THE NODE

Hotel New York



complex projects

21/01/2020

fall semester

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THE STREET



Mannhattan, New York
United states of America





“ THE STREET CAN STILL BE THE PLACE WHERE THE MOST IMPORTANT CONNECTIONS ARE MADE. IN IT, WE BEGIN TO SEE HOW OUR HOME IS CONNECTED TO THAT HOME, THIS STREET TO THAT STREET, THIS CITY TO ALL THOSE CITIES, MY EXPERIENCE TO YOURS.”

- Peter Jukes


1/3 OF CITIES EXIST OF STREETS

Streets are all around the world

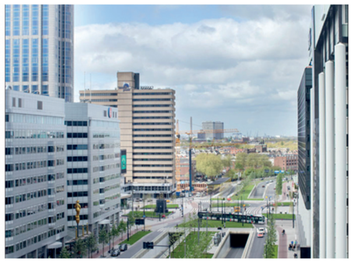




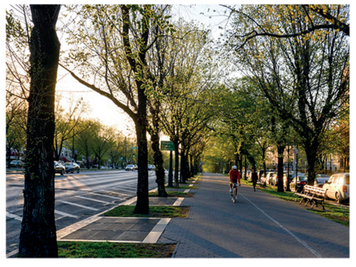











Famous streets around the world



Champs-Élysées, Paris
France



Eastern Parkway, Brooklyn
United states of America



Broadway, New York
United states of America

Profile - Program







Robinson Road, Singapore
Singapore

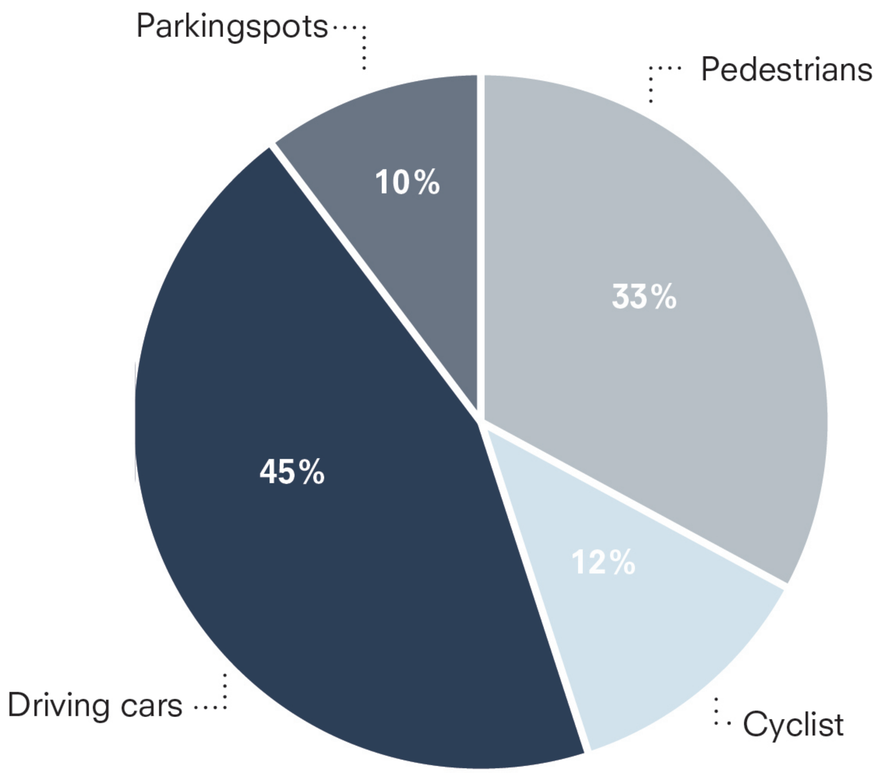


5th Avenue, New York
United states of America



Nieuwe Binnenweg, Rotterdam
The Netherlands

Users of the street




55% OF THE STREET IS OCCUPIED BY CARS

STREETS ARE MORE AN INFRASTRUCTURAL LINE AS PART OF THE BUILT ENVIRONMENT. CRITICAL FACTOR OF THIS IS THE CAR.

- Book: het recht van de snelste

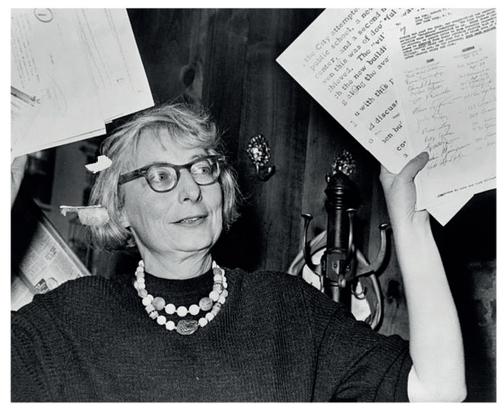

CAN WE STILL SEE THE STREET AS A PUBLIC SPACE?



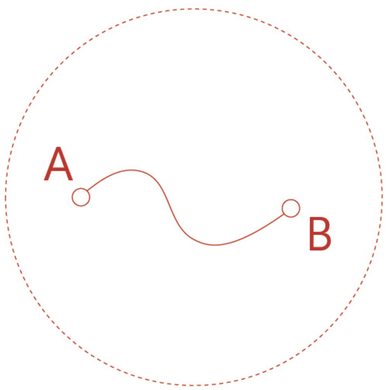
Nieuwe Binnenweg, Rotterdam
The Netherlands

“THE STREET IS AN IMPORTANT PUBLIC SPACE RATHER THAN A CHANNEL FOR MOVEMENT.”

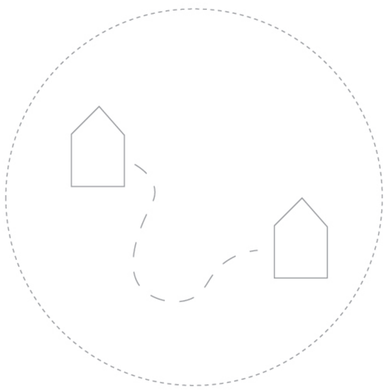
- Jane Jacobs



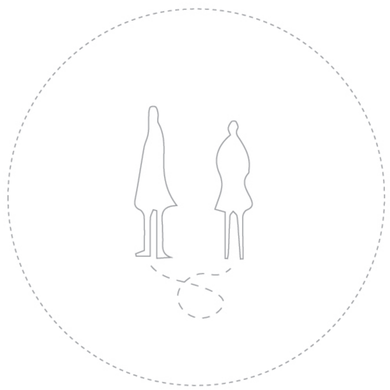
Use of the street



Movement: getting as fast as possible from one place to the other
(long-distance)

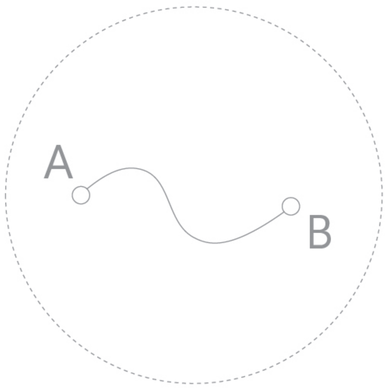


Connection between the buildings
(short - distance)

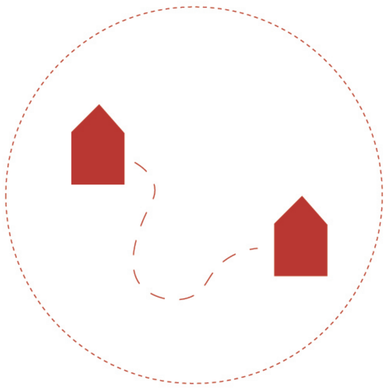


Place for social activities and behavior

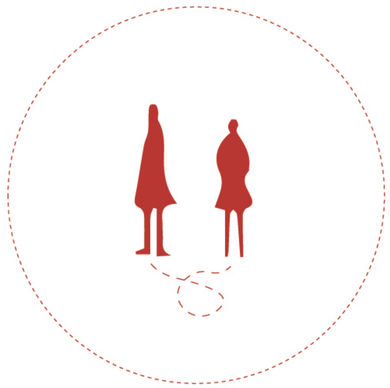
Use of the street



Movement: getting as fast as possible from one place to the other
(long-distance)



Connection between the buildings
(short - distance)

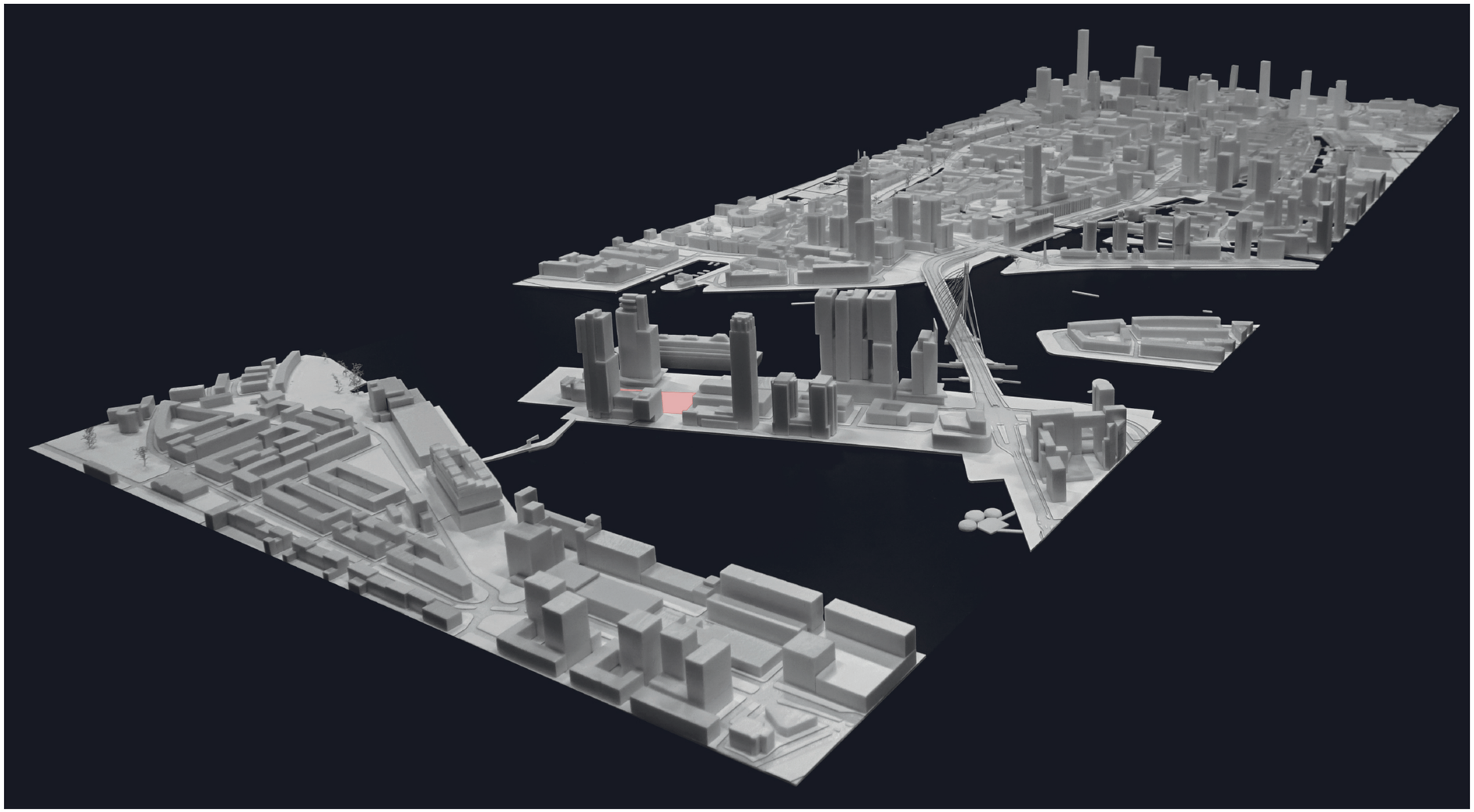


Place for social activities and behavior

Research question

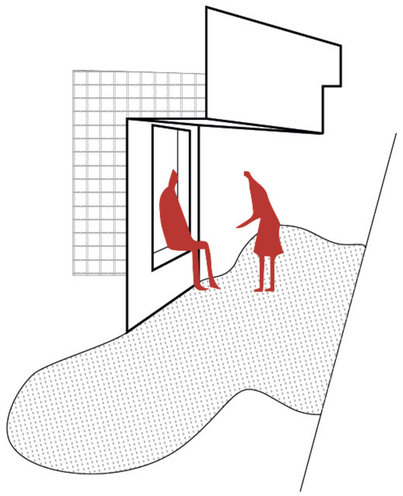
How can the street become a public space through the design of a building?

Site - Kop van Zuid



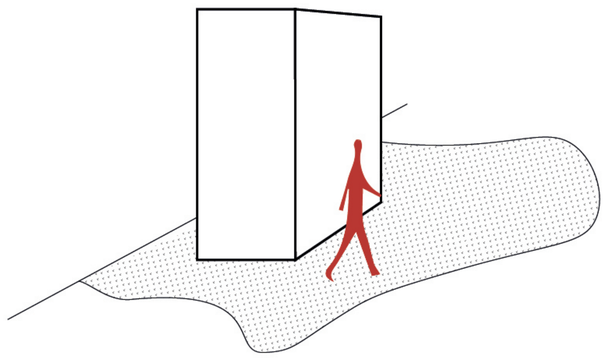

75% OF THE PUBLIC SPACE IN ROTTERDAM
CONSISTS OF STREETS

Ambitions



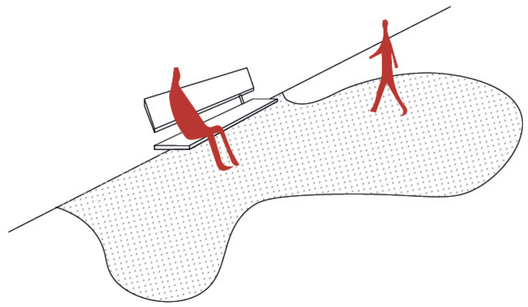
INTERGRATION

Creating connection between the street and the buildings



HUMAN SCALE

Establishing human scale in the city center



ACTIVITIES

Support necessary, option, and social activities

Ambitions



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What is a street..

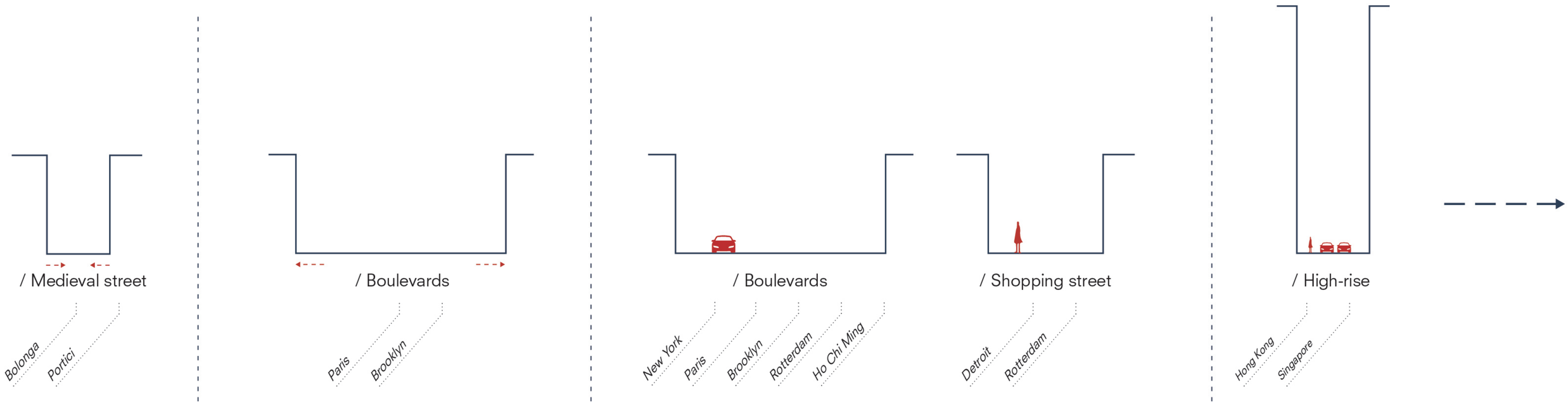
Definition of the street

Physically, a street is a three dimensional space, where the boundaries are created by the buildings.

Culturally, it is an ultimate melting pot due to its public and accessible nature.

Connection, a place that creates connection and interaction between people itself and the surroundings.

Timeline


/ Medieval street
Bolonga
Portici
/ Boulevards
Paris
Brooklyn
/ Boulevards
New York
Paris
Brooklyn
Rotterdam
Ho Chi Ming
/ Shopping street
Detroit
Rotterdam
/ High-rise
Hong Kong
Singapore

Timeline



Industrial age

/ Medieval street

Bolonga

Portici



Invention car

/ Boulevards

Paris

Brooklyn

/ Boulevards

New York

Paris

Brooklyn

Rotterdam

Ho Chi Ming

/ Shopping street

Detroit

Rotterdam



High-rise

/ High-rise

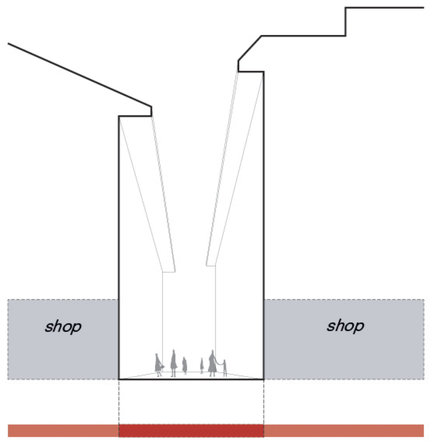
Hong Kong

Singapore

Medieval street

Bologna, Italy





Timeline



Industrial age

/ Medieval street

Bolonga

Portici



Invention car

/ Boulevards

Paris

Brooklyn

/ Boulevards

New York

Paris

Brooklyn

Rotterdam

Ho Chi Ming

/ Shopping street

Detroit

Rotterdam



High-rise

/ High-rise

Hong Kong

Singapore

Avenue de la Grand Armée

Paris, France





Eastern Parkway

Brooklyn, United states of America





Timeline



Industrial age

/ Medieval street

Bolonga

Portici



Invention car

/ Boulevards

Paris

Brooklyn

/ Boulevards

New York

Paris

Brooklyn

Rotterdam

Ho Chi Ming

/ Shopping street

Detroit

Rotterdam



High-rise

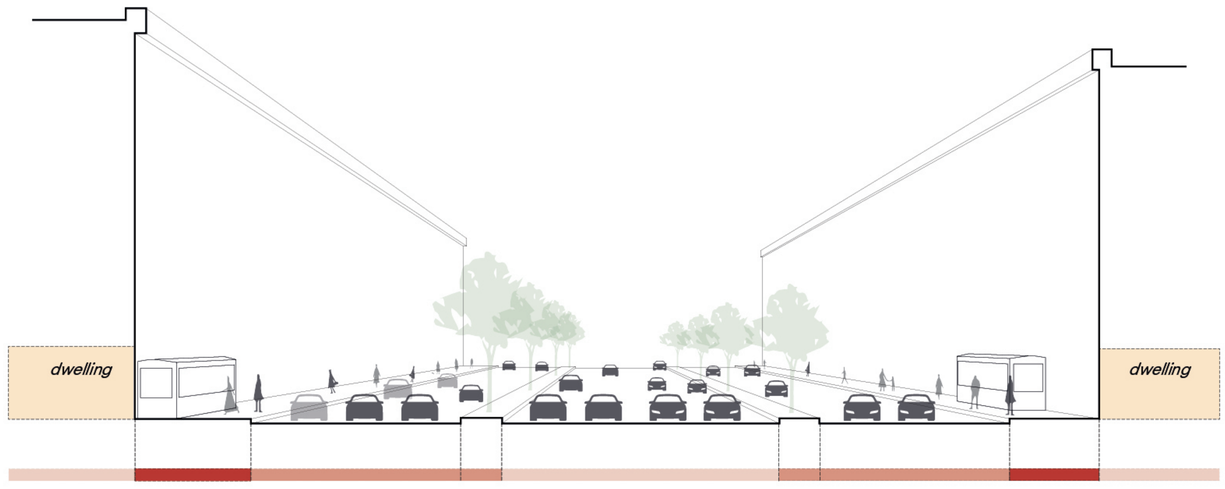
/ High-rise

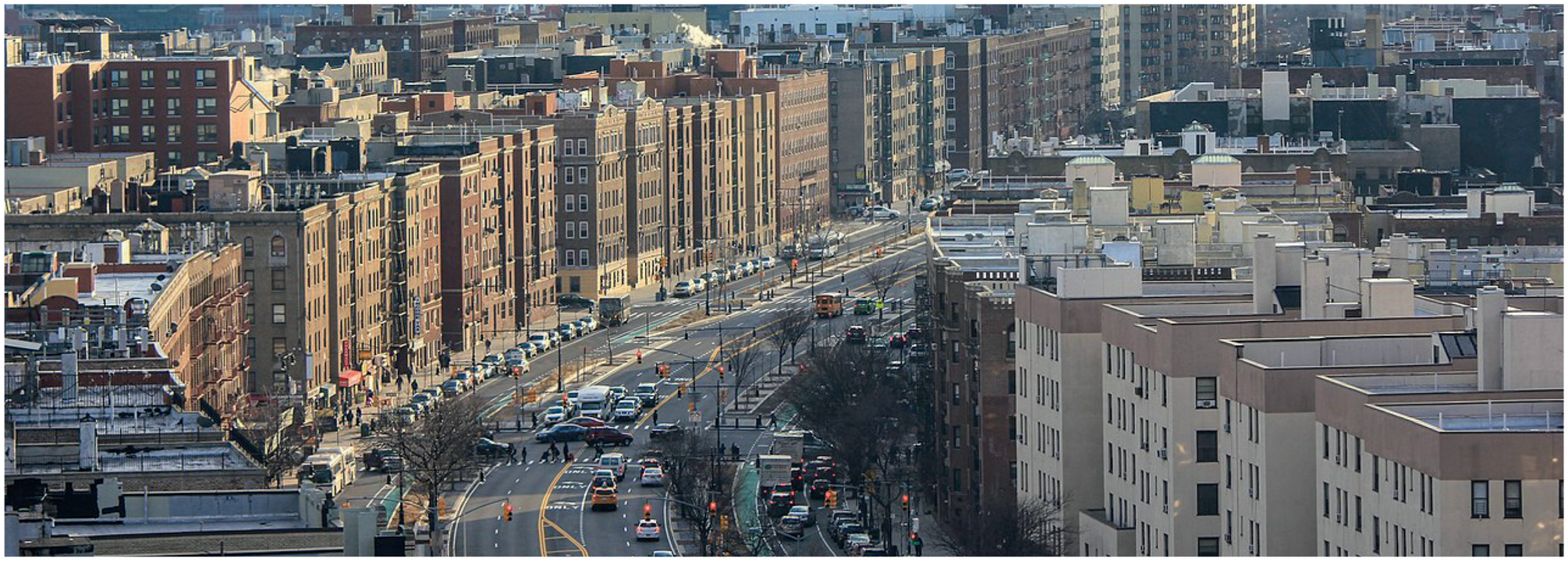
Hong Kong

Singapore

Grand Concourse

New York, United states of America

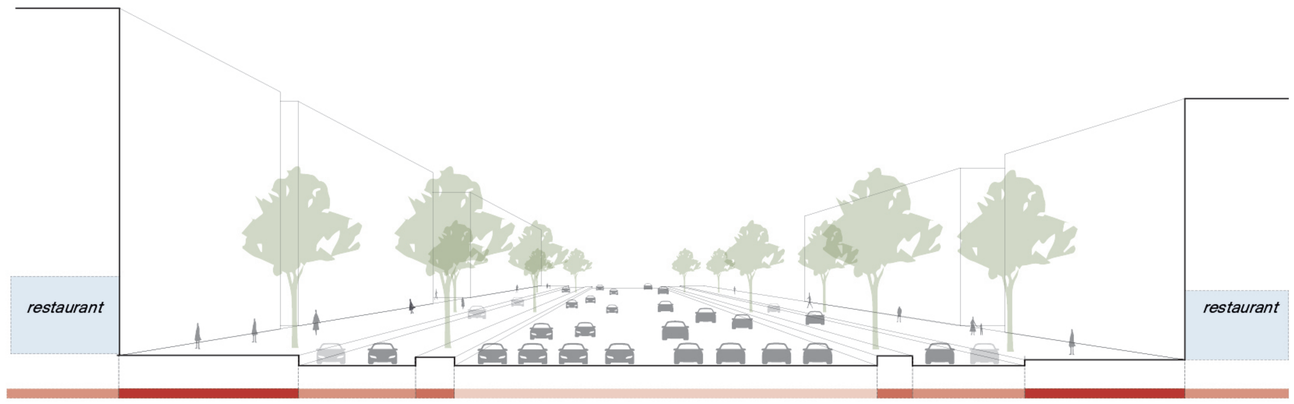




Avenue de la Grand Armee

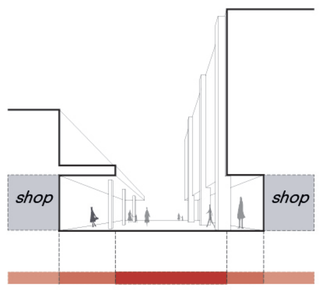
Paris, France





Northland centre

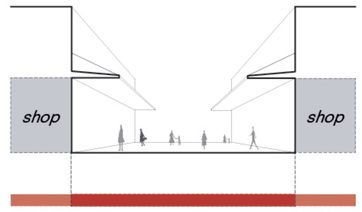
Detroit, United states of America





Lijnbaan

Rotterdam, The Netherlands







Lijnbaan, Rotterdam
The Netherlands



Lijnbaan, Rotterdam
The Netherlands

Timeline



Industrial age

/ Medieval street

Bolonga

Portici



Invention car

/ Boulevards

Paris

Brooklyn

/ Boulevards

New York

Paris

Brooklyn

Rotterdam

Ho Chi Ming

/ Shopping street

Detroit

Rotterdam



High-rise

/ High-rise

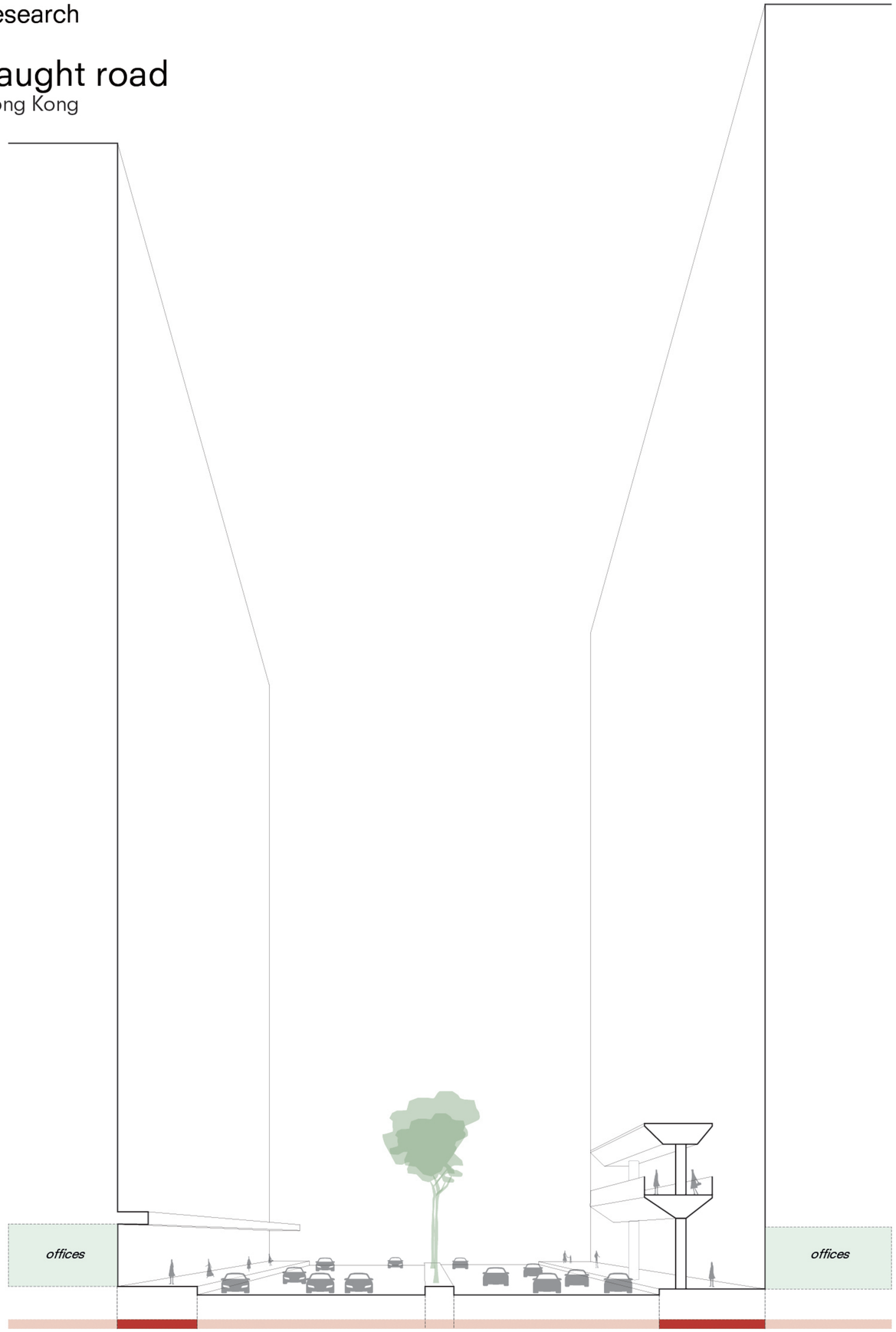
Hong Kong

Singapore

Counnaught road

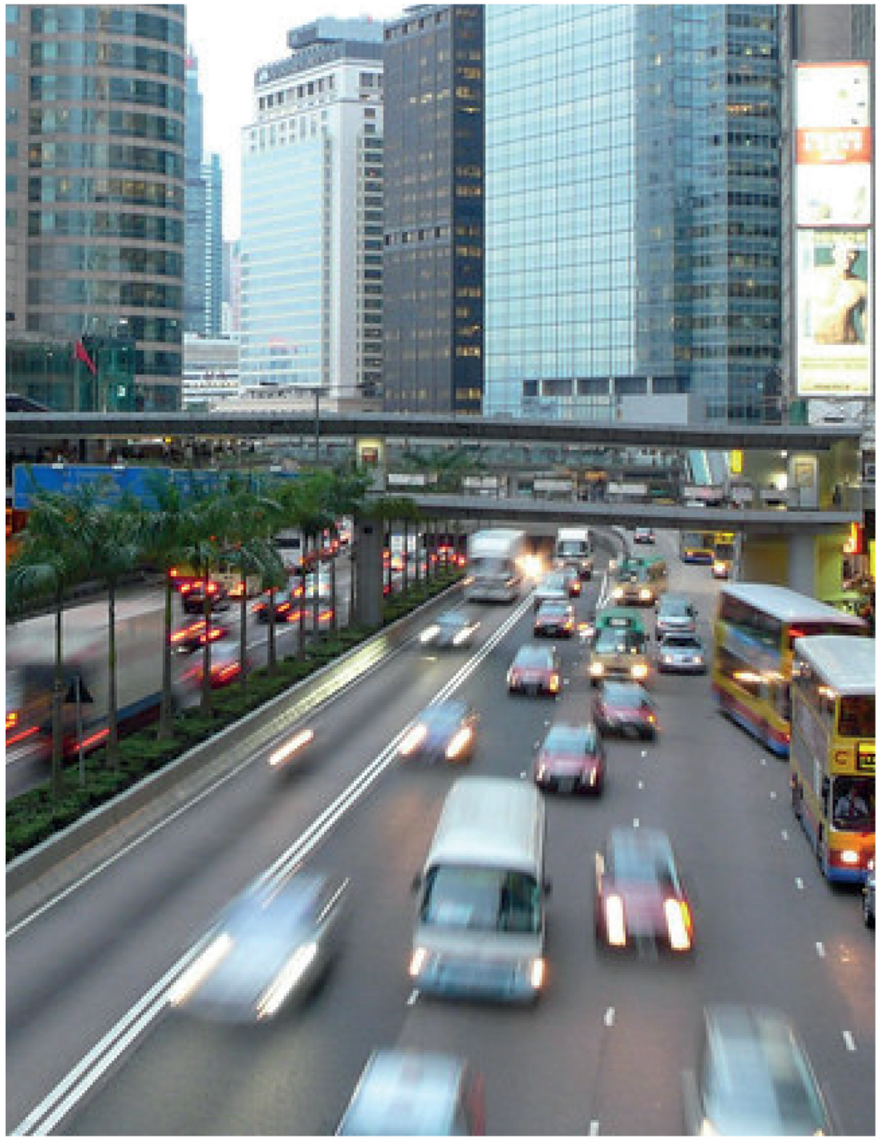
Hong Kong



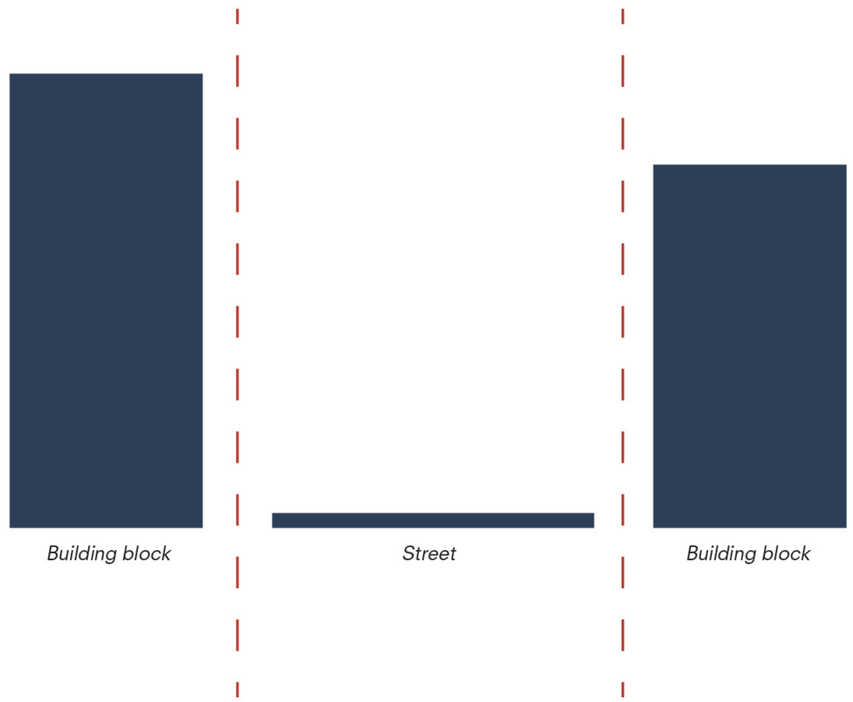


Change of the street

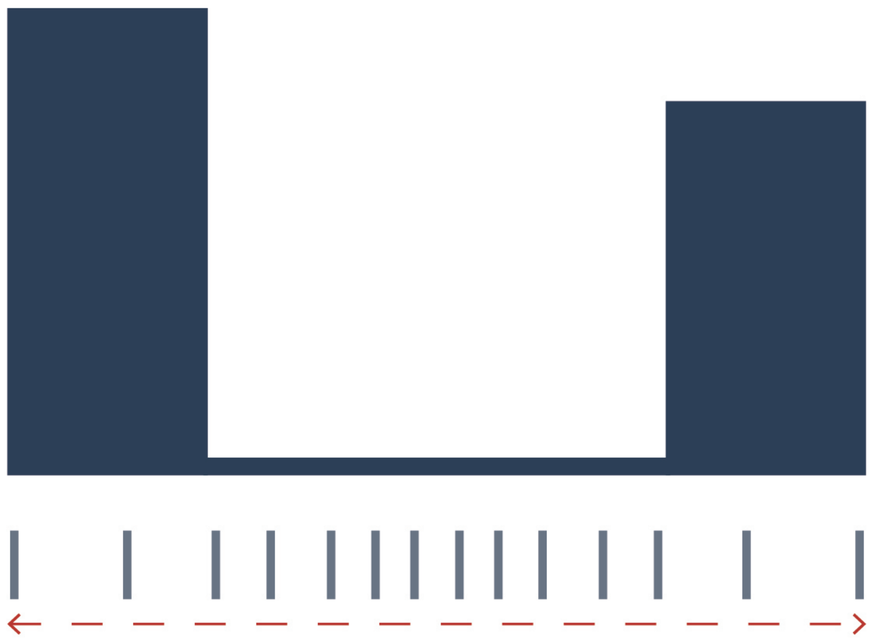




Division street

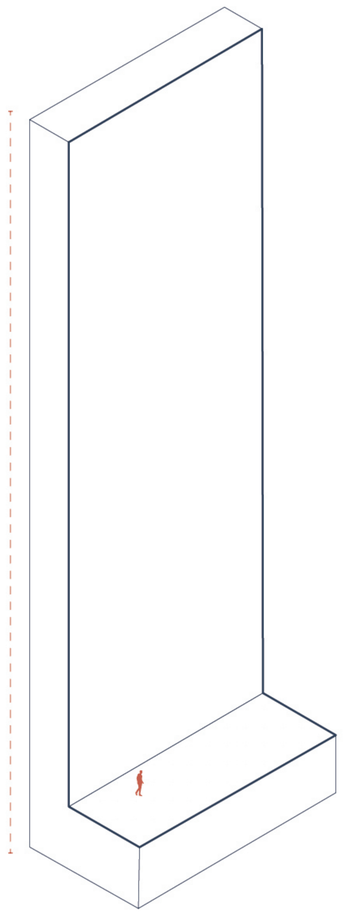


Coherentcy

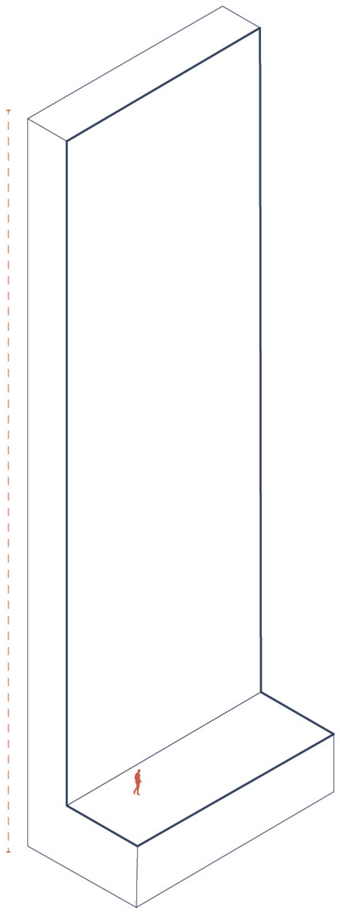


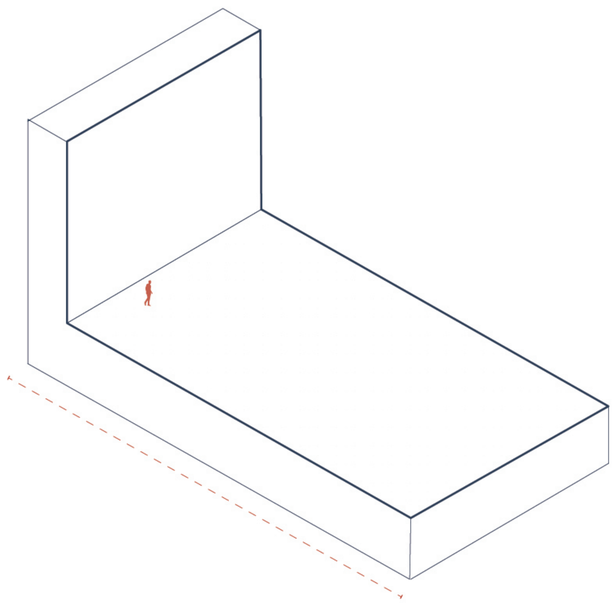
Coherentcy

Human scale

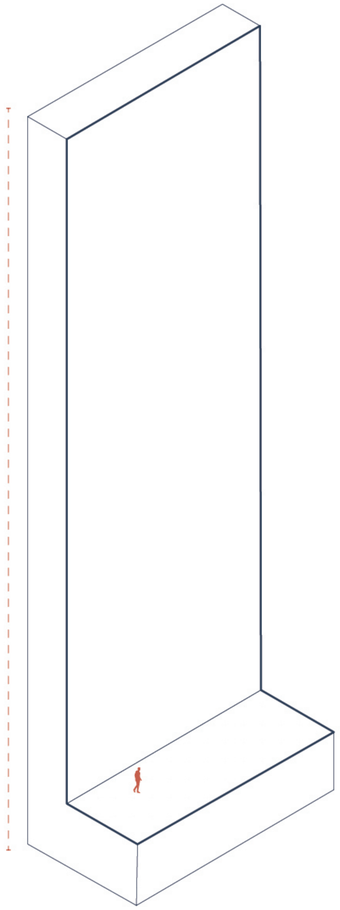


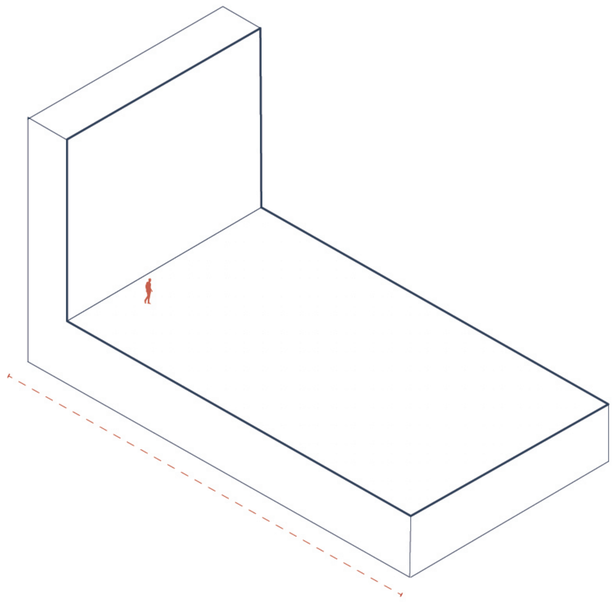
Human scale

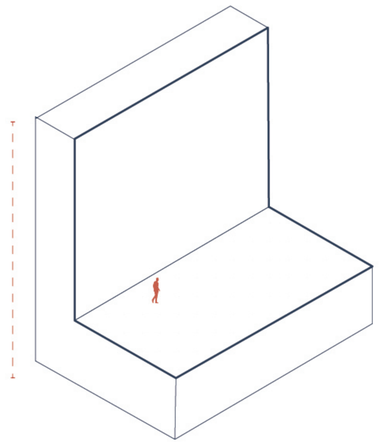




Human scale

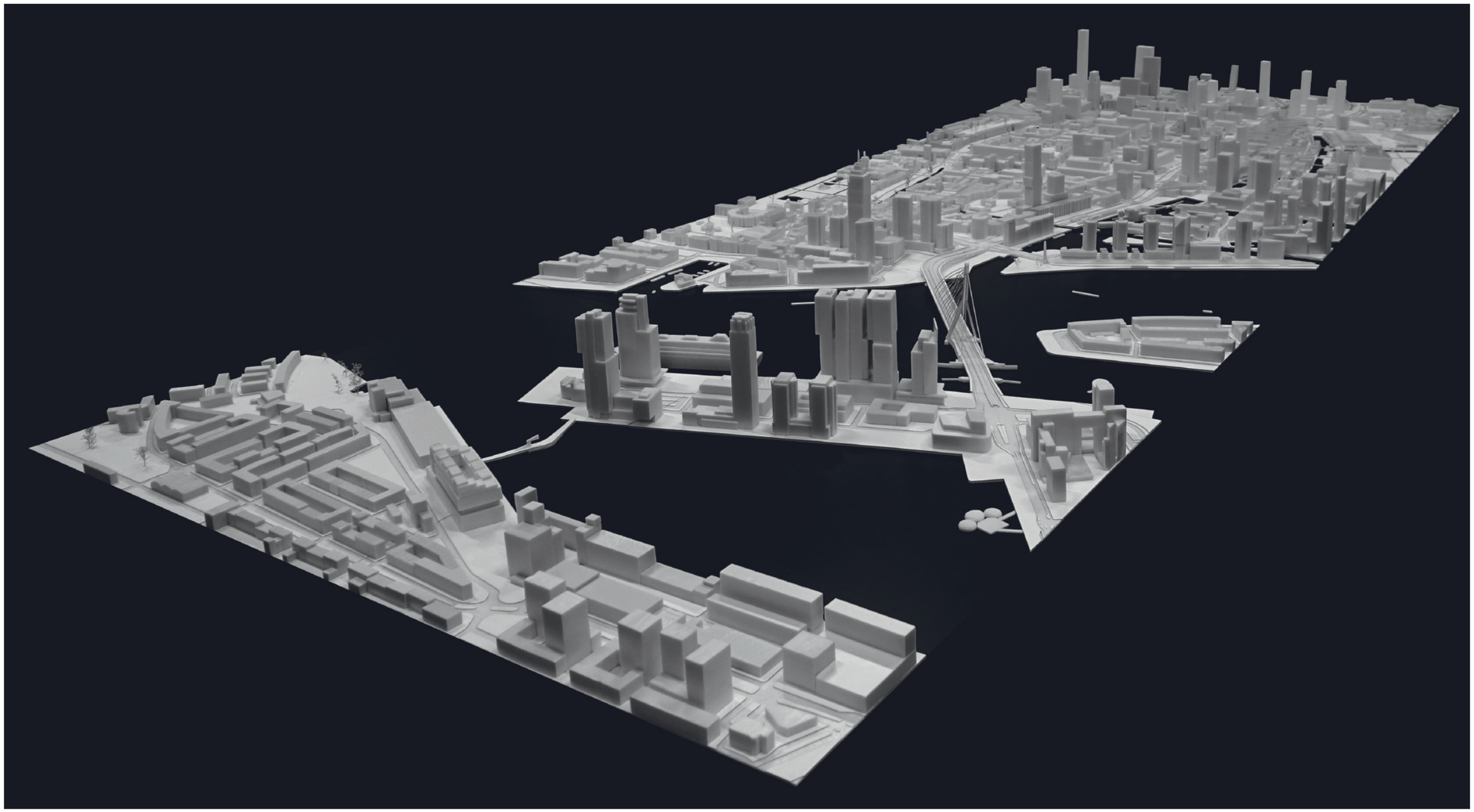




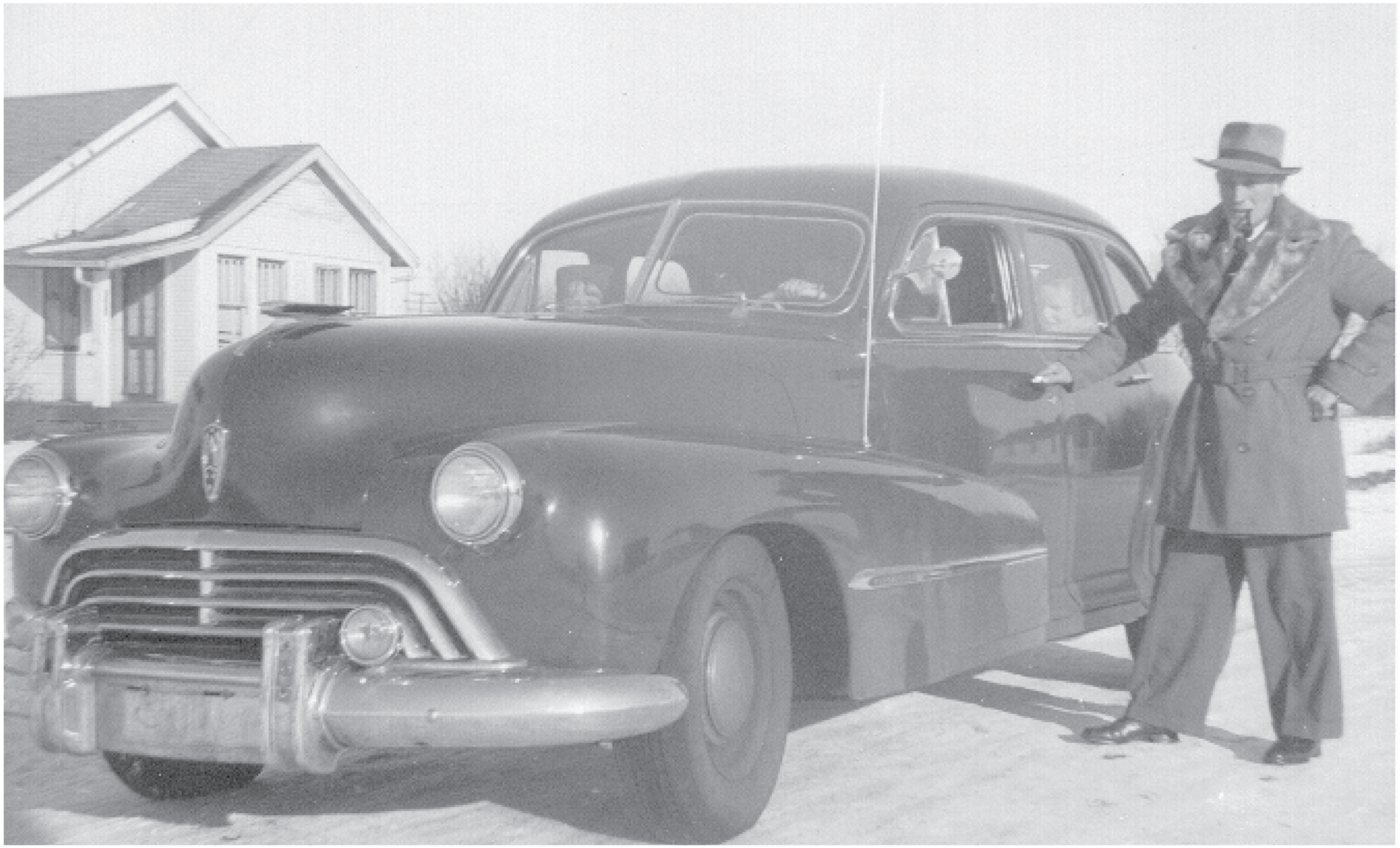


The public street can become a place instead of a transitional space

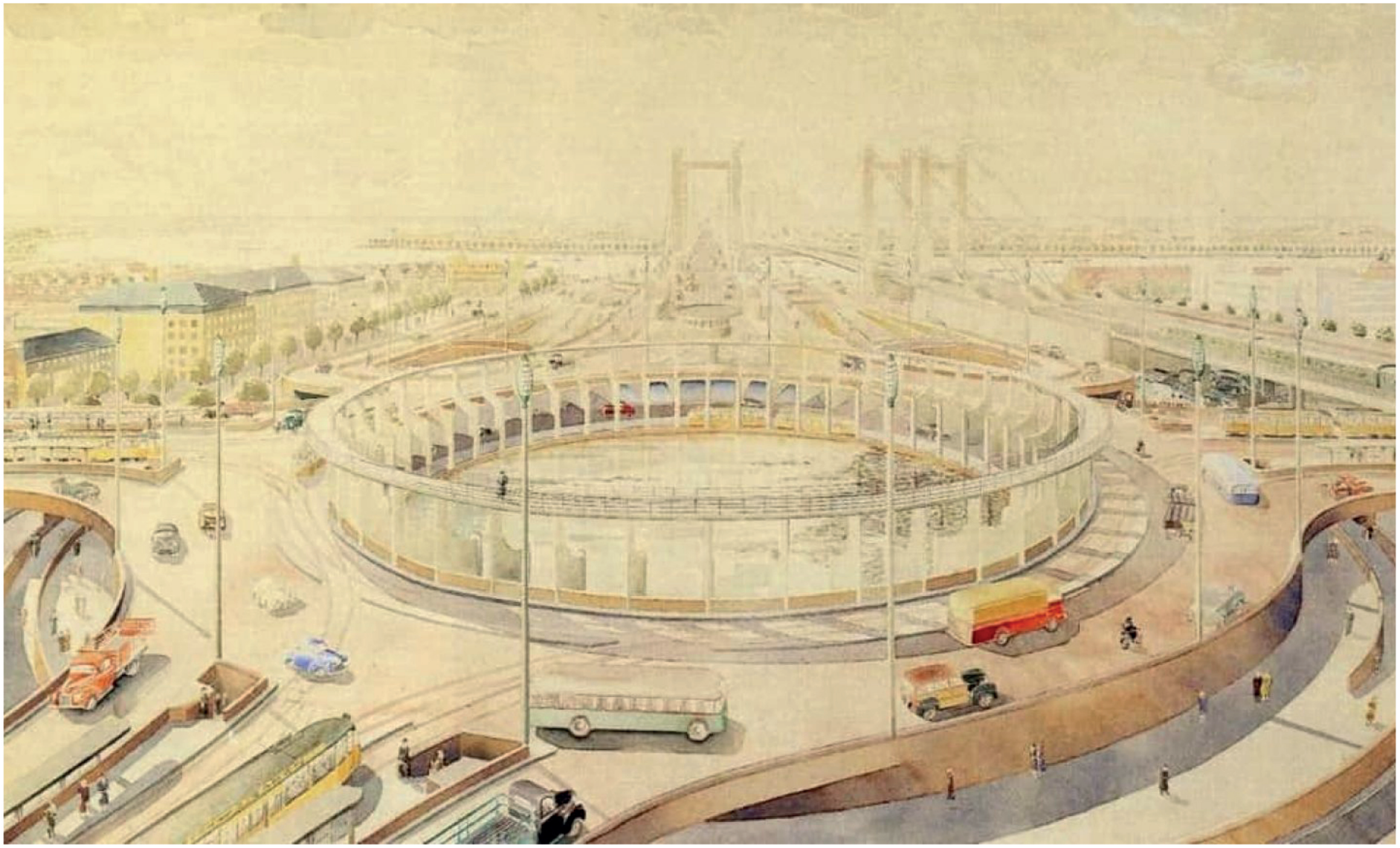
Rotterdam



The arrival of the car in Rotterdam



Masterplan



Traffic square Rotterdam, Wederopbouw
The Netherlands

Masterplan



Different plan for the traffic square Rotterdam, Wederopbouw
The Netherlands (1955)



Coolsingel, Rotterdam
The Netherlands



Coolsingel, Rotterdam
The Netherlands

New design Coolsingel





Experimenteren op het Kruisplein: 'Fietsers en voetgangers stoppen sneller bij een winkel. Sluipverkeer niet, die rijden gewoon door.' (Foto: Eric Fecken) (Foto: All rights reserved eric fecken)

Zo zet Rotterdam de stappen op weg naar autoluwe binnenstad

di 9 jun 2020, 17:00

Rotterdam - Het centrum van Rotterdam verandert. De toenemende drukte zorgt ervoor dat de hoeveelheid auto's niet meer te handhaven is, zo vindt het stadsbestuur. Volgens wethouder Judith Bokhove is er een 'nieuw type mens' ontstaan dat snakt 'naar ruimte, naar groen, naar een fijnere binnenstad met minder auto's.'



Files in het centrum van Rotterdam. Door wegwerk op het Hofplein en de Coolsingel stroopt het verkeer op. © Frank de Roo

Pak de tram of rijd je klem, want de auto is geen heilige koe meer in Rotterdam

Files in Rotterdam: wen er maar aan. Of pak het openbaar vervoer. Automobilisten die vast staan, kunnen op weinig medelijden rekenen. De stad wil van ze af.

Home > Nieuws > mathilde demi en tara willen minder auto s zodat ze op straat kun



Demi met haar vriendinnen Mathilde (links) en Tara. Ze willen meer op straat kunnen spelen en zouden het liefst zien dat daar geen auto's meer rijden. (Foto: Caro Linares) (Foto: Carolina Linares)

Mathilde, Demi en Tara willen minder auto's zodat ze op straat kunnen spelen

di 9 jun 2020, 15:04

Rotterdam - Demi (9) woont aan de Botersloot en kon tijdens de lockdown heerlijk met Mathilde (links op de foto) en Tara (rechts) op straat spelen. Zonder bang te zijn voor ongelukken. En dat wil Demi vaker doen! Ze heeft een voorstel naar de gemeente gestuurd om de binnenstad autovrij te maken. Het was zó'n lieve brief dat de gemeente het idee van Demi niet kon negeren. Dus zit ze binnenkort om de tafel met de wethouder. Wordt vervolgd... (Foto: Caro Linares)



Overal controles. (Foto: Politie)

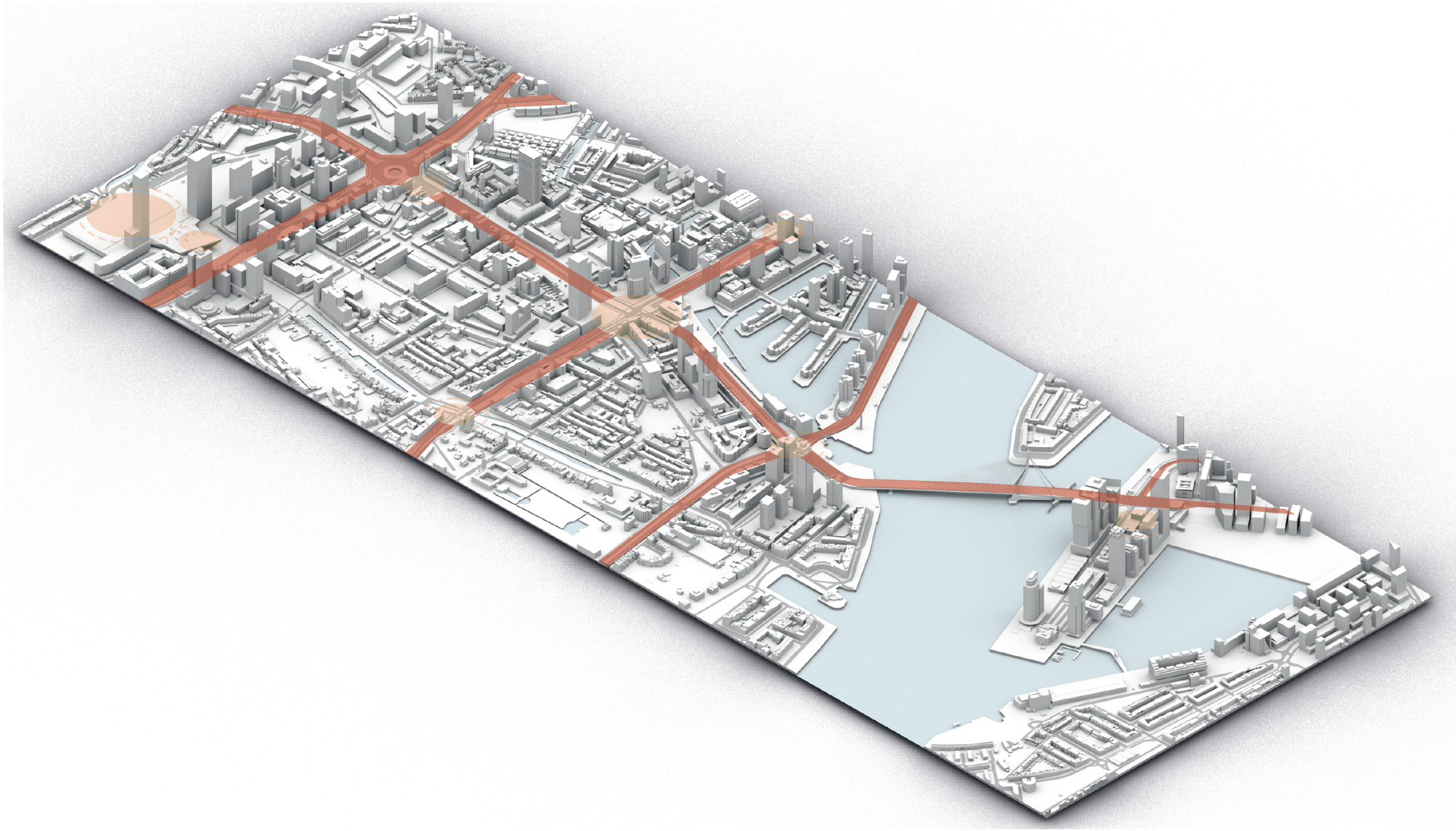
Nee, de wijk is inderdaad geen racebaan, controles op allerlei plekken in de stad

ma 8 jun 2020, 18:24

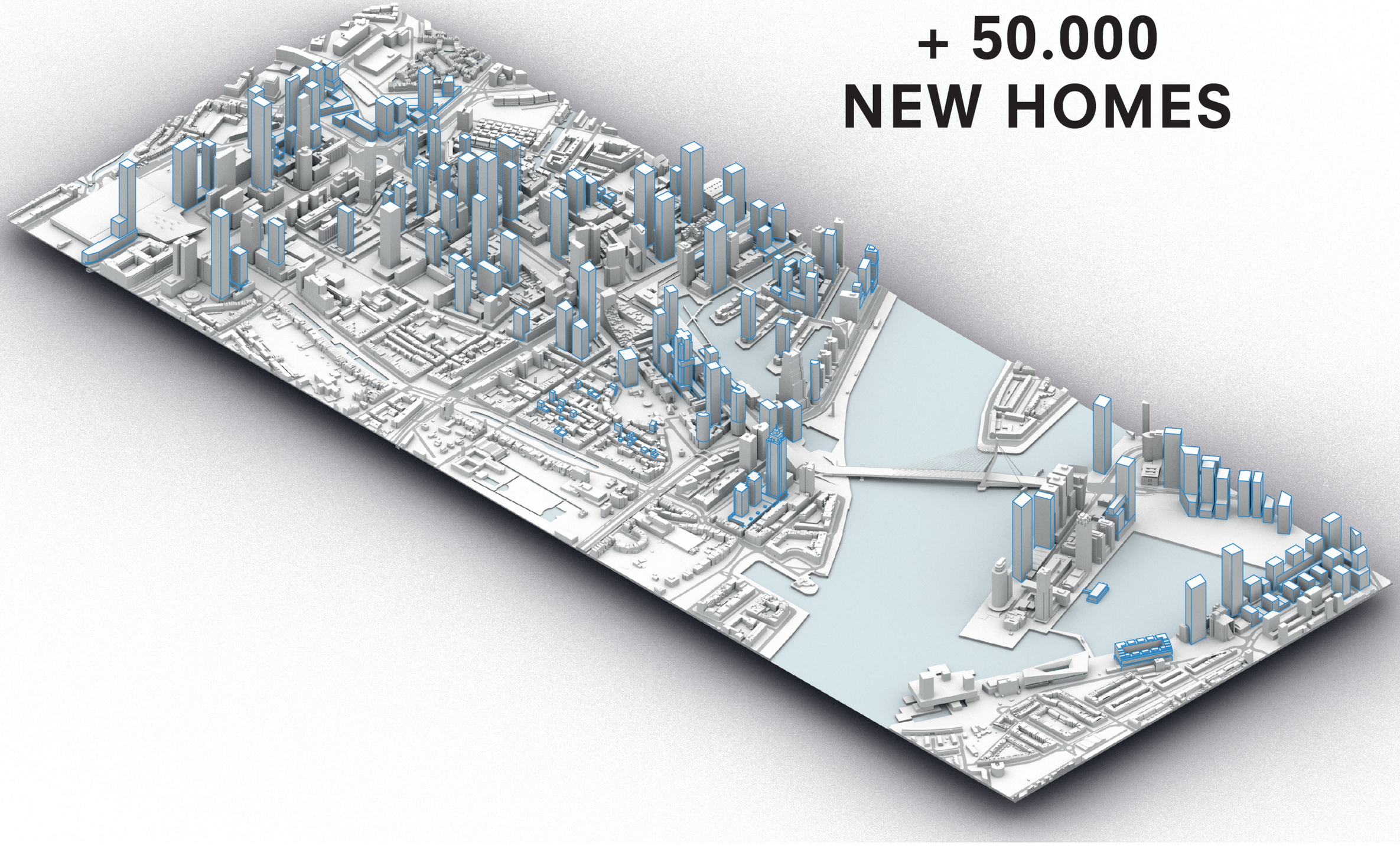
Rotterdam - In allerlei Rotterdamse buurten klagen bewoners over het veranderen van hun wijk in een racebaan. De politie lijkt daar de laatste tijd steeds vaker naar te luisteren. Er waren wekenlang patsercontroles op en rond de Meent, hardrijders in de Zwart Janstraat werden aan de kant gezet en afgelopen weekend waren er controles op de Bergselaan, de Bergweg, de Crooswijksestraat en in de Esch. Omwonenden waren er blij mee.


