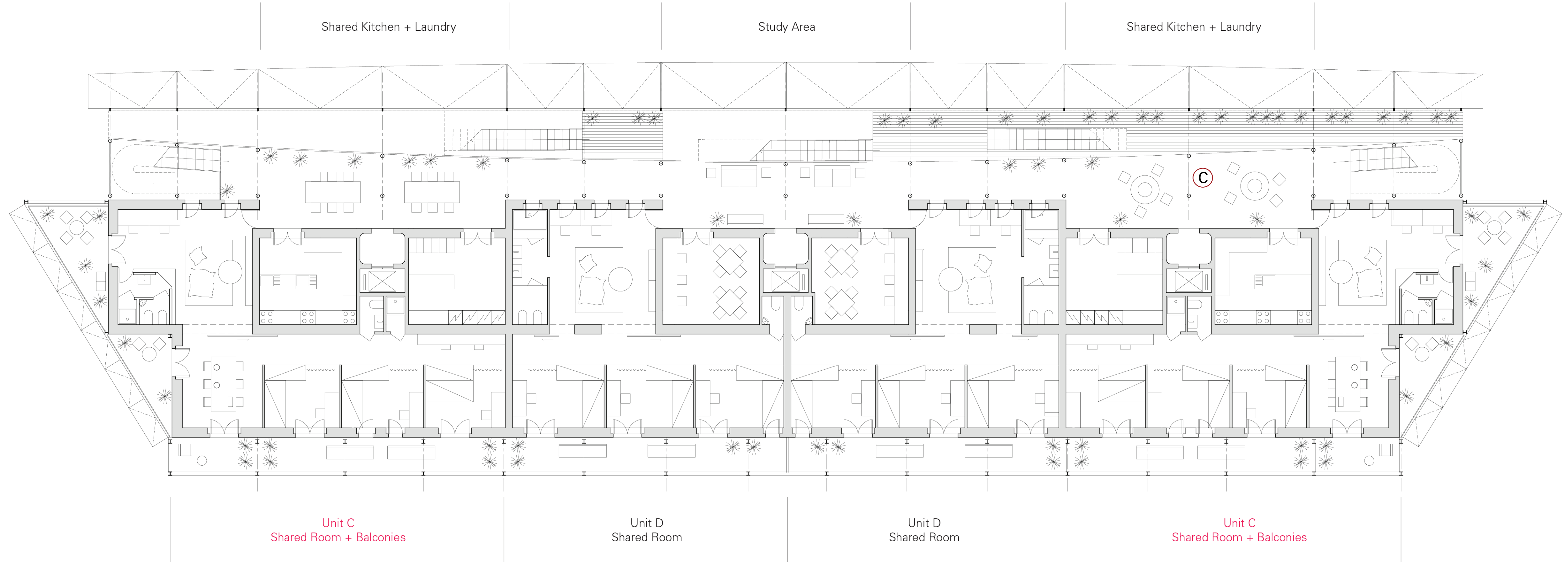
## SHARED UNIT PLANS



Cross Section(S2)  
Scale 1:100



4th Floor Plan  
Scale 1:100



3rd Floor Plan  
Scale 1:100

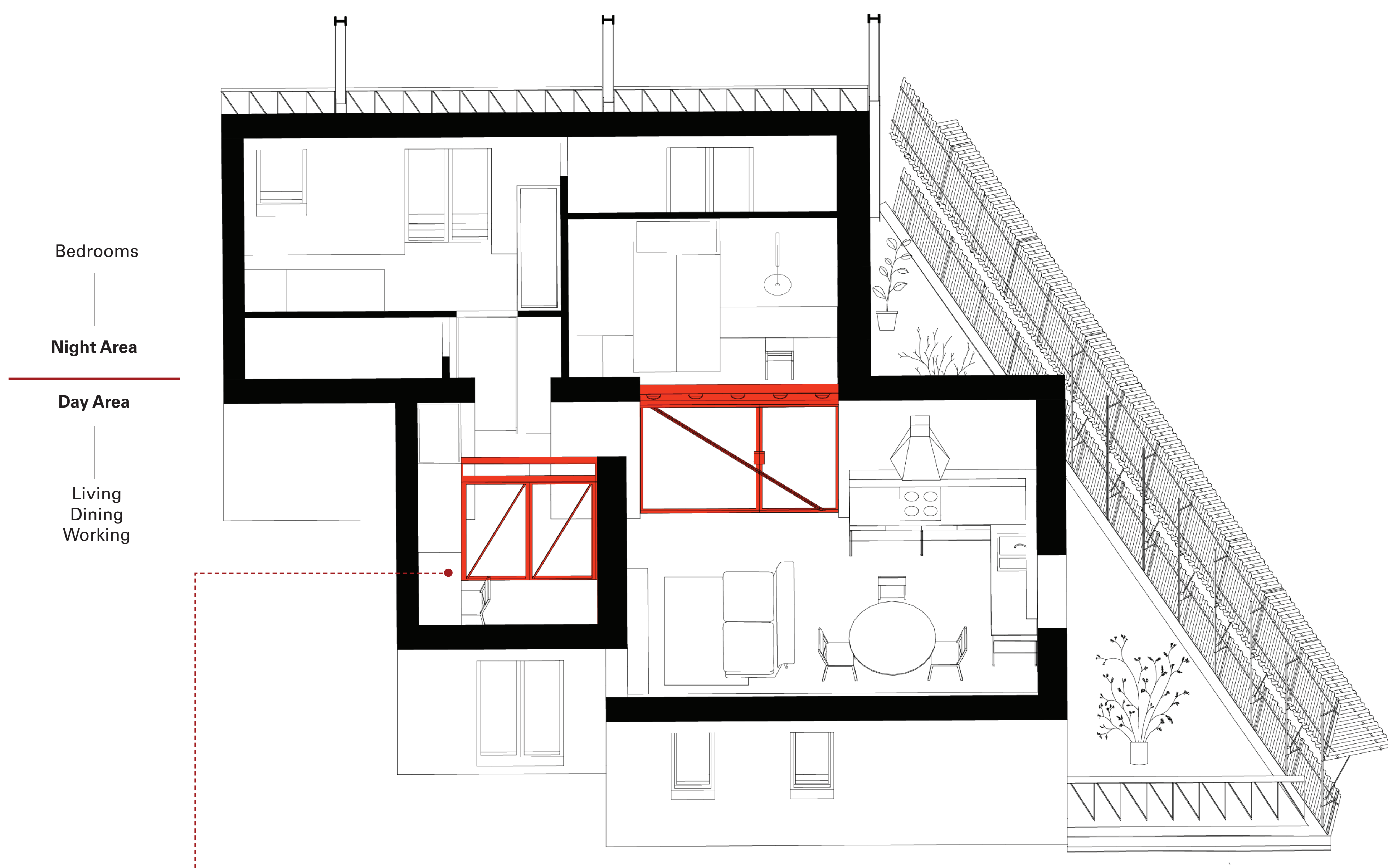


3rd Floor Street in the Sky



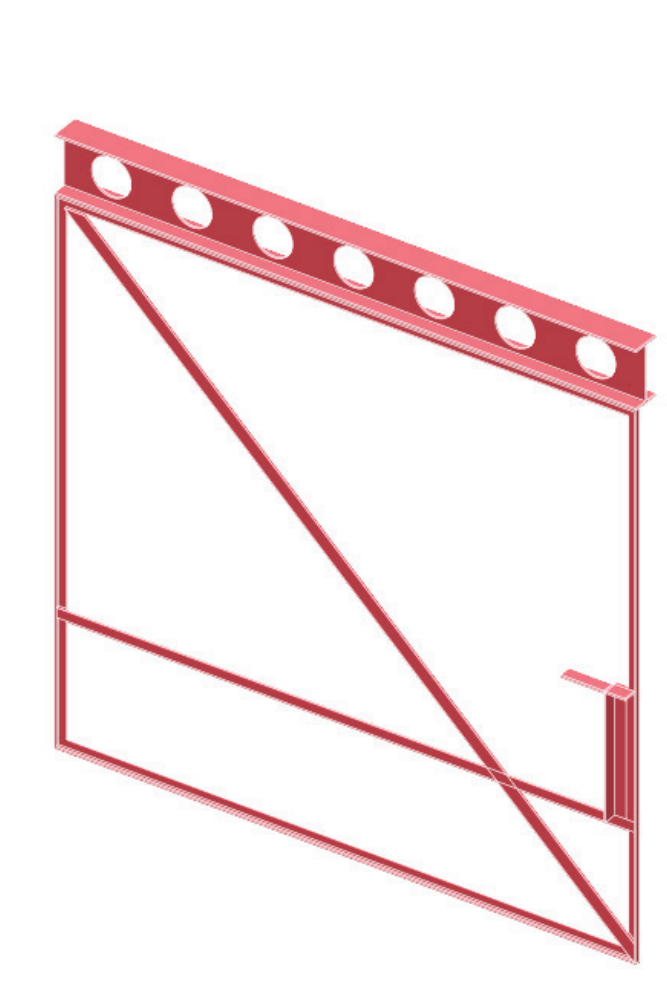
4th Floor Street in the Sky

## INTERIOR IDEA



Unit A Isometric : 1st, 2nd Floors

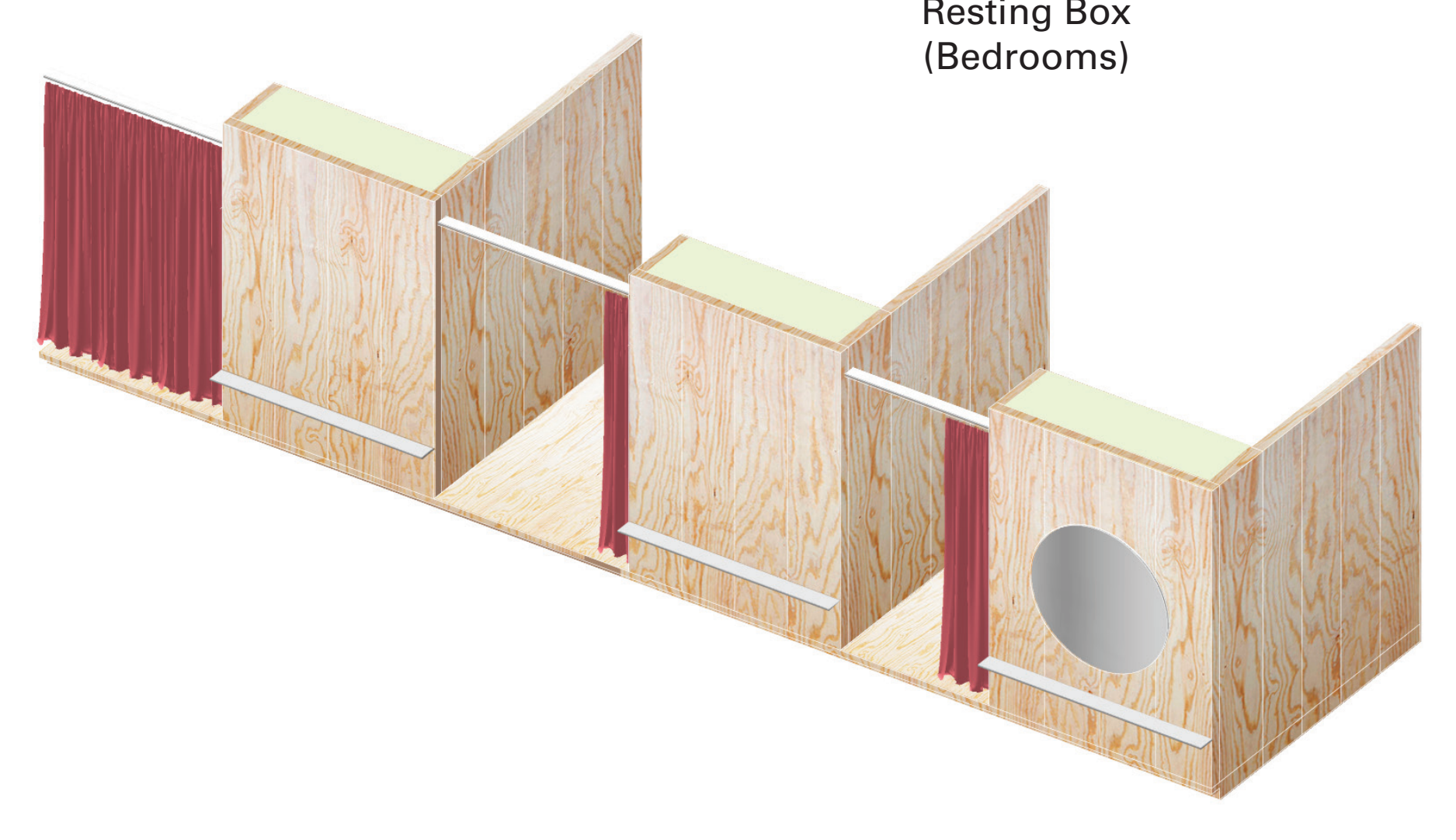
### Interventions



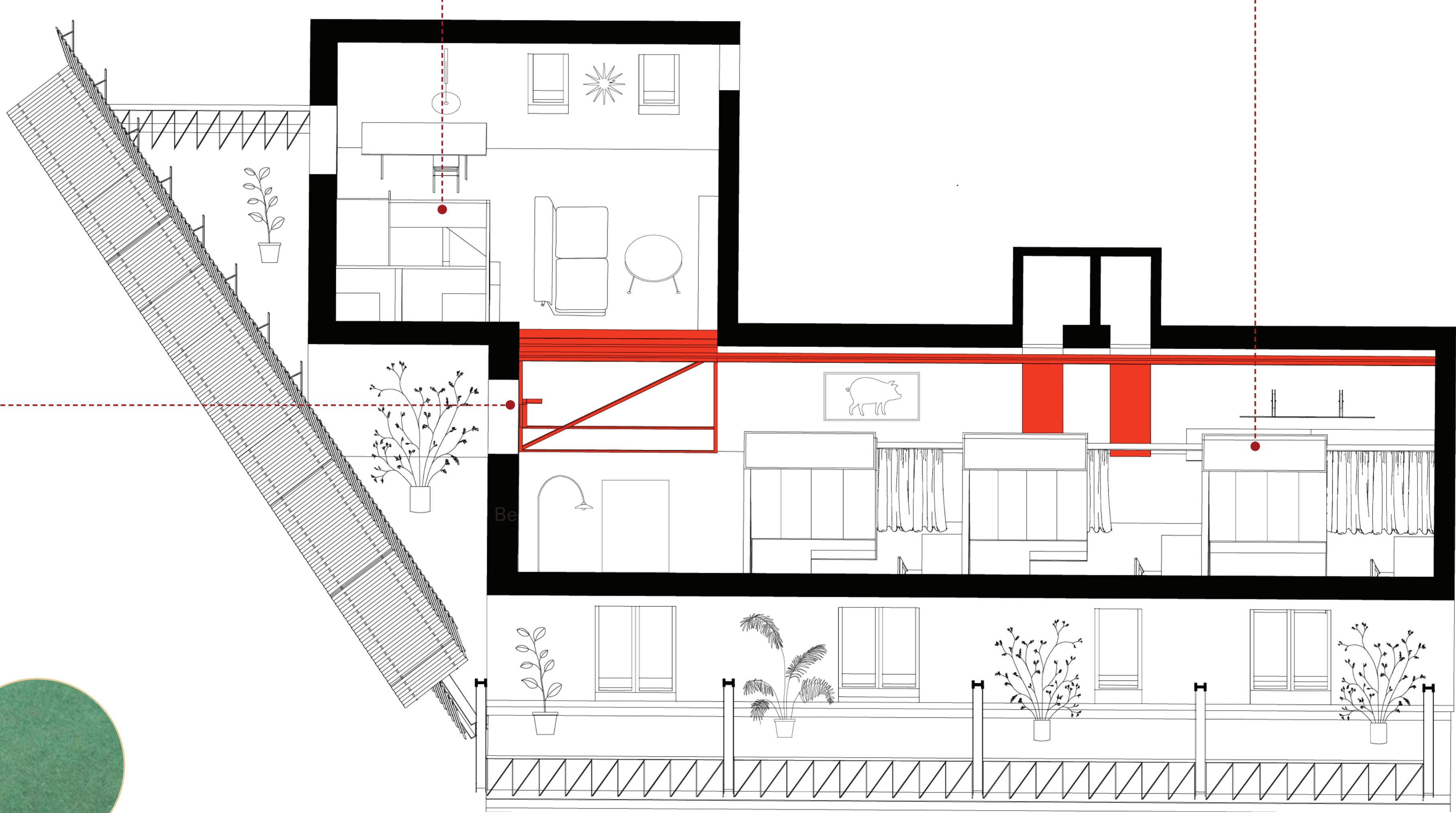
