

Reimagining Heritage:

A Flexible Approach in a Modular Landscape



*P5 - Final presentation
Heritage and Architecture
AR3AH105 | Adapting 20th Century Heritage*

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dr. ir. W.J. Quist
dr. M.T.A. van Thoor*

physical operation



digital operation

The screenshot shows the Amazon website's 'Off to College Deals' section. At the top, the Amazon logo and navigation menu are visible. The main banner features the title 'Off to College Deals' and 'Amazon Devices with Alexa'. Below this, four devices are displayed with their original and discounted prices:

- echo input: ~~\$34.99~~ \$19.99
- fire tv stick: ~~\$39.99~~ \$29.99
- echo dot: ~~\$49.99~~ \$29.99
- fire HD10: ~~\$149.99~~ \$99.99

Below the banner are four promotional tiles:

- Bargain finds:** A tile showing a hand holding a colorful, mosaic-patterned phone case. Below the image is the text 'Device accessories' and a 'See more' link.
- Stock up for college:** A tile showing a grey canvas backpack with brown leather accents. Below the image is the text 'Everything you need, on campus and off' and a 'Shop all Off to College' link.
- Men's must-have shoes:** A grid of four shoe images: red athletic sneakers, black sandals, brown loafers, and white casual sneakers. Below the grid is a 'See more men's styles' link.
- Sign in for the best experience:** A white tile with a yellow 'Sign in securely' button.

At the bottom right, there is a blue promotional banner for 'amazon commercial Introducing Janitorial Supply Papers' with a 'Shop now' link and an image of paper products.

virtual operation



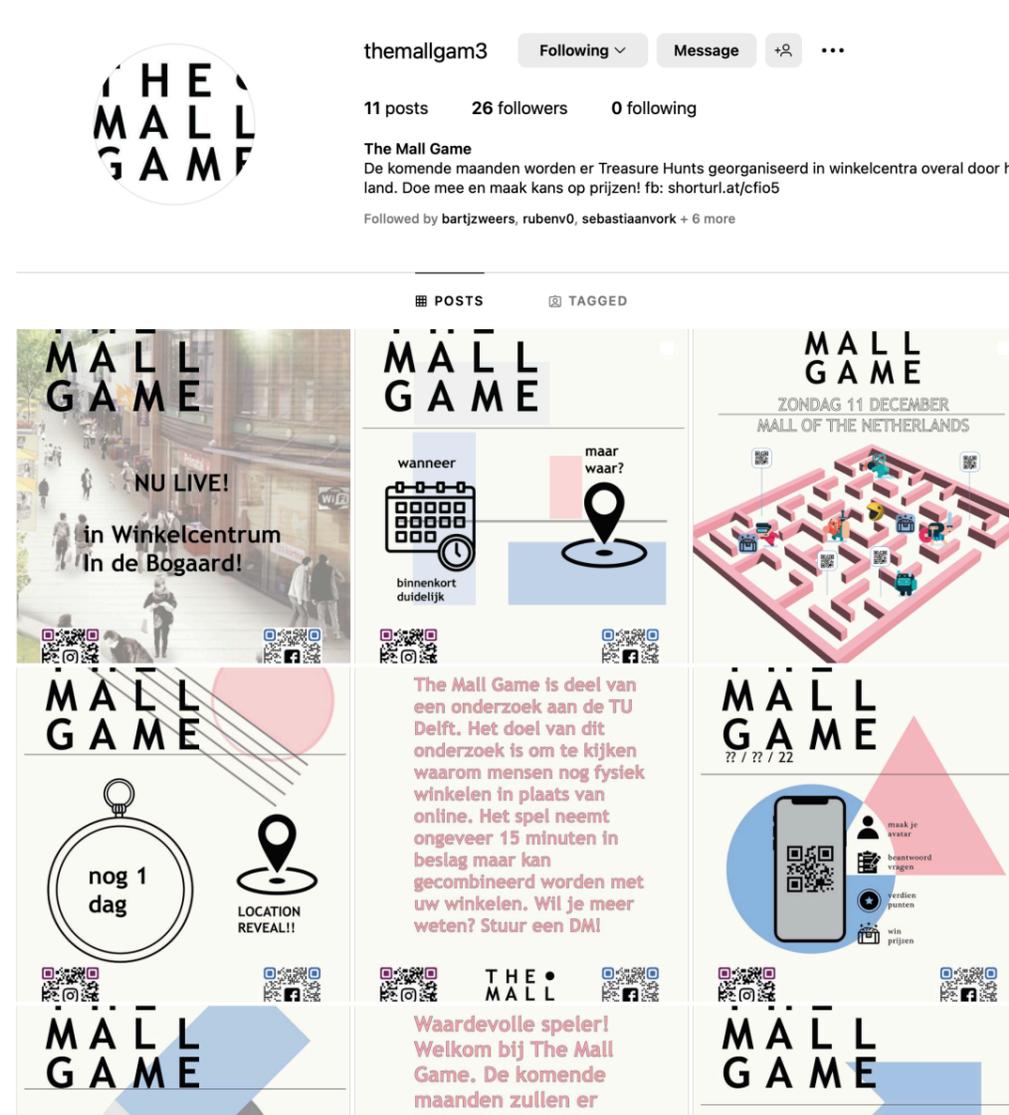
is attraction the key?

Westfield Mall of the Netherlands



How can changes in physical retail due to digital advances inform a sustainable and adaptive design for Dutch post-war shopping malls?

gamified survey



what do you still value in a shopping mall?



personal customer care

fast

experience

effective

social interaction



store as a showroom

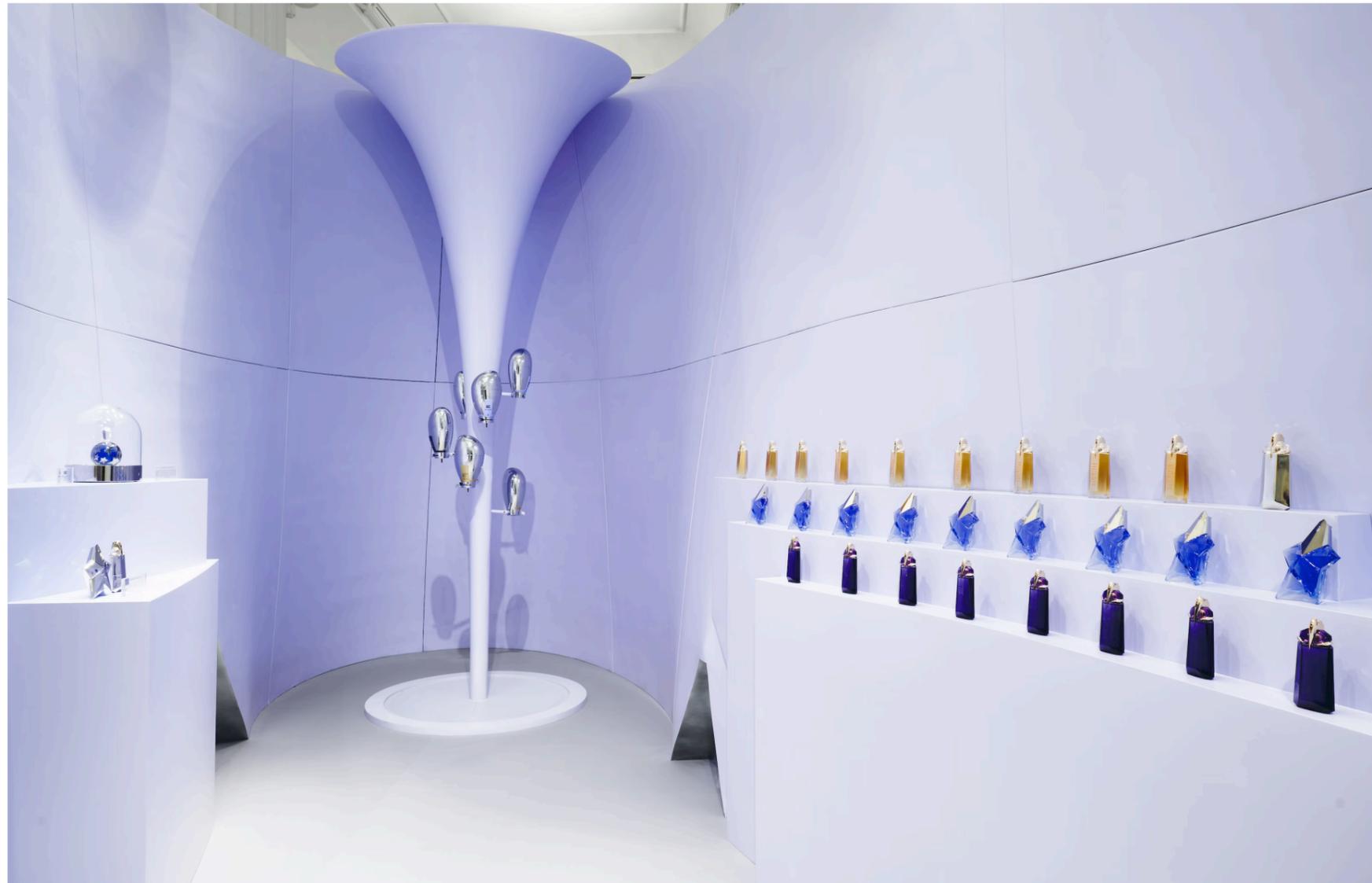


delivery at home

no stack of products in store

no storage needed

no stack of products in store



Mugler Body Space

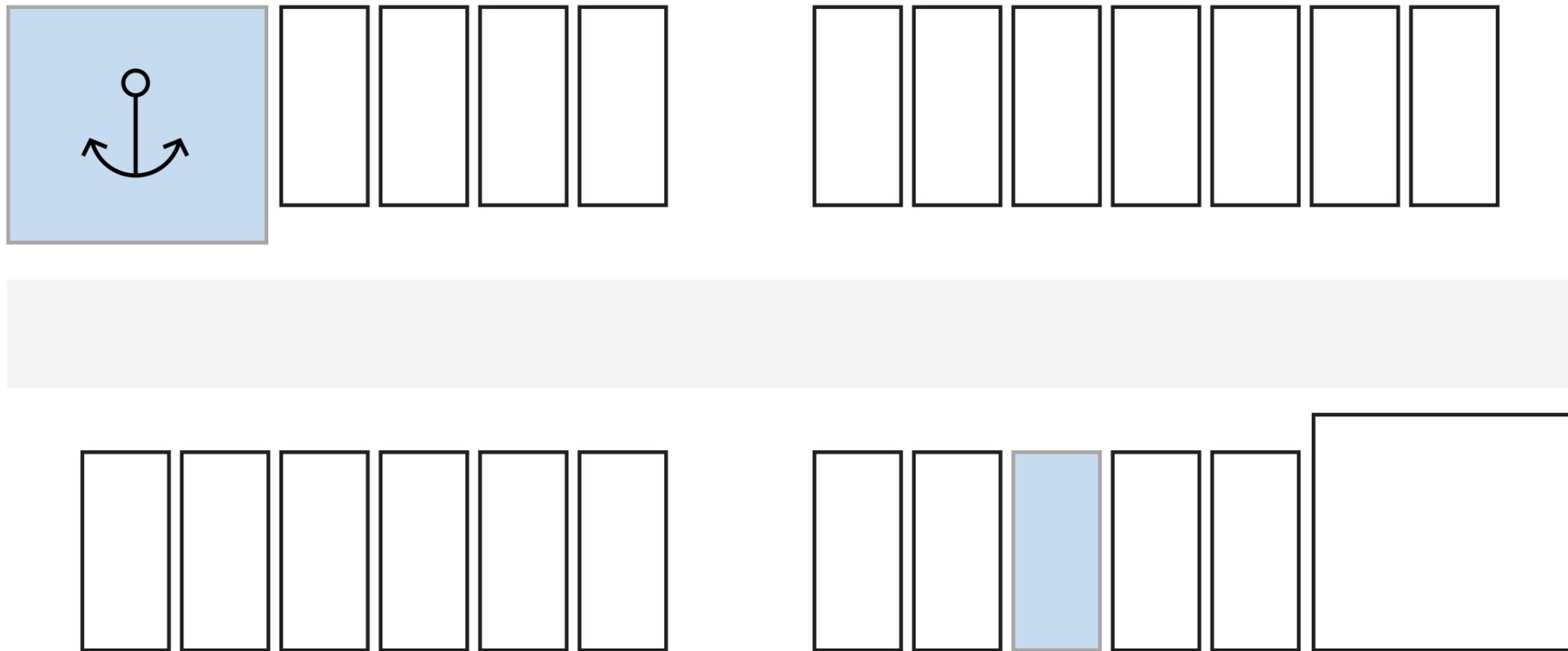
Random Studio
2022
commercial

no storage



Midjourney
AI-created

mall diagram



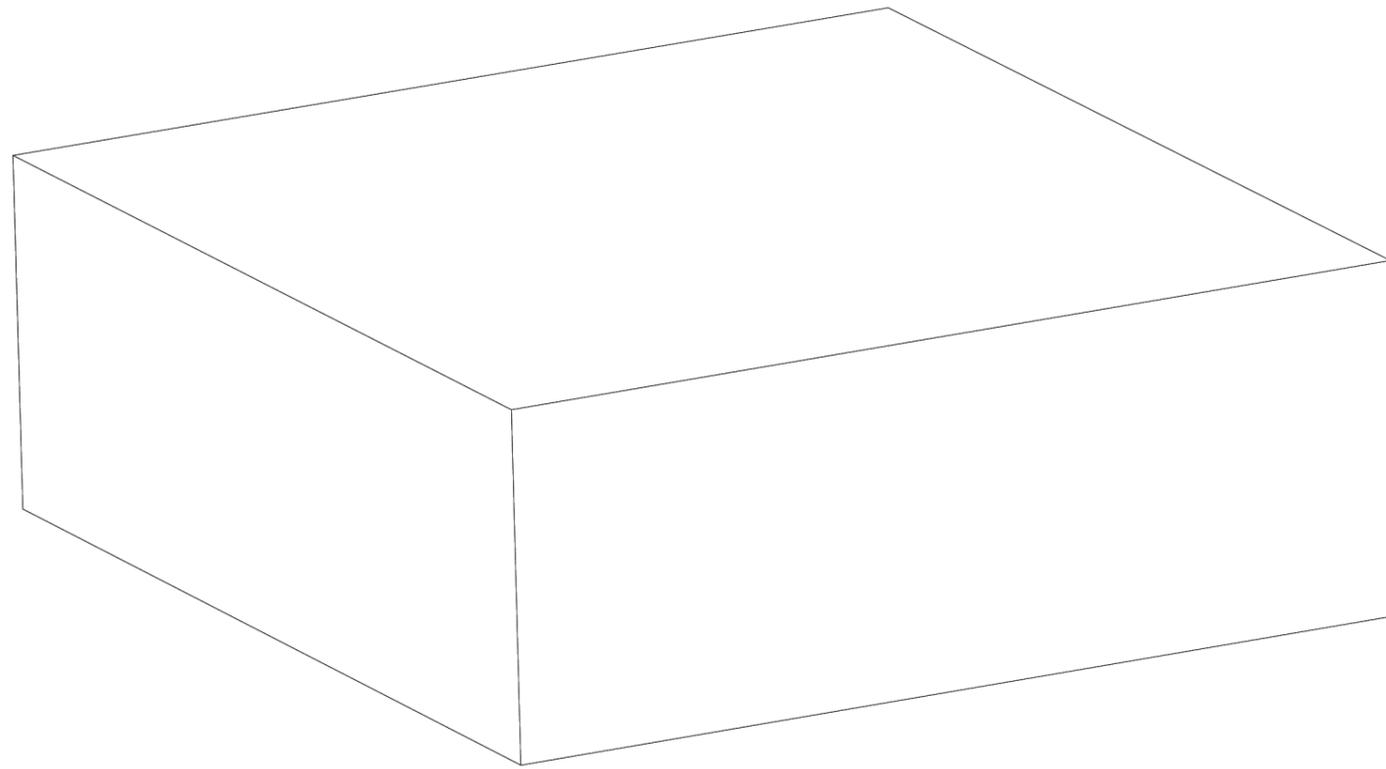
FLEXIBILITY

mo·dule

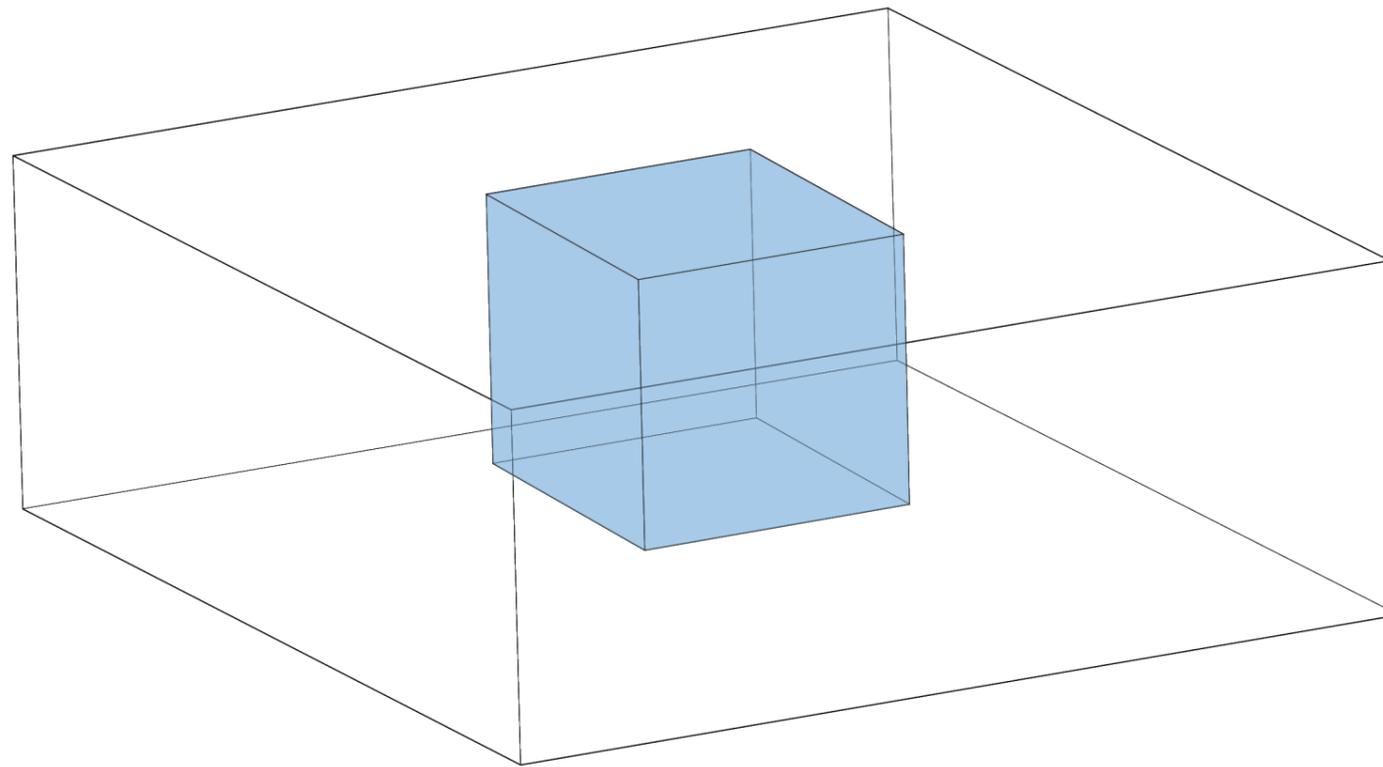
[ˈmɒdju:l] *noun*

a standardised unit adopted to regulate the dimensions and proportions of a building.

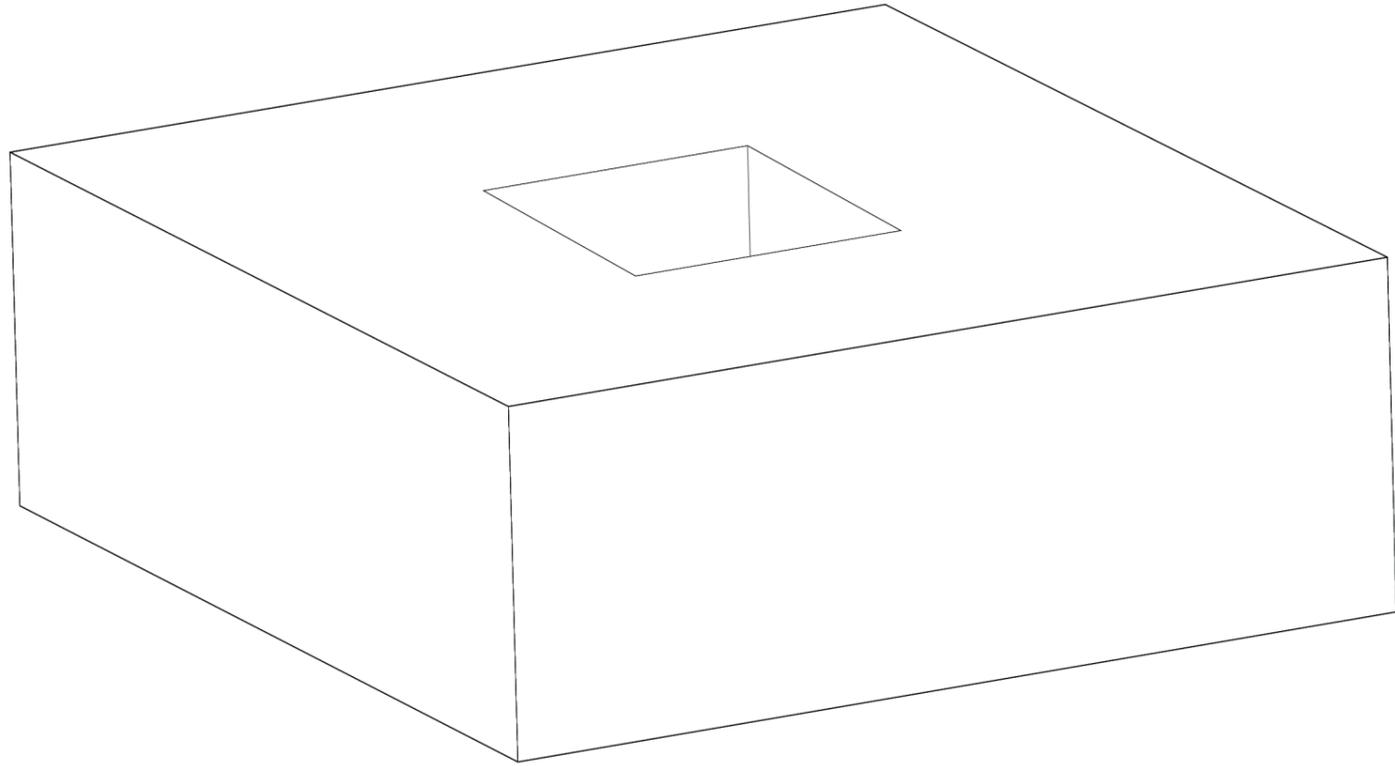
building block



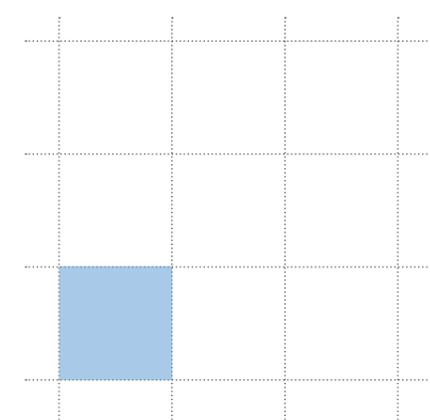
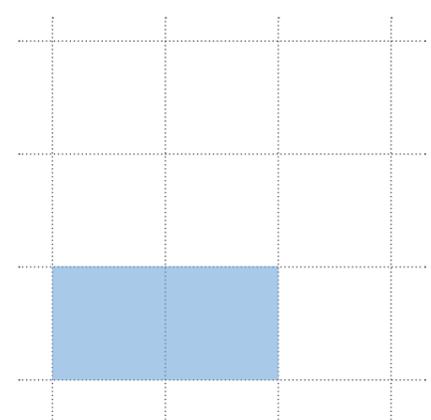
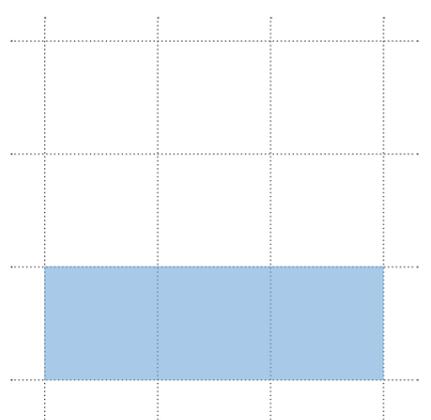
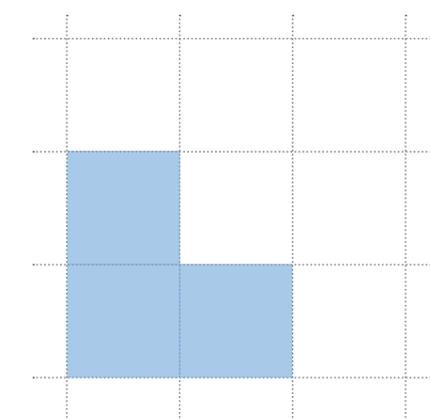
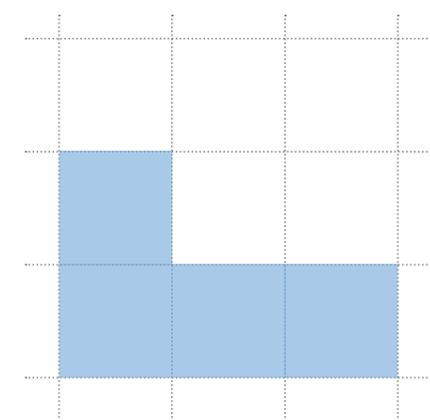
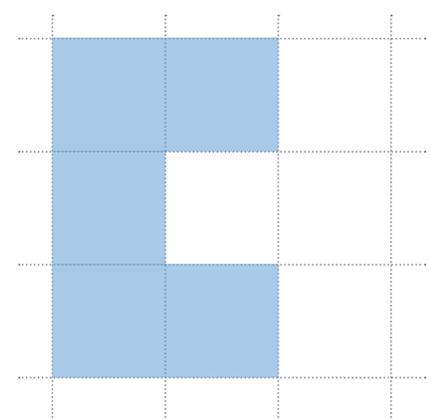
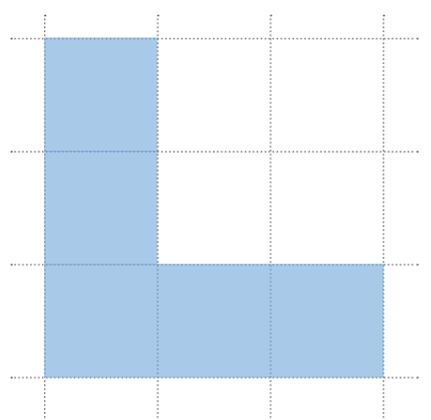
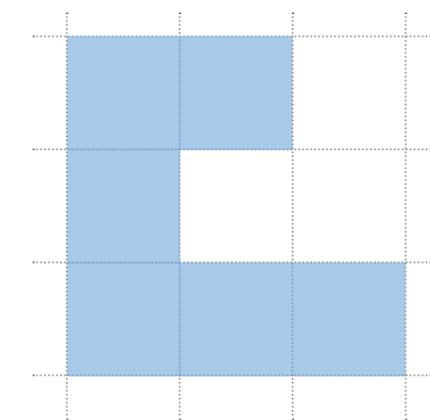
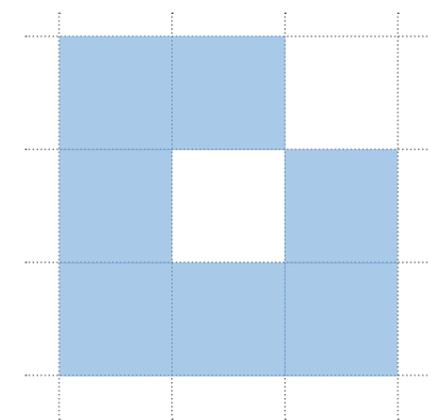
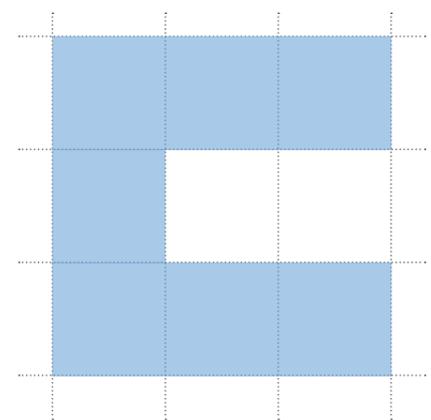
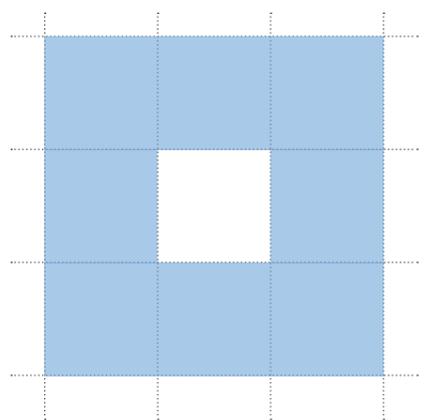
create inner qualities



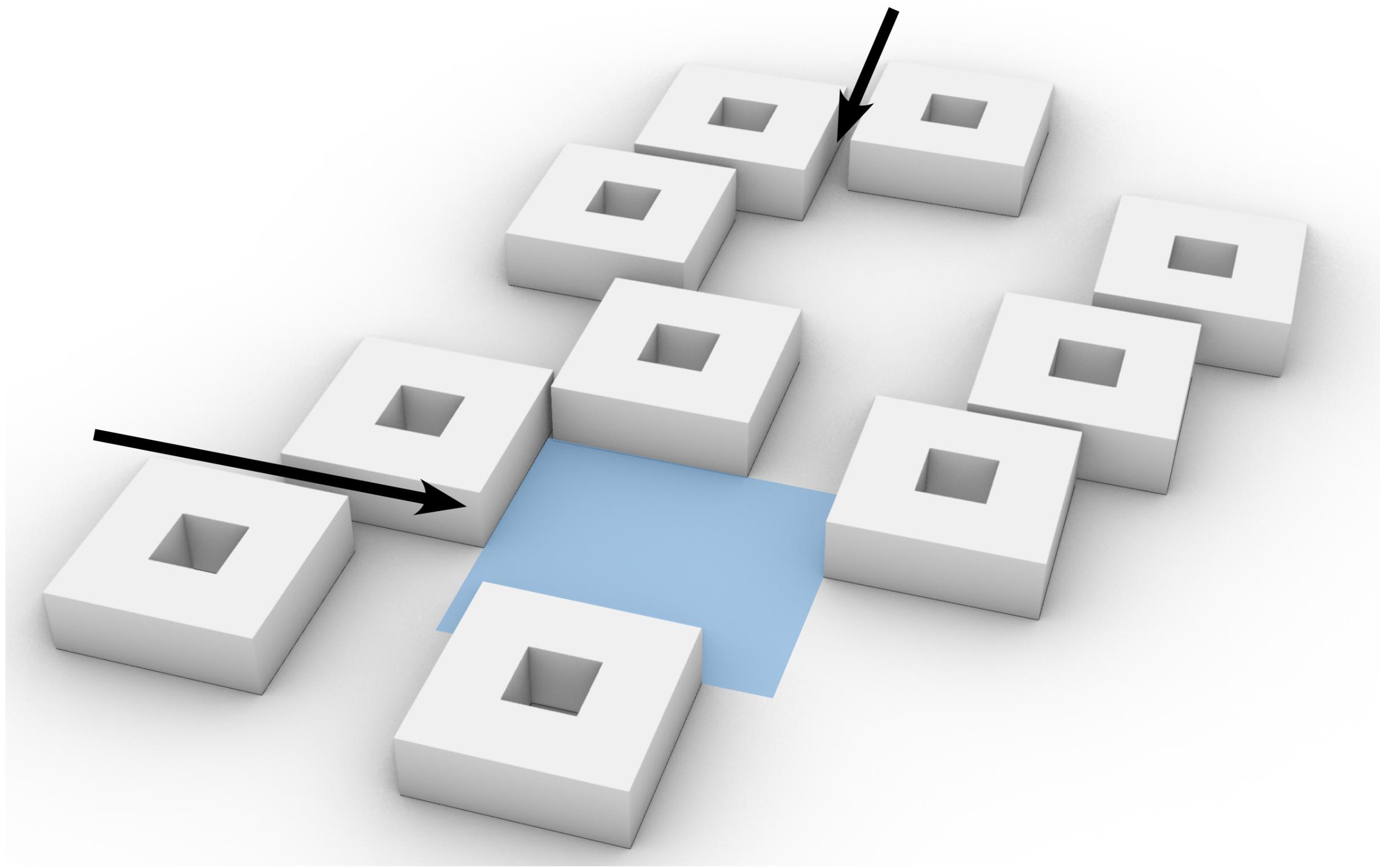
module principle



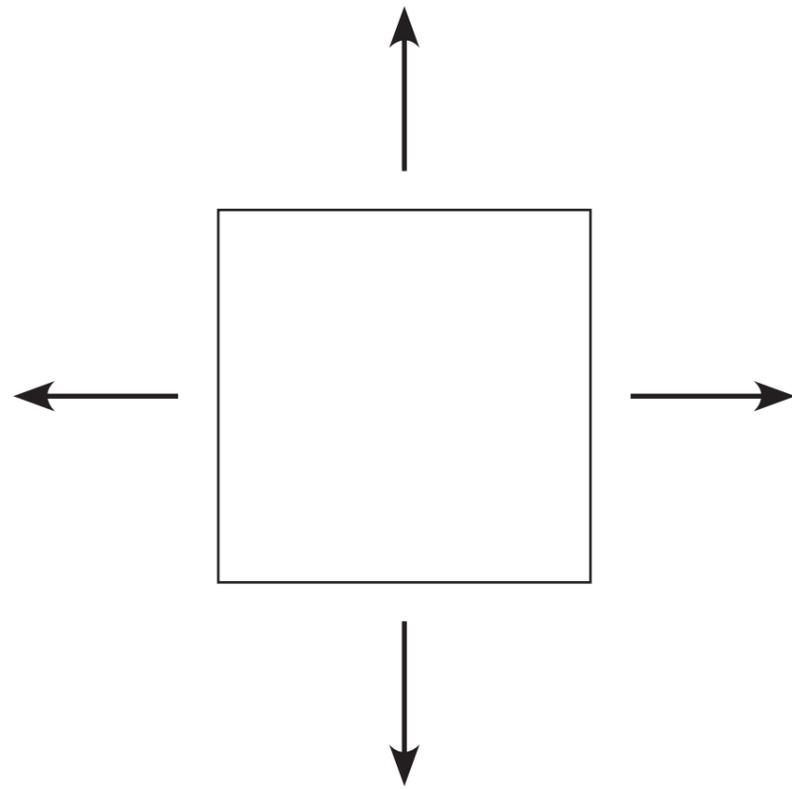
all possible outcomes with an atrium



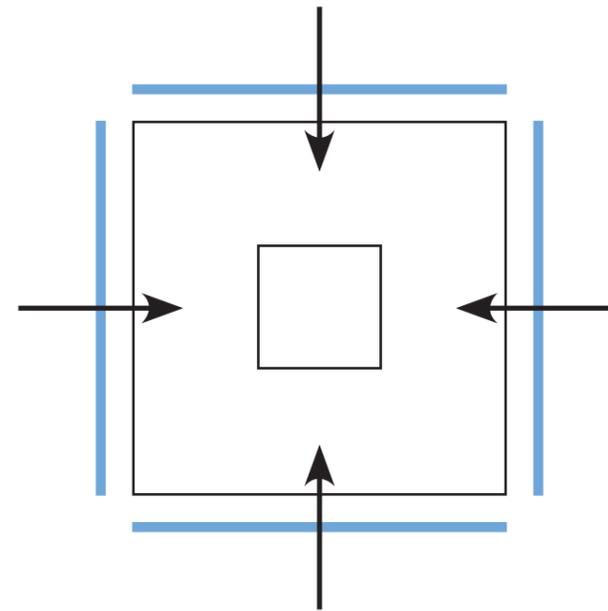
squares, courtyards, landscape garden



introverted character



introverted module



extraverted atrium

atrium



Green Livingroom

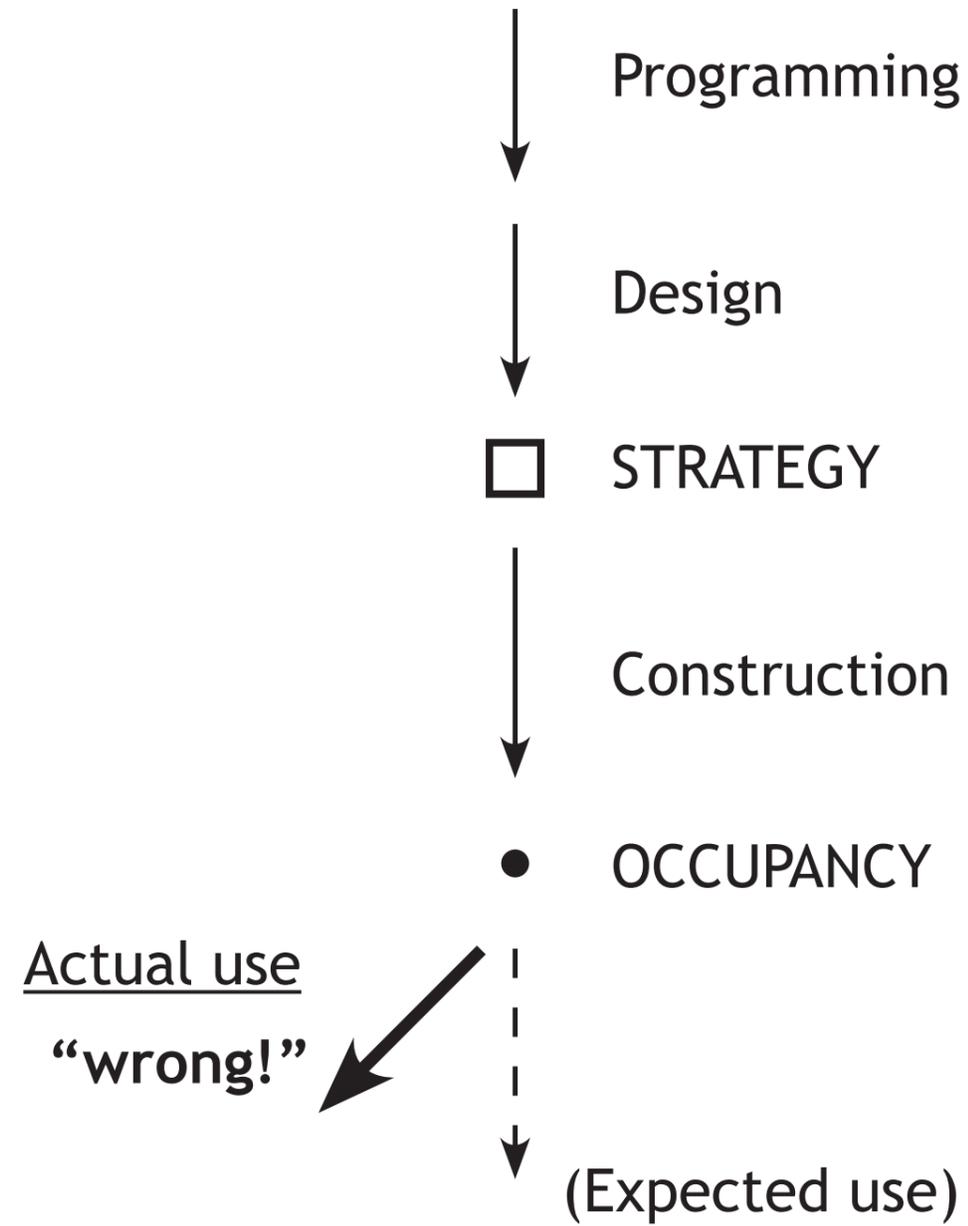
Region Studio
concept
residential



Times Square

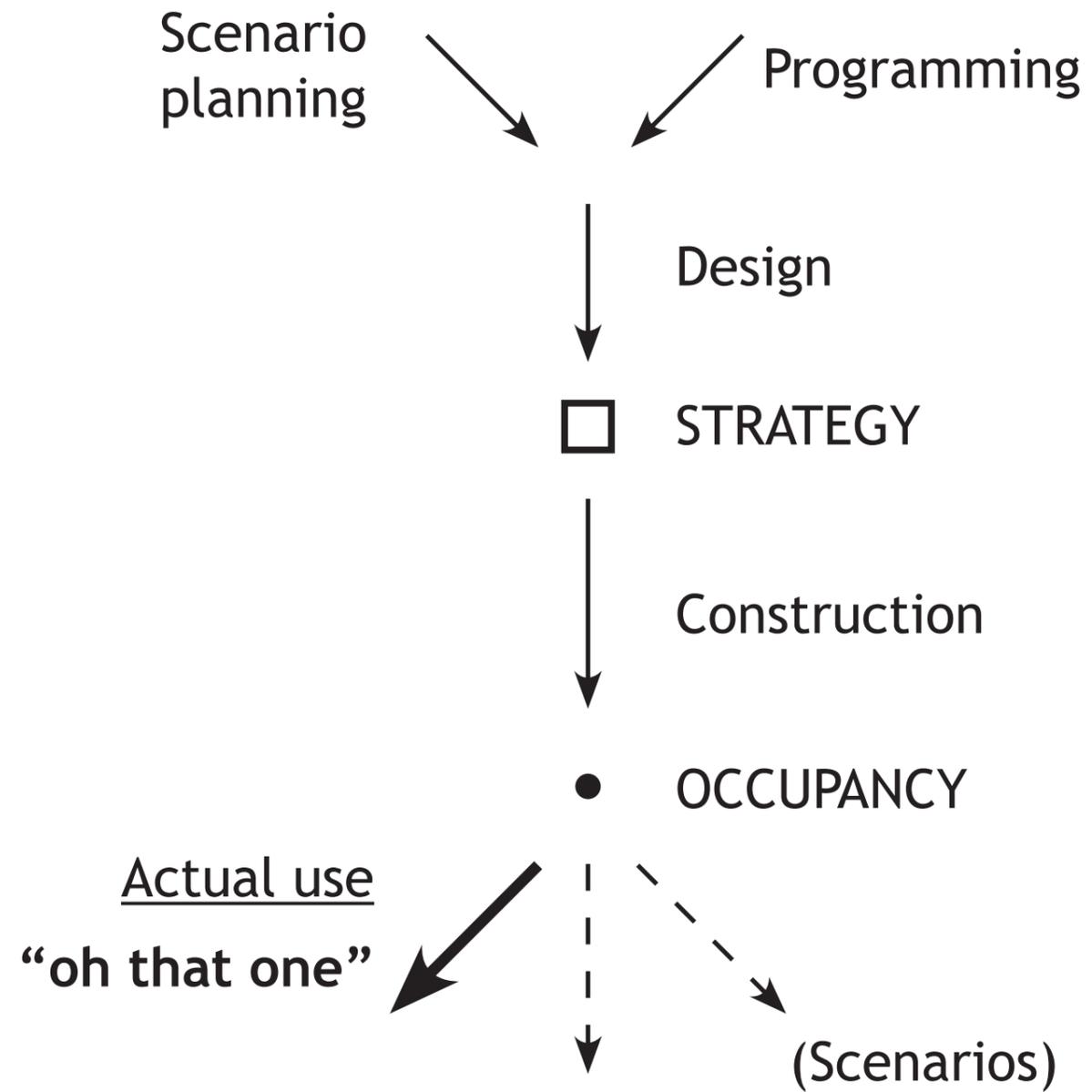
New York
commercial

regular design process.



