

POROCAMPUS

Tim Bielevelt

5709296



ASSIGNMENT

CONTEXT

THE HAGUE
SITE
CAPACITY PLAN

RESEARCH

PROBLEM STATEMENT
GOALS
RESEARCH QUESTION

DESIGN PROPOSAL

URBAN SCALE

THE EXISTING
CONCEPT

BUILDING SCALE

CONCEPT
FINAL DRAWINGS
CLIMATE
STRUCTURE

UNIT SCALE

CONCEPT
FRAGMENT
TECHNICAL DETAILS

CONCLUSION

An architectural rendering of a modern urban development. The scene features several tall, multi-story buildings with a mix of white and yellow facades and large glass windows. Some buildings have unique, stepped or terraced designs. In the foreground, there are lush green trees, a paved street with a few cars, and a group of people walking on a sidewalk. The sky is blue with some light clouds. The word "ASSIGNMENT" is overlaid in large, bold, red capital letters in the center of the image.

ASSIGNMENT

THE ASSIGNMENT

Design a **vertical campus** within a **hybrid building** in the centre of **the Hague**. The design should encourage social interaction between different social groups.

Thematic pillars:

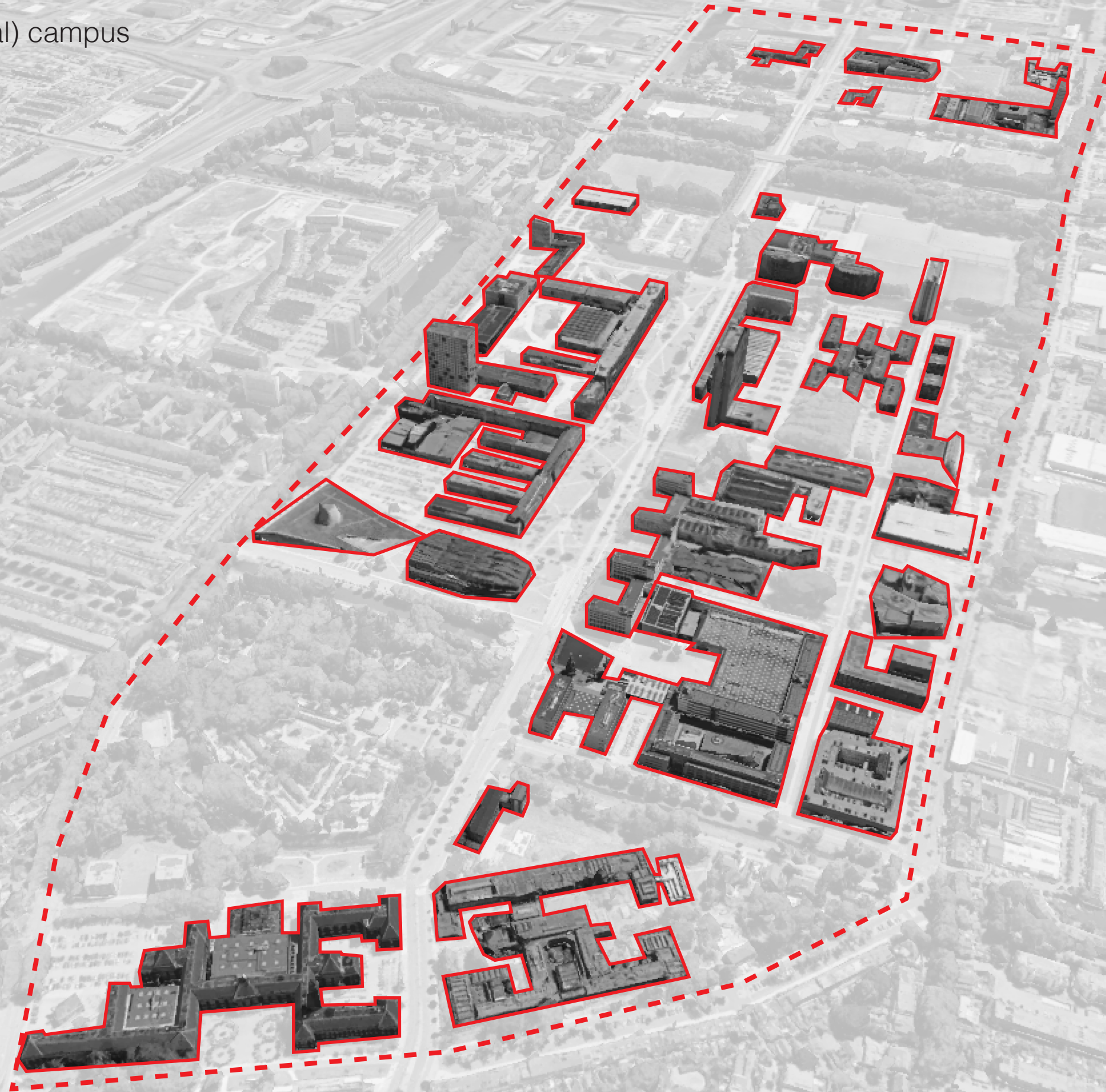
- multiplicity
- hybridity
- resilience
- sustainability





UNIVERSITY OF DELFT

Traditional dutch (horizontal) campus



TRADITIONAL CAMPUS

Isolated and separated



TU Delft



UT Twente



Oxford University



Oxford

An architectural rendering of a modern urban development. The scene features several high-rise buildings with distinctive facades. On the left, a long building with a white grid-like facade and large windows. In the center, a taller white building with a stepped profile. On the right, a prominent yellow building with a complex, geometric facade featuring white structural elements and cantilevered balconies. The foreground shows a street with cars, a red-paved area, and several green trees. People are depicted walking on the sidewalks, adding a sense of scale and life to the scene. The sky is blue with light clouds.

CONTEXT

THE HAGUE

The city

The Hague wants to **densify**, in particular in the city centre.

The Hague wants to become the **New Dutch Manhattan**, taking over from Rotterdam.

The Hague houses most **governmental functions**. It is not the capital, but acts as the ruling city of the Netherlands.

University of Leiden is expanding in the Hague.



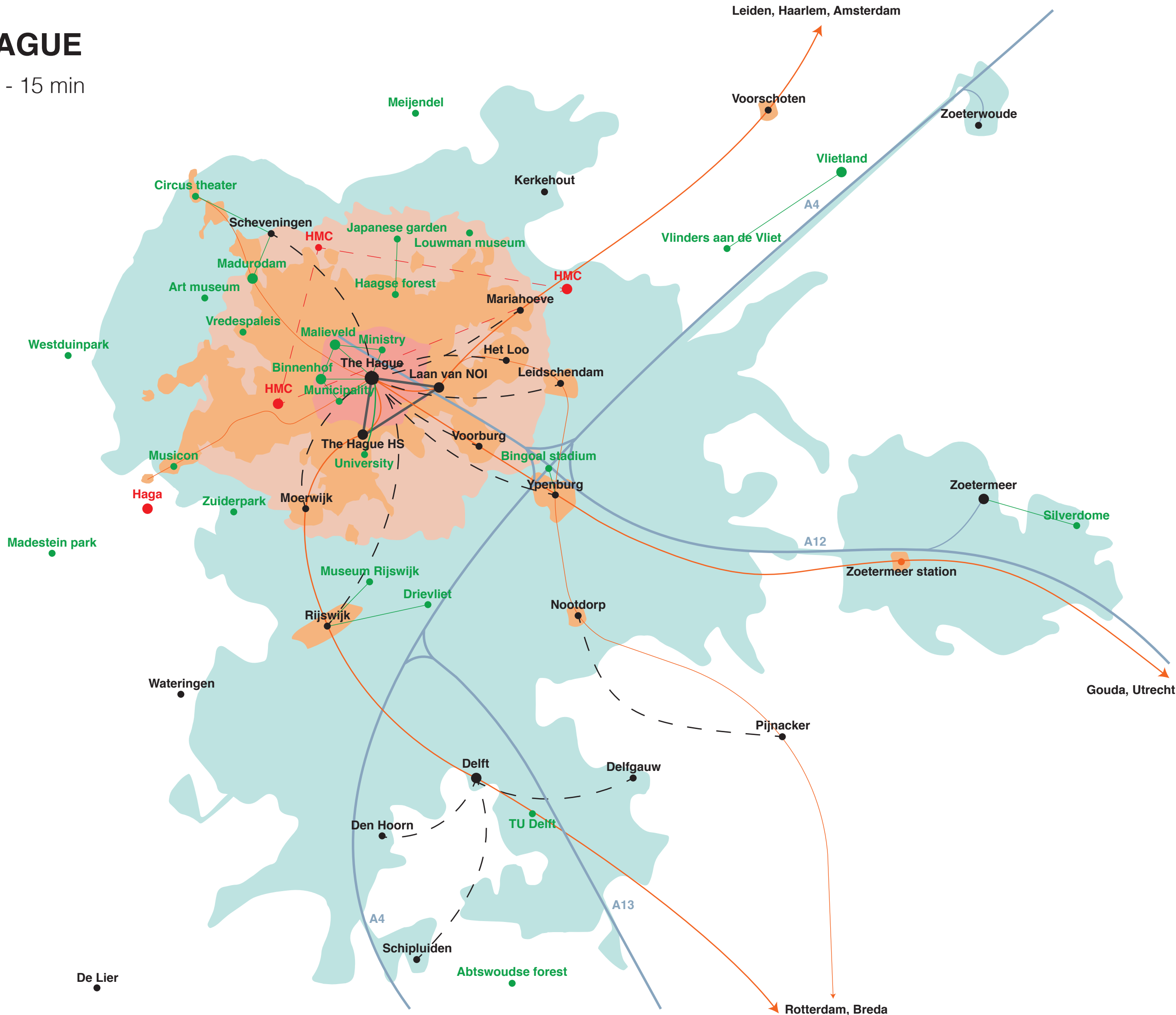
THE HAGUE

Location



THE HAGUE

Isochrone - 15 min



THE HAGUE

Site area



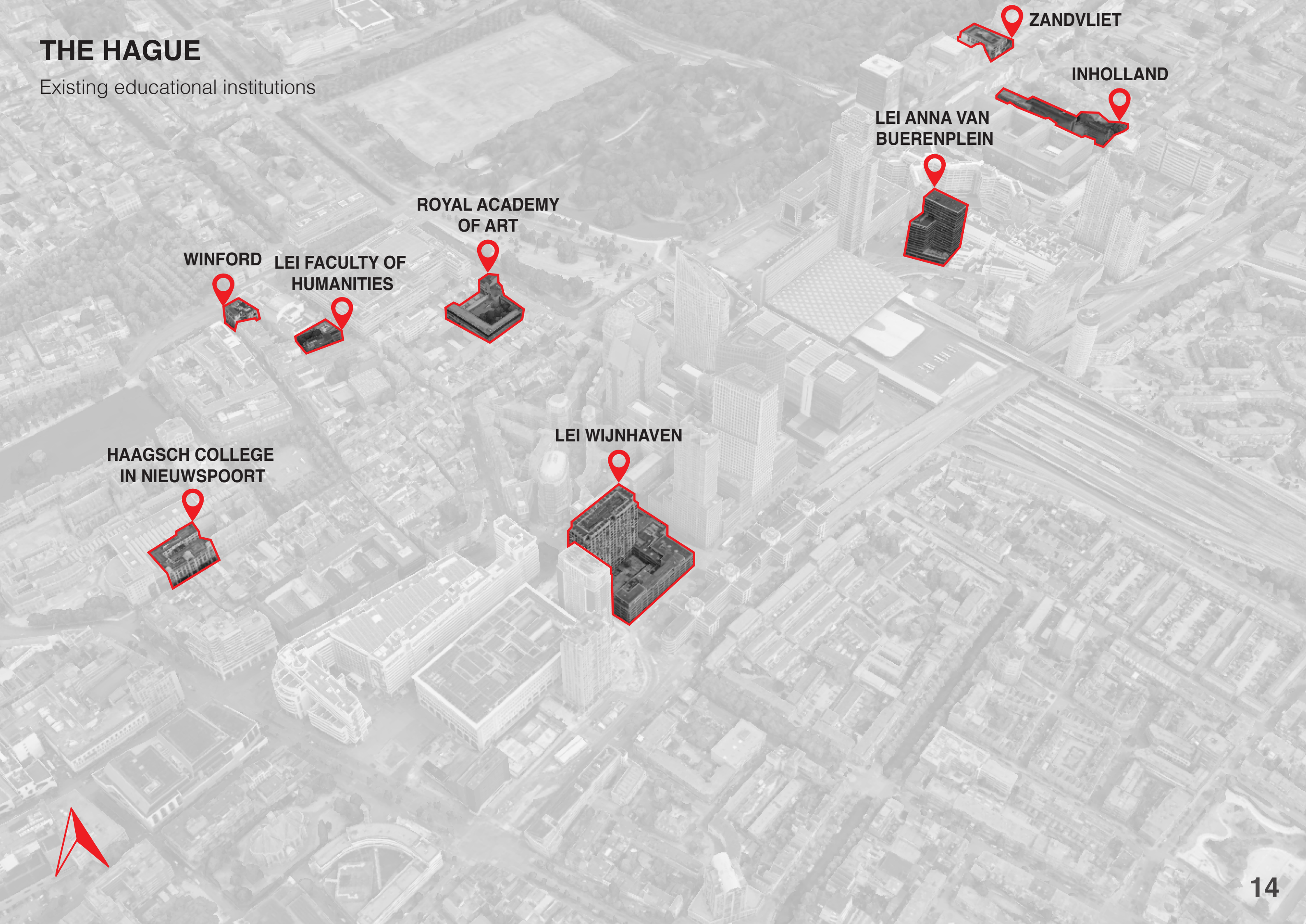
THE HAGUE

Existing educational institutions



THE HAGUE

Existing educational institutions



WINFORD

LEI FACULTY OF
HUMANITIES

ROYAL ACADEMY
OF ART

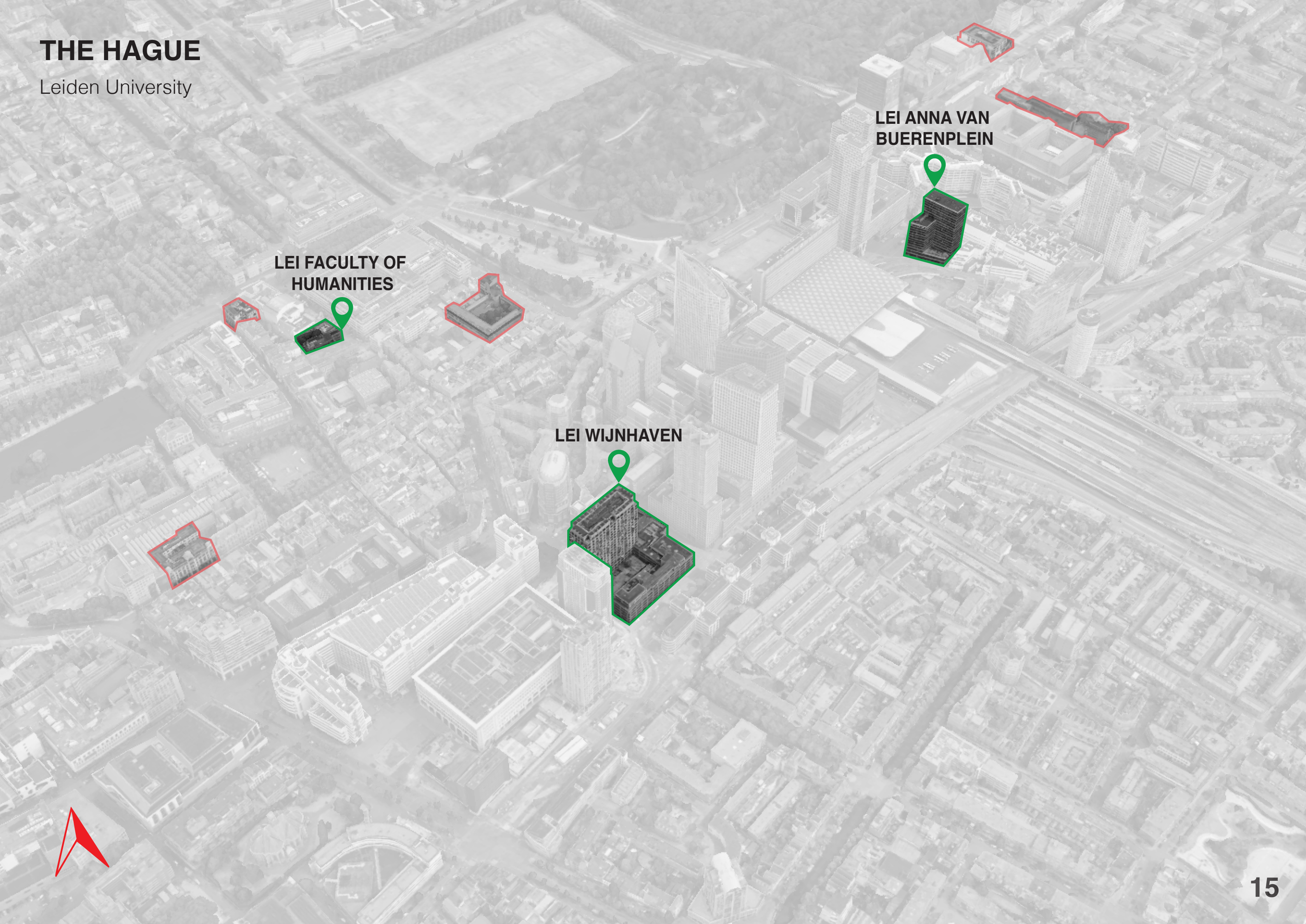
LEI WIJNHAVEN

LEI ANNA VAN
BUERENPLEIN

ZANDVLIET

INHOLLAND

HAAGSCH COLLEGE
IN NIEUWSPOORT



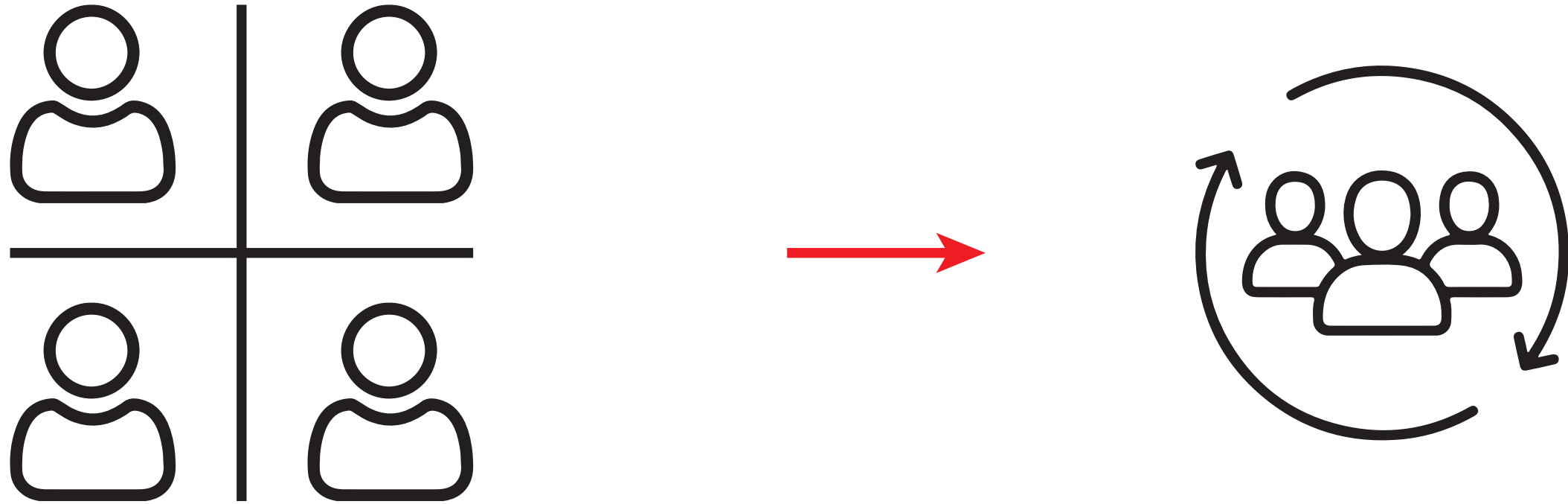
**LEI ANNA VAN
BUERENPLEIN**

**LEI FACULTY OF
HUMANITIES**

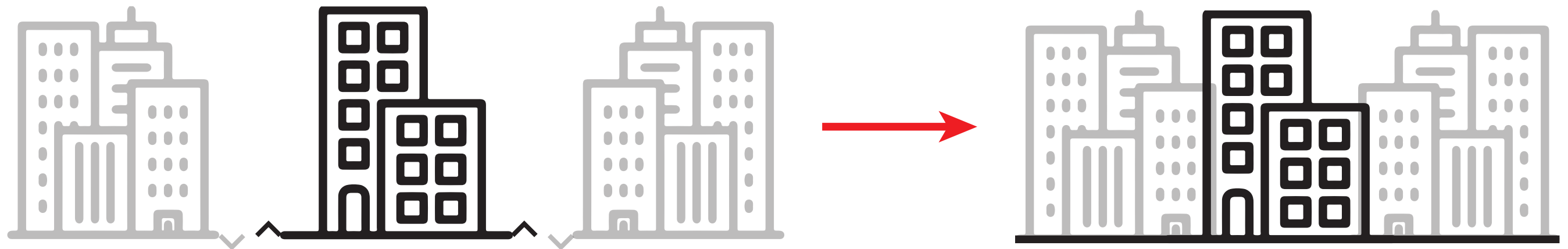
LEI WIJNHAVEN

VERTICAL CAMPUS

Why vertical?



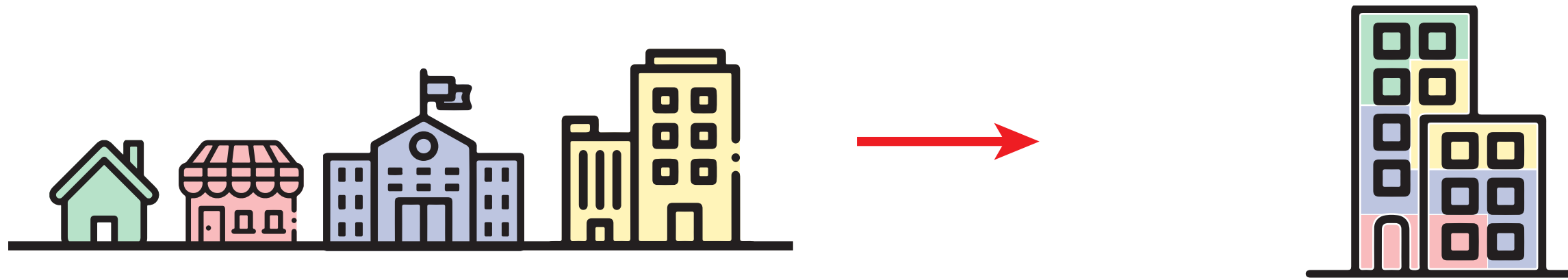
Remove boundaries between social groups to create social interaction.



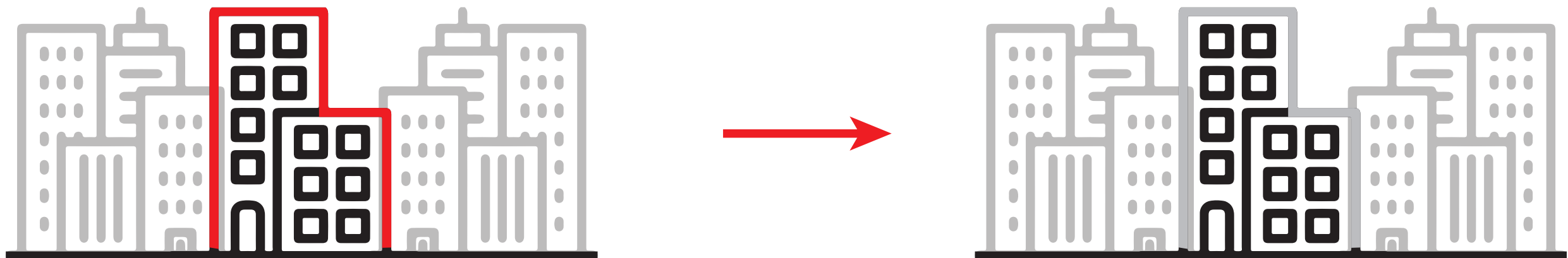
Building should not be a separate entity, but a part of the city.

VERTICAL CAMPUS

How to make a vertical campus



Create interaction between different social groups by creating a hybrid building.



Building should not be closed, but it should be an open/urban building.

Richard Sennett: “porosity could make buildings more truly urban.”

