

TOTAL DRAWING SET: DESIGNING DIGNITY

Designing care facilities to enhance autonomy and quality of life for people with dementia

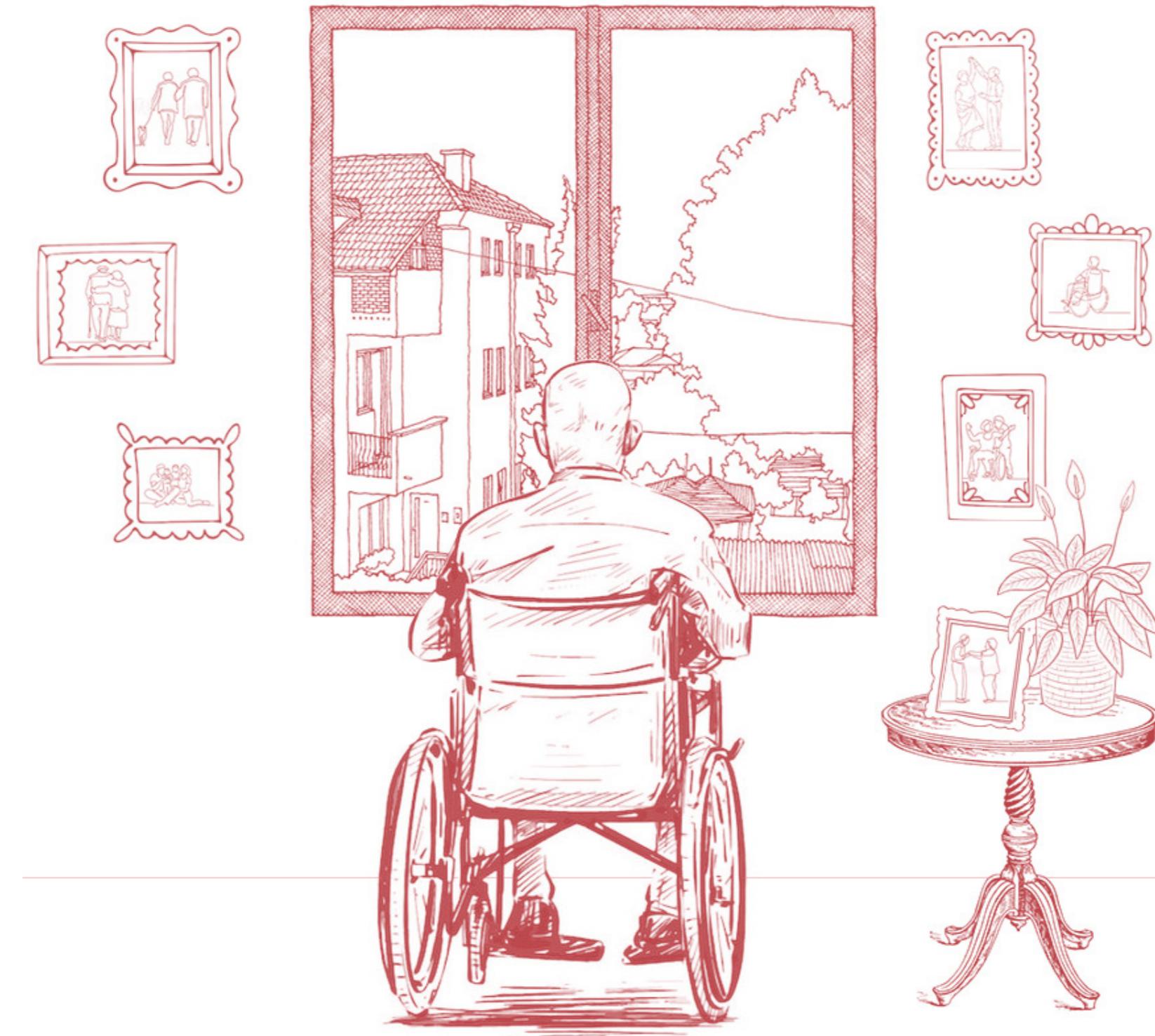


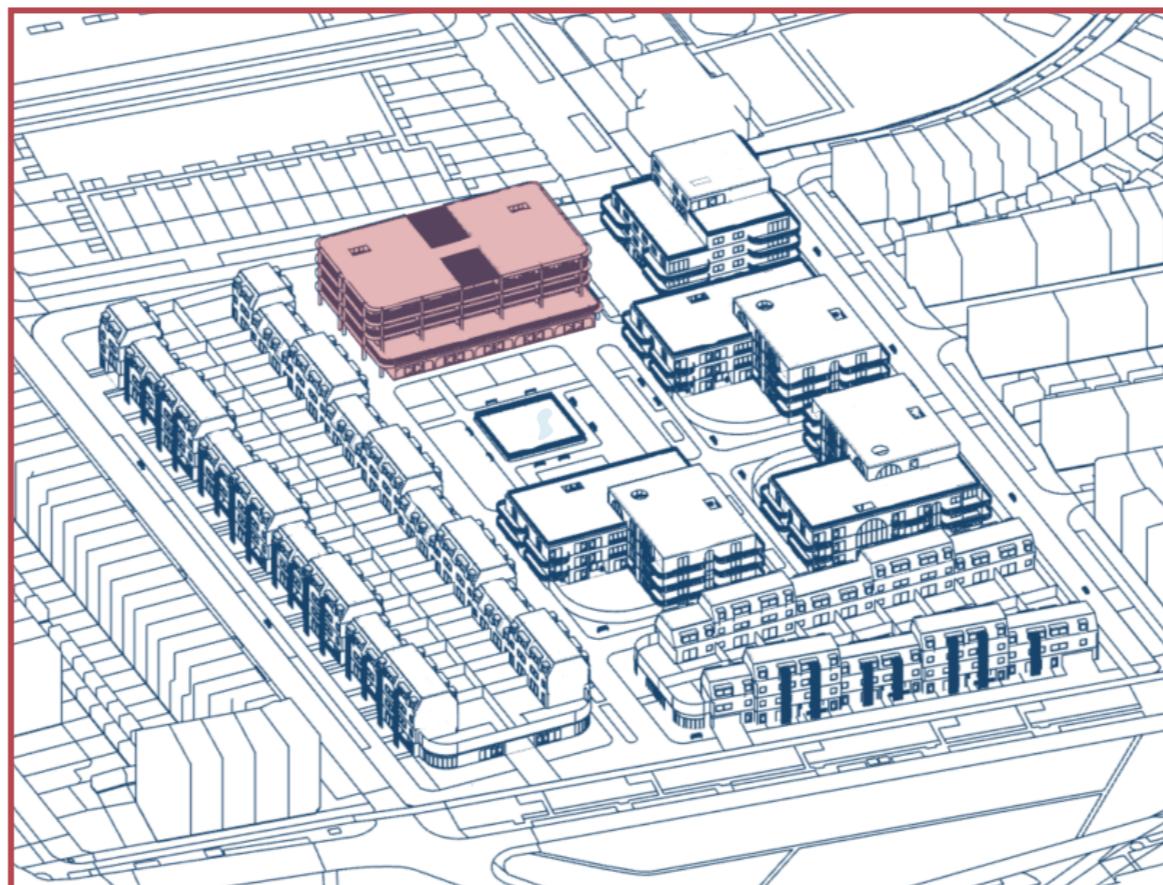
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1. FACADES

Designing dignity

PLACEMENT FACADES





EAST FACADE

1:200



NORTH FACADE

1:200



WEST FACADE

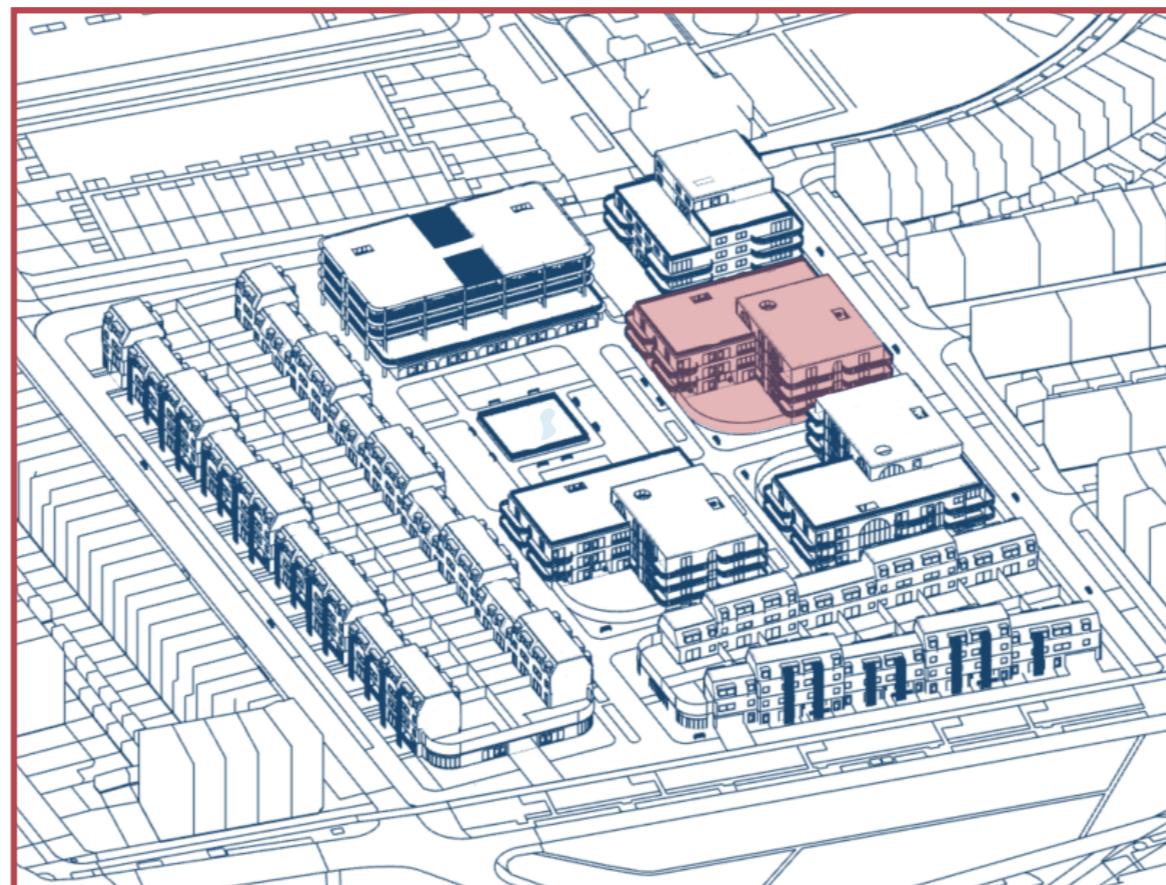
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SOUTH FACADE

1:200

PLACEMENT FACADES





EAST FACADE

1:200



NORTH FACADE

1:200



WEST

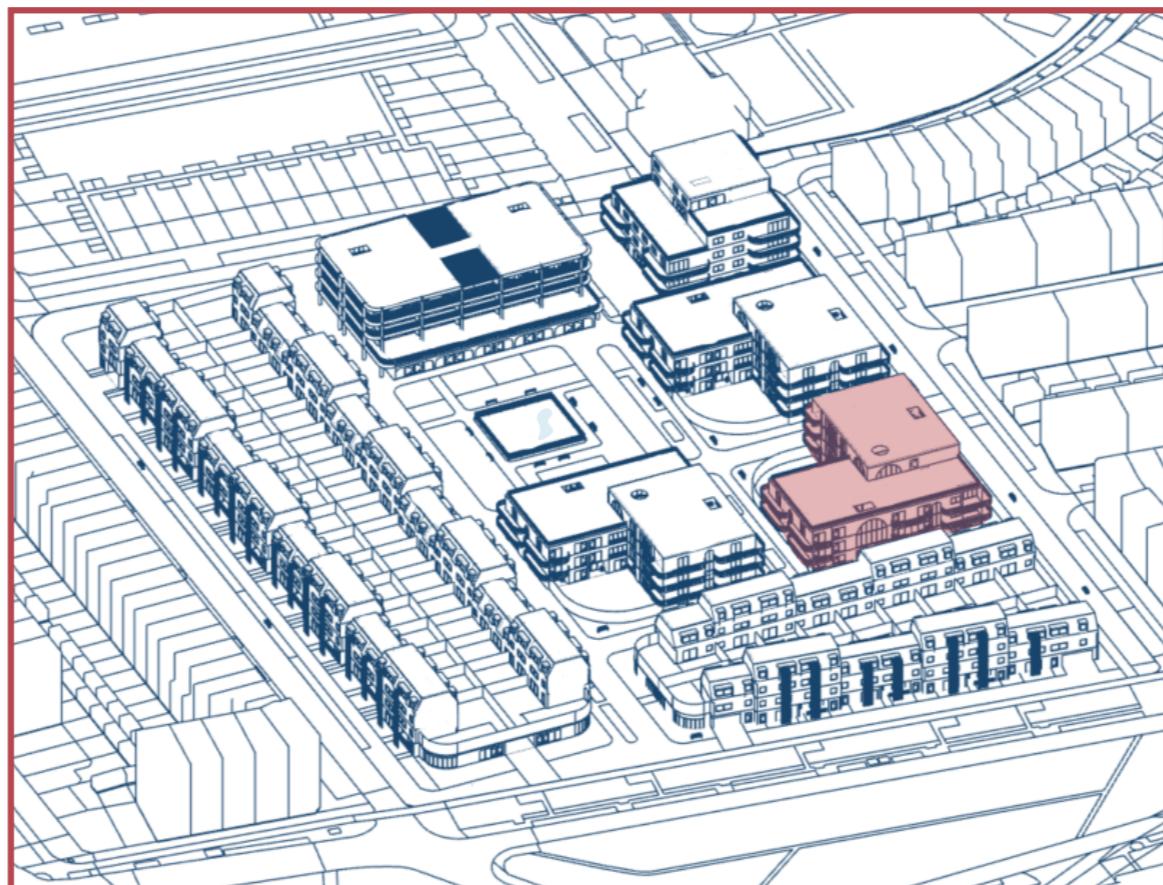
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SOUTH

1:200

PLACEMENT FACADES





EAST FACADE

1:200



NORTH FACADE

1:200

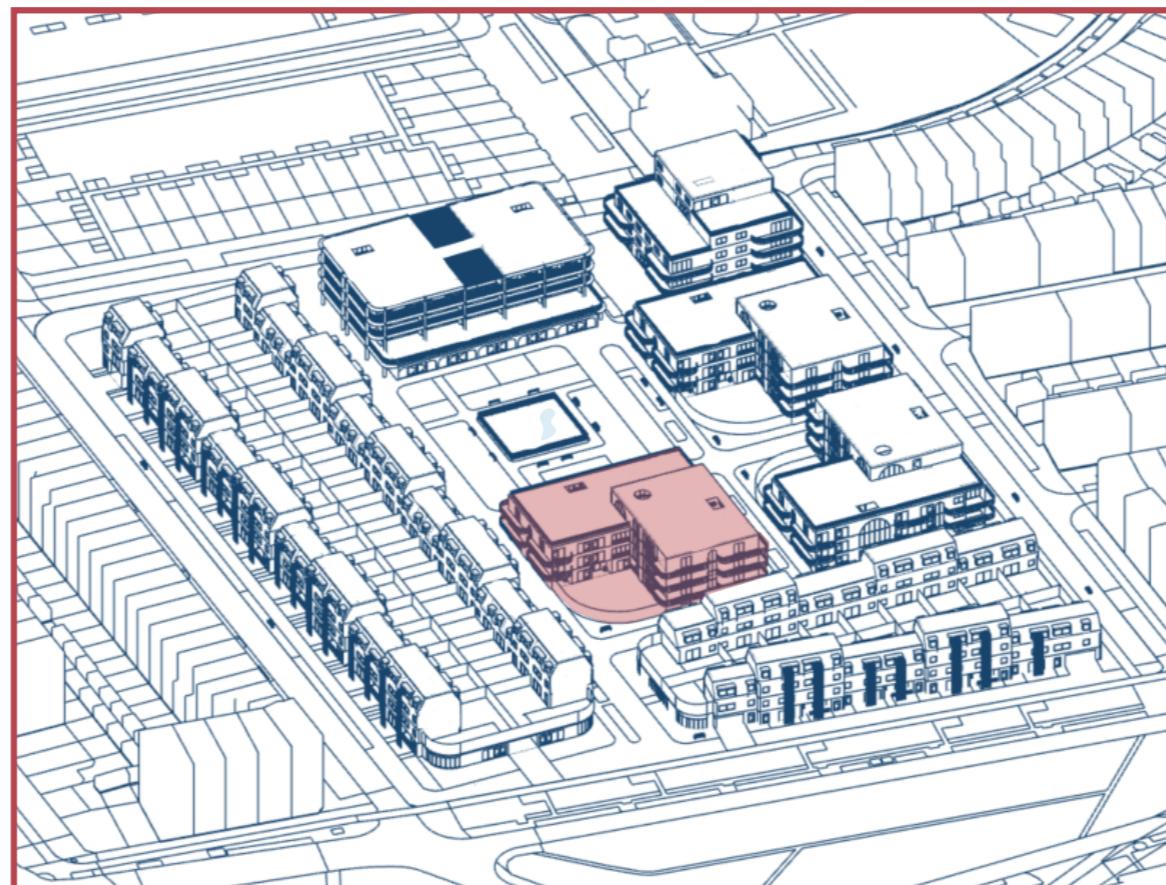


WEST
1:200



SOUTH
1:200

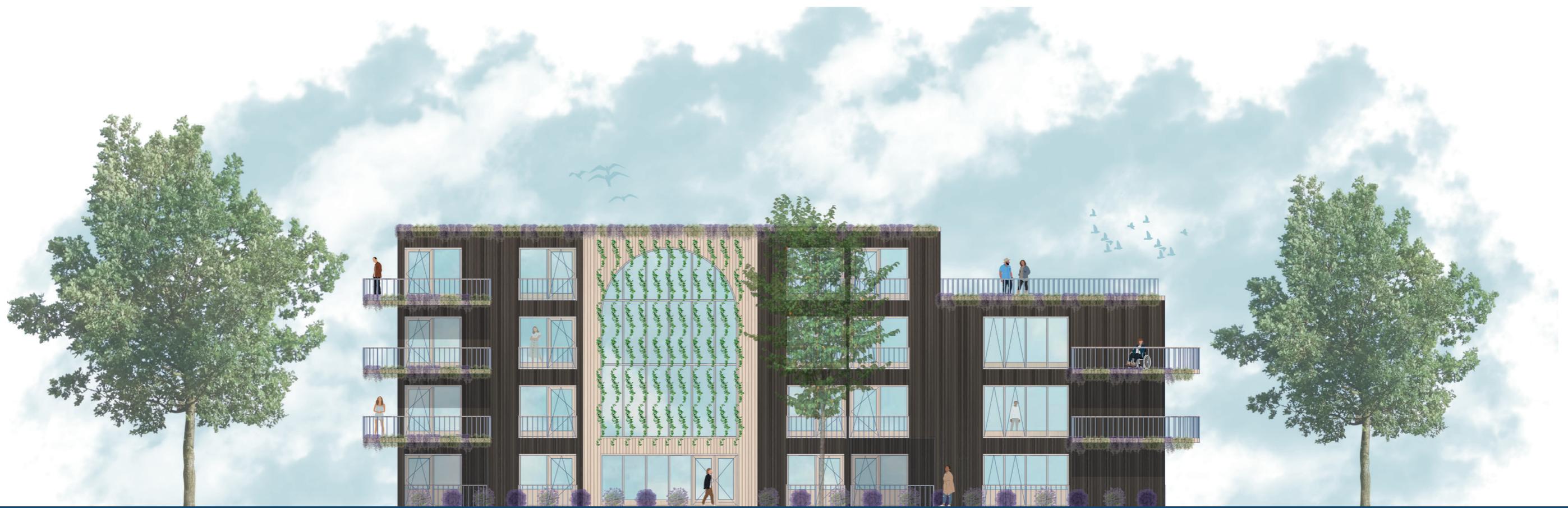
PLACEMENT FACADES





EAST FACADE

1:200



NORTH FACADE

1:200



WEST

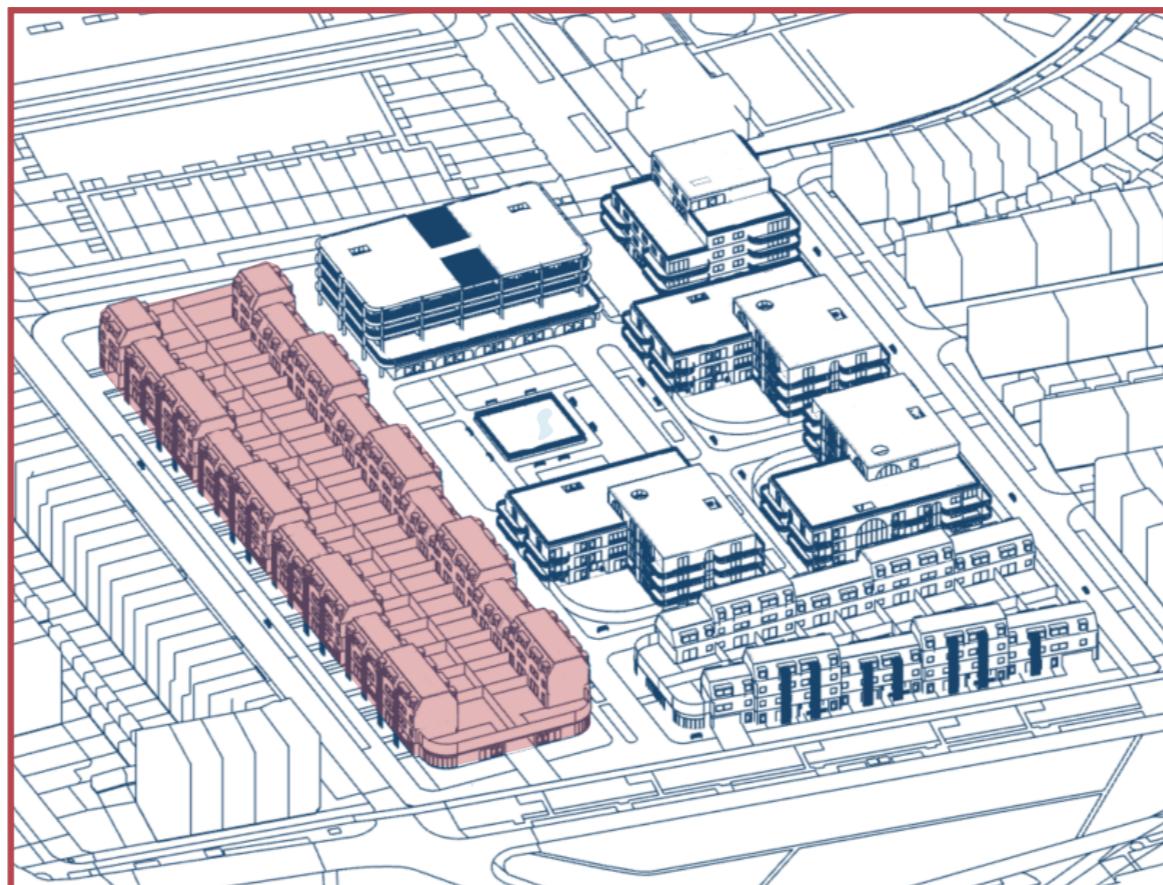
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SOUTH