USUAL NEW BUILDING

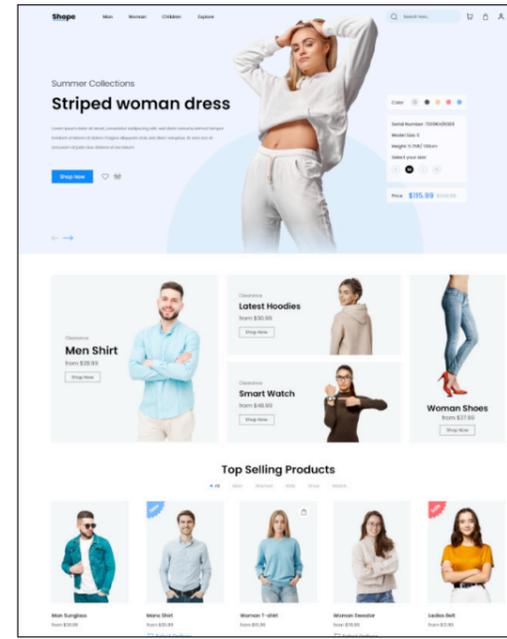
scenario principle



SCENARIO-BUFFERED BUILDING



OFFLINE



ONLINE



OWNED

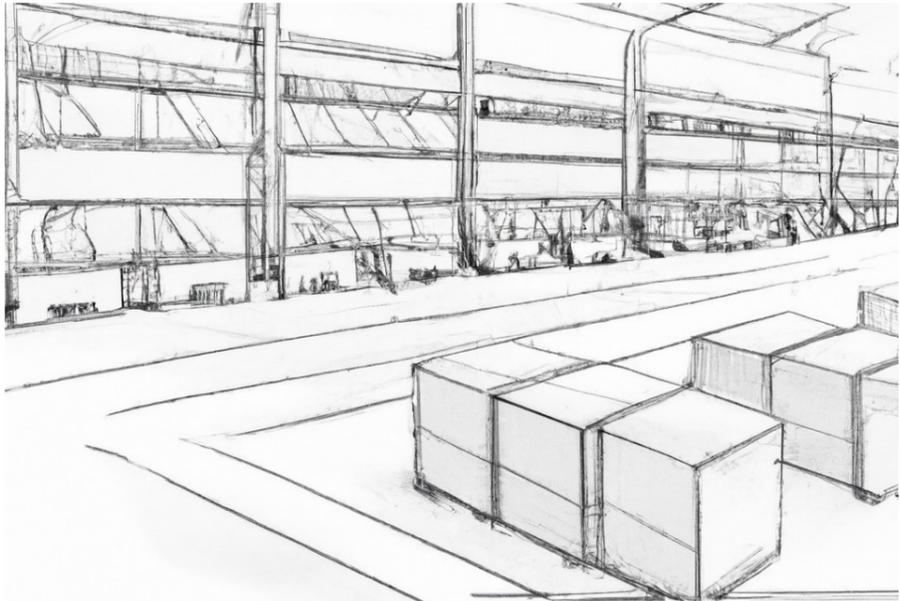


SHARED

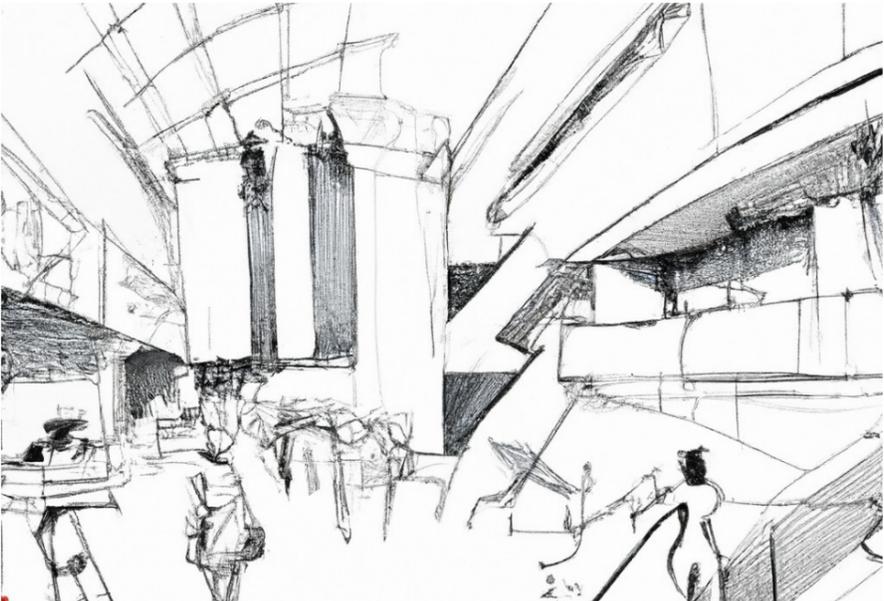
ONLINE

OFFLINE

OWNED



delivery hub

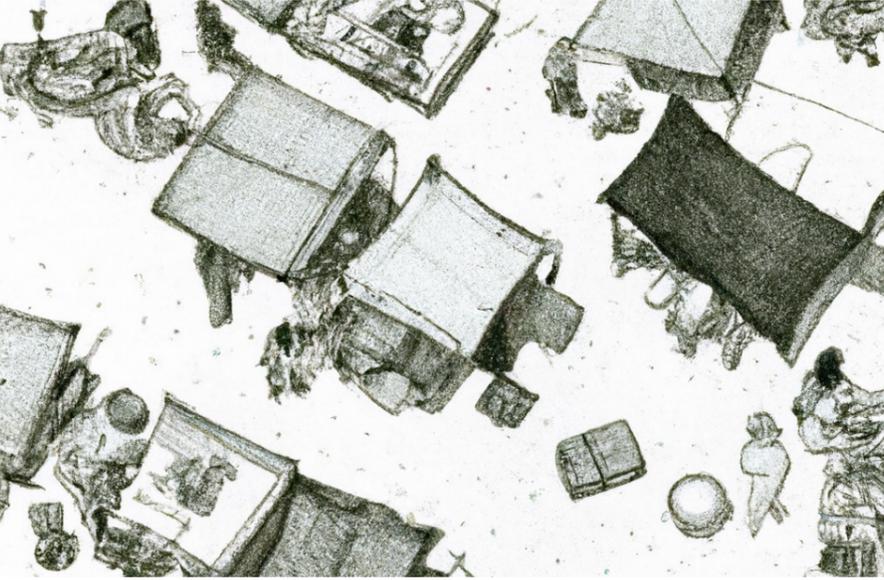


caring center

SHARED



virtual market



sharing market

recap

create a sense of identity

encourage social interaction

flexibility and adaptability

focus on people flows

recap

store as a showroom



create a sense of identity

encourage social interaction

flexibility and adaptability

focus on people flows

recap

outdoor space



create a sense of identity

encourage social interaction

flexibility and adaptability

focus on people flows

recap

create a sense of identity

encourage social interaction

scenarios



flexibility and adaptability

modules



focus on people flows

recap

create a sense of identity

encourage social interaction

flexibility and adaptability

landscape garden



focus on people flows

design case

problems

goals

case study - Winkelcentrum de Oranjerie



De Oranjerie

Ellerman Lucas van Vugt
Apeldoorn, Netherlands
1994
commercial

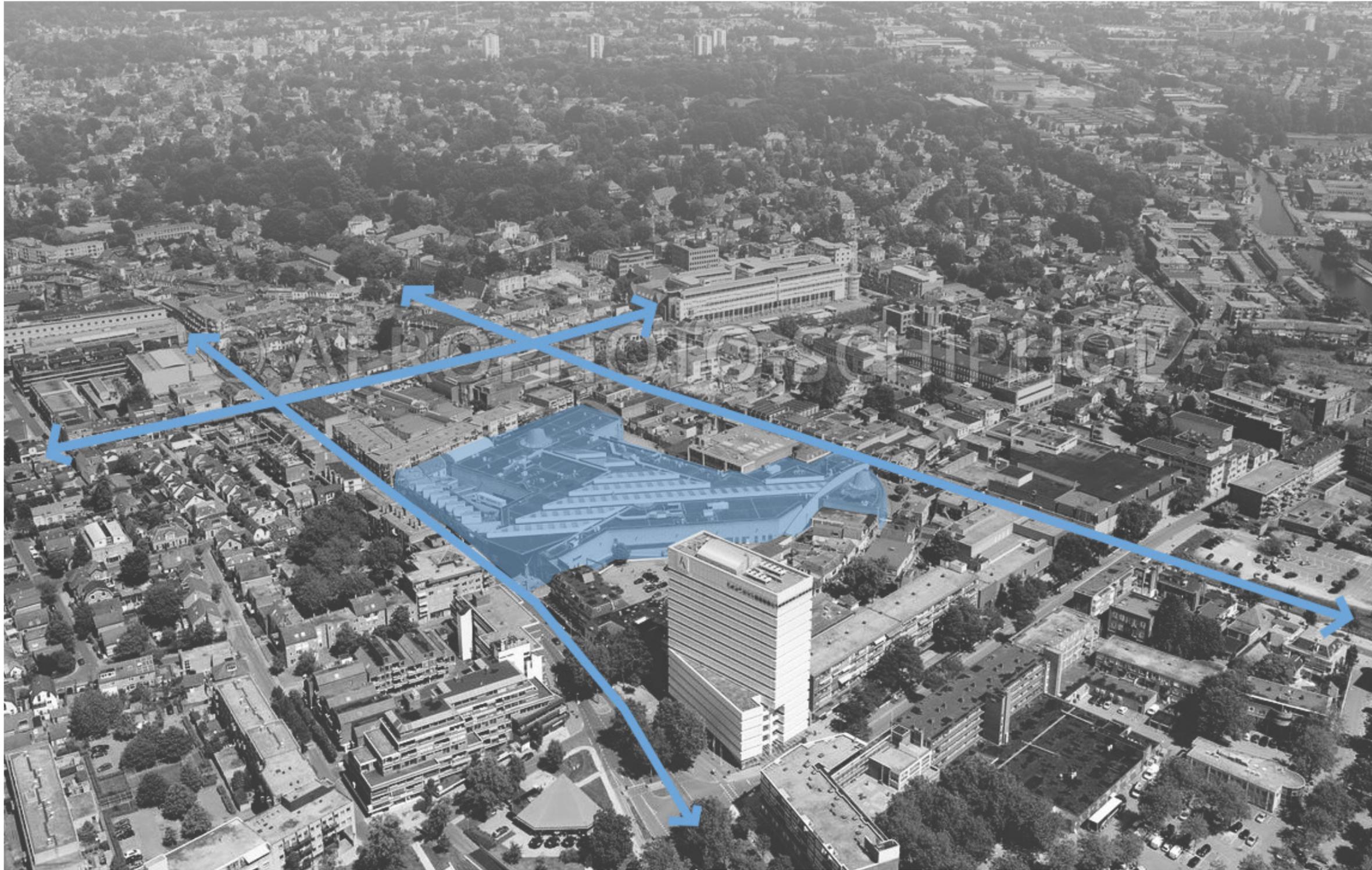
case study - Winkelcentrum de Oranjerie



De Oranjerie

Dunnet Craven
Apeldoorn, Netherlands
2017
commercial

case study - Winkelcentrum de Oranjerie - 2017



case study - atmosphere



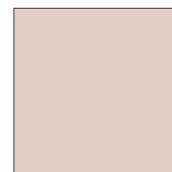
1994



case study - atmosphere



2017



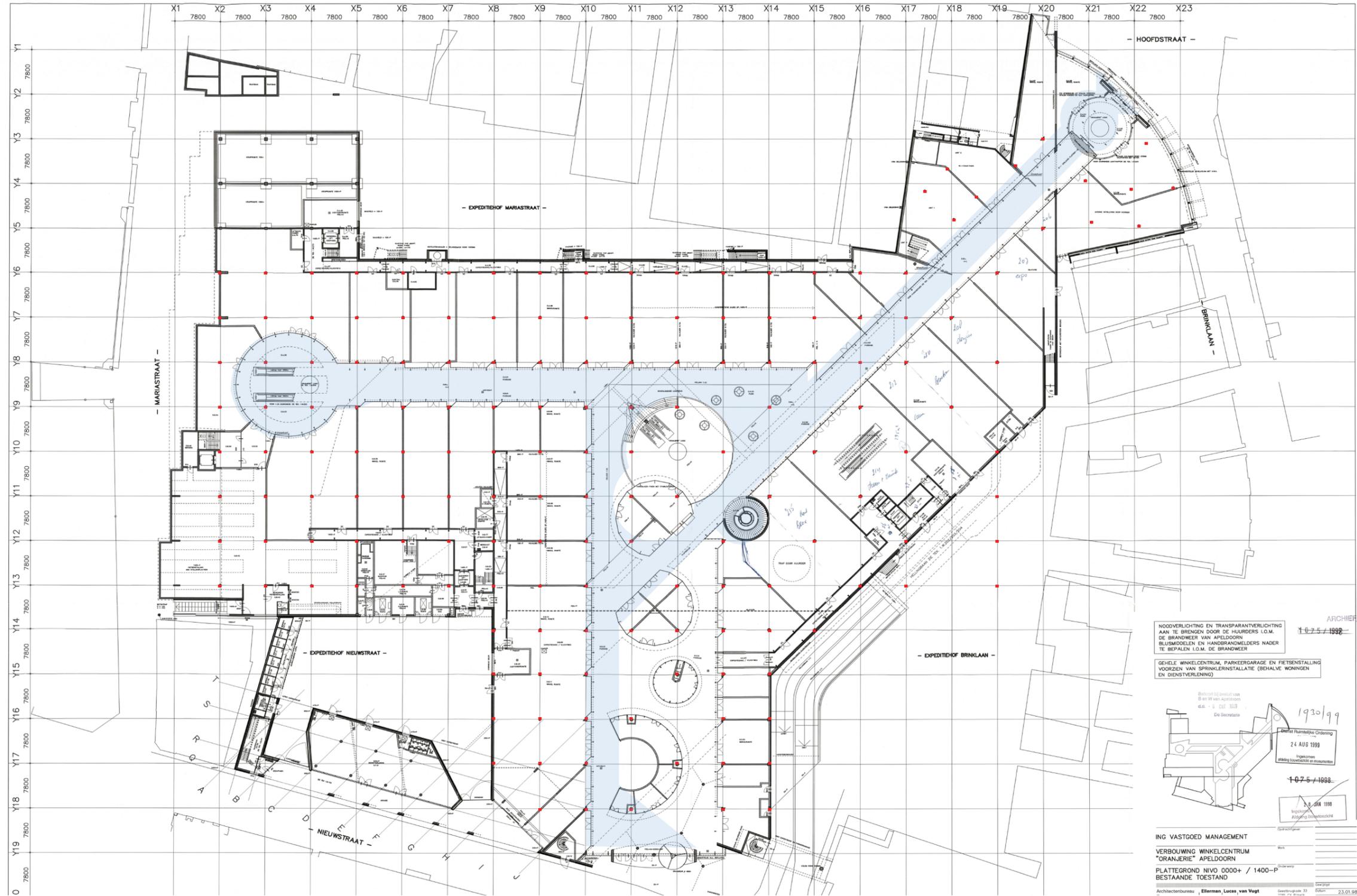
case study - Winkelcentrum de Oranjerie - 1994



case study - Winkelcentrum de Oranjerie - 2017



case study - floorplan



ARCHIEF 1075 / 1992

NOODVERLICHTING EN TRANSPARANTVERLICHTING AAN TE BRENGEN DOOR DE HUURDERS I.O.M. DE BRANDWEER VAN AFELDORIEN. BLIJSCHIEDEN EN HANDBRANDMELDERS NADER TE BEPALEN I.O.M. DE BRANDWEER

GEHELE WINKELCENTRUM, PARKEERGARAGE EN FIETSENSTALLING VOORZIEN VAN SPRINKLERINSTALLATIE (BEHALVE WONINGEN EN DIENSTVERLENING)

Beknopt 3D tekening van B en W van Apelesoom d.s. - 6 - 08 1998 De Beernaals 1930/99

24 AUG 1999

1075 / 1098

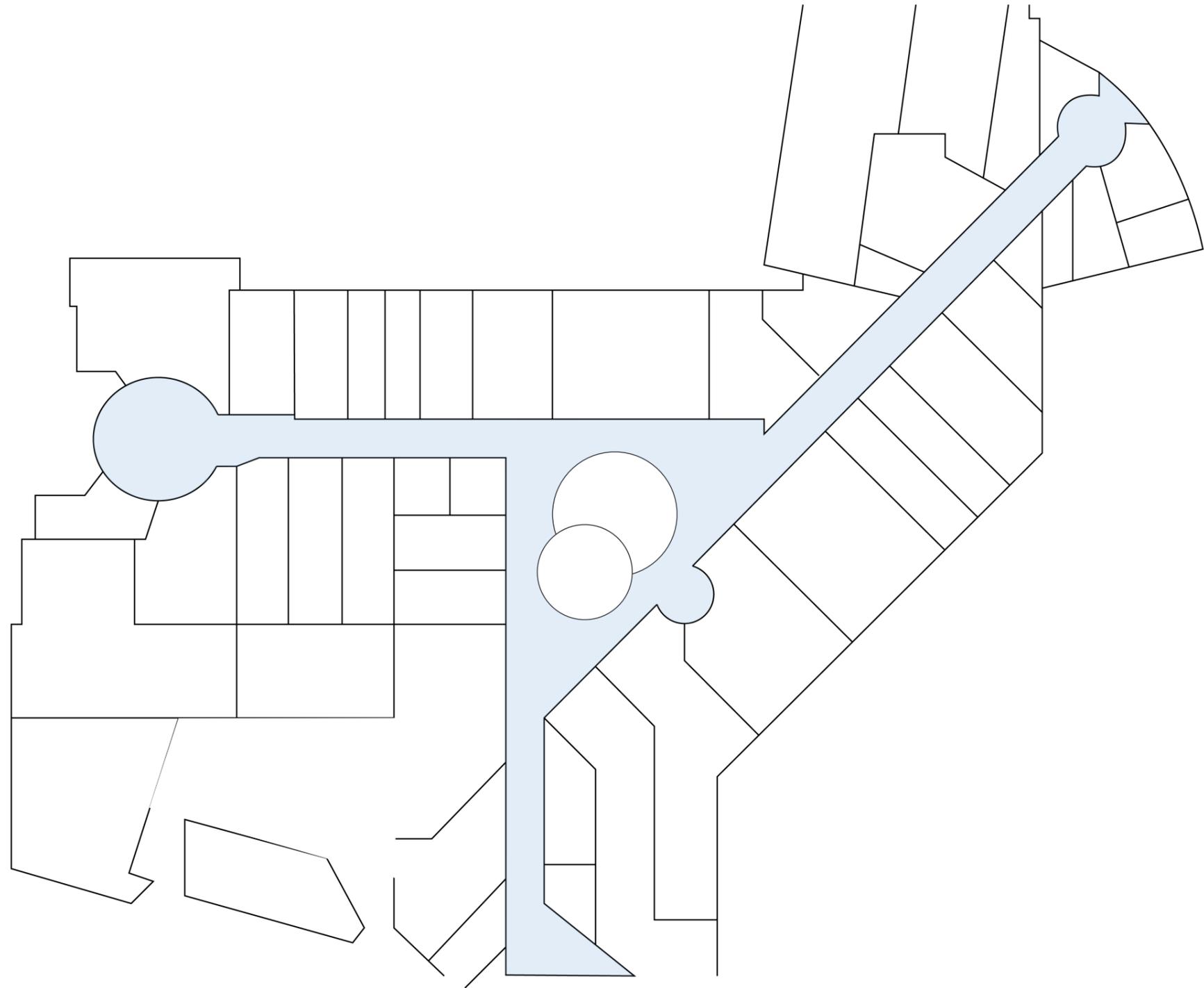
ING VASTGOED MANAGEMENT

VERBOUWING WINKELCENTRUM "ORANJERIE" APELDOORN

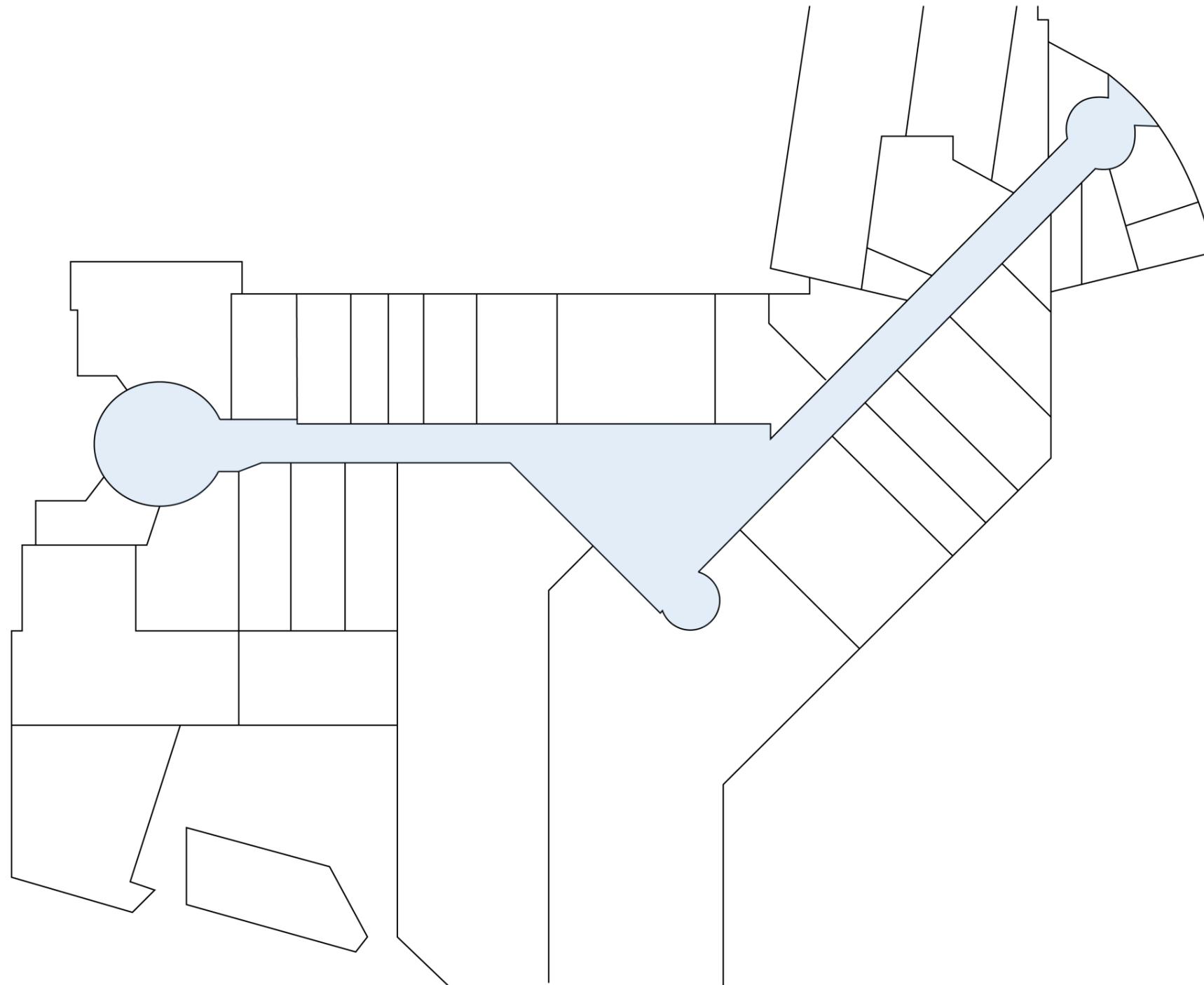
PLATTEGROND NIVO 0000+ / 1400-P BESTAANDE TOESTAND

23.01.98

case study - circulation 1994



case study - circulation 2017



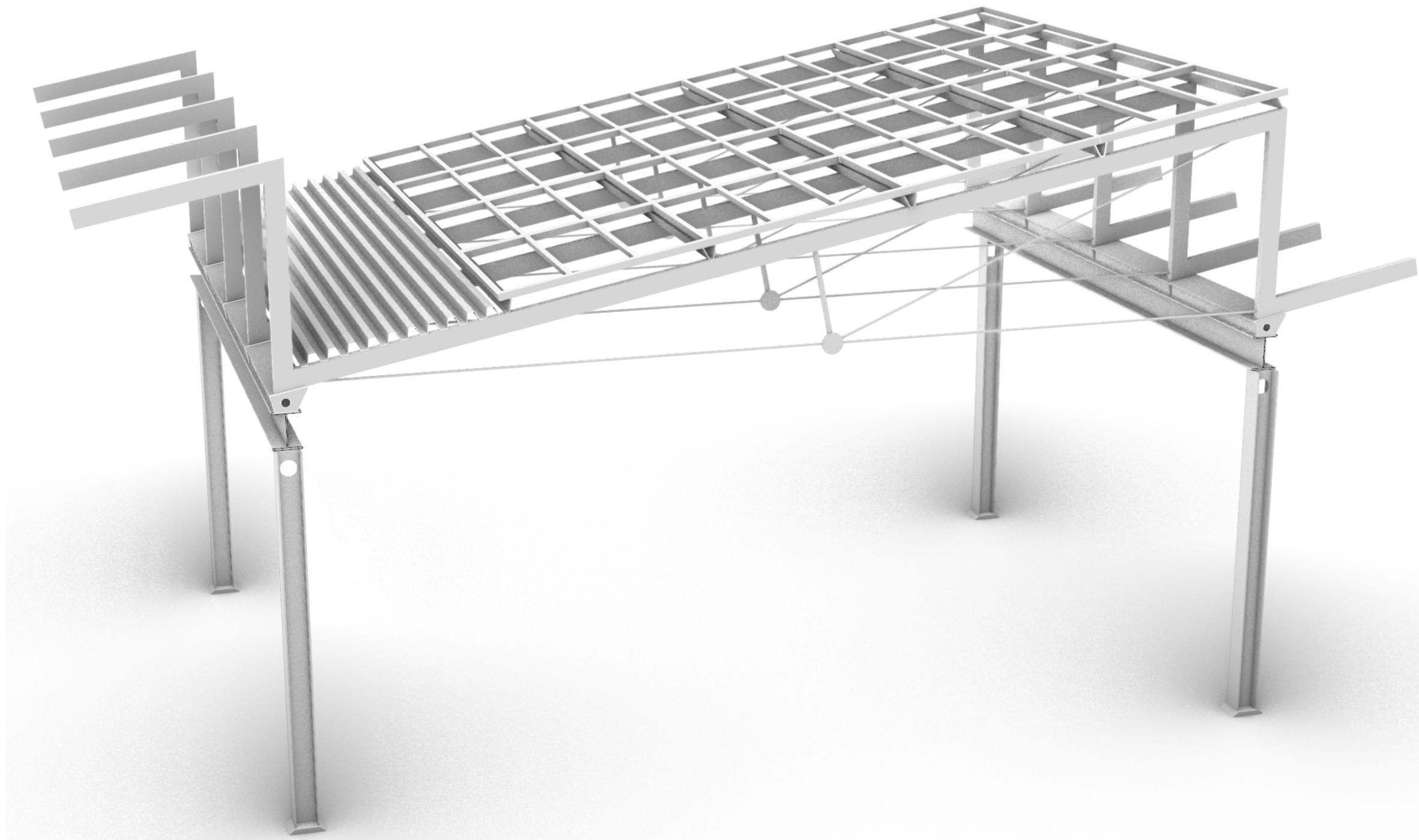
service backside



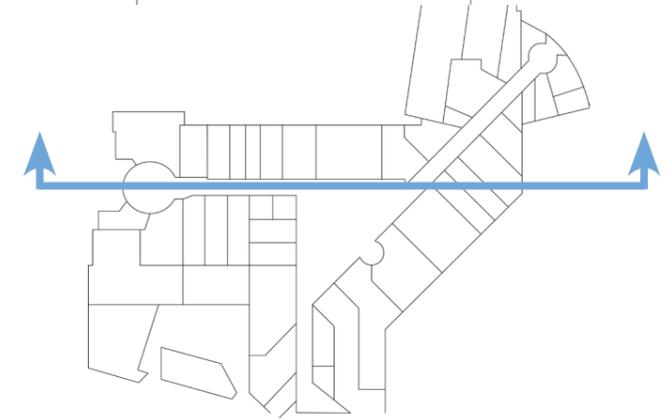
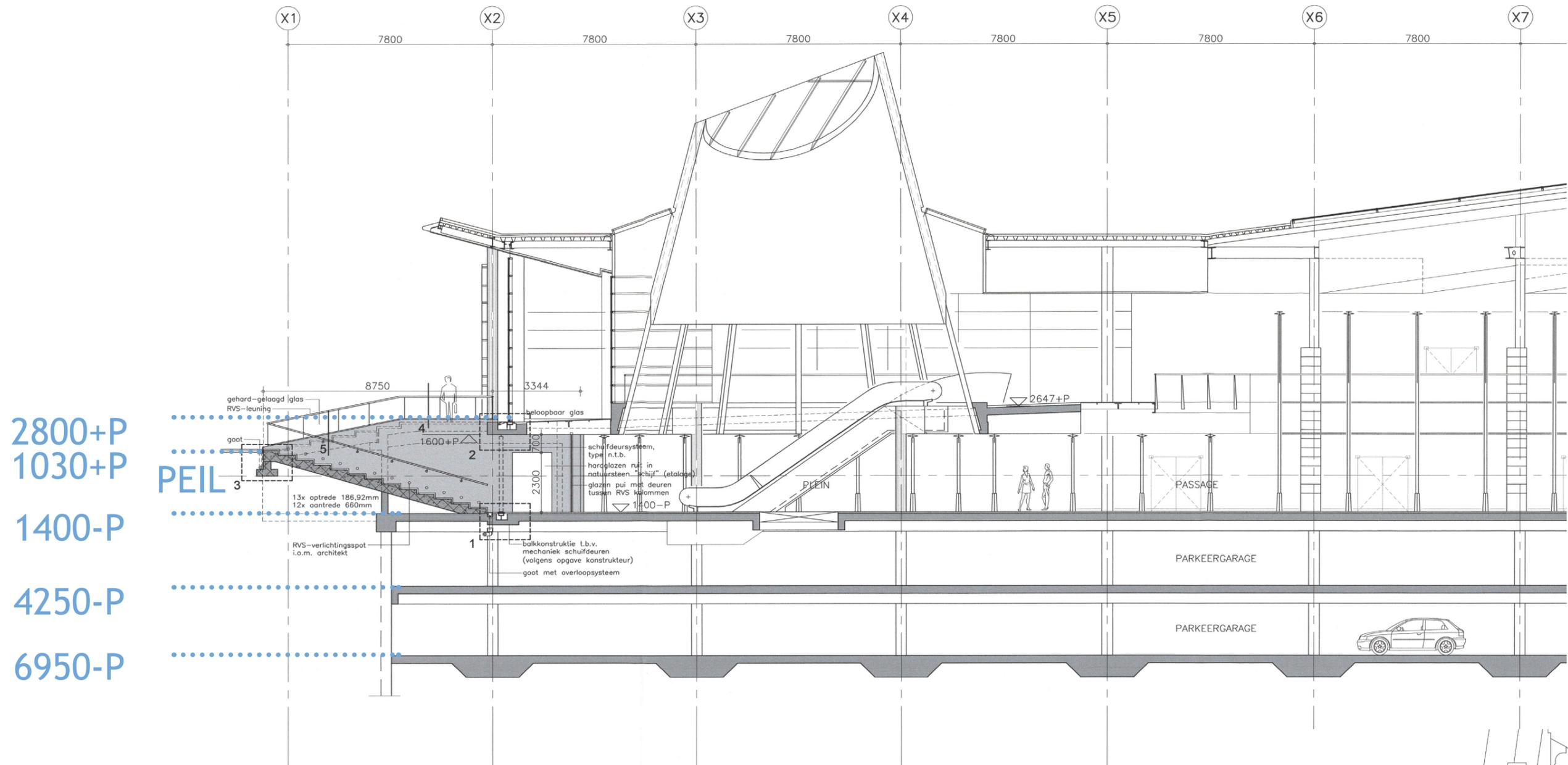
existing construction



