The public mezzanine

performing arts theatre Rotterdam

Public realm graduation
studio Rotterdam
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P5 presentation 29.06.2012 **Dirk de Groot**

The public mezzanine

performing arts theatre Rotterdam

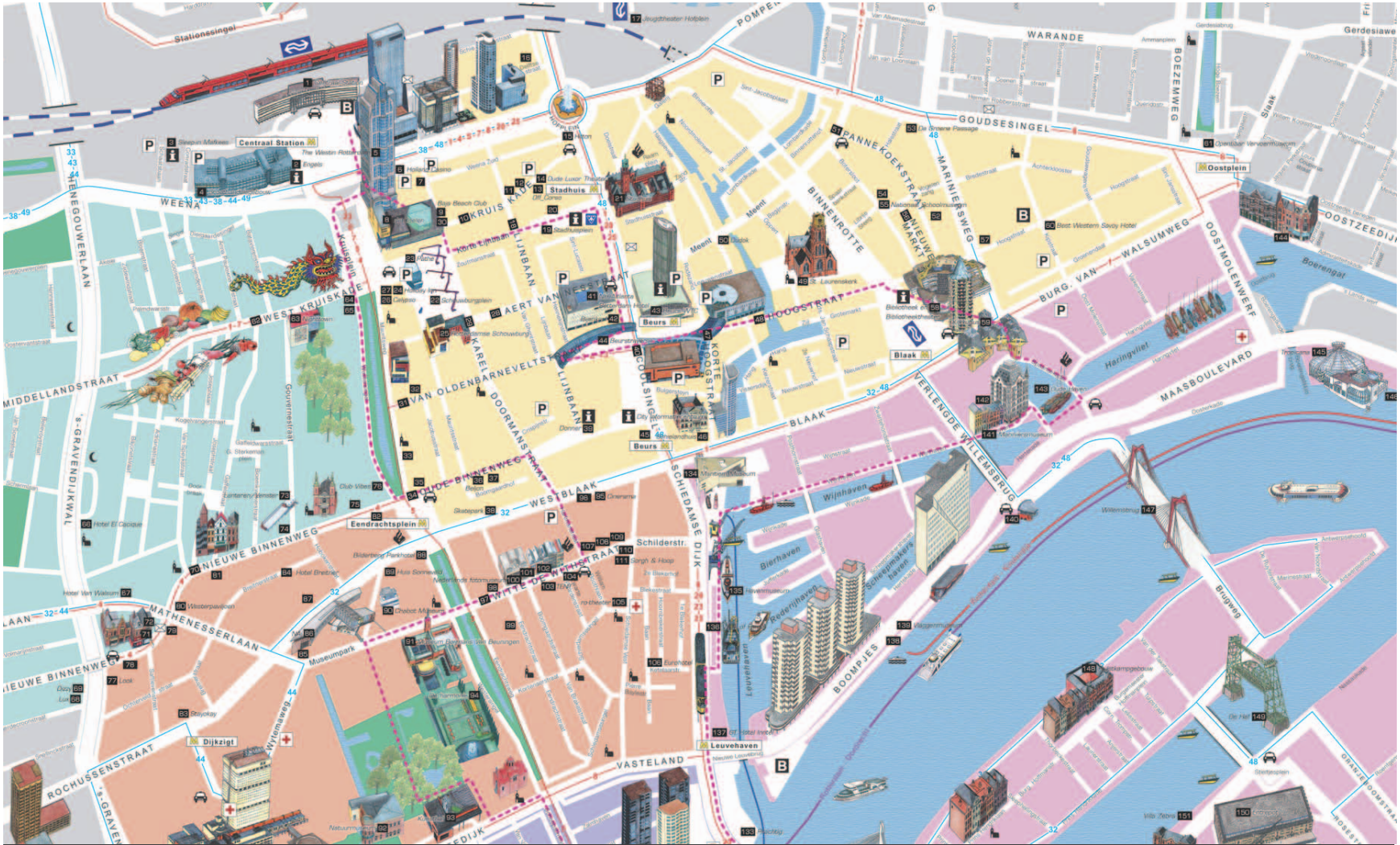
Introduction
- location
- preliminary research

Masterplan
- urban scenario
- concept

Design
- concept
- plans
- sections
- materialisation
- construction
- climate

01 Introduction

01 Introduction



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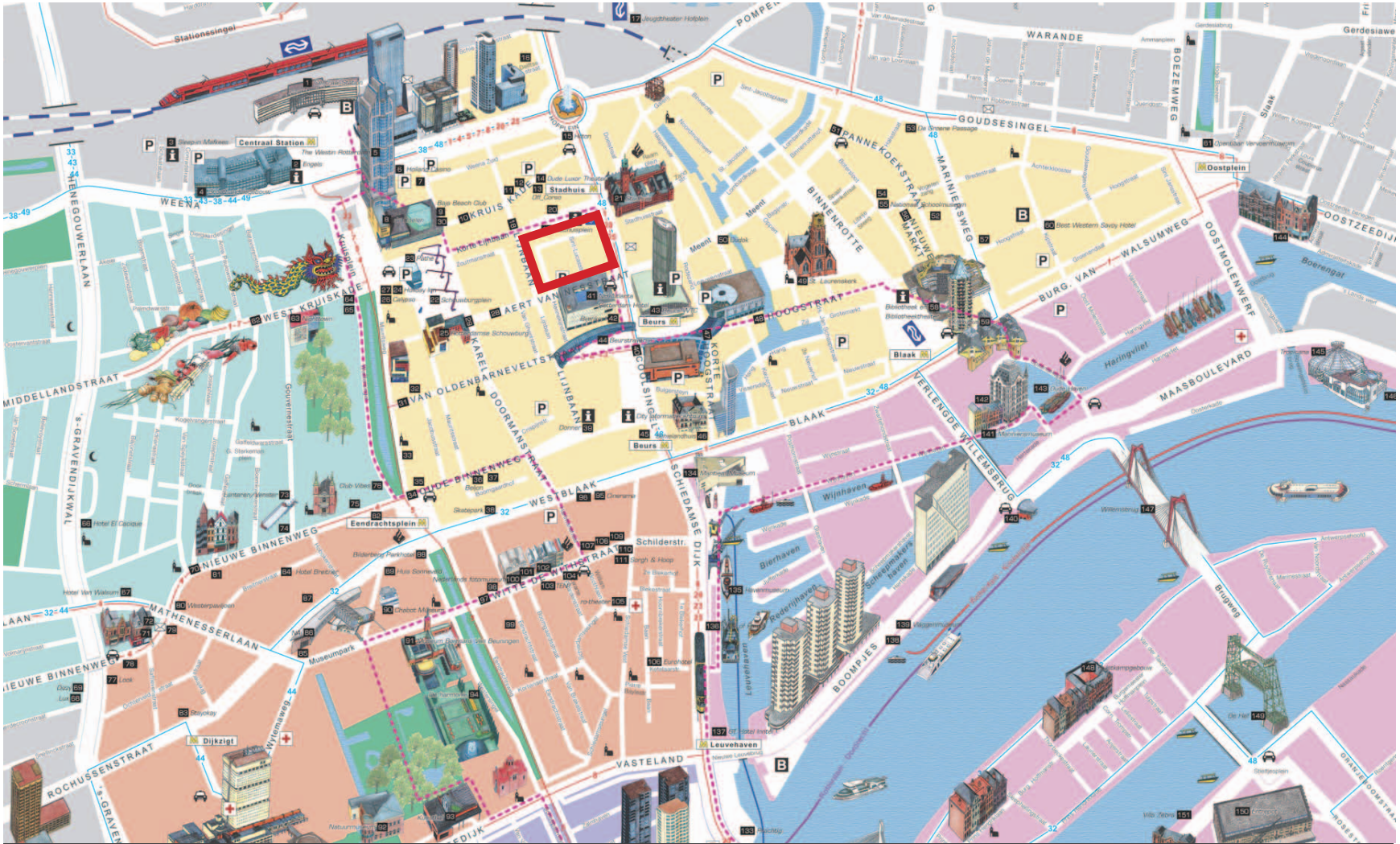

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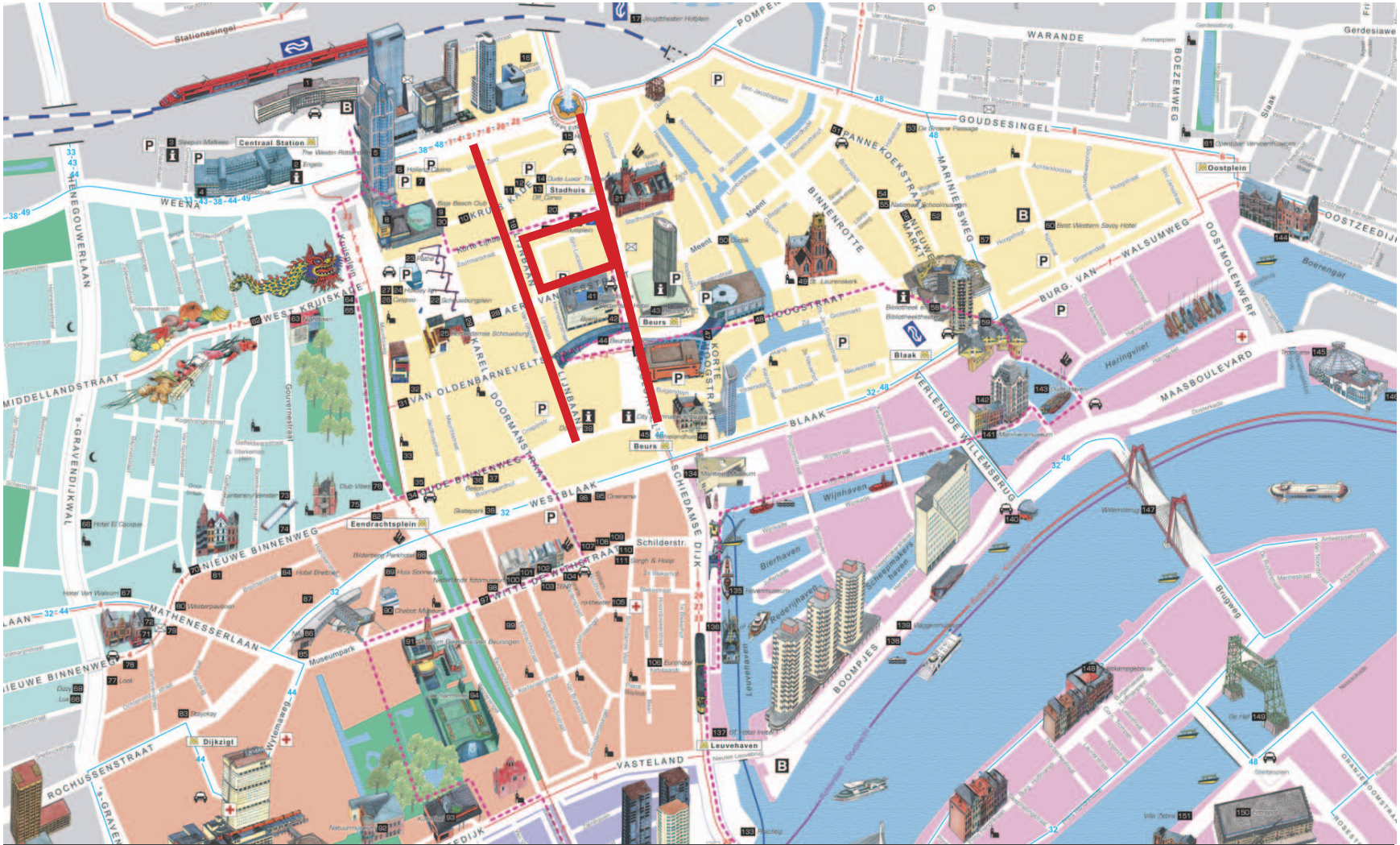
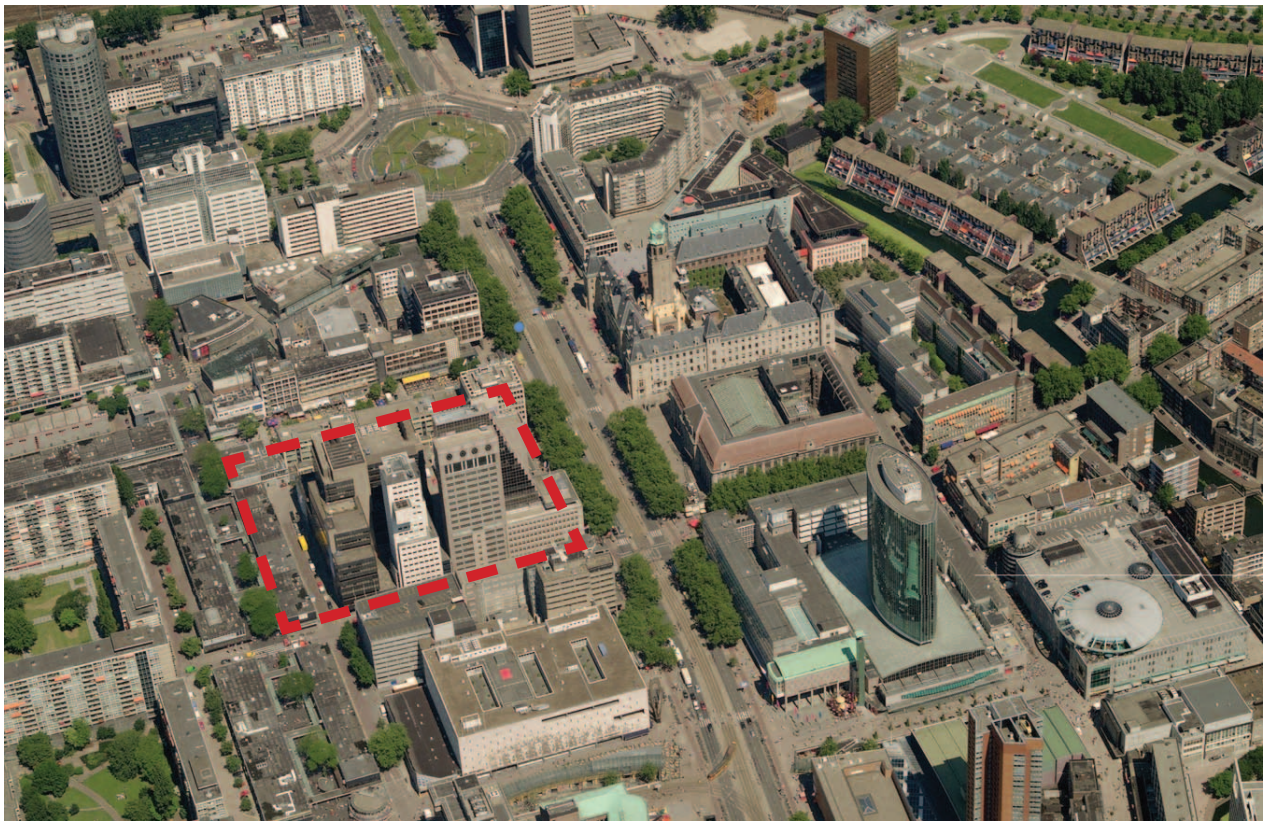


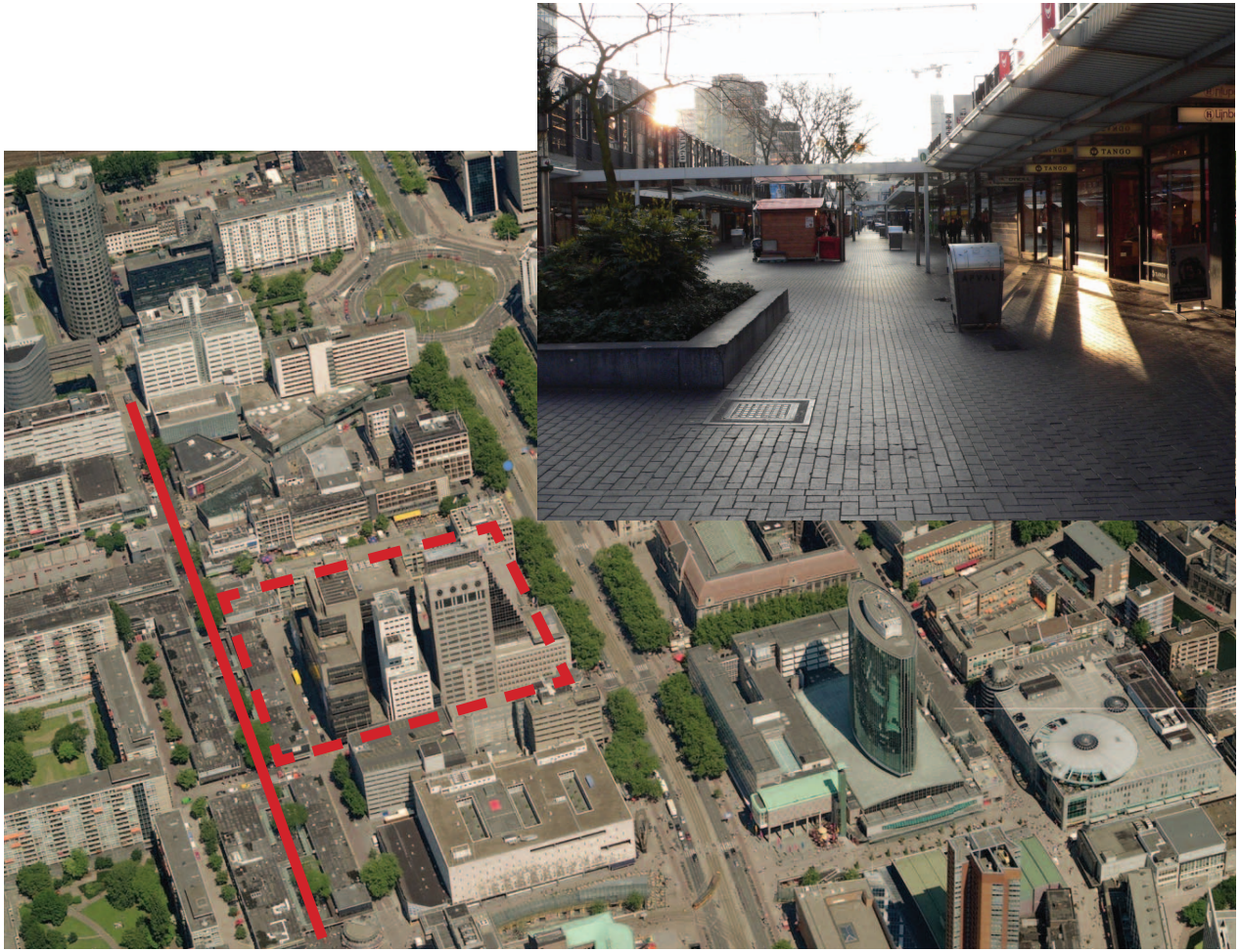
01 Introduction

location within Rotterdam versus adjacent streets



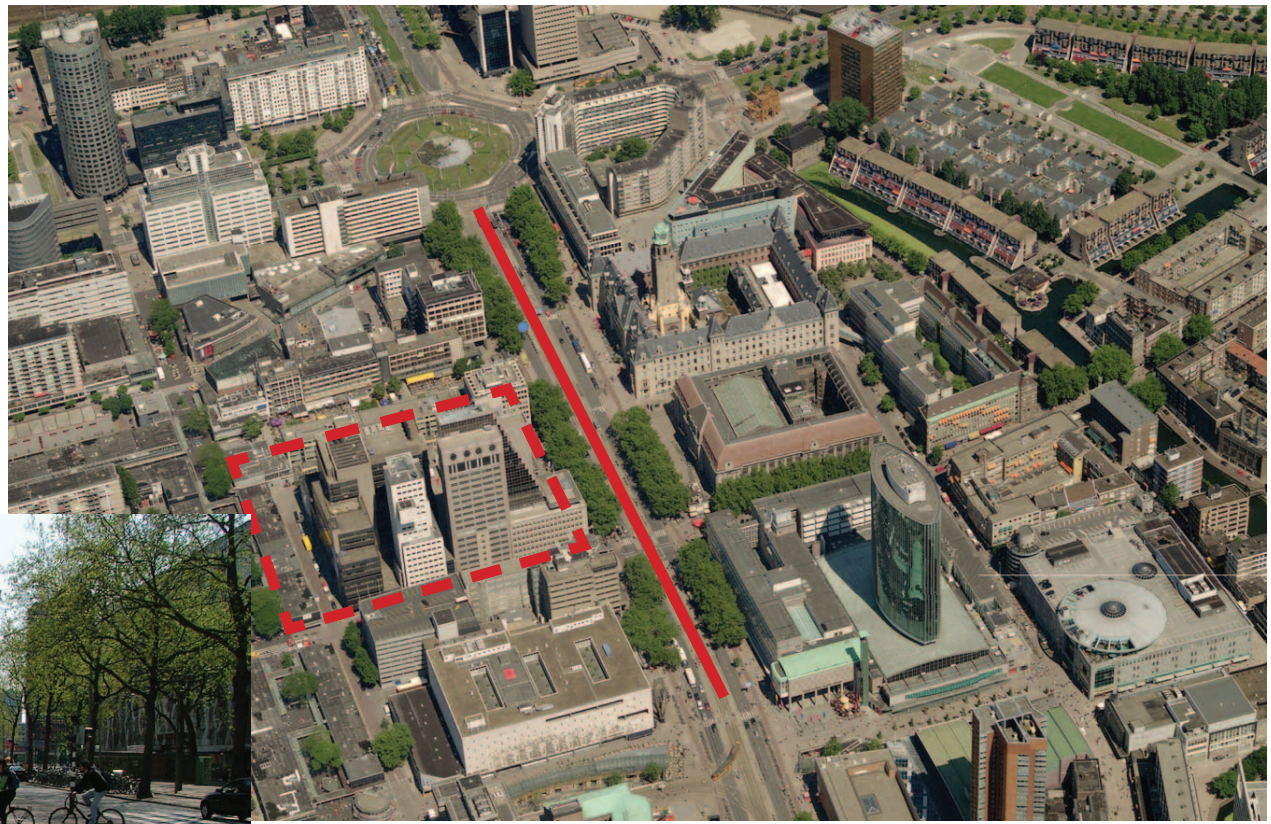
01 Introduction

Lijnbaan
shopping street
Broek en Bakema
assembly



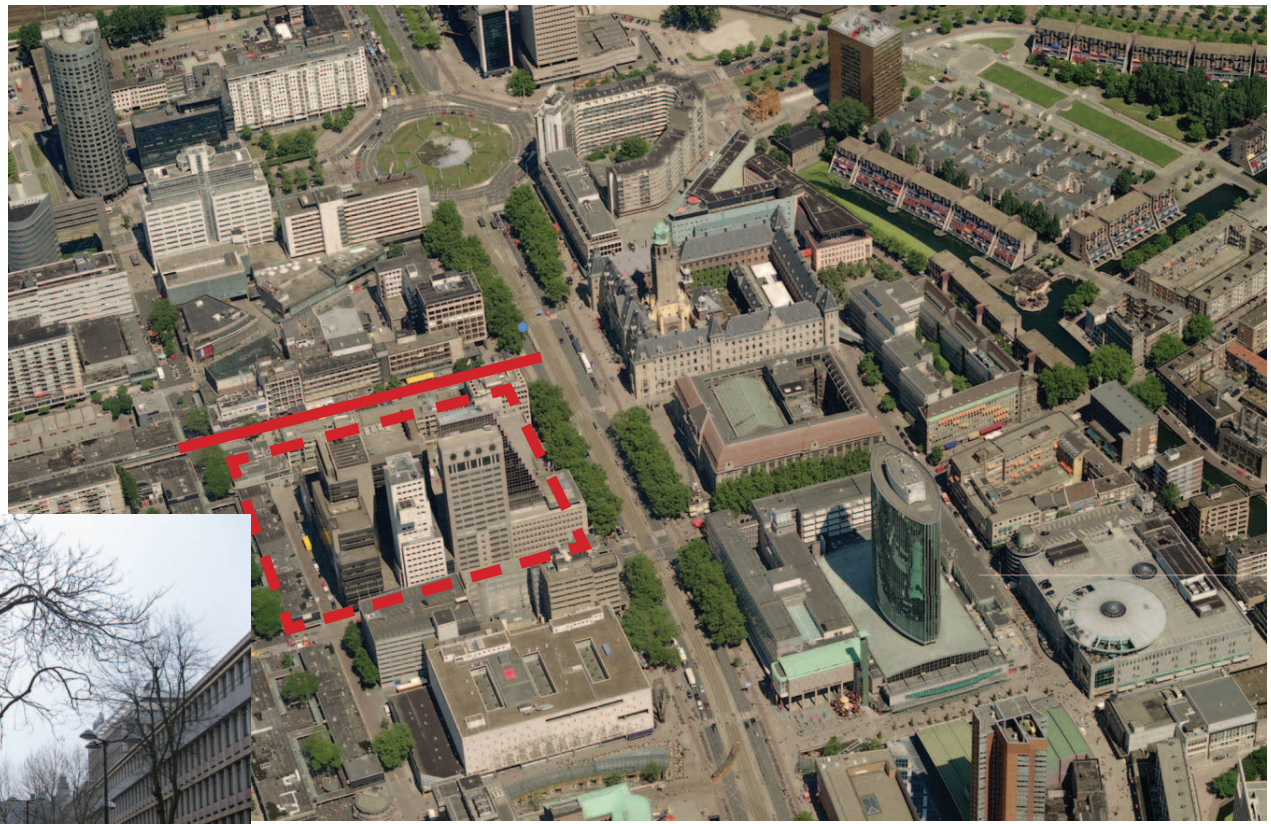
01 Introduction

Coolsingel
boulevard/traffic zone
blocks



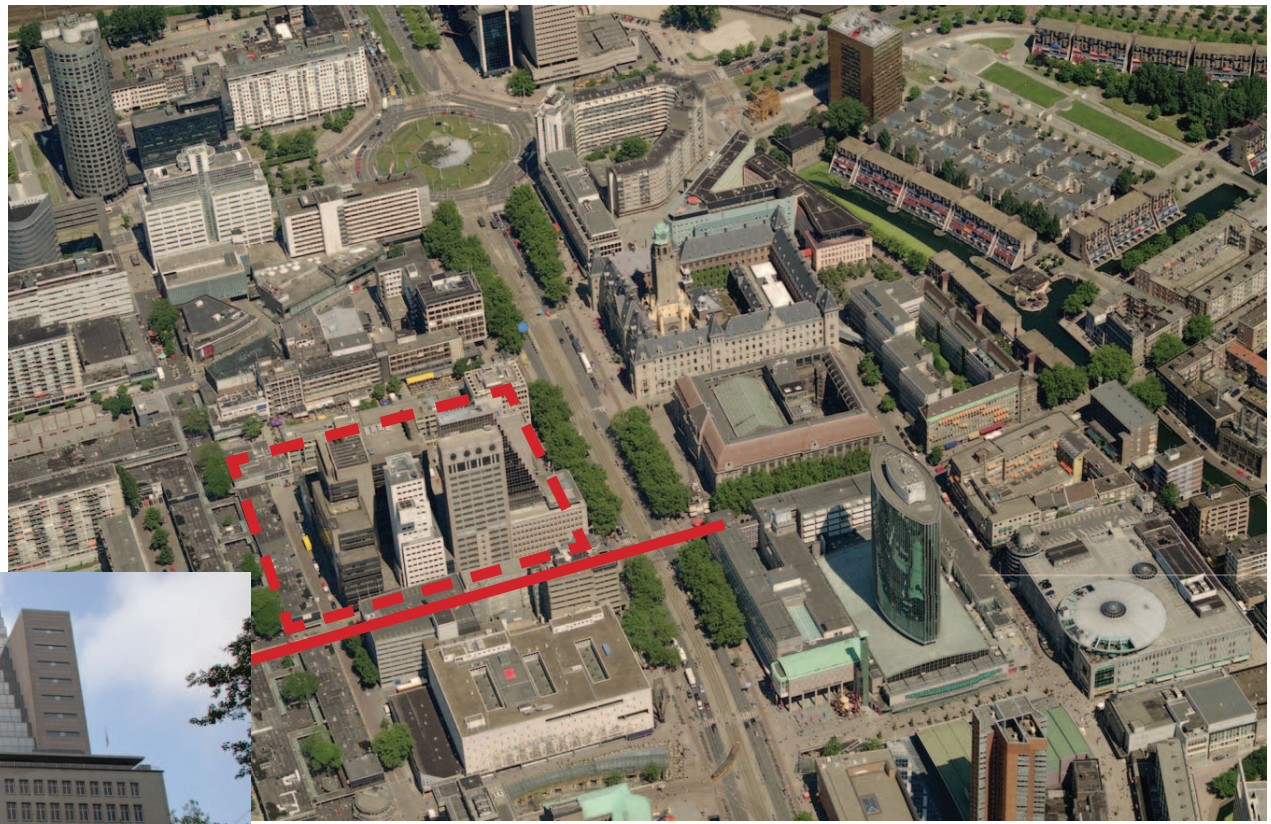
01 Introduction

Stadhuisplein
horeca



01 Introduction

Aert van Nesstraat
highrise offices
connection east-west



01 Introduction

Research into functions, structure and activities

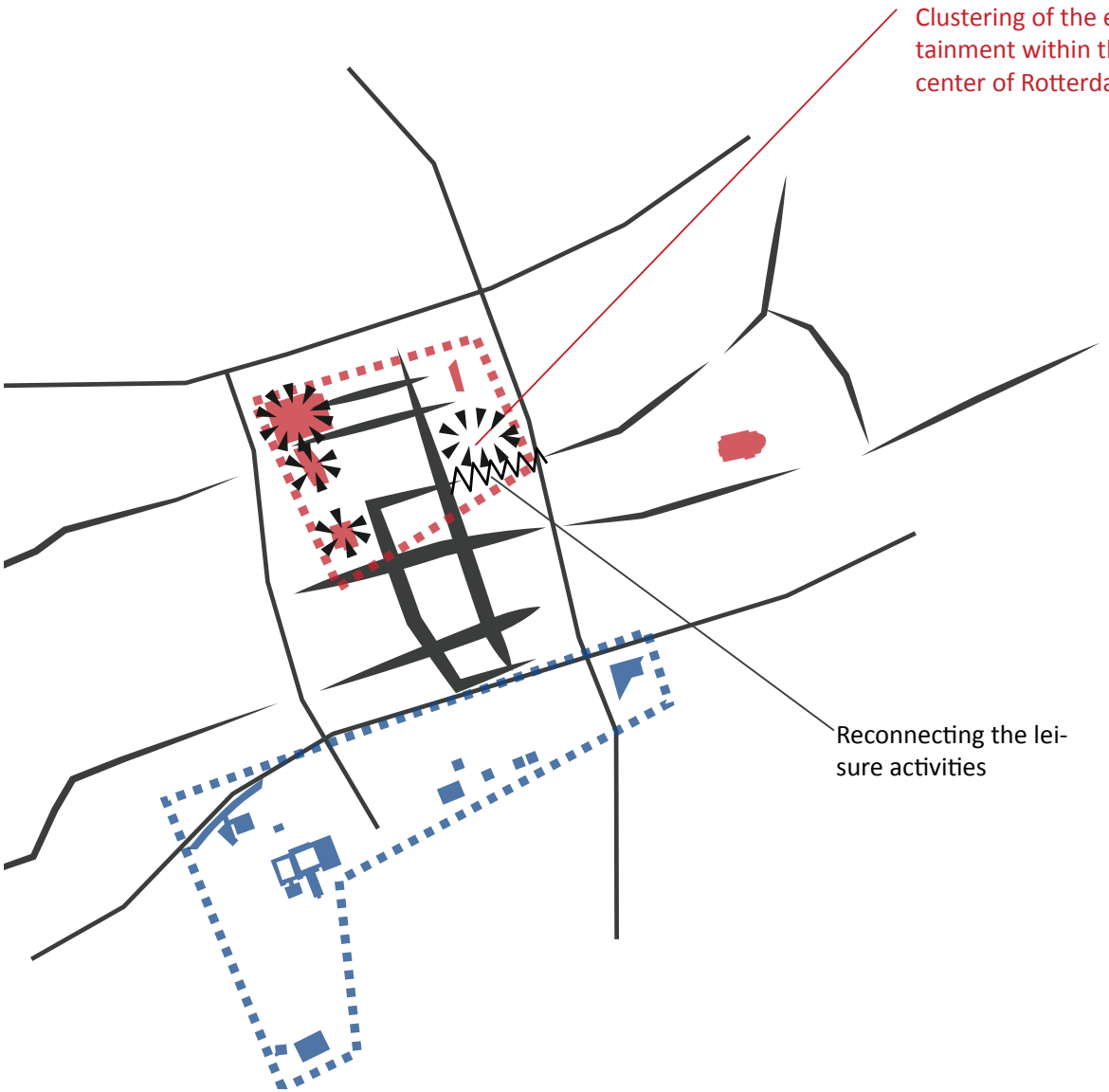
Focus on entertainment and shopping

Intensity of shopping

clustering of entertainment

clustering of culture

reconnecting the leisure activities between the Meent and Schouwburgplein

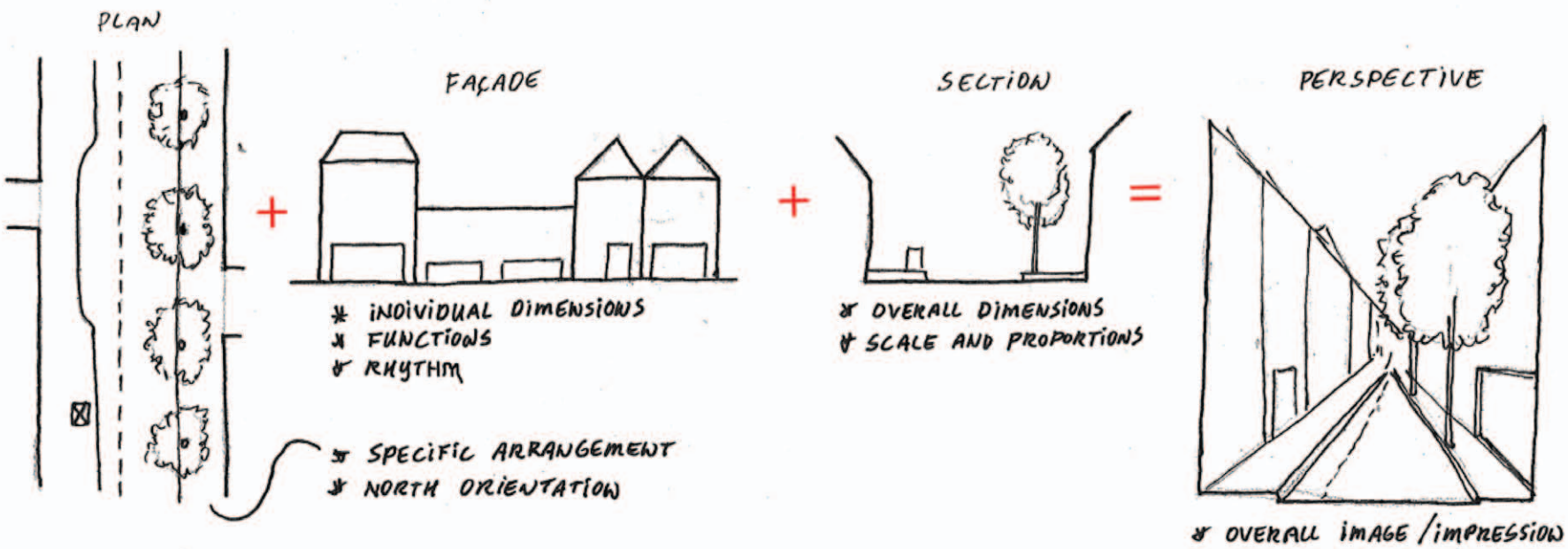


01 Introduction

methodology

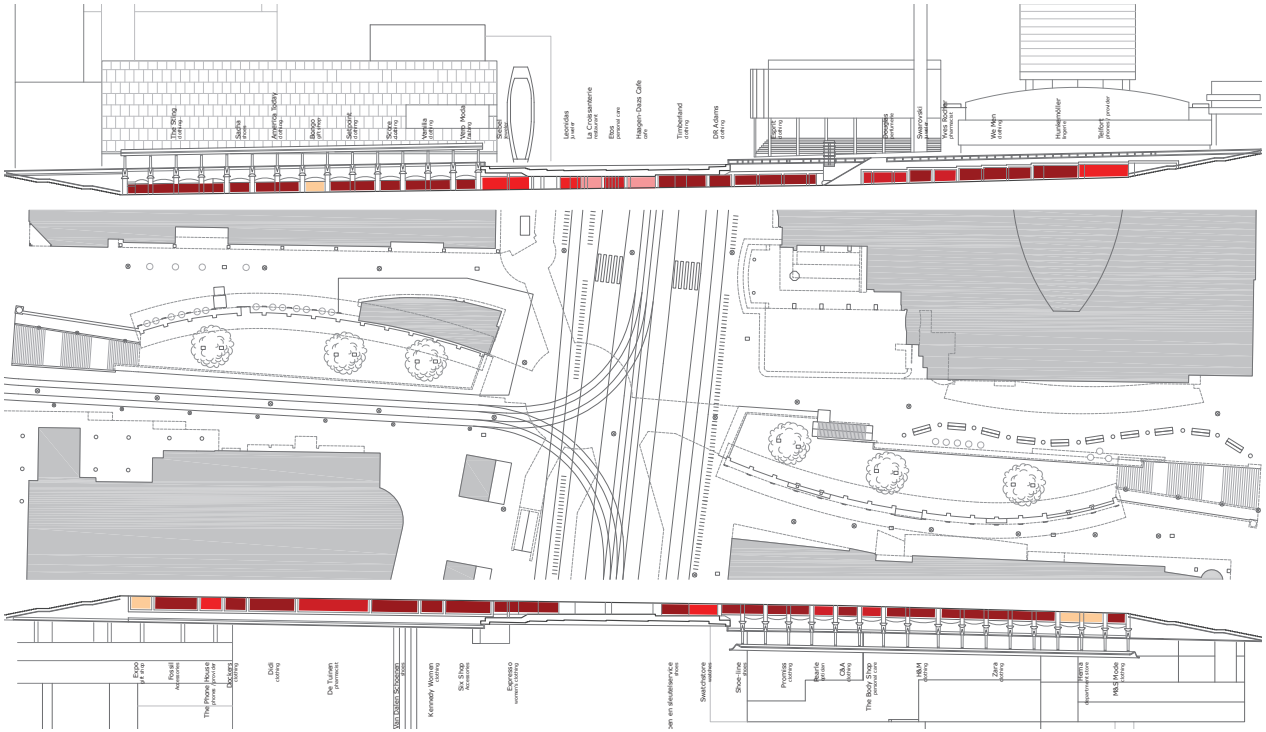
analysis of 6 main shopping
street as a ´case study´

more insight into the works
of shopping streets



01 Introduction

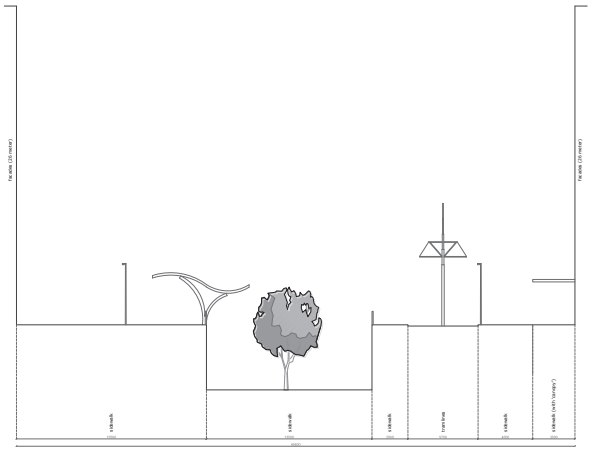
analysis of Beurstraverse or Koopgoot

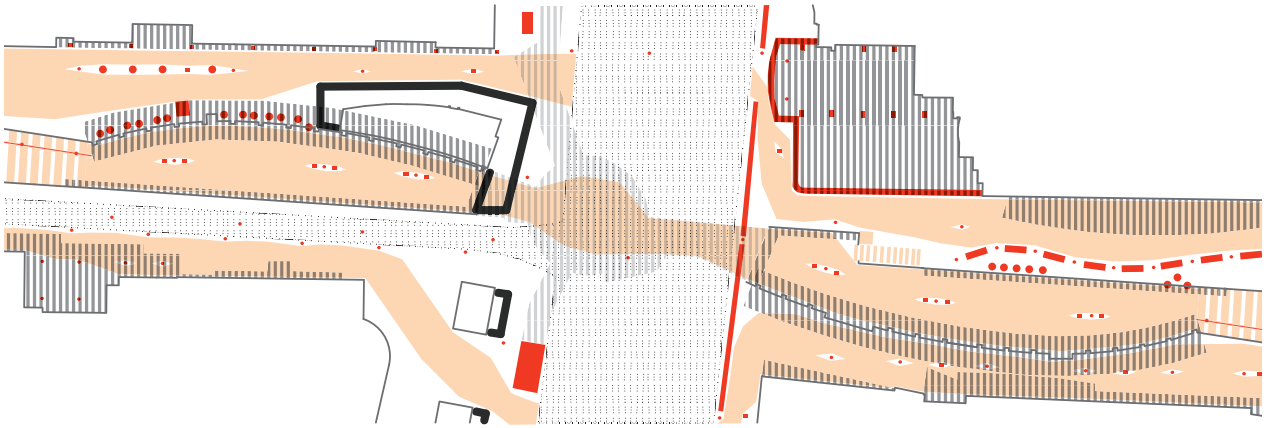


01 Introduction

analysis of Beurstraverse or Koopgoot

paths and visual element map





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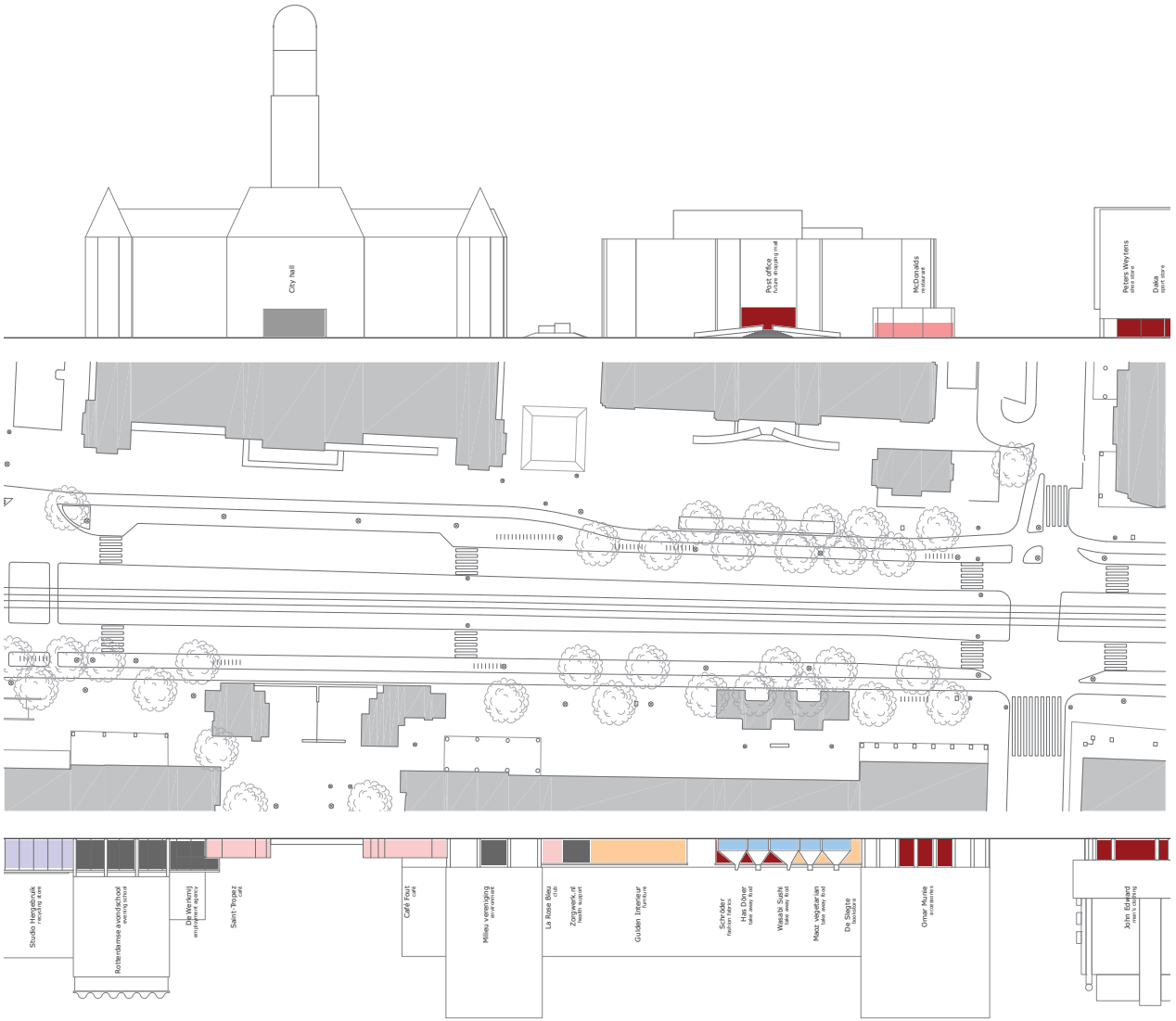
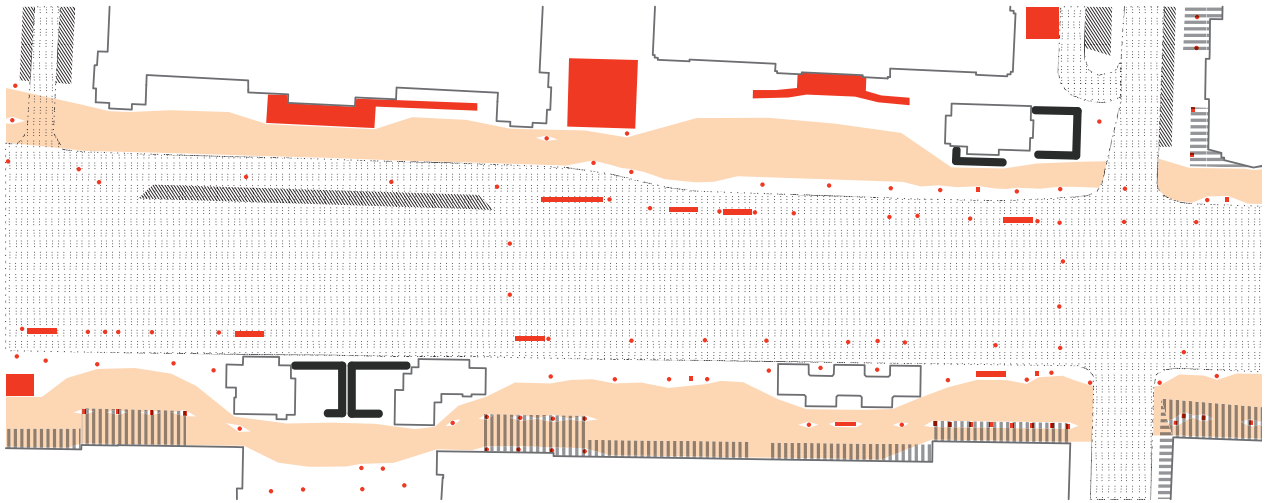


01 Introduction

analysis of Beurstraverse or Koopgoot

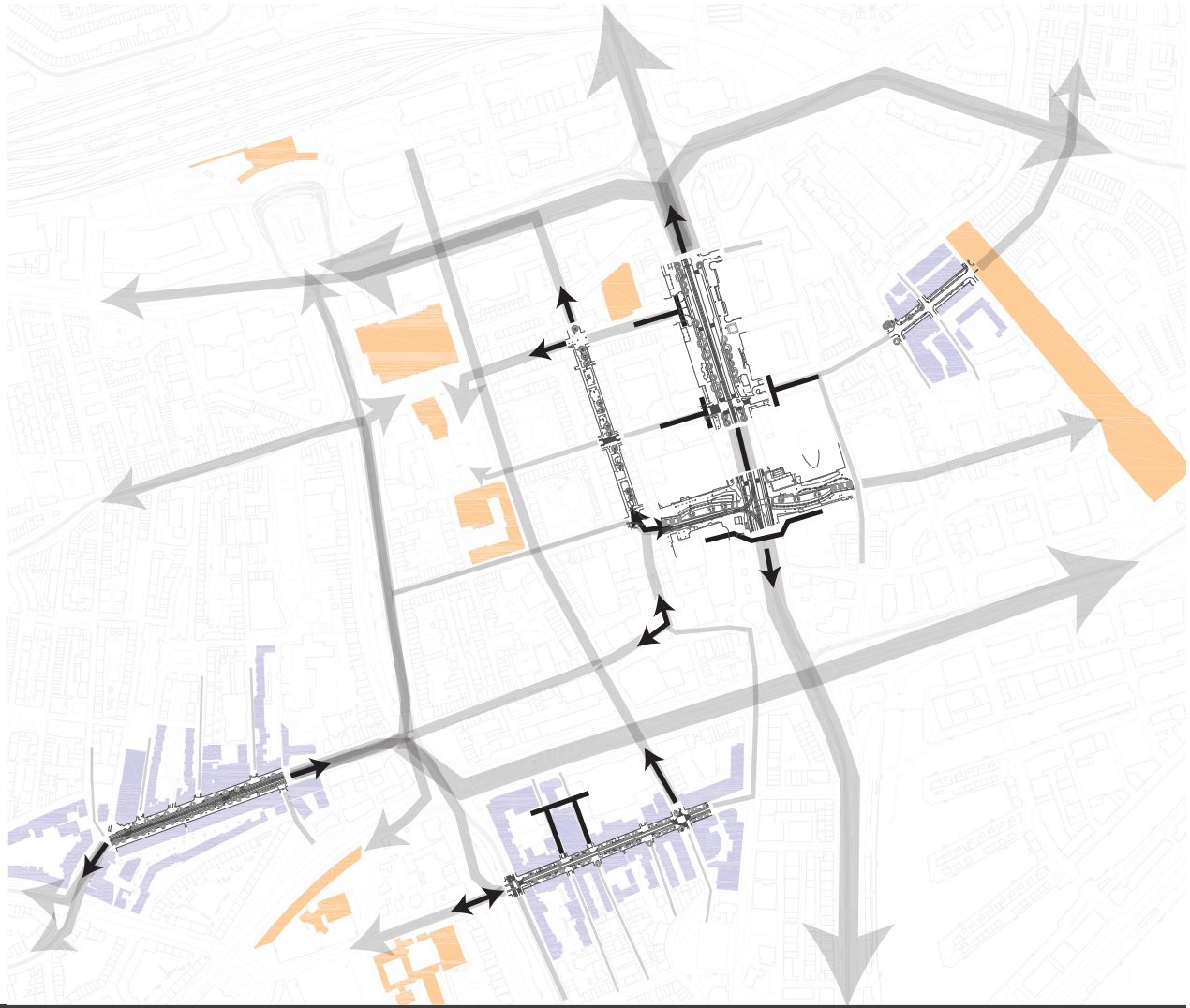
Profile Coolsingel | 1/200



01 Introduction

analysed shopping streets within context of Rotterdam and their embedment with local and regional area's