1:200

PLACEMENT FACADES





SOUTH FACADE

1:400



NORTH FACADE

1:400



EAST FACADE

1:200



WEST FACADE

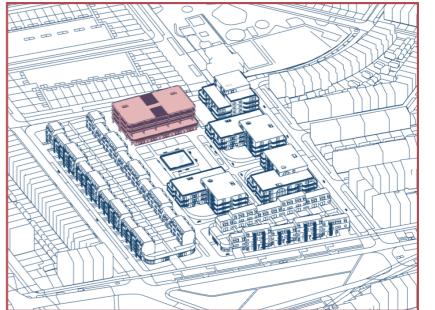
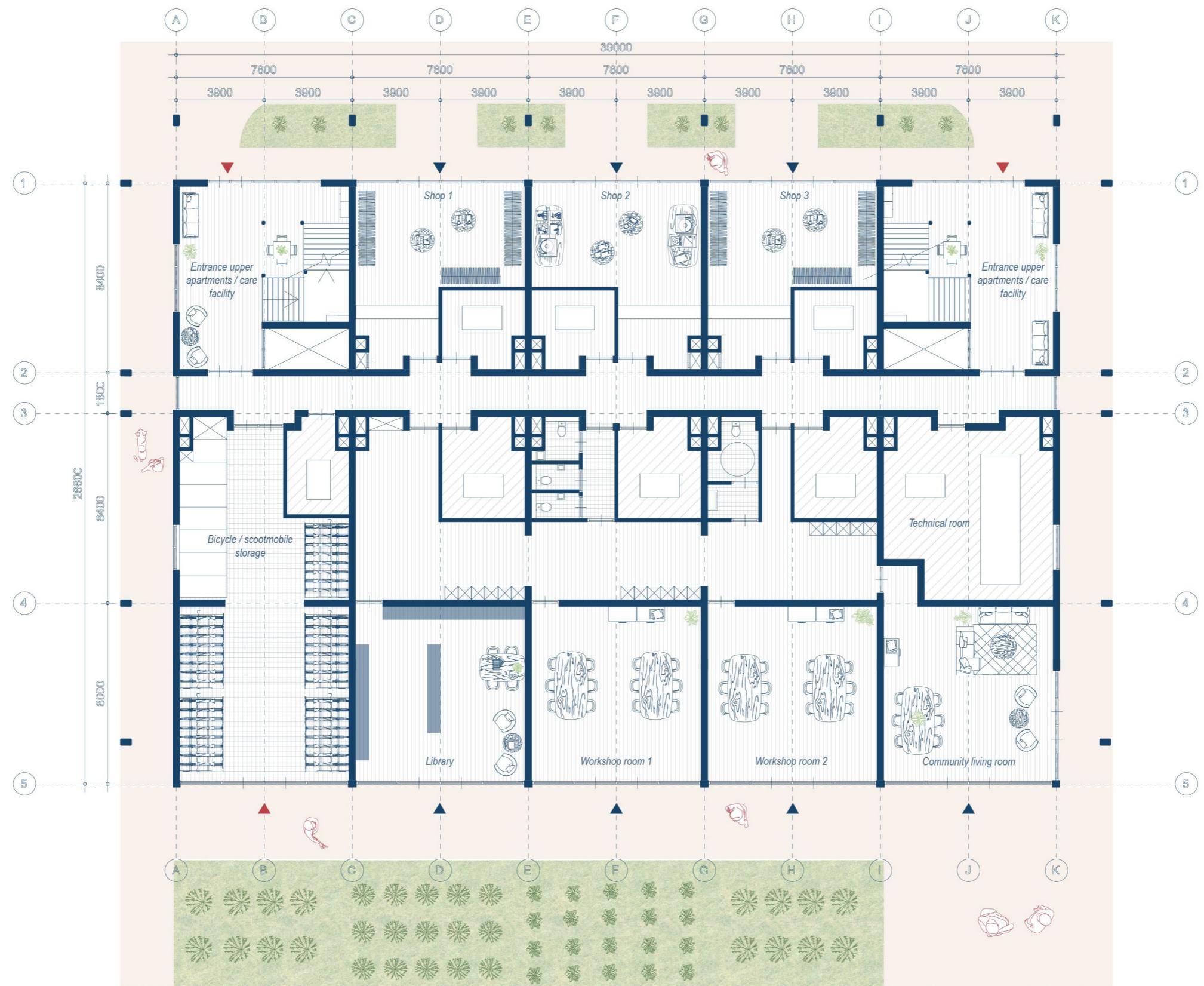
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2. FLOOR PLANS

Designing dignity

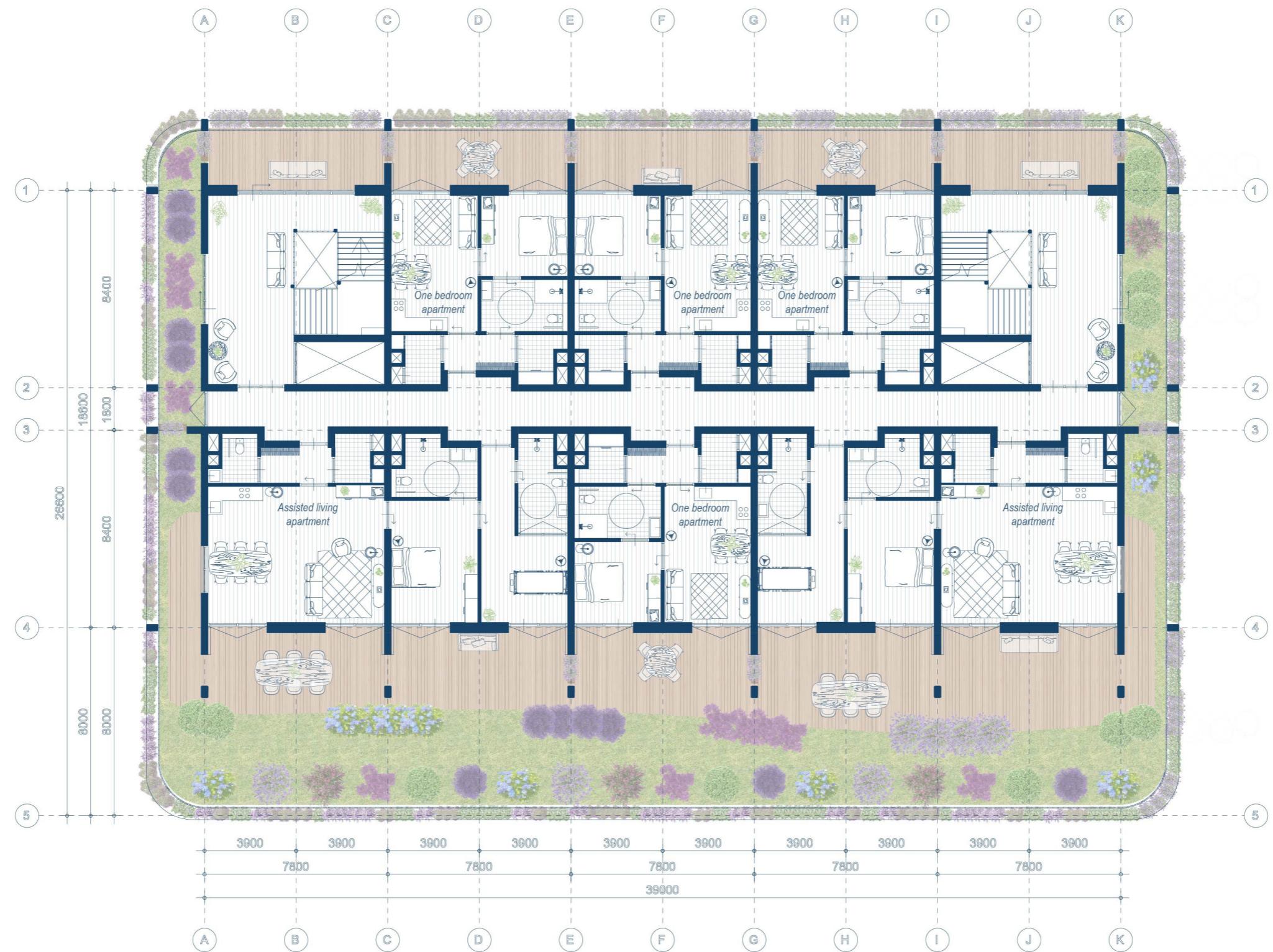
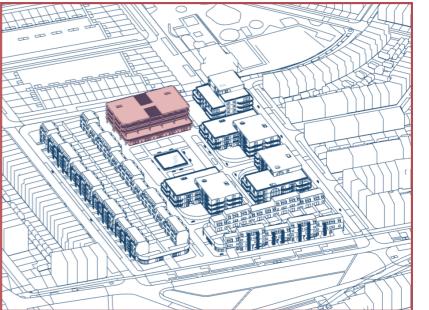
GROUND FLOOR

1:200



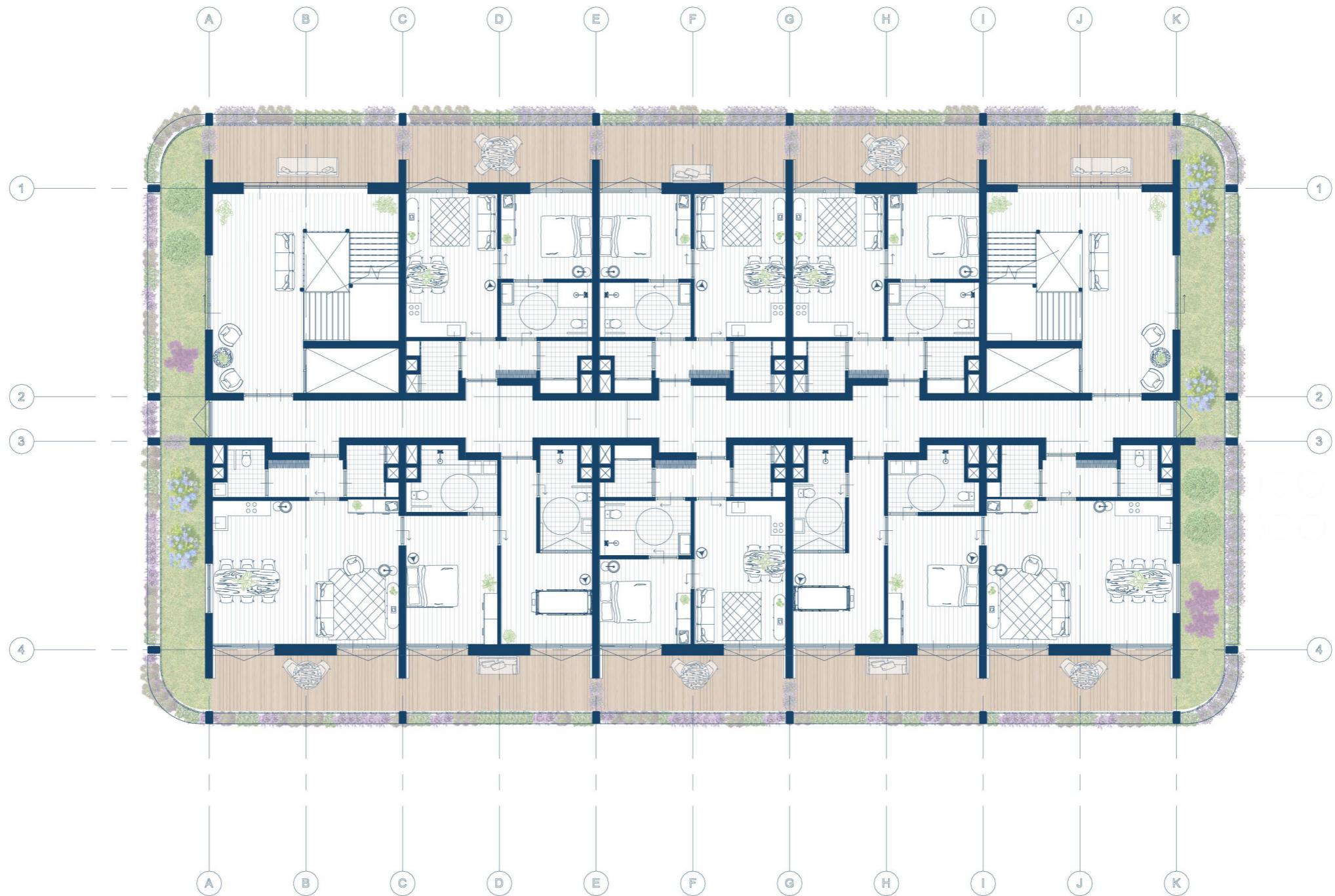
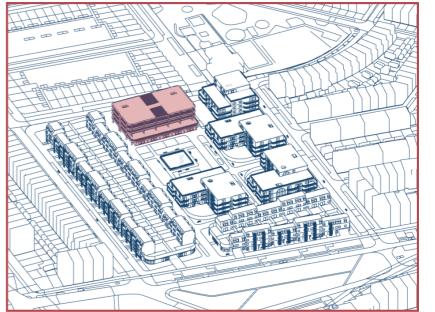
FIRST FLOOR

1:200



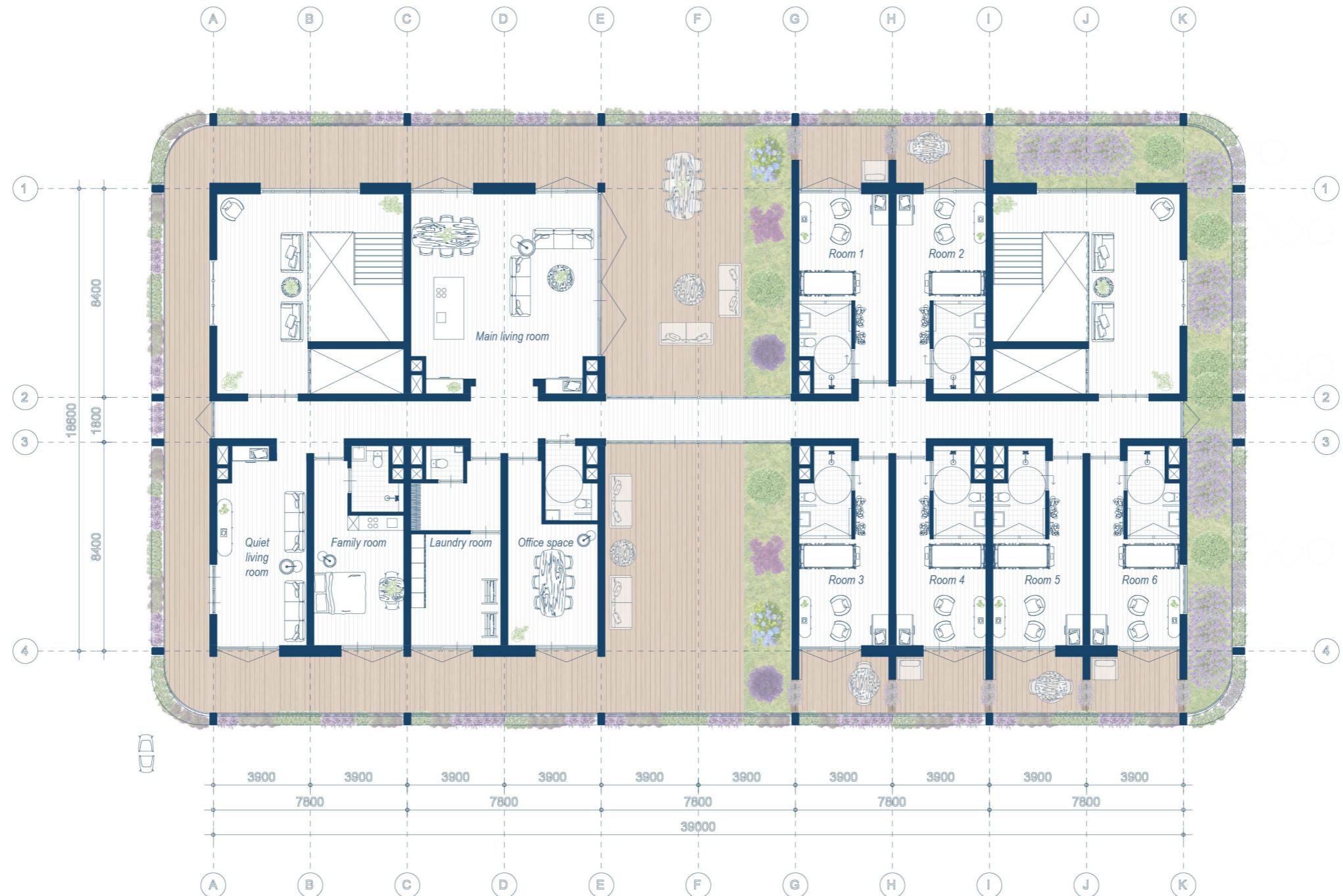
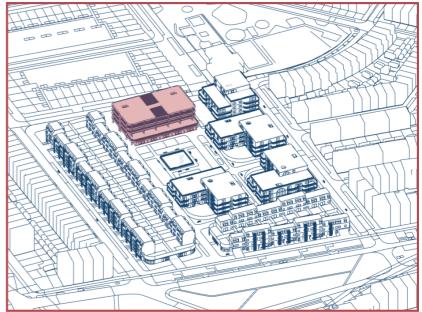
SECOND FLOOR

1:200



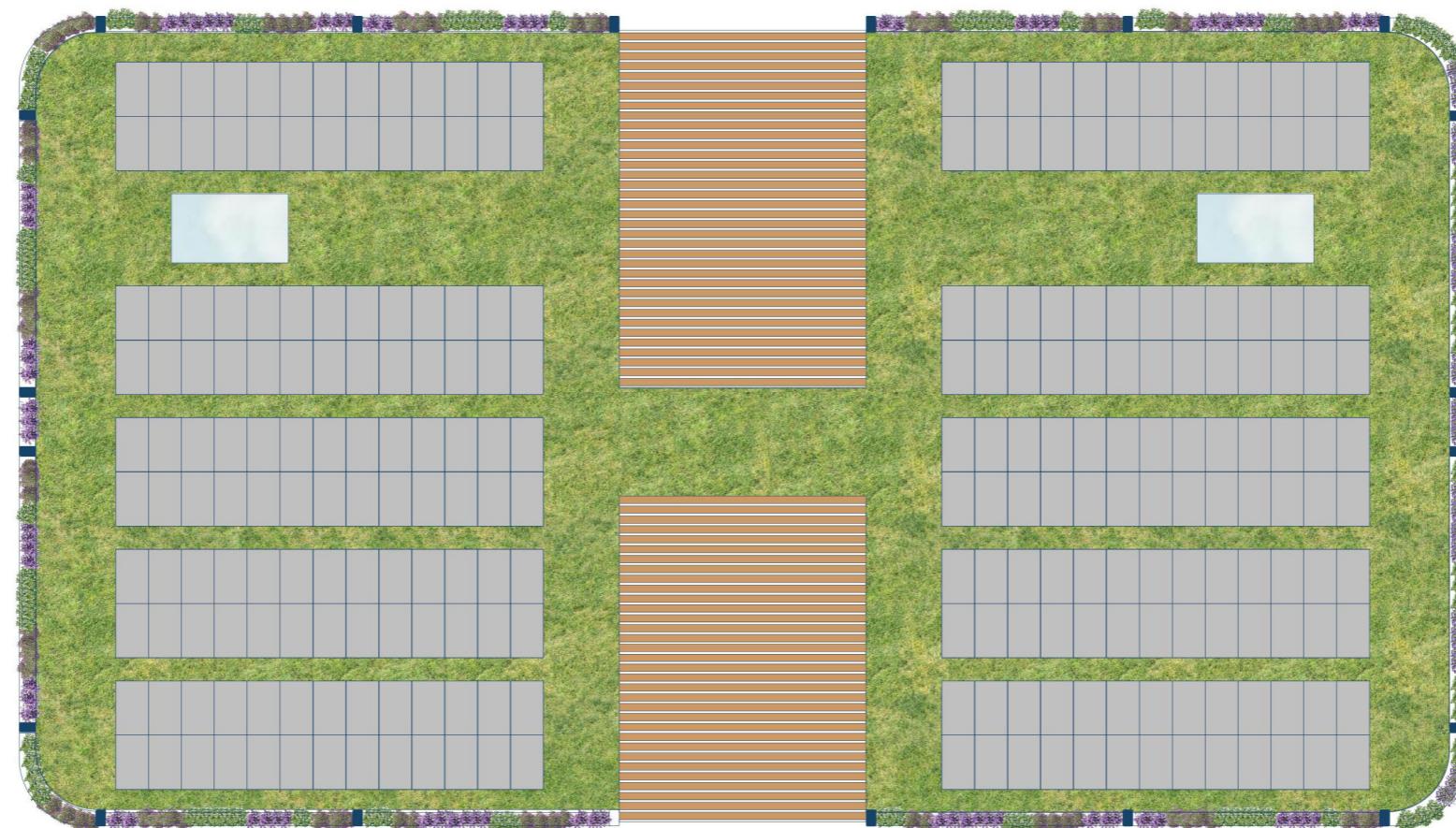
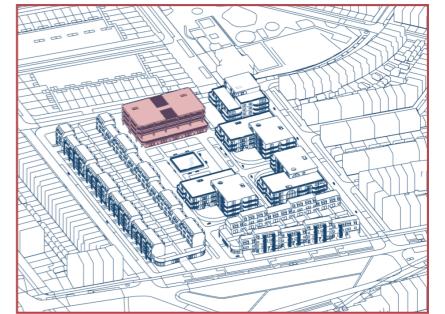
THIRD FLOOR