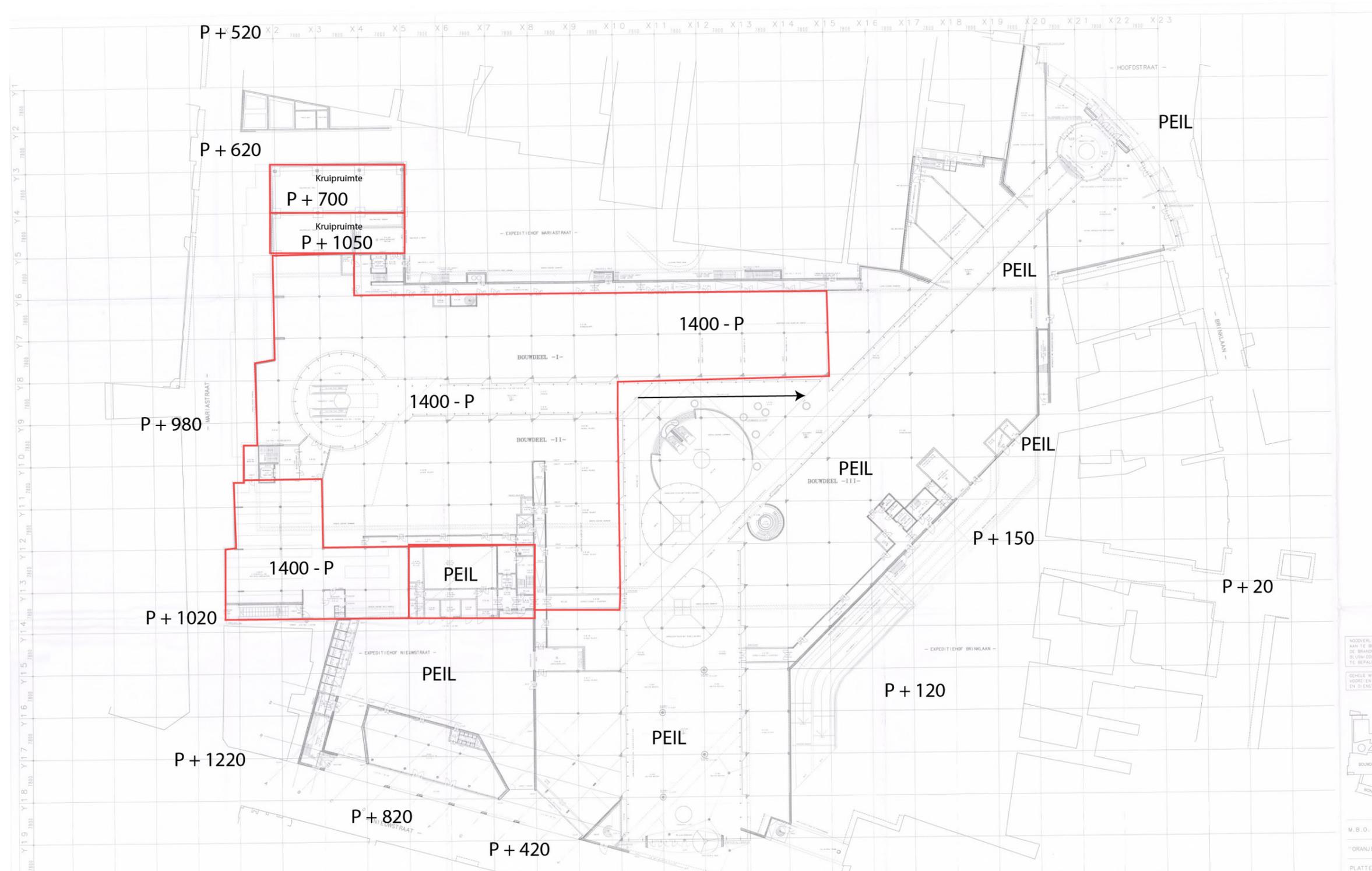
reason for preservation



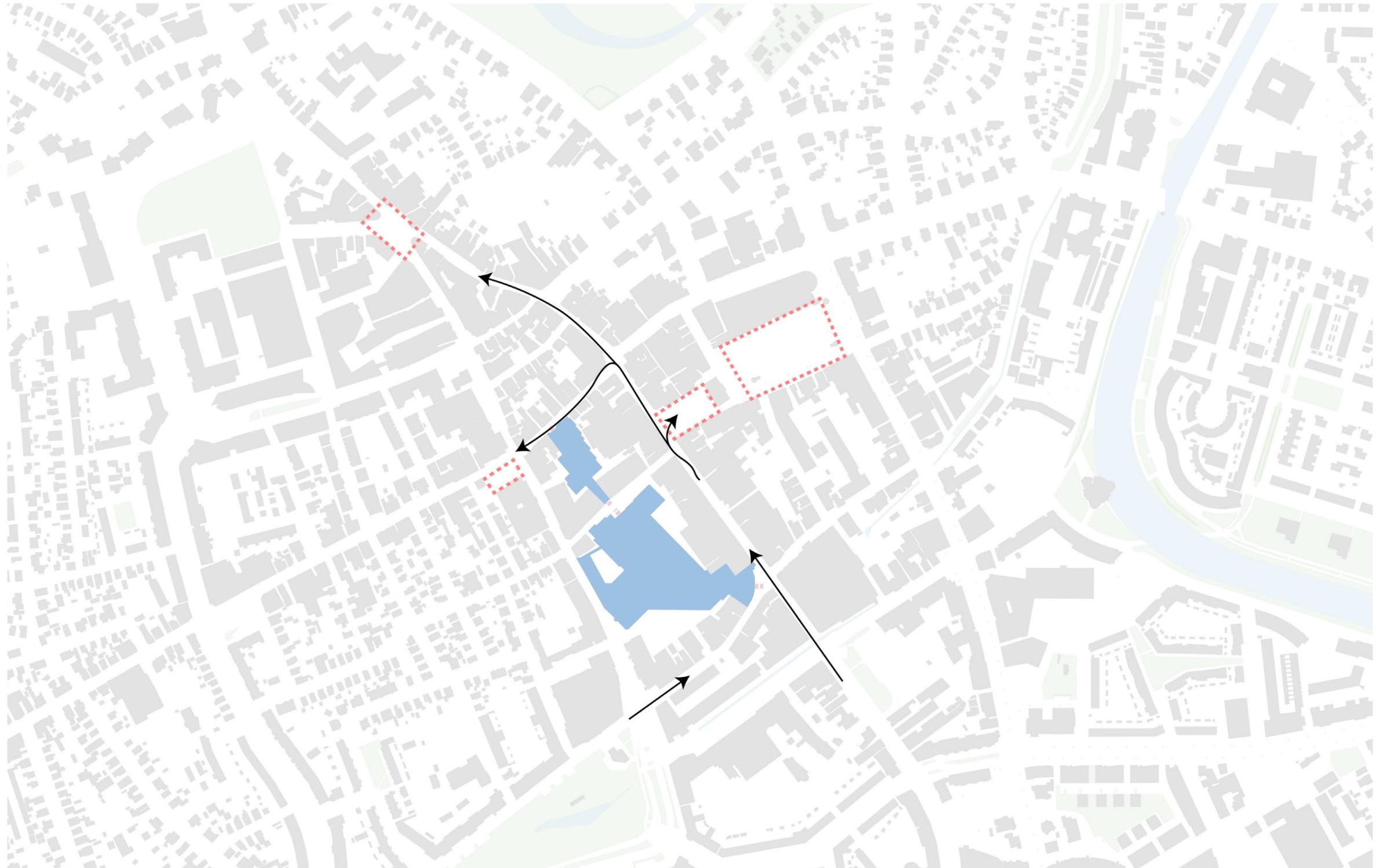
case study - ground elevations section



ground floor elevation



case study - current urban circulation

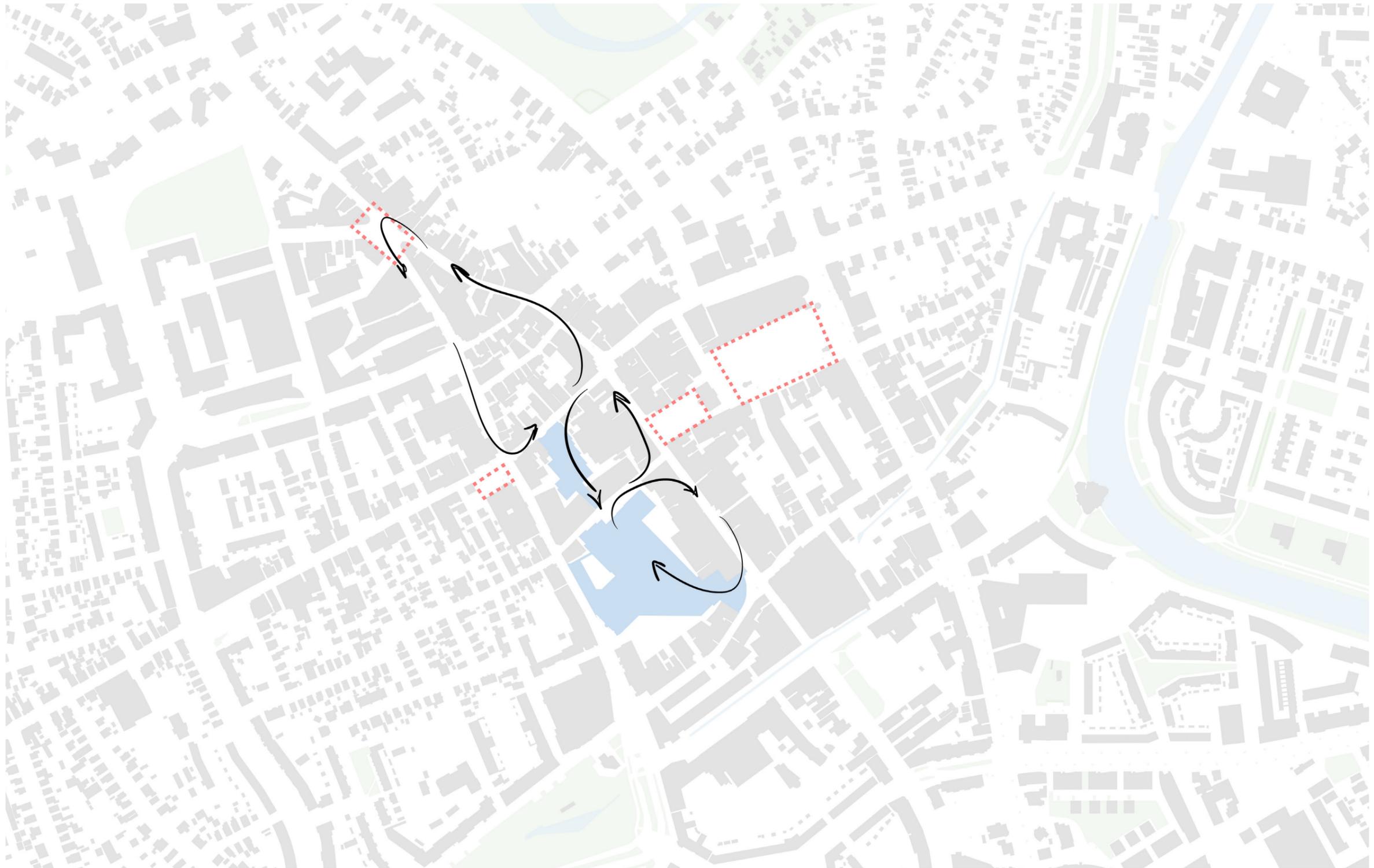


design case

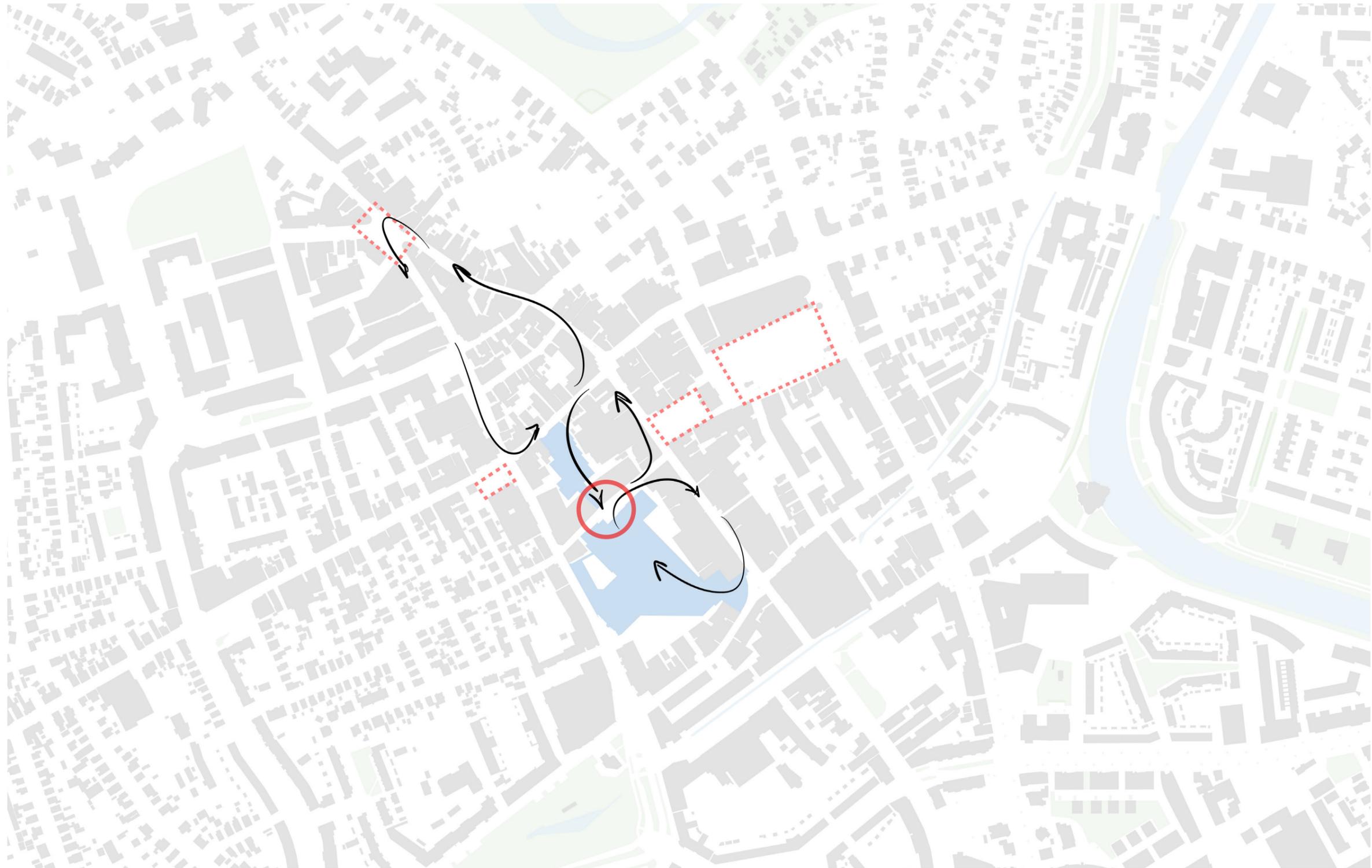
problems

goals

case study - goals municipality commercial 8



case study - goals municipality commercial 8

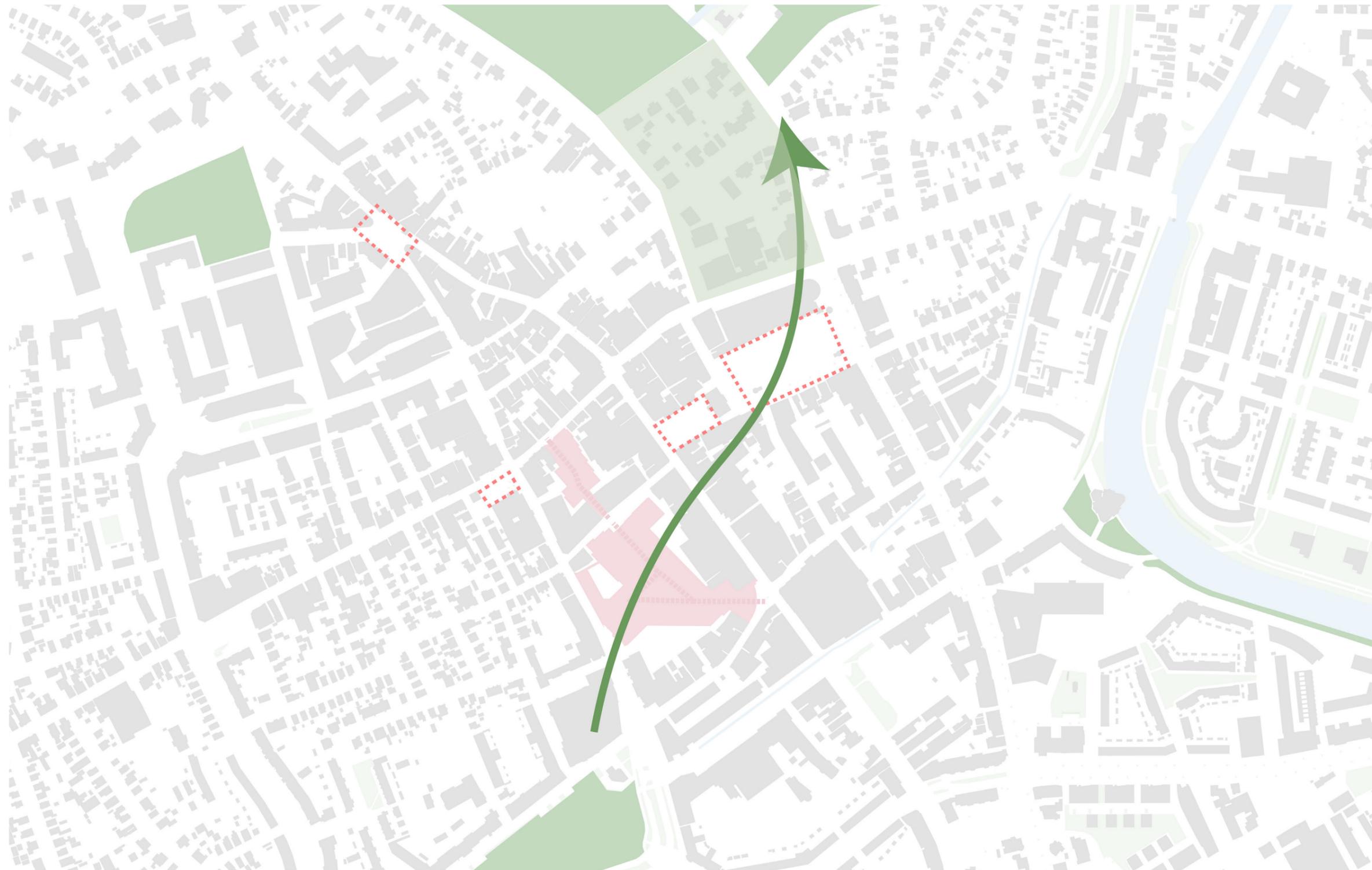




Apple Plaza Liberty

Foster + Partners
Milan, Italy
2018
commercial

case study - goals municipality green



recap design principles

theoretical framework

people flows
identity and community
encourage social interactions
flexible and adaptable buildings

location research

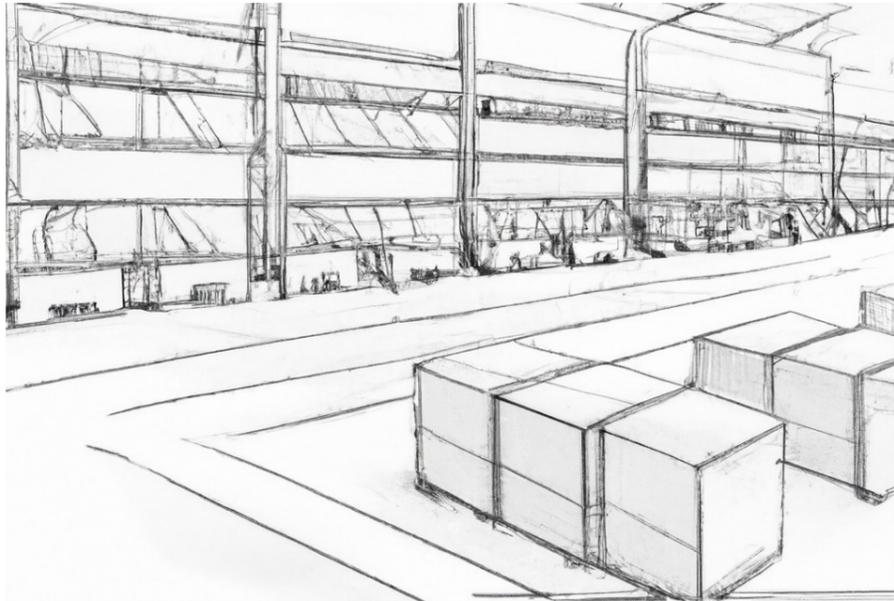
improve commercial routing
connect green corridors

design

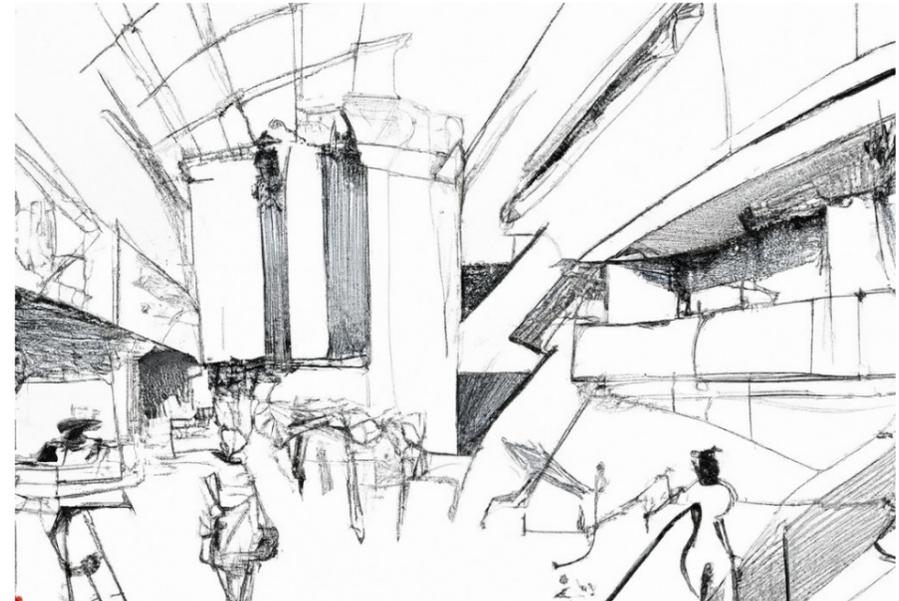
ONLINE

OFFLINE

OWNED



delivery hub

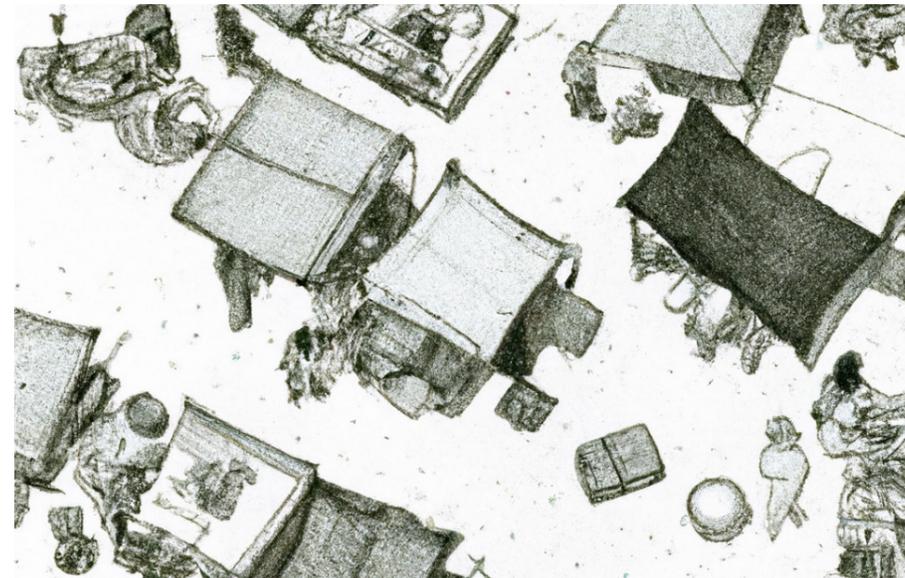


caring center

SHARED



virtual market



sharing market

ONLINE

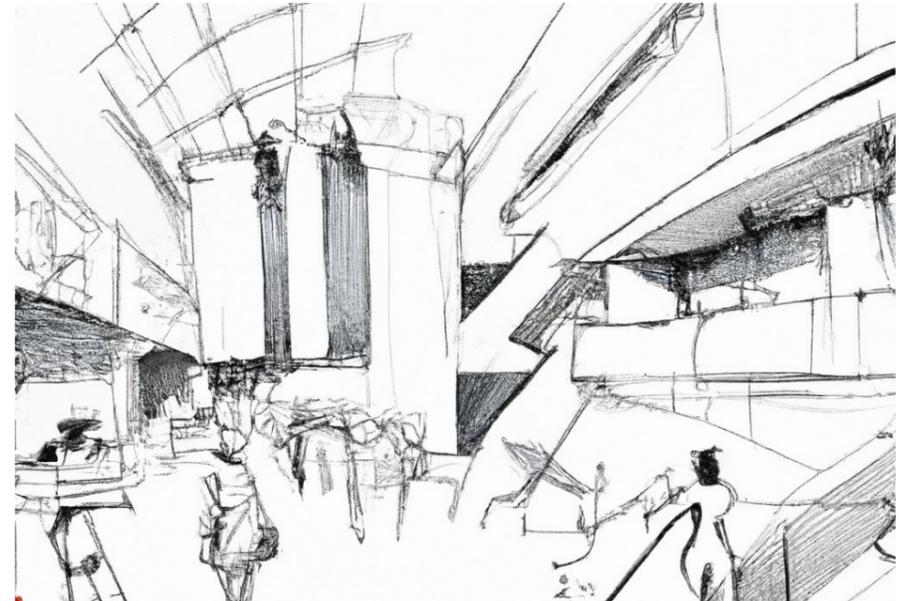
OFFLINE

OWNED



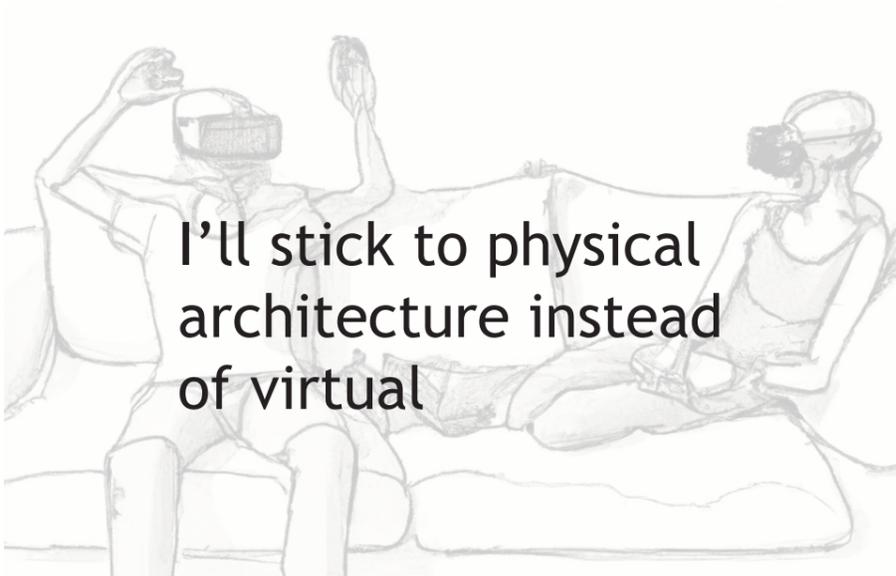
840 packages a day!

delivery hub



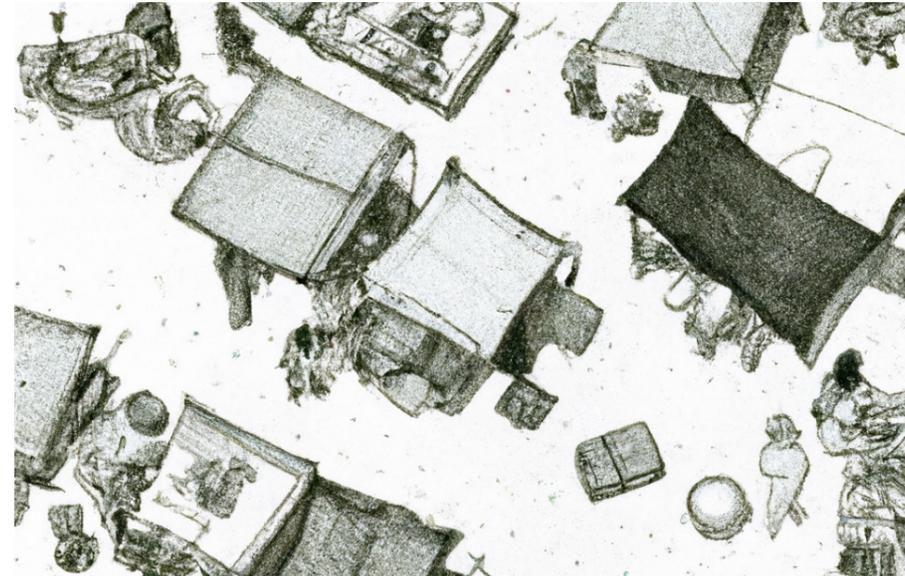
caring center

SHARED



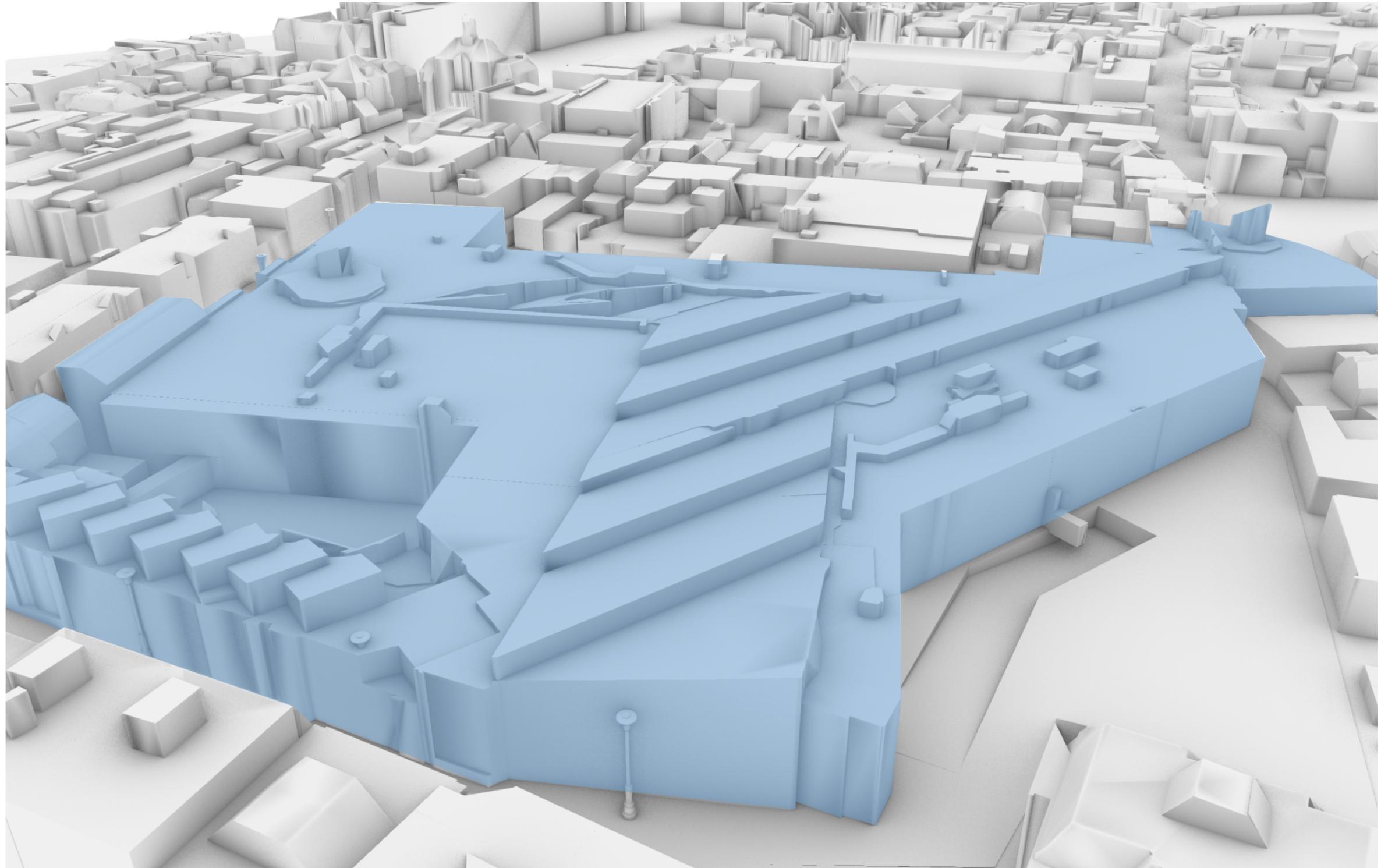
I'll stick to physical architecture instead of virtual