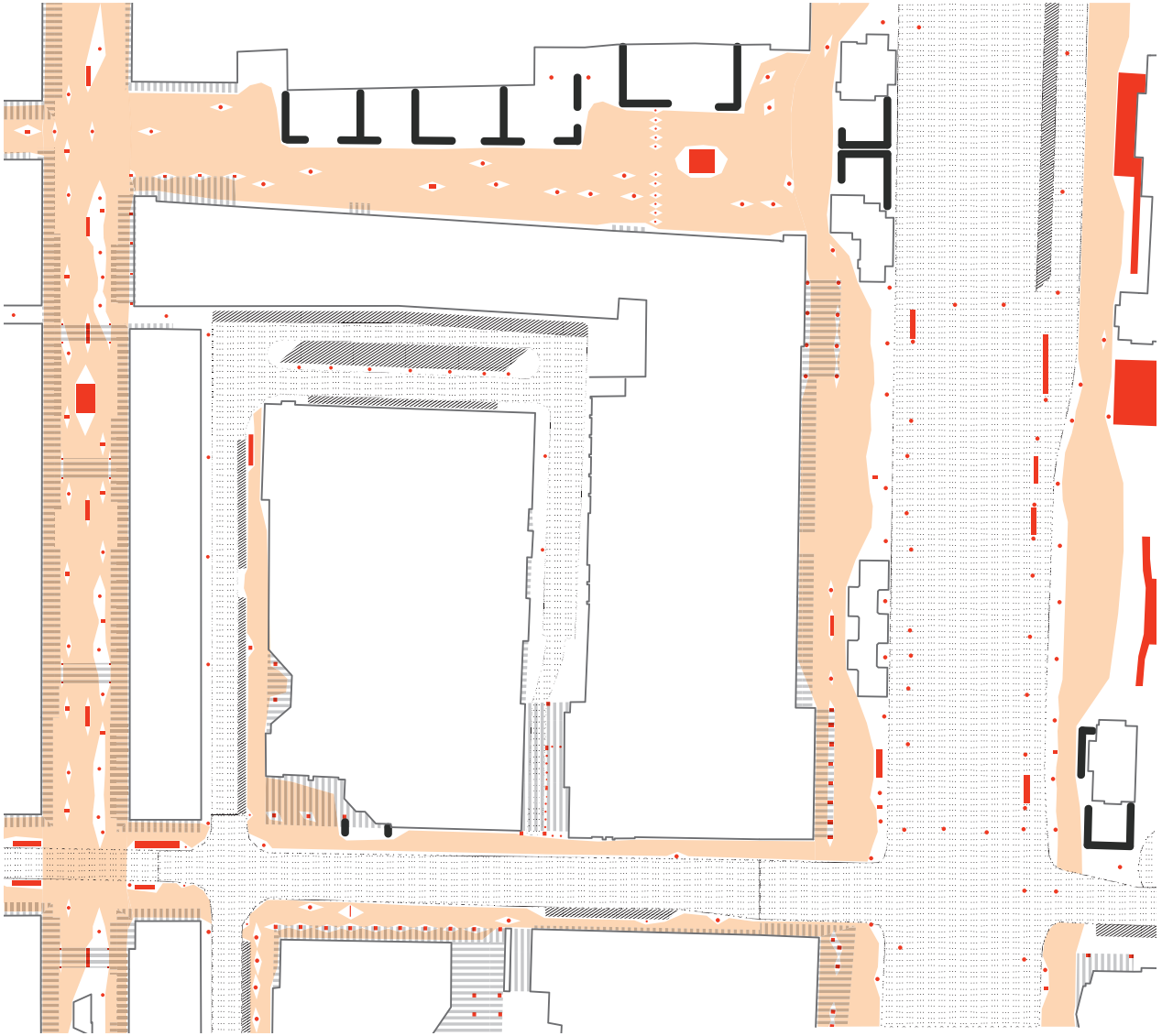
concluded with problems in connection but also individual solutions



02 Masterplan

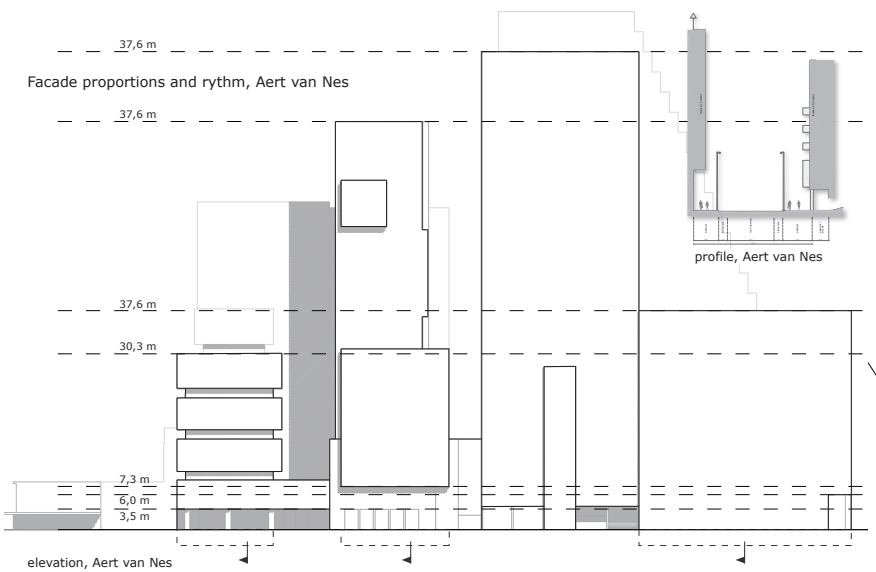
02 Masterplan

path and visual elements diagram



02 Masterplan

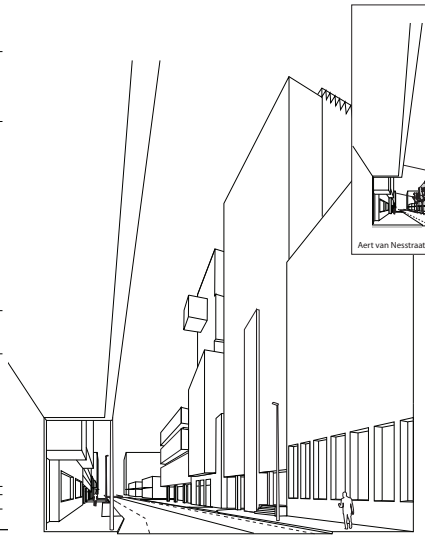
streetanalysis



Facade proportions and rythm, Aert van Nes

profile, Aert van Nes

elevation, Aert van Nes



Aert van Nesstraat - current situation

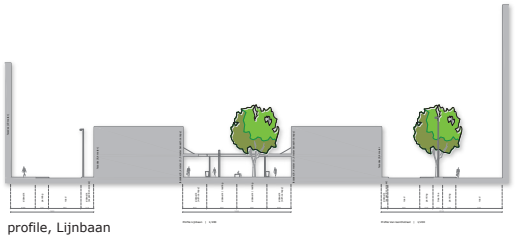
Aert van Nesstraat - introduced elements

Aert van Nesstraat - proposal

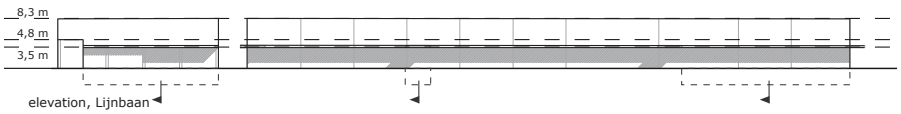
02 Masterplan

streetanalysis

Facade proportions and rythm, Lijnbaan

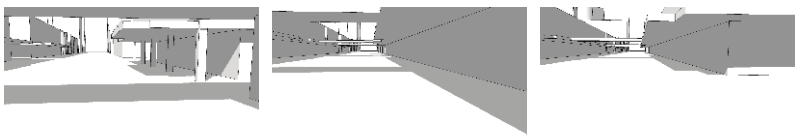


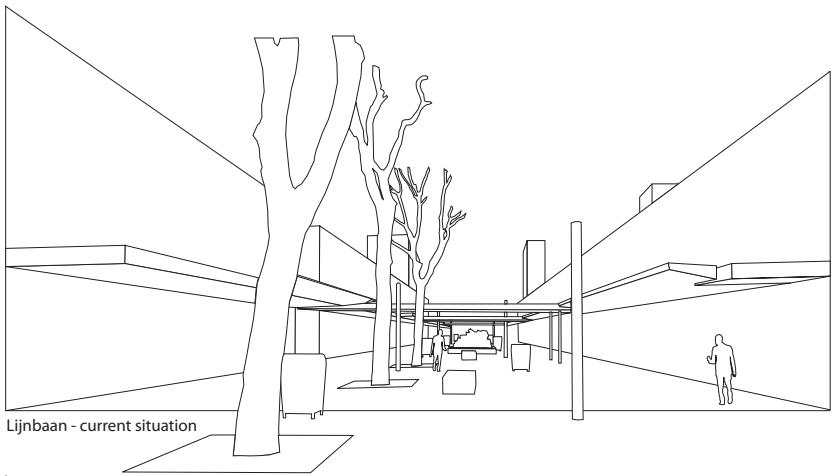
profile, Lijnbaan



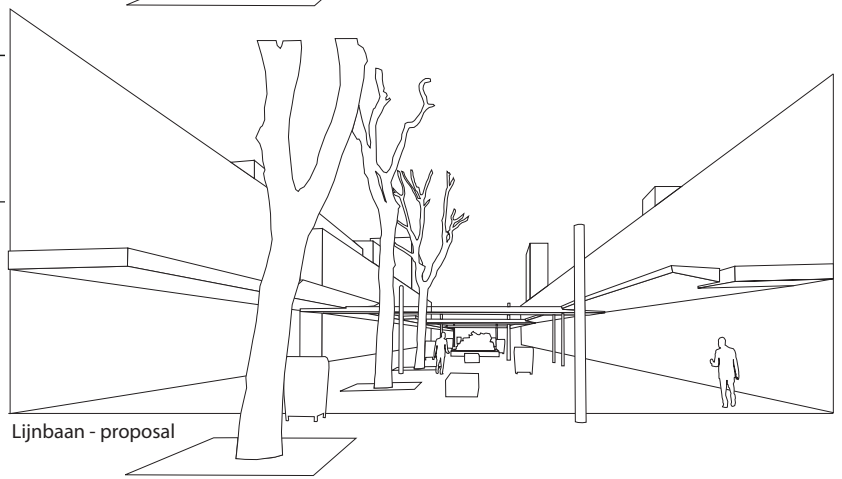
elevation, Lijnbaan

facade sections, Lijnbaan





Lijnbaan - current situation



Lijnbaan - proposal

02 Masterplan

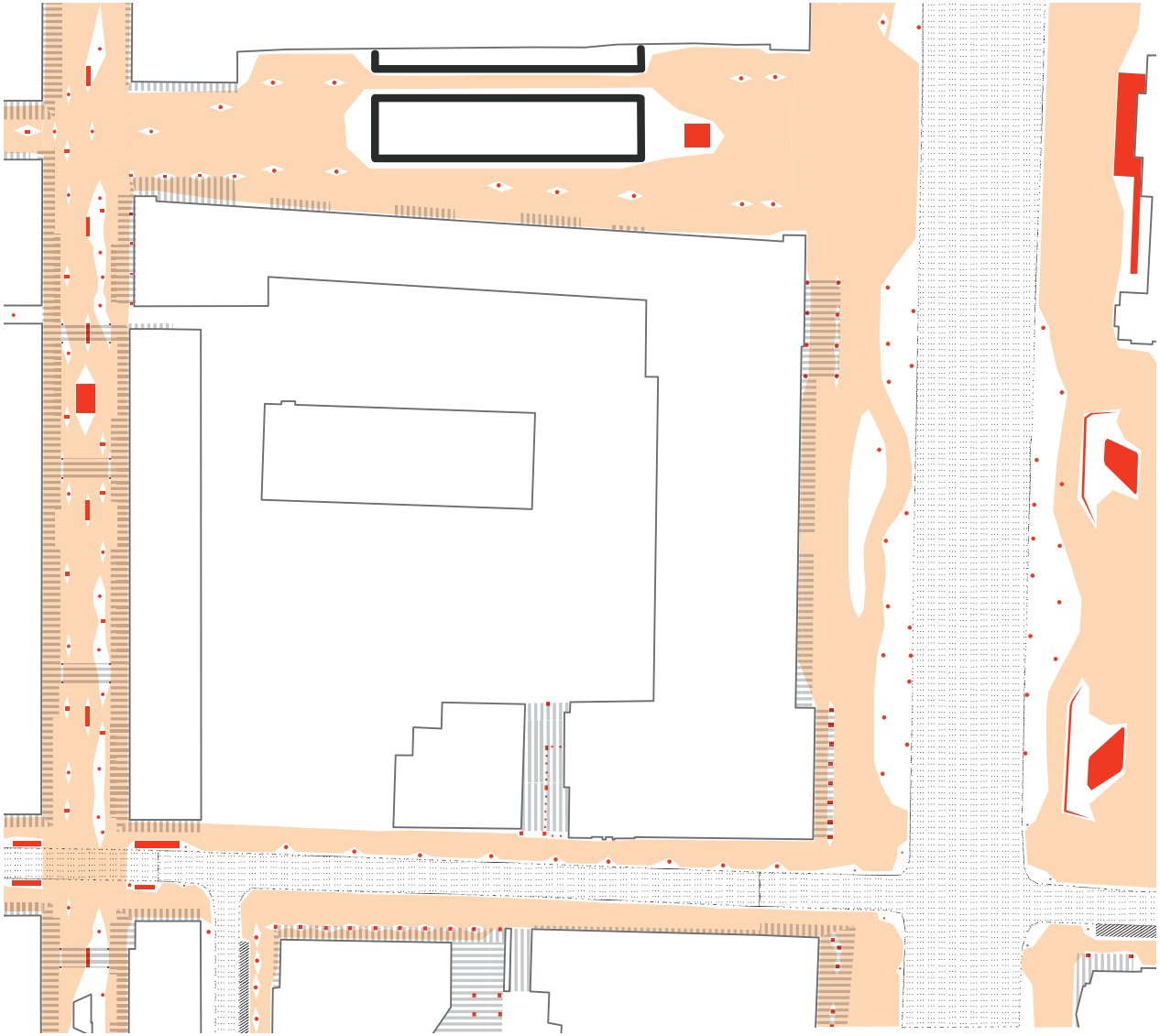
Each side has its own identity which need to be retained or improved

The stadhuisplein as horecasquare

The Coolsingel as boulevard

Aert van Nesstraat as extension of Meent and Schouwburgplein

Lijnbaan as commercial shopping and dwelling ensemble



01 Introduction

Birdseye view of location
Preservation of curtain of the block
Monument Sint Luciaschool
Demolishing of Rotterdam building

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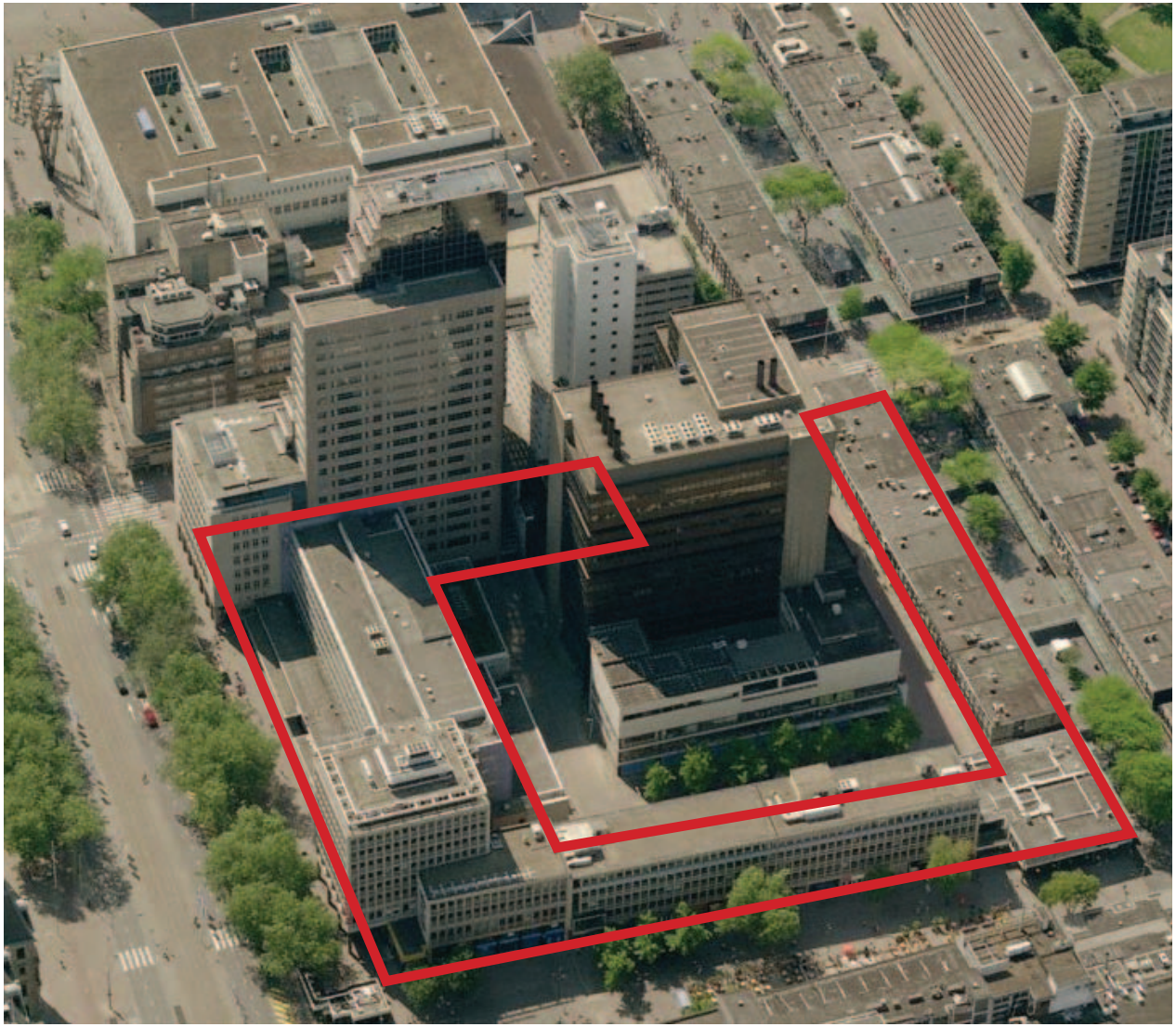

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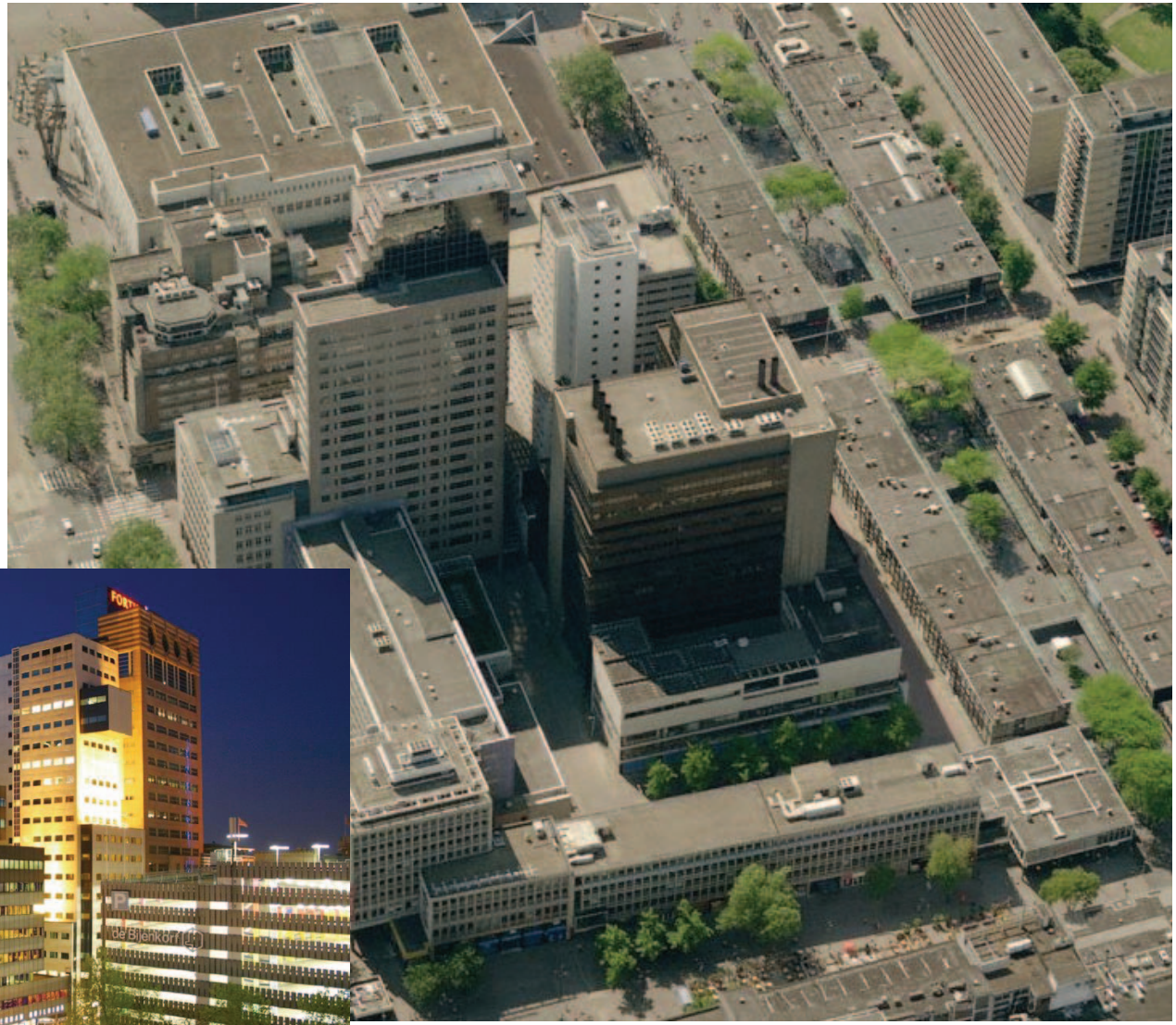
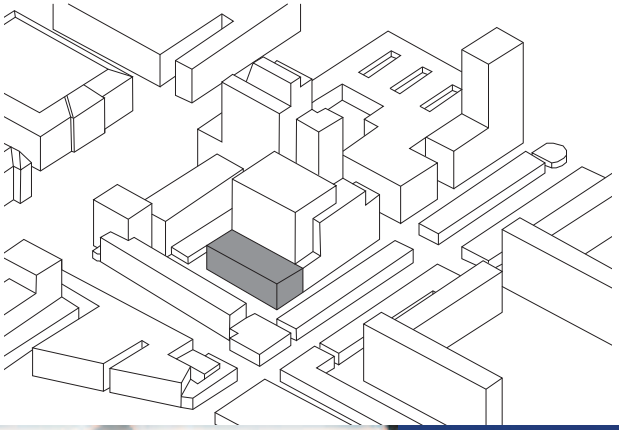
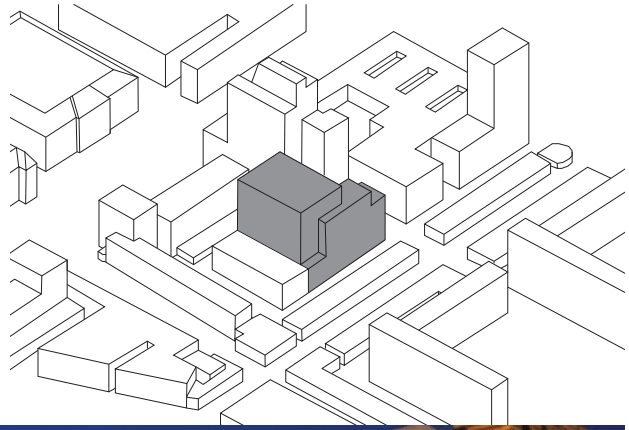


02 Masterplan

concept





02 Masterplan

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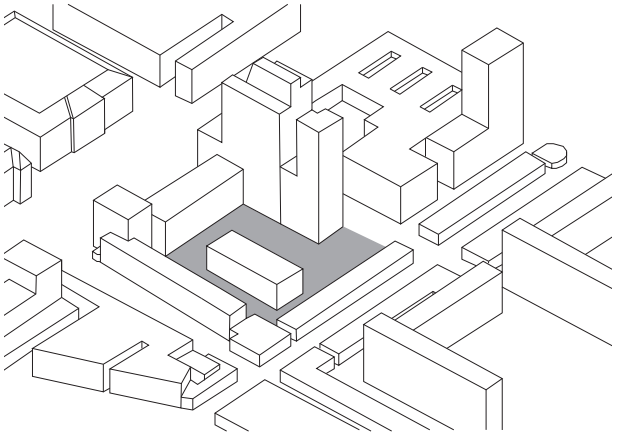
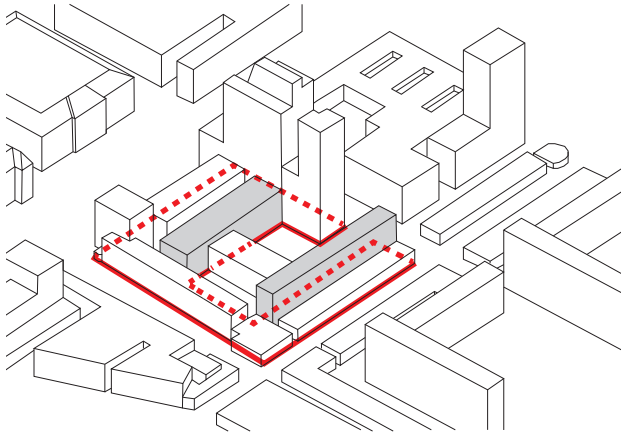
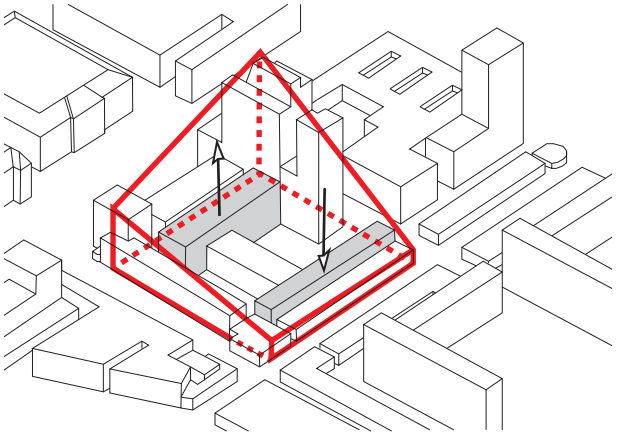




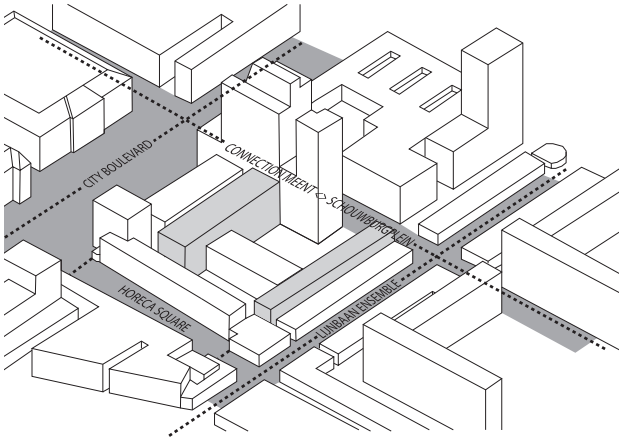
FRONT BACK BACK FRONT

02 Masterplan

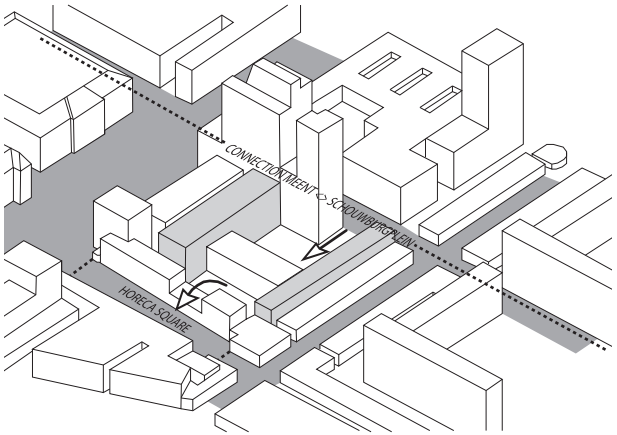
concept



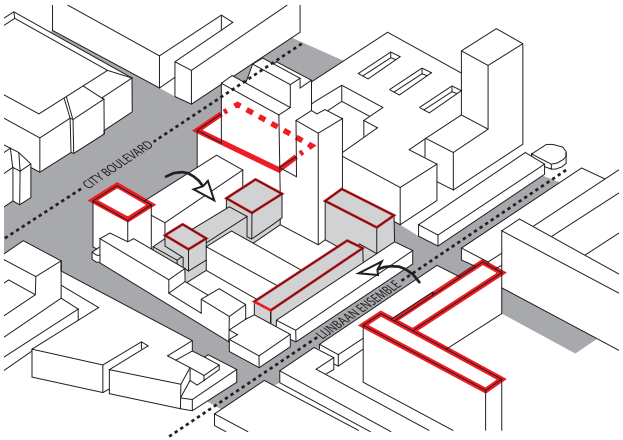
HEIGHT ACCORDING TO LOCATION



4 SURROUNDING CHARACTERS



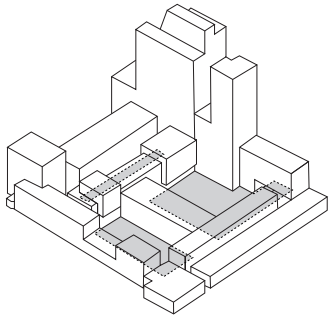
CONNECTING TO IDENTITY



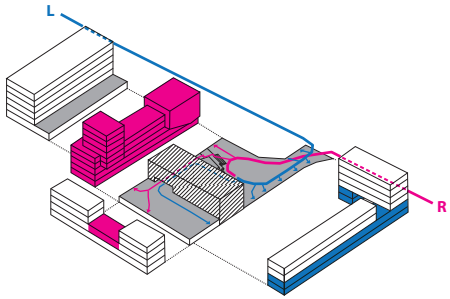
CONNECTING TO FORM

02 Masterplan

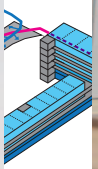
concept

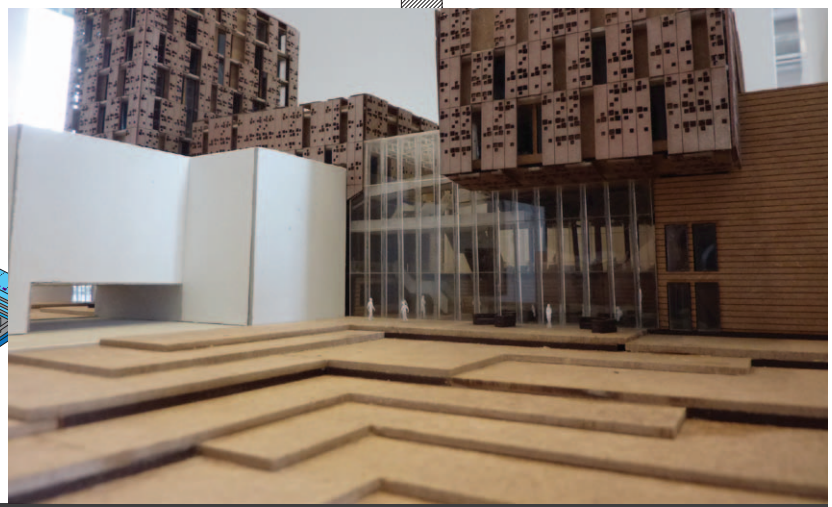


VOIDS BETWEEN MASS



KEEP SKVR AND ITS REGIONAL AND LOCAL IDENTITY





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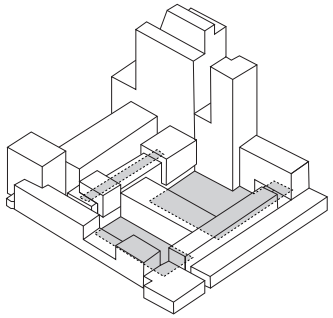

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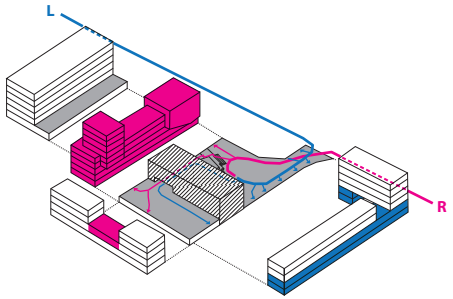

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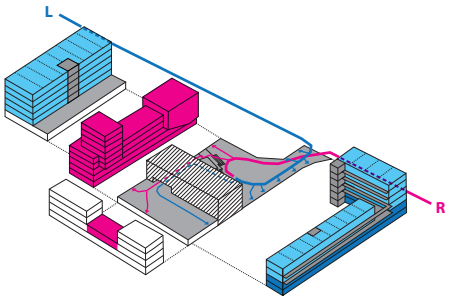
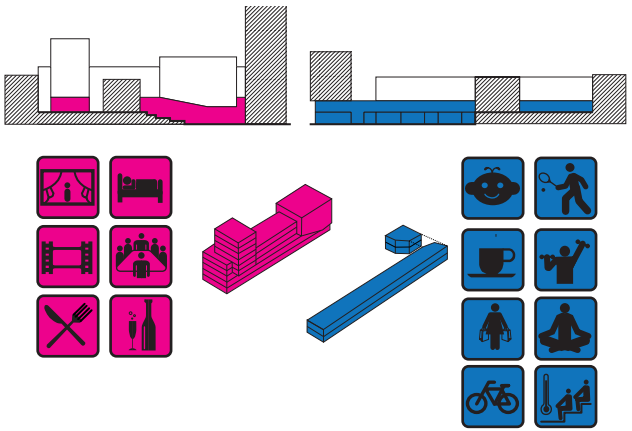


DWELLING



LOCAL AND REGIONAL PROGRAMME

03 Design

03 Design

design reference 1762
publication of Giovanni Battista Piranesi's Campo Marzio

reconstructed ancient Rome

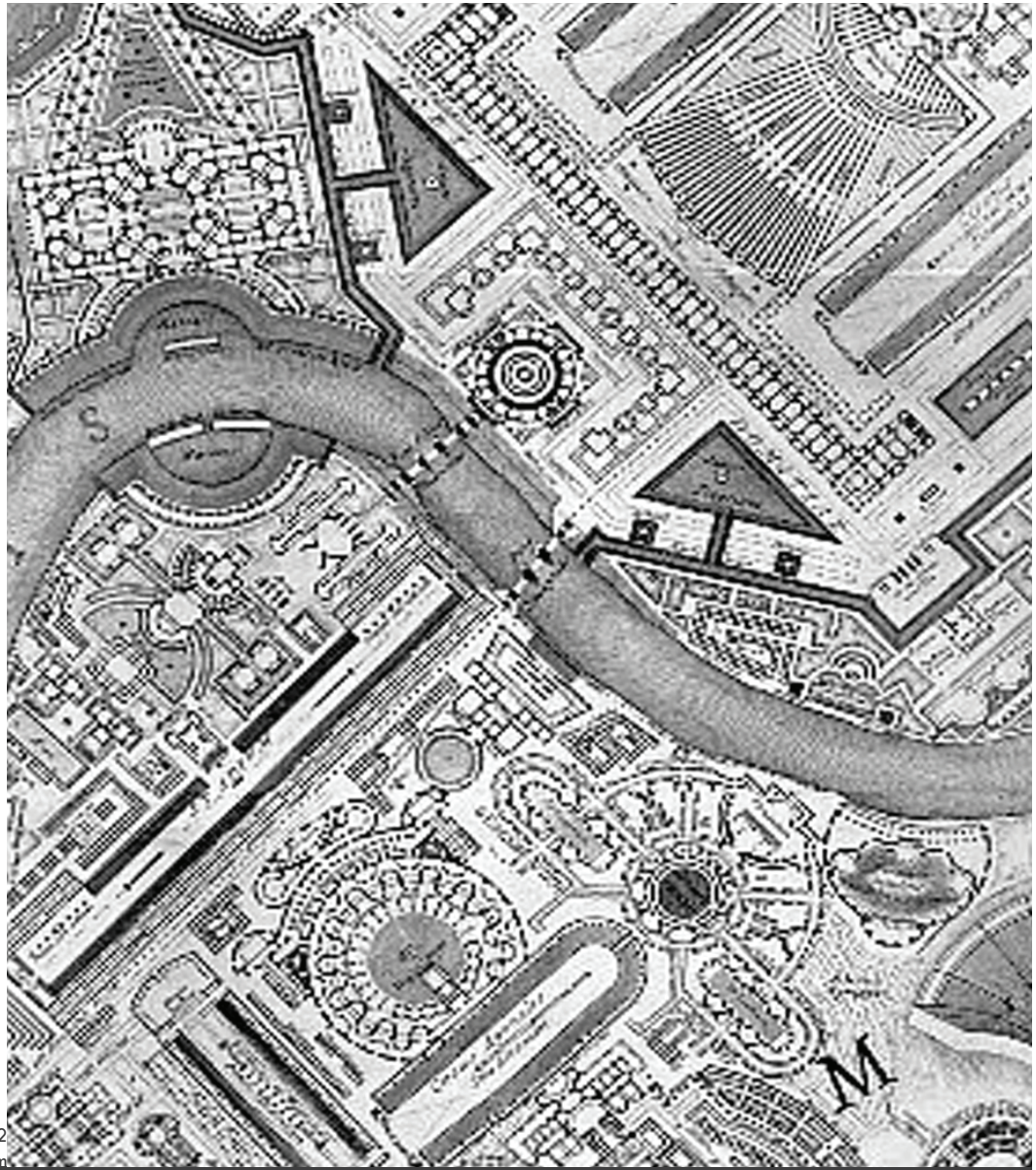
Ichnographia Campus Martius, sometime after 1762
image from http://www.quondam.com/27/2743a.htm

03 Design

collection of ancient buildings and fictional designs

historical urbanism is incorperated in a coherent design

configuration acts as a start point in combining individual parts



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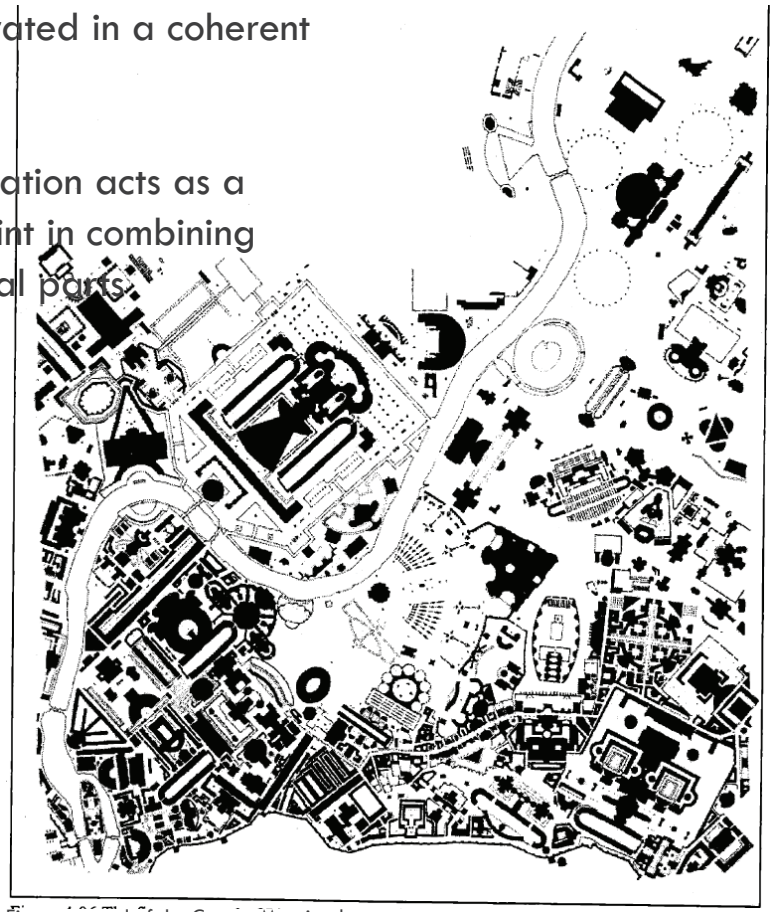
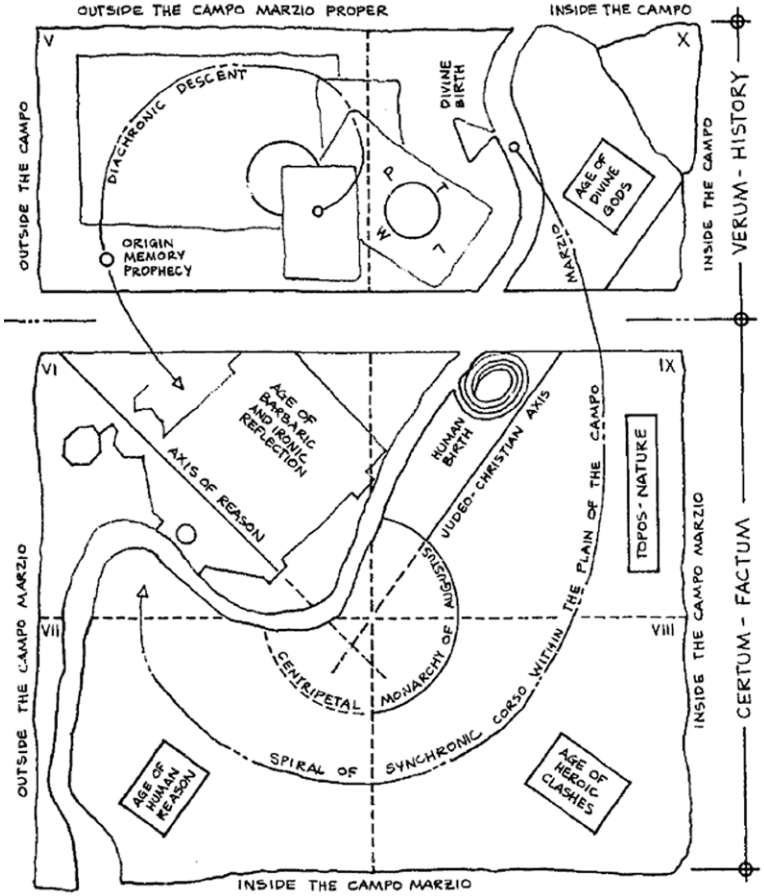


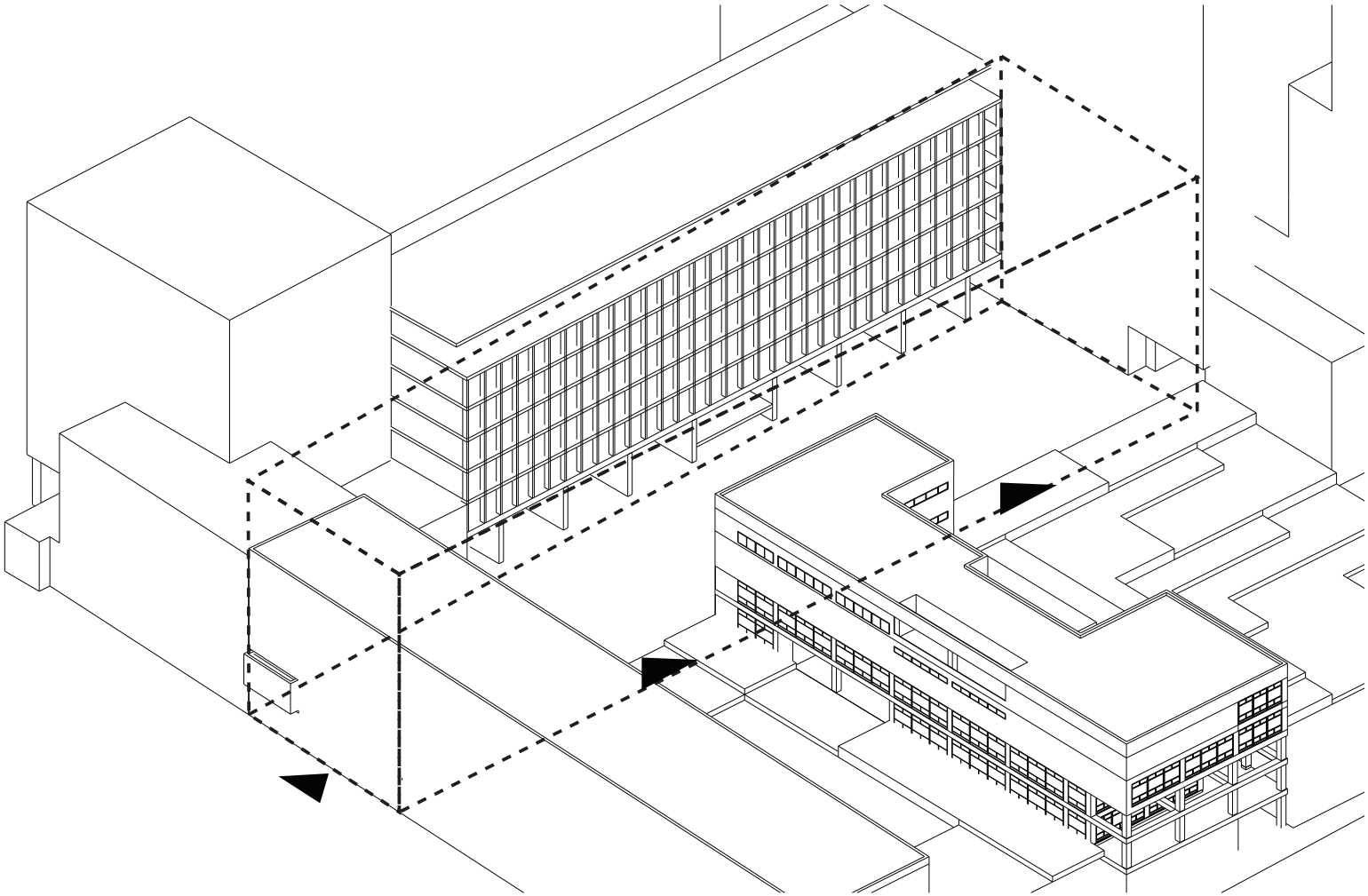
Figure-ground of the Campo Marzio plan
image from Rupinder Singh, Piranesi's Campo Marzio Plan the palimpsest of interpretive memory,
Massachutes Institute of Technology, 1996, page 46



Collage of border and frames within the Campo Marzio plan
image from Stanley Allen, Piranesi's "Campo Marzio": An Experimental Design, Assemblage, No.
10 (Dec., 1989), viewed from http://www.jstor.org/stable/3171144, page 84