1:200



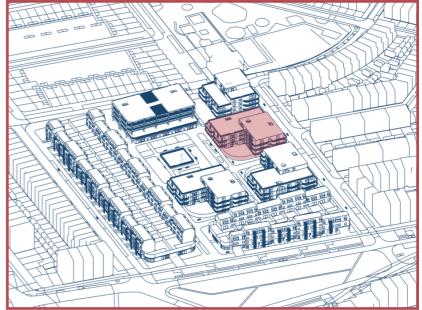
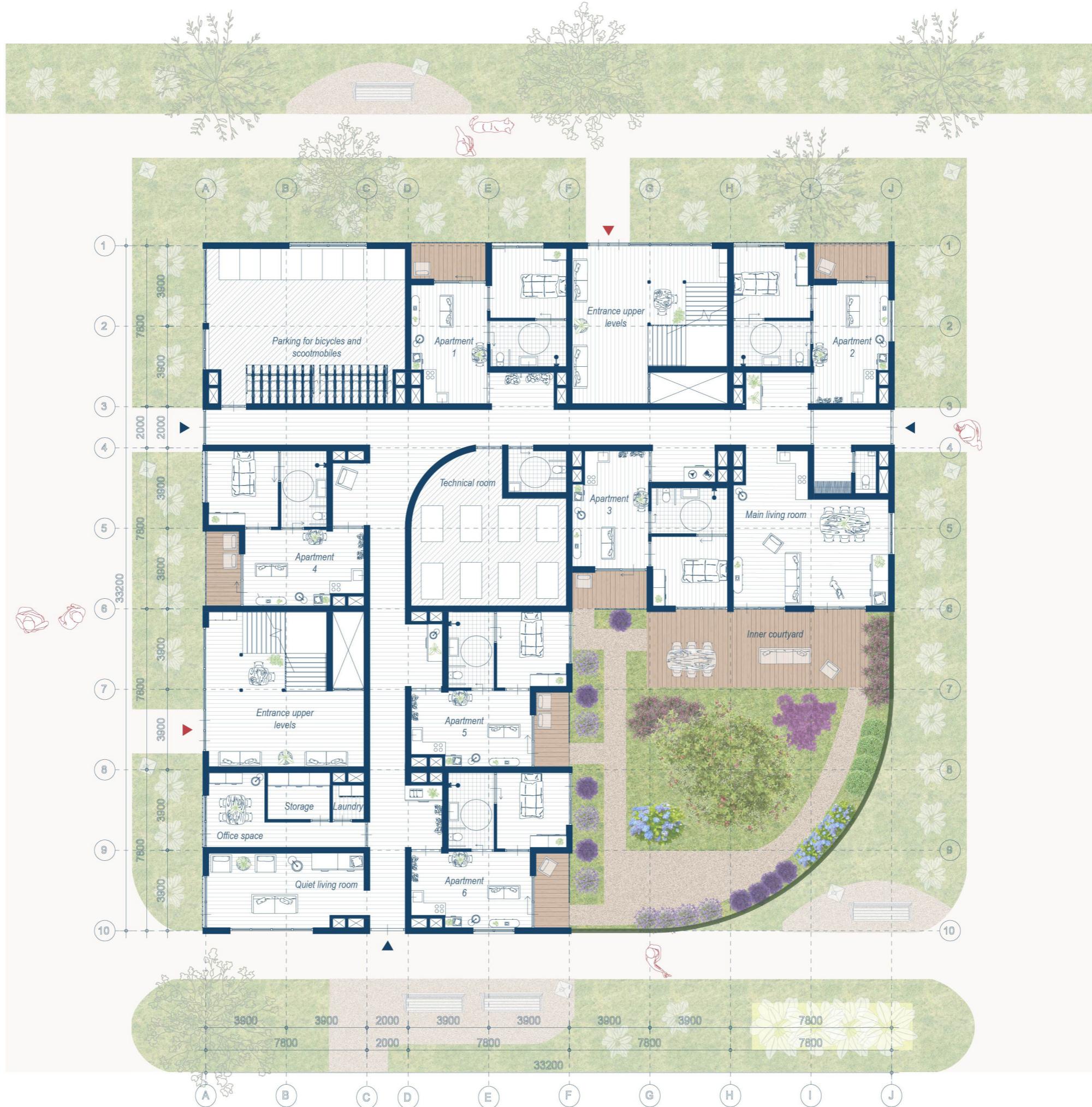
ROOF

1:200



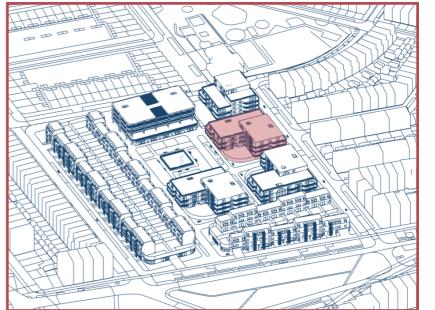
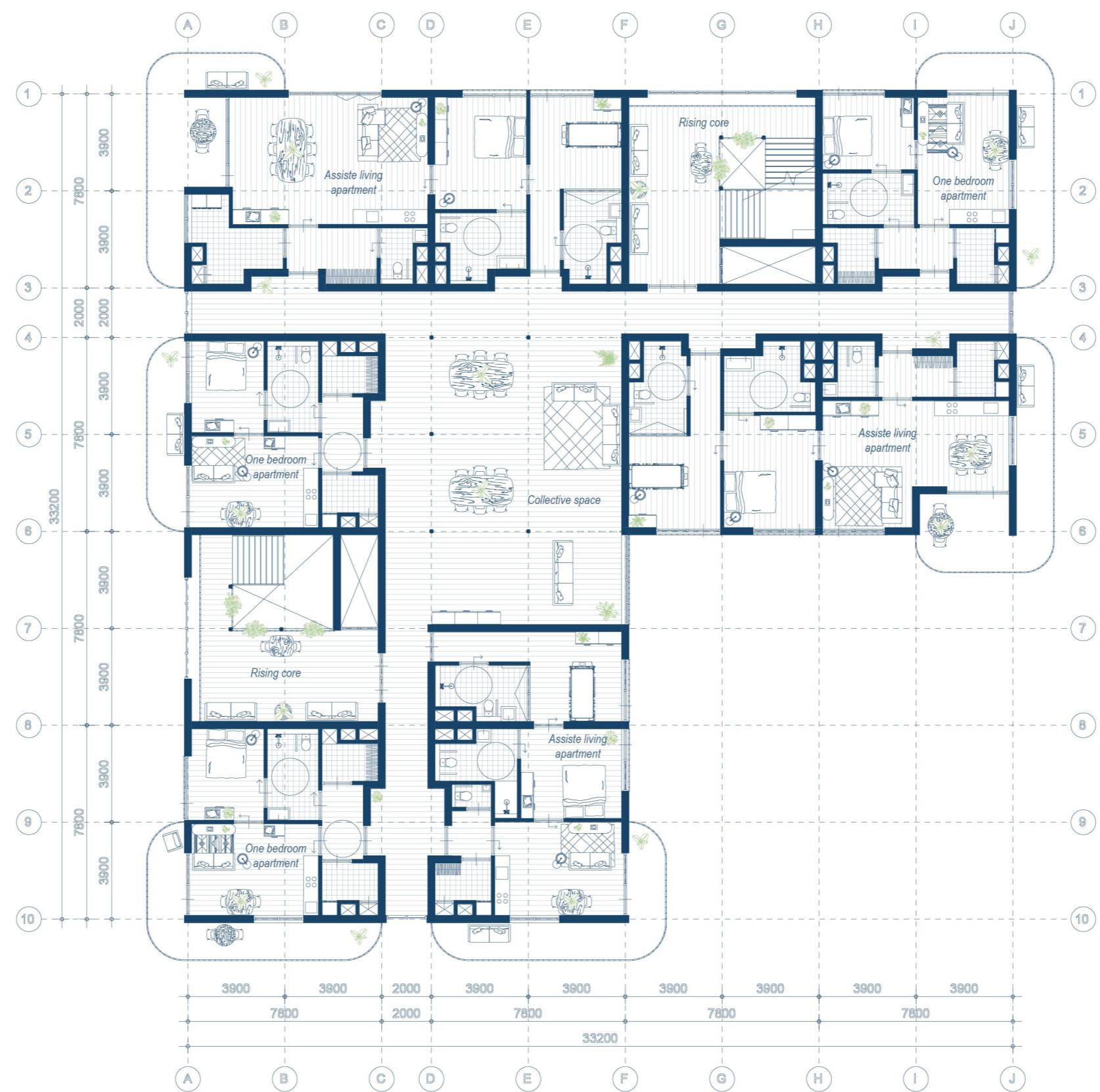
GROUND FLOOR

1:200



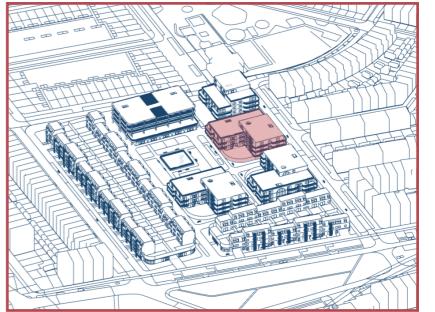
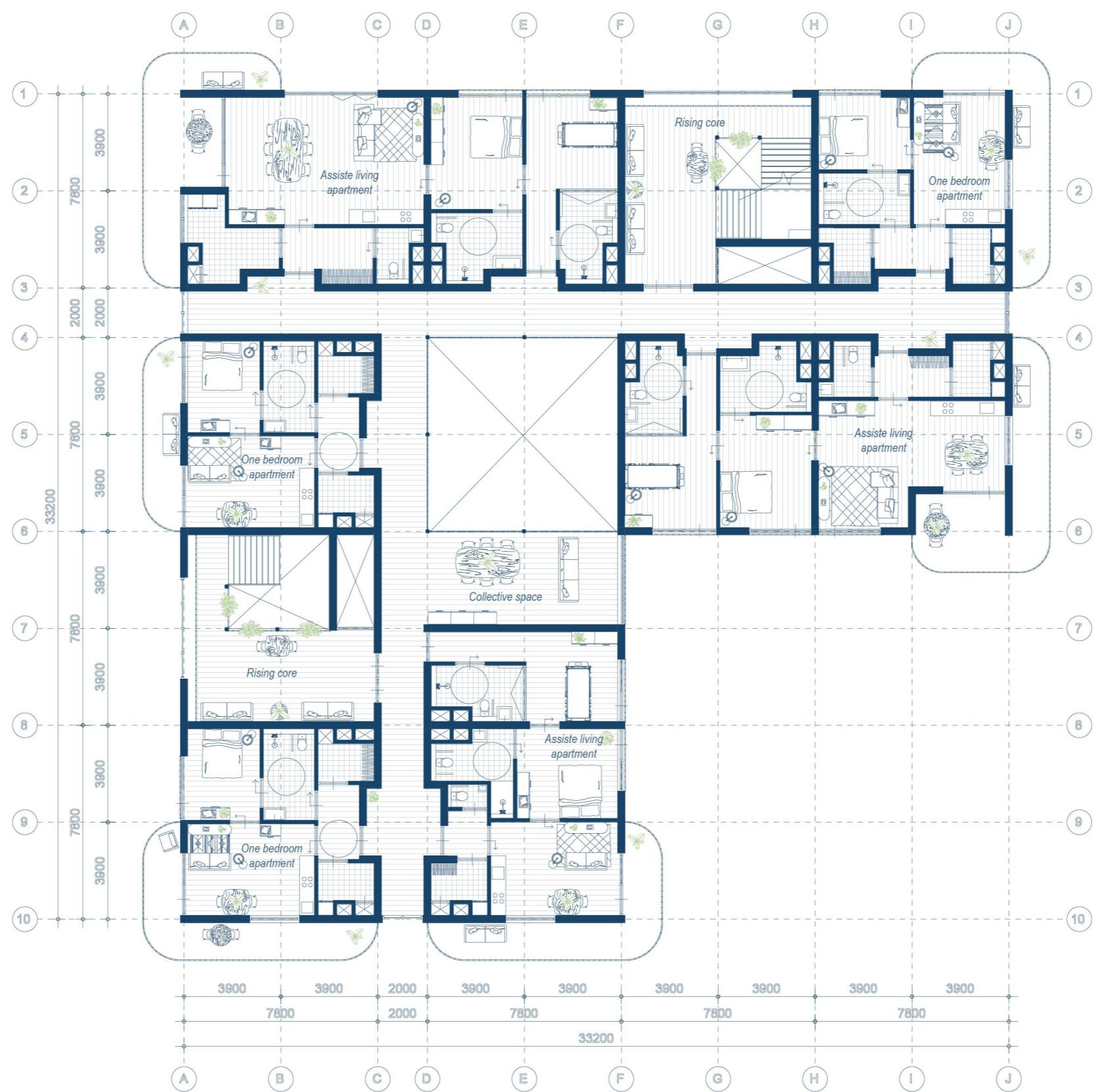
FIRST FLOOR

1:200



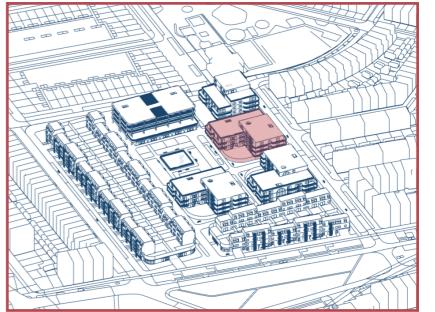
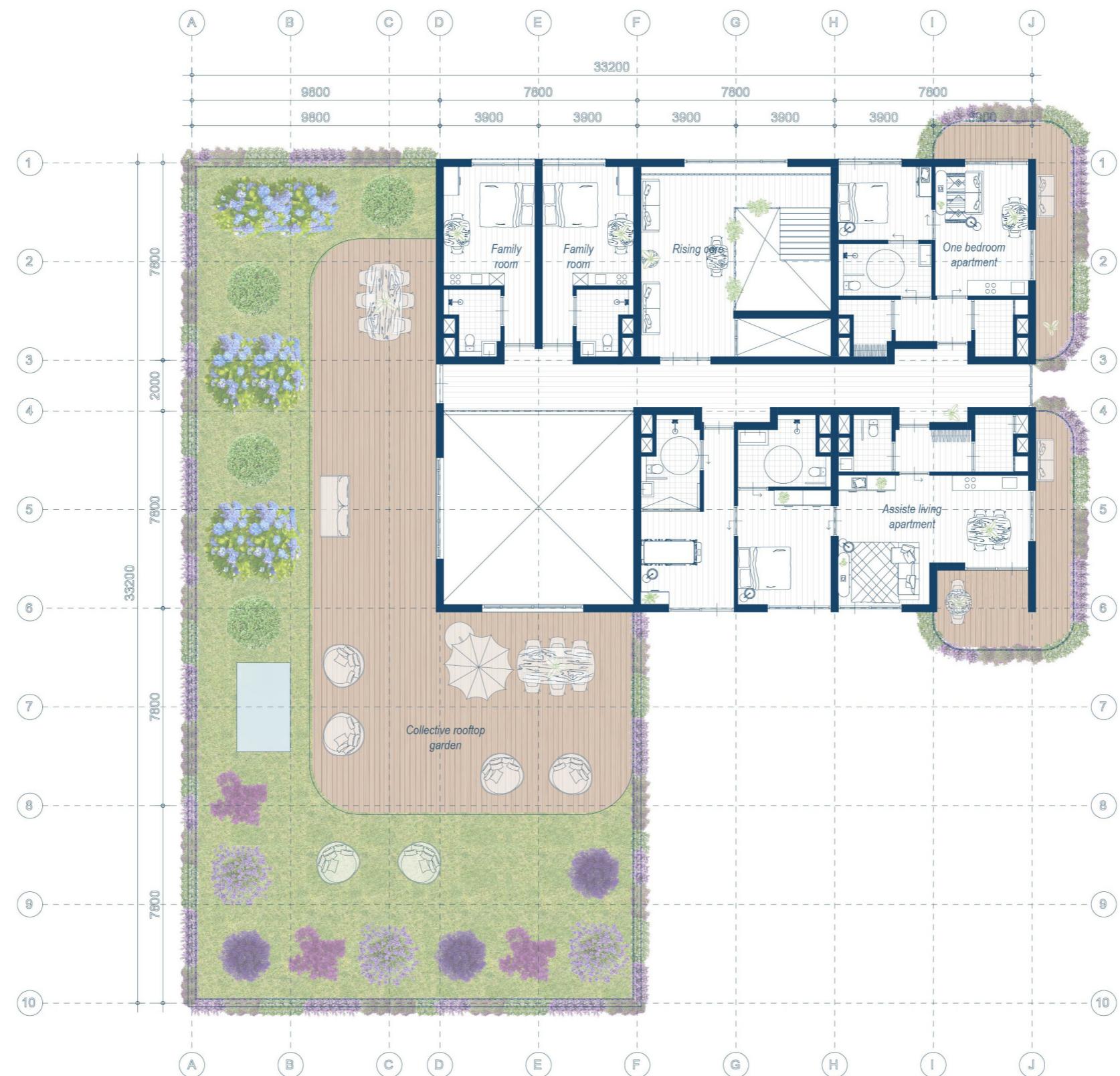
SECOND FLOOR

1:200

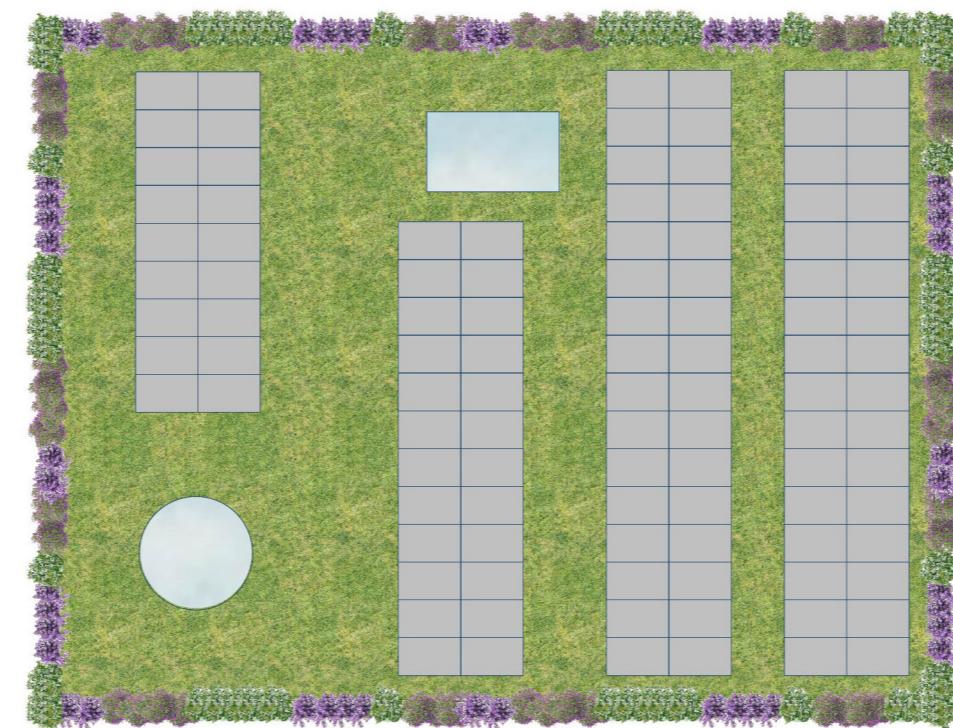
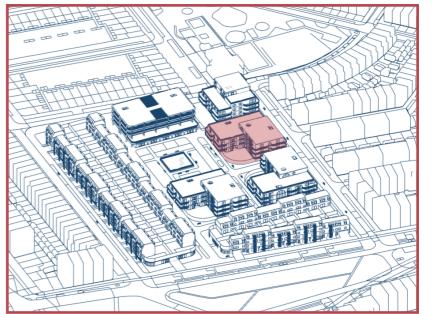


THIRD FLOOR

1:200

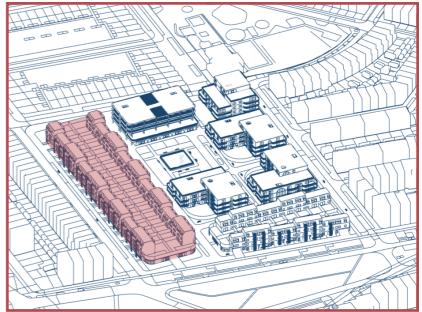


ROOF
1:200



GROUND FLOOR TOTAL

1:500



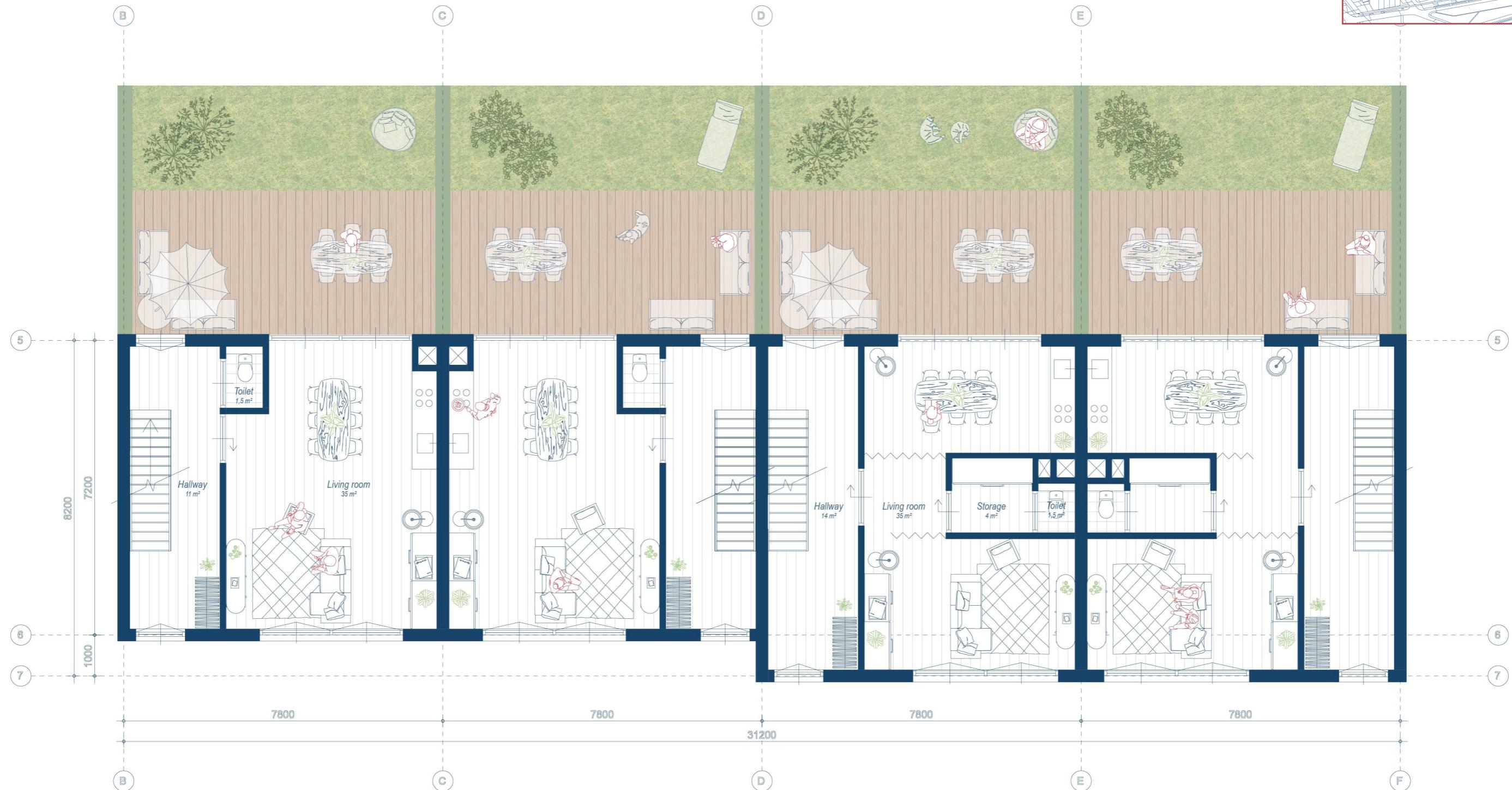
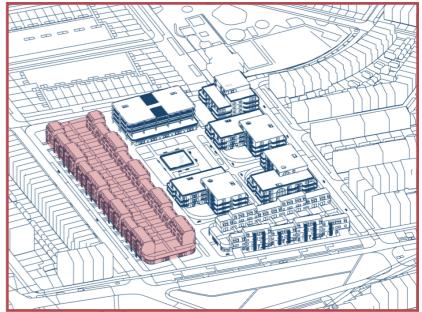
GROUND FLOOR