virtual market

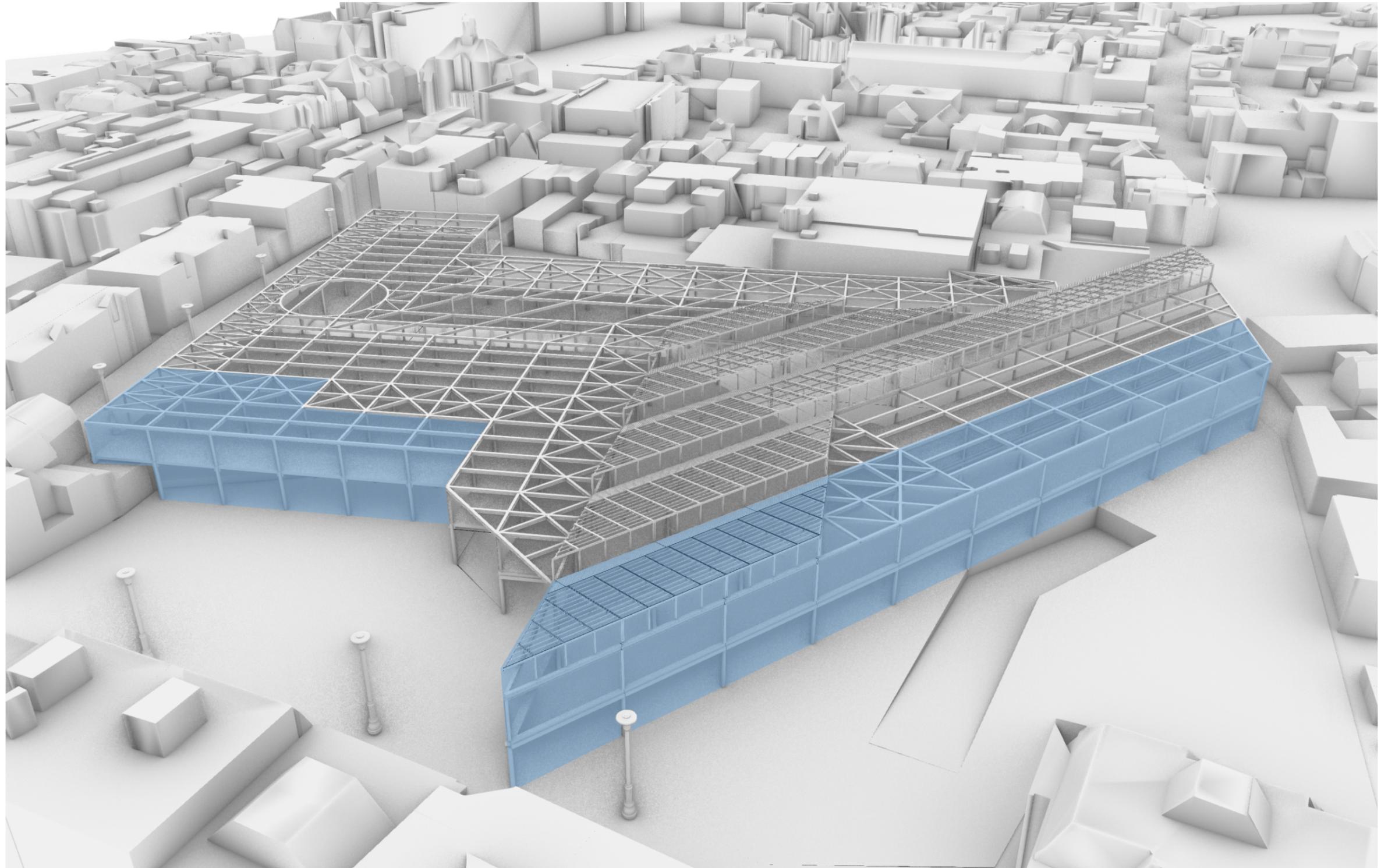


sharing market

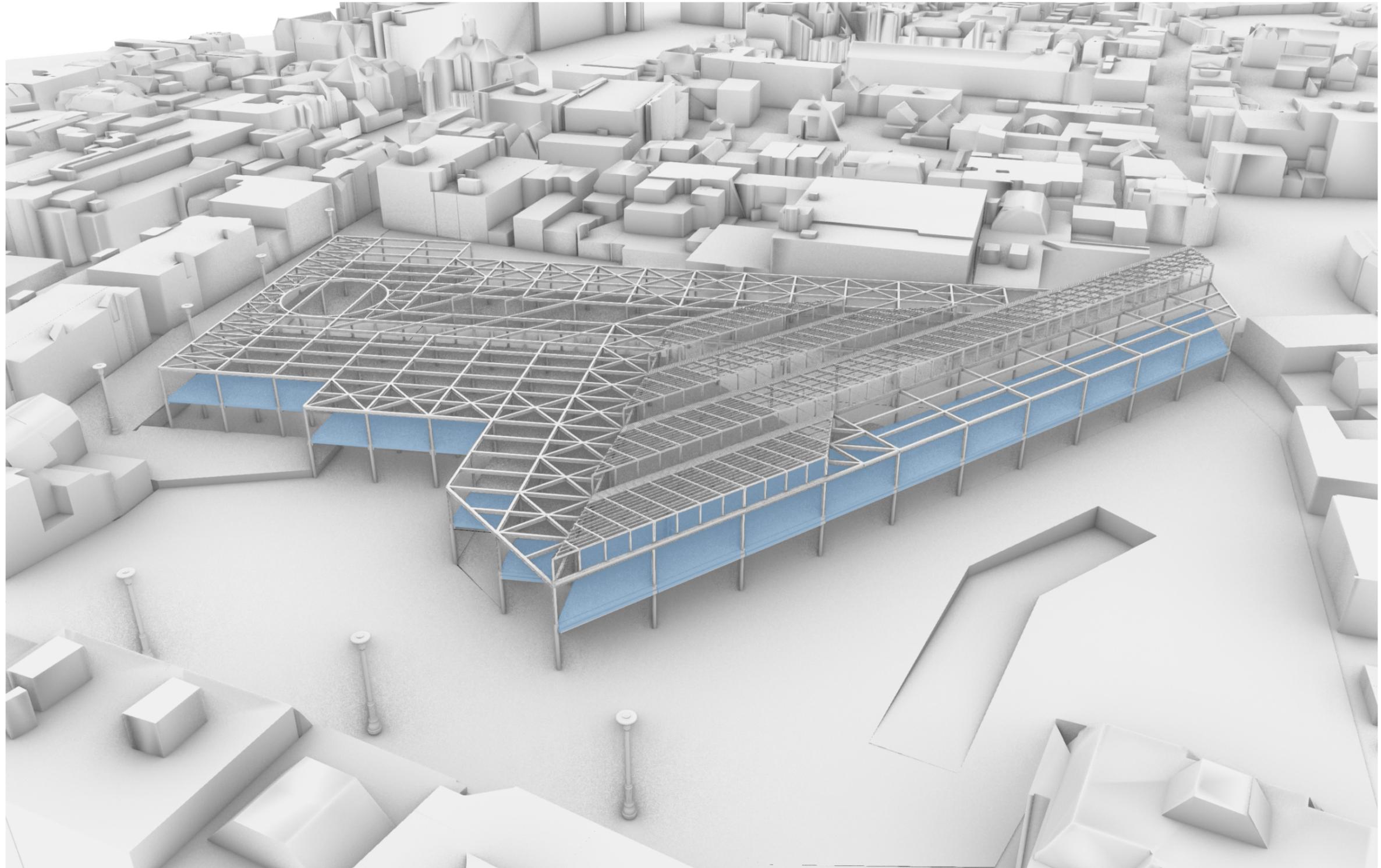
original situation



demolishing the facades



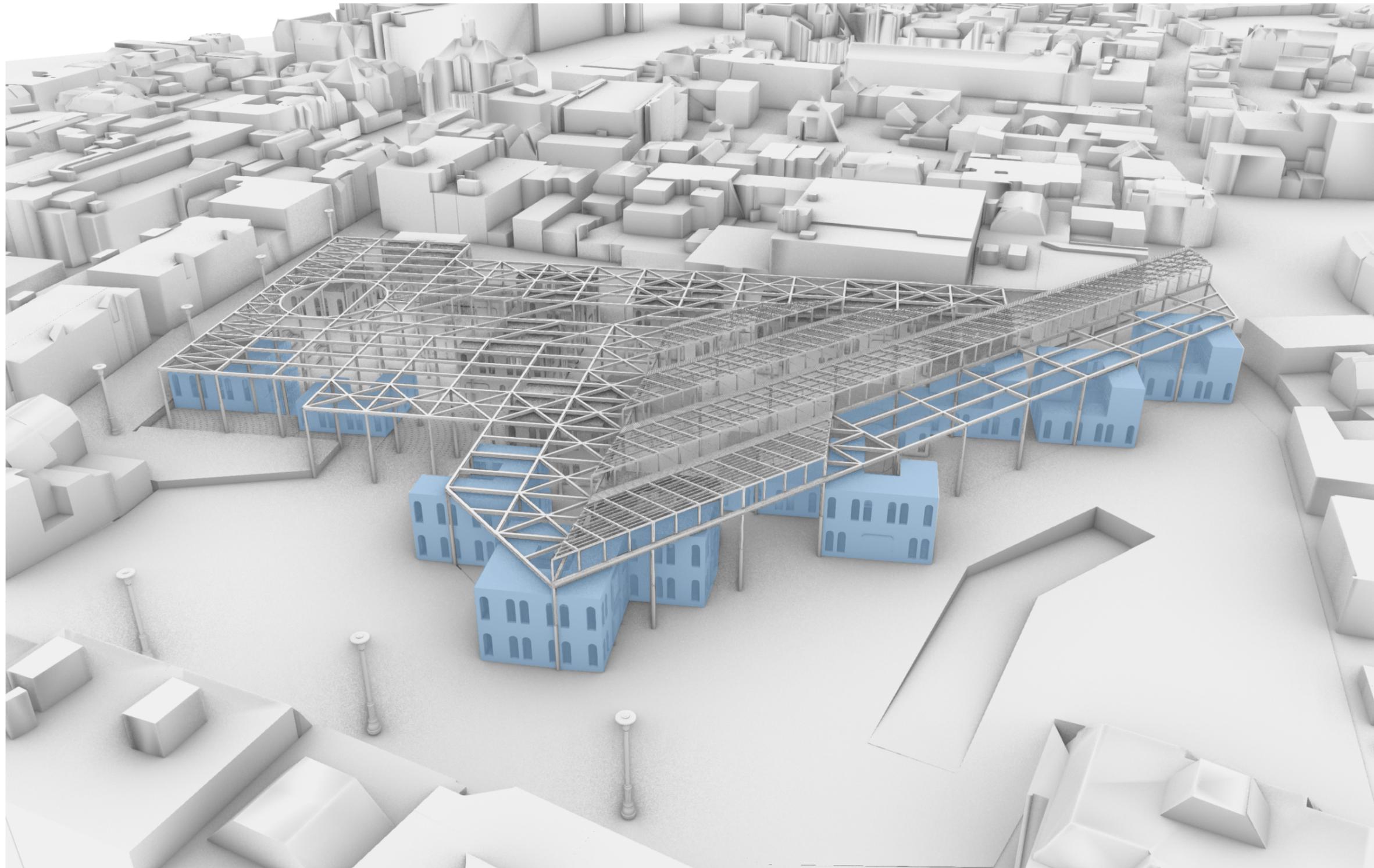
creating public space



creating space for the modules

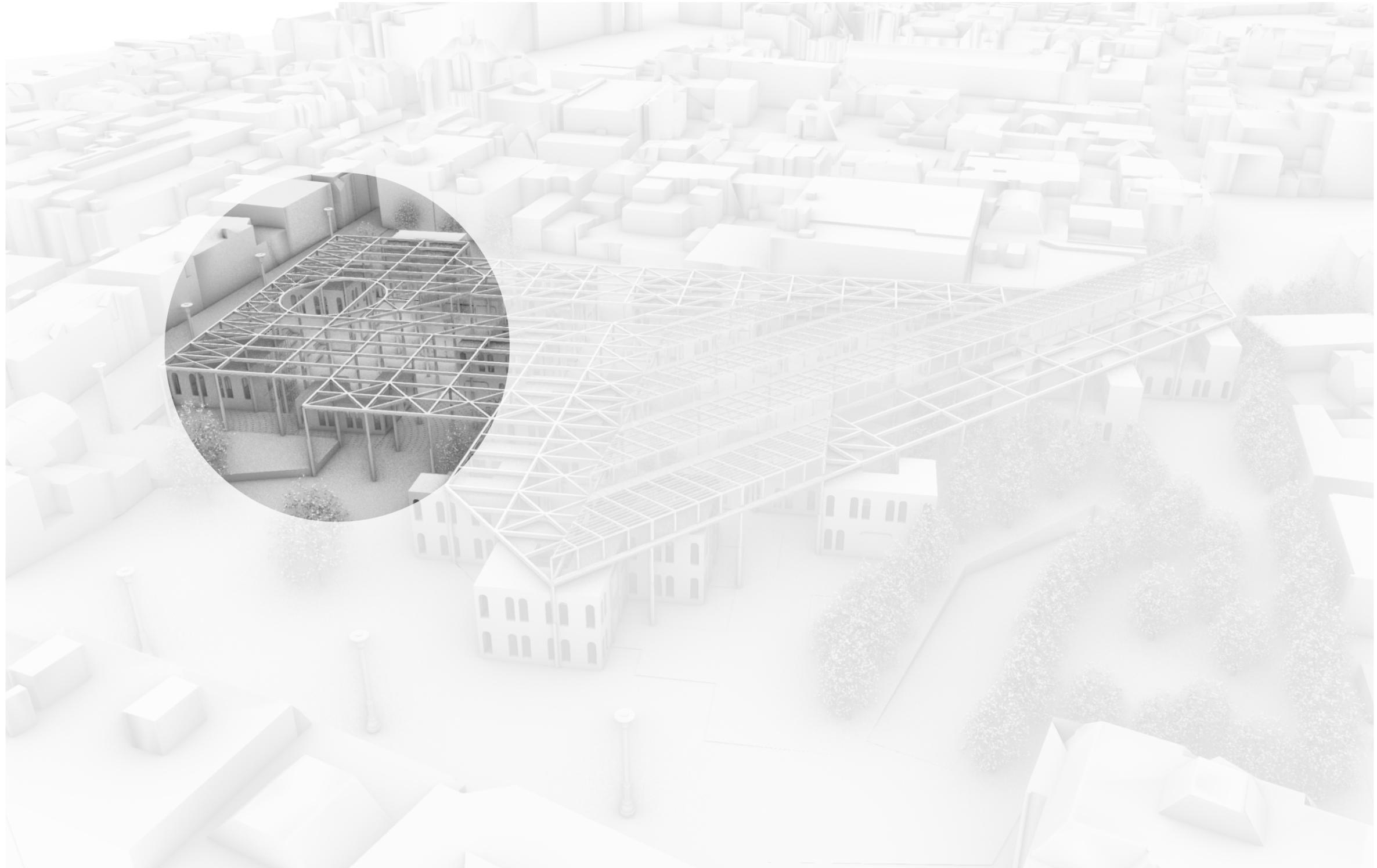


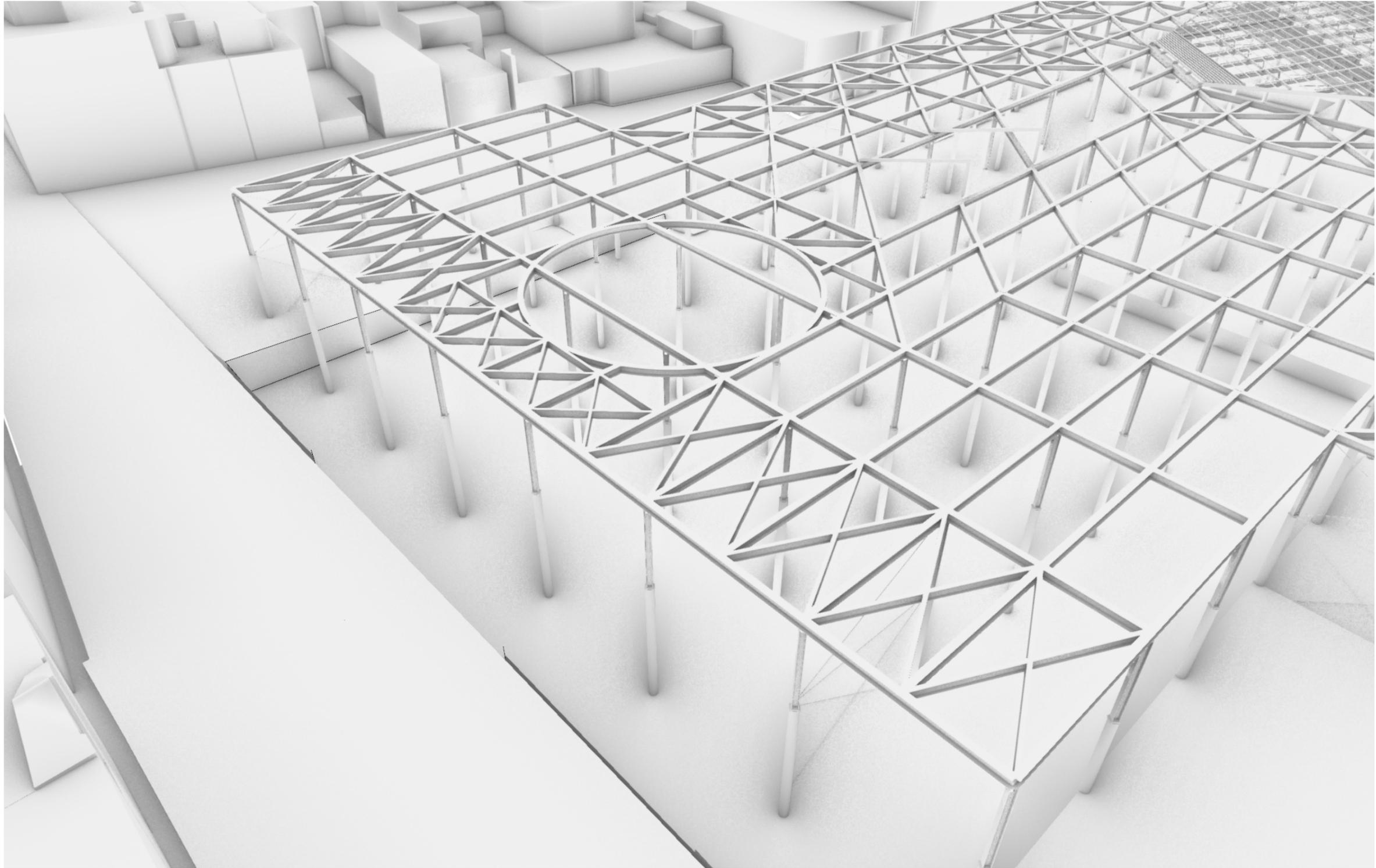
implementing modules

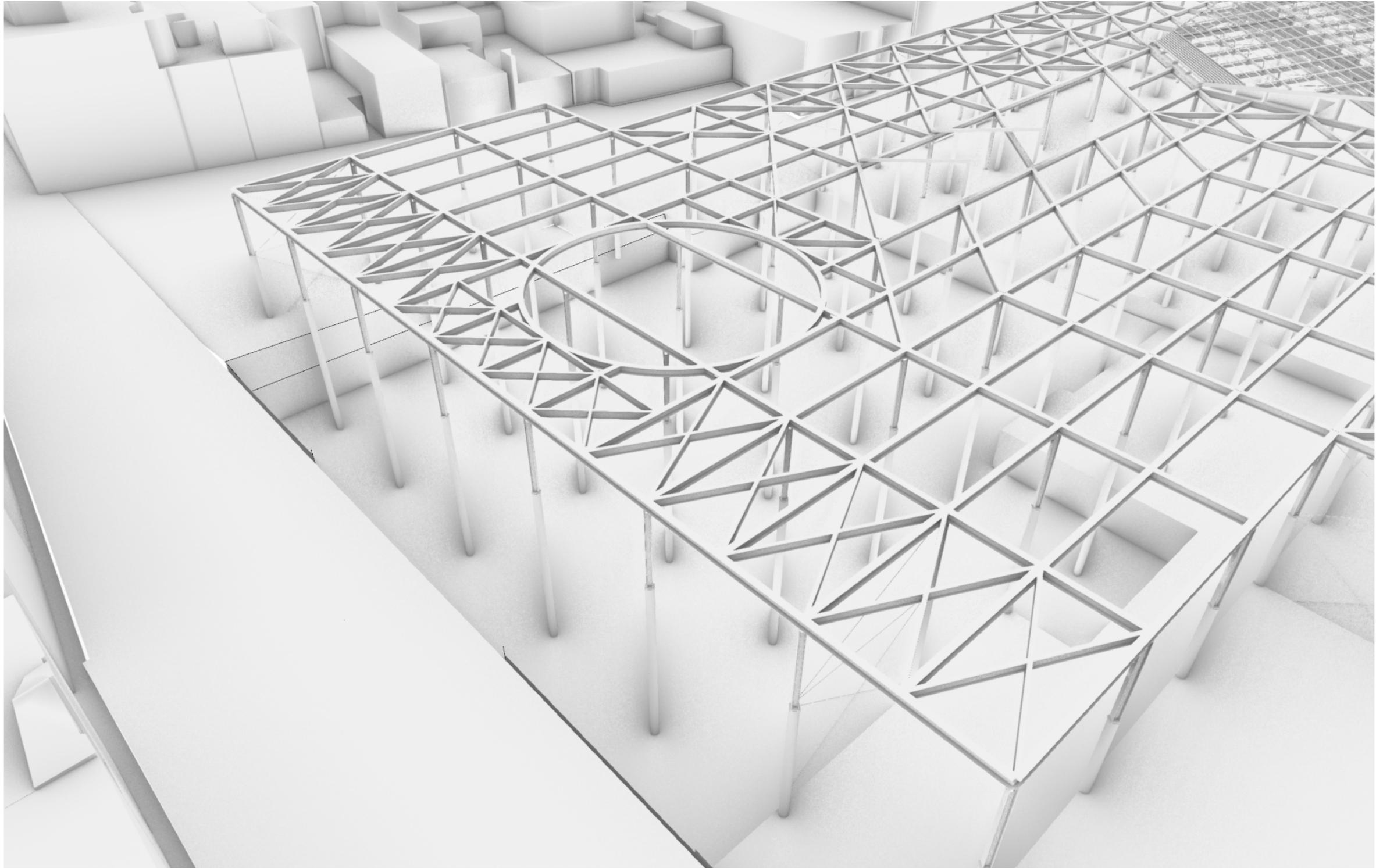


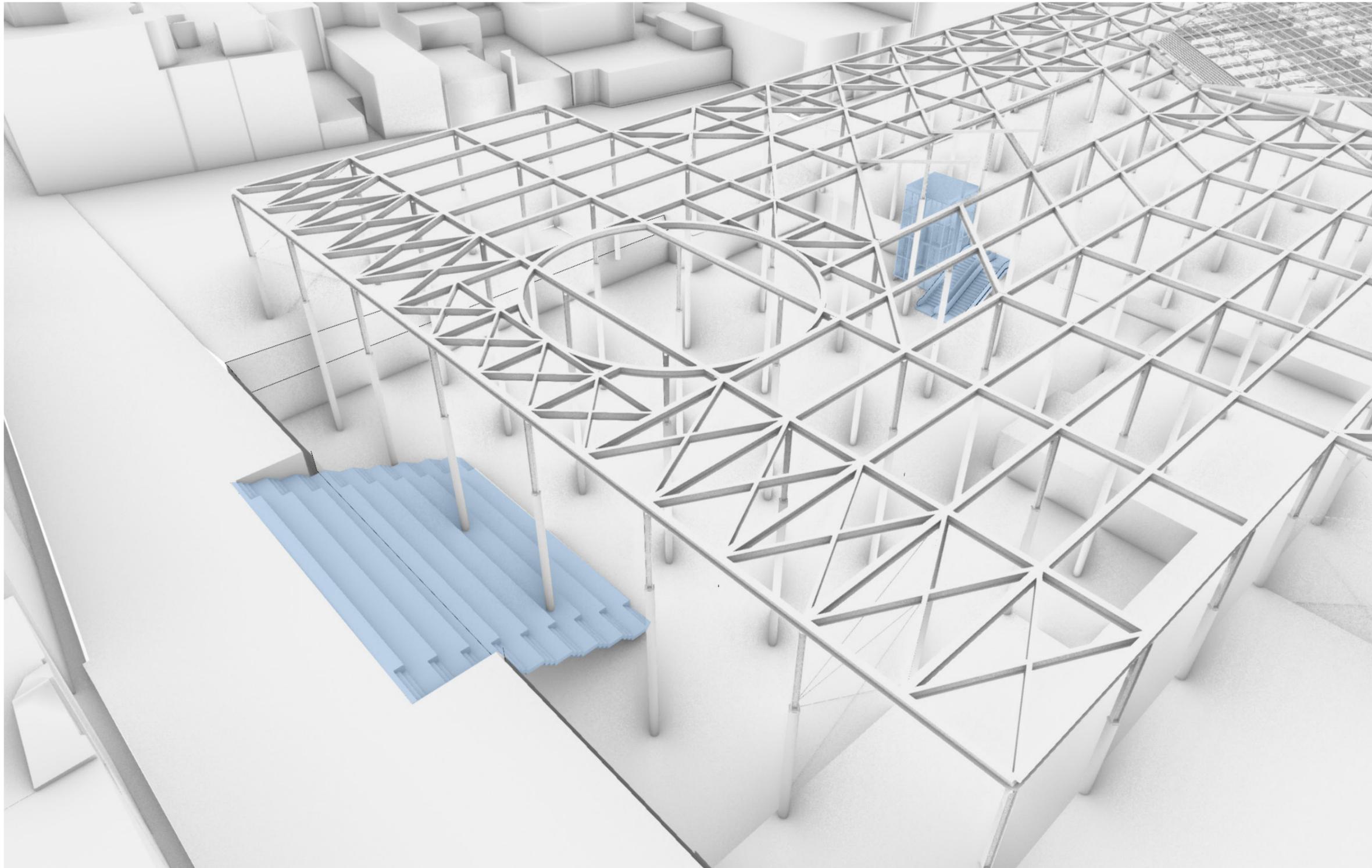
introducing greenery

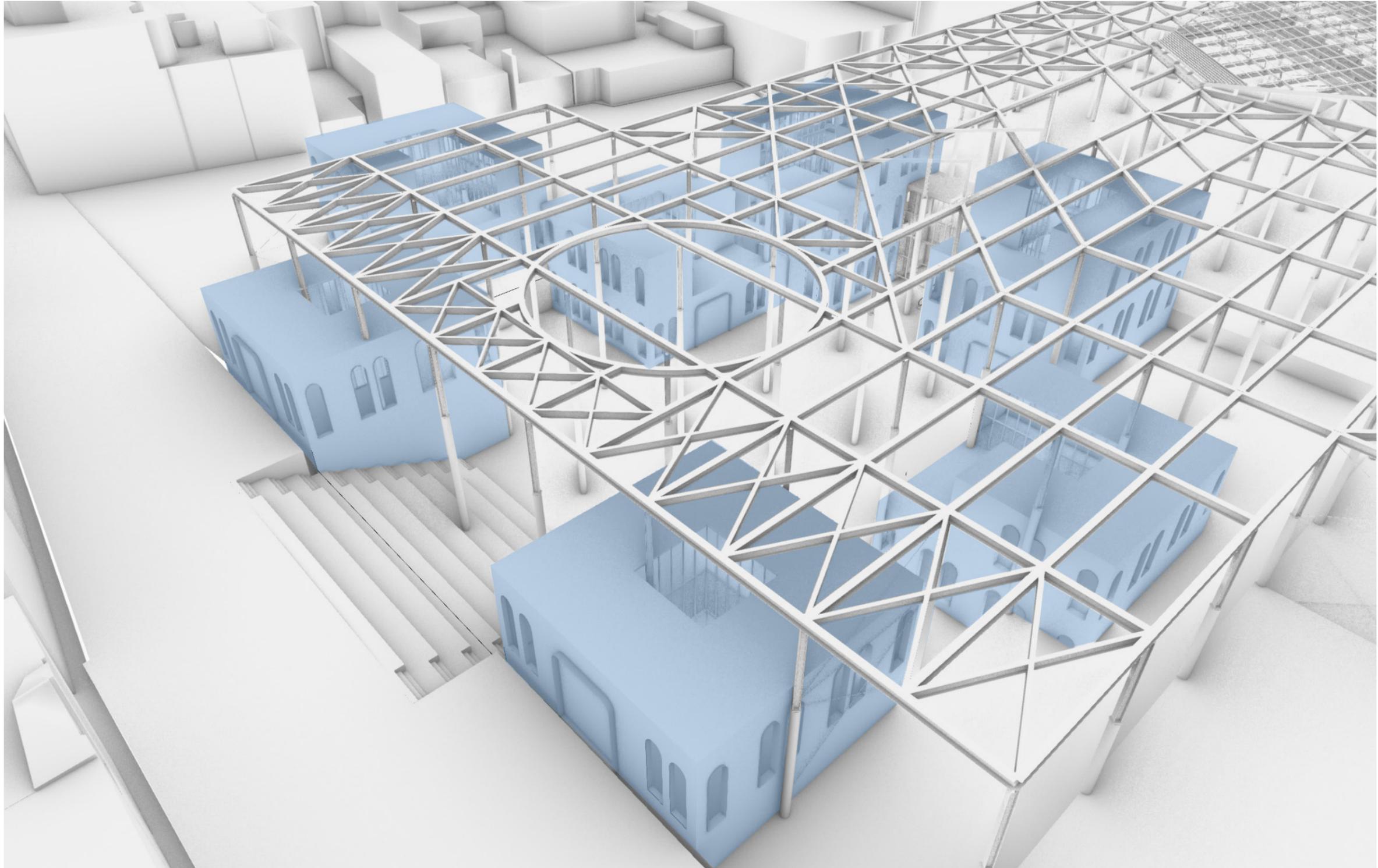


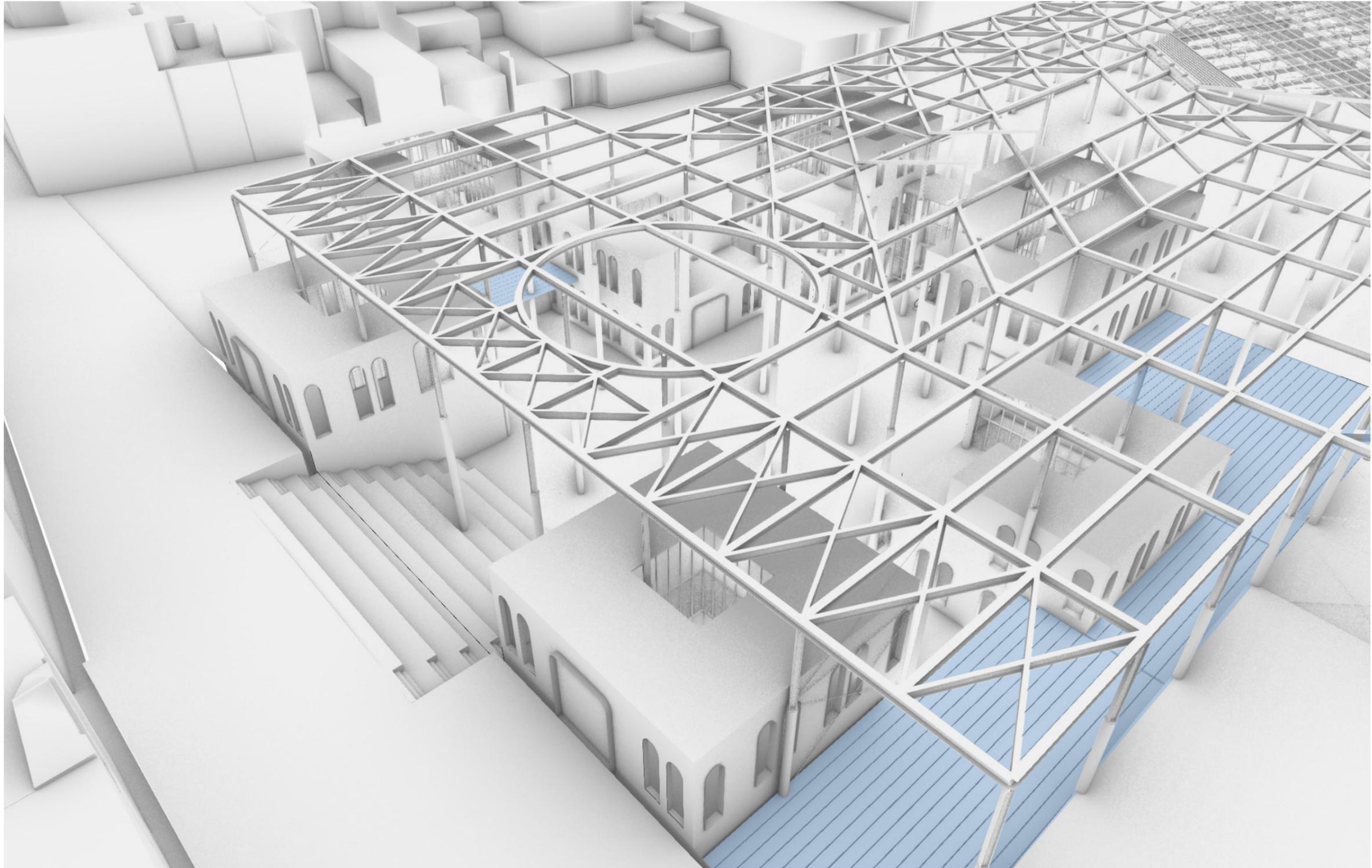












impressions social hub



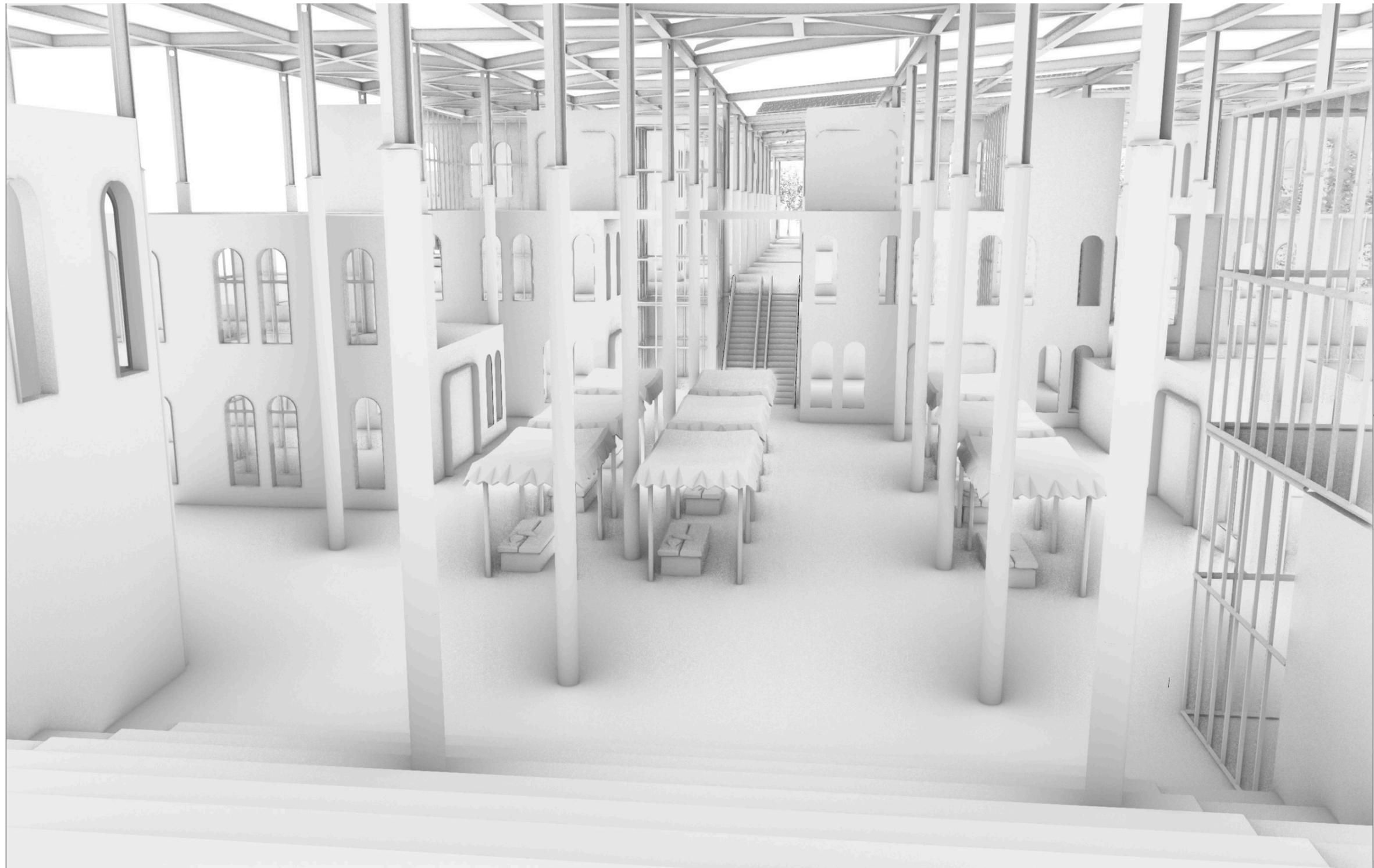
impressions social hub



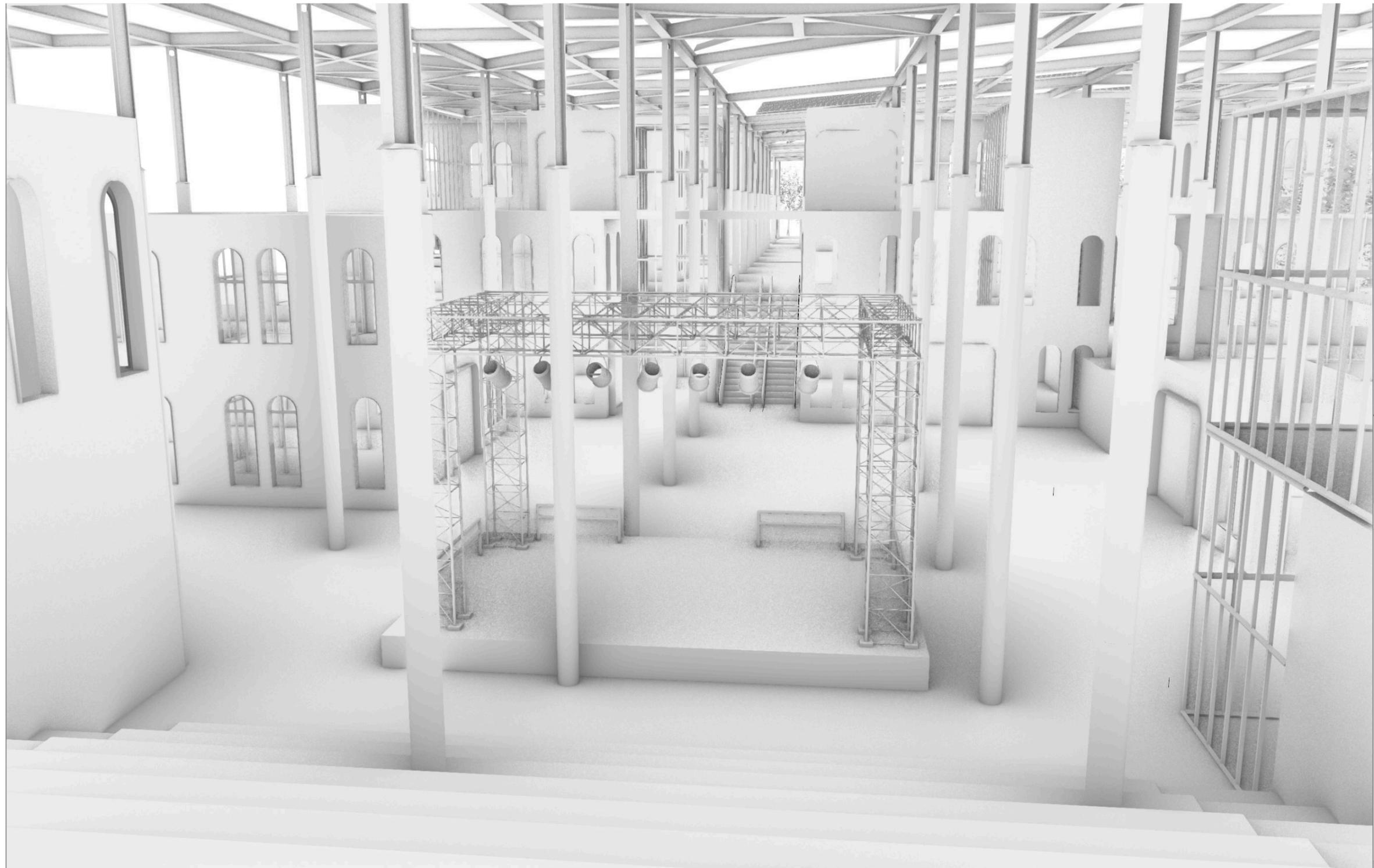
impressions social hub



social hub as a sharing market



social hub as a stage



impressions



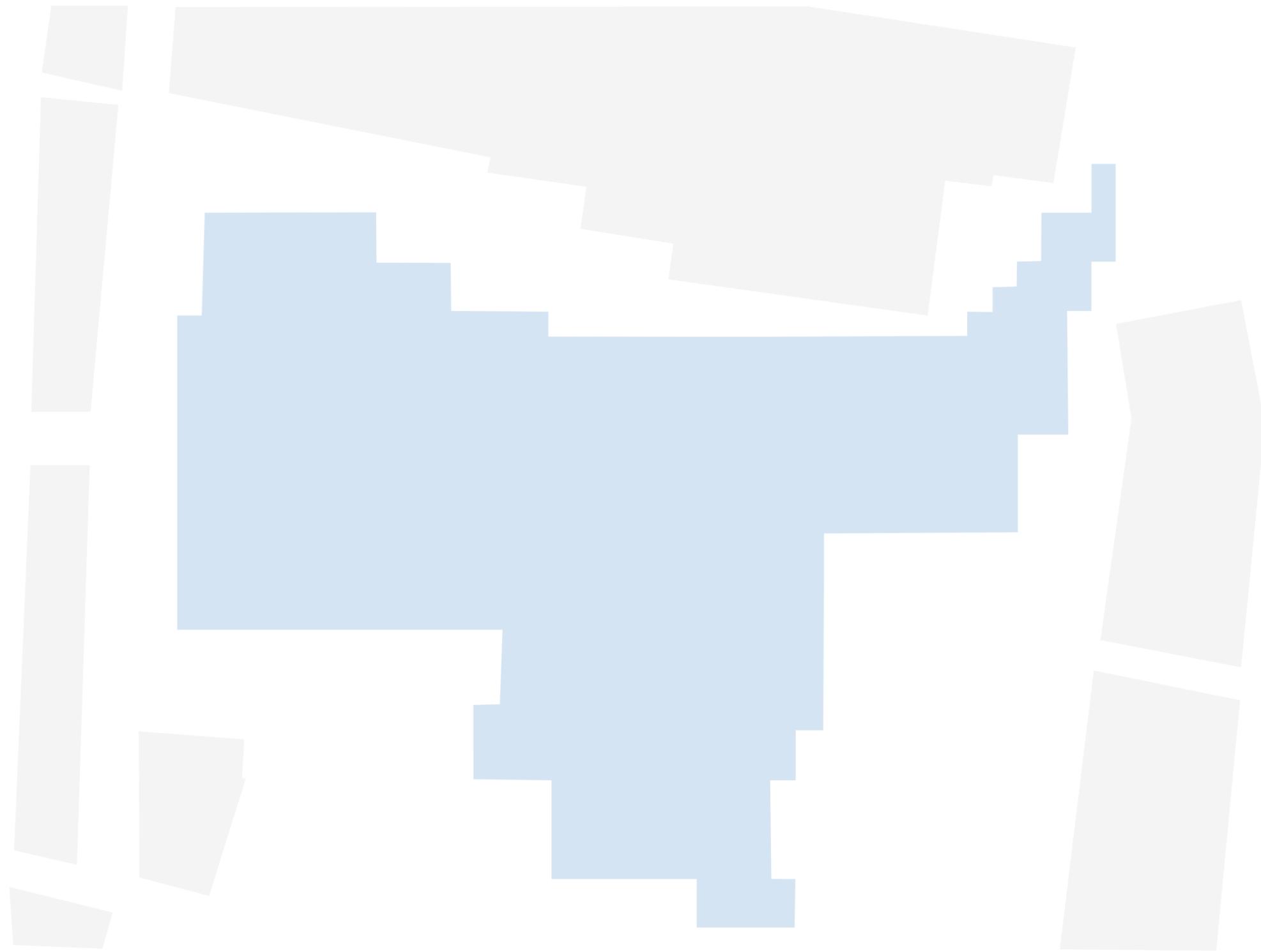
impression parks



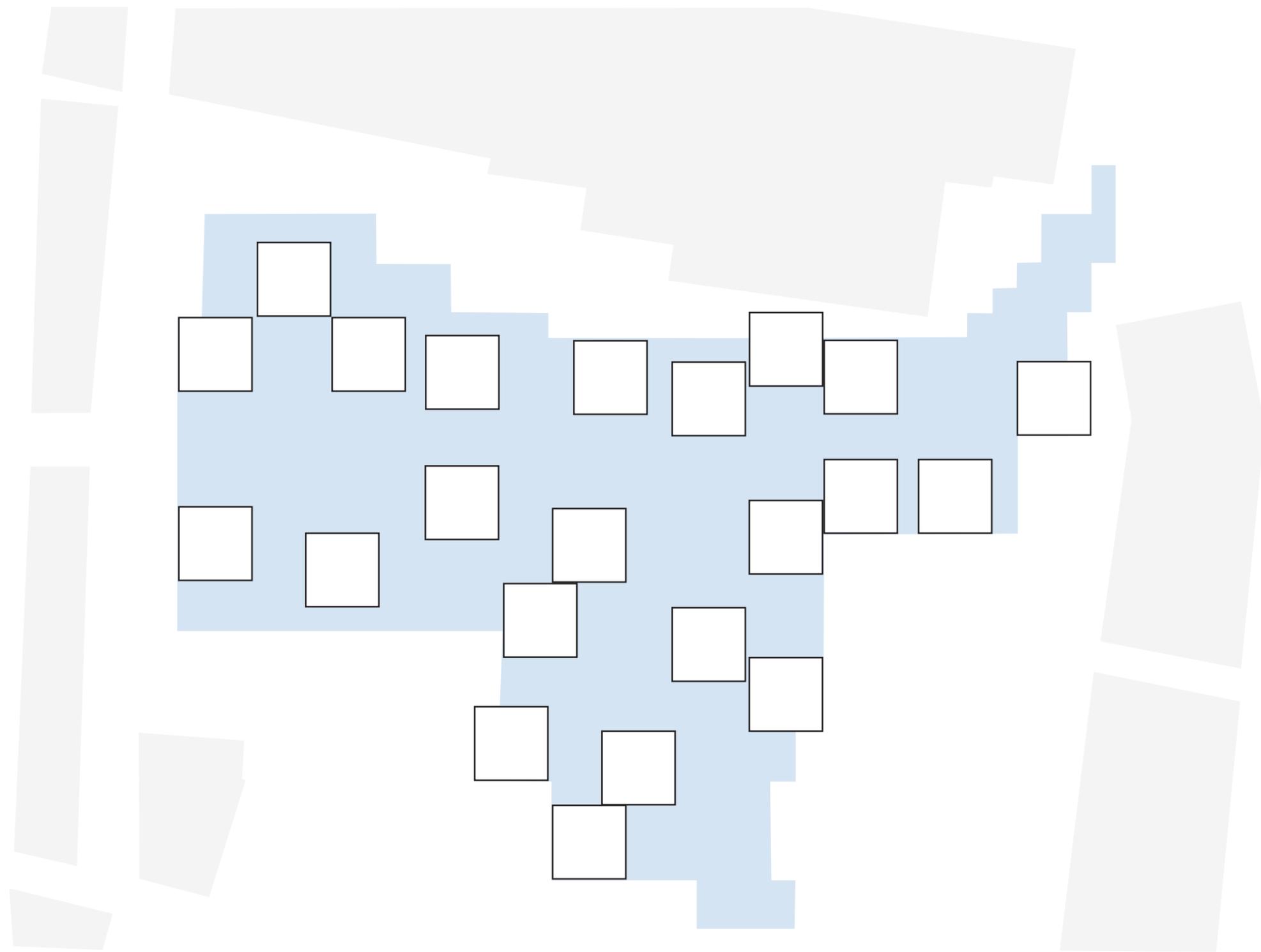
impression parks



public space of the open site



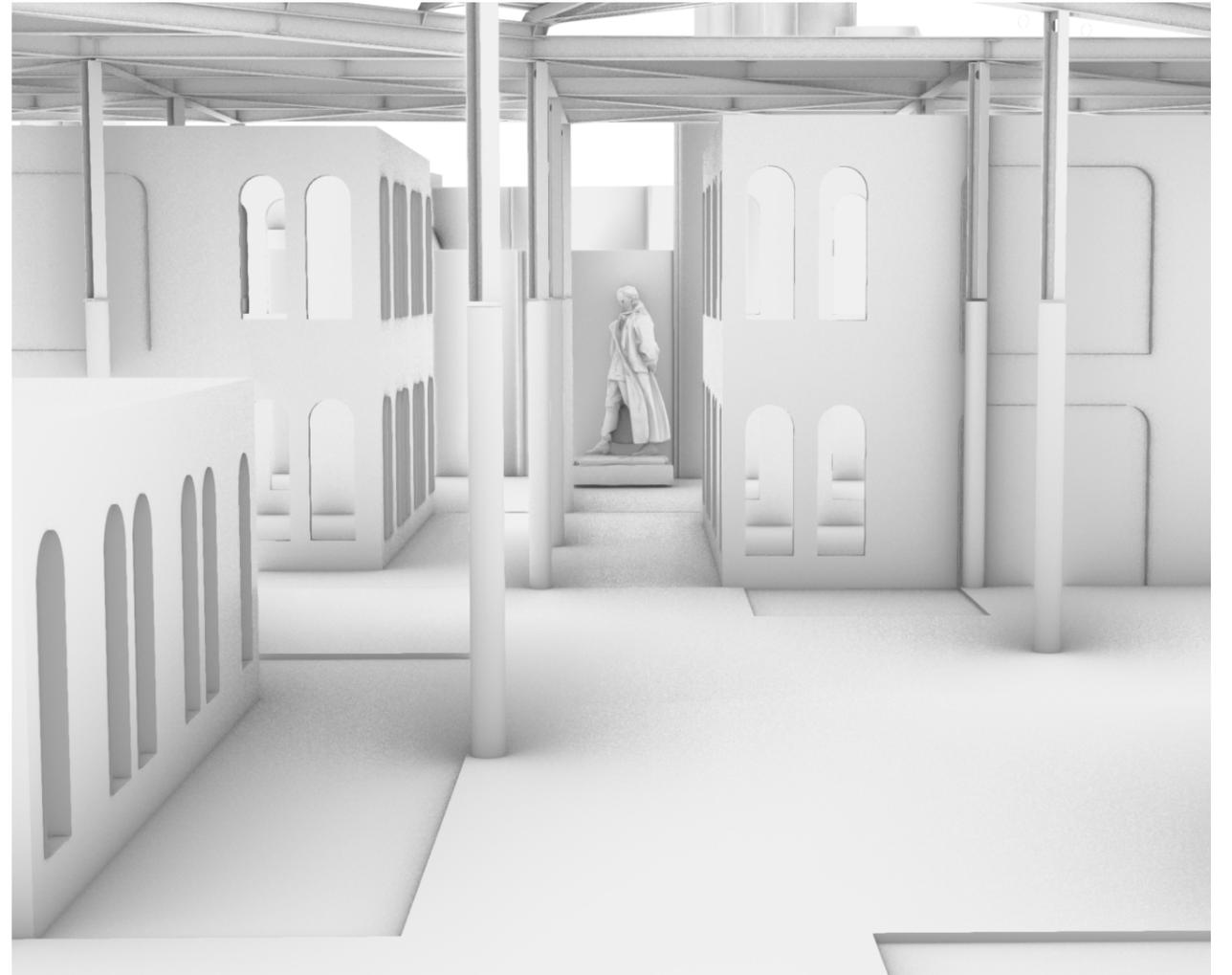
implementation of modules



changing rythm of squares, courtyards, and alleyways



meeting sequence



Different view dependant on the direction you walk through the mall

hidden views



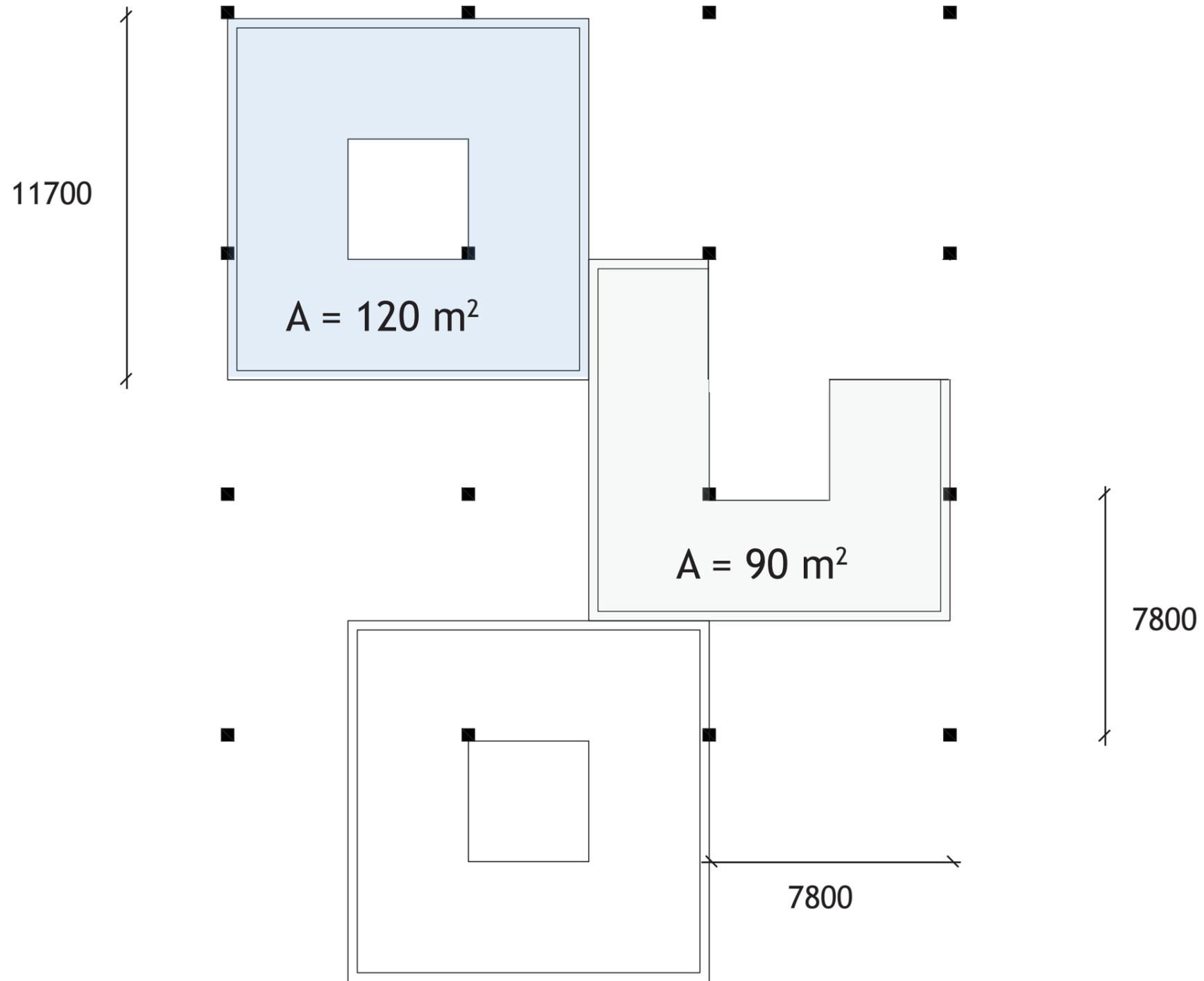
site or model top view



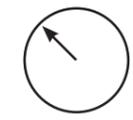
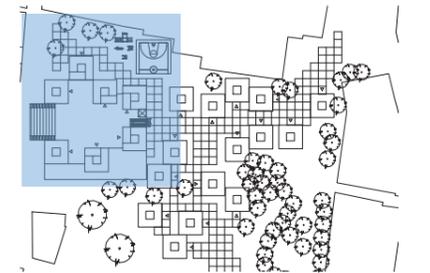
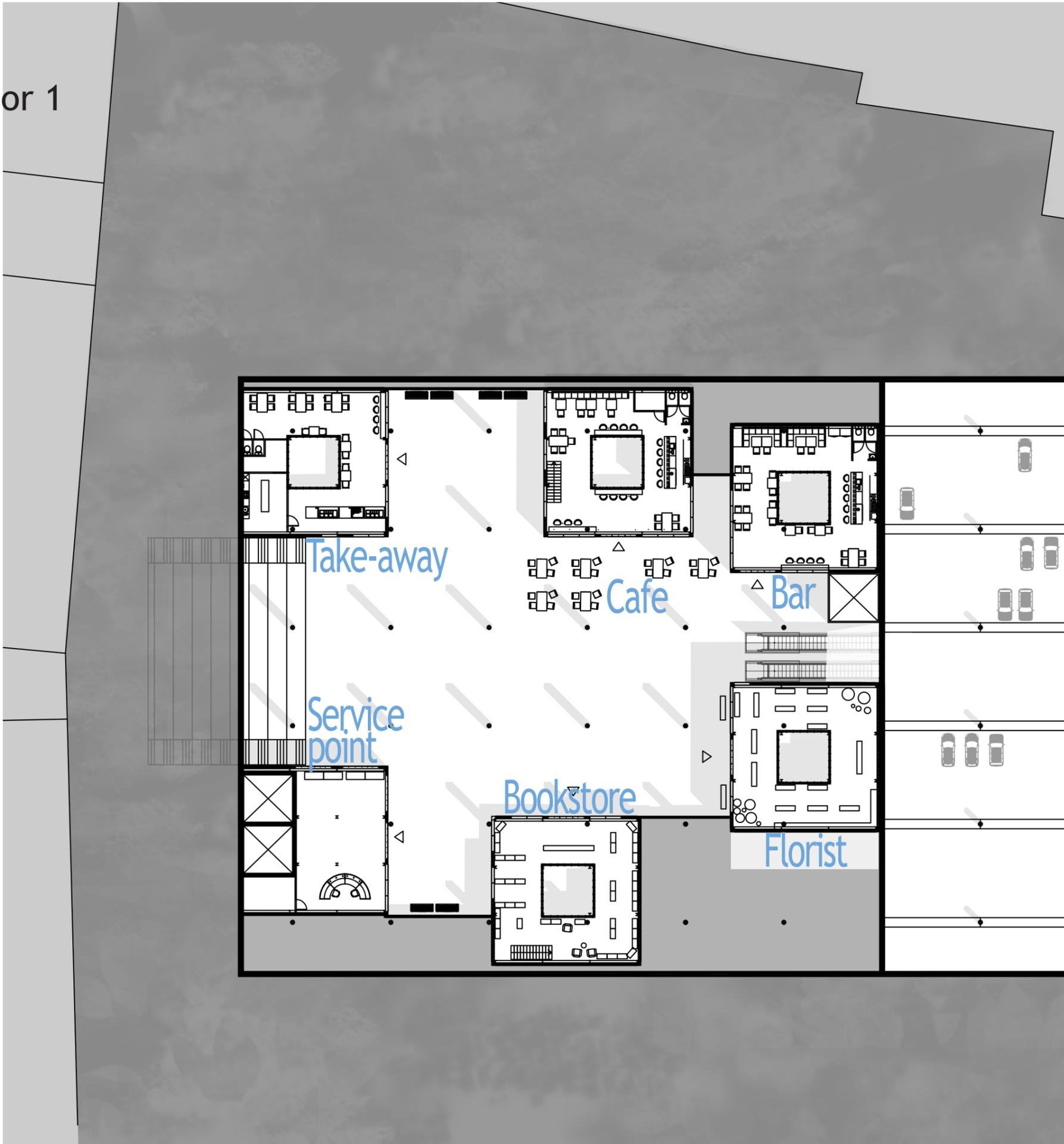
under the original roof