Rotterdam is a car-oriented city

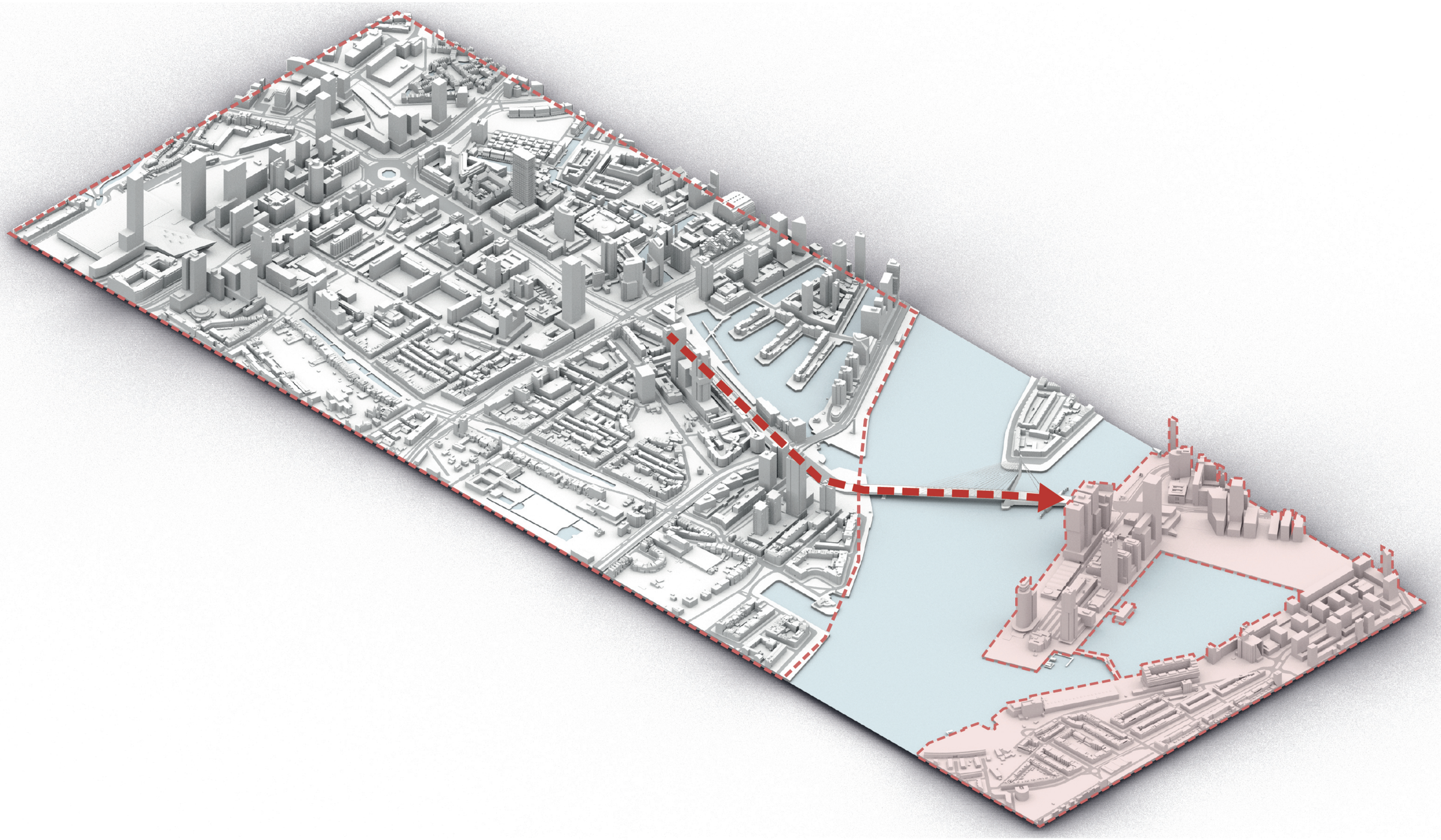
Roadsystem Rotterdam



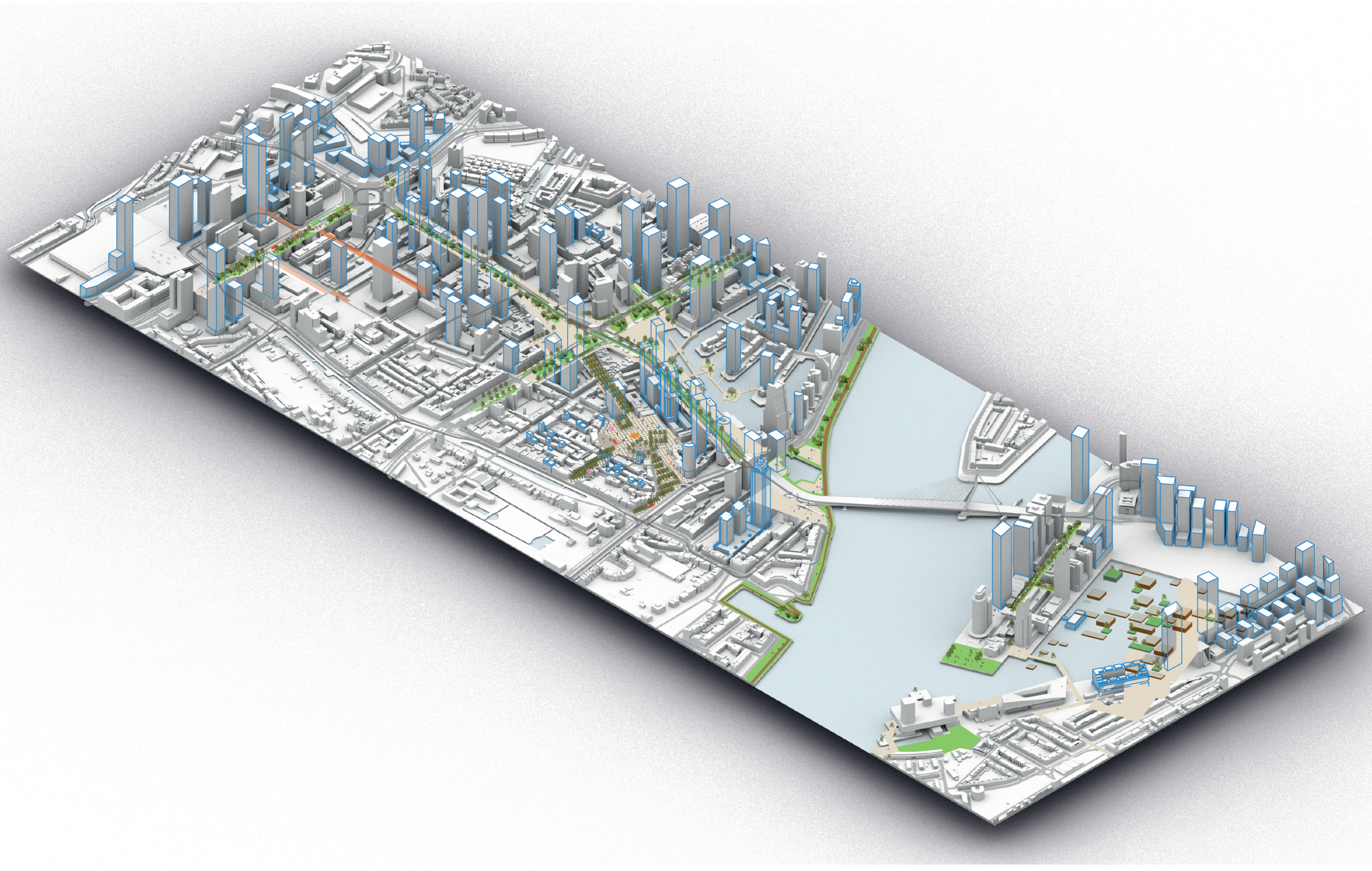
Densification



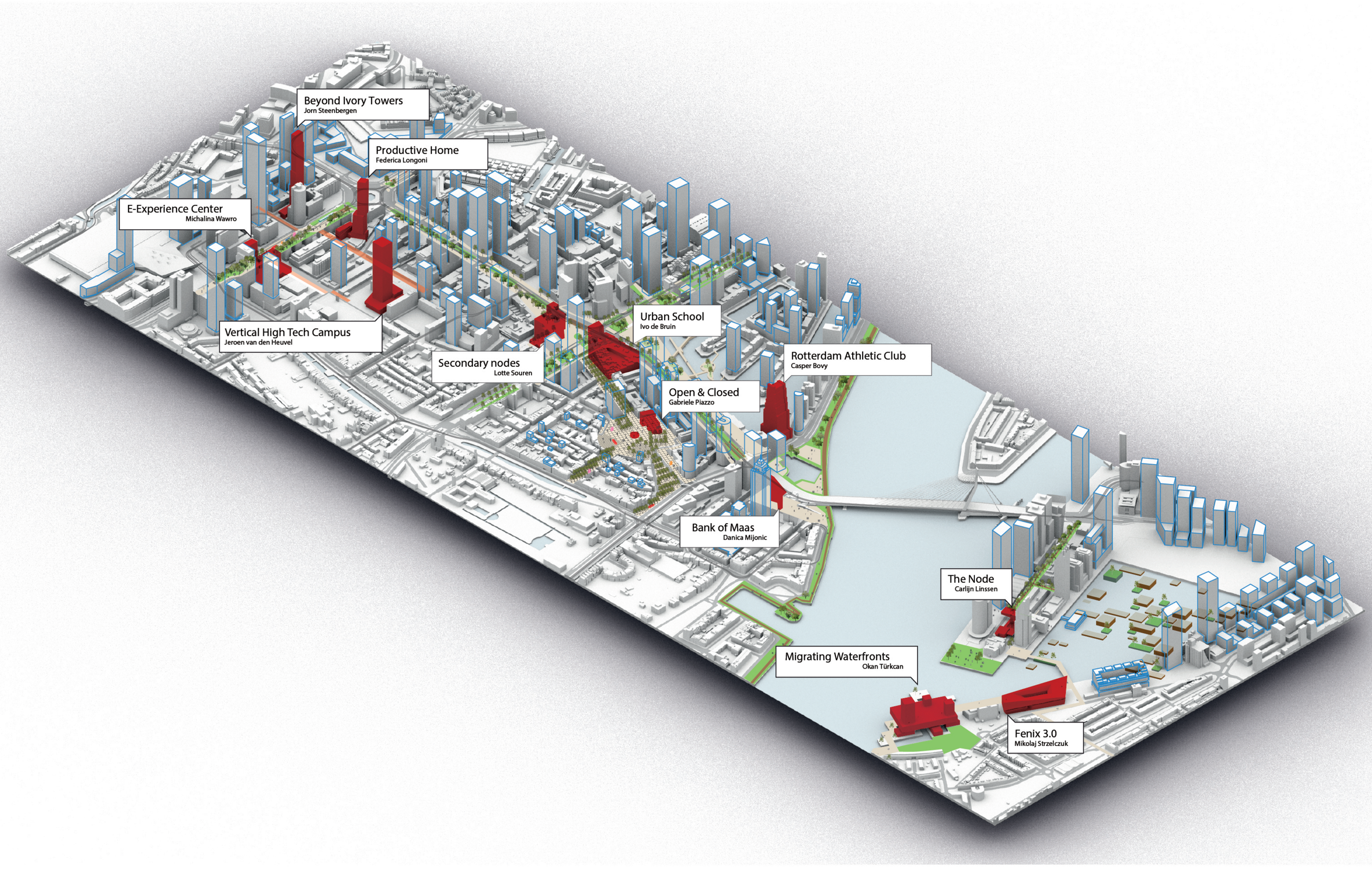
Movement to the south



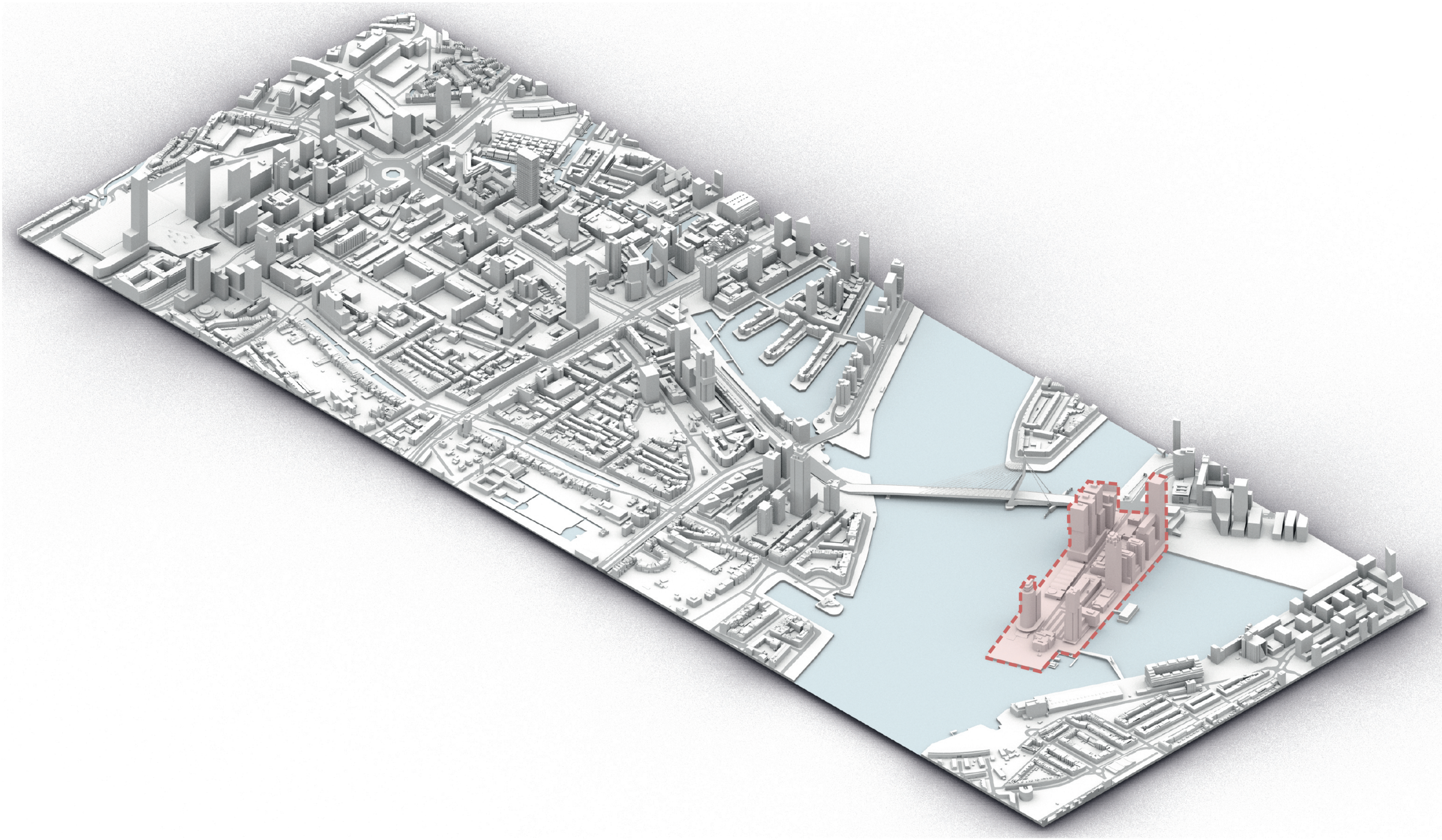
Vision Rotterdam



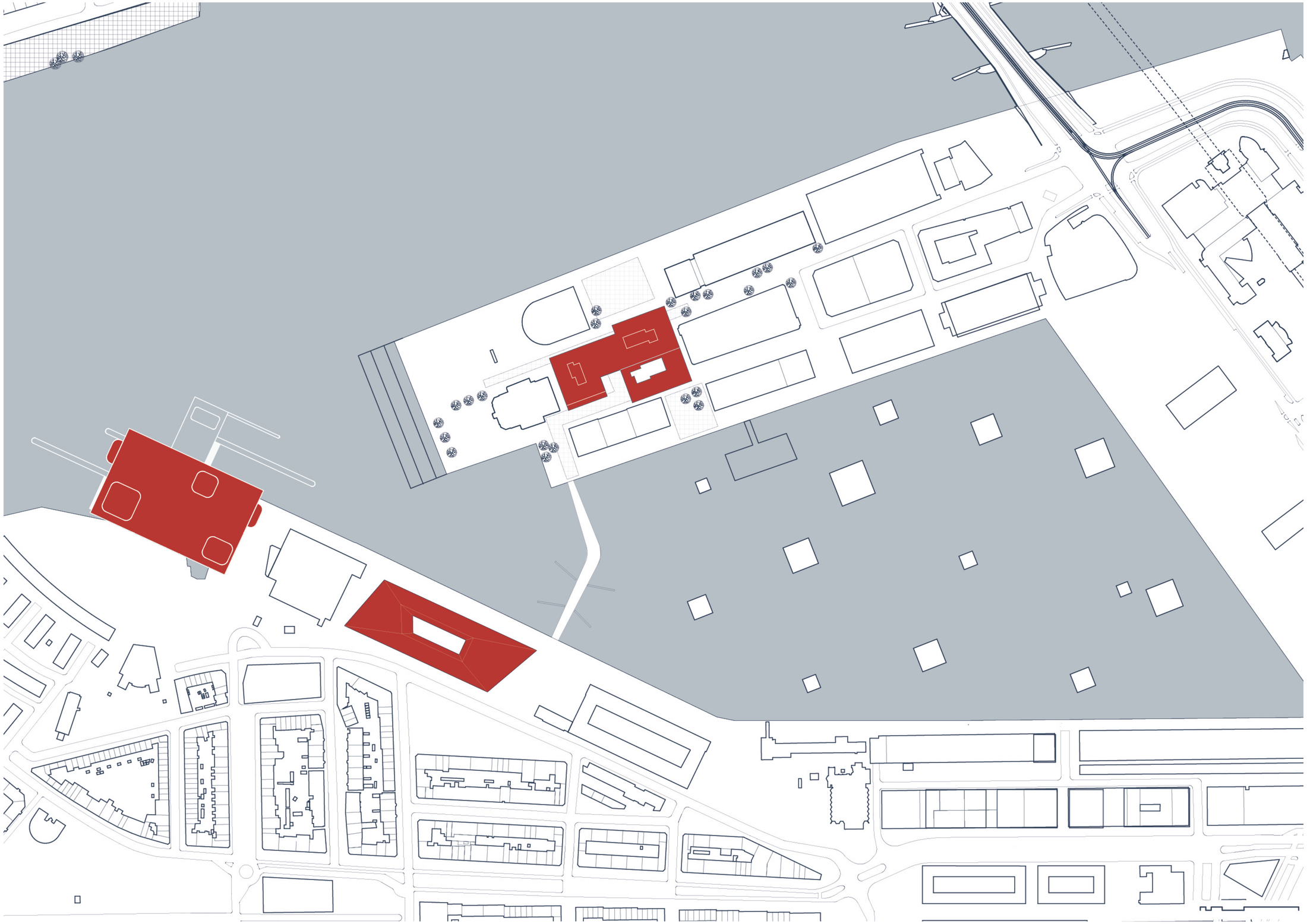
Vision Rotterdam



Kop van Zuid



Site plan South



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Industrial area



Industrial street

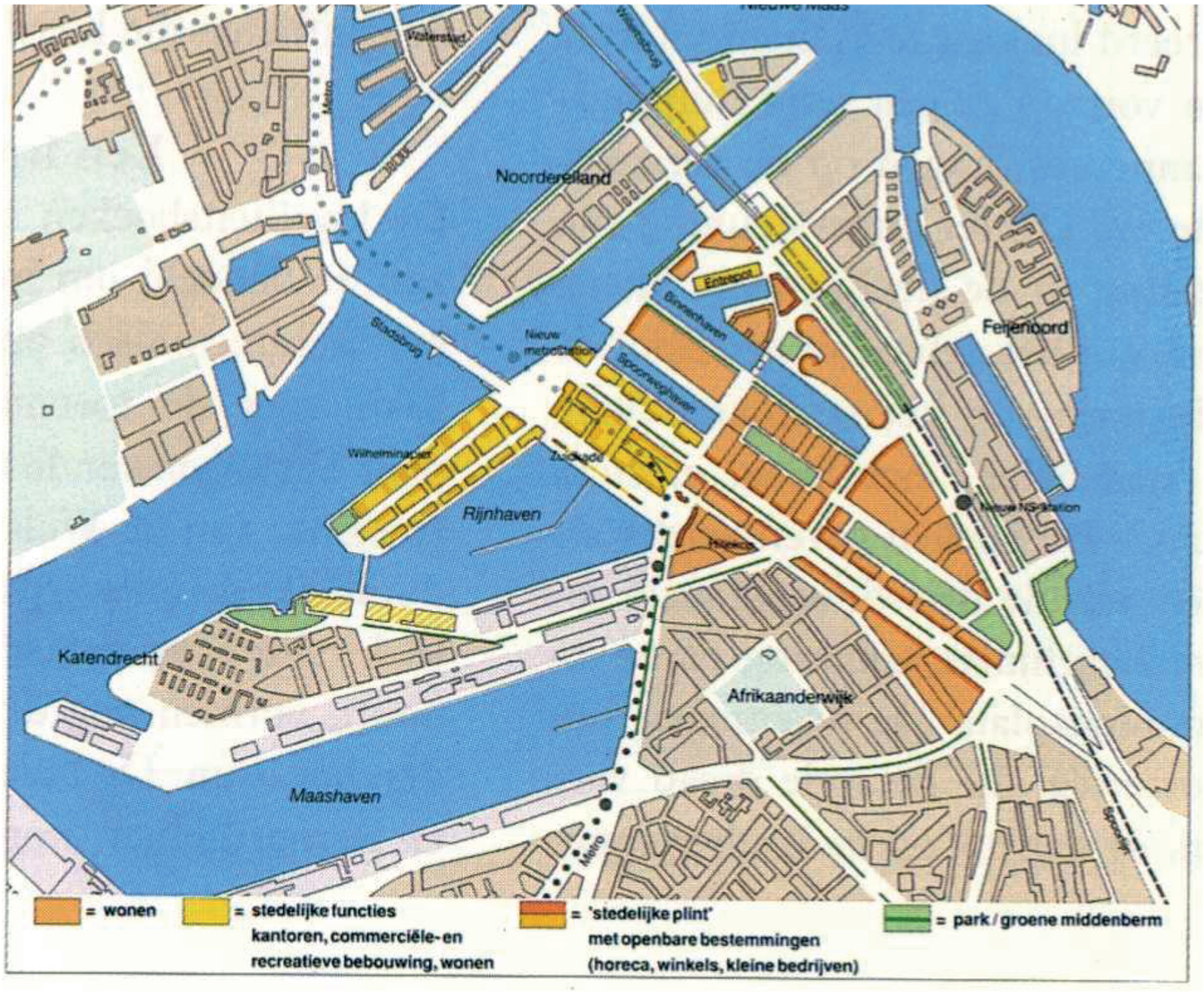


Kop van zuid

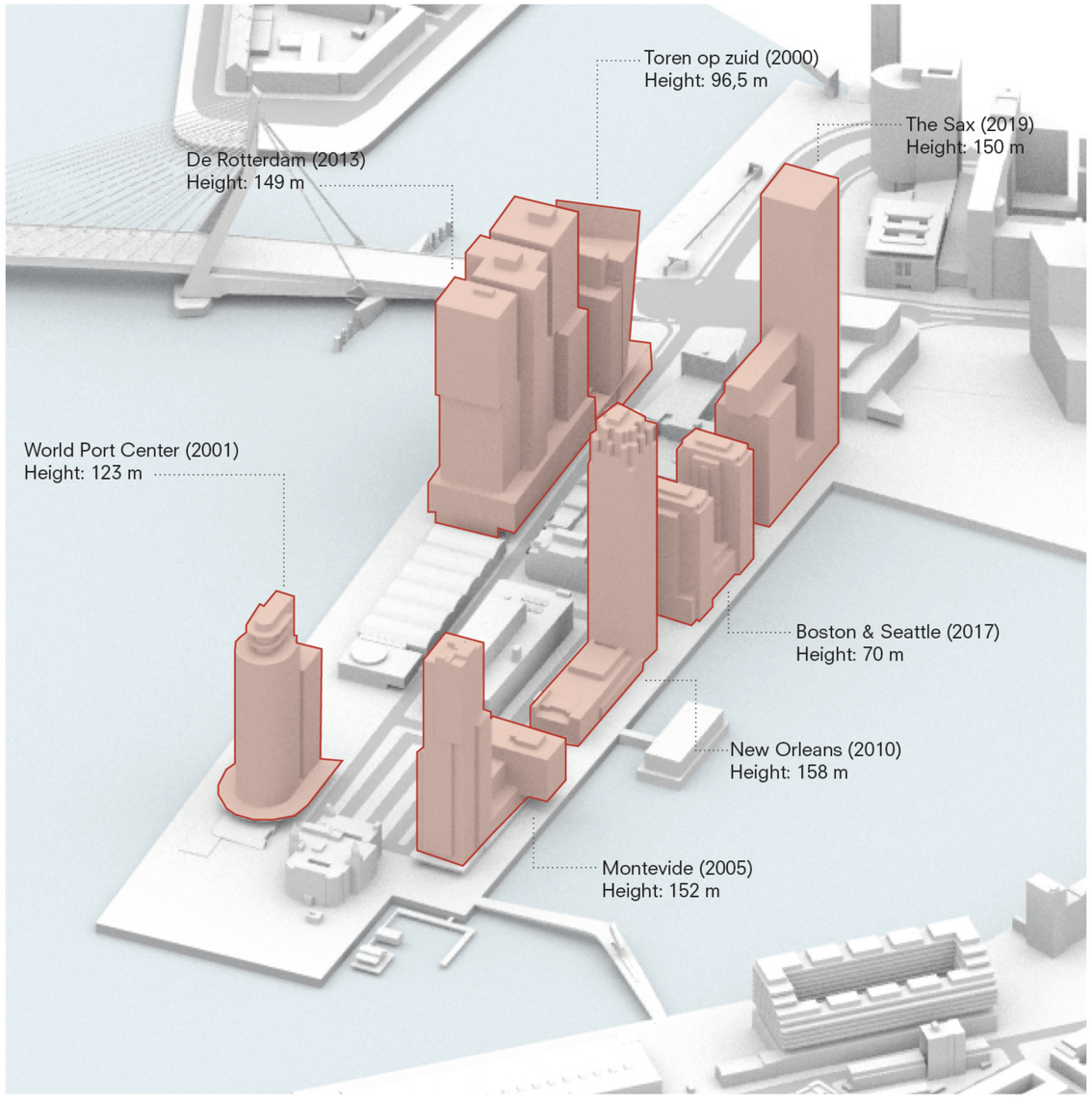


‘ Het nieuwe Rotterdam’ Masterplan 1991

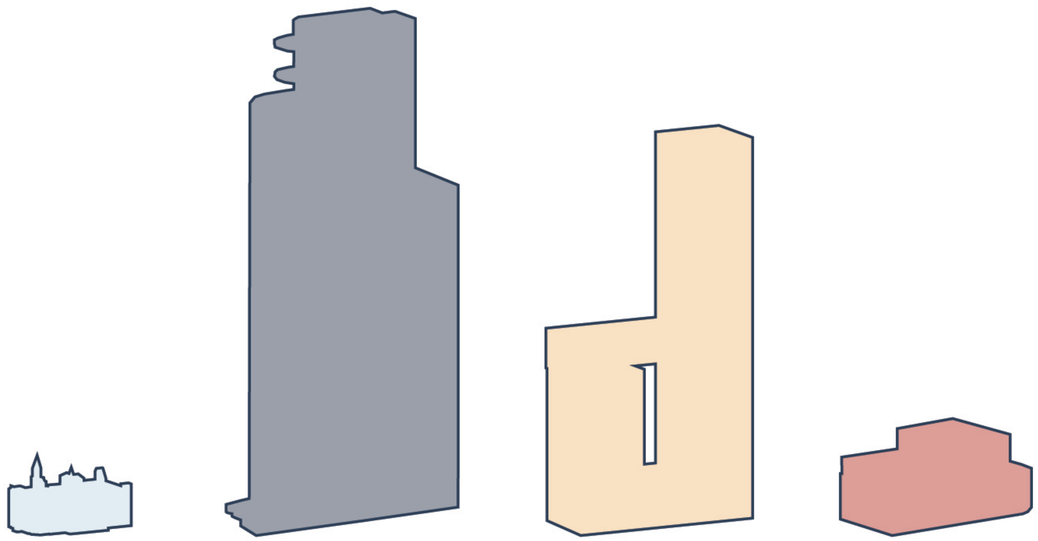
Urban functions



Buildings Kop van Zuid



Division functions

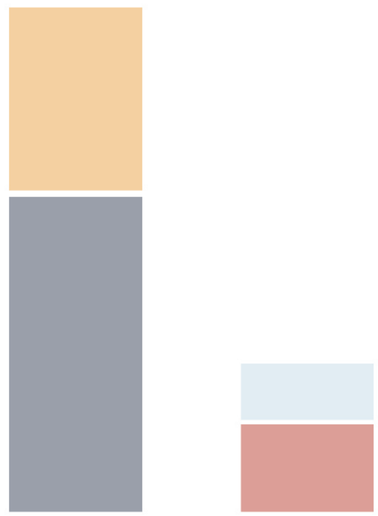


Retail
1%

Office
60%

Residential
32%

Culture
7%



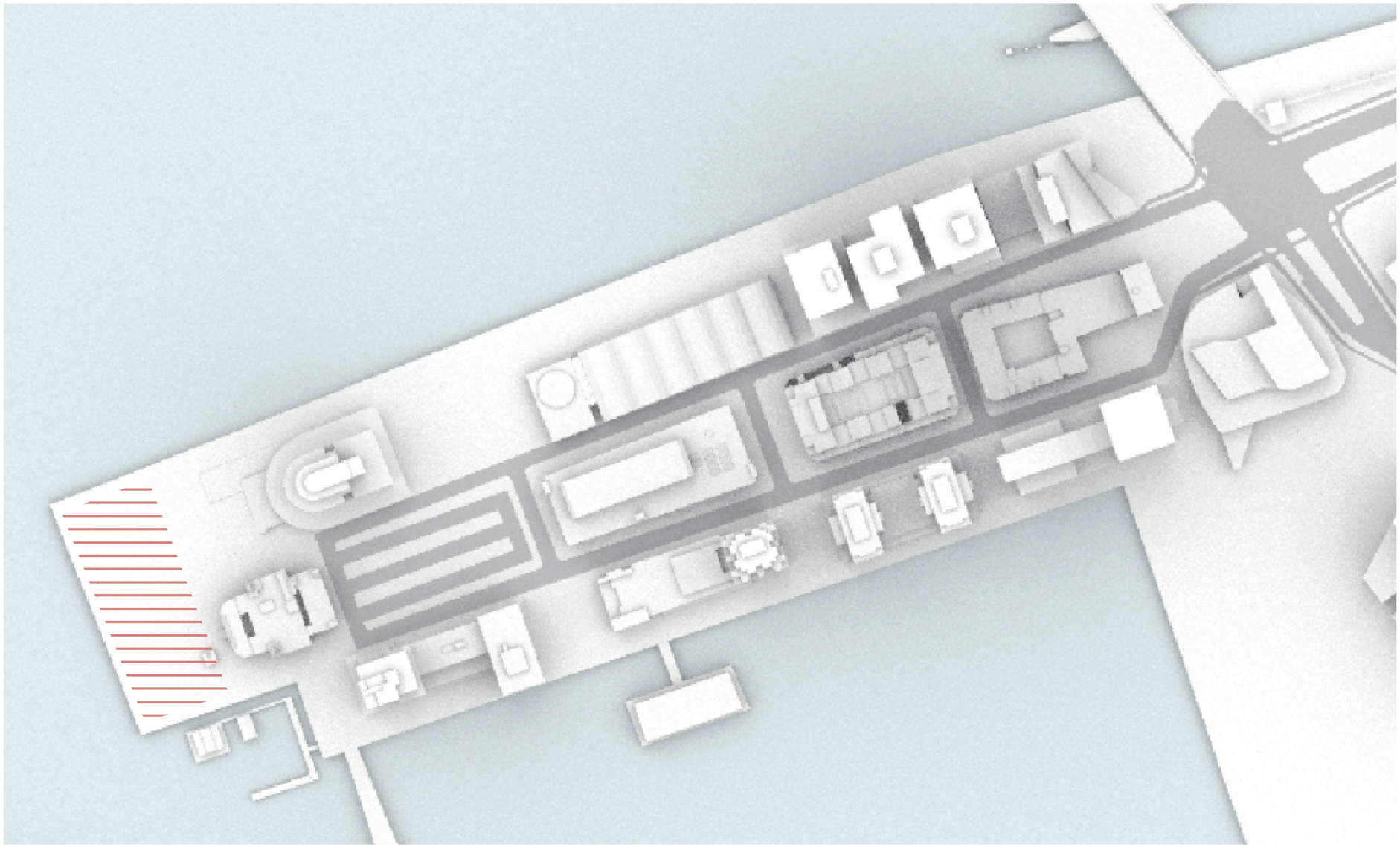
Private
3/4

Public
1/4

Designated public space - Hotel New York

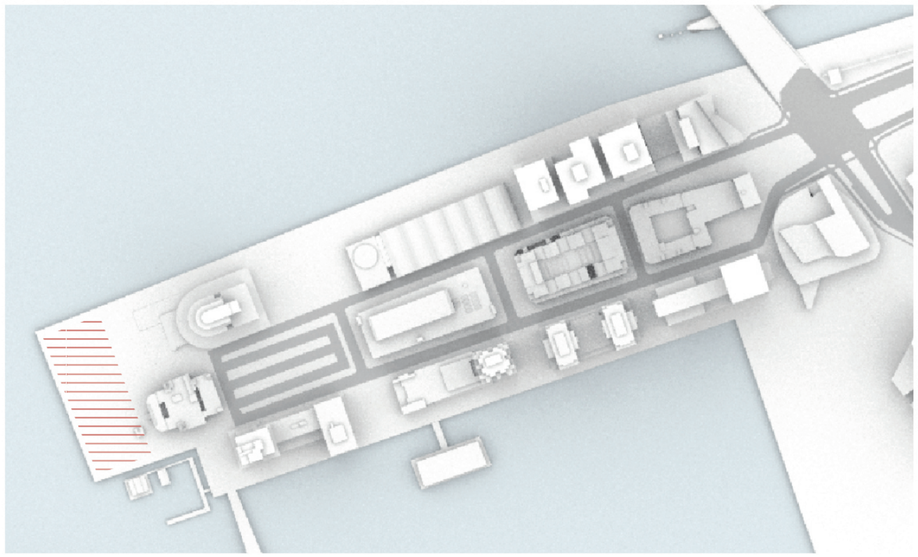


Designated public space

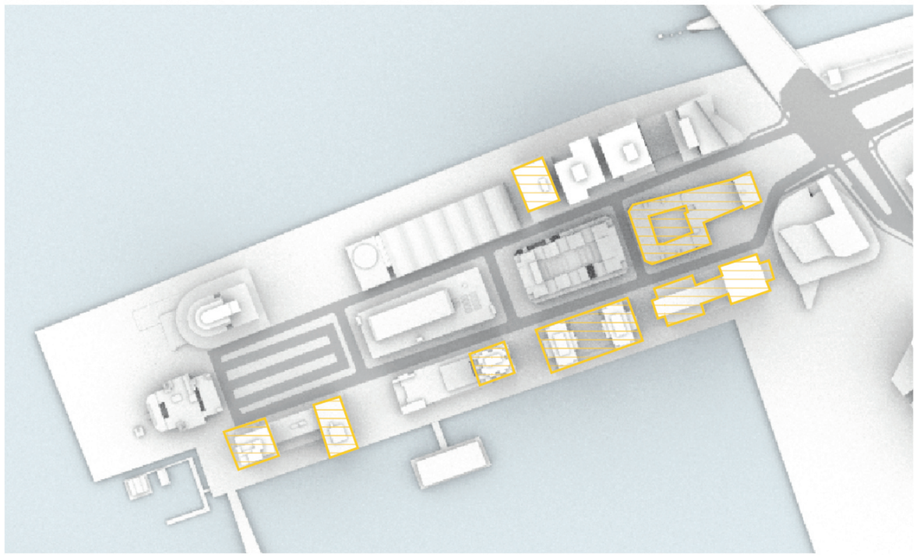


4.300 m² designated public space

Only 3 m² public space per apartment

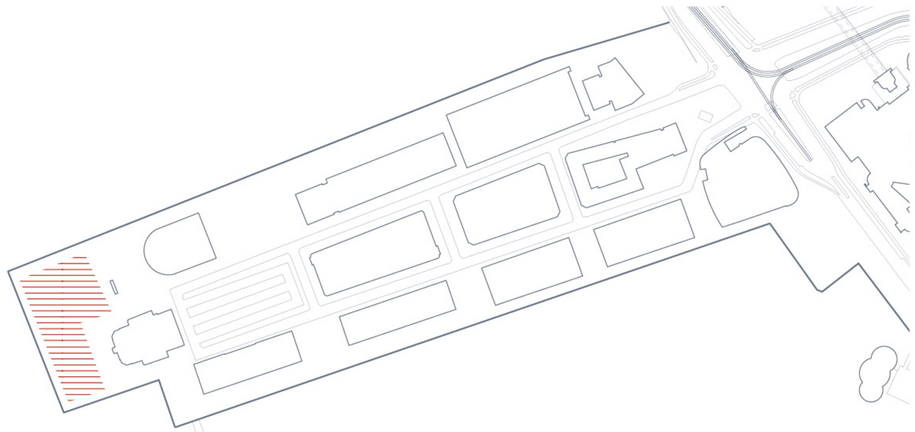


4.300 m² designated public space

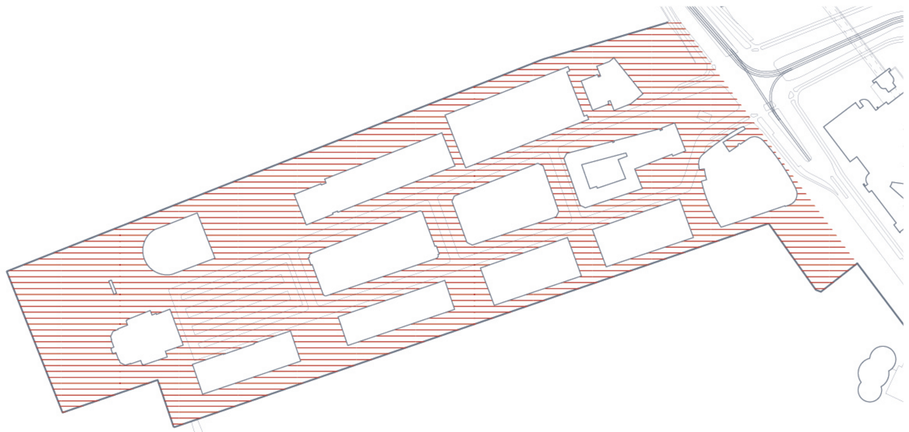


1.416 apartments

Location potentials - Public space

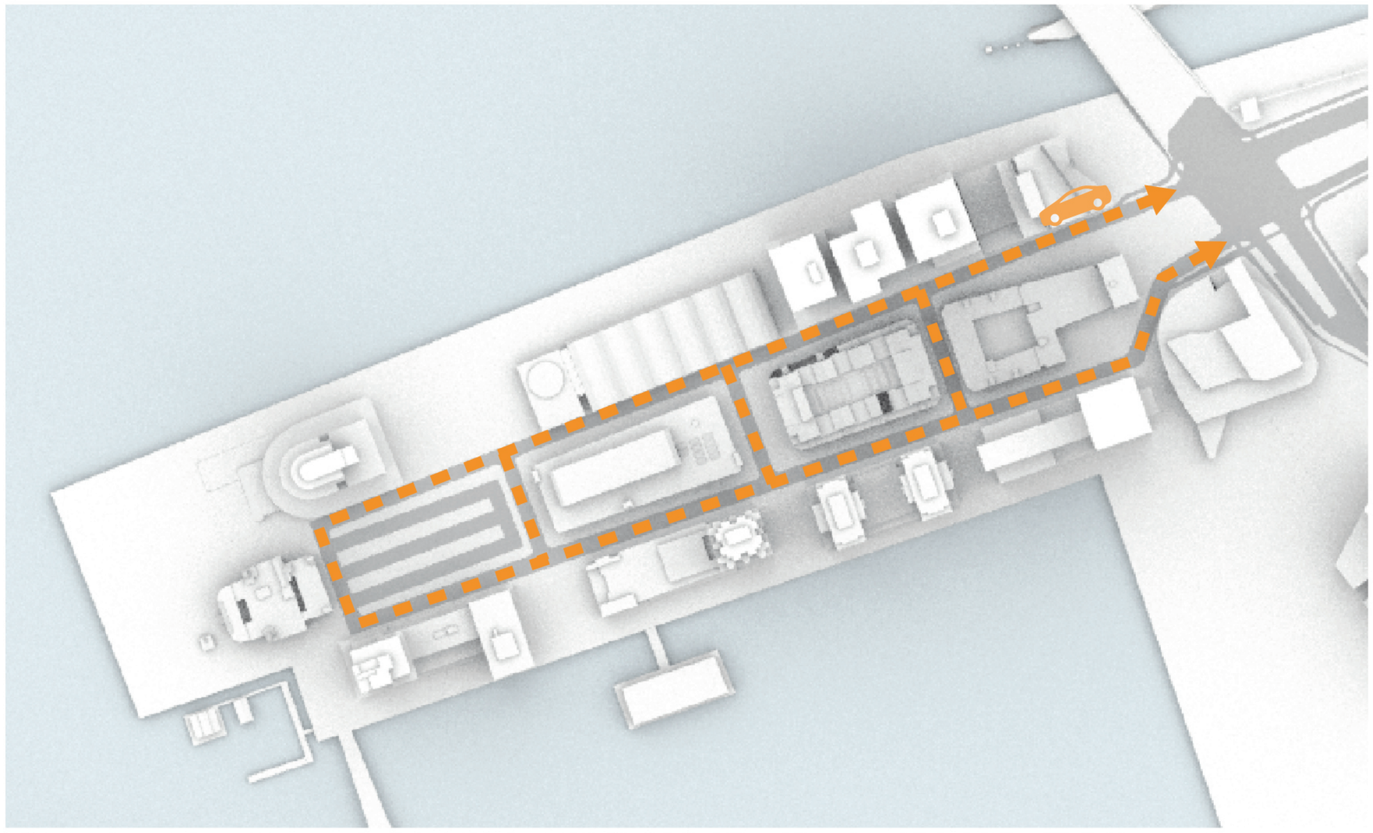


Designated public space



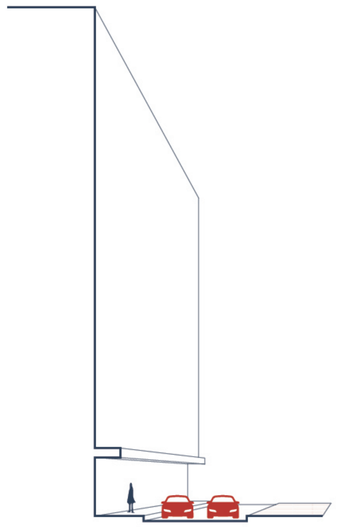
Possible public space

Traffic routes

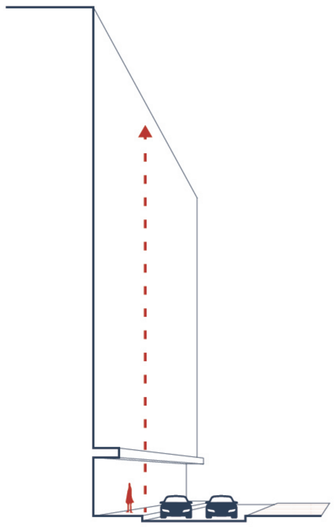


Car traffic

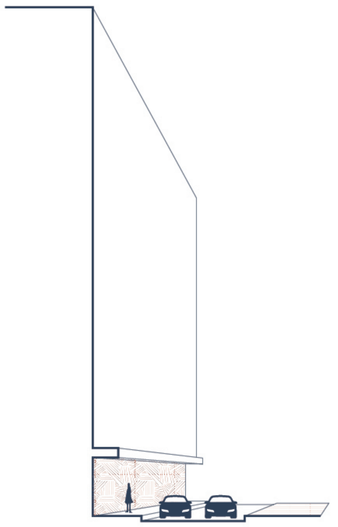
Analysing the existing



Car orientated



Lack of human scale



No connection with the plinth

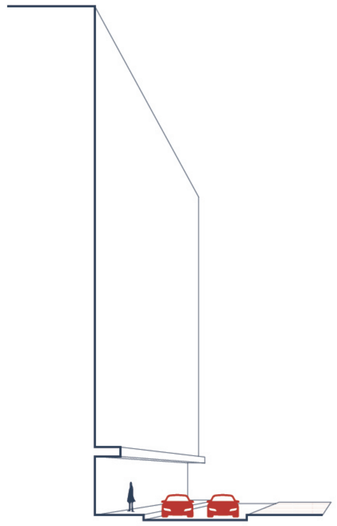




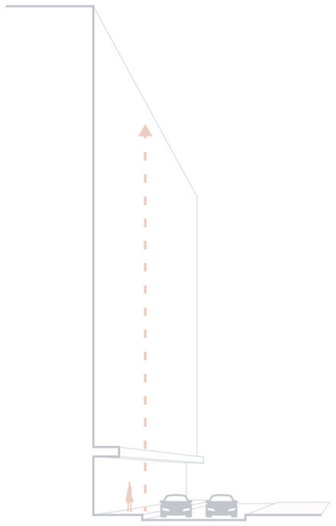


The site

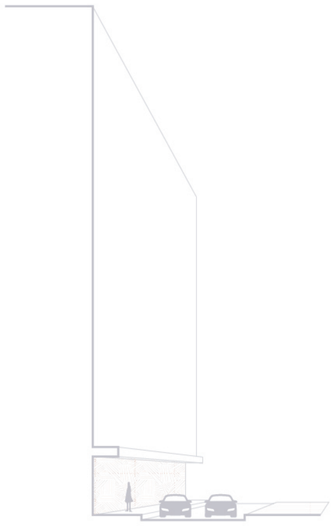
Car oriented



Car orientated



Lack of human scale



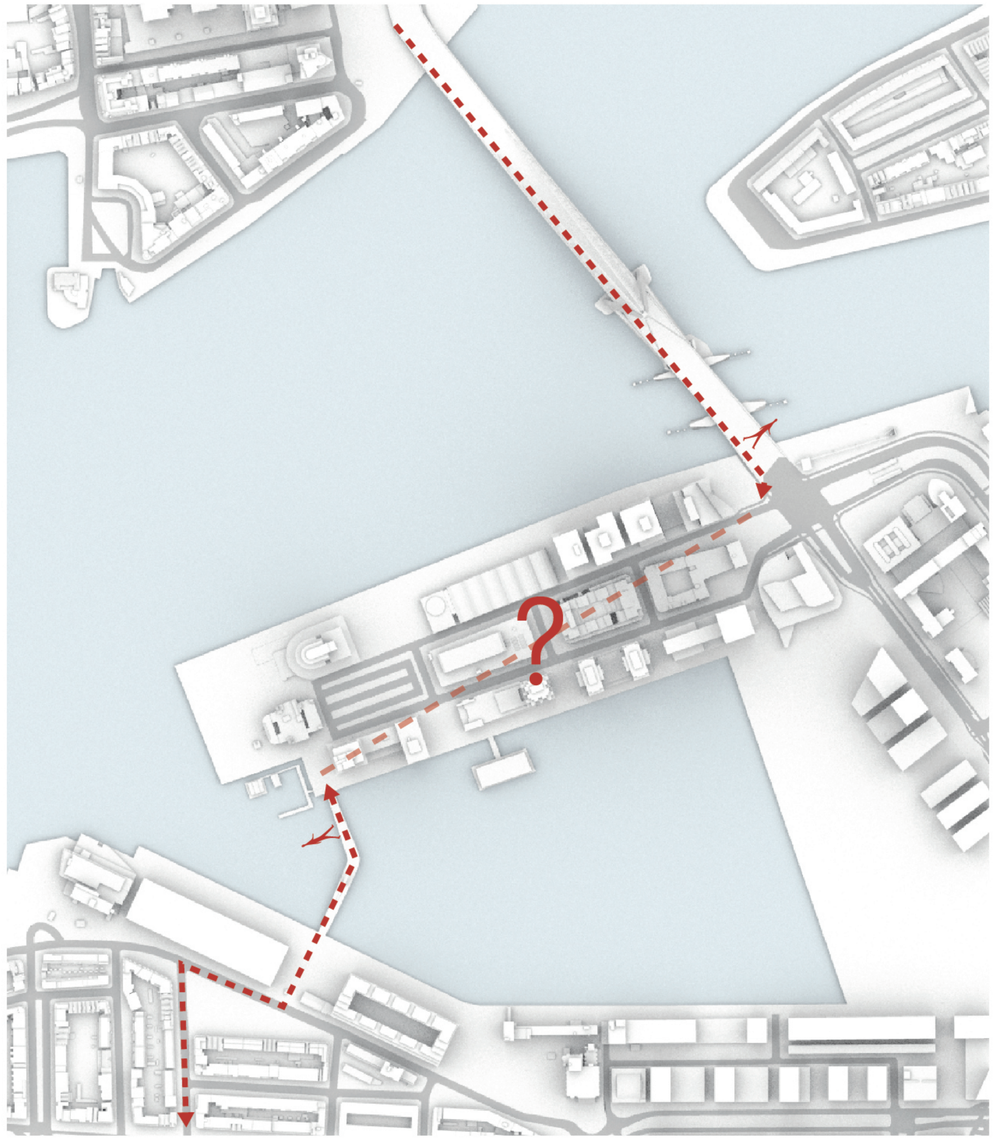
No connection with the plinth







Pedestrian route

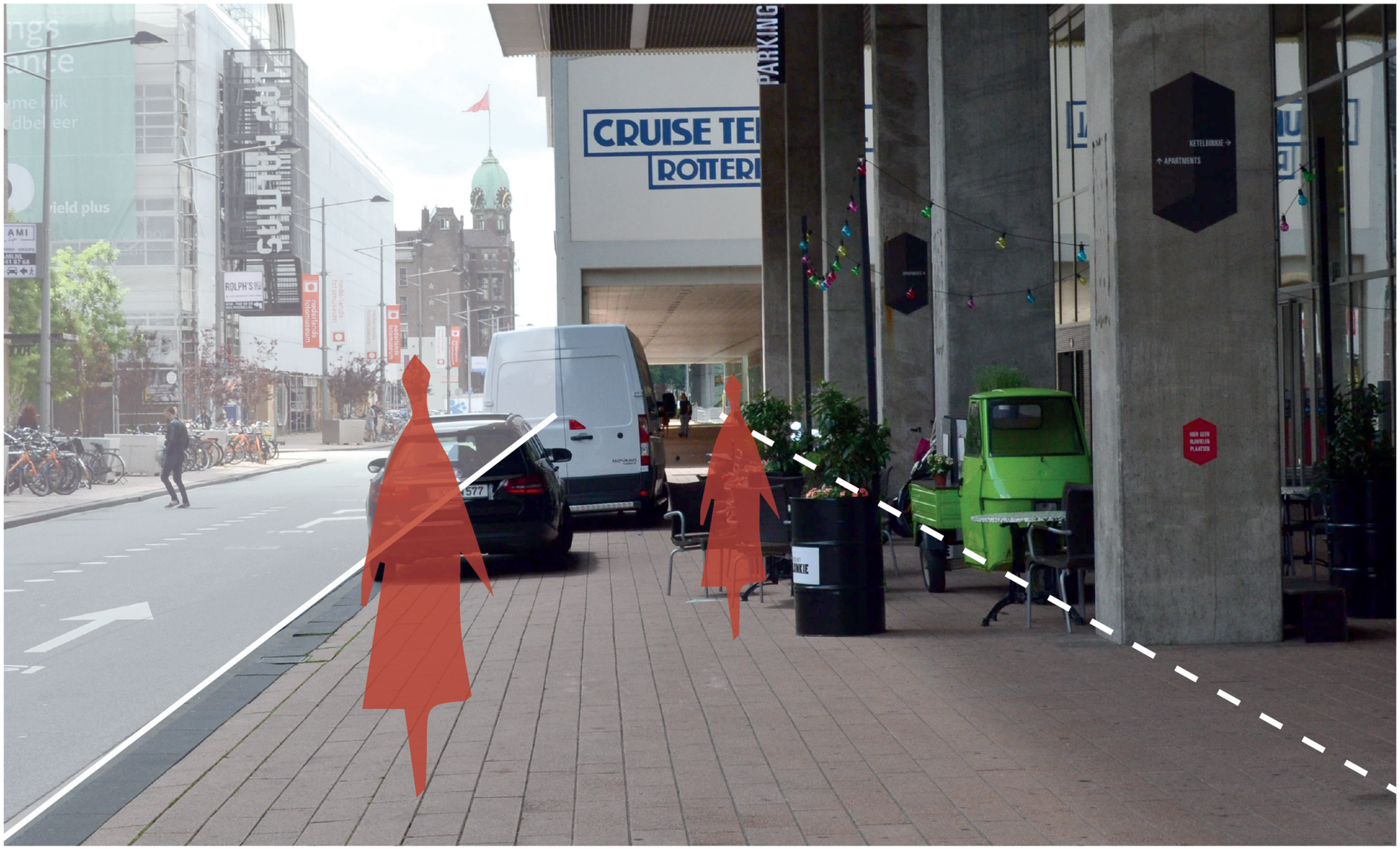


Car-oriented street



The site

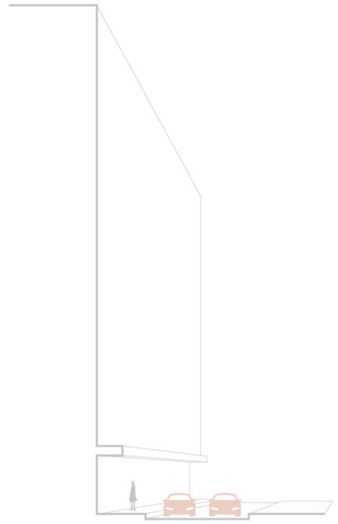
Sidewalk



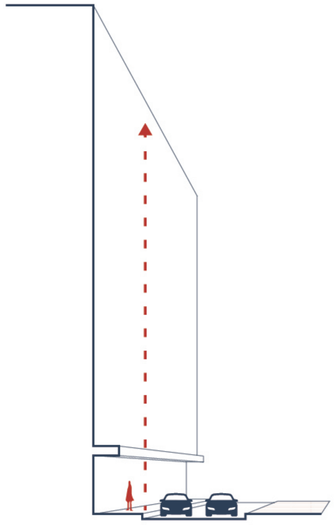
“ACCEPTABLE WALKING DISTANCE IS A HIGHLY SUBJECTIVE MATTER. THE QUALITY OF A ROUTE IS JUST AS IMPORTANT AS ITS ACTUAL LENGTHS.”

- Jan Gehl

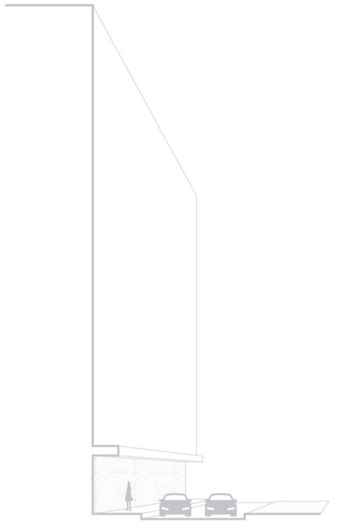
Lack of human scale



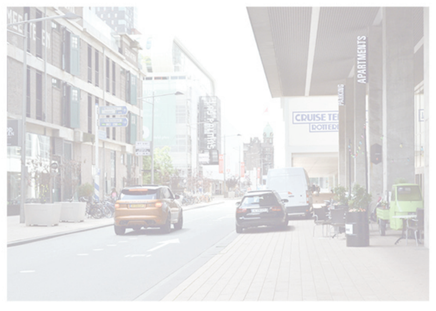
Car orientated



Lack of human scale



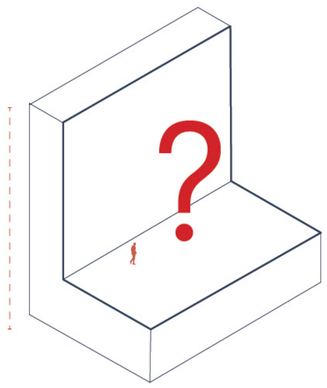
No connection with the plinth



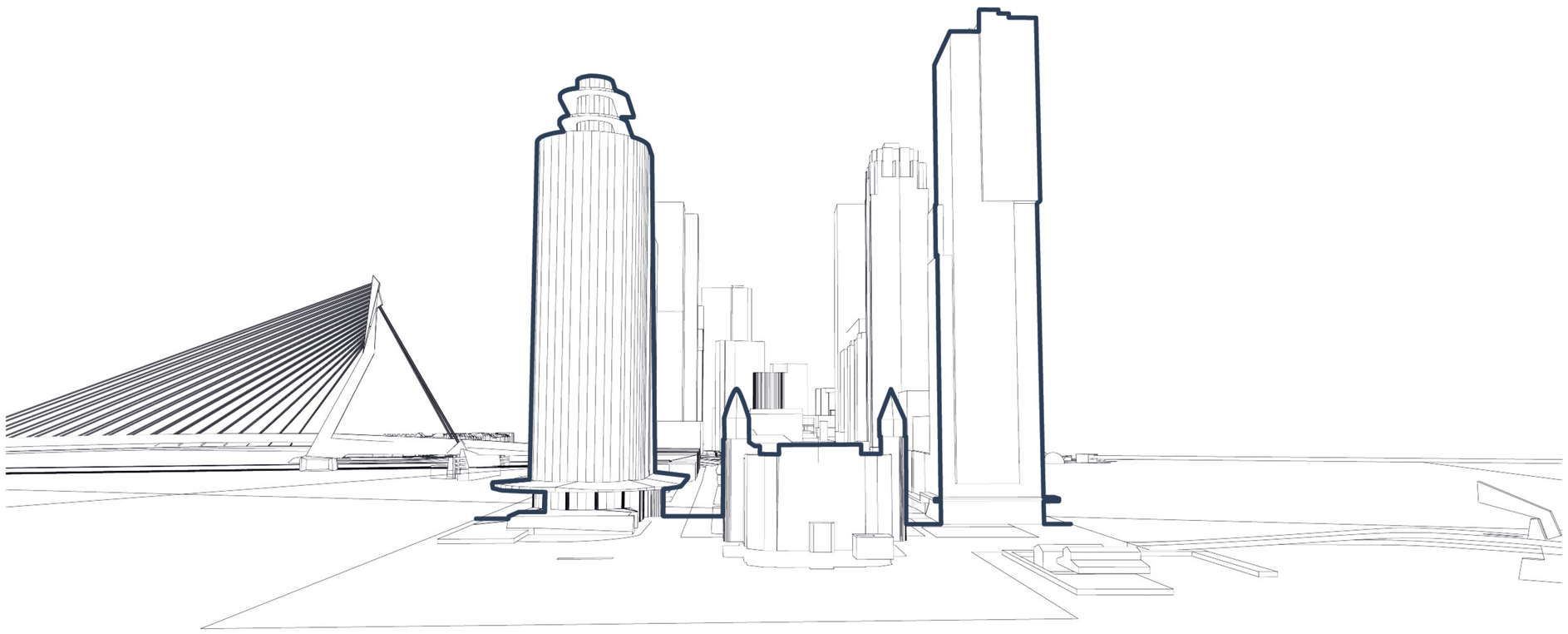




Lost human scale



High-rise and low-rise

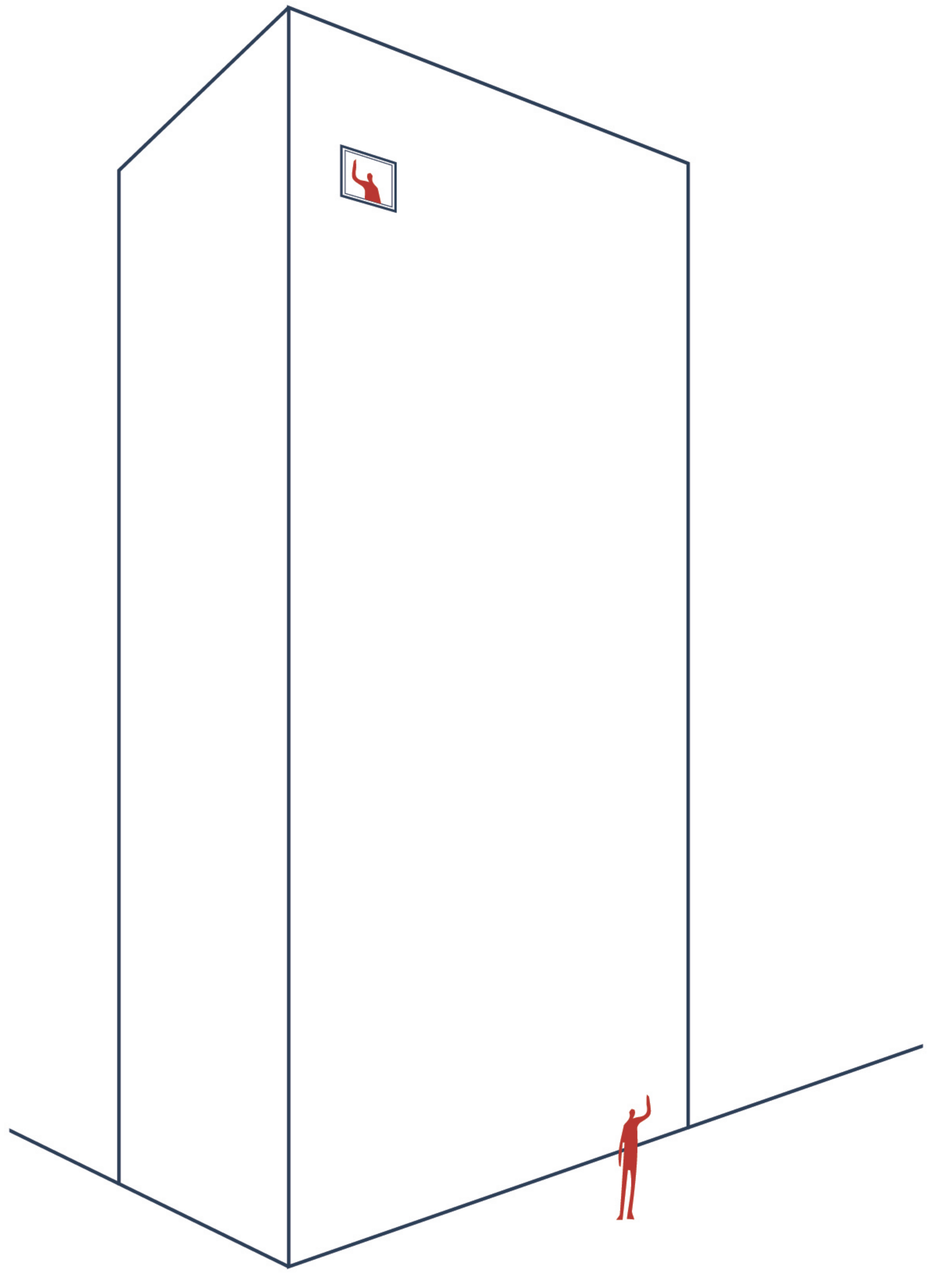


High-rise

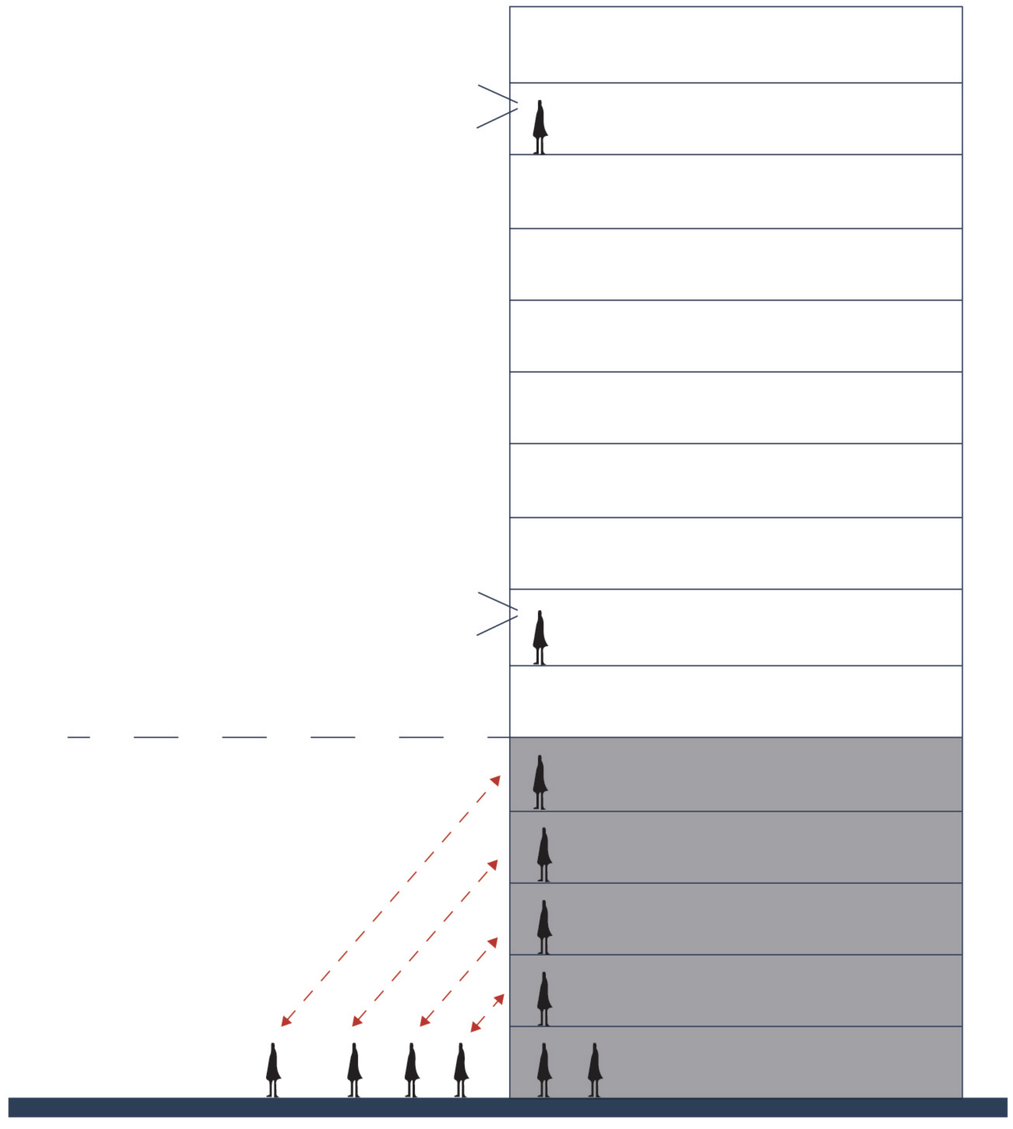
Connection between the building and the street

The higher the residents live above the ground, the weaker their perception of the ground environment tends to be.

- Jan Gehl

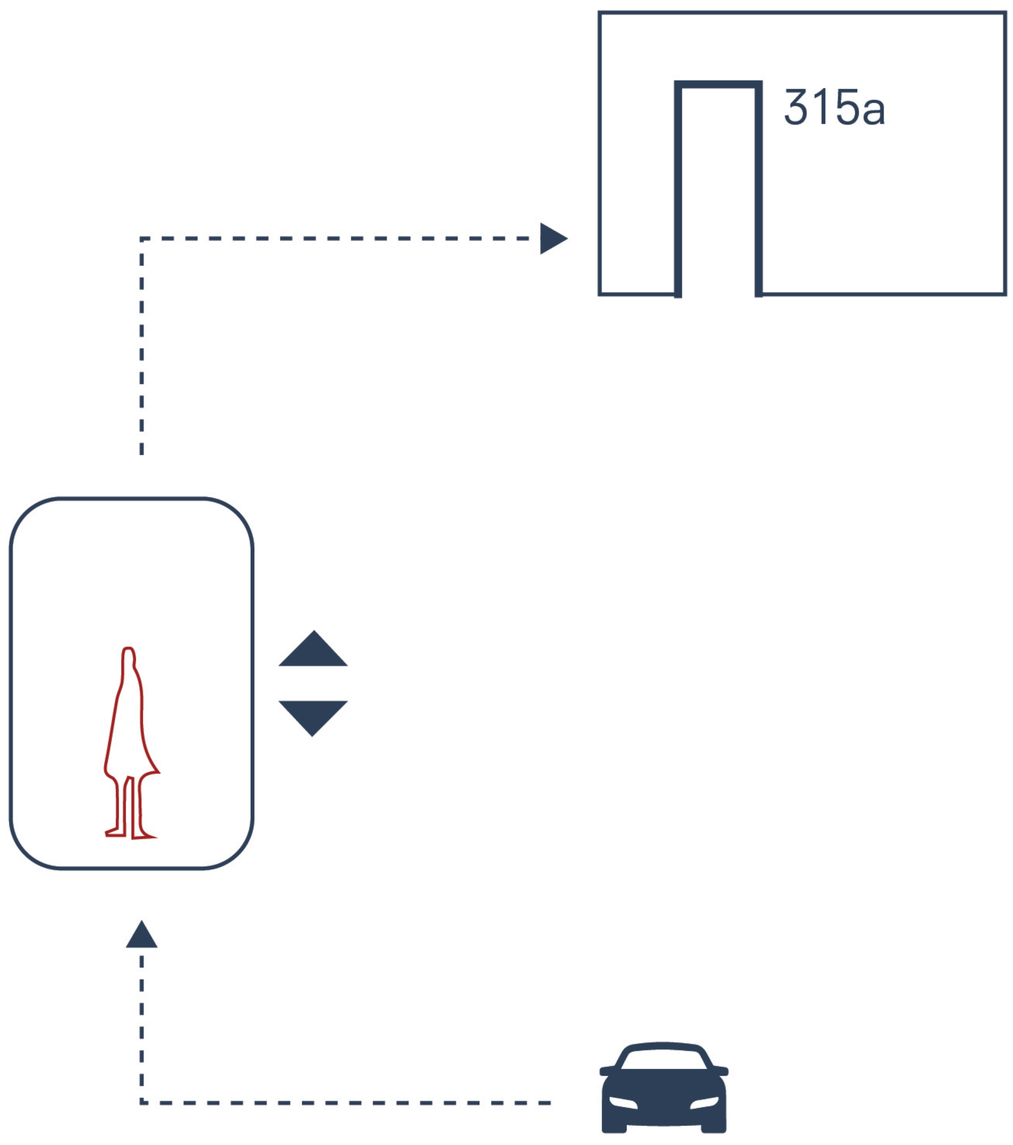


Relationship between building height and the street



Under normal circumstances, based on the scope of a person’s field of vision, anyone living above the fifth floor can not be associated with ground activities (Gehl 1996)

Lack of social contact

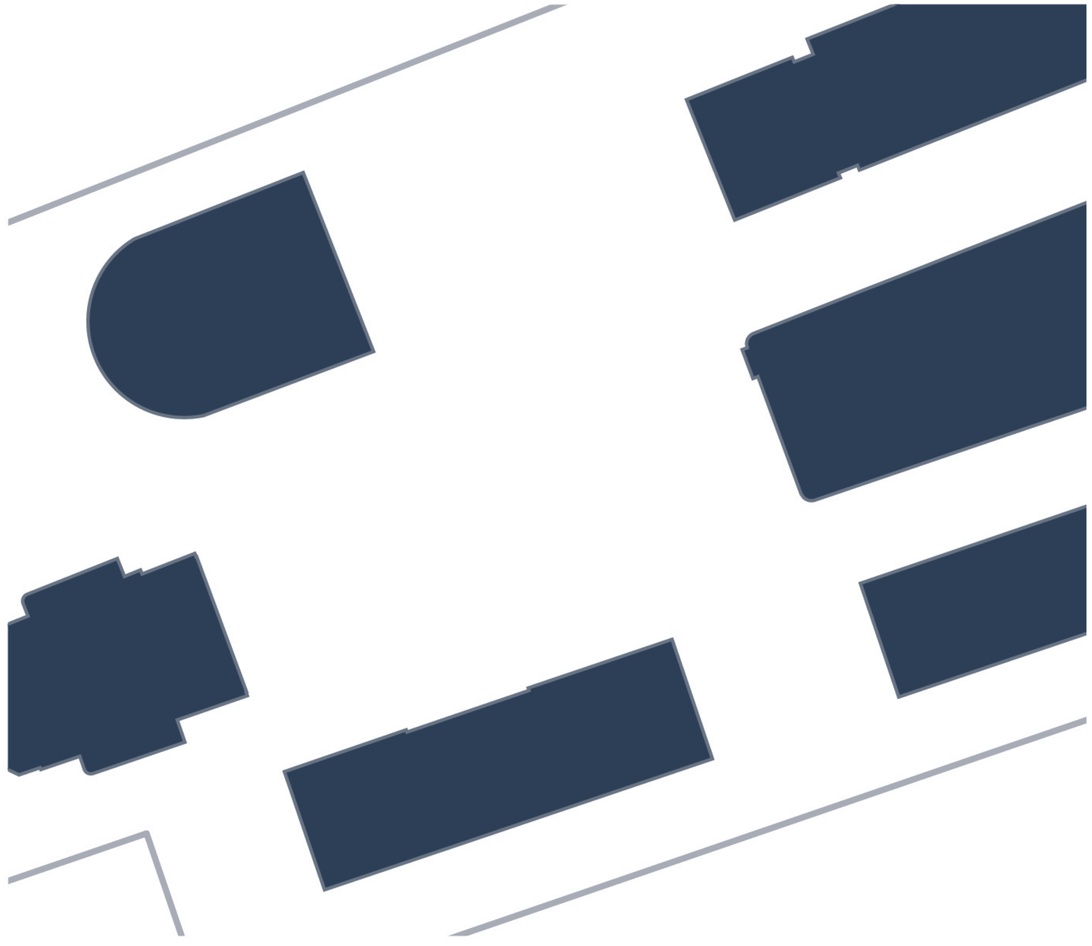


The feeling of loneliness is a big problem in the new high-rise buildings. The amount of space were people can meet each other is minimum. (Hoogbouwvisie Rotterdam)

Human scale



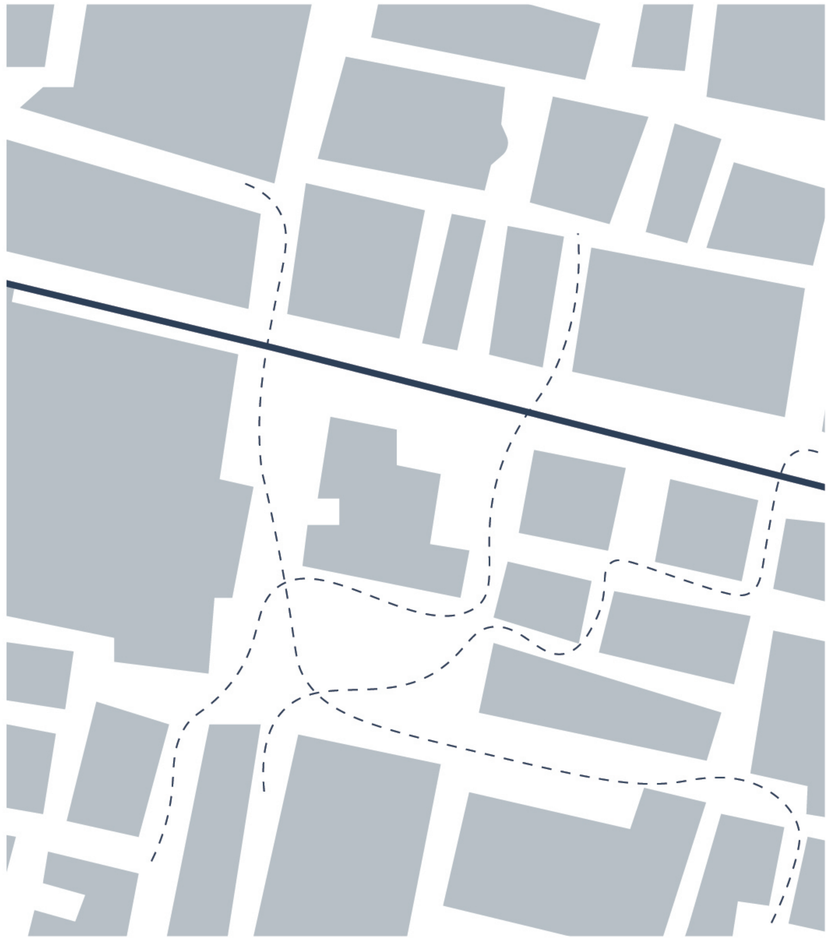
Bolonga



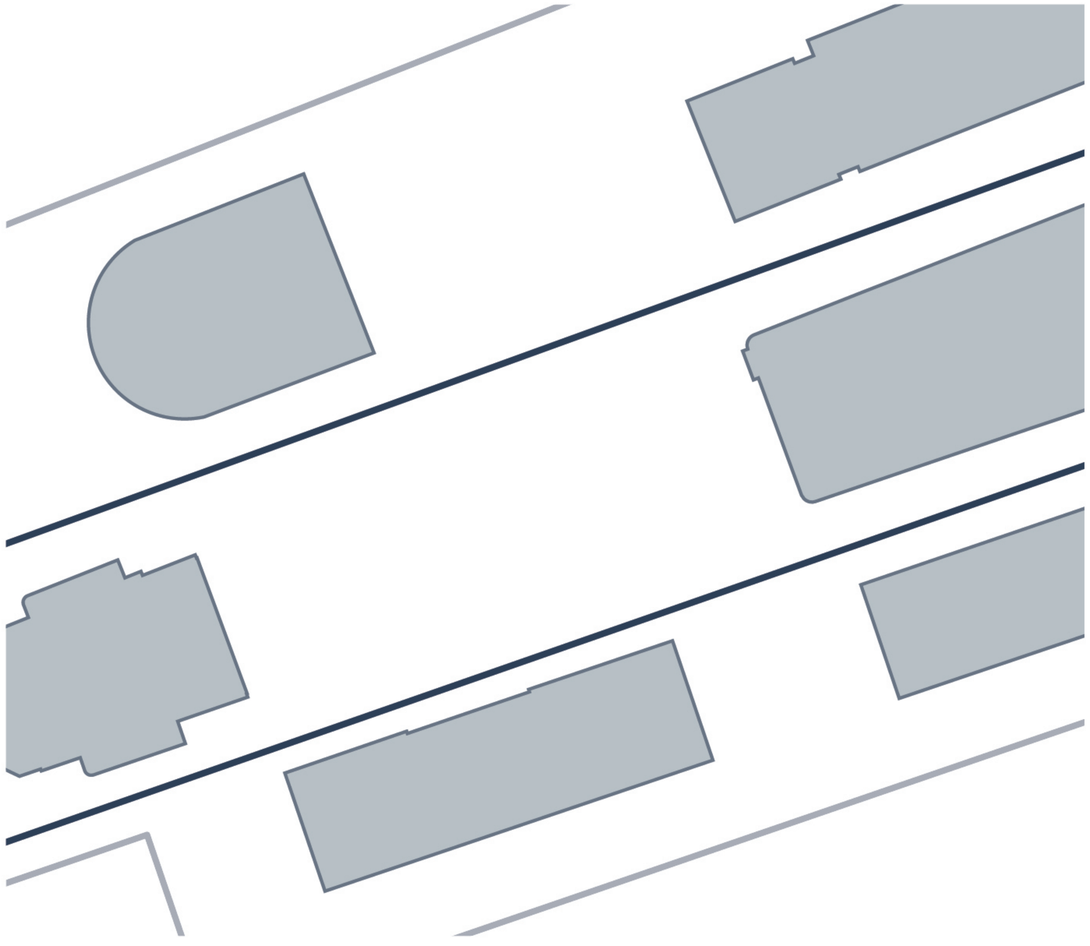
Kop van Zuid

'By contrast, traditional environments emphasize the spaces between buildings and usually produce an attractive, organic whole with a variety of useful pedestrian areas on a comfortable human scale.'
- Francis Tibbalds

Routing



Bolonga

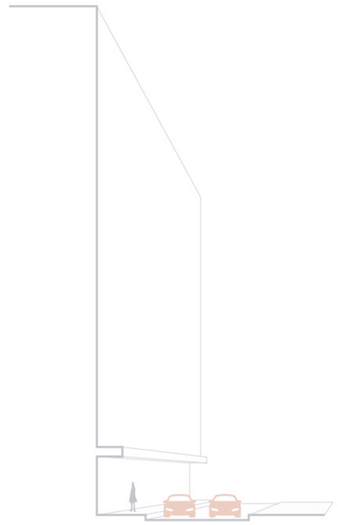


Kop van Zuid

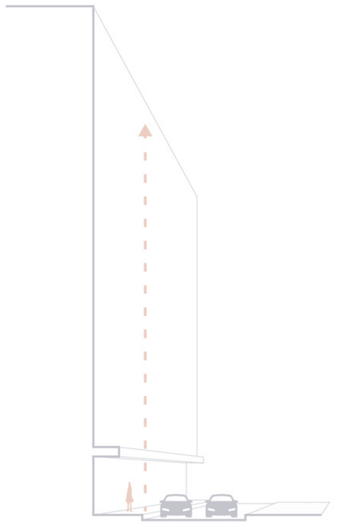
Wondering around - Lijnbaan



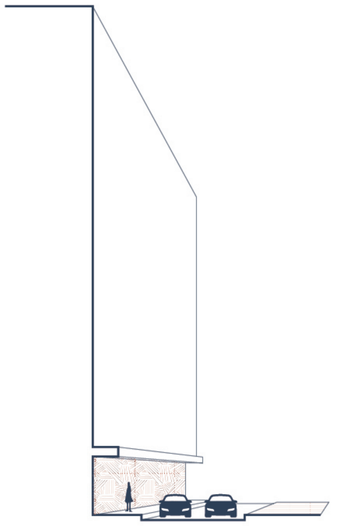
No connection with the plinth



Car orientated



Lack of human scale



No connection with the plinth







Lantarenvenster



Buildings like islands



Industrial street




Was it ever considered to redesign
the street level?



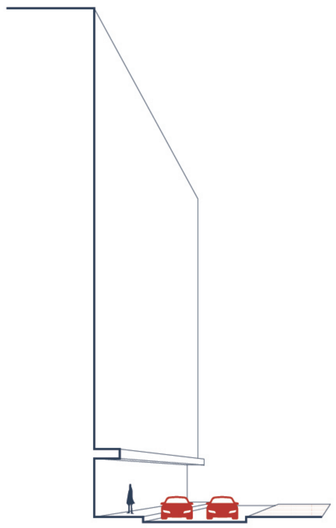
In de schemering steken de torens prachtig af tegen de langzaam donker wordende lucht boven de Wilhelminapier. © Ossip van Duivenbode

Torenstad met wow-factor

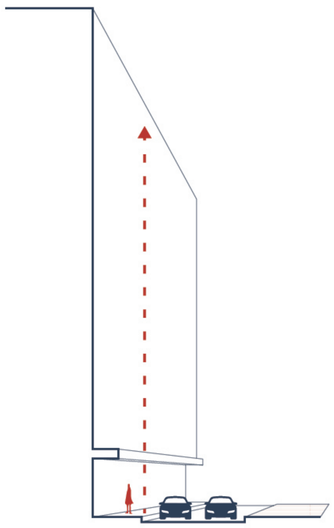
WILHELMINAPIER | Dertig jaar oud zijn de eerste tekeningen voor de Wilhelminapier, maar klaar is het dichtst bebouwde stukje Rotterdam nog niet. Niettemin zit het megaproject in zijn eindfase. Of het vlaggenschip van de Kop van Zuid een succes is? Het woud van torens maakt veel indruk, maar de begane grond kan nog wel wat sfeerbrengers gebruiken.

