

Dwelling graduation studio

the informal care

society:

multigenerational living

Tutors:

Ir. T.W. Kuper

Ir. P.S. van der Putt

Ir. F. Adema

Delegate of board of examiners: Ir. M.H. Arkesteijn

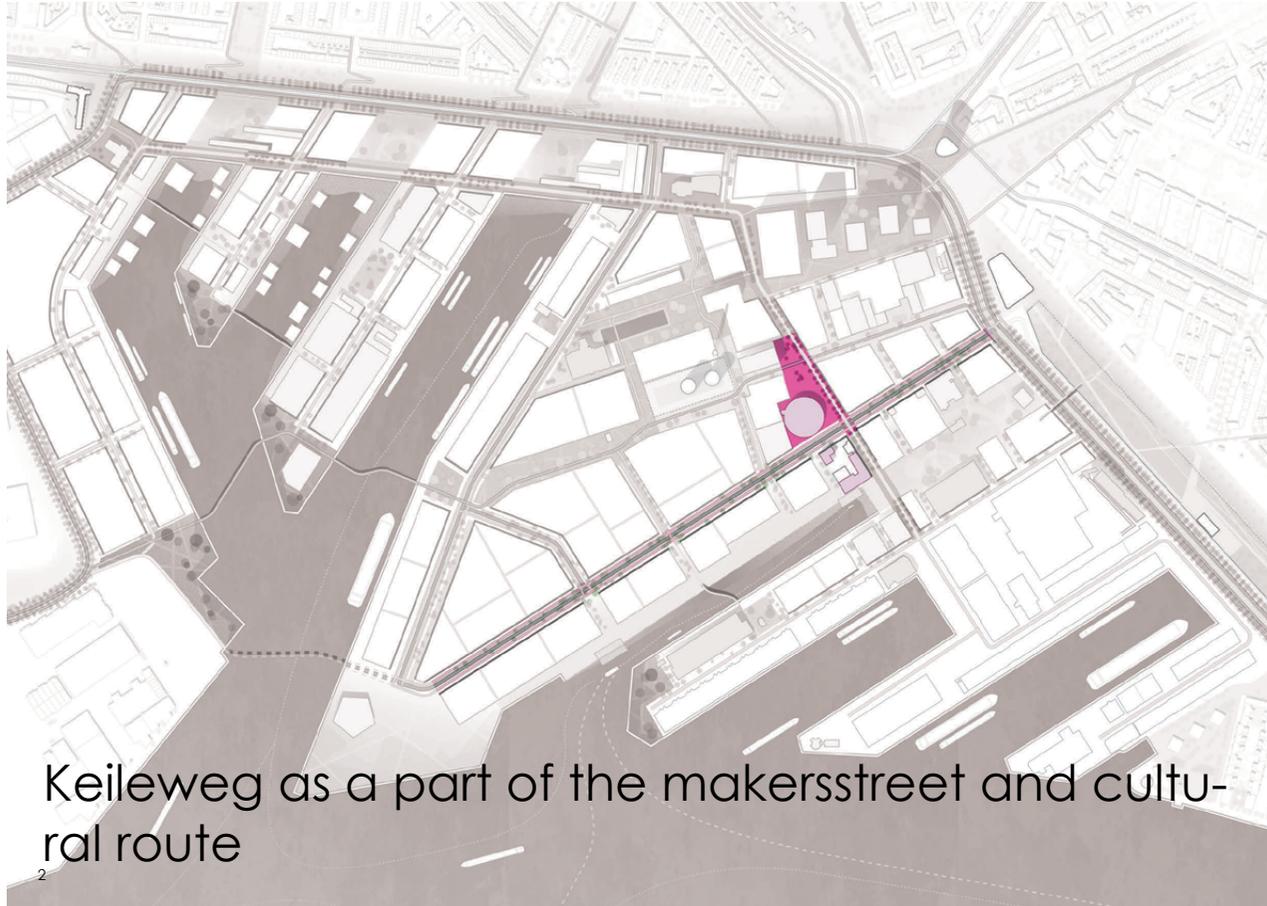
MAARTEN JELLEMA - 4227158



KEILE- KWARTIER



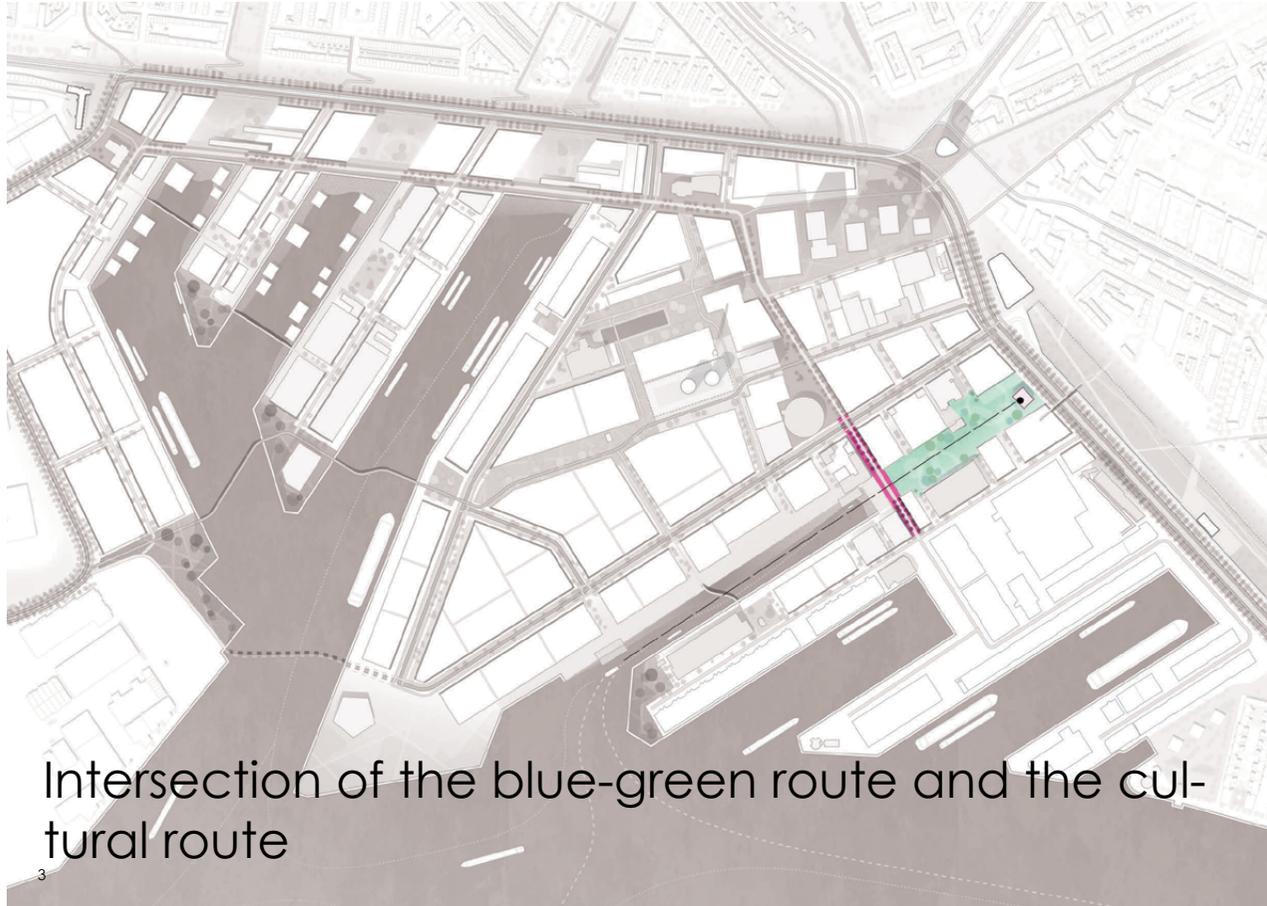
CONTEXT



Keileweg as a part of the makersstreet and cultural route

2

CONTEXT



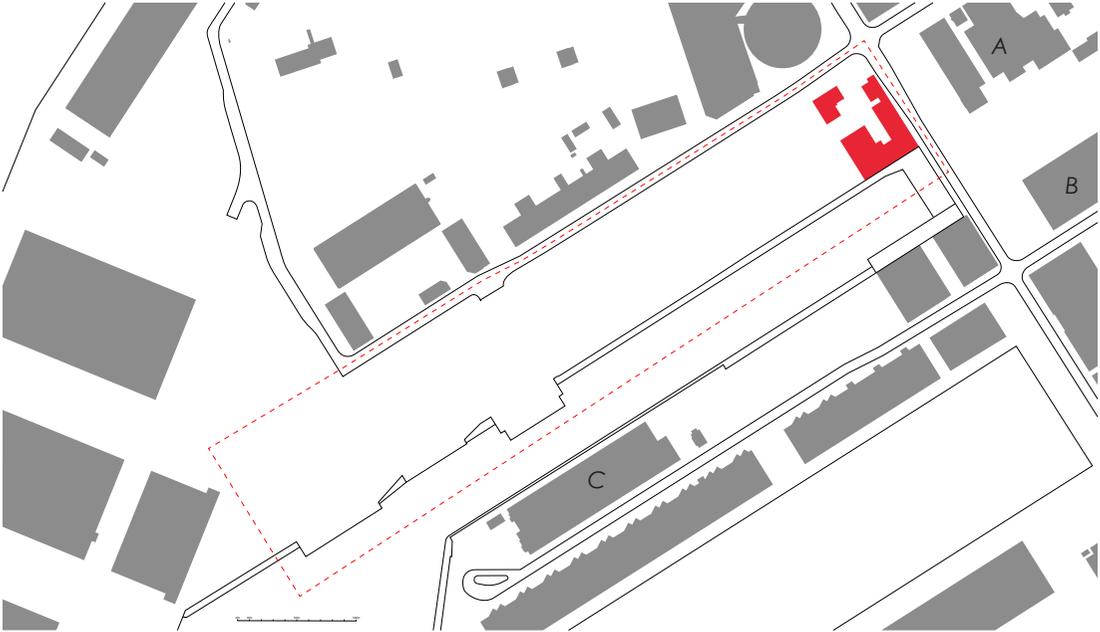
CONTEXT



SITE

● EXISTING BUILDING

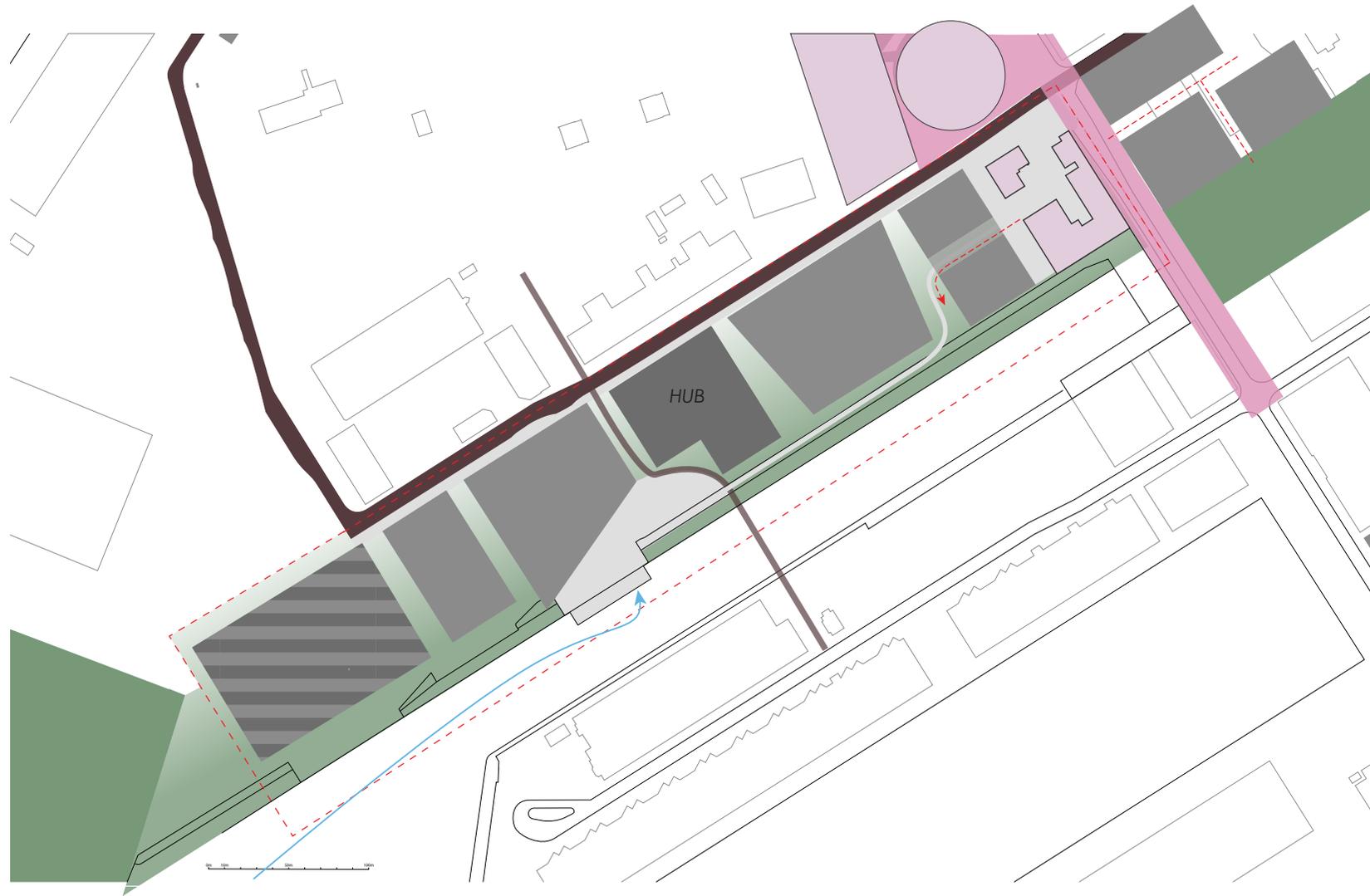
The existing building on the corner of the quadrant will remain. The building has a characteristic facade and an industrial look which fit the surroundings. The building is used by Foundation Kunst&Complex. This foundation was founded in 1981 and moved here in 1987. The building consists of 26 workshops for several artists.

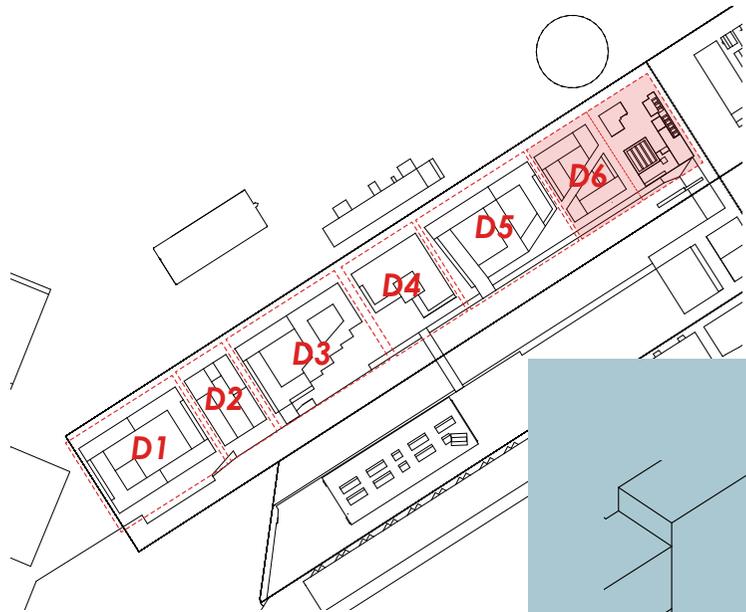


STICHTING KUNST & COMPLEX

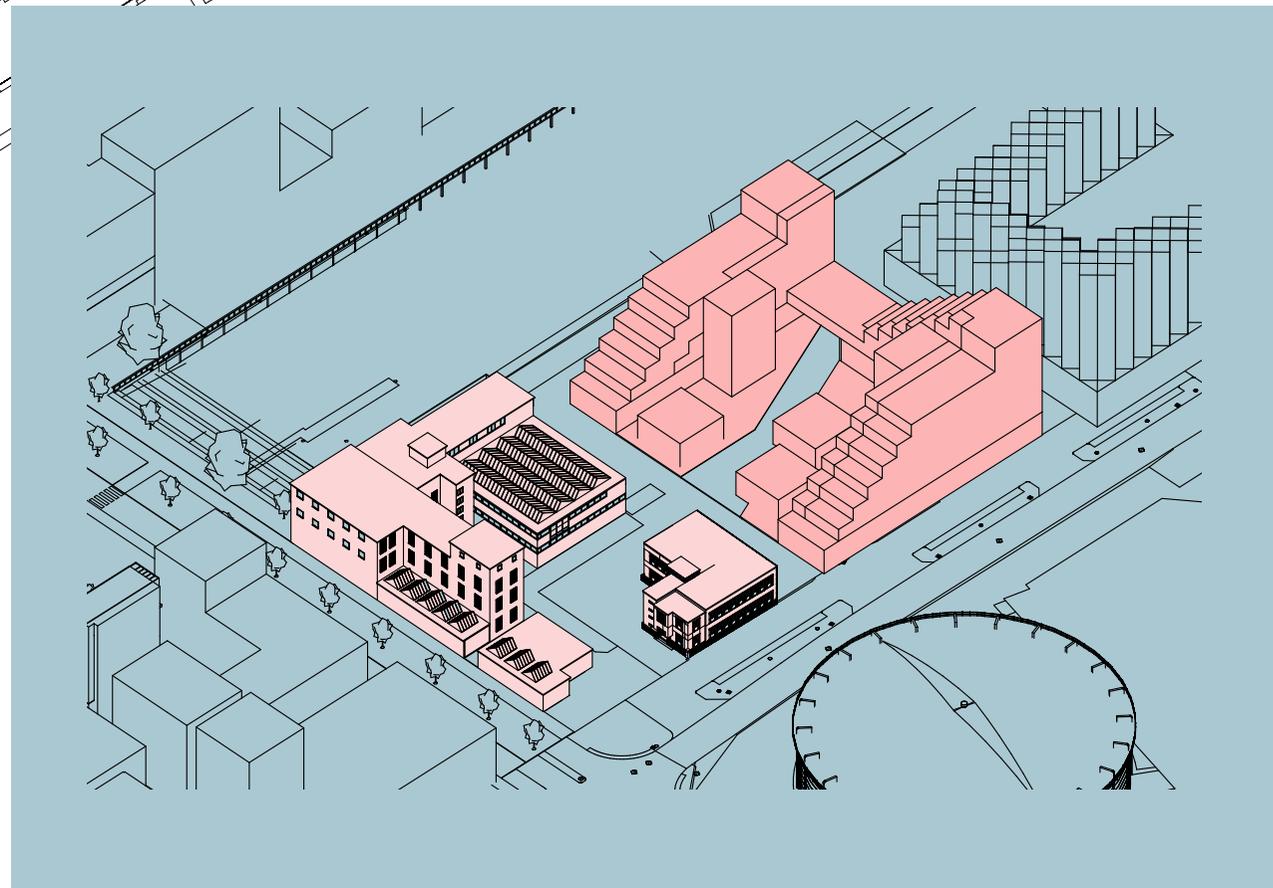


SITE

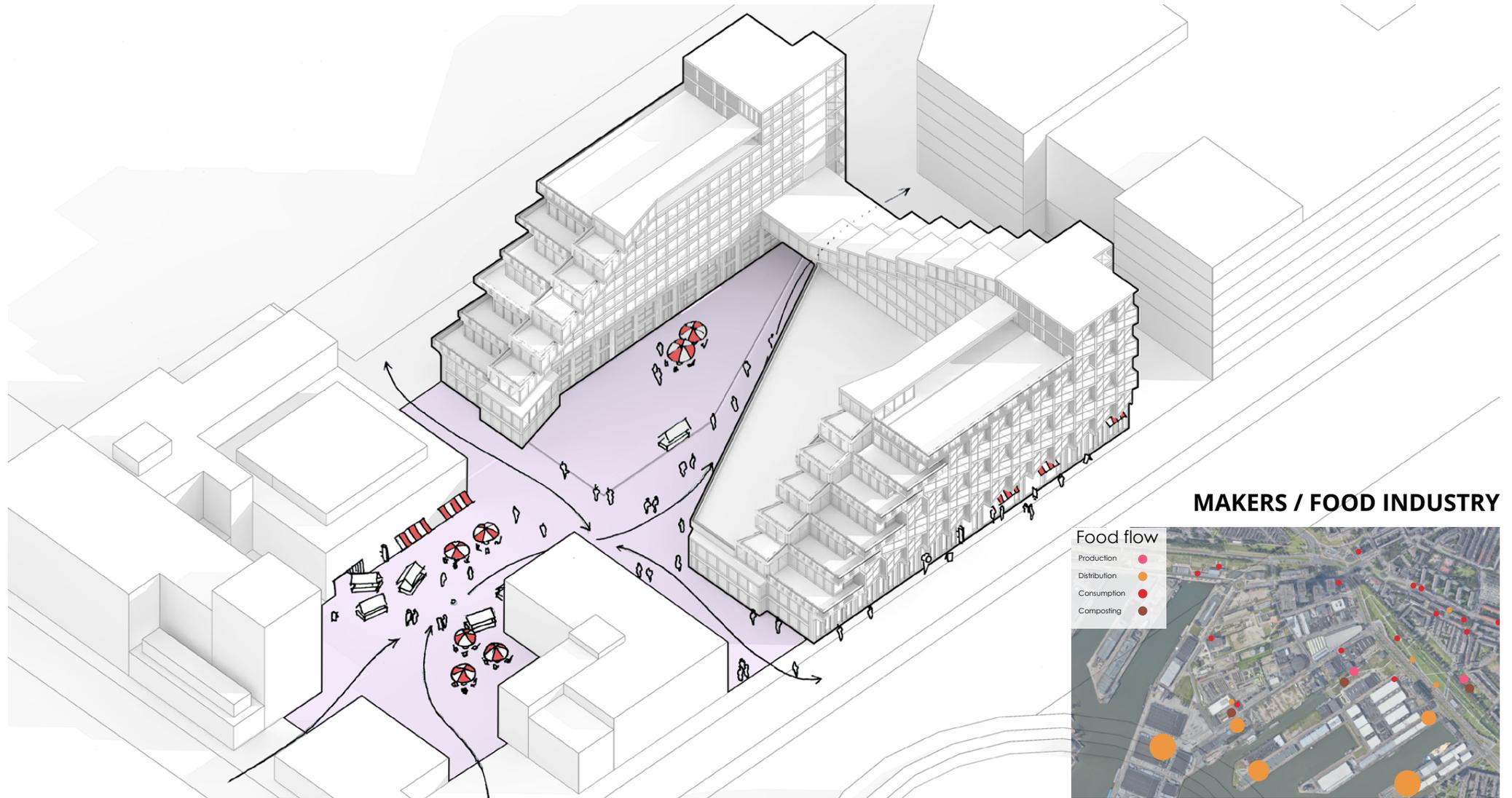




BUILDING BLOCK - QUADRANT D



RELATION FACTORY BUILDING



USE OF THE PLAZA

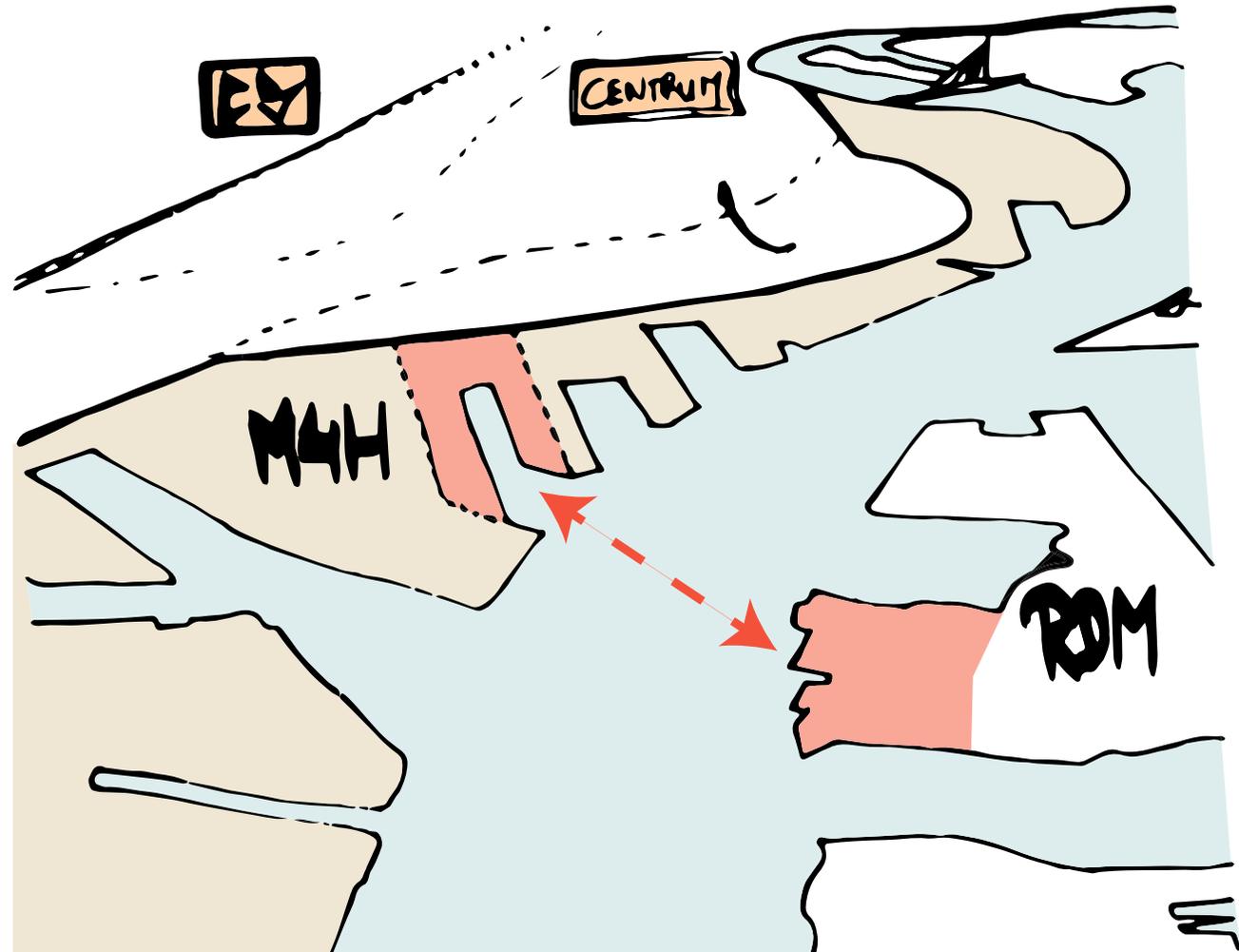


- My design will respond to the political developments, thus meeting a need that arises from society / changing governmental policies.
- A community where elderly and students take care of each other: co-existence of two different generations
- Students from the RDM Campus and the city of Rotterdam and surrounding cities.