1:100



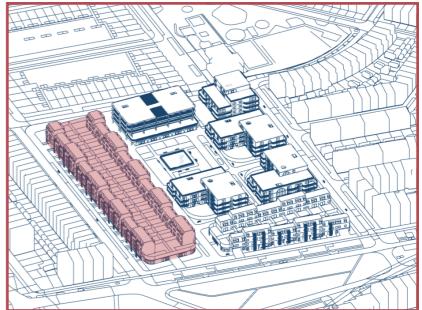
FIRST FLOOR

1:100



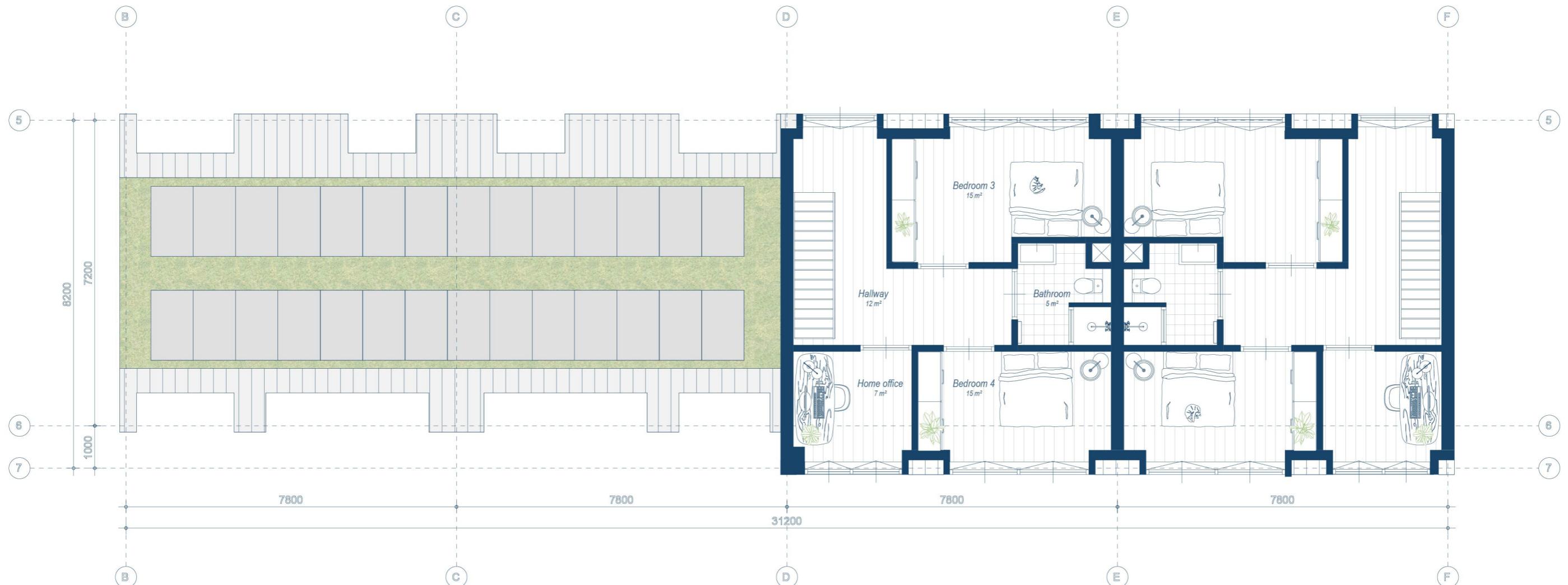
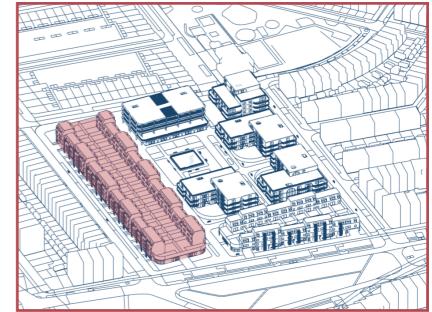
SECOND FLOOR

1:100



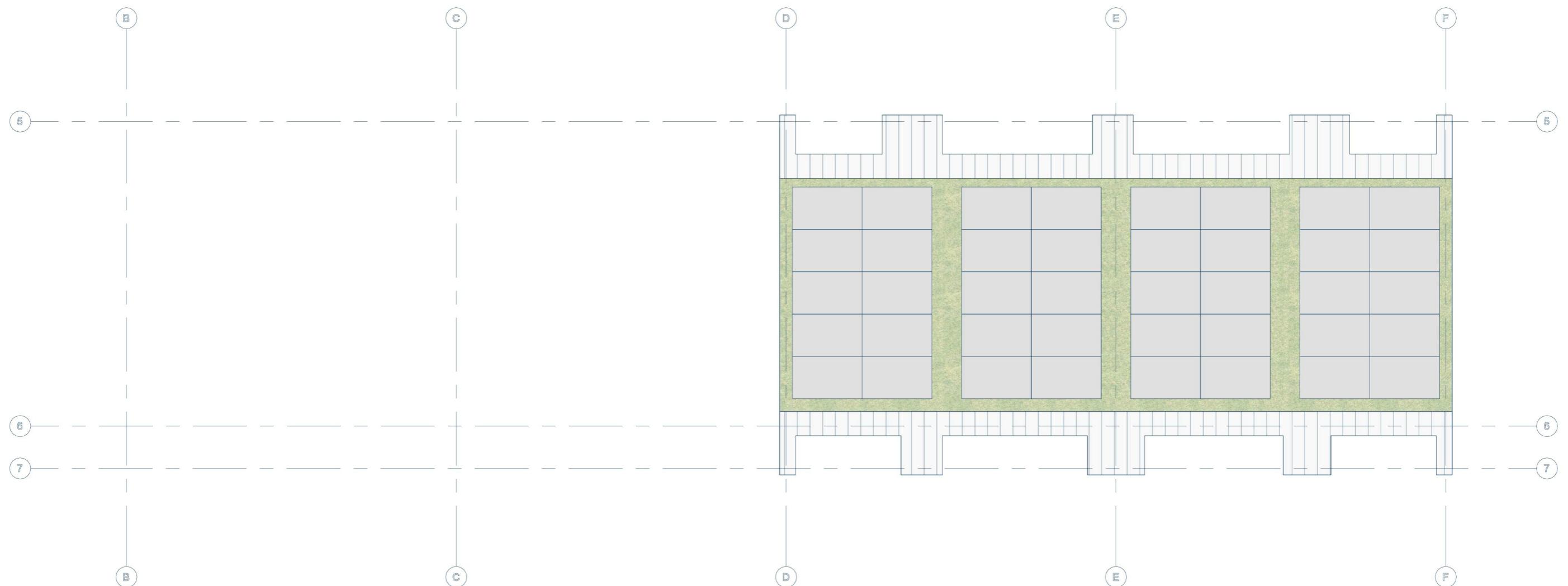
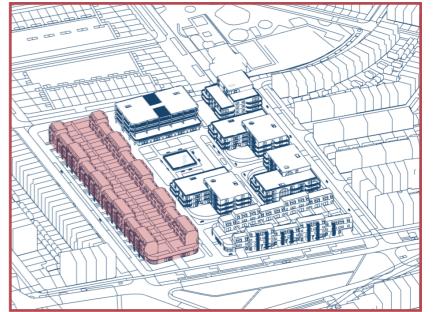
THIRD FLOOR / ROOF

1:100



ROOF

1:100

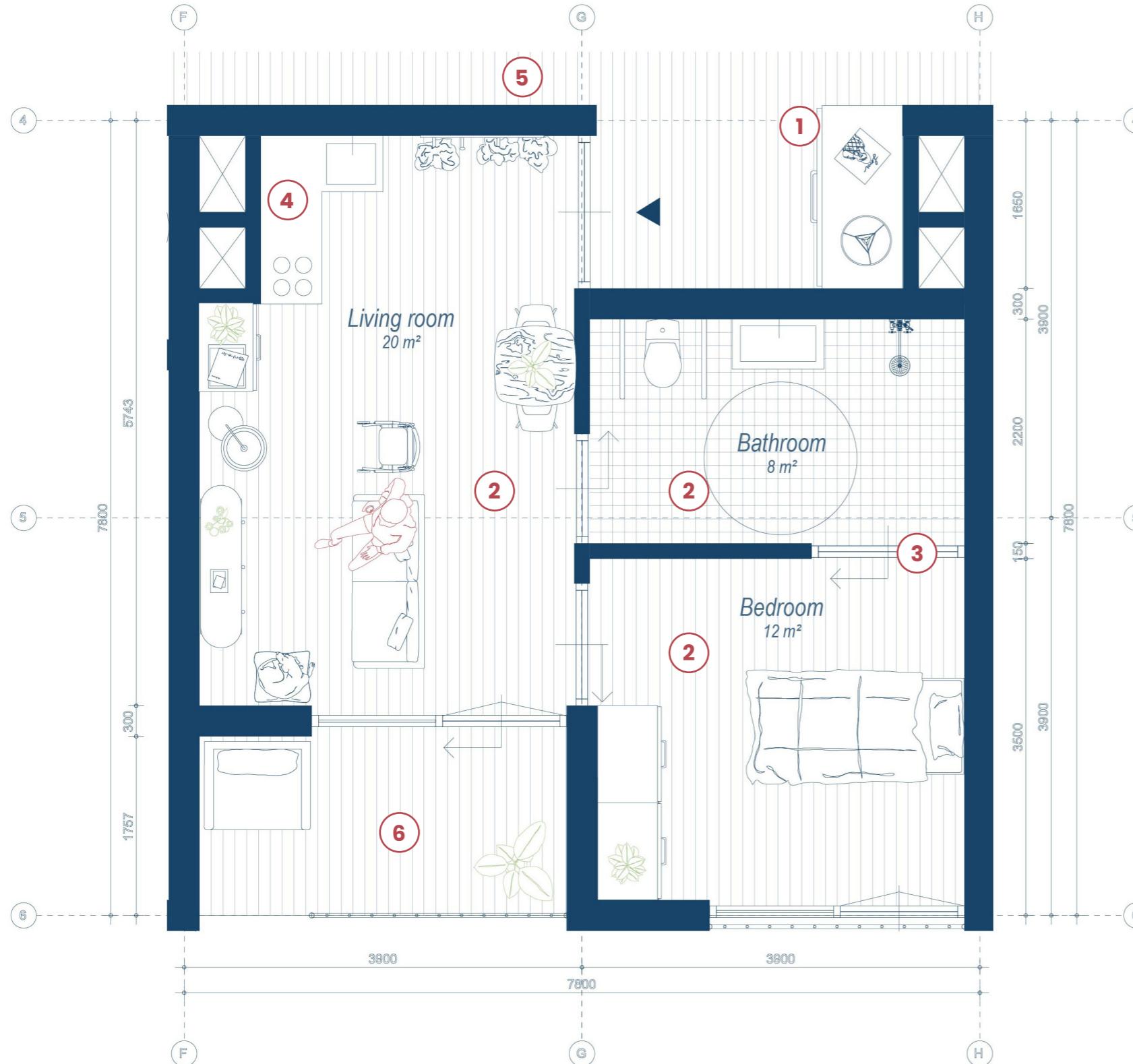


DWELLING TYPES

Designing dignity

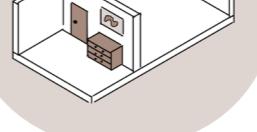
ROOM FOR ELDERLY WITH DEMENTIA

1:50



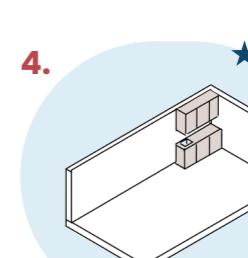
40 m²

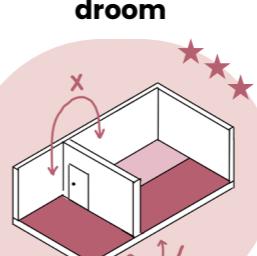
Used guidelines

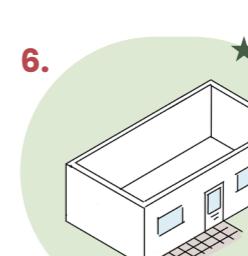
- 

Incorporate **familiar items** near the room entrance
- 

Design personal rooms with **separate zones** to create a home-like atmosphere
- 

Design private bathrooms with a **direct line of sight from the bedroom**
- 

Include a **small kitche- nette** with basic amenities
- 

Ensure **minimal contrast** between floor materials of private rooms and corridors
- 

Include **small terraces** where residents can place chairs

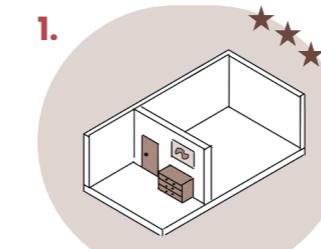
ROOMS SEVERE DEMENTIA CASES

1:100

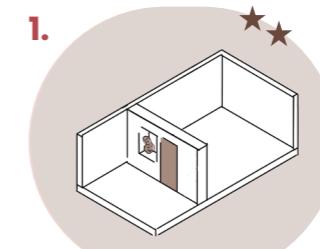


27 m²

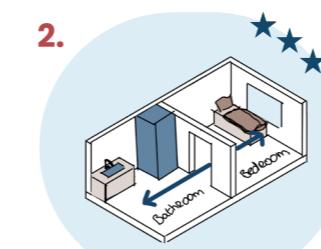
Used guidelines



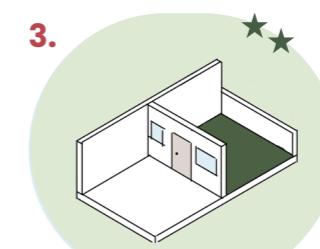
Incorporate **familiar items** near the room entrance



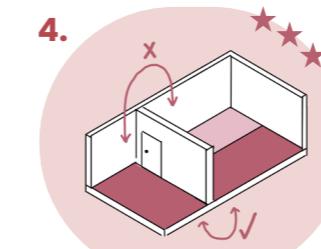
Design the entrance space with a **recess** to integrate personal items effectively



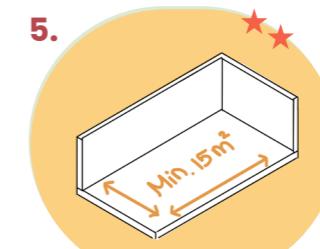
Design private bathrooms with a **direct line of sight from the bedroom**



Design **enclosed balconies** for residents on higher floors to enable private outdoor access



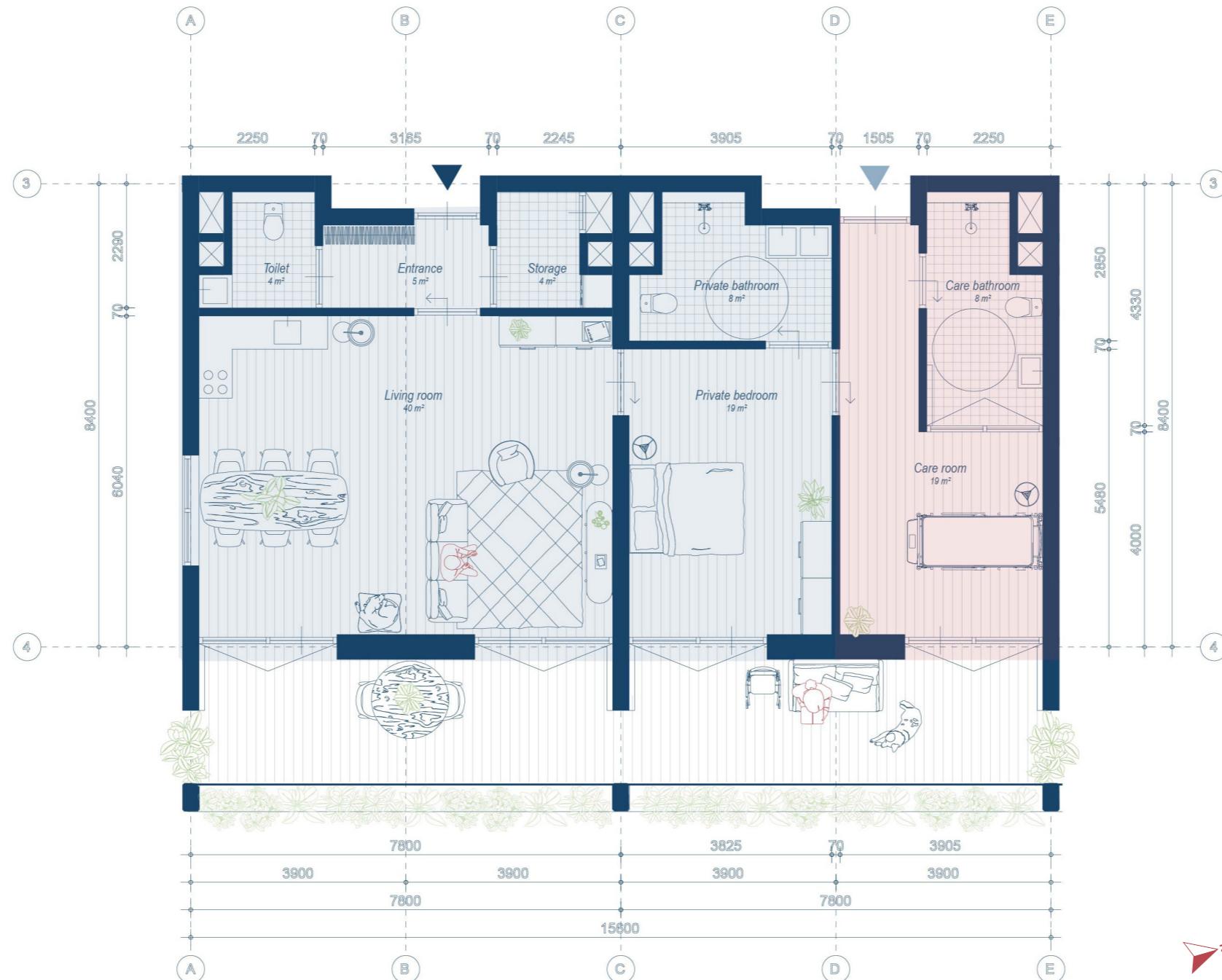
Ensure **minimal contrast** between floor materials of private rooms and corridors



Design rooms that are **at least 15m²** to accommodate personal furnishings and activities