Yvonne Keunen 10-06-17, 16:22 **Laatste update:** 14:02

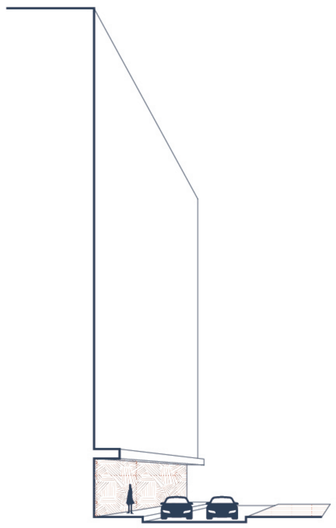
Location potentials - Public space



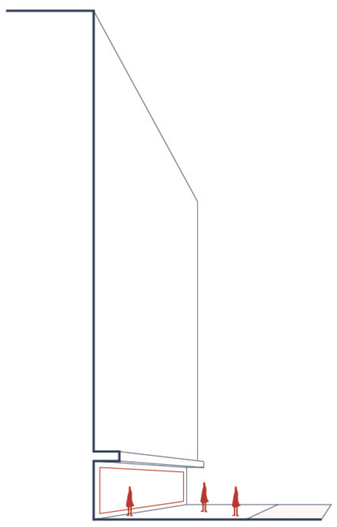
Car orientated



Lack of human scale



No connection with the plinth



Potentials to become public area







The public street can become a place instead of a transitional space

Introduction

Research

The site

Concept

Design proposal

Conclusion

The project aim

Showing how architecture can mediate between different functions by defying the human scale and routing and breaking through formulaic city systems by creating places for interaction.

Concept

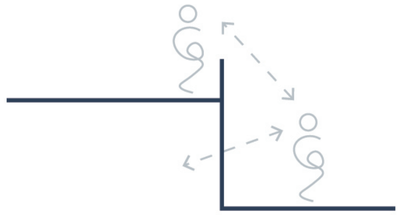


Breaking through the existing system of the Kop van Zuid

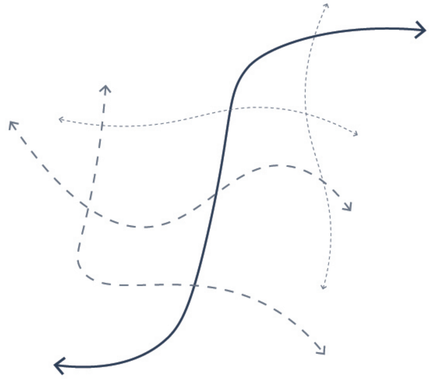
Design goals



Apply a gradient on different scales to serve the **human scale**

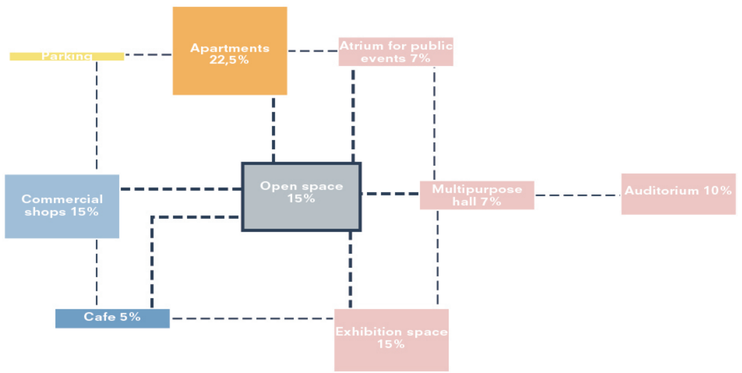


Interaction within the building itself

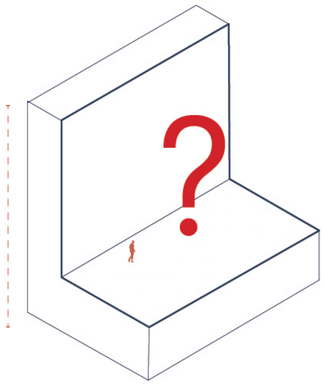


Permeability, to provoke people through the building

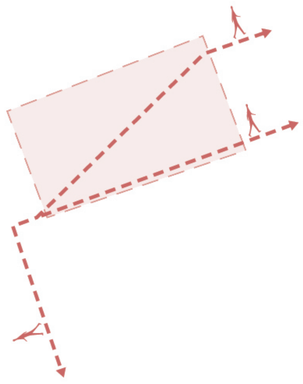
Parameters design



Interaction
Based on the use and the function

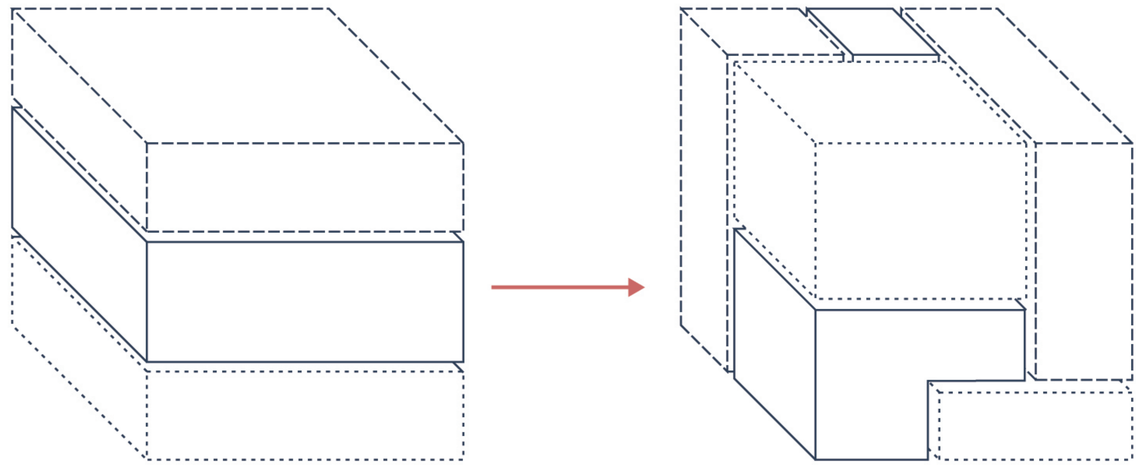


Human scale



Hierarchy of roads

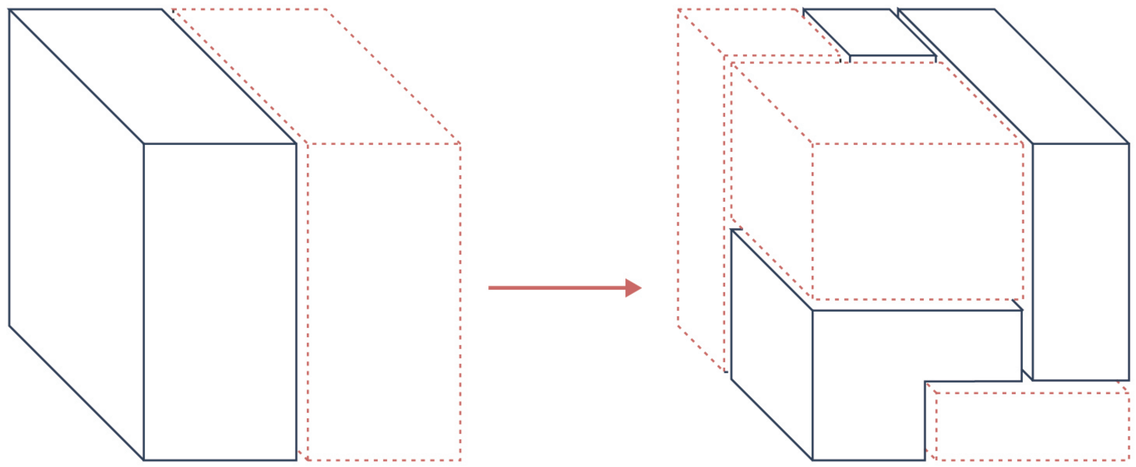
Hybrid building



MIXED USE

HYBRID BUILDING

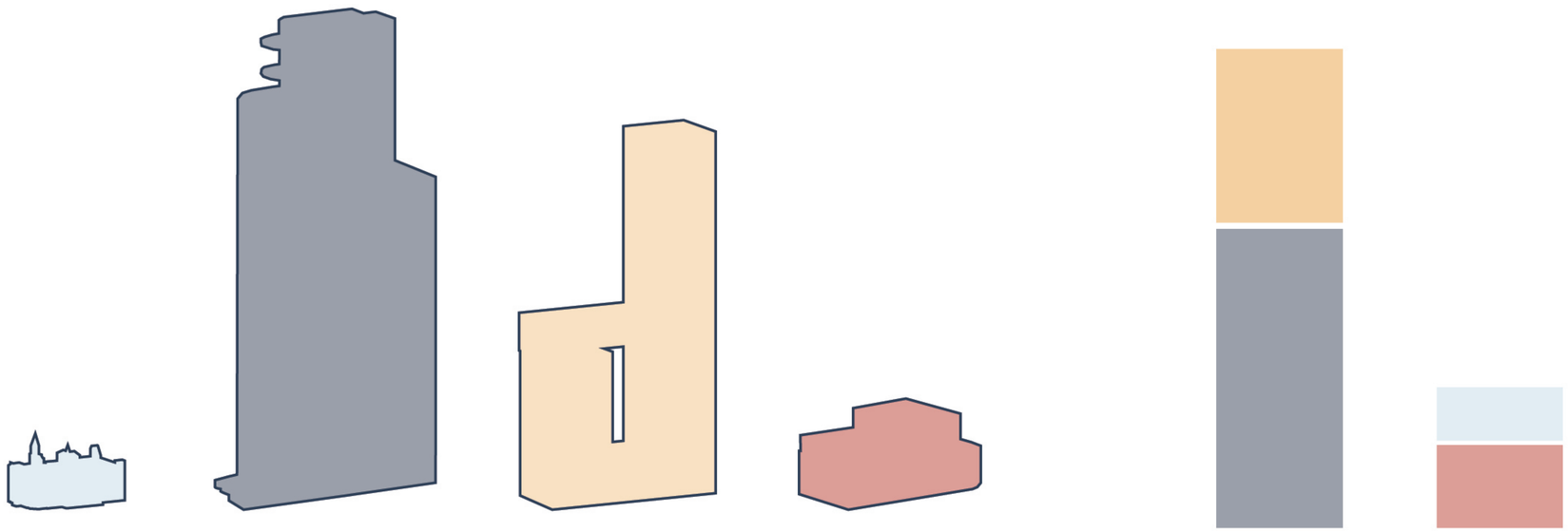
Public - private



PRIVATE - PUBLIC

MIXED PUBLIC/PRIVATE

Existing functions



Retail
1%

Office
60%

Residential
32%

Culture
7%

Private
3/4

Public
1/4

Program

Retail 20%

6.400 m²

Living 25%

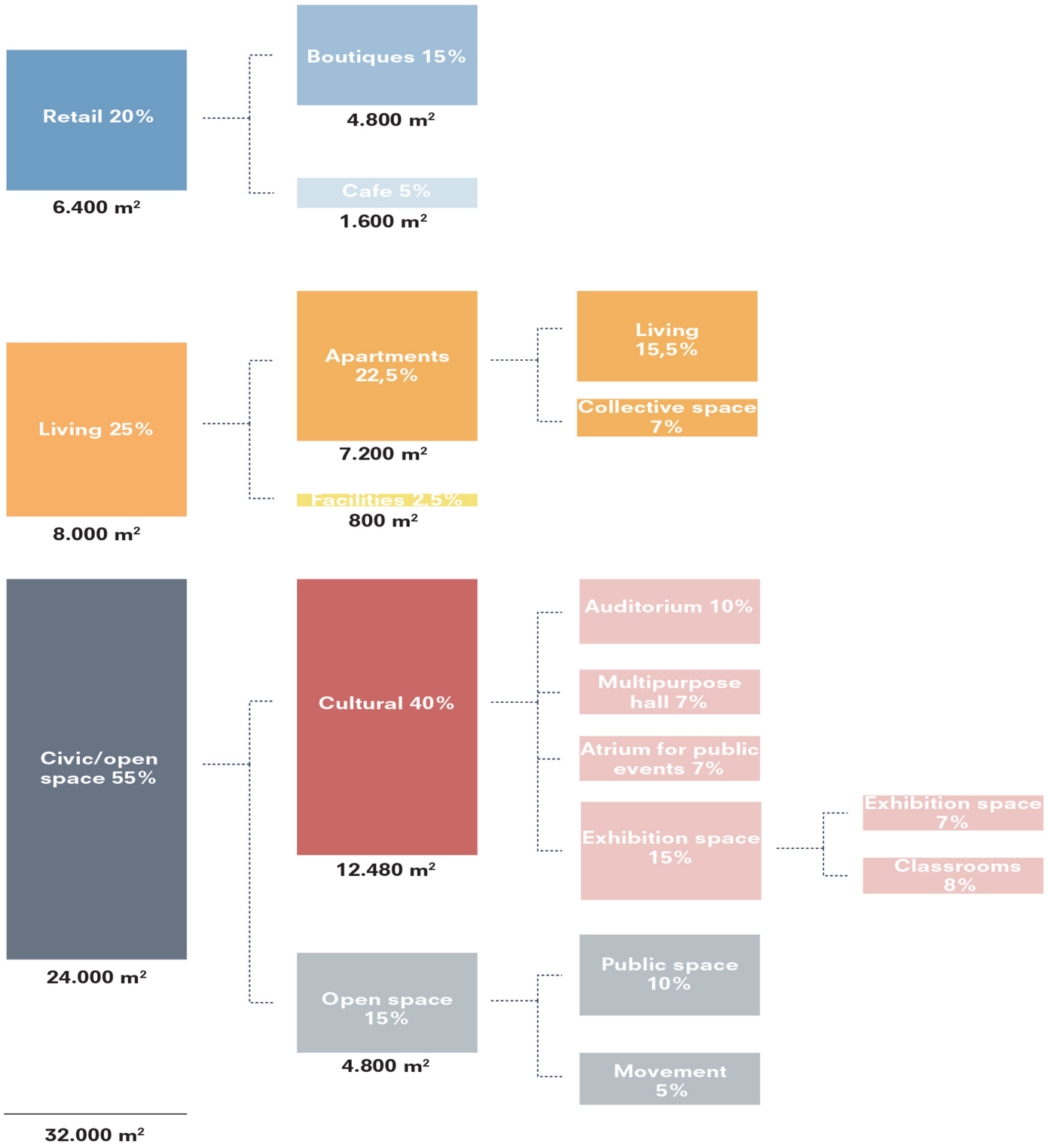
8.000 m²

Civic/open space 55%

24.000 m²

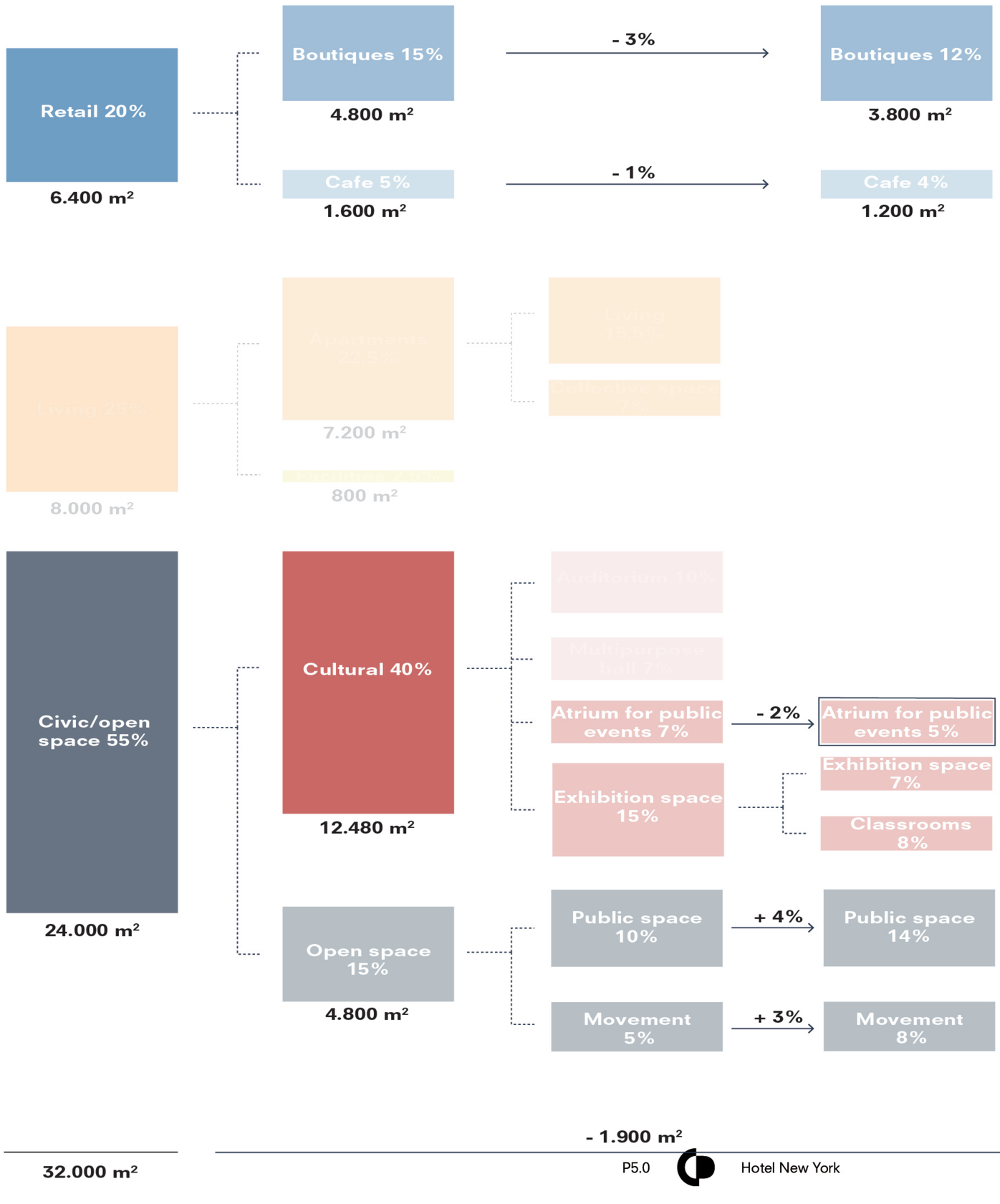
32.000 m²

Program bar


Retail 20%
6.400 m²
Boutiques 15%
4.800 m²
Cafe 5%
1.600 m²
Living 25%
8.000 m²
Apartments 22,5%
7.200 m²
Living 15,5%
Collective space 7%
Facilities 2,5%
800 m²
Civic/open space 55%
24.000 m²
Cultural 40%
12.480 m²
Auditorium 10%
Multipurpose hall 7%
Atrium for public events 7%
Exhibition space 15%
Exhibition space 7%
Classrooms 8%
Open space 15%
4.800 m²
Public space 10%
Movement 5%
32.000 m²

Concept

Program building



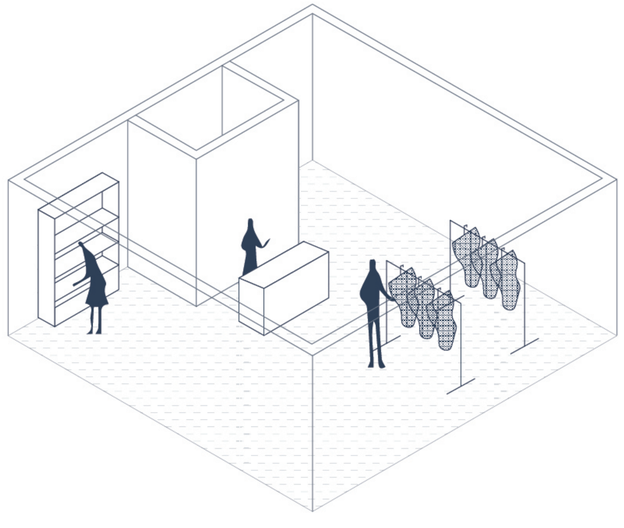
Catalyst - identity area

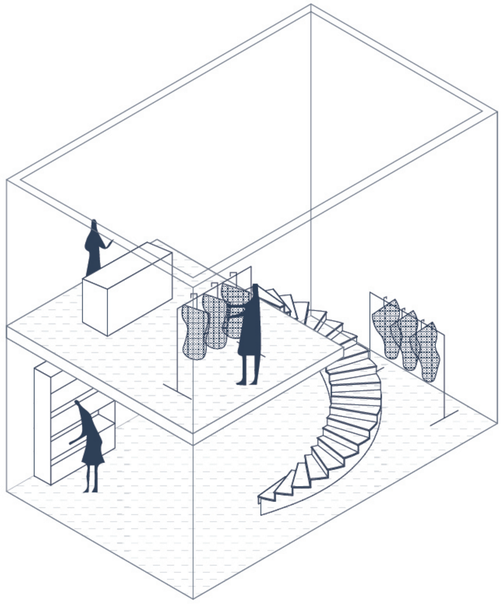


Makers district

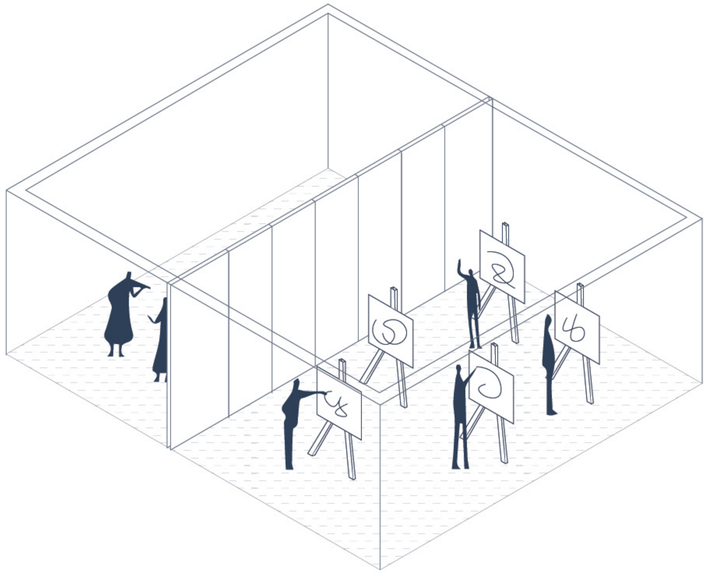


Gradient in the program





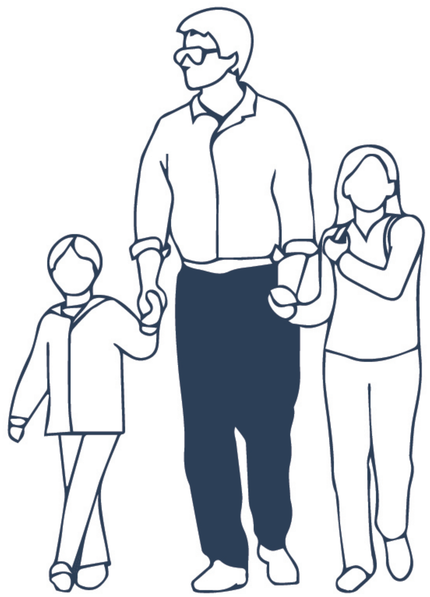
Boutiques





Classroom - Expositition space

Users



Residents / neighbourhood

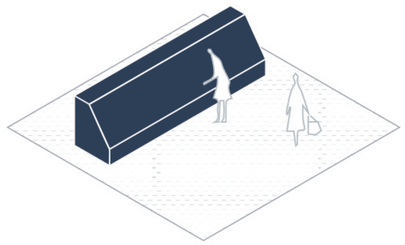


Employees

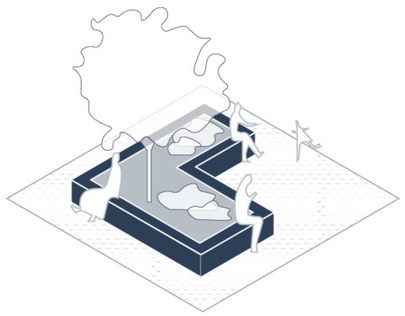


Visitors

Program elements



Boutique



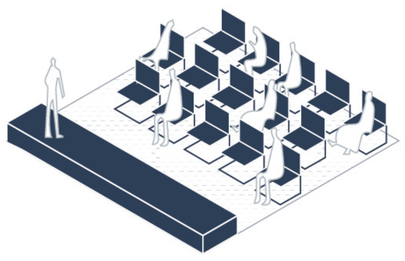
Open space



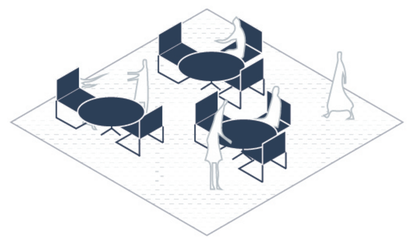
Apartment



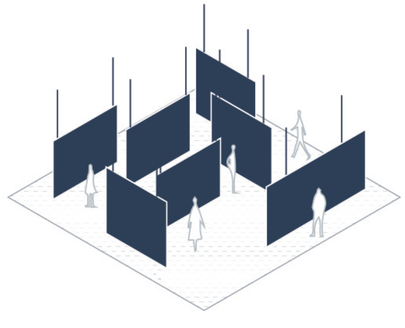
Multipurpose hall



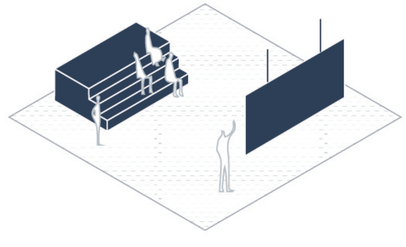
Auditorium



Cafe

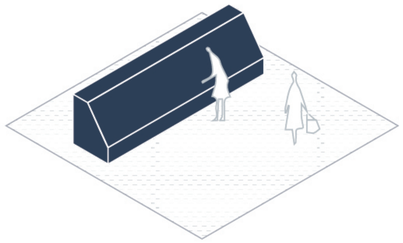


Exhibition space

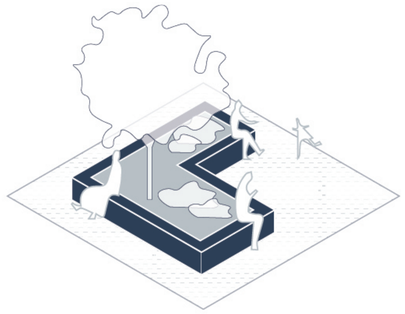


Atrium

User journeys - residents



Boutique

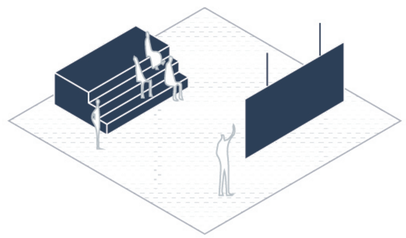


Open space



Apartment

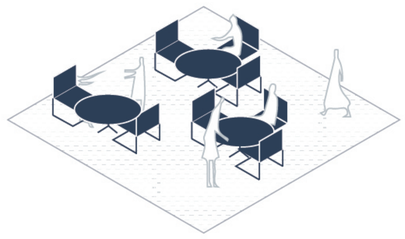
User journeys - working people



Atrium



Multipurpose hall



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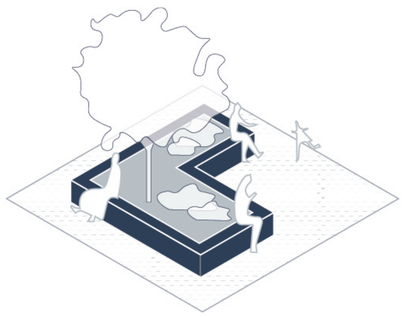

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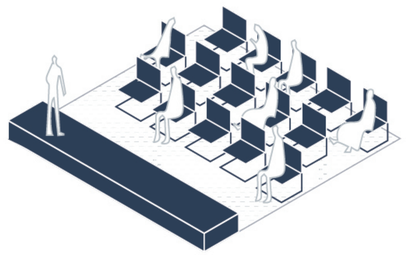
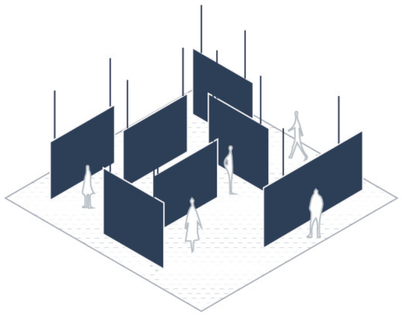


Auditorium

User journeys - visitors



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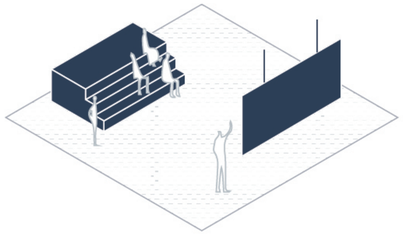
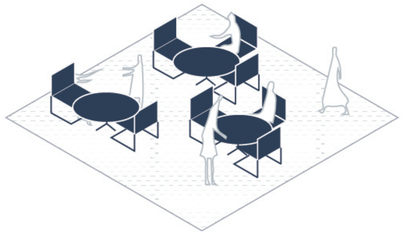


Atrium



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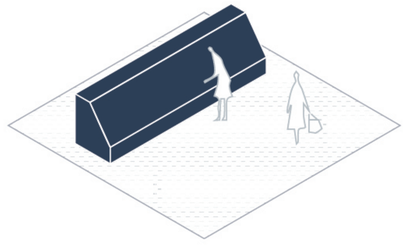
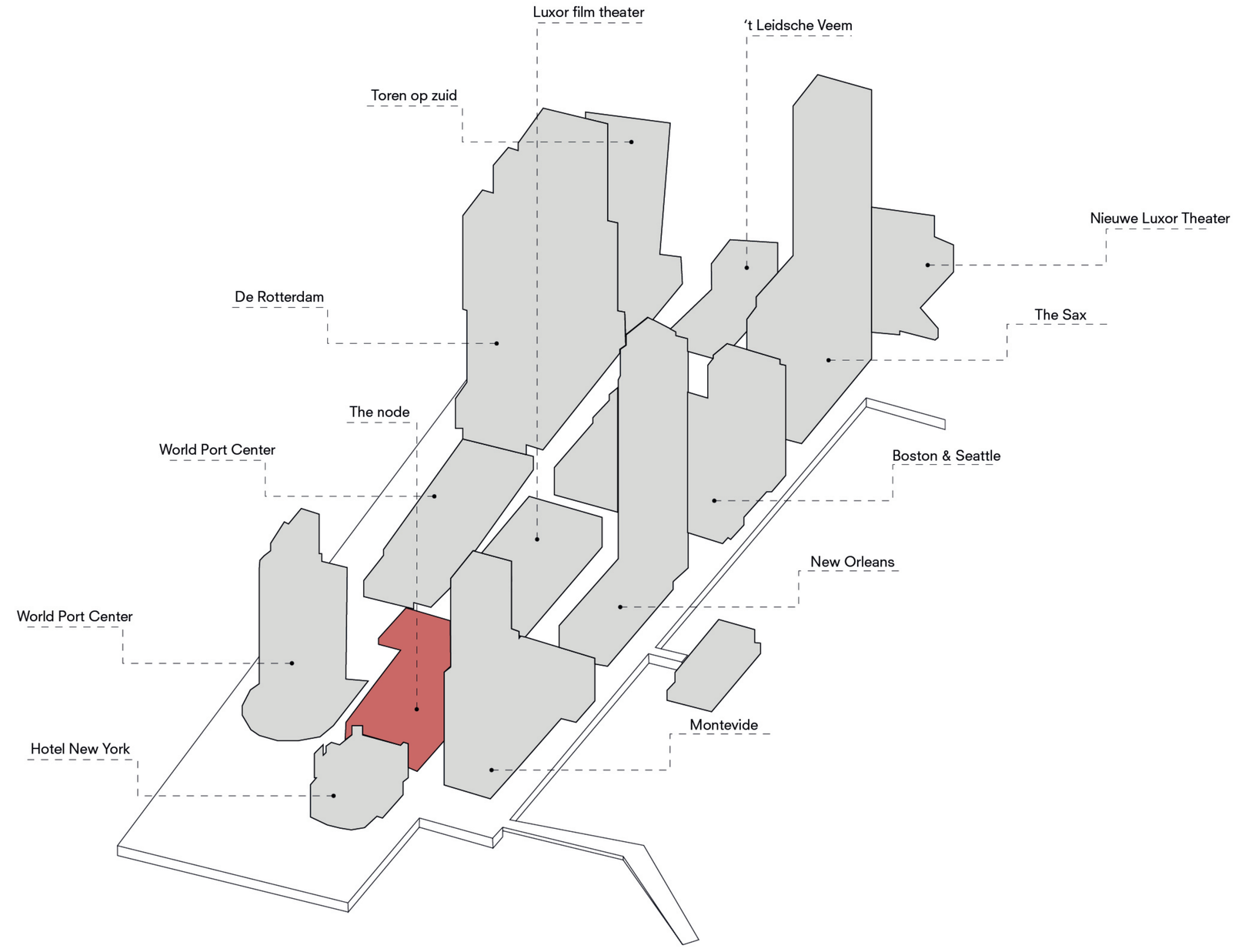
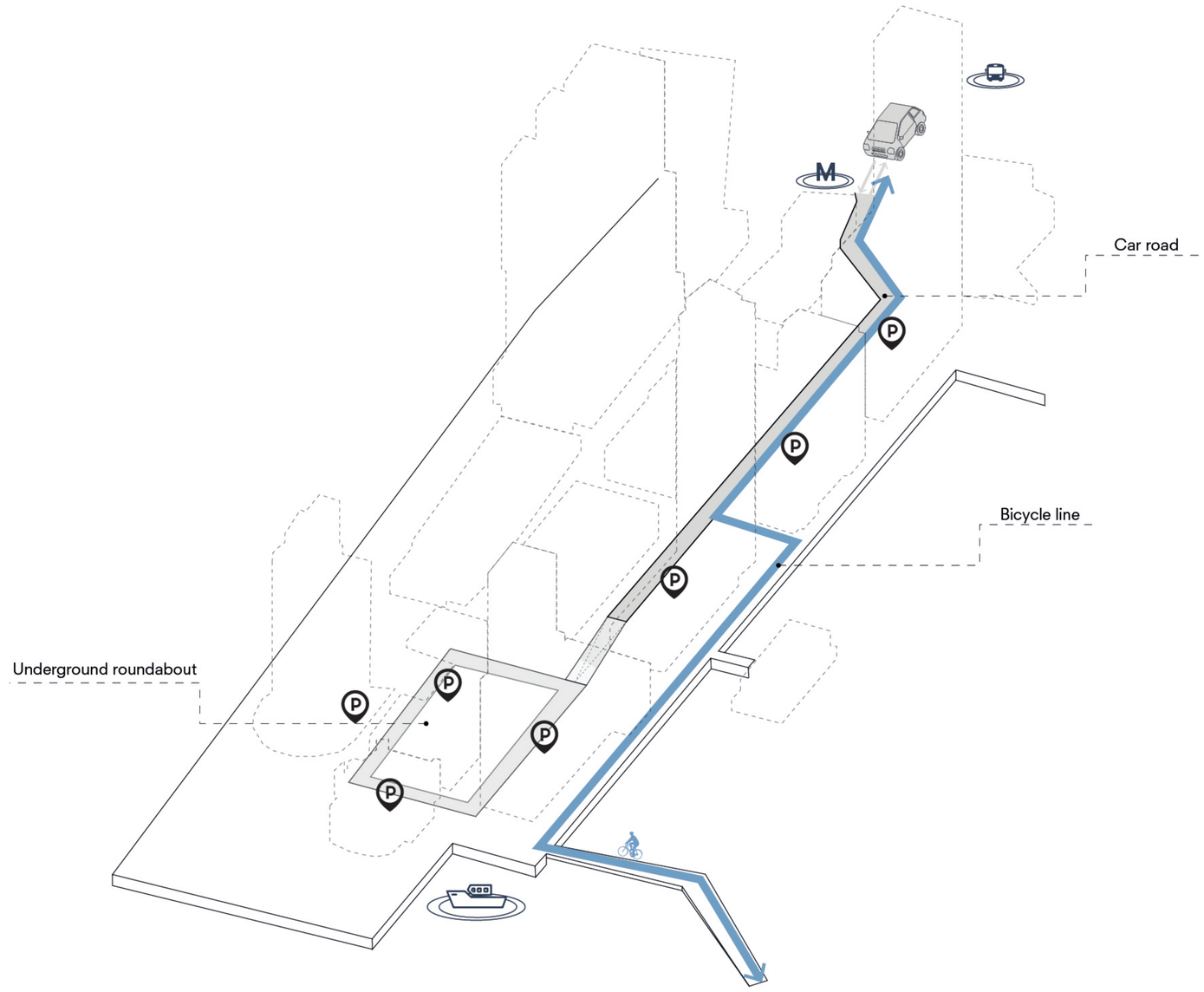


Boutique

Building blocks

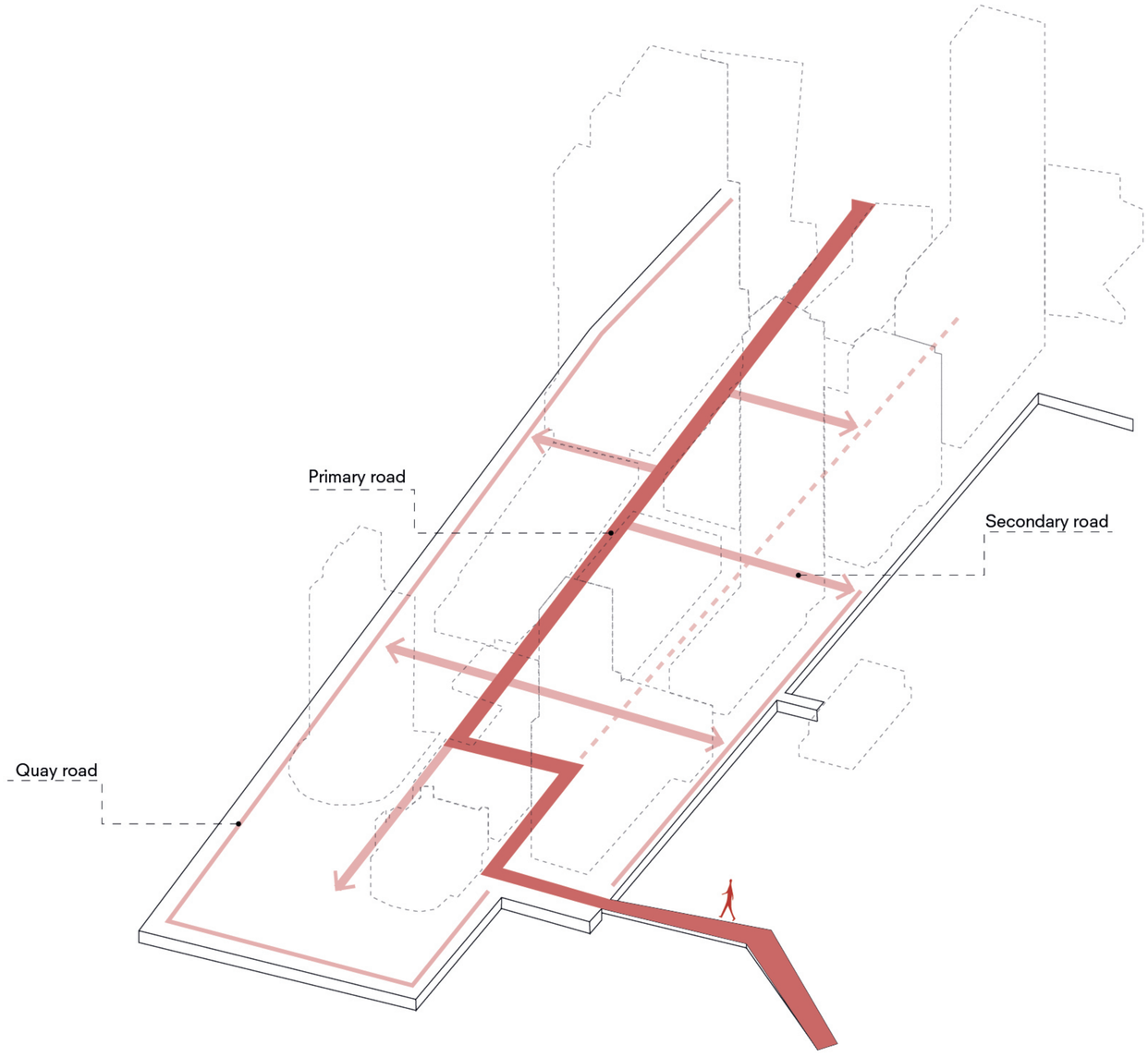


Car and cyclist line



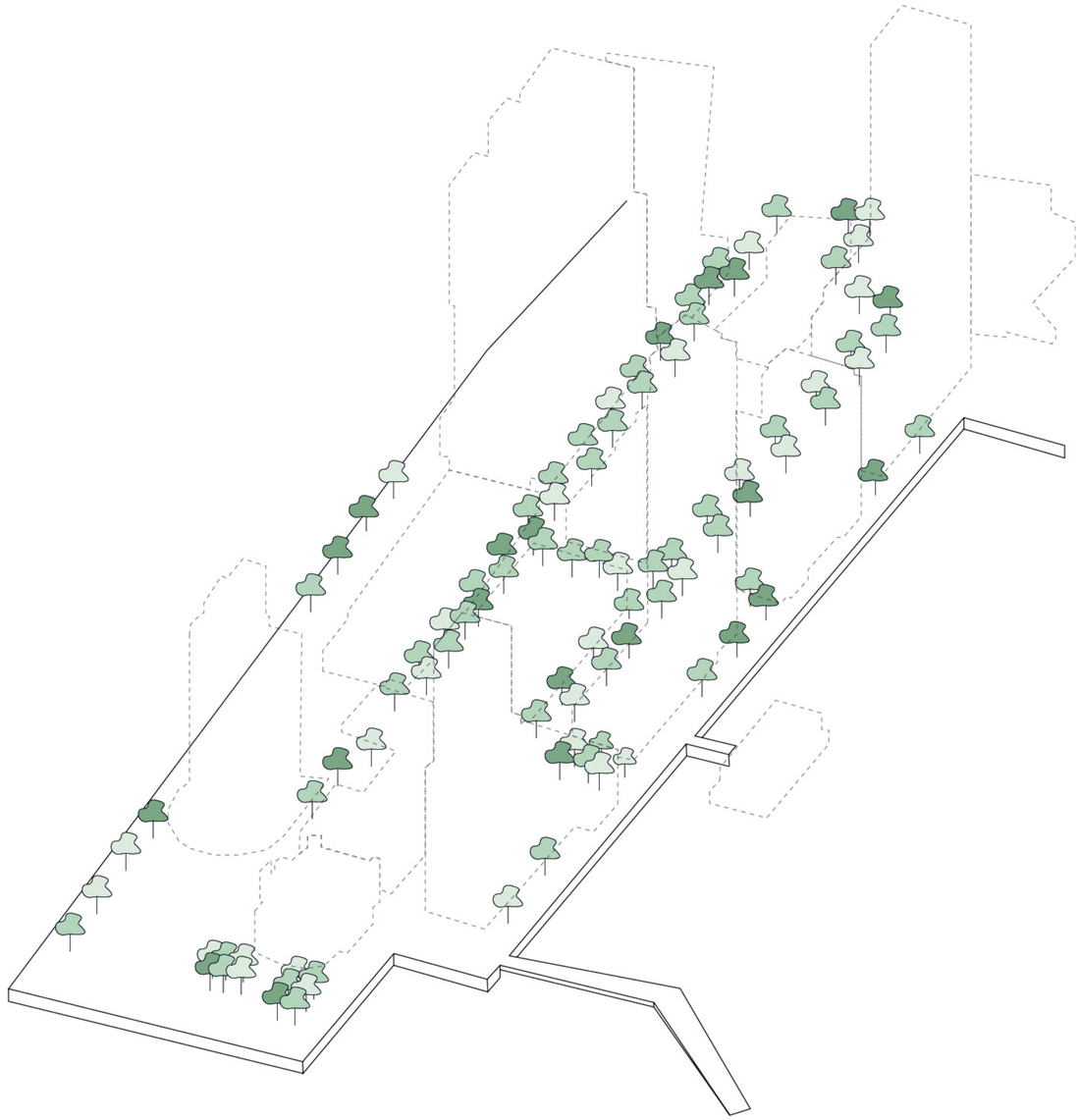
Concept

Pedestrian routing

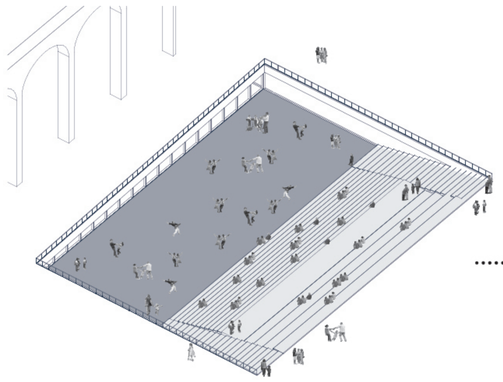


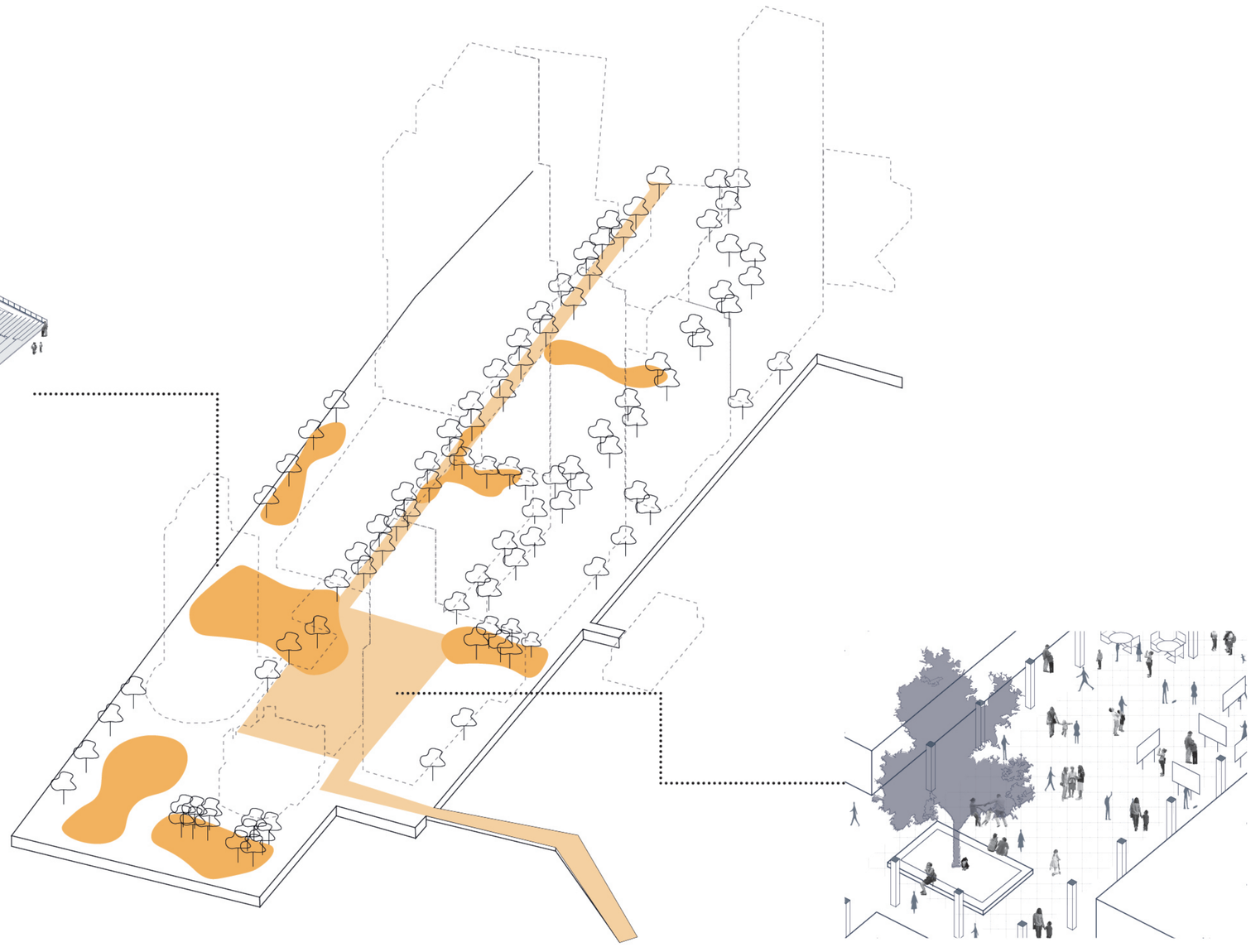
Concept

Greenery



Public areas





Introduction

Research

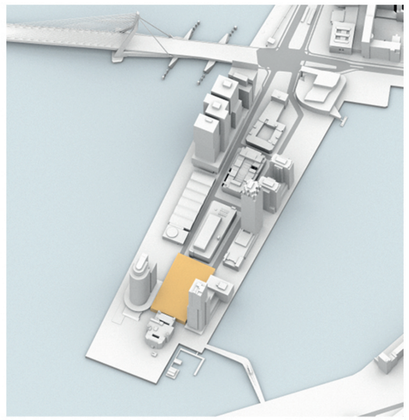
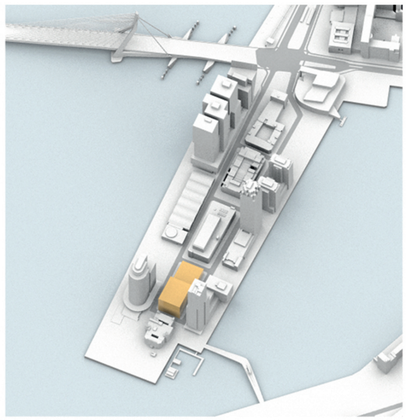
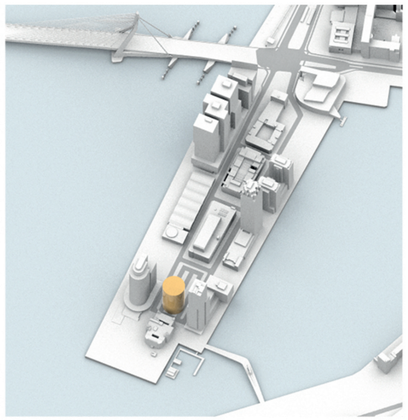
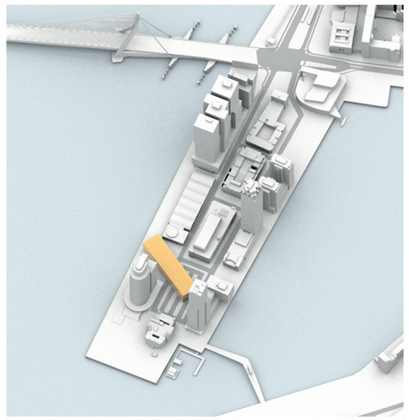
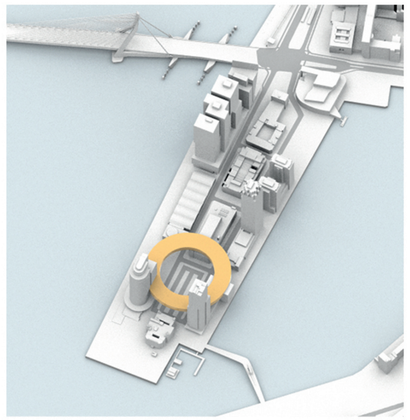
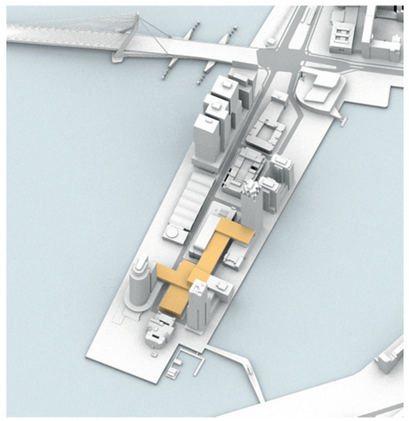
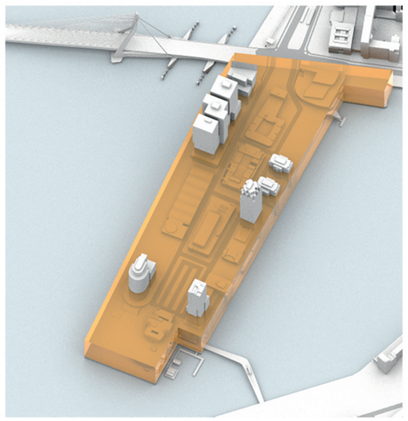
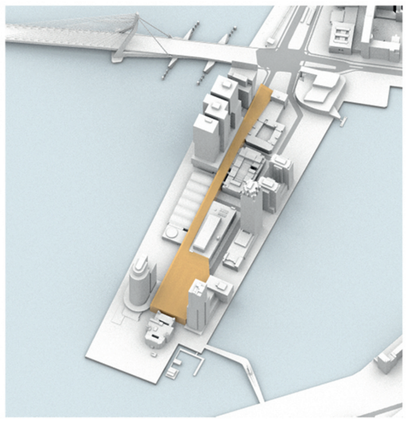
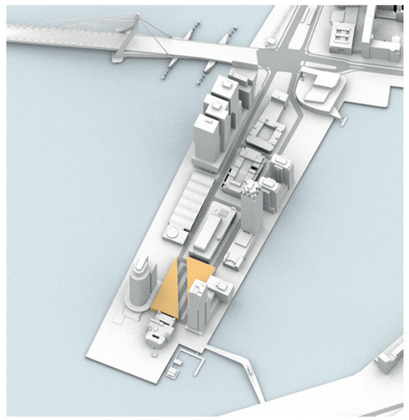
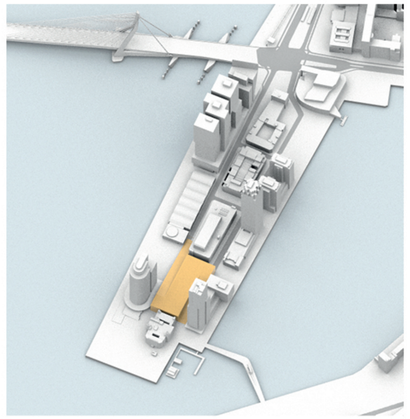
The site

Concept

Design proposal

Conclusion

Mass studies

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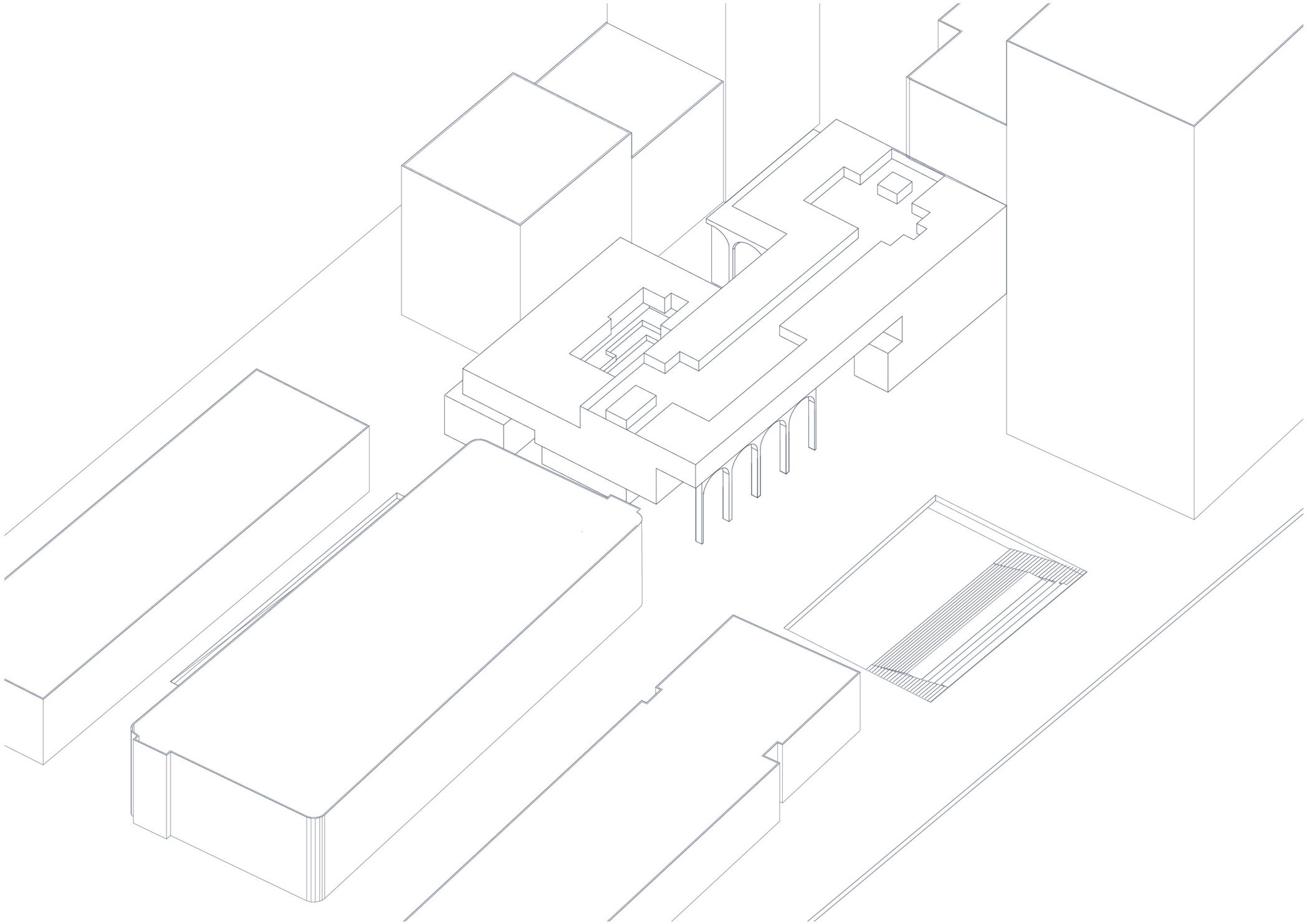
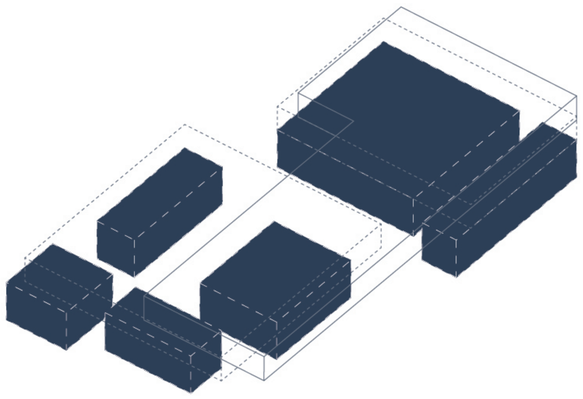


Different levels of porosity

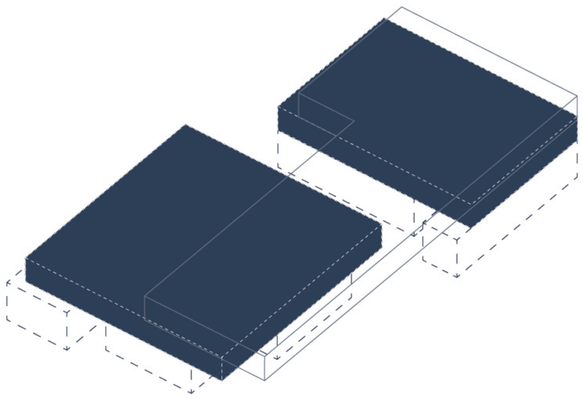


Different levels of porosity

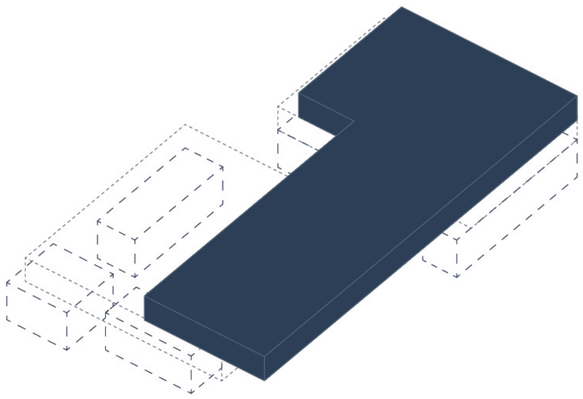
Lower levels



Middel levels



Apartment levels



C.

B.

A.

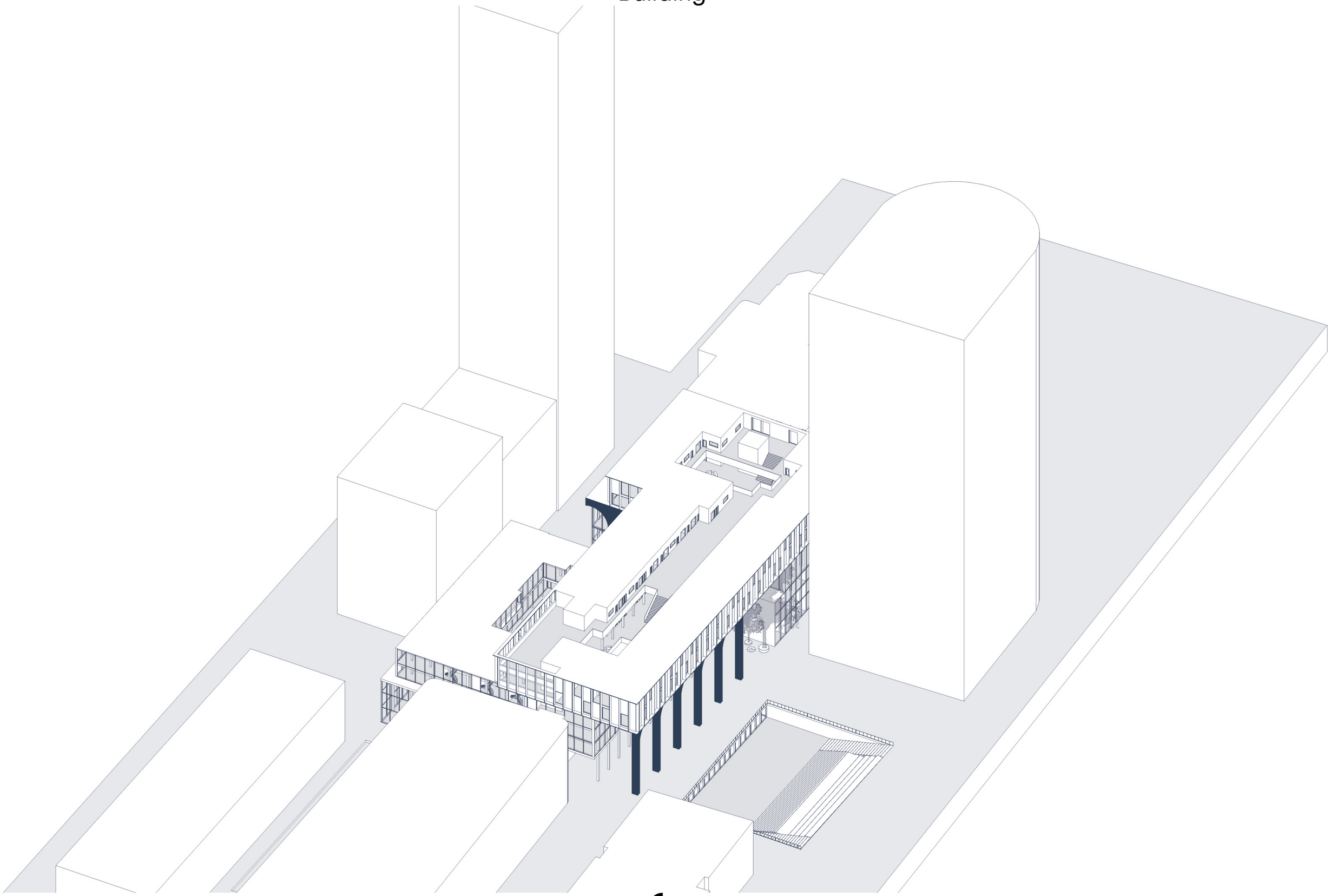
E.

D.

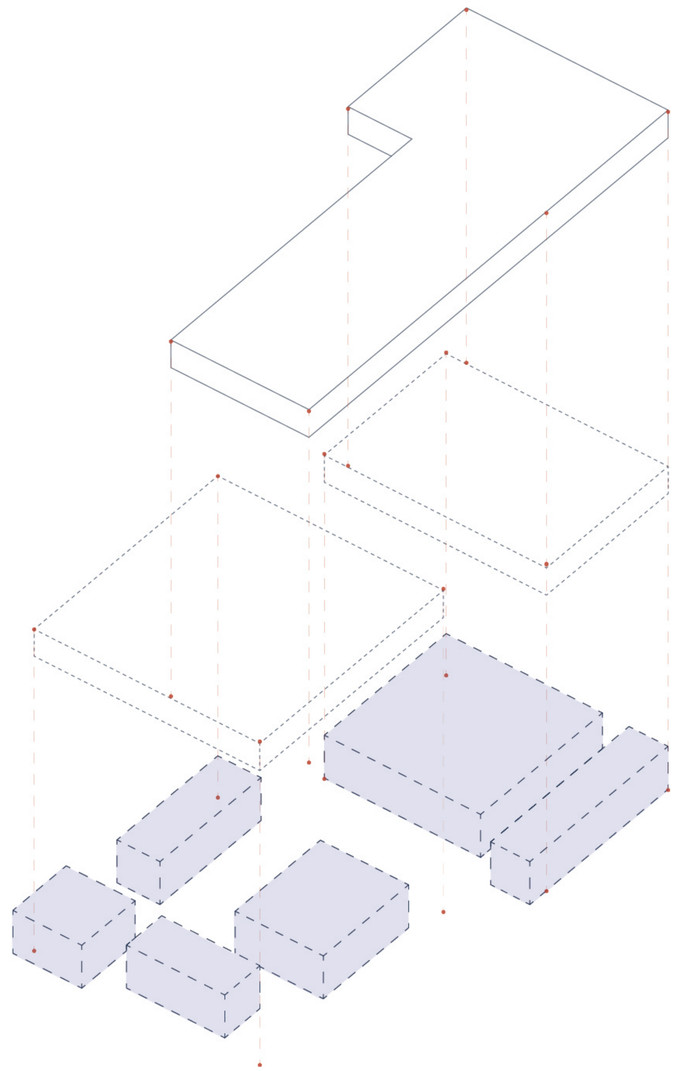
G.

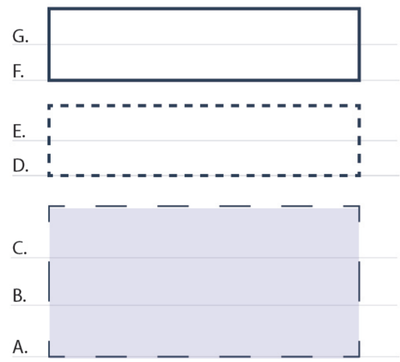
F.

