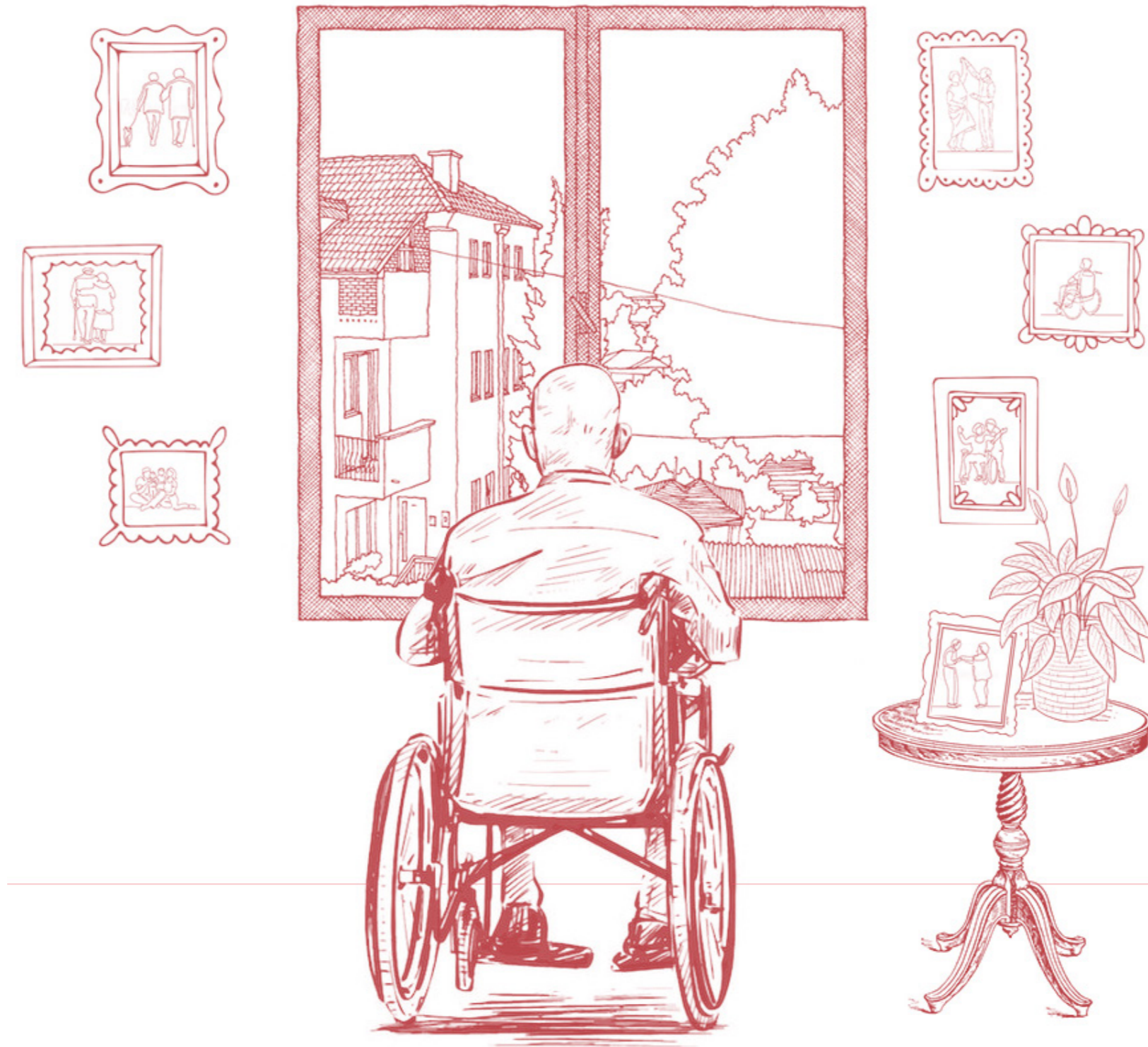


# TOTAL DRAWING SET: DESIGNING DIGNITY

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



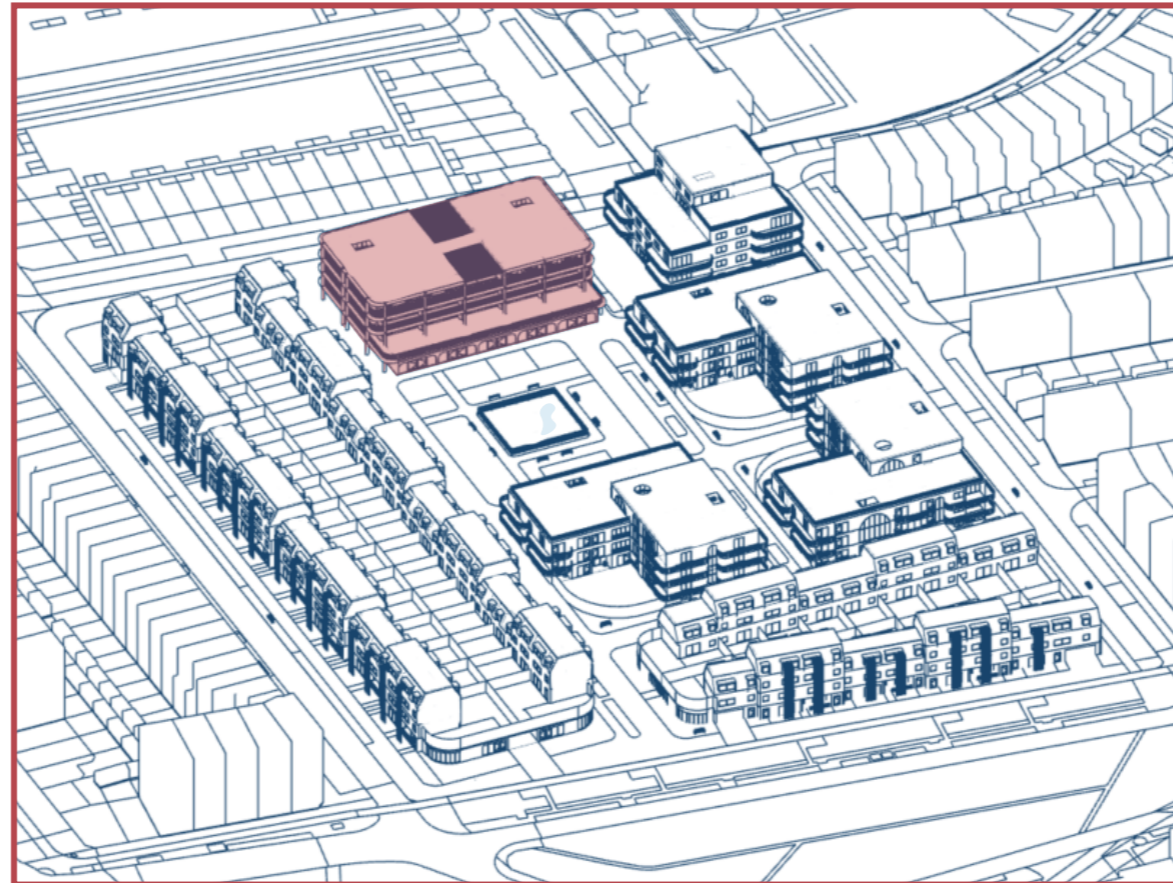
# TABLE OF CONTENTS

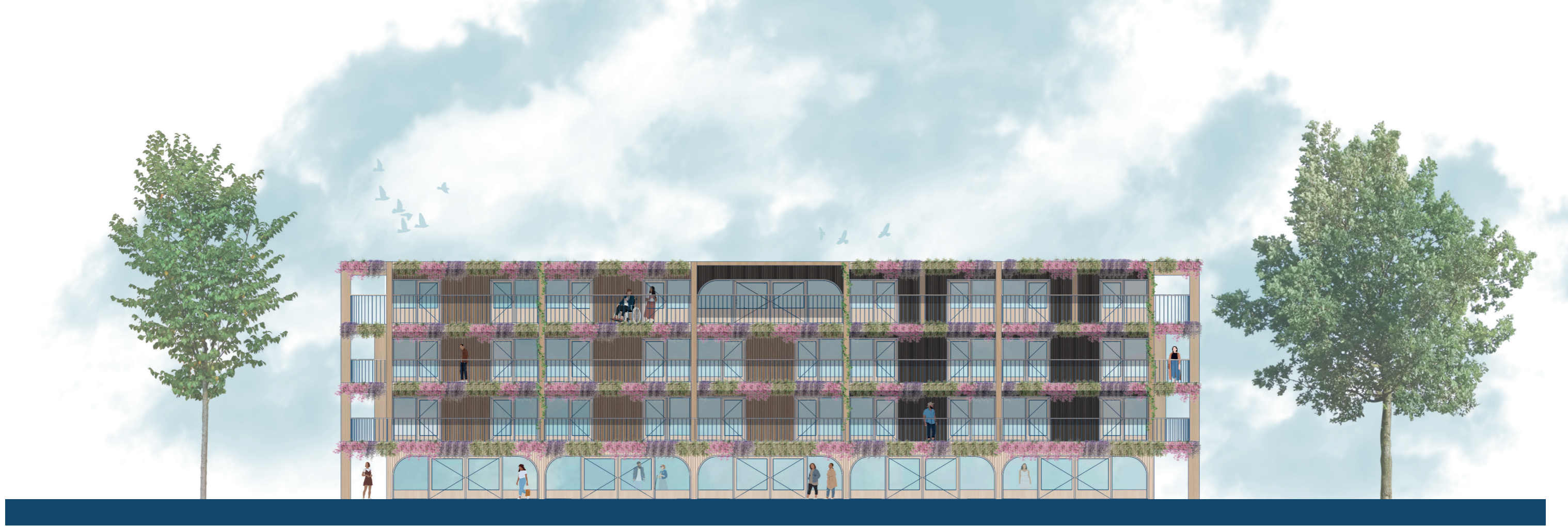
1. Facades	3
2. Floor plans	19
3. Dwelling types	36
4. Details	42
5. Construction / flexibility	55
6. Climate	63

