

CENTRE FOR  
RECREATIONAL  
ARTISTIC & MULTI  
FUNCTIONAL  
TRADE

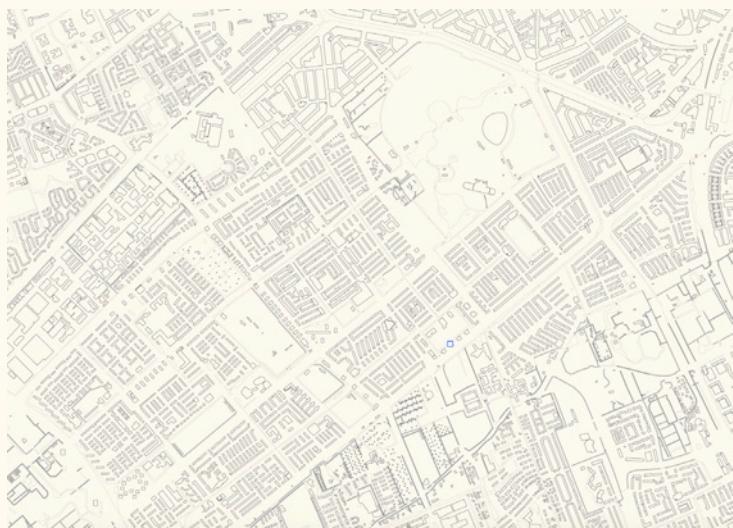
Public Condenser  
Chair of Public Building  
P5 Presentation

By

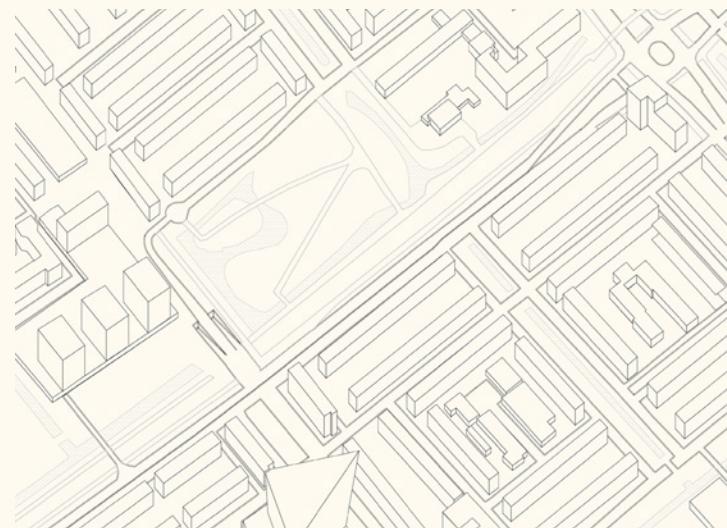
Oscar von Claer  
4936507

Master of Architecture, Urbanism  
and Building Sciences at the Delft University of  
Technology.

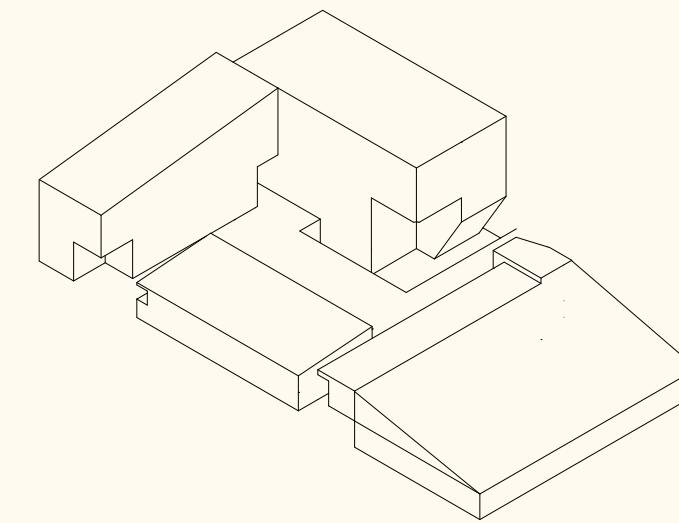
Supervisor: Ir. P.A.M Kuitenbrouwer  
Ir. G Koskamp  
Thesis committee: Prof. ir. N.A. de Vries  
Ir. H Bultstra  
Ir. M Overschie



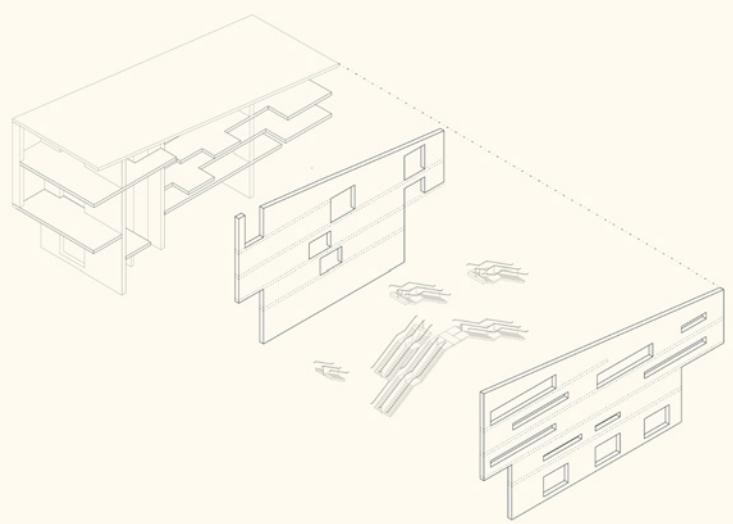
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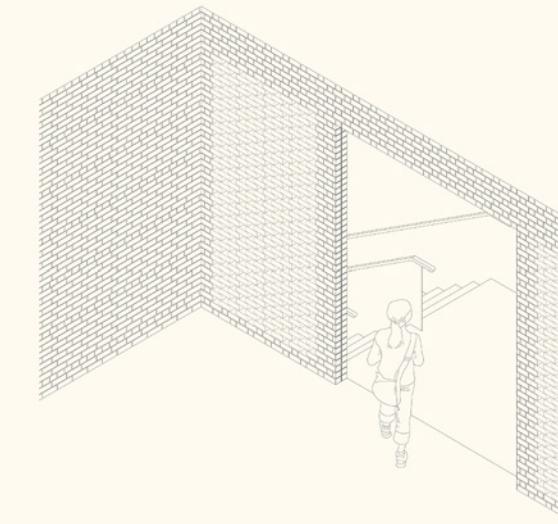
NEIGHBOURHOOD



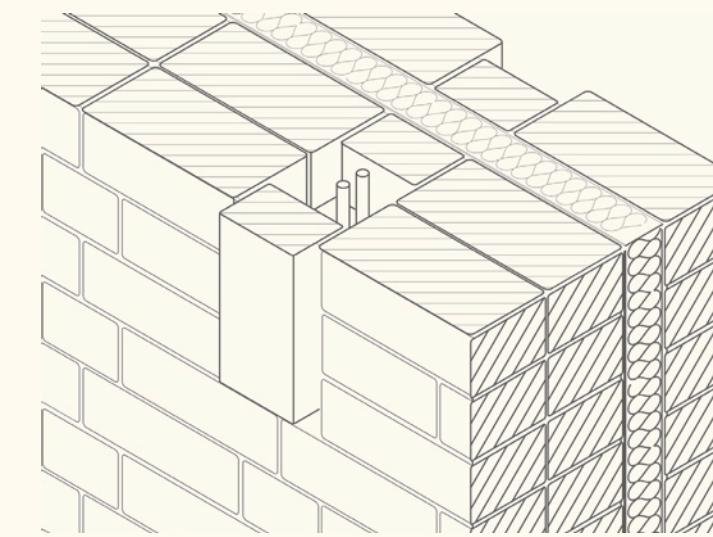
BODY



ORGAN



MATERIAL



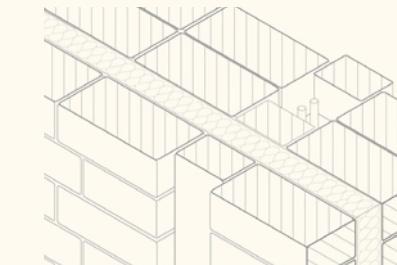
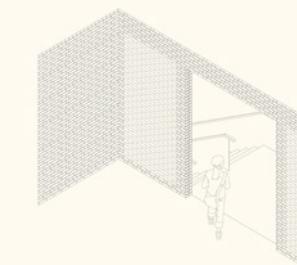
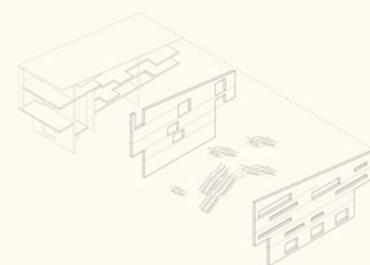
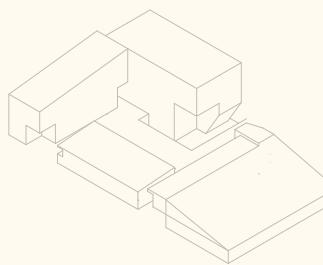
COMPONENT

## **RESEARCH AND BRIEF**

**PUBLIC BUILDING TYPOLOGY**

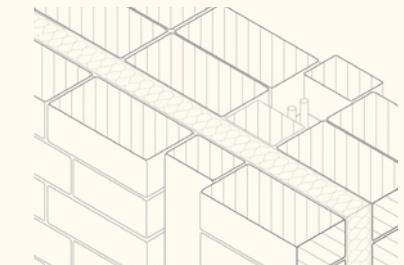
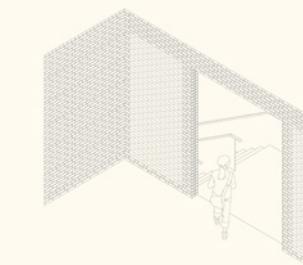
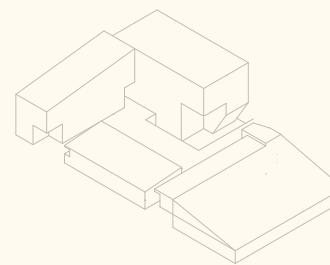
**DESIGN**

**USAGE**



## THE HAGUE

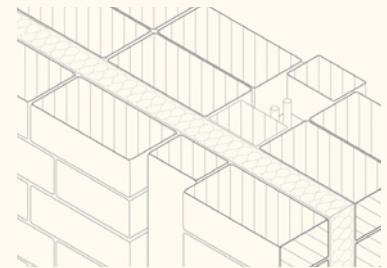
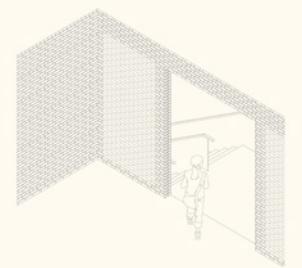
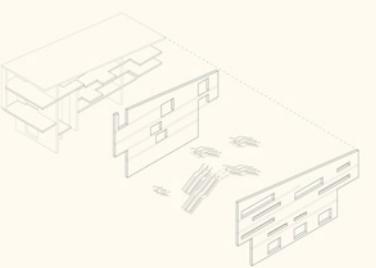
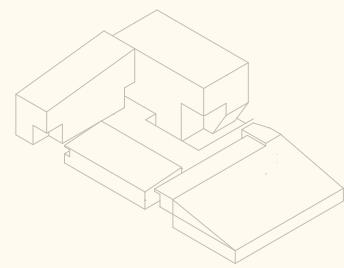




## MORGENSTOND

THE HAGUE SOUTH WEST





C  
R  
A  
F  
T

## EXISTING TYPOLOGY

### THE HAGUE SOUTH WEST

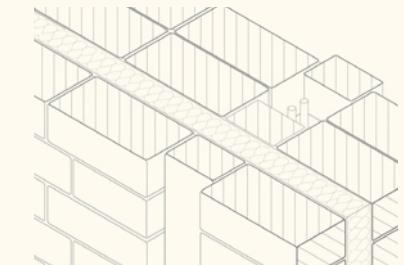
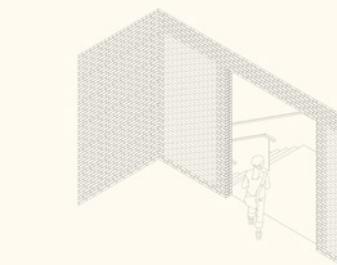
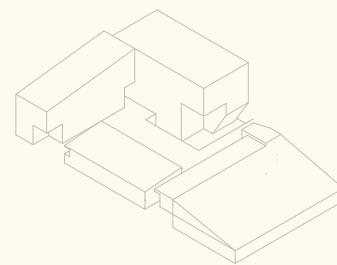
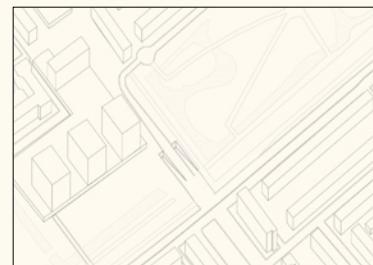
Densification and renewal process in Morgenstond

original social housing block



rennovated / replaced social housing

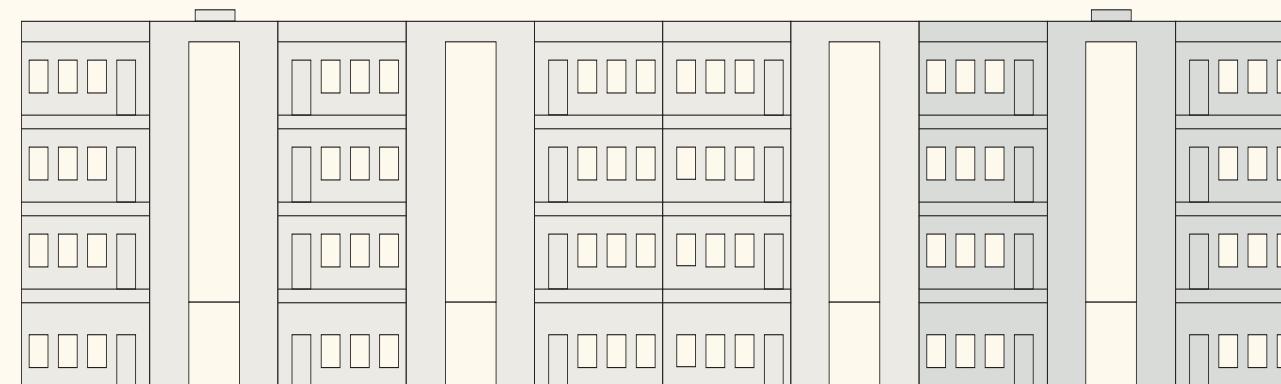




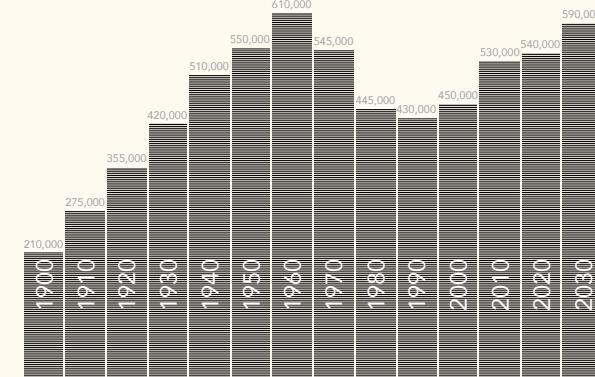
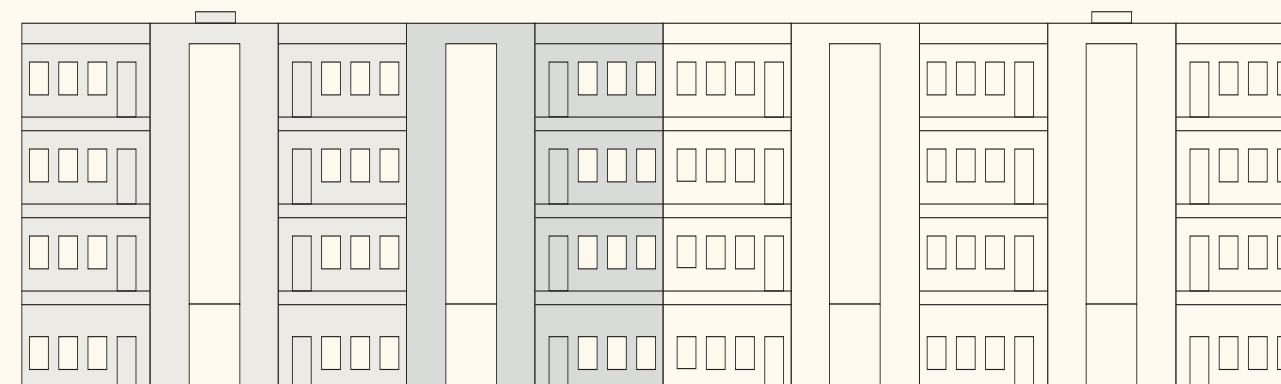
## EXISTING TYPOLOGY

### THE HAGUE SOUTH WEST

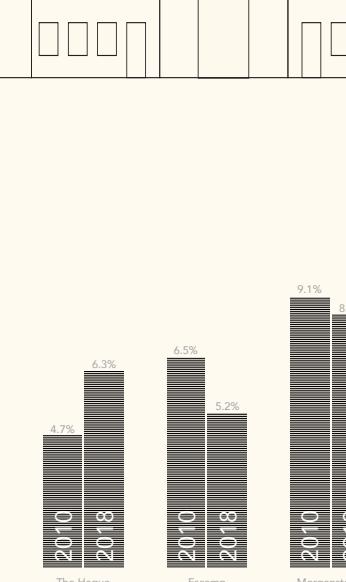
70% social housing  
30% free market



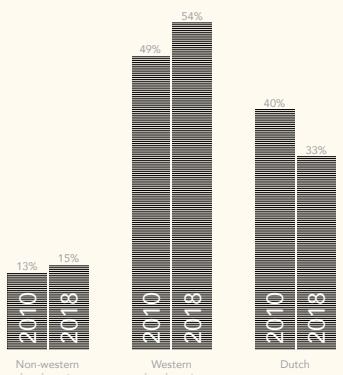
30% social housing  
20% free market  
50% free choice



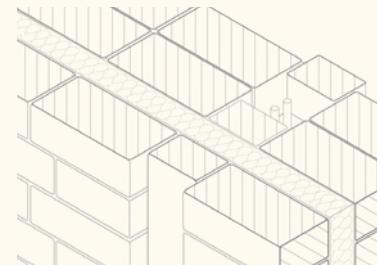
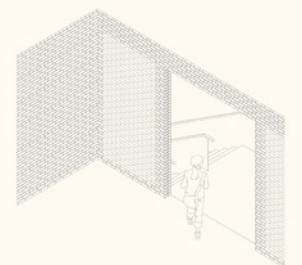
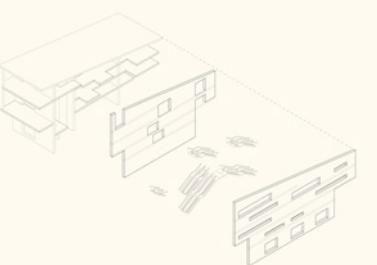
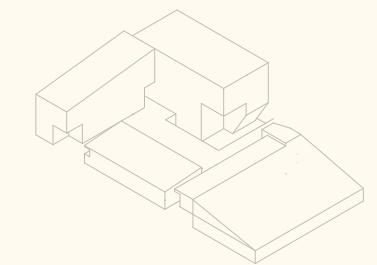
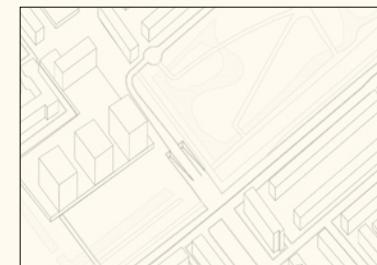
The Hague population growth



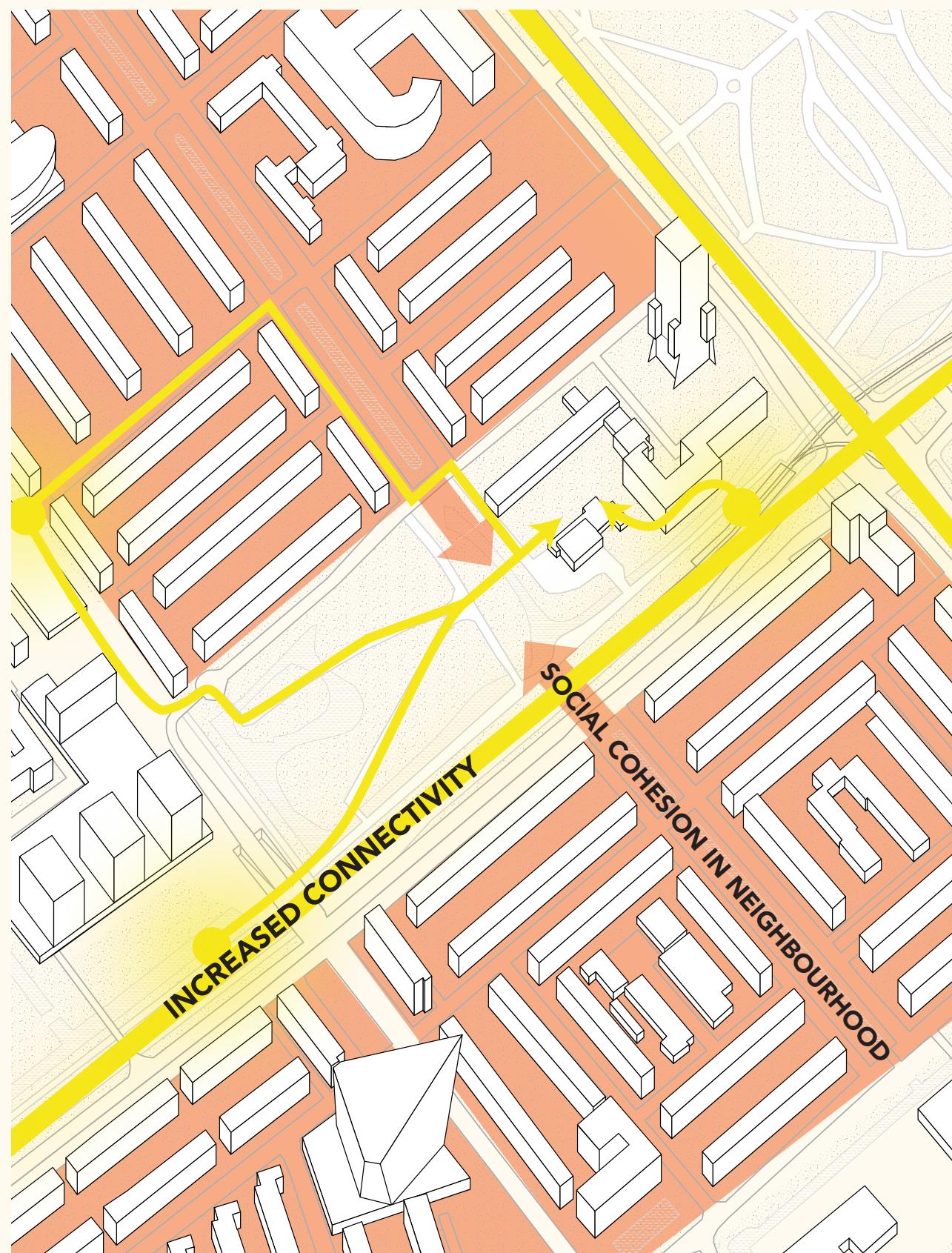
Unemployment rates

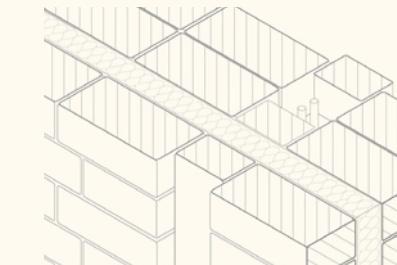
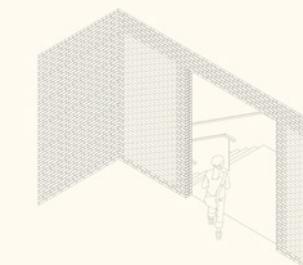
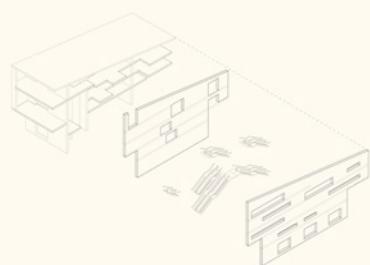
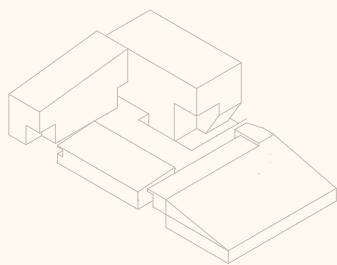
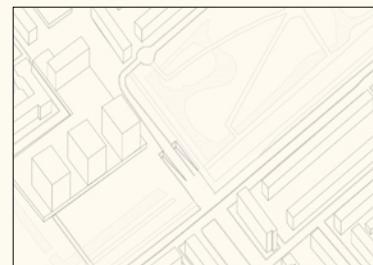


Population background



## FUTURE CHANGES



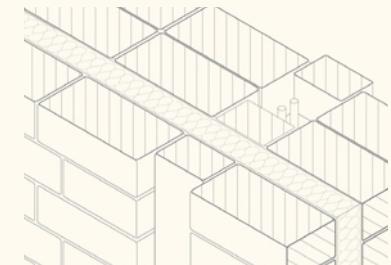
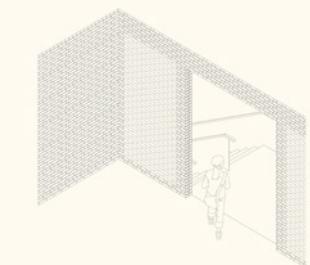
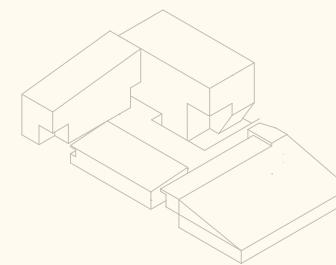
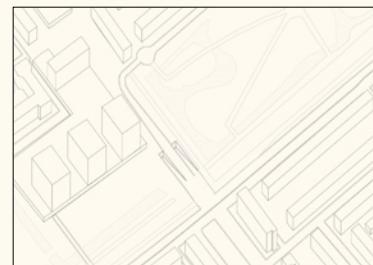


## CONCLUSIONS

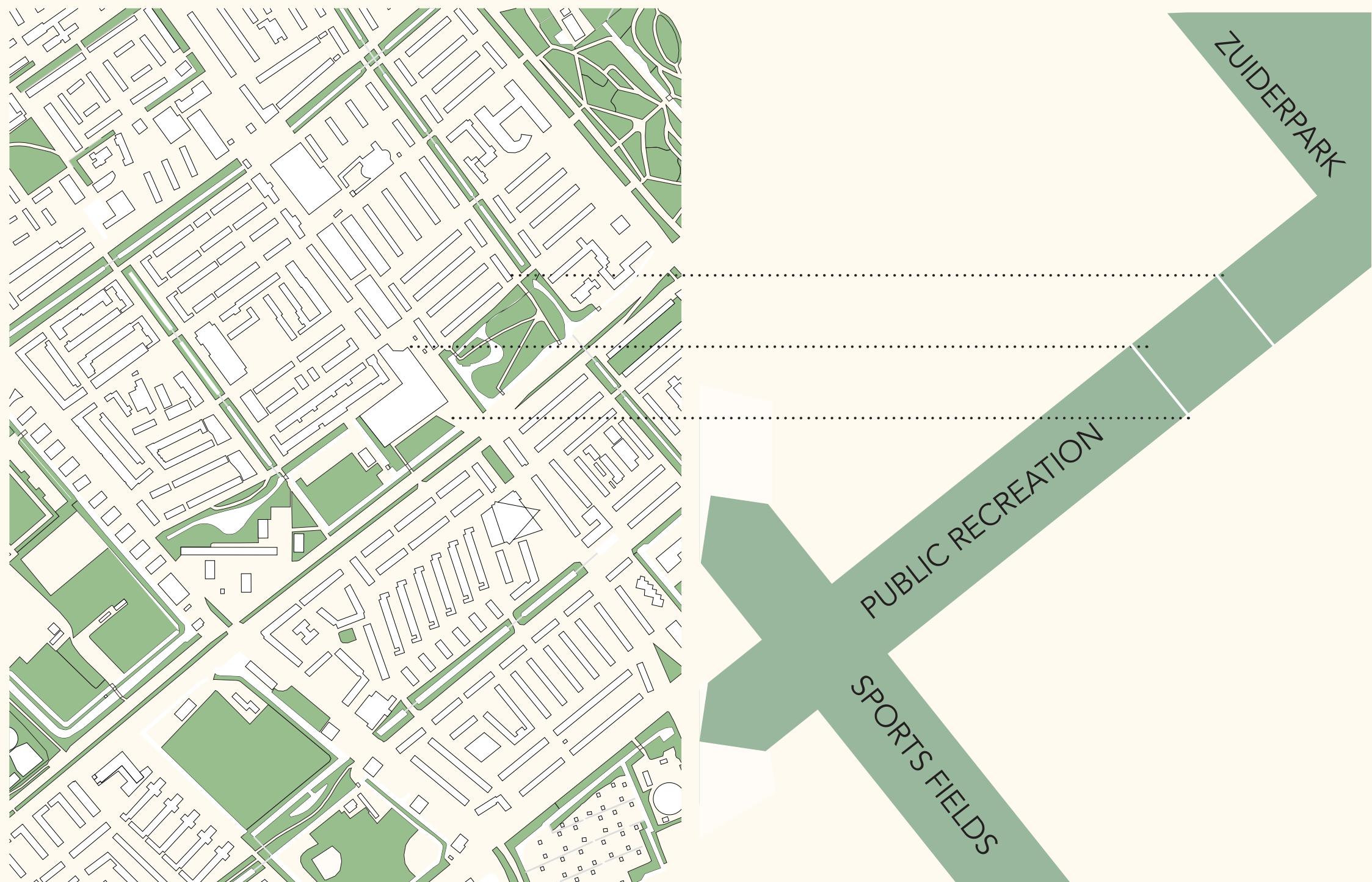
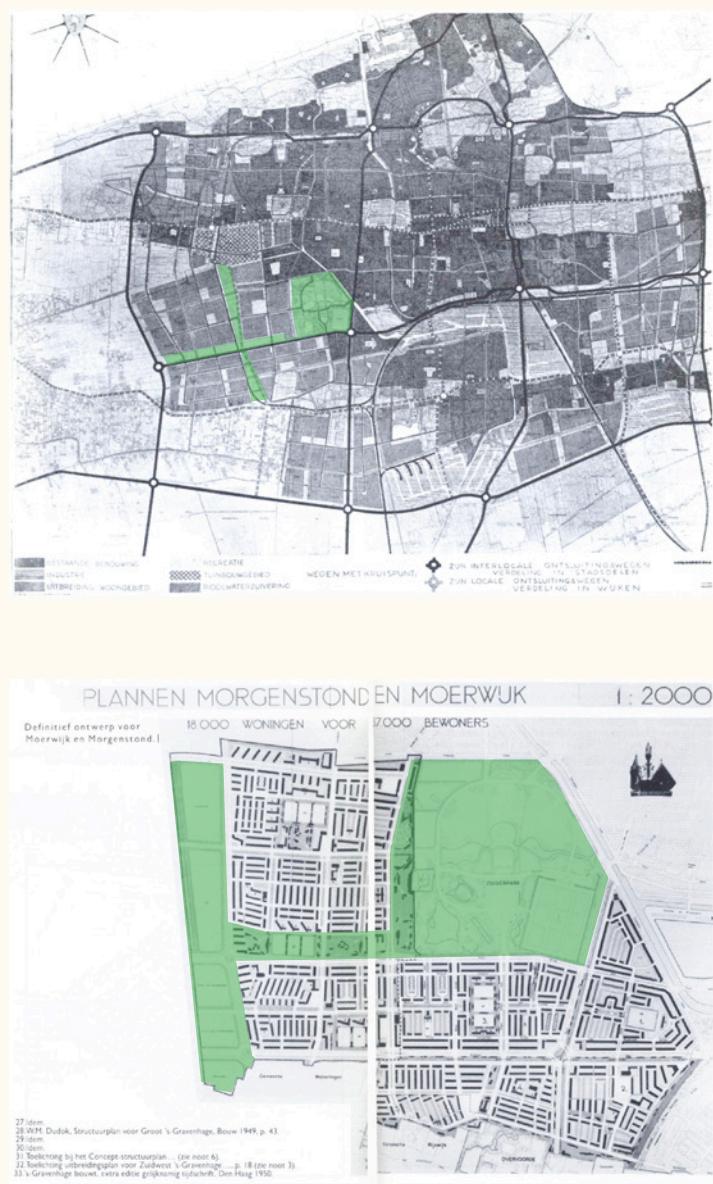
### THE HAGUE SOUTH WEST

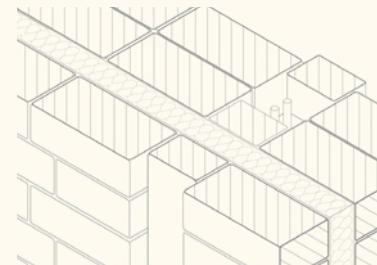
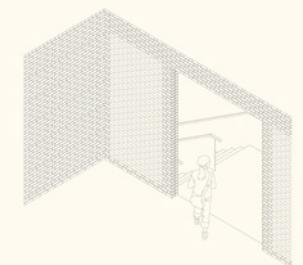
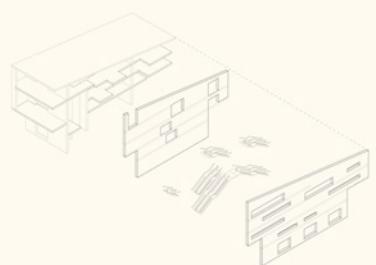
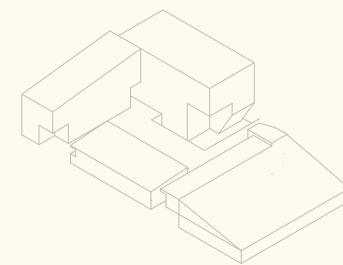
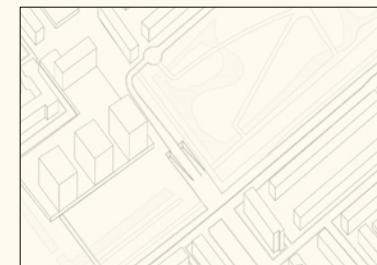
- **CONNECTION** : The increased mobility will **encourage movement** towards the site. By densifying the transportation network of the area, it will fast-track people moving in and out of the area, and thereby enable a greater accessibility.
- **CITY** : Changes in the housing stock : frequent **rennovations** and developments. The older housing stock (ageing social housing blocks) will be re-developed up-market and attempt to **densify** the area.
- **PEOPLE** : **Gentrification** - the increased popularity of the area will change the population of the area. By increasing the prices of housing and goods, the lower-income local citizens will be displaced and replaced by younger and richer people.
- **POWER** : Transformation of the neighbourhood : the city will look to establish this area as a new and **vibrant centers** of The Hague. In order to make this a permanent change, the municipality will invest into projects (such as the Public Condenser) to embody this transformation.

**INCREASED  
CONNECTIVITY**  
**OPPORTUNITES**  
**DENSIFICATION**  
**DIVERSIFICATION**  
**SOCIAL COHESION  
AMONGST RESIDENTS**



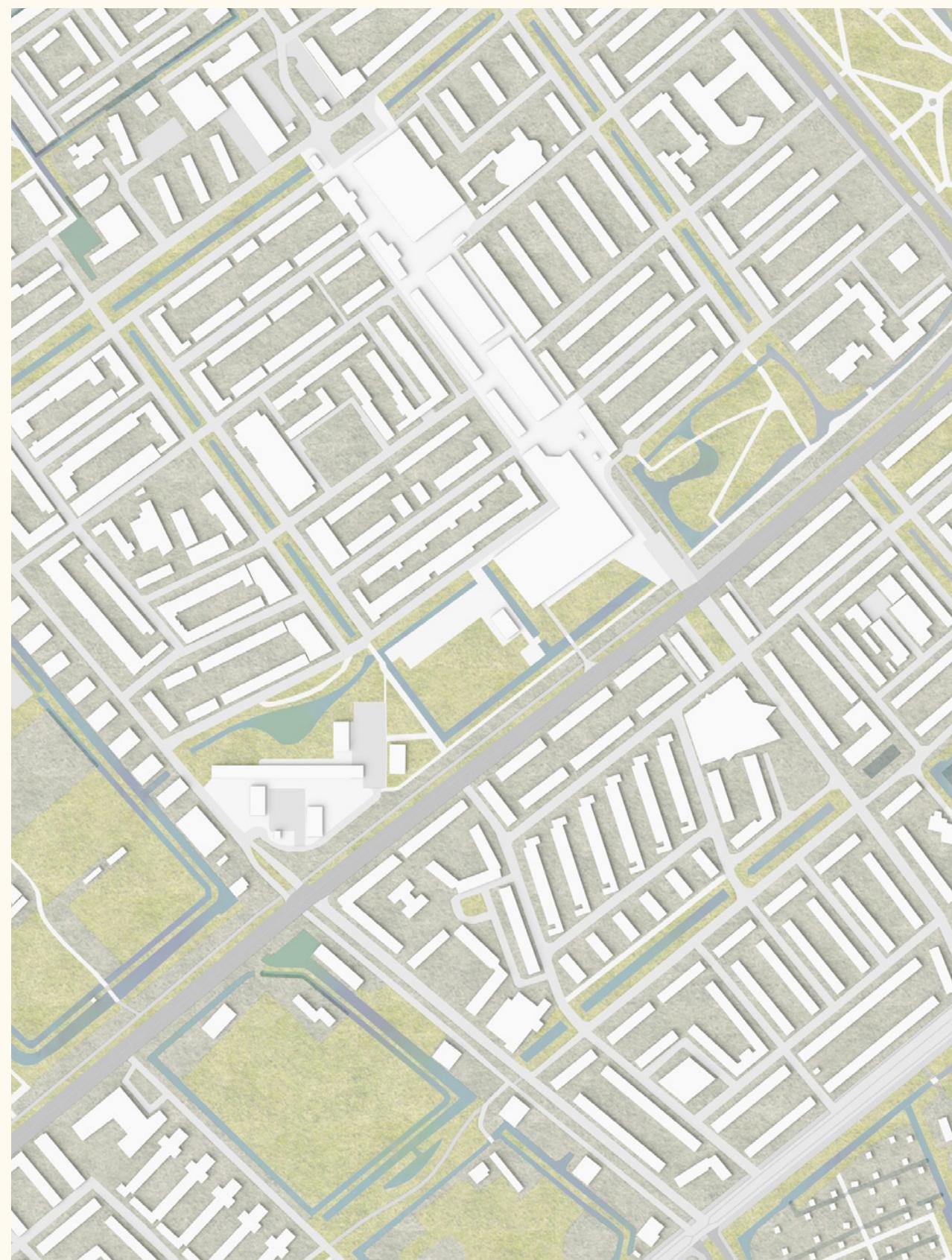
## GREEN CROSS

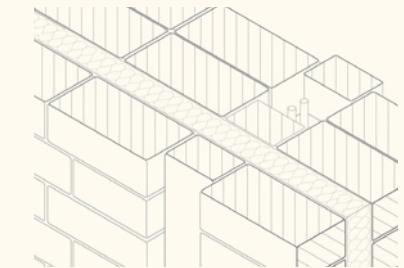
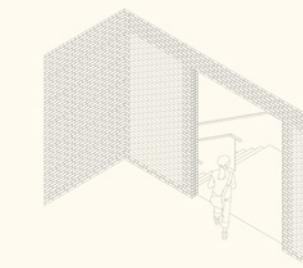
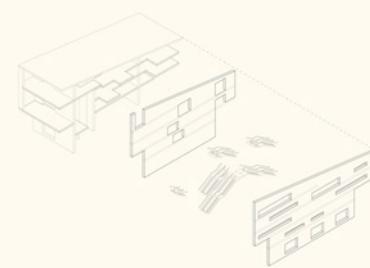
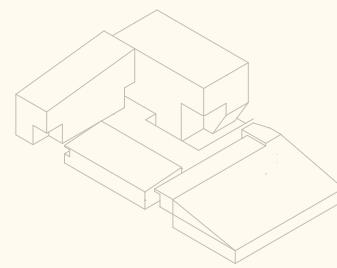
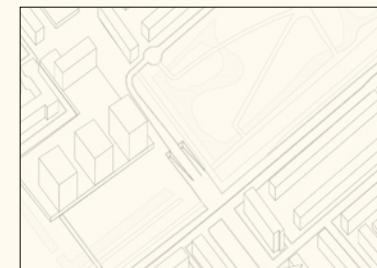
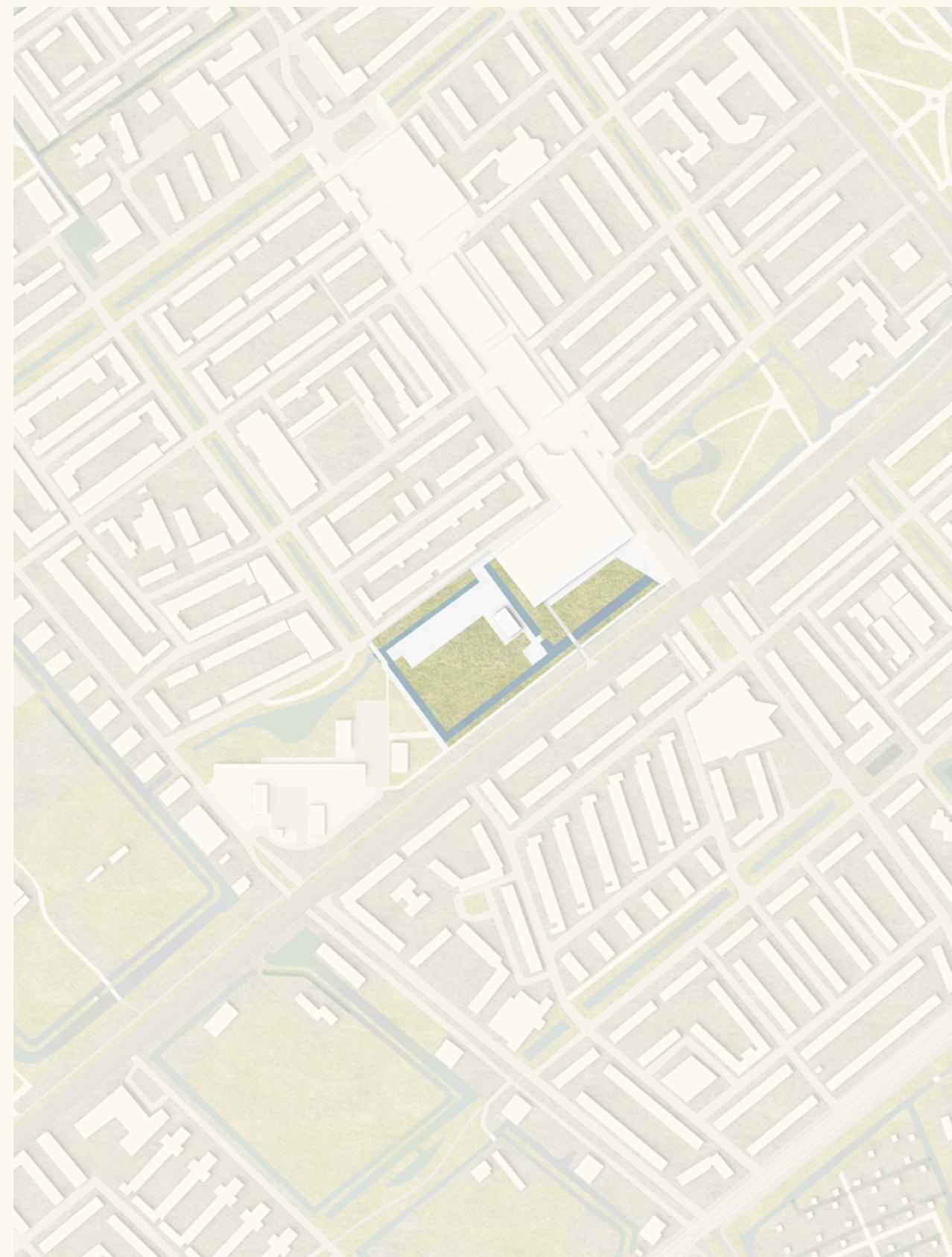