Challenge

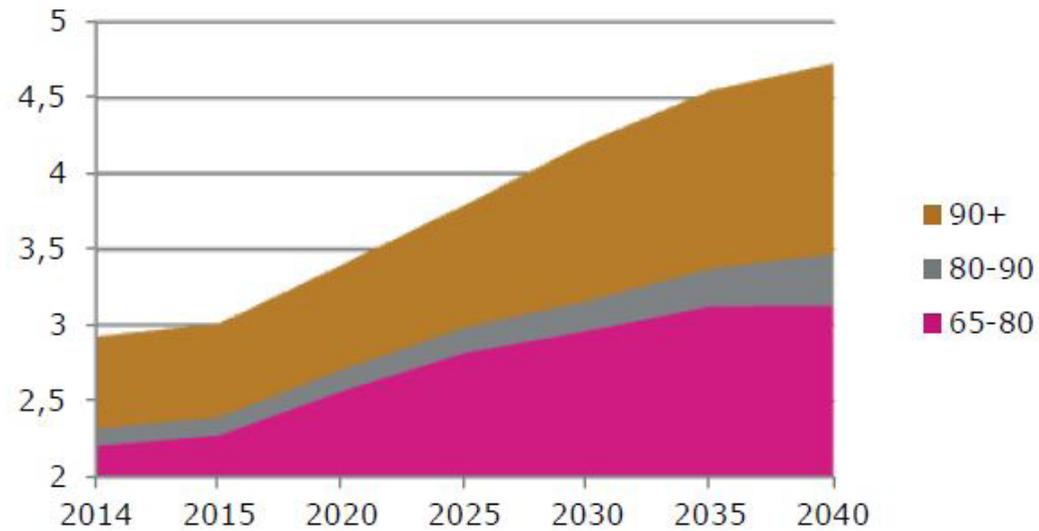


- My design will respond to the political developments, thus meeting a need that arises from society / changing governmental policies.
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Designing for the elderly

Aantal 65-plussers in Nederland

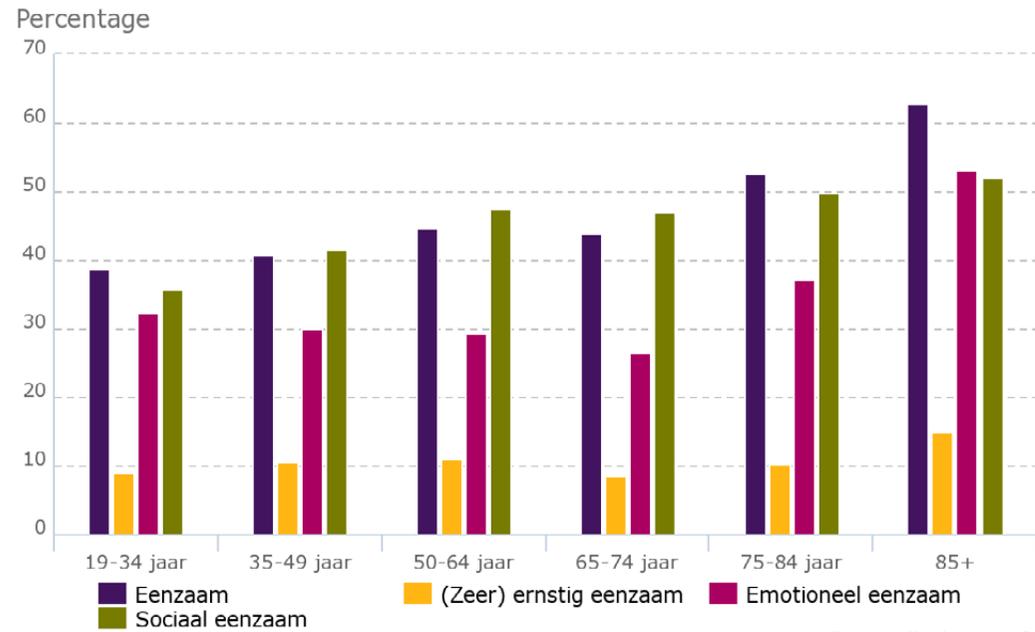


- Bron: Demografie van de vergrijzing, Joop Garssen, 2011



Elderly and loneliness

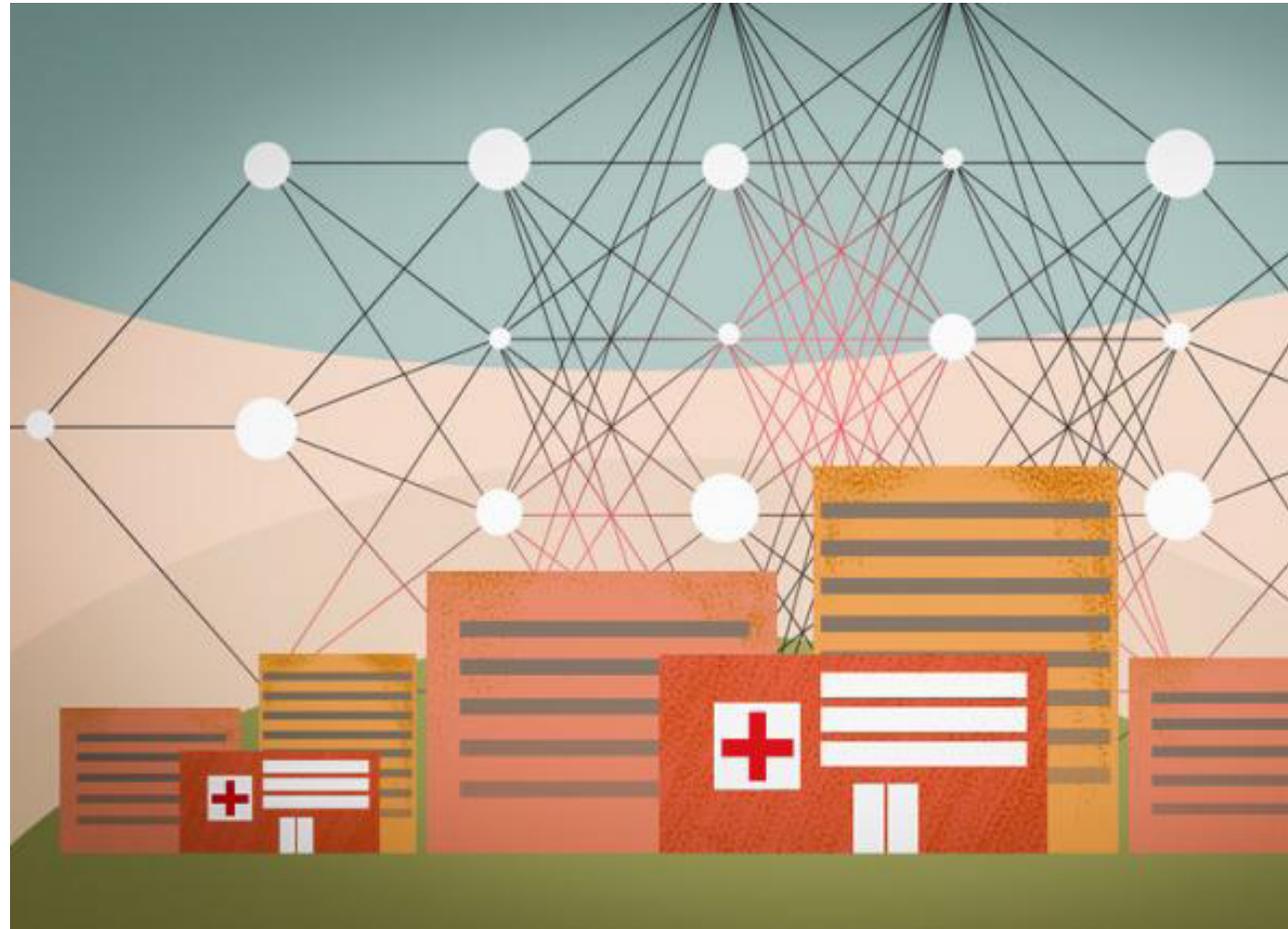
Eenzaamheid naar leeftijd in 2016



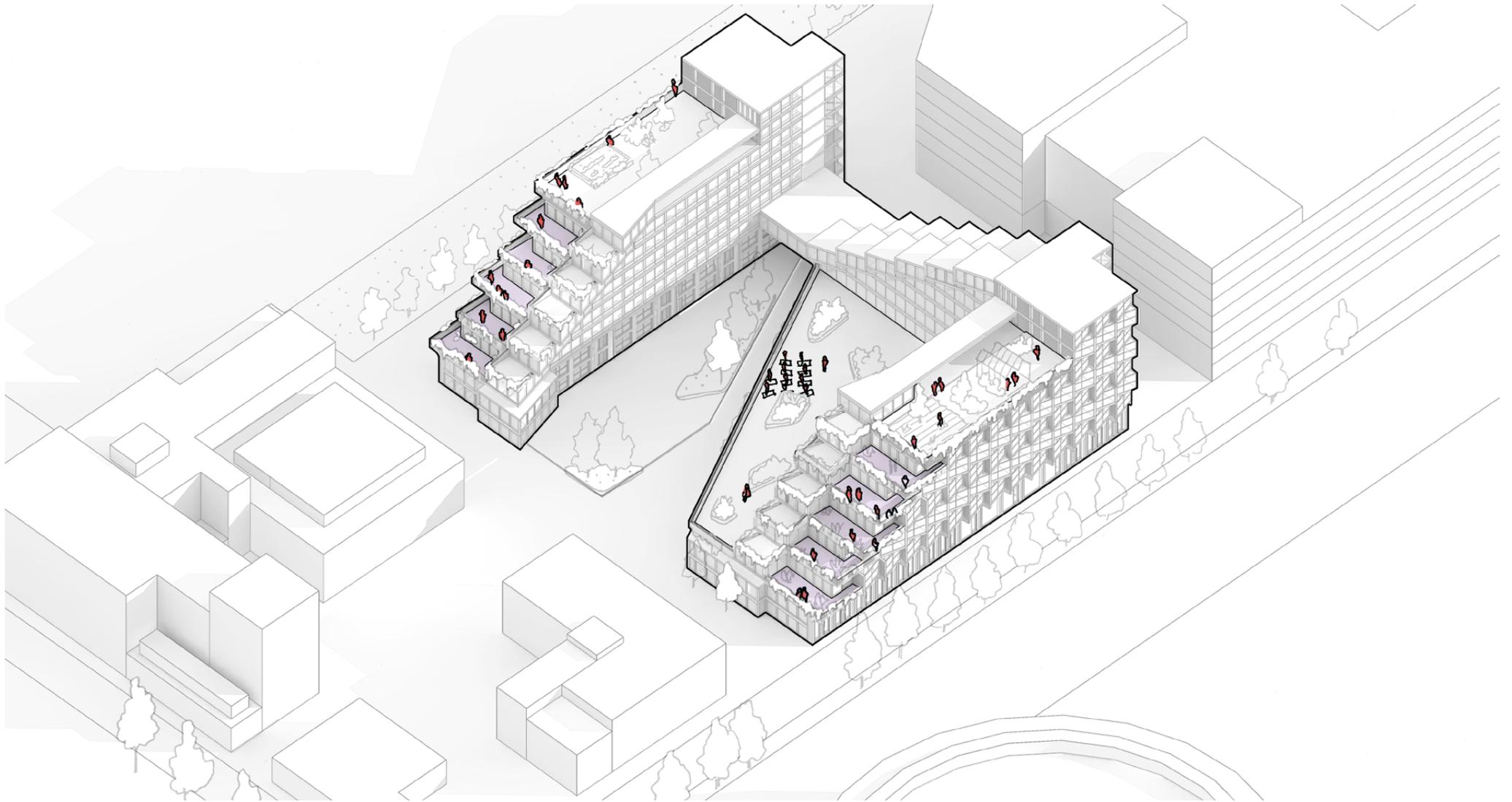
Interventions and matching strategies

- **Compensators:** will actively look for opportunities to participate
- **Hopeful people:** are much more passive and wait for the situation to change
- **Dependents:** hold on to one single social contact
- **Outsiders:** emphatically turn away from society

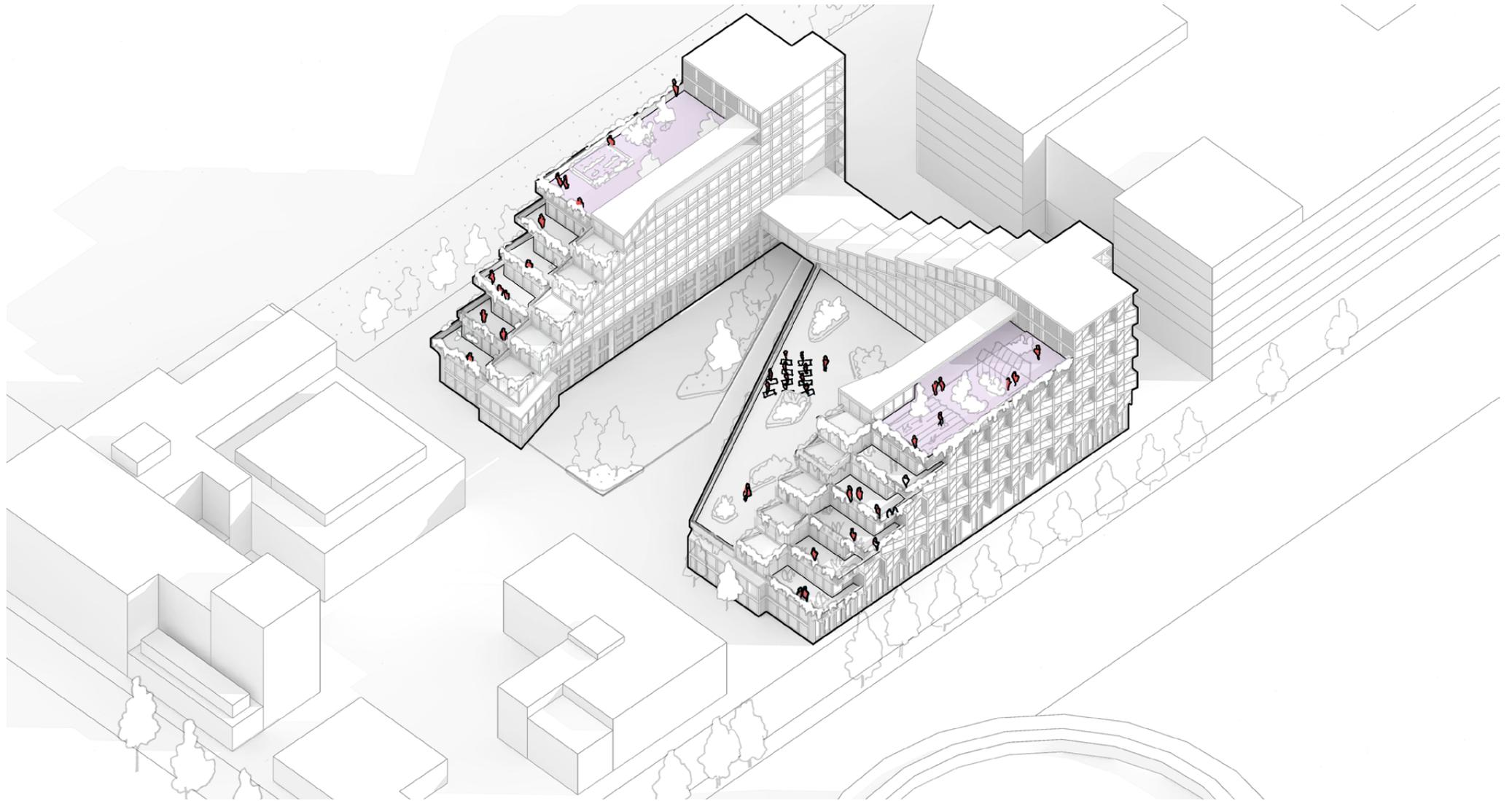
Social isolation among the elderly



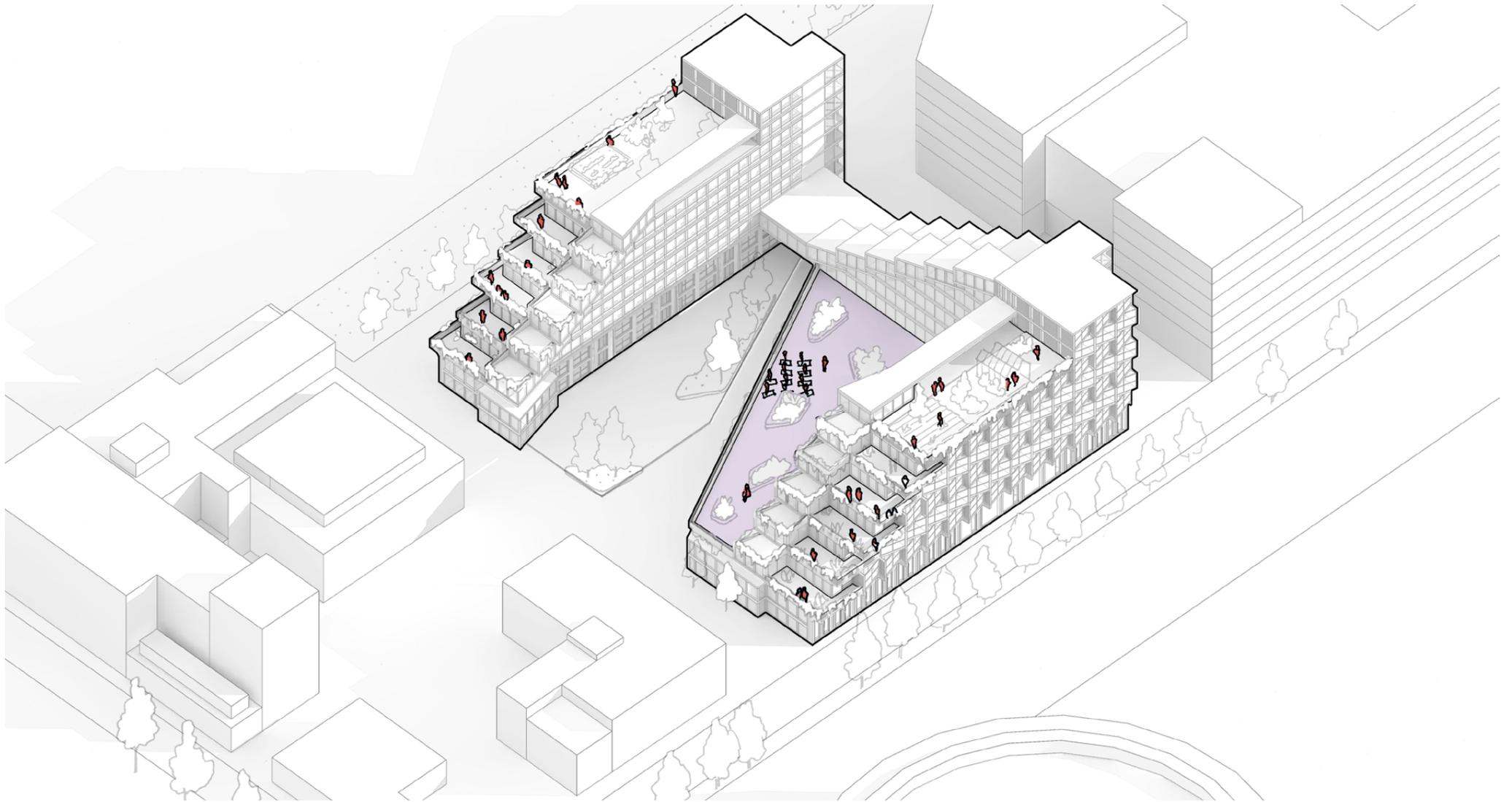
DIFFERENT ZONES OF COLLECTIVITY: ZONE 1



DIFFERENT ZONES OF COLLECTIVITY: ZONE 2



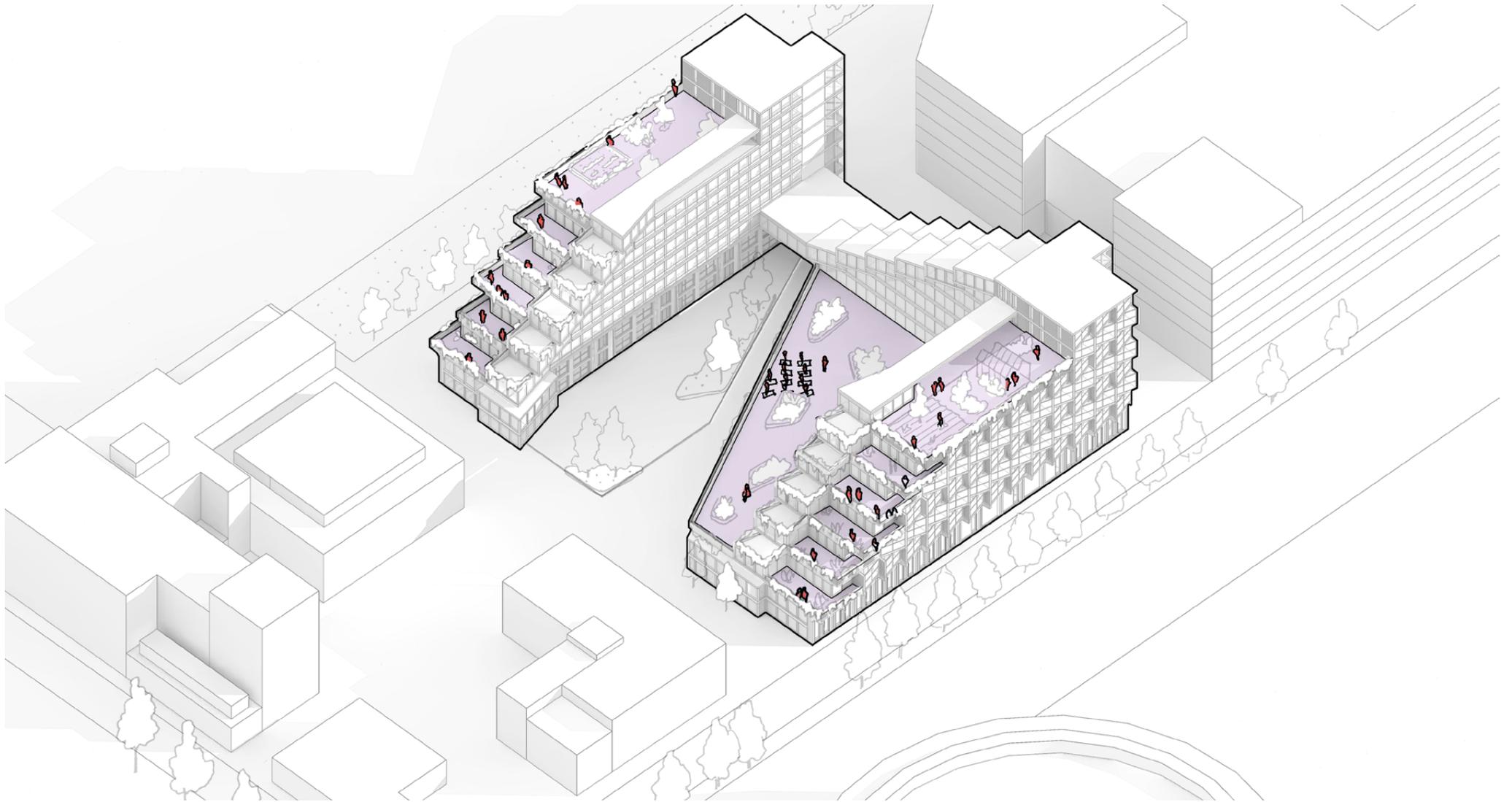
DIFFERENT ZONES OF COLLECTIVITY: ZONE 3



IMPRESSION COLLECTIVE COURTYARD



ZONES OF COLLECTIVITY - DIFFERENT IN THEIR SOCIAL INTENSITY AND WAYS OF INTERACTING



Social needs (survey)

- Independence
- Dignity
- Meaning - Being part of society
- Daily structure
- Privacy (in relation to the students)
- Social cohesion between residents

Architectural toolbox

Independence:

- facilities within walking distance
- preservation of autonomy

Dignity

- not pushed away in an isolated environment
- living with like minded people (socially active)
- mix with younger people

Meaning (zingeving)

- self-esteem
- self-development
- maintaining health

Daily structure

- guidance for daily activities
- accessible collective space
- public functions within building
- exercise facilities (fitness, swimming etc.)