SITE AREAS

3 main site areas

GREEN BORDER

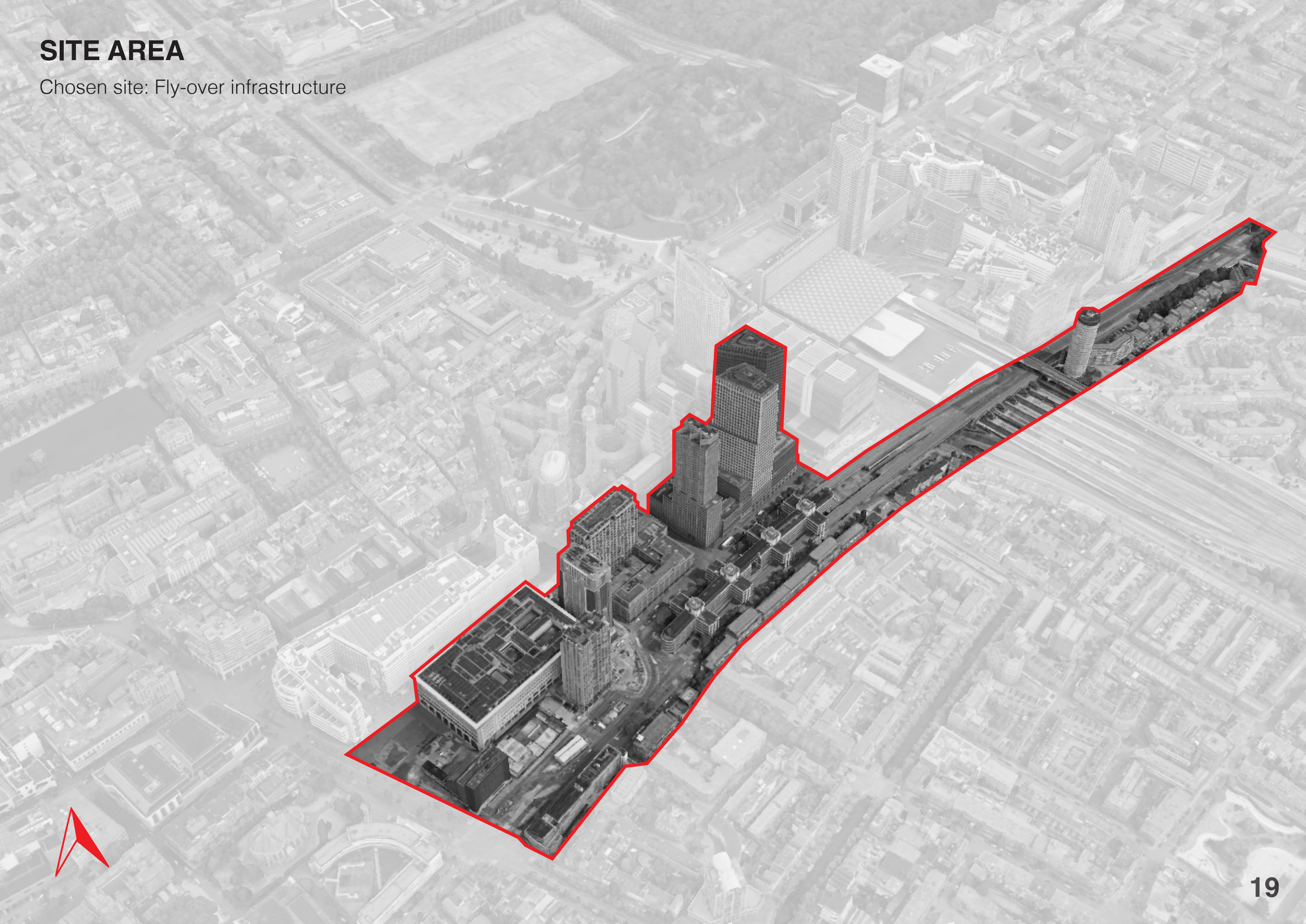
HIGH DENSITY

FLY-OVER



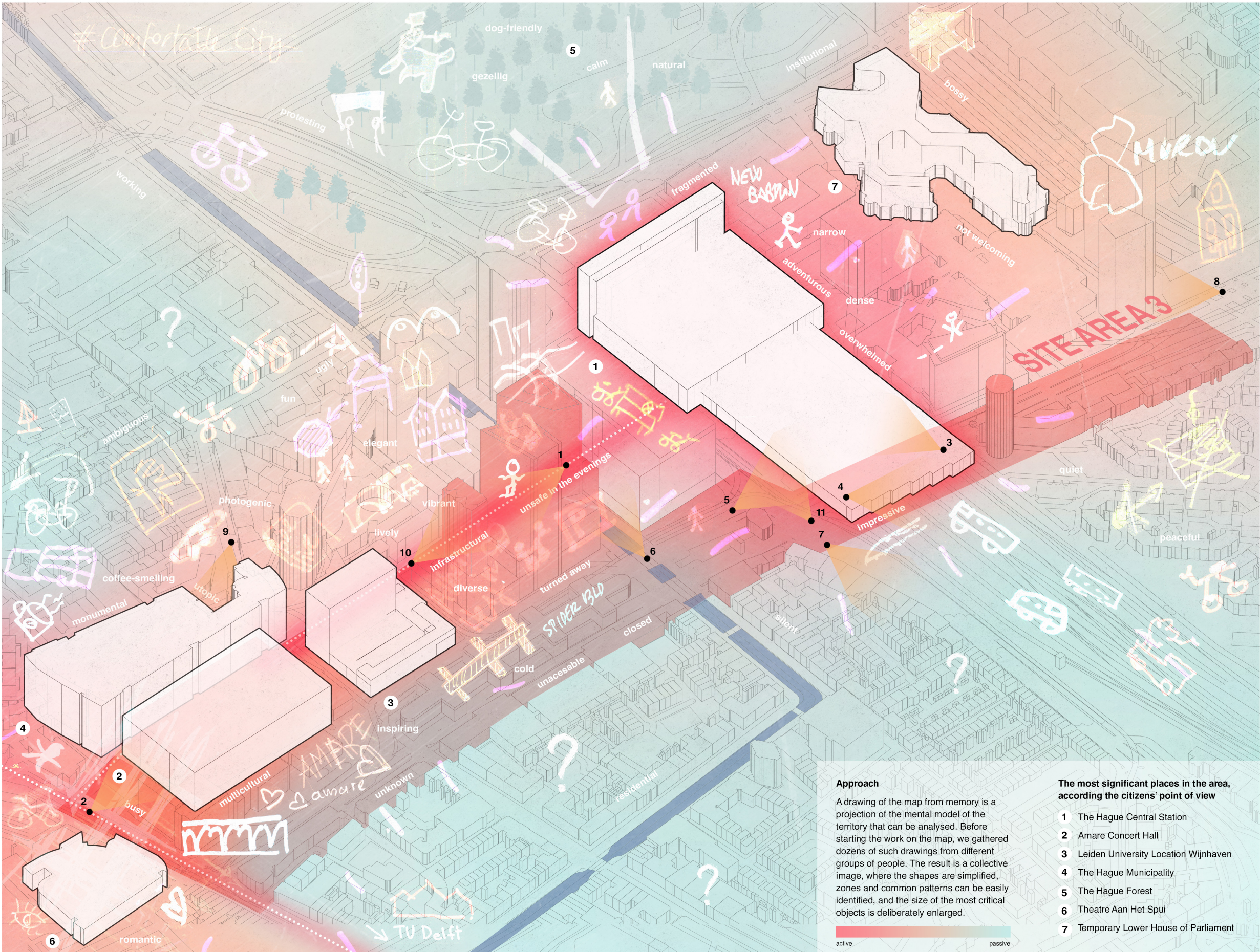
SITE AREA

Chosen site: Fly-over infrastructure



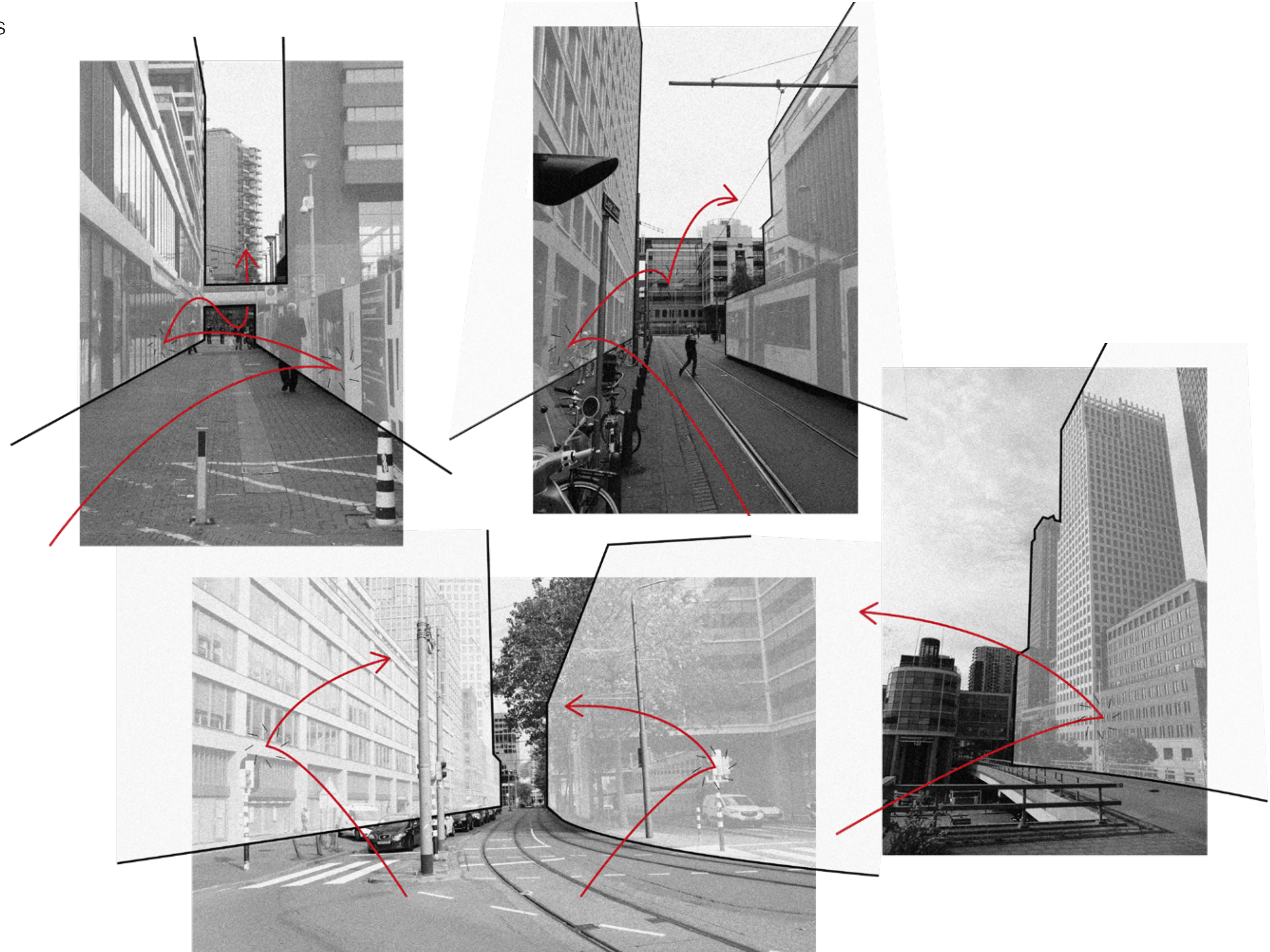
SITE AREA

Psychogeographical map



SITE AREA

Boundaries



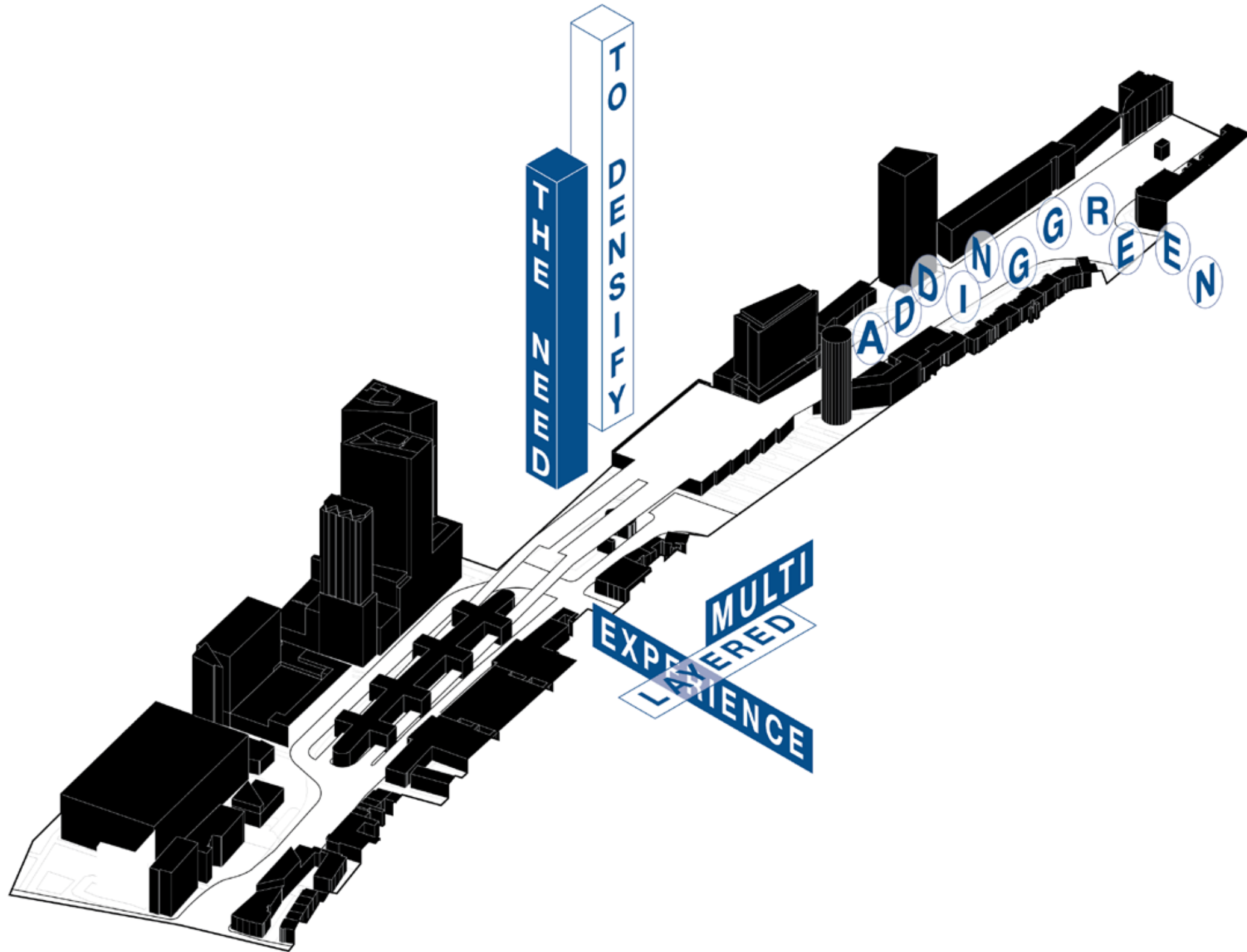
SITE AREA

Nolli map



SITE AREA

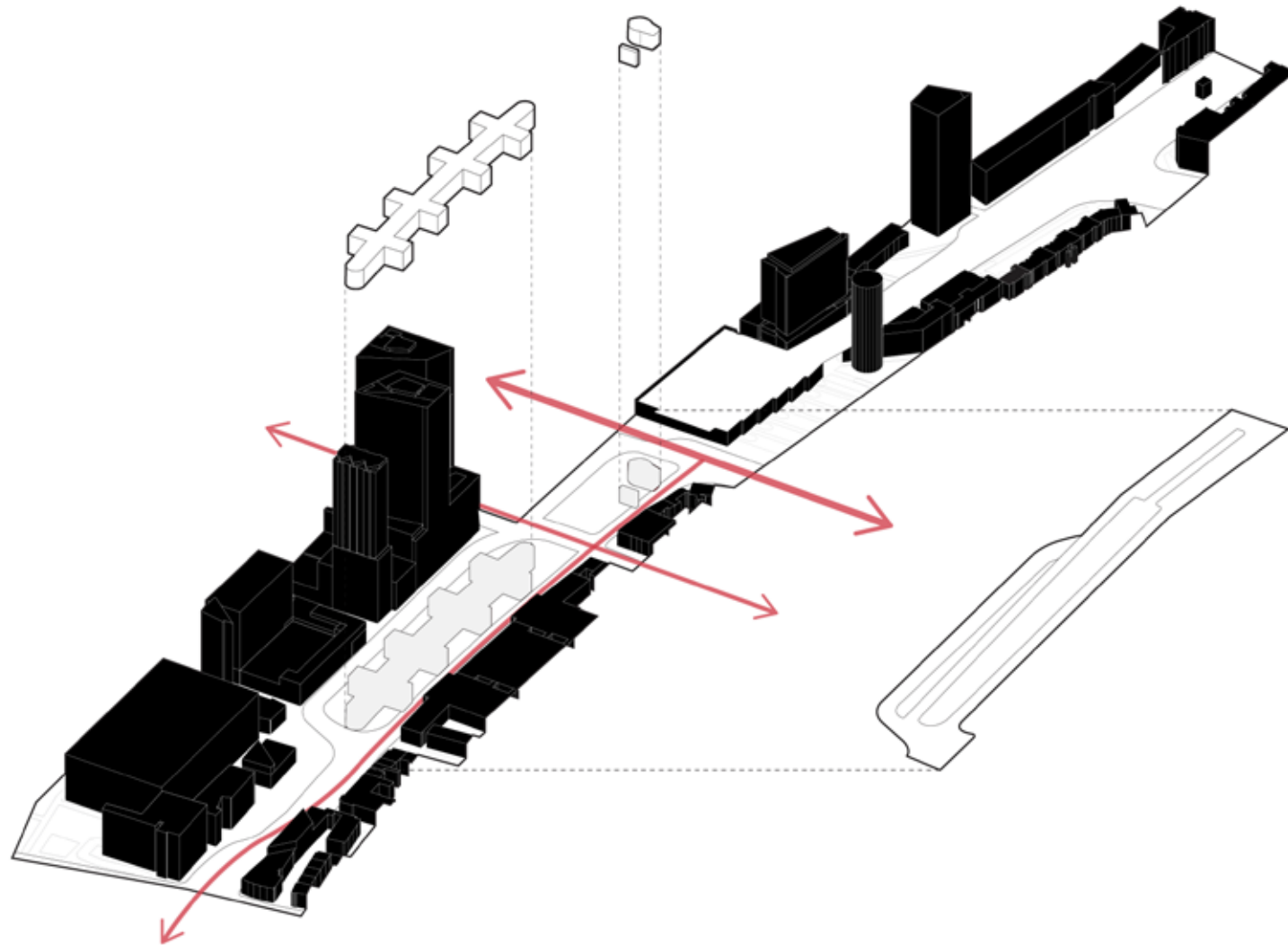
Capacity plan concept



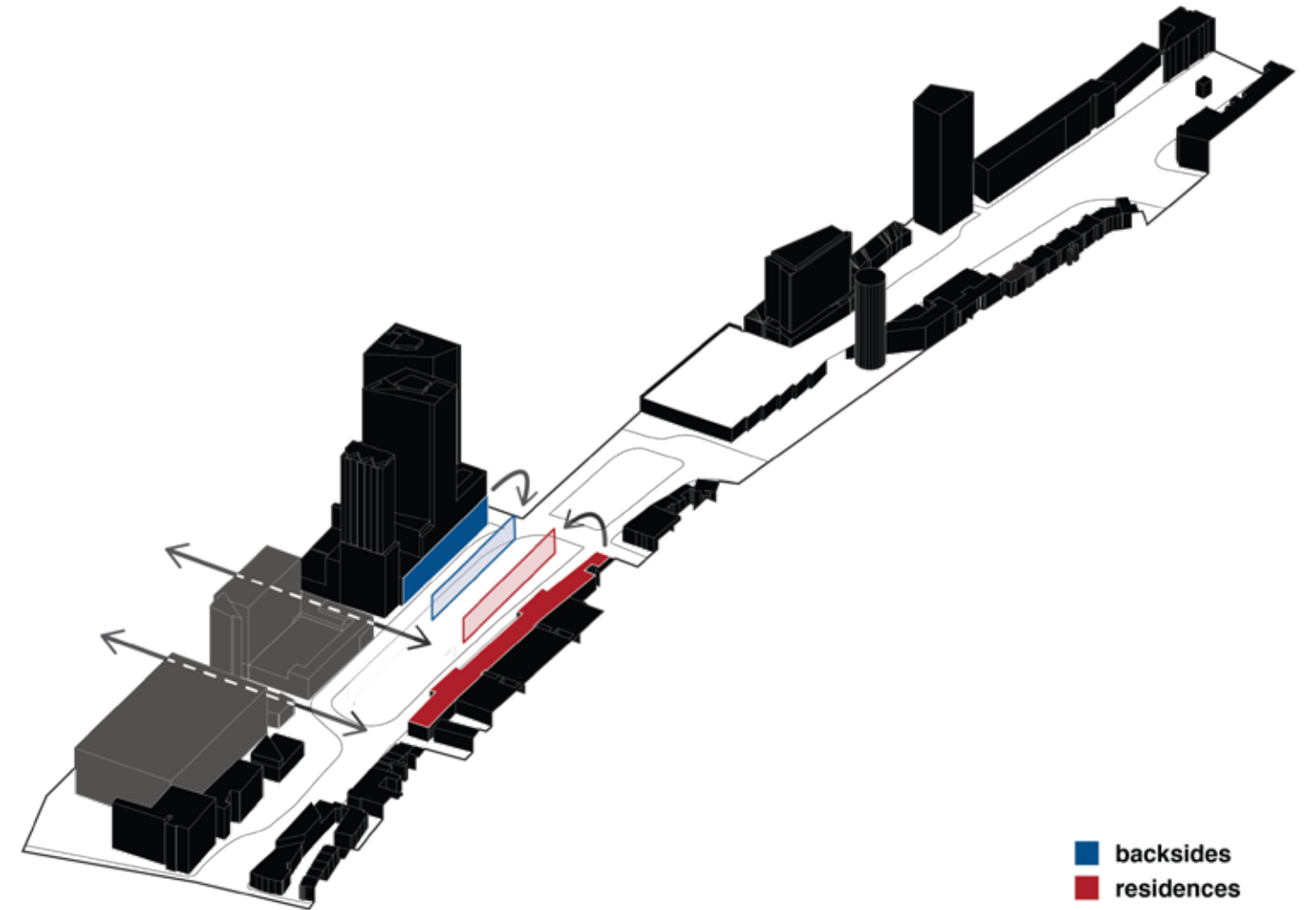
SITE AREA

Capacity plan concept

REVISION

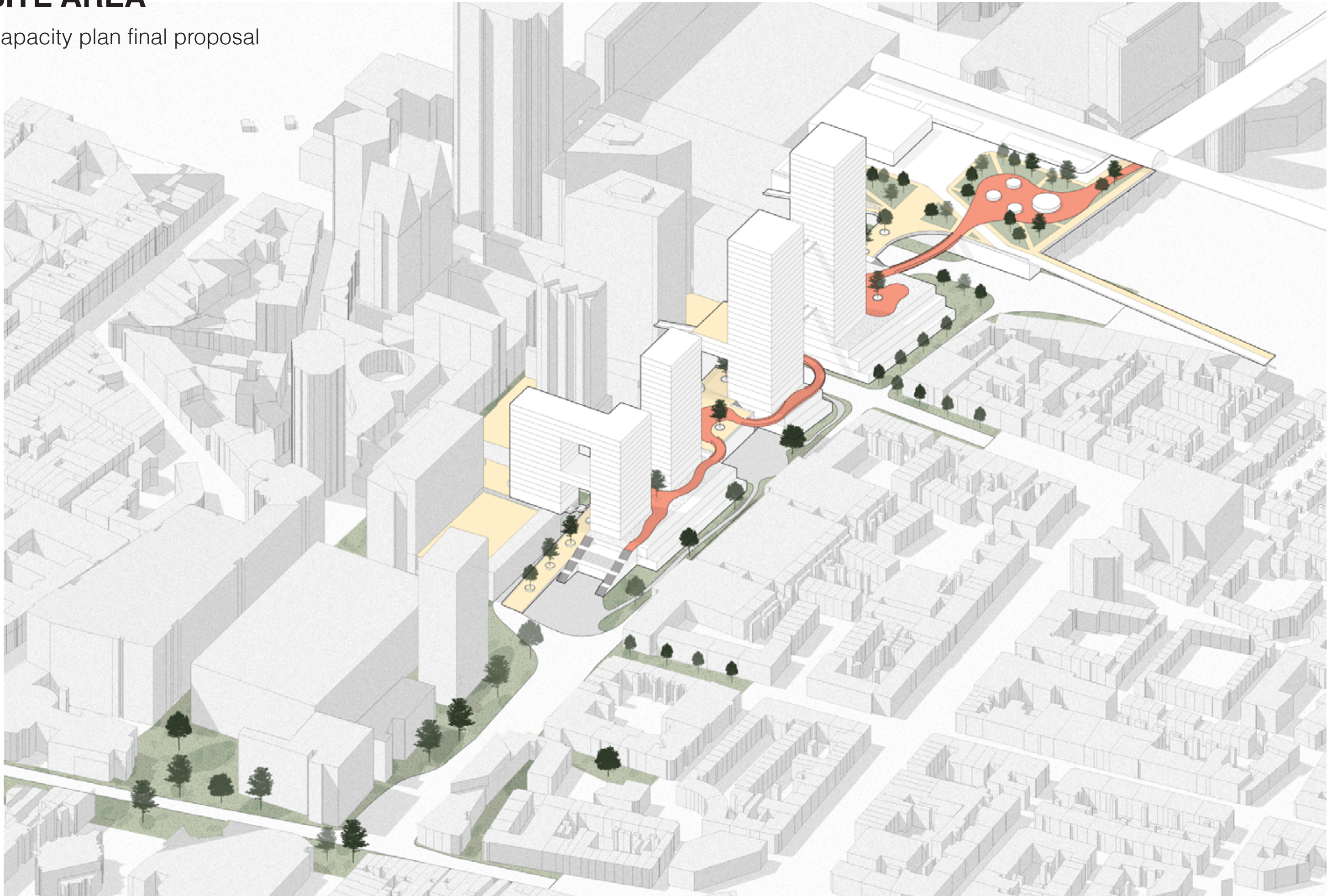


CONCEPT



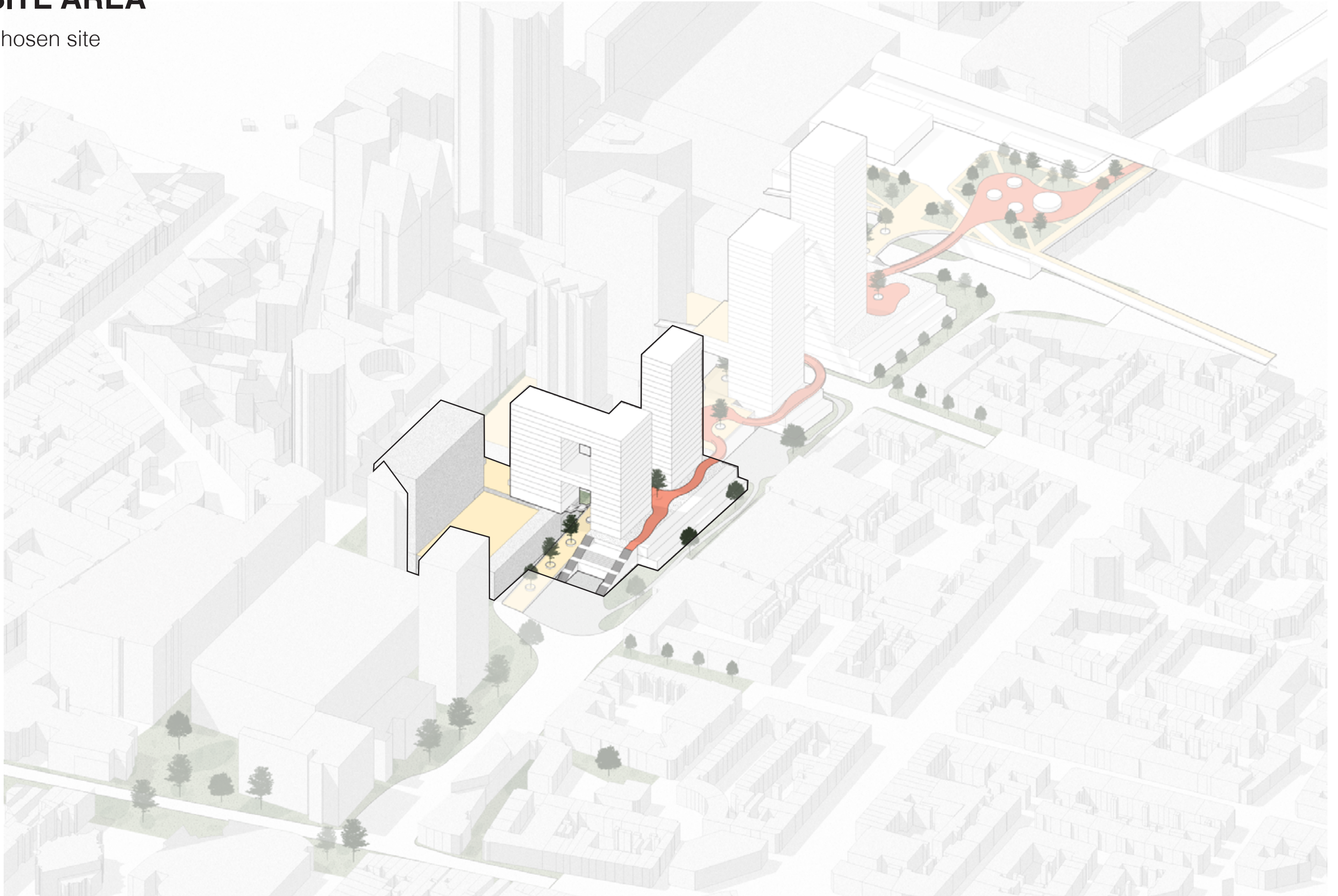
SITE AREA

Capacity plan final proposal



SITE AREA

Chosen site



An architectural rendering of a modern urban development. The scene features several multi-story buildings with a mix of yellow and white facades. The buildings have large windows and some have balconies with glass railings. In the foreground, there are lush green trees, a paved street with a few cars, and a group of people walking. The sky is blue with some clouds. The word "RESEARCH" is overlaid in large, bold, red capital letters in the center of the image.

RESEARCH

PROBLEM STATEMENT

Layering of the infrastructure and buildings within the site creates **dead spaces**.

Larger buildings use this space as **back sides**, mainly for supply.

Buildings and infrastructure in the site area acts as a **boundary** between the city centre and neighbourhood.

The project needs to dismantle this boundary and turn it into a **border**.

Using **porosity** strategies could be an answer to transform the area into a border.



RESEARCH

Boundaries and borders

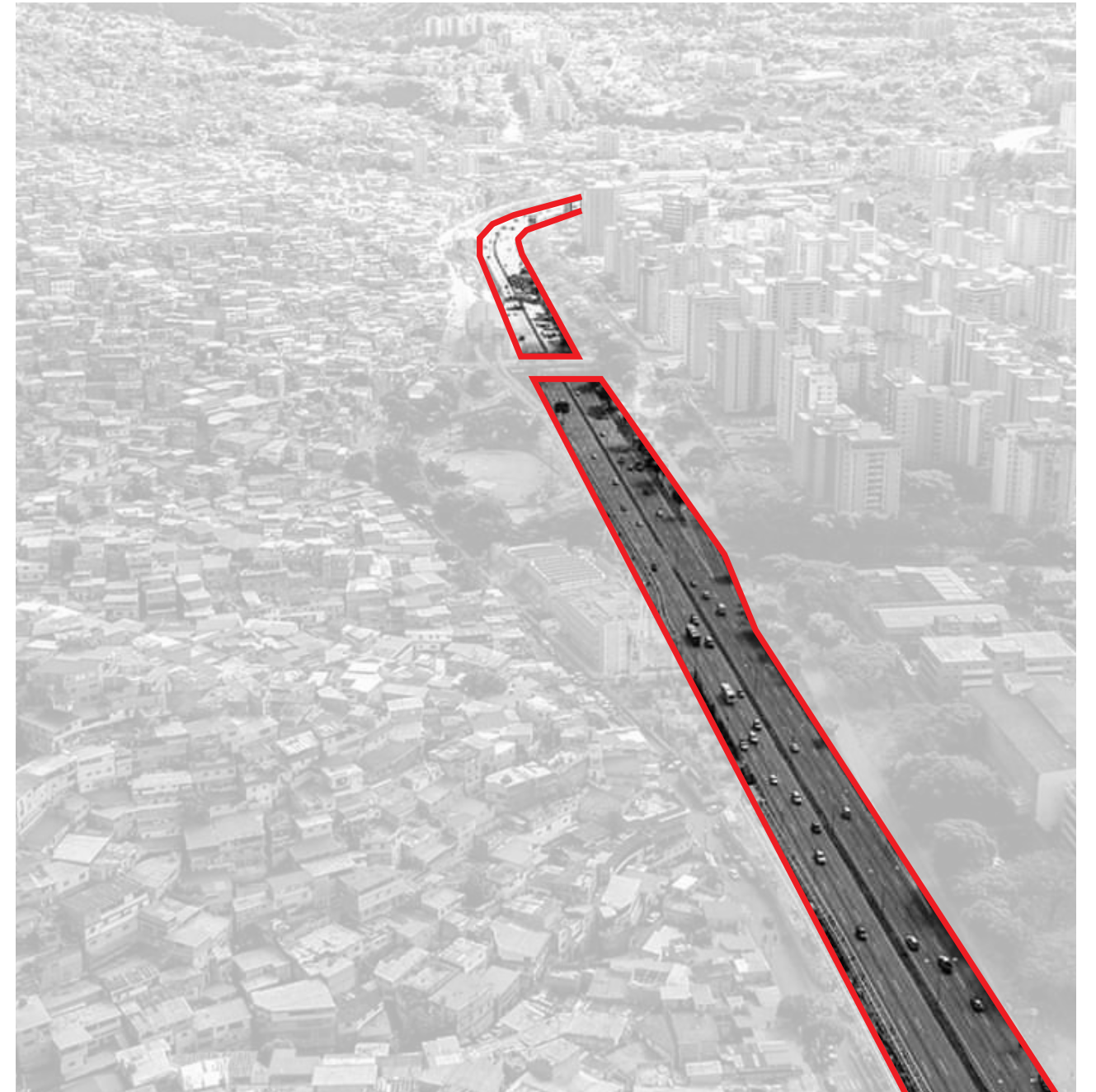
Richard Sennett: “Boundaries being limits or edges which separate one territory from another and borders being a zone of interactive edge between territories.”

Boundaries are hard and borders are permeable.

RESEARCH

Boundary

Capital of Venezuela, Caracas.



Highway creates boundary, only one connection to connect two parts of the city

RESEARCH

Border

Central Park, New York, USA.

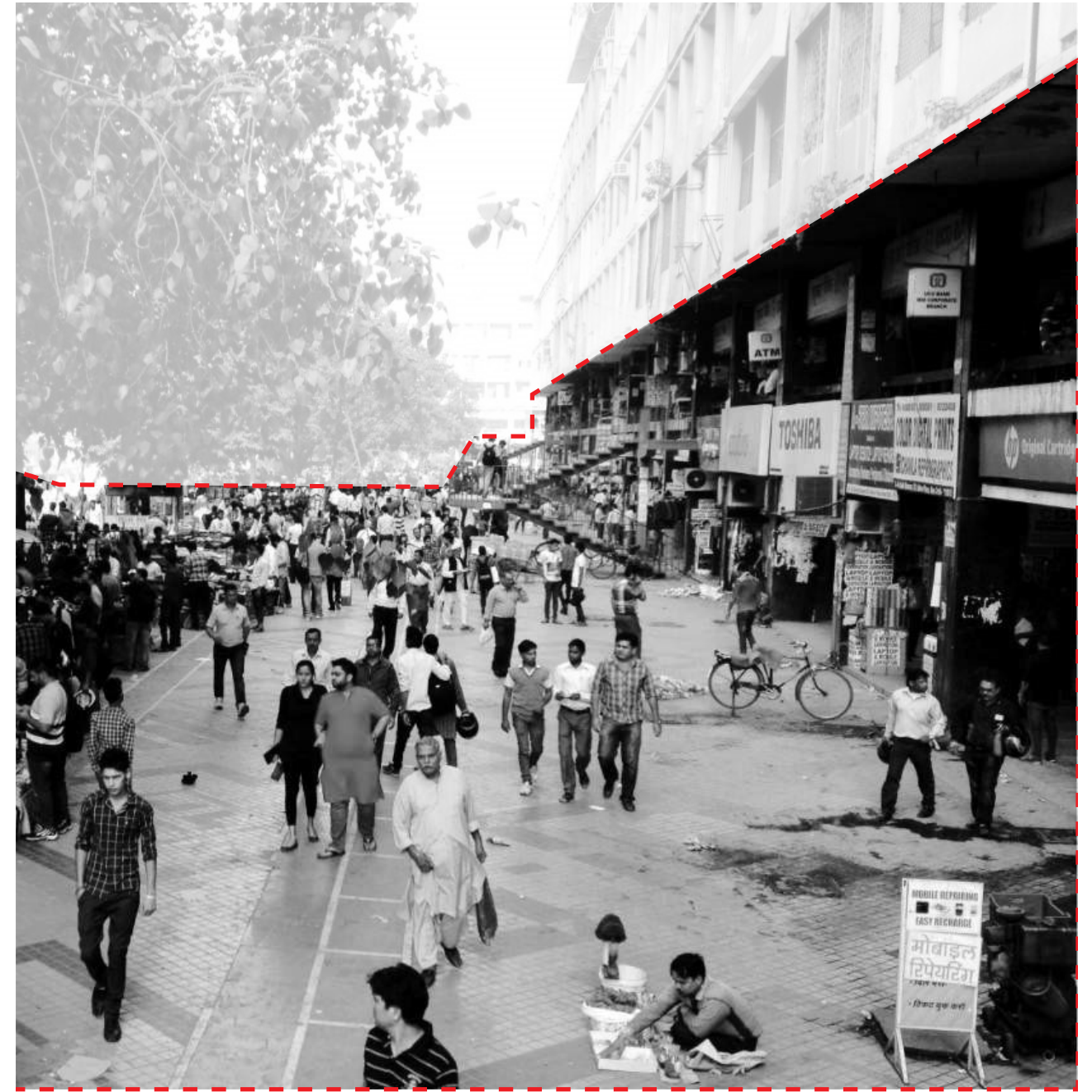
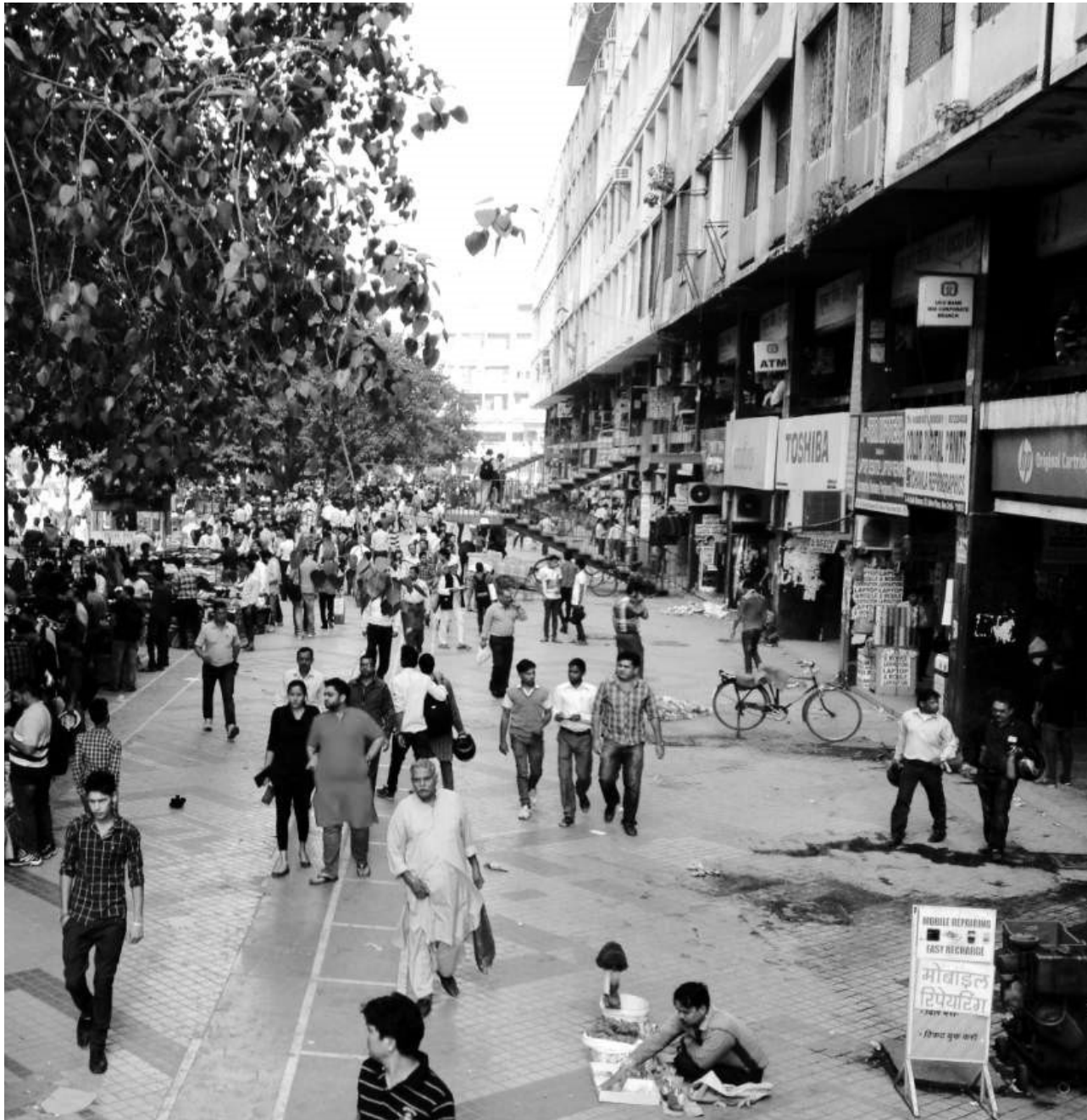


Park acts as a border within the city, different social groups come together in this space

RESEARCH

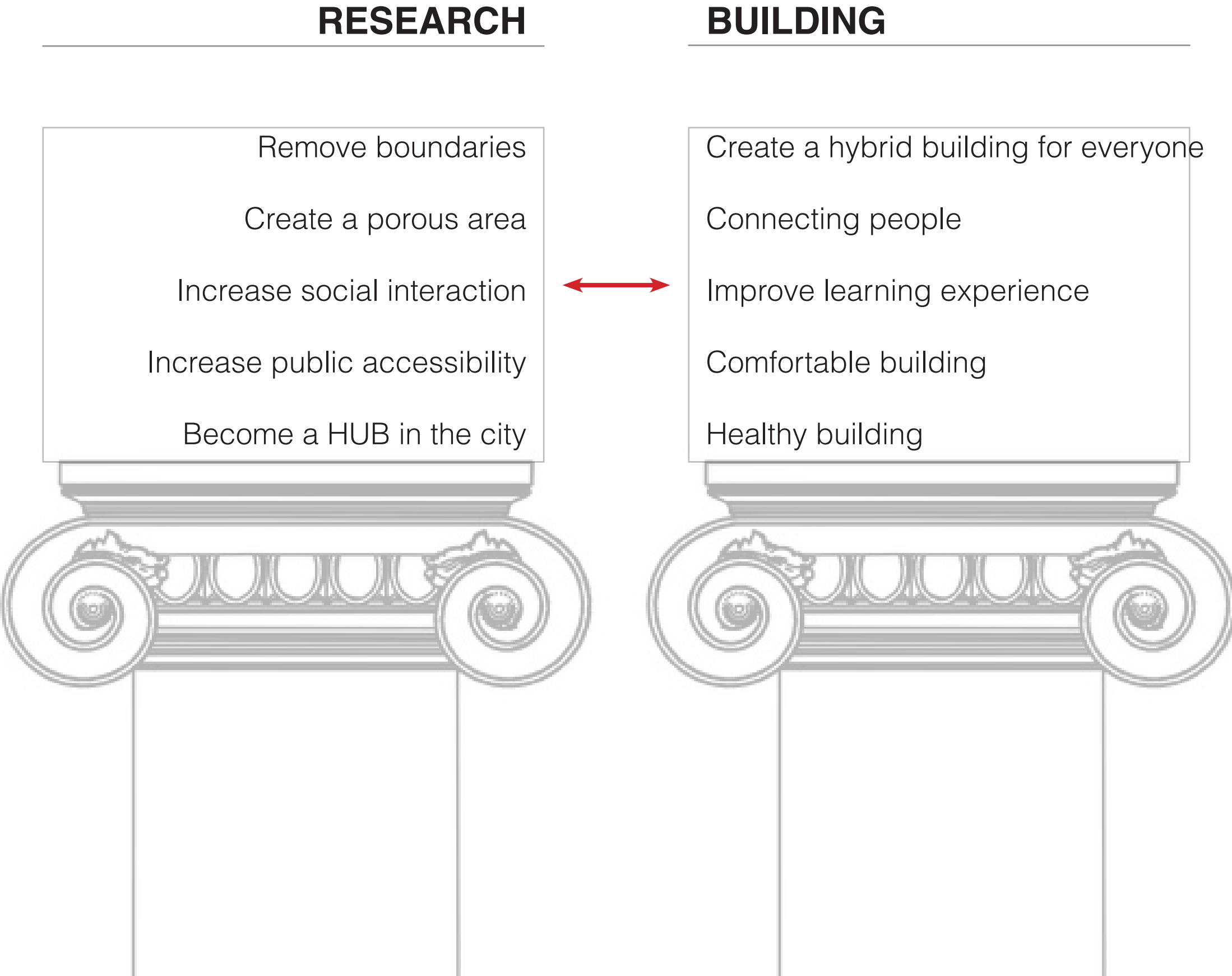
Porosity

Nehru Place, south of Delhi, India.