# **1. FACADES**

*Designing dignity*

# PLACEMENT FACADES

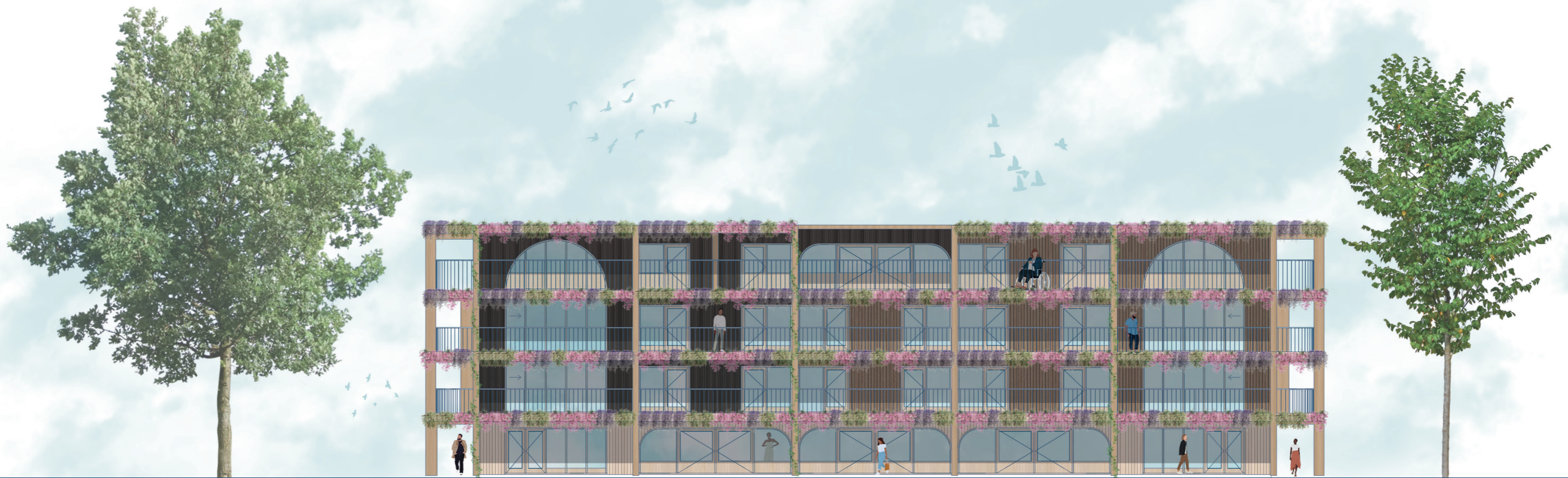




**EAST FACADE**  
1:200



**NORTH FACADE**  
1:200



## WEST FACADE

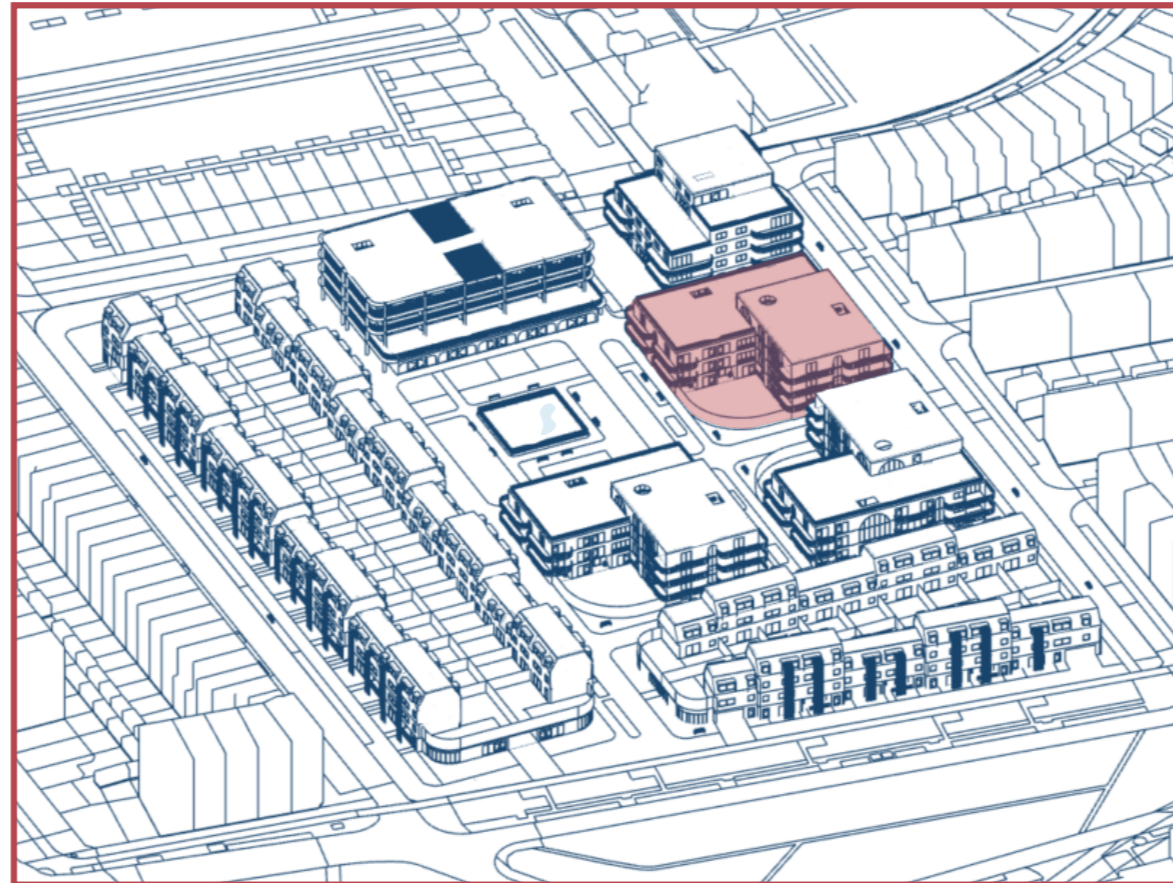
1:200



## SOUTH FACADE

1:200

# PLACEMENT FACADES





**EAST FACADE**  
1:200



**NORTH FACADE**  
1:200

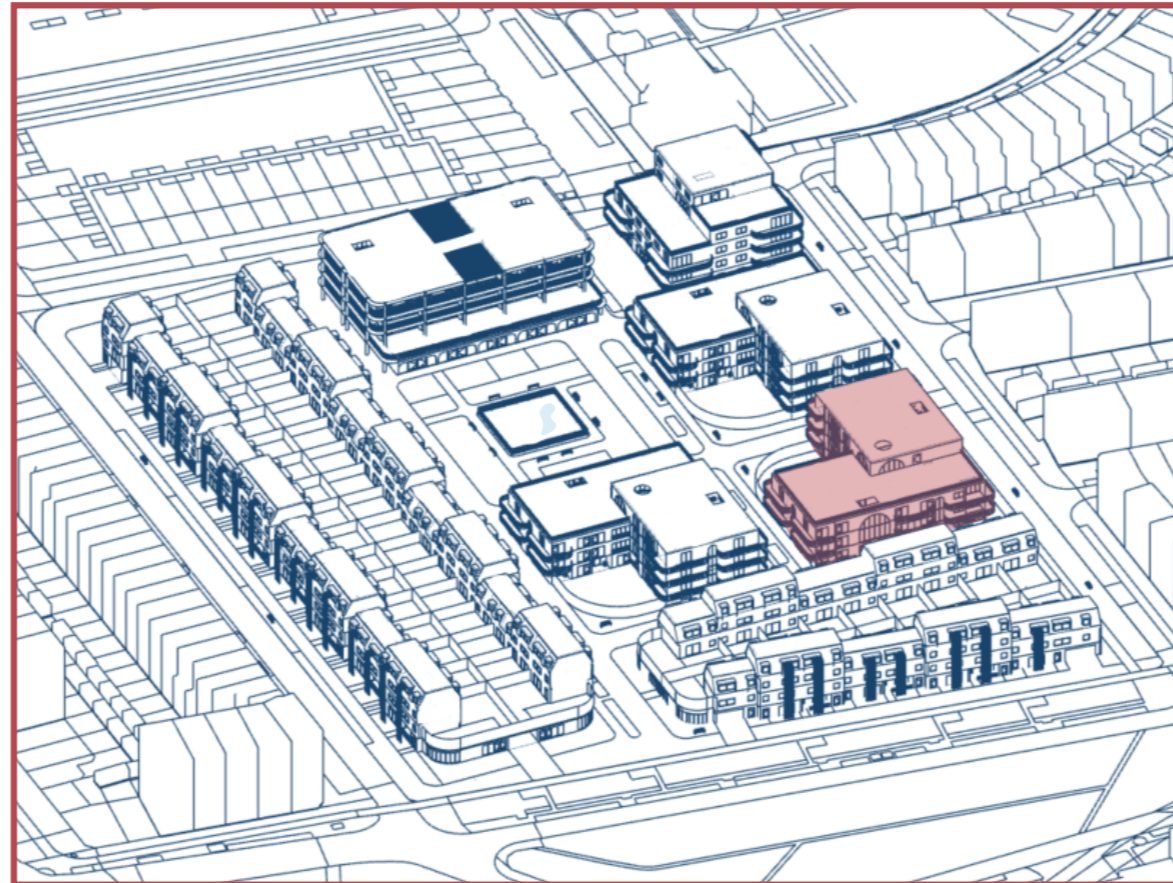


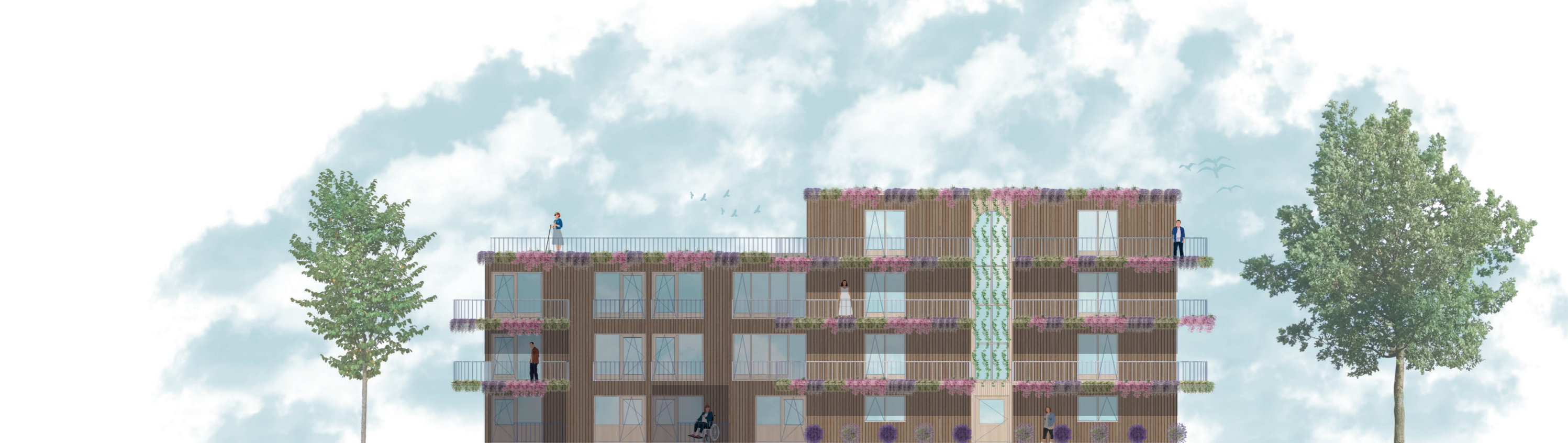
**WEST**  
1:200



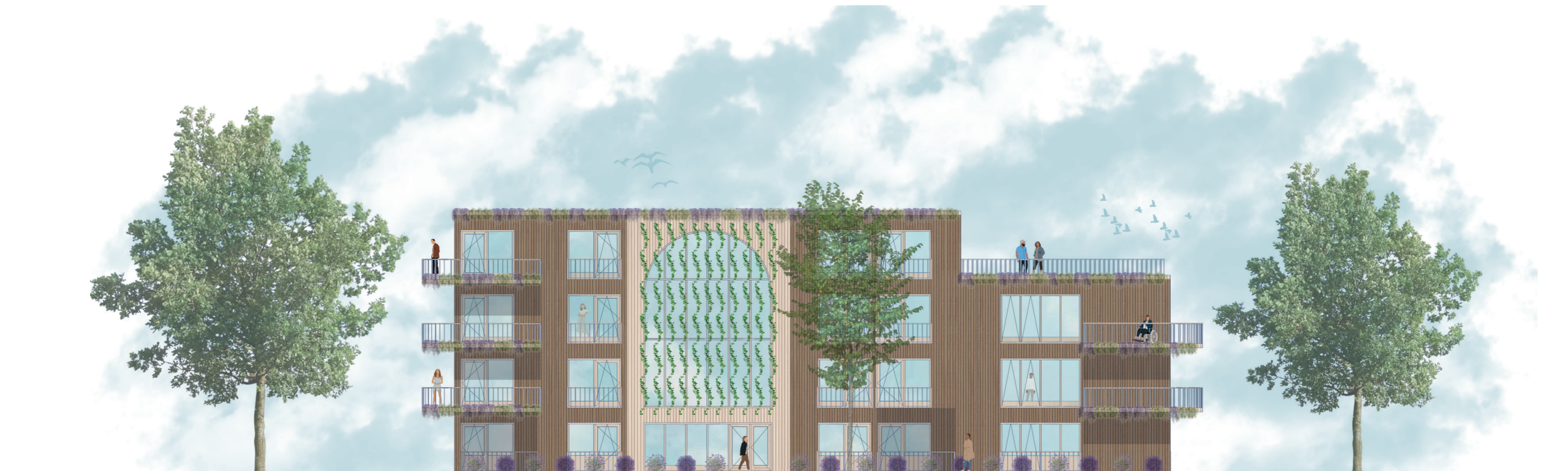
**SOUTH**  
1:200

# PLACEMENT FACADES





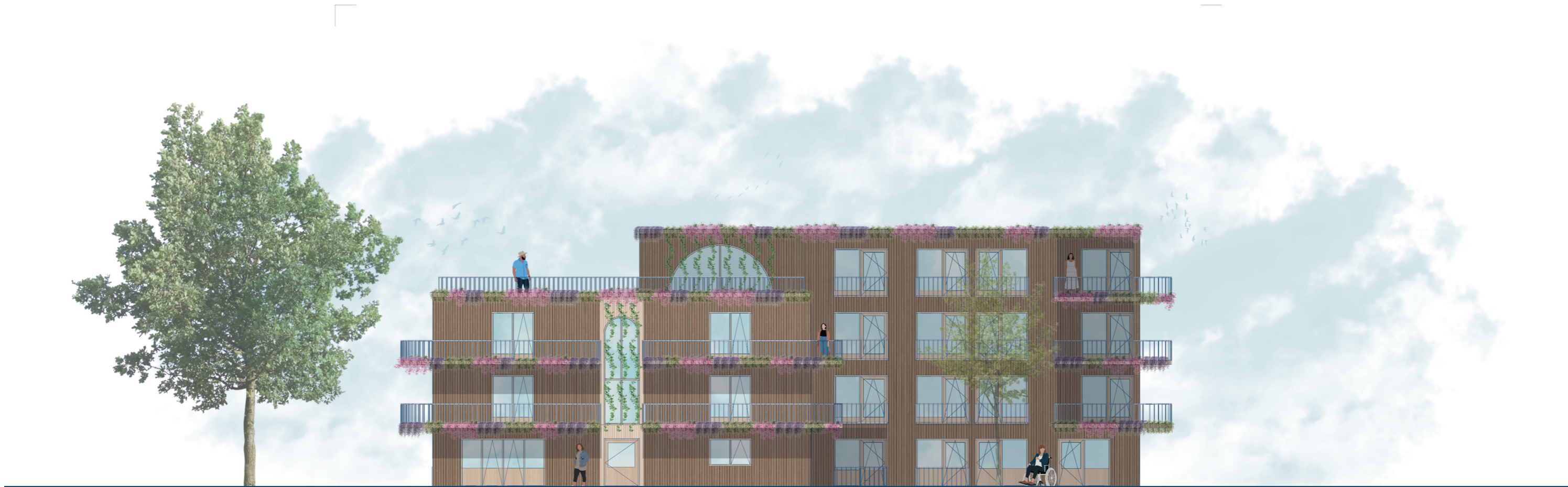
**EAST FACADE**  
1:200



**NORTH FACADE**  
1:200

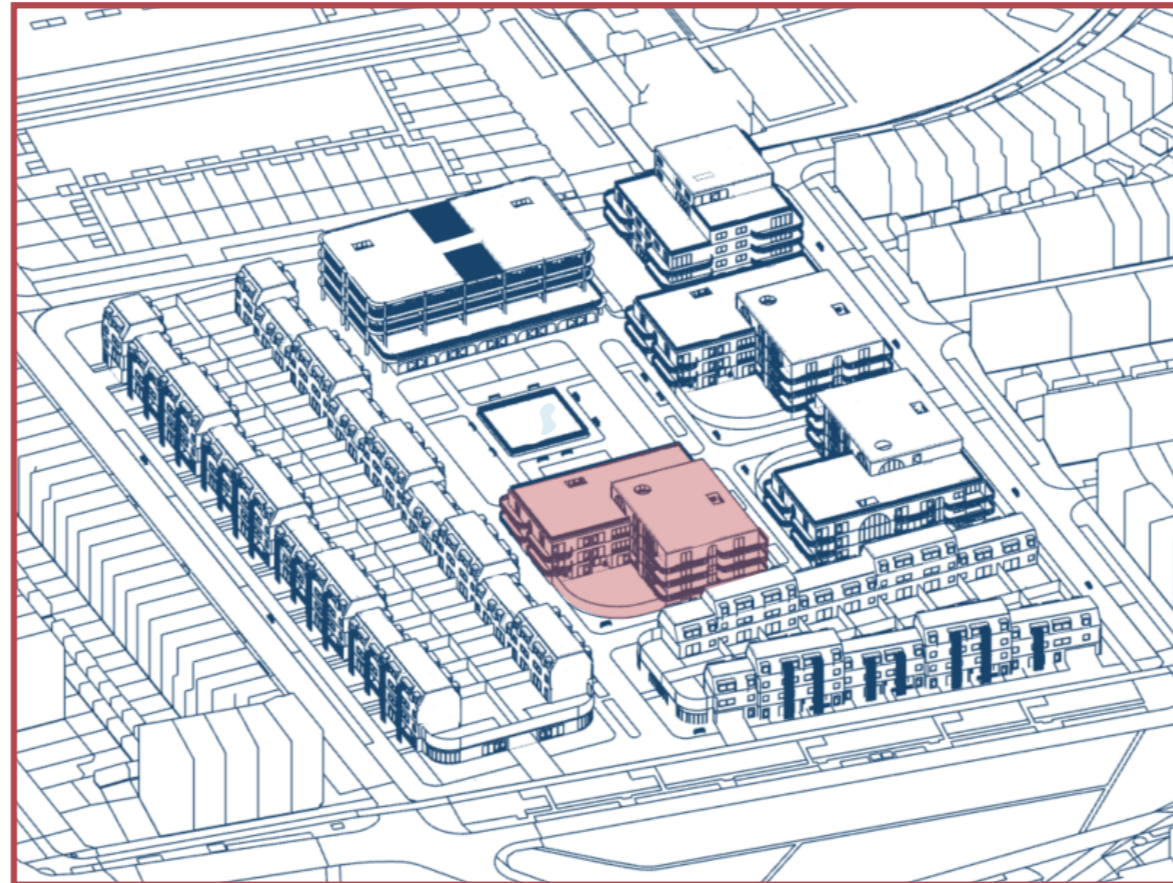


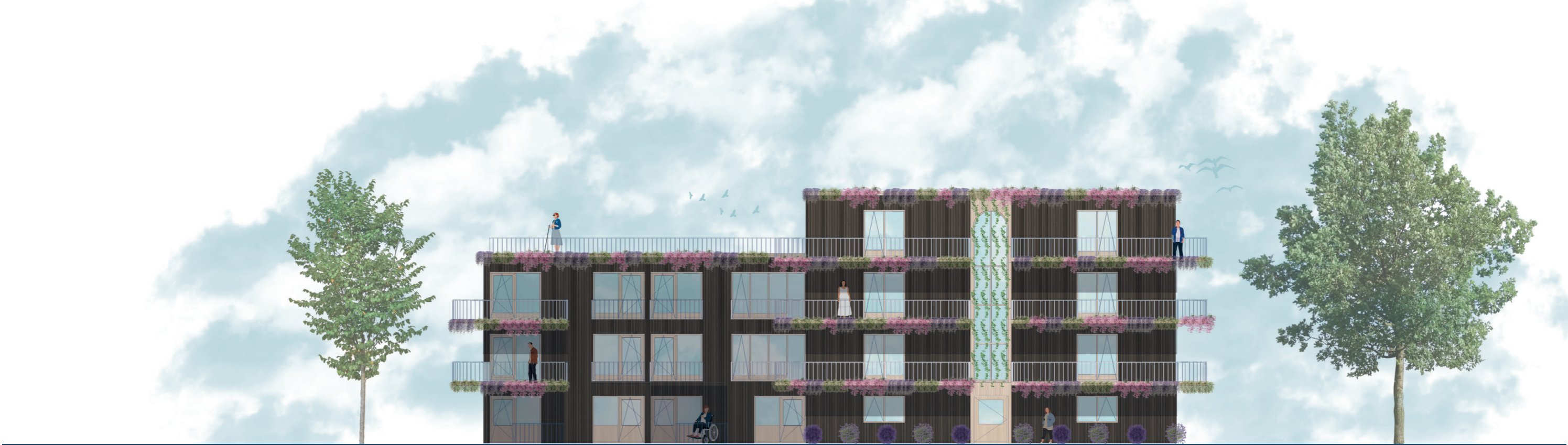
**WEST**  
1:200



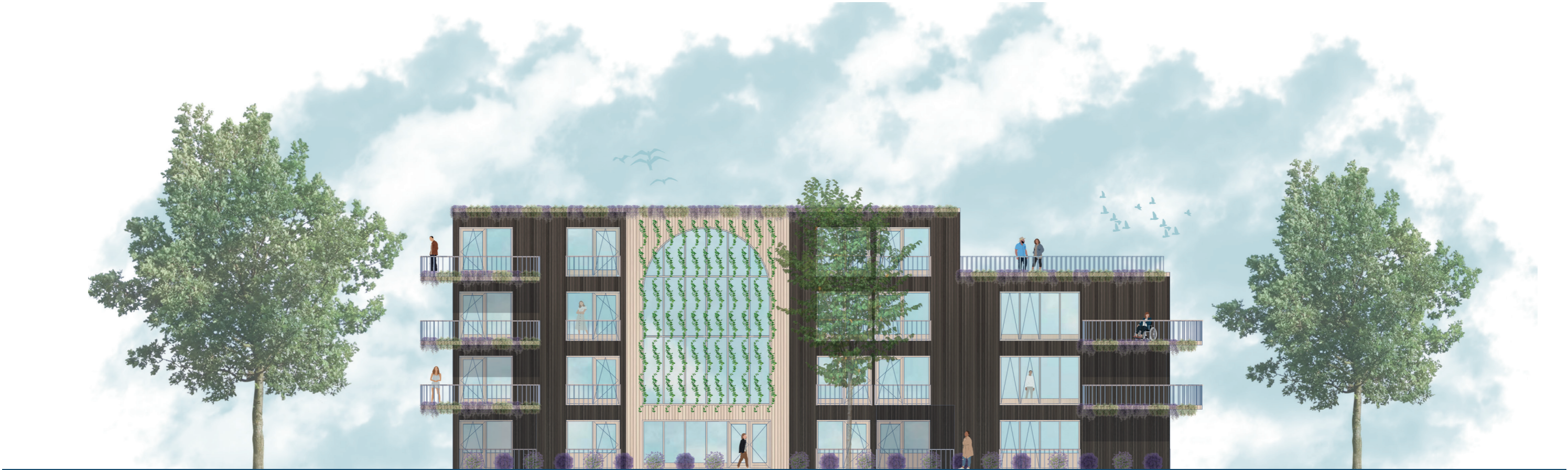
**SOUTH**  
1:200

# PLACEMENT FACADES

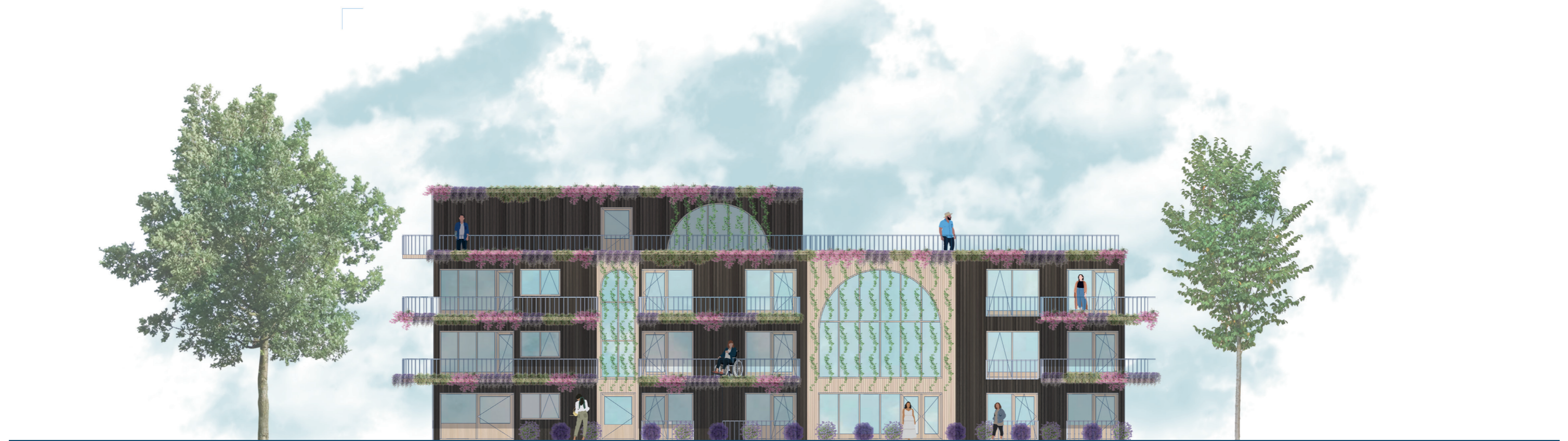




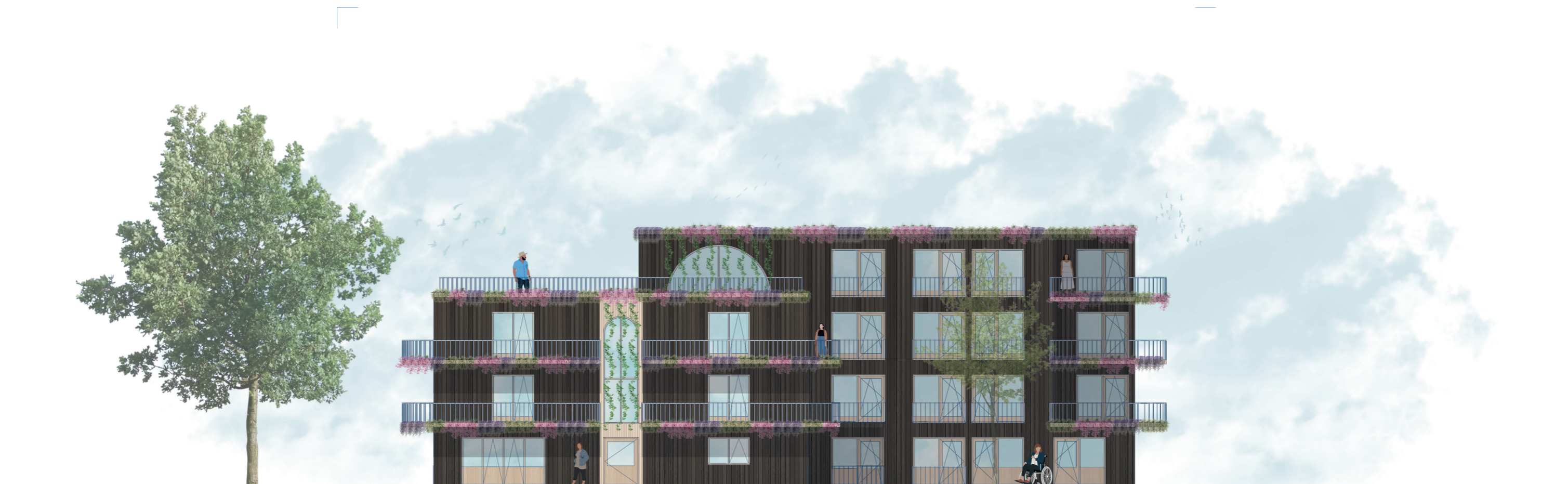
**EAST FACADE**  
1:200



**NORTH FACADE**  
1:200

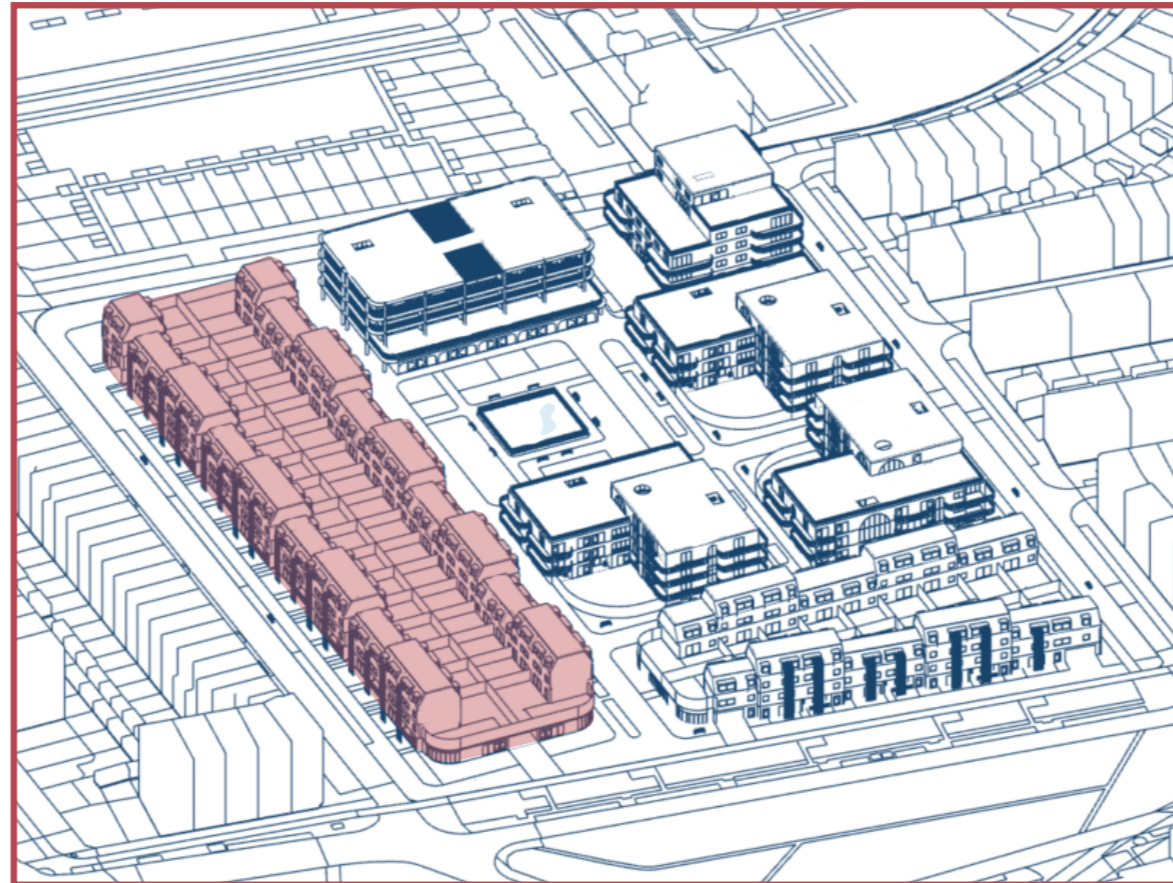


**WEST**  
1:200



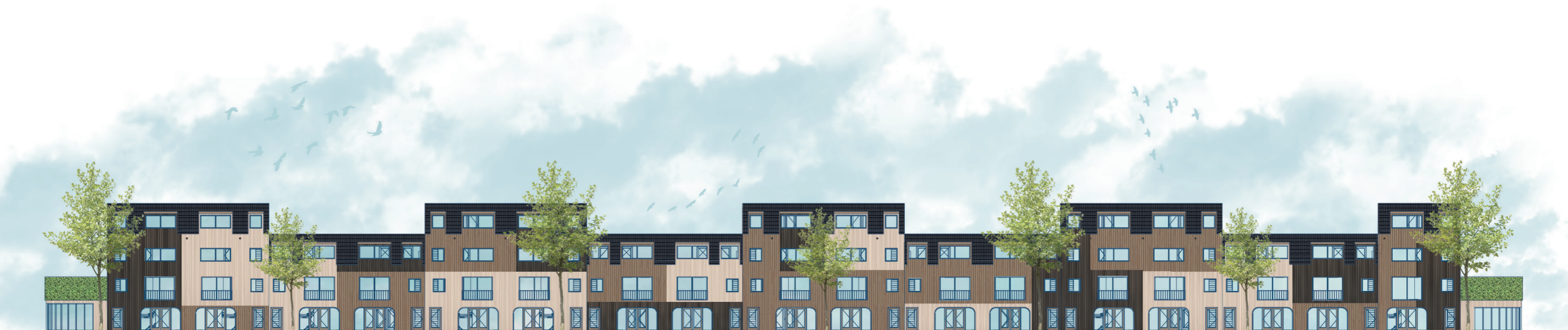
**SOUTH**  
1:200

# PLACEMENT FACADES





**SOUTH FACADE**  
*1:400*



**NORTH FACADE**  
*1:400*



## EAST FACADE

1:200



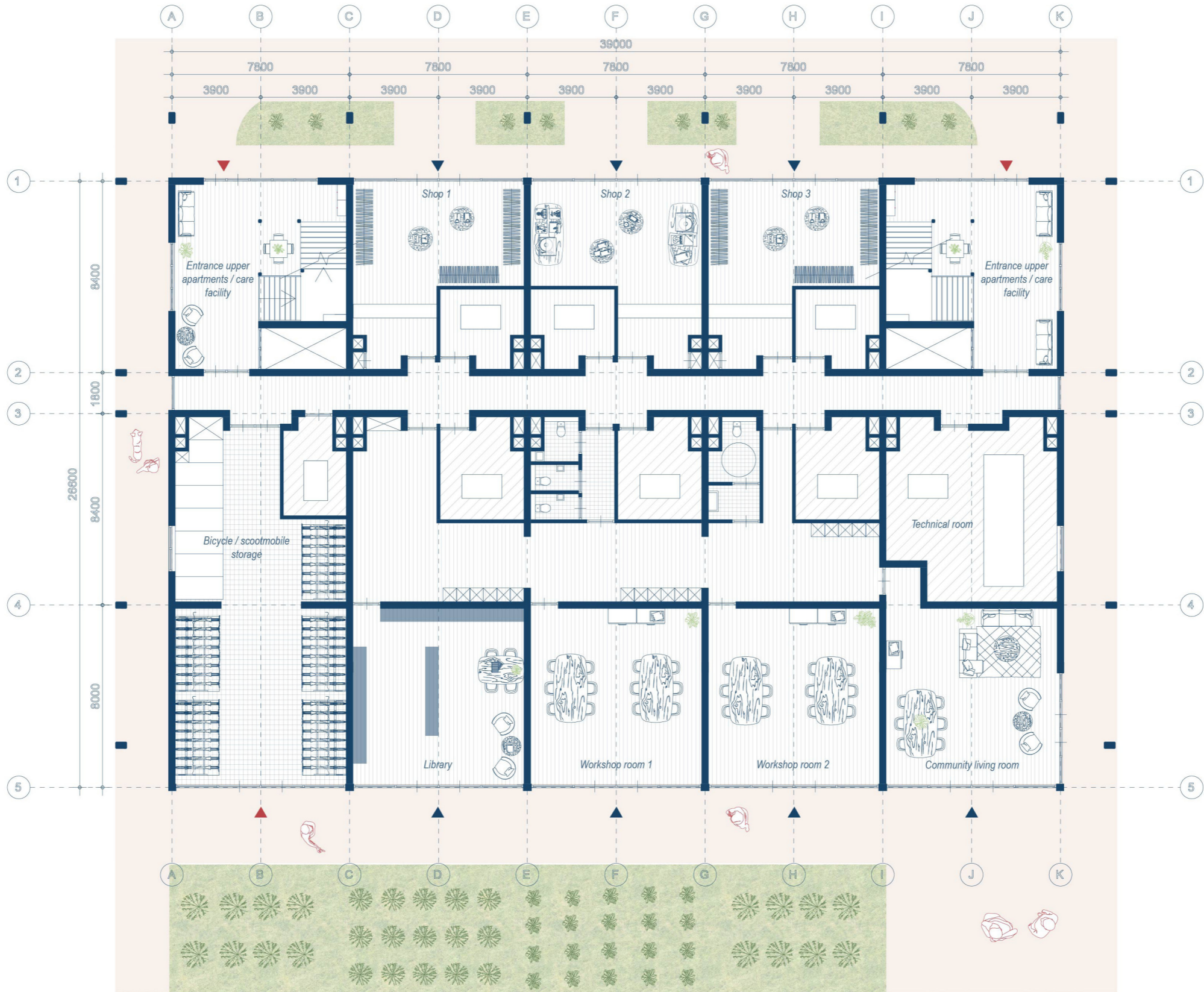
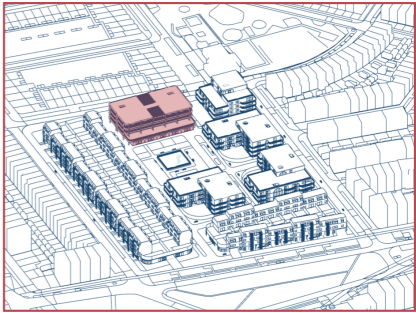
## WEST FACADE

1:400

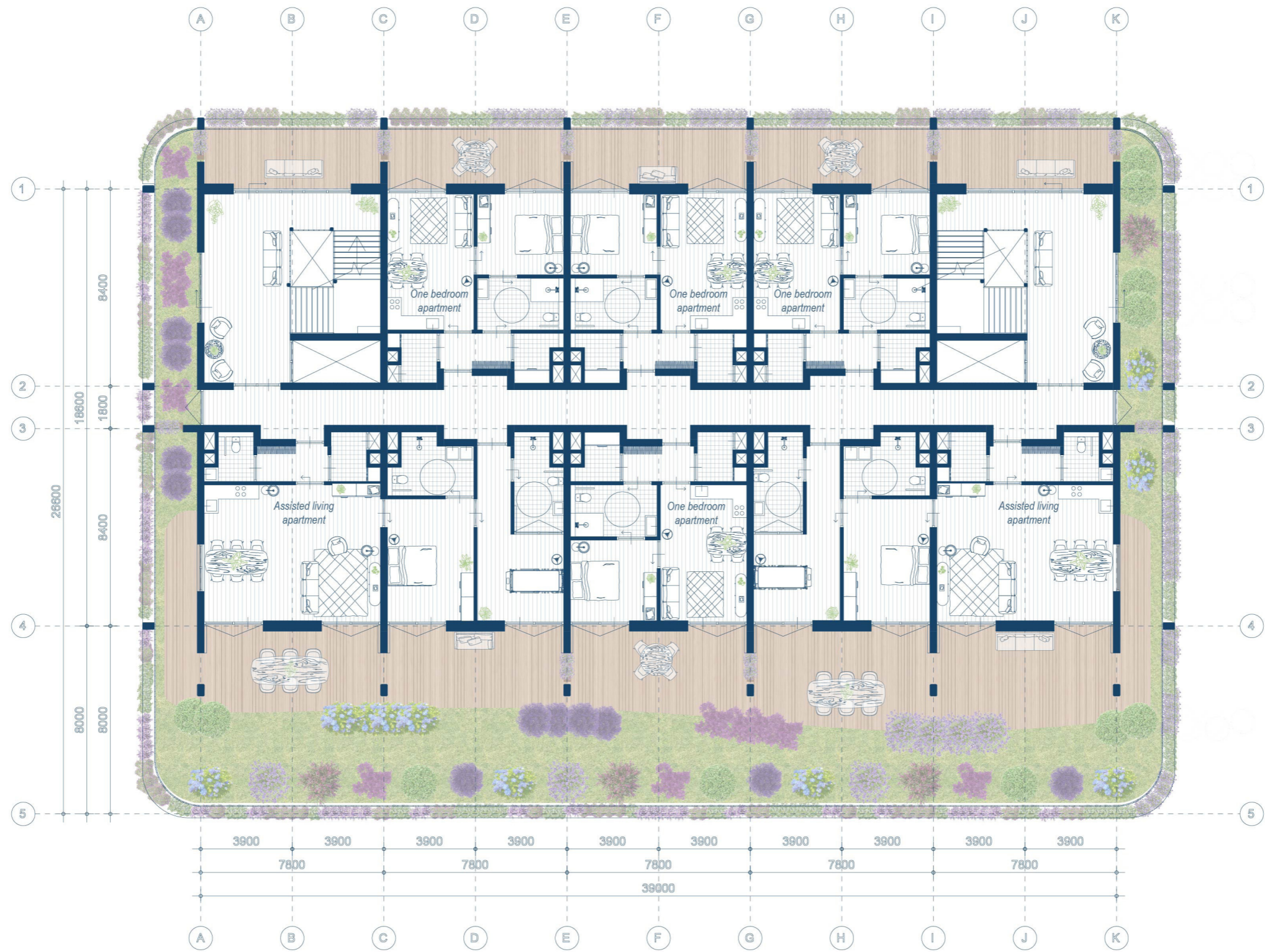
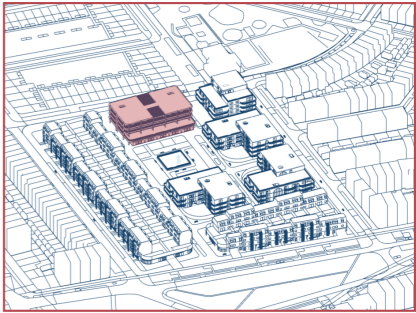
## **2. FLOOR PLANS**

