

Vertical Habitat in CBD, Singapore



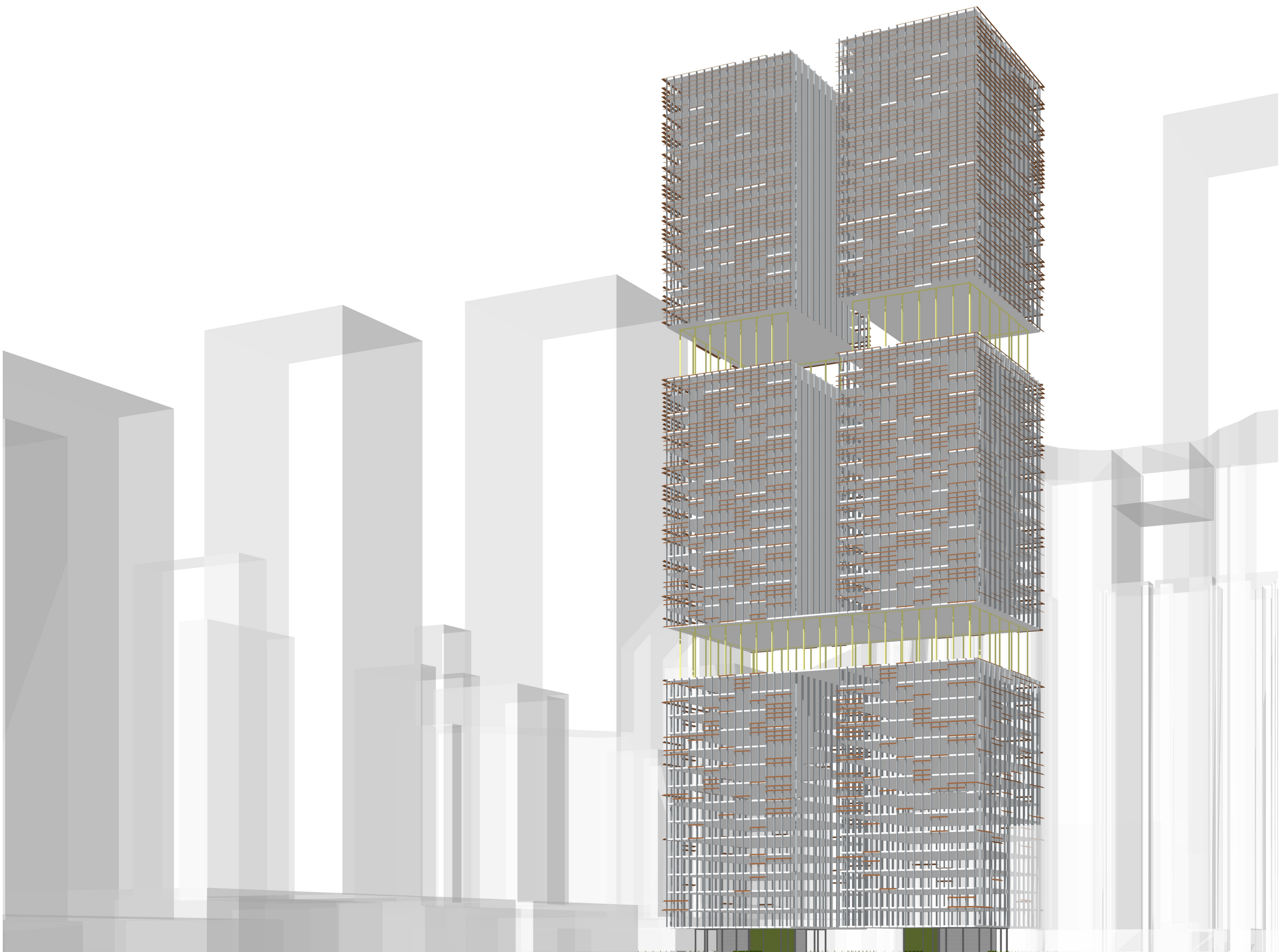
POLITECNICO
MILANO 1863

Presented to

Prof. Maria Grazia Folli
Prof. Corrado Pecora
Prof. Giovanni Dotelli
Prof. Francesco Romano
Prof. Marco Imperadori

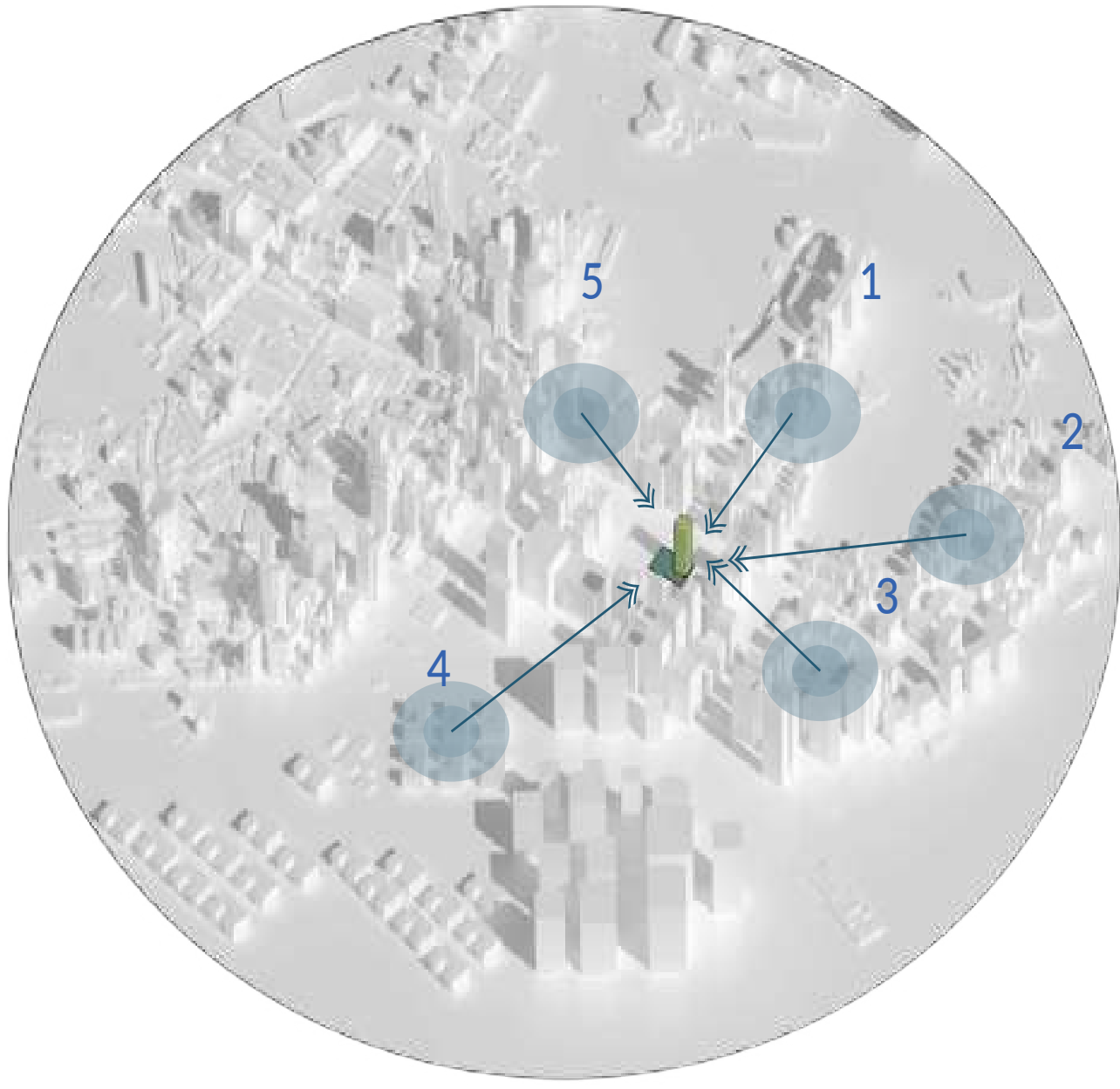
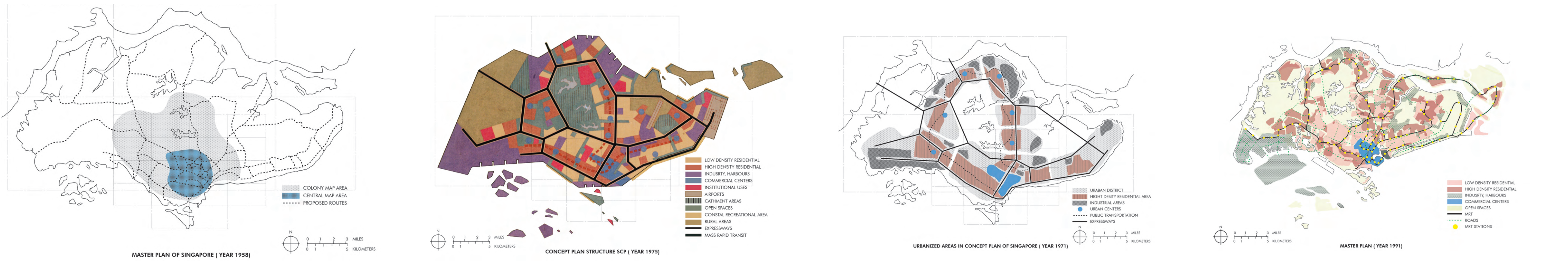
Group 8

Diana Trushina
Hamza Yaseen
Kristina Perkova

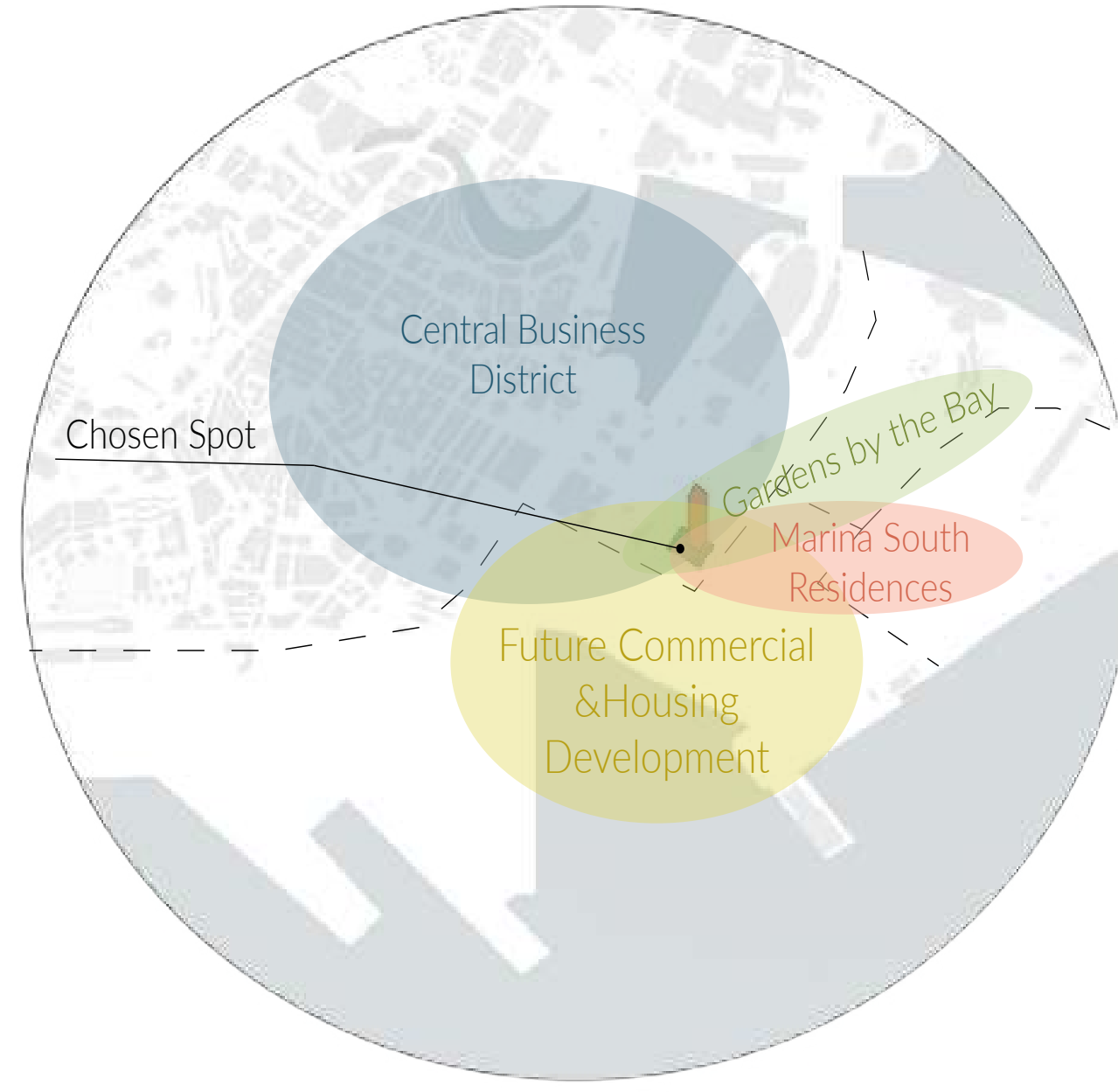


SINGAPORE URBAN PLANNING

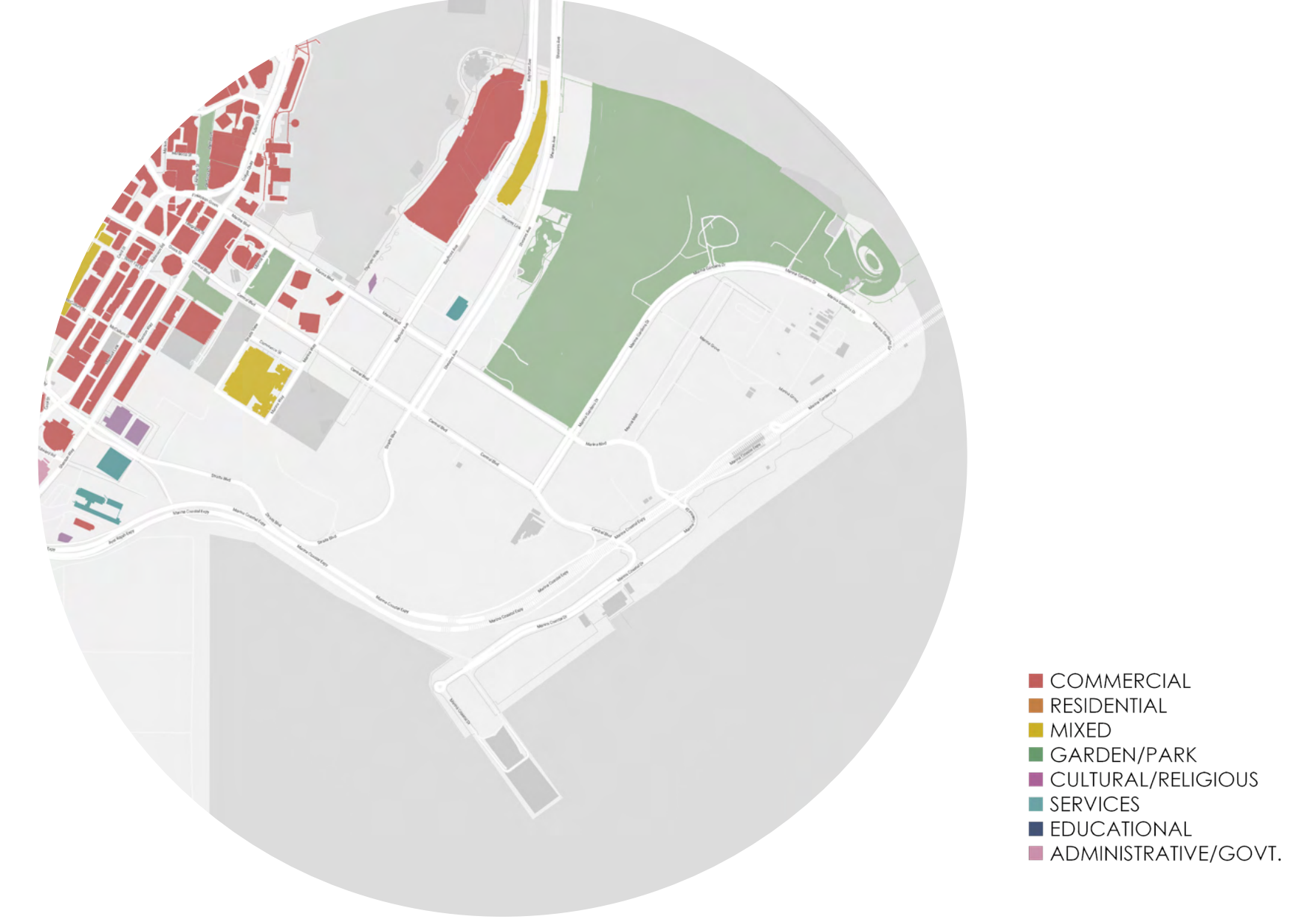
Evolution of master plans of singapore pre and post independence