Porous buildings around the busy public square, they add to the square by being open and public

GOALS



RESEARCH

Research question

HOW CAN A VERTICAL HYBRID CAMPUS BUILDING ENHANCE ITS POROSITY TO PROMOTE INCREASED PUBLIC ACCESSIBILITY AND FOSTER SOCIAL INTERACTION?



RESEARCH

What is porosity?

Dictionary:

“The state or quality of being porous.”

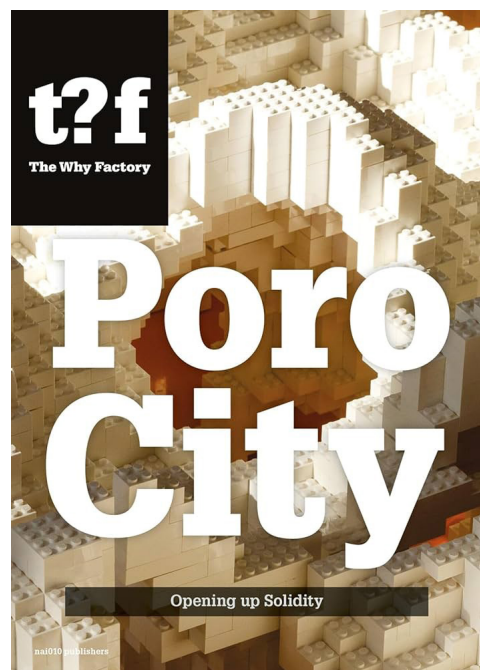
Porous: “permeable by water, air, etc.”

RESEARCH

What is porosity?

From the book PoroCity:

“Porosity is more than merely the ratio between void and mass. Porosity has to do with air and light, with circulations and connectivity, with views and terraces, with climate and social life.”



RESEARCH

What is porosity?

My position:

Porosity is a way to remove boundaries within the city, to create more open and public buildings which add value to the public realm. It is a way to bring social groups together and to provide to the city.

RESEARCH

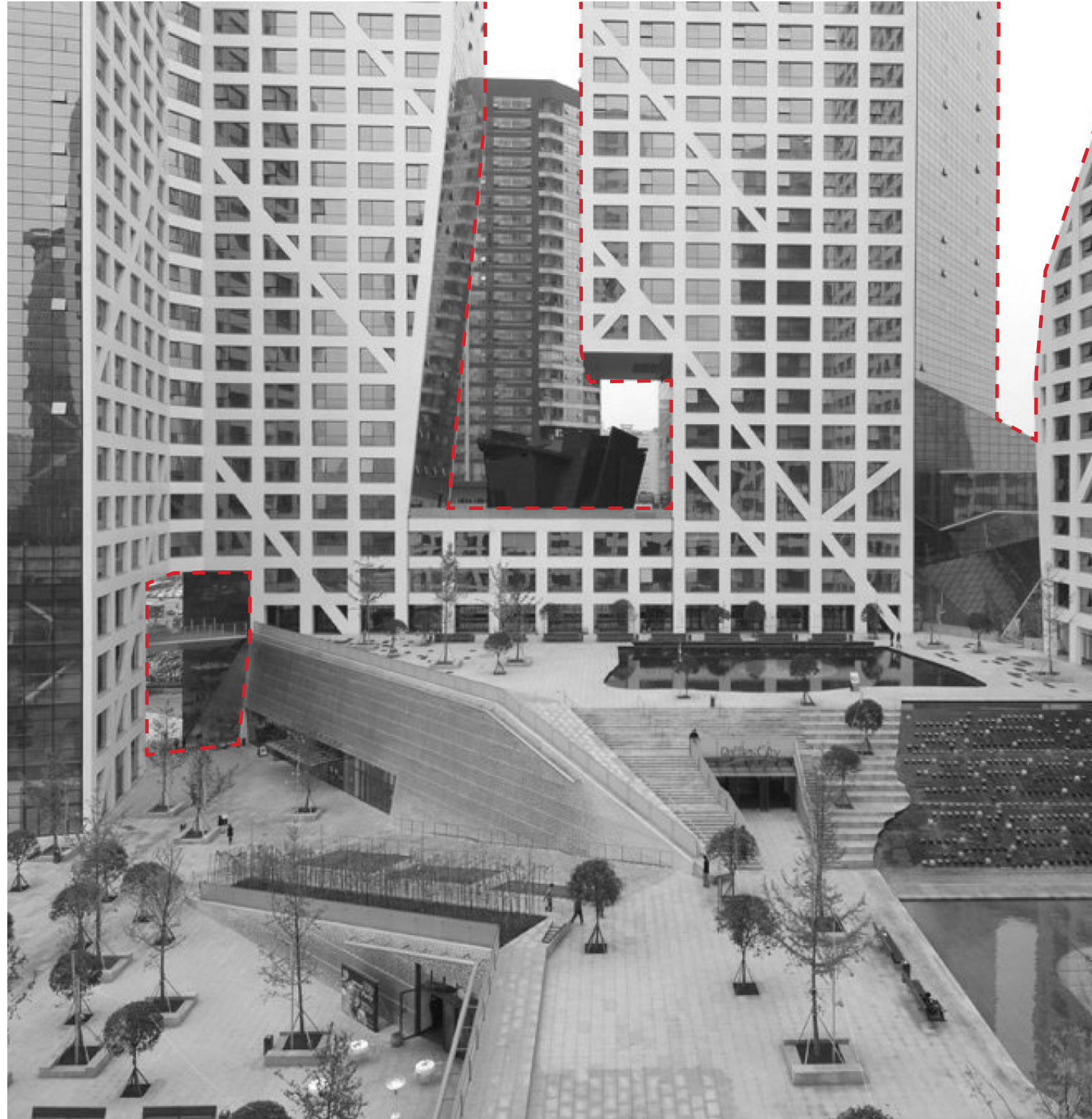
Porosity: Natural daylight

The **Sliced Porosity Block** consists of five towers and is situated at the centre of Chengdu.

The Sliced Porosity Block is a **hybrid building**, it houses many different functions.

The required minimum **sunlight** exposures prescribe precise geometric angles that **slice the mass**.

Establishing human scale in this project is achieved through the concept of “**micro urbanism**,” with double-fronted shops open to the street as well as the shopping center.



Steven Holl Architects, Sliced Porosity Block, 2012, Chengdu, China.

RESEARCH

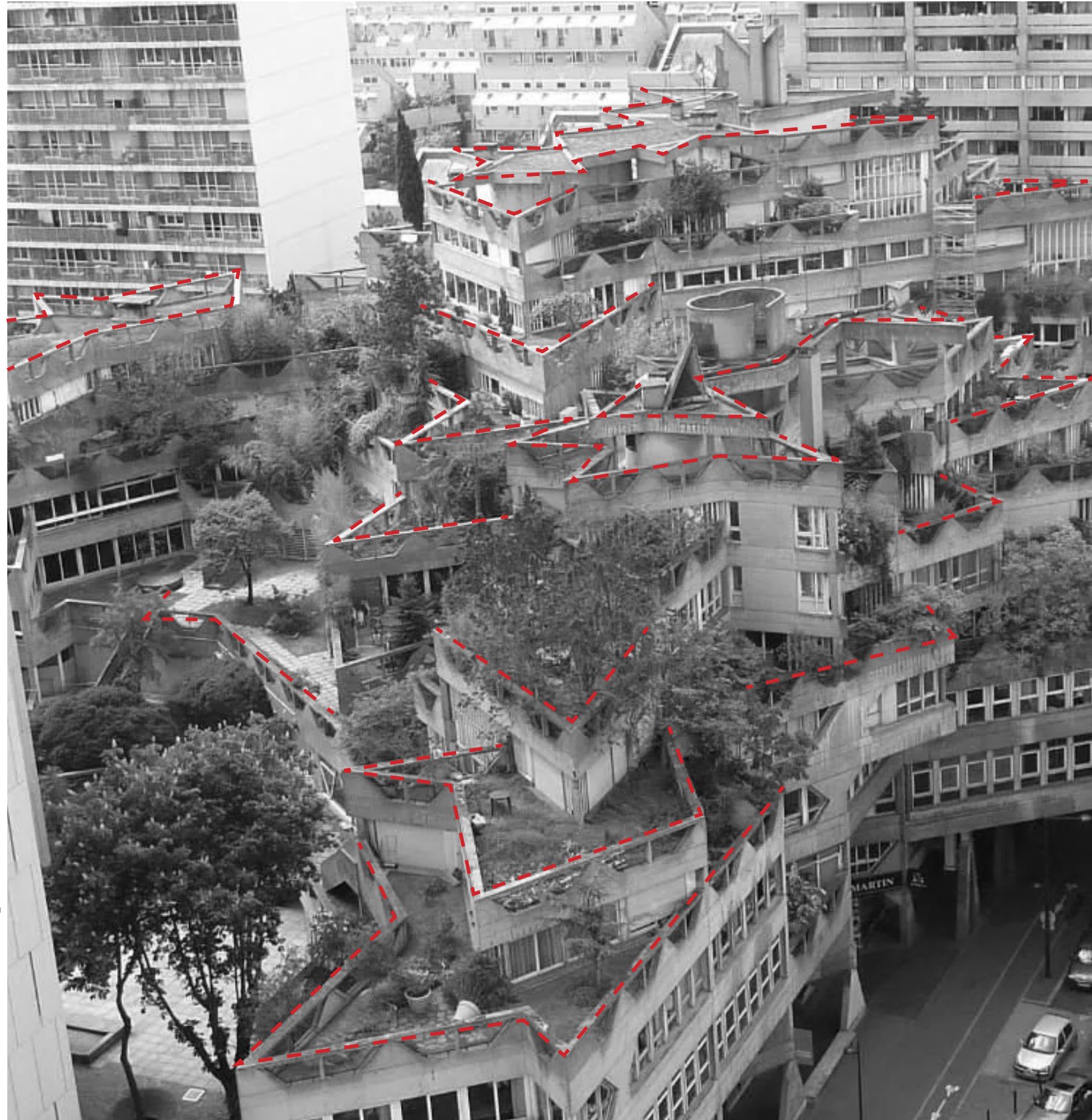
Porocity: Views

The **Ivry-sur-Seine** social housing complex consists of eight buildings and is situated in Paris.

The complex is **hybrid**, it has many functions mixed on different levels composing a sort of a pyramid structure.

Jean Renaudie was against **mono orientation** of apartments.

Every apartment is angled at **45 degrees**, giving all the habitants an **unique view**.



Jean Renaudie, Housing complex Ivry-sur-Seine, 1969, Paris, France.

RESEARCH

Why is porosity relevant?

**To create a place or space that is open, public, accessible,
permeable, mixed and intense.**

RESEARCH

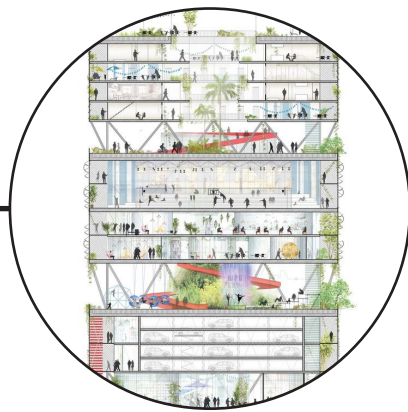
Design strategy



URBAN SCALE



POCKET PARKS



MIXED-USE



COURTYARDS



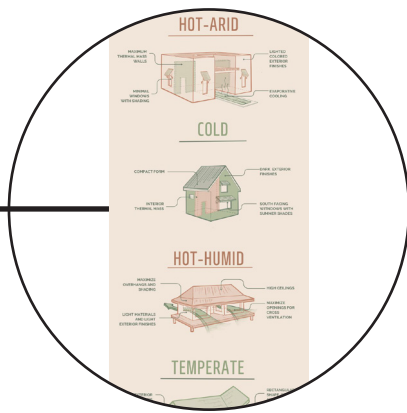
BUILDING SCALE



FACADE SETBACKS



ATRIUMS



CLIMATE



UNIT SCALE



SPATIAL PLANNING



COMMUNITY



CLIMATE

An architectural rendering of a modern urban building complex. The scene features several multi-story buildings with a mix of white and yellow facades and large glass windows. Some buildings have unique, stepped or cantilevered upper floors. The foreground shows a street with cars, a red-paved area, and several green trees. People are depicted walking on the sidewalks. The sky is blue with light clouds. A large, bold, red title is centered over the image.

URBAN SCALE



THE EXISTING

Intervention



THE EXISTING

Why connect to the university

ROTTERDAM

TU Delft wil campus in Rotterdam om druk van het grote aantal studenten op Delftse campus te verlagen

14 juni 2023, 20:58 • 2 minuten leestijd

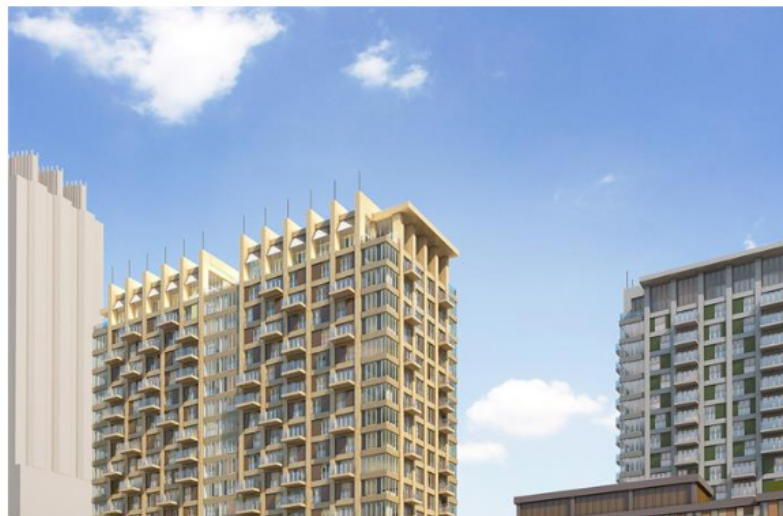


Rotterdamse studenten bij de Eureka Week in 2019
© Rijnmond

Universiteit Leiden in Den Haag blijft groeien

In Nieuws 10:34, 09 juni 2016 Door Ronald de Blauw

Overheid



Ronald de Blauw
Redacteur

De Leidse Universiteit gaat de onderwijs- en onderzoeksactiviteiten in Den Haag uitbreiden. Daardoor zal de campus in Den Haag uitgroeien tot een internationaal vooraanstaand academisch centrum. Alle faculteiten zullen hieraan gaan bijdragen.

Campus Den Haag

Den Haag is, naast Leiden, de tweede moederstad van de Universiteit Leiden.

De Universiteit Leiden is hier al ruim 20 jaar gevestigd. Op de Campus Den Haag zijn alle zeven faculteiten actief en bijna 20% van het totaal aantal studenten van de universiteit studeert aan de Haagse Campus. Daarbij werken meer dan 500 medewerkers van de universiteit in Den Haag. De Universiteit Leiden heeft gekozen om één universiteit in twee steden te zijn.

Onderwijs, onderzoek en impact van de Campus Den Haag sluiten nauw aan op het profiel van Den Haag – stad van vrede, recht en veiligheid – en op de overige mogelijkheden die de stad biedt.

Het onderwijs en onderzoek draait om vijf thema's:

1. Internationaal recht, vrede en veiligheid
2. Globalisering en internationale betrekkingen
3. Politiek, openbaar bestuur en publieke financiën
4. Stedelijke vraagstukken
5. Gezondheid en zorg

Feiten & cijfers Den Haag

 7
FACULTEITEN

 21
OPLEIDINGEN

 7.000
STUDENTEN

 103
NATIONALITEITEN



ROBERT MUIS
Redacteur

Campus Den Haag heeft nieuwe vestiging aan Turfmarkt

25 april 2017, 17:23

De Universiteit Leiden heeft een nieuwe vestiging aan de Haagse Turfmarkt. Het interieur is ontworpen door [Studio Leon Thier architectuur/interieur](#) met medewerking van [StudioLEFT](#). Voor het casco was [Geurst & Schulze Architecten](#) verantwoordelijk.

De Campus Den Haag van de Universiteit Leiden is sinds zijn oprichting in 1998 gegroeid naar drie vestigingen. De nieuwe huisvesting aan de Turfmarkt is in februari 2017 officieel geopend en is ondergebracht in een van de getransformeerde ministeriegebouwen in het gebied. Het bruto oppervlak van Campus Den Haag, locatie Wijnhaven beslaat 16.663 m².

In het kader van de herbestemming heeft Geurst & Schulze Architecten het gebouw voorzien van nieuwe gevels met verdiepingshoge ramen. Verder heeft het architectenbureau een cascadetrap, de trappenhuizen en de sanitaire ruimtes ontworpen.

THE EXISTING

University Leiden - Wijnhavenkwartier

Former **Ministry of Internal Affairs and Kingdom Relations** building.

Transformation designed by
Geurst & Schulze Architects.

It was one of the **largest office transformations** in the Netherlands.
This concerns approximately 50,000 m² of office space that will be given a new purpose.

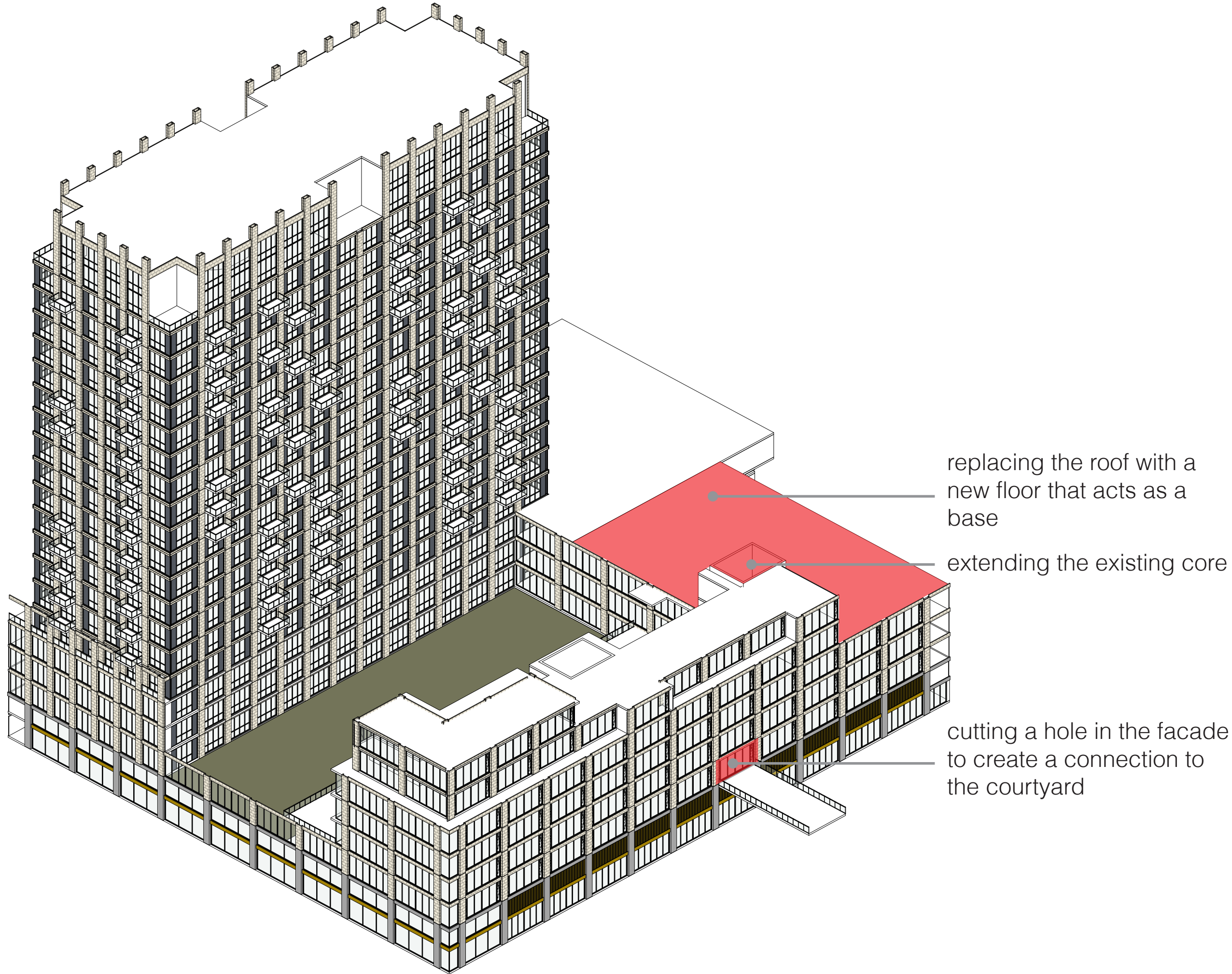
Building has been transformed into a **hybrid building**, including homes, commercial spaces and the faculty campus The Hague from **Leiden University**.



Geurst & Schulze Architects, Wijnhavenkwartier, 2017, The Hague, Netherlands.

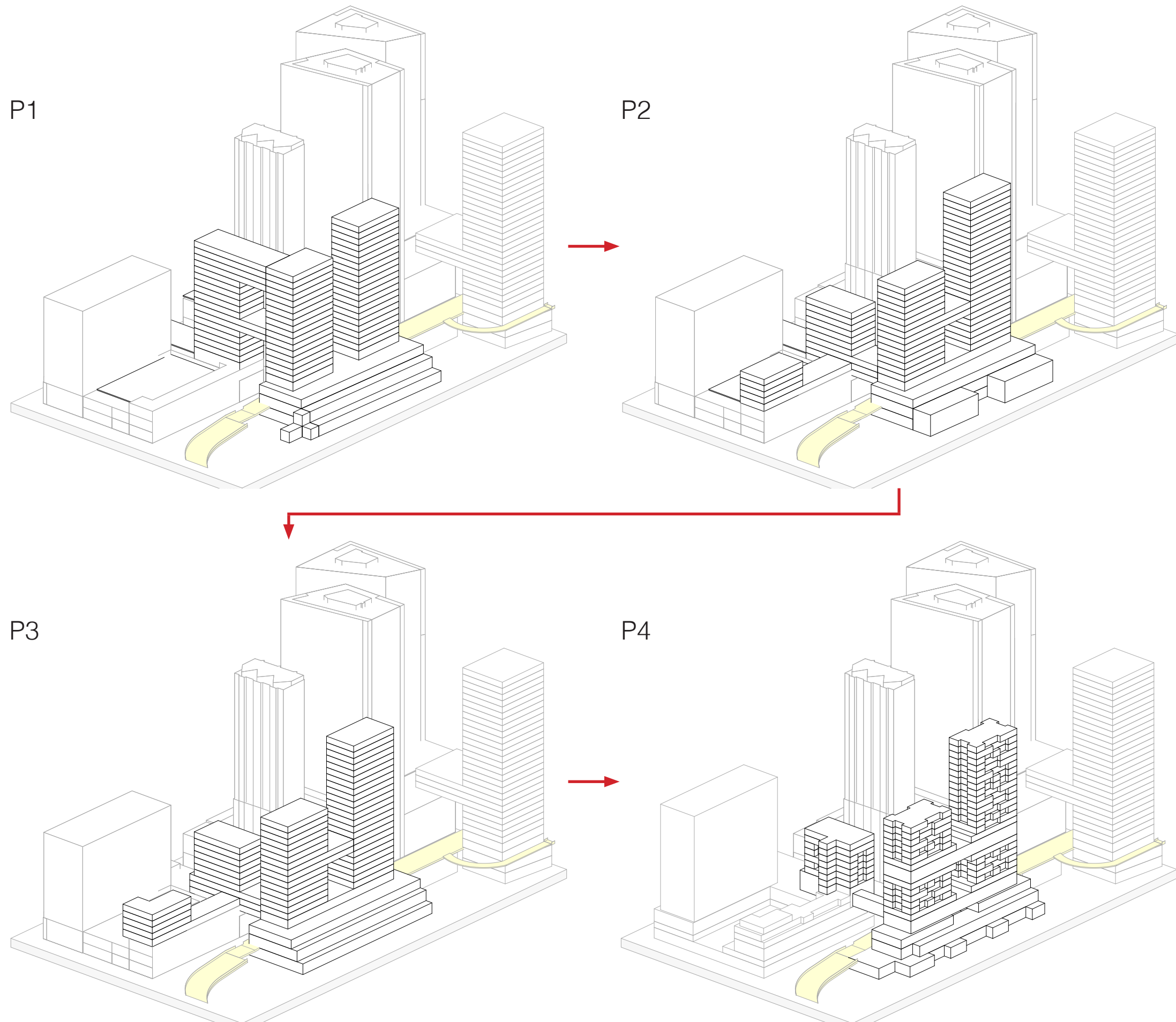
THE EXISTING

University intervention



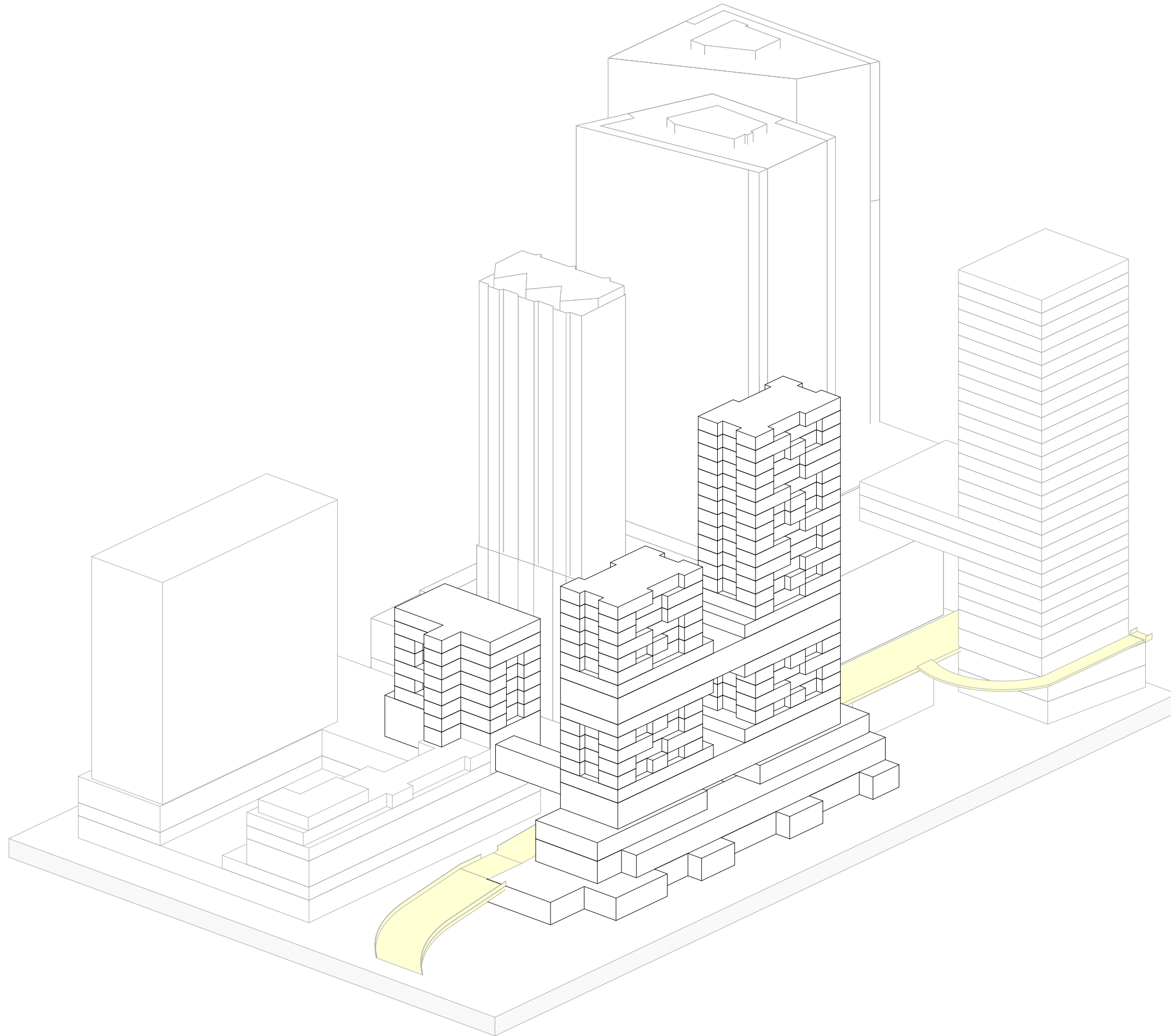
CONCEPT DIAGRAMS

Mass progress



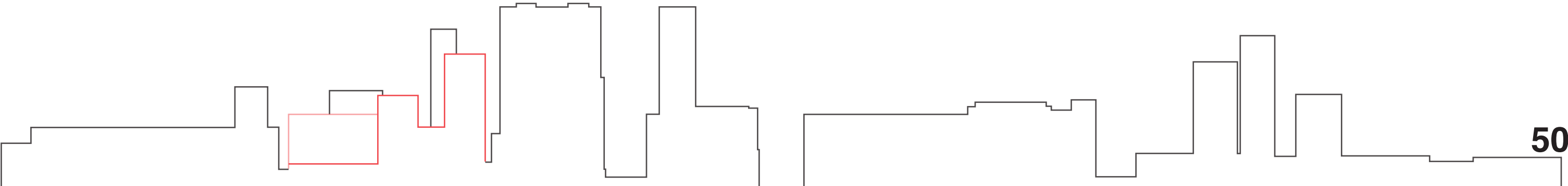
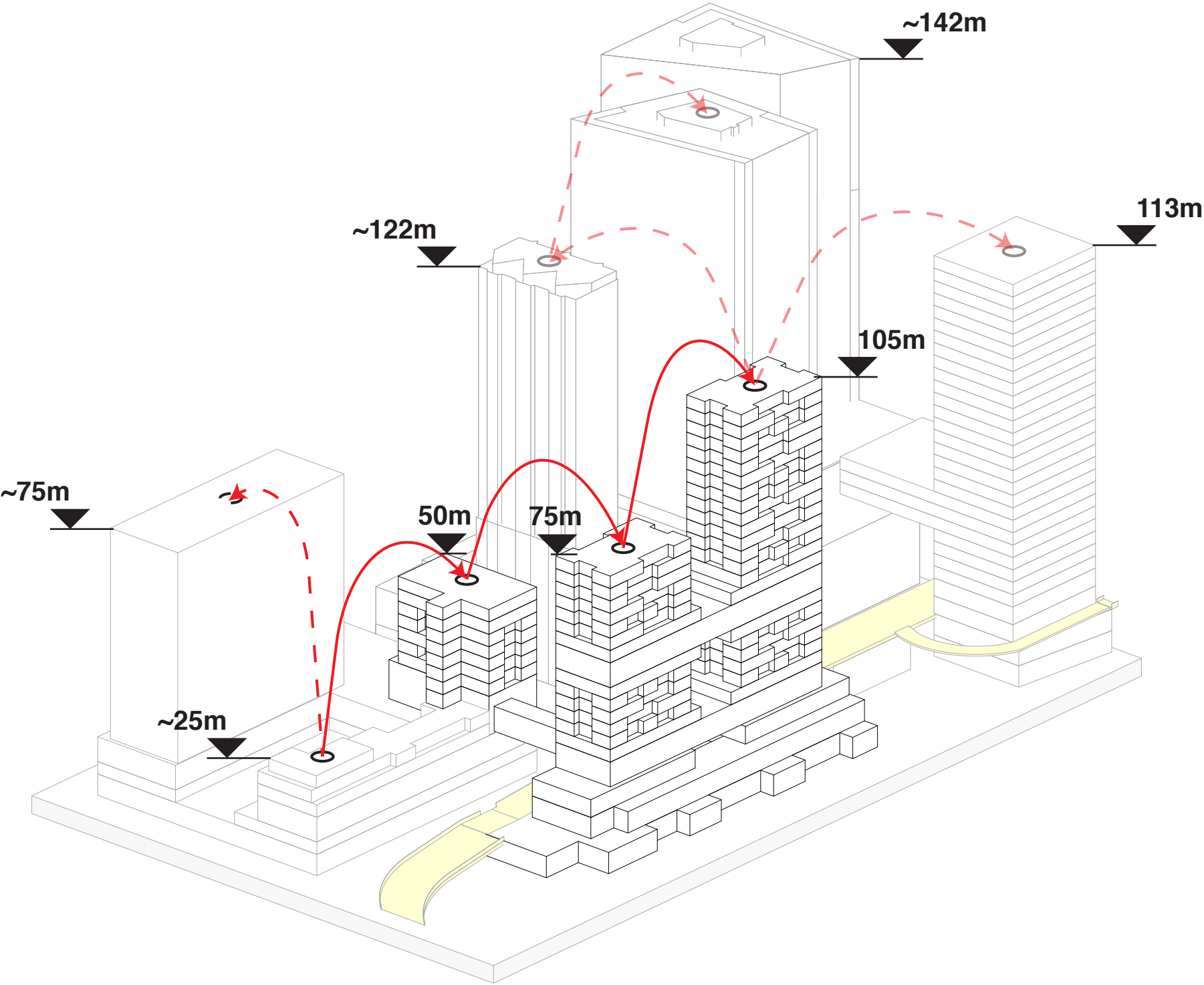
CONCEPT DIAGRAMS