Light Partition (Translucent)



Service Box (Toilet, Shower)



Resting Box (Bedrooms)



Unit C Isometric : 3rd, 4th Floors



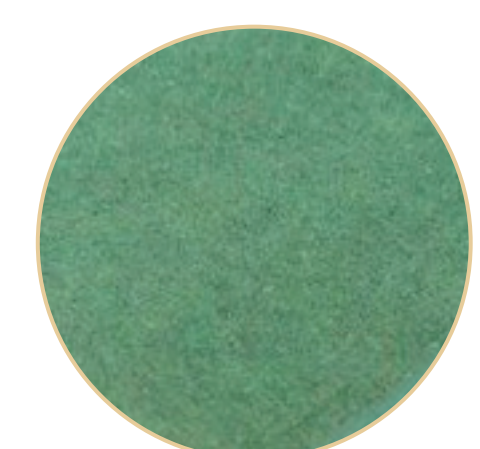
Birch Plywood



Polished Concrete



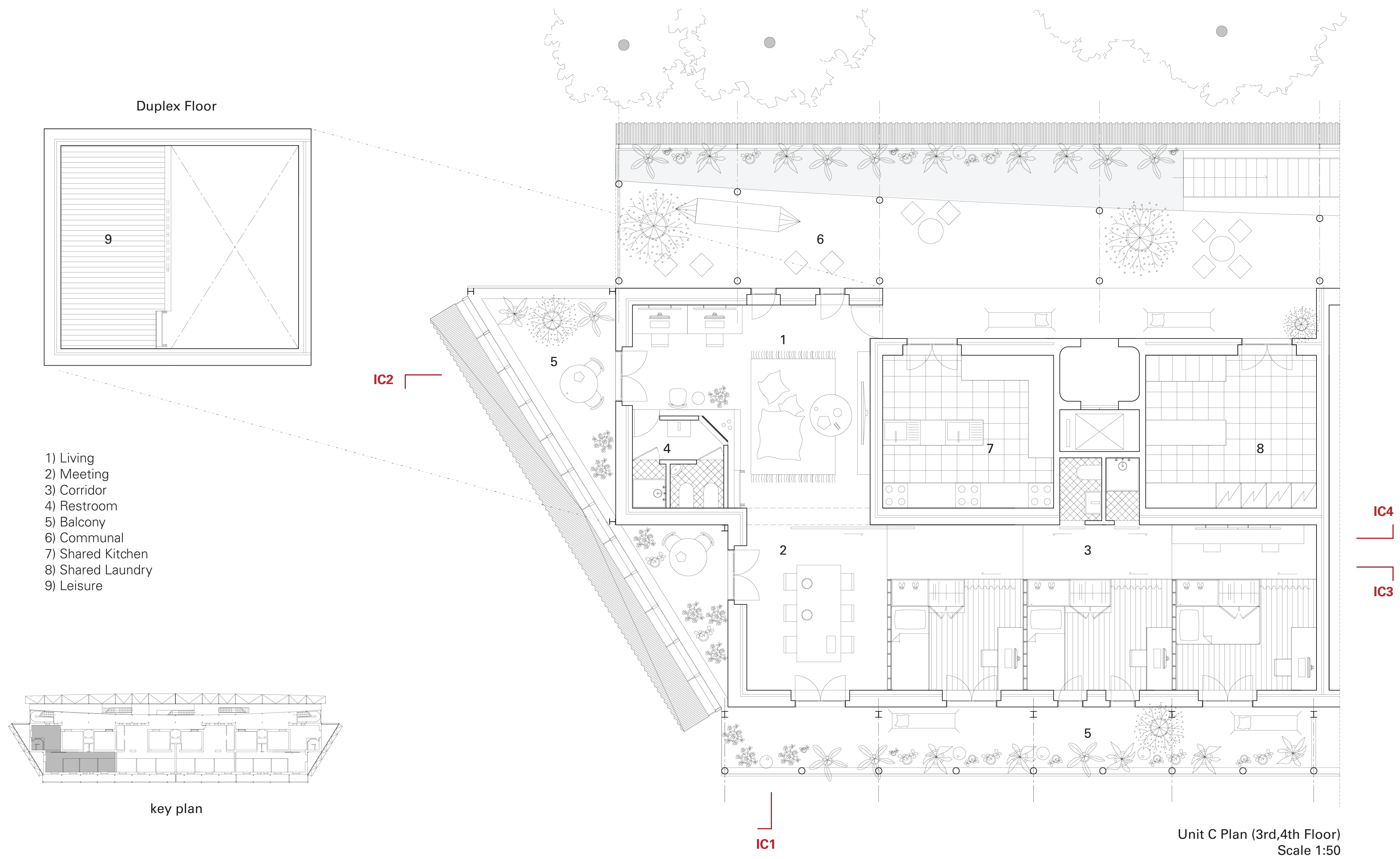
Curtain (Red)



Painted MDF (Green)



DETAIL OF UNIT C / DAY AREA

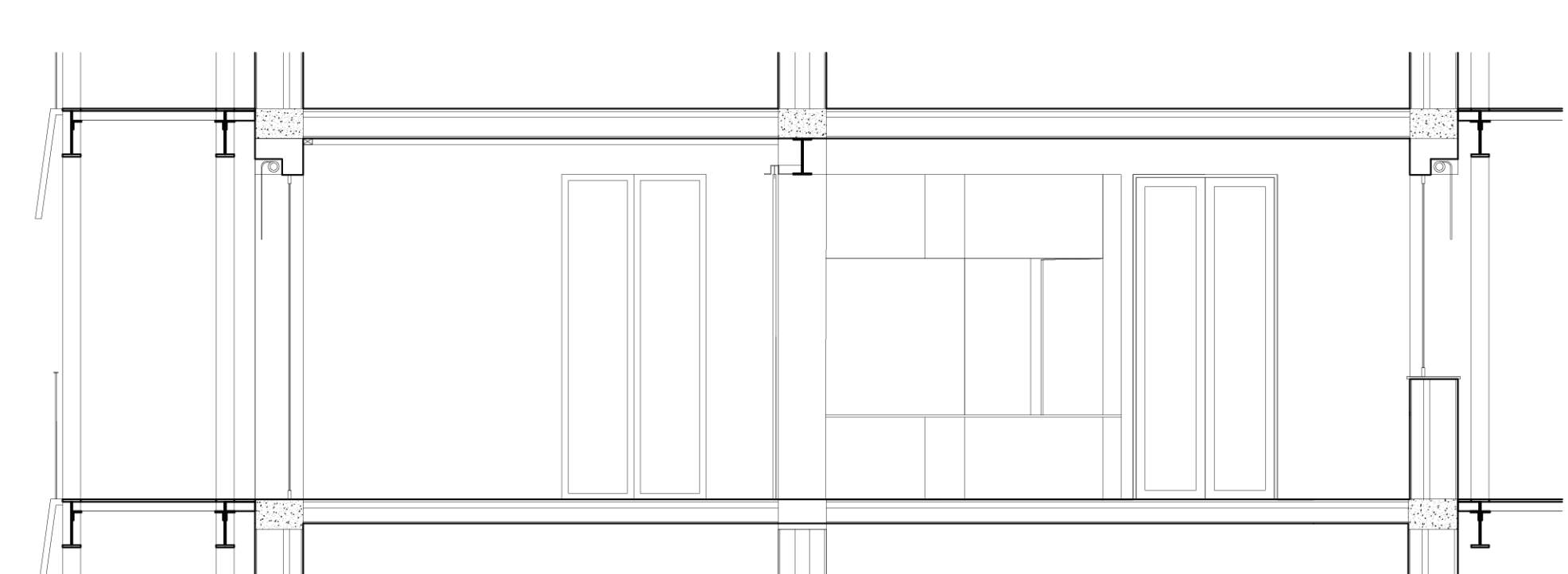


- 1) Living
- 2) Meeting
- 3) Corridor
- 4) Restroom
- 5) Balcony
- 6) Communal
- 7) Shared Kitchen
- 8) Shared Laundry
- 9) Leisure

