

# Mixed Use Building

Office + Community Centre, Prague

**İdil Küçük**

Master Thesis  
Portfolio

# Master Thesis Portfolio

Mixed Use Building  
Office + Community Centre  
Prague 4 - Michle

Author: İdil Küçük  
Supervisors: prof. Dr. Henri Hubertus Achten  
& Ing. arch. Jiří Pavlíček, Ph.D.

FA ČVUT  
15116 Department of Architectural Modelling

2018 - 2019 / Summer Semester

## Contents

|                                   |    |
|-----------------------------------|----|
| Assignment of the Diploma Project | 1  |
| The Author's Declaration          | 2  |
| Abstract                          | 3  |
| Analysis                          | 5  |
| Proposal                          | 9  |
| Plans                             | 13 |
| Sections                          | 25 |
| Elevations                        | 29 |
| Visualizations                    | 33 |
| Resources                         | 43 |

Czech Technical University in Prague, Faculty of Architecture

## 2/ ASSIGNMENT of the diploma project

Mgr. program navazující

Name and Surname: İdil Küçük

Date of Birth: 16.04.1993

Academic Year / Semester: 2019 – Summer Semester

Department Numer / Name: 15116 - Ústav modelového projektování

Diploma Project Tutor: prof. Dr. Henri Hubertus Achten, Ing. arch. Jiří Pavlíček, Ph.D.

### Diploma Project Theme:

See the Application Form for DP

### Assignment of the Diploma Project:

1/description of the project assignment and the expected solution objective

The project area is in the BB Centrum in Michle, Prague 4. BB Centrum project is still proceeding and the picked site for the project is one of the places that is not designed yet. My solution for the area is to design a mixed use building which will work as an office building and also for community.

2/description of the final result, outputs and elaboration scales

Site: 1/1000

Site Landscape: 1/1000

Plan : 1/500 – 1/200

Sections, Elevations 1/500 – 1/200

Visualization

3/list of further agreed-upon parts of the project (model)

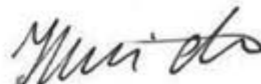
To this list further attachments can be added according to necessity.

Scaled Model

Date and Signature of the Student



Date and Signature of the Diploma Project Tutor



Date and Signature of the Dean of FA CTU

6.3.2019



CZECH TECHNICAL UNIVERSITY IN PRAGUE

FACULTY OF ARCHITECTURE

AUTOR, DIPLOMANT: İDİL KÜÇÜK

AUTHOR OF THE DIPLOMA WORK / DIPLOMA PROJECT: prof. Dr. Henri Hubertus Achten

Academic Year 2018/2019, Spring Semester

TITLE OF THE DIPLOMA WORK / DIPLOMA PROJECT:  
(IN CZECH LANGUAGE)

TITLE OF THE DIPLOMA WORK / DIPLOMA PROJECT: MIXED USE BUILDING IN PRAGUE  
(IN ENGLISH LANGUAGE)

LANGUAGE OF THE DIPLOMA WORK / DIPLOMA PROJECT: ENGLISH

Diploma Work /  
Diploma Project  
Supervisor

Ústav: 15116 Department of Architectural Modelling  
Supervisor: prof. Dr. Henri Hubertus Achten

Diploma Work /  
Diploma Project  
Opponent

Key Words  
(Czech)

Mixed use, office, community, flexibility, BB Centrum, coworking, public space

Annotation  
(Czech)

Annotation  
(English)

This Master Thesis Project focuses on design of a mixed use building that is consist of office space and community centre by providing interactive and flexible office space, and interaction with the public space.

### The Author's Declaration

I declare that I have elaborated the submitted diploma work / diploma project independently and that I have stated all the used information sources in coherence with the "Methodological Instruction for Ethical Preparation of University Final Works".

(The complete text of the methodological instruction is available for download on <http://www.fa.cvut.cz/En>)

In Prague on .....Signature of the Diploma Project Author

This document is an essential and obligatory part of the diploma project / portfolio / CD.

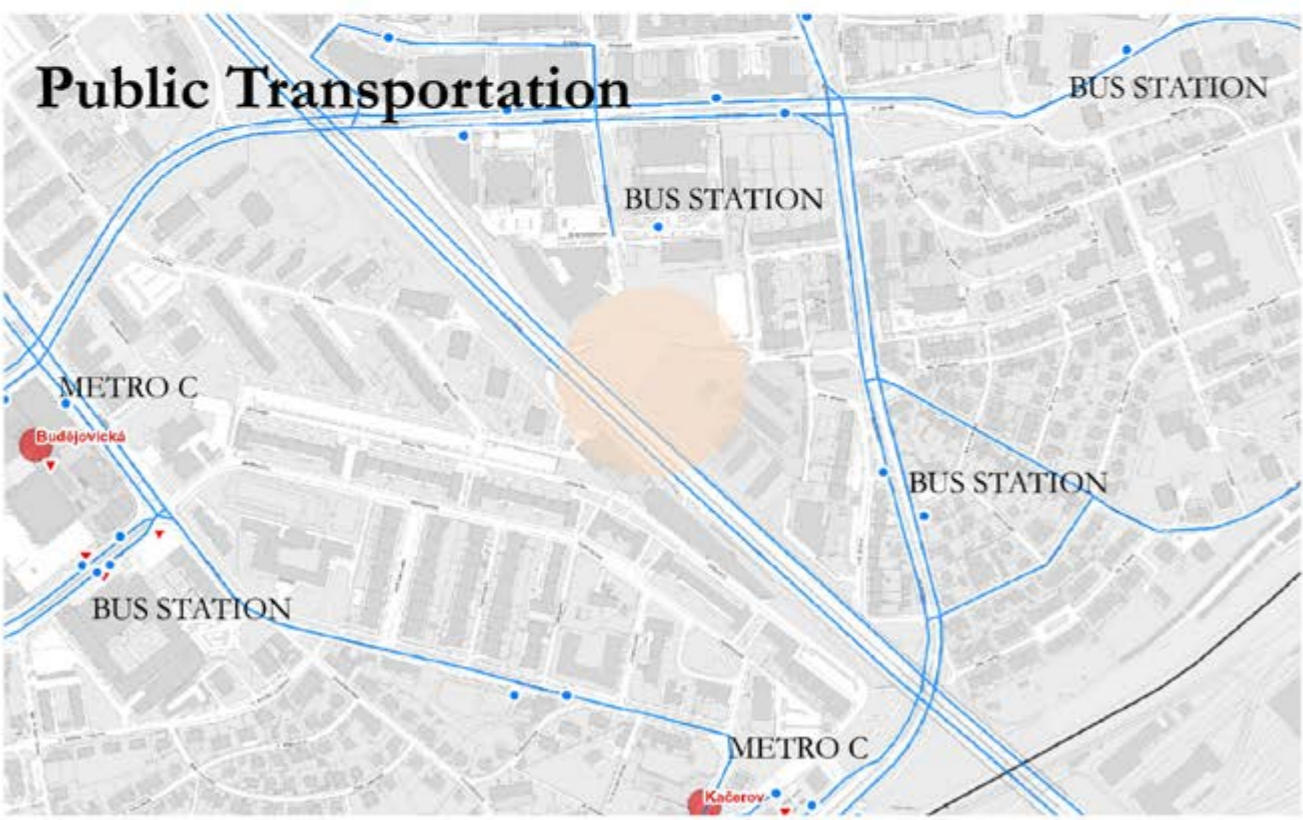
## Abstract

**Architecture** is related to two essential necessities of life: physical movement and the need for physical shelter, and both focuses on the 2 basic material: space and the body. However in today's life architecture is more than this. Contemporary architecture finds solutions and replies the contemporary needs.