Final mass



CONCEPT DIAGRAMS

Height relations



POROSITY STRATEGY

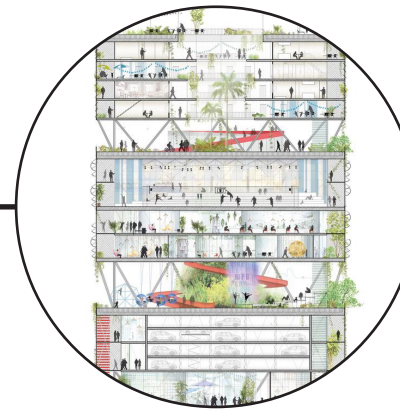
Urban scale



URBAN SCALE



POCKET PARKS



MIXED-USE



COURTYARDS

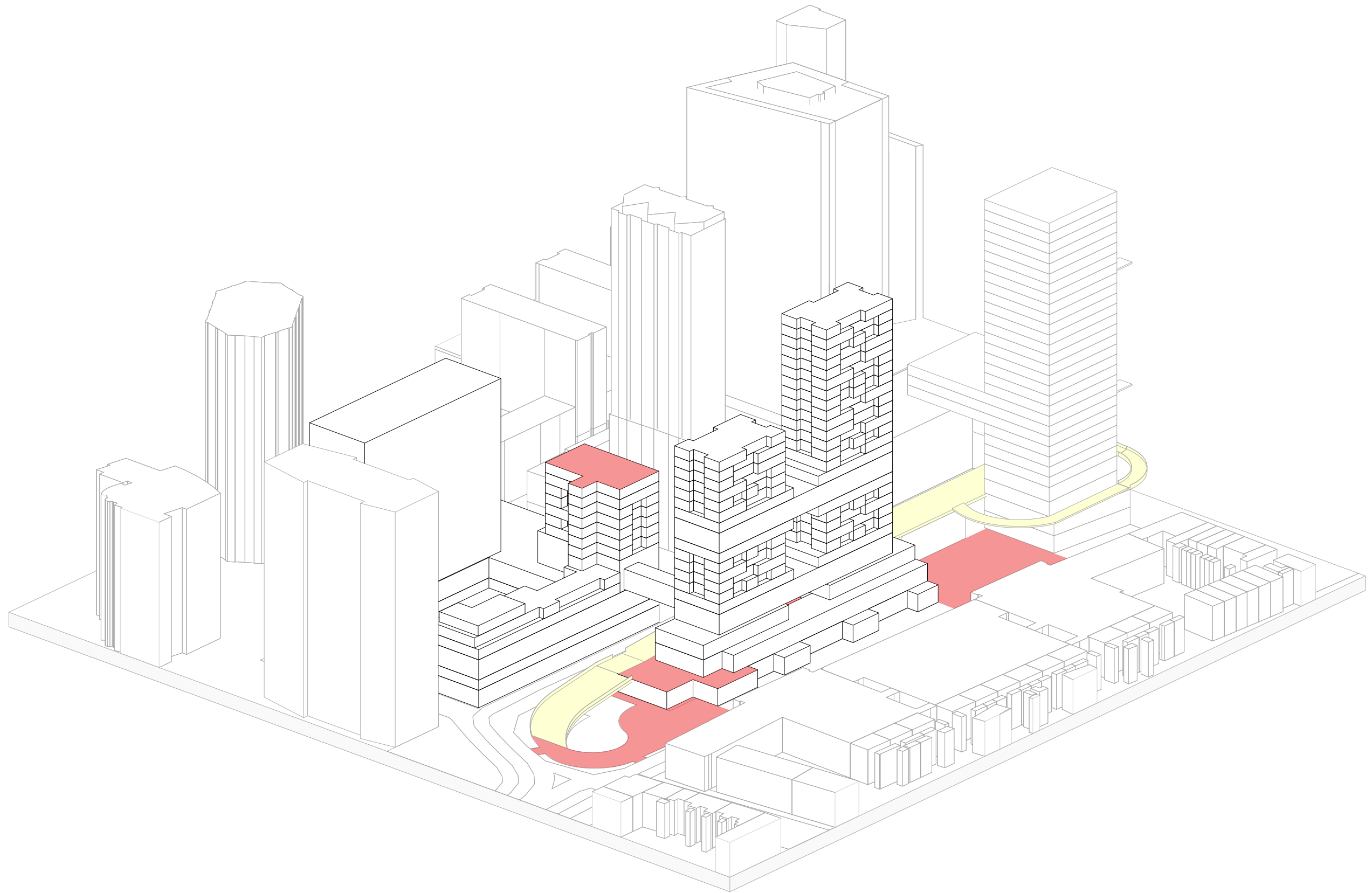
CONCEPT DIAGRAM

Parks/green



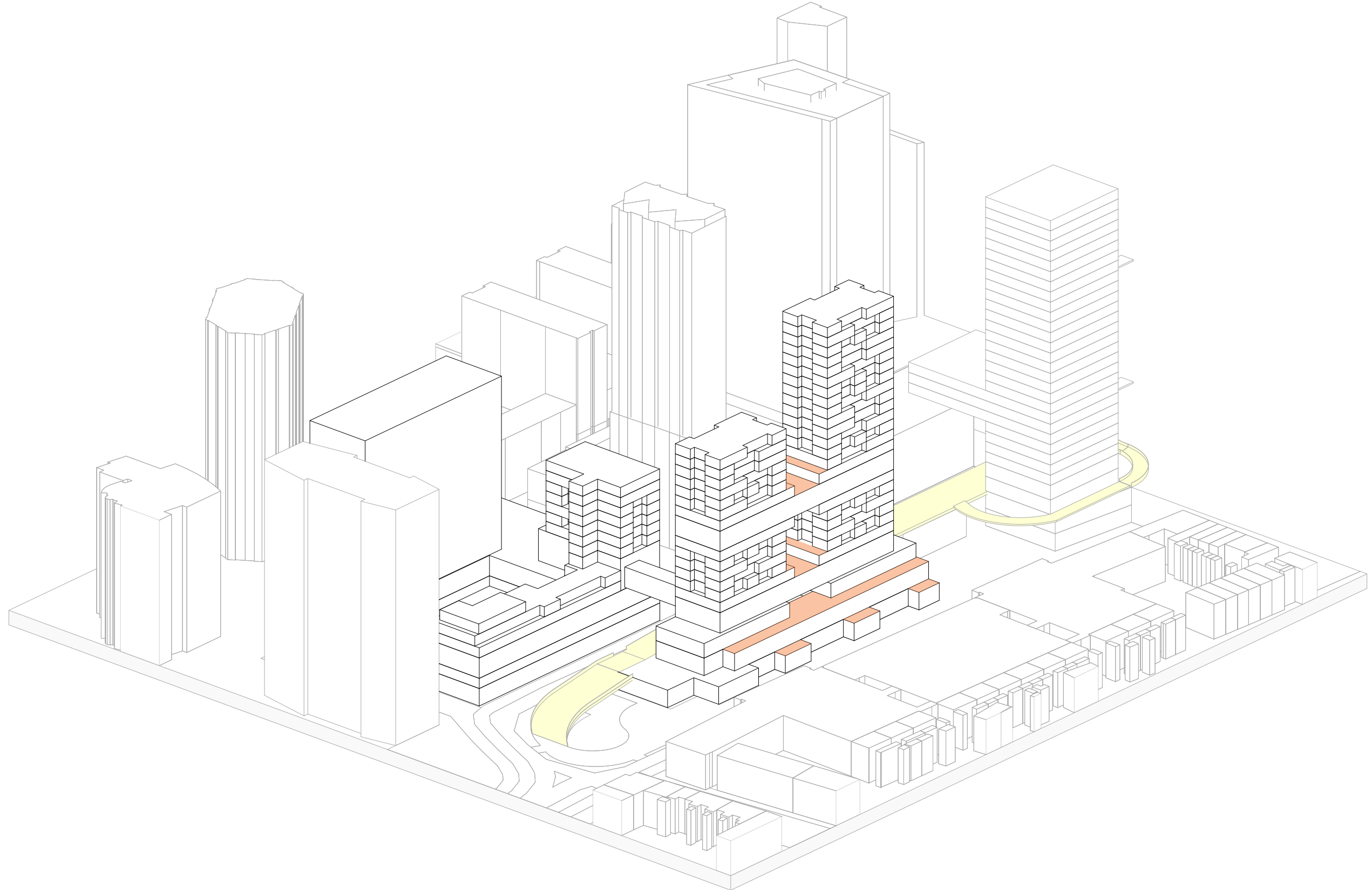
CONCEPT DIAGRAM

Public courtyards



CONCEPT DIAGRAM

Public terraces



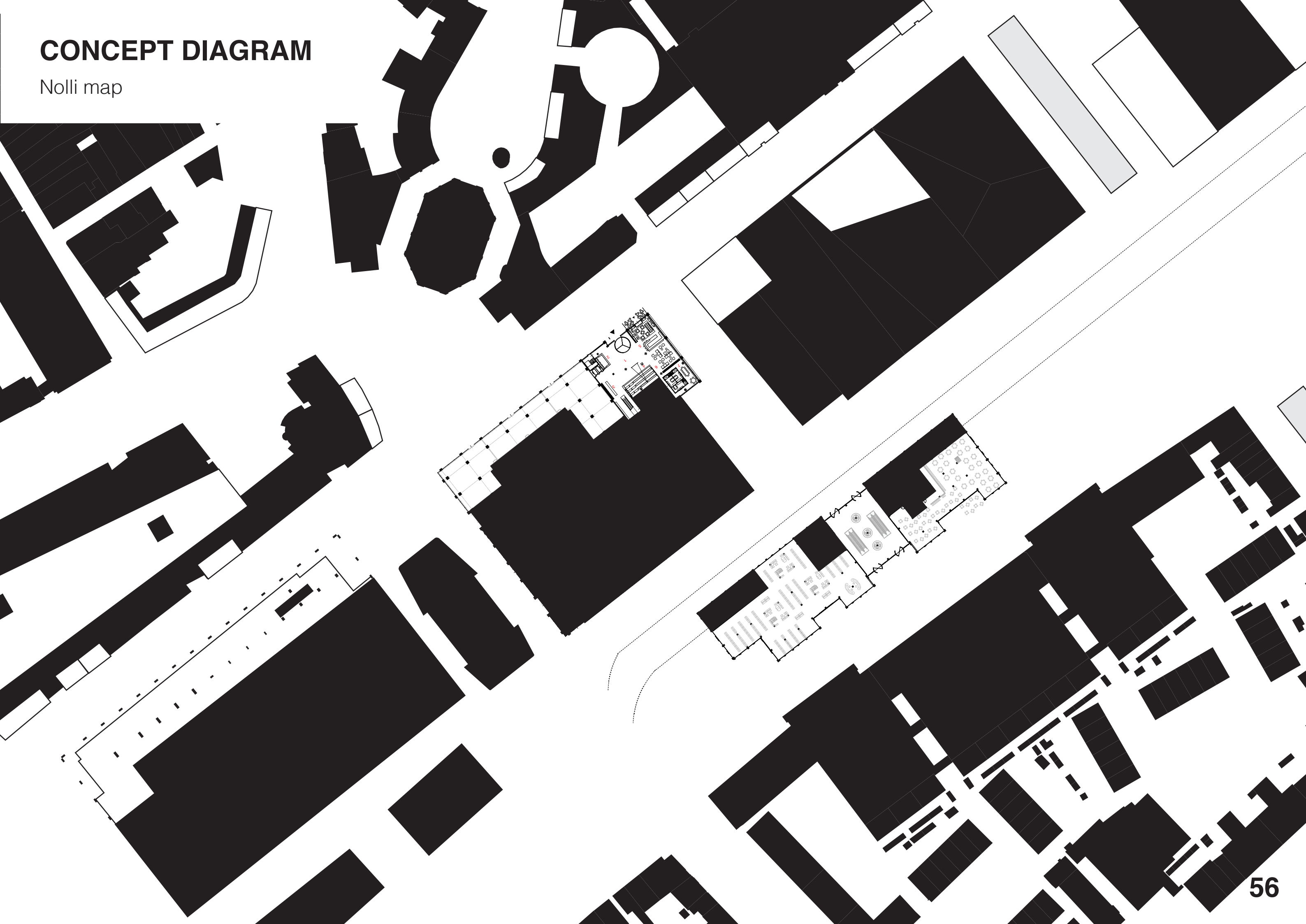
CONCEPT DIAGRAM

Urban flows



CONCEPT DIAGRAM

Nolli map





An architectural rendering of a modern urban building complex. The scene features several multi-story buildings with a mix of white and light yellow facades and large glass windows. Some buildings have unique, stepped or cantilevered upper floors. The foreground shows a street with cars, a red-paved pedestrian area, and several green trees. People are depicted walking on the sidewalks. The sky is blue with some clouds. A large, bold red text overlay is centered in the middle of the image.

BUILDING SCALE

POROSITY STRATEGY

Building scale



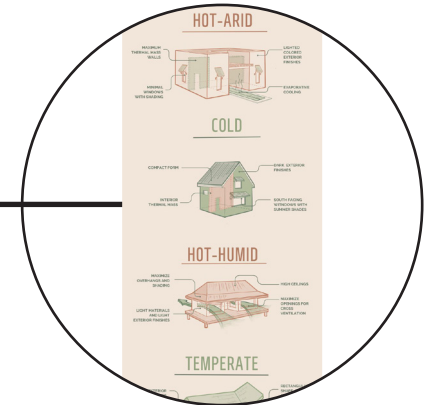
BUILDING SCALE



FACADE SETBACKS



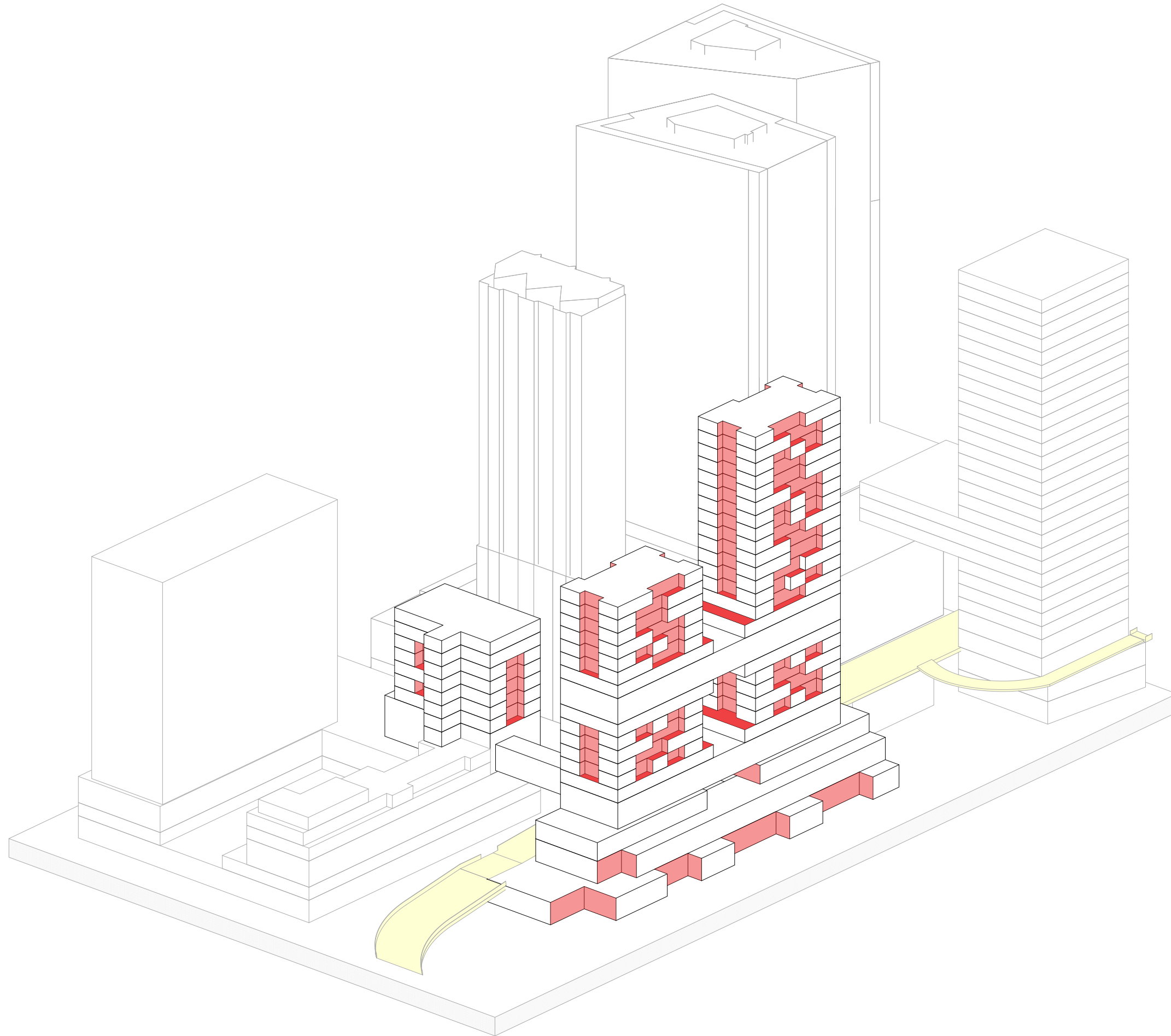
ATRIUMS



CLIMATE

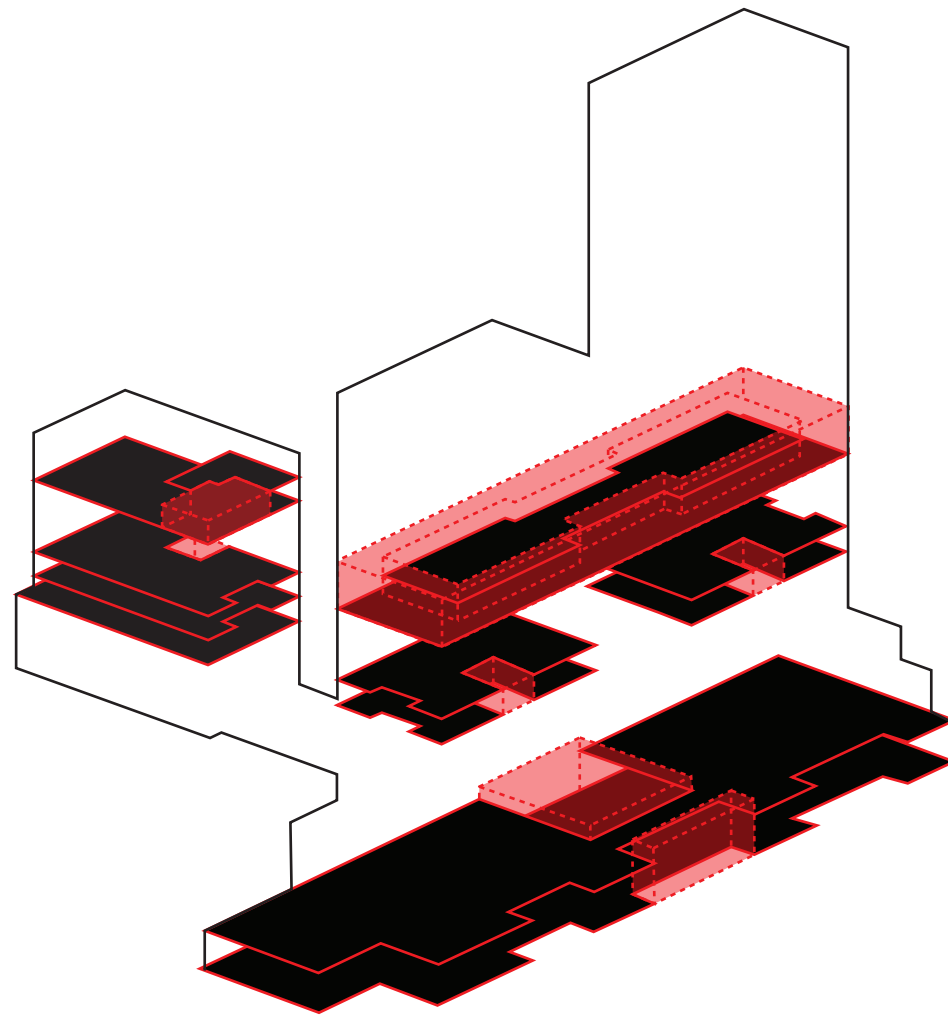
CONCEPT DIAGRAMS

Facade setbacks



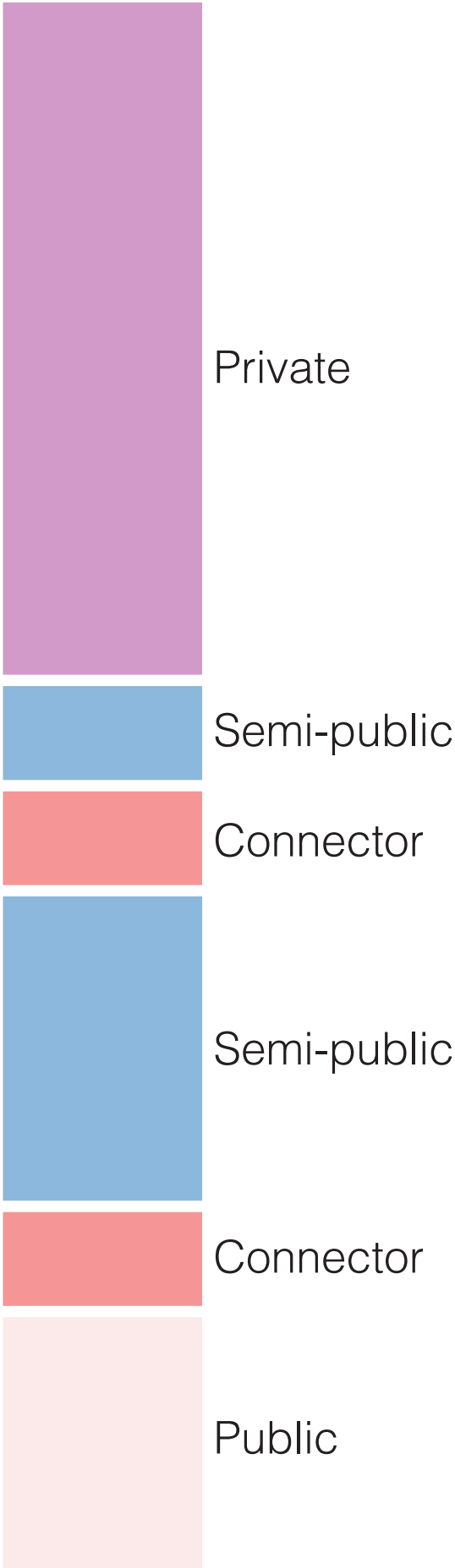
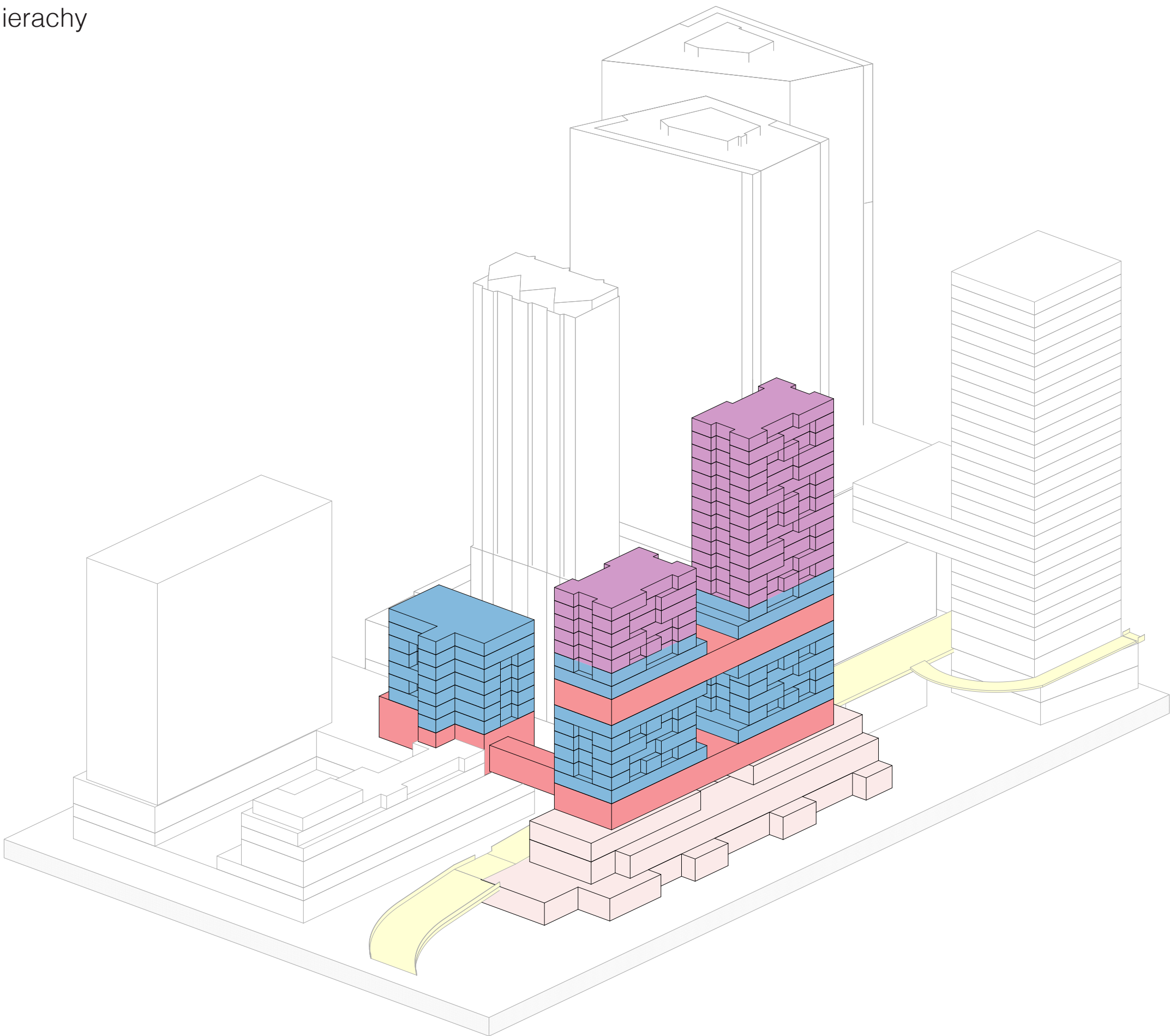
CONCEPT DIAGRAMS

