



Unified Diversification

P5 Graduation Report
Public Building Studio
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The dense city center of Den Haag is a place of constant redevelopments and a need for more multiplicity. The area is populated with inaccessible governmental buildings with fortress-like designs. The proposal reuses the existing National Library and National Archives while connecting to Leiden University Tower. It captures the flow of the city and directs the public inside.

The proposal aims to create and celebrate diversity. By inviting the general public inside the vertical campus, the university gains the new meaning of a marker in a city, a stage. Campus becomes a place for cultural exchange, public gatherings, and extra stage for minorities. Students benefit from improved creativity, innovation, civic engagement, and many others.

The design follows the Space Catalogue to ensure spatial diversity. Different floors, and moments inside them, provide unique experiences and new ways of learning. Various types of stages give students opportunities for social interactions, ranging from intimate to grand atmospheres.

The booklet explains the beginning stages of the design leading up to final proposal. It consists of theory, structure and final design.

1. Proces Documentation

1.1. P1

TD Assignment 1 | Psychogeographical map
Reflections by Night

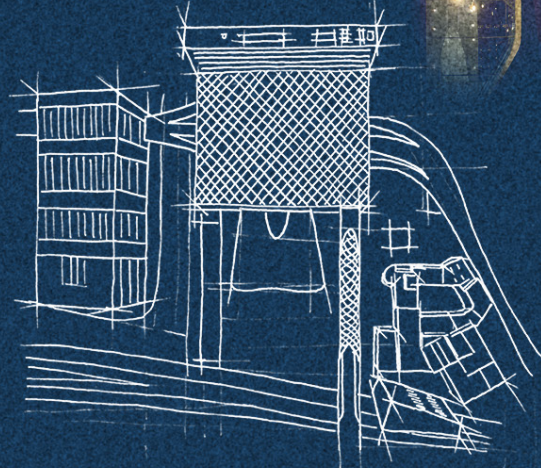
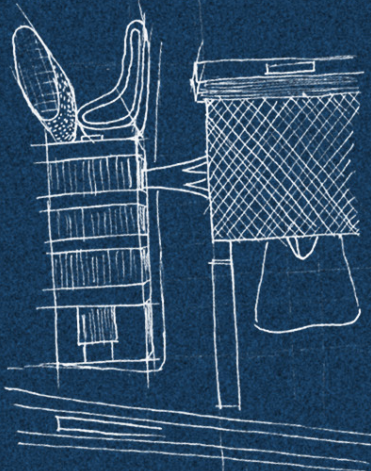
bezuidenhoutseweg

Tram network
Colourful digital artwork

Crossing place
North-south
Extension of interior

Electricity cables

Waiting people



openness and emptiness
harsh and traffic oriented surface

freedom of choice of a bus
clash of transit modes

bus stop
glass facade

marks of a bus wheels on the road
trash on the ground
pollution

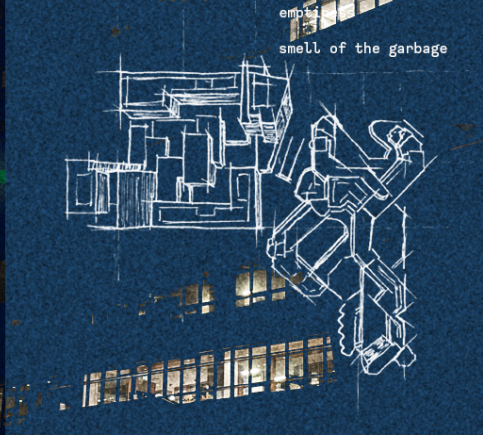
Horizontal viewlines
Wooden benches
variety of building
Framed public space
Corridors
Building process
Building heights

The psychogeographical map was the starting point for theoretical research. It helped pinpointing the fragmentation of Den Haag. Lack of adaptability of the buildings during the day was the main issue in the area. The concept of temporalities became the main aspect of the group analysis.

brick flooring
vertical lights
garage doors

not public at all
gated community

brick
empty
smell of the garbage

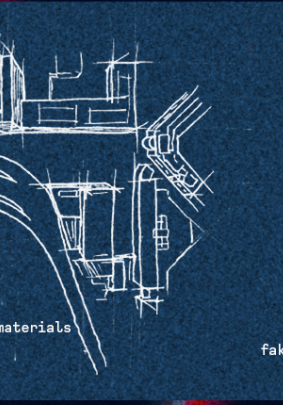
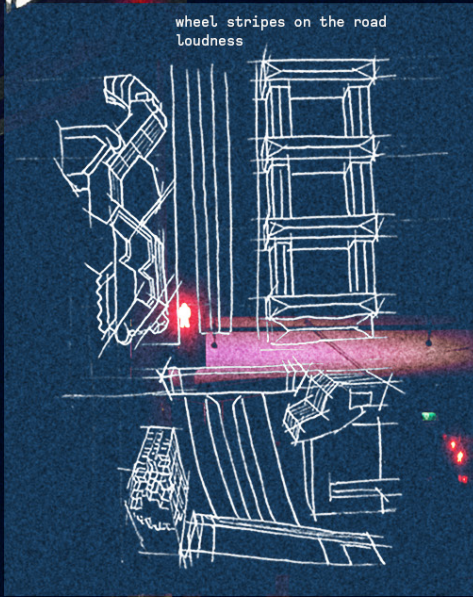


axes of flows
100km/h
A12

prosperity of traffic
transitional

engines
tunnel light

wheel stripes on the road
loudness



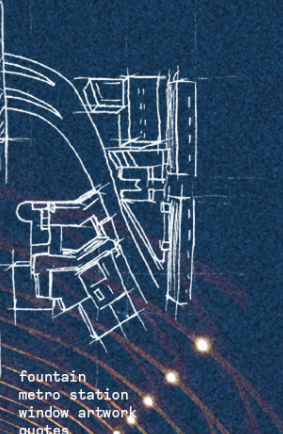
materials

fake book covers
rocket statue
the pond

no public area on the ground floor

metal or composite cladding

ugliness
fakeness



fountain
metro station
window artwork
quotes

transition of height

missions

transparency

unity of materials
soft landing of the towers

rhythm of the lights
flexibility

residential windows
construction site truck

dustiness
temporality of the borders

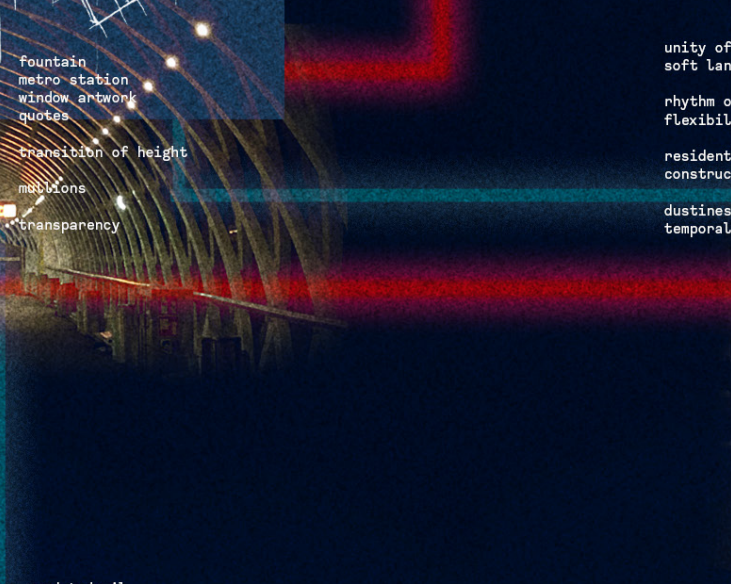


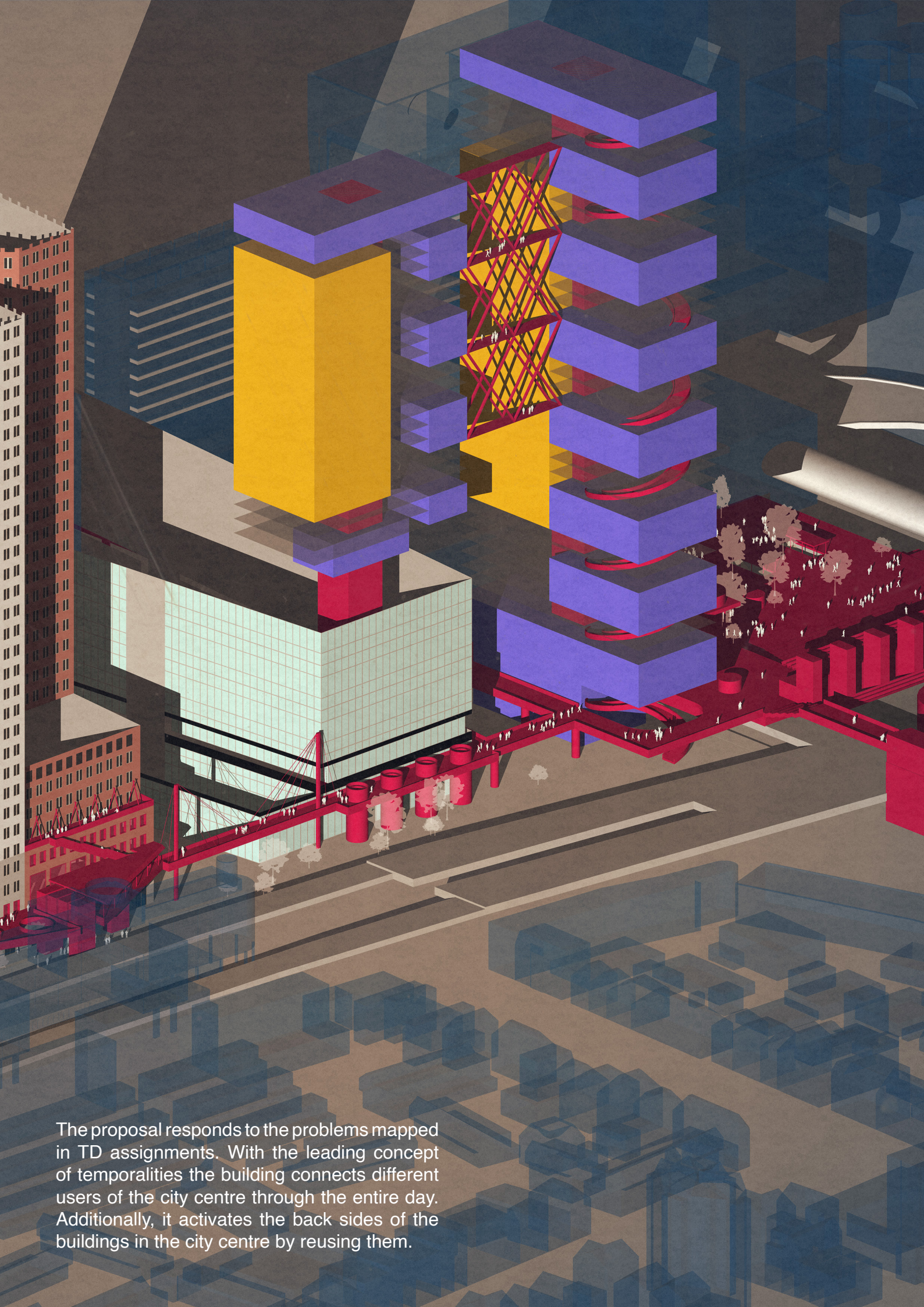
a12

beuzidenhoutseweg



tram network





The proposal responds to the problems mapped in TD assignments. With the leading concept of temporalities the building connects different users of the city centre through the entire day. Additionally, it activates the back sides of the buildings in the city centre by reusing them.



1.2. P2 Theory Development

First version of the research plan. As the project progressed, the research question and problem statement evolved as a part of studio's Research by Design program.

Vertical Campus Culture

Redefining the meaning of vertical campus by exploring its potential with campus culture.

Problem Statement

The ever-evolving universities need radical changes in their functions and spatial configurations to use their full potential in an urban fabric. A vertical campus cannot follow a modernized type of an office building with rather few communal or leisure spaces. It needs to redefine its own type. As academia becomes interdisciplinary and universities multifunctional, connectivity, communication, and a sense of belonging are crucial in achieving innovation. Treating them as of secondary importance during the design hinders the productivity of the university. Therefore, campus culture needs to be the leading force in this change. If left as it is, the universities stay as disconnected from the urban fabric as office and residential towers are in Den Haag now. Such change from a horizontal campus to a vertical one can miss the opportunities and negatively impact users' quality of life. Creating personas from street interviews on the 26th of September 2023 in Den Haag for Design Thinking Assignment showed that communal and public areas for students are lacking. Students' sense of belonging was hindered as they had to use outside retail spaces to socialize. Finding a new function and redefining the new type of university is necessary to achieve its full potential.

Research Questions

The research questions aim to examine and challenge campus culture in the evolving new type of university. The objective is to redefine the meaning of vertical campus building and identify its potential with the use of campus culture as the leading concept.

The first question stands as “What is a campus culture in a traditional, horizontally expanded campus?”. It provides the basis for understanding social activities in an academic built environment. It includes mapping culturally significant spaces and the reasons for their importance, as well as their evolution and flexibility.

The second question focuses on “How can a university tower benefit from an analogy to a theatre?”. It pushes the understanding of a campus culture and provides the building with a new function. By dealing with the campus as a non-hierarchical theater, the users gain a forum for sharing their opinions, therefore, empowering their impact on society and policymakers.

The third question stands as “How can a vertical campus become a landmark in a dense urban setting?”. It aims to map physical differences to office and residential towers and the reasons behind them. Additionally, it highlights the relation with the urban fabric. But above all, it questions the achievement of monumentality through the use rather than physical appearances. With that, it aims to acquire public recognition to expand campus culture with new points of view.

Design Goal

The goal of the design is to create a multifunctional campus tower that act on its opportunities given by the connection with the urban setting. It aims to create multifunctional building that provide forum for public debates and social cohesion. As universities already facilitate innovation with wide societal impact, the objective is to amplify it through inclusive and wheelchair accessible public spaces (Deiaco, 2012). Making those spaces flexible ensures adaptability to temporal changes in campus culture and longevity of the building. Following the example of LSE Marshall Building (Grafton Architects, 2022), the design aims to create a durable structure that allows for future expansion. Moreover, its aim is to also expand the program with sports, arts and flexible communal spaces for enhancement of campus culture.



Left: $x = 1$
Line of x number equal to $1/2$
 $x = 1/2$ The horizontal line
is $y = 1/2$

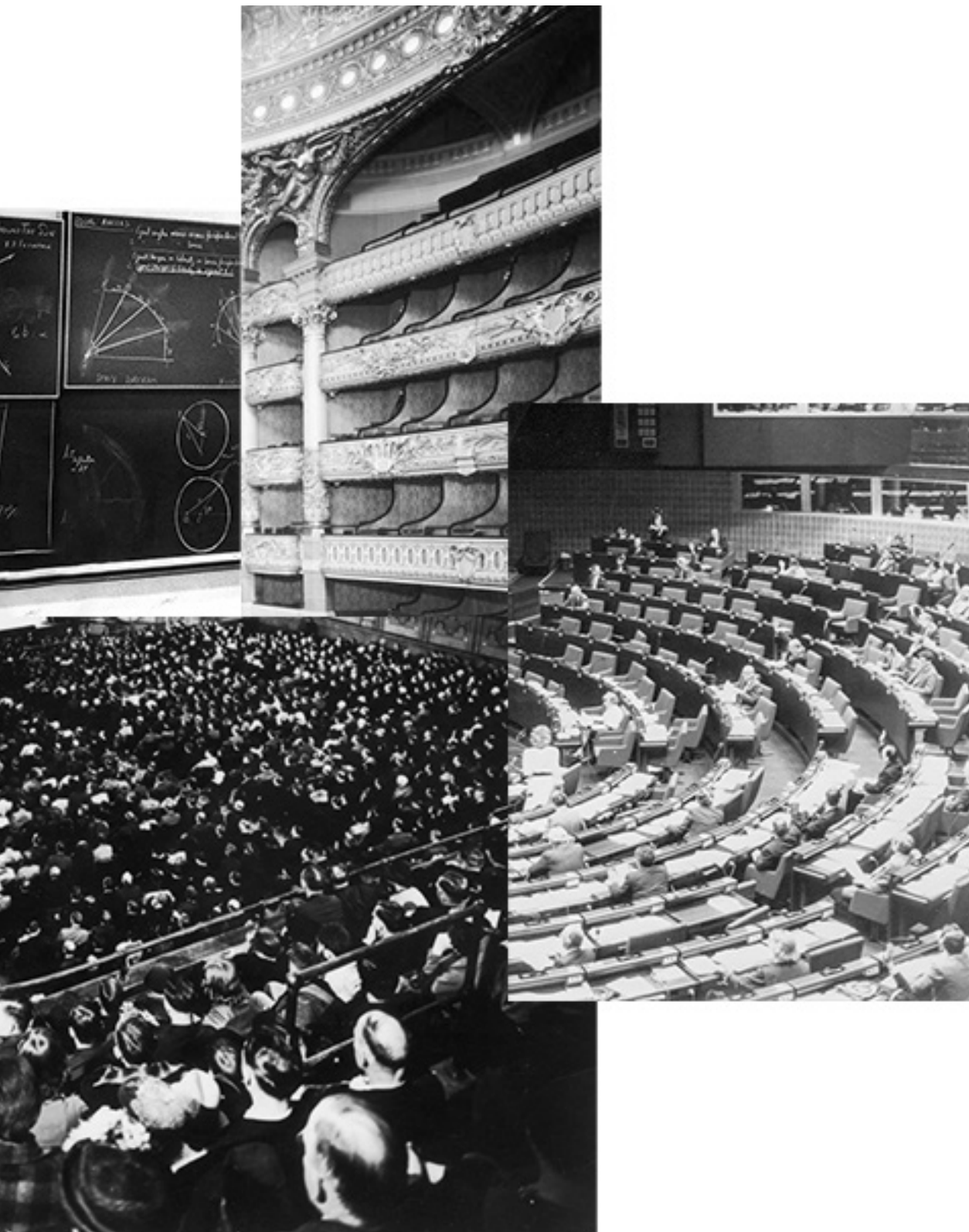
$$\cos^2 x + \sin^2 x = 1$$
$$\cos^2 x = 1 - \sin^2 x$$


$$\cos^2 x = \frac{y^2}{r^2} = \frac{y^2}{1} = y^2$$
$$\cos x = \pm \sqrt{y^2} = \pm y$$

condition for $\sin^2 x > 0$

$$\sin^2 x = 1 - \cos^2 x = 1 - y^2$$
$$\sin x = \pm \sqrt{1 - y^2}$$





TD Assignment 4 | Montage | Campus as a Place that Celebrates and Unifies Diversity.



Diverse, Non-hierarchical Street Culture Performance.

What is a campus culture?

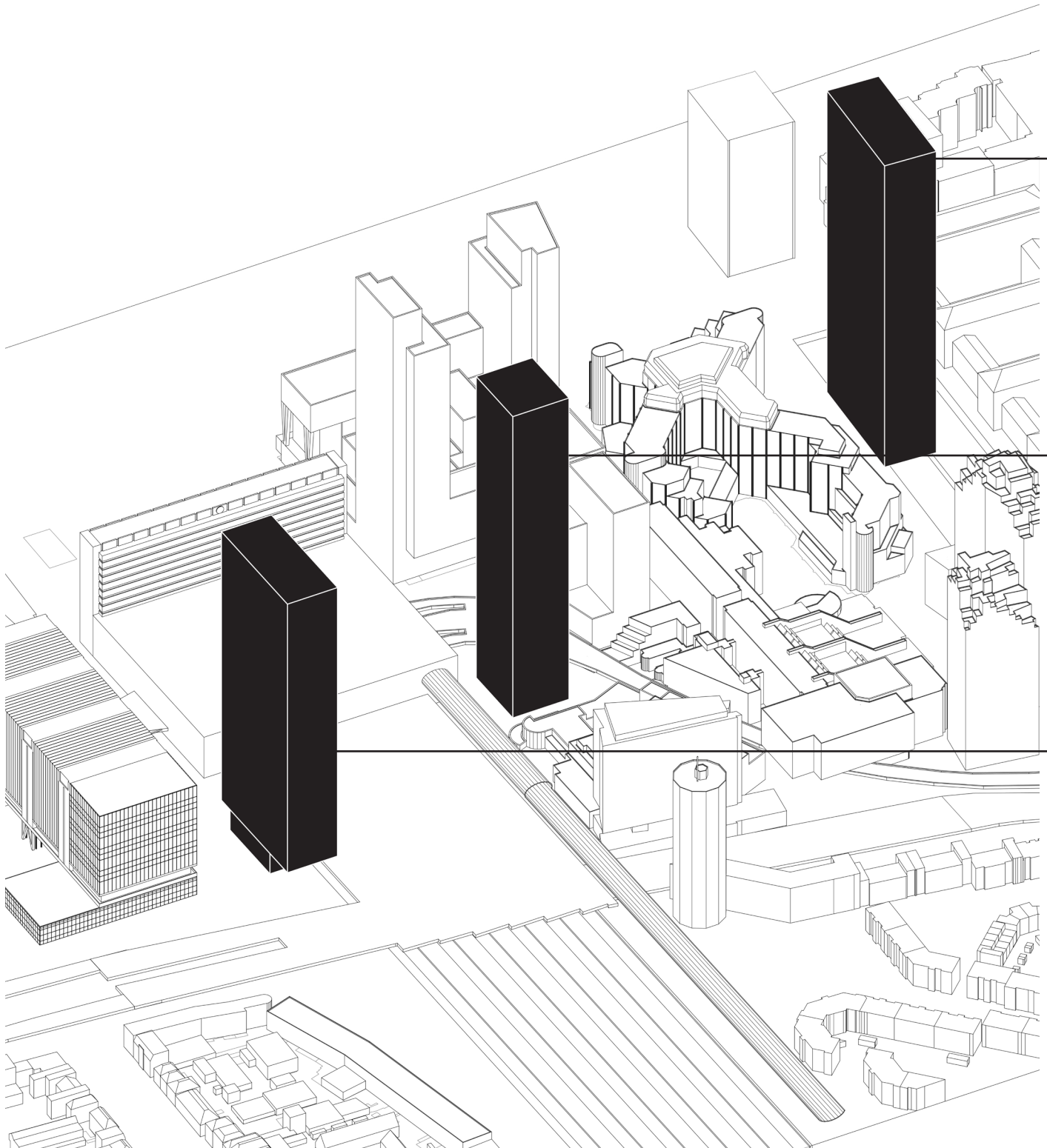
A collective combination of users' different cultures.



Theatre for One.

It consists of campus material culture, which is the built environment and its objects, institutional culture which is the rules and management of the organization, and campus spiritual culture - students' participation in social and academic life.

1.3. P2 Site Development



Site 3

Site 2

Site 1

Pros:

Area the compatible with the analysis.

Connection to the urban square and the library.

Close proximity to governmental offices.

High connectivity to the public transport.

Possibility for underground levels.

Cons:

Taking away a public square.

Less space for the high-rise.

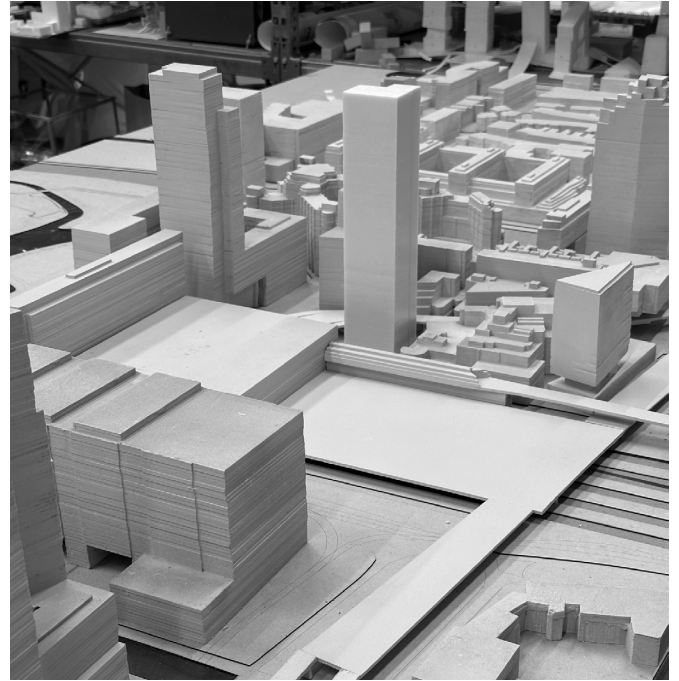
Necessity of a complex ground floor.

Close proximity to subway tracks and vibrations.

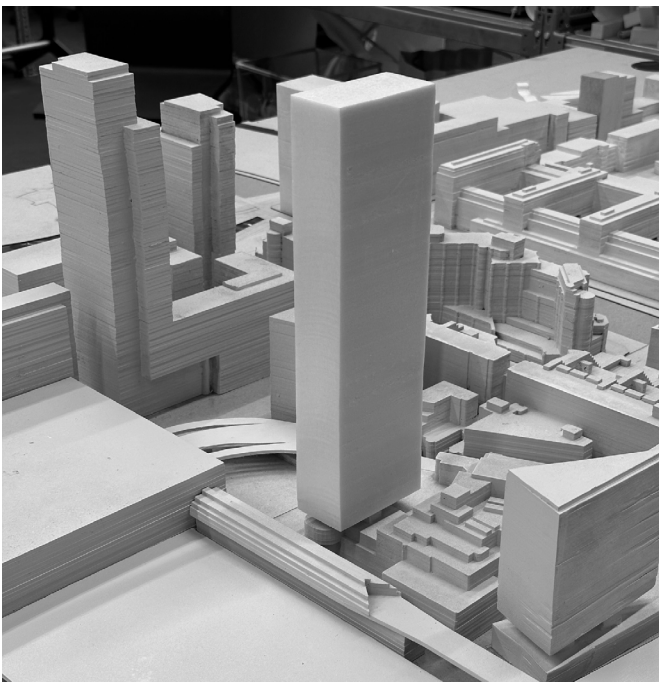
Main entrance from a small street.

Hard connection for delivery trucks.

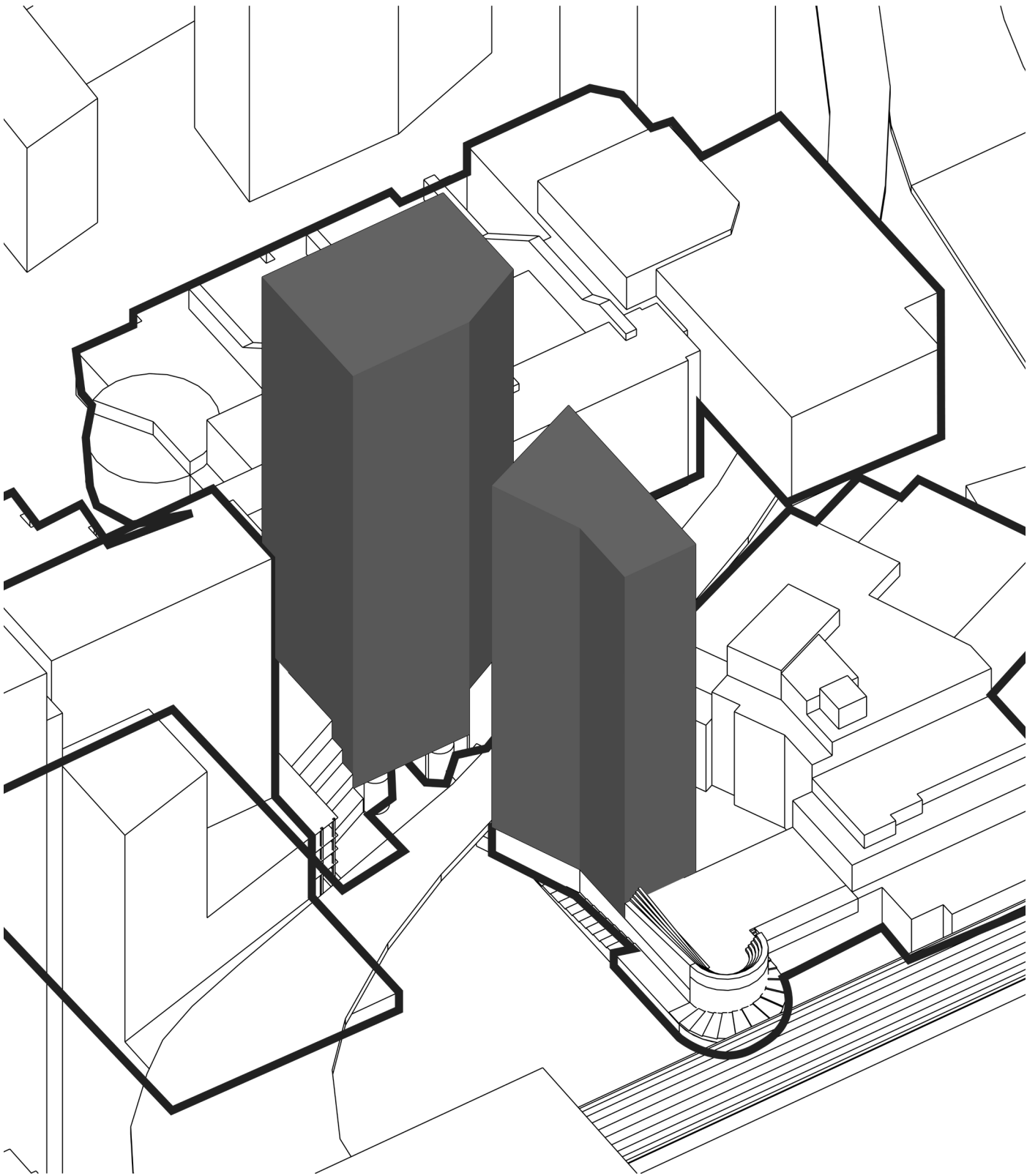
Site 2. Variant 1



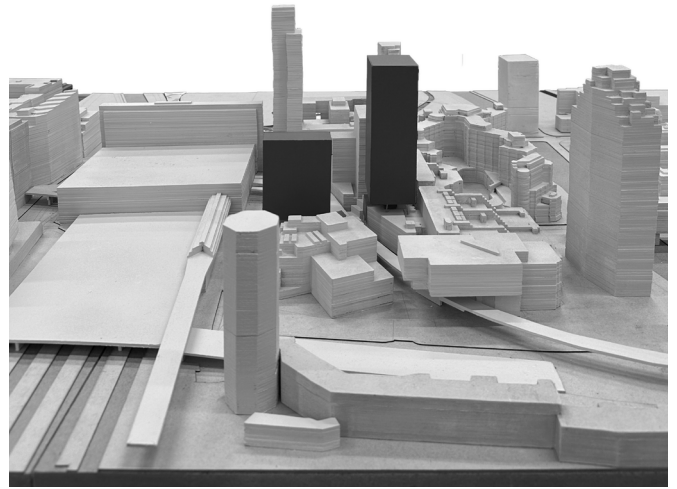
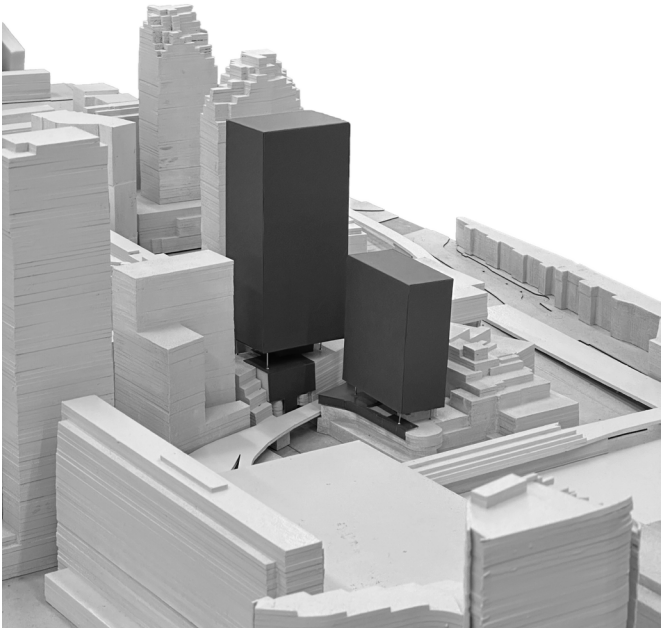
Site 2. Variant 2



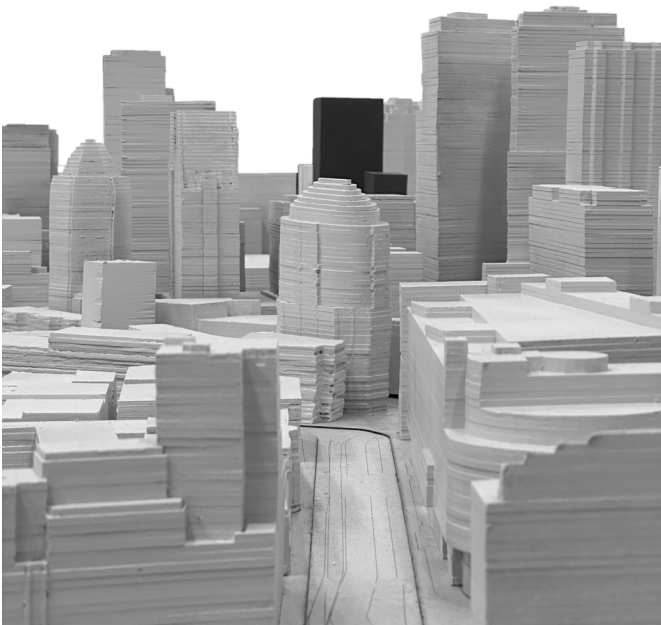
2nd Tutoring | 24.11.23 - 30.11.23

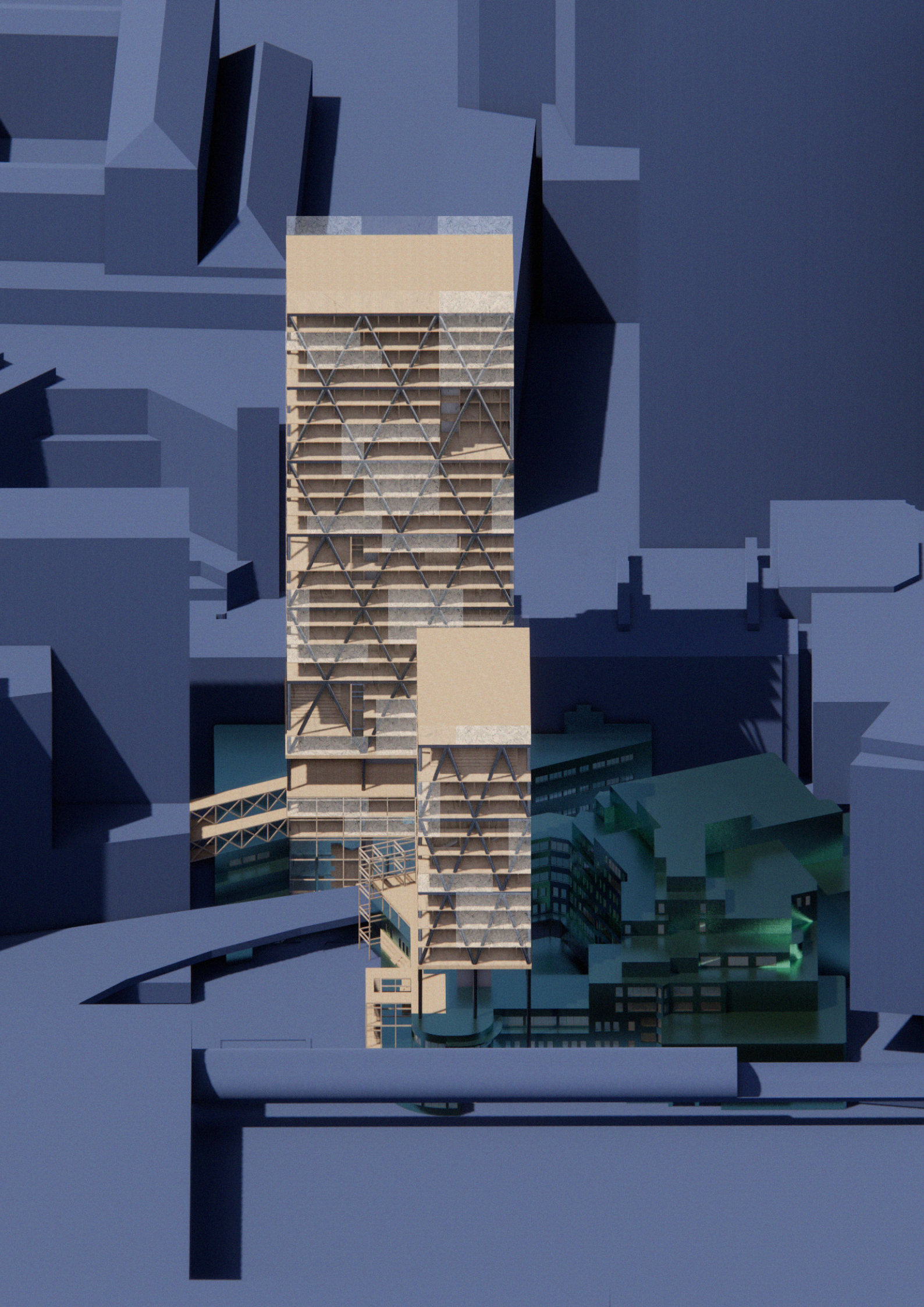


Site 2. Variant 1

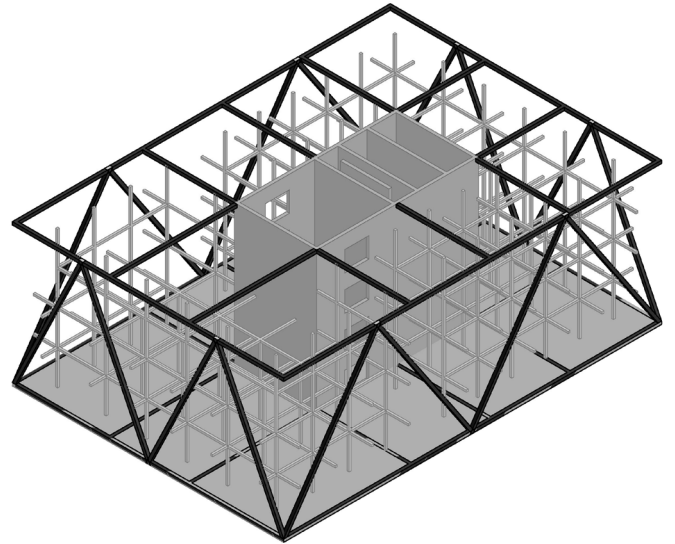


Site 2. Variant 2

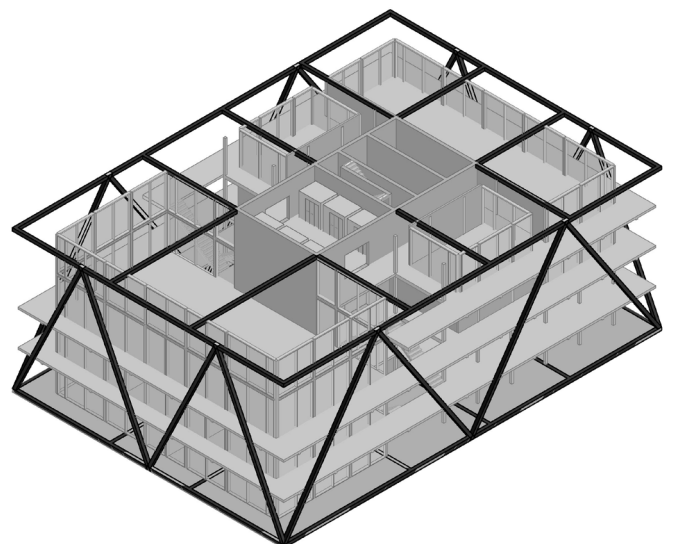




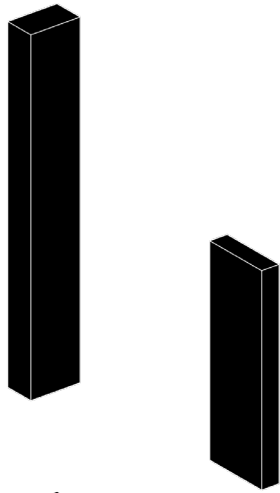
1.4.1. P2 Structure Development



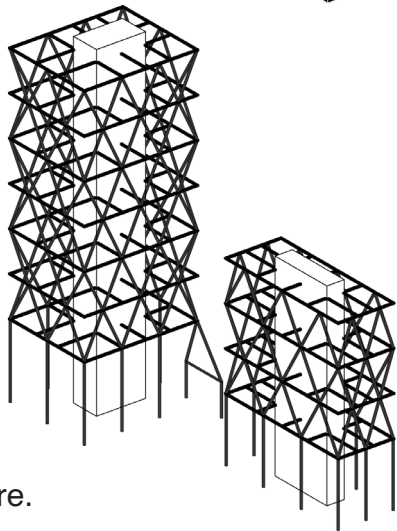
External superstructure and internal secondary wooden structure.



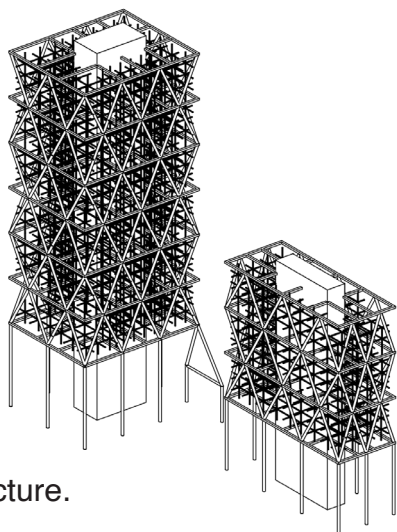
Internal walls on the grid of the secondary structure.



