

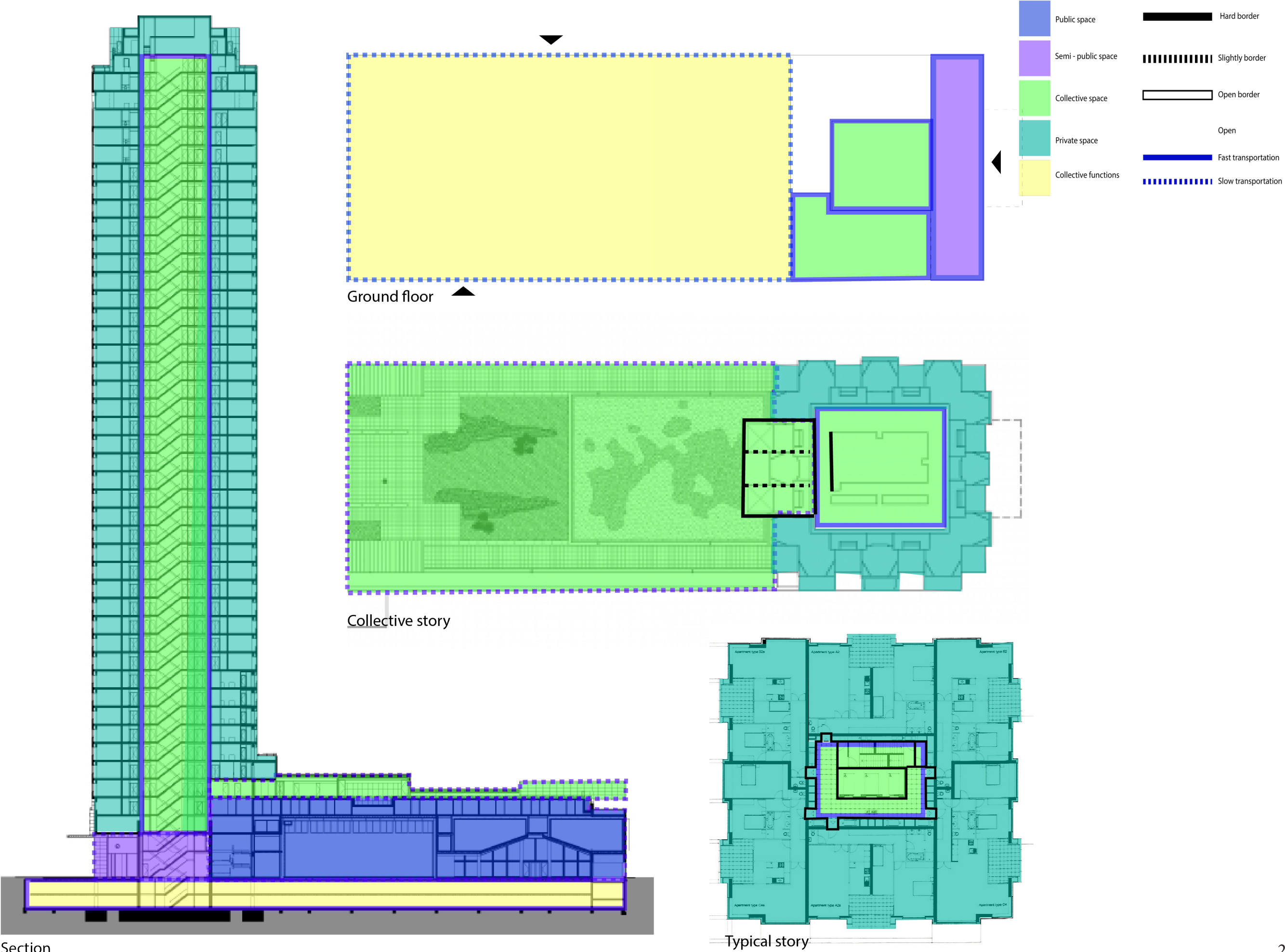
SOCIAL ACTS AT HEIGHT

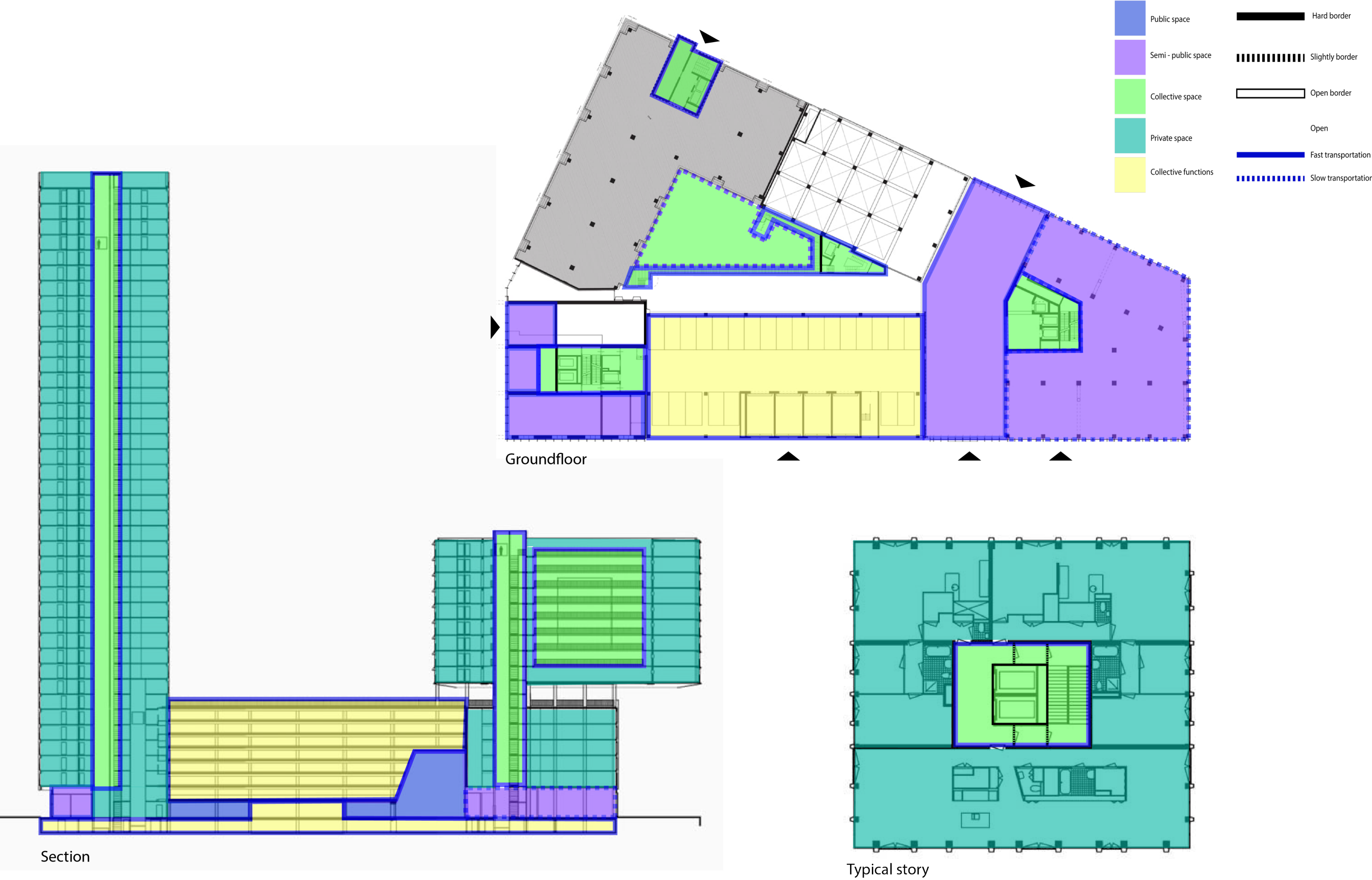
Liberated from the loneliness and
social isolation in high-rise buildings

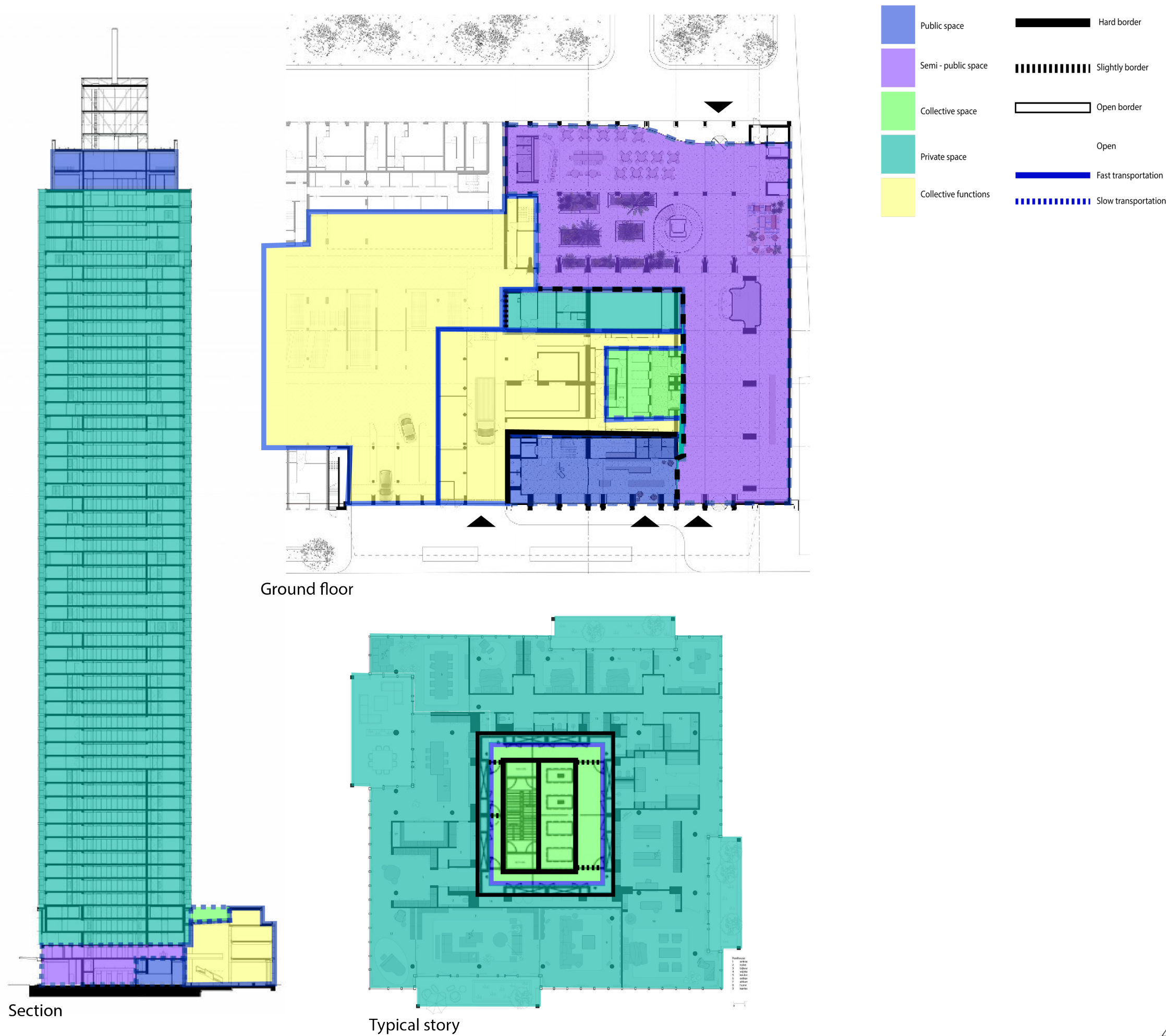
Drawings and process

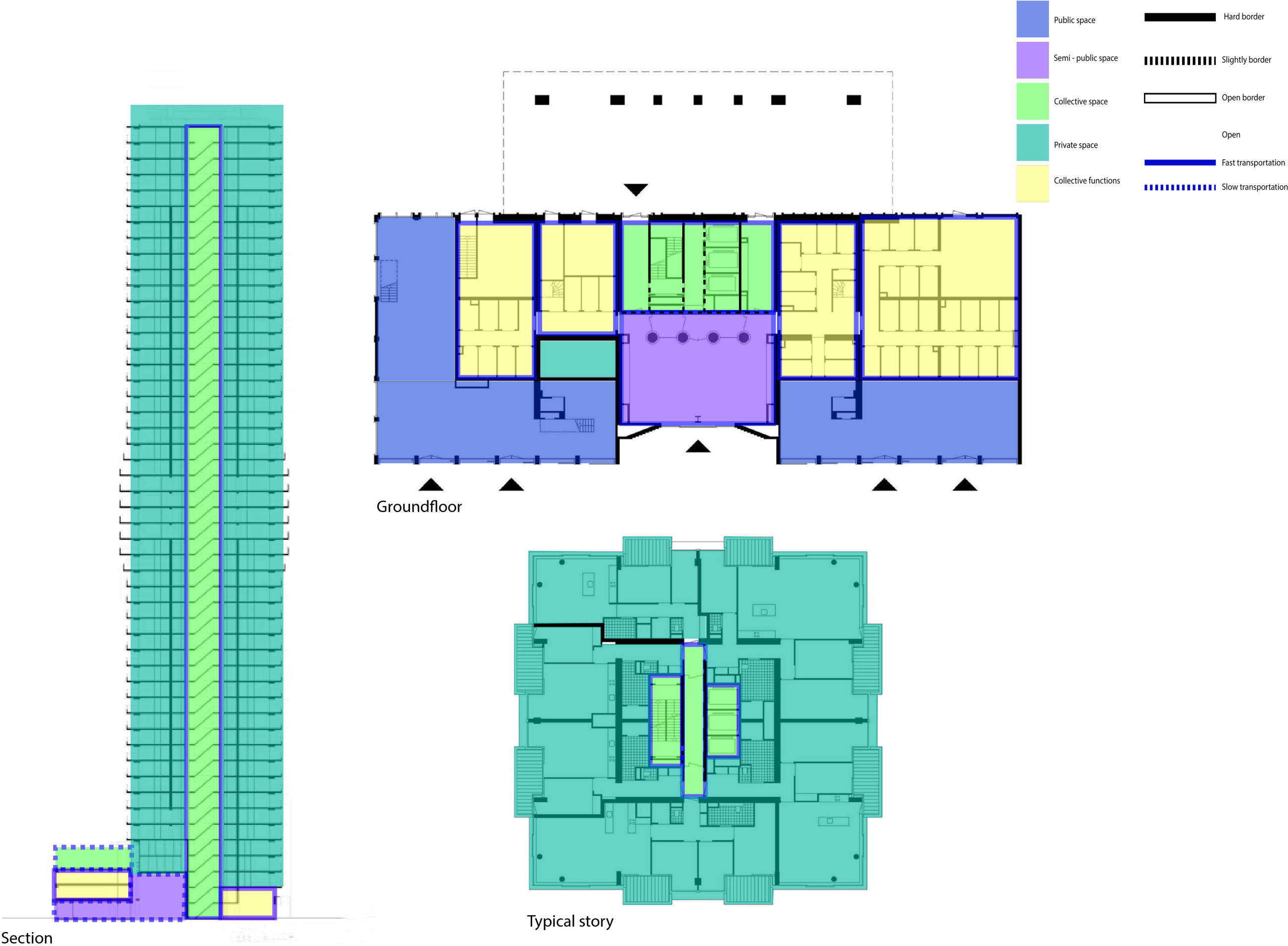


Linda Tran Nguyen
Technical University Delft
Faculty of Architecture
July 2024











Analysis New Orleans area



Oriental restaurant and cinema in the same street



Height of the plinth of New Orleans fits well with the height of surrounding buildings



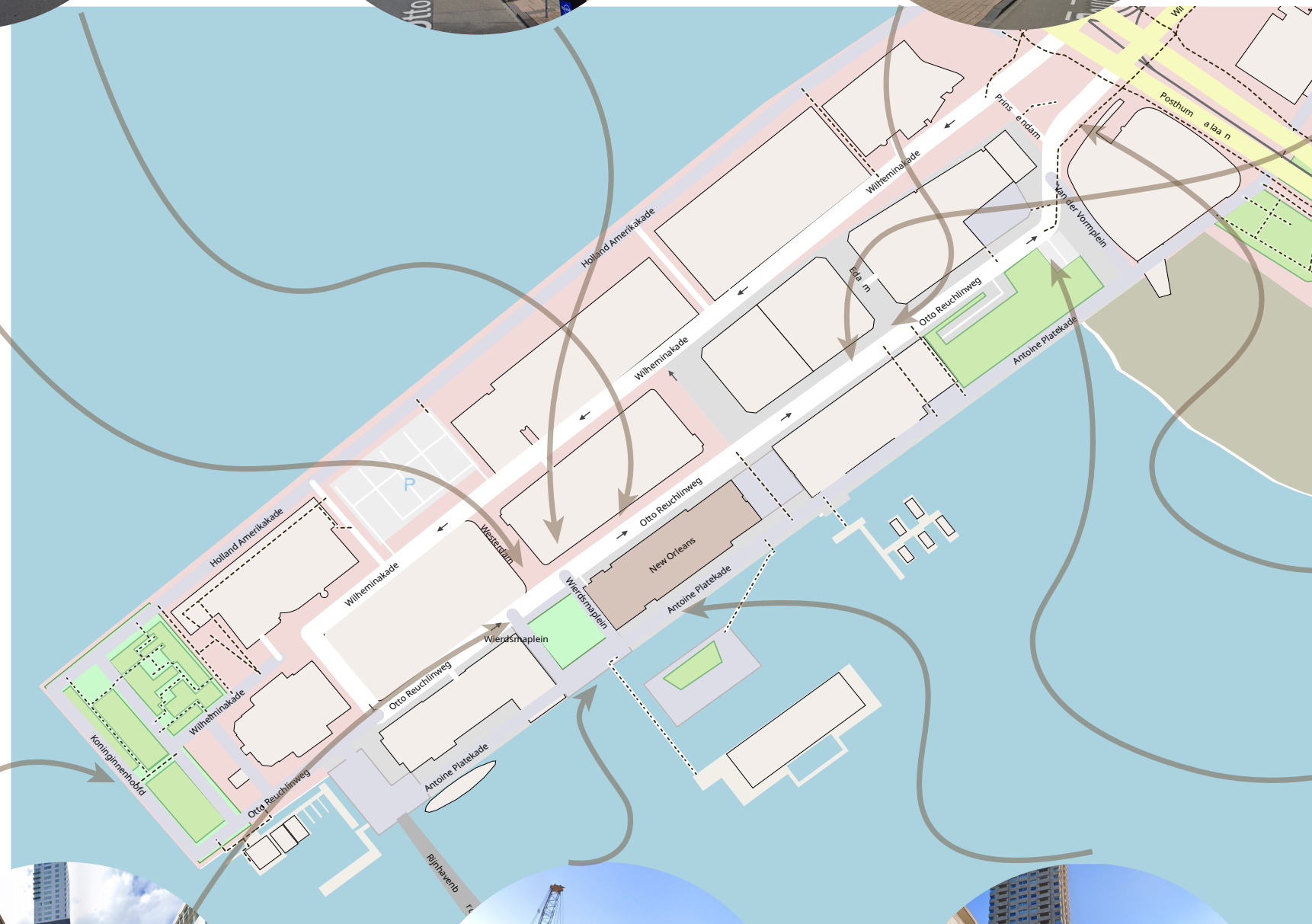
Hotels and food-hall on the other side of the street

Mini supermarket the Albert Heijn in the street



The only grocery store on the island and so very crowded

Central parkinglot of the island (payed) with a good view around the island



Public transport is accessible on the beginnen of the 'island' as well as the metro as the tram

High-rise towers are scattered on the island, each with an intermediate street, square or space



Sufficient parking space. No streetparking only parkinglots and public or private parking garages

Public green park with lots of seats and plenty occasions for leisurements.



One-way traffic with plenty of space for pedestrians on both sides of the street



Walking and cycle bridge connected to Katendrecht

Buildings on the water of which offices, tiny houses and the watertaxi com-



The open side of the island to the water. Car-free zone with lots of seating occasions



New orleans belongs to one of the 5 towers on the Kop van Zuid

The Red Apple map



Analysis The Red Apple area

High residential towers are situated well apart from each other



Ibis hotel in the street with applied science university located on the other side of the water.



The tower has a big building volume that takes over the 'island', while it is integrated with other buildings and various facilities in the plinth



A dynamic environment thanks to the water and boats sailing around. There are also seating areas to observe the area.

Despite the entire mass, the buildings are easily distinguishable because of the façade variation



Street parking on the facade side. Wide width for pedestrians with one-way traffic for cars



Connected with pedestrian and cycle bridges

Public parking garage in the city. (mainly used by visitors in the area)



Wide access from the street with the tower entrance is situated



Cars and bicycles are parking on the street. Mostly residential buildings and offices are located in the street



Clear overview of the area with various elements such as water, trees, boats, people and buildings



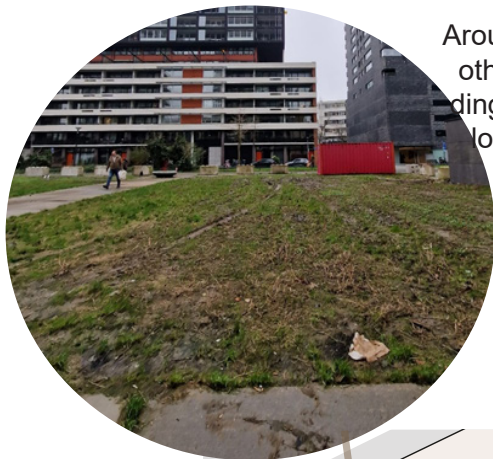
Lively environment because of many passers-by, walkers and cyclists





Analysis Zalmhaventower area

Ambition for a public green park at the front of the building, but hasn't start yet. For now its just a non-maintaining piece of grass



Around the Zalmhaven, other residential buildings are located from low-rise to mid-rise buildings



Open public space for scooters, cyclists and pedestrians with some greenery and seating occasions



Public parking garage under the Erasmus bridge



A wide street for traffic, pedestrians, cyclists and green. There are also plenty of parking spaces in the street



The cluster of towers is highly visible on this side of the street. The street serves as a main street



In this area many restaurants and bars are located. The street is lively and crowded most of the time



A wide street for traffic, pedestrians, cyclists and green. There are also plenty of parking spaces in



Entrance of the Zalmhaven I is accessible on both sides of the streets.

Cars are allowed to park in the street



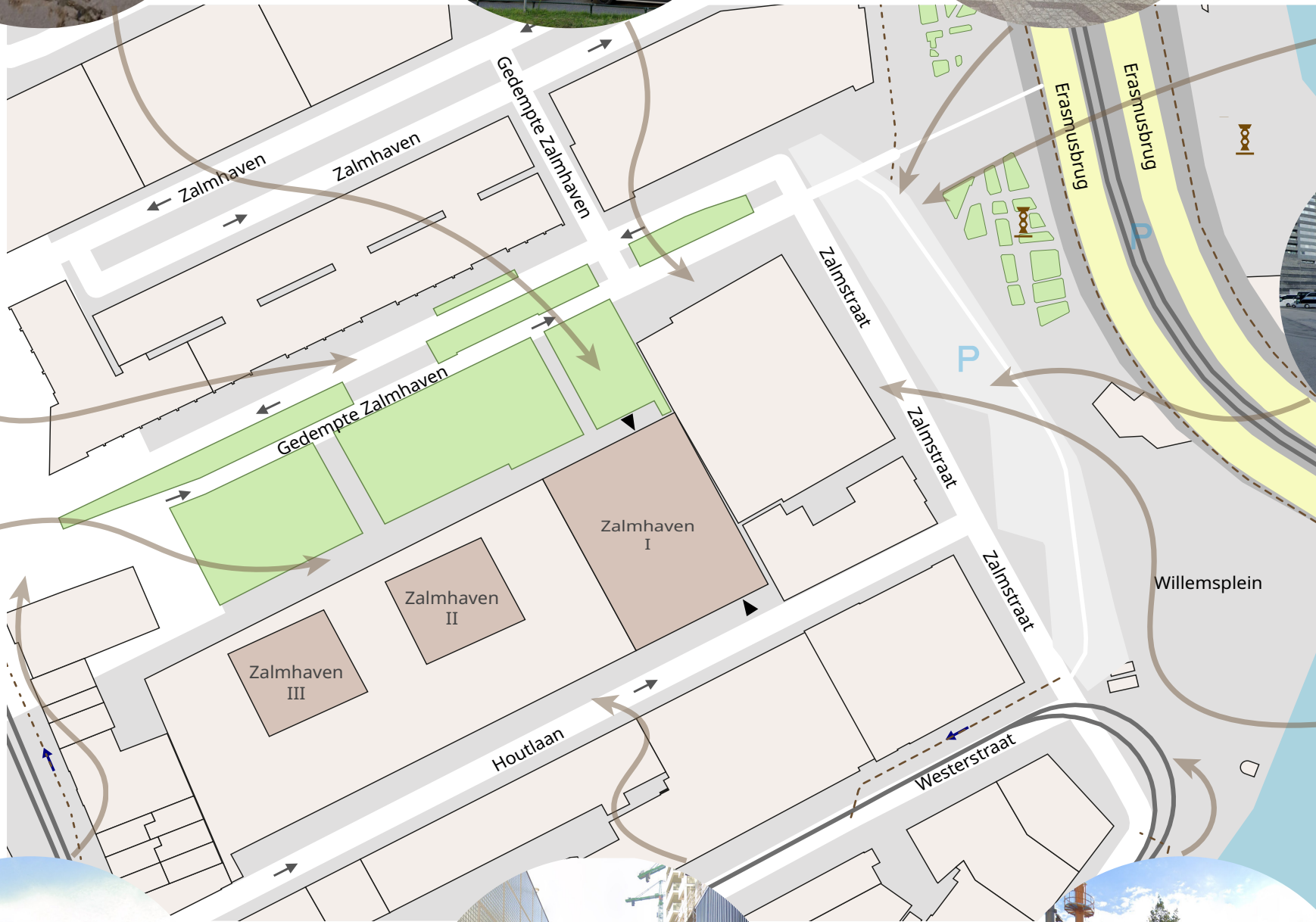
Parking spot for touring cars and busses.

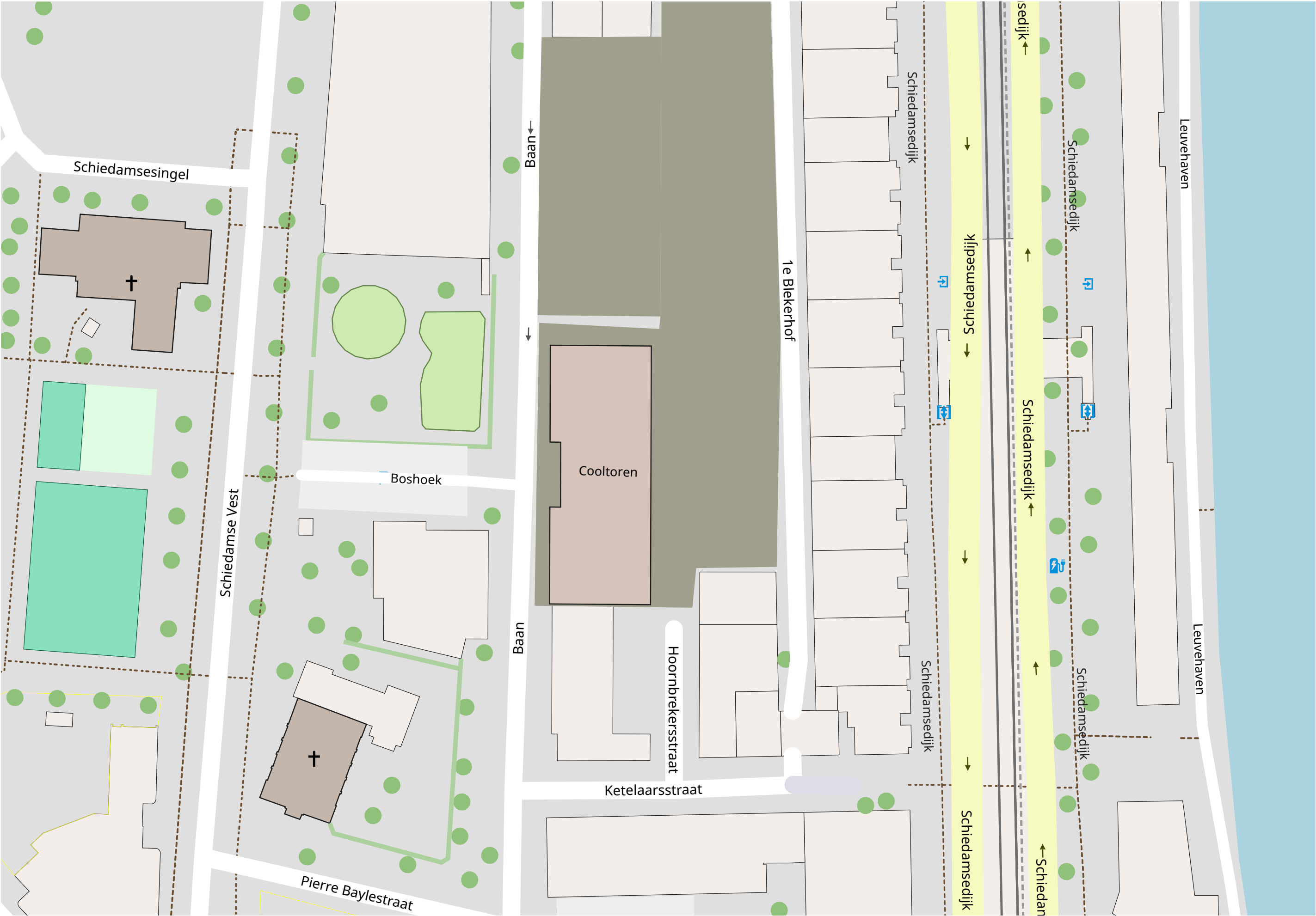


Restaurant and café bars are located on the water / bridge side of the building



View on the water and the Erasmus bridge that belongs to the iconic skyline of the city. Also a place for tourist activities where many touring





Analysis Cooltower area

Other buidlings that are located in this street are: school, church, playground and the eye hospital



The main street where much is happening and lively.



Parking on the steet where the tower is highly visible in the neighborhood, but is not located on the main street of the



Connected to a vibrant area with many commercial, hotel and retail facilities despite the street itself does not contain

Visible junctions around the tower



The entrance of the tower is not directly connected with the main street!



City fire station in the street with car repair garages



Old residential and office buildings in the area



View on the main street and the water. Lots of boats and museum and restaurant pavilions are located on this side of the street



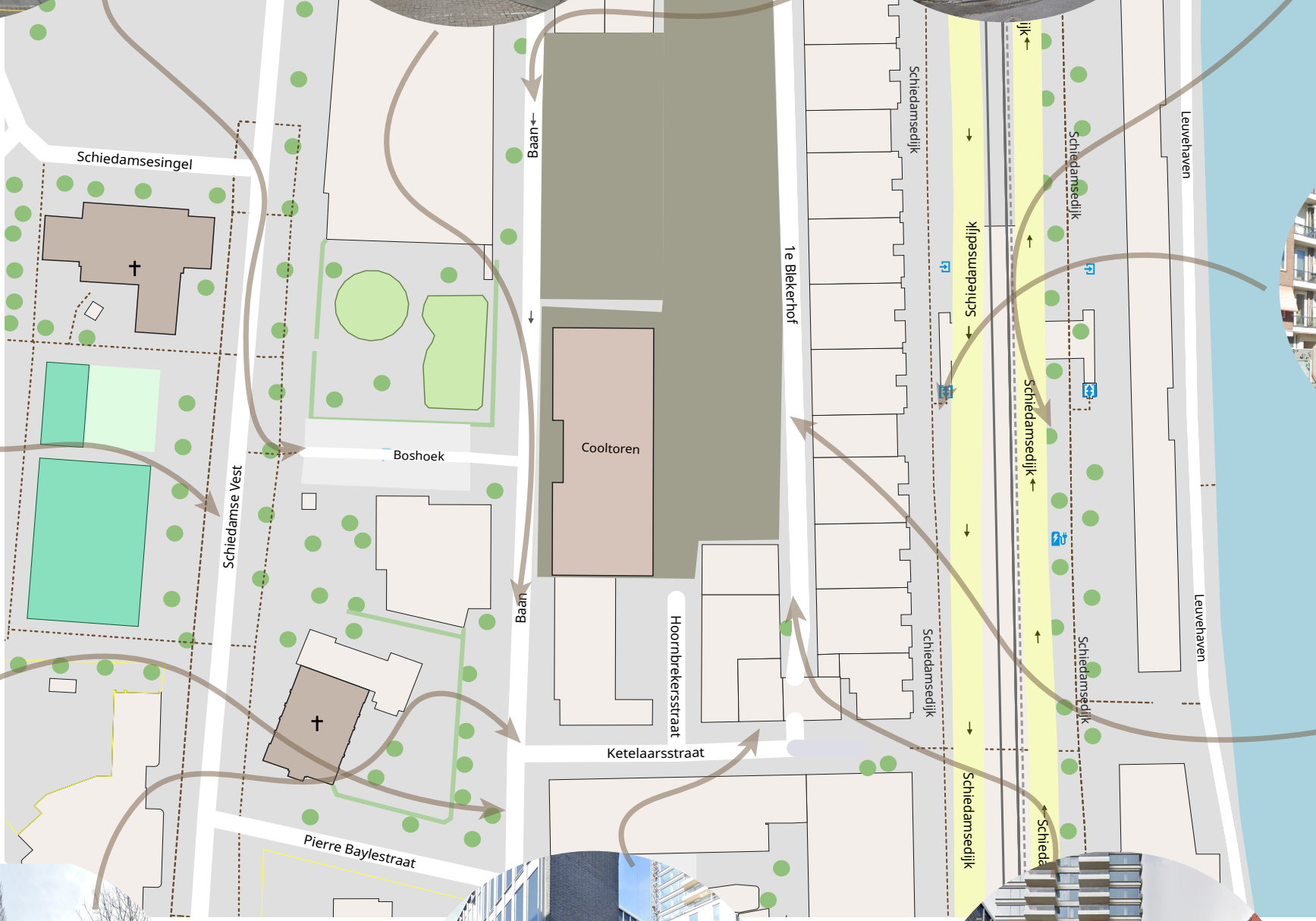
The main street to the city center with a commerical plinth and residential above



Back side of the Cool tower, Space for cars and delivery vans. Also serves as traffic route to the main street