03 Design

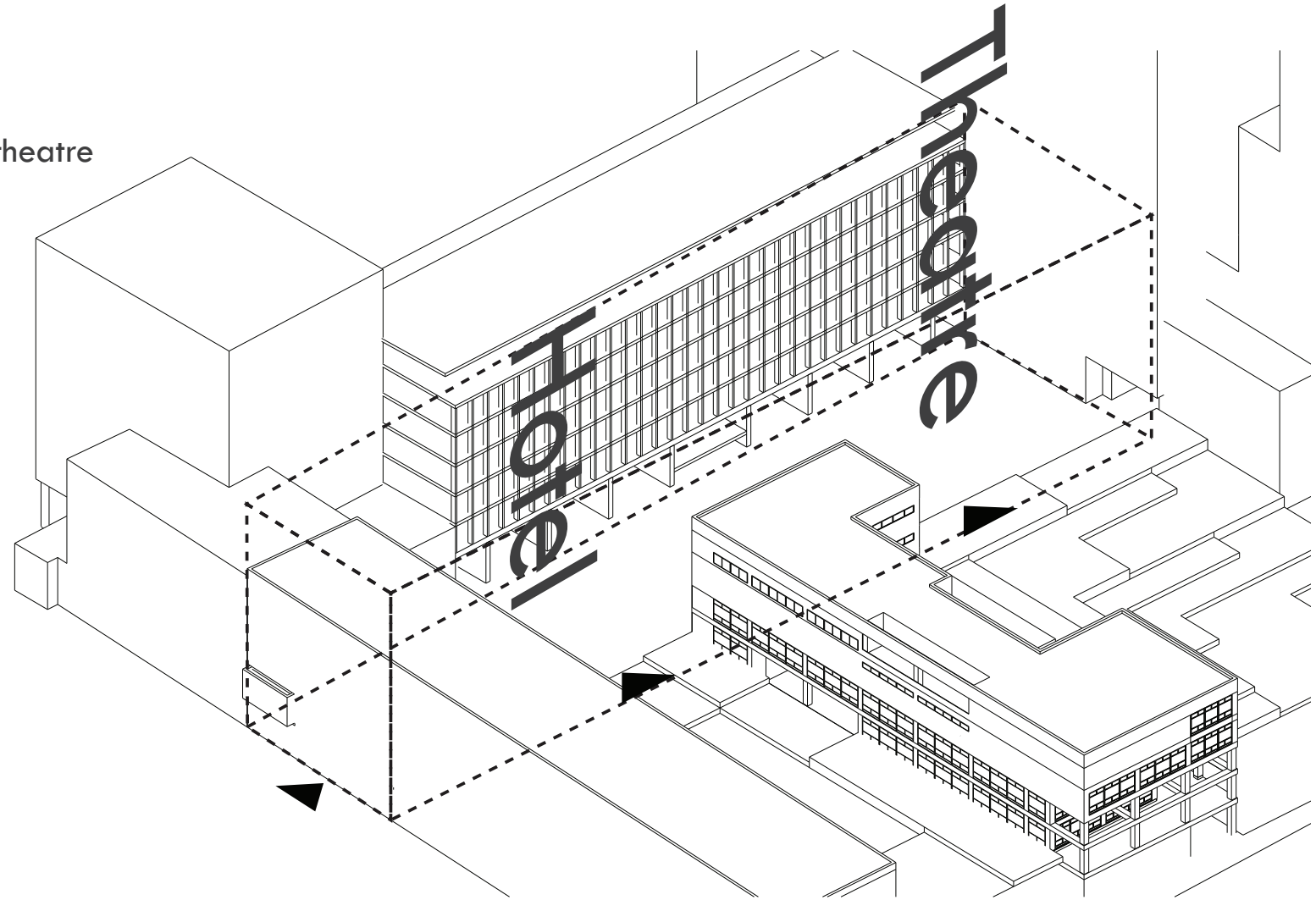
concept



03 Design

concept

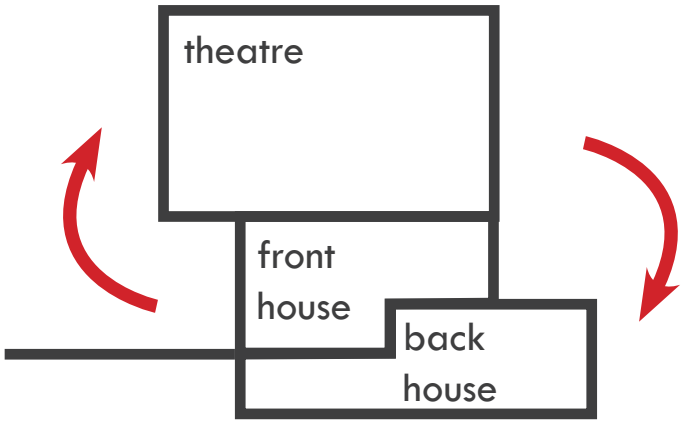
hotel and theatre



03 Design

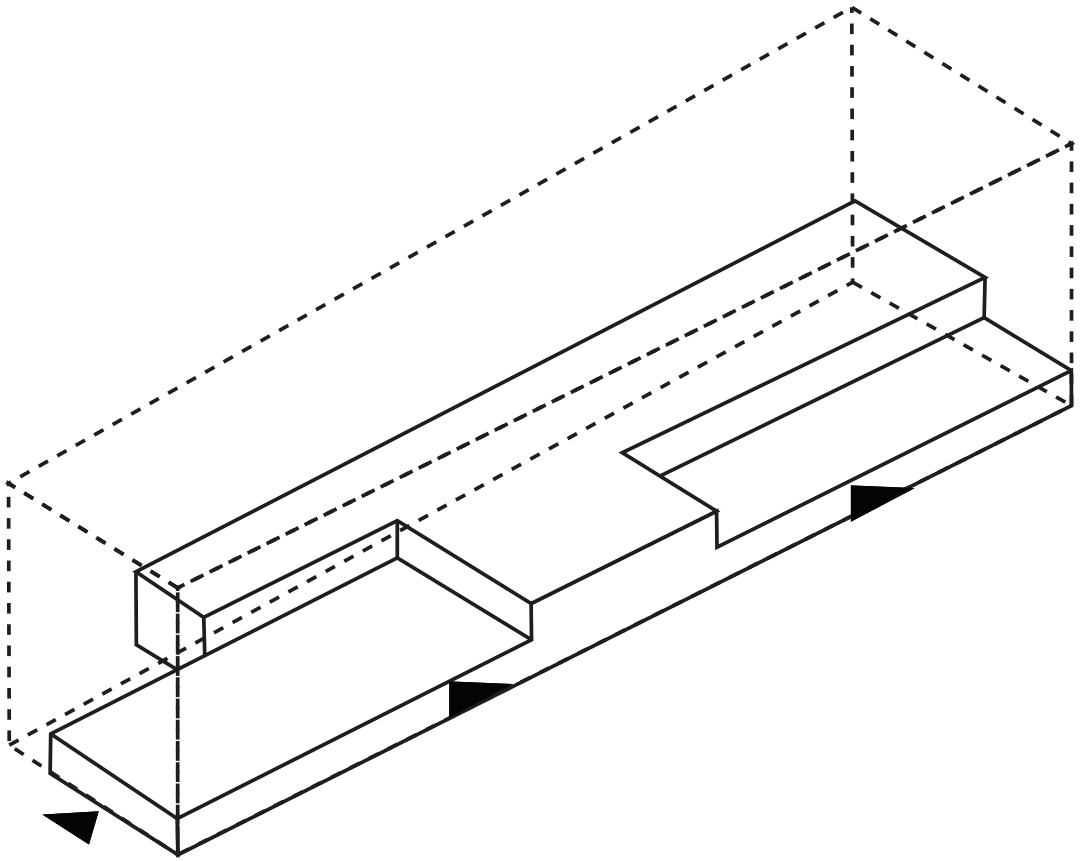
concept

theatre design



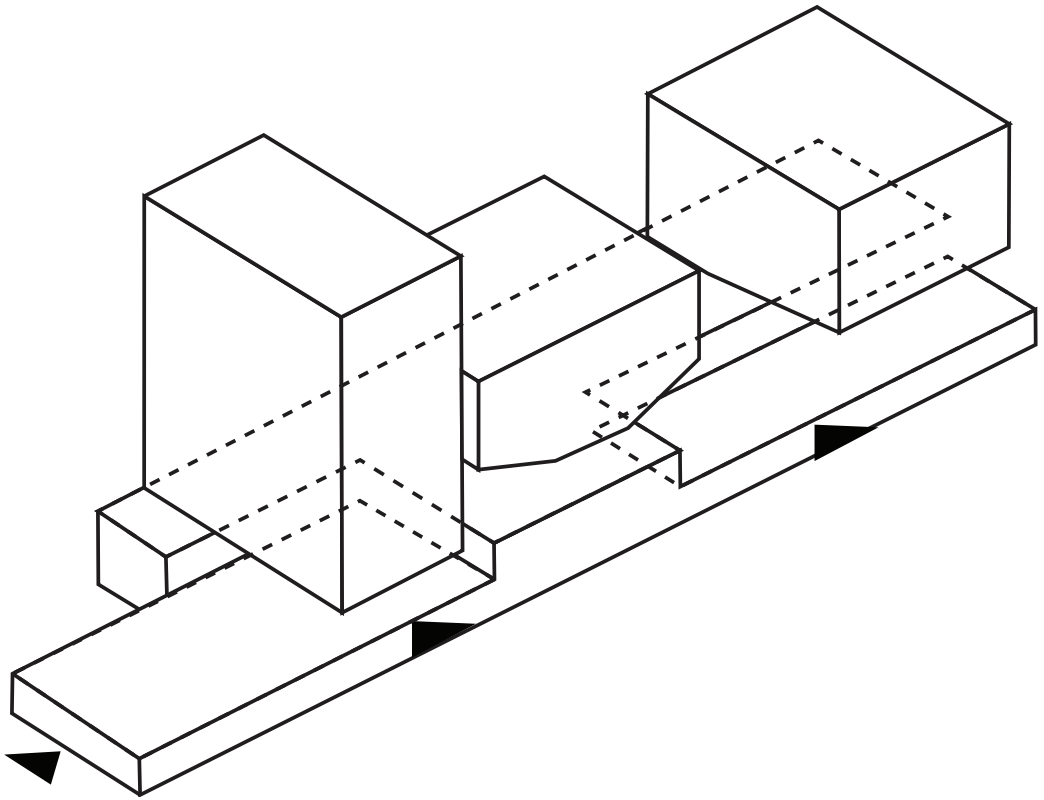
03 Design

concept
solid support base



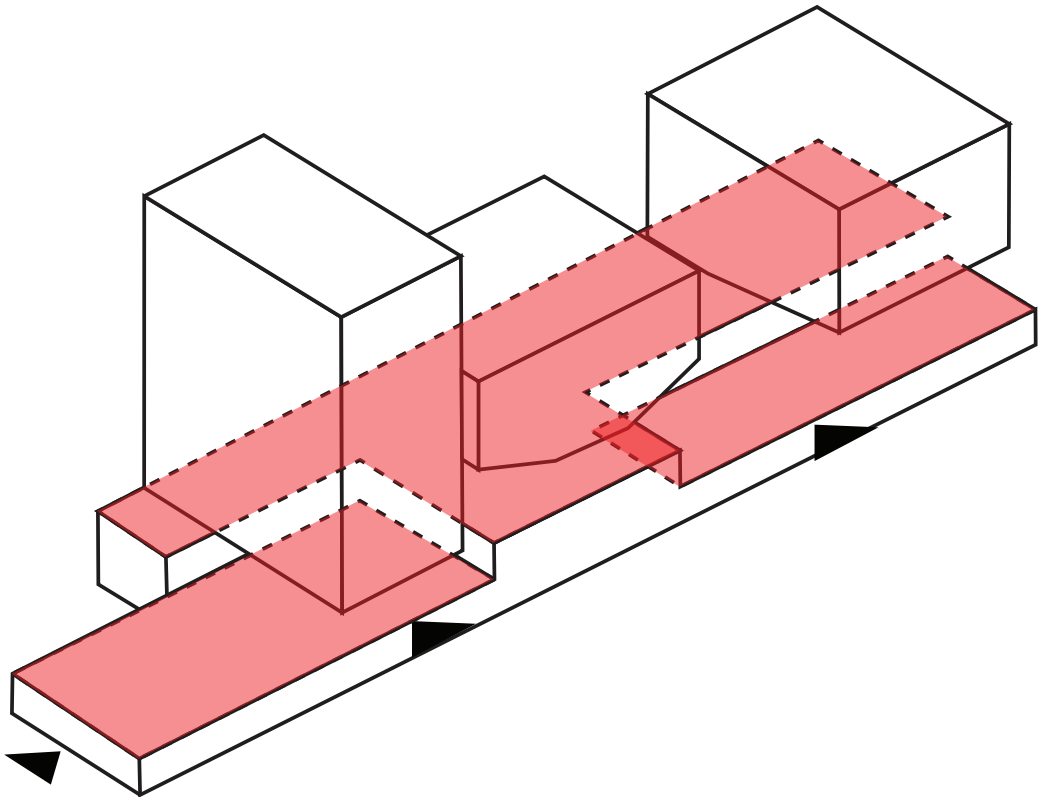
03 Design

concept
three main boxes



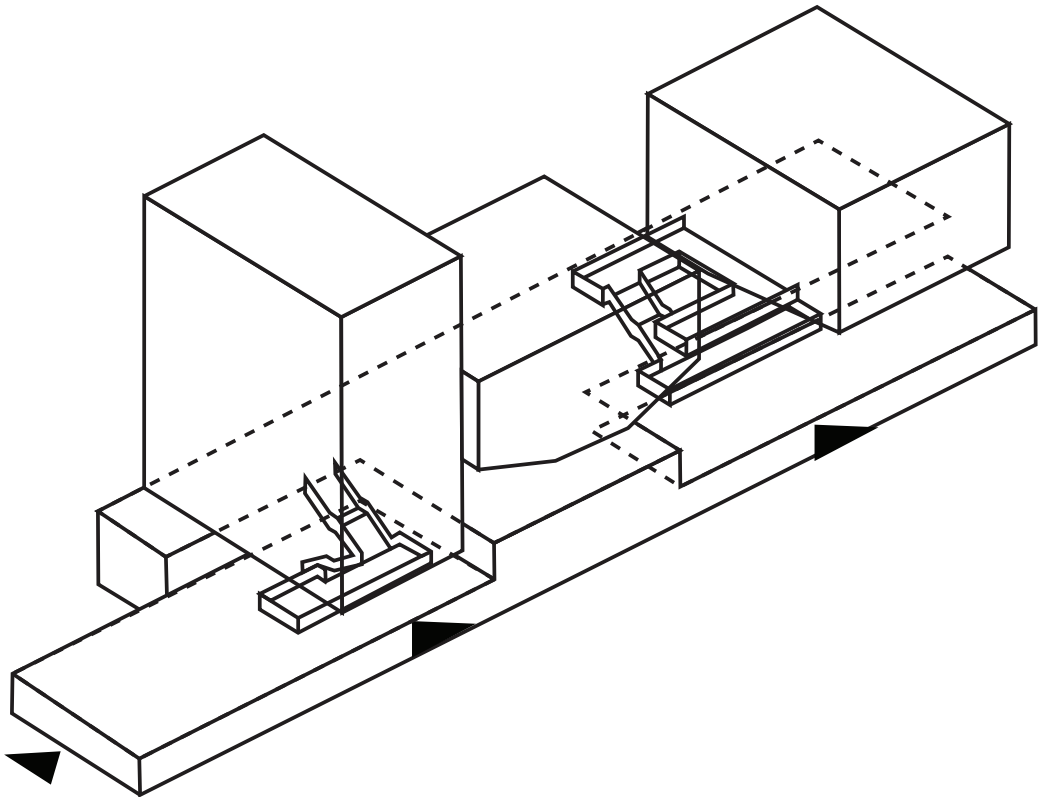
03 Design

concept
intermediate foyers



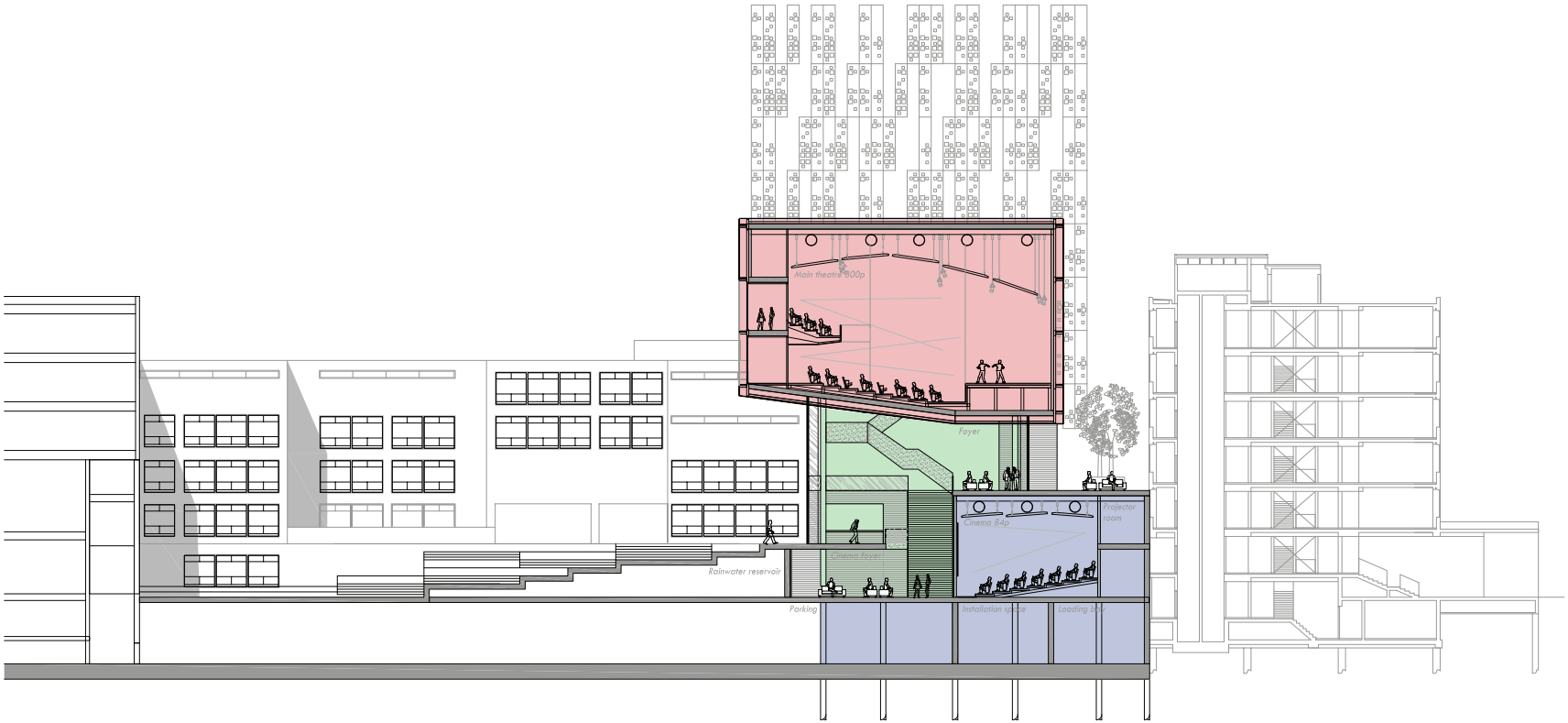
03 Design

concept
connecting public routes



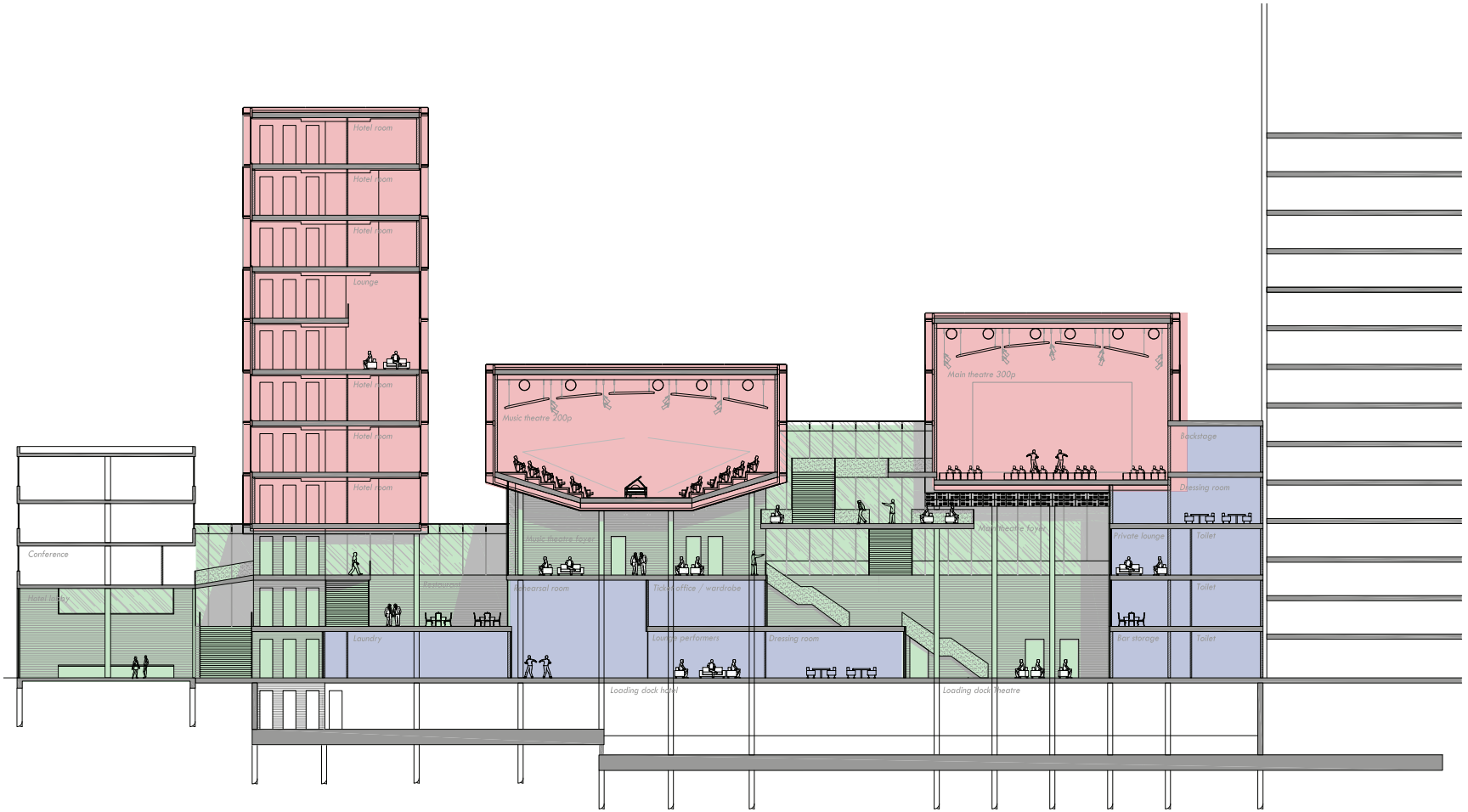
03 Design

concept



03 Design

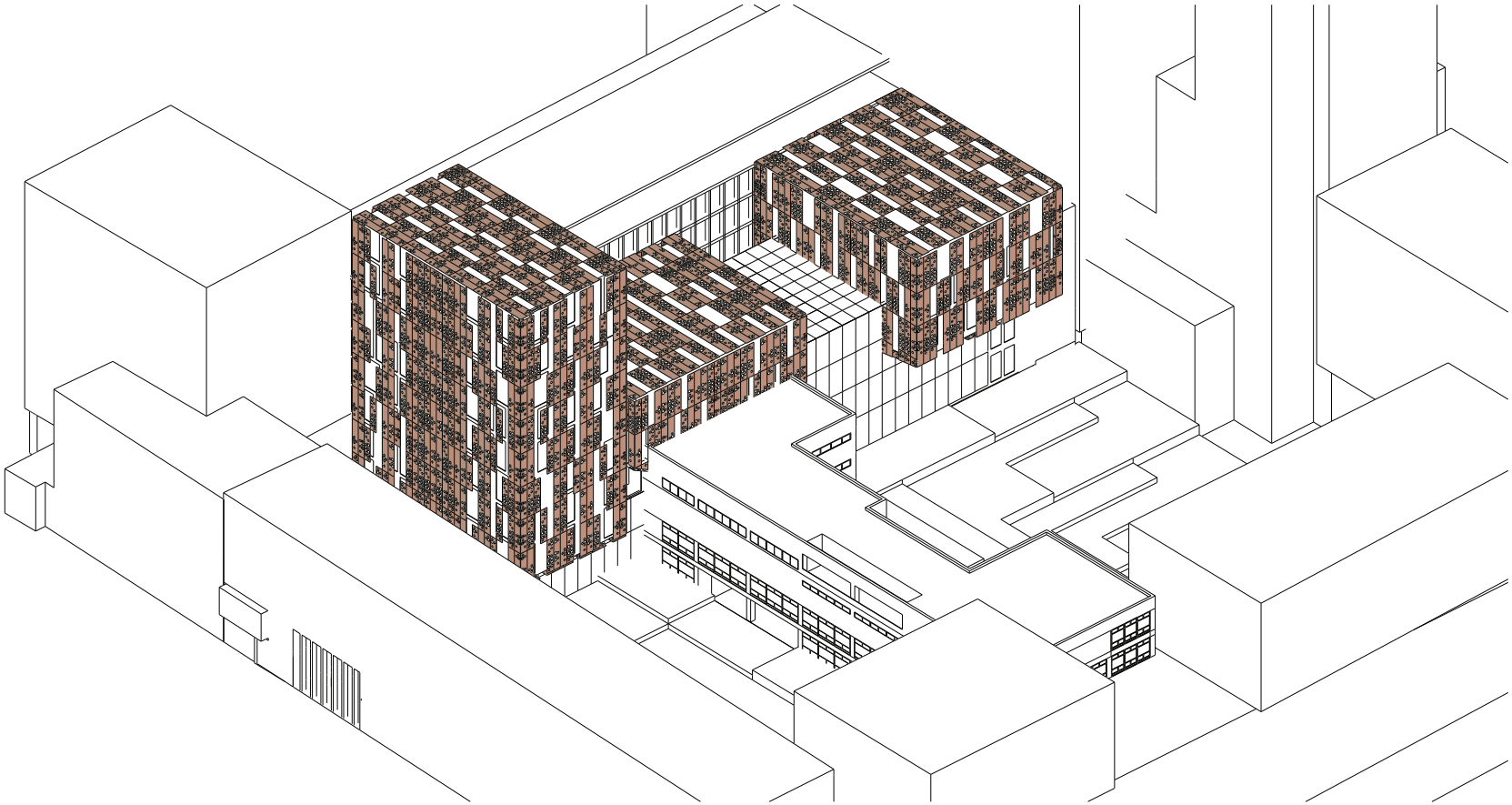
concept



04 Plans

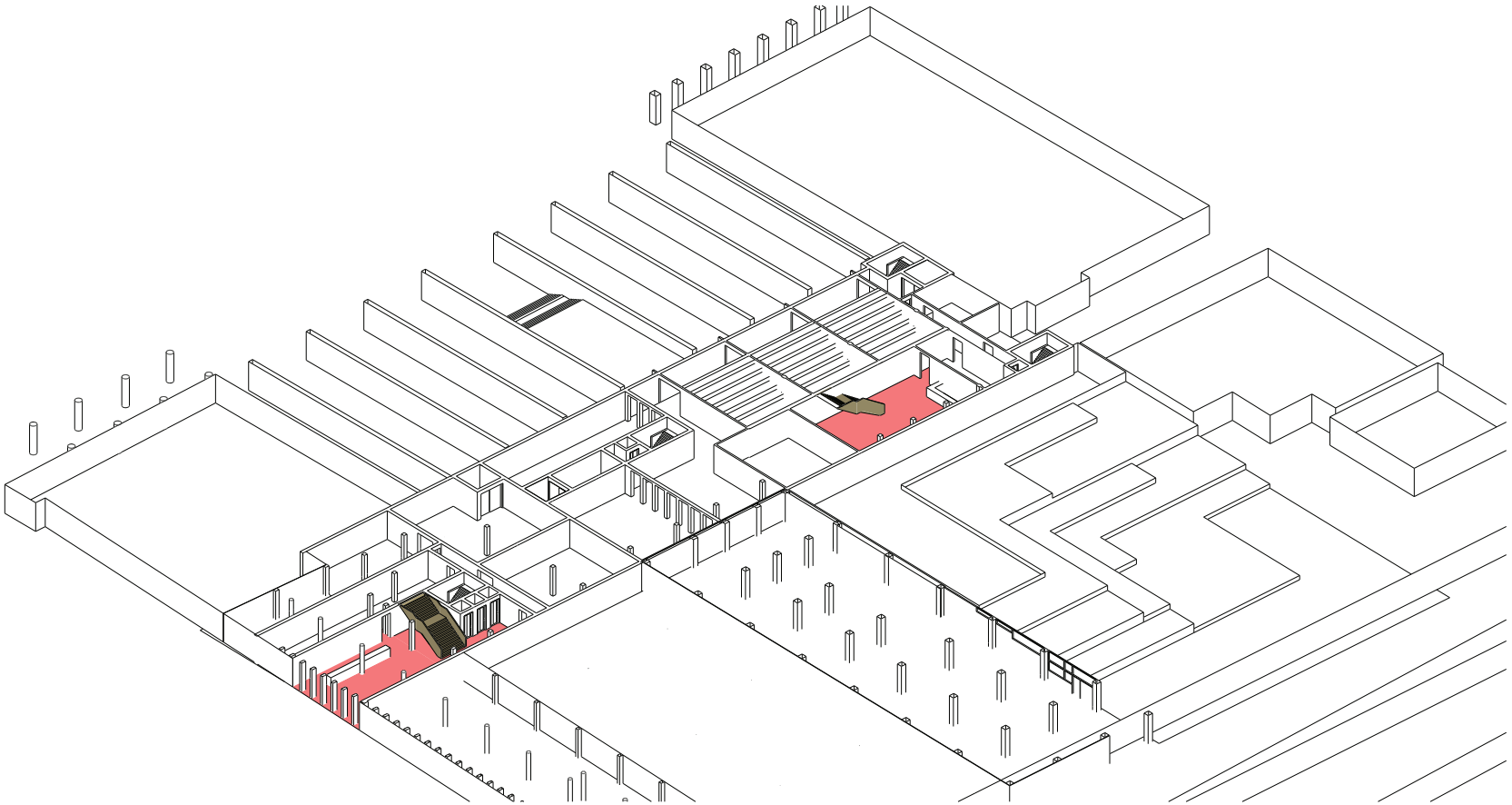
04 Design

isometric view



04 Design

plan 00



04 Design

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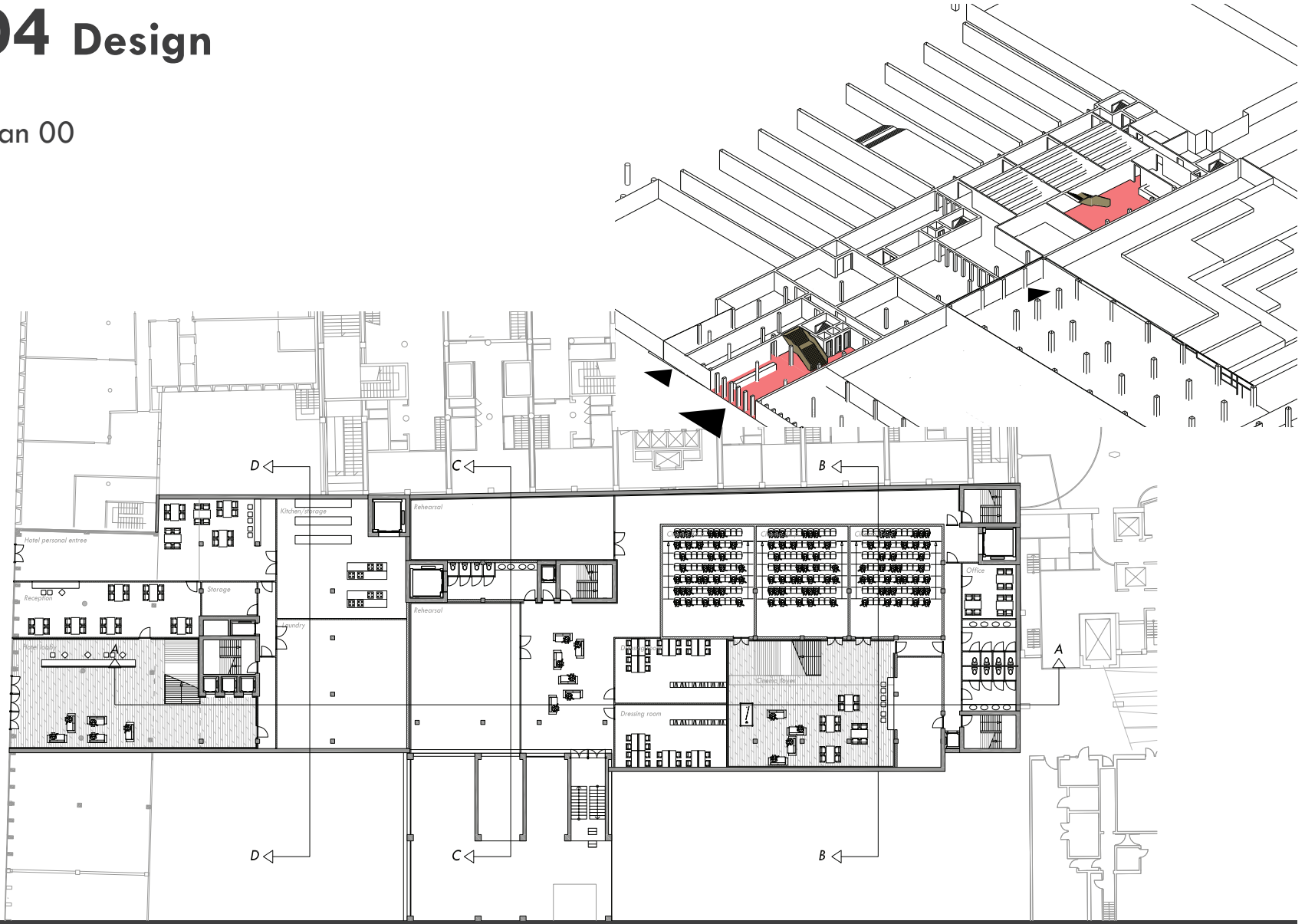
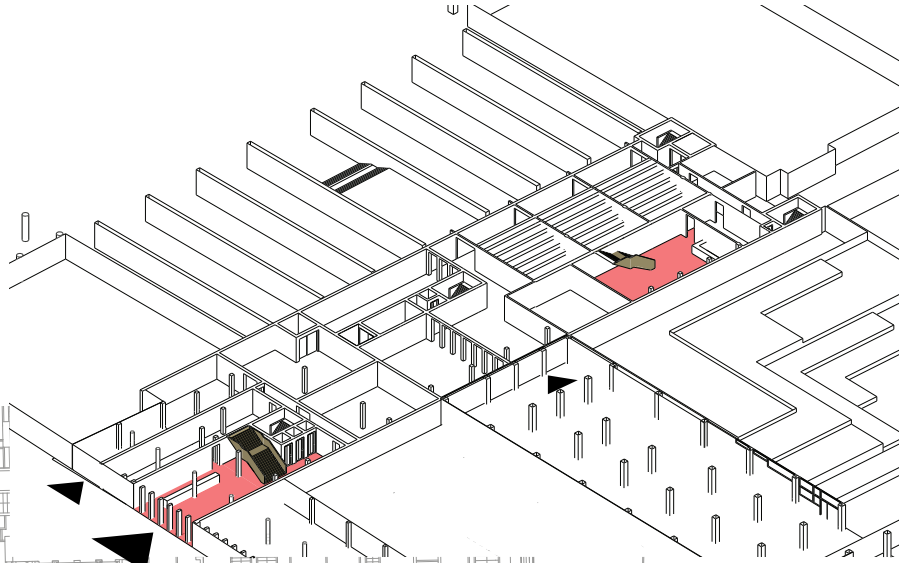


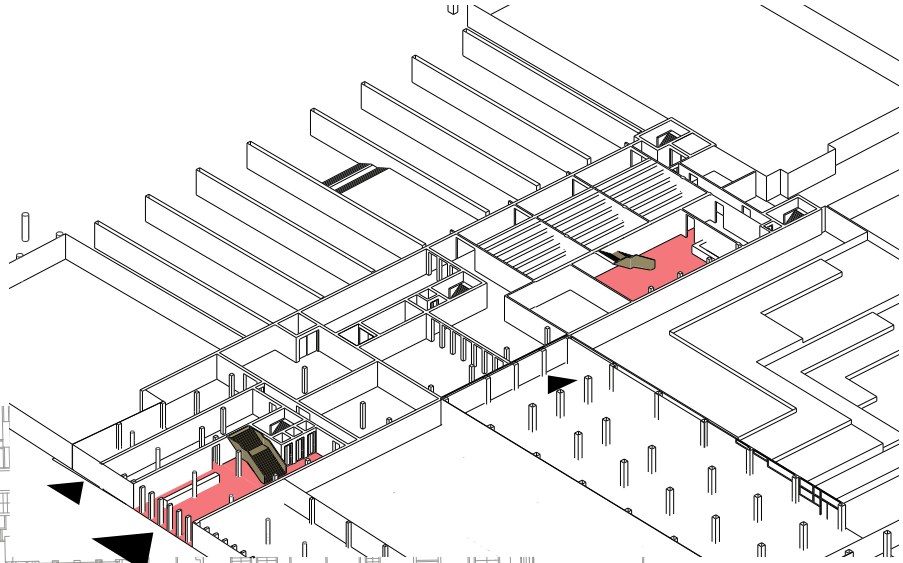
04 Design

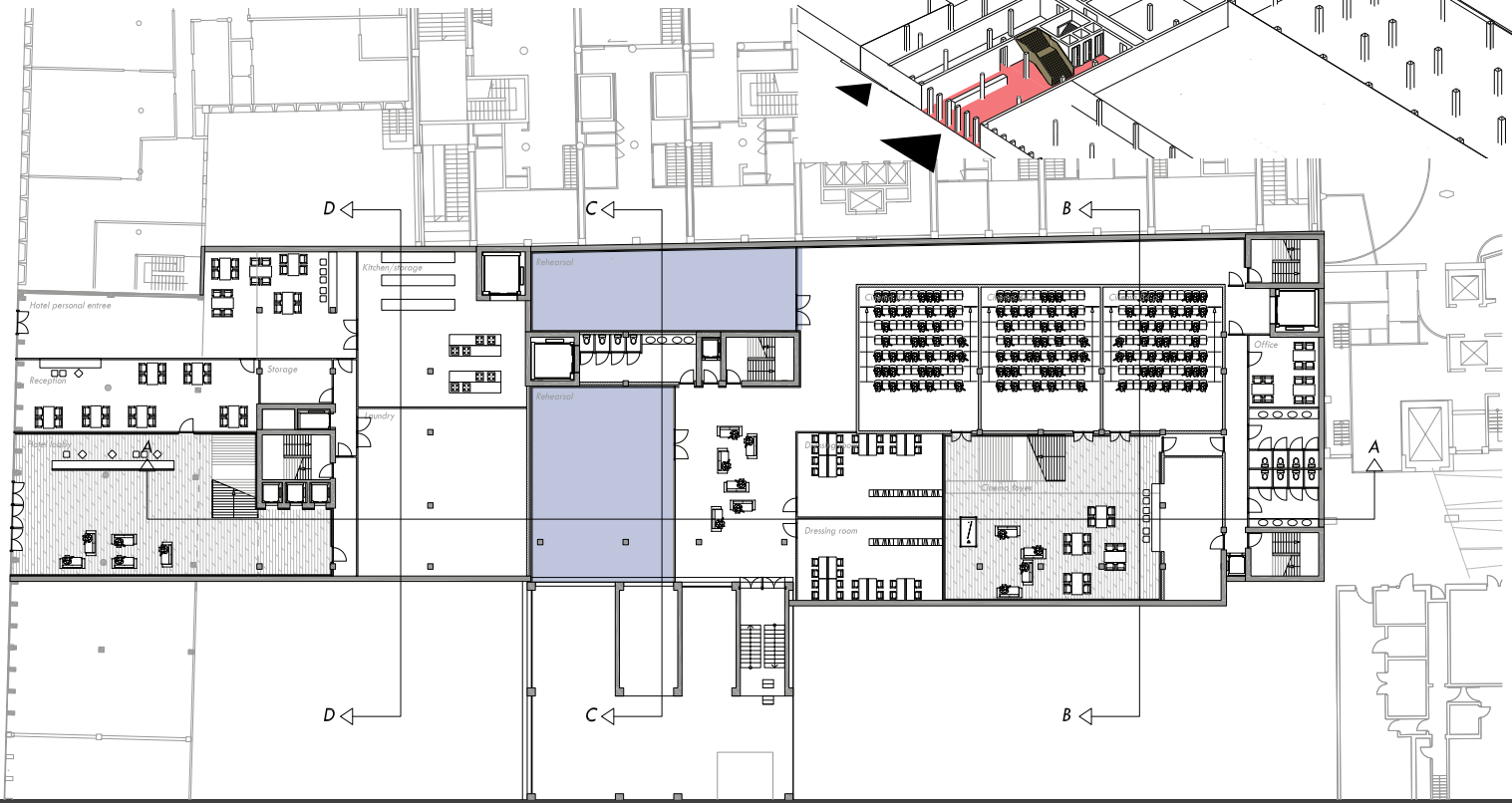
plan 00
Entree hotel
Cinema foyer
Entree performers



04 Design

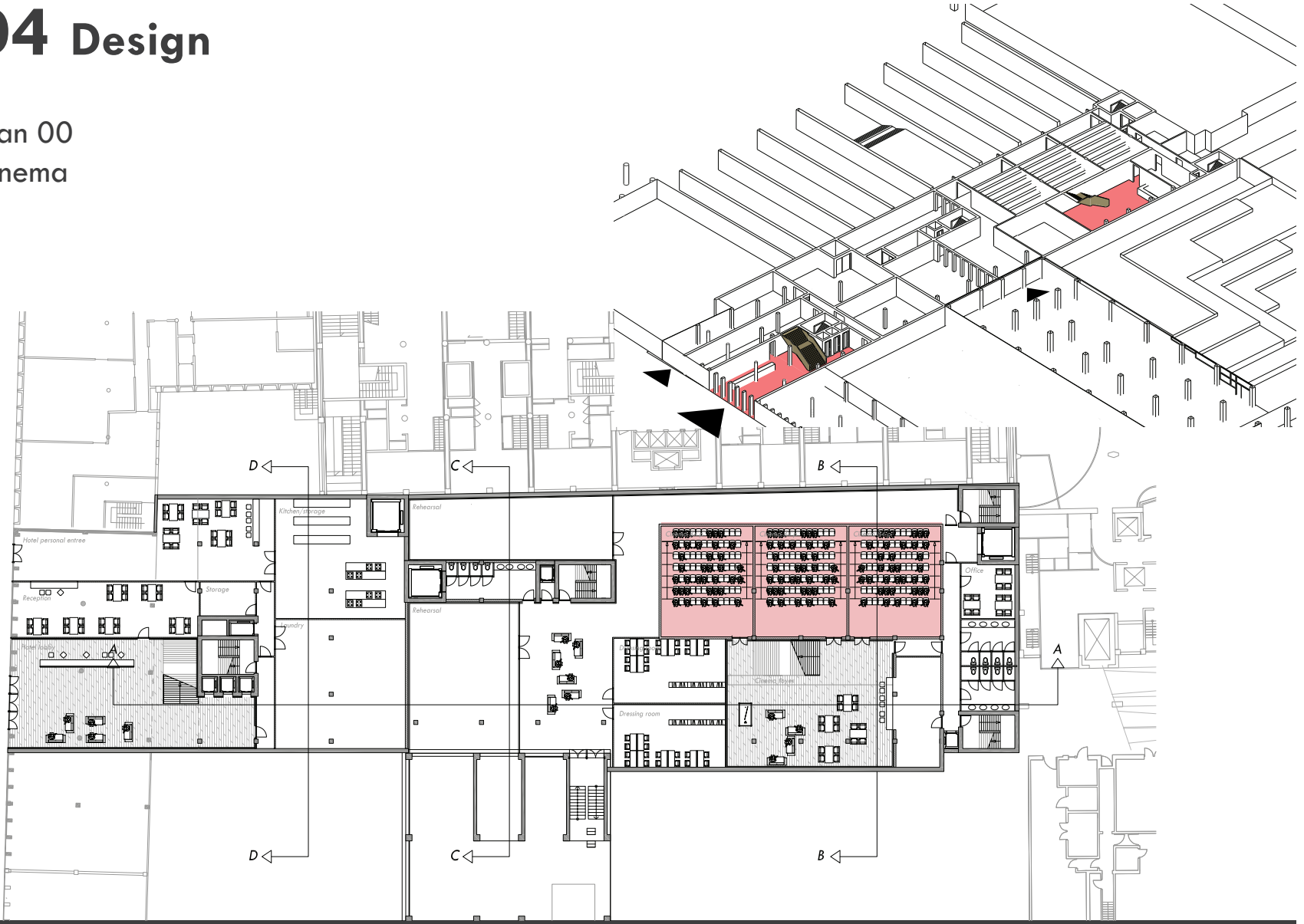
plan 00
Rehearsal





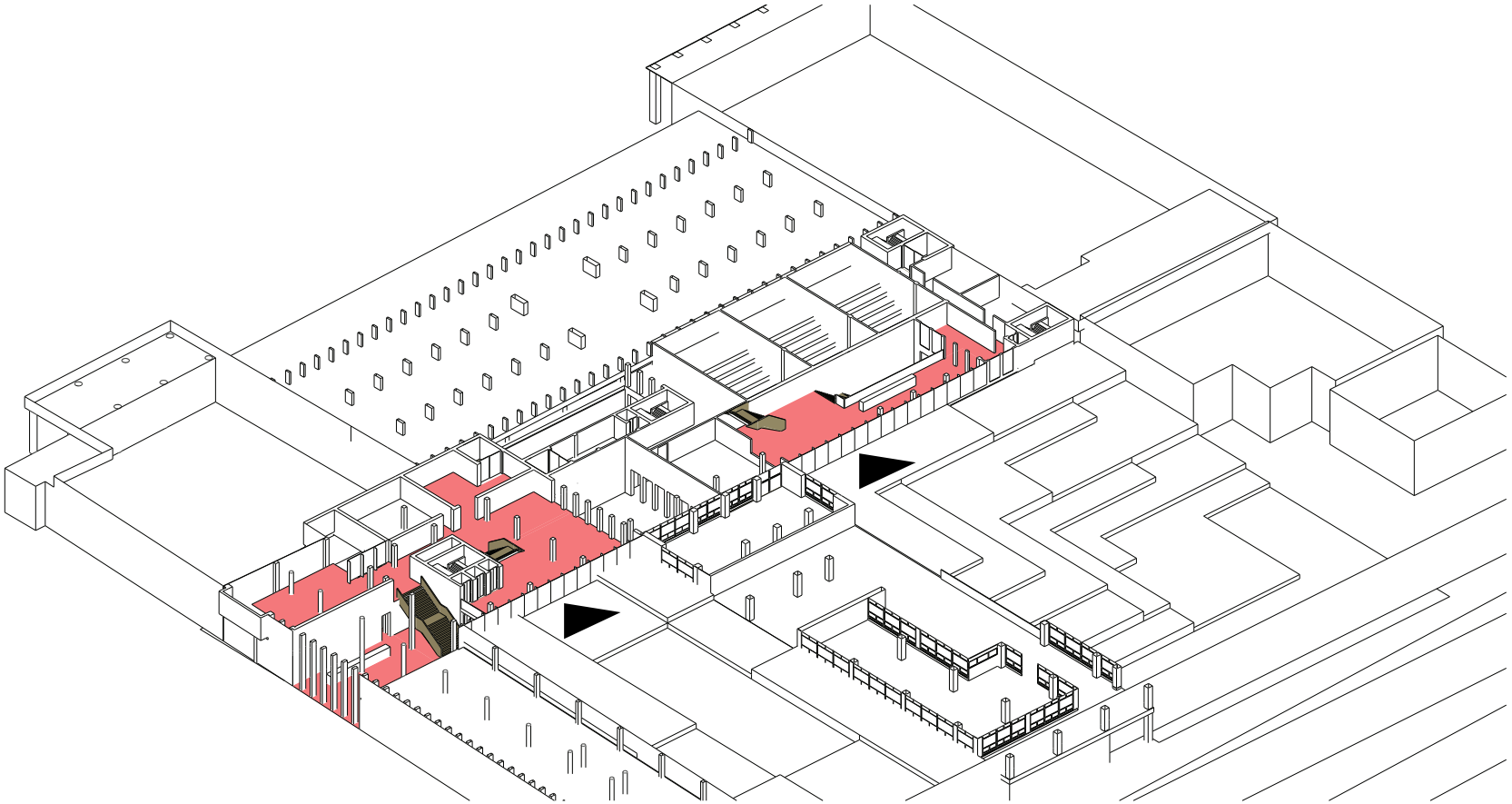
04 Design

plan 00
Cinema



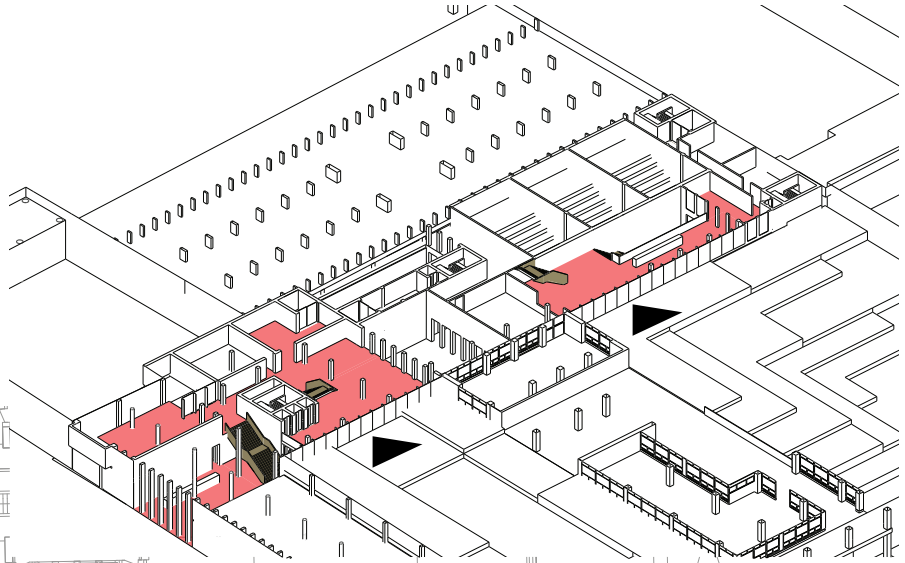
04 Design

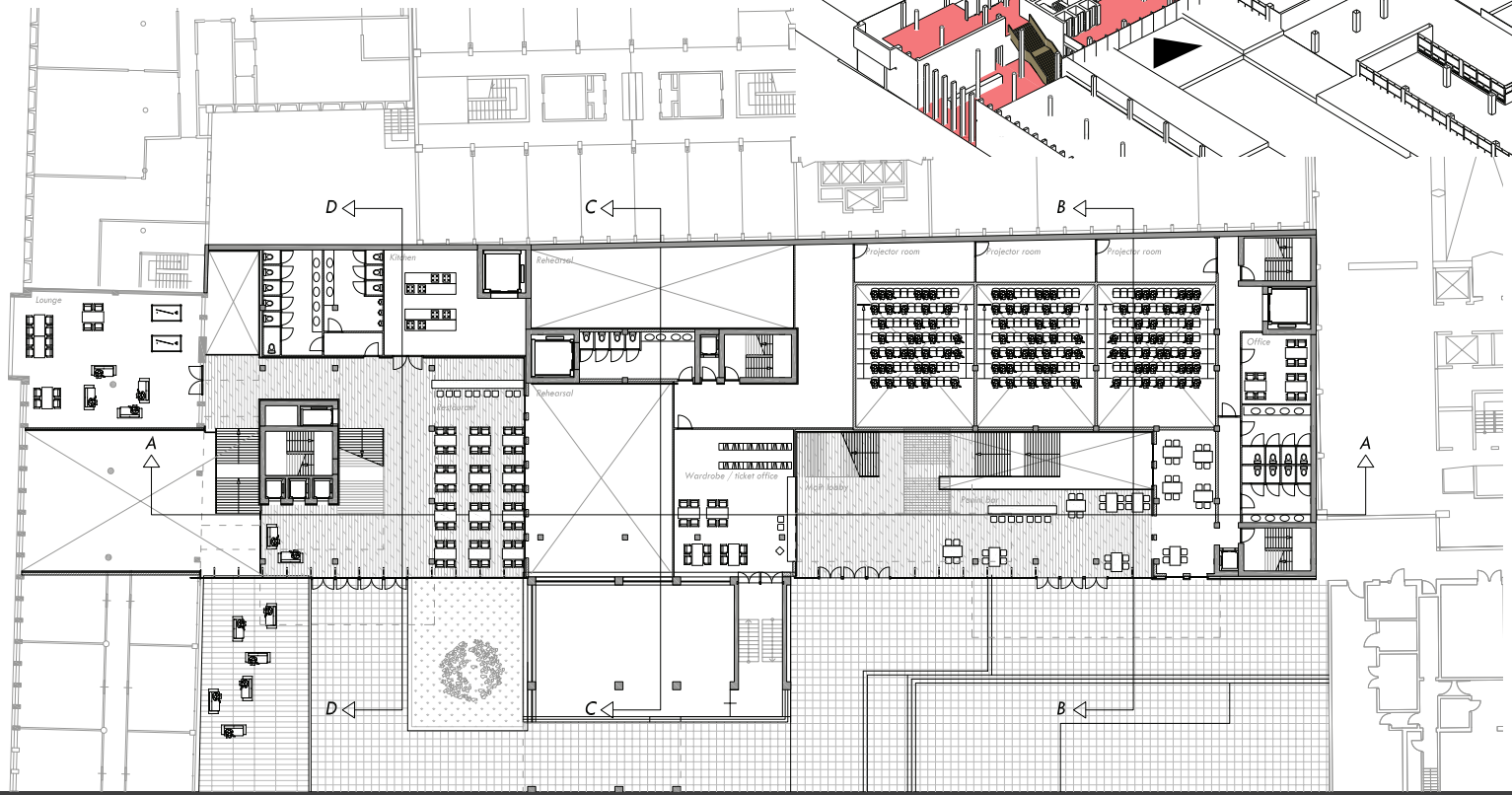
plan 01



04 Design

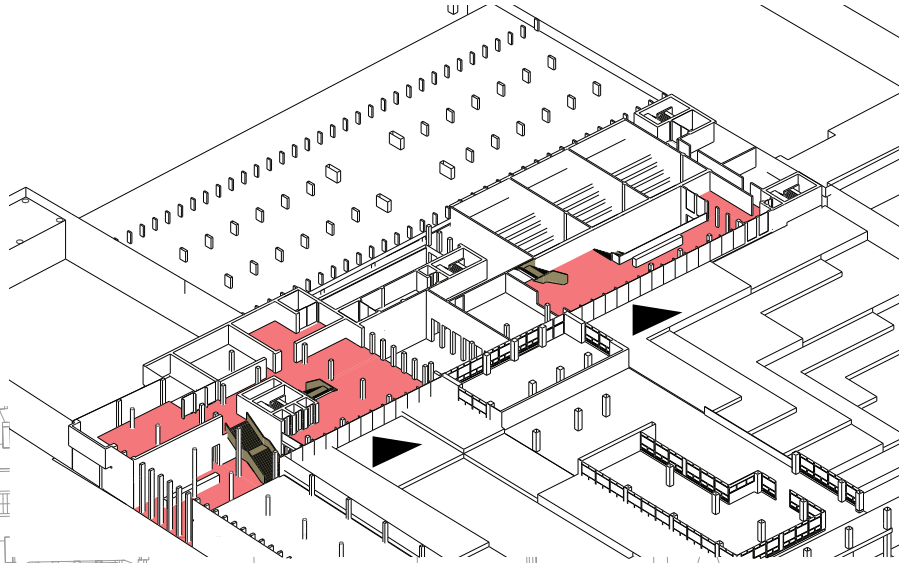
plans 01

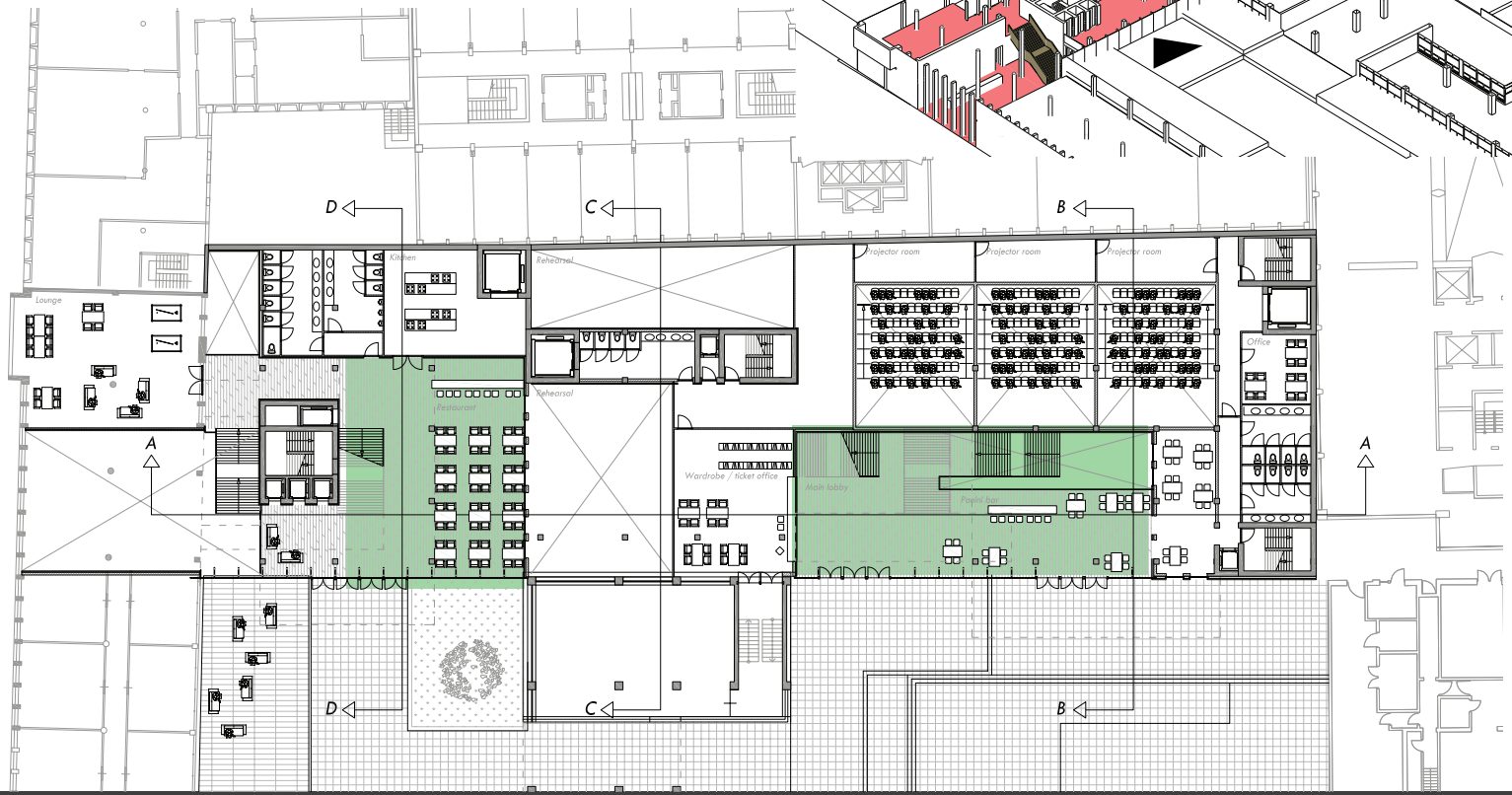




04 Design

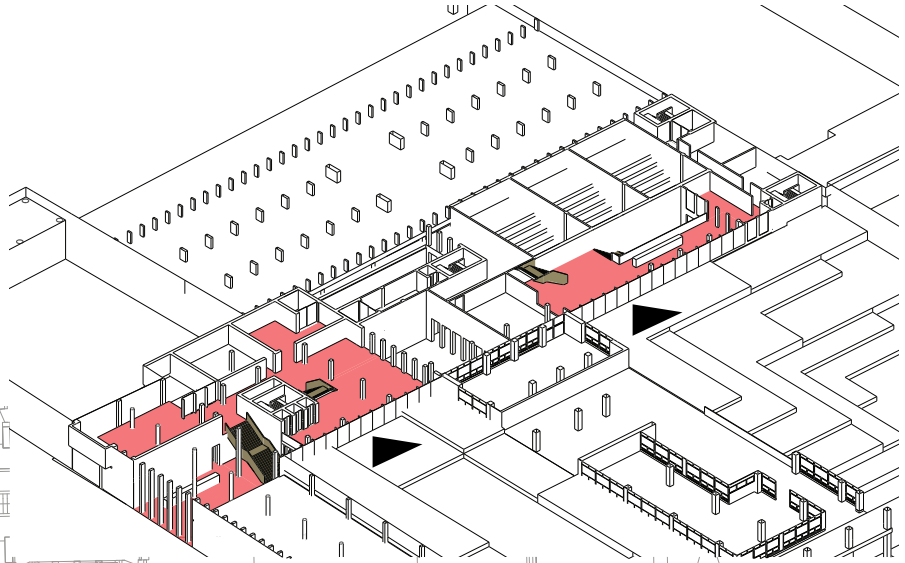
plans 01
restaurant
entree theatre with panini
bar