Concrete core.

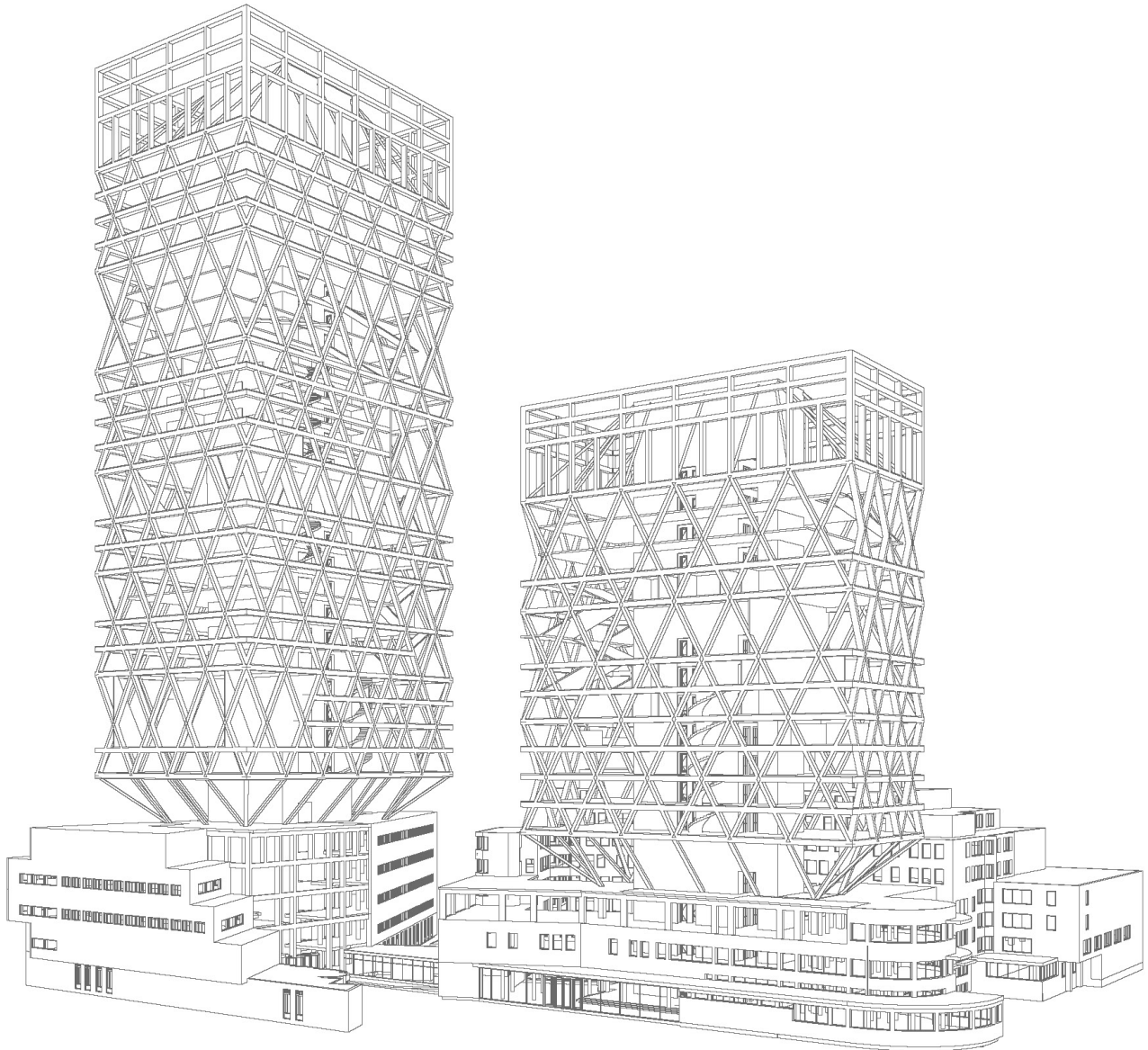


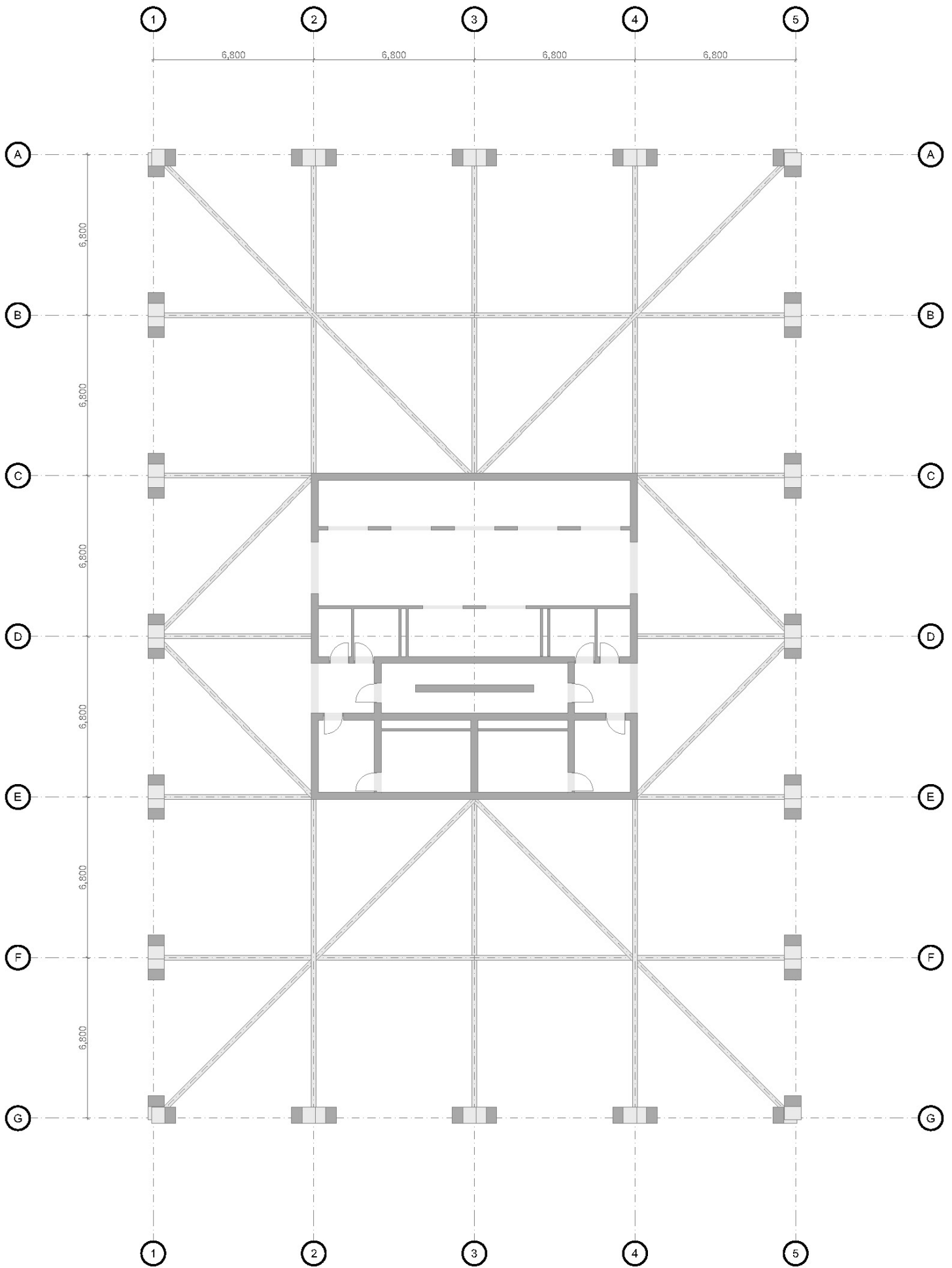
Steel superstructure.



Timber inside structure.

1.4.2. P3 Structure Development

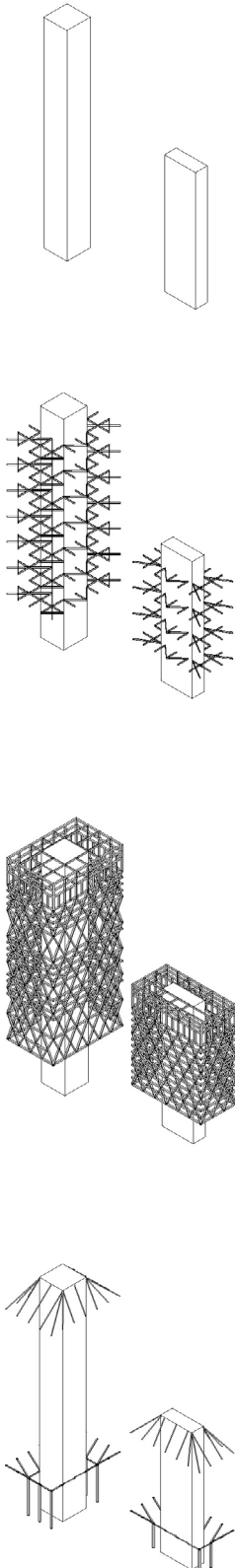




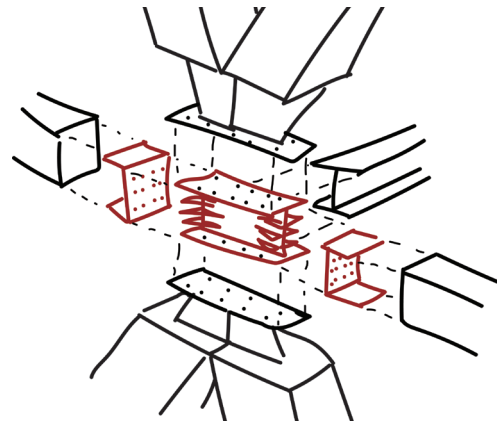
Structural Beams Plan Scale 1:200

13th Tutoring I 15.03.24 - 21.03.24

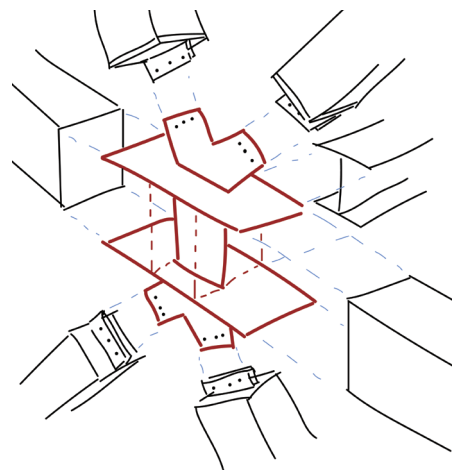
1.4.3. P4 Structure Development



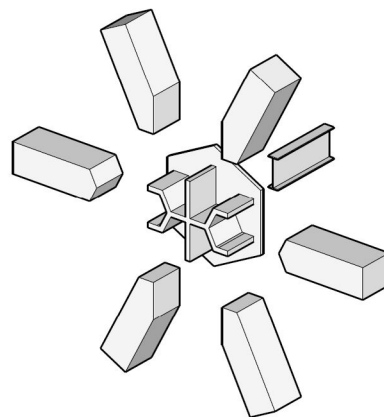
18th Tutoring | 12.04.24 - 18.04.24



18th Tutoring | 12.04.24 - 18.04.24



19th Tutoring | 19.04.24 - 25.04.24

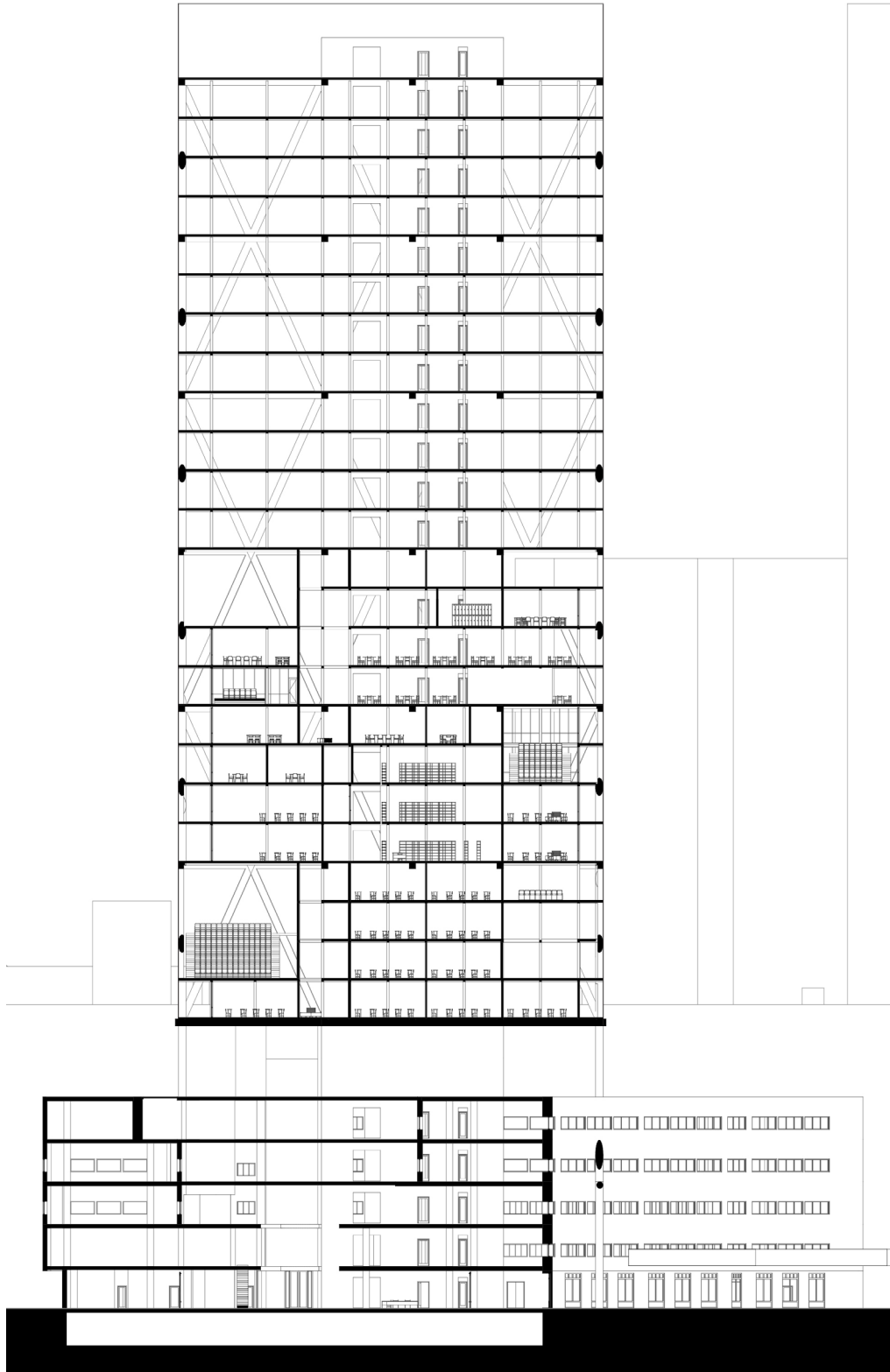


20th Tutoring | 26.04.24 - 02.05.24



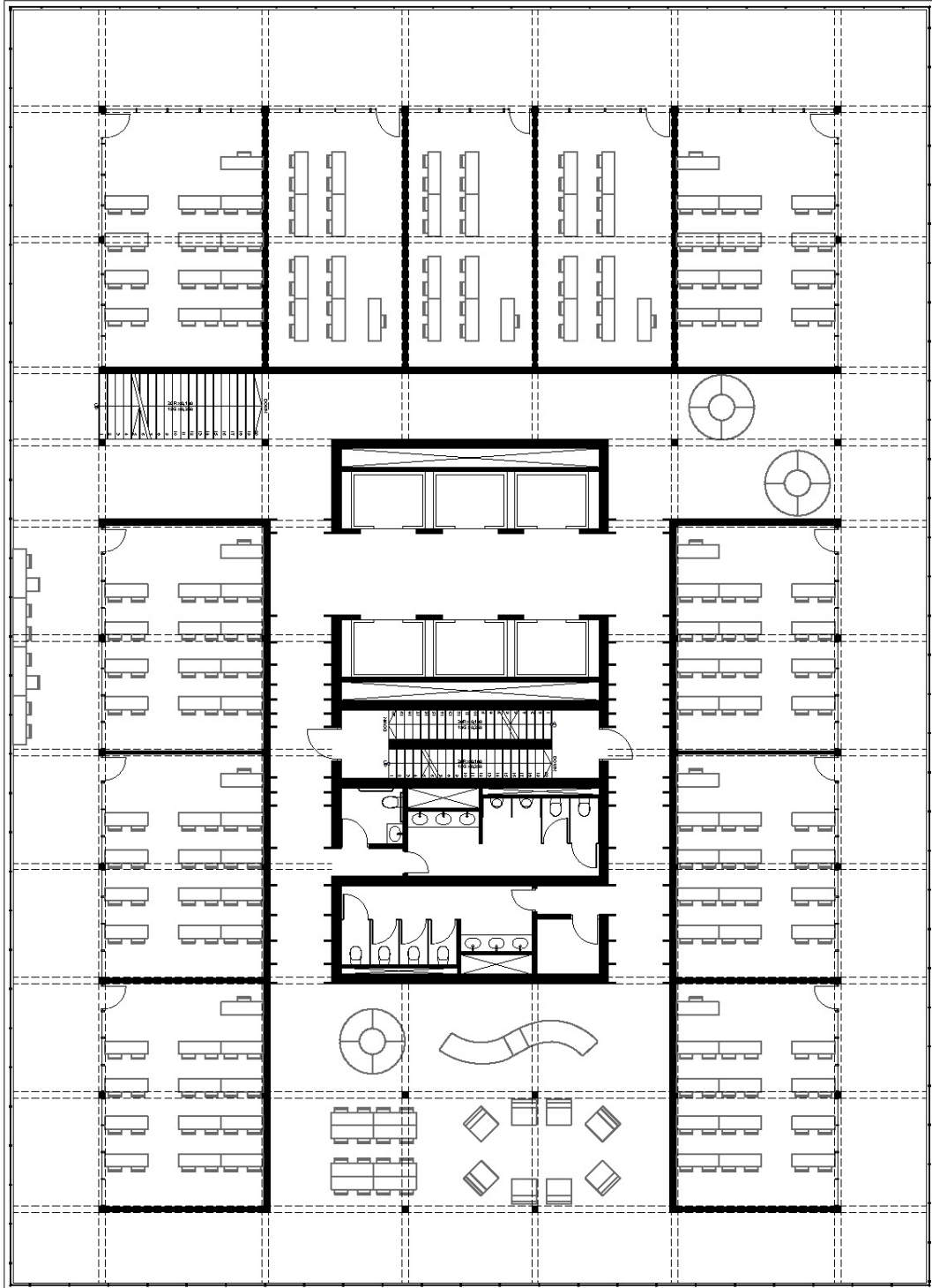
17th Tutoring | 04.04.24 -11.04.24

1.5.1. P2 Design Development



Urban Section C-C

P2

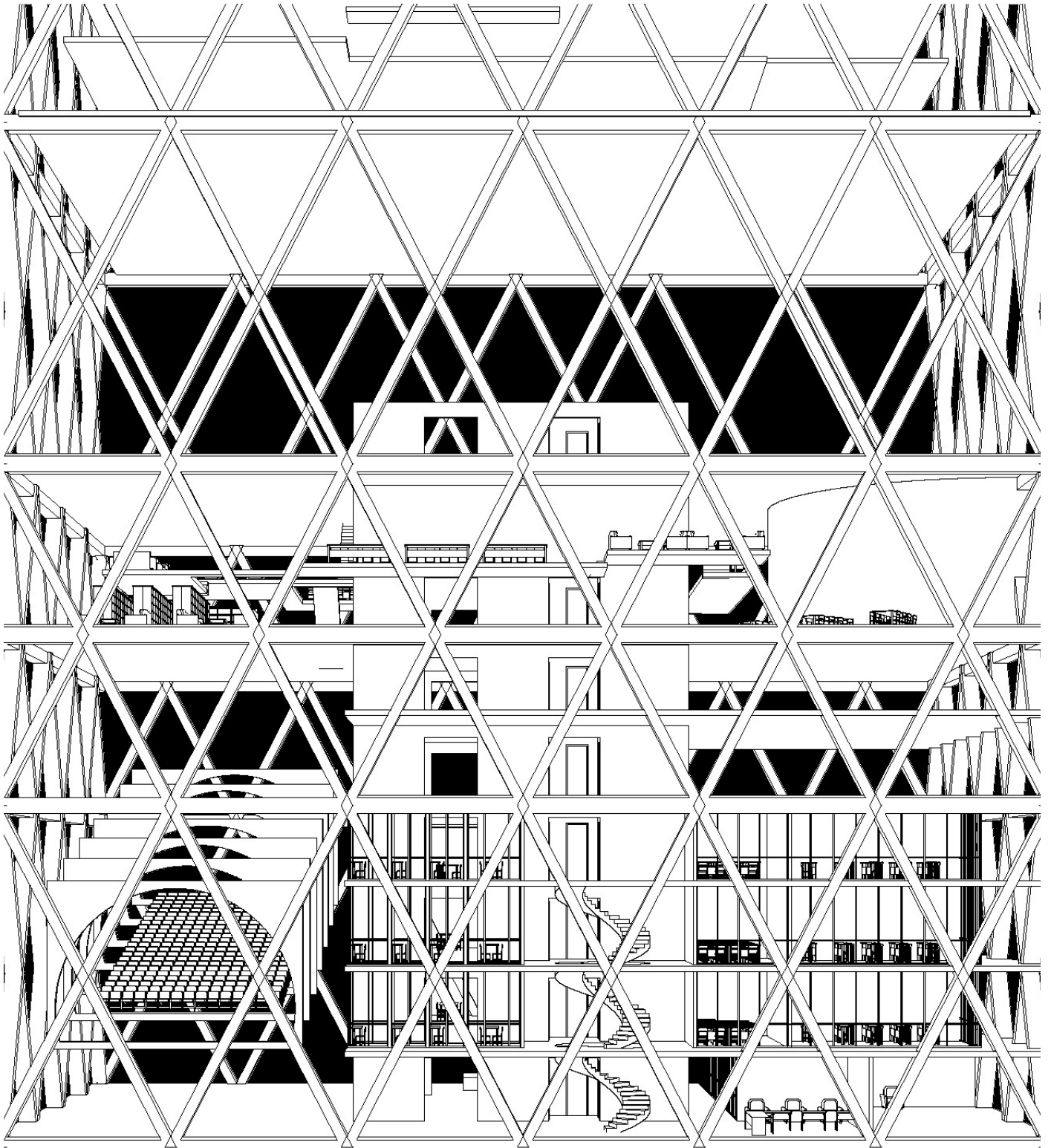


Scale 1:200

Floor 7

P2

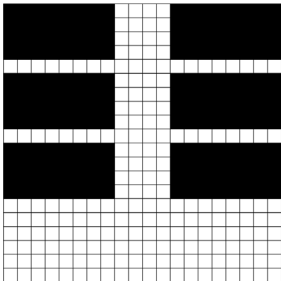
1.5.2. P3 Design Development



13th Tutoring | 15.03.24 - 21.03.24

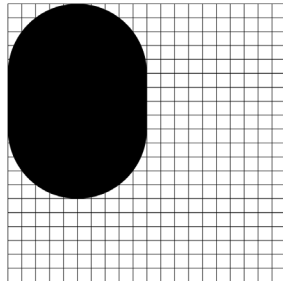
Traditional Classroom

Small sized, private meeting rooms.
Glass and wooden partitions.
Traditional and formal interior.



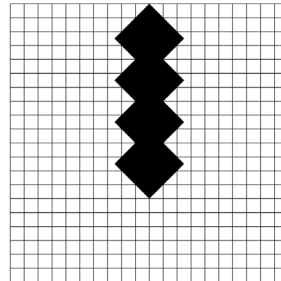
Lifelong Learning

Open, engaging and flexible spaces.
Colorful, paper softwalls, fabric
partitions, informal playfull interior.



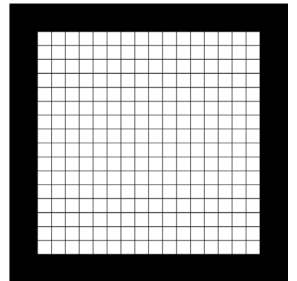
Vertical Public Space

Few floors high, visual connections.
Uniform industrial interior, between
formal and informal.



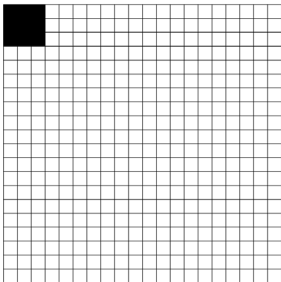
Panaromic Circulation

Long corridors, views to the outside.
Sitting and studying spaces.
Play of shadows from the facade.



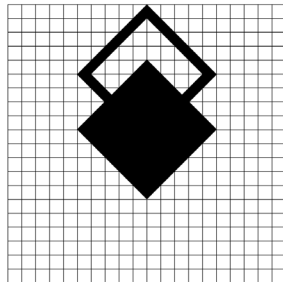
Theatre for One

Small, private, study rooms.
Sense of safety.
"Soft" materials (porous, fabrics etc.).



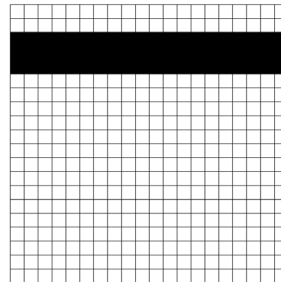
Open Canvas

Double floor, medium sized mostly
empty spaces used as exhibitions.
Objects as the main features.



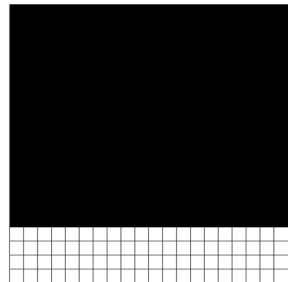
Spatial Transition

Corridors connected to large rooms.
Anticipation, mystery, dim lighting.
Wooden ribs partitions, fabrics.

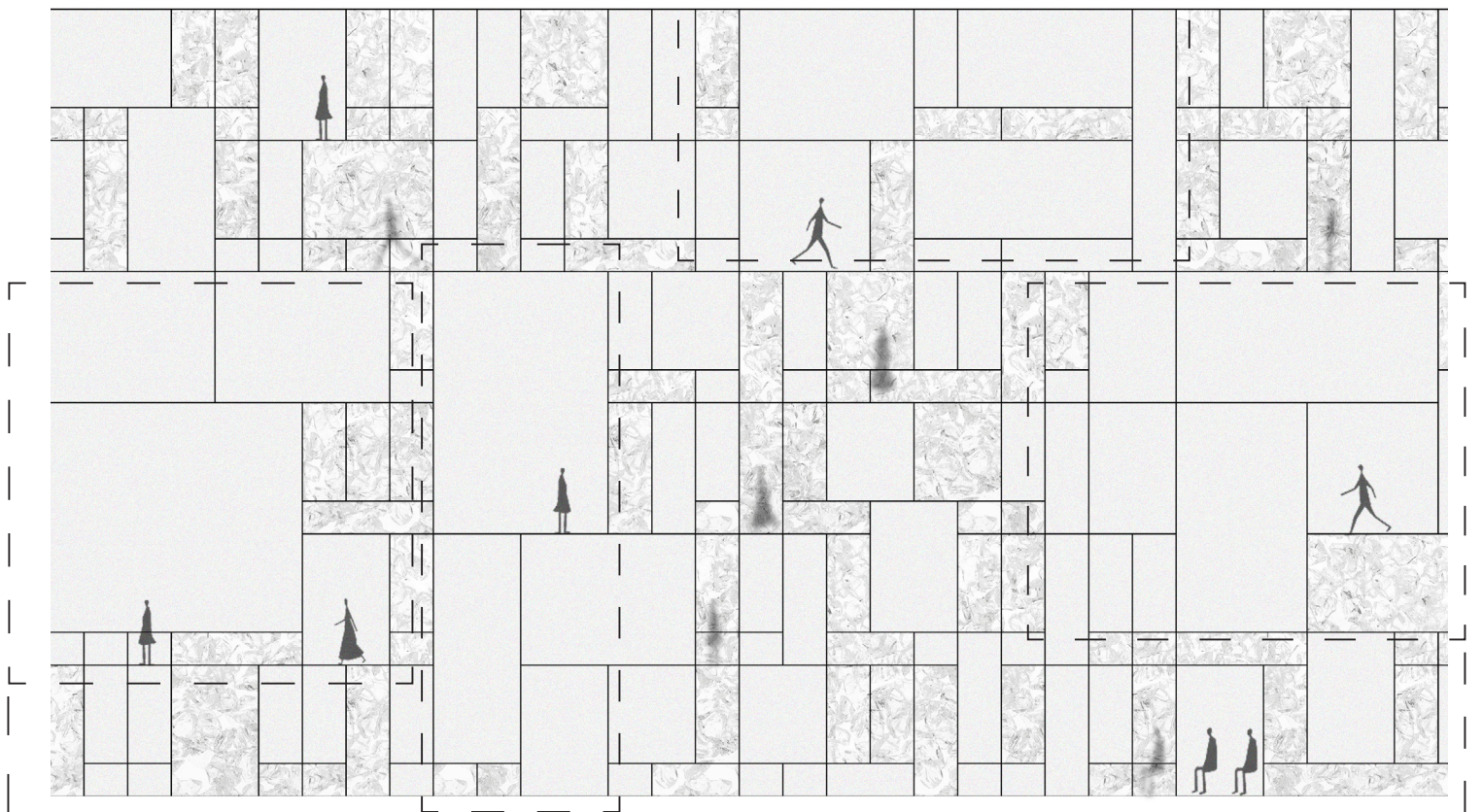


Theatrical Experience

Large, few stories high lecture spaces.
Open, minimalistic, grand.
Bright with outside views.