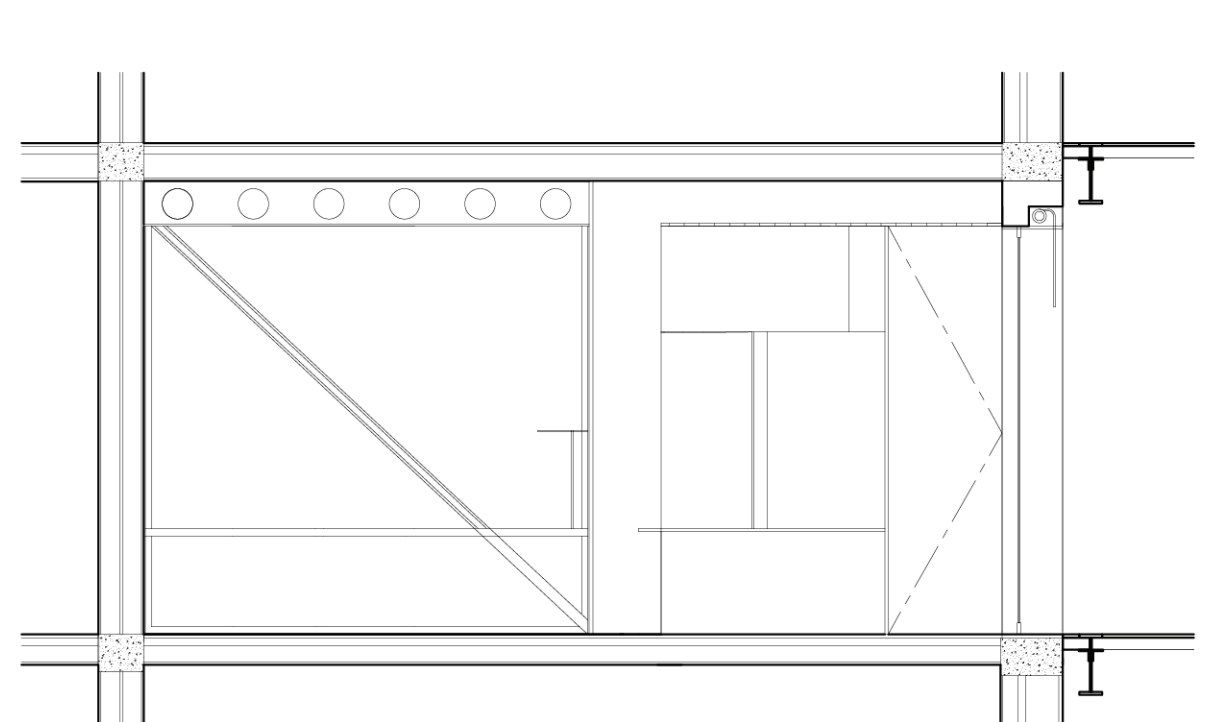
Unit C Plan (3rd,4th Floor)  
Scale 1:50