This Master Thesis Project focuses on not only to design meaningful places but also to responds to contemporary needs.

# Project Site

BB Centrum, Michle



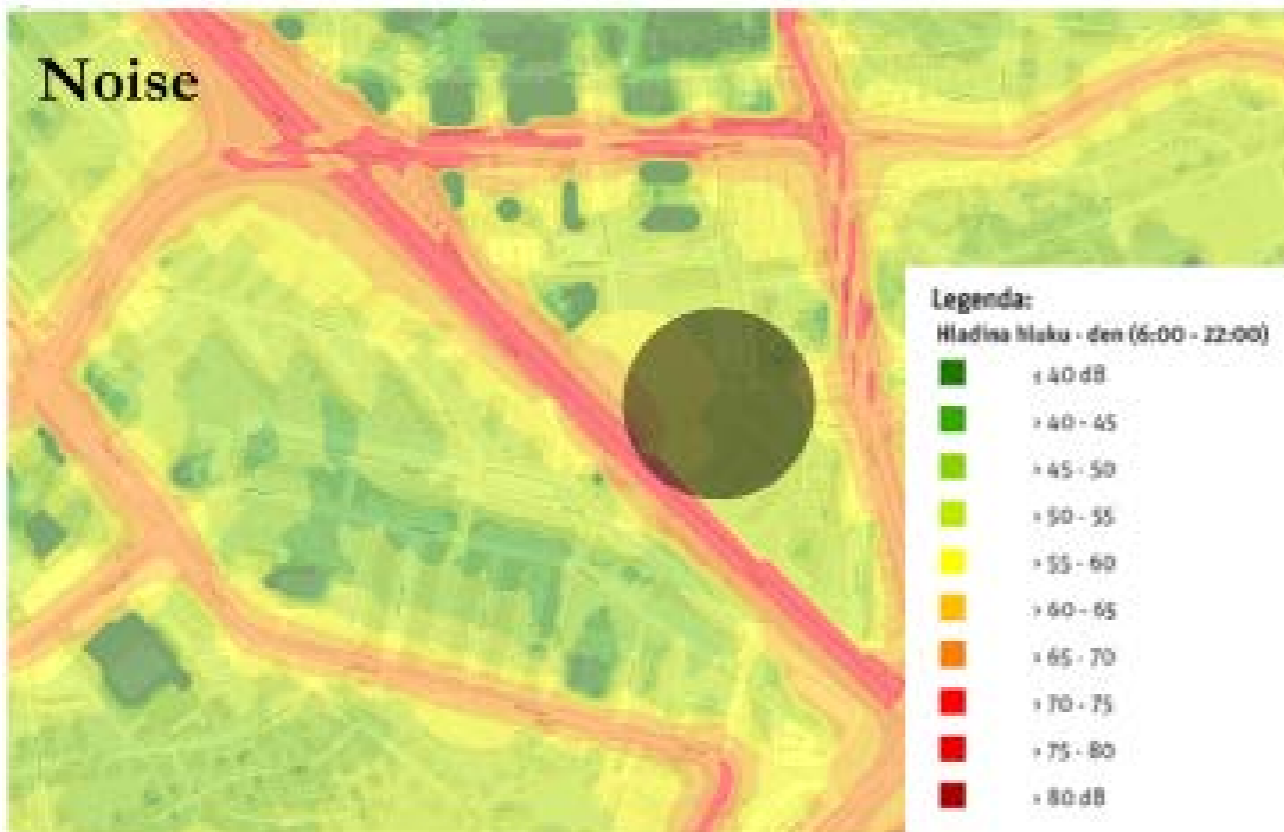
The site has bus stops with bus routes around. There is also Metro C close by the area.



The area is in connection point of the main and branches of routes for cycling.



The site is located on a park and former municipality building, building shops area. Neighbourhood is on north side consist of administrative centres while on the south forming by residential buildings.



Site is close to the highway that causes noise.

# Zoning Plan



- ZP: Parks, historical gardens, graveyards
- ZVO: Other building complexes public facilities
- SP: Sports
- SV-K: Mixed-use
- IZ: Green for isolation
- ZMK: City and landscape greens
- OV: General residential

# BB Centrum



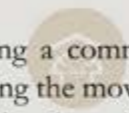
# Proposal

Functions  
Concept of Functions



- Prague 4 is the largest office district in Prague.
- 352 600sqm of area is becoming office spaces between 2018 - 2020. The 18% of the area is planned in the Prague 4.
- Vacancy rate became 5.3% in 2018 from 6.7% which was in 2017. It is the 3rd lowest district with the vacancy rate in Prague.
- 1st place is Prague 1 with 4.4% and the 2nd place is Prague 8 with 4.9%.

Office



- Designing a community centre encouraging the movement would break the borders of the business centre.
- Since the site and the neighborhood is dead during the working hours, community centre will bring the people staying home outside by providing answers to contemporary needs. It will bring people together in the means of place, values, interests, age and spirituality, since the community coagulations seems to be very difficult in the contemporary urban society.

Community Centre



- Resident zone  
Open working area
- Resilient work space  
Semi enclosed
- Meeting zone  
Meeting - Workshop  
Media - Presentation  
Focus area
- Social zone  
Lounge, PingPong,  
Coffee Tea Print,  
Terrace, Tennis

Office



- Active zone  
Child care  
Gym, Yoga, Pilates  
Dance  
Music
- Silent zone  
Reading room  
Conferance - Lecture

Community Centre

## Programme of Office Space

Resident zone, Resilient work space, Meeting zone, Social zone - Offices  
Atrium, Lobby, Terrace, Common Meeting&Social zone, Community centre, Car parking, Cafes, Restaurants - Support area  
Childcare, Gym, Yoga, Pilates, Dance, Music, Reading room, Conferance, Lecture - Community centre  
General storages, Kitchens, Maintenance rooms - Operation and maintenance space

**Flexibility**  
Offices that are flexible in the means of division which will provide in the future also being open for some other operation inside.



**Daylight**  
Offices that can use the daylight to be more sustainable. For the 4 m high floors, sunlight can reach at about 8 m. Therefore to be able use the natural light will be prioritised to support energy efficiency in such a building which needs the light as its function primarily requires.