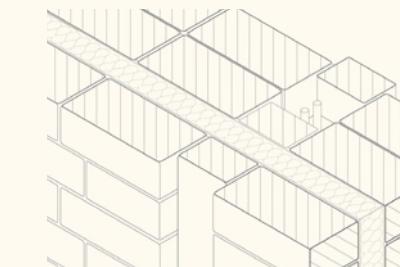
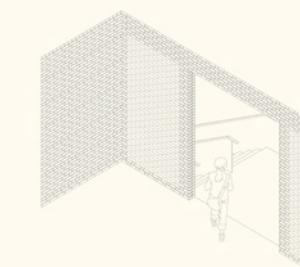
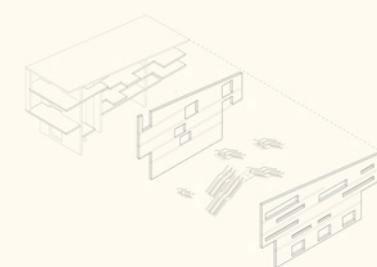
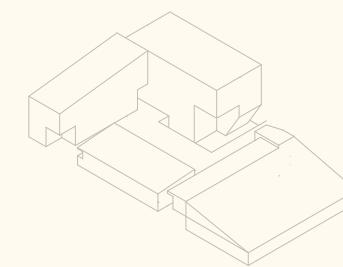
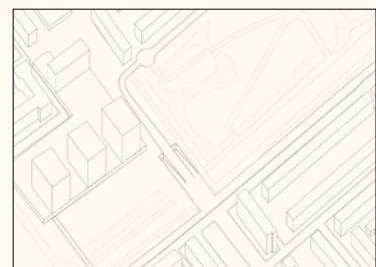


## MORGENSTOND

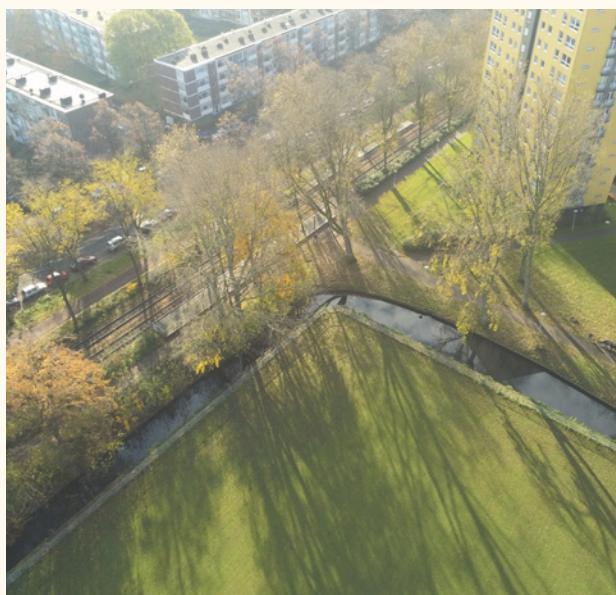
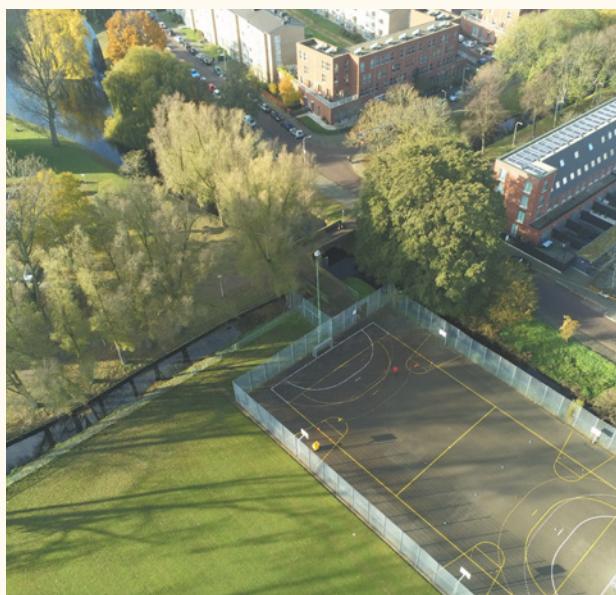
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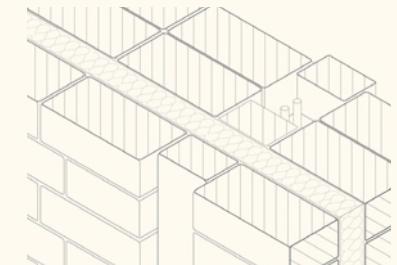
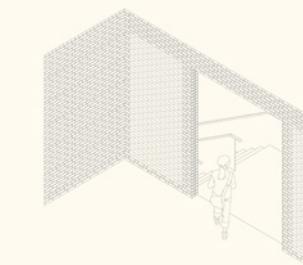
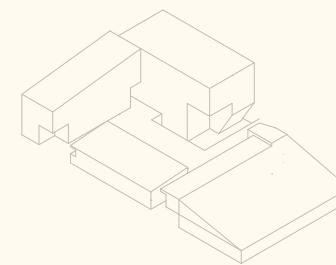
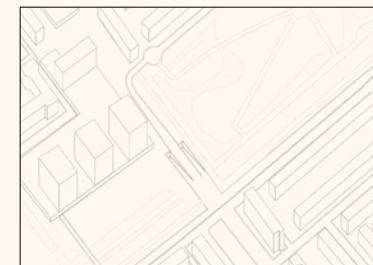
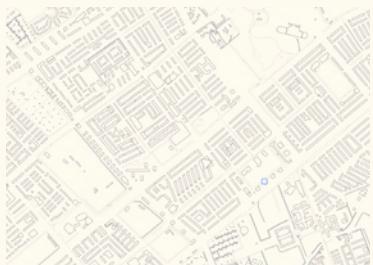


**SITE**

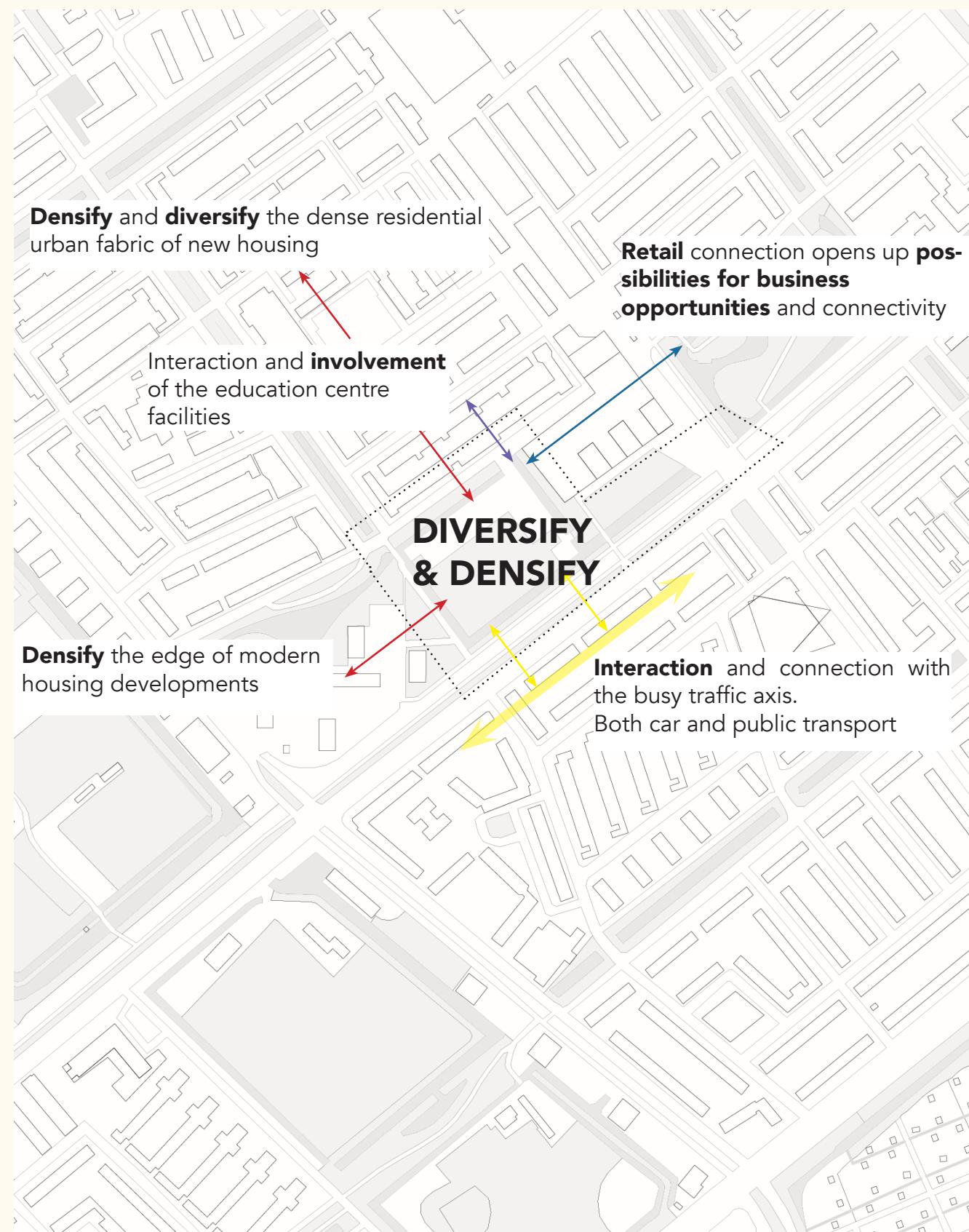


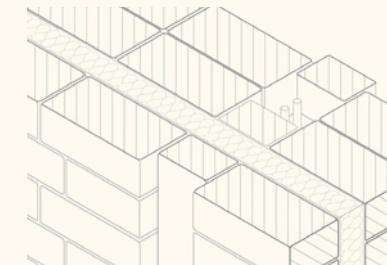
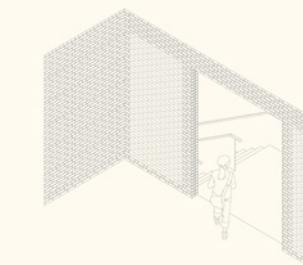
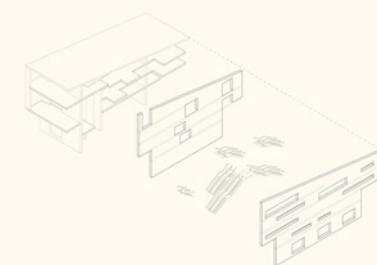
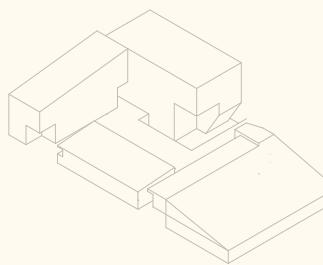
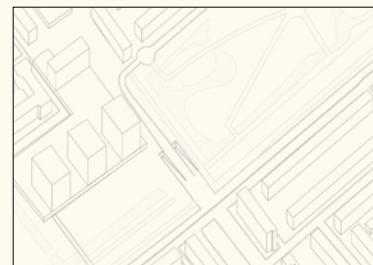
## SITE





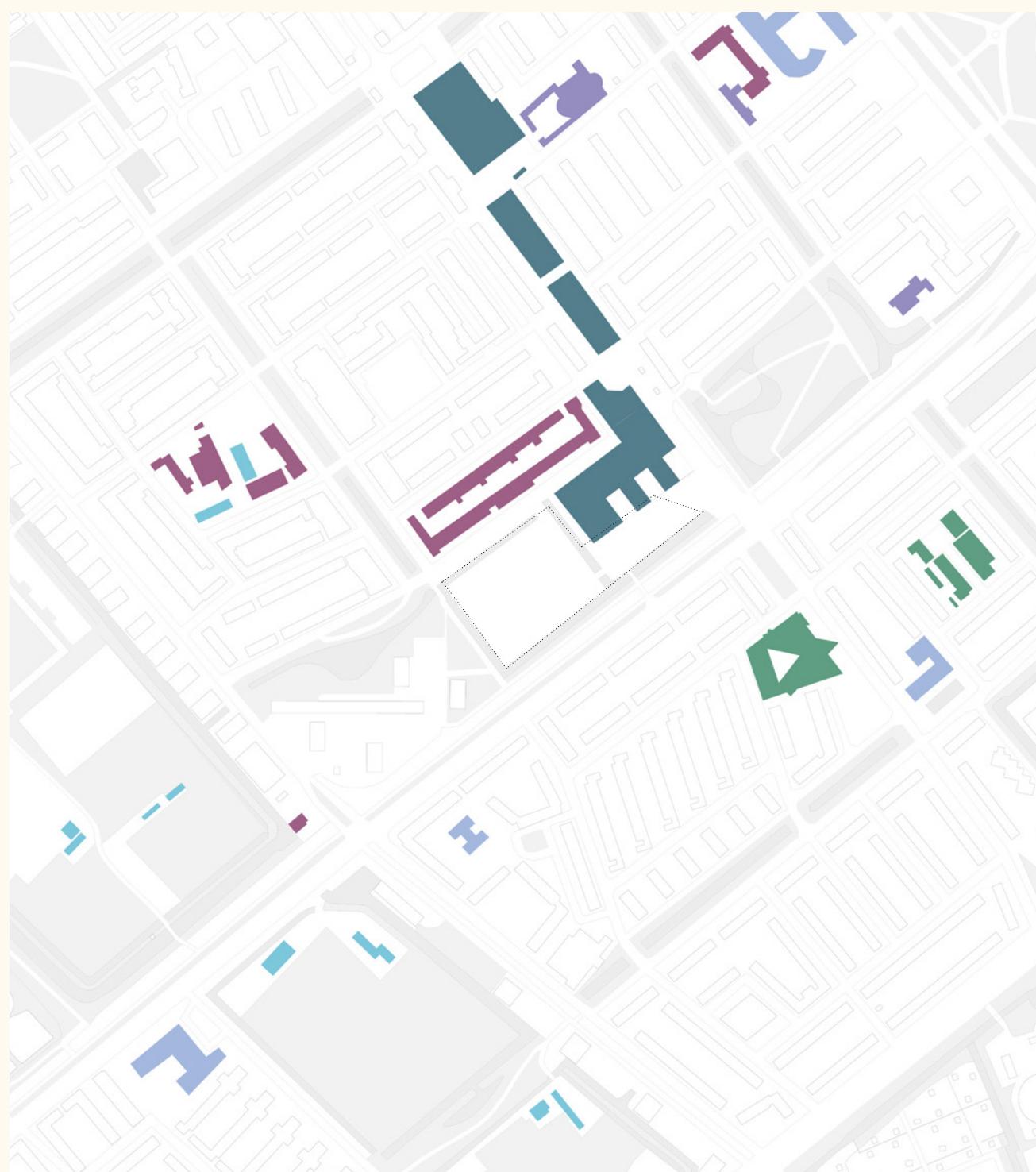
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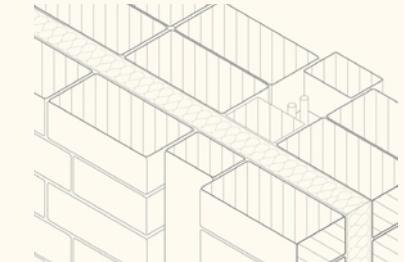
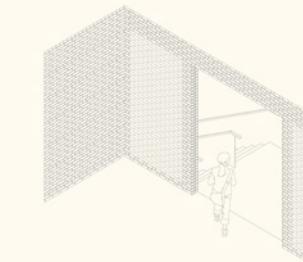
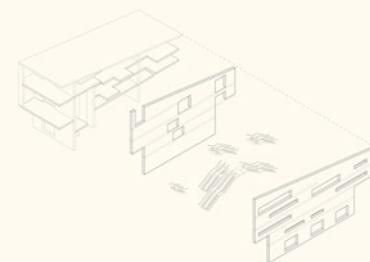
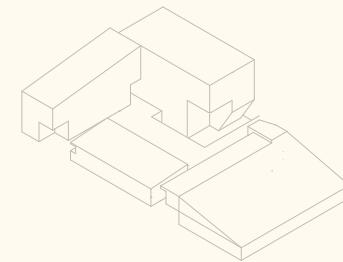




## EXISTING FUNCTIONS

- Administrative / Business
- Retail
- Education
- Sports / recreation
- Health
- Religious





## USERS

### FUNCTIONS

### USERS

#### Workshops / Start-up facilities

Local entrepreneurs and businesses - forceably moving to the area in a coming wave of gentrification and densification of the area.

#### Cultural centre

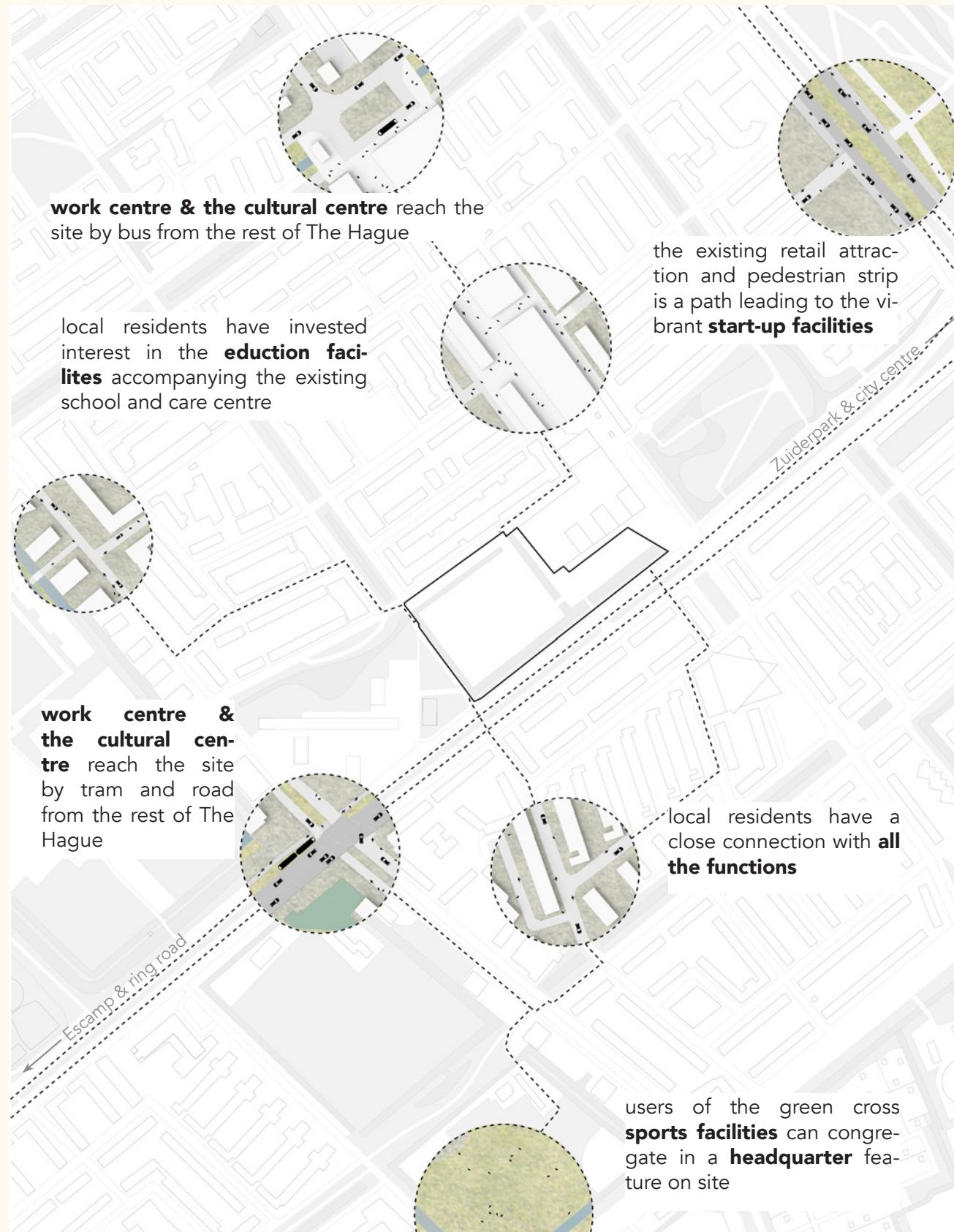
Locals, residents of The Hague, across Netherlands and Europe...

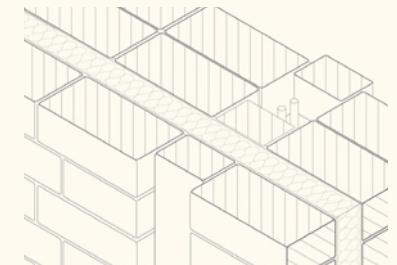
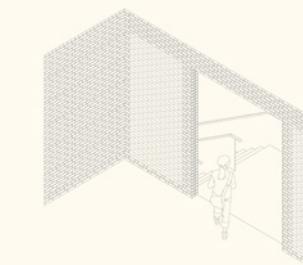
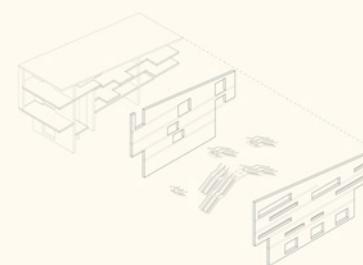
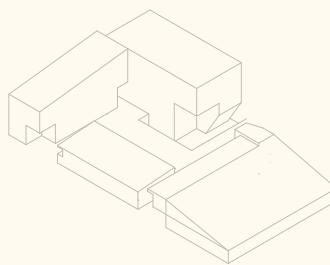
#### Green cross sports

Local sports club and residents of the area

#### Education & care centre

CJG Escamp & SBO De Haagse Beek staff, children and parents.





## THE PUBLIC CONDENSER : 4,400 m<sup>2</sup>

### Education - 490 m<sup>2</sup>

- > Creative hub (290 m<sup>2</sup>)
- > Care center (100 m<sup>2</sup>)
- > Canteen (110m<sup>2</sup>)
- > Playground (200m<sup>2</sup>)

### Workshop Space / Start Up Offices - 520 m<sup>2</sup>

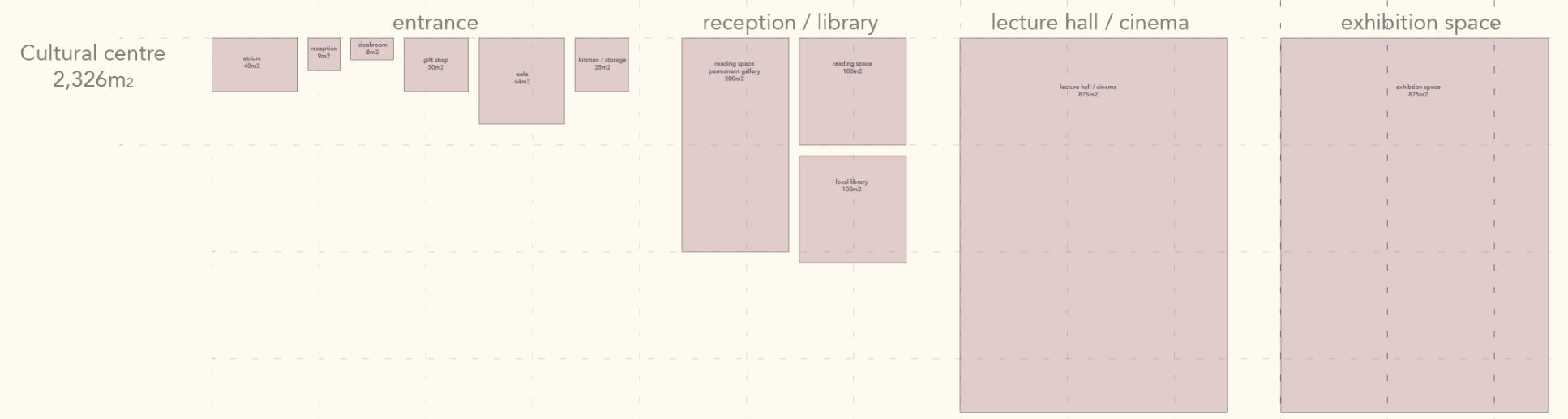
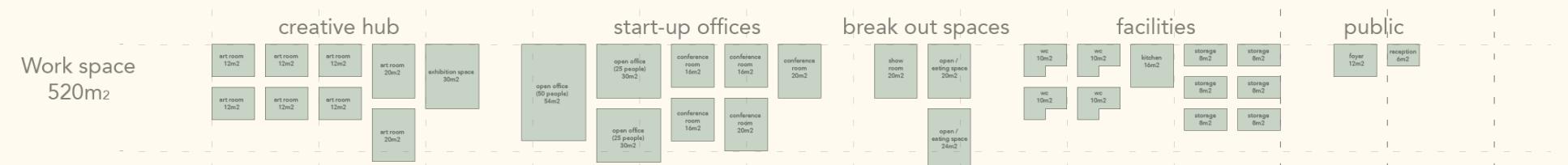
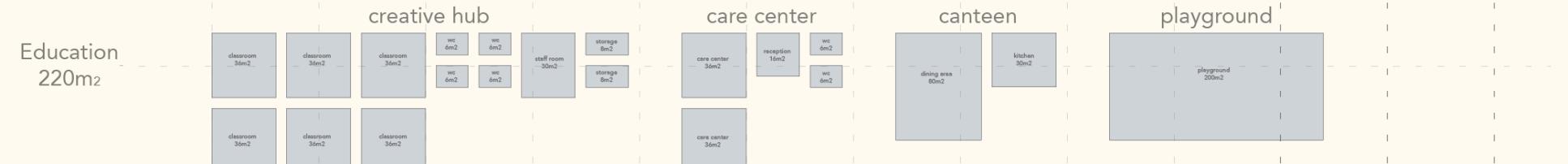
- > Creative hub (140m<sup>2</sup>)
- > Start-up offices (250m<sup>2</sup>)
- > Breakout spaces/Facilities (170m<sup>2</sup>)
- > Public (20m<sup>2</sup>)

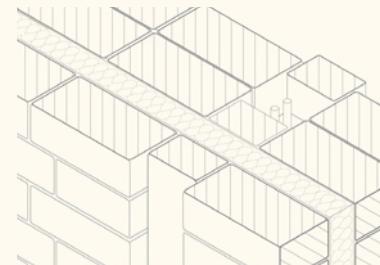
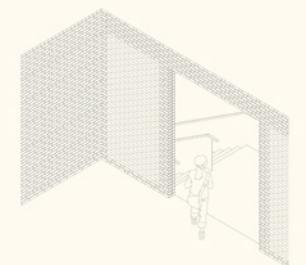
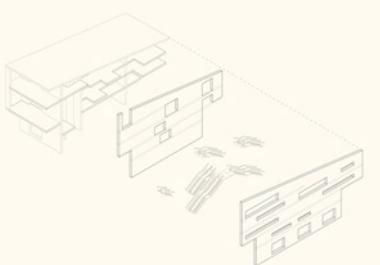
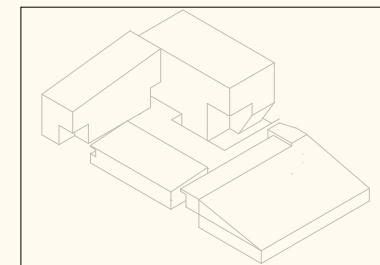
### Green Cross Sports and Recreation - 1,300 m<sup>2</sup>

- > Administration (110m<sup>2</sup>)
- > Multi-sports court (1050m<sup>2</sup>)
- > Facilities (150m<sup>2</sup>)

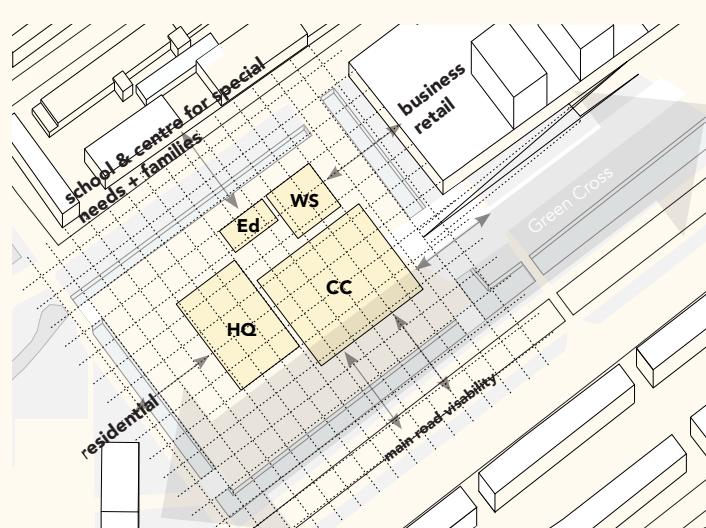
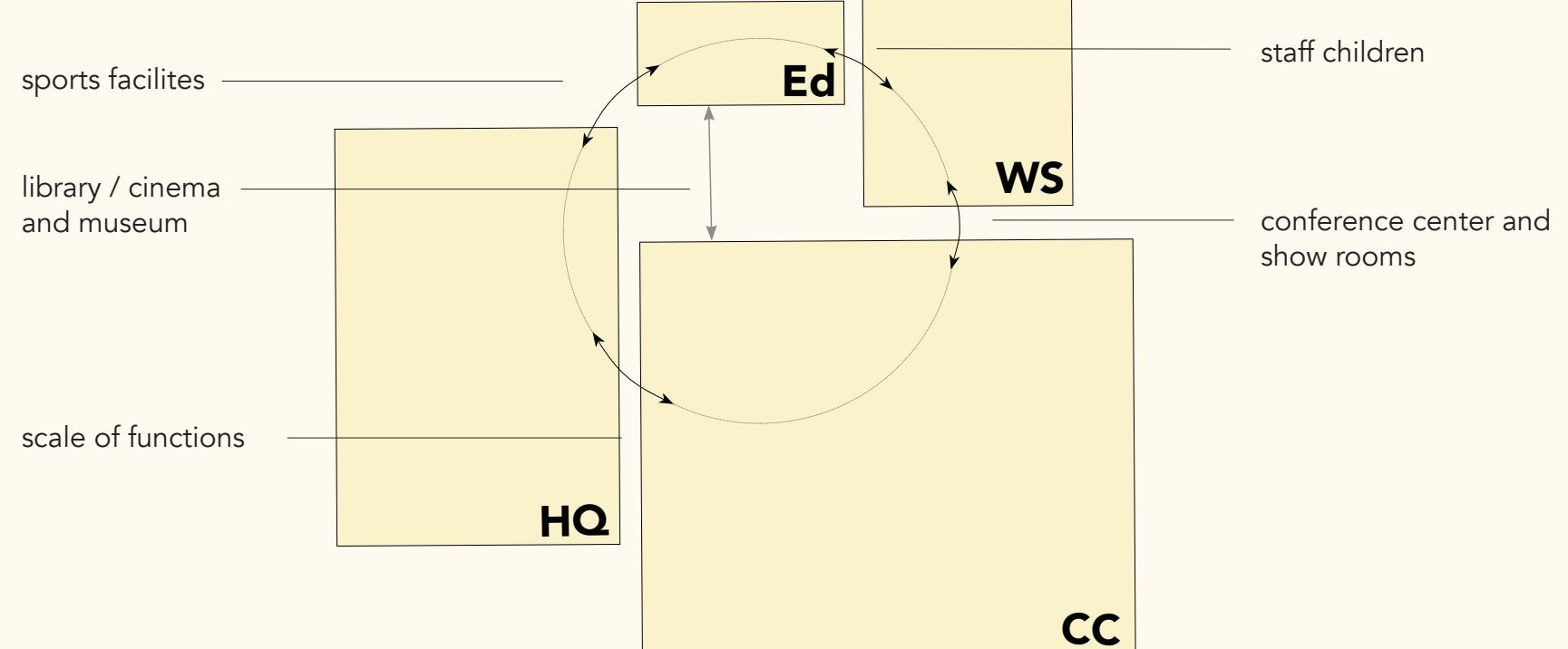
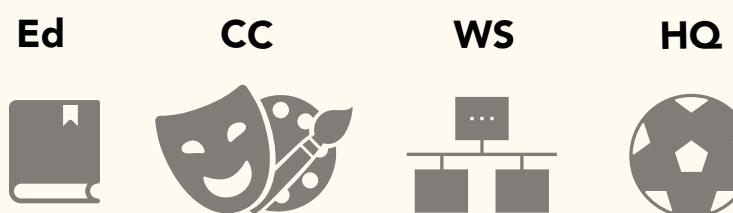
### Cultural center - 2,330 m<sup>2</sup>

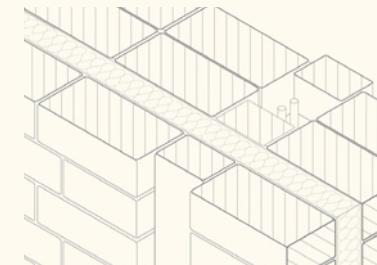
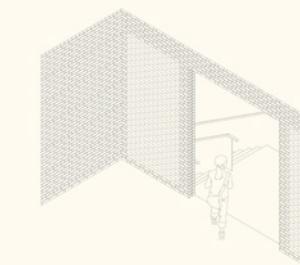
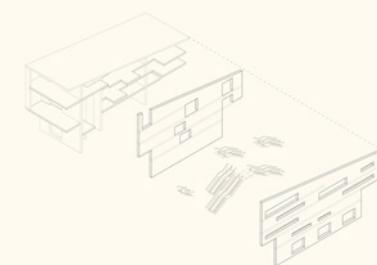
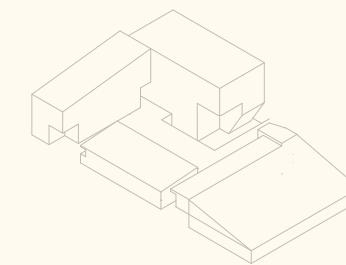
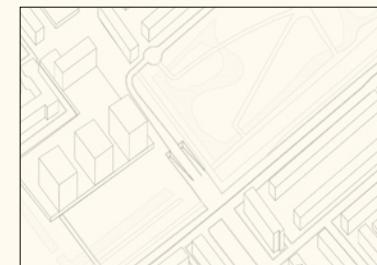
- > Entrance (180m<sup>2</sup>)
- > Reception hall / Library (400m<sup>2</sup>)
- > Lecture Hall / Cinema (870m<sup>2</sup>)
- > Exhibition space (870m<sup>2</sup>)





## INTER FUNCTIONALITY





## MANIFESTO

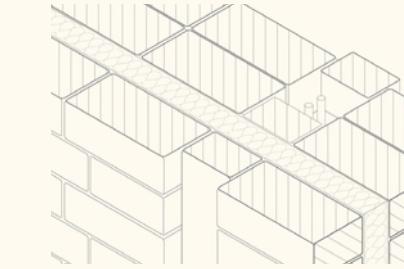
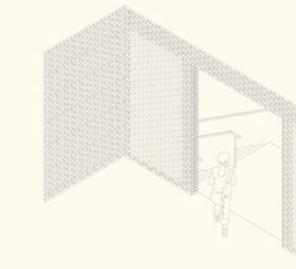
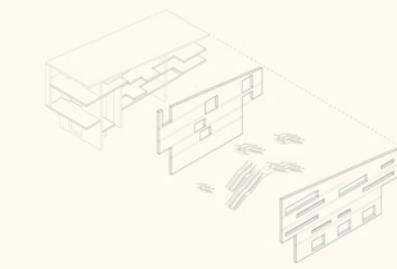
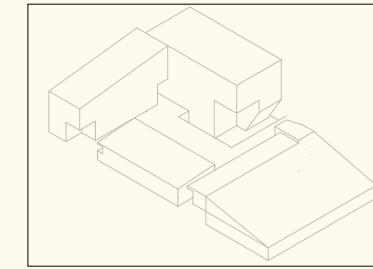


RESEARCH AND BRIEF

**PUBLIC BUILDING TYPOLOGY**

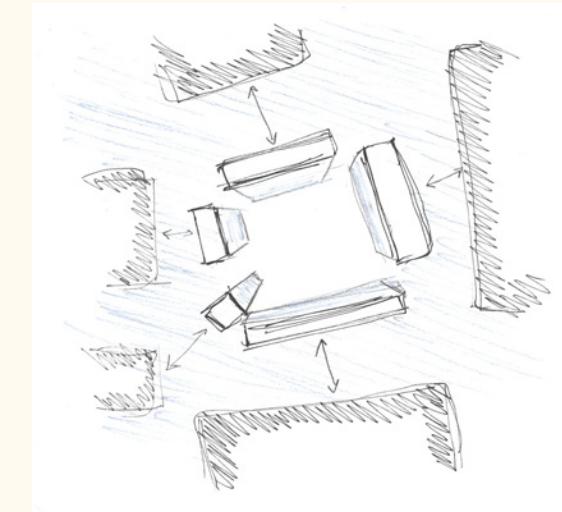
DESIGN

USAGE

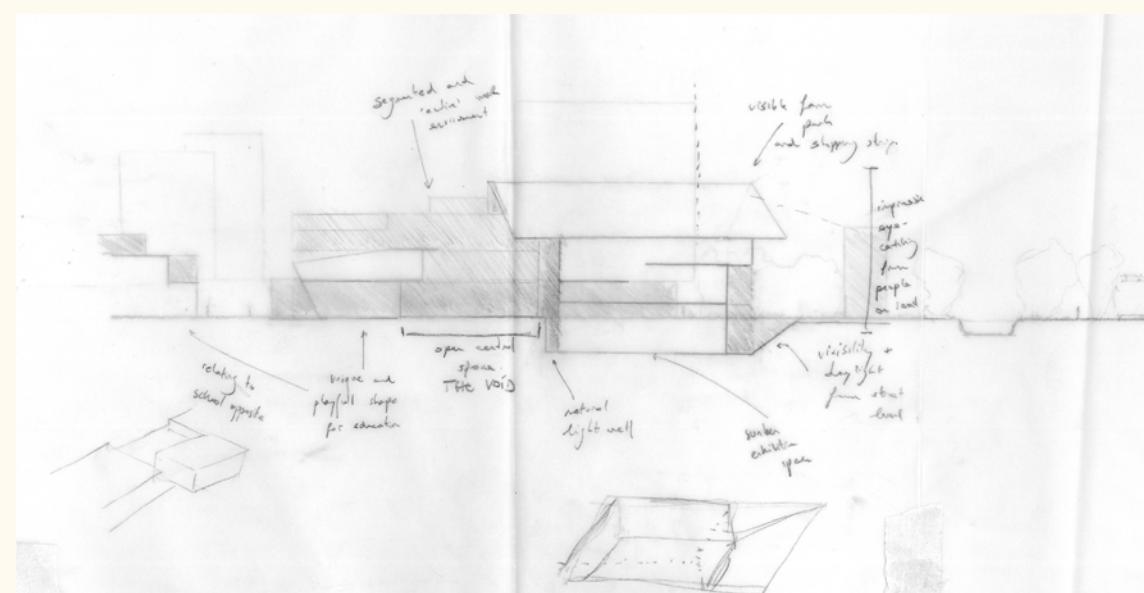


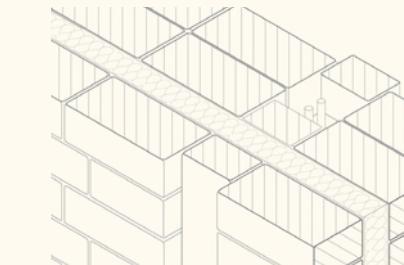
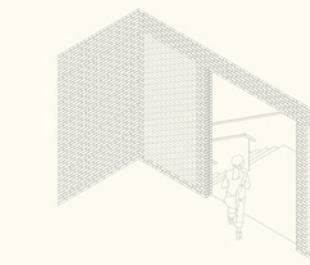
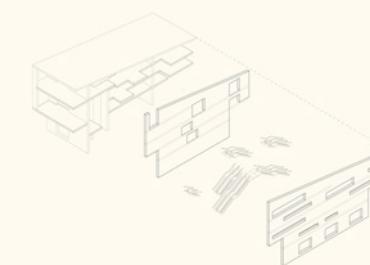
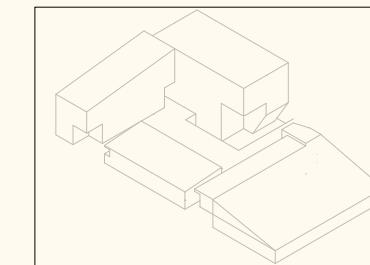
## MULTIPLICITY CONCEPT

**THE PUBLIC CONDENSER**  
 densification of functions  
 singular inner courtyard vs the fragmented outer shell  
 of the buildings



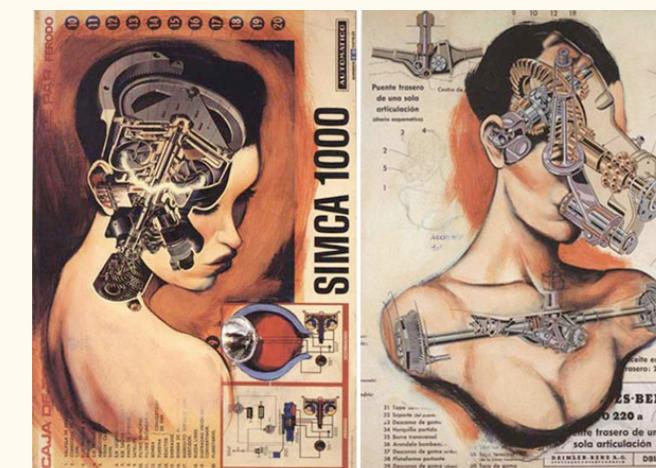
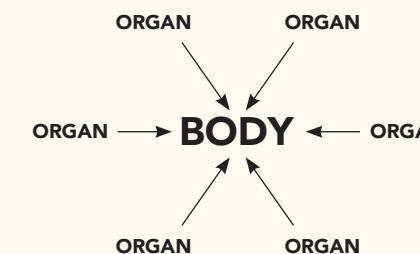
**MULTIPLICITY**  
 the building's ability to behave singularly whilst being a part of the whole complex. surprise and trigger awareness in the visitor



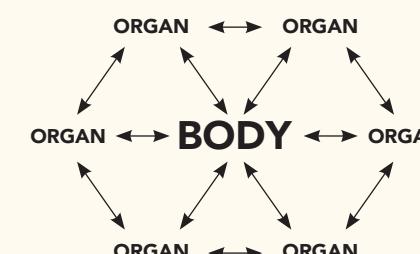


## MULTIPLICITY CONCEPT

### ORGAN VS BODY      DELEUZE & GUATTARI



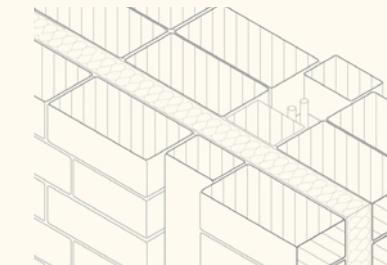
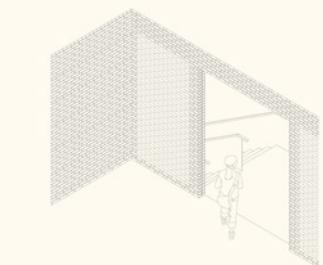
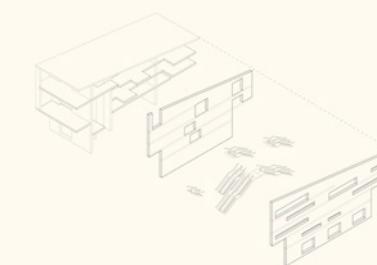
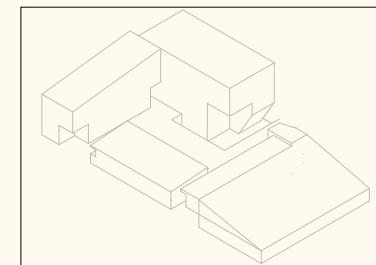
### ORGAN & BODY



W. GIBSON



“ calls for a non-material space of representation [...] enabling you to explore the void that separates the physical presence and the consciousness of a ‘spirit’, a ghost who hauntingly will navigate the expanses of such a consensual illusion ”