Library



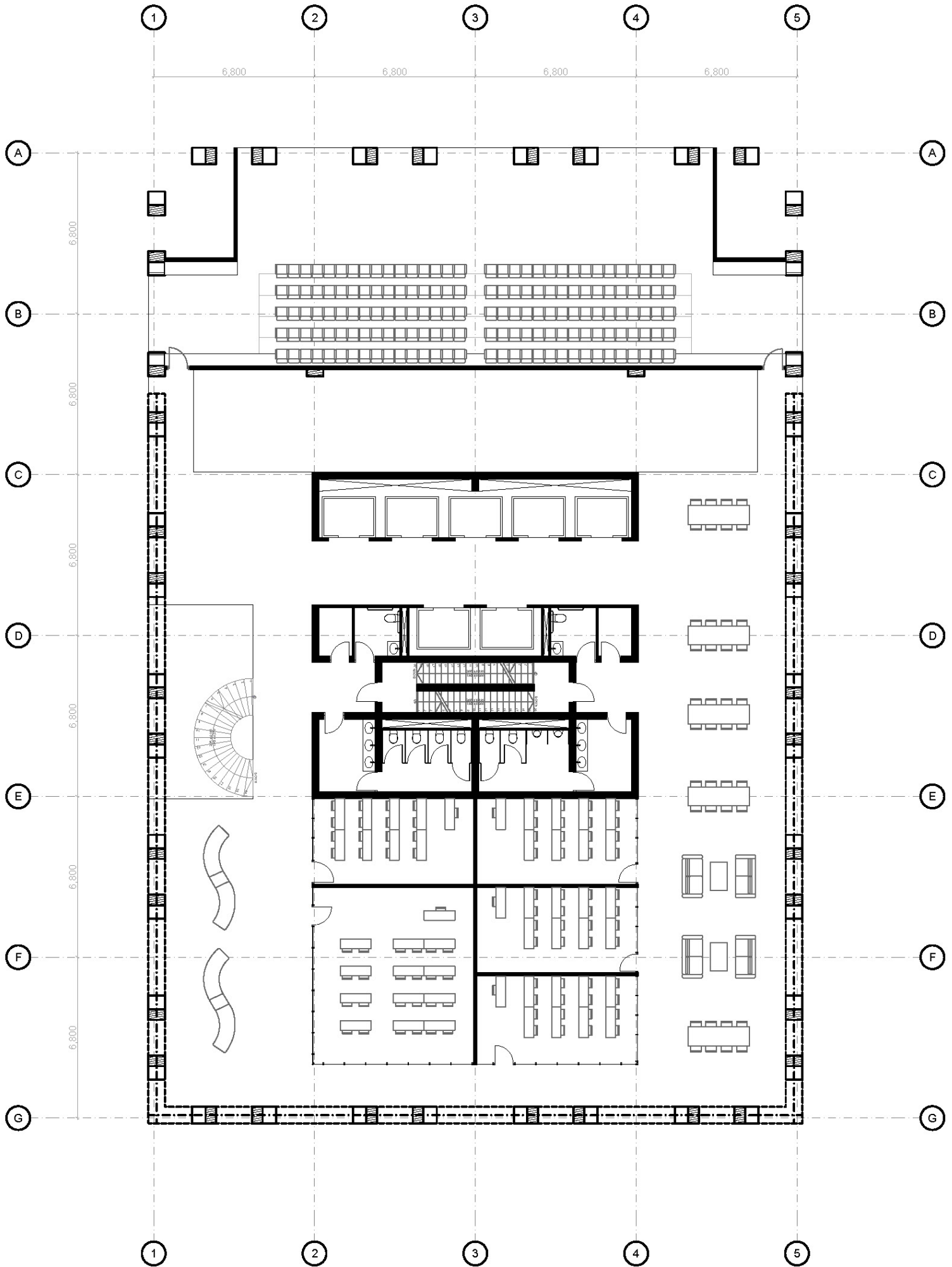
Auditorium

Vertical Public Space

Foyer/ Auditorium

Facade

P3

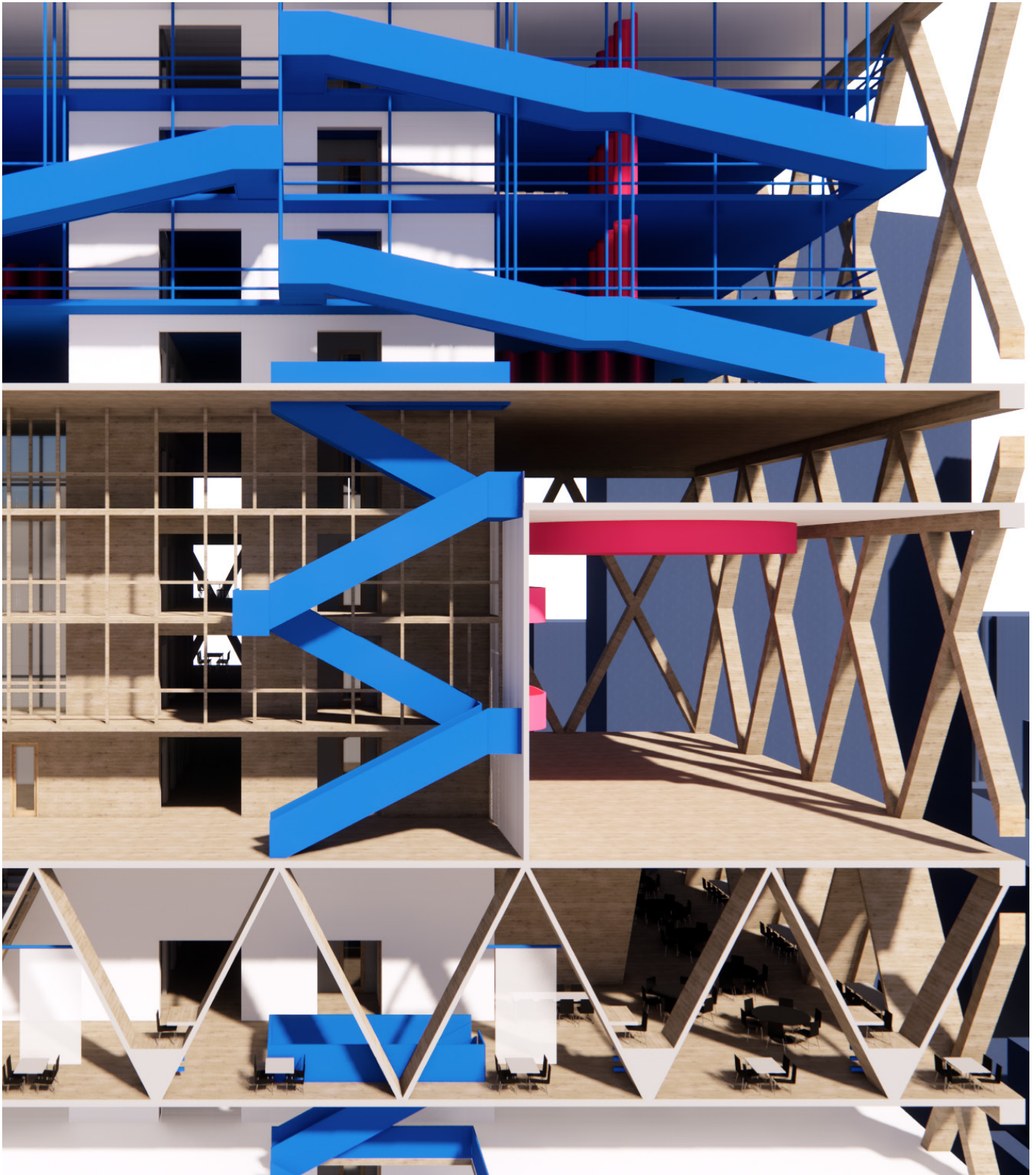


Floor 8

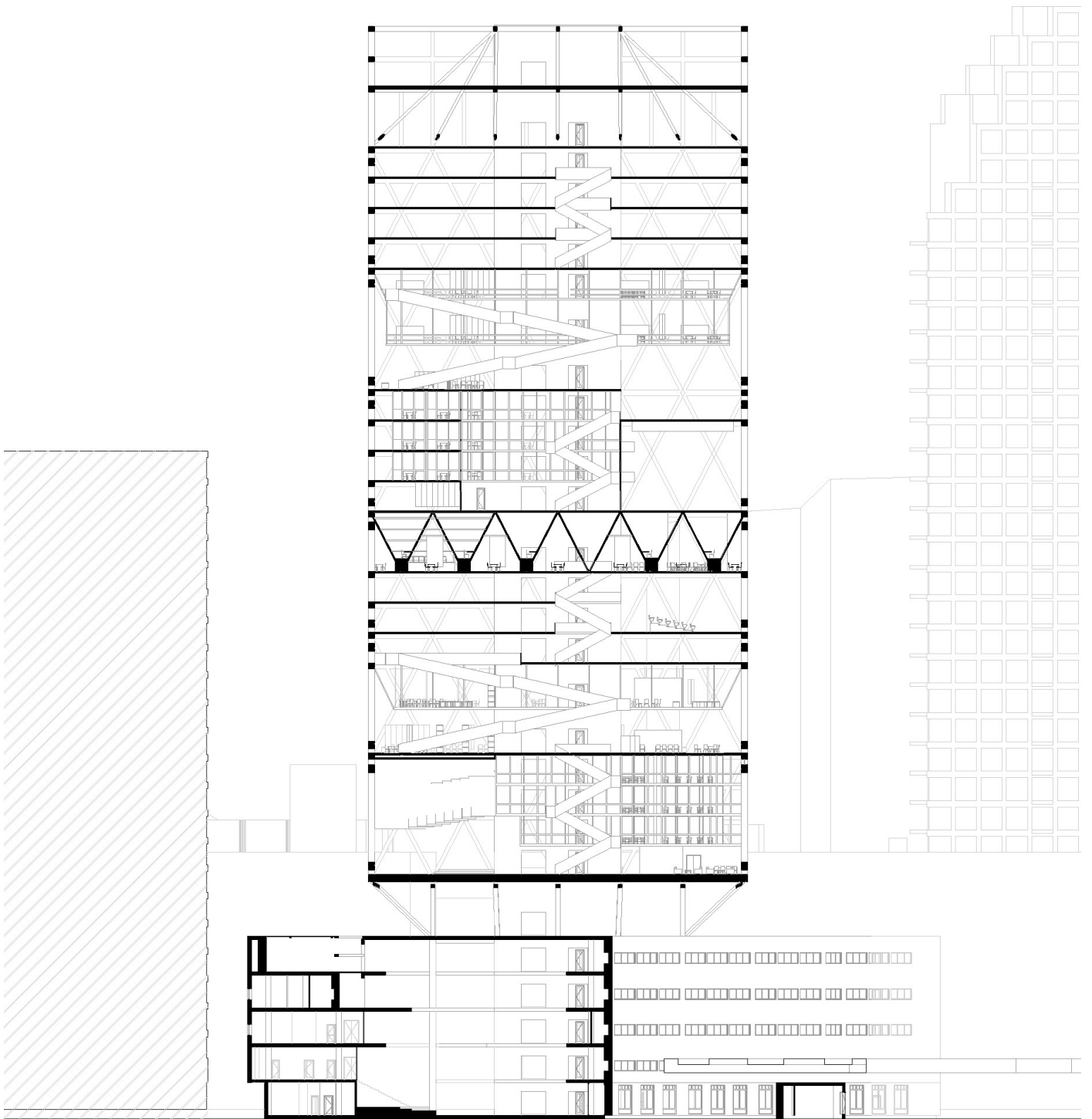
Scale 1:200

P3

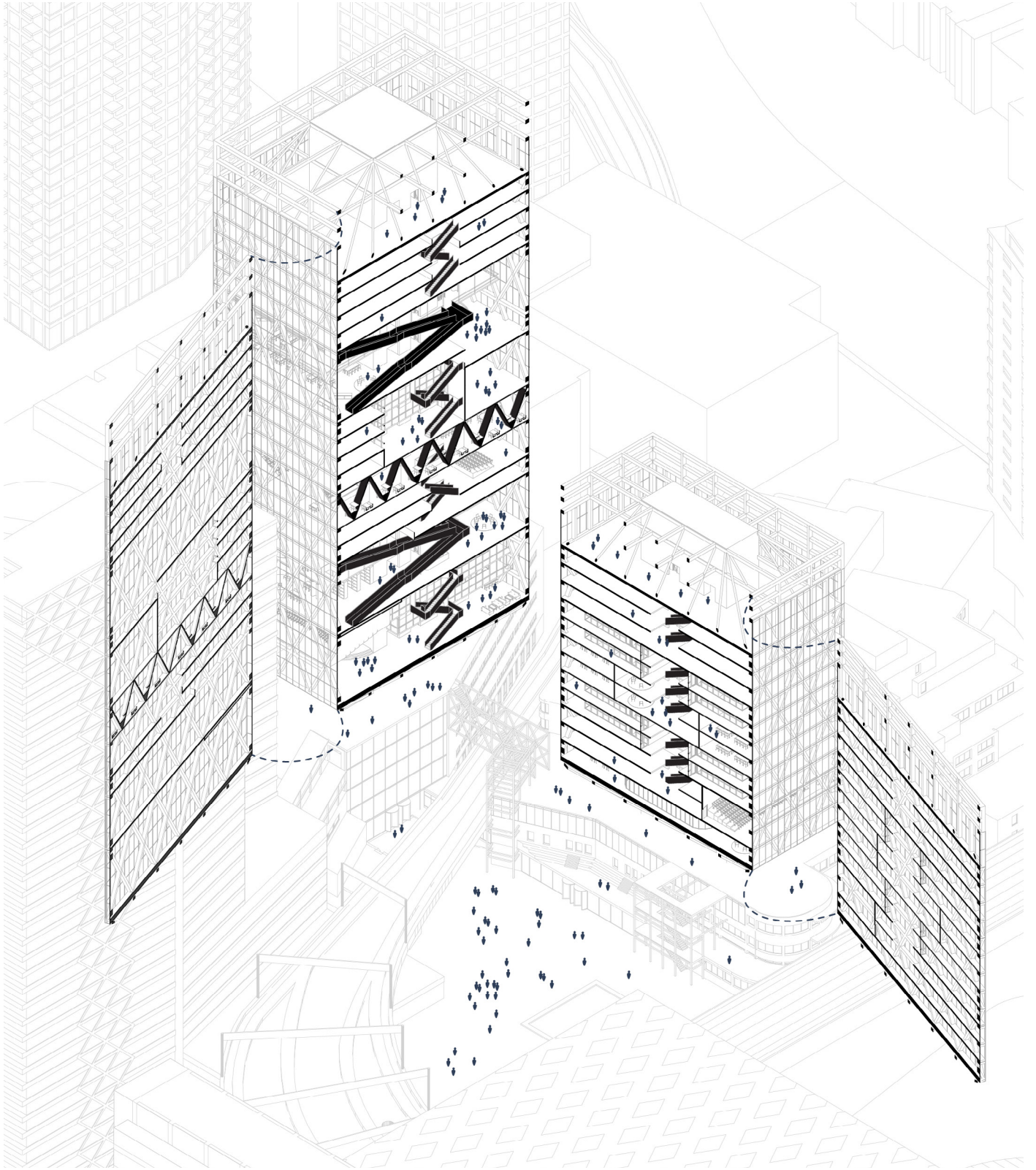
1.5.3. P4 Design Development



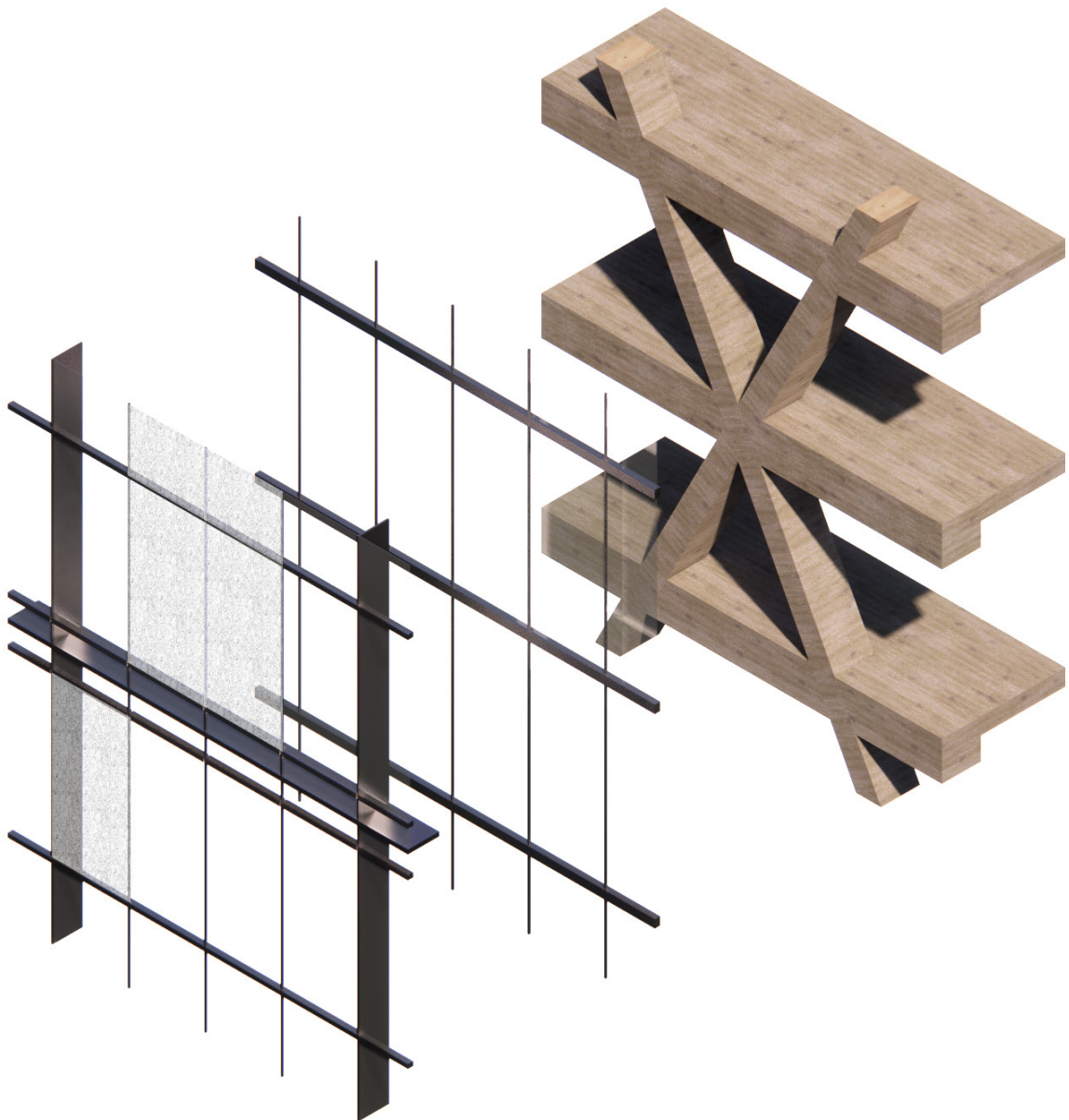
17th Tutoring | 04.04.24 - 11.04.24



18th Tutoring I 11.04.24 - 18.04.24

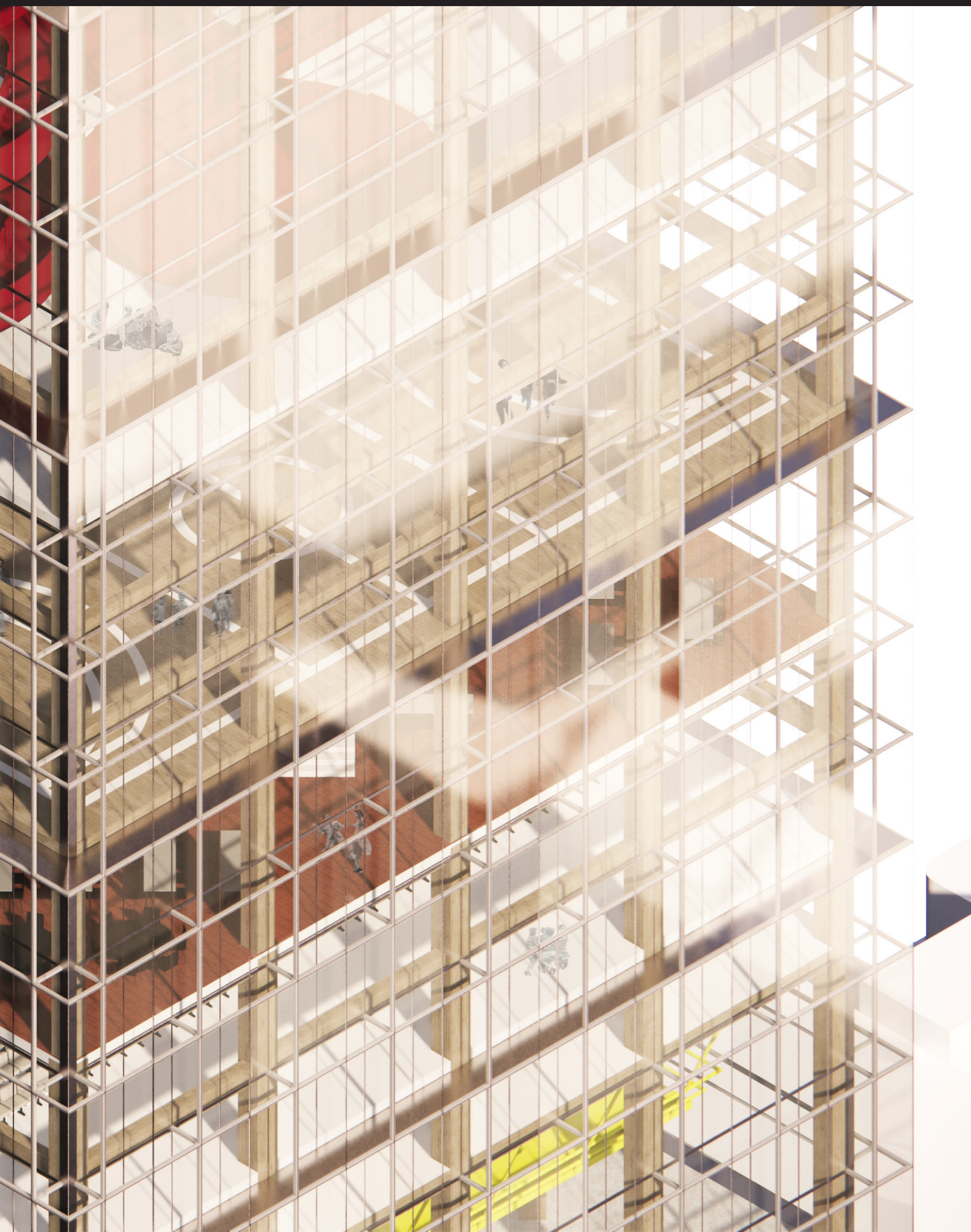


19th Tutoring | 19.04.24 - 26.04.24



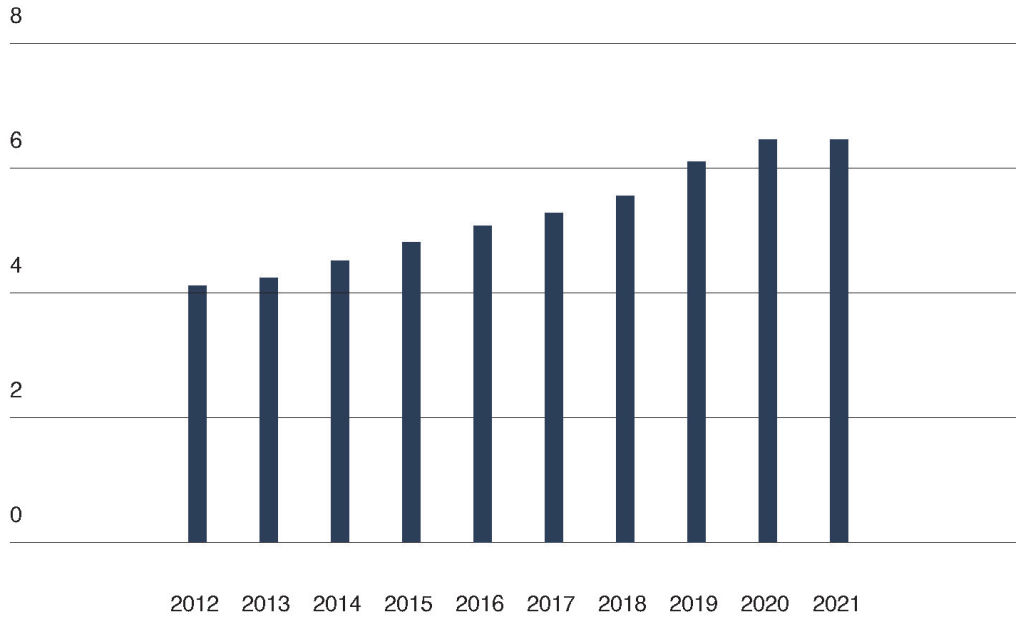
2. Final Design





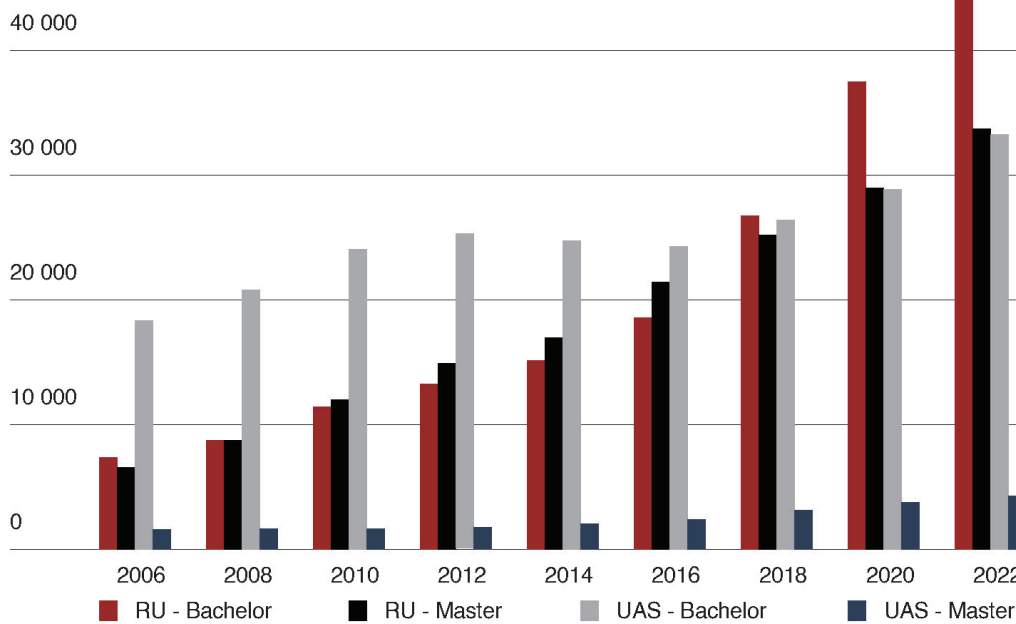
2.1. Problem Statement and Theory

International students globally.



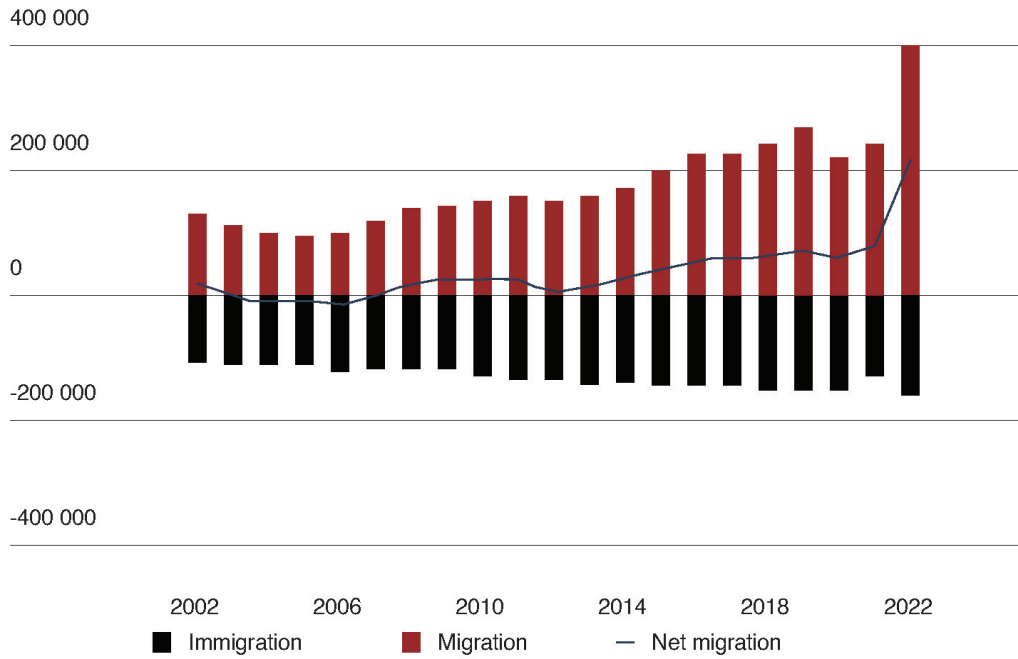
UNESCO Institute of Statistics (UIS), “Internationally Mobile Students Globally” (2023)

Number of international students in the Netherlands.



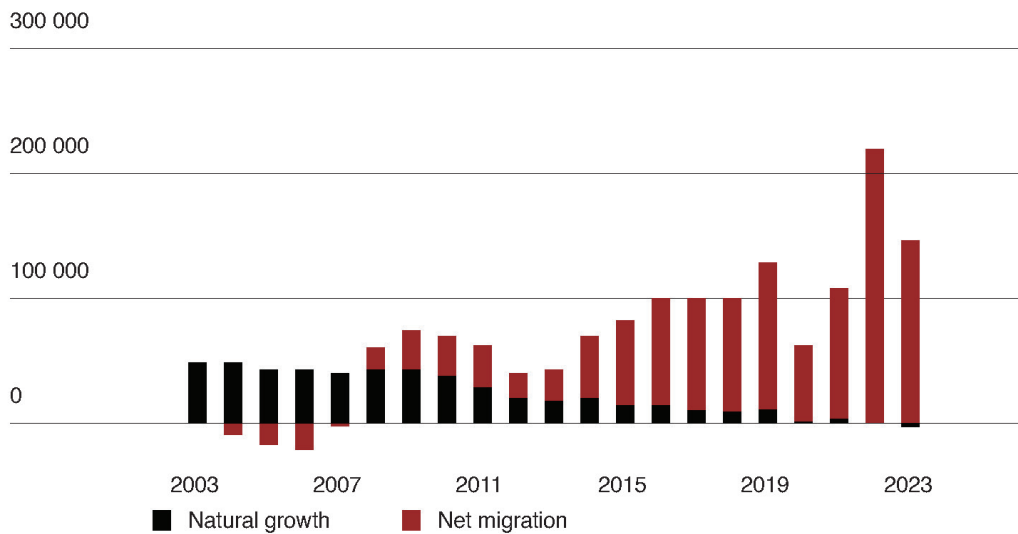
Nuffic, “Incoming degree mobility in Dutch higher education 2022-23” (2023)

Immigration vs migration in the Netherlands.

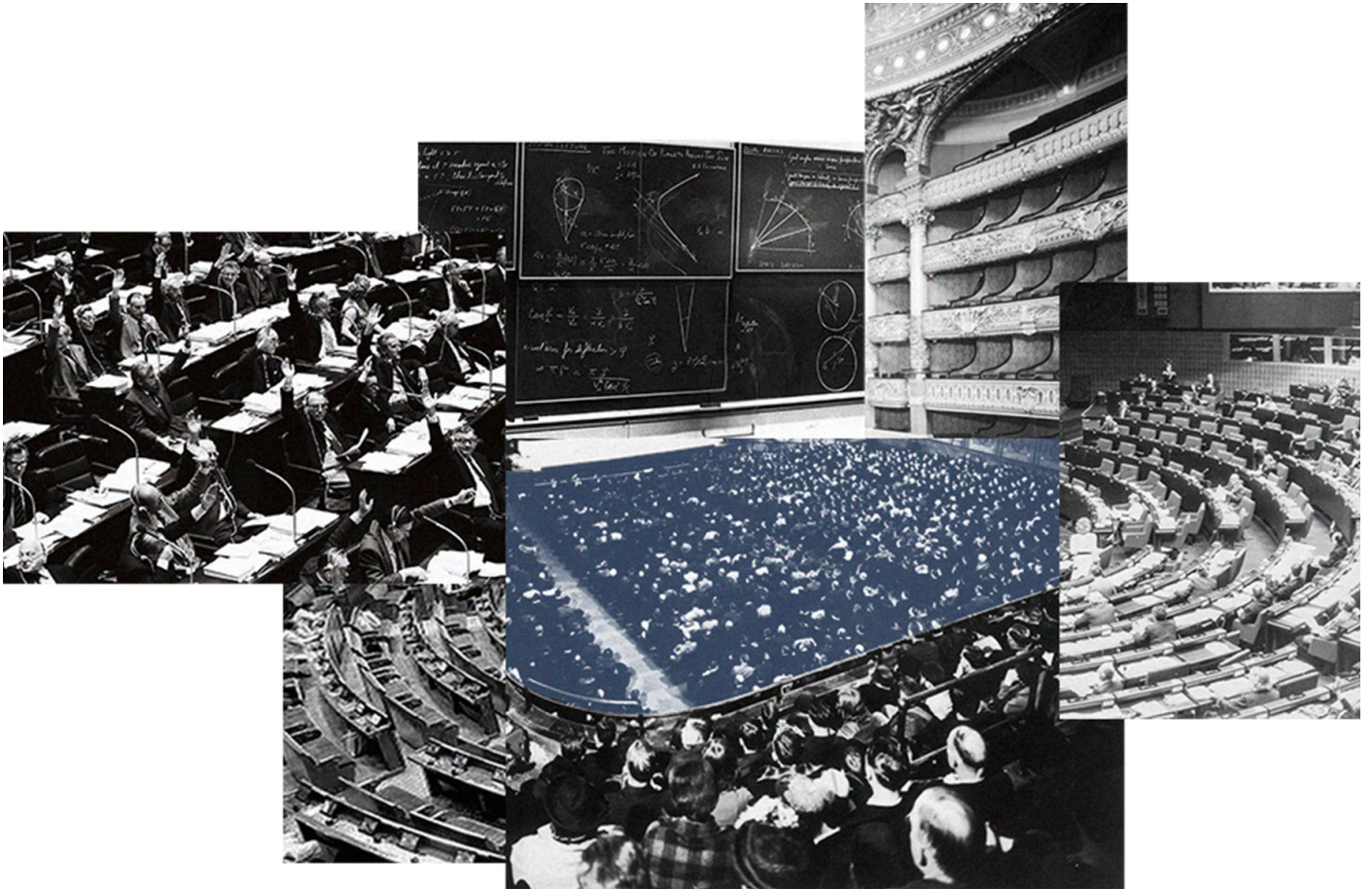


Statistics Netherlands (CBS), "Migration" (2023)

Natural growth vs net migration in the Netherlands.



Statistics Netherlands (CBS), "Population Dynamics" (2023)



University as a stage

Stage as a marker, indicator for public gatherings, creating innovation and scientific and cultural exchange with affirmative action bearing extra inclusivity for minorities.

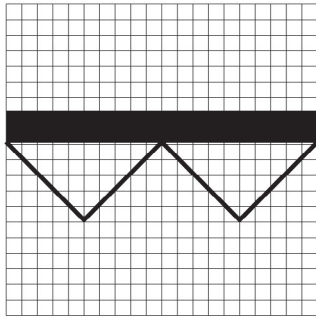
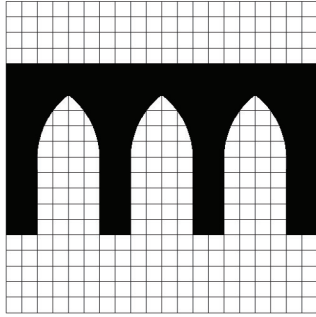
Takes place in an active participatory, informal theatre. Improvisational, spontaneous.

Students, staff and general public as the participators.

“All the world’s stage.”

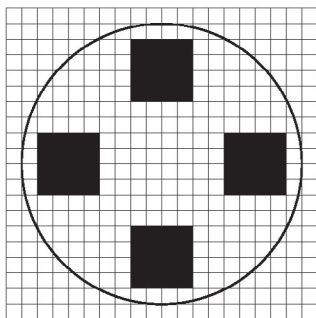
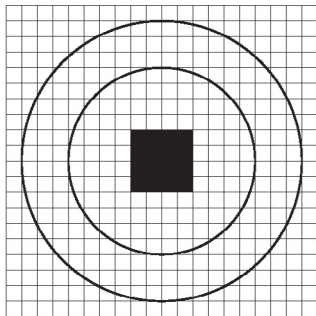
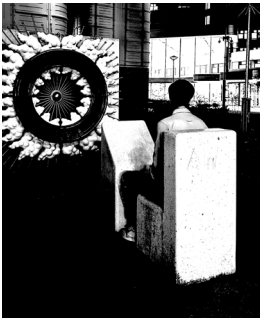
William Shakespeare, “As You Like It”, Act II, Scene VII (1623)

Tradition



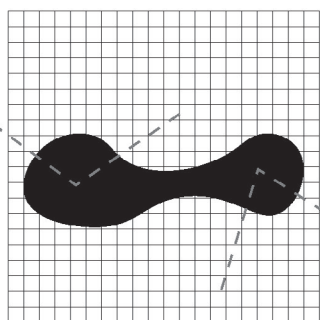
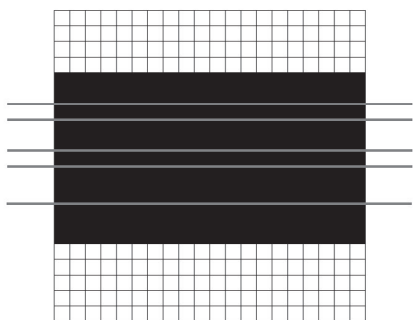
Innovation

Isolation



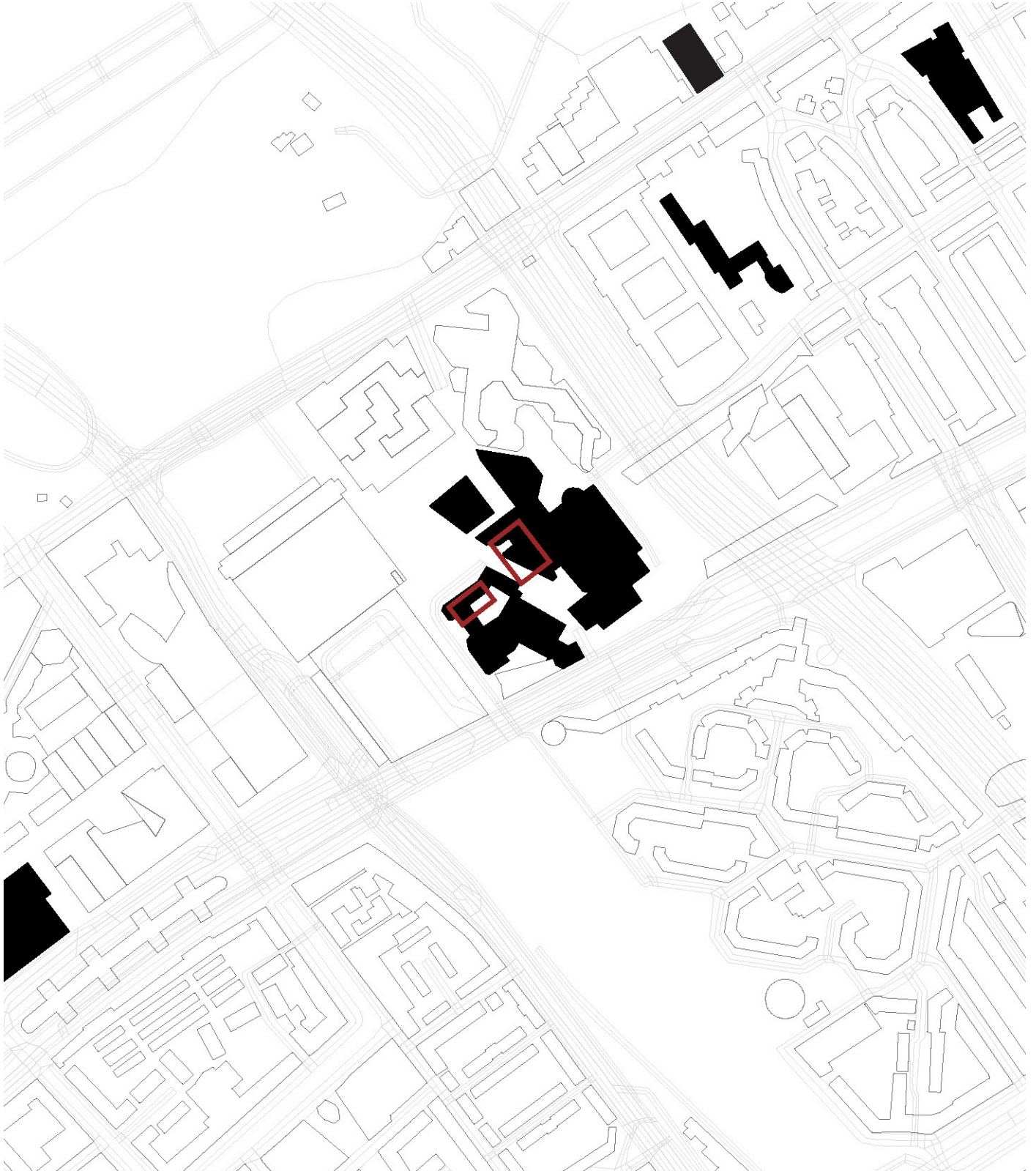
Engagement

Static



Dynamic

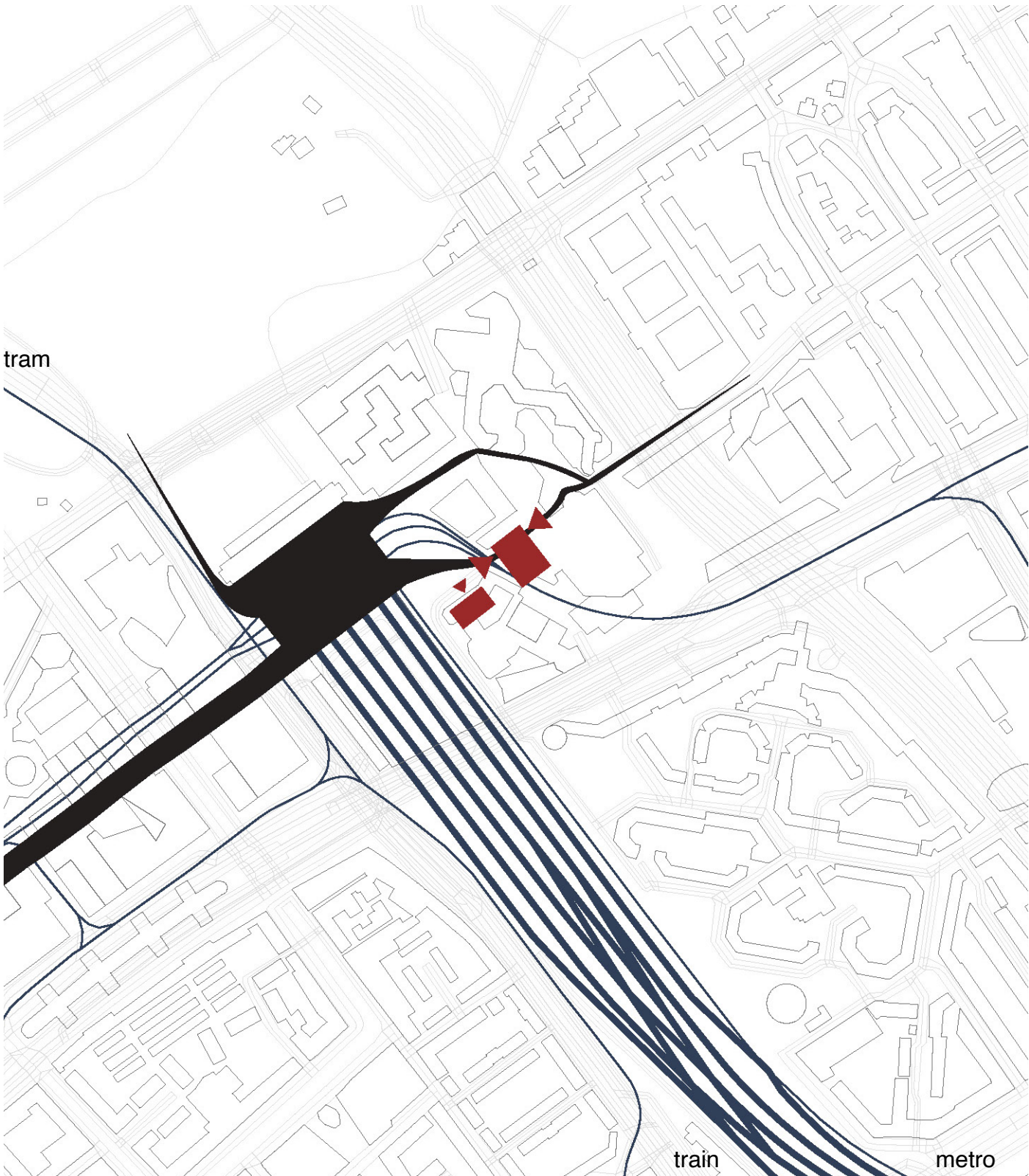
2.2. Site



1:2000



Educational Buildings





Nationaal Archief

architect: Sjoerd Schamhart
year built: 1972 - 1979
materials: concrete, masonry
client: Rijksgebouwendienst
gross area: 35 000 m²
renovation: 2008 - 2016
architect: diederendirrix



Koninklijke Bibliotheek

architect: Arie Hagoort, B.M.
van der Meer, A.J. Trotz
year built: 1973 - 1982
materials: concrete, masonry
client: Rijksgebouwendienst
gross area: 74 462 m²
extention: 2003 - 2006
architect: OD 205



Anna van Buerentoren

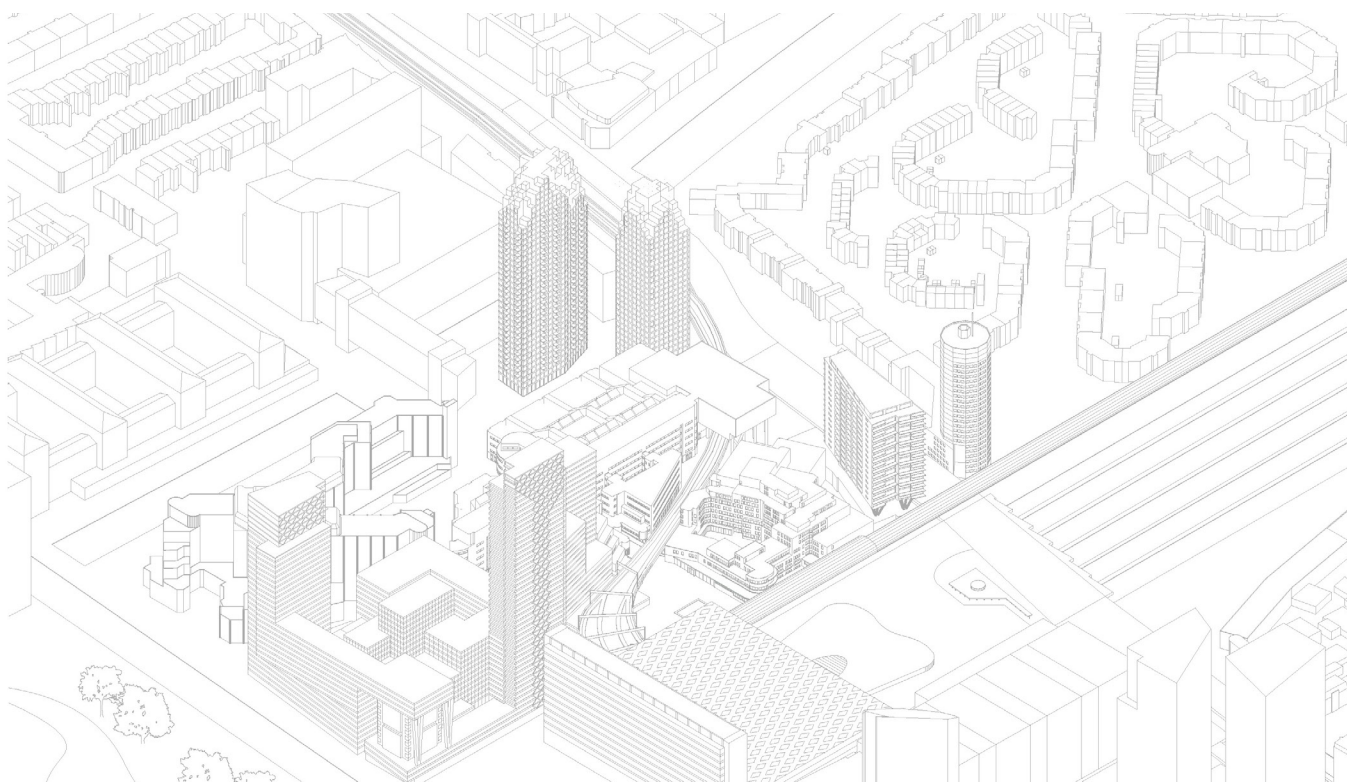
architect: Wiel Arets

year built: 2010 - 2013

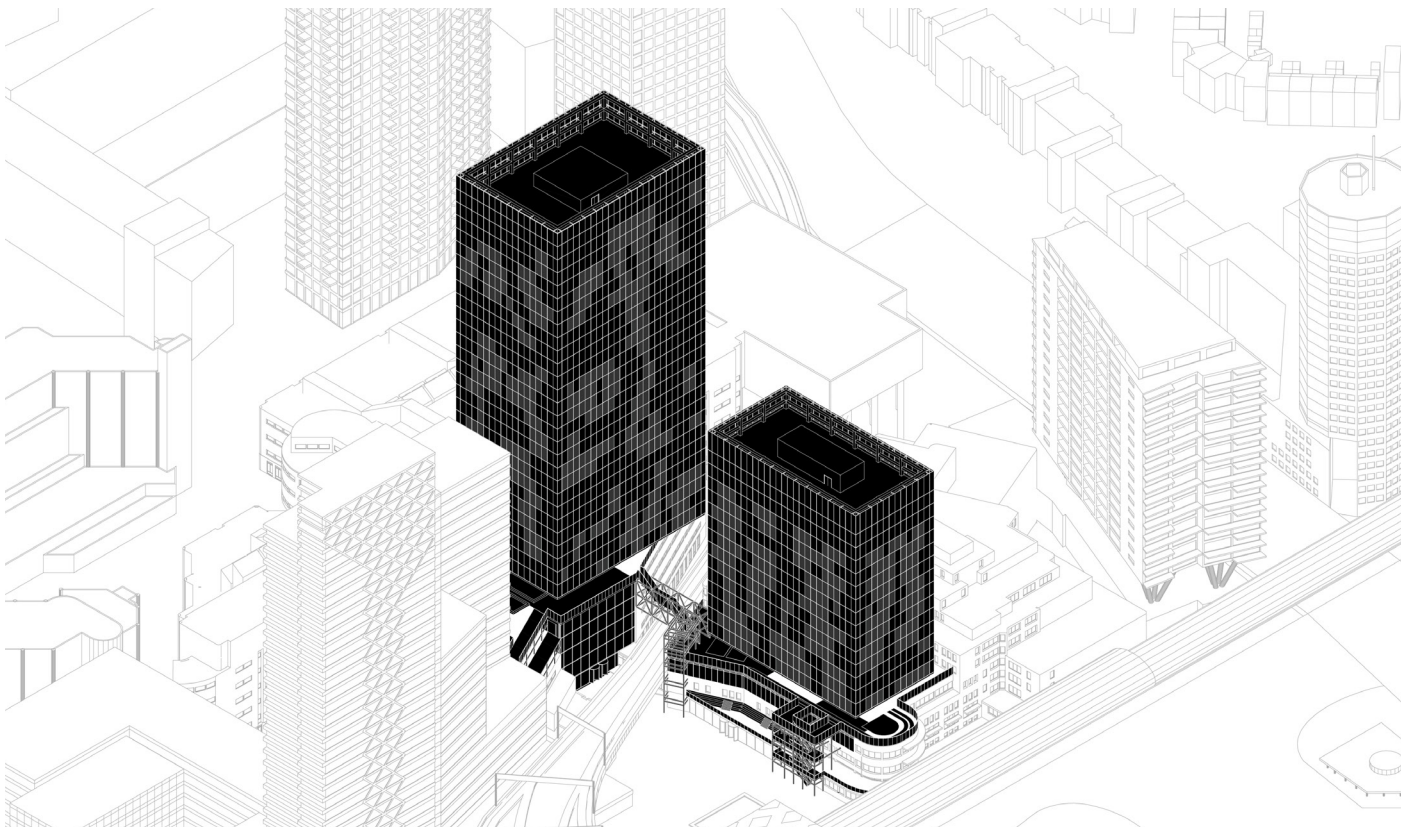
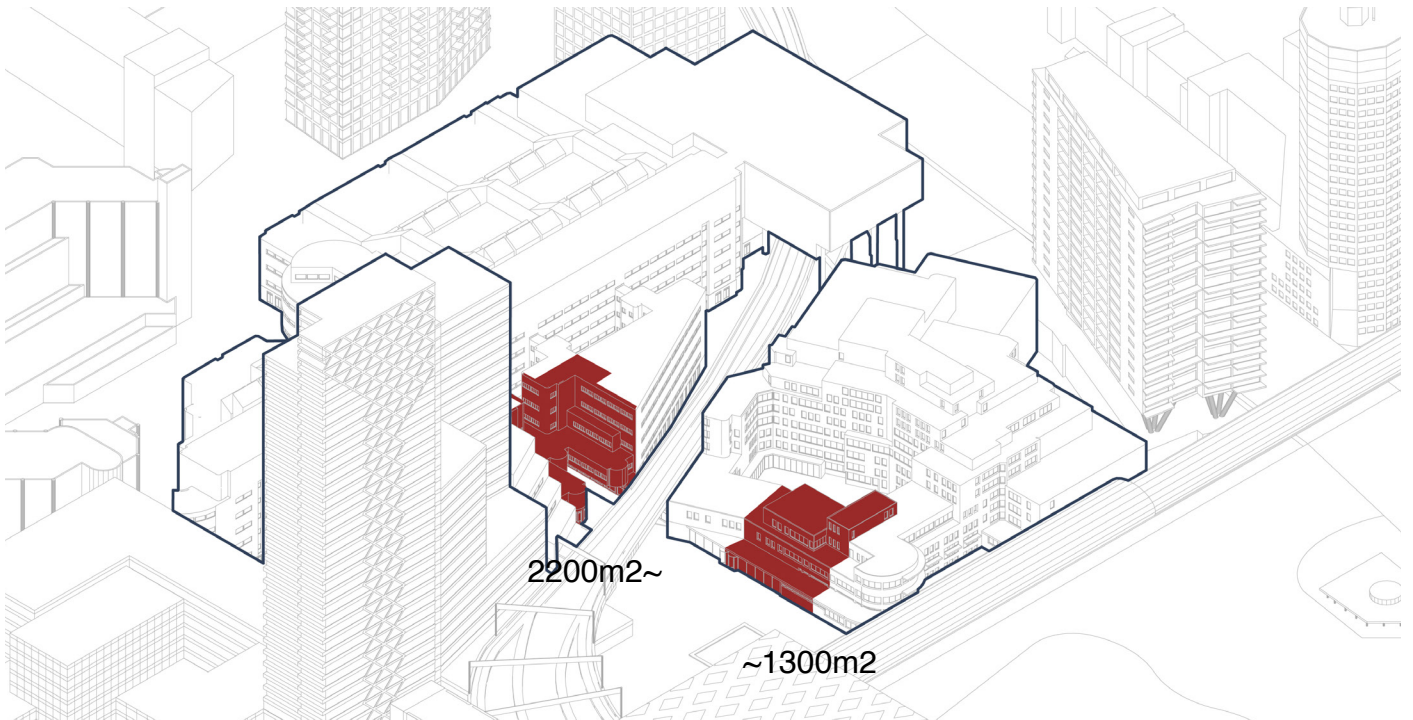
materials: steel