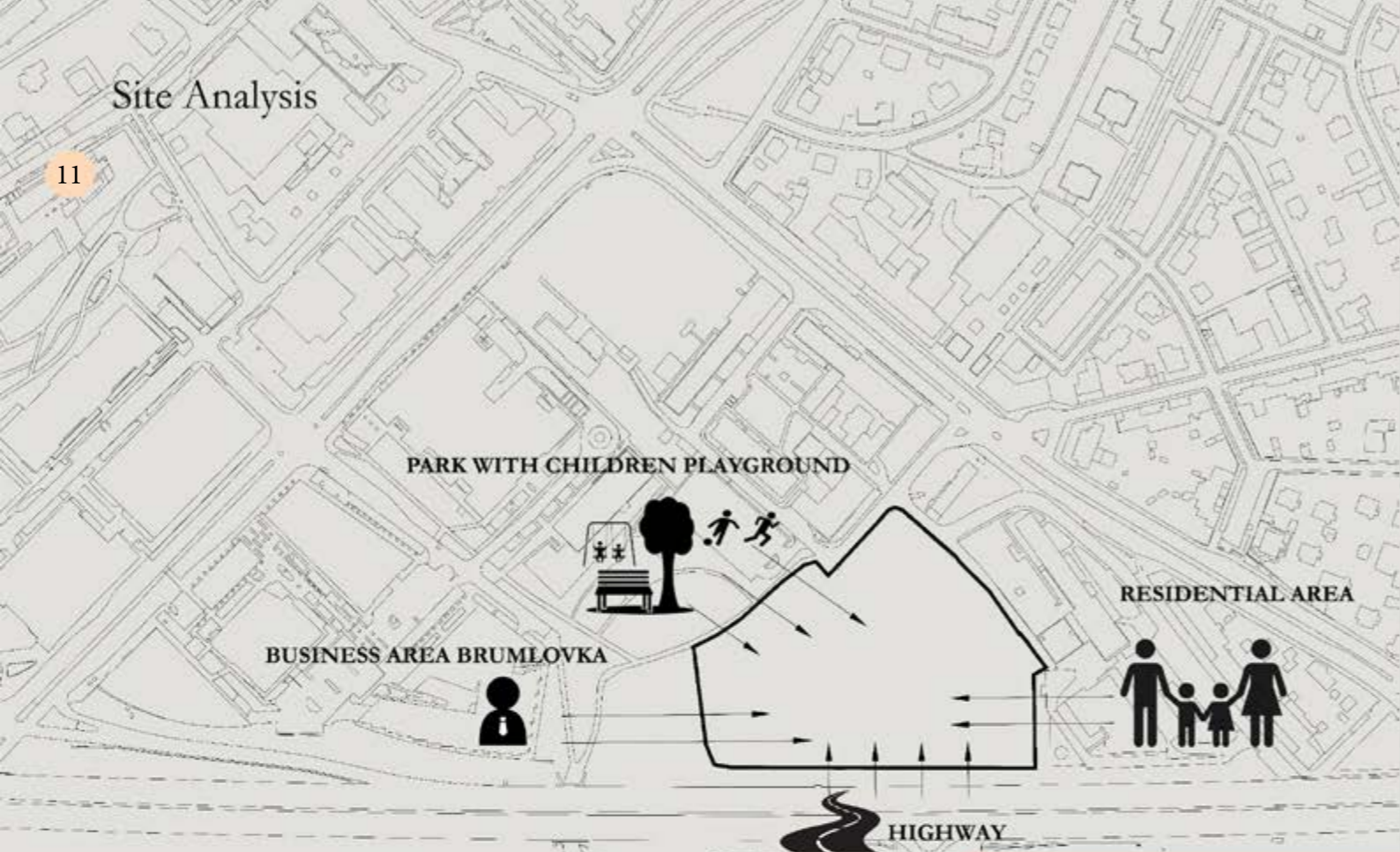
## Programme of Community Centre



Dues of office owners are including monthly subscription for the community centre. Therefore the community centre will improve the value of the office space, while it also adding value to the working atmosphere of the building with its programme.

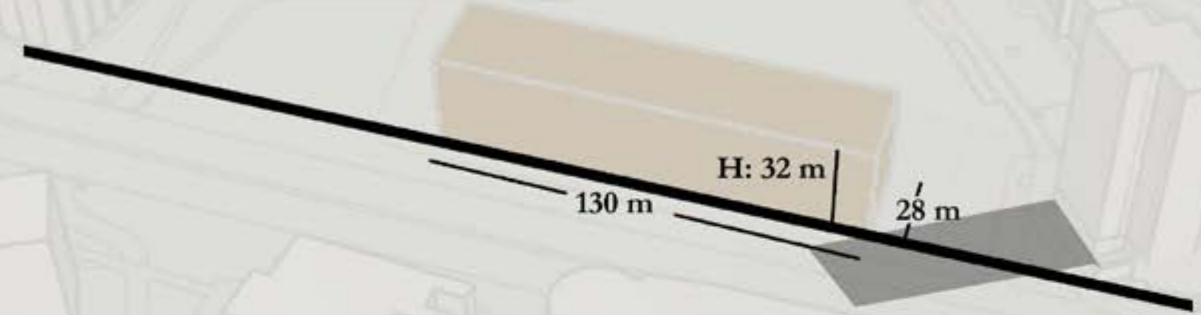
# Site Analysis

11



Total area is 2 hectares.  
 Buildable area: 50 % = 1 hectare.  
 Maximum floor number: 8  
 Floor area ratio: 1.49  
 Build area:  $20\,000 \times 1.49 = 29\,800$  sqm  
 Each floor's area:  $29\,800 / 8 = 3\,725$  sqm  
 Public space: 50 % = 1 hectare