Building

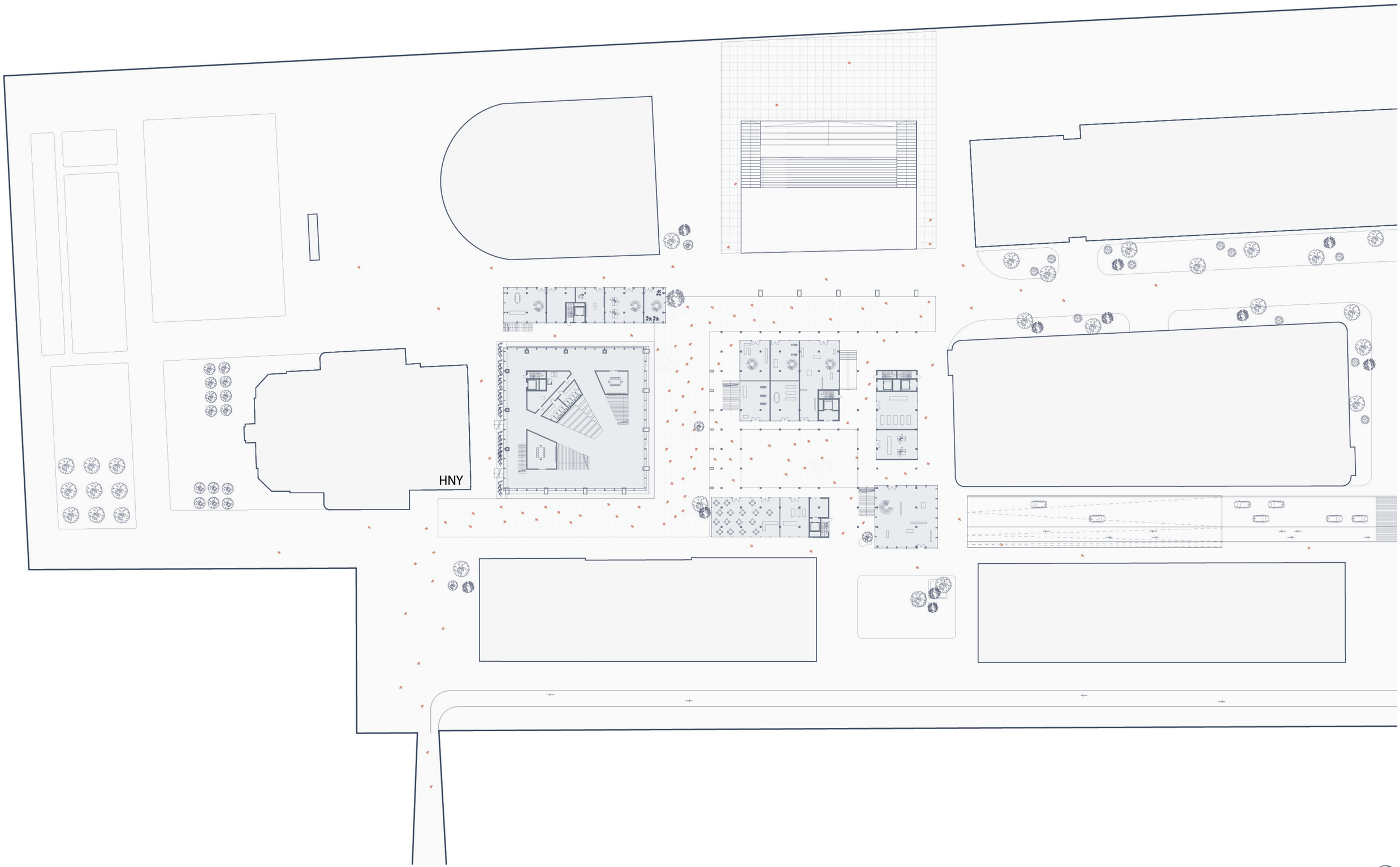


Lower levels

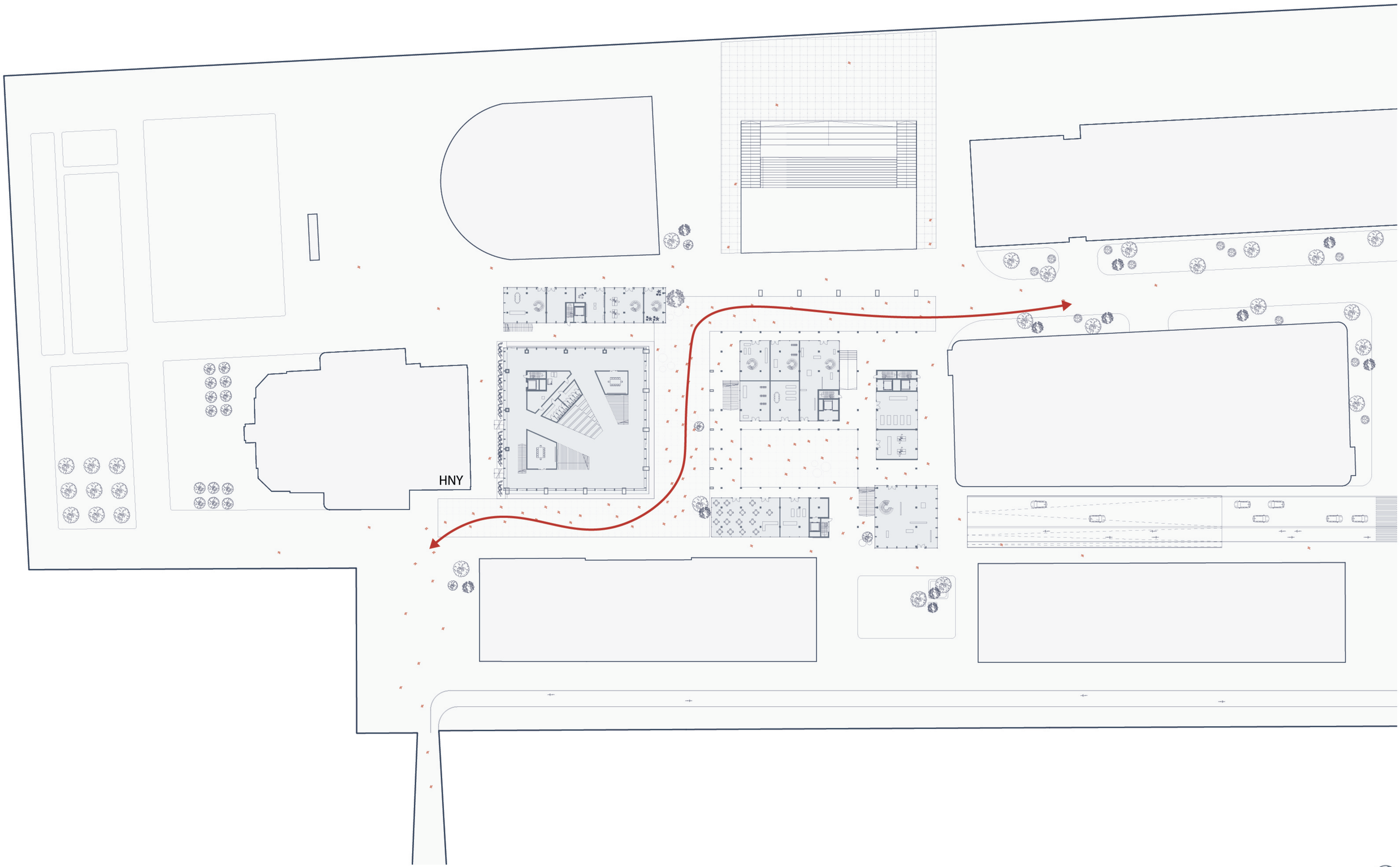




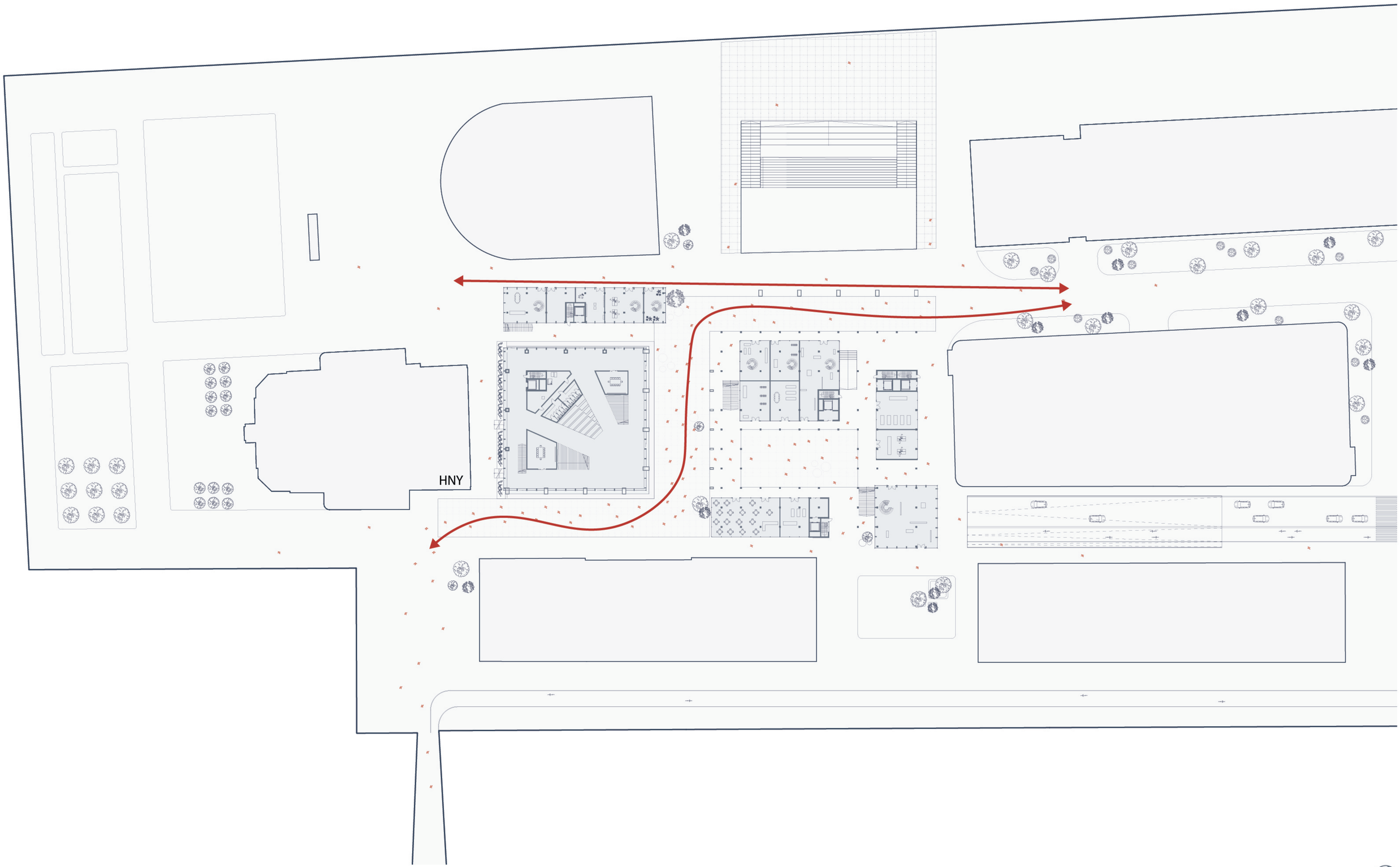
Urban implementation



Primary routing



Primary routing



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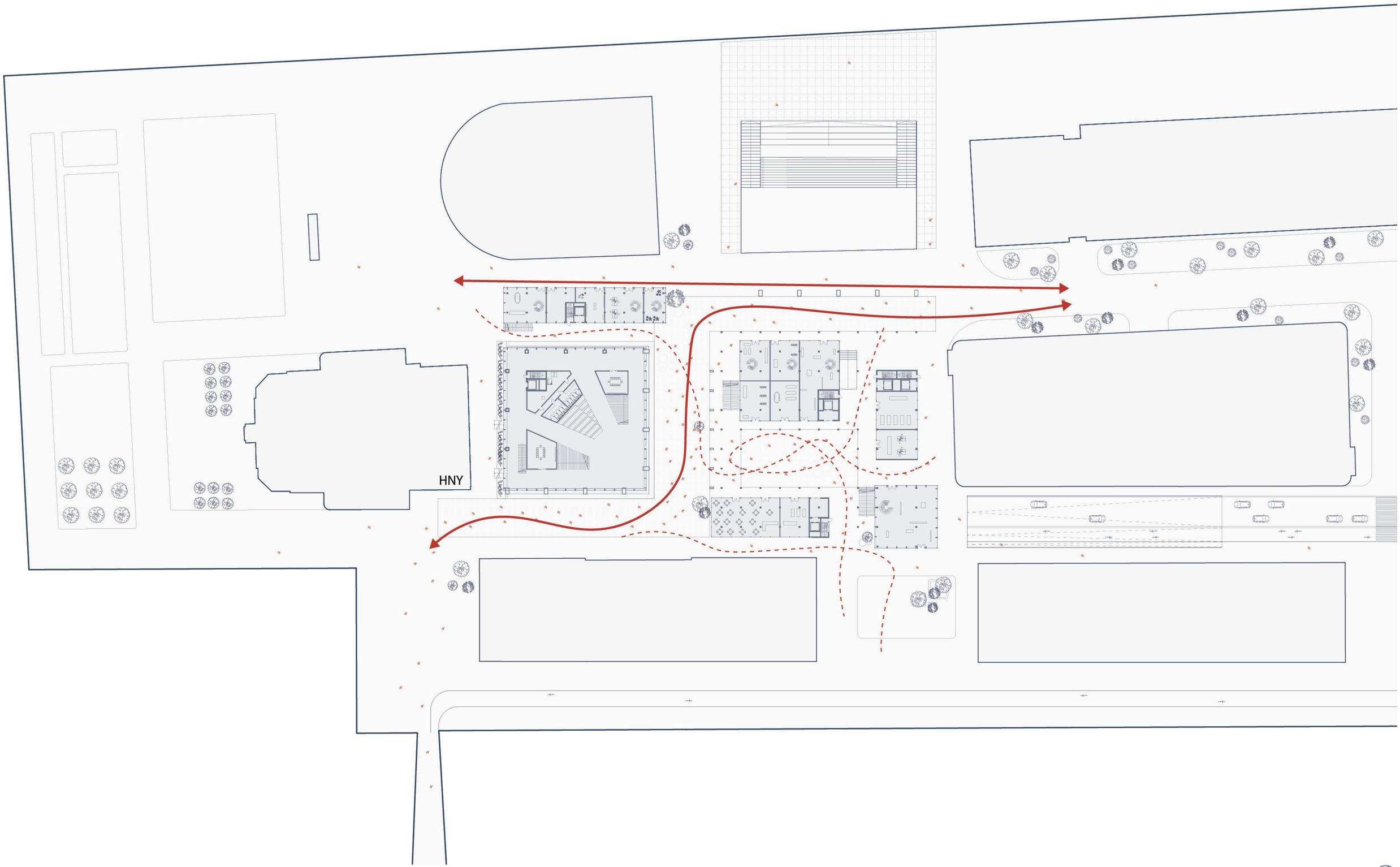
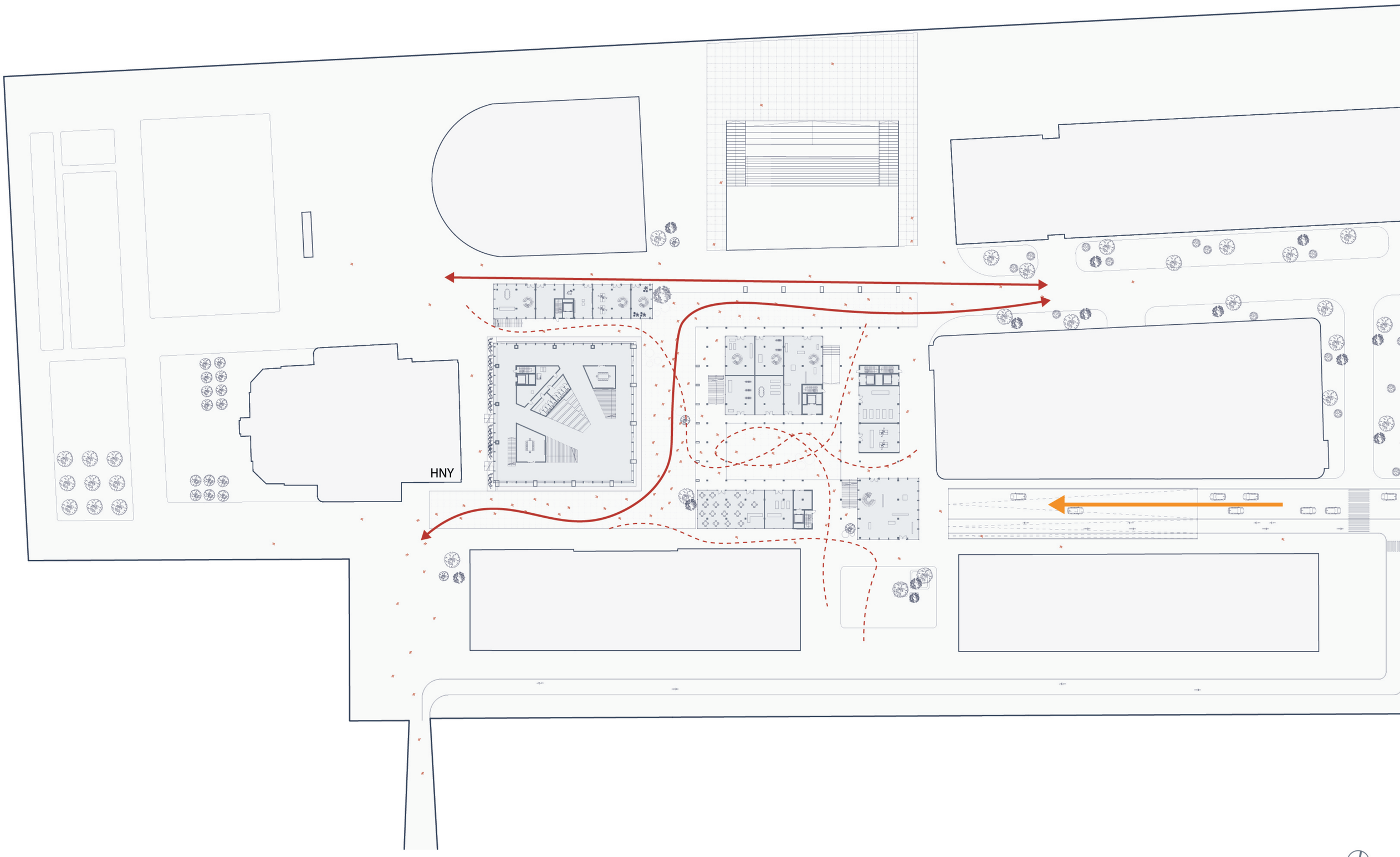
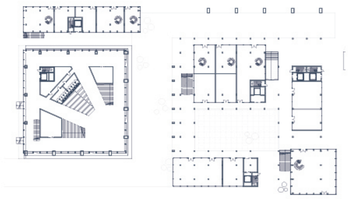
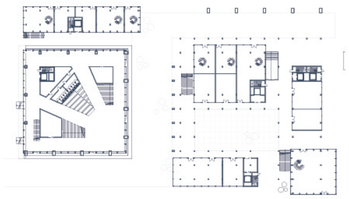


Traffic



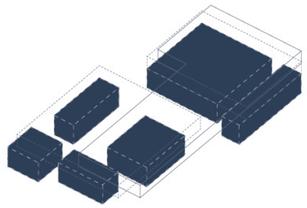


Pedestrian view



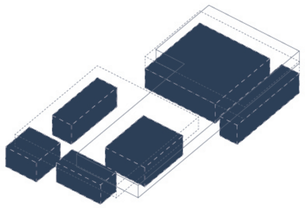
Pedestrian view

Ground level

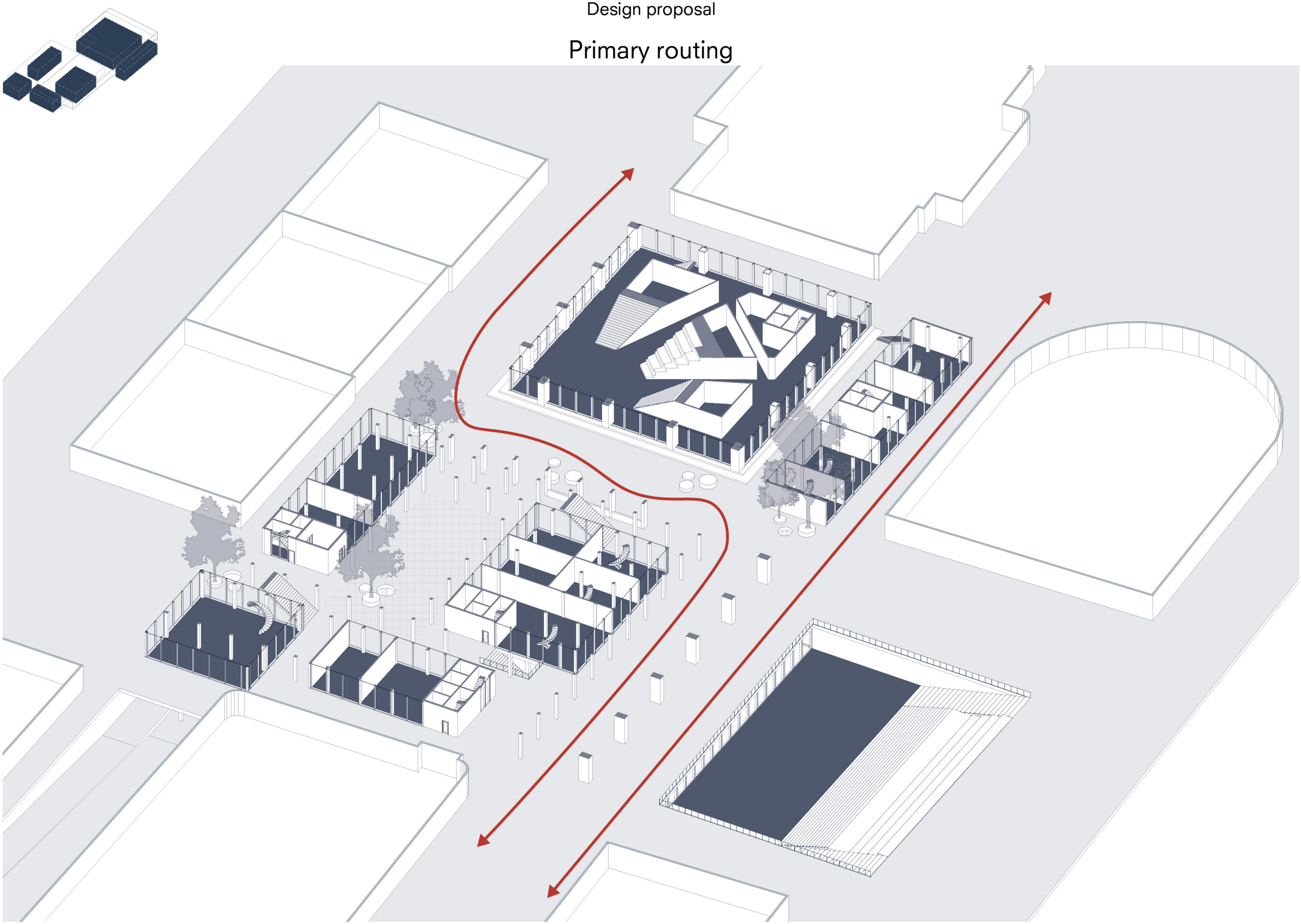




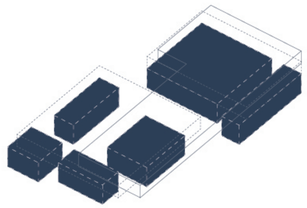
Primary routing

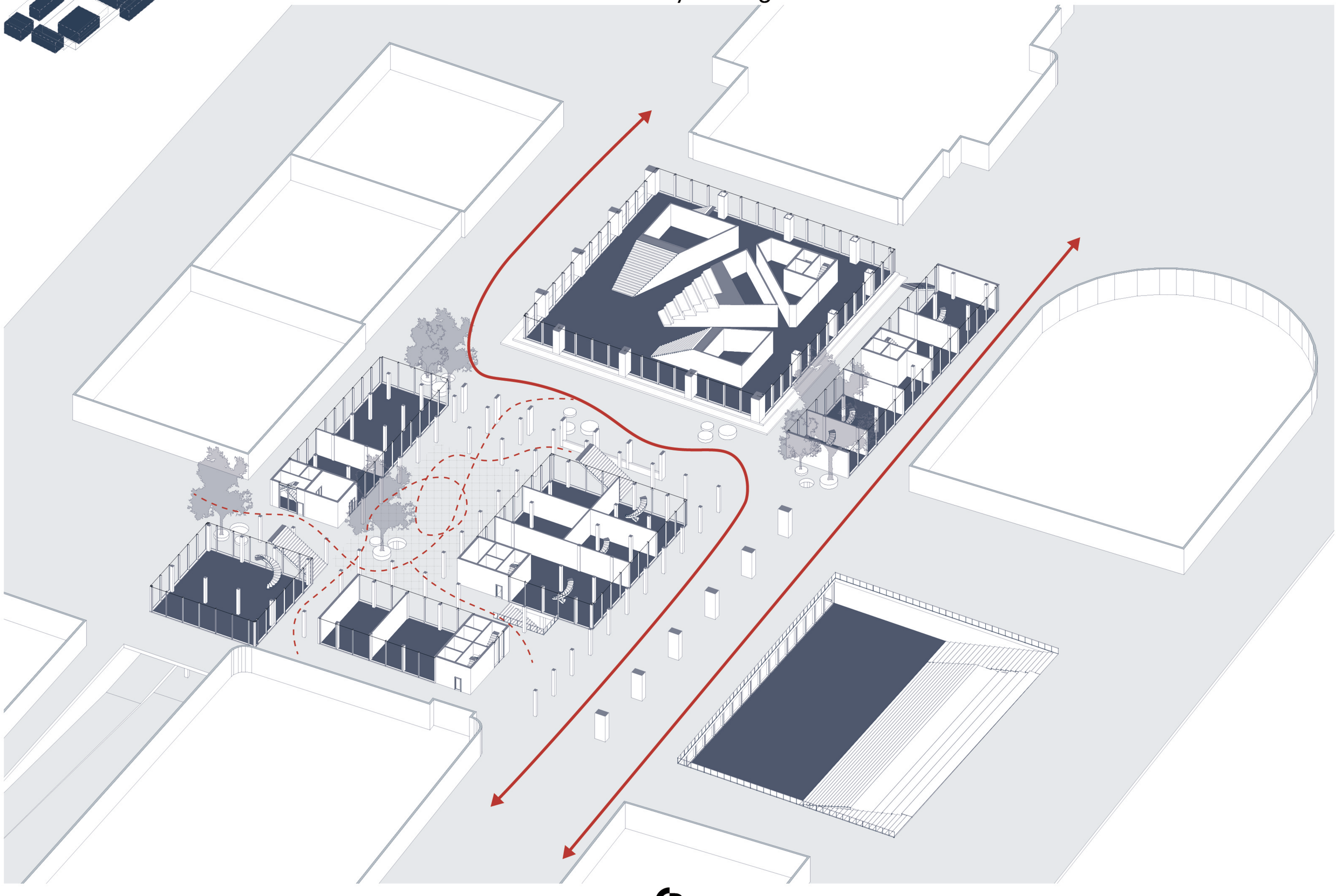


Primary routing

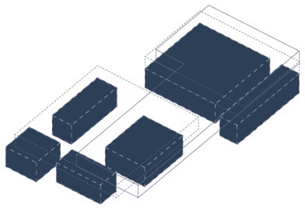


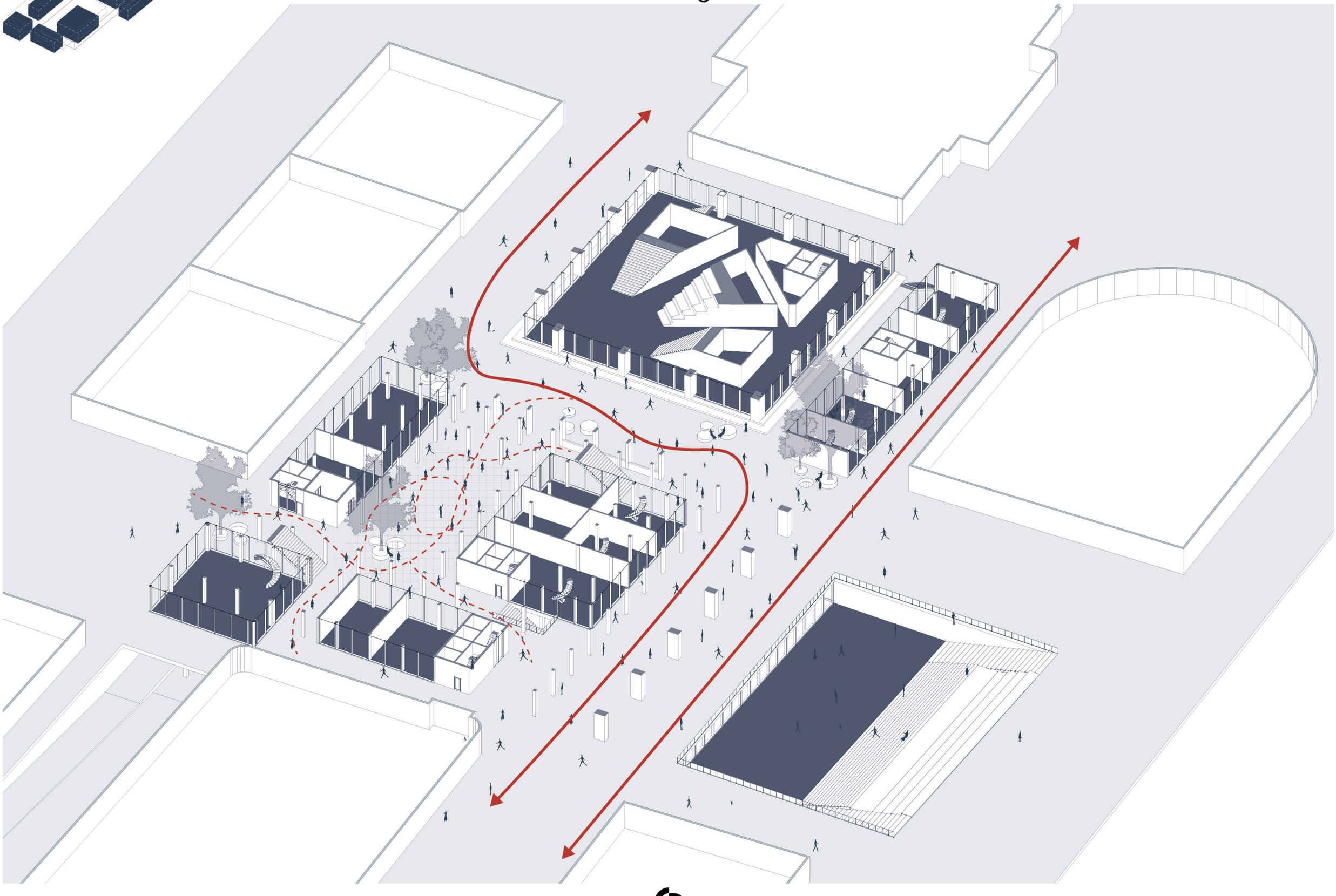
Secondary routing





Routing





Design proposal

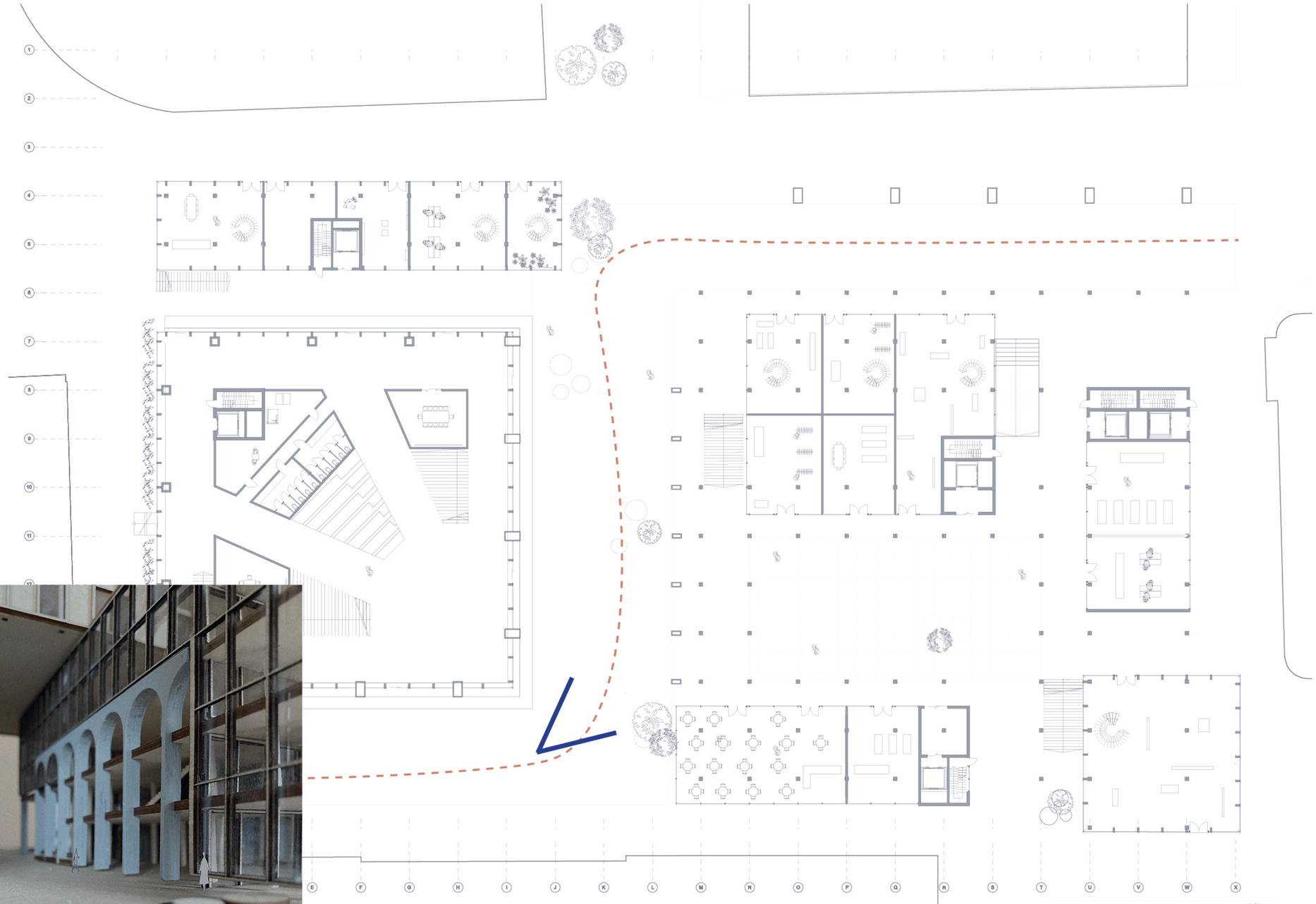
Primary road



Primary road



Primary road



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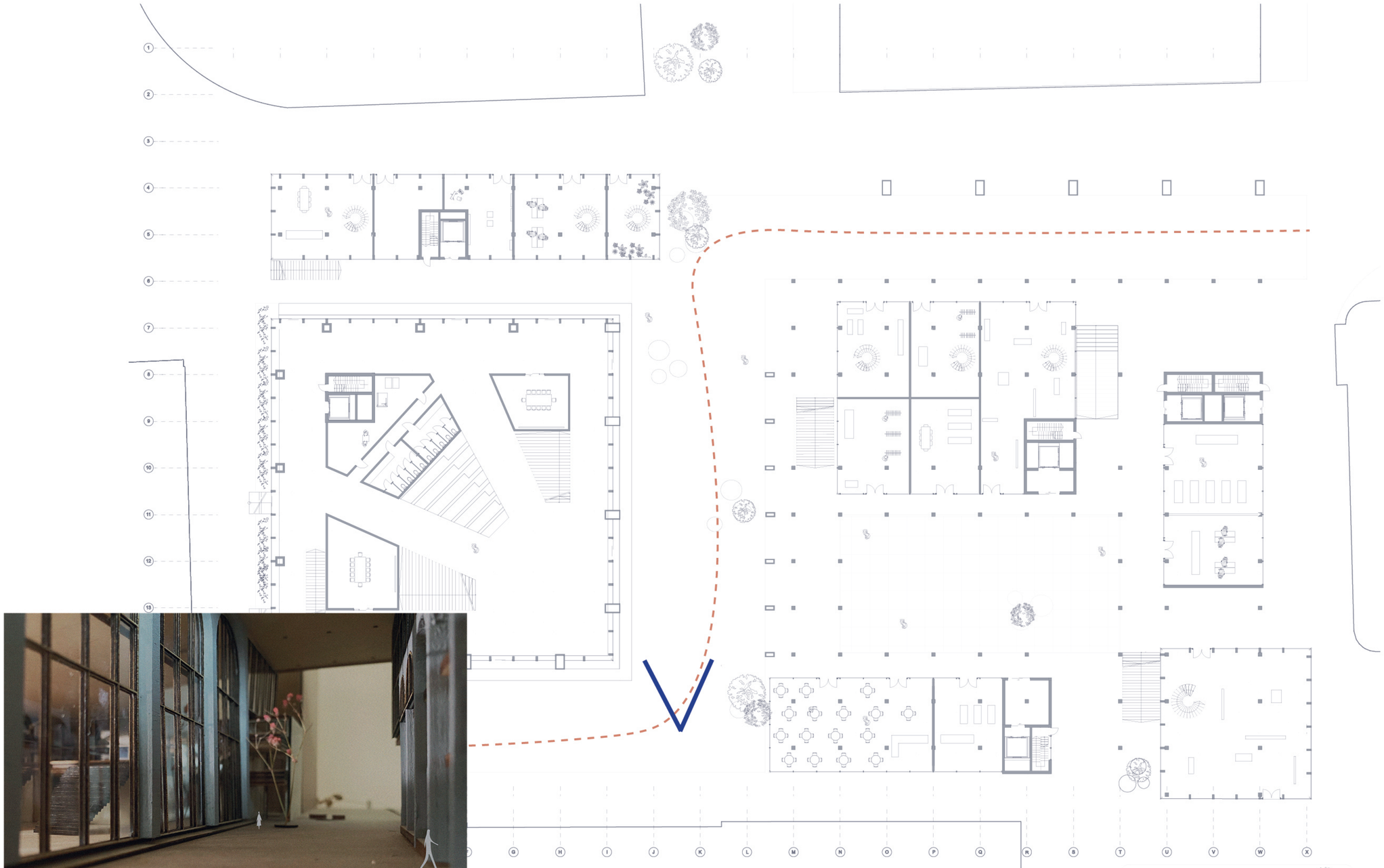
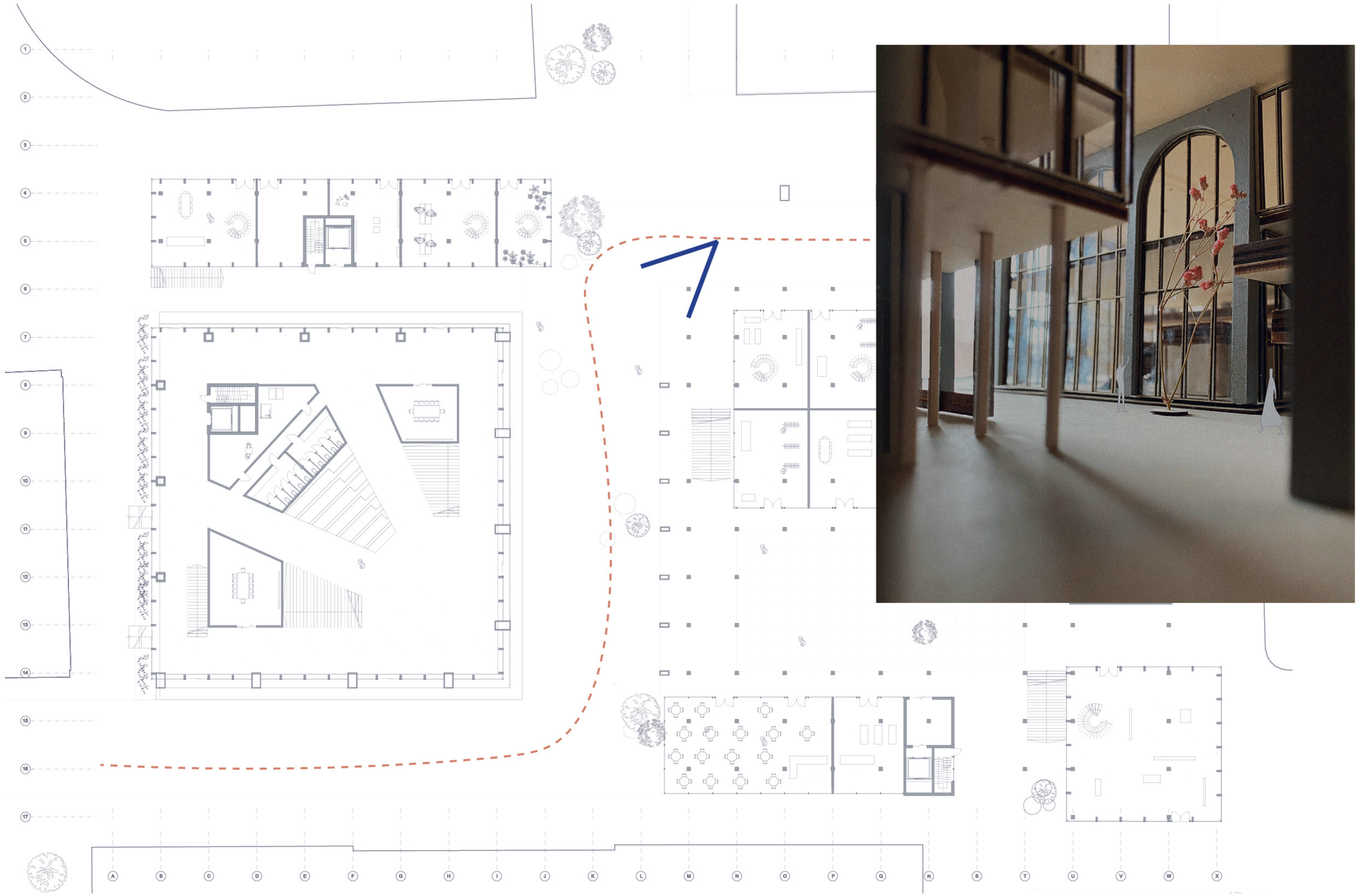