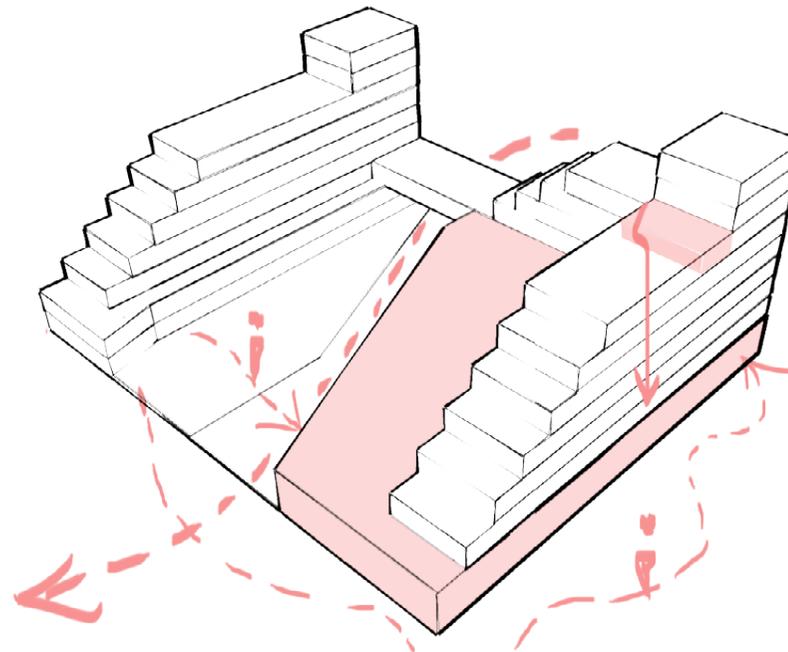
Privacy

- privacy in relation to other residents (elderly)
- privacy in relation to the students
- privacy in relation to informal care
- different zones of privacy

Social cohesion

- stimulating social contact between residents on the same floor
- stimulating social contact within the building
- weaving: sporadic opportunities such as brief / unplanned meetings
- cross-linking: deeper relationships with others

INDEPENDENCE



DIGNITY

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Daily structure

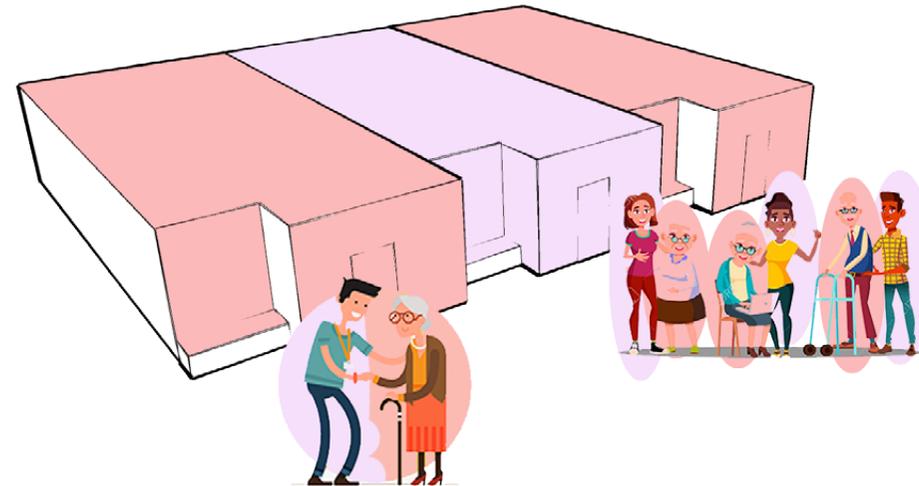
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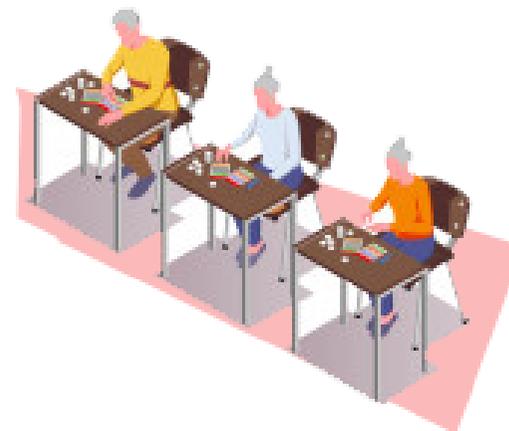
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MEANING



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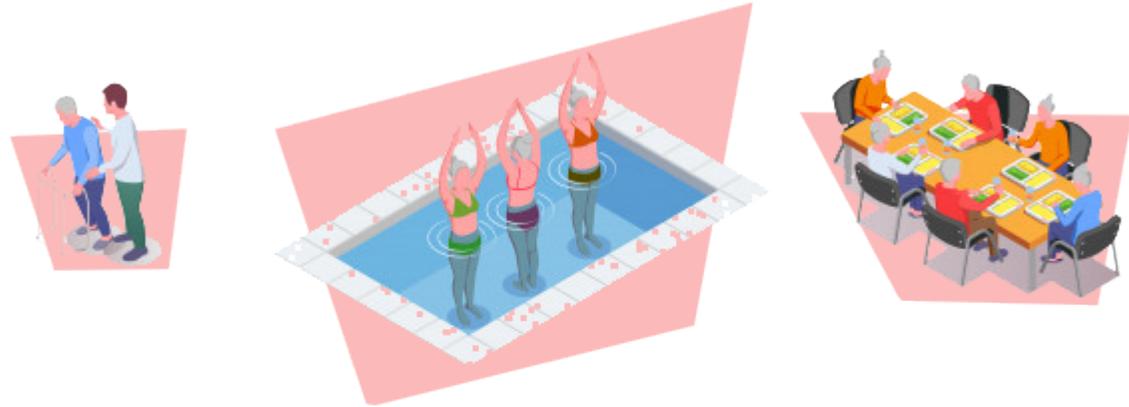
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DAILY STRUCTURE



Architectural toolbox

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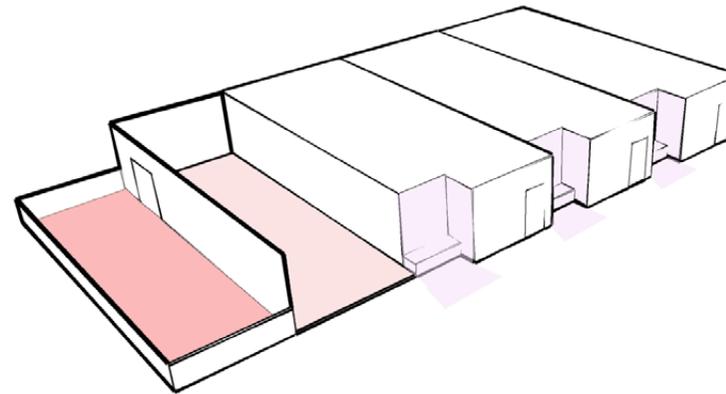
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PRIVACY



SOCIAL COHESION

Architectural toolbox

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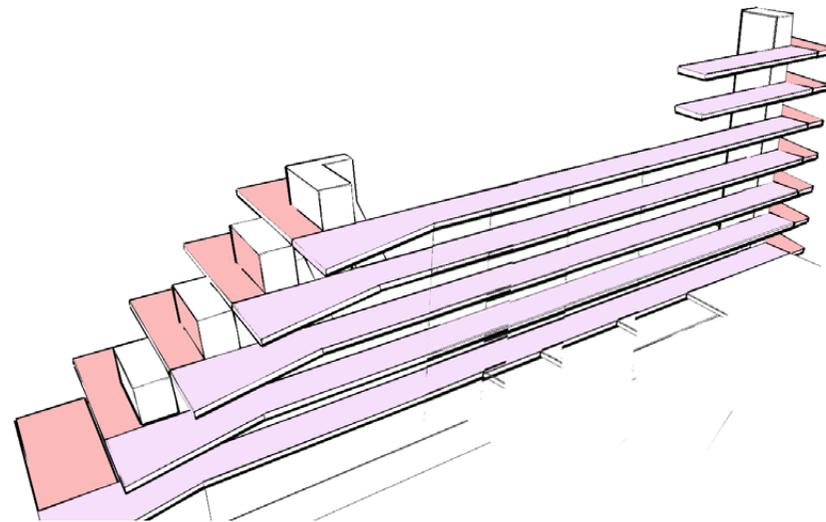
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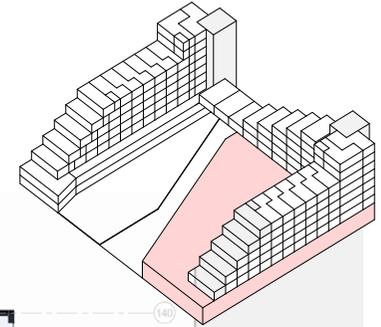
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GROUND FLOOR / PLINTH



IMPRESSION SWIMMINGPOOL



IMPRESSION INTERIOR (INNER STREET)



IMPRESSION INTERIOR (INNERSTREET)



Social contacts and everyday encounters

According to Tanja Blokland (Blokland, 2008) it is useful to make a distinction between different ways of meeting:

- weaving: sporadic opportunities such as a brief / unplanned meetings
- cross-linking: deeper relationships with others