ASSISTED LIVING APARTMENT

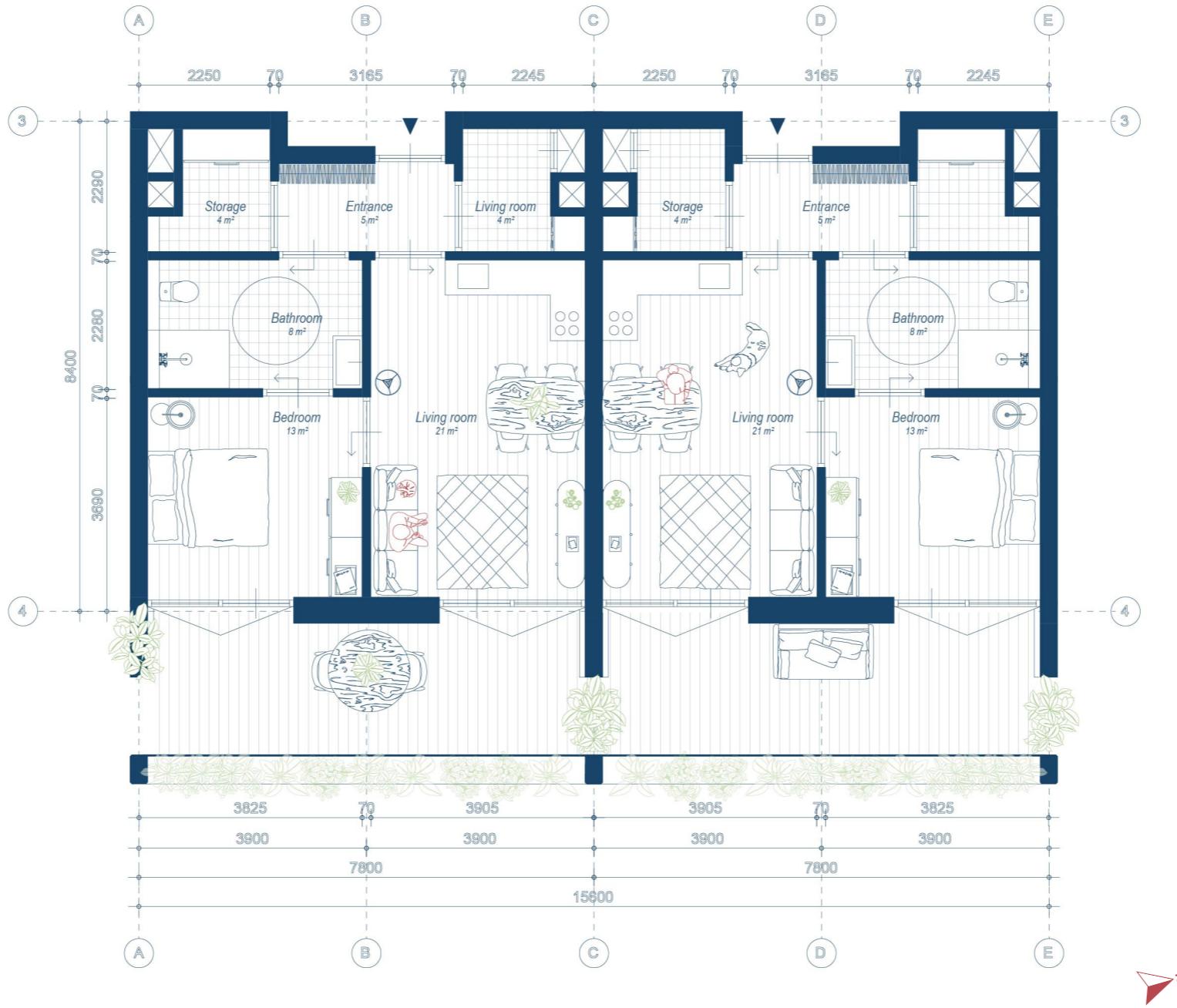
1:100



107 m²

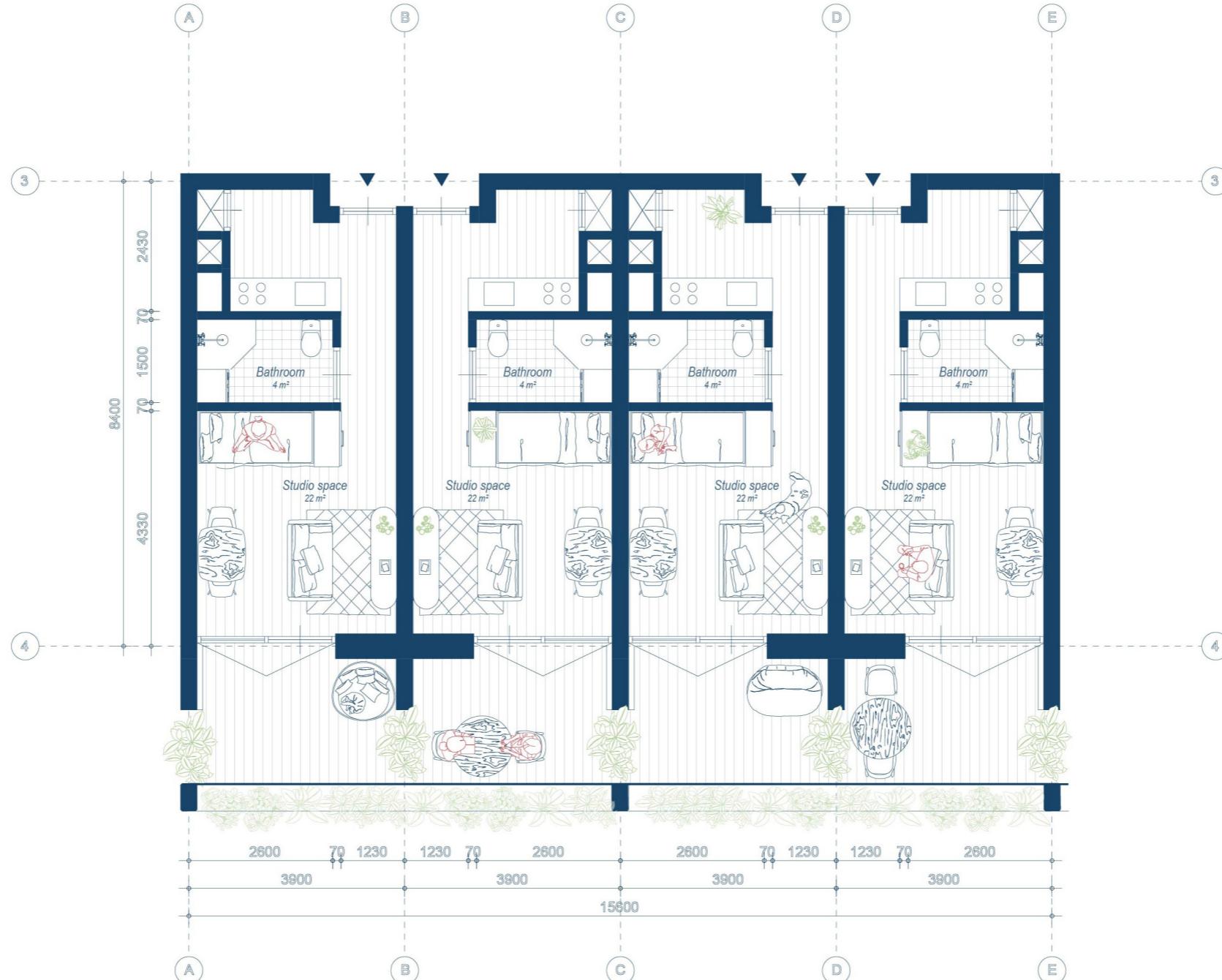
ONE BEDROOM APARTMENT

1:100



FUTURE OPTION: STUDIO SPACES

1:100

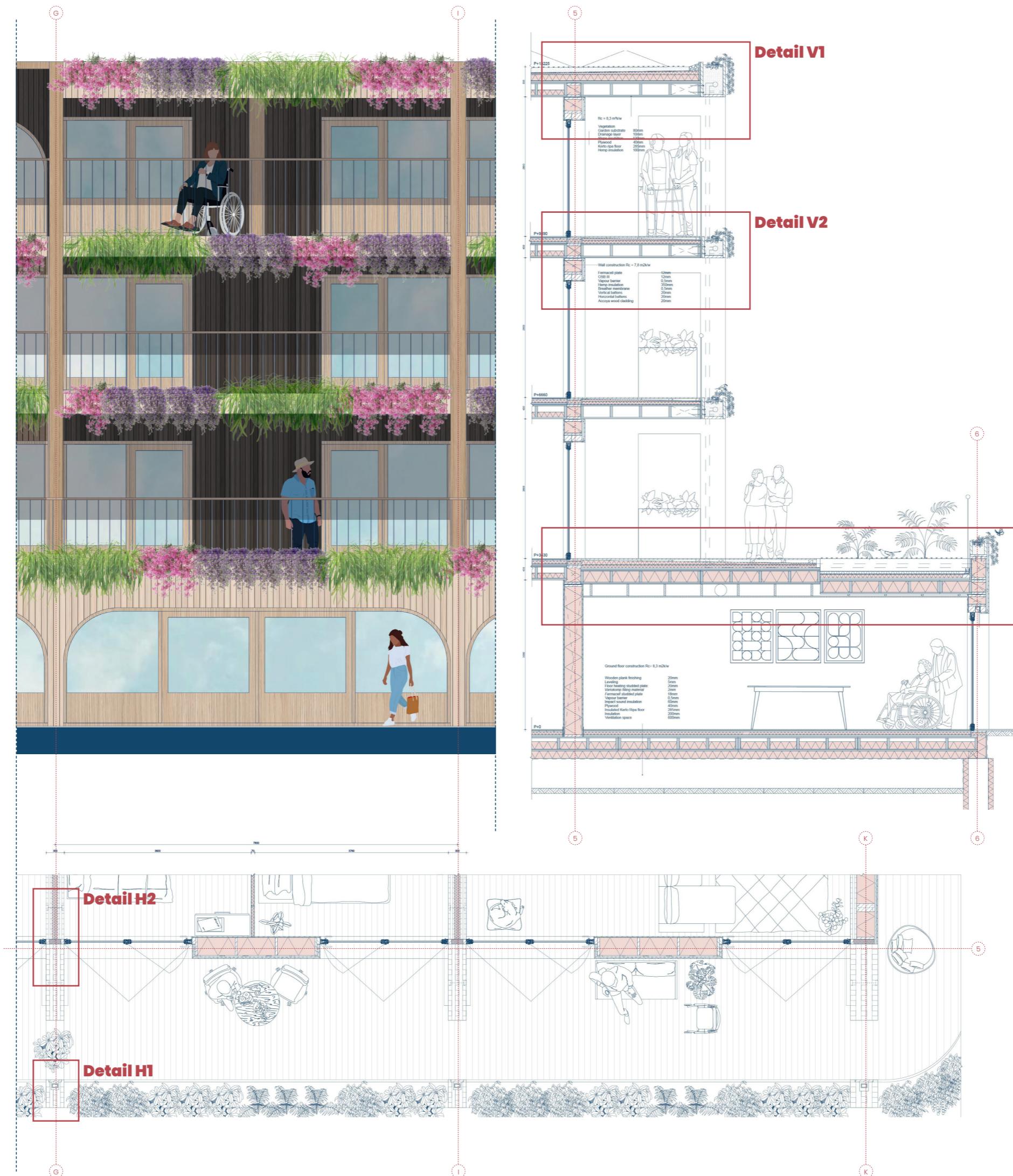


DETAILS

Designing dignity

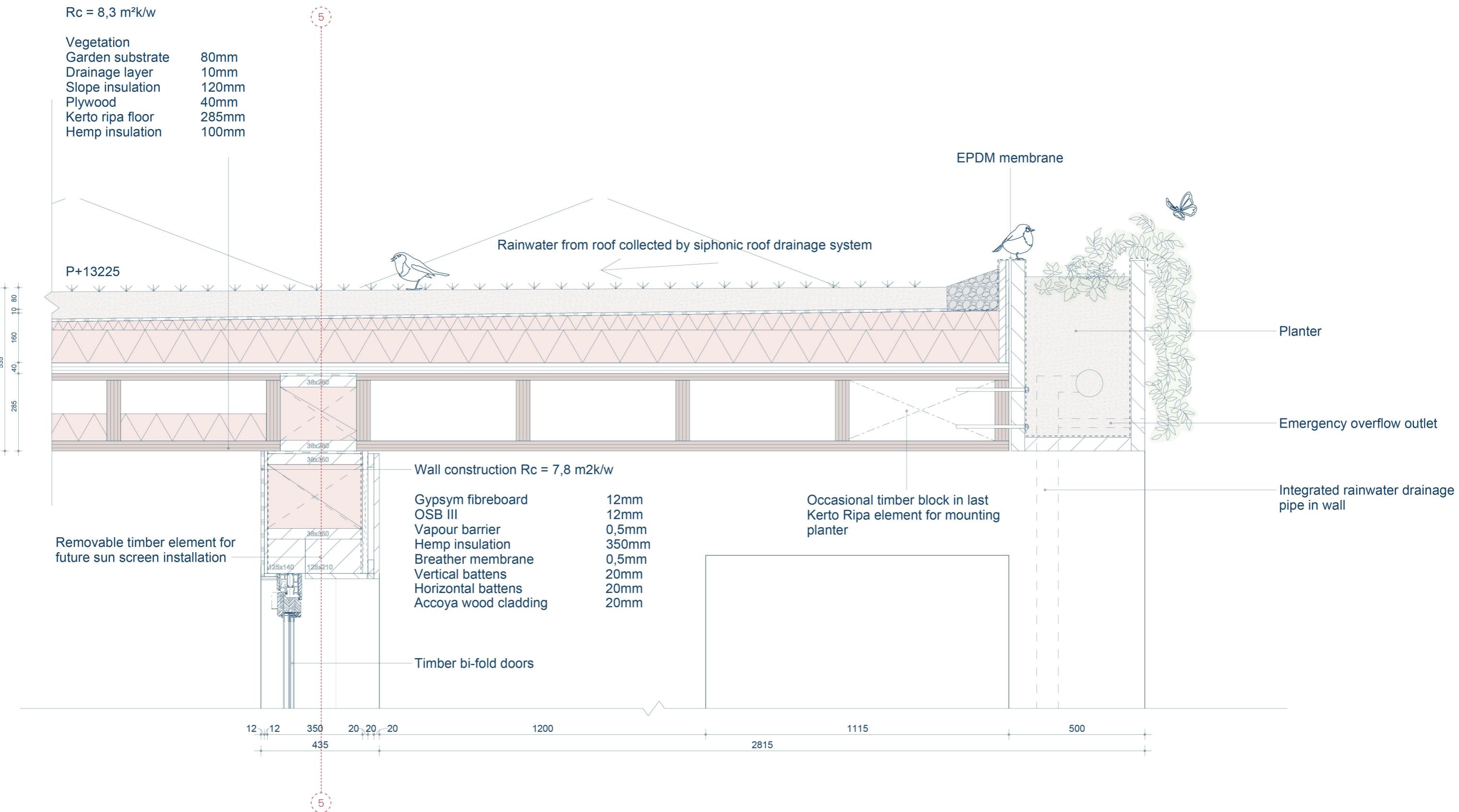
FRAGMENT 1

1:25 (scaled with 30%)



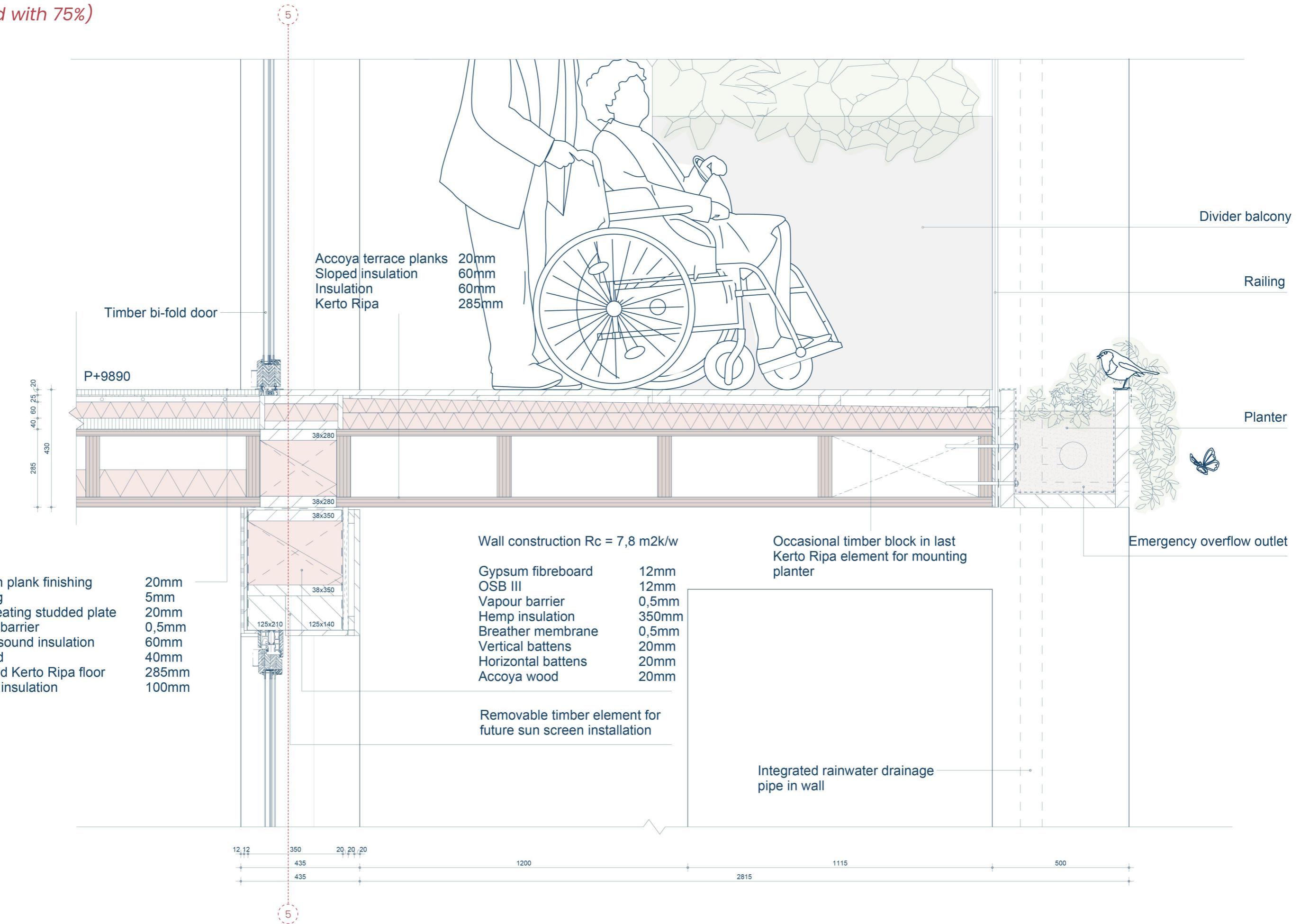
DETAIL VI

1:10 (Scaled with 75%)



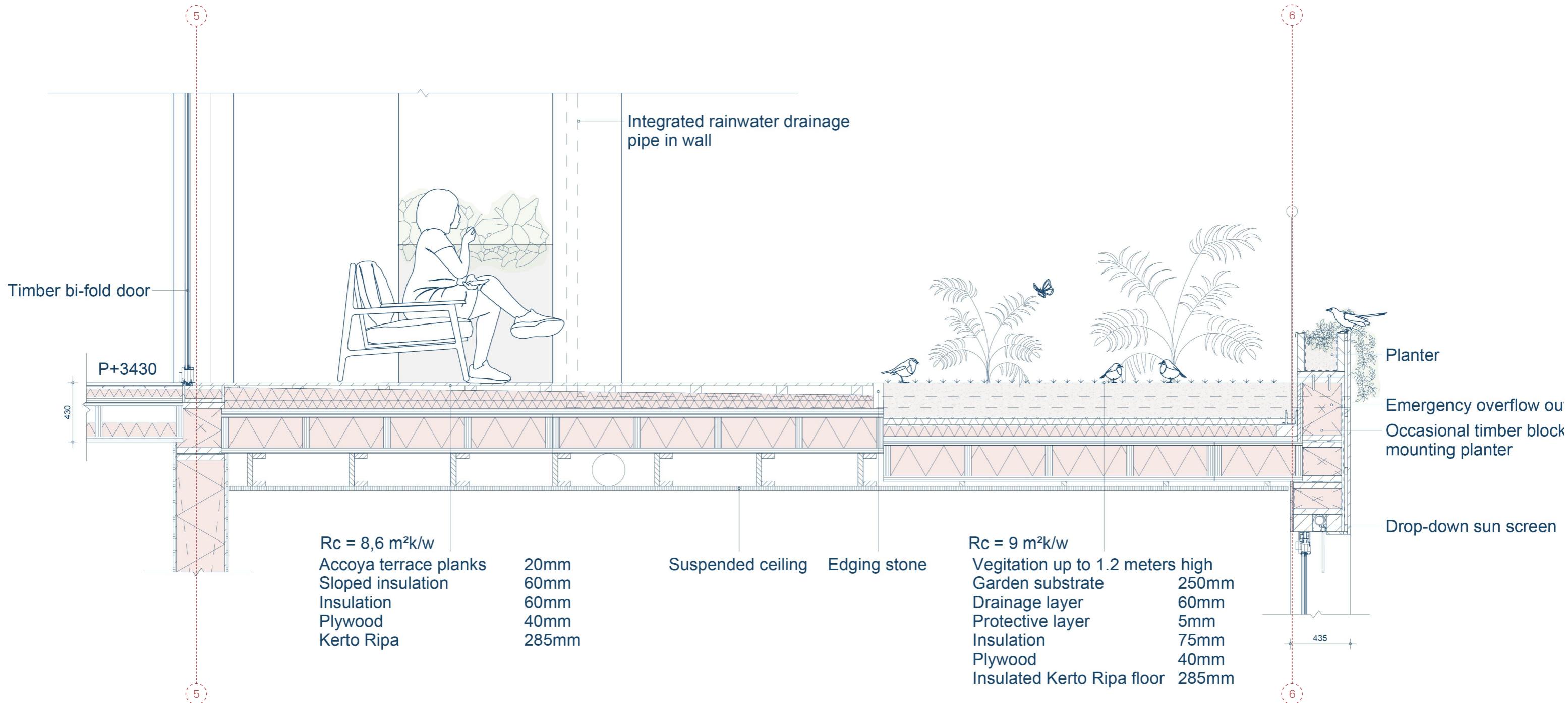
DETAIL V2

1:10 (Scaled with 75%)



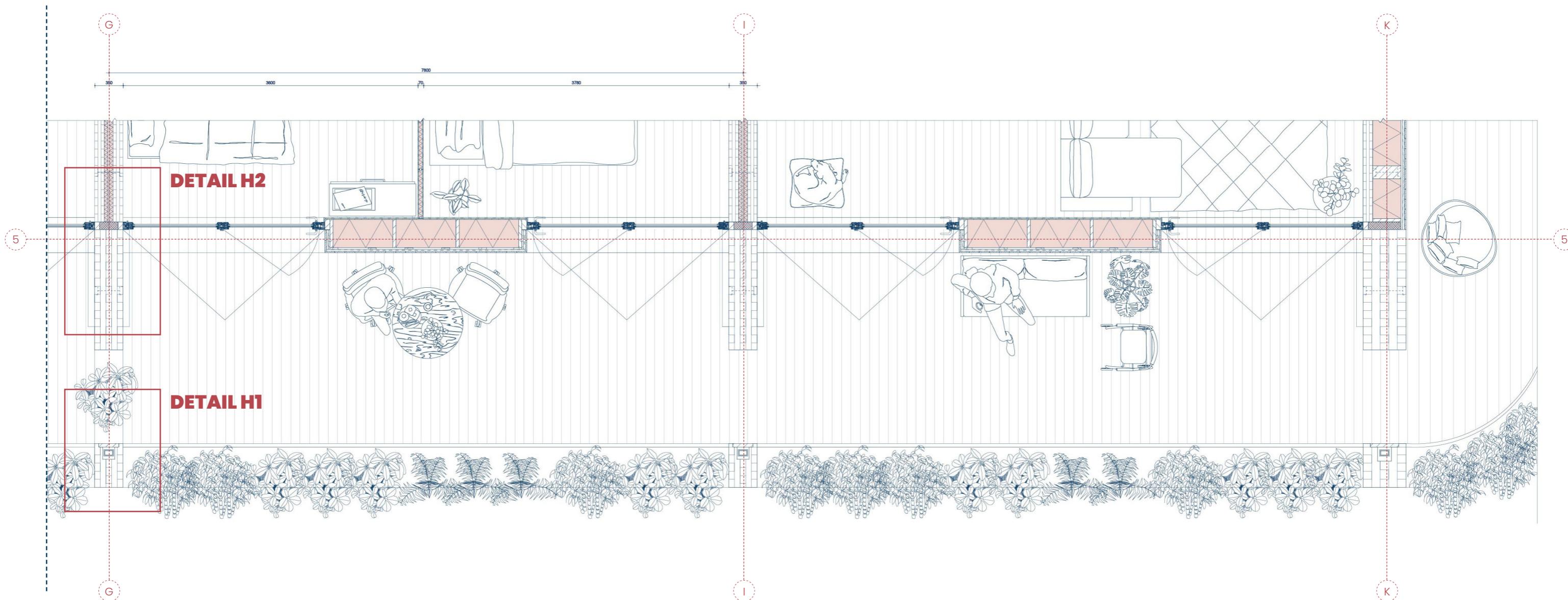
DETAIL V3

1:25 (Scaled with 85%)



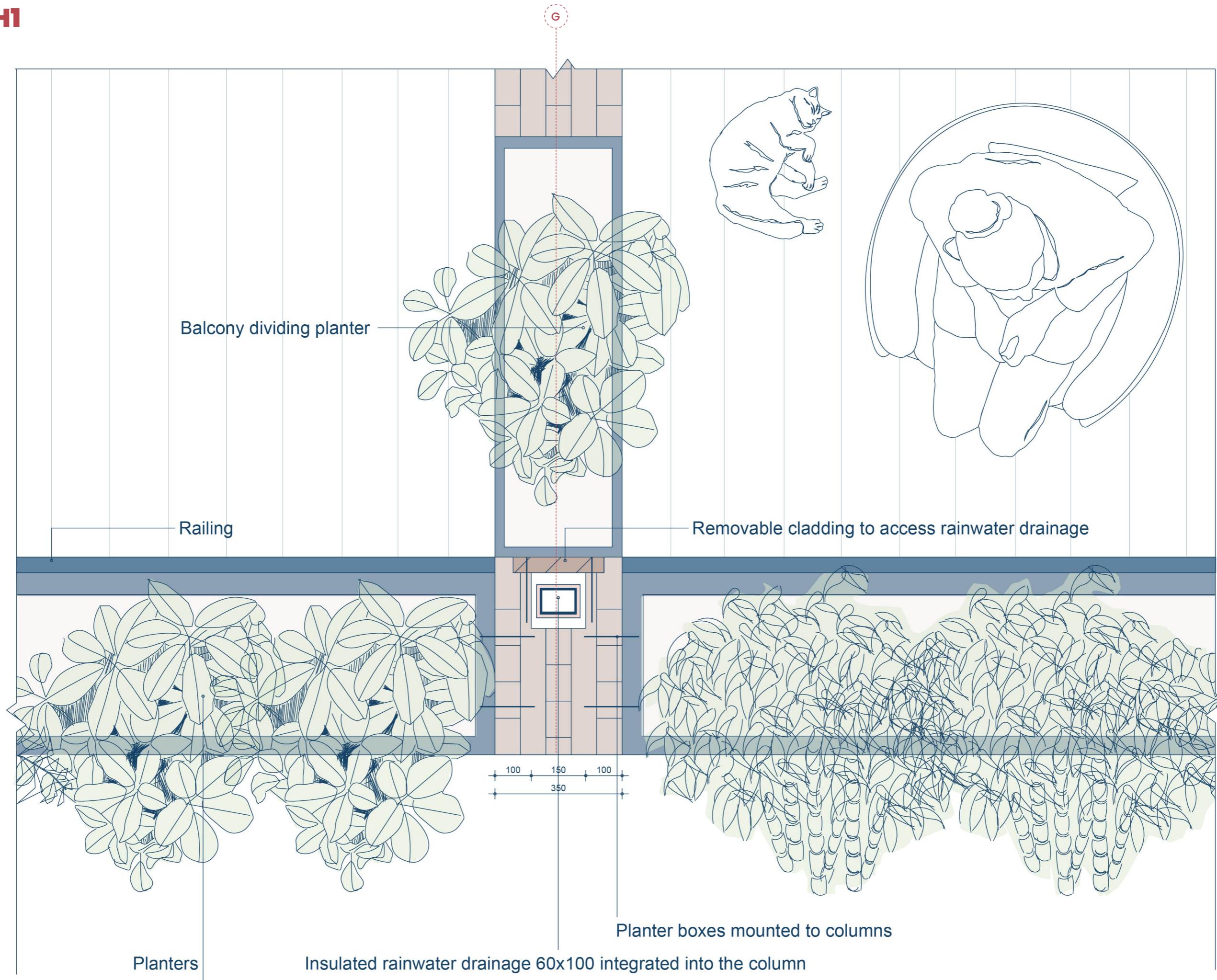
HORIZONTAL FRAGMENT

1:25 (Scaled down with 50%)