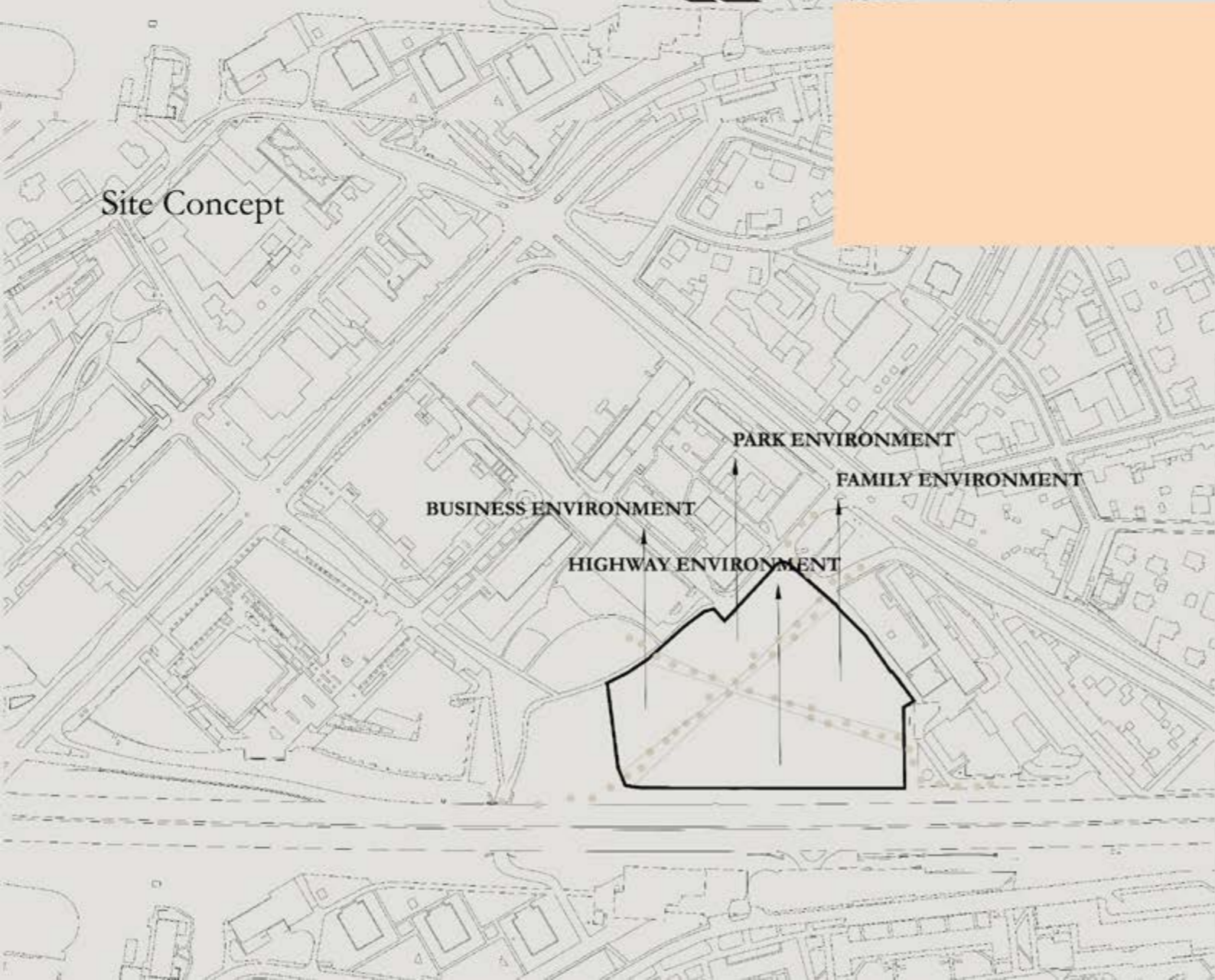
Max Volume



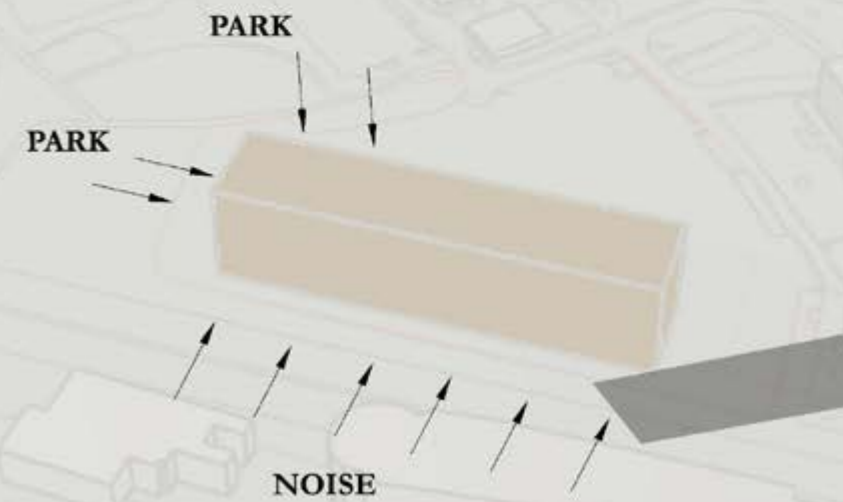
# Analyses

in immediate surrounding

# Site Concept



Site Relations







ENTRANCE  
TO COMMUNITY  
CENTRE

ENTRANCE  
TO OFFICE

ENTRANCE  
TO OFFICE  
IV

1

11

111

111

1

11

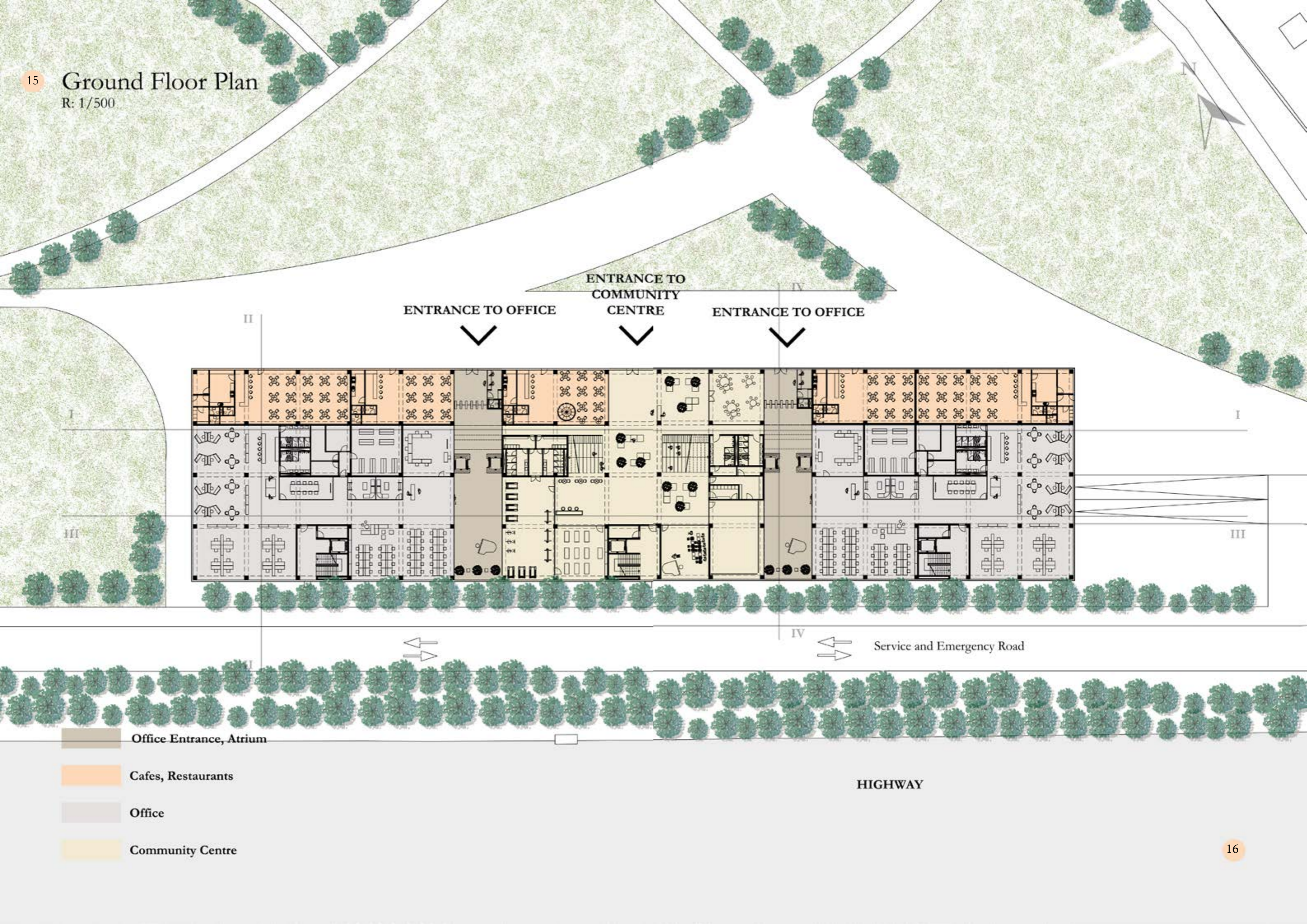
SERVICES AND EMERGENCY ROAD