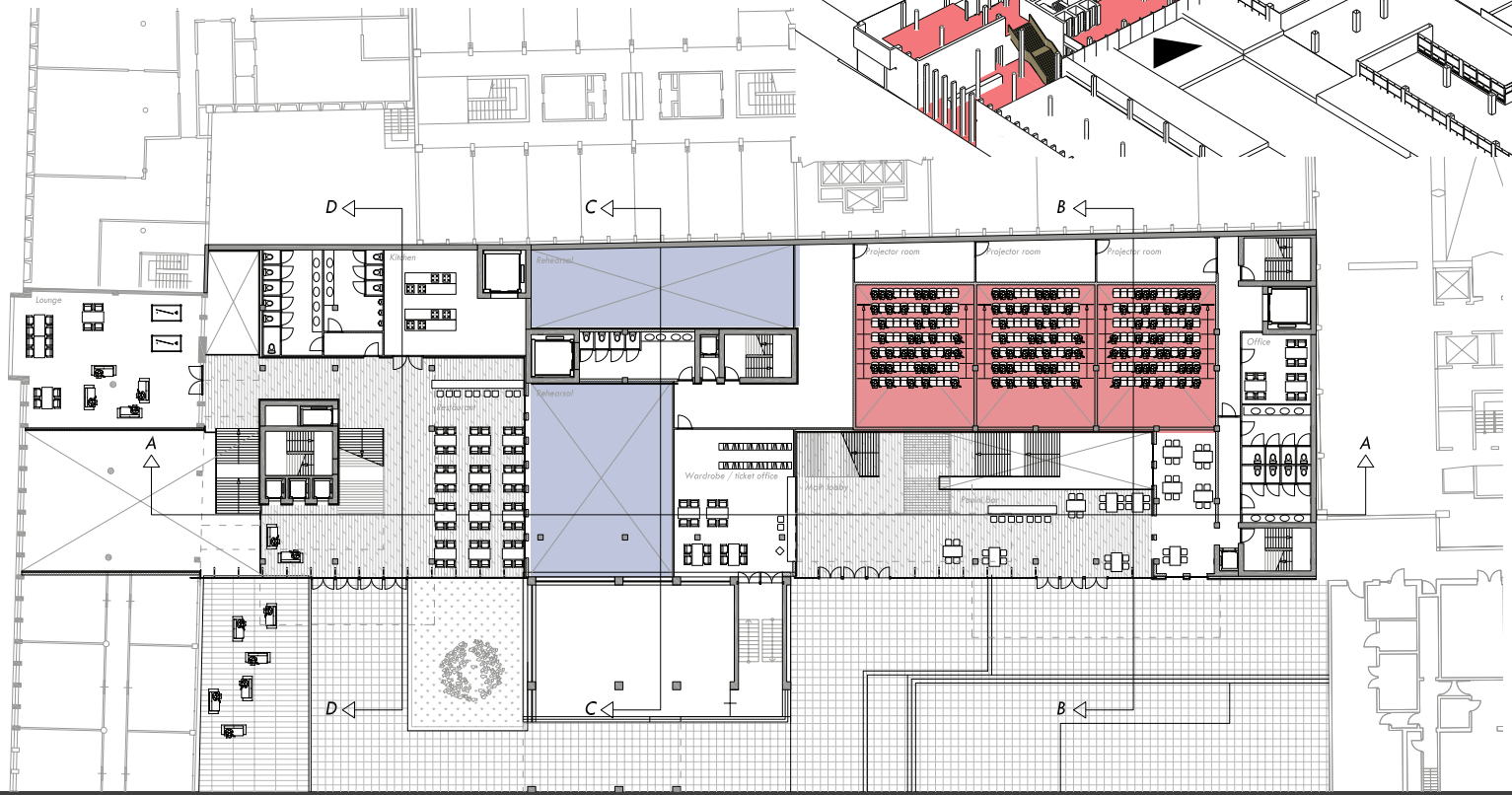




04 Design

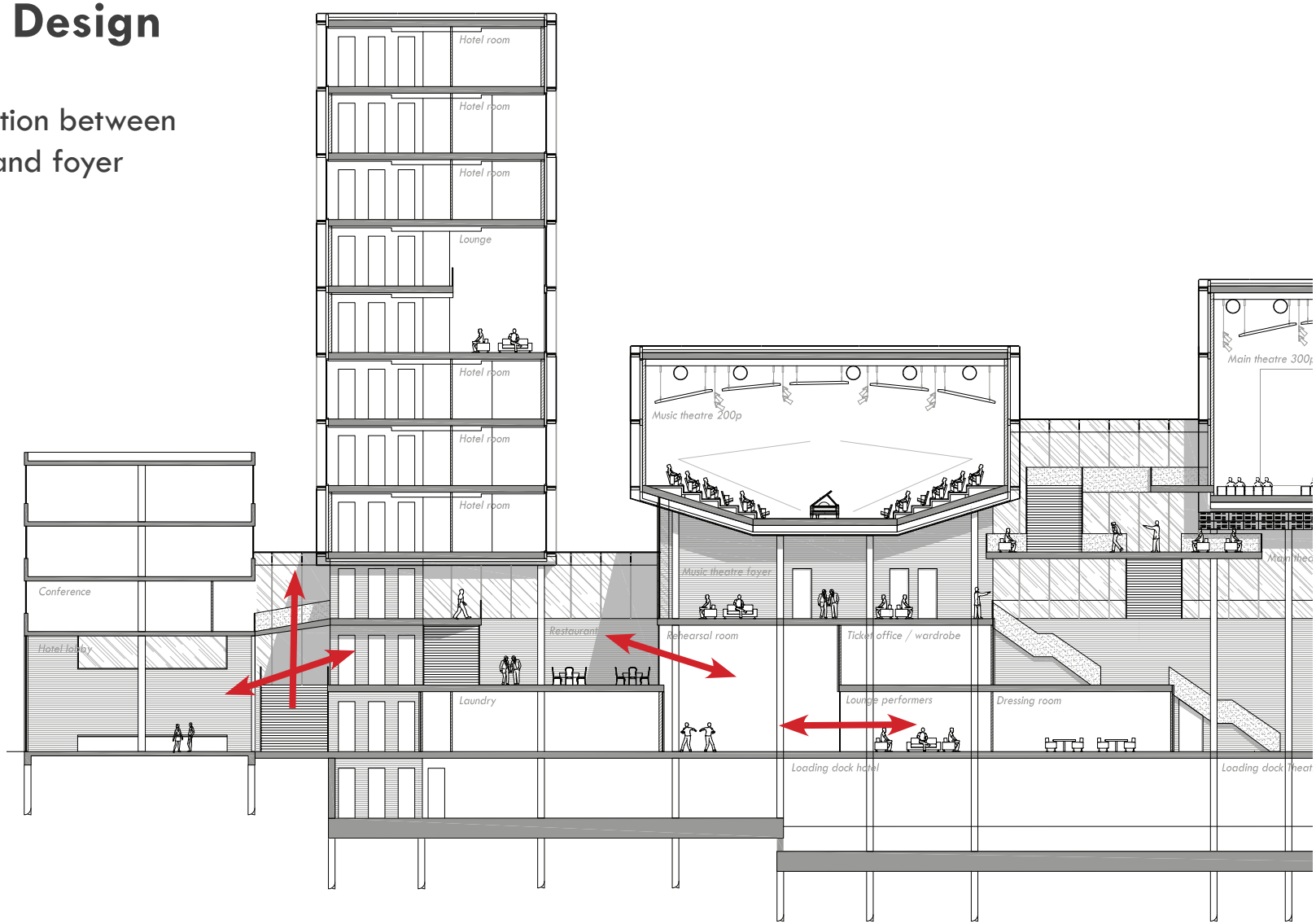
plans 01
cinema
rehearsal





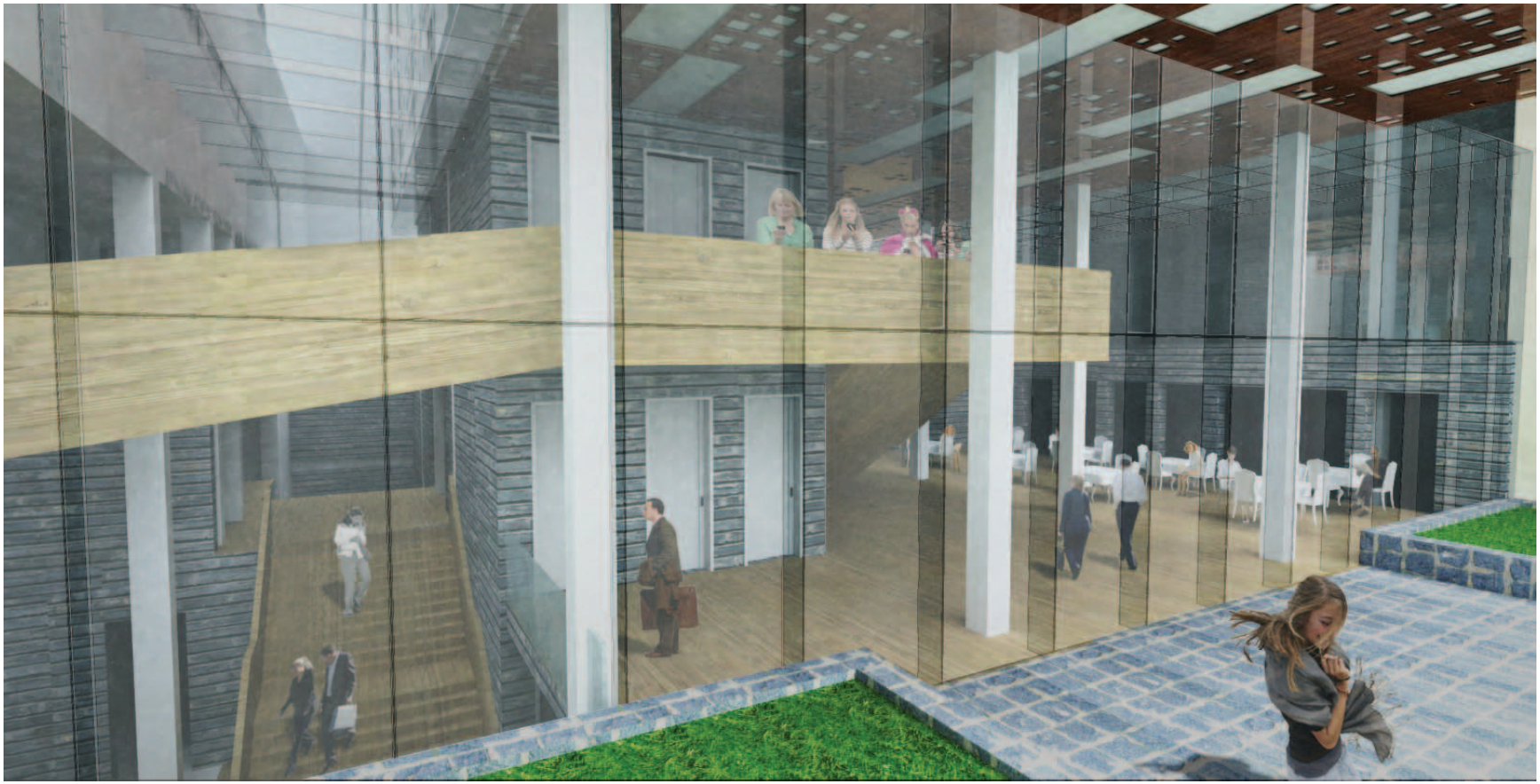
04 Design

connection between
block and foyer



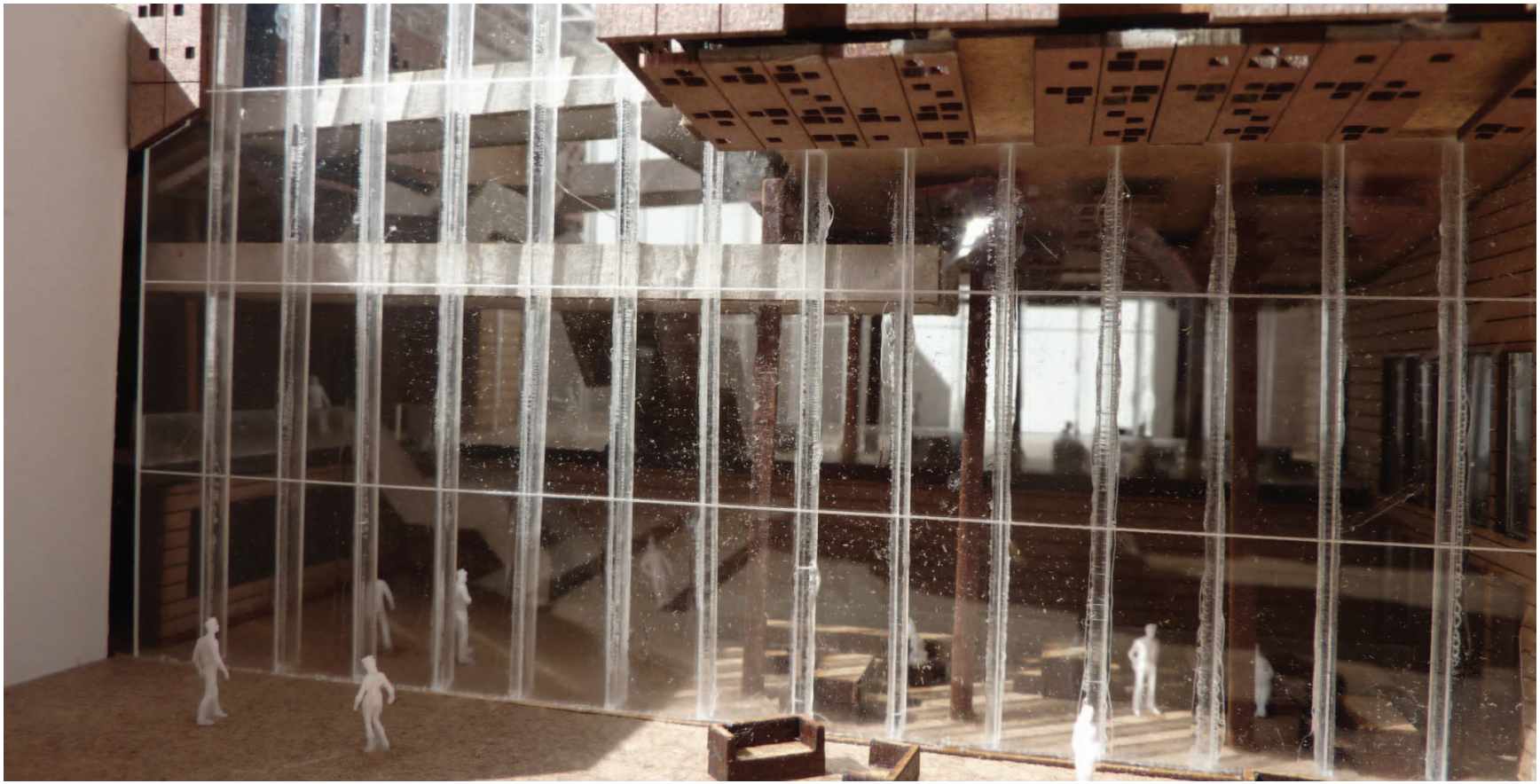
04 Design

04 Design



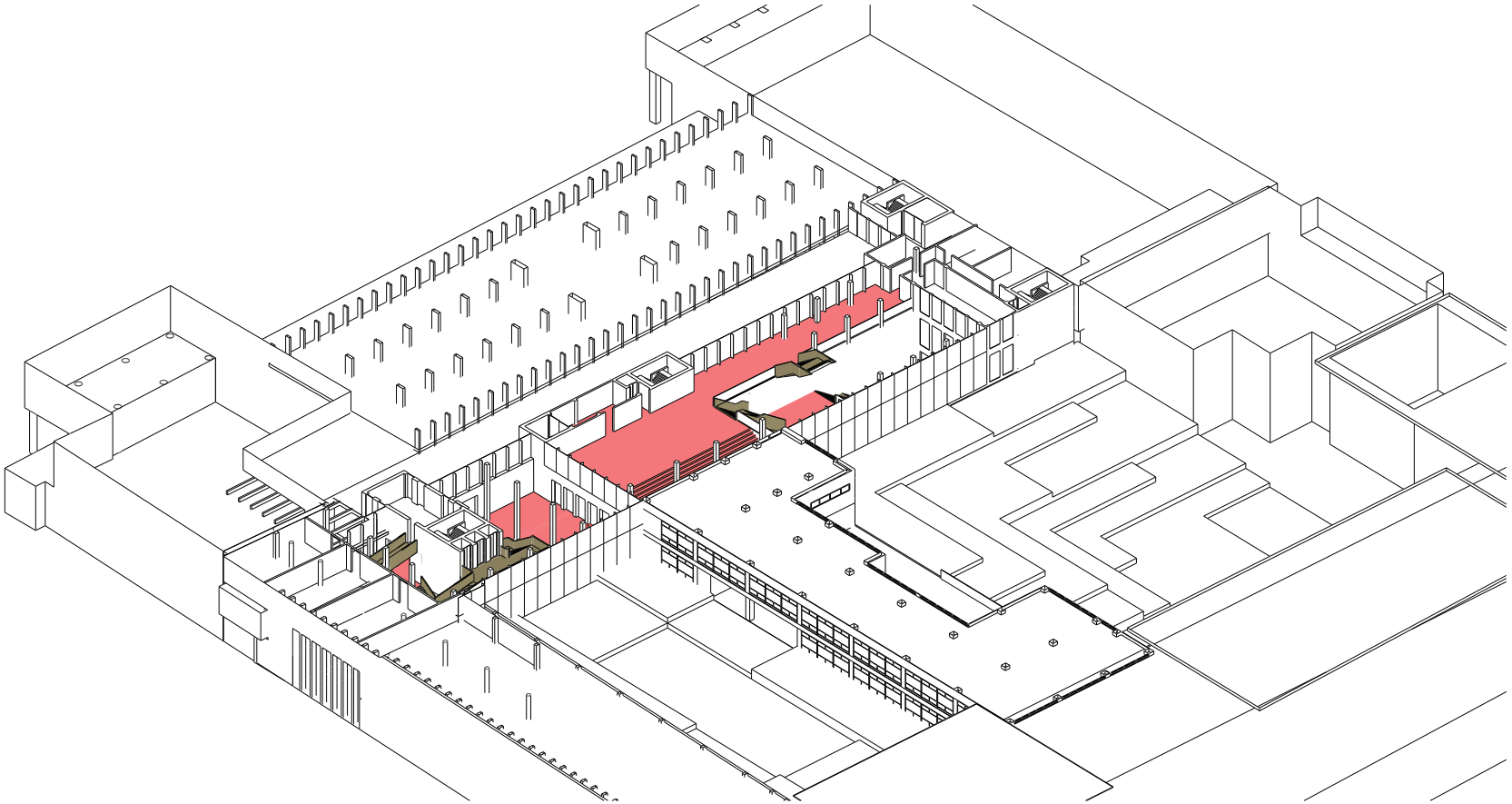
04 Design

04 Design



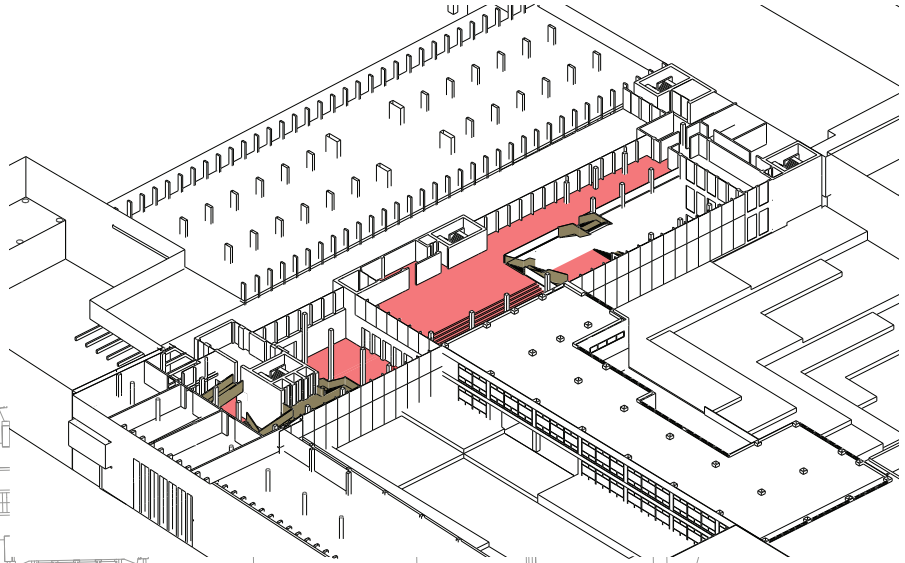
04 Design

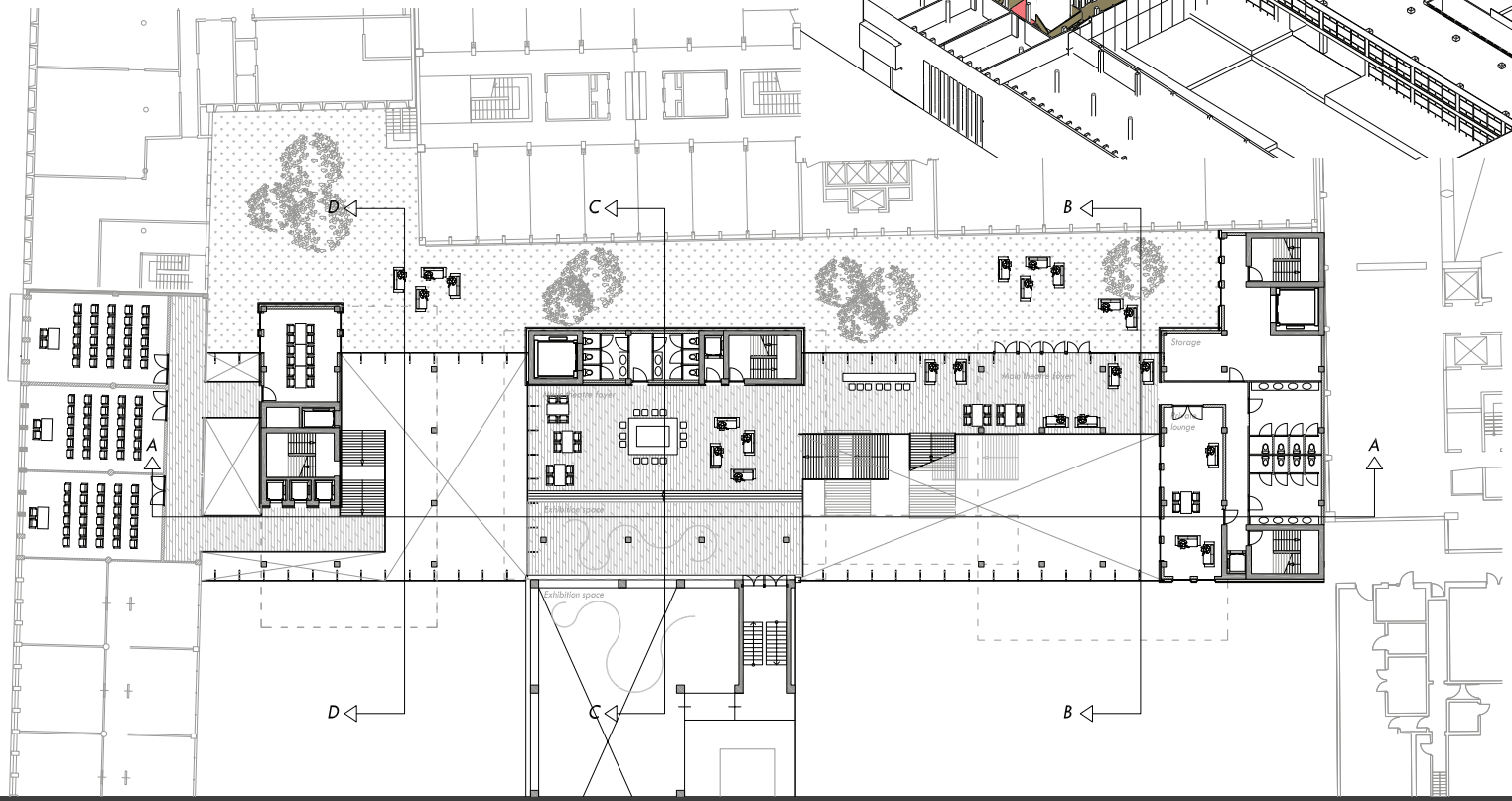
plan 02



04 Design

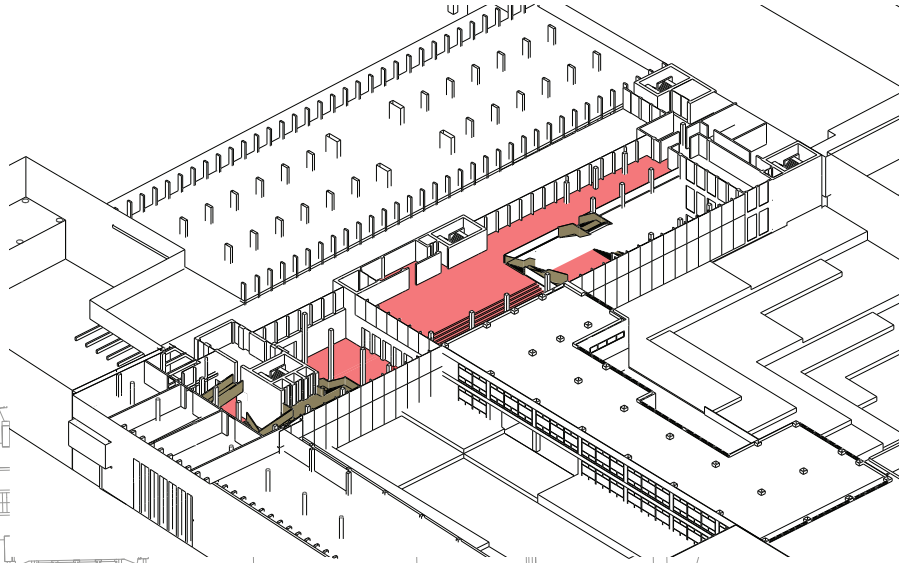
plan 02

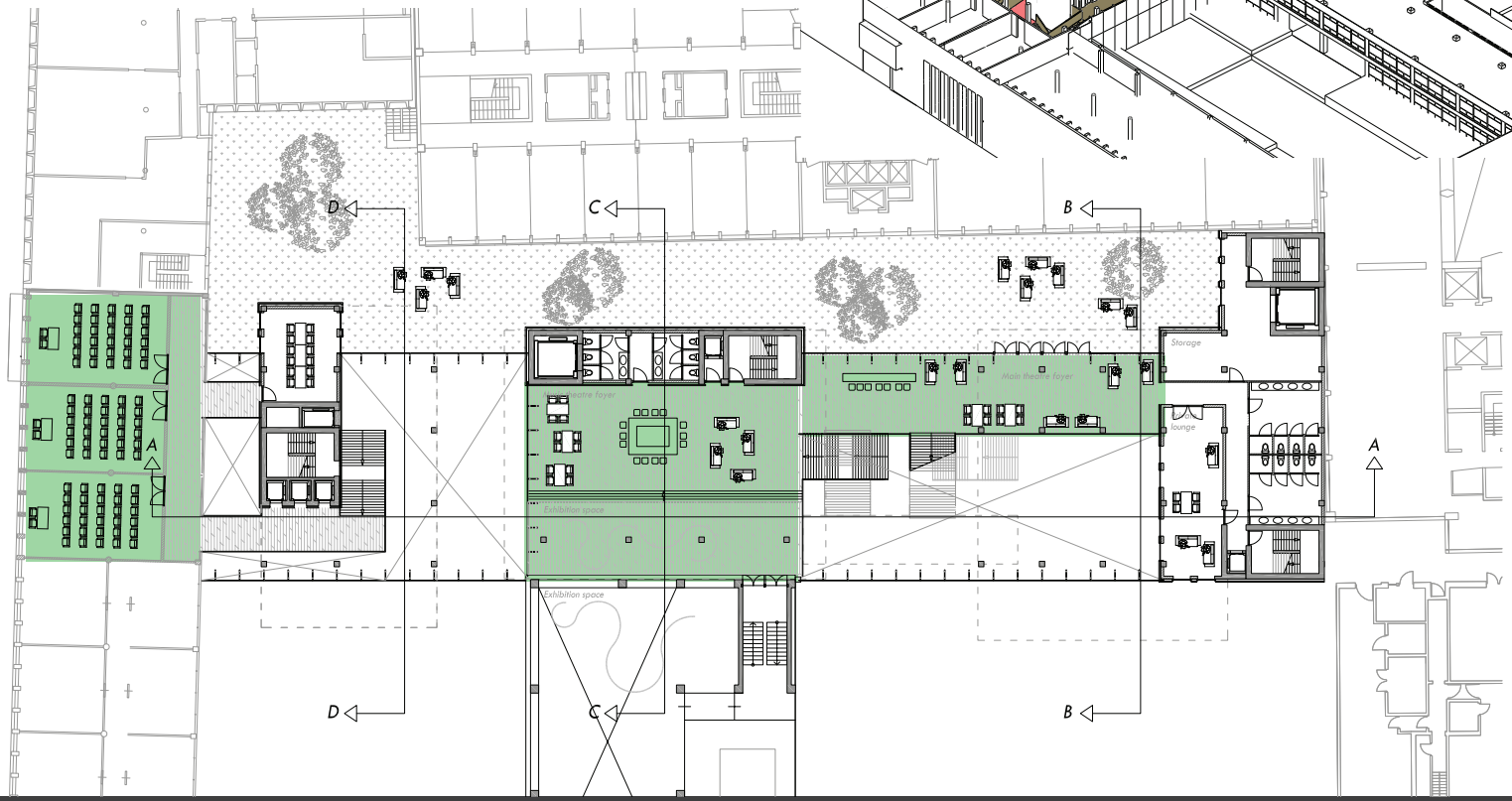




04 Design

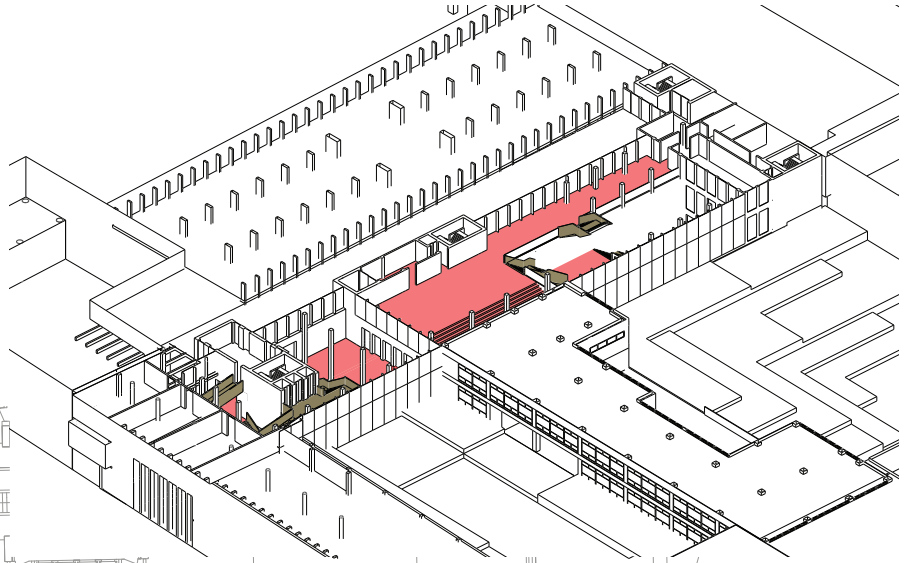
plan 02
main foyers
public route
conference rooms

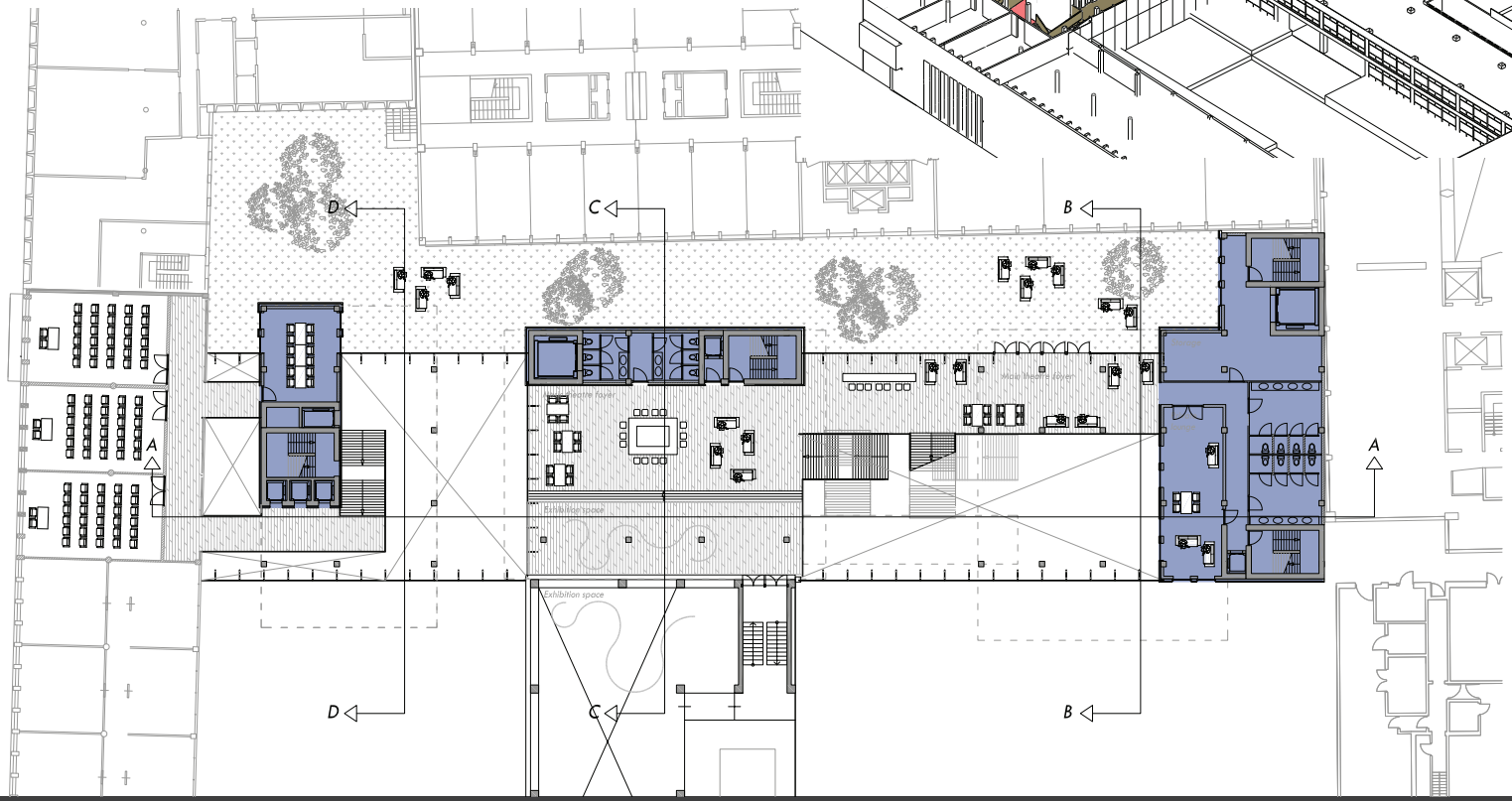




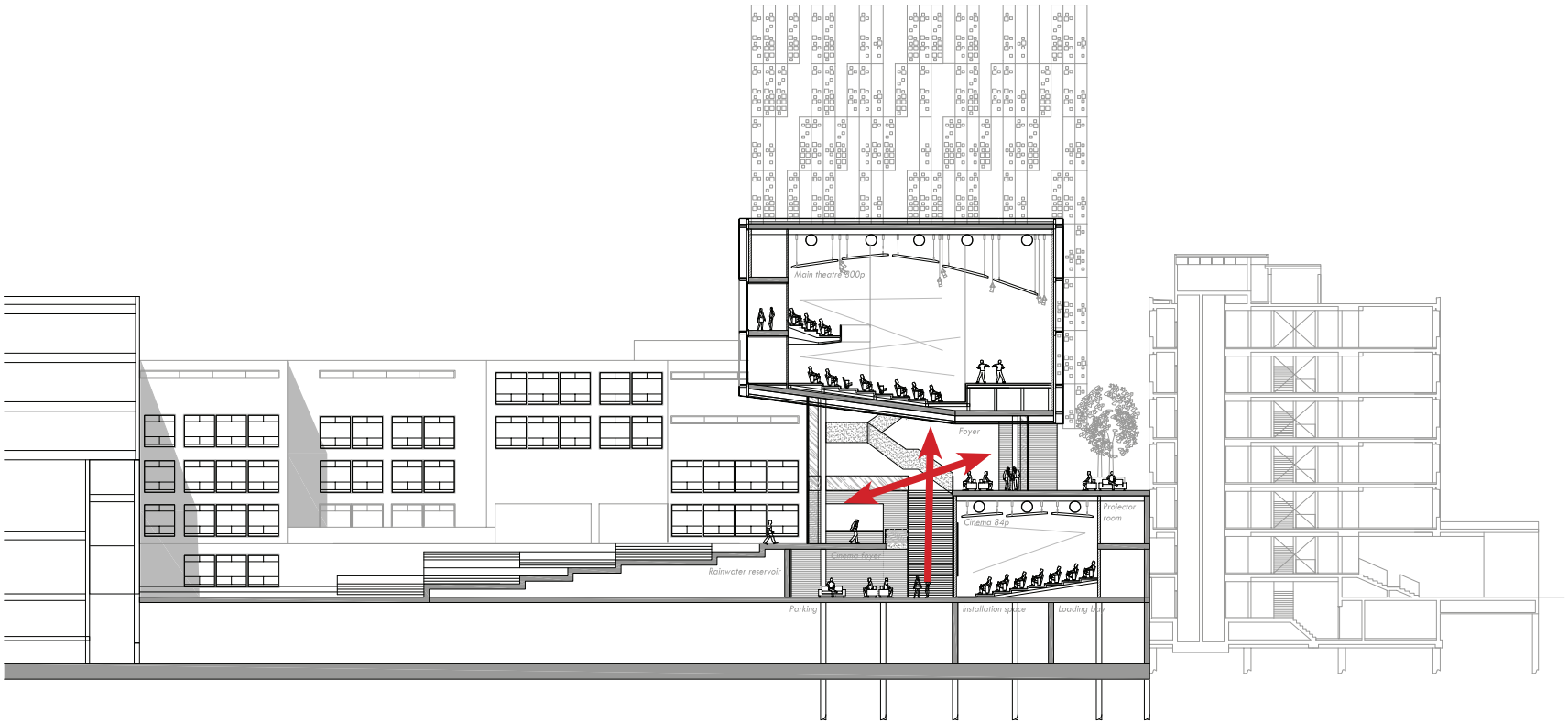
04 Design

plan 02
supporting functions



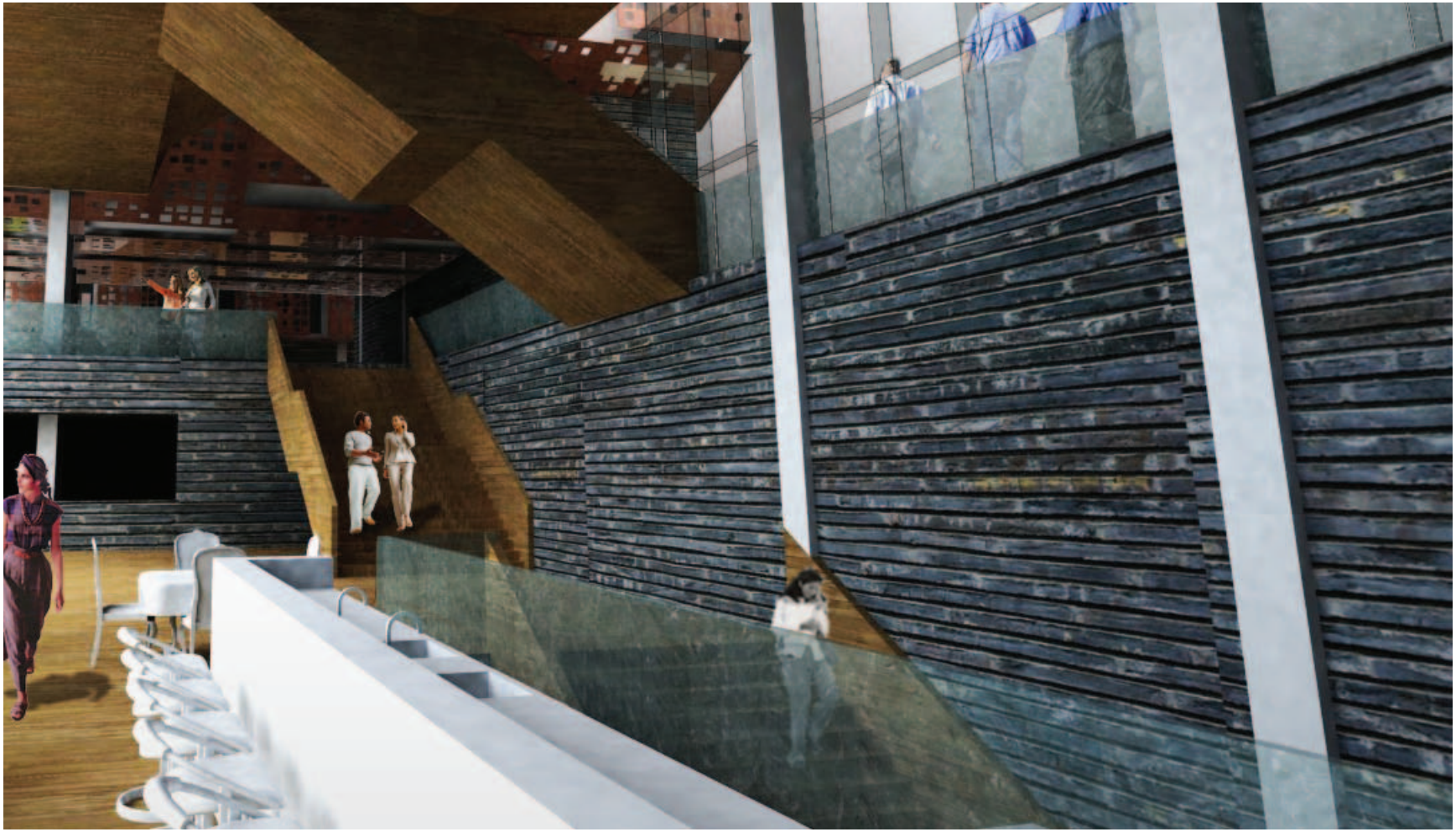


04 Design


Main theatre 900p
Foyer
Cinema 84p
Projector room
Cinema foyer
Rainwater reservoir
Parking
Installation space
Loading bay