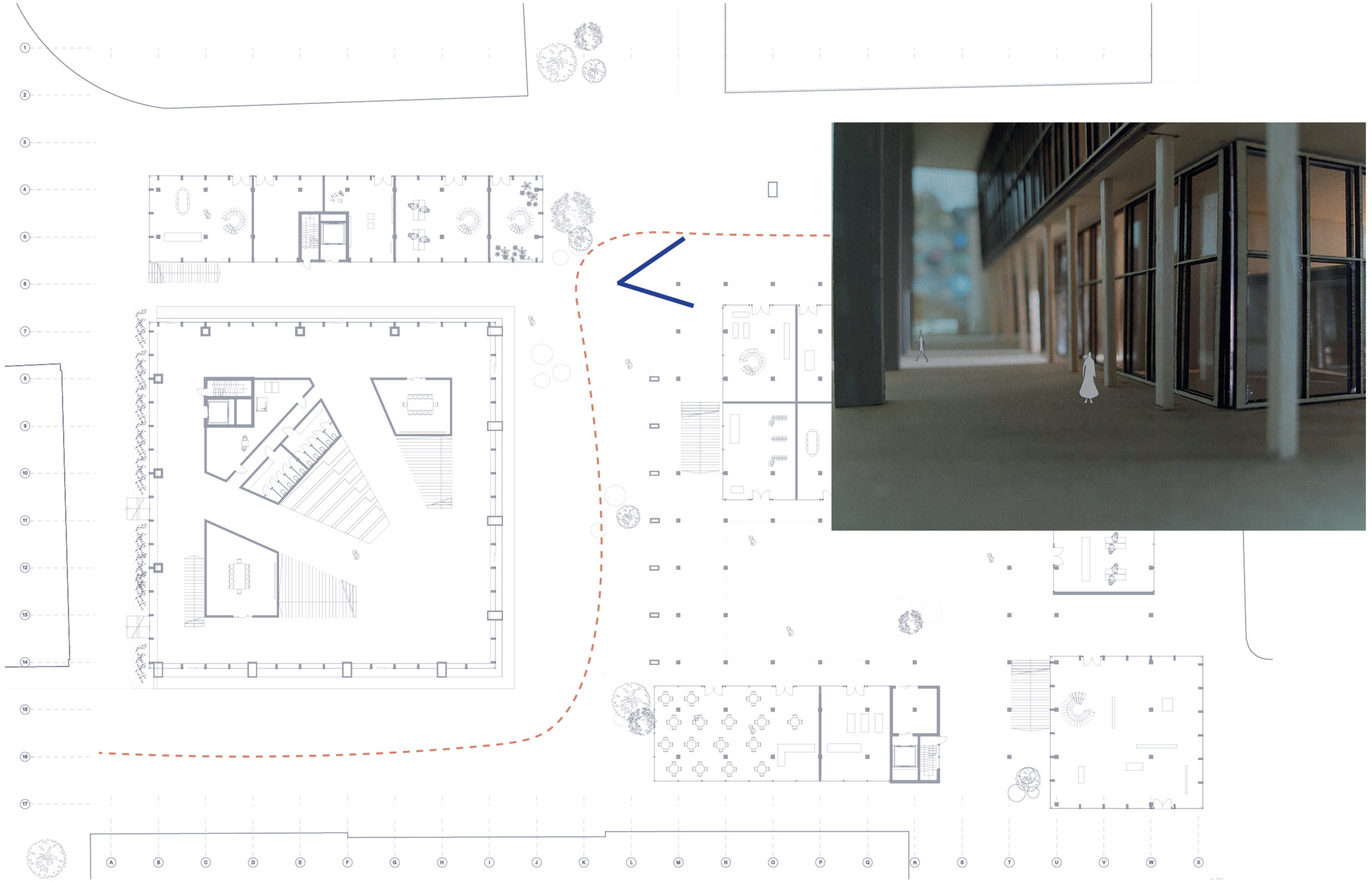
Design proposal

Primary road



Design proposal

Primary road



Primary road



Primary road







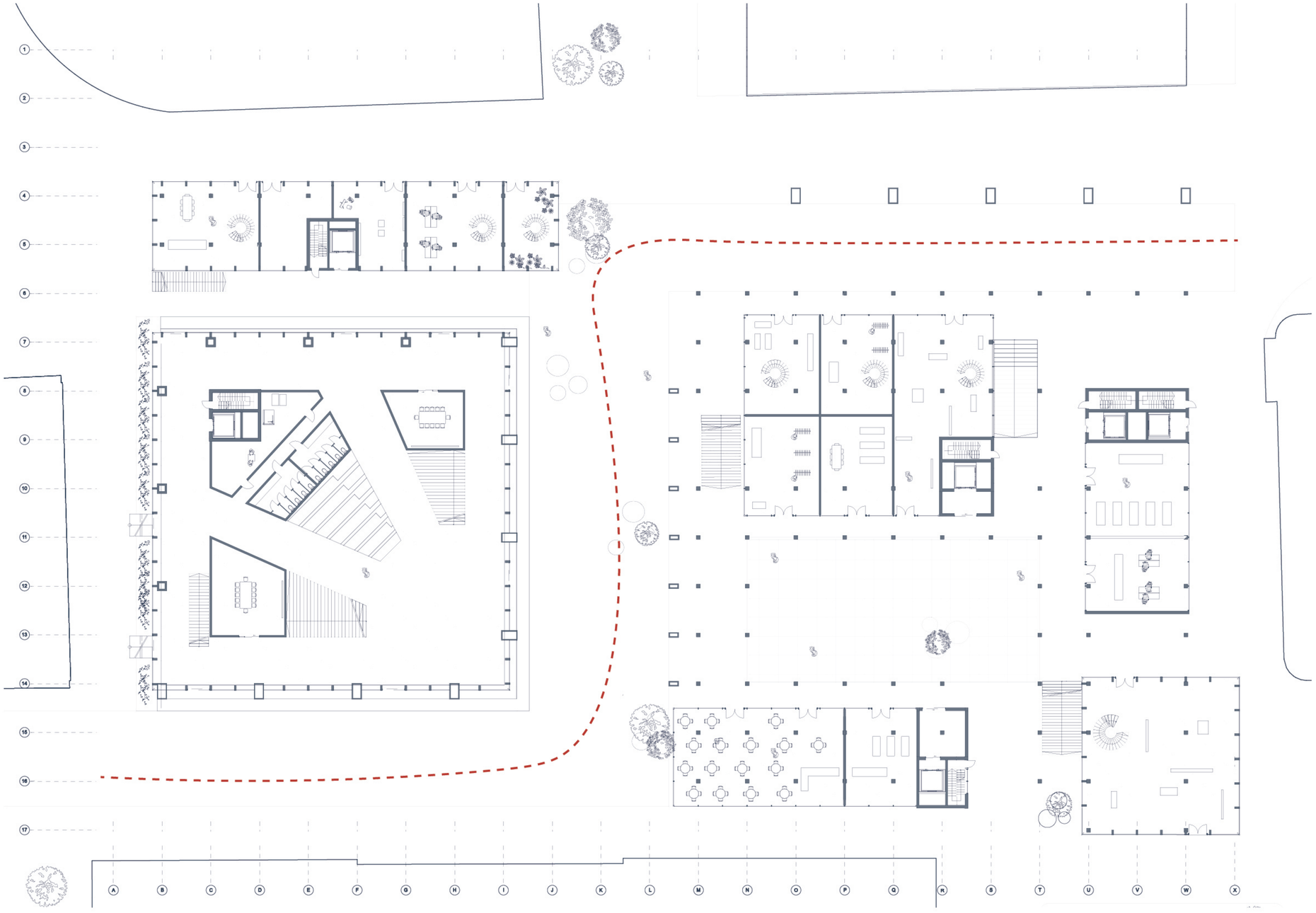


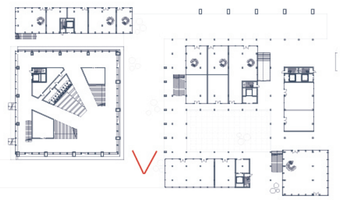




Design proposal

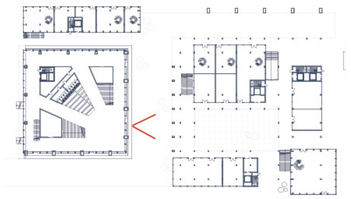
Primary road





Design proposal

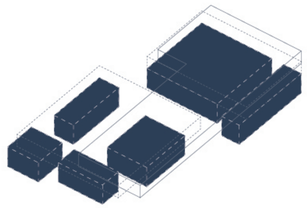
Passage



Design proposal

Courtyard

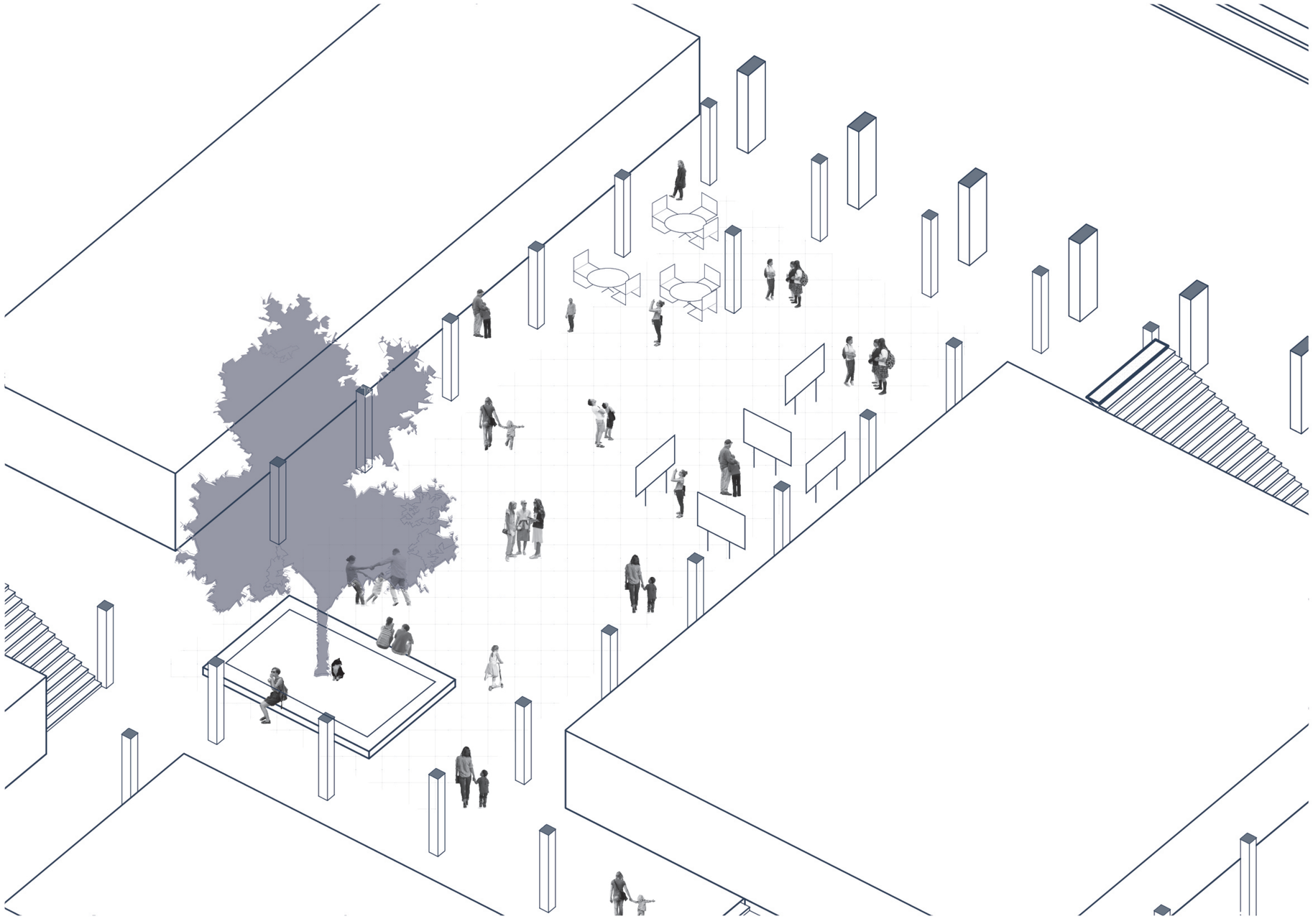
Courtyard



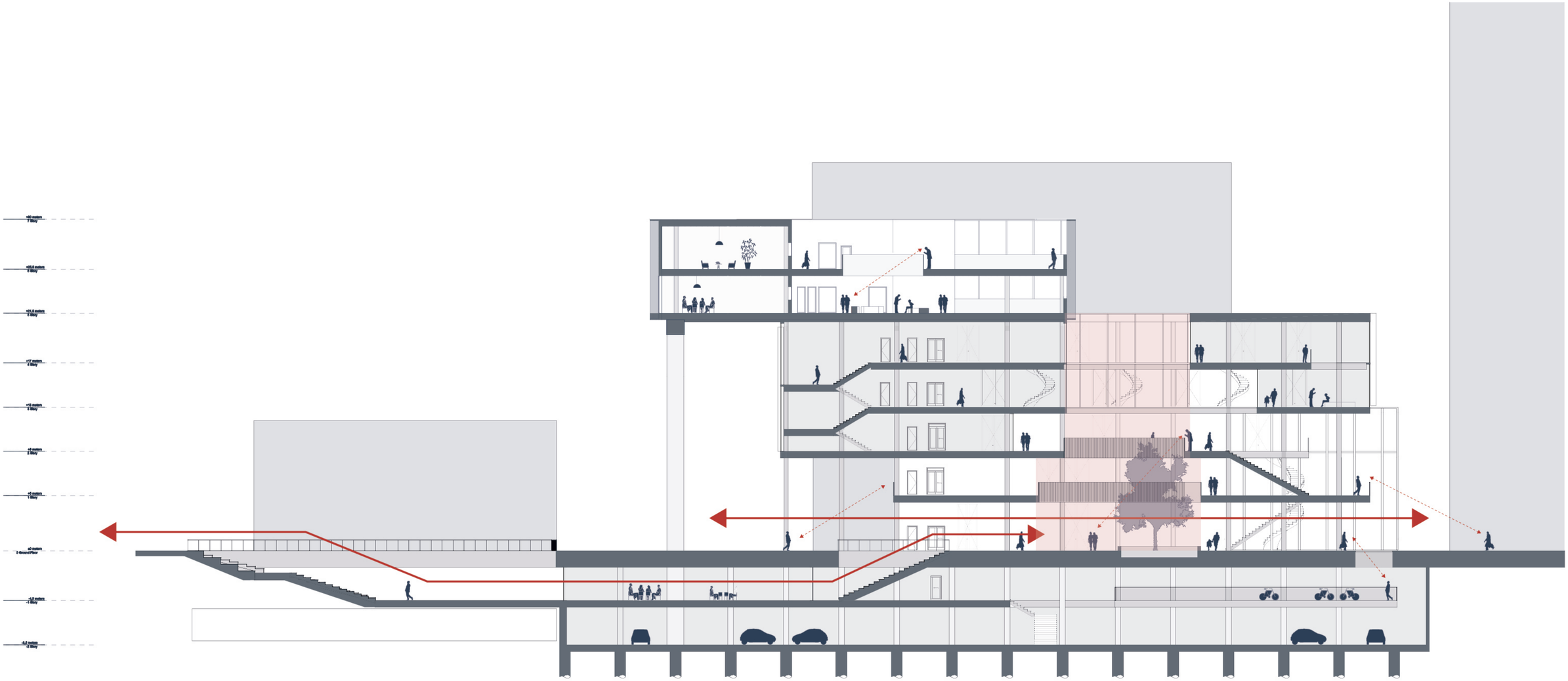


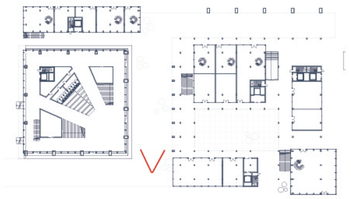
Design proposal

Courtyard



Viewpoints courtyard

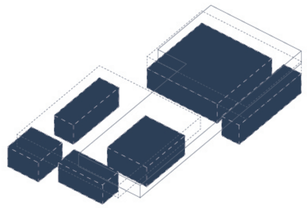


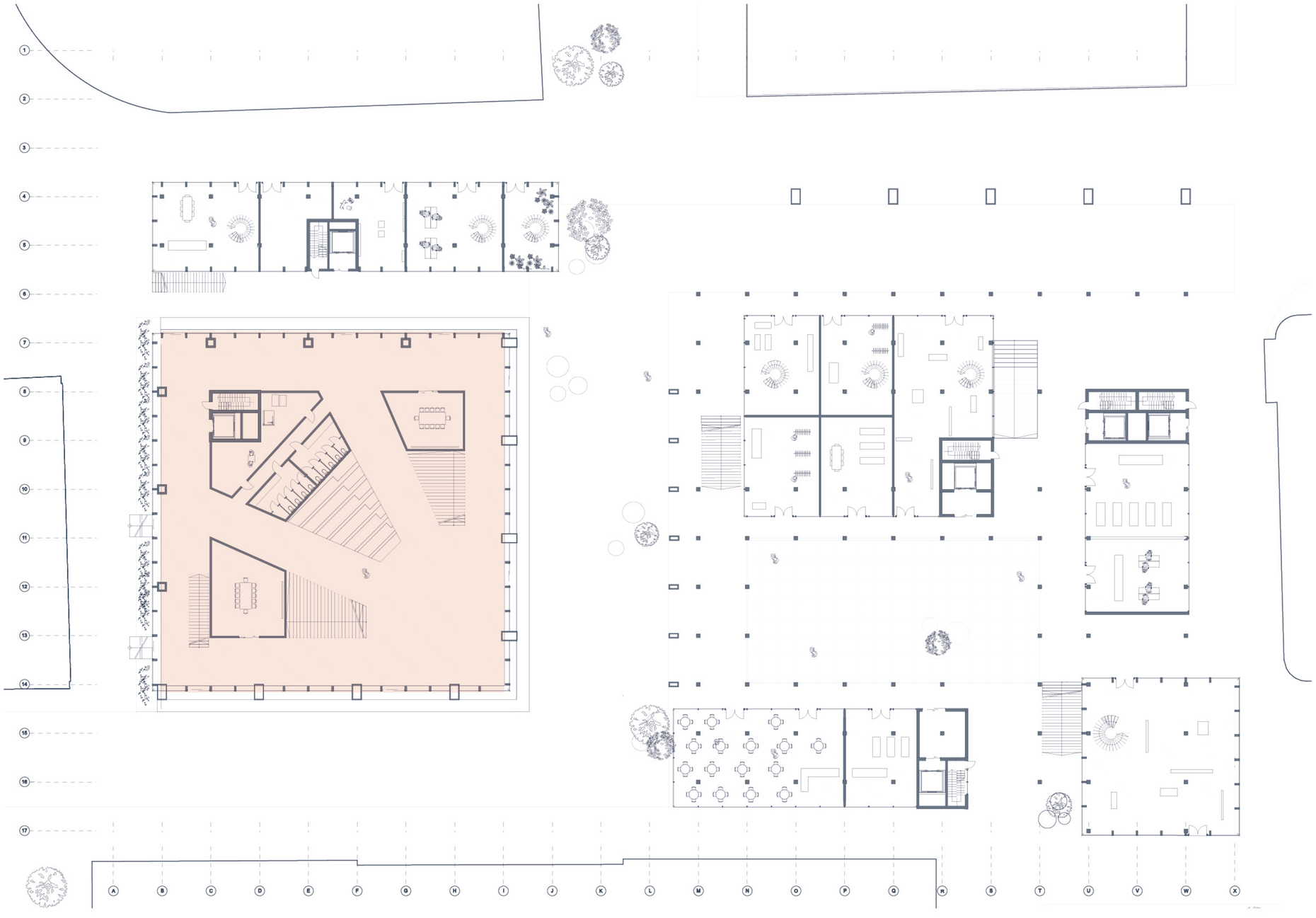


Design proposal

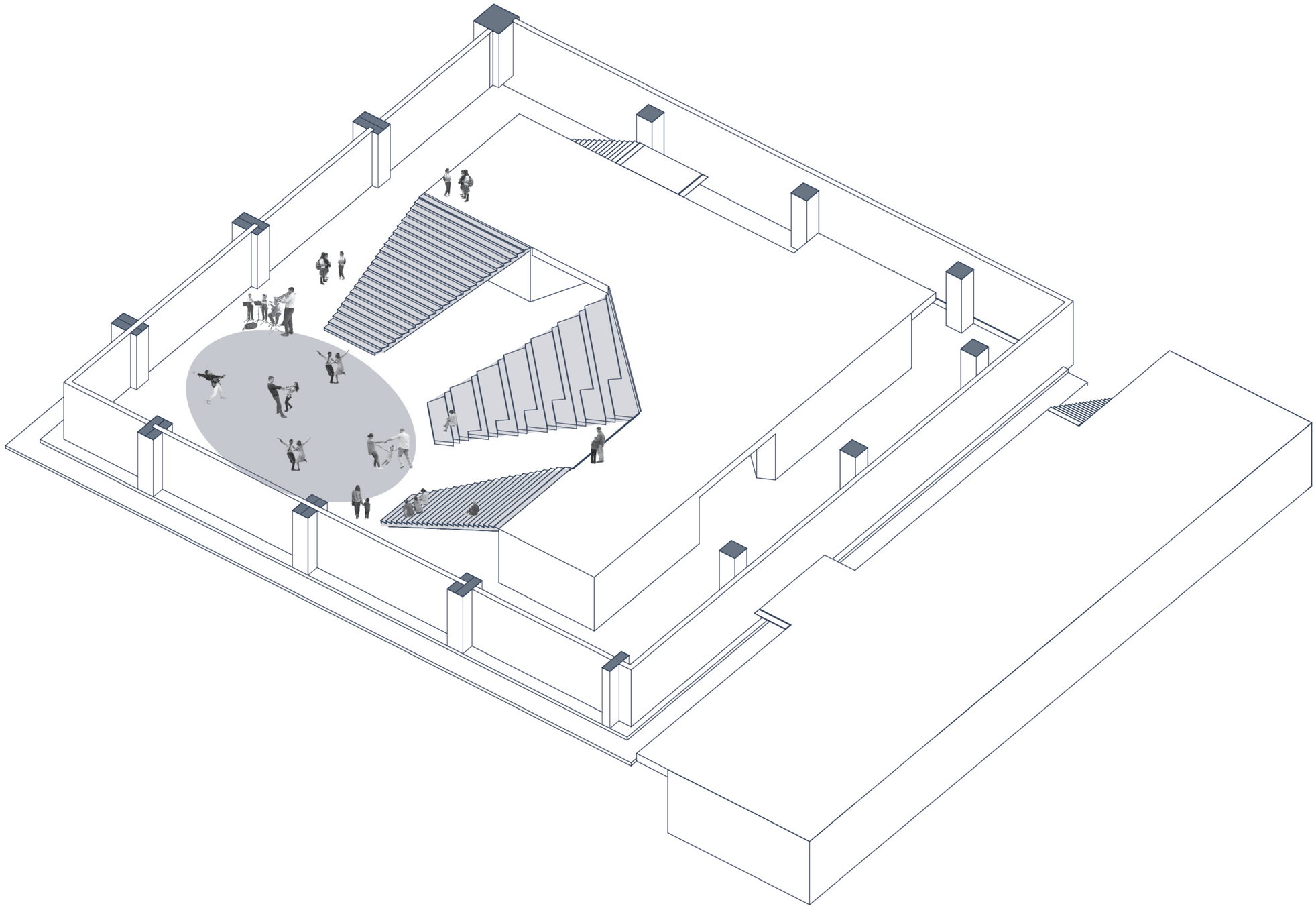
Passage

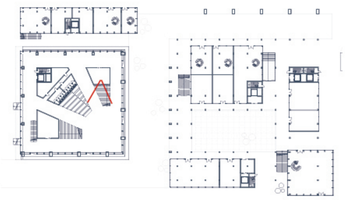
Inner courtyard - atrium





Inner courtyard - atrium

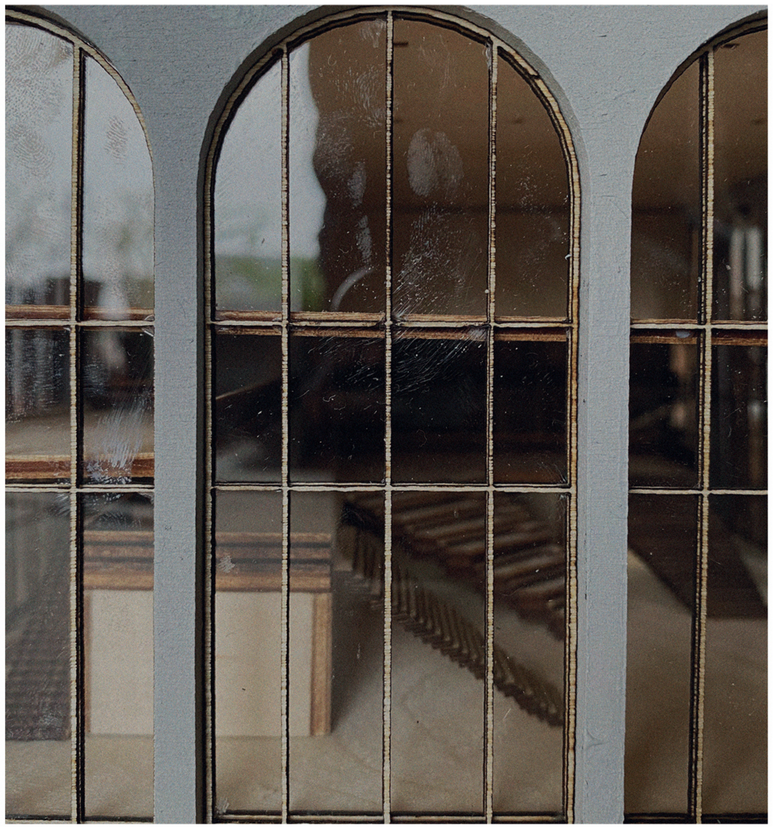




Design proposal

Inner courtyard - atrium

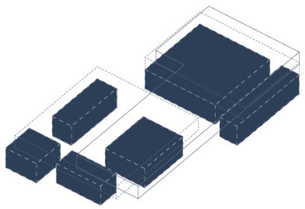
Inner courtyard - atrium





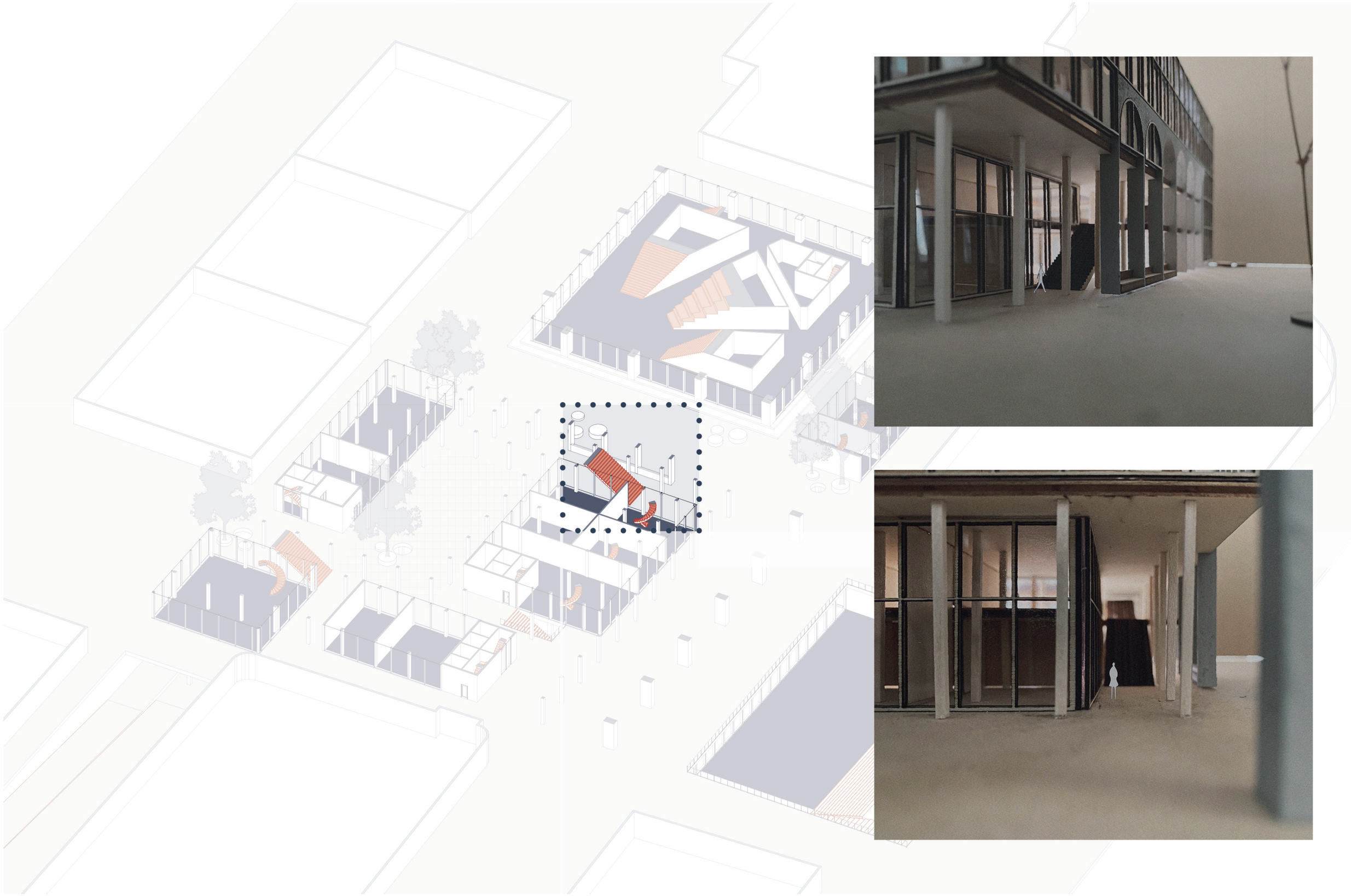


Ground level





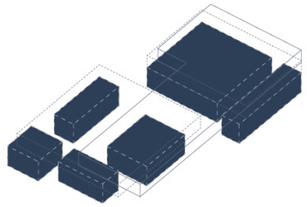
Ground level

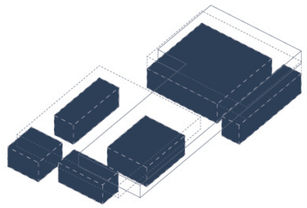


Ground level



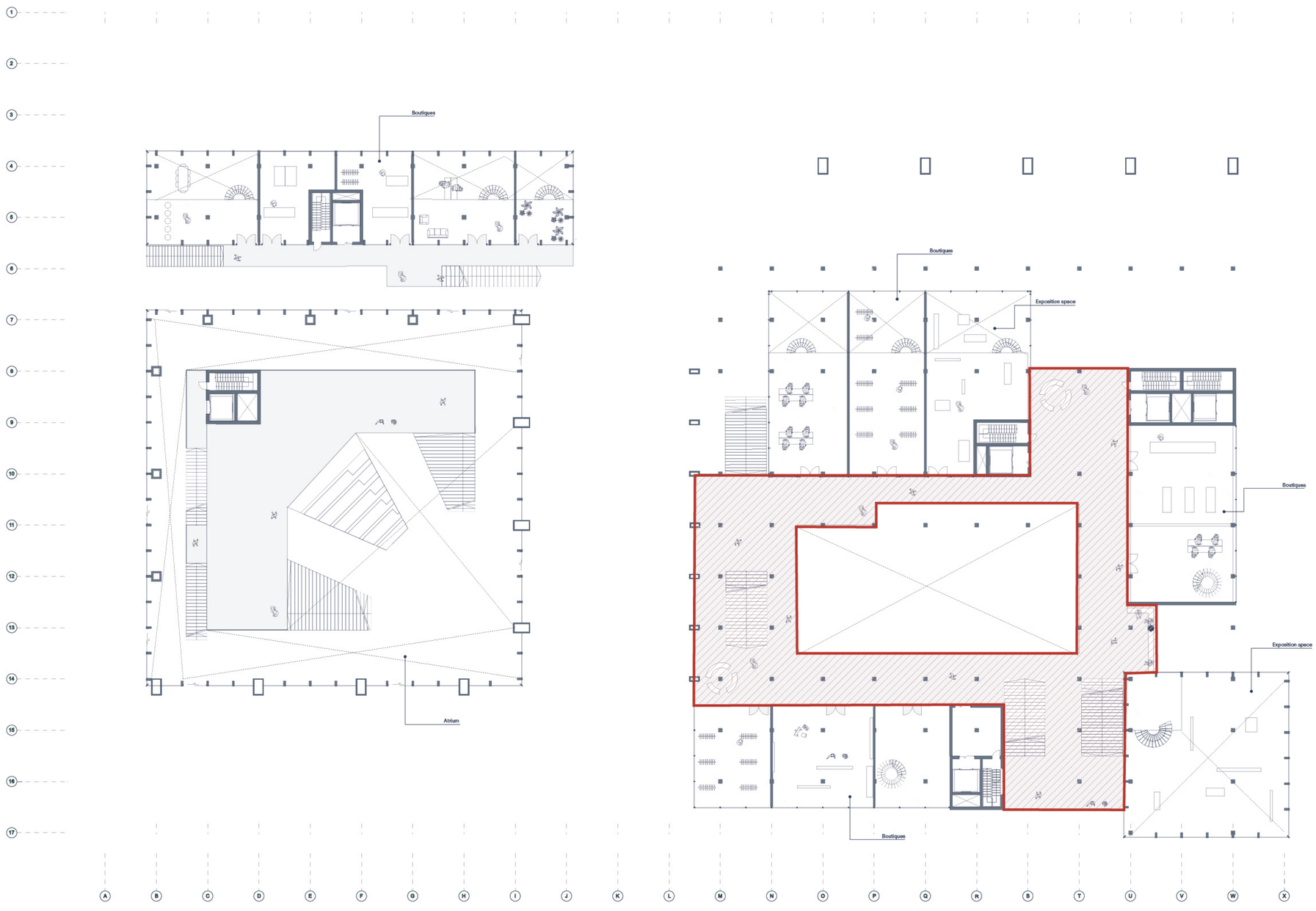
Second level



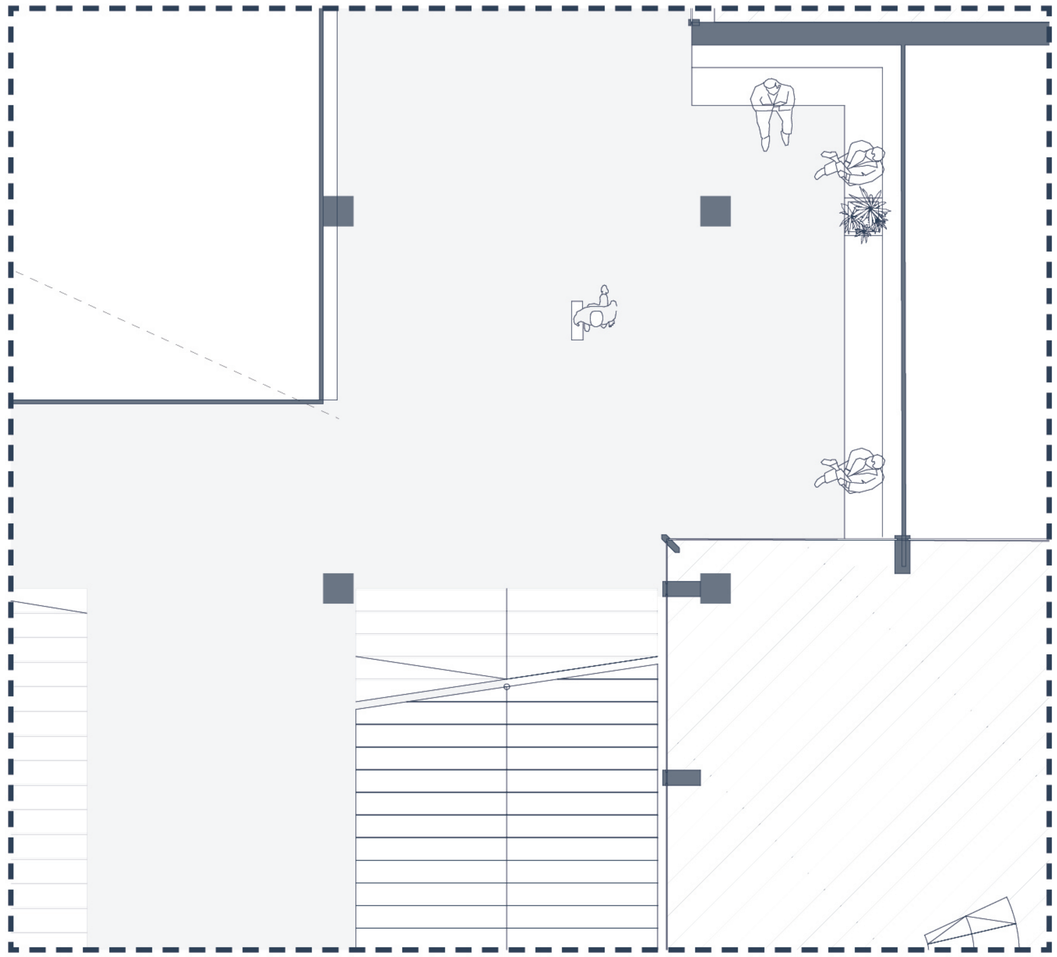


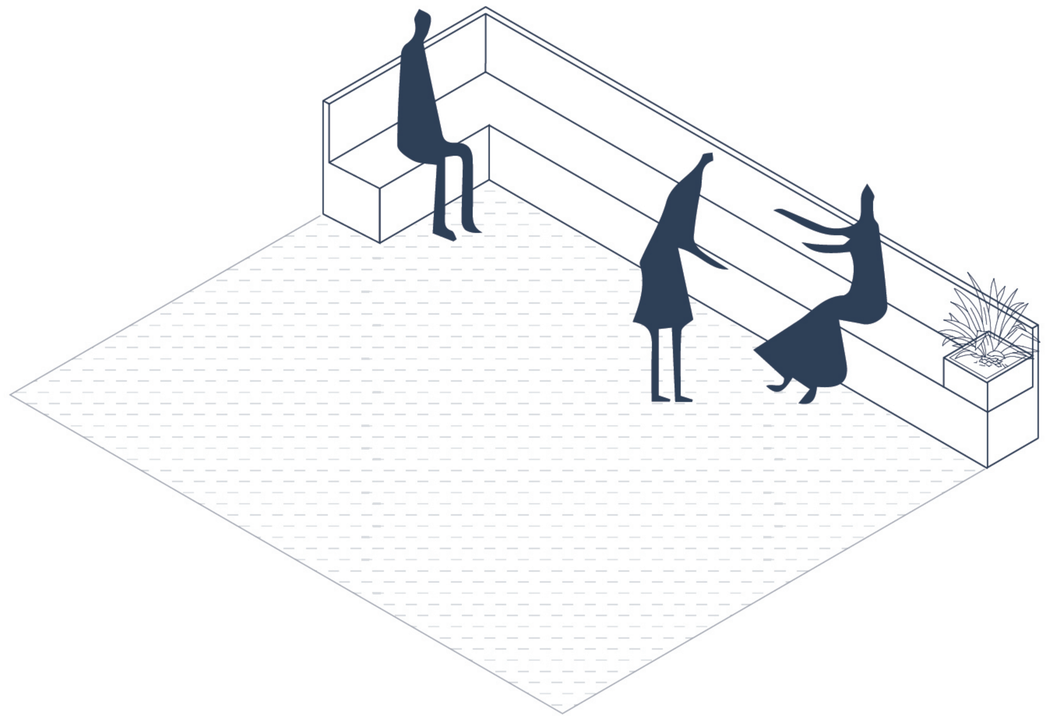
Design proposal

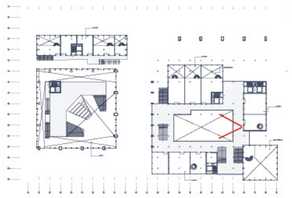
Upper courtyard



Public spaces

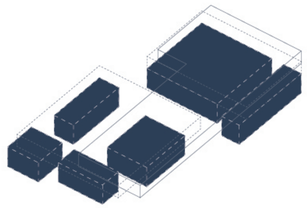






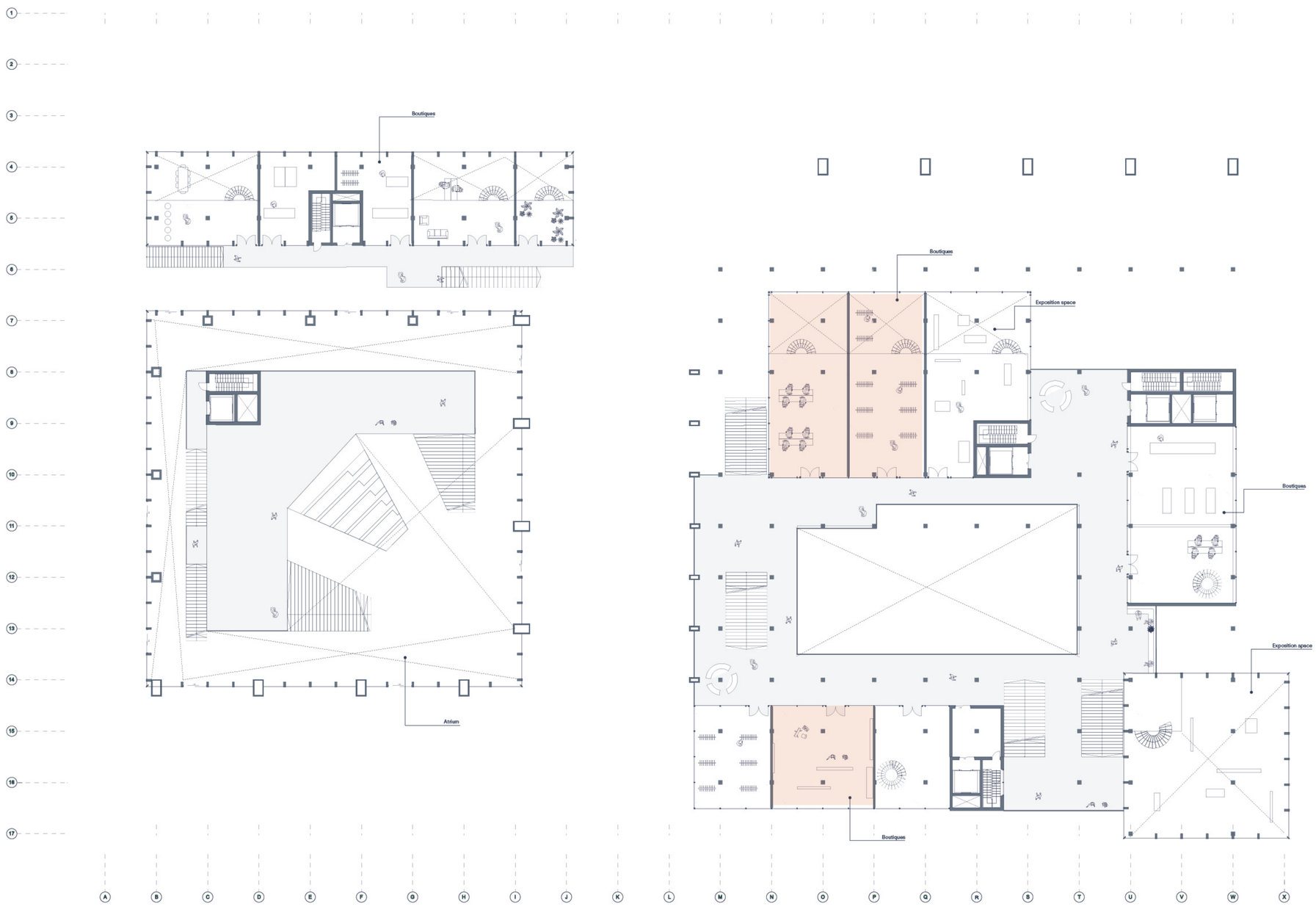
Design proposal

Courtyard

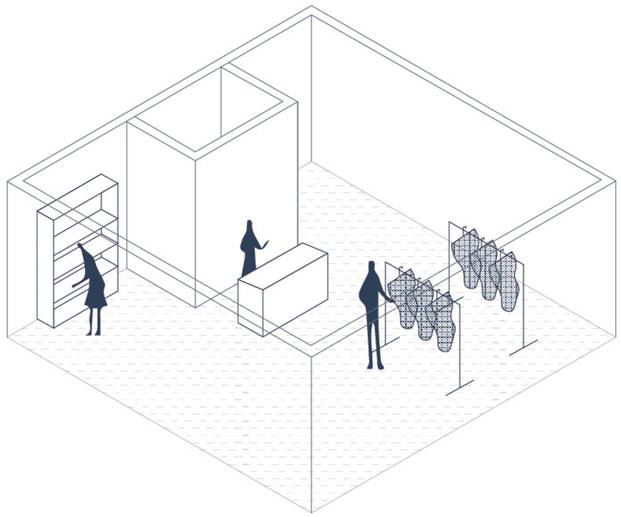


Design proposal

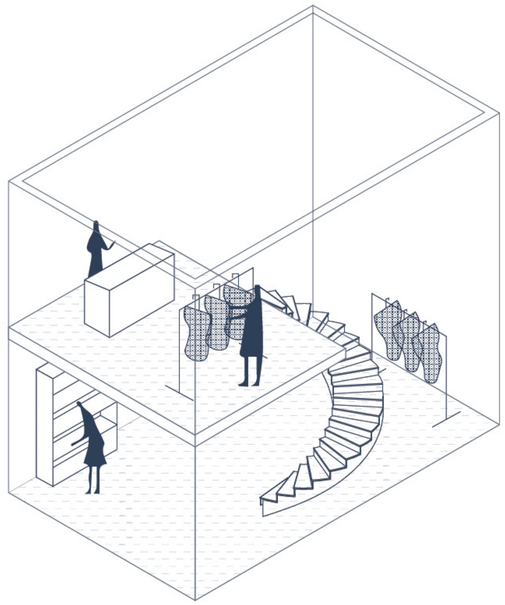
Boutiques



Boutiques

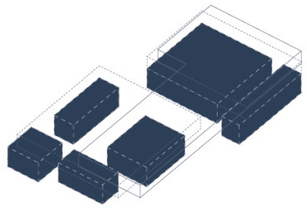


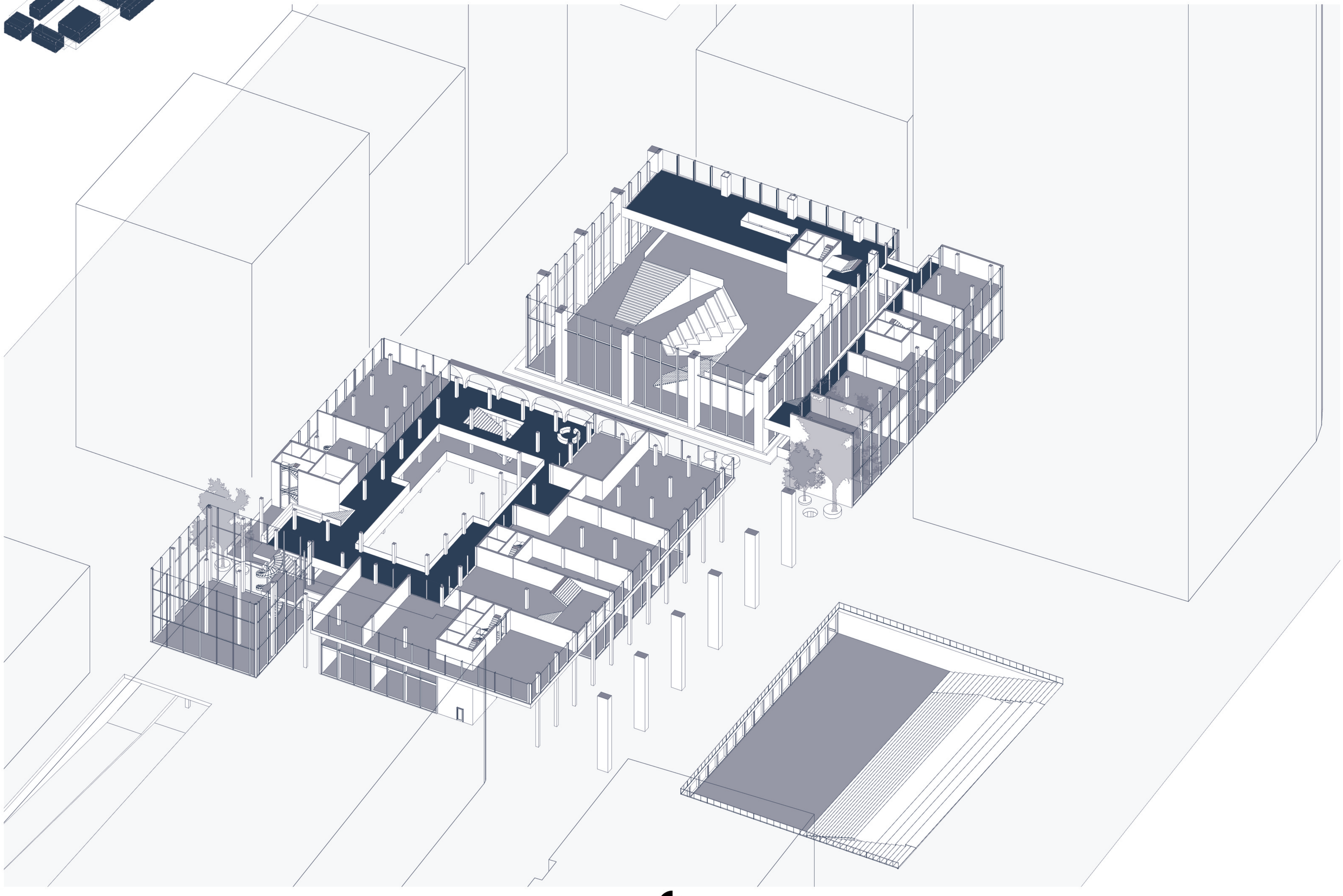
One level

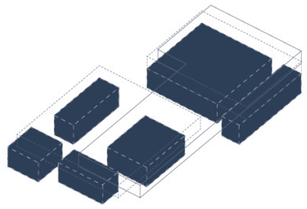


Split level

Third level

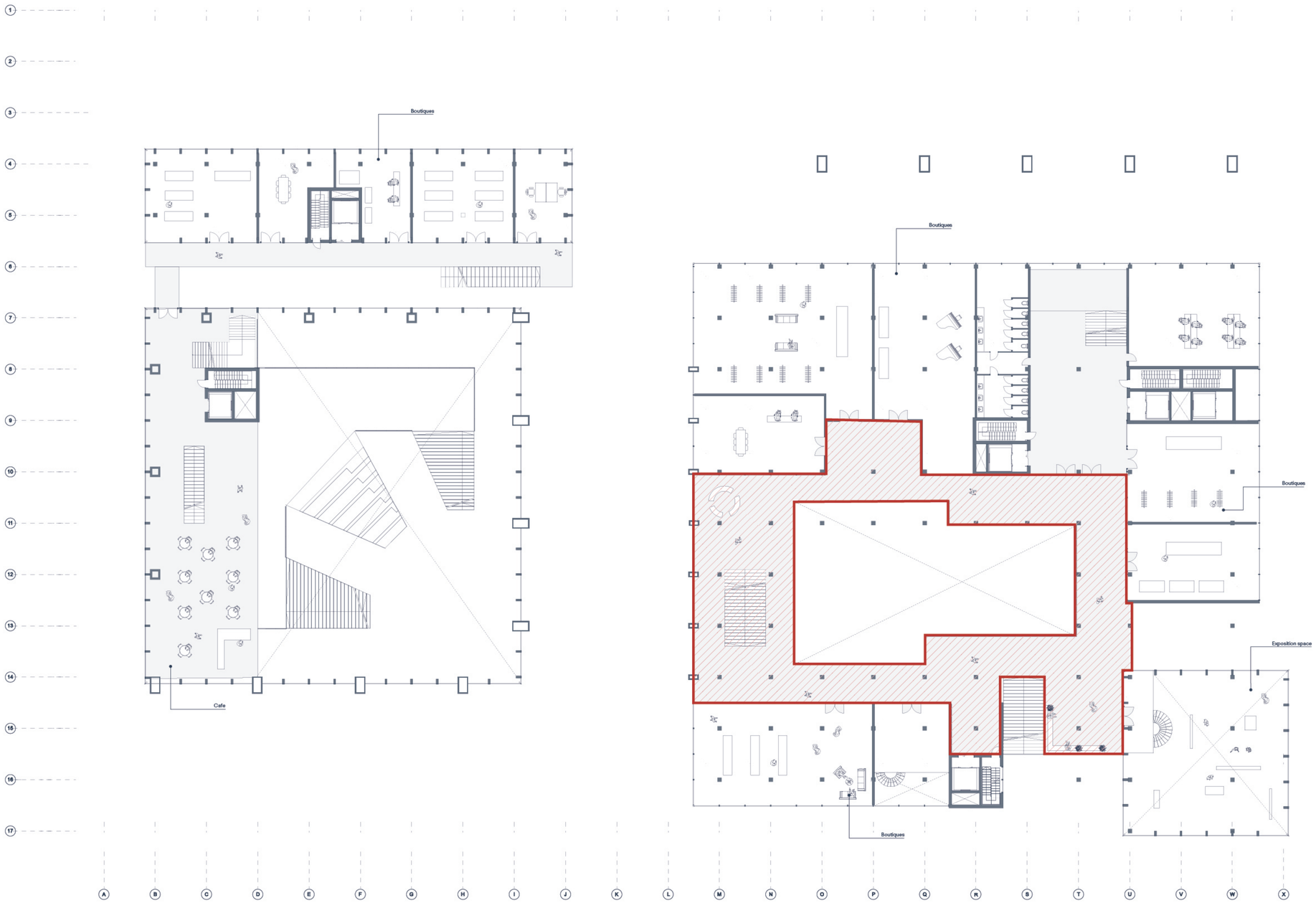




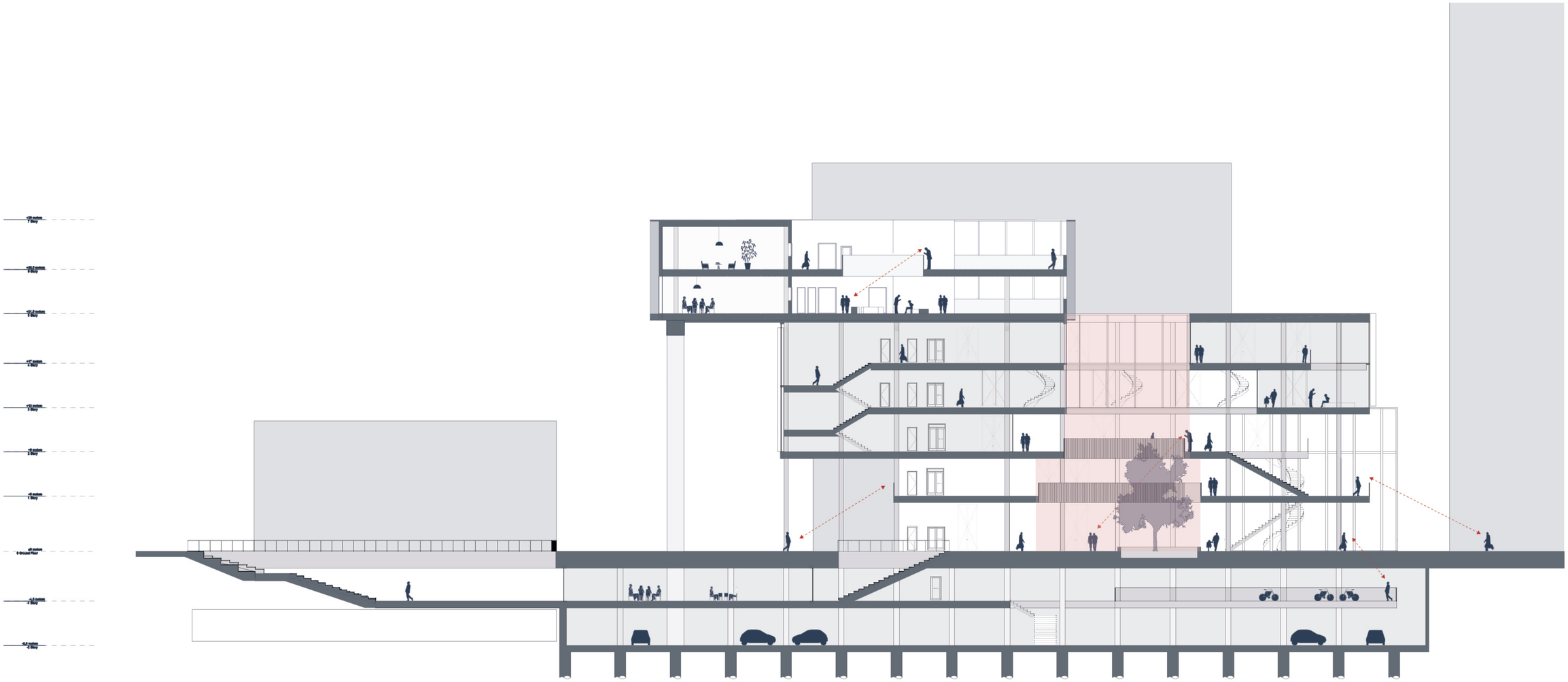


Design proposal

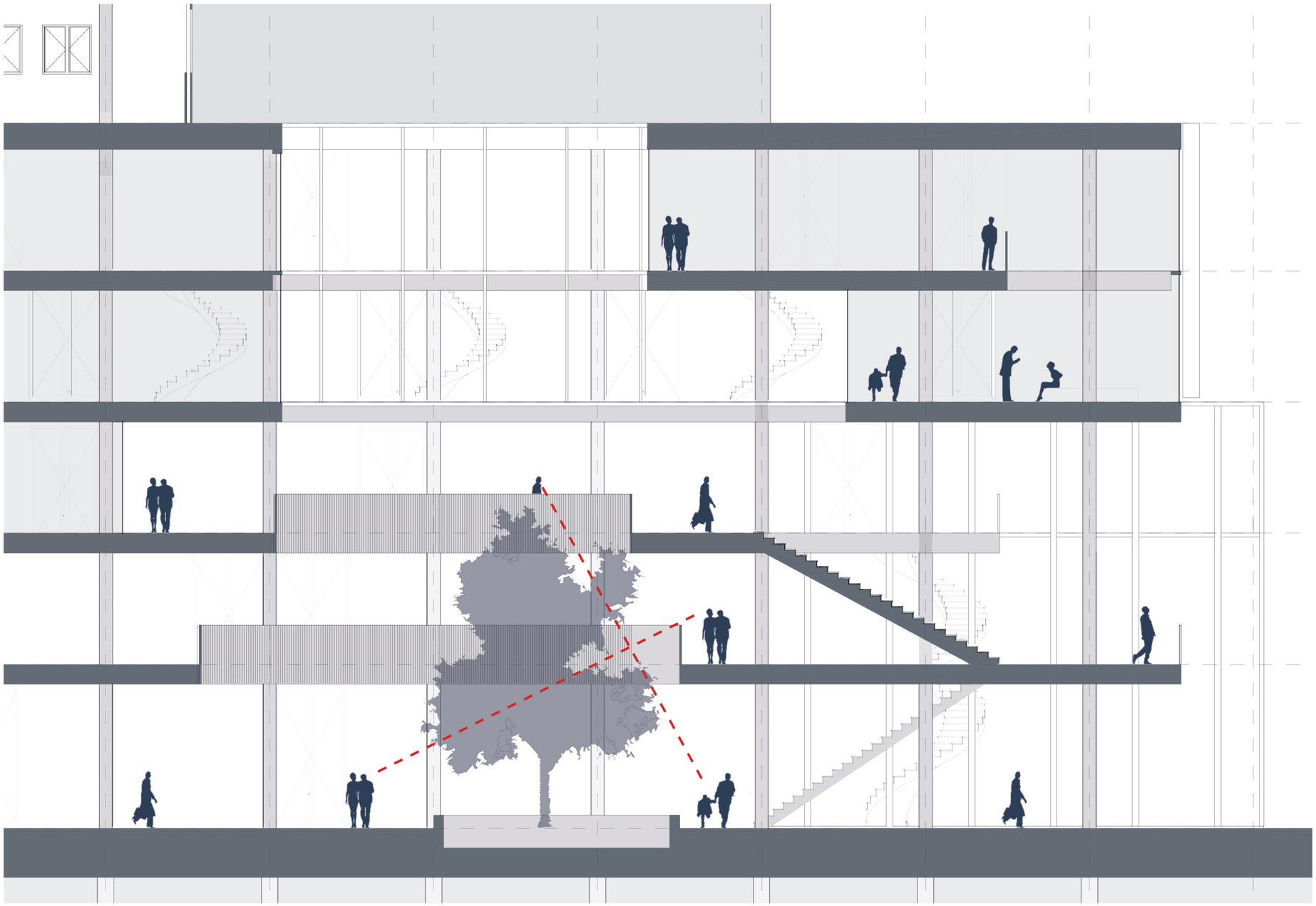
Upper courtyard



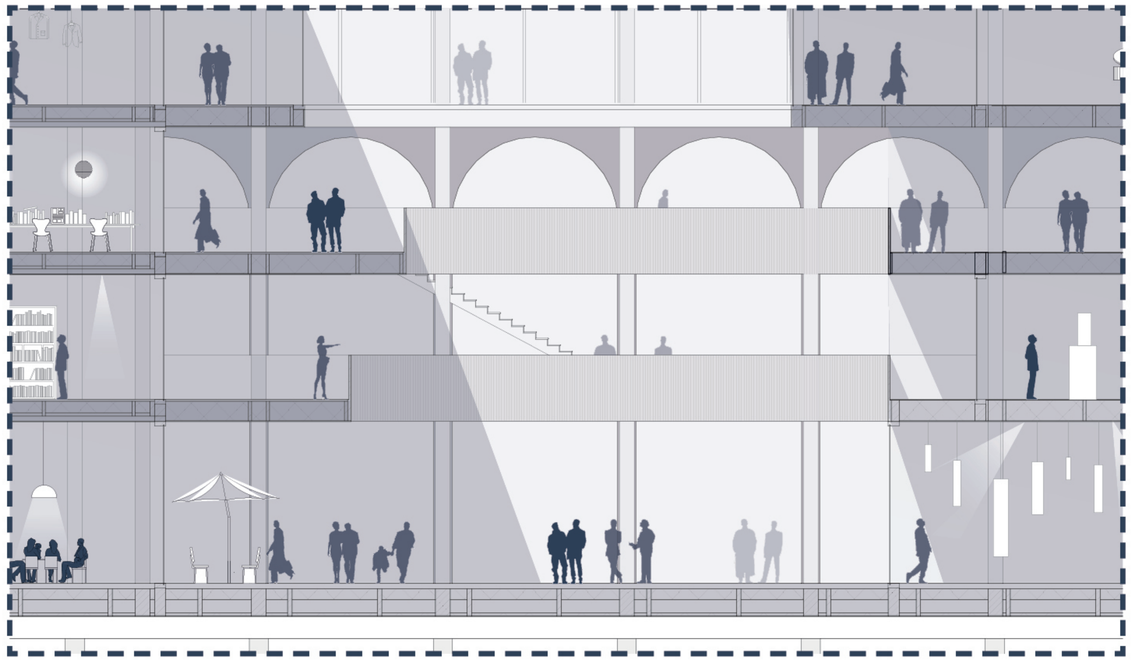
Section

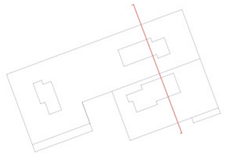


Different sadbacks

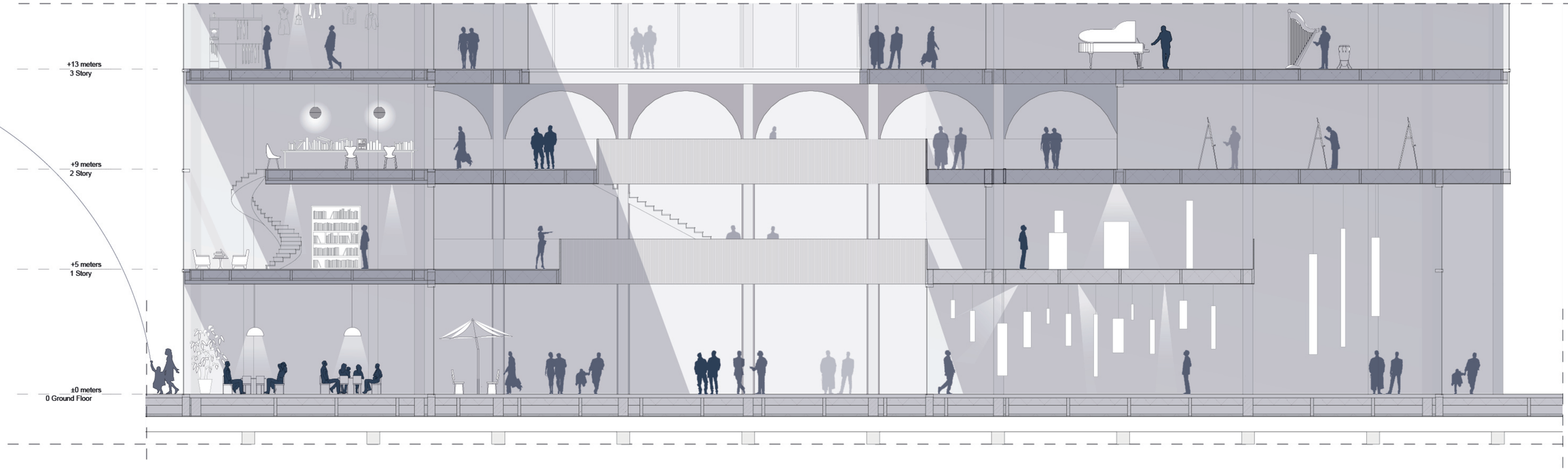


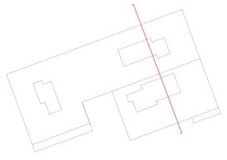
Section courtyard



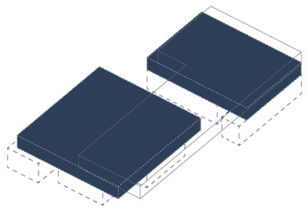