SITE AS CONCENTRATION POINT

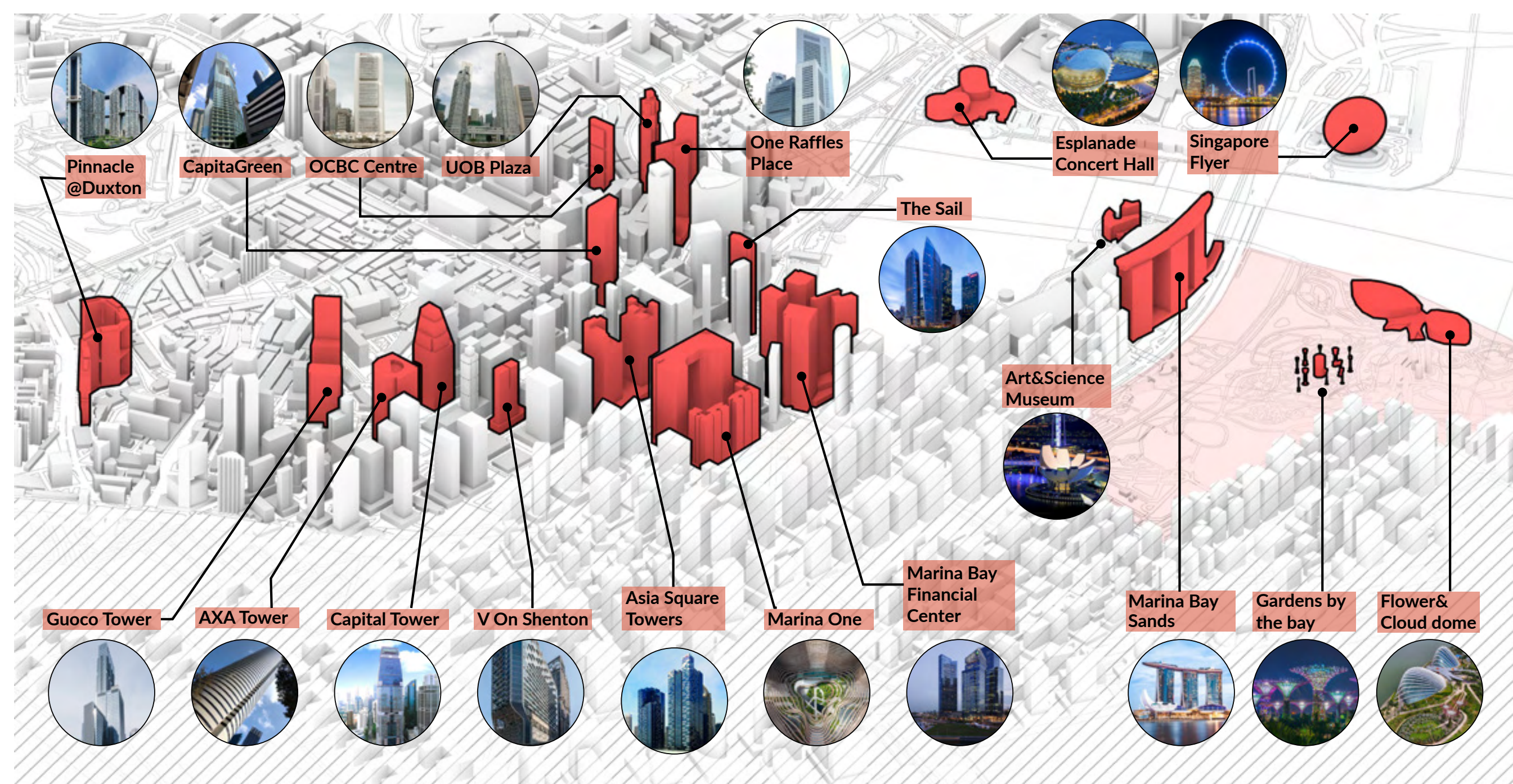


SITE INTERACTION



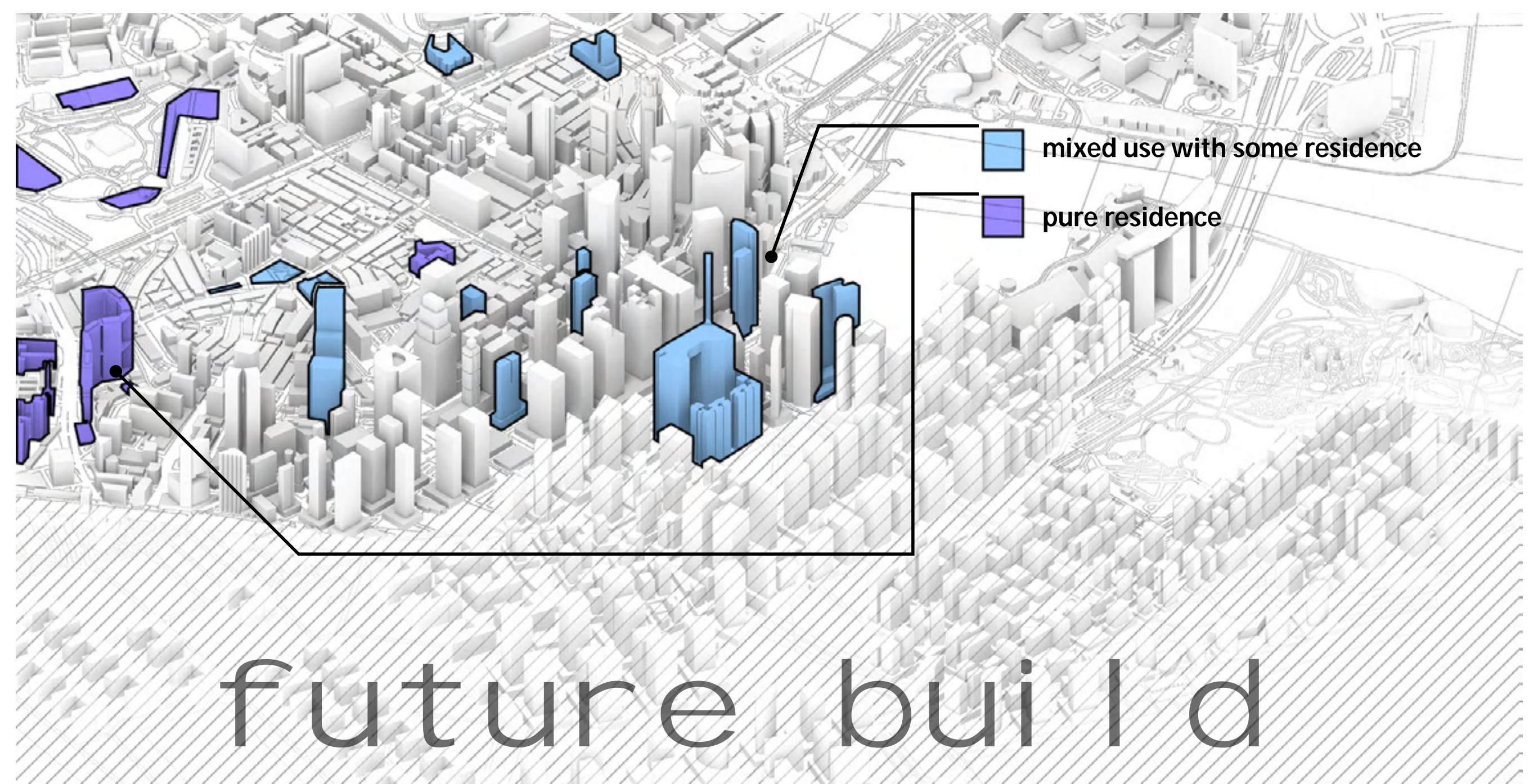
land use map

iconic buildings in the area (*abudant*)

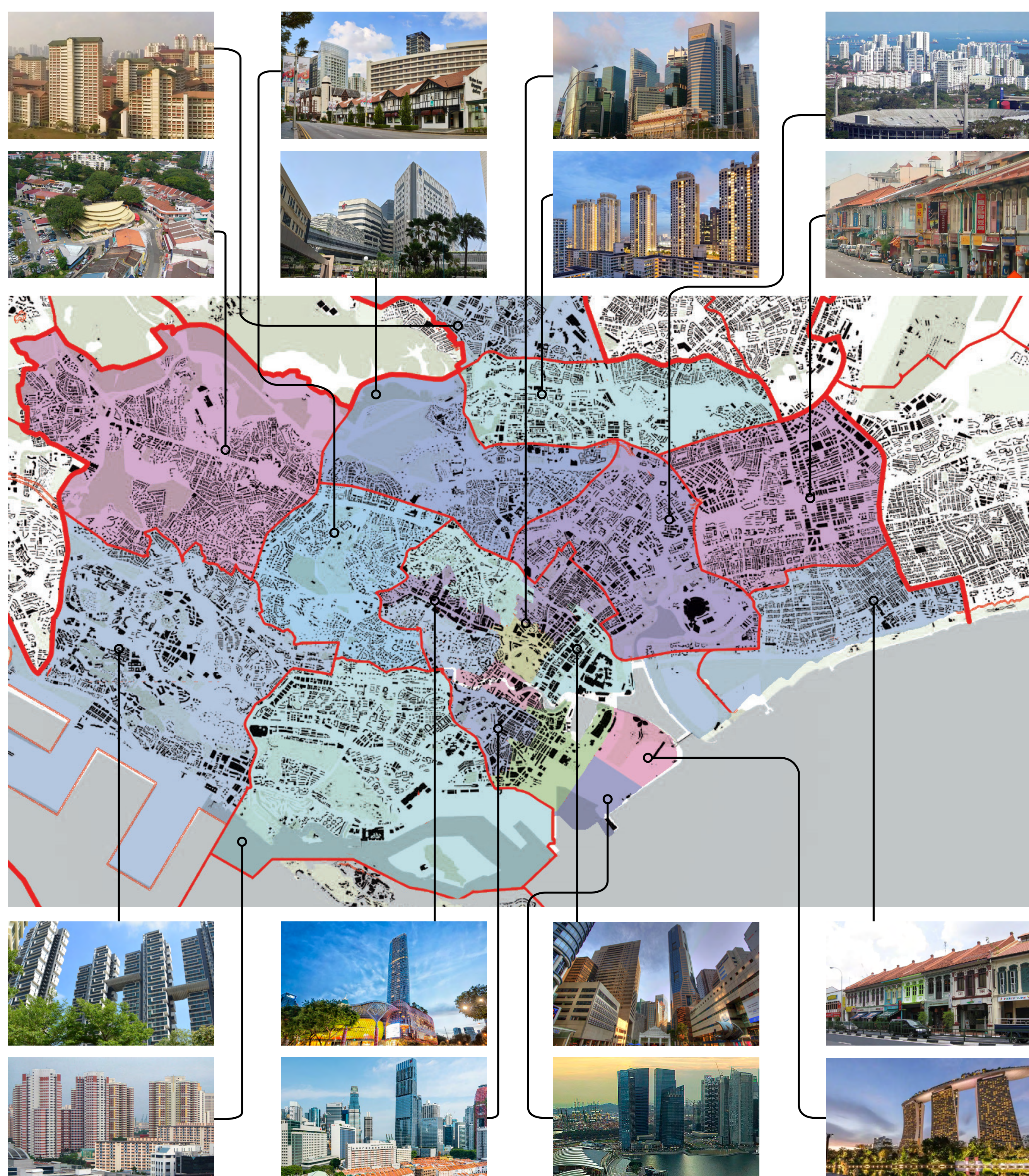


The CBD area of Marina Bay is full of iconic buildings, mostly high-rise, but also of other typologies; there are so many, that not all of them made it into the showcase.

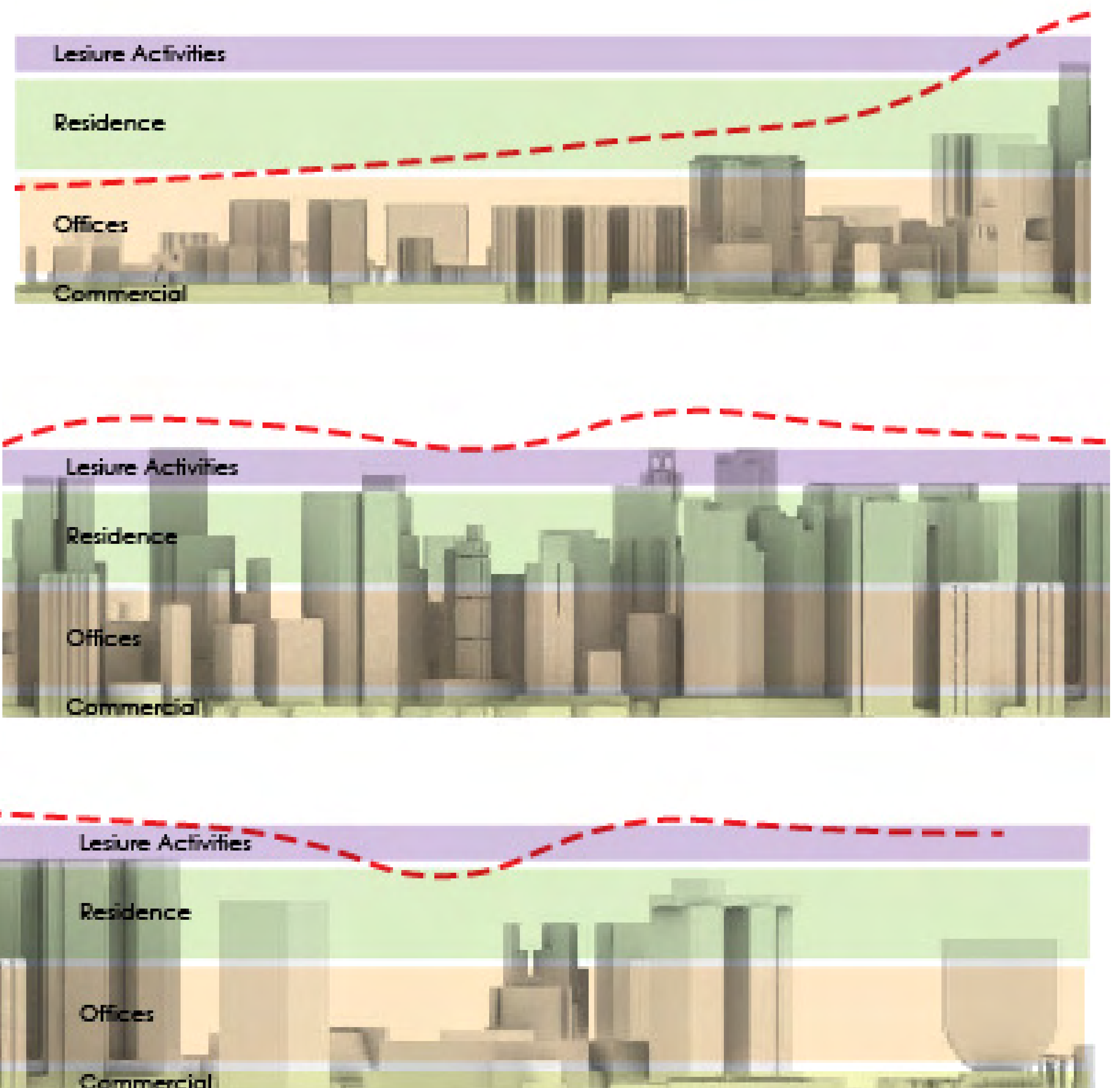
residential buildings (*lacking*)



At the same time, residence in the area is almost non-existent; mainly it is presented by apartments available for rent in mixed-use buildings, and only on the outskirts of CBD we can find a couple of purely residential buildings.



Defining the tallness in singapore



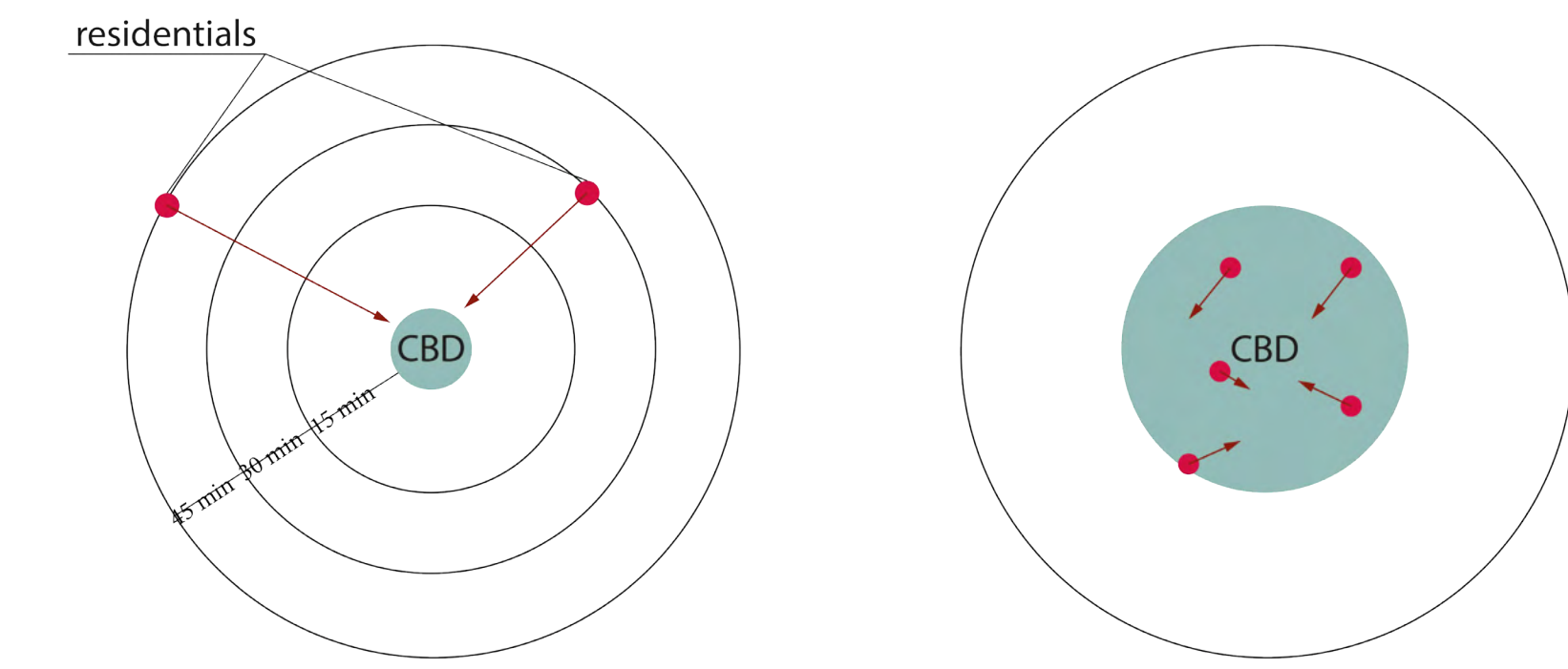
Understanding the site

Study of morphology and site context

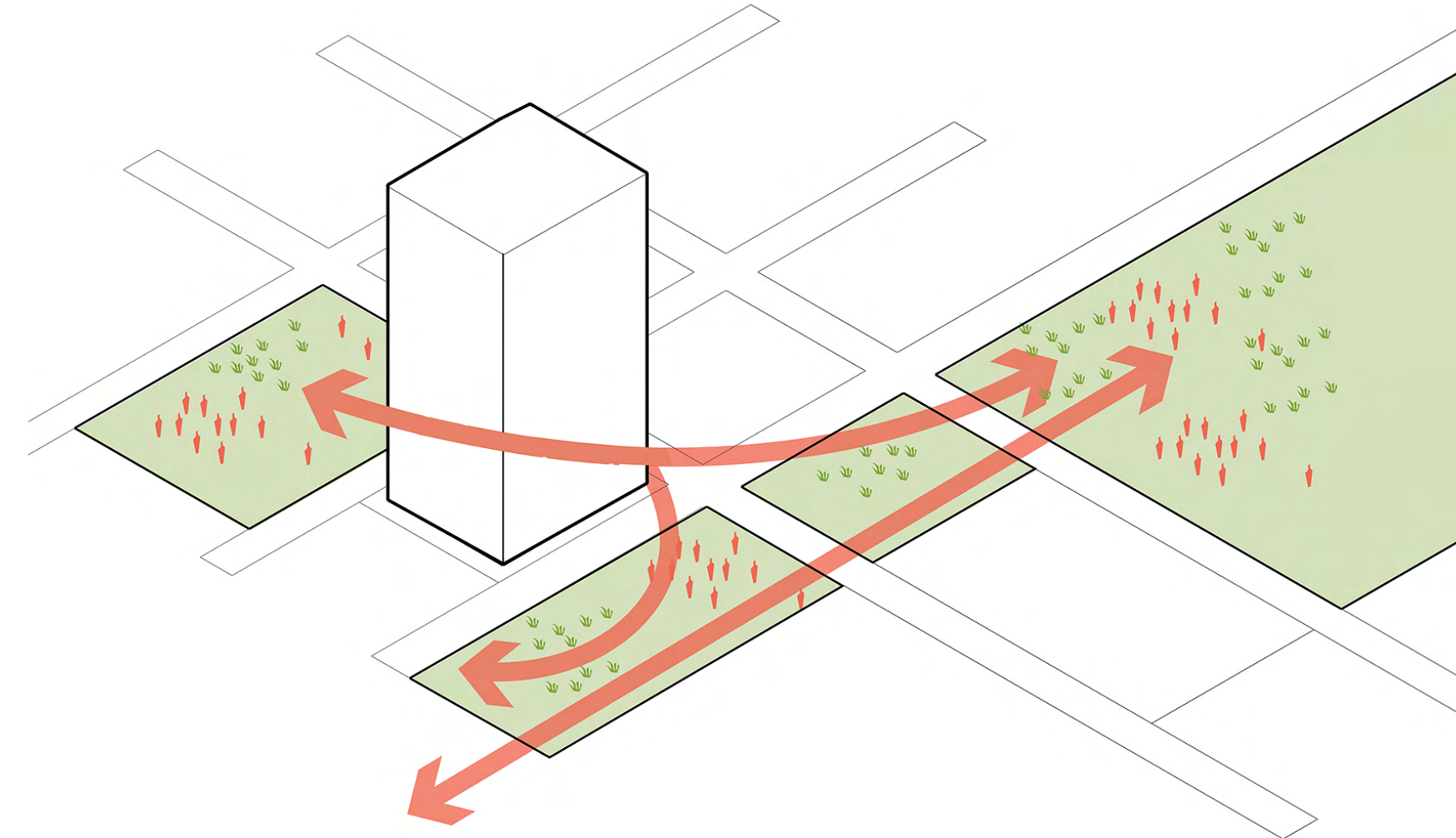
SINGAPORE CBD - MARINA BAY AREA - Study of existing and future urban development