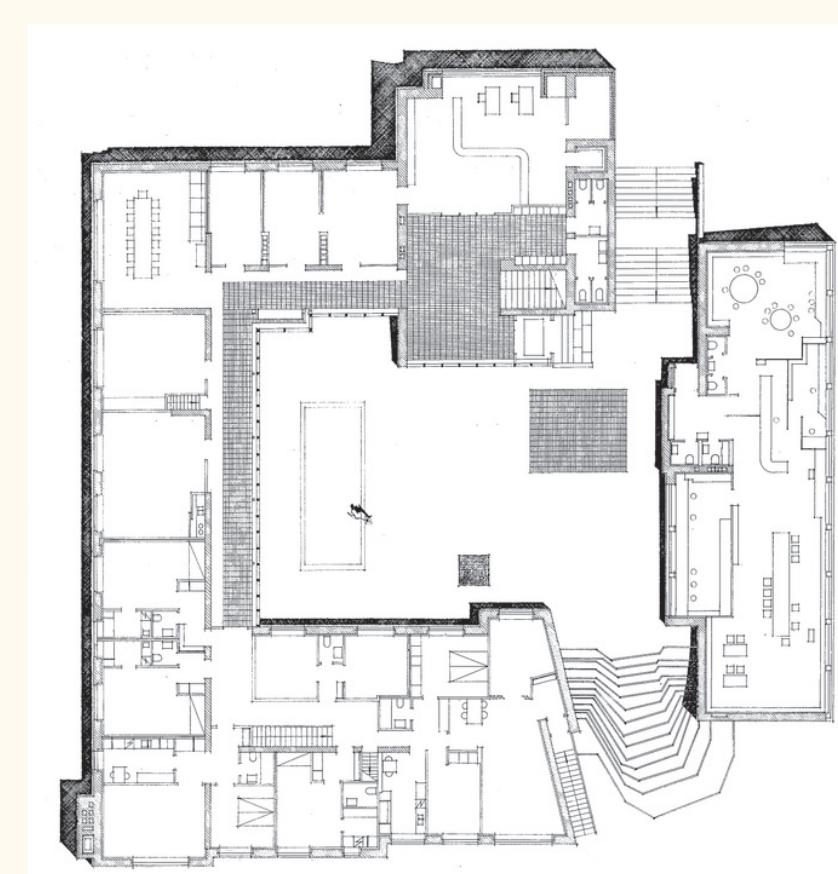
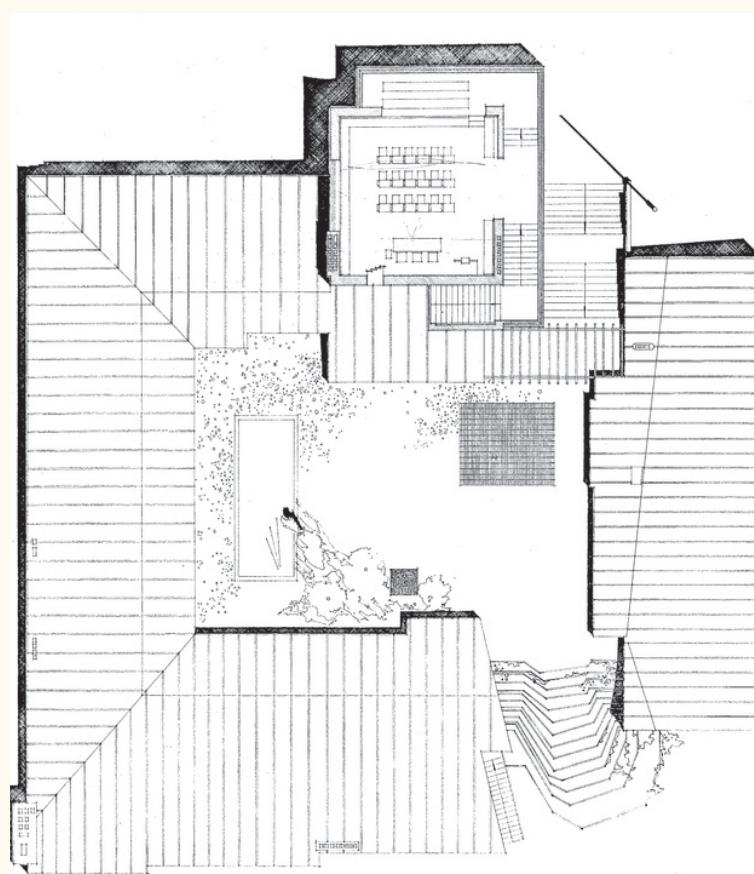


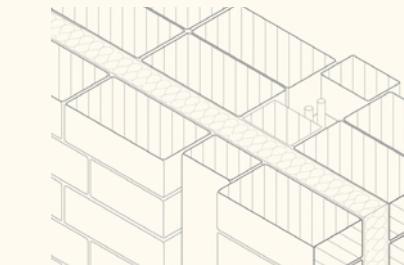
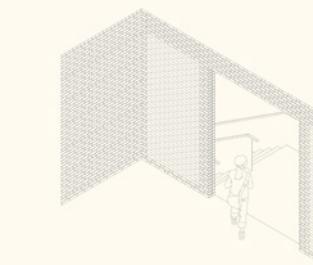
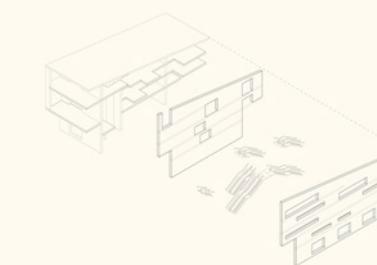
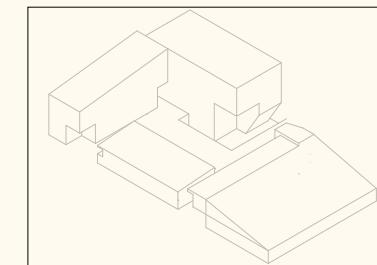
**Säynätsalo Town Hall** Finland

**A. AALTO**

**BODY FIRST, ORGANS LATER**

**MEDIATION AND SEQUENCING**



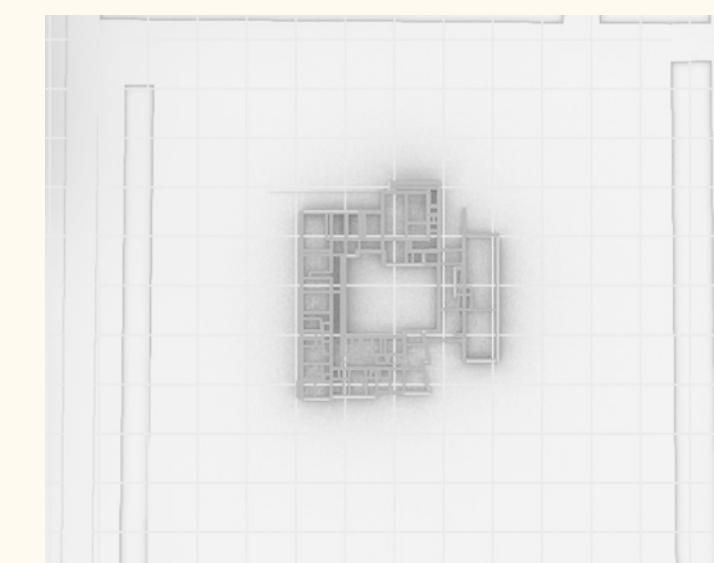
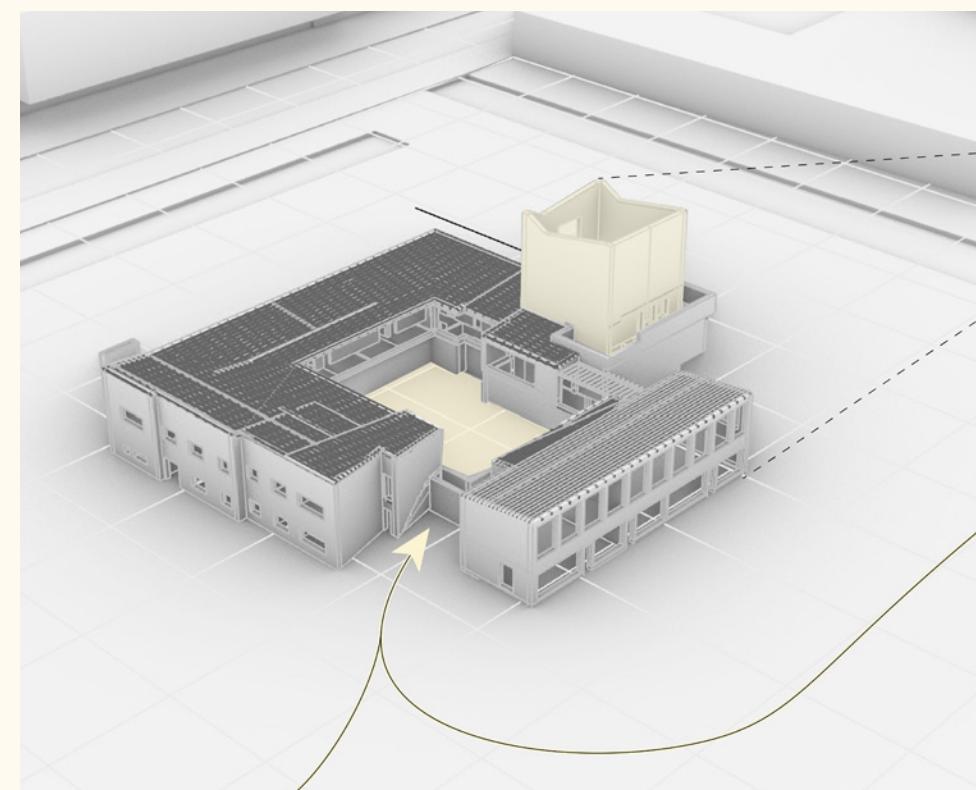
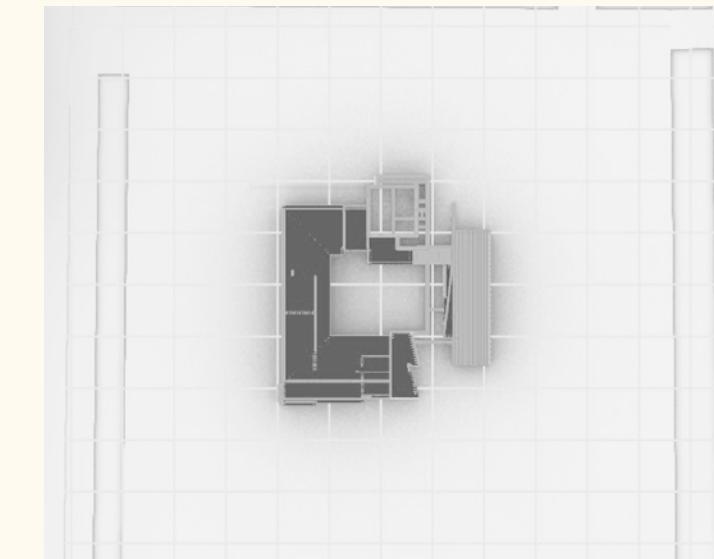


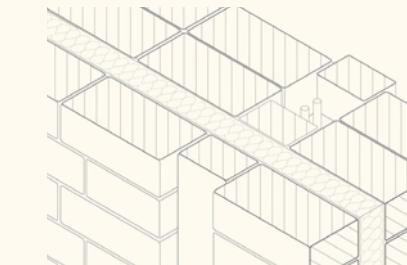
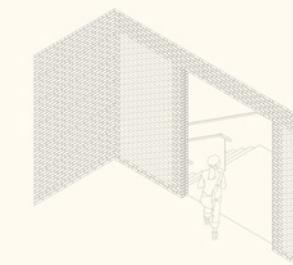
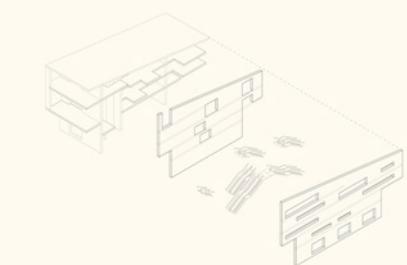
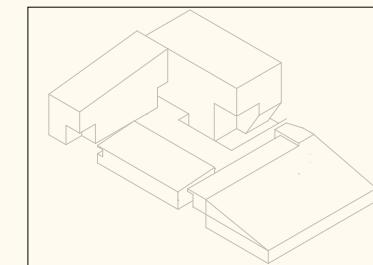
**Säynätsalo Town Hall** Finland

**A. AALTO**

**BODY FIRST, ORGANS LATER**

**ON SITE**

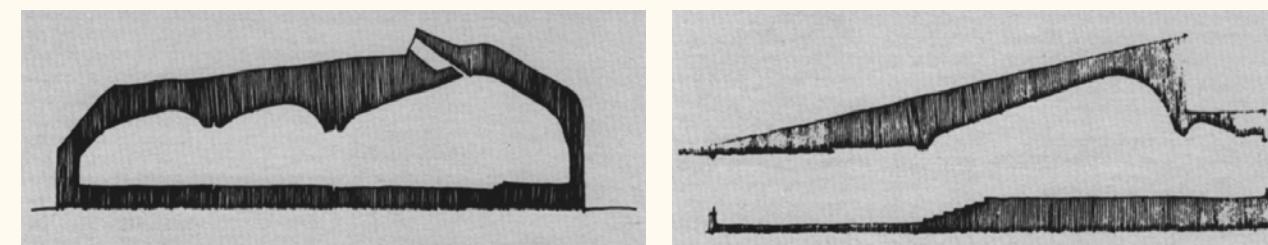




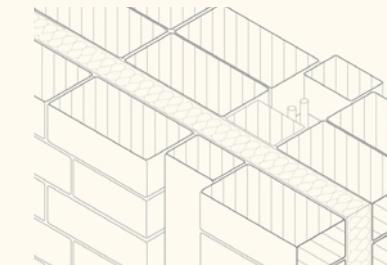
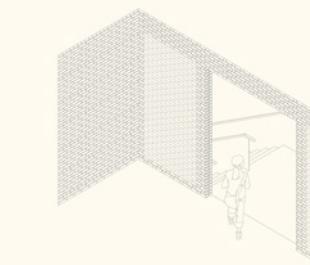
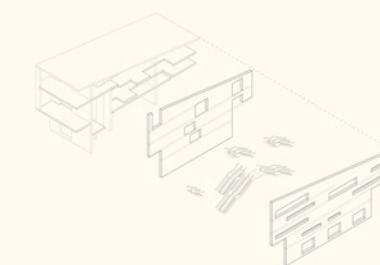
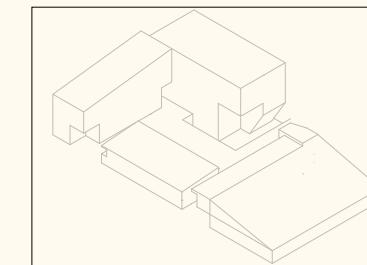
## MEDIATION AND SEQUENCING

### (BODY FIRST, ORGANS LATER) A. AALTO

**“Aalto’s ability to reconcile the forces of inside and outside without their expression becoming suppressed, simplistic or forced, is a valuable lesson in today’s architecture. It is this pluralistic approach to architectural form and to the solution of architectural problems that results in the expressive architectural language that Aalto has developed. ”** William C. Miller (1979)



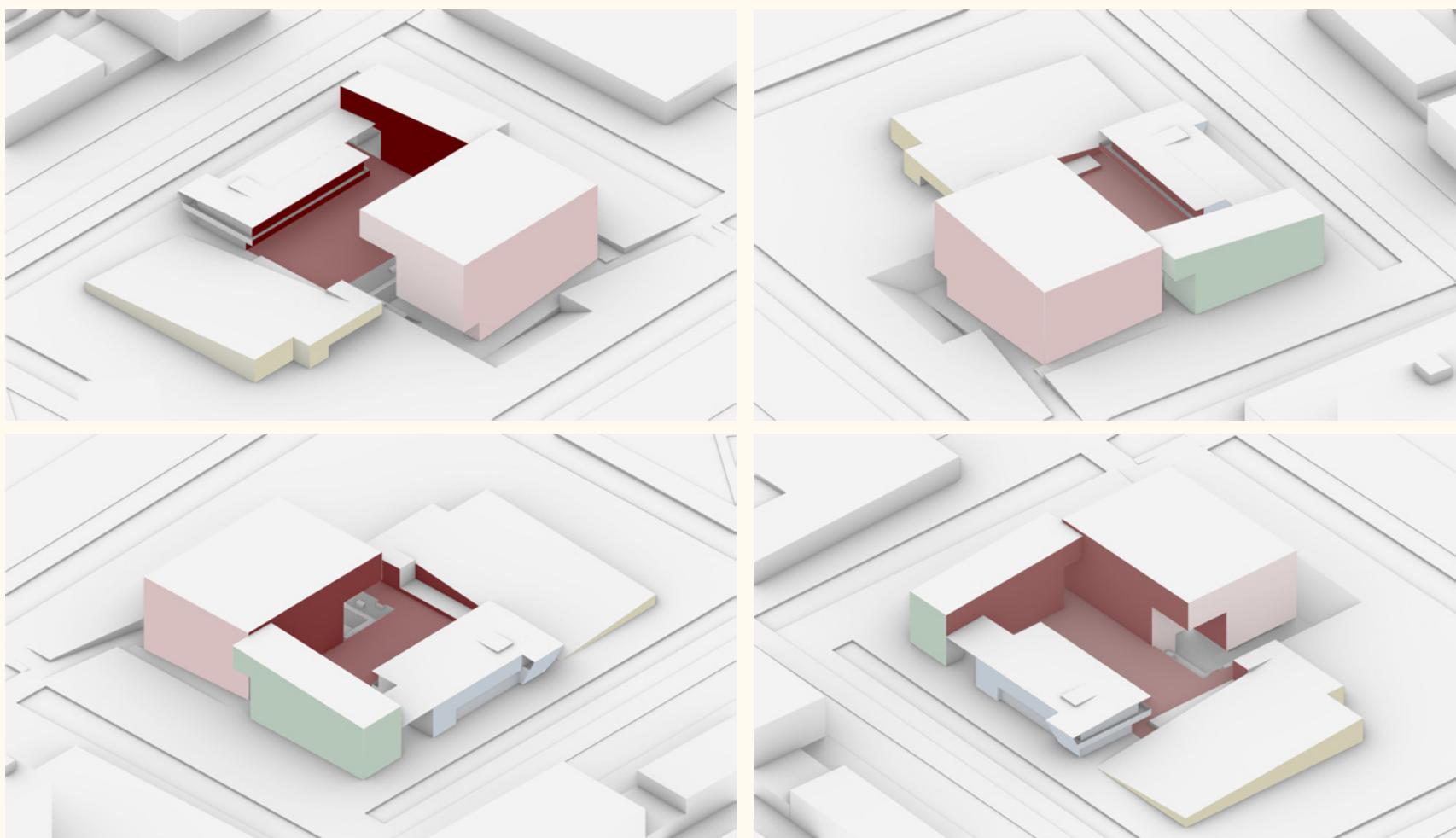
**“The seemingly casual introduction of an undulating or splayed space in an ostensibly regular building geometry (...) all attest to Aalto’s ability to bring forth an architectural whole based on the acknowledgements of the difficulties inherent in an architectural program. ”** Ibid

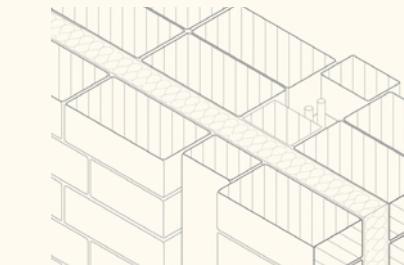
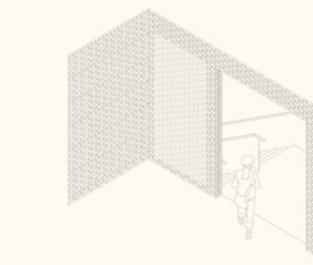
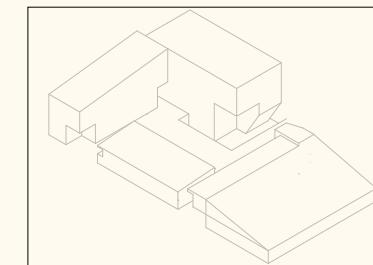


**REVERSING THE AALTO APPROACH**

## **CHAMPIONING THE MULTI-FUNCTIONALITY**

**4 MAIN DIFFERENT FUNCTIONS/BUILDINGS  
4 EXTERNAL AESTHETICS  
1 INTERNAL COURTYARD DEFINING  
THE BODY OF THE CONDENSER**

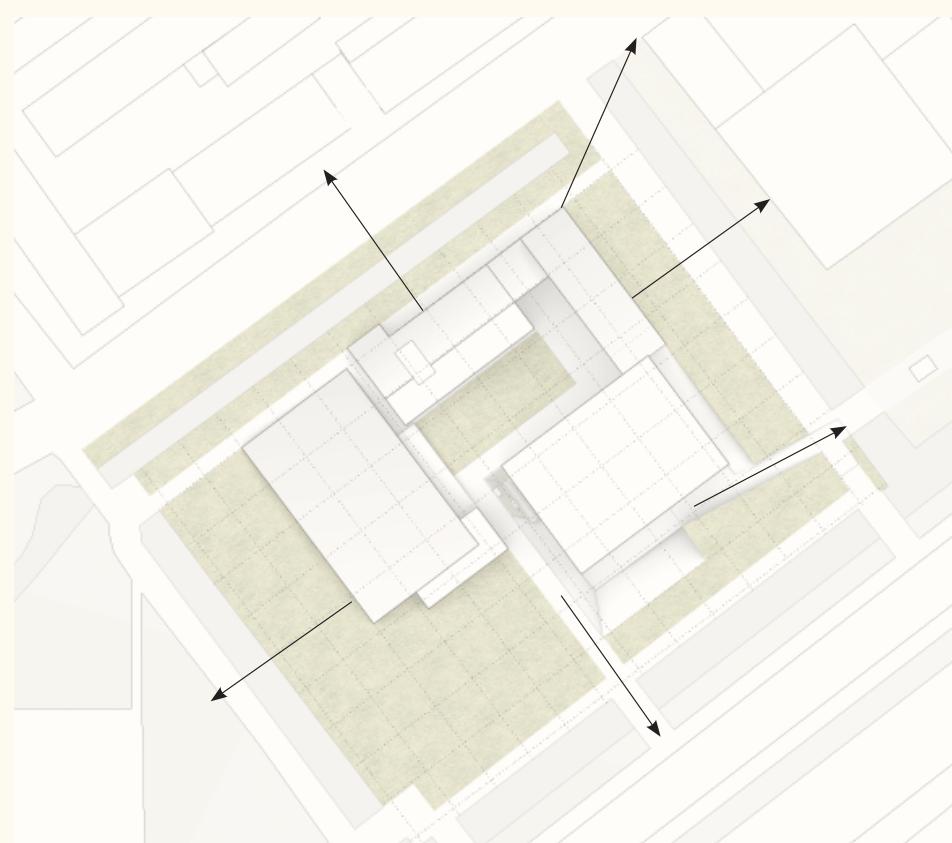


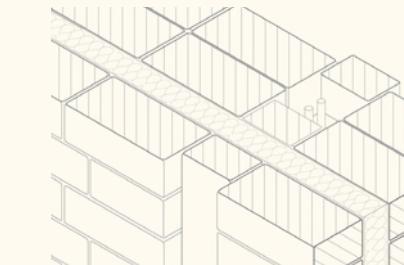
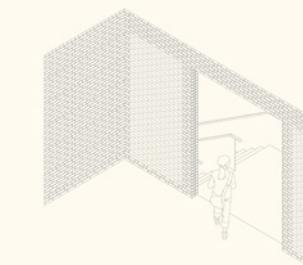
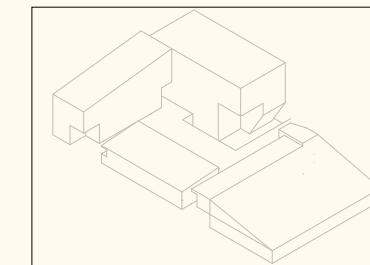
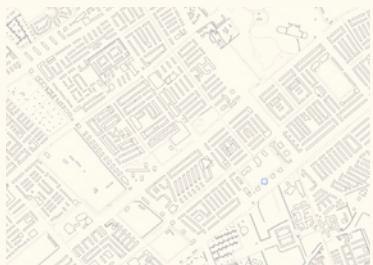


## CENTRAL COURTYARD AS THE BODY



**“ ability to bring forth an architectural whole based on the acknowledgements of the difficulties inherent in an architectural program. ”** William C. Miller (1979)





## THE FUNCTIONS AS THE FOUR ORGANS

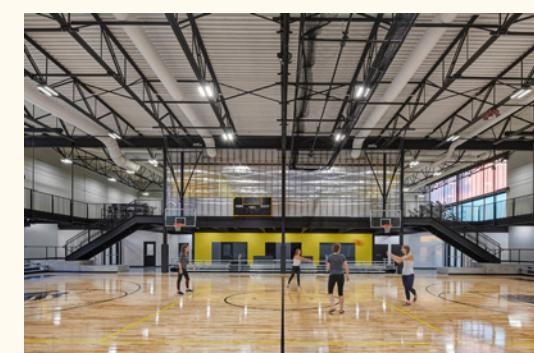
**Beiersdorf Children's Day Care Centre**  
Kadawittfeldarchitektur



SMALLEST FUNCTION  
PRIVATE  
CHILDREN SCALE  
PLAYFULL

### EDUCATION CENTRE

**SPORTS CENTRE**  
LARGE OPEN SPACE  
MOSTLY BELOW GROUND  
SUBTERREAN BALANCE IN BODY  
VARYING TRANSPARENCY  
SEMI PUBLIC



**Lone Tree Wellness Centre**  
Neumann Monson

**Joolz Headquarters**  
Space Encounters



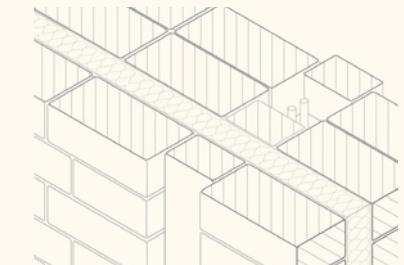
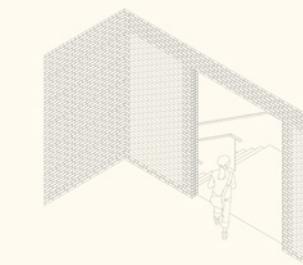
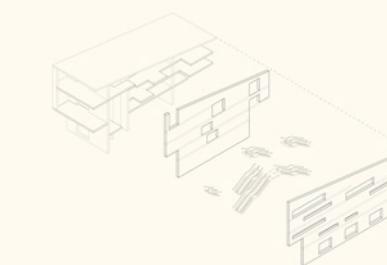
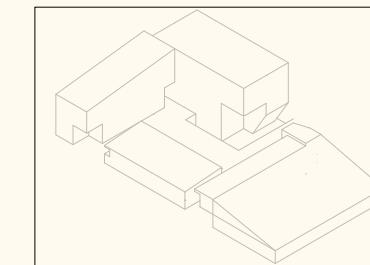
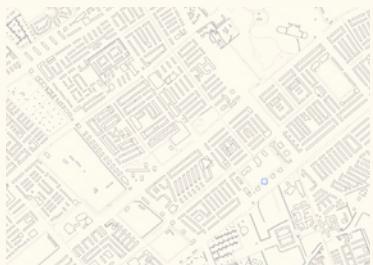
SEMI PUBLIC  
HIGH-TEC  
TRANSPARENCY  
CONNECTED  
MODERN

### BUSINESS CENTRE

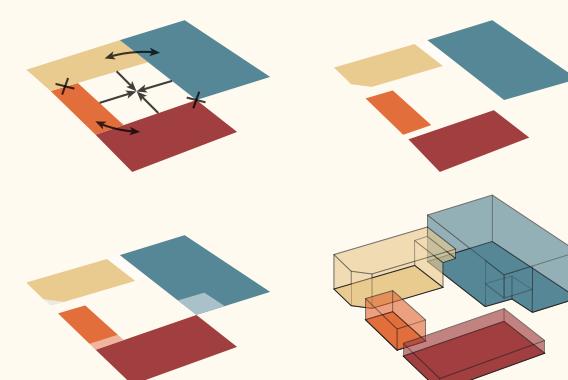
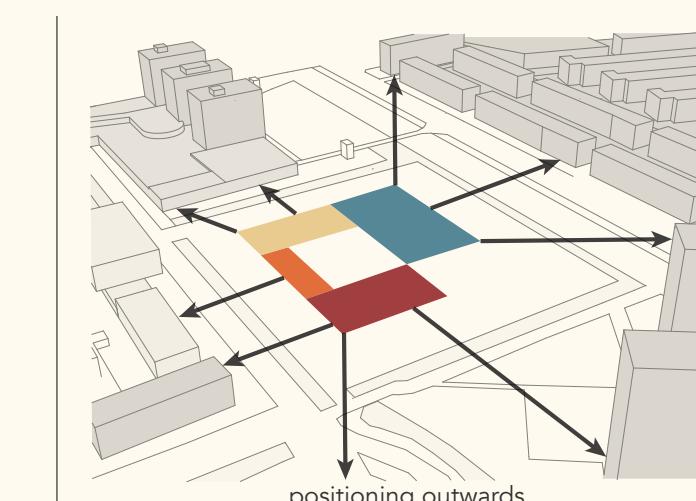
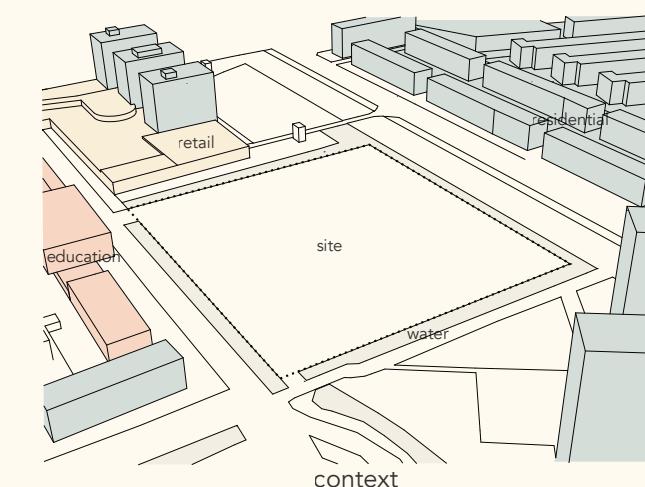
**CULTURAL CENTRE**  
ICONIC  
LARGEST VISIBILITY  
ABOVE AND BELOW GROUND  
LARGE FUNCTIONS  
MONOLITHIC  
CURVATURE  
PUBLIC



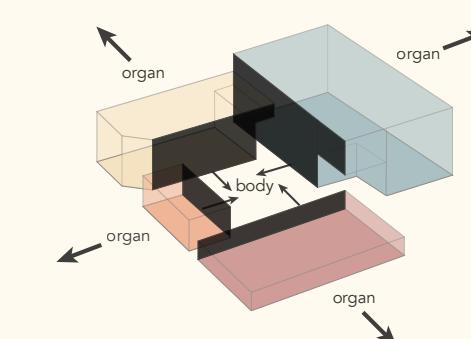
**Tate extension**  
Herzog & de Meuron



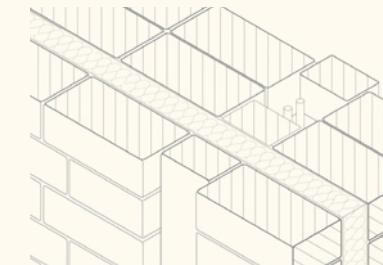
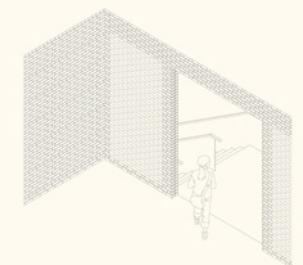
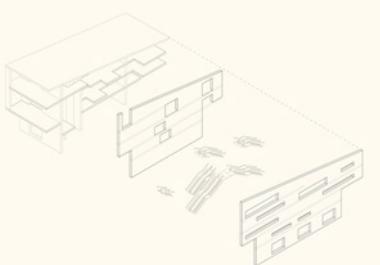
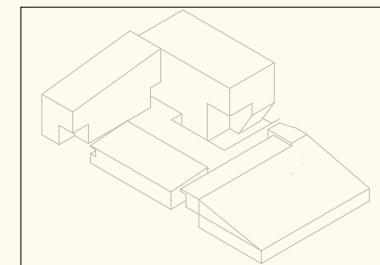
## MASSING



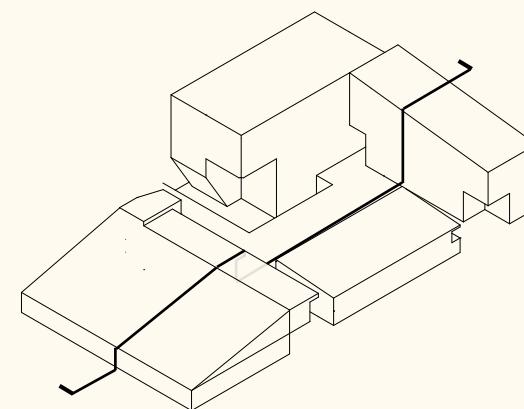
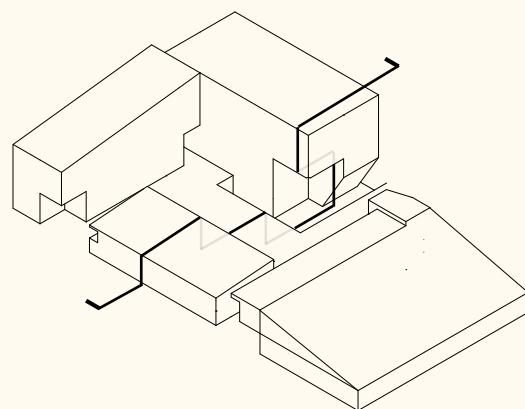
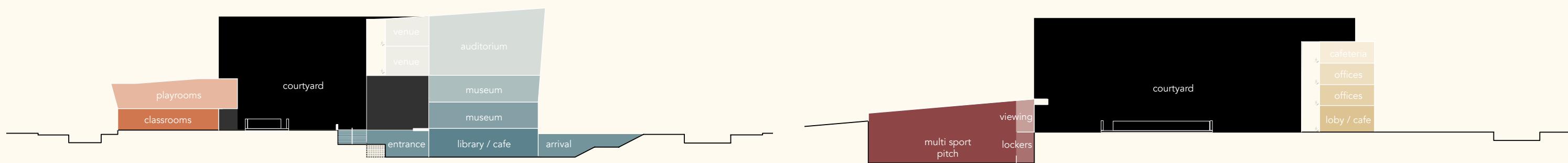
positioning inwards

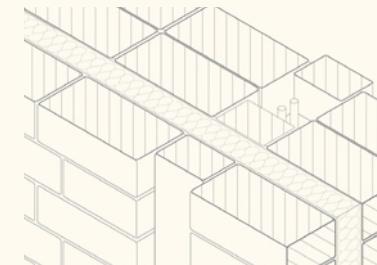
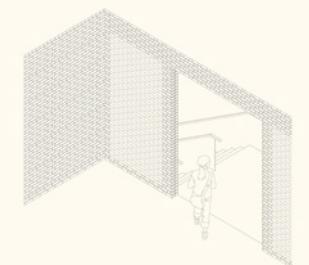
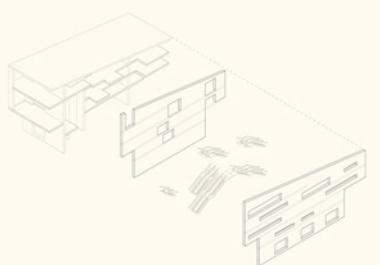
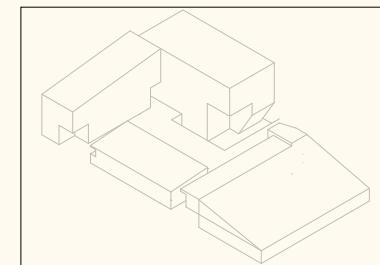


organs and body

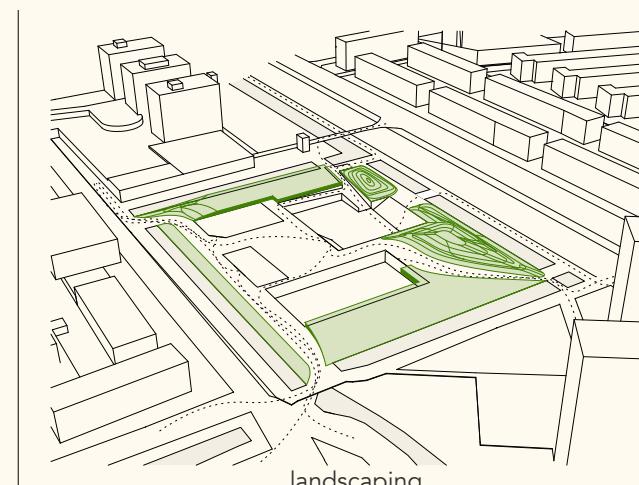
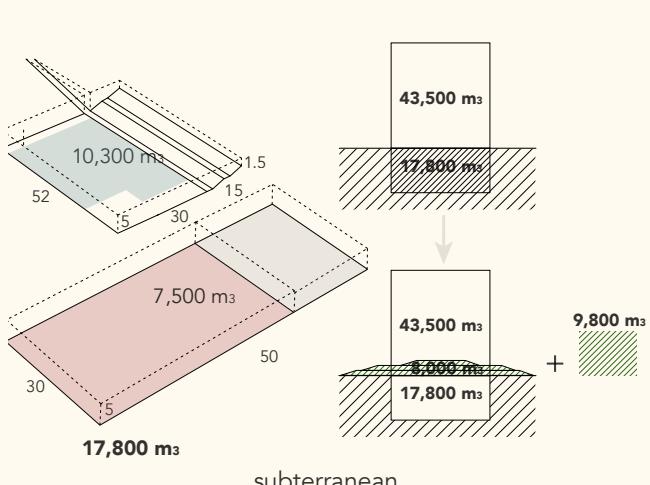
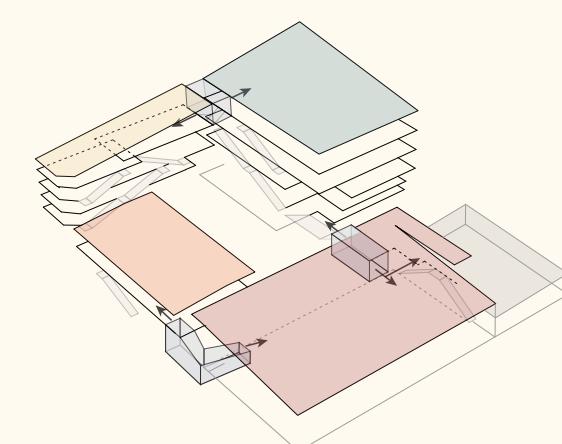
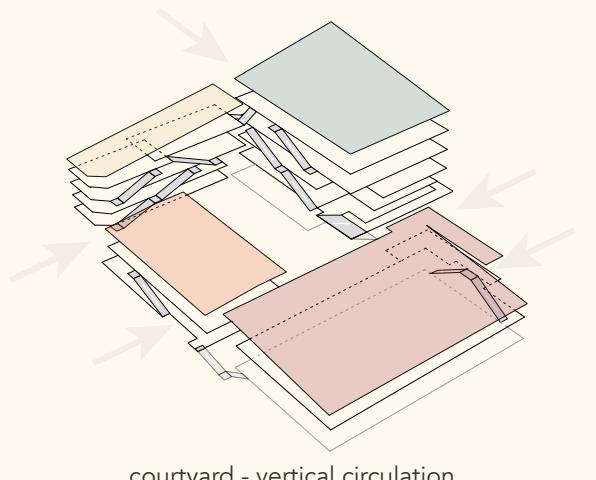
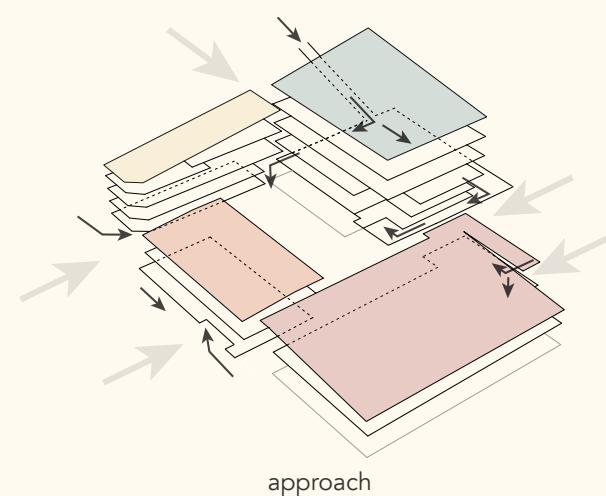


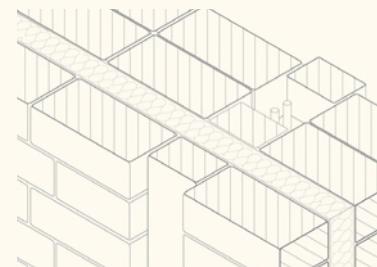
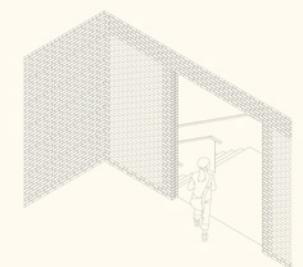
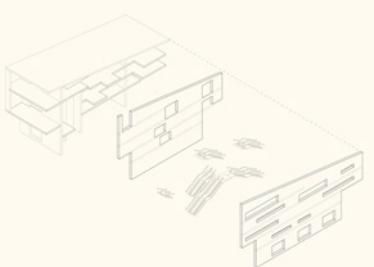
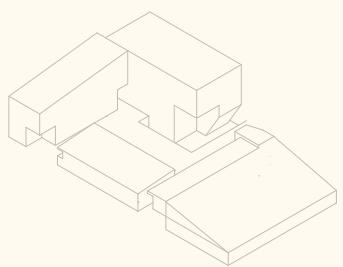
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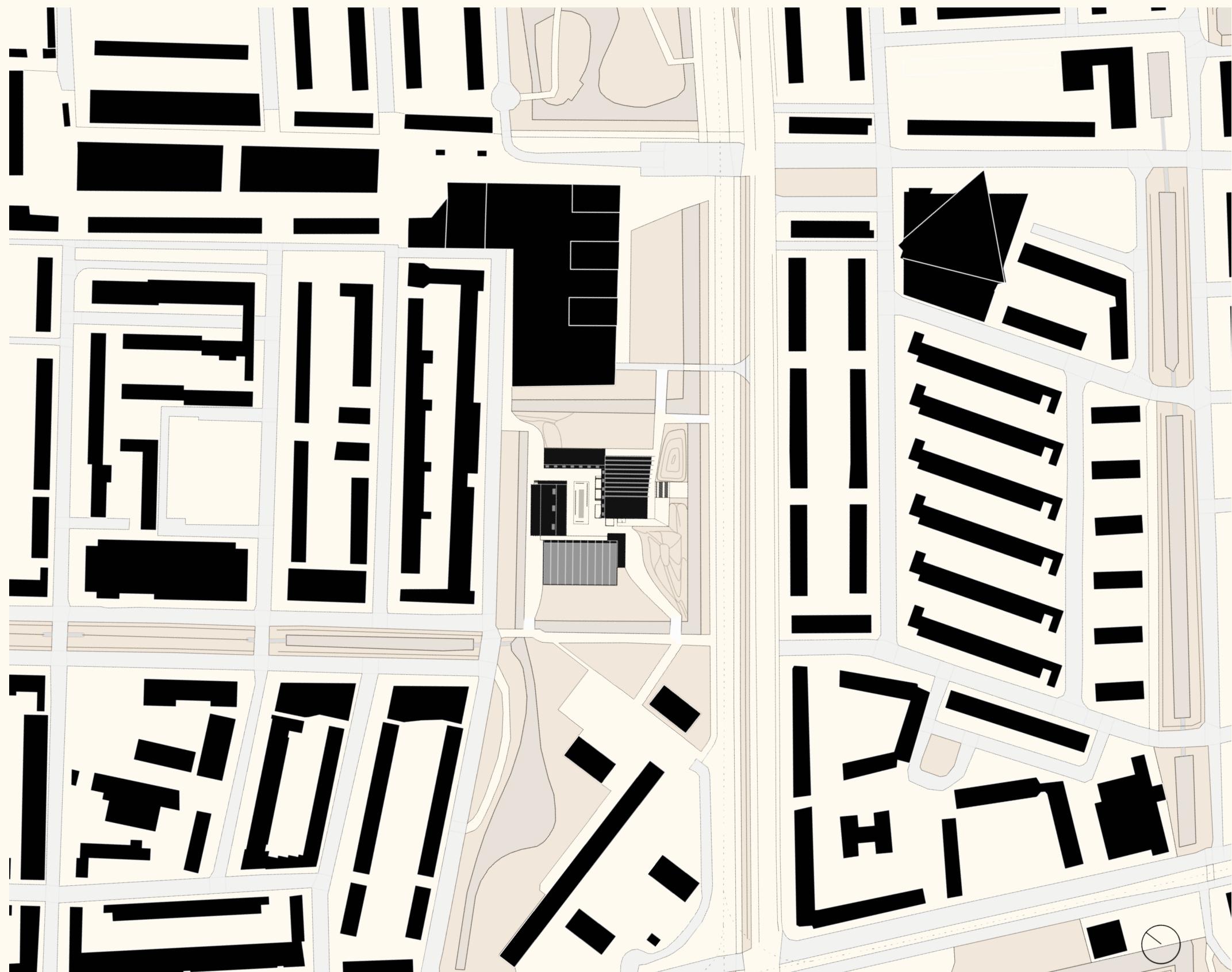