*Designing dignity*

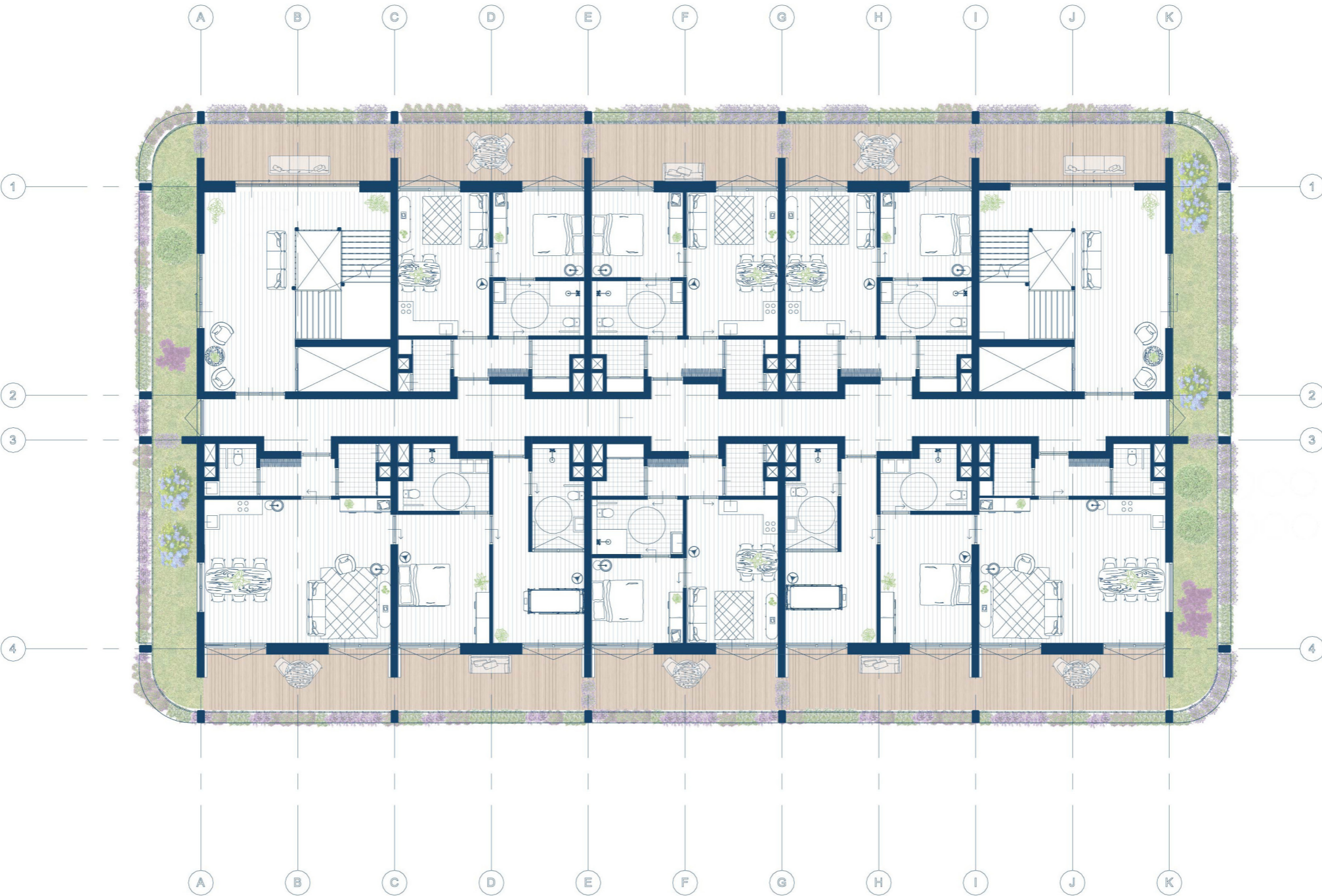
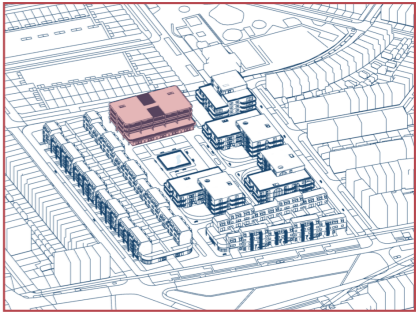
GROUND FLOOR  
1:200



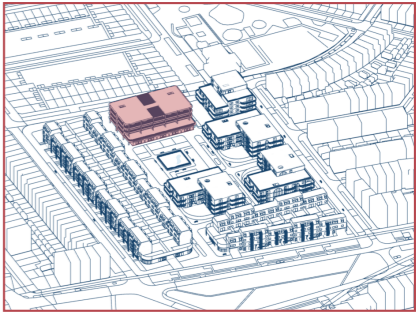
FIRST FLOOR  
1:200

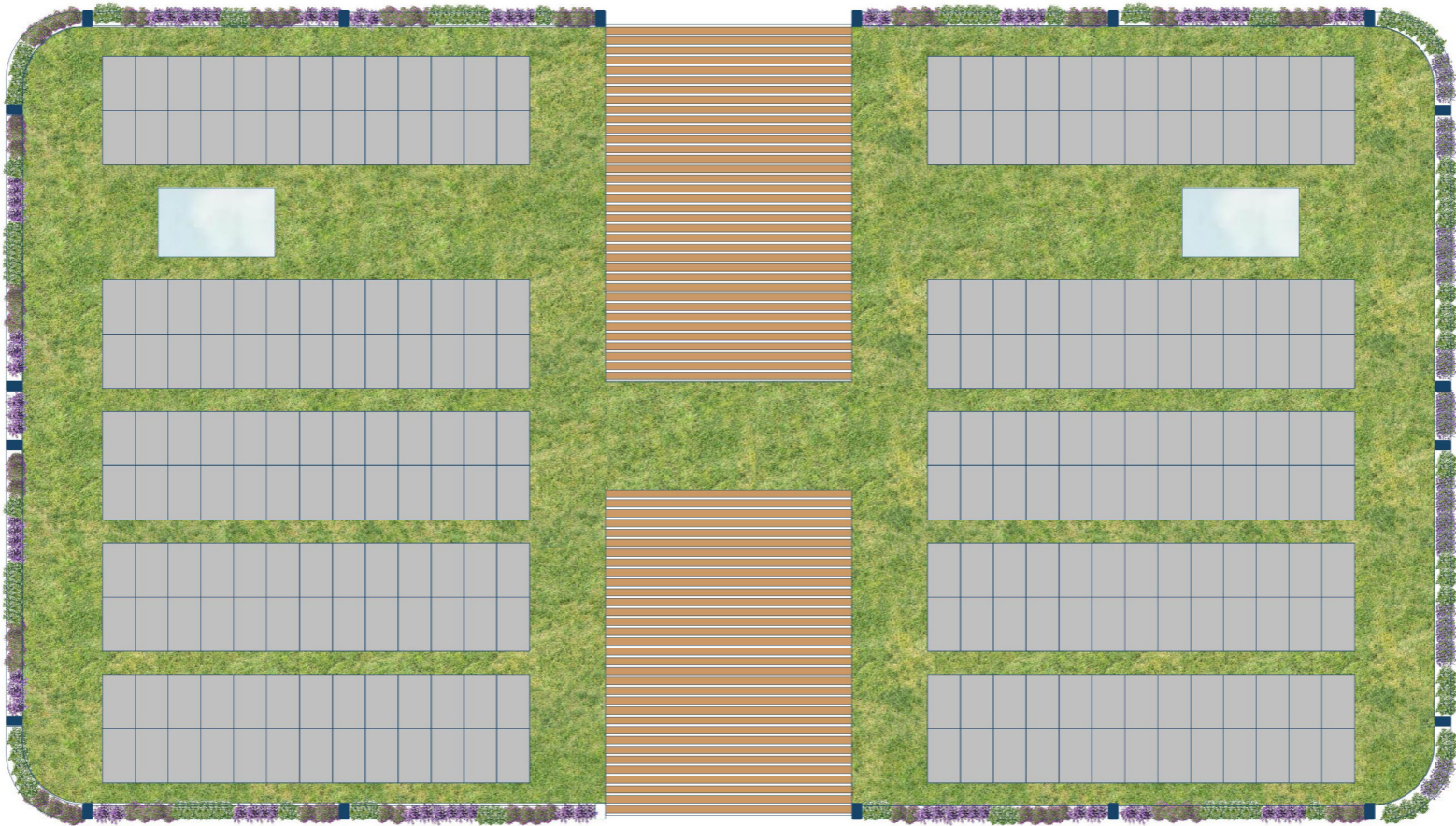
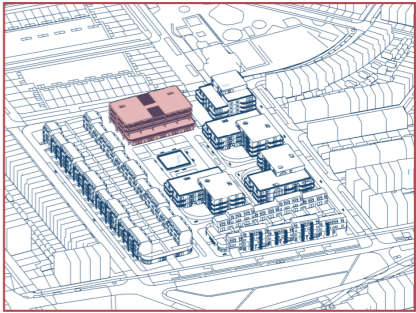


SECOND FLOOR  
1:200

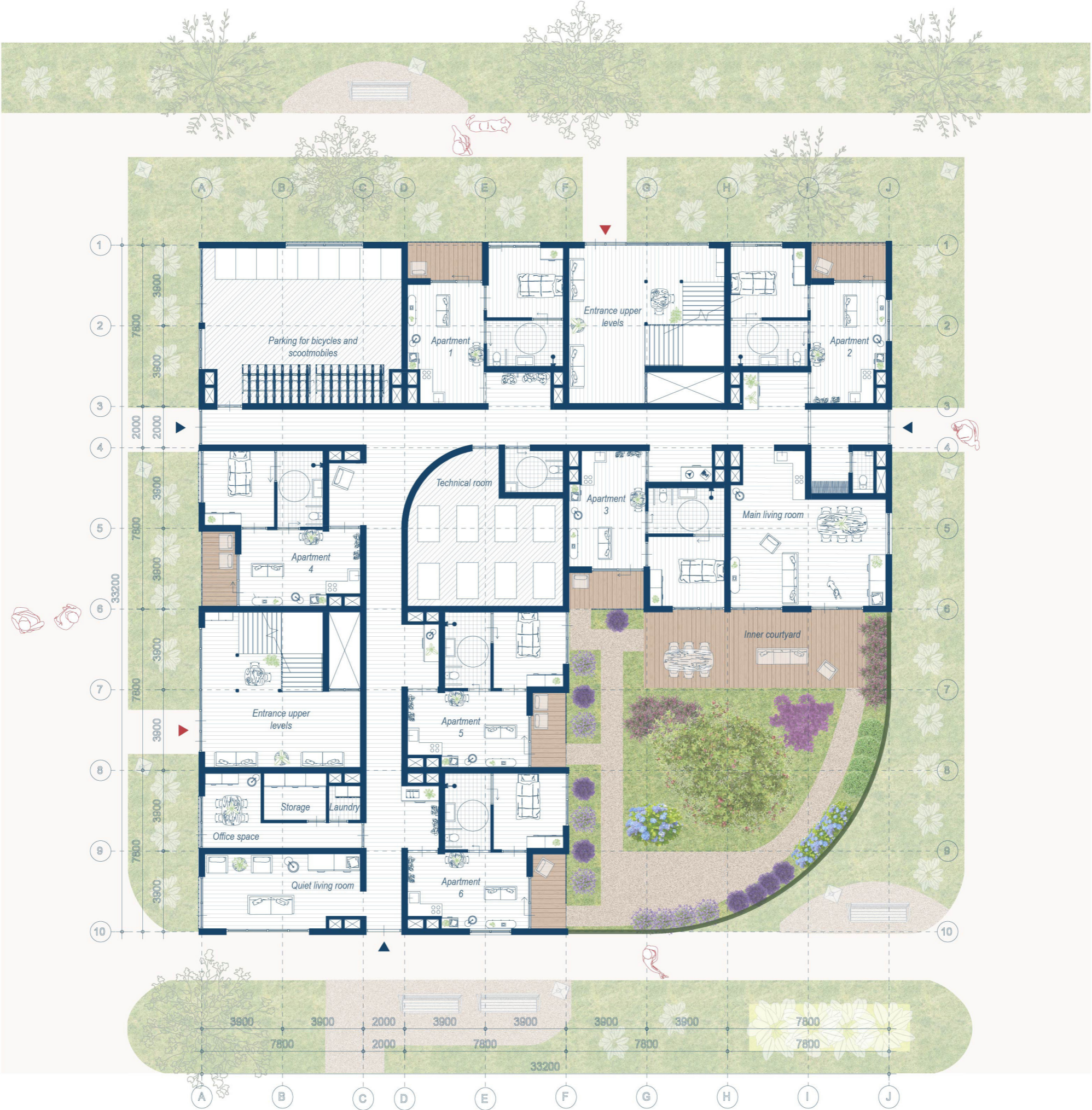


THIRD FLOOR  
1:200

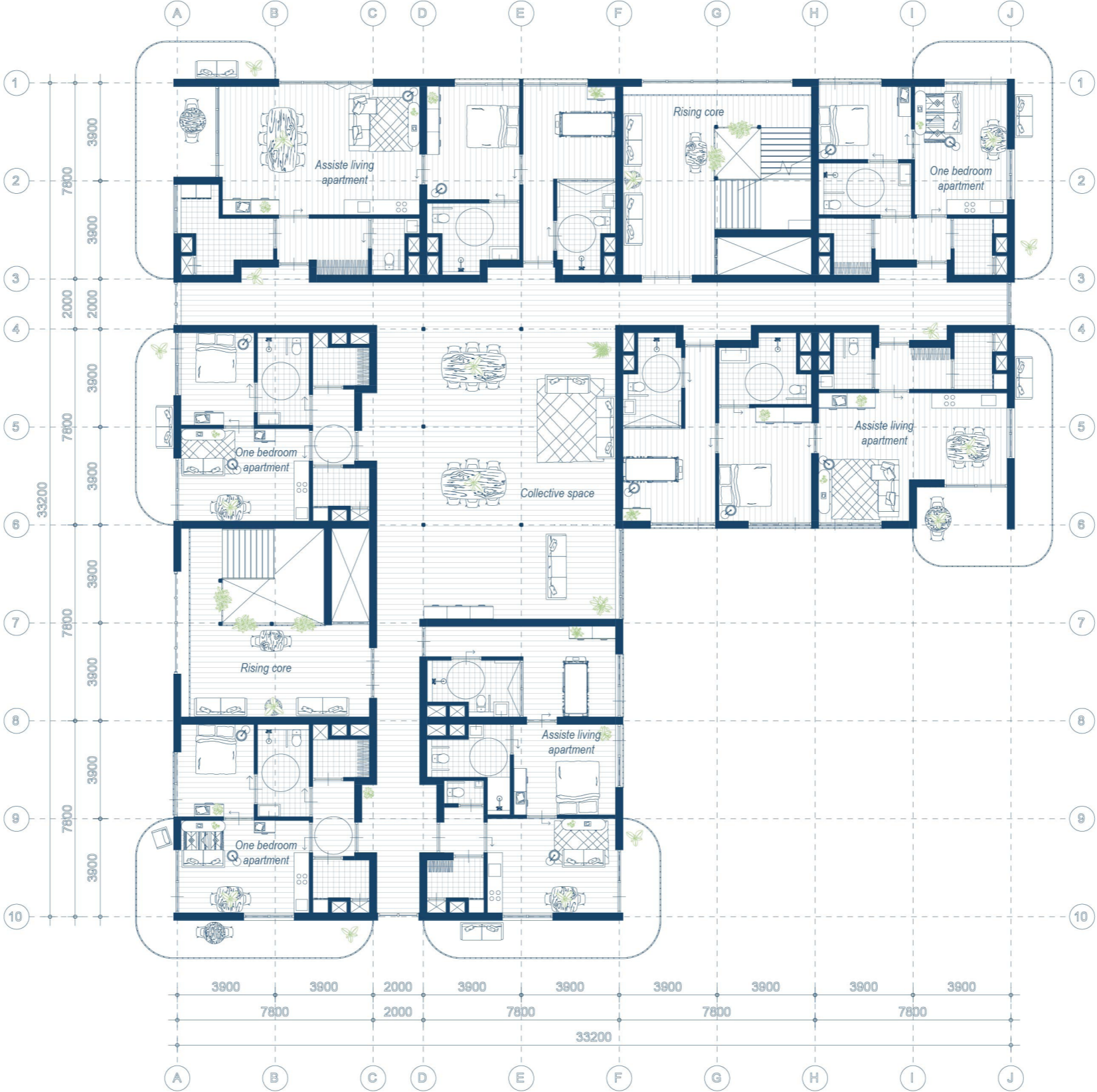
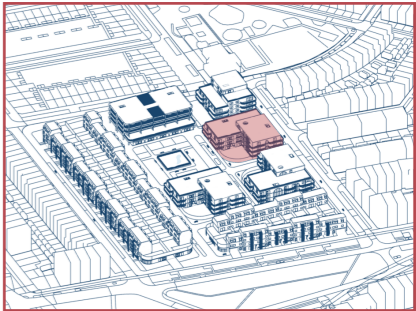




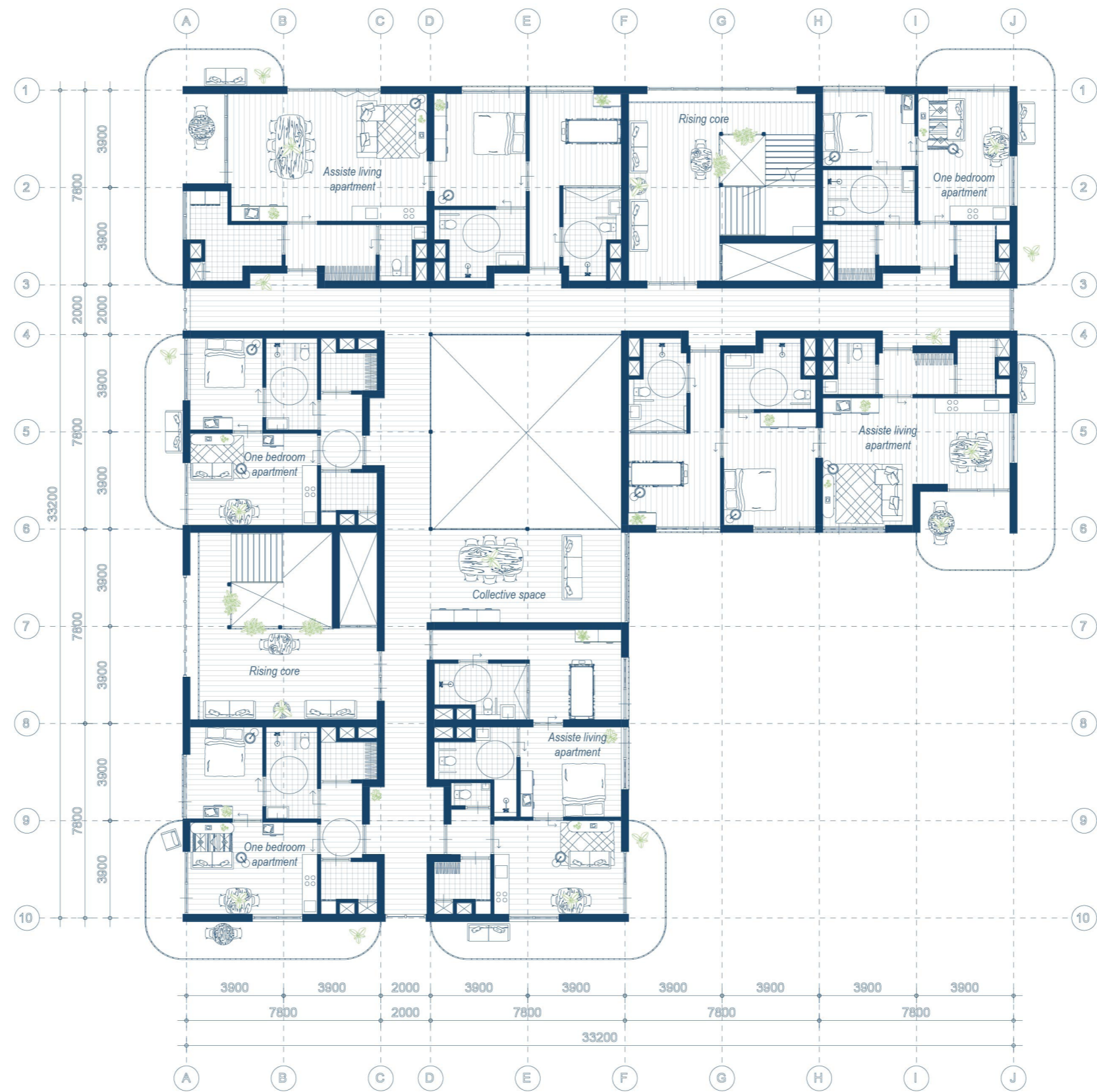
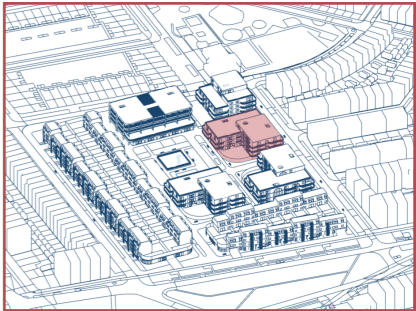
GROUND FLOOR  
1:200



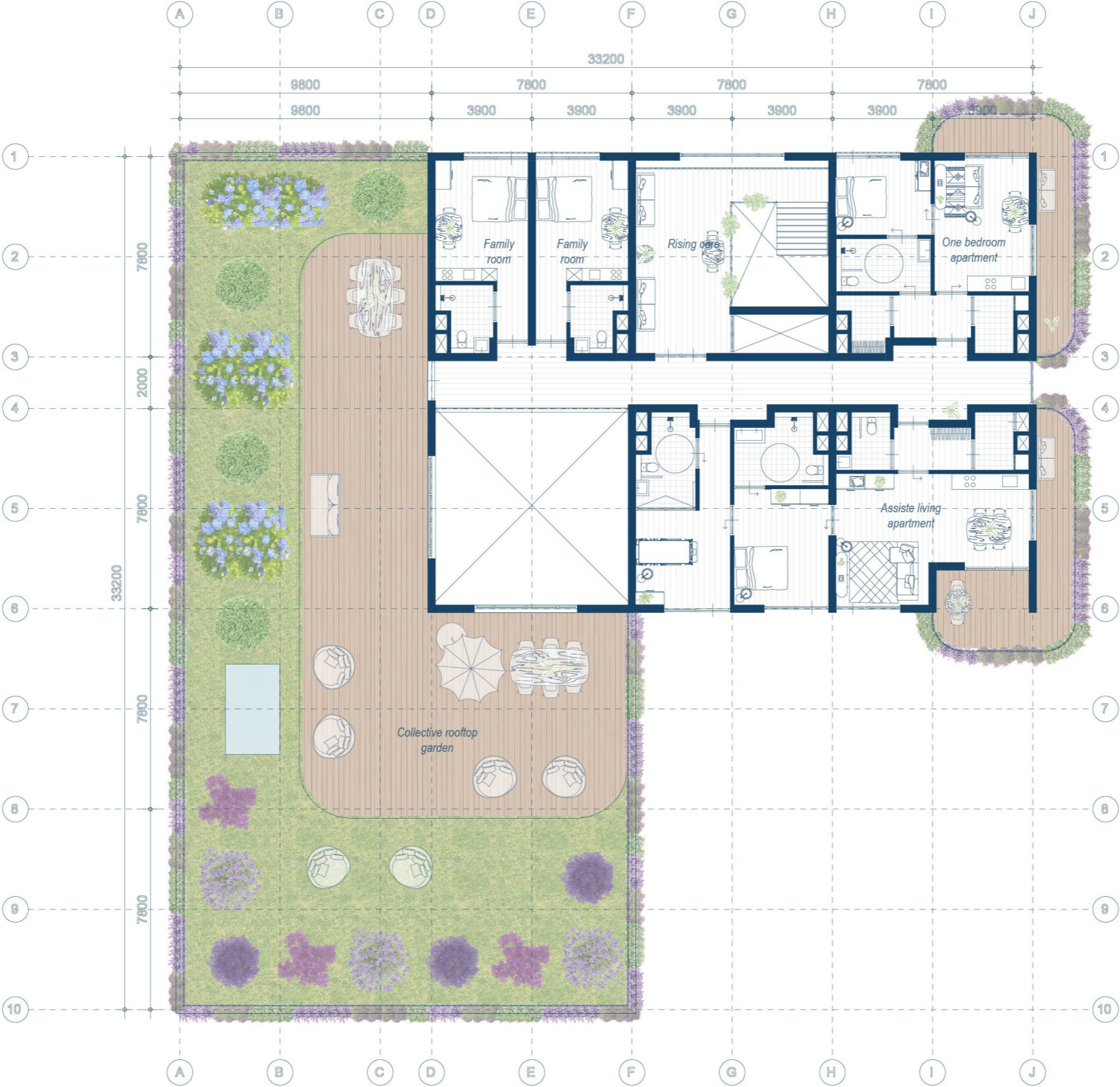
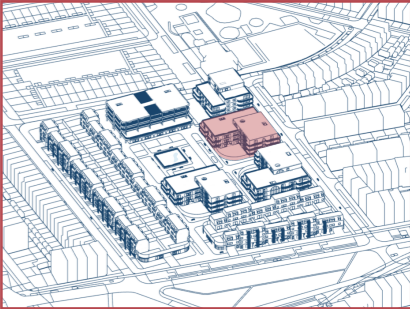
FIRST FLOOR  
1:200



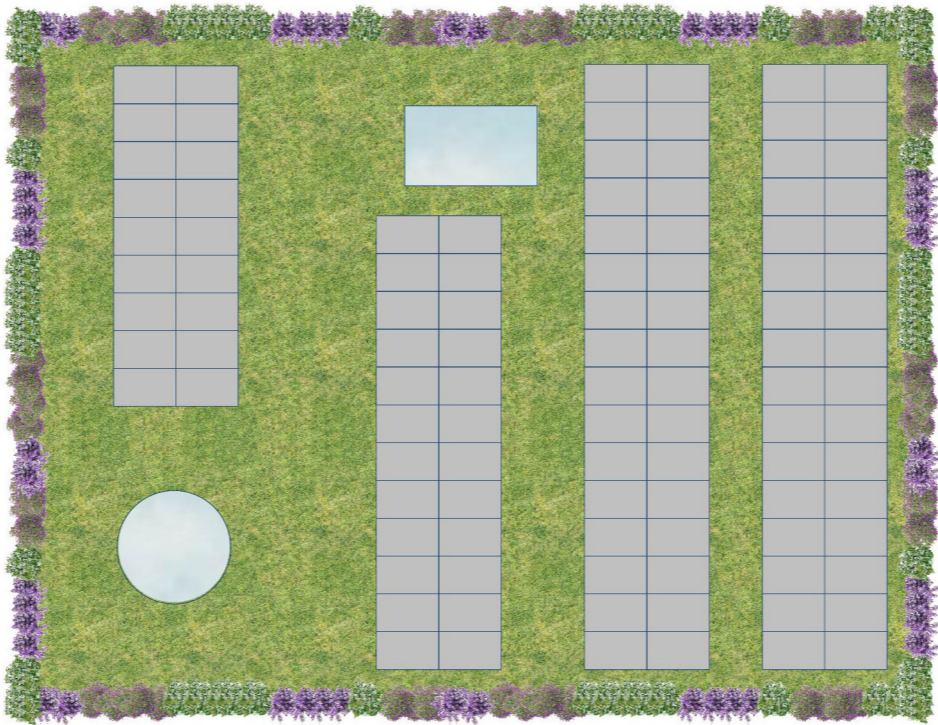
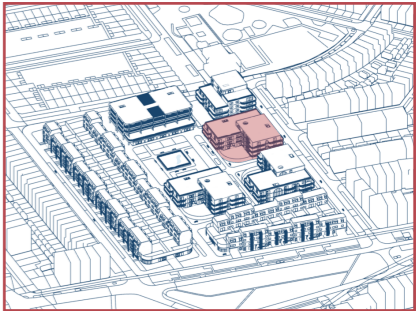
SECOND FLOOR  
1:200