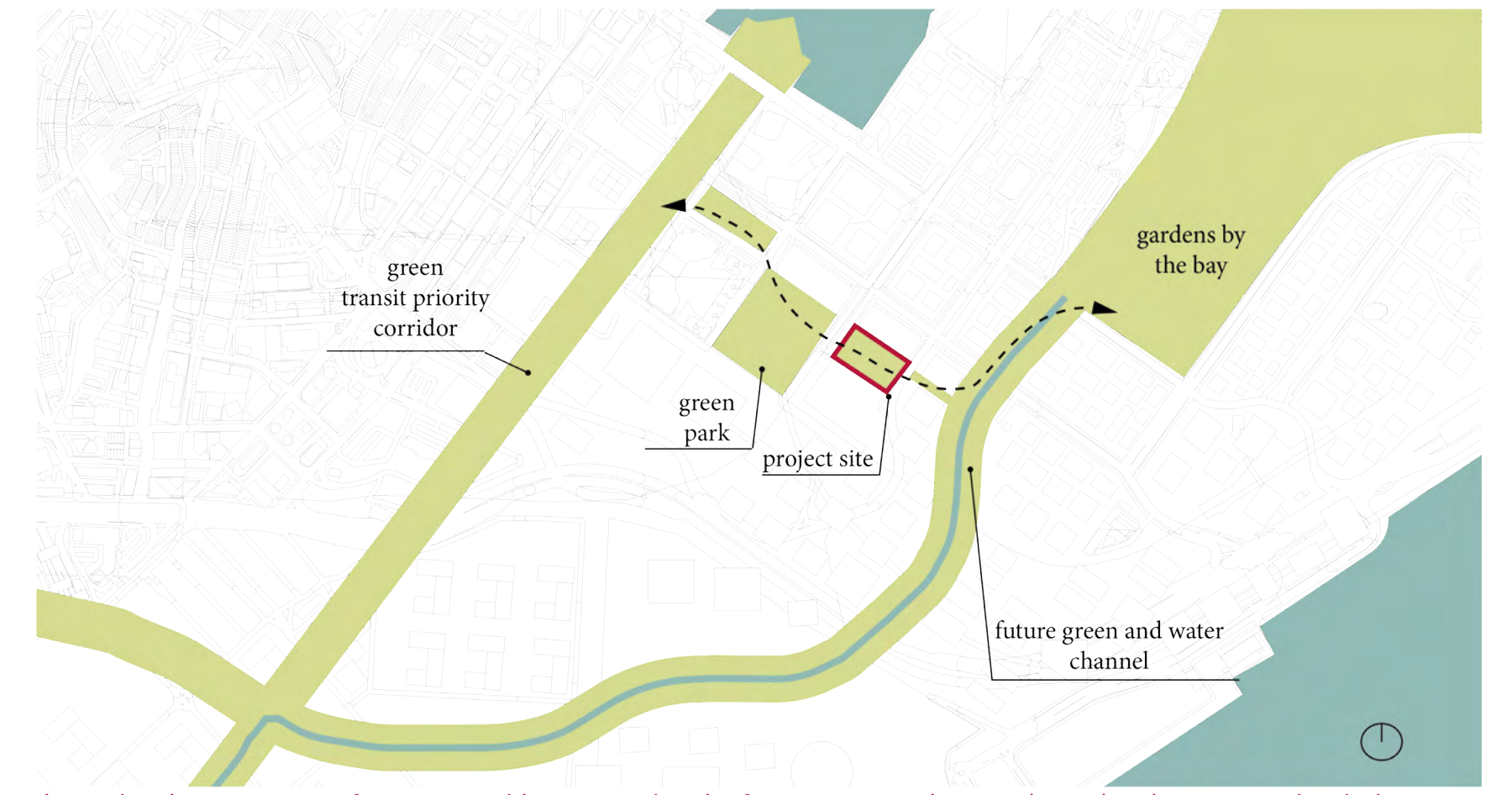
urban official strategy of transformation central business district into mixed use area



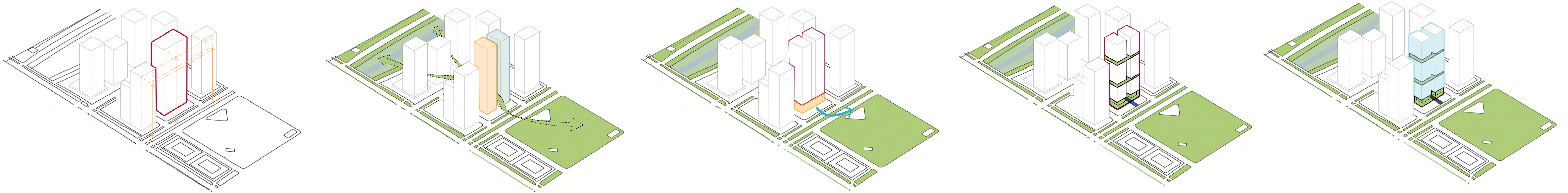
strategic location chosen to meet the needs of residents who work in the business district and want to live in the vicinity



city in nature - green corridors



the project becomes part of a green corridor connecting the future green and water channel and green transit priority corridor through the green park



1 placing the volume in urban context; analysis of the potential build of the area; adjusting the height of the building to the context and to the local regulations of the country

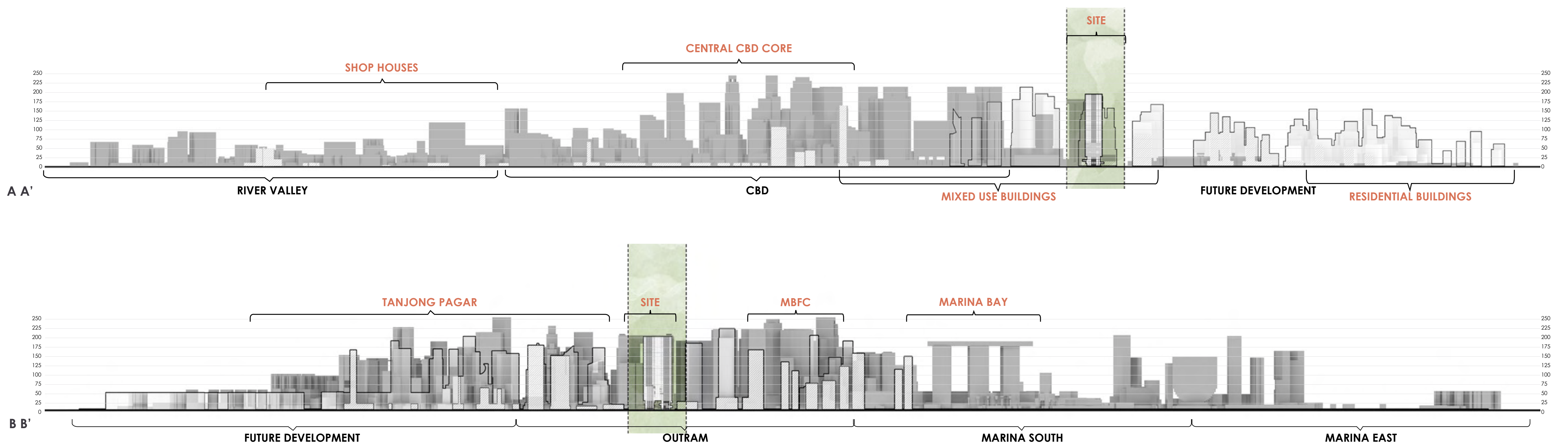
2 creating a passage = "green corridor" through the tight land plot and the building itself to aid in connecting the city's green zones together

3 opening the bottom floors to the public as free passage and communal space; creating a clear connection to the local metro station through the underground

4 cutting the volumes of the buildings to distinguish two "gardens", which connect the towers together visually and act as internal social space for the tenants, as well as a notable appearance element

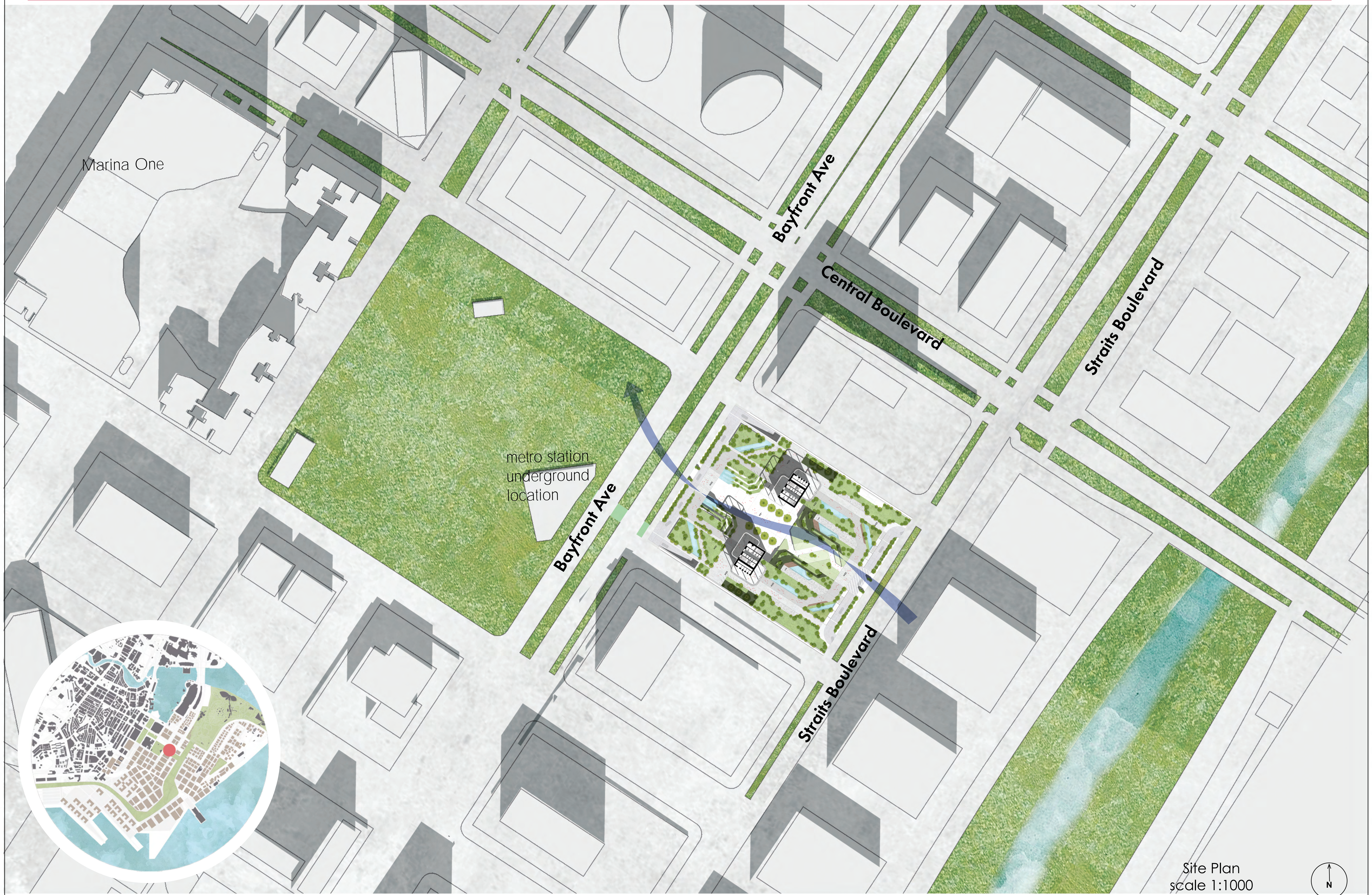
5 wrapping a skin round the building in addition to the normal curtain wall to allow for shading where sun is not wanted (typical floors) and get maximum sun where its required (garden floors).