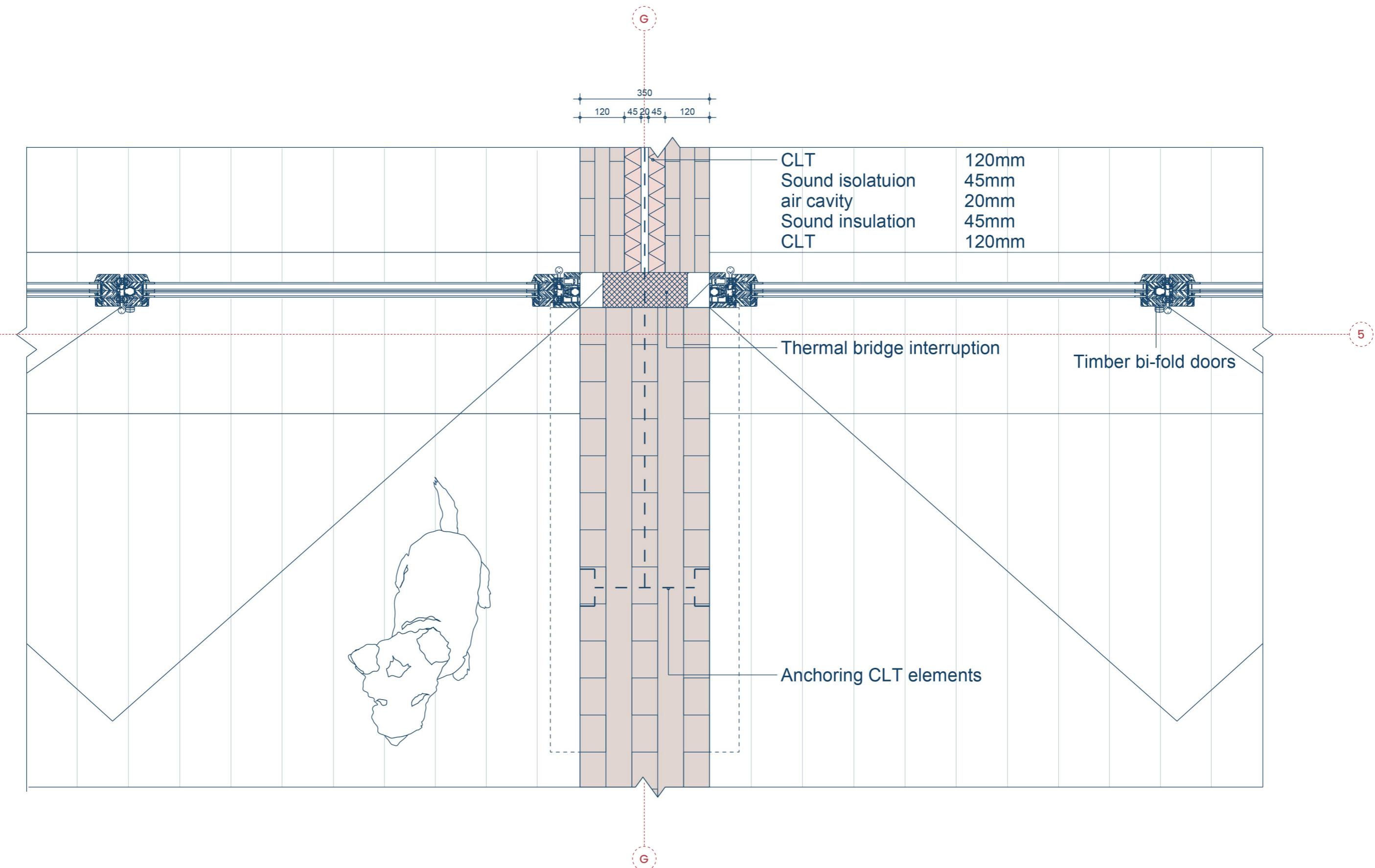
DETAIL H1

1:10



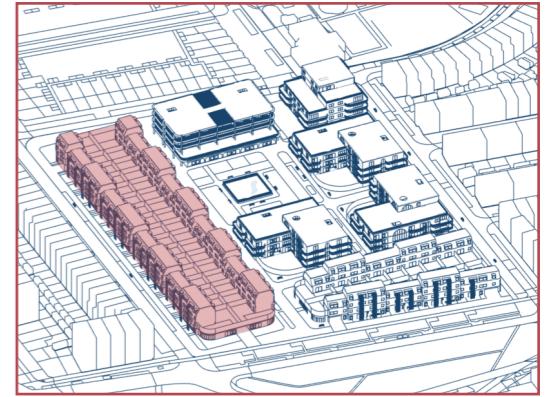
DETAIL H2

1:10



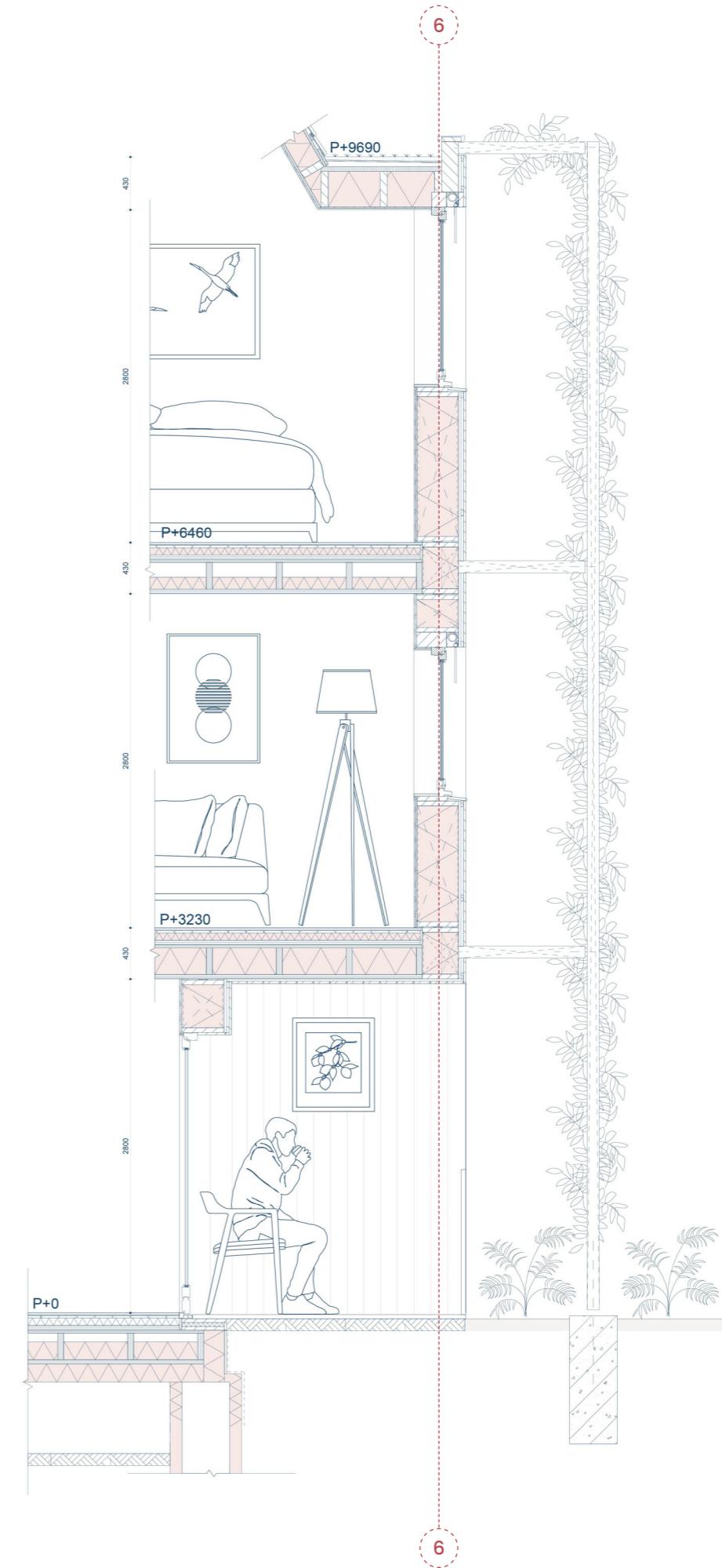
DETAIL BOOKLET

FRAGMENT 2



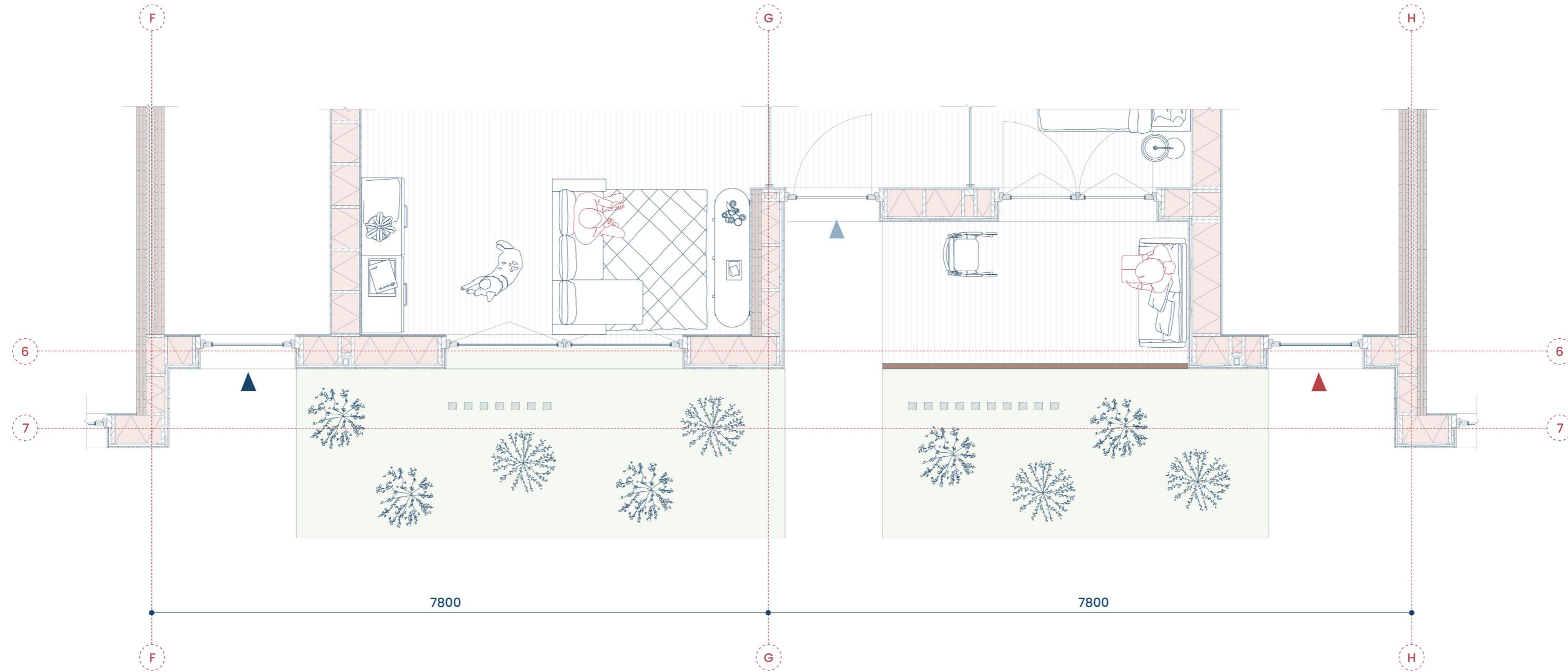
FRAGMENT VERTICAL

1:25 (scaled with 50%)



FRAGMENT HORIZONTAL

1:25 (scaled with 50%)

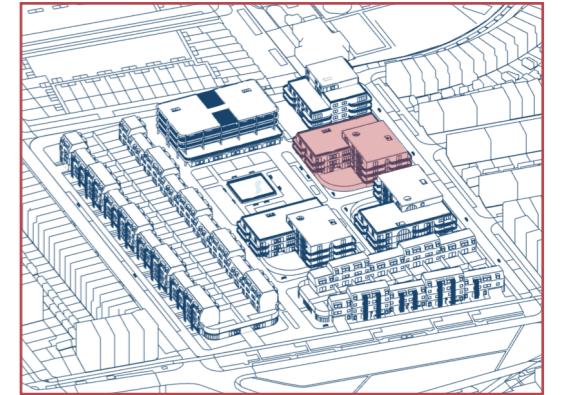


Legend

- ▲ = Entrance elderly unit
- ▲ = Entrance linked home
- ▲ = Entrance regular apartment

DETAIL BOOKLET

PRINCIPLE DETAIL



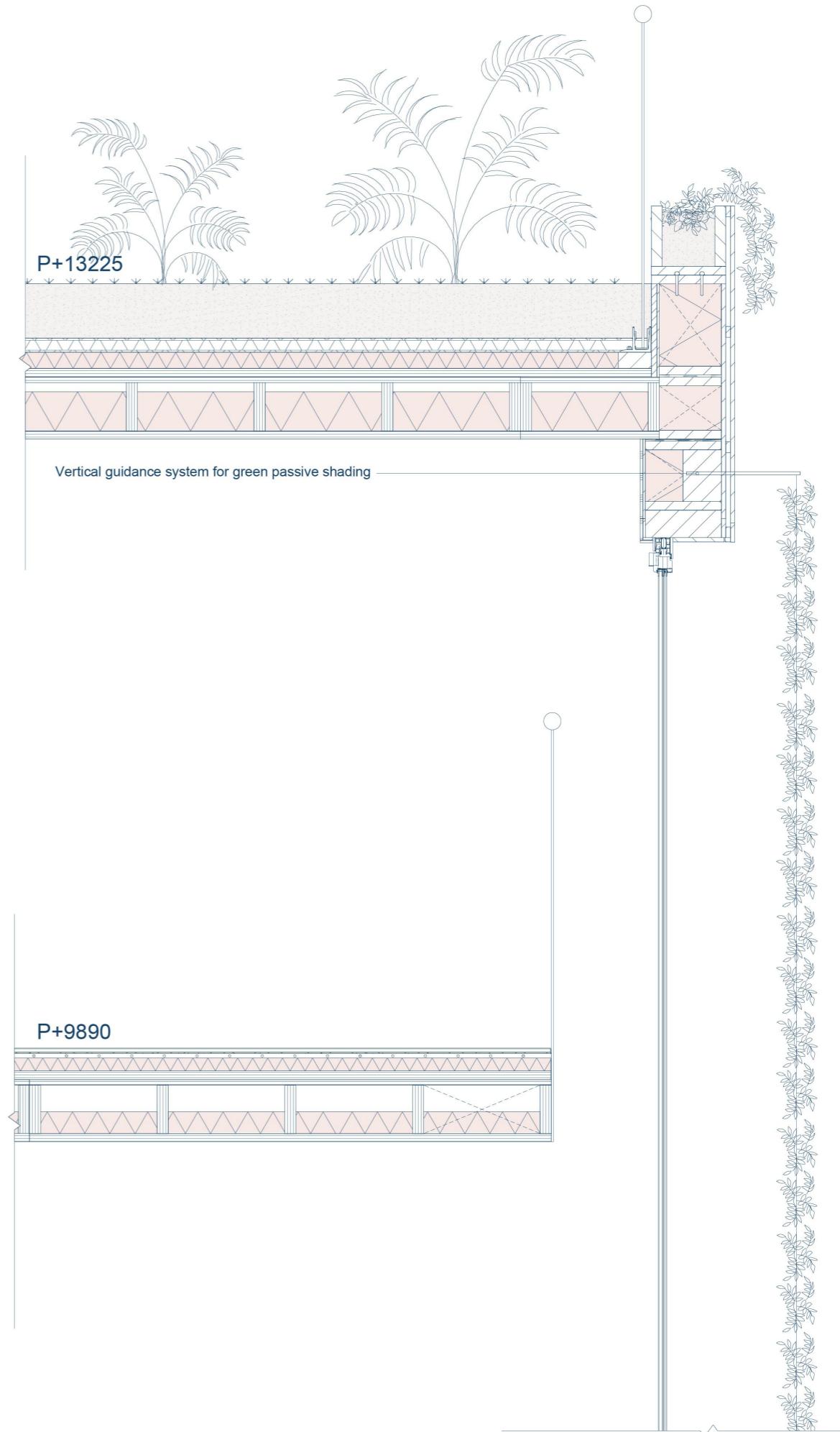
NORTH FACADE

1:200



PRINCIPLE DETAIL PASSIVE SUN BLOCKING

1:20 (scaled with 50%)

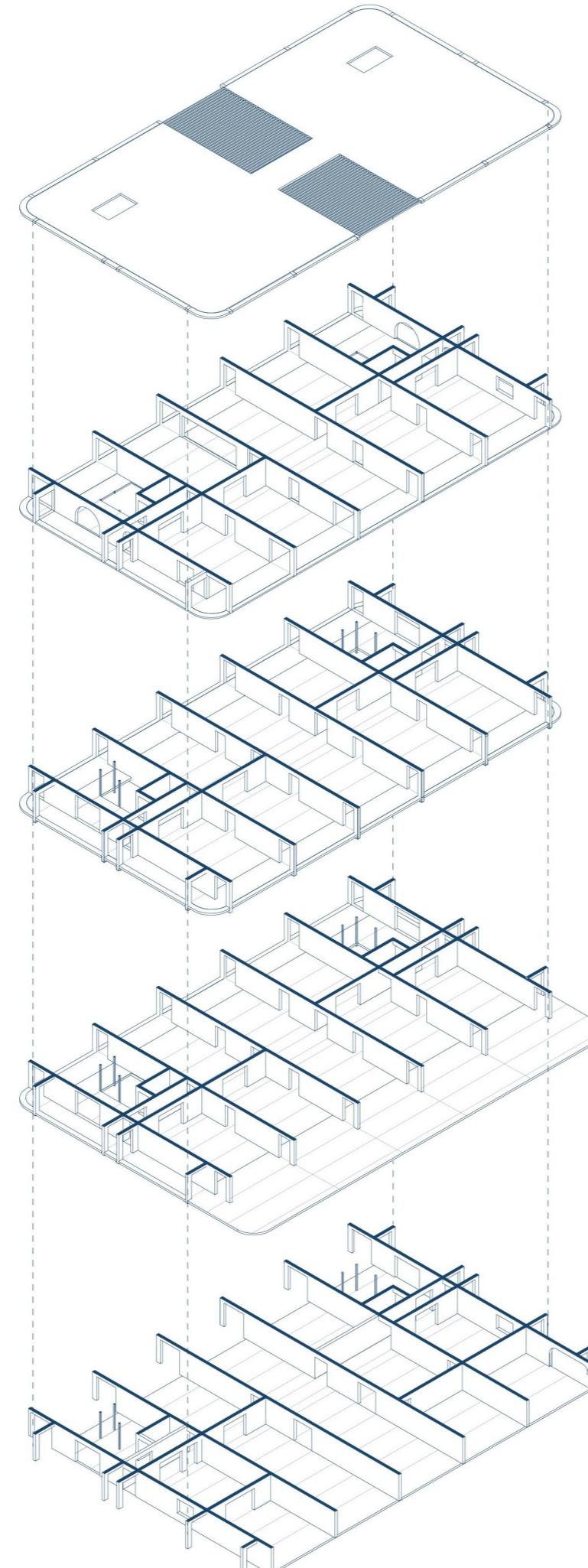


CONSTRUCTION / FLEXIBILITY

Designing dignity

CONSTRUCTION

1:500



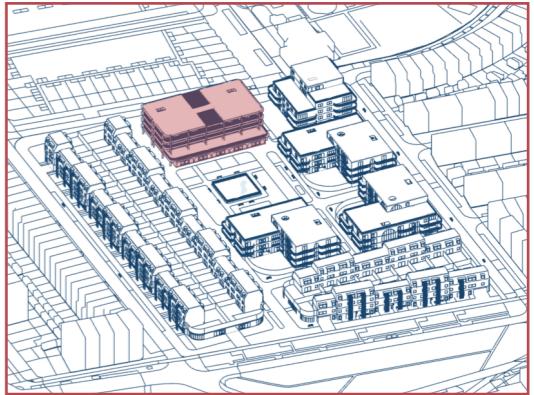
LOAD BEARING WALLS

CLT



(Novatop, n.d.)

- Stores CO2
- Low environmental impact



NON LOAD BEARING WALLS

Timber frame construction



(Wandshop, n.d.)

- Carbon negative
- Biodegradable

FLOORS

Kerto Ripa

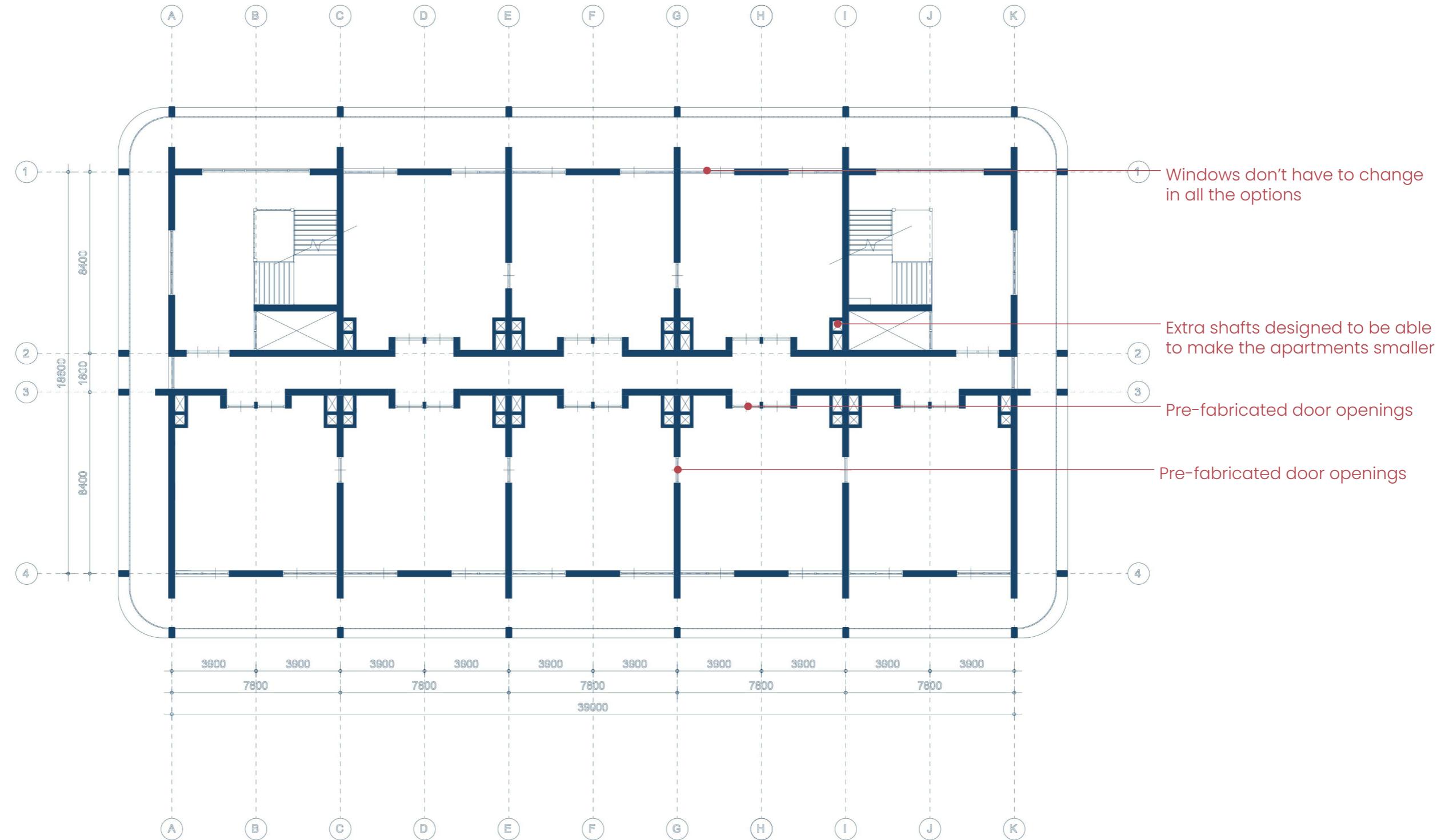


(Woodteq, n.d.)