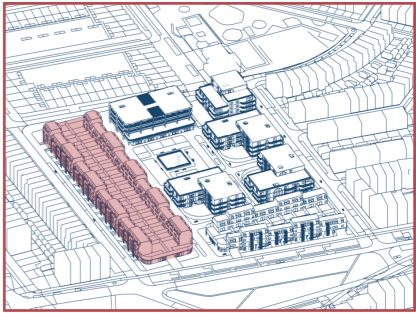
THIRD FLOOR  
1:200



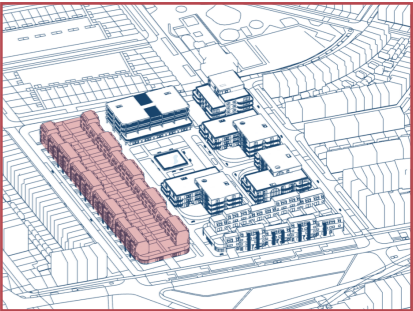
**ROOF**  
1:200



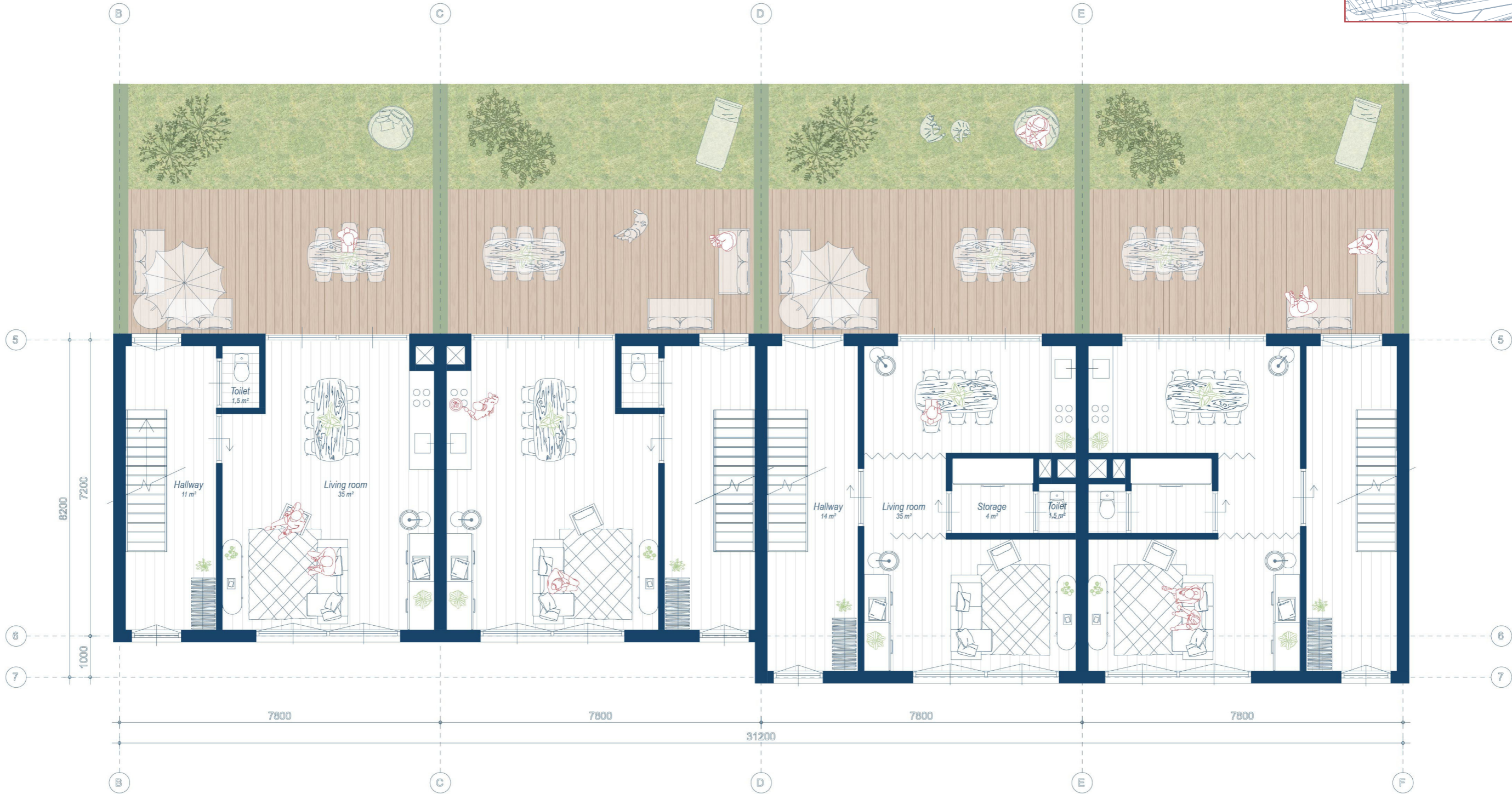
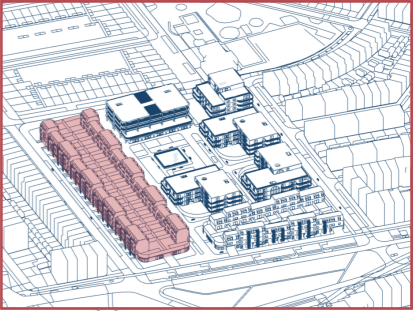
GROUND FLOOR TOTAL  
1:500



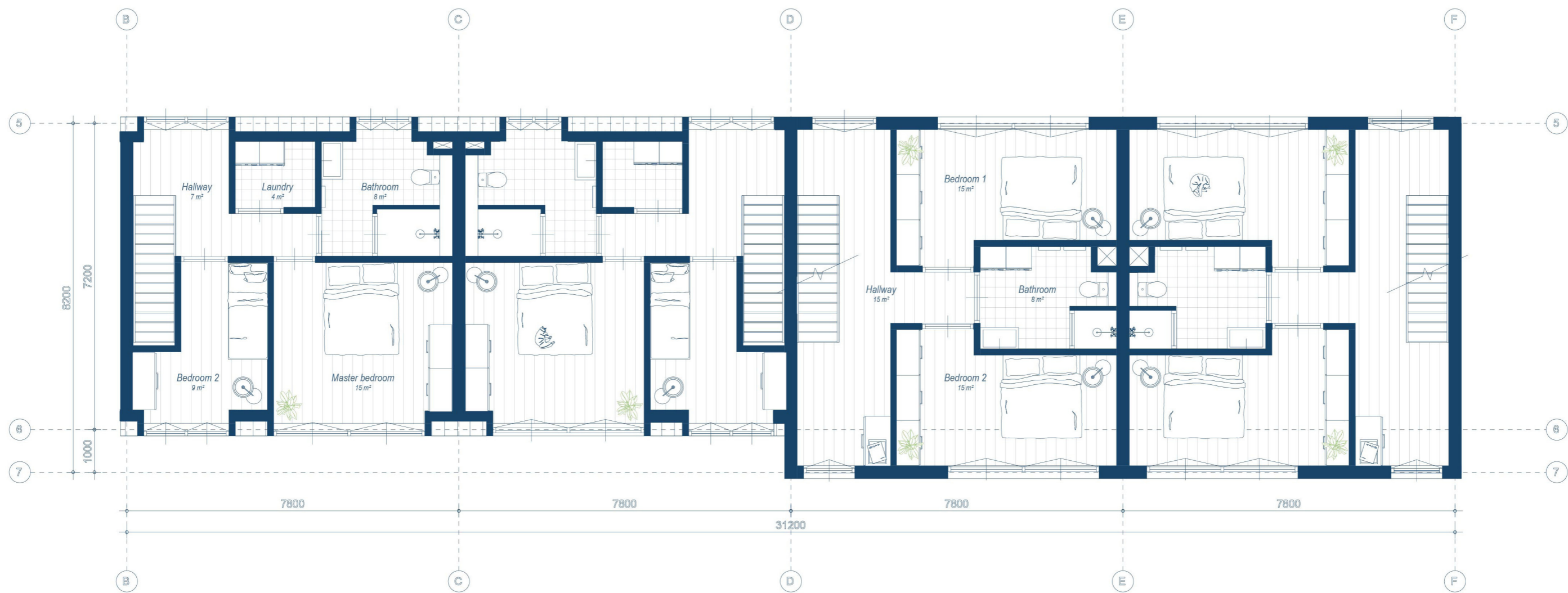
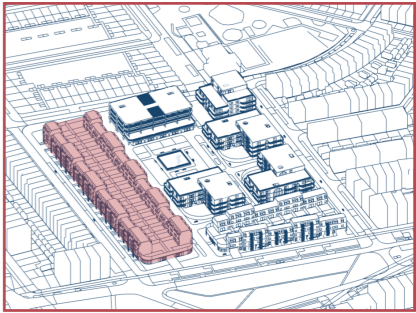
GROUND FLOOR  
1:100



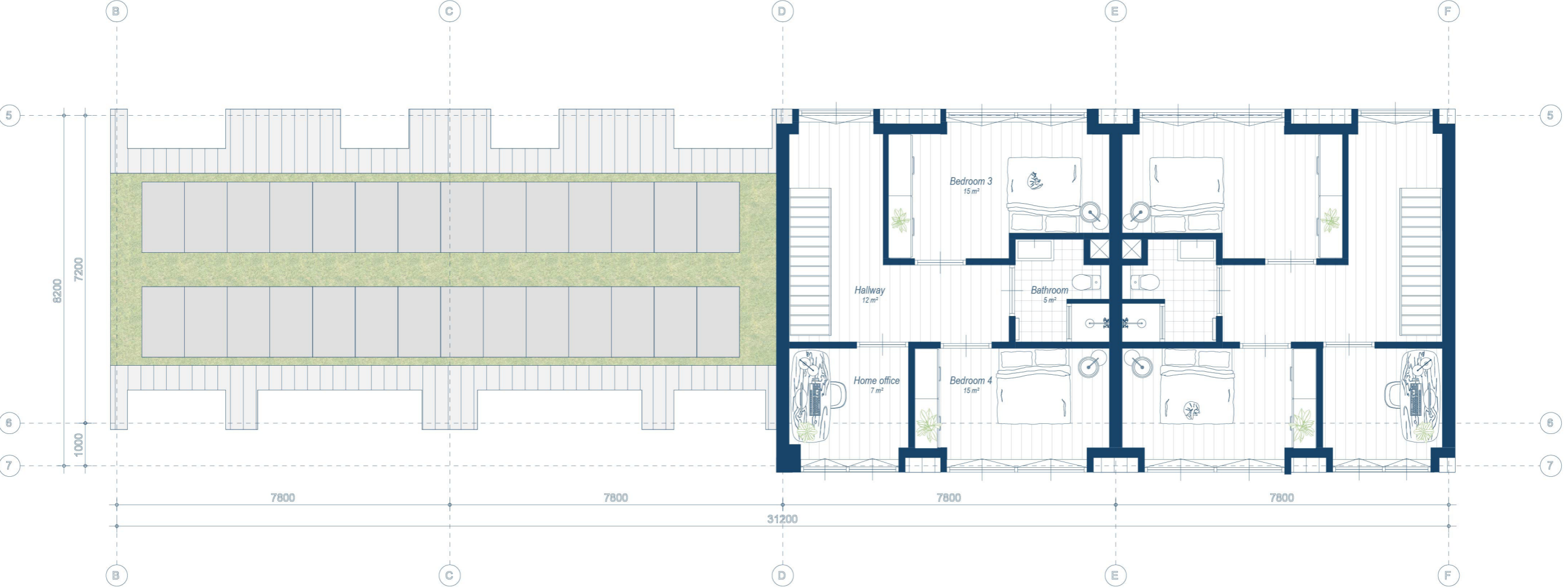
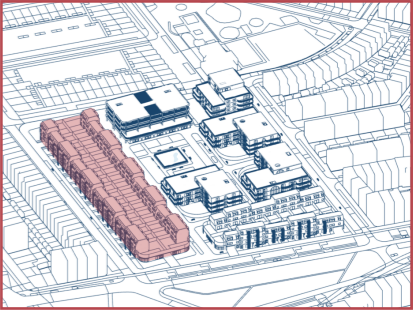
FIRST FLOOR  
1:100



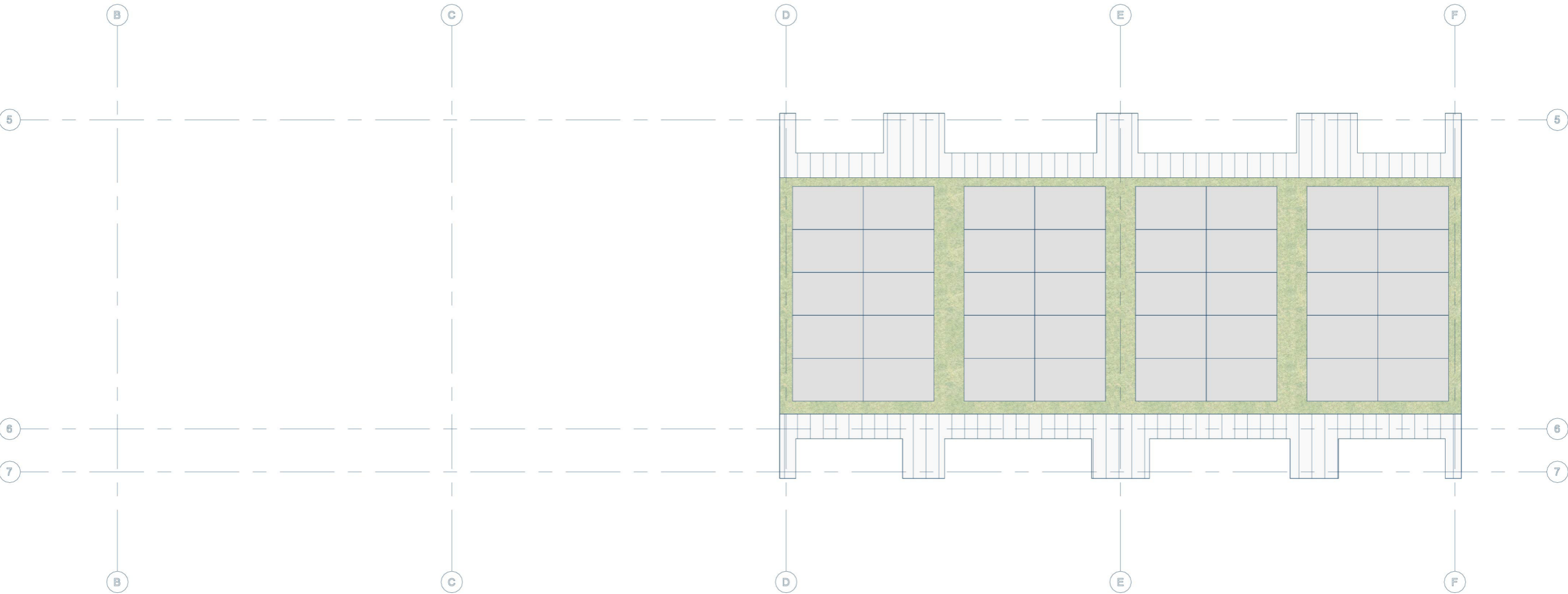
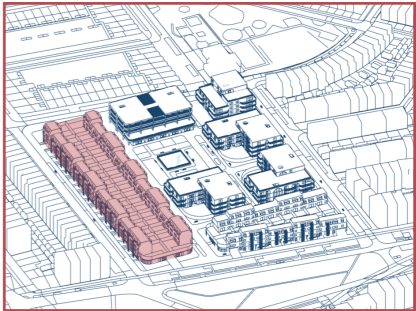
SECOND FLOOR  
1:100



THIRD FLOOR / ROOF  
1:100



ROOF  
1:100

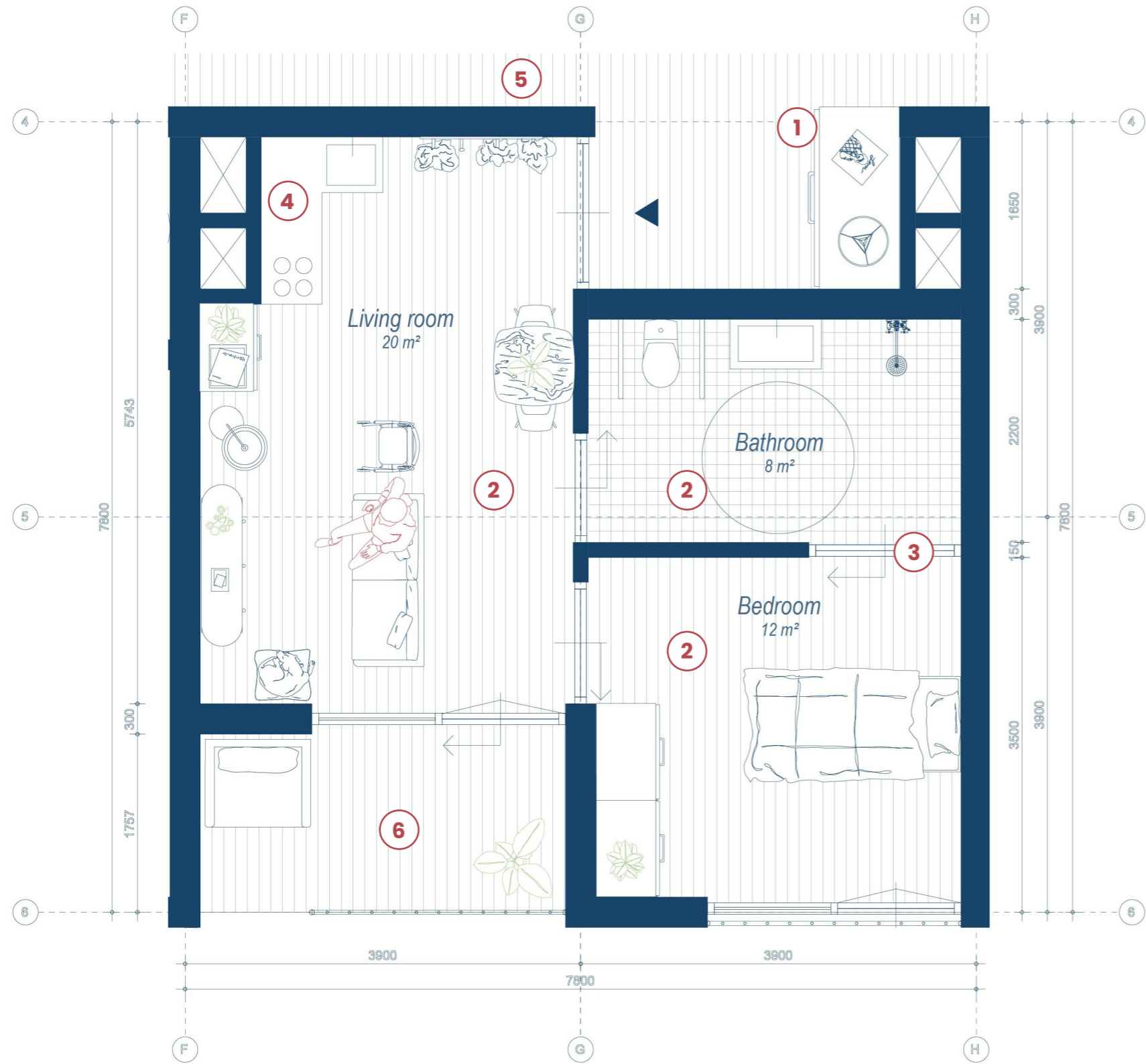


# **DWELLING TYPES**

*Designing dignity*

ROOM FOR ELDERLY WITH DEMENTIA

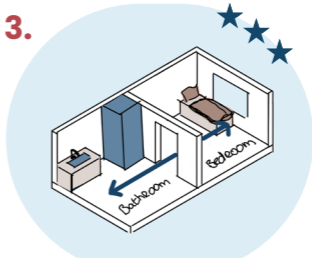
1:50

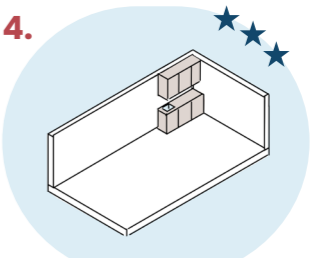


Used guidelines

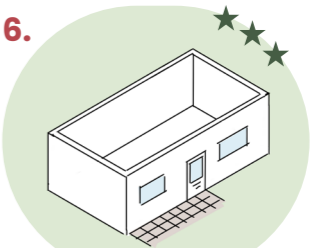
1.  Incorporate **familiar items** near the room entrance

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

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

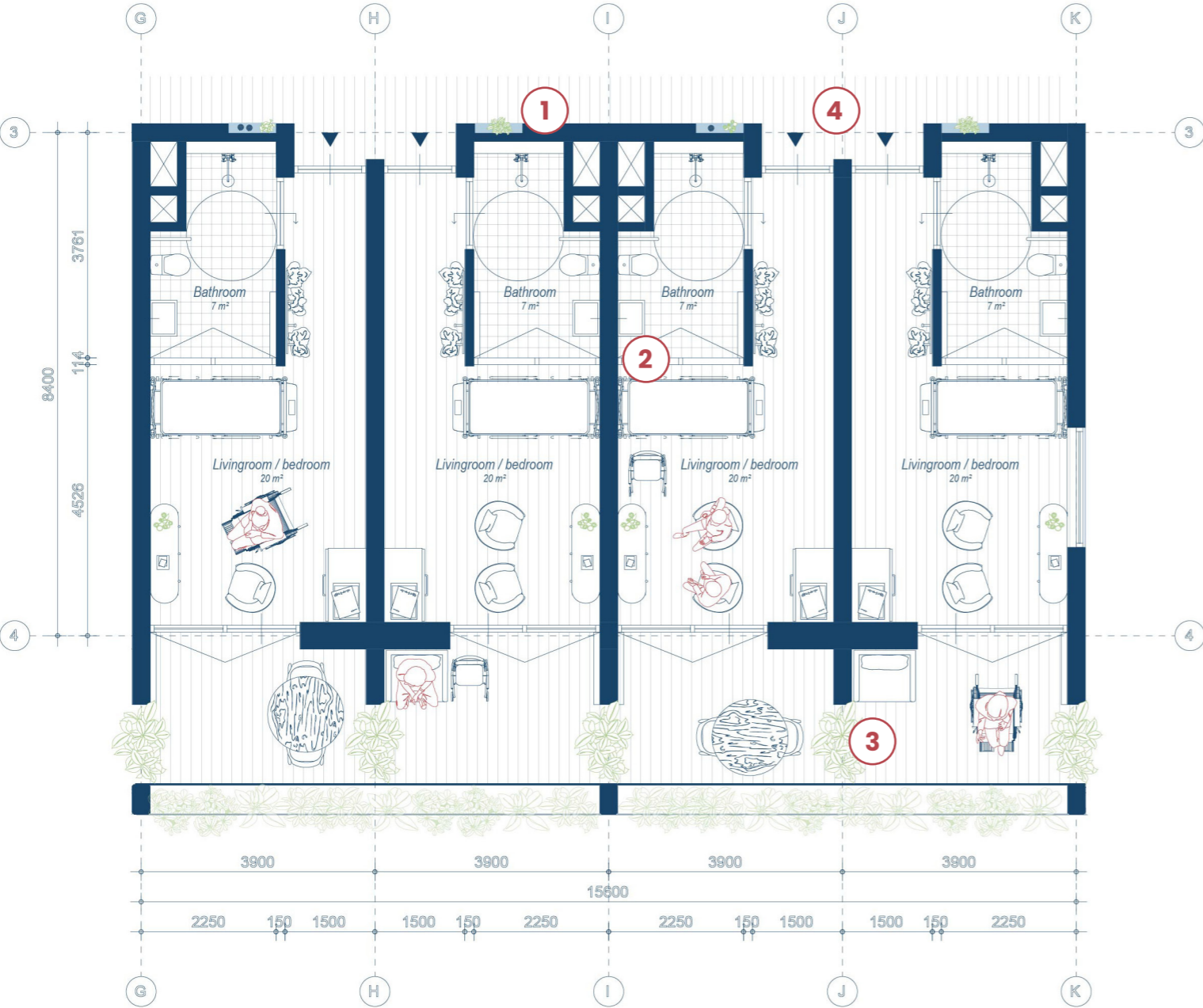
4.  Include a **small kitchenette** with basic amenities

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

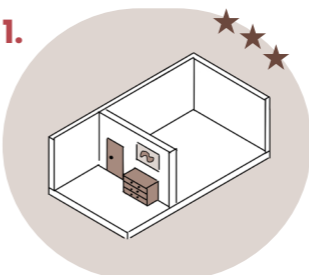
6.  Include **small terraces** where residents can place chairs

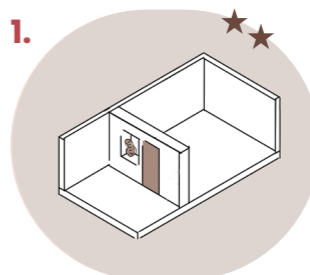
# ROOMS SEVERE DEMENTIA CASES

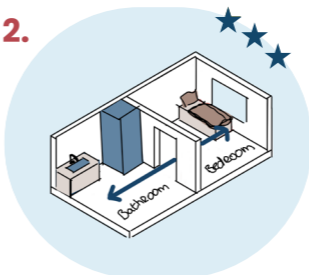
1:100

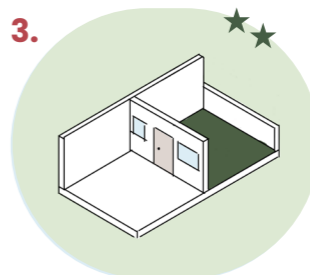


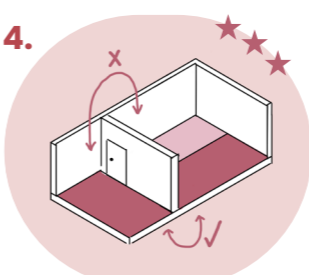
## Used guidelines

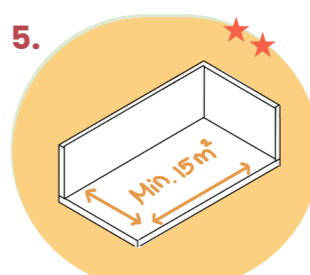
1. 

Incorporate **familiar items** near the room entrance
1. 

Design the entrance space with a **recess** to integrate personal items effectively
2. 