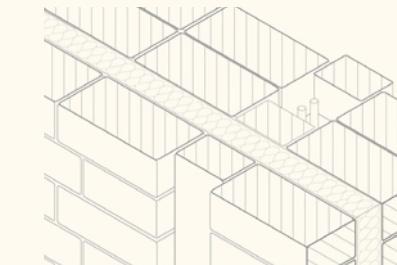
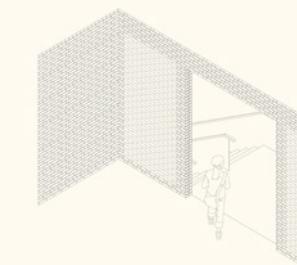
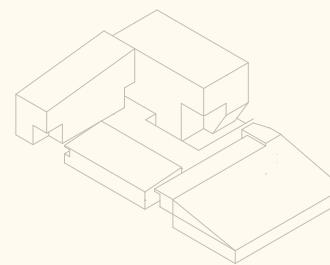
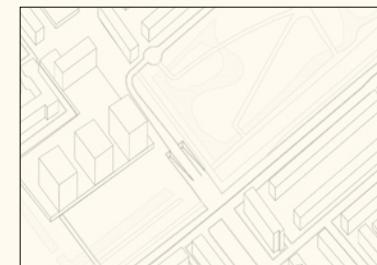
## CIRCULATION



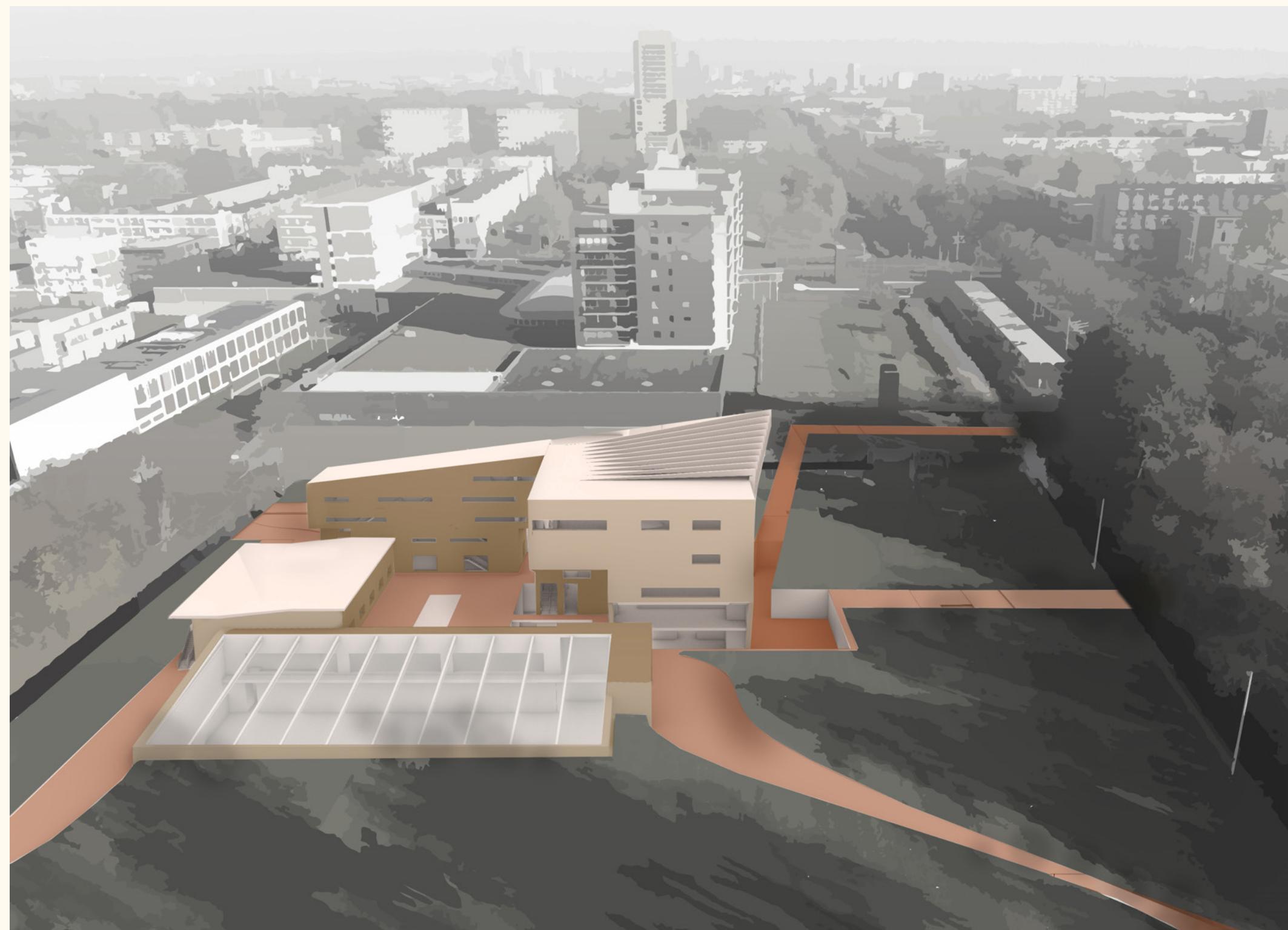


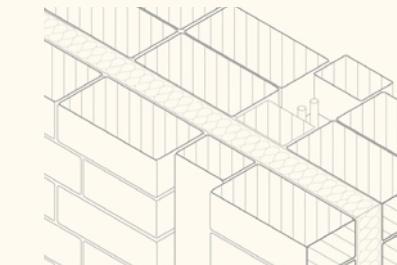
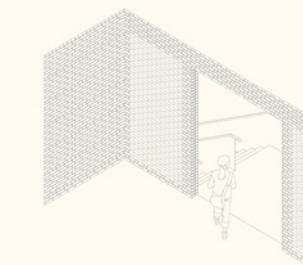
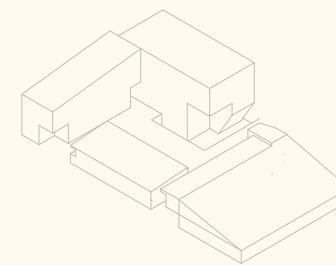
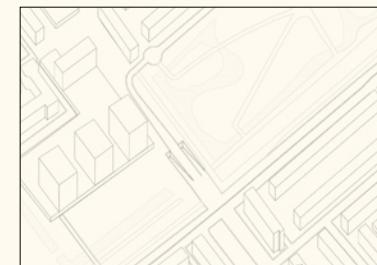
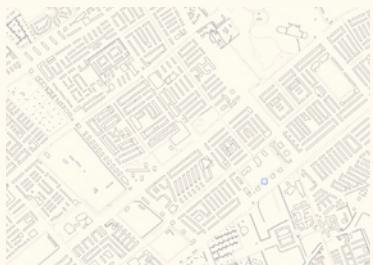
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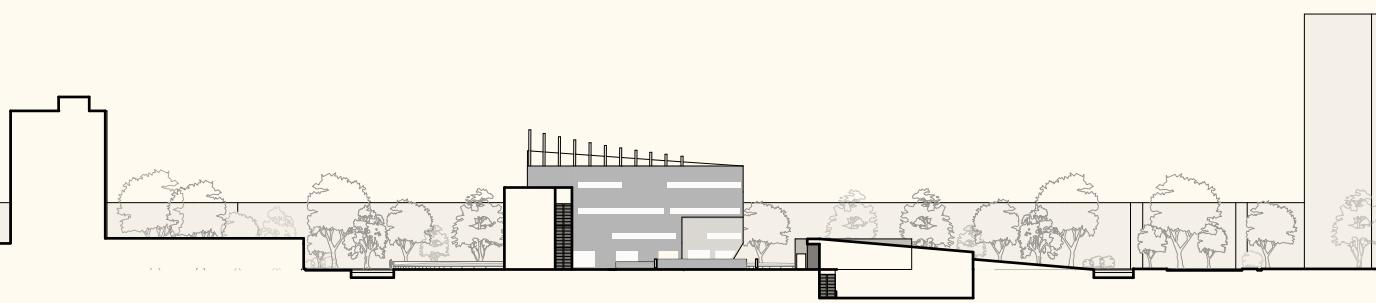


## AERIAL

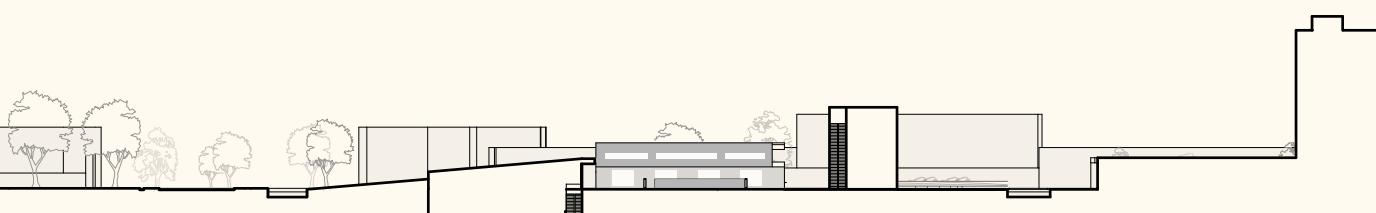




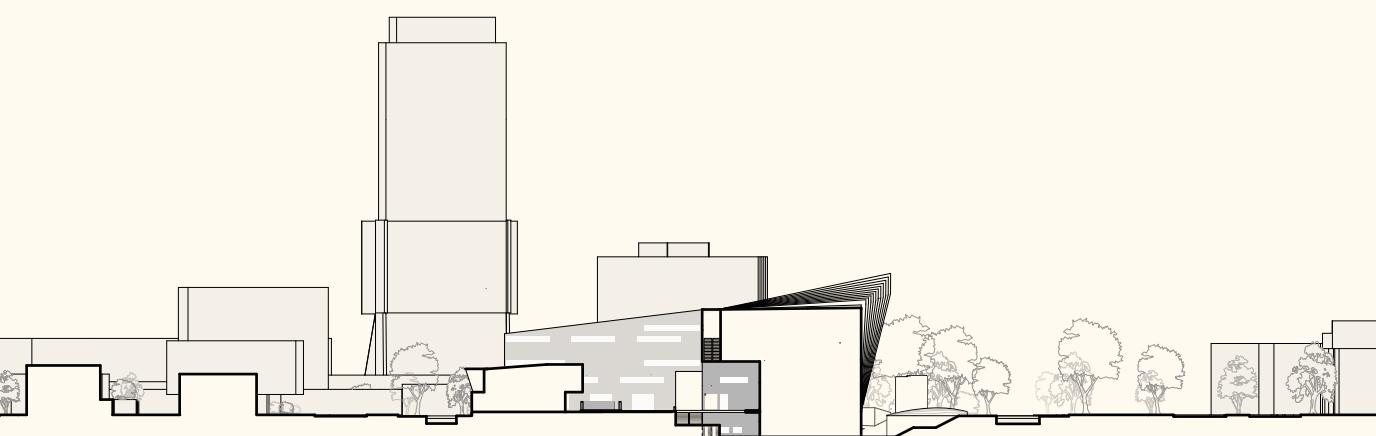
## CONTEXT SECTIONS



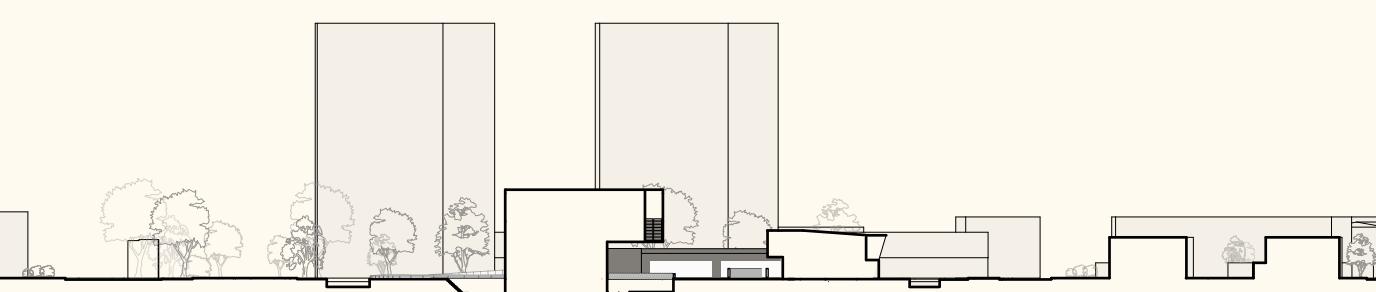
AA Section facing South East - 1/1000



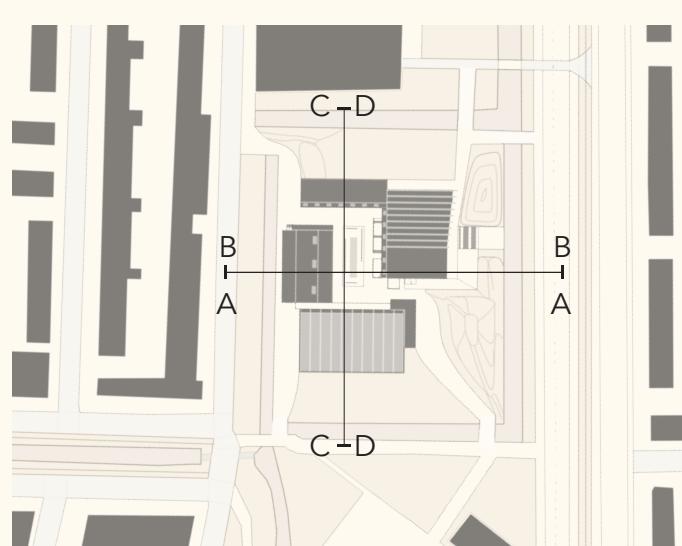
BB Section facing North West - 1/1000

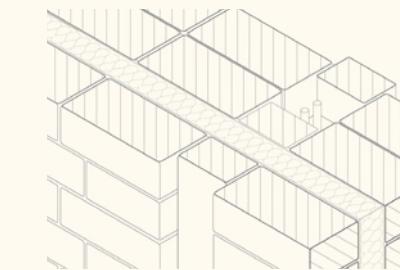
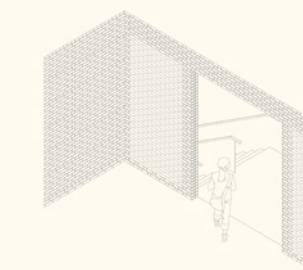
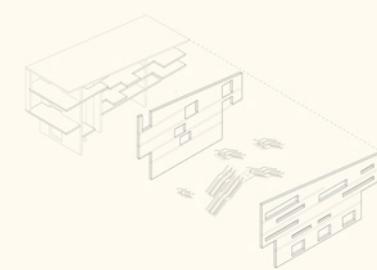
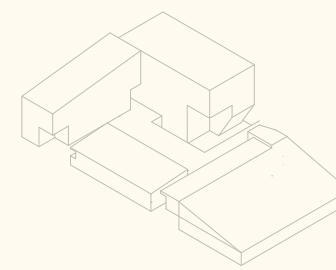
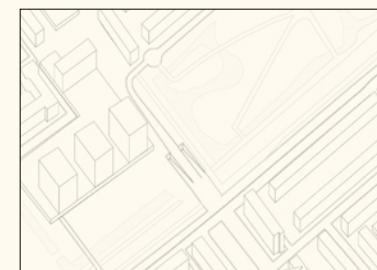


CC Section facing North East - 1/1000

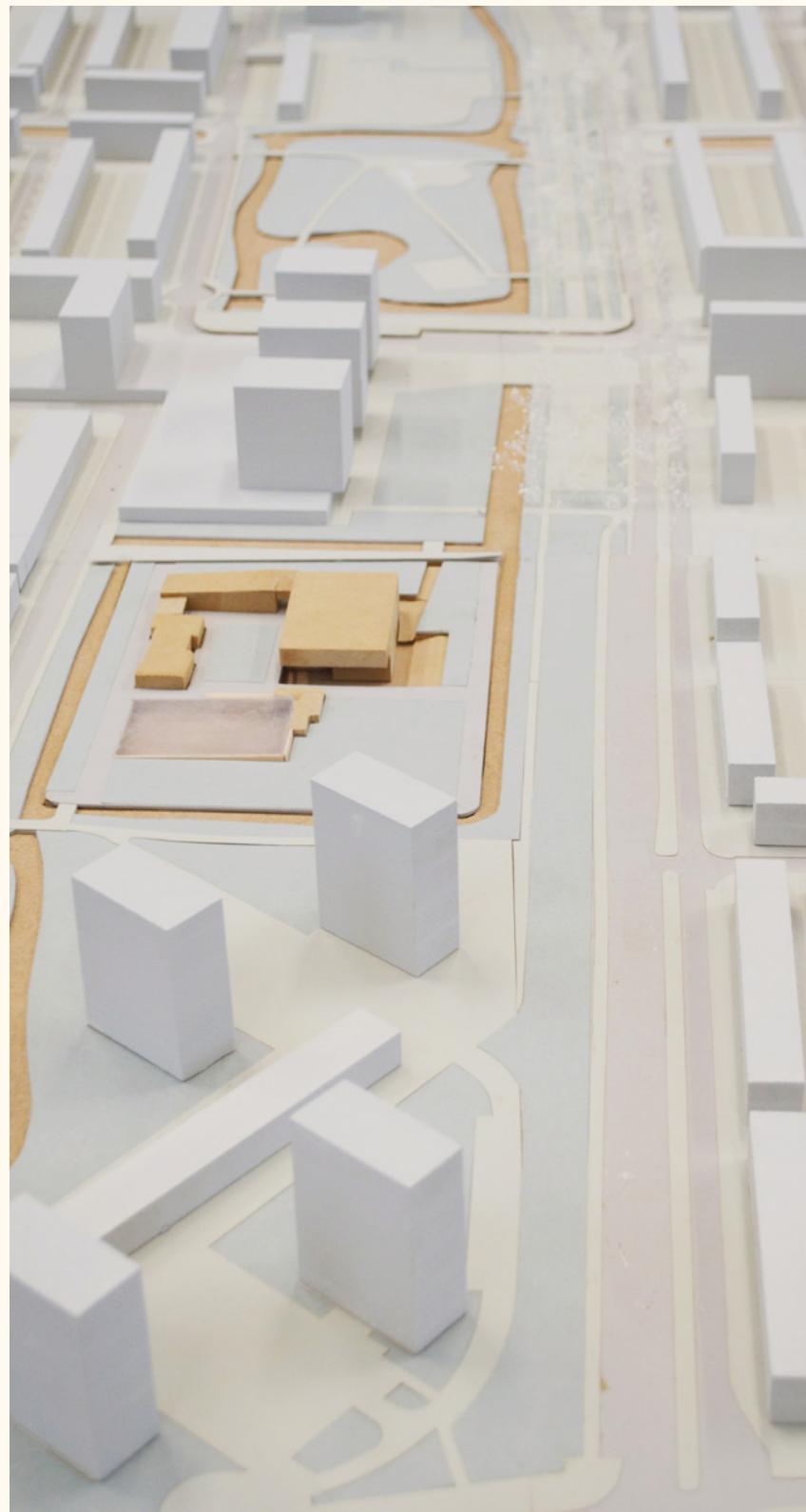


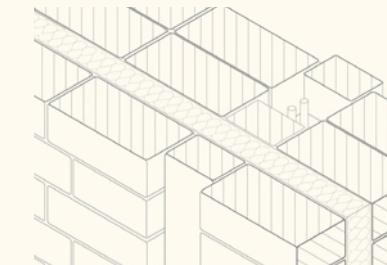
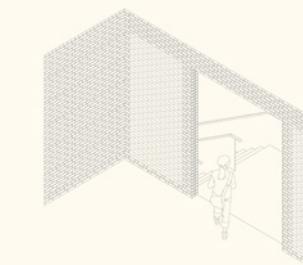
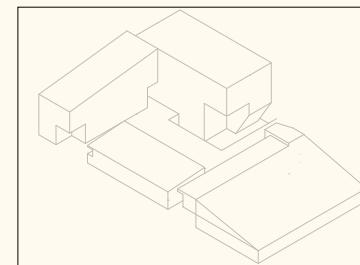
DD Section facing South West - 1/1000





## CONTEXT MASSING MODEL



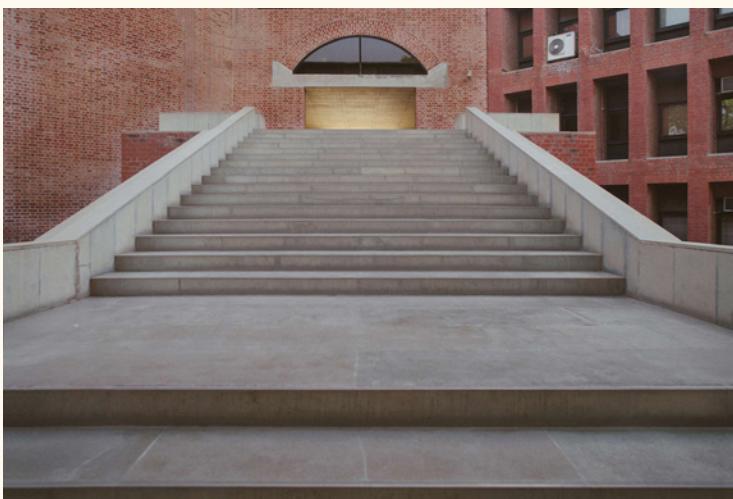


## MATERIALITY AS A DESIGN LANGUAGE FOR THE BODY

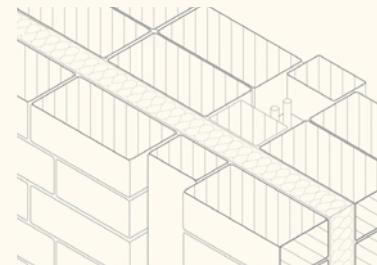
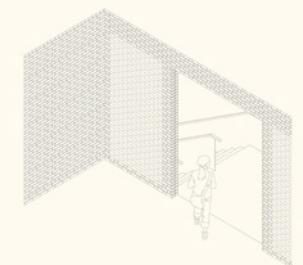
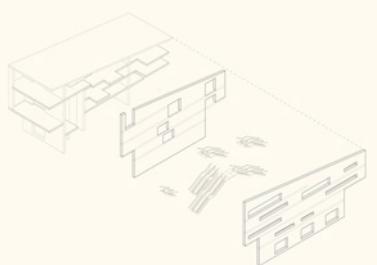
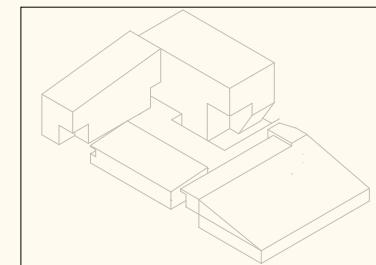
### BUILT PRECEDENTS



Ruby City, David Adjaye. 2015

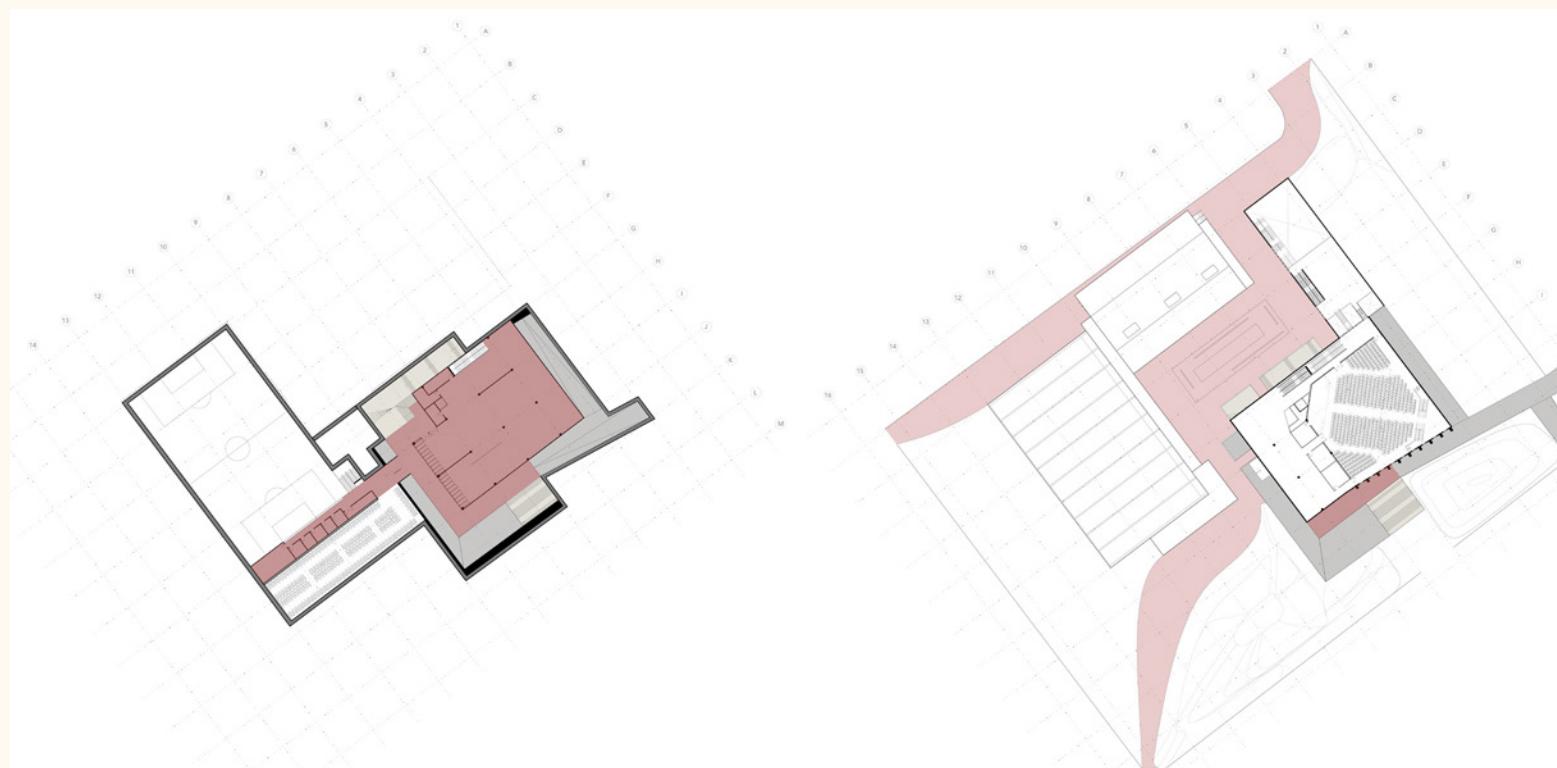


Indian Institute of Management, Louis Kahn. 1974



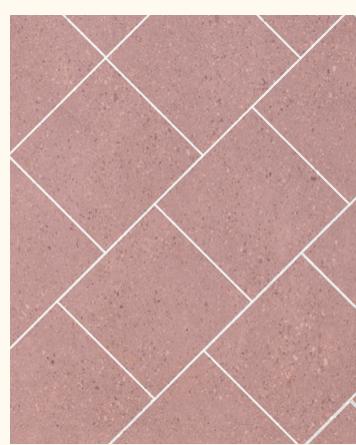
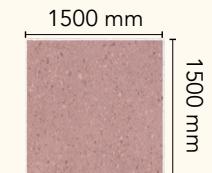
## CIRCULATION MATERIALITY

### NARRATIVE OF MATERIAL USE



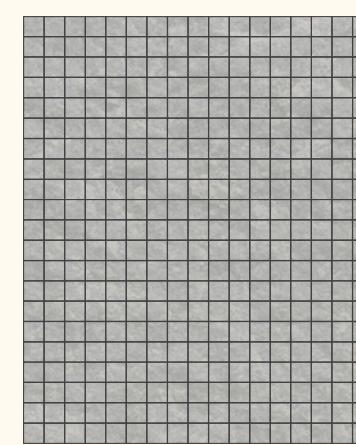
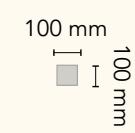
Base (-5 m)

.Tinted concrete tile with  
micca stone aggregate



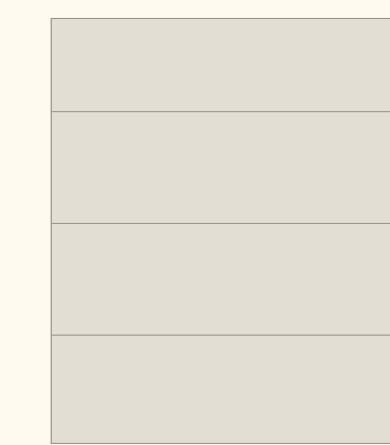
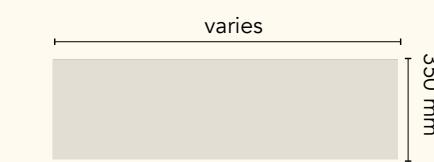
Slopes

. Cobblestone



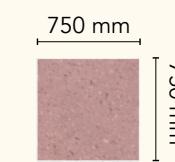
Stairs

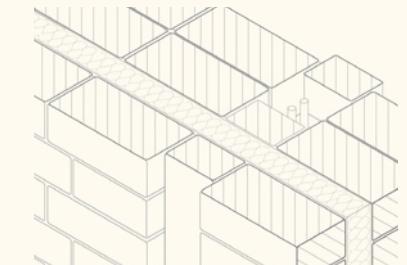
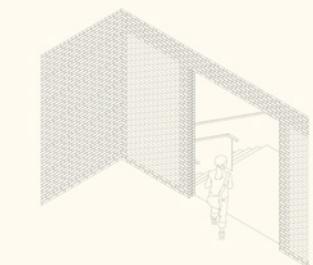
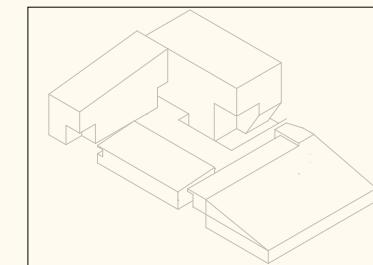
. Polished concrete slabs



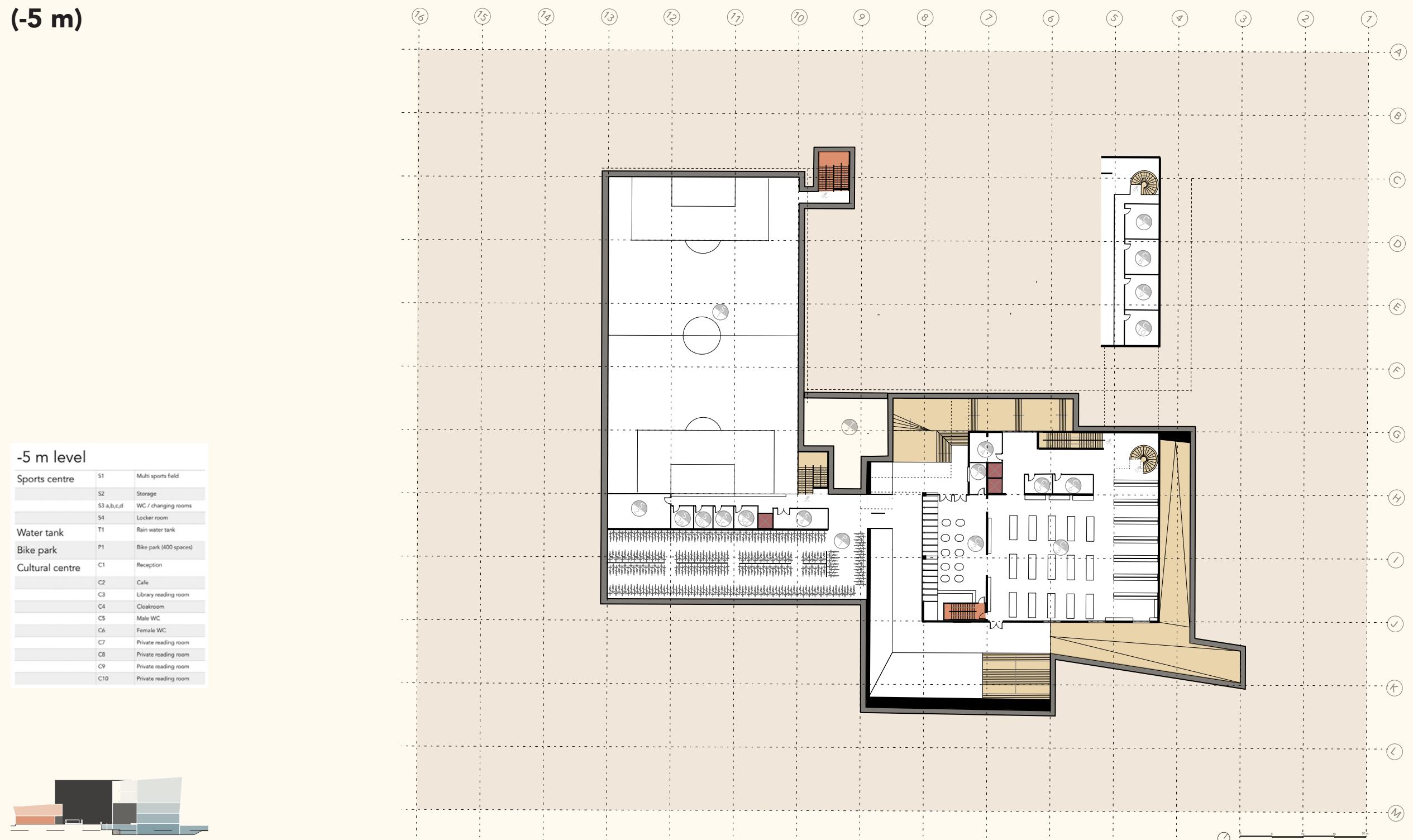
GF Plain (courtyard)

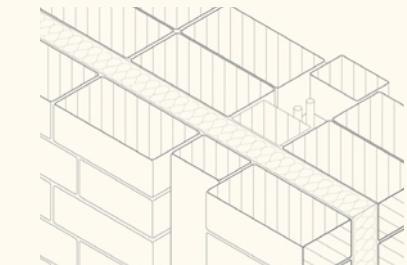
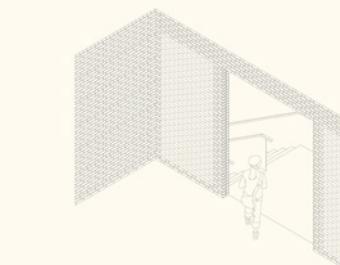
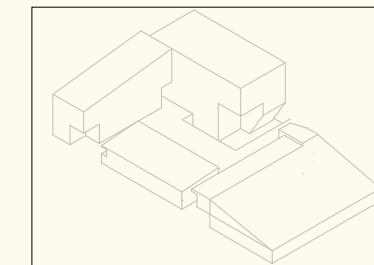
.Tinted concrete tile with  
micca stone aggregate



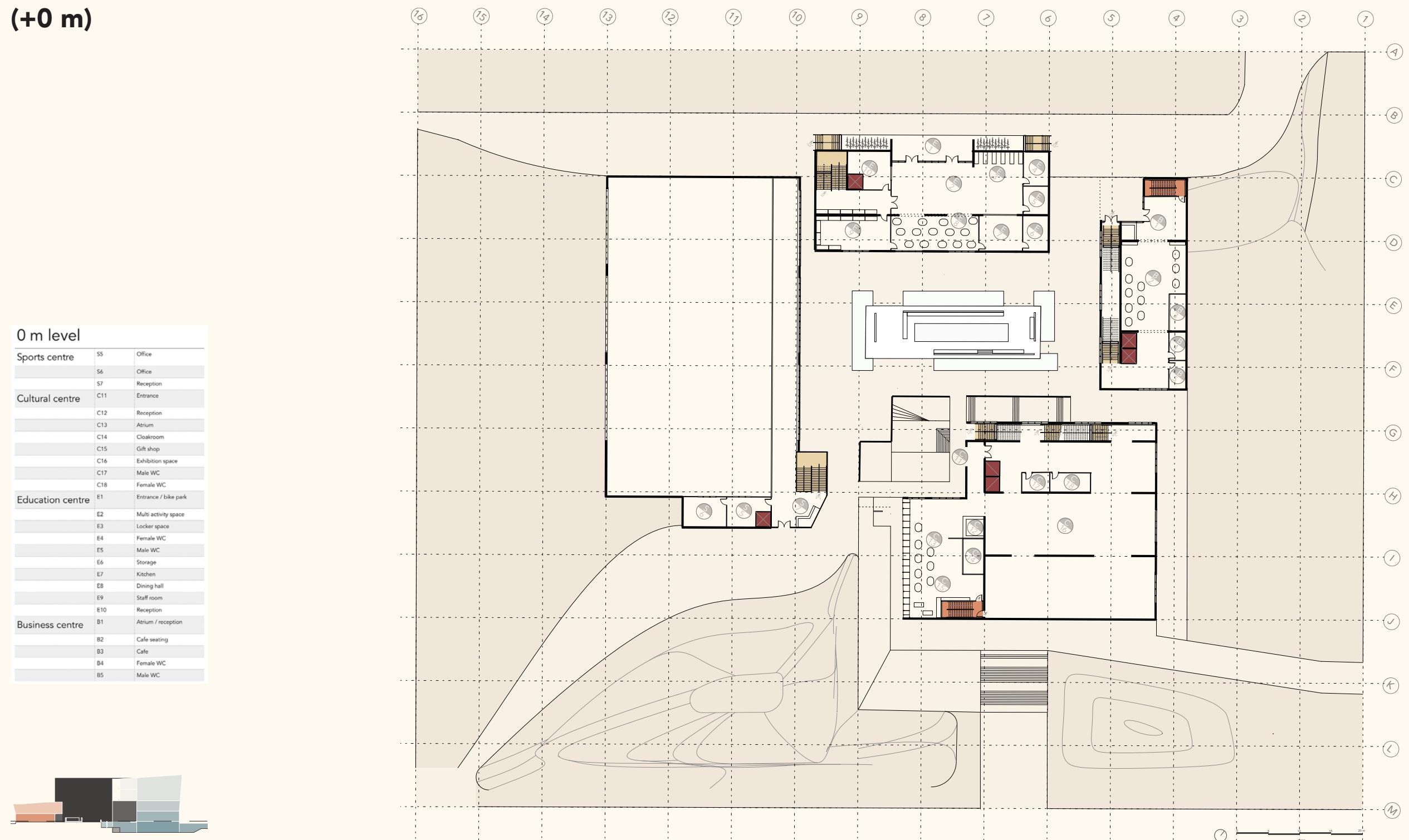


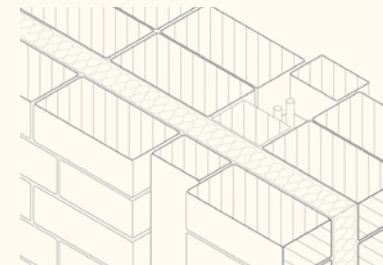
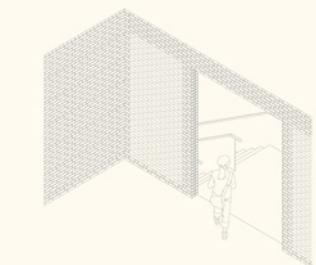
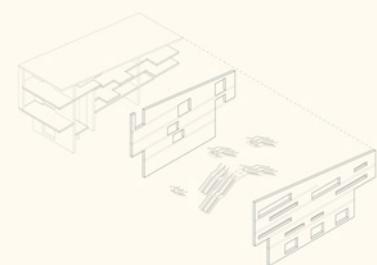
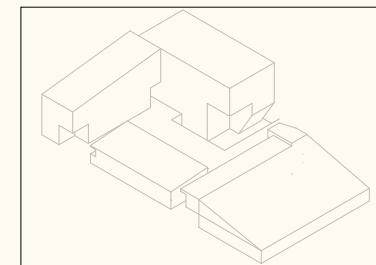
## PLAN BASEMENT (-5 m)



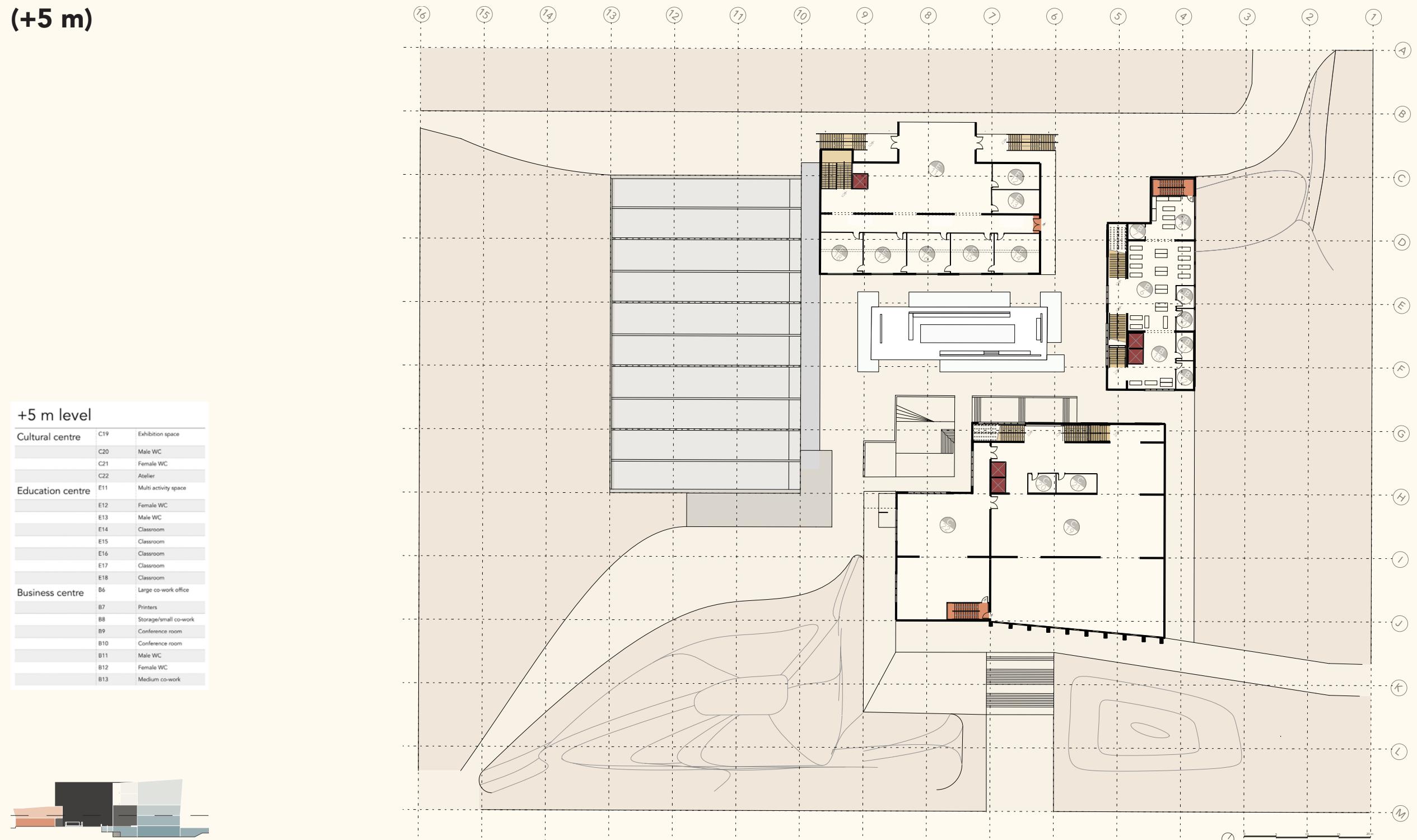


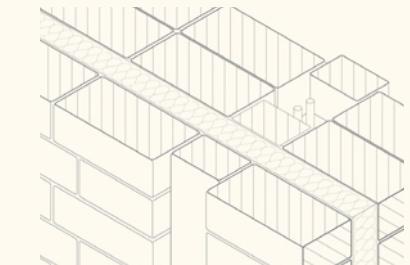
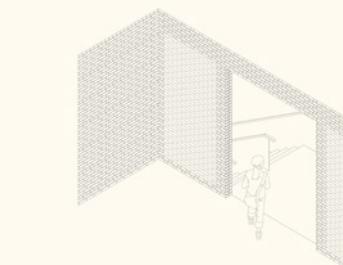
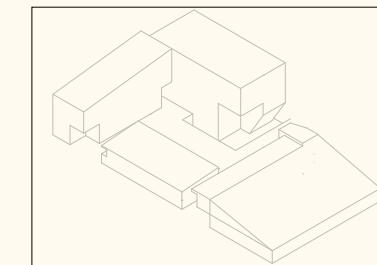
## PLAN GROUND FLOOR (+0 m)