Atriums



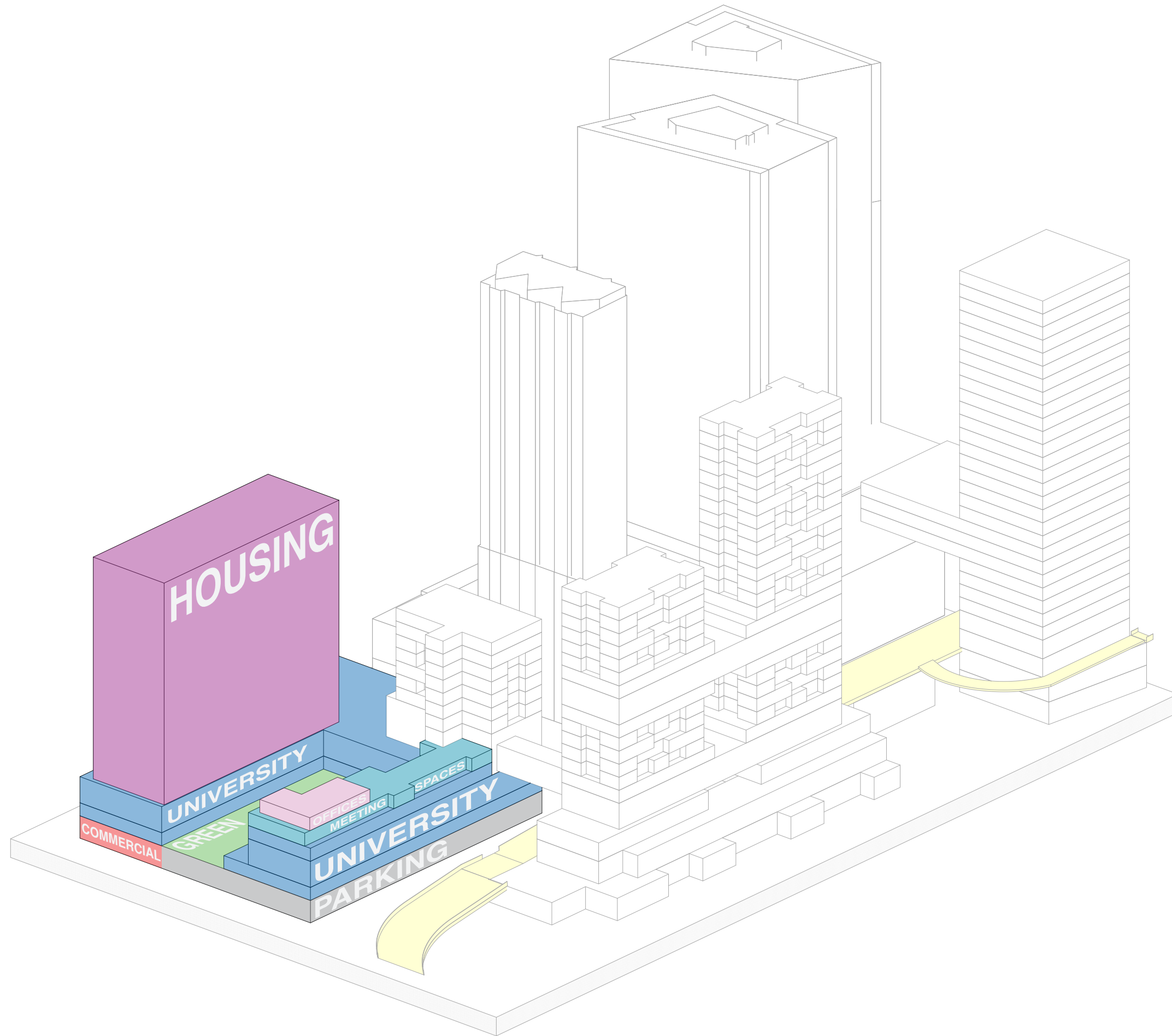
CONCEPT DIAGRAMS

Program hierachy



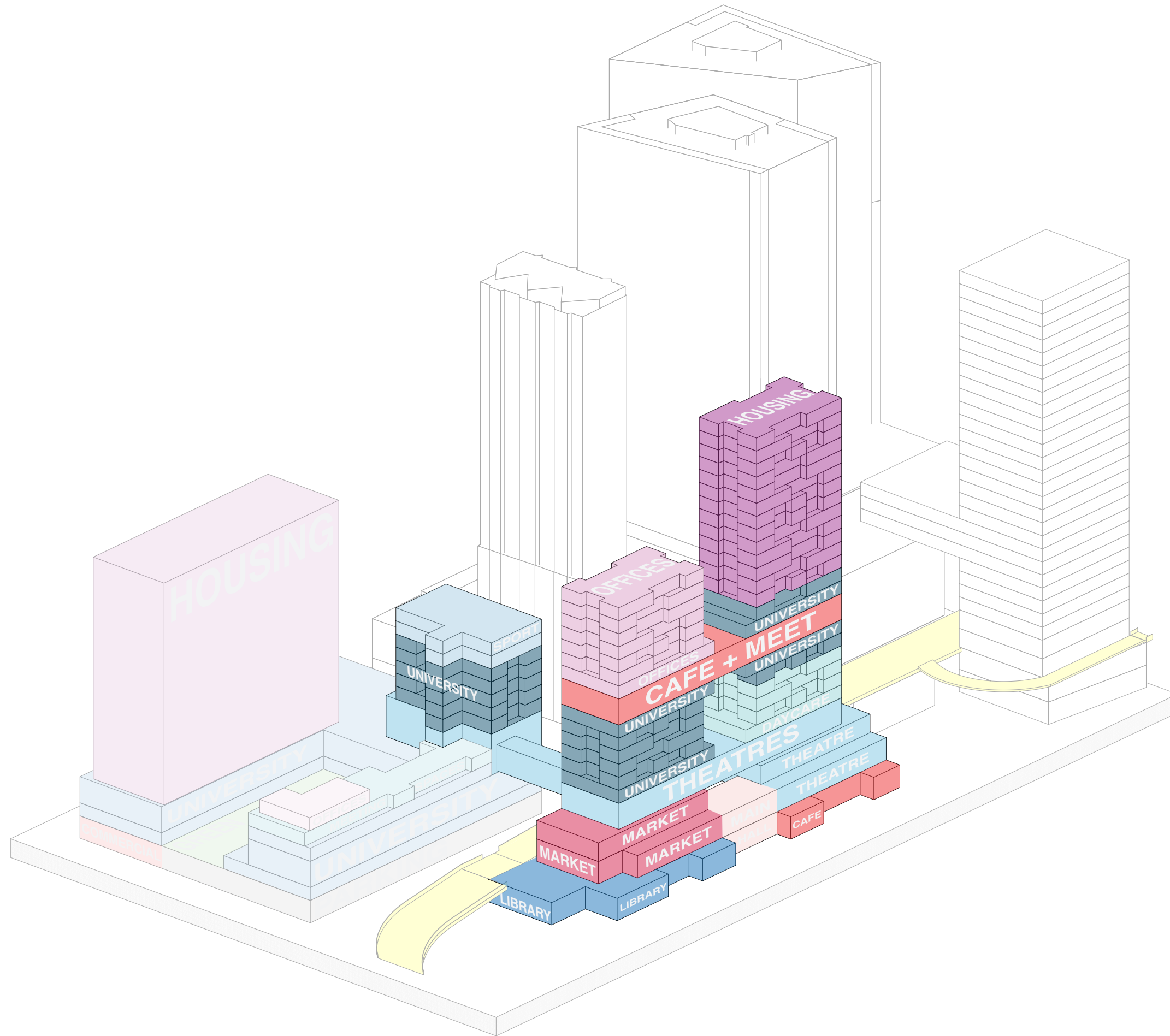
CONCEPT DIAGRAMS

Program existing



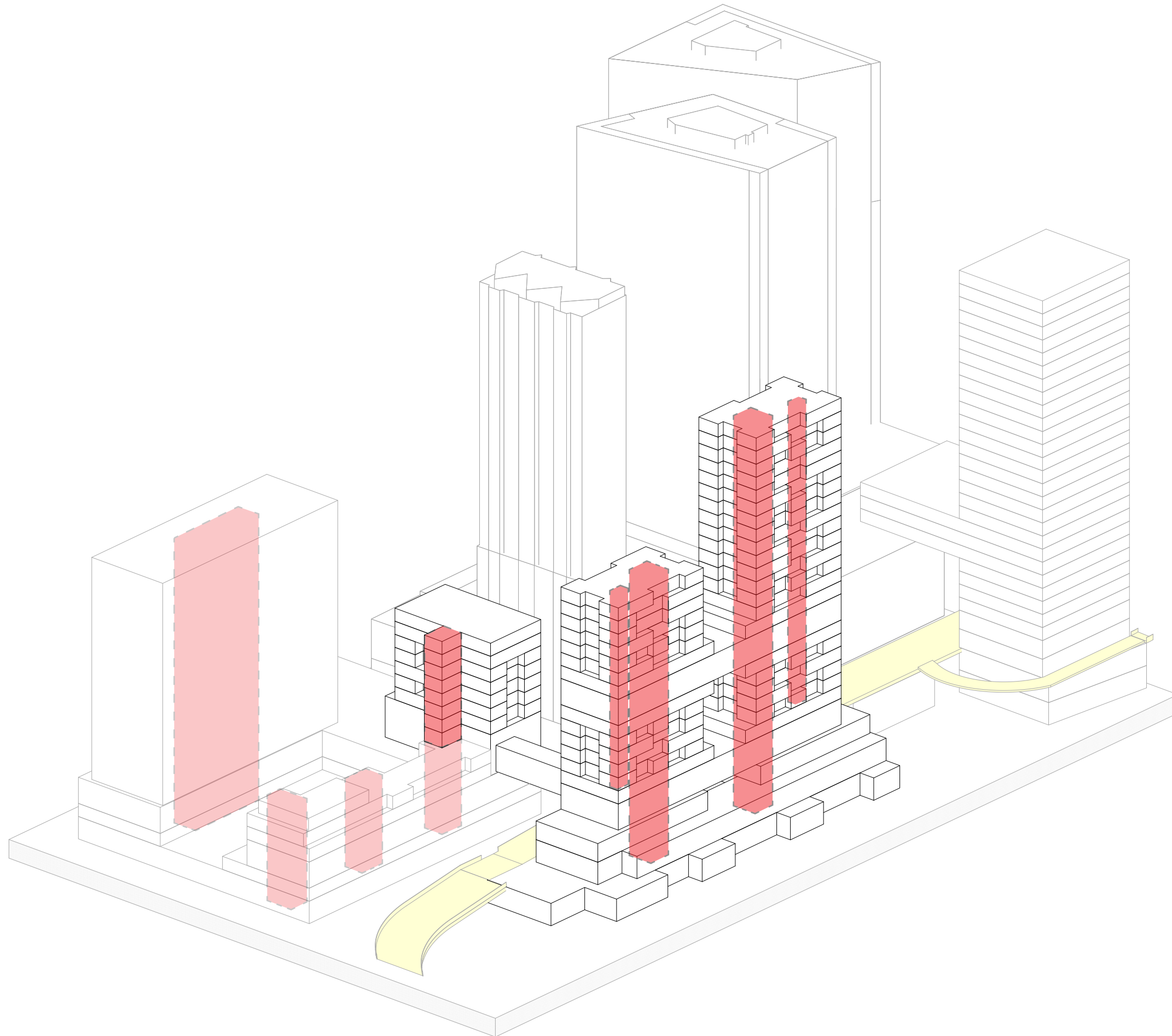
CONCEPT DIAGRAMS

Program new



CONCEPT DIAGRAMS

Vertical circulation



FINAL DESIGN



FINAL DRAWINGS

Ground floorplan



MAIN HALL



BAR



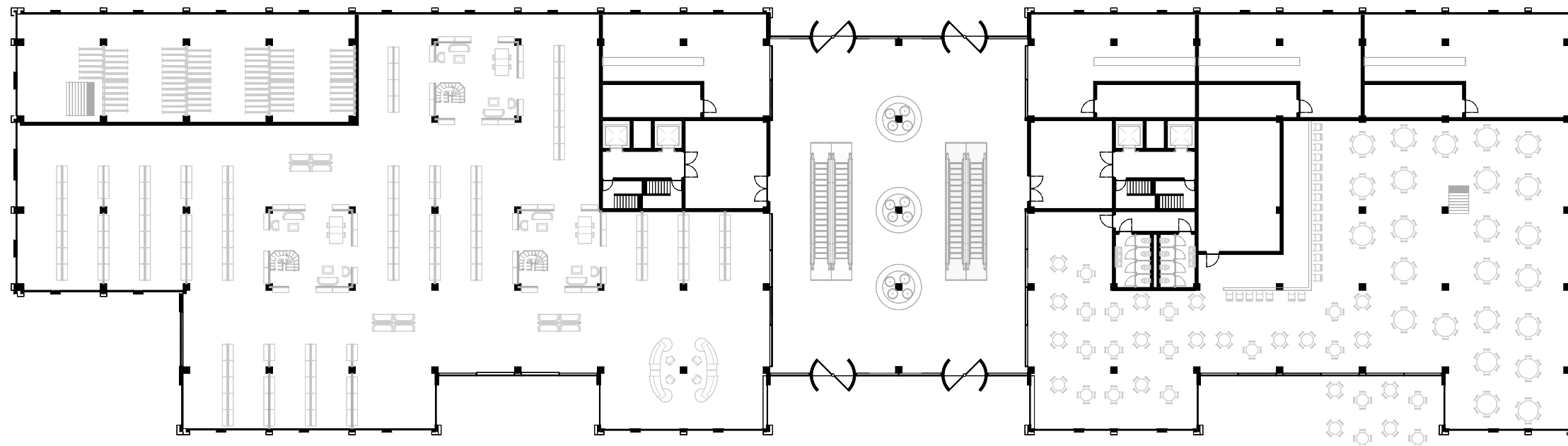
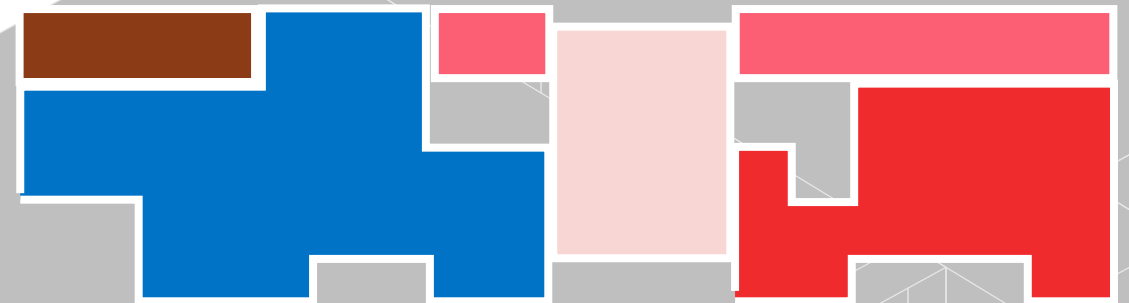
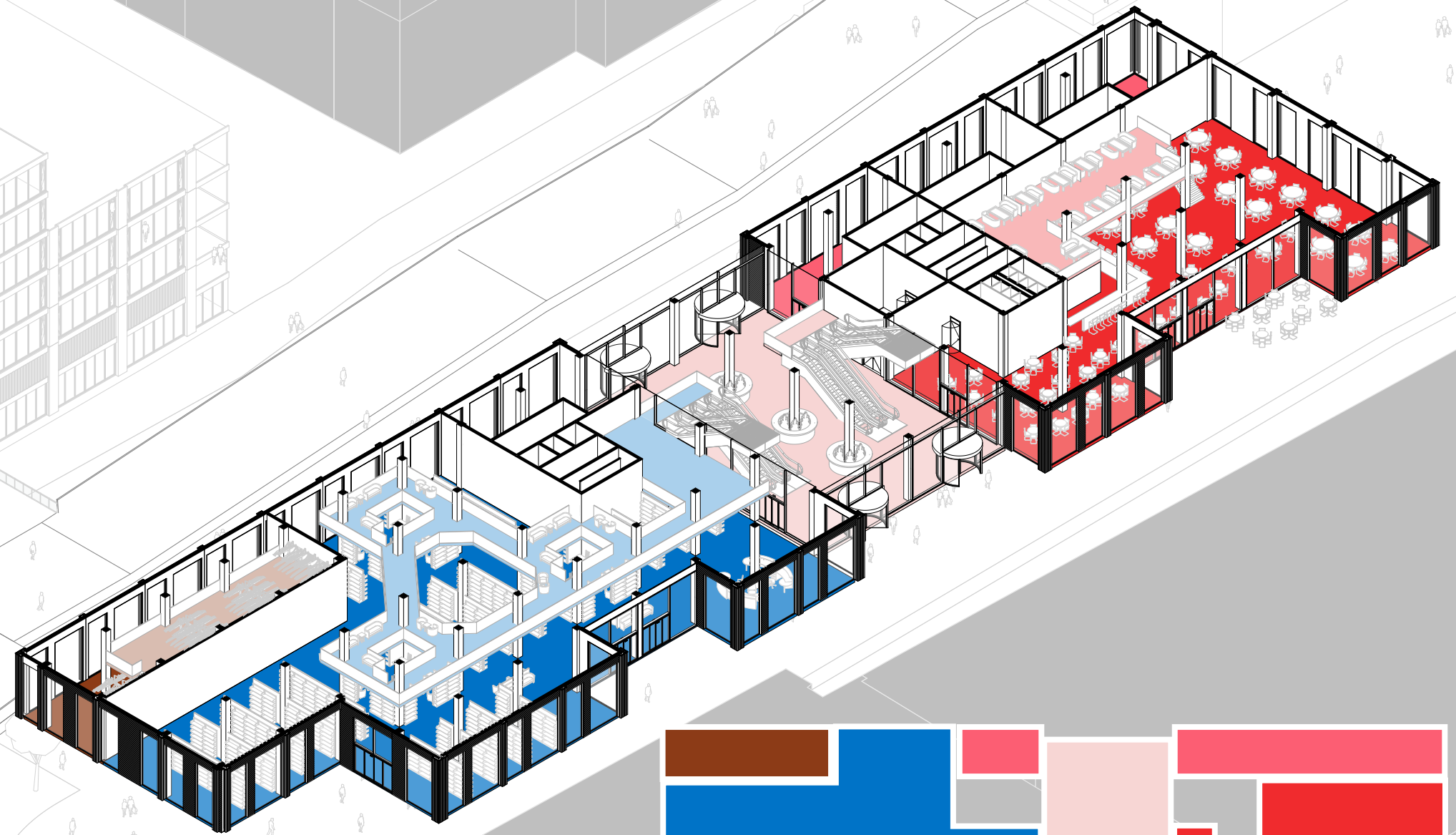
SHOPS



LIBRARY



BIKE STORAGE



MAIN ENTRANCE



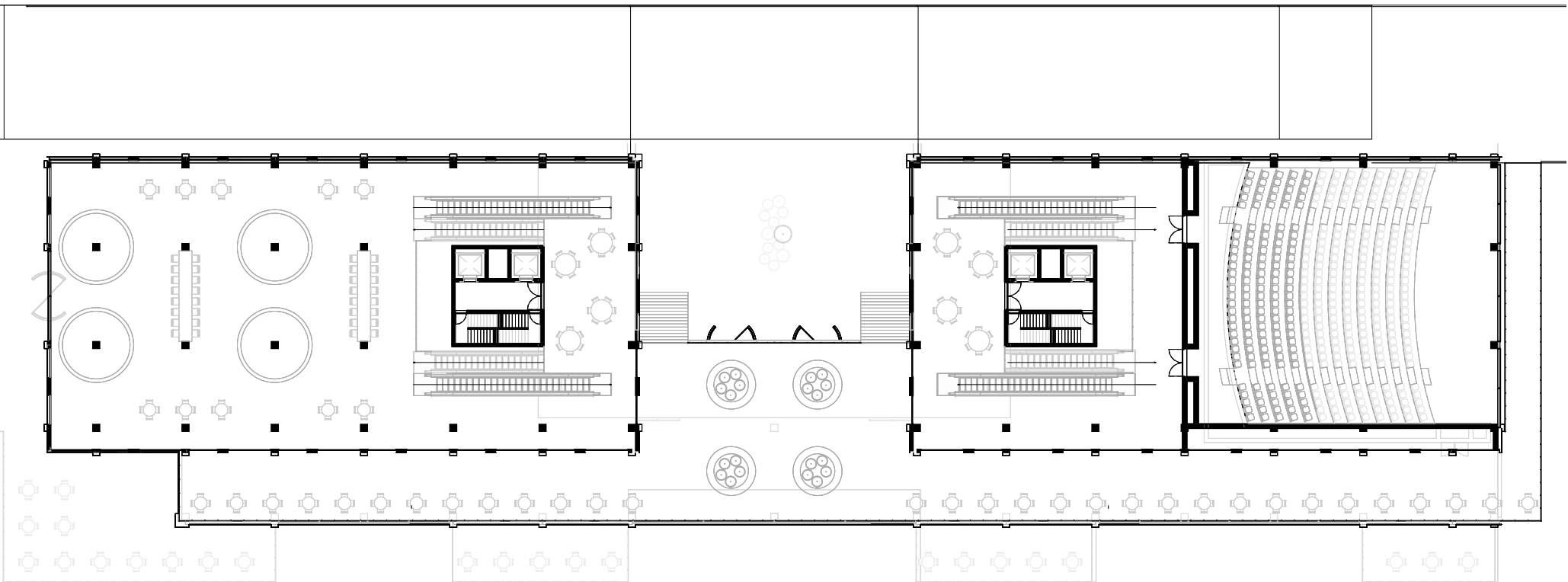
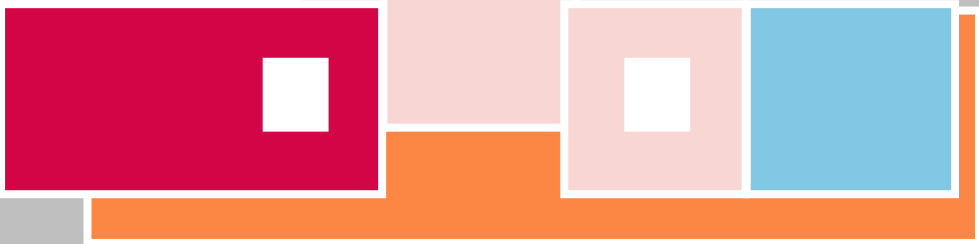
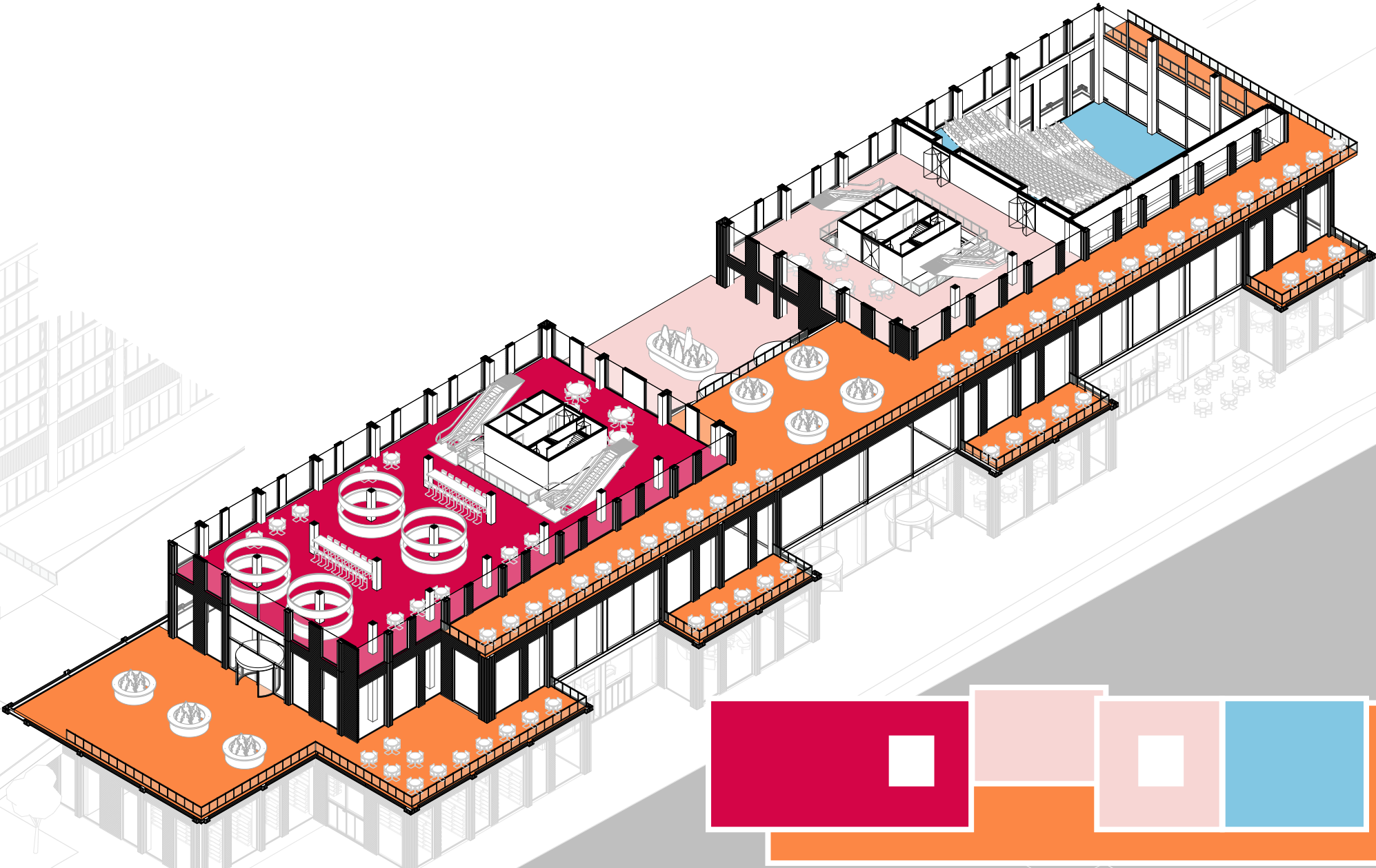
LIBRARY