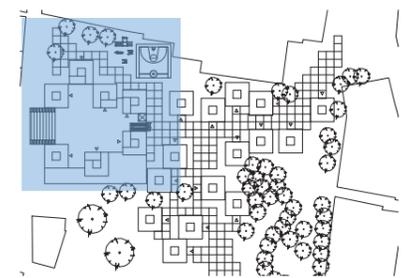
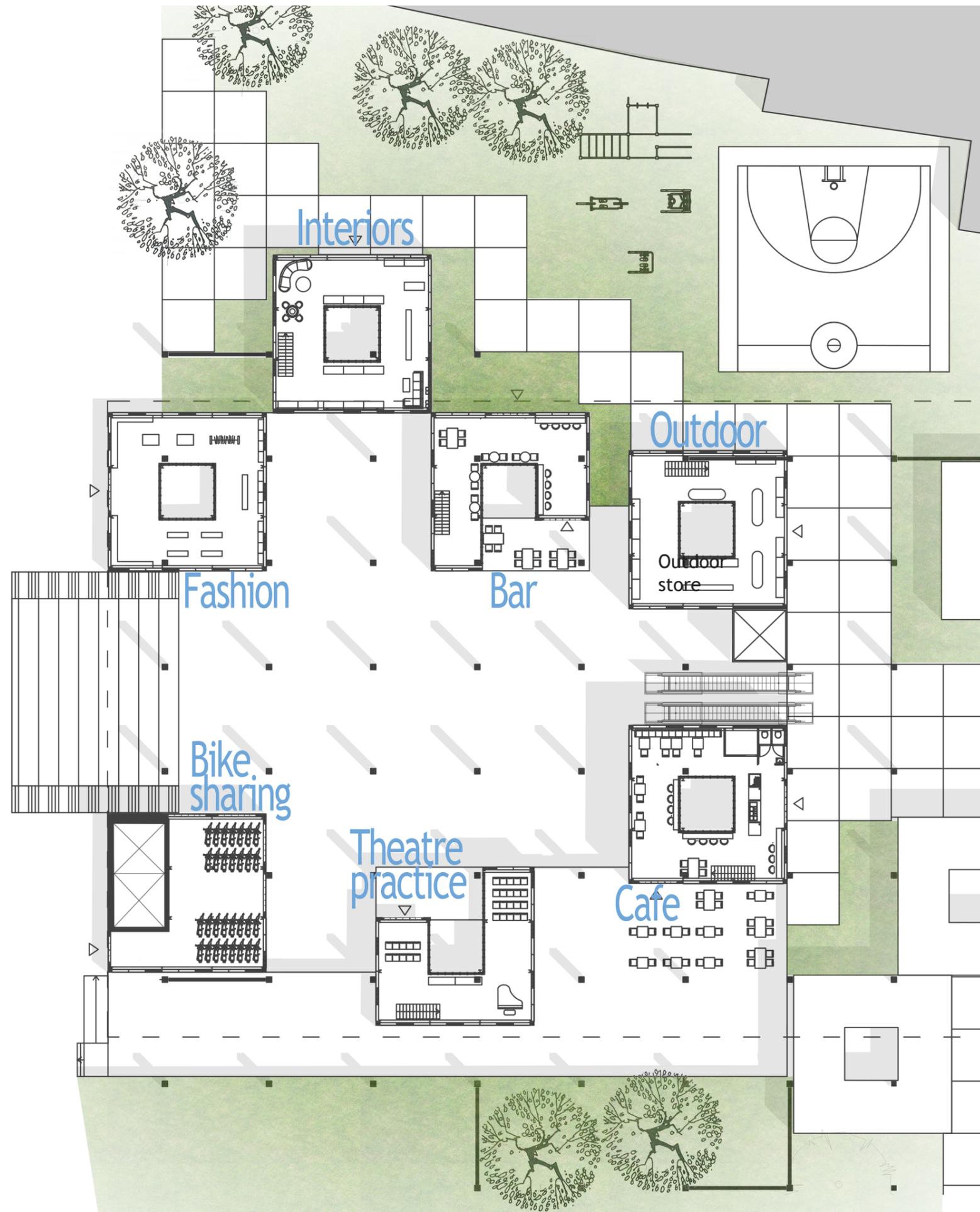
module size



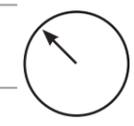
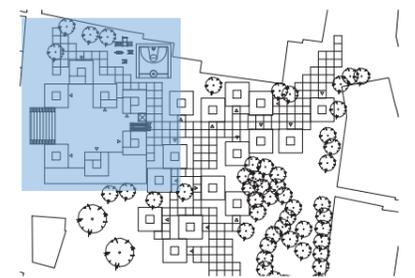
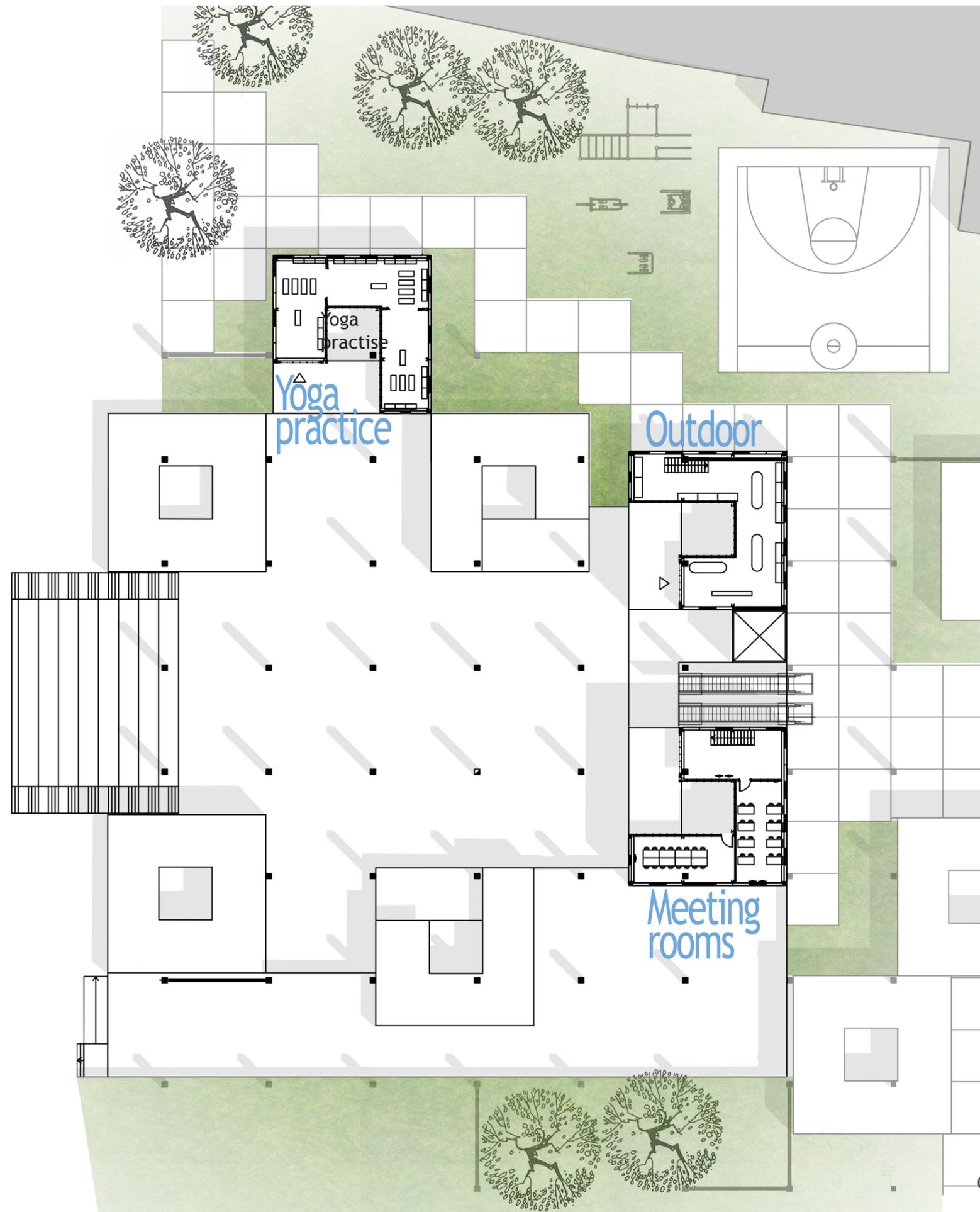
Parking floor 1

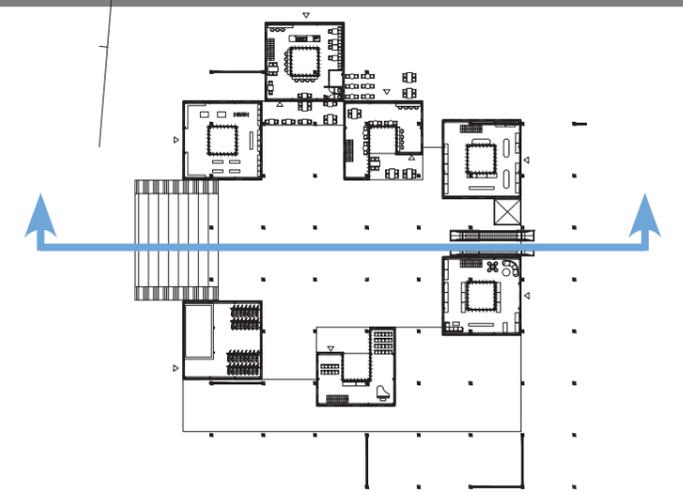


Ground floor



First floor

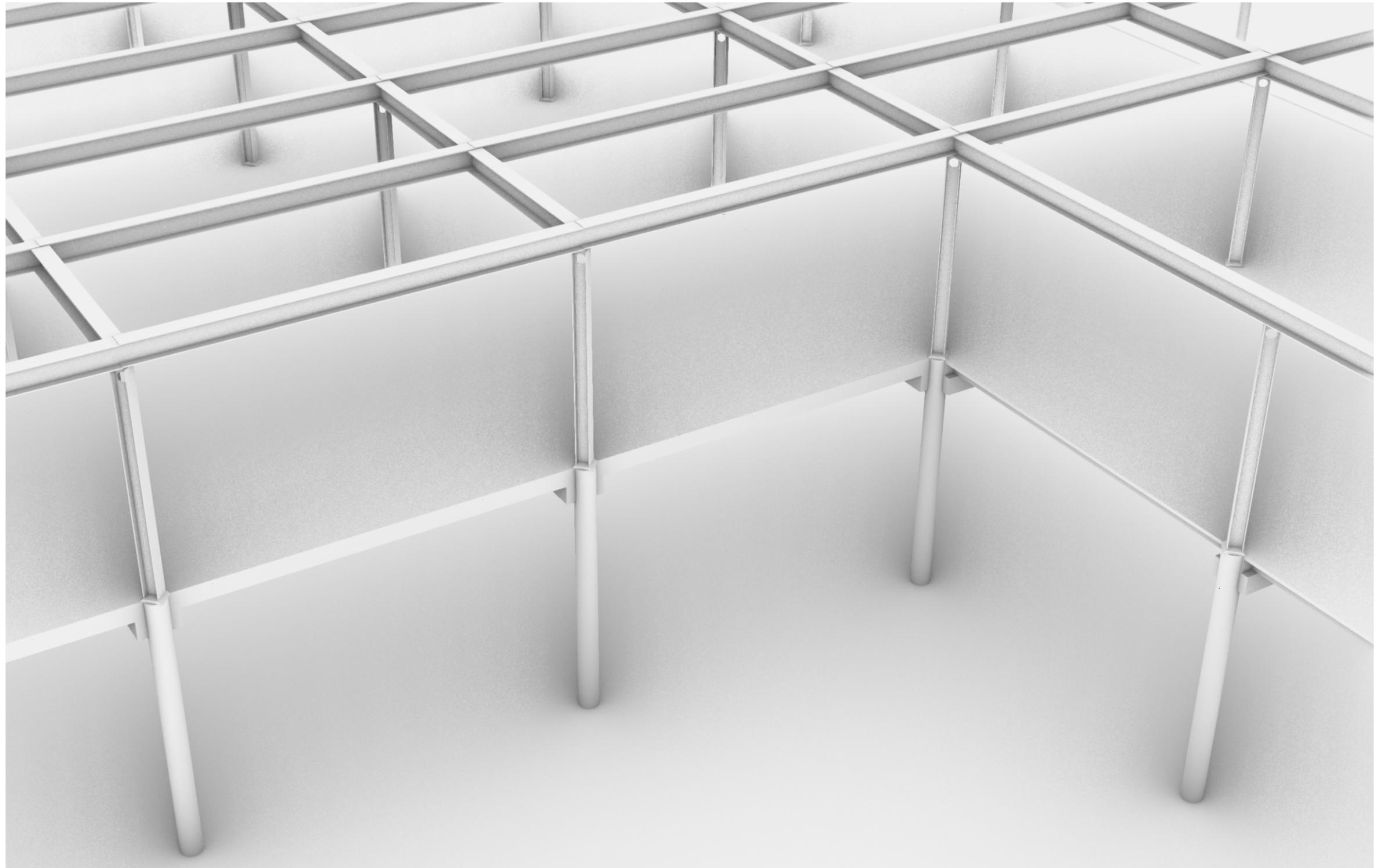




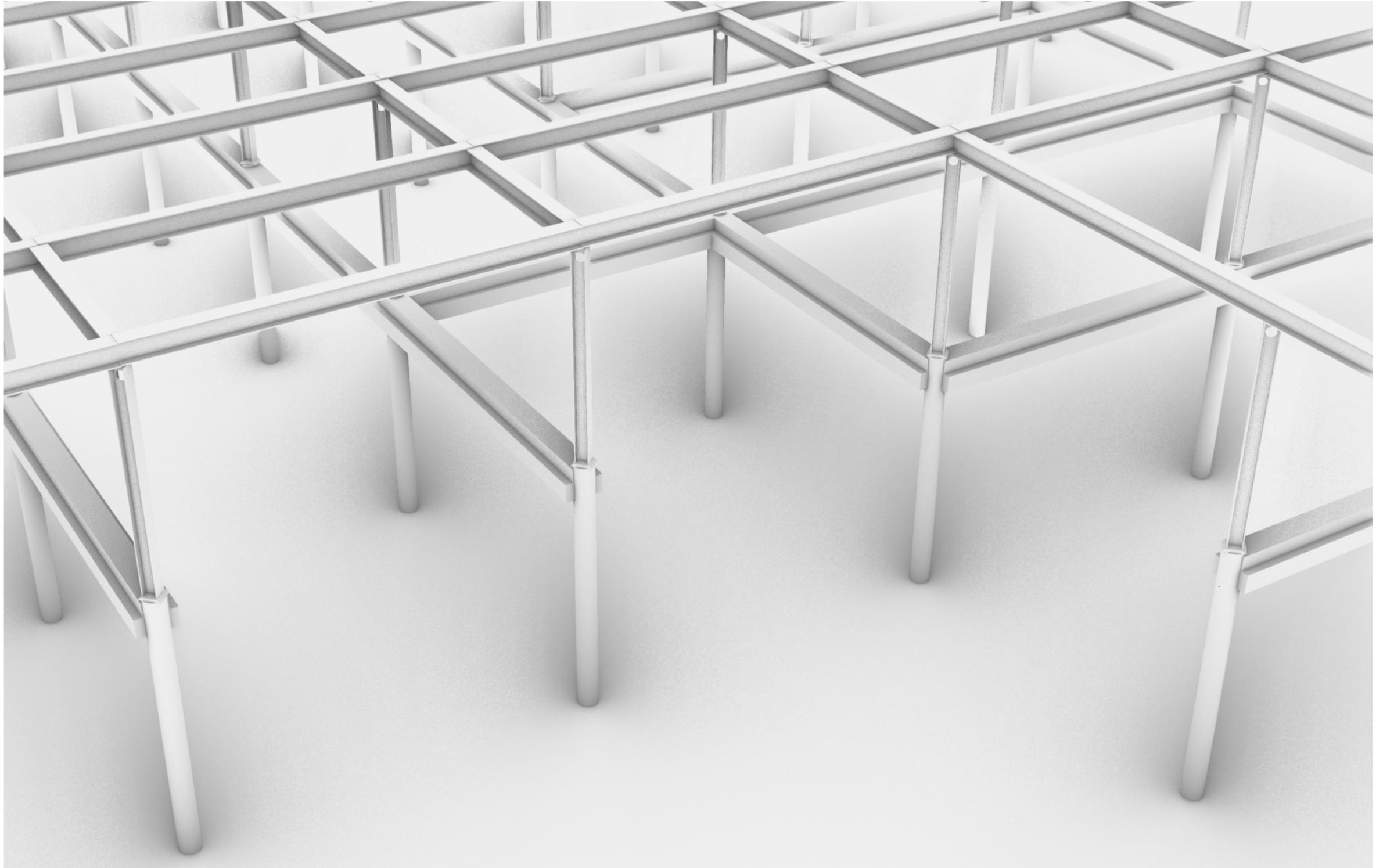


construction

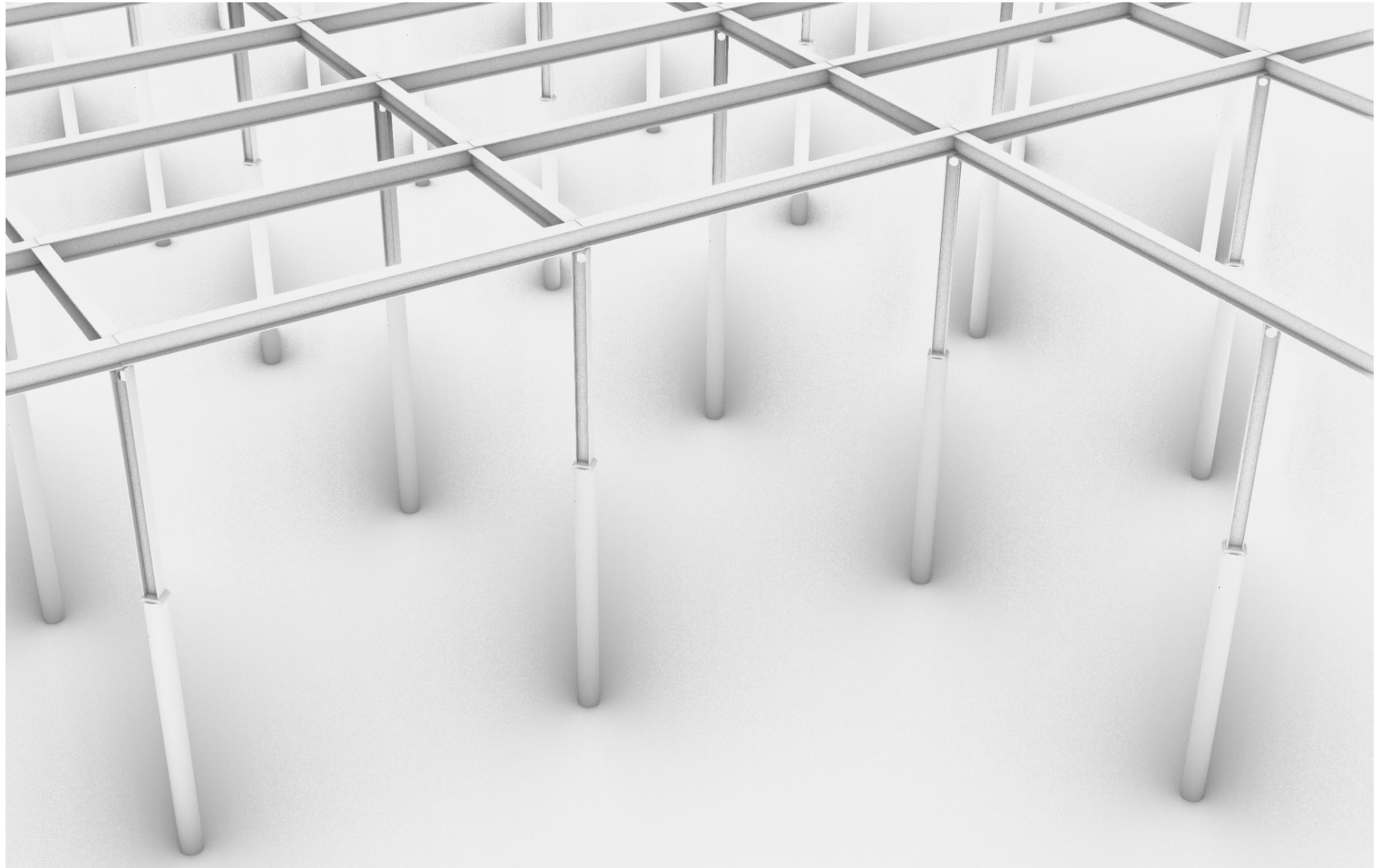
how modules fit



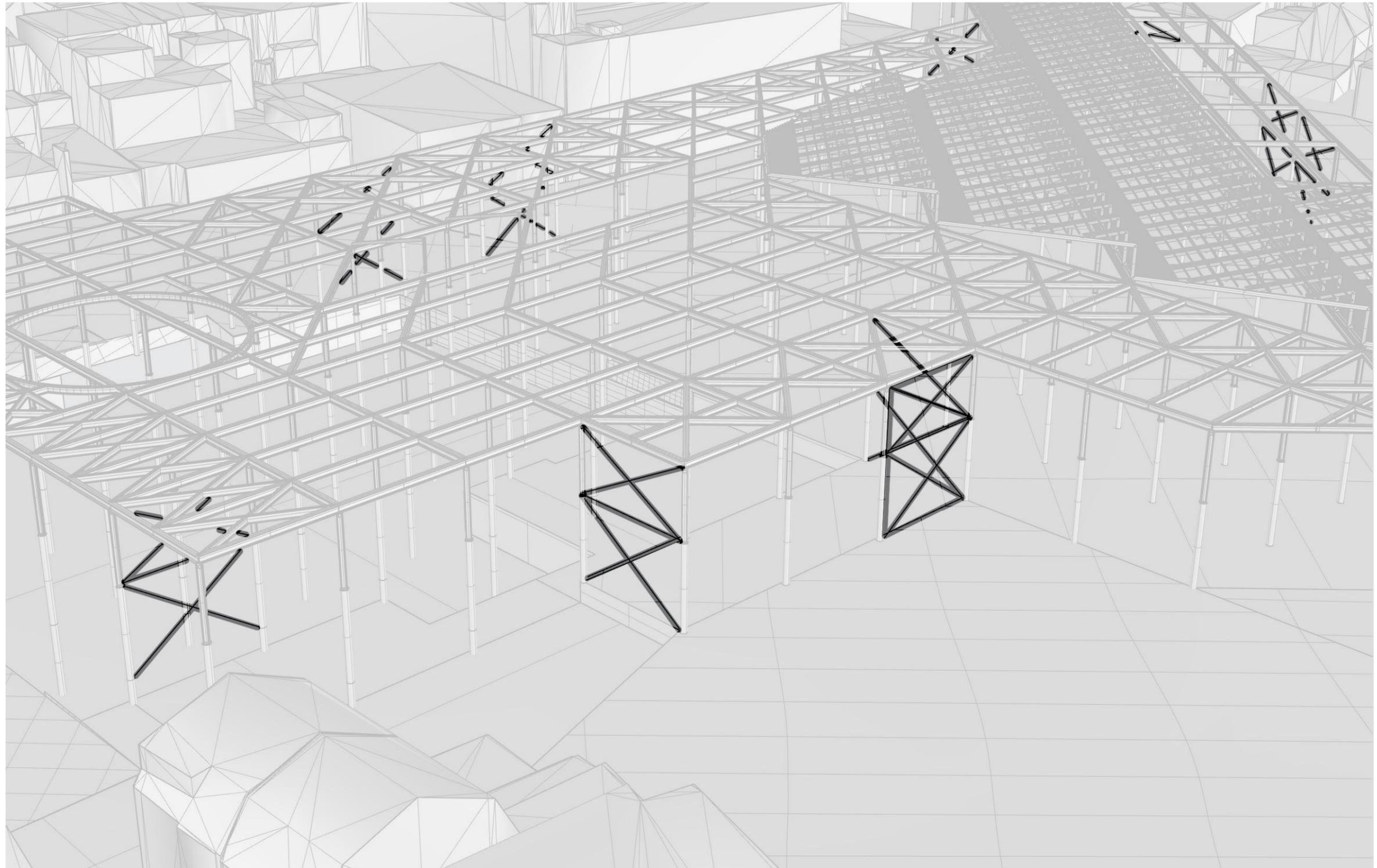
how modules fit



how modules fit



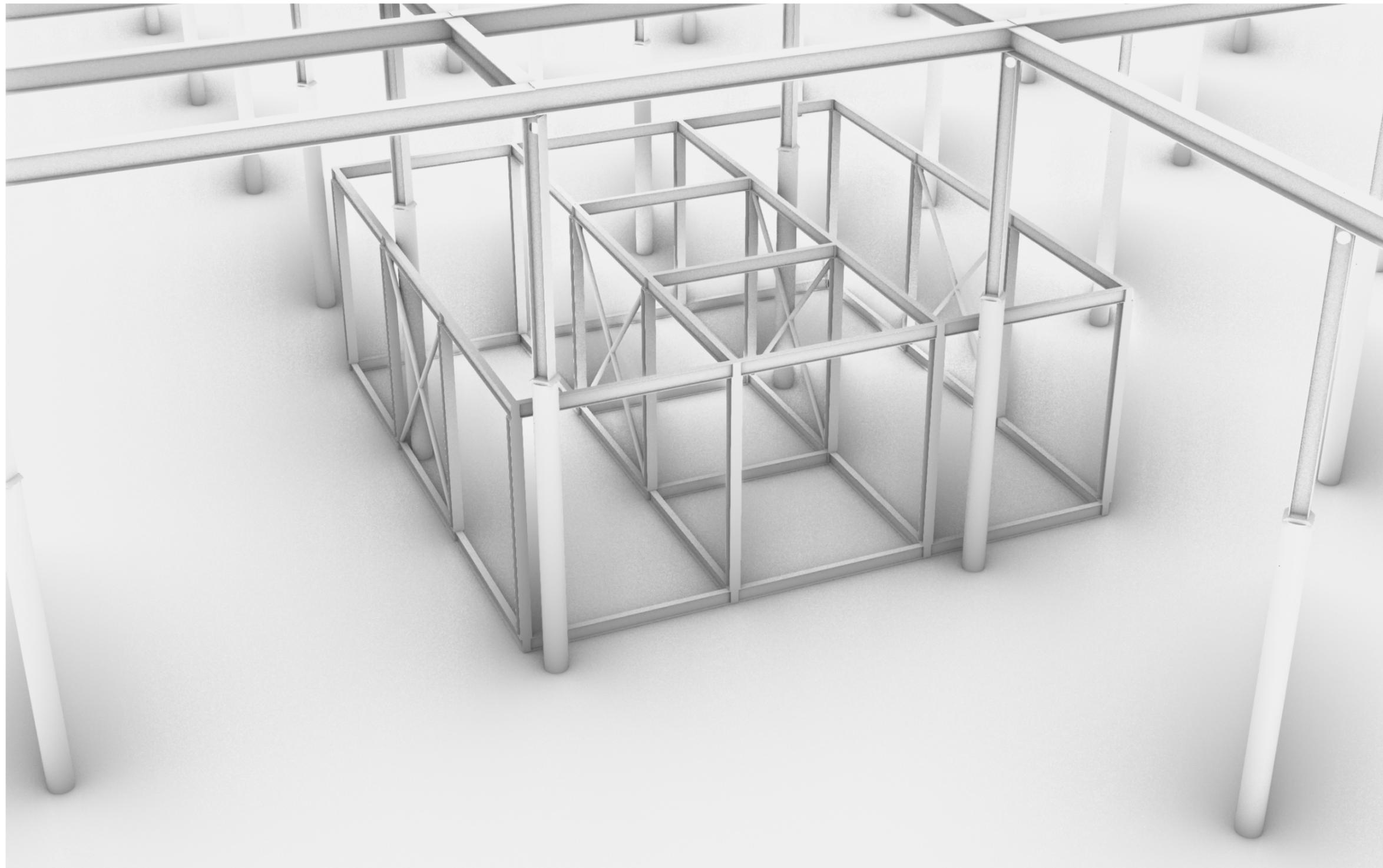
how modules fit

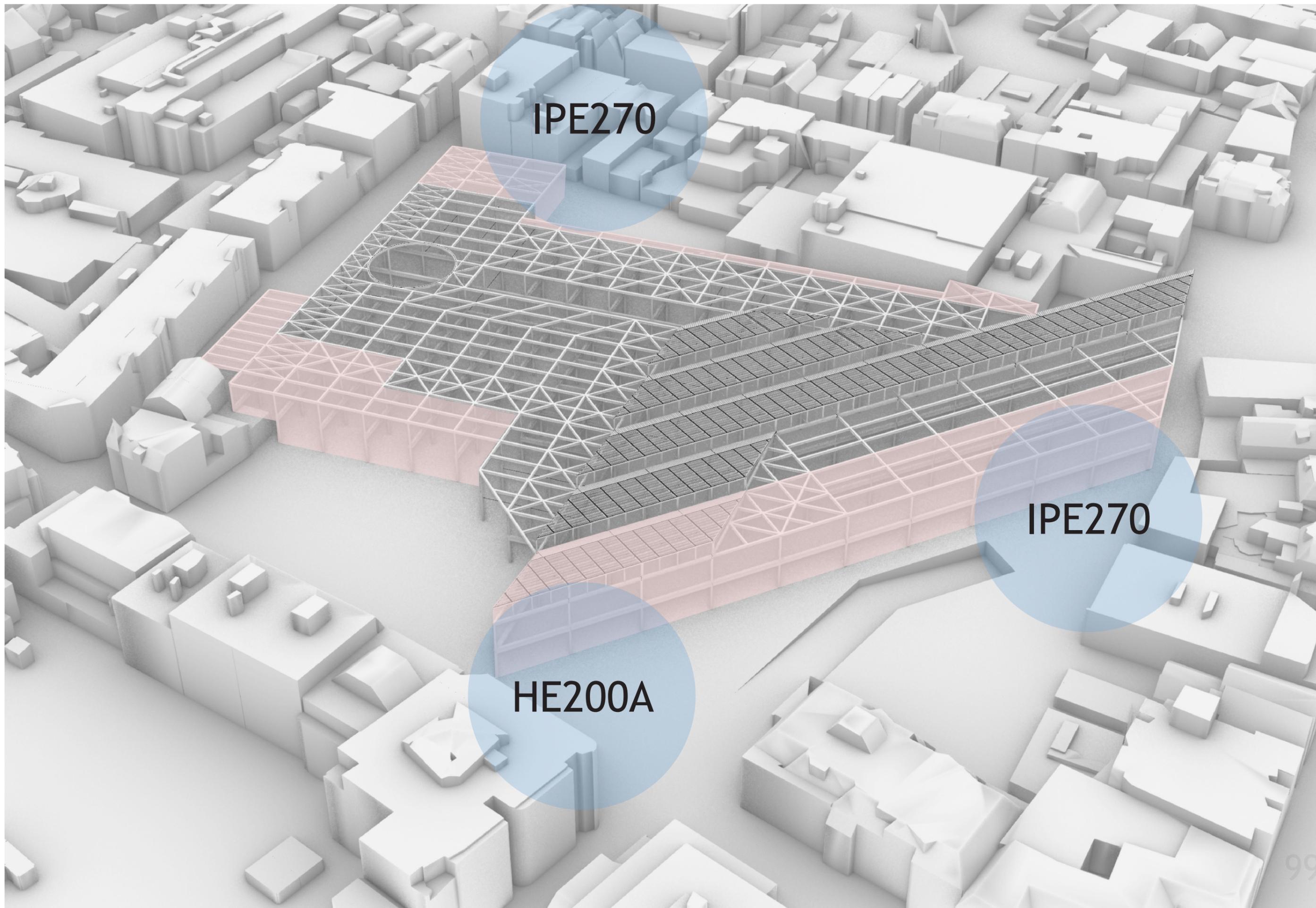


how modules fit



how modules fit





IPE270

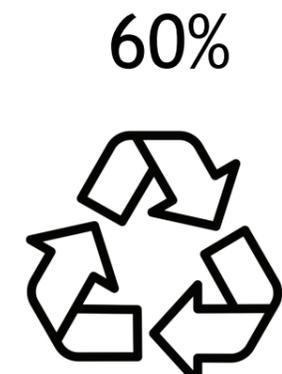
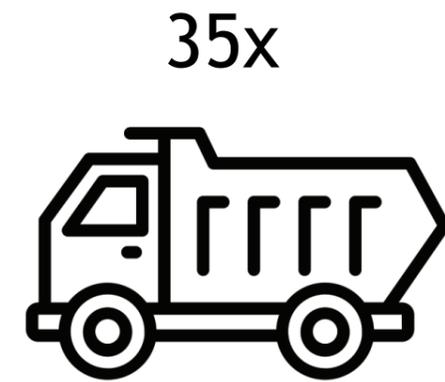
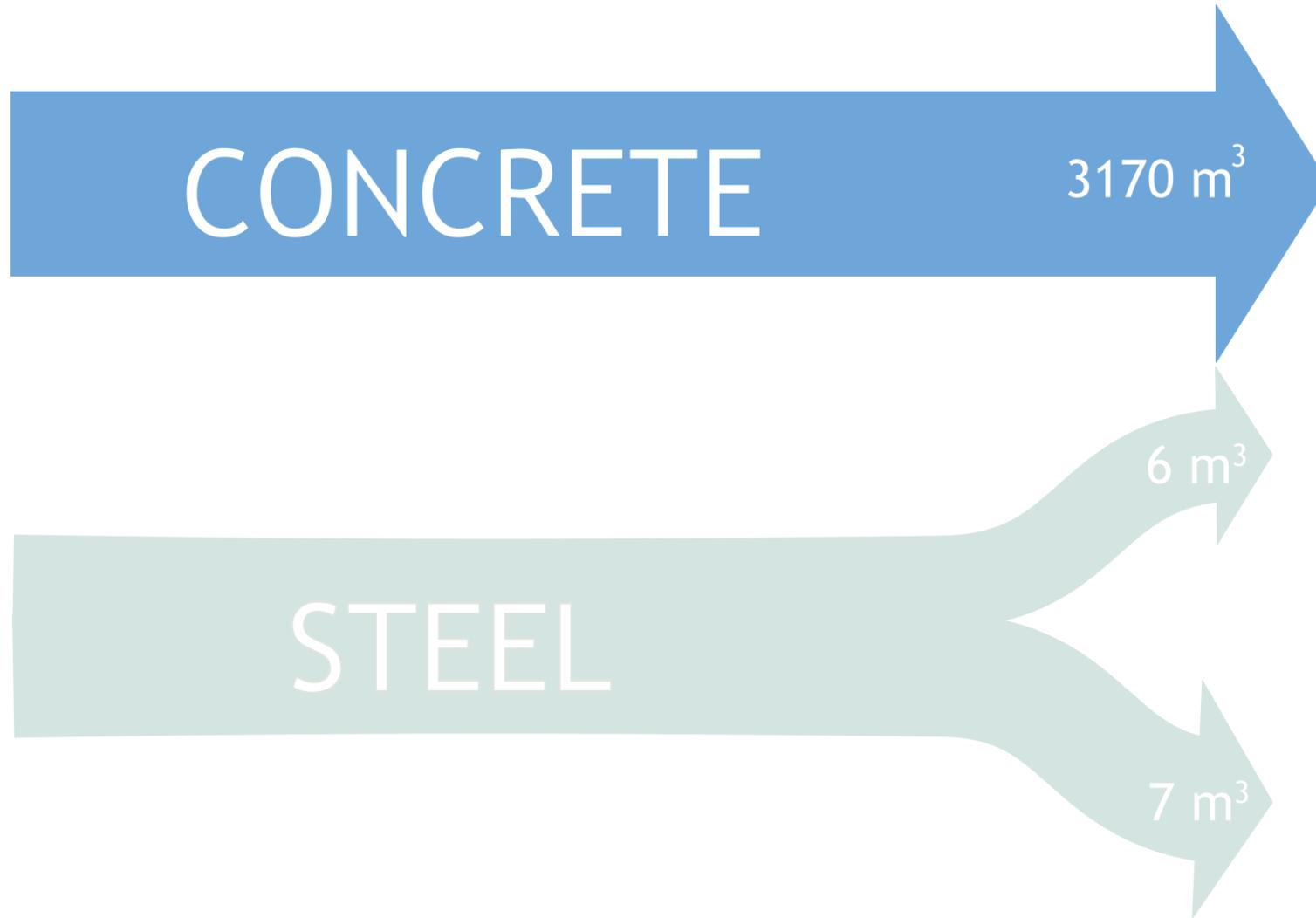
IPE270