client: Bouwbedrijf Wessels Zeist

gross area: 24 500 m²

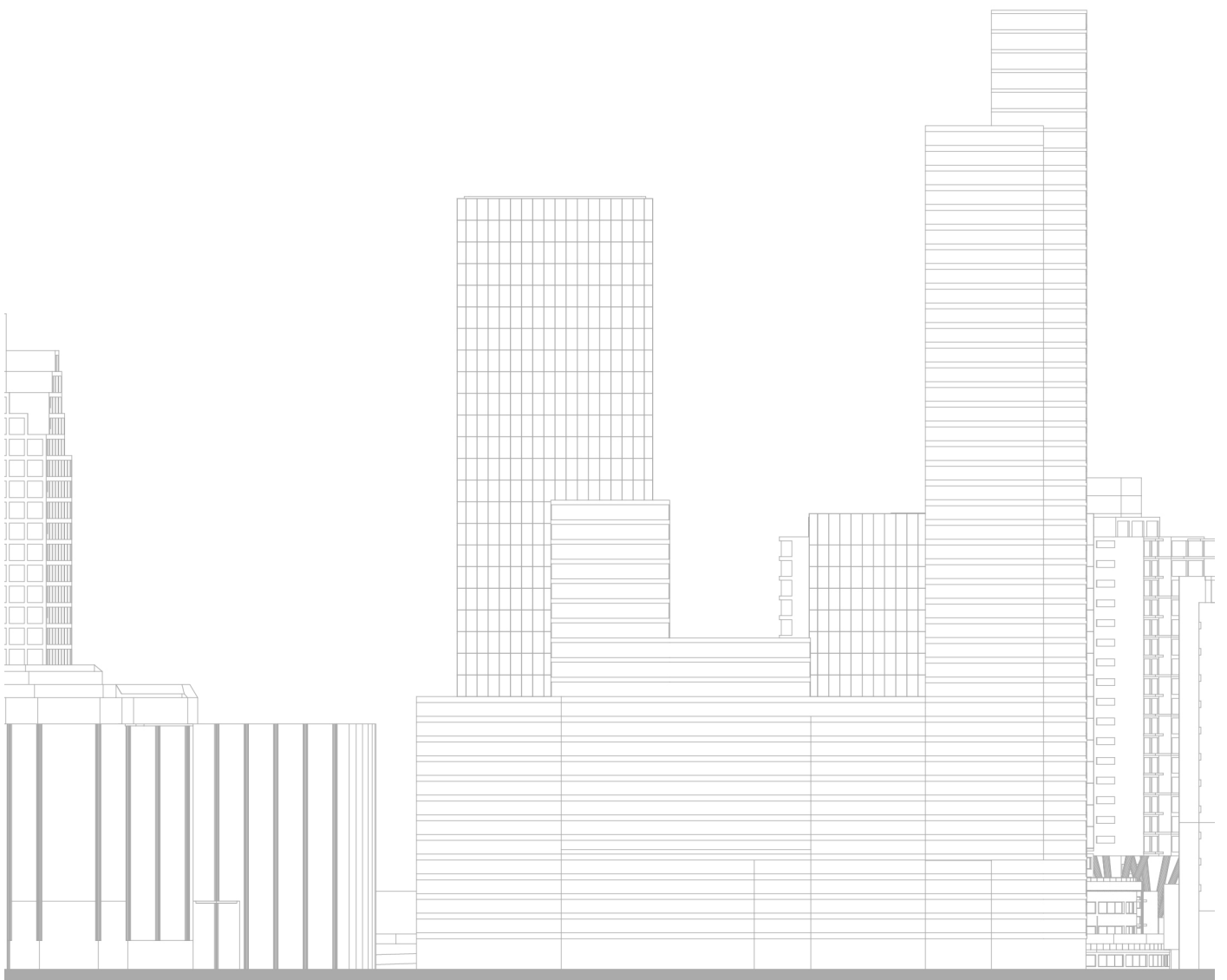


2.3. Design

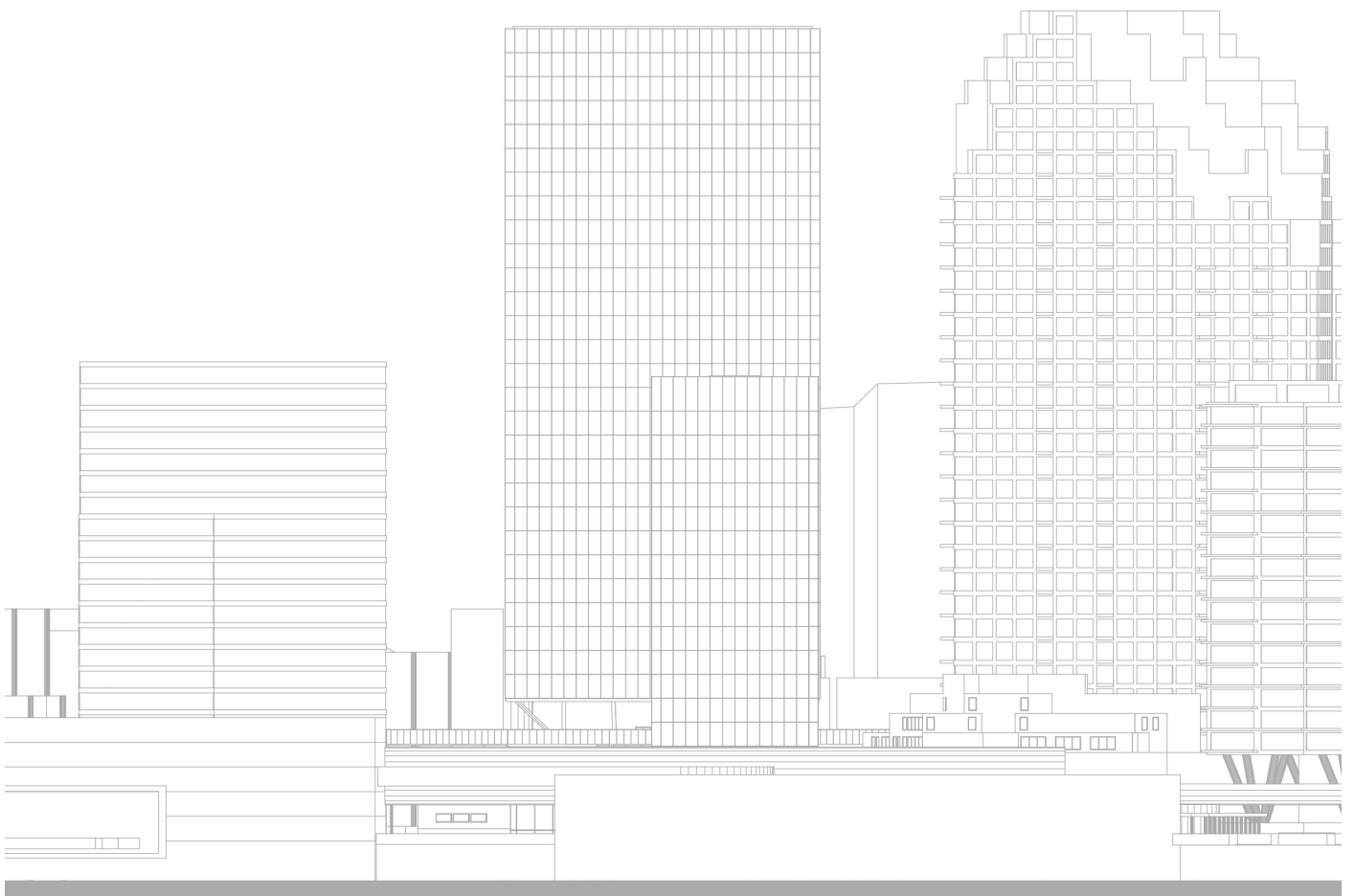


Remove vs New Diagrams





Urban Elevation North 1:1000



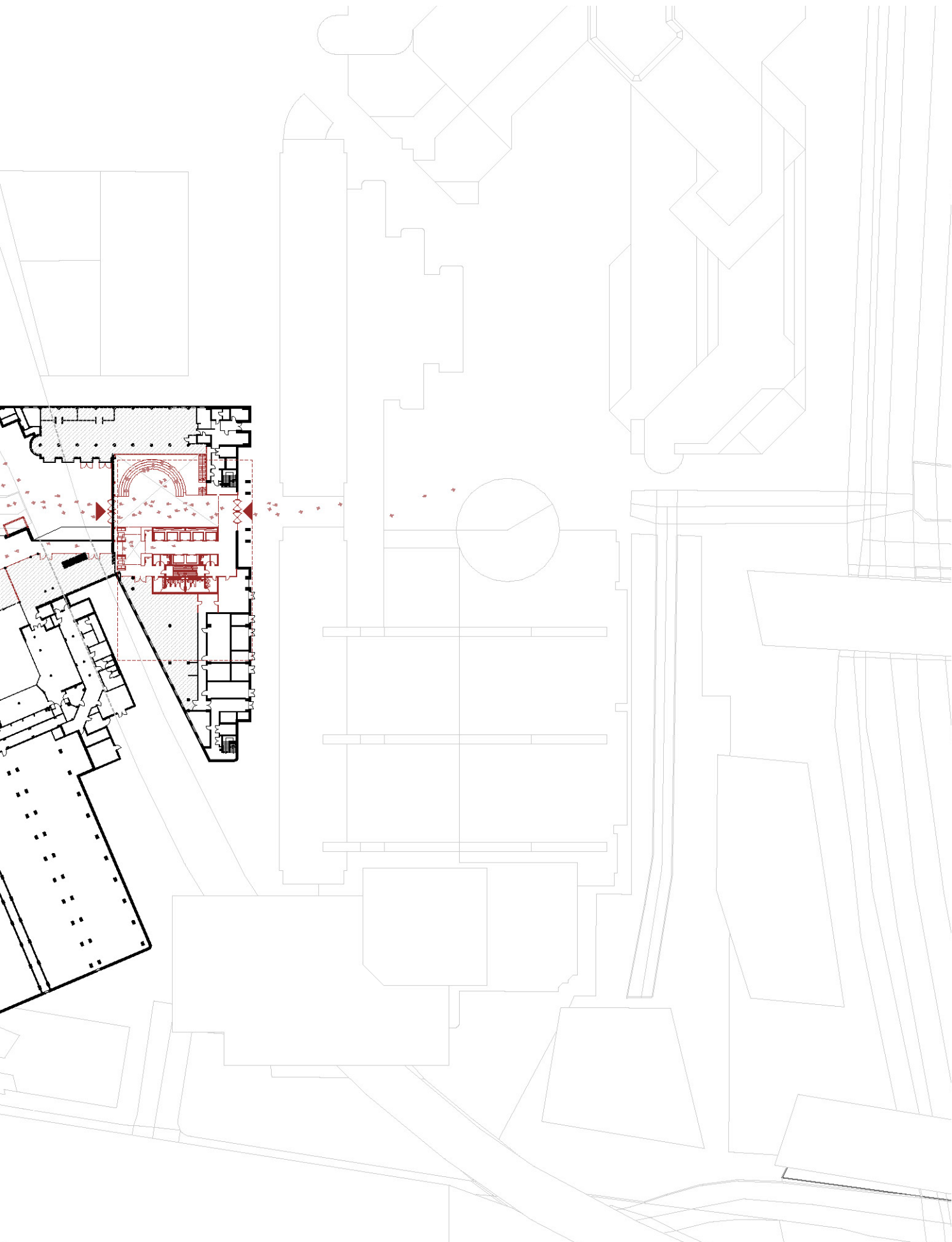
Urban Elevation West 1:1000



Ground Floor

Scale 1:1000





new



existing





Ground Floor

Scale 1:500



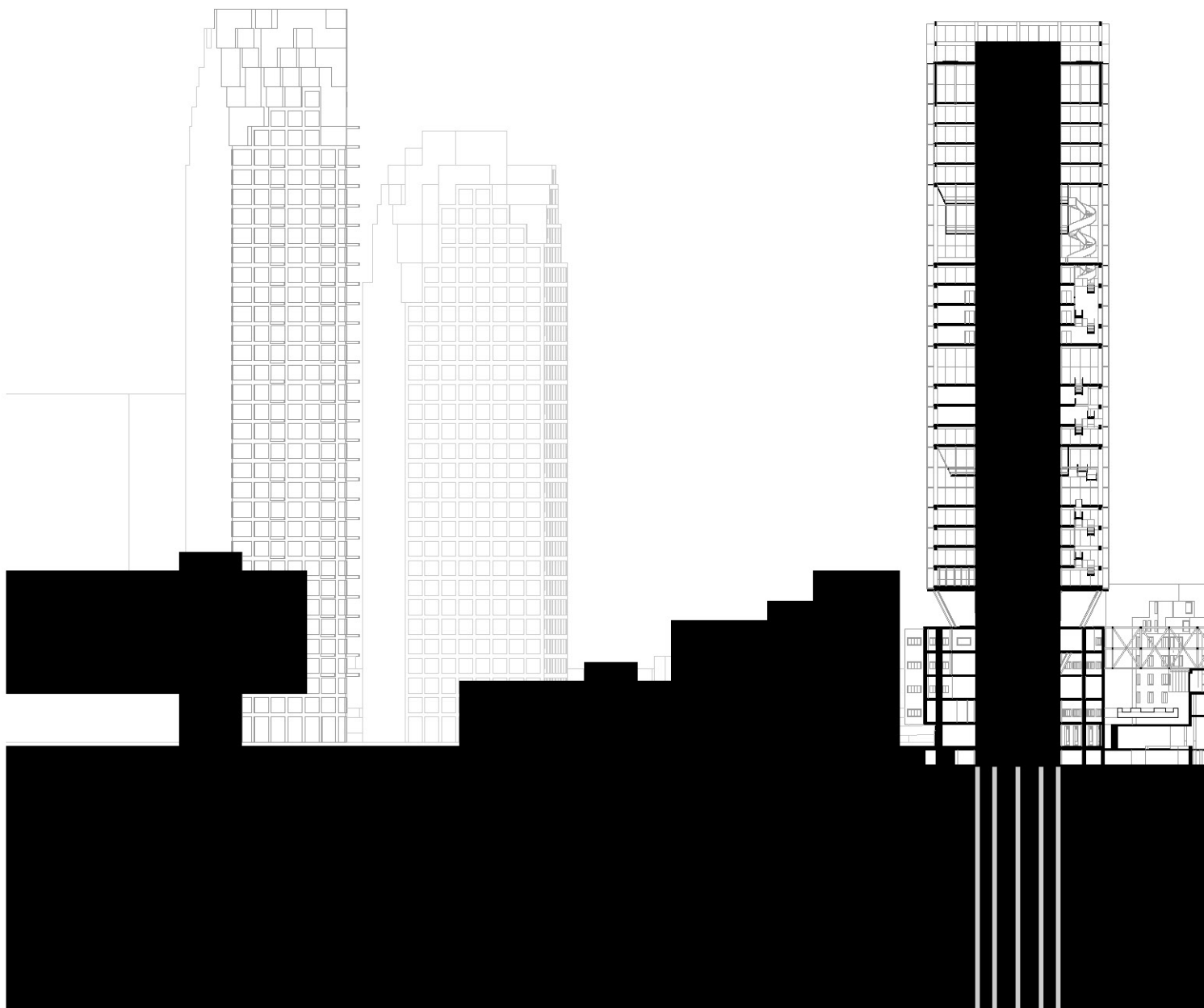


A

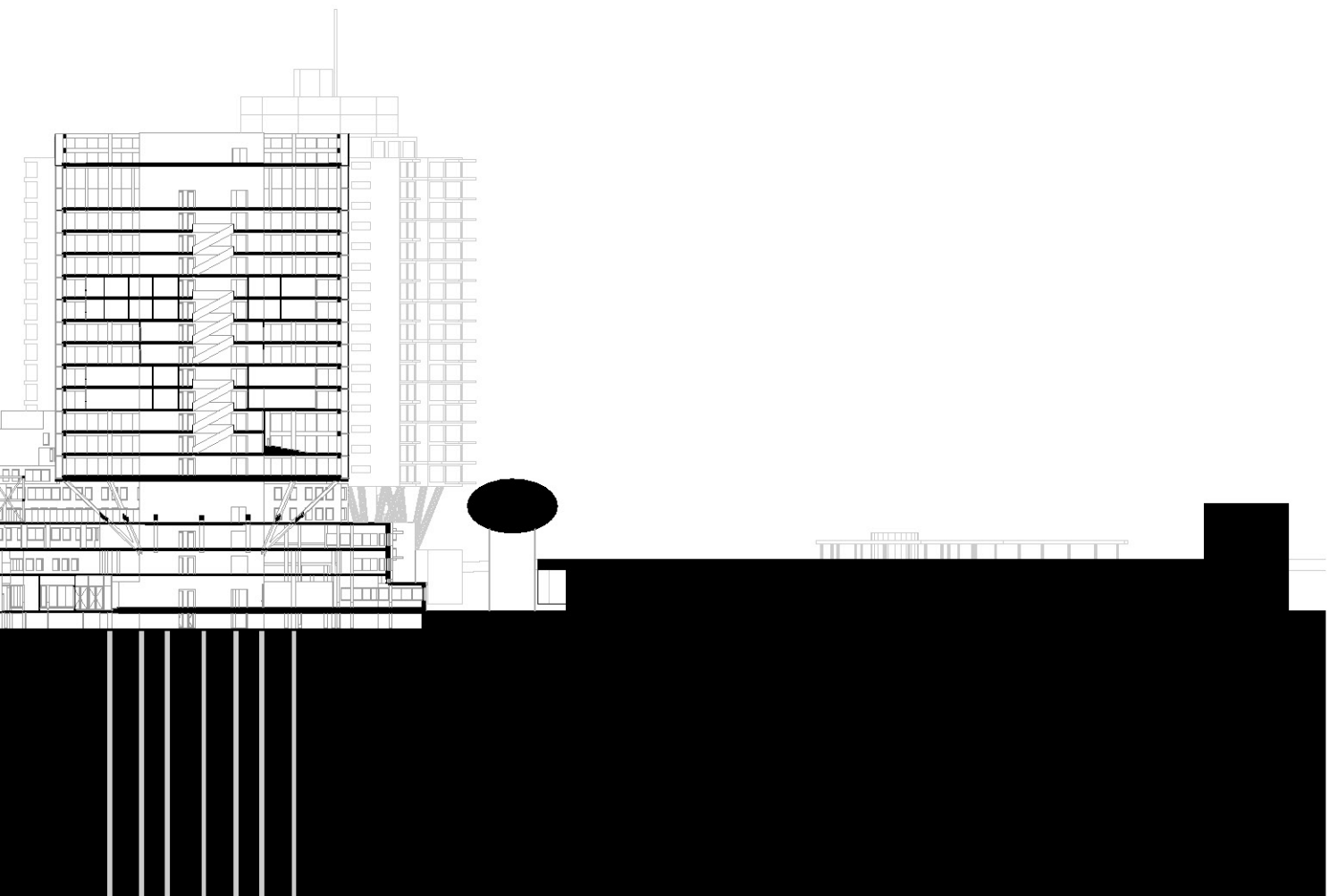
B

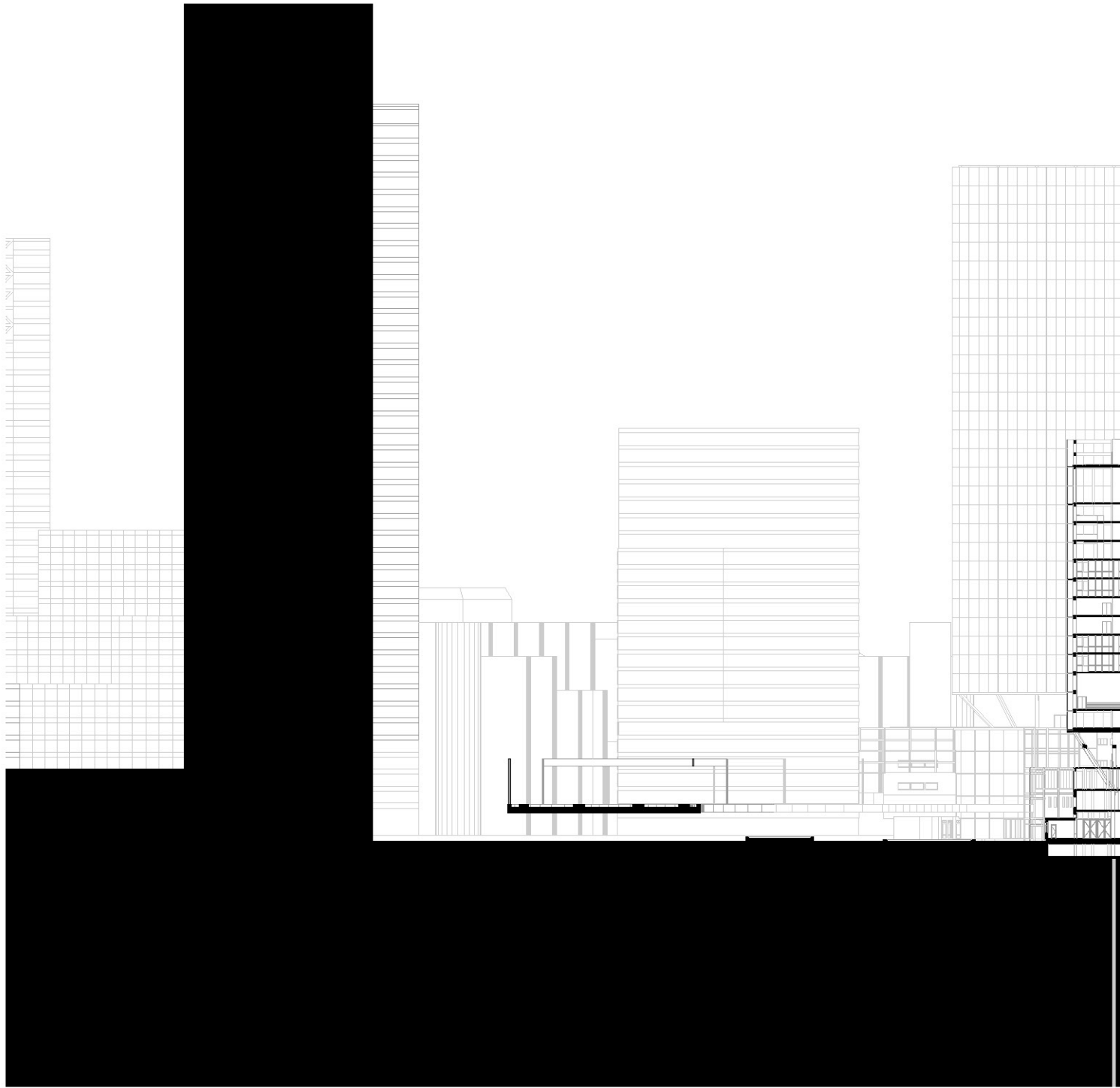
A

new existing

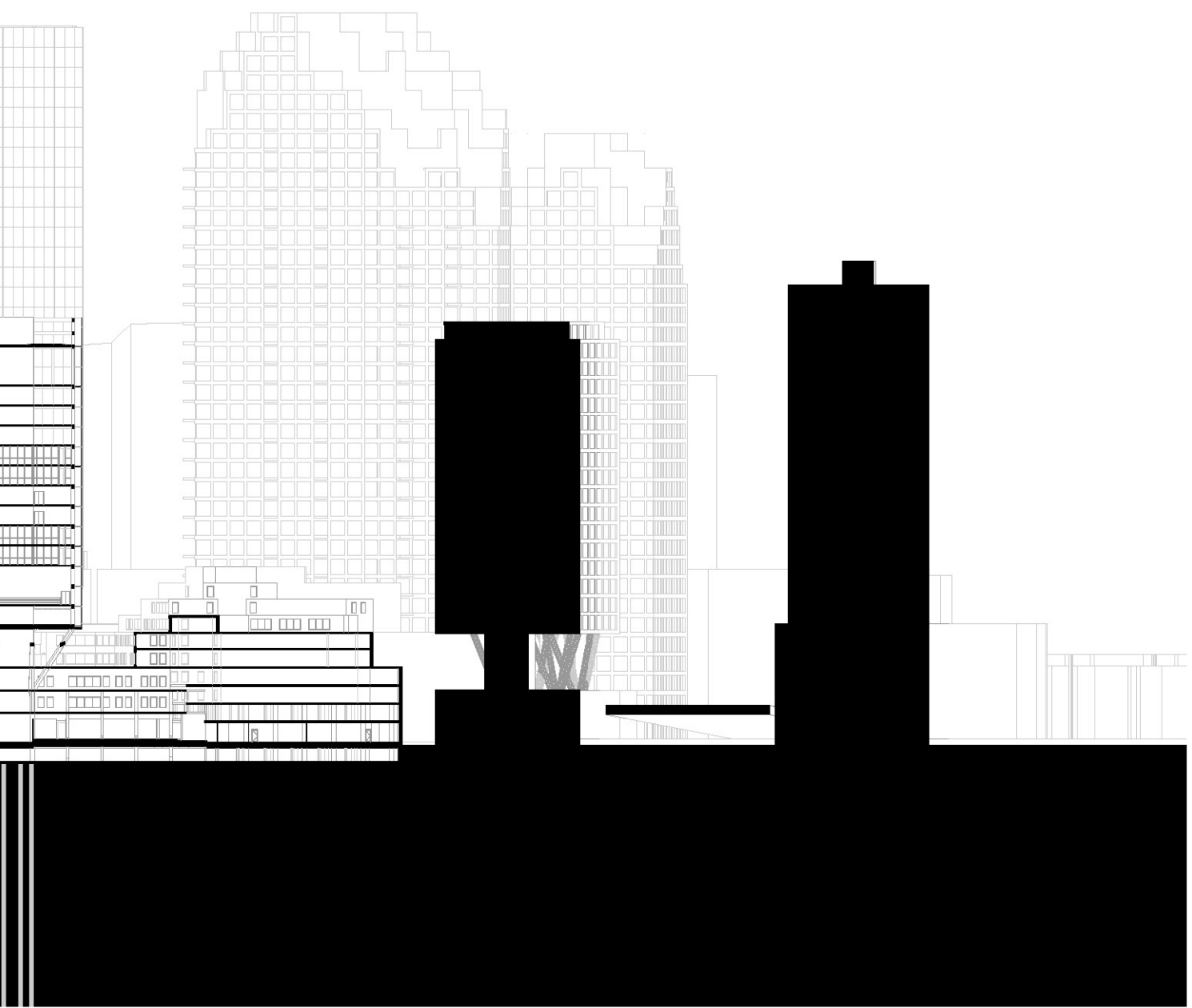


Urban Section BB Scale 1:1000

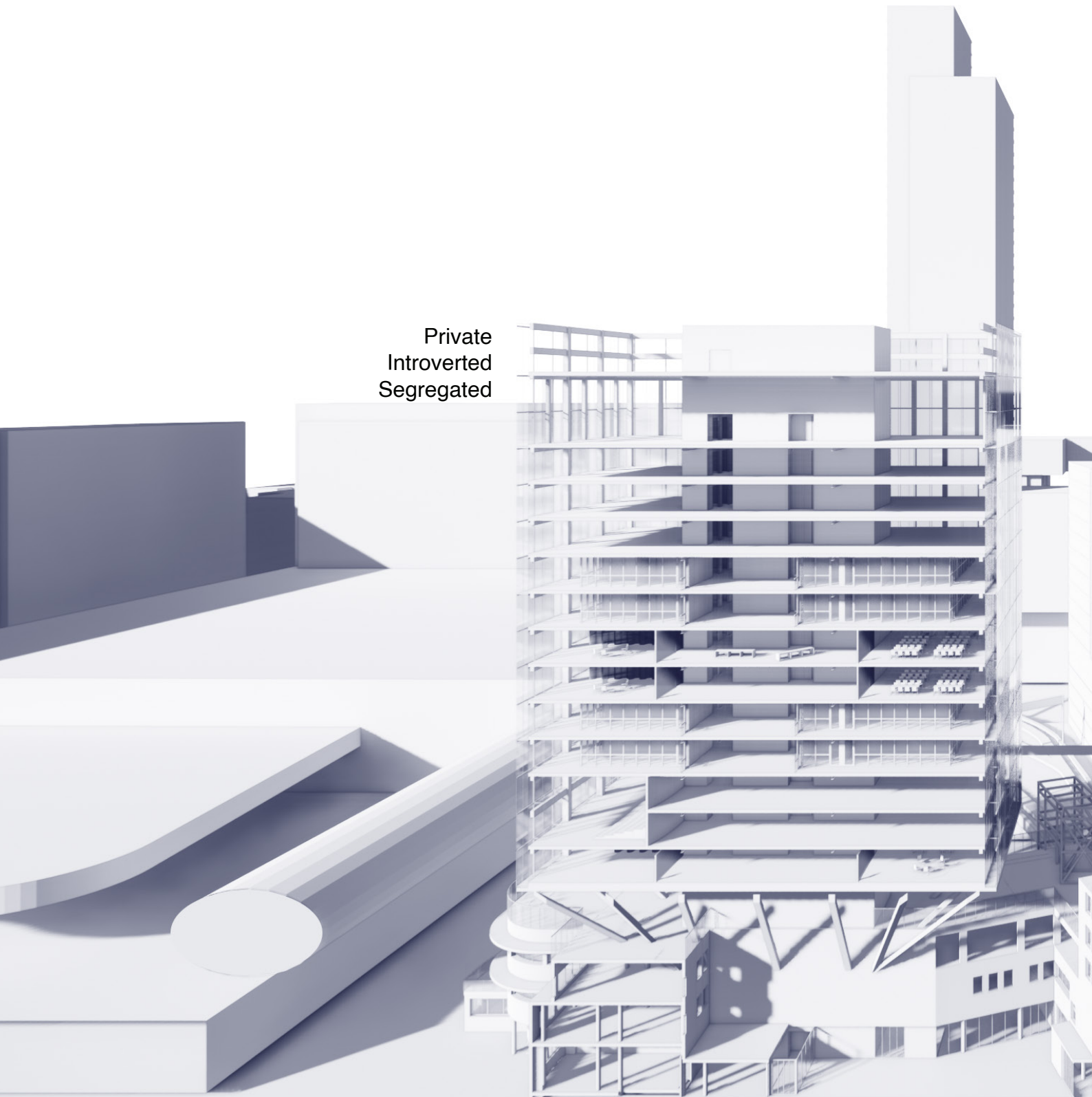




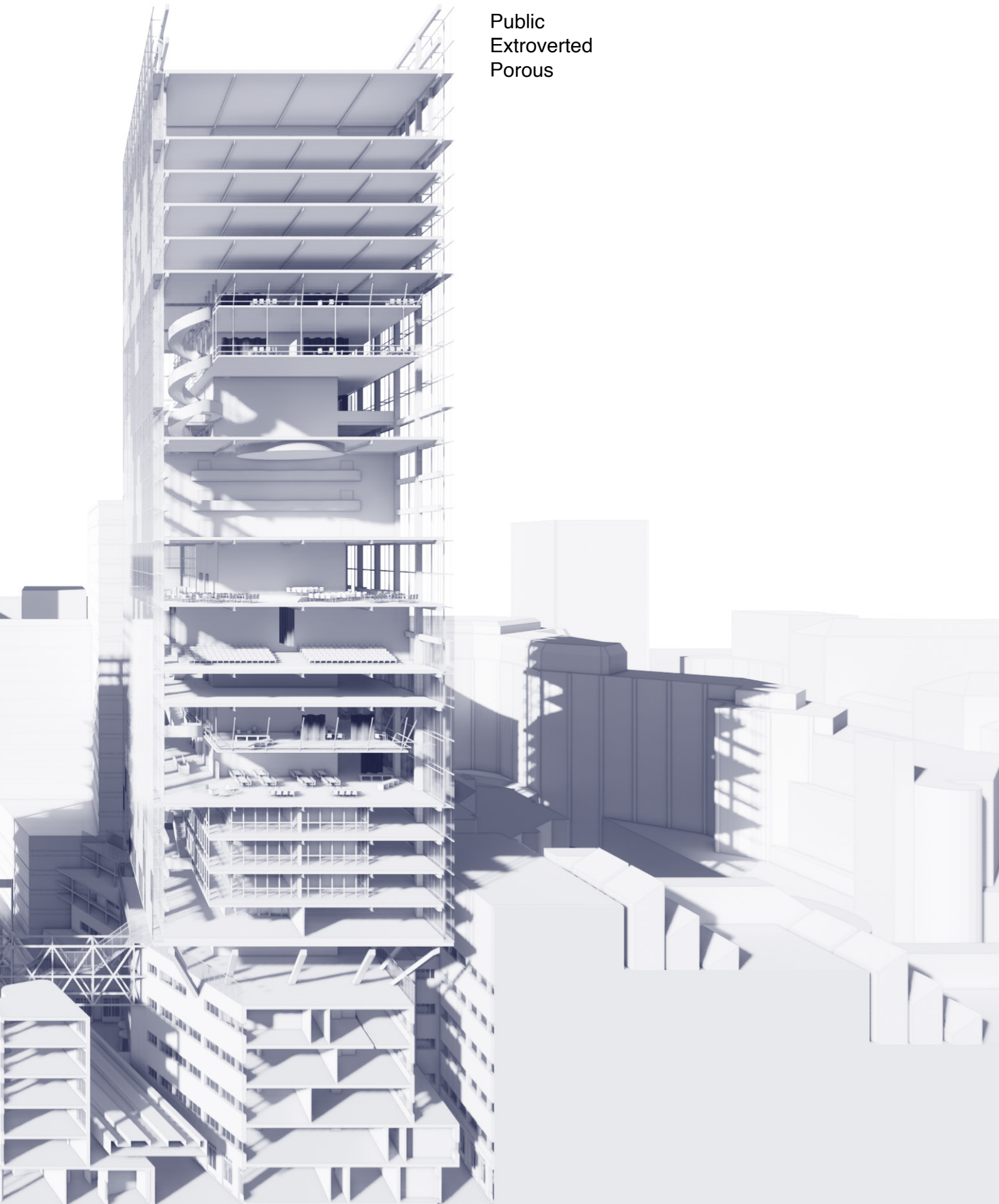
Urban Section CC Scale 1:1000



Private
Introverted
Segregated



Public
Extroverted
Porous





Dean and Staff

Student Association Spaces

Debate Centre

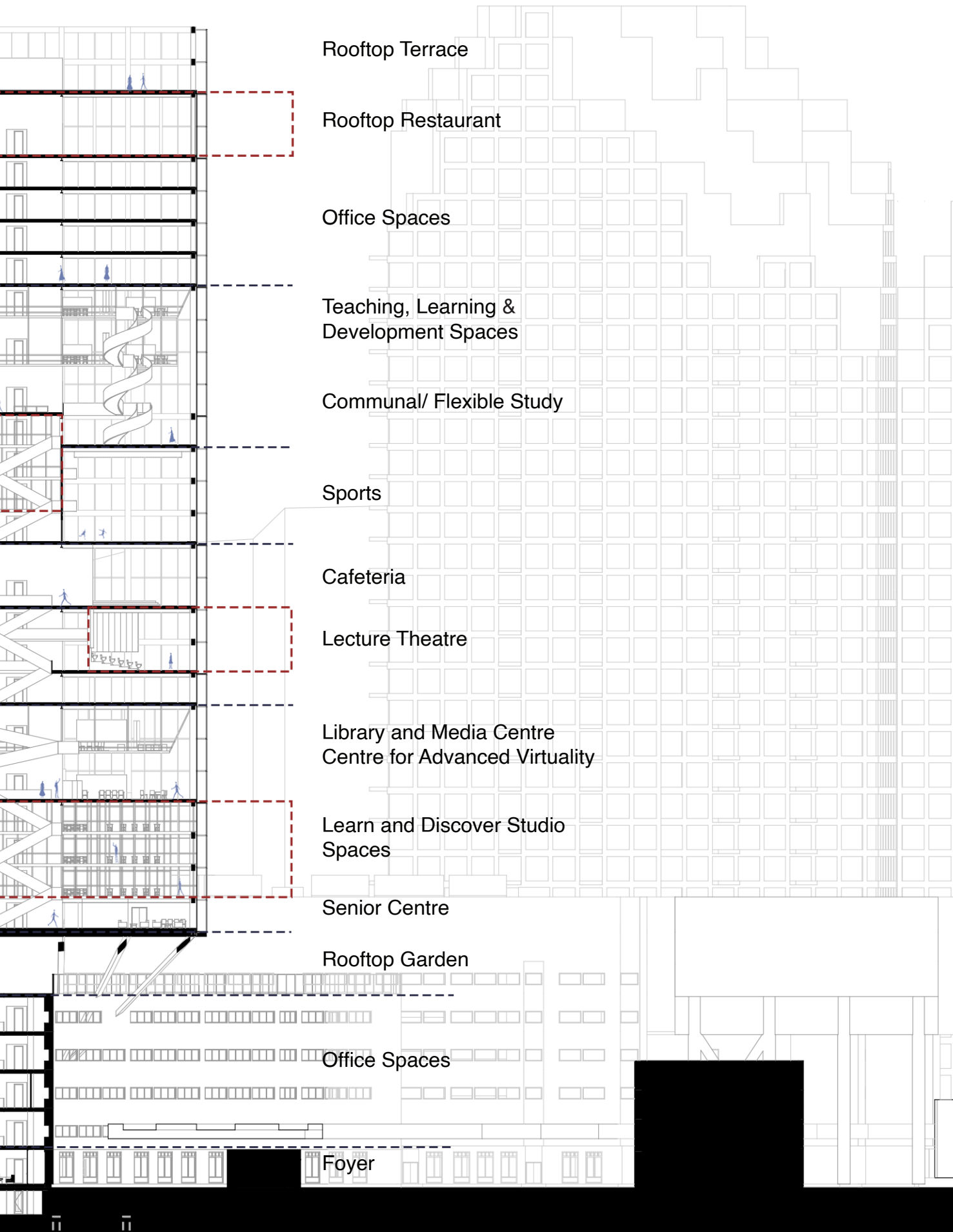
Office Spaces

Lecture Theatre

Lobby and Cafe
Exhibition Space

Retail Spaces





Rooftop Terrace

Rooftop Restaurant

Office Spaces

Teaching, Learning &
Development Spaces

Communal/ Flexible Study

Sports

Cafeteria

Lecture Theatre

Library and Media Centre
Centre for Advanced Virtuality

Learn and Discover Studio
Spaces

Senior Centre

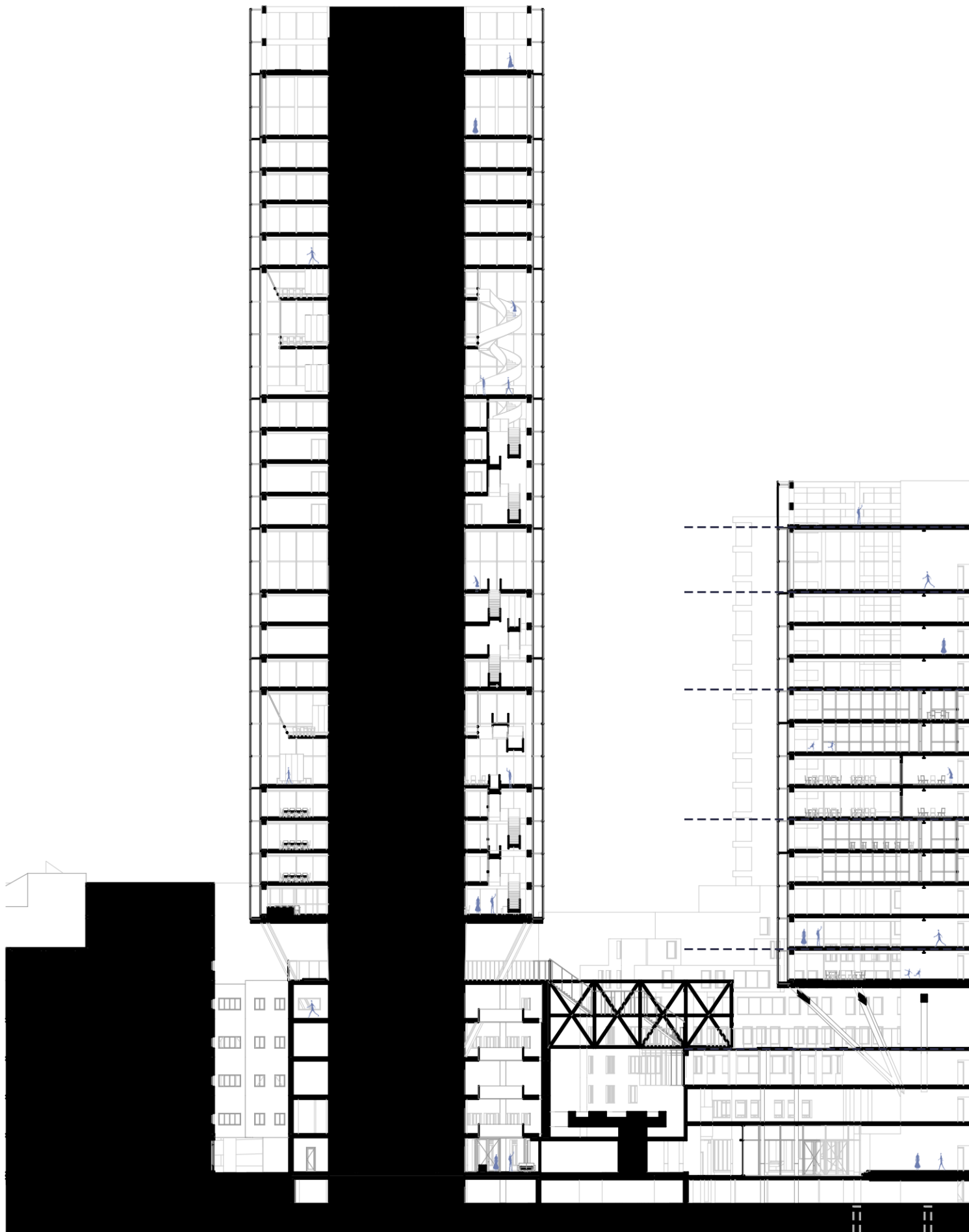
Rooftop Garden

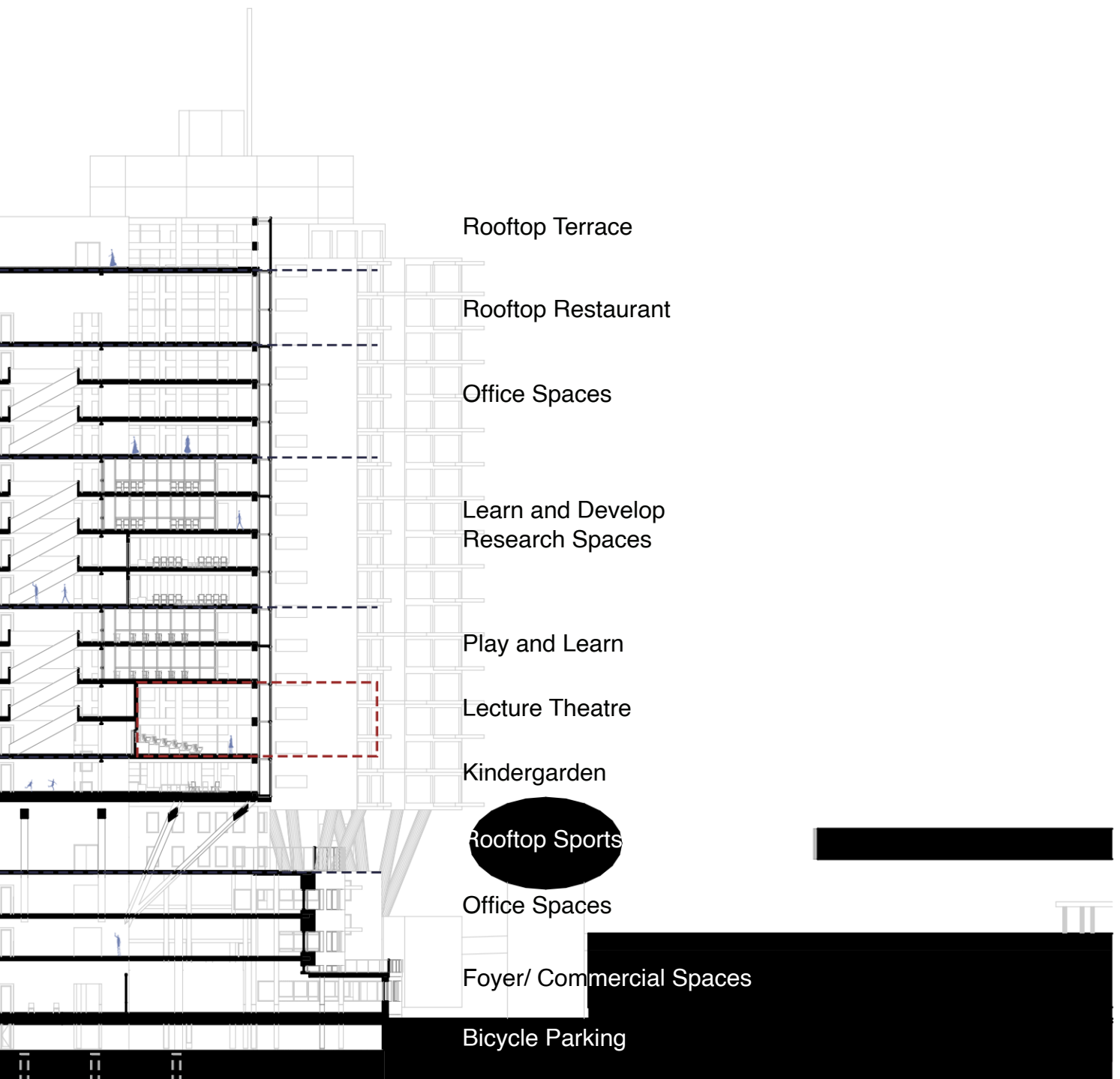
Office Spaces

Foyer

Section AA

Scale 1:500





Rooftop Terrace

Rooftop Restaurant

Office Spaces

Learn and Develop
Research Spaces

Play and Learn

Lecture Theatre

Kindergarden

Rooftop Sports