- weaving

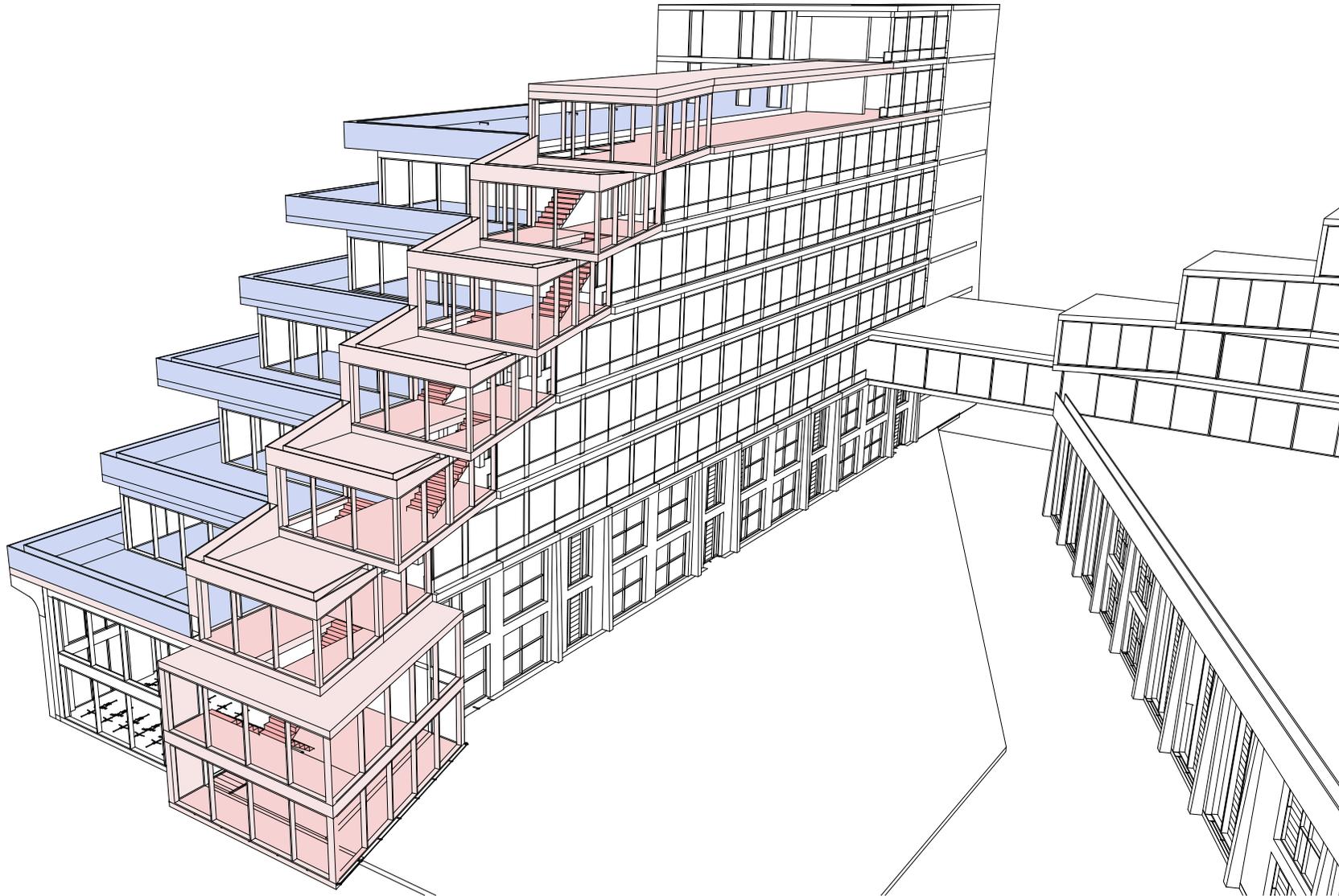


- cross-linking

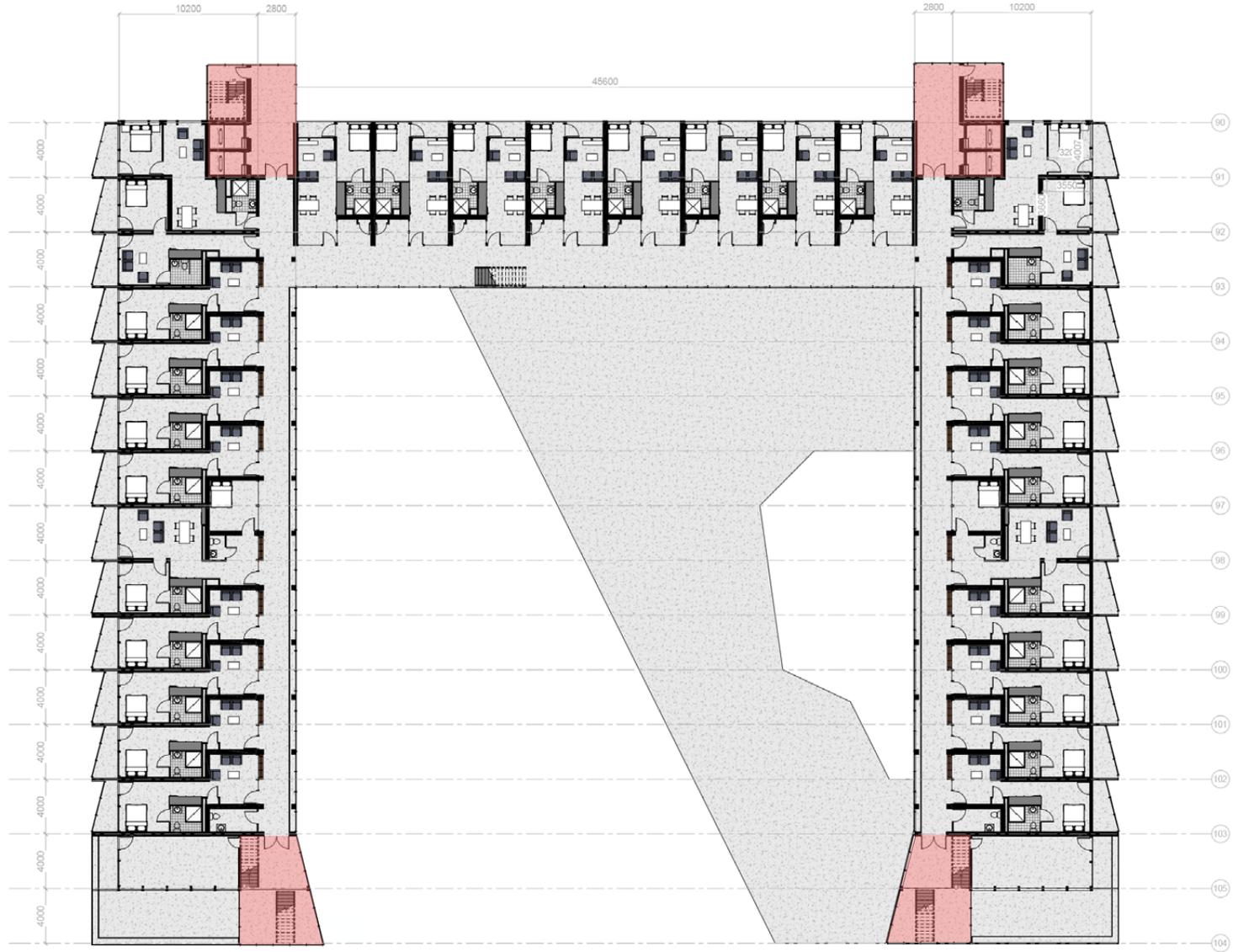
GROUND FLOOR / PLINTH



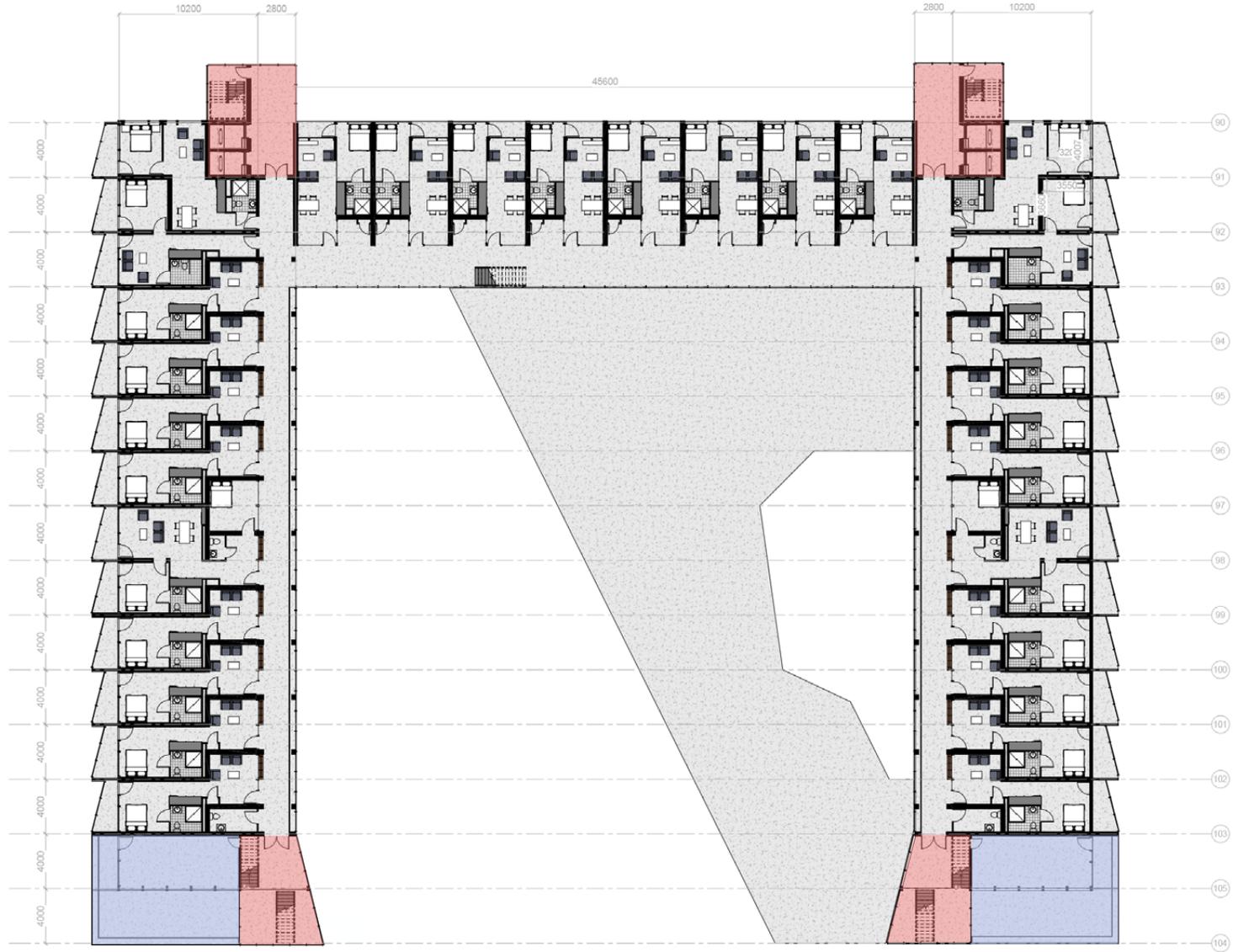
STEPPED STAIRCASE TO ROOFGARDEN



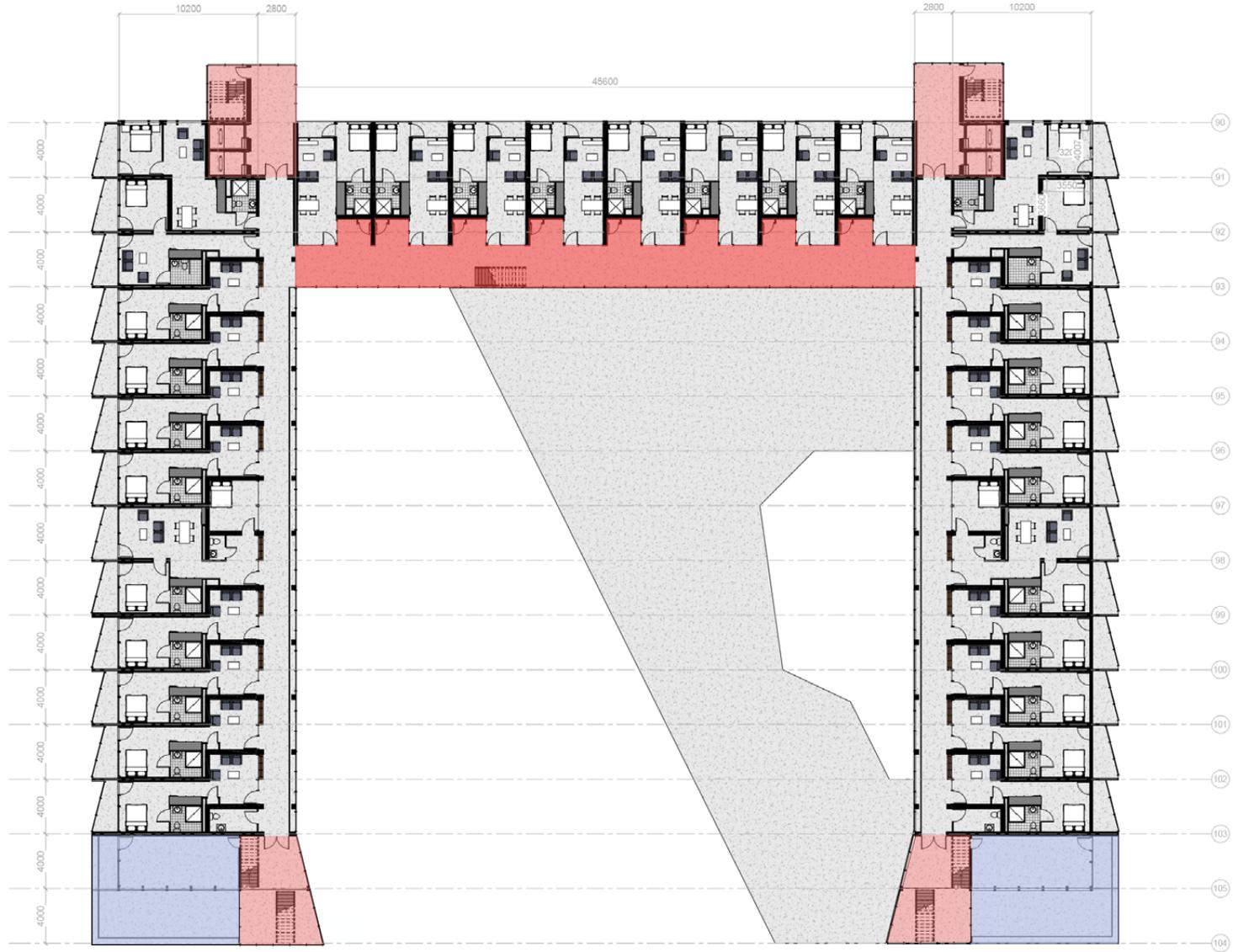
SECOND FLOOR



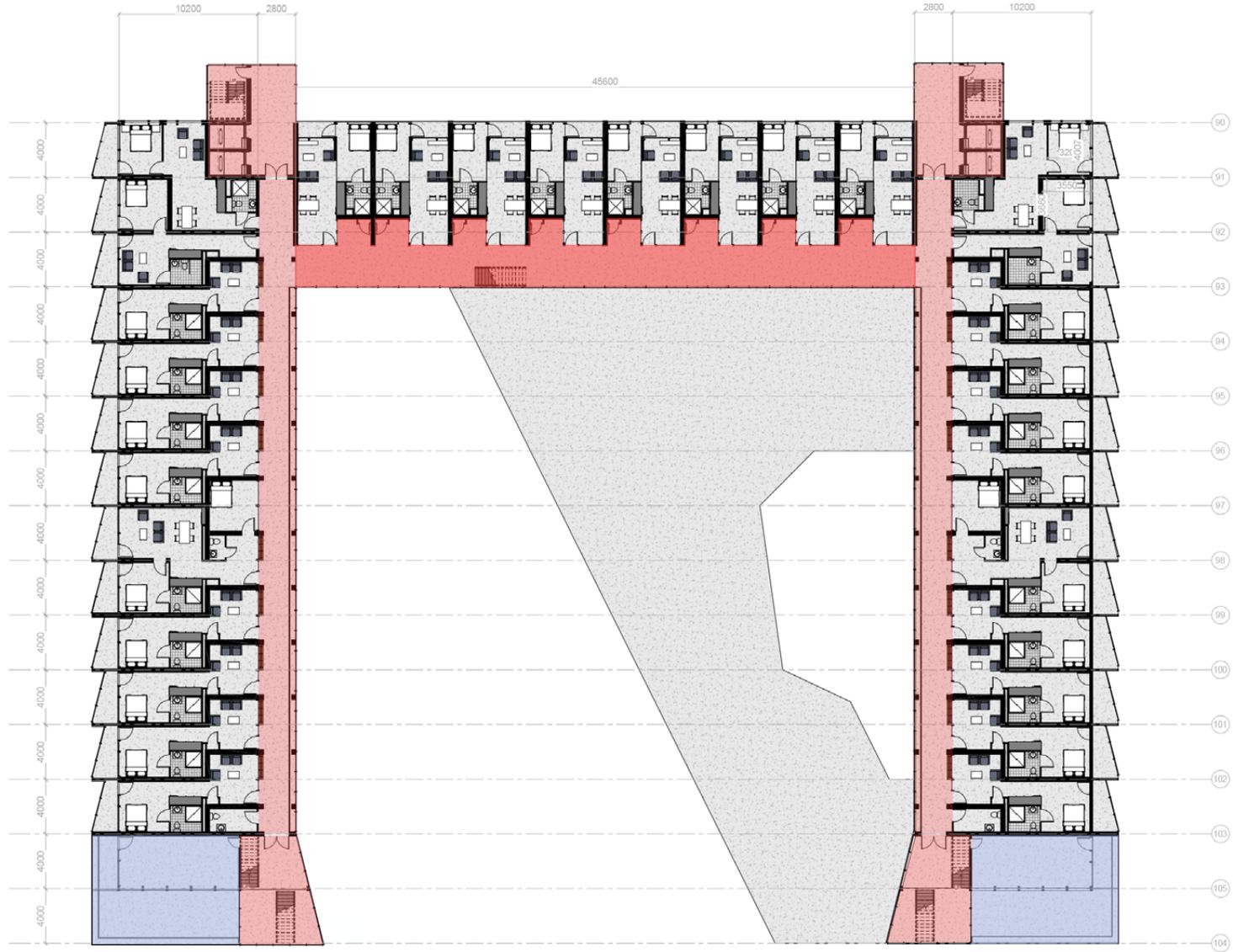
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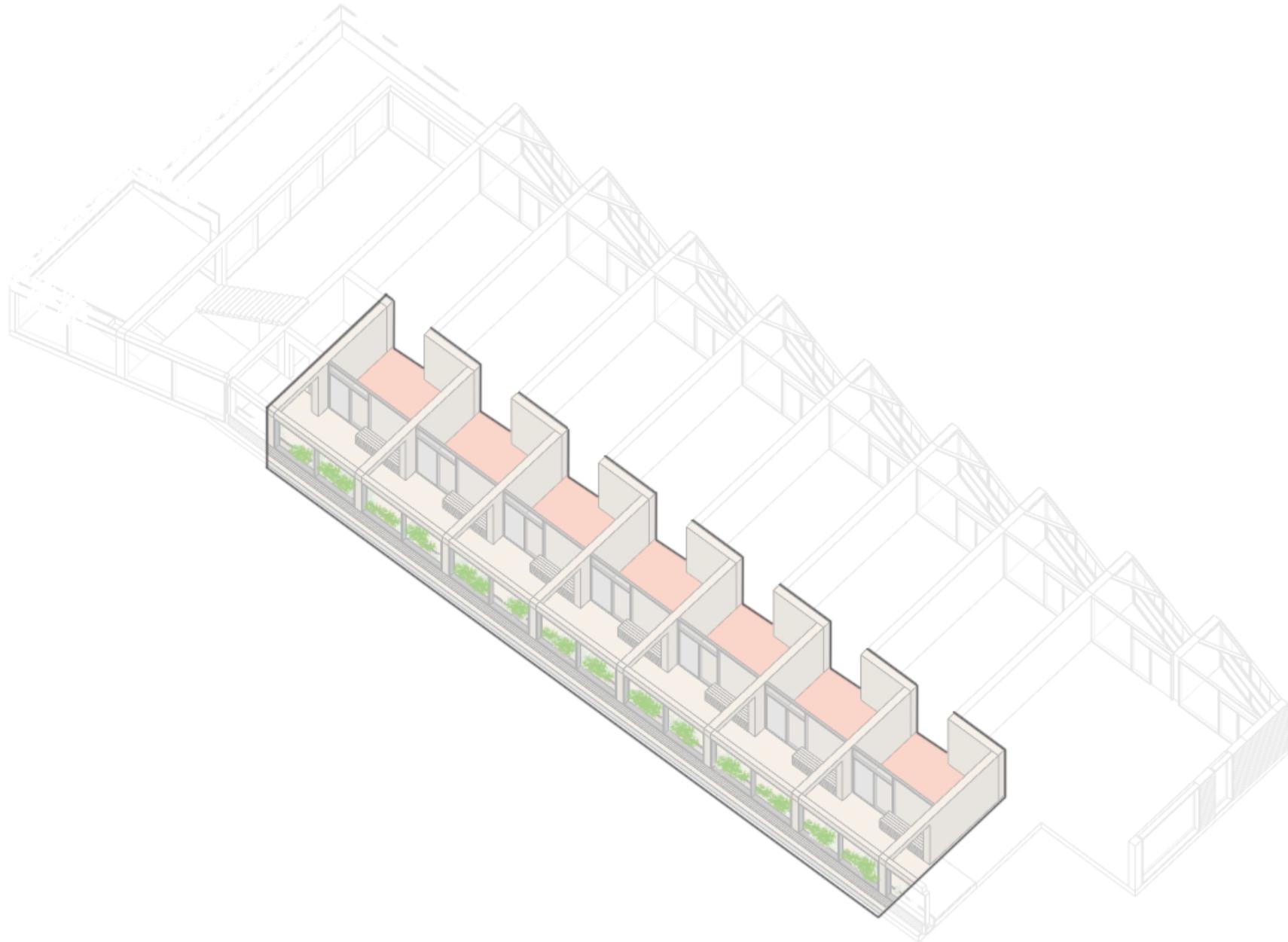
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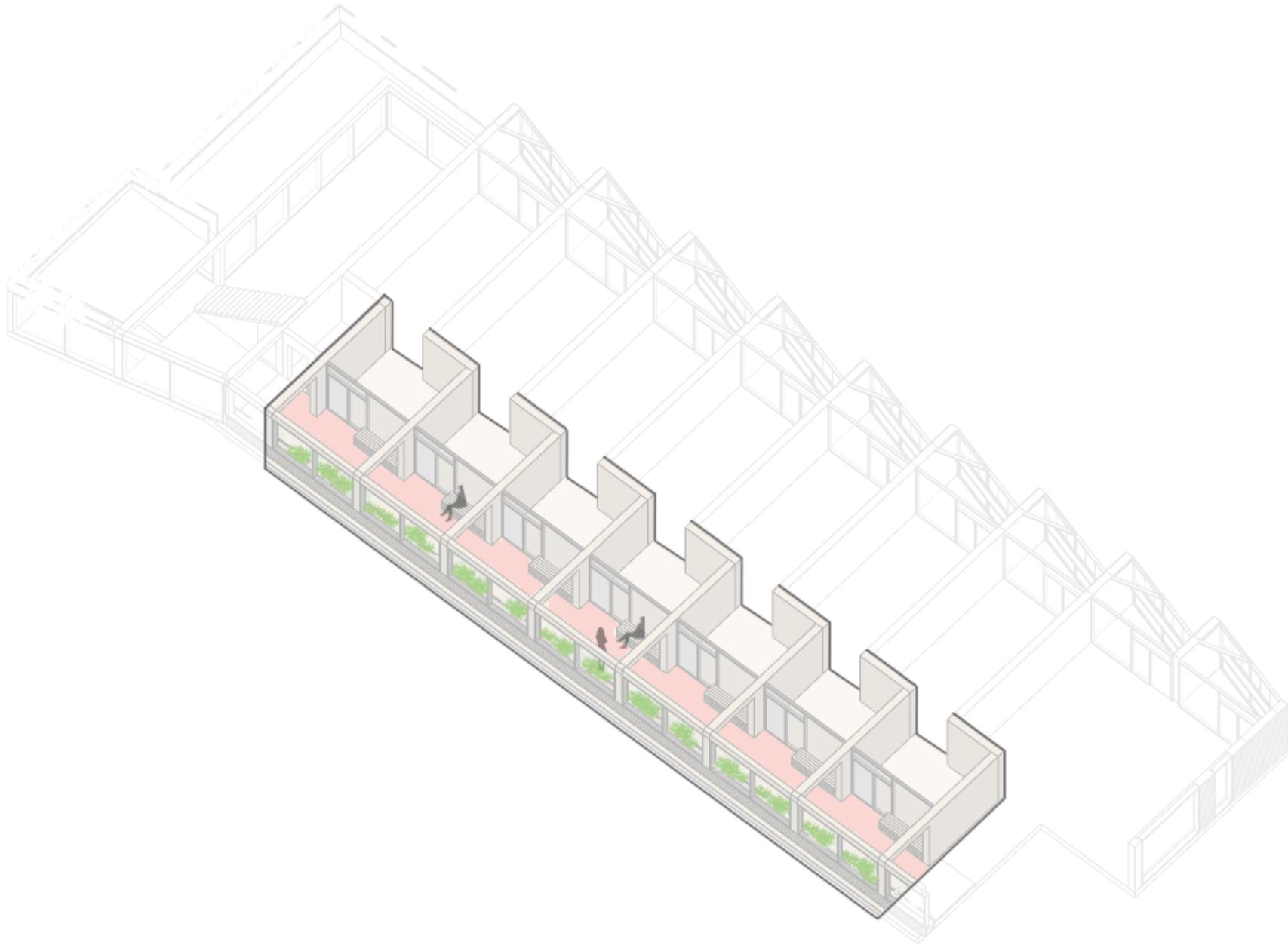


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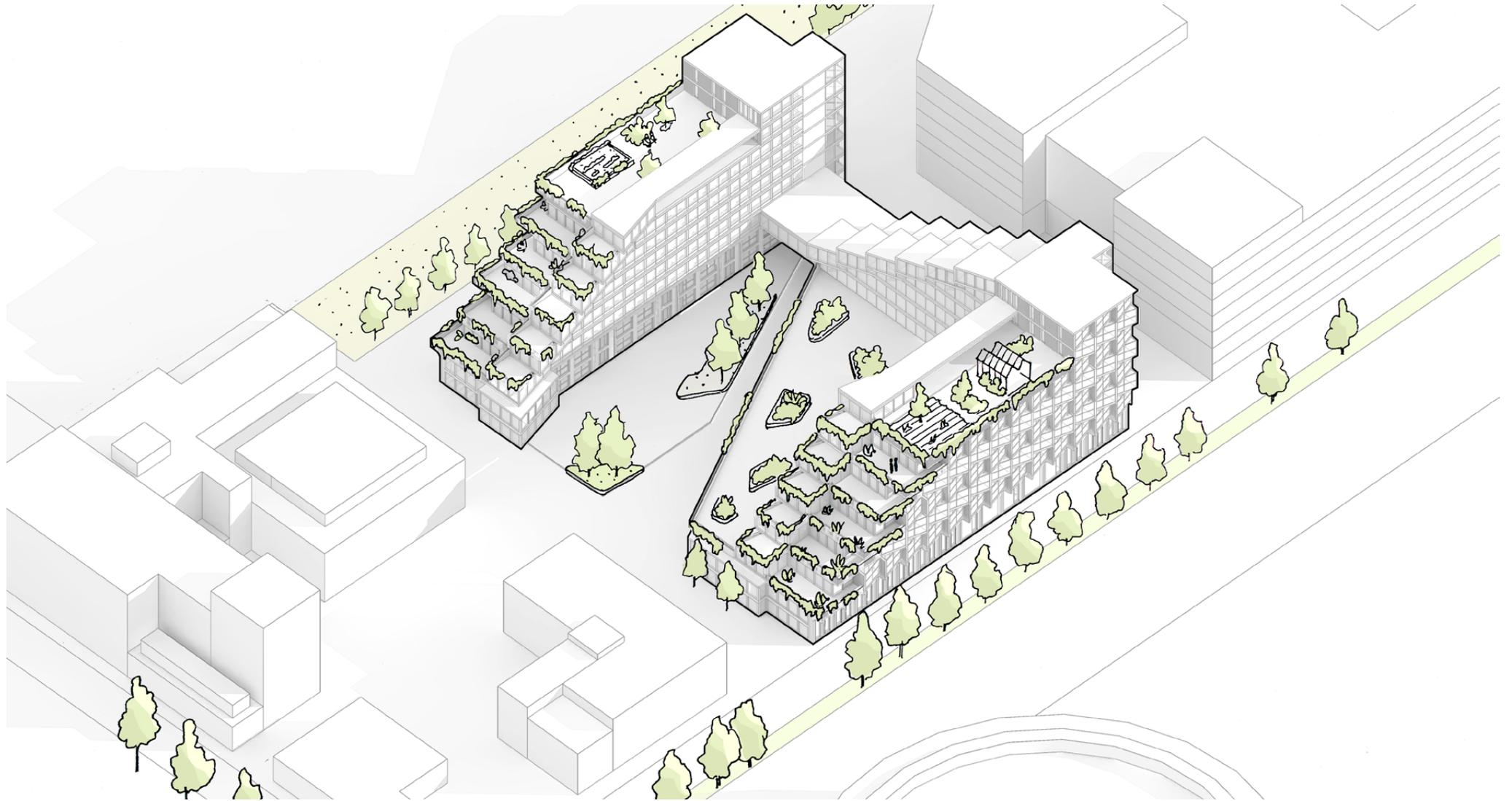


CORRIDOR (SOCIAL ASPECT)