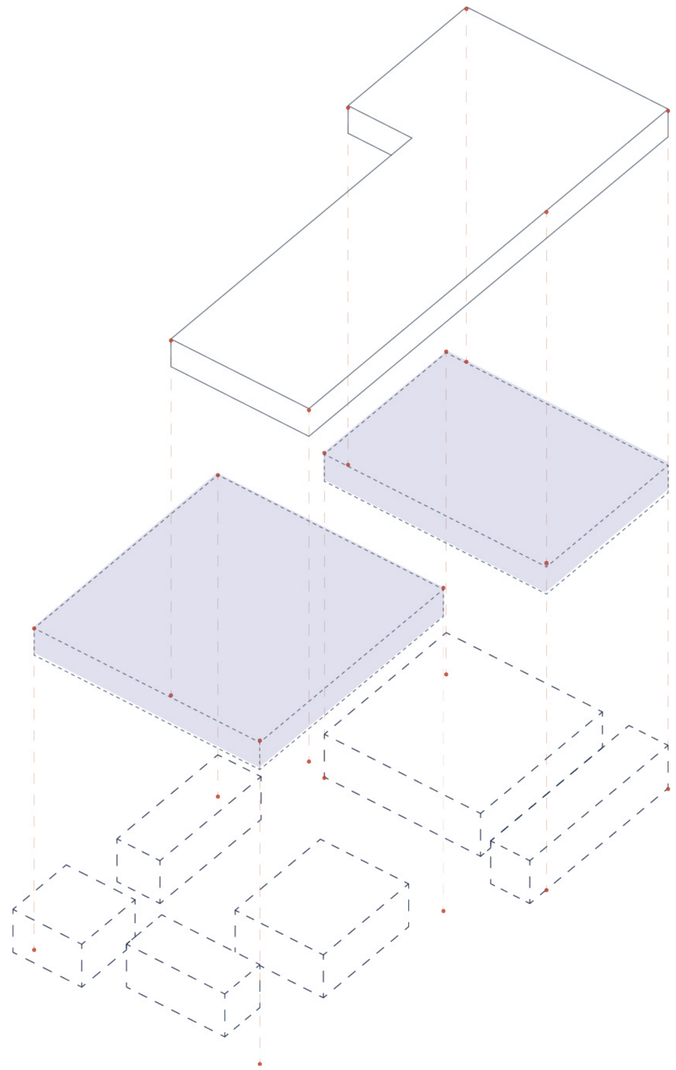
Section courtyard - intergration



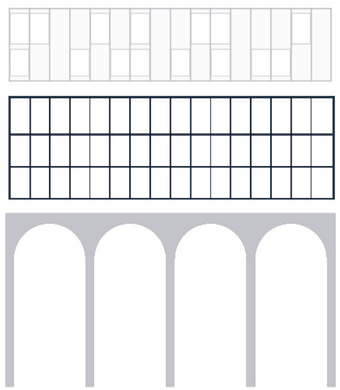


Middel levels

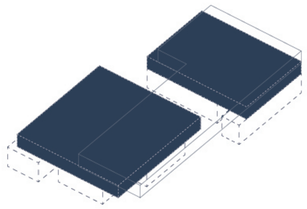


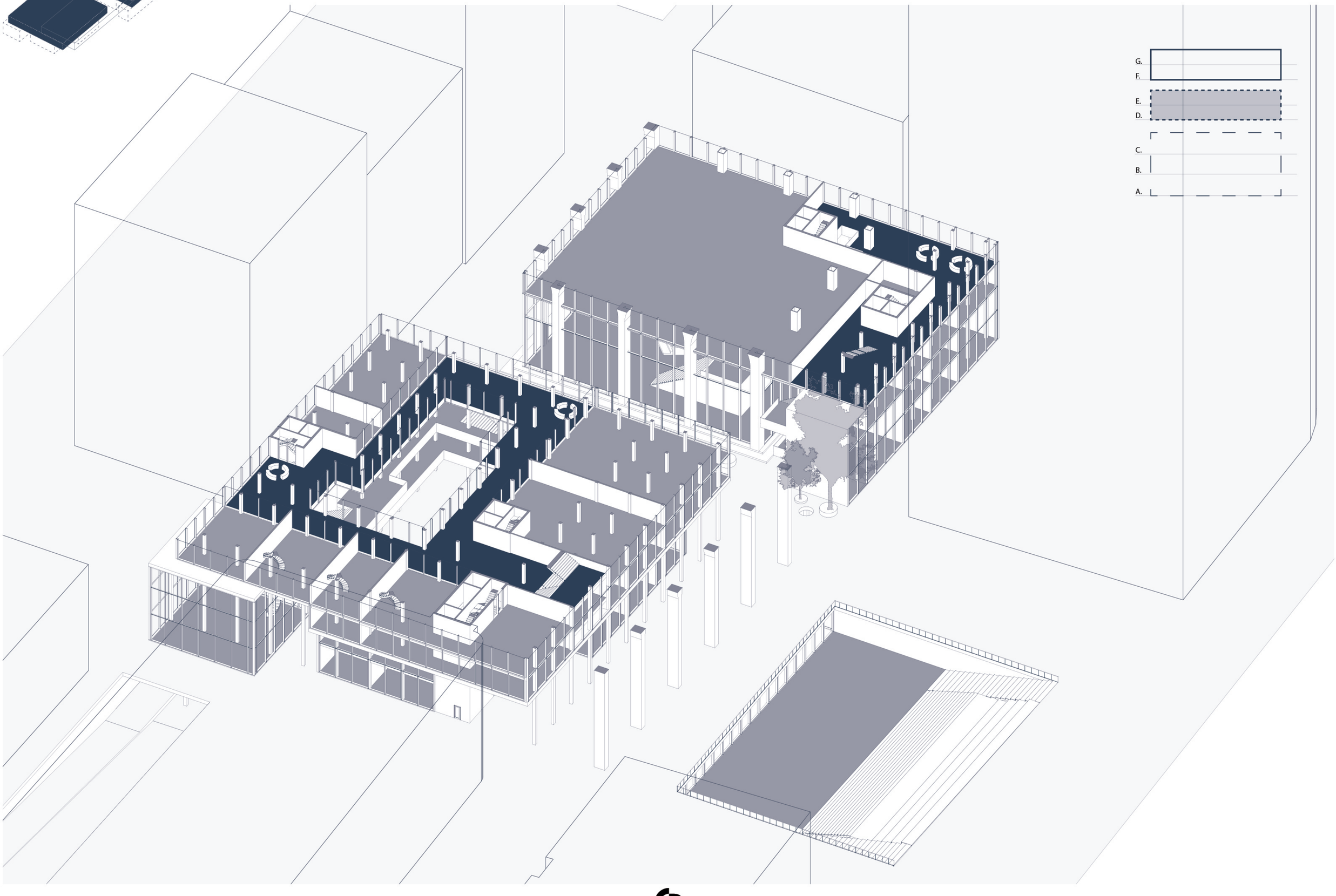


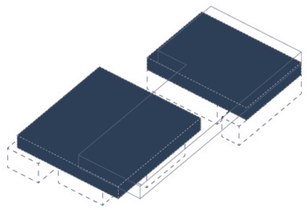




Fourth level



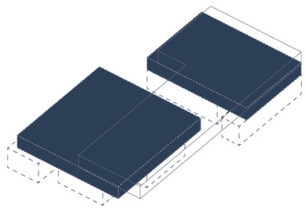




Design proposal

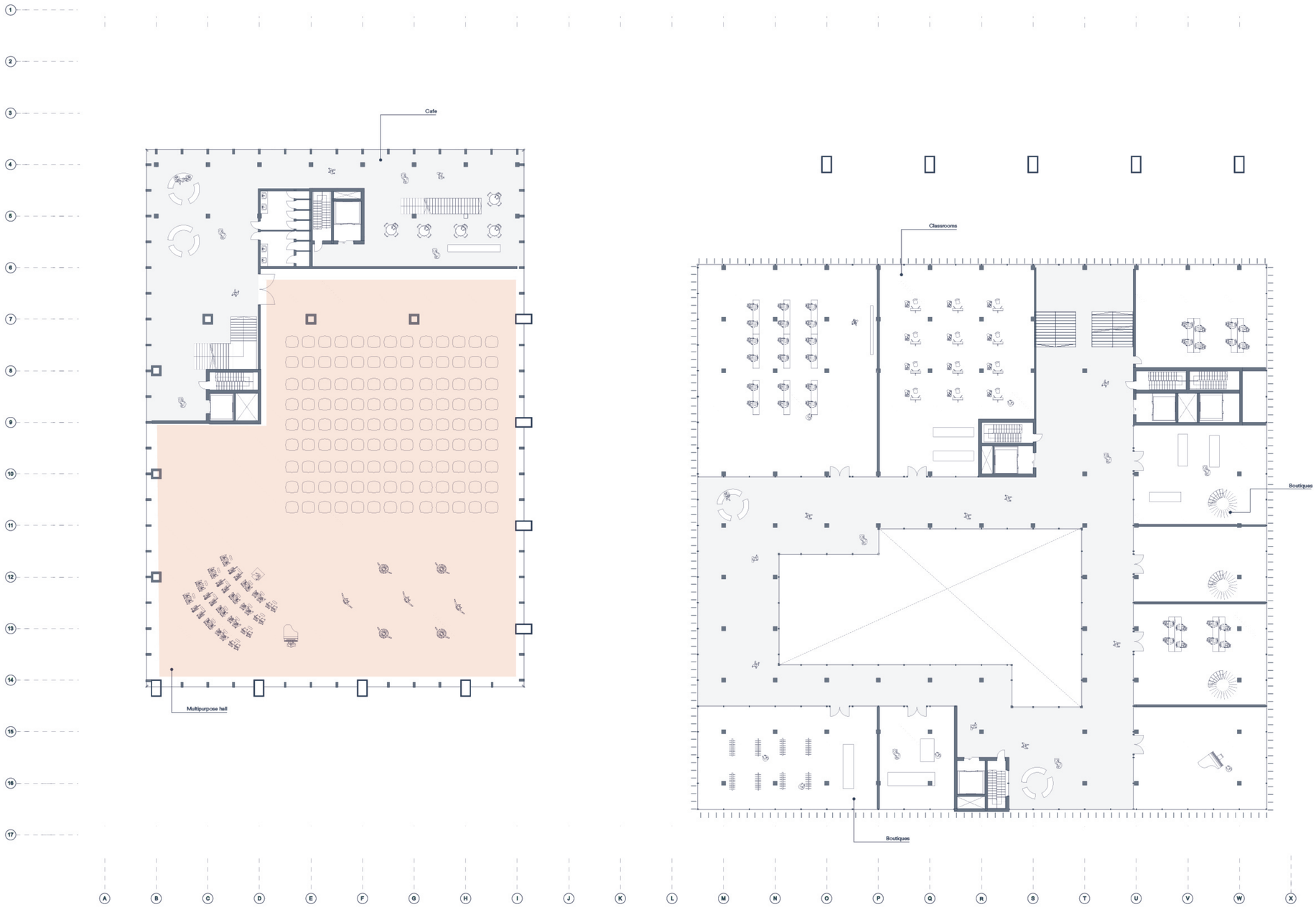
Fourth level

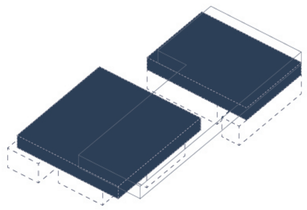




Design proposal

Multipurpose hall



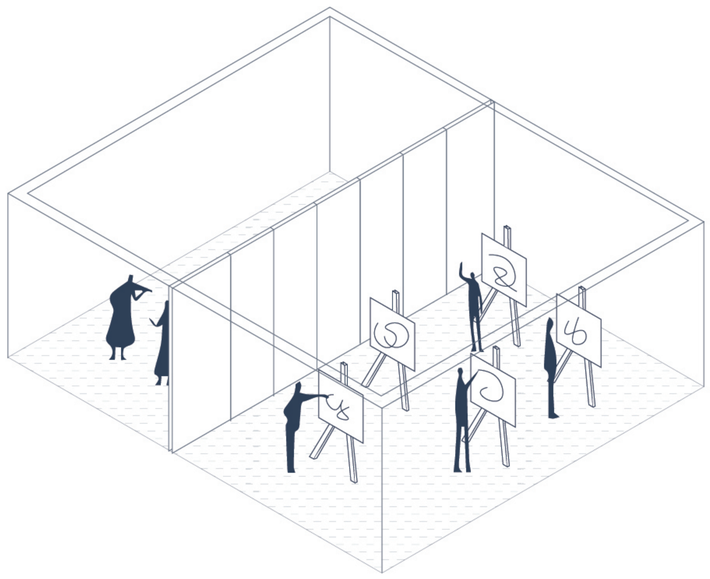


Design proposal

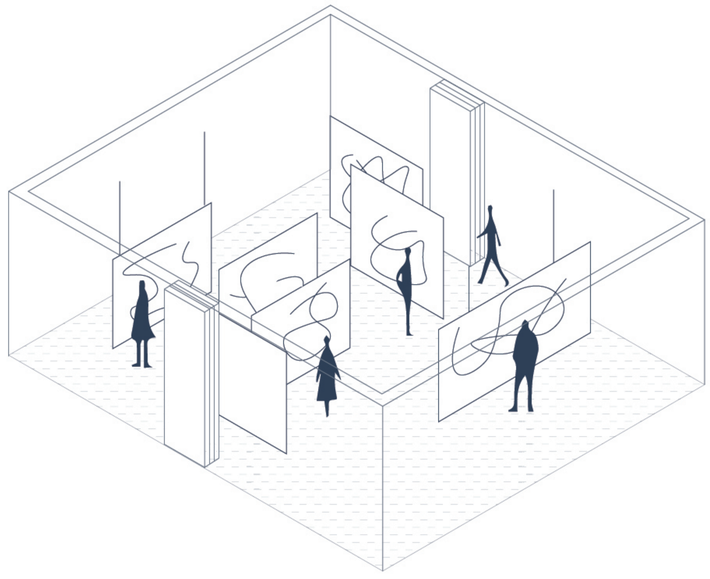
Classroom



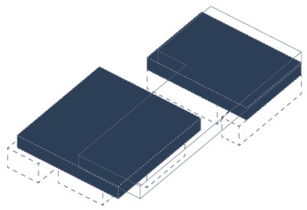
Classroom - Exhibition space



Classroom

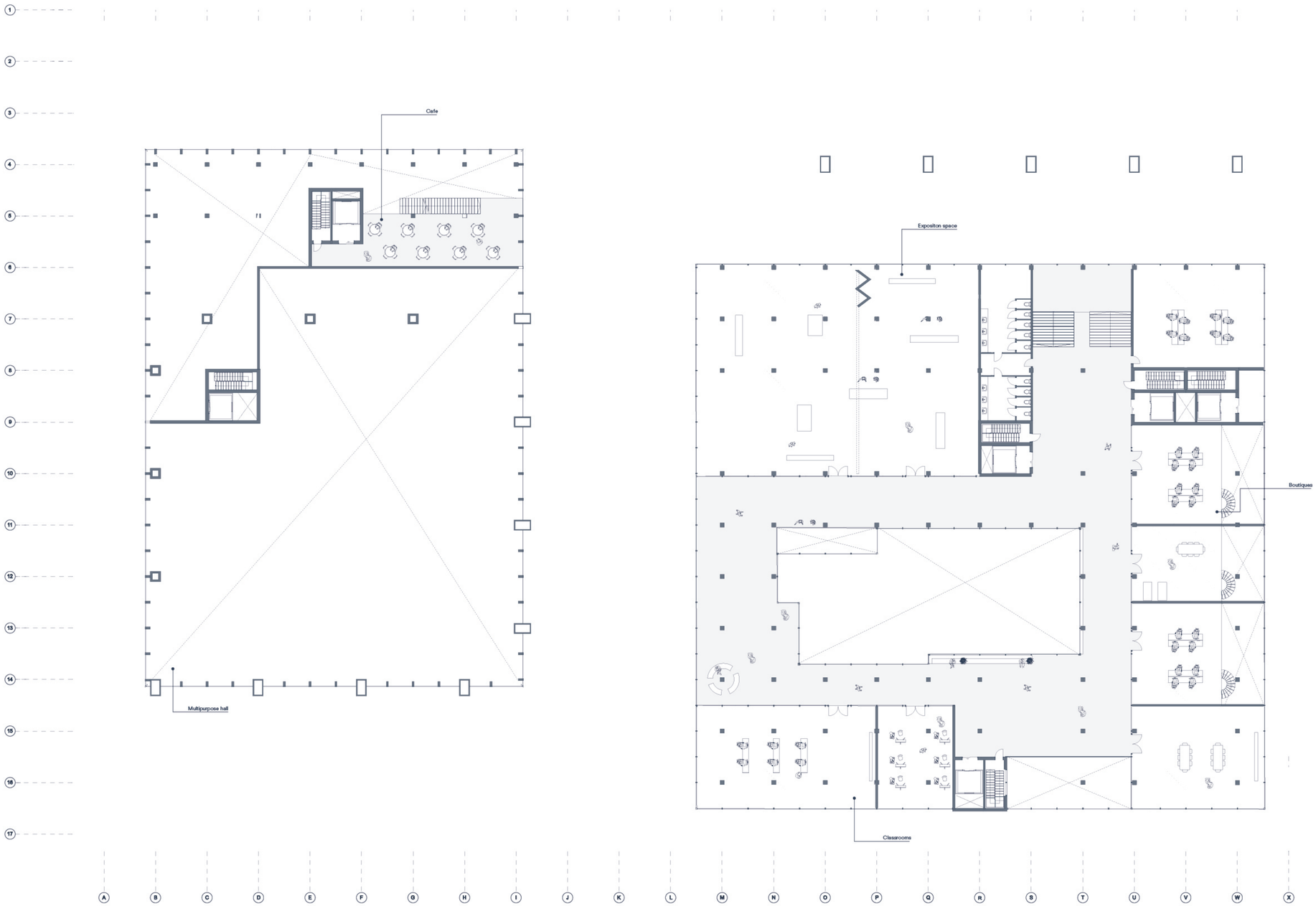


Exhibition space

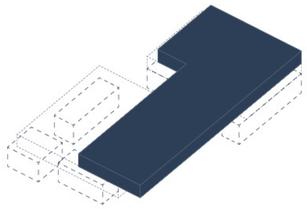


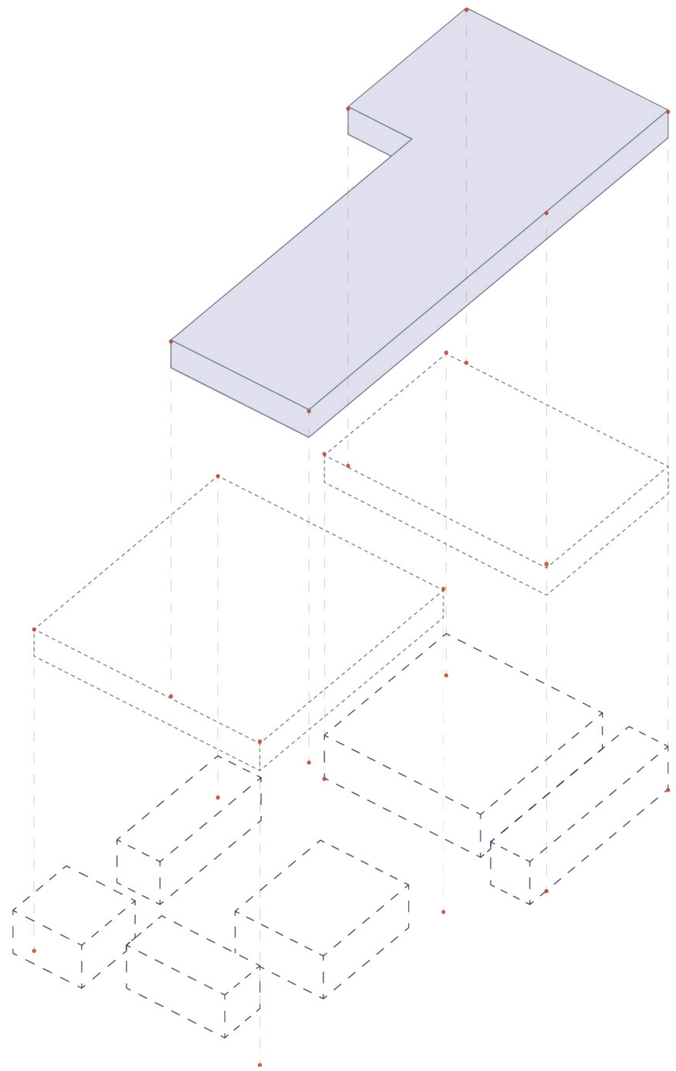
Design proposal

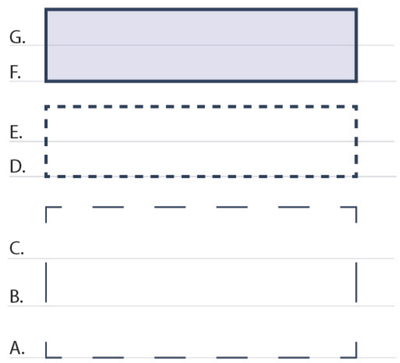
Fifth level

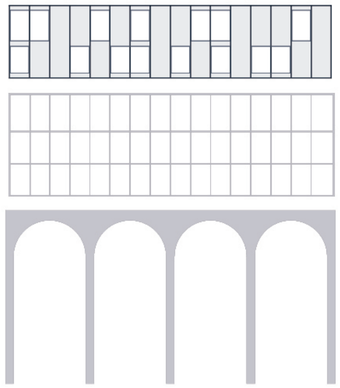


Apartments level

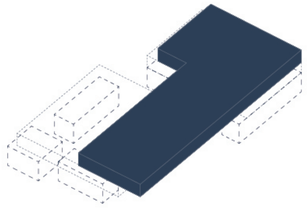


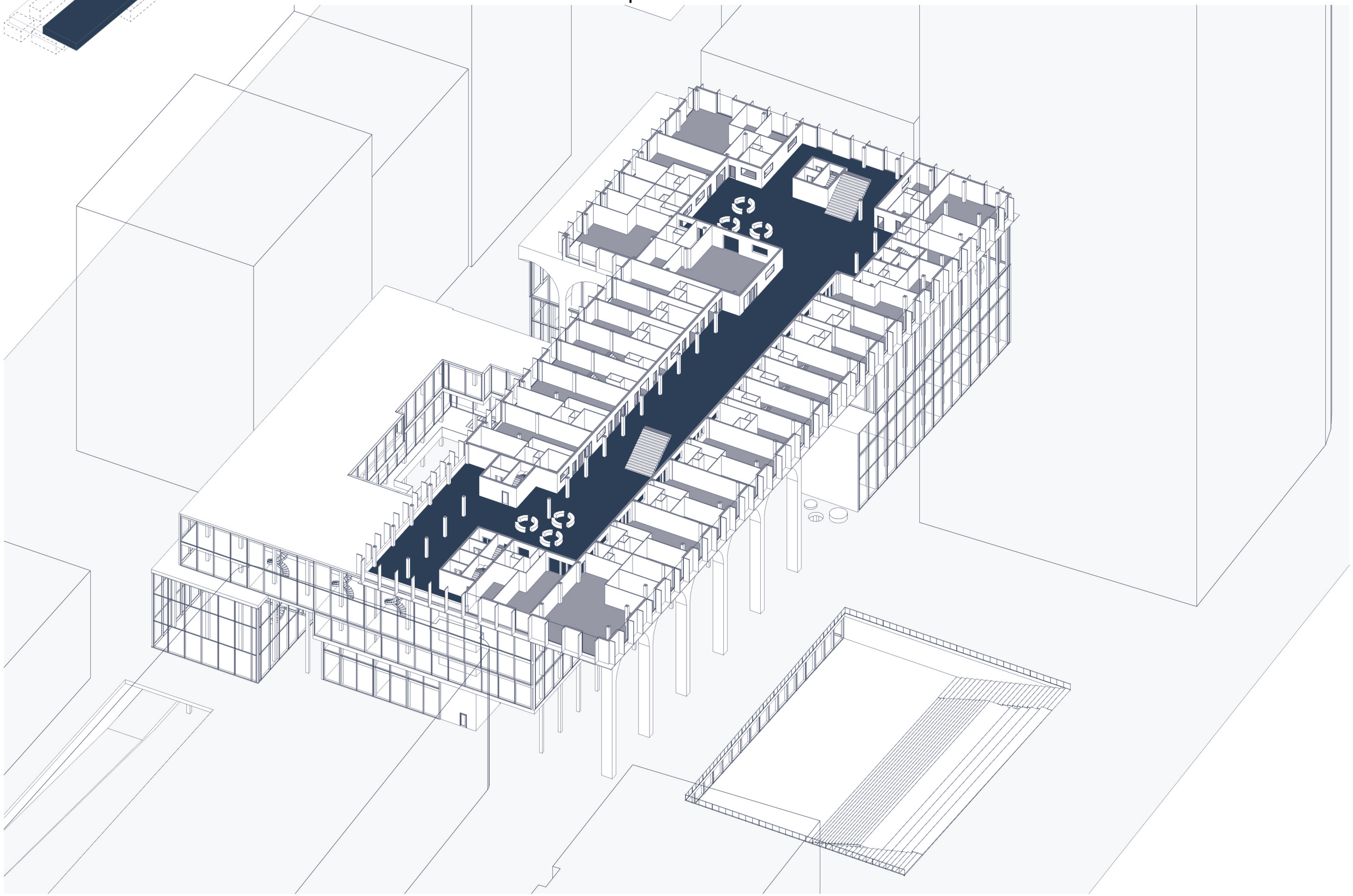


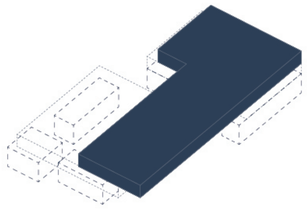




Apartments



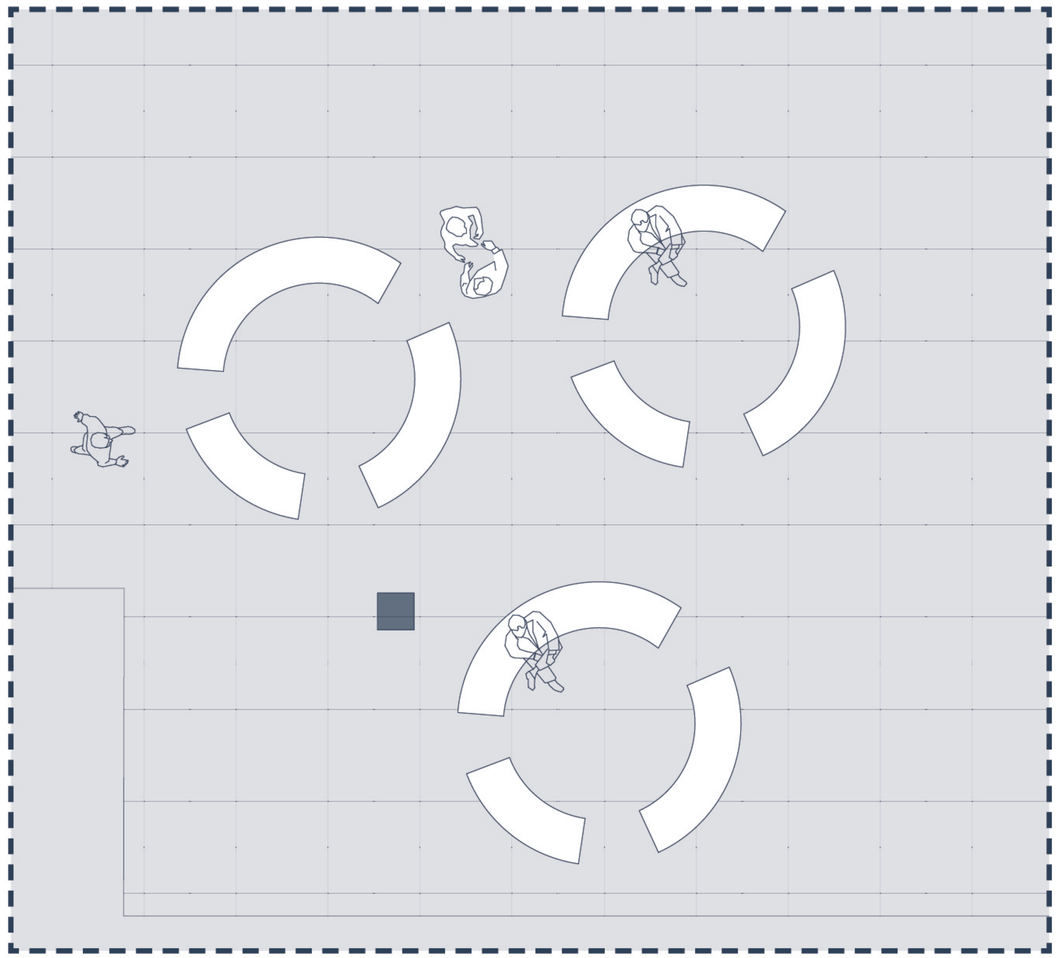


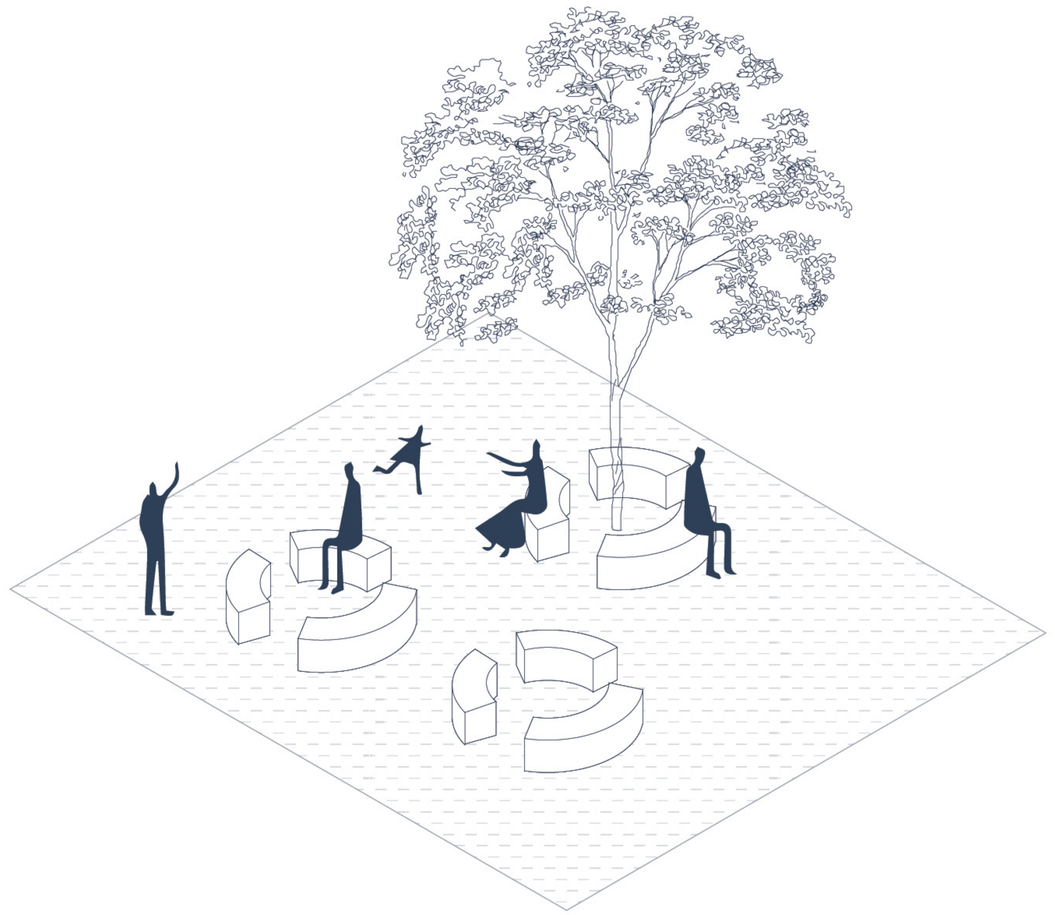


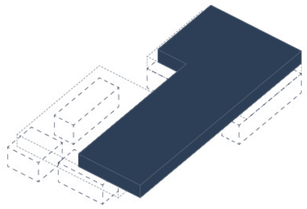
5. Floorplan



Public spaces



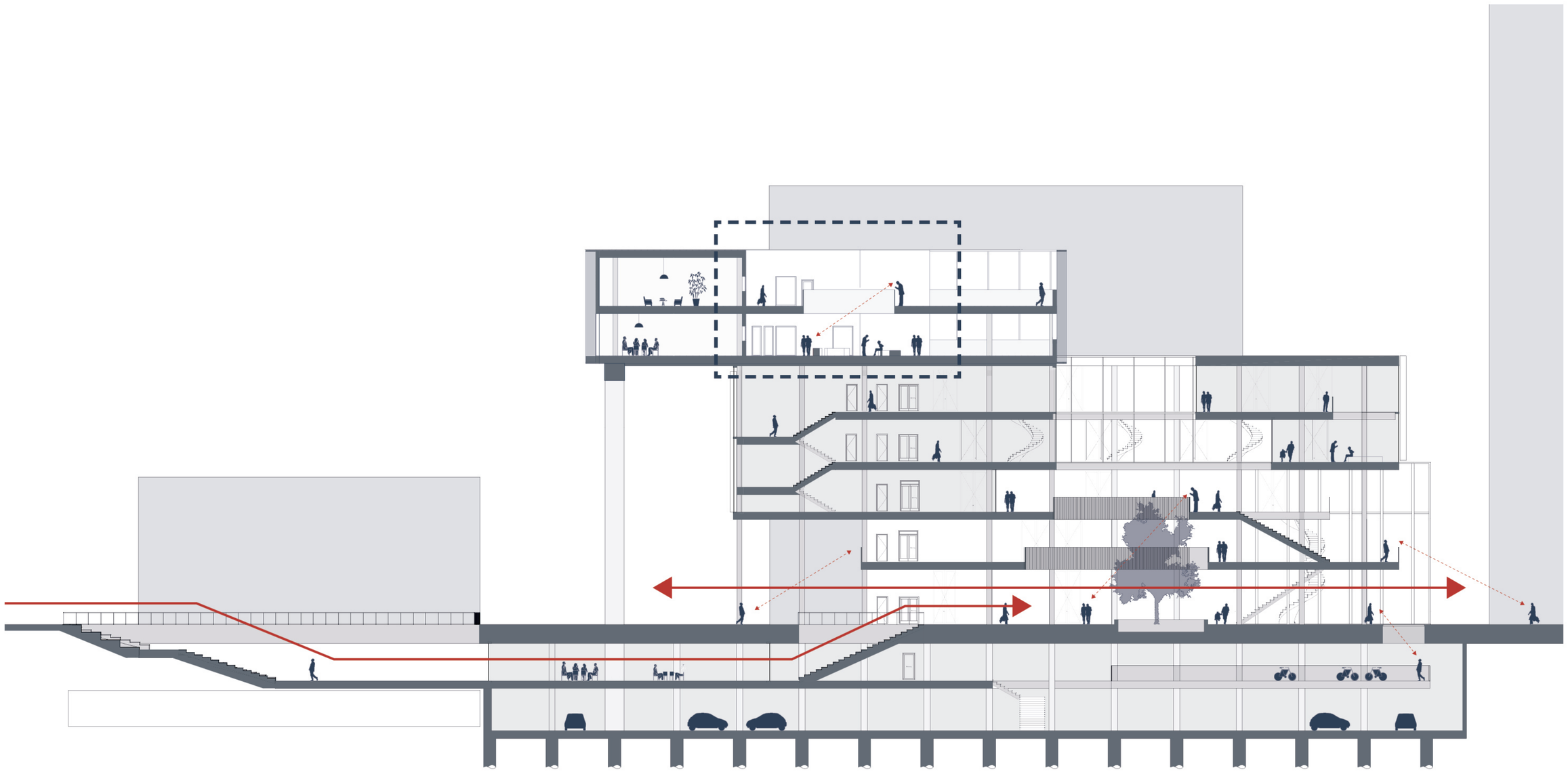


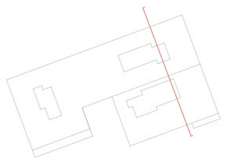


6. Floorplan

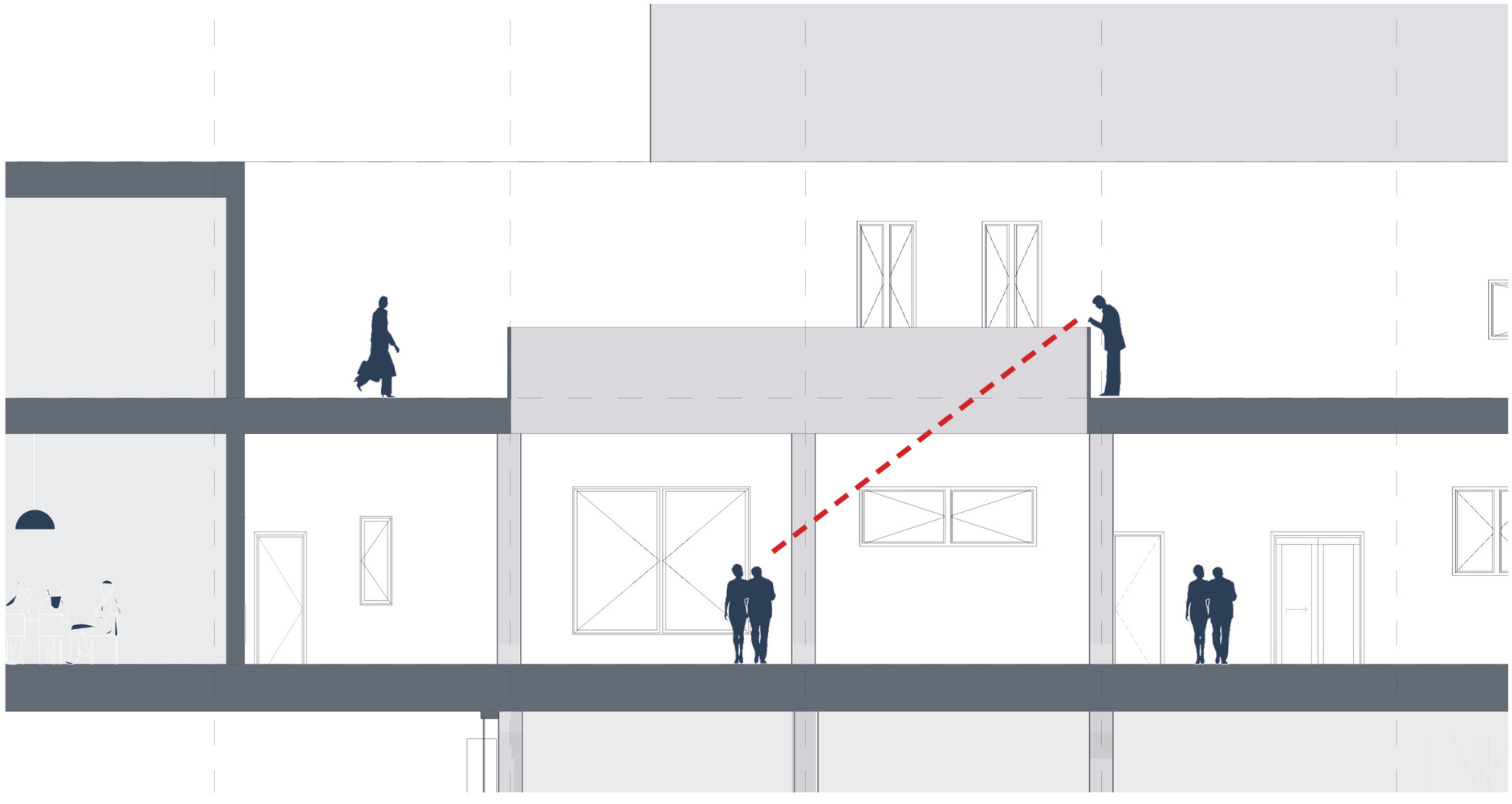


Section

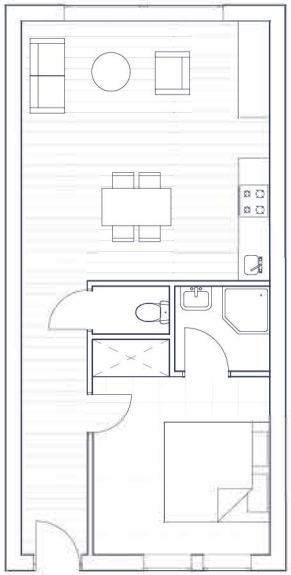




Connection courtyards



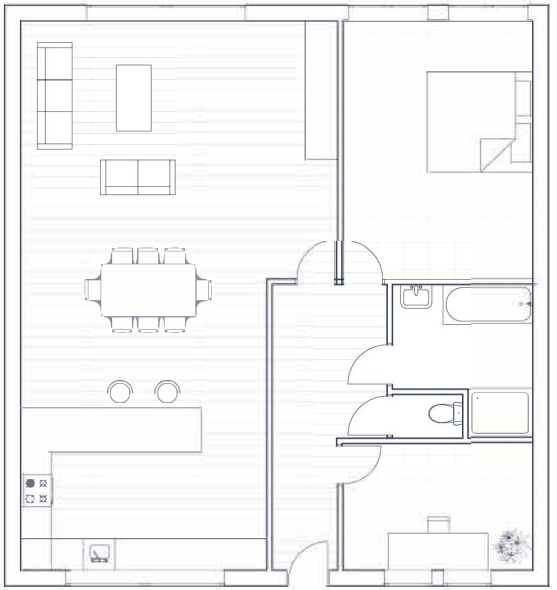
Typology apartments



50 m2 apartment



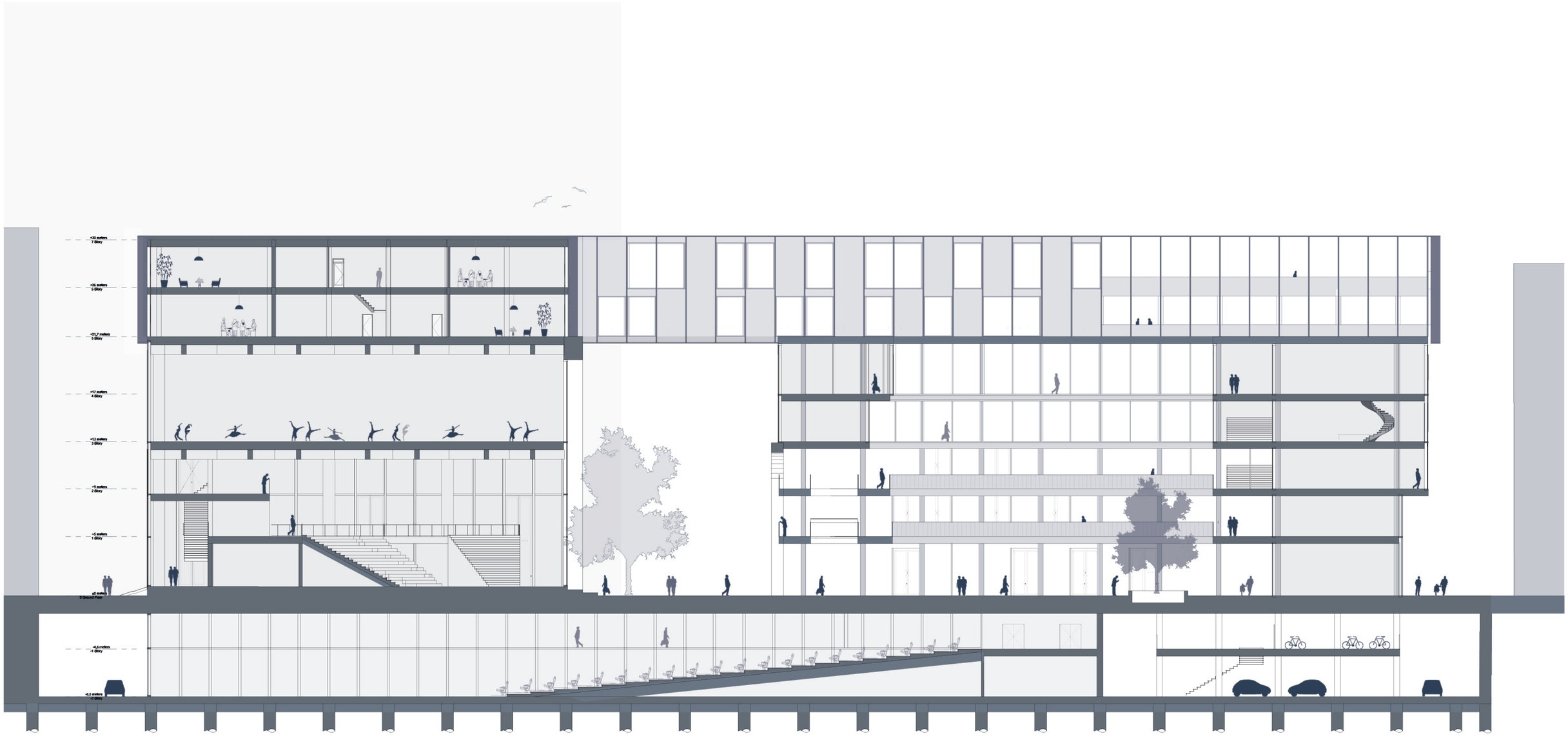
100 m2 apartment
two level

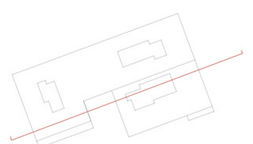


100 m2 apartment

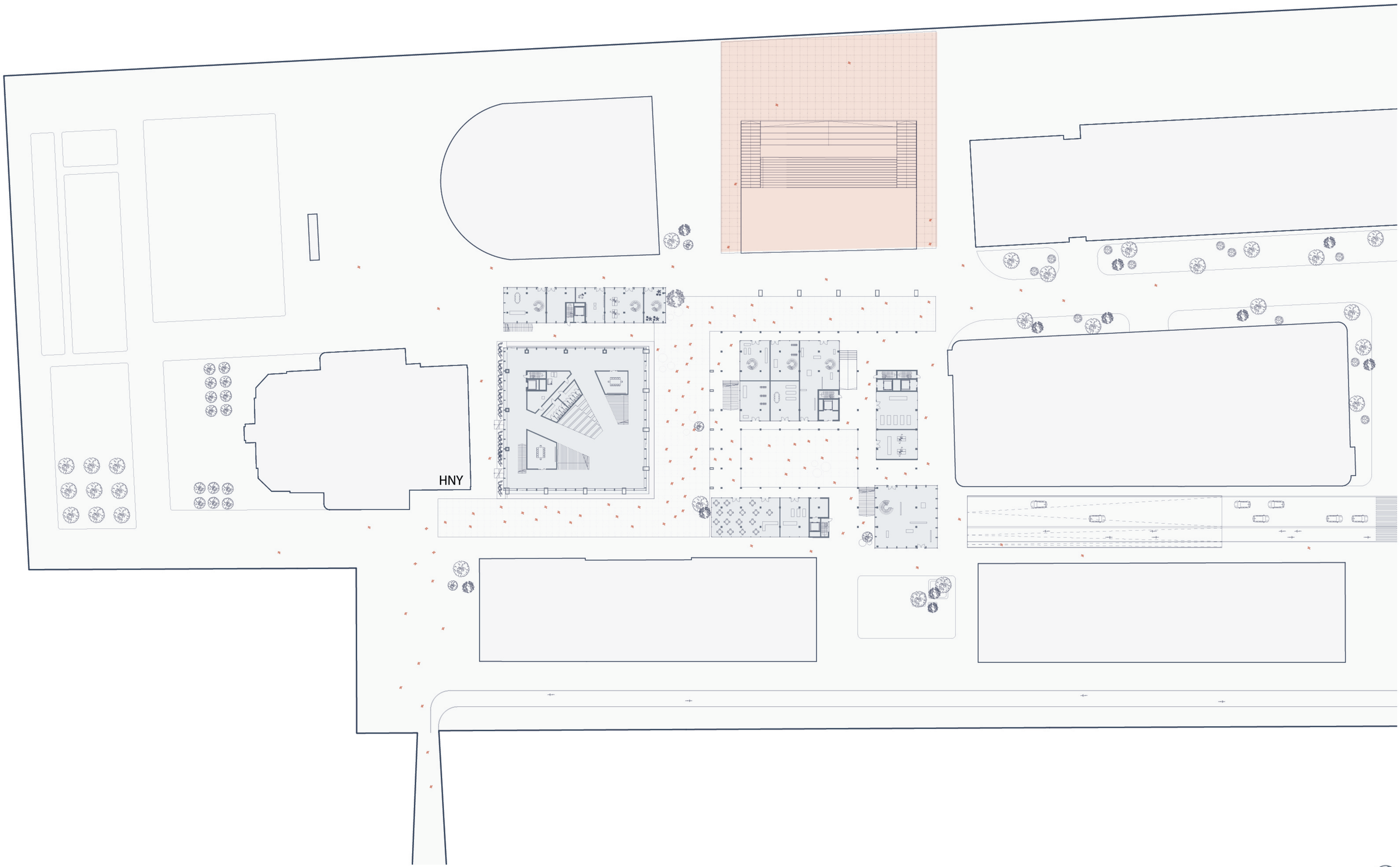
Design proposal

Section

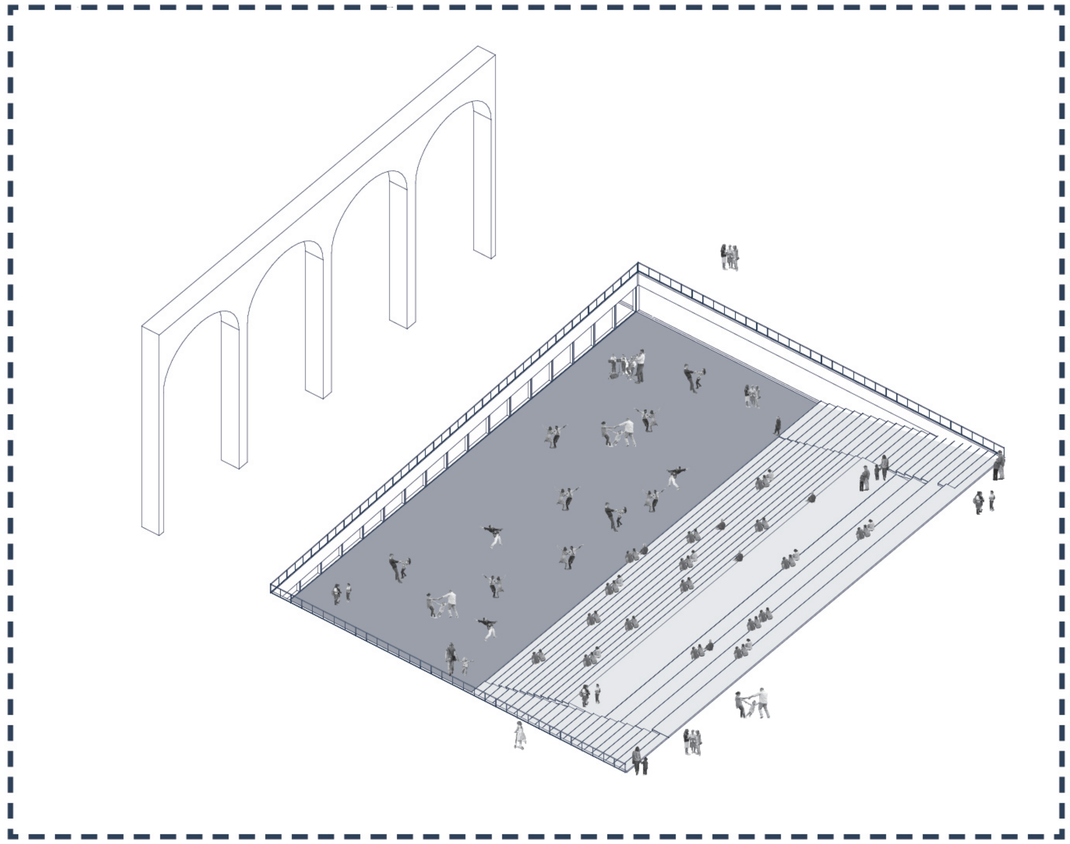




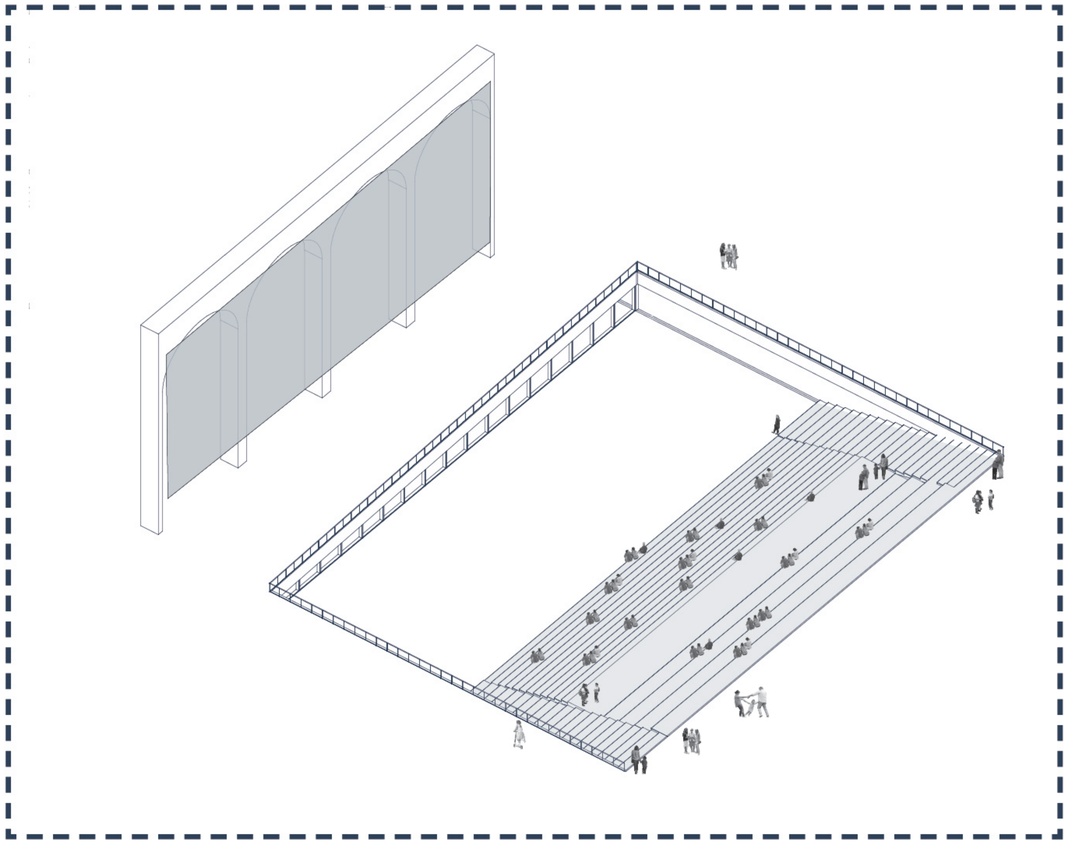
Entrance auditorium



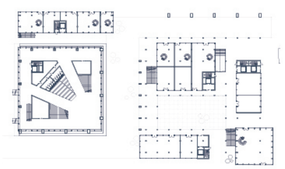
Public stage



Dancing event

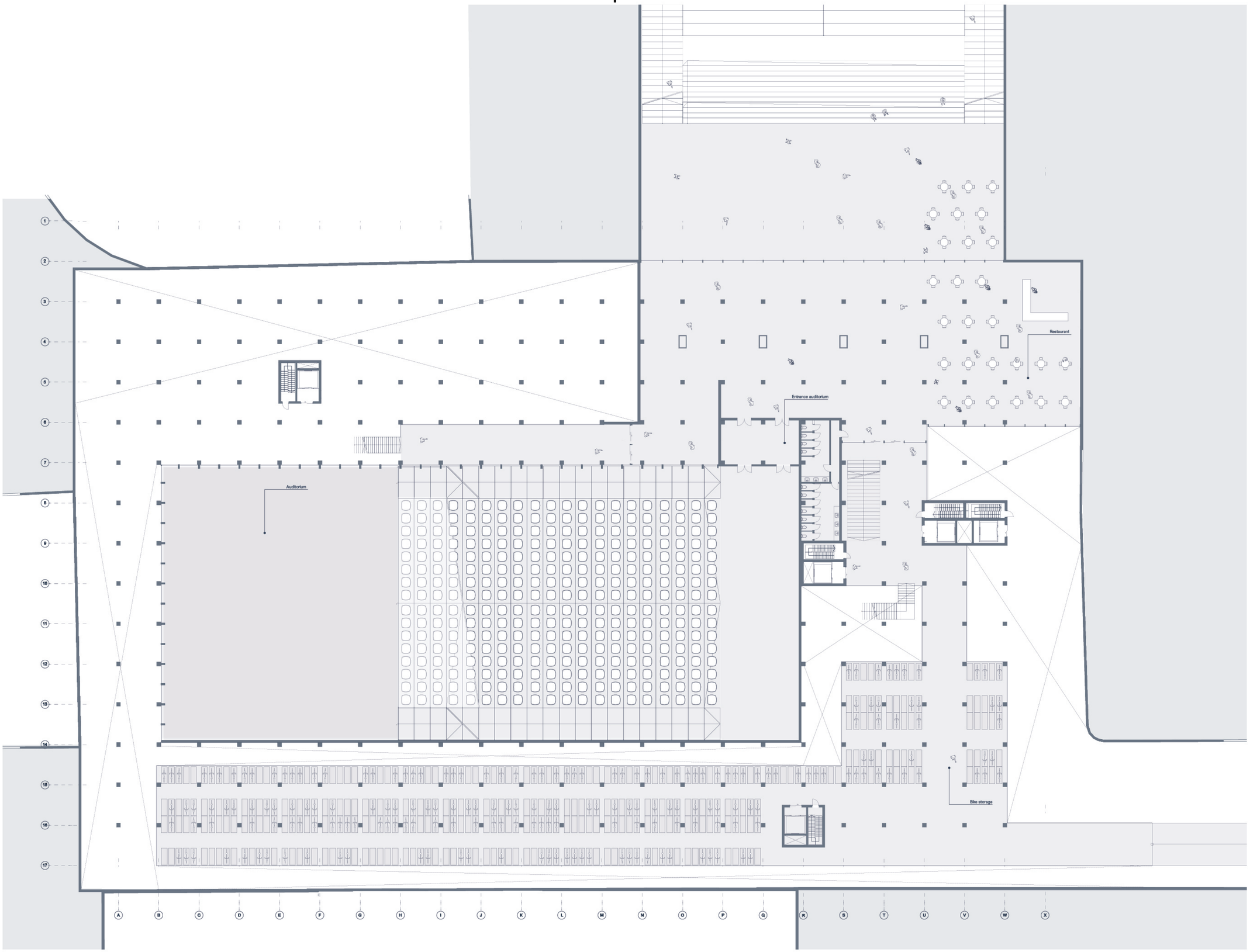


Cinema



Design proposal

-1. Floorplan


Reetsurant
Entrance auditorium
Auditorium
Bike storage
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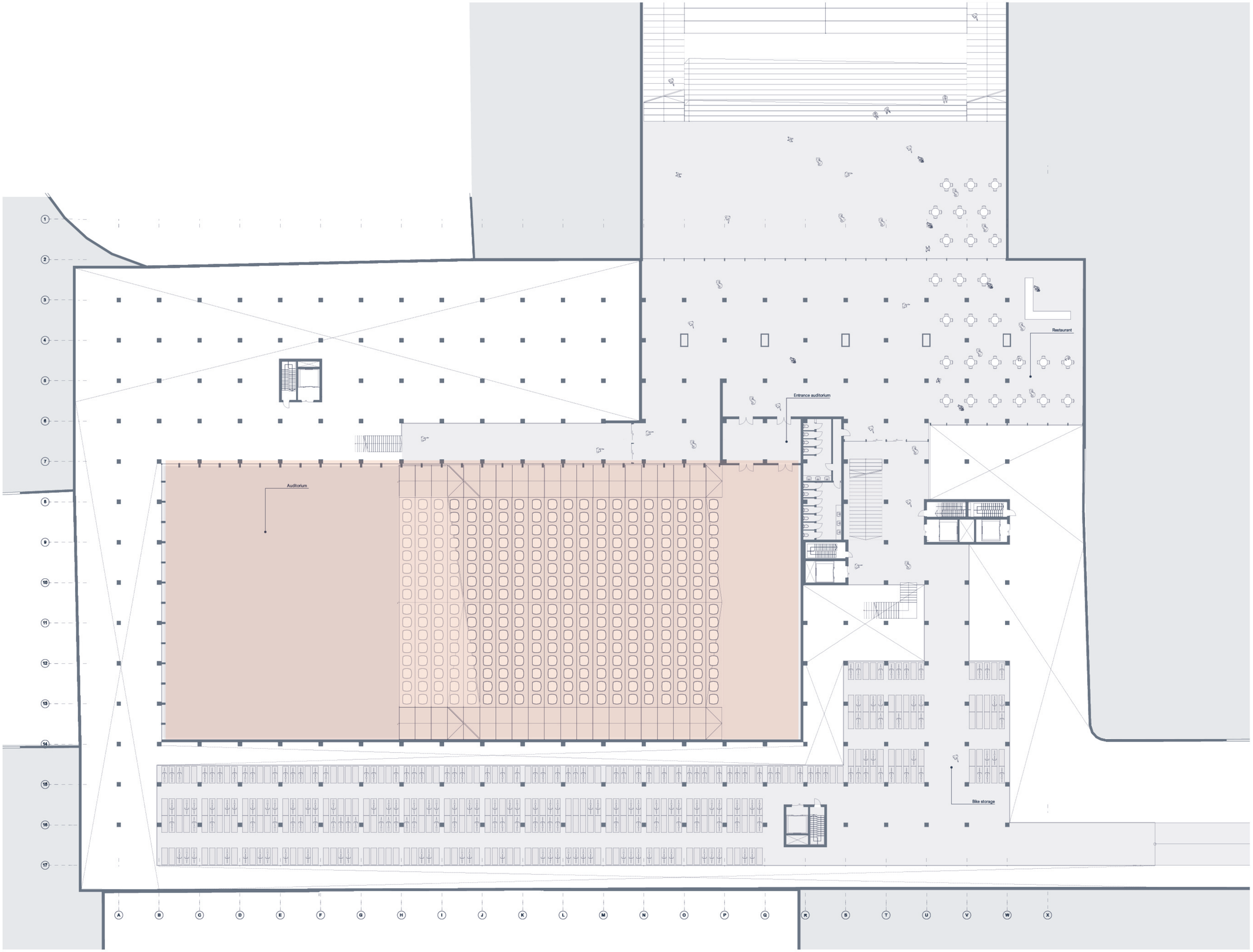
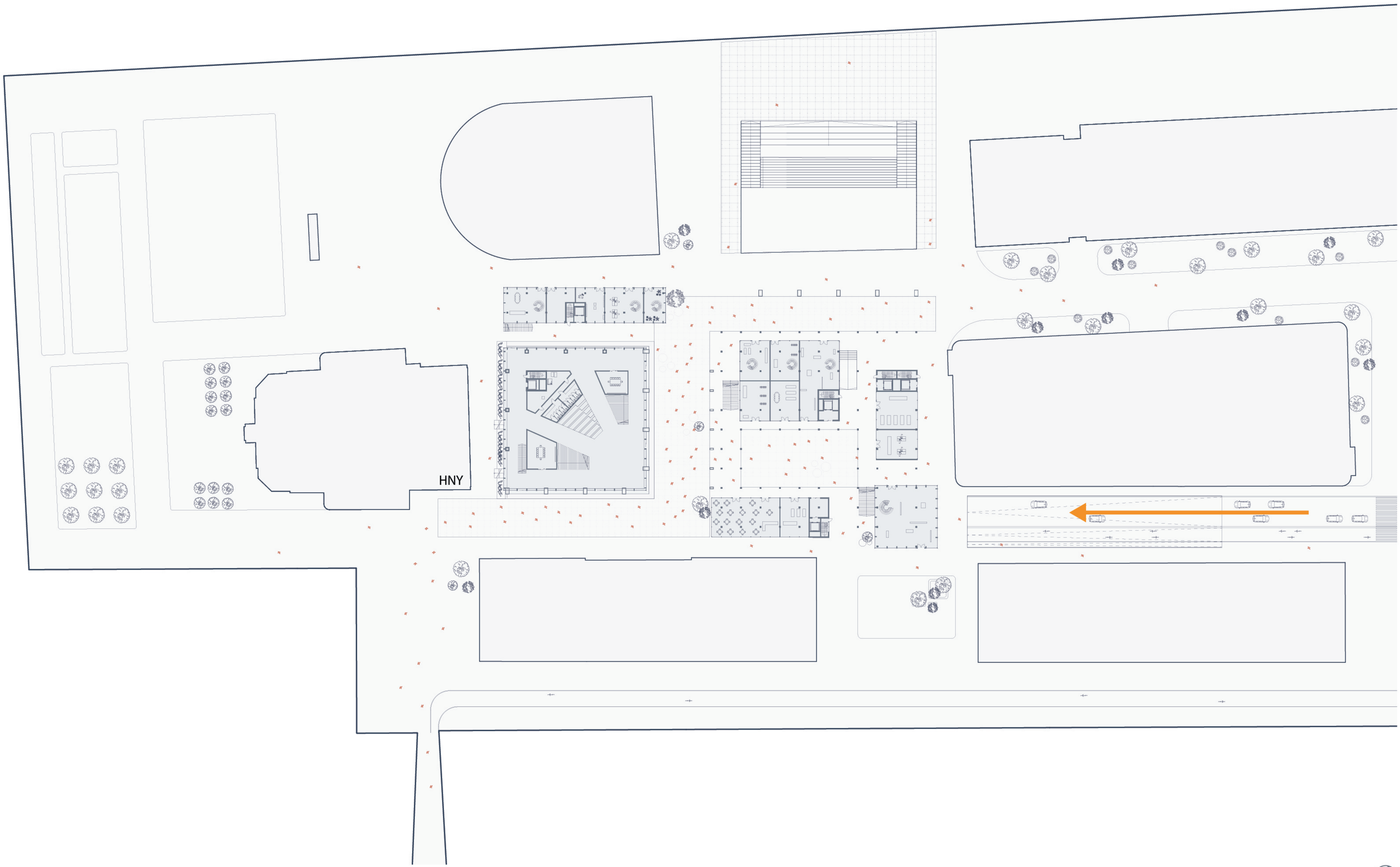
X