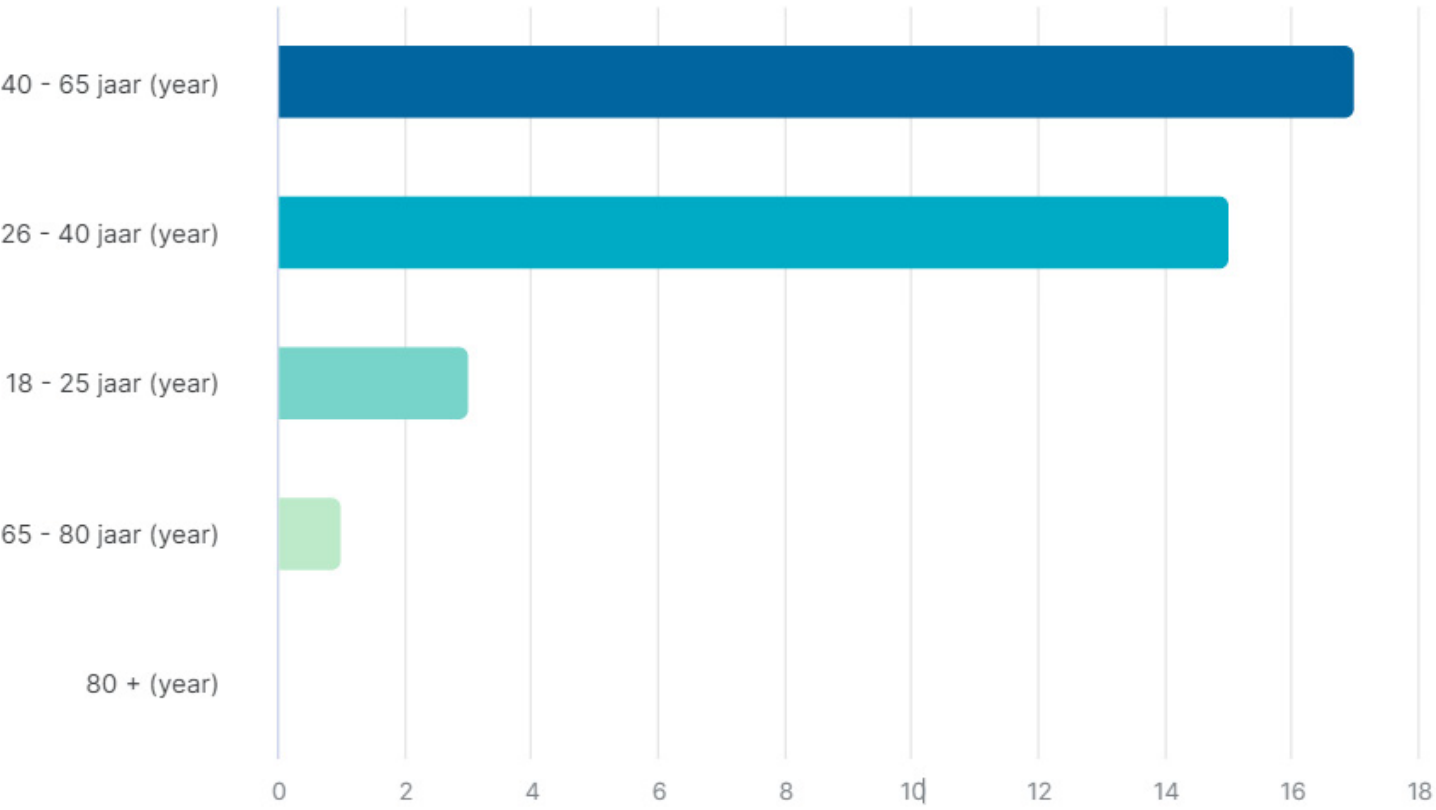


Small street on the back of the residential tower. The street is moderately used

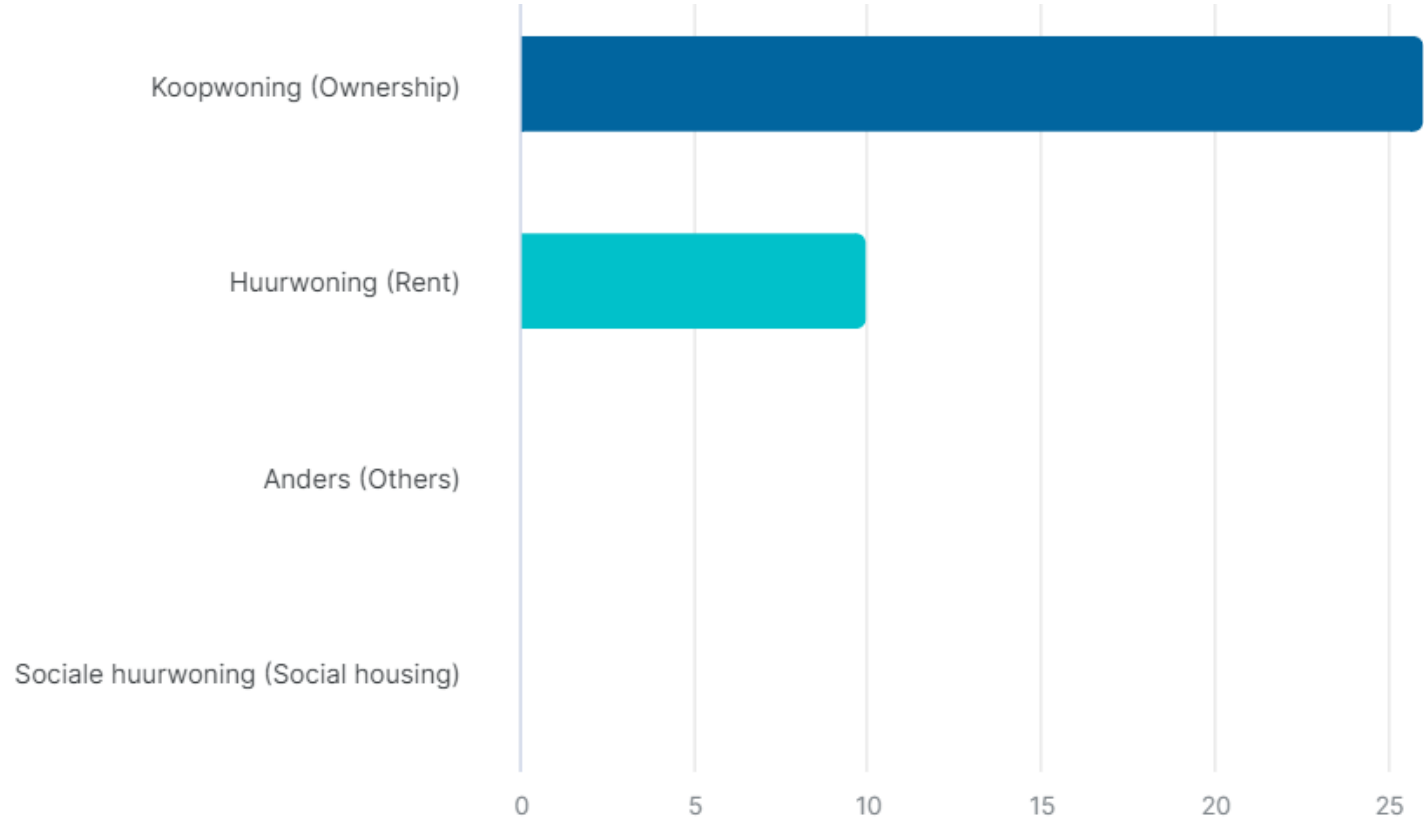


Survey results

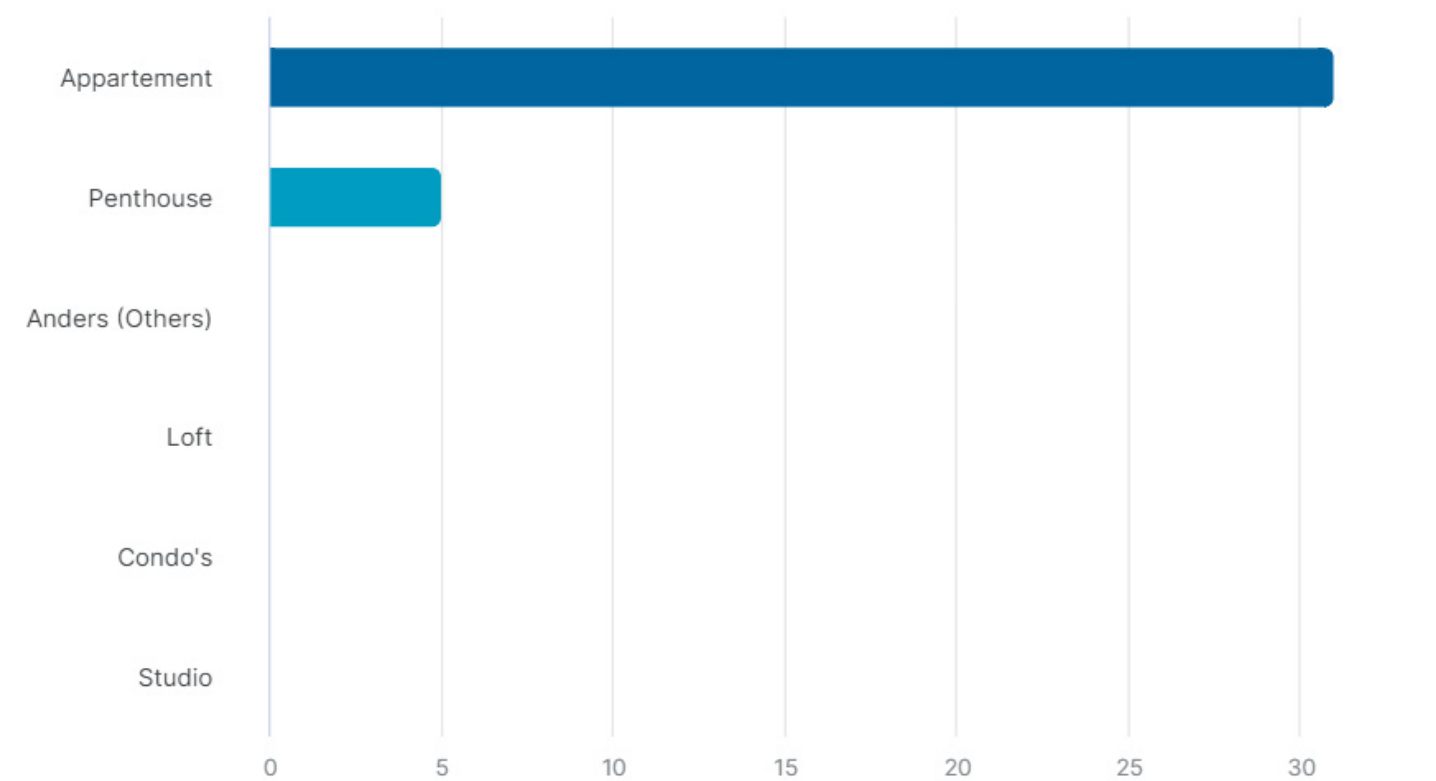
In what age group do you belong to?



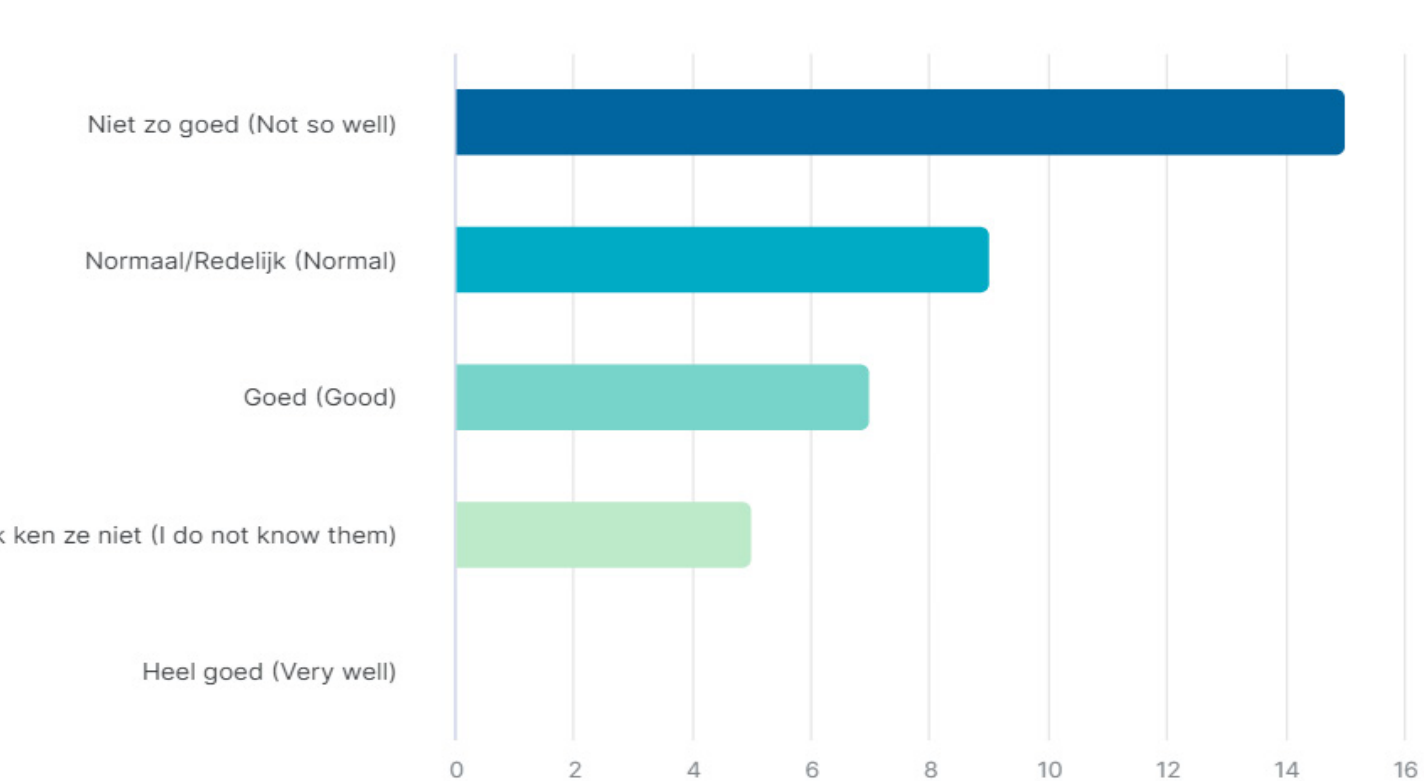
What is your tenure structure?



What type of housing do you live in?

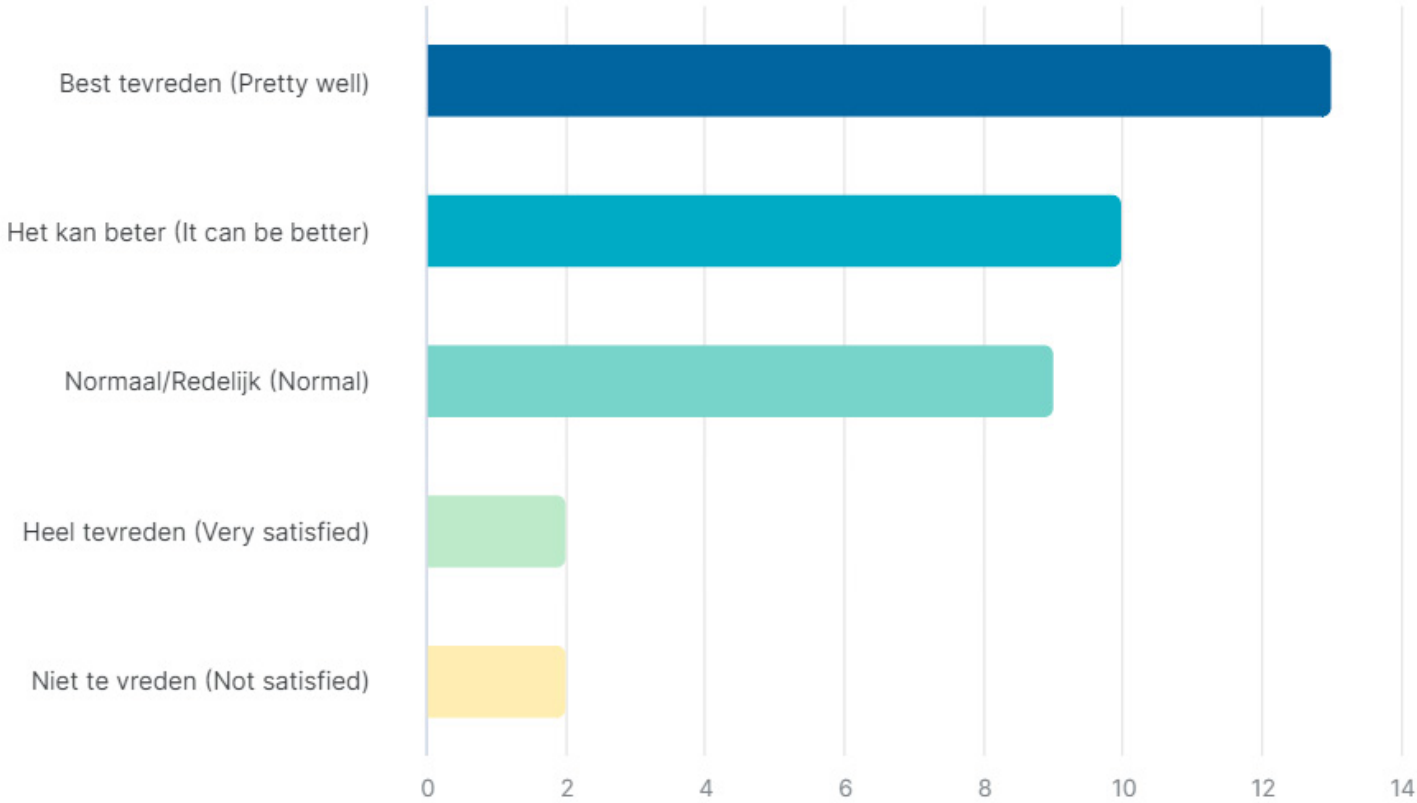


How well do you know other neighbours in the residential tower?

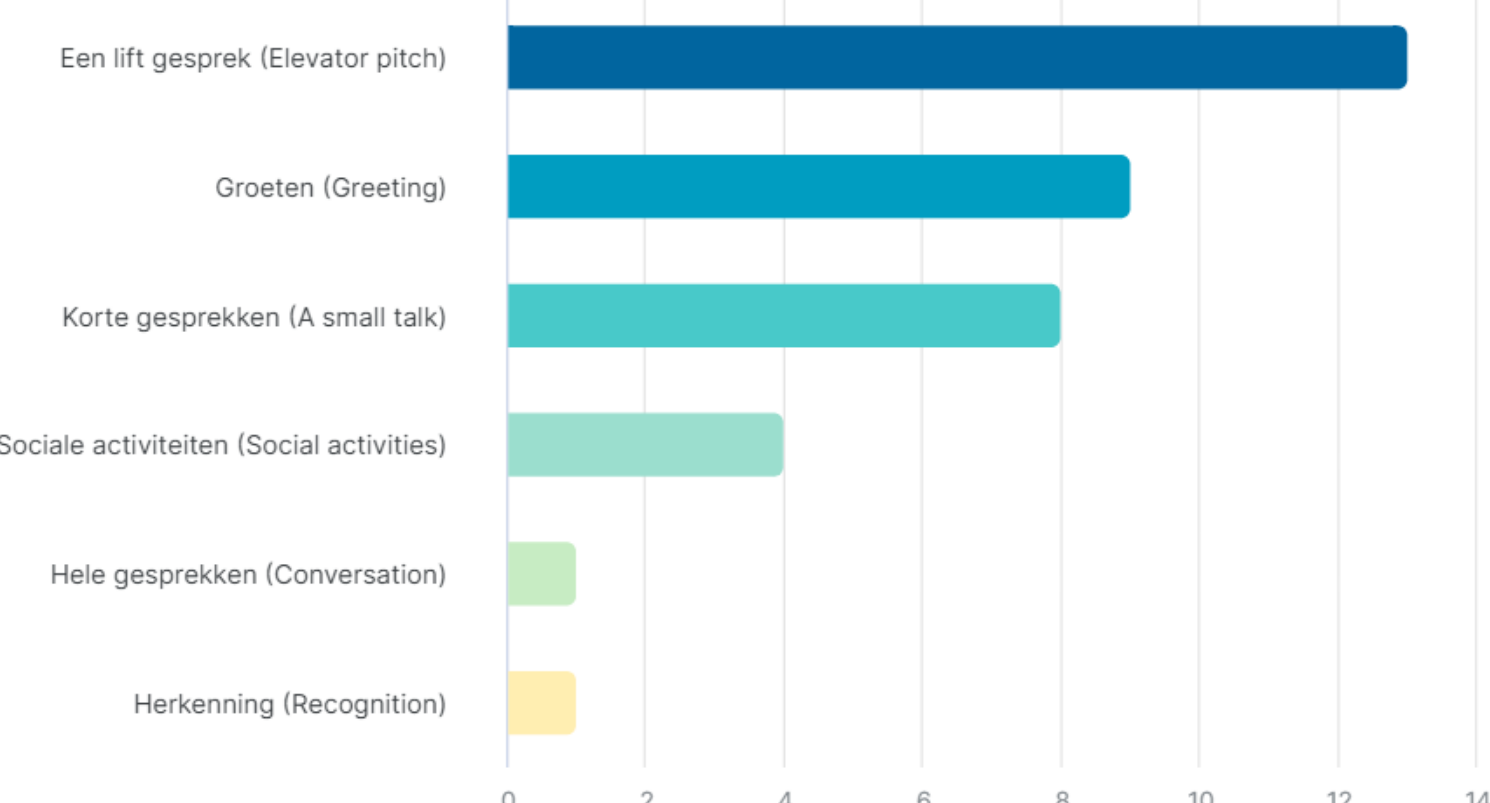


Survey results

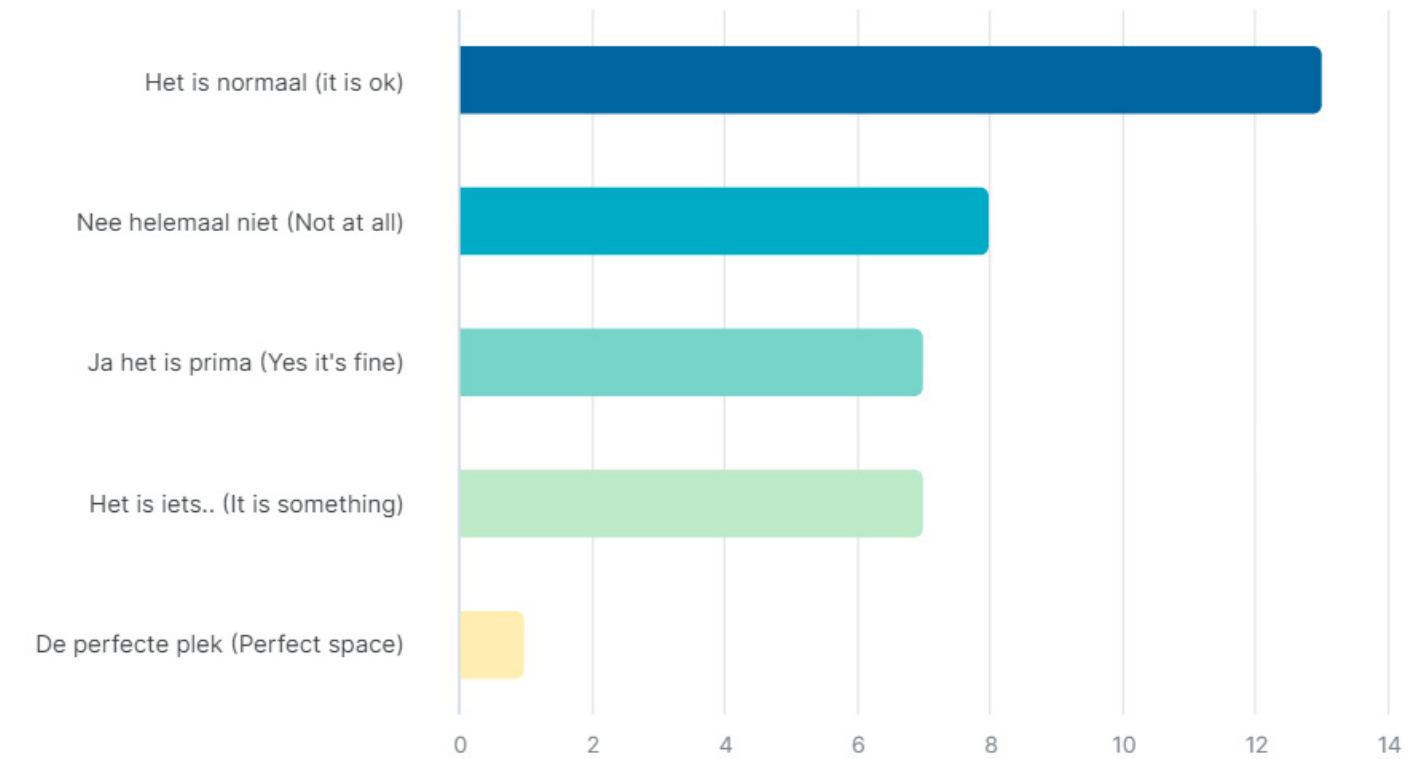
How satisfied are you with the amount of social contacts in your residential tower?



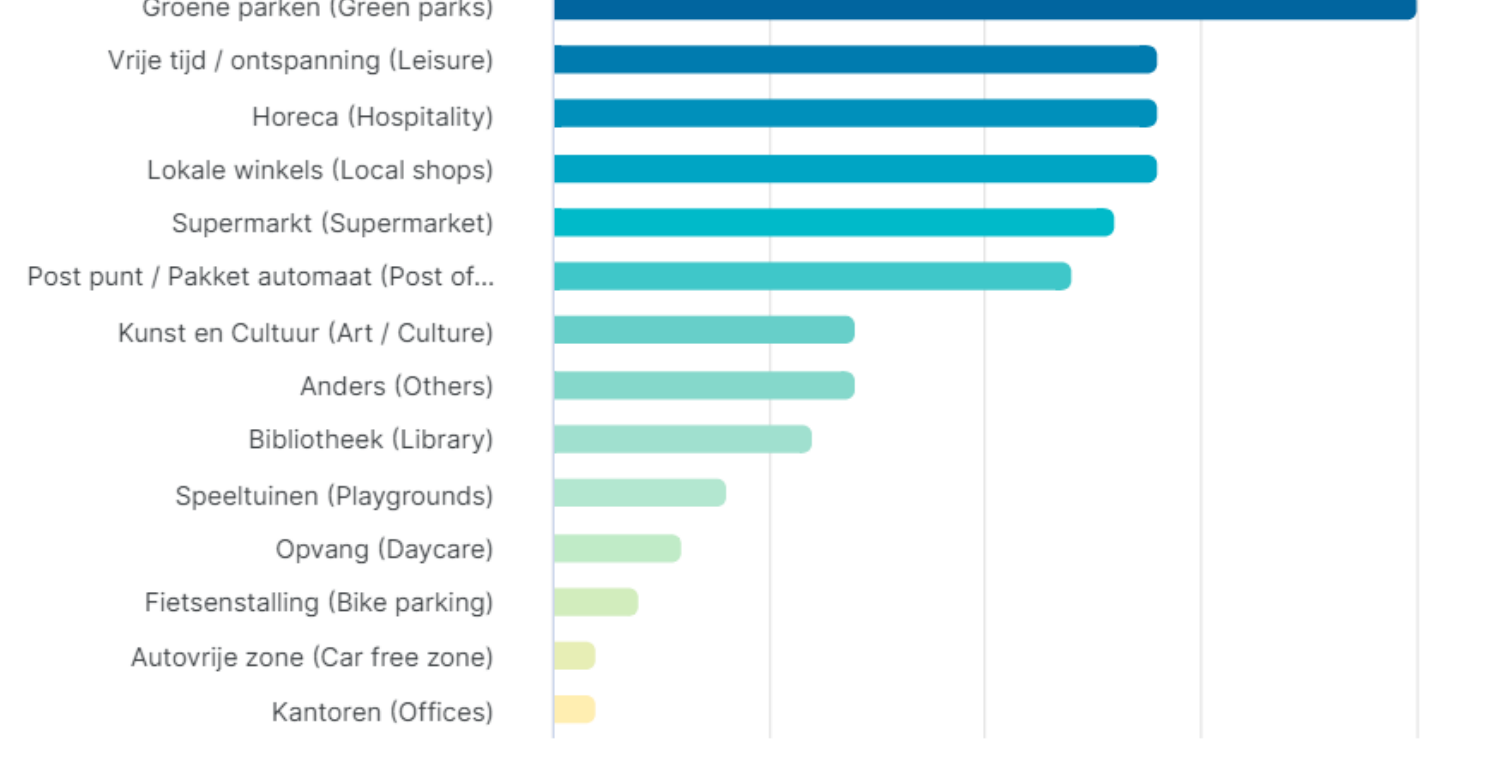
What kind of interaction do you usually have with other residents in the tower?



Do you believe the space where you interact is suitable or comfortable for social interactions?

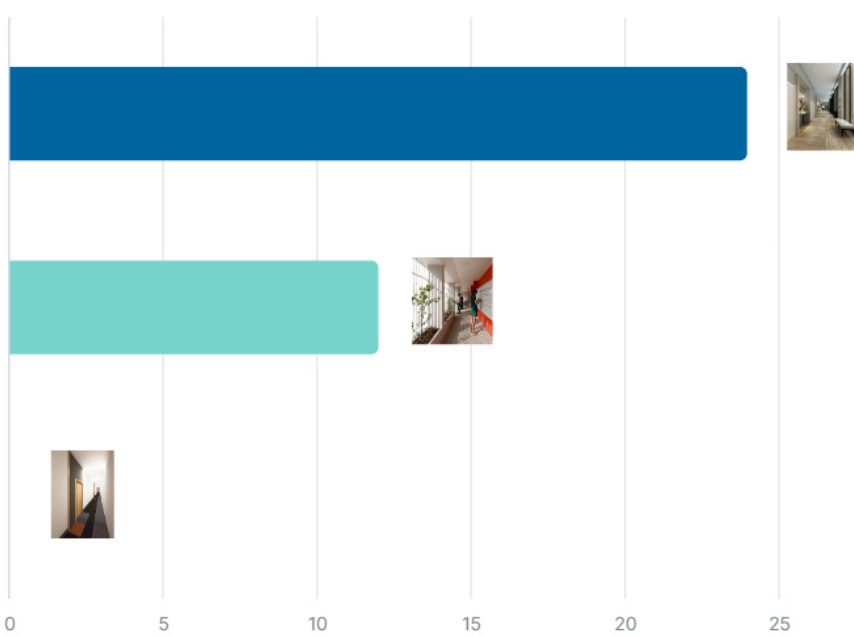


What kind of amenities would you like to have or add directly around or in your residential tower?

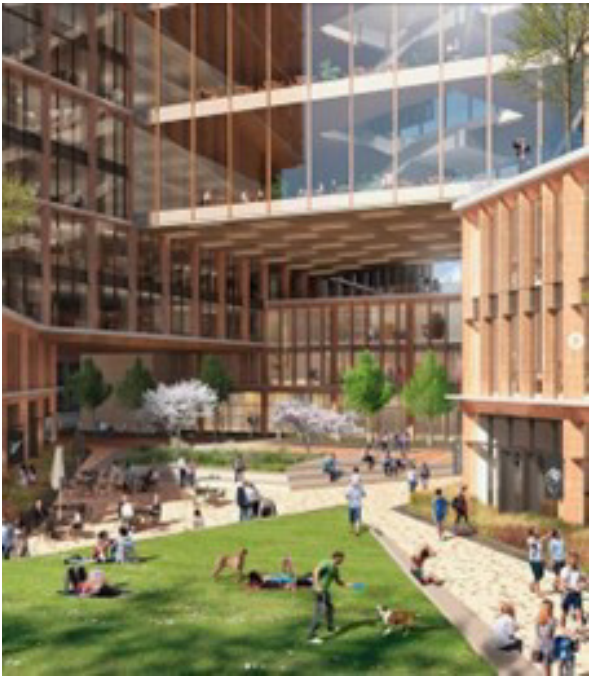
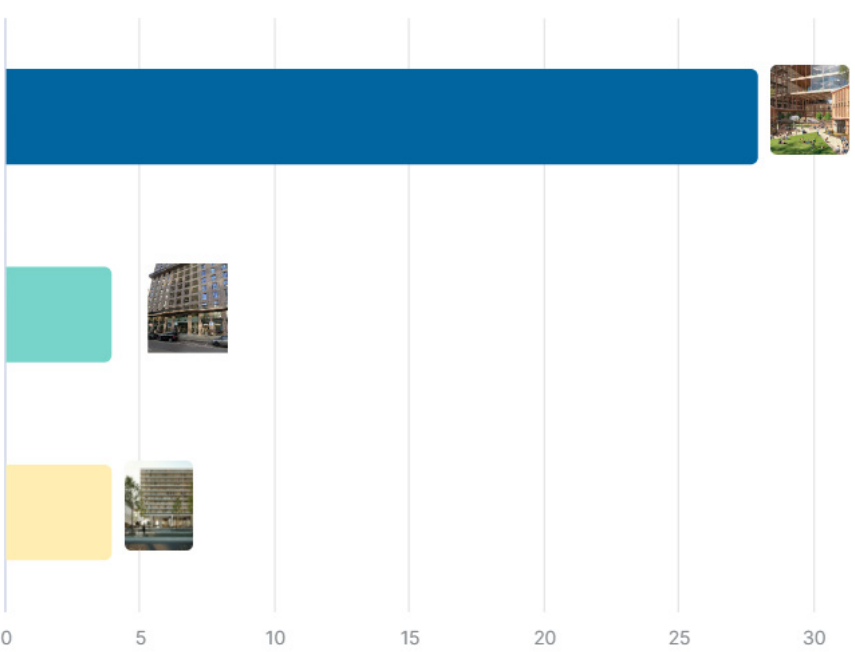


Survey results

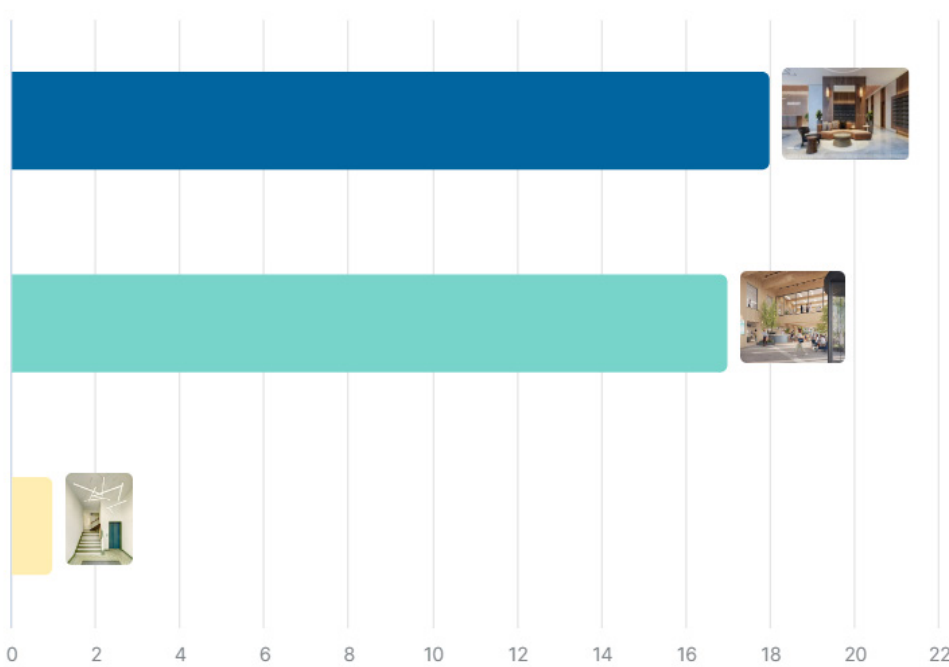
Most desired corridor appearance according to you?



Most desired streetscape according to you?



Most desired entrance / lobby appearance according to you?