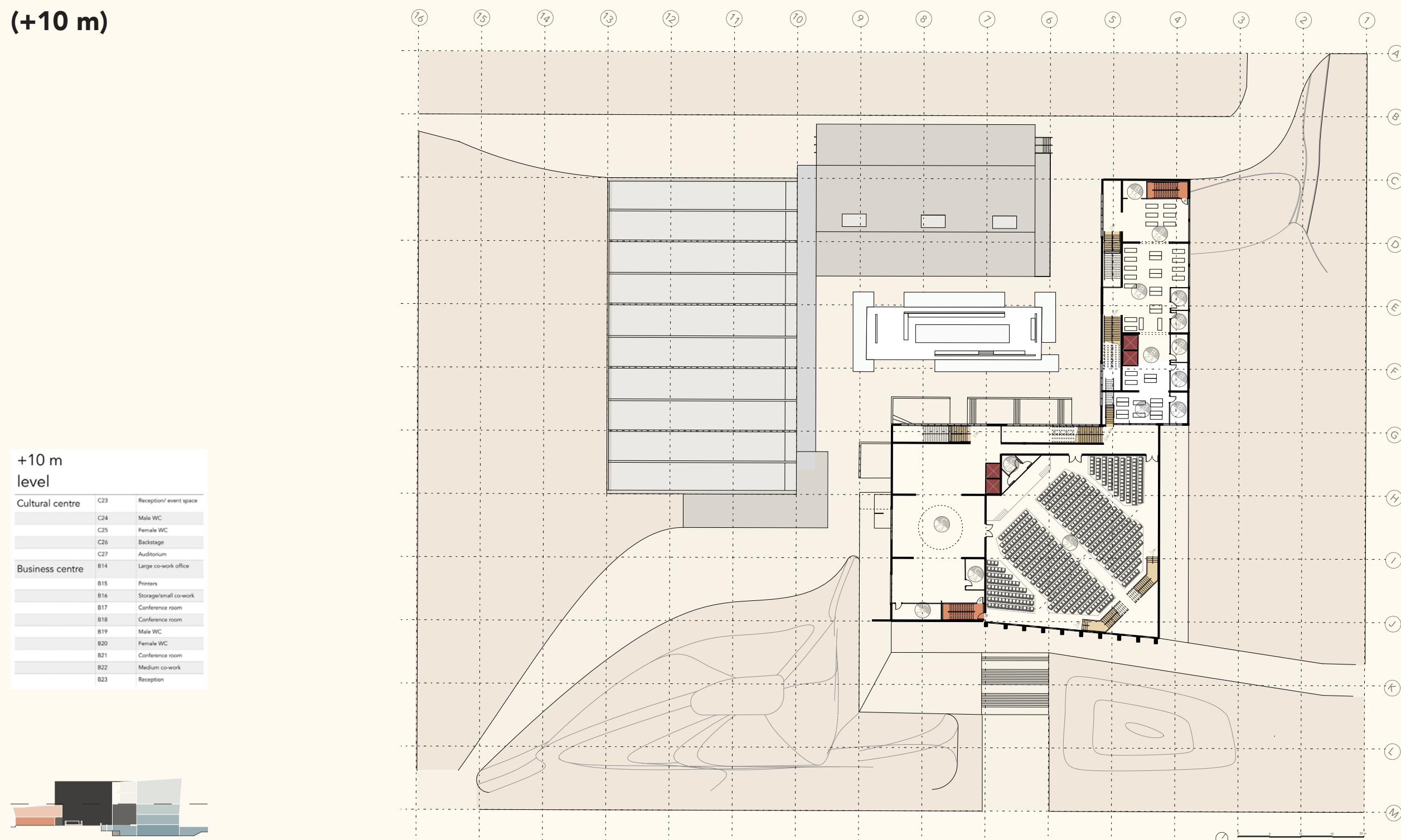


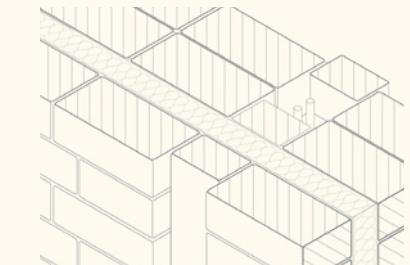
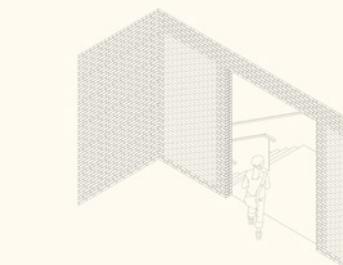
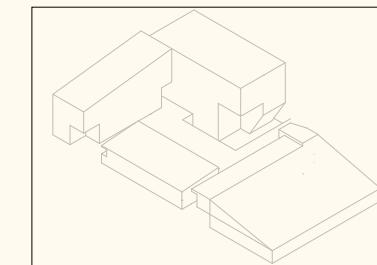
## PLAN 1ST FLOOR (+5 m)



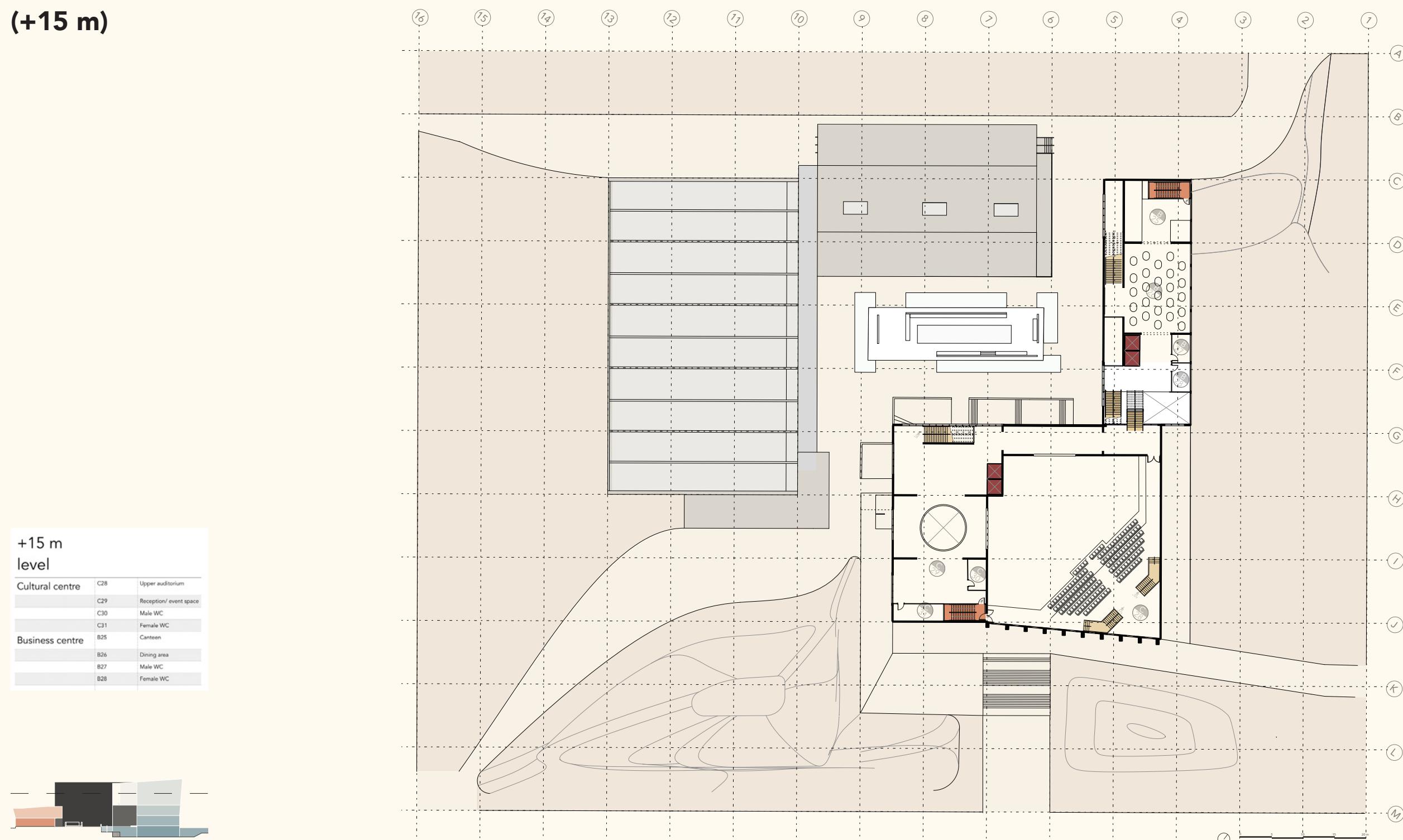


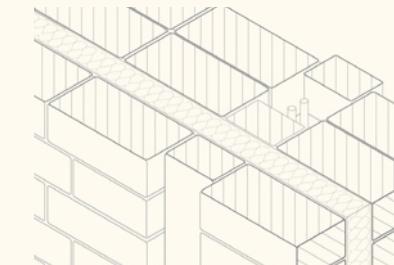
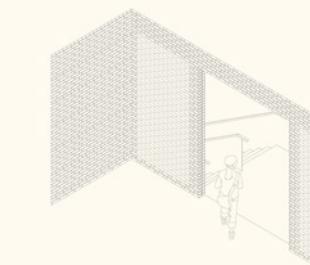
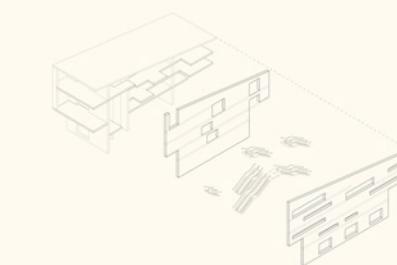
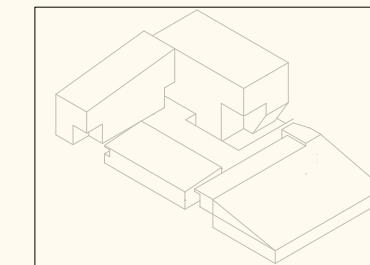
**PLAN  
2ND FLOOR  
(+10 m)**



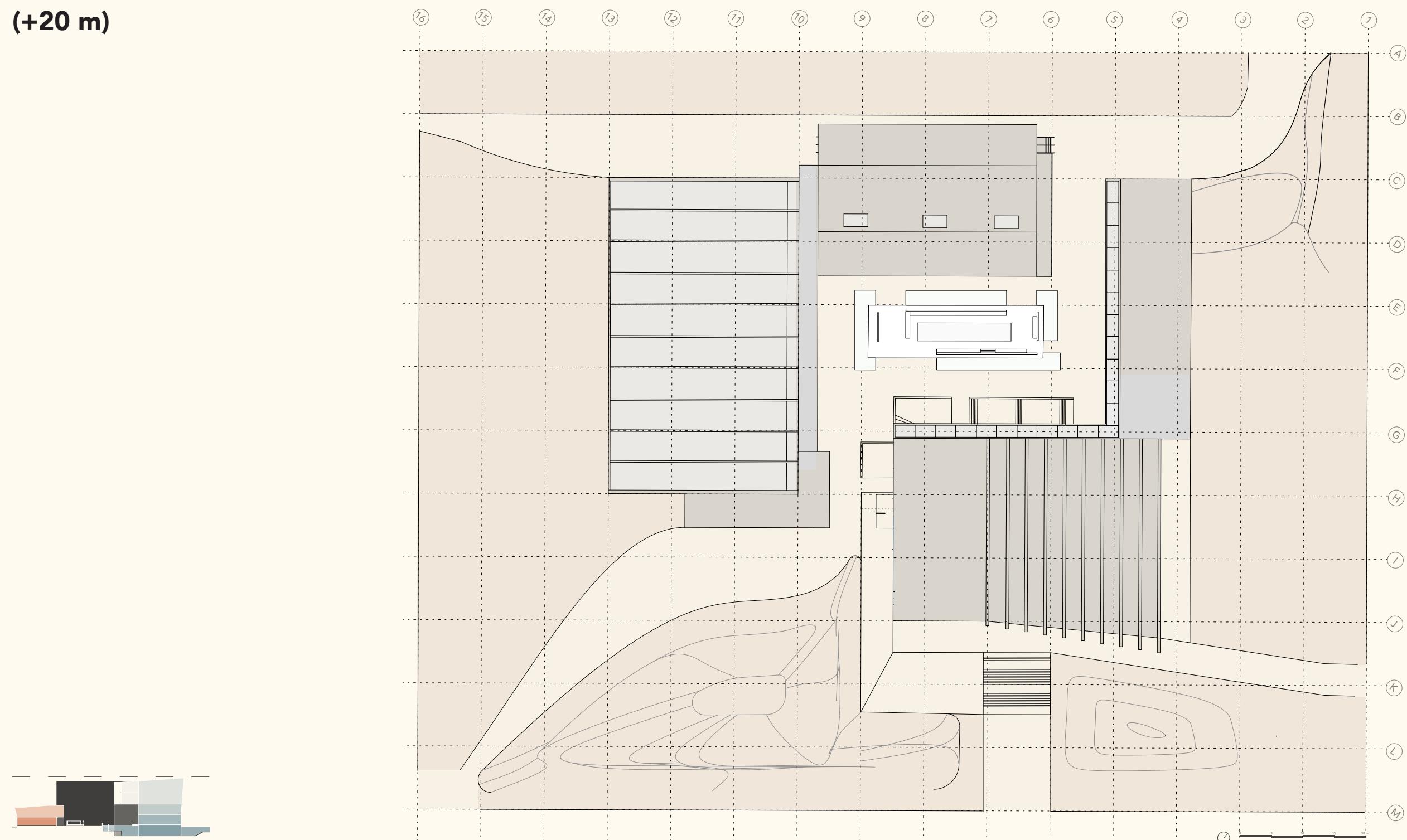


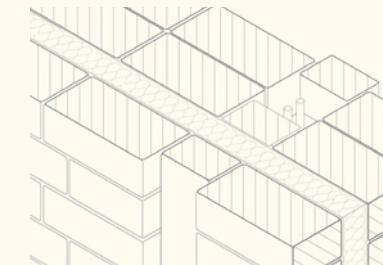
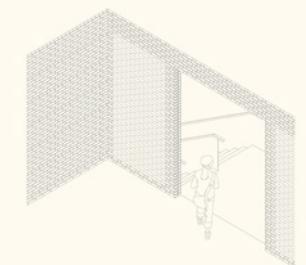
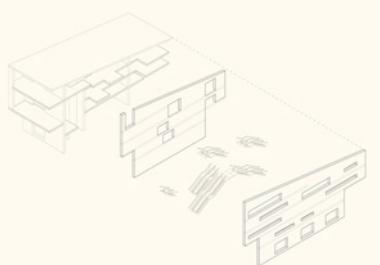
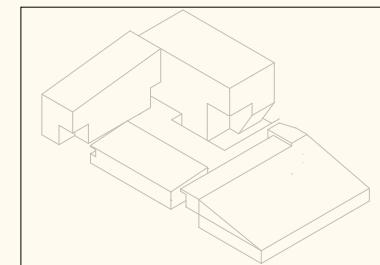
**PLAN  
3RD FLOOR  
(+15 m)**



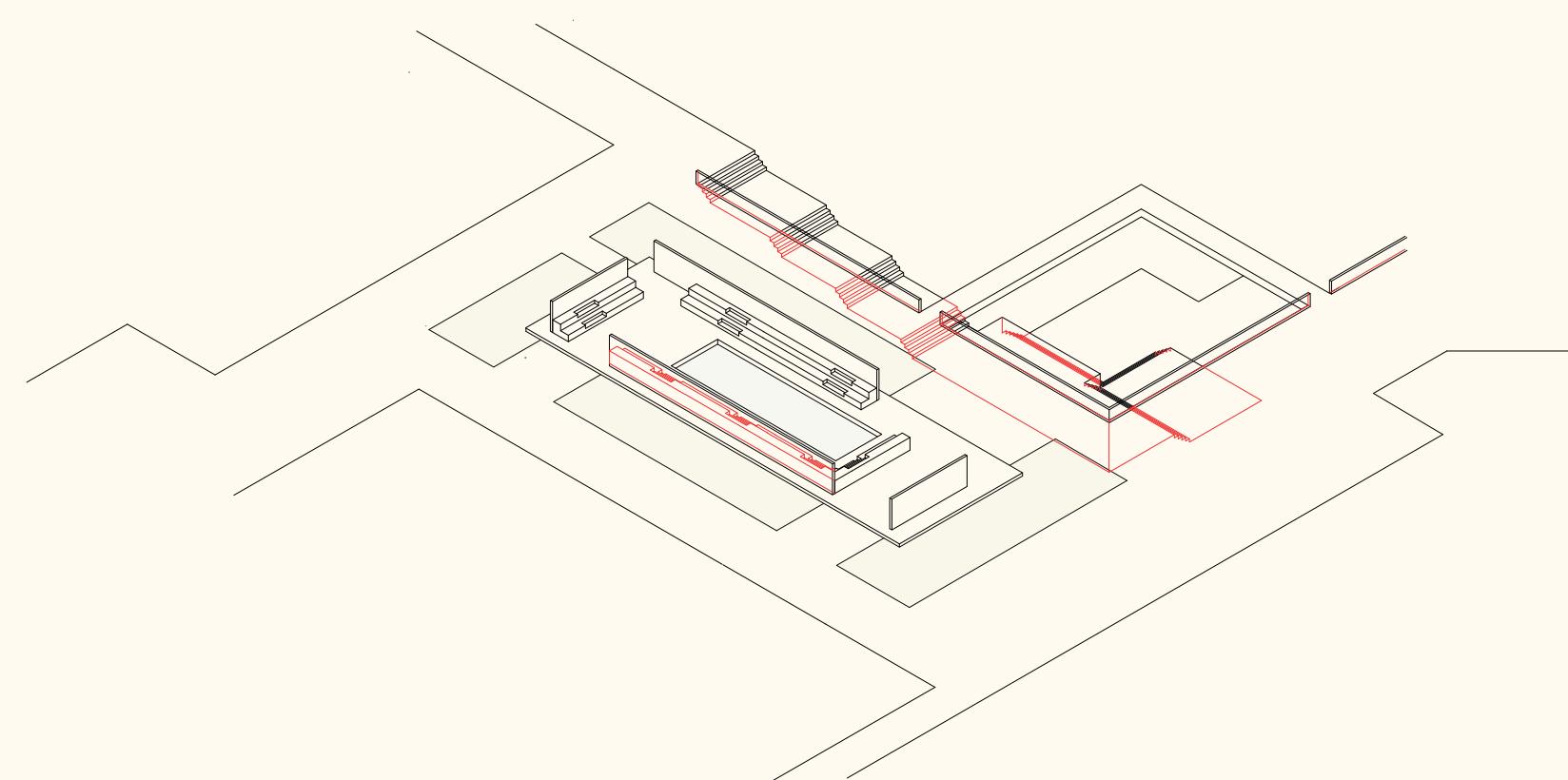
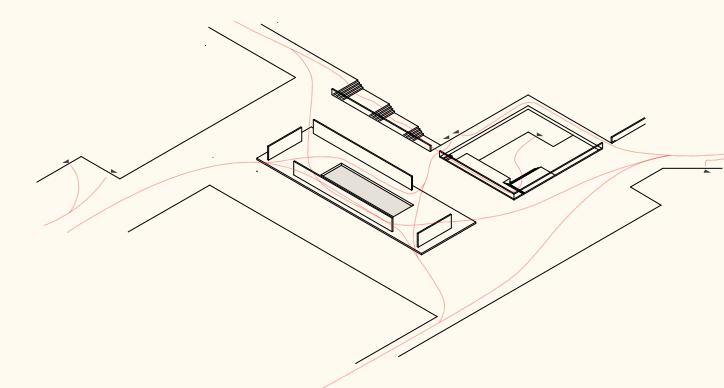
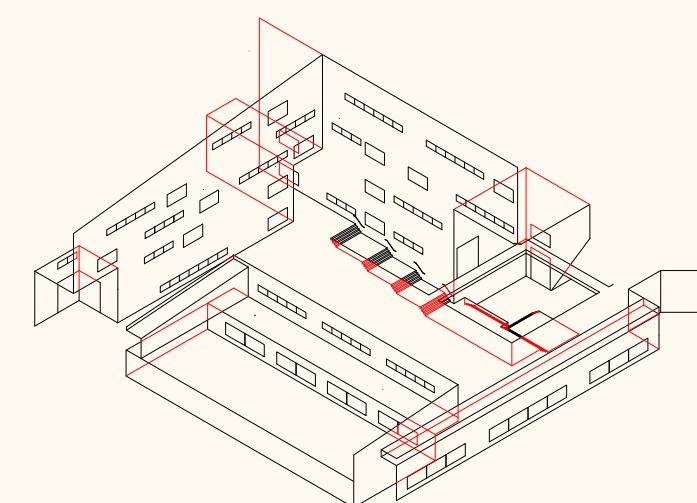
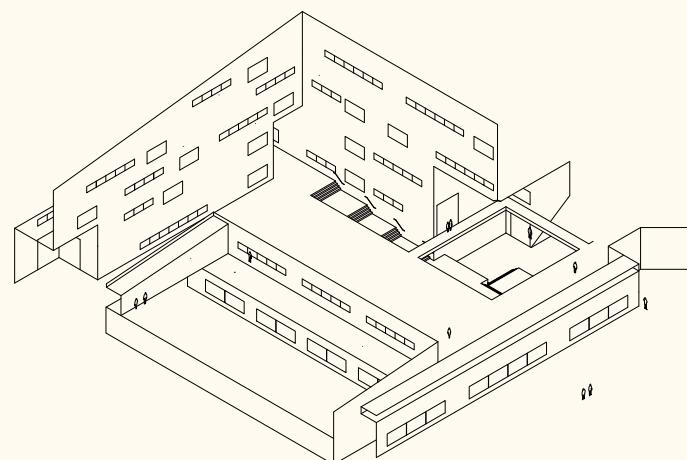
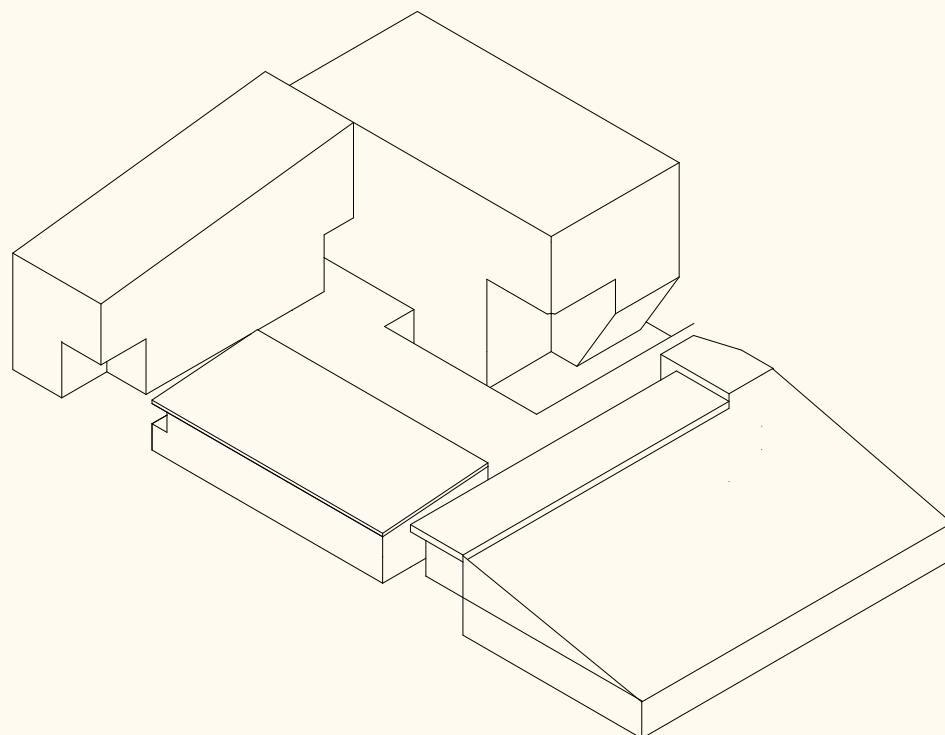


**PLAN  
ROOF  
(+20 m)**





## DEFINING THE DESIGN OF THE COURTYARD BODY

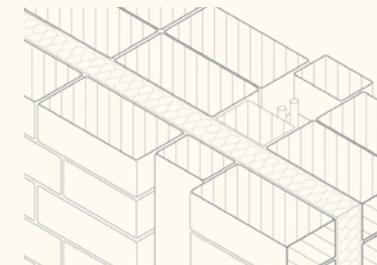
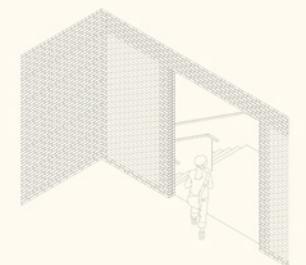
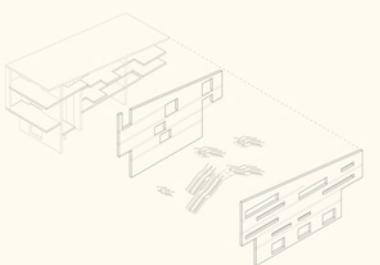
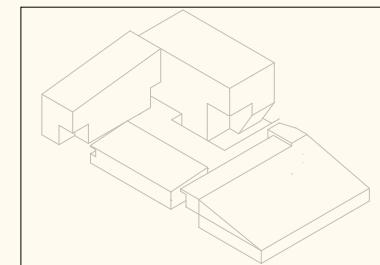


RESEARCH AND BRIEF

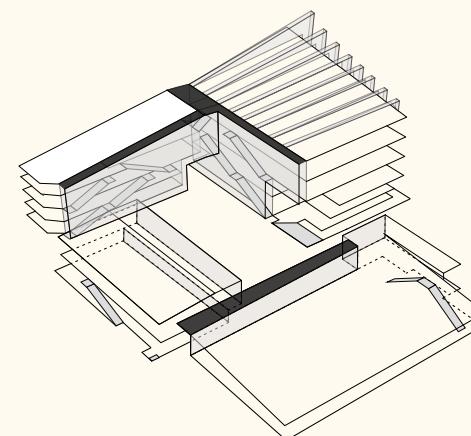
PUBLIC BUILDING TYPOLOGY

**DESIGN**

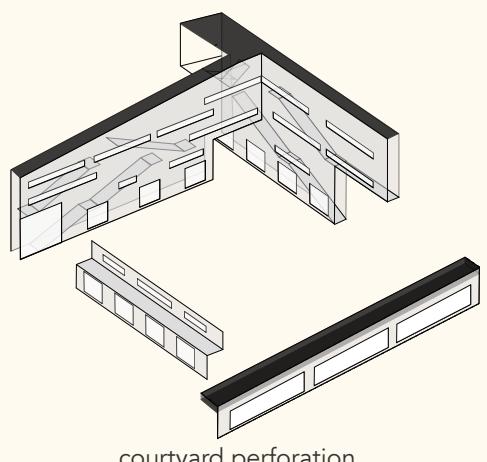
USAGE



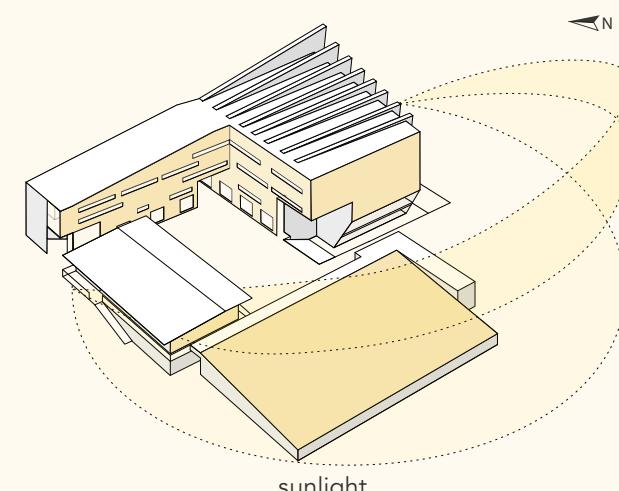
## ENVIRONMENT



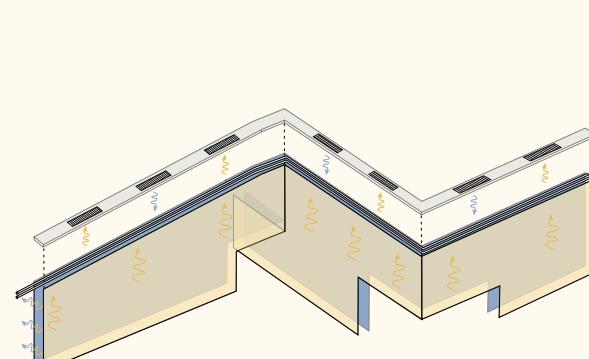
courtyard wall



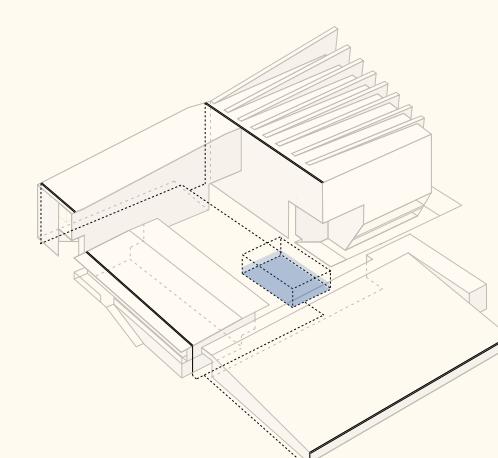
courtyard perforation



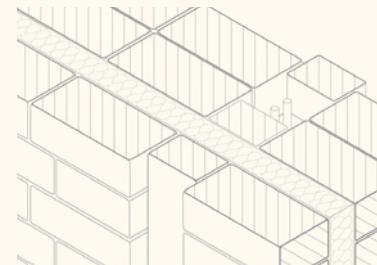
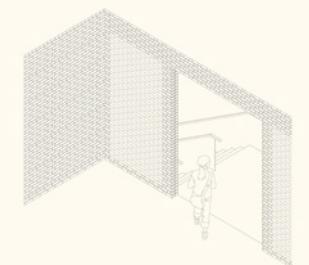
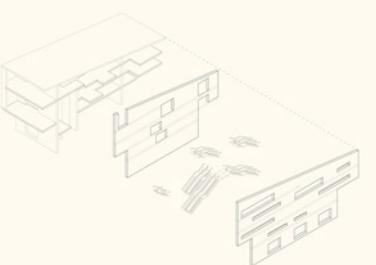
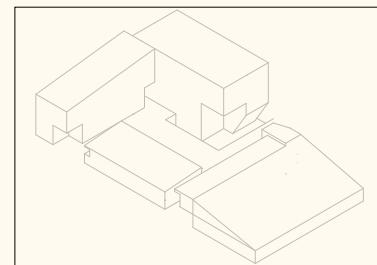
sunlight



ventilation

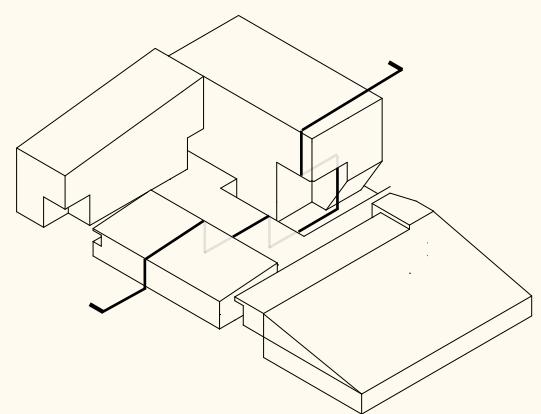
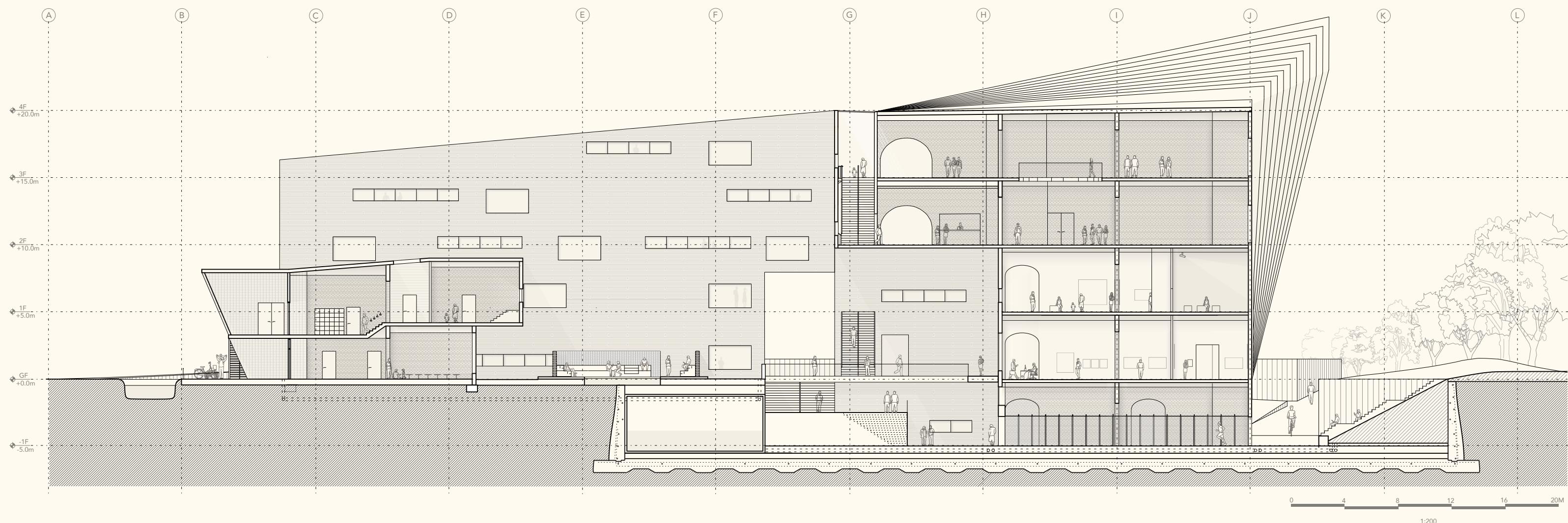


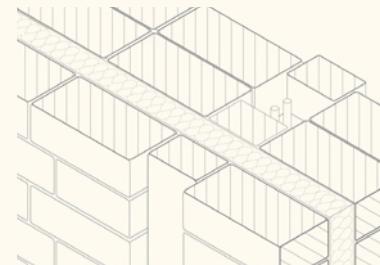
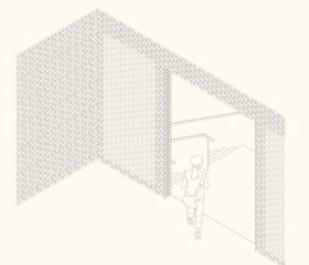
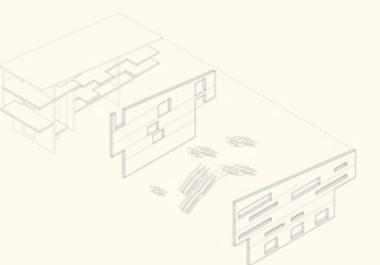
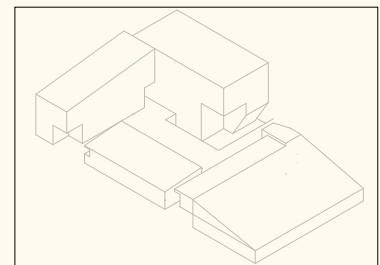
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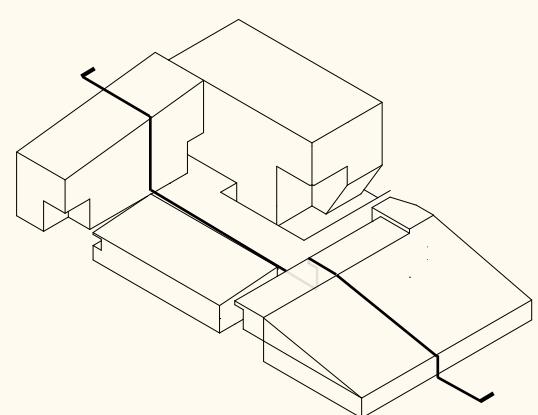
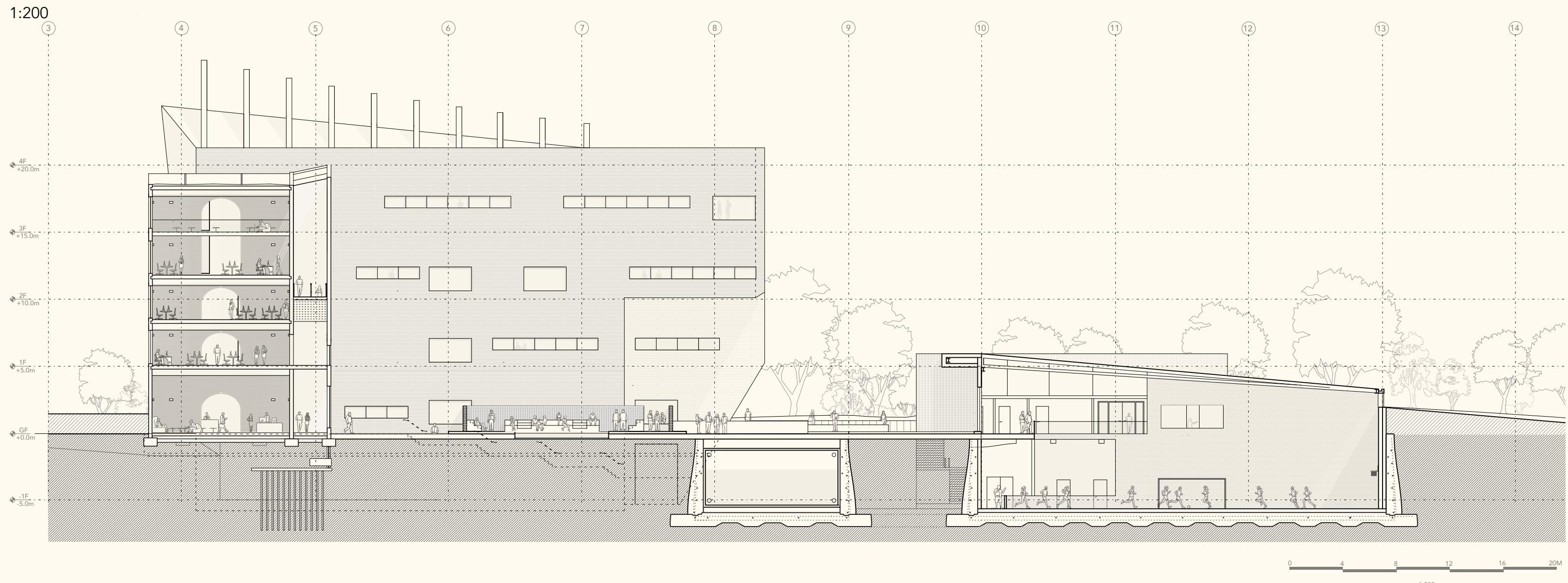
## SECTION AA

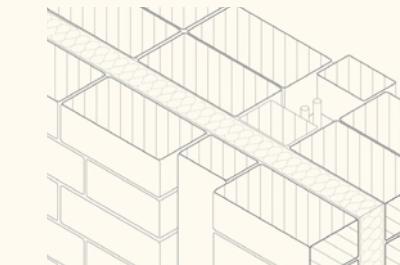
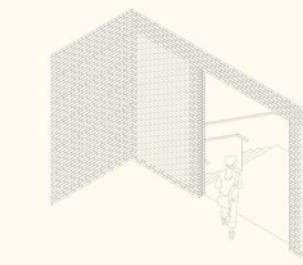
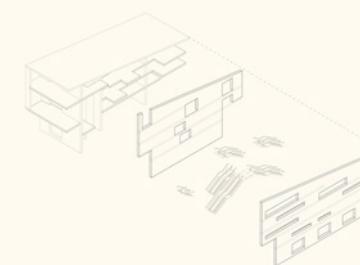
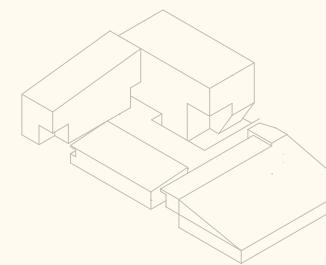
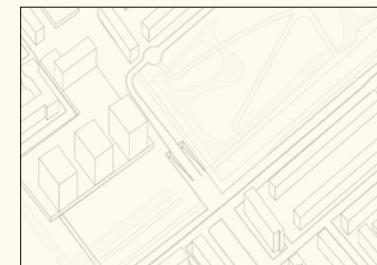
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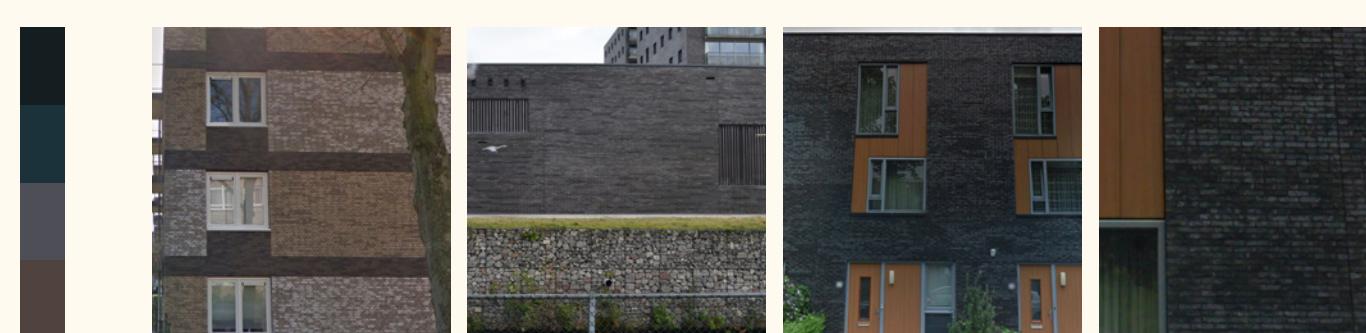
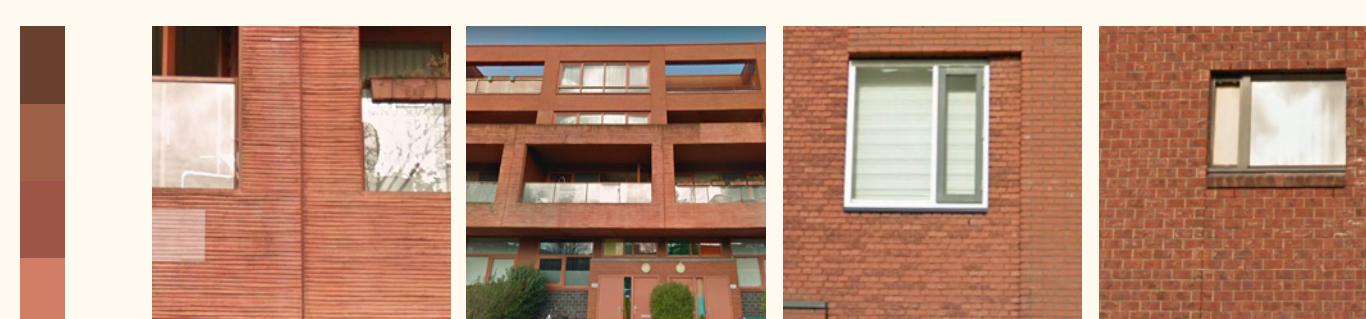
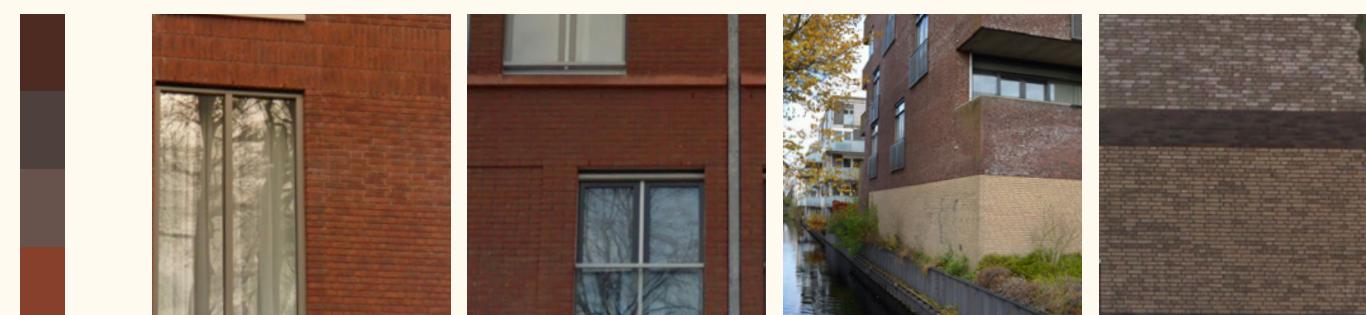
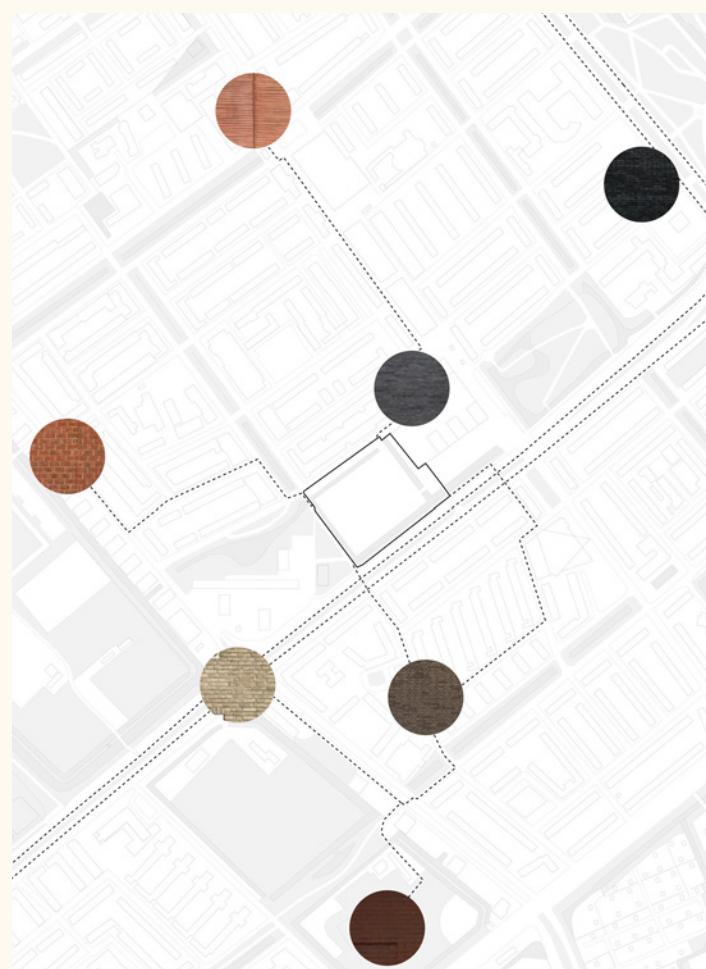
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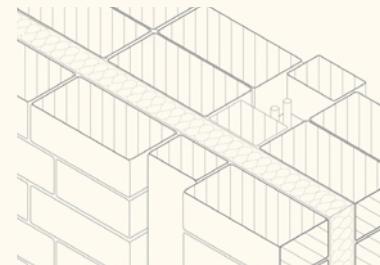
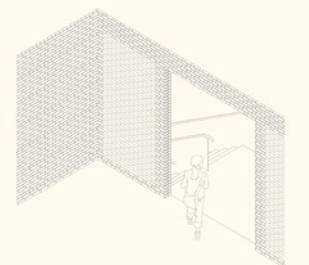
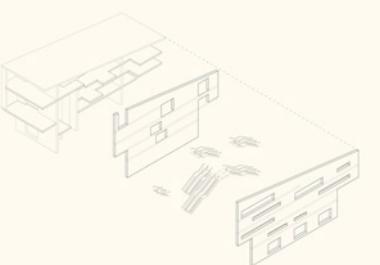
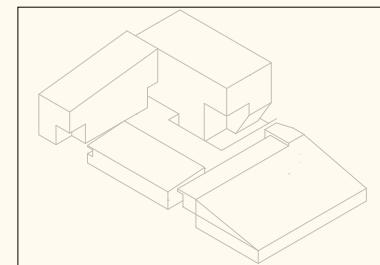