Day Area

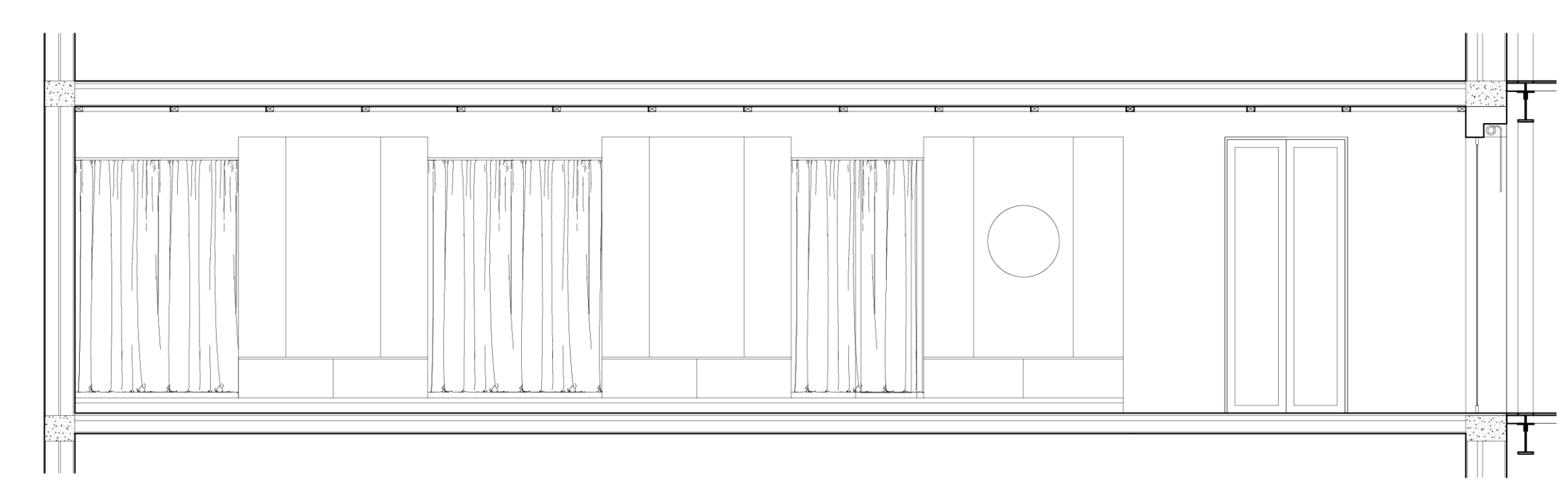
Night Area



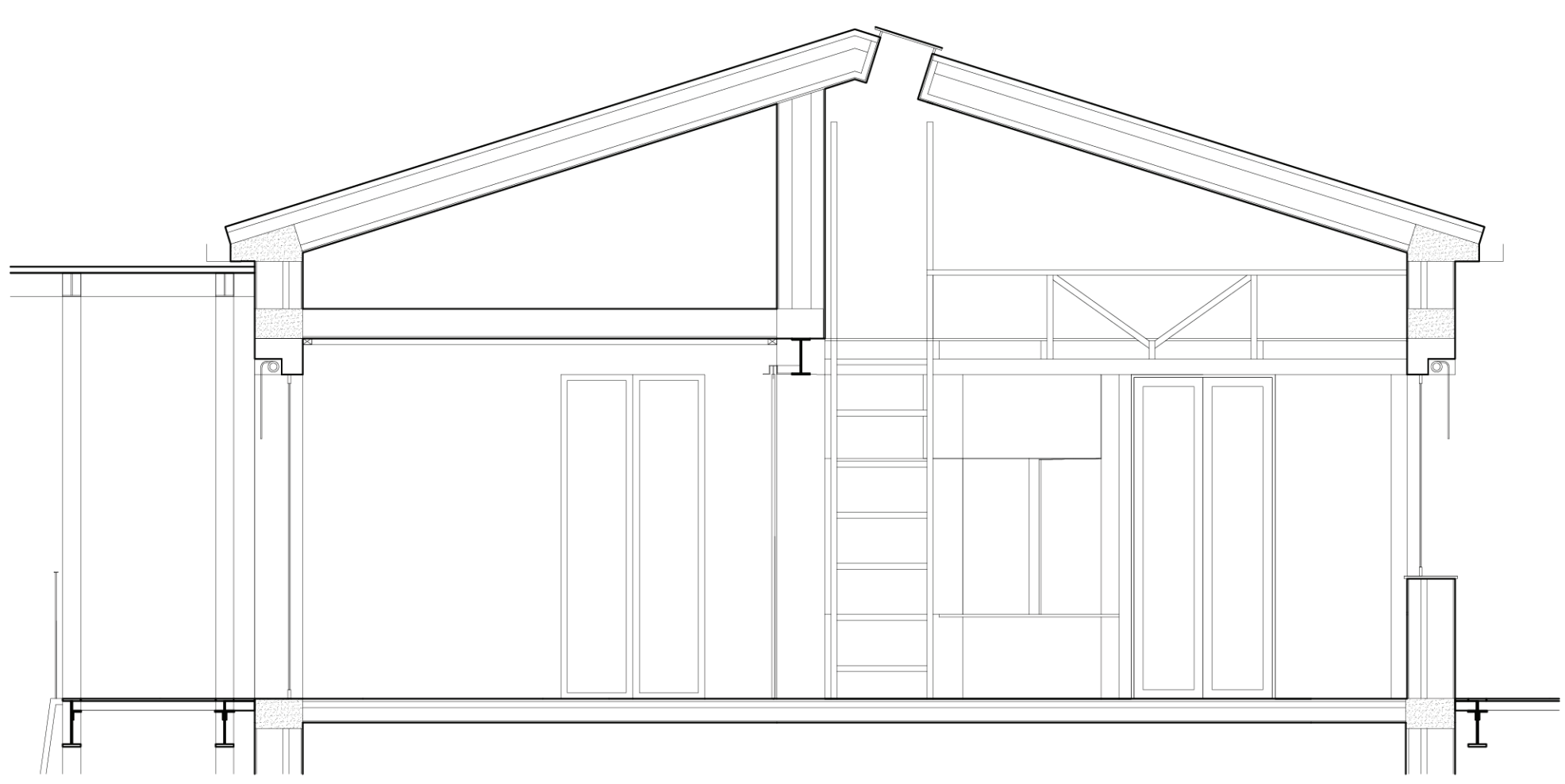
Section IC1  
Scale 1:50



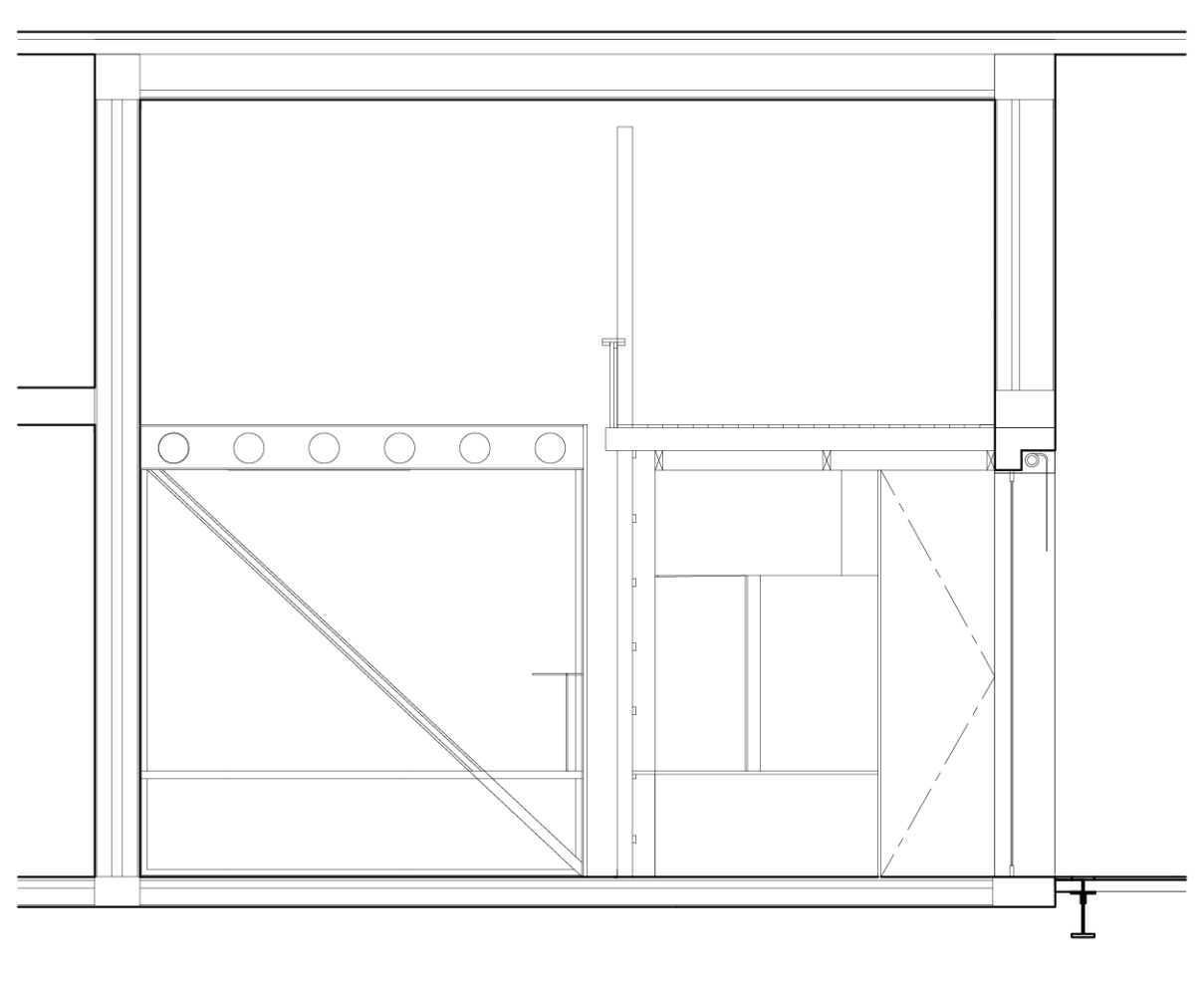
Section IC2  
Scale 1:50



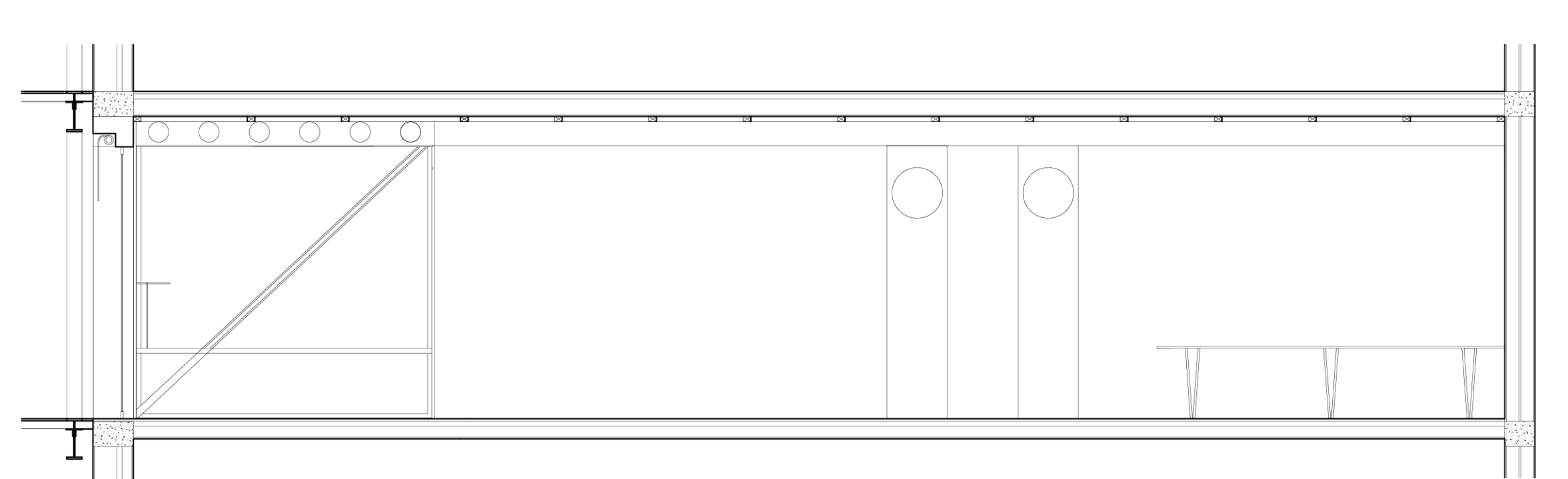
Section IC3  
Scale 1:50



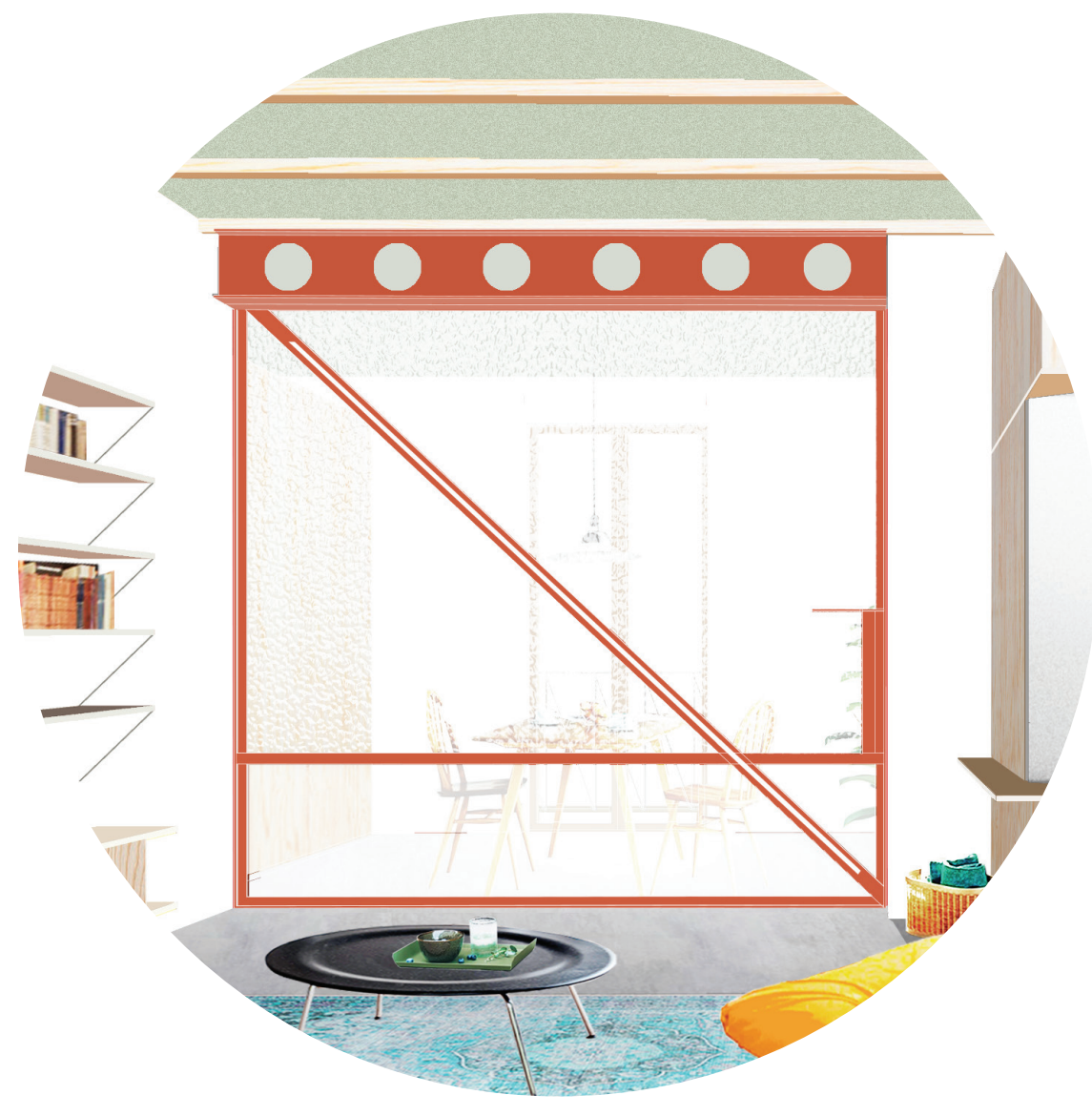
Section IC1 (Duplex)  
Scale 1:50



Section IC2 (Duplex)  
Scale 1:50



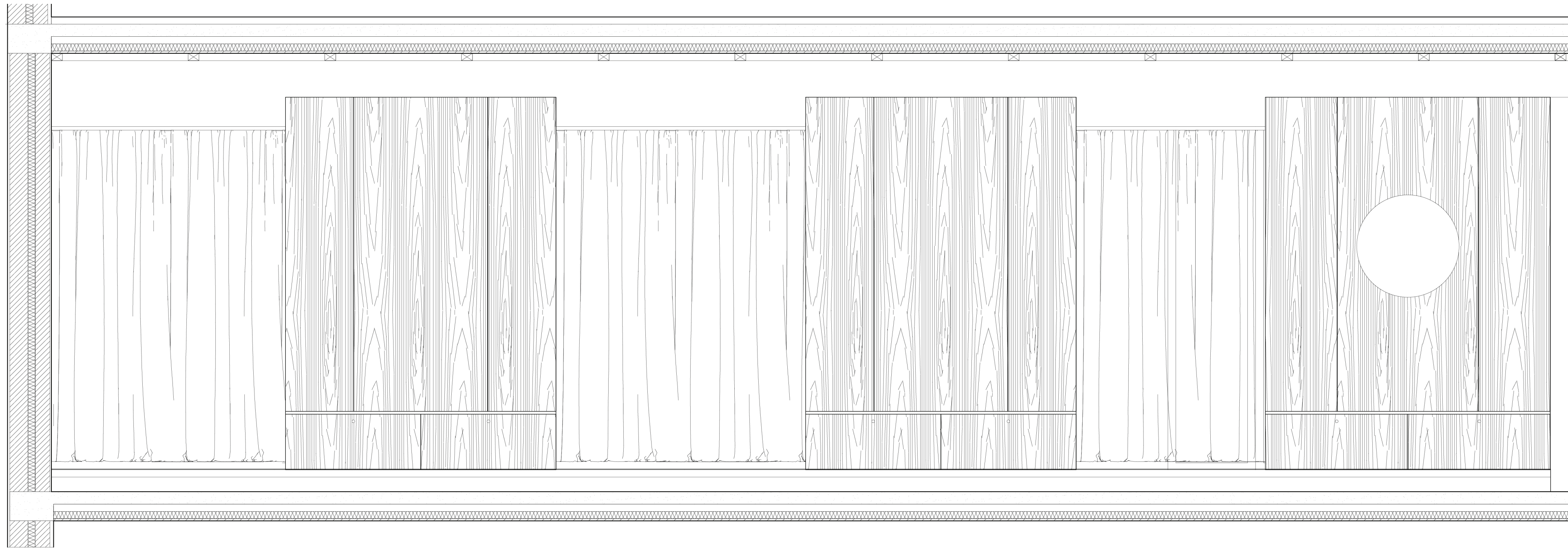
Section IC4  
Scale 1:50