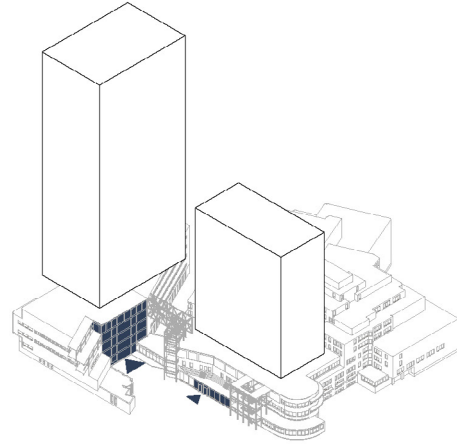
Office Spaces

Foyer/ Commercial Spaces

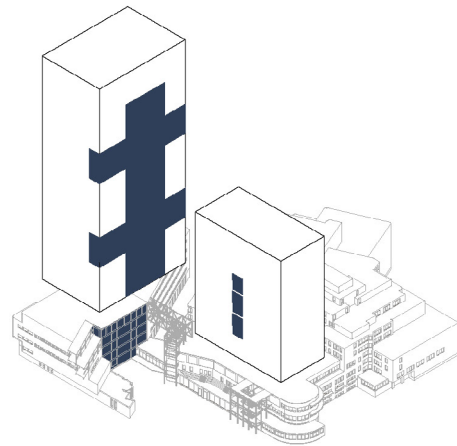
Bicycle Parking

Section BB

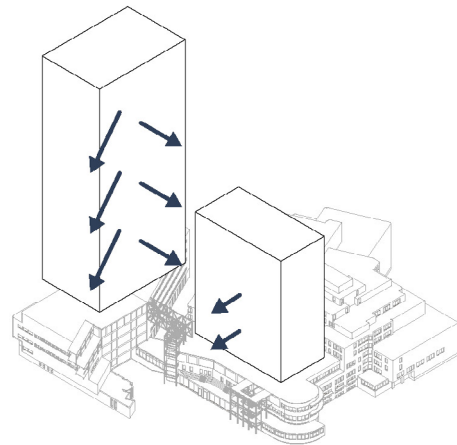
Scale 1:500



entrances

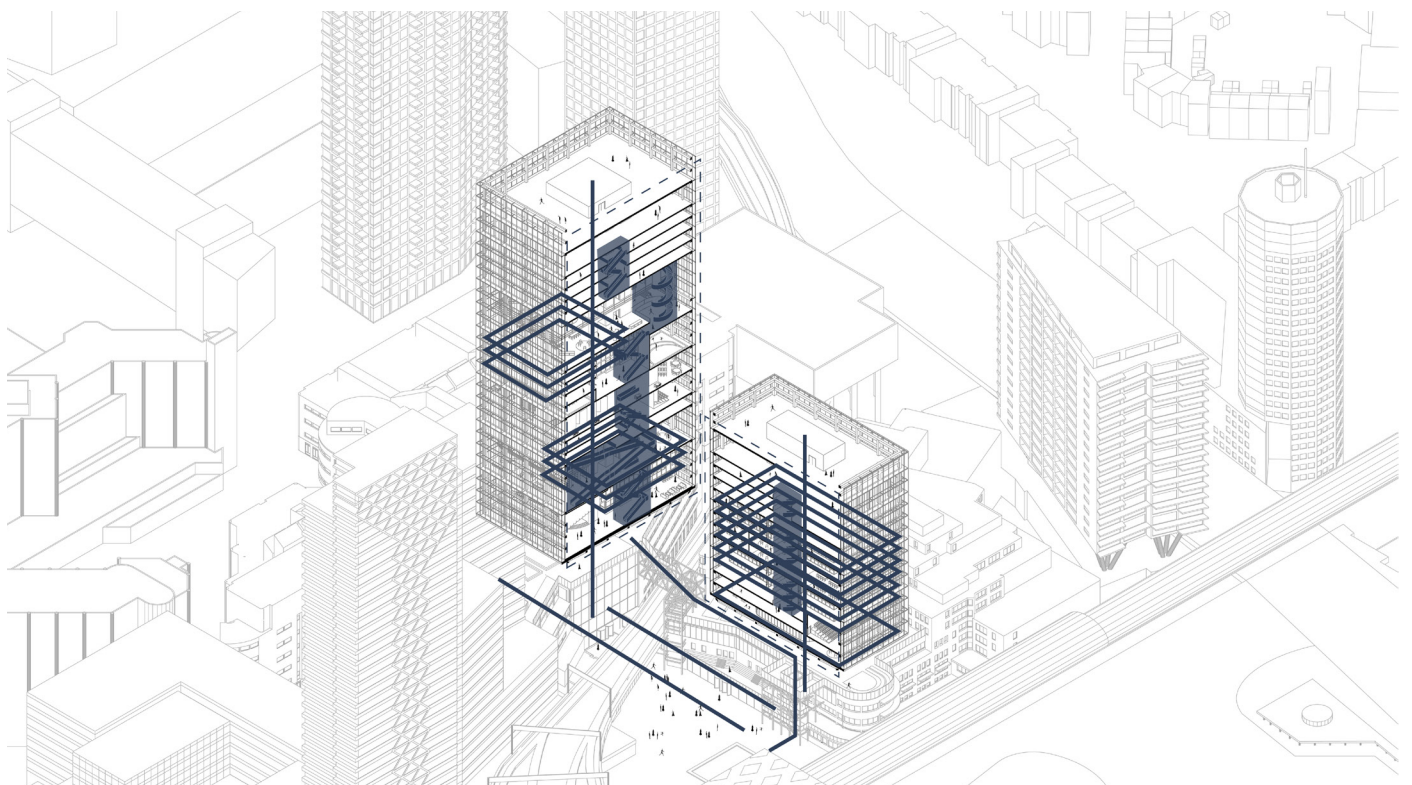
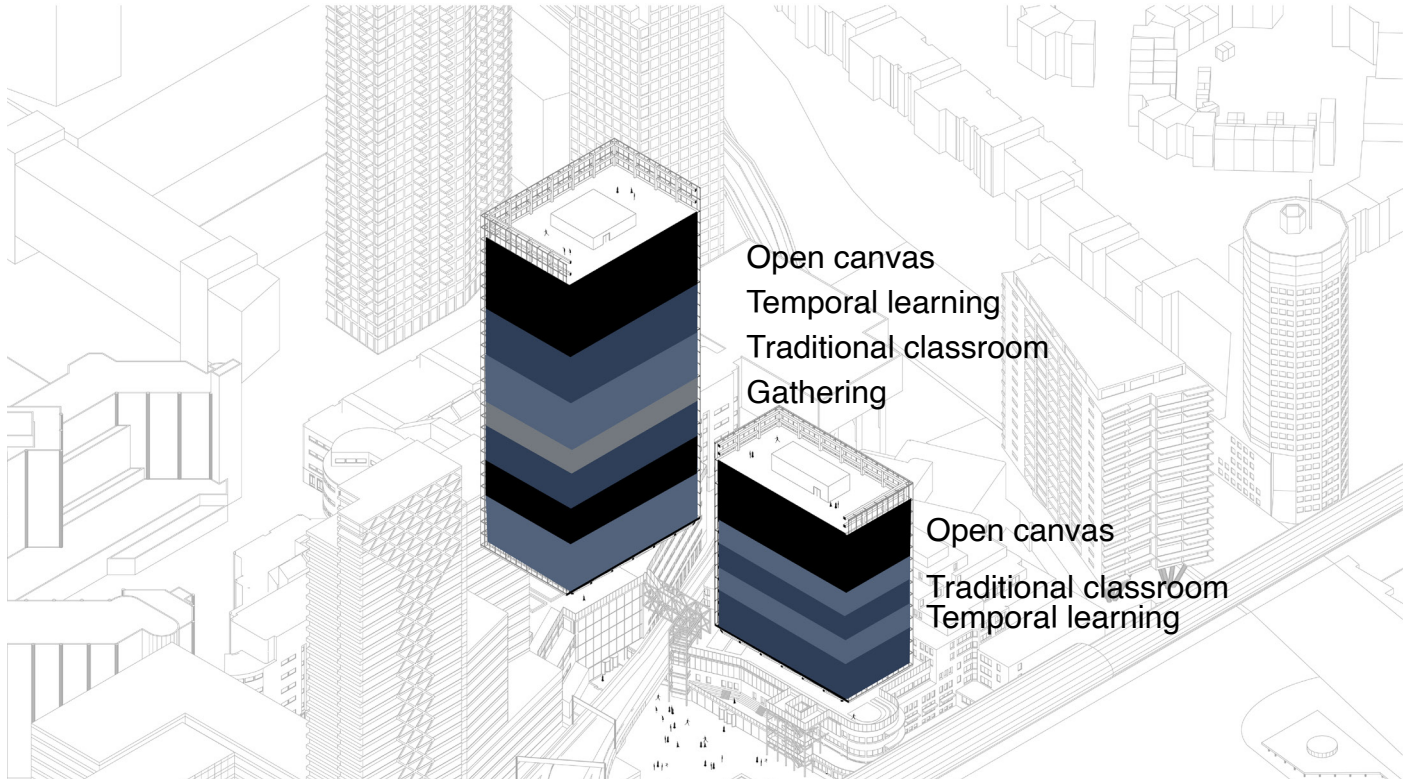


vertical voids



views from communal areas

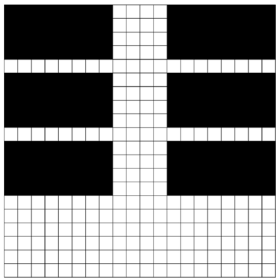
Space allocation



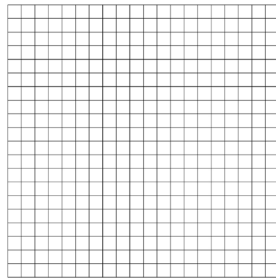
Circulation

space catalogue
pockets of floors

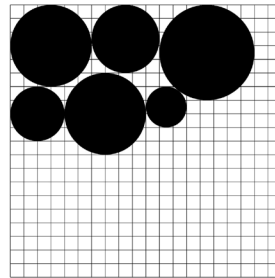
traditional classrooms



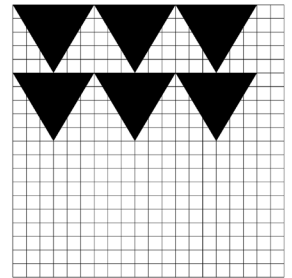
temporal learning



open canvas

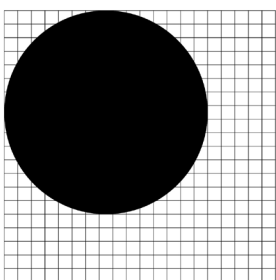


gathering

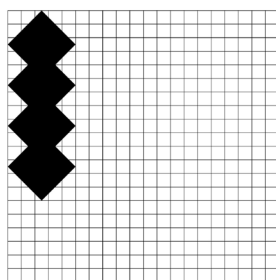


space catalogue
moments

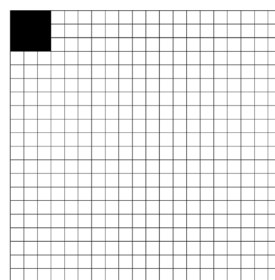
theatrical experience



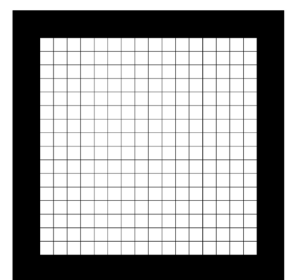
theatre for one



vertical void

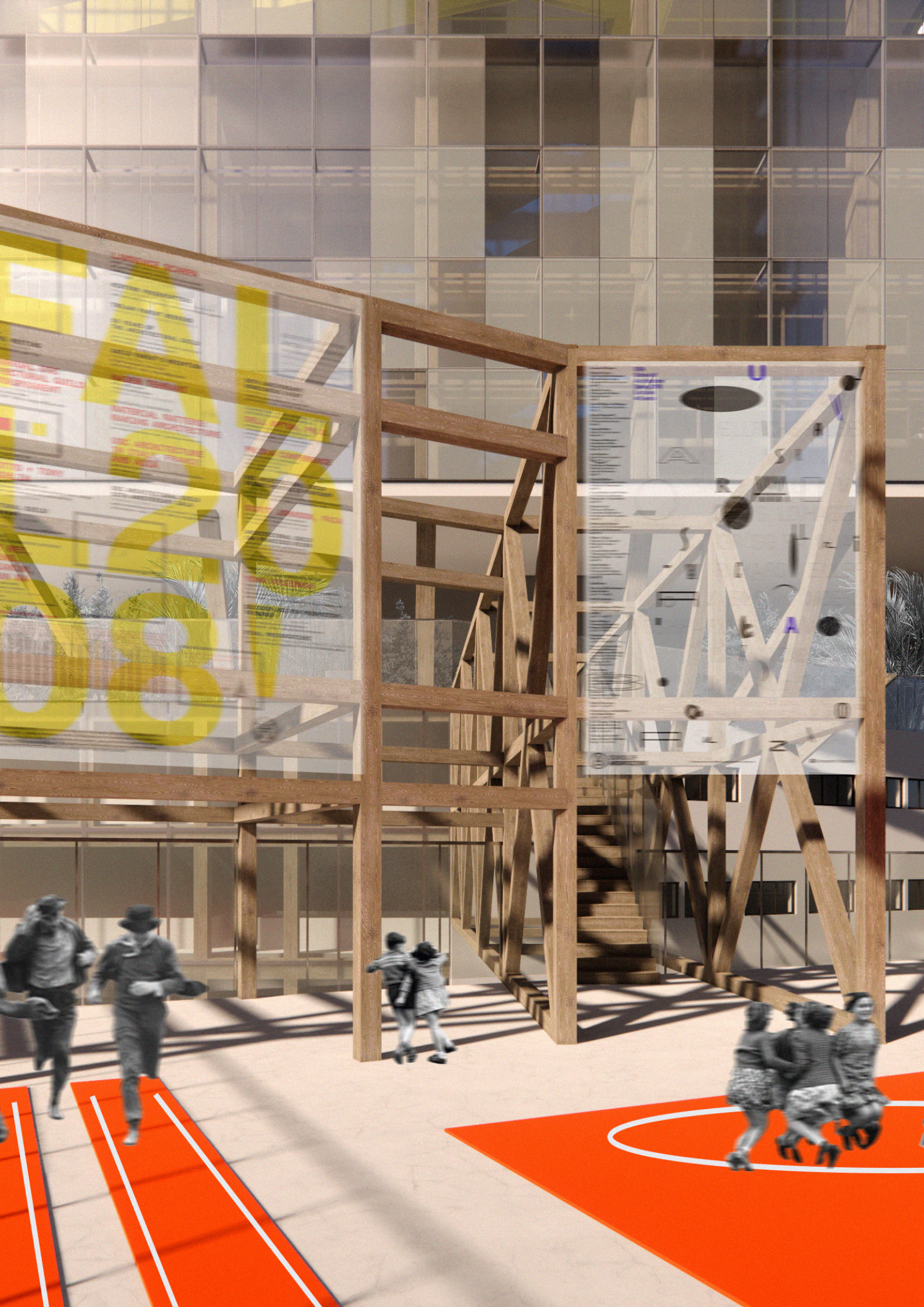


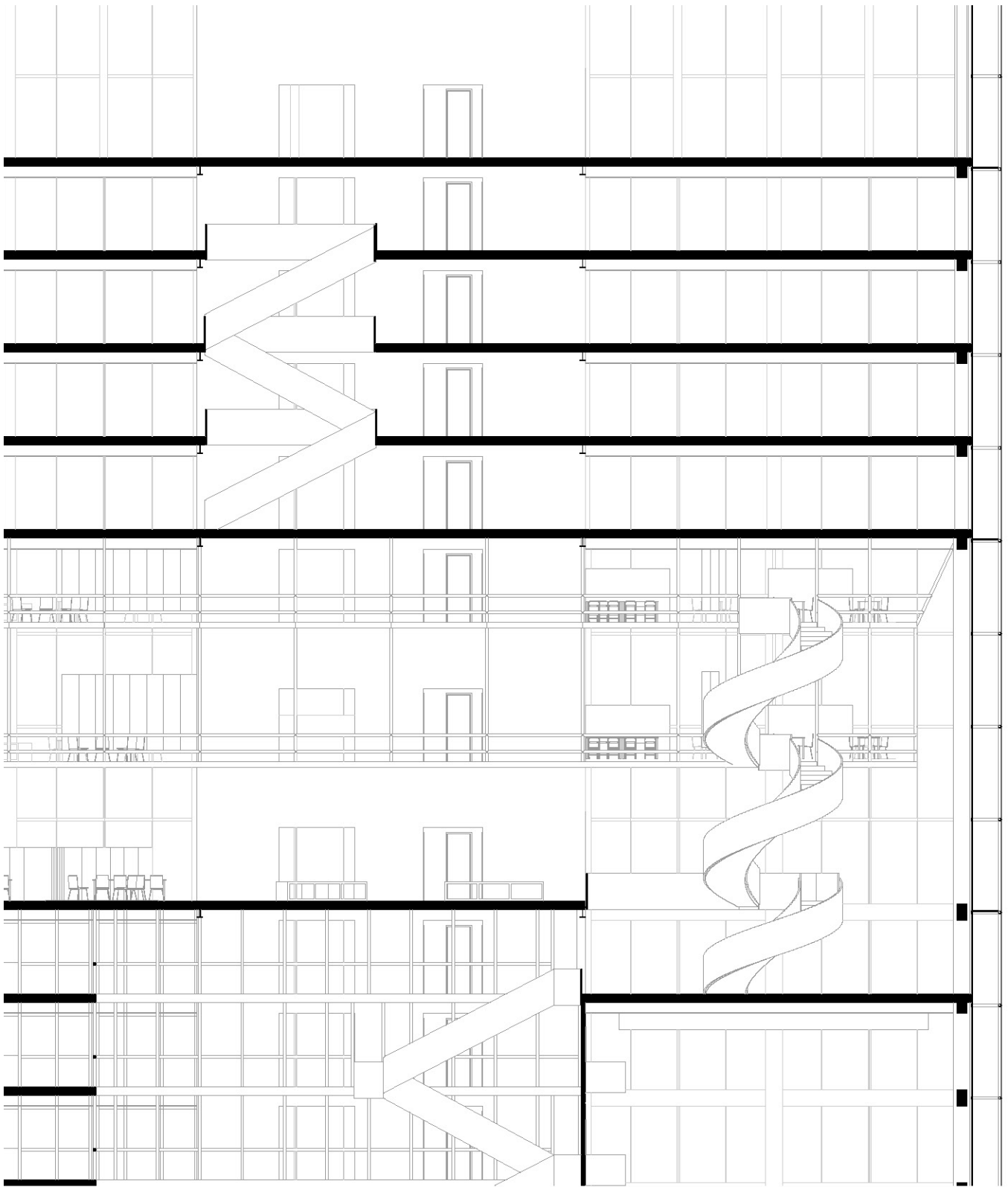
peripheral promenade



The concept of Multiplicity appears throughout the project from the urban scale to the details. It creates and celebrates diversity while connecting to urban fabric. It provides voice for minorities while creating unified environment for cultural and scientific exchange.

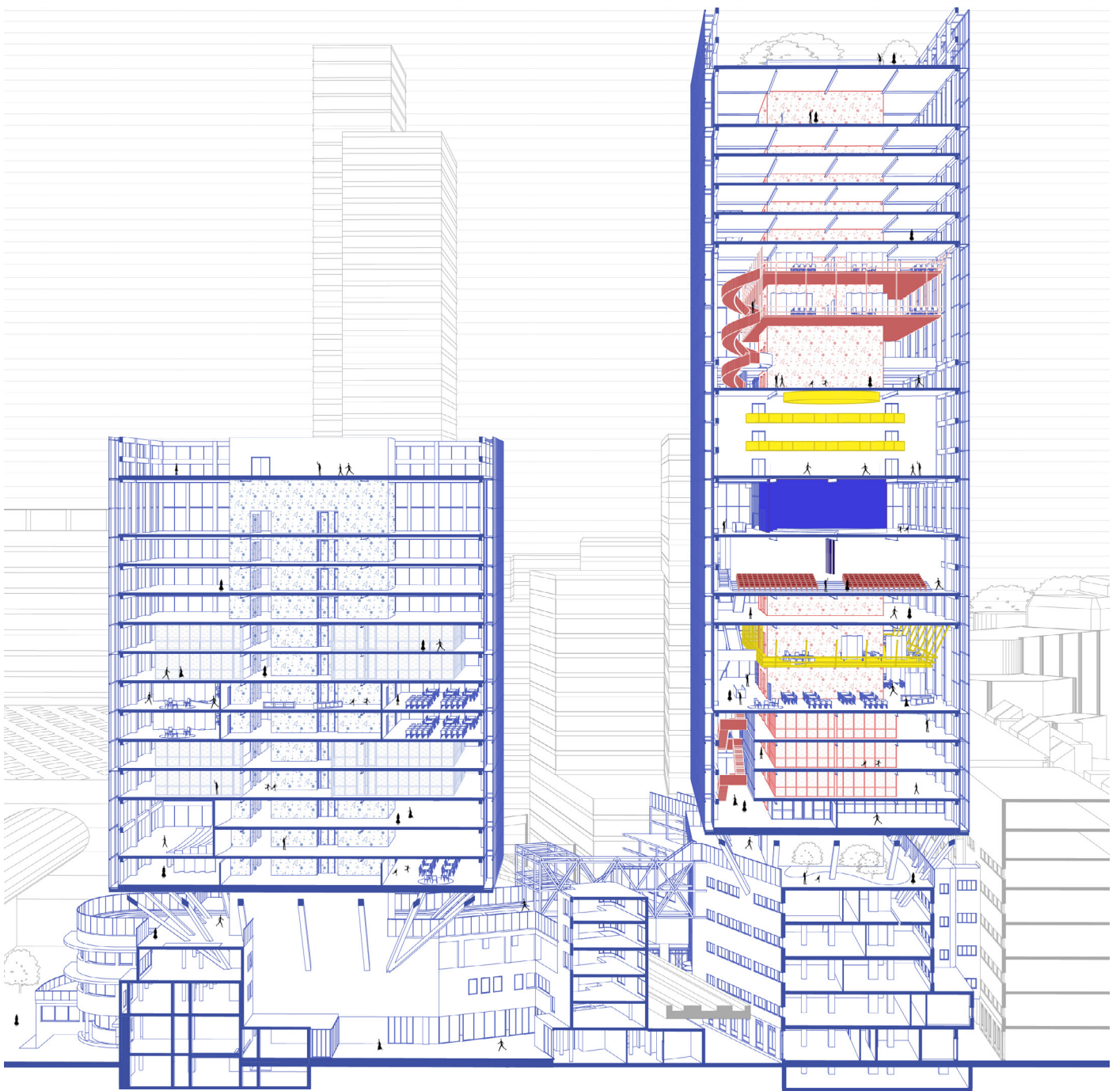
The materials ensure the sustainability of the project while construction makes sure its easily dismantlable. Added program invites general public inside the buildings which makes it being used throughout the day.