Homogeneous form



Stacked layers



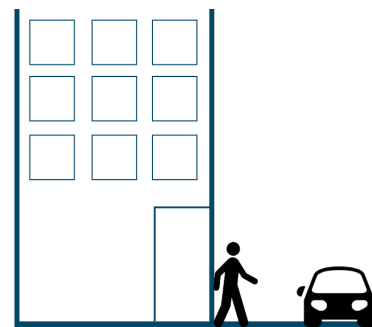
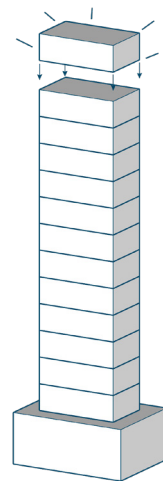
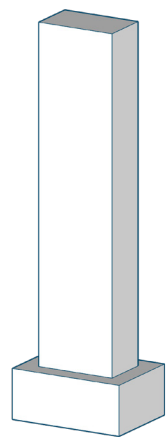
Street parking



No outdoor furniture

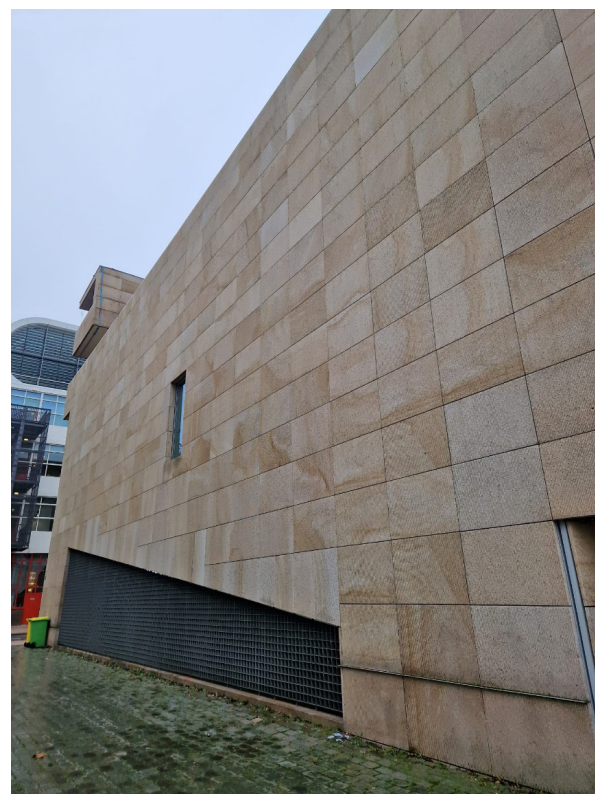
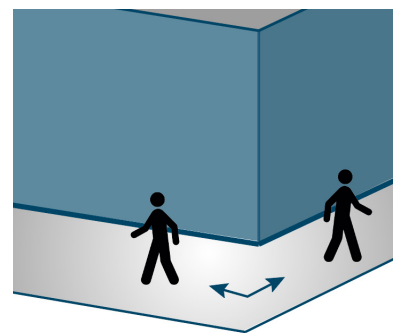


Dead end streets

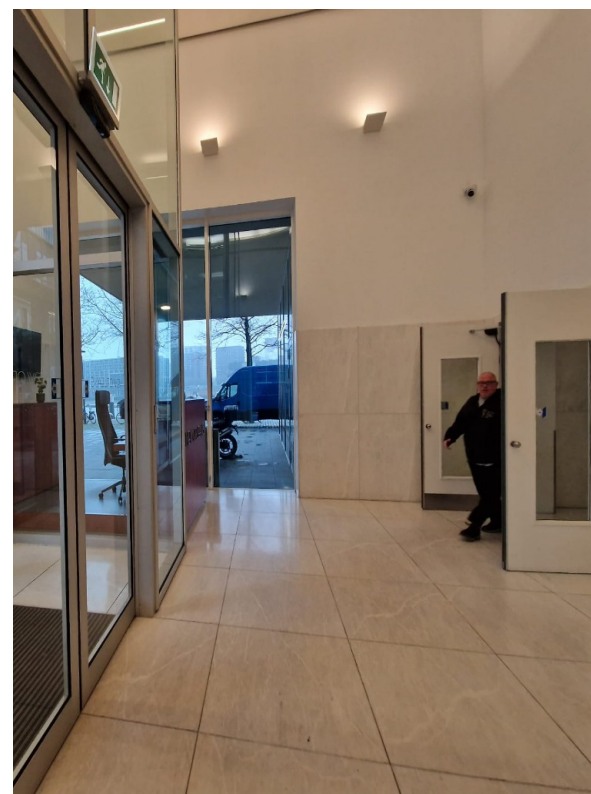
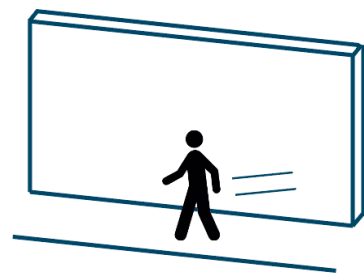




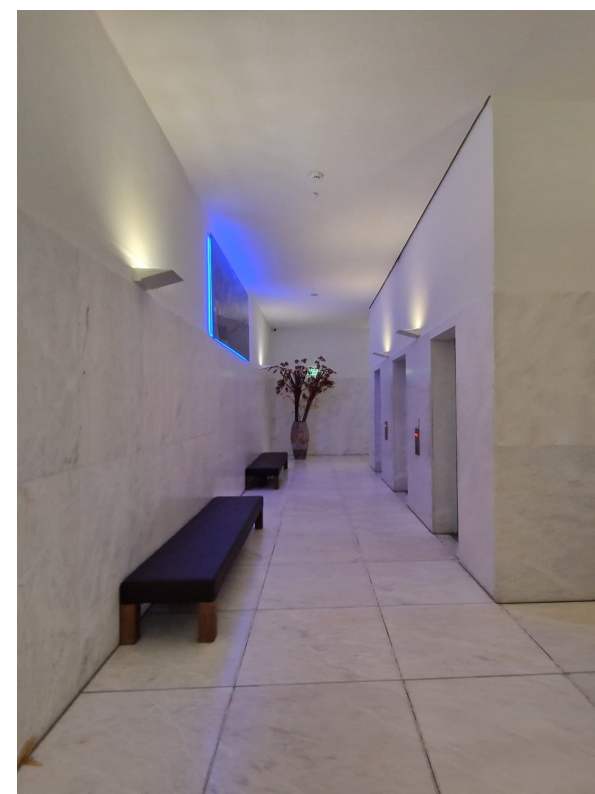
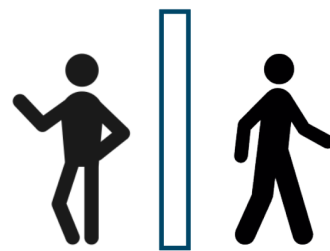
Hard borders



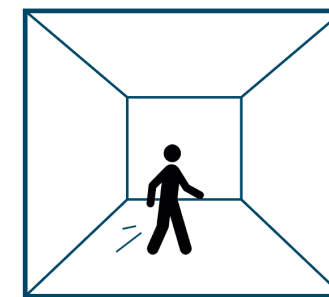
Closed facades



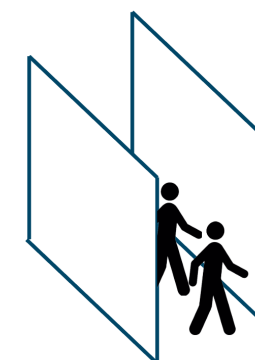
Obstacles



No Diversity



Small collective space





Monotonous corridors



Missing spaces



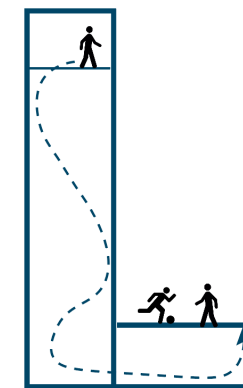
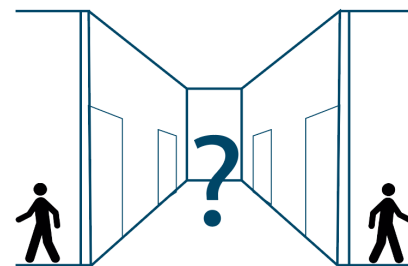
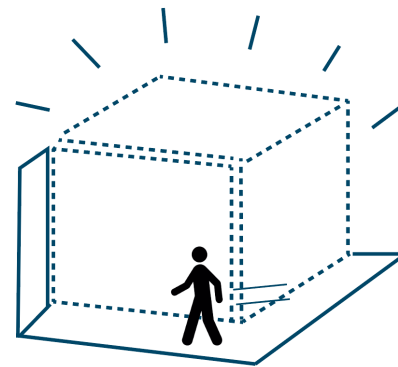
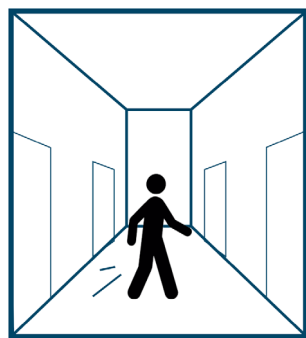
Non-space



Poor accesibility



Poor lightning





Variations



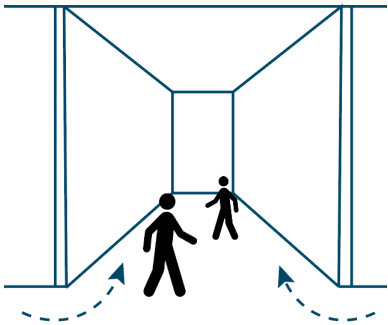
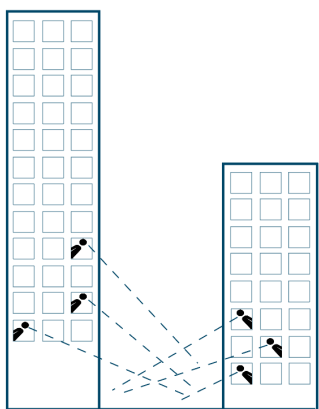
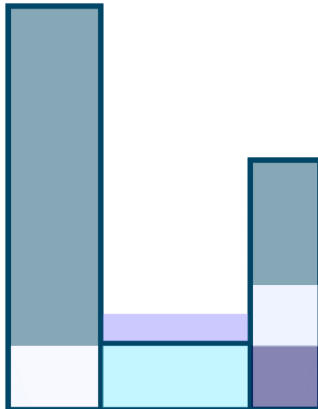
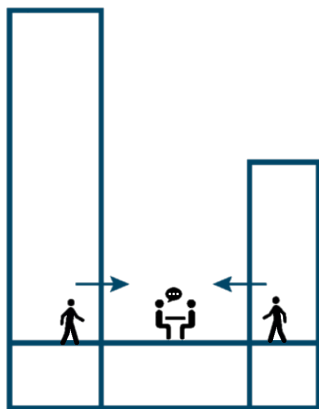
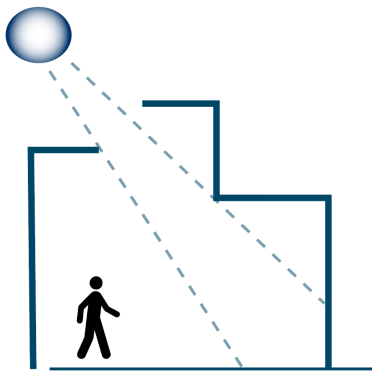
Shared spaces



View

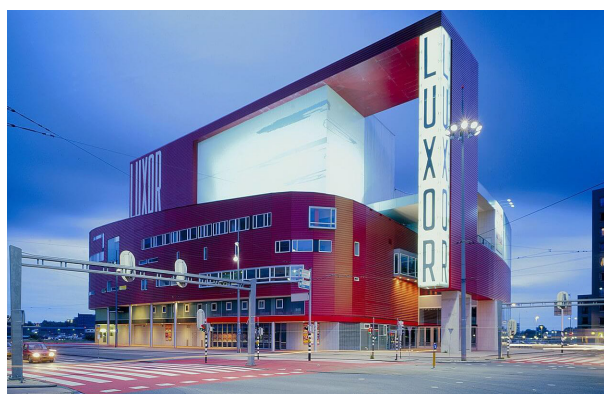


Openness





City court building



Luxor theatre



Plot

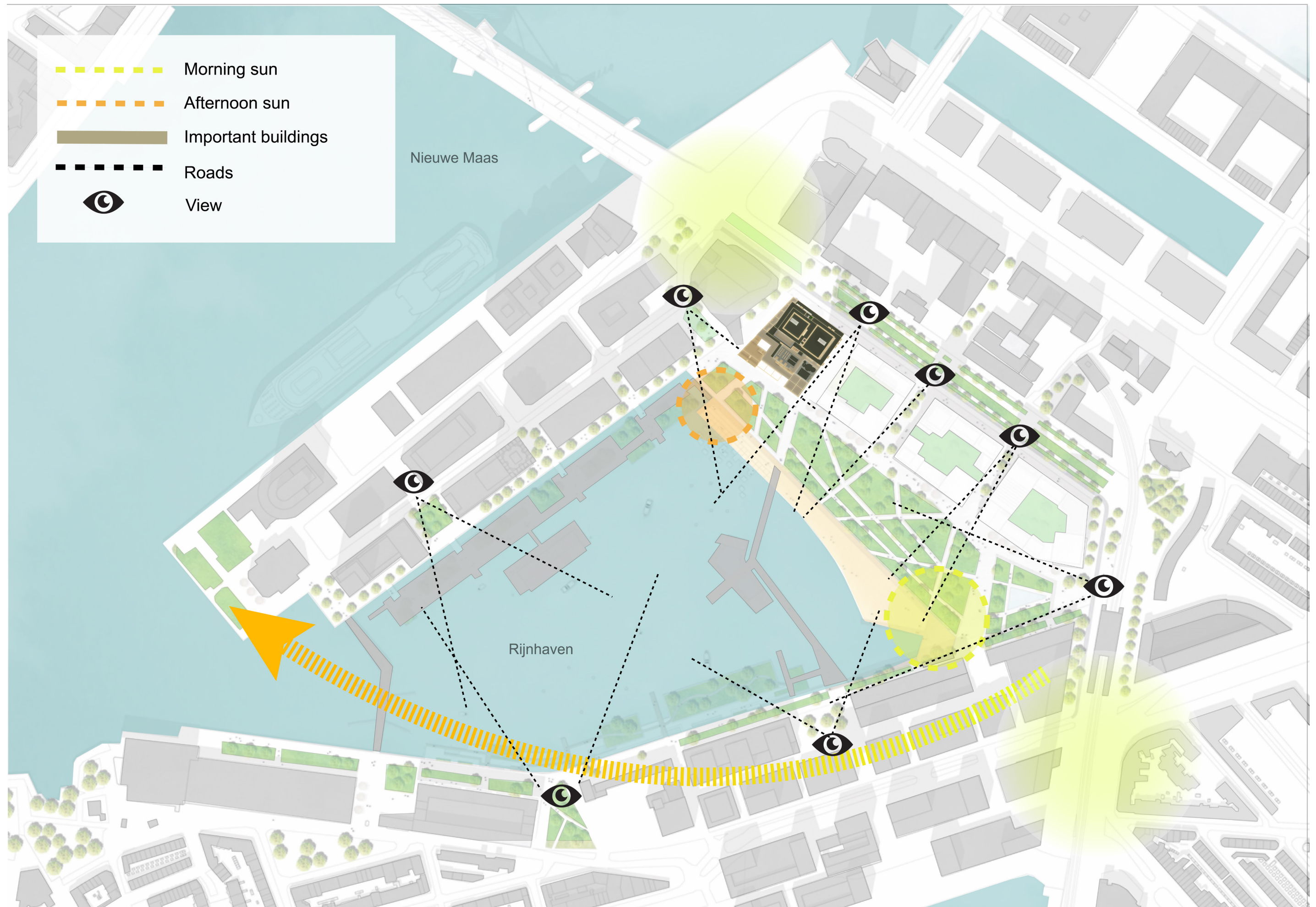


Erasmusbridge



Area functions







Human-being

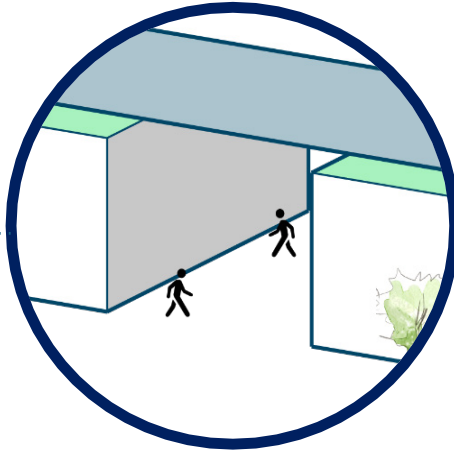
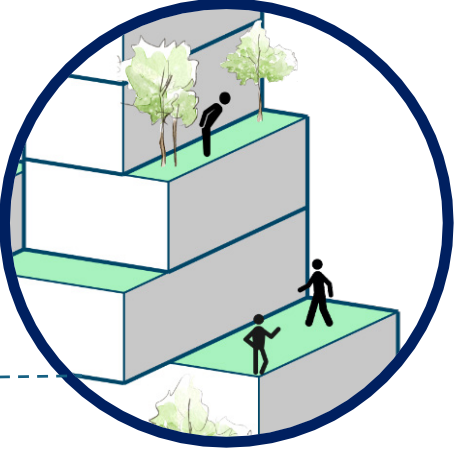
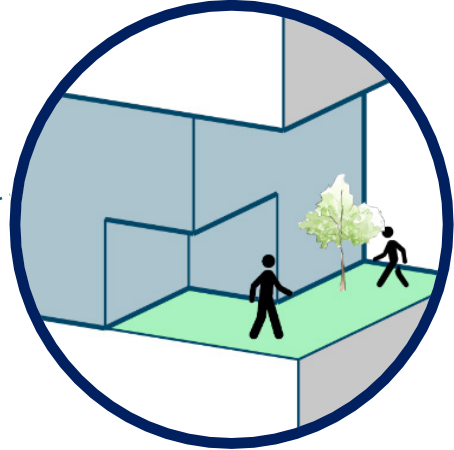
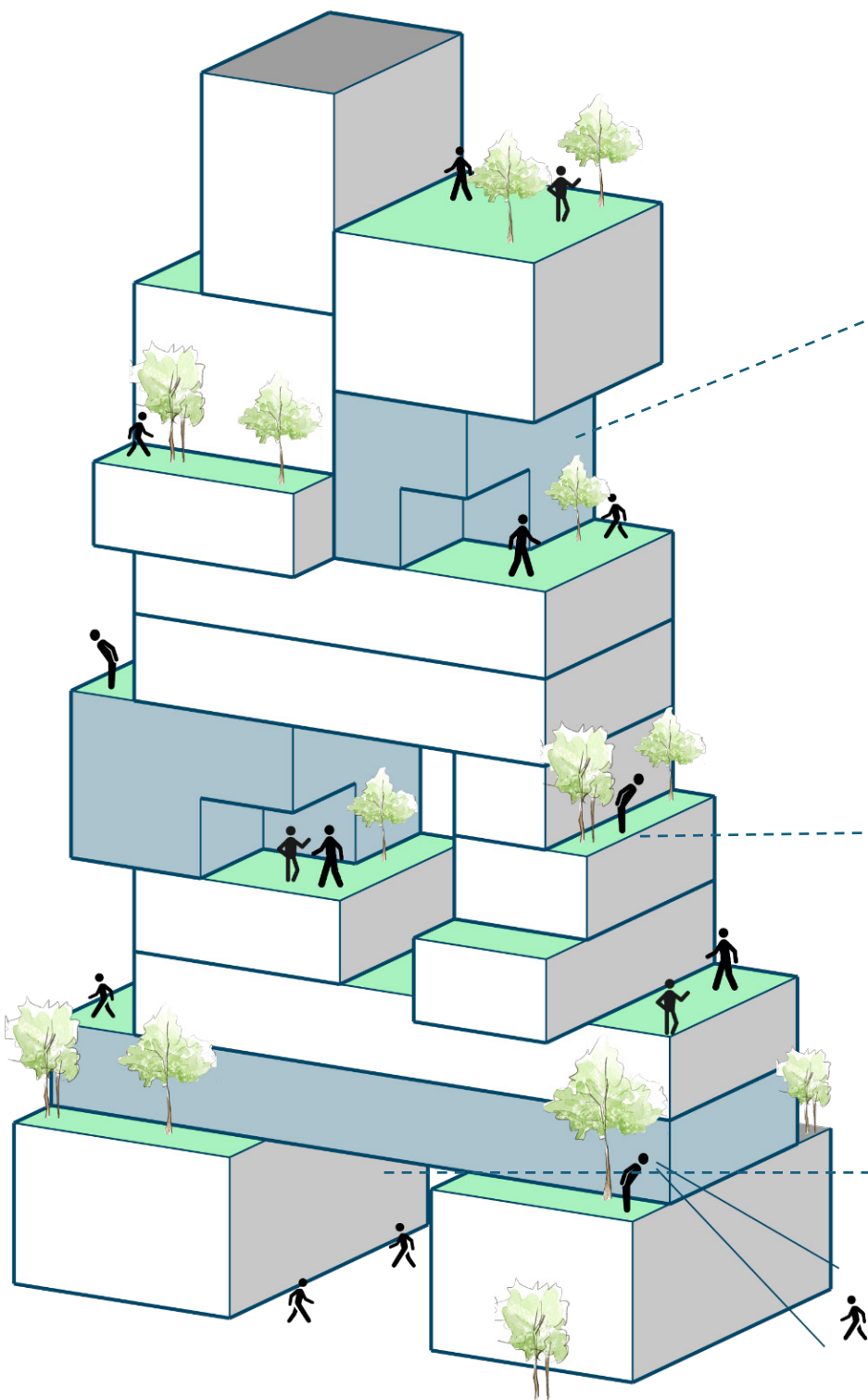
Eye-level

Dimensions

Stepped levels

Overview

Variation



Interior spaces

Meeting spaces

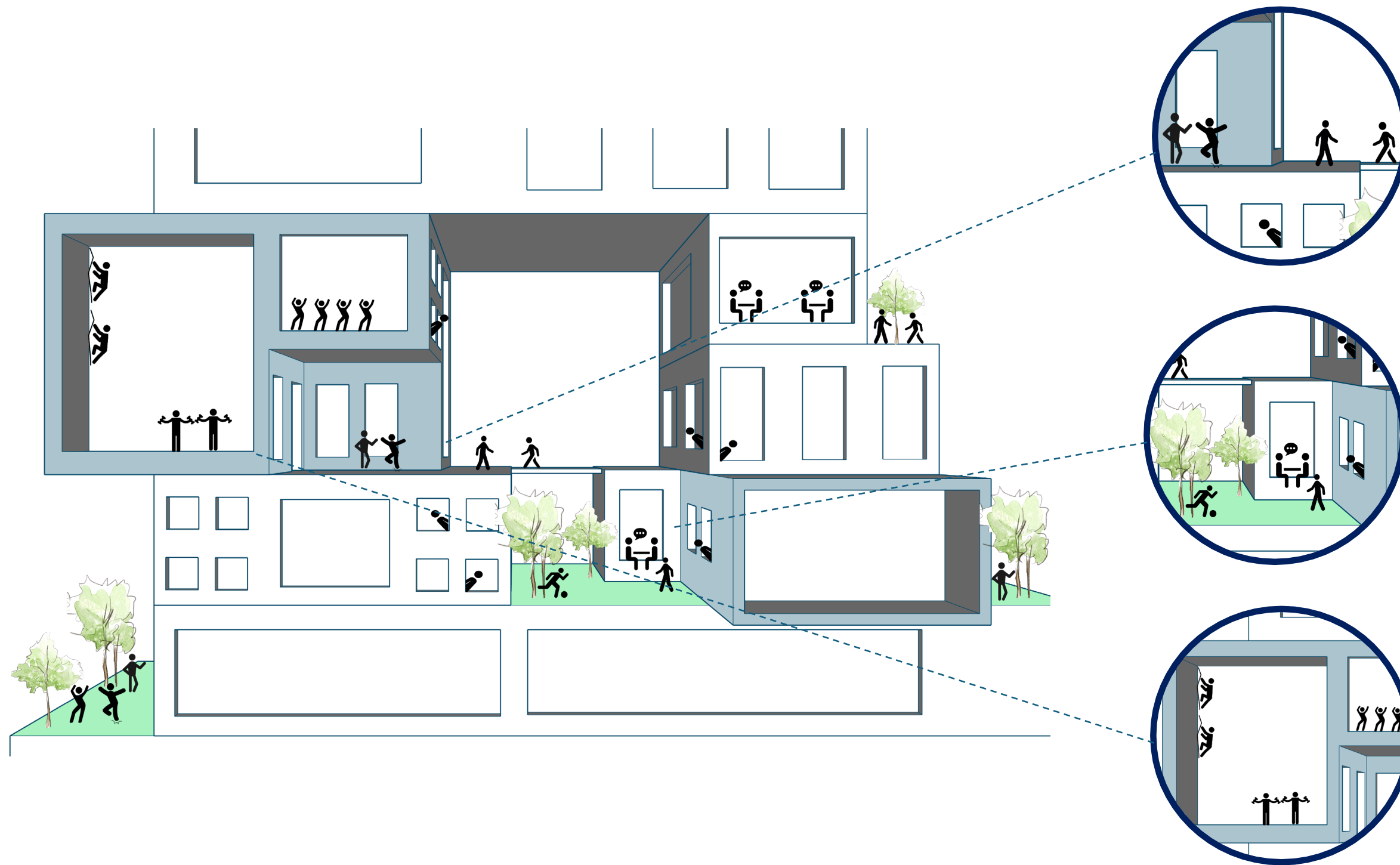
Green pockets

Spatial transition

View

Daylight

Sustainable



Community

Diversity

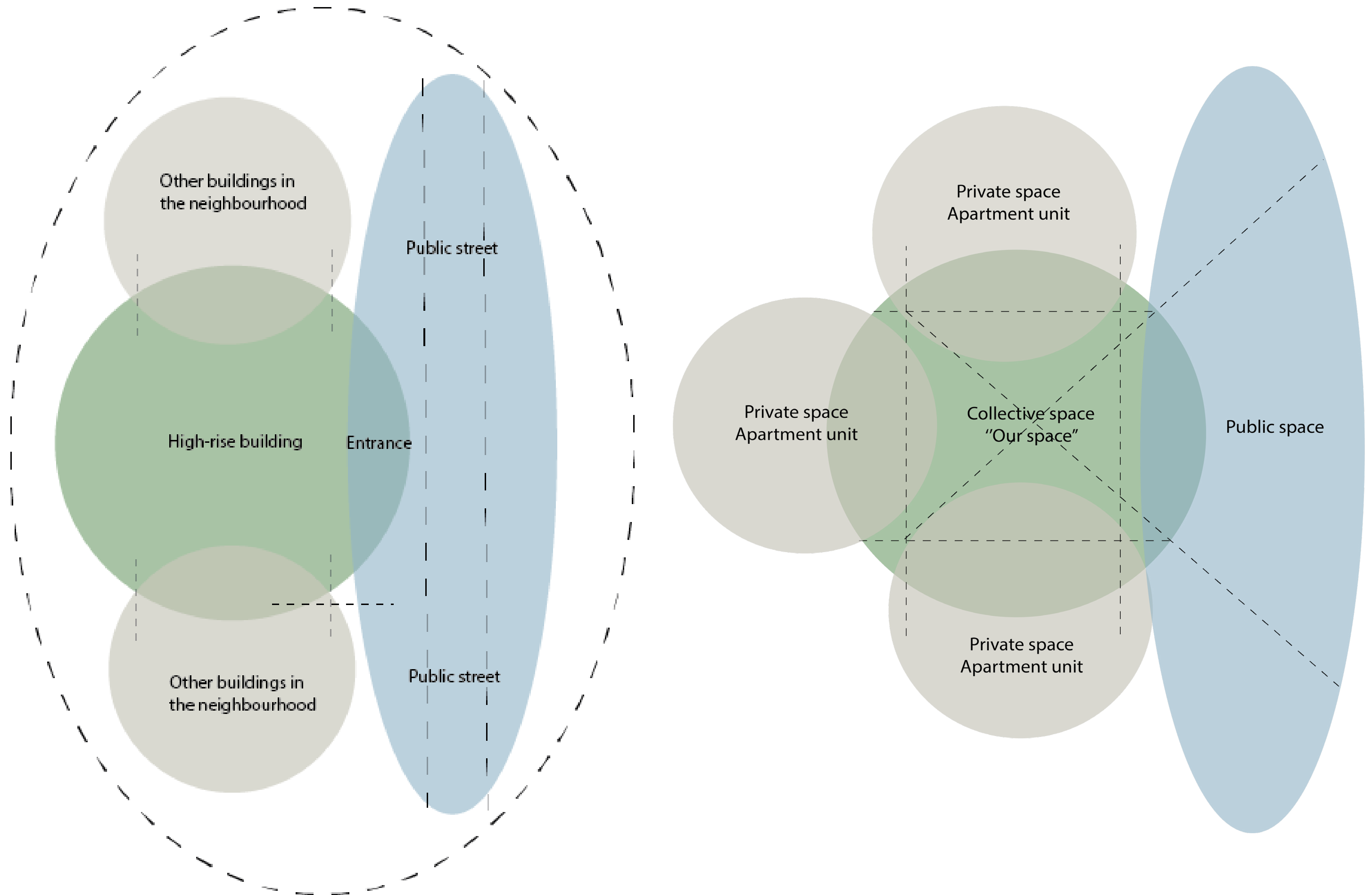
Contact points

Low speed routing

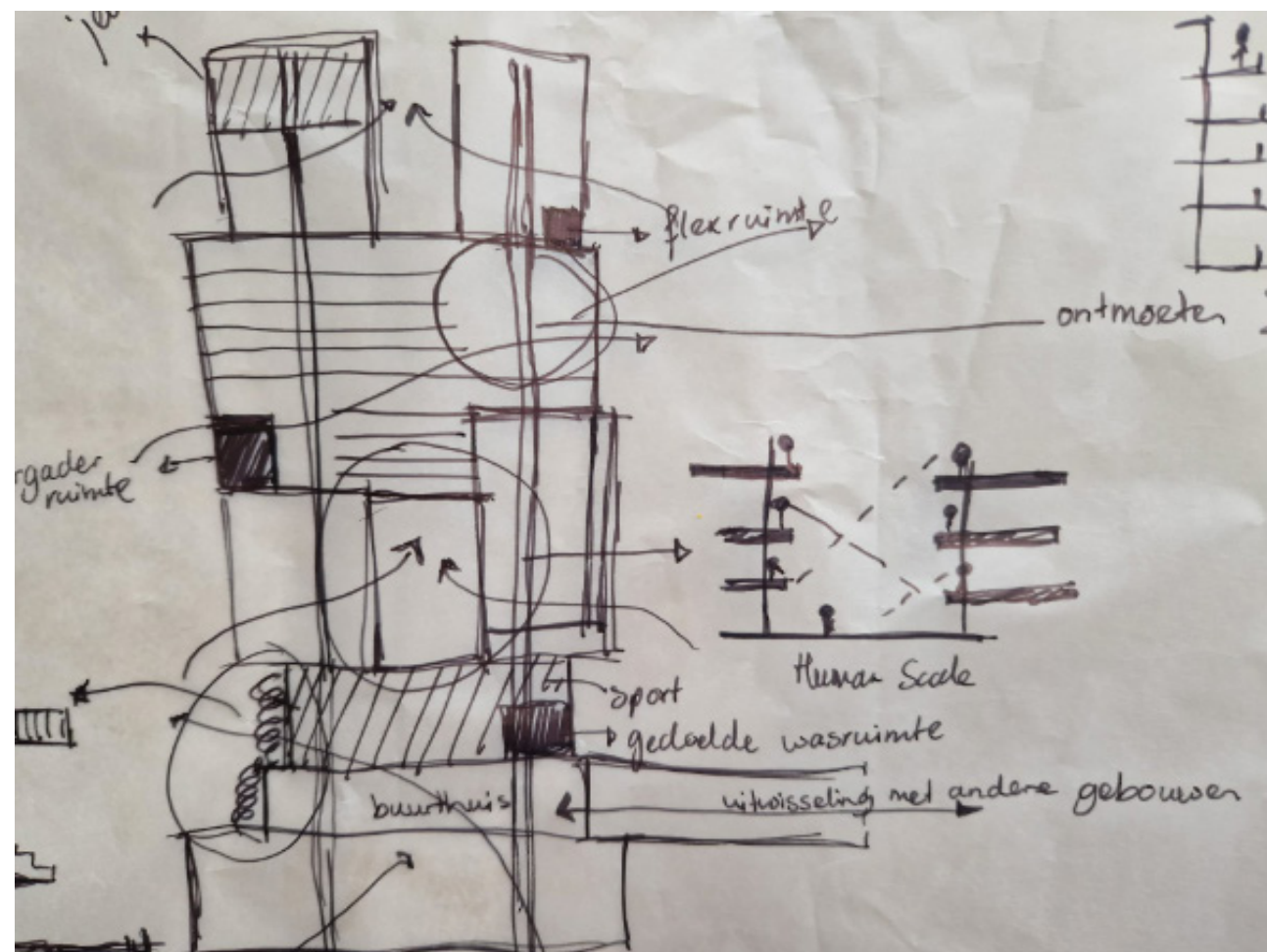
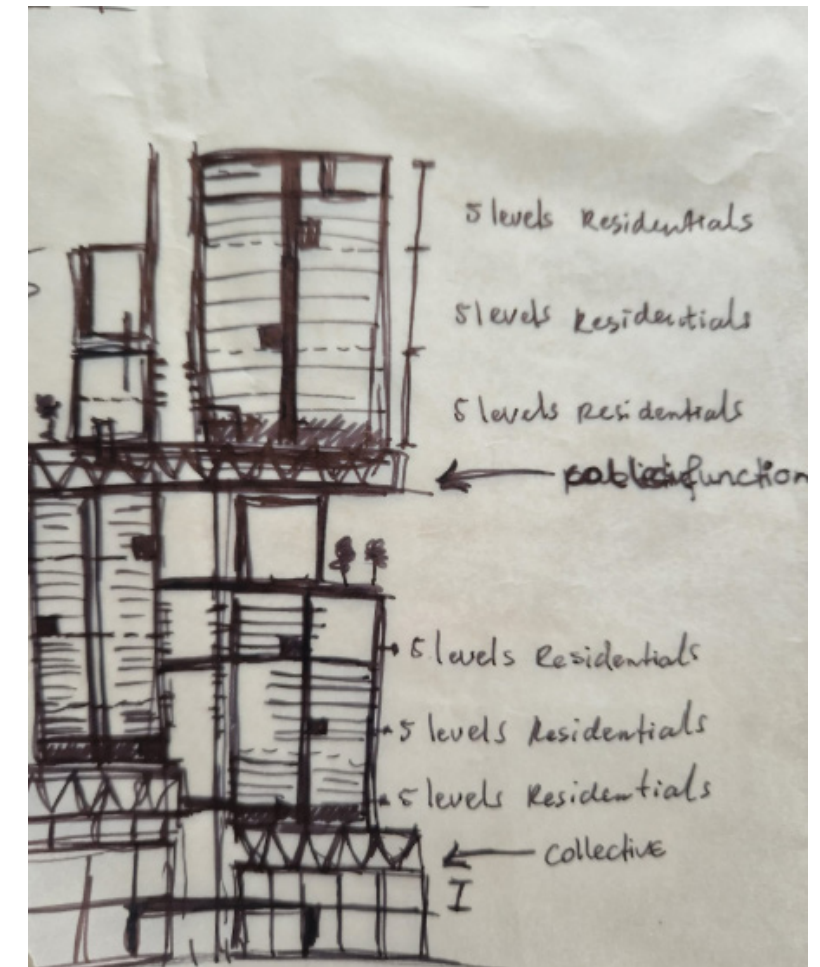
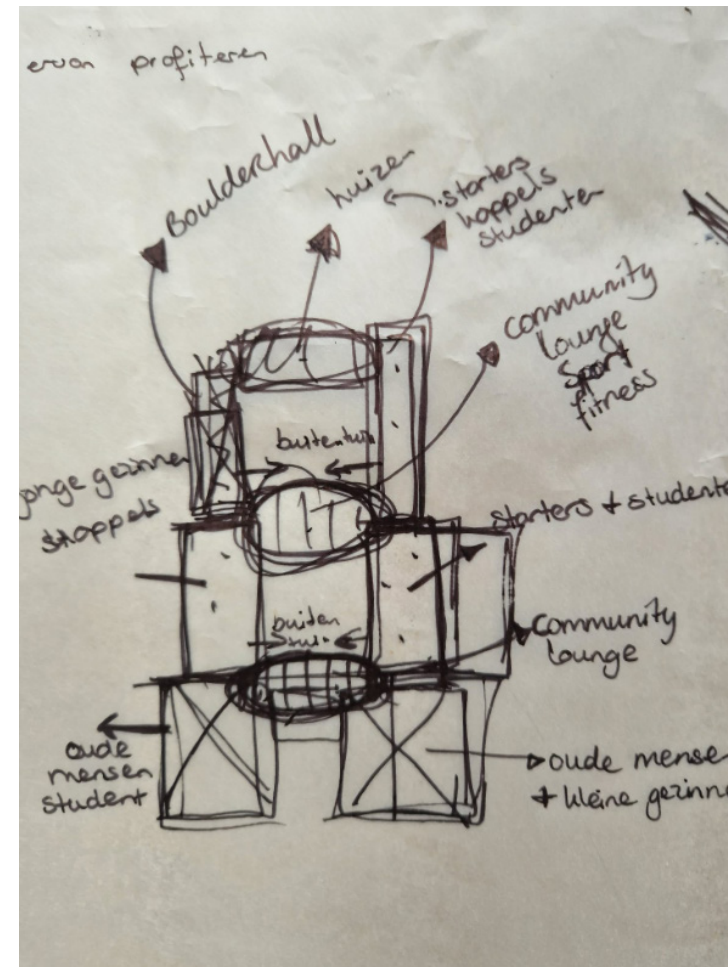
Free-infill