04 Design

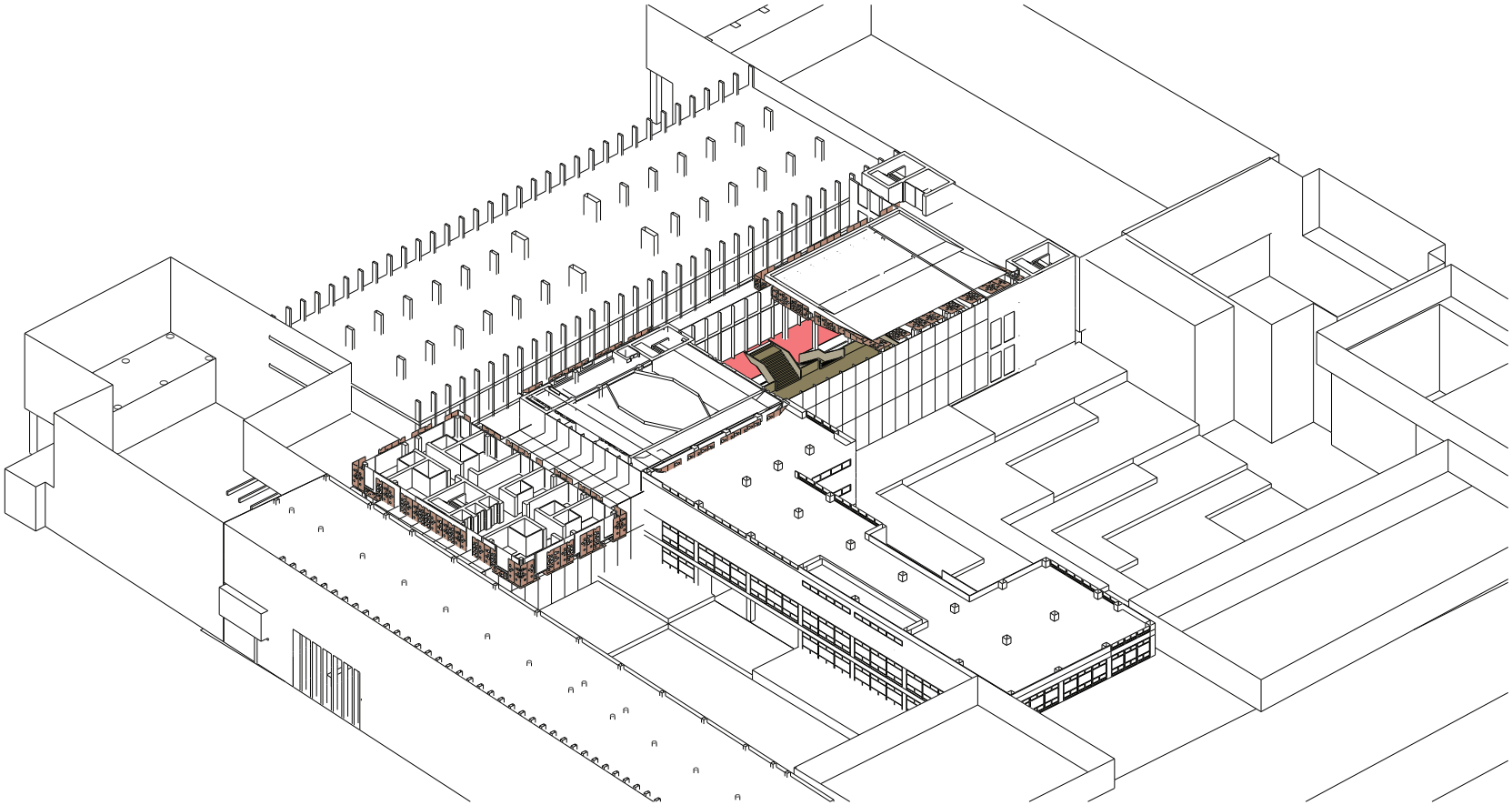
04 Design



04 Design

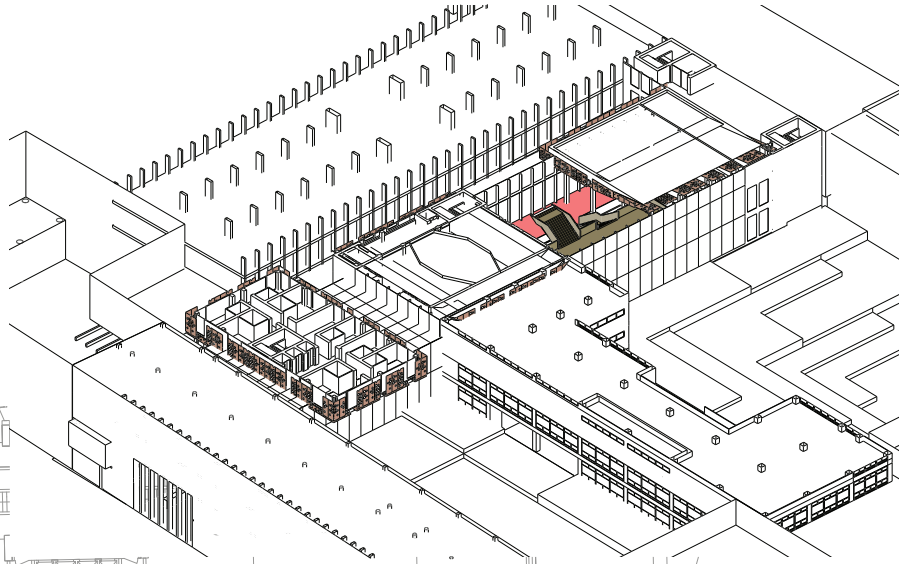
04 Design

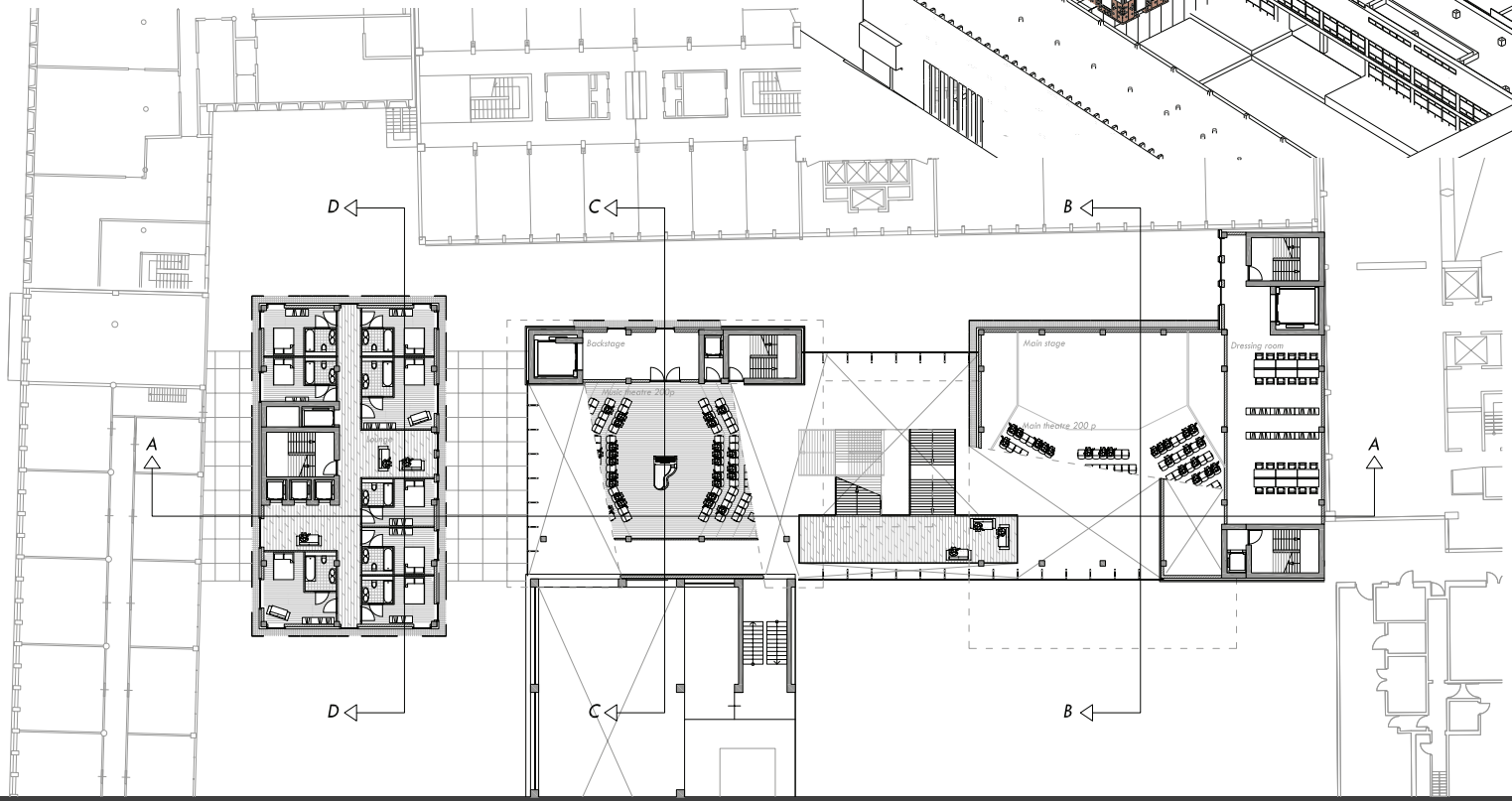
plan 03



04 Design

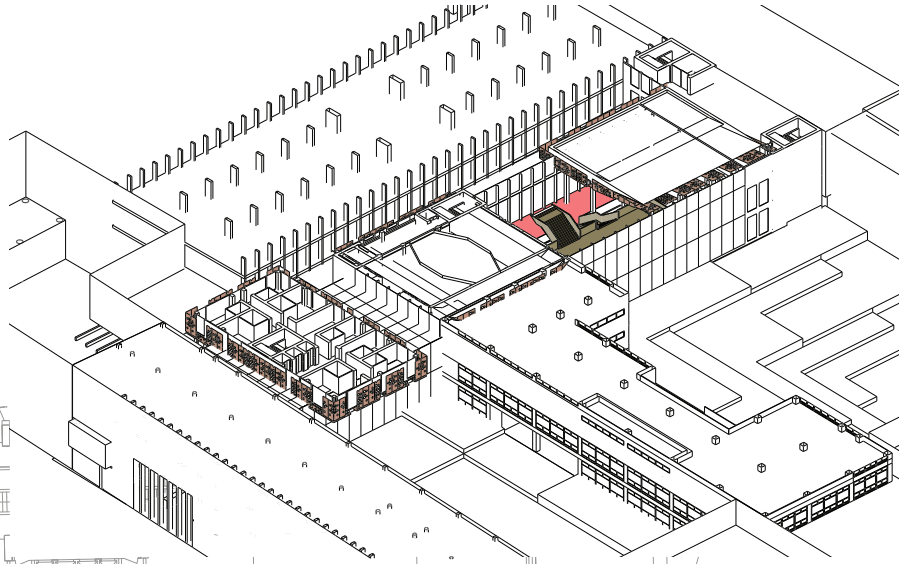
plan 03

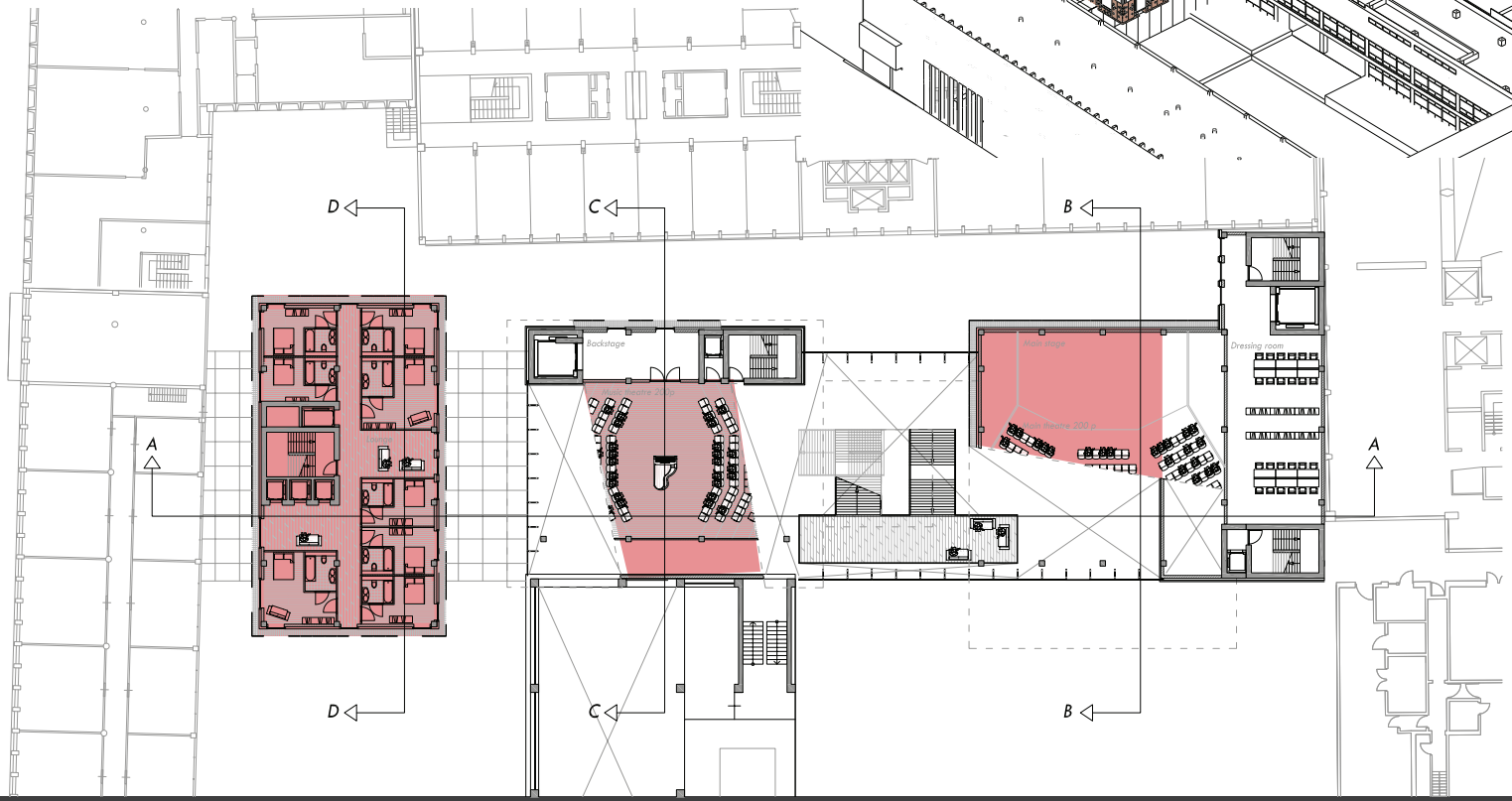




04 Design

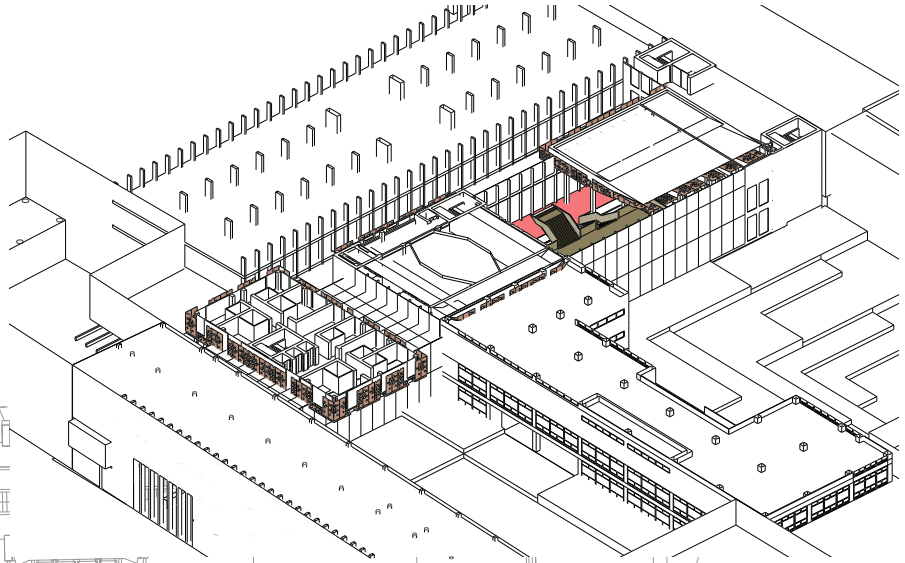
plan 03
hotel rooms
music theatre
main theatre
public route

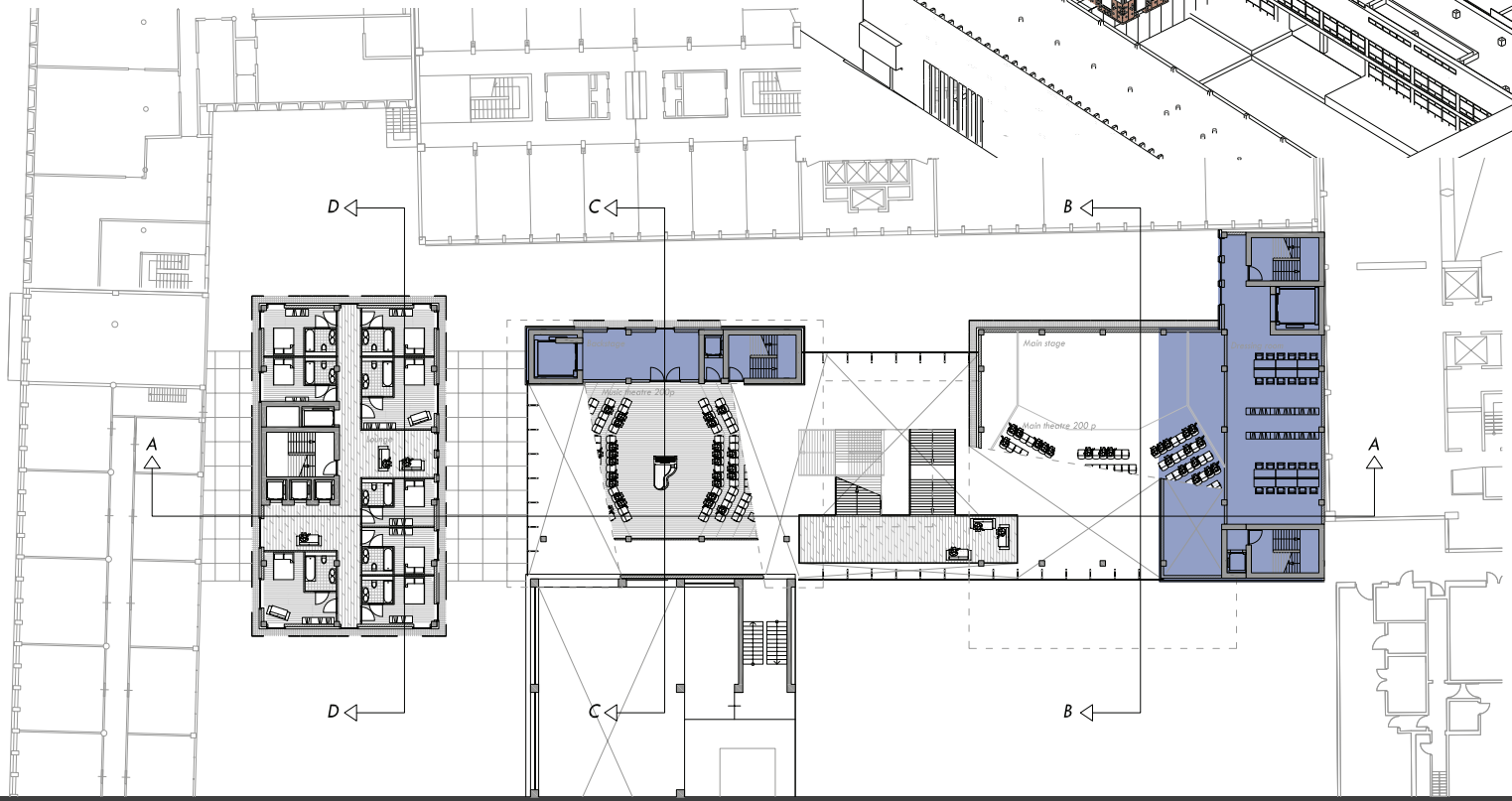




04 Design

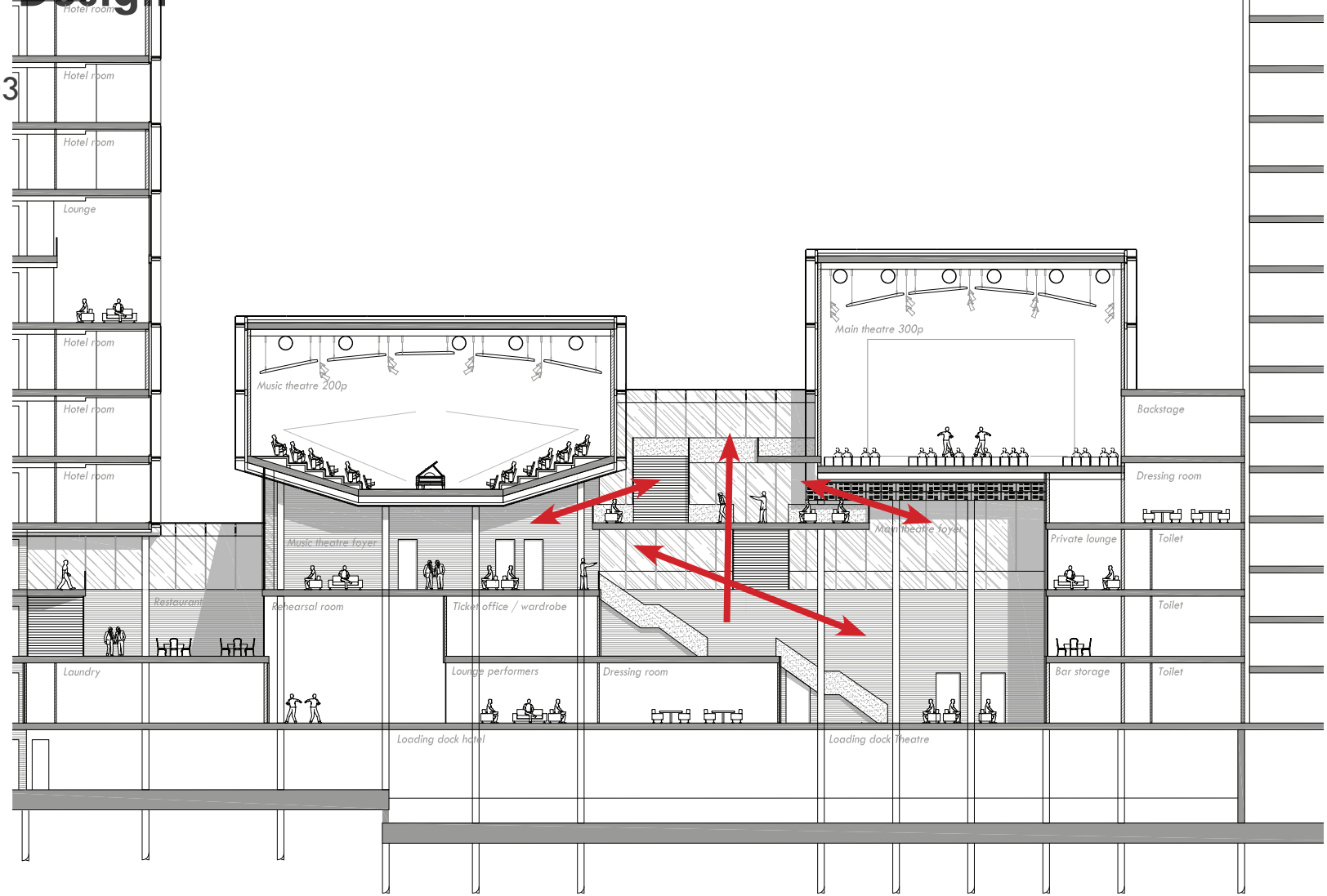
plan 03
hotel rooms
music theatre
main theatre
public route