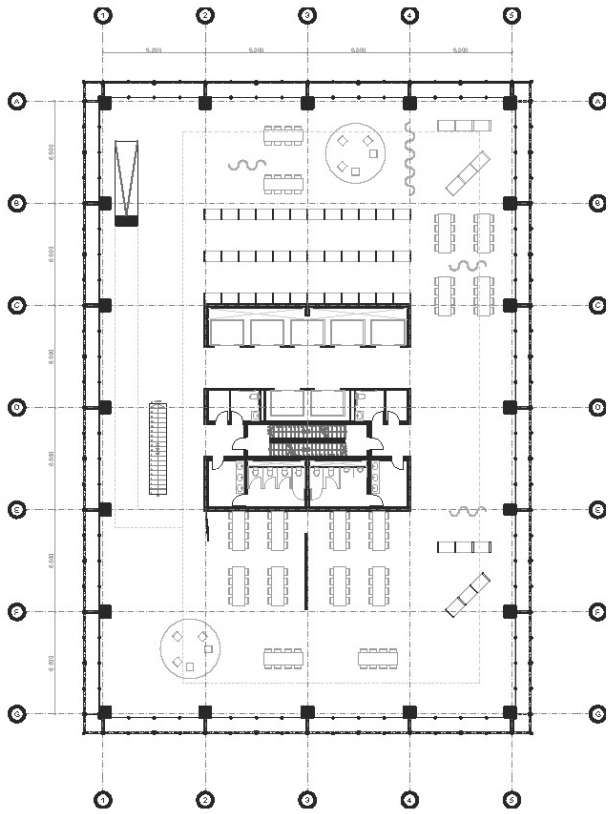


Section AA

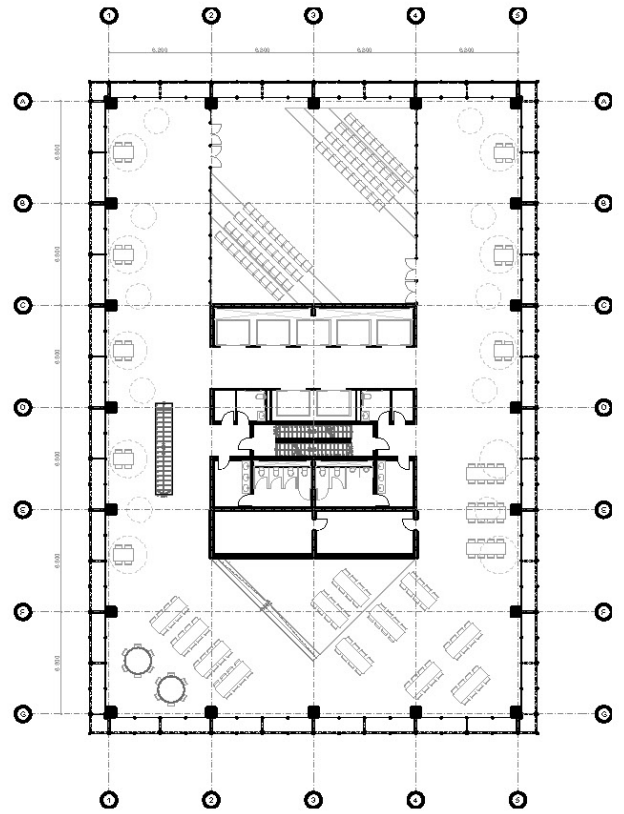
Scale 1:200



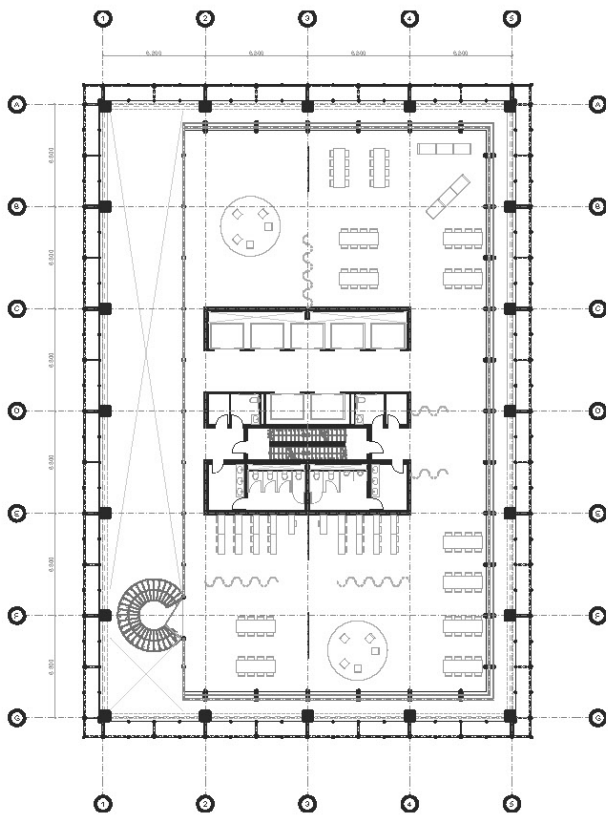




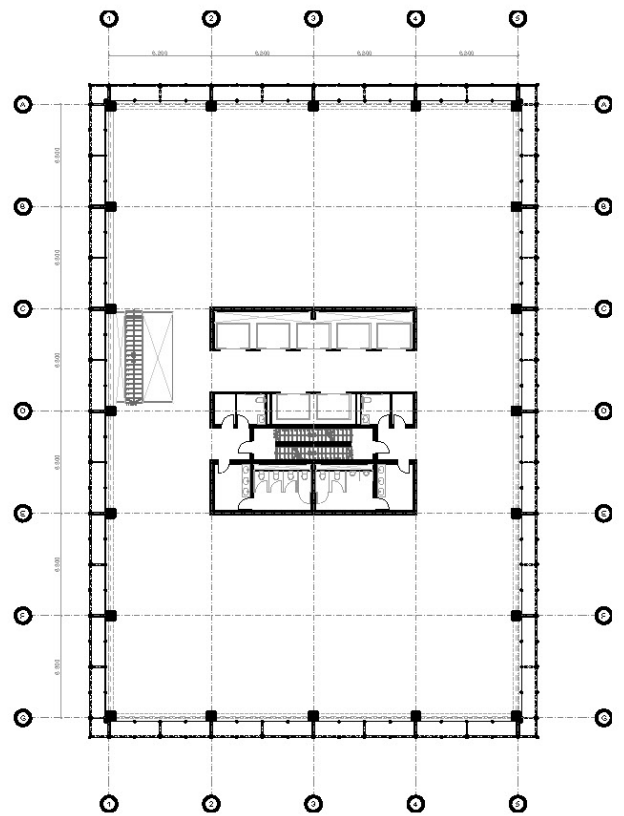
Floor 11



Floor 17



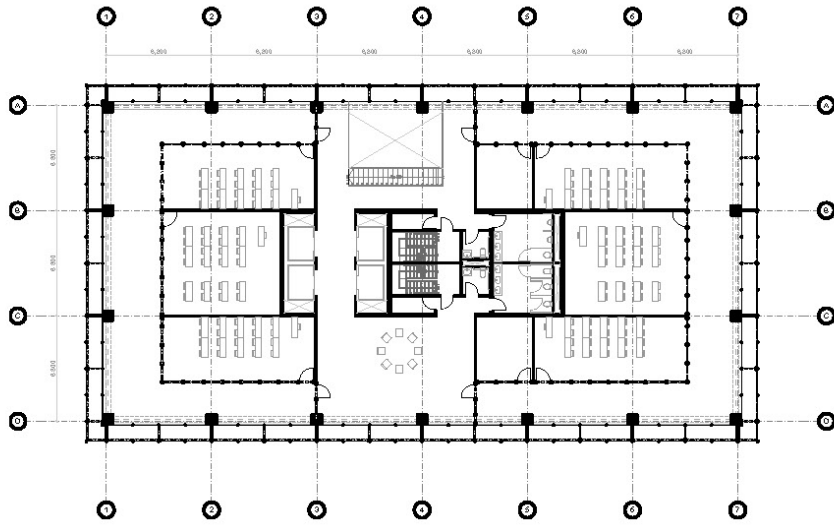
Floor 26



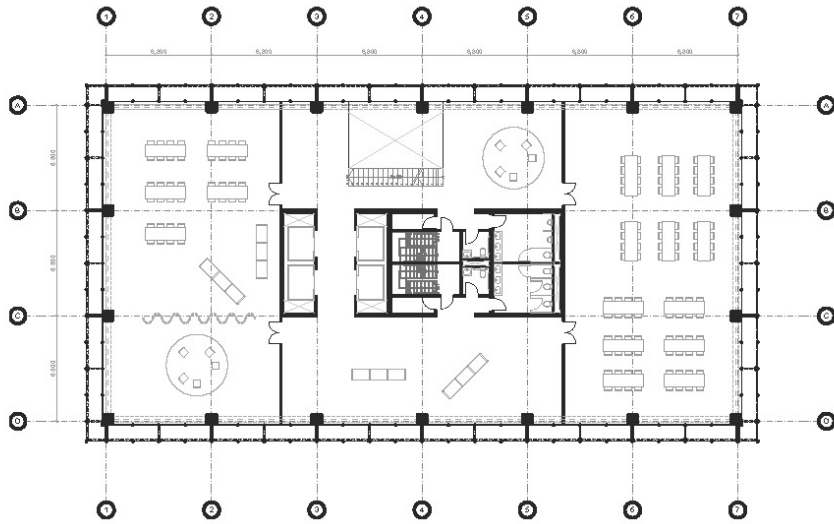
Floor 30

Scale 1:500

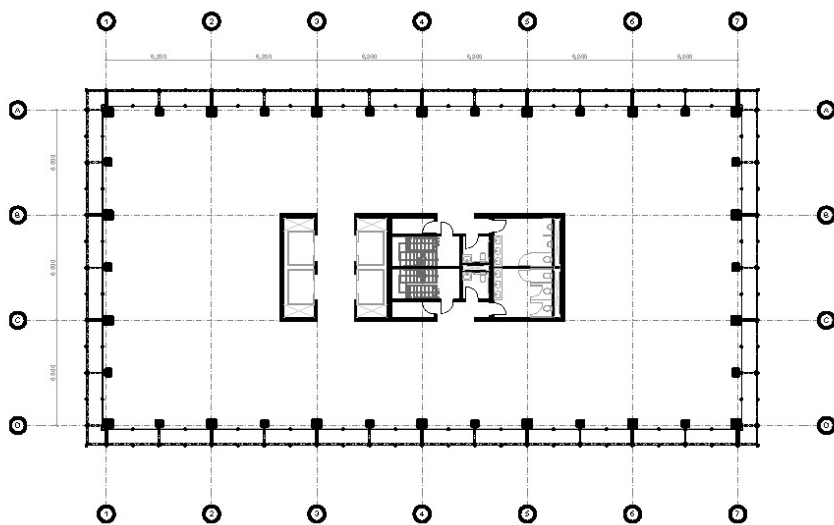




Floor 9



Floor 11

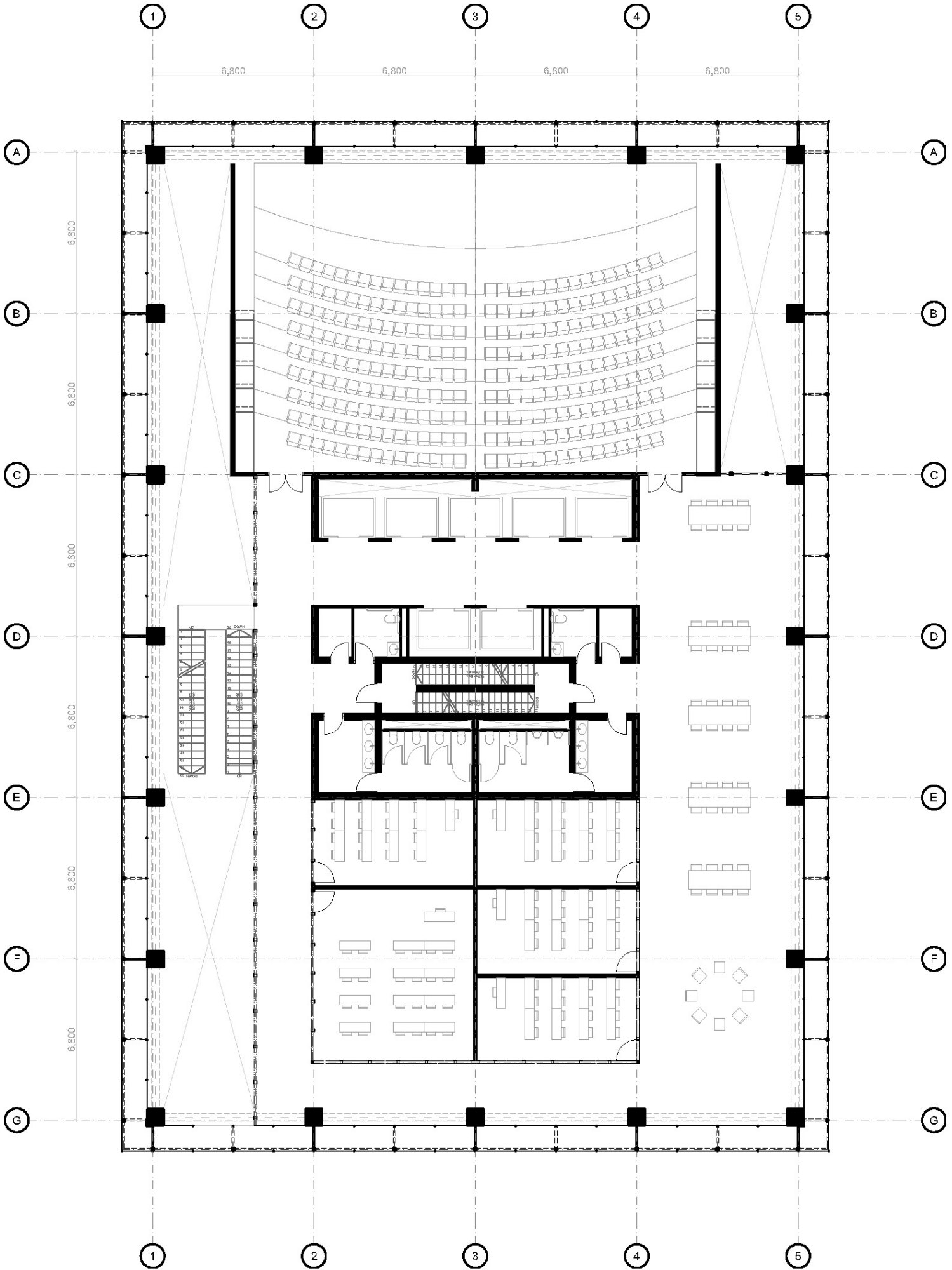


Floor 17

Scale 1:500



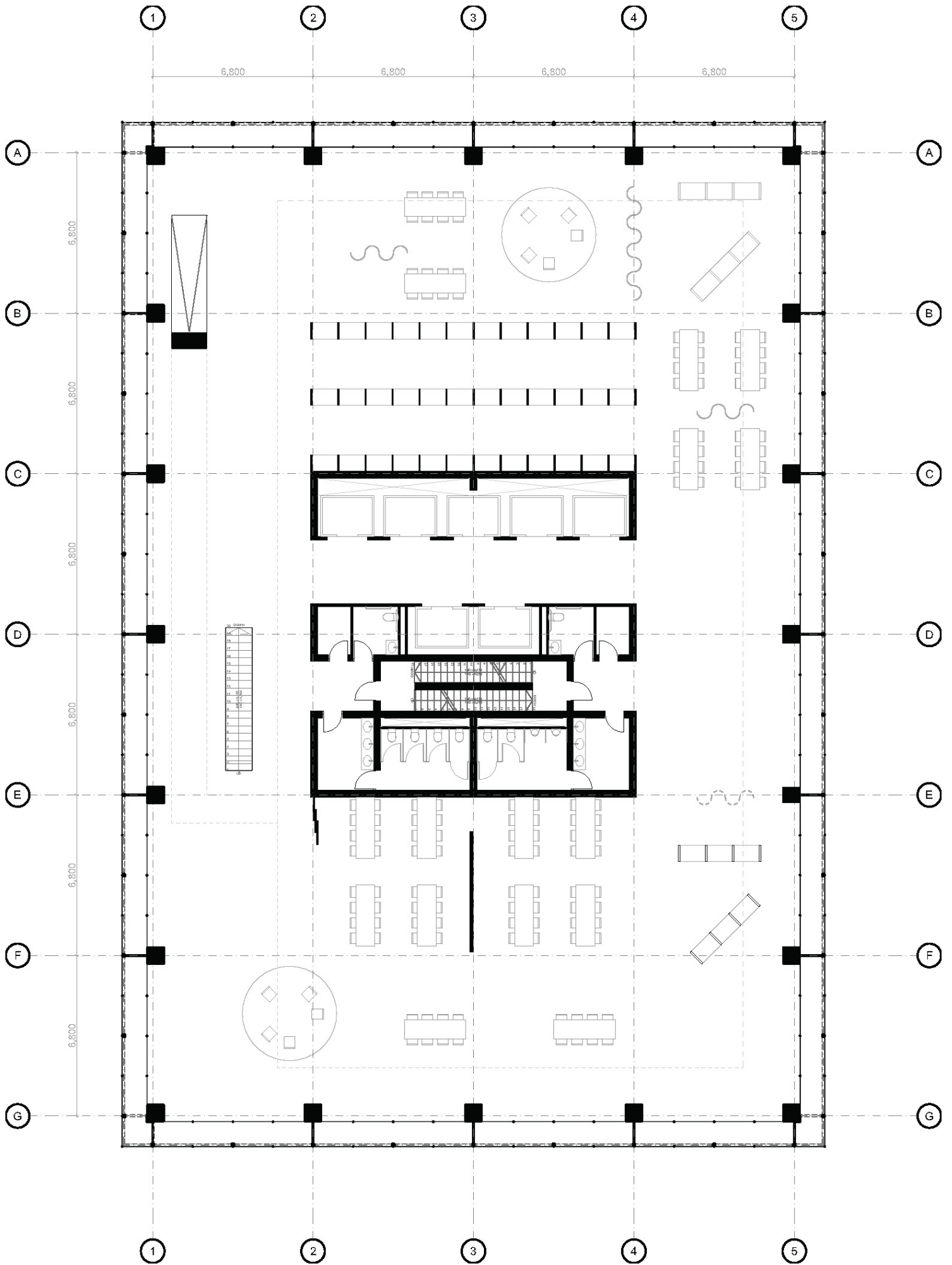




Floor 9

Scale 1:200





Floor 11

Scale 1:200

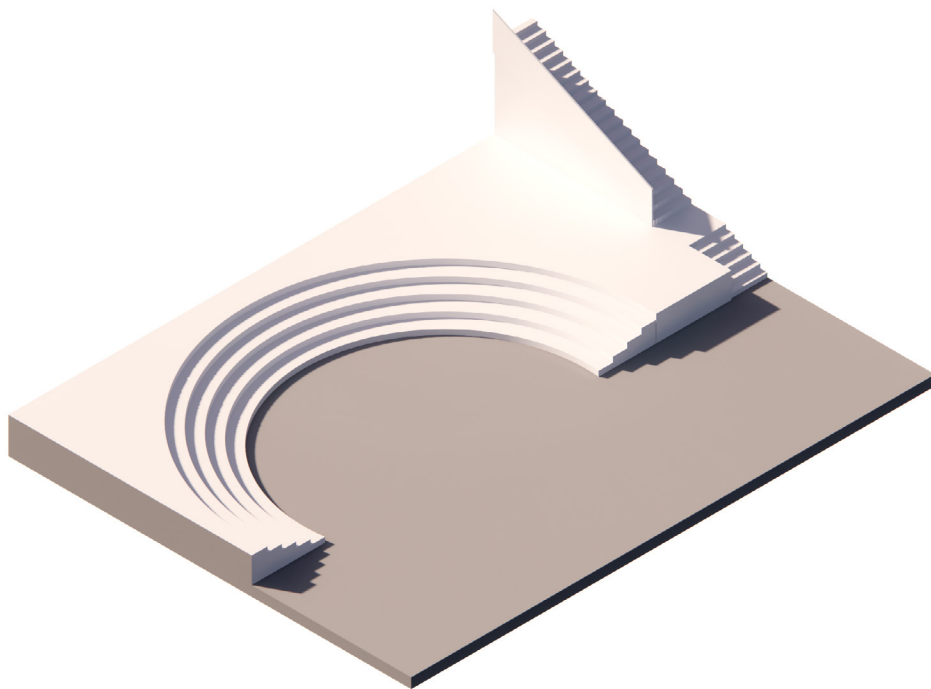
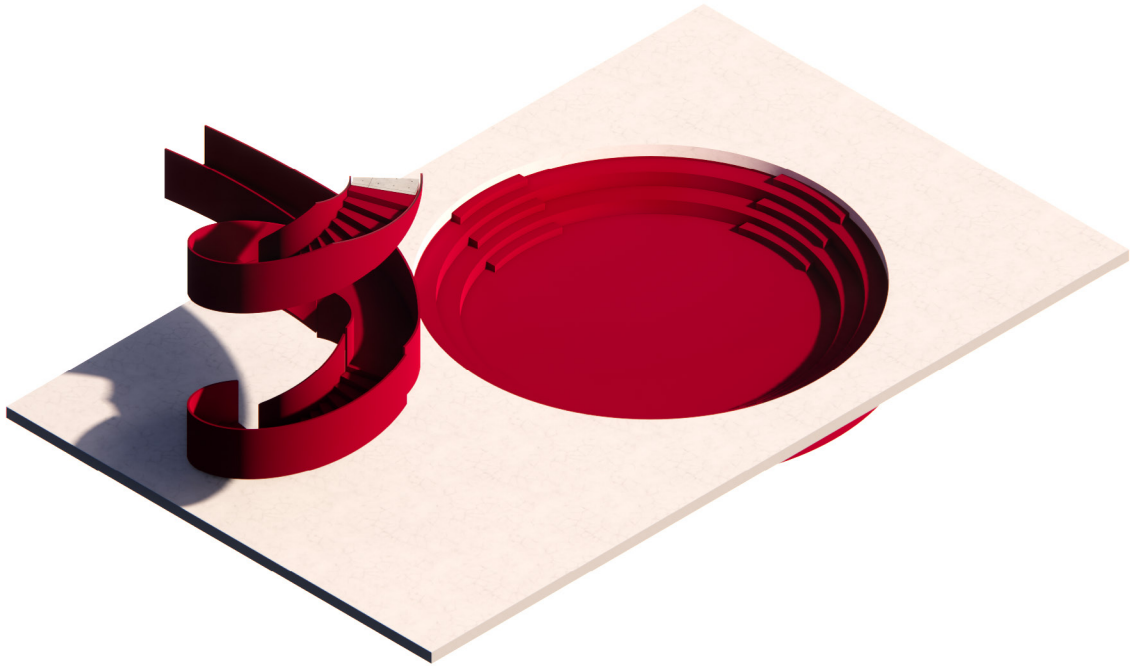




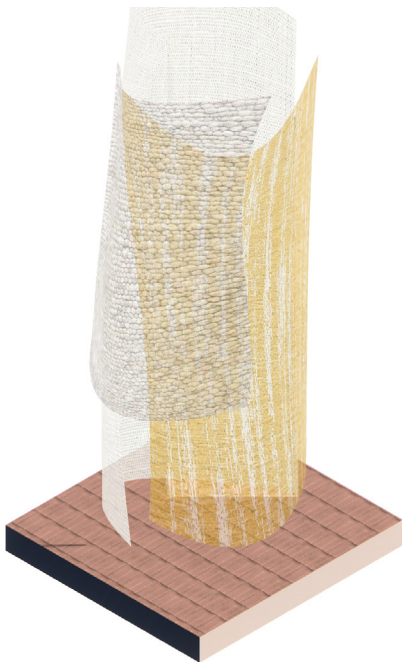
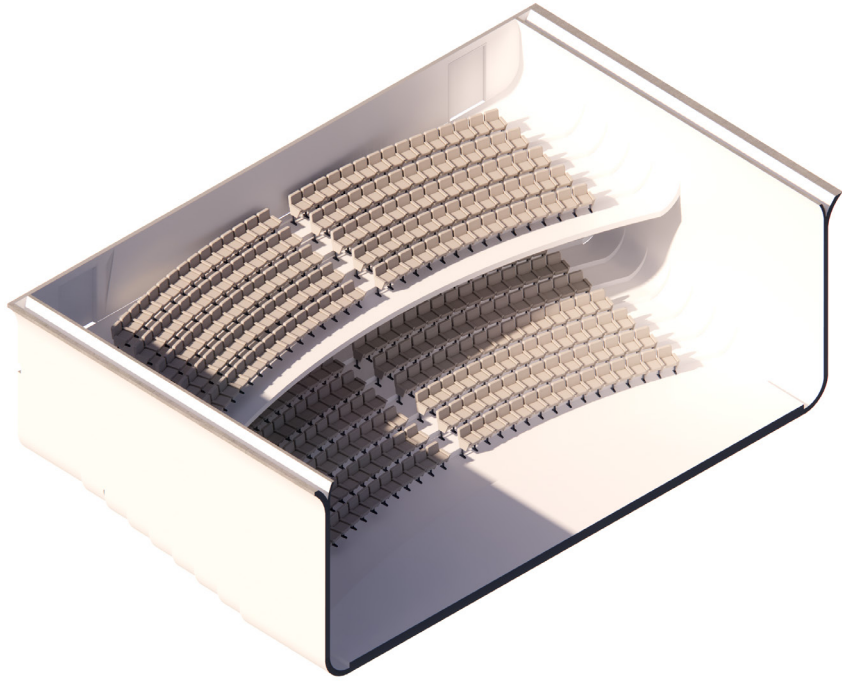


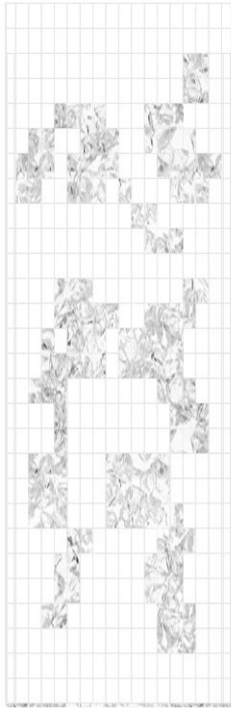




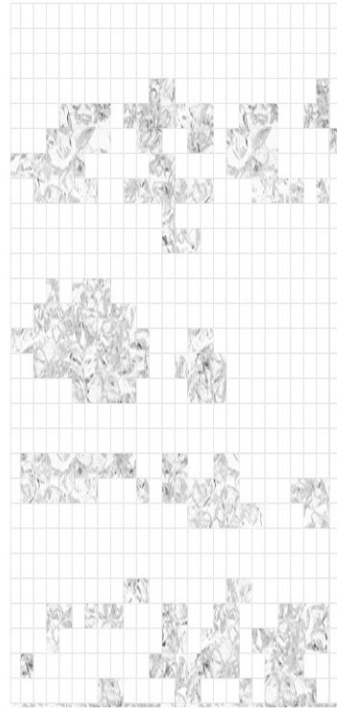


Stages Diversity

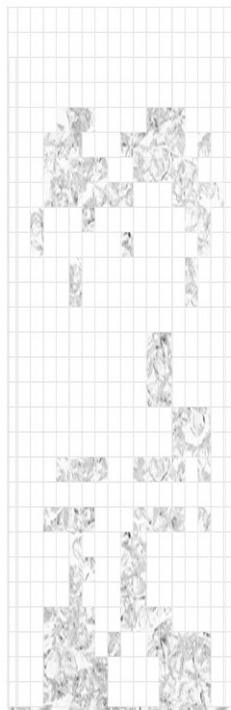




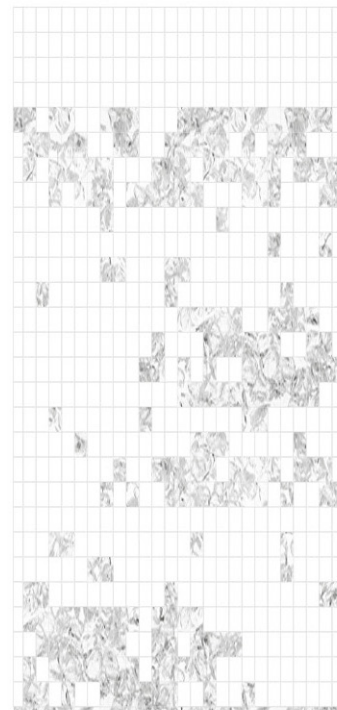
North



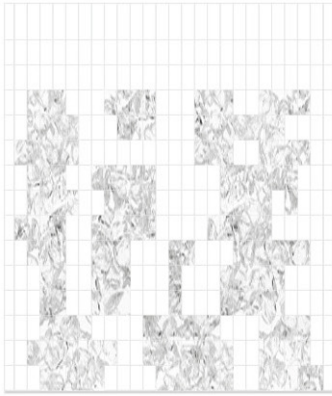
West



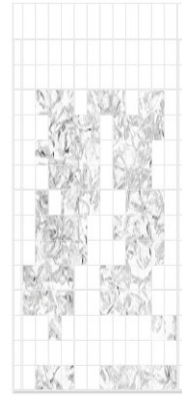
South



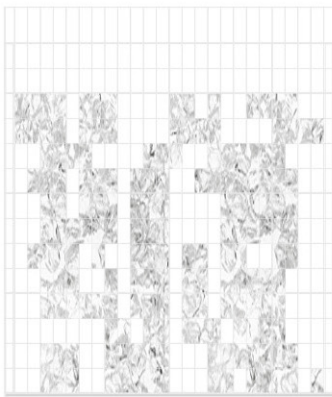
East



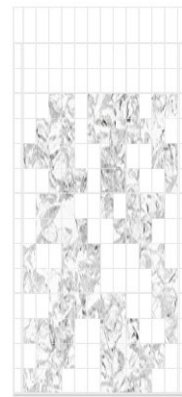
North



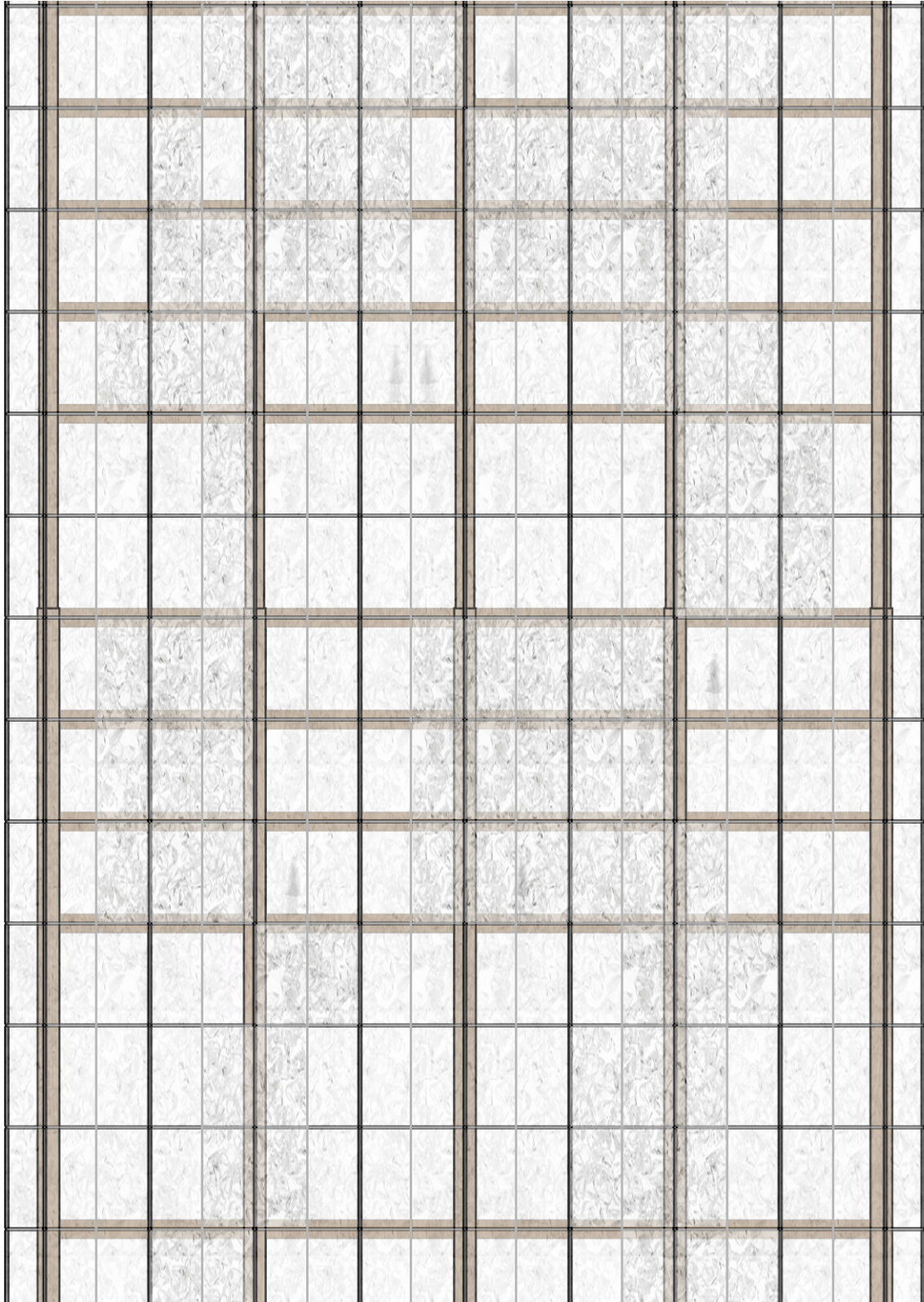
West



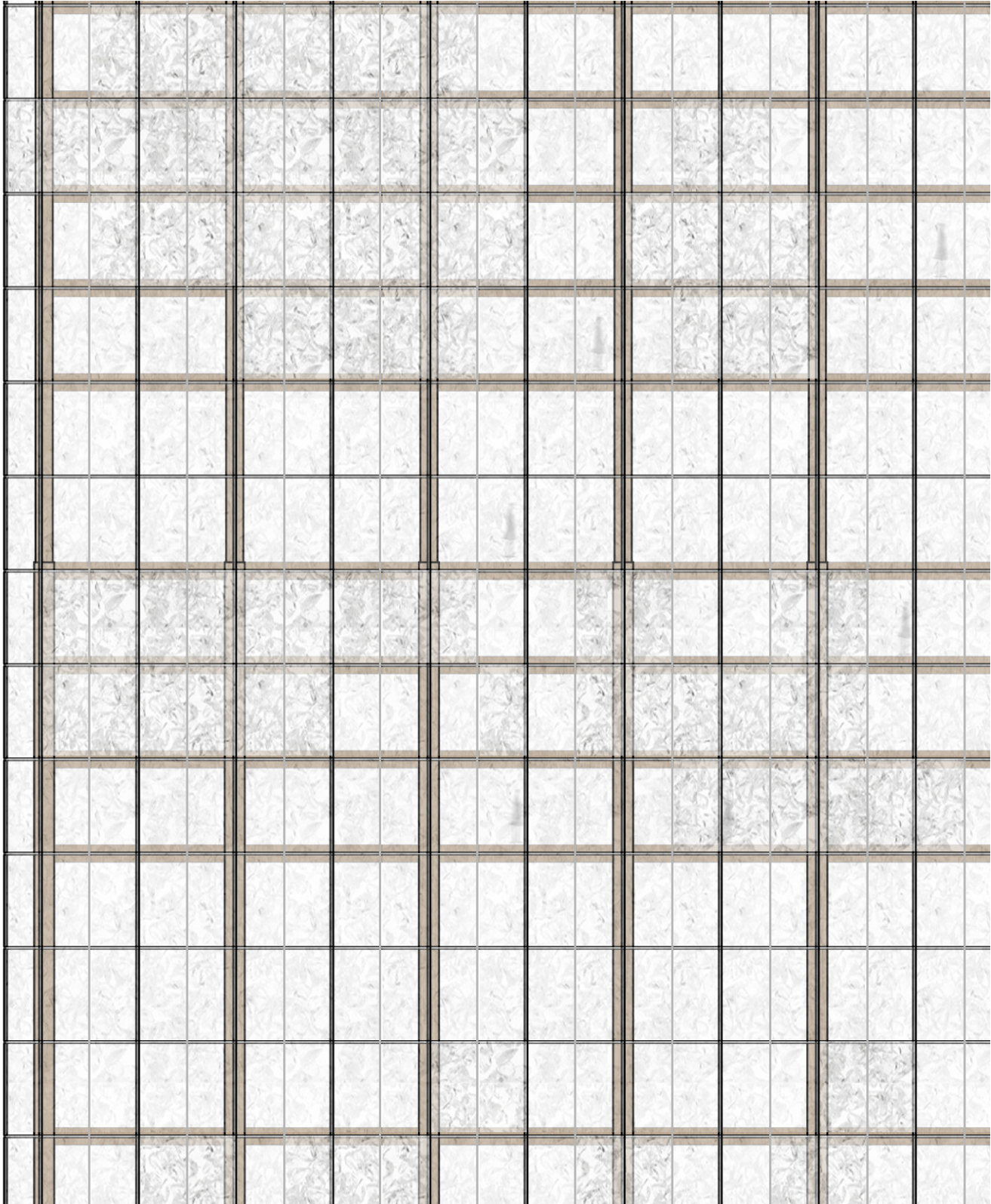
South



East

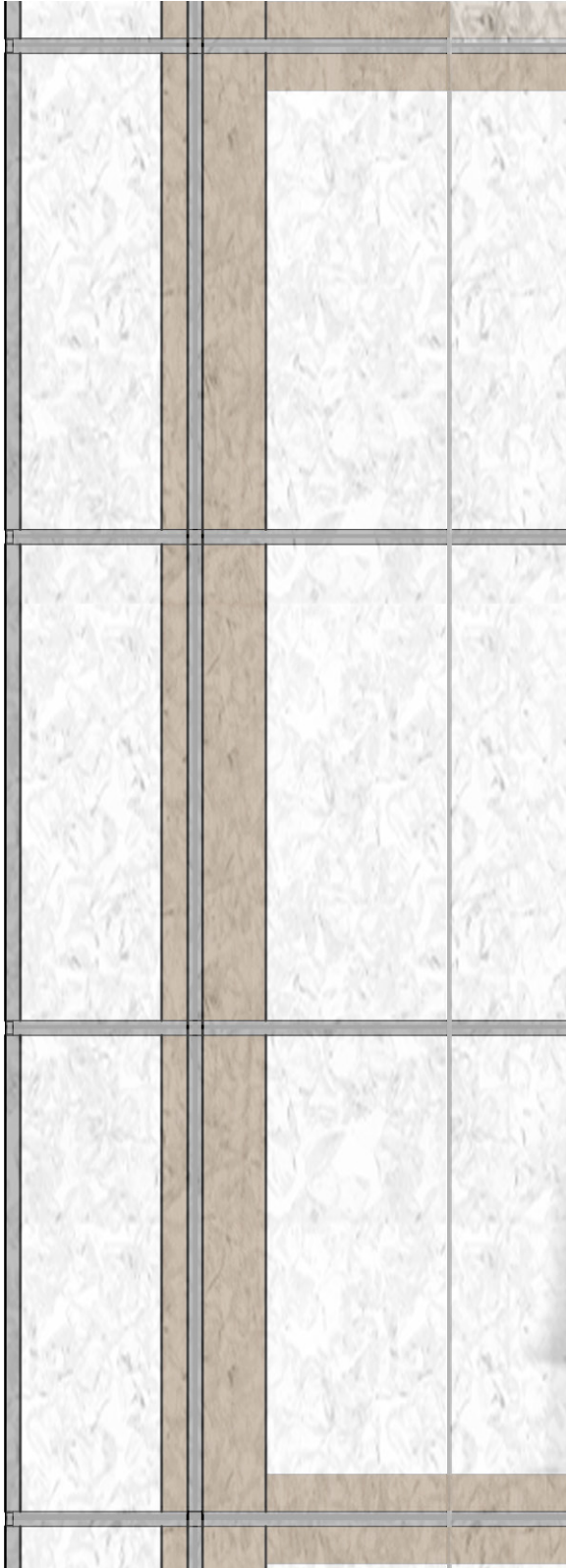


Elevation North Scale 1:200

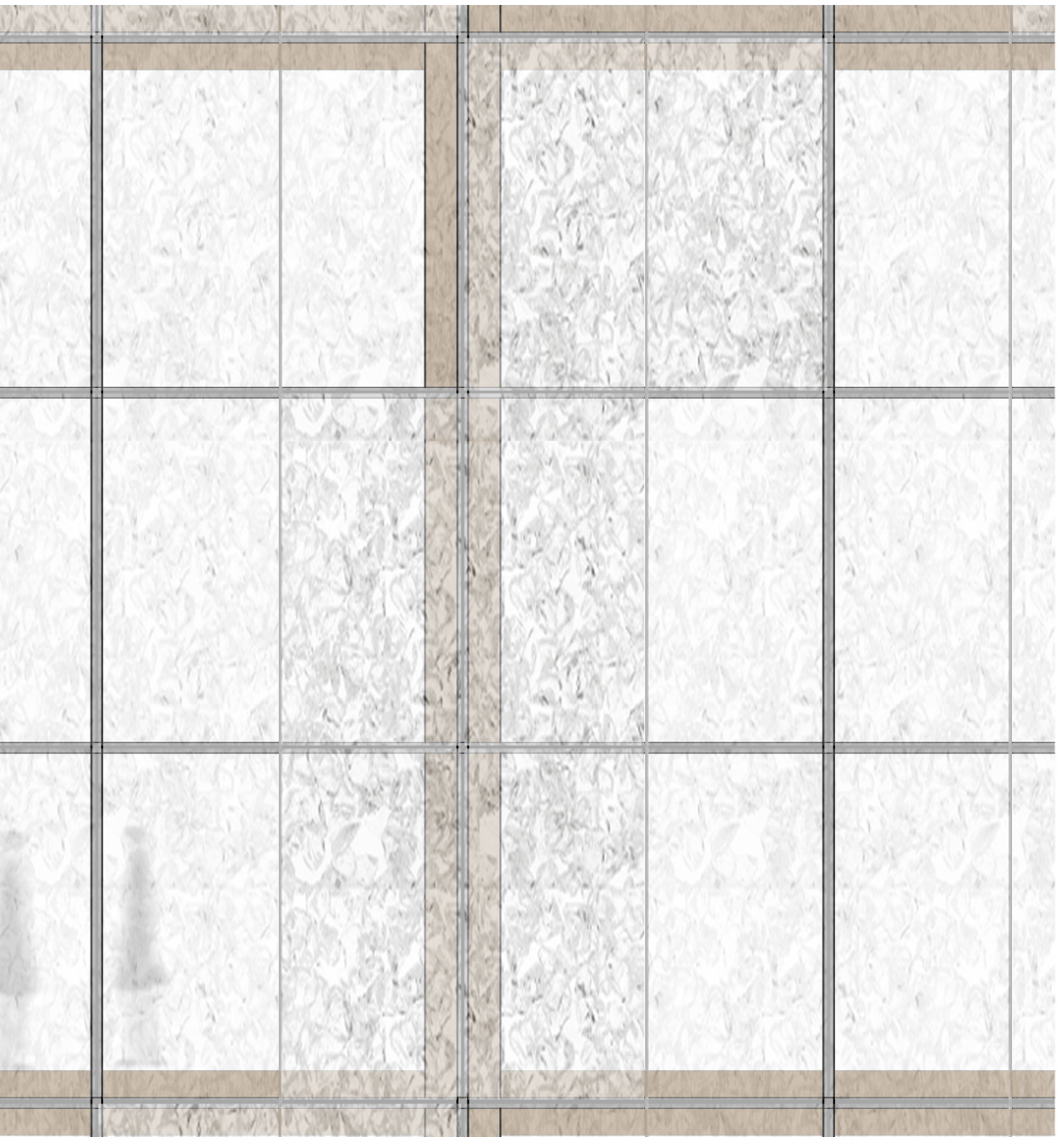


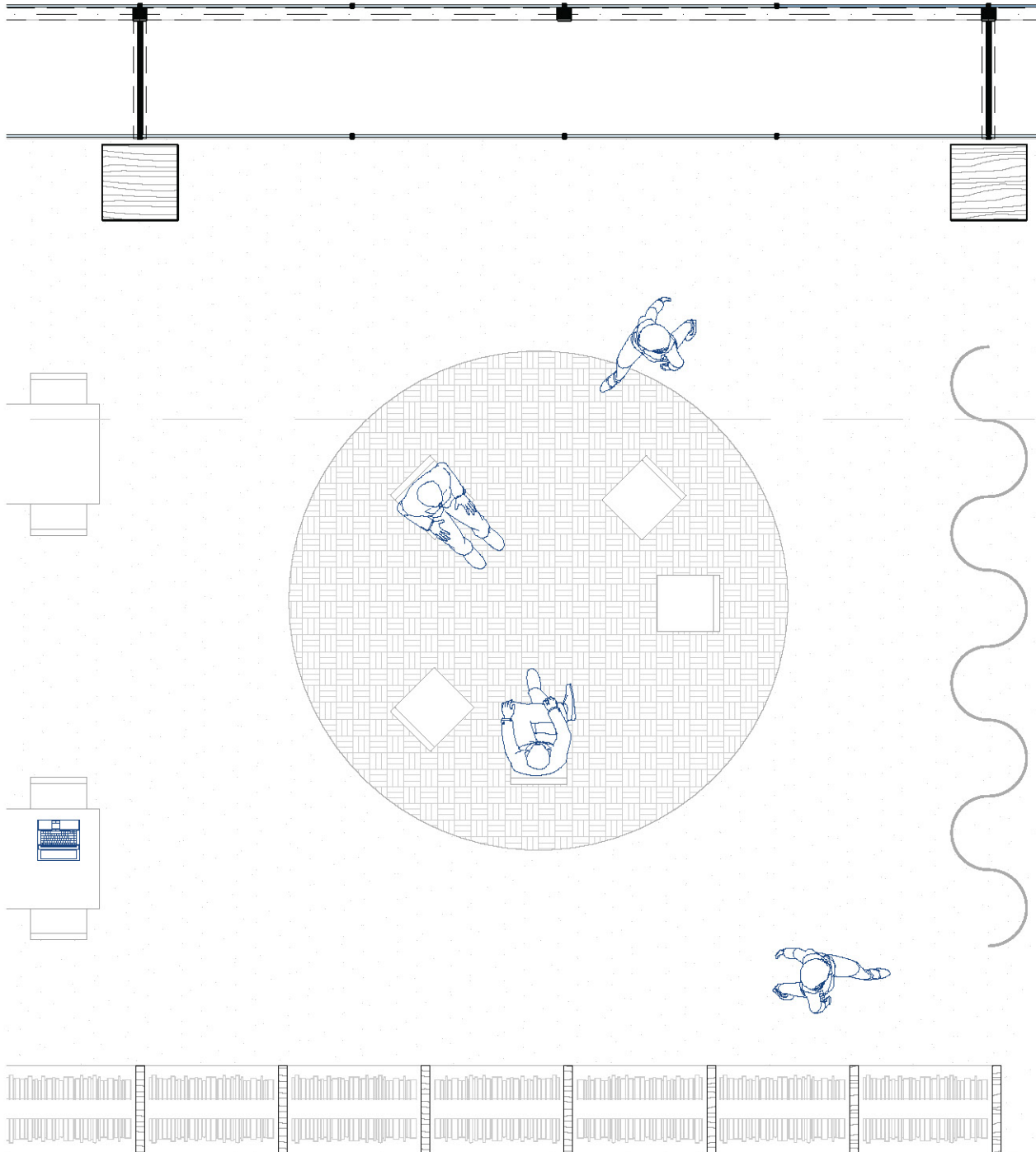
Elevation West

Scale 1:200



Elevation North Scale 1:50

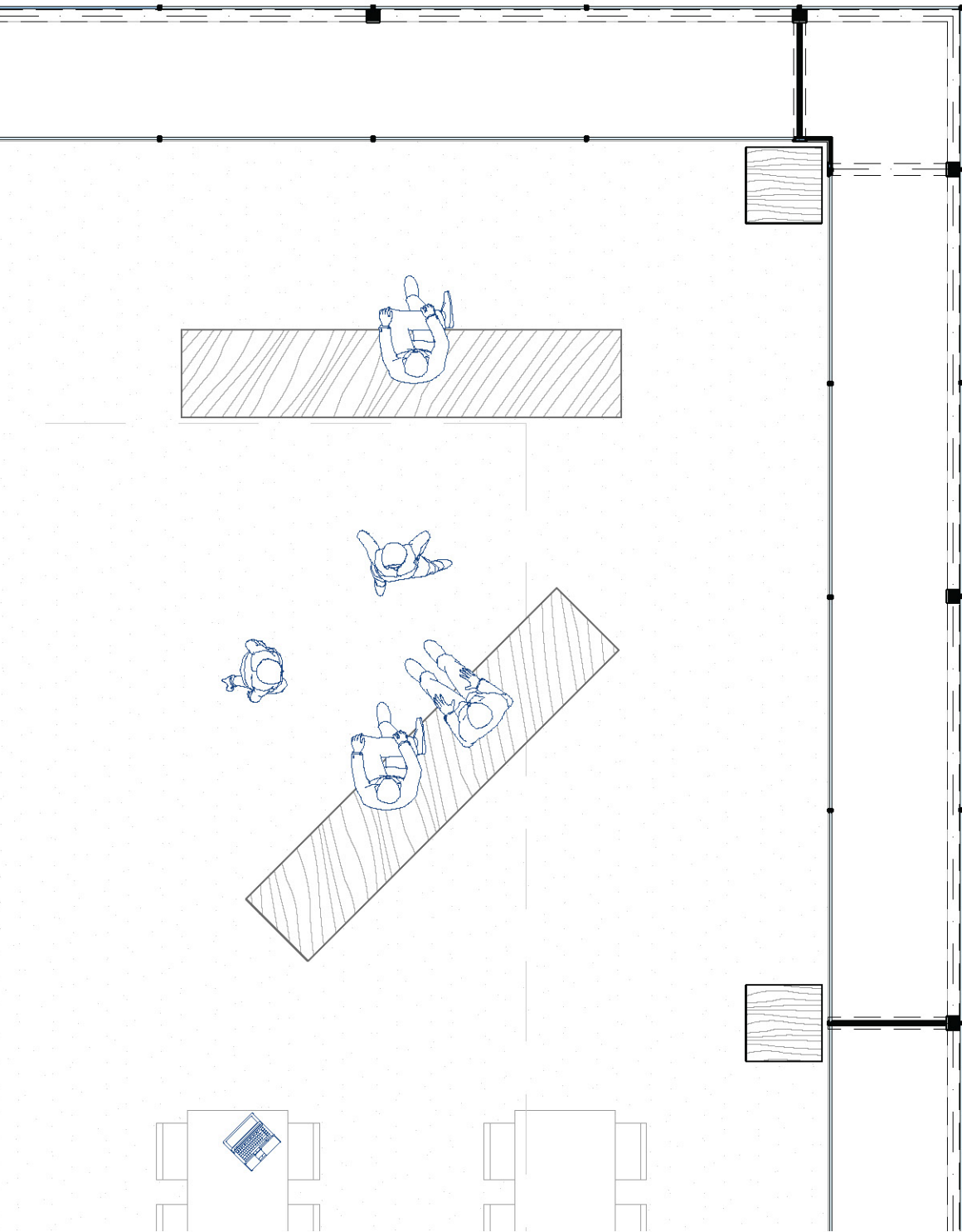




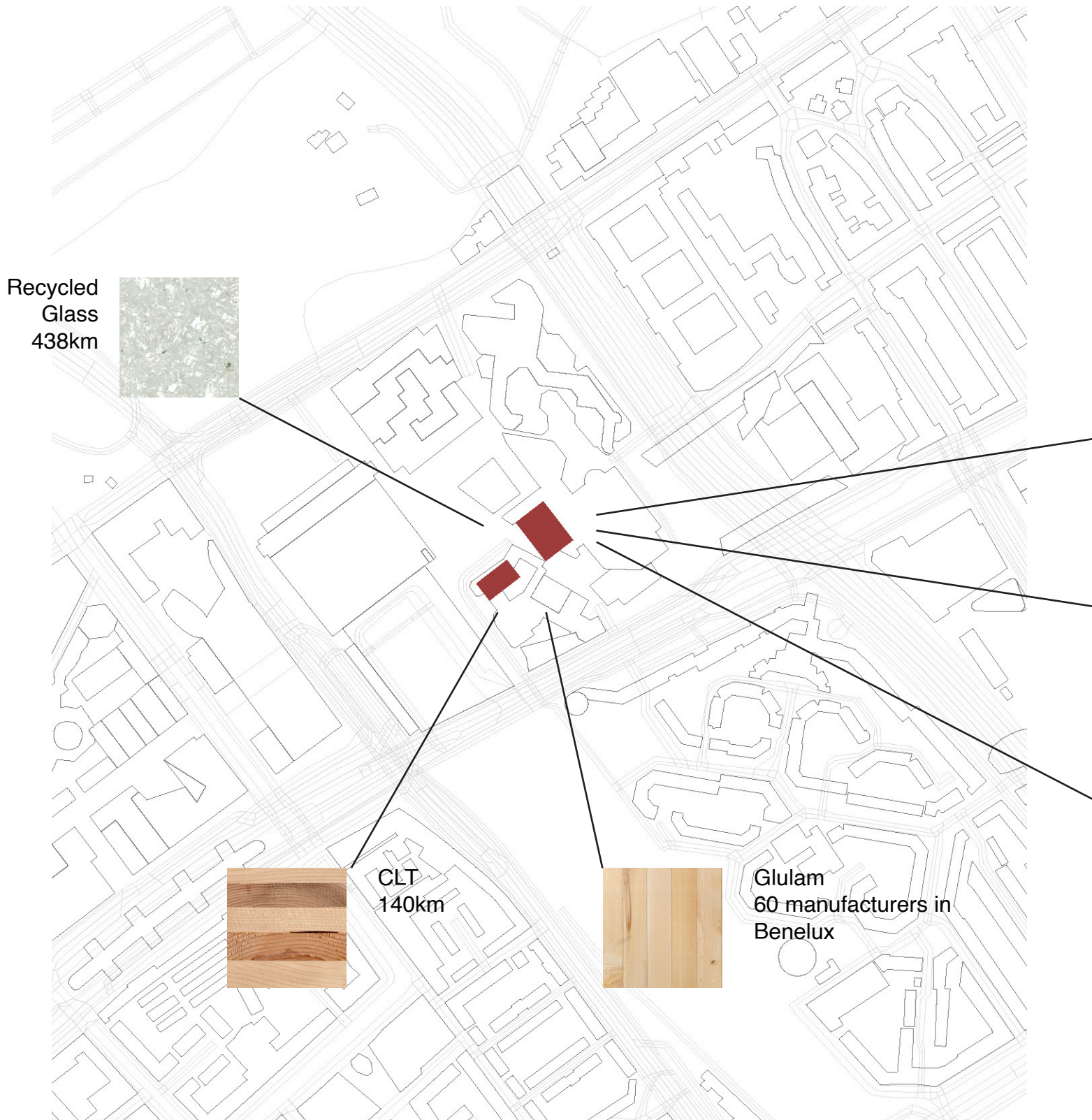
Floor 11

Scale 1:50





2.3.1. Structure and Details



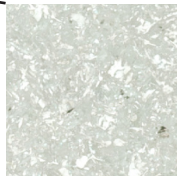
1:2000



Materials Map



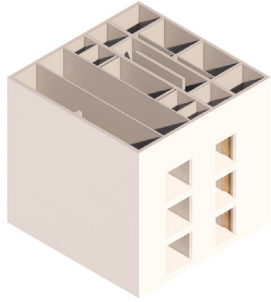
Concrete
multiple manufacturers in
South Holland