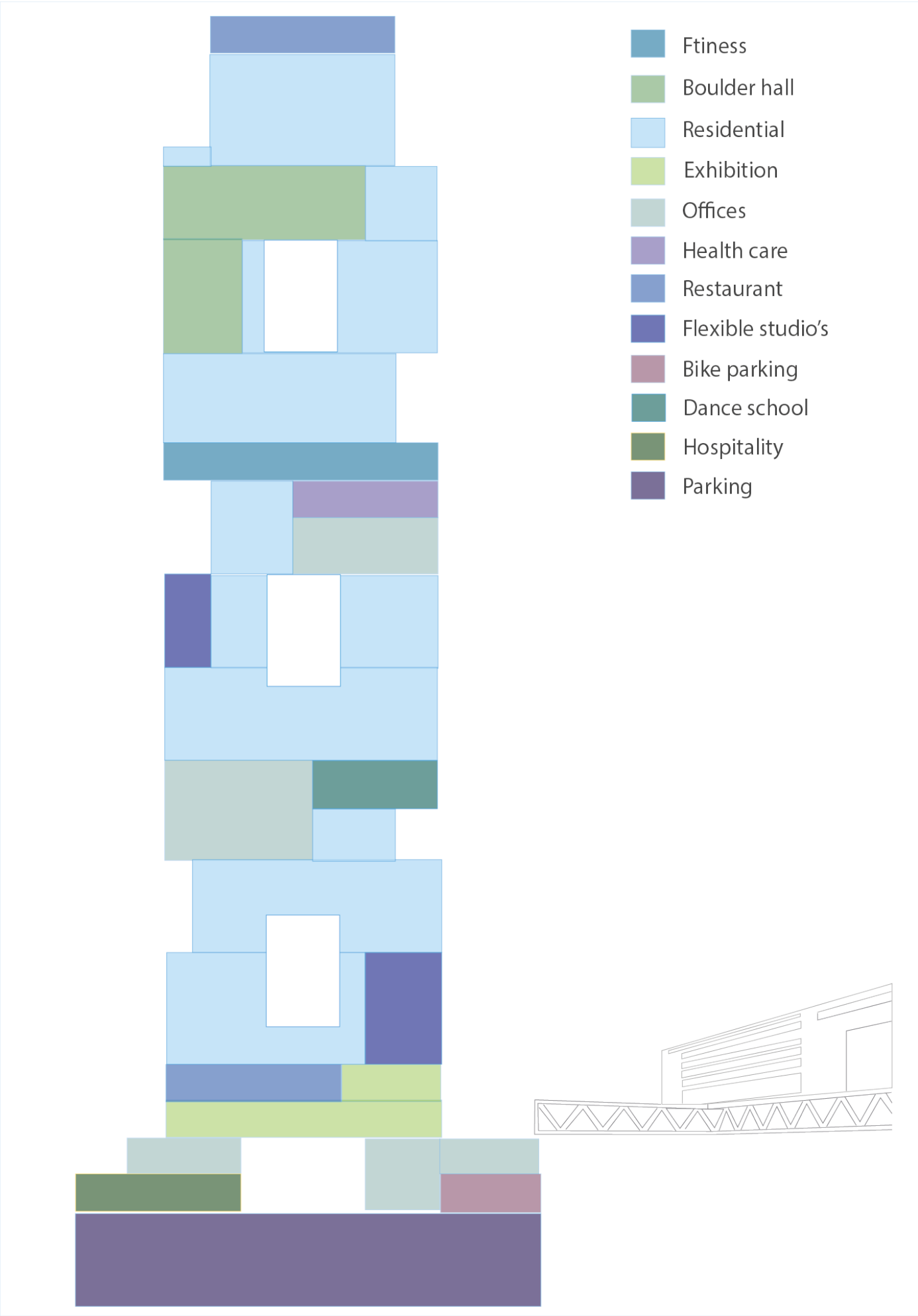
Social activities

Clustering



Sketches







Traditional block



Adding transitional scale



Introducing groundlevels



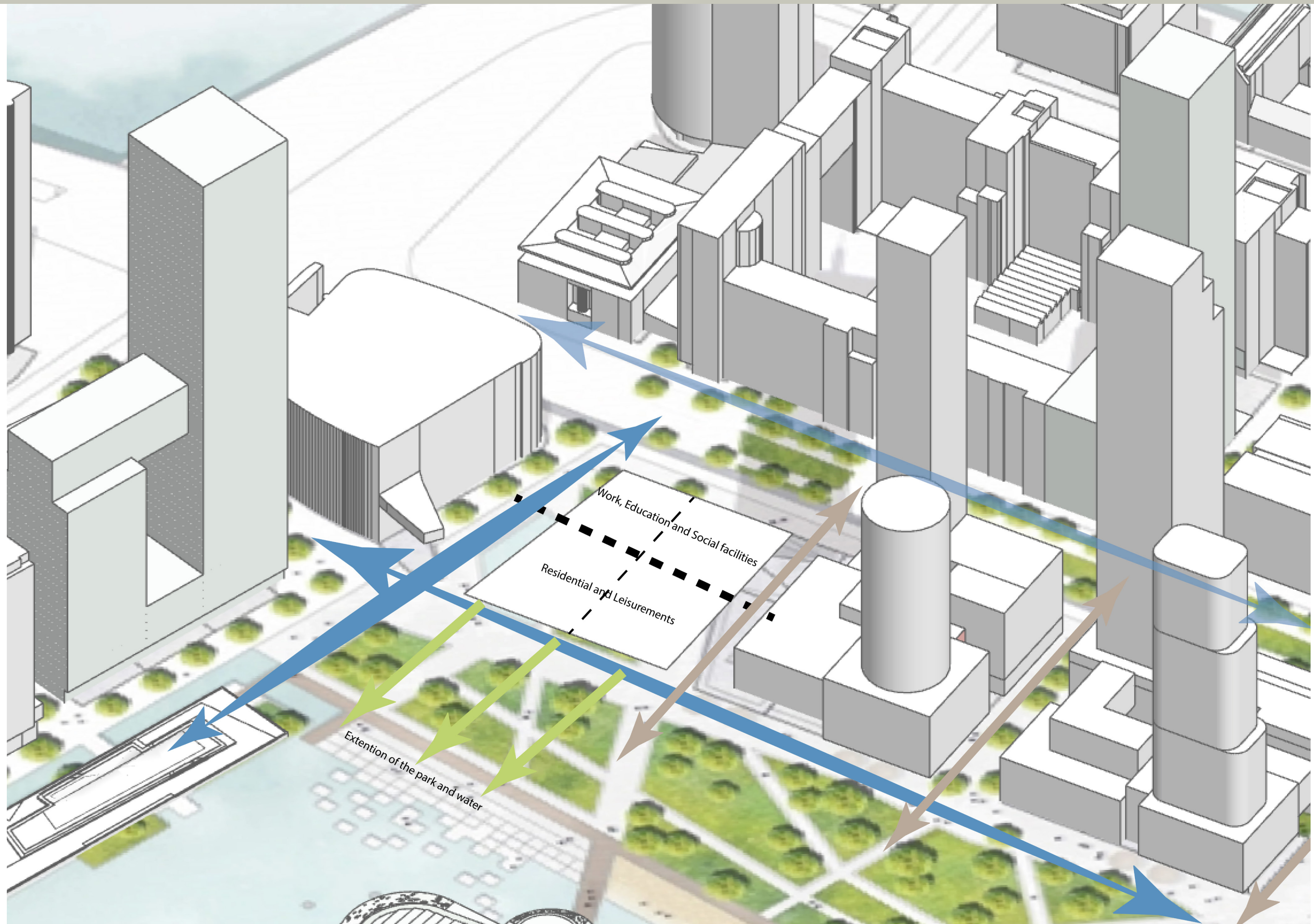
Subtraction to spatial continuity

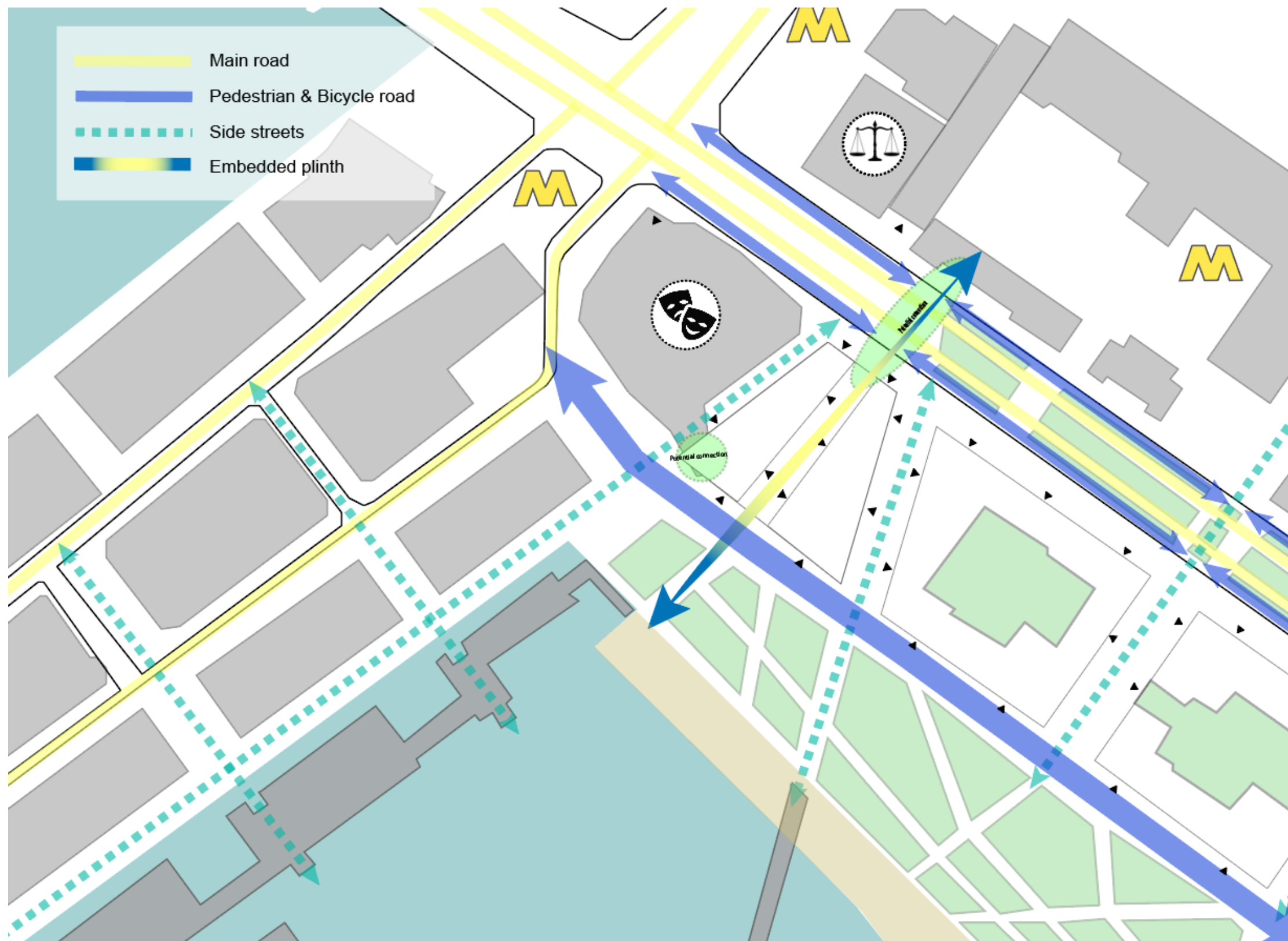


Diverse functions integration



Open spaces





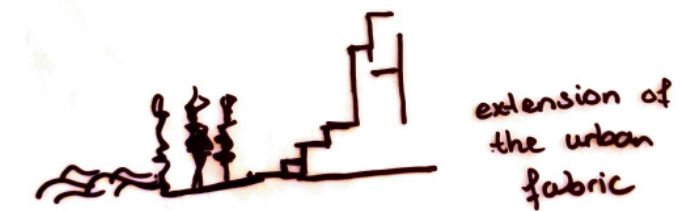
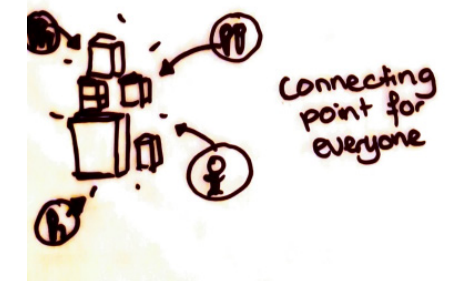
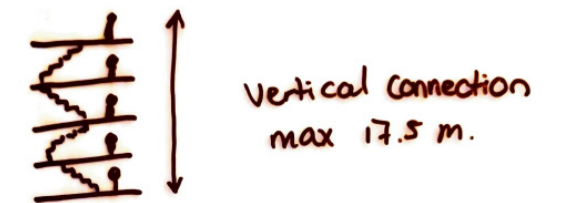
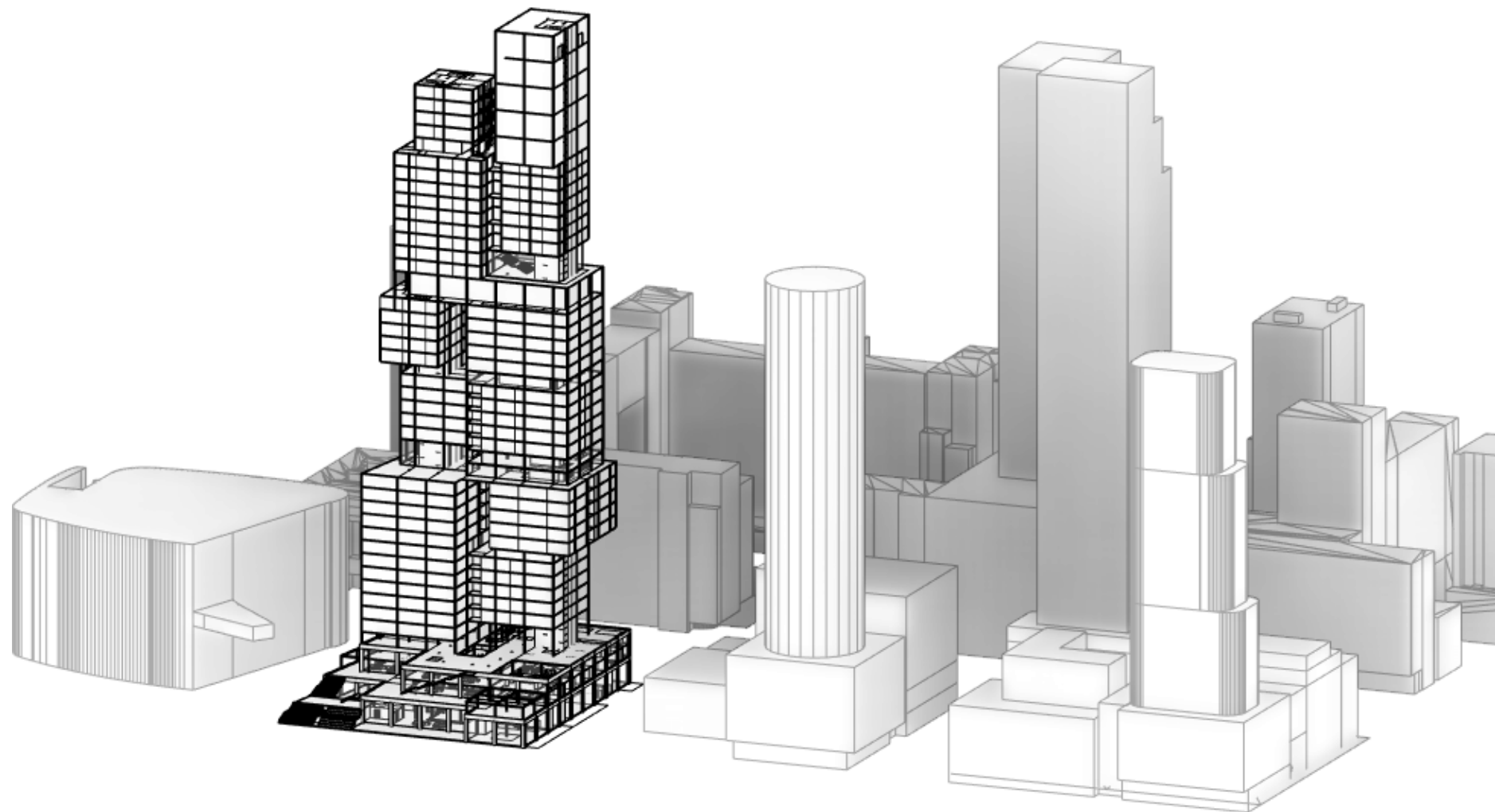
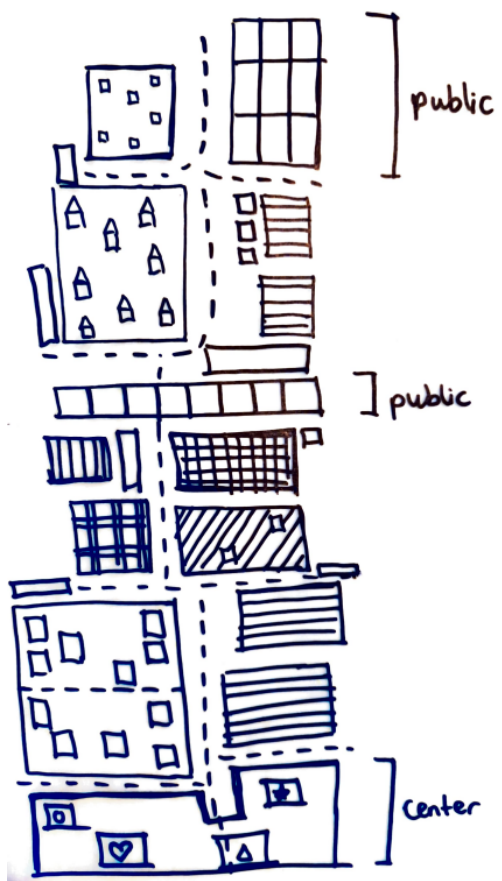
Embedded high-rise

Multi-functional

Flexibility

Orientation to existed building

Potential connection



Structure: Timber & Concrete

Max beam span : 8 metres
Max column height : 7 metres

Structure measurements

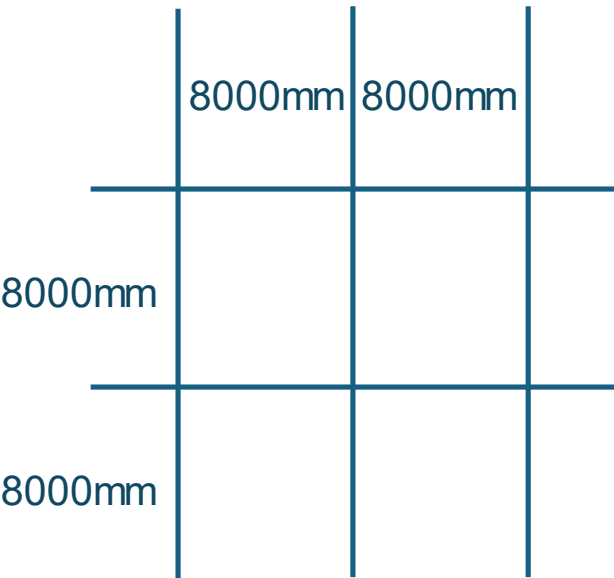
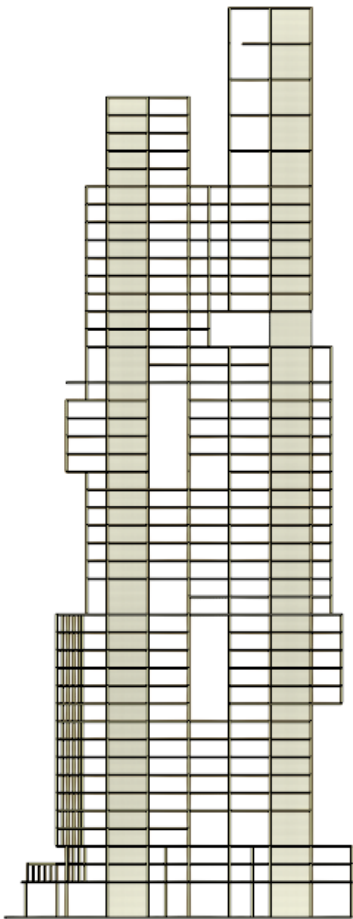
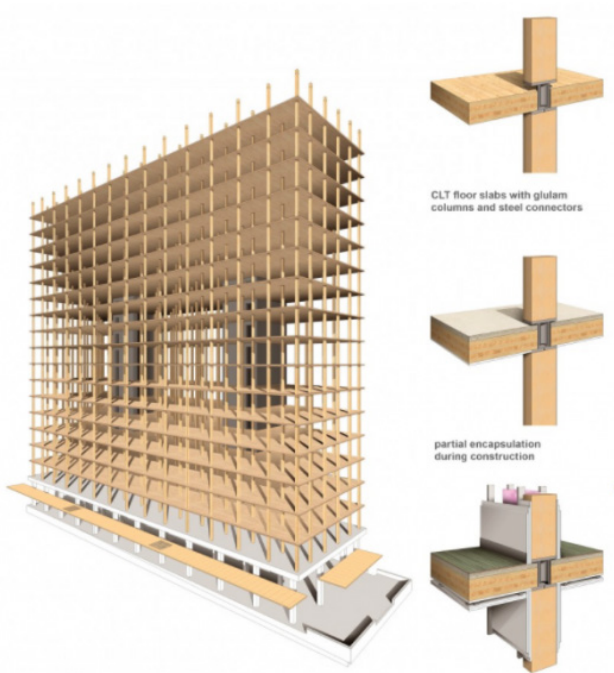
Beams height :
Column tickness: 500mm x 500mm (plinth levels)
400mm x 400mm (levels)

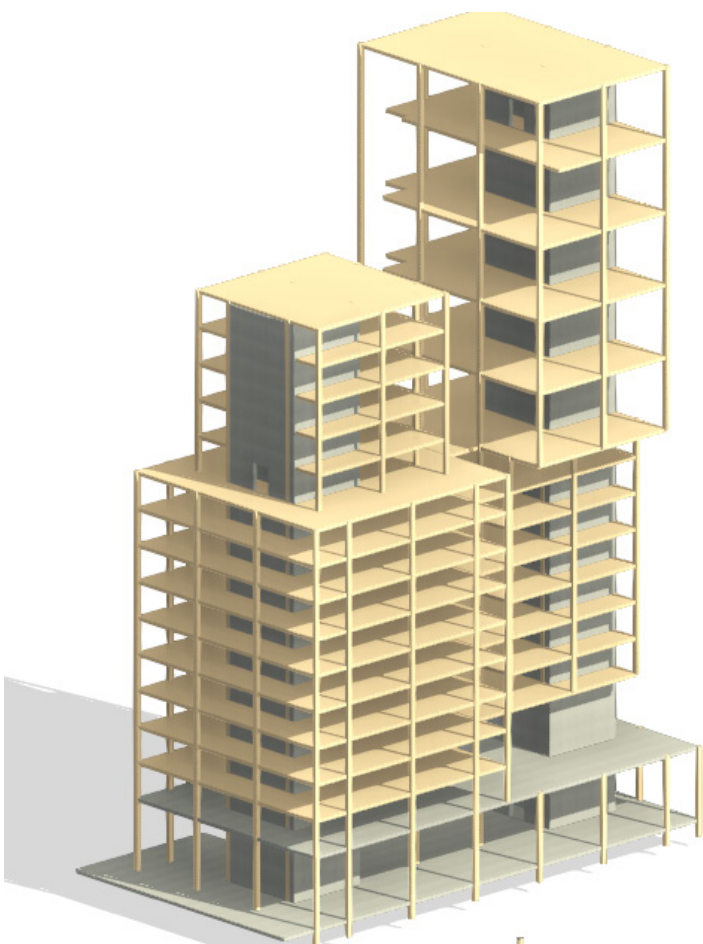
Stabilisation

Concrete slabs on public levels (every 40 metres)
Two concrete cores 8000mm x 8000mm

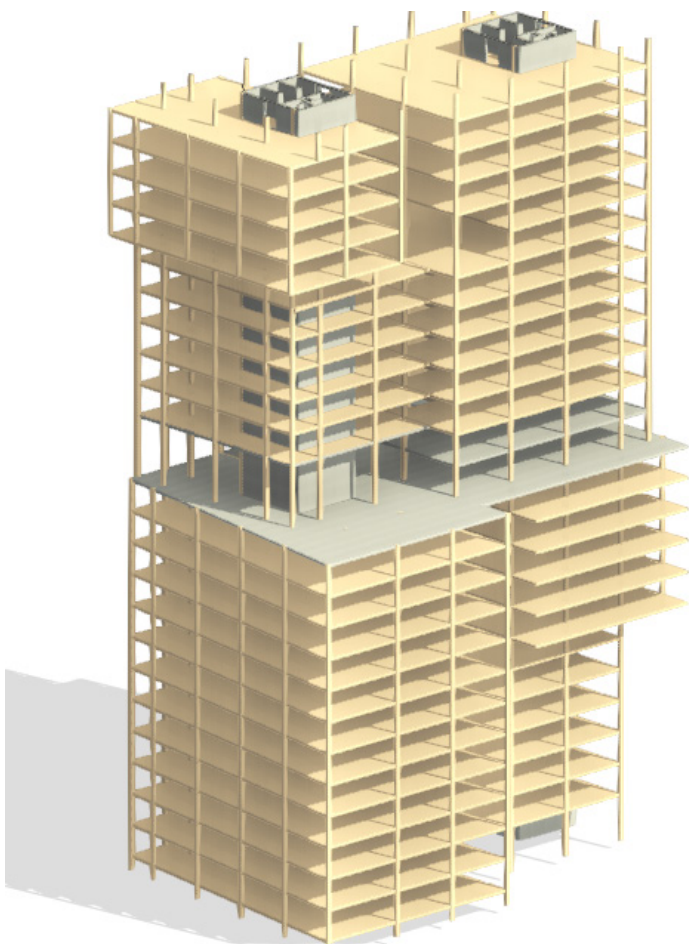
Grid structure

8000mm x 8000 mm
With variations of 2000m and 4000mm

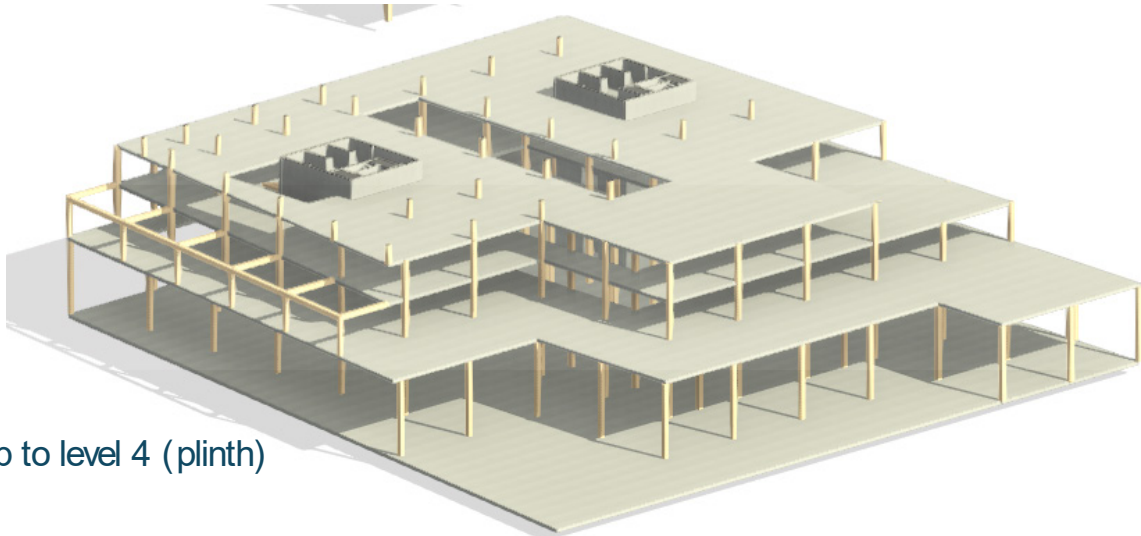




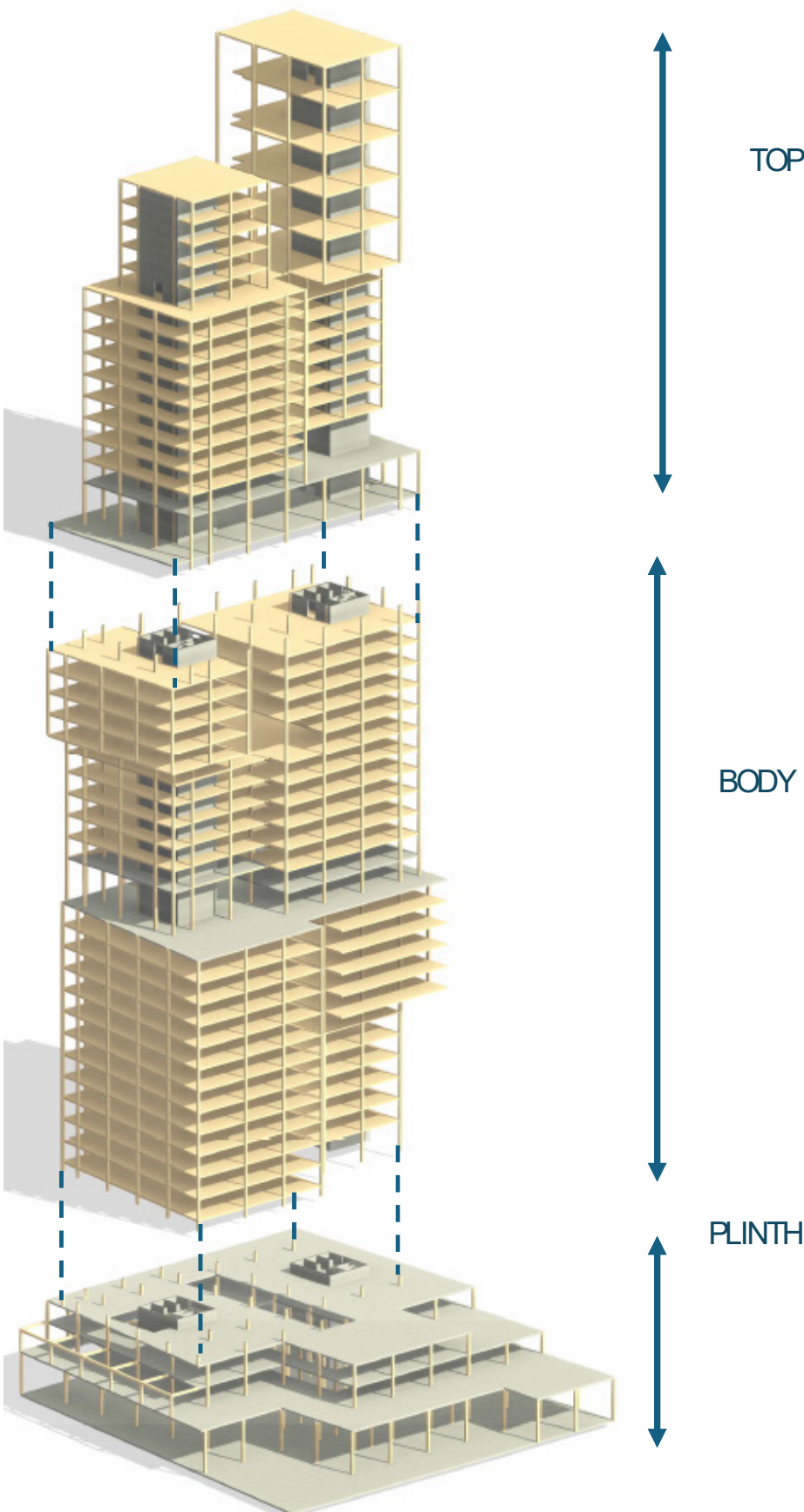
Level 30 up to level 50 (top)



Level 4 up to level 29 (body)



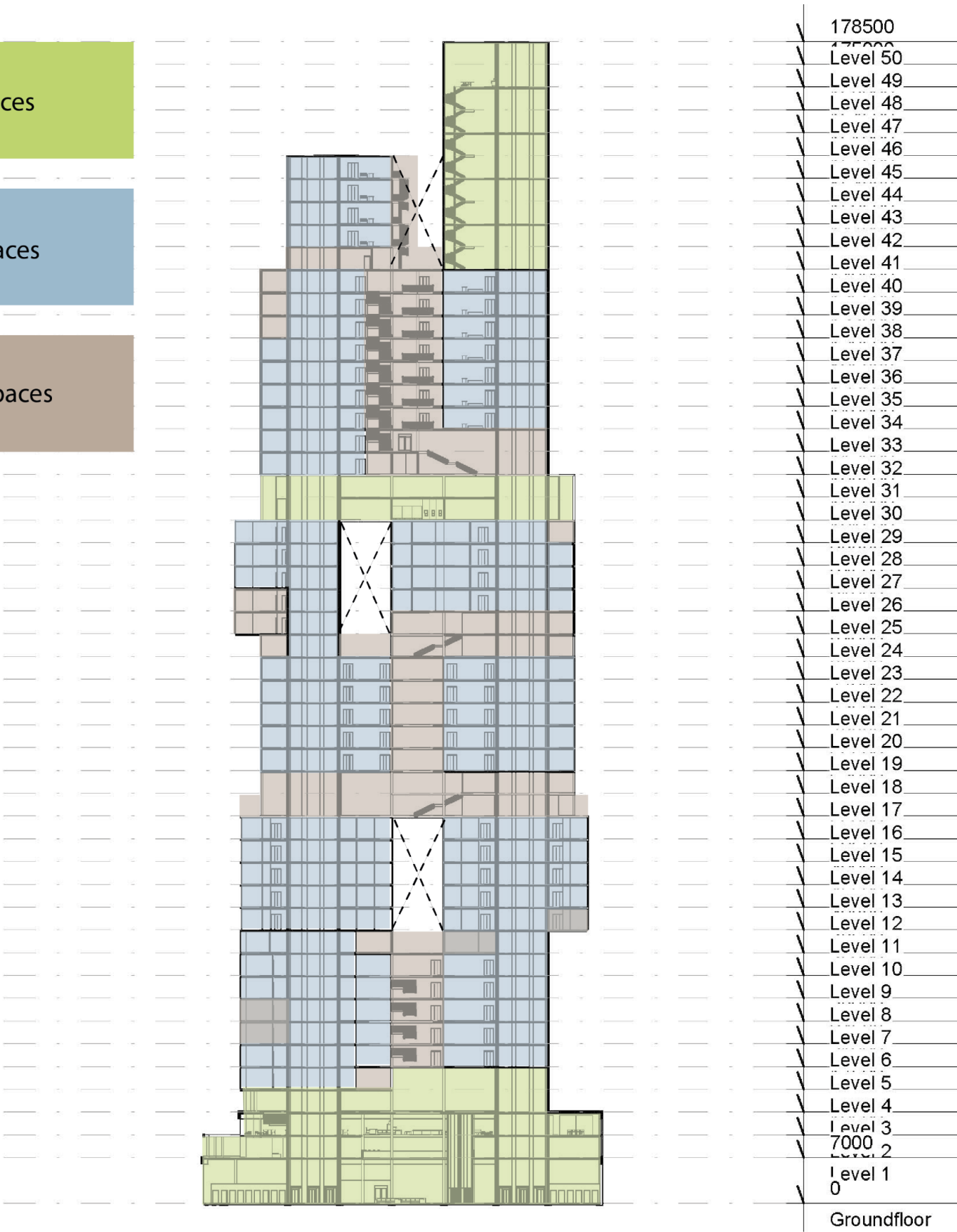
Groundfloor up to level 4 (plinth)



Public spaces

Private spaces

Collective spaces

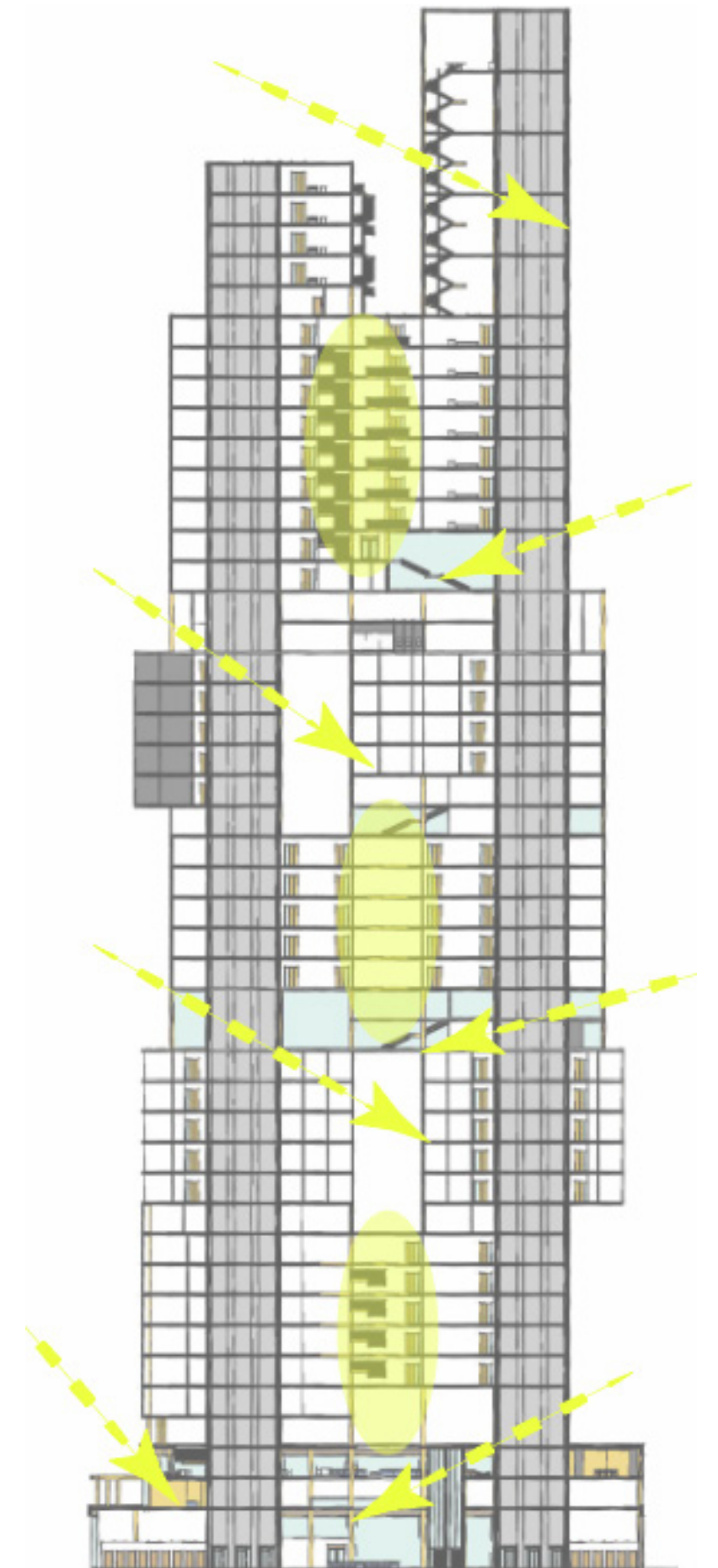
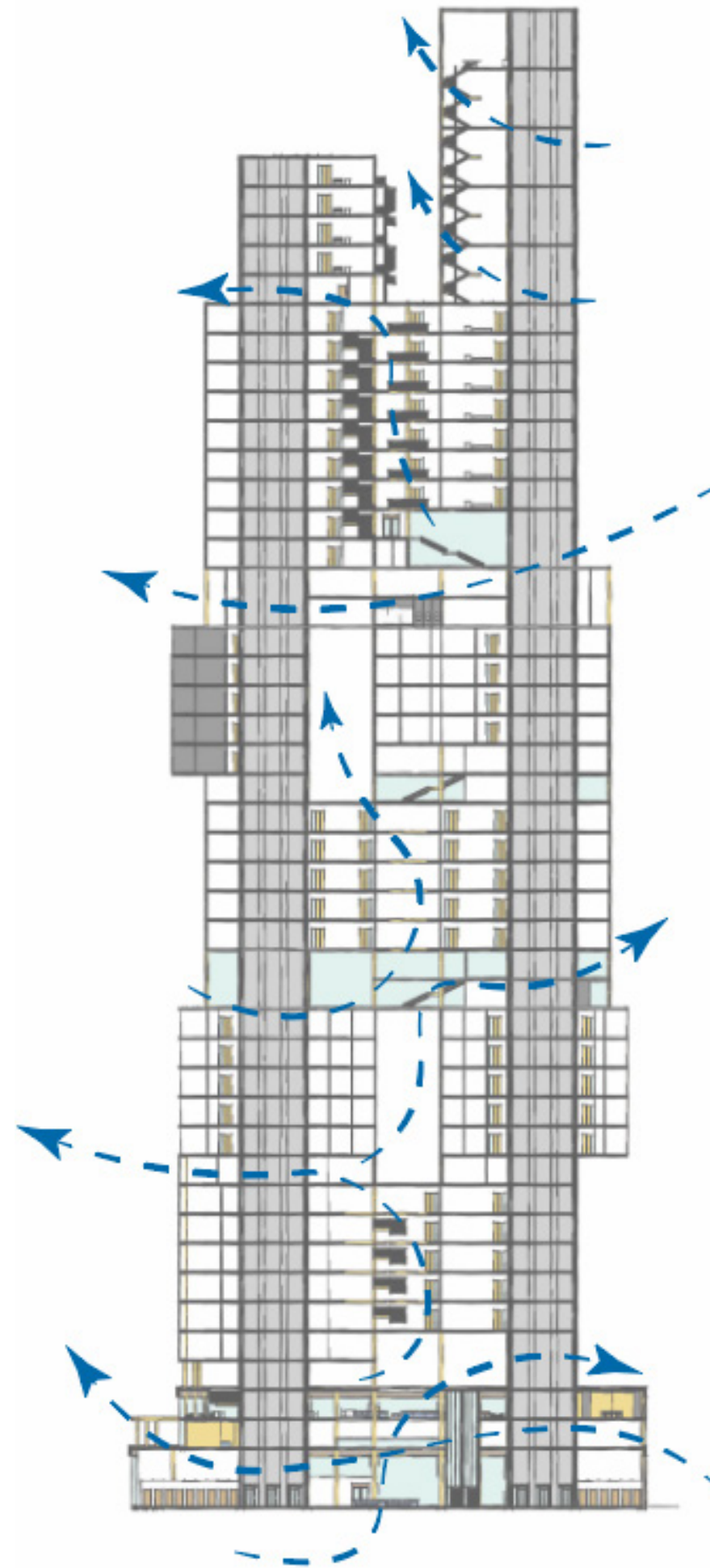