HE200A

reuse of materials

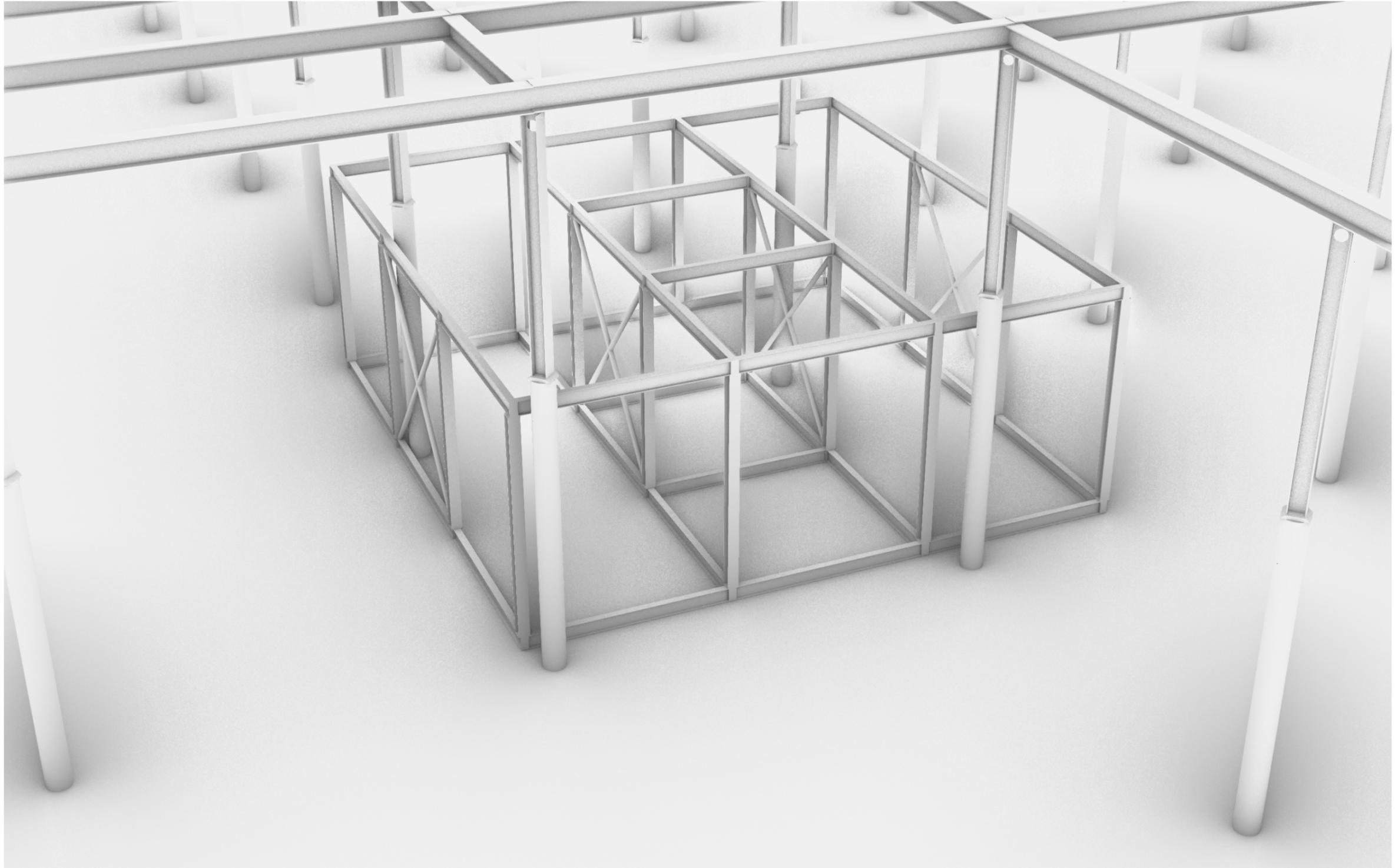


A = 22.000 m²

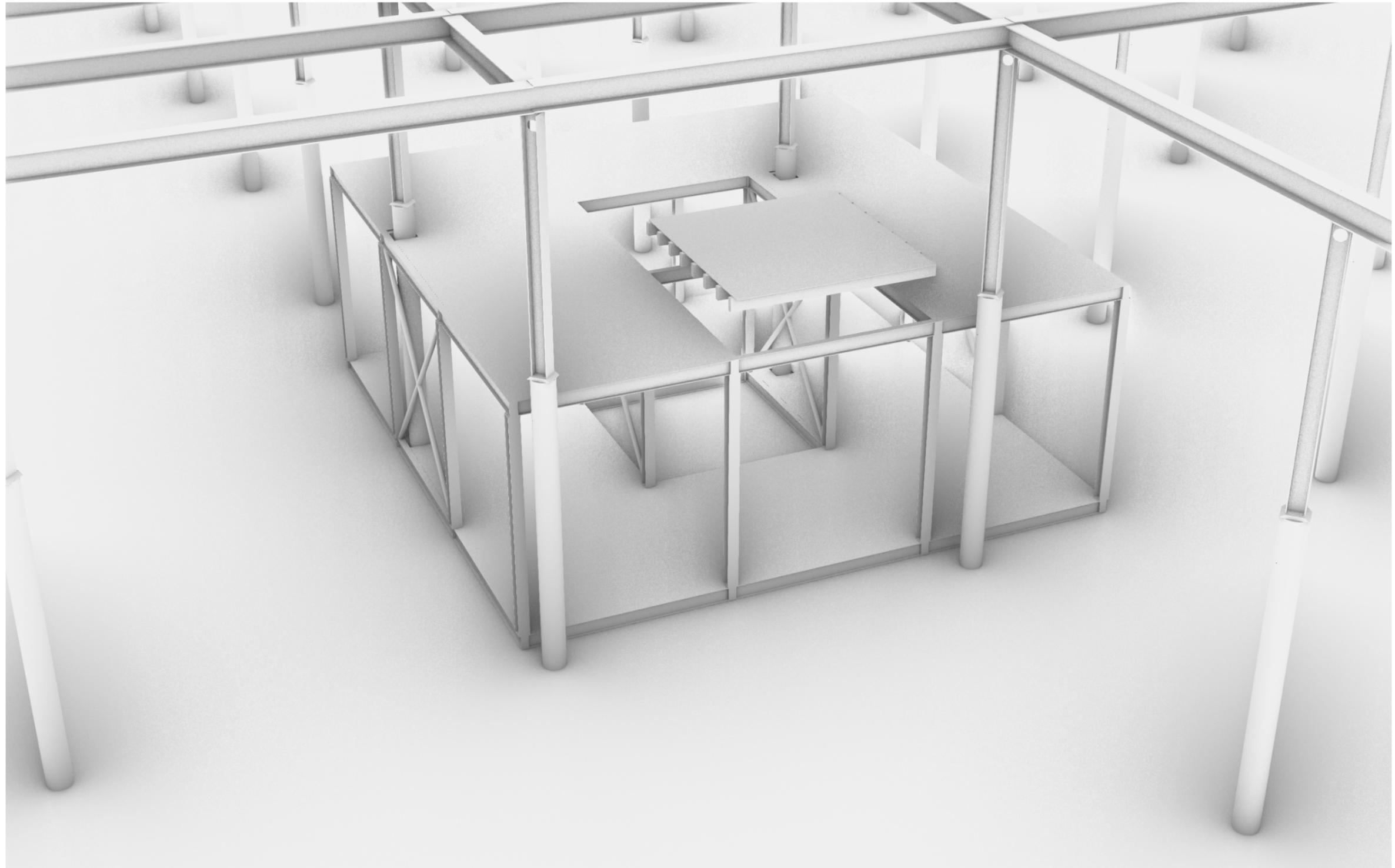


6 to 7 new modules!

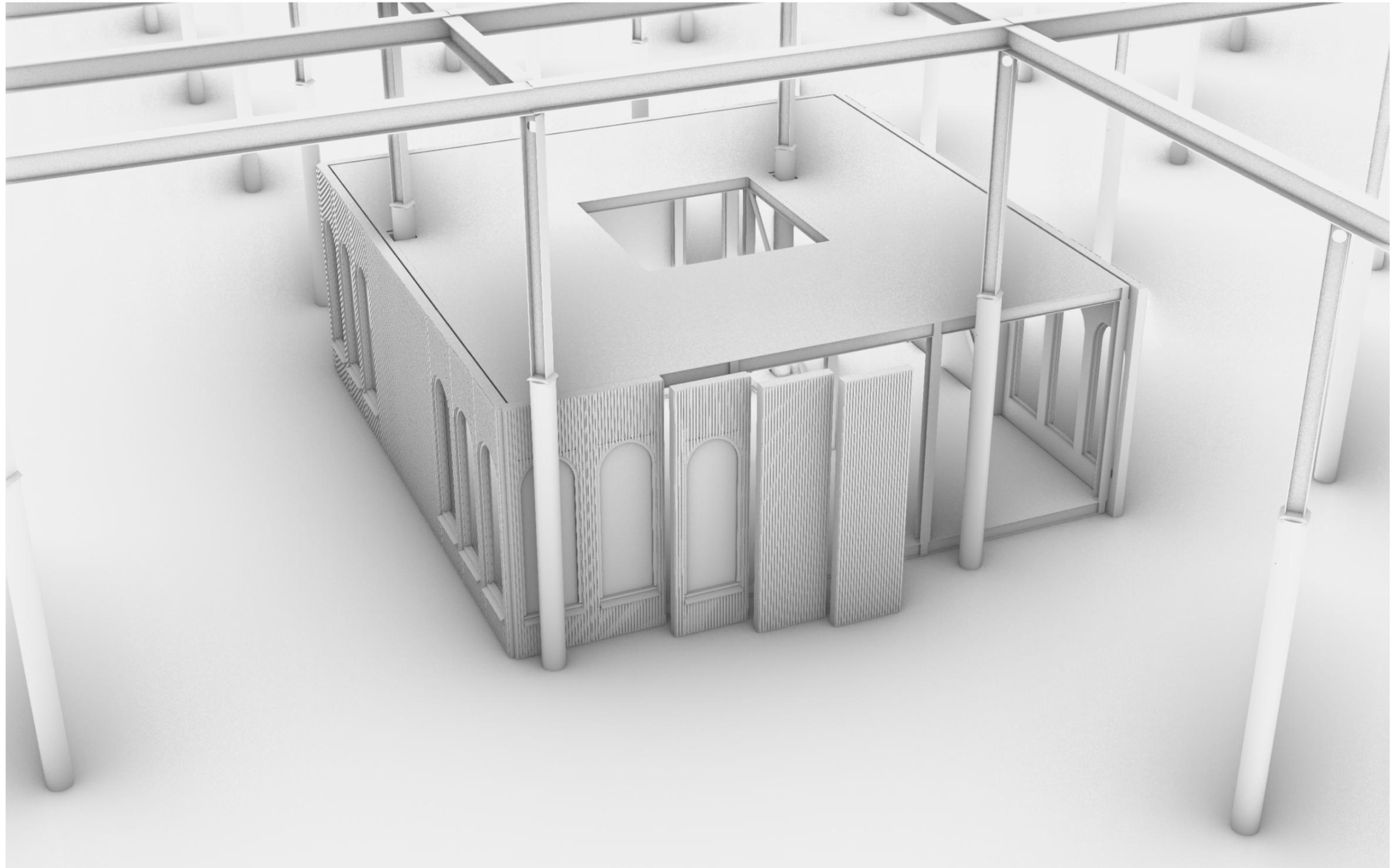
how modules fit



how modules fit



how modules fit





Hoofdstraat 143



Raadhuisplein

*Brick arches as a stylistic element
in the city center of Apeldoorn*



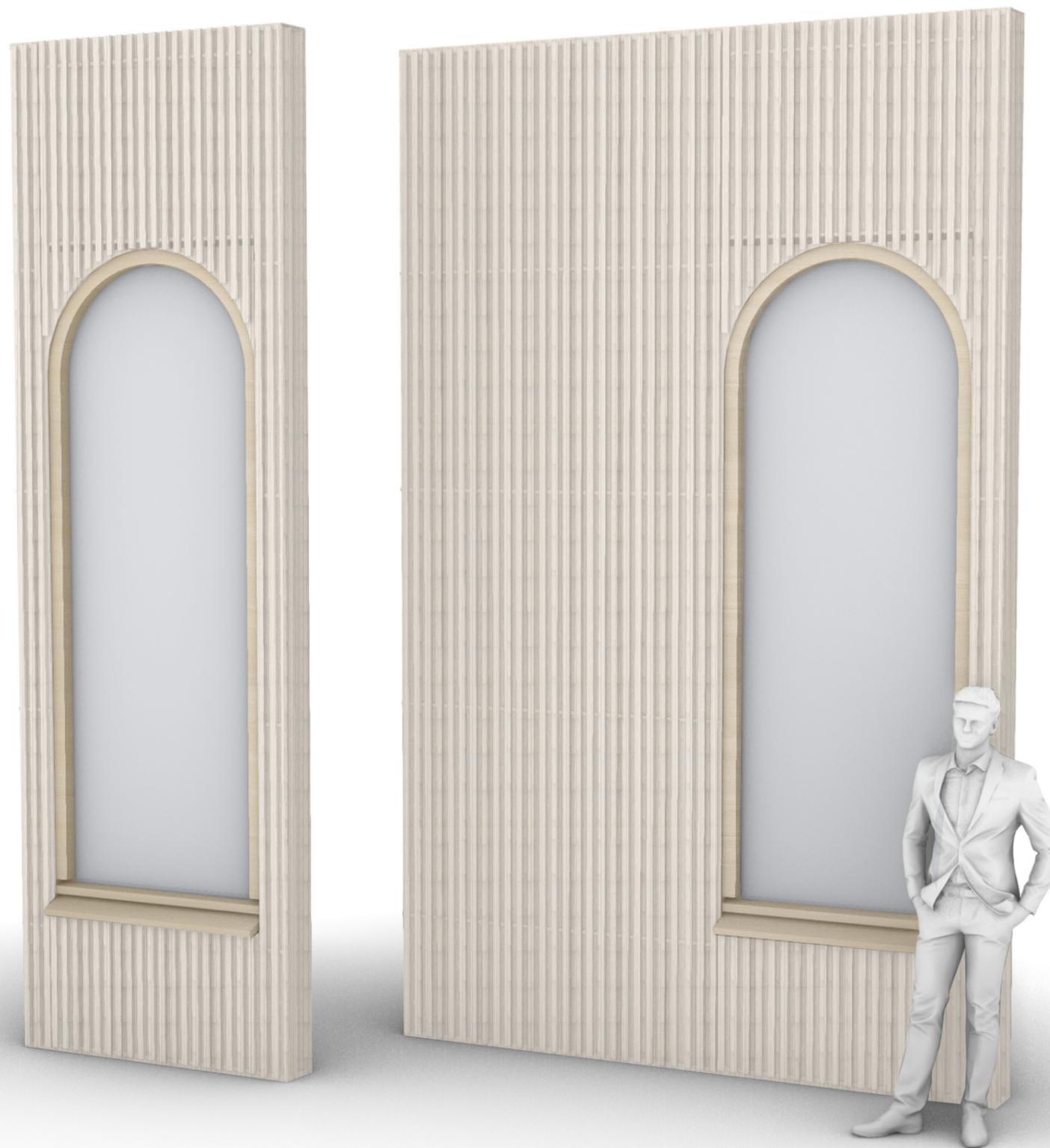
Korenpassage

The arched window of the Korenpassage is a 20th century interpretation using steel

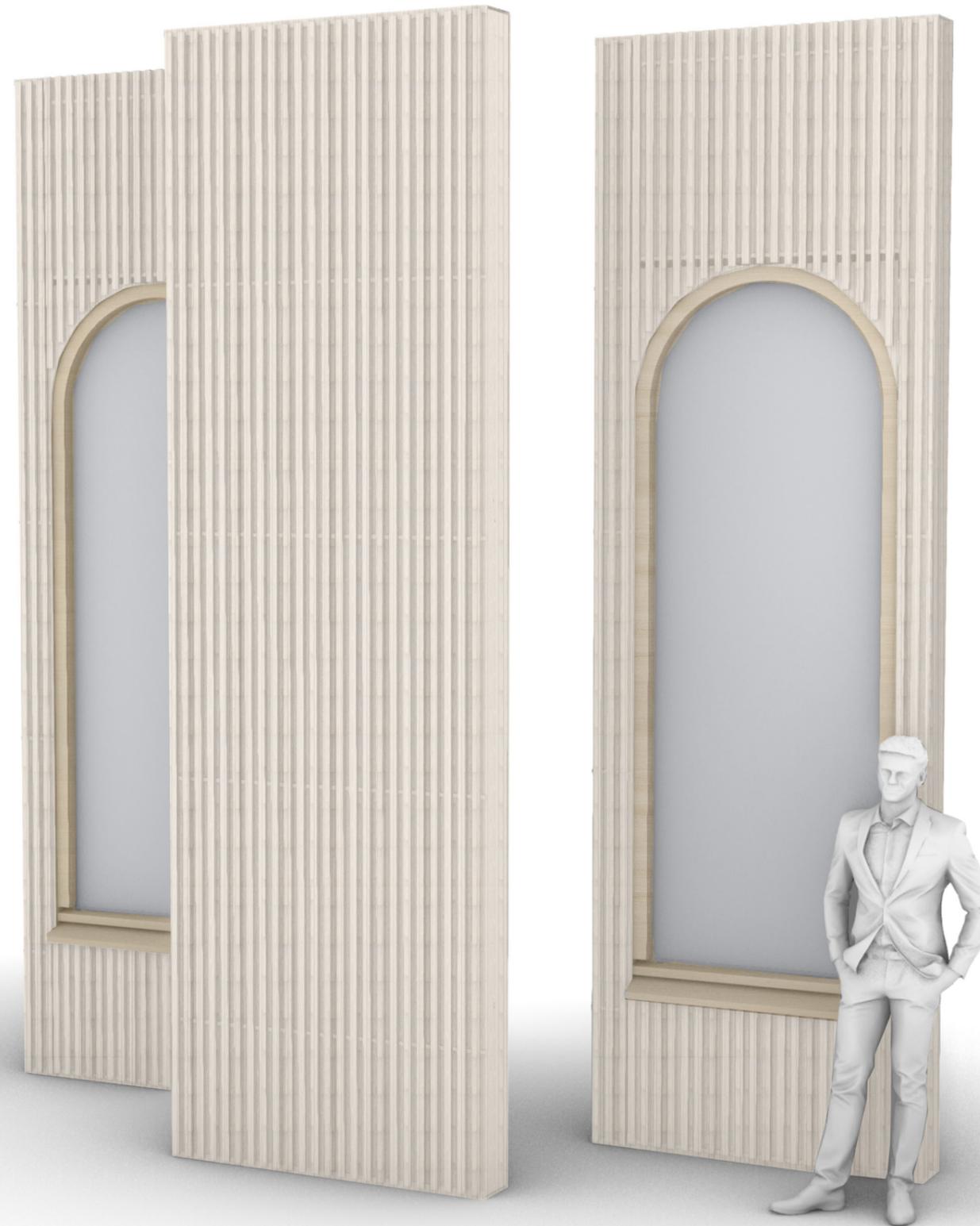


The arched windows of the Oranjerie a a 21st century interpretation using wood

variation in facade

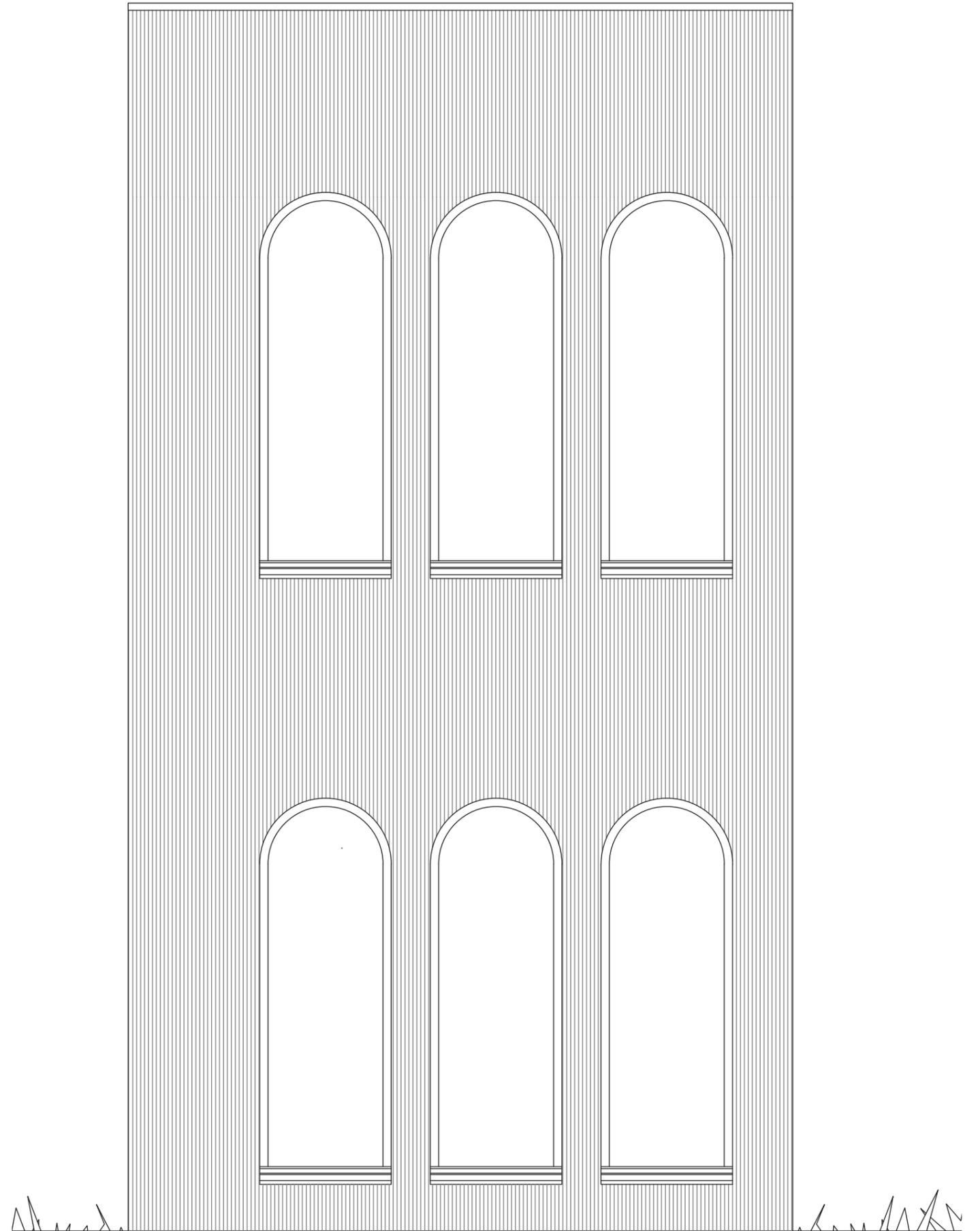
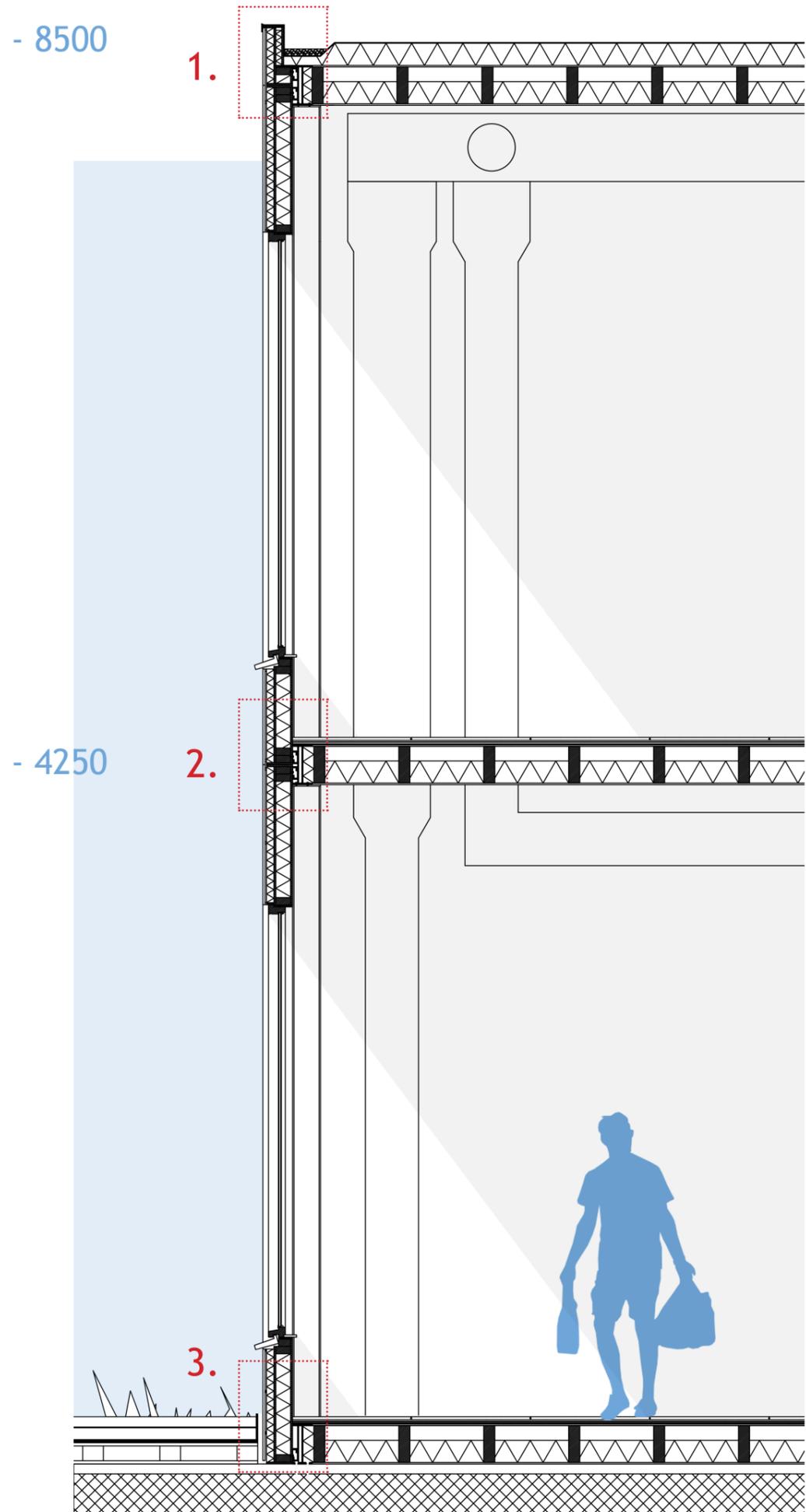


variation in facade



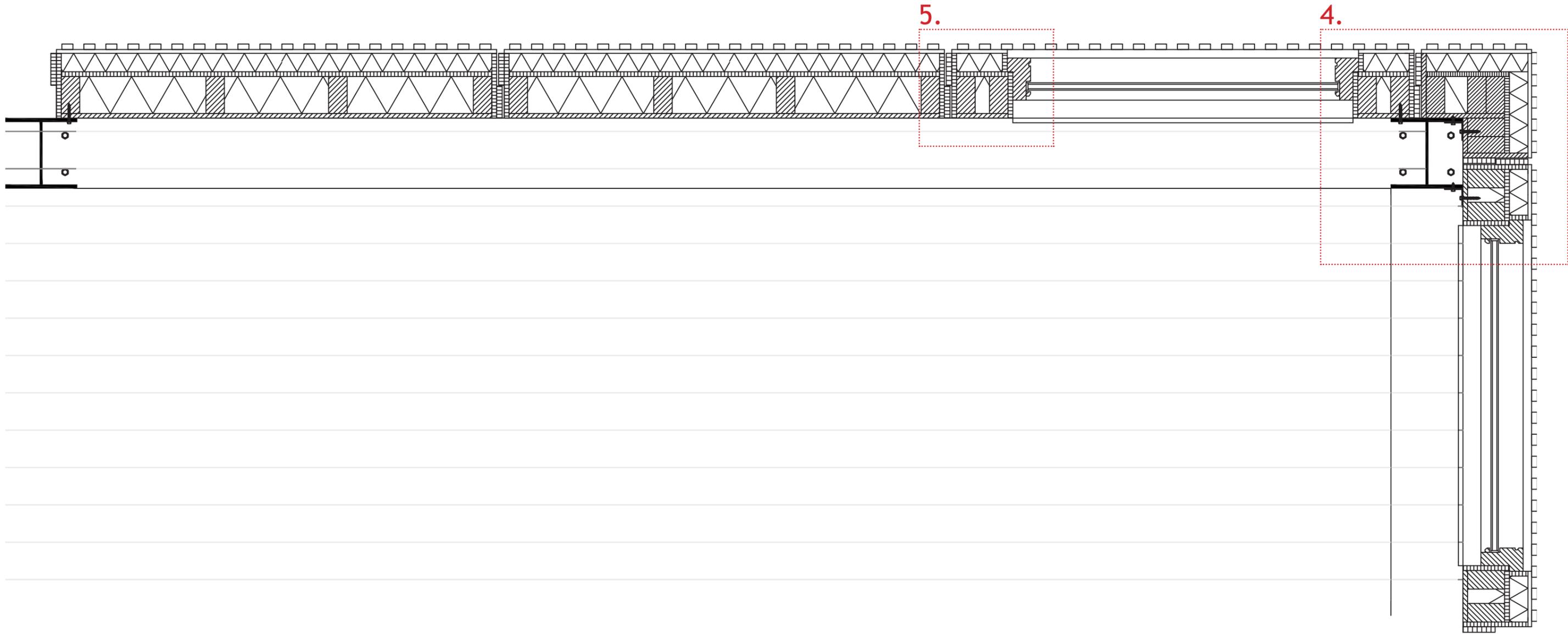
materiality

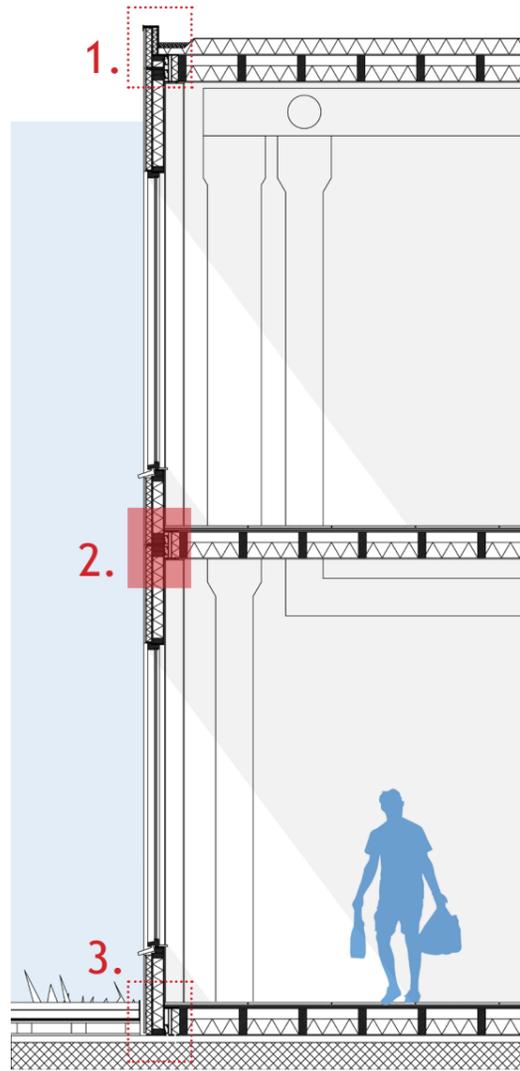




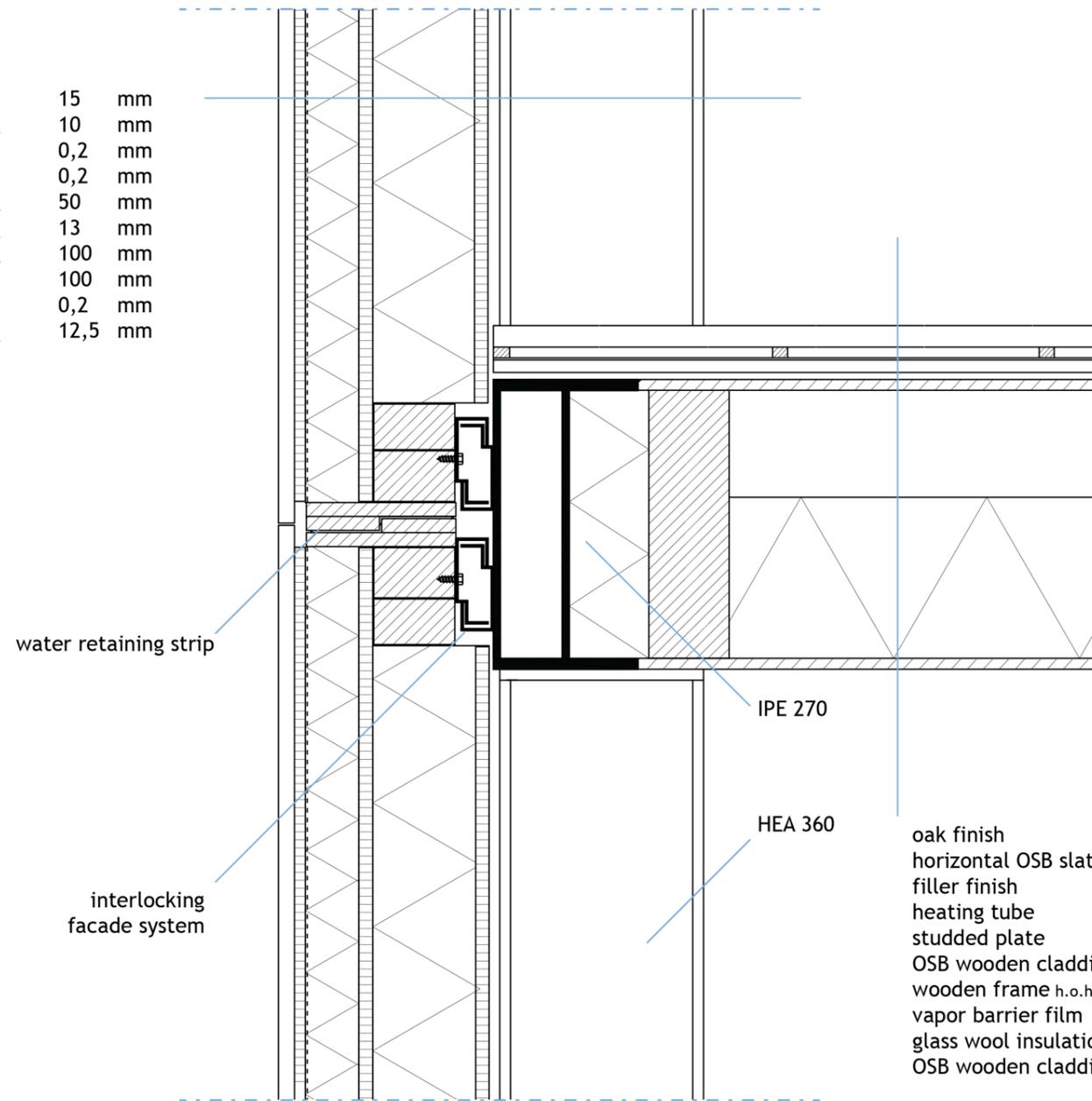
horizontal section

1250





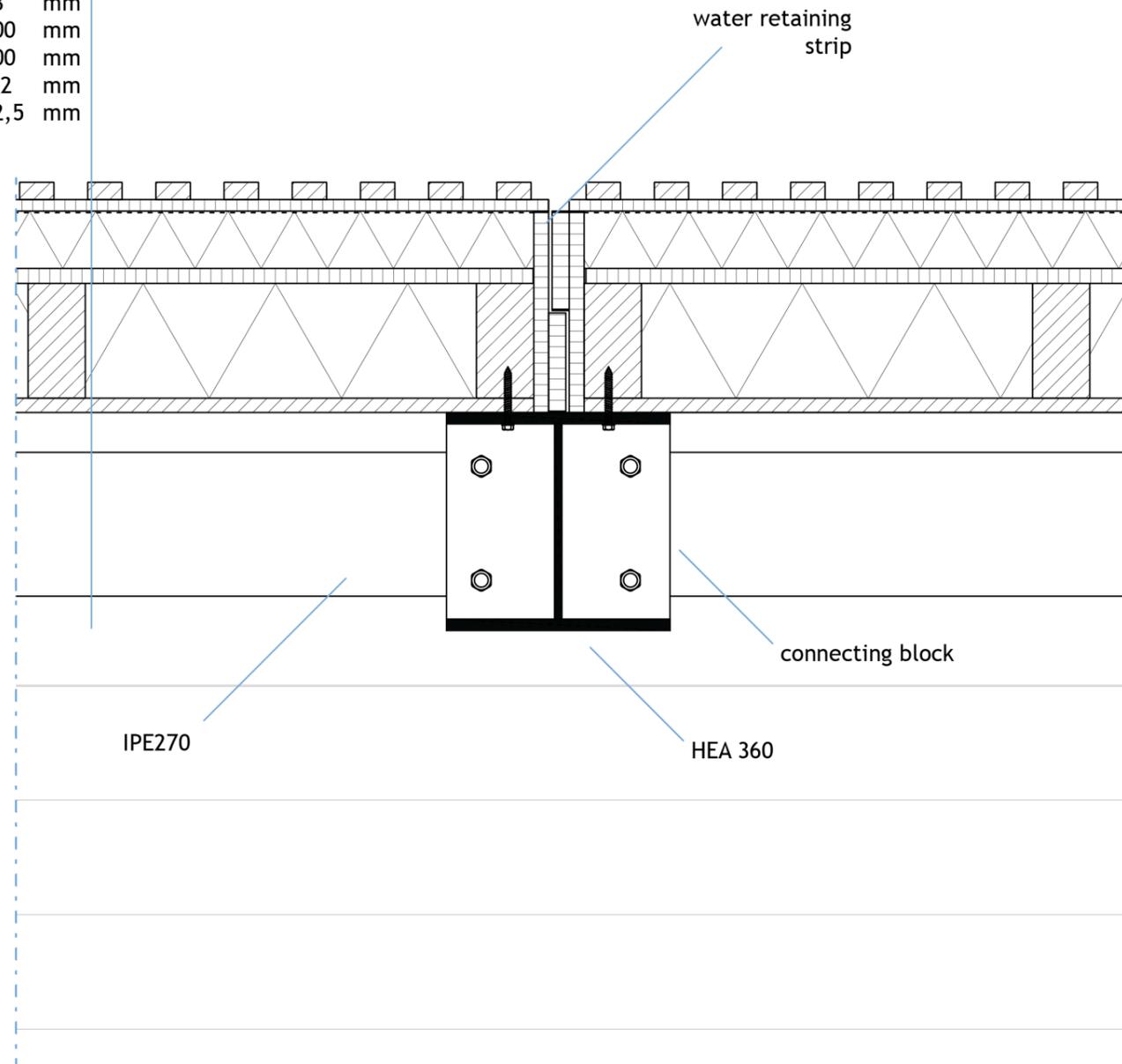
oak slat finish	15	mm
oak cladding	10	mm
water retaining film	0,2	mm
water permeable film	0,2	mm
polystyrene insulation $R_c = 0,035$ W/mk	50	mm
OSB wooden cladding	13	mm
glass wool insulation $R_c = 0,031$ W/mk	100	mm
wooden frame h.o.h. 500 mm	100	mm
vapor barrier film	0,2	mm
OSB wooden cladding	12,5	mm



oak finish	20	mm
horizontal OSB slats	10	mm
filler finish	2	mm
heating tube	11,6	mm
studded plate	18	mm
OSB wooden cladding	10	mm
wooden frame h.o.h. 500 mm	250	mm
vapor barrier film	0,2	mm
glass wool insulation $R_c = 0,031$ W/mk	150	mm
OSB wooden cladding	12,5	mm

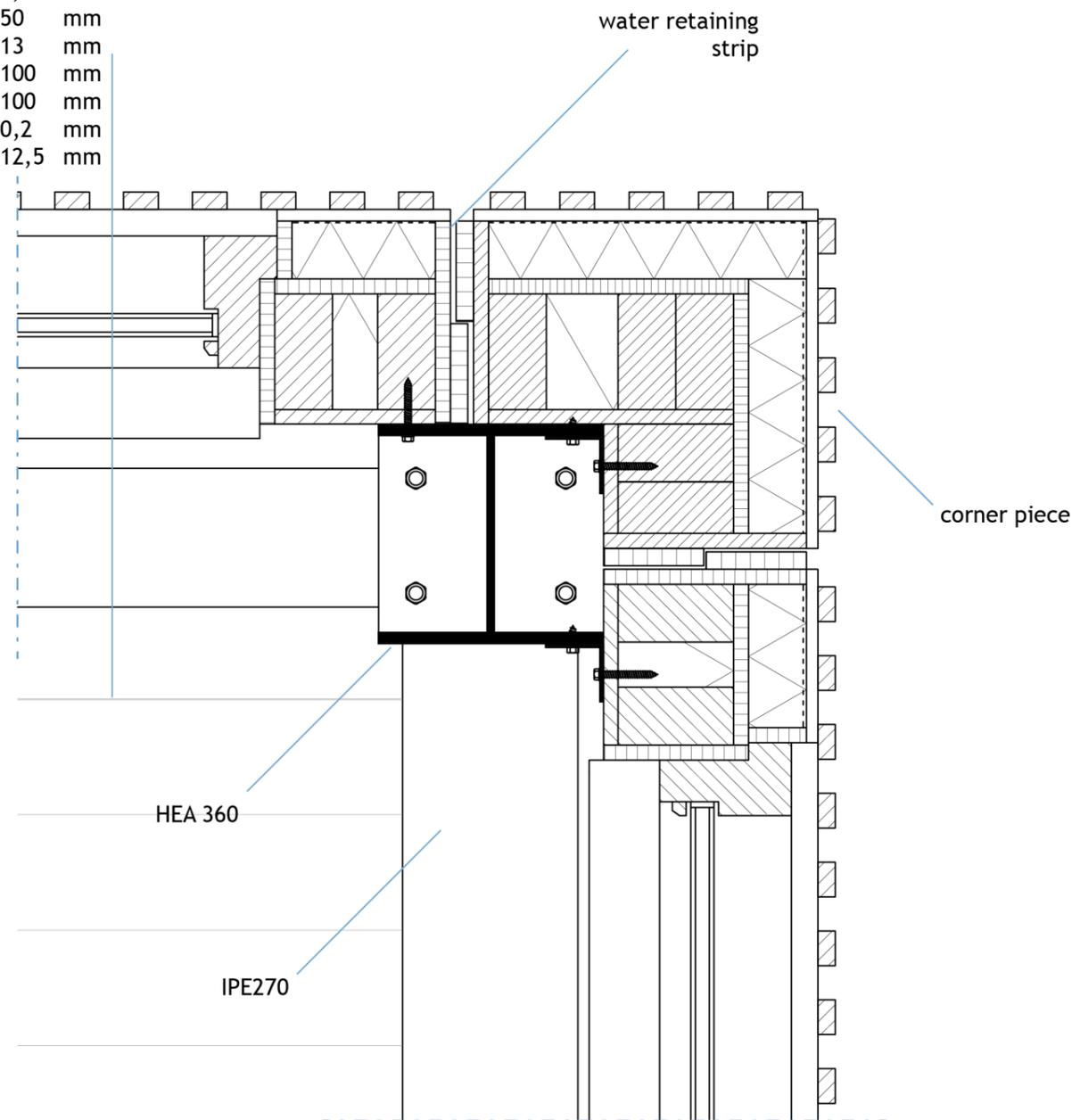
2.