## MATERIAL CONTEXT

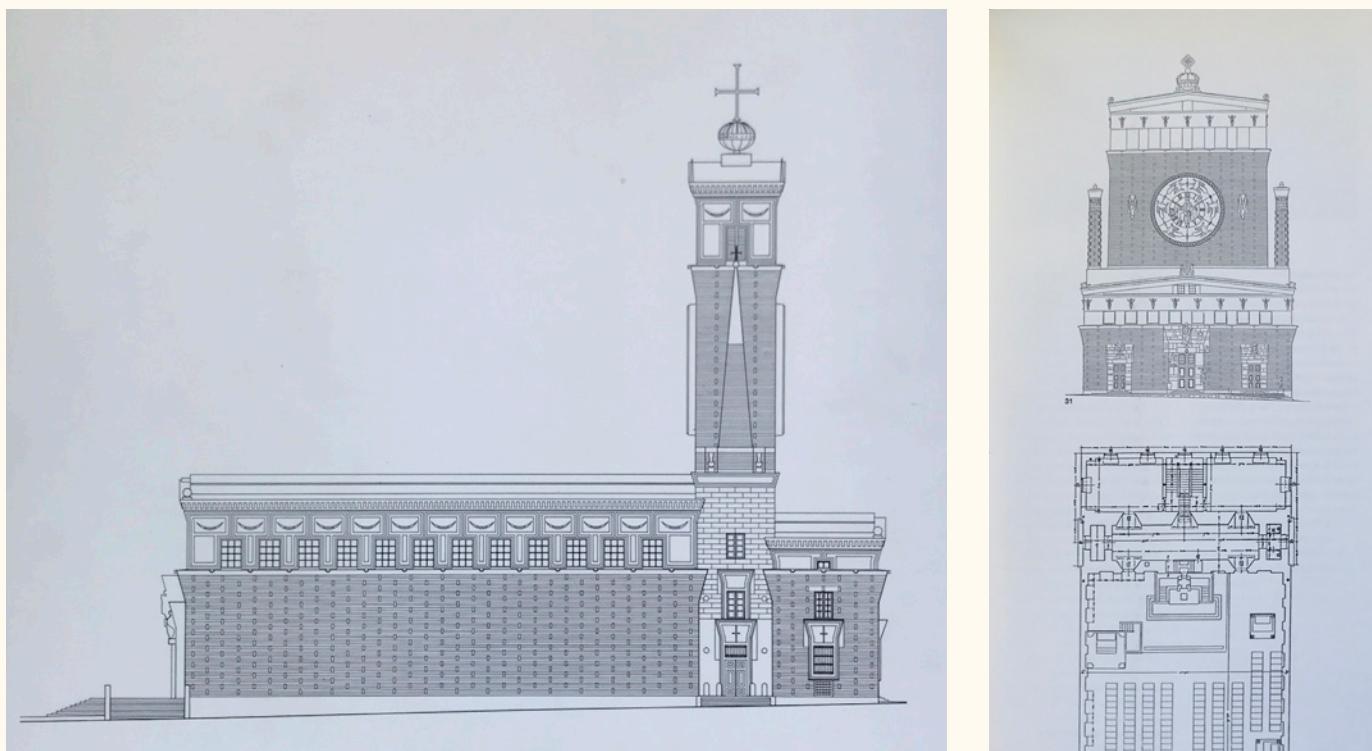
### Brick based context

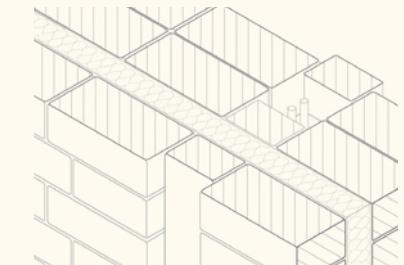
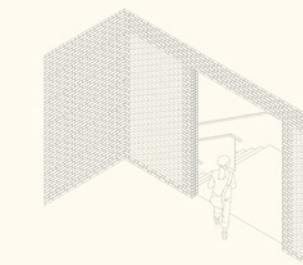
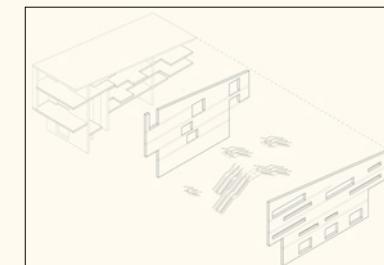
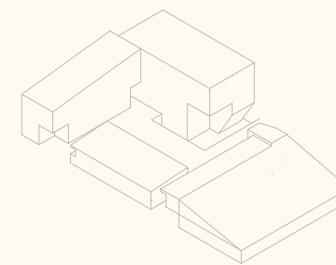




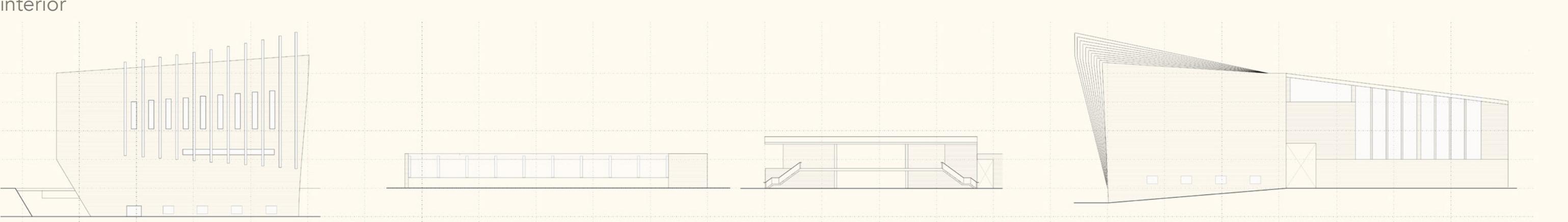
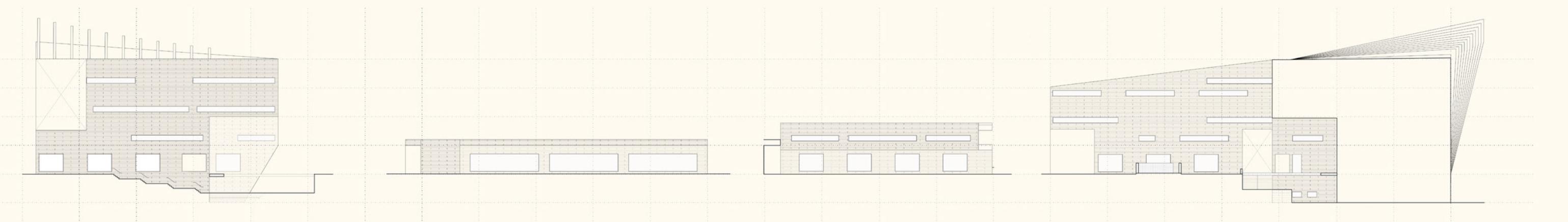
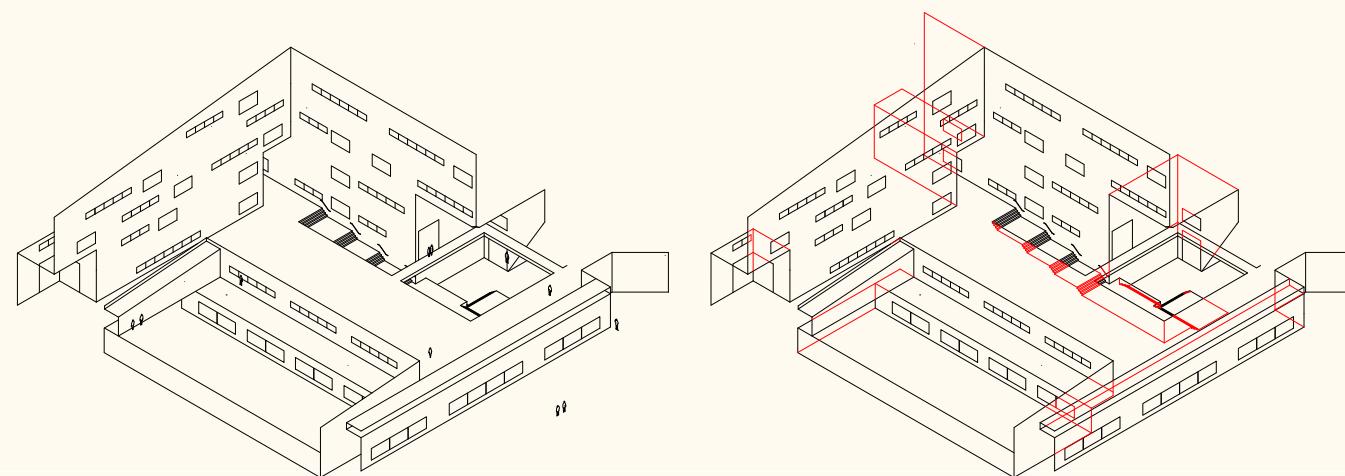
## MATERIALITY AS A DESIGN LANGUAGE FOR THE BODY

### J. PLECNIK'S USE OF THE BRICK PATTERN Church of the Sacred Heart

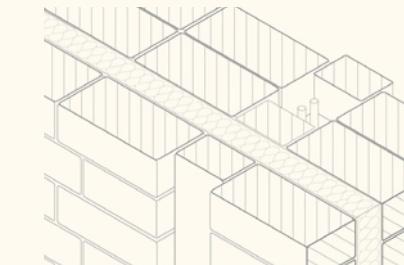
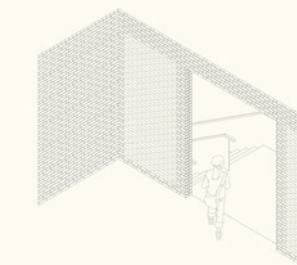
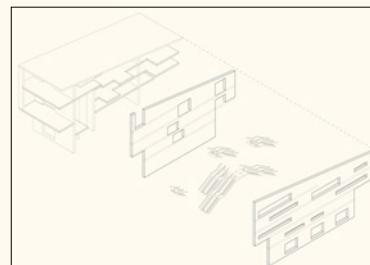
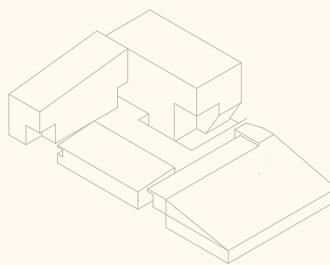
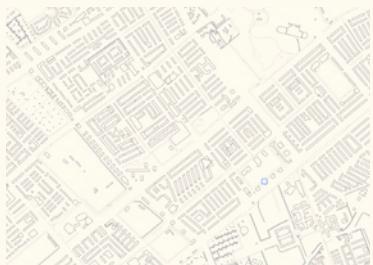




## 360 BRICK FACE OF THE INTERNAL COURTYARD

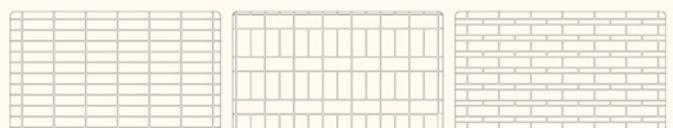


exterior

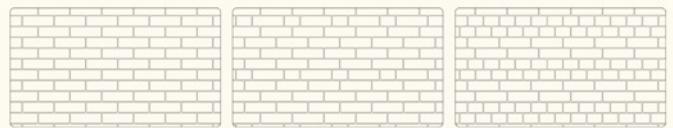


## PATTERN

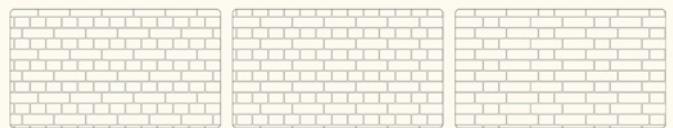
The uniform materiality of the Public Condenser's structure is a conscious decision aiming to replicate similar atmospheres and patterns across its range of functions. As such, the commonly used masonry patterns are drawn out to find fitting combinations.



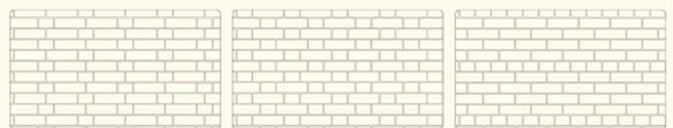
STACK BOND    STACK / RUNNING BOND    CUSTOM



STRETCHER BOND    FLEMISH STRETCHER BOND    DOUBLE ENGLISH CROSS



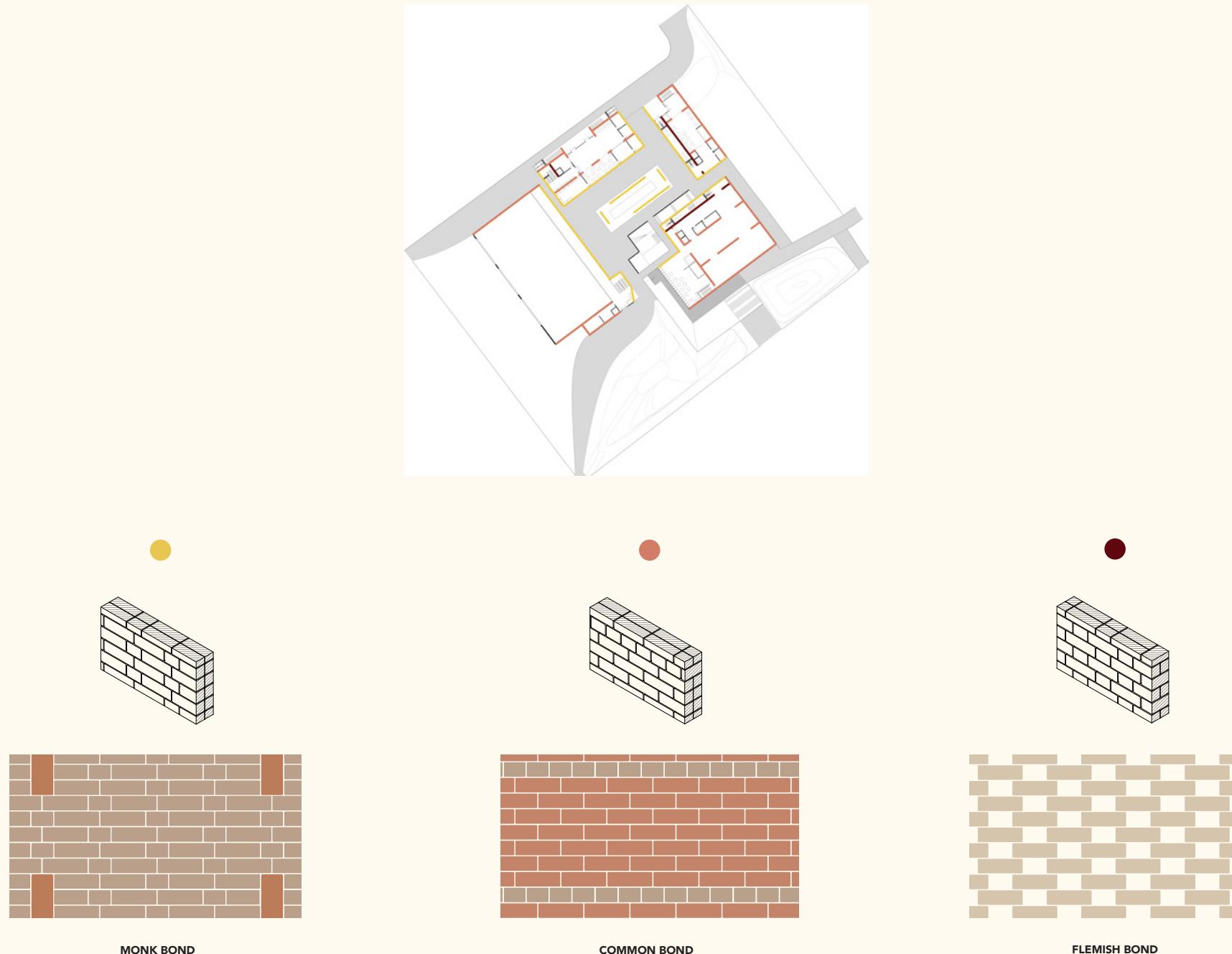
ENGLISH CROSS BOND    ENGLISH BOND    FLEMISH GARDEN WALL

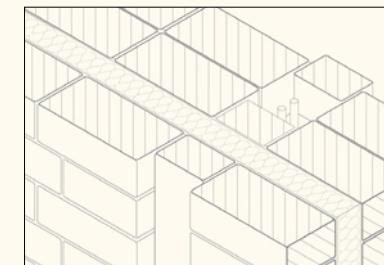
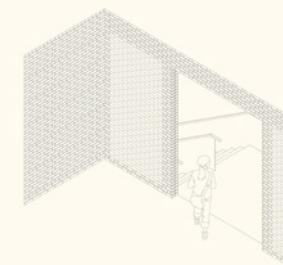
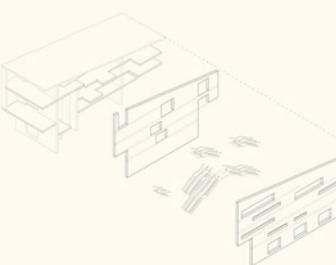
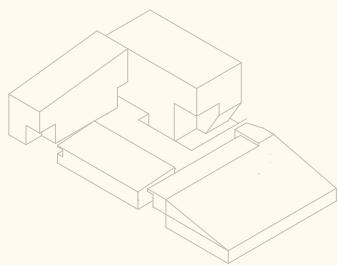


MONK BOND    FLEMISH BOND    COMMON BOND



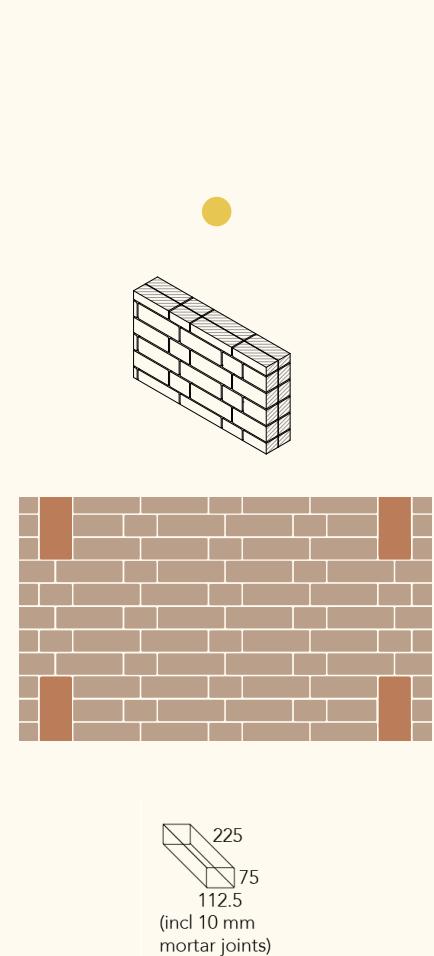
45° HERRINGBONE    90° HERRINGBONE    BOXED BASKETWEAVE



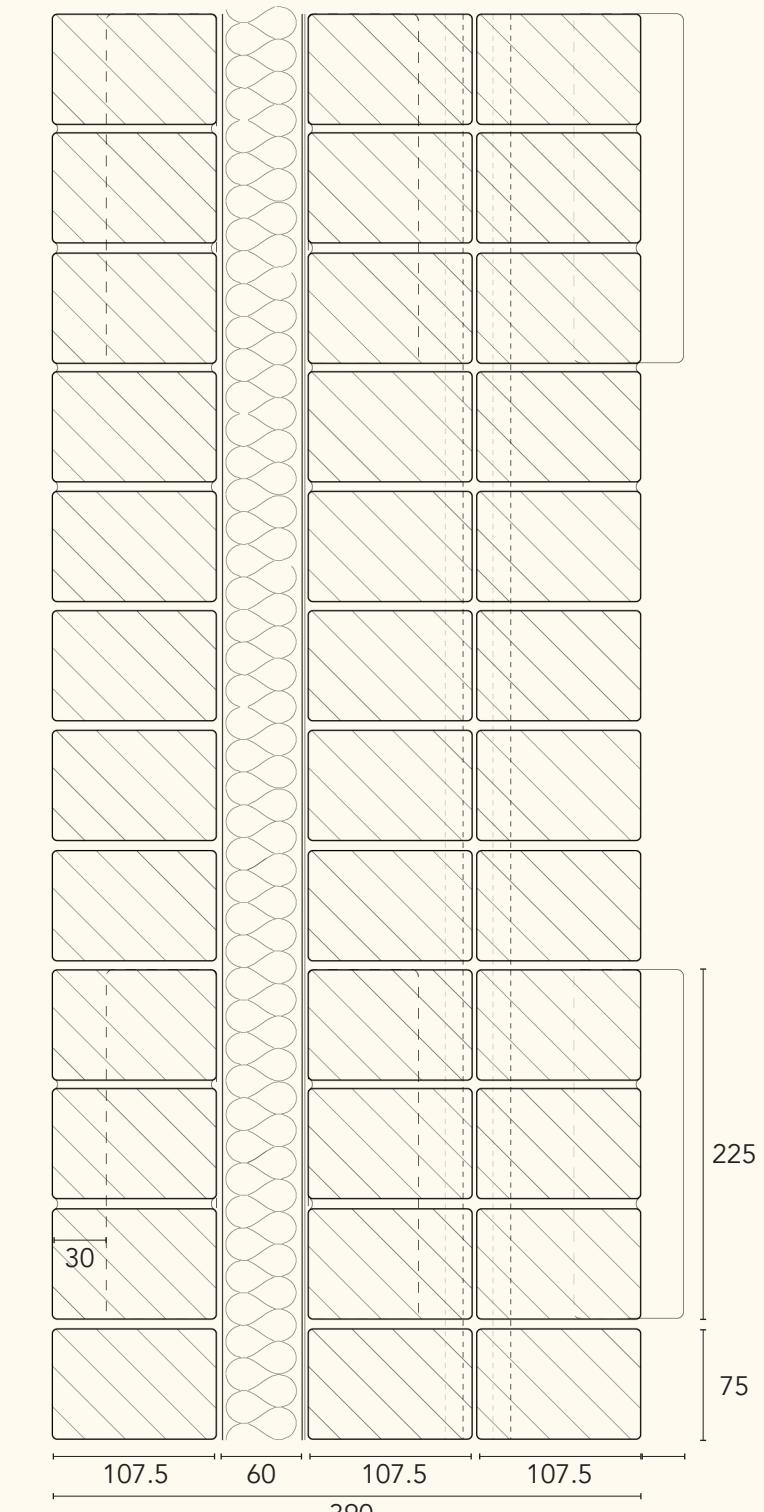
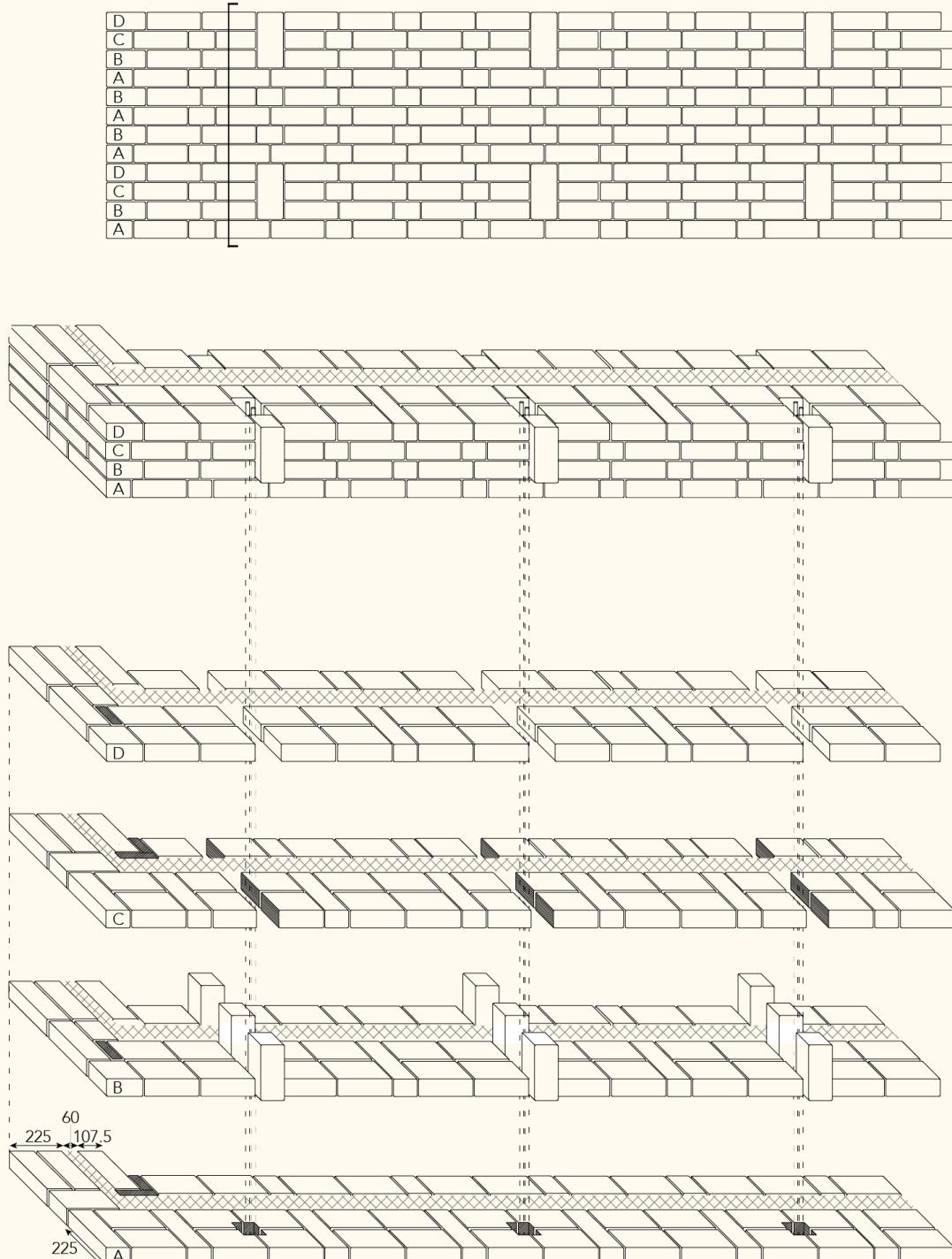


## WALL BUILD UP

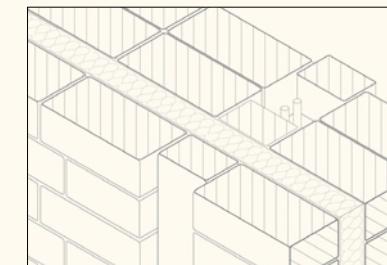
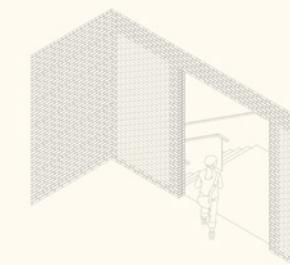
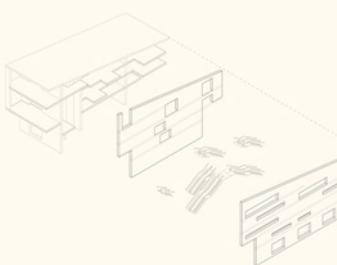
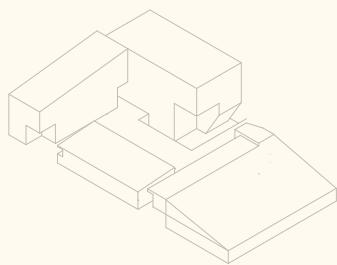
type 1



225  
75  
112.5  
(incl 10 mm  
mortar joints)

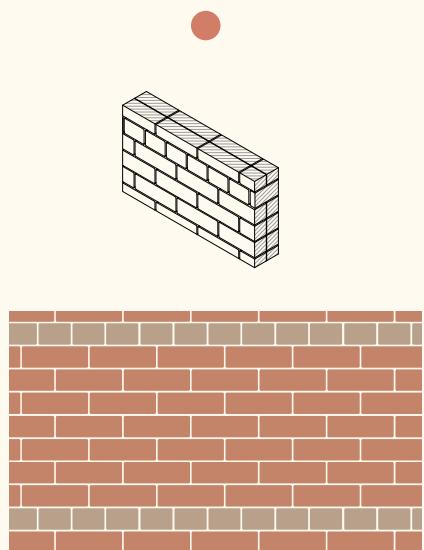


1:5 wall type 1 section

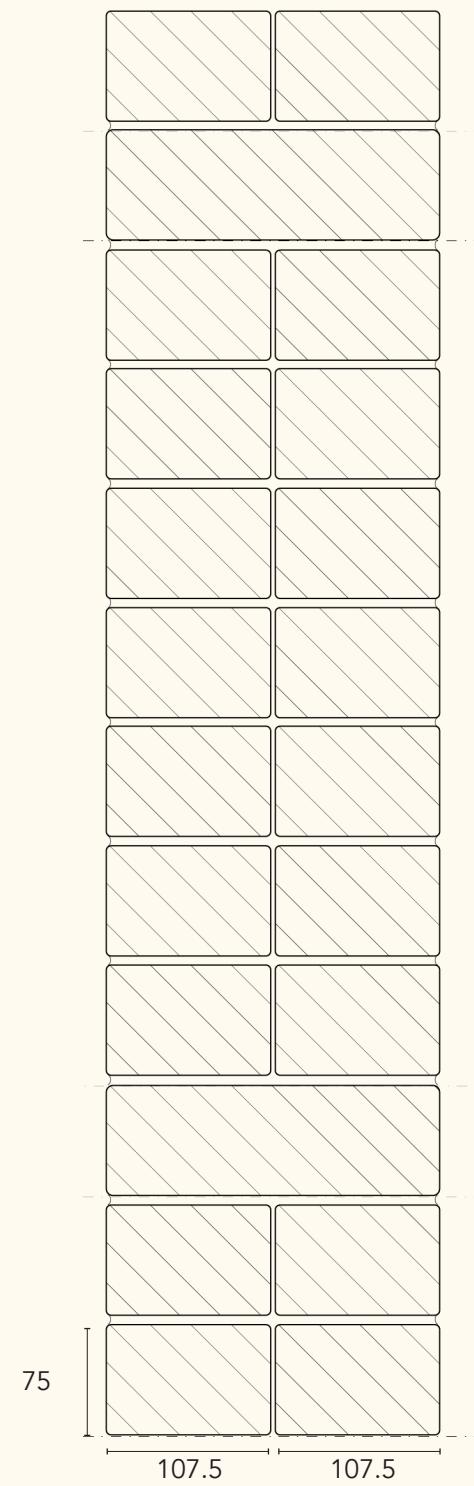
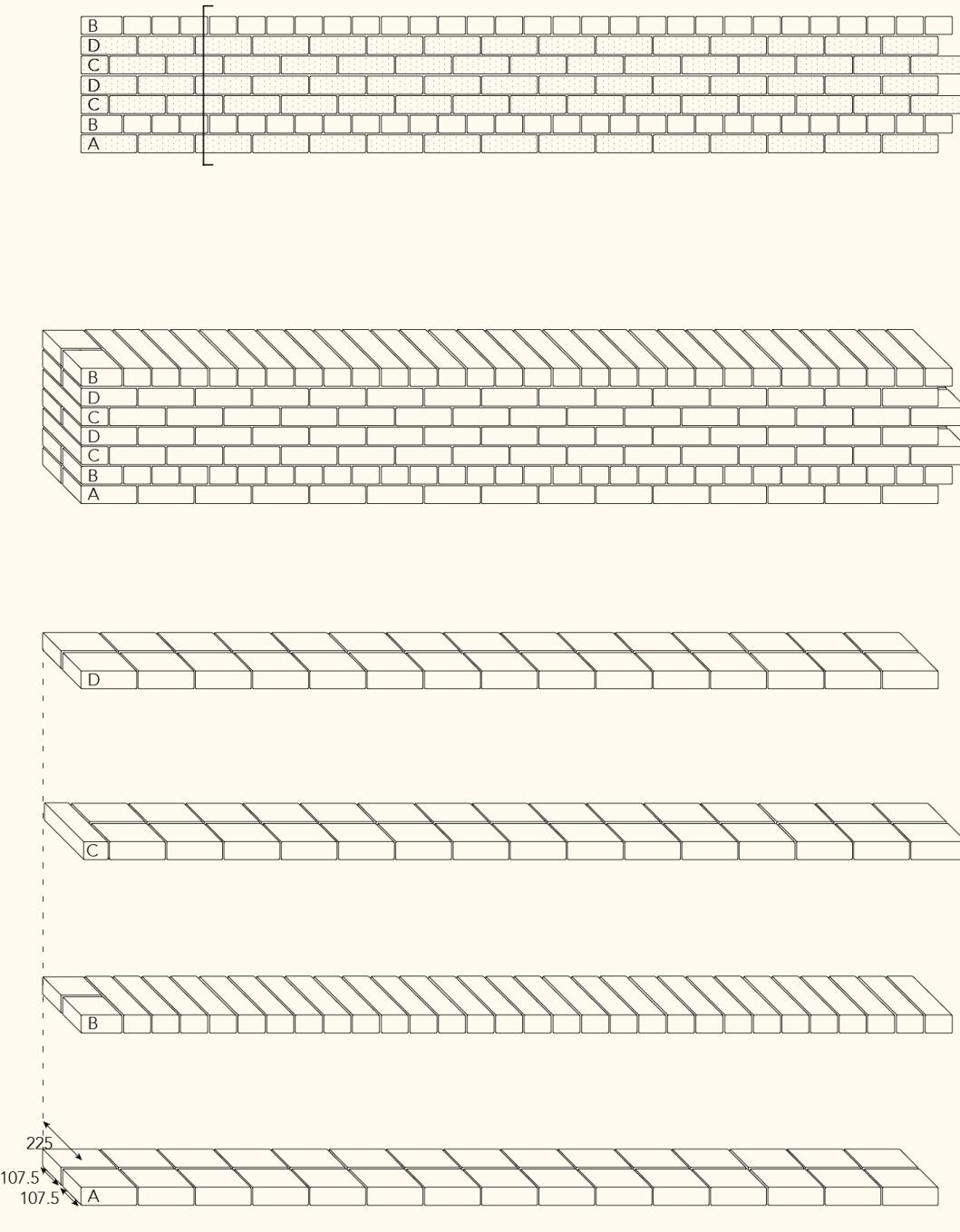


## WALL BUILD UP

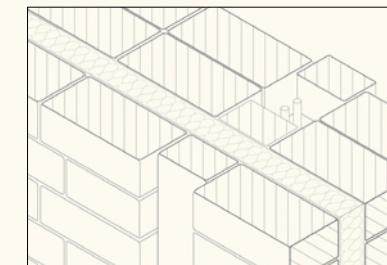
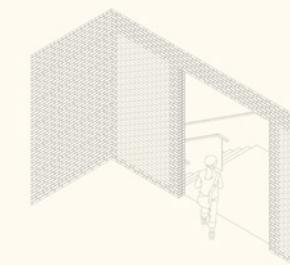
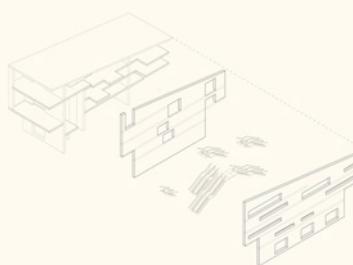
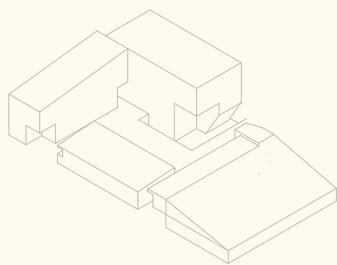
type 2



225  
75  
112.5  
(incl 10 mm  
mortar joints)

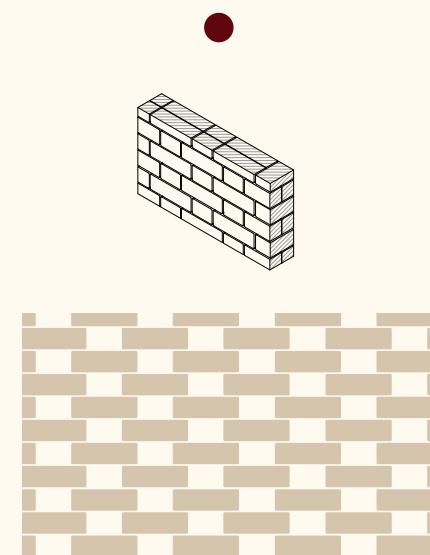


1:5 wall type 2 section

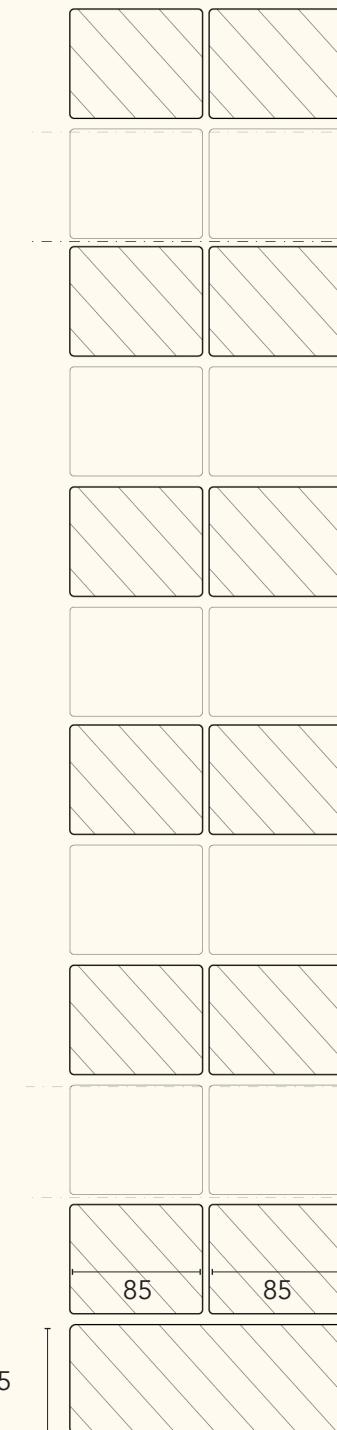
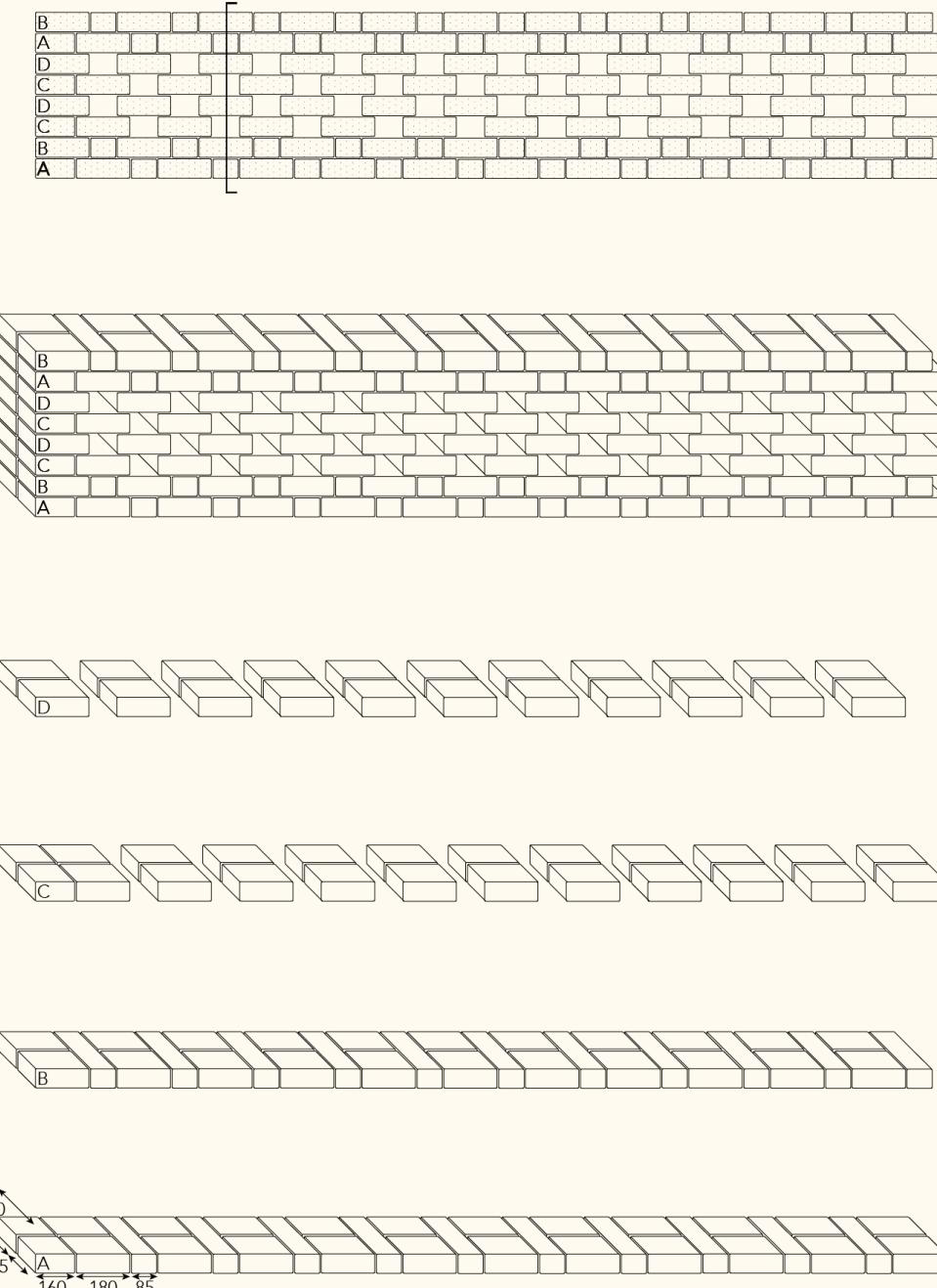