Ventilation circulation

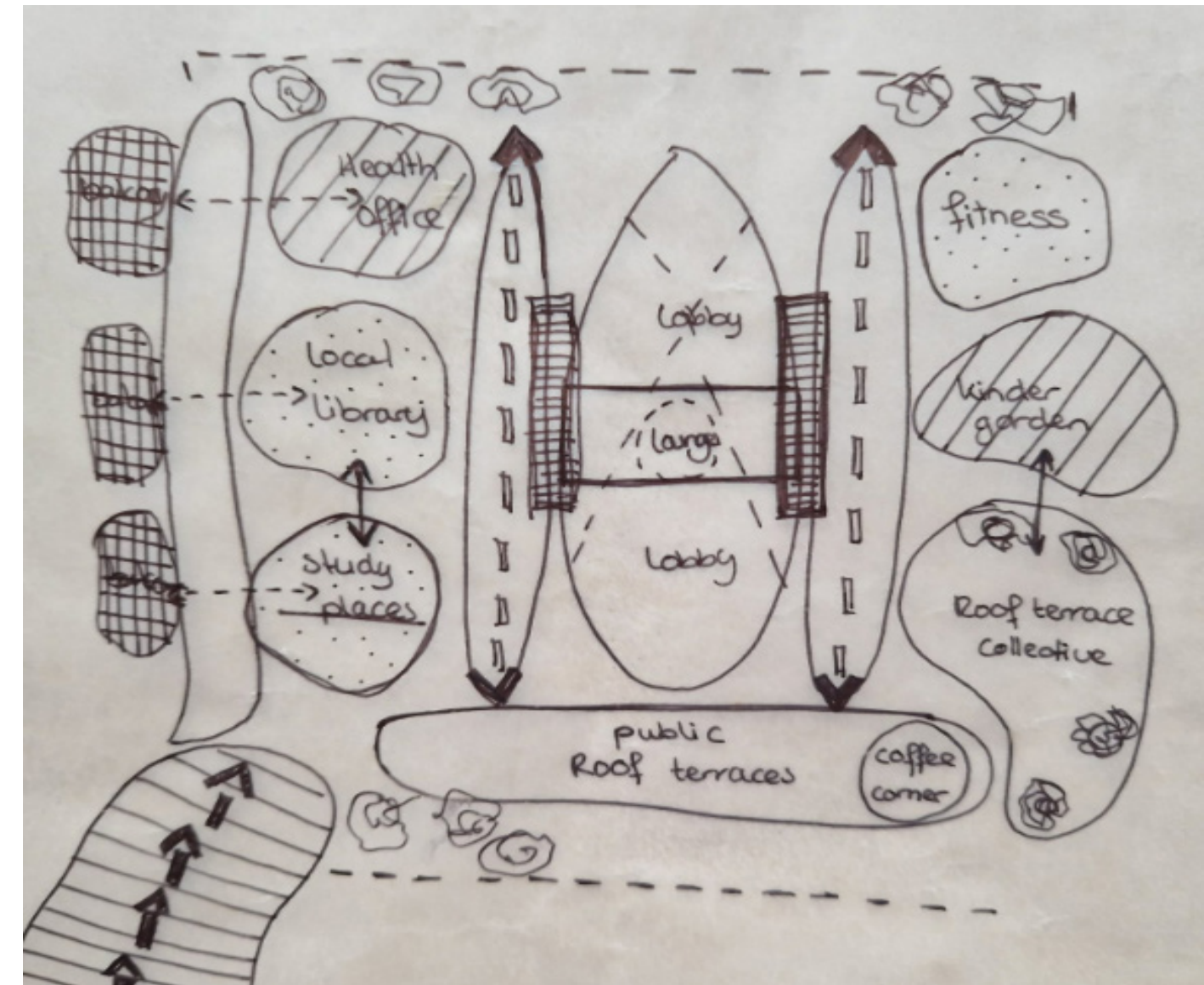
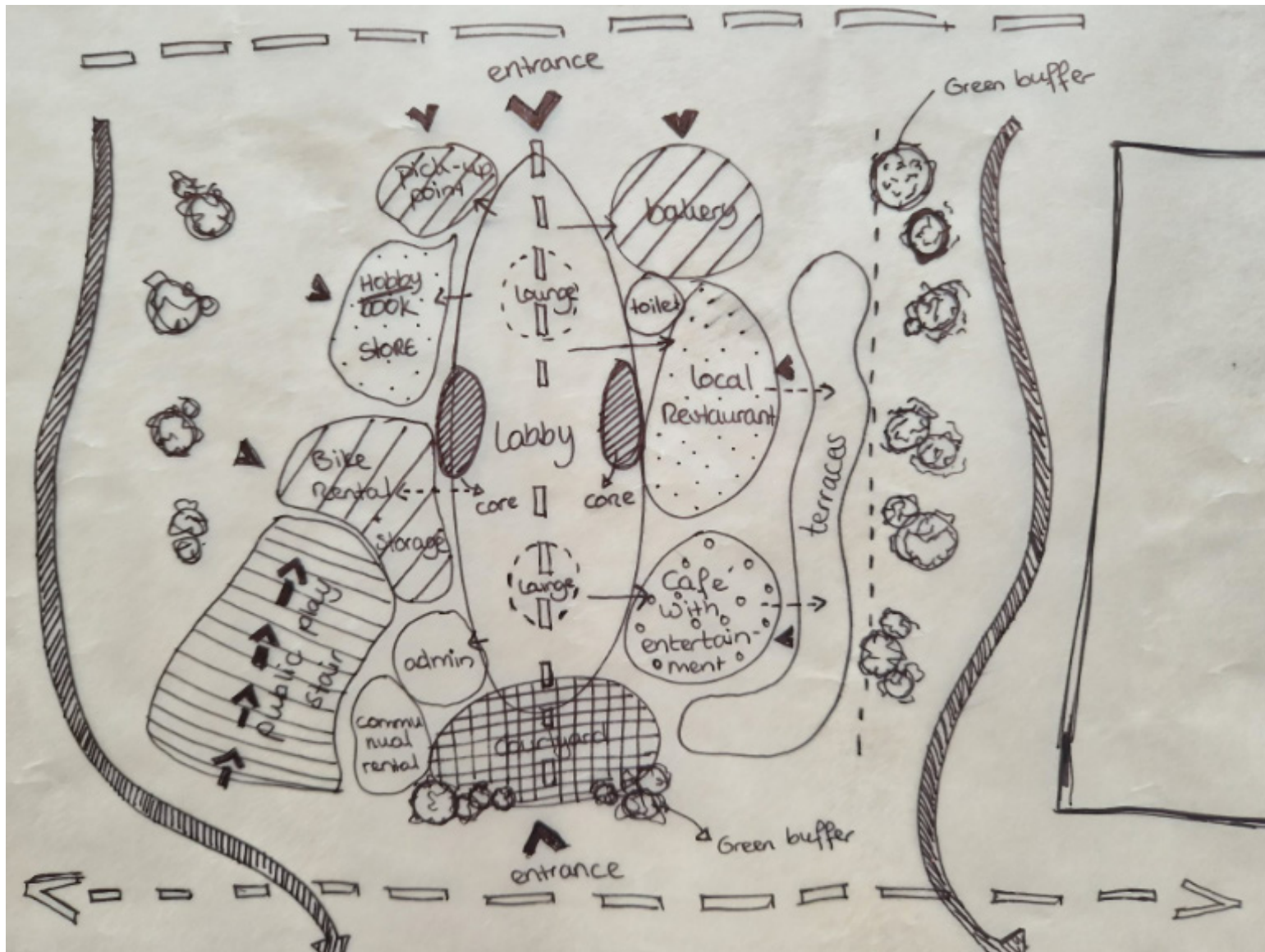
1. Natural ventilation
2. Mechanical ventilation

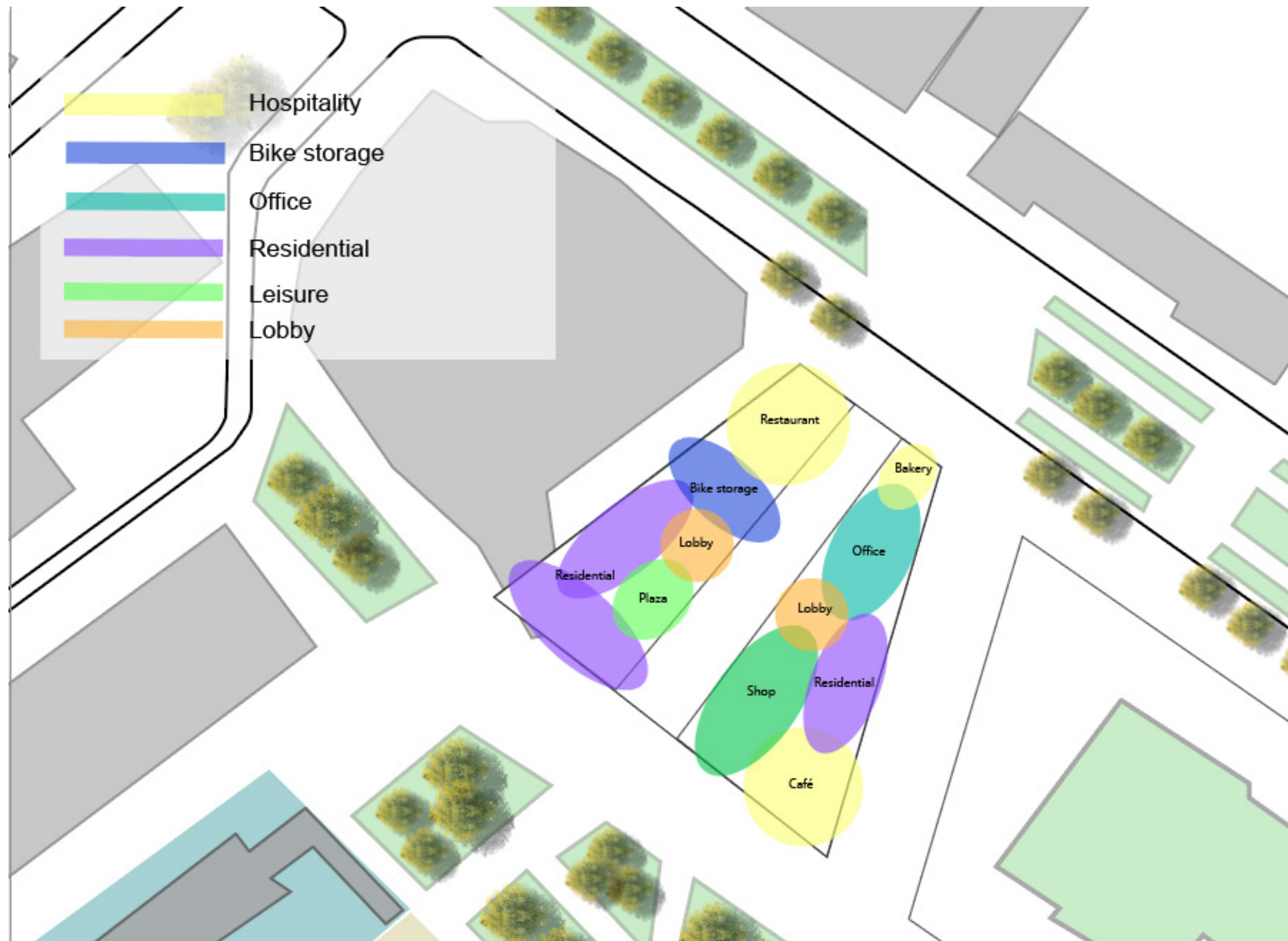
Lightning

- Passive daylight
- Sunlight



Functional layout





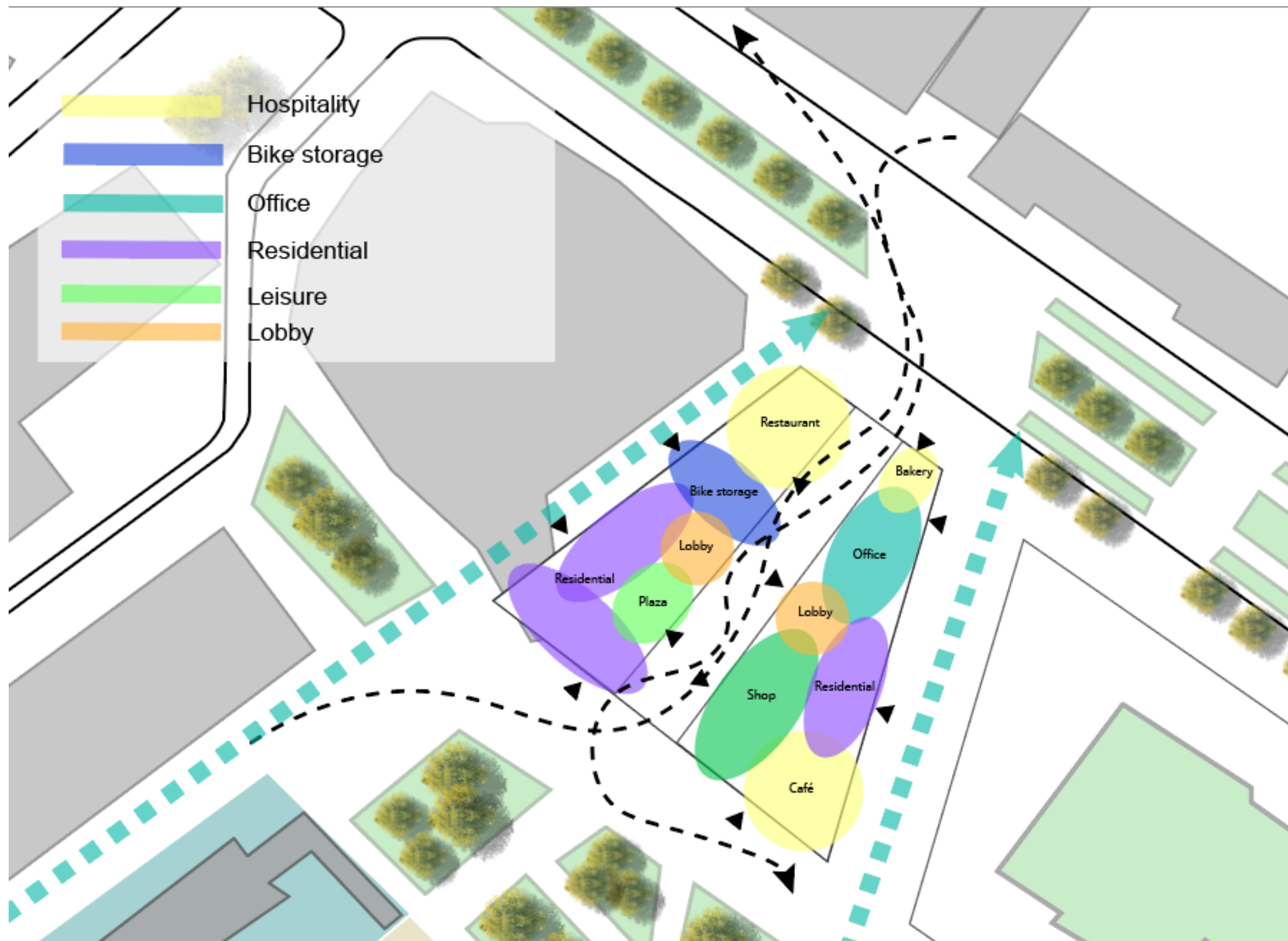
Hybrid plinth

Inclusive building

Functions based on surrounding

Daily based program

Rotterdam local facilities



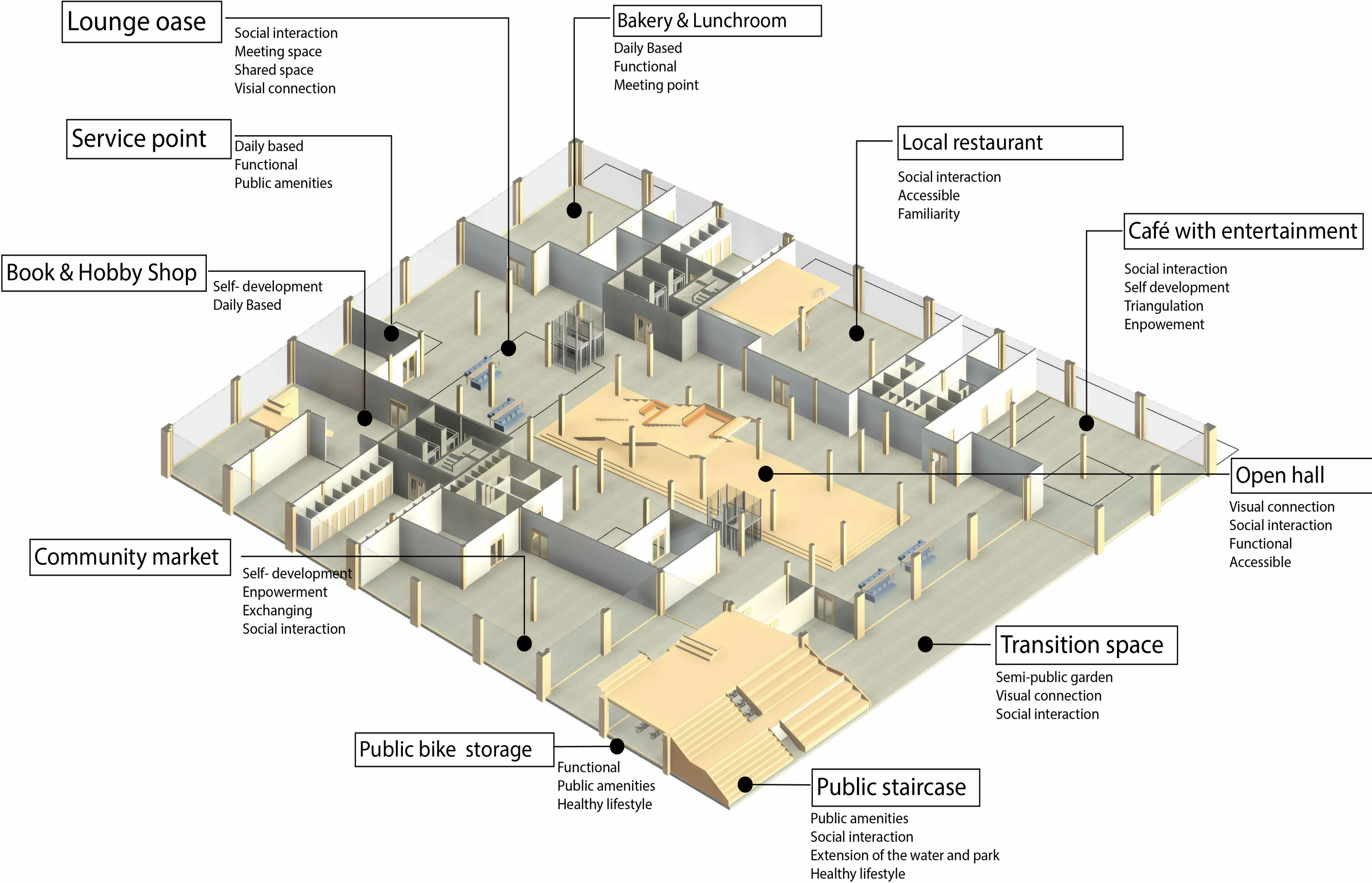
Intergration with urban fabric

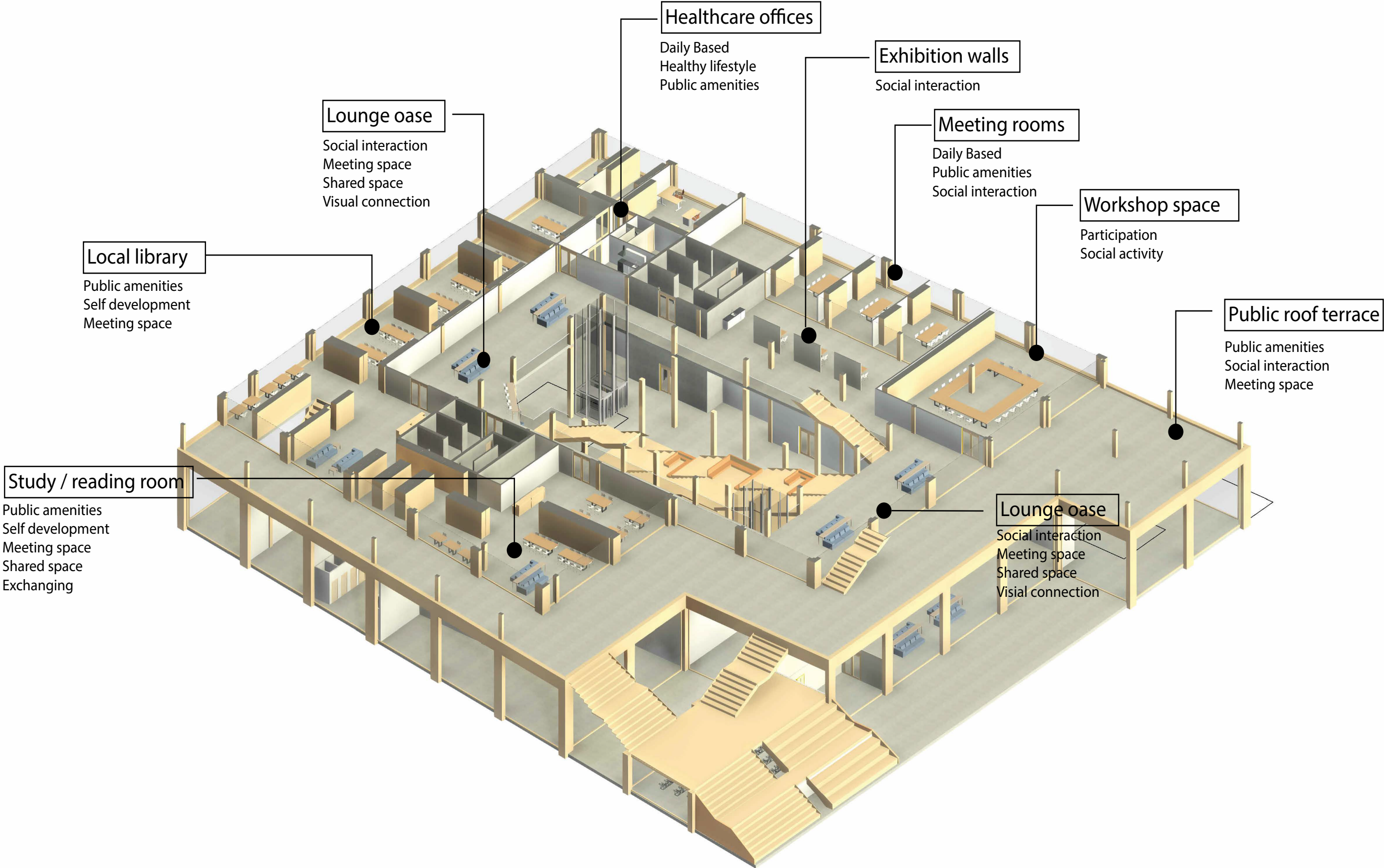
Routing

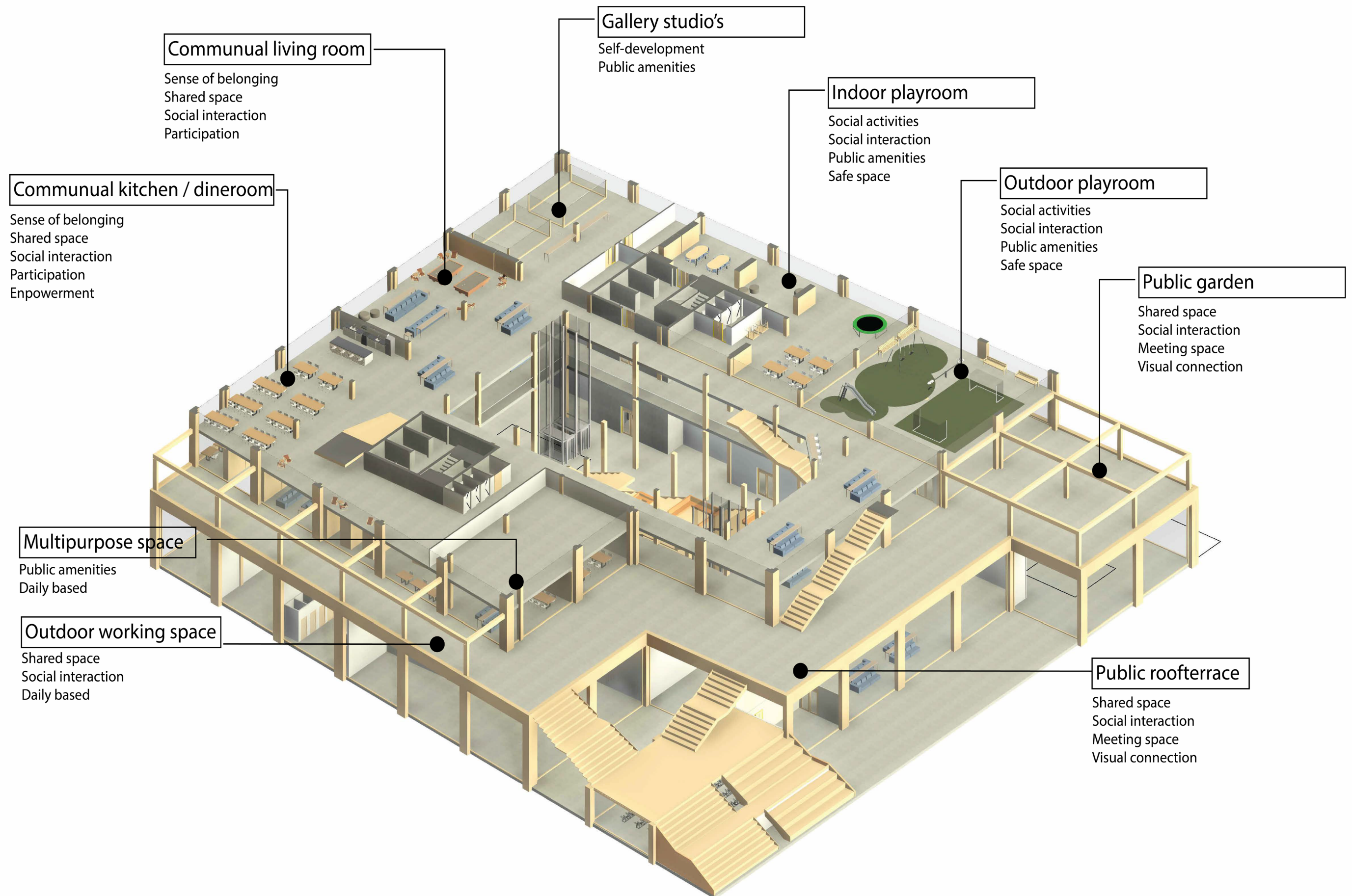
Based on different targetgroups

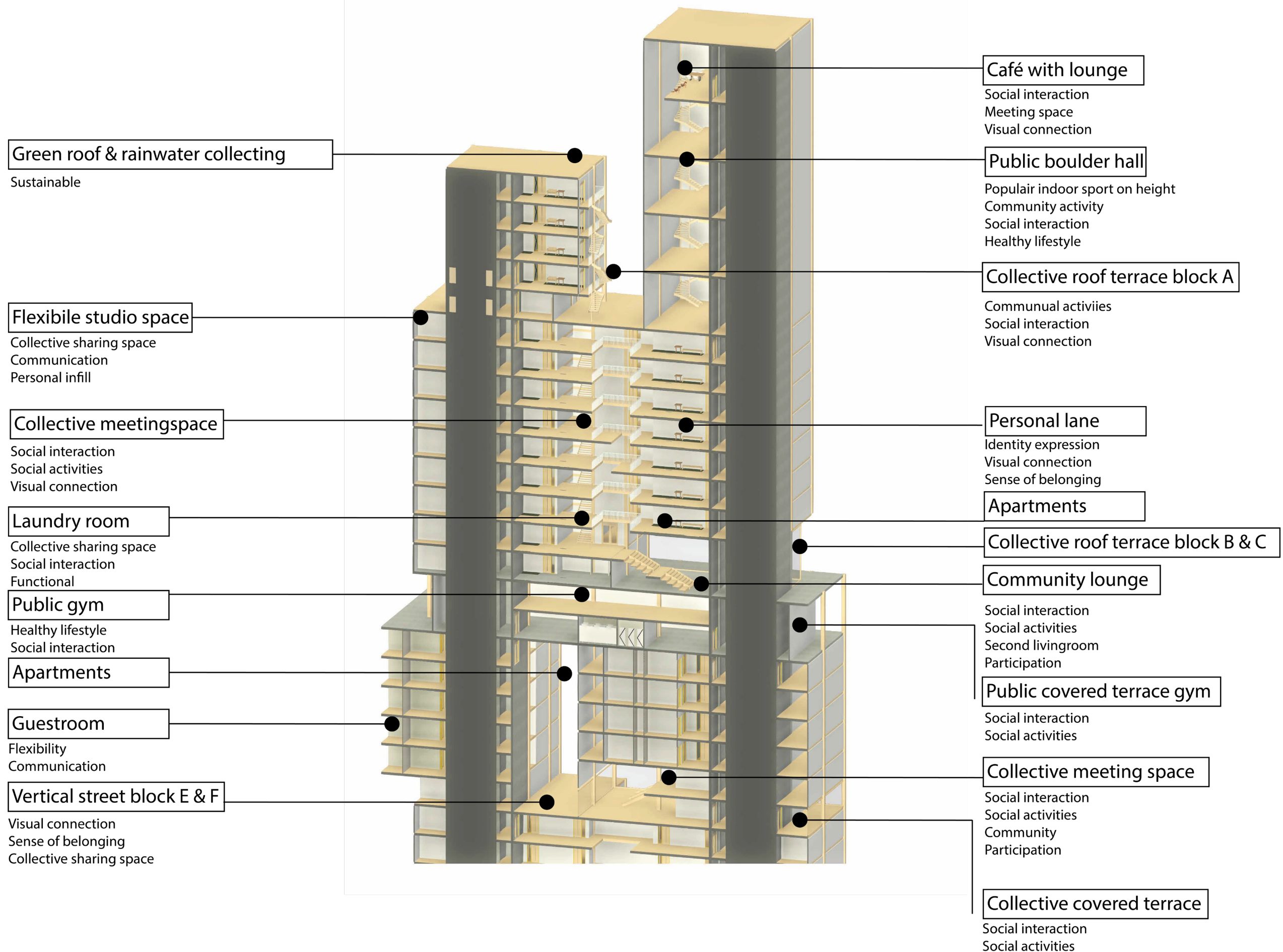
Flexibility

Public, collective and private

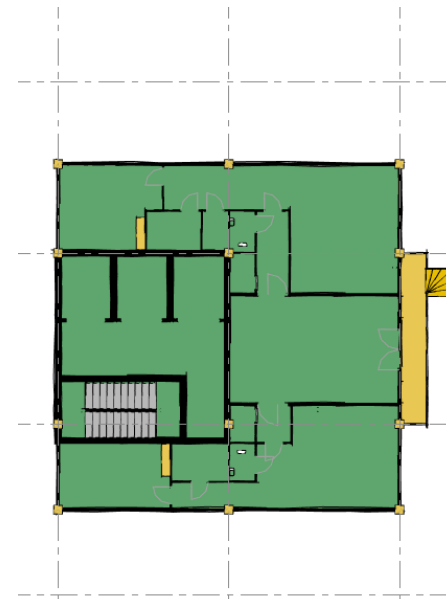
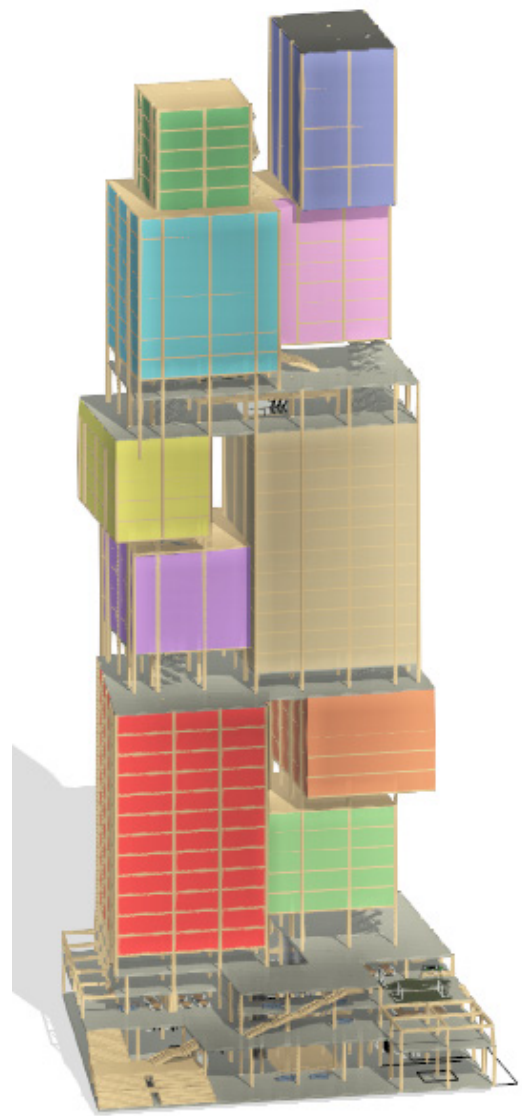