04 Design

plan 03



04 Design

plan 03

04 Design

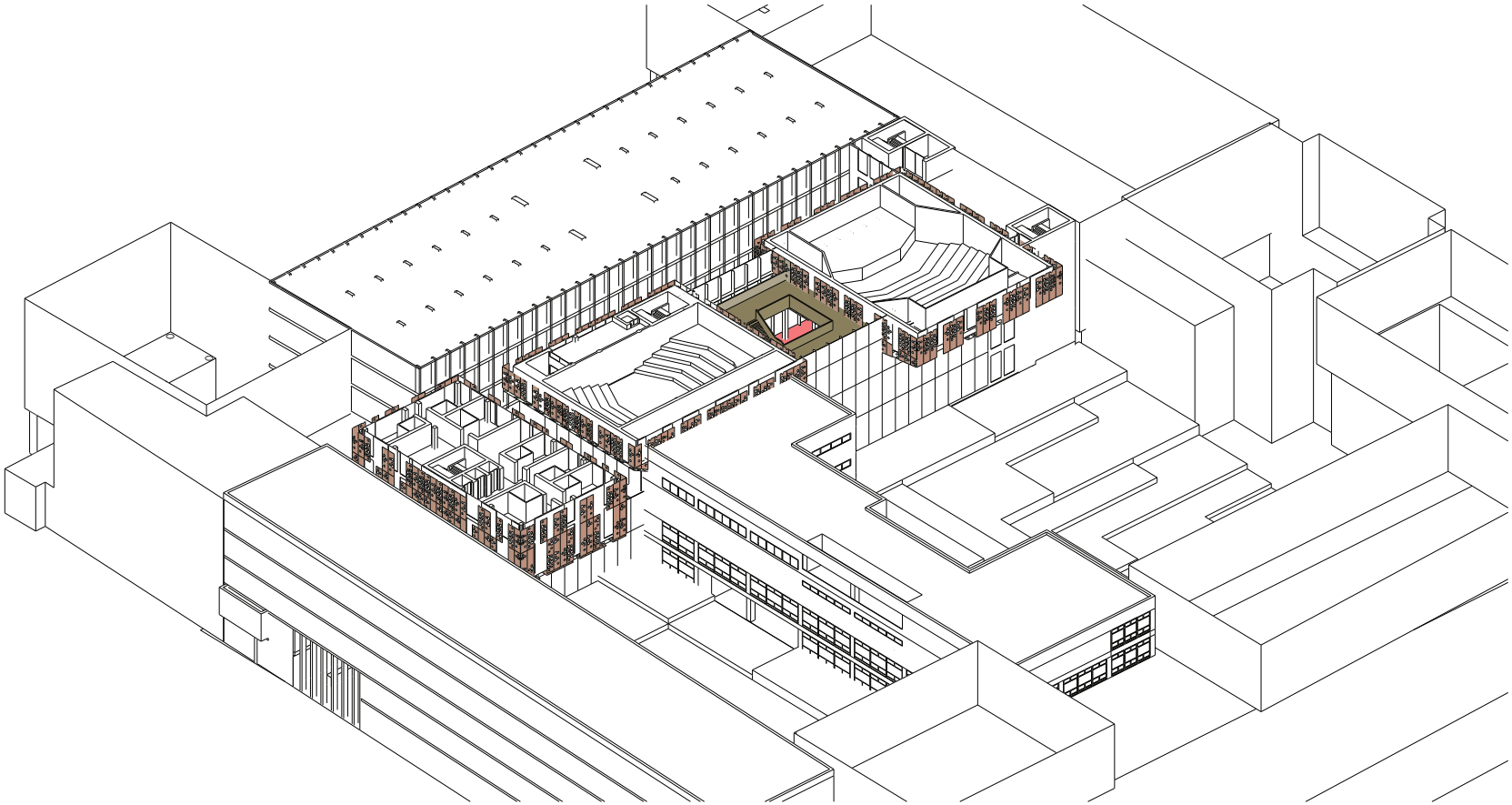
plan 03

04 Design

04 Design

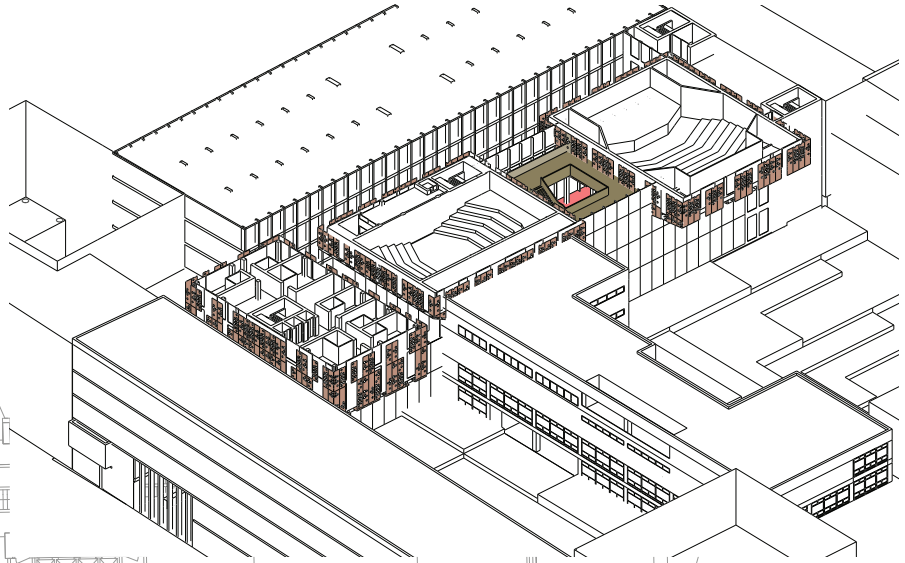
04 Design

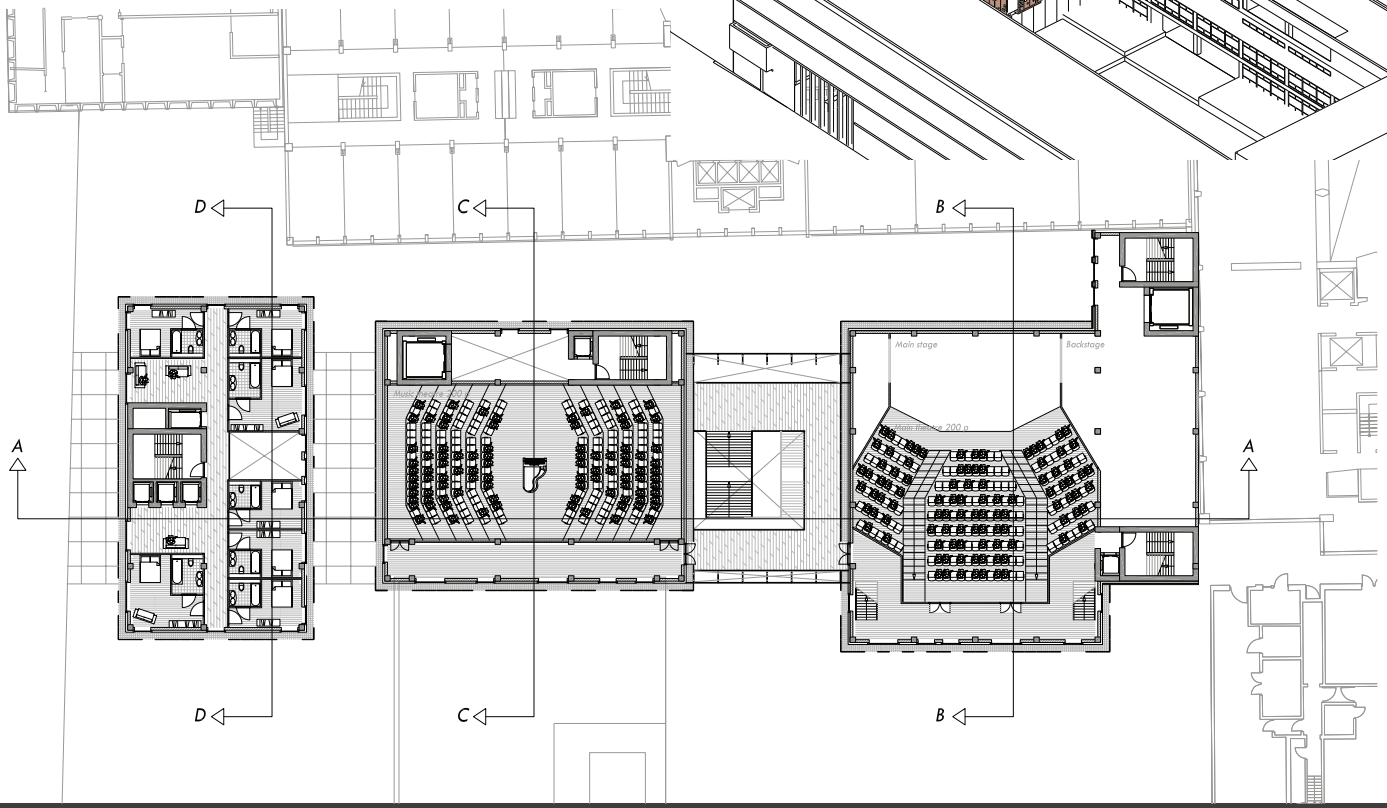
plan 04



04 Design

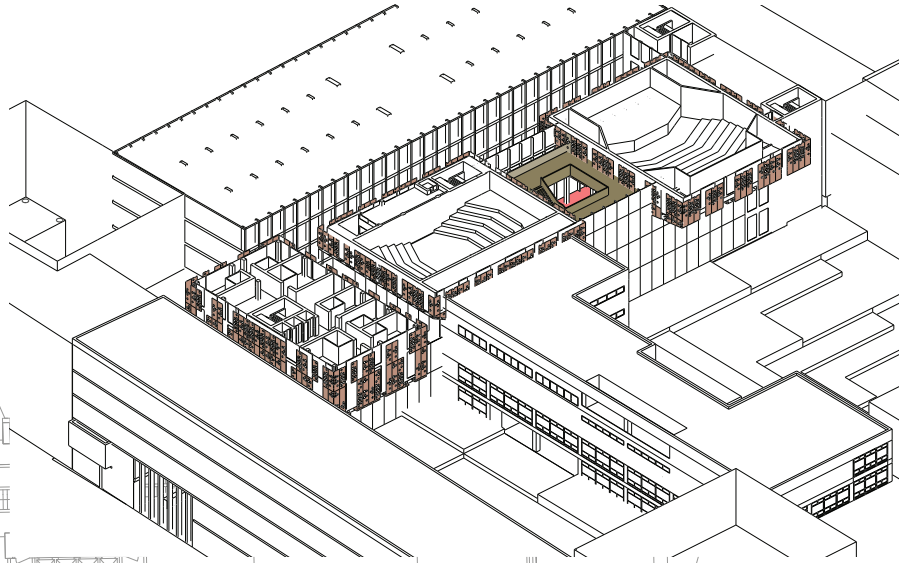
plan 04

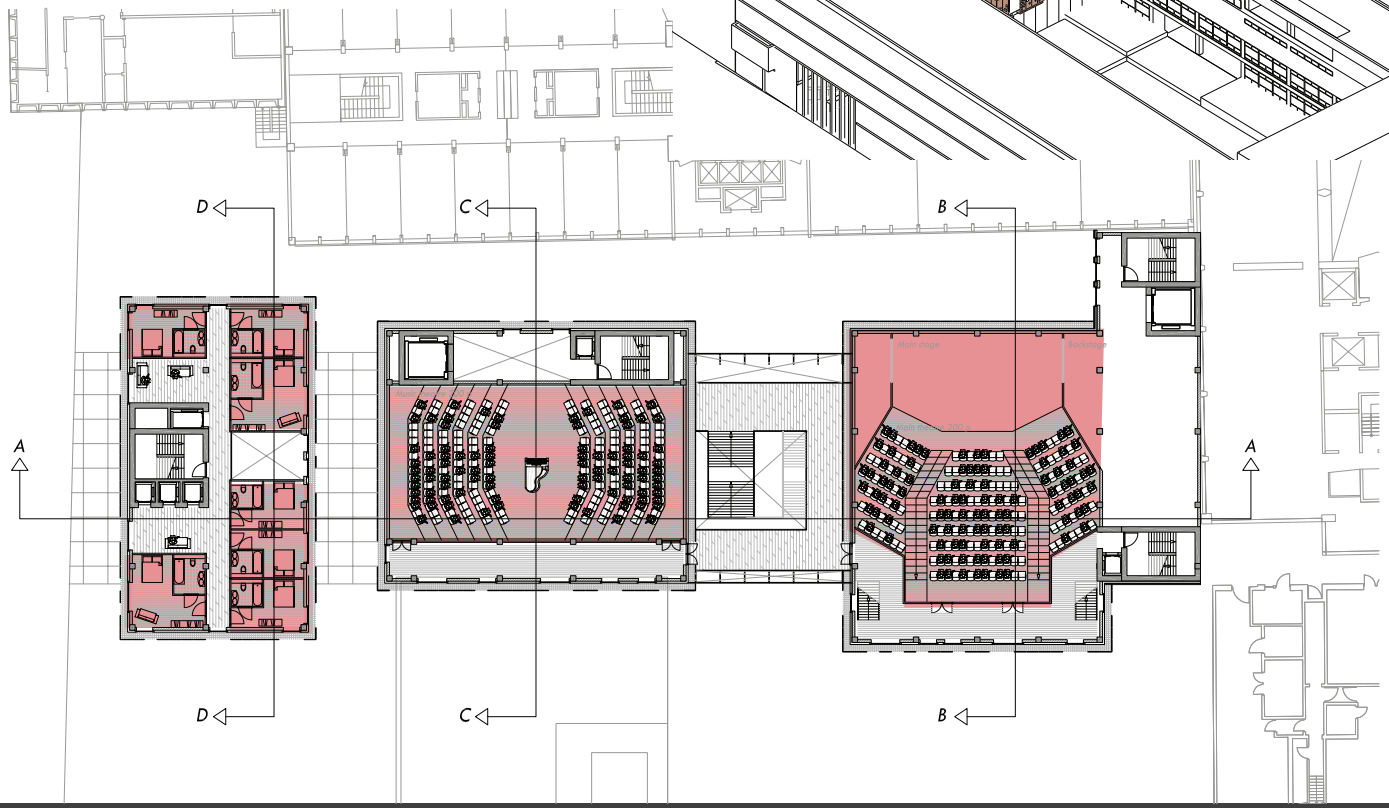




04 Design

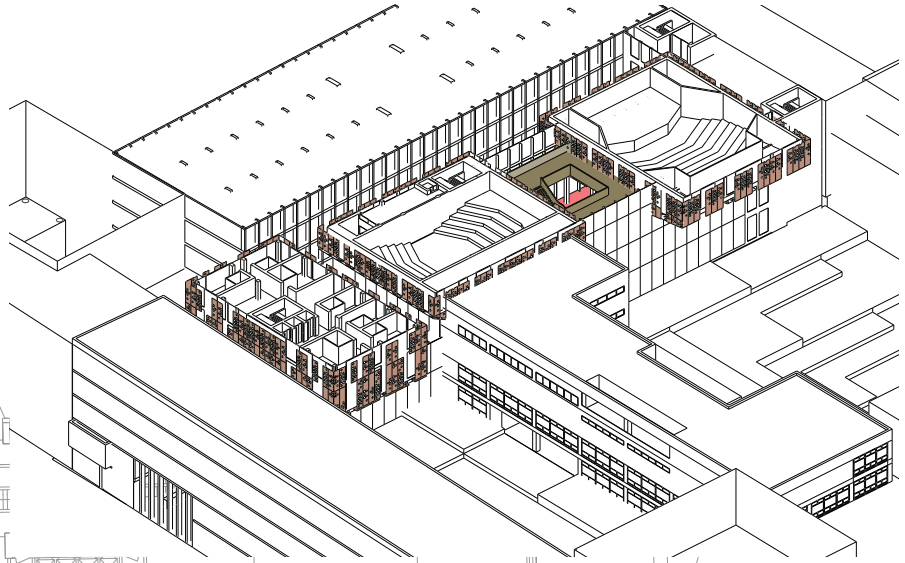
plan 04
hotel
music
theatre

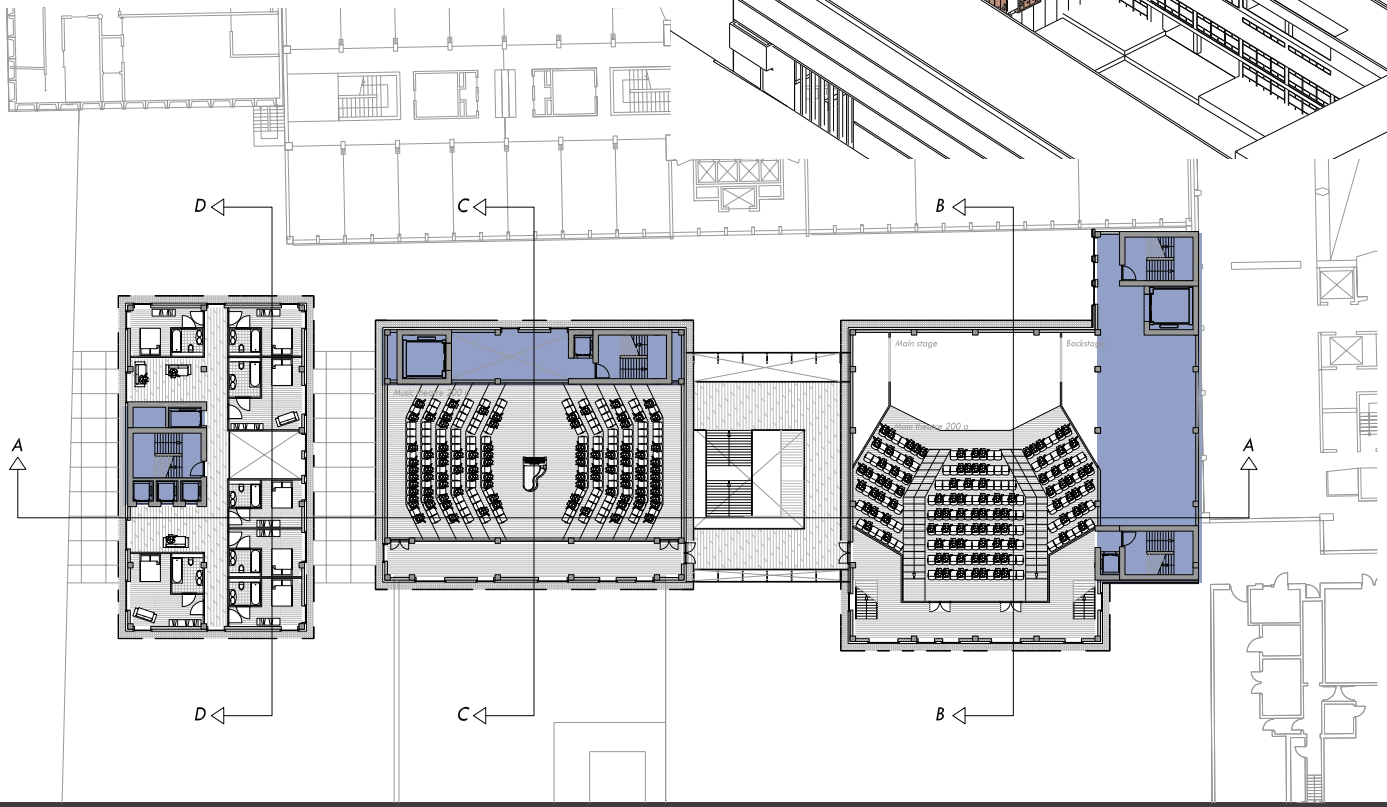




04 Design

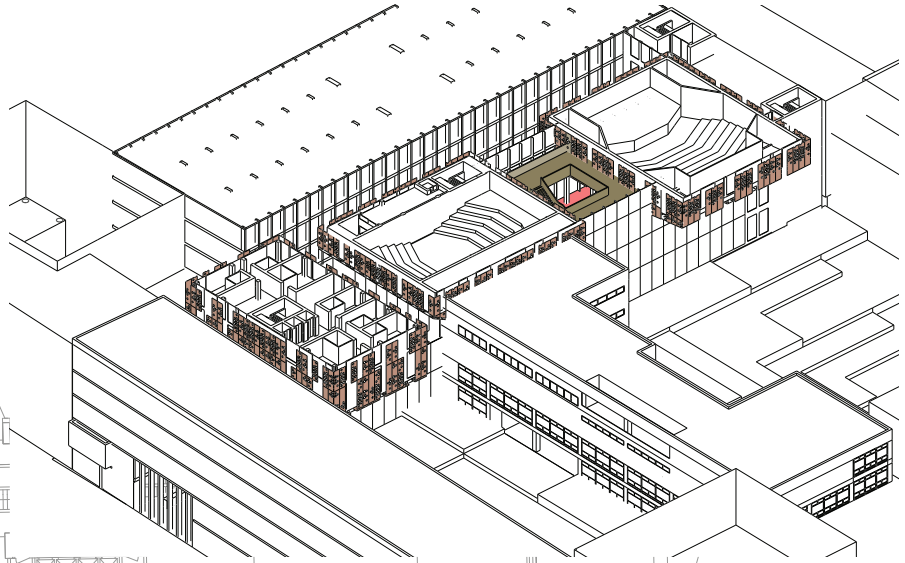
plan 04
cores

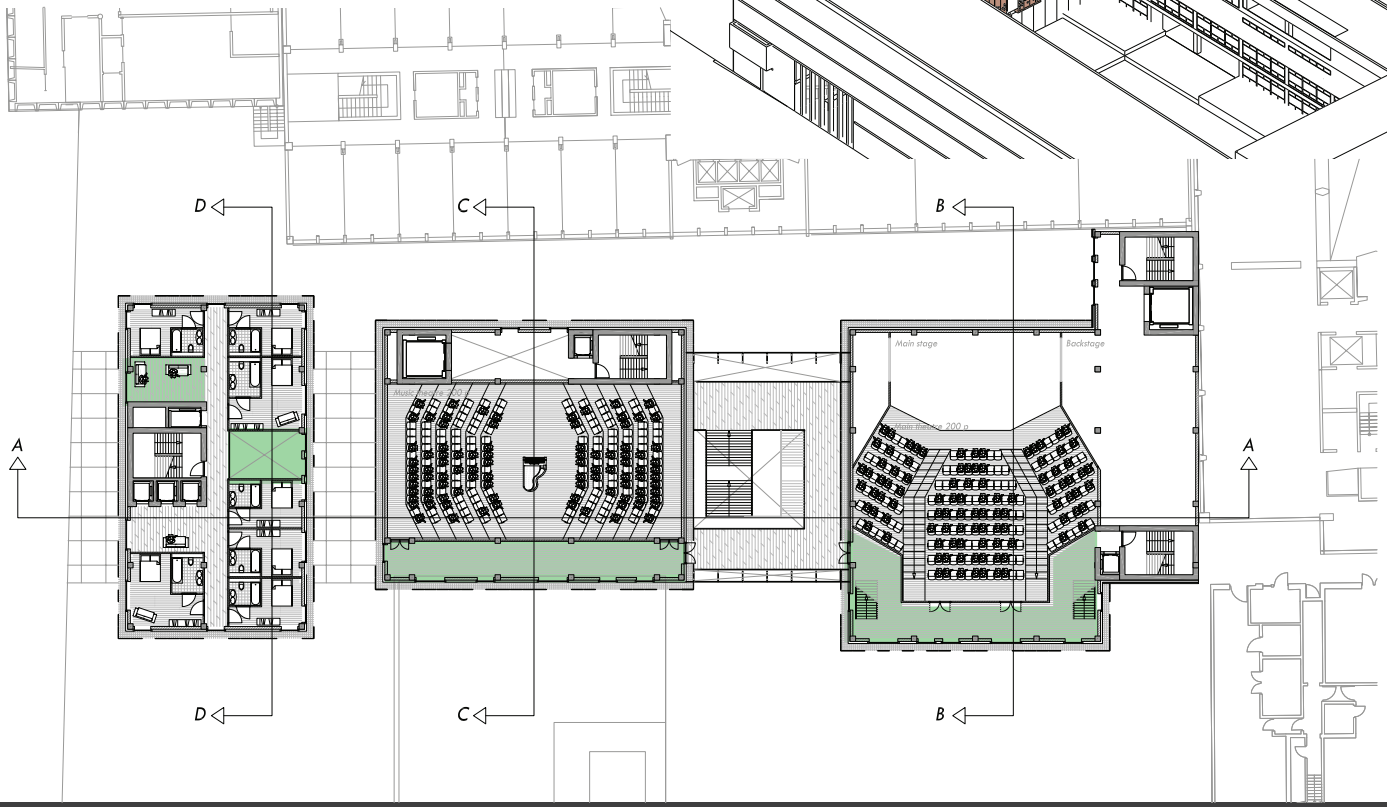




04 Design

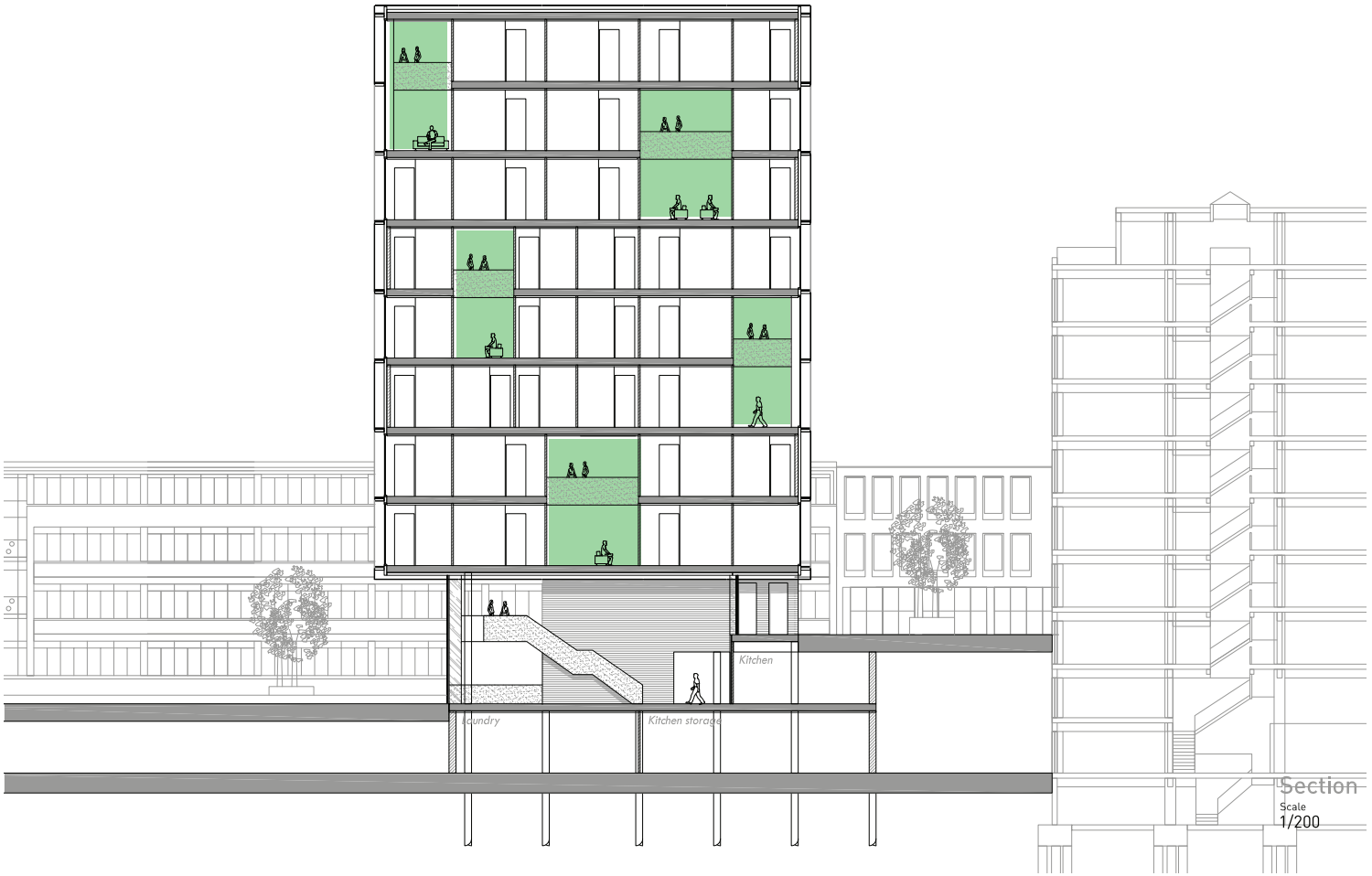
plan 04
vides and entrees





04 Design

section



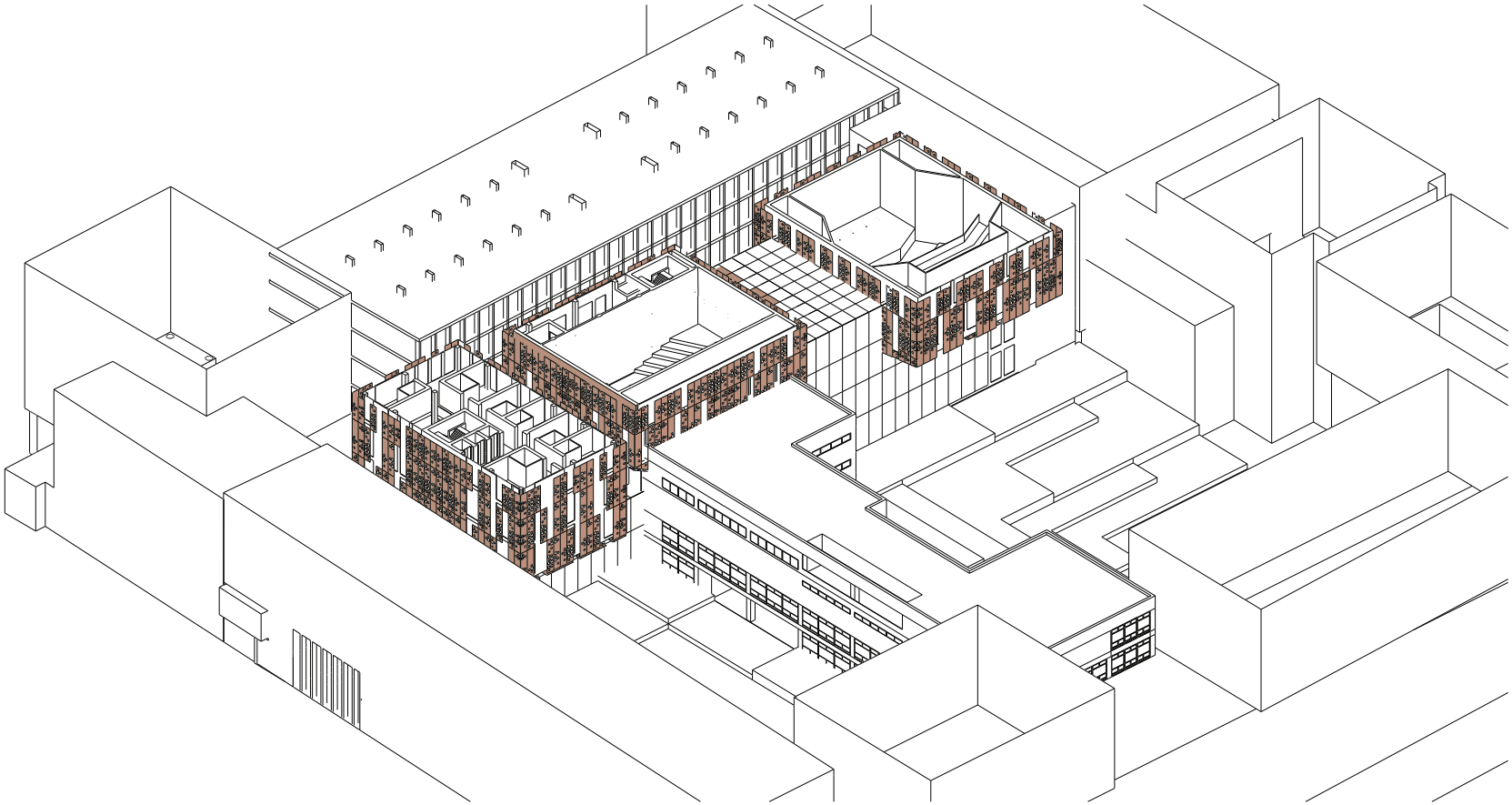
04 Design

plan 04

04 Design

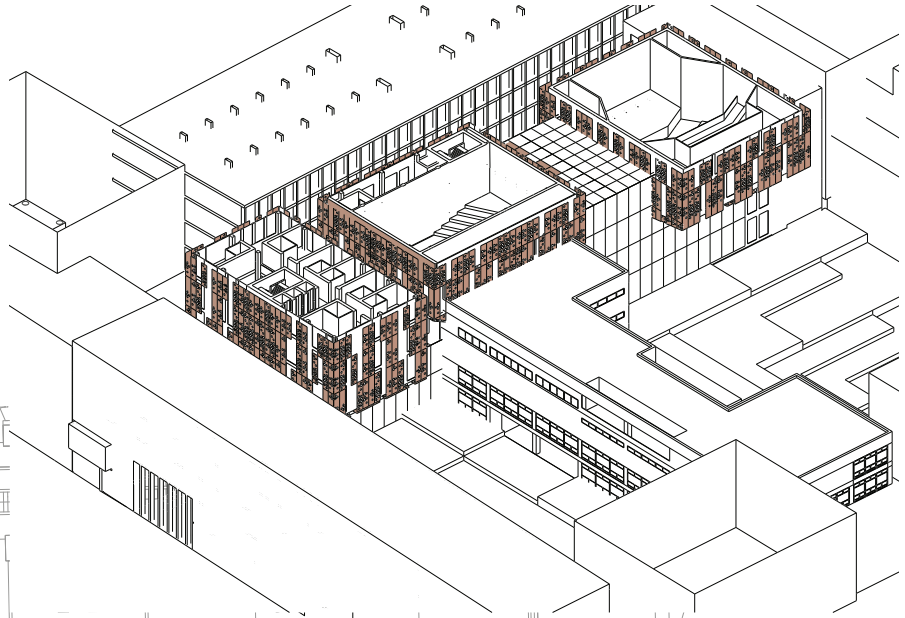
04 Design

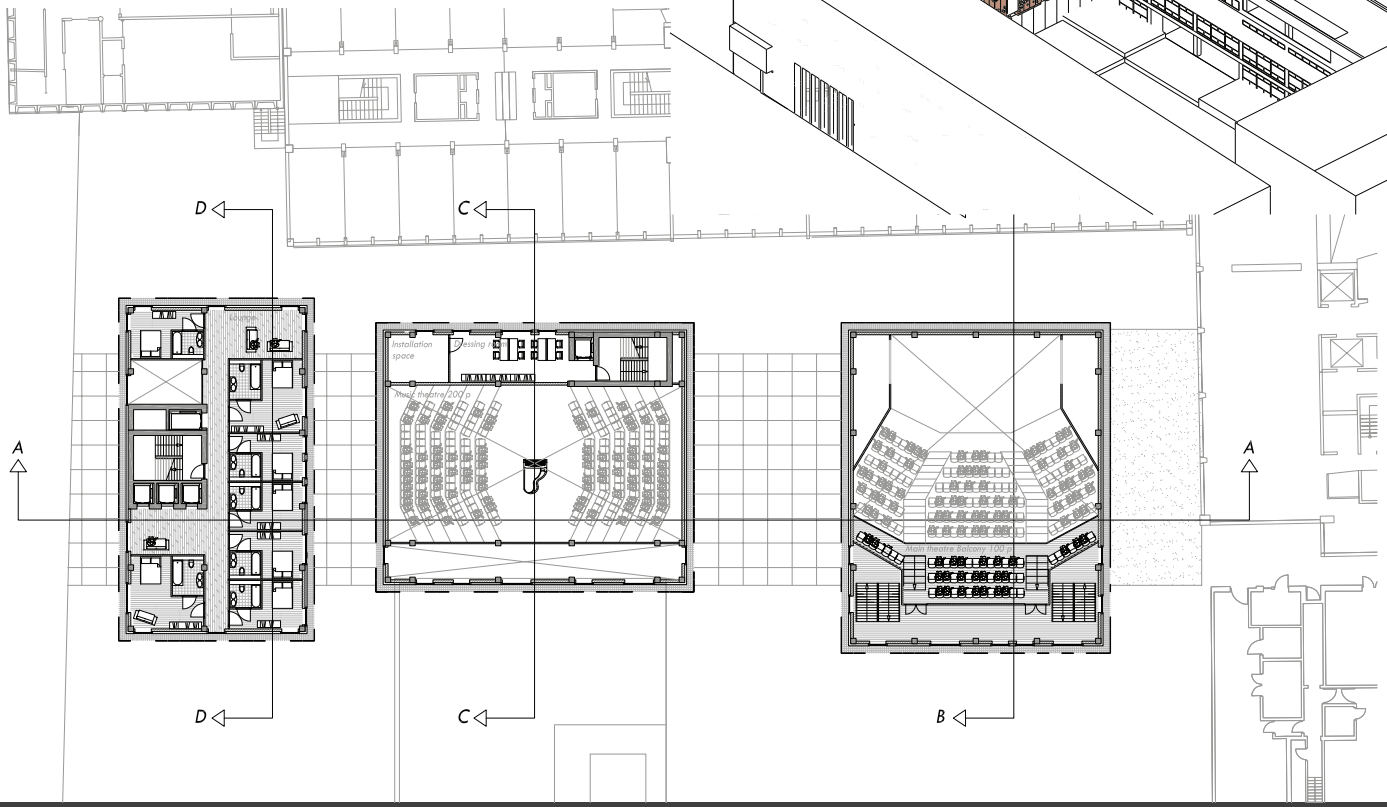
plan 05



04 Design

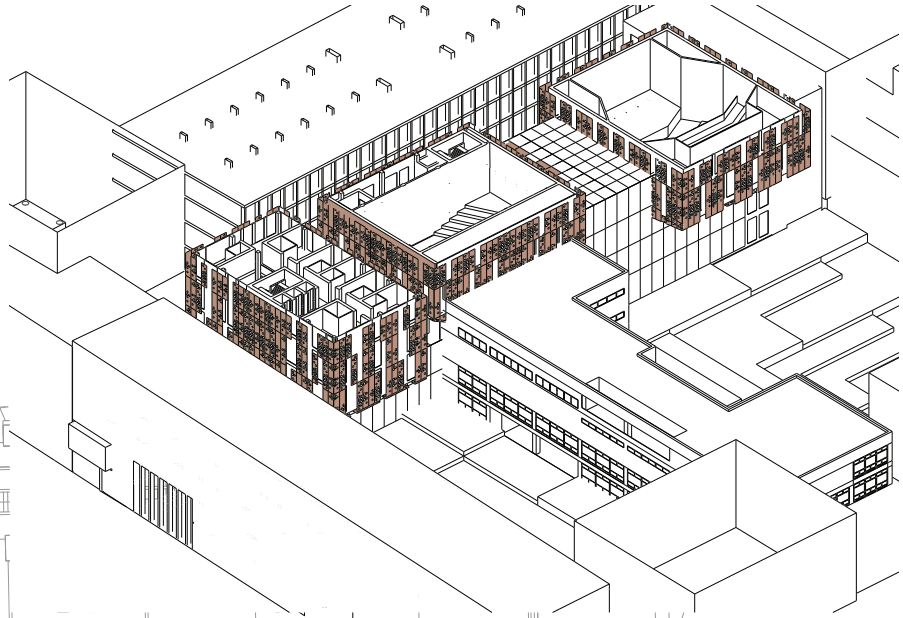
plan 05

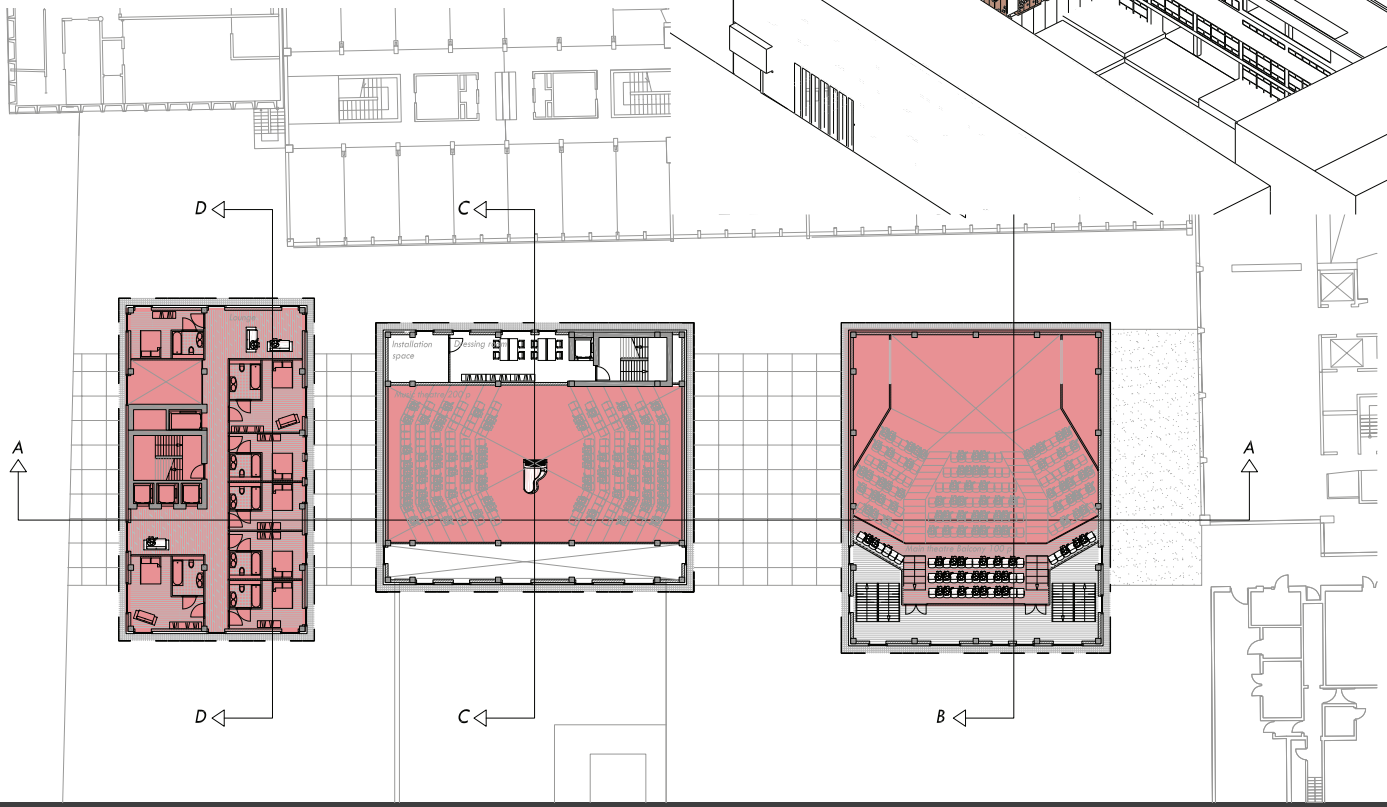




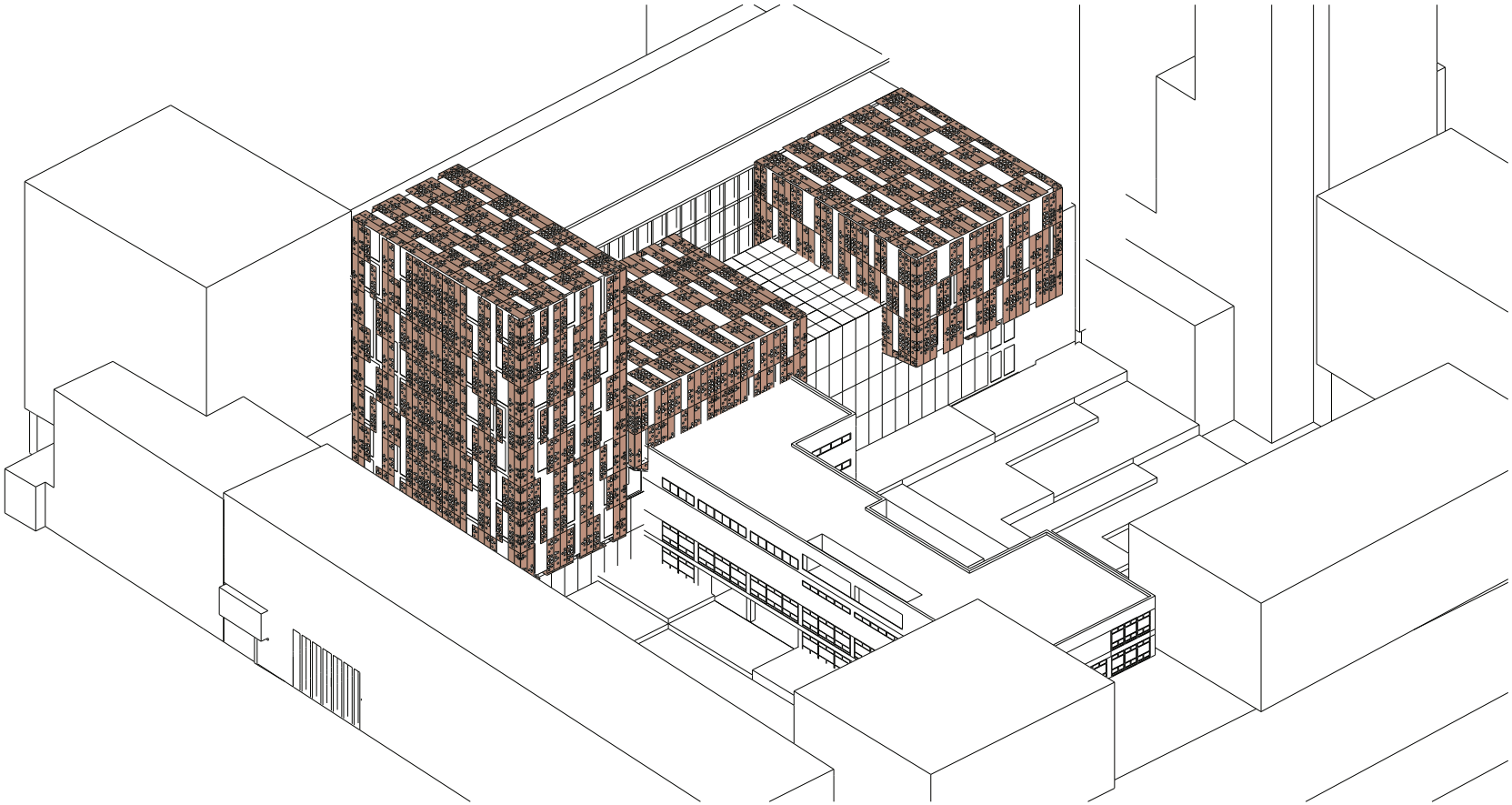
04 Design

plan 05





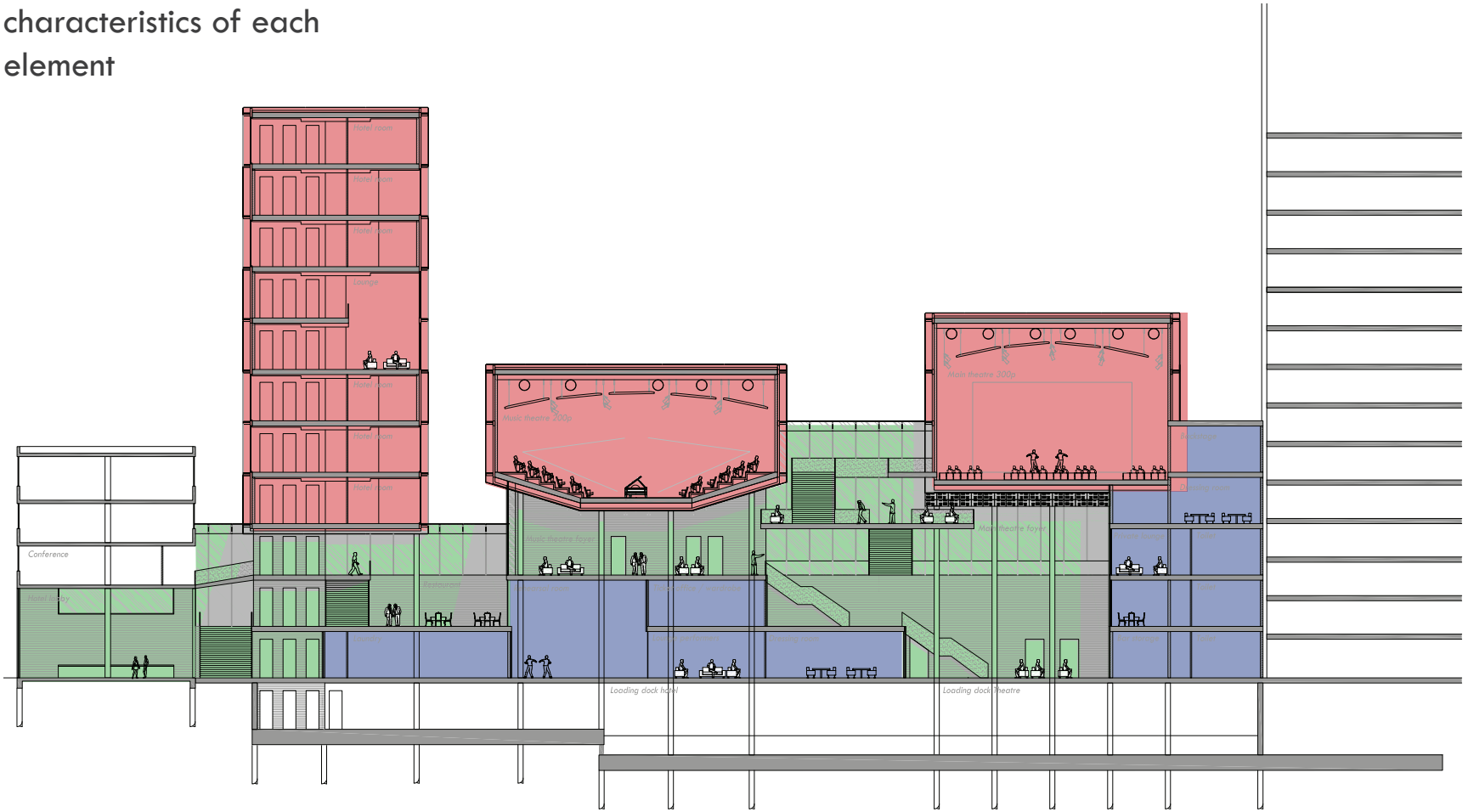
04 Design



05 Materialisation

05 Materialisation

facade concept
characteristics of each
element

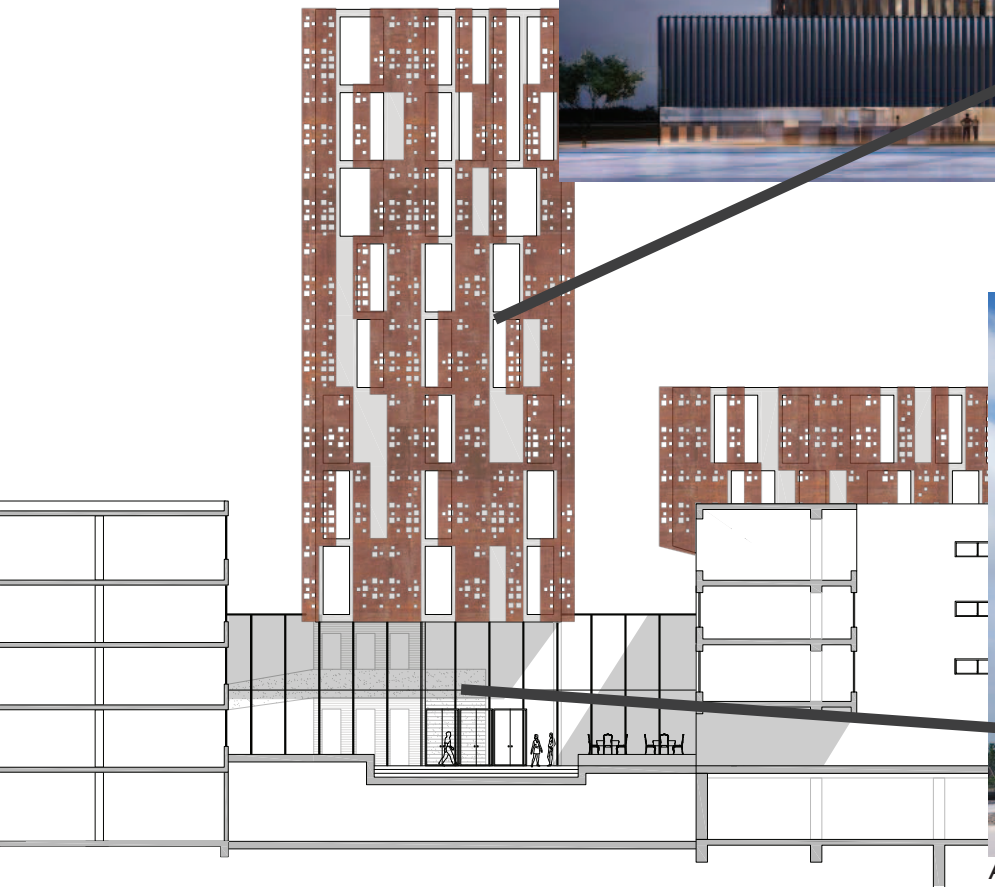


05 Materialisation

facade concept
characteristics of each
element

05 Materialisation

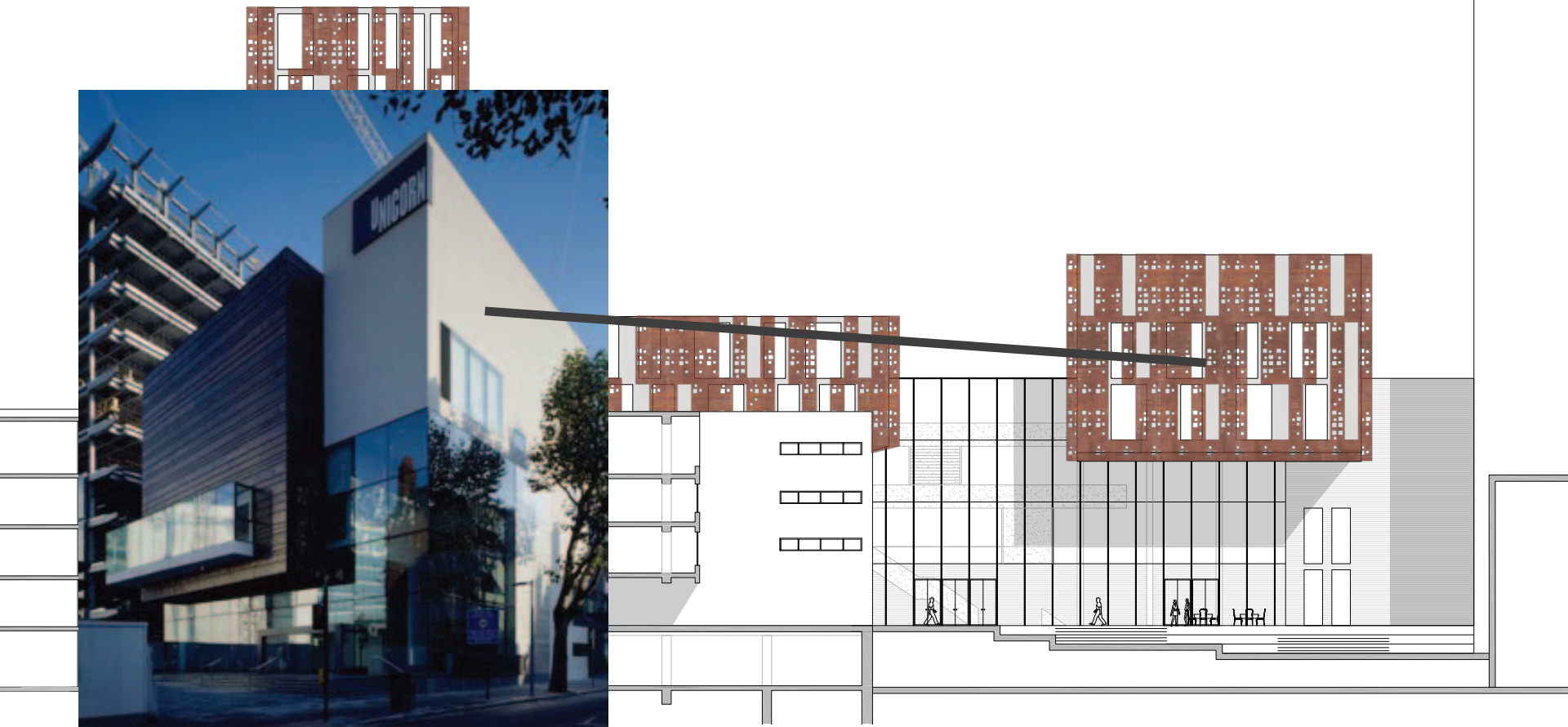
solid ‘backbone’



Administration Building of the North Shanghai Gas Company in Jiading Atelier Deshaus

05 Materialisation

stronly accentuated main block

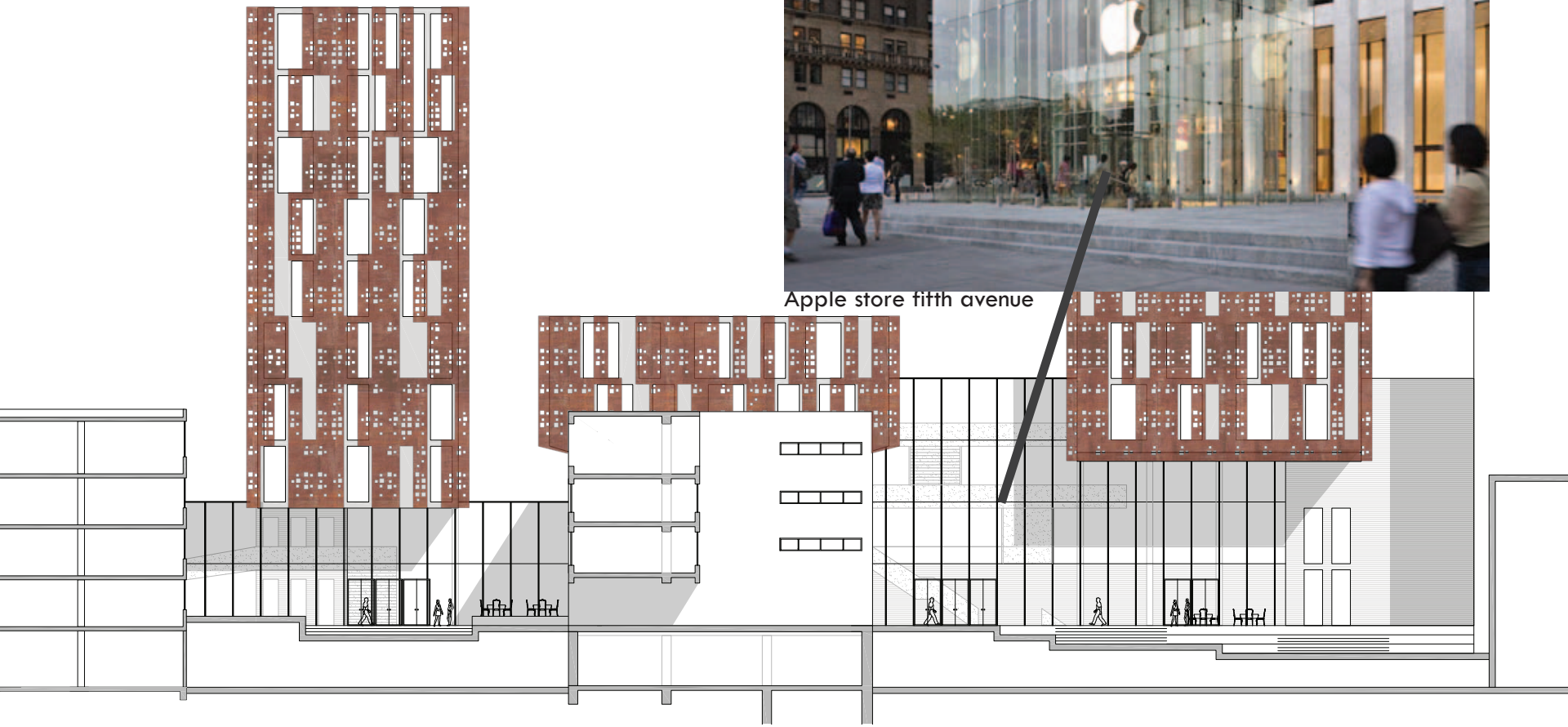


Unicorn theatre Keith Williams Architects

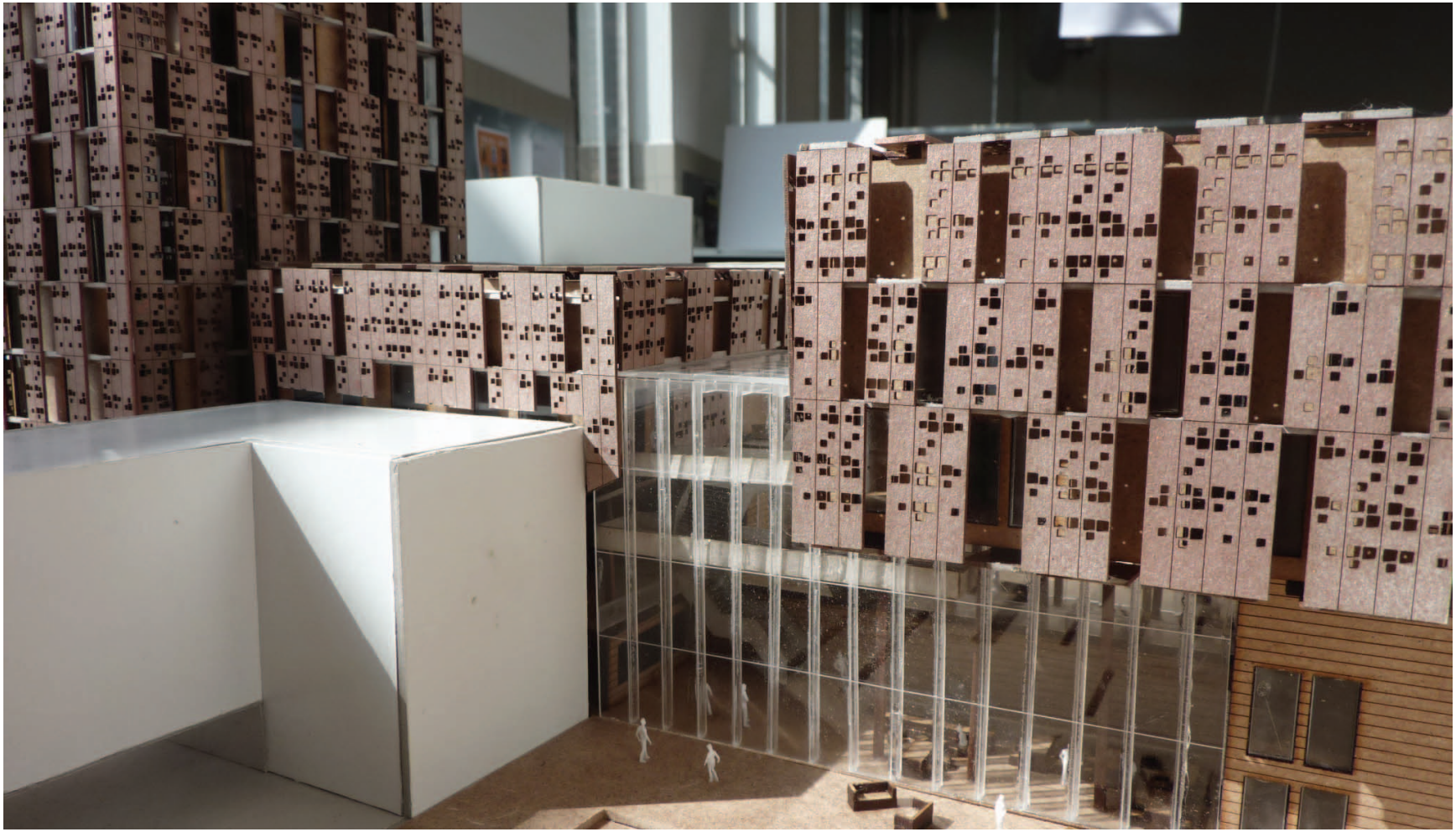
05 Materialisation

transparant plint

Apple store fifth avenue



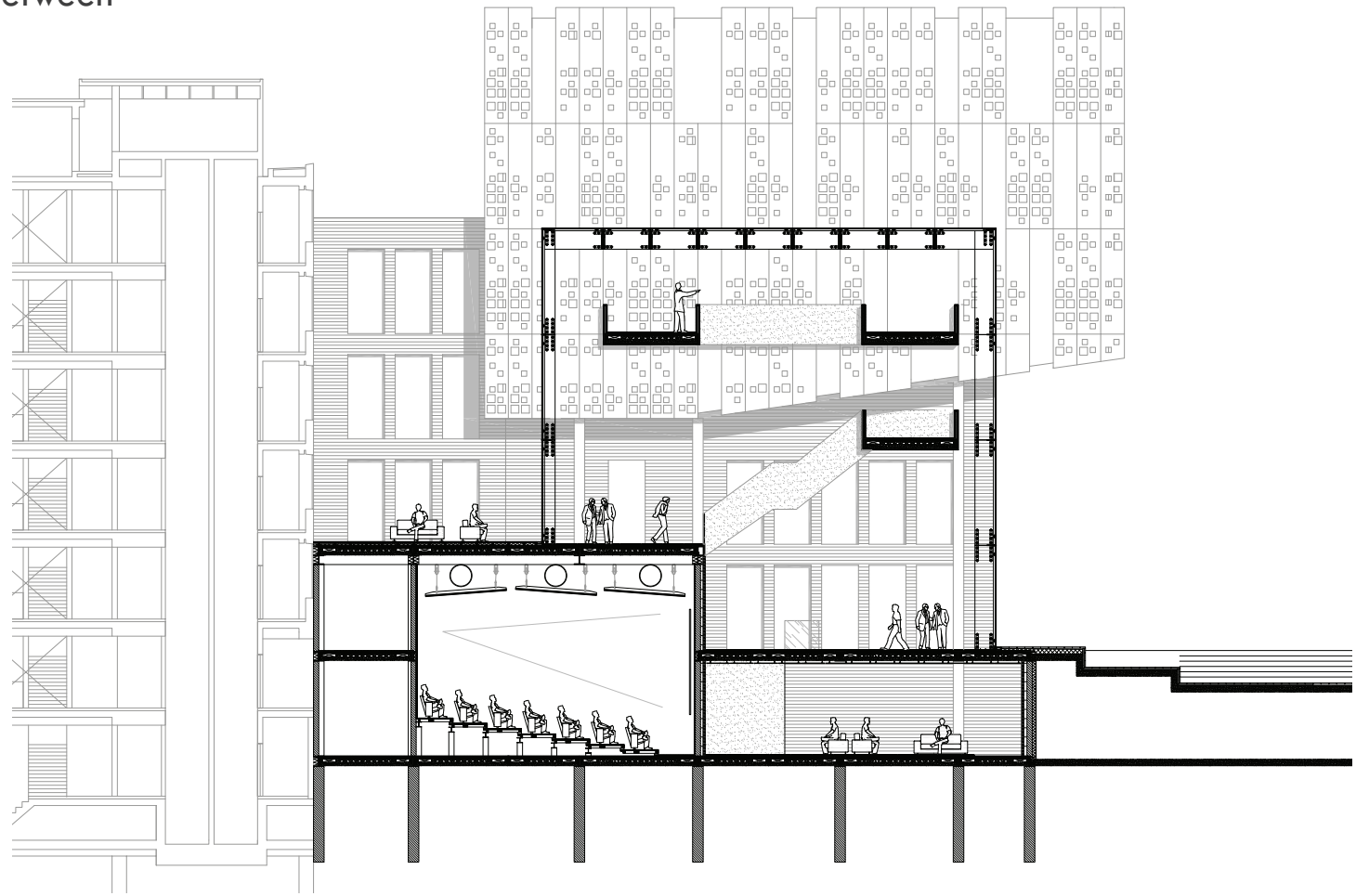
05 Materialisation



05 Materialisation

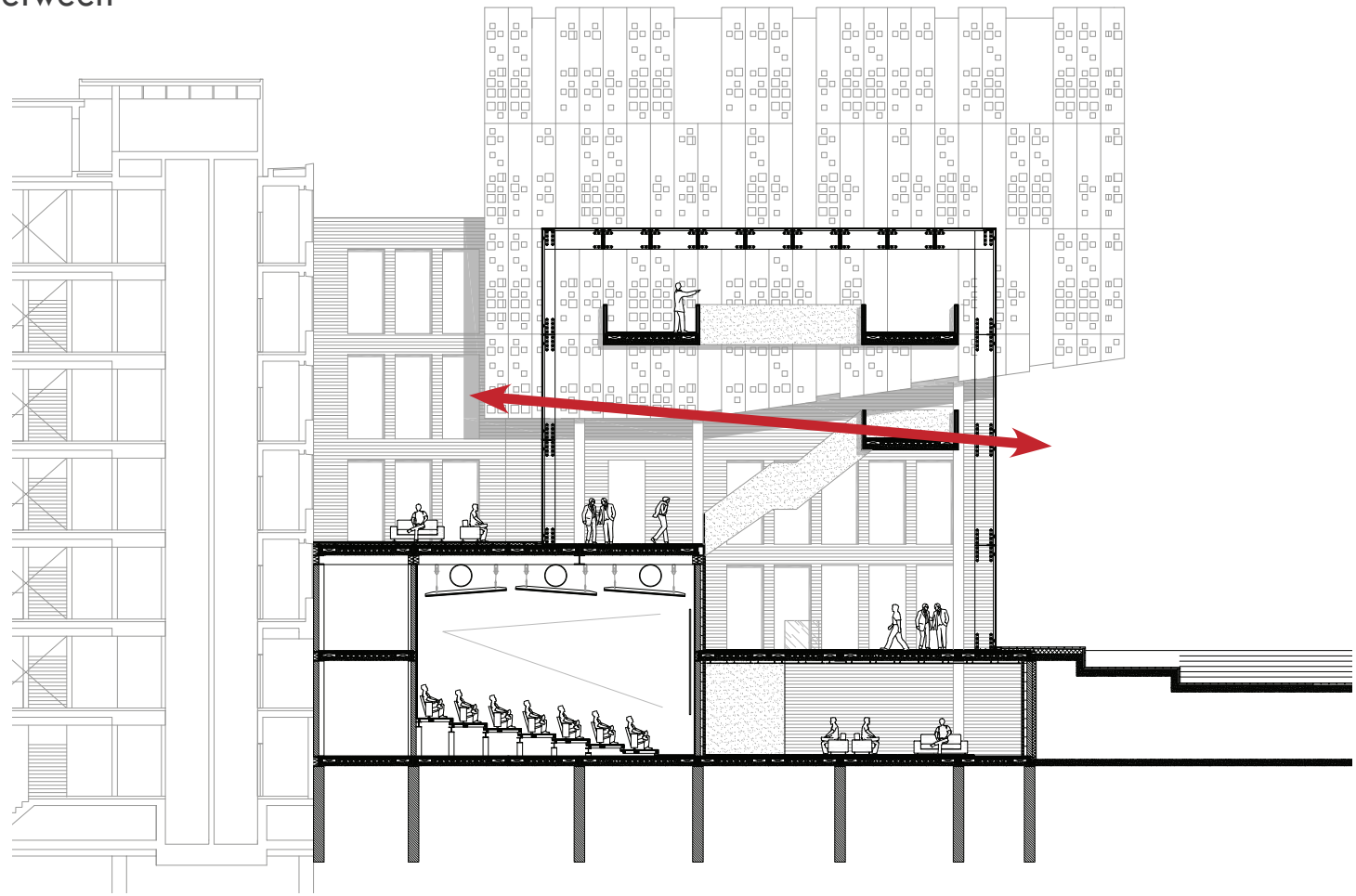
05 Materialisation

differentiation between
glass and bock



05 Materialisation

differentiation between
glass and bock

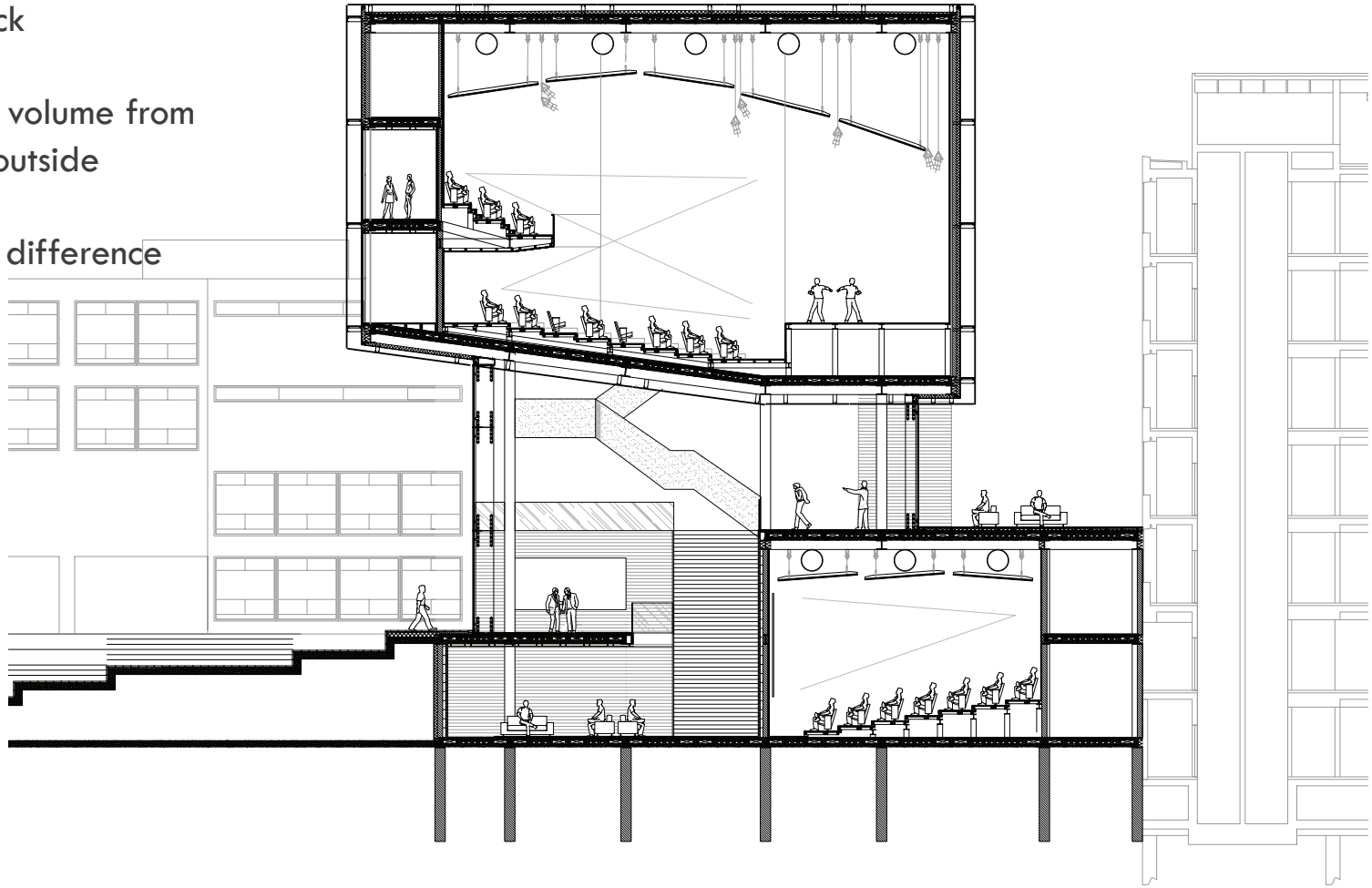


05 Materialisation

differentiation between
glass and bock

awareness of volume from
the inside to outside

programmitic difference



05 Materialisation

differentiation between
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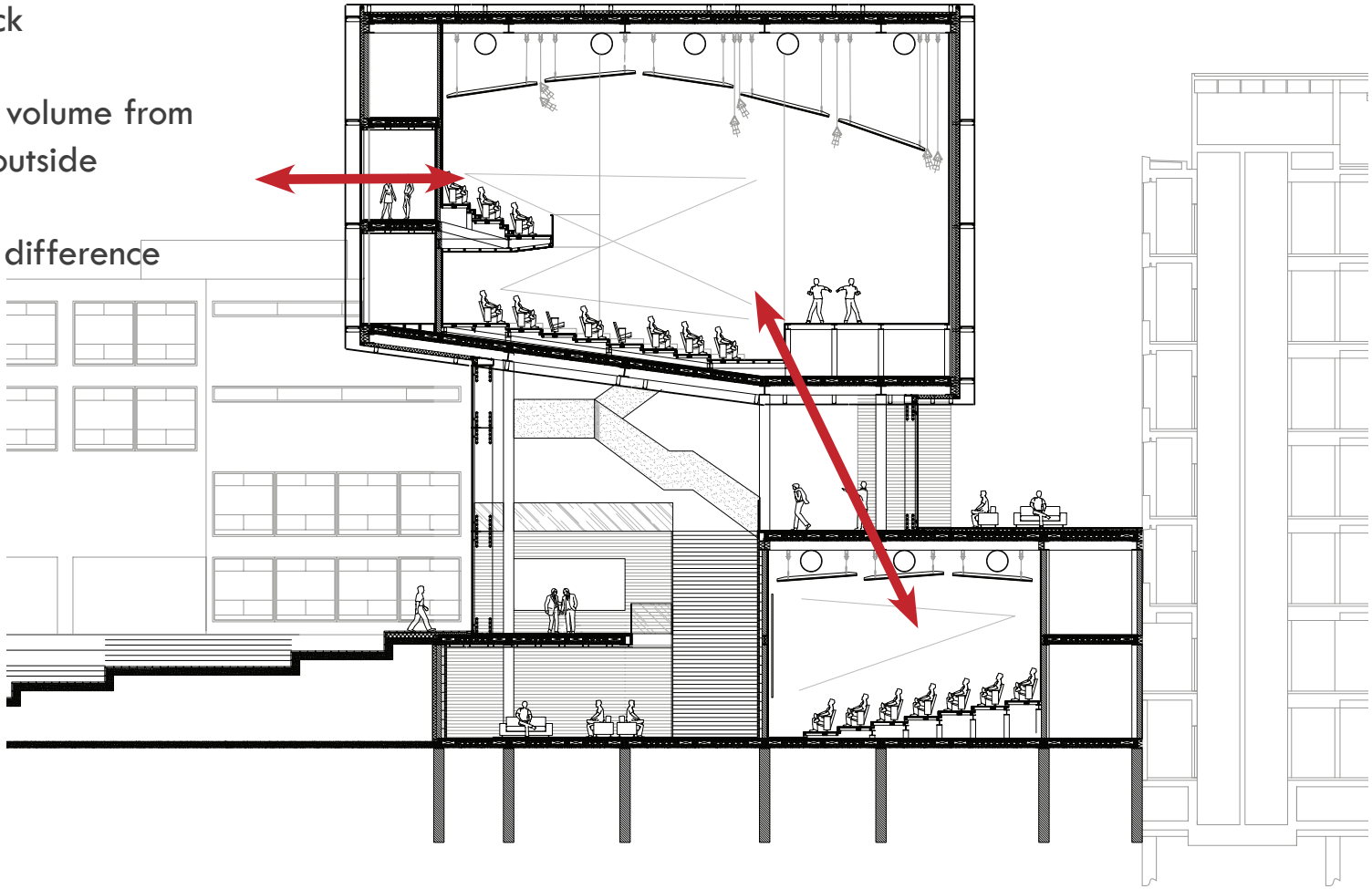
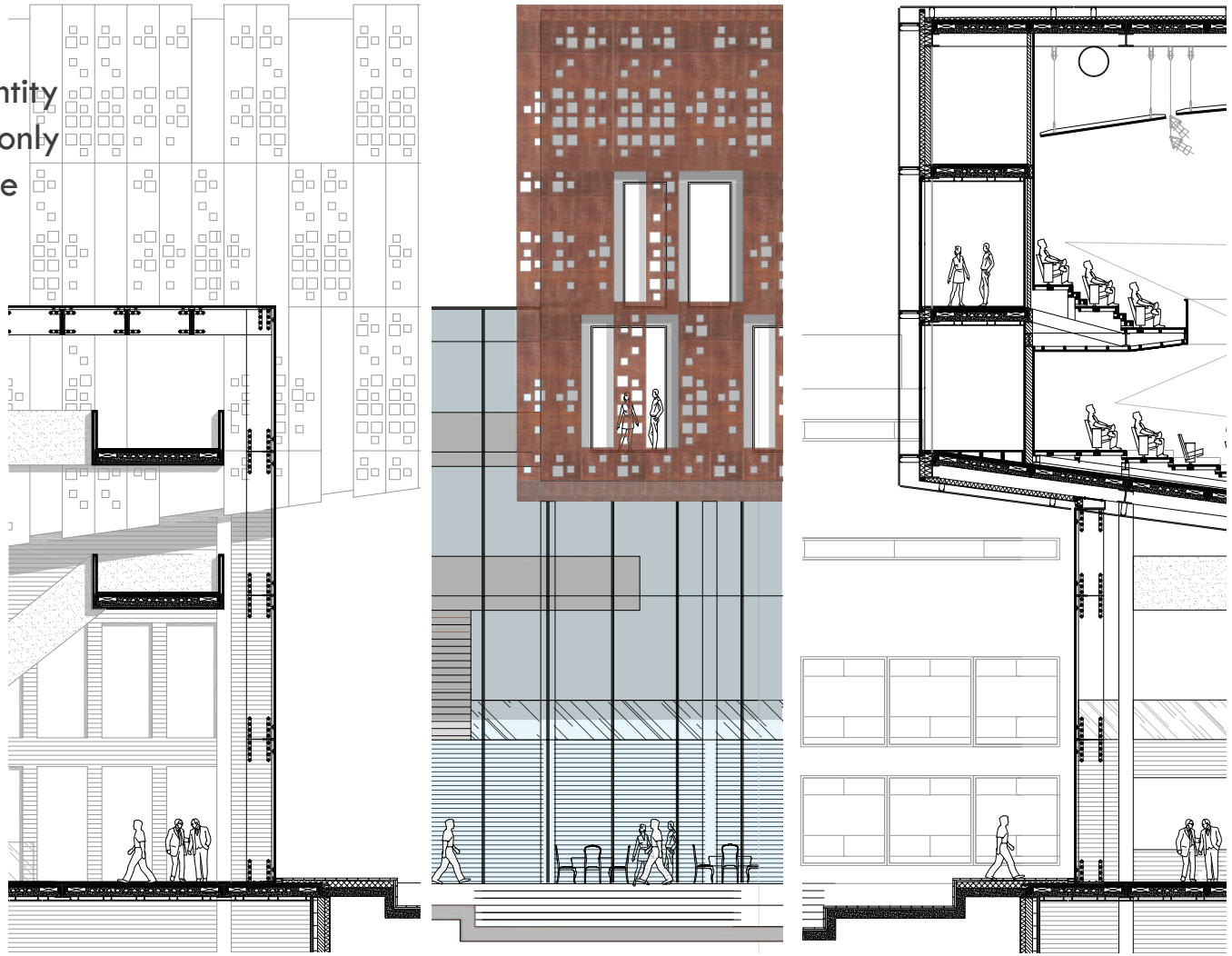