IV

HIGHWAY

# Ground Floor Plan

R: 1/500



- Office Entrance, Atrium
- Cafes, Restaurants
- Office
- Community Centre

# 1st Floor Plan

R: 1/500



# 2nd Floor Plan

R: 1/500



- 1-Seminar
- 2-Meeting
- 3-Relaxing
- 4-Reading room

- Atrium, Office Common Space
- Cafes, Restaurants
- Office
- Community Centre

# 3rd Floor Plan

R: 1/500



# 4th Floor Plan

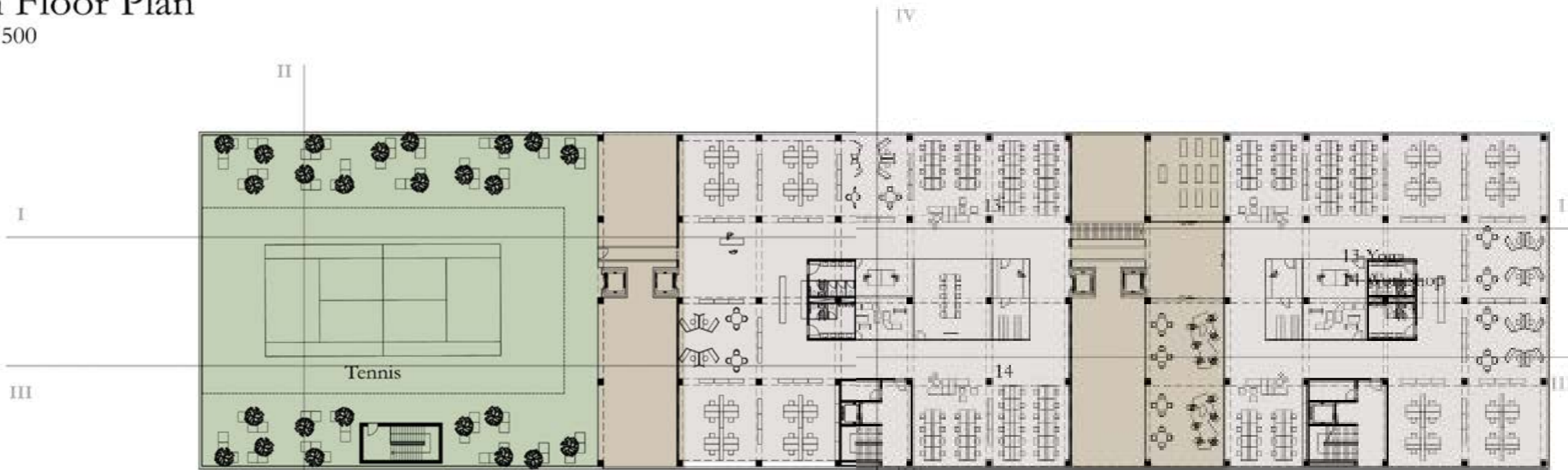
R: 1/500



- Atrium, Office Common Space
- Cafes, Restaurants
- Office
- Community Centre

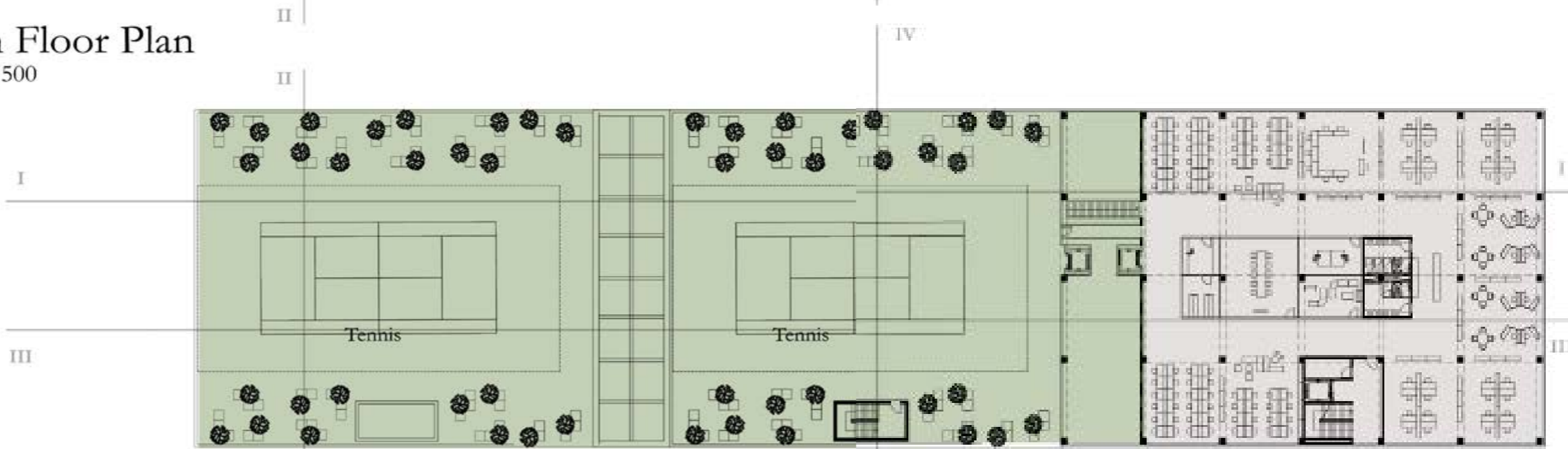
# 5th Floor Plan

21 R: 1/500

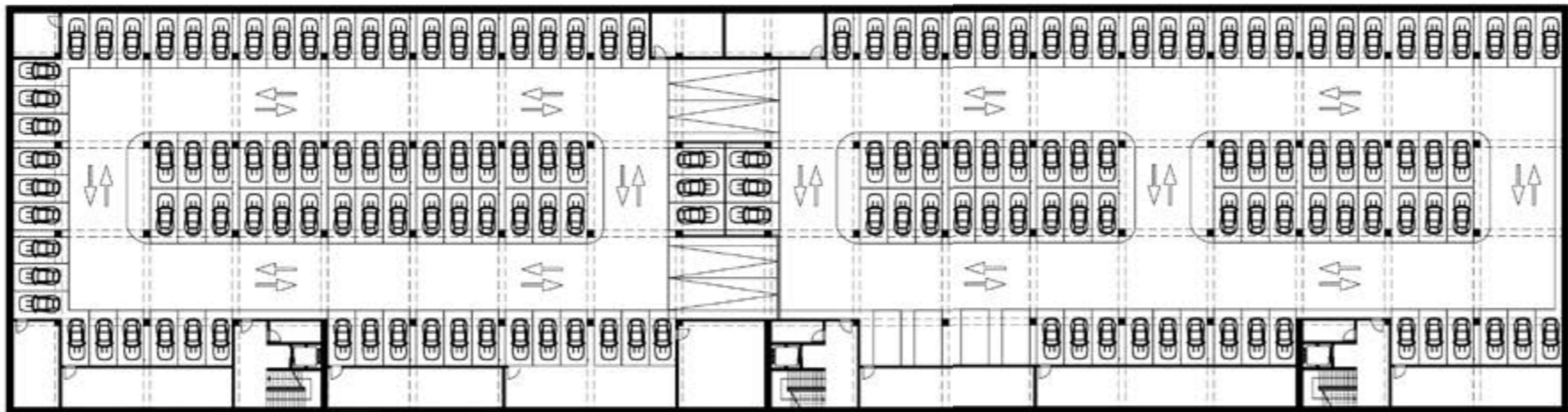
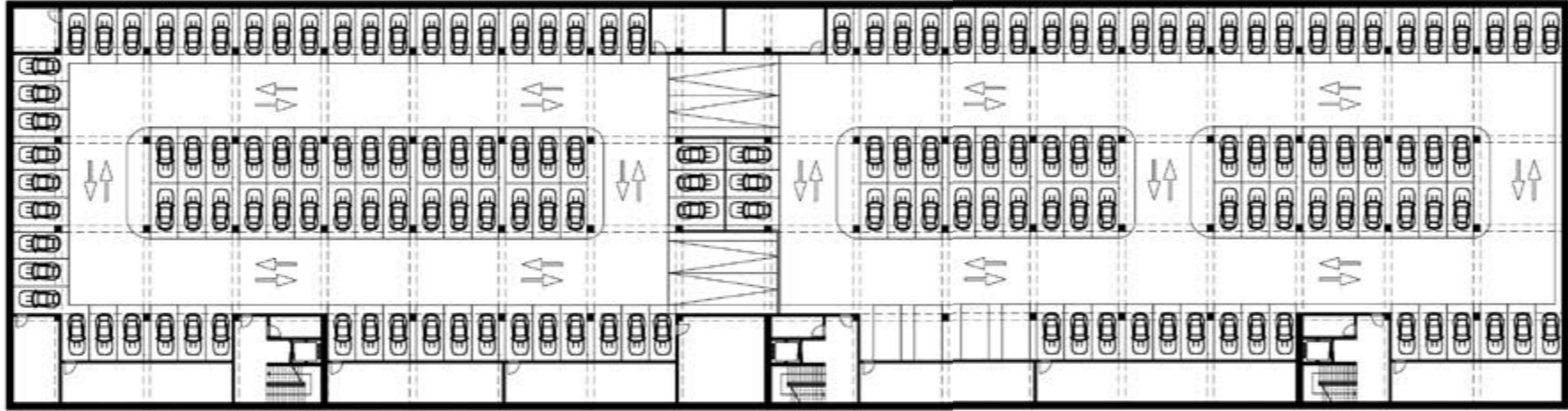
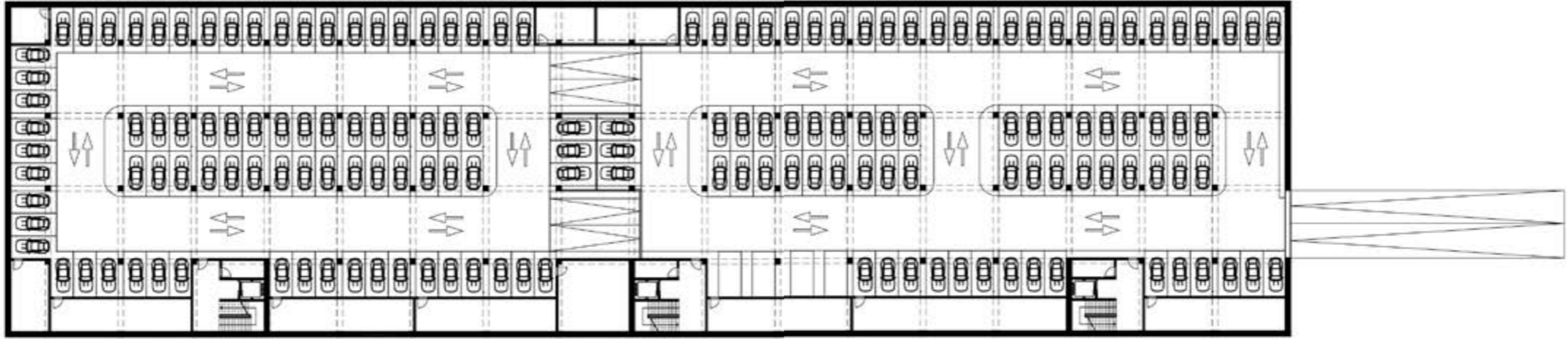