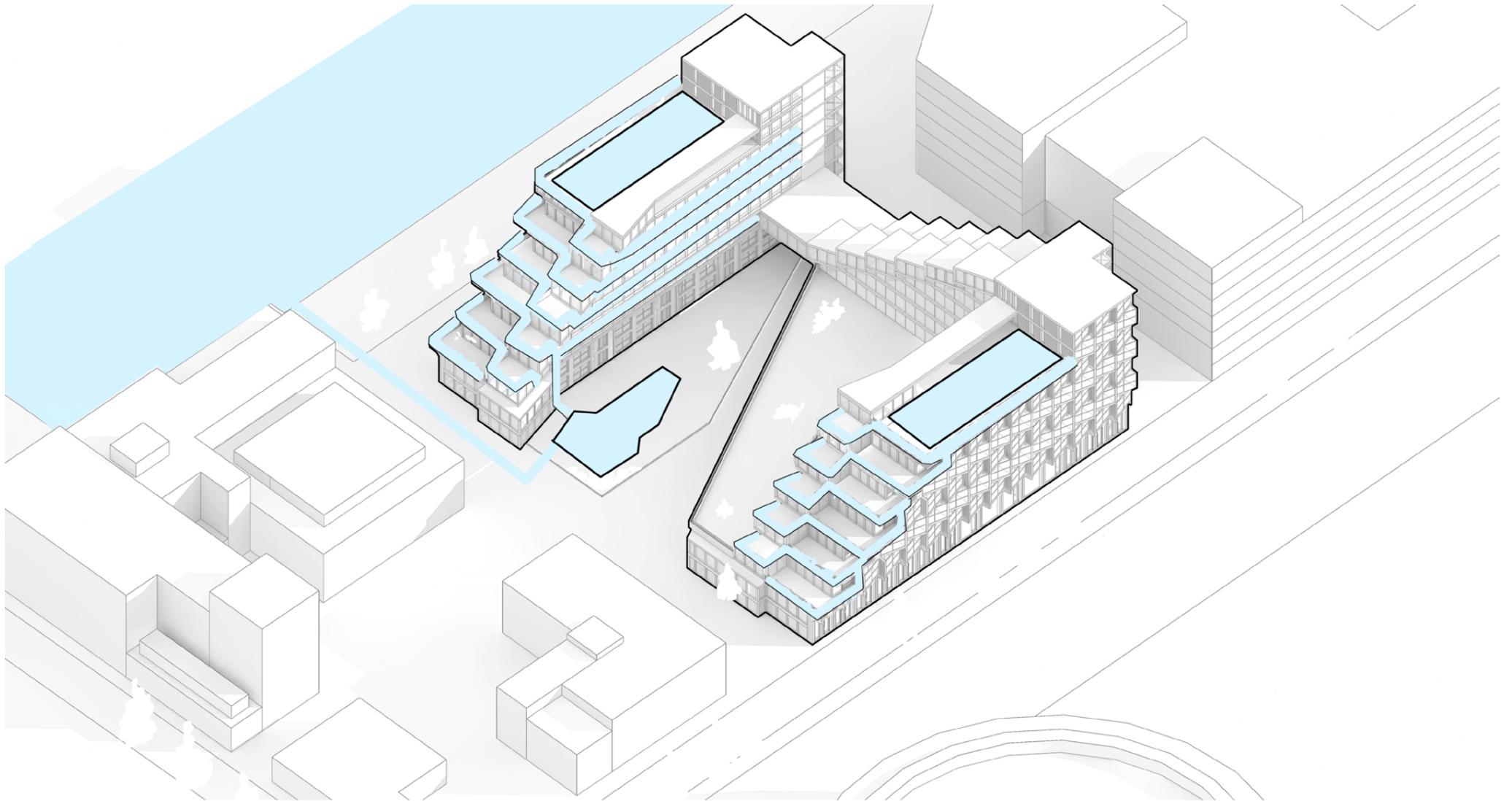




COLLECTIVE GREEN AS A CONNECTING ACTIVITY



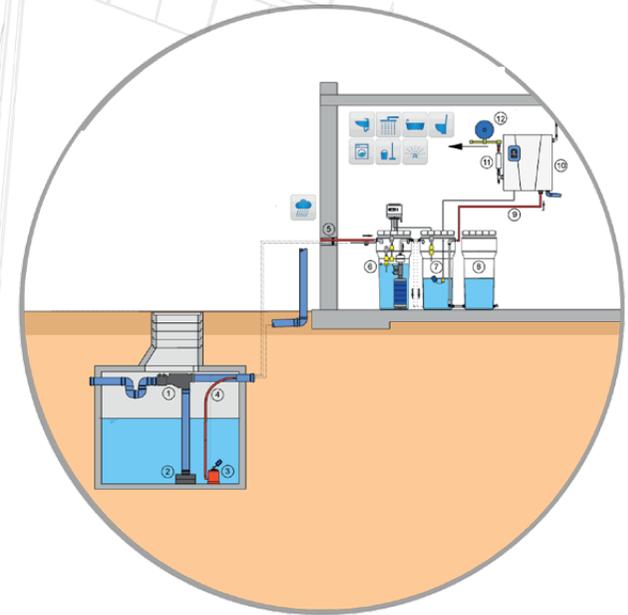
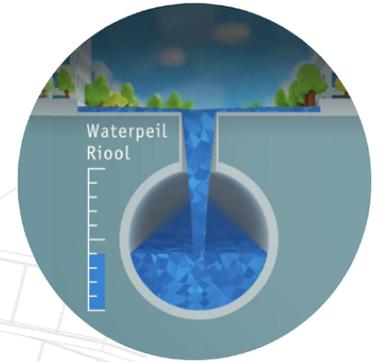
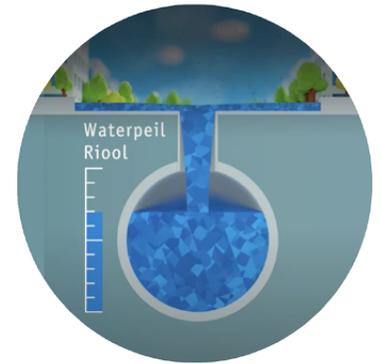
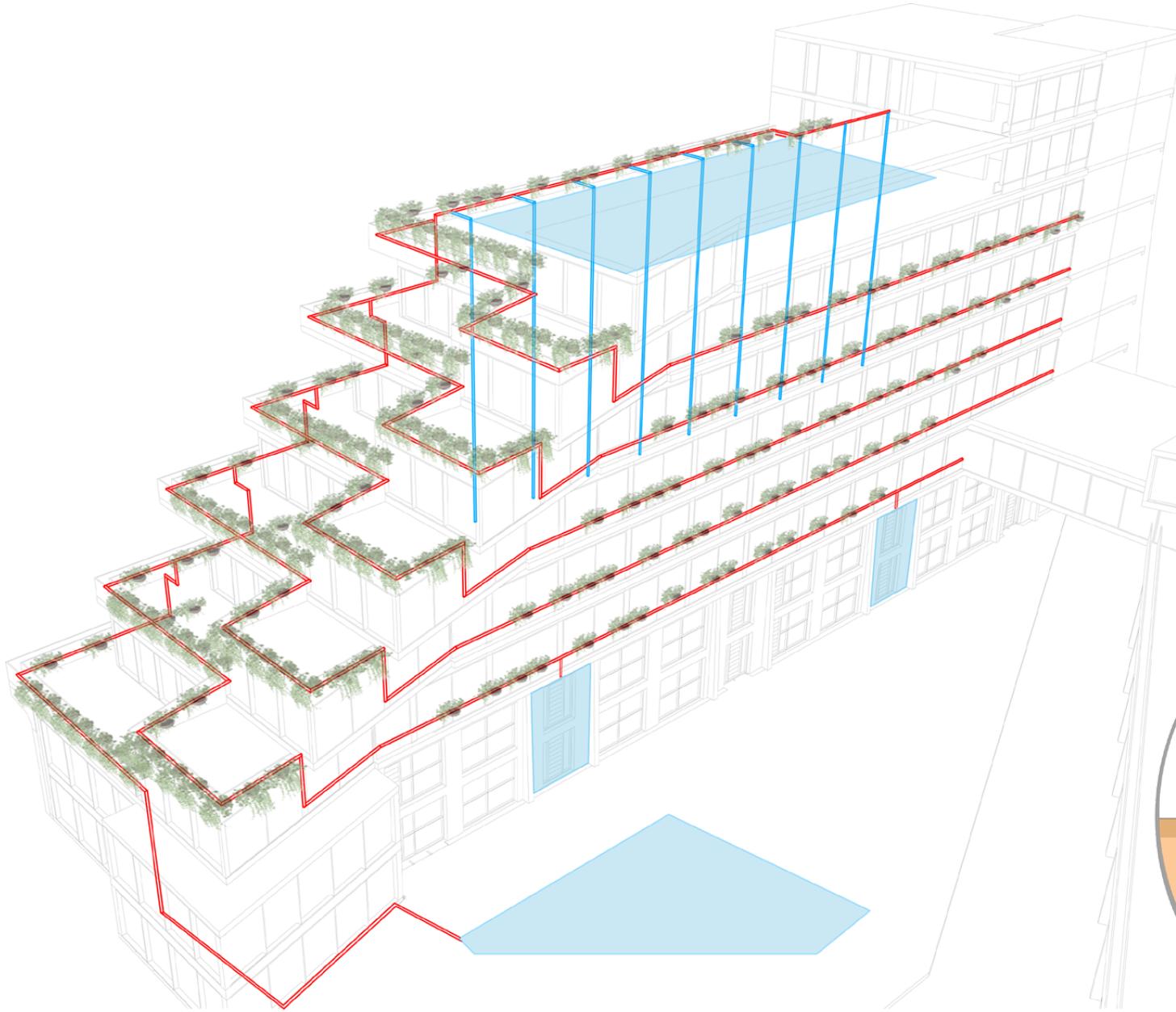
WATER CATCHMENT



TIDLE AREA'S IN ROTTERDAM (WATERSQUARE)



DRAINAGE SYSTEM (TECHNICAL ASPECT)



INSPIRATIONAL REFERENCES IN RELATION TO WATER MANAGEMENT



GREENSYSTEM (VISUAL ASPECT)



ROOFGARDEN (SOCIAL ASPECT)



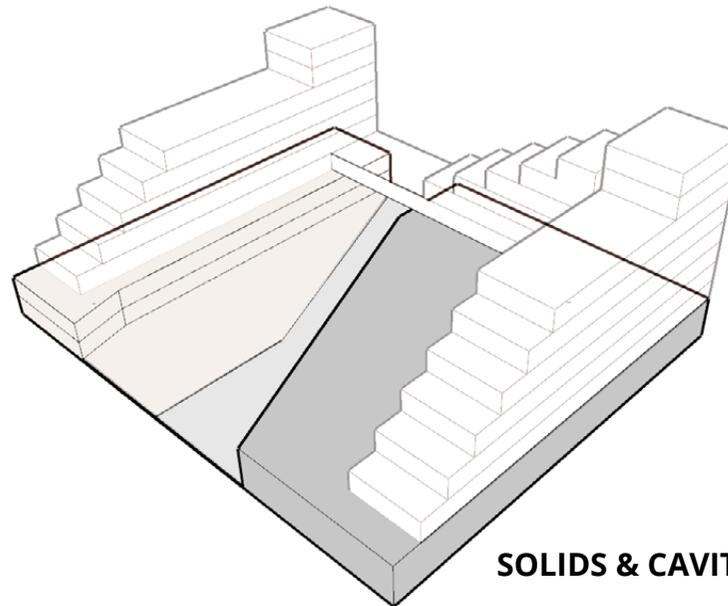
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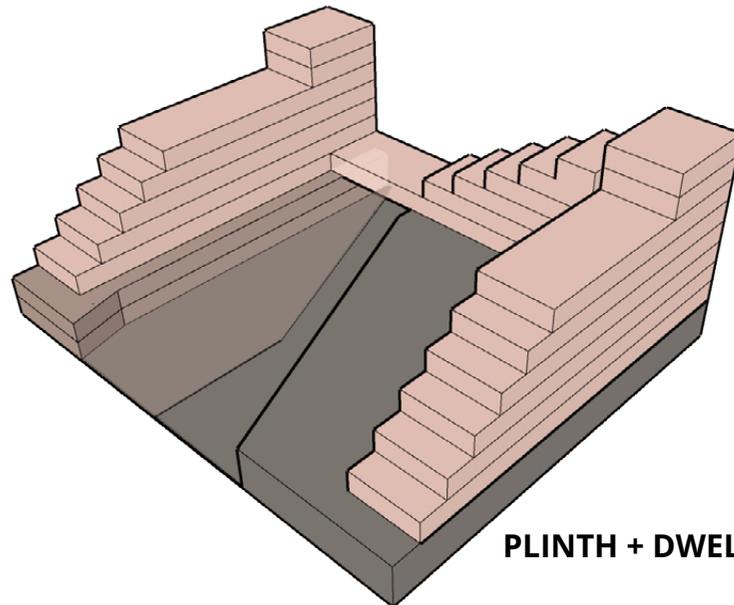
CONSTRUCTION SCHEME

Design aspects:

- Sculpturing the plinth
- Solid plinth
- Cavity within this solid mass functions as a passage