oak slat finish	15	mm
oak cladding	10	mm
water retaining film	0,2	mm
water permeable film	0,2	mm
polystyrene insulation $R_c = 0,035 \text{ W/mk}$	50	mm
OSB wooden cladding	13	mm
glass wool insulation $R_c = 0,031 \text{ W/mk}$	100	mm
wooden frame h.o.h. 500 mm	100	mm
vapor barrier film	0,2	mm
OSB wooden cladding	12,5	mm



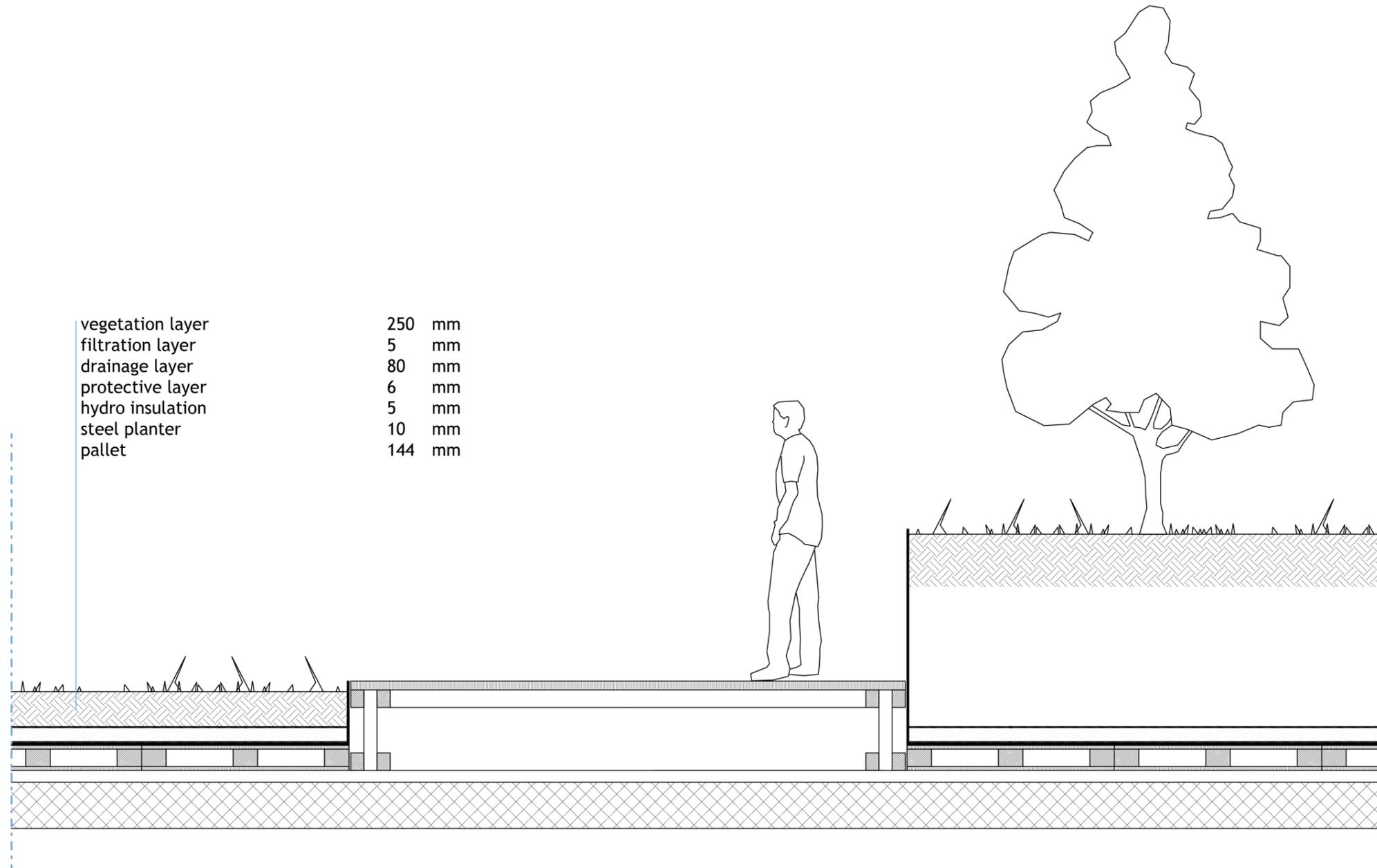
5.

oak slat finish	15	mm
oak cladding	10	mm
water retaining film	0,2	mm
water permeable film	0,2	mm
polystyrene insulation $R_c = 0,035 \text{ W/mk}$	50	mm
OSB wooden cladding	13	mm
glass wool insulation $R_c = 0,031 \text{ W/mk}$	100	mm
wooden frame h.o.h. 500 mm	100	mm
vapor barrier film	0,2	mm
OSB wooden cladding	12,5	mm

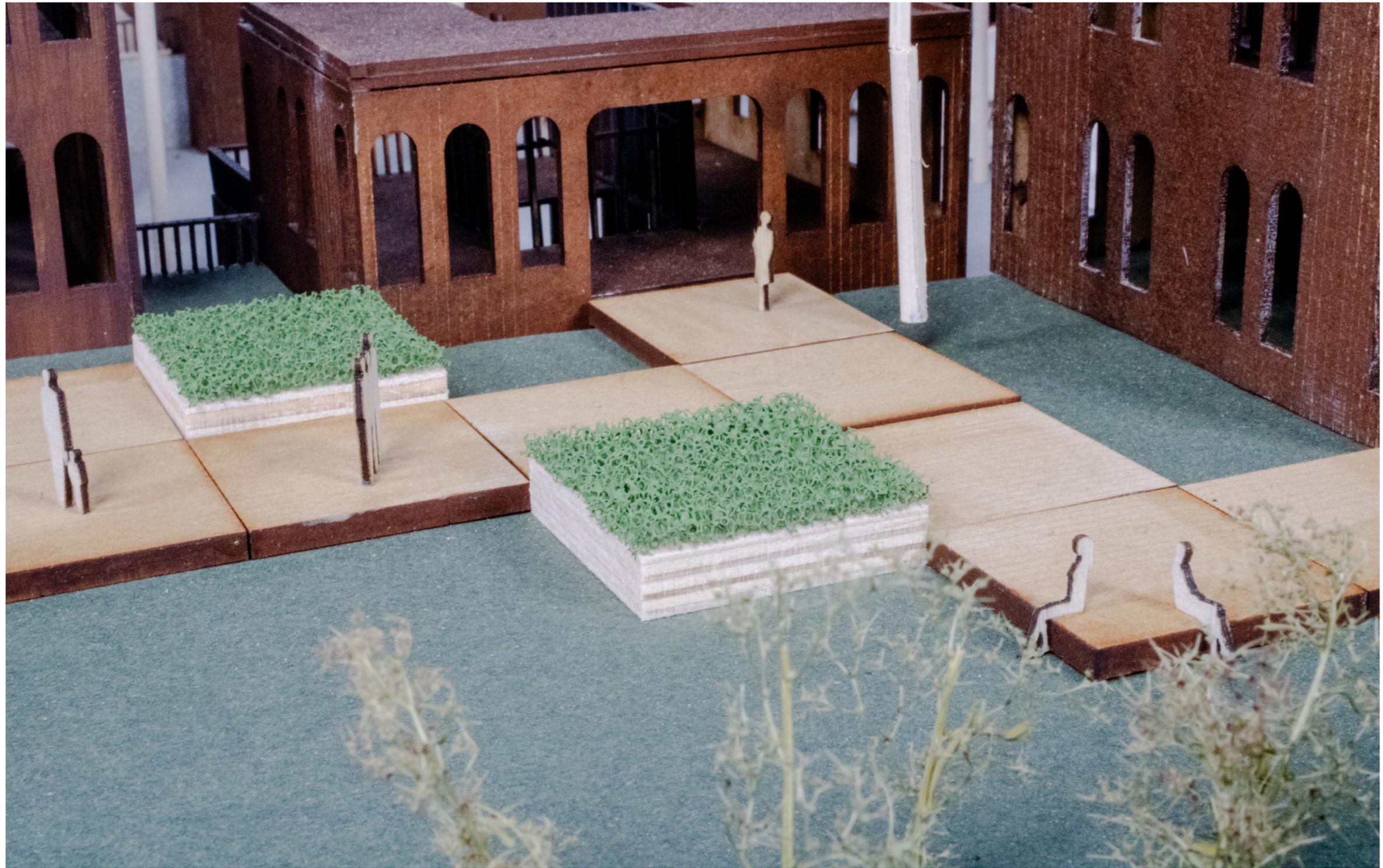


4.

landscaping details



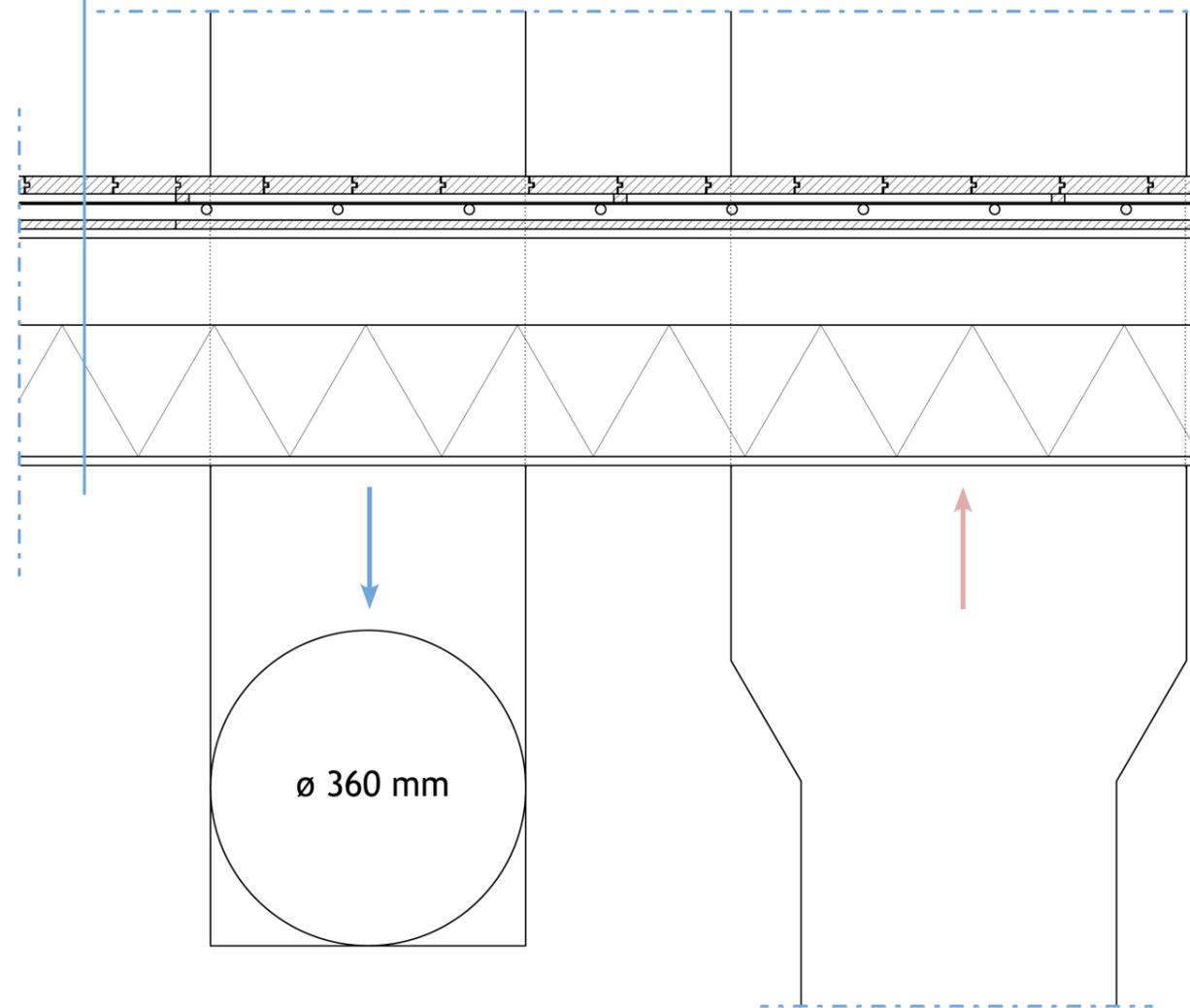
landscape



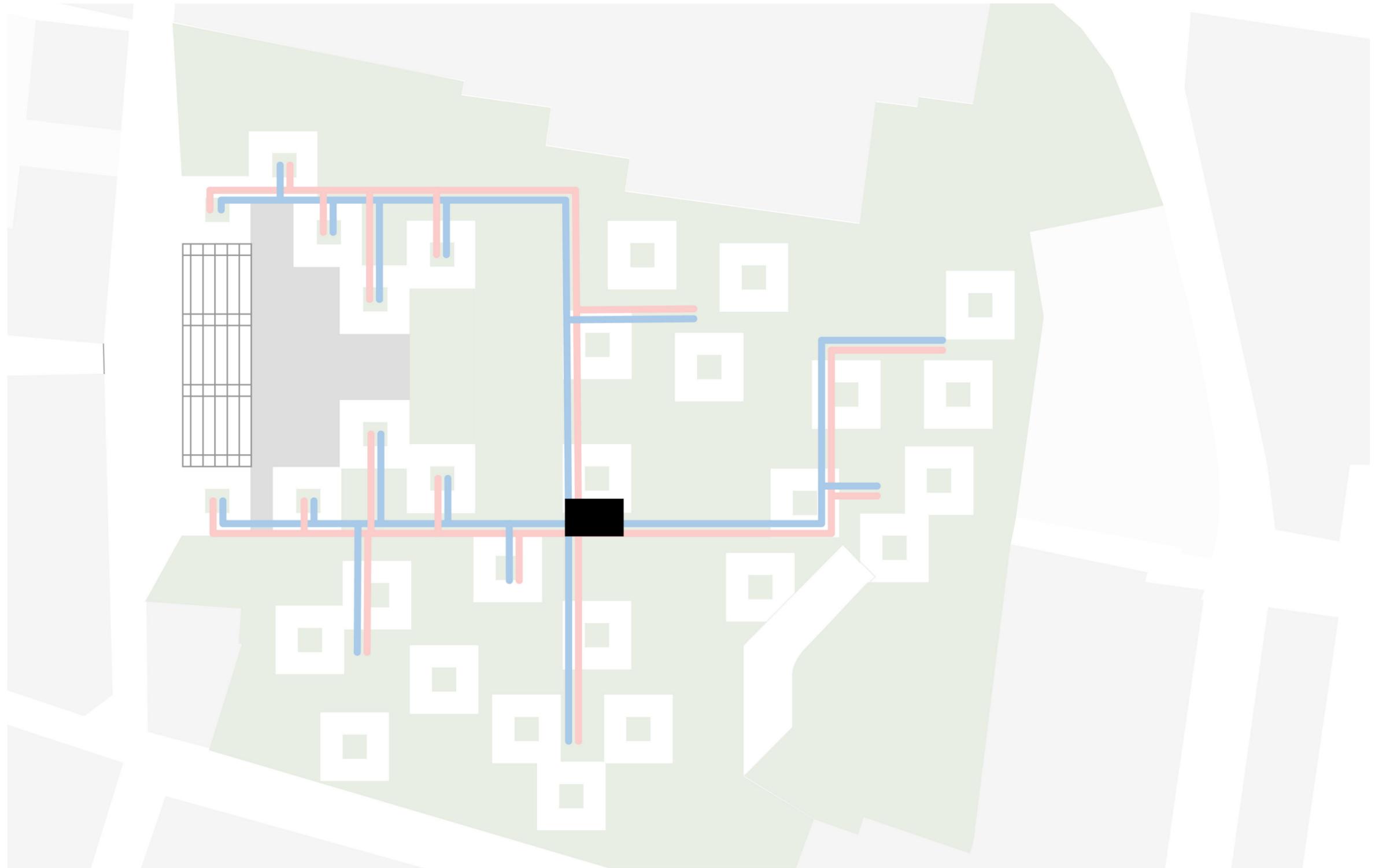
climate

underfloor heating

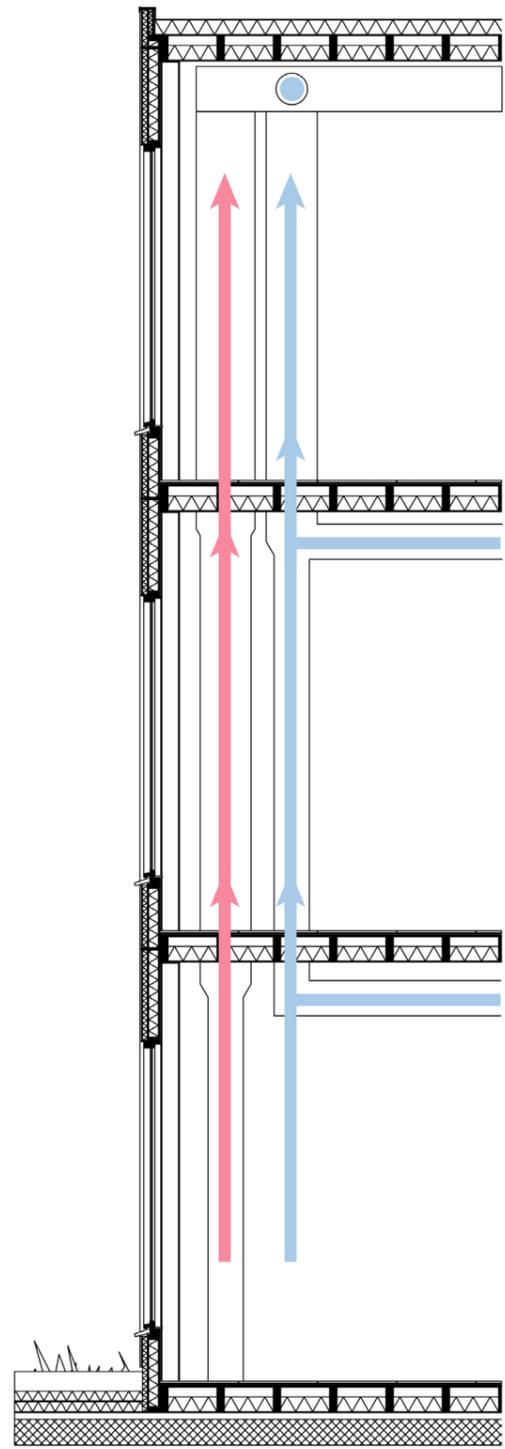
oak slat finish	20	mm
horizontal OSB slats	10	mm
filler finish	2	mm
heating tube	11,6	mm
studded plate	18	mm
OSB wooden cladding	10	mm
glass wool insulation $R_c = 0,031 \text{ W/mk}$	100	mm
wooden frame h.o.h. 500 mm	100	mm
vapor barrier film	0,2	mm
OSB wooden cladding	12,5	mm



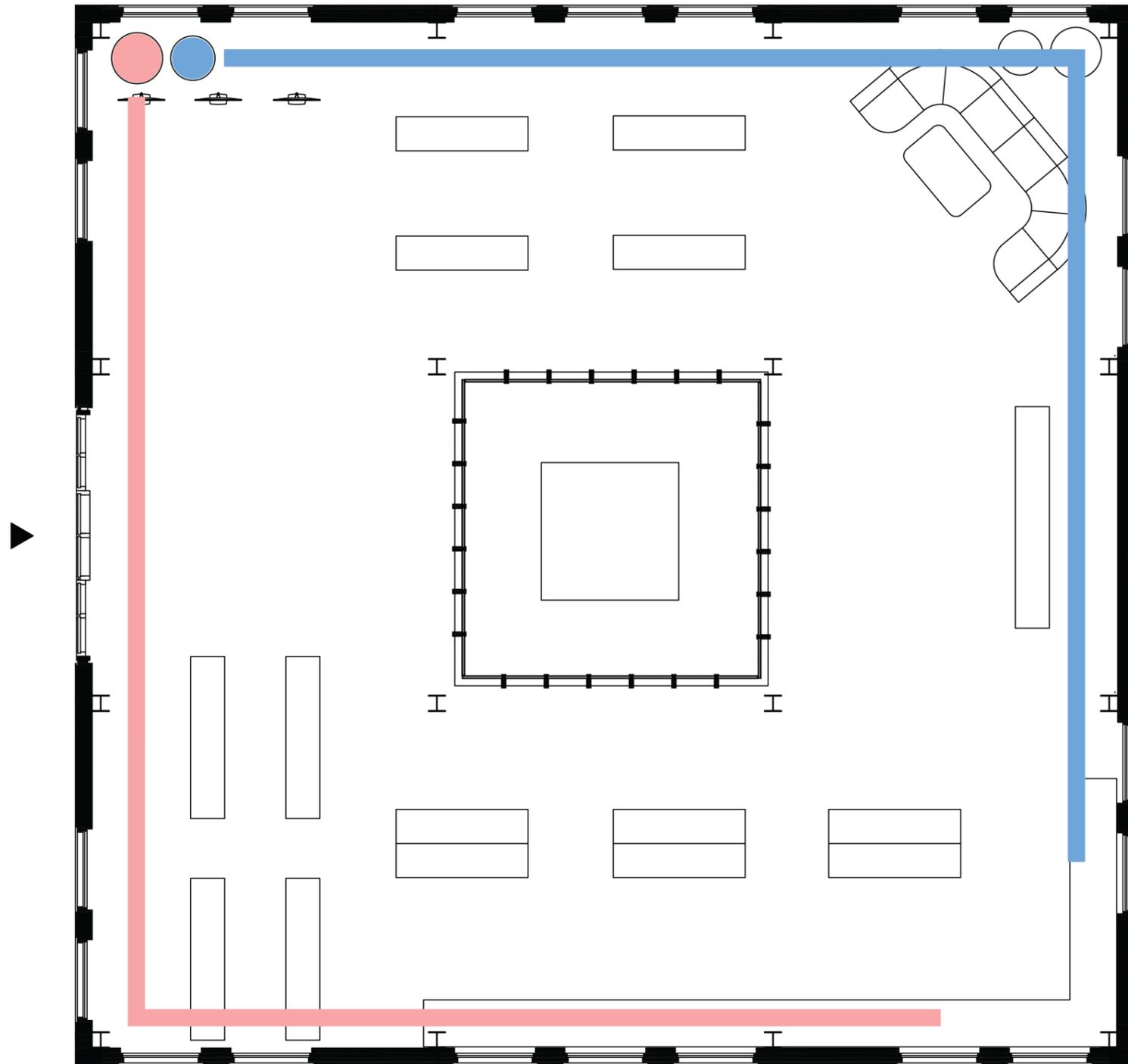
heat network



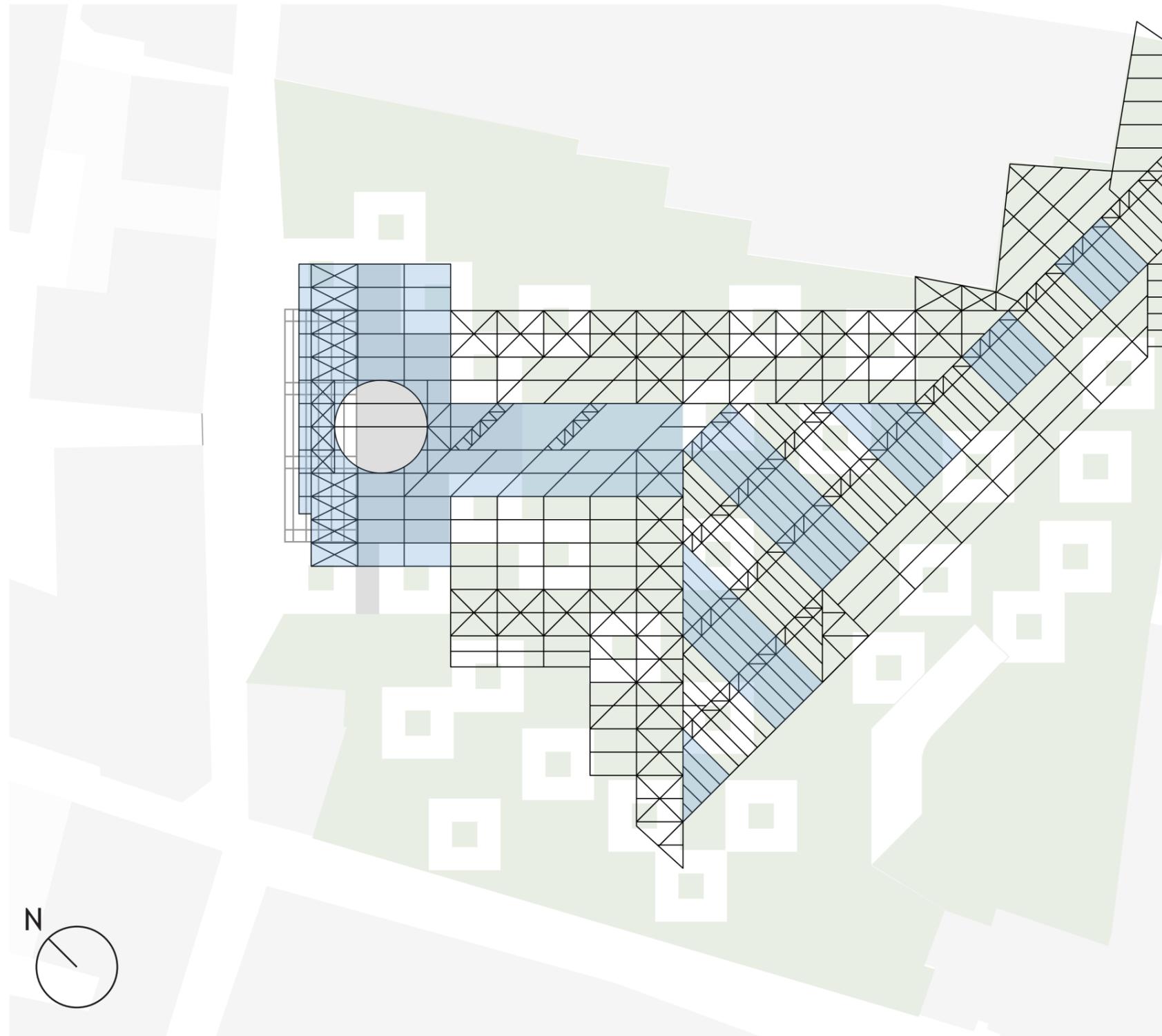
ventilation - section



ventilation - shop plan



electricity



$E = 150 \text{ kWh per m}^2 \text{ panel per year}$

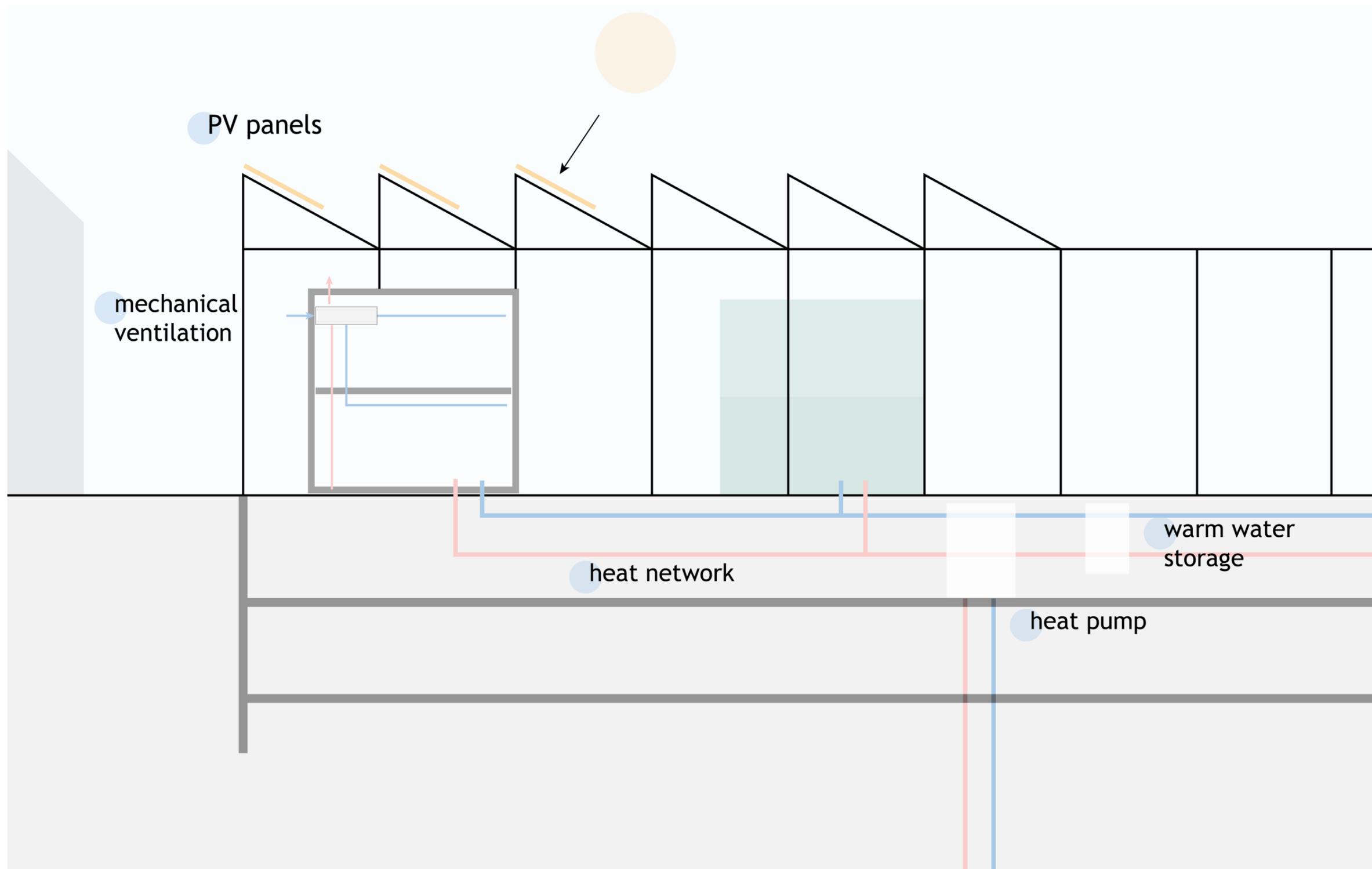
$A \approx 3000 \text{ m}^2$

$E = 450.000 \text{ kWh per year}$

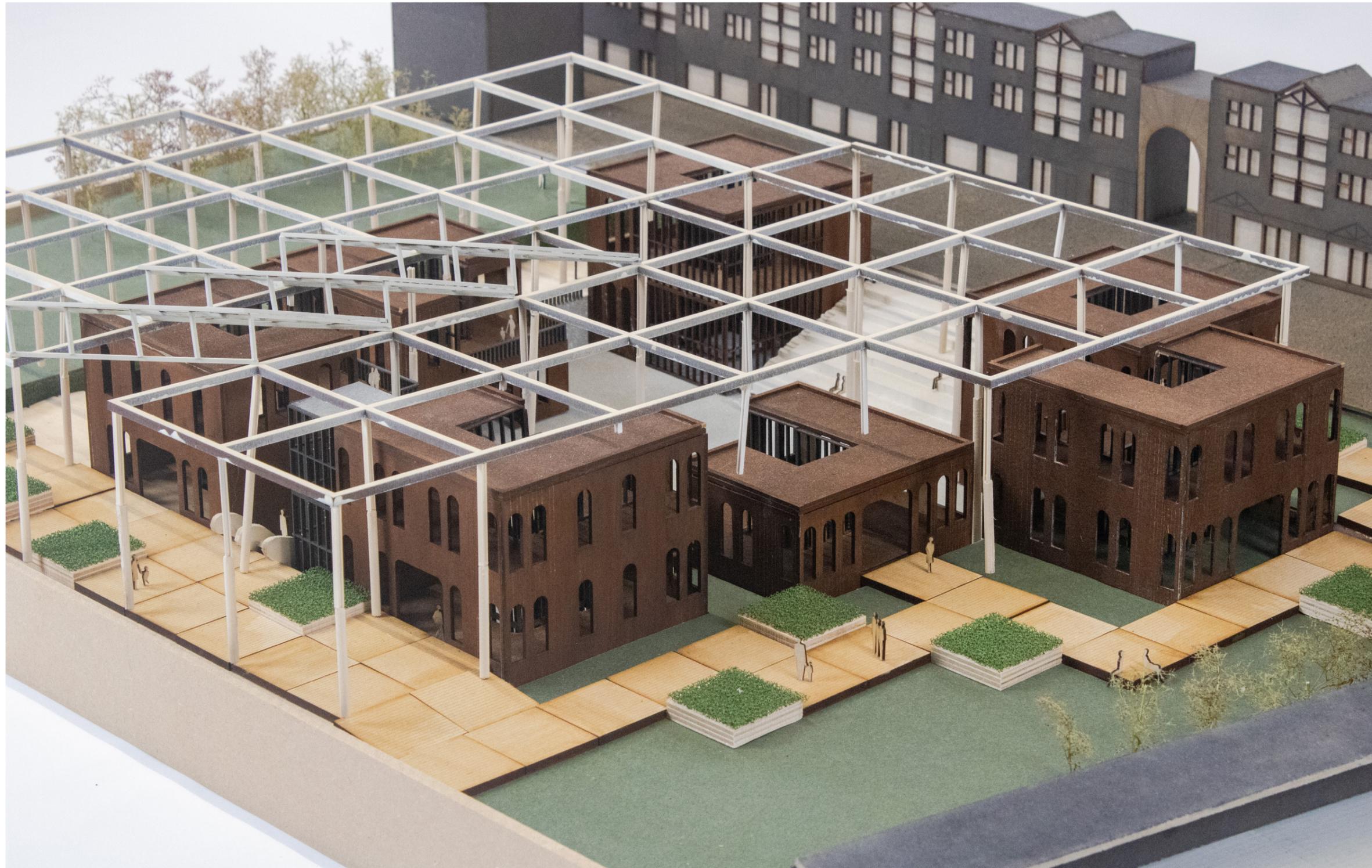
$E = 20.000 \text{ kWh average need of stores}$

all modules are provided!

climate strategy



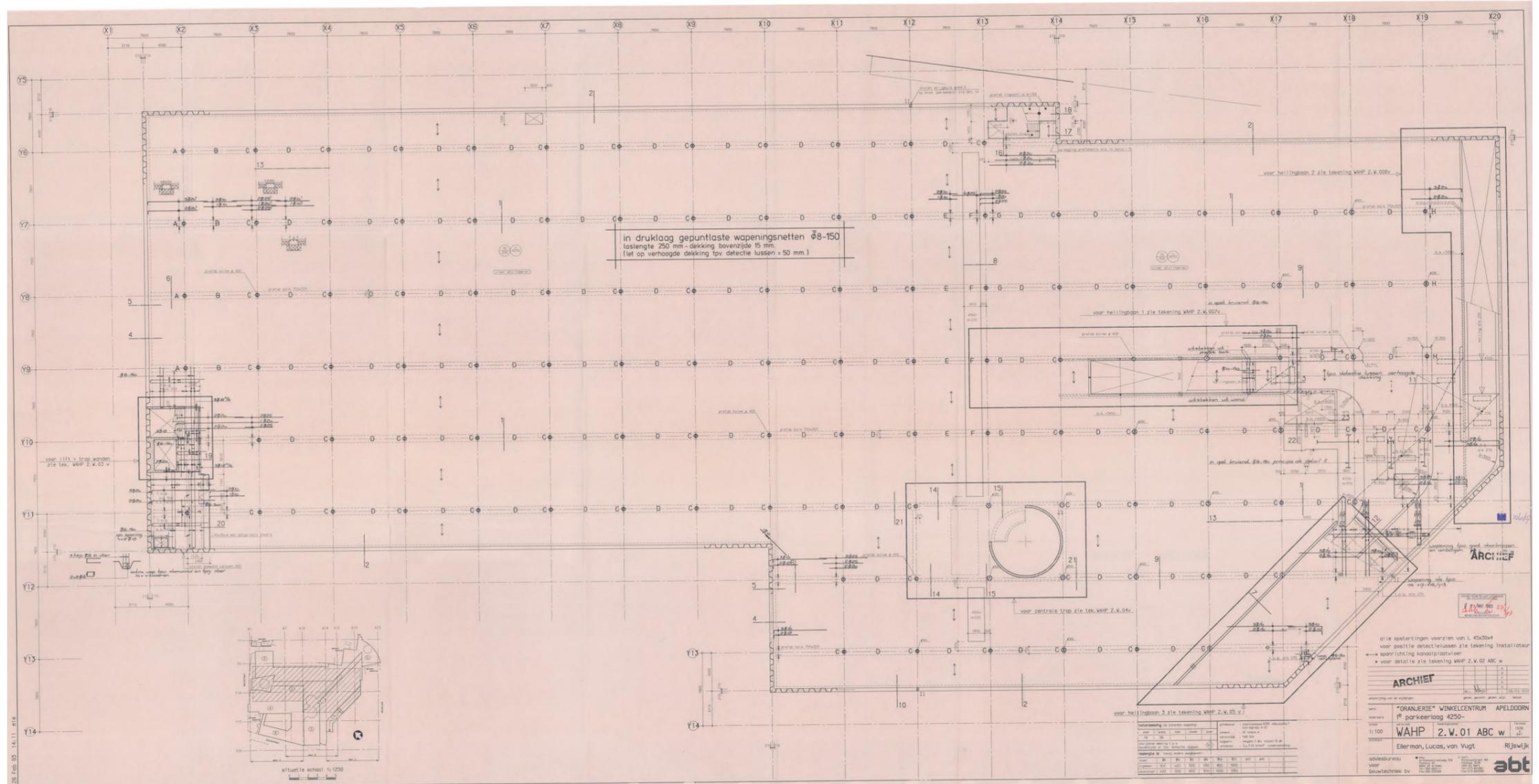
conclusion

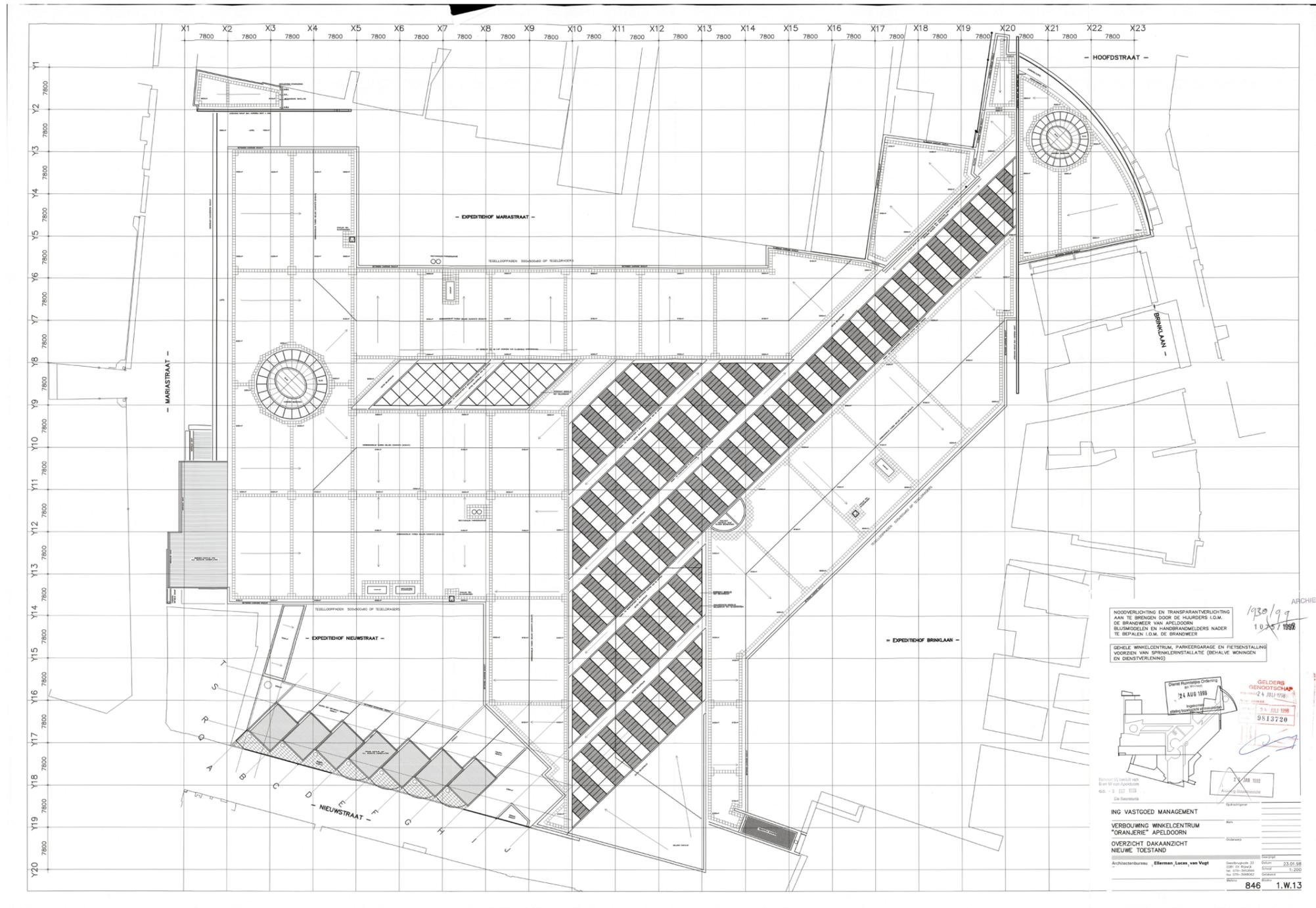




THANK
YOU FOR
LISTENING

Appendix





NOODVERLICHTING EN TRANSPARENTVERLICHTING
AAN TE BRENGEN DOOR DE HUURDERS I.O.M.
DE BRANDWEEZEL VAN APELDORP
BLUWMOEDLEN EN HANDBRANDWELDELS NADER
TE BEPALEN I.O.M. DE BRANDWEEZEL