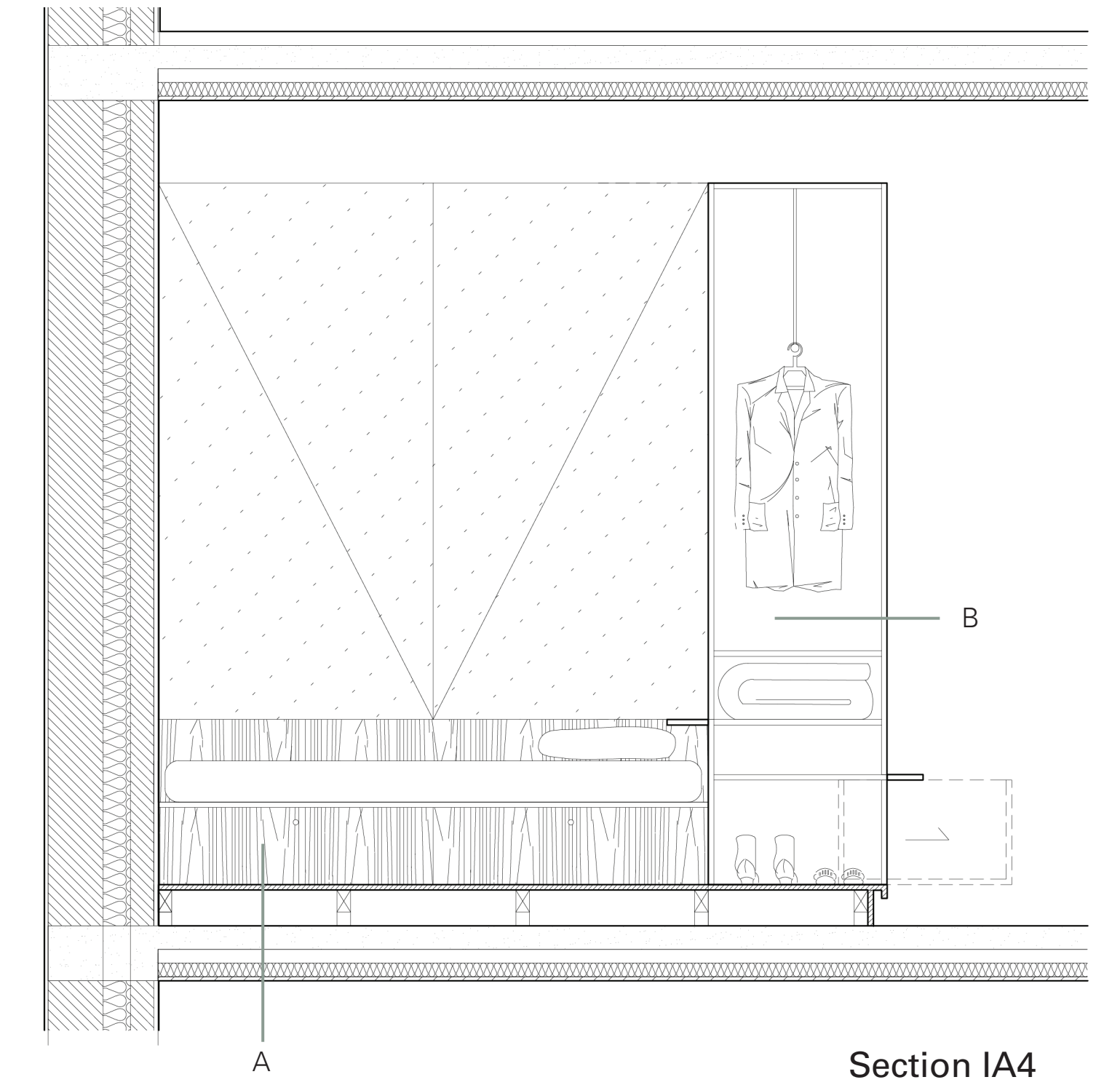
Living Area (Closed Partition)



Living Area (Opened Partition)



Section IA1  
Scale 1:20

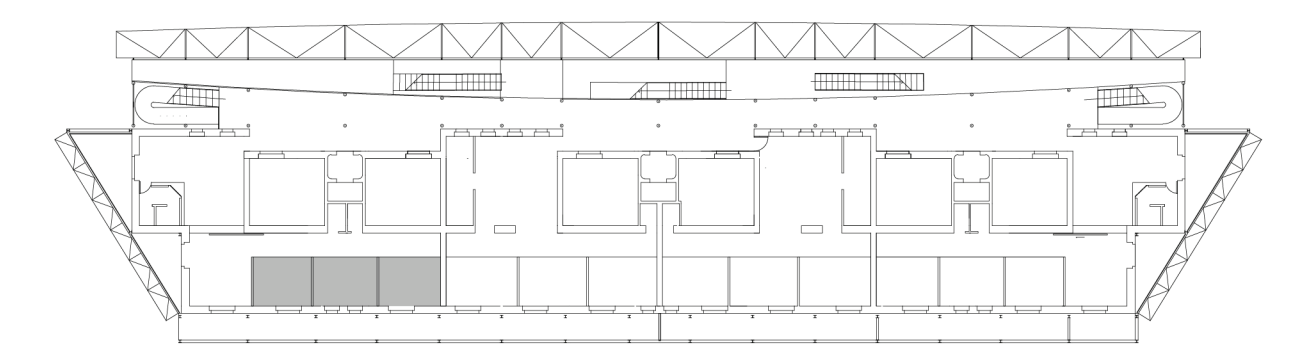


Section IA4  
Scale 1:20



- 1) Bedroom
- 2) Balcony
- 3) Corridor
- 4) Restroom

Night Area Plan  
Scale 1:20

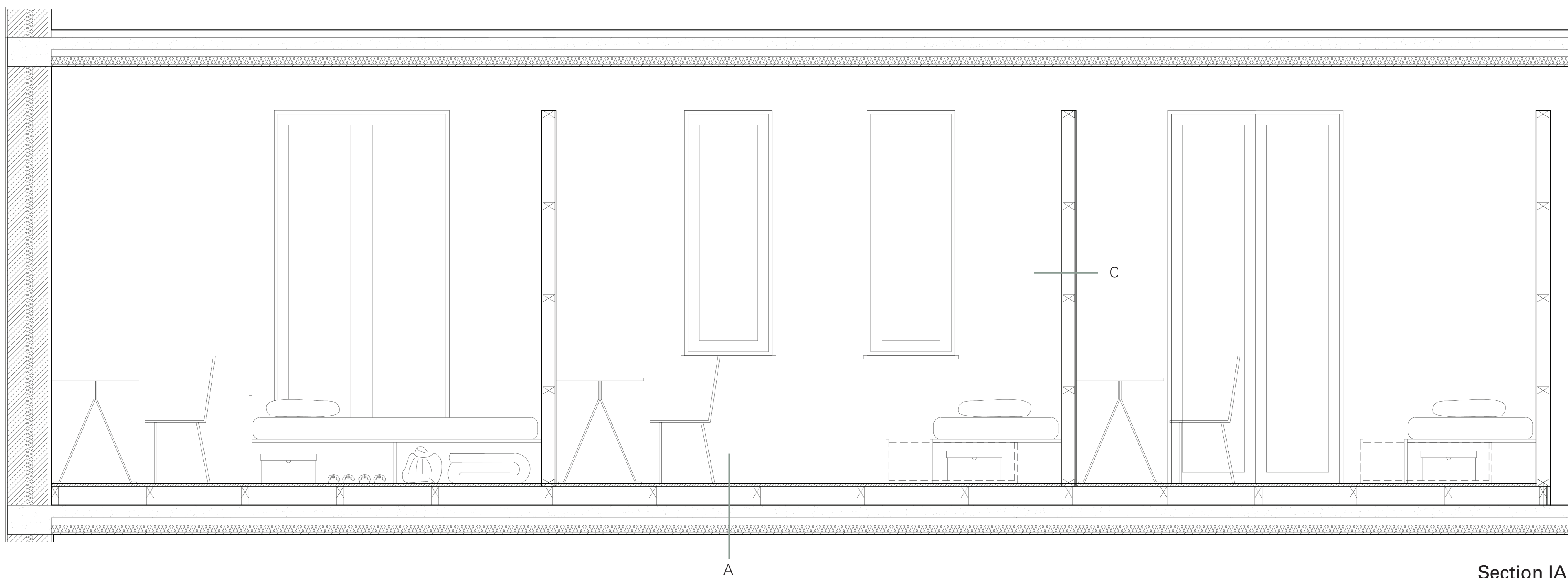


key plan

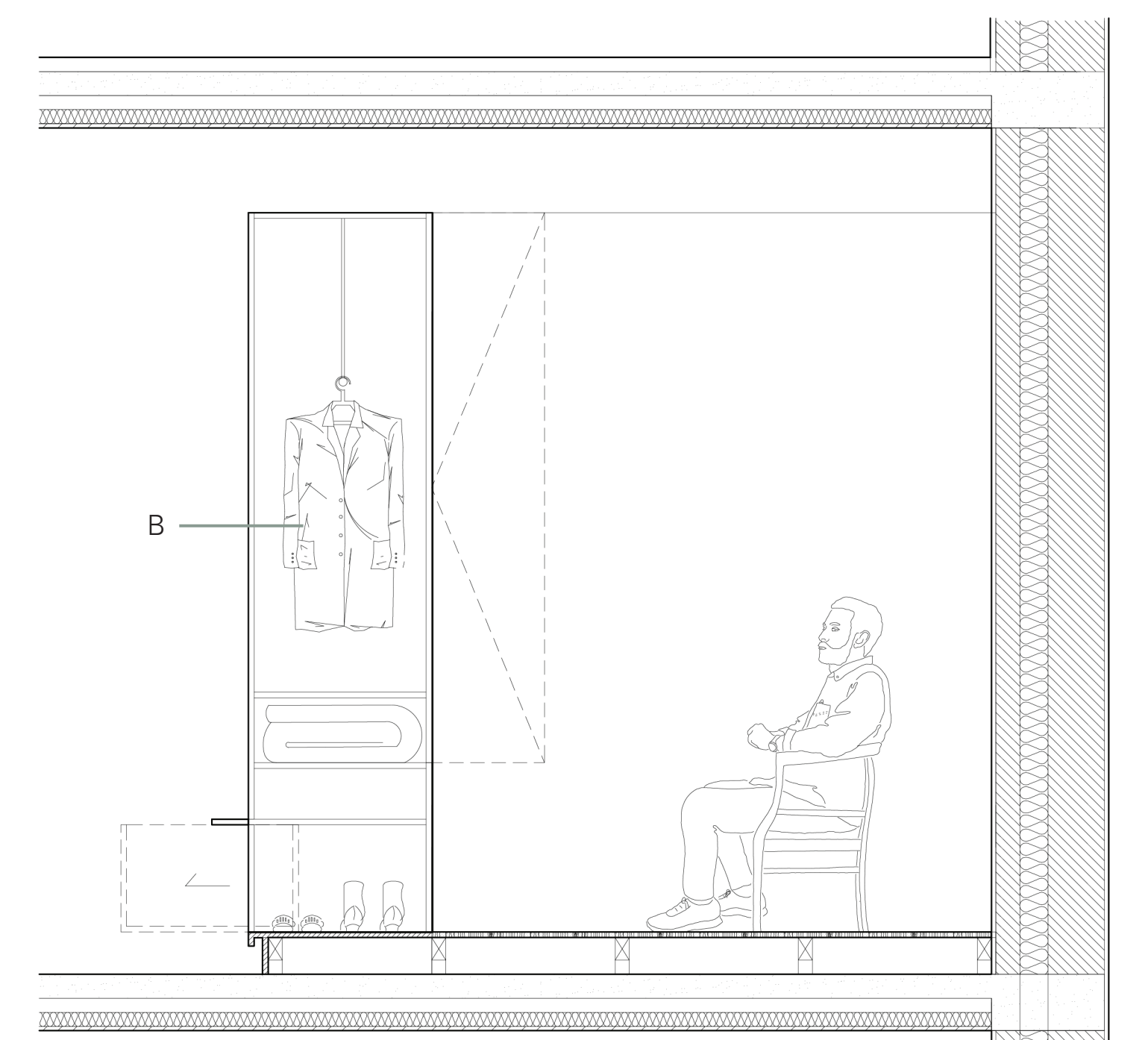
- Floor Detail (A)
- 25 mm. Birch Plywood Plank
  - 25 x 75 Wood Beam
  - 50 mm. Concrete Finishing