conceptual shaping



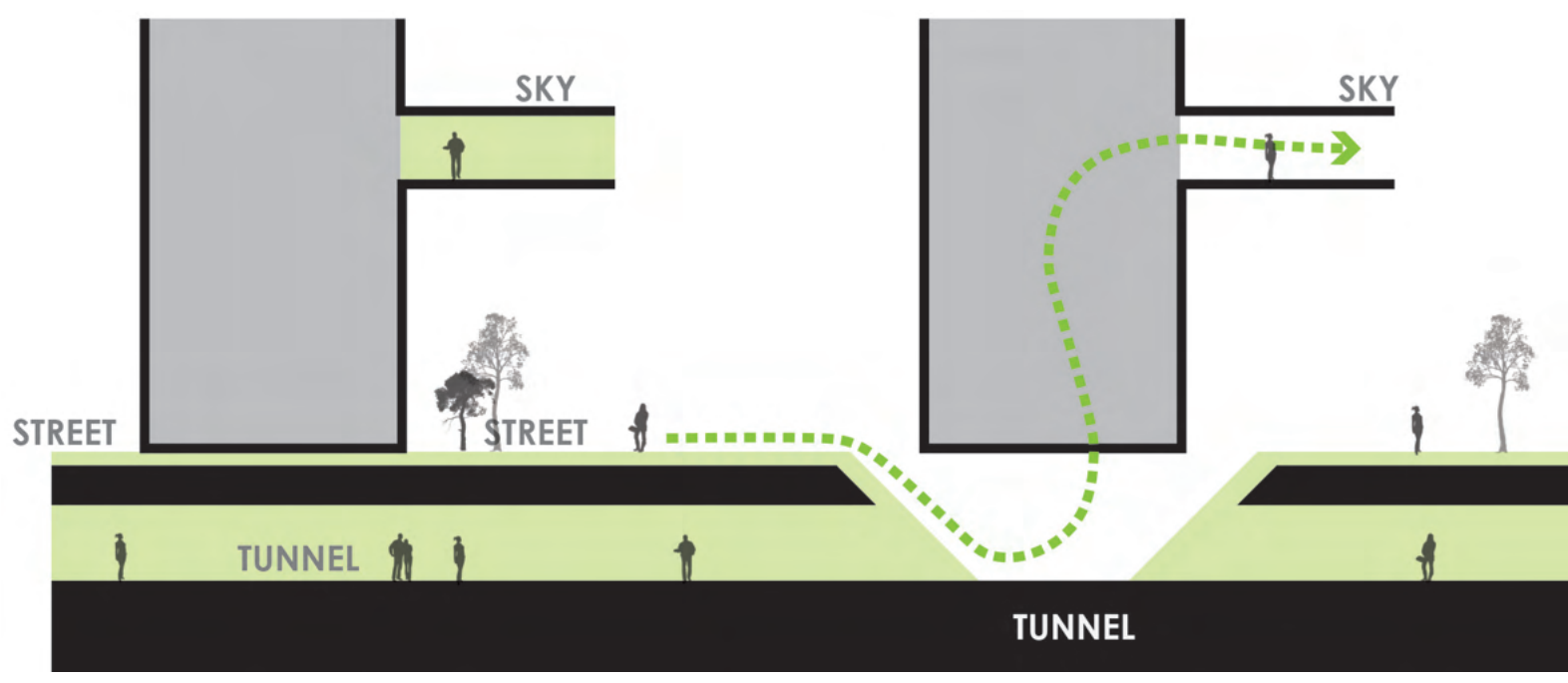
MASTERPLAN

site & masterplan definition

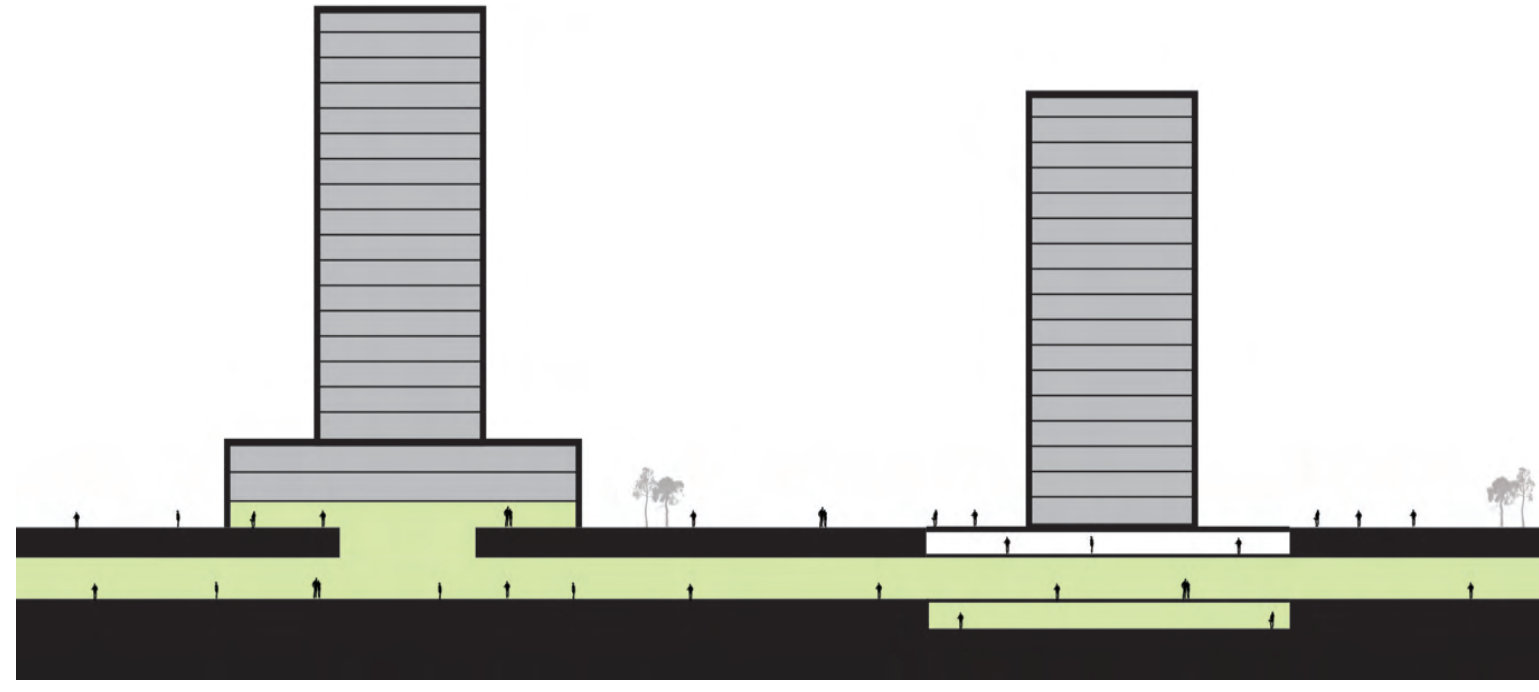


Building Program & Public Piazza

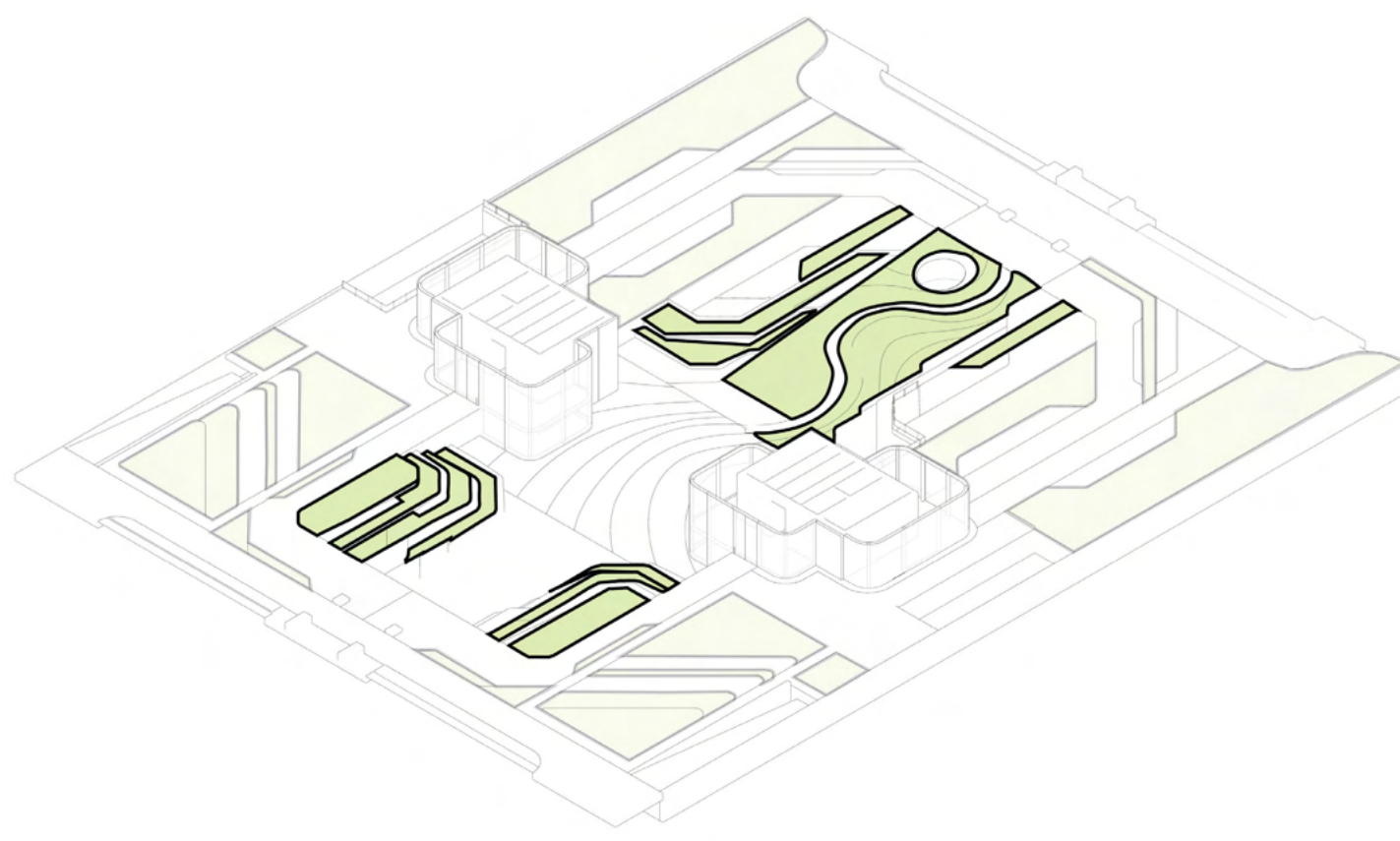
Working of public flow in the site



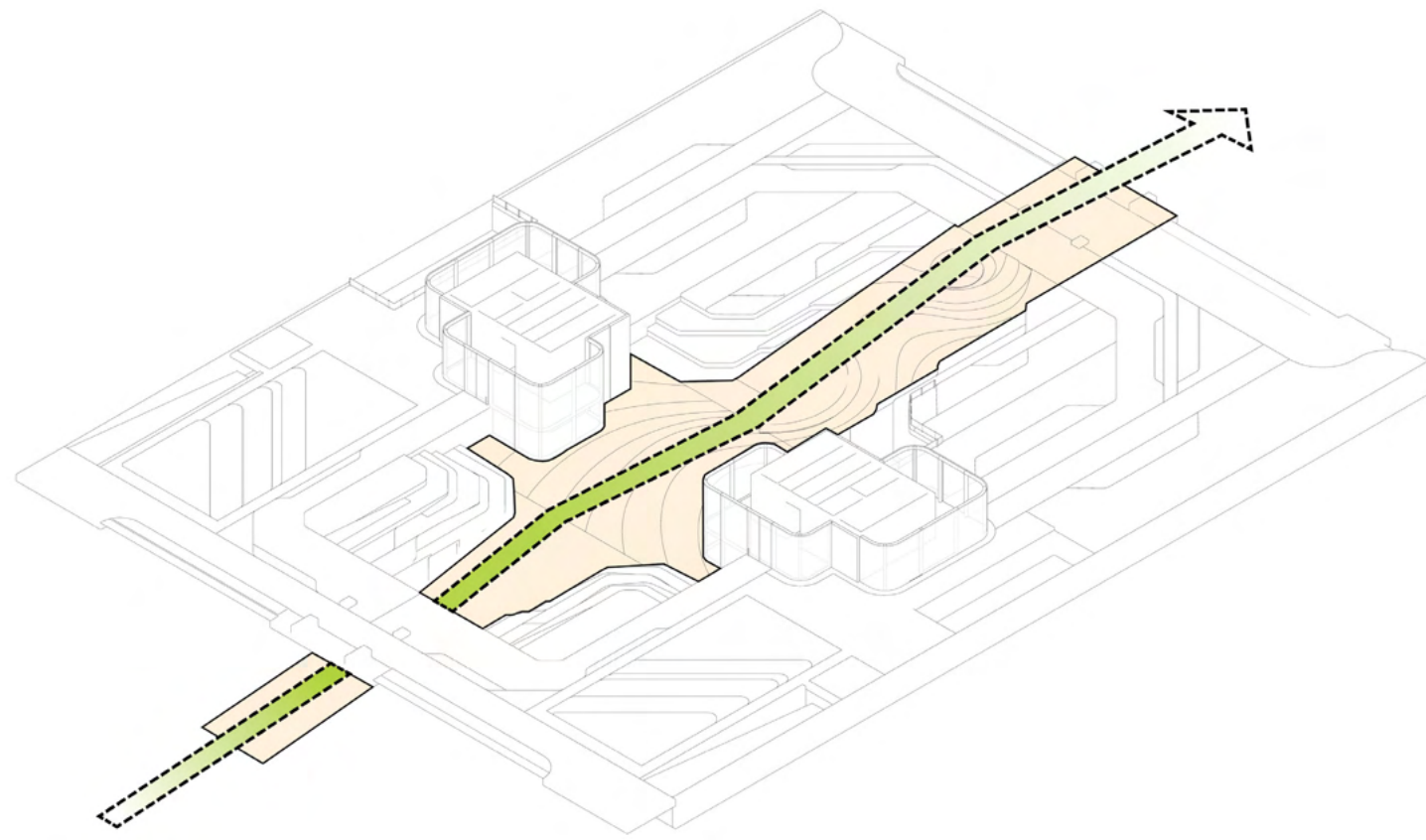
CONNECTION OF BUILDING WITH THE UNDER GROUND



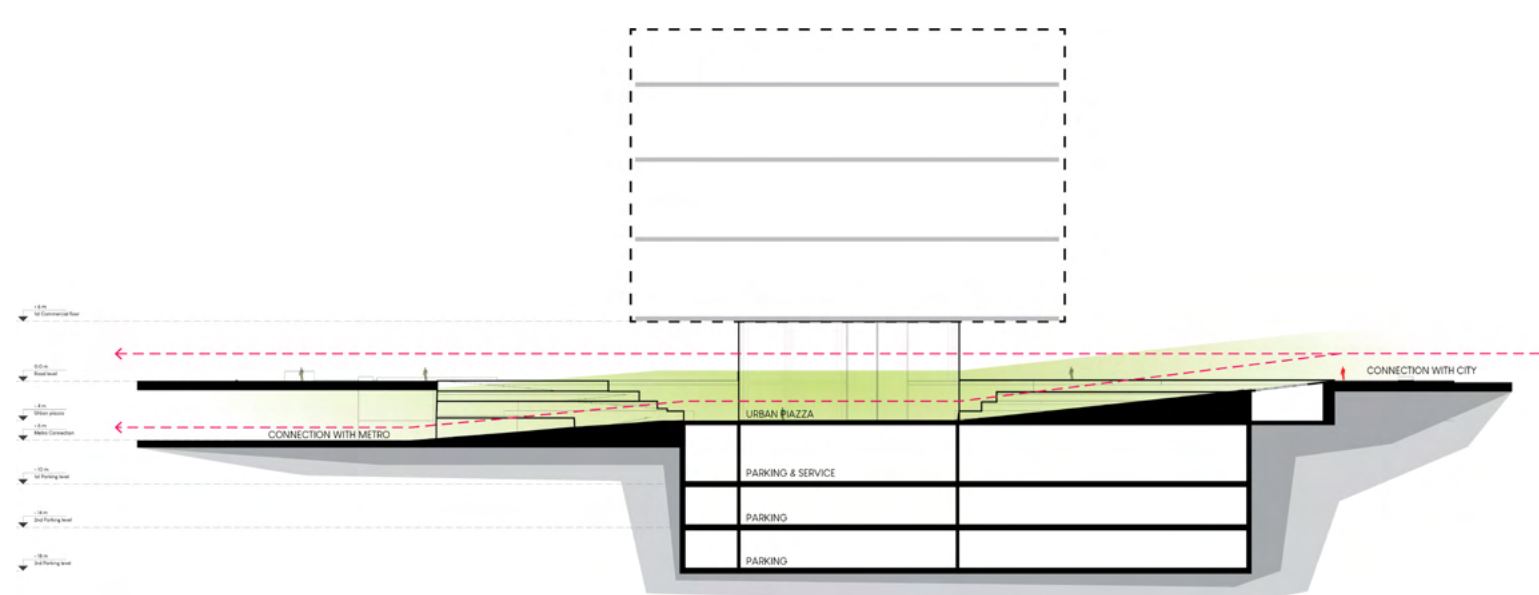
DISTRIBUTION OF PODIUM IN THE UNDERGROUND



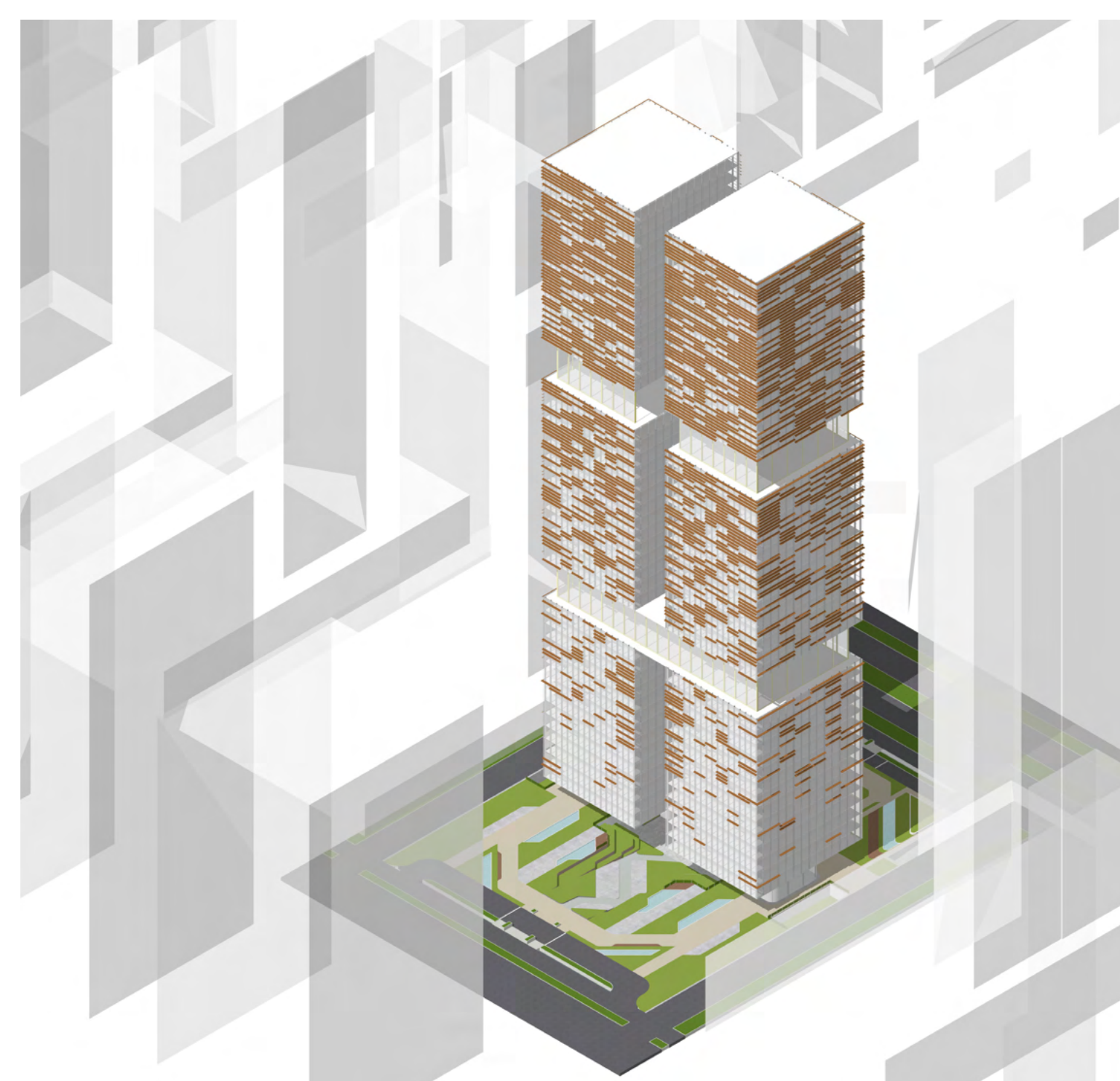
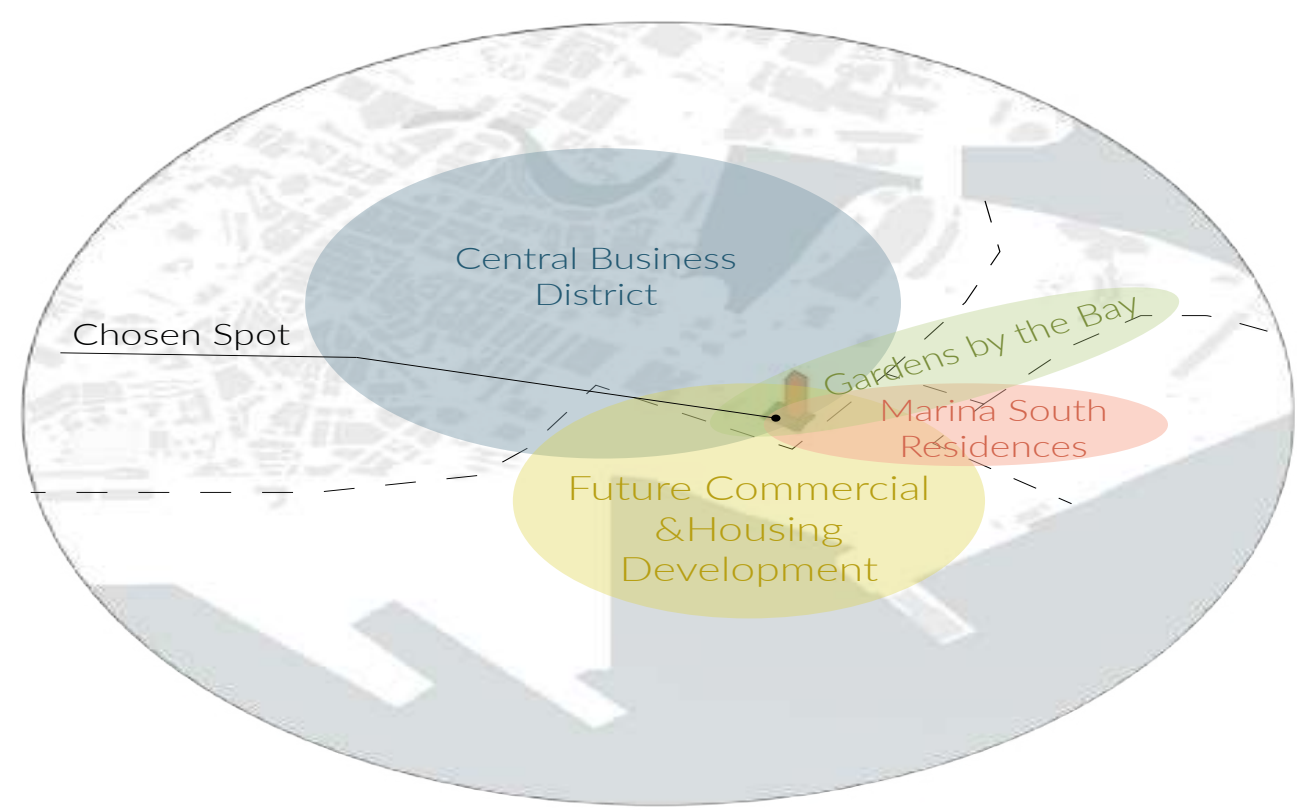
GREEN TERRACES TO INCREASE THE SOFT SURFACE AREA IN THE SITE