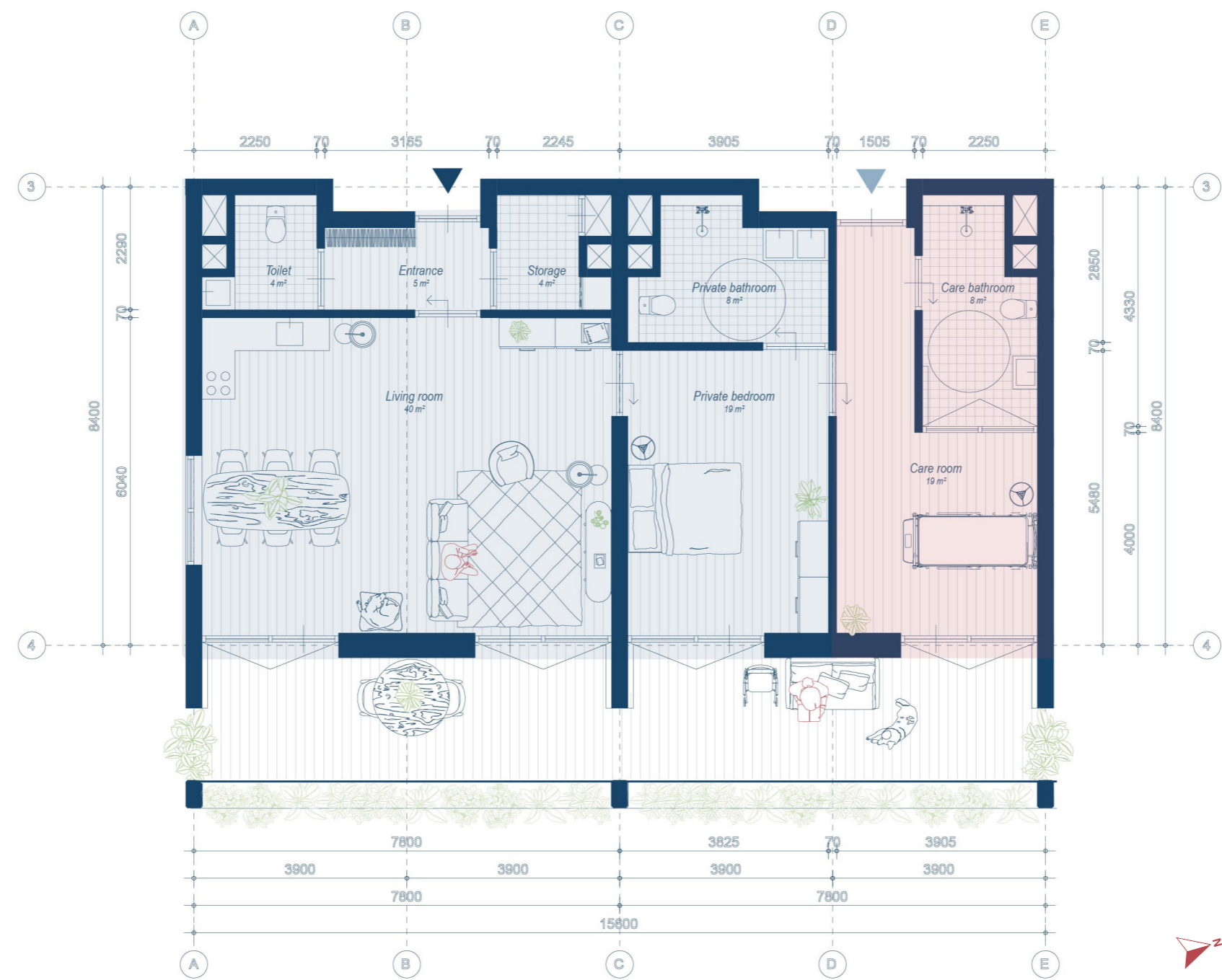
Design private bathrooms with a **direct line of sight** from the bedroom
3. 

Design **enclosed balconies** for residents on higher floors to enable private outdoor access
4. 

Ensure **minimal contrast** between floor materials of private rooms and corridors
5. 

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

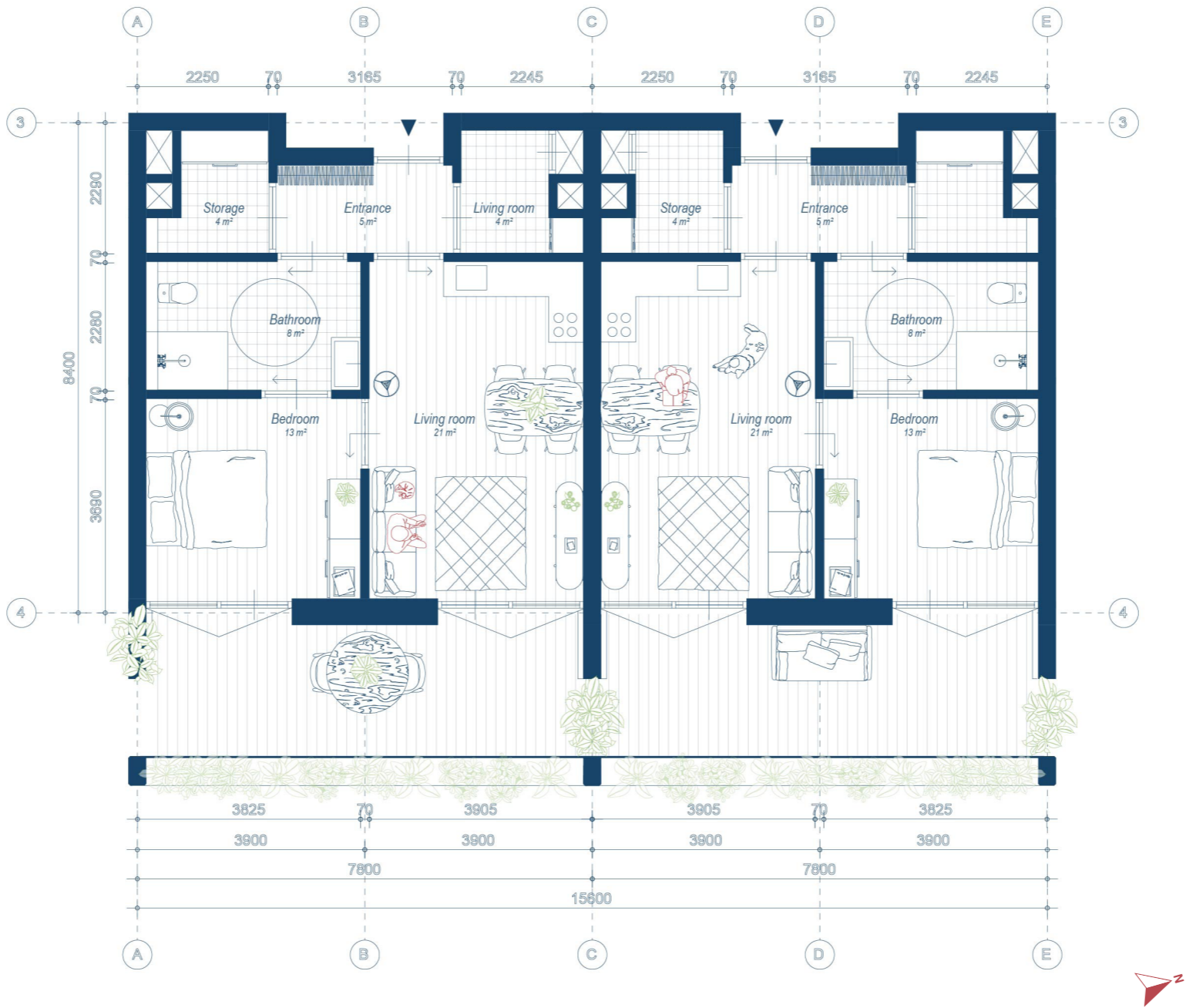
ASSISTED LIVING APARTMENT  
1:100



107 m²

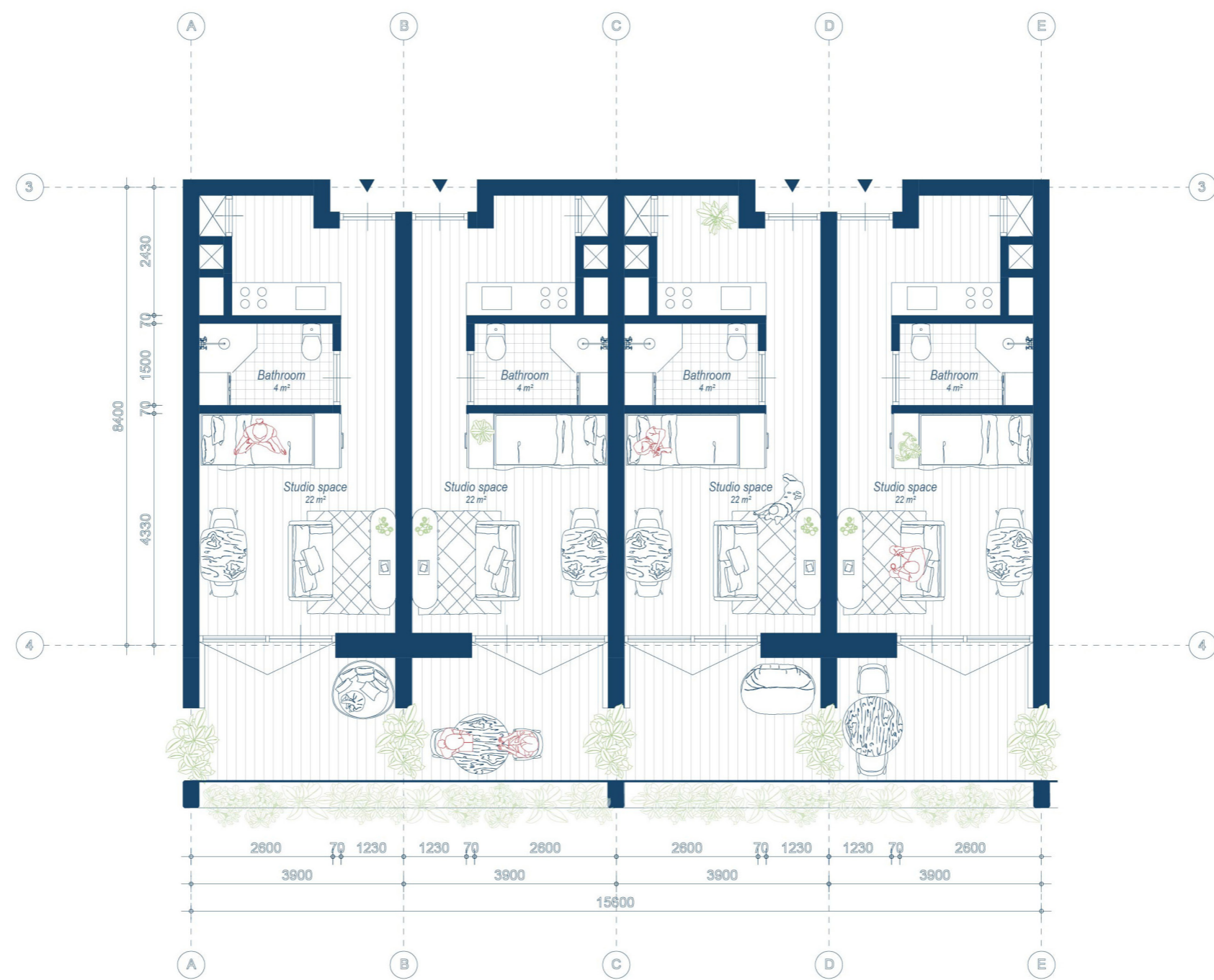
ONE BEDROOM APARTMENT

1:100



55 m²

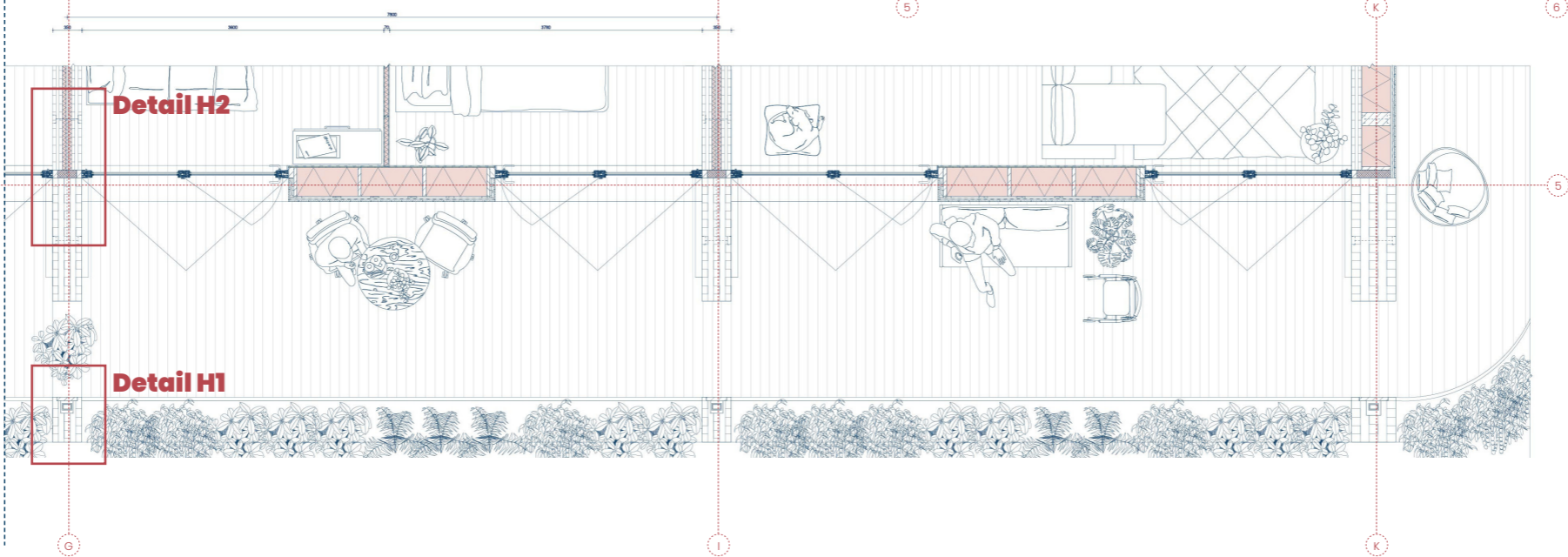
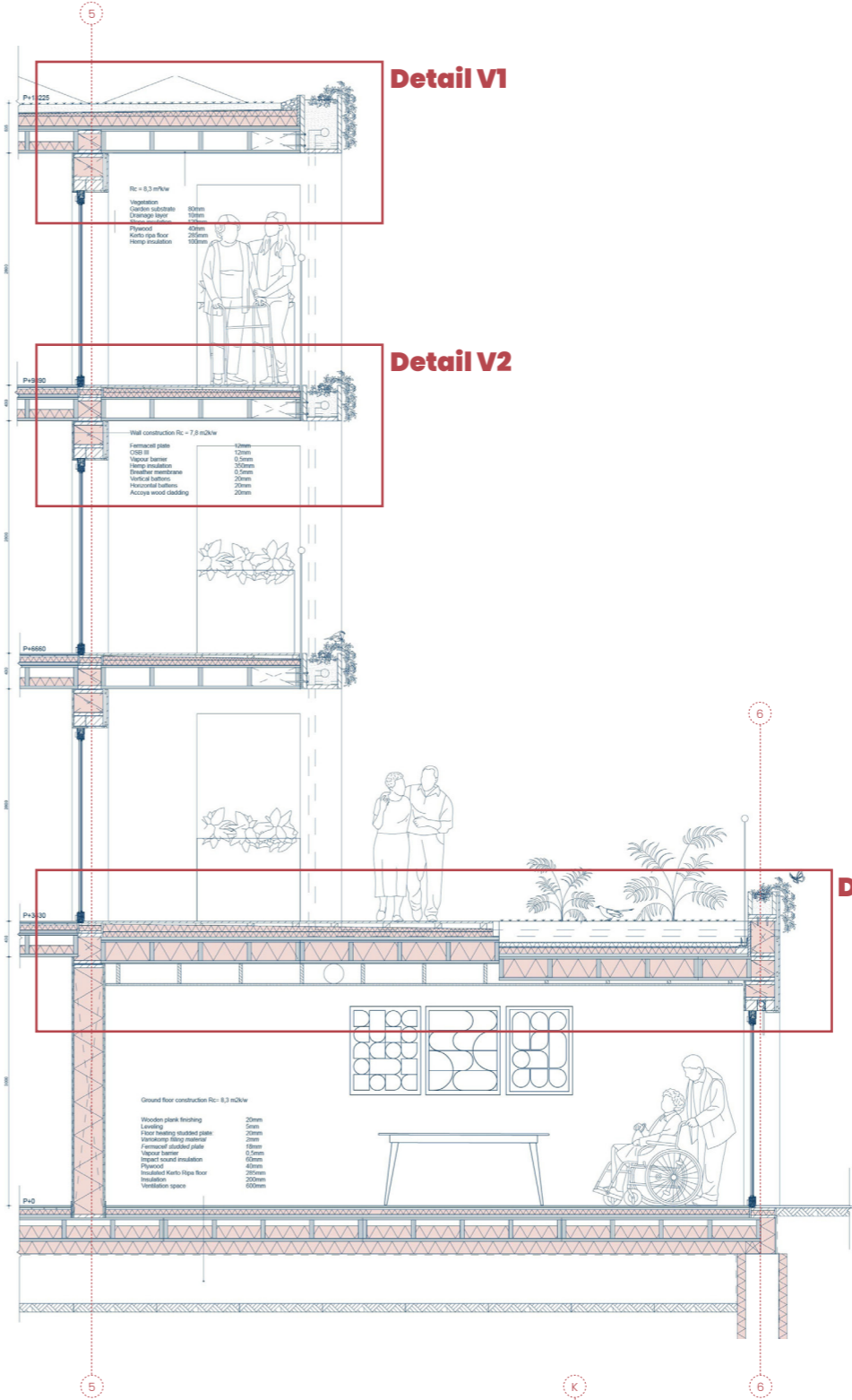
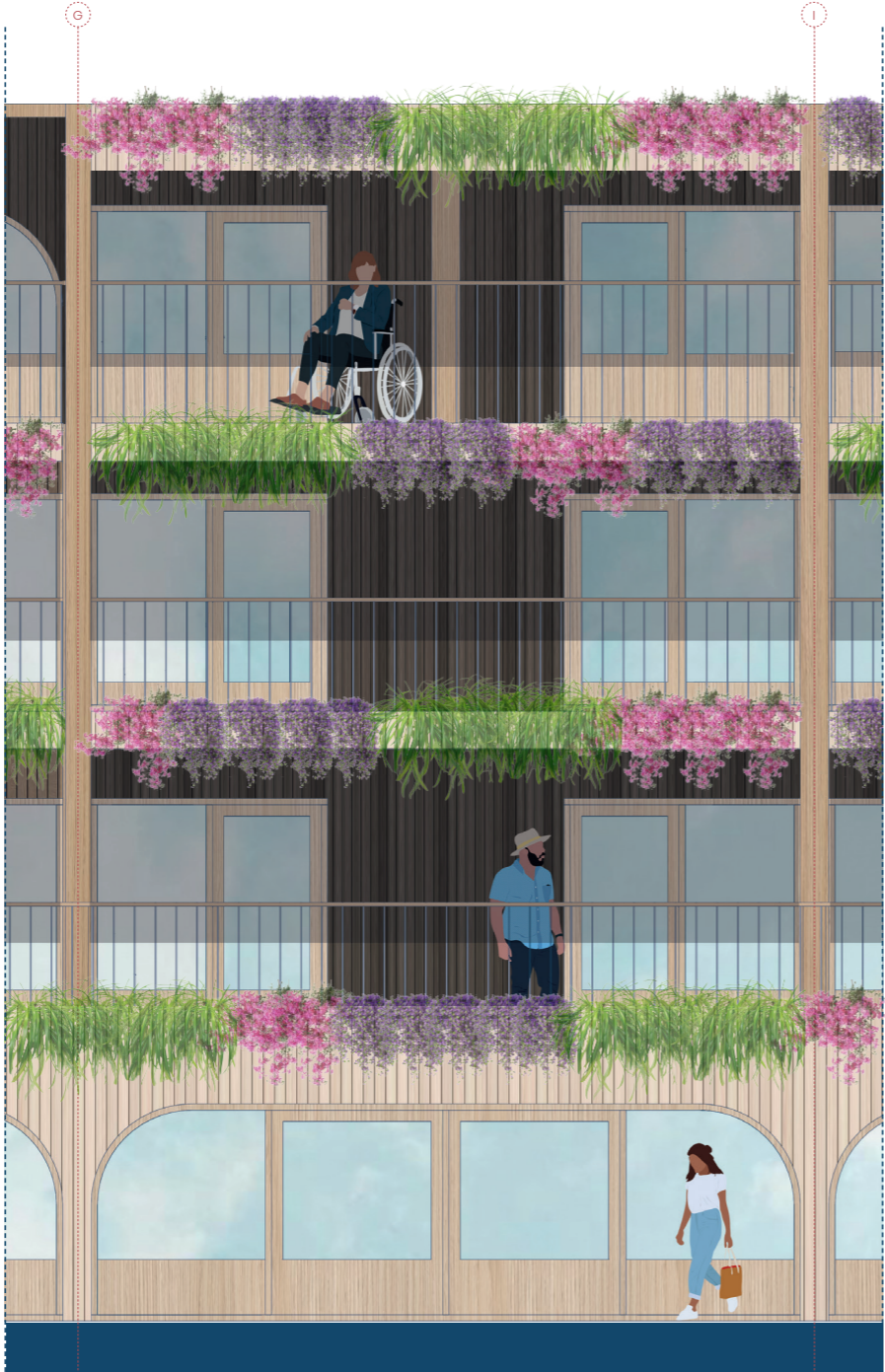
**FUTURE OPTION: STUDIO SPACES**  
1:100



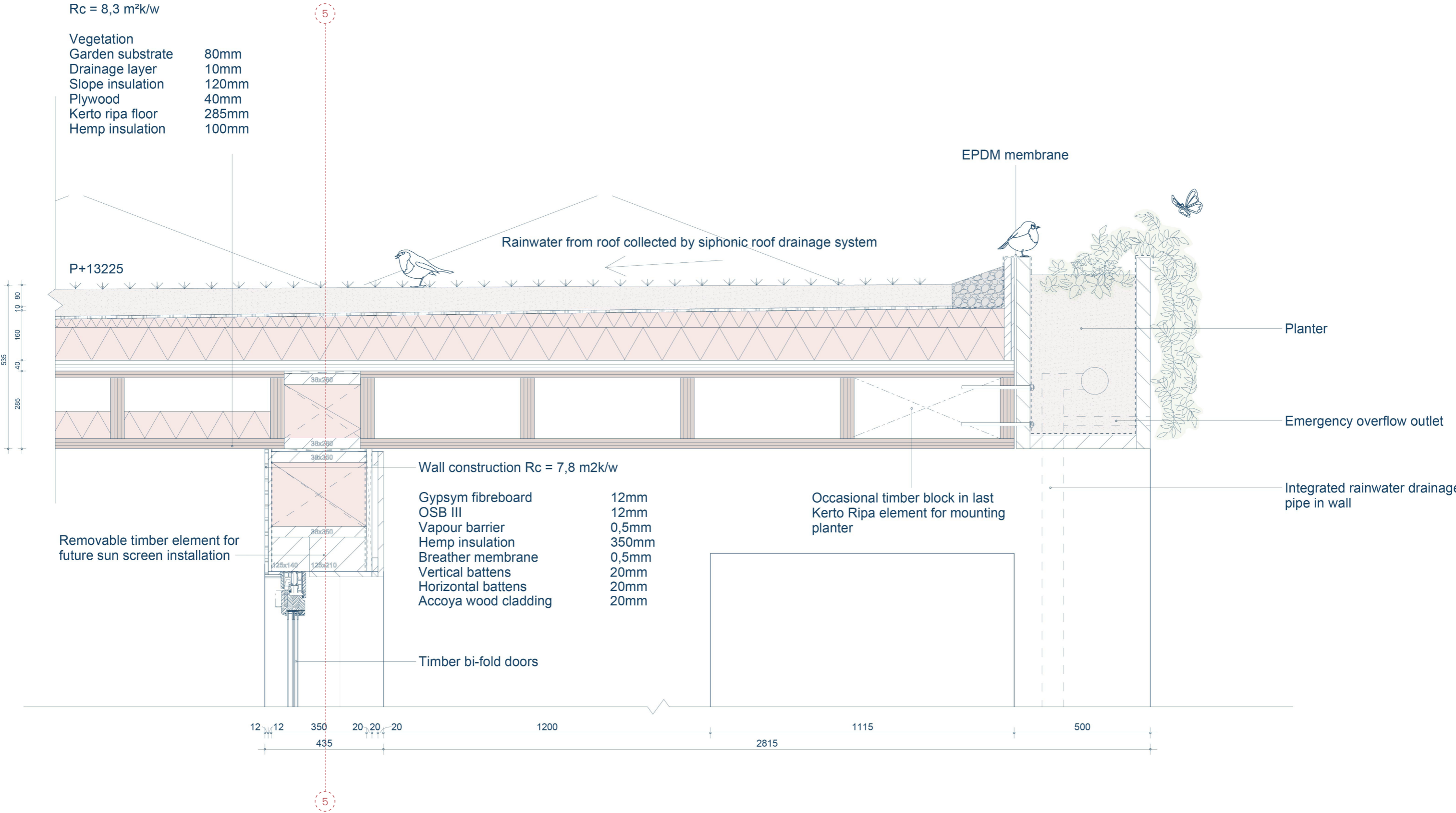
# **DETAILS**

*Designing dignity*

**FRAGMENT 1**  
1:25 (scaled with 30%)



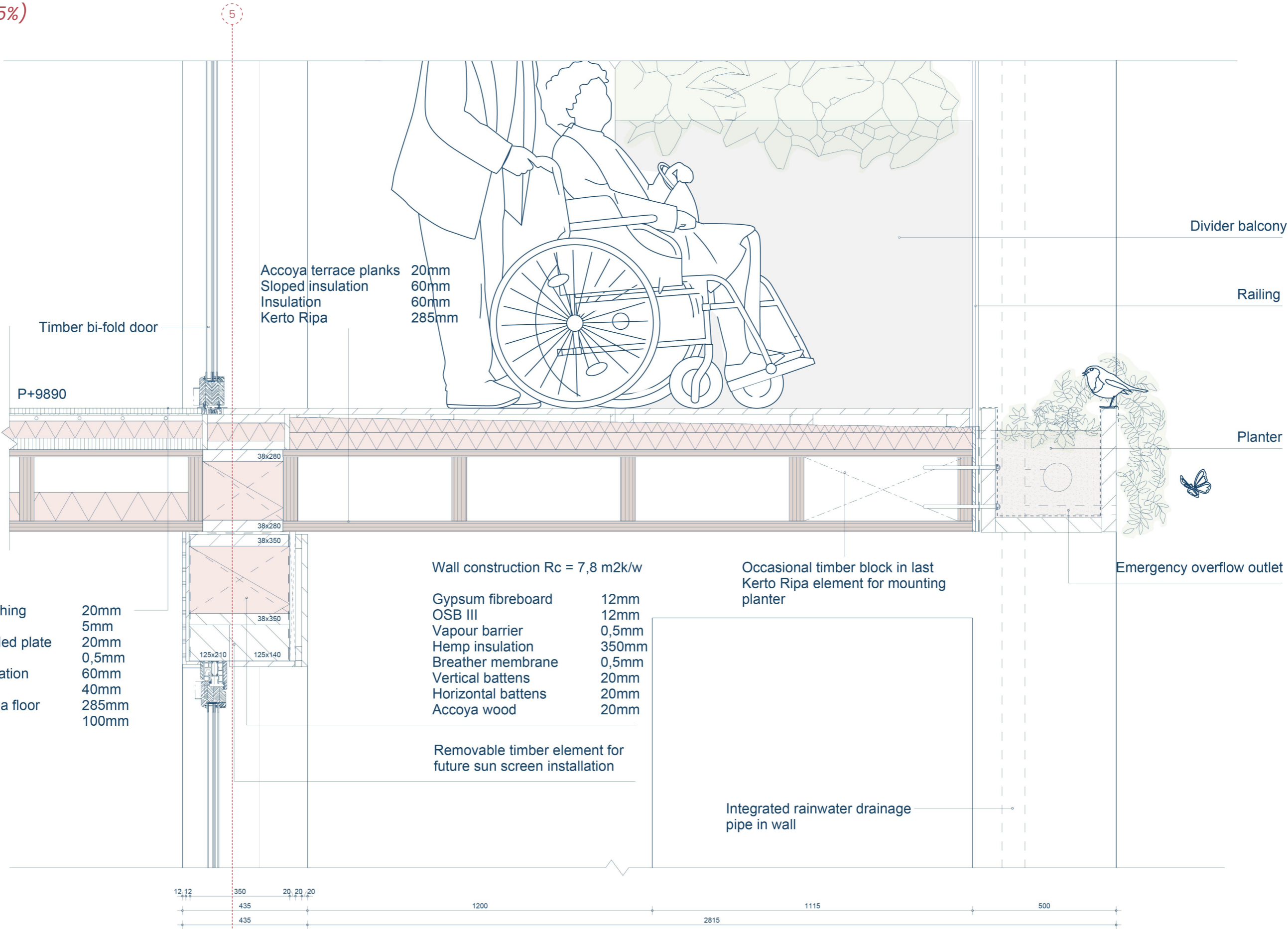
DETAIL V1  
1:10 (Scaled with 75%)