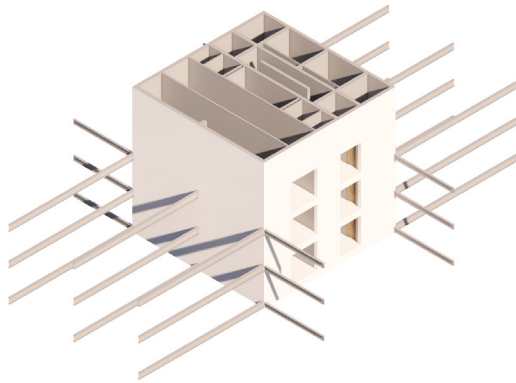
Recycled
Glass
515km



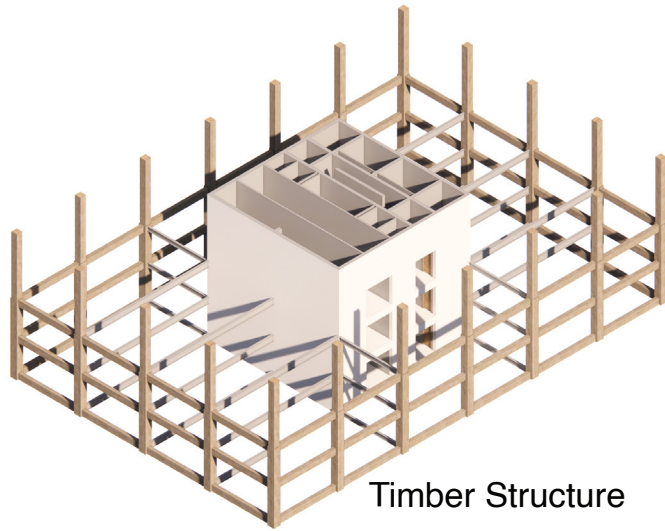
Steel
35km



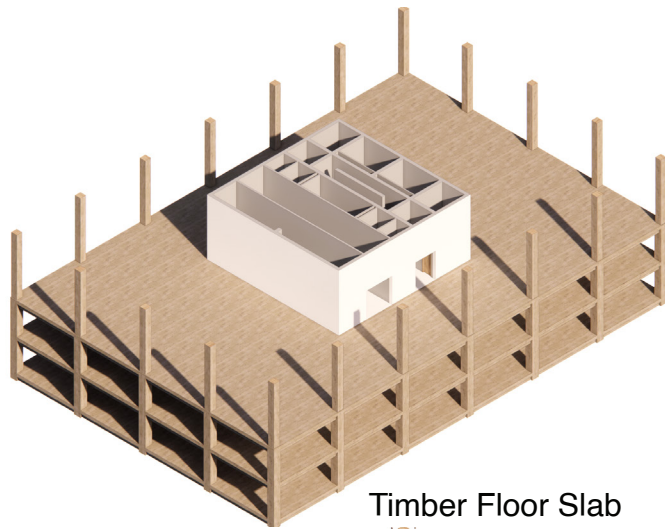
Concrete Core



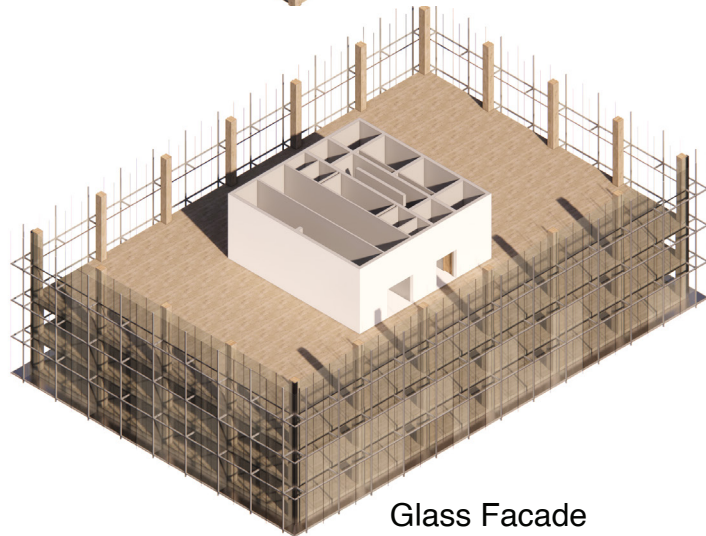
Steel Beams



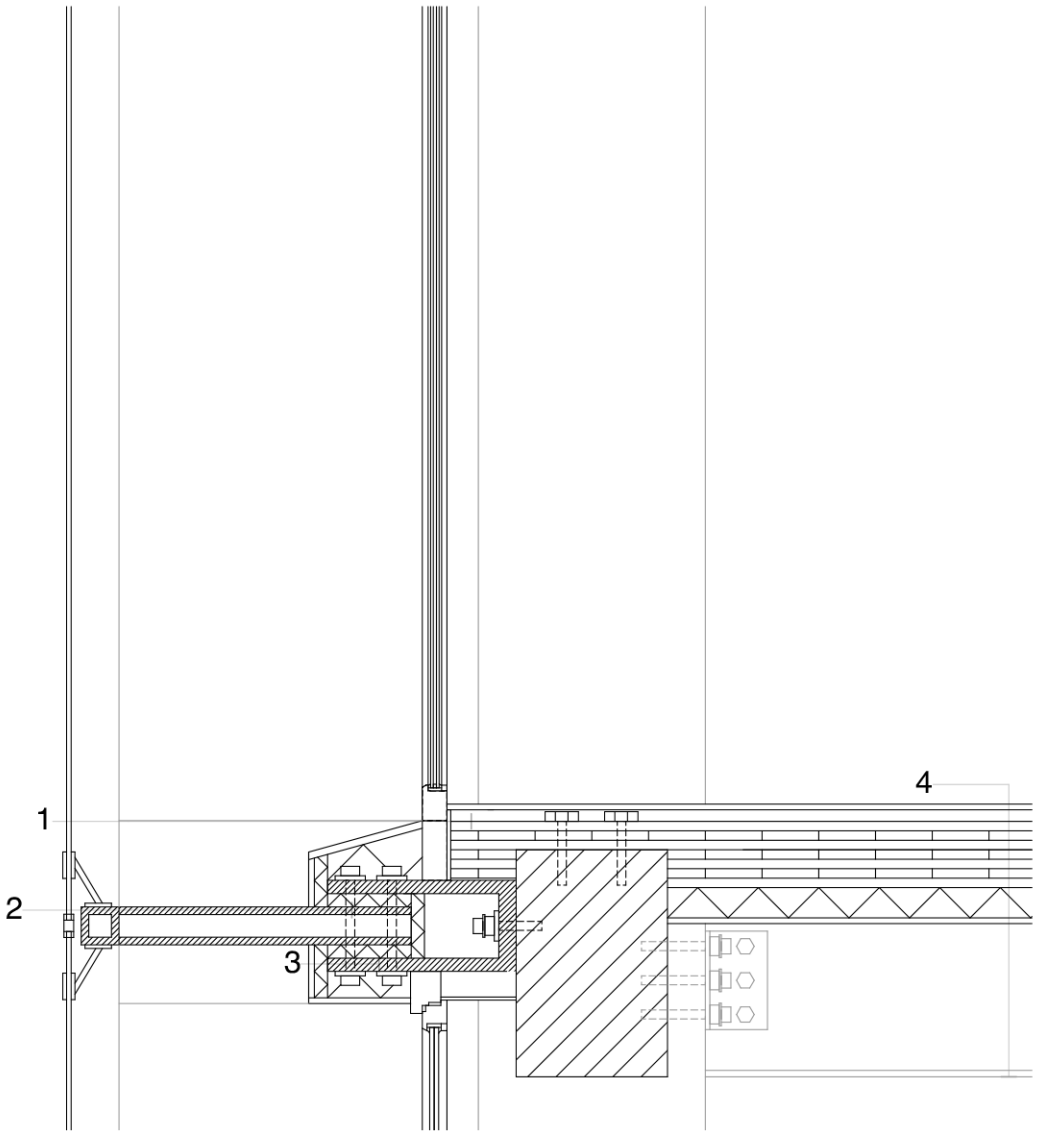
Timber Structure



Timber Floor Slab



Glass Facade

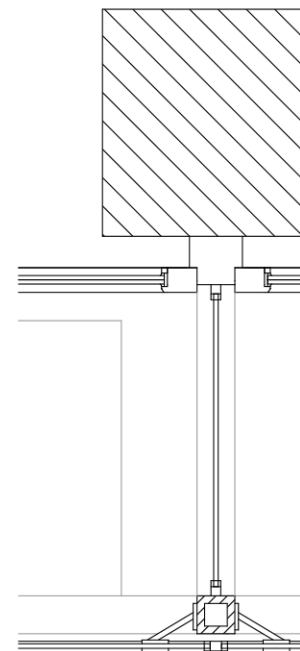


12mm recycled glass in aluminium frame
 glass double glazing
 7mm glass
 8mm cavity
 65mm wood frame

bolt fixings
 100mm hollow steel beam
 15mm coated wood sill
 waterproof membrane

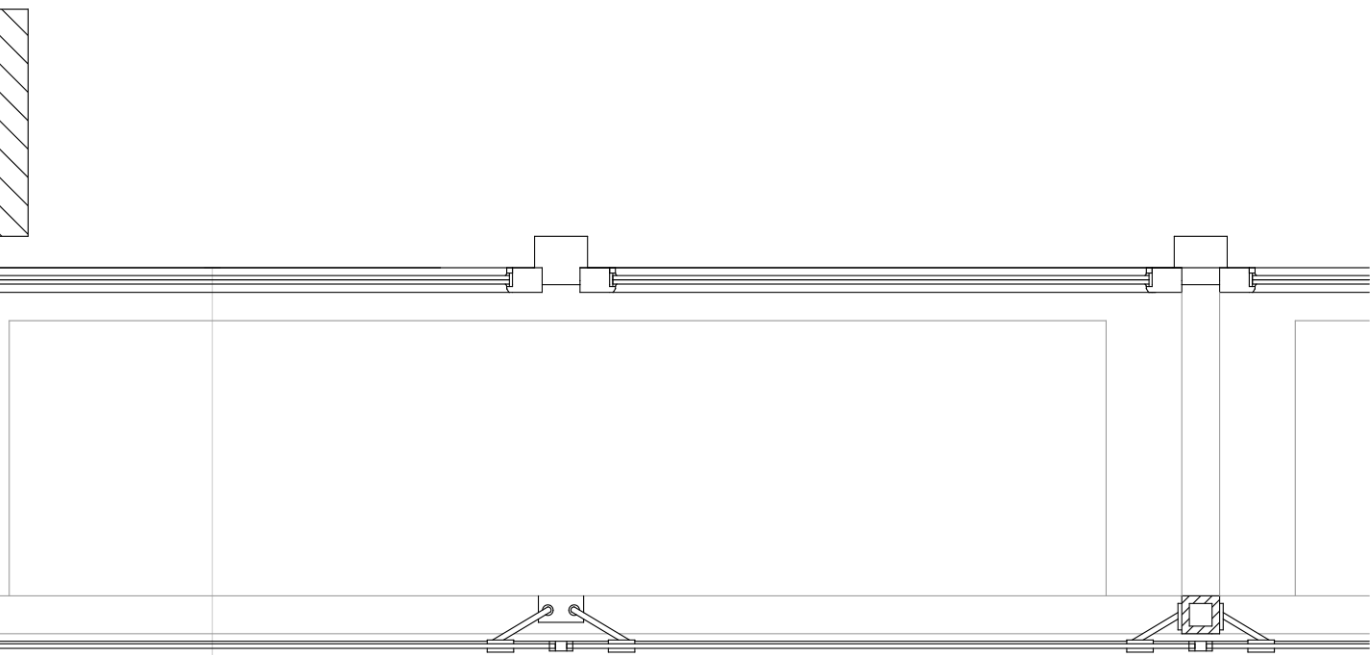
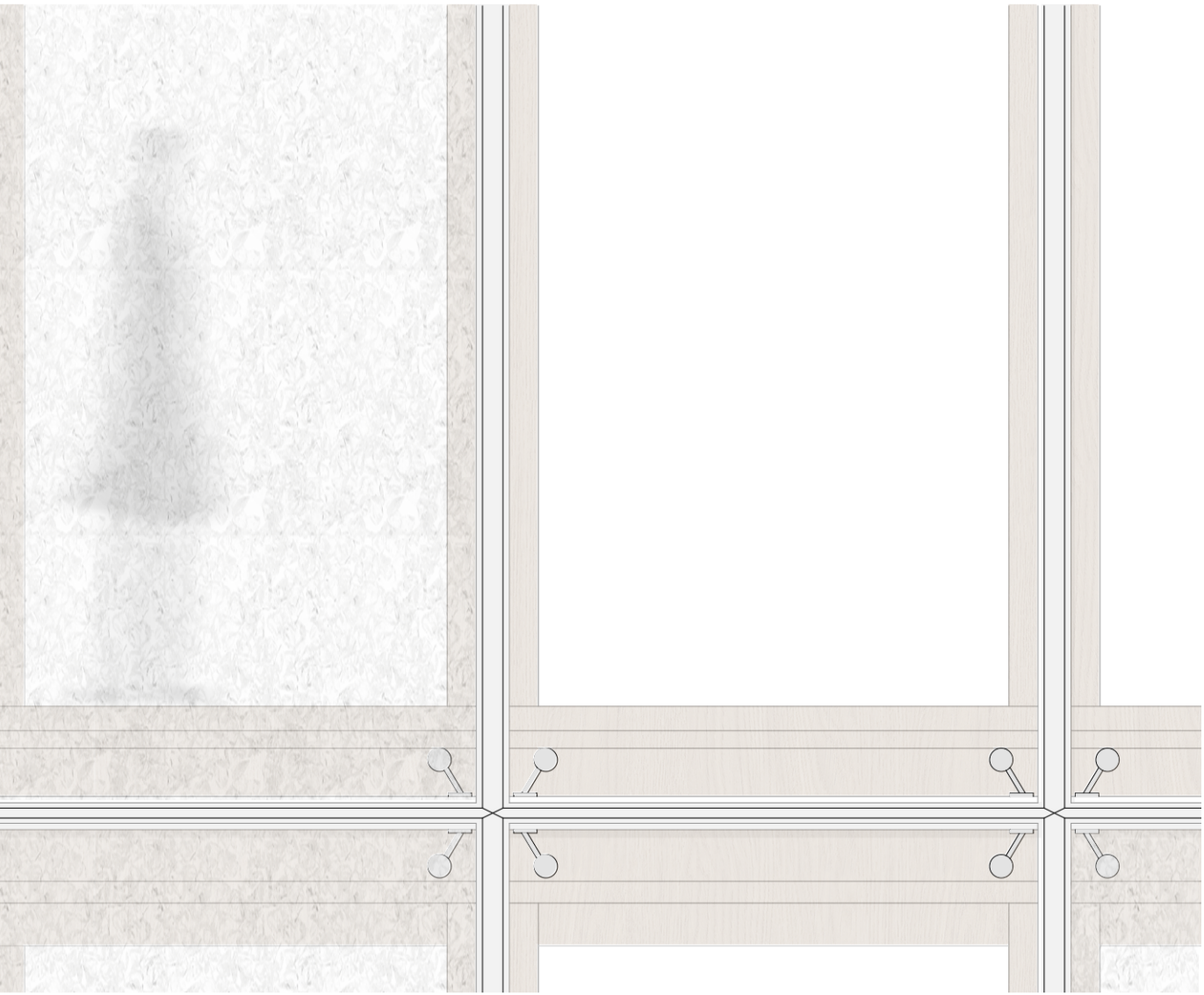
15mm coated wood
 waterproof membrane
 35mm mineral wool insulation
 35mm steel hinge
 24mm bolts

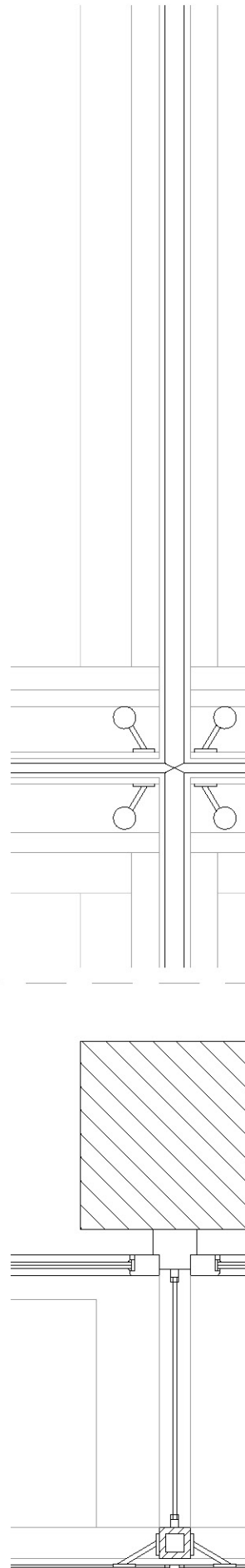
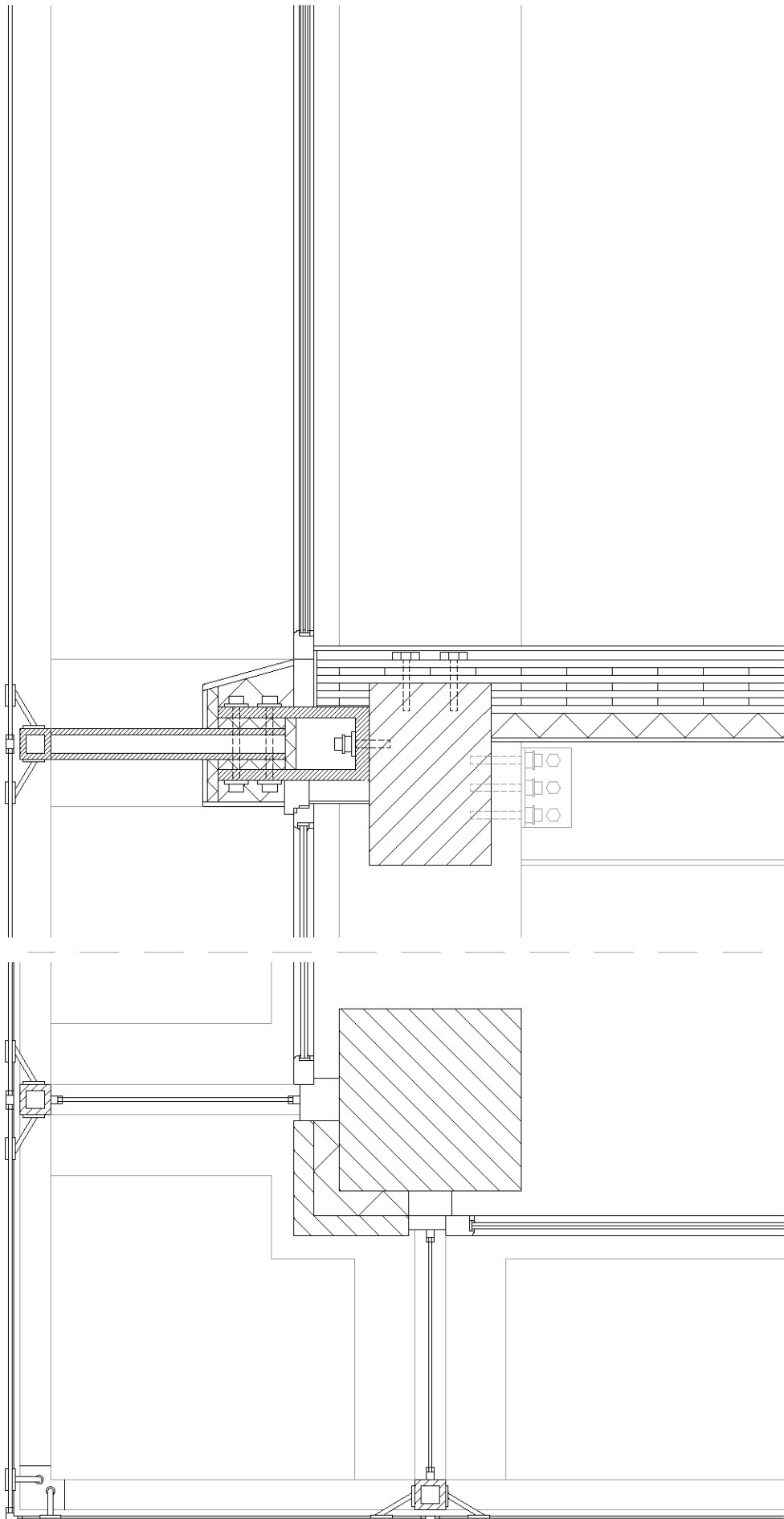
15mm wood floor
 5mm polyester fiber mat
 25mm gypsum fiberboard
 225mm CLT panel 7 layers
 80mm mineral wool insulation
 15mm suspended wood panels
 600mm steel beam



Facade Details

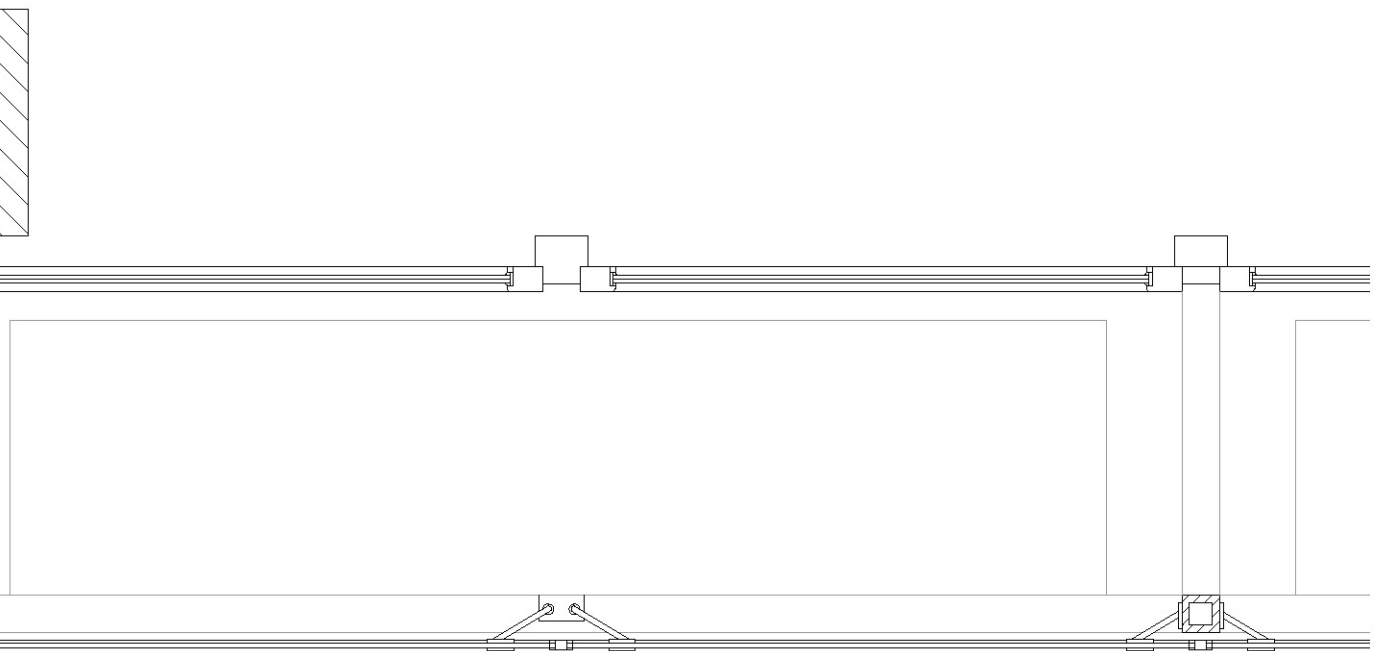
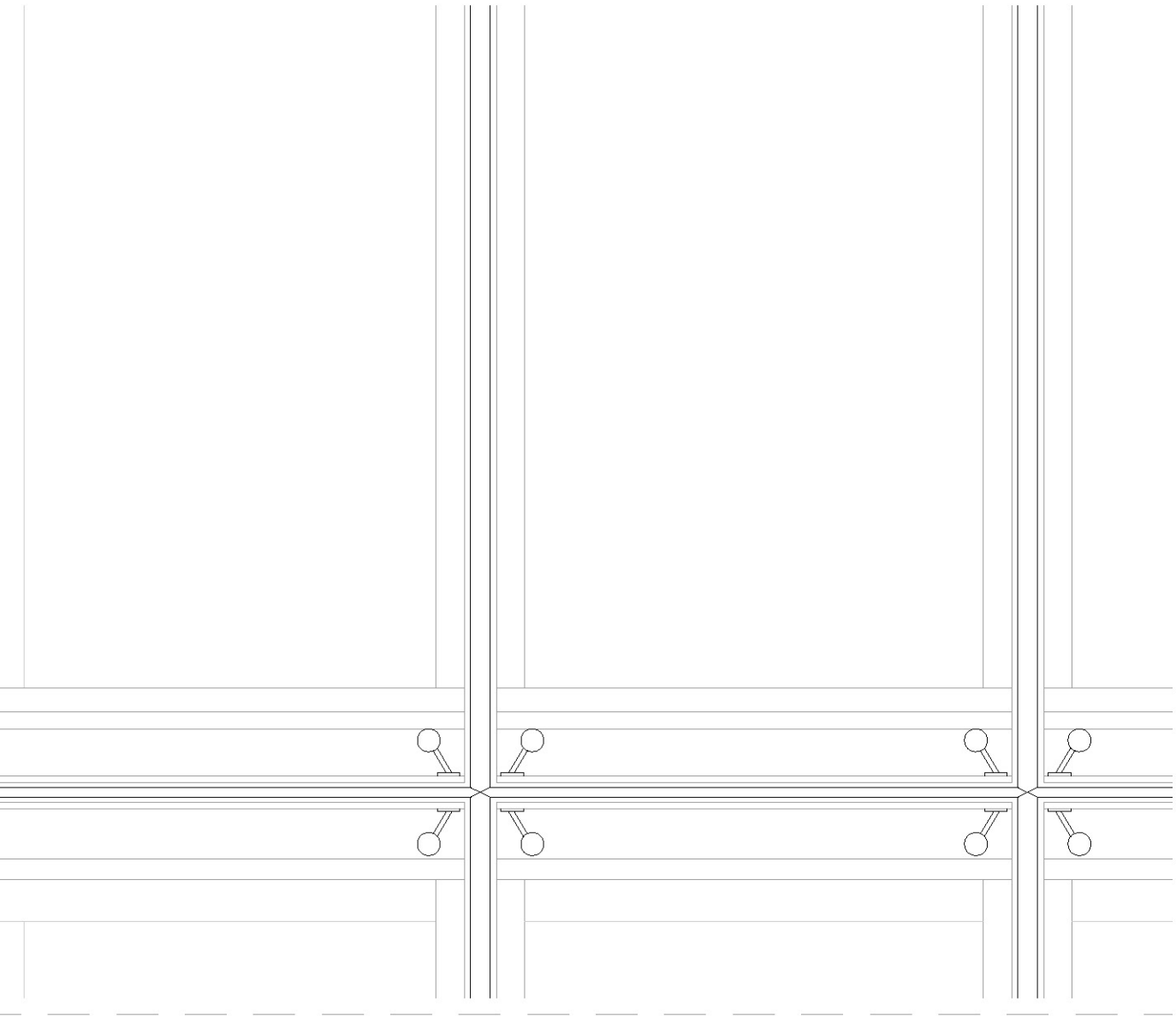
Scale 1:20