## WALL BUILD UP

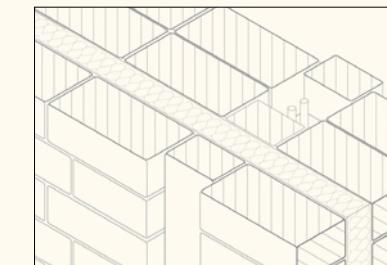
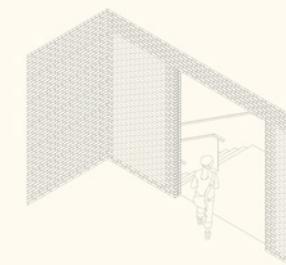
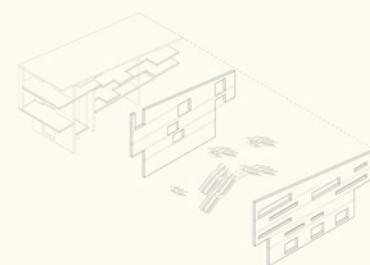
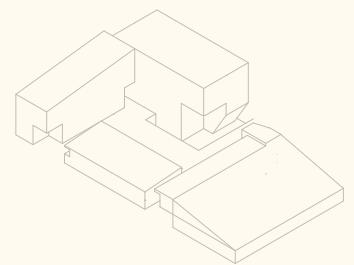
type 3



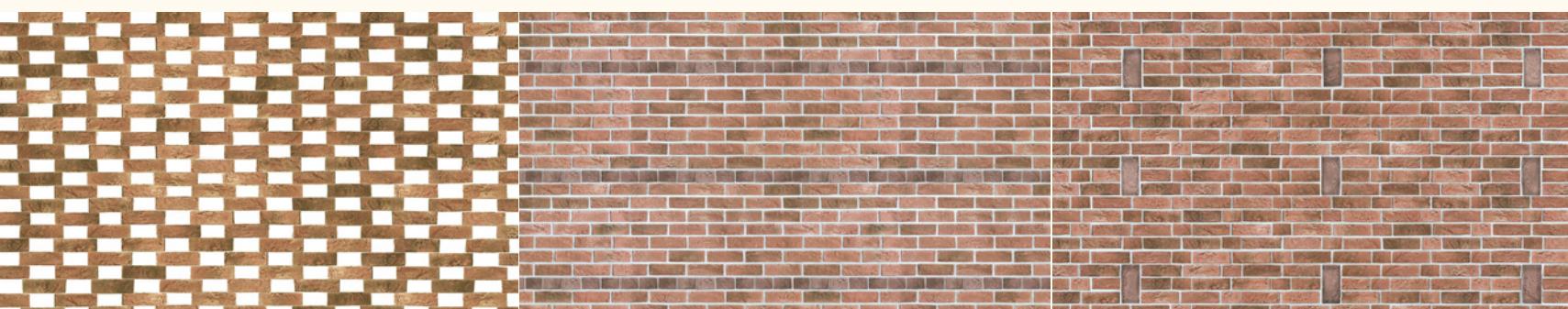
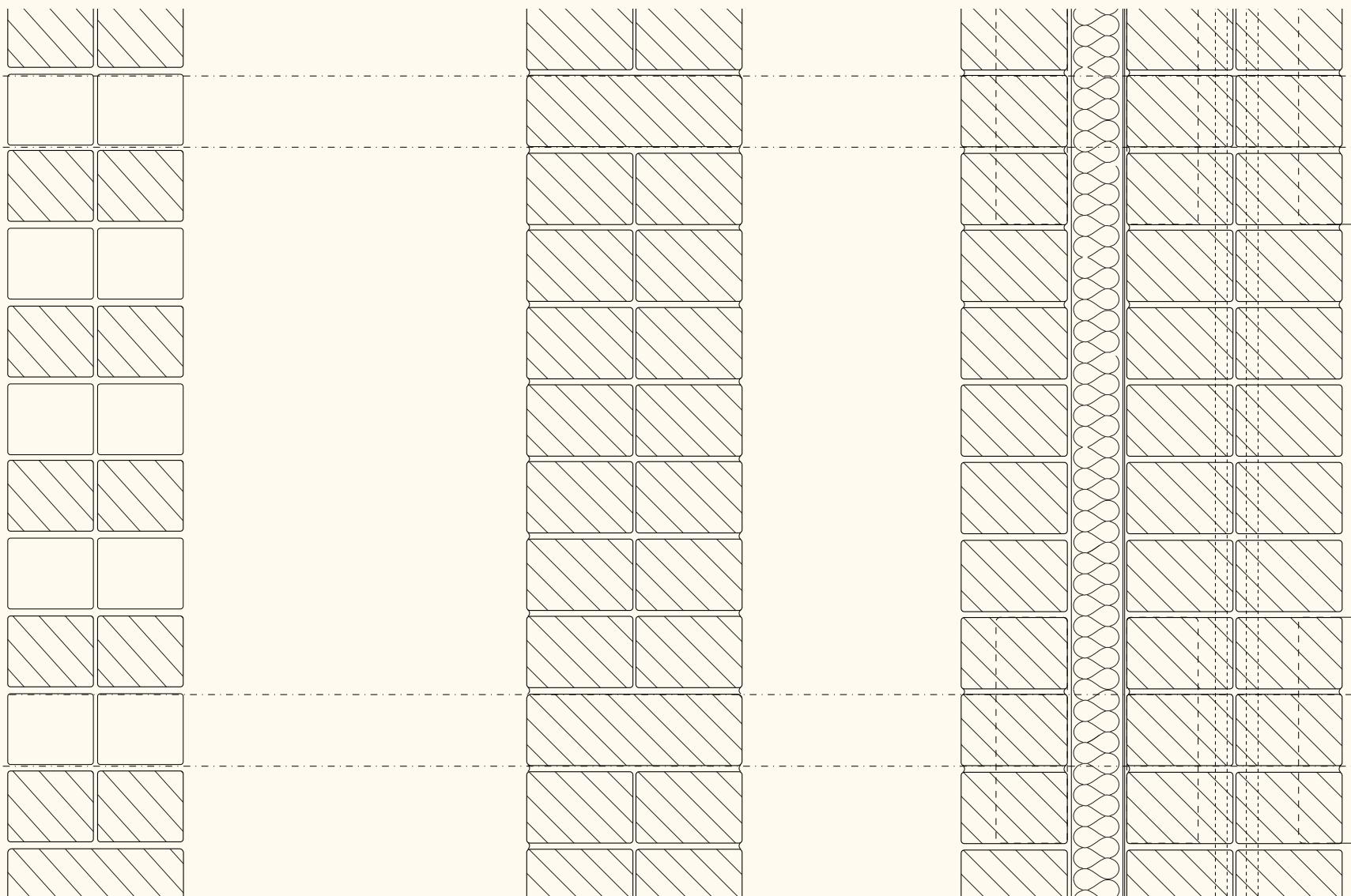
180  
75  
85

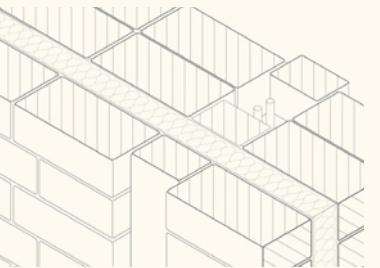
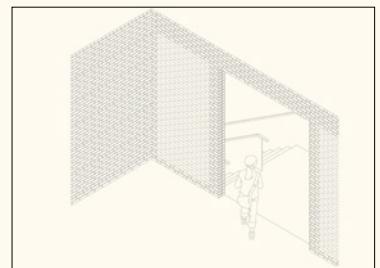
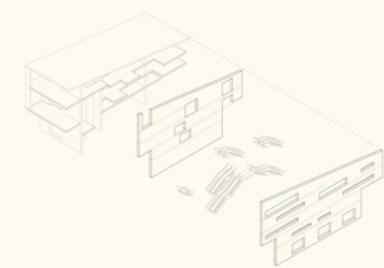
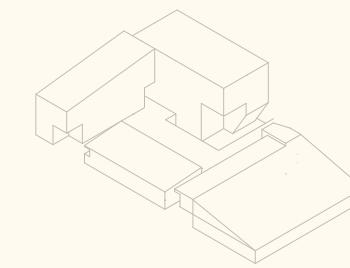


1:5 wall type 3 section

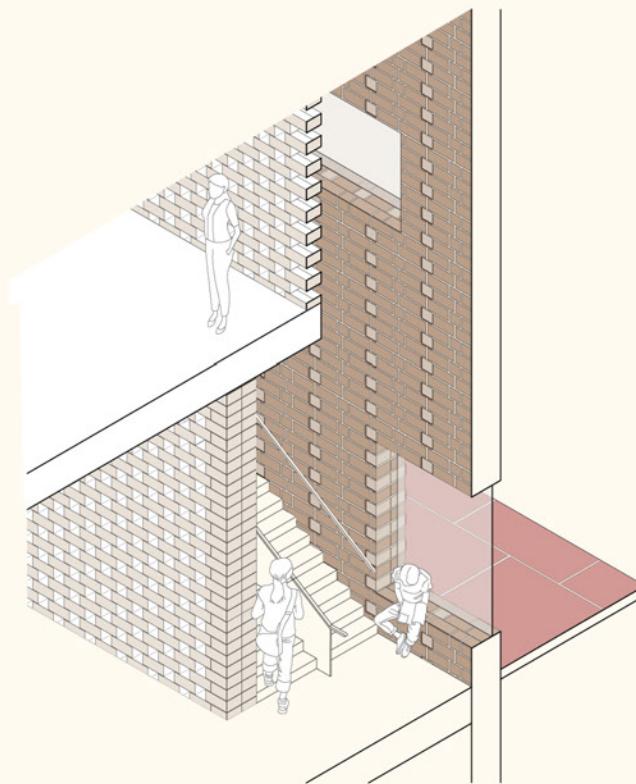


## WALL BUILD UP

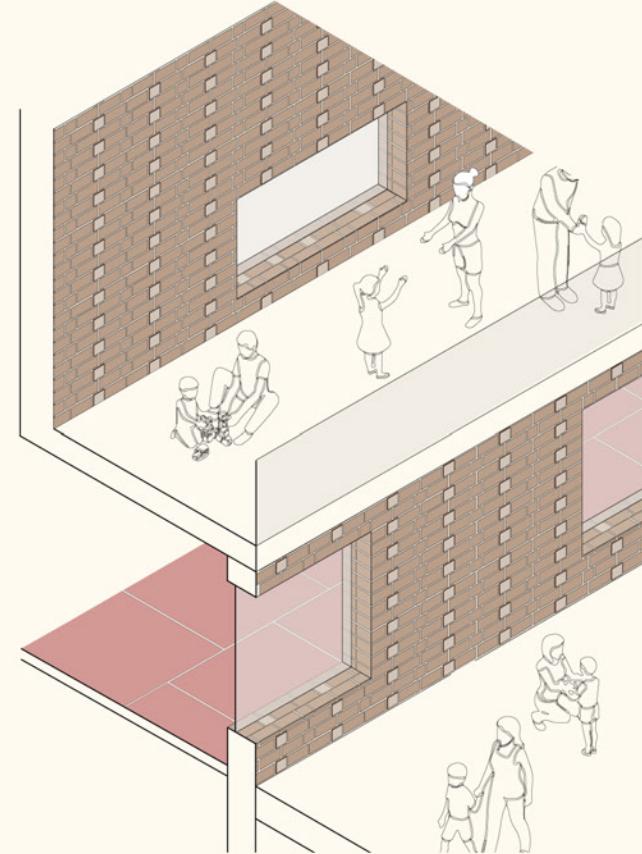




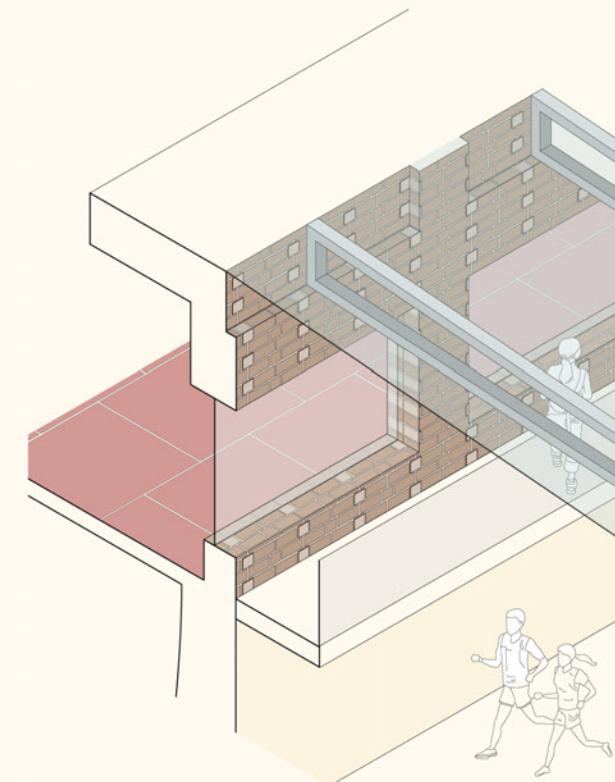
## MATERIAL IMPRESSIONS



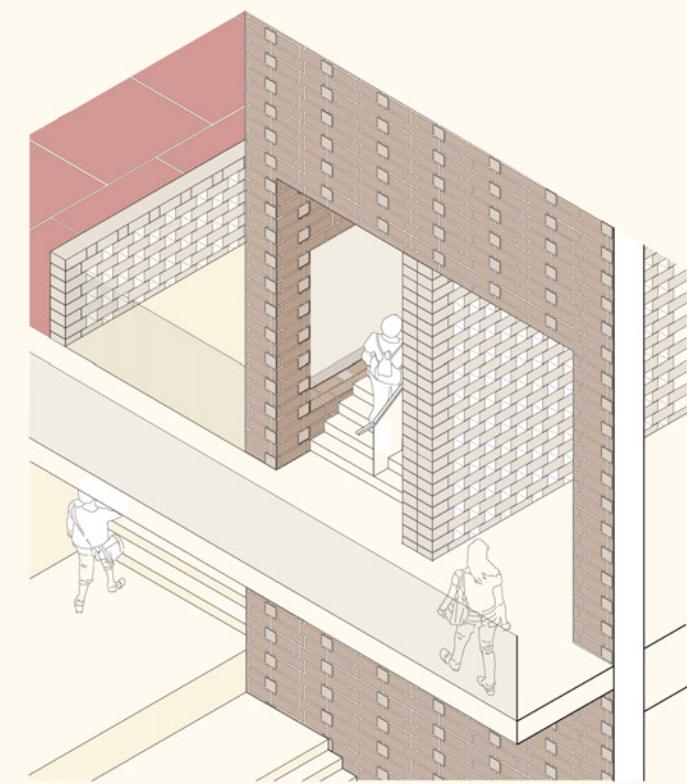
Business centre



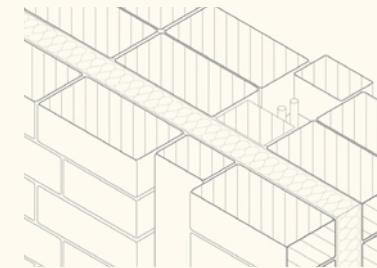
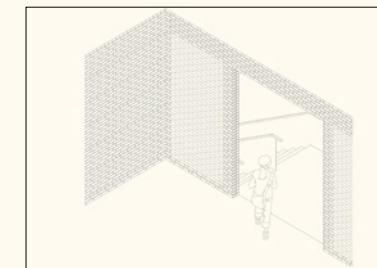
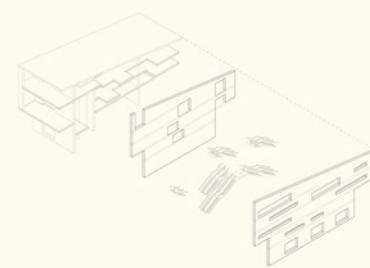
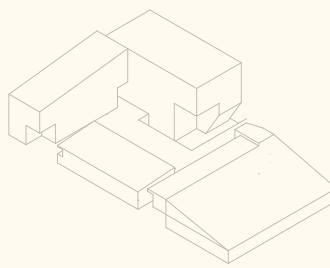
Education centre



Sports centre

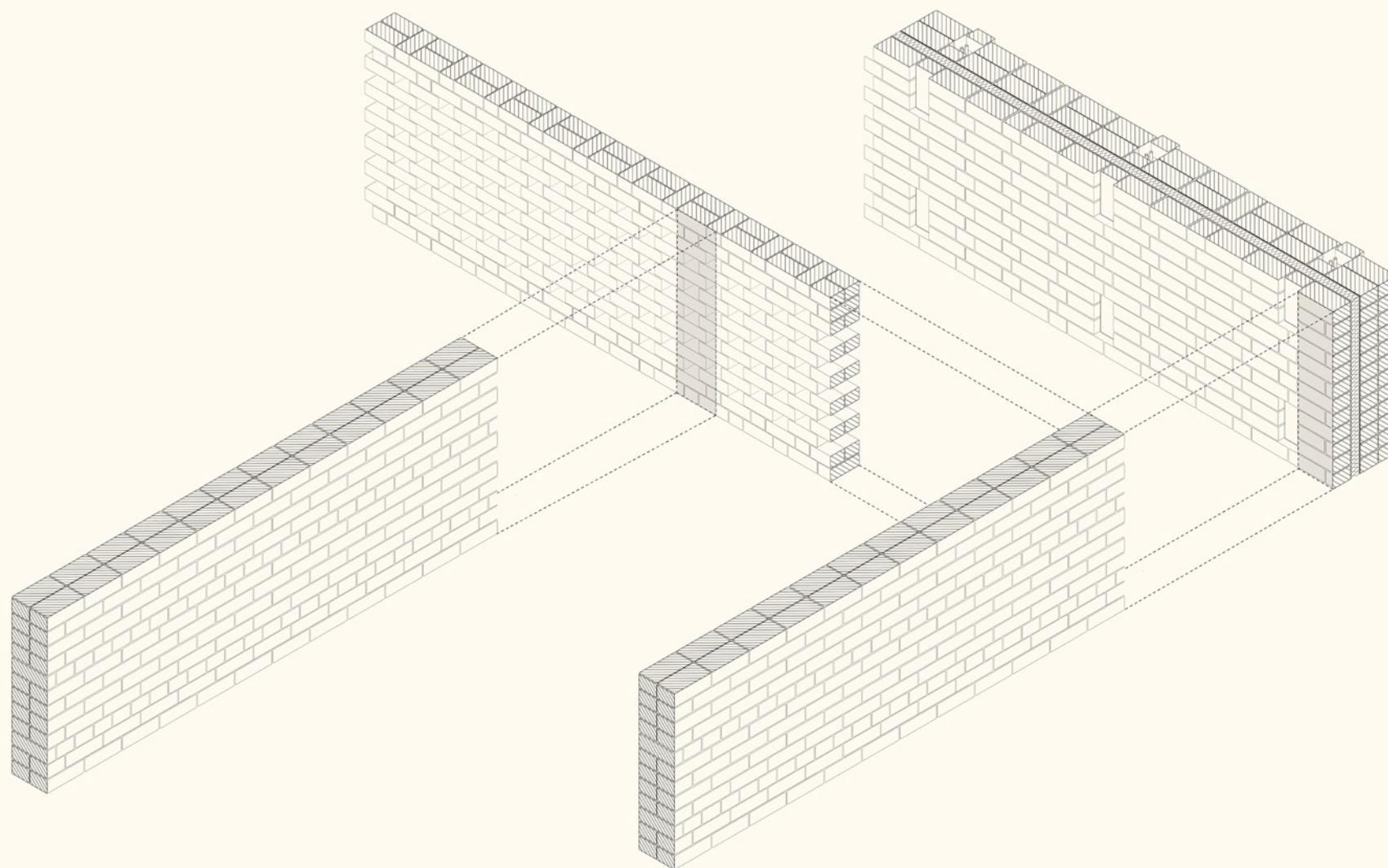


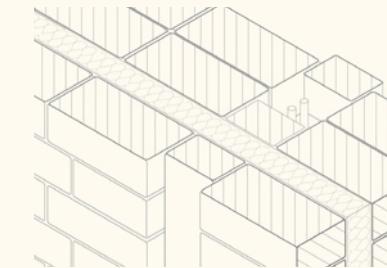
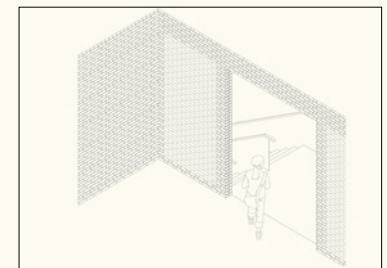
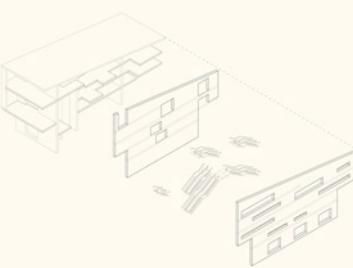
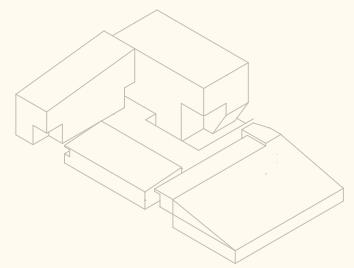
Cultural centre



## CONNECTIONS

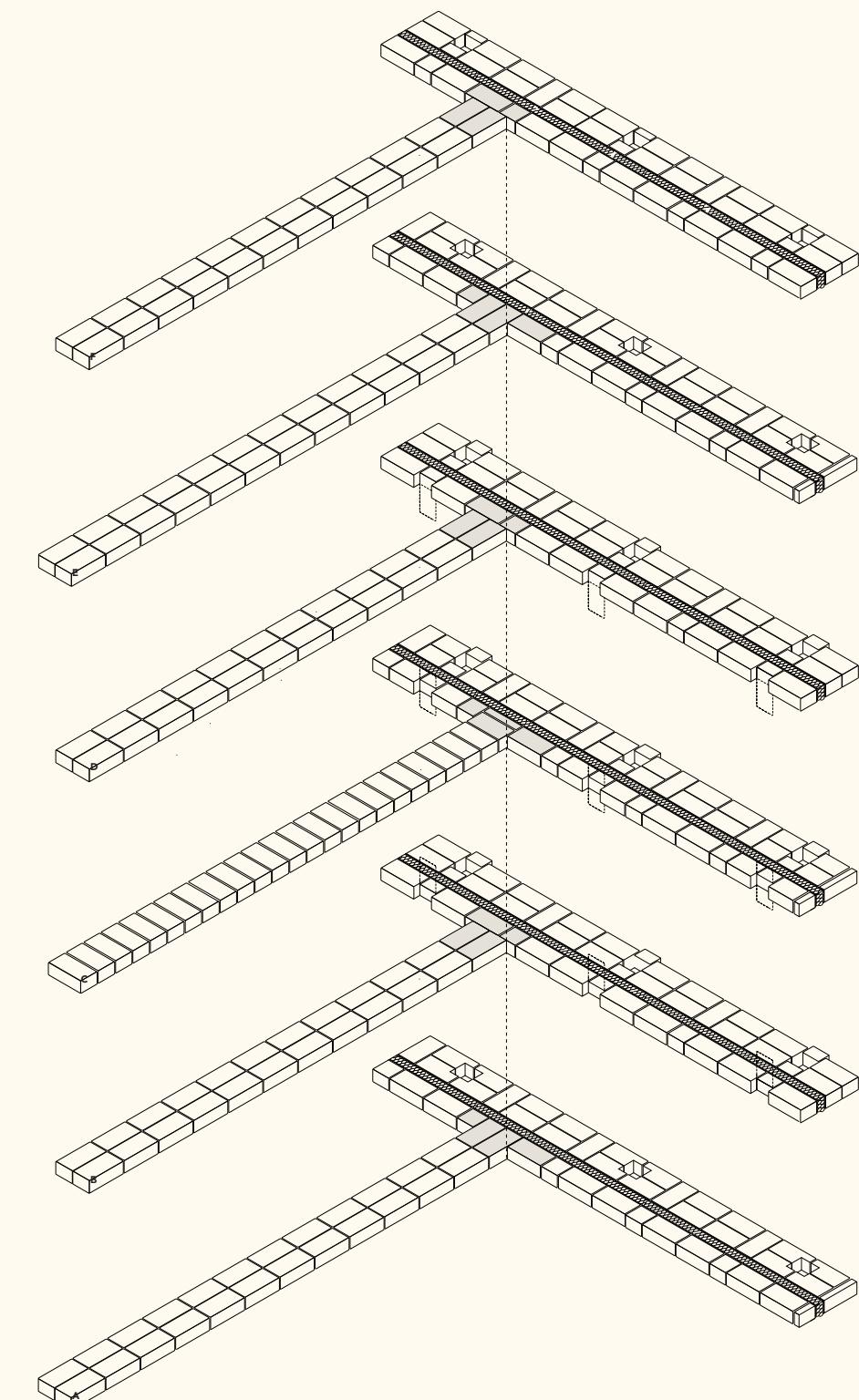
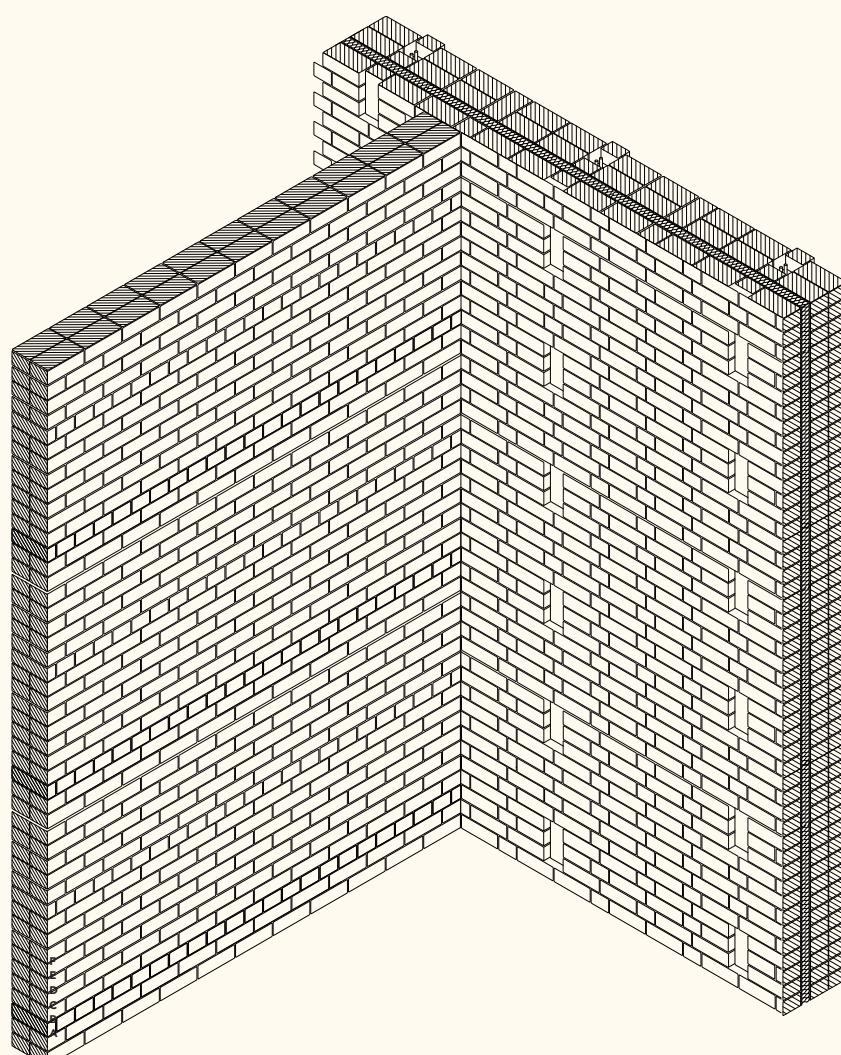
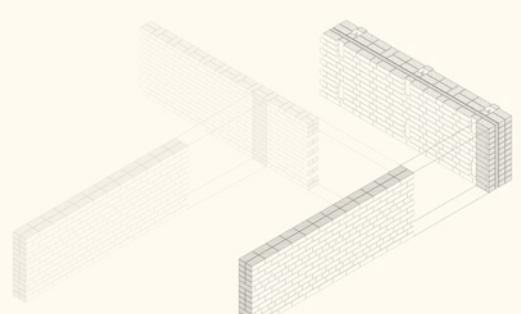
**WALL type 1- WALL type 2**  
**WALL type 2- WALL type 3**

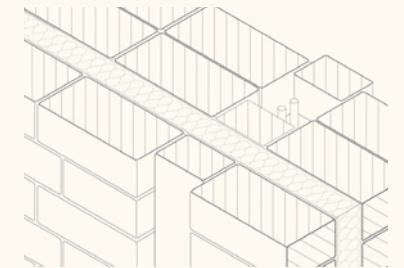
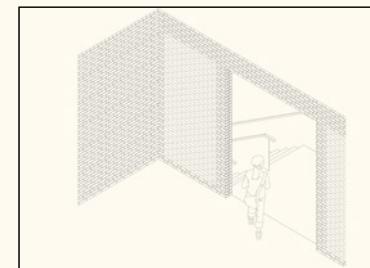
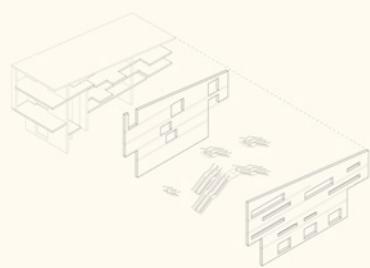
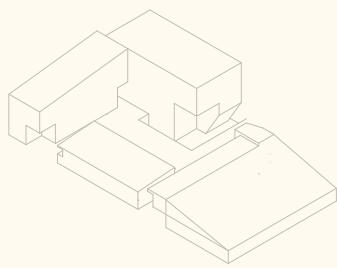




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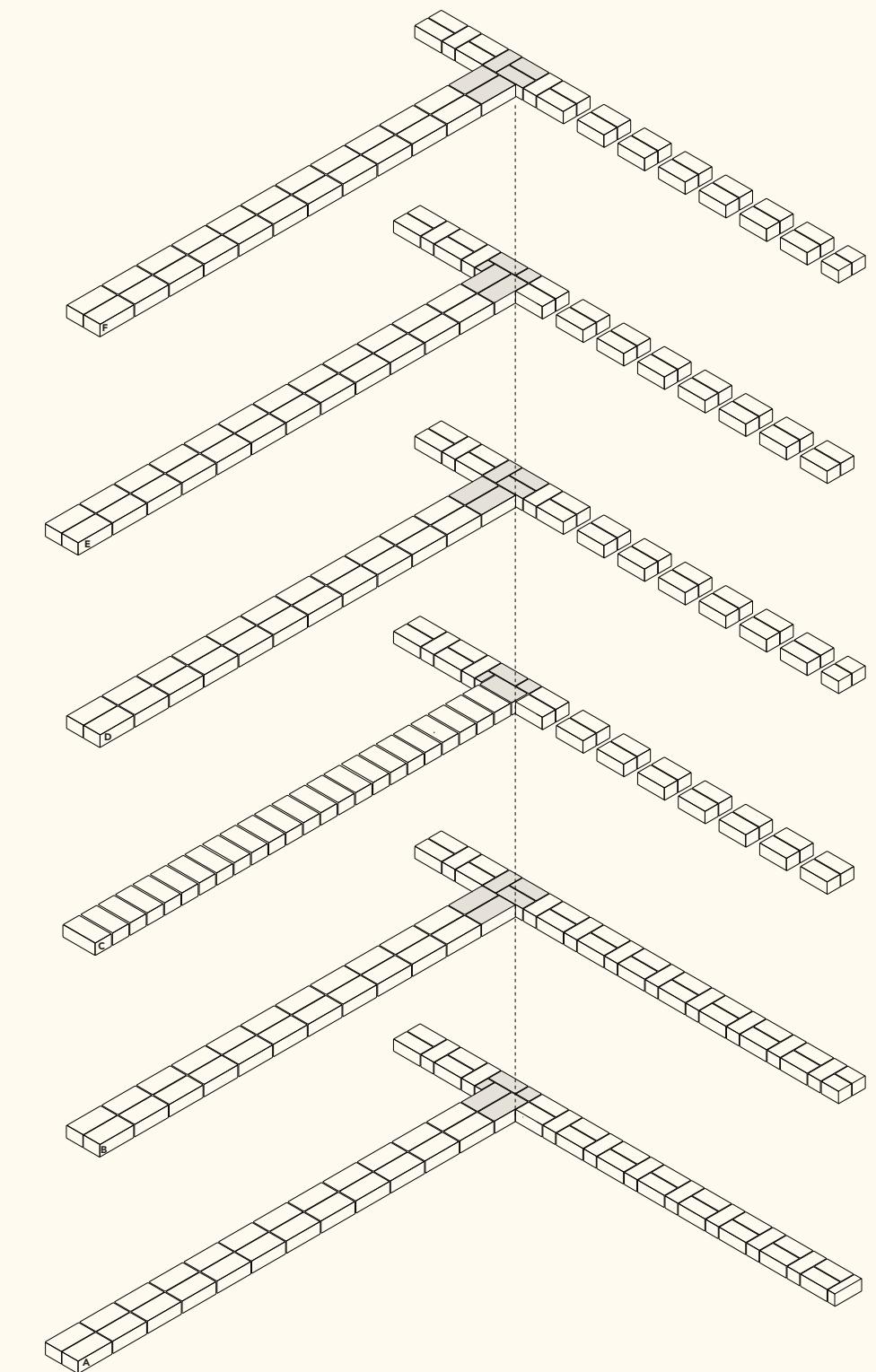
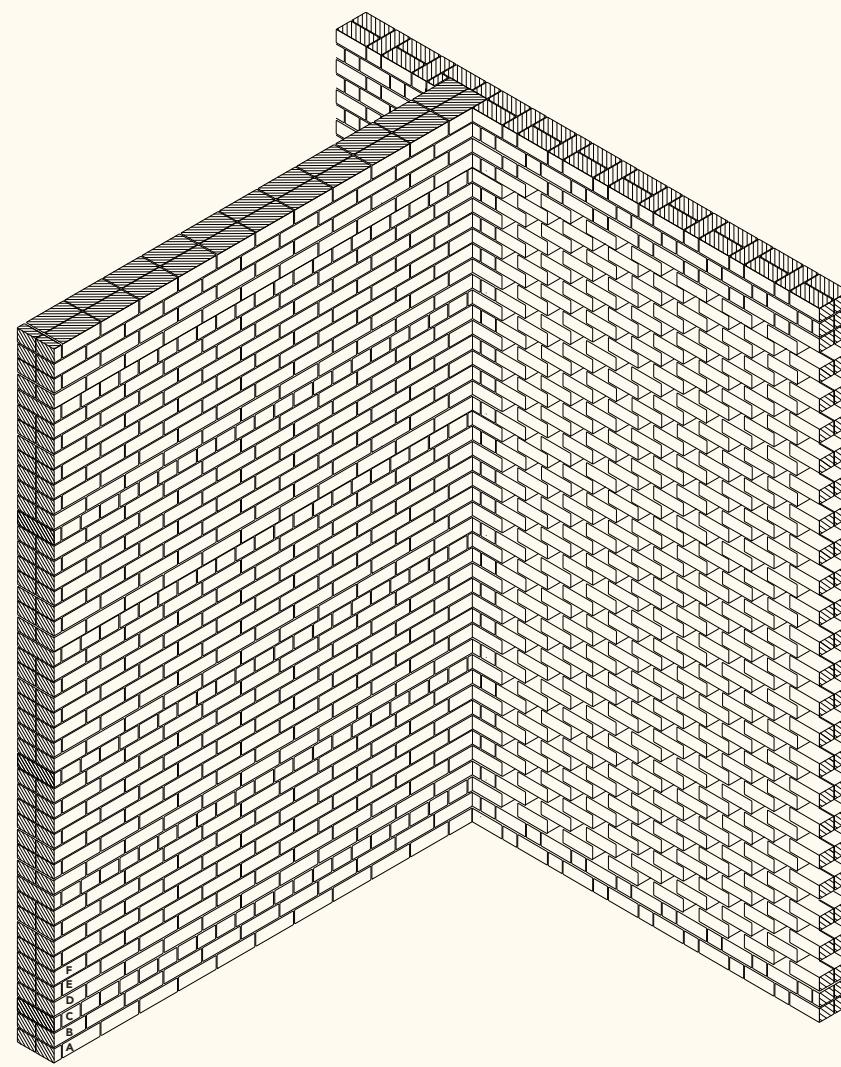
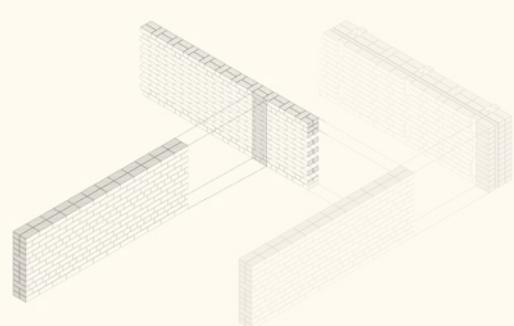
WALL type 1- WALL type 2

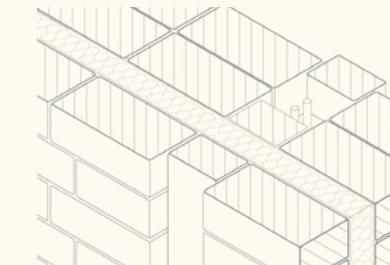
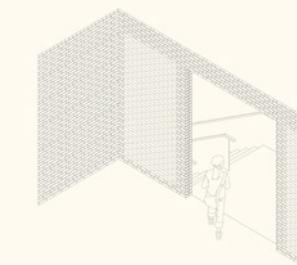
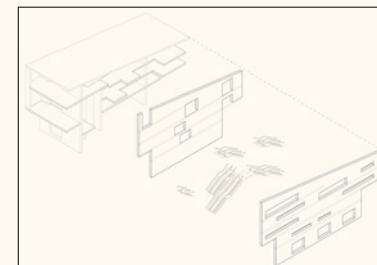
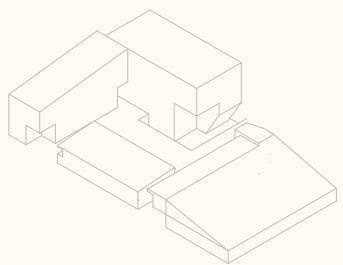




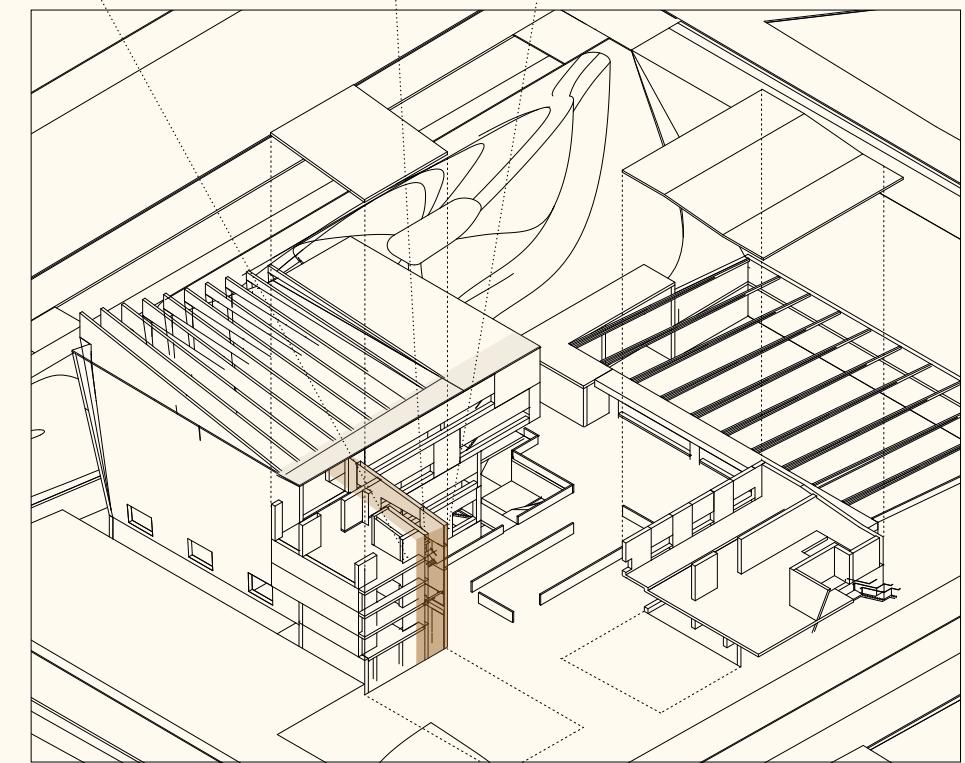
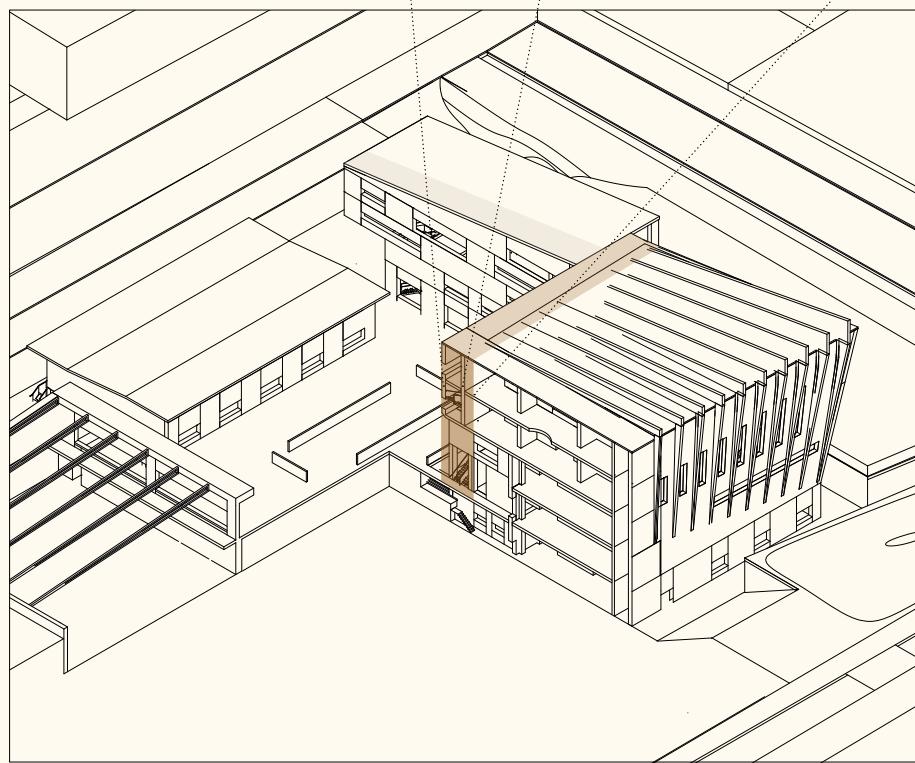
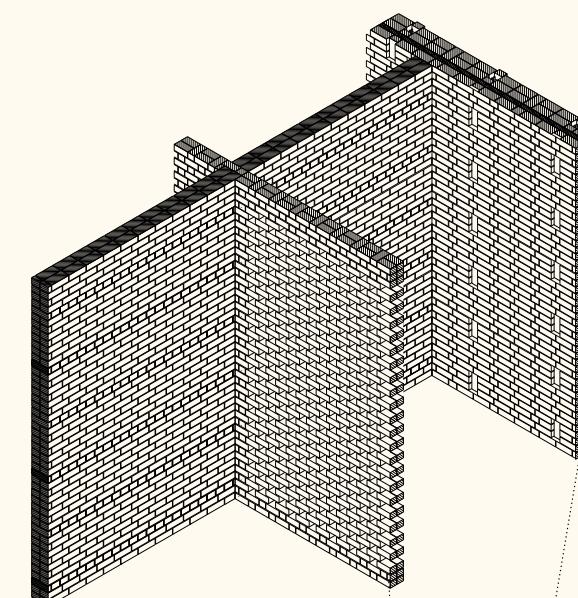
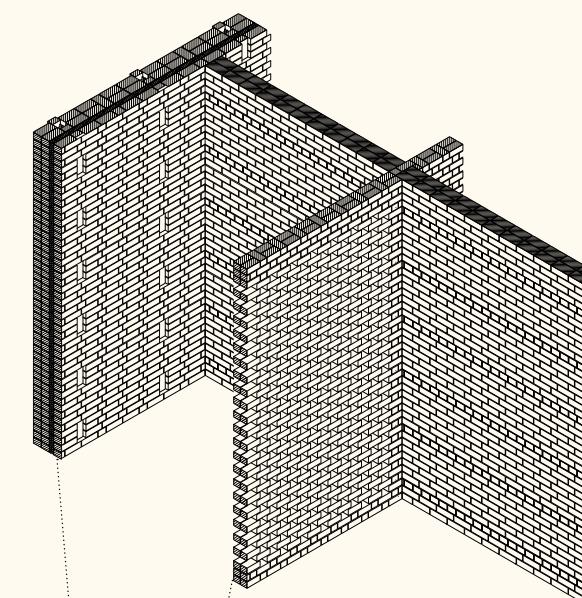
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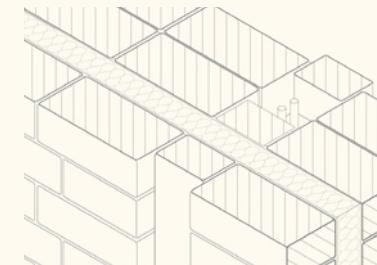
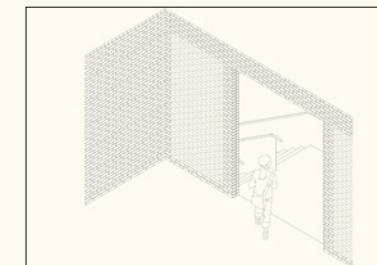
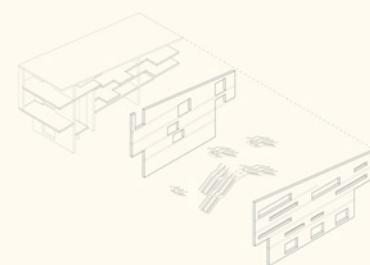
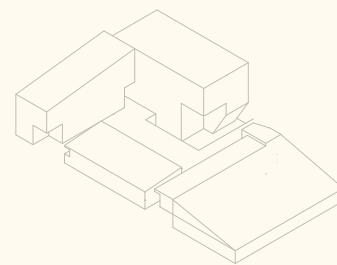
WALL type 2- WALL type 3