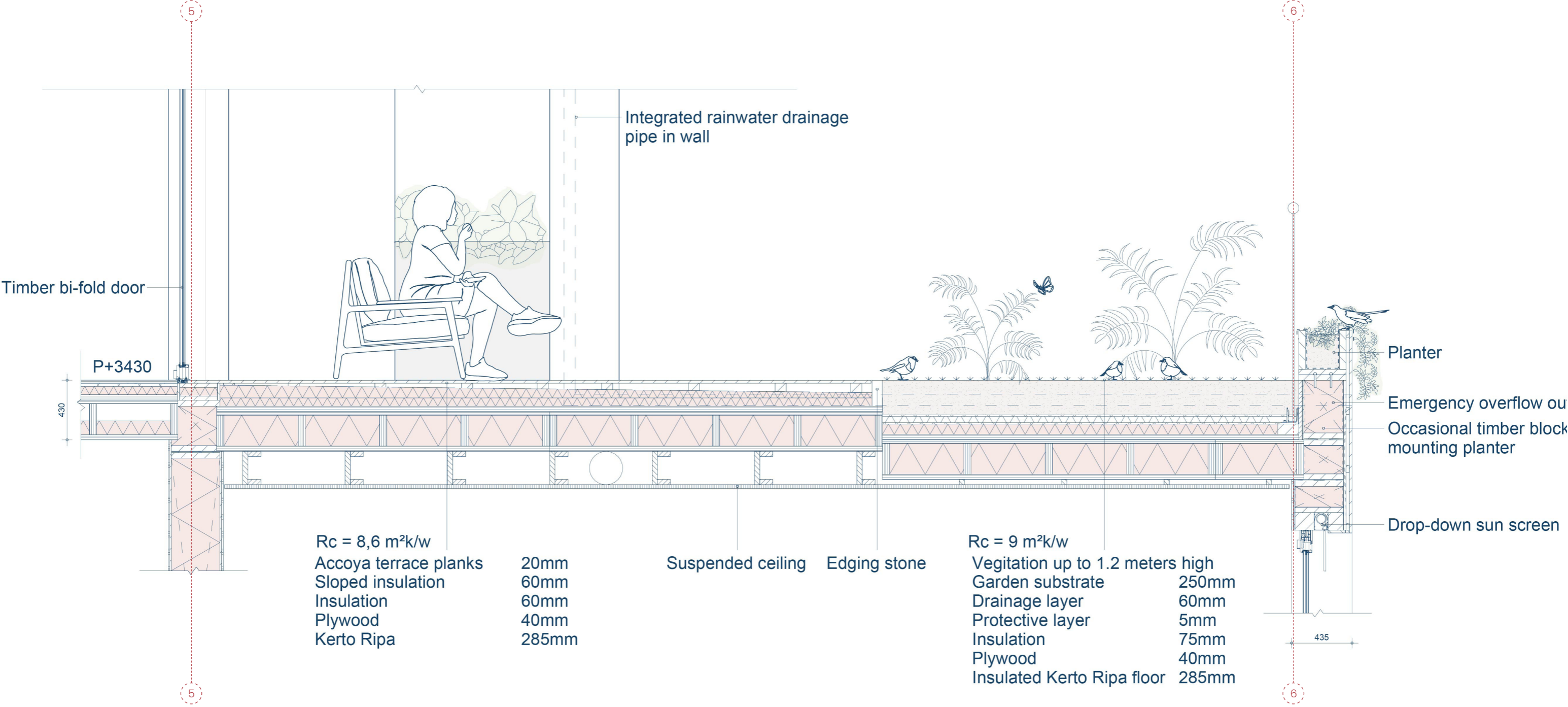
DETAIL V2  
1:10 (Scaled with 75%)

Wooden plank finishing 20mm  
Leveling 5mm  
Floor heating studded plate 20mm  
Vapour barrier 0,5mm  
Impact sound insulation 60mm  
Plywood 40mm  
Insulated Kerto Ripa floor 285mm  
- Hemp insulation 100mm

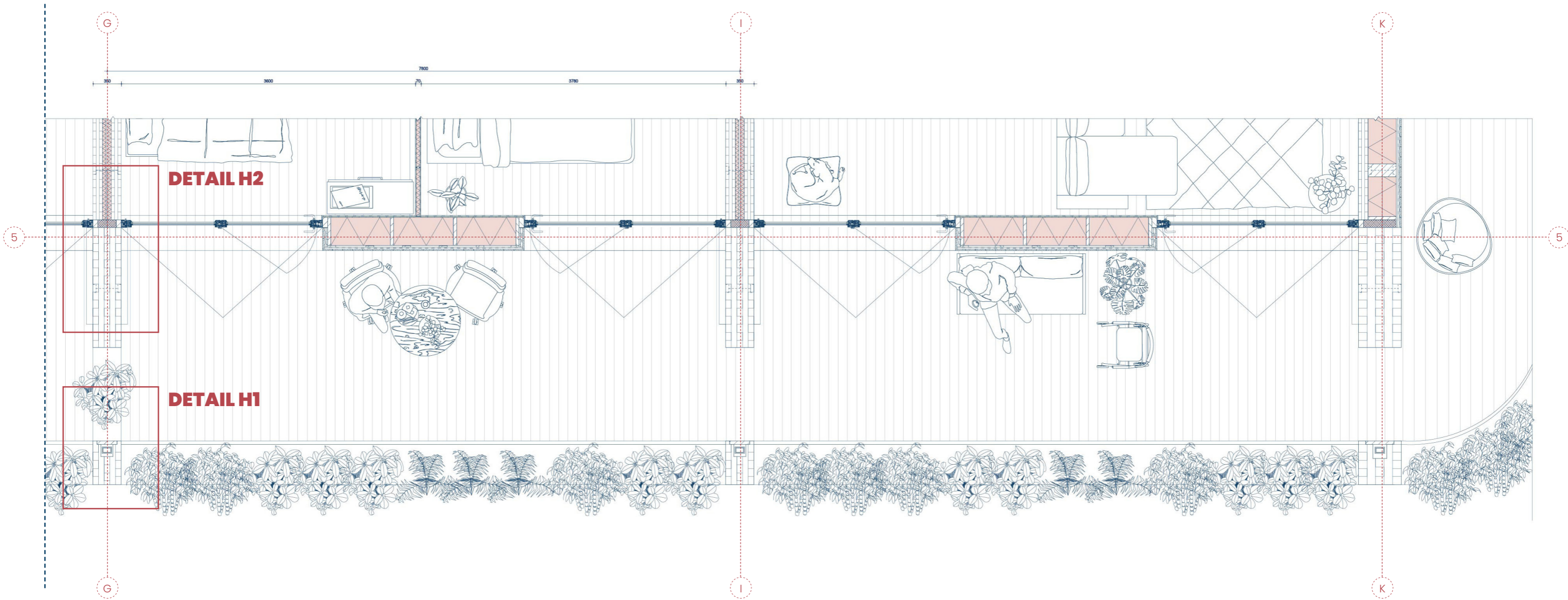
285  
40 60 25 20  
430



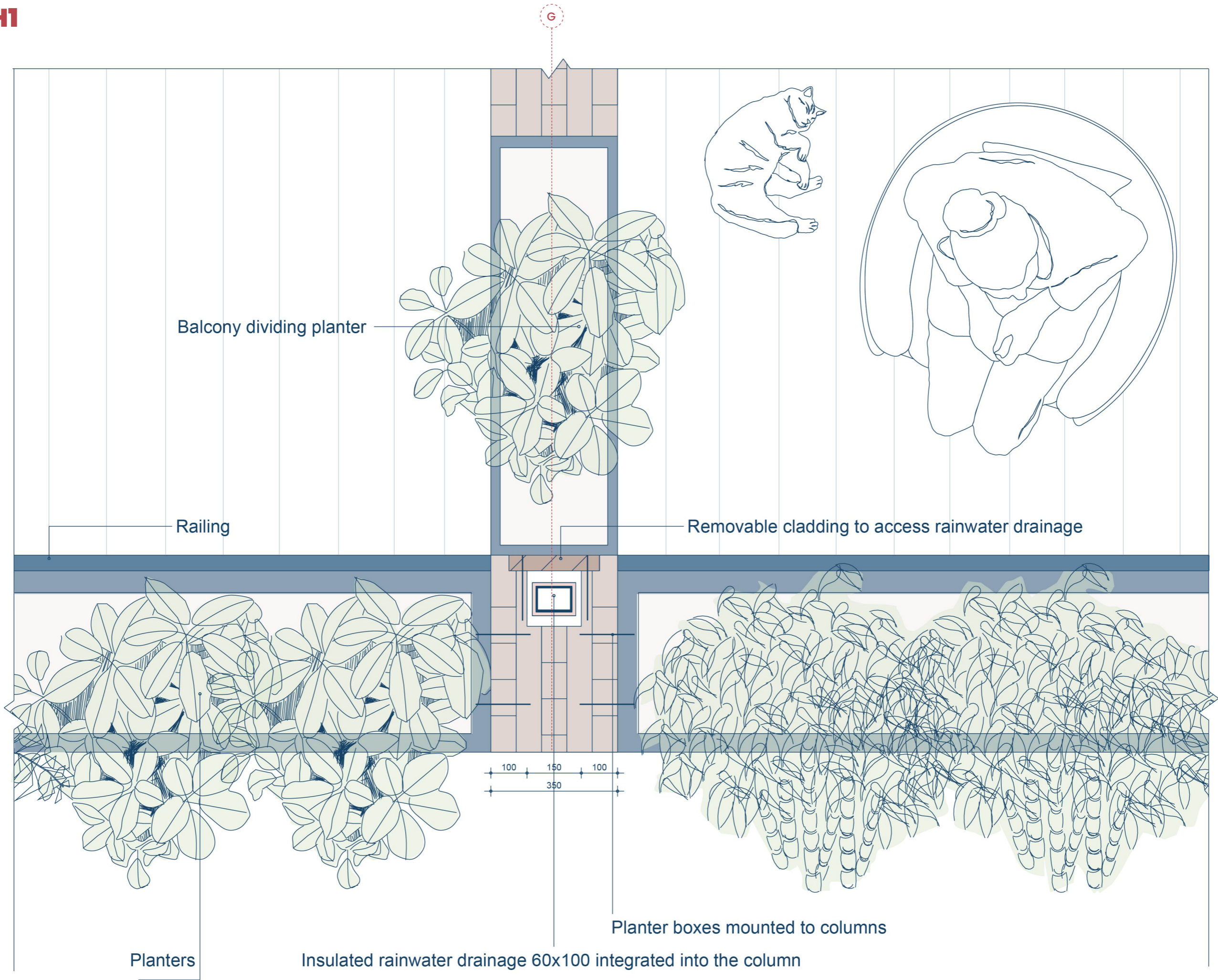
**DETAIL V3**  
1:25 (Scaled with 85%)



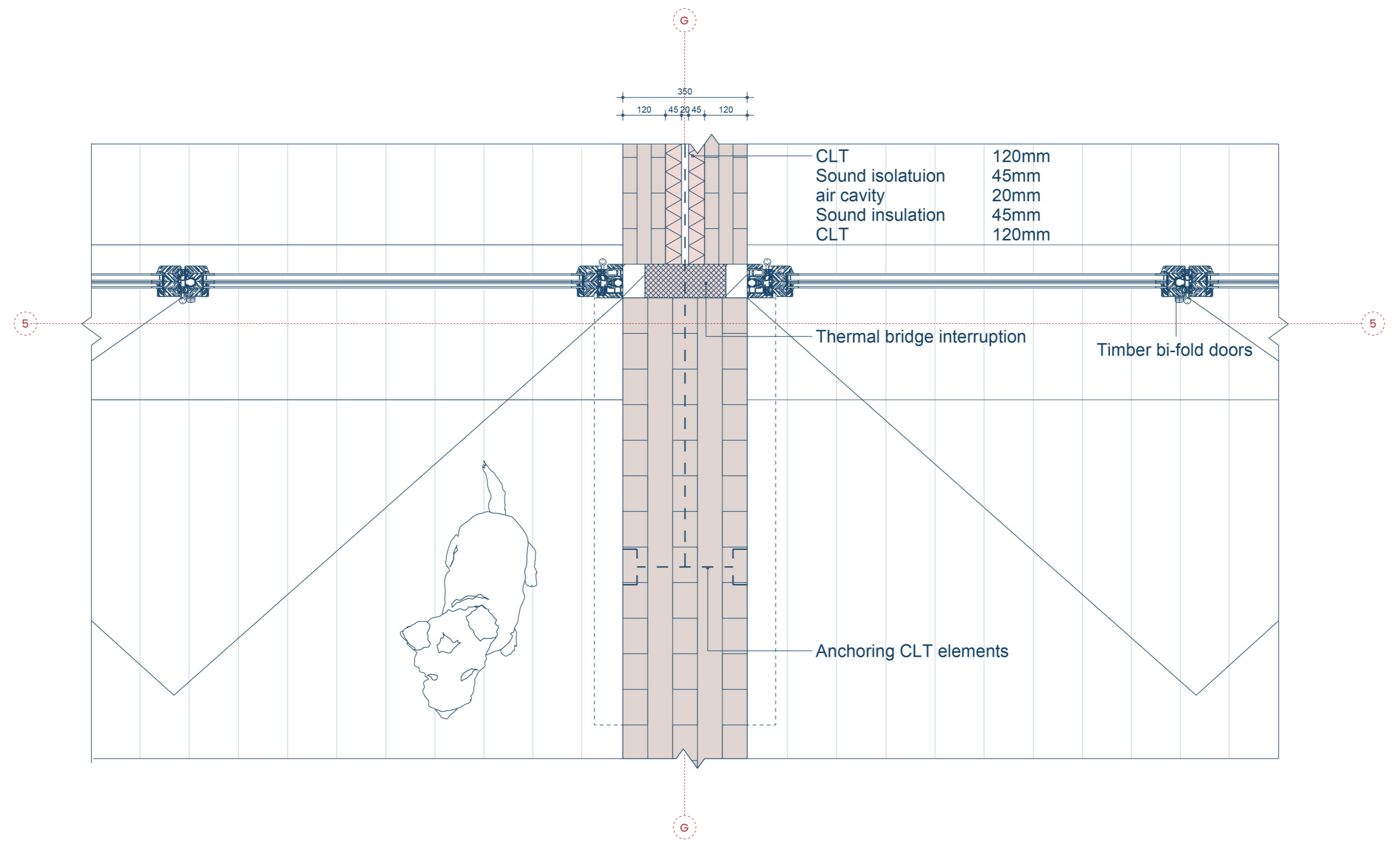
**HORIZONTAL FRAGMENT**  
1:25 (Scaled down with 50%)



**DETAIL H1**  
1:10

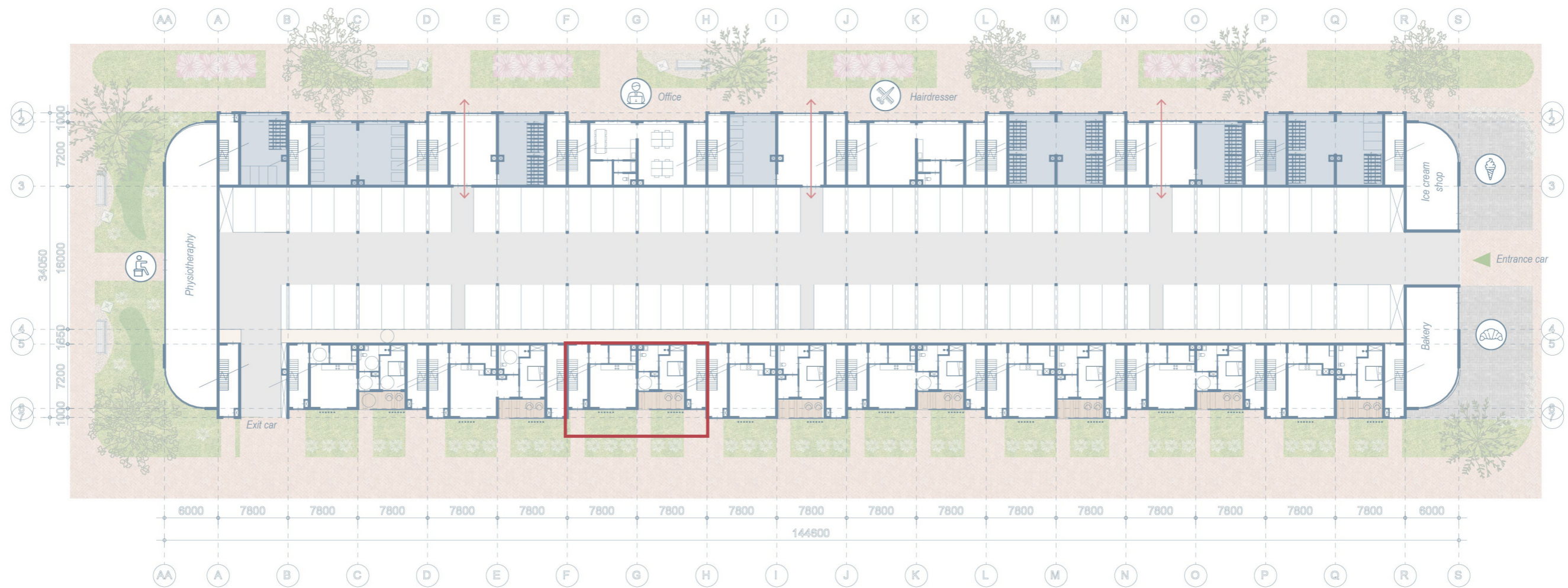
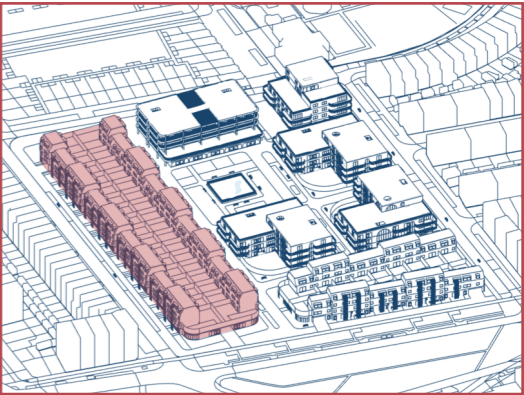


DETAIL H2  
1:10

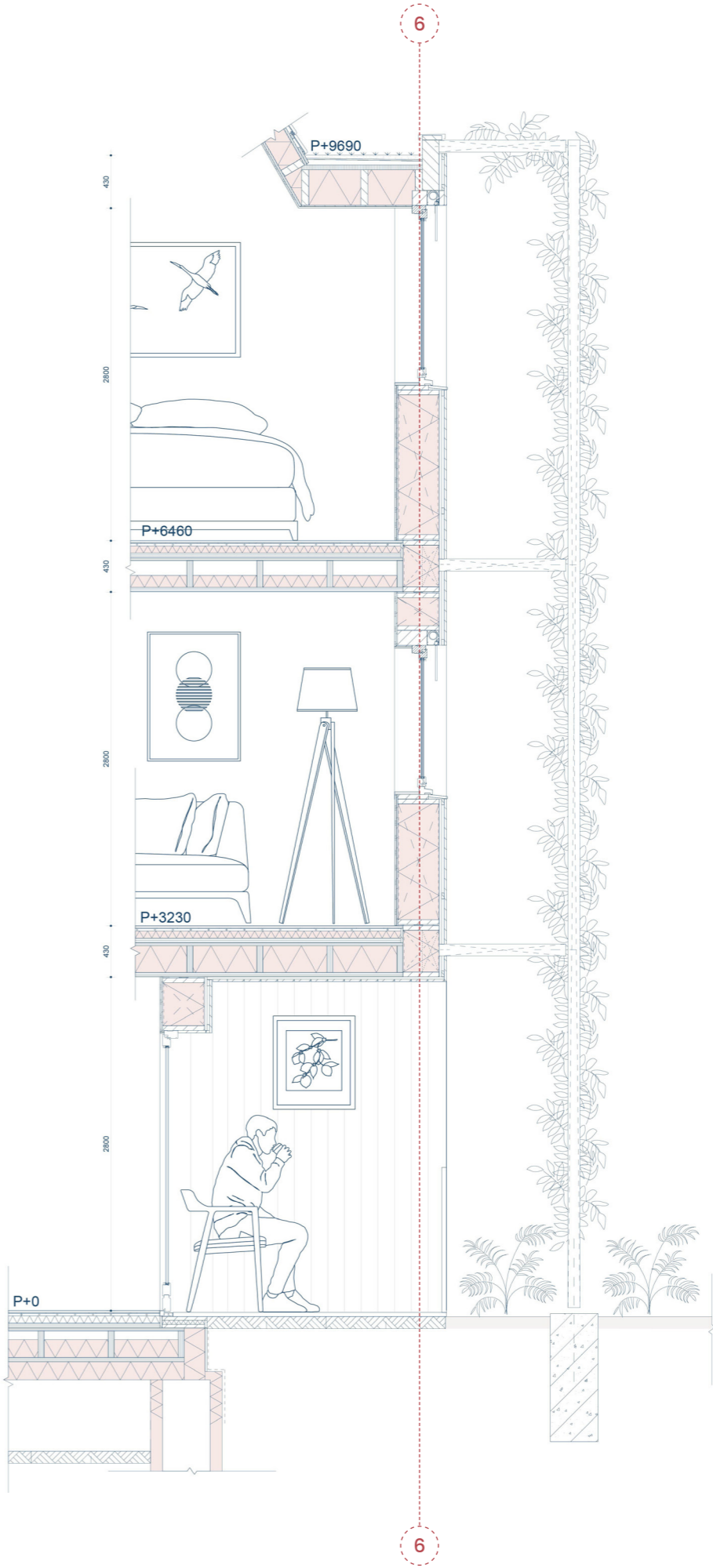


# DETAIL BOOKLET

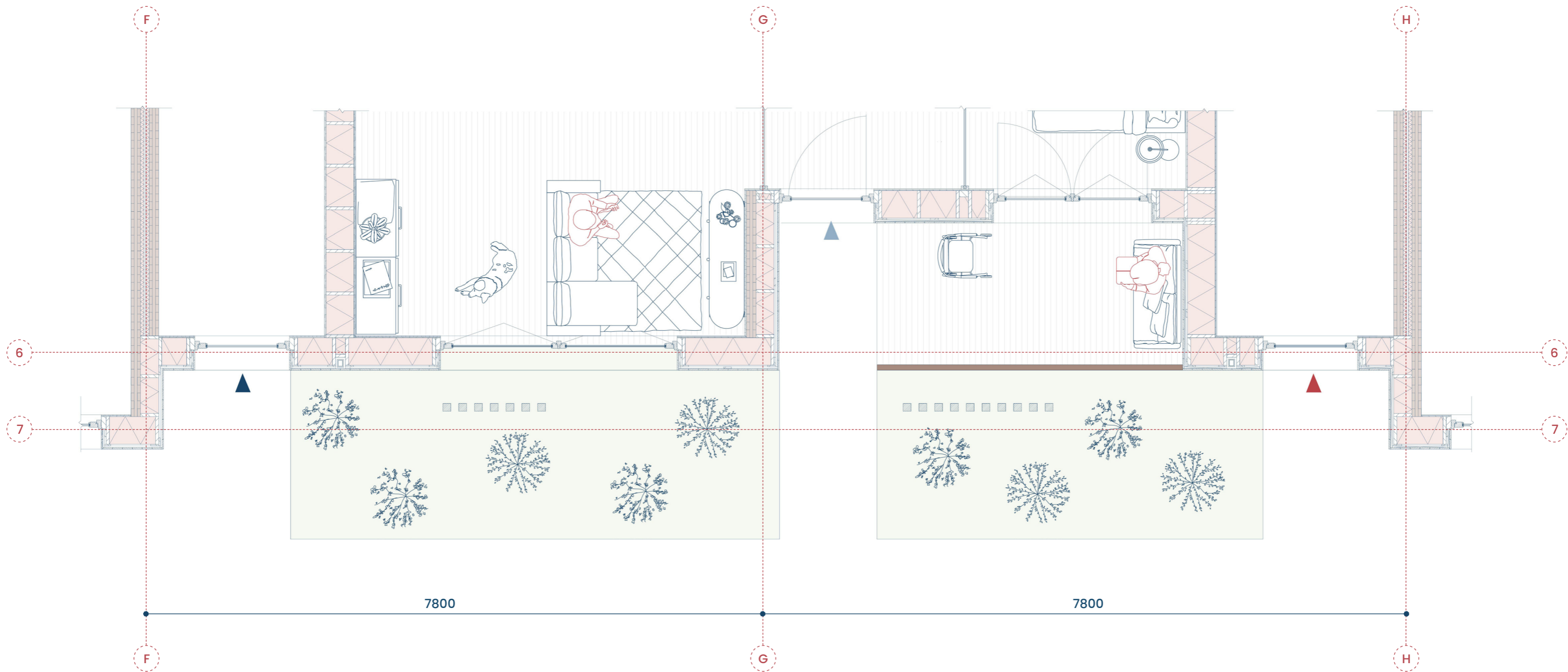
## FRAGMENT 2



**FRAGMENT VERTICAL**  
1:25 (scaled with 50%)



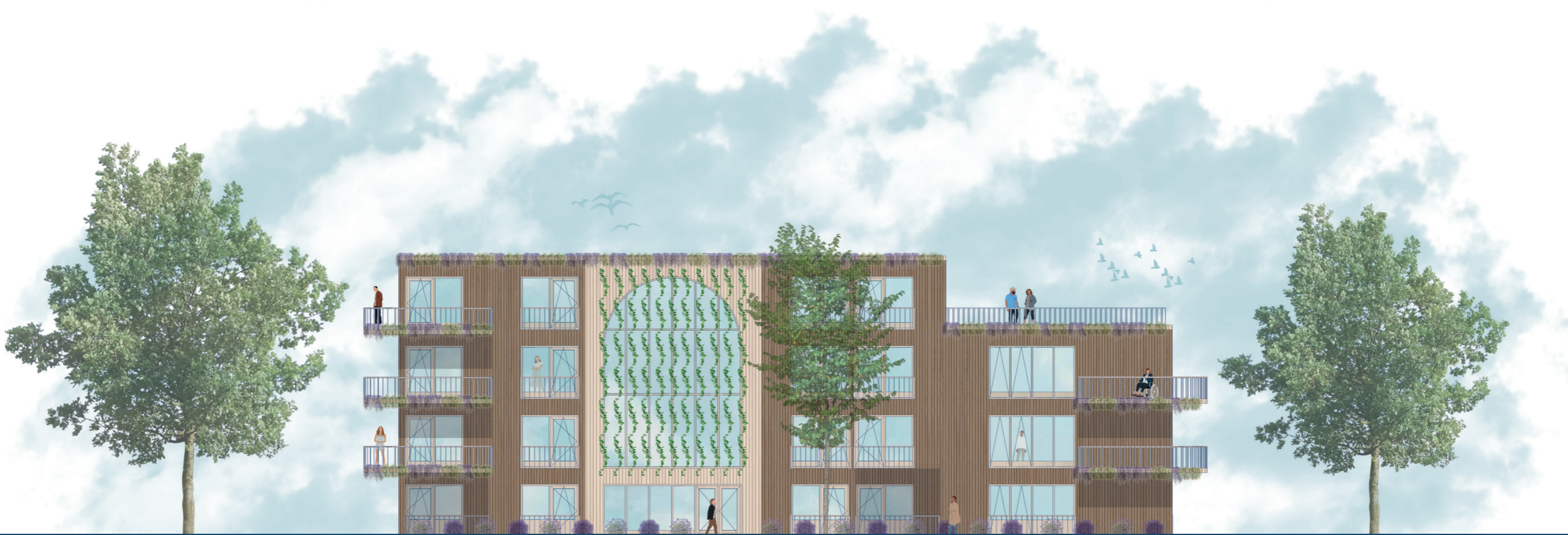
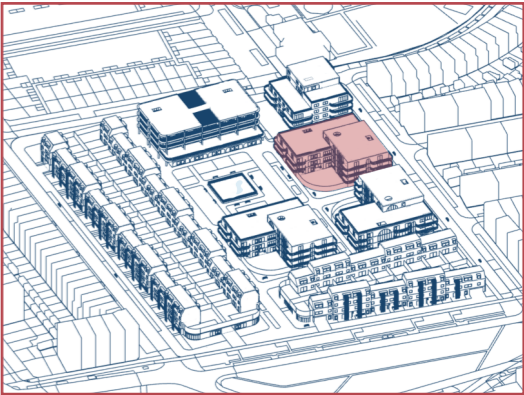
FRAGMENT HORIZONTAL  
1:25 (scaled with 50%)