- Cabinet Detail (B)
- 20 mm. MDF / Lacquer, Painted in Green

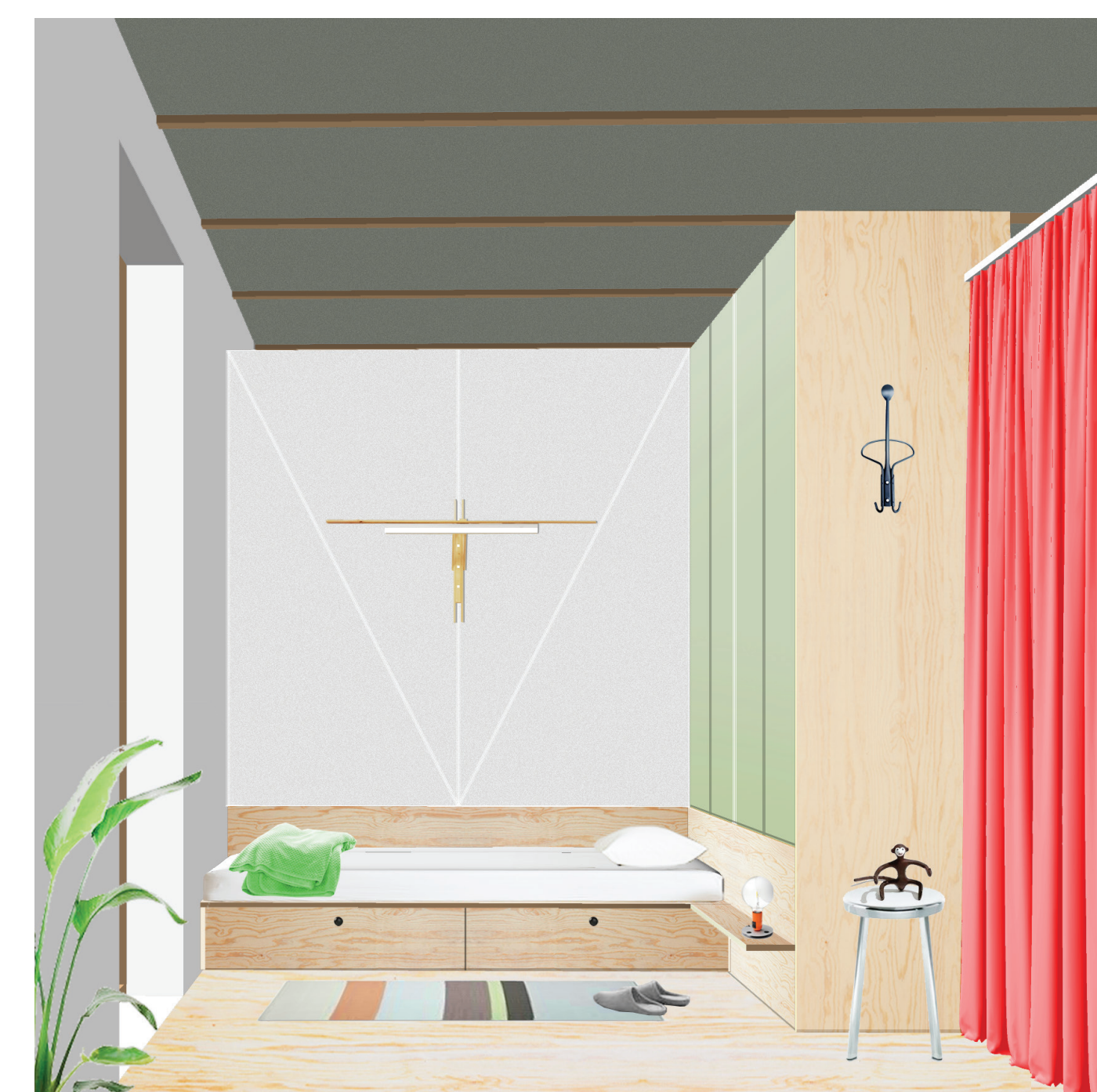
- Partition Detail (C)
- 15 mm. Plywood Panel, Coated with Matt Urythane
  - 50x100 Wood Structures