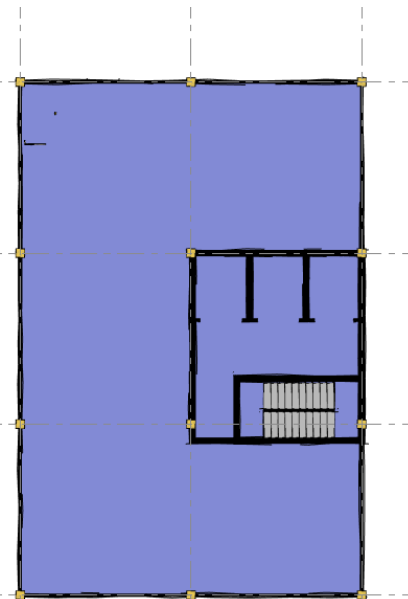




Floorplan blocks



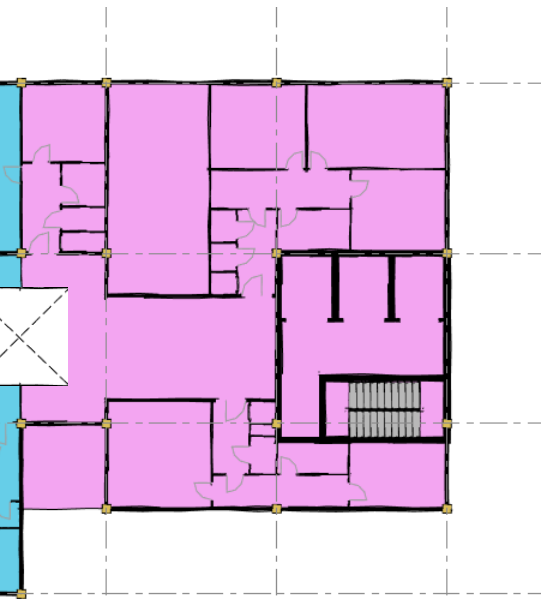
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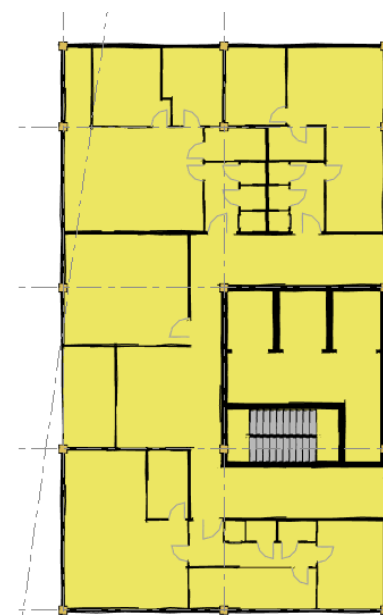
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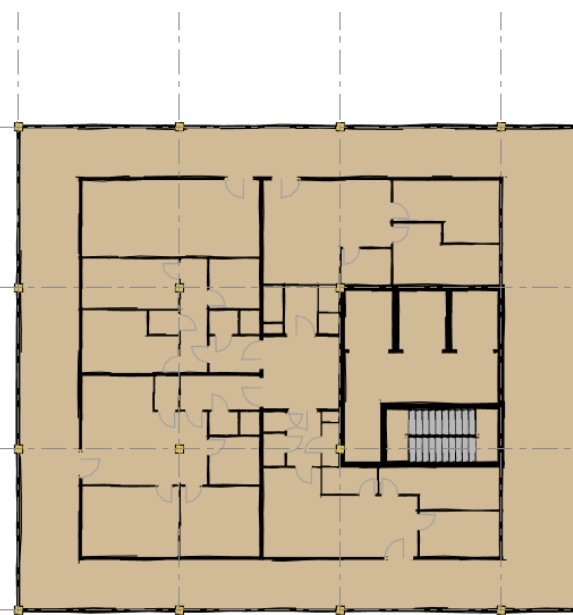
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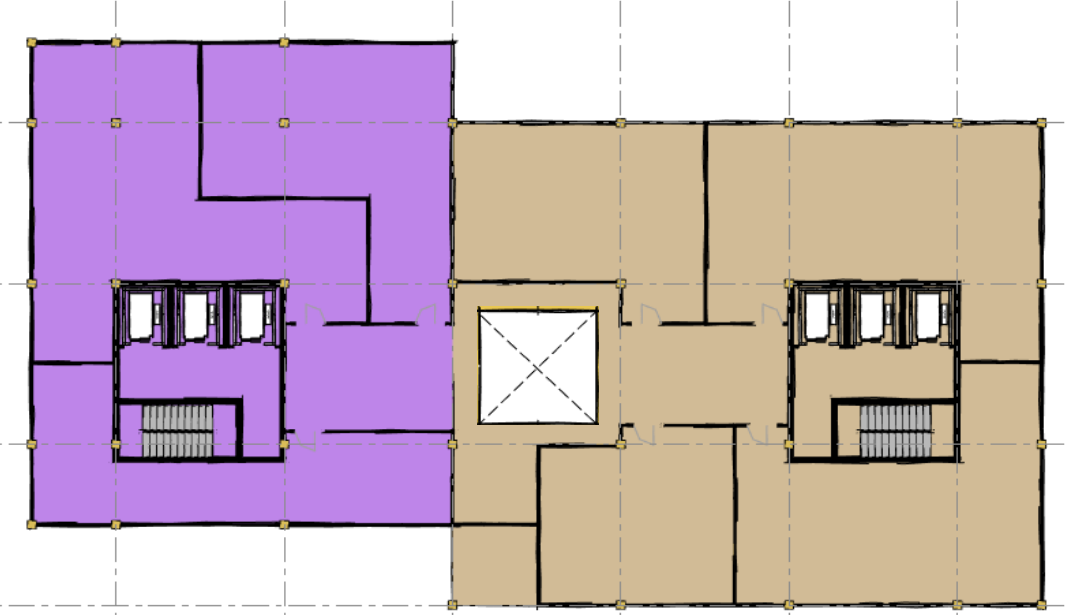
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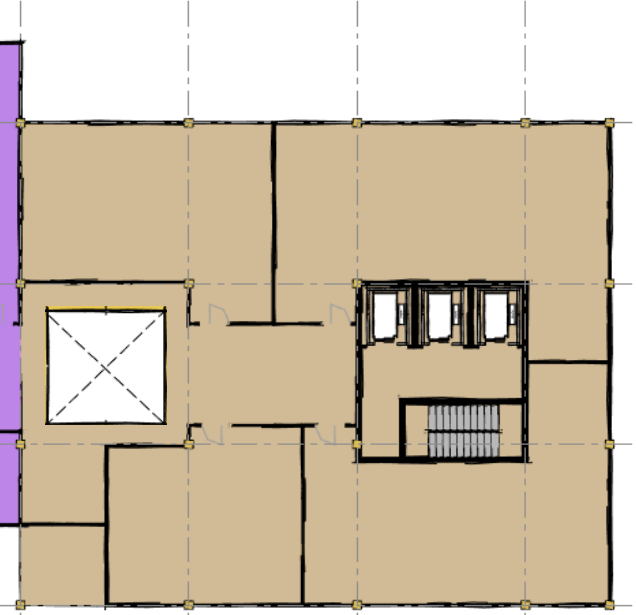
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F

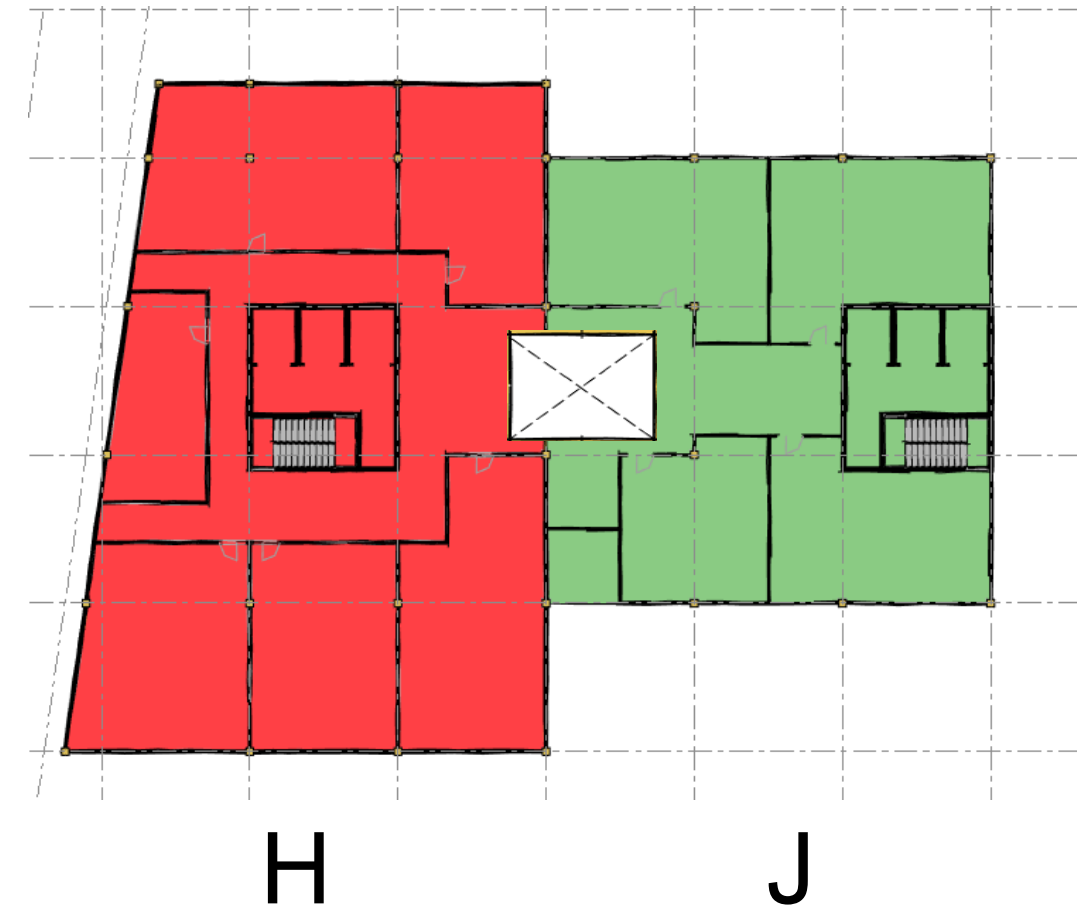
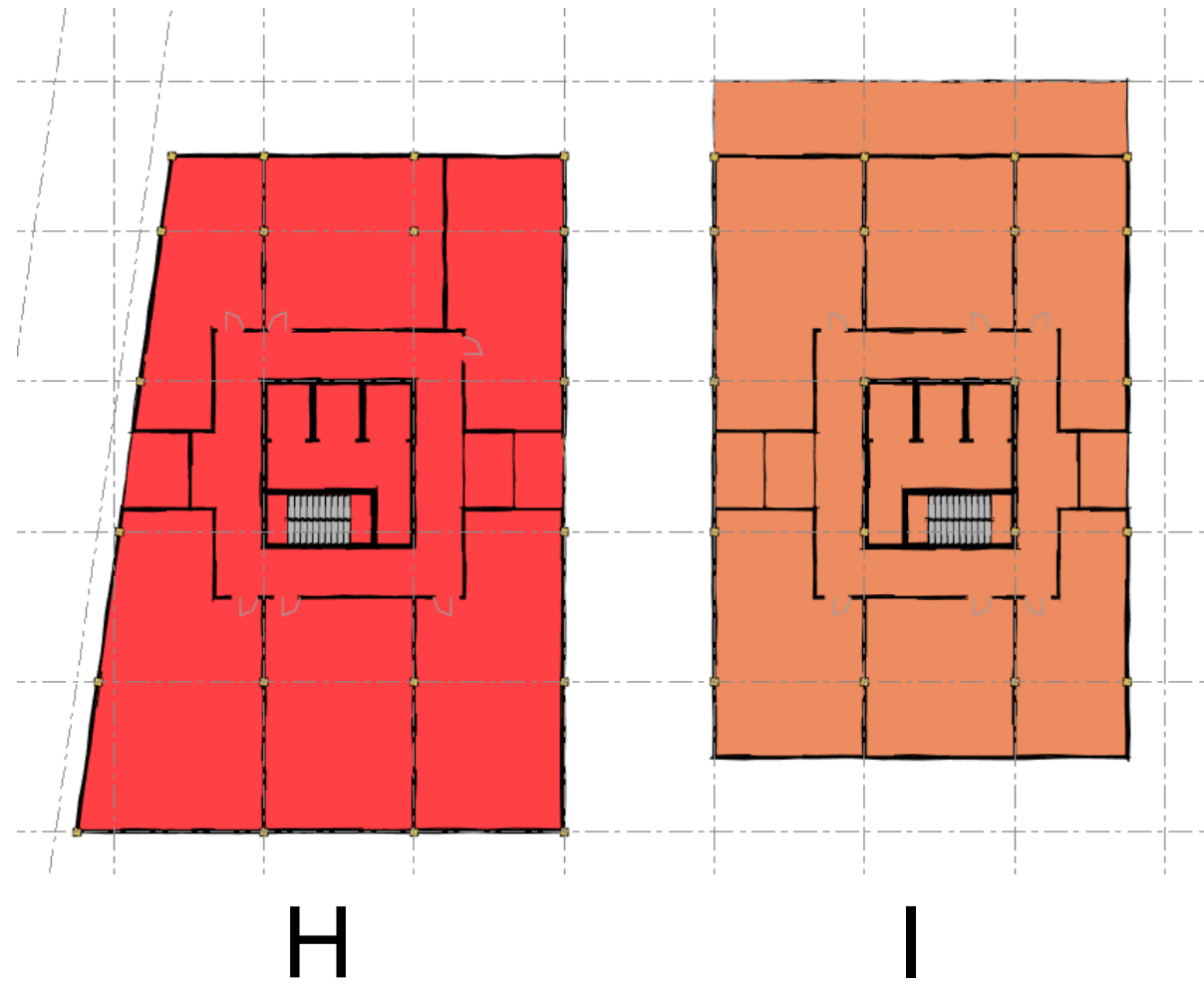
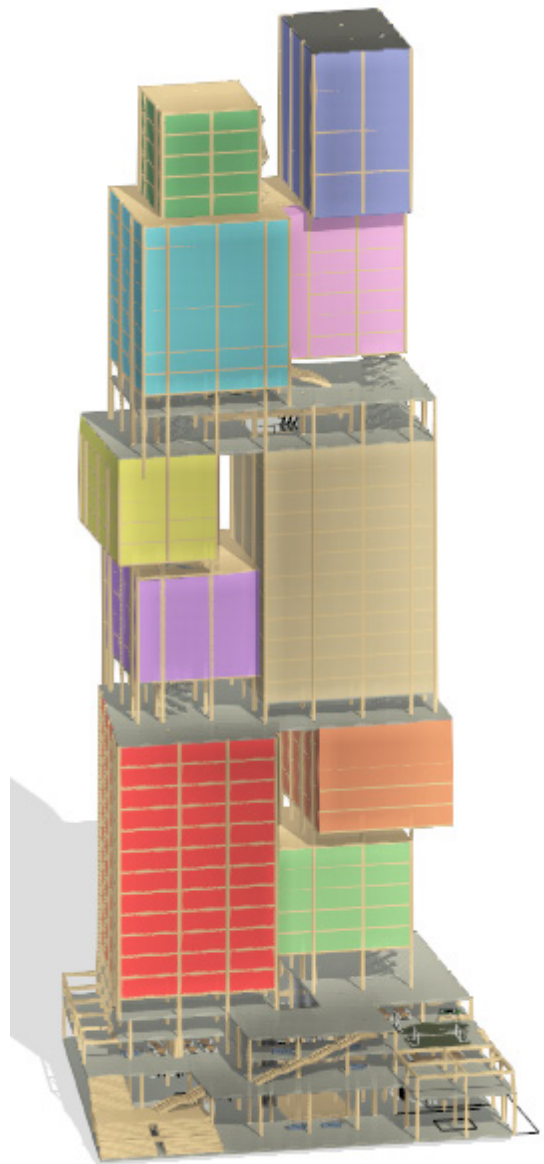


G

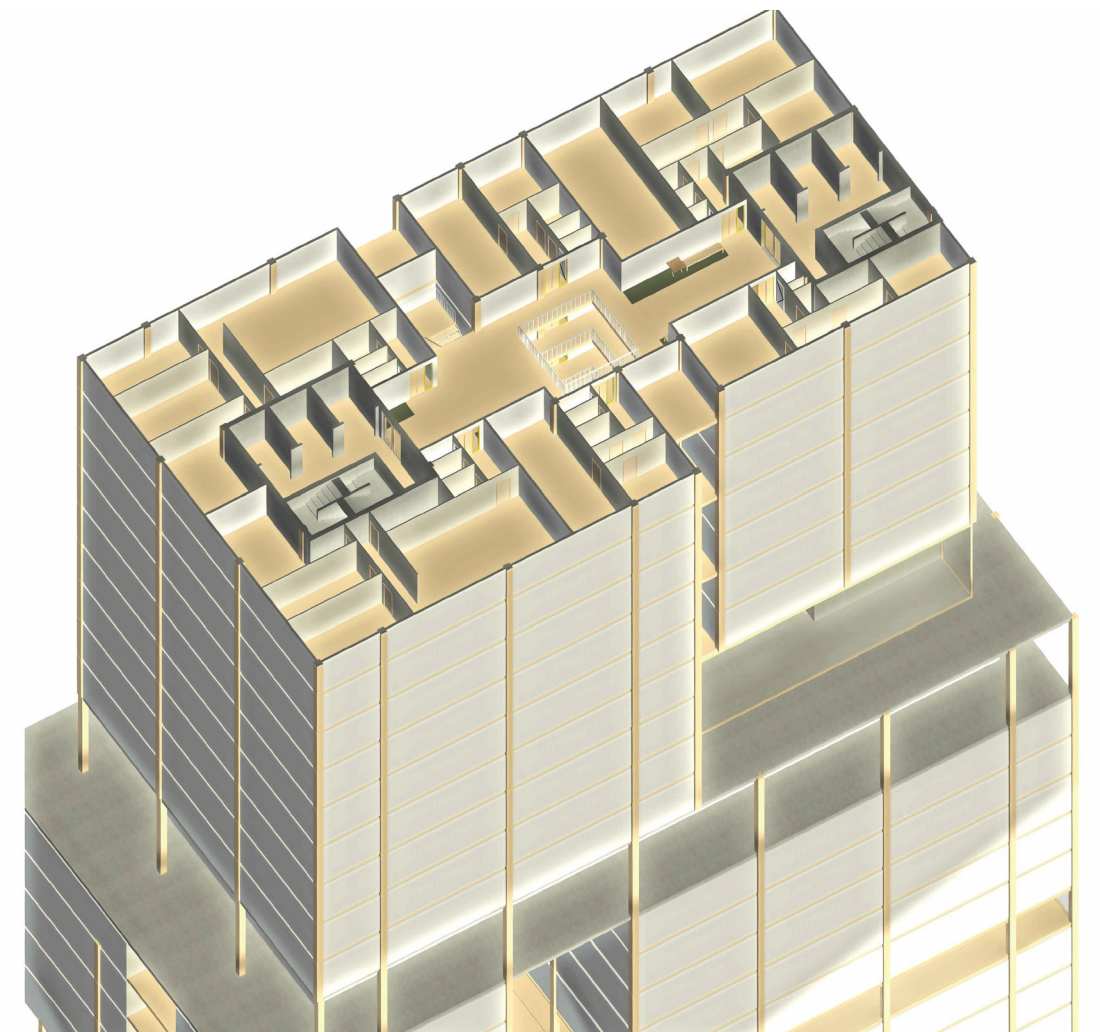
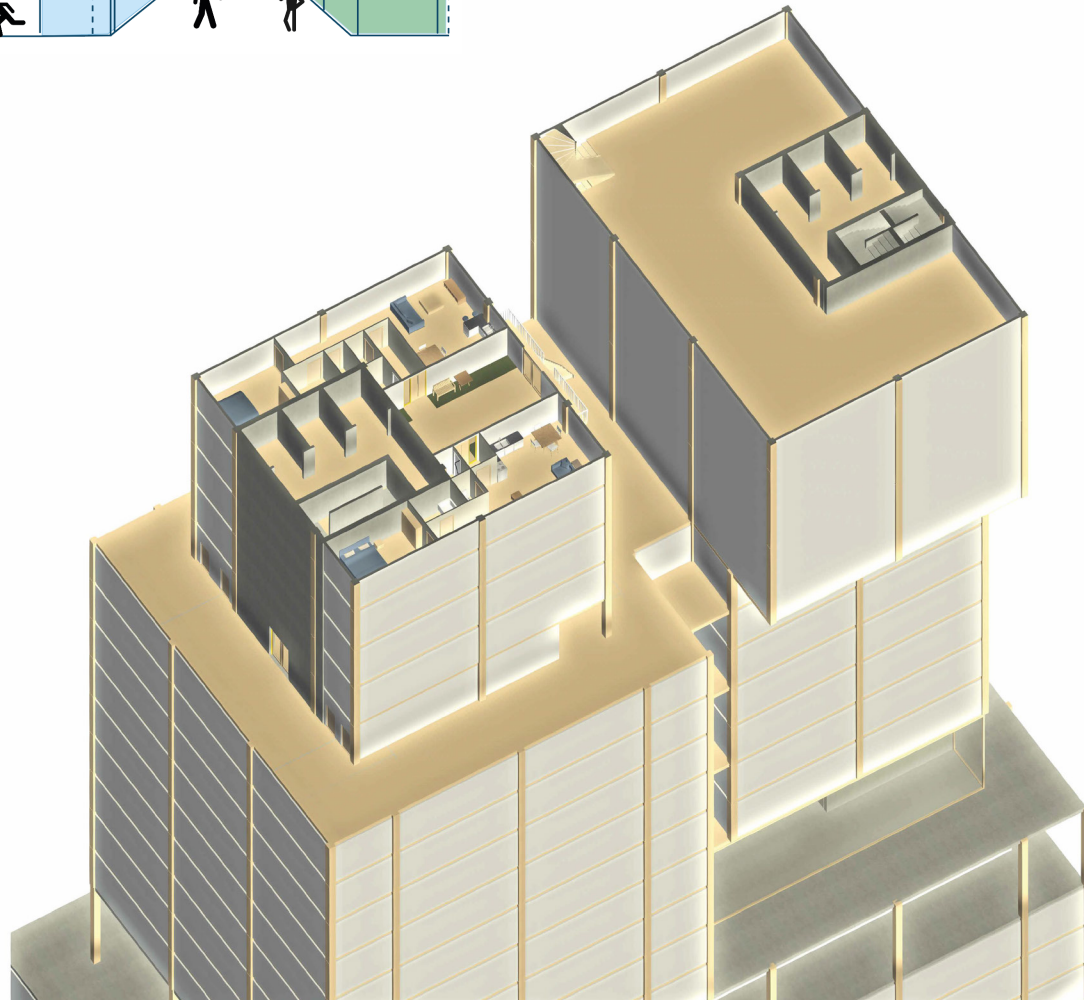
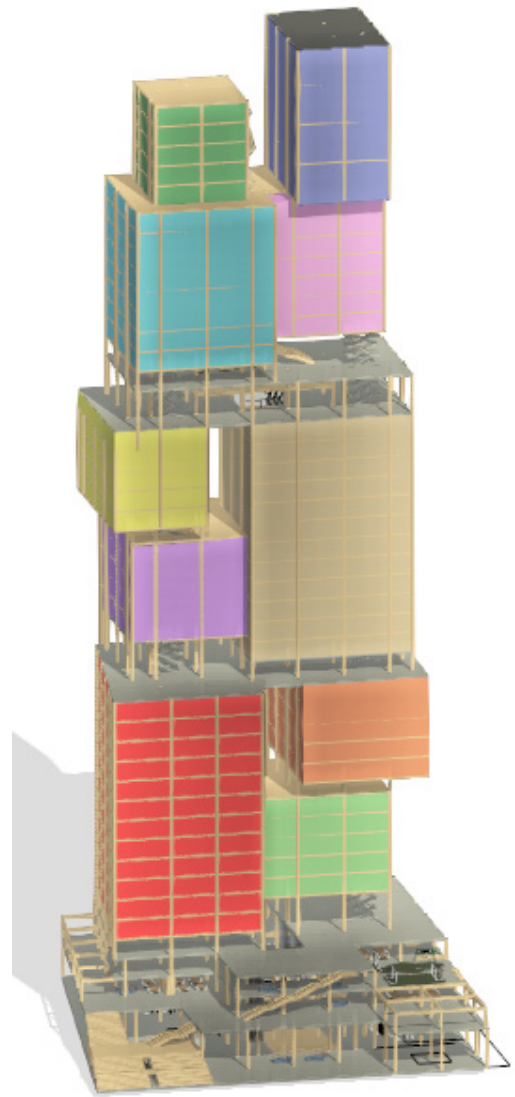
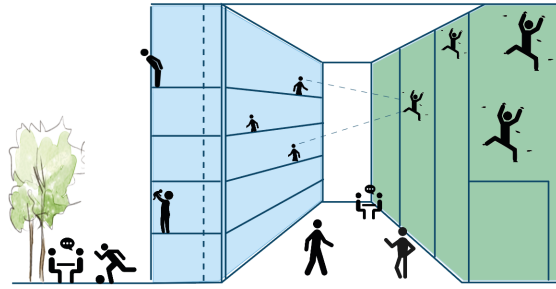


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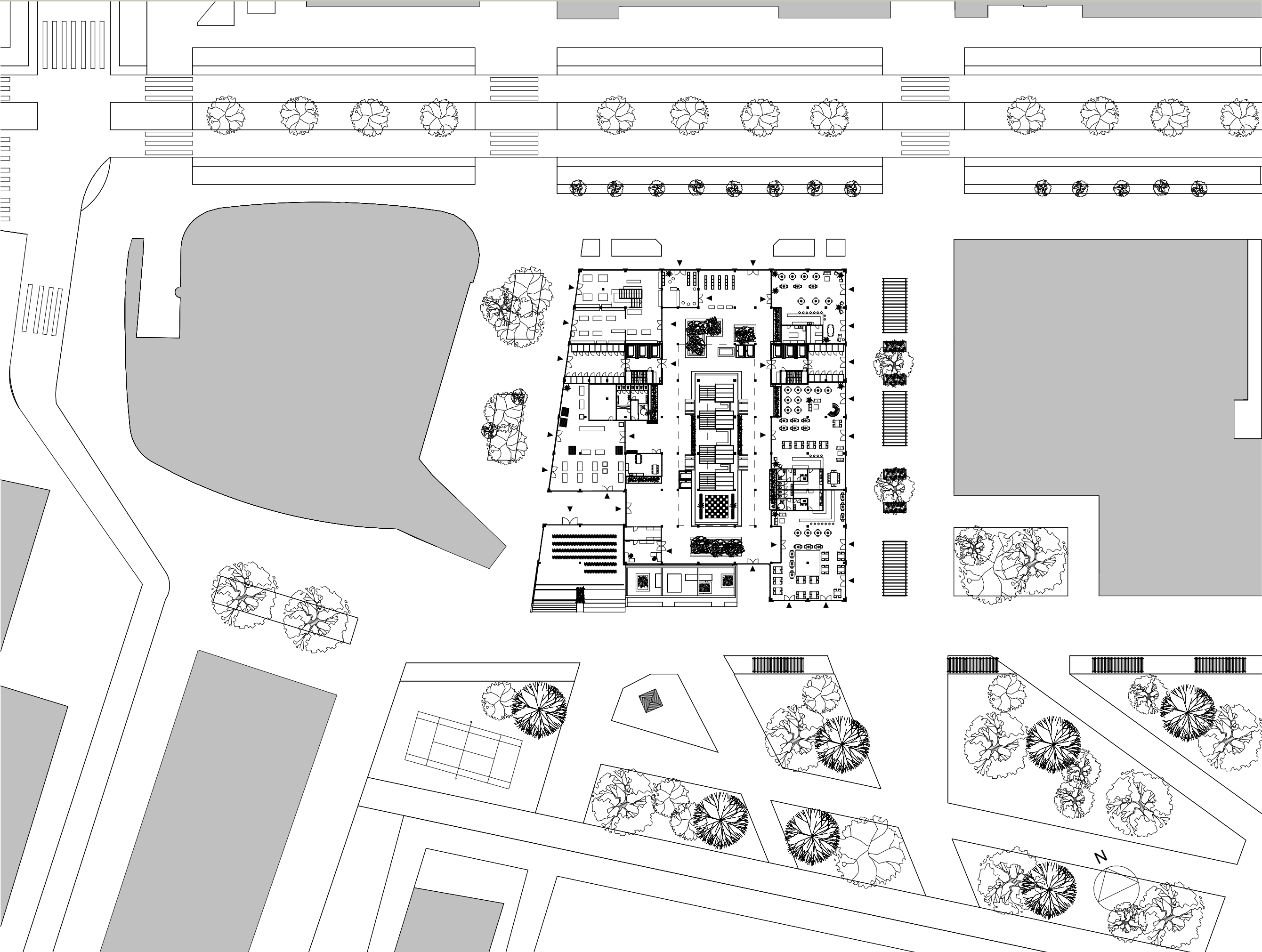
Floorplan blocks

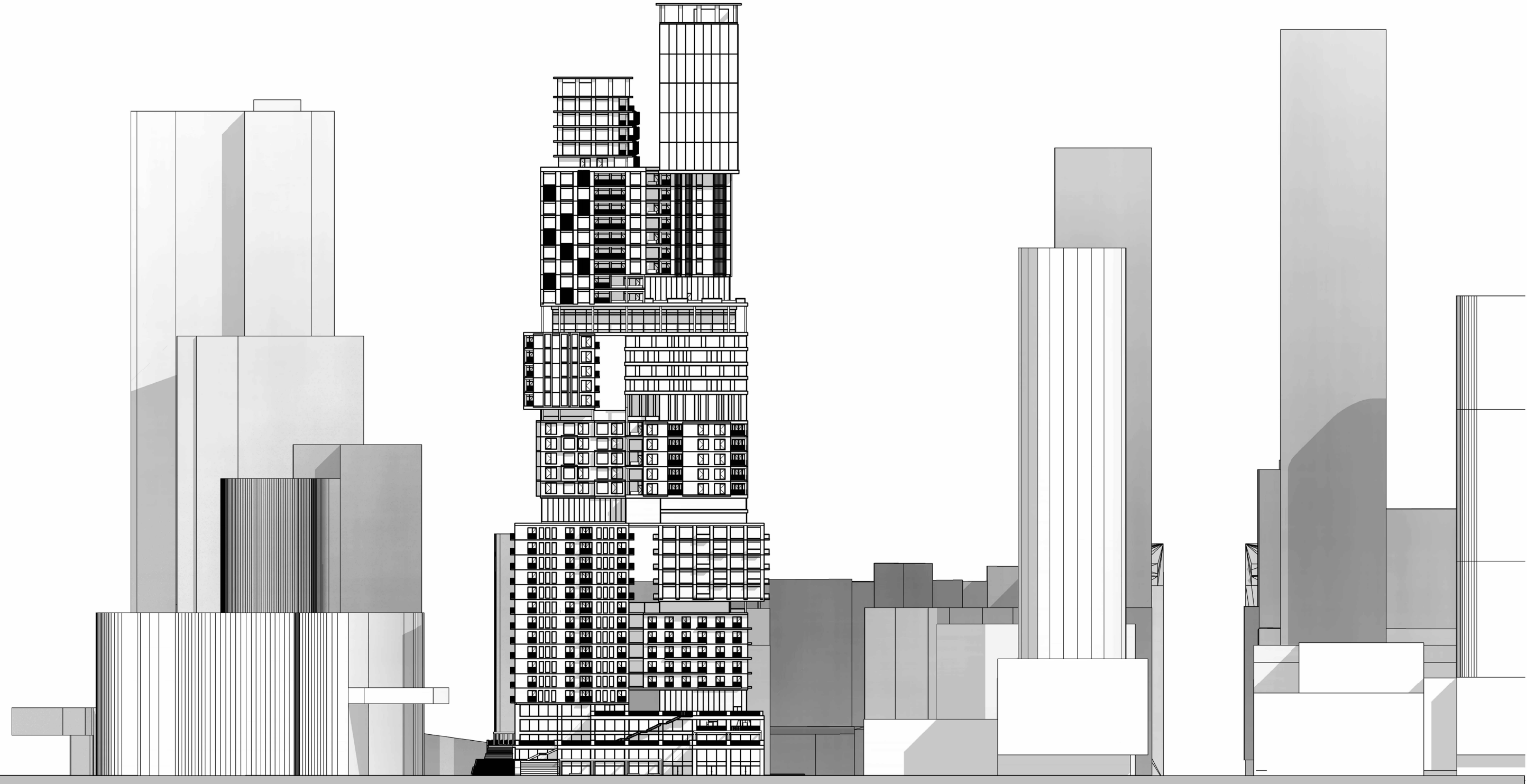


Floorplan blocks







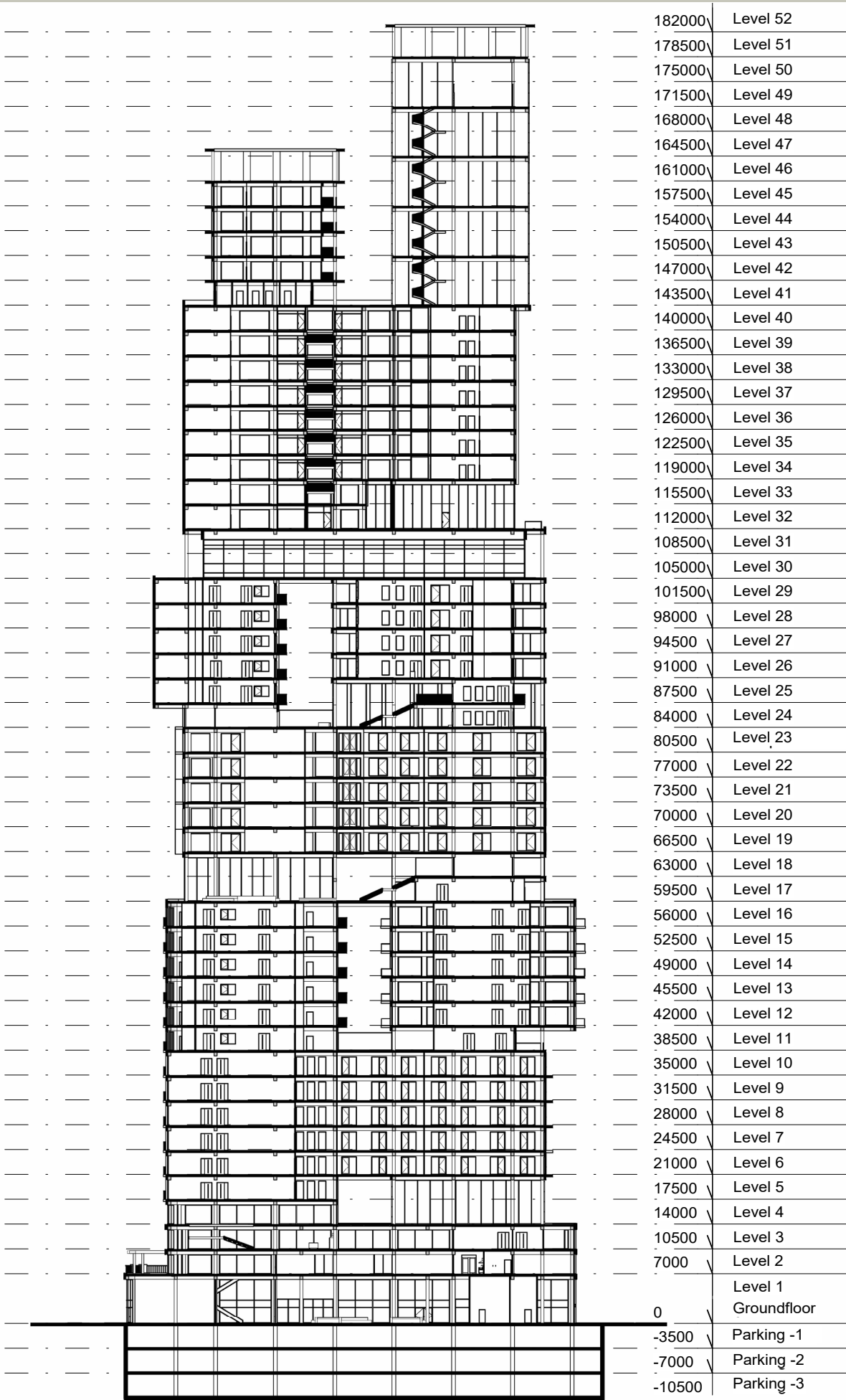


South elevation 1:500

East elevation 1:500



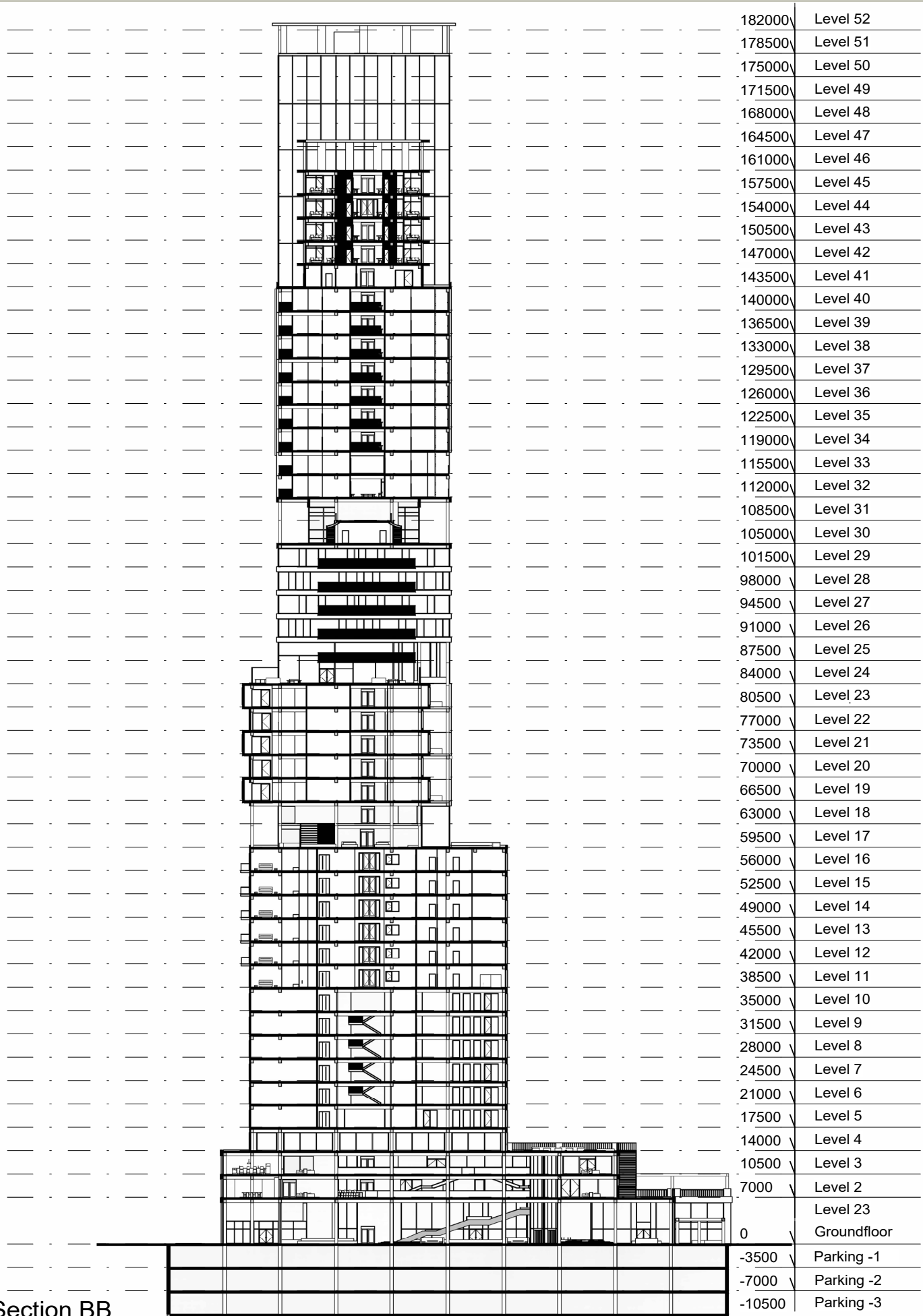
Section AA 1:500



Section AA

schaal 1 : 500

Section BB 1:500



Section BB

schaal 1 : 500



TOP

- Concrete slab as roof for reinforcement

RESIDENTIAL LEVELS

- Timber glulam construction
- Timber column 400 x 400 mm
- Timber beam 400 x 450 mm
- Cross laminated timber floor 300 mm

PUBLIC LEVELS

- Double height stories
- Concrete slabs as diaphragm

RESIDENTIAL LEVELS

- Timber glulam construction
- Timber column 400 x 400 mm
- Timber beam 400 x 450 mm
- Cross laminated timber floor 300 mm