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

# DETAIL BOOKLET

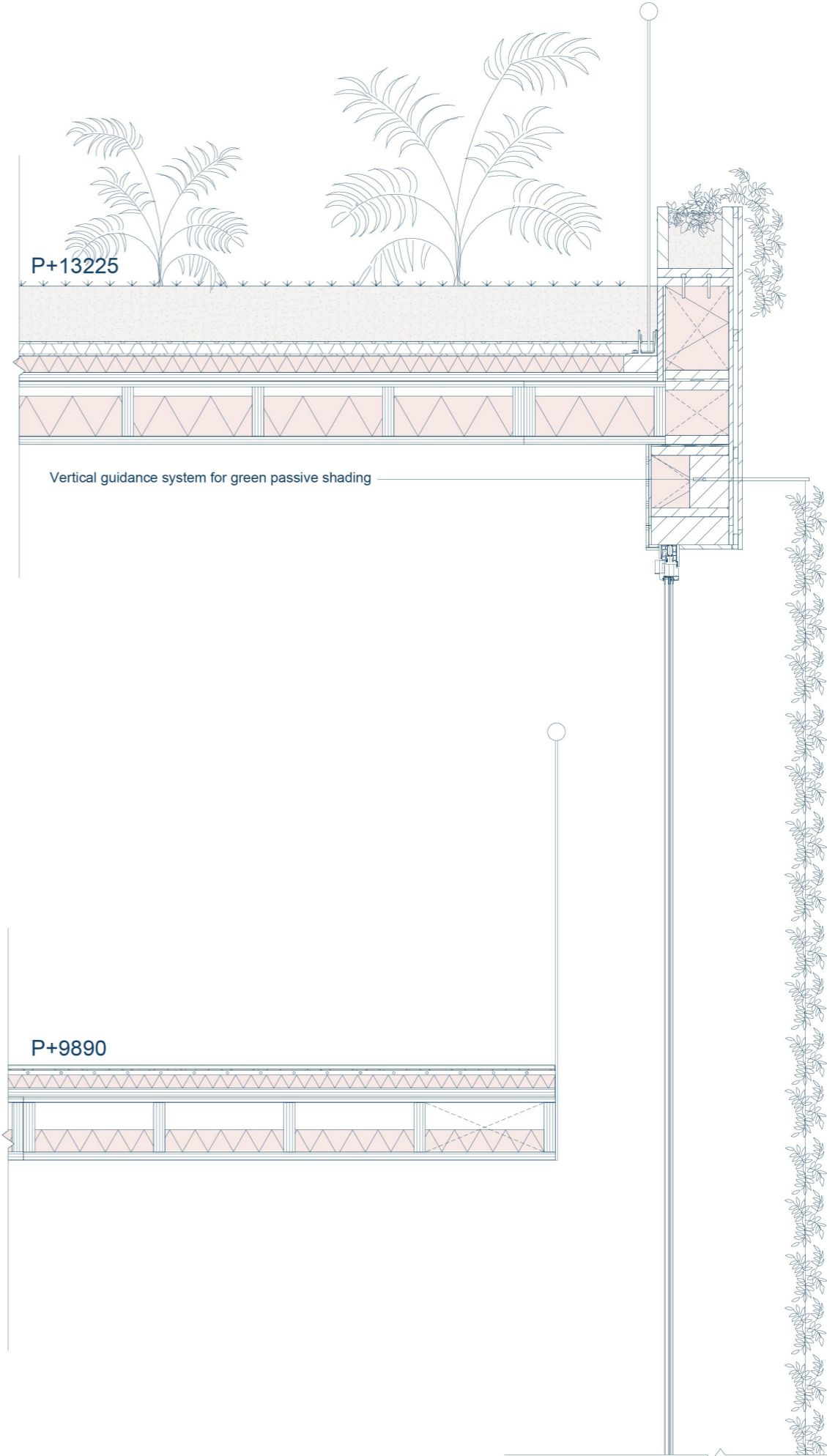
PRINCIPLE DETAIL



**NORTH FACADE**  
1:200

PRINCIPLE DETAIL PASSIVE SUN BLOCKING

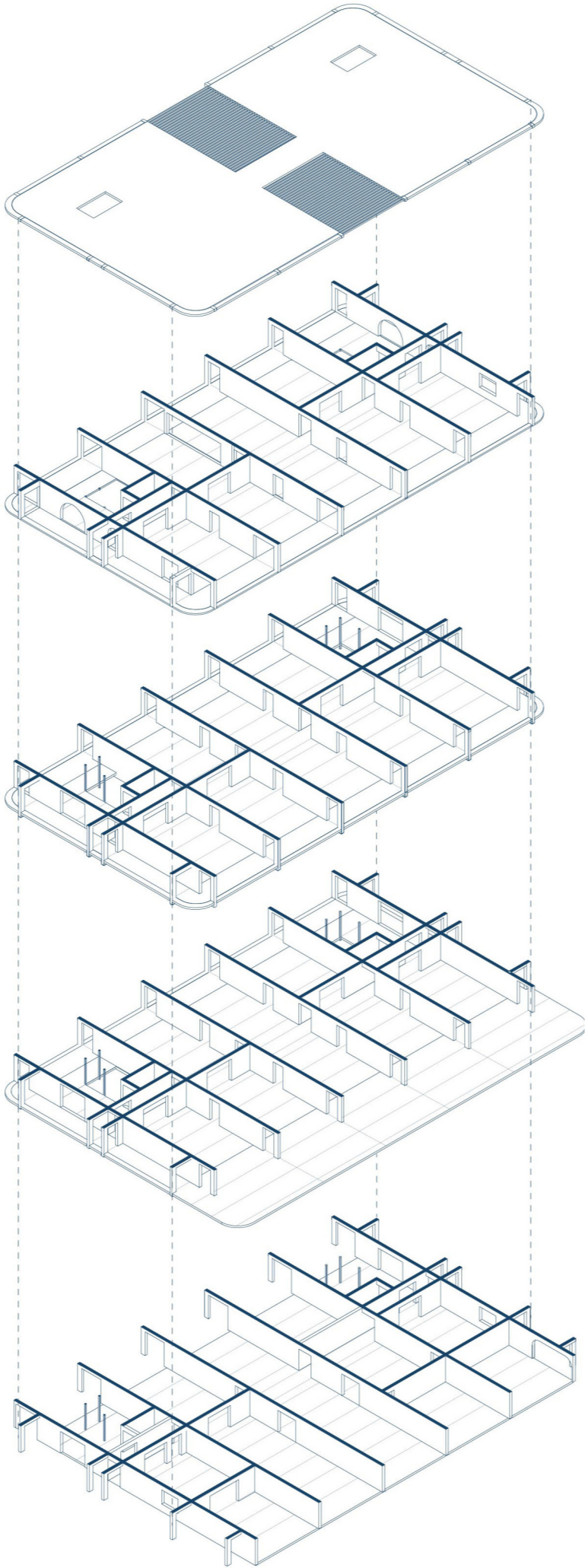
1:20 (scaled with 50%)



# **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.)

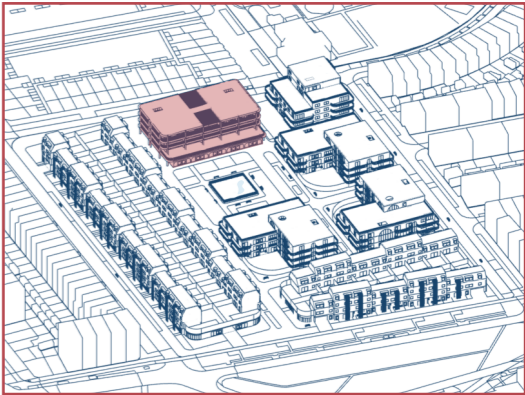
- Carbon negative
- Biodegradable

**FLOORS**  
*Kerto Ripa*

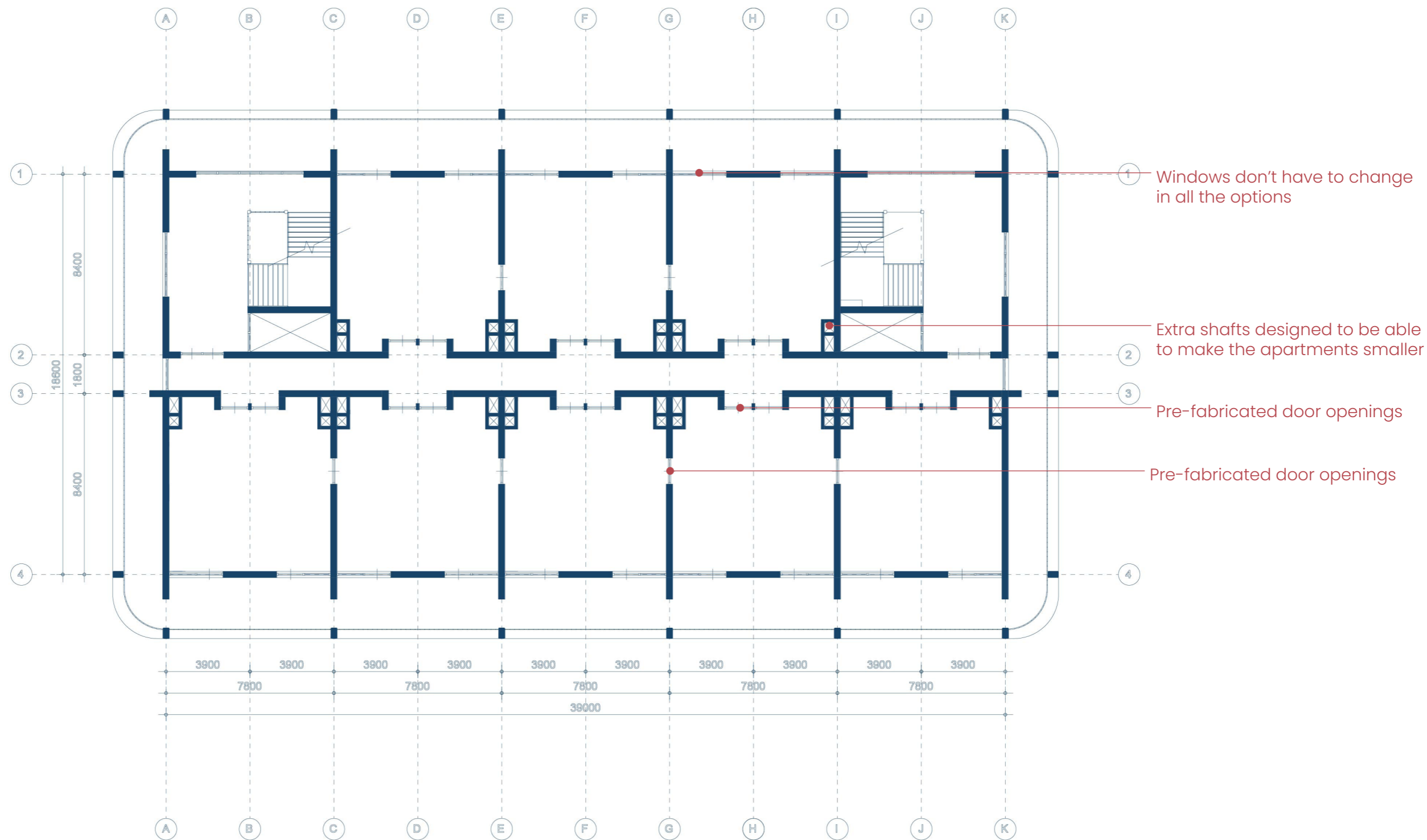


(Woodteq, n.d.)

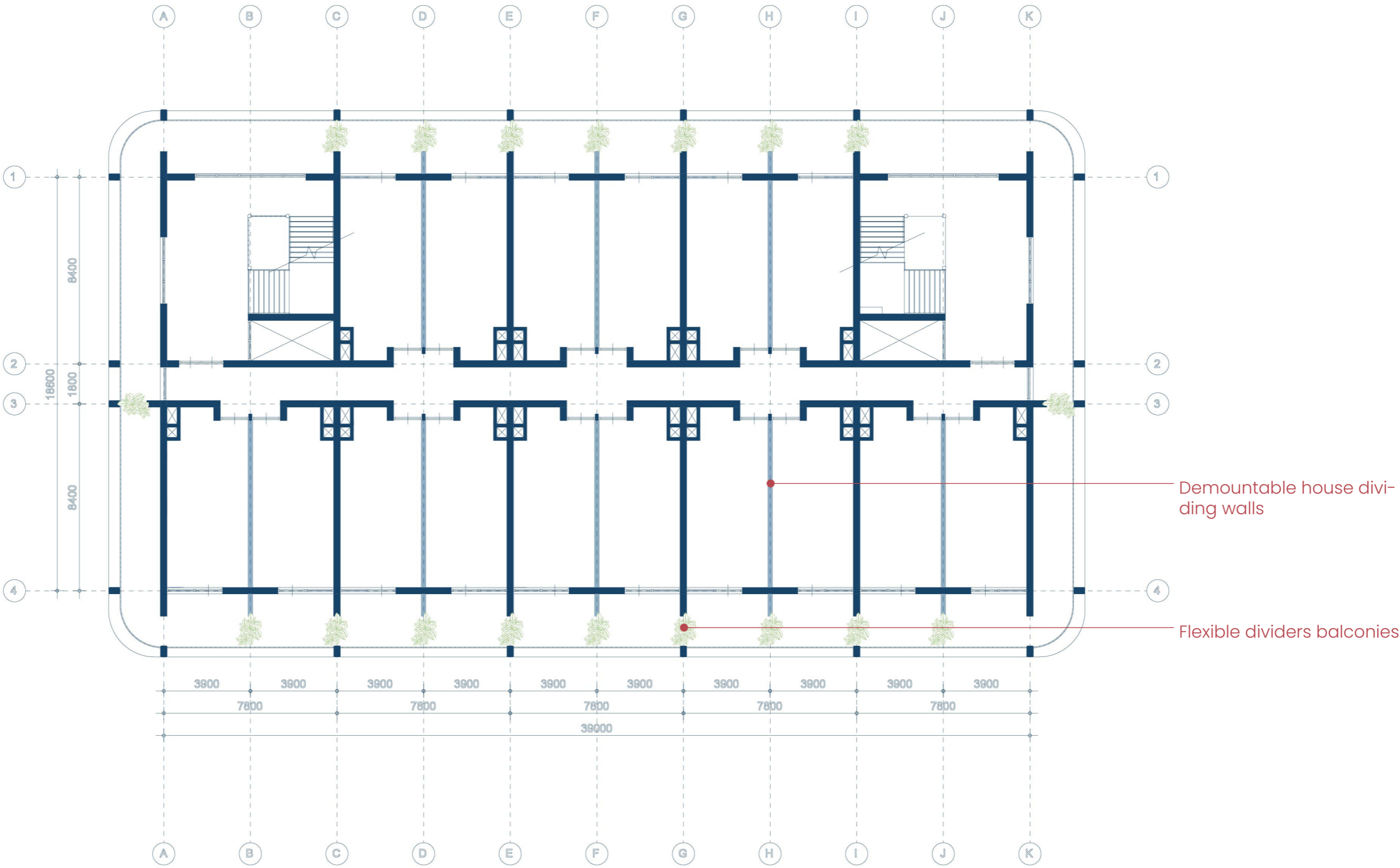
- Wooden hollow floor
- Place for insulation / installations



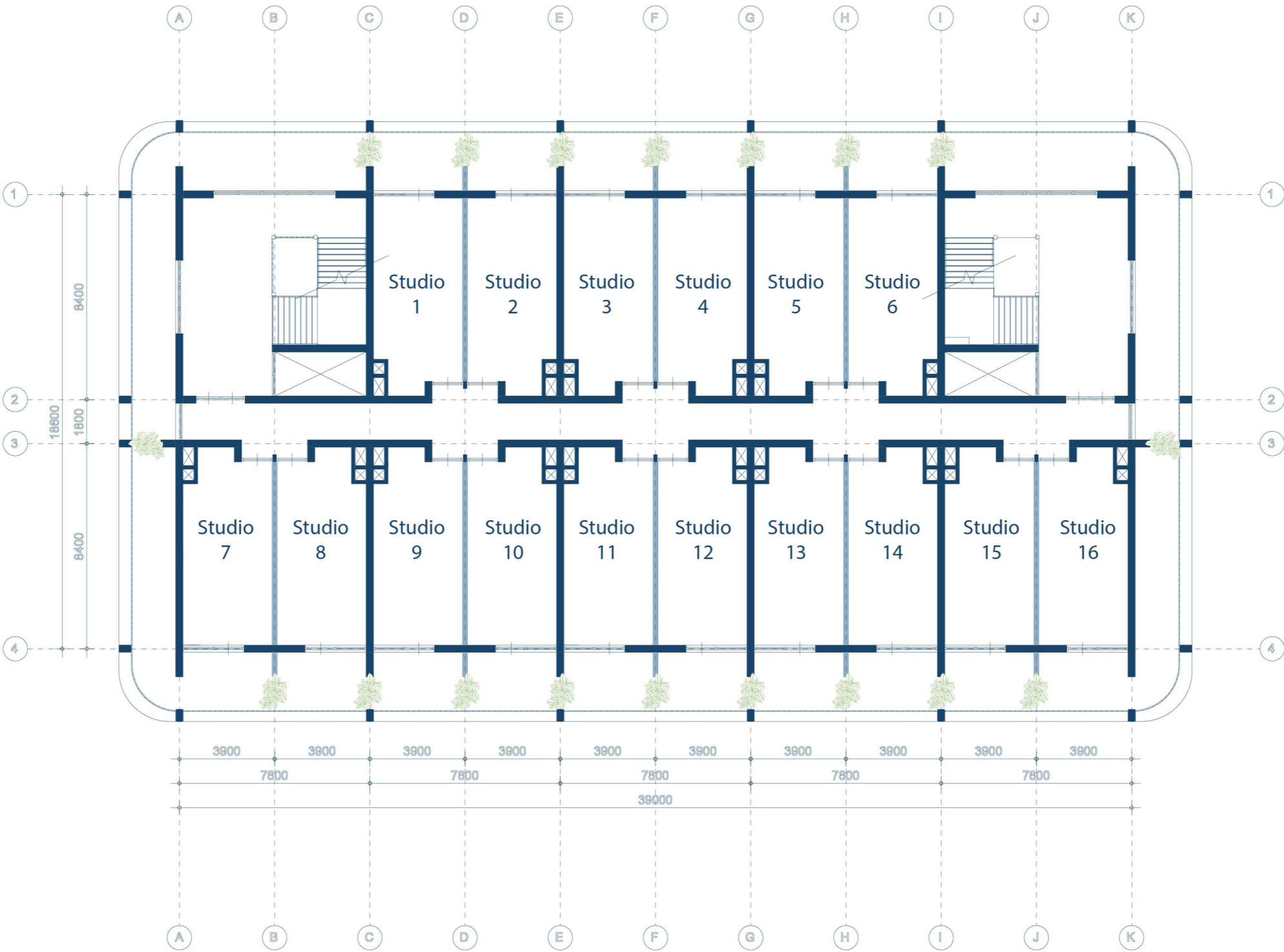
**FLEXIBILITY GRID 1:200**  
Second floor

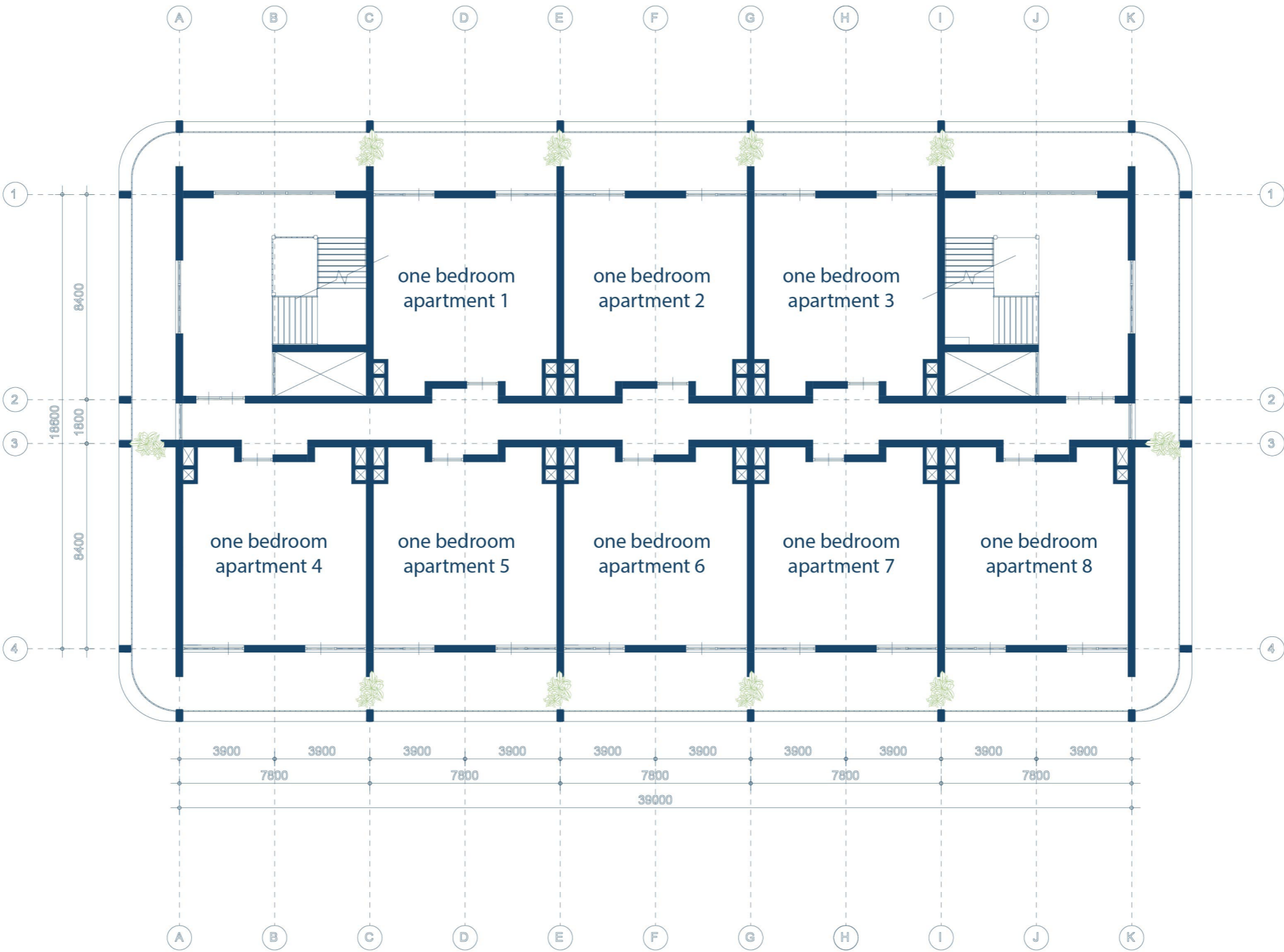


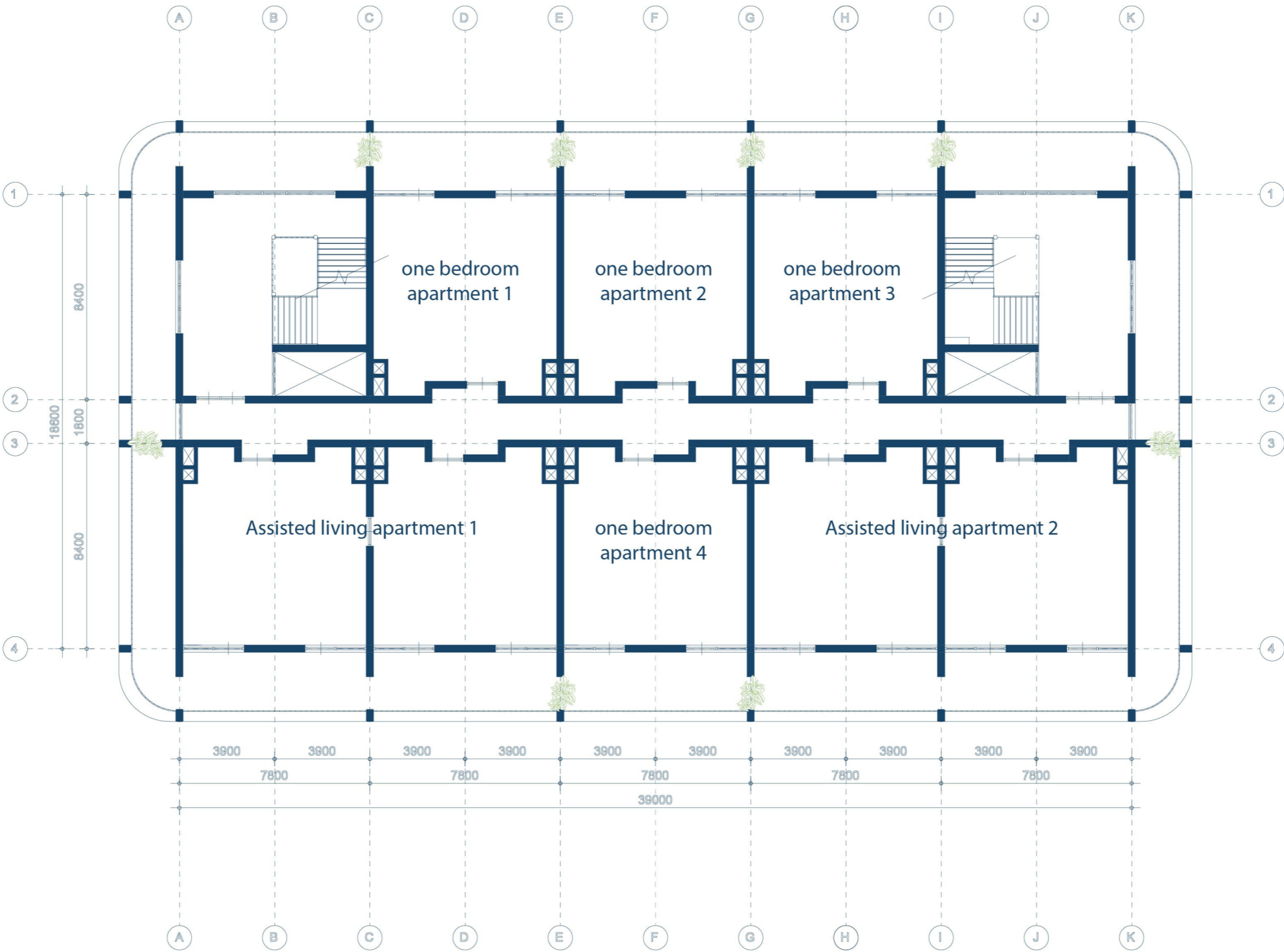
**FLEXIBILITY GRID 1:200**  
Second floor