- Wooden hollow floor
- Place for insulation / installations

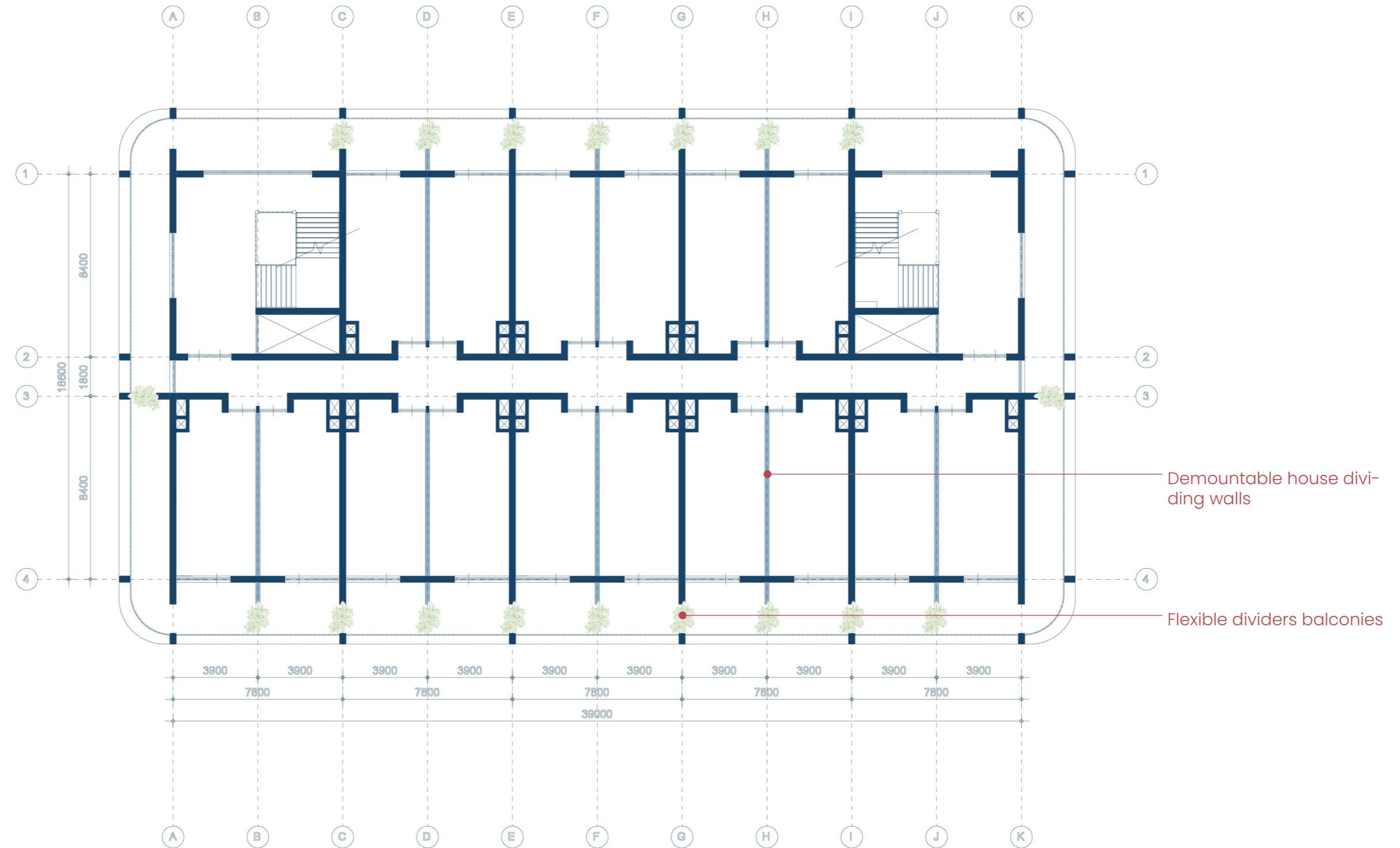
FLEXIBILITY GRID 1:200

Second floor



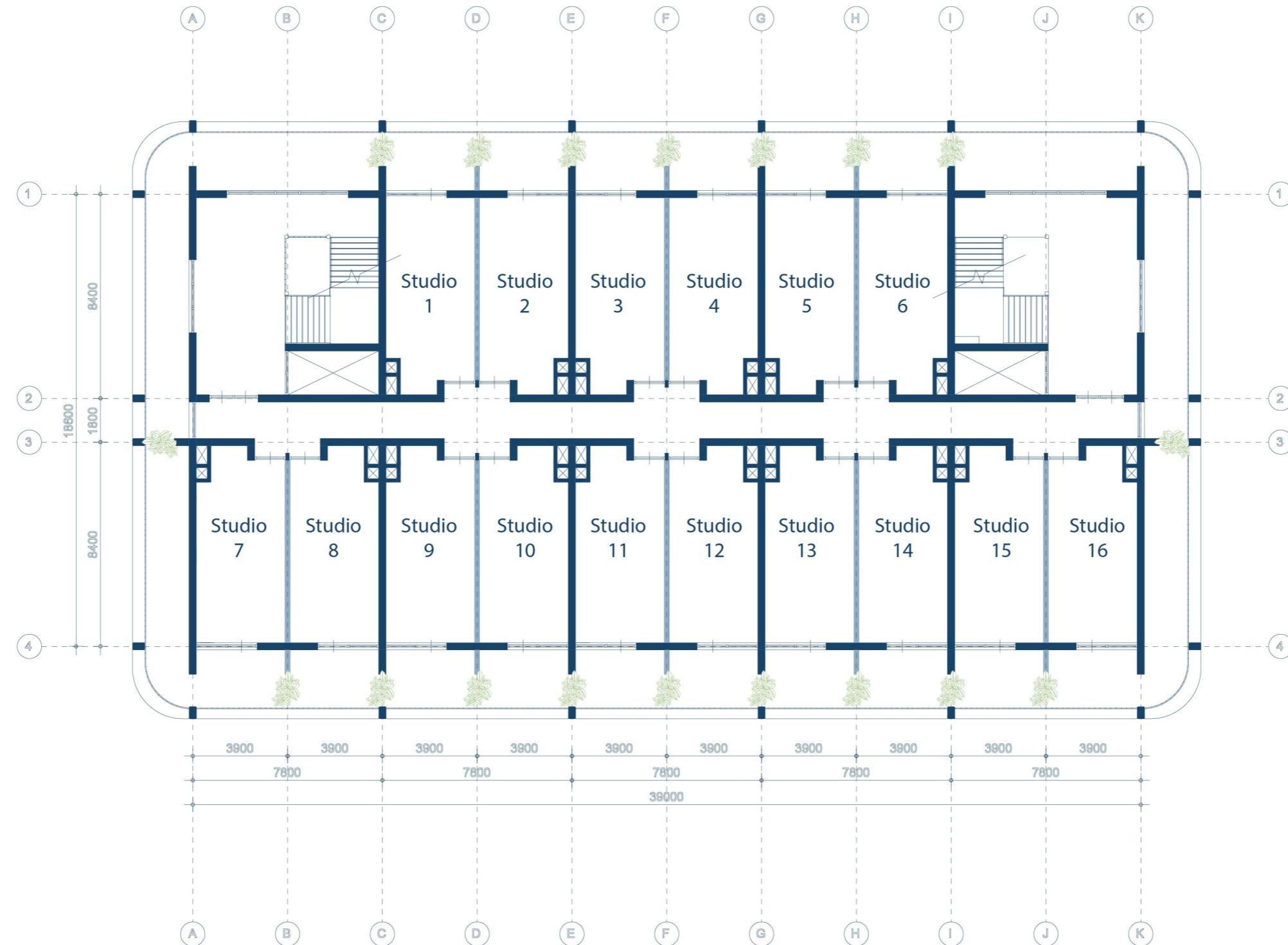
FLEXIBILITY GRID 1:200

Second floor



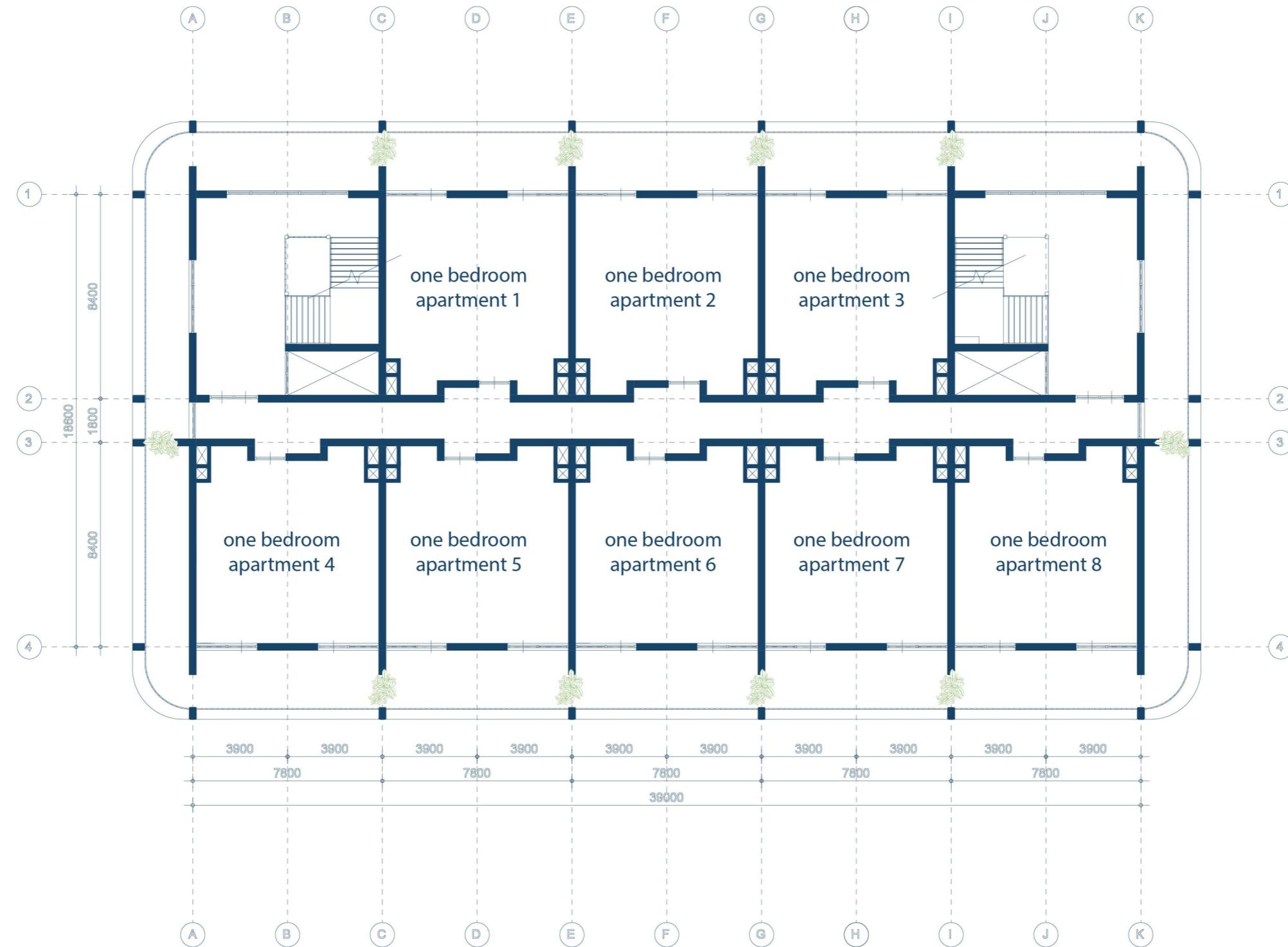
Dwelling scenarios

Second floor 1:200



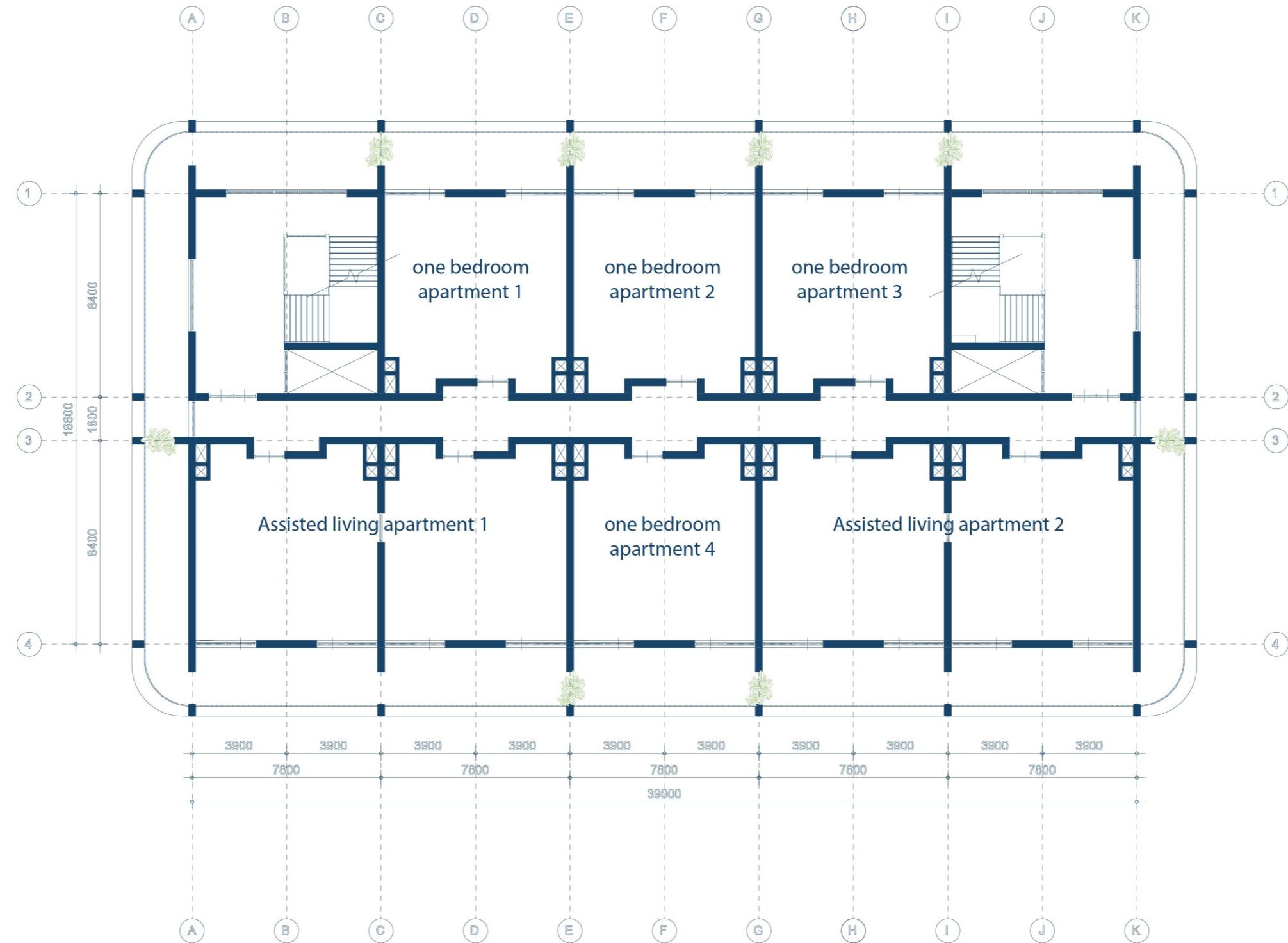
Dwelling scenarios

Second floor 1:200



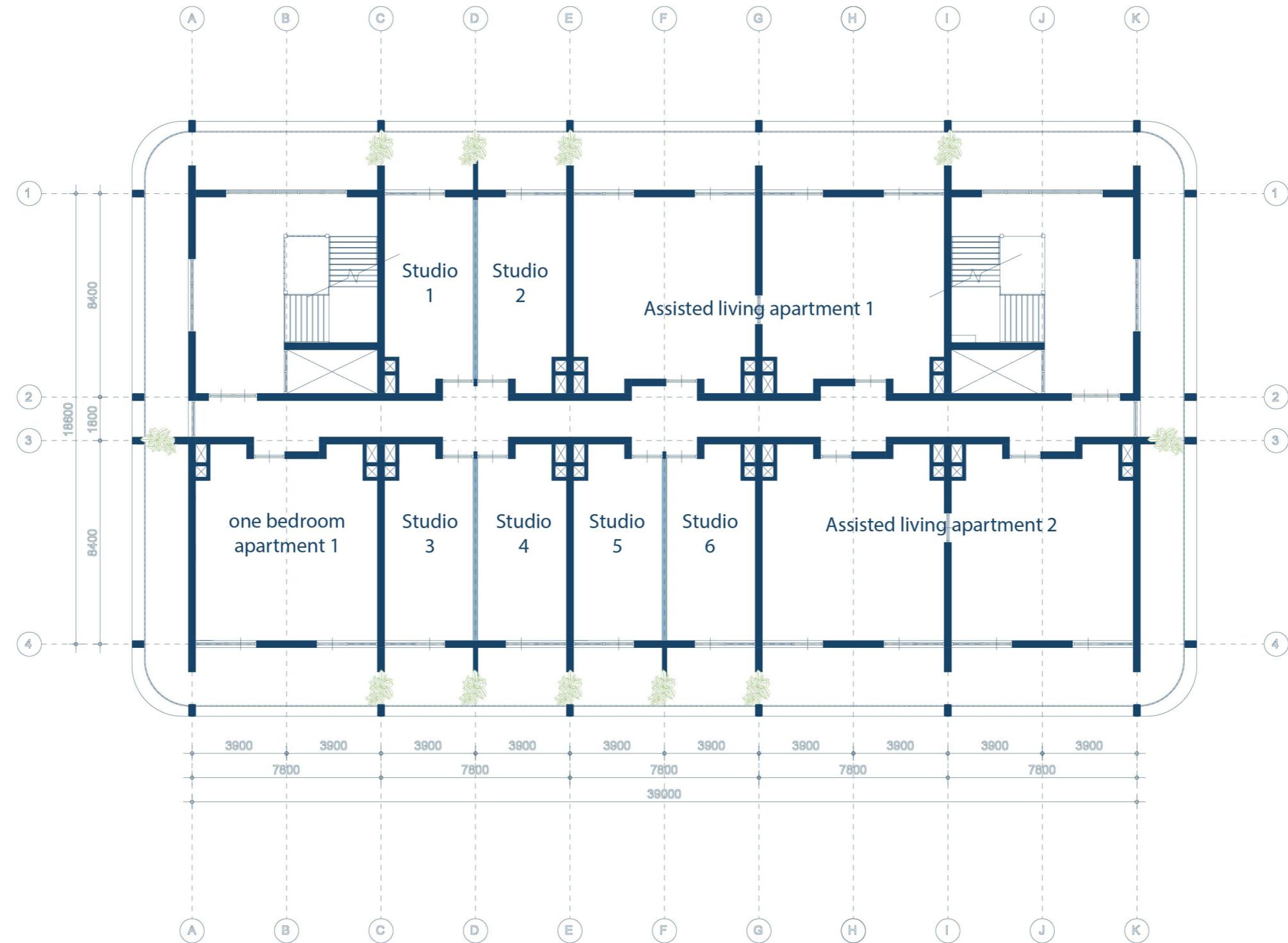
Dwelling scenarios

Second floor 1:200



Dwelling scenarios

Second floor 1:200

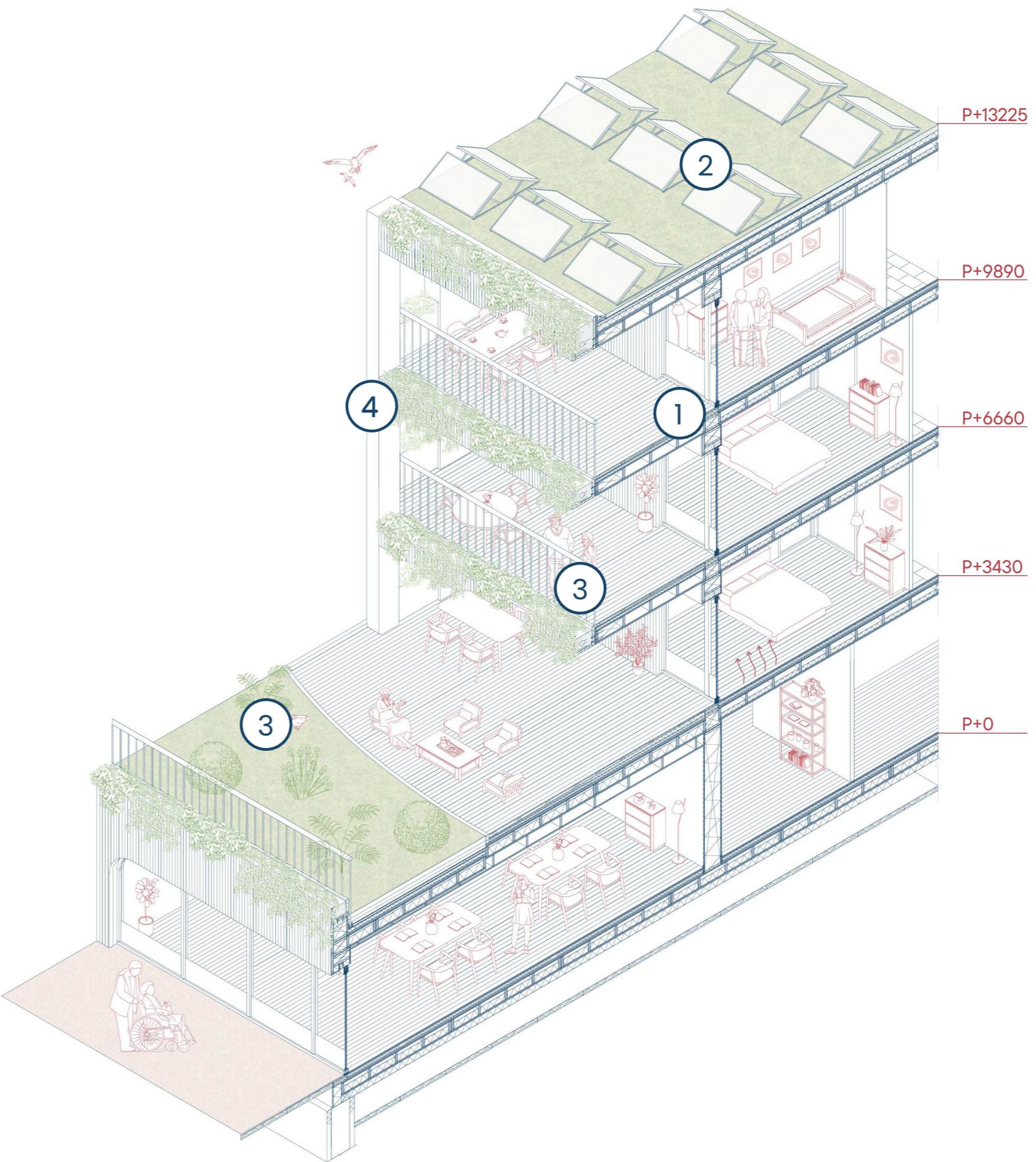


CLIMATE

Designing dignity

CLIMATE ARCHITECTURAL DESIGN PRINCIPLES

- 1 The 2,4 meter overhangs provide sufficient shade on the balconies during summer. As a result, the sun will not shine directly into the rooms in summer, helping to reduce heat in these spaces.
- 2 The green roof helps cool the PV panels, which increases their efficiency.
- 3 The plants on the balconies & the biodiversity garden improve air quality and enhance the biodiversity.
- 4 Rainwater falling on the balconies is drained through a hollow column. The collected water can be used to irrigate the plants on the sides of the balconies.