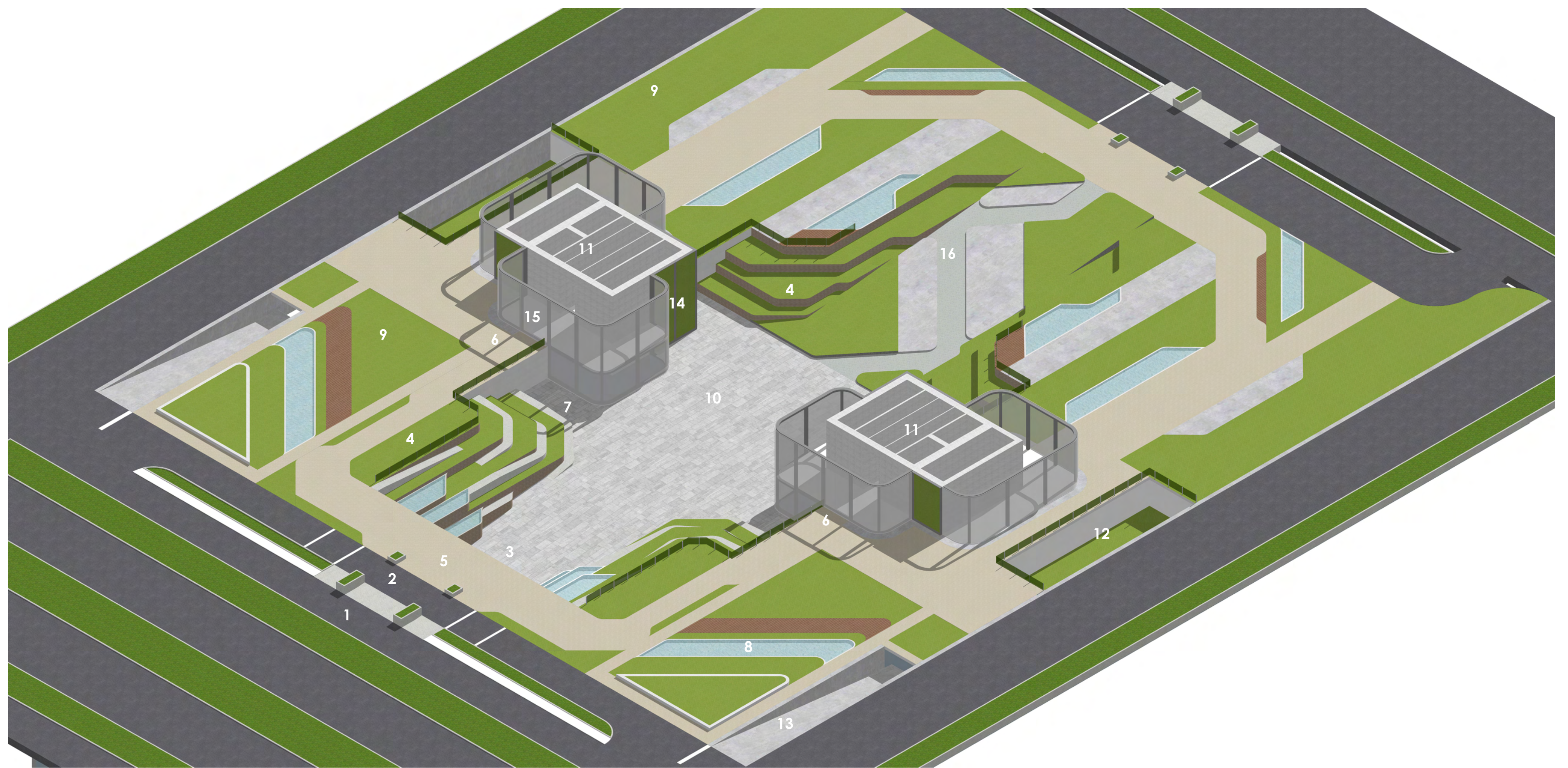
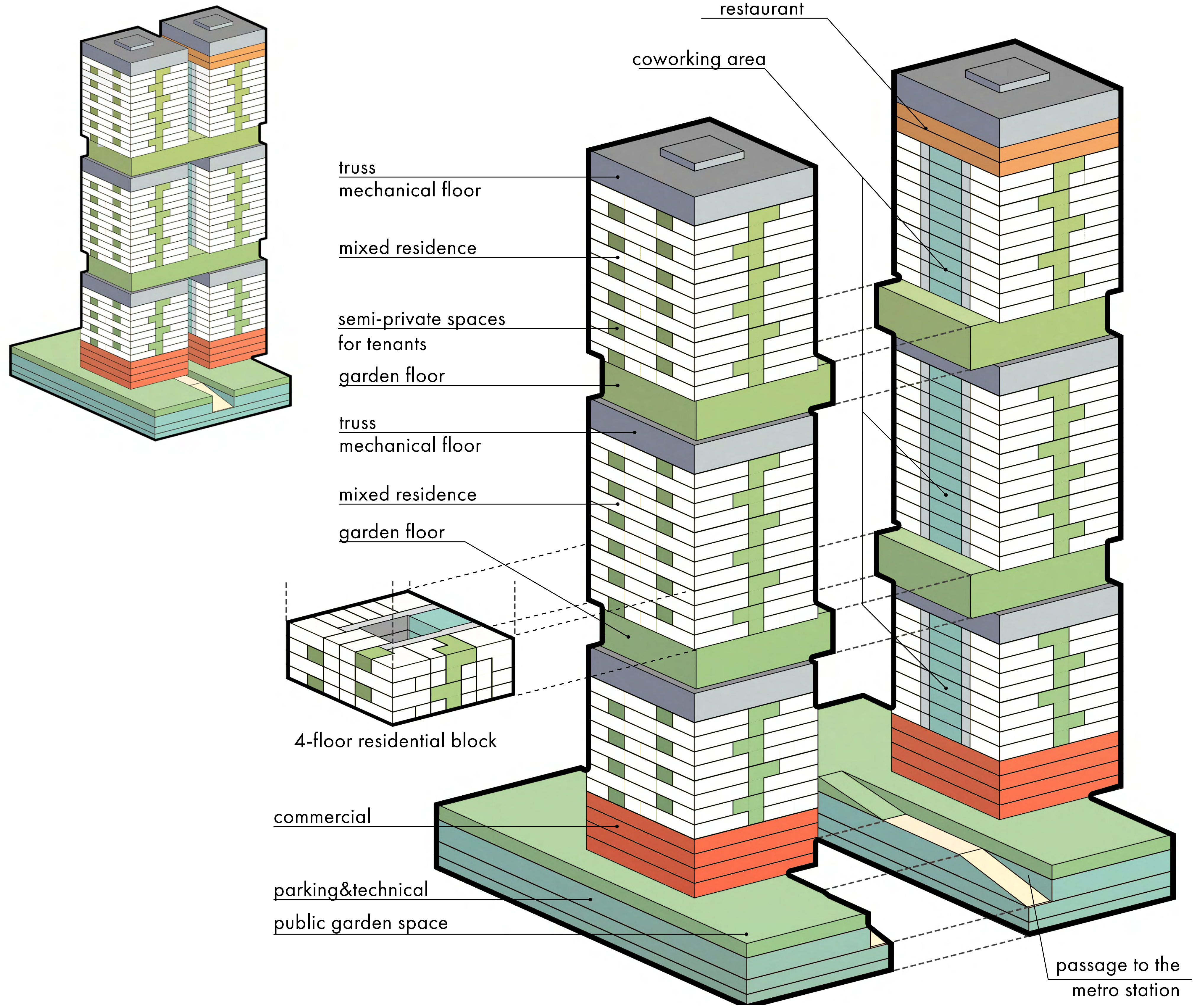
CONSTINUOUS AND FREE MOVEMENT THROUGH THE SITE



CONNECTION WITH THE MASS TRANSIT SYTEM OF THE CITY

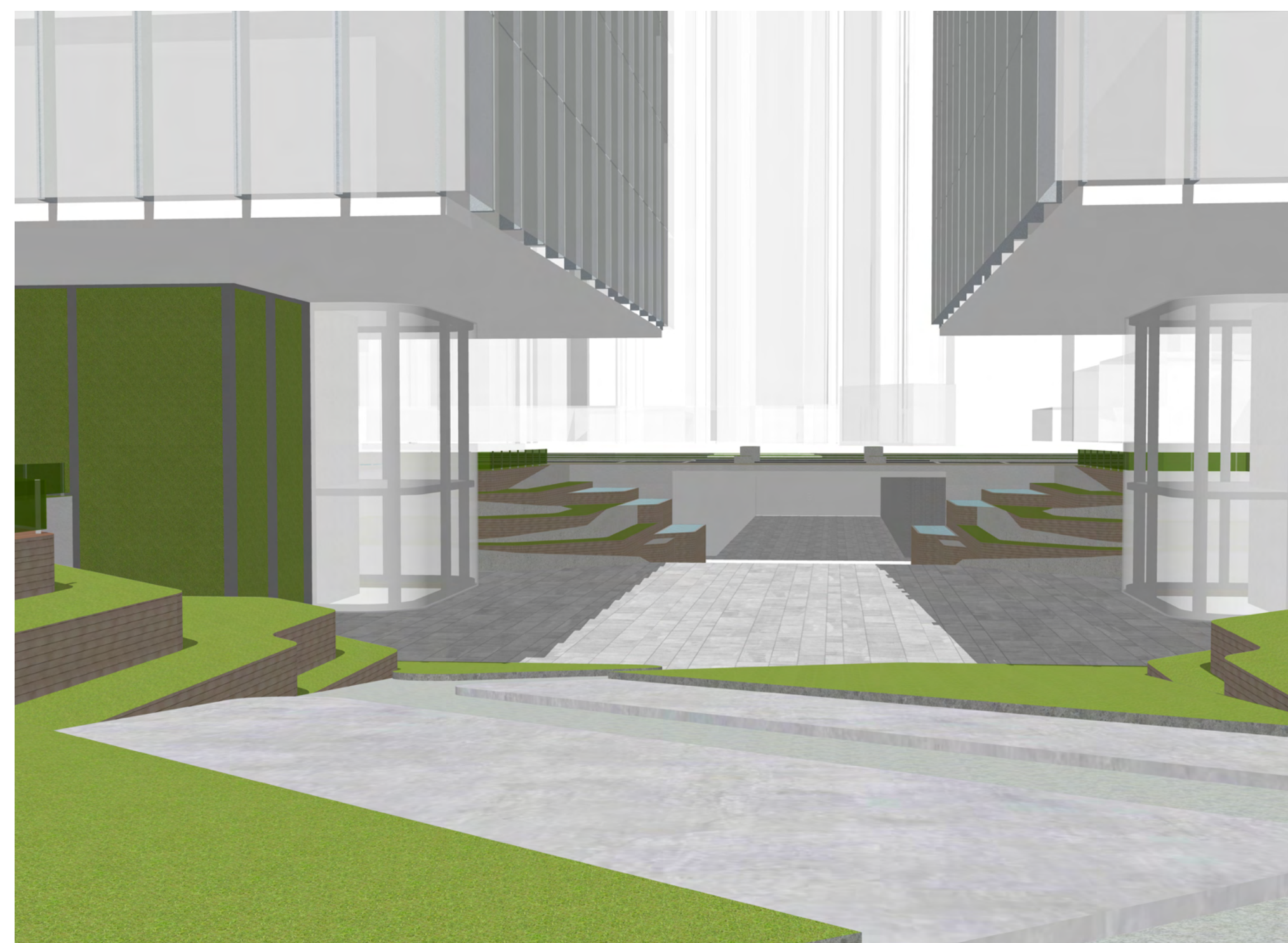


SOUTH EAST SIDE OF THE BUILDING WITH PODIUM

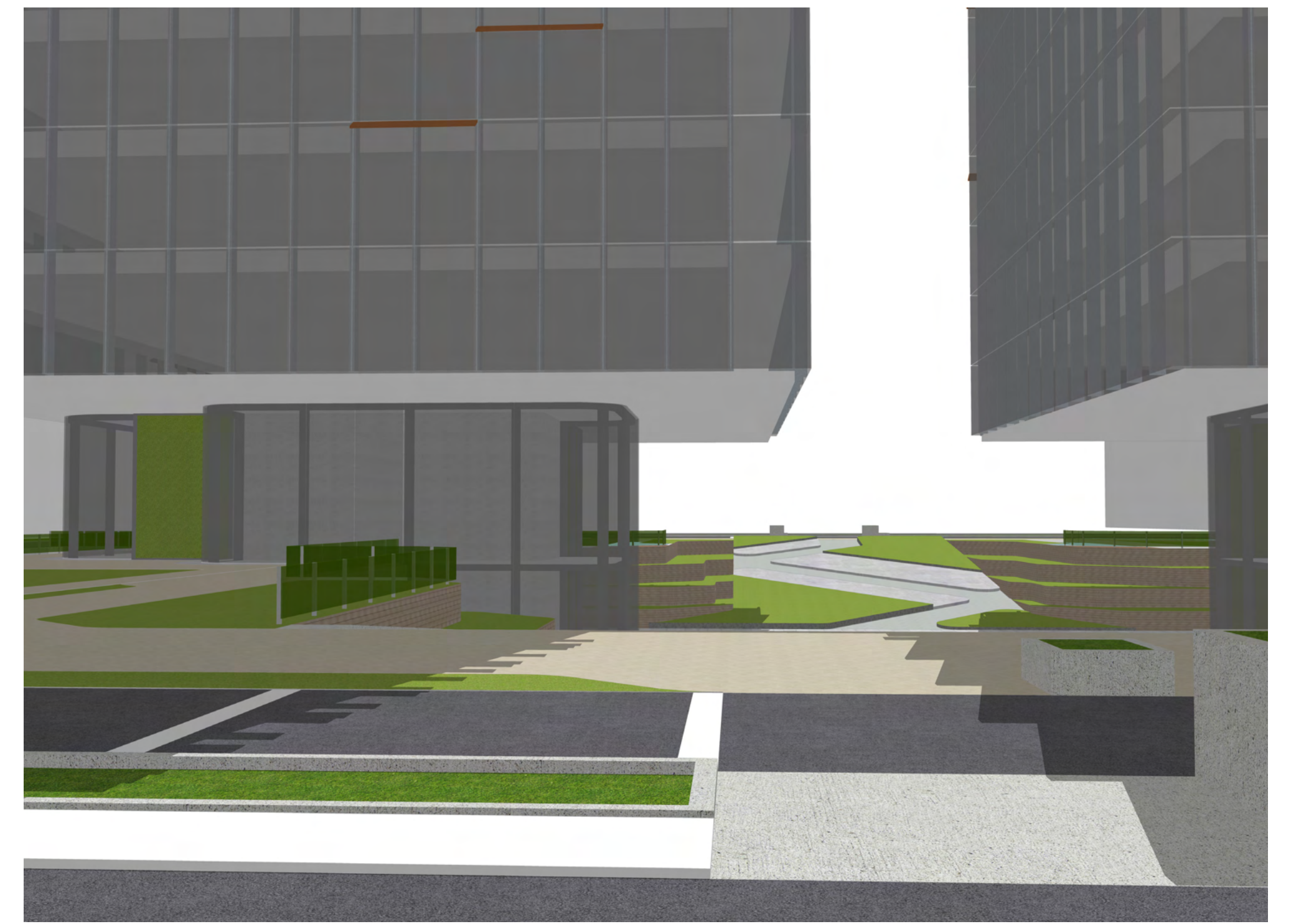


3D VIEW OF THE PIAZZA AND PODIUM

- | | | | |
|------------------------------------|------------------------------|-----------------------|-------------------------|
| 1. Main road for vehicular traffic | 5. Pavement | 9. Public Park | 13. Ramp |
| 2. Public Access at road Level | 6. Entry for Residents | 10. Central Piazza | 14. Vertical vegetatoin |
| 3. Access from Underground | 7. Entry for commercial area | 11. Building Core | 15. Residents Lobby |
| 4. Green terraces | 8. Water bodies for cooling | 12. Voids for Exhaust | 16. Connecting Ramp |