Section IA2  
Scale 1:20

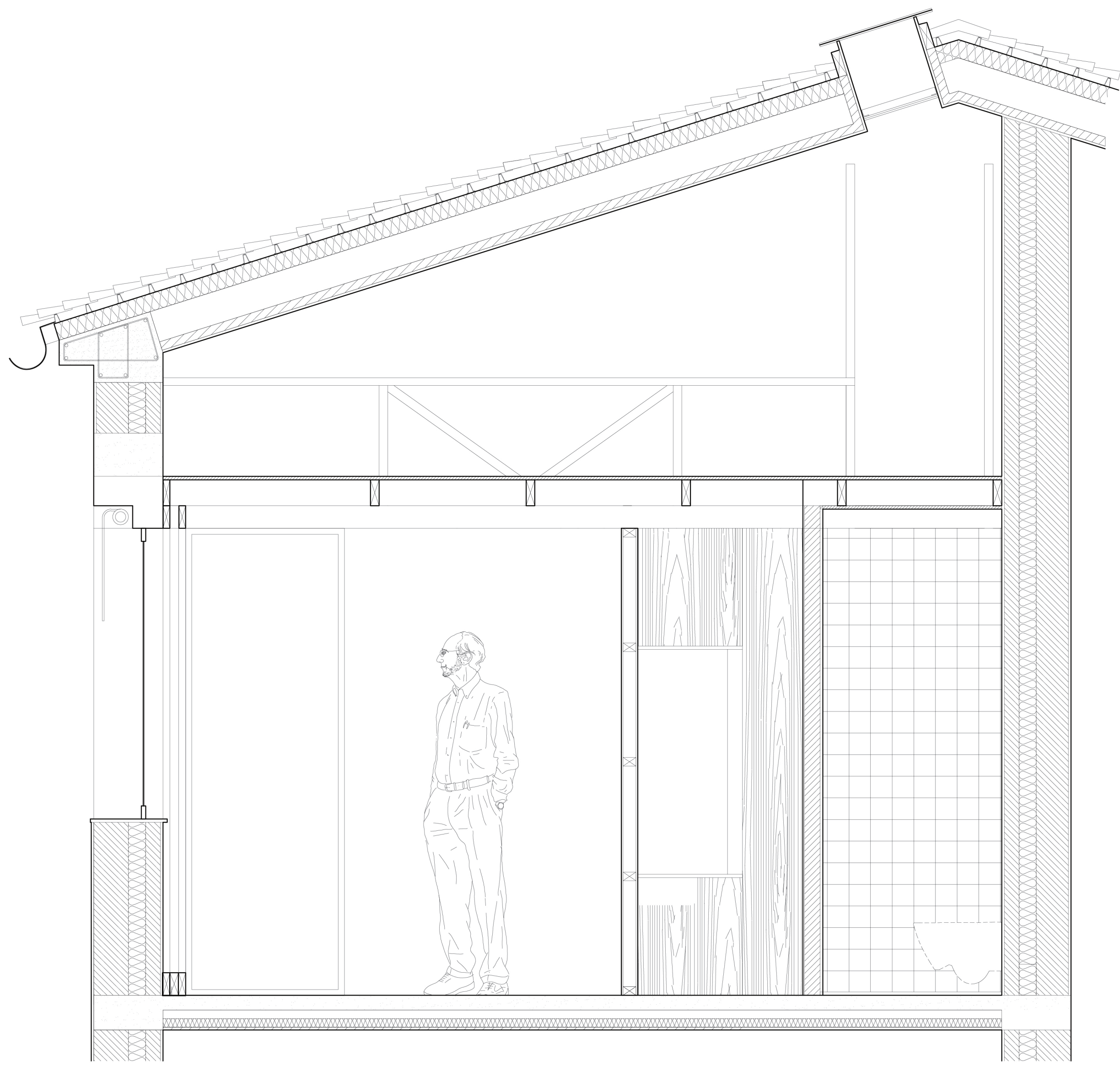


Section IA3  
Scale 1:20

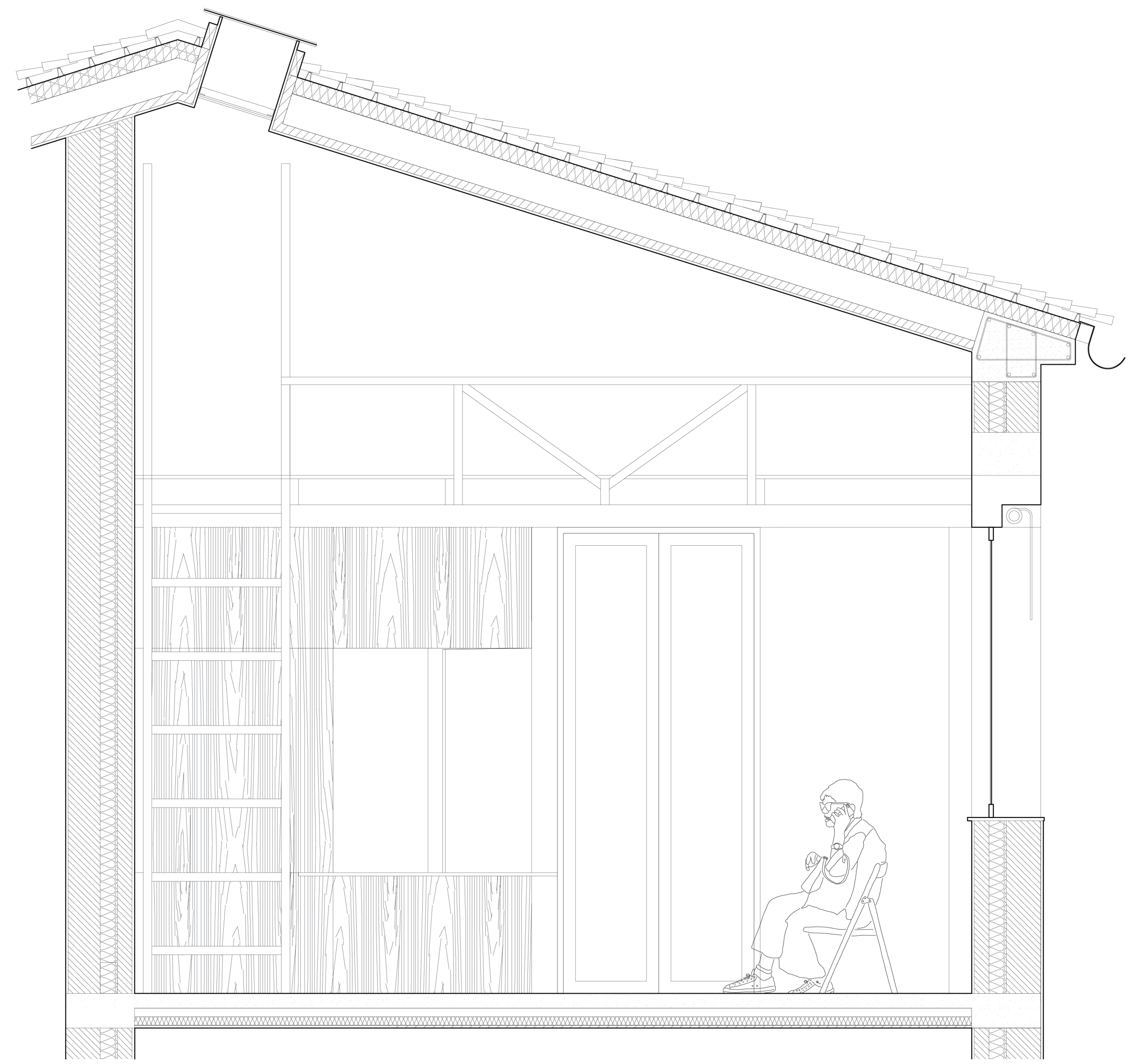


From up to down : Elevation of Night Area 1 , Elevation of Night Area 2

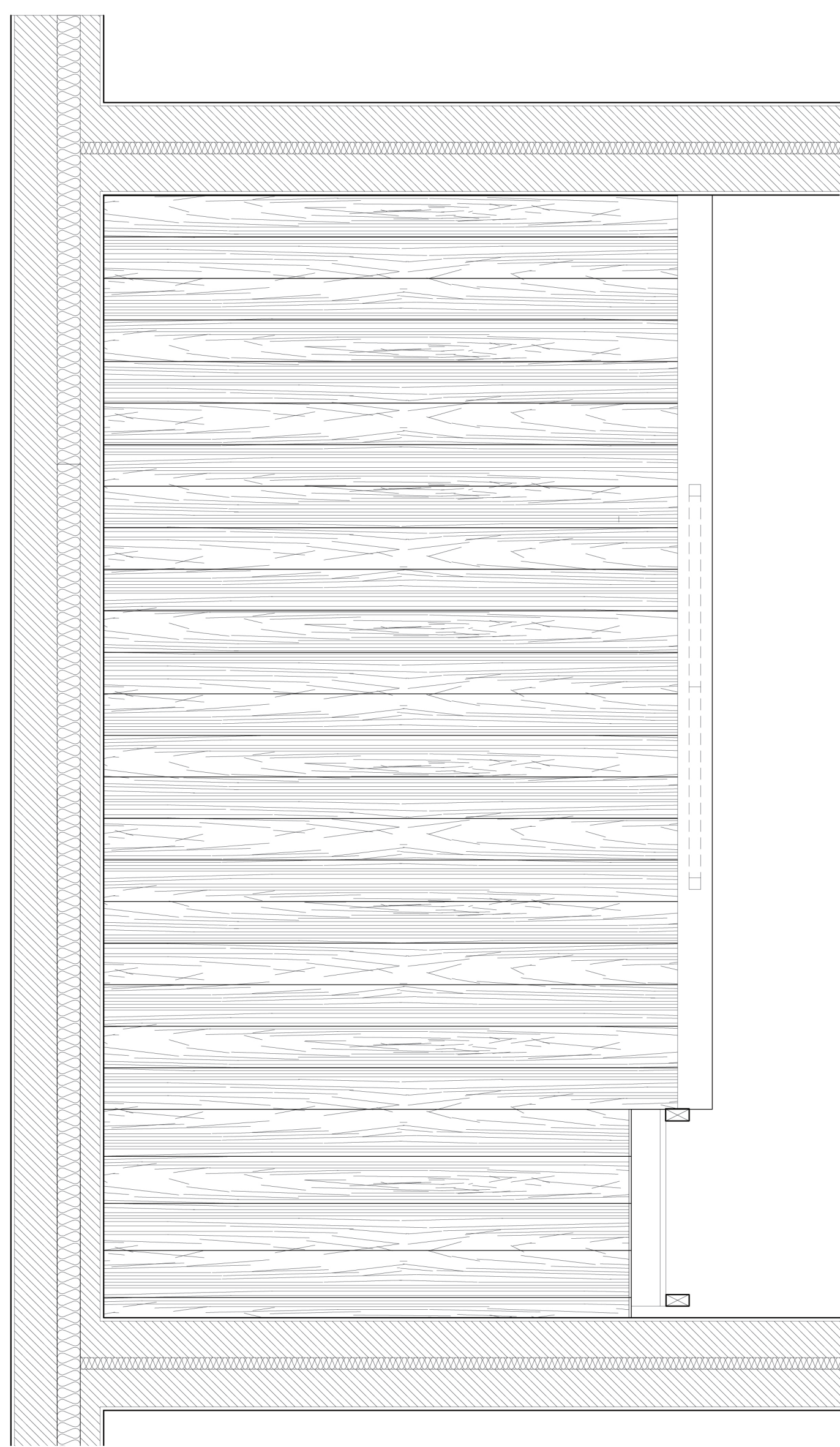
Sleeping Unit



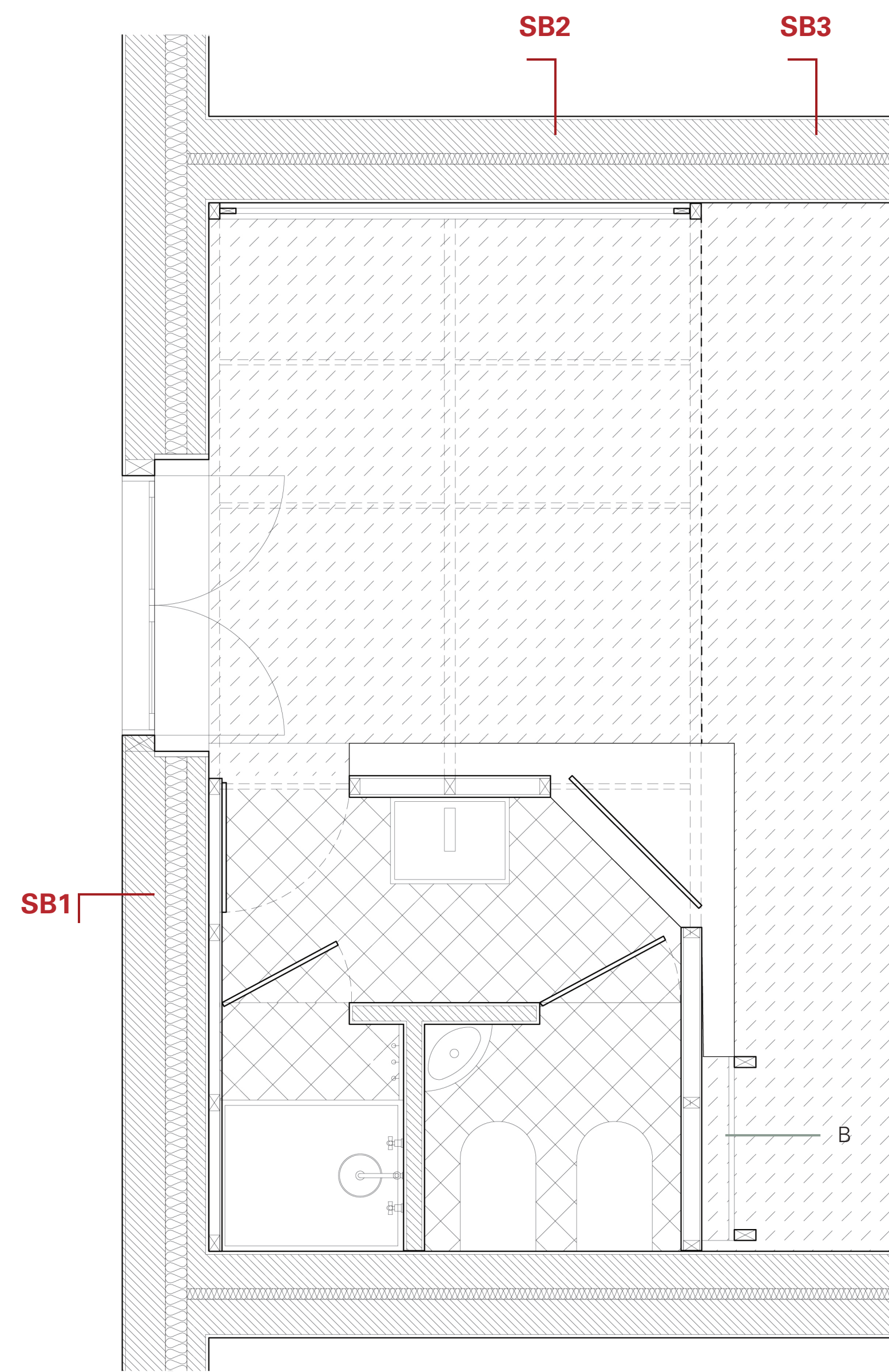
Section SB2  
Scale 1:20



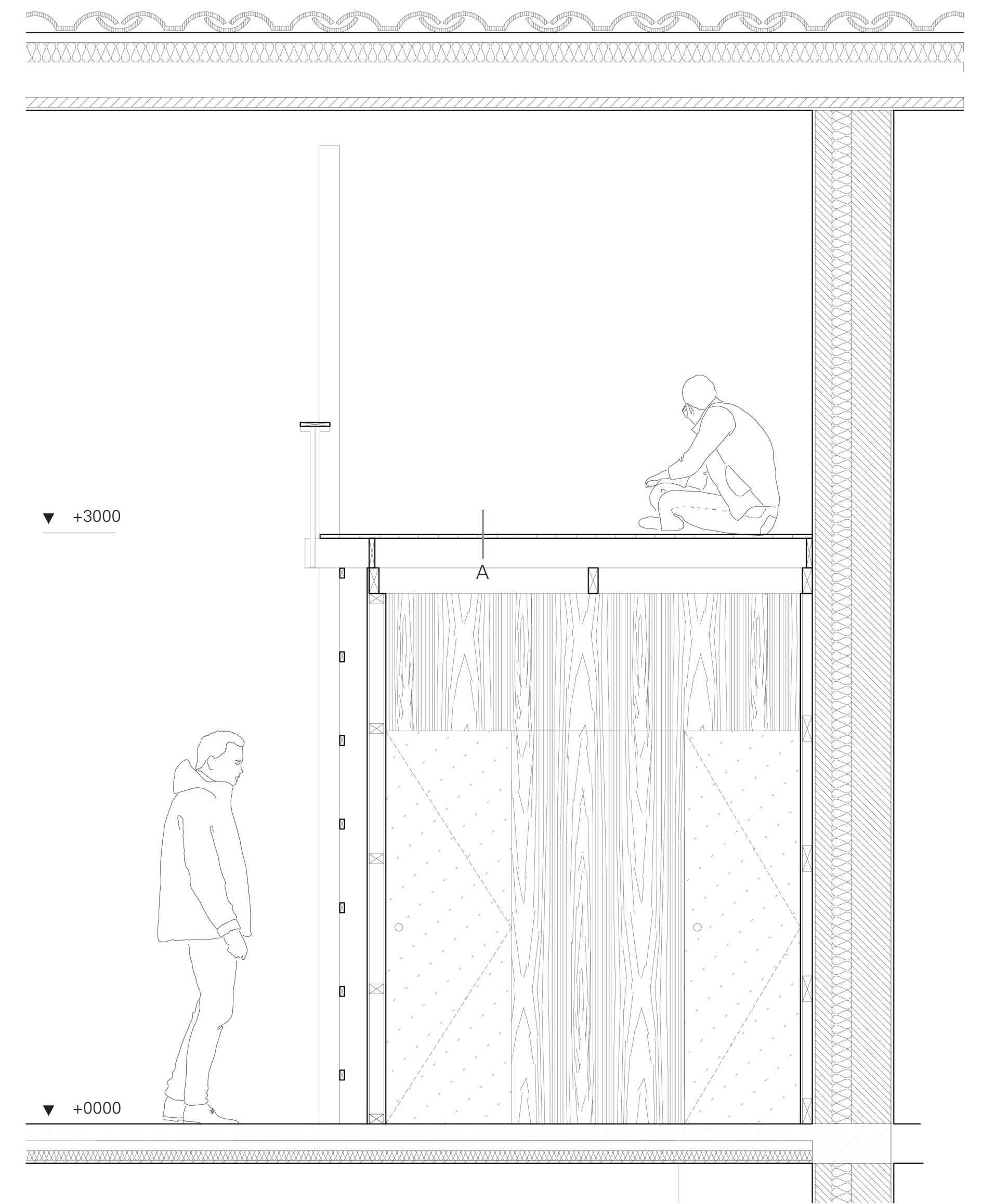
Section SB3  
Scale 1:20



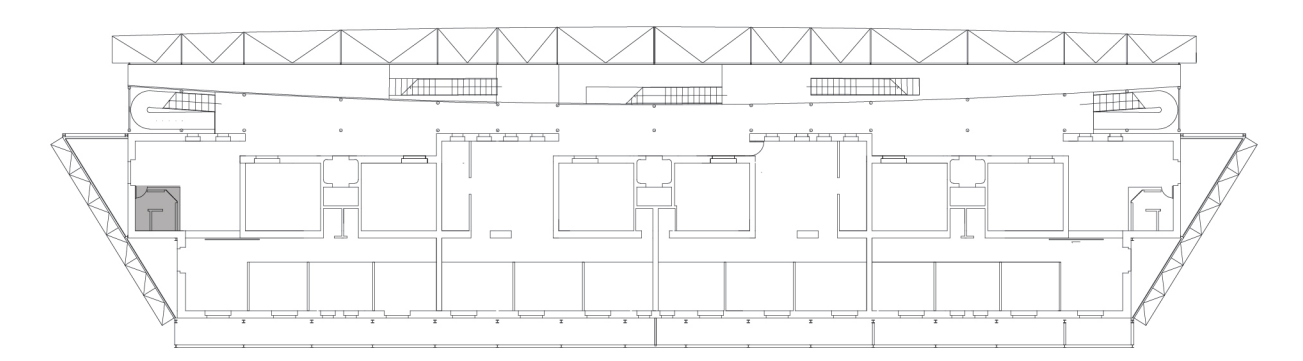
Service Box Plan (Upper Floor)  
Scale 1:20