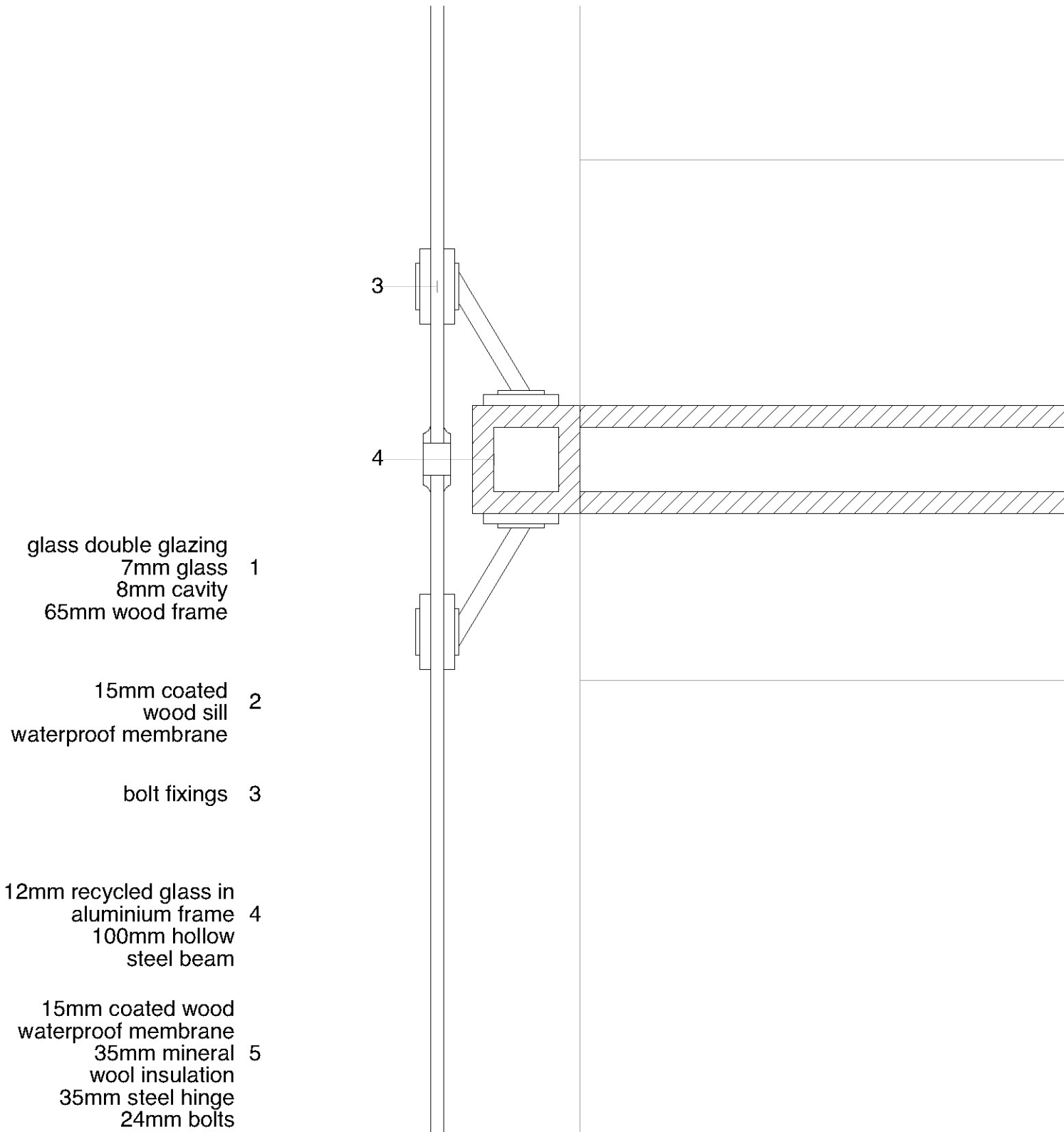




Facade Details

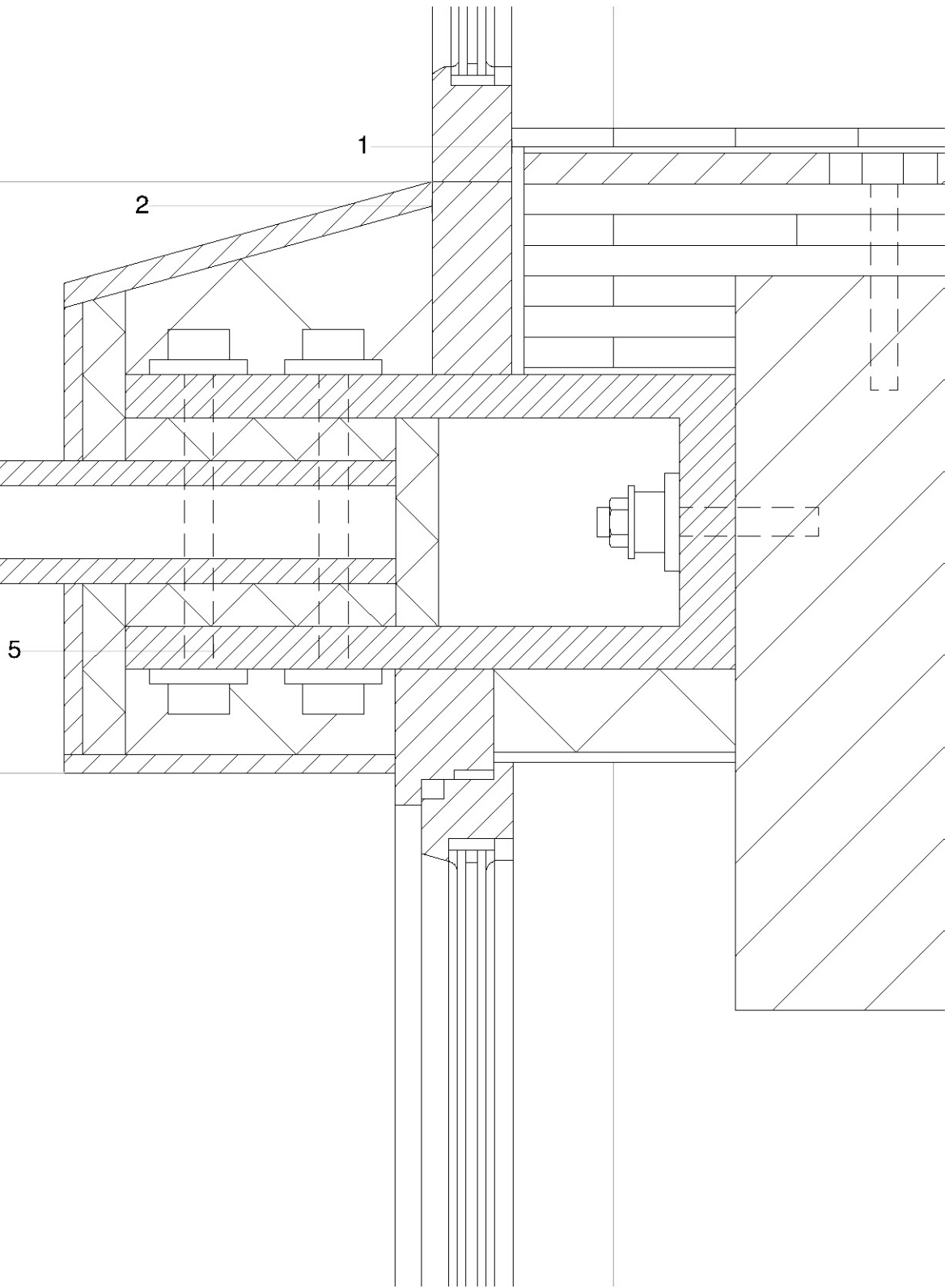
Scale 1:20

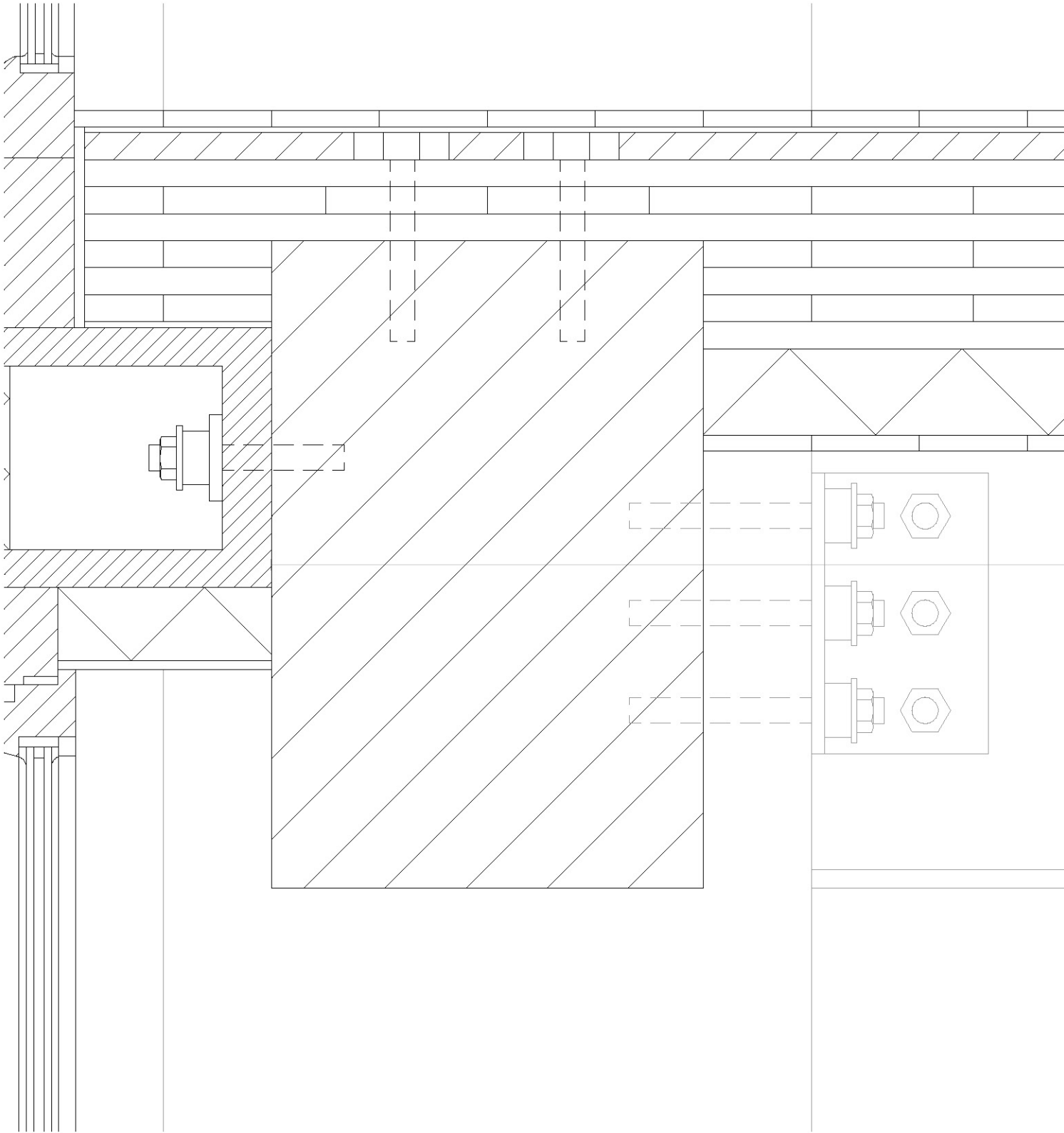




Facade Detail

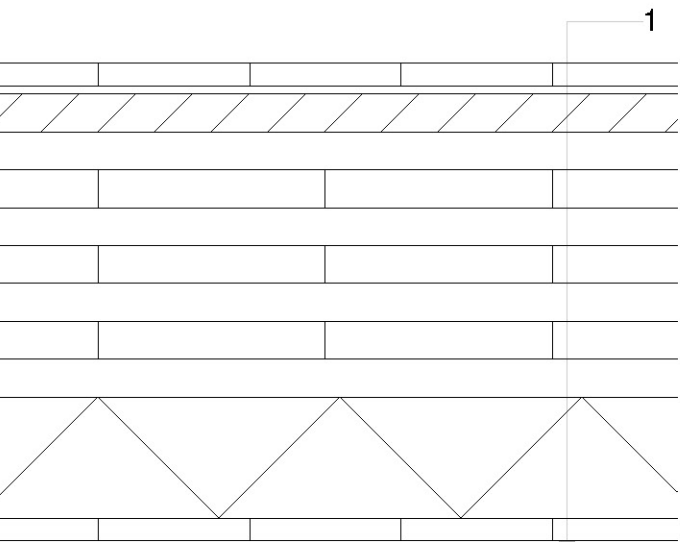
Scale 1:5





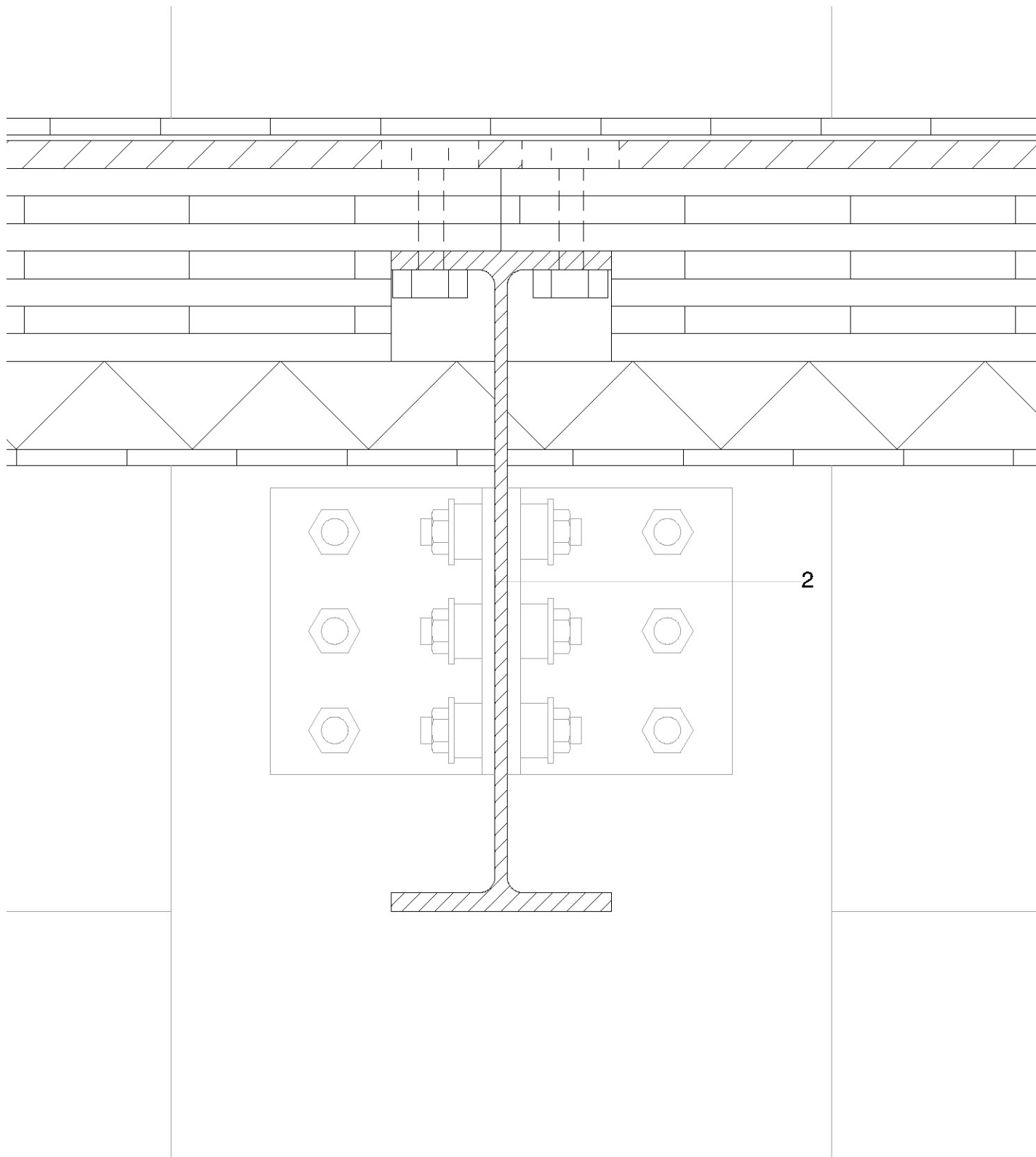
Floor Detail

Scale 1:5



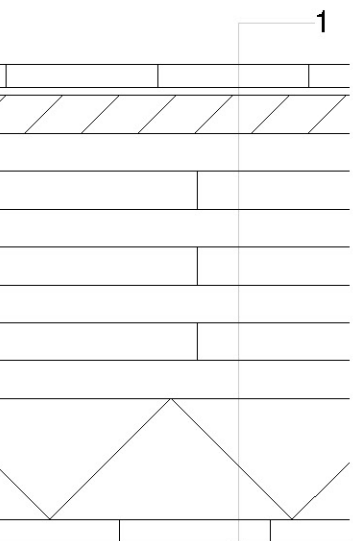
- 15mm wood floor
- 5mm polyester fiber mat
- 1 25mm gypsum fiberboard
- 225mm CLT panel 7 layers
- 80mm mineral wool insulation
- 15mm suspended wood panels

- 2 600mm steel beam
- 24mm bolt connections
- 600mm x 400mm wood beam

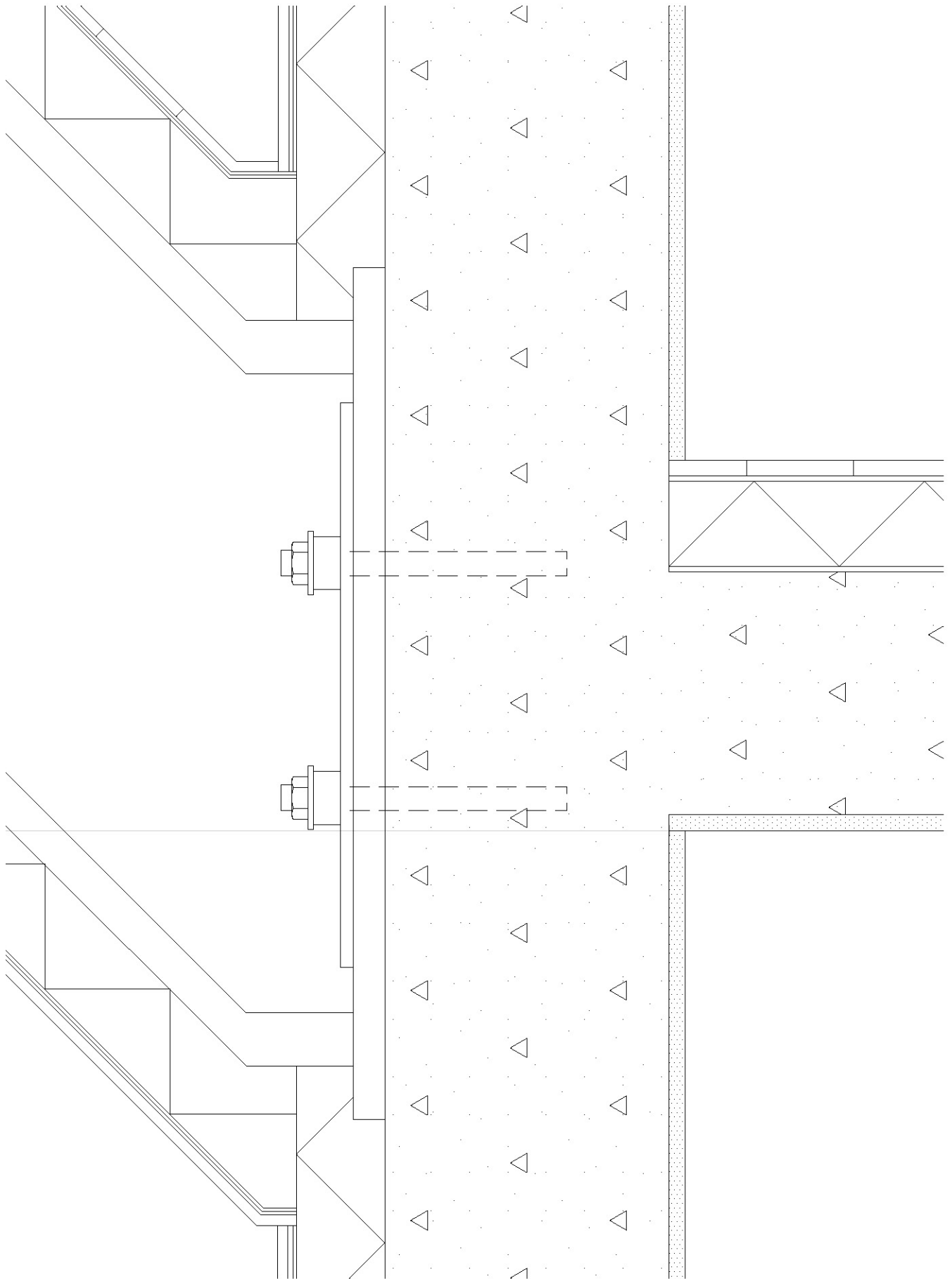


Floor Detail

Scale 1:5



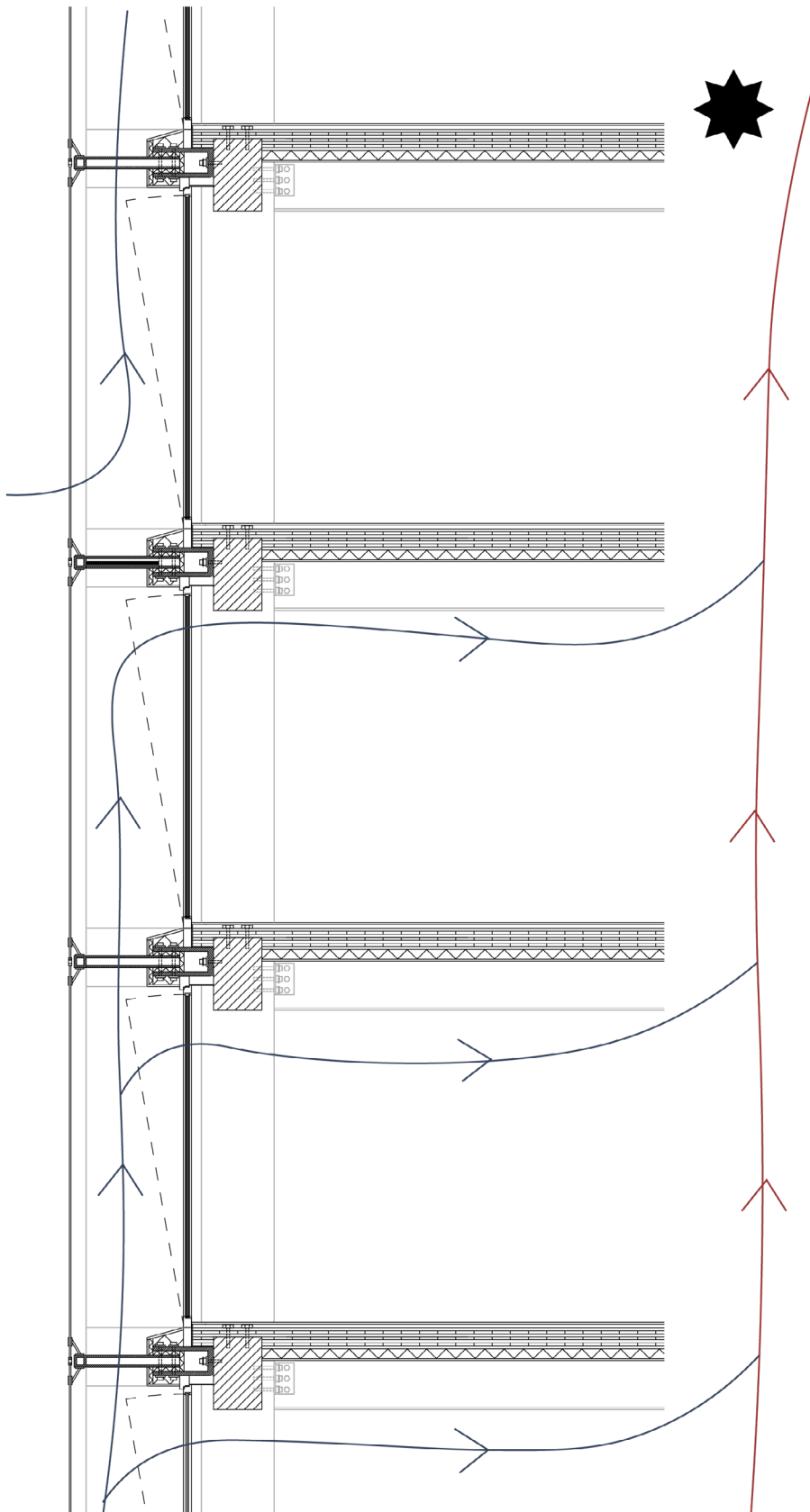
- 15mm wood floor
5mm polyester fiber mat
1 25mm gypsum fiberboard
225mm CLT panel 7 layers
80mm mineral wool insulation
15mm suspended wood panels
- 2 600mm steel beam
24mm bolt connections



Structure Detail

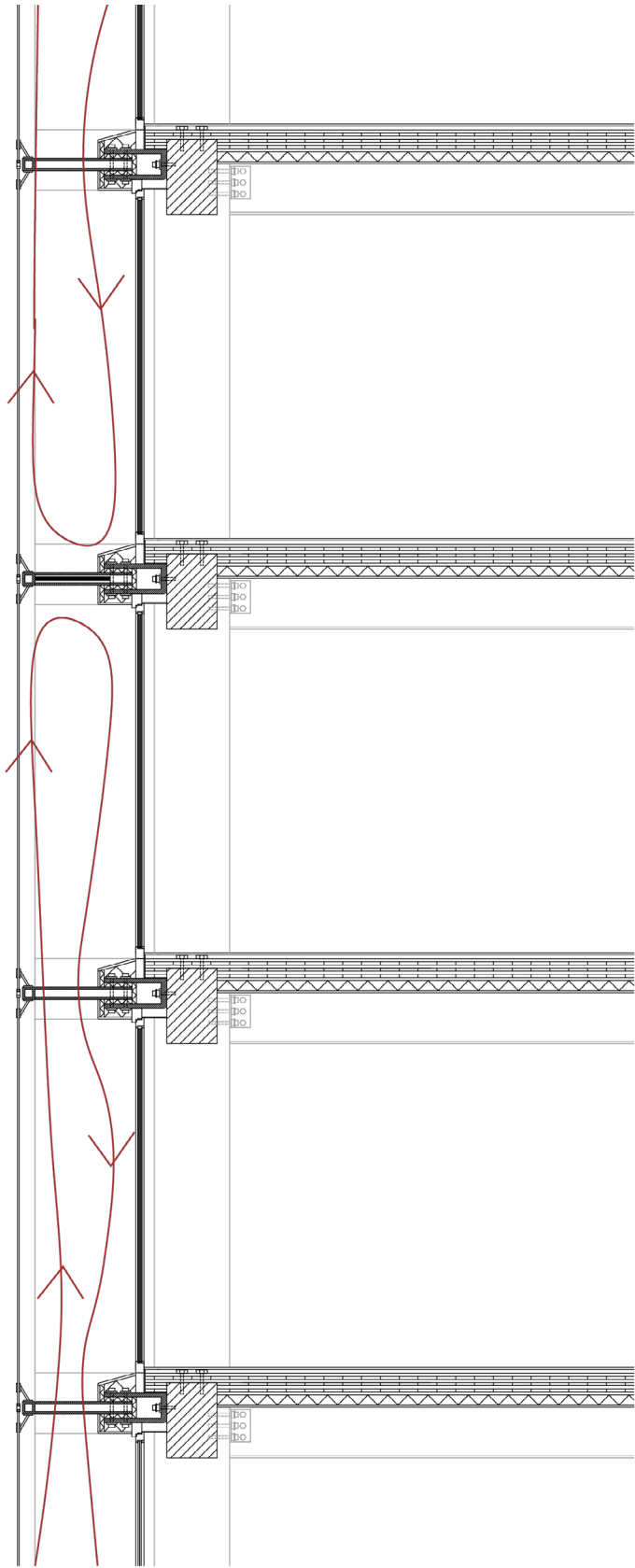
Scale 1:5

- 10mm tiles
- mortar
- waterproof membrane
- 83mm mineral wool insulation
- 700mm steel beam
- 24mm bolt connections
- welded steel plate
- 267mm concrete

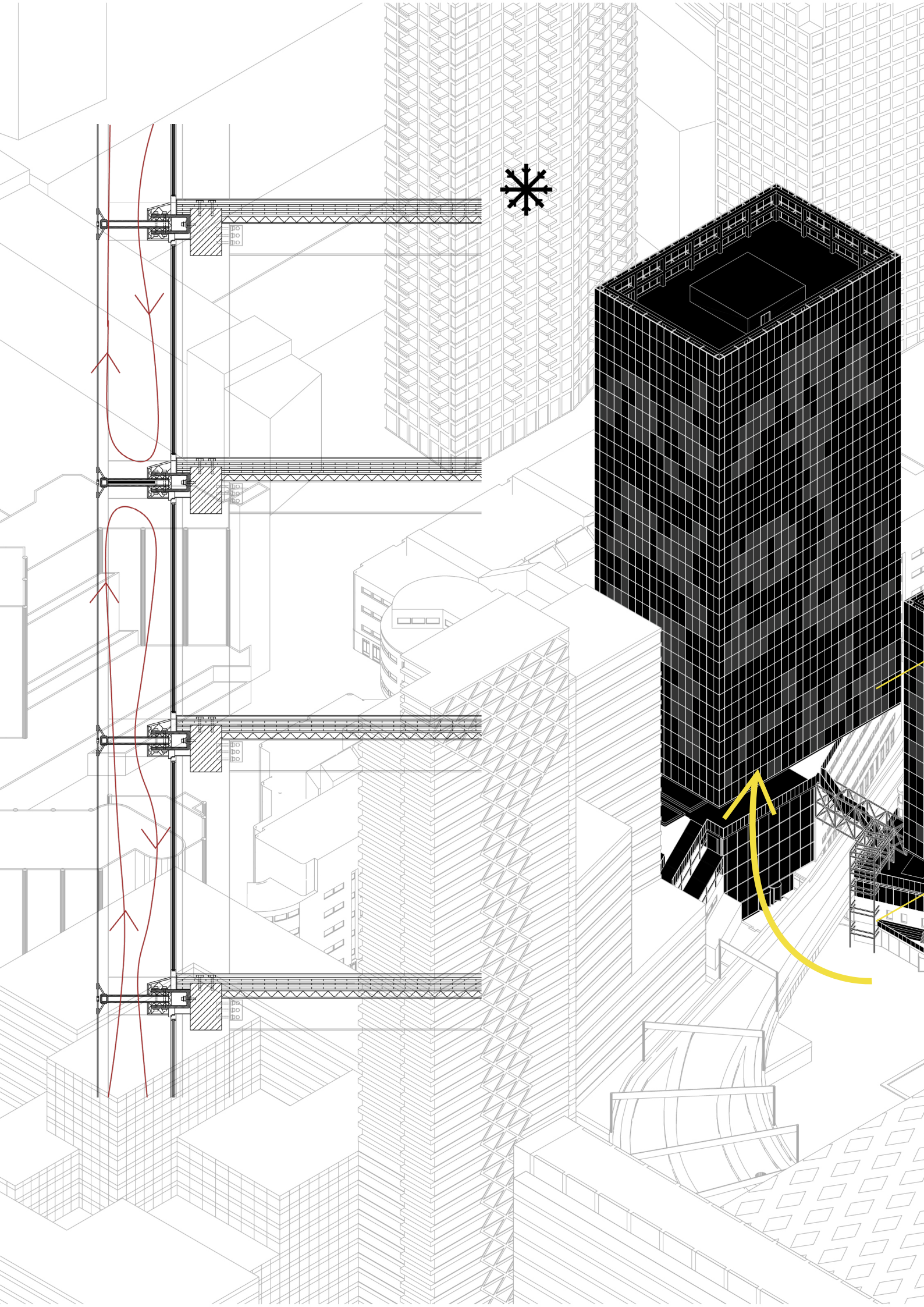


Facade Principals

Scale 1:50



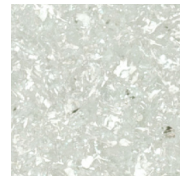
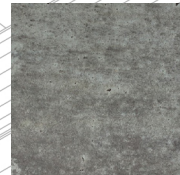
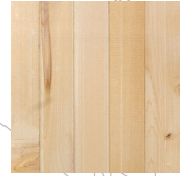
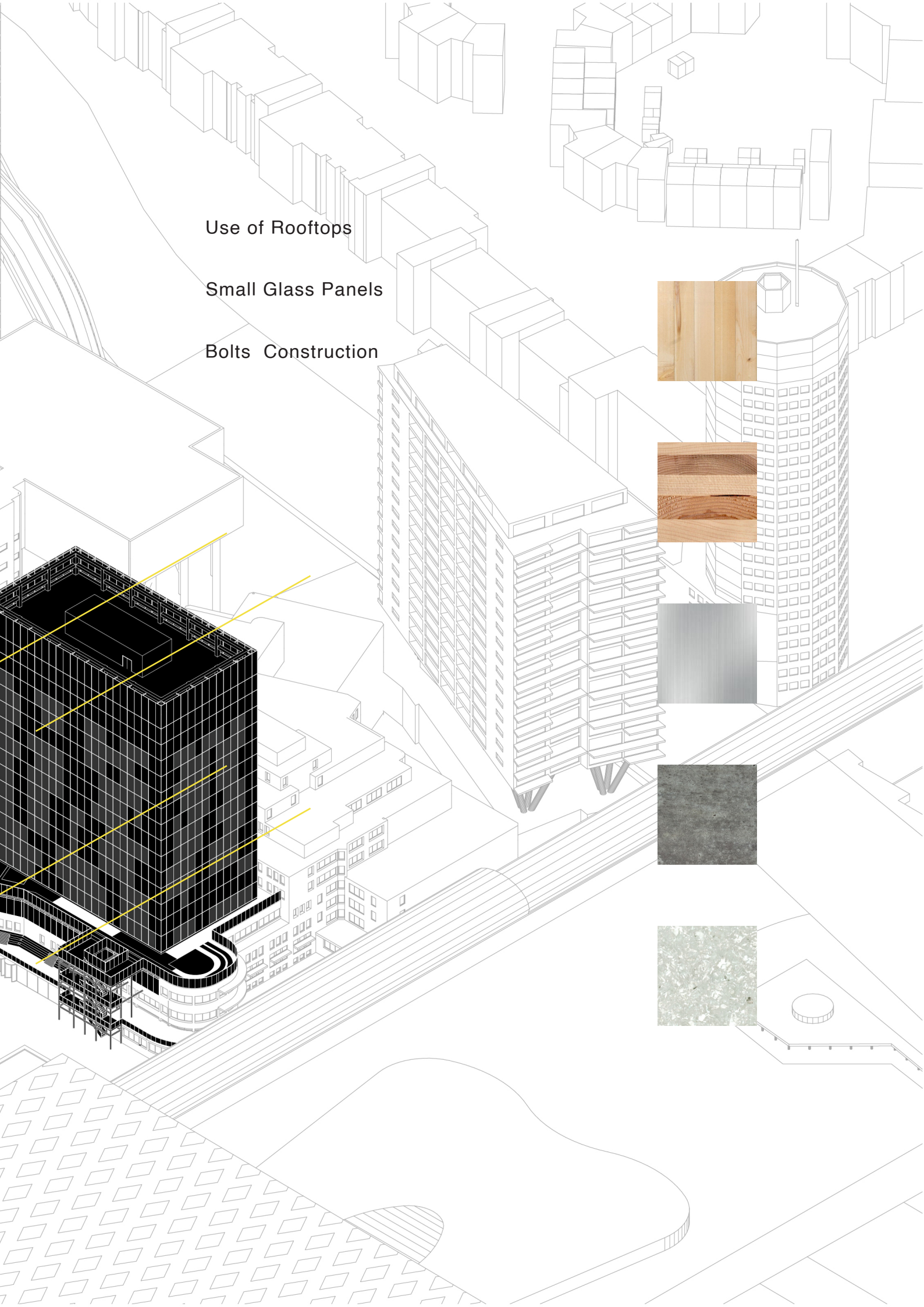
cold air ——— warm air ———



Use of Rooftops

Small Glass Panels

Bolts Construction



2.4. Model Study



Physical Model Study



3. Appendix

3.1. Final Design Brief

Studio Syllabus Design Brief

1. Entrance	(400 m2)
2. Commercial Spaces	(600 m2)
3. Café and Lounge	(500 m2)
4. Play and Learn	(2.000 m2)
5. Learn and Discover; Studio Spaces	(1.000 m2)
6. Library and Media Center	(400 m2)
7. Workshops	(400 m2)
8. Centre for Advanced Virtuality	(500 m2)
9. Learn and Develop; Research Spaces	(2.000 m2)
10. Teaching, Learning & Development Spaces	(1.000 m2)
11. (Lecture) Theatres	(1.000 m2)
12. Exhibition Space	(500 m2)
13. Sports	(500 m2)
14. Office Spaces	(10.000 m2)
15. Outdoor grounds	
16. Storage, Mechanical Utilities and Circulation Space	(25-30% of total gross floor area)
17. Bicycle Parking	(1.500 sqm)
18. Delivery of Goods	

Added Program

1. Cafeteria	(200 m2)
2. Senior Centre	(370 m2)
3. Student Association Spaces	(400 m2)
4. Debate Centre	(300 m2)
5. Dean and Staff	(400 m2)
6. Communal/ Flexible Study	
7. Rooftop Restaurants	(1600 m2)

Removed Program

1. Car Parking	
2. Commercial Spaces	(400 m2)
3. Library and Media Center	(1.600 m2)

Total Area of the Buildings: 32 300 sqm

3.2. Graduation Plan

Personal information	
Name	Oskar Michal Lubera
Student number	5585481

Studio		
Name / Theme	Public Building Graduation Studio: The vertical campus	
Main mentor	dr. ir. Stefano Corbo	Design Mentor
Second mentor	ir. Florian Eckardt	Technical Building Design Mentor
Third mentor	dr. Sang Lee	Research Mentor
Argumentation of choice of the studio	<p>The way public buildings shape social cohesion, sense of belonging, and cultural experiences fascinated me throughout my studies. In my past projects I researched the impact of built environment on social realm, which started my curiosity in this field. However, visiting Lina Bo Bardi's Teatro Oficina and SESC Pompeia fueled my passion towards the unconventional use of public buildings. Merging art with the audience, engulfing spectators and making them a part of a play through spatial design, while strengthening social cohesion struck me as the pinnacle of my interests in architecture. Together with the aim for further exploration of possibilities of public buildings, this is why I chose this studio.</p>	

Graduation project	
Title of the graduation project	"Unified diversification"
Goal	
Location:	<p>The project is situated in the city center of Den Haag. More precisely, the buildings of the National Archives and National Library are acting as a plinth for the vertical campus. Additionally, the project's location is close to the existing Leiden University building. Therefore, the new towers introduce physical connections between those buildings while creating a unified campus in the area.</p>

<p>The posed problem</p>	<p>The number of international students in Dutch higher education has grown from around 24.000 in 2006 to 122.287 in 2023. 167 nationalities were enrolled in 2023 (Nuffic, 2023). Traditional universities do not accommodate space for such diversity, resulting from the rapid change in demographics. The spaces are usually repetitive, ignoring students' various preferences of learning, thus, lowering their sense of belonging (as concluded from the street interviews on the 26th of September 2023 in Den Haag for Design Thinking Assignment). Moreover, traditional universities lack spaces for socialization, which is crucial with such diversity in students. They also need to accommodate dynamic and static changes in campus culture to stay innovative. Therefore, a campus needs to redefine its type more than ever, to accommodate, celebrate, and connect diverse users. Especially, being directly connected to an urban fabric.</p>
<p>Research questions</p>	<p>The research questions aim to examine and challenge diversity in a new type of campus in an urban setting. They investigate campus culture, which is a collective combination of users' different cultures.</p> <p>"How can social and spatial diversity influence the learning process?"</p> <p>"How does connecting a campus to the urban fabric and general public affect its use?"</p> <p>"How can a higher education building answer static and dynamic changes of a campus culture?"</p>
<p>Design assignment</p>	<p>The design assignment is to create a hybrid, vertical campus in an urban setting. The aim is to design a public hub that encourages social interactions and sets standards for sustainable development.</p>
<p>The goal of the project is to redefine the use of a campus in an urban setting. According to Deborah Son Holoien, diversity positively affects the learning process, moreover, it improves students' civic engagement in the future (Holoien, 2013). Therefore, the design aims to create and celebrate diversity in a learning environment, while magnifying connections between the users themselves and with the general public and policymakers of Den Haag. The project explores diversity as an architectural concept while using a variety of solutions, devices and techniques that will create multiple experiences of space.</p>	

Process

Method description

The analysis method is qualitative, led by a theoretical literature review. It consists of studying historical campuses, starting with the established in the 11th century Oxford University, and their approach to campus culture through architecture. It also consists of case studies of university buildings with a focus on understanding spatial diversity and its influence on the users. Next, studying the meaning of social interactions in modern universities and within an urban fabric helps in applying the knowledge to a vertical built environment. Site visits in Den Haag provide insight into the magnitude of connection with the urban fabric. The Public Building studio approach is research by design, meaning that the knowledge acquired during the literature review influences the design process, and vice-versa, findings during design help to structure the research.

Literature and general practical references

Brian Edwards, *University Architecture* (Abingdon: Routledge, 2013): 2-21

Charles Strange and James Banning, *Designing for Learning: Creating Campus Environments for Student Success*. Second ed. (San Francisco CA: Jossey-Bass; 2015): 27-45.

Deborah Son Holoien, "Do differences make a difference? The effects of diversity on learning, intergroup outcomes, and civic engagement." Princeton University: Trustee Ad Hoc Committee on Diversity (2013).

Enrico Deiano, et al., "Universities as strategic actors in the knowledge economy". *Cambridge Journal of Economics*, vol. 36, no. 3, (2012): 525-541.

Isabelle Soares, et al., "Public Spaces as Knowledgescapes: Understanding the Relationship between the Built Environment and Creative Encounters at Dutch University Campuses and Science Parks". *International Journal of Environmental Research and Public Health* 17, no. 20: 7421. (2020)

Janet Lawrence, "Campus Culture and Faculty Perceptions of Time". *New Directions for Institutional Research*. 18(8). (2006): 25-38.

Jean Gonondo, "University campus culture connotation, characteristics and functions". *International Journal of Academic Research and Development*. 1. (2016): 36-40.

Jean-Paul Addie, et al. "Beyond town and gown: universities, territoriality and the mobilization of new urban structures in Canada". *Territory, Politics, Governance*, vol. 3, no. 1, (2014): 27-50.

Nuffic, "Incoming degree mobility in Dutch higher education 2022-23" (2023): 8-16.

Shen Xi, et al. "Academic culture and campus culture of universities". *Higher Education Studies*, vol. 2, no. 2, (2012)

Reflection

The graduation topic "Common diversification" is an answer to the studio's topic - creating an innovative vertical campus. It relies on designing for users' wellbeing and social cohesion which has been a recurring concept in my designs during the master track MSc AUBS. The project allows for a deeper understanding of public spaces and their influence on their users.

On a larger scale, the project contributes to redefining the use of a campus in a dense urban setting. The often-overlooked campus culture becomes its main feature as the need for connectivity and communication for a campus is stronger within the city. The direct impact of universities on civic agendas and scientific progress can only benefit from the connection to the urban context (Addie 2014). This project questions the ways those connections can be achieved resulting in a proposal of a new type of campus.

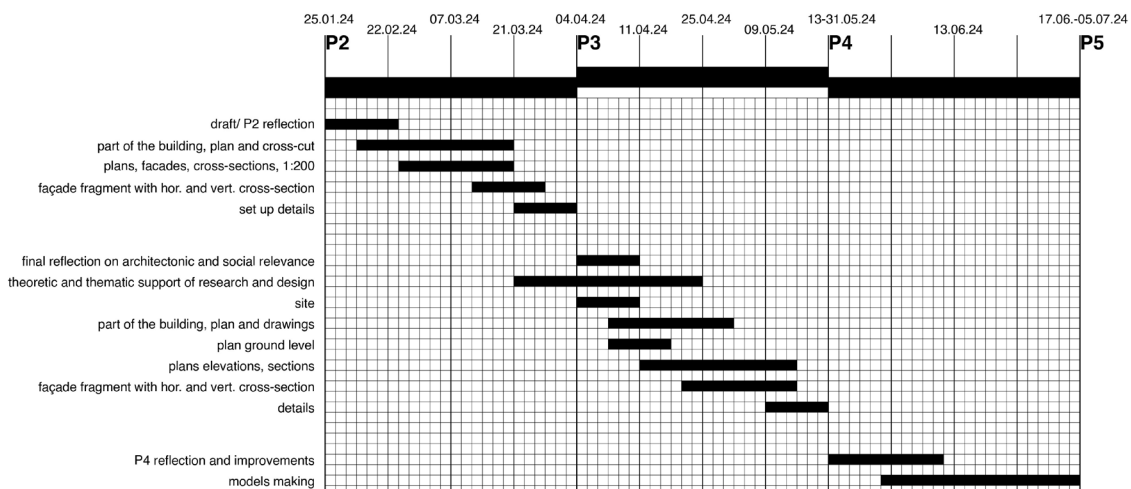
How does the topic relate to your personal interest?

Being an international student myself, I always struggled to find a place for myself at campus to study. I prefer studying at home because of the repetition and inhospitality of the spaces. Additionally, my passion is traveling and I have seen a lot of cultures and learning environments so far. Therefore I would like to create an inclusive place where everyone can learn with their own preferences.

How does your approach help you with your design?

The approach of research by design, literature review, and street interviews proved to be the most in line with my design process. As the project progressed I discovered areas in theory I needed to improve to deliver coherent project. Then, I could use the theory to further experiment and question diversity in academic environments. Nevertheless, street interviews helped me with starting points for users' basic needs.

Time Planning



3.3. Final Reflection

P5 Graduation Studio Reflection

Public Building Graduation Studio: The vertical campus

Master of Science Architecture, Urbanism & Building Sciences

Oskar Michal Lubera 5585481

TU Delft, 24.06.2024

1st Mentor	Design Mentor	dr. ir. Stefano Corbo
2nd Mentor	Technical Building Design Mentor	ir. Florian Eckardt
3rd Mentor	Research Mentor	dr. Sang Lee

Research Interest

Public buildings play a crucial role in creating communities. The way people experience them shapes their interactions and sense of belonging. The social aspect of architecture lies within my field of interest and motivated me to choose this studio for my graduation. Questioning the potential of public buildings by adding new uses or reimagining experiencing them, fascinates me.

Moreover, vertical campuses are a relatively new model, providing space for innovative research and design. For me, the studio's relevance lies in reinventing a campus' meaning for an urban setting. The full potential of an educational building in a dense city area becomes the ultimate goal and the main research subject. As society becomes more international and cultures mix, I approach the project by creating and celebrating diversity. Hence, introducing a campus to dynamic and static societal changes while giving extra voice to minorities.

Diversity is a far-reaching concept, so to specify it I use an analogy of a campus to a stage. The intervention becomes a marker, an indicator for gatherings by connecting three surrounding educational buildings. The campus in a new urban setting acts as a place for the exchange of science and culture, however, not only between the students but also the general public and policymakers as its influence stretches far beyond its typical users. Therefore, an urgent need to accommodate more diversity. However, a stage is a part of a theatre so defining it creates a clear context for the approach. An active participatory, informal theatre brings in improvisation and spontaneity. Based on William Shakespeare's "All the world's a stage" (Shakespeare, 1623) everyone is putting on a play and the world becomes a theatre. This is the approach I follow in my project.

In general, my research interest goes in line with the studio's goal of designing a campus of the 21st century. The topic of diversity relates to modern-day needs and changes. On a larger scale of architecture, it highlights the need for redefining campuses for the maximum use of their potential in urban settings.

Summing up, the approach to defining diversity through analogy to a stage and a theatre works well, in my opinion. With the right guidance, I was able to narrow down the scope of my interest in educational buildings. However, there is still a place for further research on possible future trends in education to ensure the resilience of the building.

Design Process

Until P2 my research was evolving hand-in-hand with my design. After P2 a deeper understanding of my research problem and approach was the driving force for change. That aligned with my planning for the research.

In the beginning stages, through design, the abstractiveness of the research became clear. My main focus was designing for campus culture. That was the beginning point, however, the inability to translate research into the design led me to specifying my research problem and goals. My tutorings proved to be successful as they directed my focus and left me with the right questions. I concluded that campus culture is a part of a diversity concept in an academic setting. My design evolved with that, however, not to its full potential. During the P2 the feedback I received was mainly about creating more spatial diversity and connecting it with the structure.

The way I translated the feedback into the design was, firstly, by going back to the research. I specified my goals and the meaning of the campus for me. Then, I created a space catalog as a basis for my spatial diversity concept. The urban positioning of the building did not change. However, the structure changed dramatically a few times. In the end, I believe it conveys a message of diversity that happens inside. Close to the end of the project the theory tutoring pushed me to focus on the role of a theatre and stage in my proposal for a clear definition of my intentions. That shows through the use of different types of stages throughout my design. The feedback I received was crucial to explaining my idea of the campus.

In the end, the concept of creating, celebrating, and unifying diversity is prominent in my design on different scales. On an urban scale, the positioning of the towers plays a huge role as they activate three separate buildings to act as a campus while capturing a flow of the general public inside the building. On the scale of the building, they follow the spatial catalog, creating diverse pockets of floors and playing with intimacy and engagement. The stages in the towers differ, creating different experiences of public engagements. The added program helps to invite the general public into the building, creating space for cultural or scientific exchange. The diversity of spaces ensures that everyone can find a preferred space for themselves. The students can choose from flexible open floors, intimate areas, traditional classrooms, and more. Each space creates a specific atmosphere, which goes back to creating and celebrating diversity. The inclusivity of minorities through different public stages and intimate spaces proves that the campus goal is to invite everyone in.

Looking at the building physics and material scale, the structure is a hybrid. The flexible pockets of floors are translated through it to the outside. The materiality differs through the inside of the

building for different spatial experiences, however, the facade unifies all the diversity. The material for that is recycled glass. There are multiple variants as it is possible to create recycled glass panels from materials that are usually non-recyclable (for example windshield glass or prescription glasses). They offer random patterns with several imperfections, visible only from up close. That works perfectly with the concept of unified diversification.

The methodology for the research and design consisted of site visits, a literature review, and street interviews with the public and Den Haag. The main idea of the studio was following the method of research by design so the two were always combined. The methodology proved to be successful as findings contributed to the design process significantly, and as I mentioned before, the design helped to structure the research. I am satisfied with the value of my work as I believe my deliverables are consistent with each other and they answer the research problem on all the scales.

Project's Influence

The final design answers my initial ambitions, however, in a more elaborate way. In the beginning stage, I only had ideas connected to my interests until the tutorings helped me direct toward the goals of my proposal. I significantly improved my design process compared to my previous projects as I would create change a lot based on small feedback. With this project, I stayed consistent with my initial idea and managed to incorporate it through the design. During the process, I had times when I needed more tutorings to find solutions but I believe it is a normal part of the design.

The overall impact of the design on the architectural field is positive. It questions the idea of a campus in an urban setting while advocating for inclusivity in diverse environments. The new meaning of educational building that combines the general public with policymakers and students proves that the full potential of a campus is yet to be used. Creating such public buildings improves society's civic engagement and appropriation, while the university itself gains a possibility for innovation through diverse points of view. The sustainability guidelines ensure that the building has a negative CO2 impact and provides thermal and acoustic comfort inside.

Further development of the project can take place by researching the impact of the users on the building through the years to improve its resilience and sustainability aspects in the future. More tutorings with the services consultant would be necessary. In the next phase, I plan to work on physical models and improving drawings, for example, working on the context 3D model in detail.

Literature

William Shakespeare, "As You Like It", Act II, Scene VII (Folio 1, 1623)