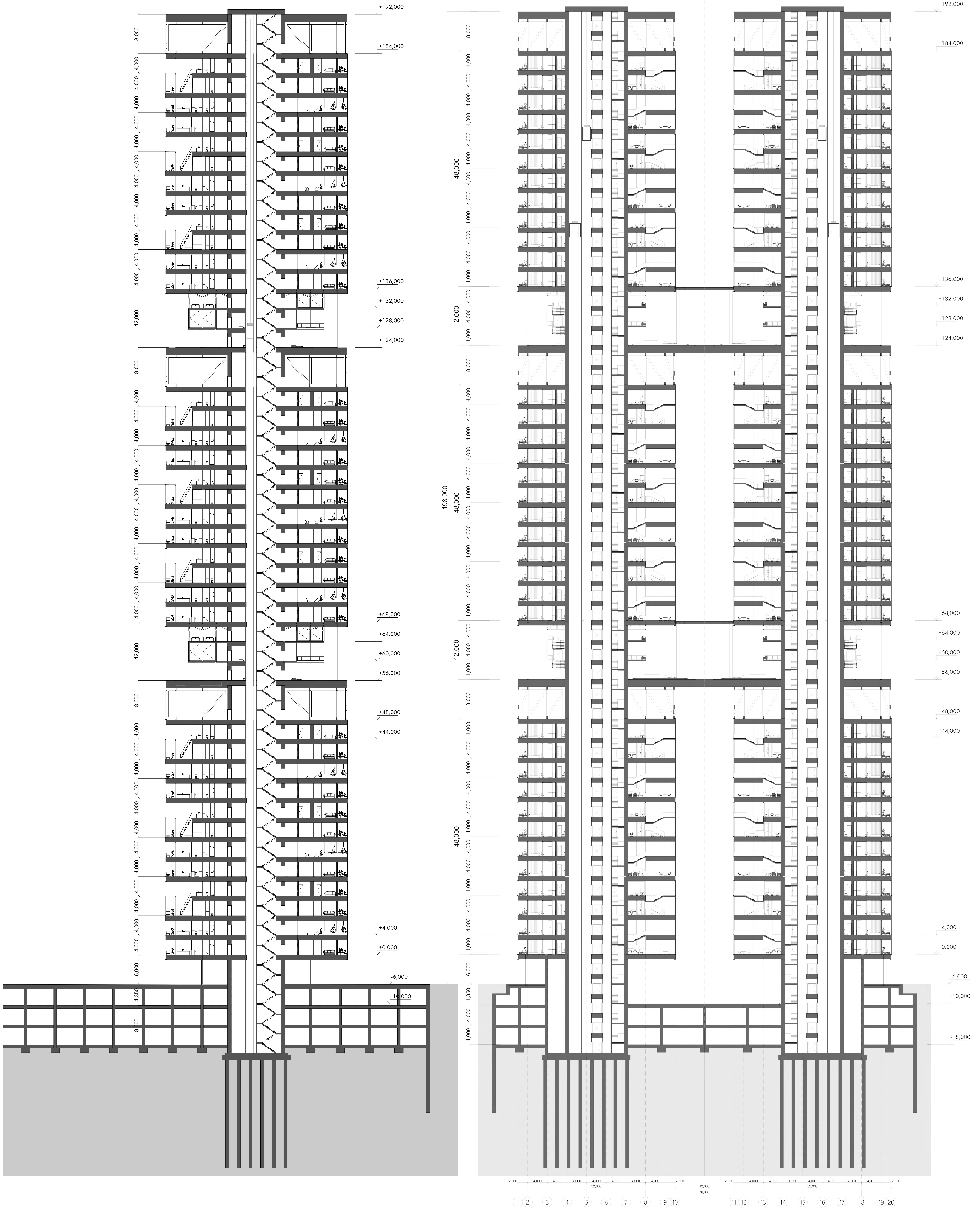


VIEW OF PODIUM FROM HUMAN PERSPECTIVE



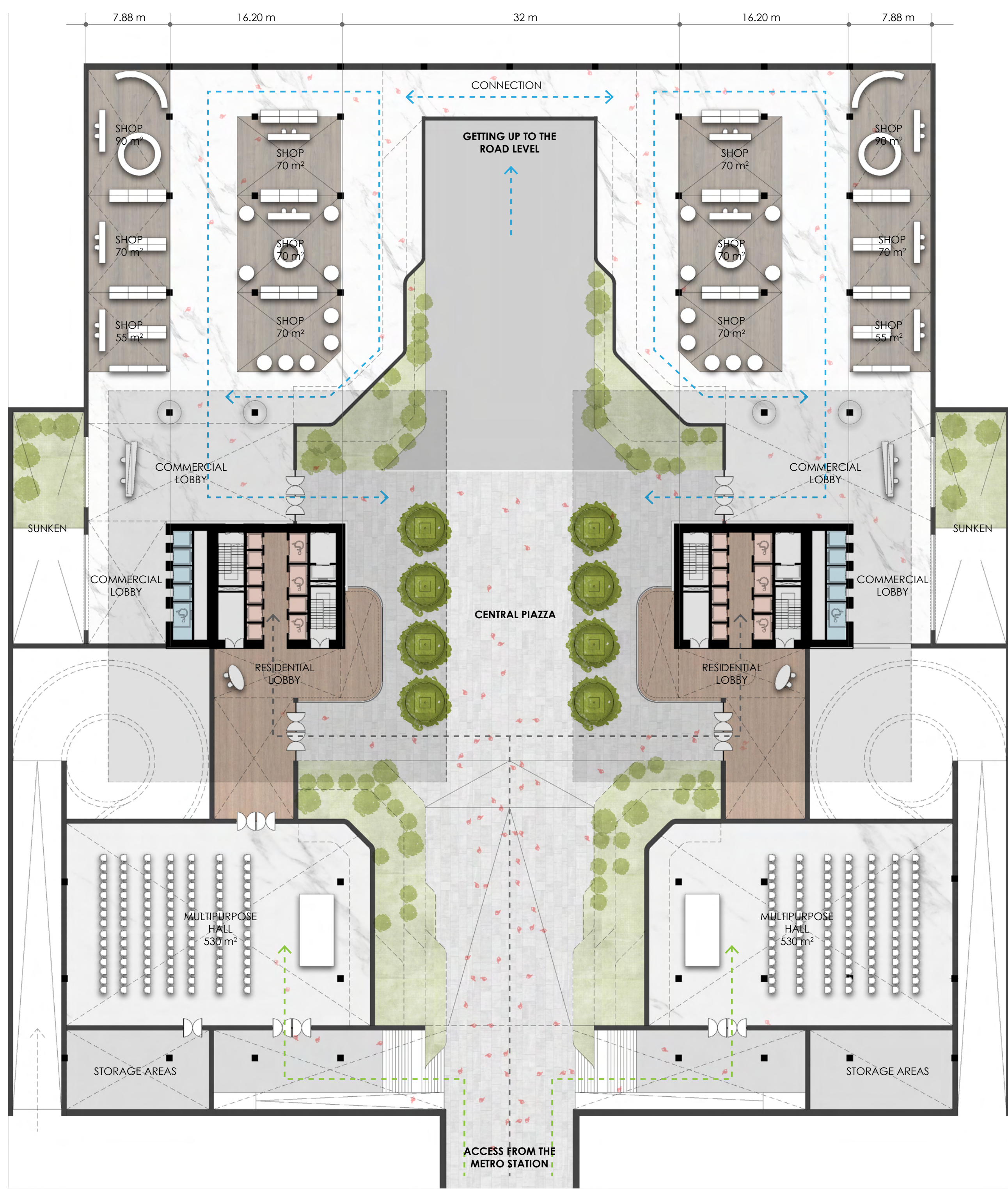
SECTIONS

Section of the building

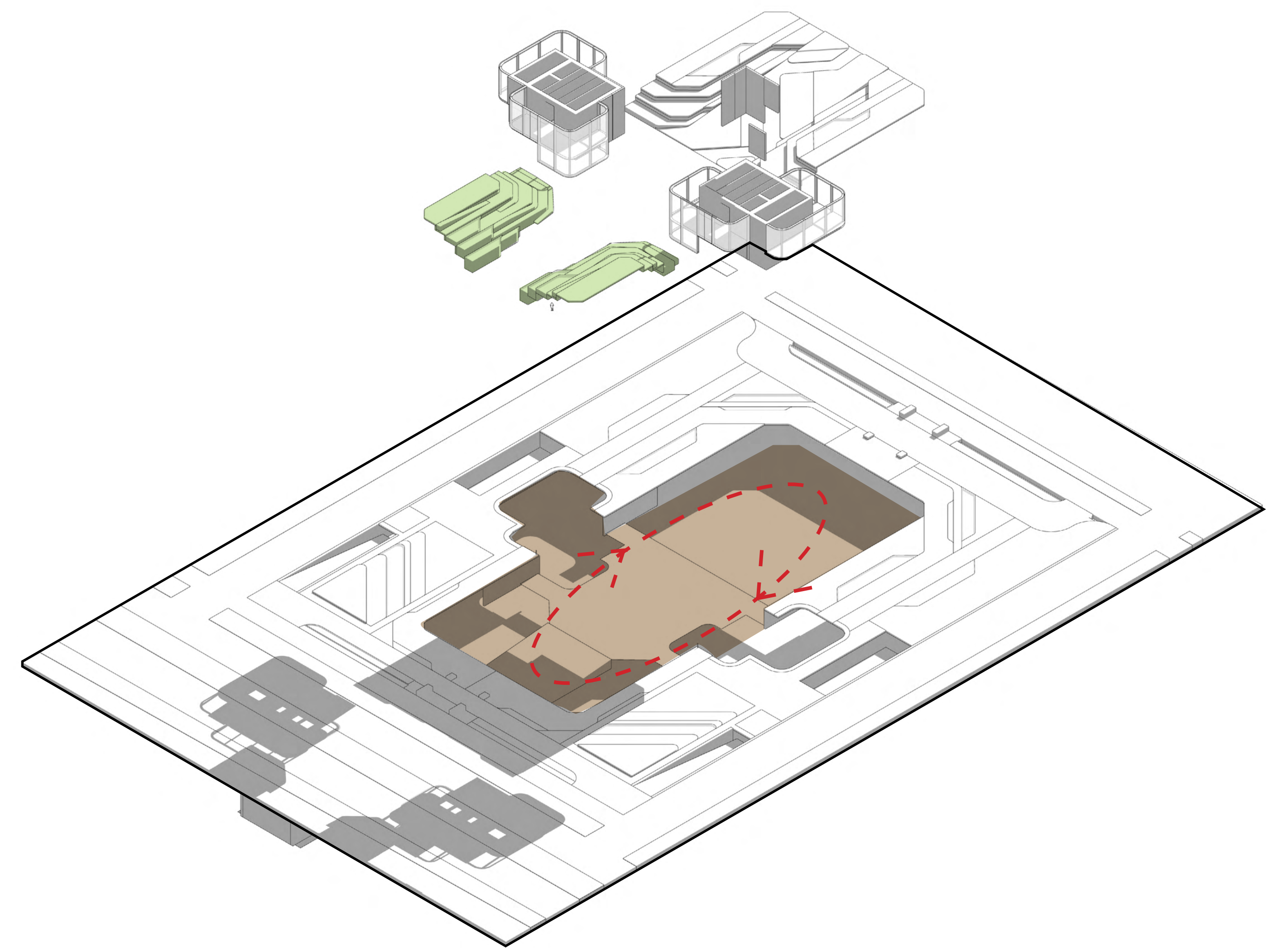


BASEMENT AND COMMERCIAL FLOORS

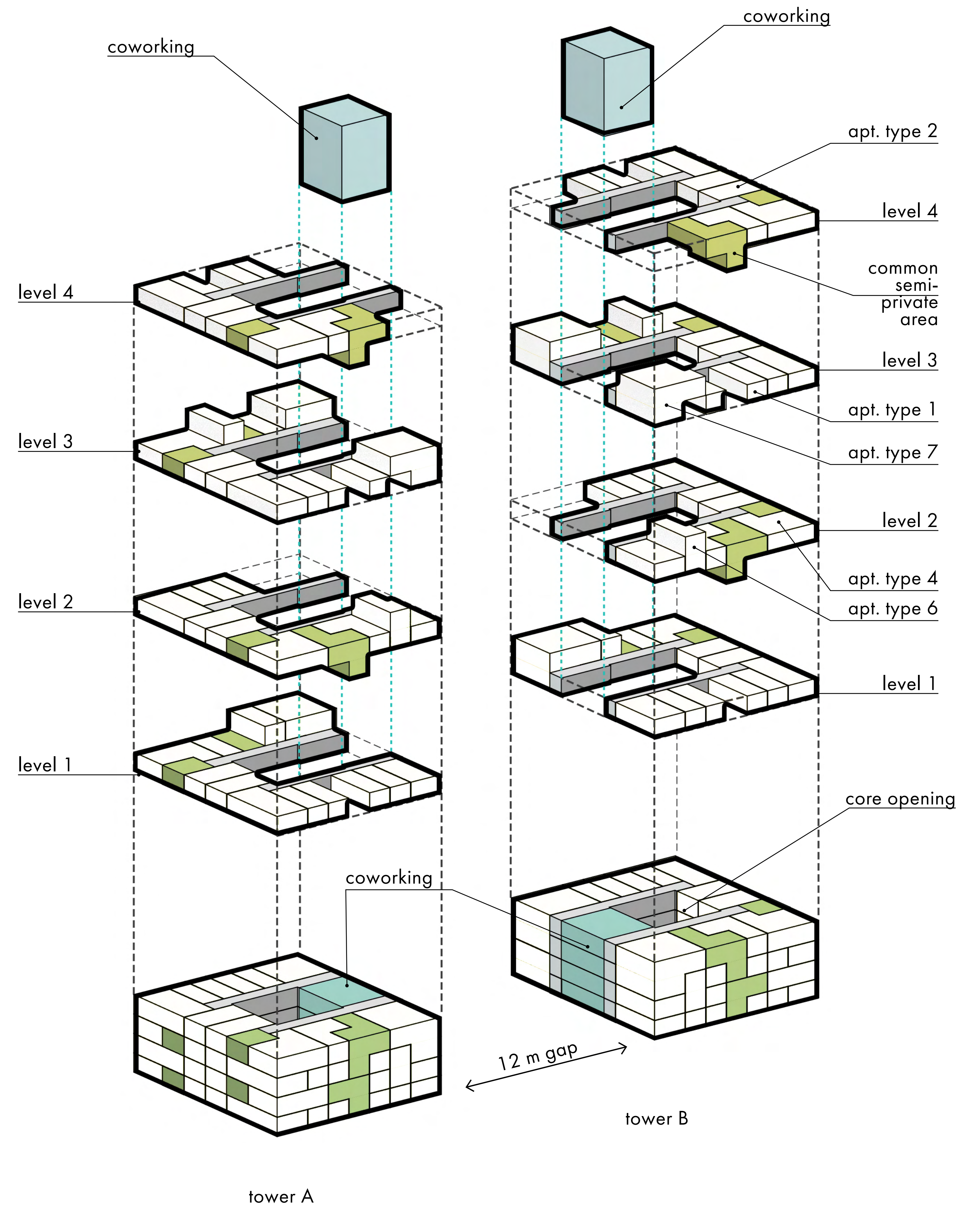
Basement plans & Commercial floors



COMMERCIAL & PUBLIC AREAS IN THE PODIUM LEVEL -4 m



BUILDING PROGRAM: EXPLODED RESIDENTIAL 4-FLOOR BLOCK

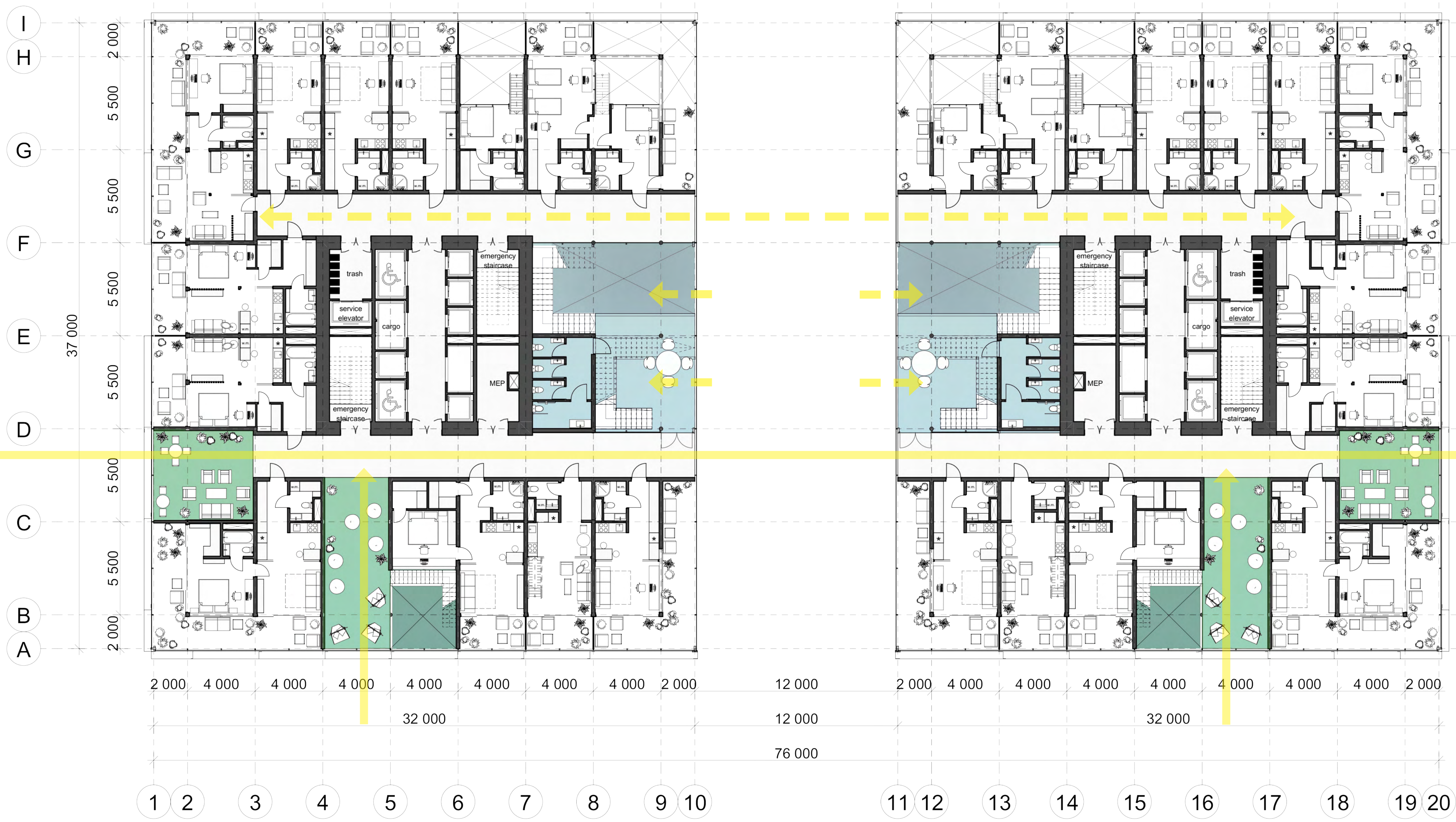


TYPICAL FLOOR PLAN

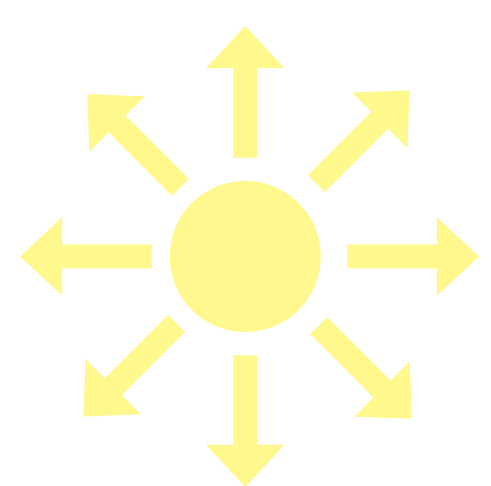
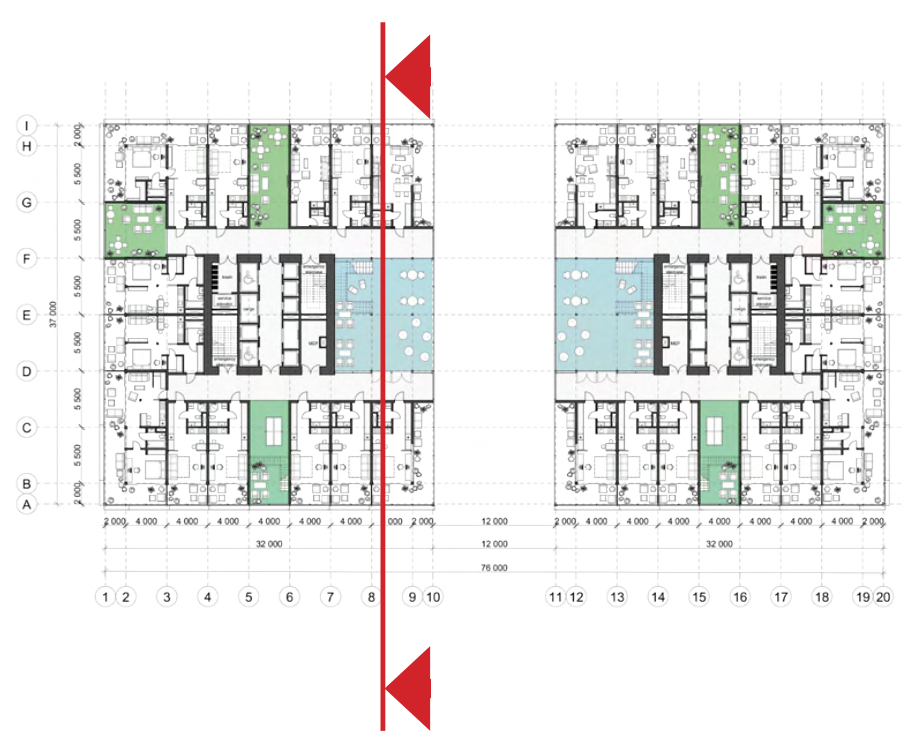
residential floor plans