Design proposal

Auditorium



Traffic

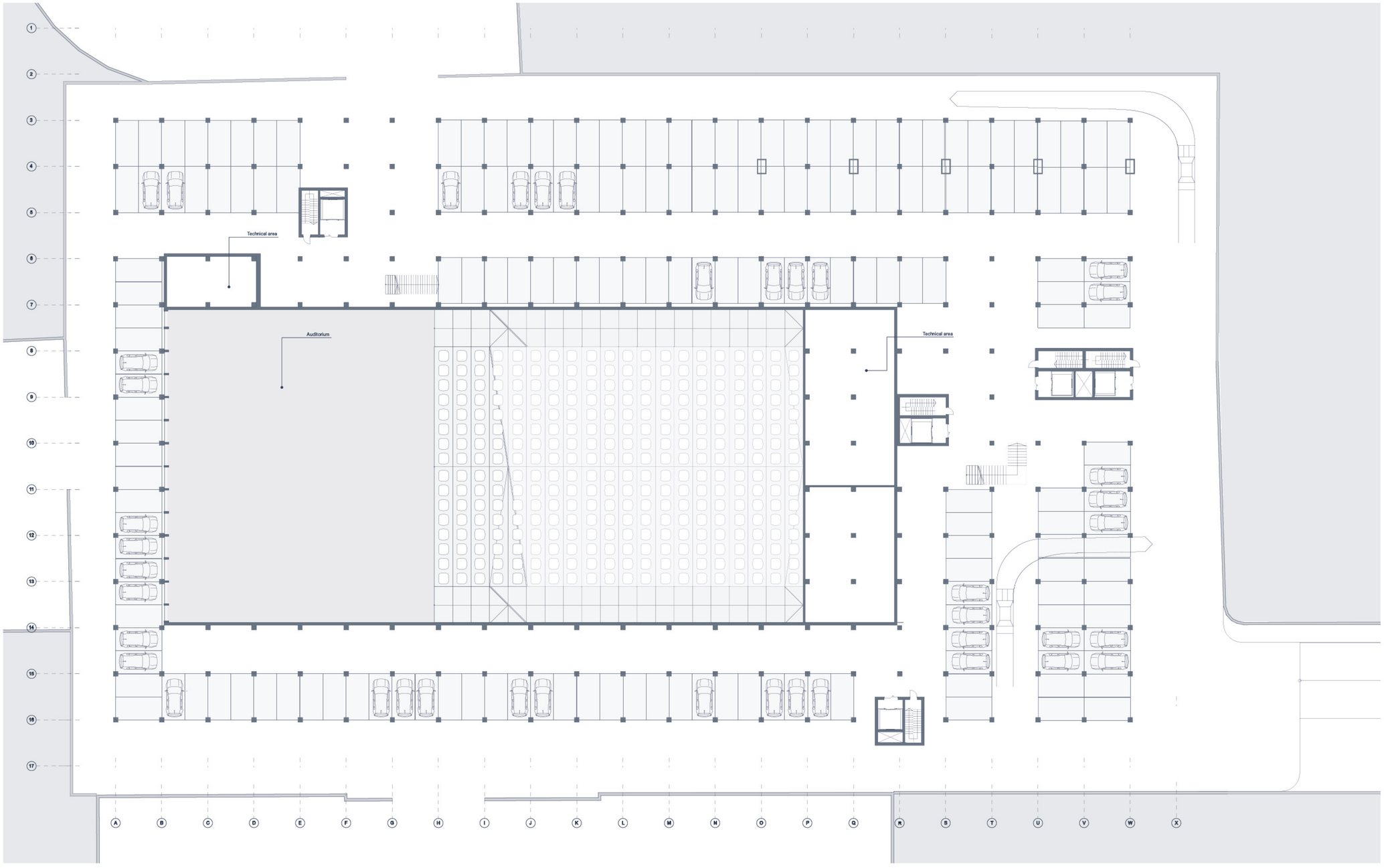


Entrance traffic

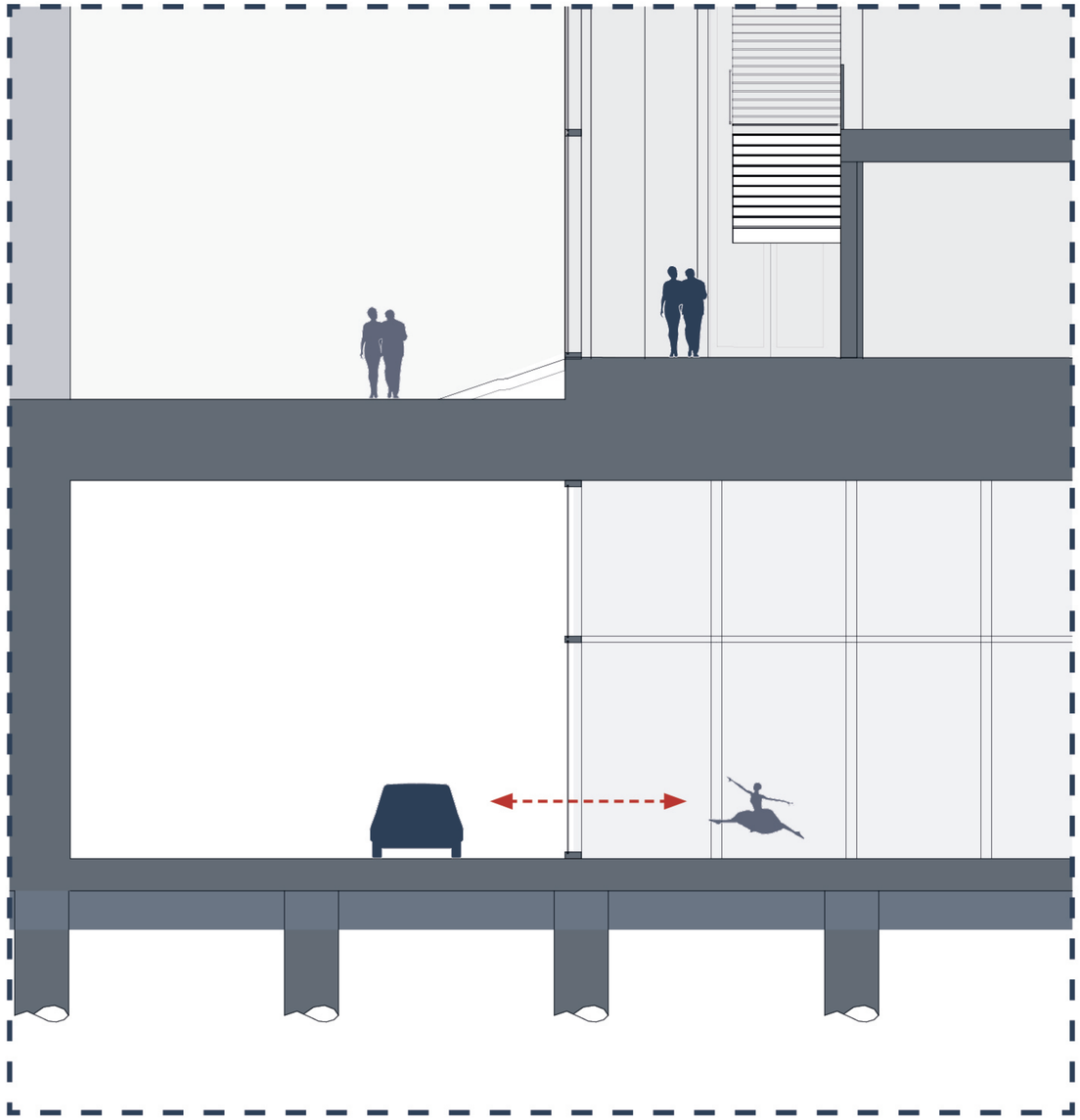


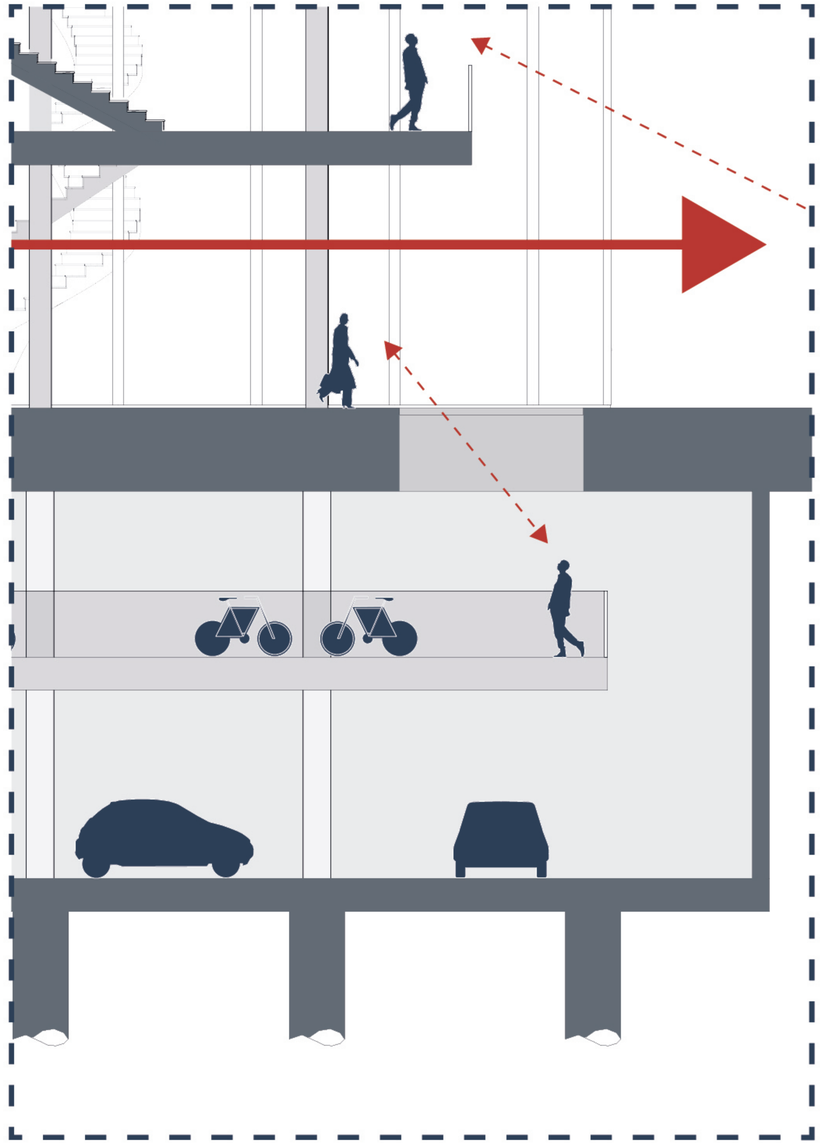
Design proposal

-2. Floorplan

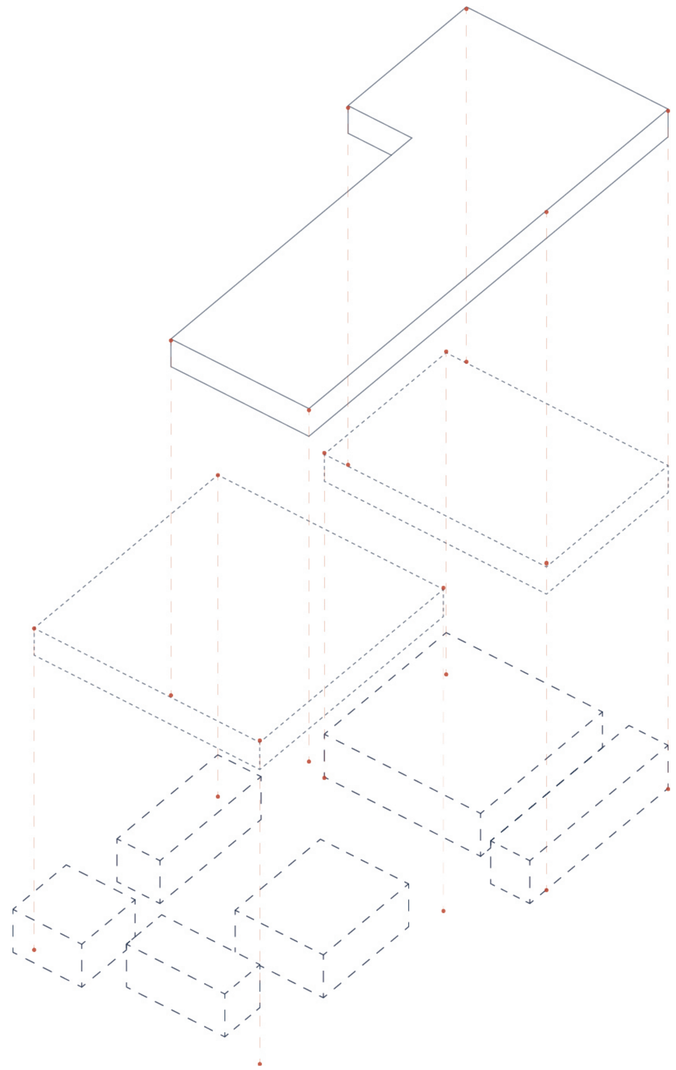


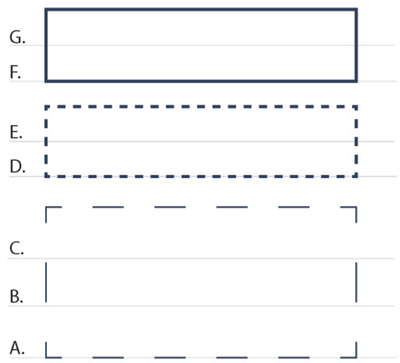
Viewpoint

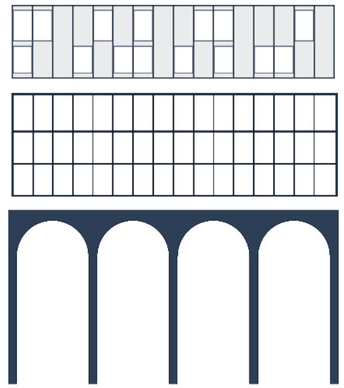




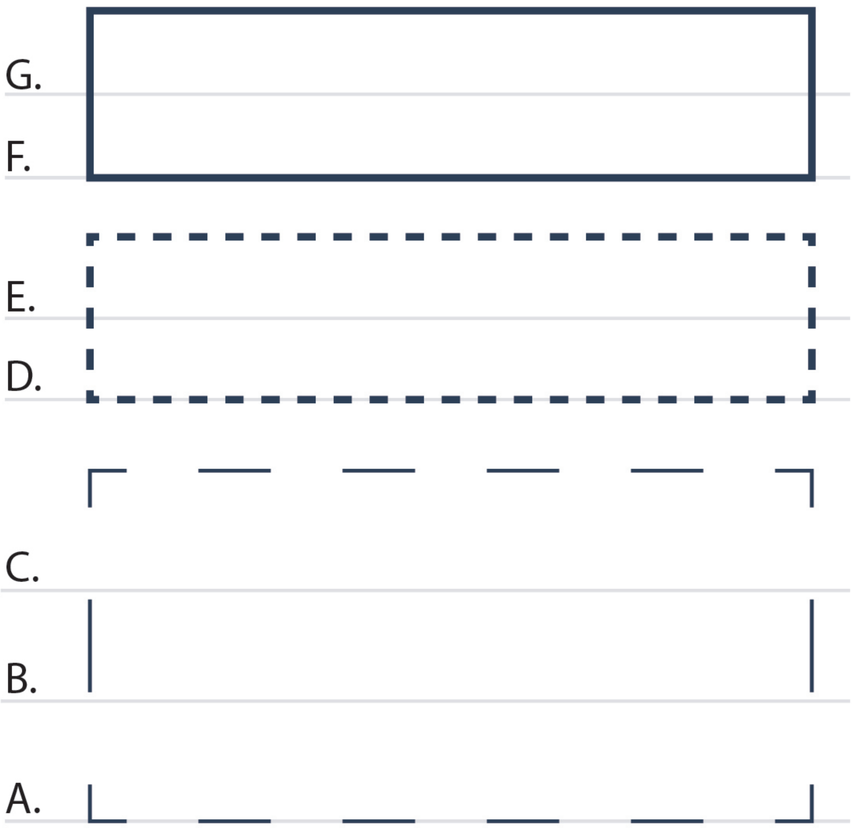
Levels op porosity

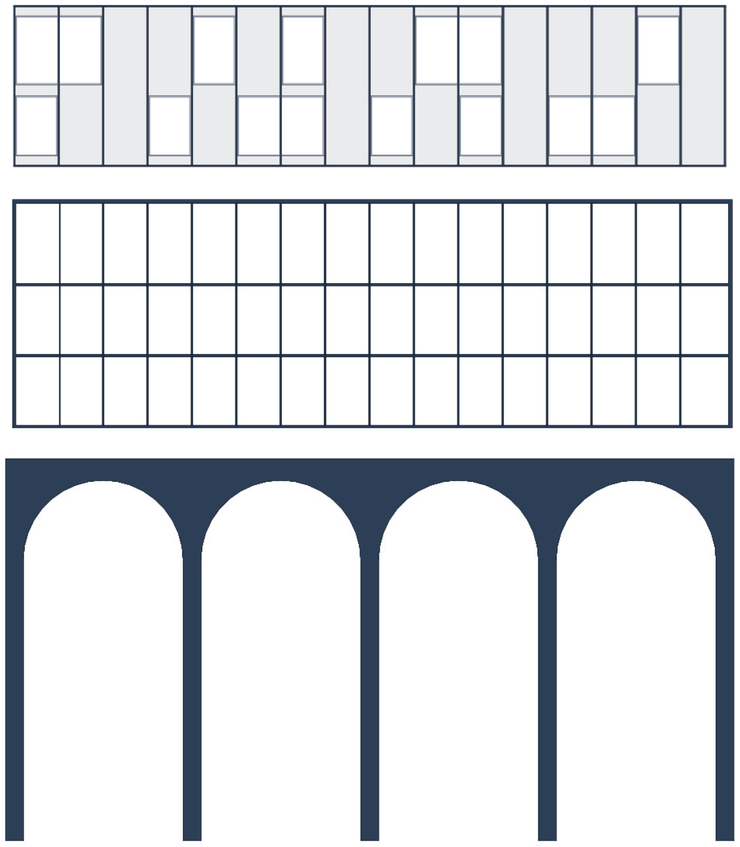




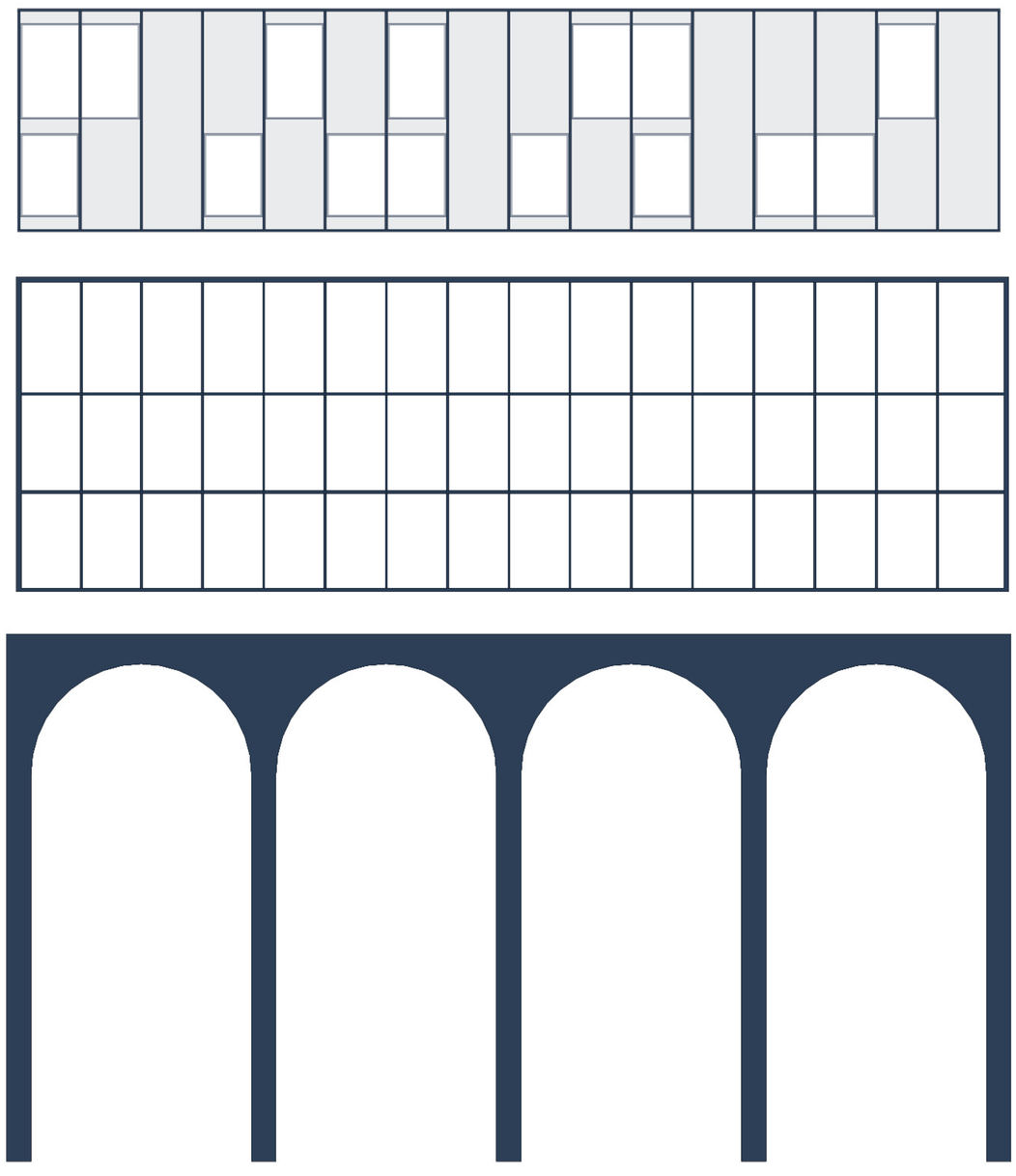


Levels op porosity

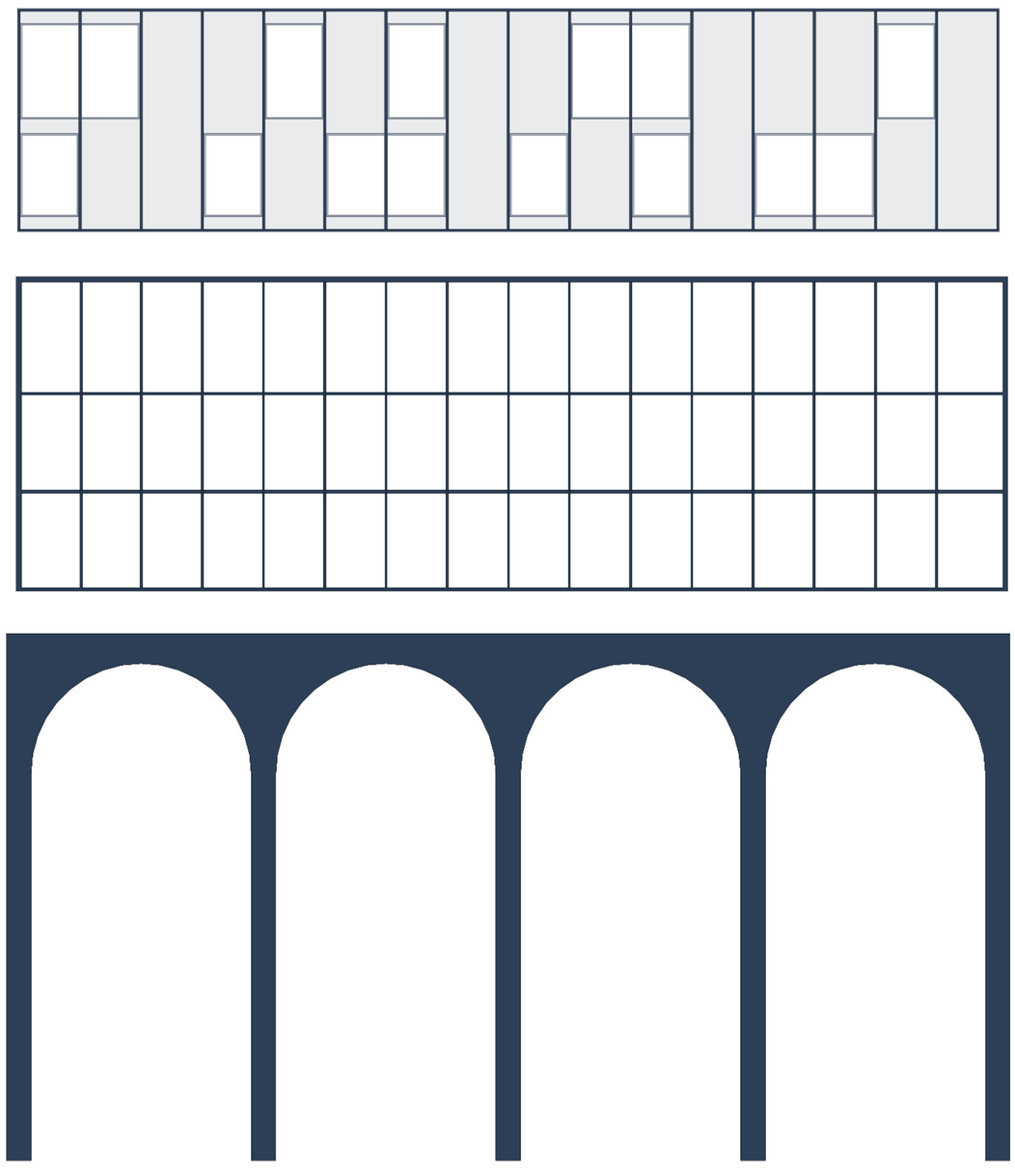




Facade



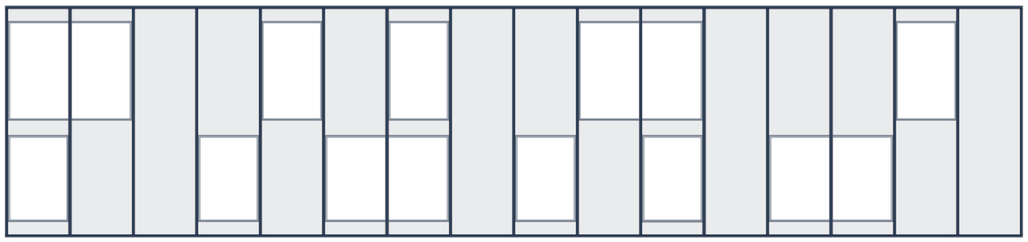
Facade

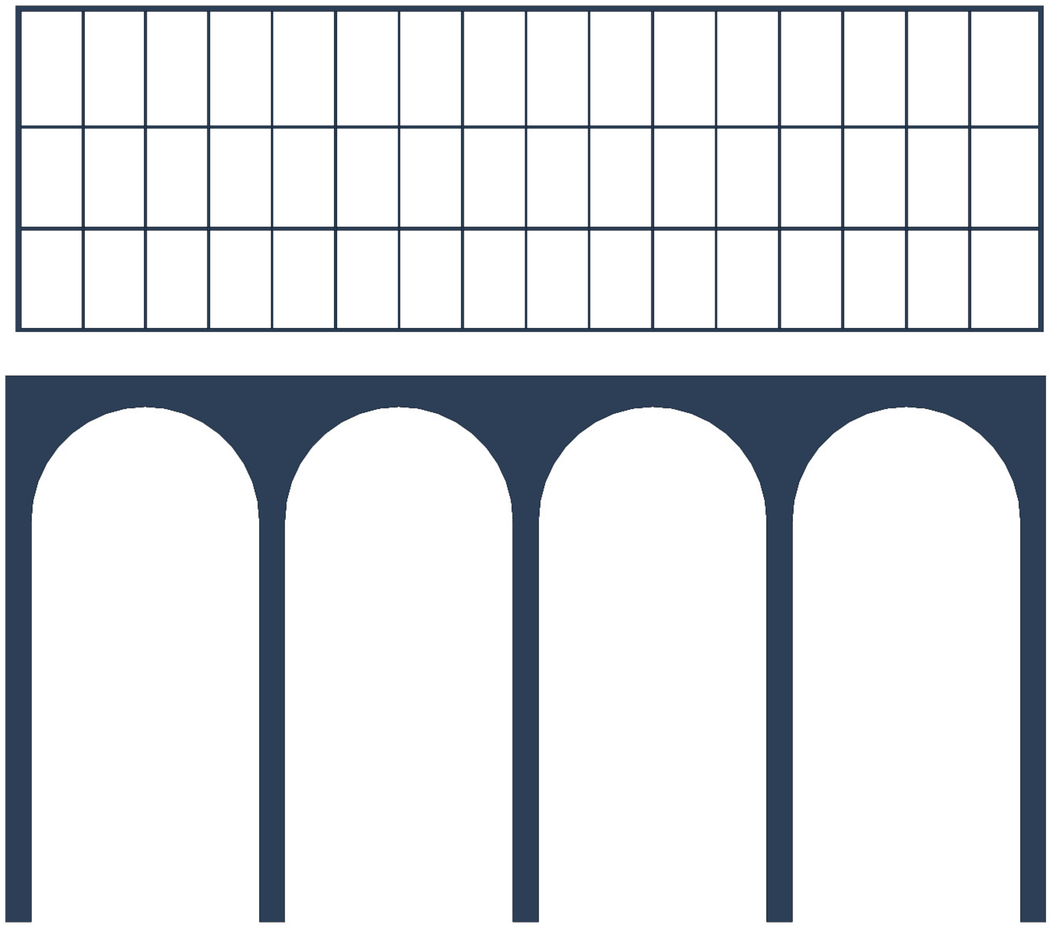




Design proposal

Facade



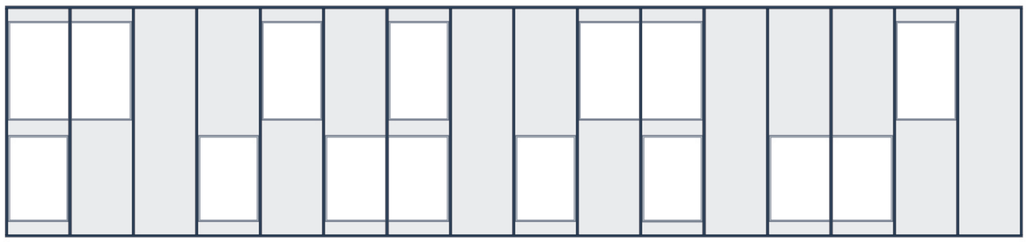


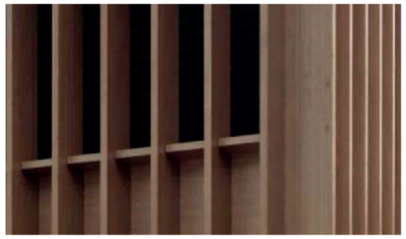


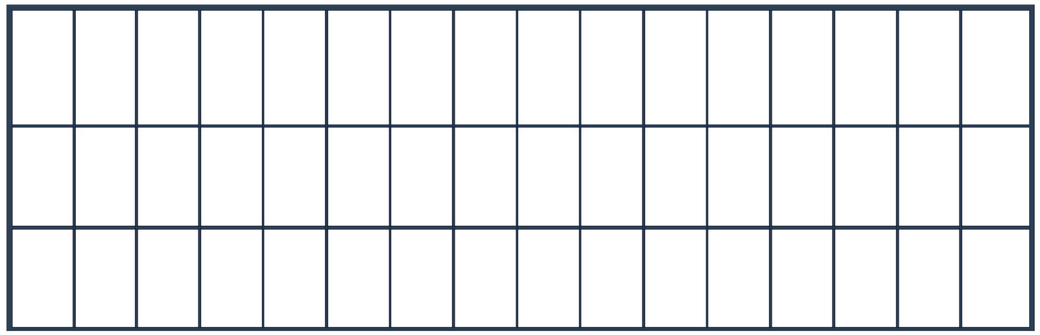


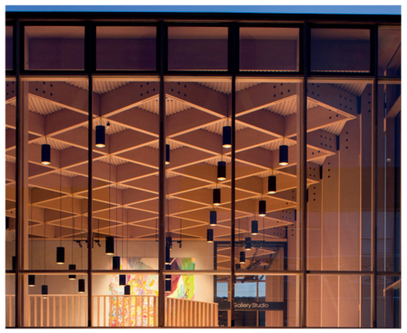
Design proposal

Facade













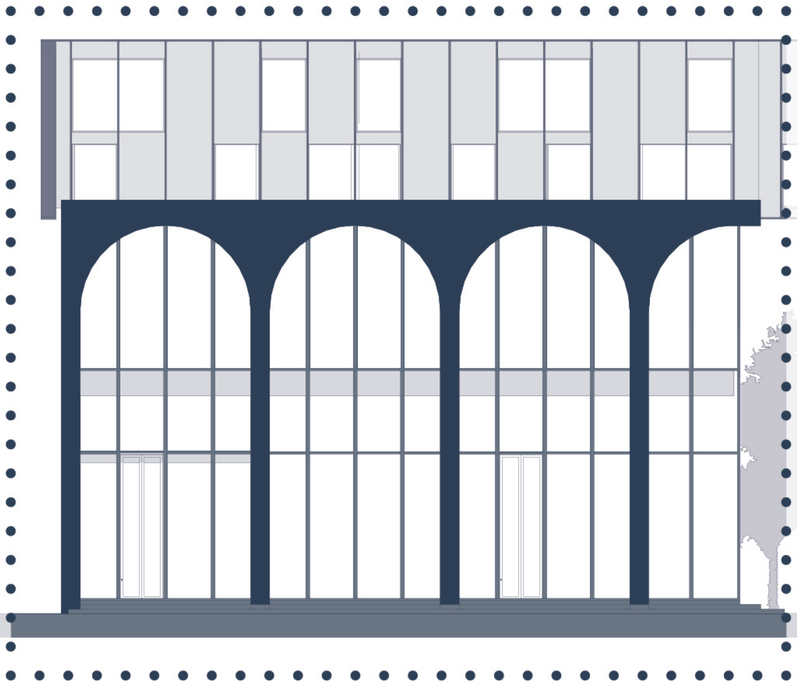
North elevation

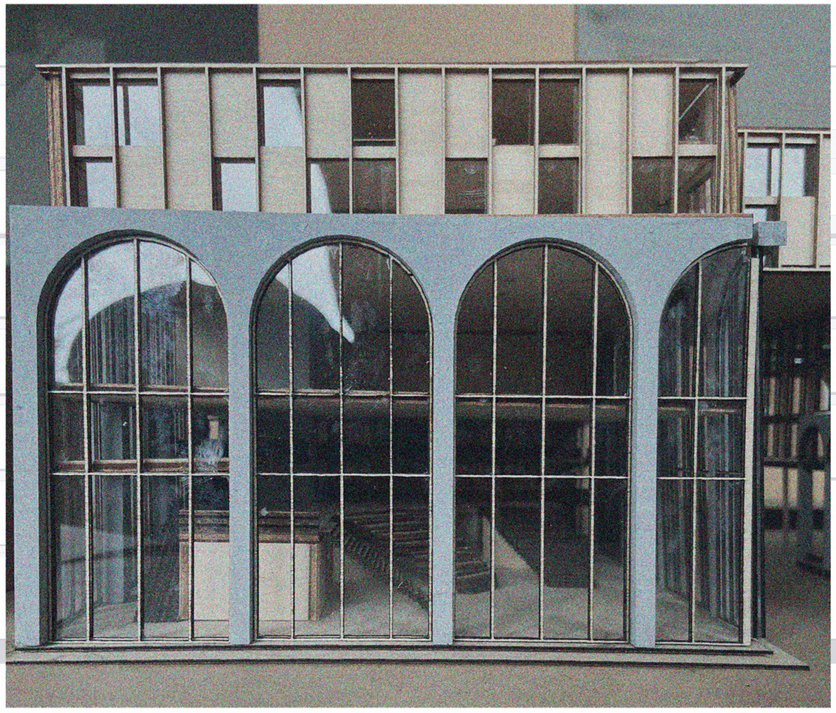


South elevation



Inner courtyard - atrium





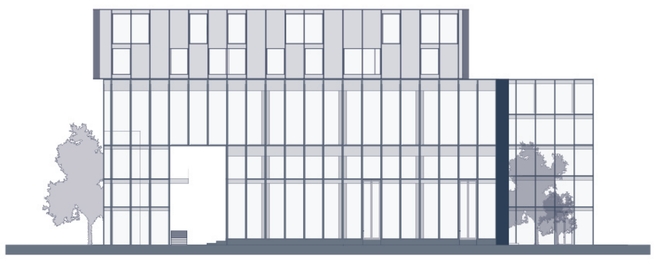
Apartments



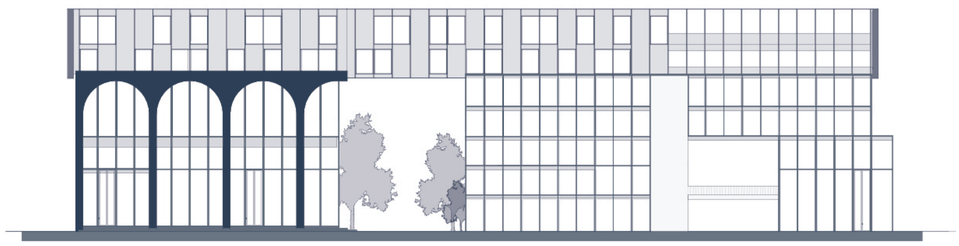
Gradient facade



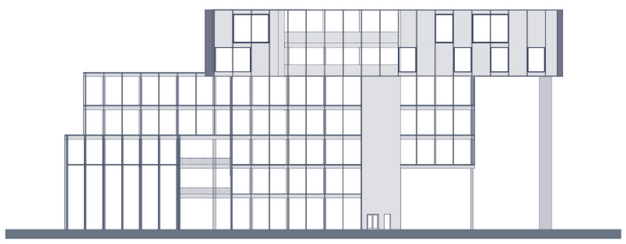
Elevations



West

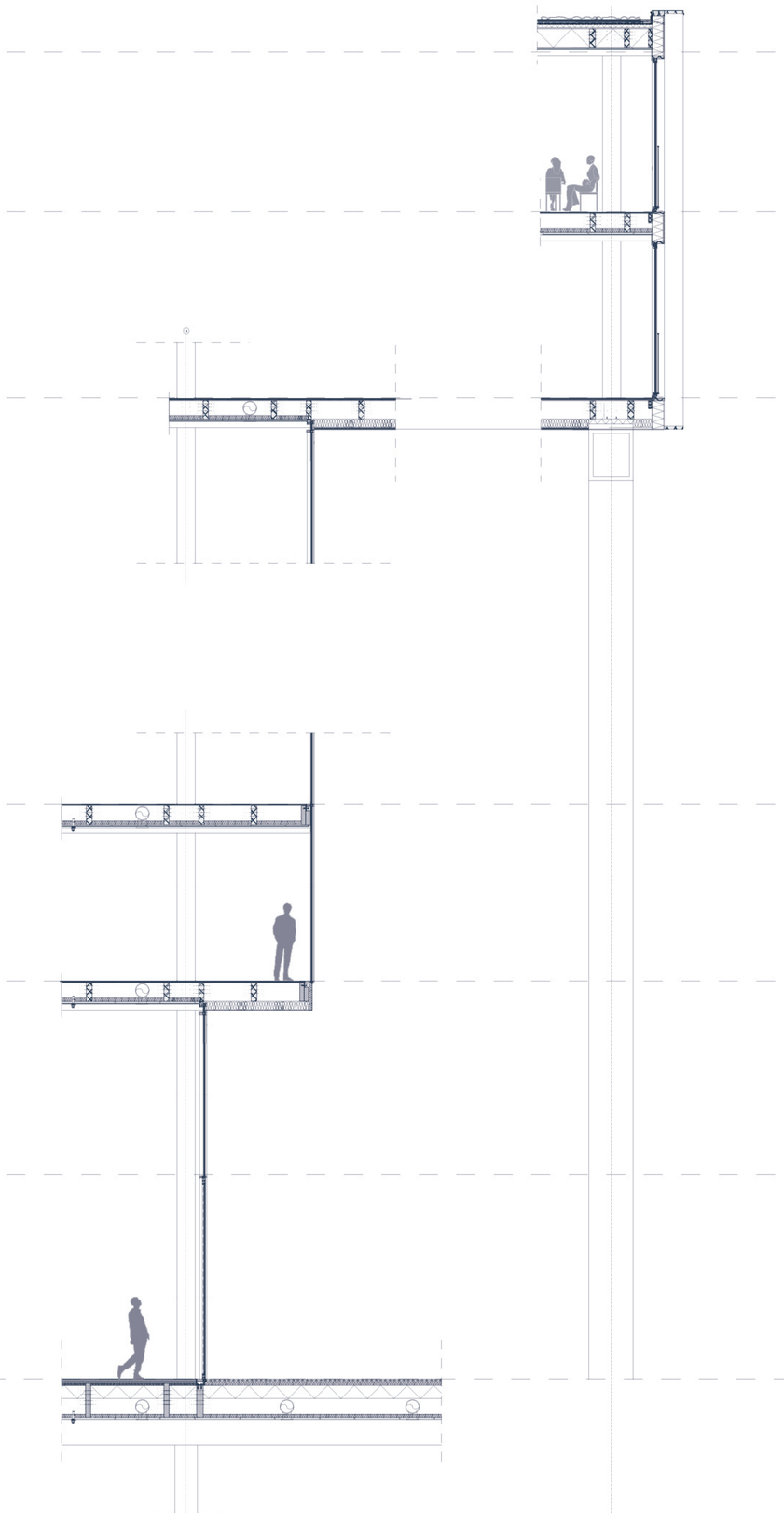


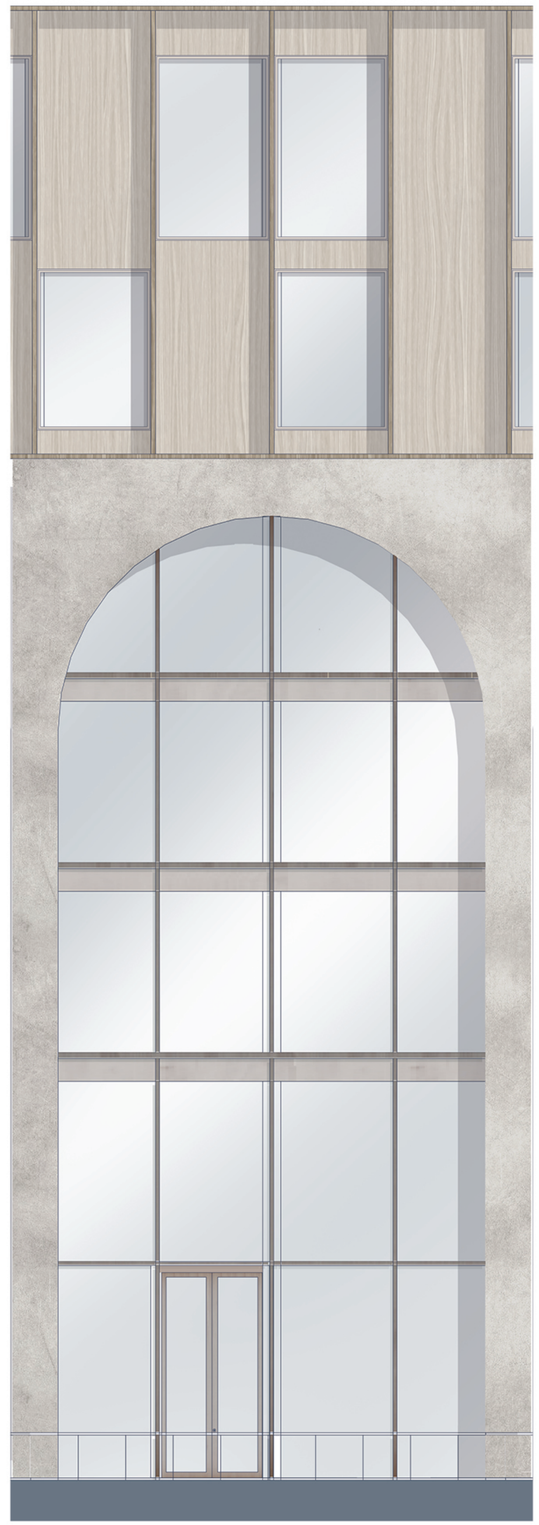
South



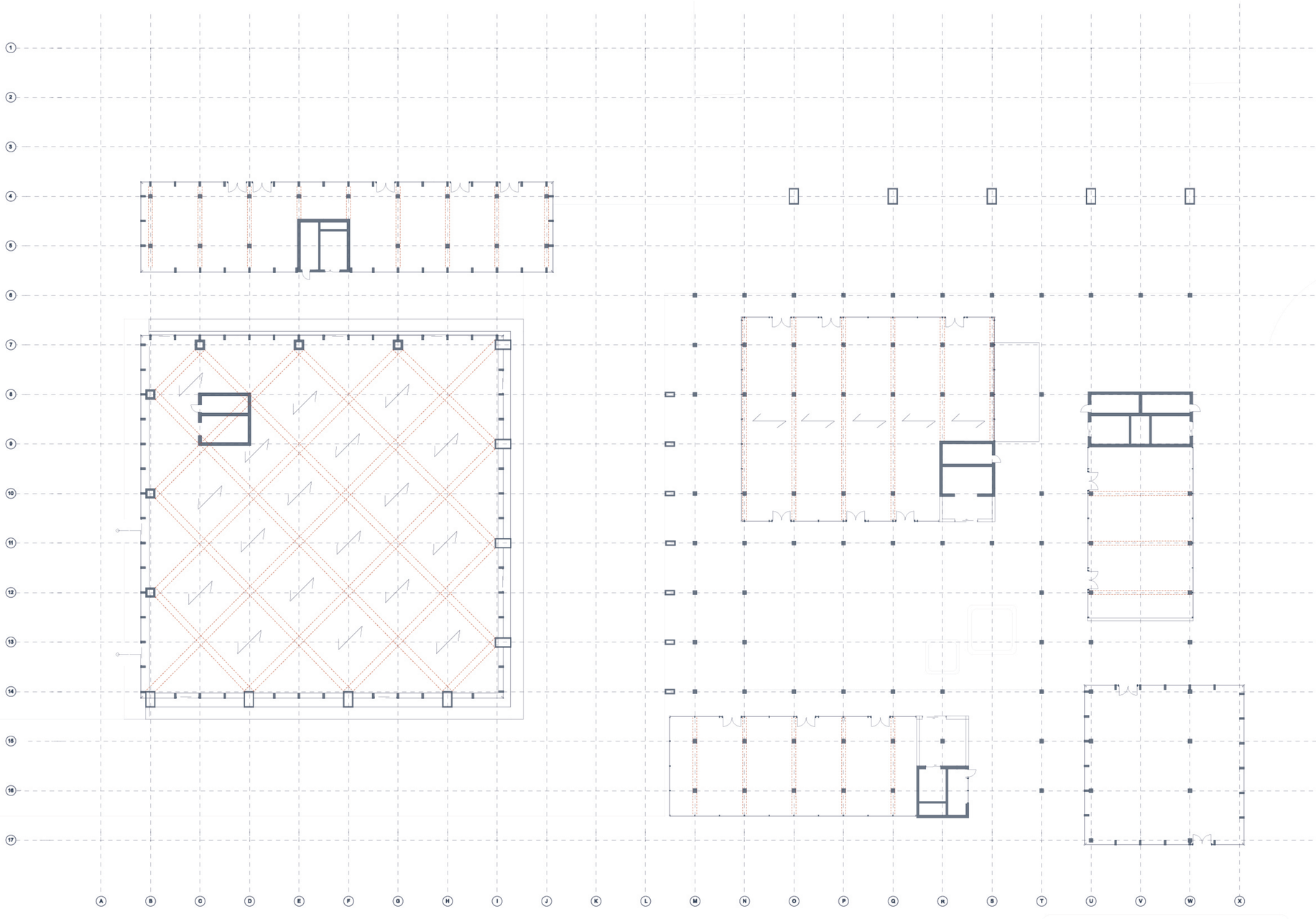
East

1:20 detail

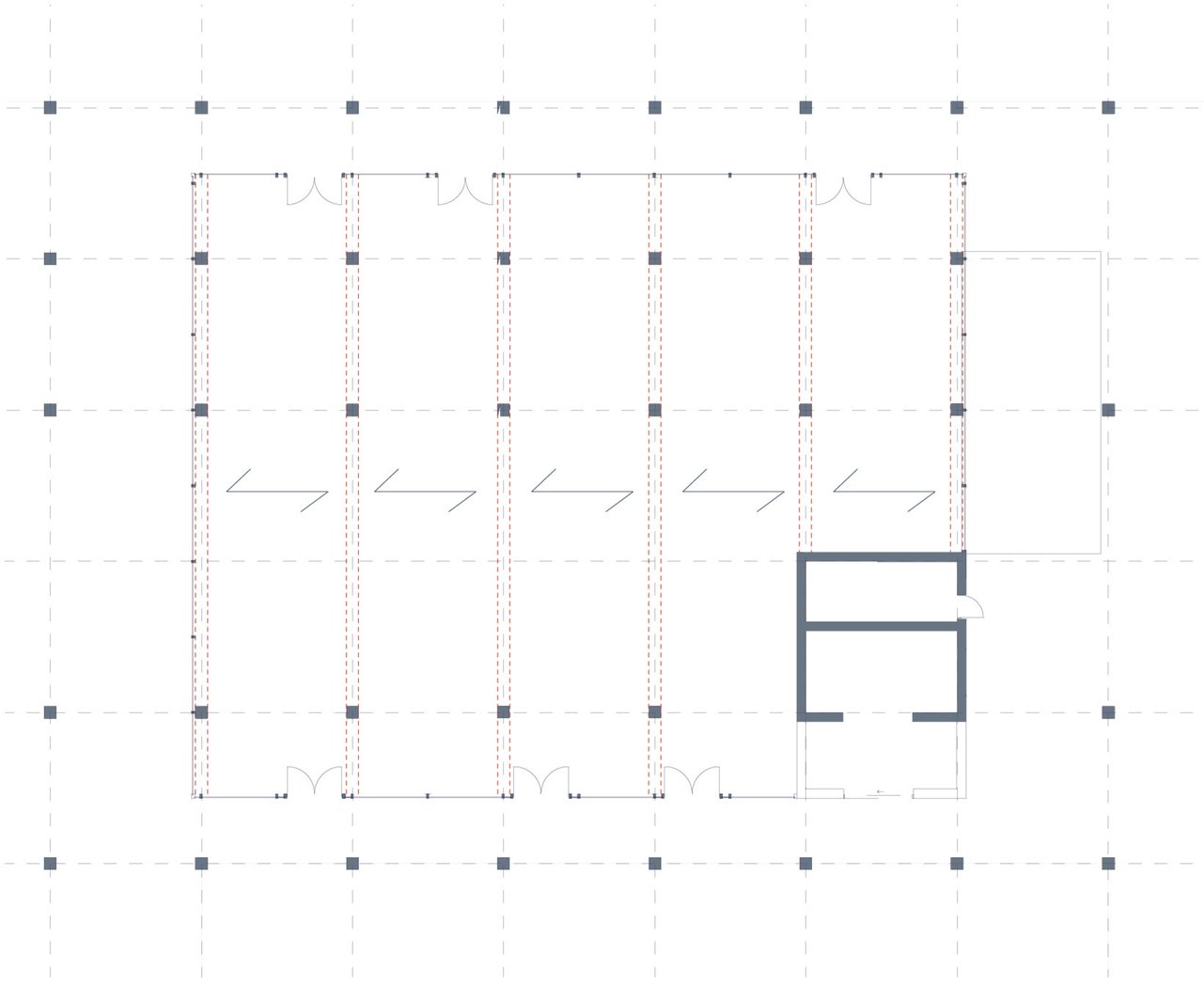




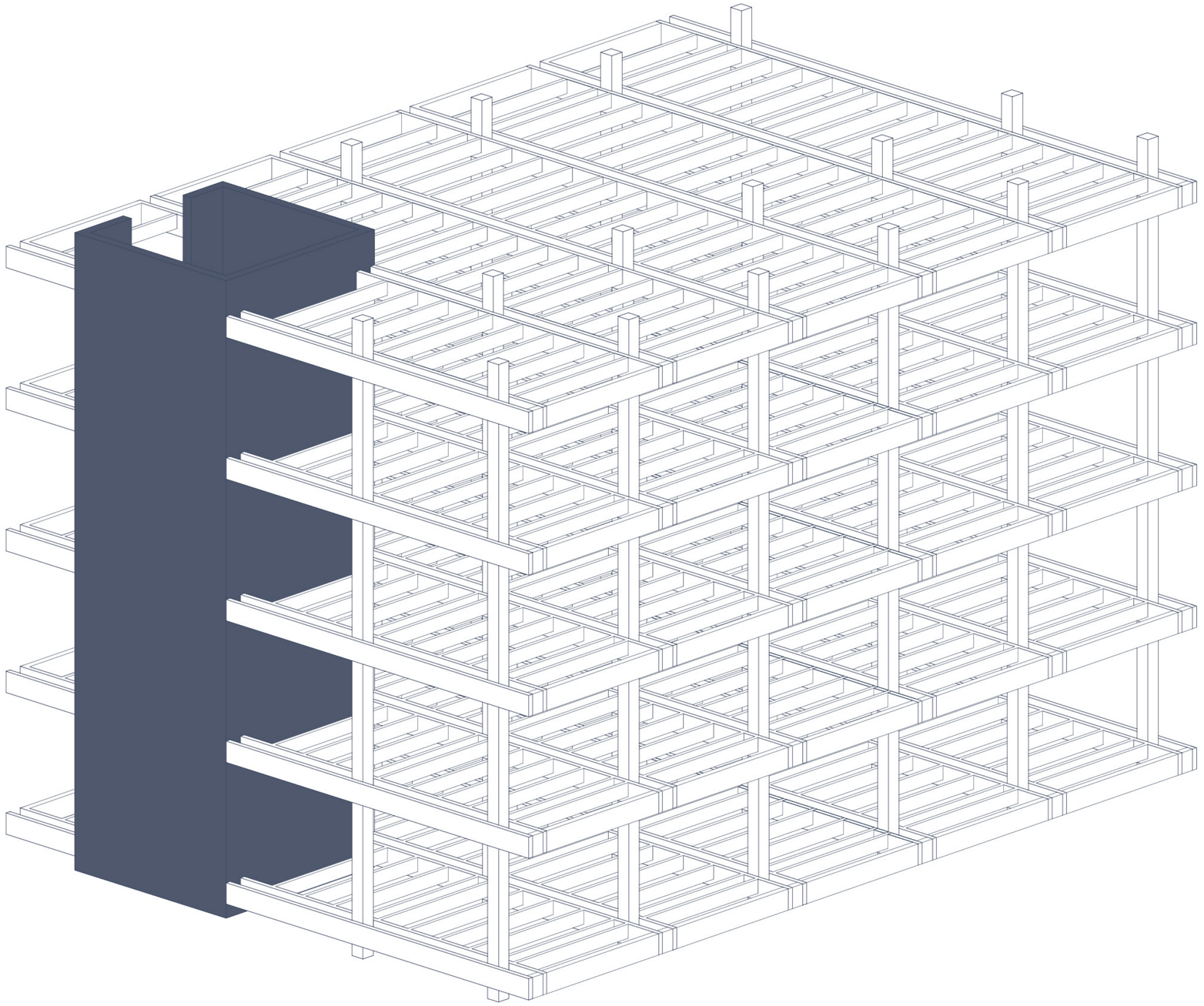
Construction



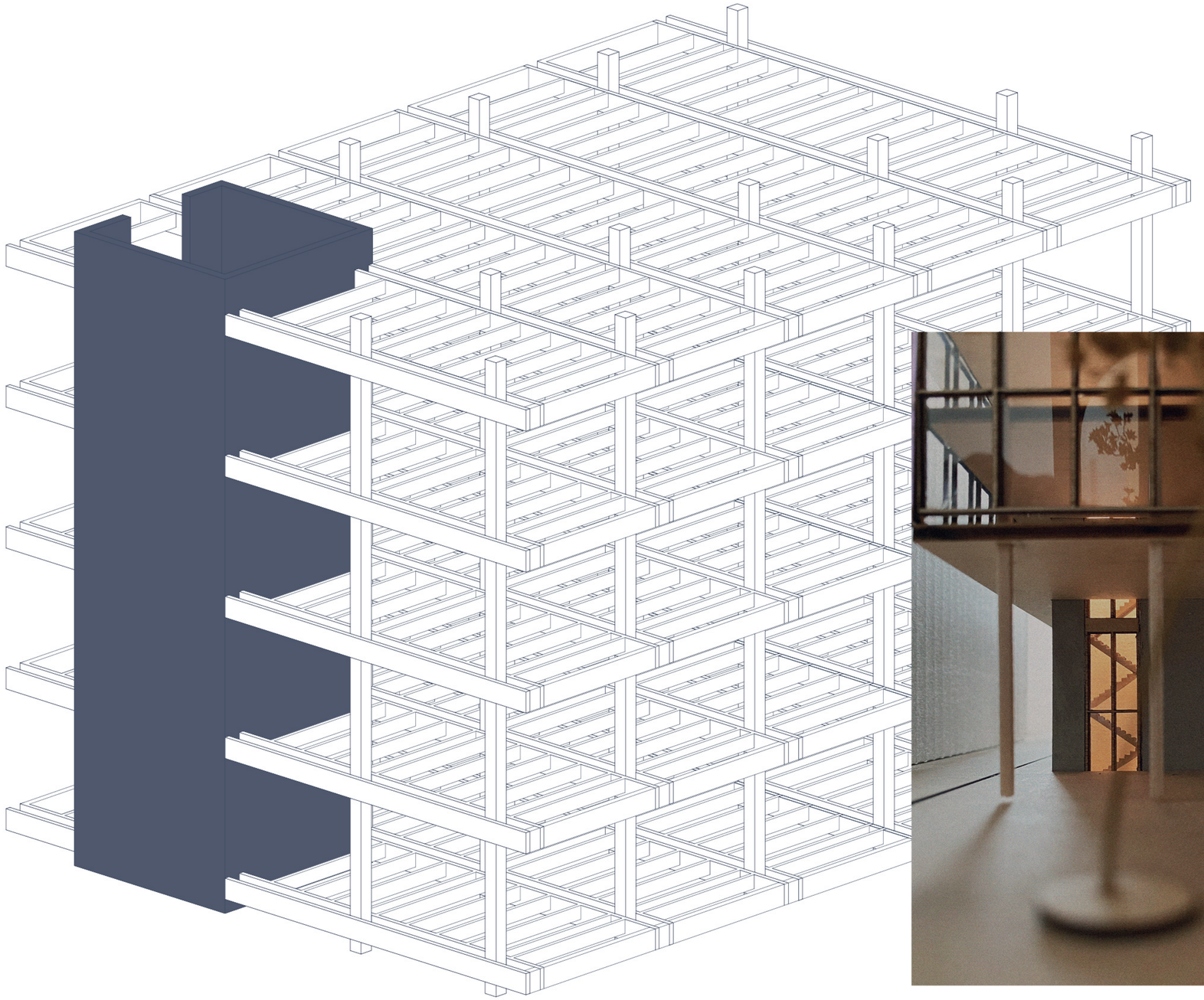
Construction diagram



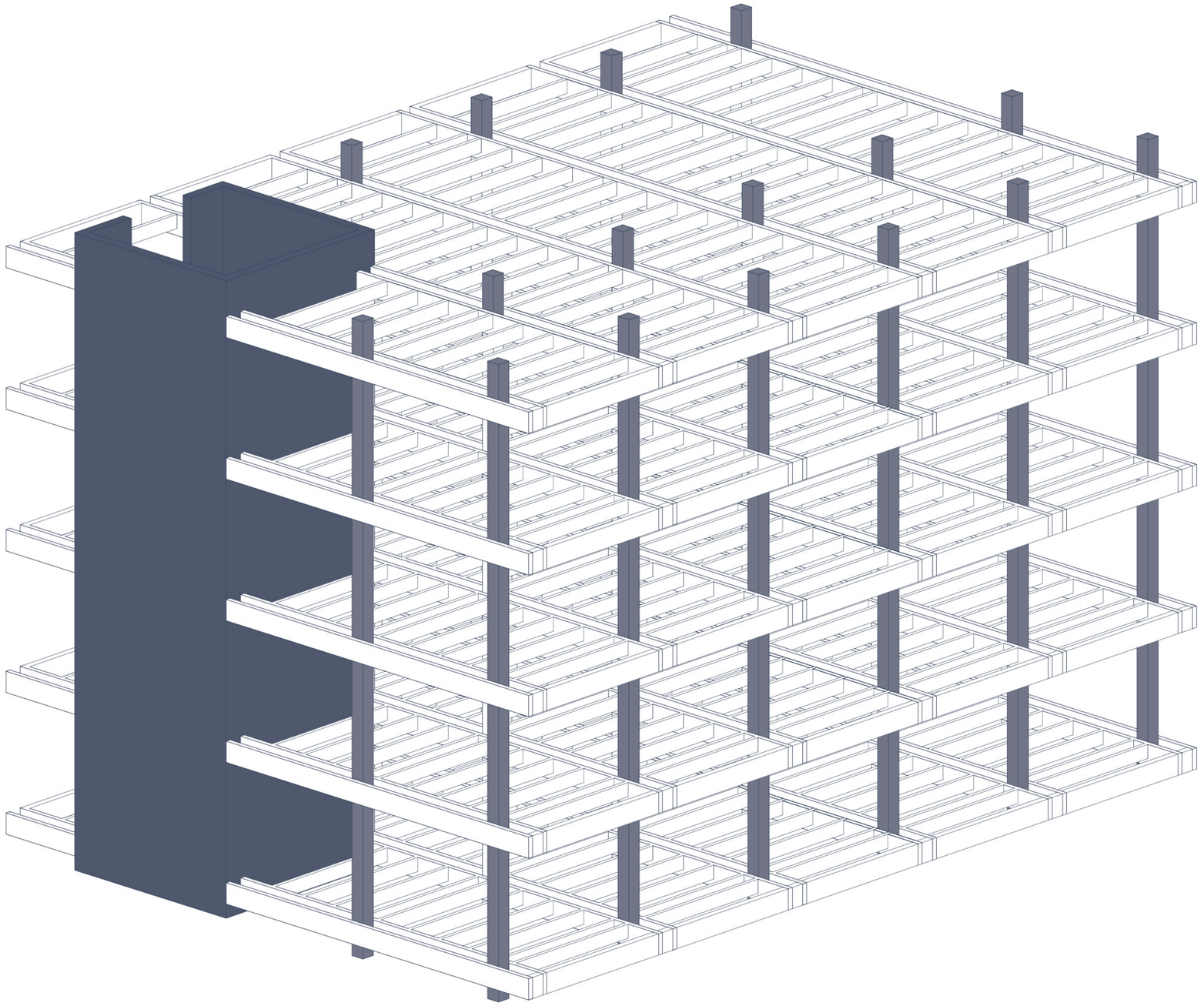
Core



Core



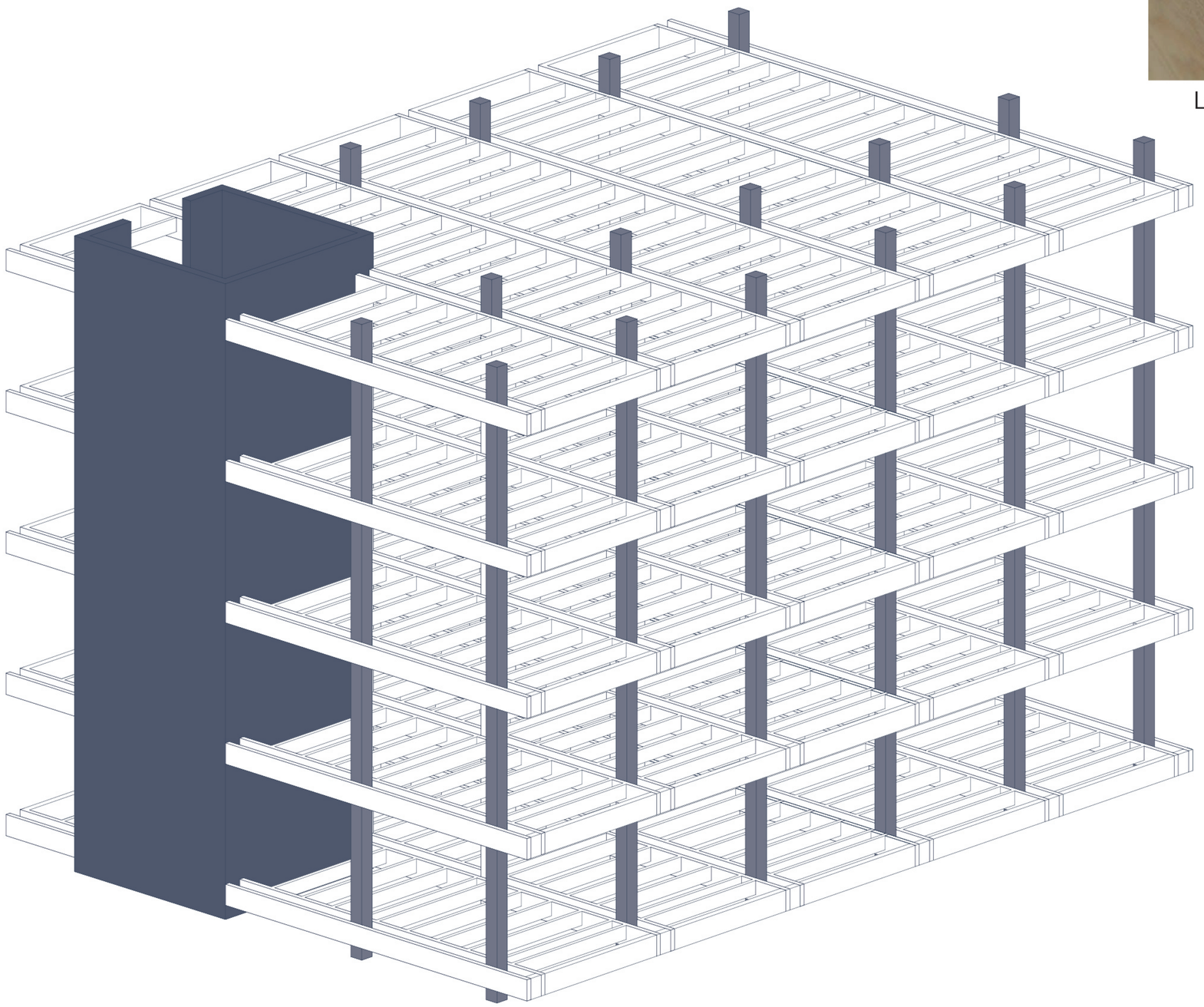
LVL Colomns



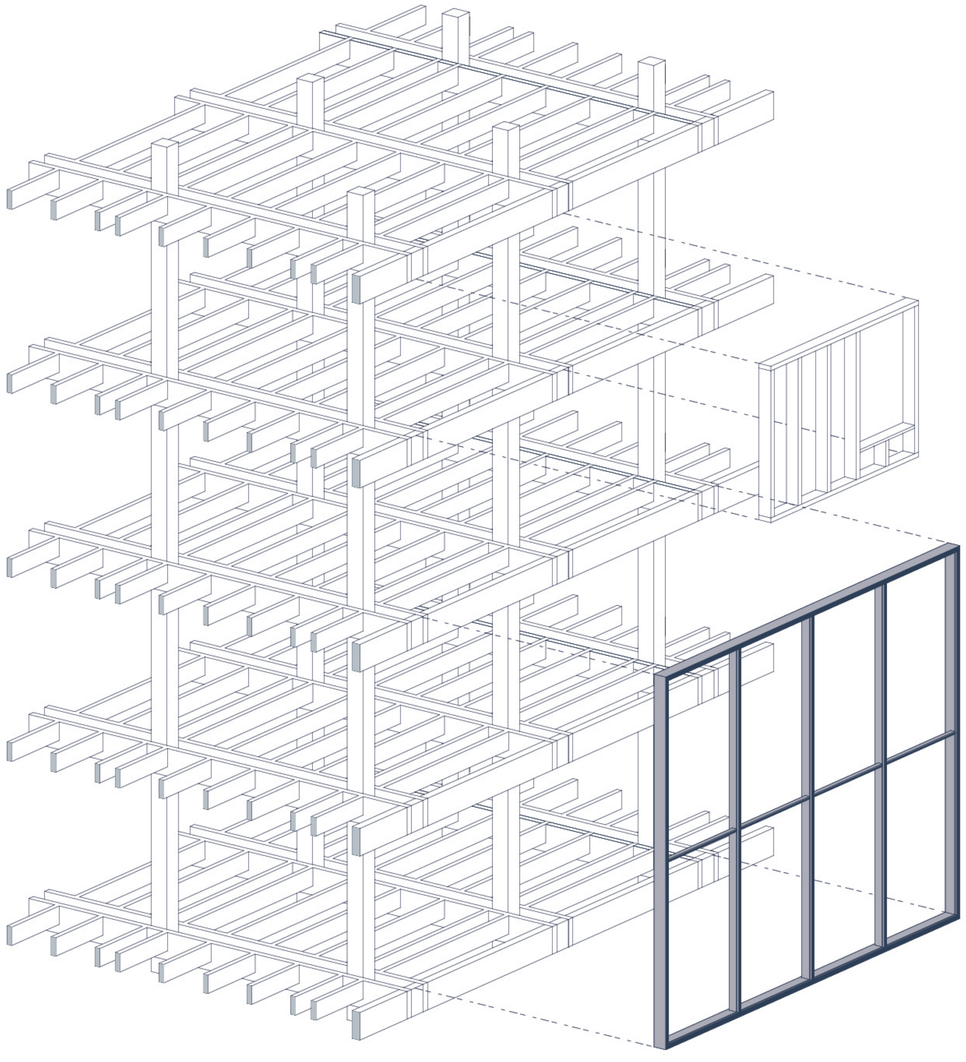
LVL Colomns

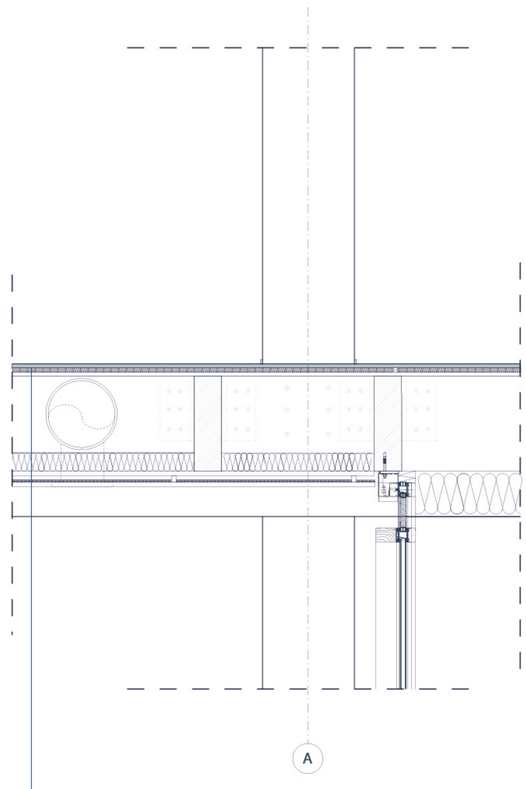


Laminated veneer lumber



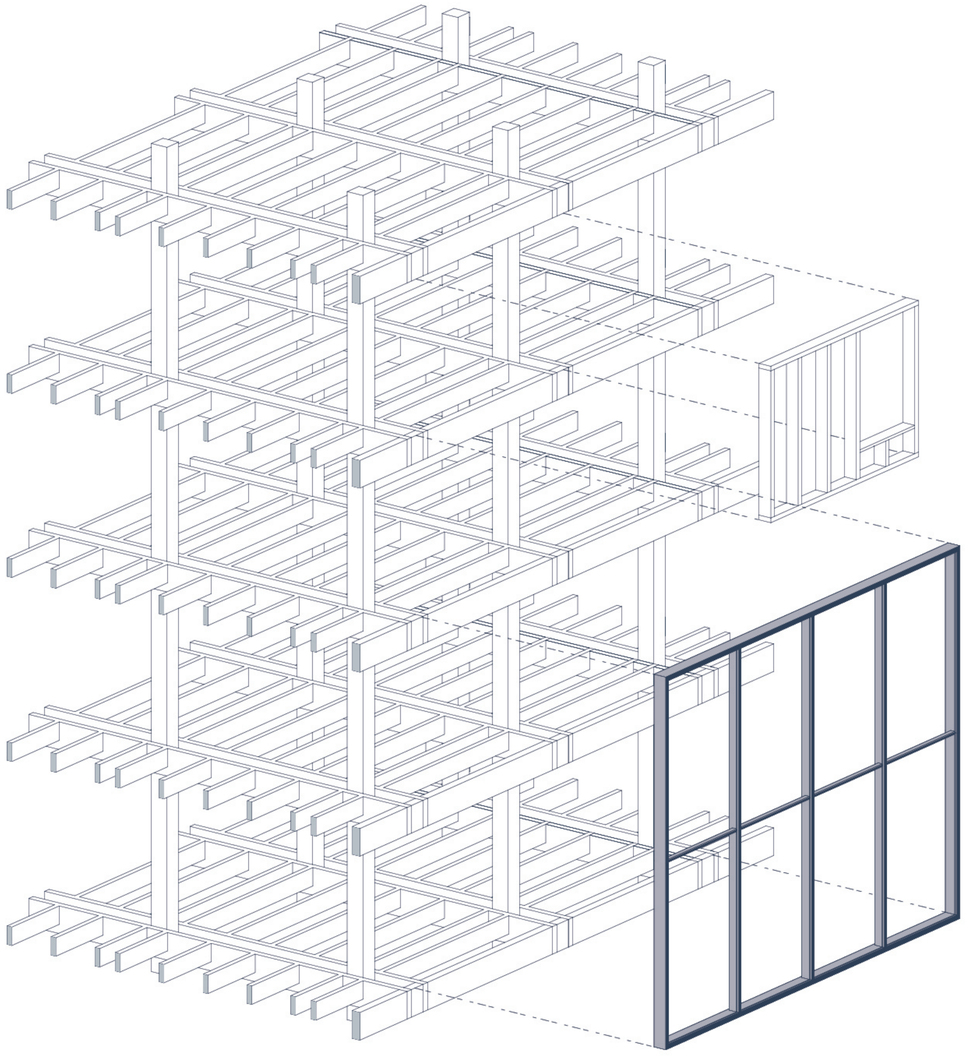
Curtain wall

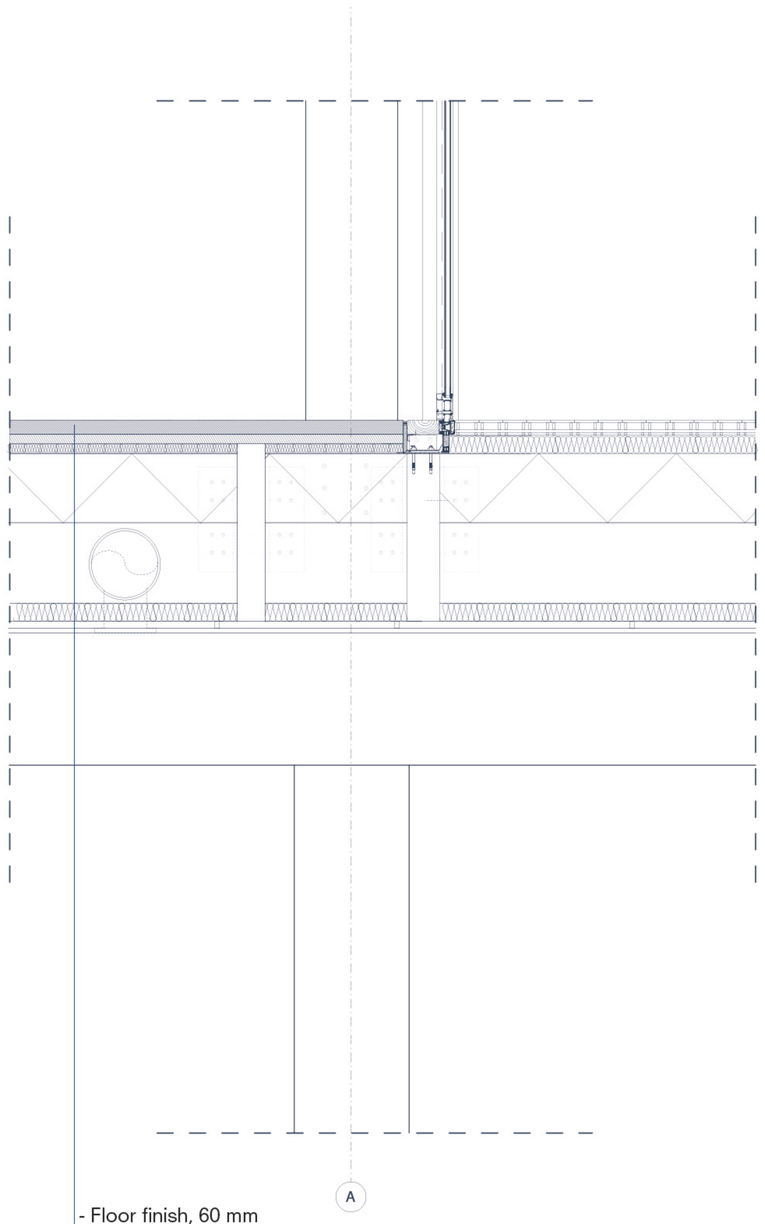




- Floor finish, 15 mm
- Sound insulation, 18 mm
- Oriented strand board, 12,5 mm
- Laminated veneer lumber primairy 300x640mm, secondairy 120x400mm
- Mineral fibre insulation, 80 mm
- Acoustic ceiling

Curtain walls

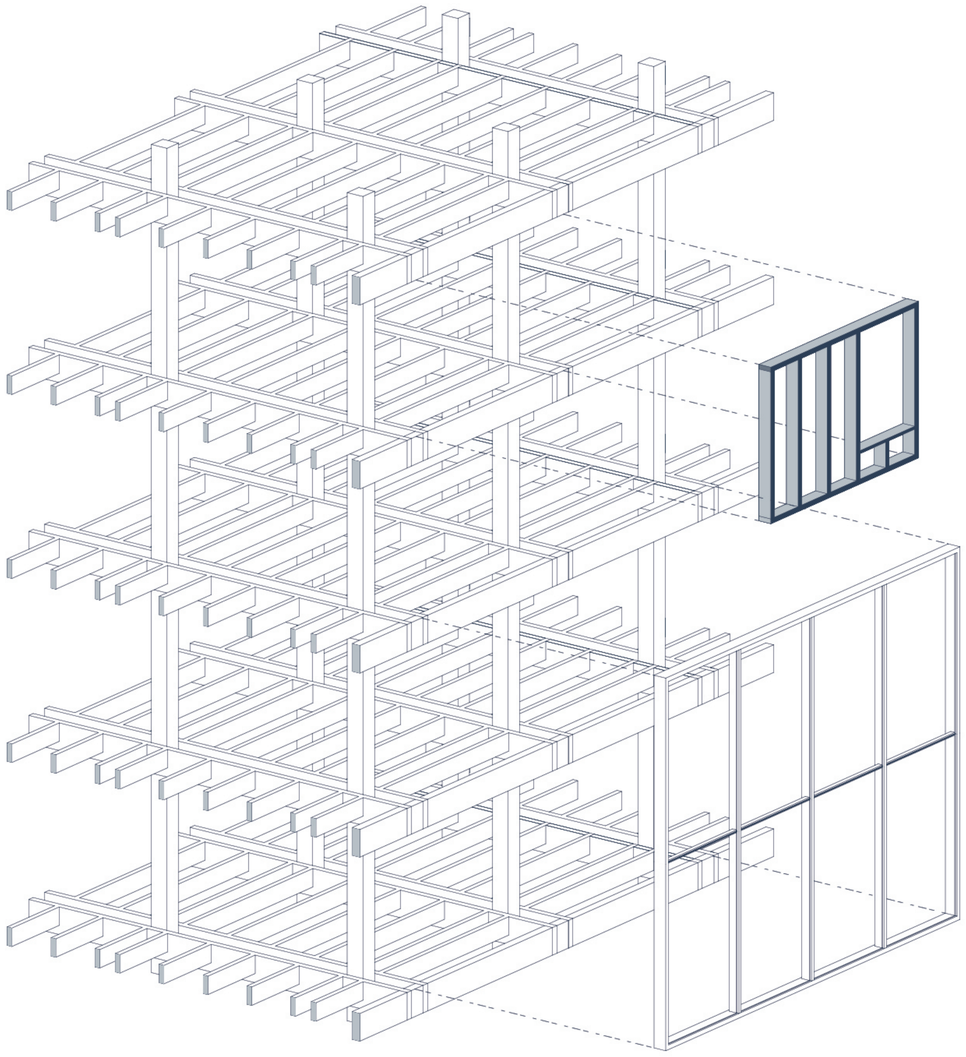


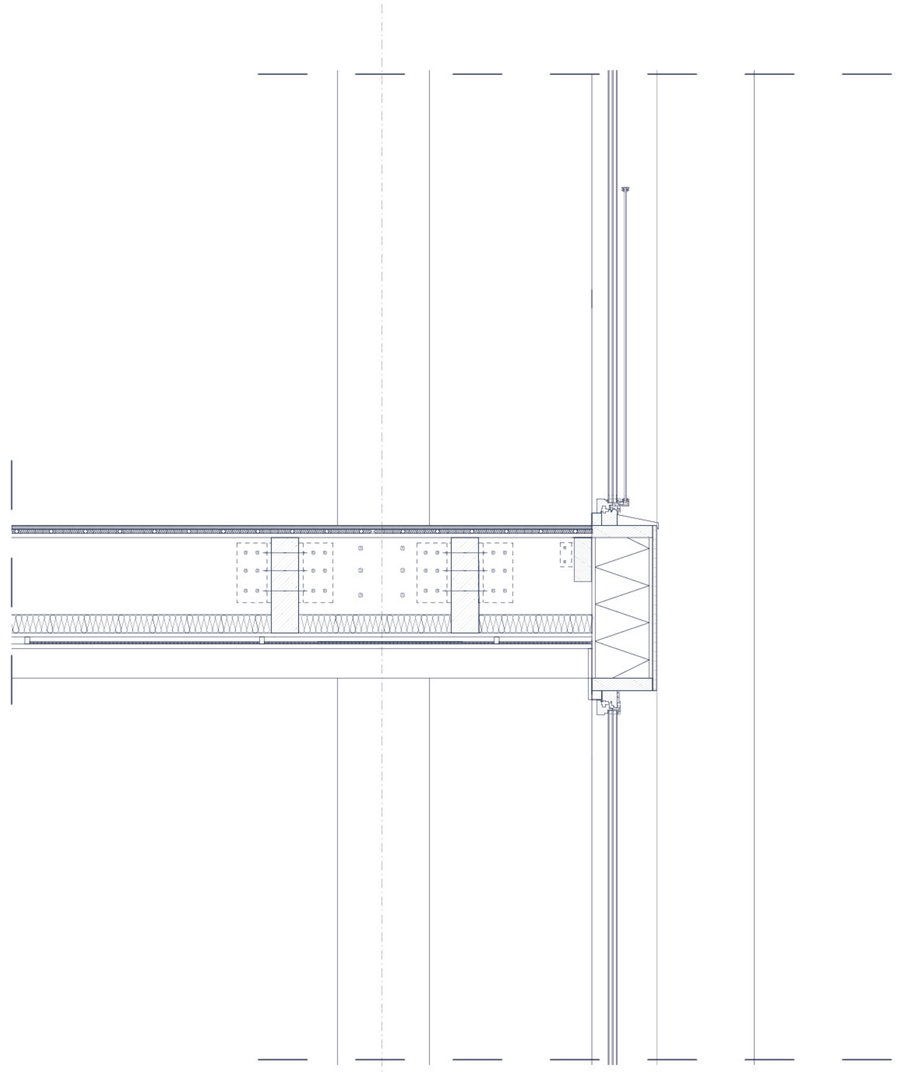


A

- Floor finish, 60 mm
- Separating layer, 40 mm
- Sound insulation, 2x12,5 mm
- Laminated veneer lumber
- Mineral fibre insulation, 80 mm
- Acoustic ceiling

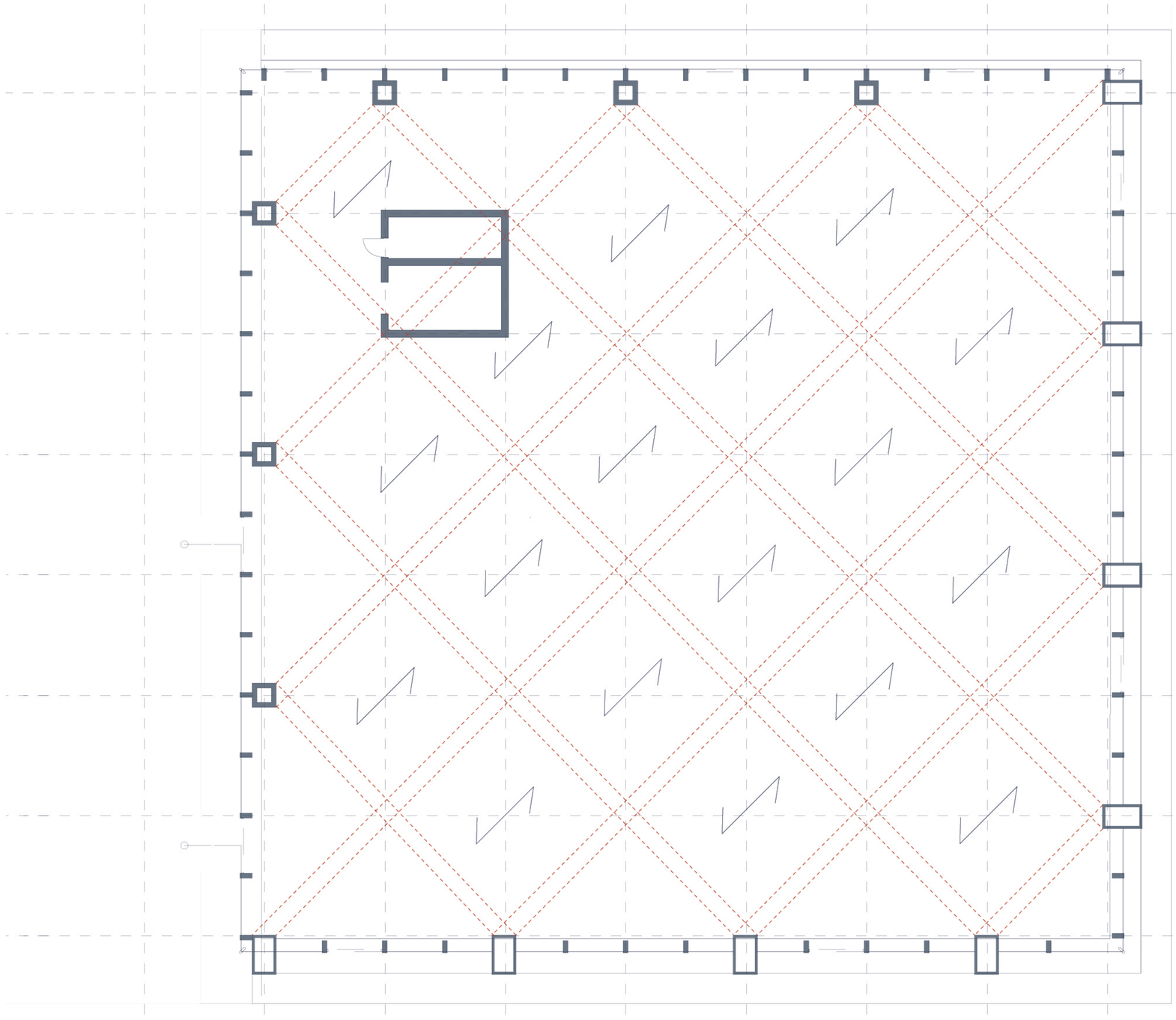
Prefab elements





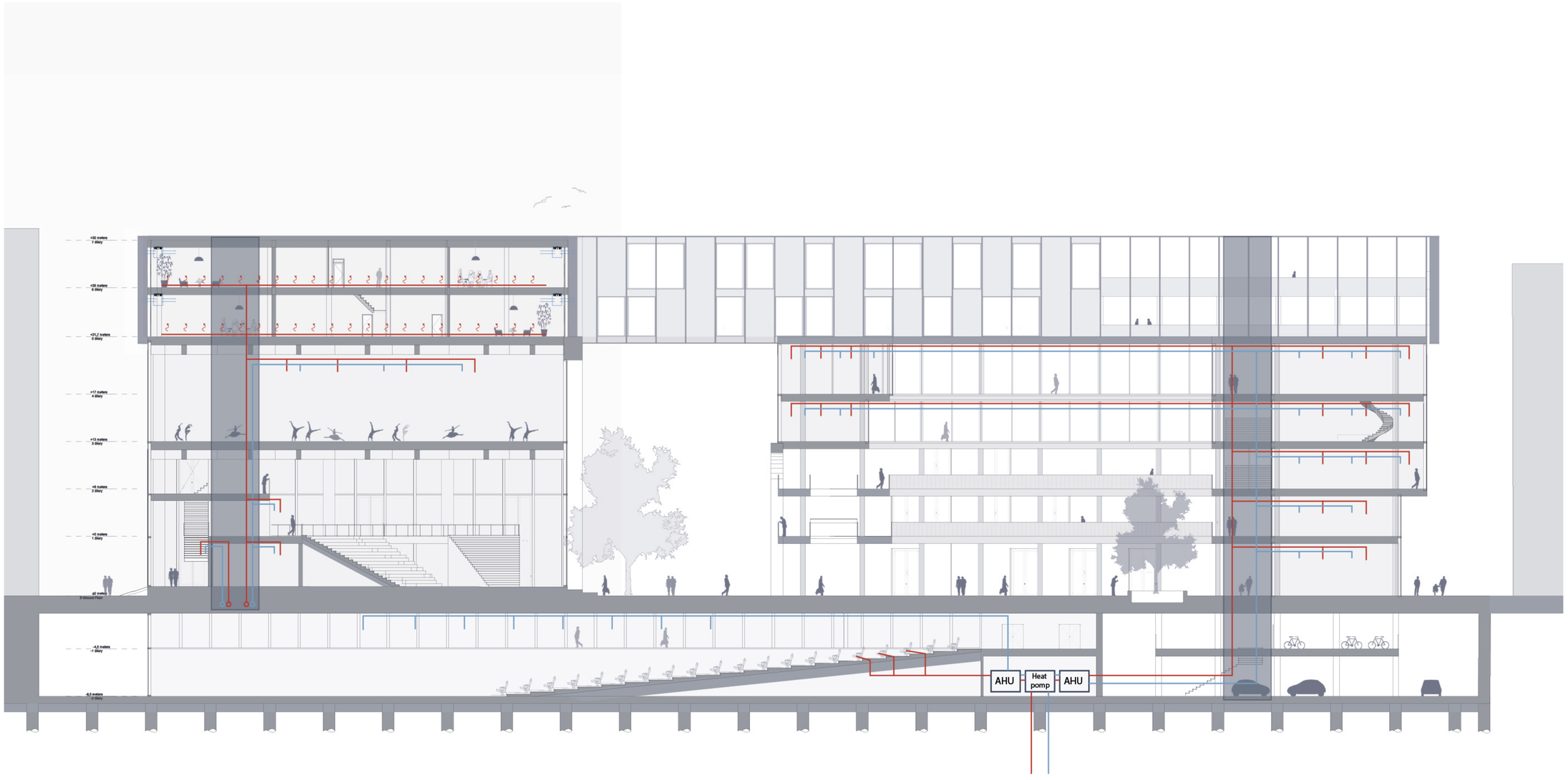
- Floor finish, 60 mm
- Separating layer, 40 mm
- Underfloor heating
- Sound insulation, 2x12,5 mm
- Laminated veneer lumber
- Mineral fibre insulation, 80 mm
- Acoustic ceiling

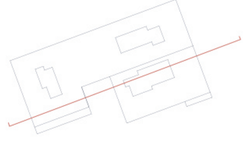
Construction diagram



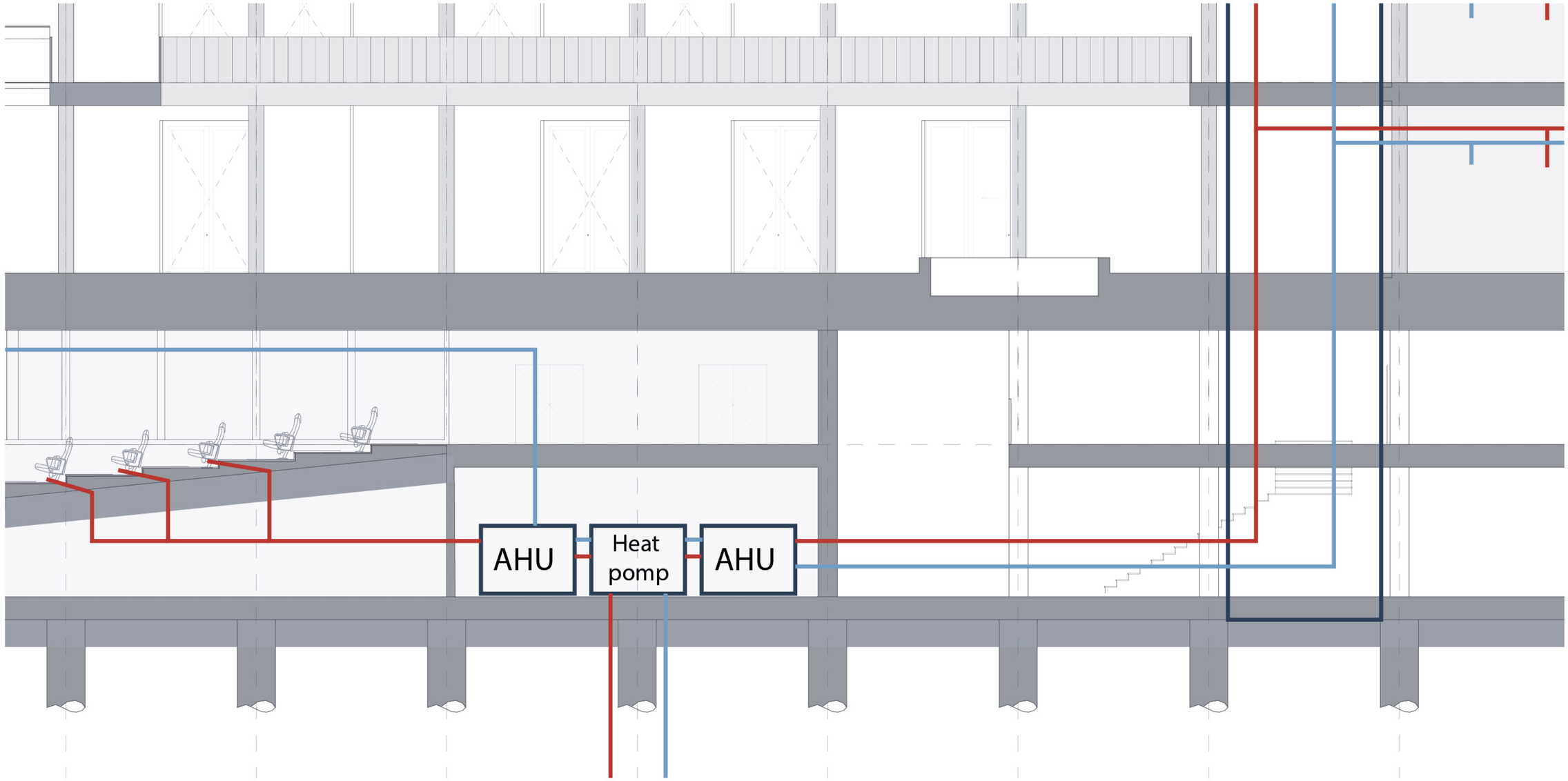


Climate diagram



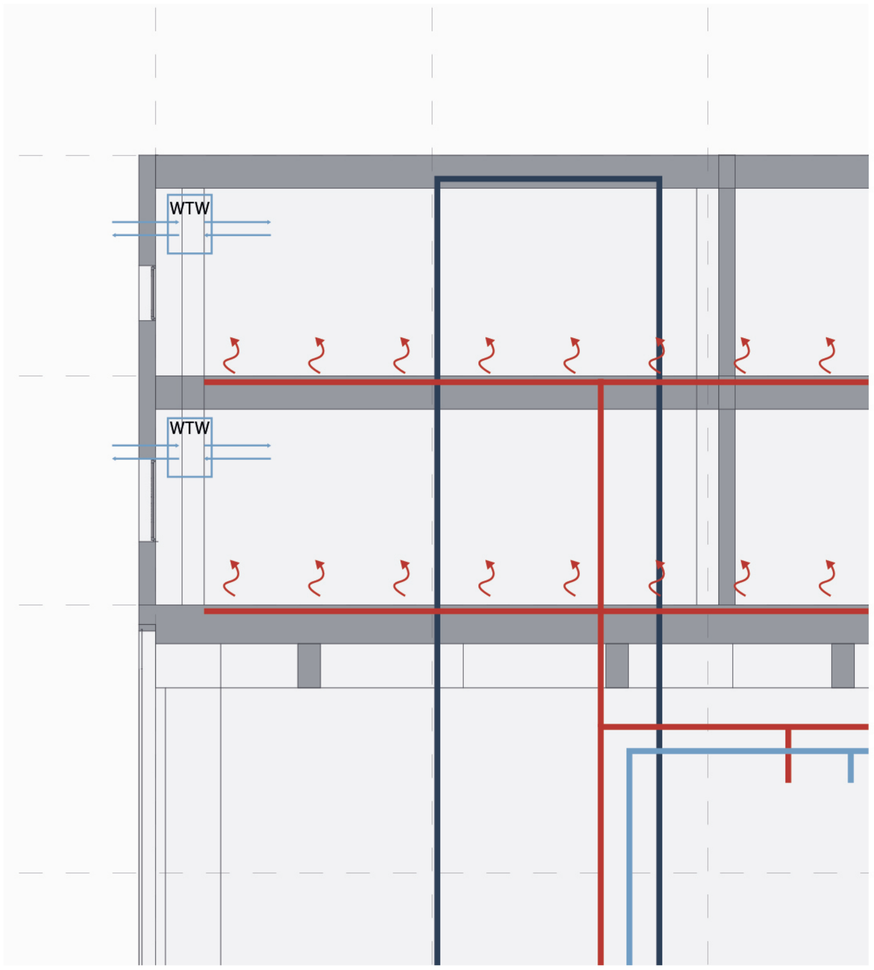


Climate diagram



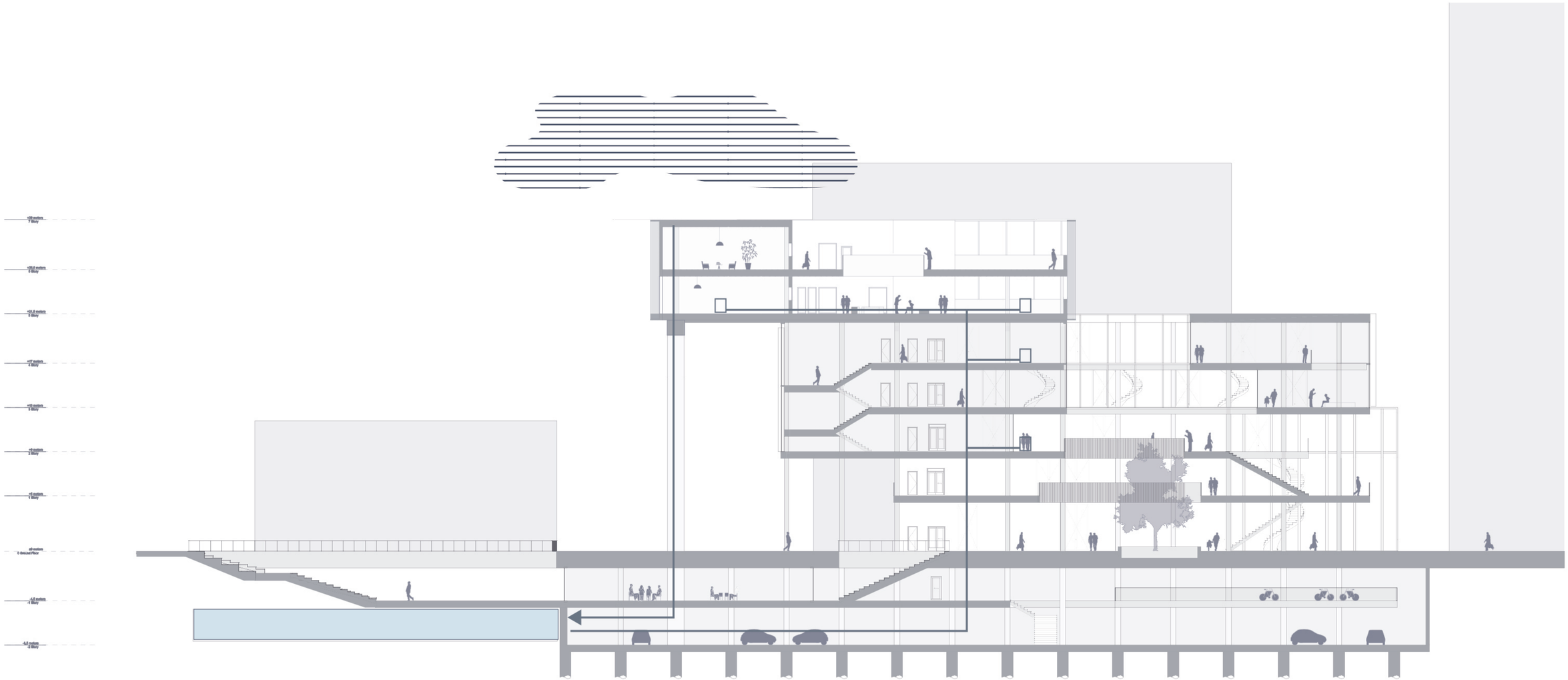
- Mechanical ventilation system with CO2 meter

Climate diagram



- Heat recovery system with CO2 meter
- Underfloor heating

Climate diagram - rainwater



Introduction

Research

The site

Concept

Design proposal

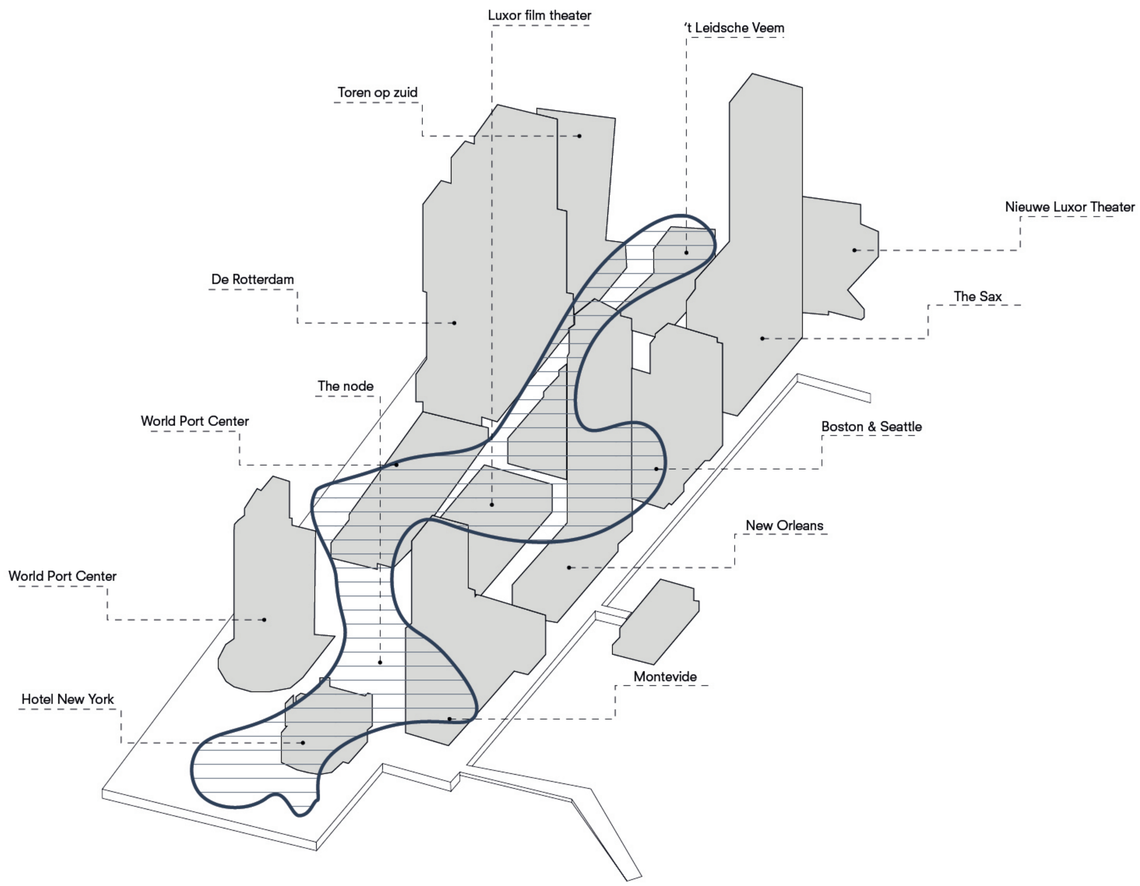
Conclusion

The project aim

Showing how architecture can mediate between different functions by defying the human scale and routing and breaking through formulaic city systems by creating places for interaction.

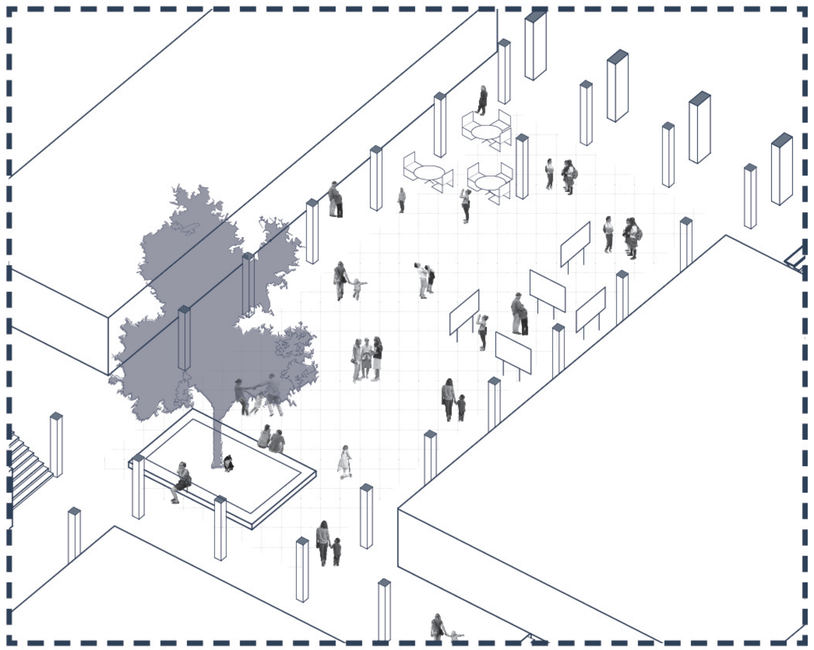
The public street can become a place instead of a transitional space

Kop van zuid

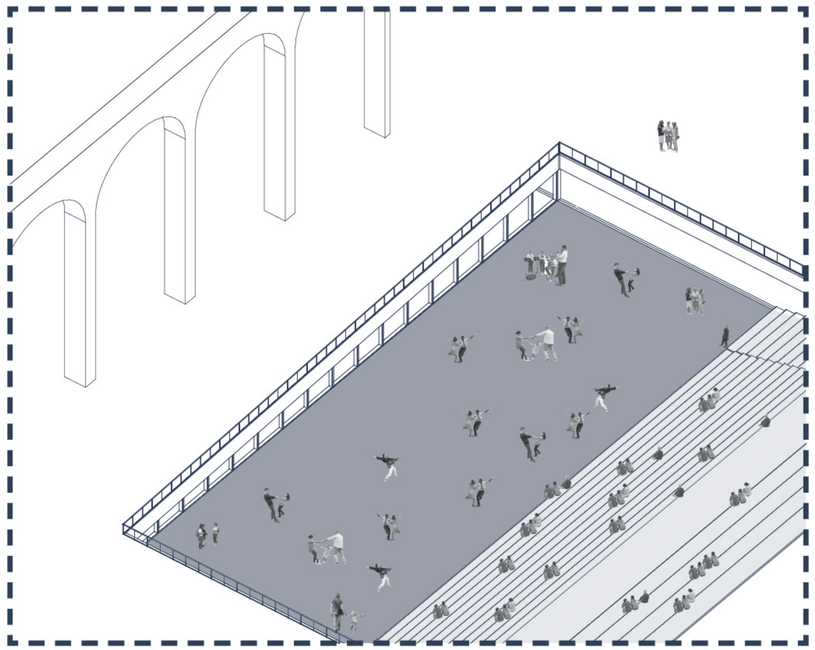


Breaking through the existing system of the Kop van Zuid

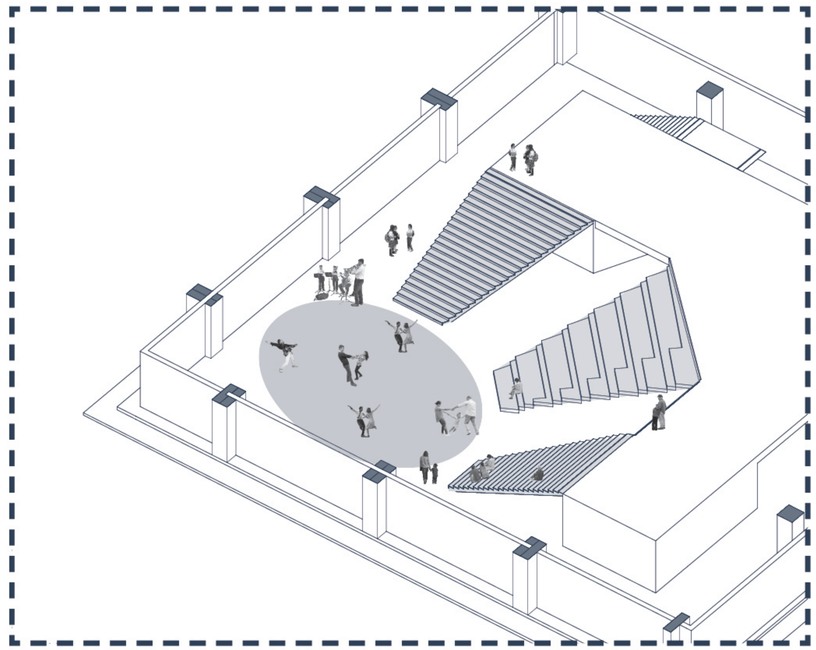
Public spaces



Courtyard

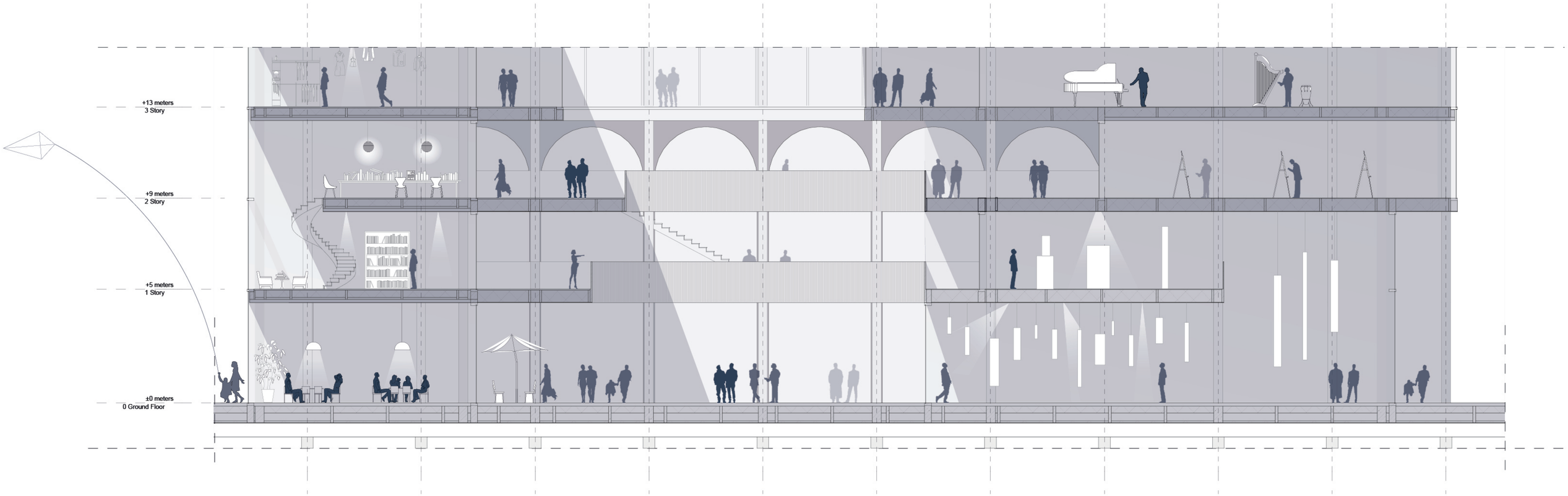


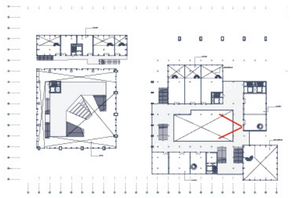
Public stairs



Inner courtyard

Integration





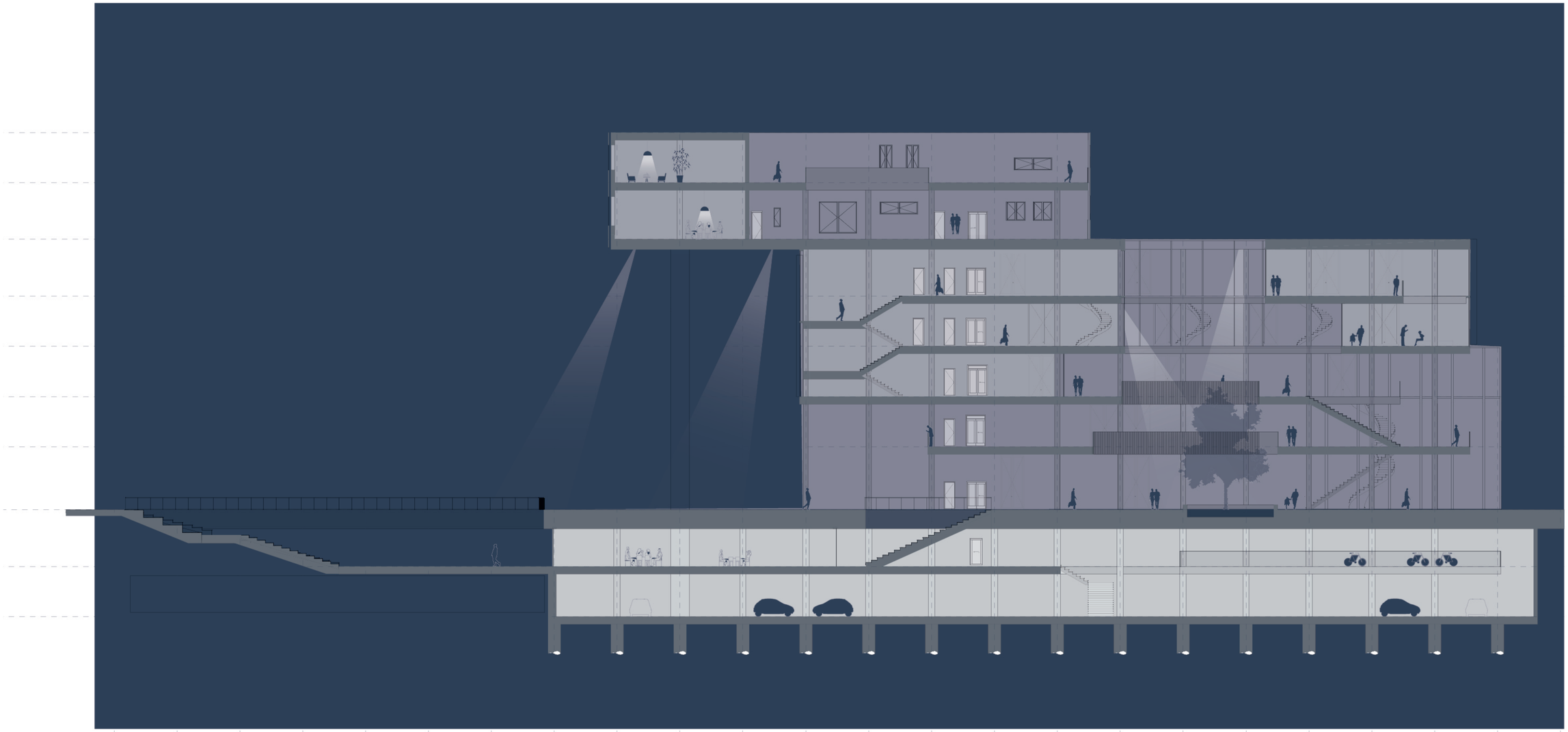
Courtyard

THANK YOU.