FINAL DRAWINGS

Second floorplan

-  MAIN HALL
-  LECTURE HALL
-  PUBLIC MARKET
-  TERRACE



LEAVING THE MARKET



LARGE THEATRE



FINAL DRAWINGS

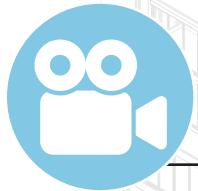
Third floorplan



MAIN HALL



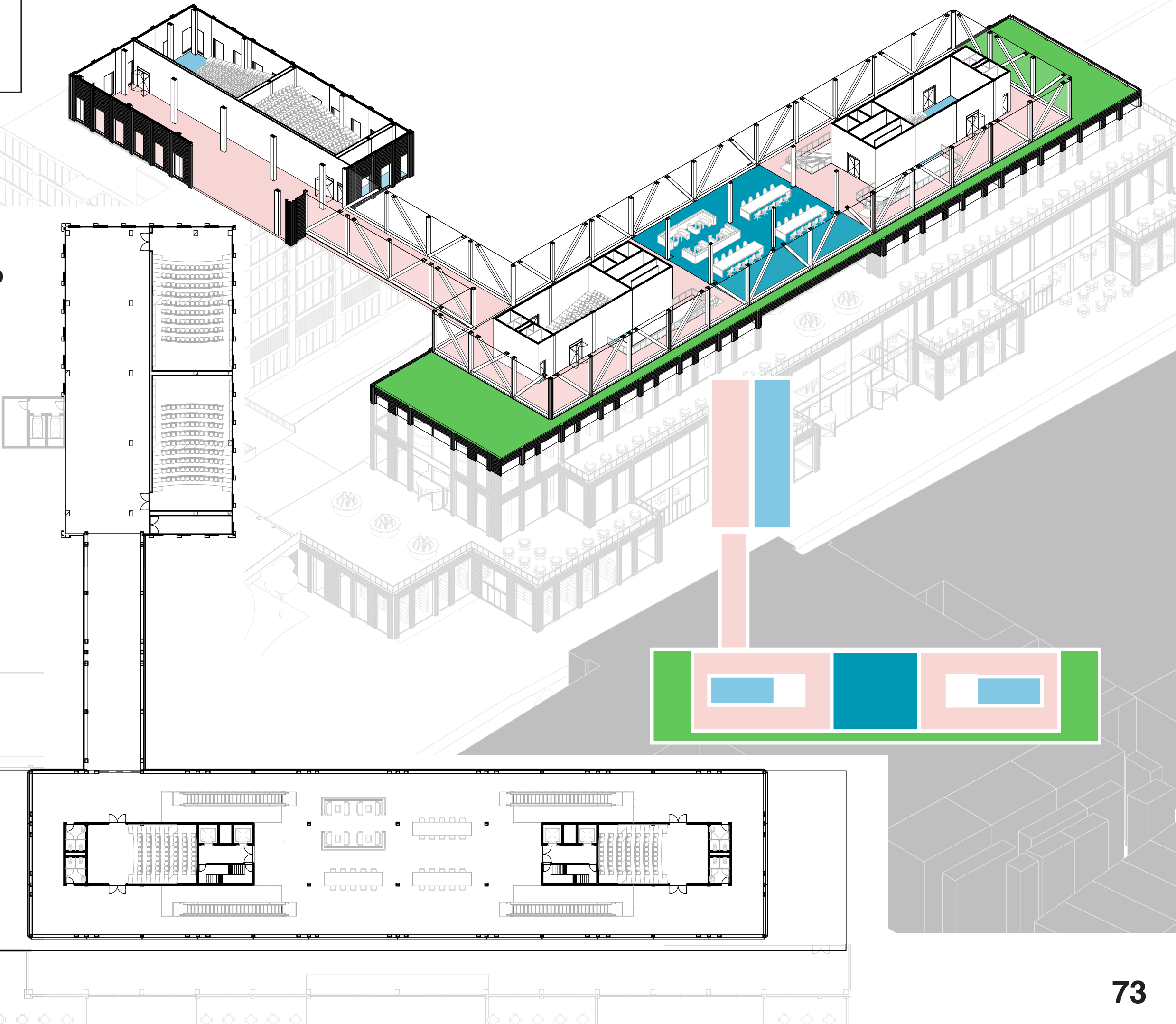
OPENFLOOR STUDIO



LECTURE HALLS



GREEN ROOF



FINAL DRAWINGS

7th floorplan



OPENFLOOR STUDIO



CLASSROOMS



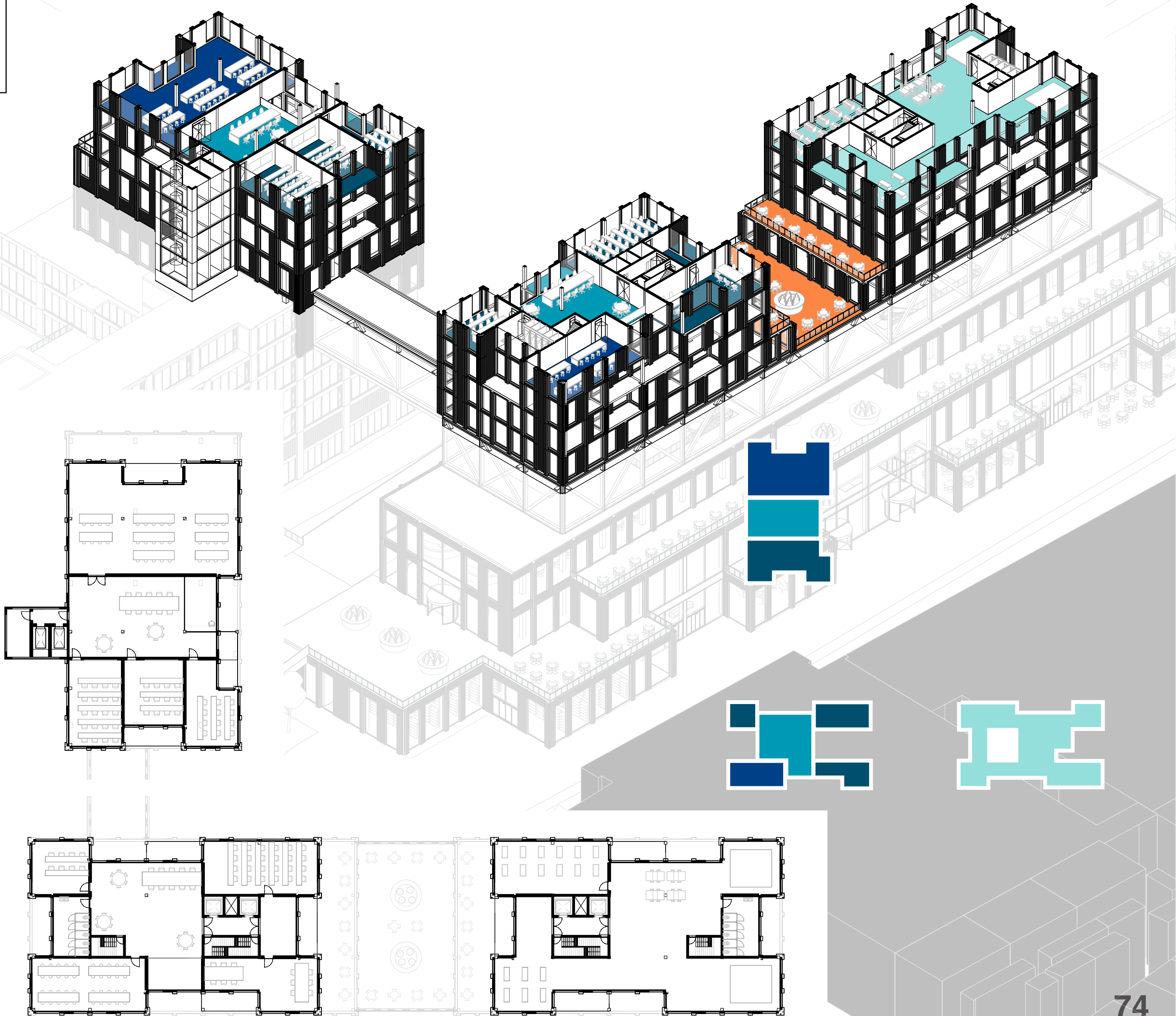
RESEARCH



DAYCARE



TERRACE



FINAL DRAWINGS

10th floorplan



CAFE



HALL



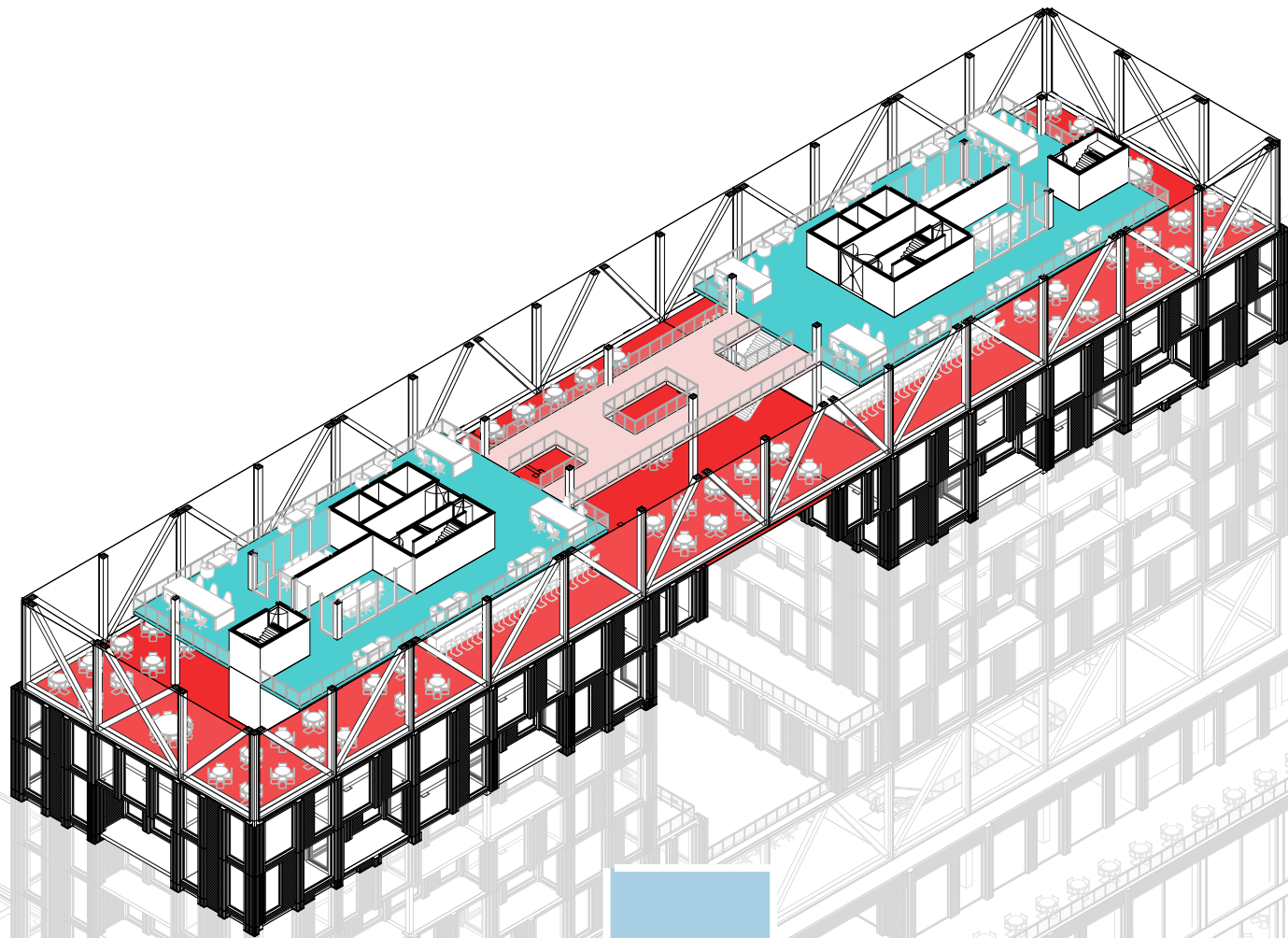
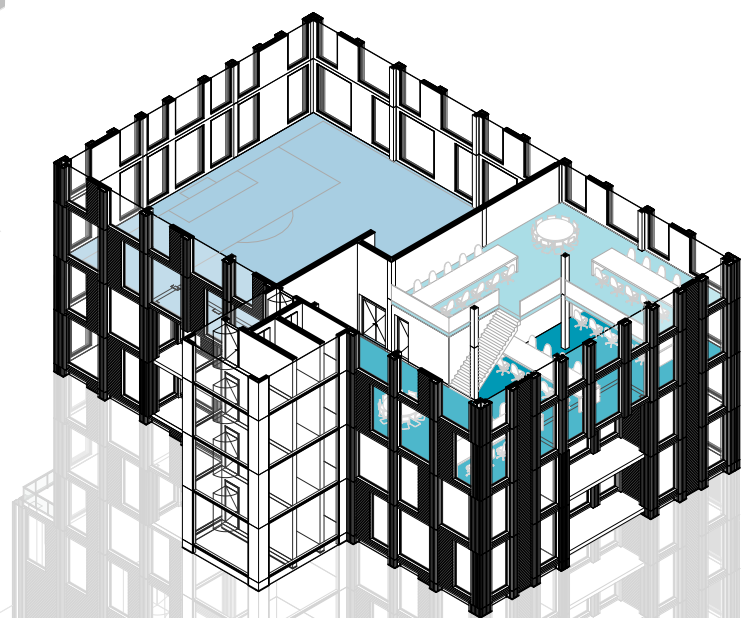
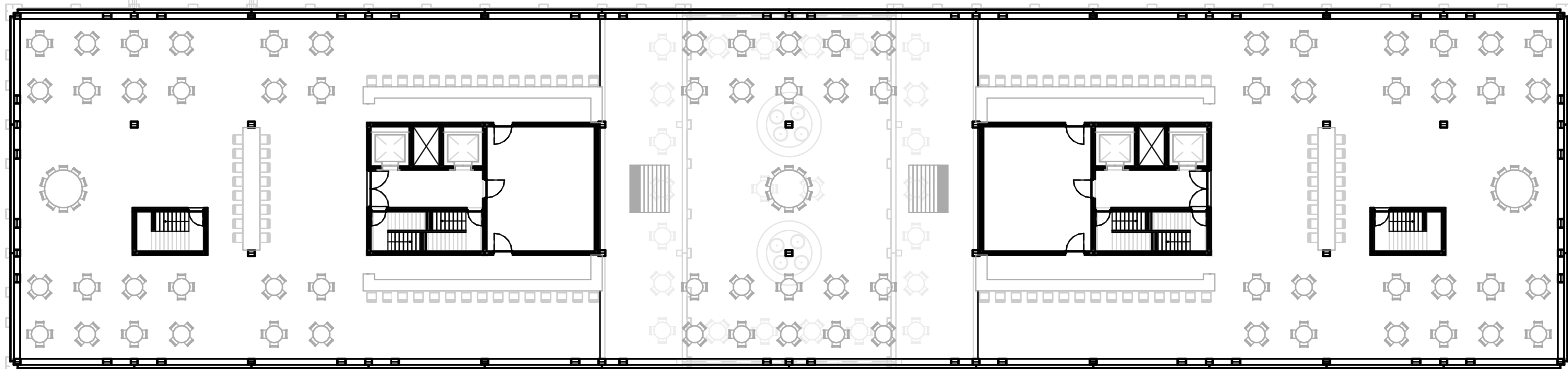
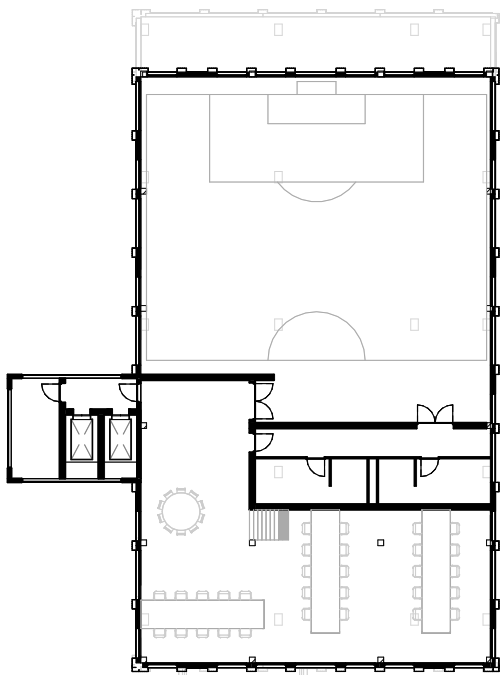
MEETING ROOMS



SPORT



OPENFLOOR STUDIO



FINAL DRAWINGS

15th floorplan



APARTMENTS



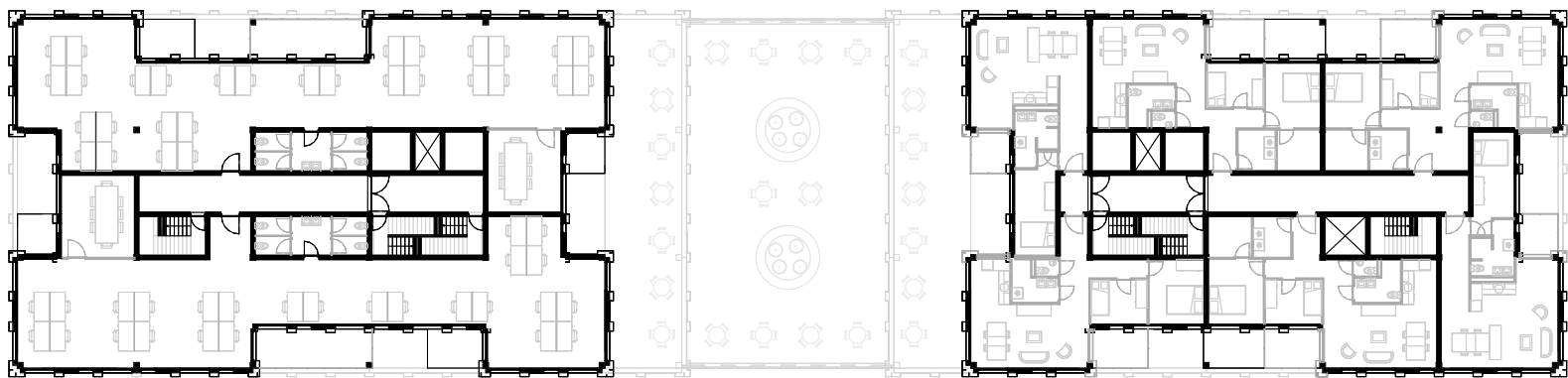
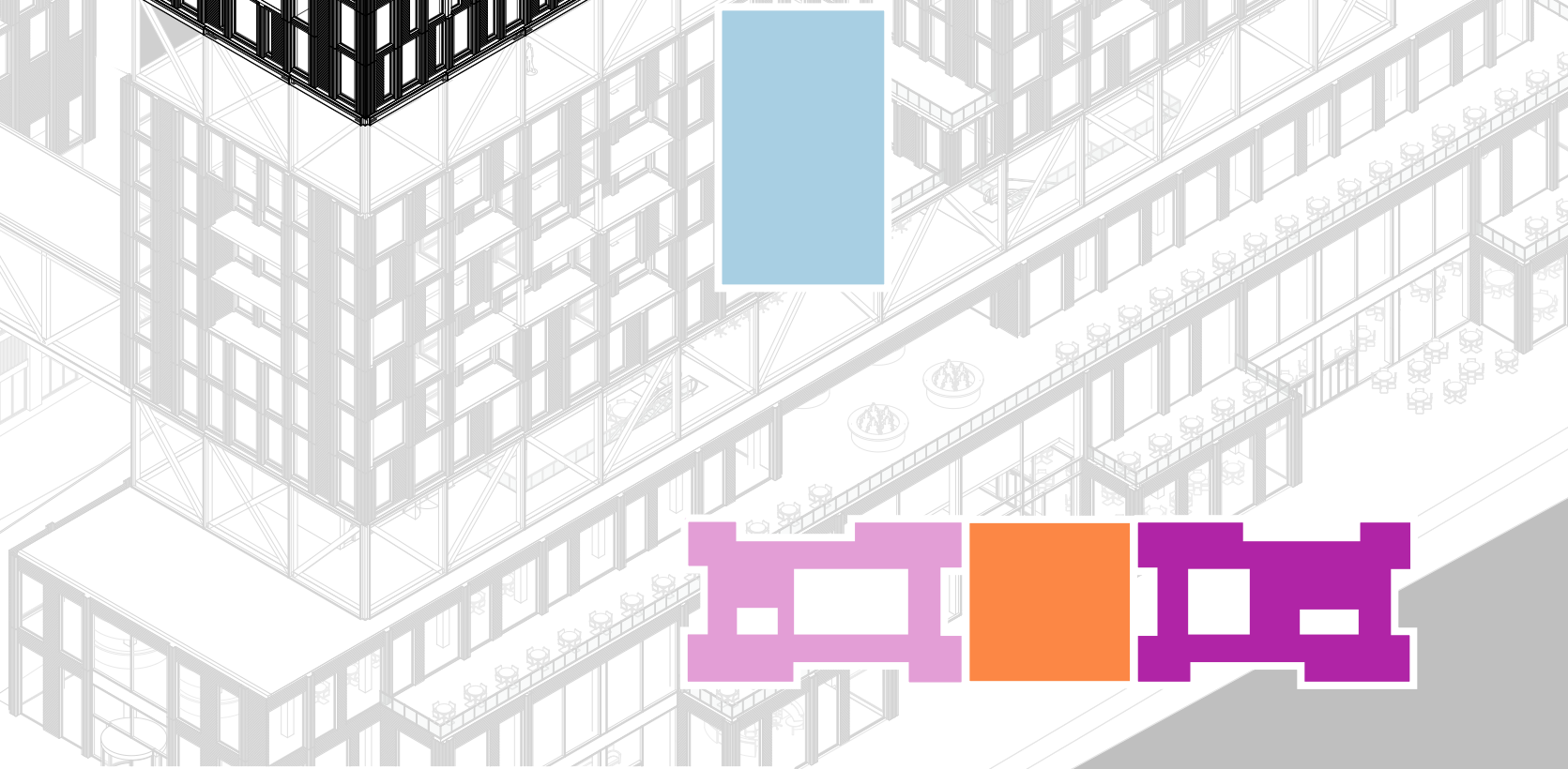
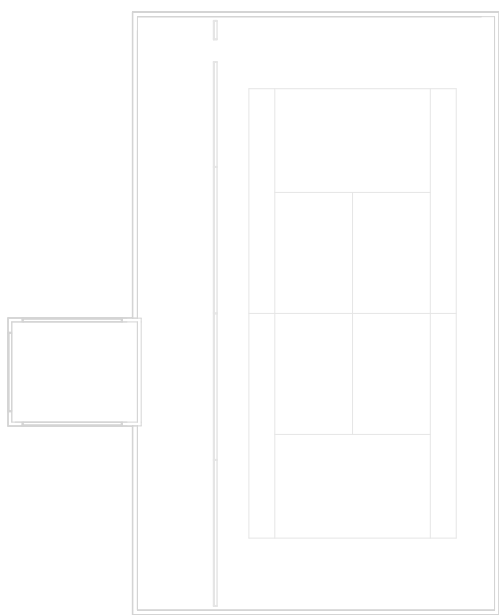
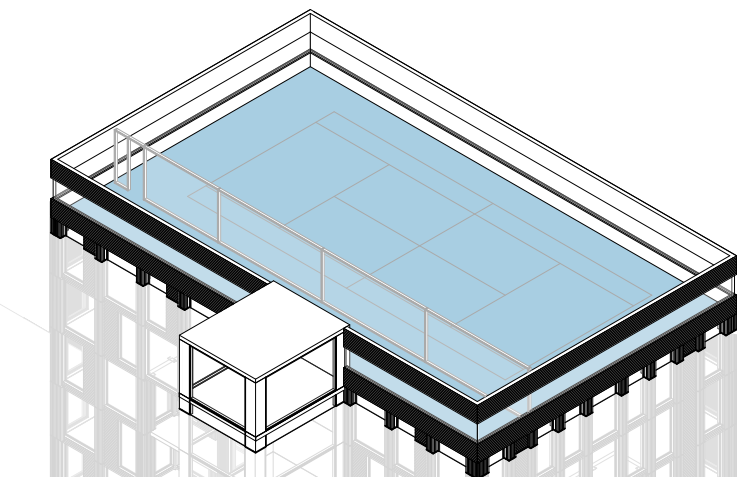
OFFICES



TERRACE



SPORT



FINAL DRAWINGS

22nd floorplan



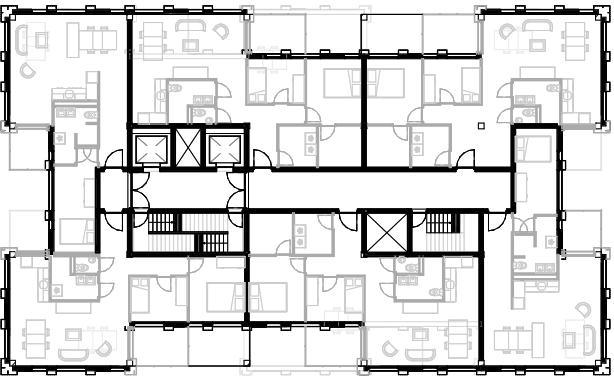
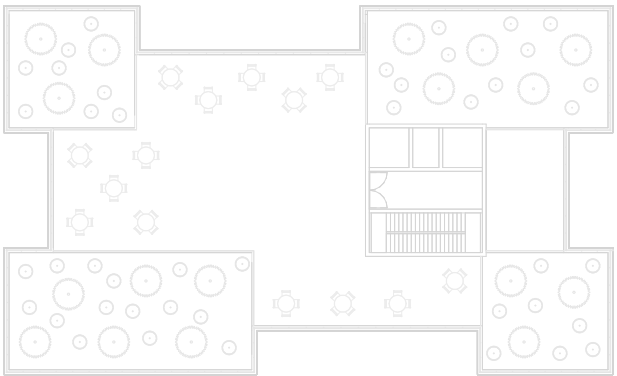
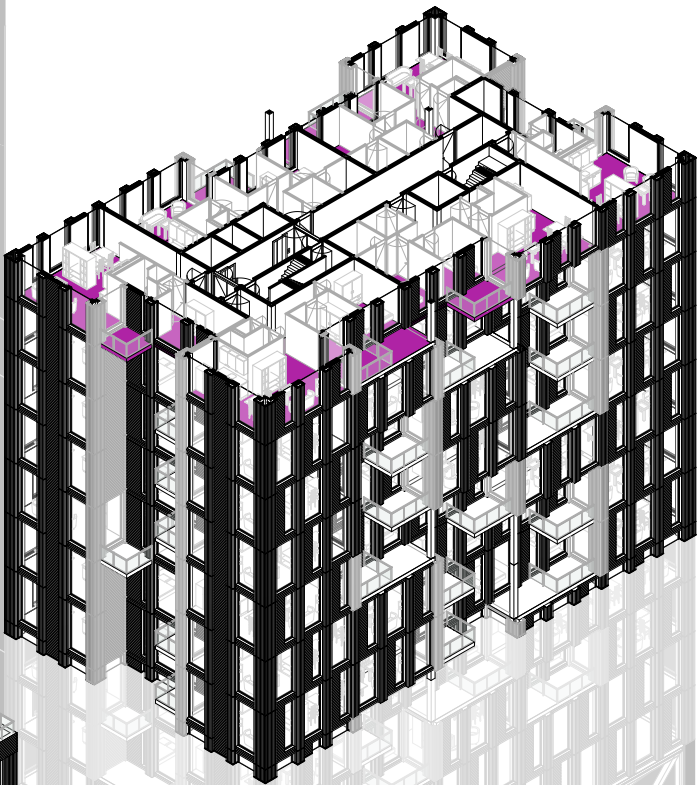
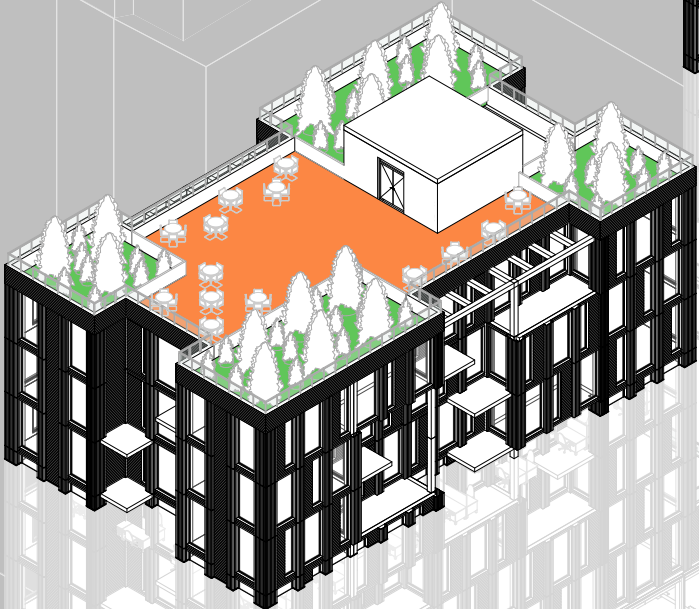
APARTMENTS



TERRACE



GREEN

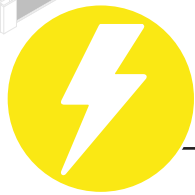


FINAL DRAWINGS

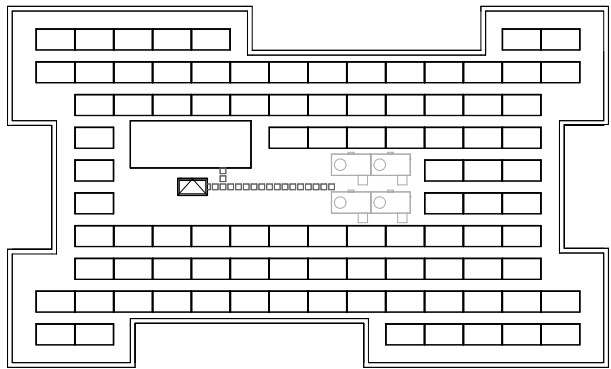
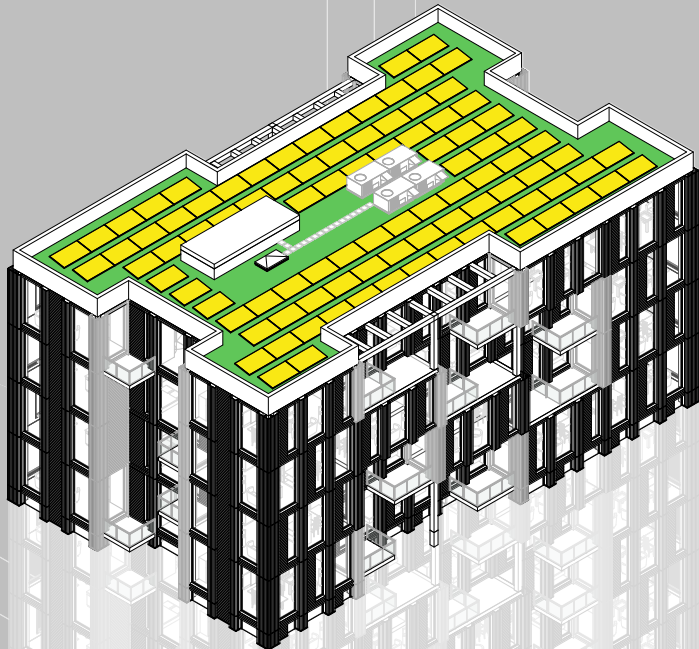
Top Roof