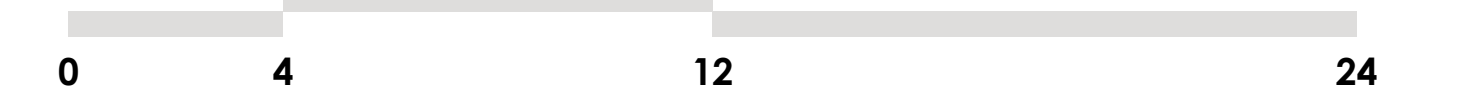
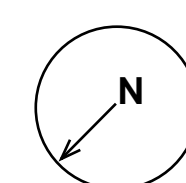
typical floor plan in a 4-level block: level 1
scale 1:150



typical floor plan in a 4-level block: level 2
scale 1:150



- natural light permeating through the floor

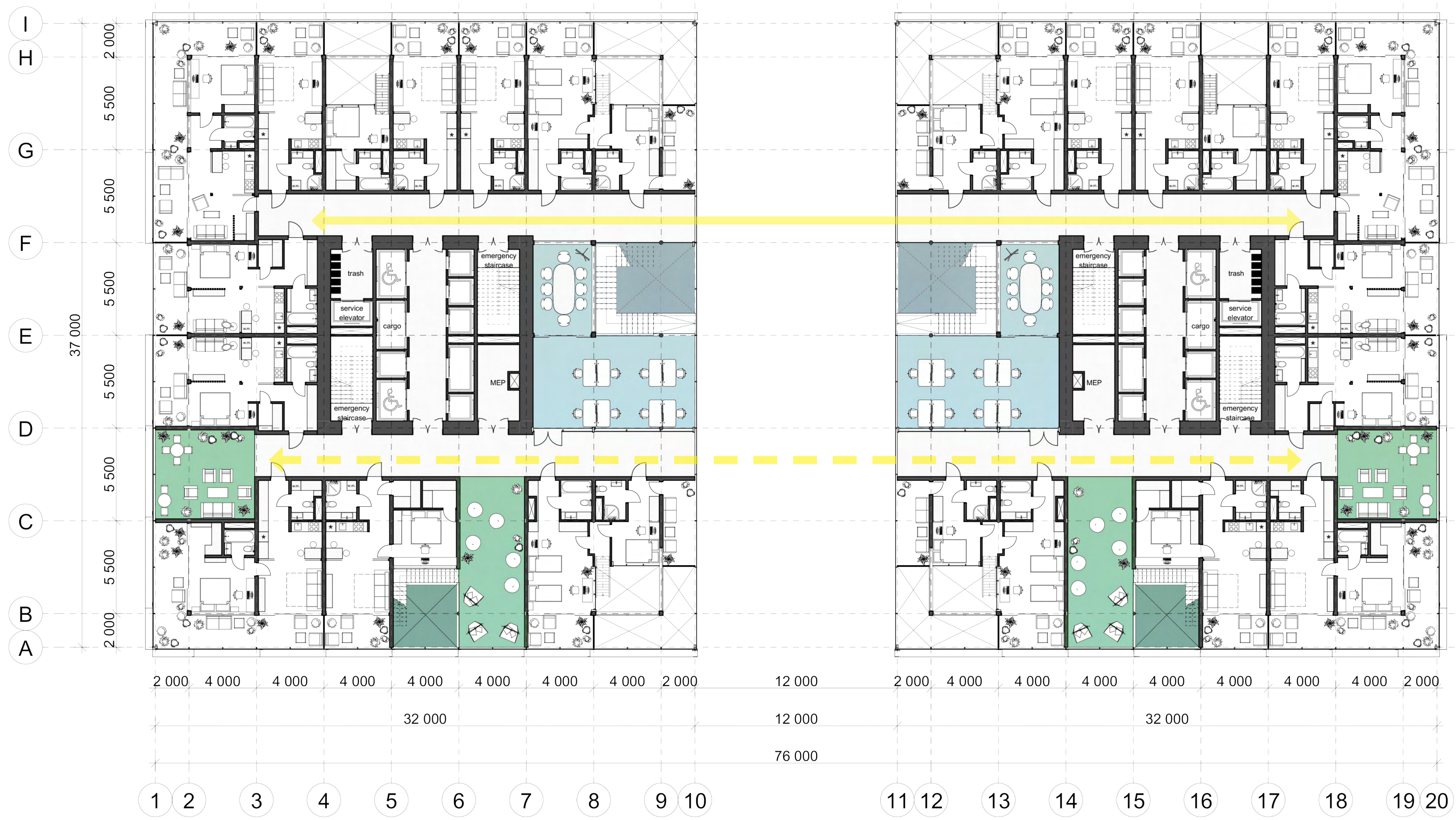


TYPICAL FLOOR PLAN

residential floor plans



typical floor plan in a 4-level block: level 3
scale 1:150




typical floor plan in a 4-level block: level 4
scale 1:150



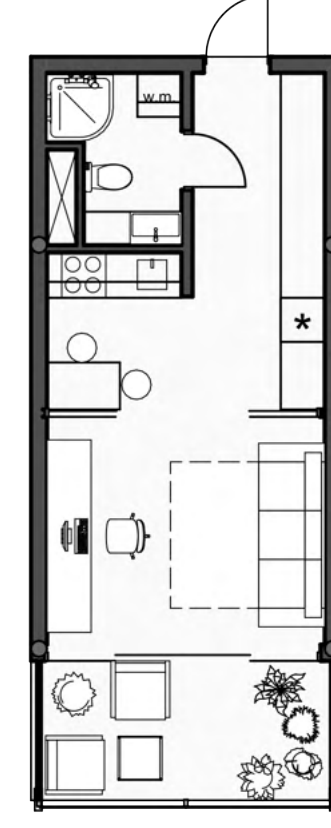
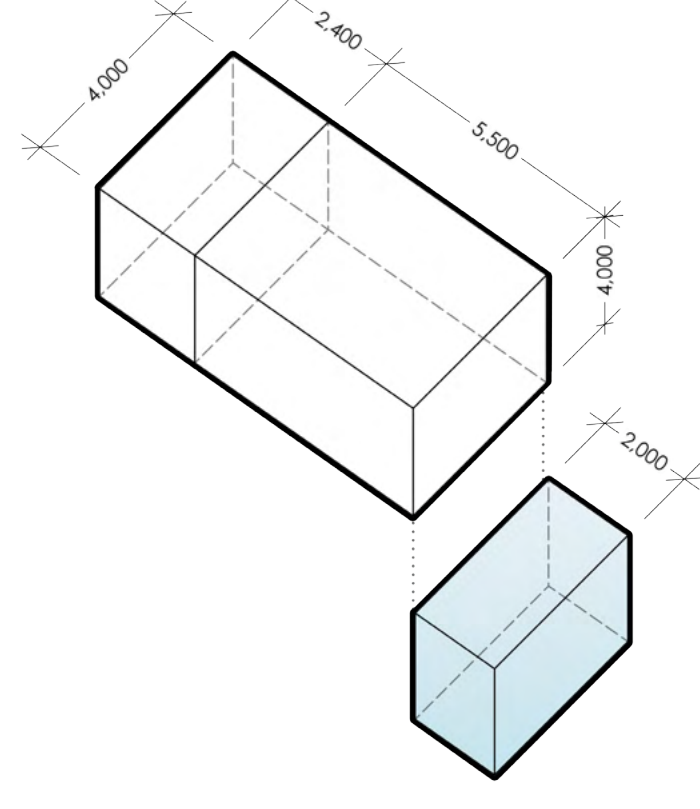
TYPES OF APARTMENTS

1

Residents: 

19 per block
43%
35.5 m²

Apartment: 28 m²
Balcony: 7,5 m²
Living+kitchen: 28 m²
Balcony: 7,5 m²
W/c: 3,6 m²

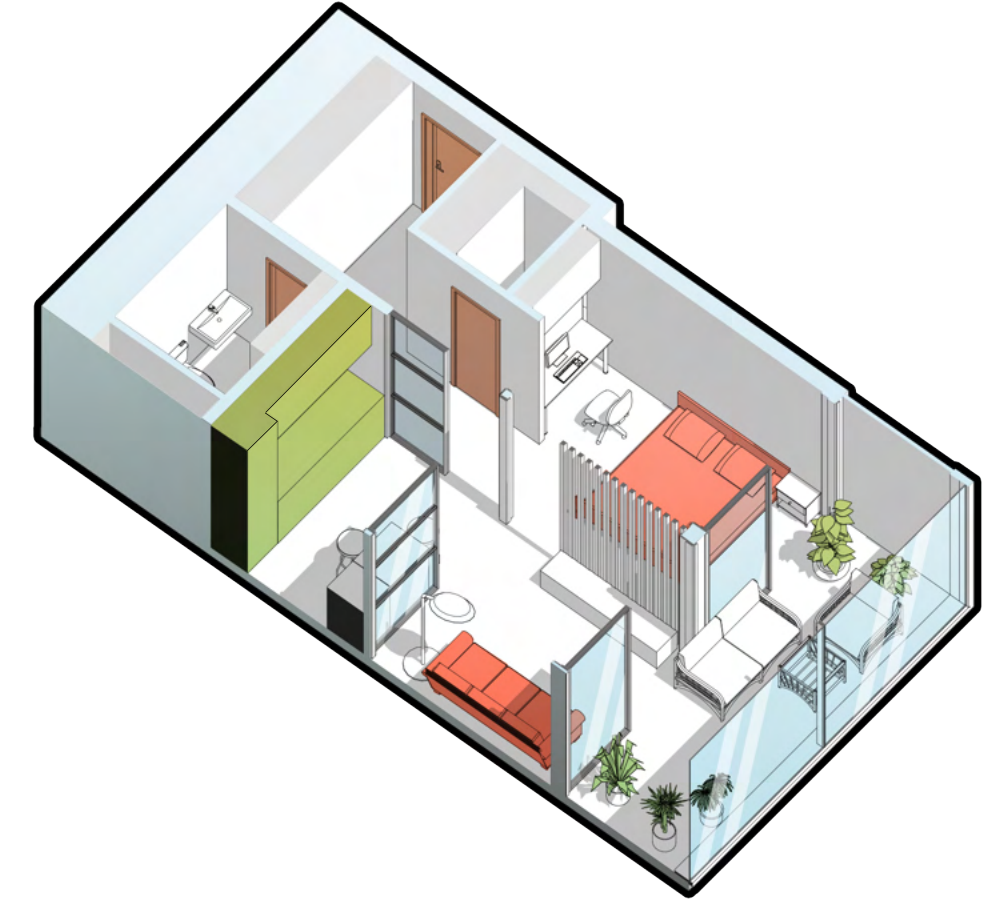
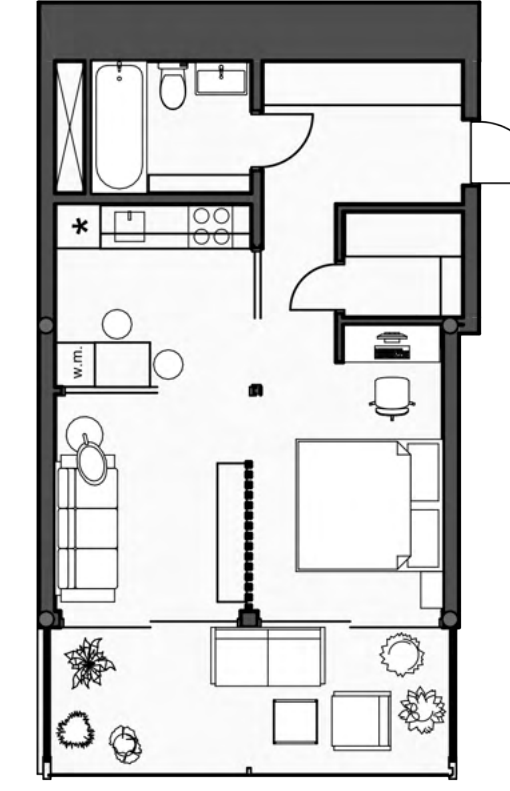
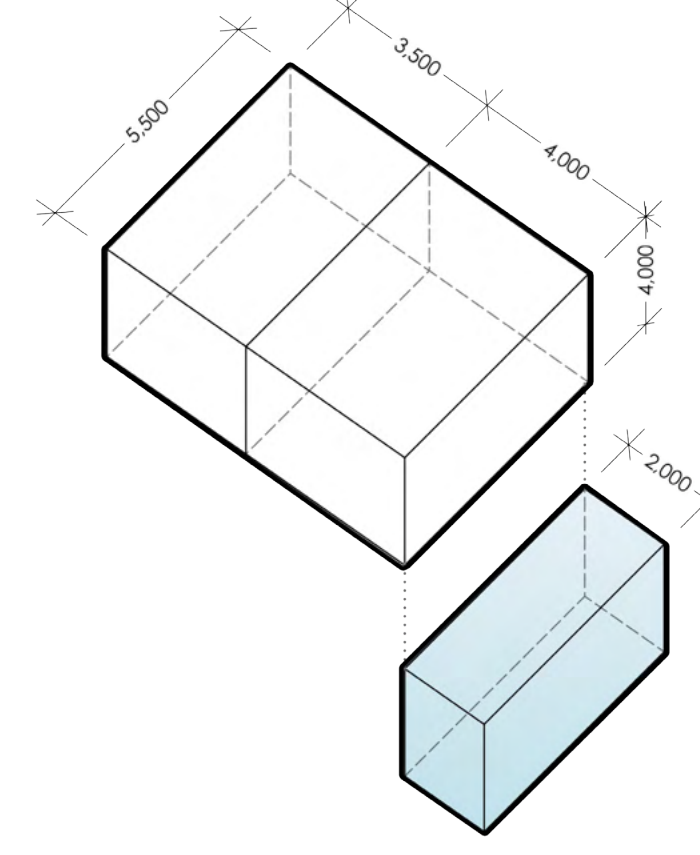


2

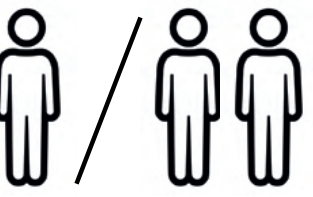
Residents: 

8 per block
13%
48.71 m²

Apartment: 38,3 m²
Balcony: 10,4 m²
Living+kitchen: 17 m²
Balcony: 10,4 m²
W/c: 3,9 m²
Bedroom: 9,0 m²

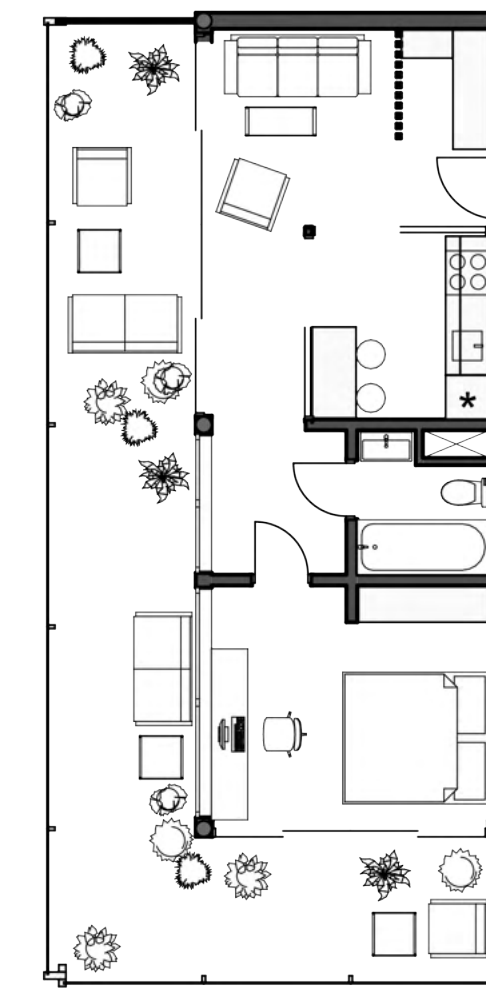
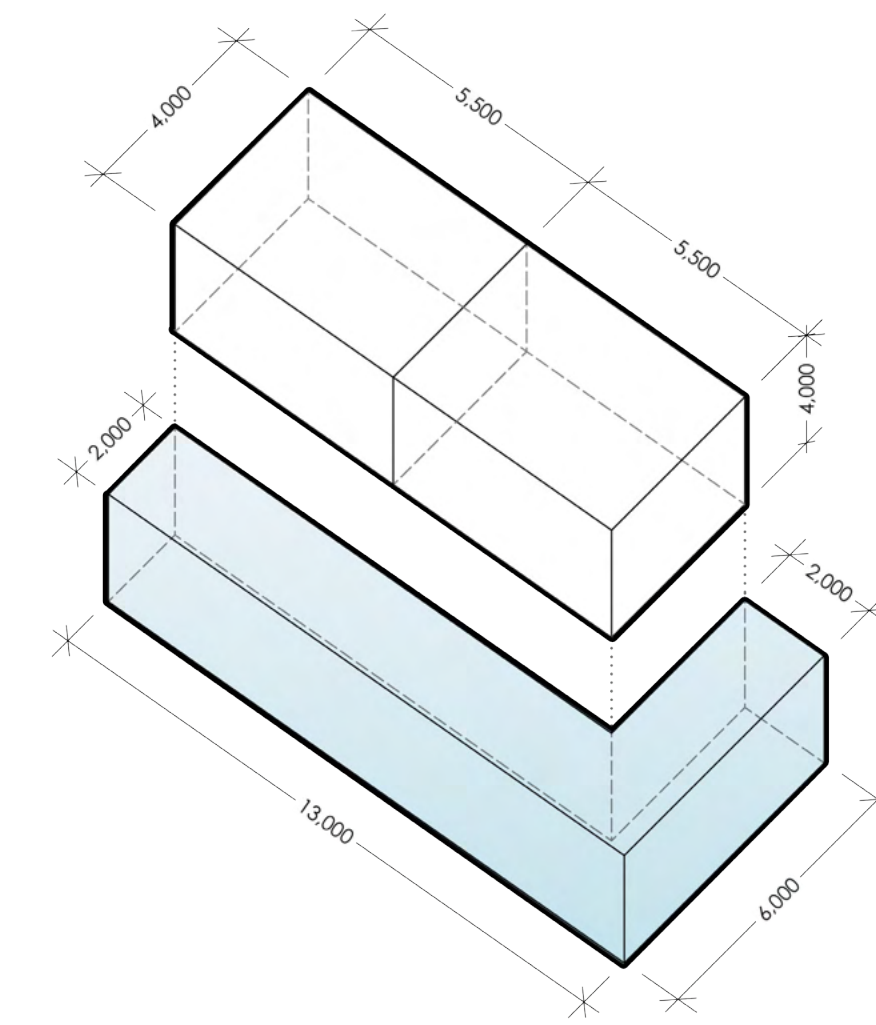


3

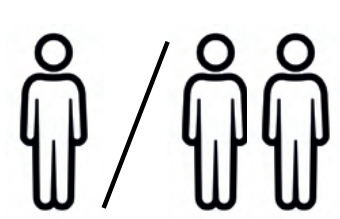
Residents: 

4 per block
9%
71.75 m²

Apartment: 39 m²
Balcony: 32,5 m²
Living+kitchen: 24 m²
Balcony: 32,5 m²
W/c: 3,1 m²
Bedroom: 12,3 m²