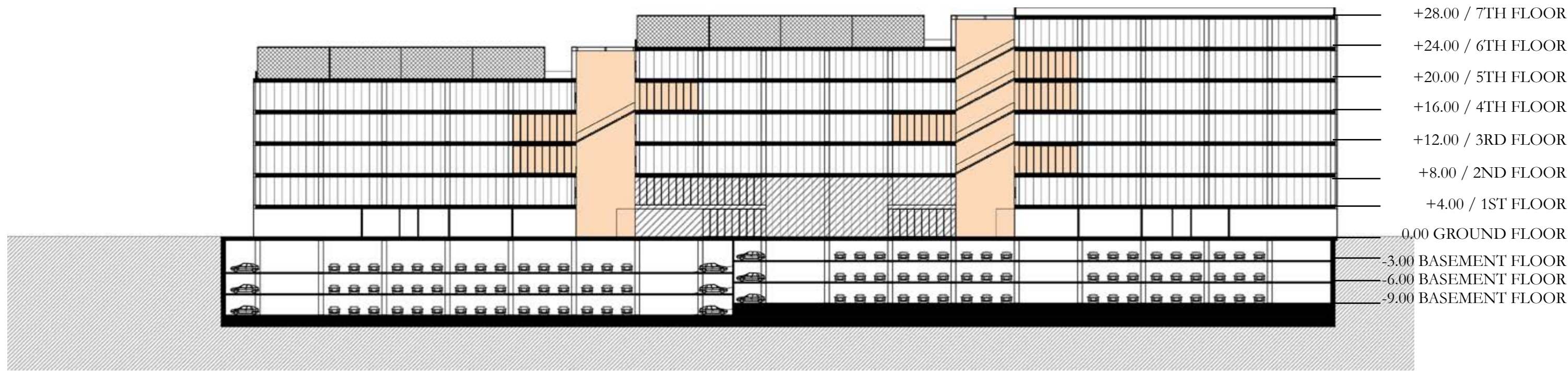
# 6th Floor Plan

R: 1/500

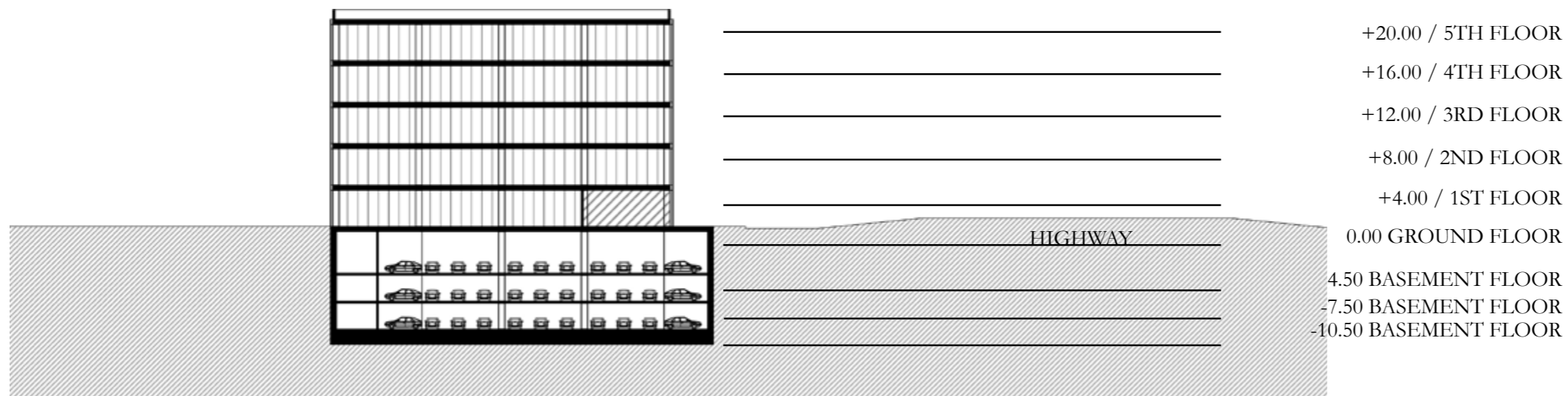


- Atrium, Office Common Space
- Terrace
- Office
- Community Centre



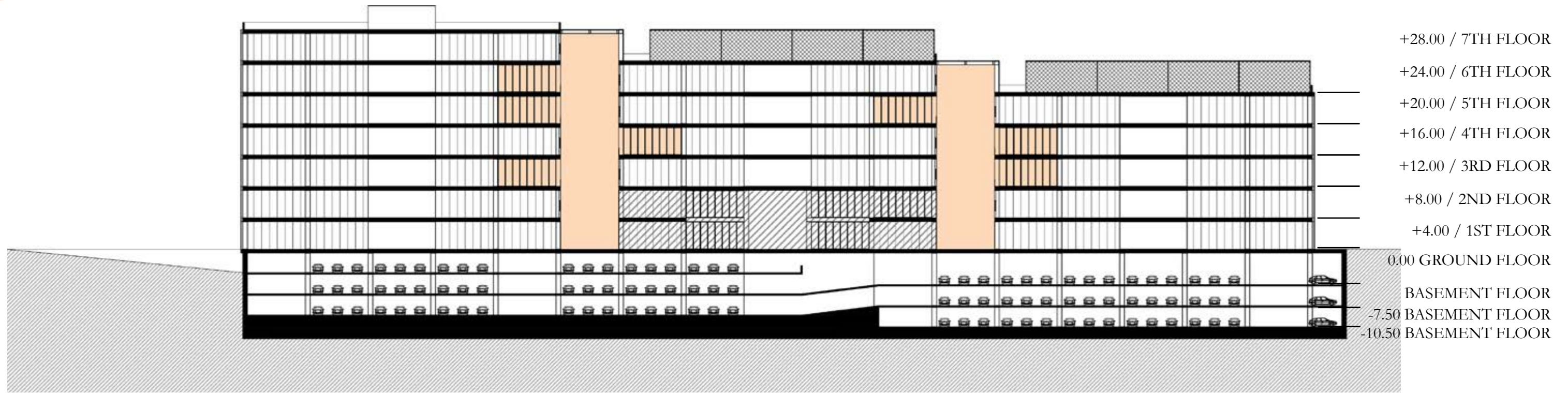


SECTION I - I  
R: 1/500



SECTION II - II  
R: 1/500



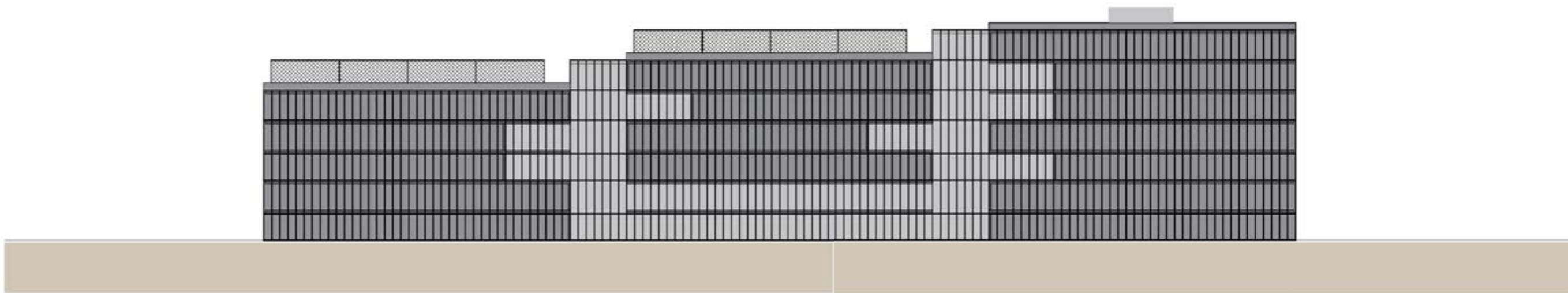


SECTION III - III  
R: 1/500



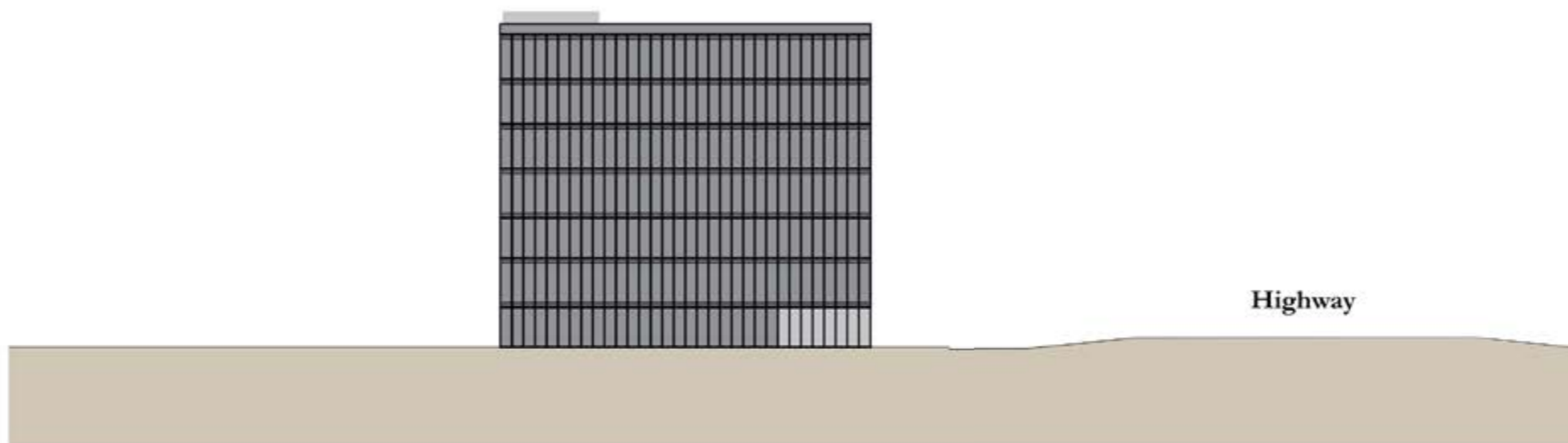
SECTION IV - IV  
R: 1/500





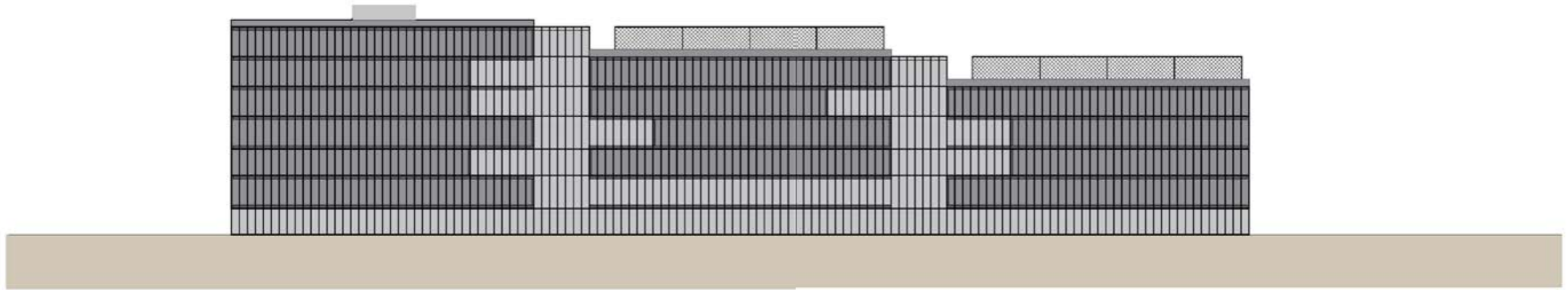
Southwest Elevation

R: 1/500

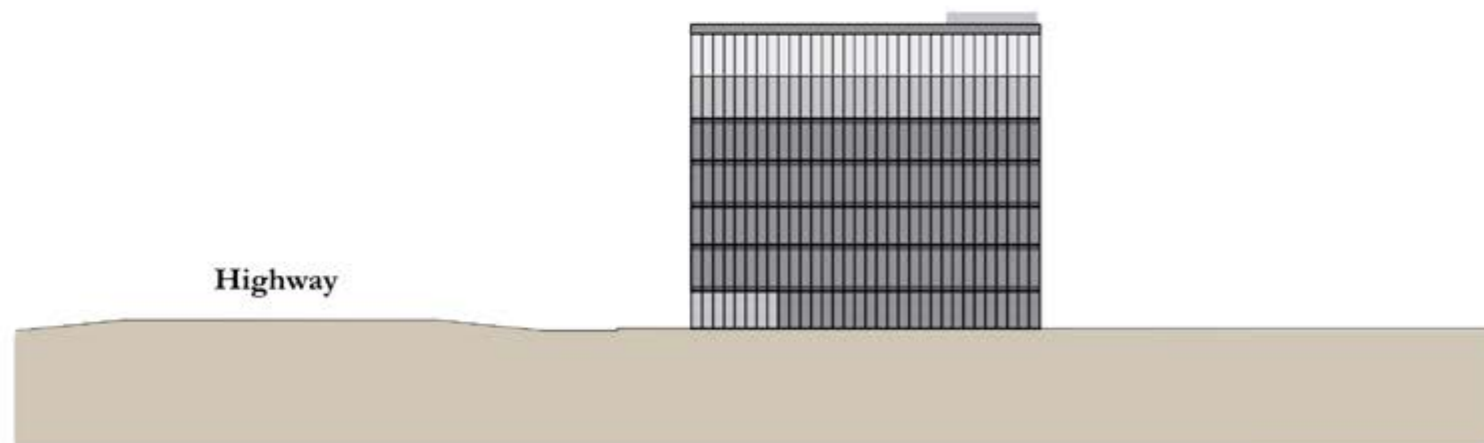


Southeast Elevation

R: 1/500



Northeast Elevation  
R: 1/500



Northwest Elevation  
R: 1/500











- 1 [<http://www.urban-hub.com/buildings/mixed-use-buildings-for-diversified-sustainable-sites/>]
- 2 [<https://www.cityofbowie.org/Document-Center/View/952/A-Brief-History-of-Mixed-Use-Developments---Stephen-Ferrandi-Presentation?bidId=>]
- 3 [[https://www.designingbuildings.co.uk/wiki/Mixed\\_use\\_development](https://www.designingbuildings.co.uk/wiki/Mixed_use_development)]
- 4 [<https://www.sciencedirect.com/science/article/pii/S1687404814000303>]
- 5 [<https://www.kpf.com/stories/mixed-use>]
- 6 [<https://cs.wikipedia.org/wiki/Michle>]
- 7 [[https://giswas1.mepnet.cz/arcgis/rest/directories/arcgisoutput/TISK/PrintMap\\_GPServer/\\_ags\\_29e744a7f0c34adcbf48747c06ab6c27.pdf](https://giswas1.mepnet.cz/arcgis/rest/directories/arcgisoutput/TISK/PrintMap_GPServer/_ags_29e744a7f0c34adcbf48747c06ab6c27.pdf)]
- 8 [<https://www.dezeen.com>]
- 9 [<https://www.azuremagazine.com/article/plyscrapers-timber-towers-green-skyscrapers/>]
- 10 [<https://www.havwoods.com.au/rise-of-sustainable-building/>]