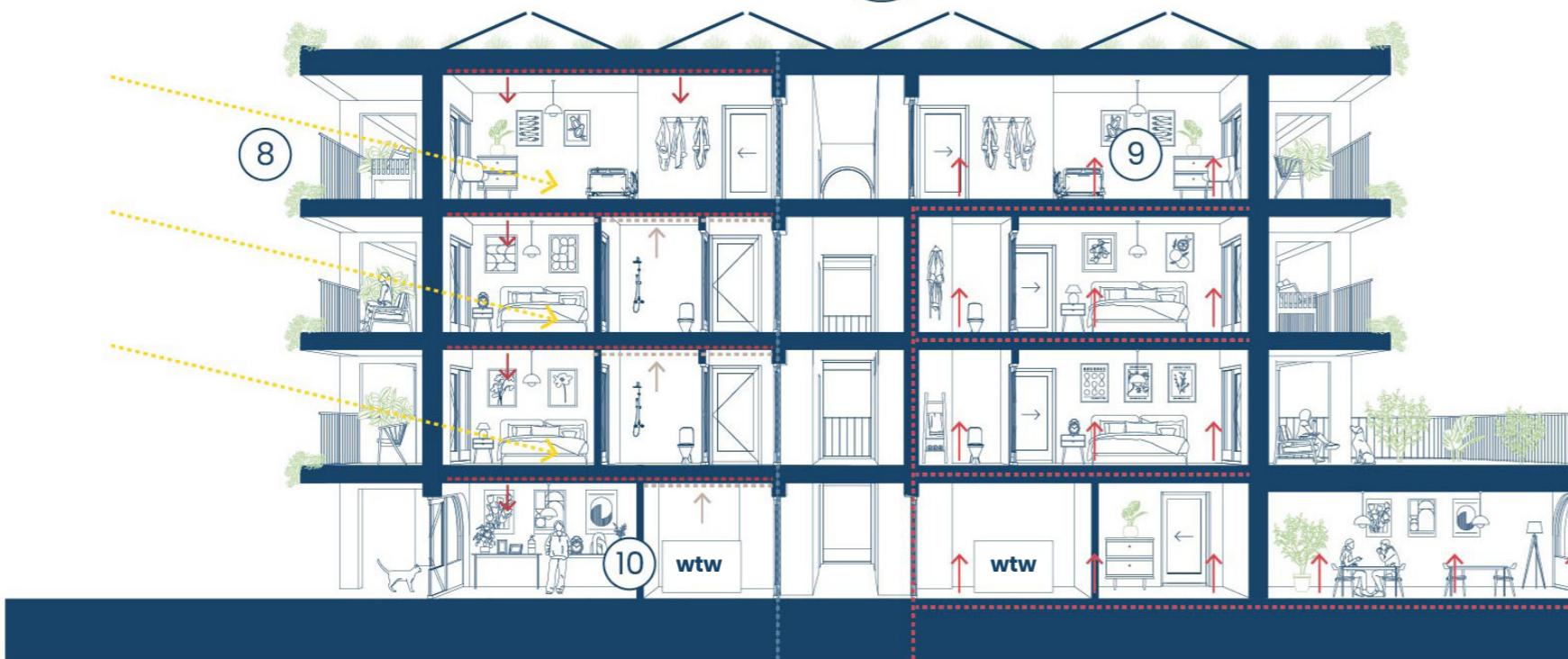
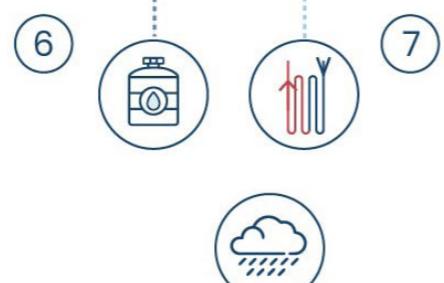


CLIMATE DIAGRAMS

1:200



Climate diagram summer



Climate diagram winter

1 The 2,4 meter overhangs provide **sufficient shade** on the balconies during summer. As a result, the sun will not shine directly into the rooms in summer, helping to reduce heat in these spaces.

2 The green roof helps cool the PV panels, which increases their efficiency.

3 Ventilation system D will be used, supplying fresh air to living areas while extracting polluted air. **With heat recovery, it can reclaim up to 95% of the heat from extracted air**, reducing energy costs. This system also ensures a constant flow of fresh air and stable indoor air quality for a more comfortable living environment.

4 In summer, cold water flows through the floor heating system, keeping the apartment cool.

5 The plants on the balconies **improve air quality, provide natural shade** in summer and **enhance the biodiversity**.

6 The Pluvia system **collects and stores rainwater from the roof**. This water can then be used for irrigating plants, flusing toilets, and running washing machines.

7 A WKO (Warmte Koude Opslag) system stores **thermal energy in the ground**, using it for heating in the winter and cooling in the summer. This system is energy-efficient and reduces the need for conventional heating and cooling methods.

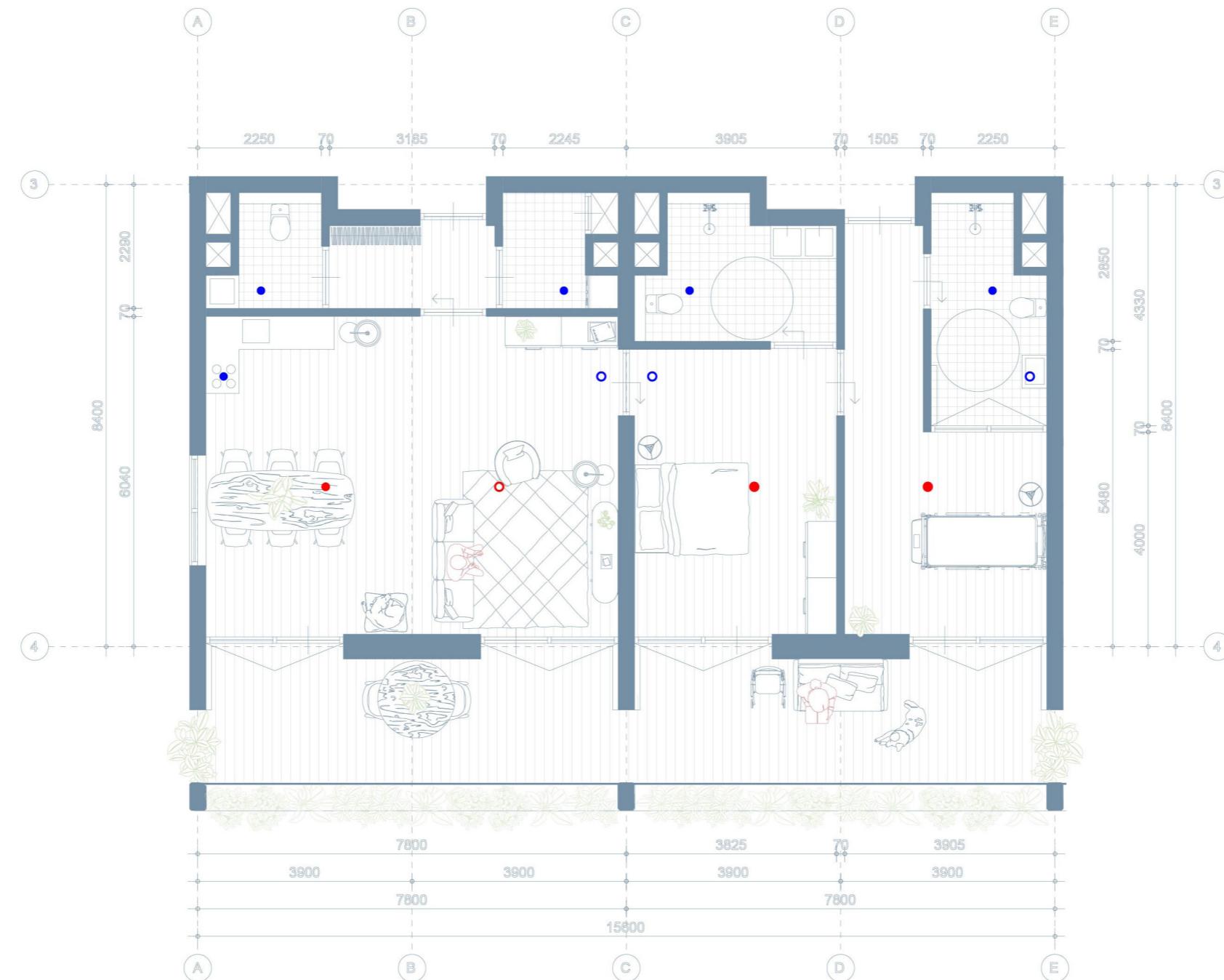
8 In winter, the sun is lower in the sky and will shine into the living room.

9 In winter, warm water flows through the floor heating system, keeping the apartment warm.

10 On the ground floor, air handling units with heat recovery are installed as part of ventilation system D. These units supply fresh outdoor air and extract stale indoor air, while simultaneously recovering heat from the outgoing air to preheat the incoming air, contributing to an energy-efficient and comfortable indoor climate.

FLEXIBILITY VENTILATION SYSTEM

1x Assisted living



Legend

● = Air exhaust in use

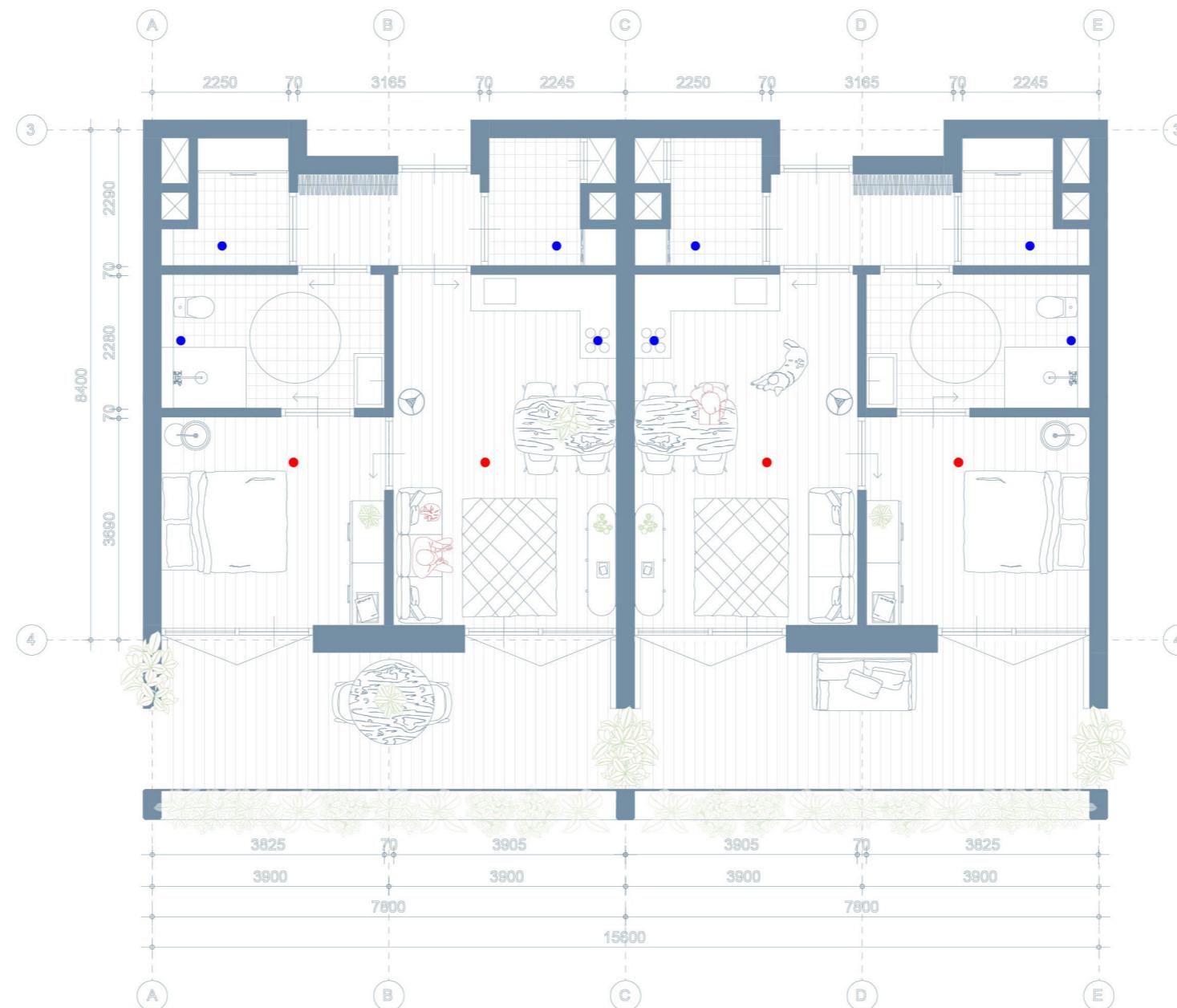
○ = Air exhaust not in use

● = Air supply in use

○ = Air supply not in use

FLEXIBILITY VENTILATION SYSTEM

2x one bedroom apartment



Legend

Blue circle with arrow = Air exhaust in use

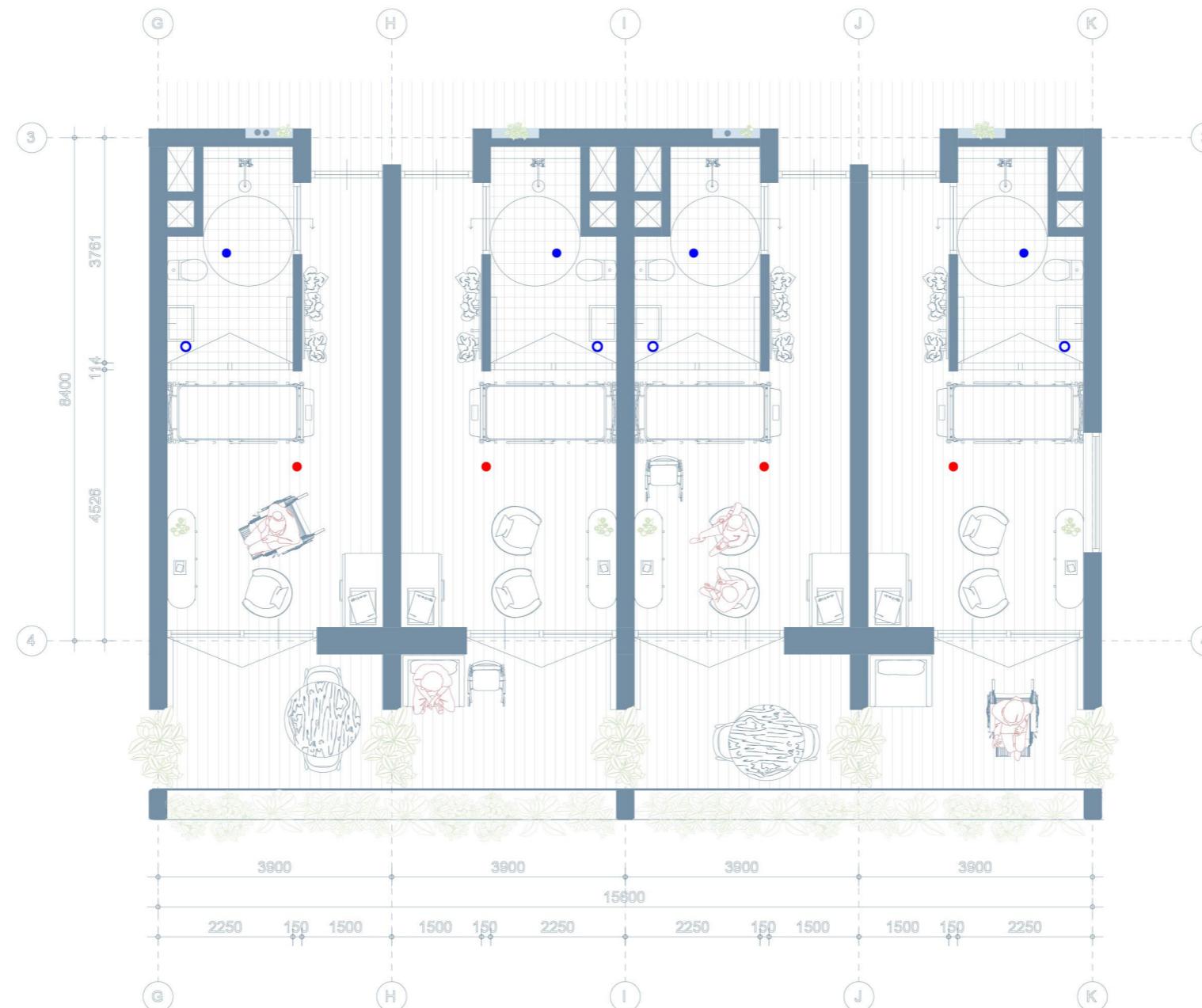
Blue circle without arrow = Air exhaust not in use

Red circle with arrow = Air supply in use

Red circle without arrow = Air supply not in use

FLEXIBILITY VENTILATION SYSTEM

4x room for elderly with severe dementia



Legend

● = Air exhaust in use

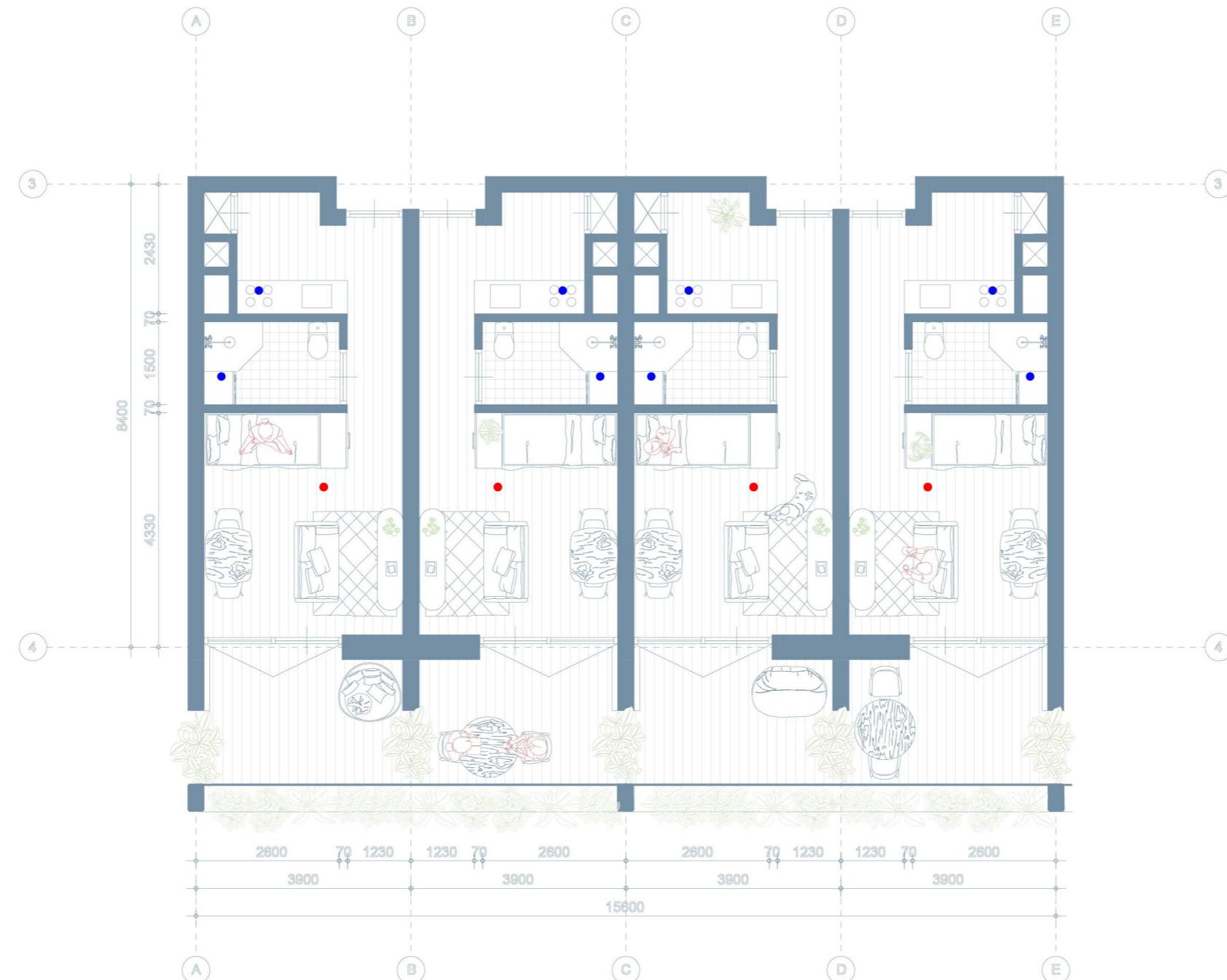
○ = Air exhaust not in use

● = Air supply in use

○ = Air supply not in use

FLEXIBILITY VENTILATION SYSTEM

4x studio spaces



Legend

Blue circle = Air exhaust in use

Blue outline circle = Air exhaust not in use

Red circle = Air supply in use

Red outline circle = Air supply not in use