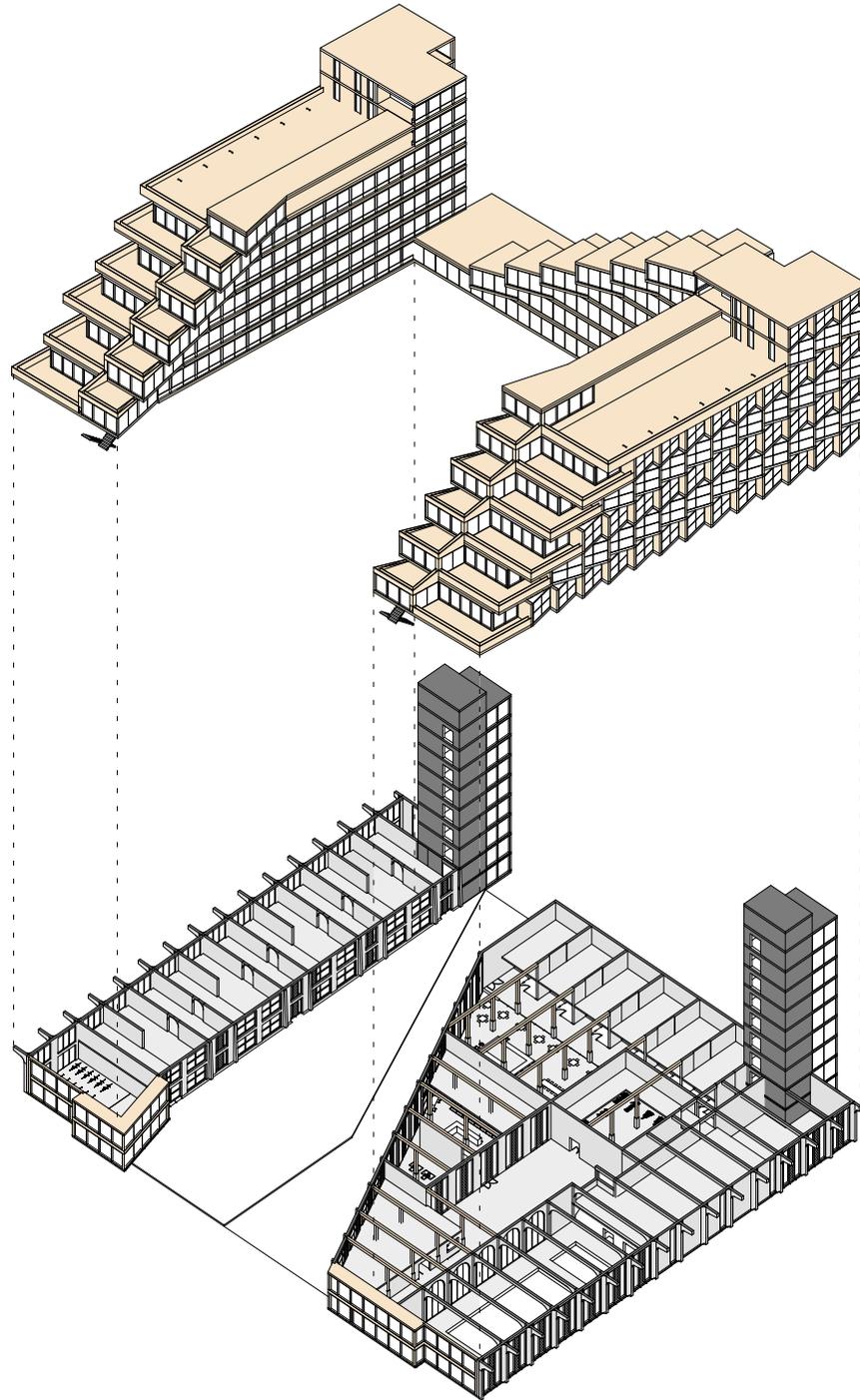


SOLIDS & CAVITIES

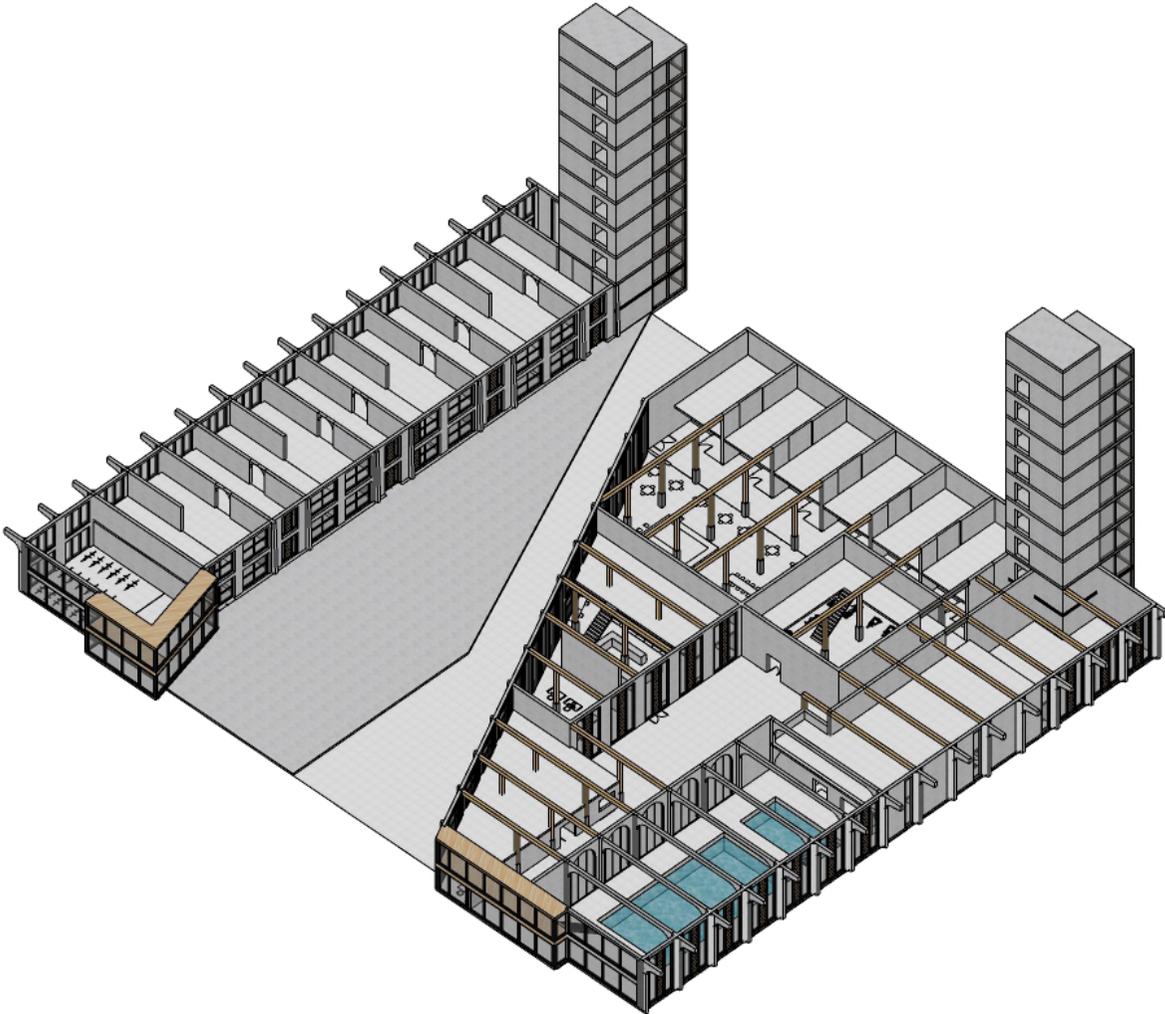


PLINTH + DWELLINGS

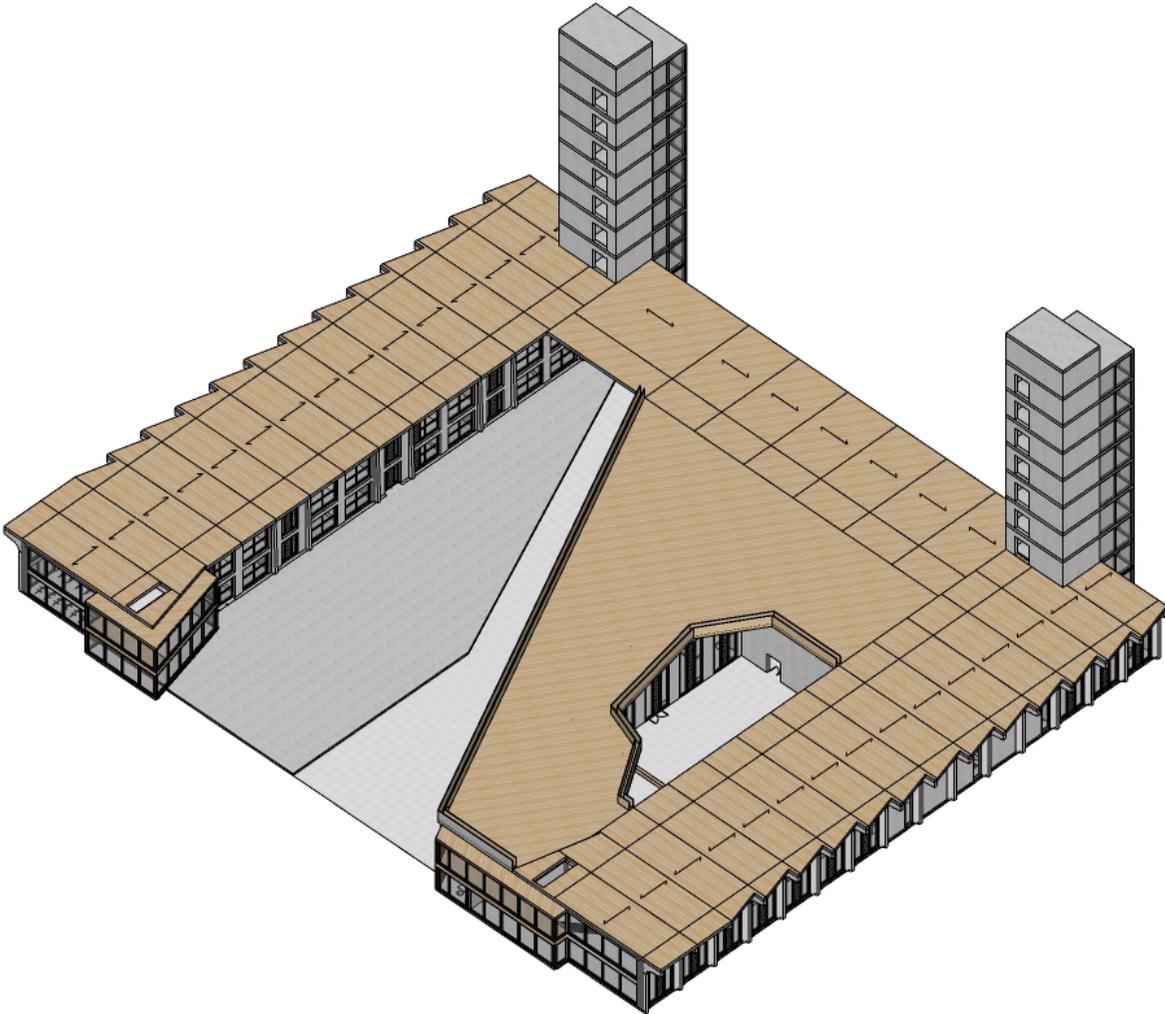
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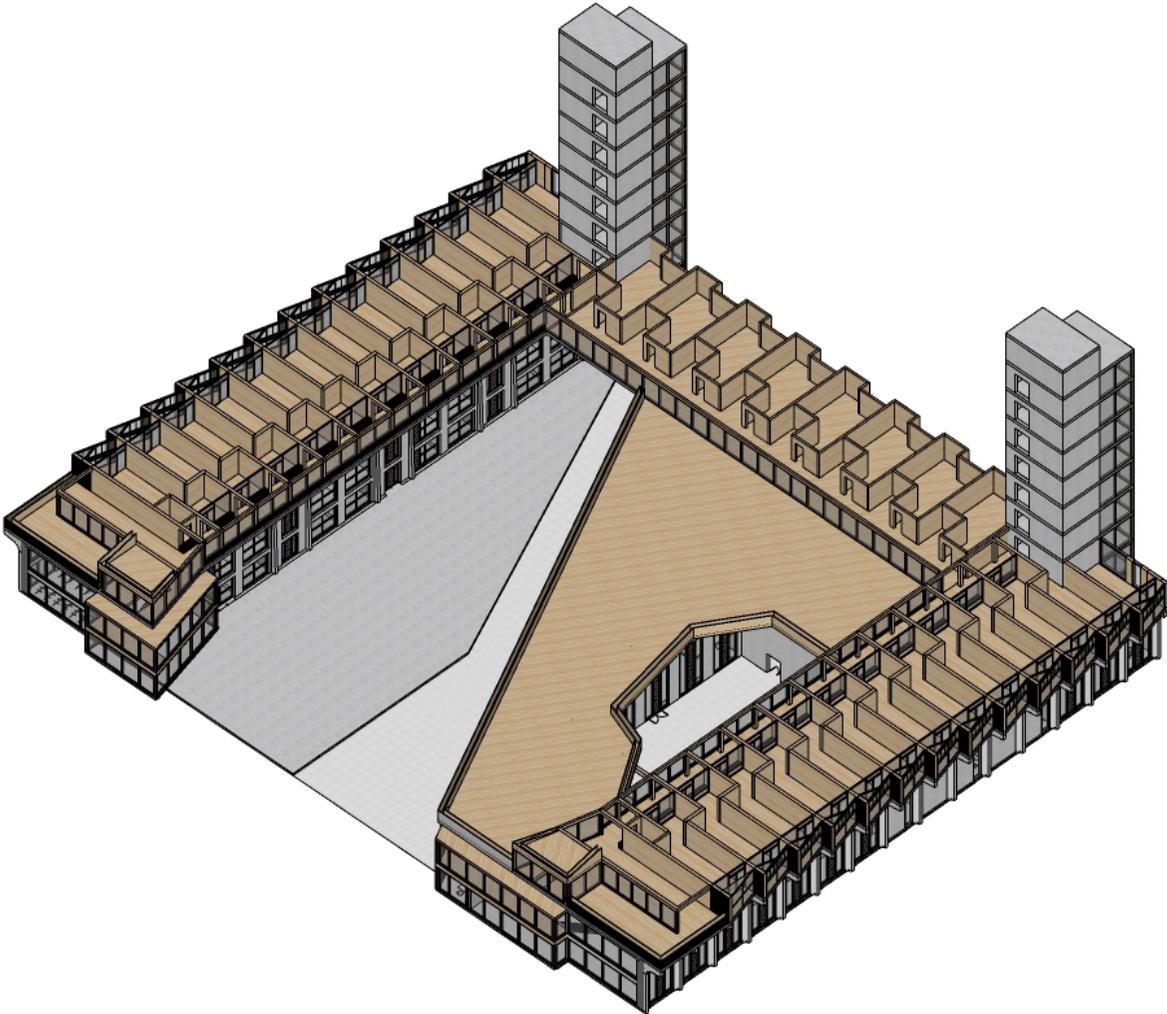
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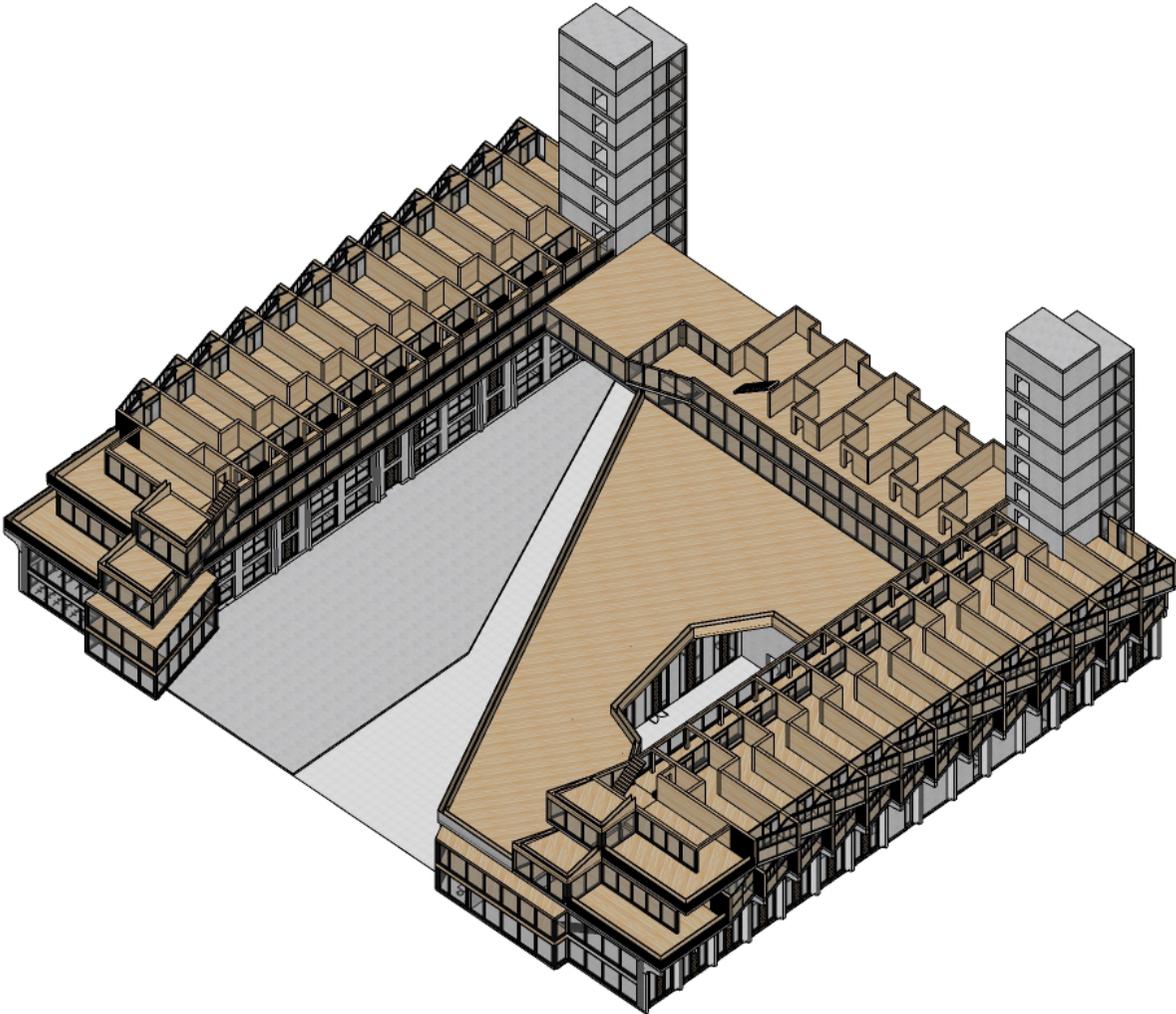
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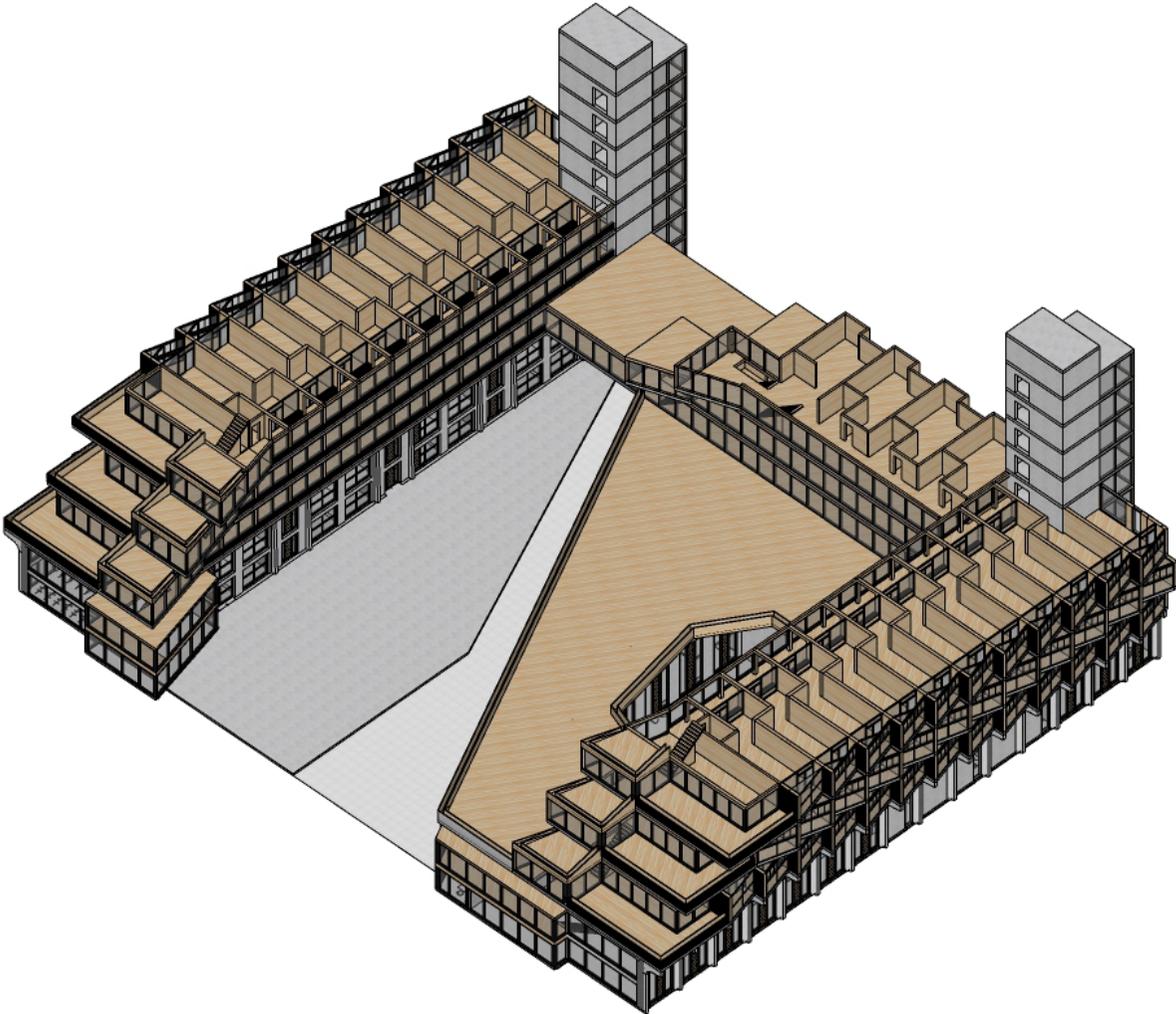
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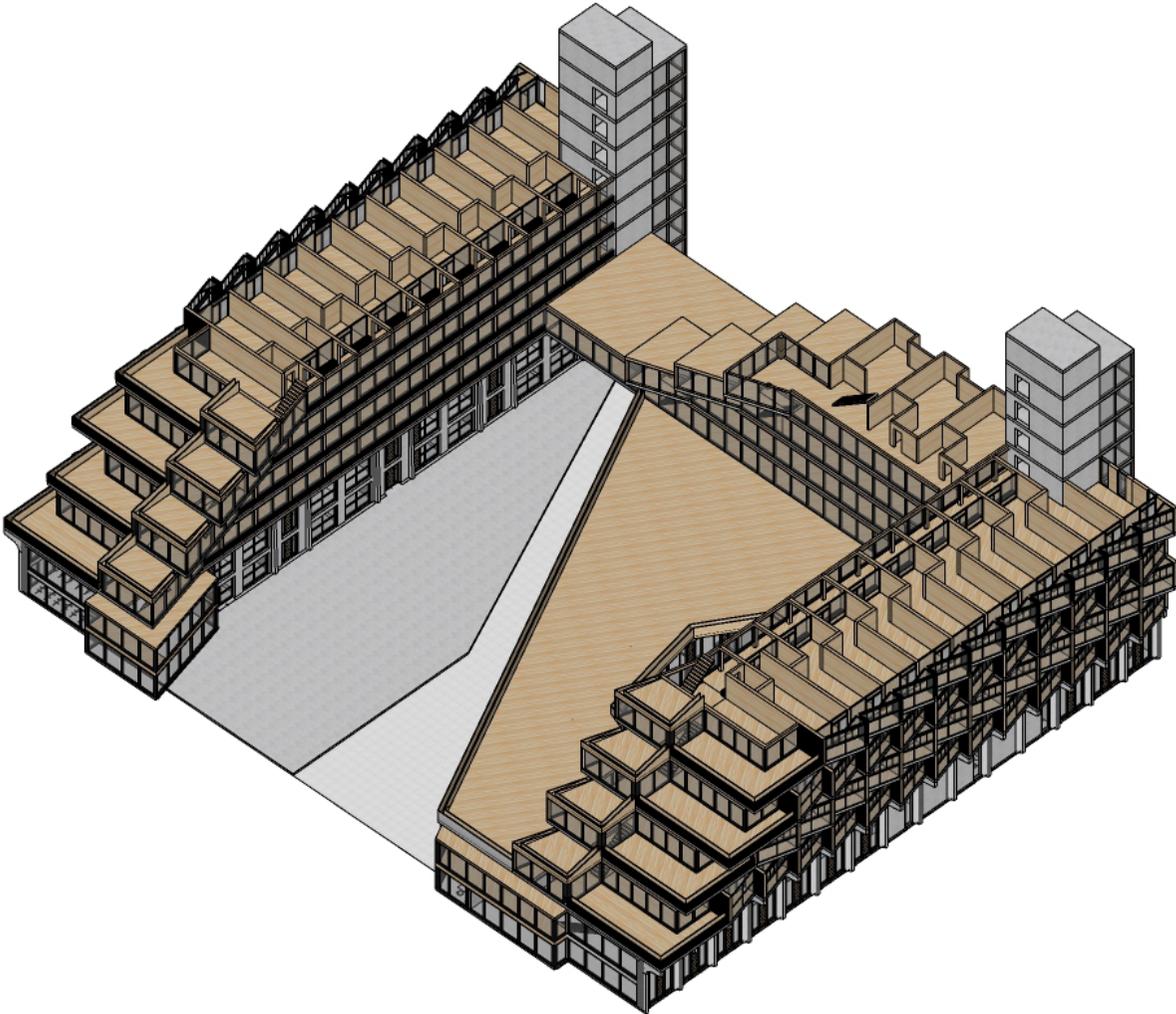
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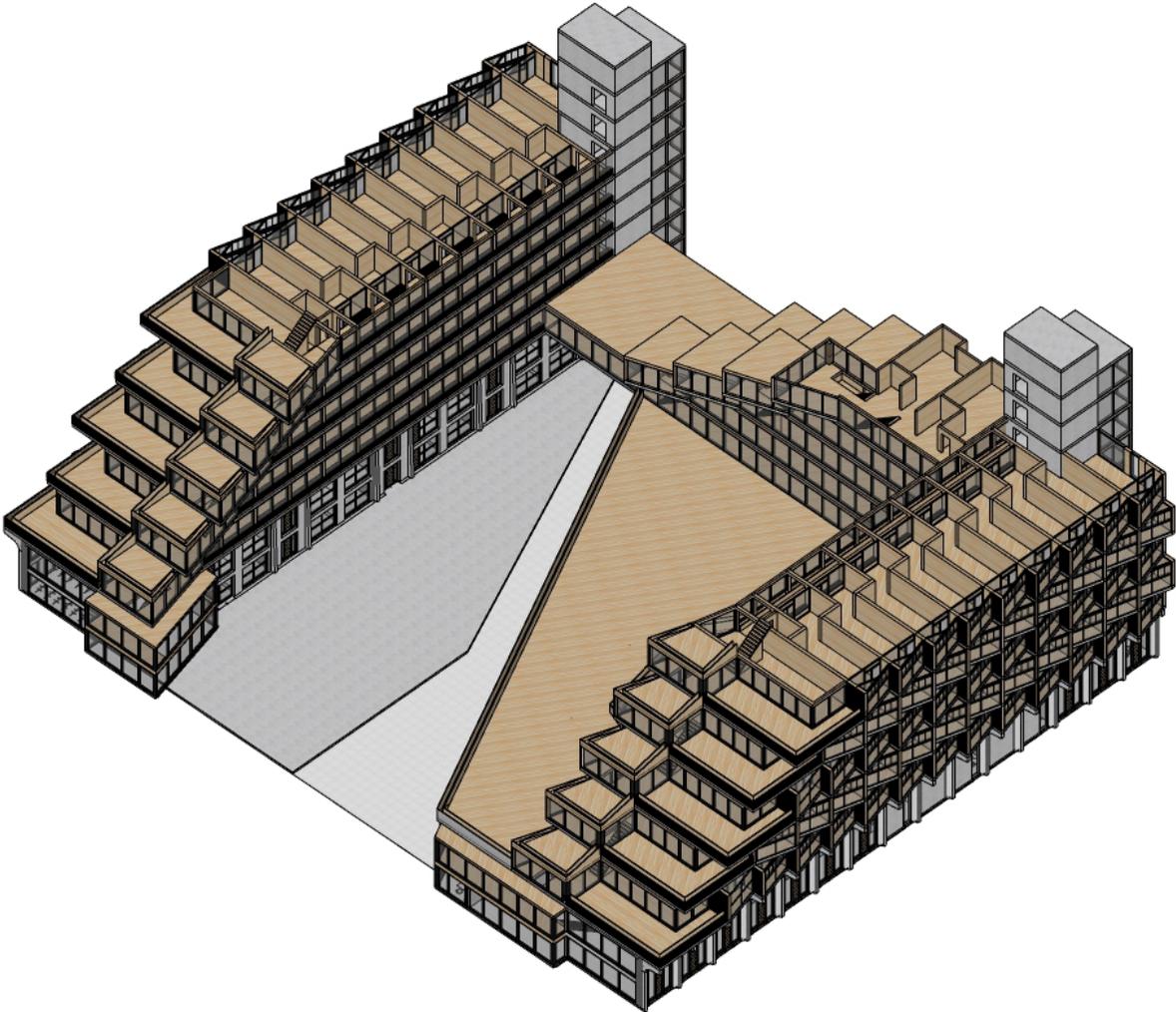
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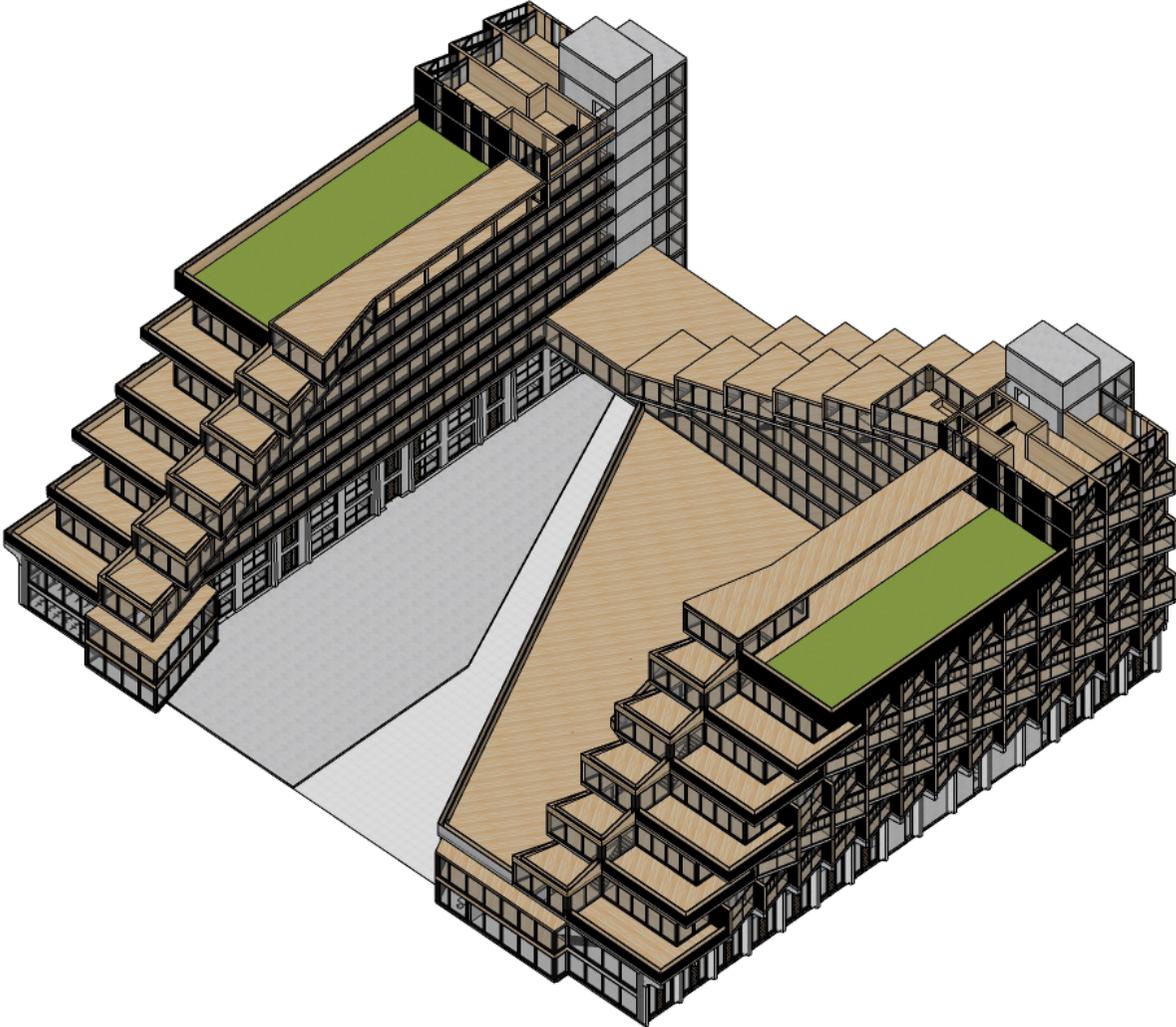
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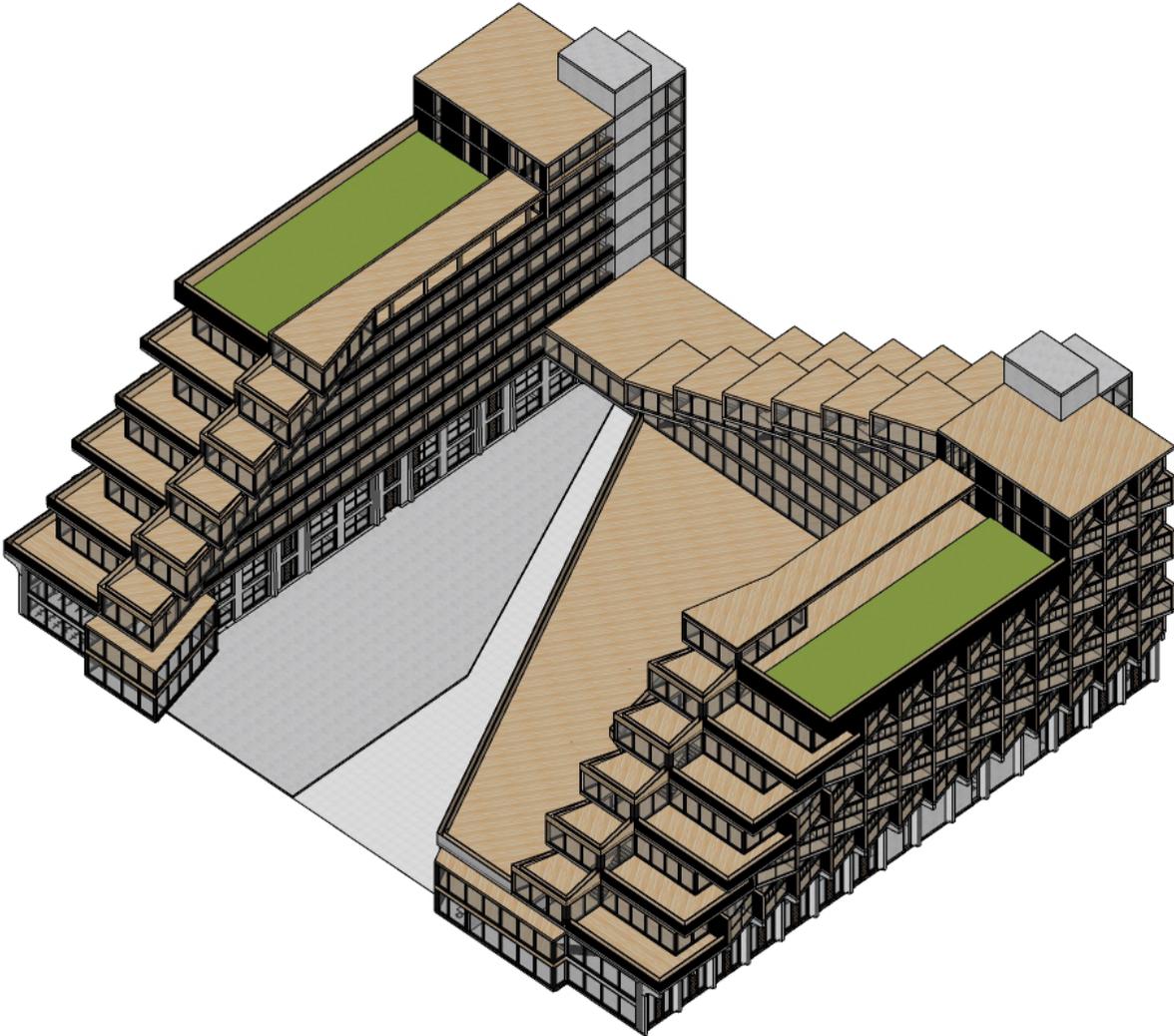
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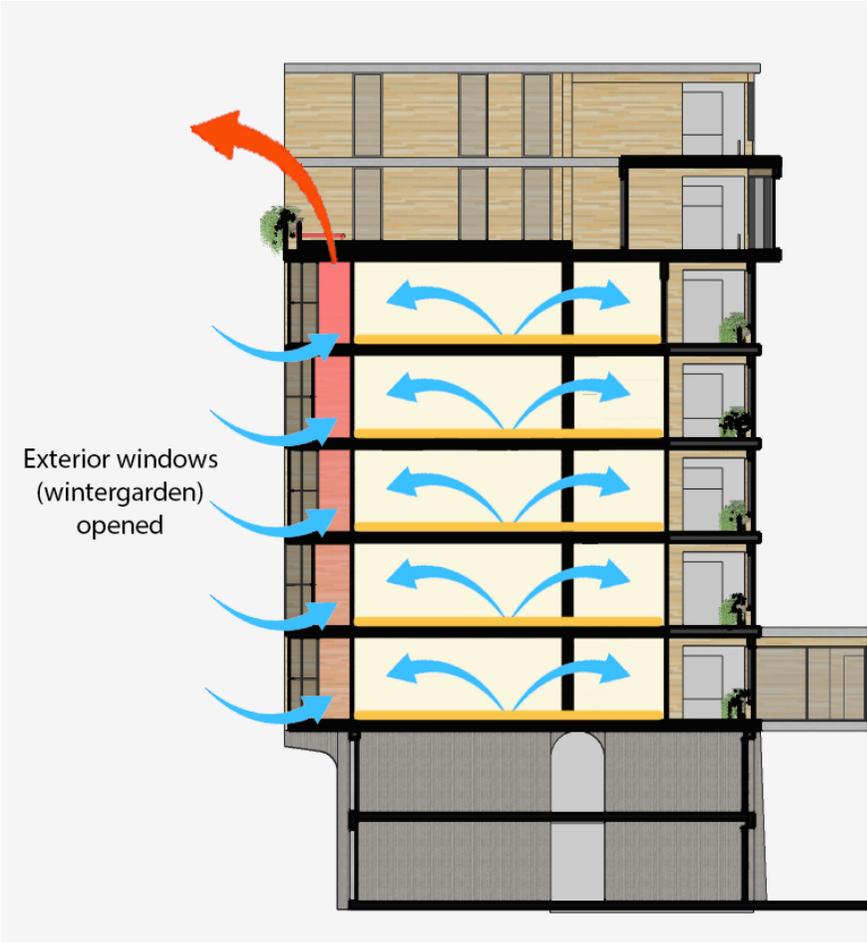
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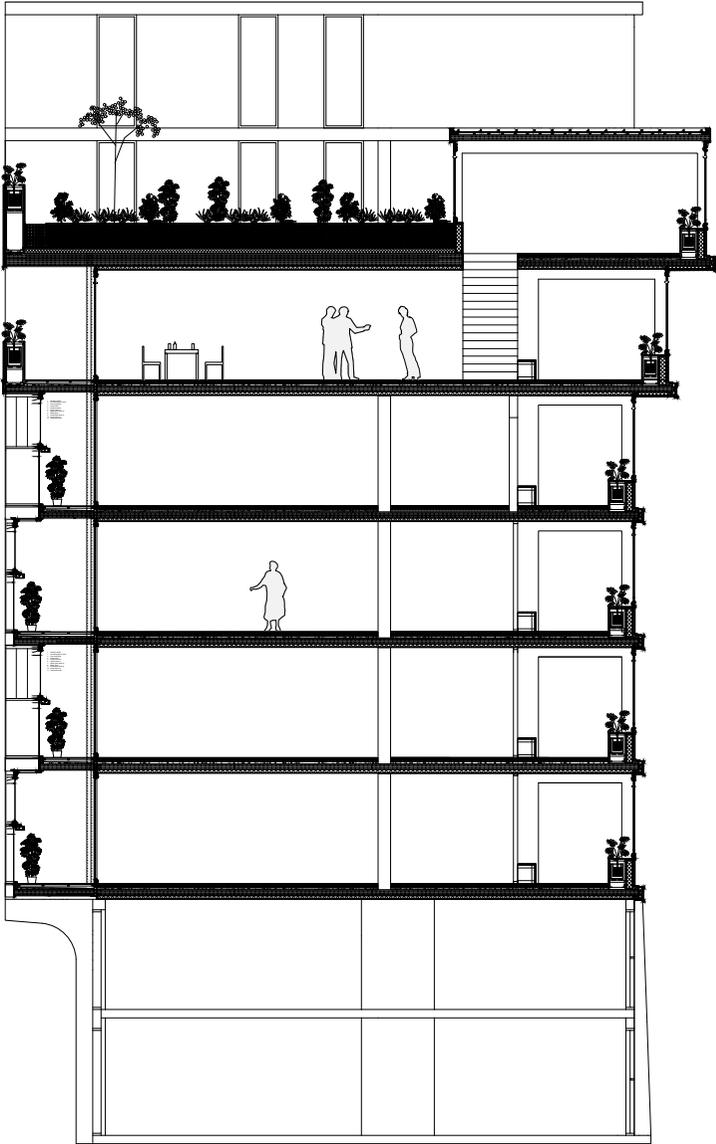
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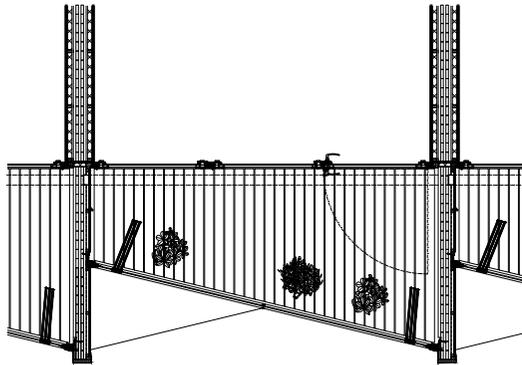
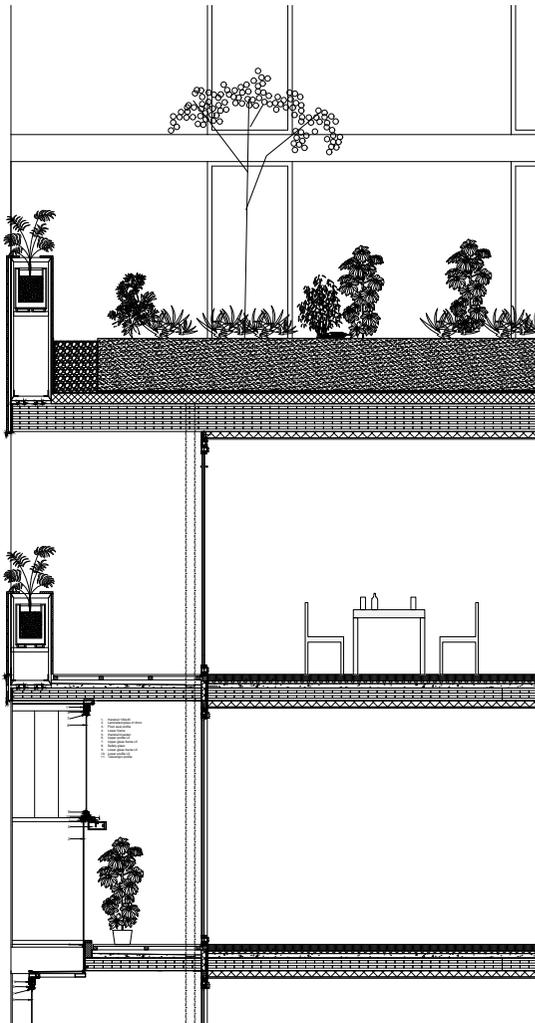
WINTERGARDEN AS DOUBLE FAÇADE (VENTILATION PRINCIPLE)