1930/99
10.05.1992

ARCHIEF

DEHELE WINKELCENTRUM, PARKEERGARAGE EN FIETSENSTALLING
VOORZIEN VAN SPRINKELINSTALLATIE (BEPALVE WONINGEN
EN DIENSTVERLENING)

Deel van de Bestemmingsplan
24 AUG 1999

GELDERS
GEMEENTENRADER
24 JUL 1998
9513720

ING VASTGOED MANAGEMENT

VERBOUWING WINKELCENTRUM
"ORANJERIE" APELDORP

OVERZICHT DAKAANZICHT
NIEUWE TOESTAND

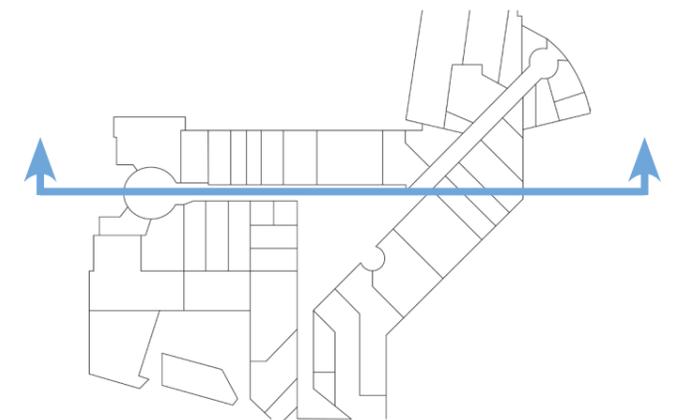
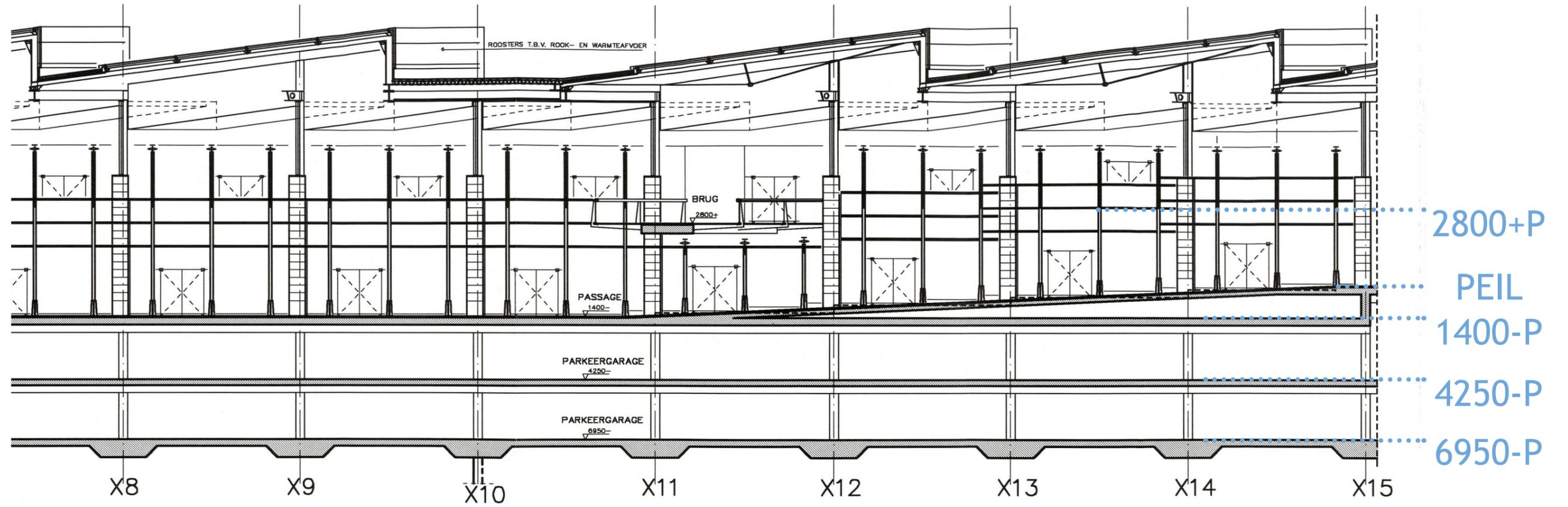
Architectenbureau: **Ellerman Lacey, van Vugt**

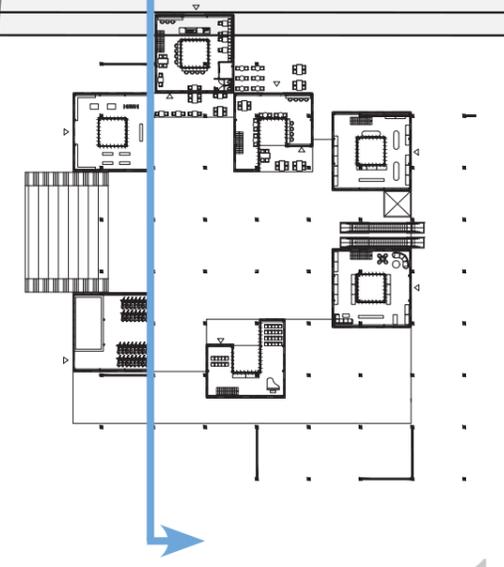
23.01.98
1:200

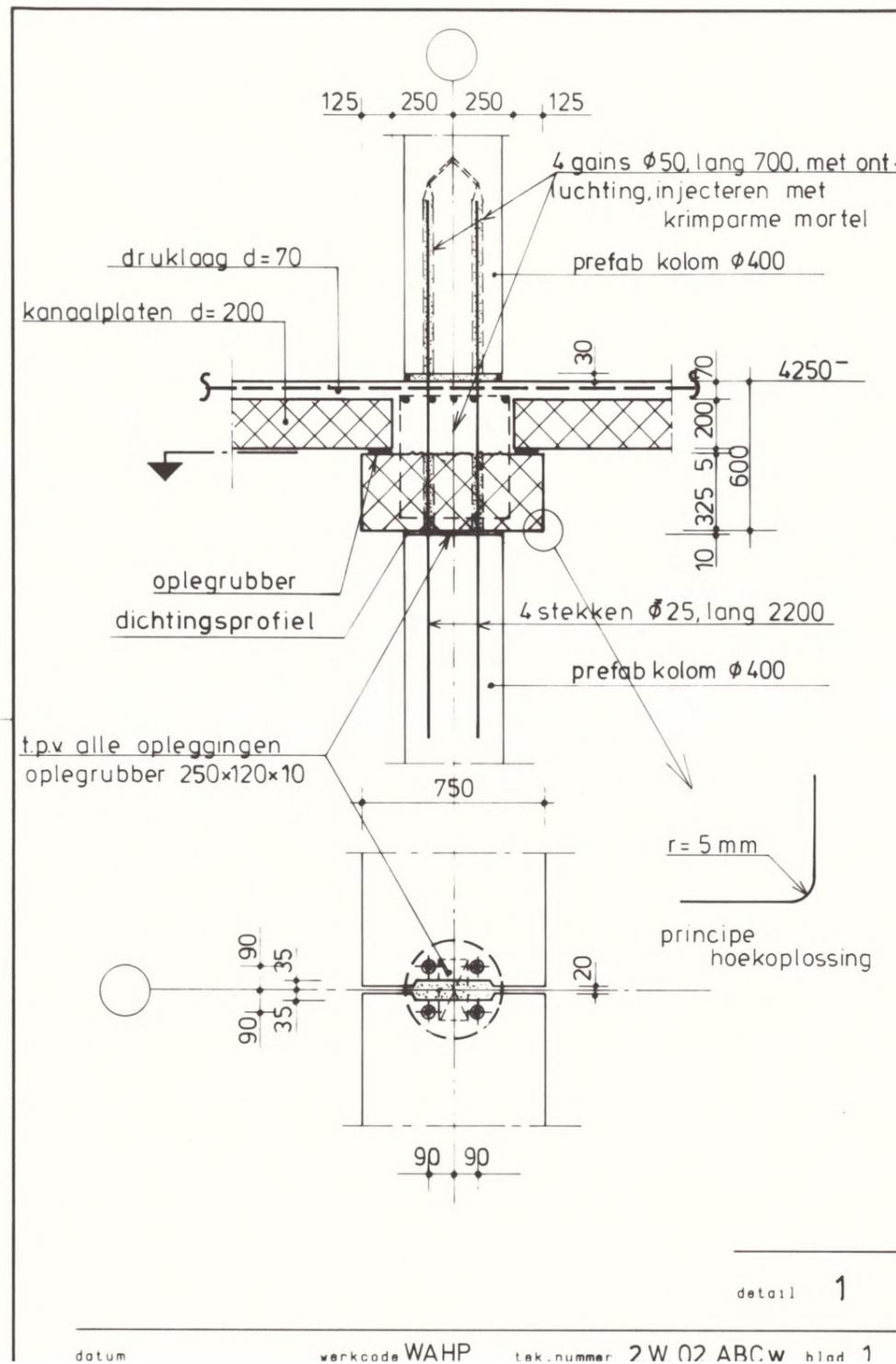
846 1.W.13

roof

case study - ground elevations section



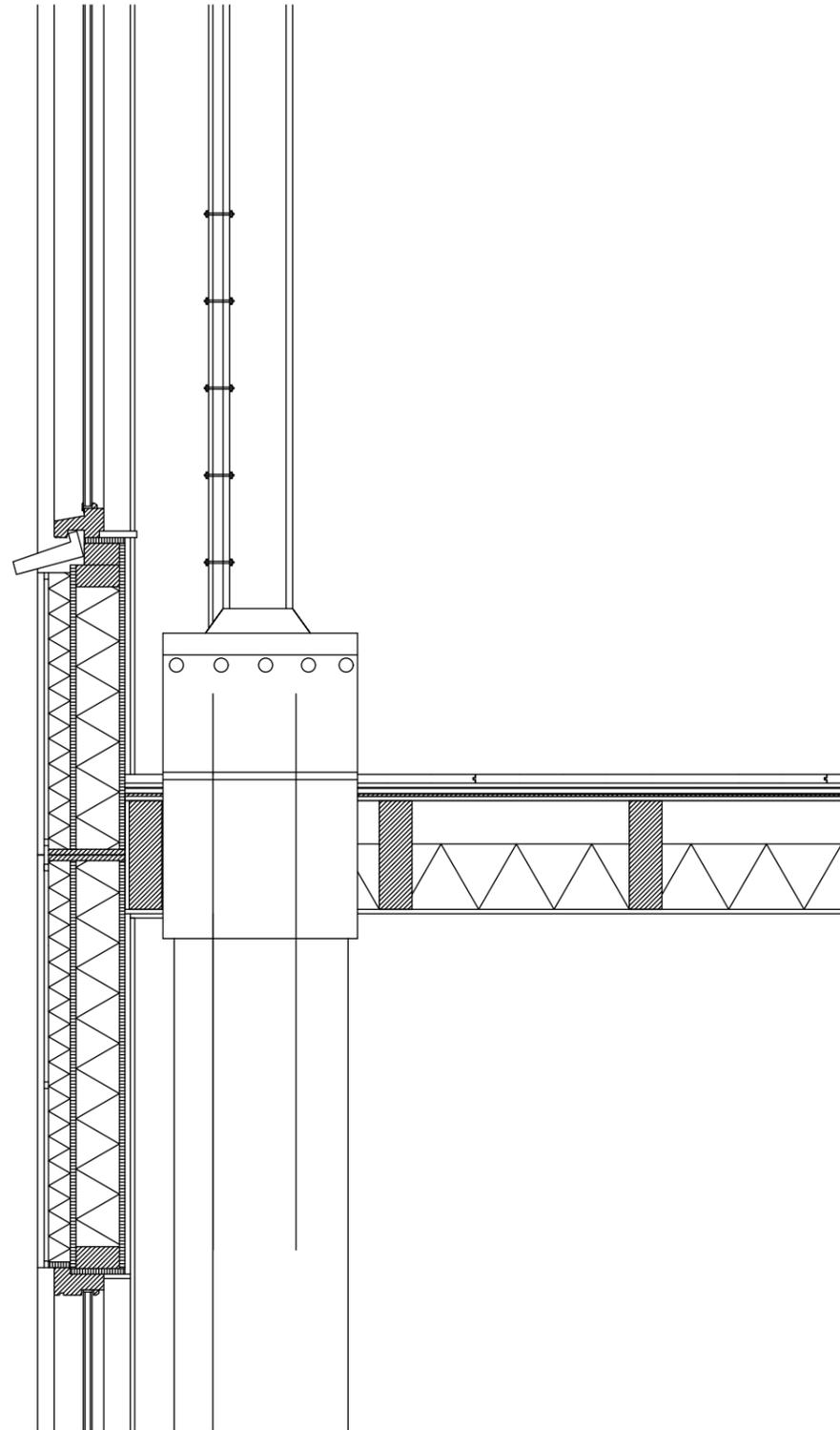


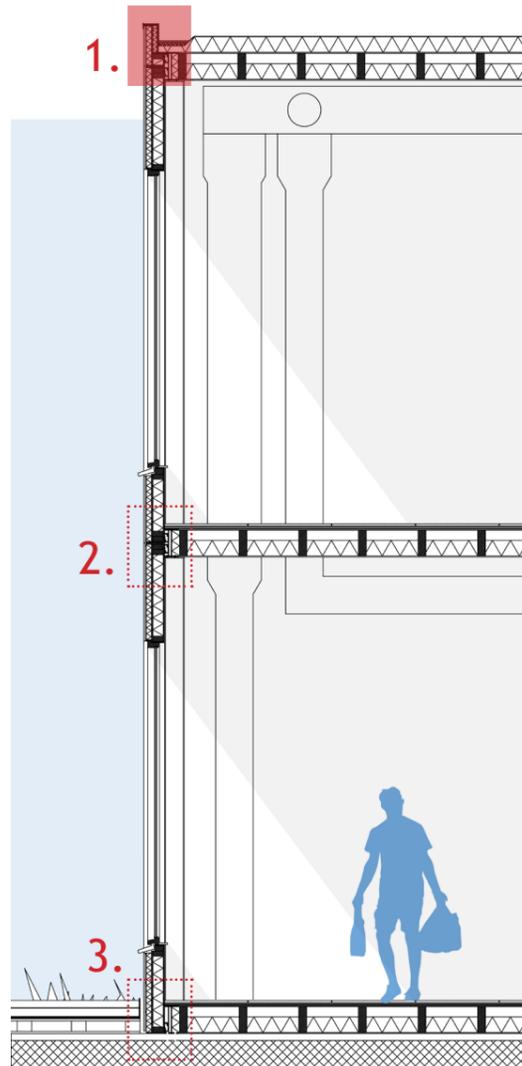


buckling of columns



column connection detail

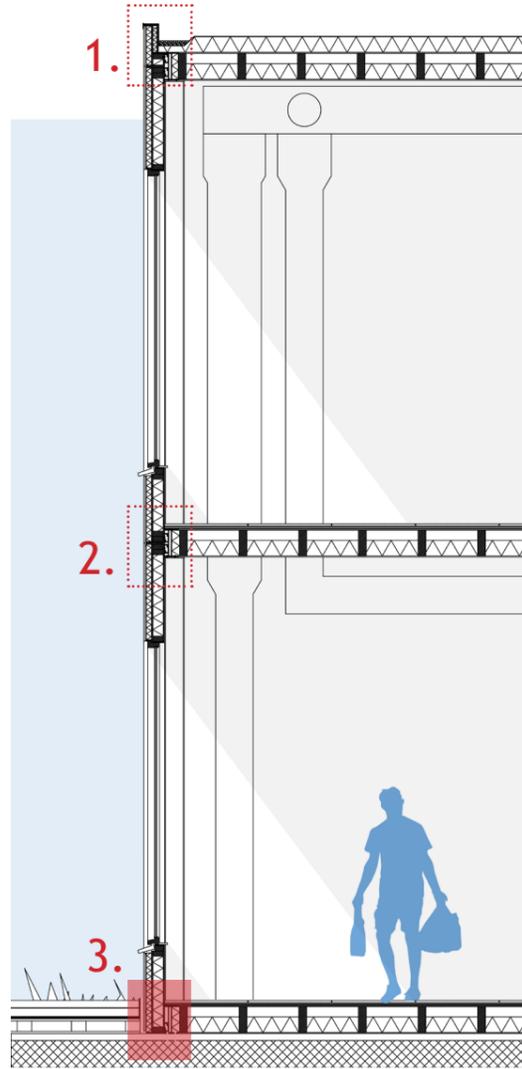




1.



wooden slat finish	15	mm
horizontal slats	10	mm
vapor permeable film	0,2	mm
insulation	50	mm
wooden cladding	13	mm
insulation	100	mm
wooden frame h.o.h. 500mm	100	mm
vapor barrier film	0,2	mm
wooden cladding	12,5	mm



3.

reuse of materials

demolished

ground floor

Concrete prefab slabs 710 m³

Concrete pressure layer 250 m³

first floor

Concrete prefab slabs 1640 m³

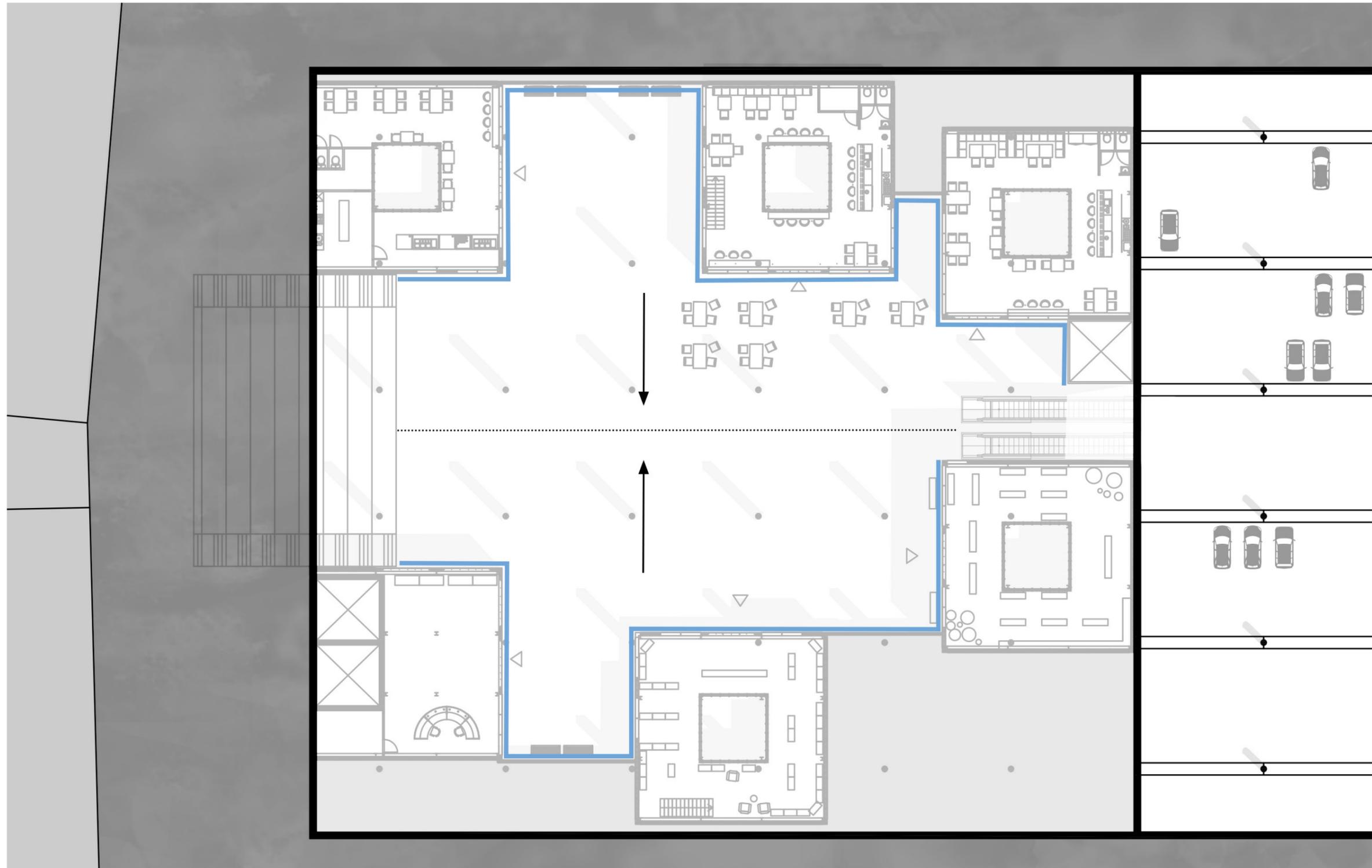
Concrete pressure layer 570 m³

roof

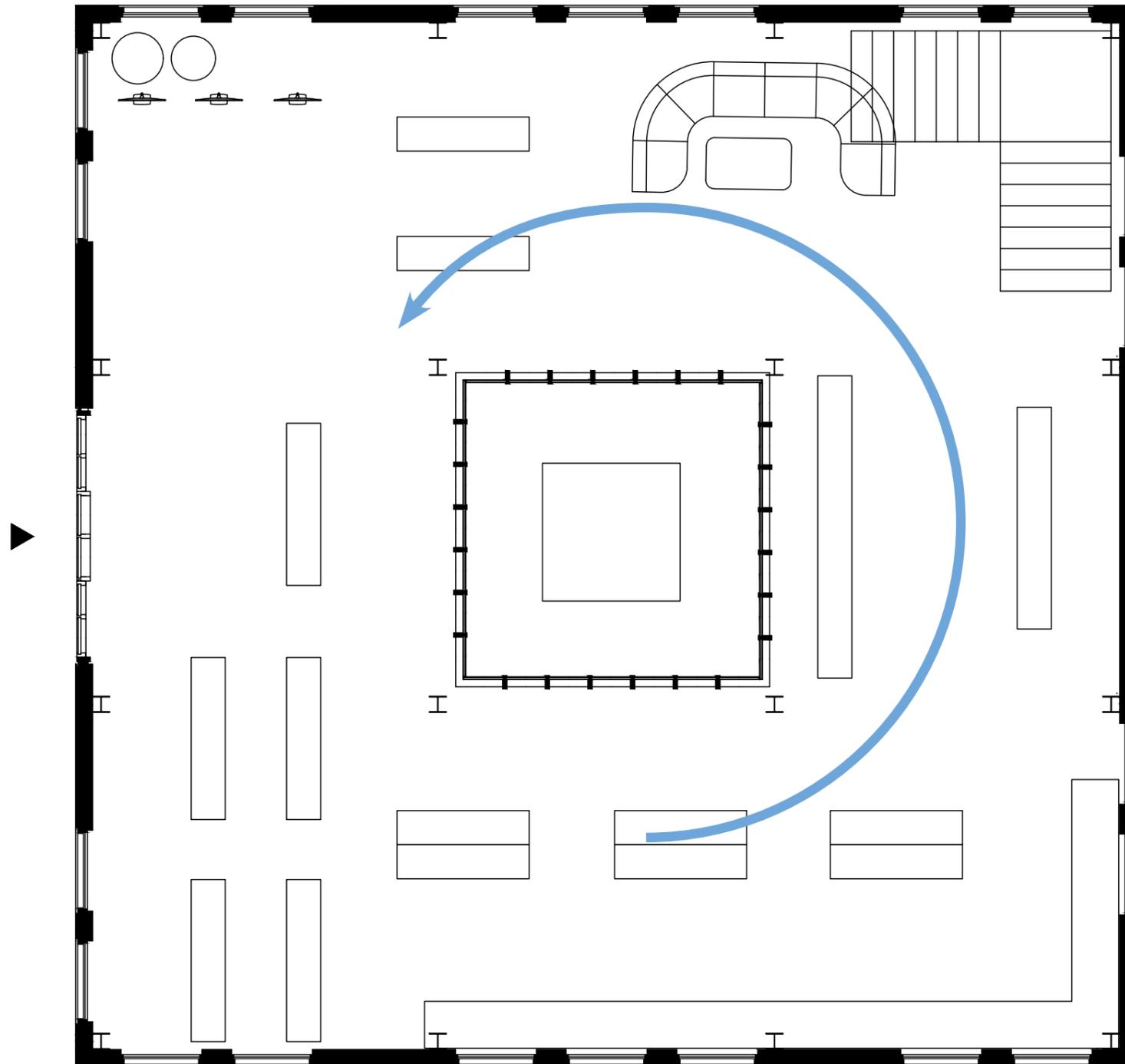
Steel corrugated sheet 6 m³

Steel IPE profiles 1482 m

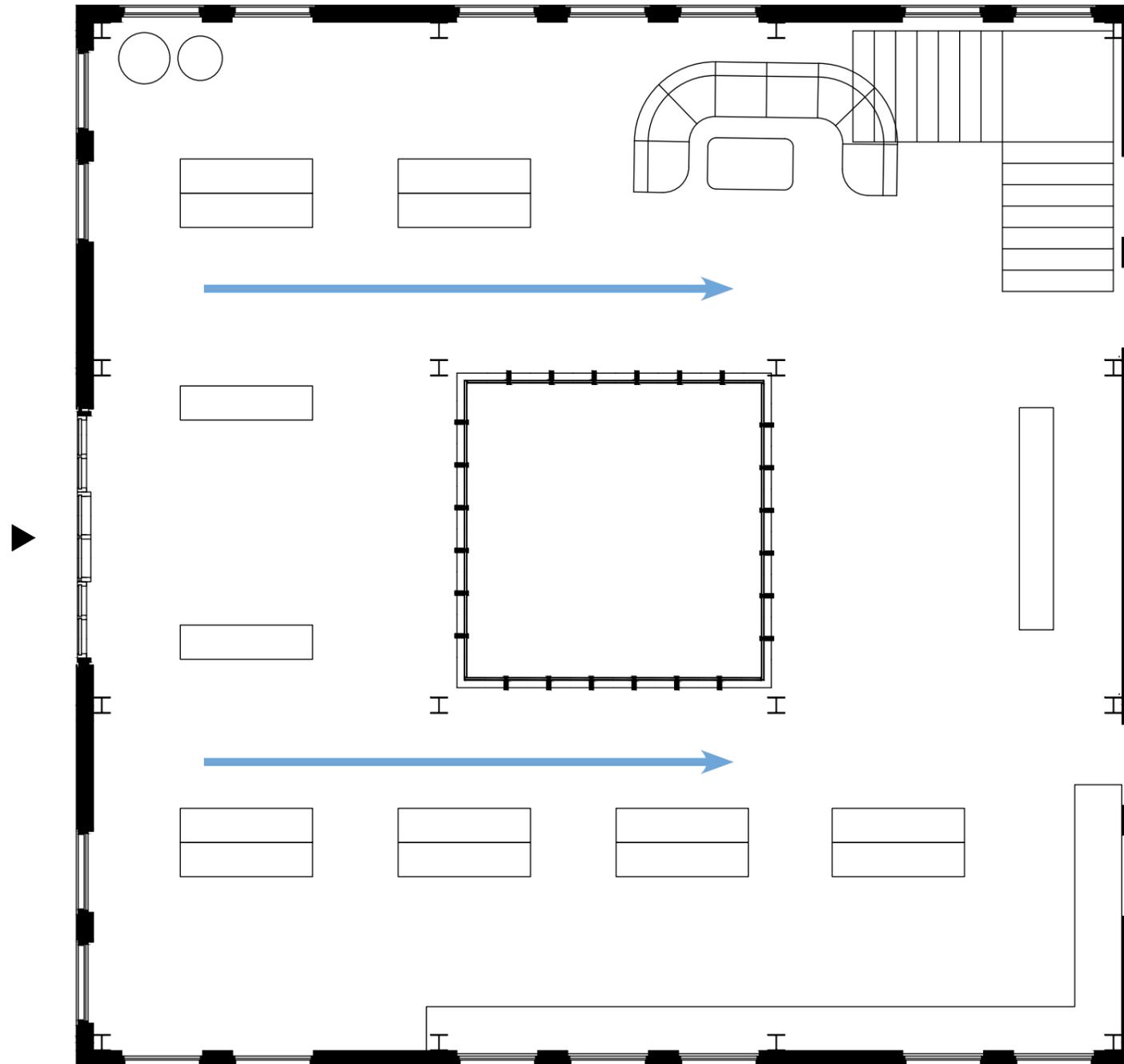
Water management



Caring Center - shop owned products



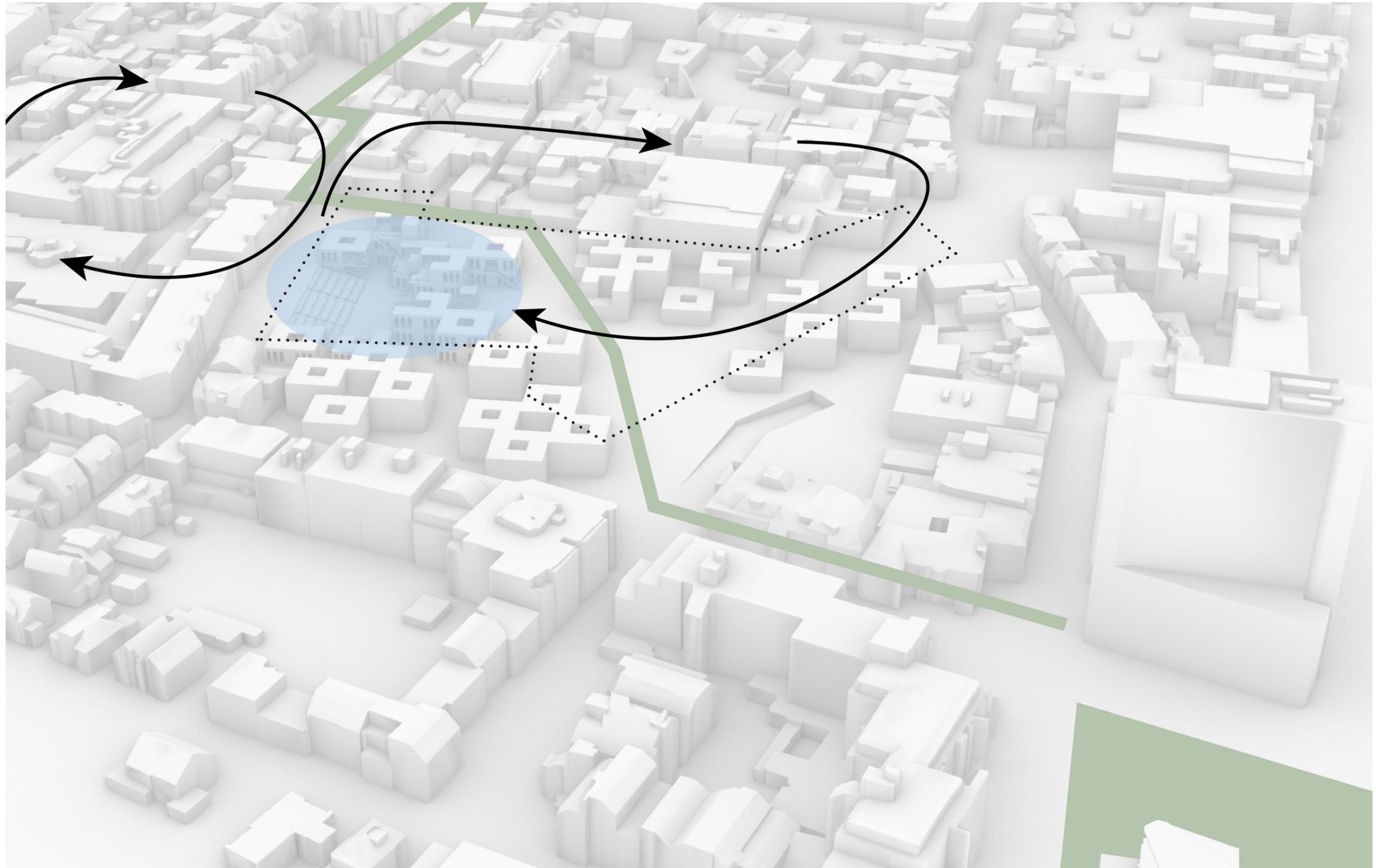
Sharing Market - shop shared products



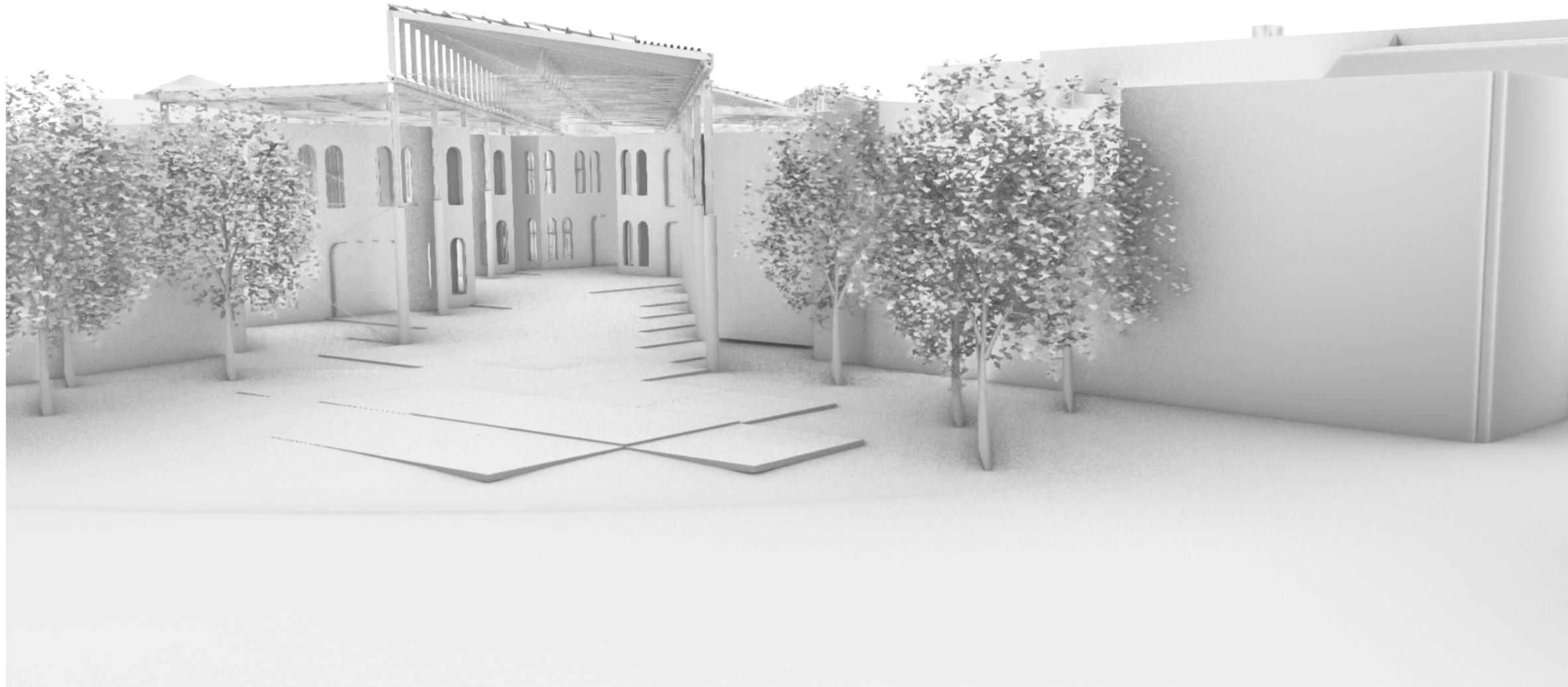
ground floor elevation new design



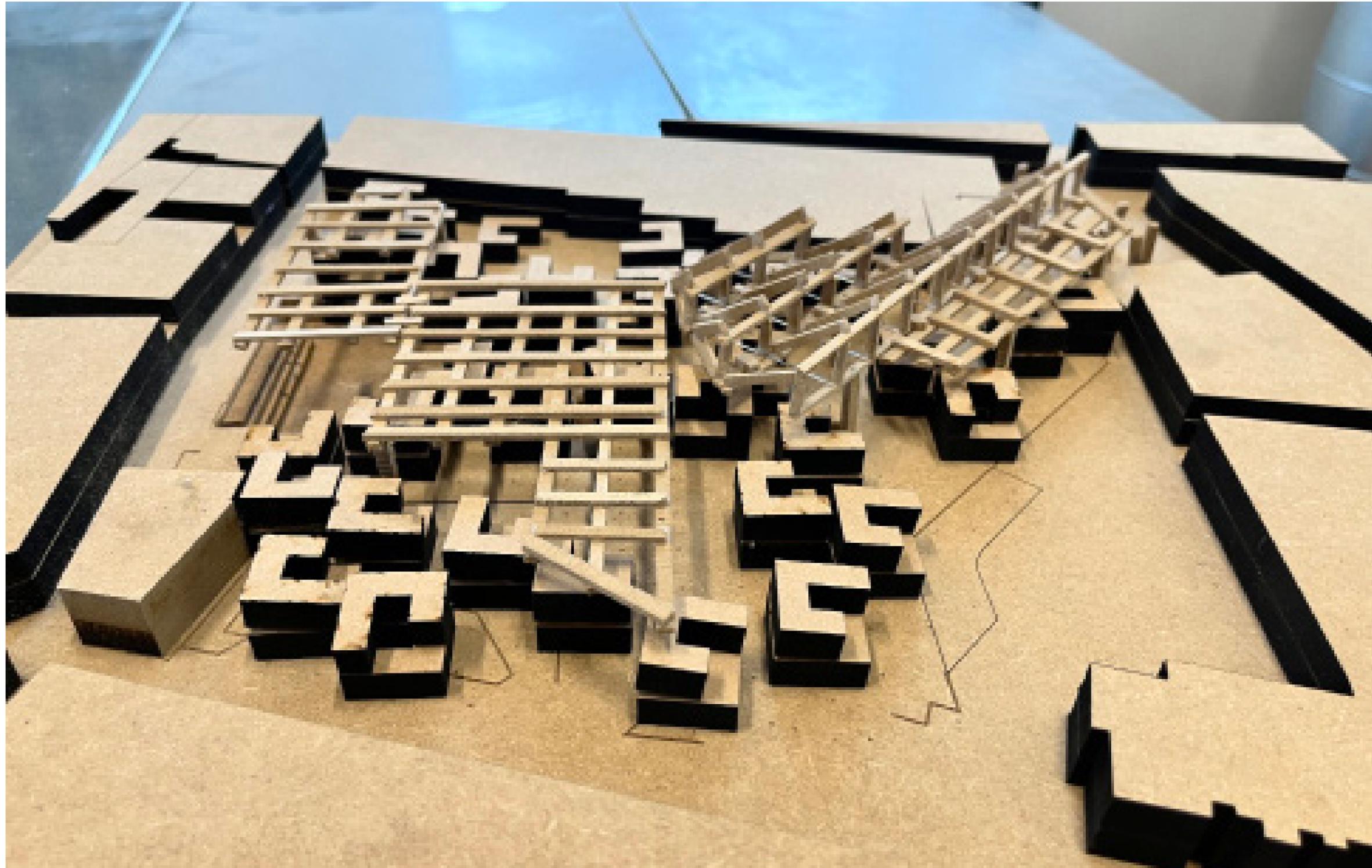
commercial 8 and green



Main entrance facade



Pictures model



Pictures model