GREEN ROOF

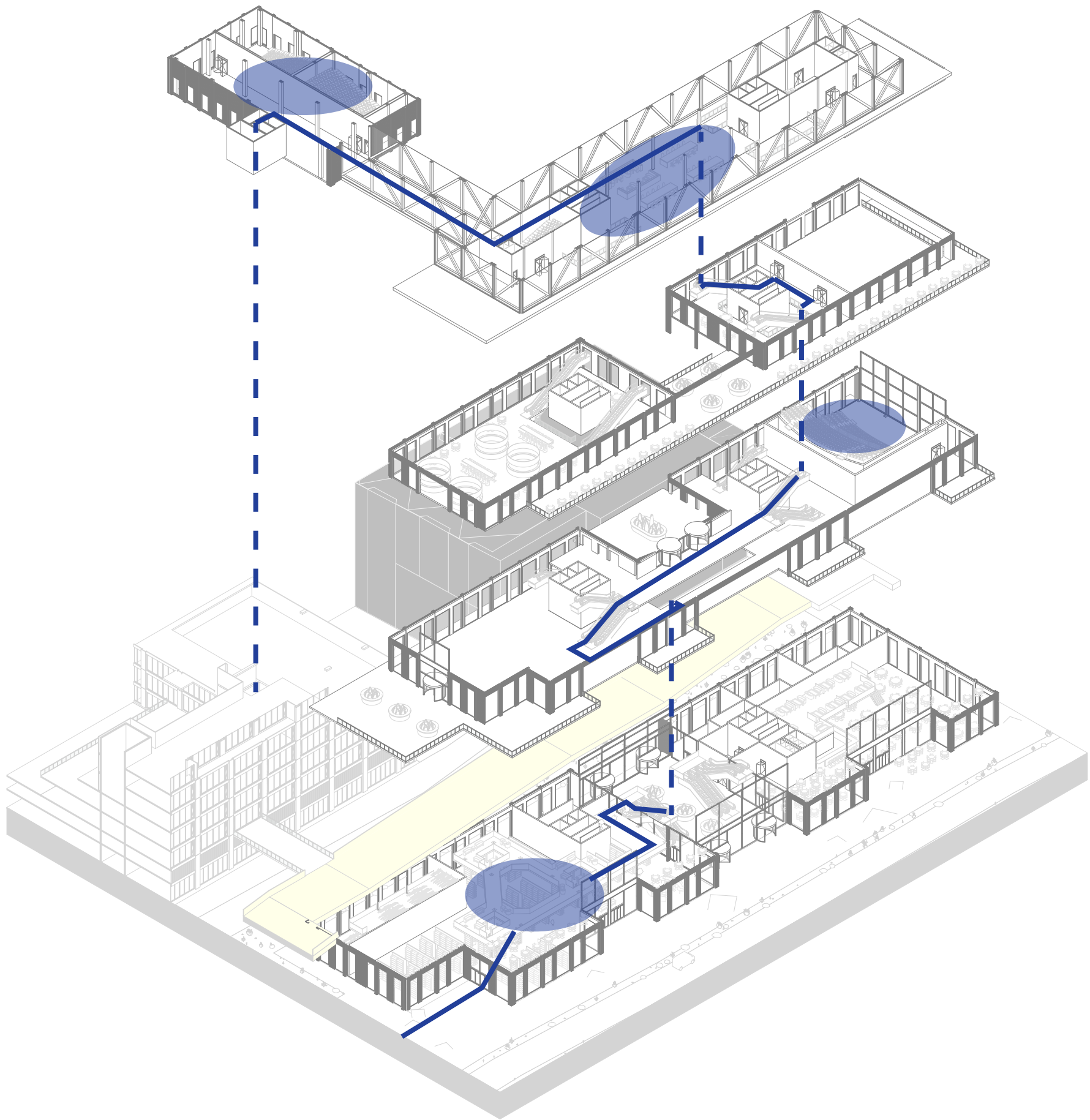


SOLAR PANELS



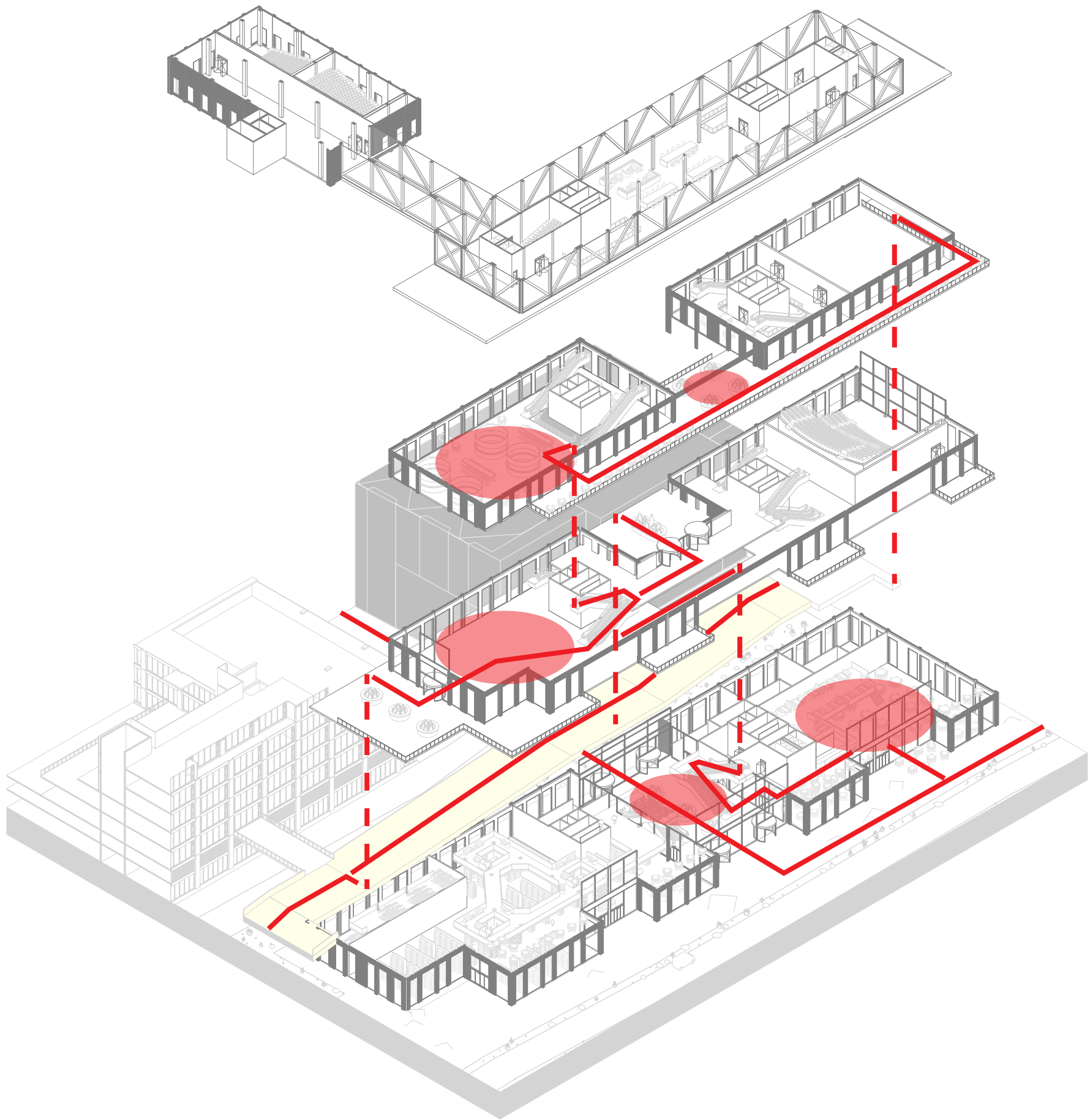
GENERAL FLOWS DIAGRAM

Students



GENERAL FLOWS DIAGRAM

Tourists



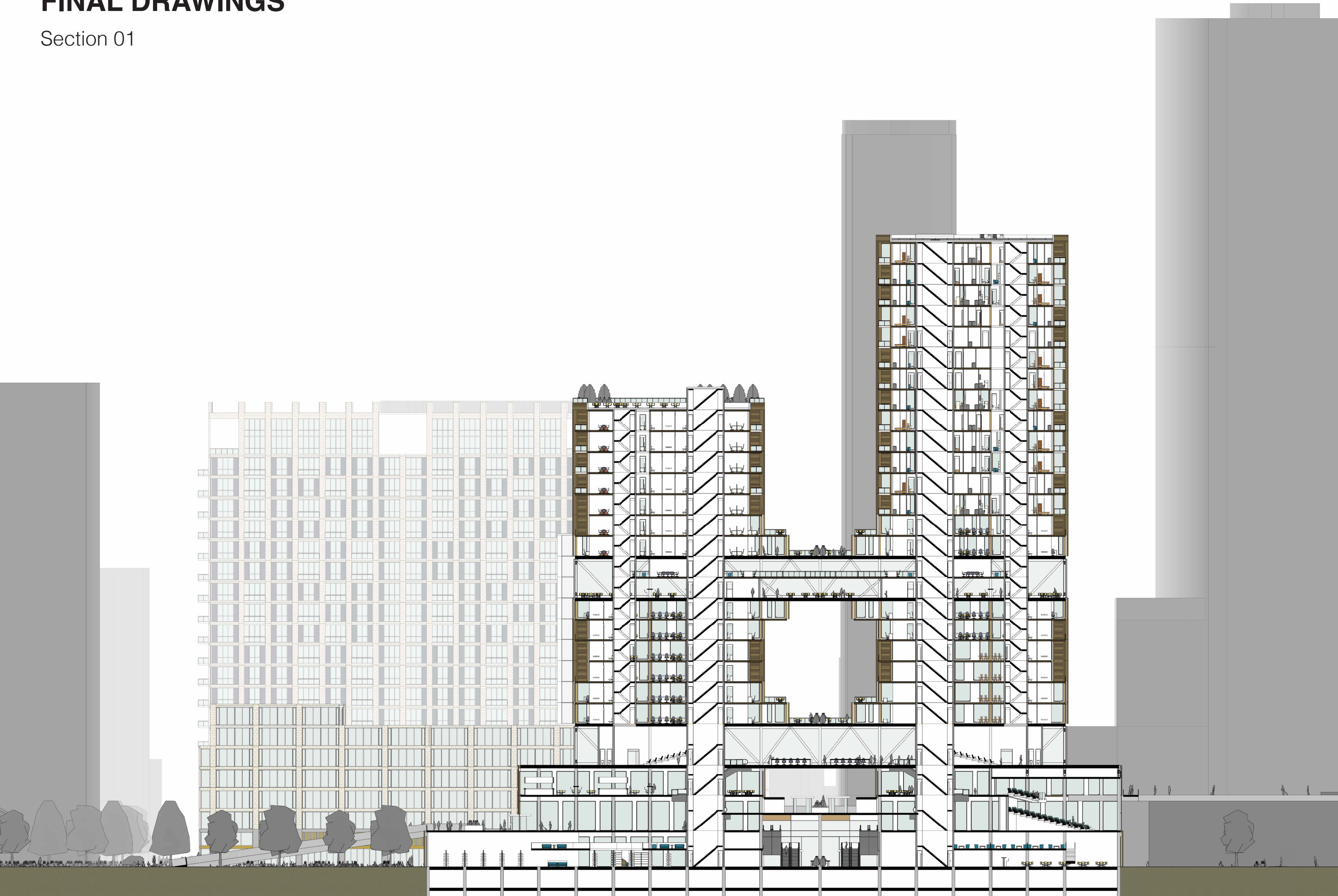
FINAL DRAWINGS

South-East elevation



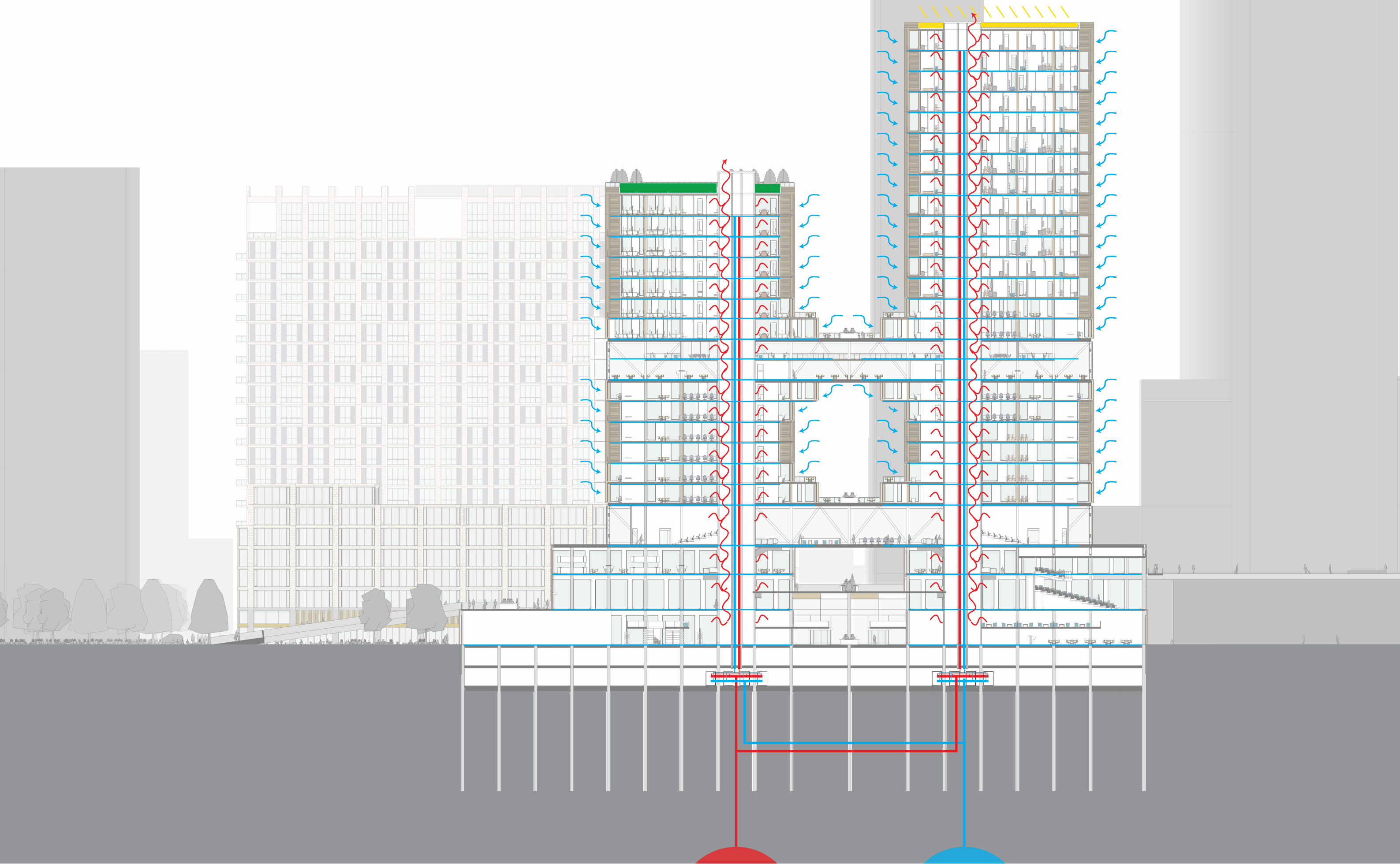
FINAL DRAWINGS

Section 01



FINAL DRAWINGS

Climate section - summer



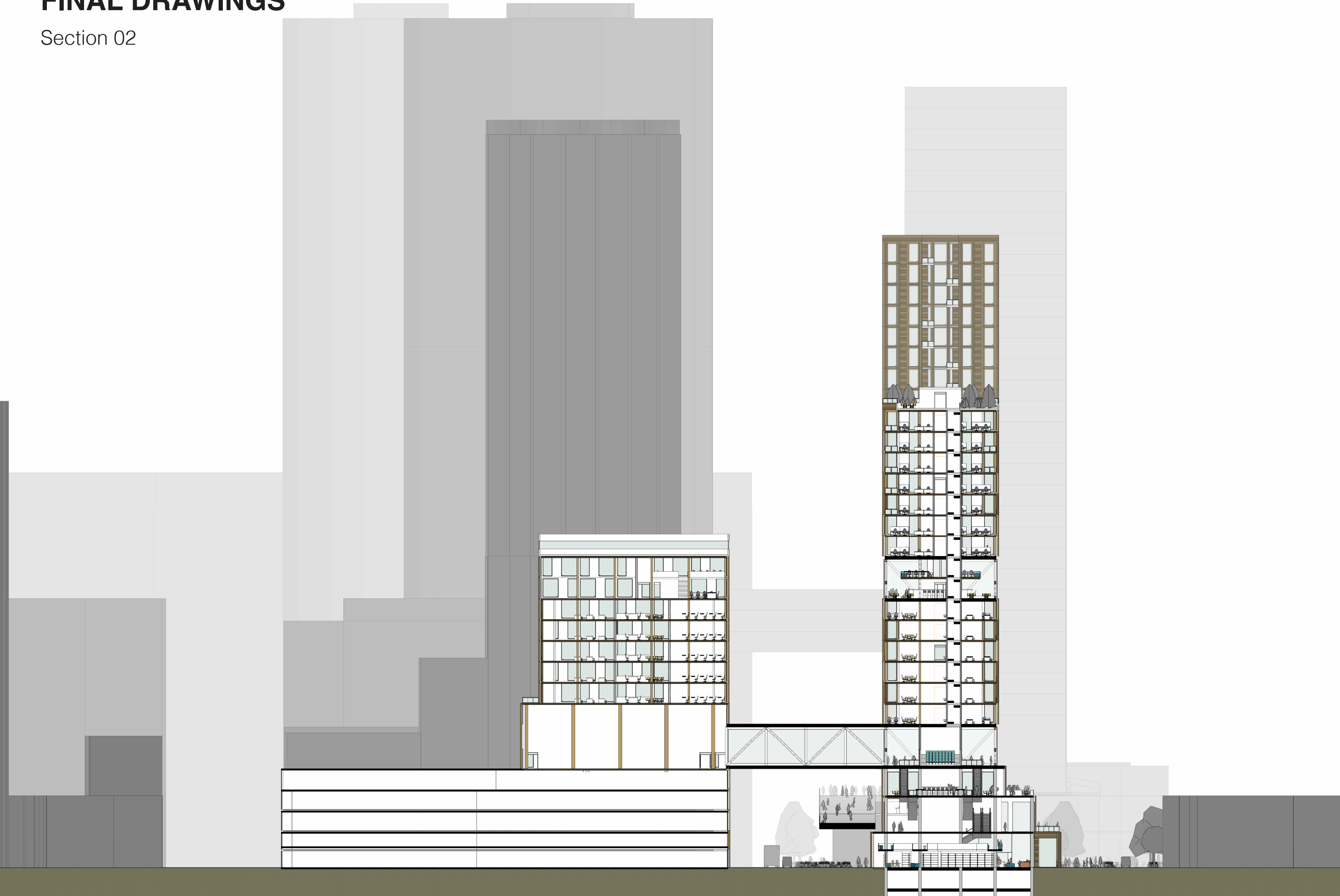
FINAL DRAWINGS

South-West elevation



FINAL DRAWINGS

Section 02

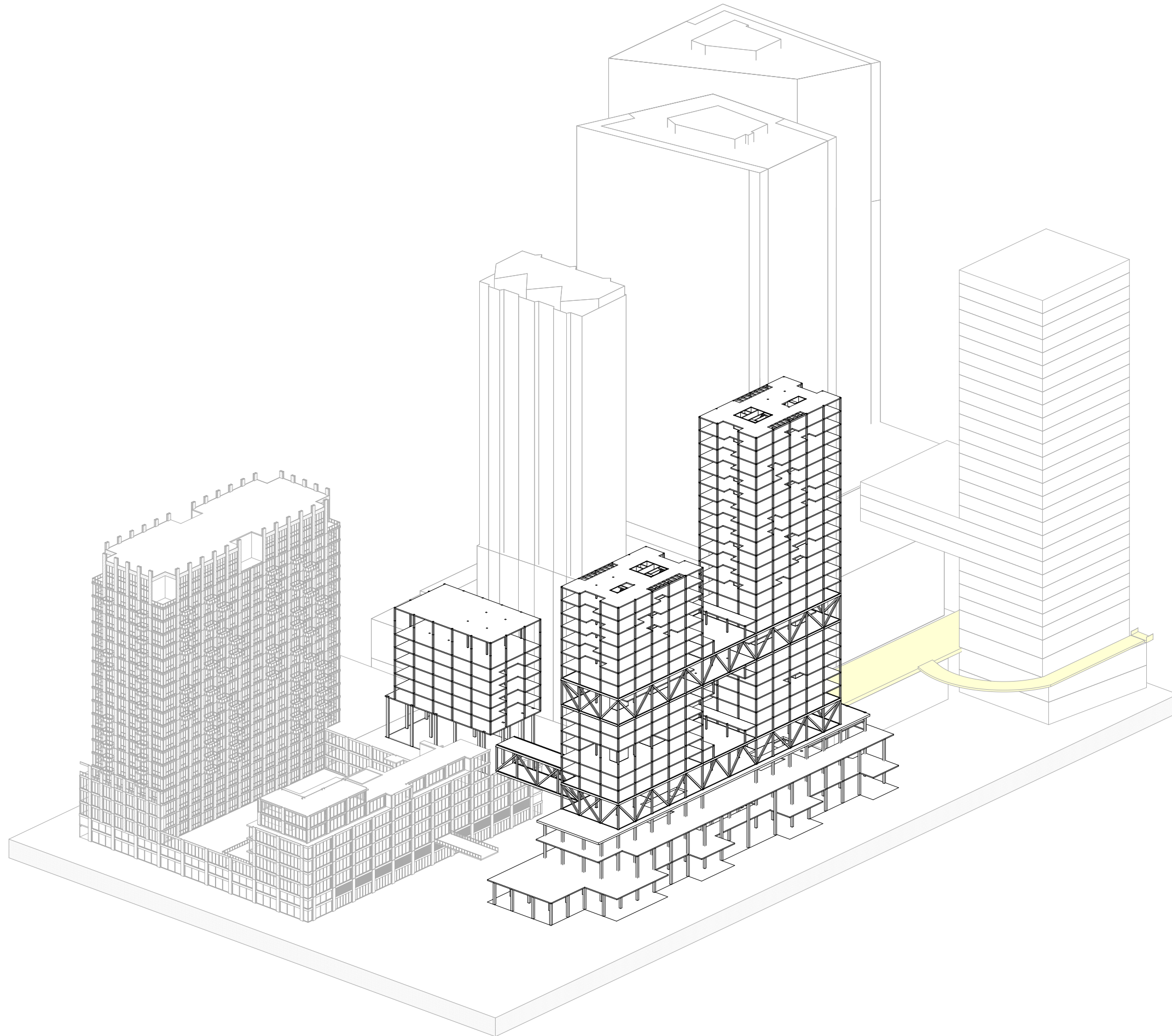


An architectural rendering of a modern urban development. The scene features several multi-story buildings with a mix of white and light yellow facades. The buildings have large glass windows and some have unique, angular rooflines. In the foreground, there's a paved area with a red-painted section, possibly a pedestrian crossing or a bike lane. Several cars are parked or driving on the street. There are also trees and greenery interspersed throughout the scene, including a large tree on the left and smaller trees along the sidewalks. People are visible walking on the sidewalks, adding a sense of scale and life to the scene. The sky is blue with some light clouds. The word 'STRUCTURE' is overlaid in large, bold, red capital letters across the center of the image.

STRUCTURE

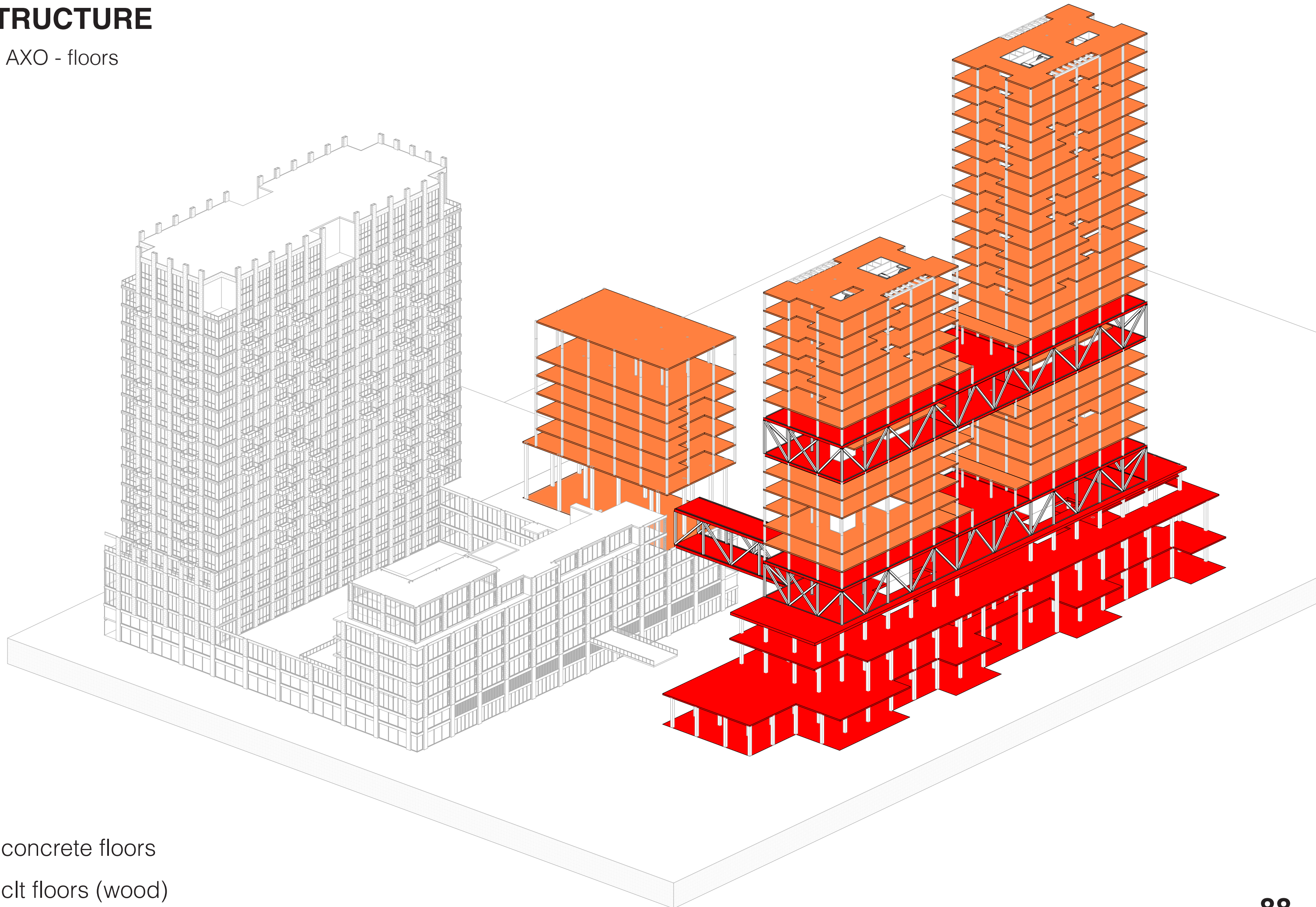
STRUCTURE

3D AXO



STRUCTURE

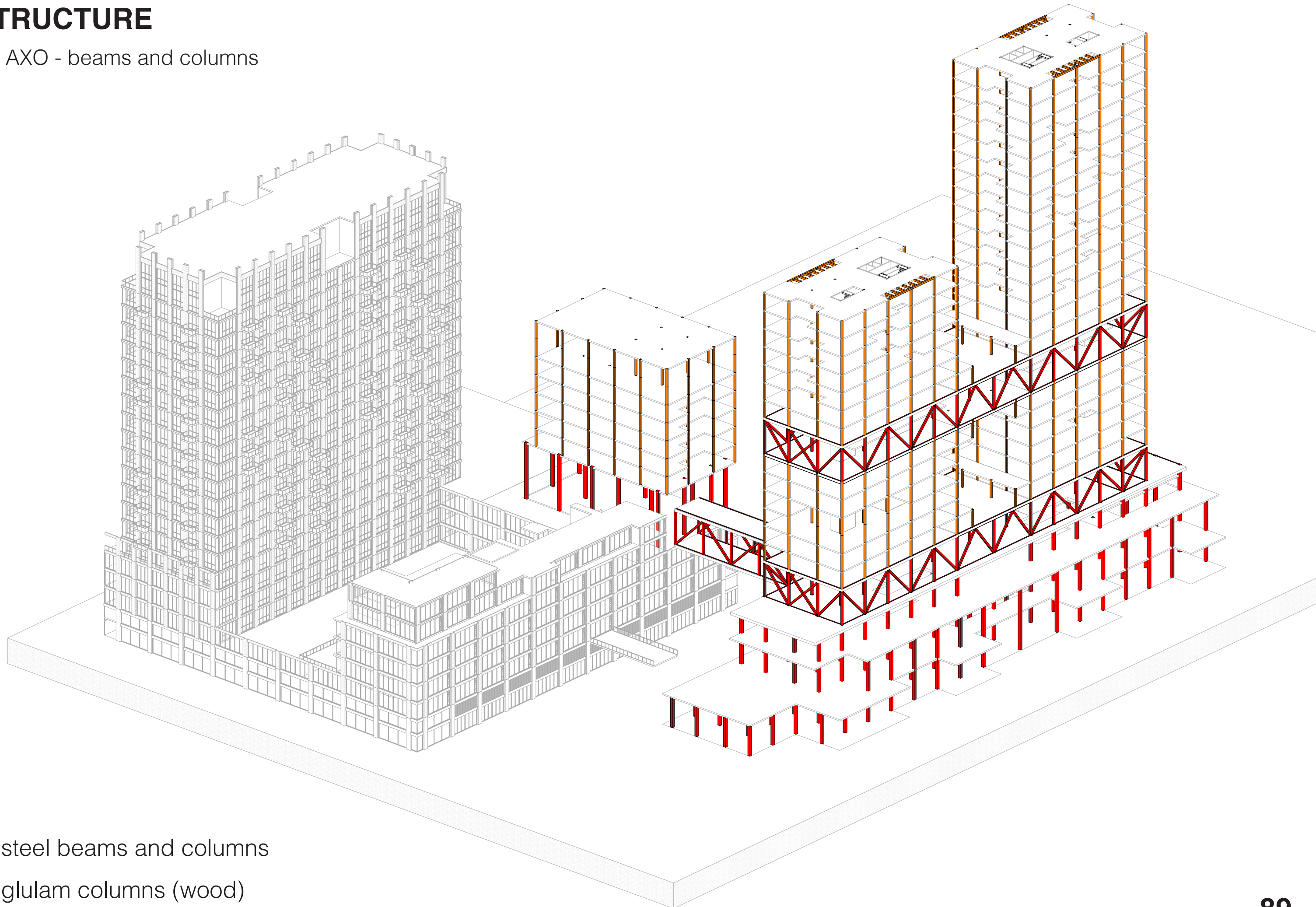
3D AXO - floors



- concrete floors
- clt floors (wood)

STRUCTURE

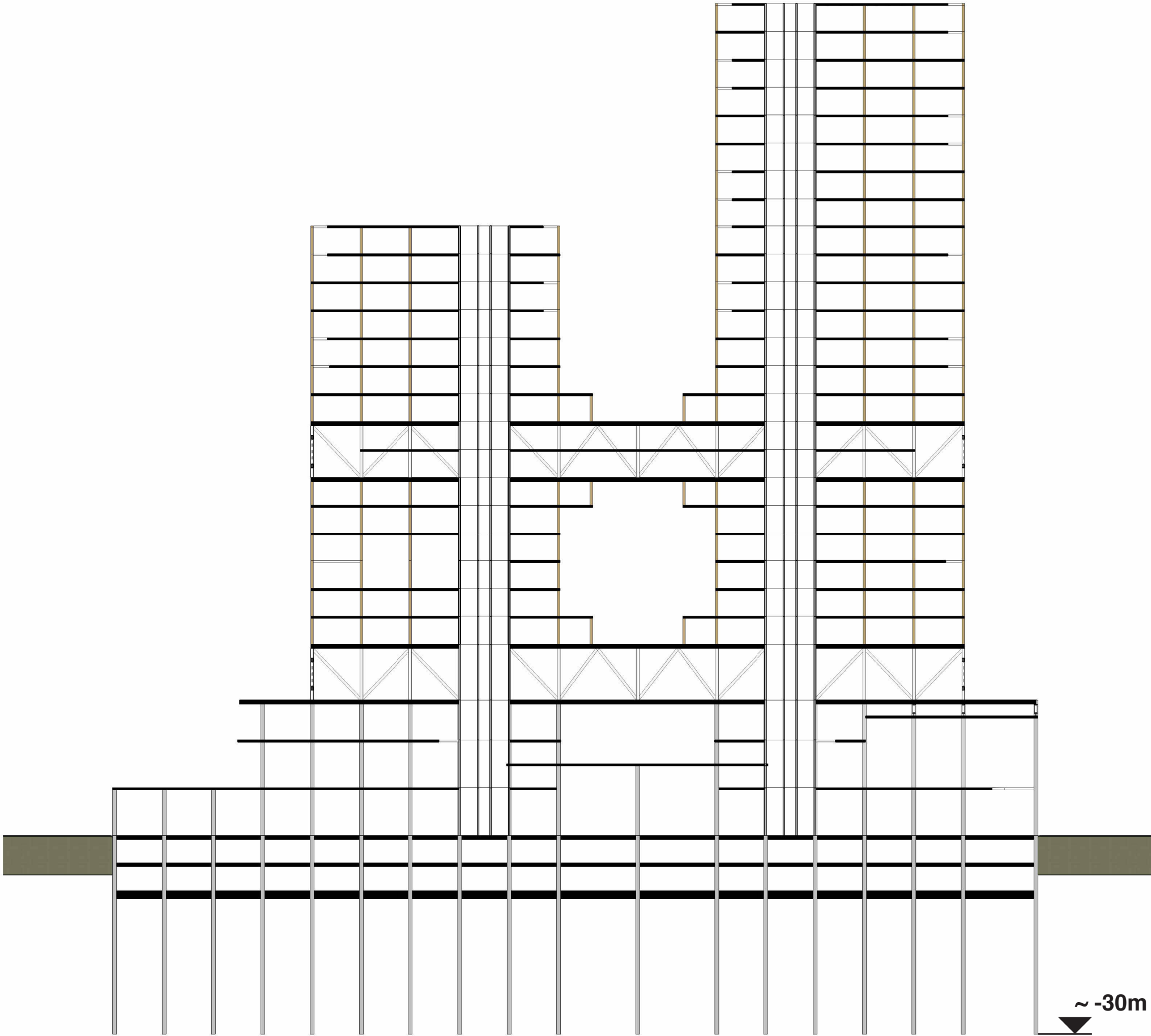
3D AXO - beams and columns



- steel beams and columns
- glulam columns (wood)

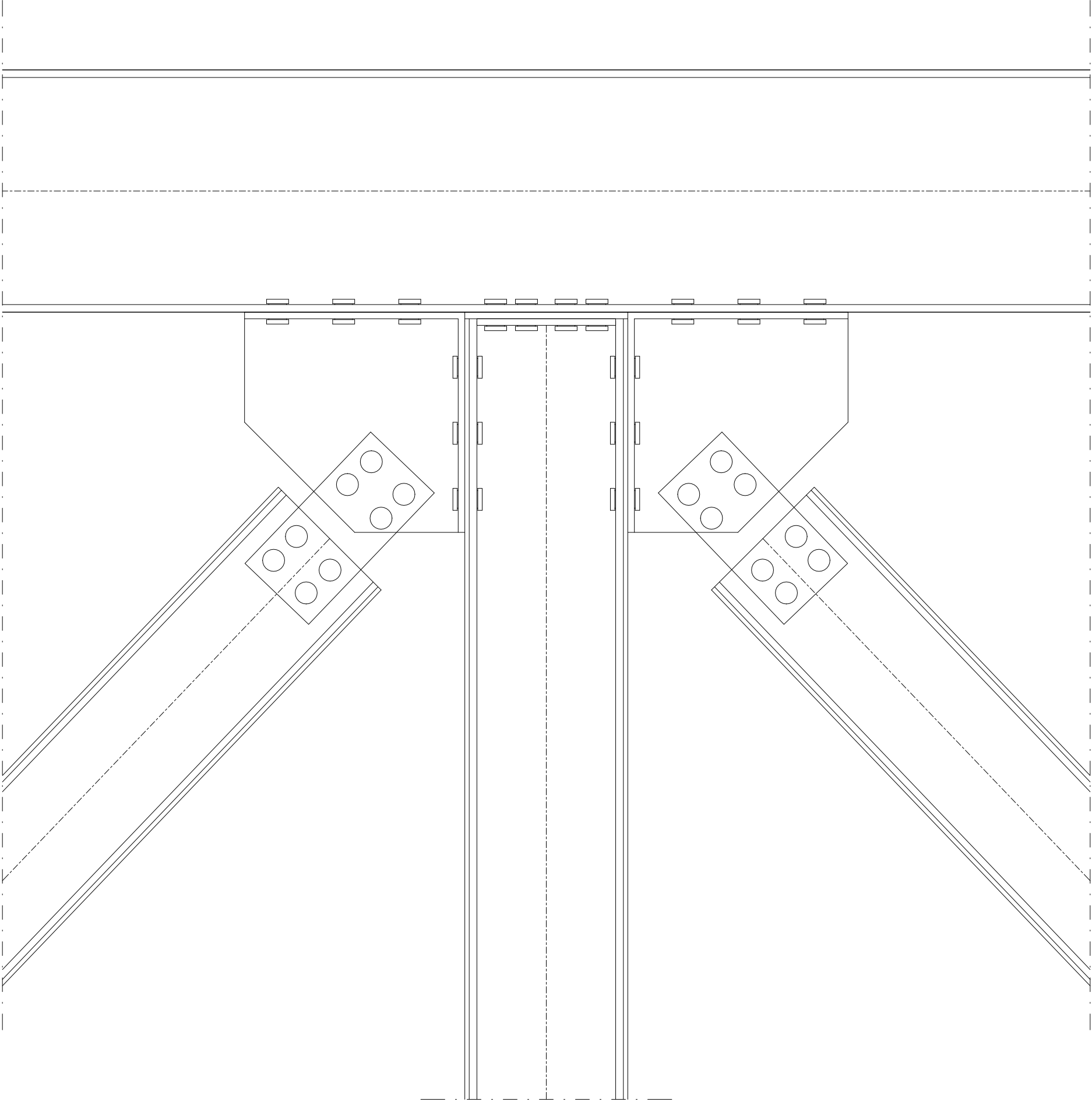
STRUCTURE

Section - foundation



STRUCTURE

Steel truss connection





UNIT SCALE

POROSITY STRATEGY

Unit scale



UNIT SCALE



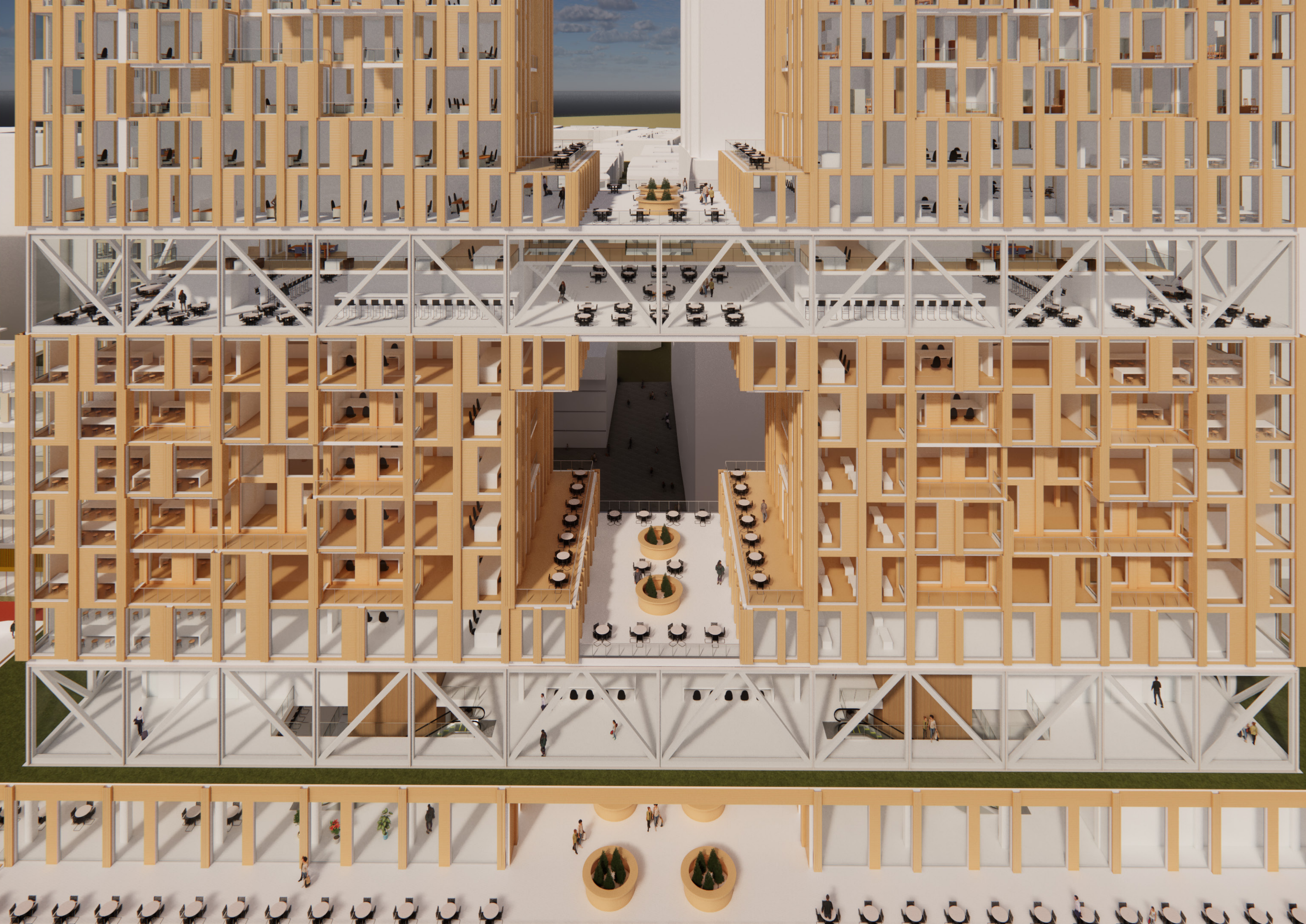
SPATIAL PLANNING



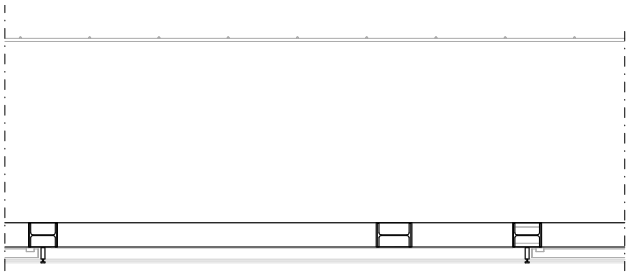
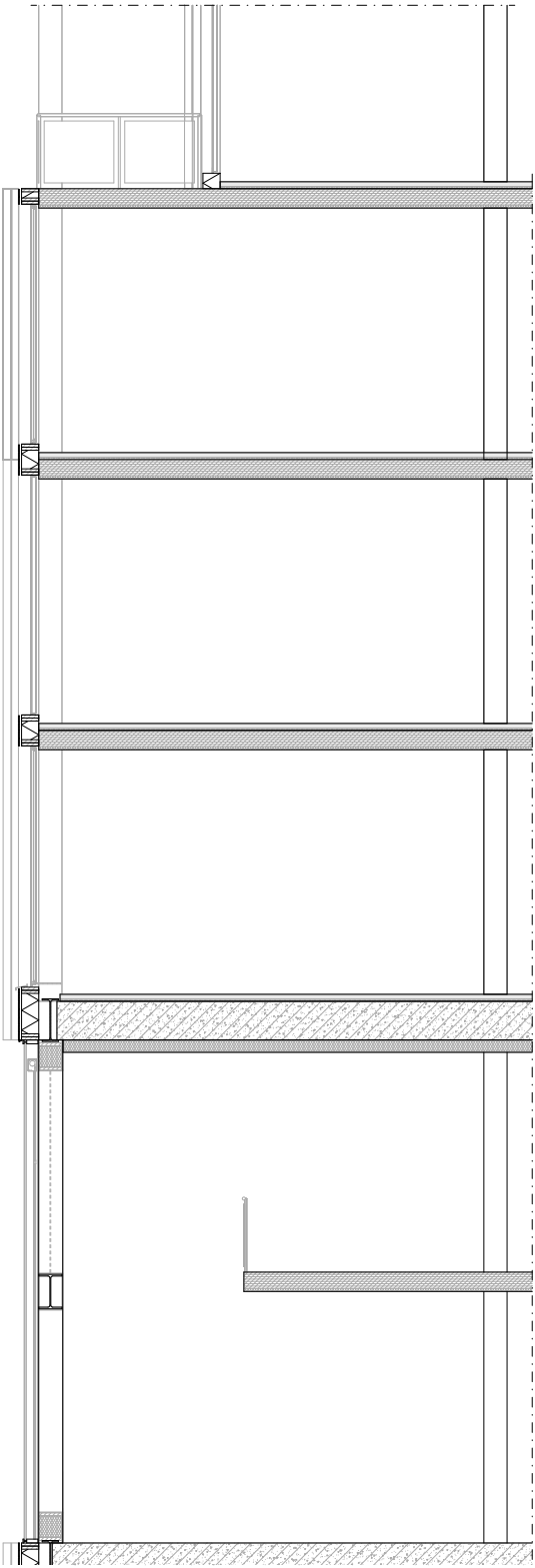
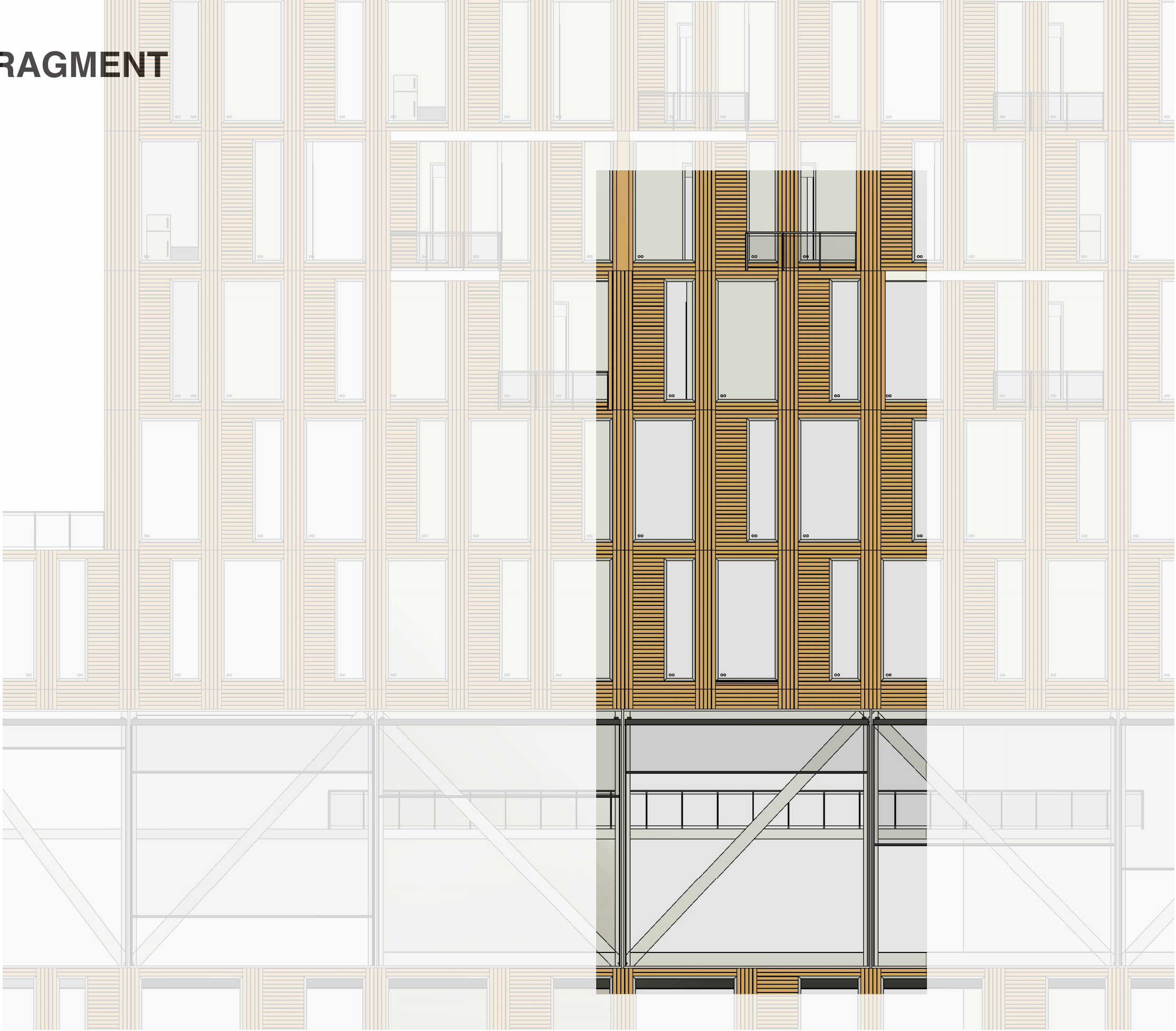
COMMUNITY