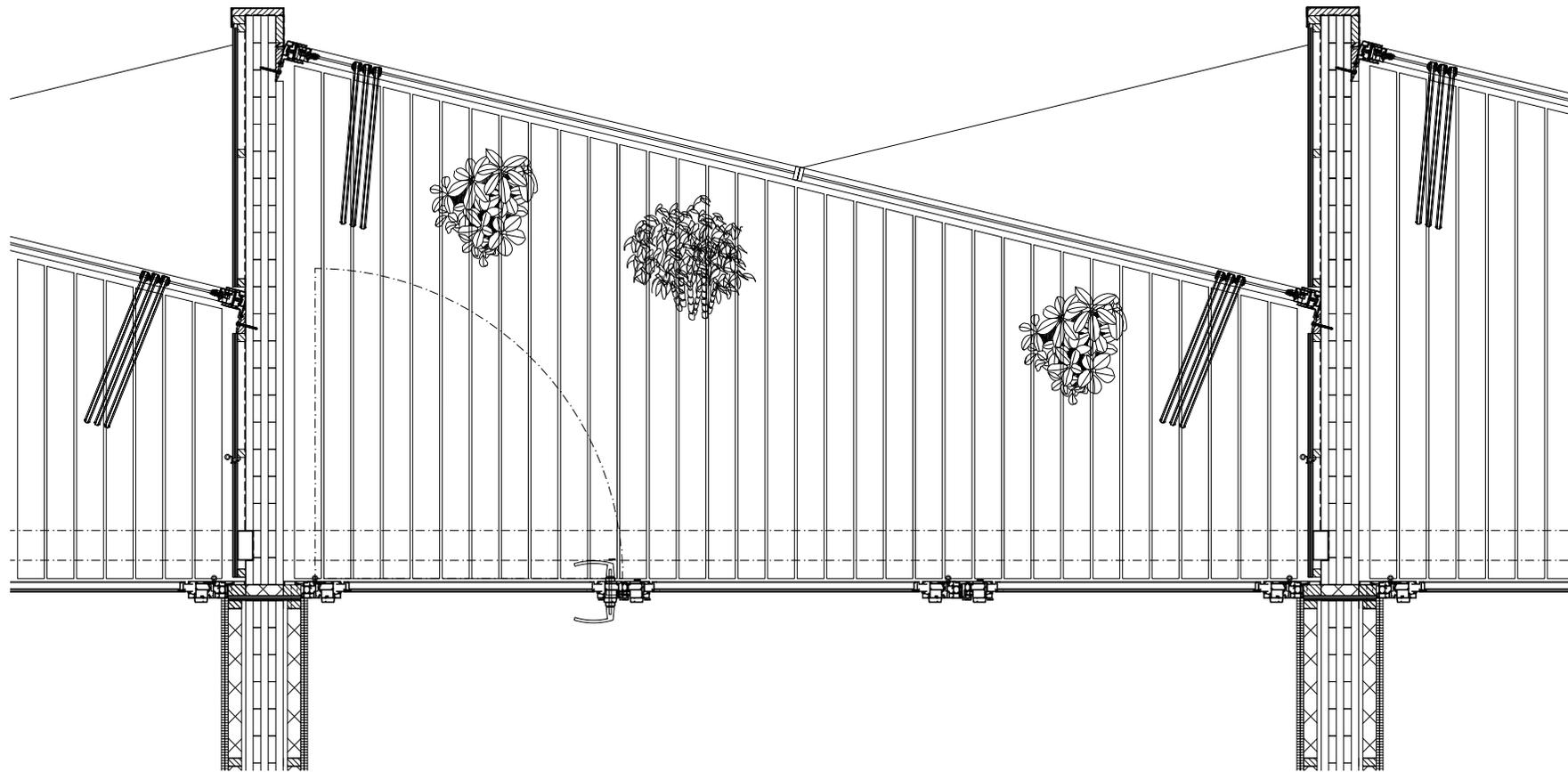
OVERALL SECTION



1:20 FACADE FRAGMENT



HORIZONTAL SECTION WINTERGARDEN 1:5



Partition wall 1
(thickness 300 mm)



- 12.5 mm plasterboard
- 12.5 mm plasterboard
- 50 mm separate facing panel including 50 mm mineral wool
- 100 mm CLT by Stora Enso
- 40 mm mineral wool
- 100 mm CLT by Stora Enso
- 50 mm separate facing panel including 50 mm mineral wool
- 12.5 mm plasterboard
- 12.5 mm plasterboard

$D_{nT,w} (C; C_w)$: 67 (-1; -4) dB
 $C_{60-3150} = -9$ dB

Partition wall 2
(thickness 270 mm)



- 12.5 mm sound rated plasterboard
- 12.5 mm sound rated plasterboard
- β5 mm independent studs held 15mm clear from CLT with 50mm mineral fibre in stud cavity
- 90 mm CLT by Stora Enso
- independent studs held 15mm clear from CLT with 50mm mineral fibre in stud cavity
- 65 mm with 50mm mineral fibre in stud cavity
- 12.5 mm sound rated plasterboard
- 12.5 mm sound rated plasterboard

$D_{nT,w} (C; C_w)$: 67 (-2; -7) dB*
 $C_{60-3150} = -11$ dB*

* lowest value out of 4 site measurements

Partition wall 3
(thickness 305 mm)



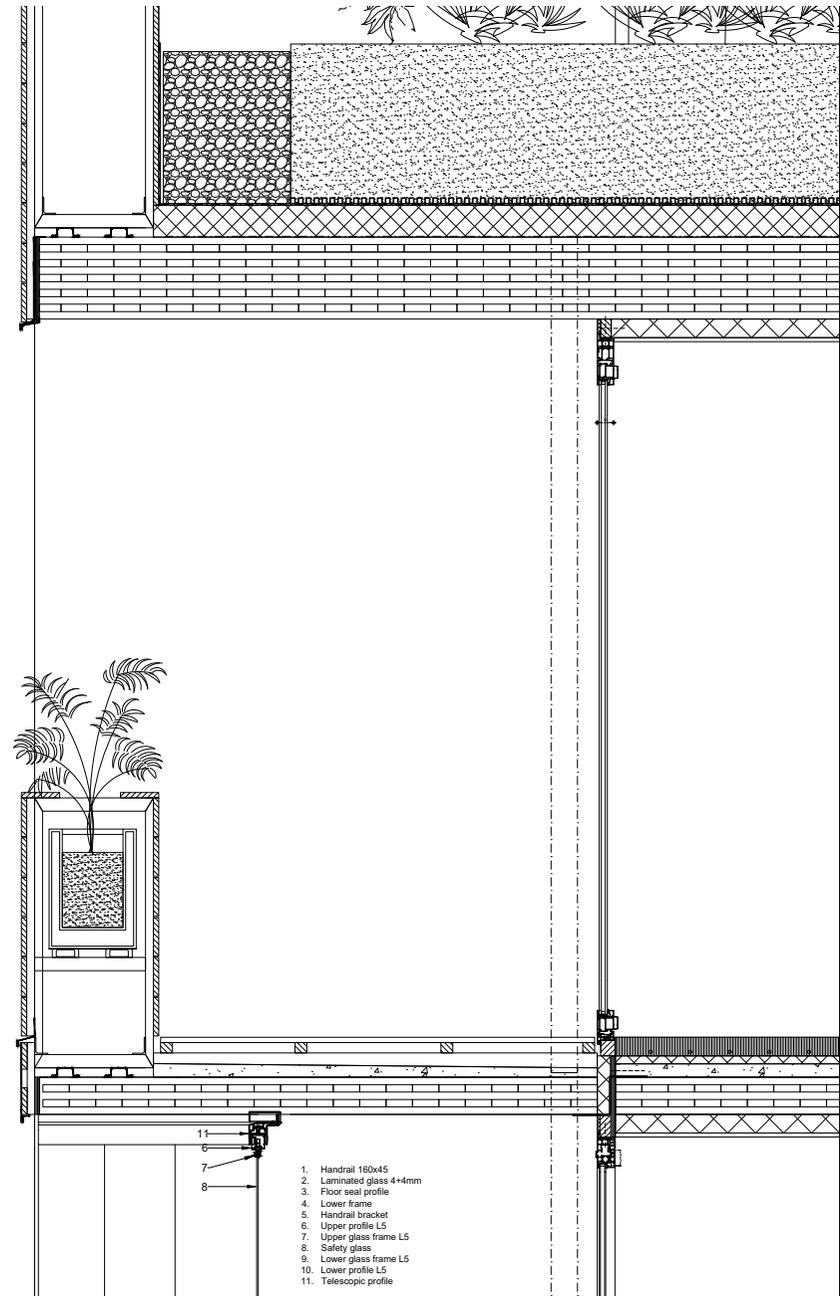
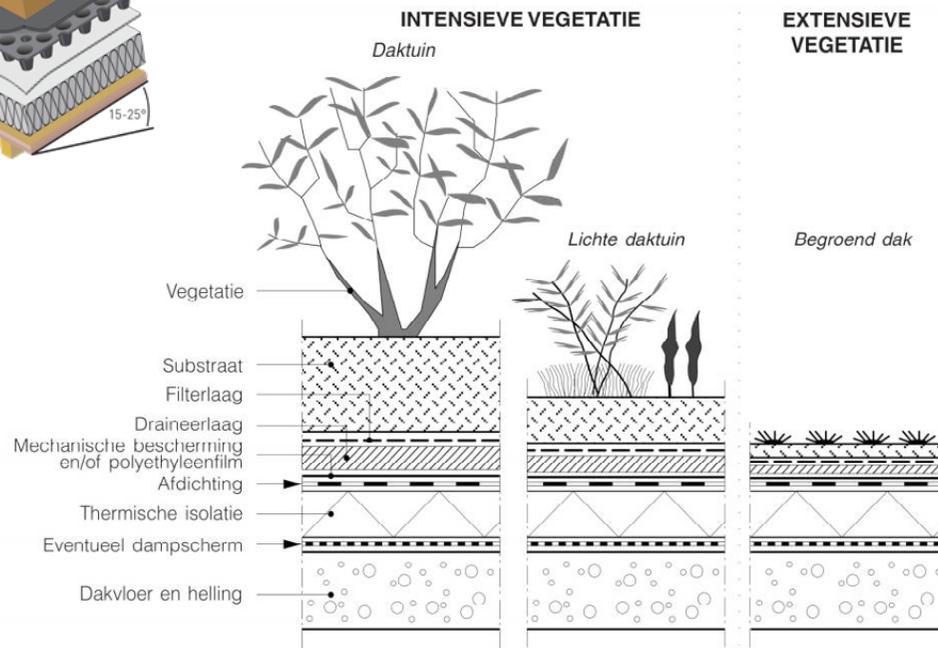
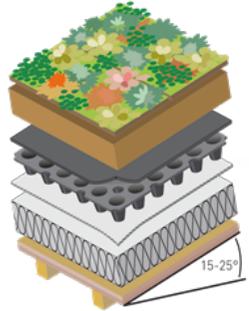
- 12.5 mm plasterboard
- 100 mm CLT by Stora Enso
- mineral wool
- 60-80 mm mineral wool
- 100 mm CLT by Stora Enso
- 12.5 mm plasterboard

$R'_w (C; C_w)$: 58 (-1; -6) dB*
 $C_{60-3150} = -2$ dB*

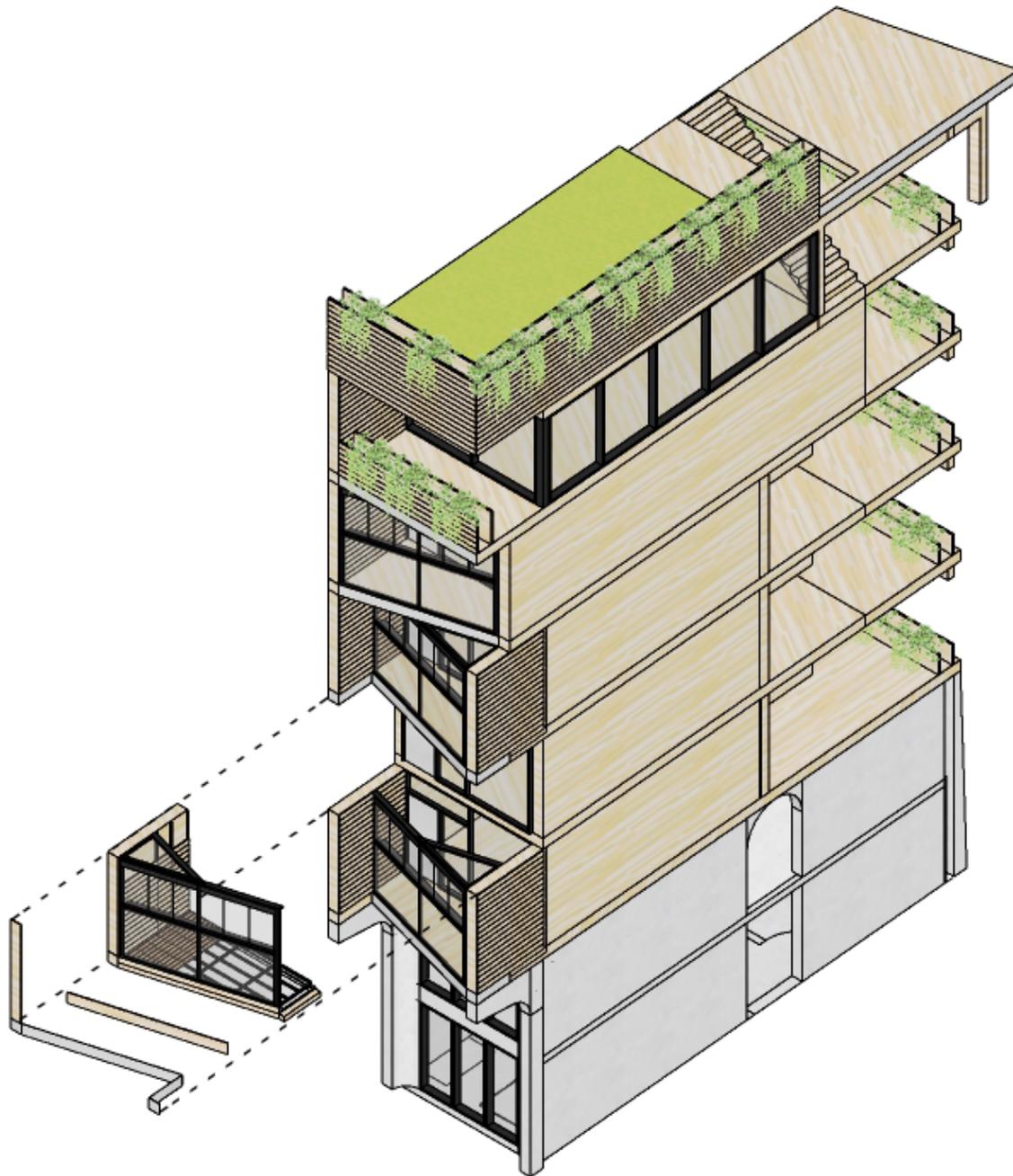
* lowest value out of 8 site measurements