- 11 [<https://www.archdaily.com>]
- 12 [<http://www.plparchitecture.com/oakwood-timber-tower.html>]
- 13 [<https://perkinswill.com/work/river-beech-tower>]
- 14 [<https://inhabitat.com>]
- 15 [[https://books.google.cz/books?id=\\_lmcCQAAQBAJ&pg=PA387&lp-g=PA387&dq=green+towers+sustainable&source=bl&ots=Zt7GA5d4MI&sig=ACfU3U3ncR-6cvEzx\\_V6em5BWEdNw5CHqA&hl=tr&sa=X&ved=2ahUKEwjTz5Tg4rngAhUPfFAKHbXuBr0Q6AEwDXoECAAQAQ#v=onepage&q=green%20towers%20sustainable&f=false](https://books.google.cz/books?id=_lmcCQAAQBAJ&pg=PA387&lp-g=PA387&dq=green+towers+sustainable&source=bl&ots=Zt7GA5d4MI&sig=ACfU3U3ncR-6cvEzx_V6em5BWEdNw5CHqA&hl=tr&sa=X&ved=2ahUKEwjTz5Tg4rngAhUPfFAKHbXuBr0Q6AEwDXoECAAQAQ#v=onepage&q=green%20towers%20sustainable&f=false)]
- 16 [[https://www.som.com/ideas/research/timber\\_tower\\_research\\_project](https://www.som.com/ideas/research/timber_tower_research_project)]
- 17 [<https://www.bbcentrum.cz/en/about-us/bb-centrum/about-bb-centrum>]
- 18 [<https://www.breeam.com/>]
- 19 [[https://www.researchgate.net/publication/326818196\\_Sustainability\\_and\\_the\\_21st\\_Century\\_Vertical\\_City\\_A\\_Review\\_of\\_Design\\_Approaches\\_of\\_Tall\\_Buildings](https://www.researchgate.net/publication/326818196_Sustainability_and_the_21st_Century_Vertical_City_A_Review_of_Design_Approaches_of_Tall_Buildings)]
- 20 [<https://realitymix.centrum.cz/statistika-nemovitosti-graf.php?mesto=19&praha=0&s=byty-pronajem-prumerna-cena-pronajmu-1m2-mesic>]
- 21 [<https://www.fosterandpartners.com>]
- 22 [<http://app.iprpraha.cz/js-api/app/vykresyUP/>]
- 23 [[https://plan.app.iprpraha.cz/texty/#tcz\\_cl\\_157](https://plan.app.iprpraha.cz/texty/#tcz_cl_157)]



Thank you.