PUBLIC LEVELS

- Double height stories
- Concrete slabs as diaphragm

CONCRETE CORES

- 2 Massive concrete cores
- Stabilisation
- Emergency exit

PLINTH

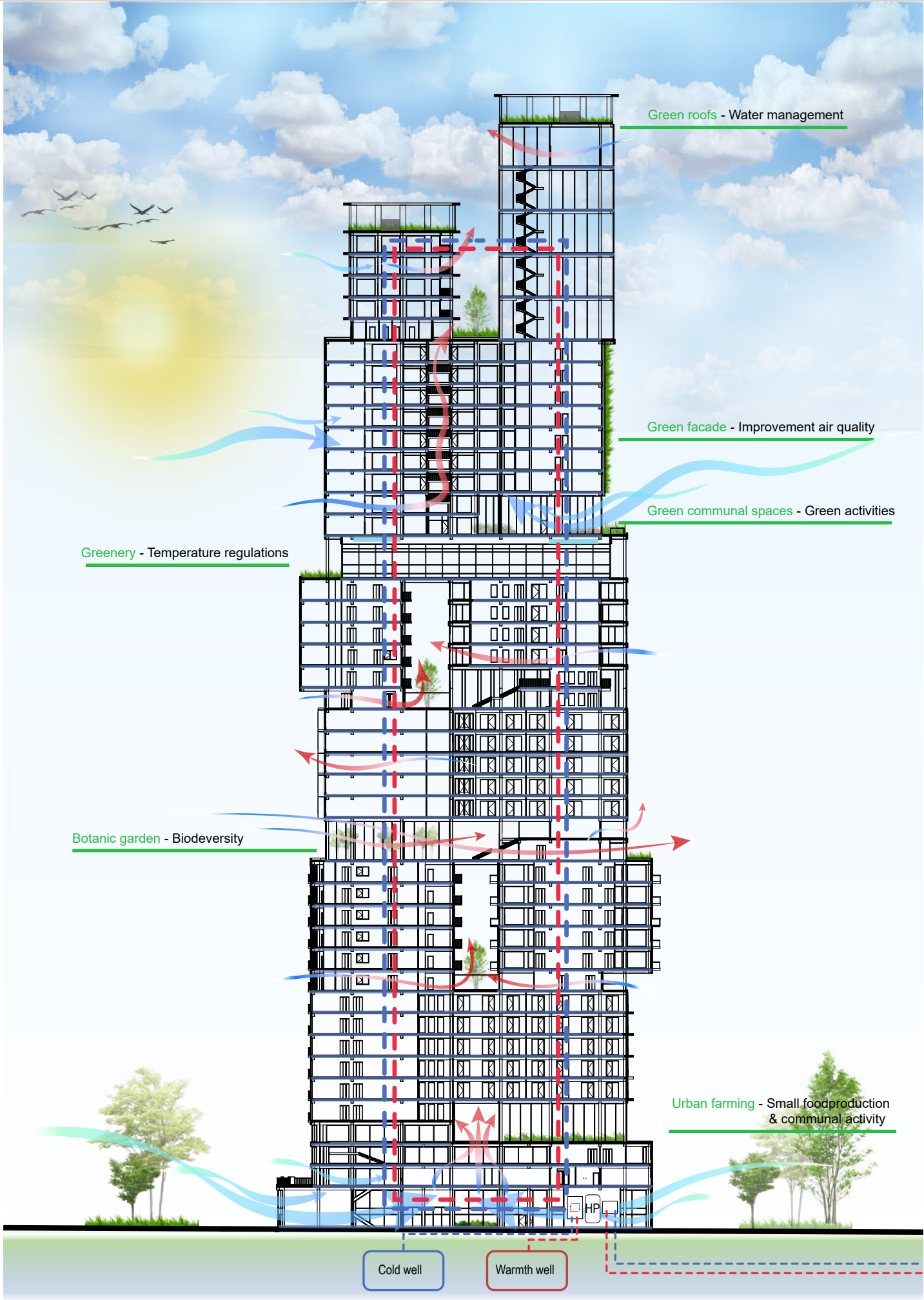
- Mass and hybrid timber construction
- Timber column 450 x 450 mm
- Timber beam 450 x 500 mm
- Concrete slab 250 mm

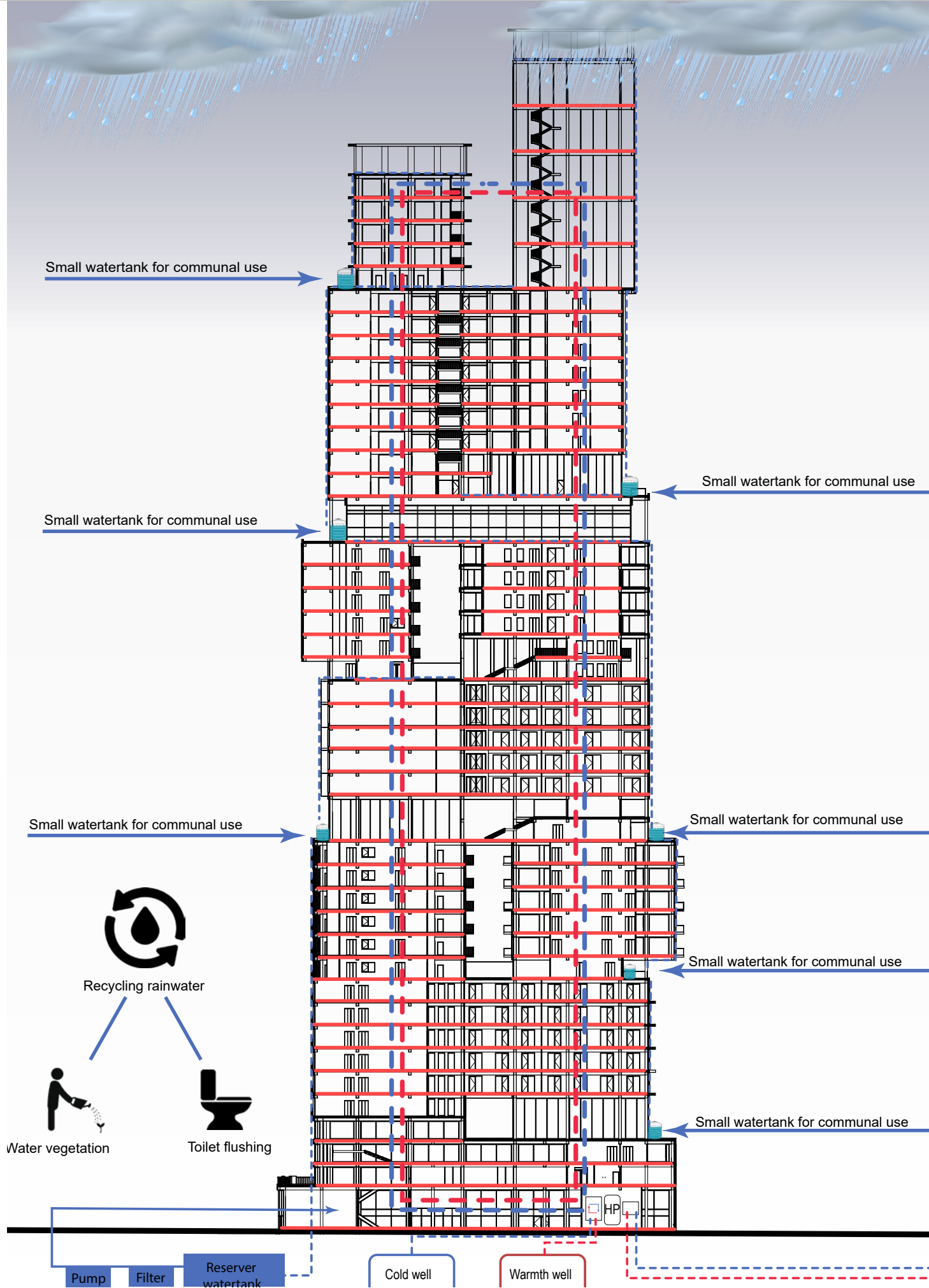
PARKING GARAGE

3 Stories parkinggarage (shared with other buildings)
Poured reinforced concrete walls and floors

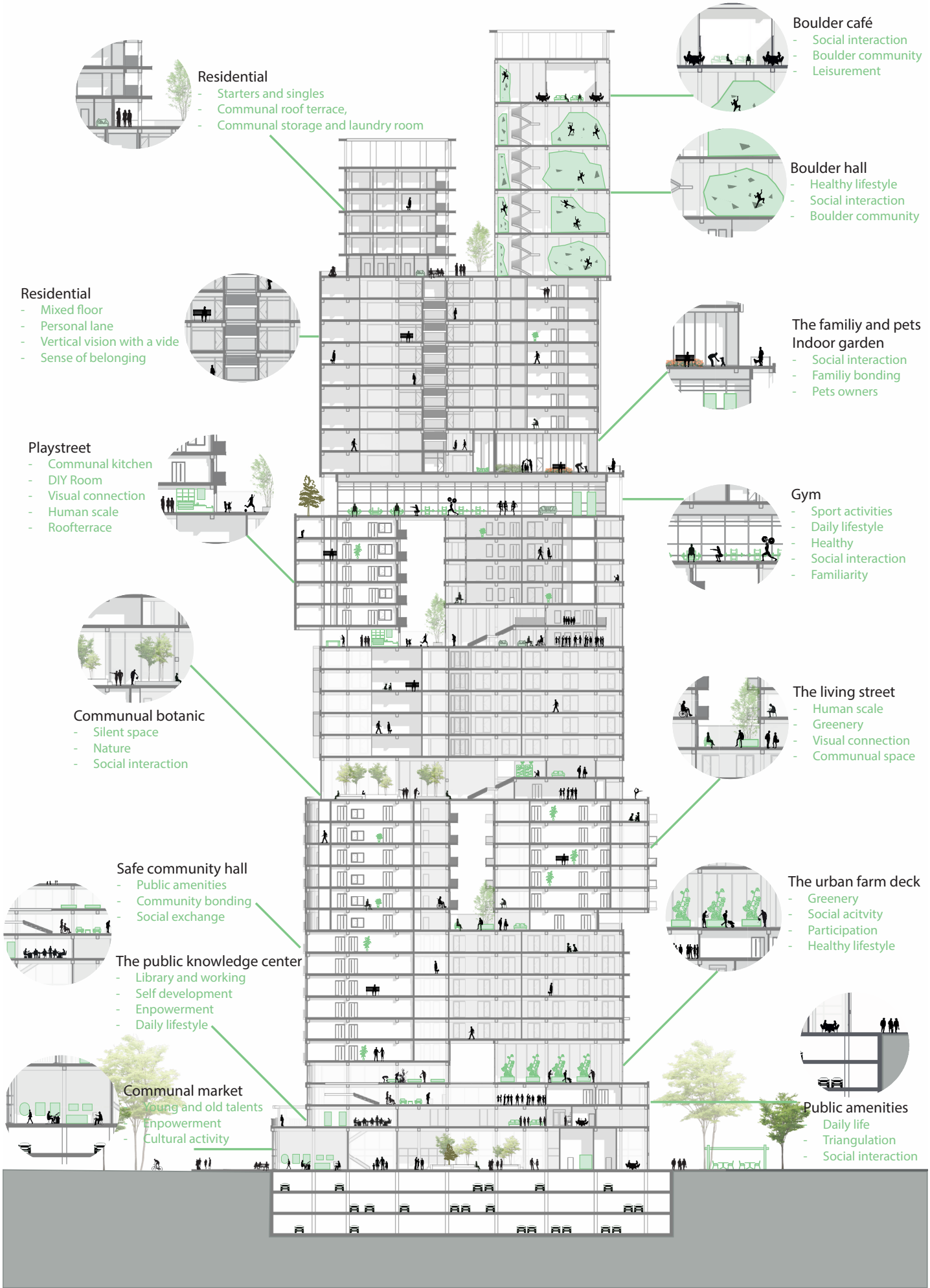
FOUNDATION

Foundation beams≈ 1500 x 2000 mm
Tubepoles ≈ Ø 850 mm x 70.000 m

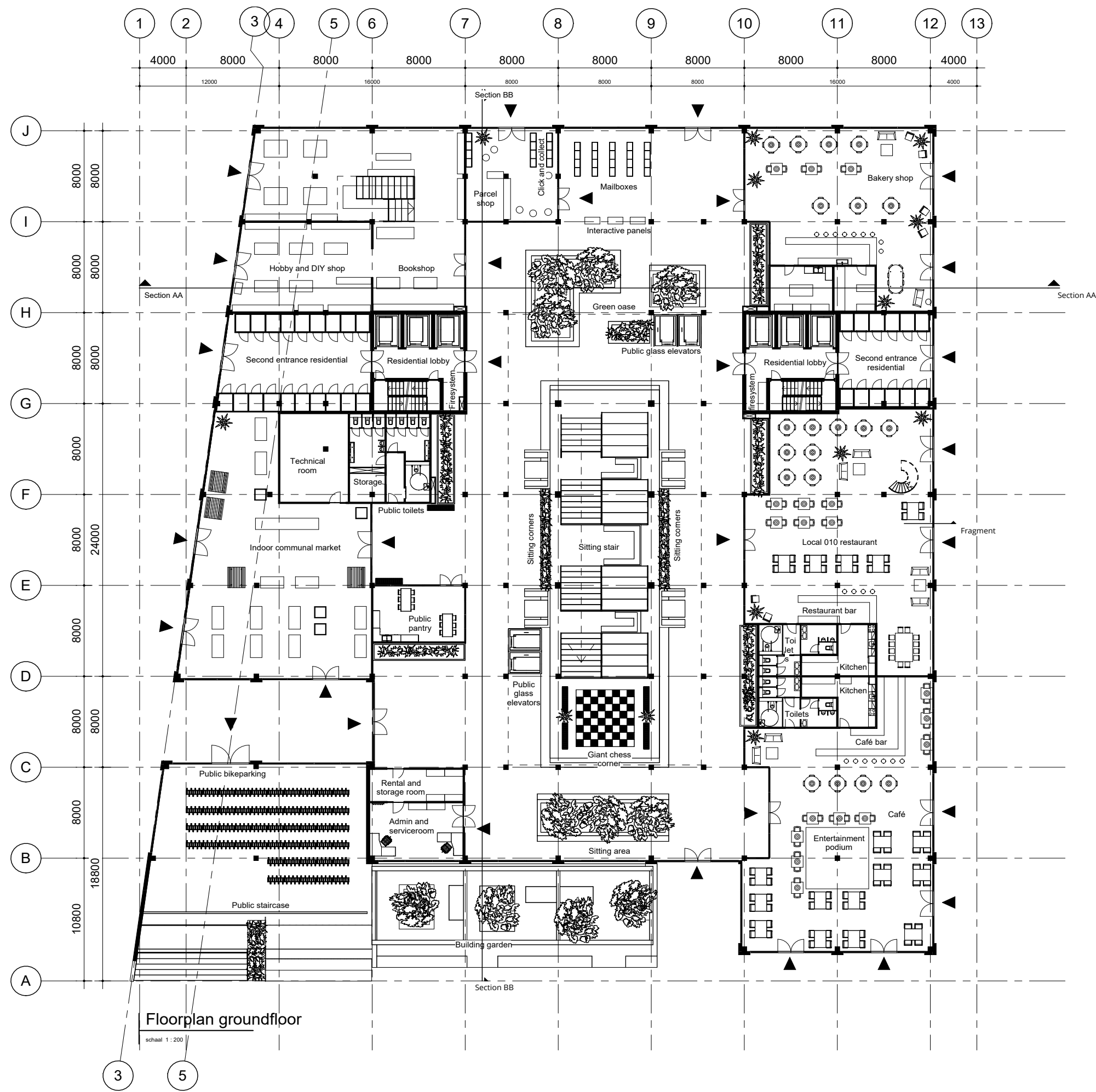




Community functions

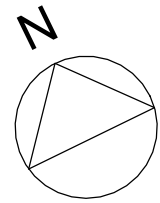


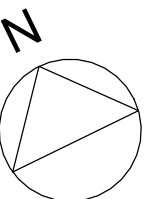
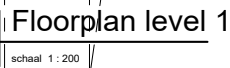
Public floorplan - Groundfloor

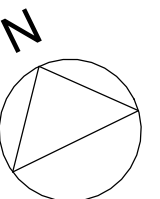
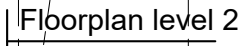


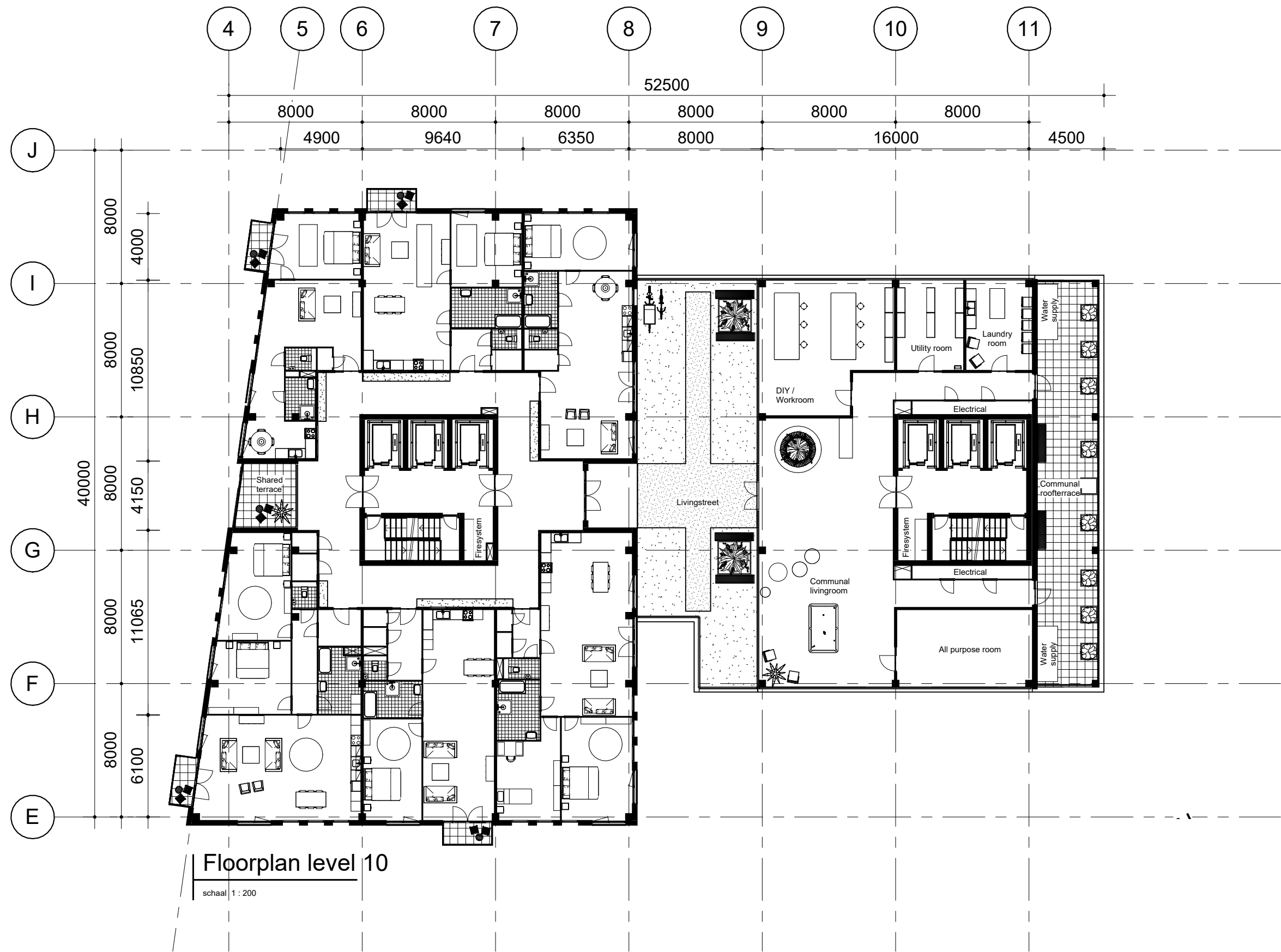
Floorplan groundfloor

schaal 1 : 200



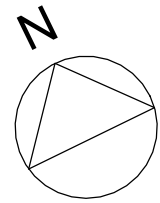


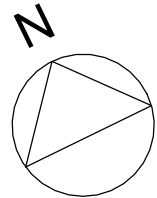
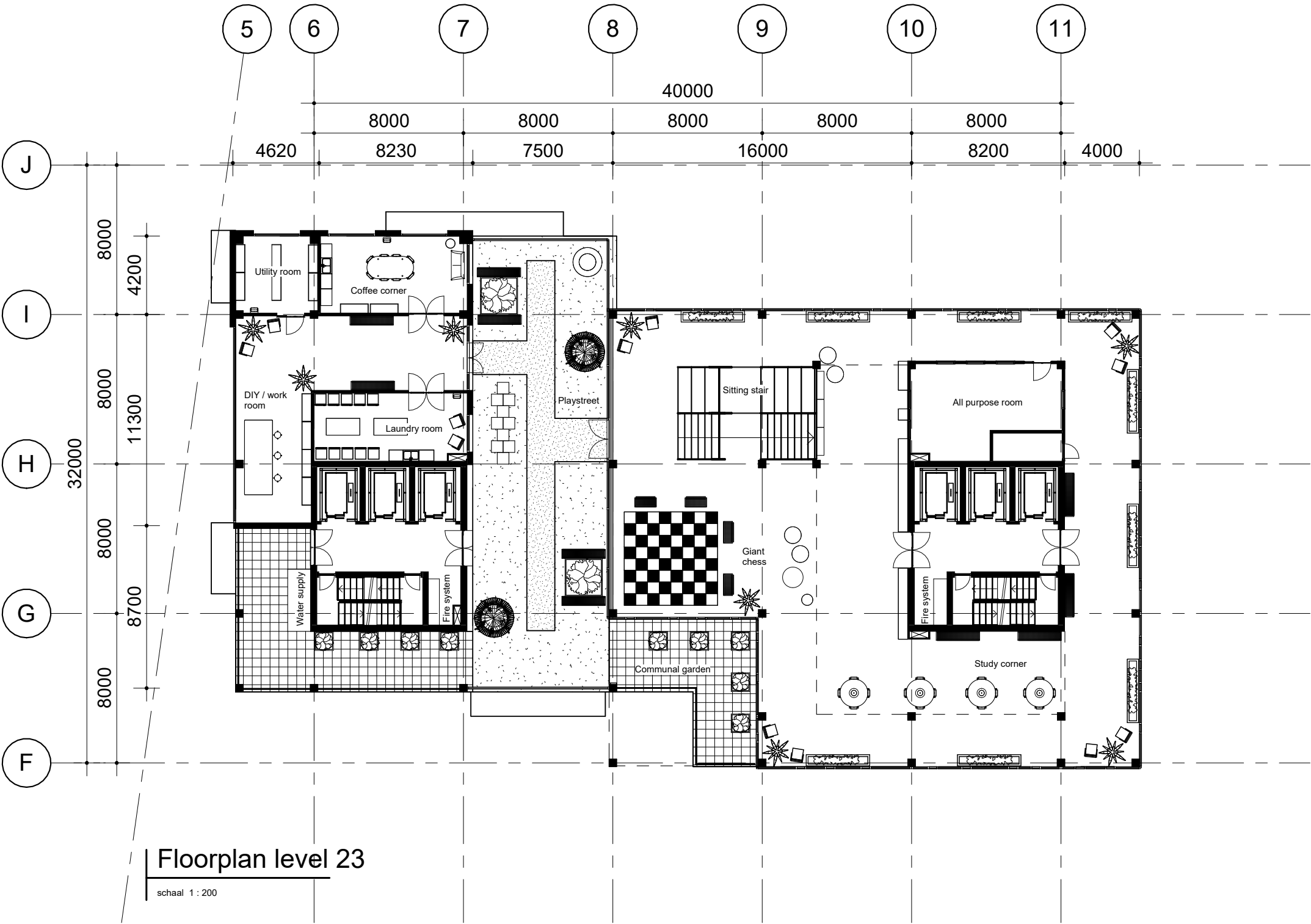


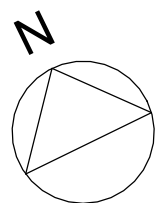


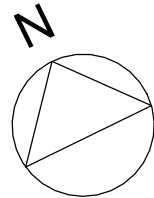
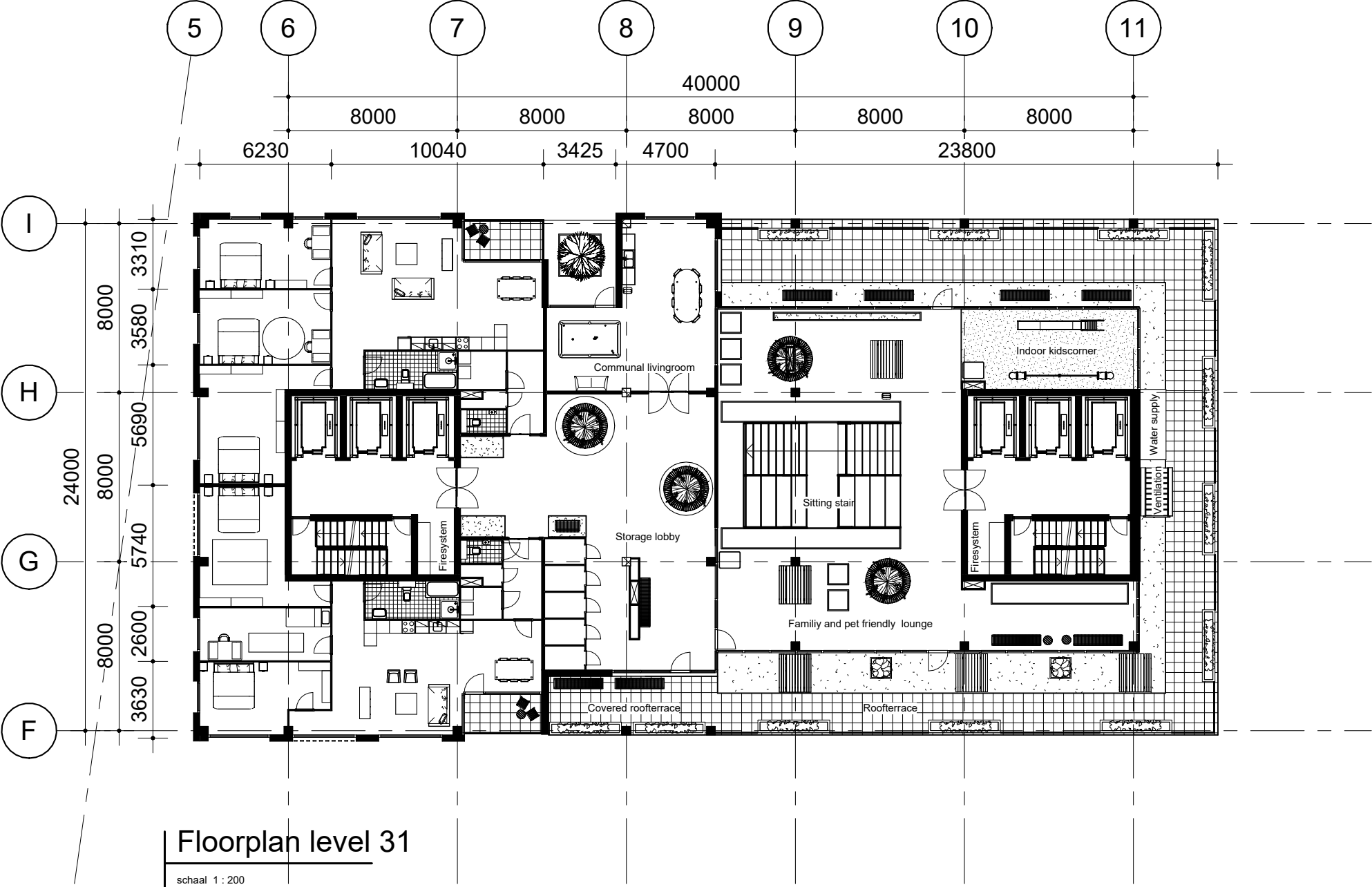
Floorplan level 10

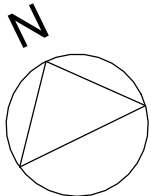
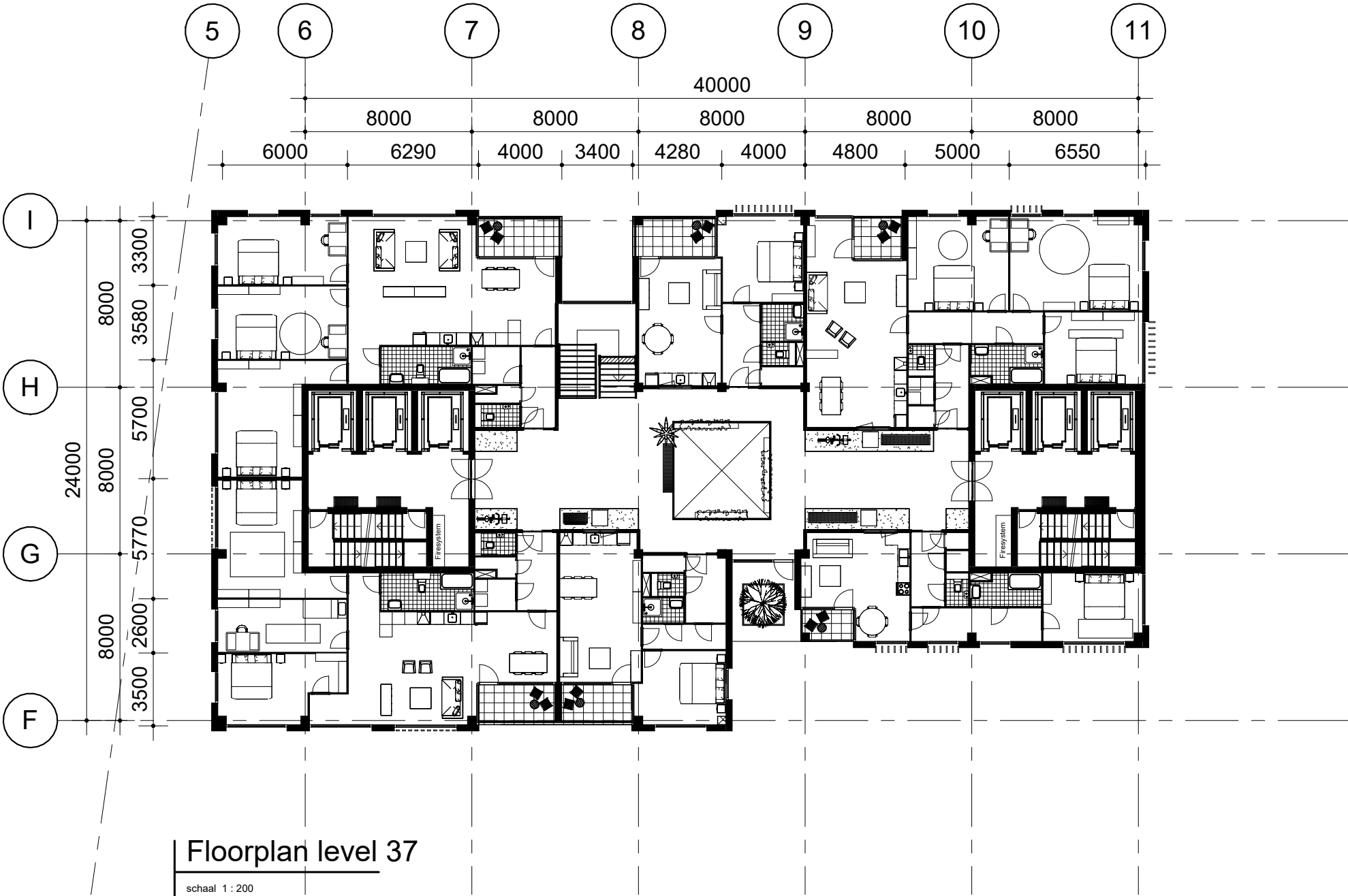
schaal 1 : 200

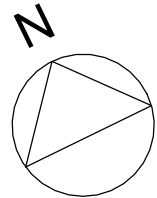
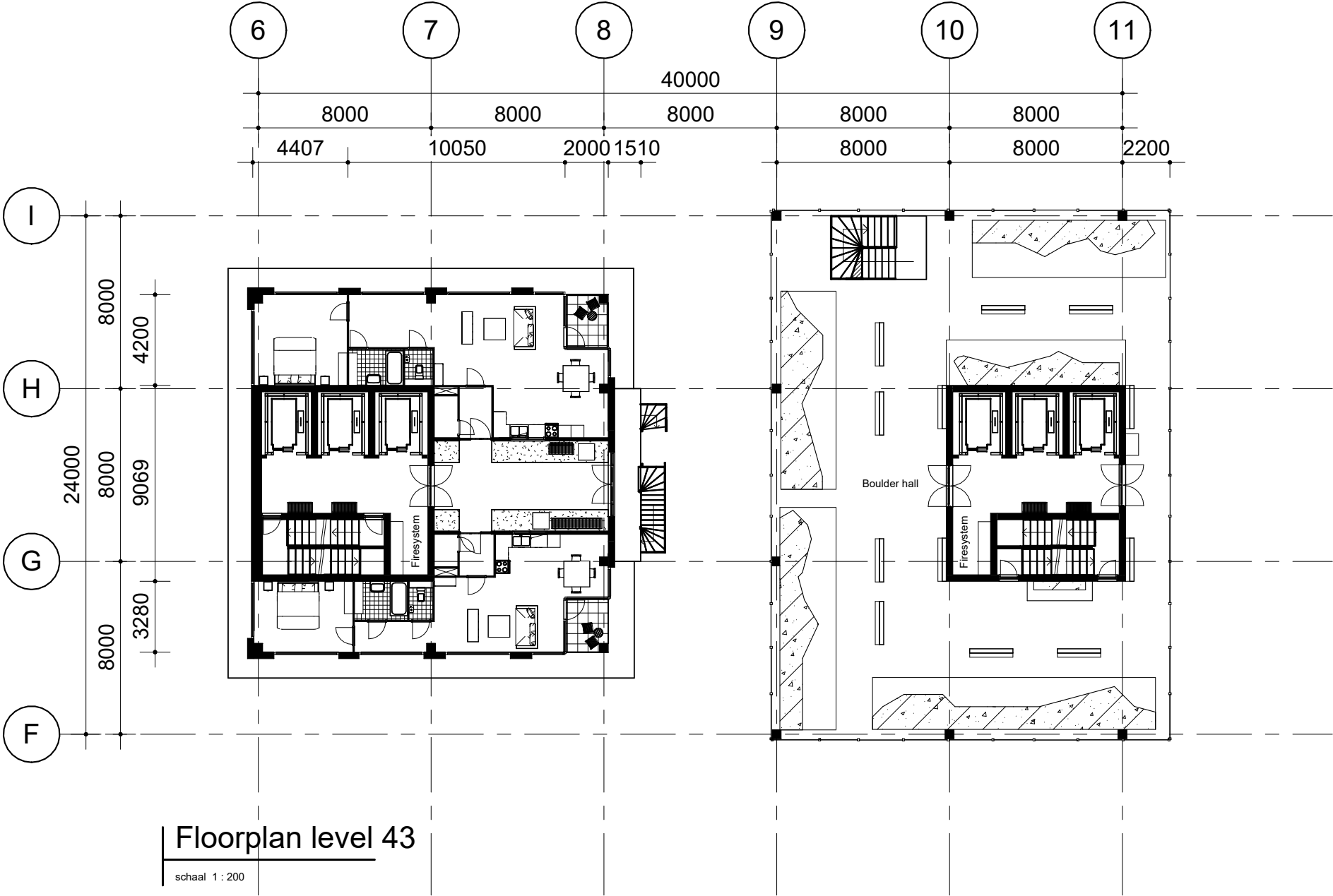