OPTIONAL LAYERS ROOF GARDEN

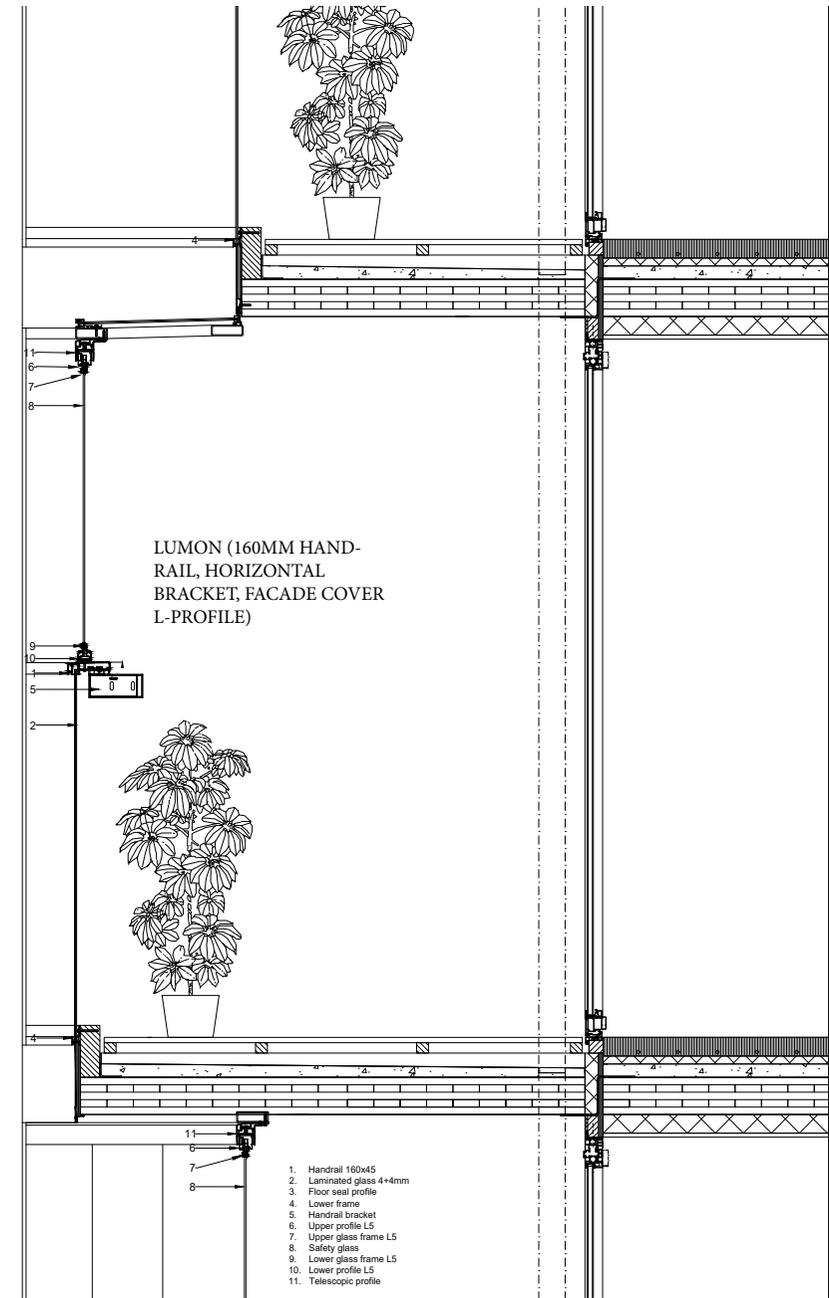
OUTER FAÇADE DETAIL 1:5



FAÇADE FRAGMENT



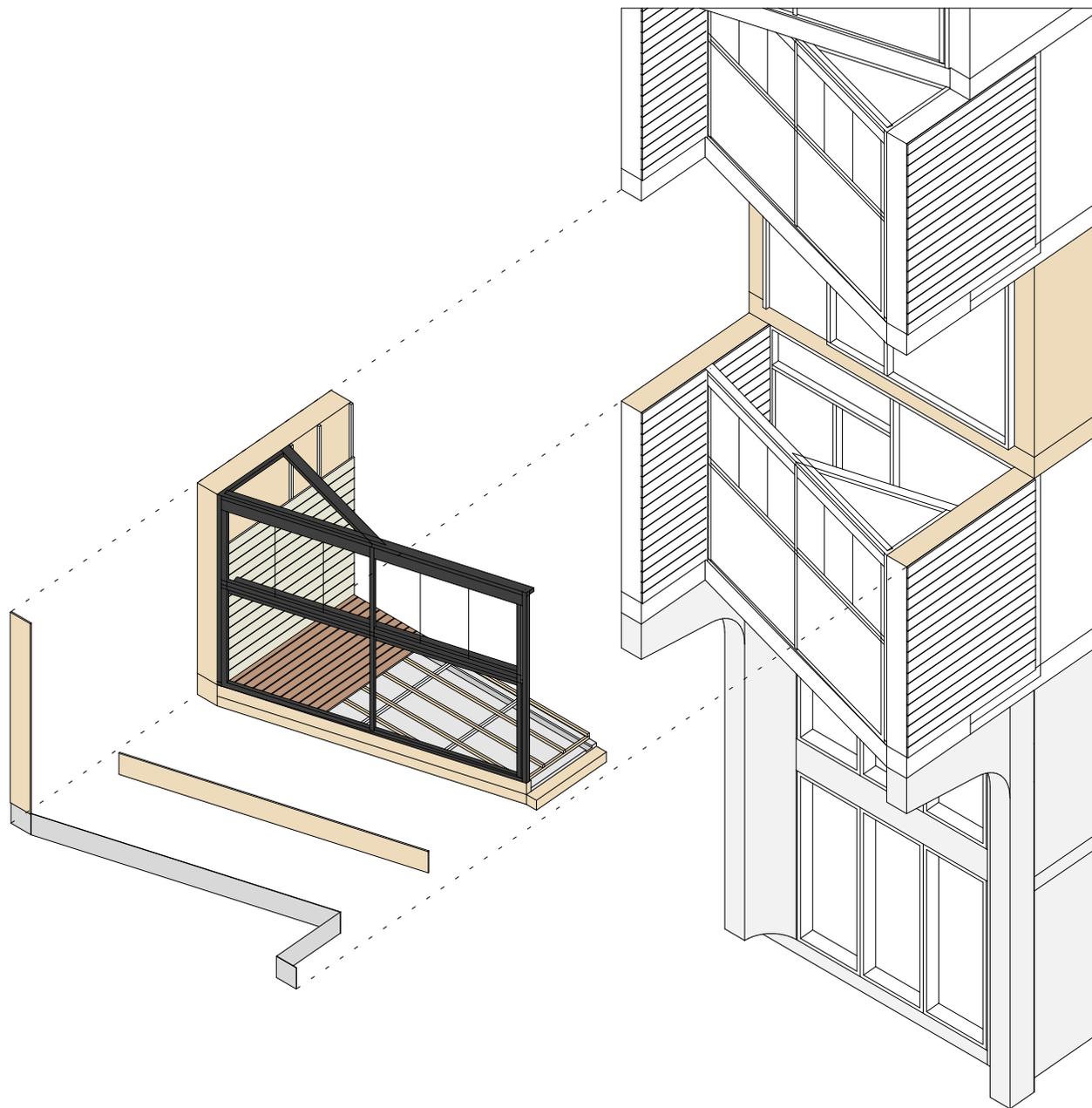
WINTERGARDEN DETAIL 1:5



IMPRESSION SOUTH FAÇADE

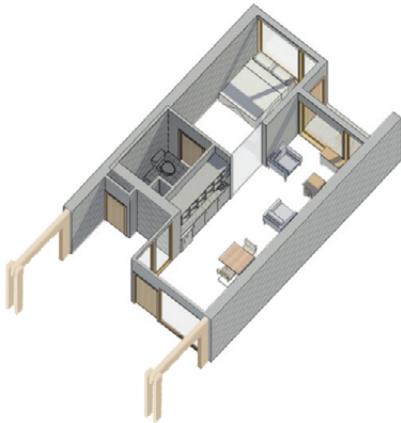
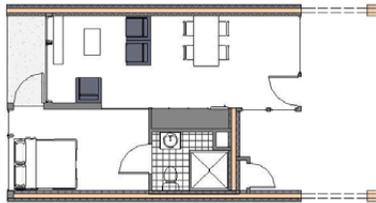


FAÇADE FRAGMENT (ASSEMBLY)

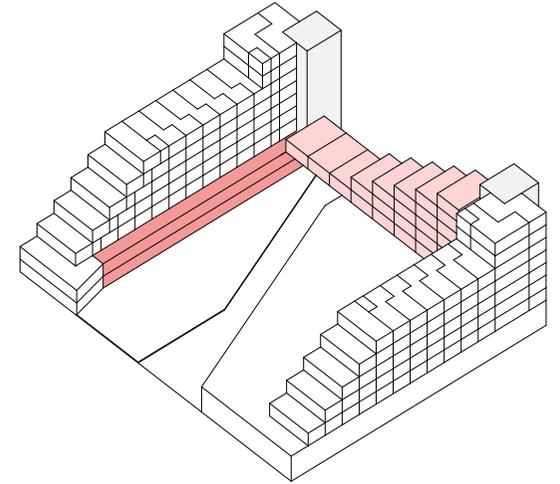


DWELLING TYPOLOGIES

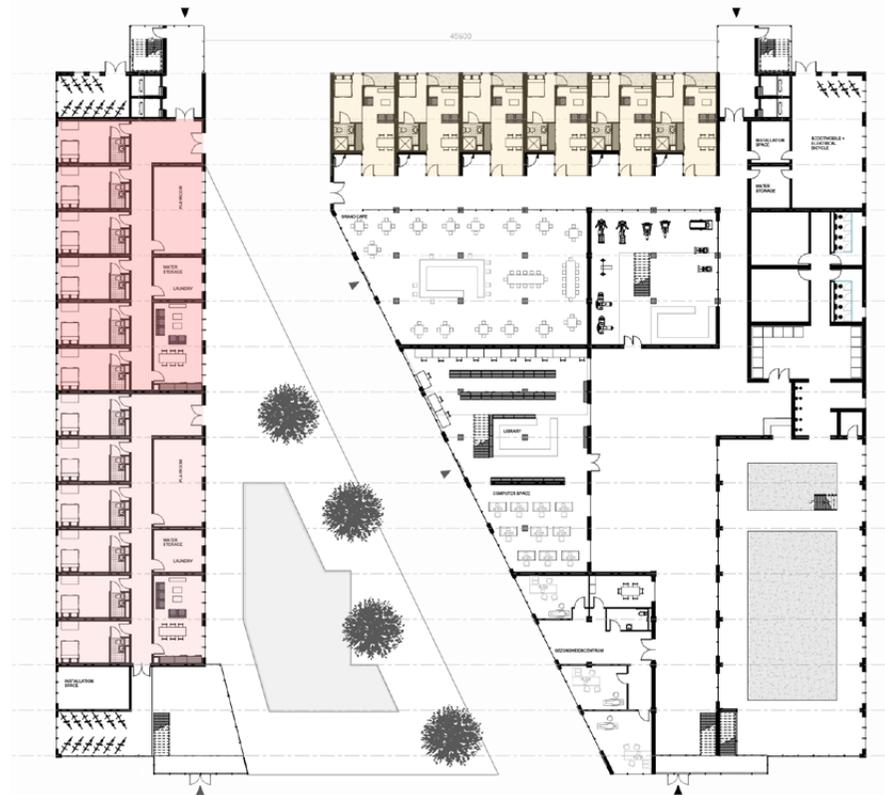
C Apartment for one or two persons (40 m²)



D Room as a part of group living (24 m²)

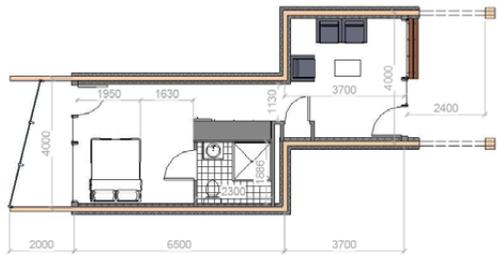


GROUND FLOOR / PLINTH

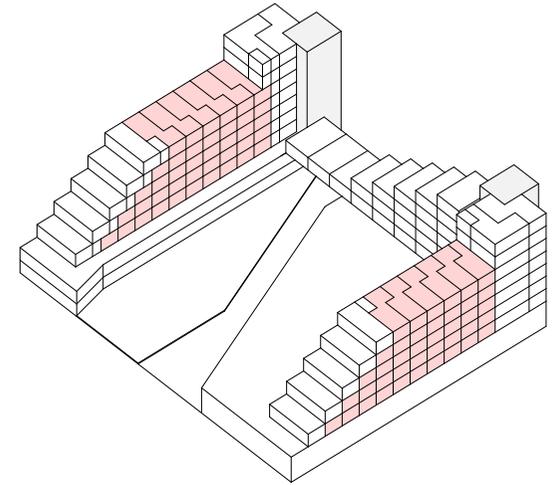


DWELLING TYPOLOGIES (ADAPTABLE)

A Small apartment (37 m²)



B Large apartment for two persons (65 m²)

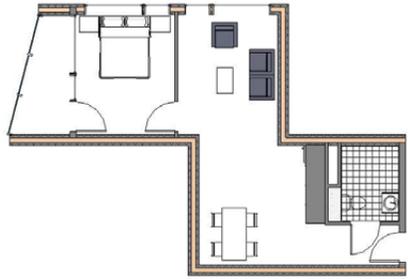


SECOND FLOOR

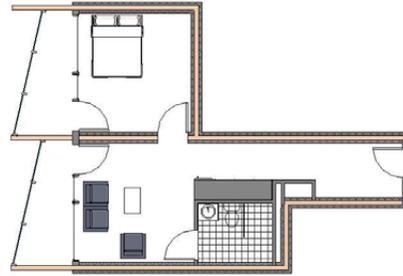


DWELLING TYPOLOGIES

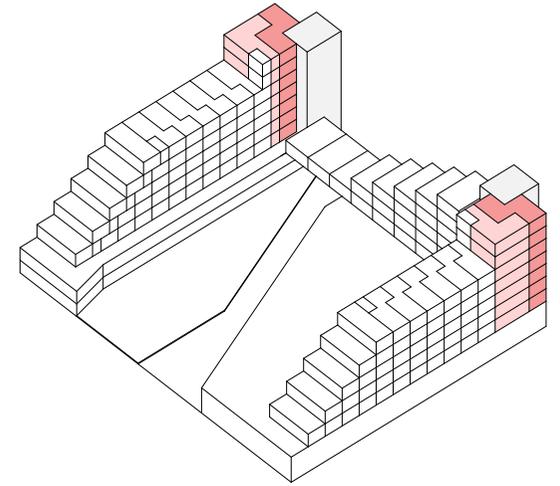
E Variant op type A



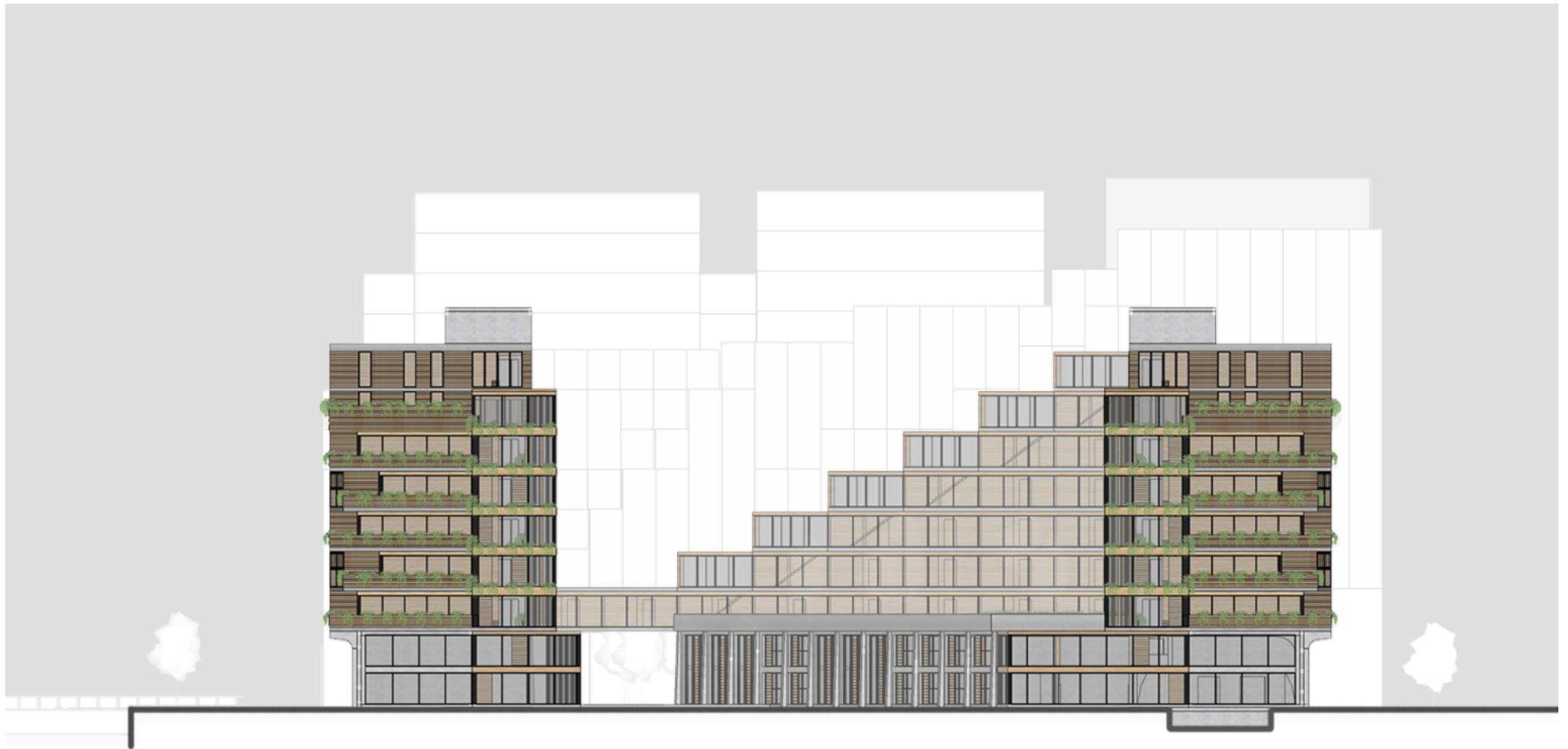
F Variant op type A



E-F Combined



ELEVATION EAST FAÇADE



ELEVATION WEST FAÇADE



MATERIALS

Red Cedar



Red Cedar aging



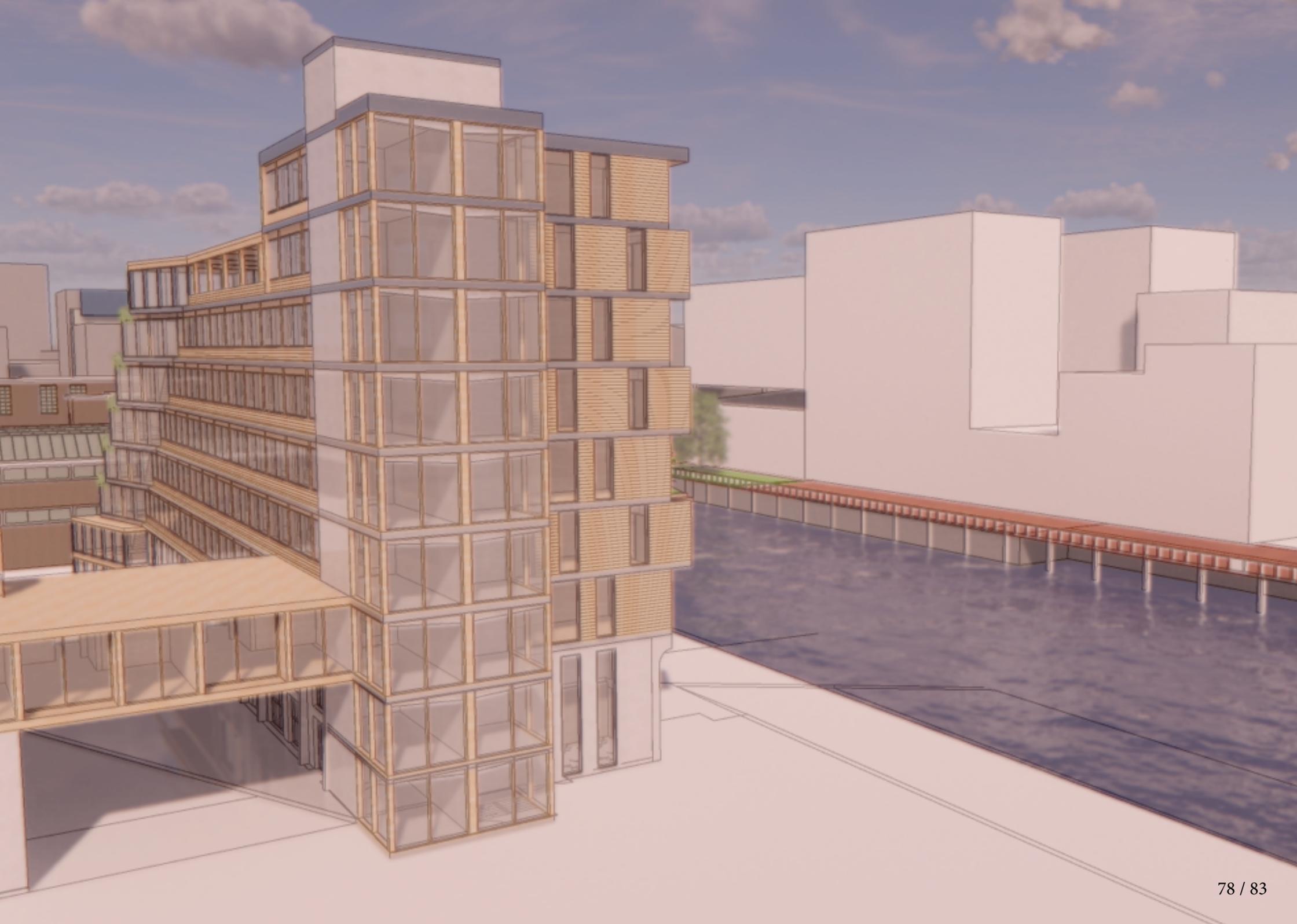
IMPRESSION SOUTH FAÇADE



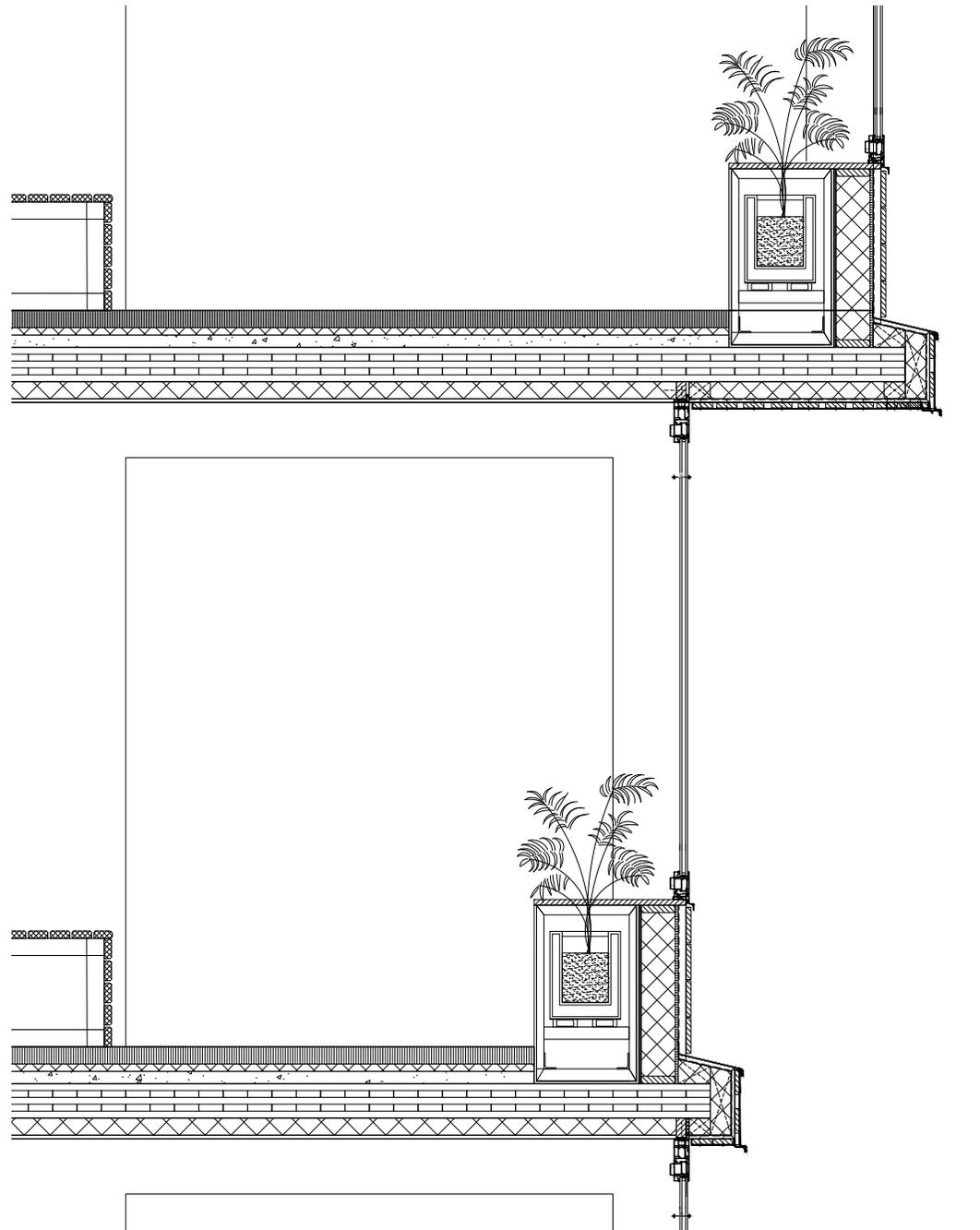




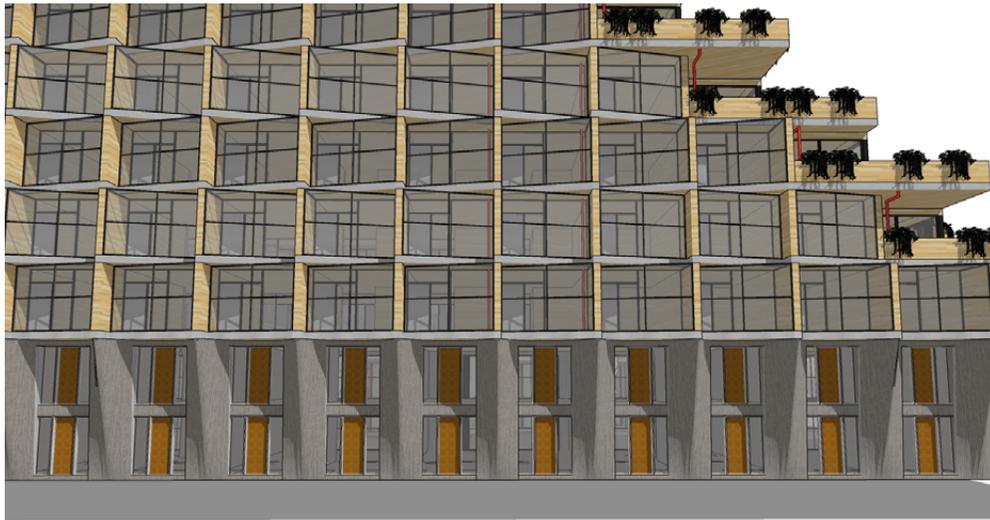
QUESTIONS?



FAÇADE FACING THE COURTYARD 1:5



FAÇADE TESTING - OPENNESS ROBUST FAÇADE



FAÇADE TESTING - OPENNESS ROBUST FAÇADE



ELEVATION NORTH FAÇADE



Which types of co-existence are best suited to prevent loneliness and isolation among the elderly?

- 01 What types of collectivity can stimulate informal care for the elderly within a residential community?
- 02 What are the social needs and how do they translate into a spatial design?
- 03 What are the architectural tools that create the spatial conditions to stimulate informal care for the elderly?