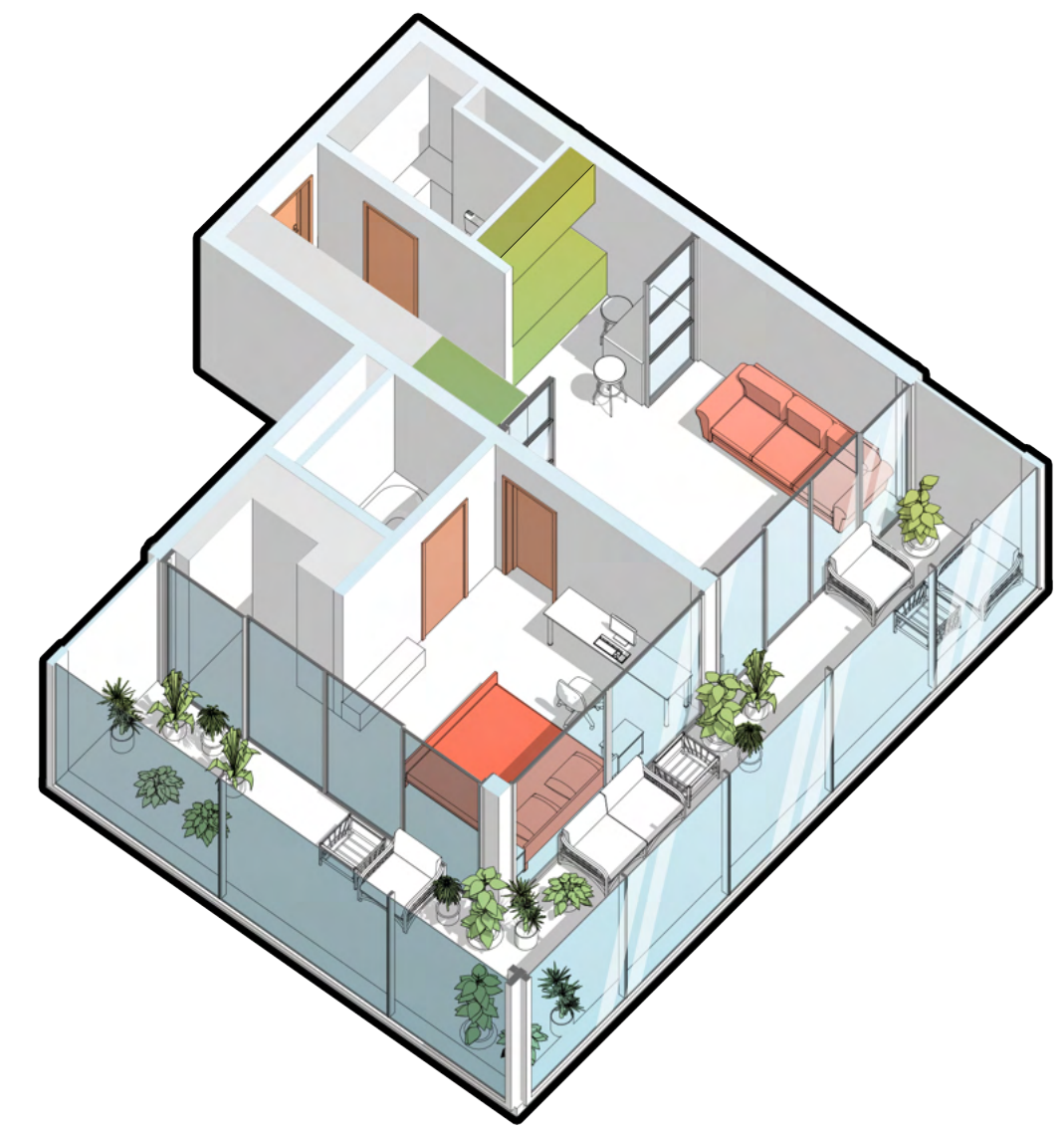
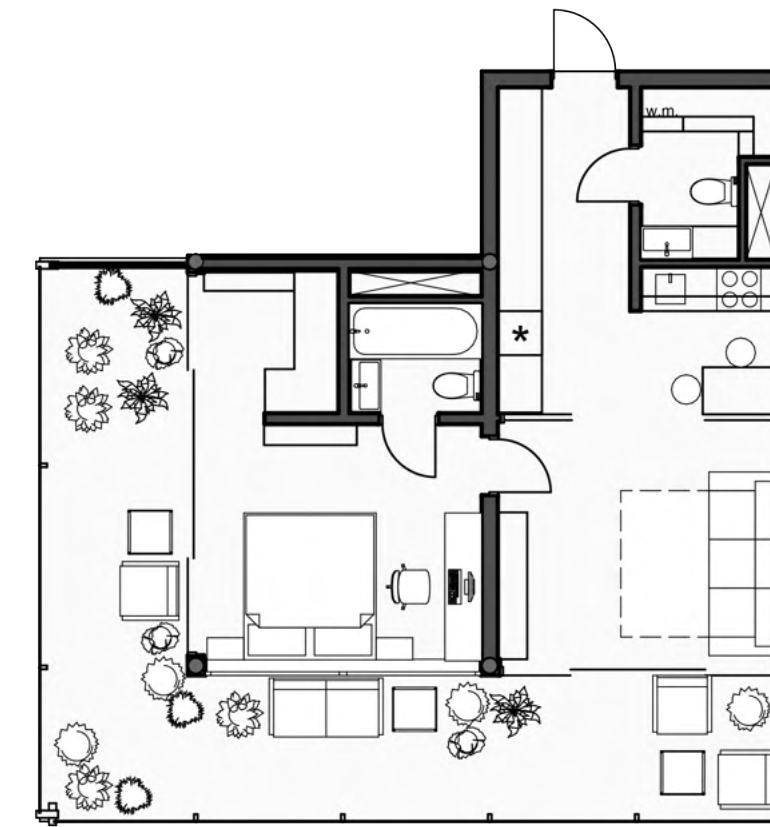
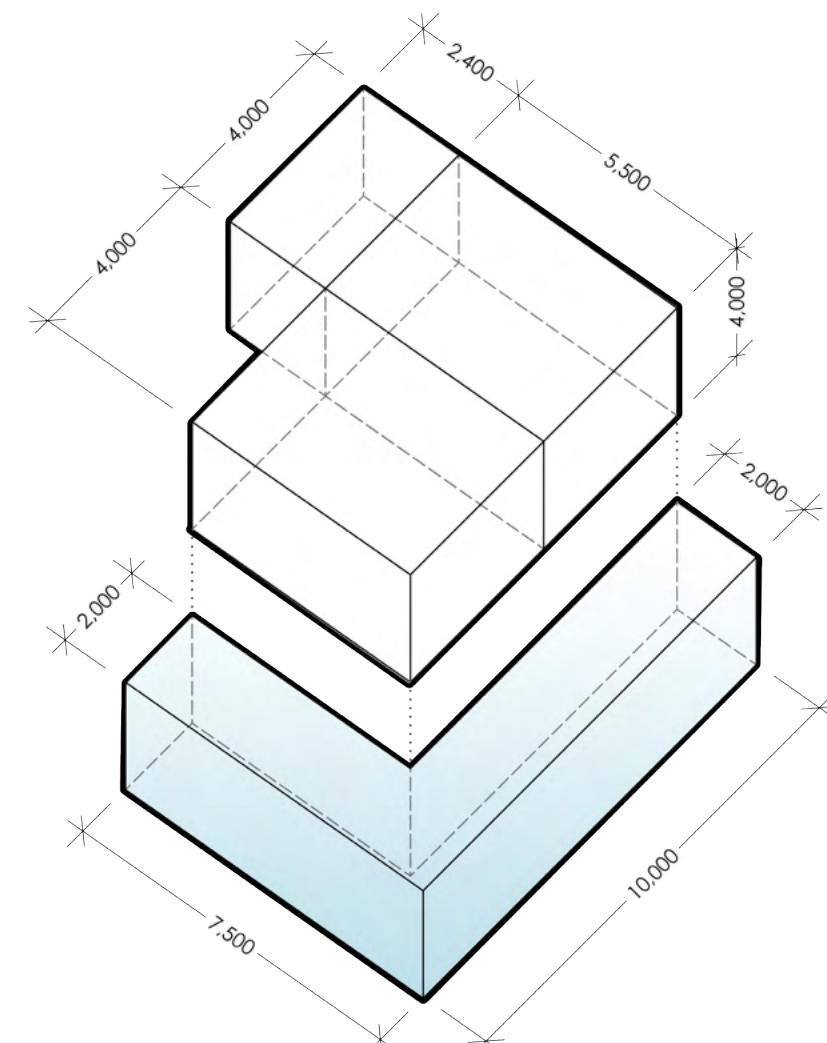


4

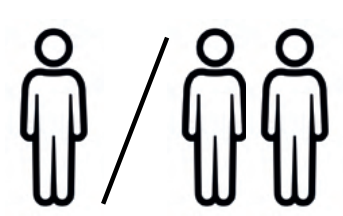
Residents: 

4 per block
9%
75.44 m²

Apartment: 46,5 m²
Balcony: 29 m²
Living+kitchen: 19 m²
Balcony: 29 m²
W/c: 6,3 m²
Bedroom: 15,8 m²

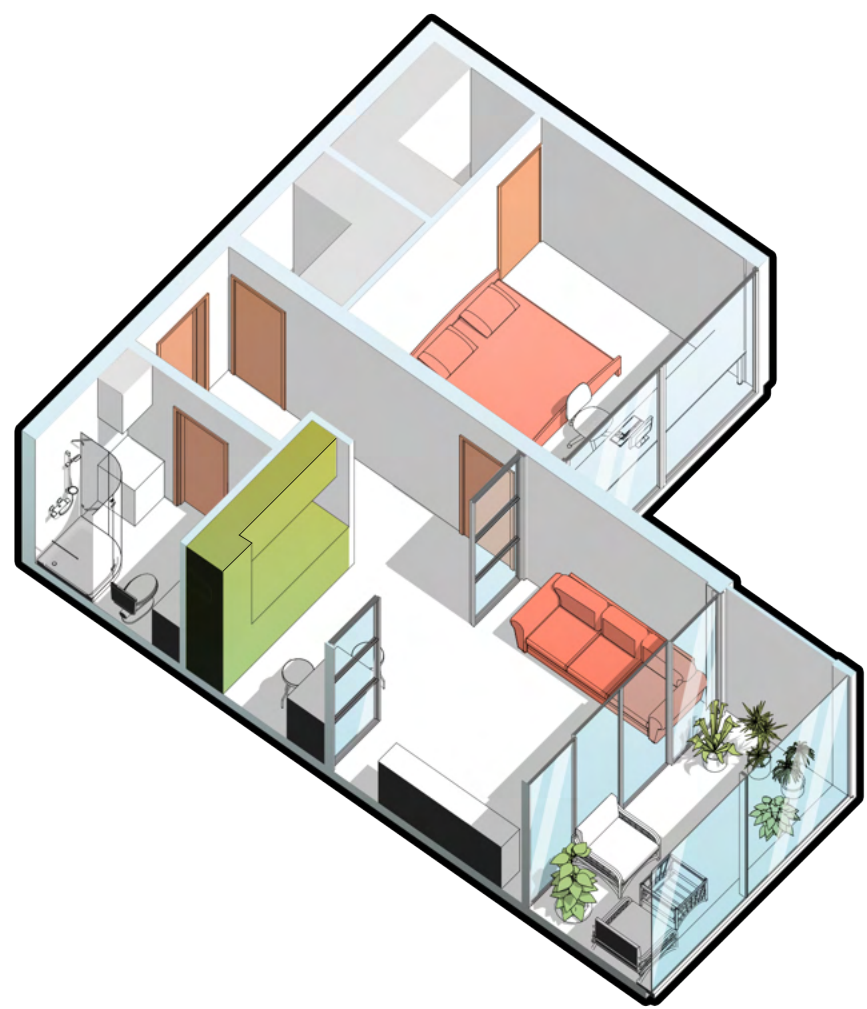
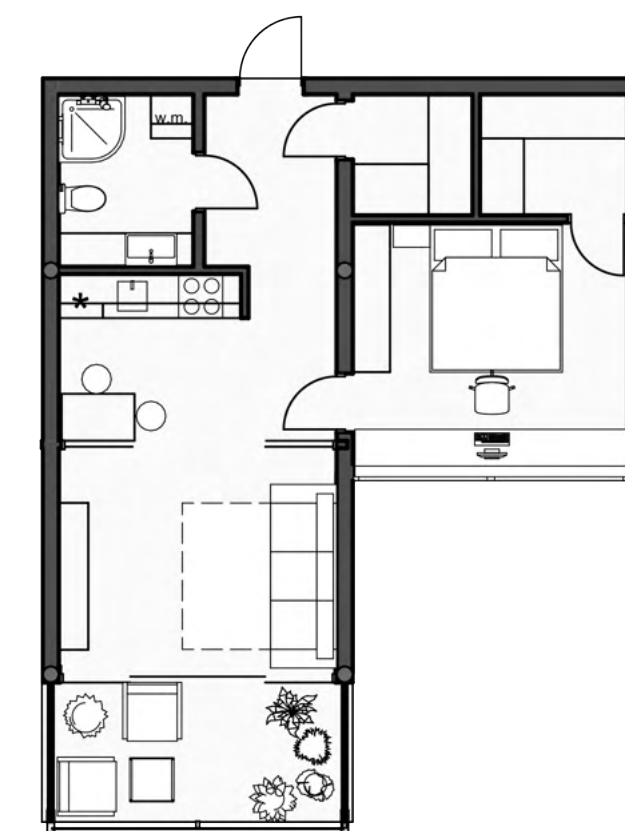
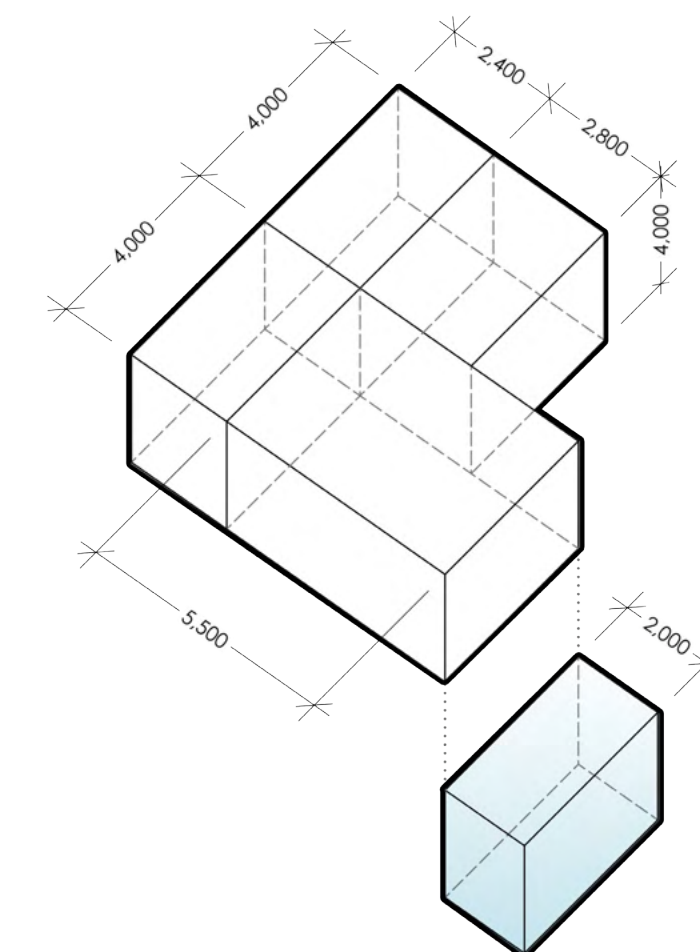


5

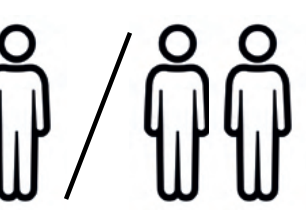
Residents: 

3 per block
6%
54.72 m²

Apartment: 47,25 m²
Balcony: 7,47 m²
Living+kitchen: 20,25 m²
Balcony: 7,47 m²
W/c: 4,29 m²
Bedroom: 12,31 m²

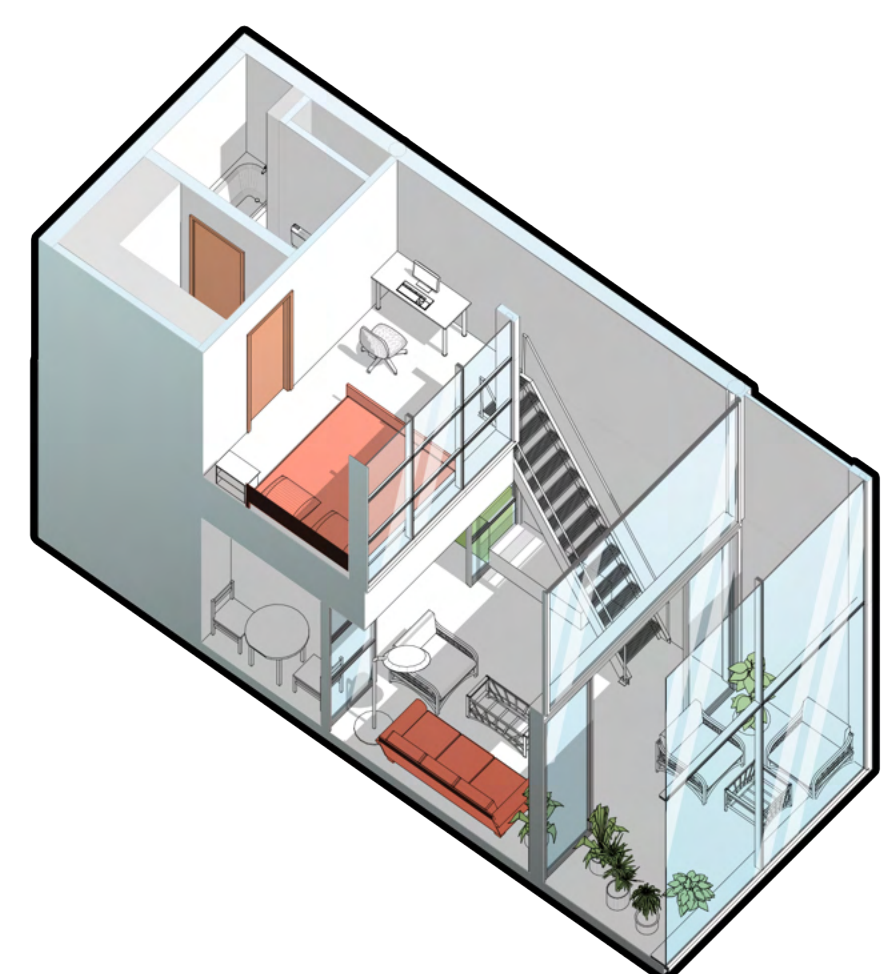
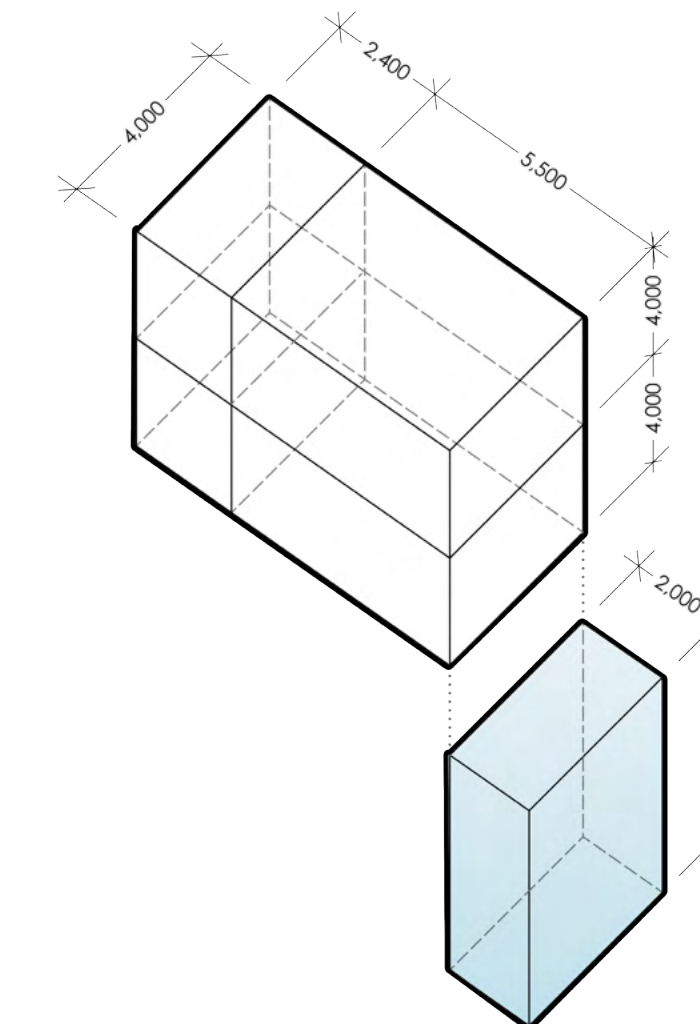


6

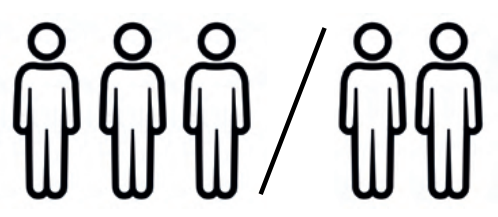
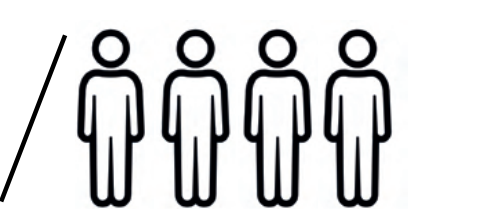
Residents: 

8 per block
18%
52.35 m²

Apartment: 44,88 m²
Balcony: 7,47 m²
Living+kitchen: 21,15 m²
Balcony: 7,47 m²
W/c: 6,3 m²
Bedroom: 9,11 m²



7

Residents: 


4 per block
9%
116,63 m²

Apartment: 73,26 m²
Balcony: 43,37 m²
Living+kitchen: 26,49 m²
Balcony: 43,37 m²
W/c: 9,7 m²
Bedrooms: 37,07 m²