Service Box Plan  
Scale 1:20



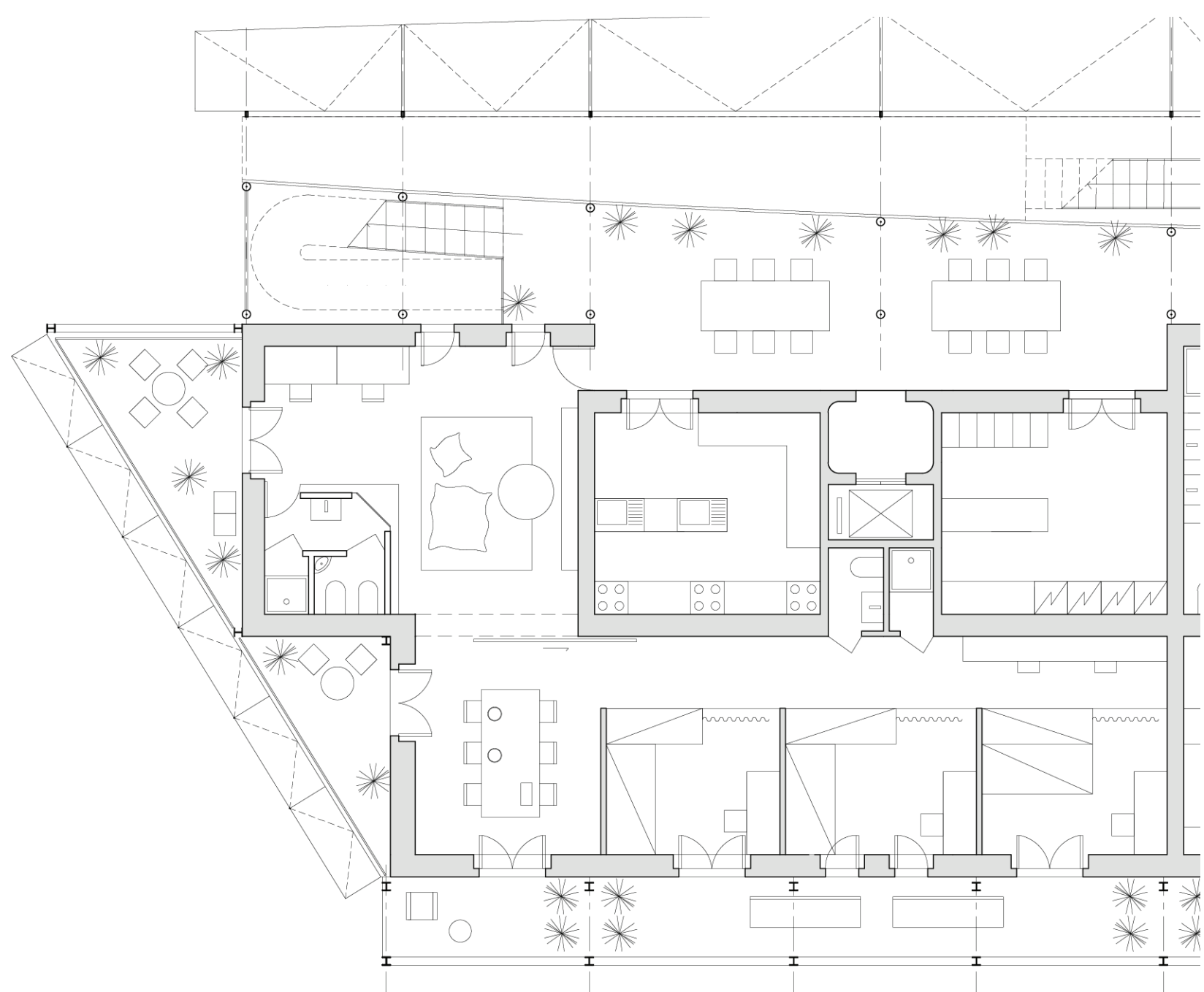
Section SB1  
Scale 1:20



key plan

Floor Detail (A)  
- 25 mm. Birch Plywood Plank, Sand and Coated with Matt Urythane  
- 25 x 75 Wood Beam

Partition Detail (B)  
- 15 mm. Plywood Panel 2 sided, Coated with Matt Urythane  
- 50x100 Wood Structures  
- 150 x 150 mm. White Ceramic Tile



Unit C Plan / Scale 1:100

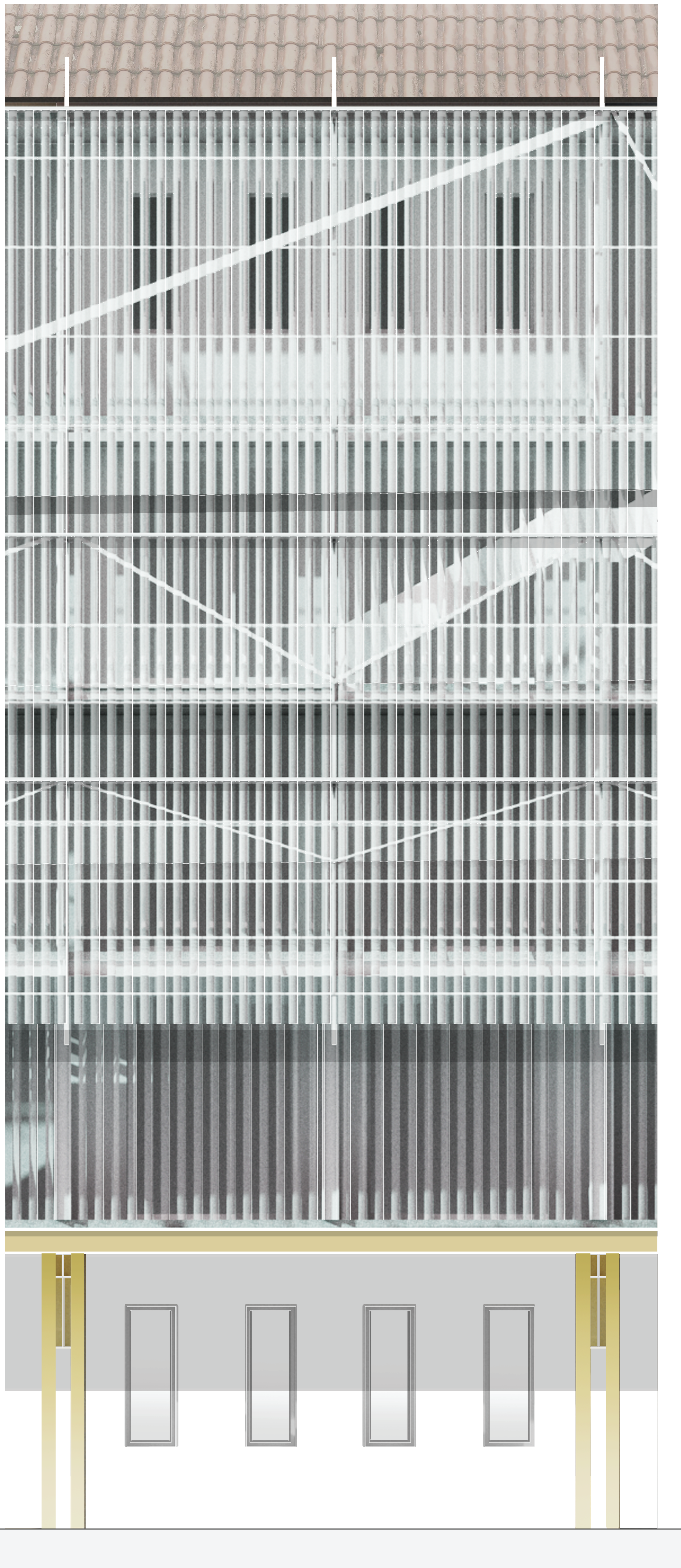
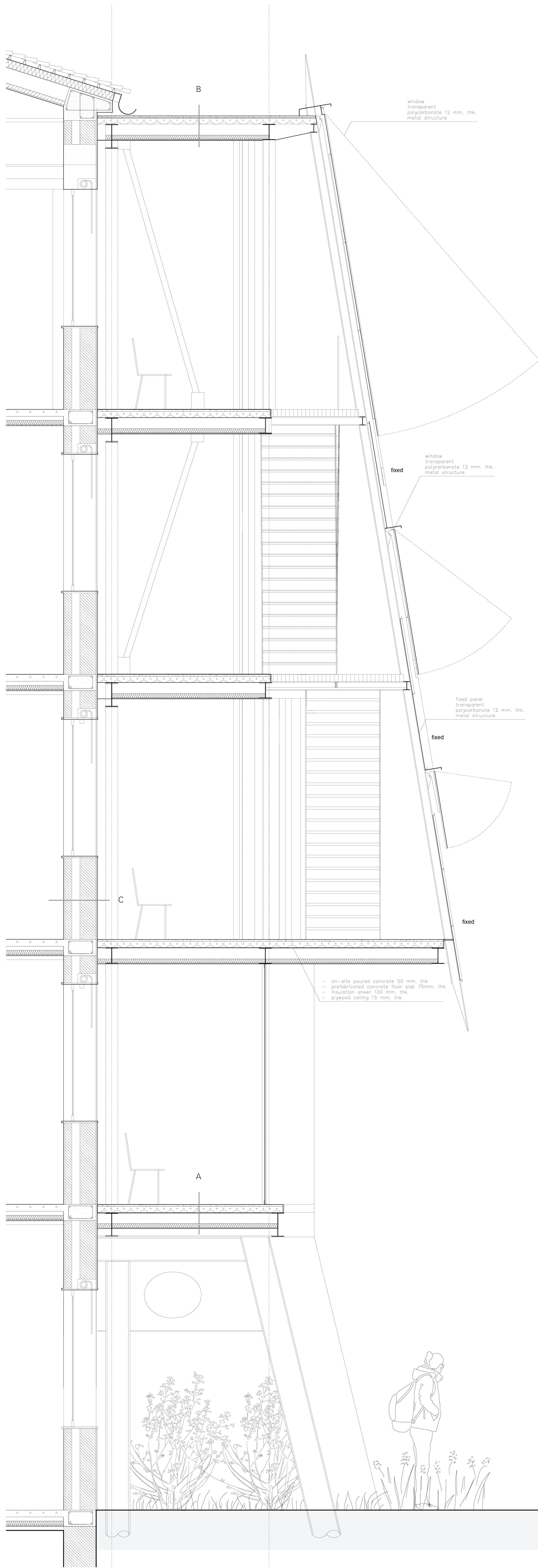


Living Area (Duplex)



Additional Balcony

## WALL SECTION (GARDEN FACADE)

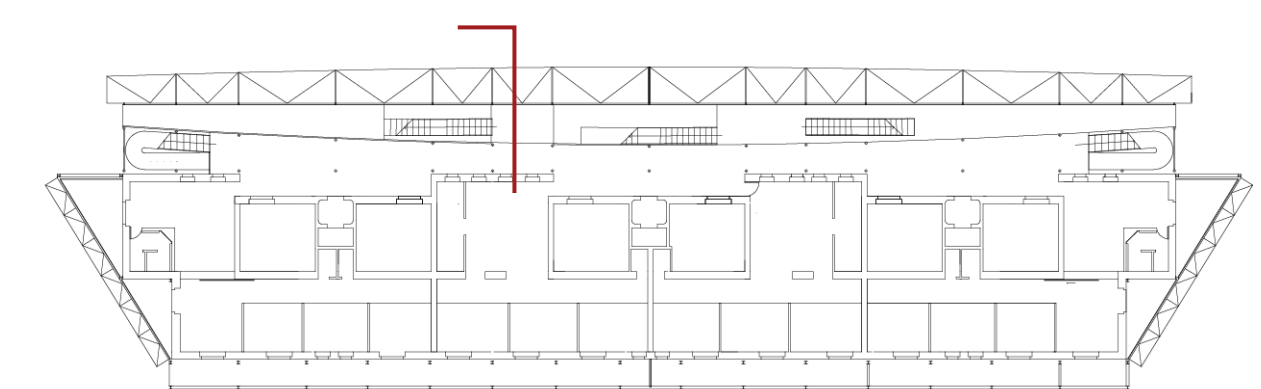


Wall Section  
1:20

- Floor Detail (A)**
- on-site poured concrete 50 mm. thk
  - prefabricated concrete floor slab 75mm. thk
  - insulation sheet 100 mm. thk
  - plywood ceiling 15 mm. thk

- Roof Detail (B)**
- on-site poured concrete 50 mm. thk
  - water membrane
  - prefabricated concrete floor slab 75mm. thk
  - insulation sheet 100 mm. thk
  - plywood ceiling 15 mm. thk

- Wall Detail (C)**
- inner plaster 15 mm.
  - masonry brick 100 mm.
  - insulation sheet 100 mm. thk
  - existing masonry wall 125 mm. thk
  - outer plaster 15 mm.



key plan