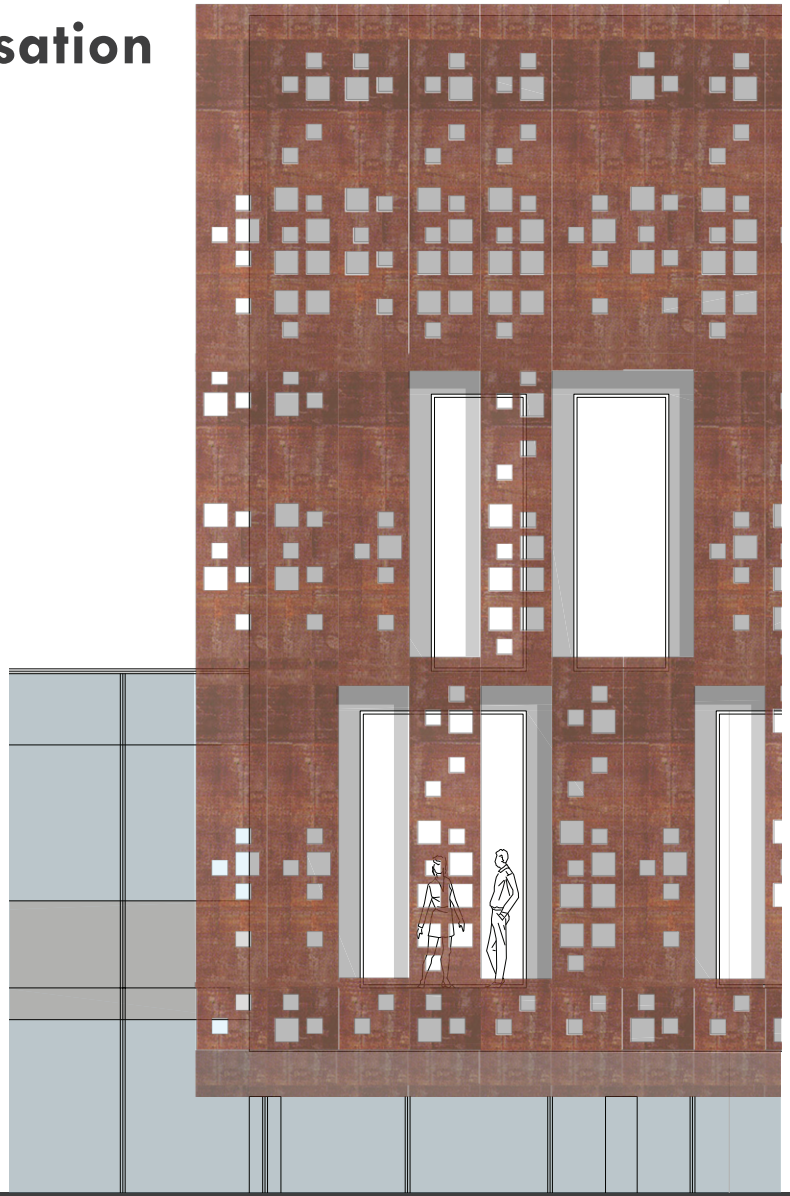
05 Materialisation

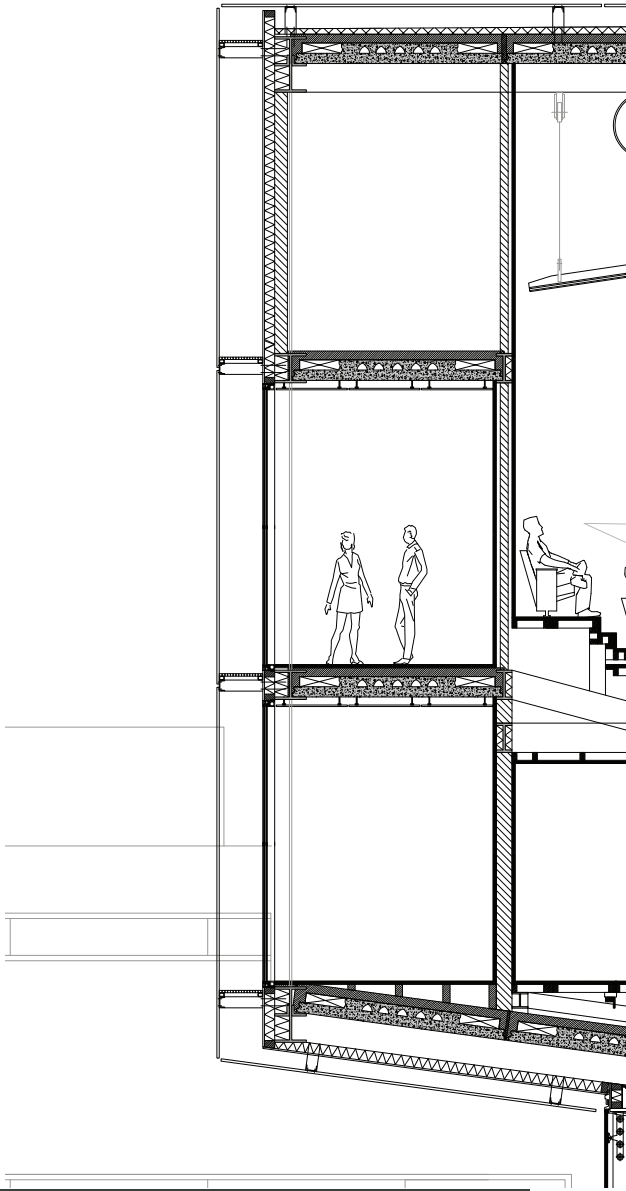
facade
transparant versus identity
feeling of privacy not only
in hotel but also theatre
entering a new world



05 Materialisation

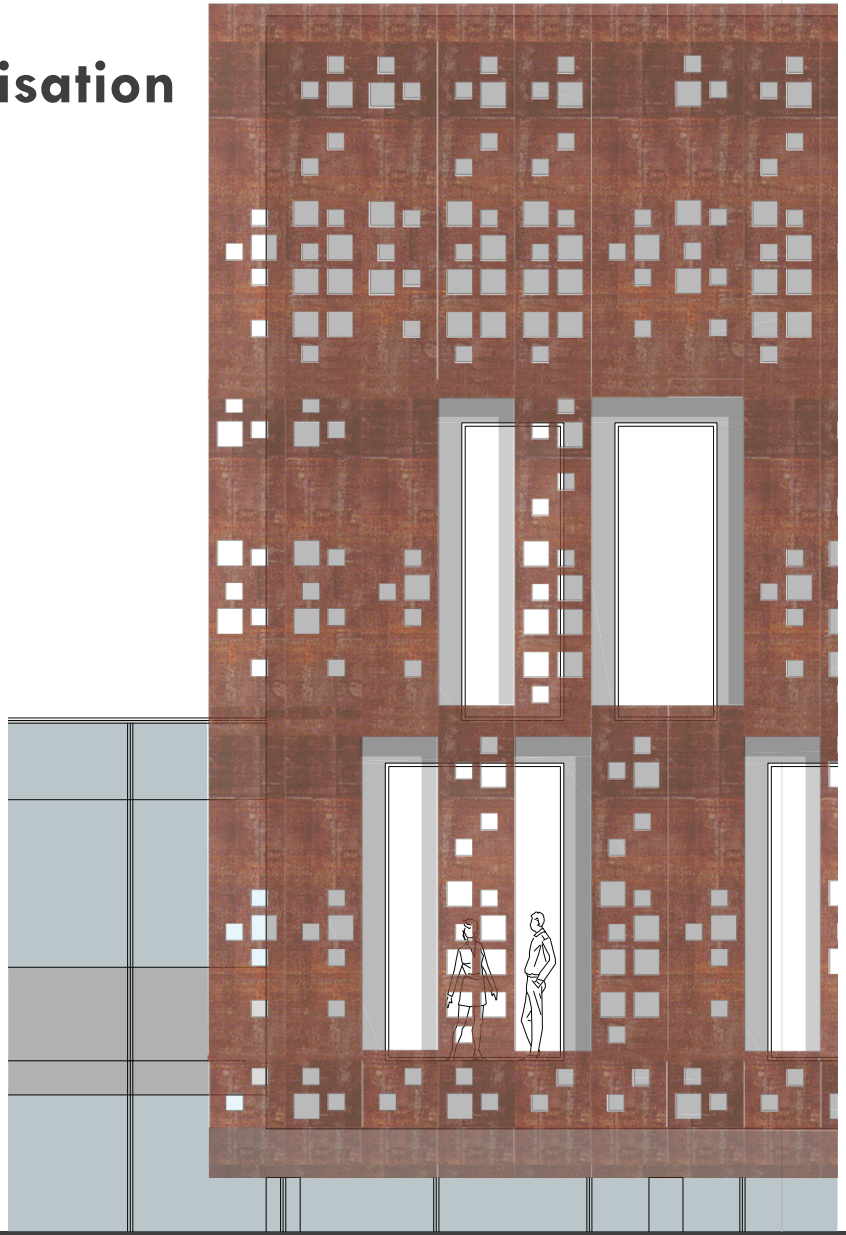
facade
theatre box

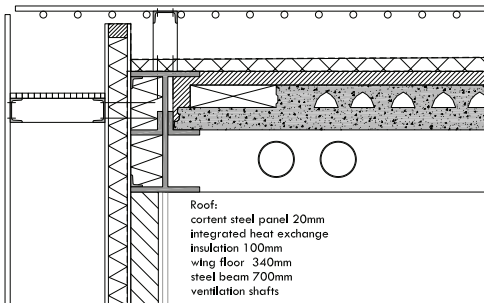


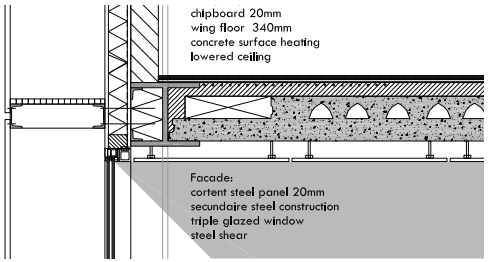


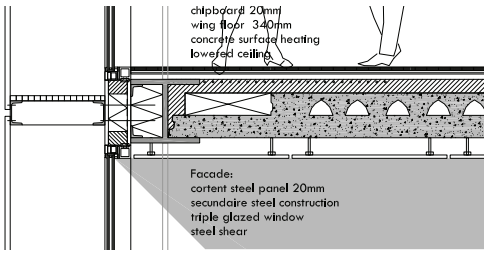
05 Materialisation

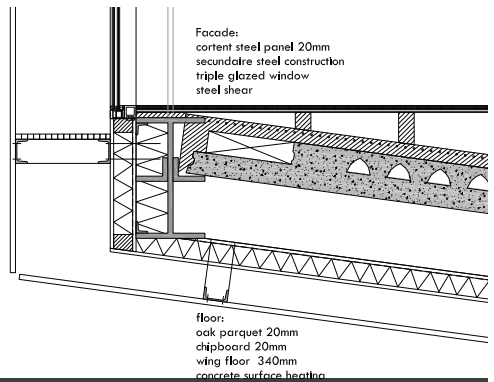
facade detail





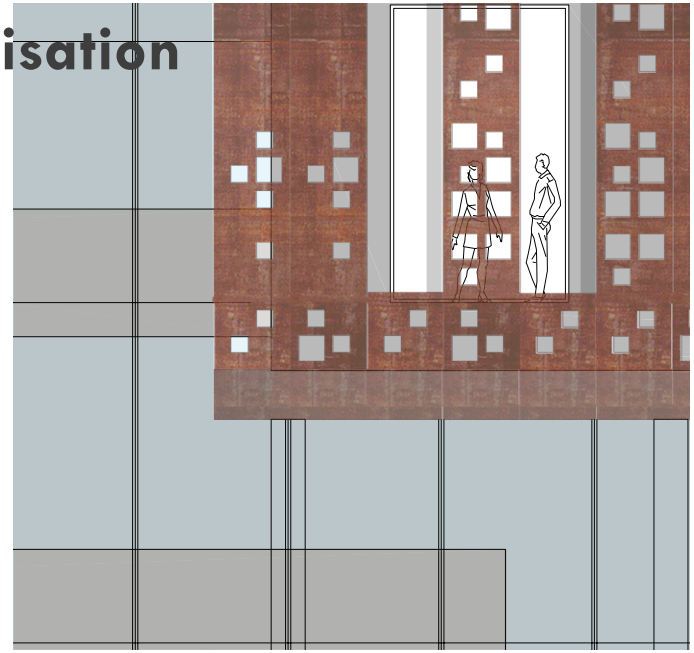


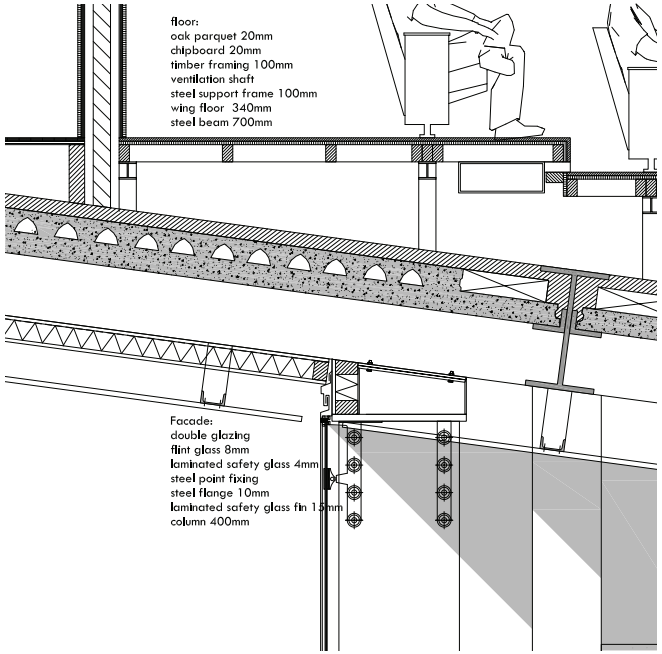


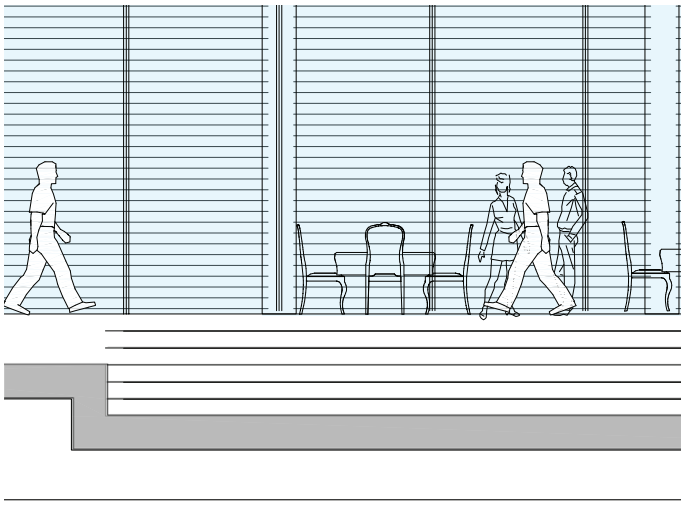


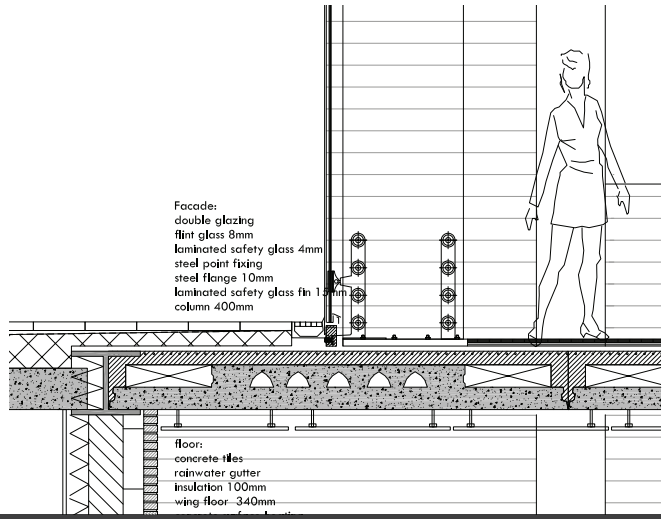
05 Materialisation

facade detail









05 Materialisation

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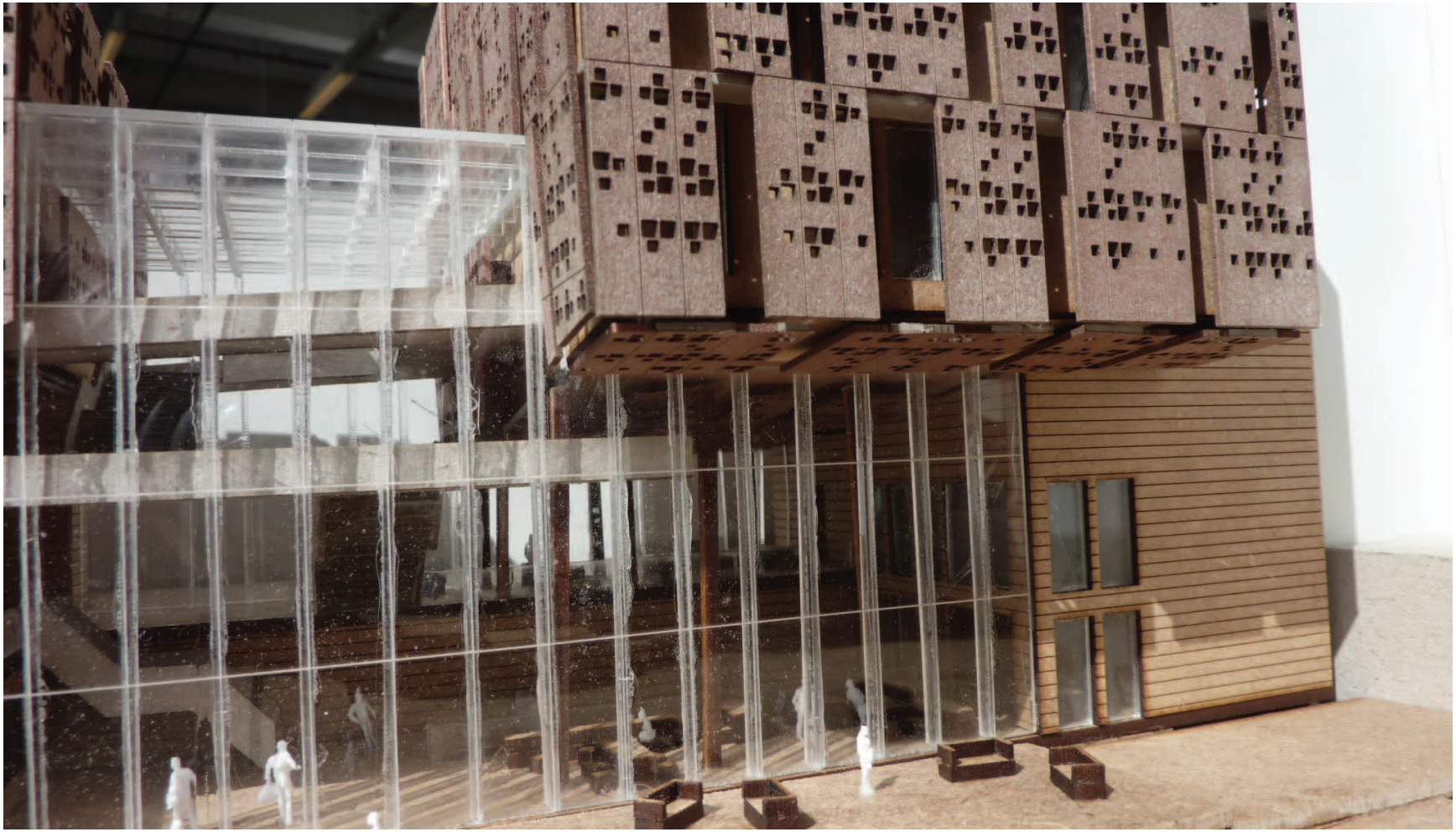
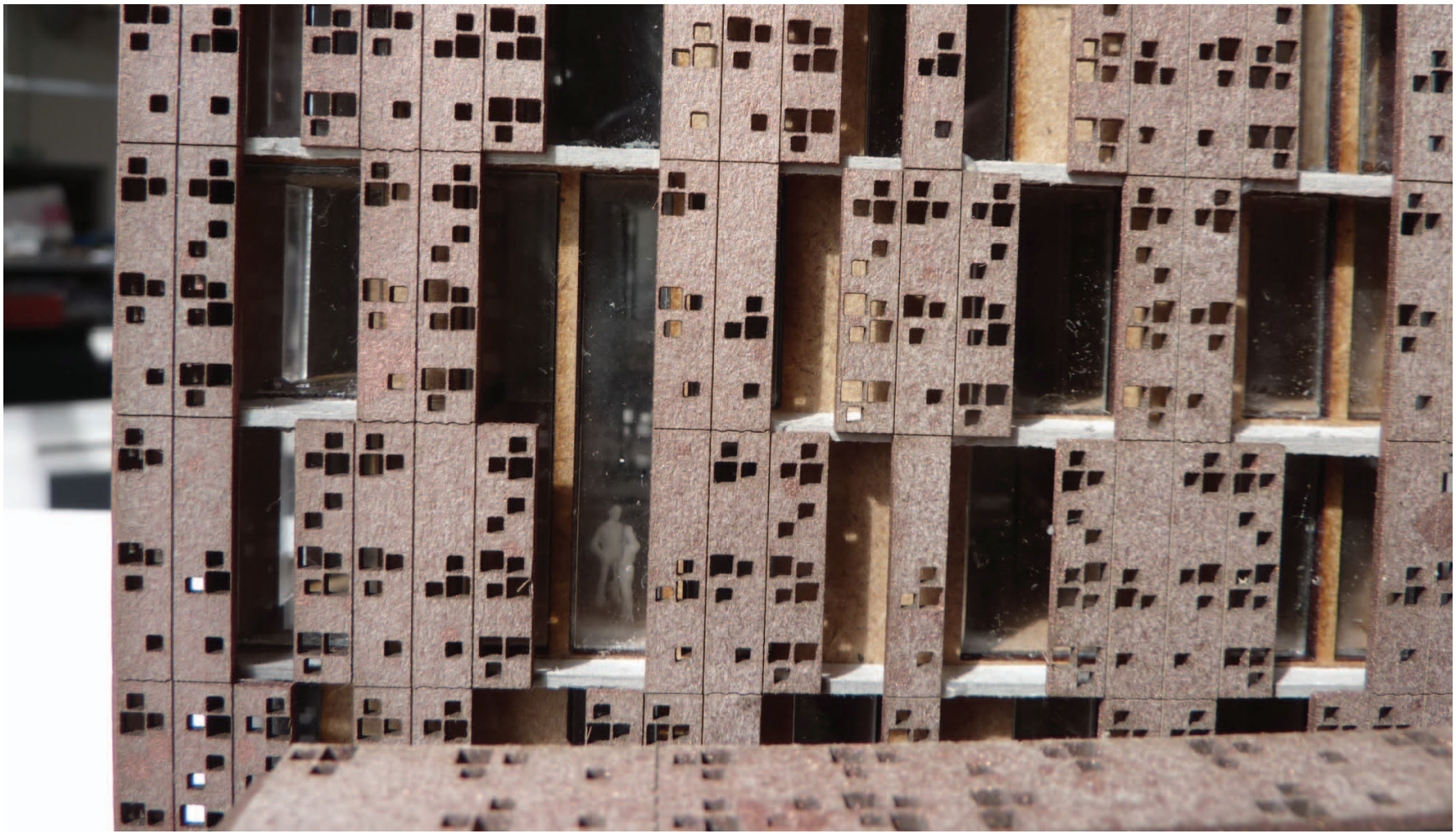
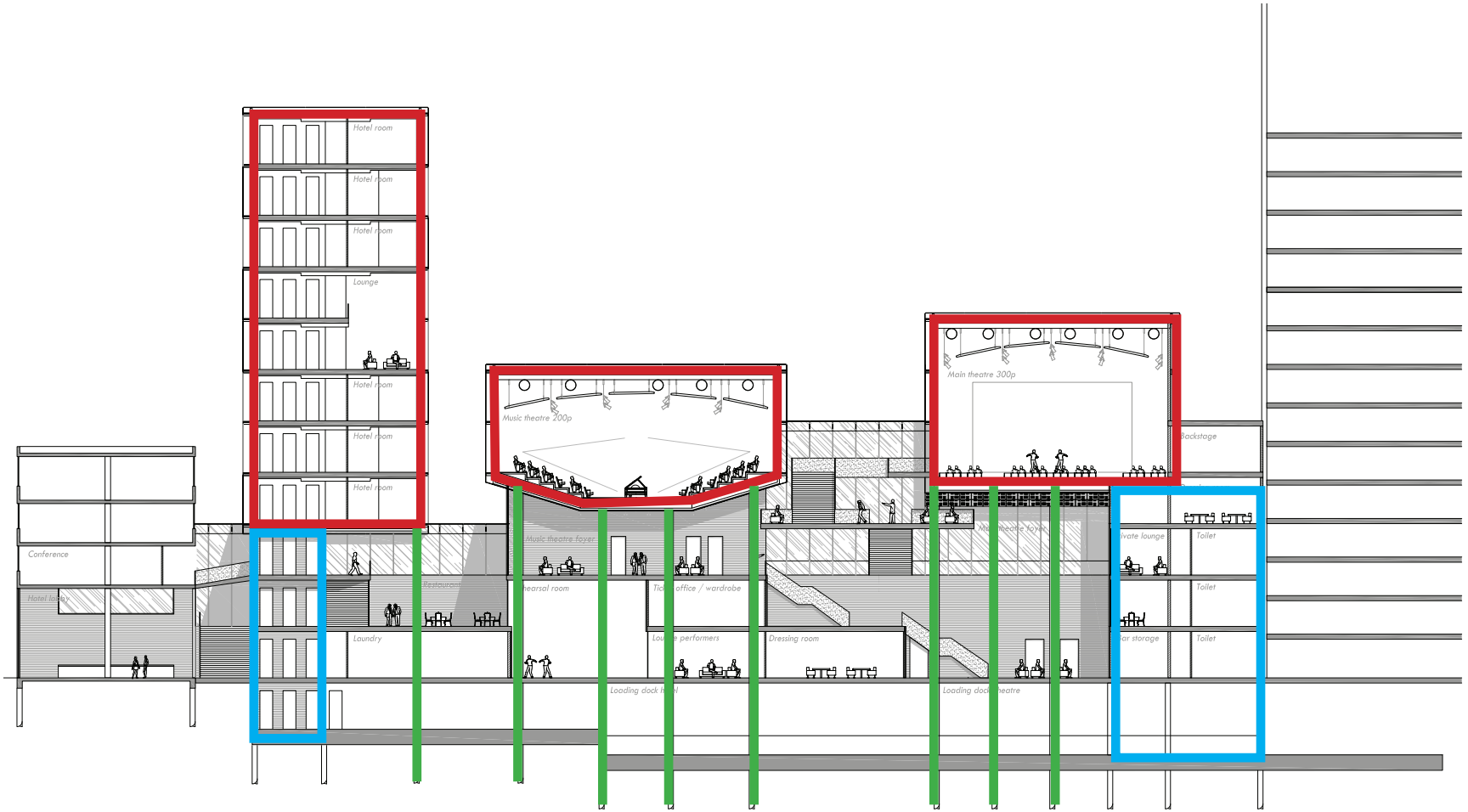