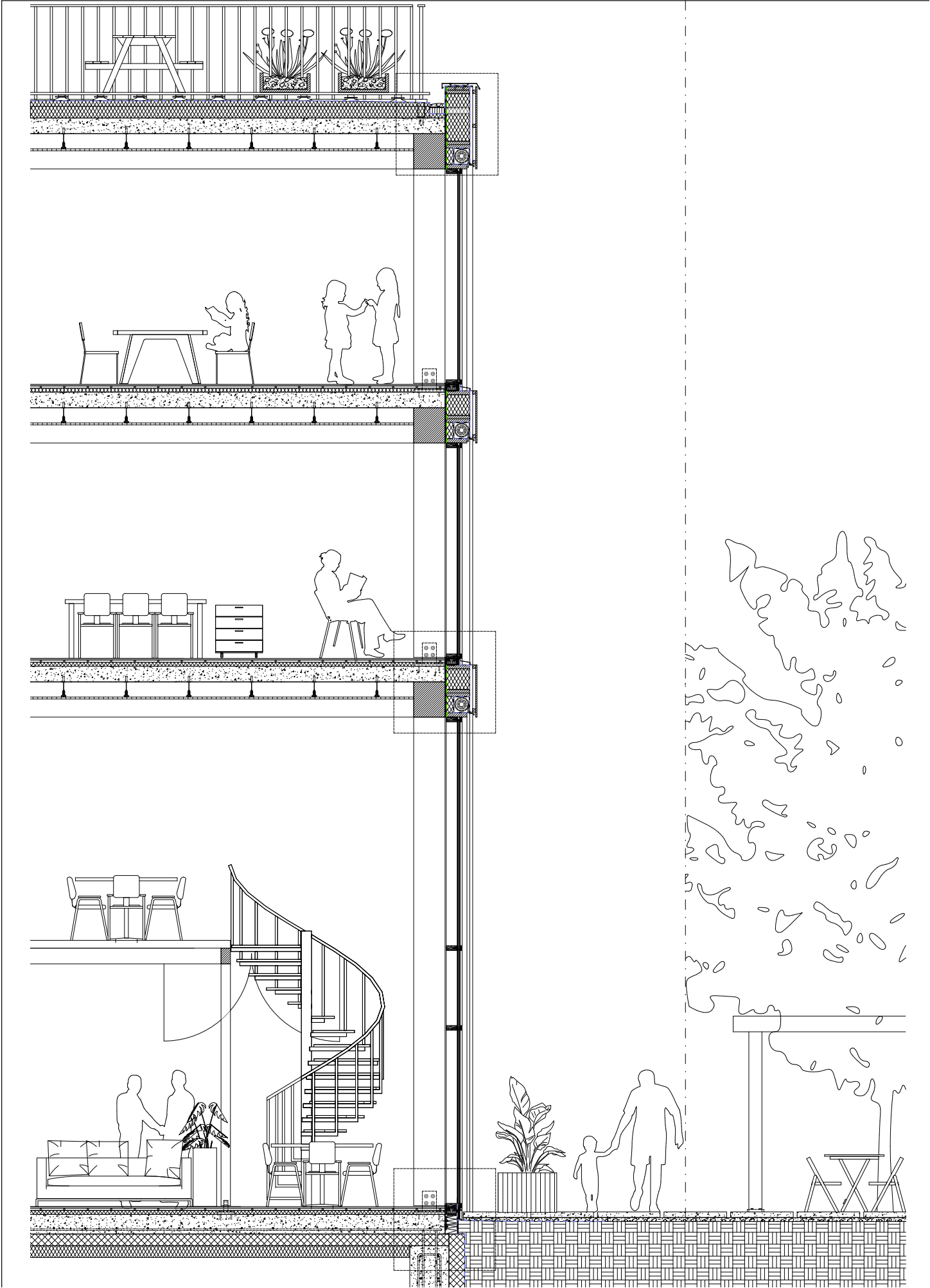




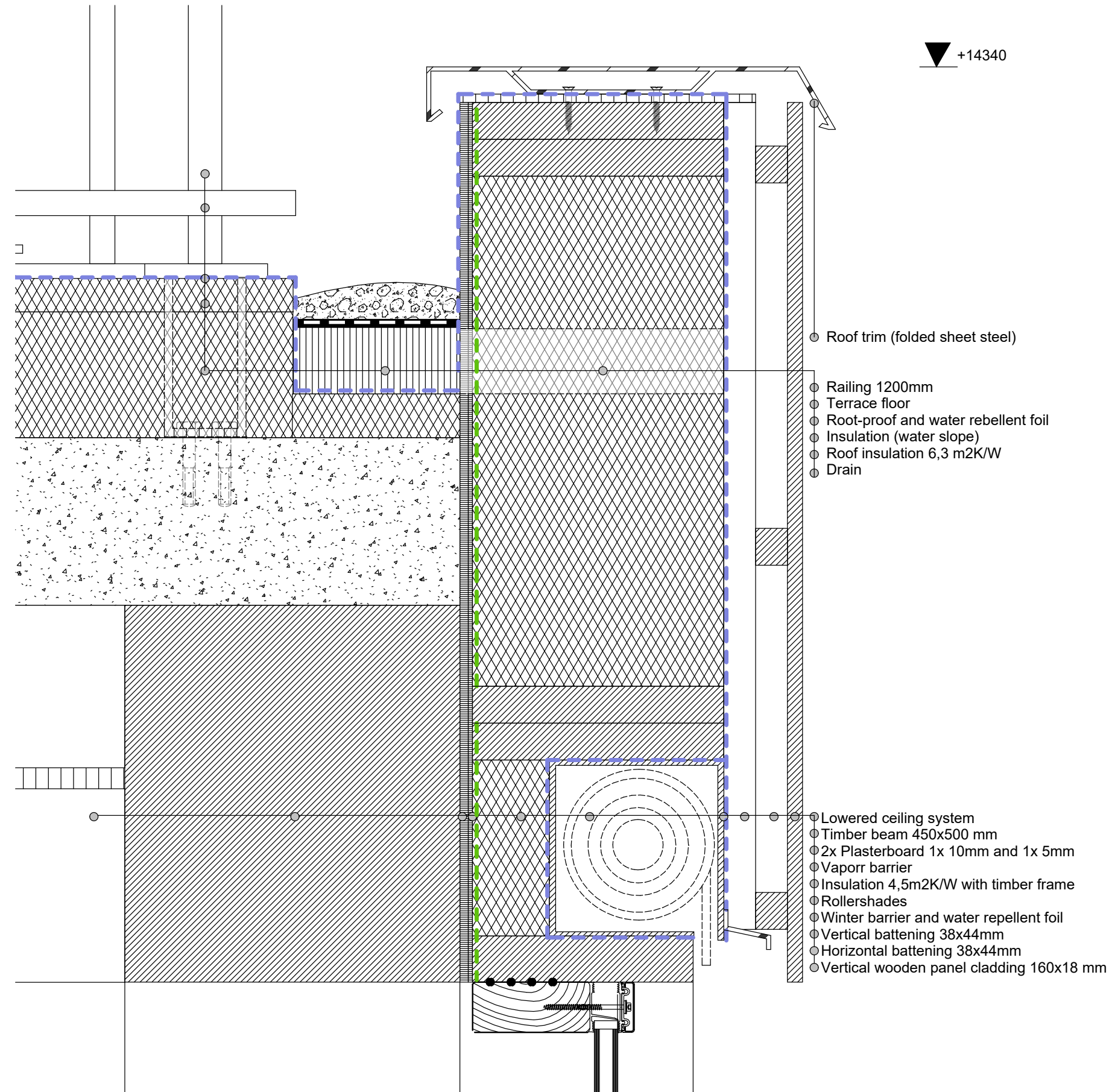




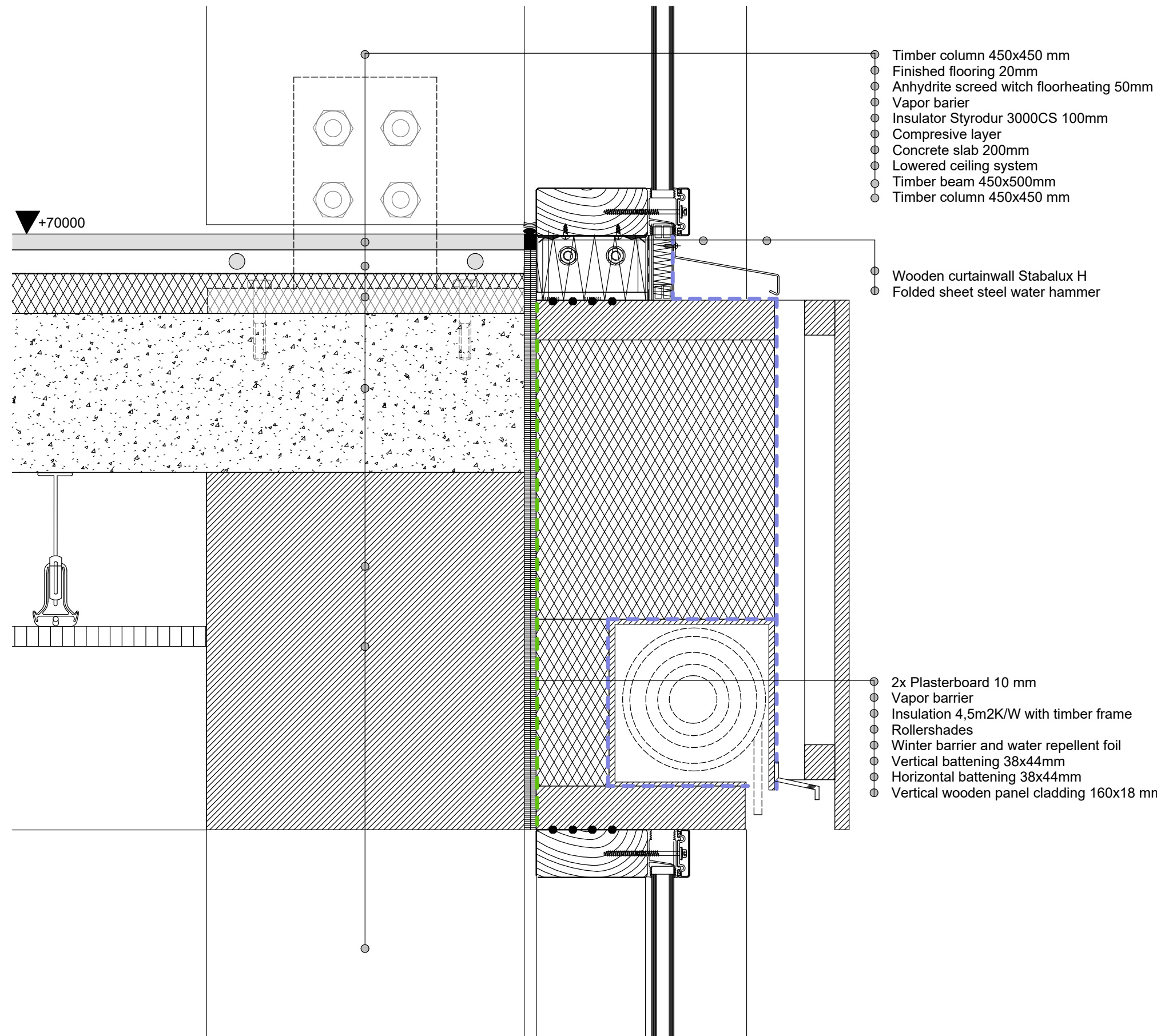




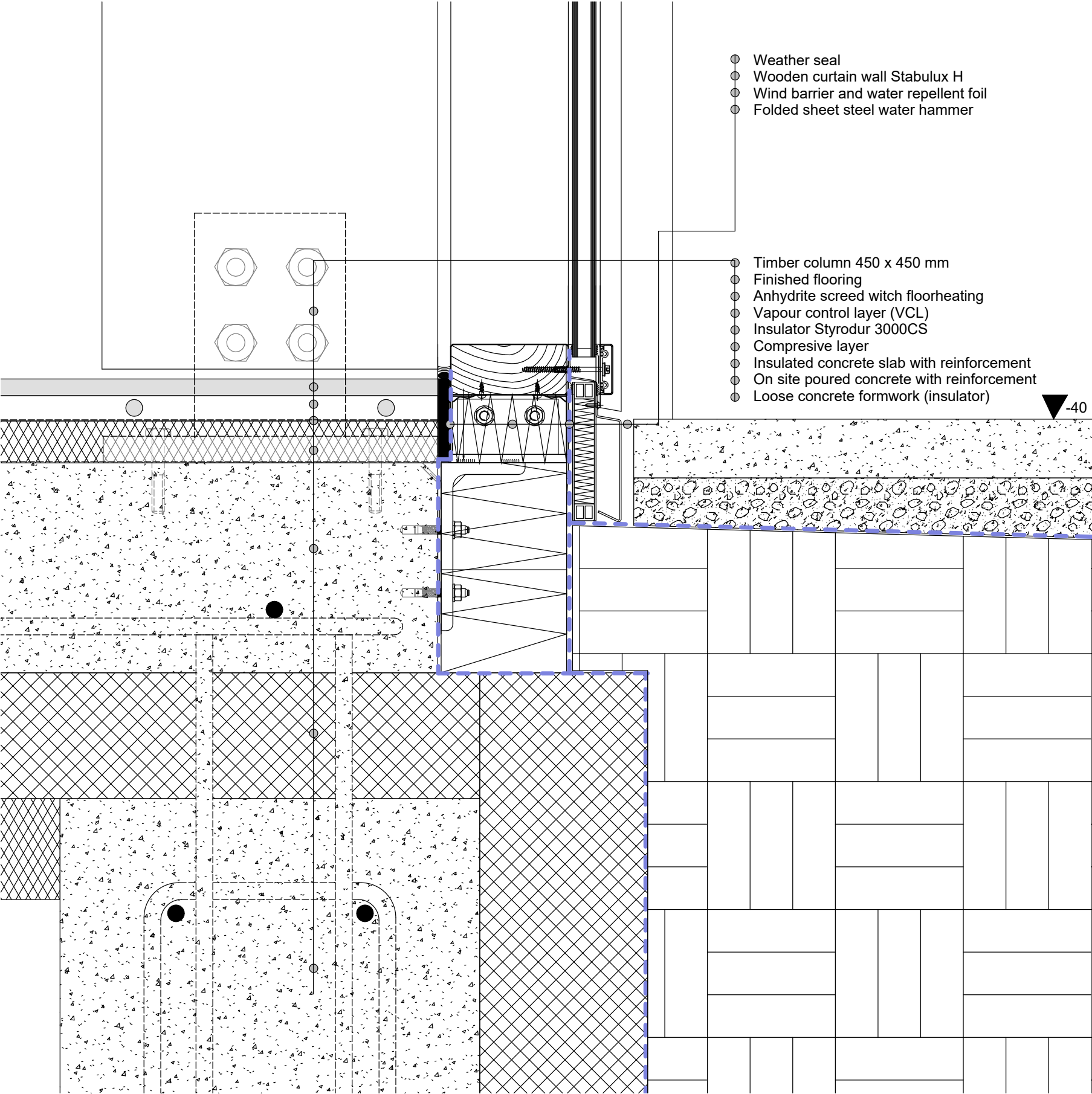
Vertical rooftop terrace detail 1:5



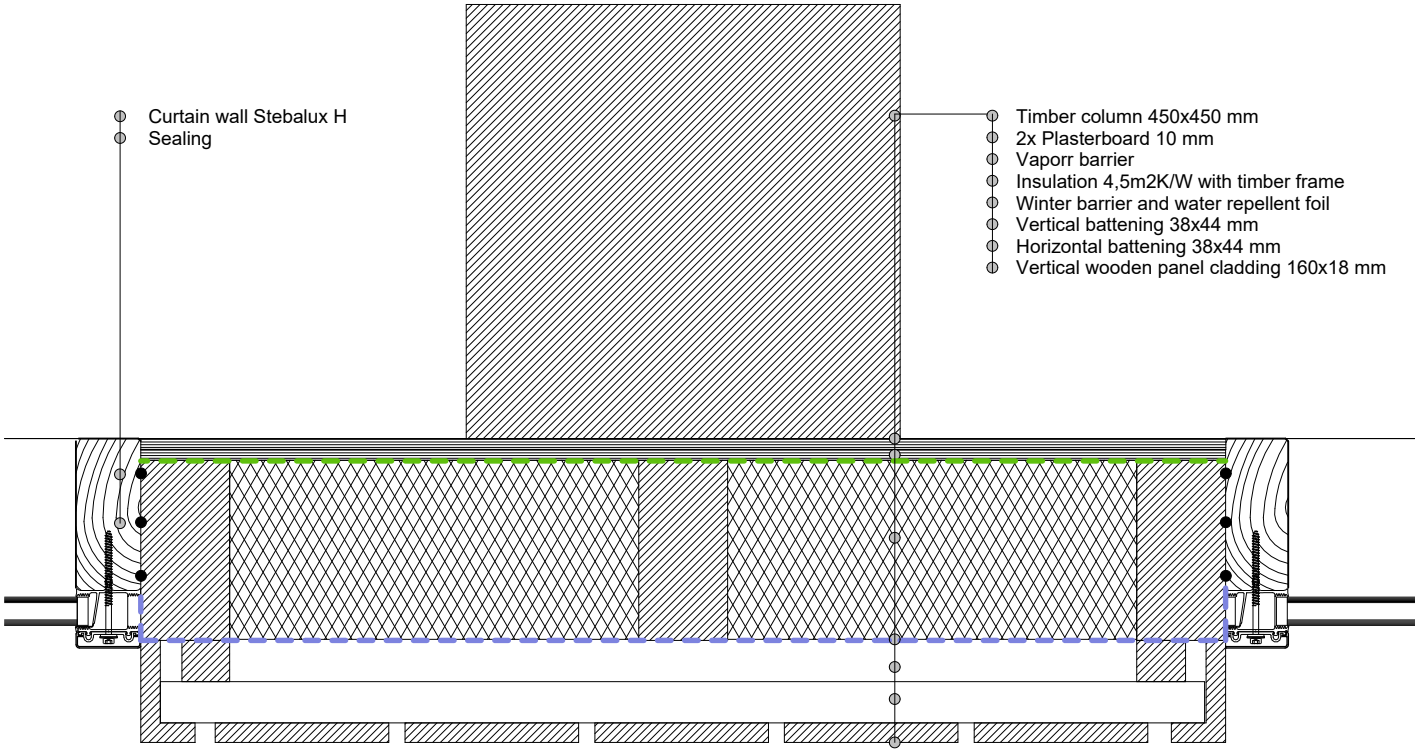
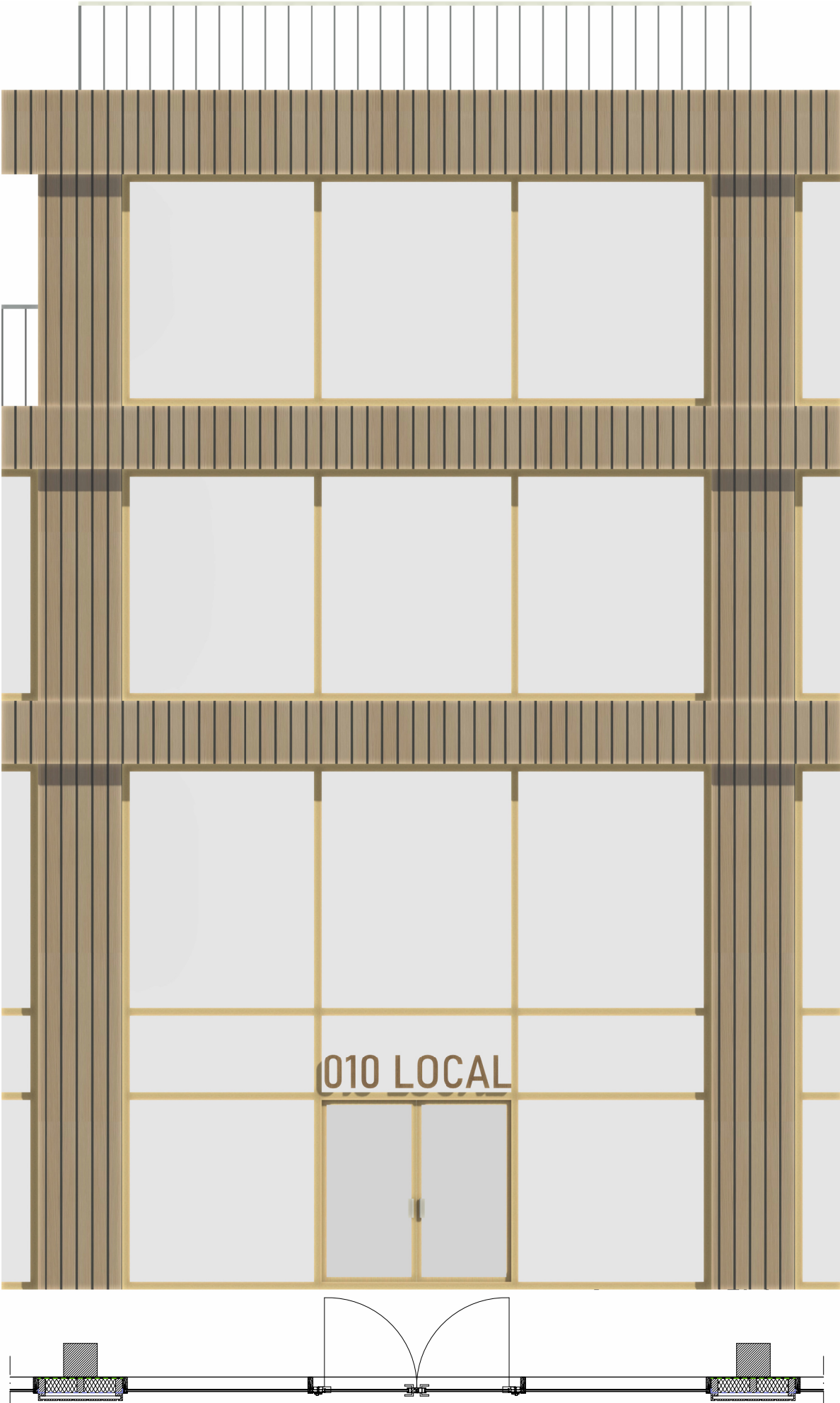
Vertical floor and facade detail 1:5

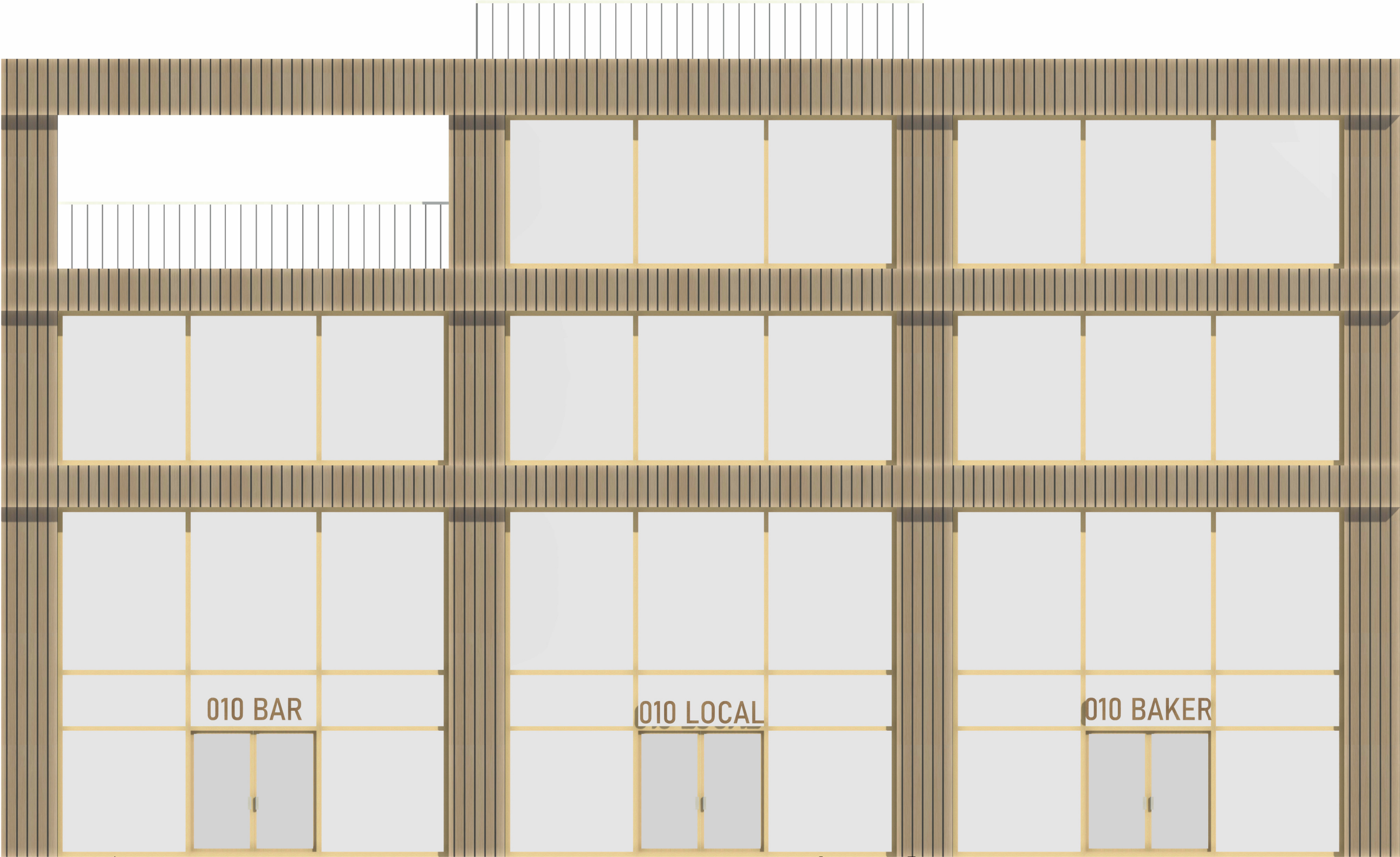


Vertical groundfloor and parkinggarage detail 1:5

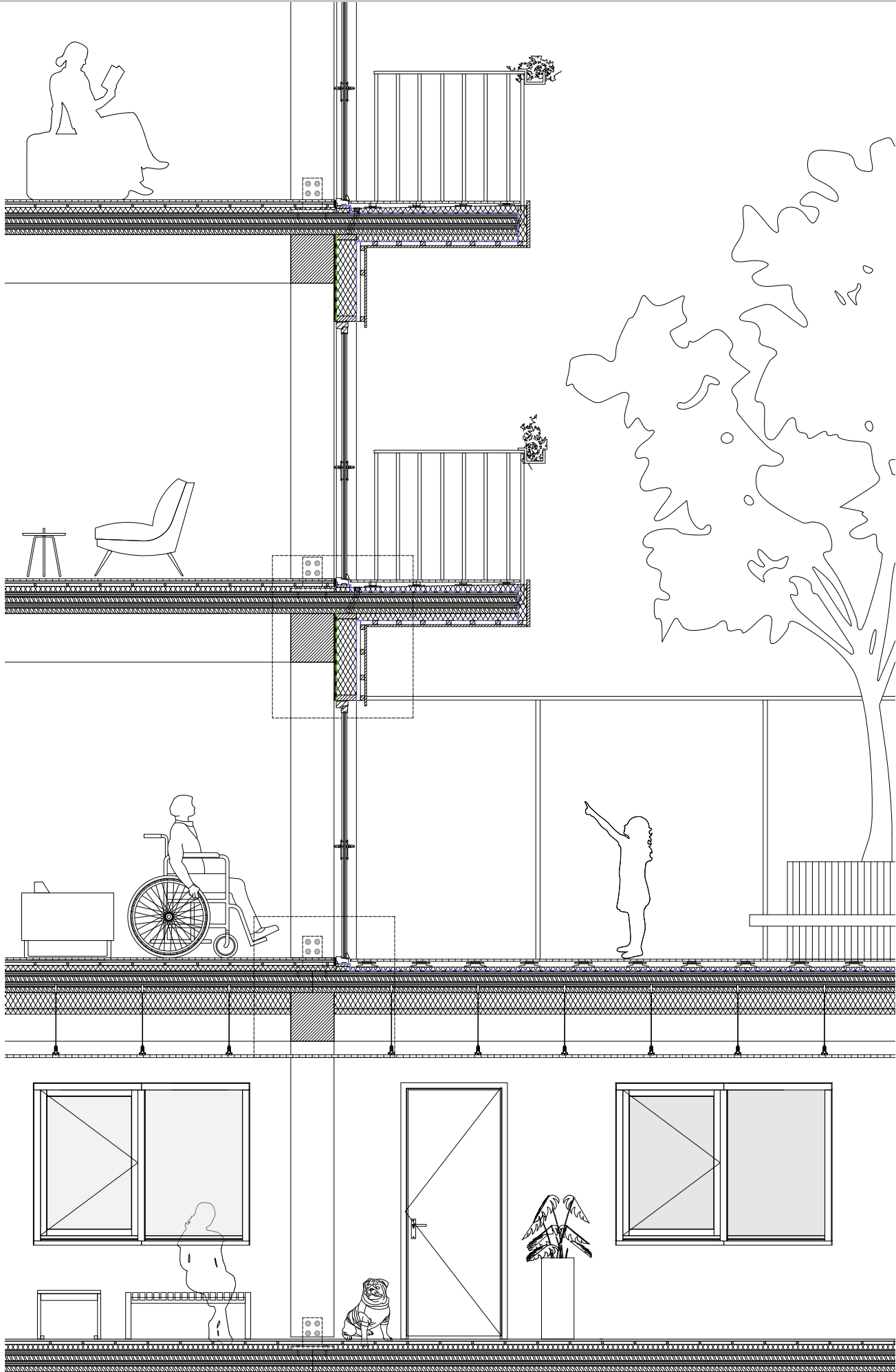


Horizontal facade fragment 1:20

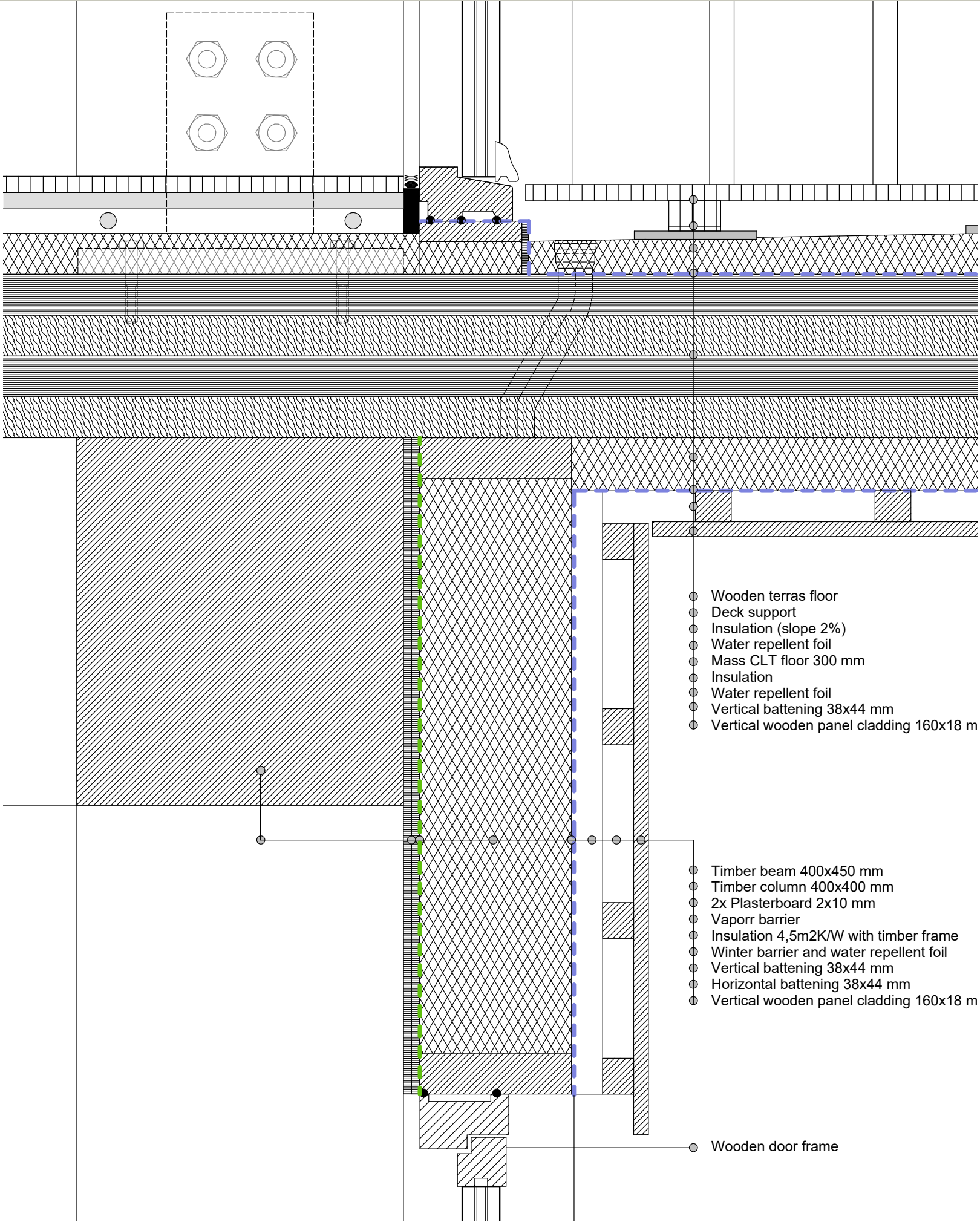




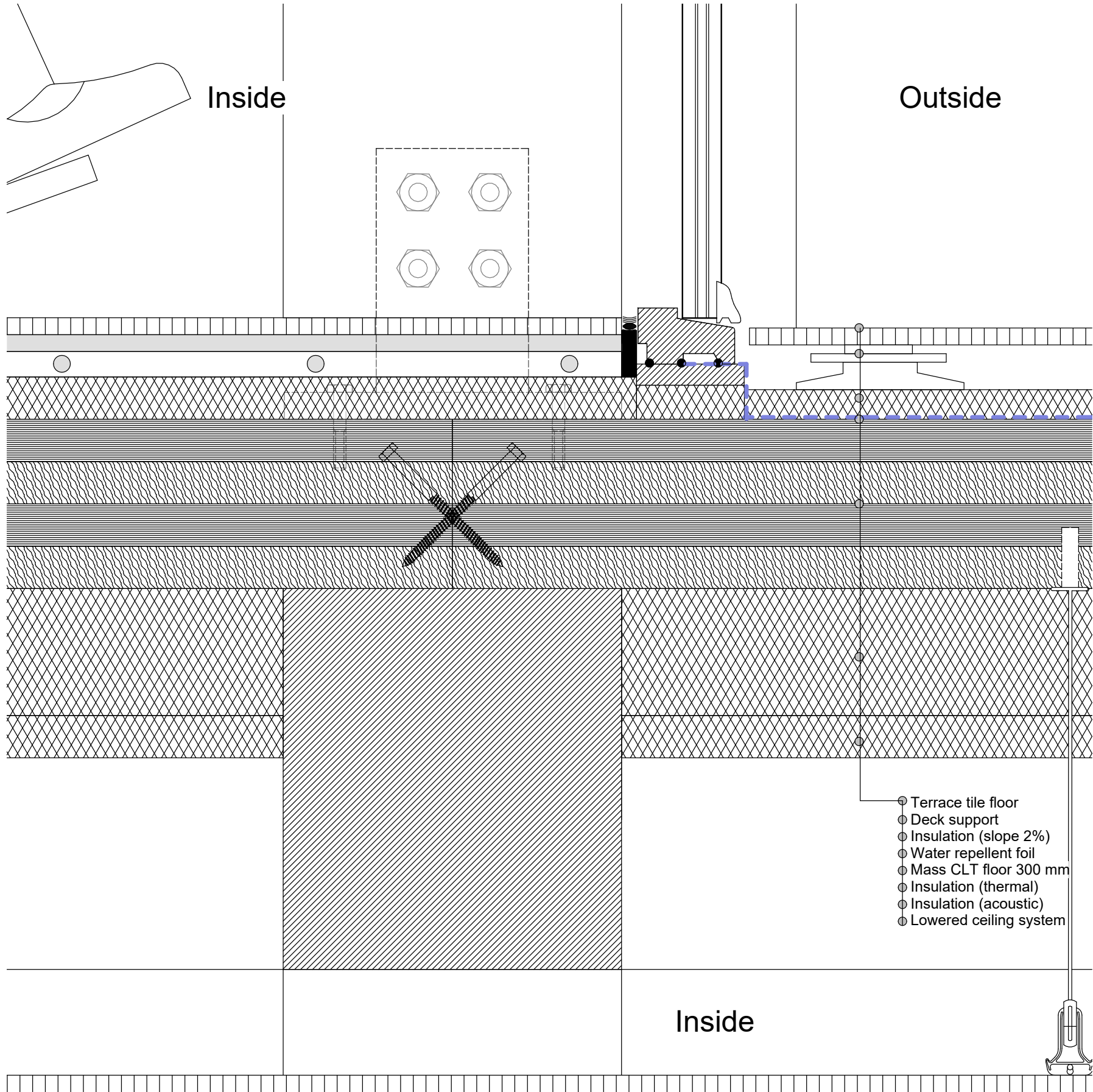
Vertical fragment residential levels 1:20



Vertical balcony detail 1:5



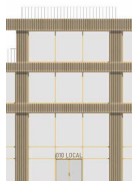
Vertical floor detail between inside and outside 1:5



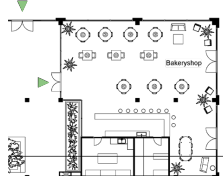
Accessibility



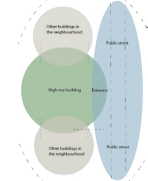
Multi-functional spaces



Transparency



Multiple entrances



Spatial transition



Urban connection

Collective spaces



Encounter



Daily needs



Social interaction



Knowledge

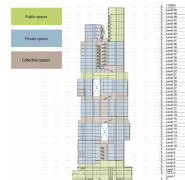


Triangulation

Diversity in space and expression



Hybrid development



Mix-use development



Program



Different demographics



Facade lay-out

Identity and empowerment



Social identity



Personal strip

Flexibility



Division of spaces



Diversity in lay-out (indoor/outdoor)



Sustainable

Sense of belonging



Inclusive



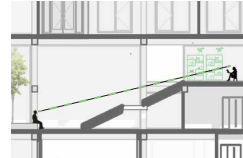
Participation



Personal infill



Placemaking objects



Visual connection

Human needs



Daylight



Climate



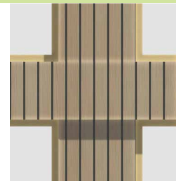
Cross ventilation



Furniture



Human scale



Materialisation



Greenery









The communal livingroom





The living corridor as a meeting space





Master thesis

Author: Linda Tran Nguyen
Student number: 5734134
1st supervisor: Roberto Cavallo
2nd supervisor: Piero Medici
3rd supervisor: Maurice Harteveld
Version: Drawings and process
Date: 01-07-2024

Title: Social acts at height
Sub-title: Liberated from the social loneliness in high-rise buildings
Location: The Netherlands, Rotterdam
Case studies: Zalmhaventower, Cooltower, Red Apple and New Orleans

University: Technical University Delft
Faculty: Architecture and the Built Environment
Mastertrack: Architecture
Studio: City of the future 2023/2024

Keywords: Social interaction, Social loneliness, Community, High-rise, Public space, Communal space, Engagement