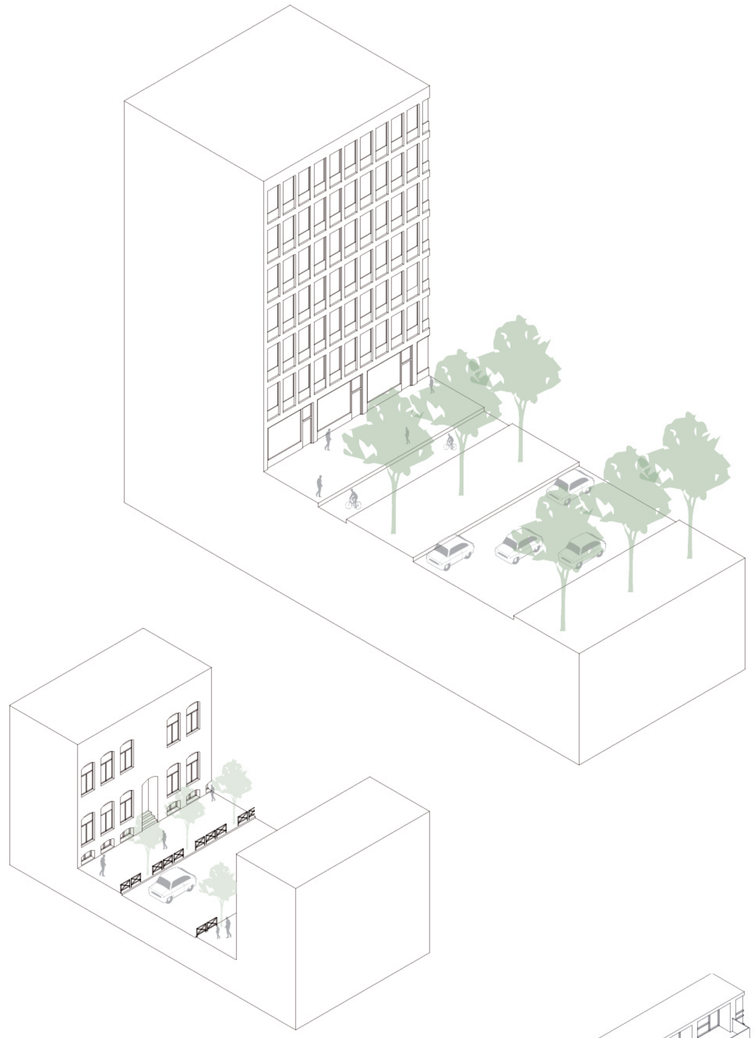


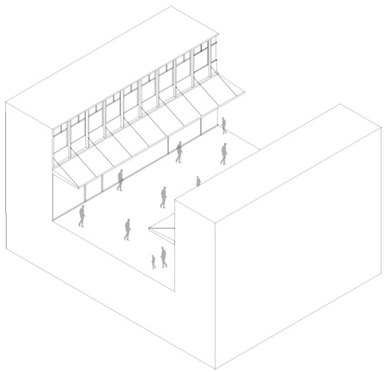
complex projects

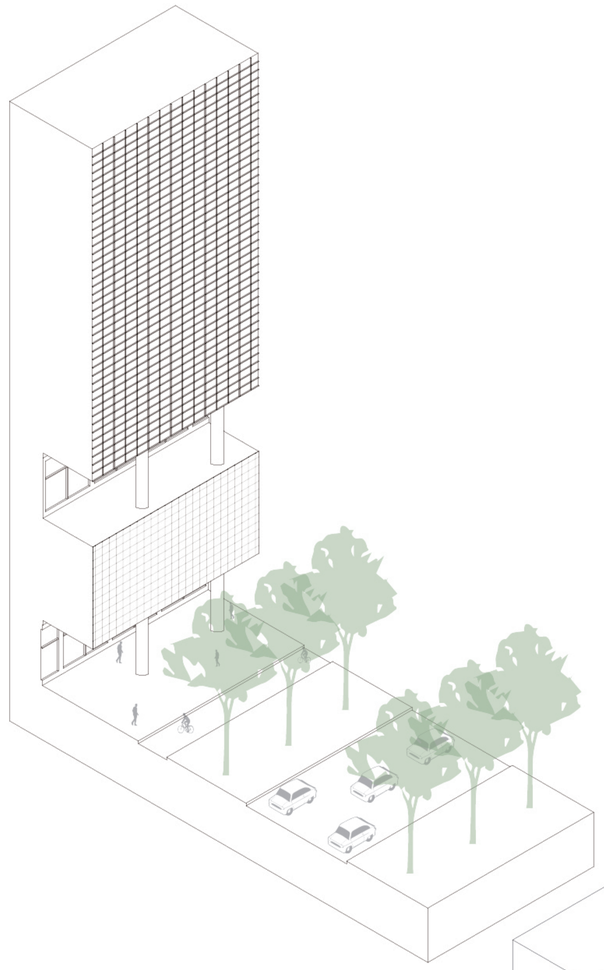
Night vision

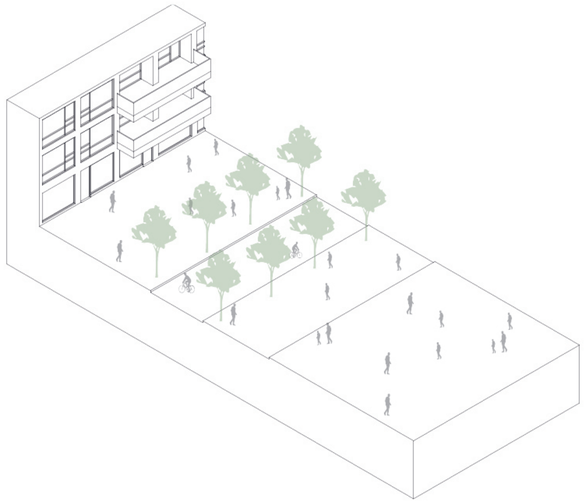


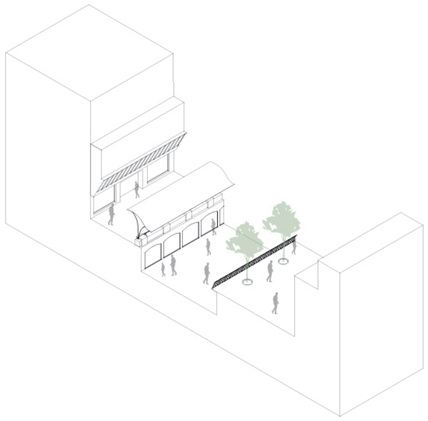
Streets Rotterdam





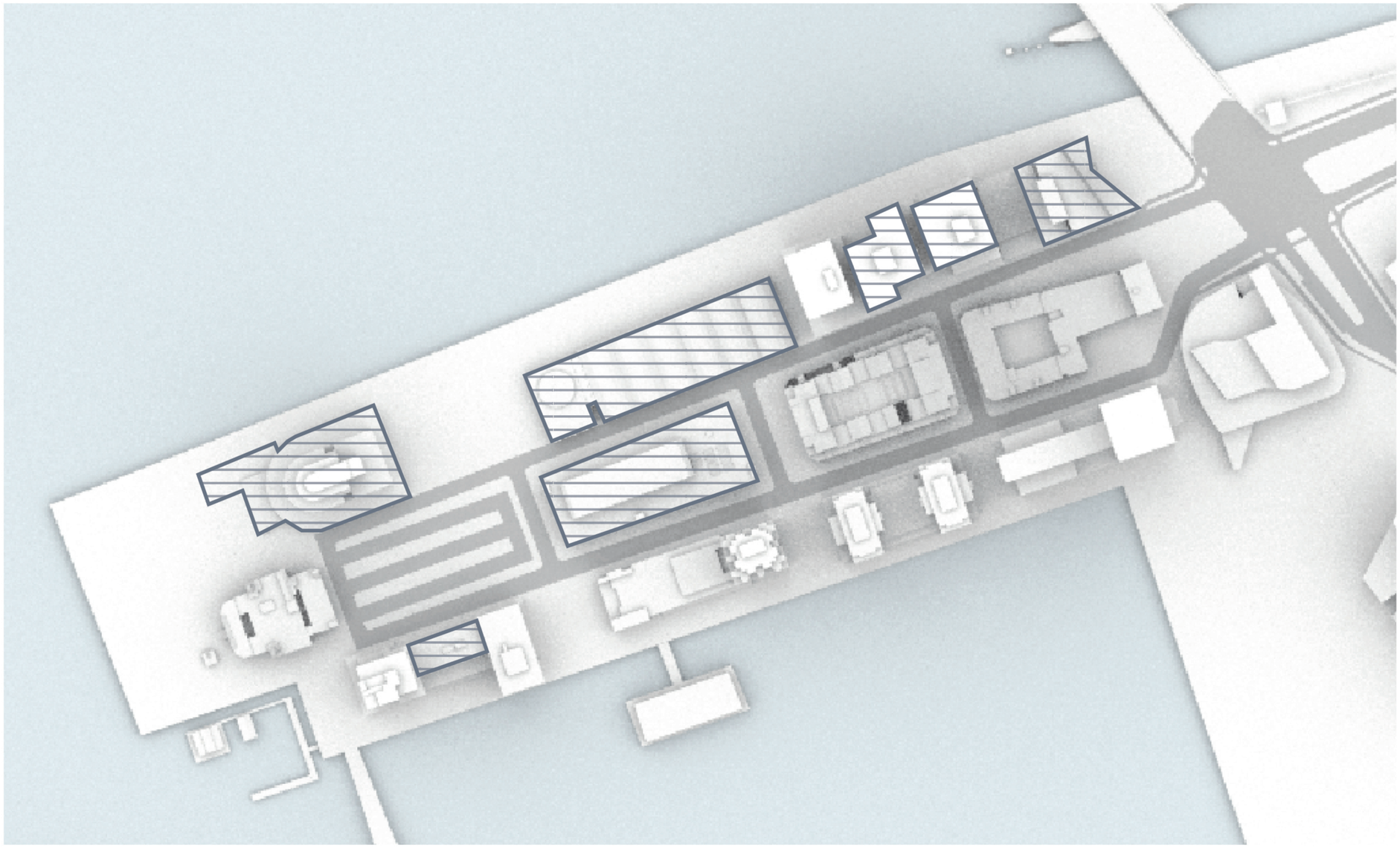






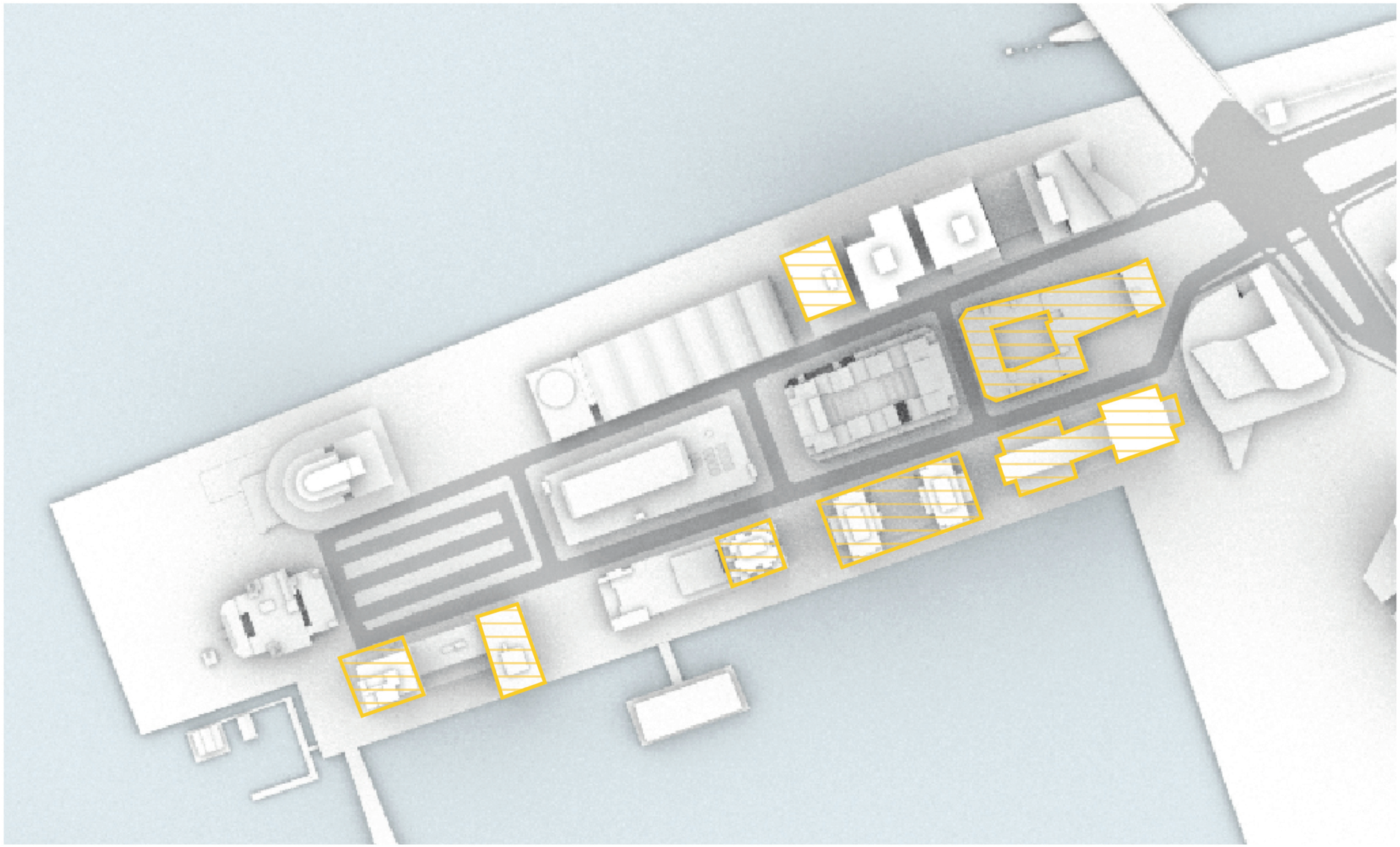


Offices



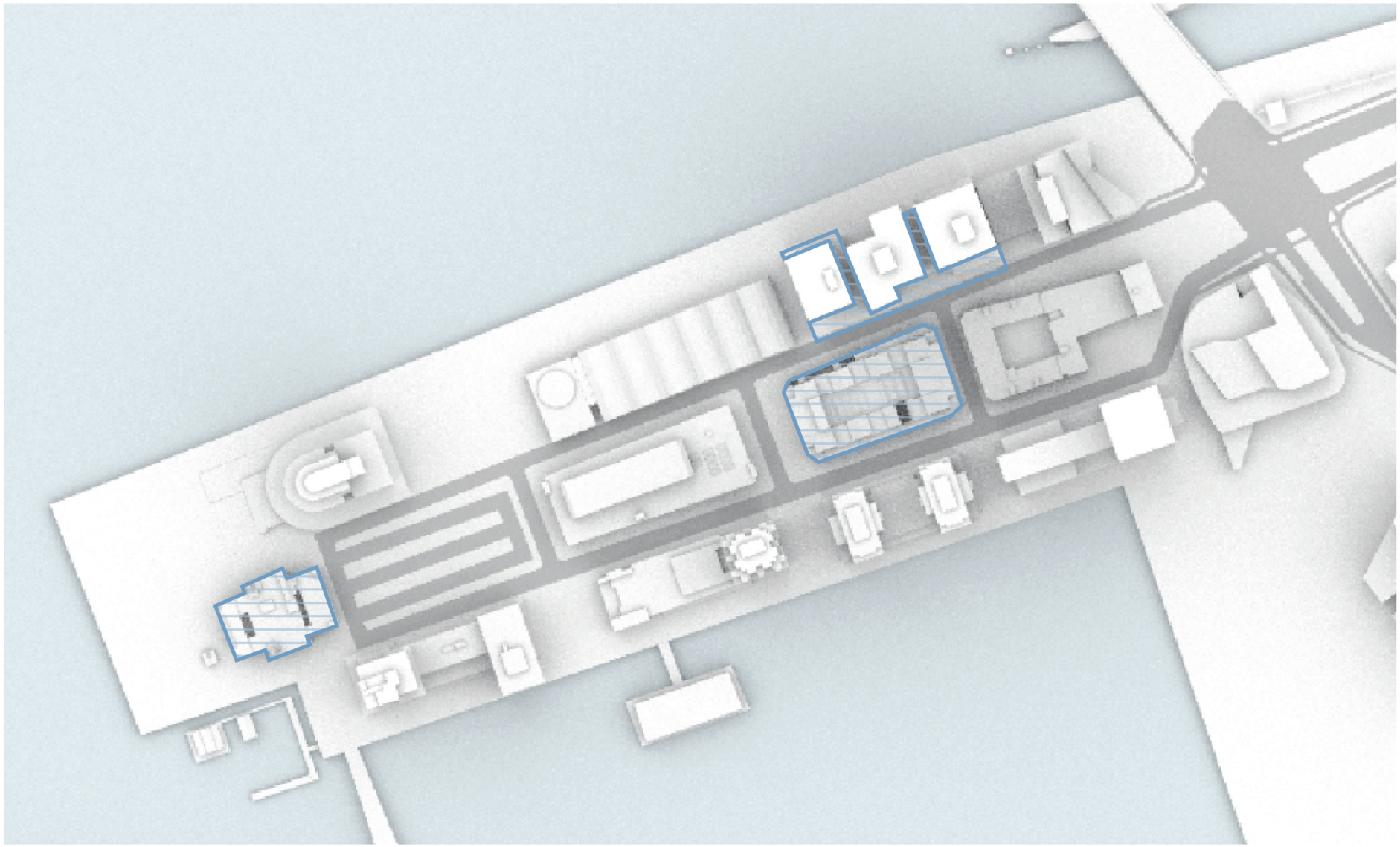
380.000 m2 offices

Apartments



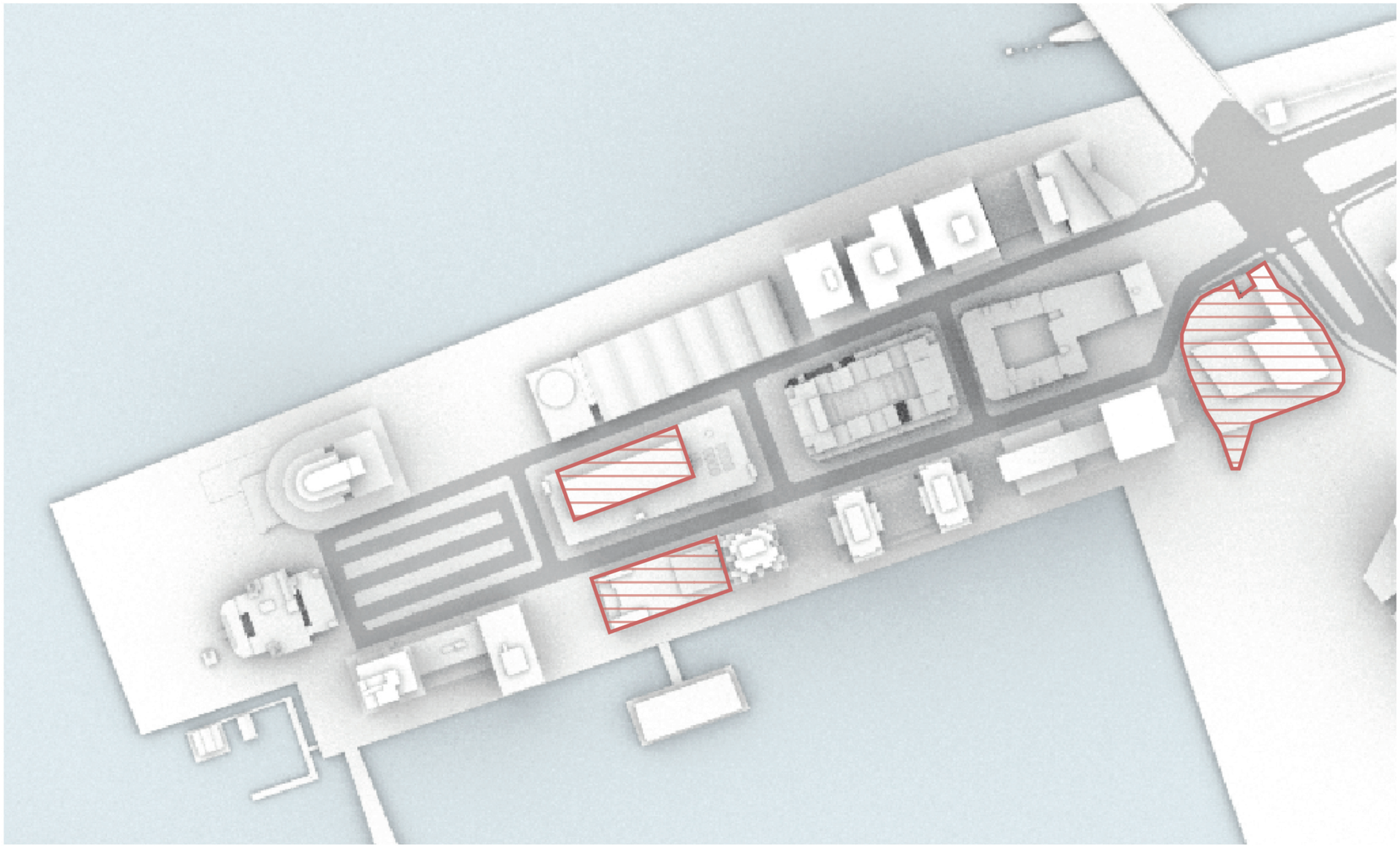
1.416 apartments

Retail



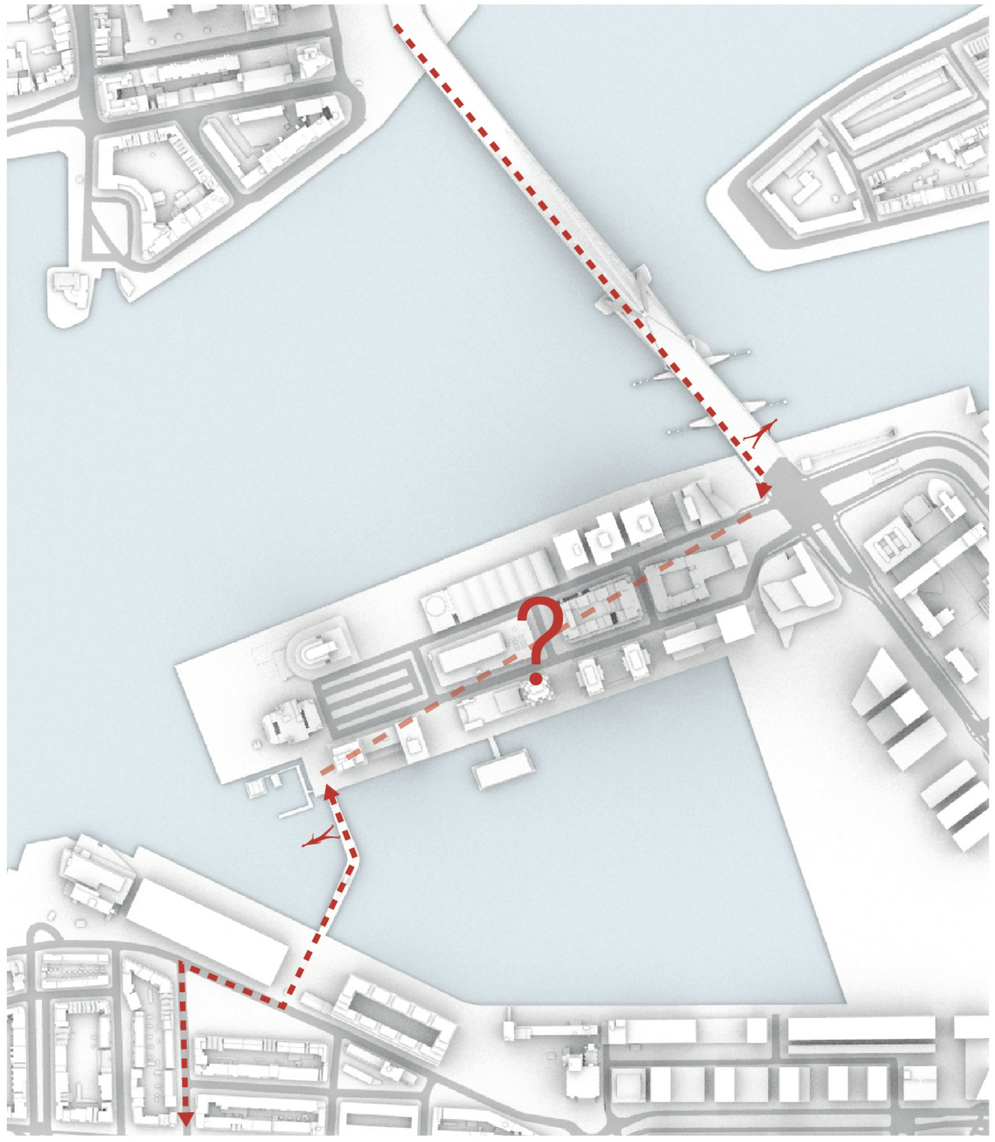
3.500 m² retail

Culture



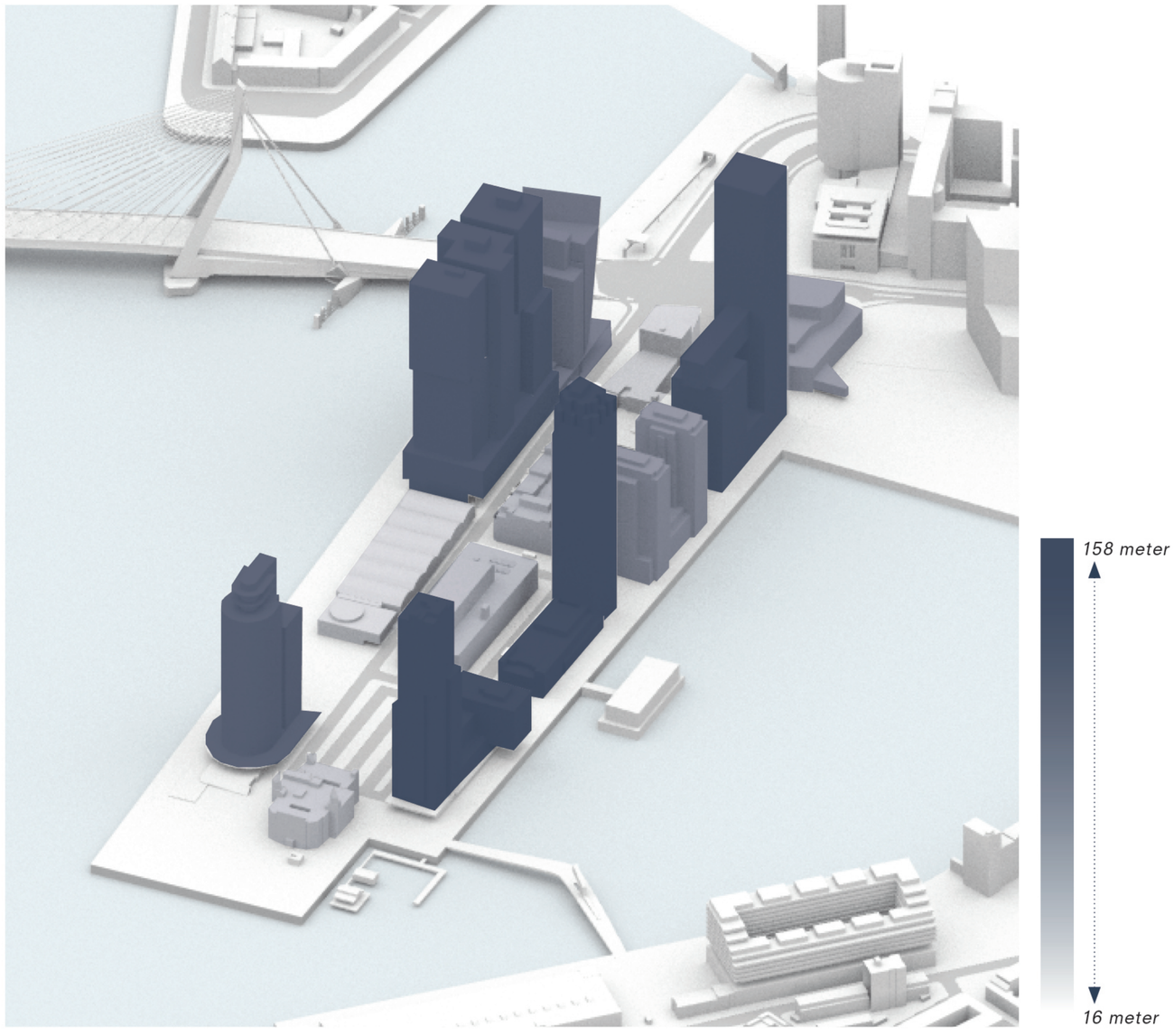
45.000 m² cultural functions

Pedestrian route



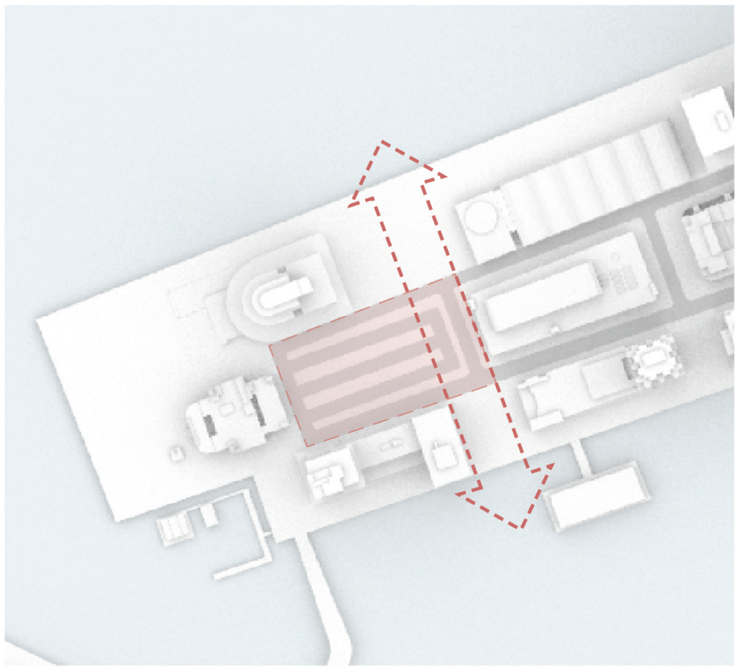


Densification

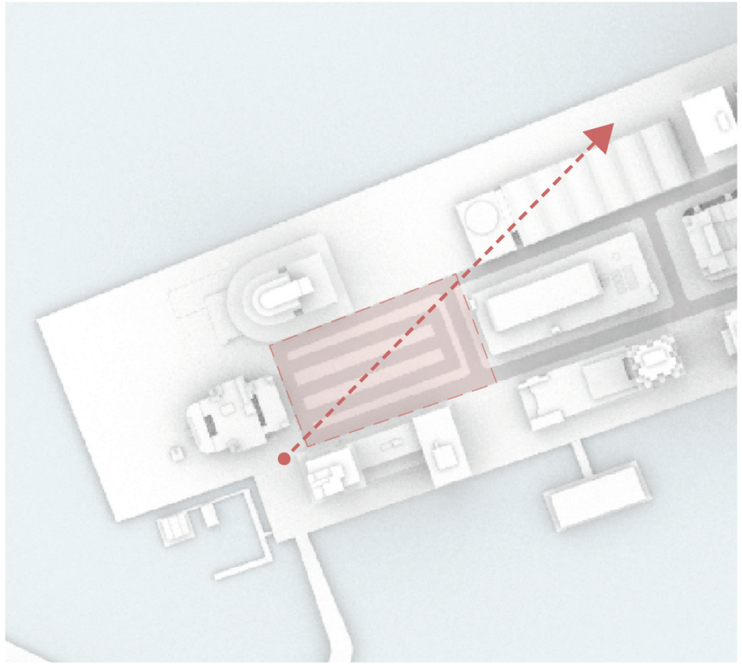


Sightlines

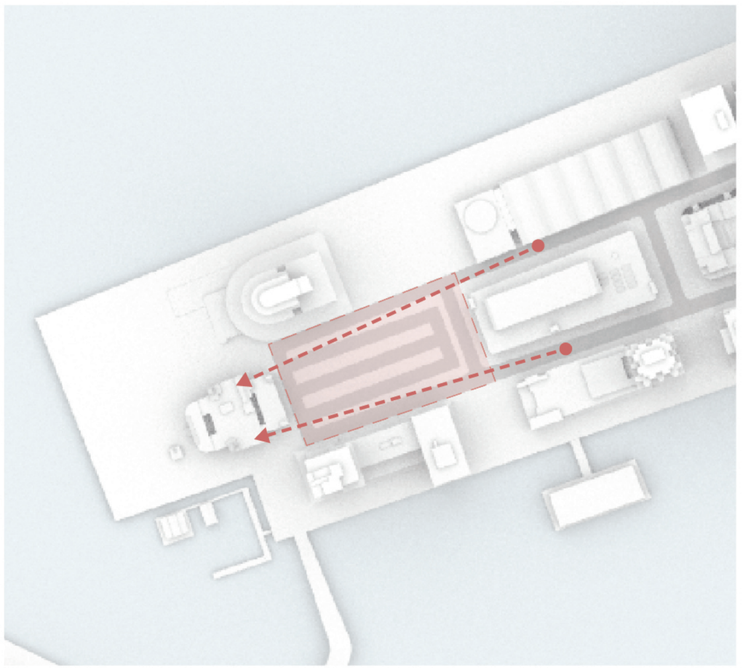
Sightlines



Viewpoint



Viewpoint



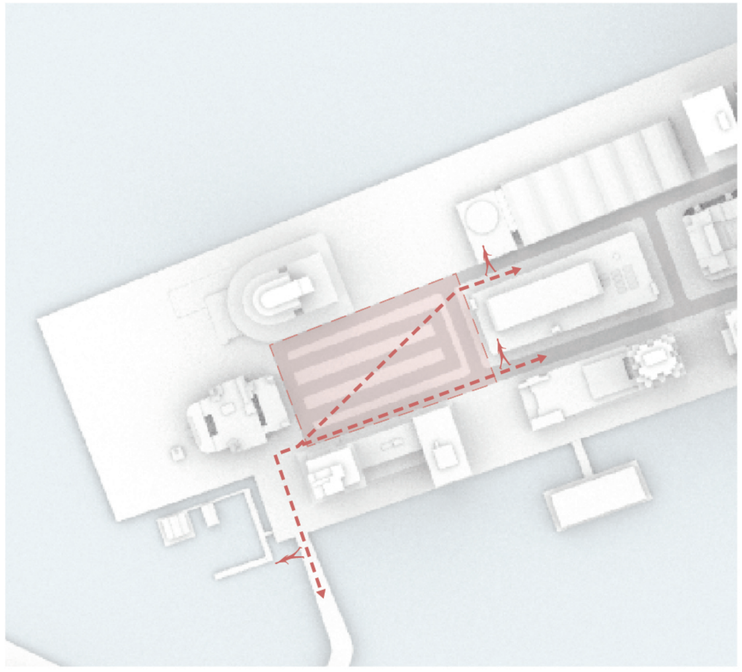




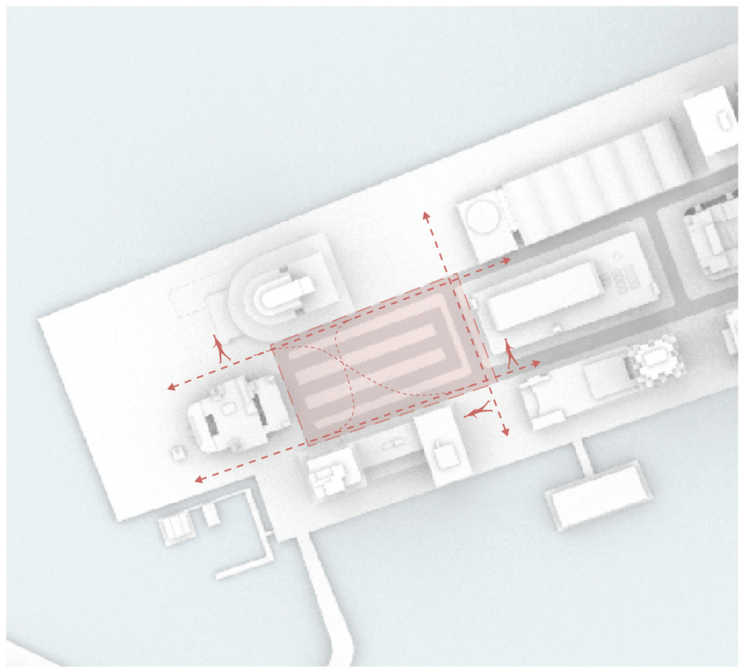


Flows

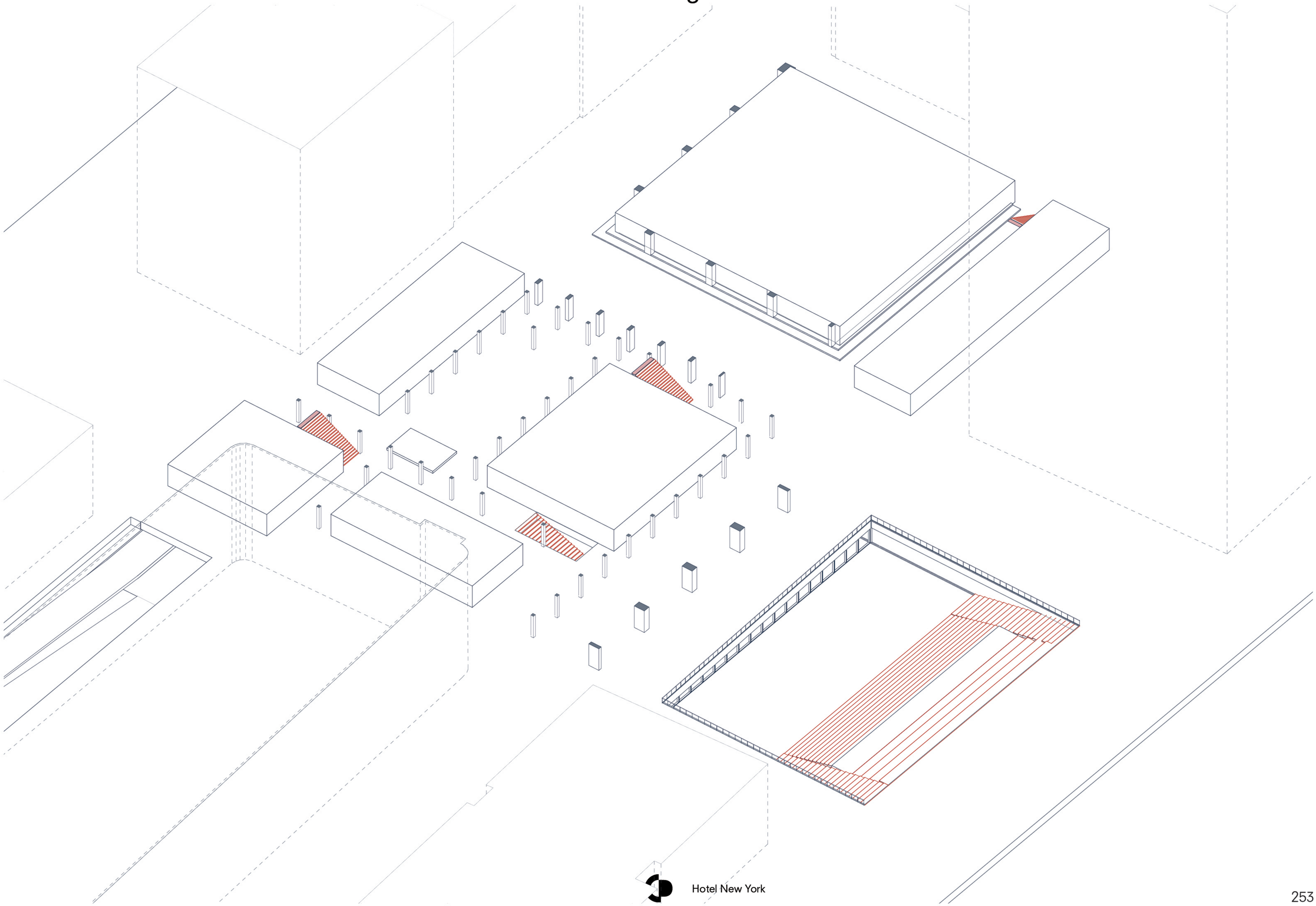
Primary pedestrain roads



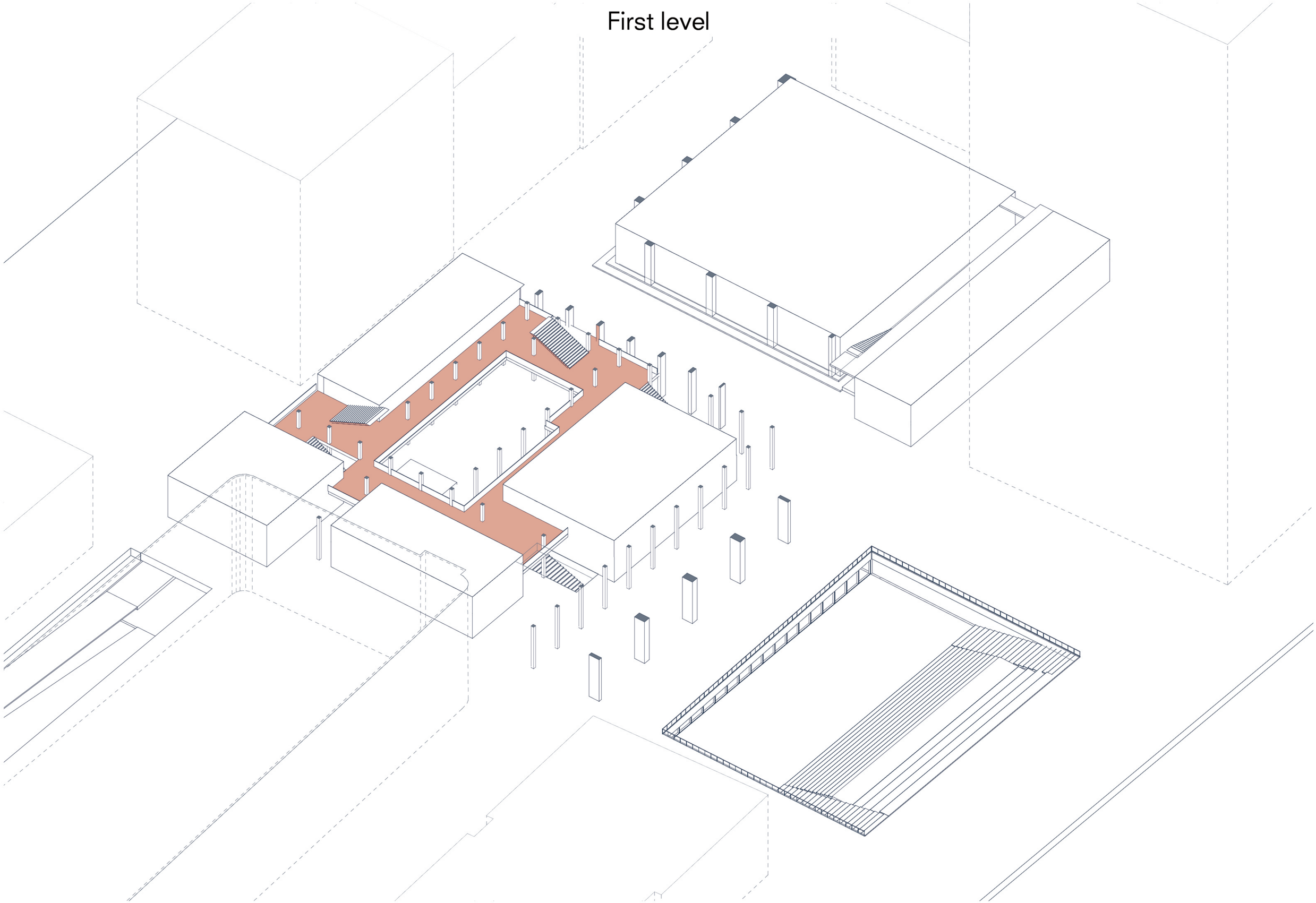
Secondary pedestrain roads



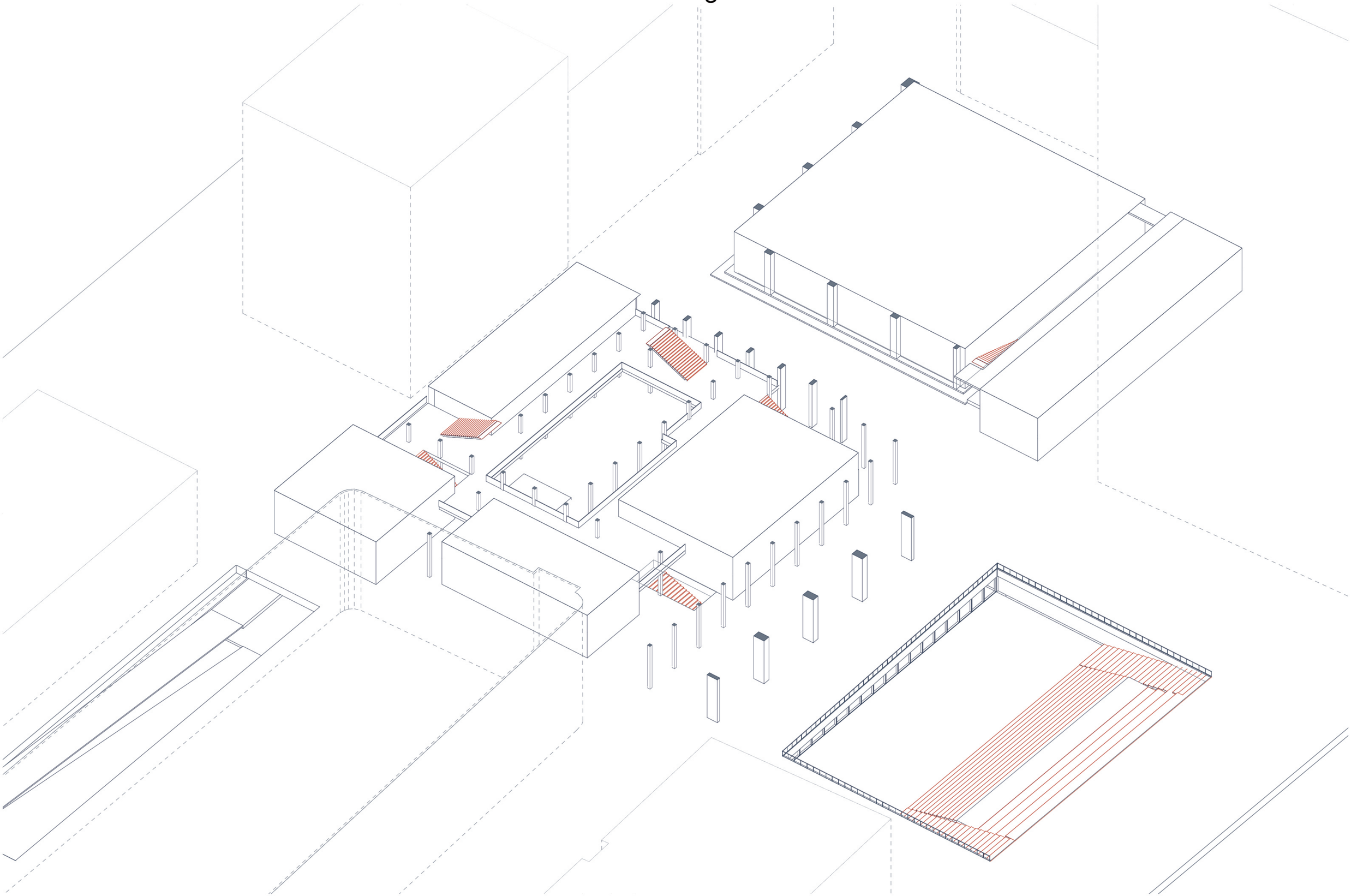
Routing



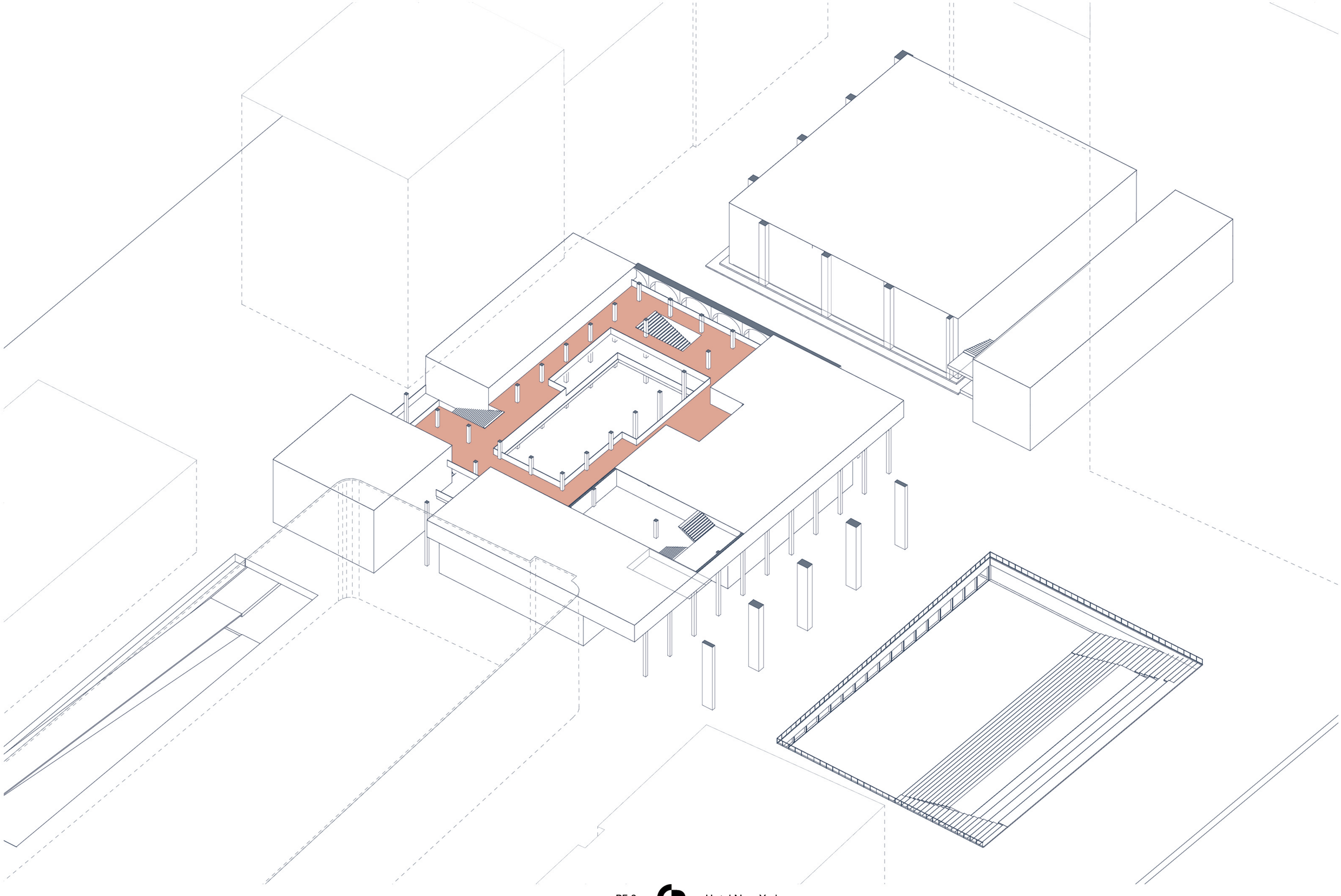
First level



Routing

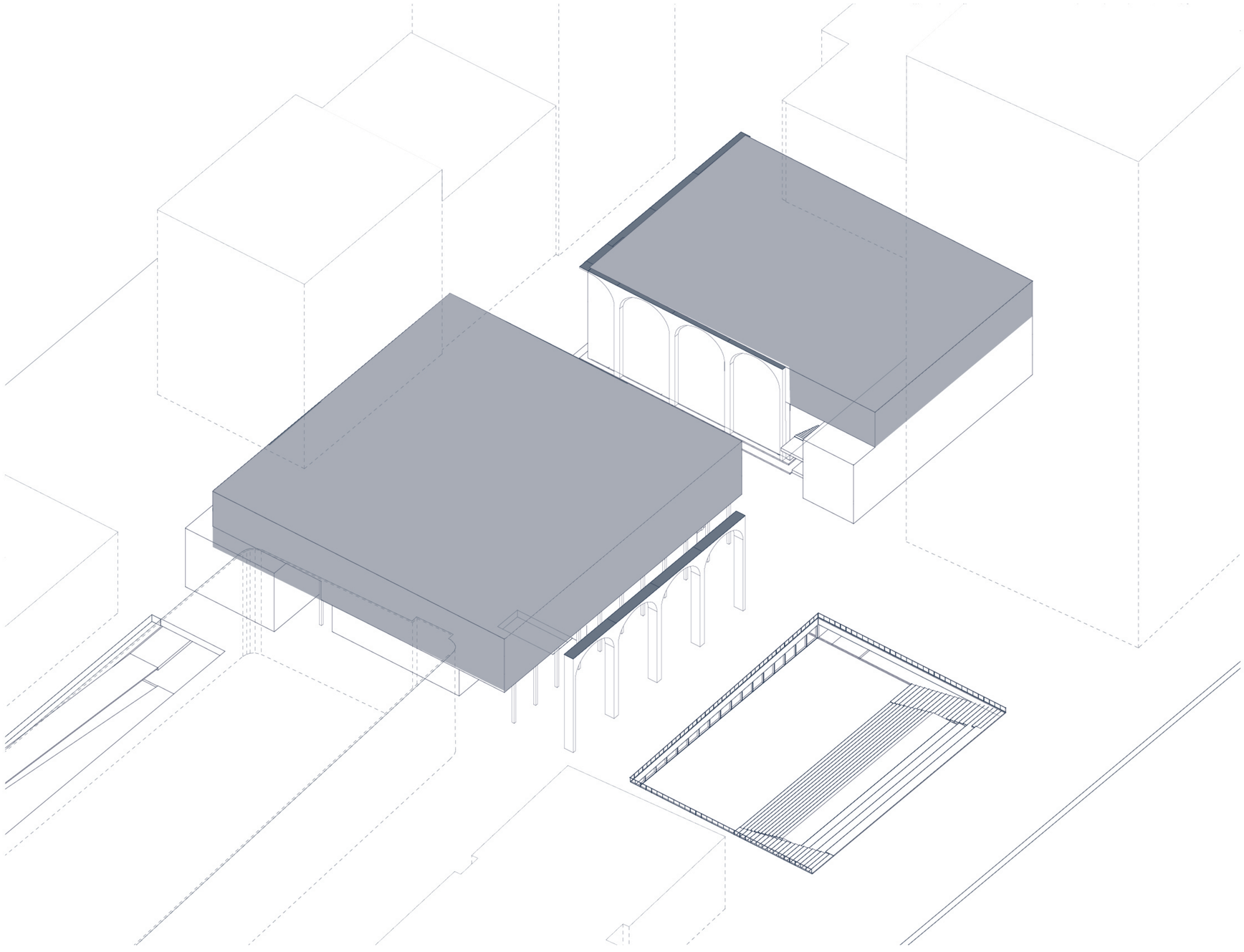


Upper courtyard



Third and fourth level

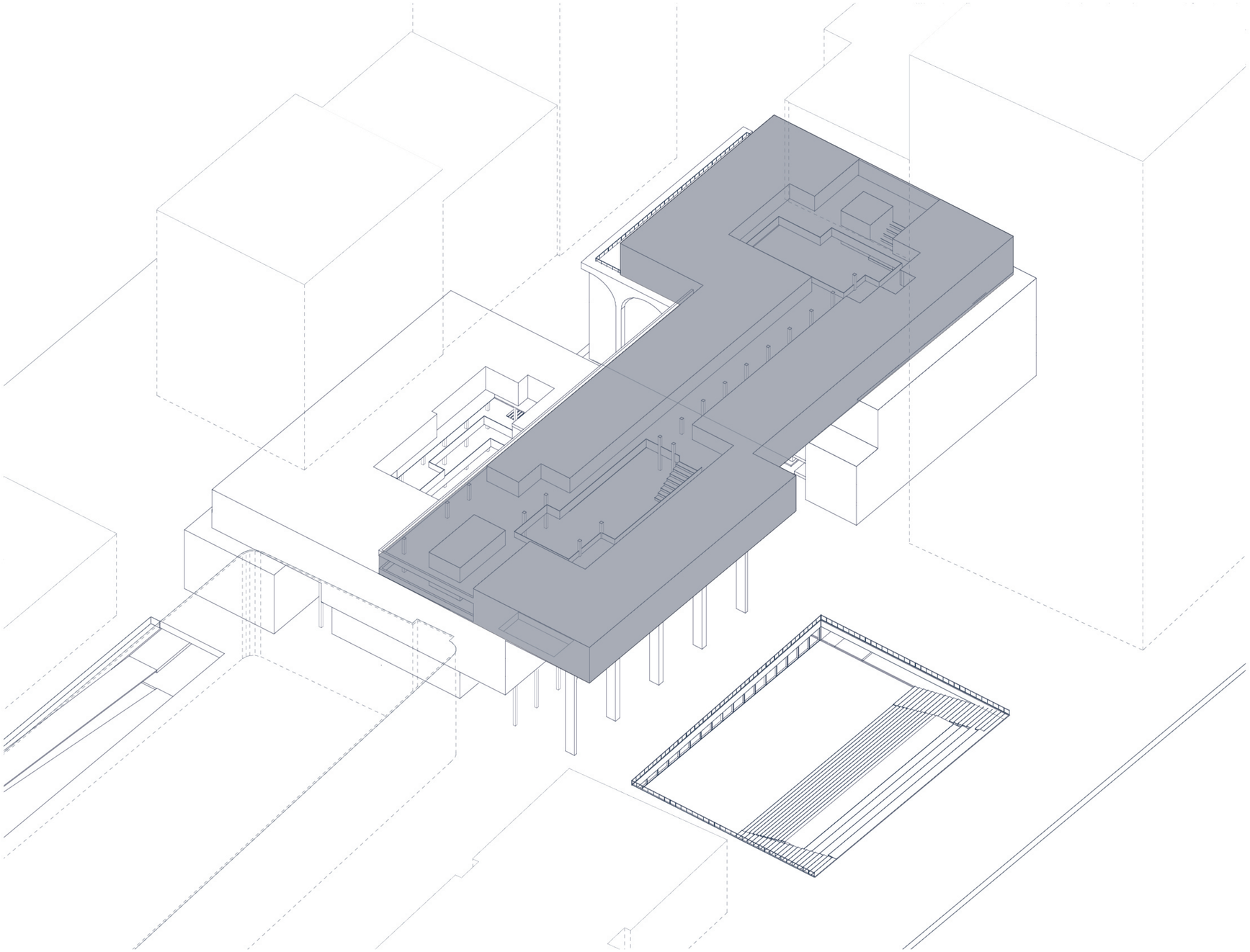
Aanpassen Axo

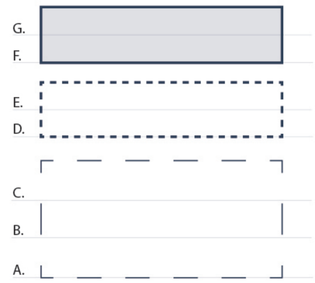




Apartment blocks

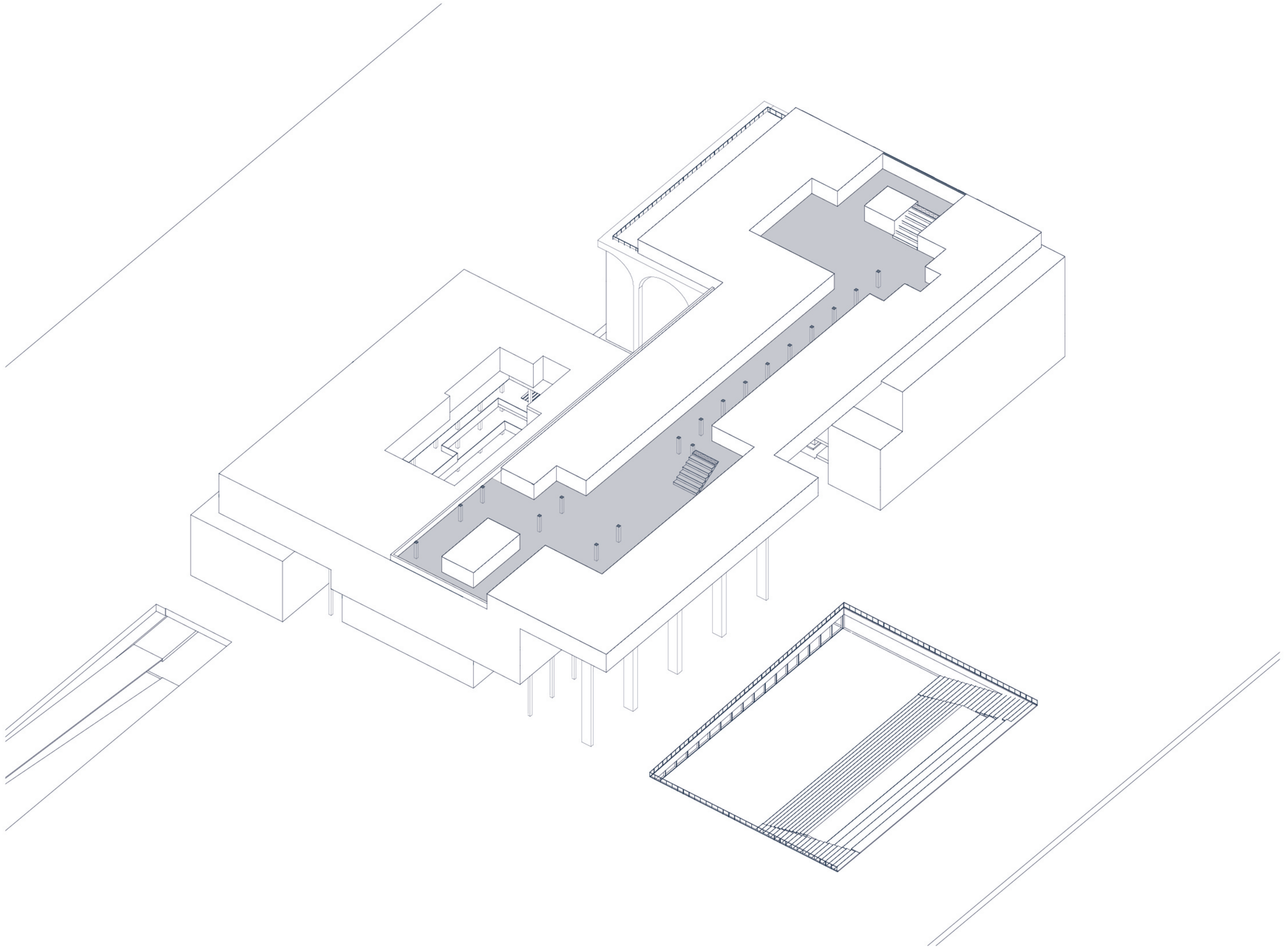
Aanpassen gevel



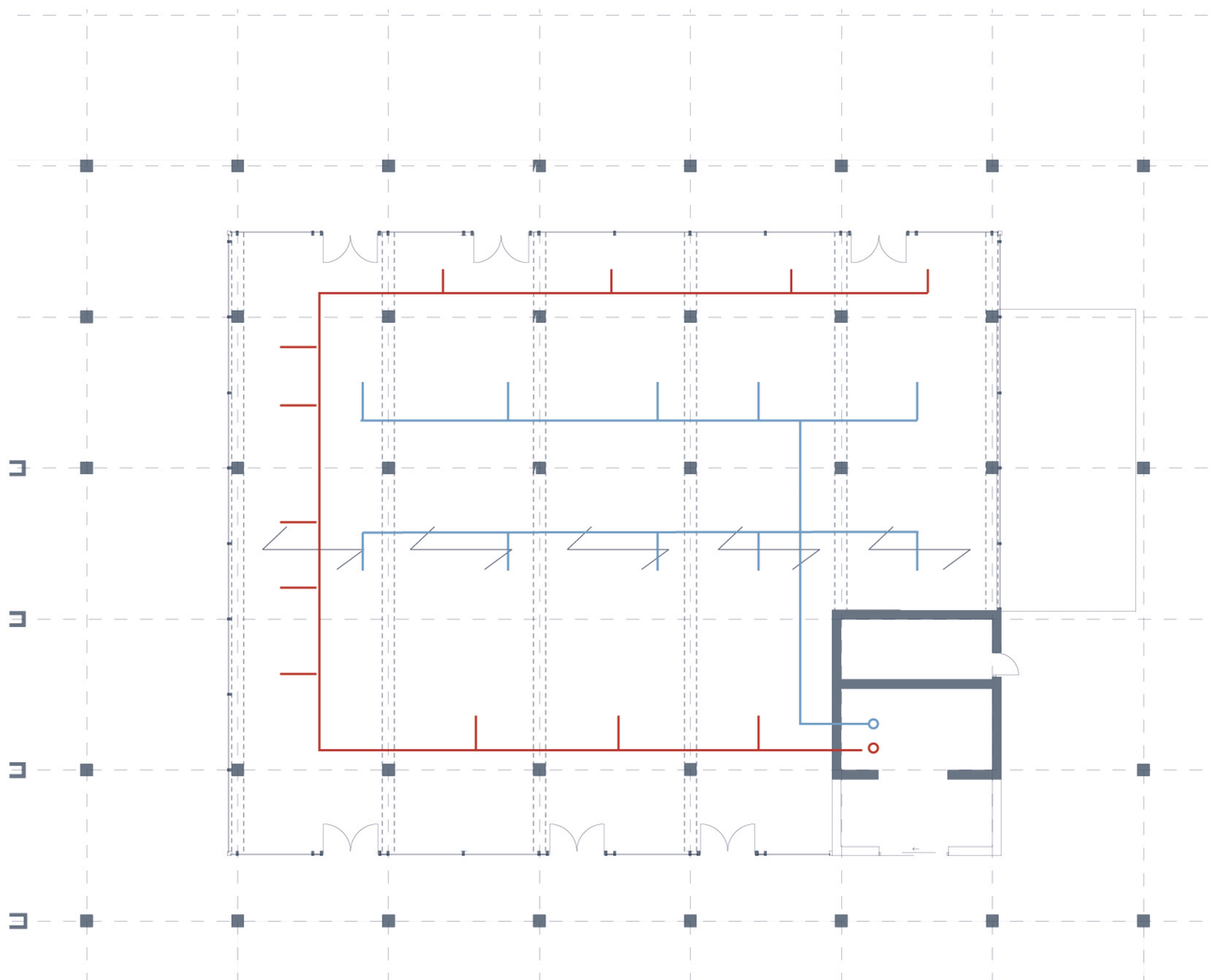


Orientation inwards

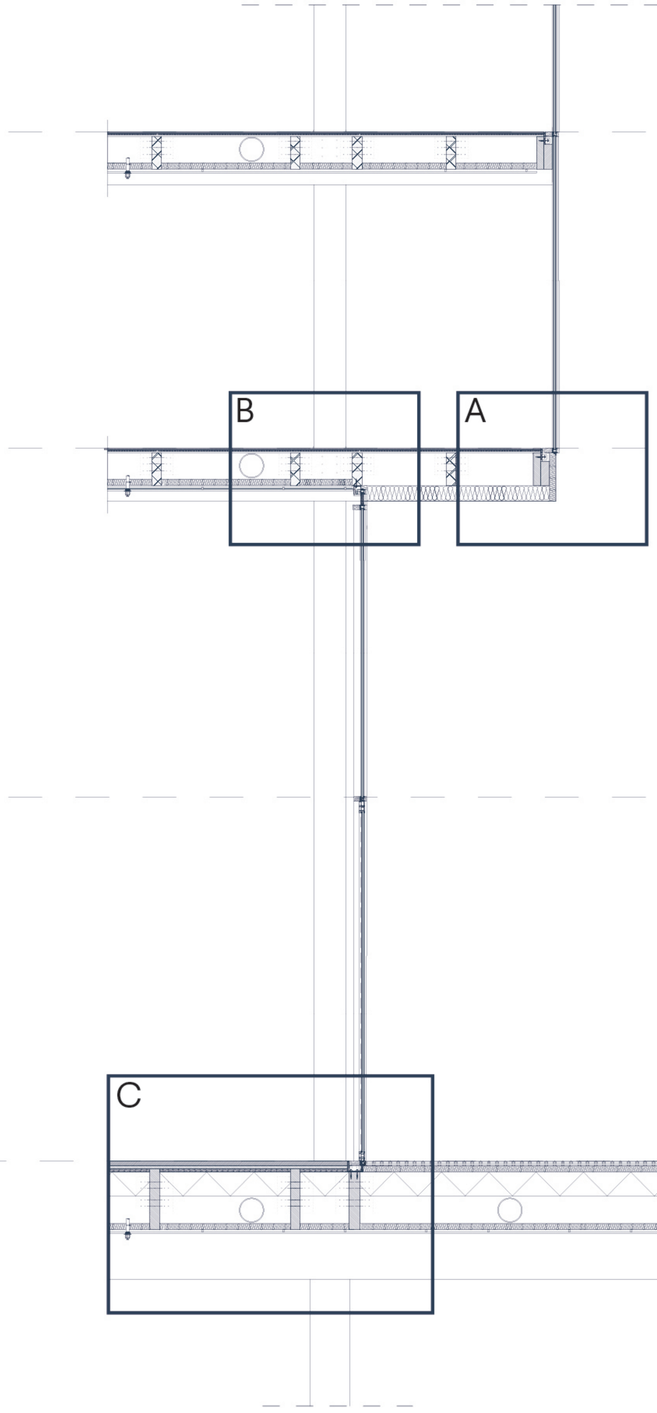
Aanpassen gevel



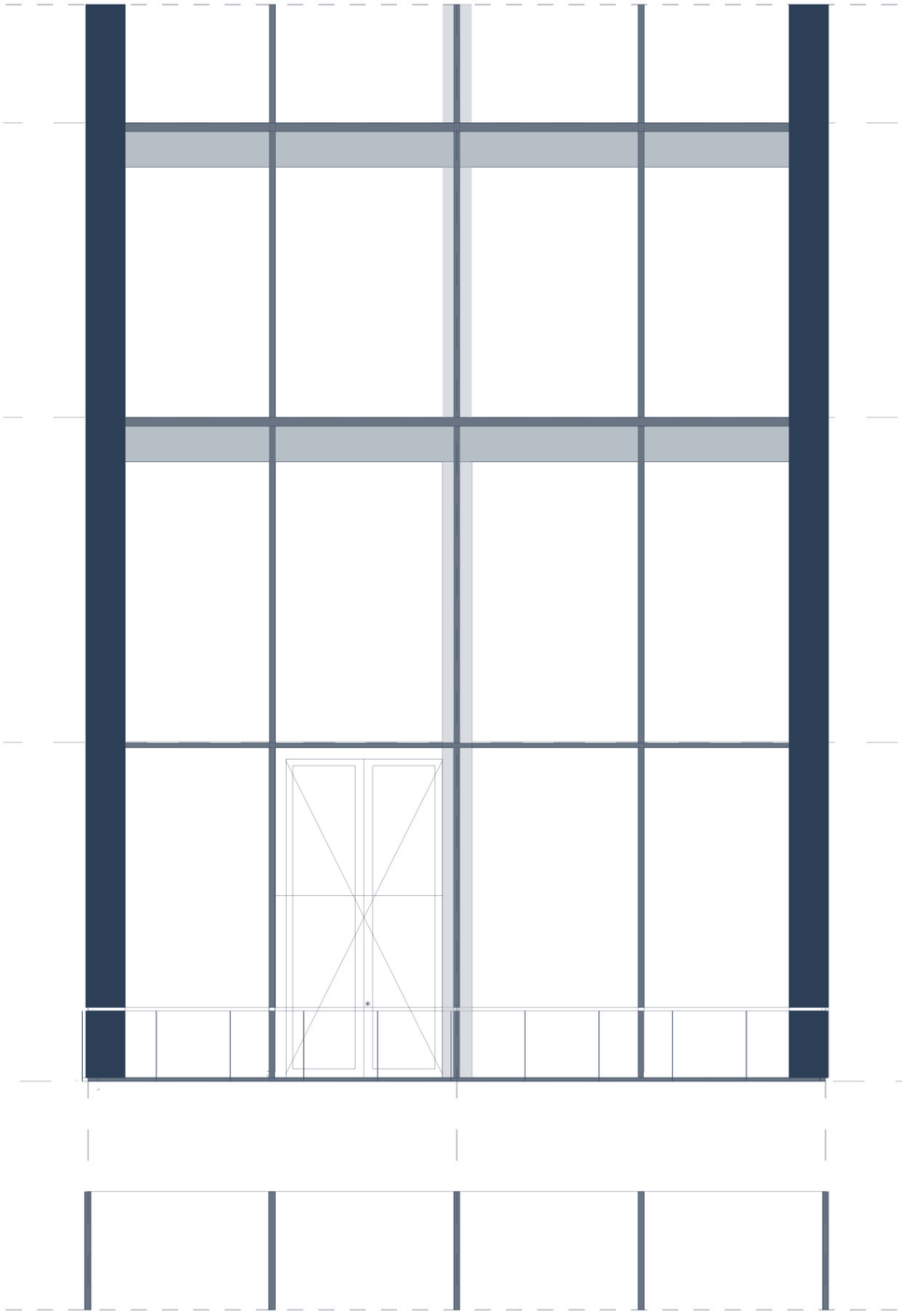
Climate diagram



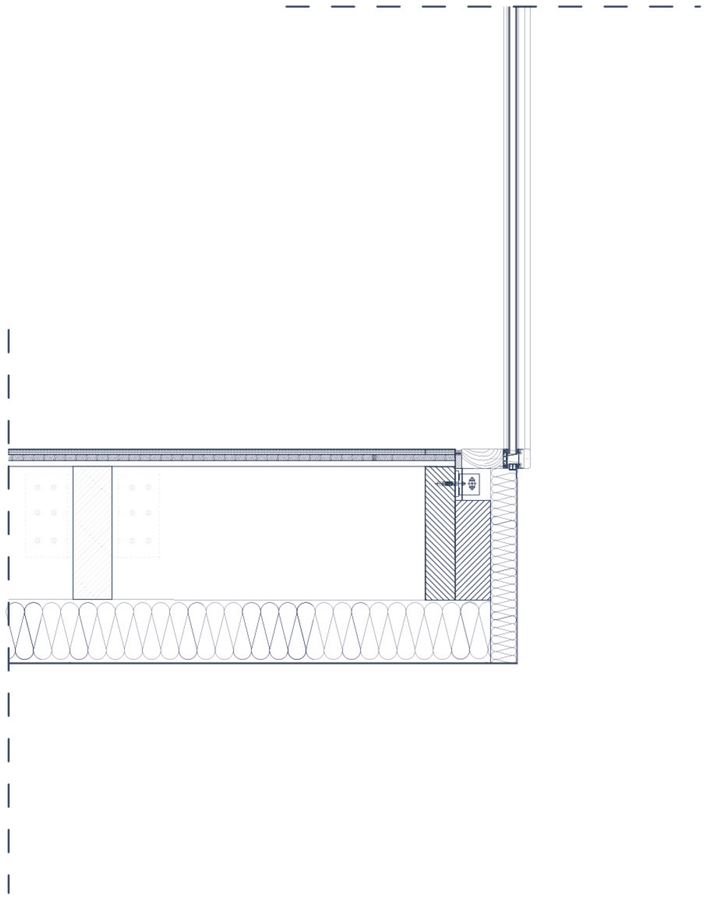
1:20 detail



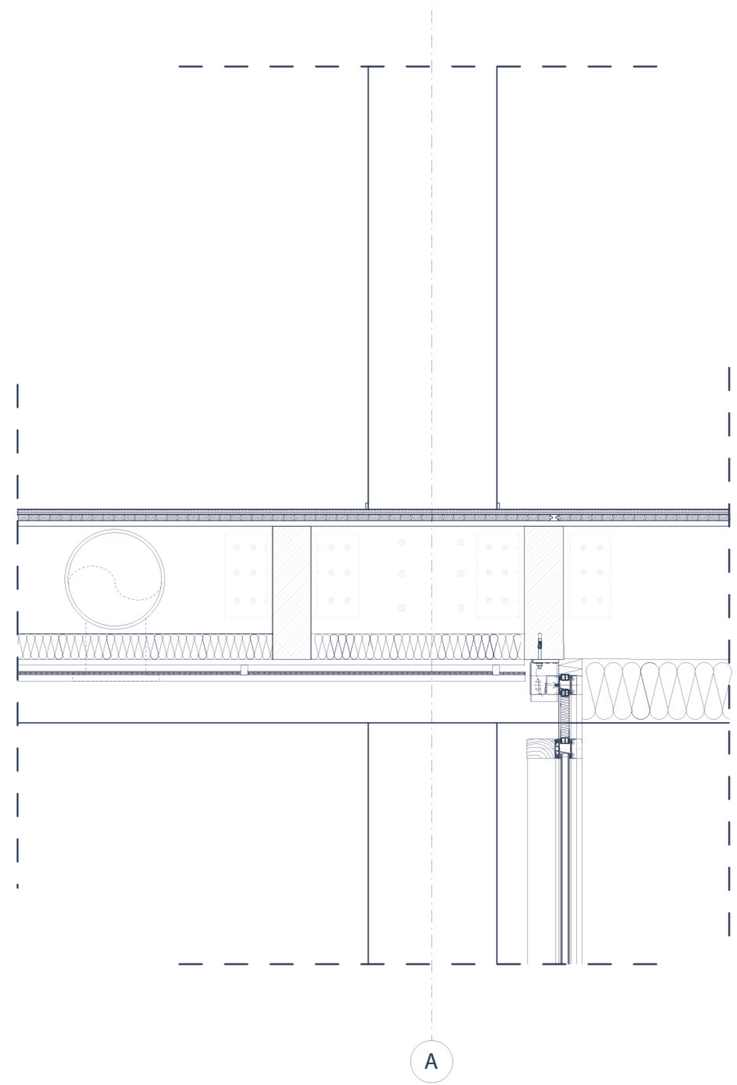
Aanpassen



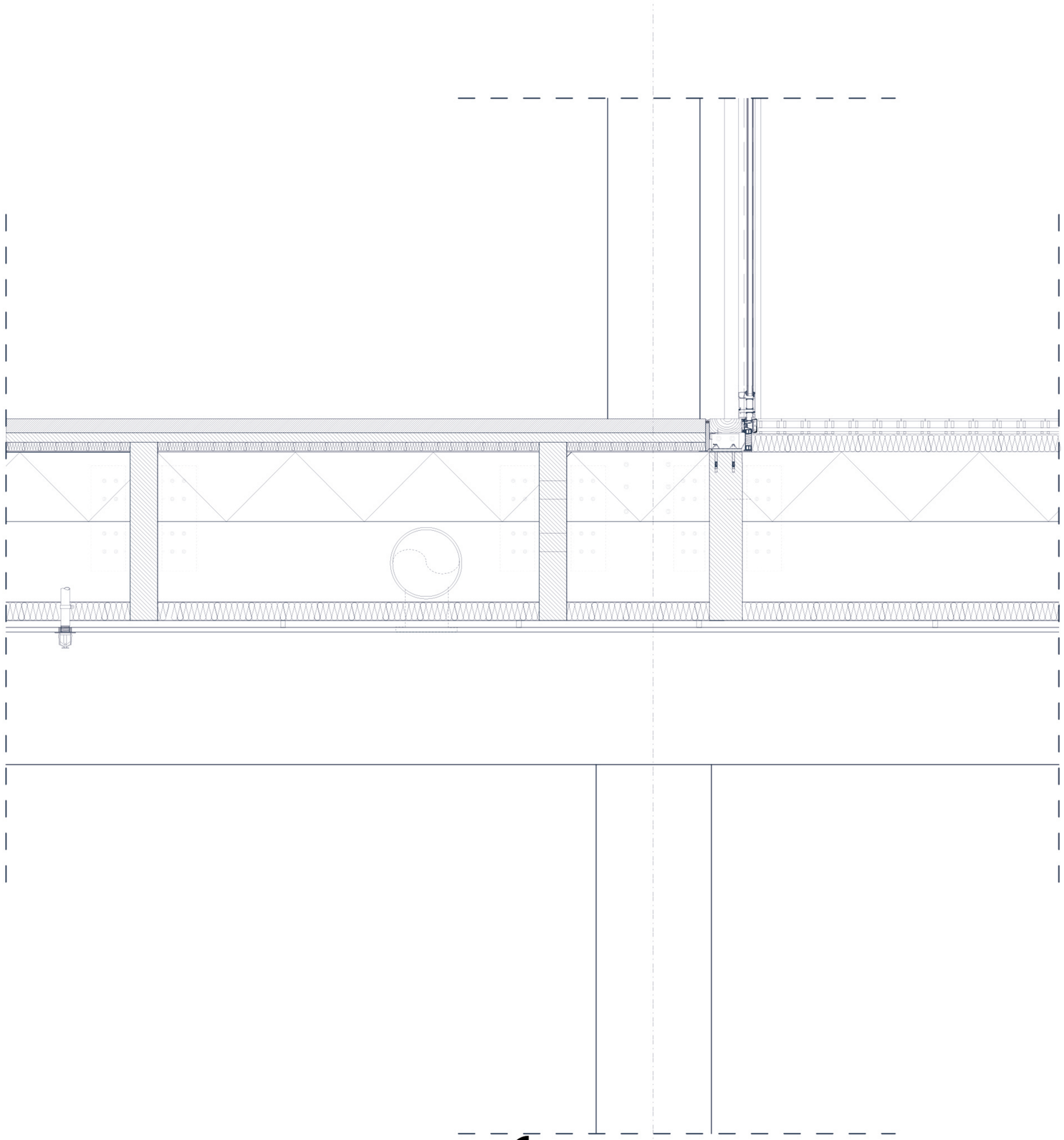
Detail A



Detail B



Detail C



Horizontal detail