CLIMATE

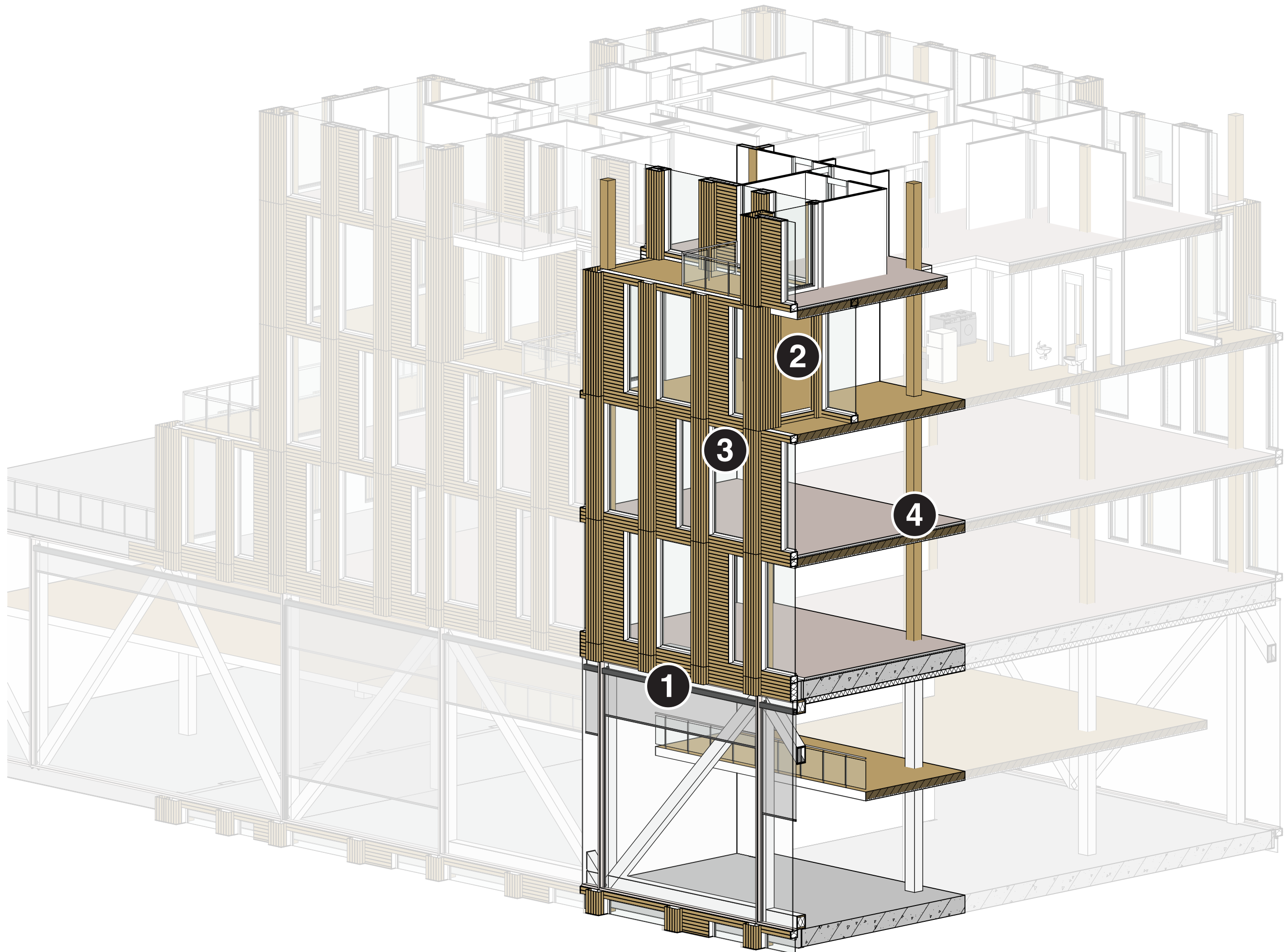


FRAGMENT



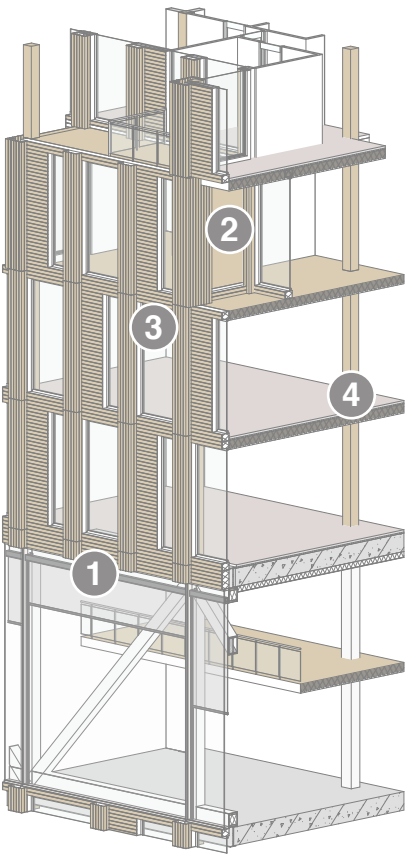
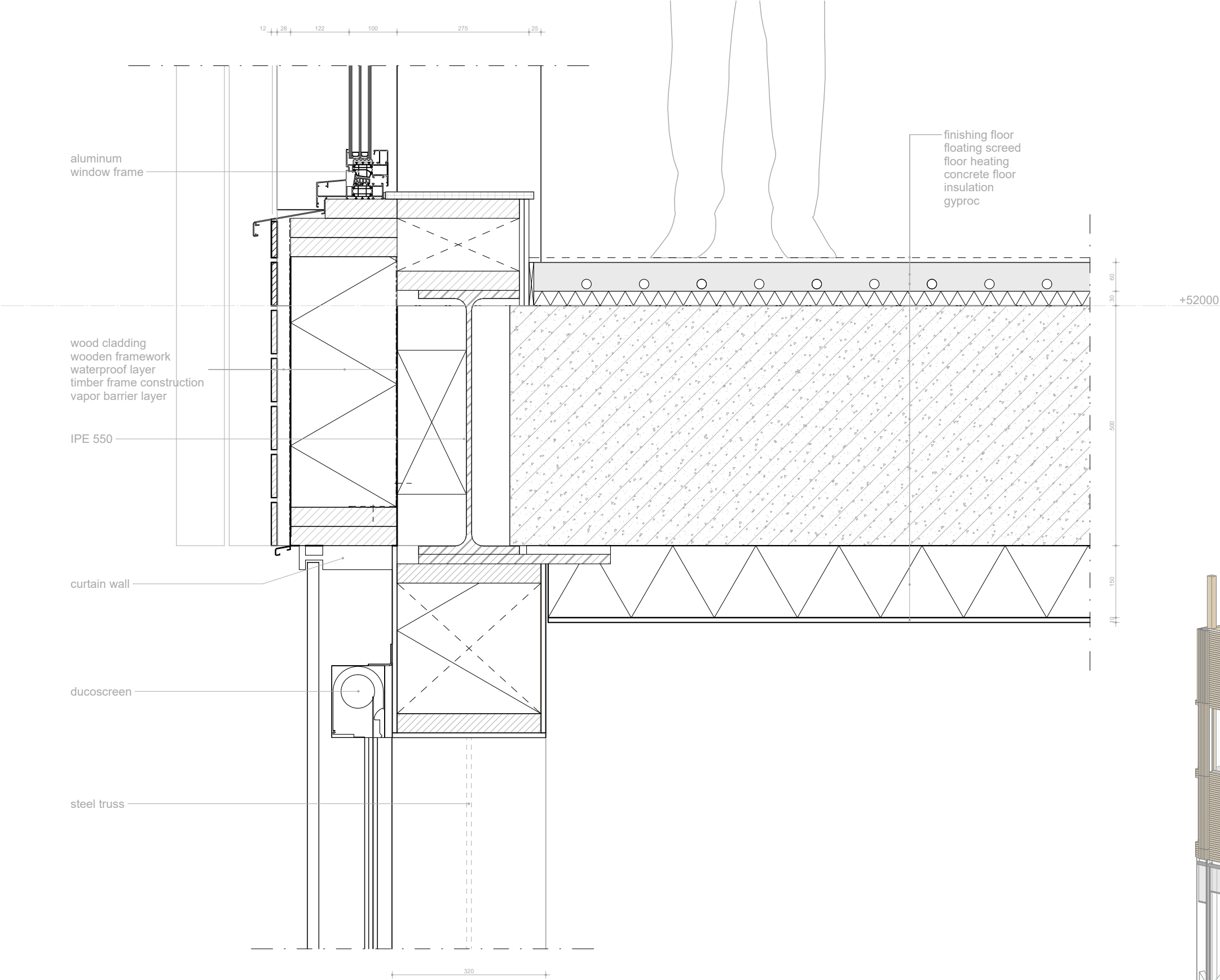
FRAGMENT

3D



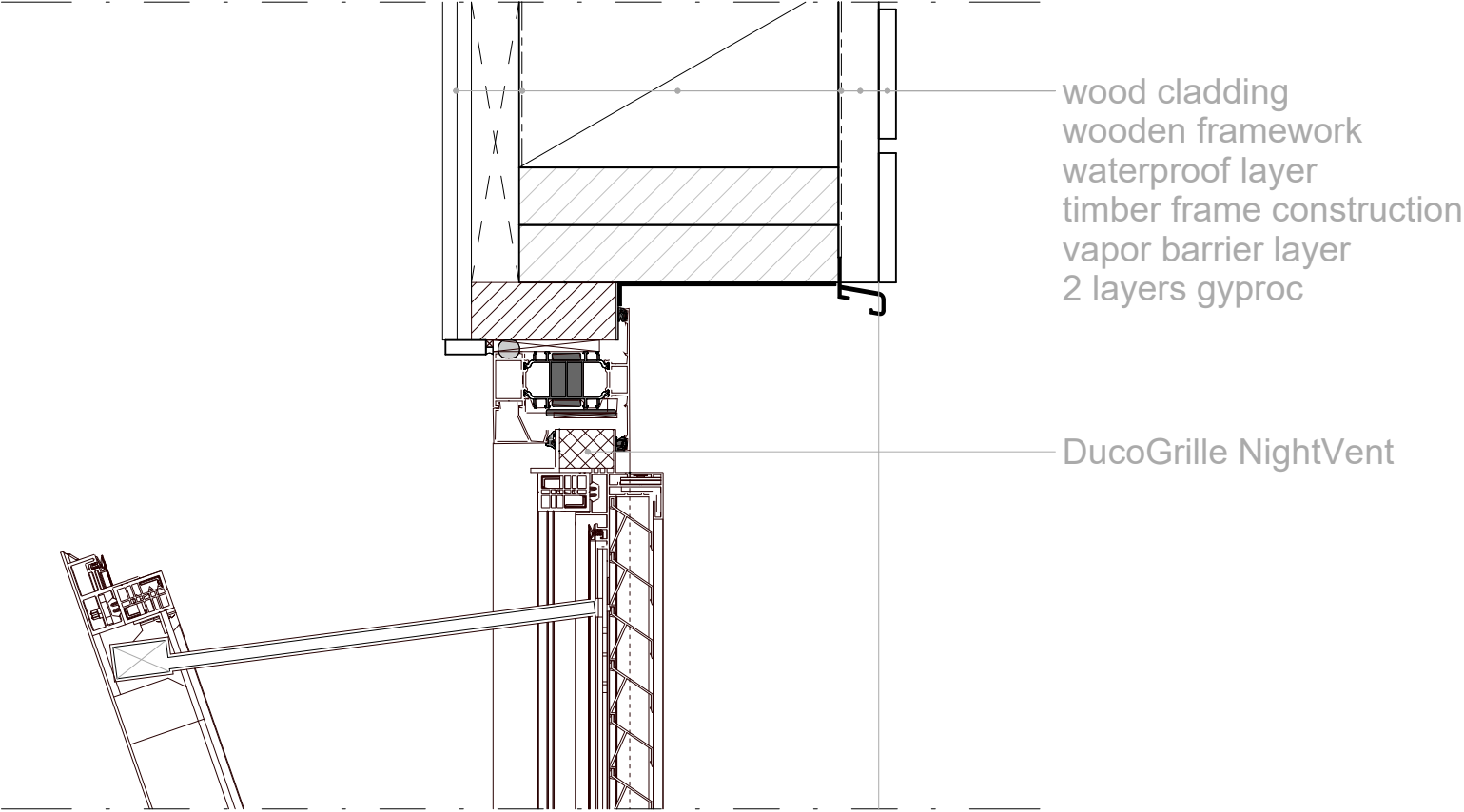
FRAGMENT

Detail 01 - skybridge



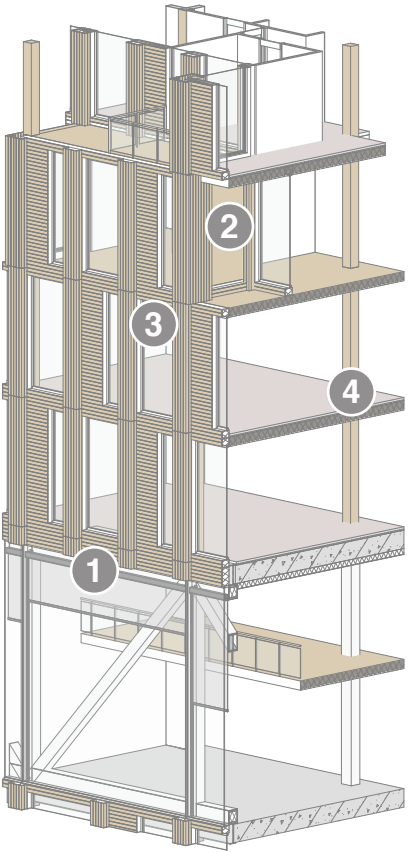
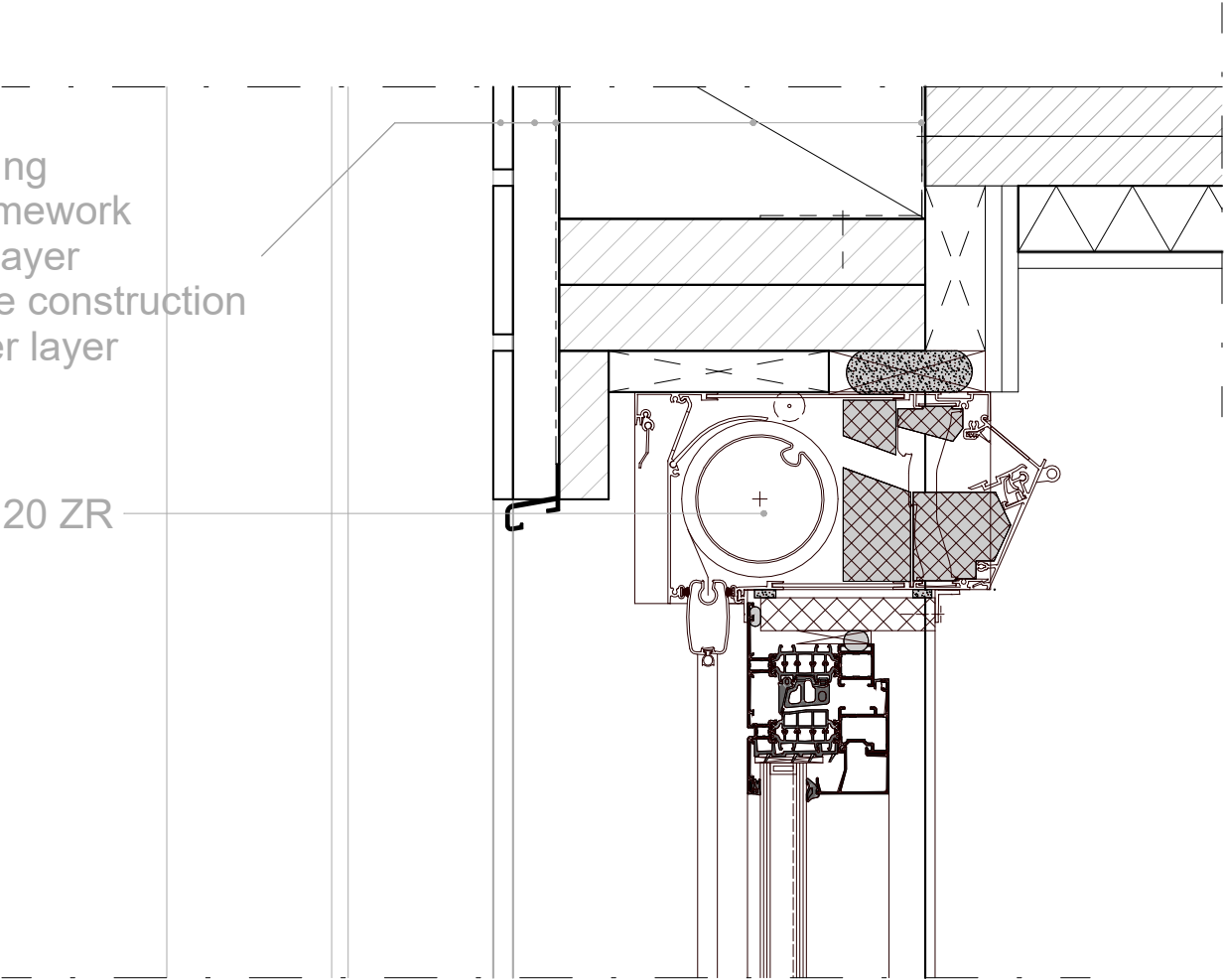
FRAGMENT

Detail 02 + 03 - ventilation (window) systems



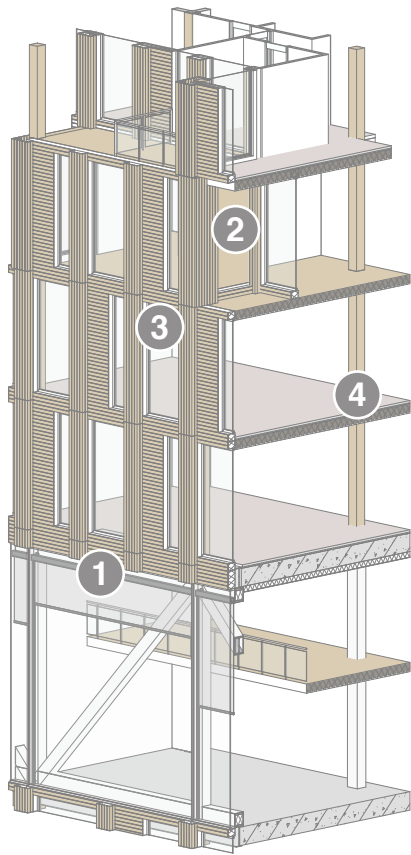
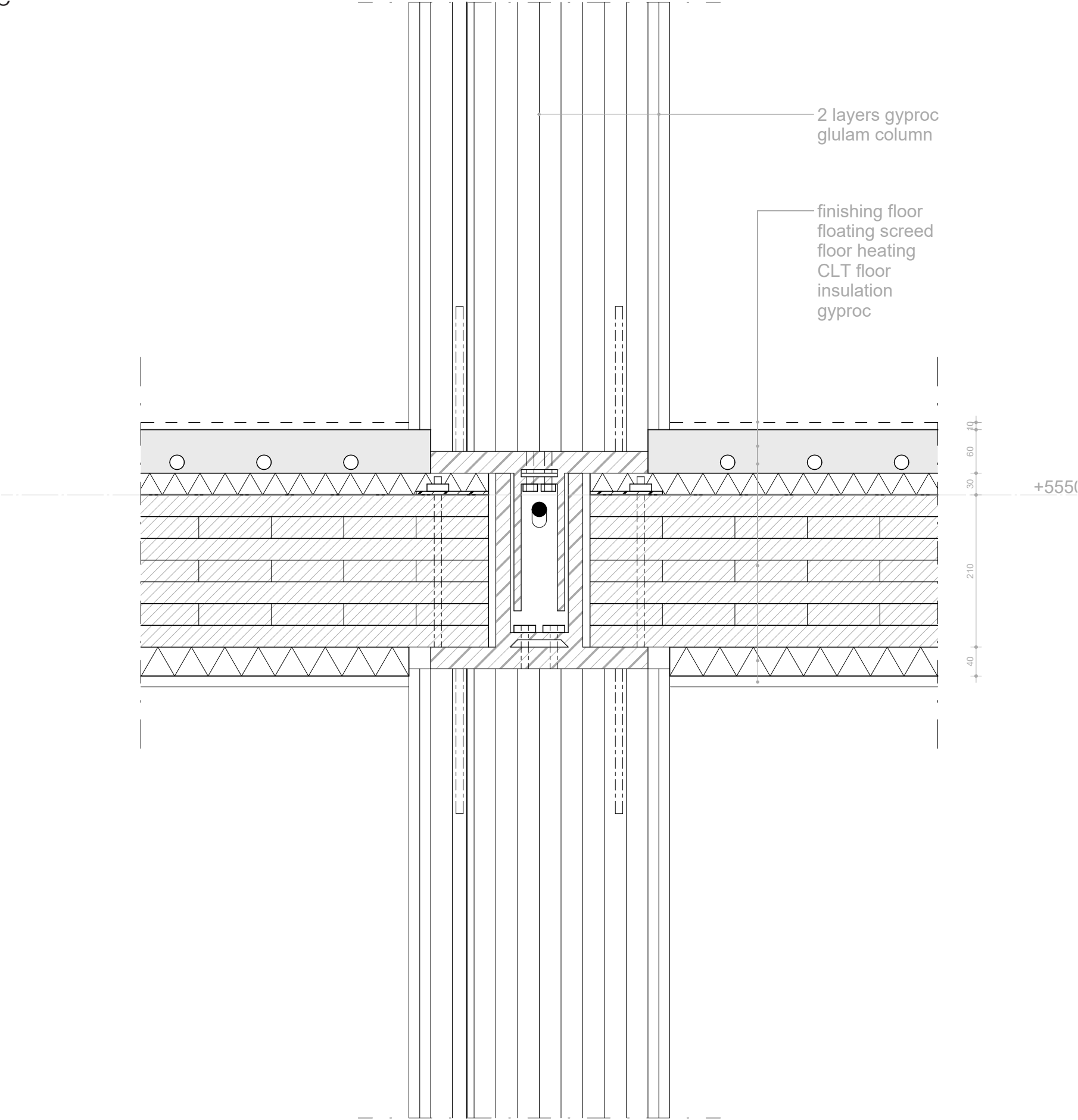
wood cladding
wooden framework
waterproof layer
timber frame construction
vapor barrier layer

DucoTwin 120 ZR



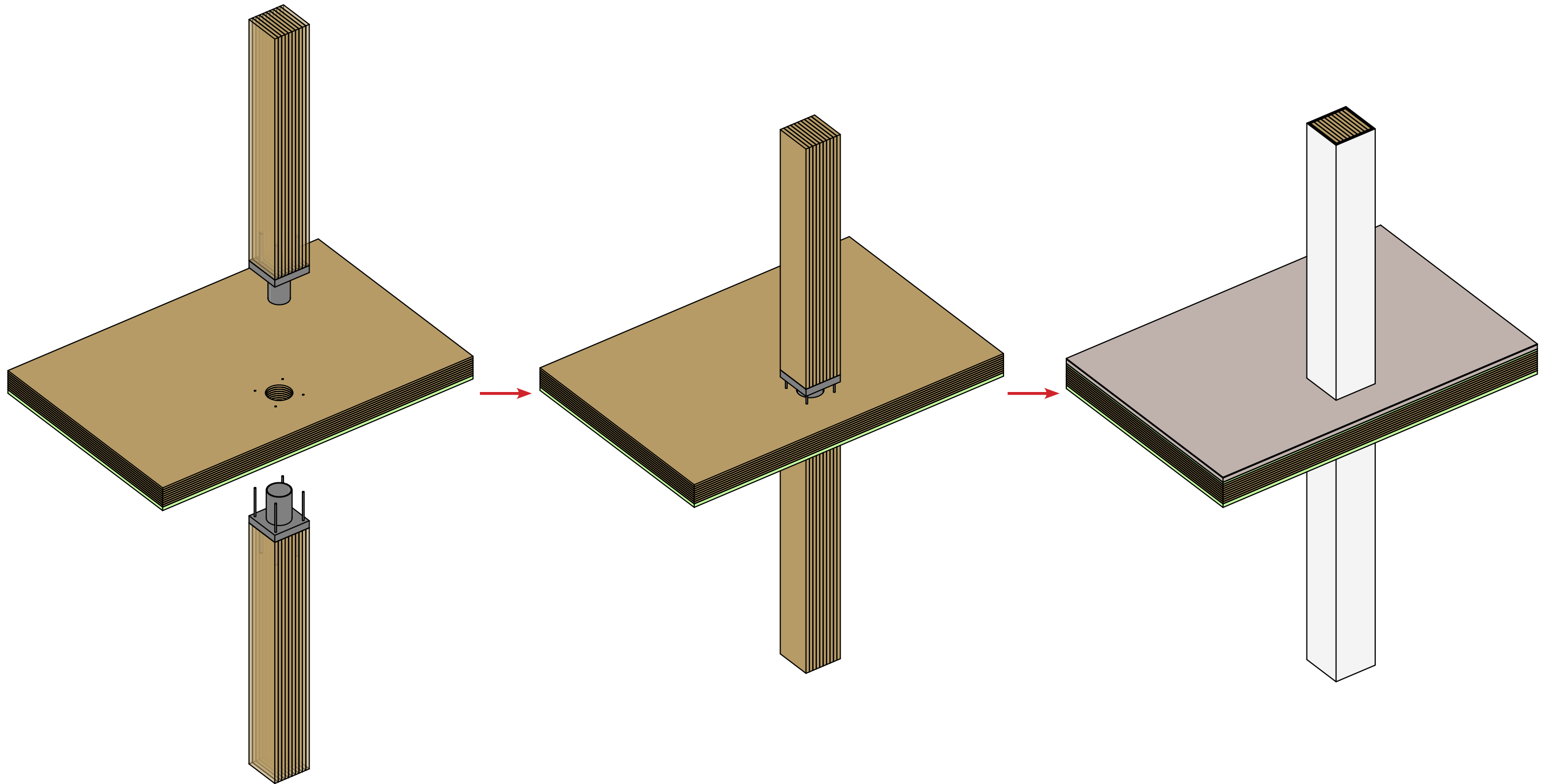
FRAGMENT

Detail 04 - wooden structure



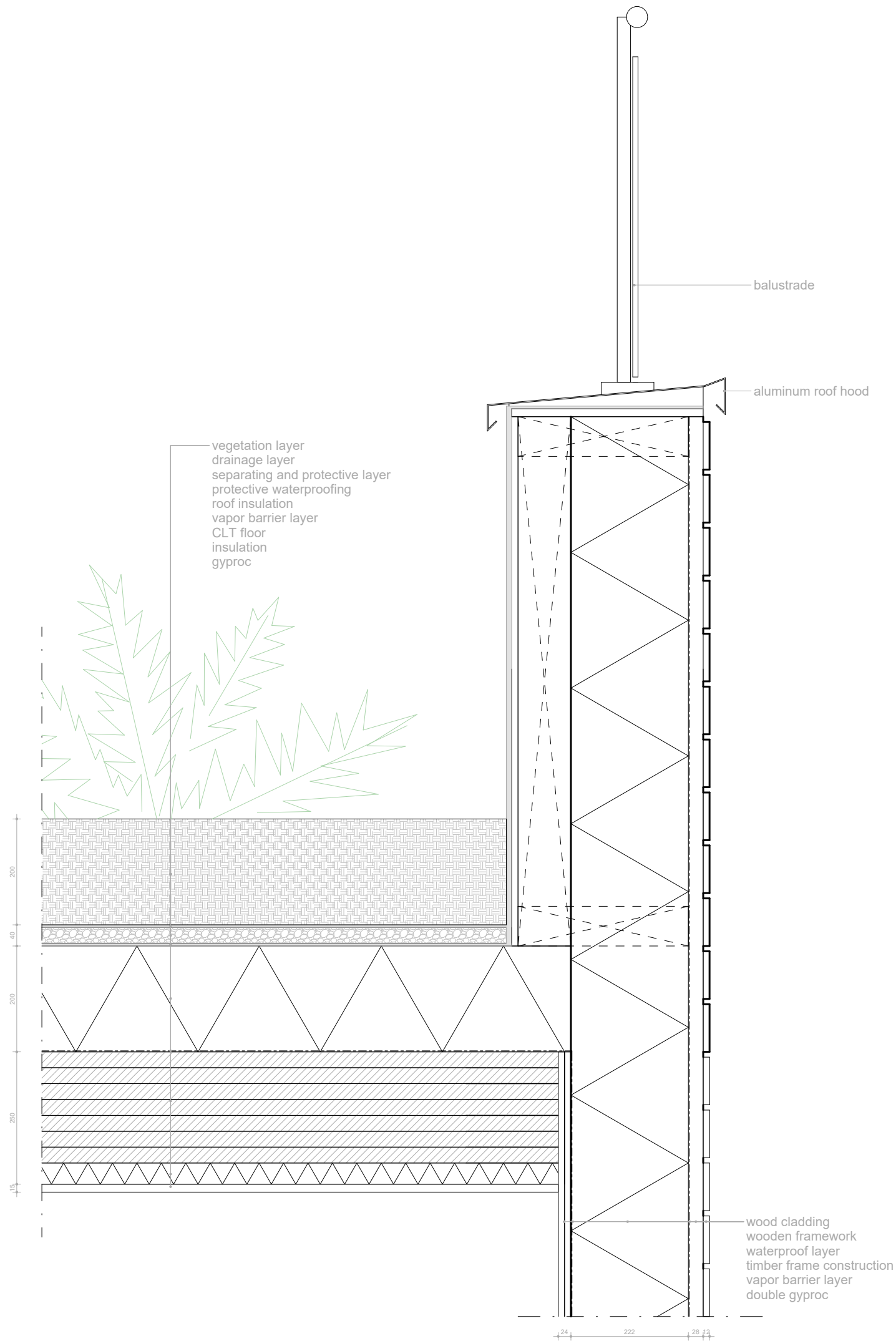
FRAGMENT

Structure sequence



FRAGMENT

Detail 06 - roof









CONCLUSION

Boundary within the city has been removed and connections in the city are more focused on people instead of infrastructure

The building has become a HUB within the city

Porosity strategies has been successfully used to increase public accessibility and increase social interaction between social groups

THANK YOU