Dwelling scenarios  
Second floor 1:200

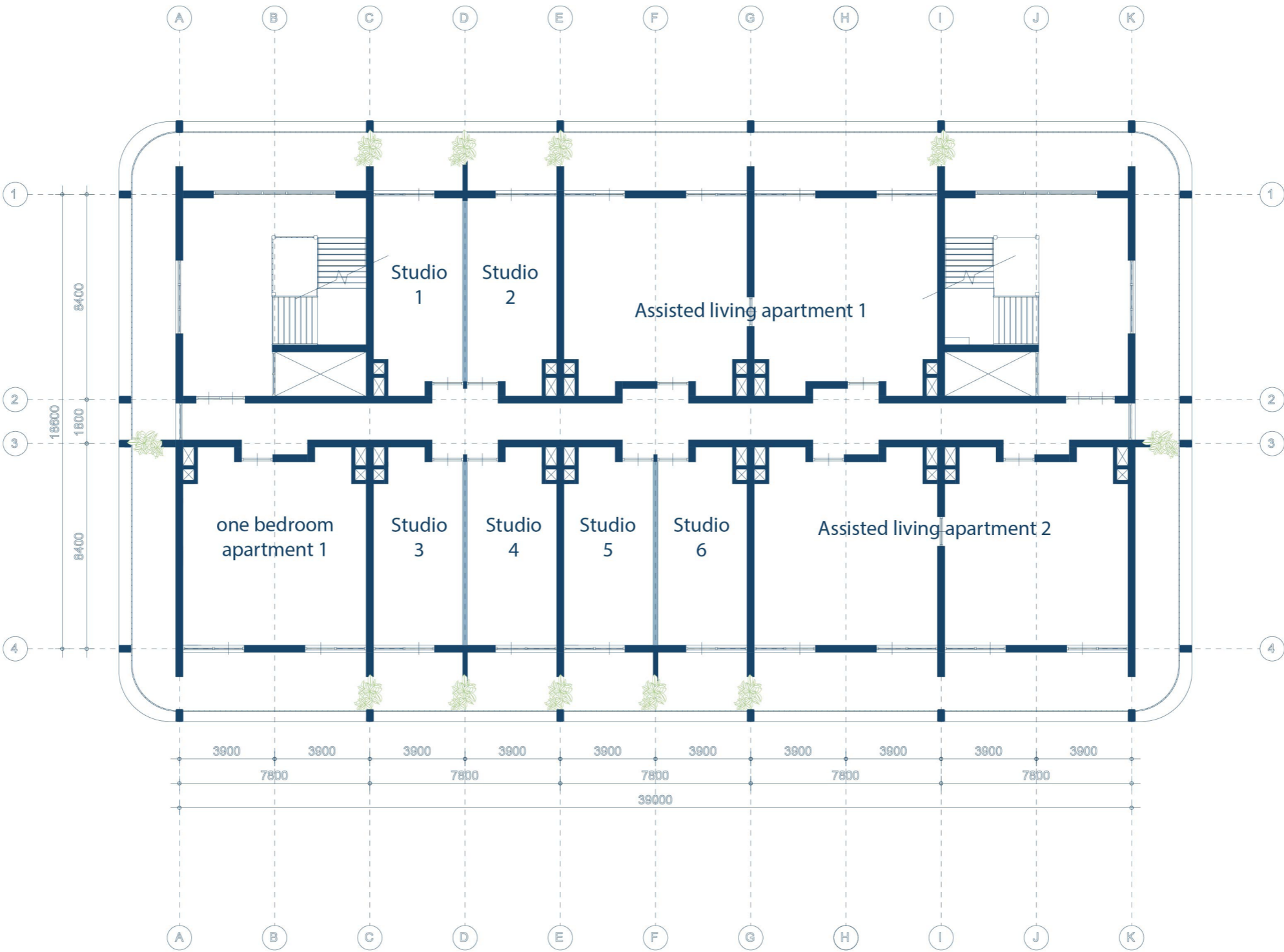






Dwelling scenarios

Second floor 1:200

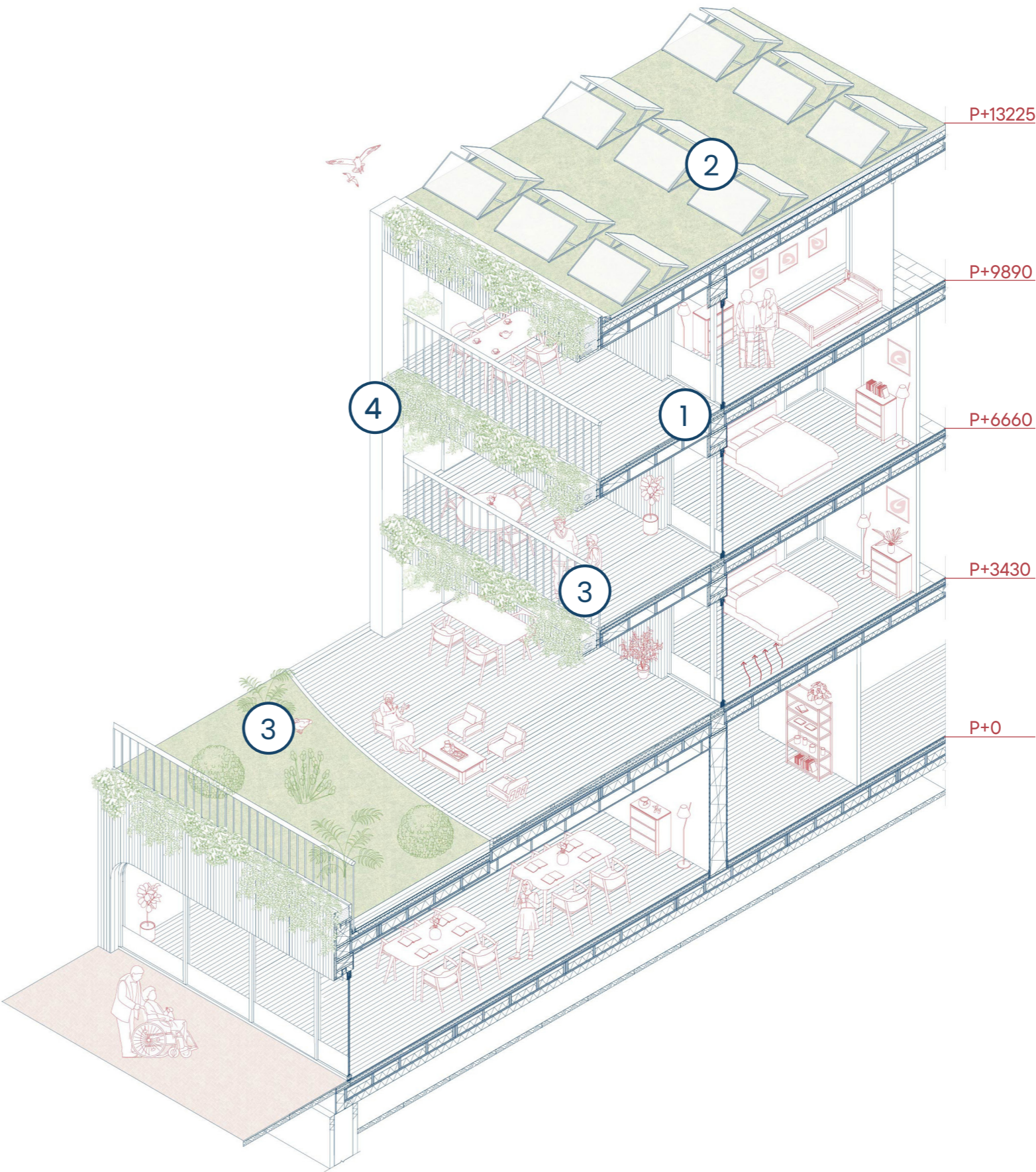


# **CLIMATE**

*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

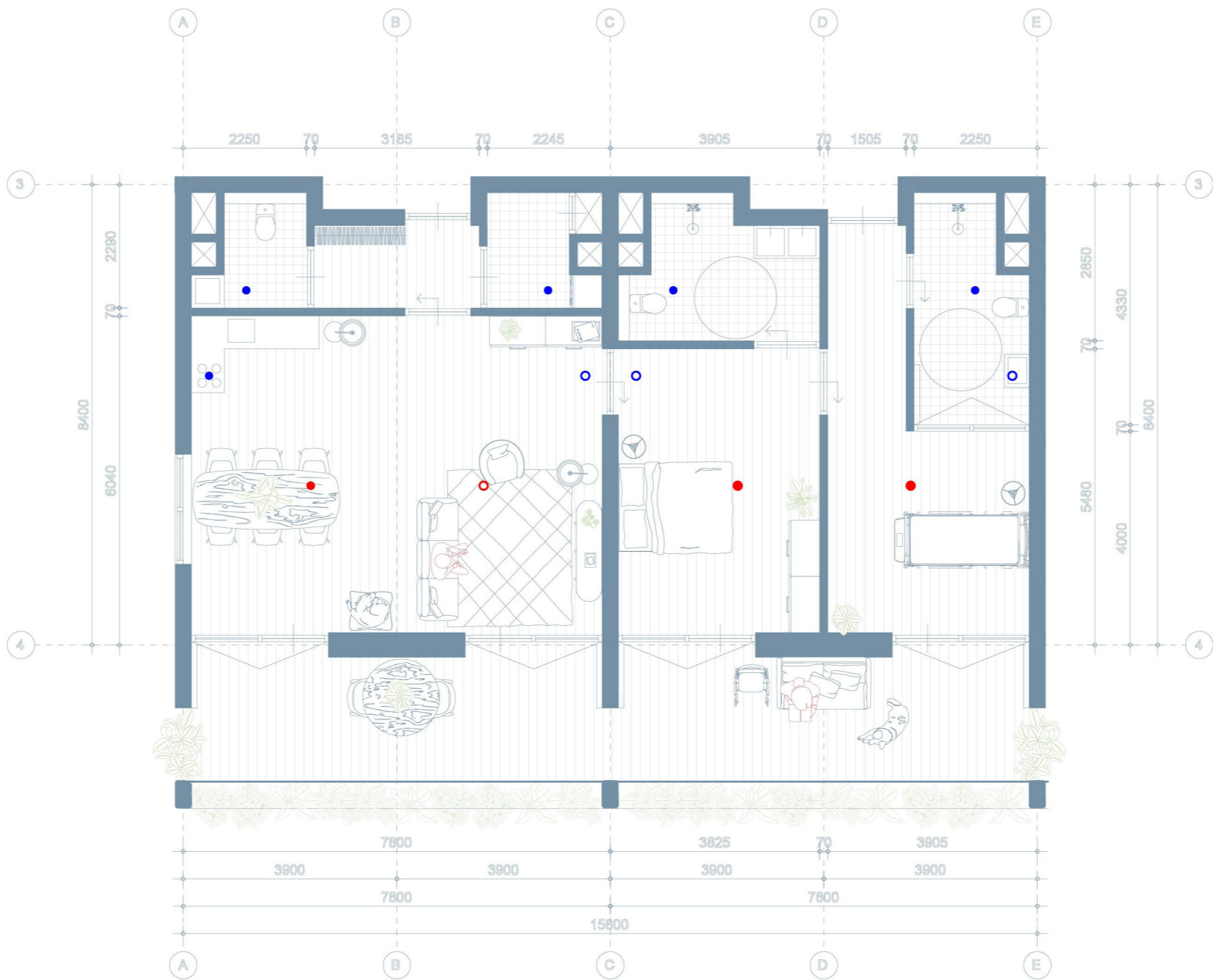


Climate diagram winter

- 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 rain-water from the roof**. This water can then be used for irrigating plants, flushing 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

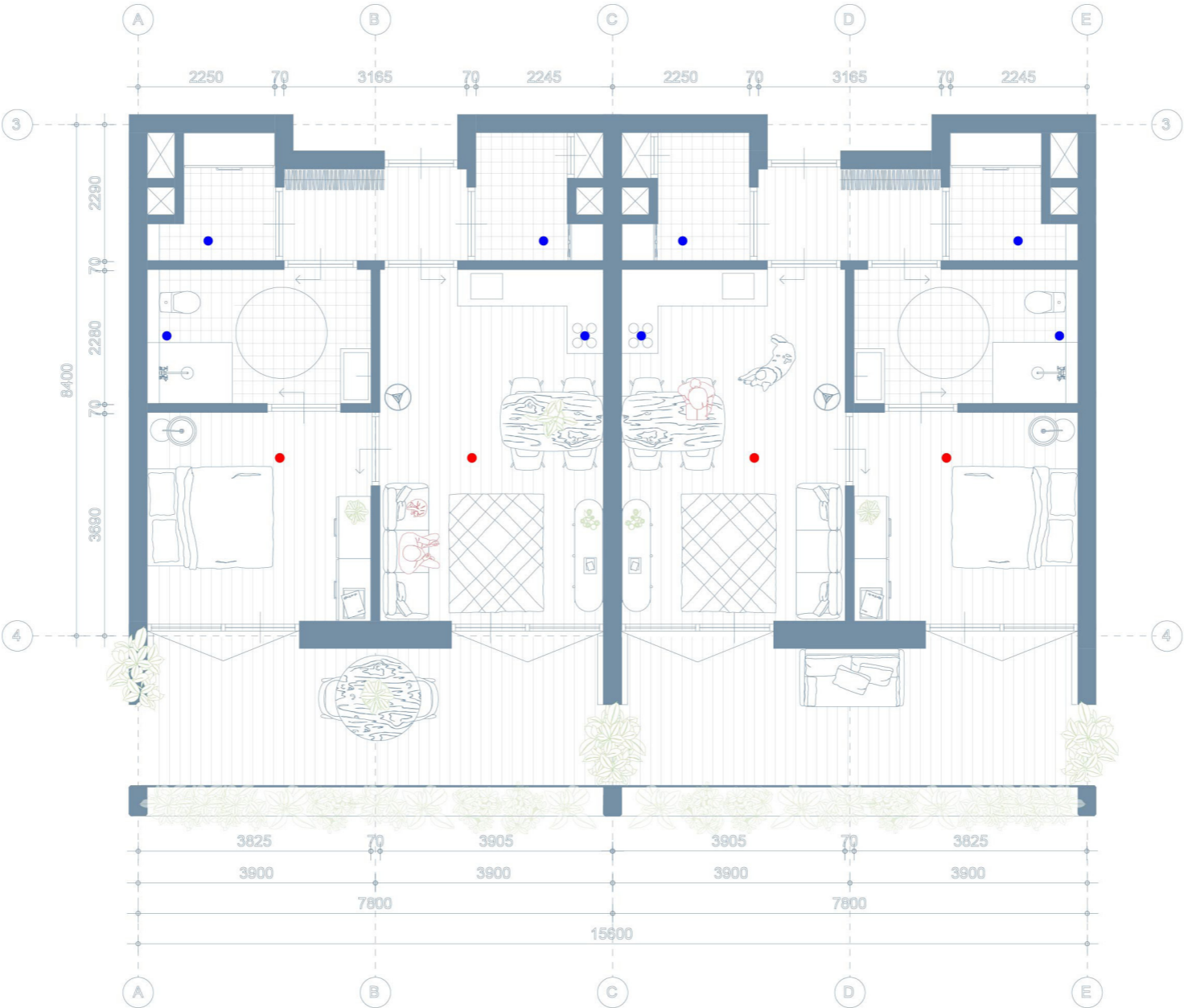


Legend

- = Air exhaust in use
- = Air exhaust not in use
- = Air supply in use
- = Air supply not in use

# FLEXIBILITY VENTILATION SYSTEM

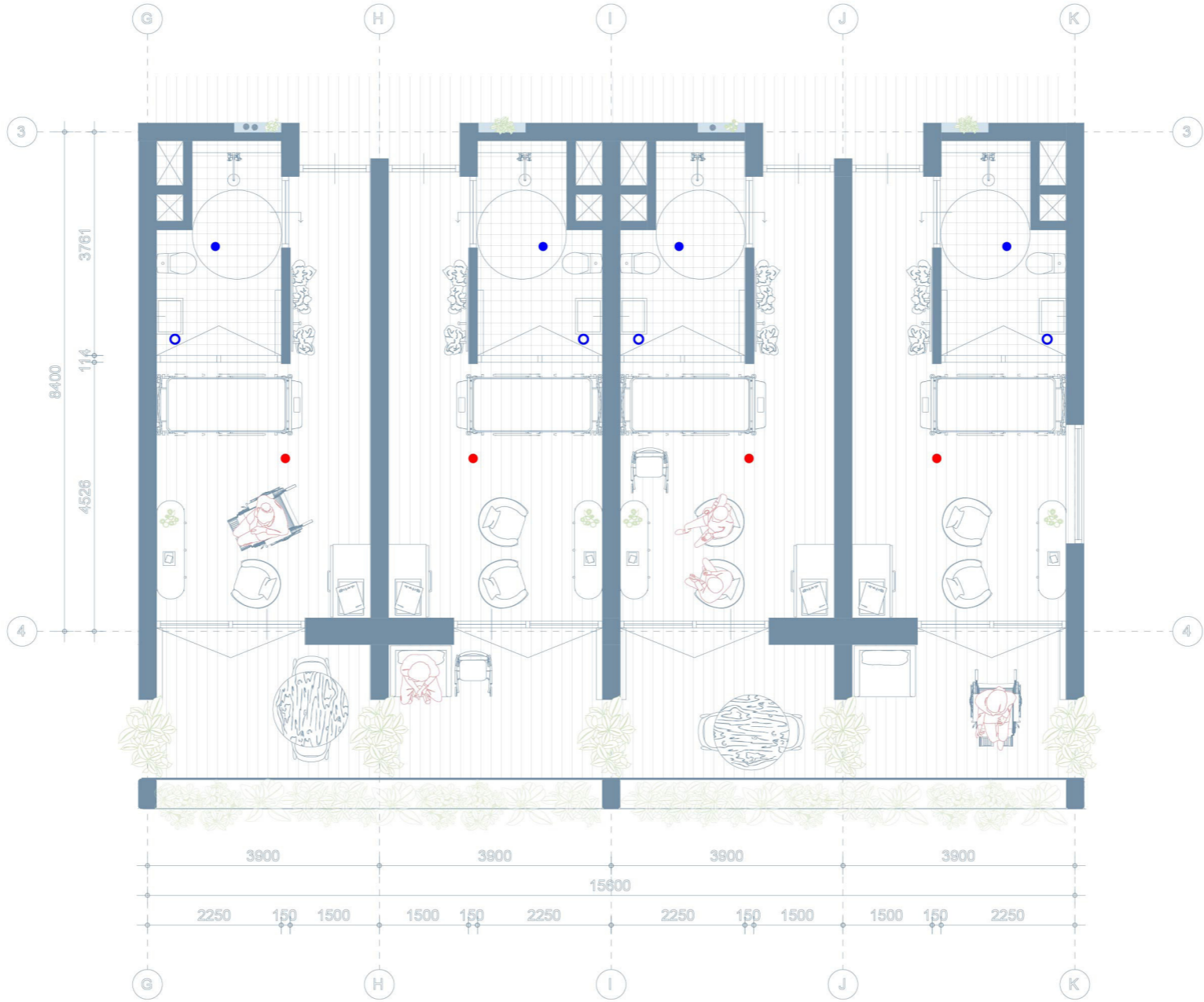
2x one bedroom apartment



- Legend**
- = Air exhaust in use
  - = Air exhaust not in use
  - = Air supply in use
  - = Air supply not in use

# FLEXIBILITY VENTILATION SYSTEM

4x room for elderly with severe dementia

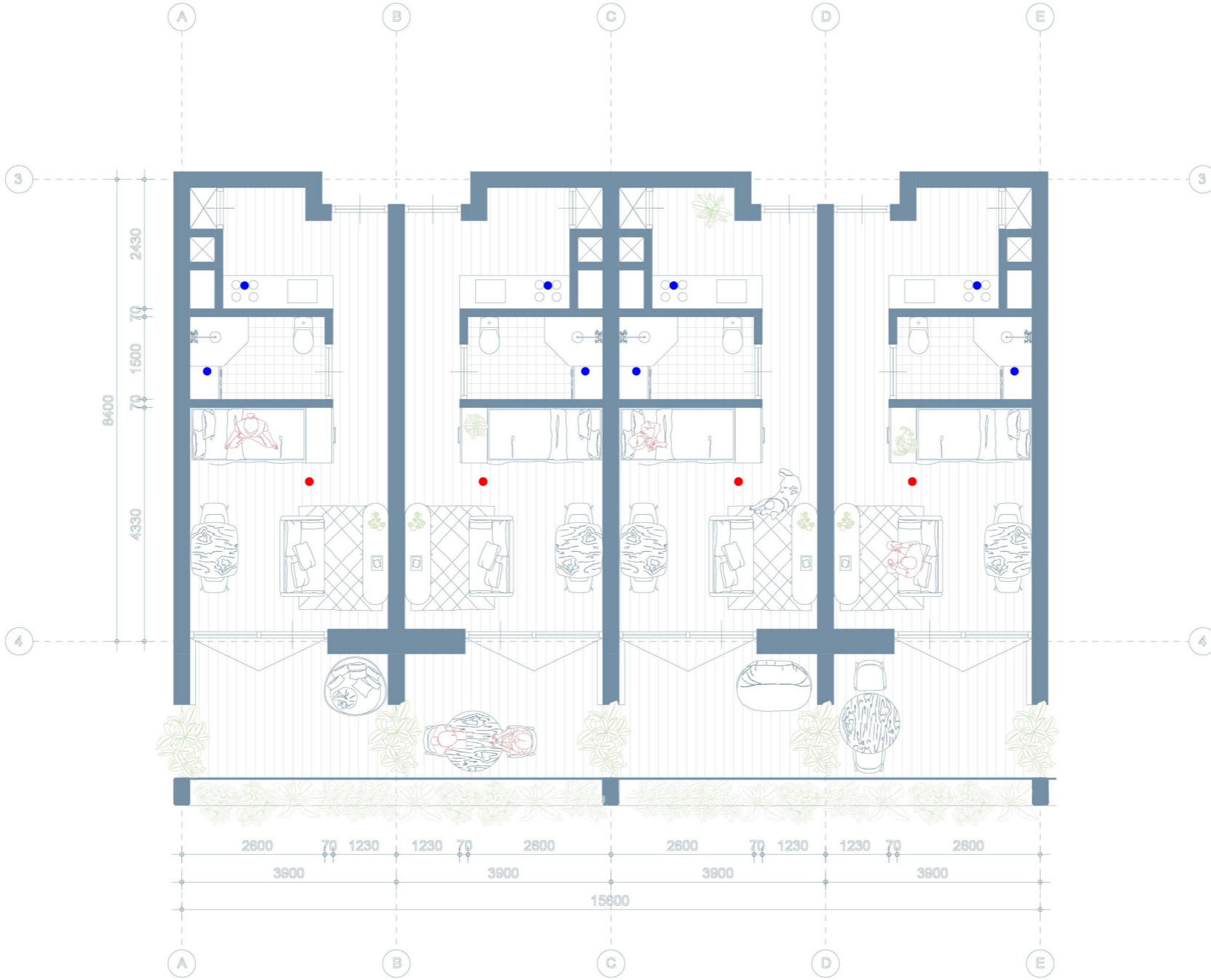


## Legend

- = 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**
- = Air exhaust in use
  - = Air exhaust not in use
  - = Air supply in use
  - = Air supply not in use