05 Materialisation

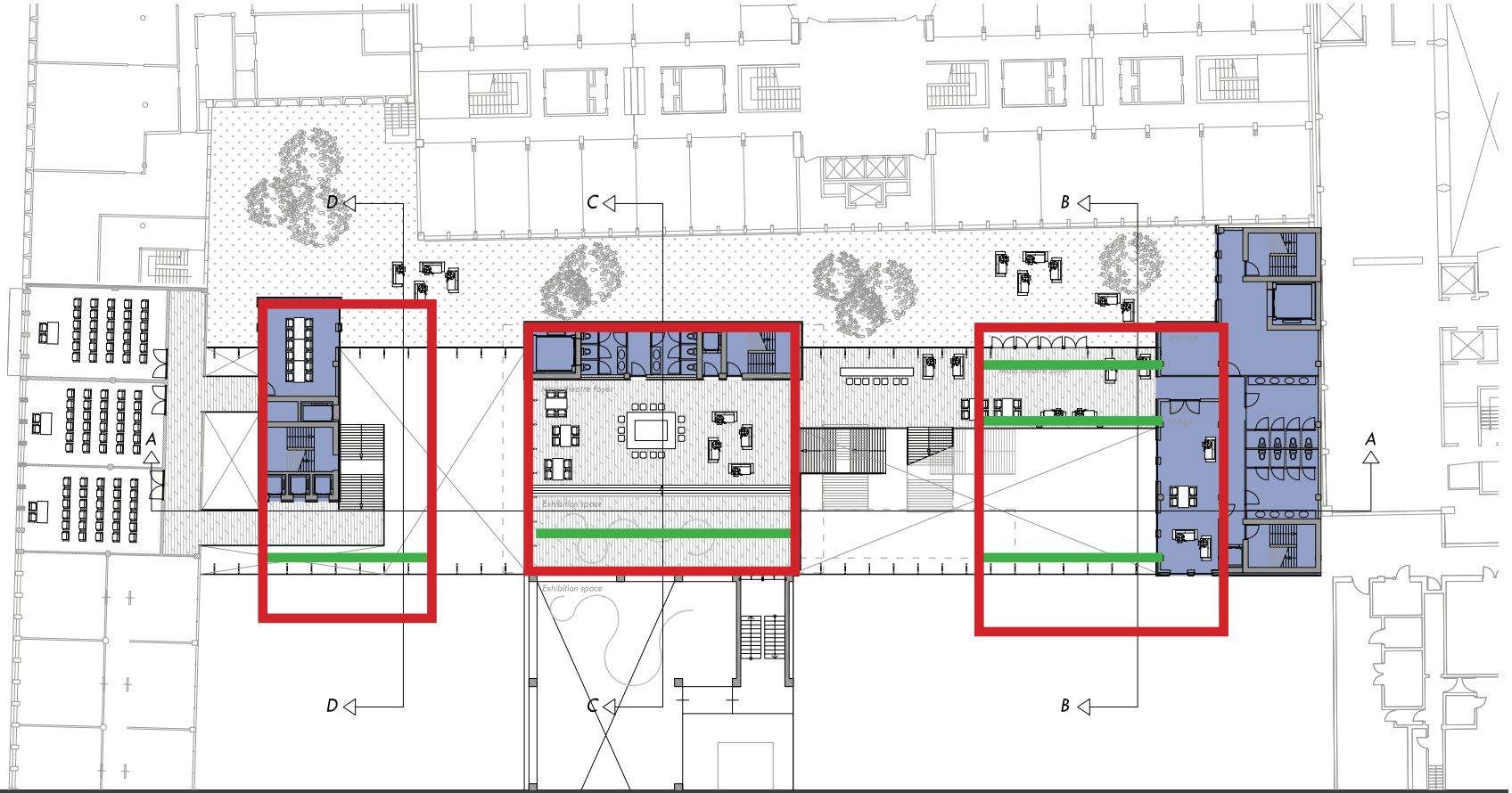


06 Construction

06 Construction

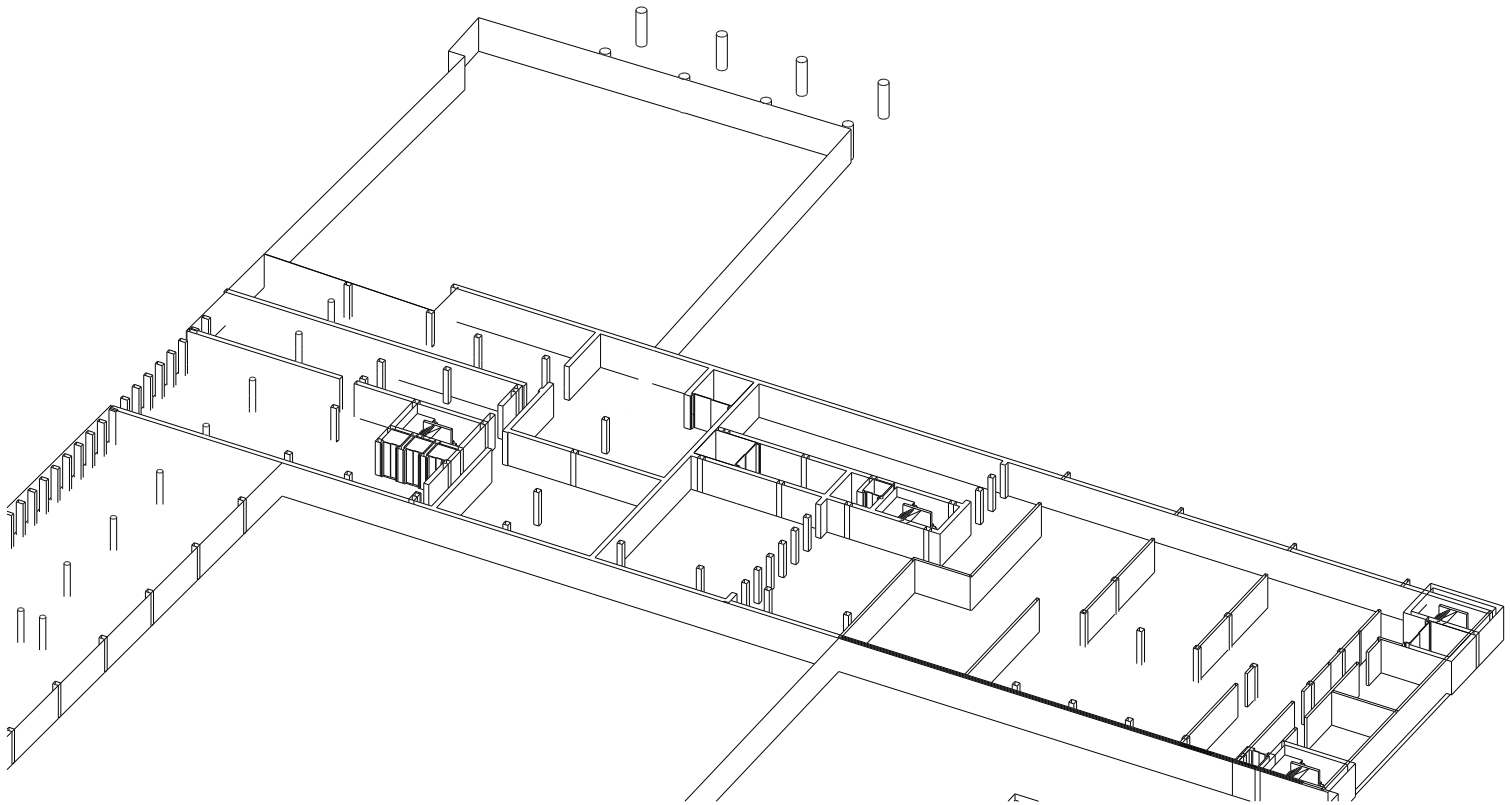


06 Construction



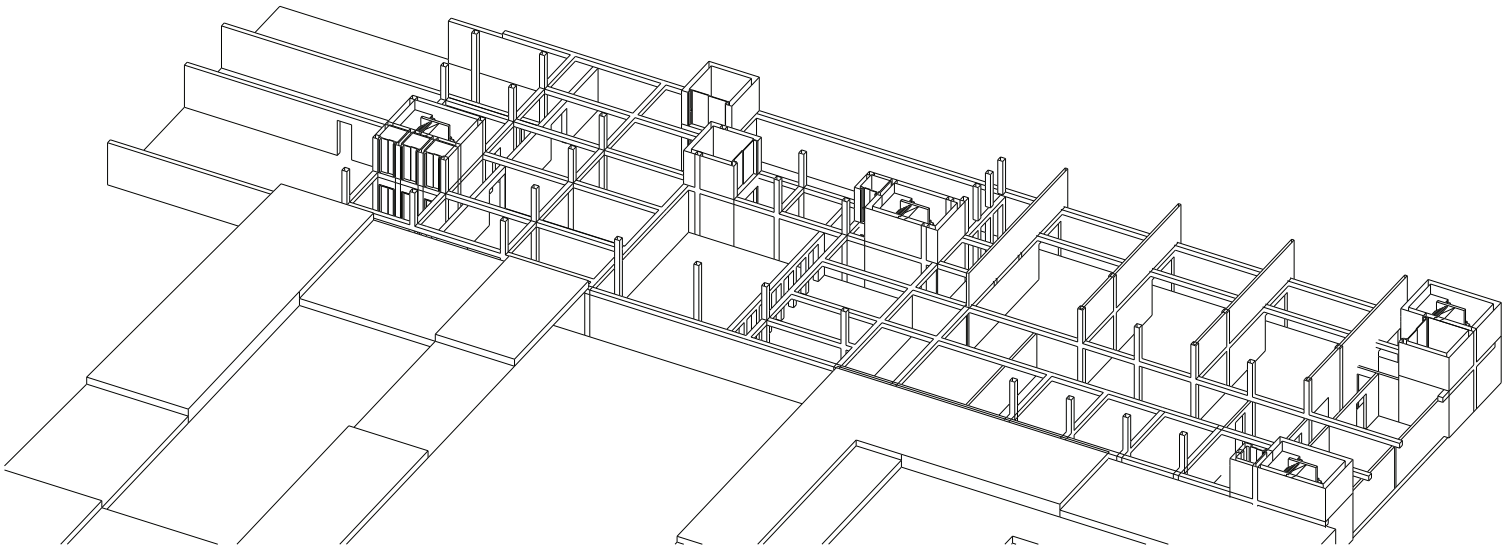
06 Construction

ground floor solid base
construction



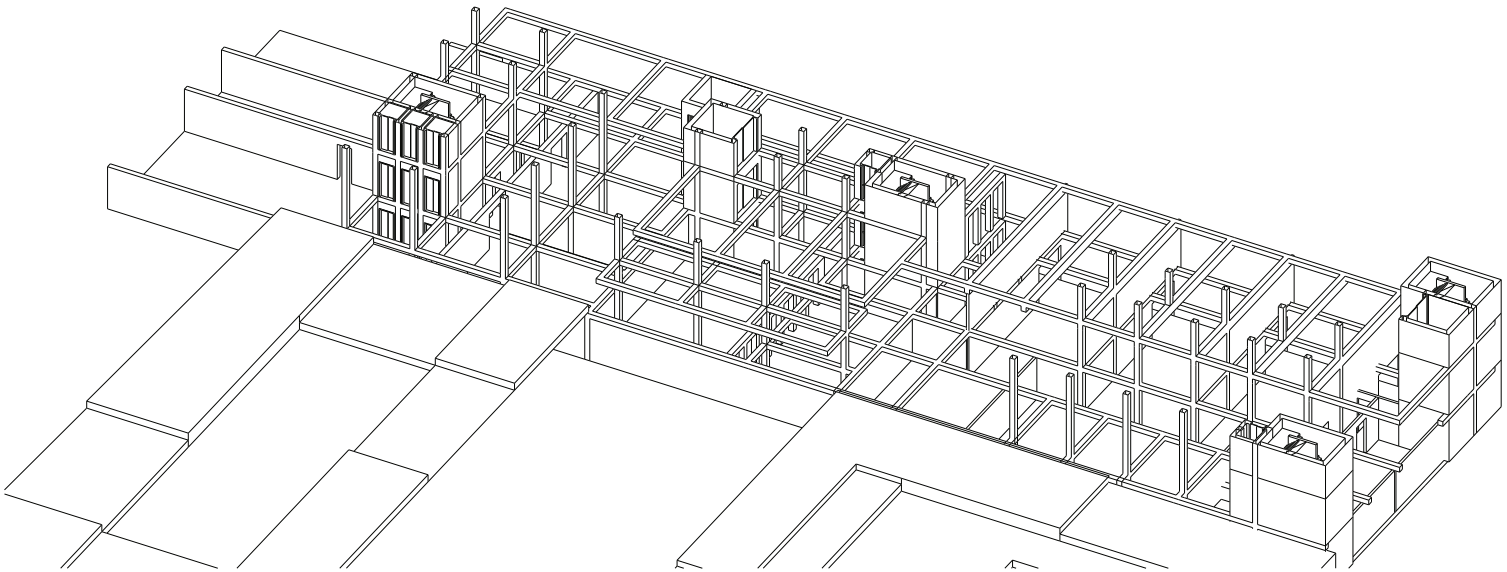
06 Construction

first floor solid base con-
struction



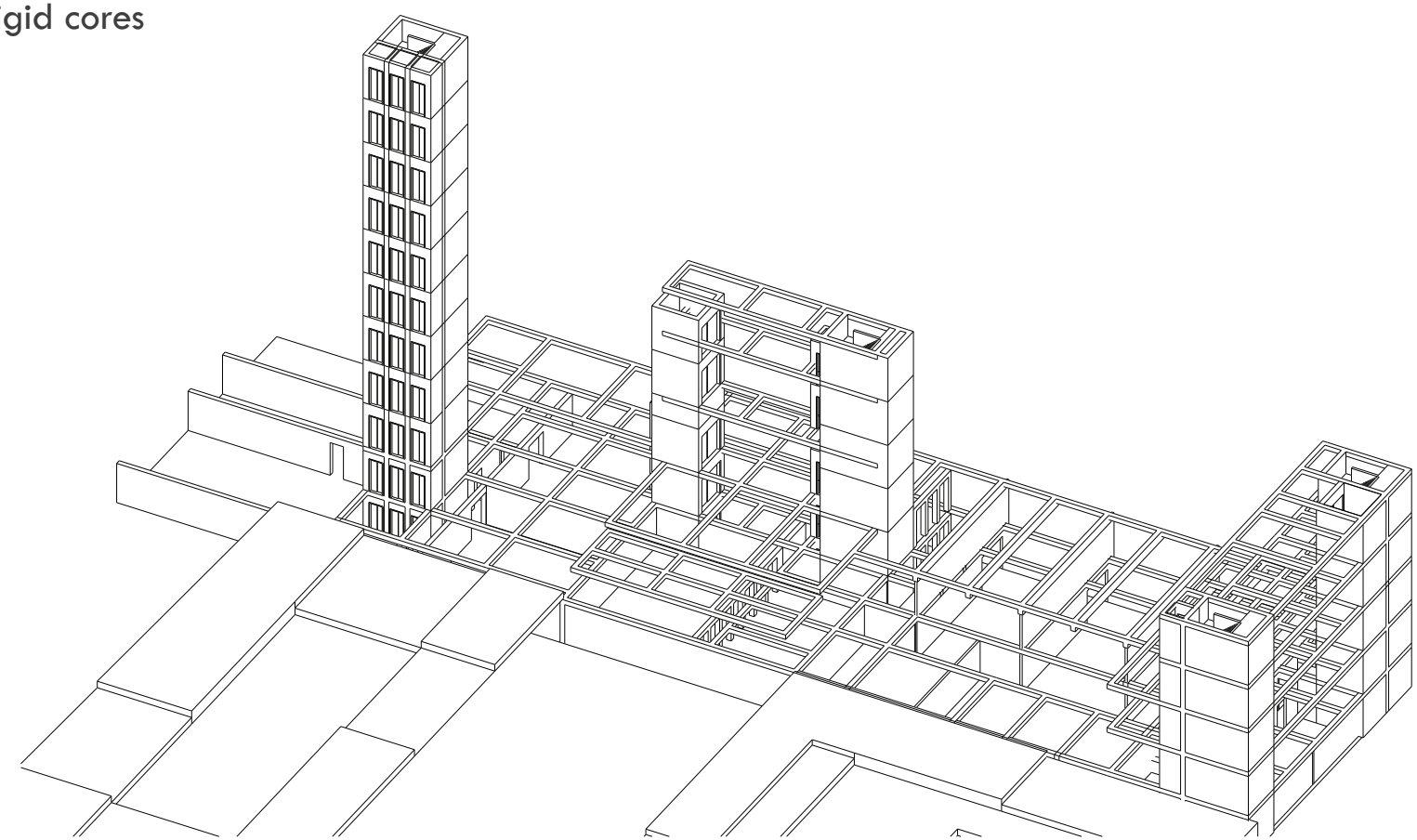
06 Construction

second floor solid base
construction



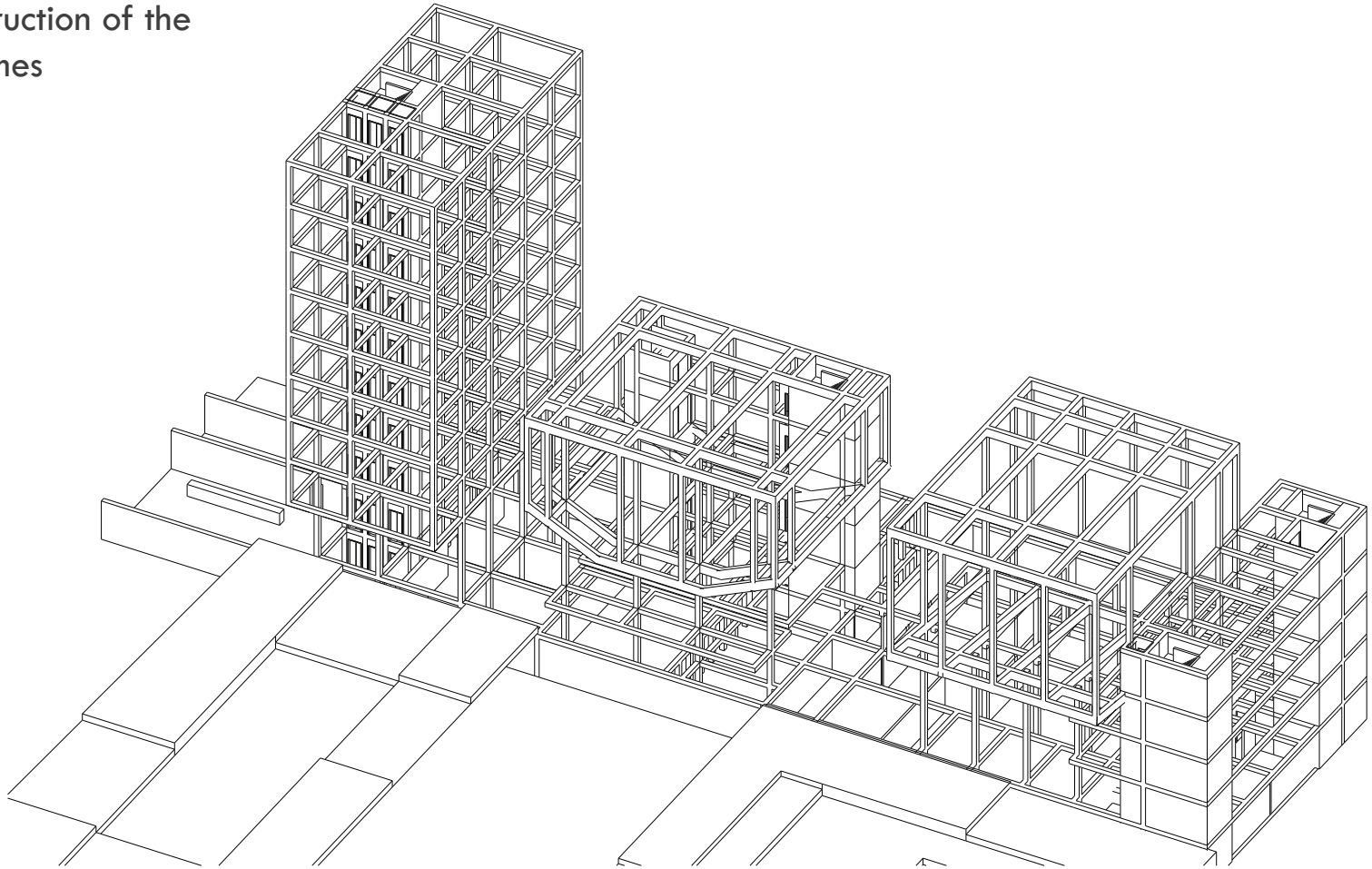
06 Construction

extention of solid base up-
ward as rigid cores



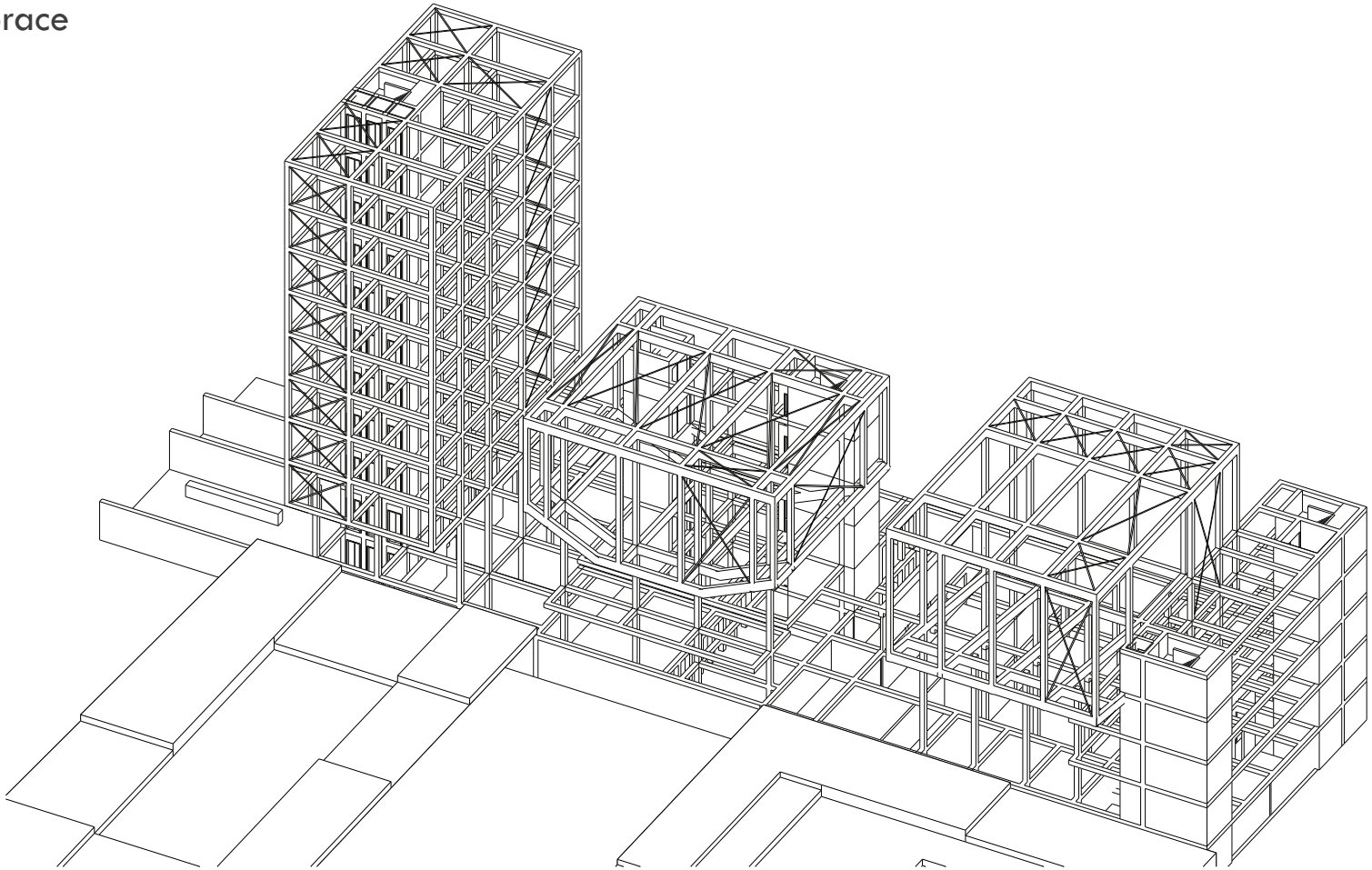
06 Construction

steel construction of the
three volumes

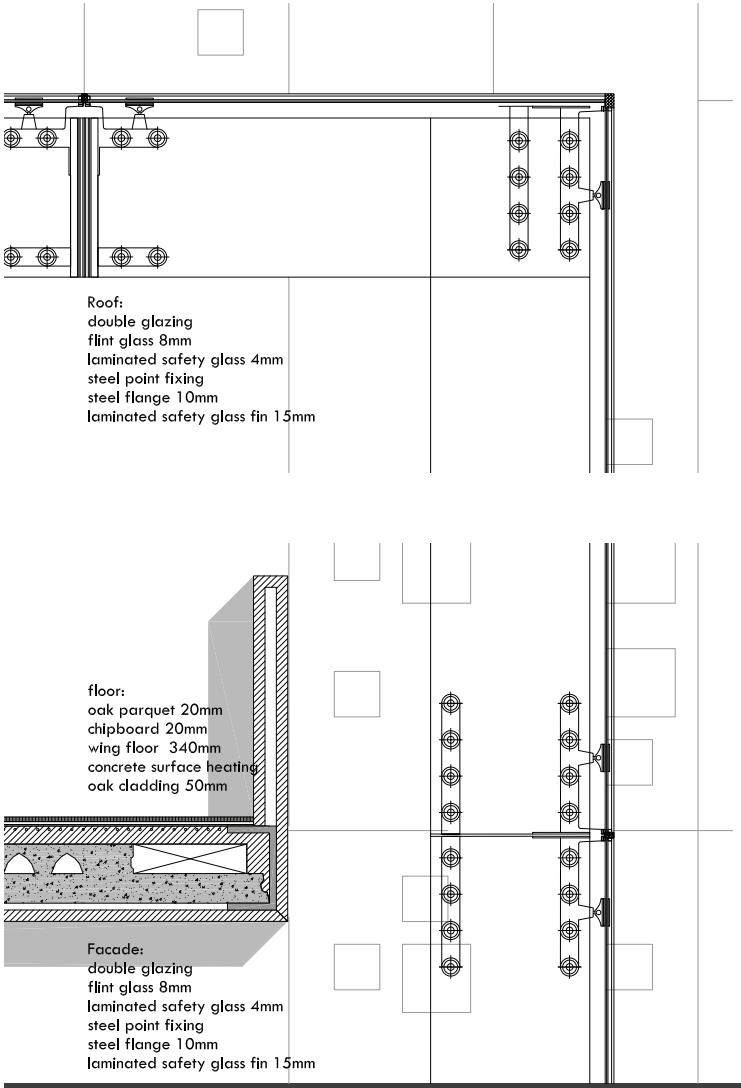


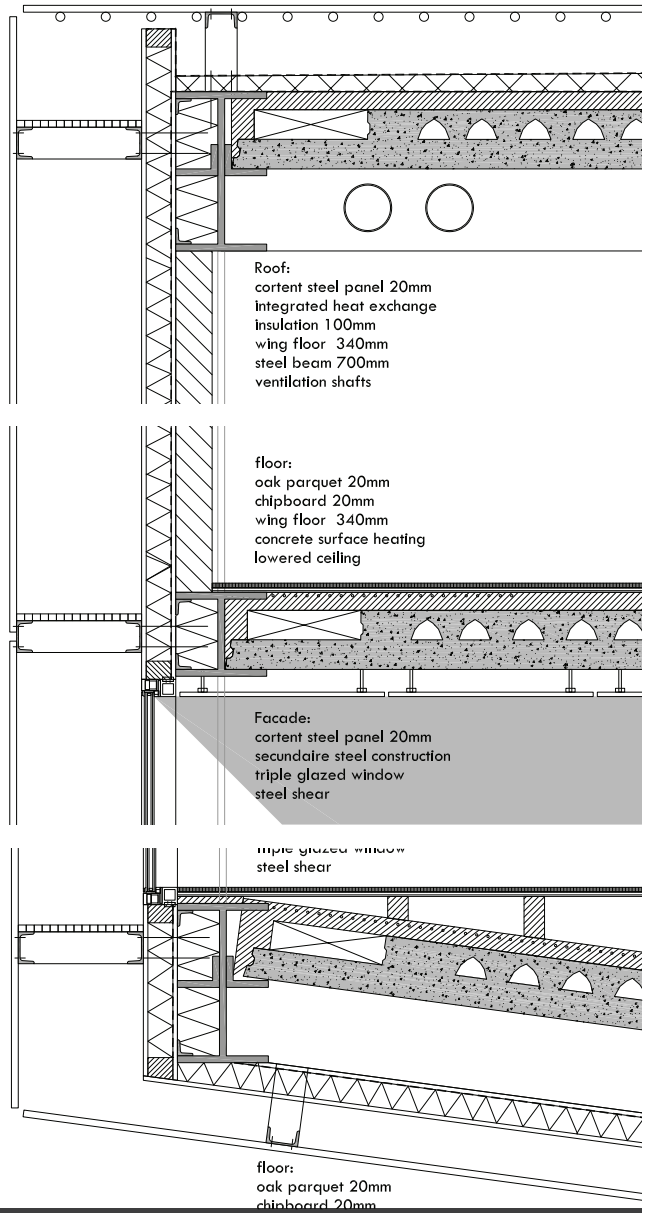
06 Construction

diagonal brace



06 Construction

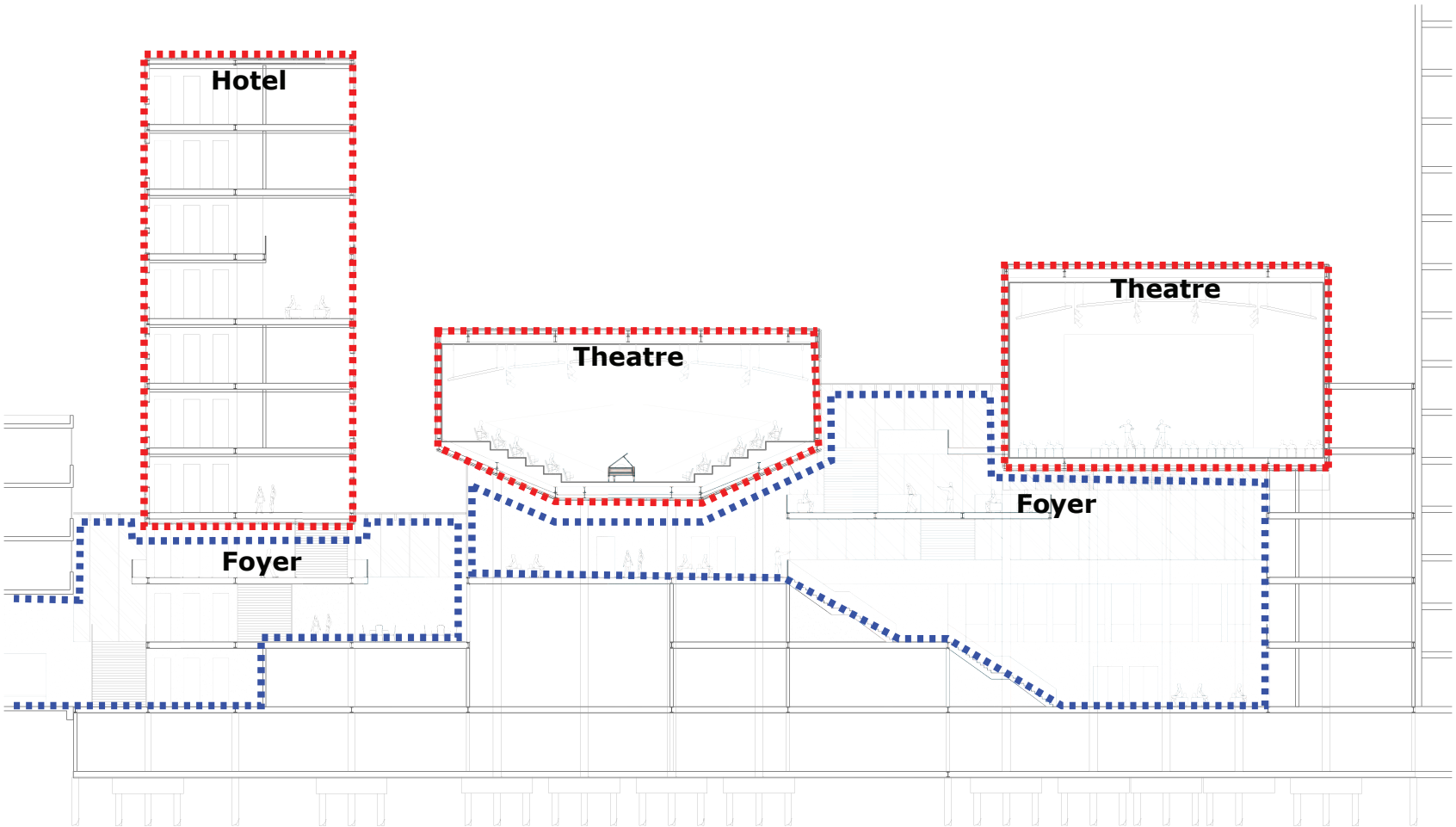




07 Installations

07 Installations

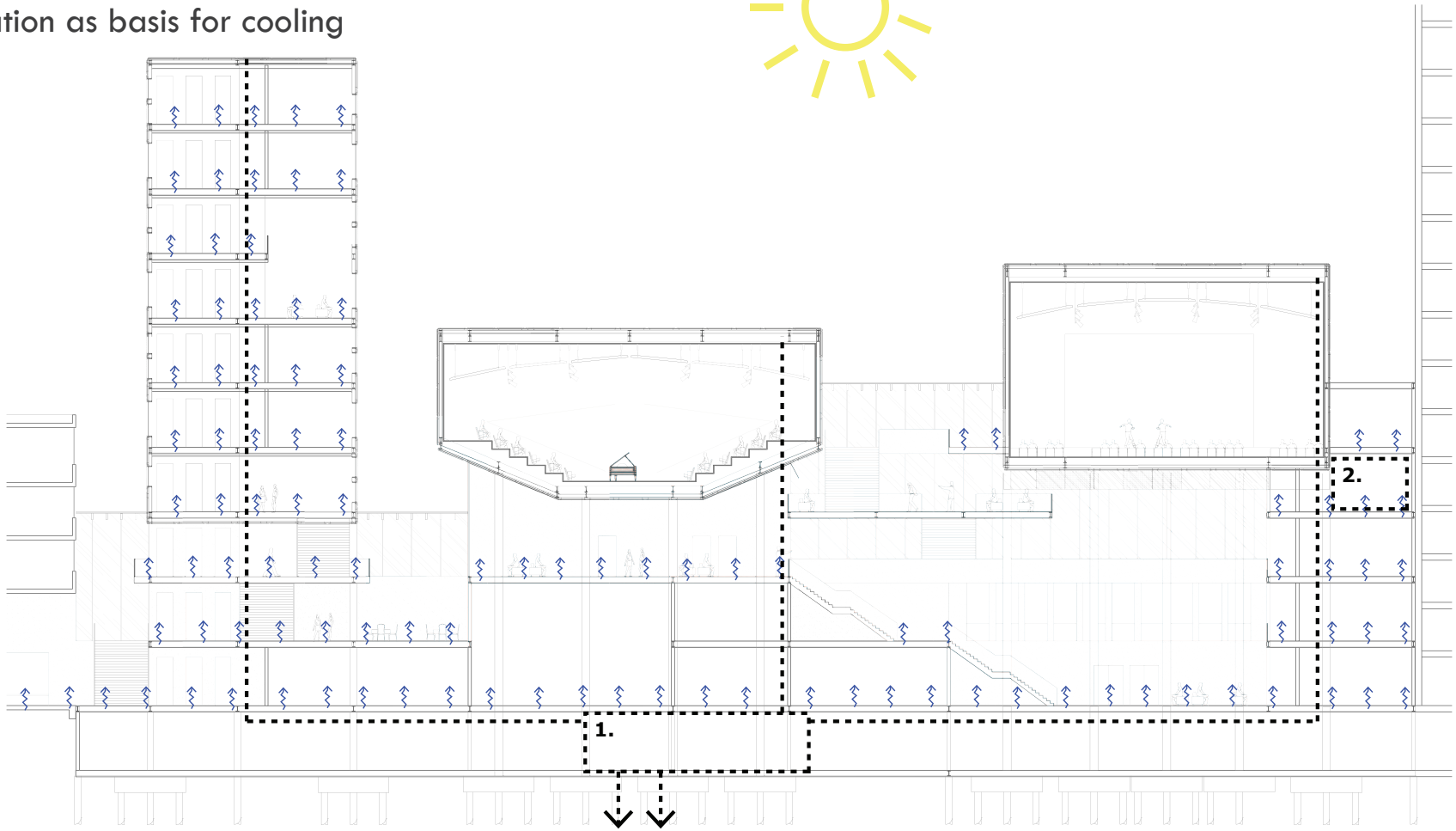
two main differentiation



07 Installations

summer: concrete core activation as basis for cooling

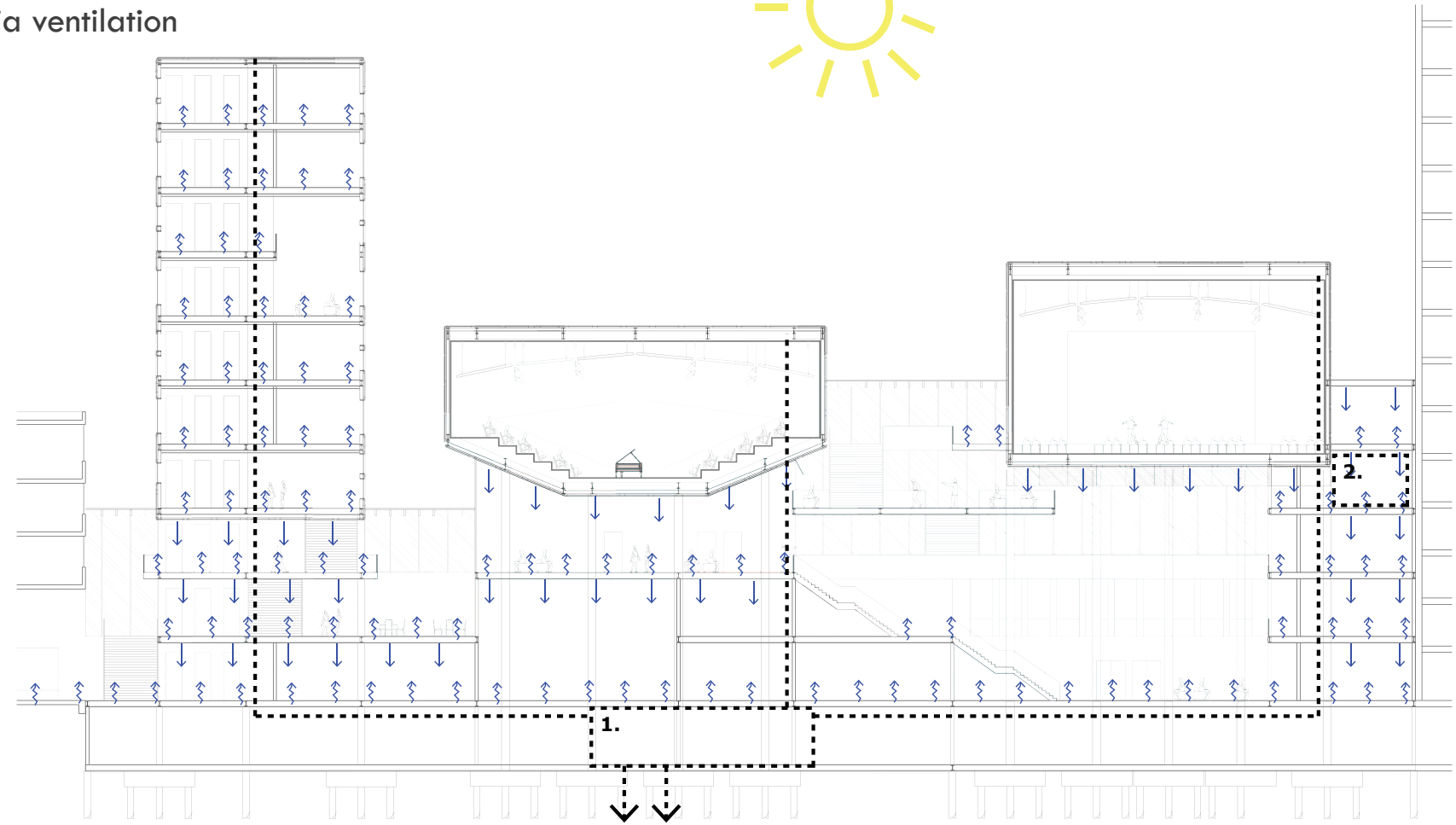
1. City heating system with heat exchange
2. Airhandeling unit



07 Installations

summer: additional cooling
via ventilation

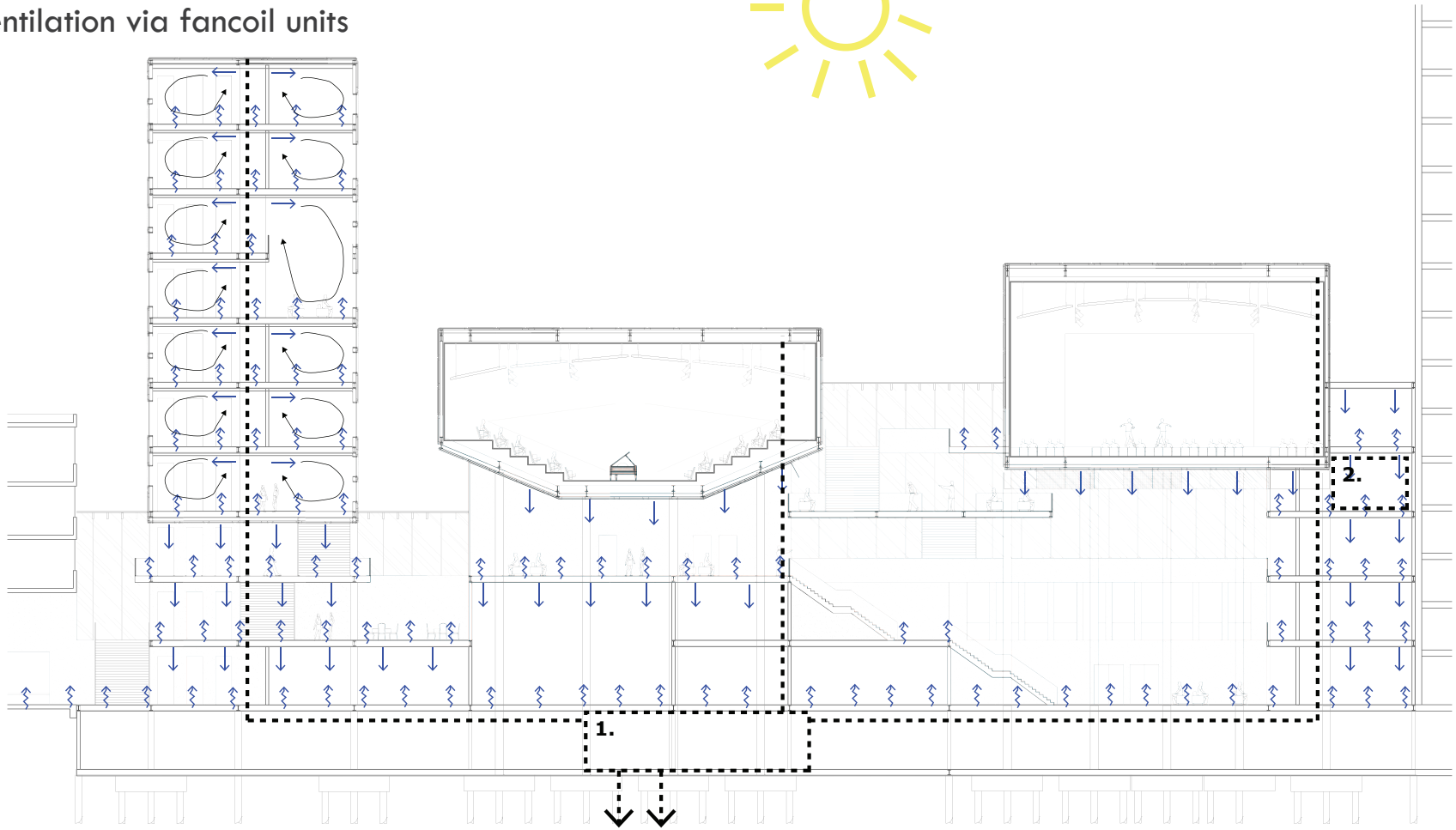
1. City heating system with heat exchange
2. Airhandeling unit



07 Installations

summer: hotel cooling and ventilation via fancoil units

1. City heating system with heat exchange
2. Airhandeling unit



07 Installations

summer: hotel cooling and ventilation via fancoil units

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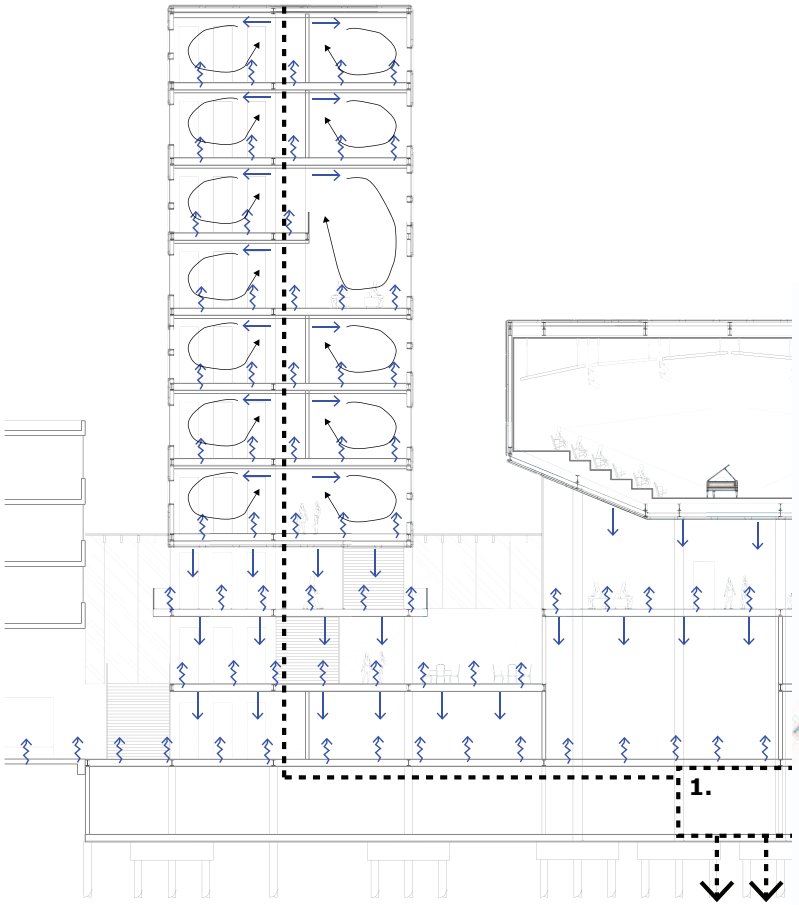
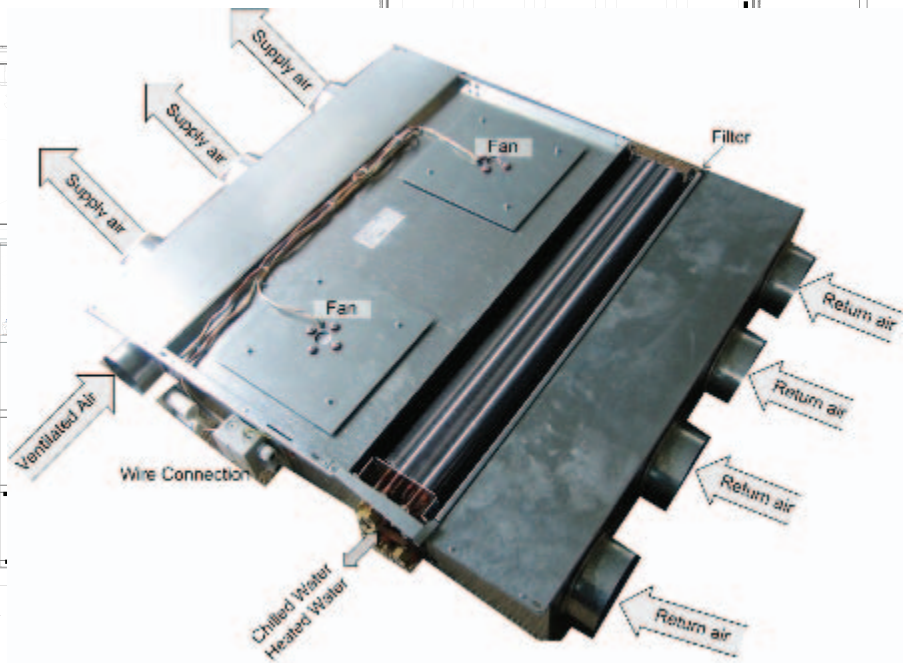
2. Airhandeling unit

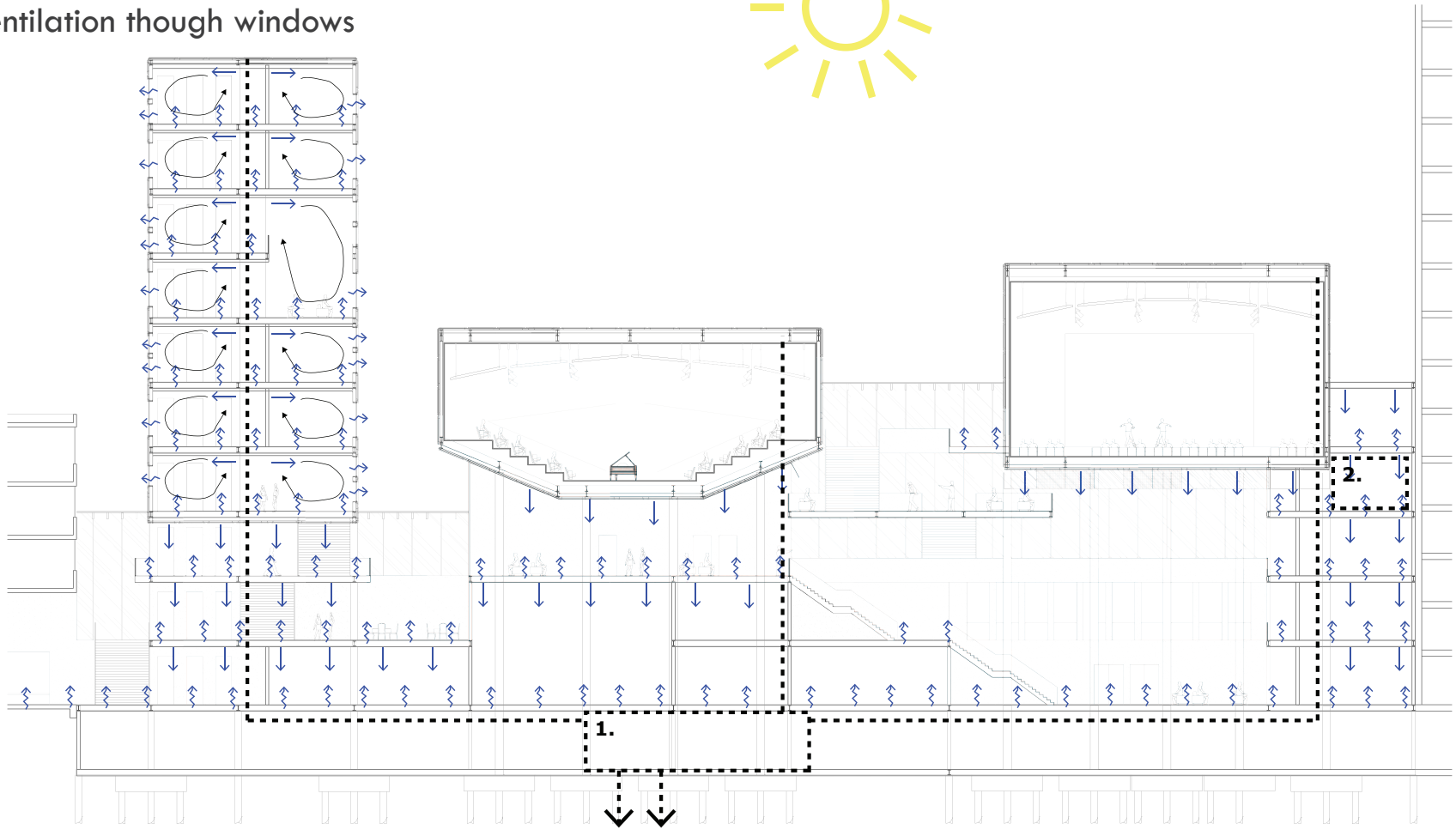




07 Installations

summer: additional
ventilation though windows

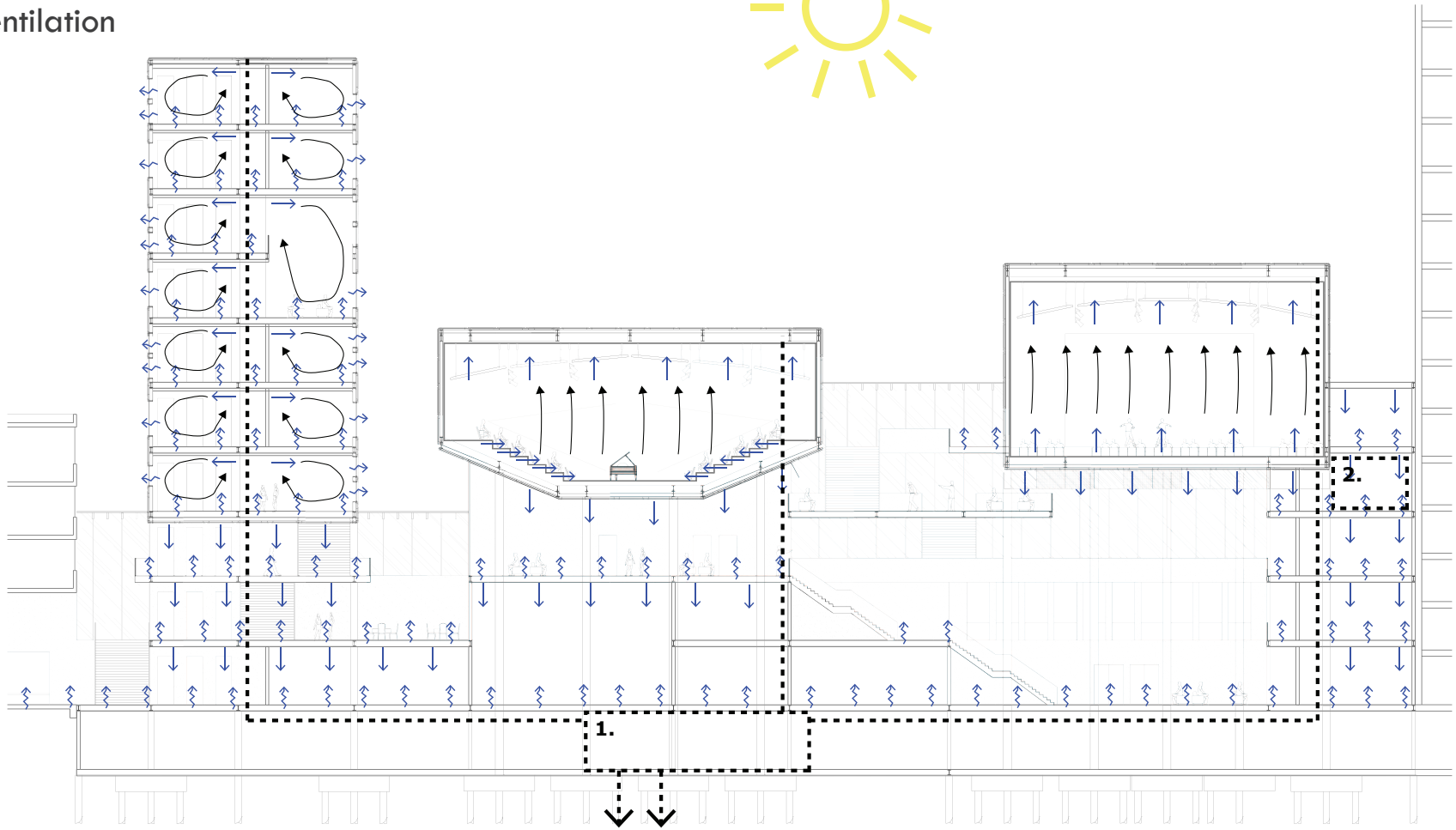
1. City heating system with heat exchange
2. Airhandeling unit



07 Installations

summer: Theatre cooling via ventilation

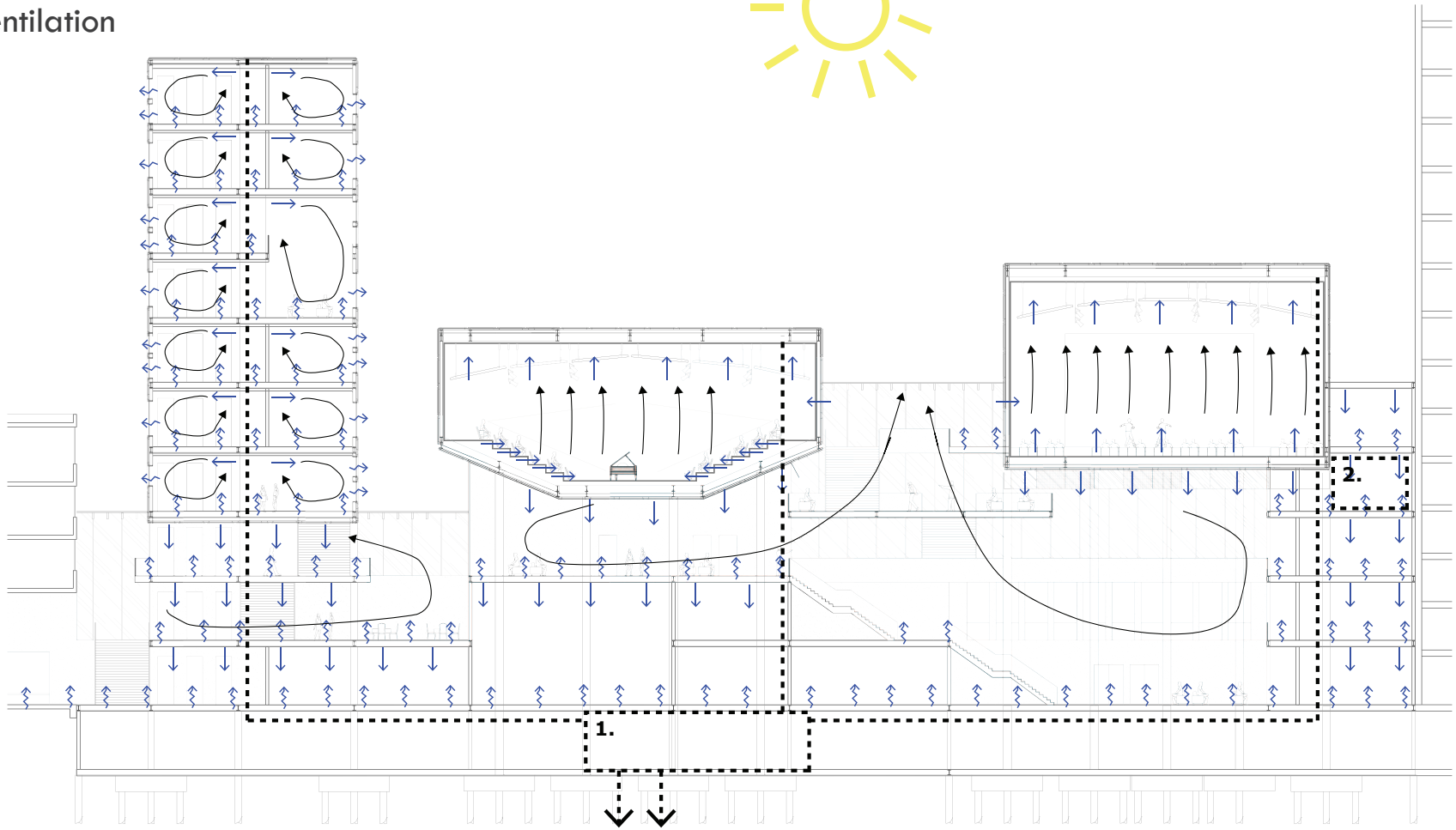
1. City heating system with heat exchange
2. Airhandeling unit



07 Installations

summer: foyer cooling and ventilation

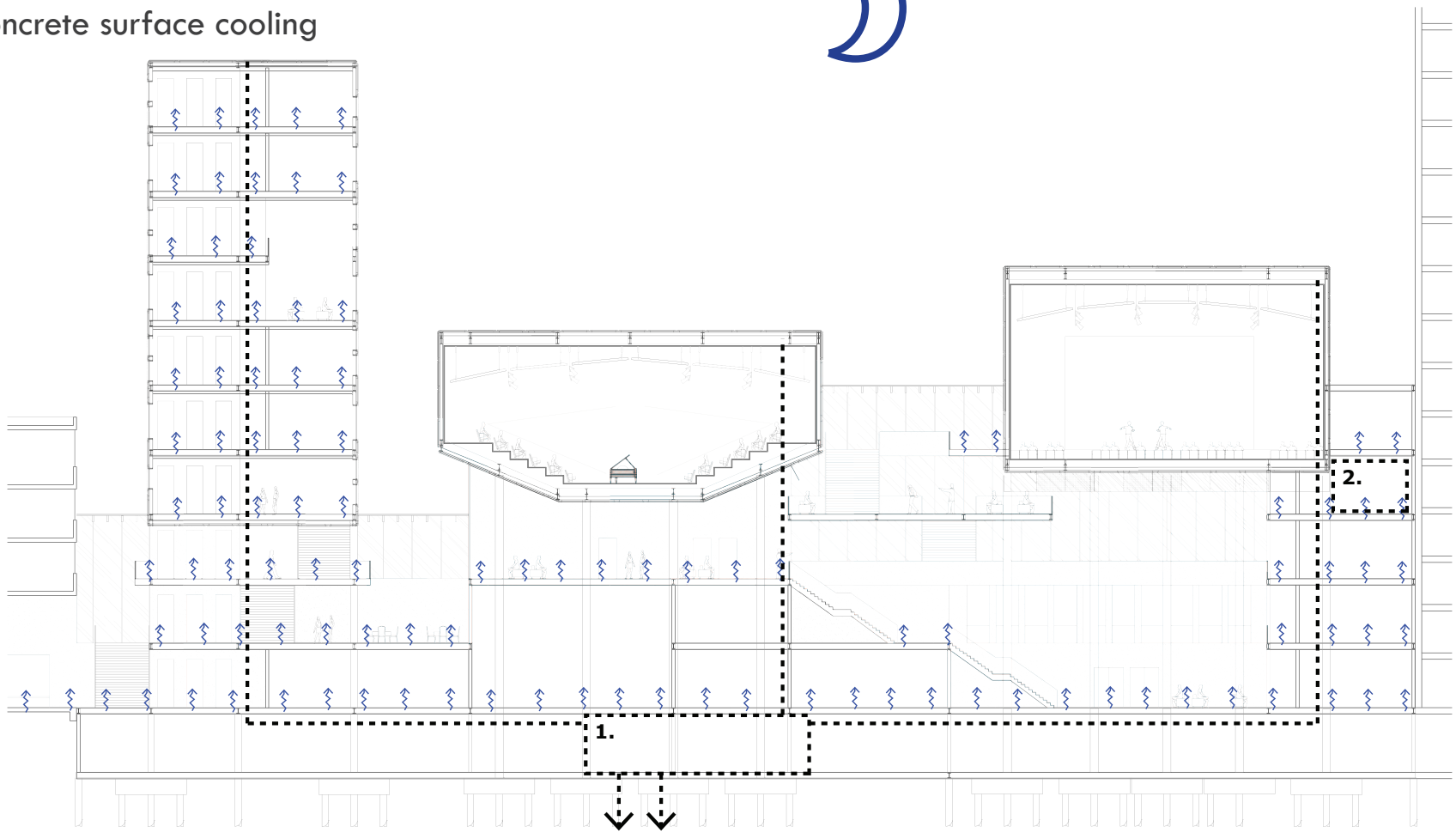
1. City heating system with heat exchange
2. Airhandeling unit



07 Installations

summer: passive cooling via
concrete surface cooling

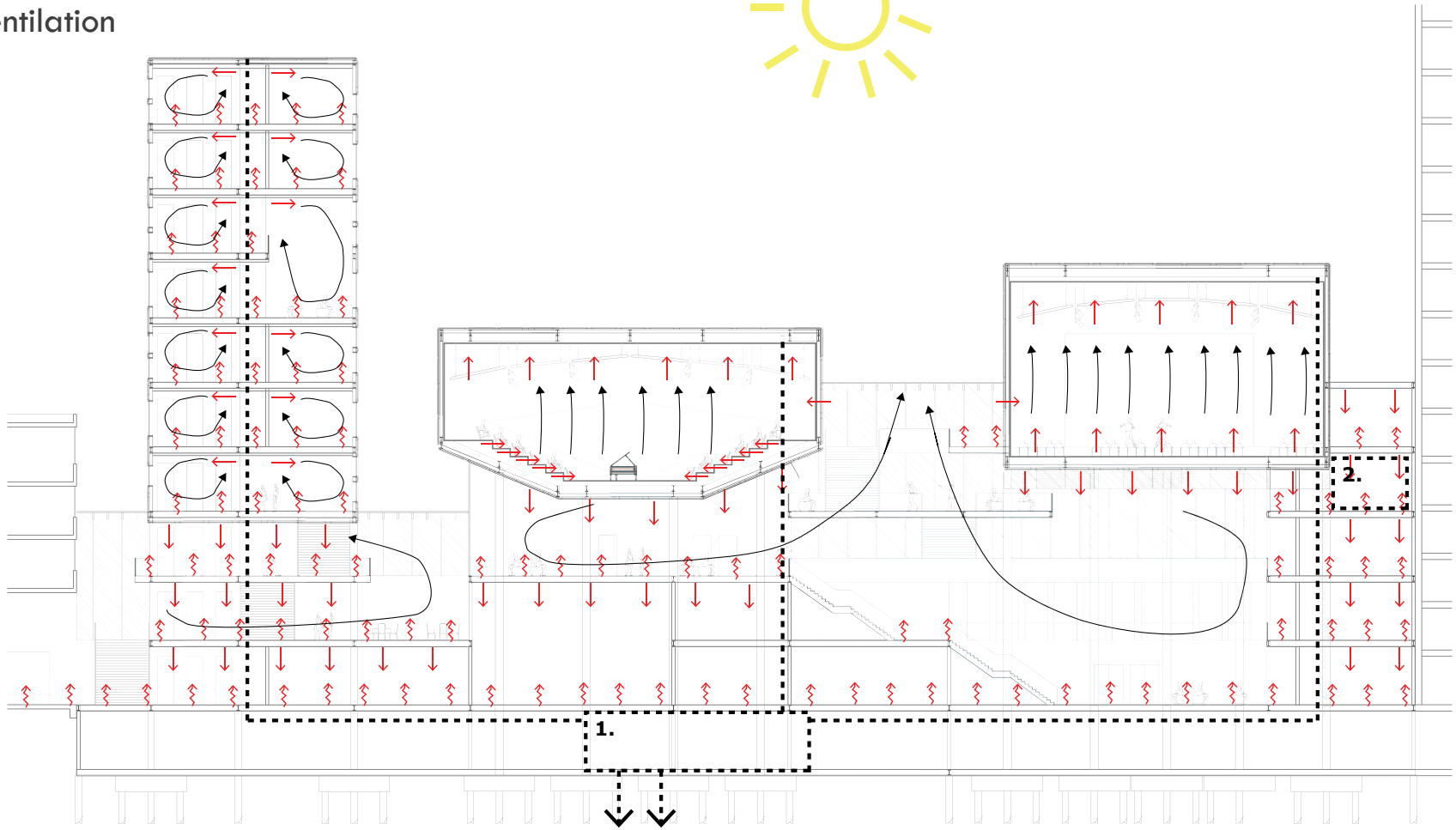
1. City heating system with heat exchange
2. Airhandeling unit



07 Installations

winter: heating and ventilation

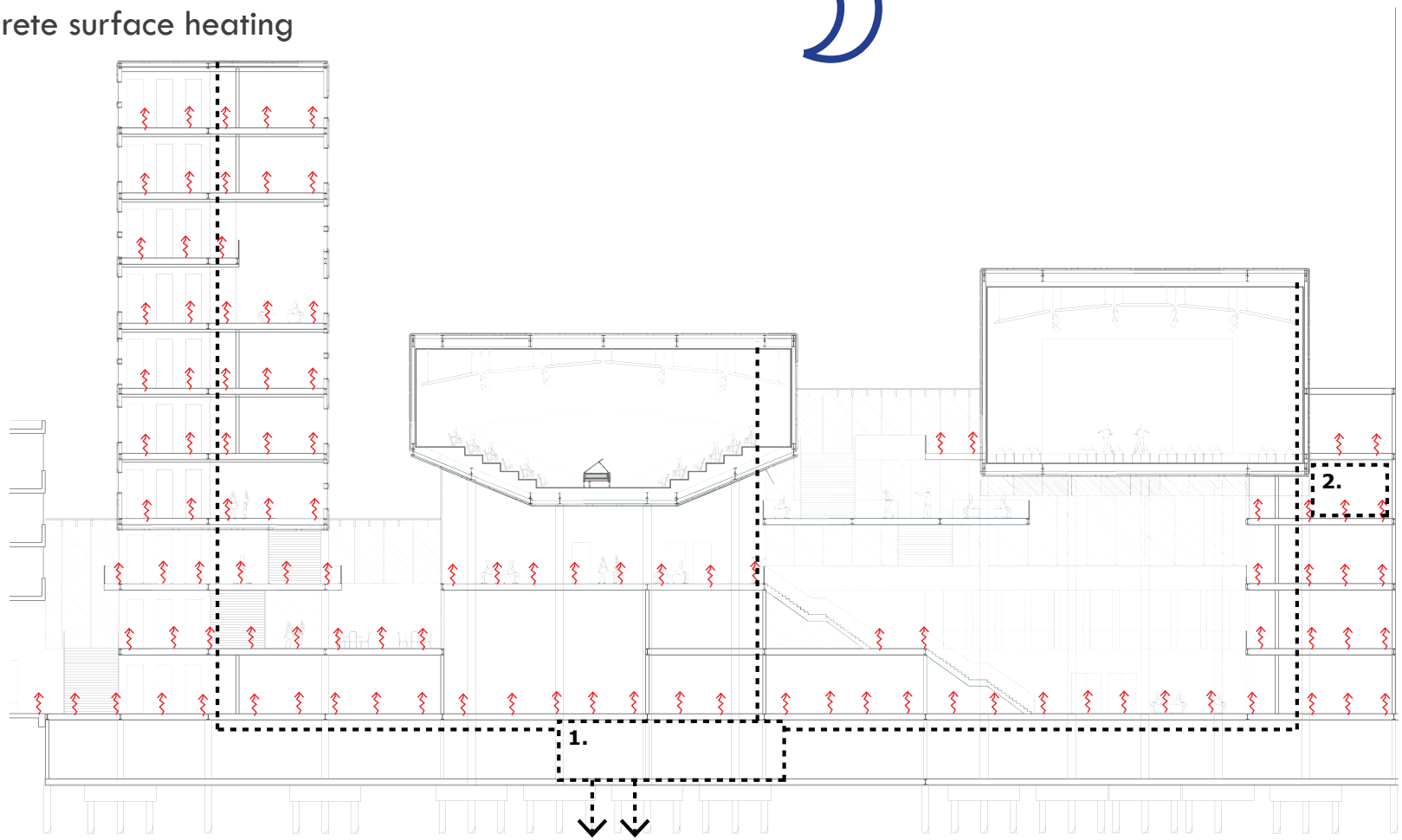
1. City heating system with heat exchange
2. Airhandeling unit



07 Installations

winter: passive heating via
concrete surface heating

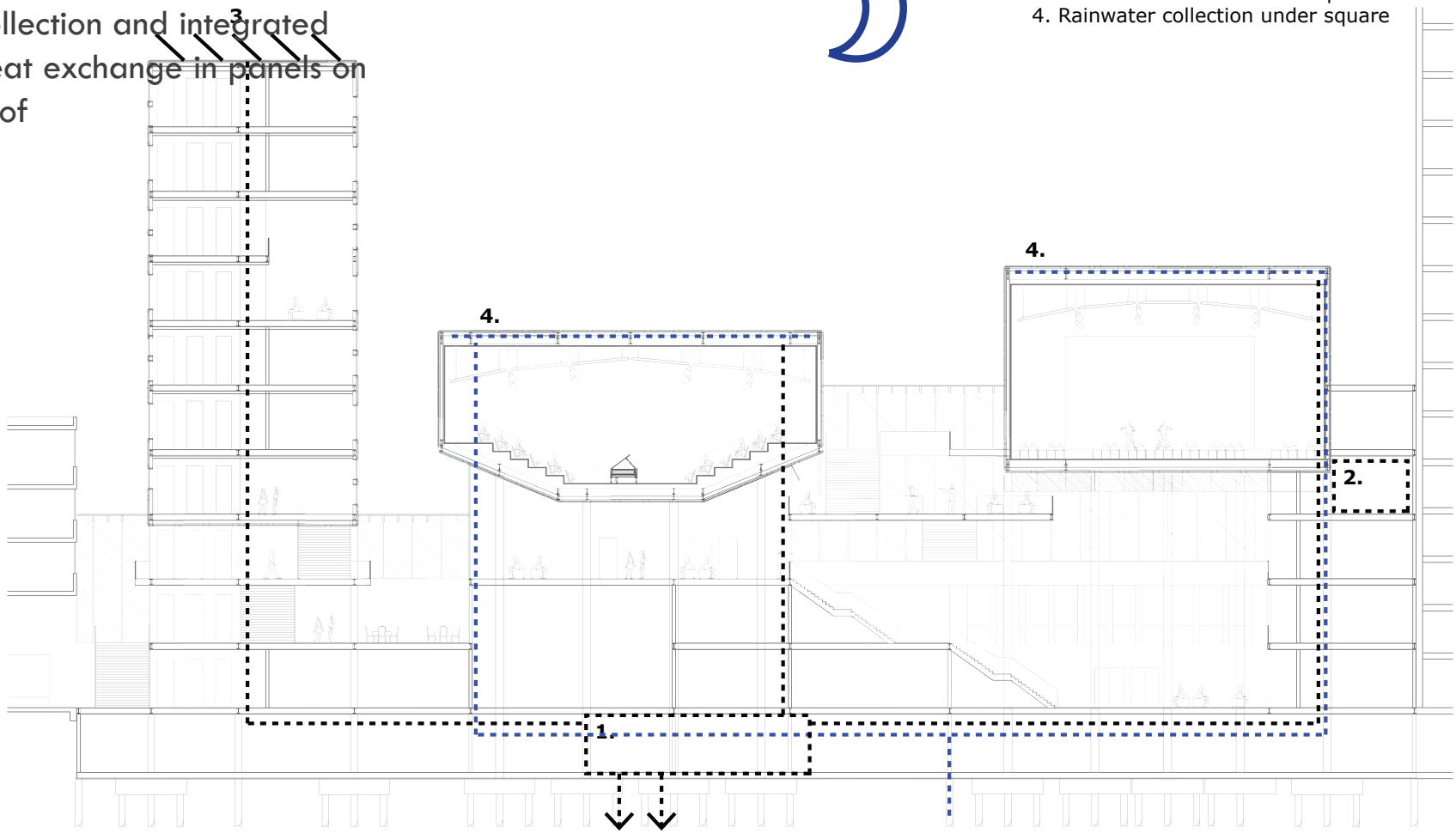
1. City heating system with heat exchange
2. Airhandeling unit



07 Installations

Sustainability: rainwater collection and integrated heat exchange in panels on roof

1. City heating system with heat exchange
2. Airhandeling unit
3. Solar panels
4. Rainwater collection under square



The public mezzanine

performing arts theatre Rotterdam

Fin

Questions?

Public realm graduation studio Rotterdam

tutors:

N. Marzot

S. Komossa

J. Fokkinga

I. Nevzgodin

P5 presentation 29.06.2012

Dirk de Groot