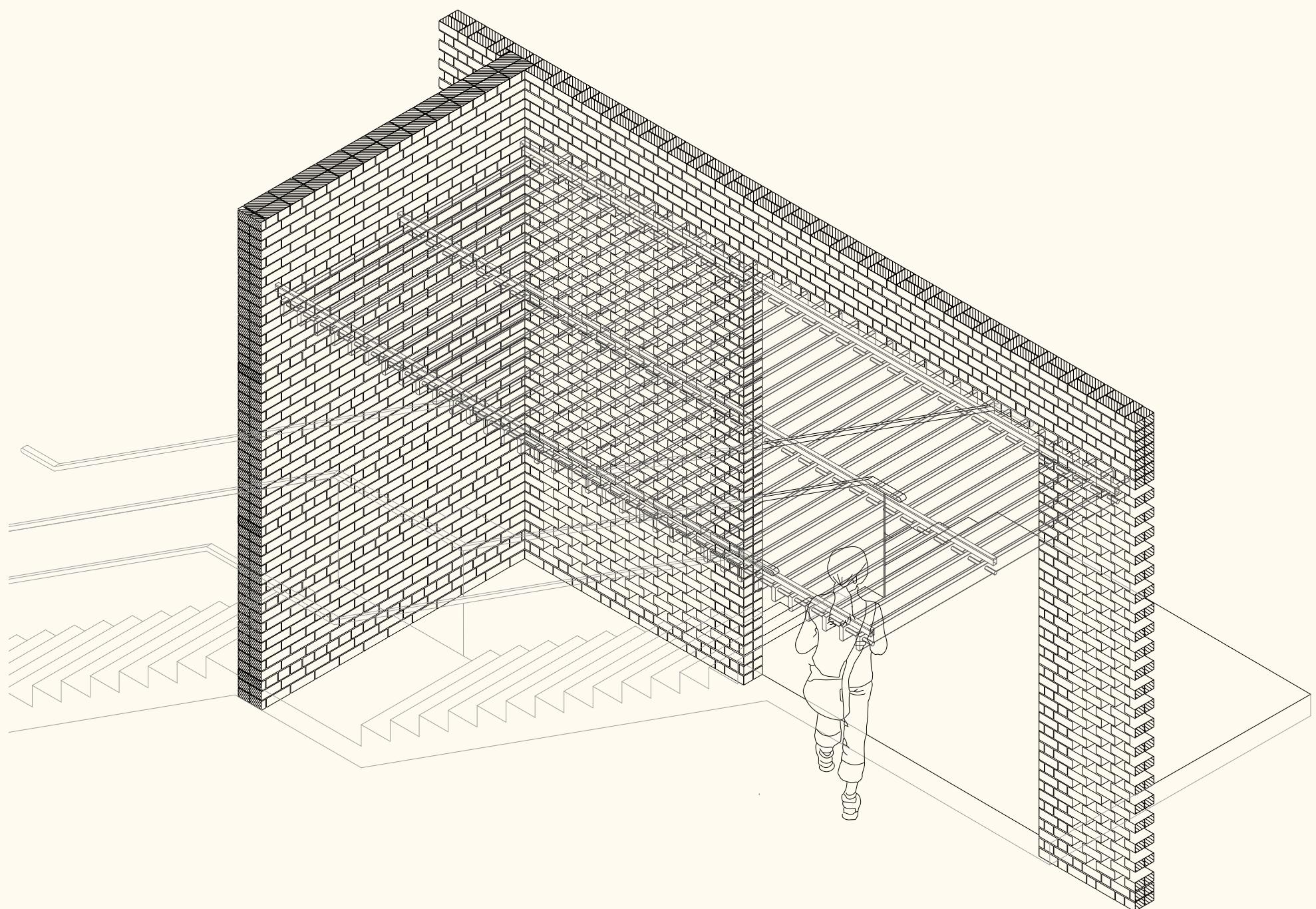
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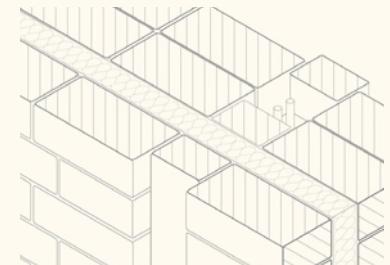
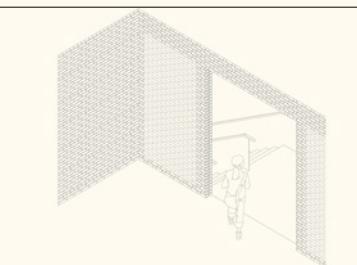
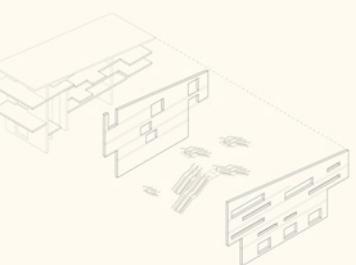
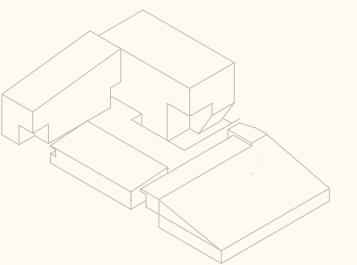




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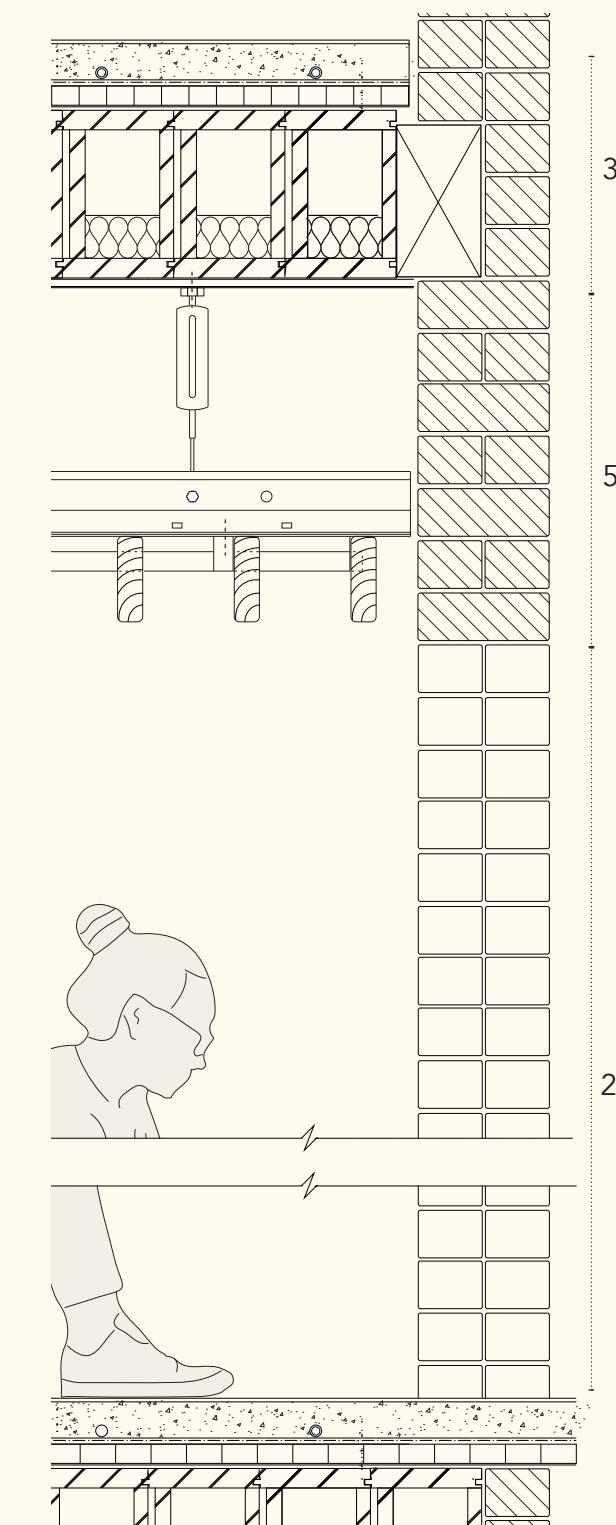
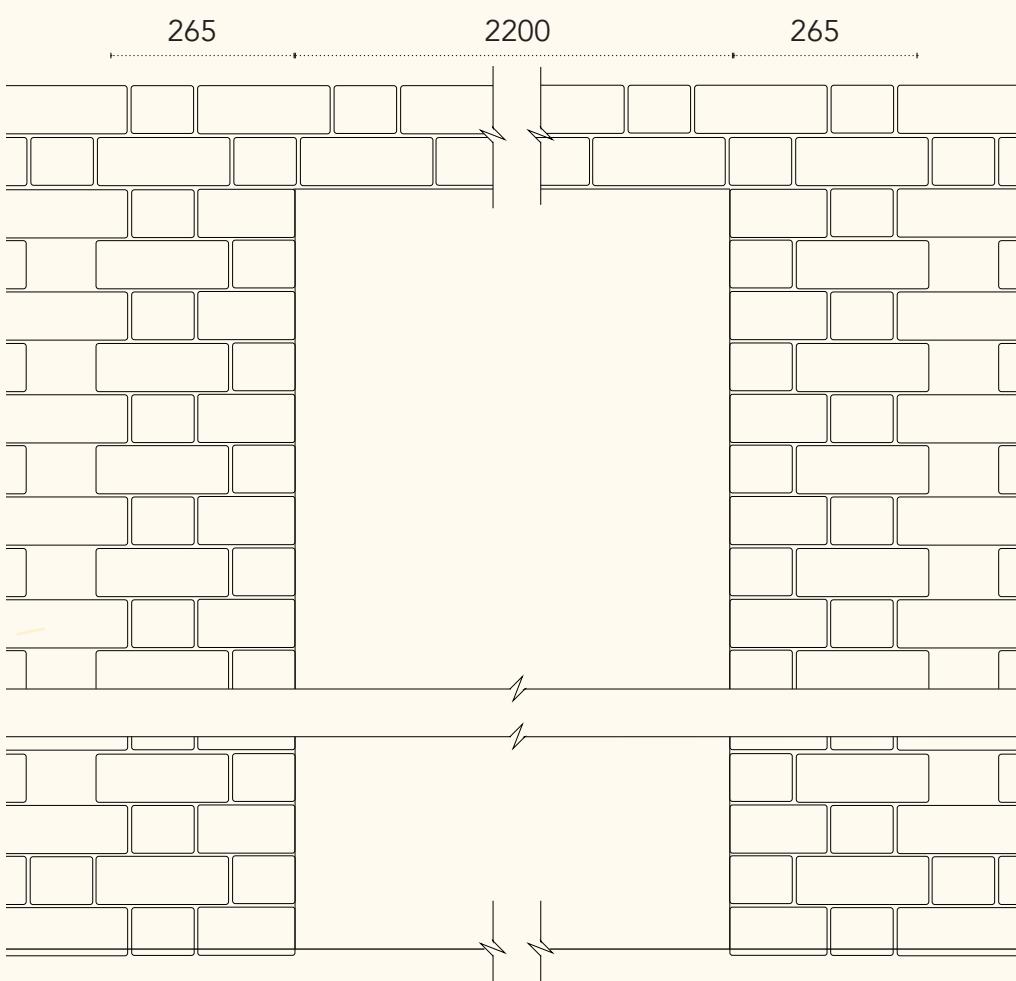
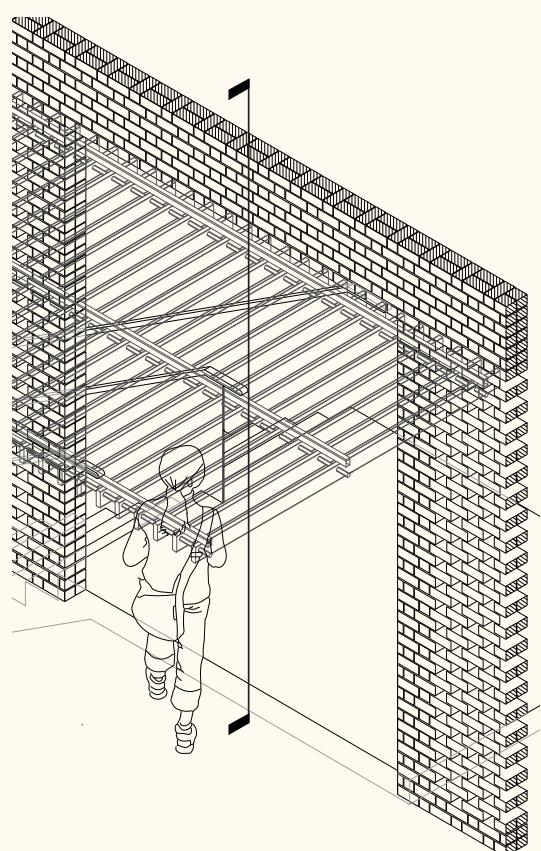
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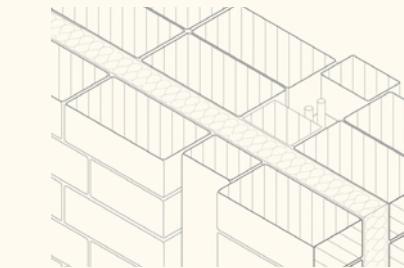
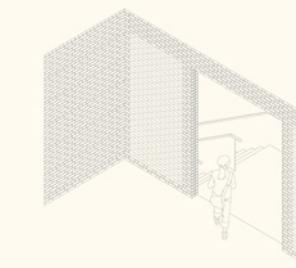
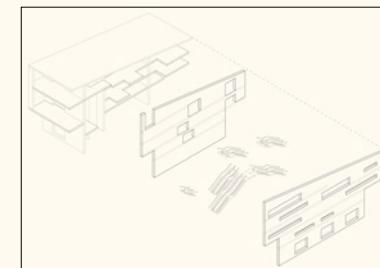
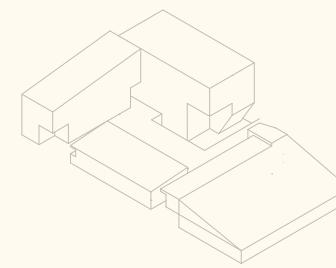




## OPENINGS

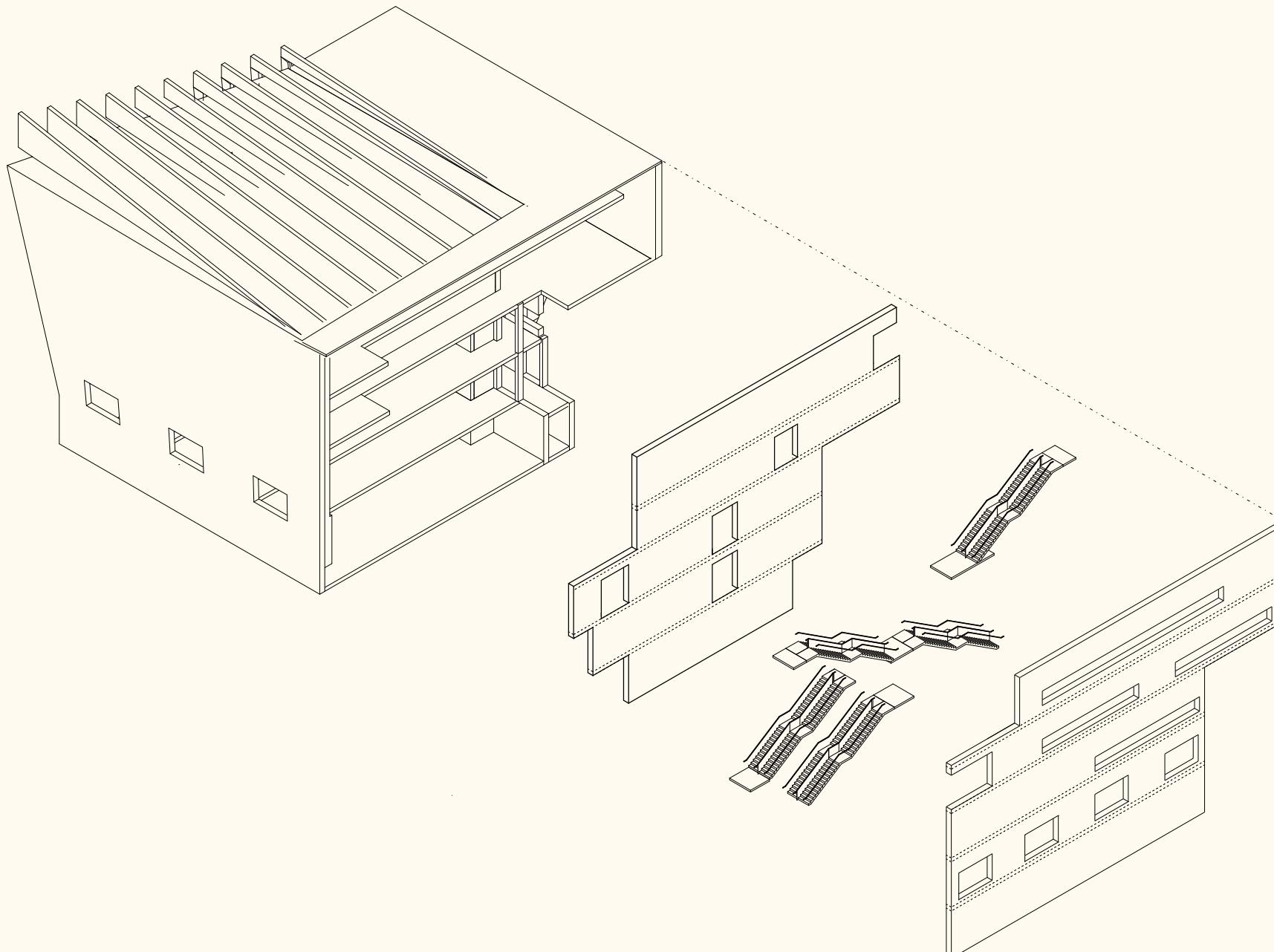
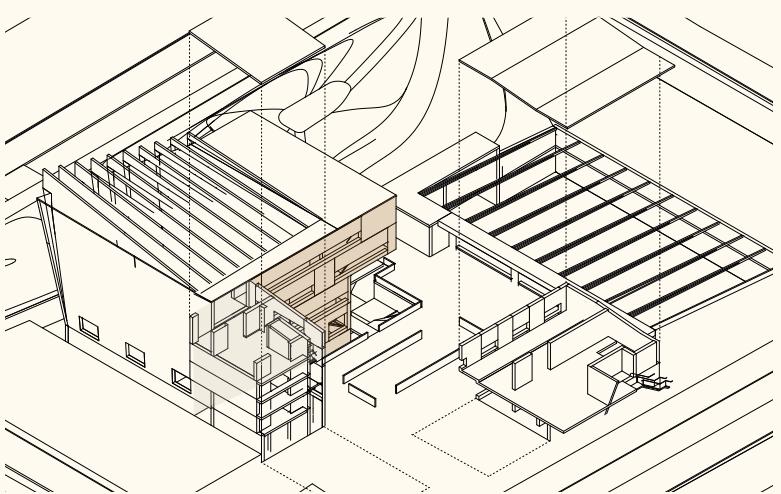
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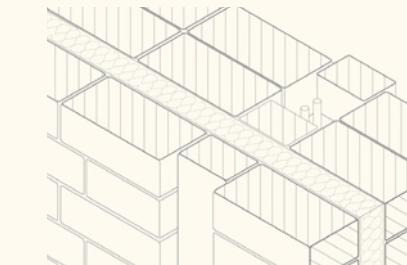
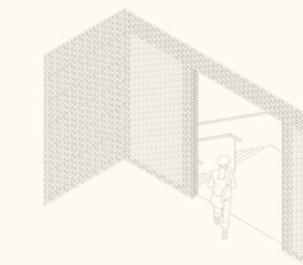
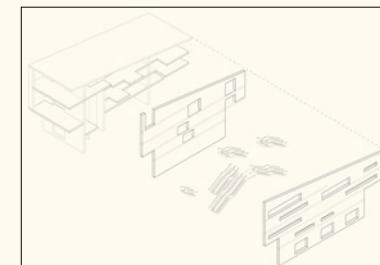
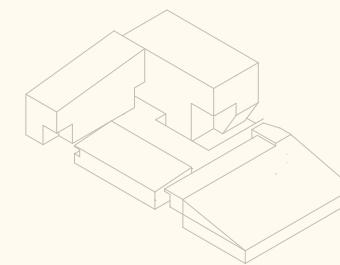




## OPENINGS

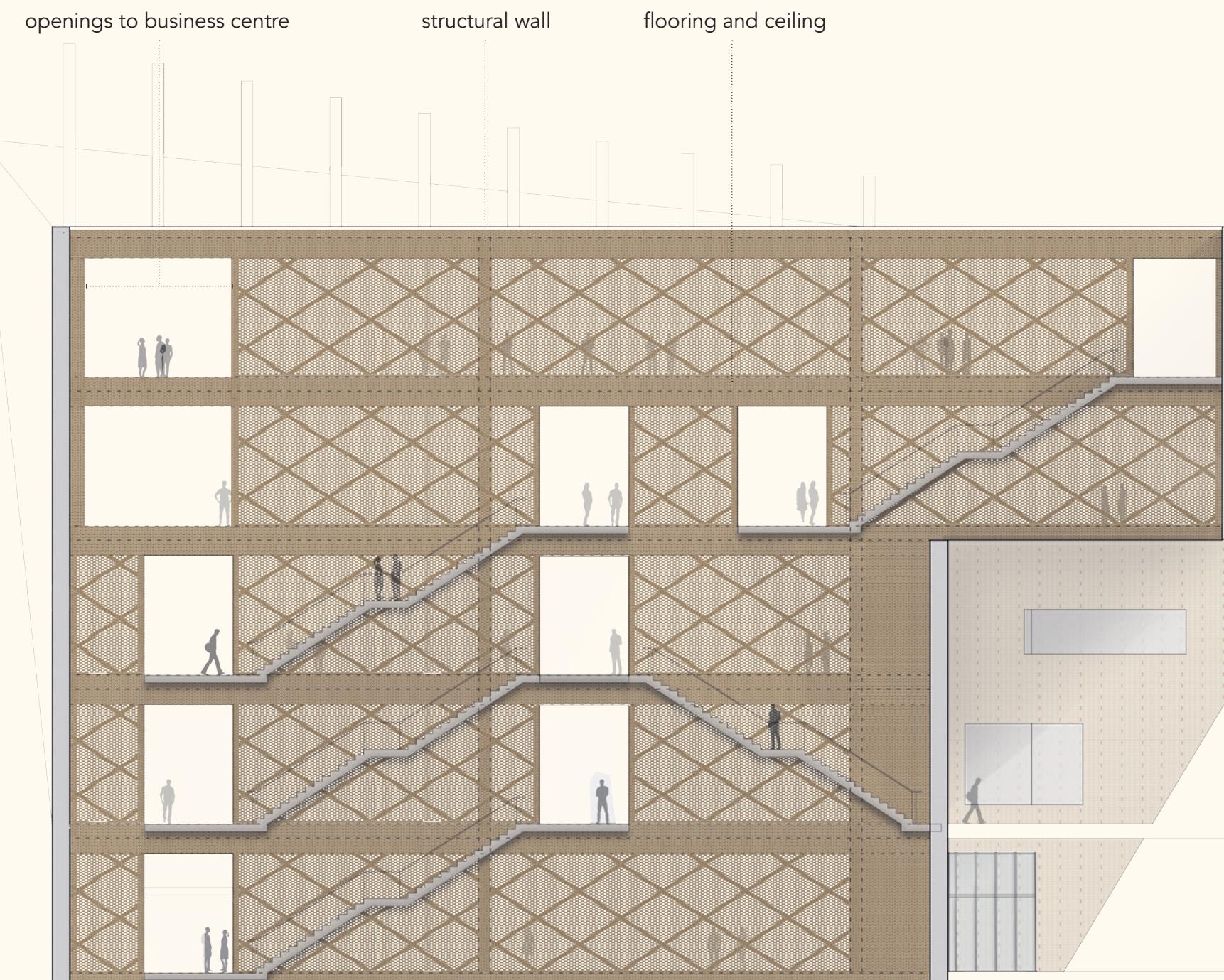
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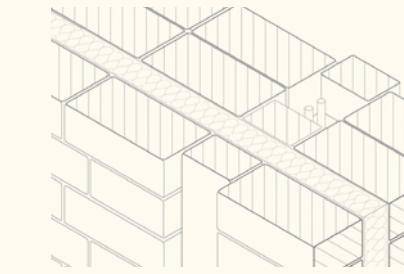
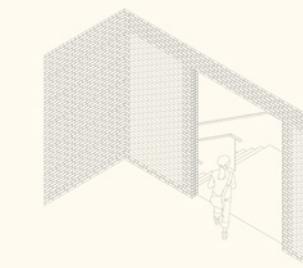
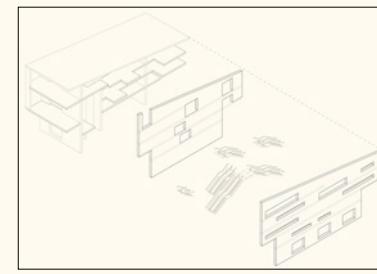
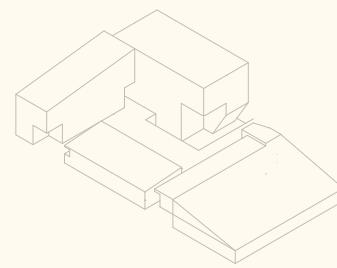




## OPENINGS

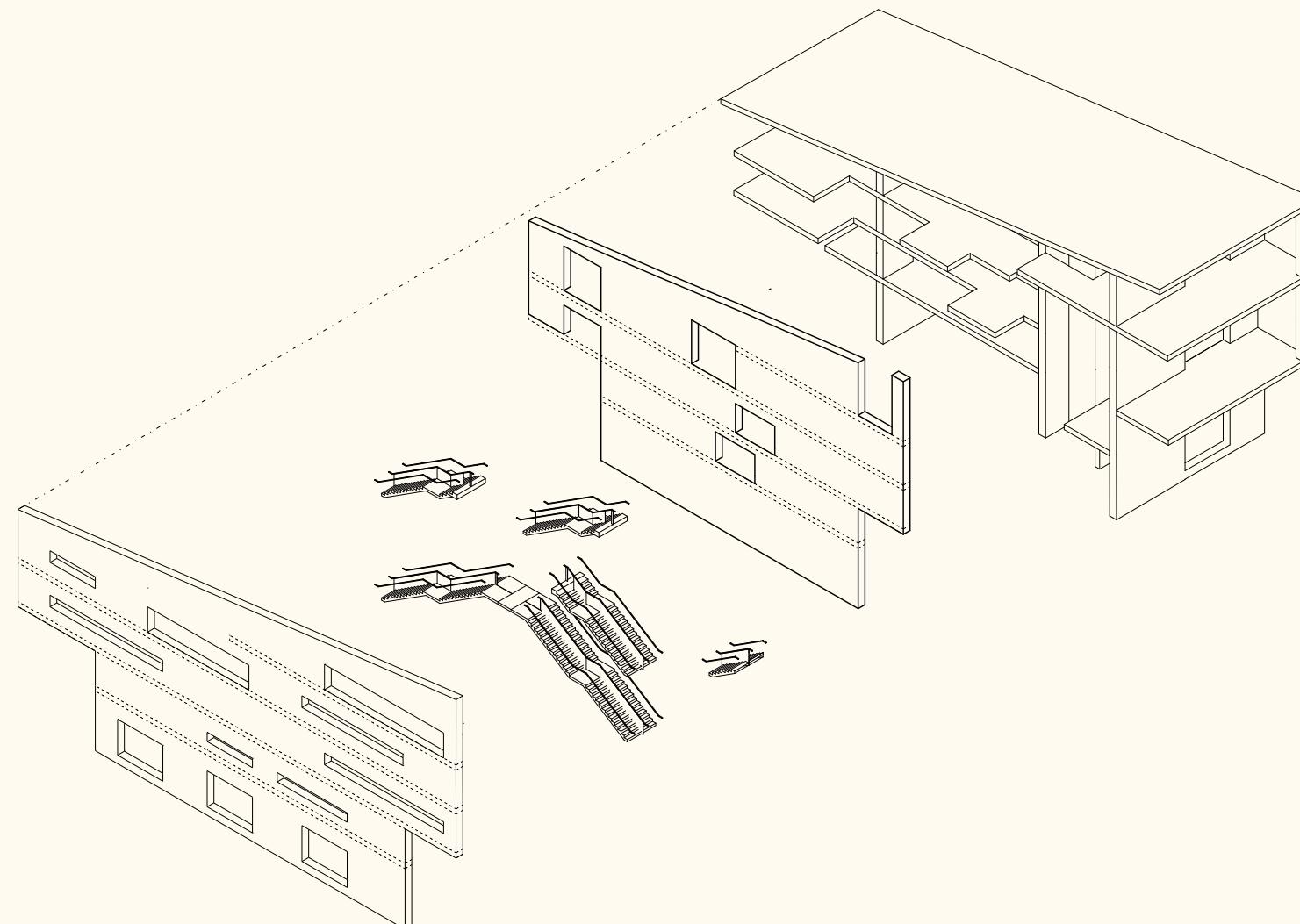
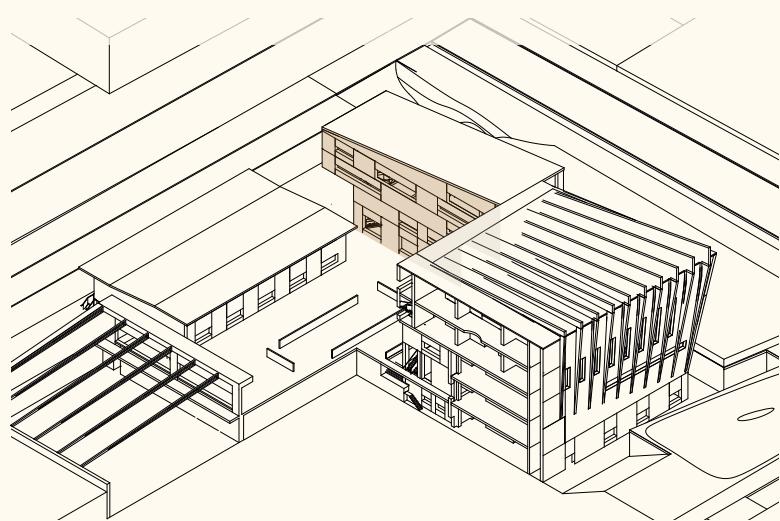
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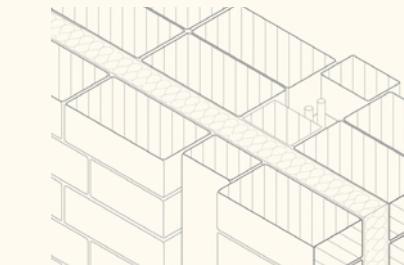
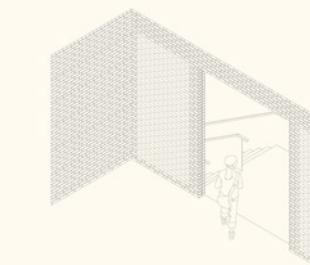
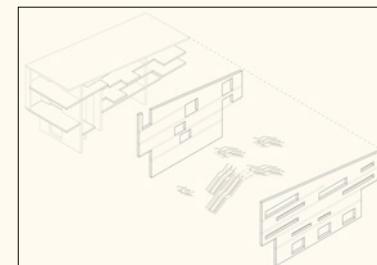
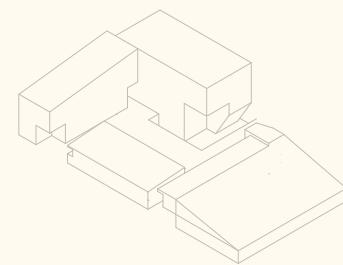




## OPENINGS

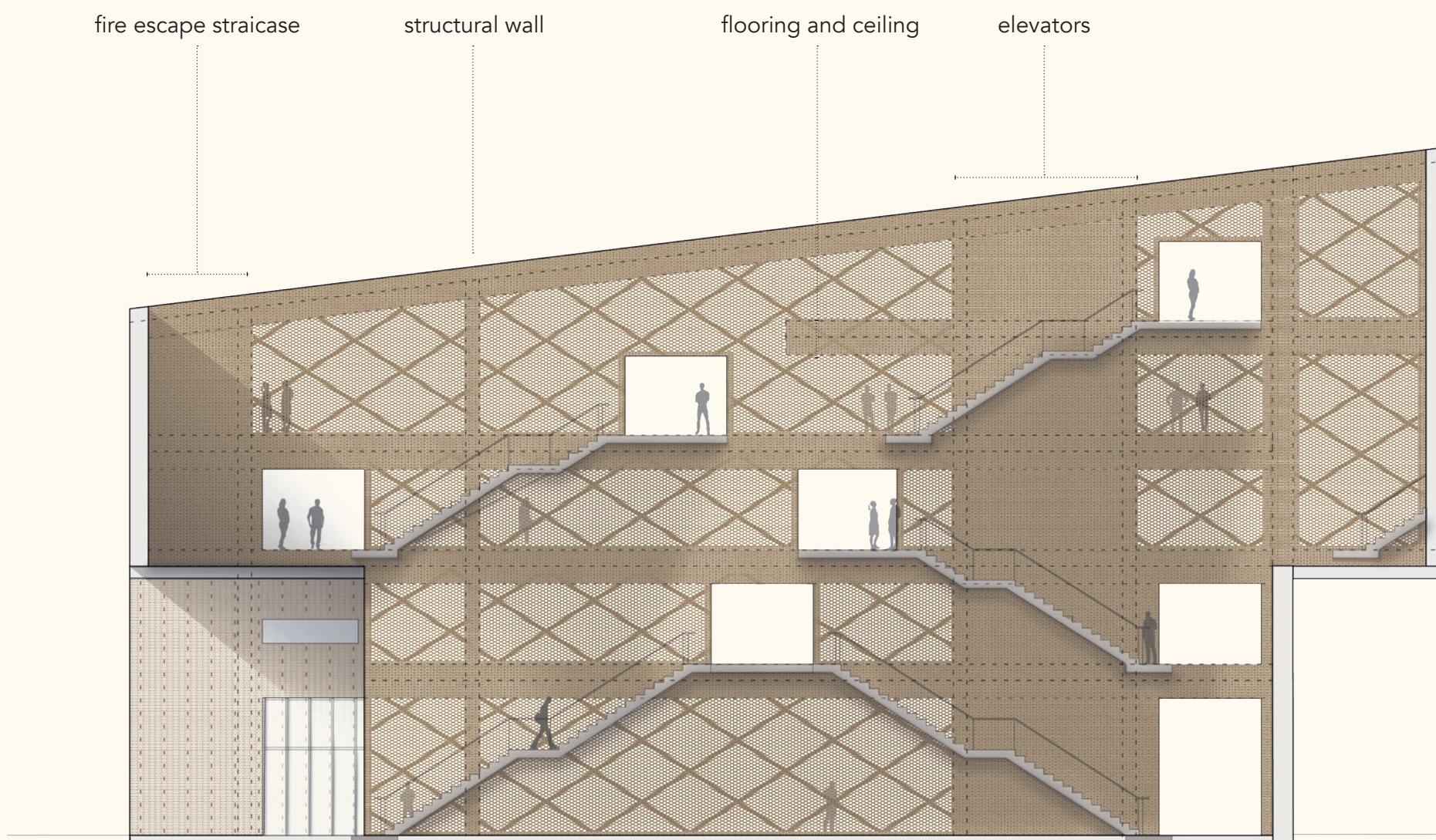
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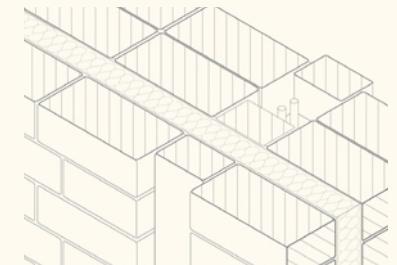
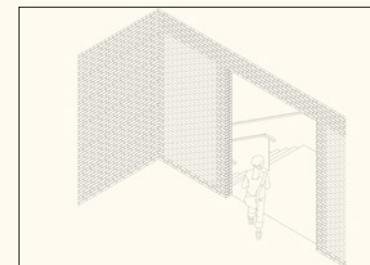
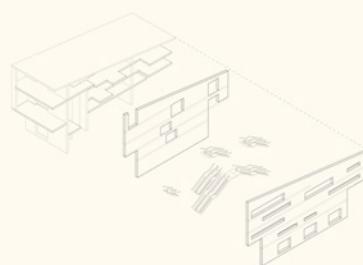
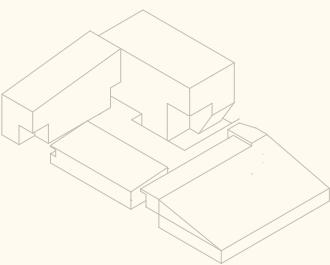




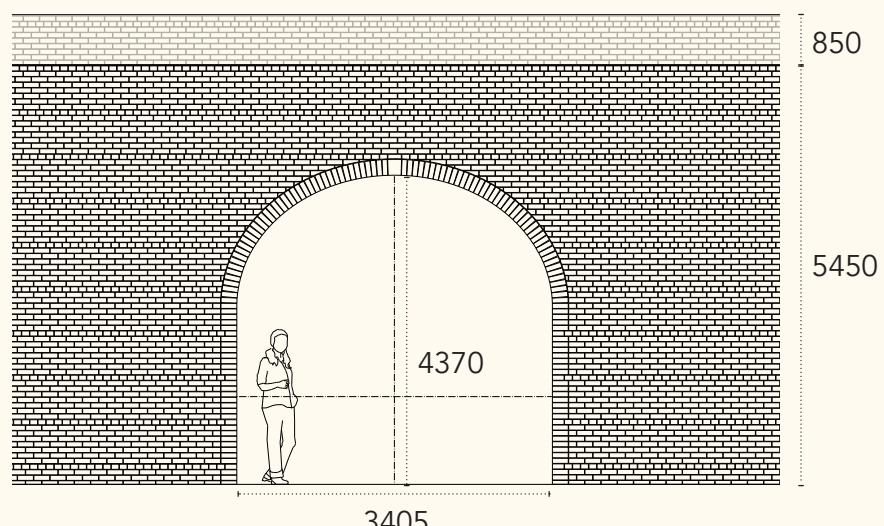
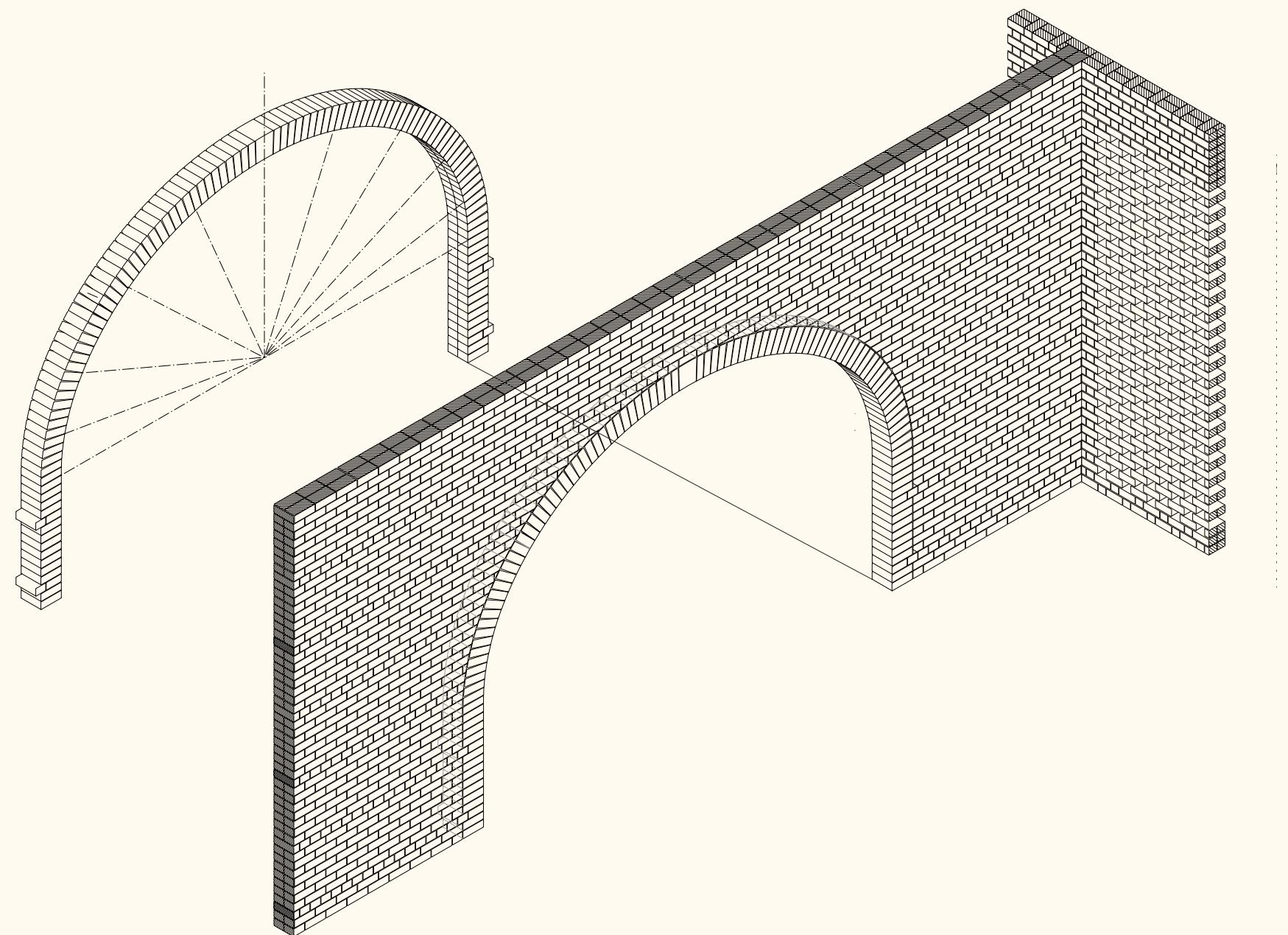
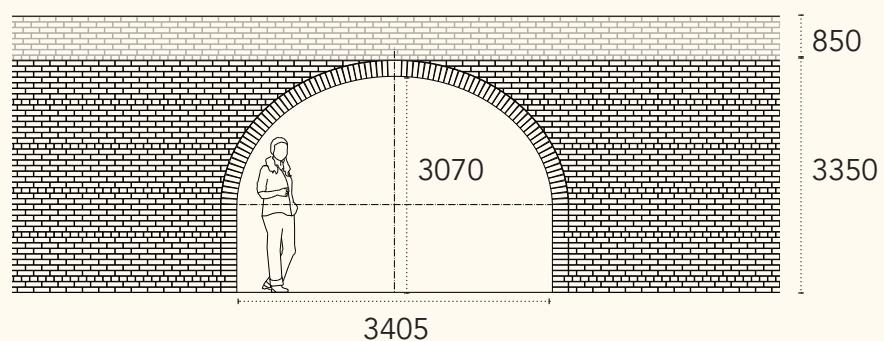
## OPENINGS

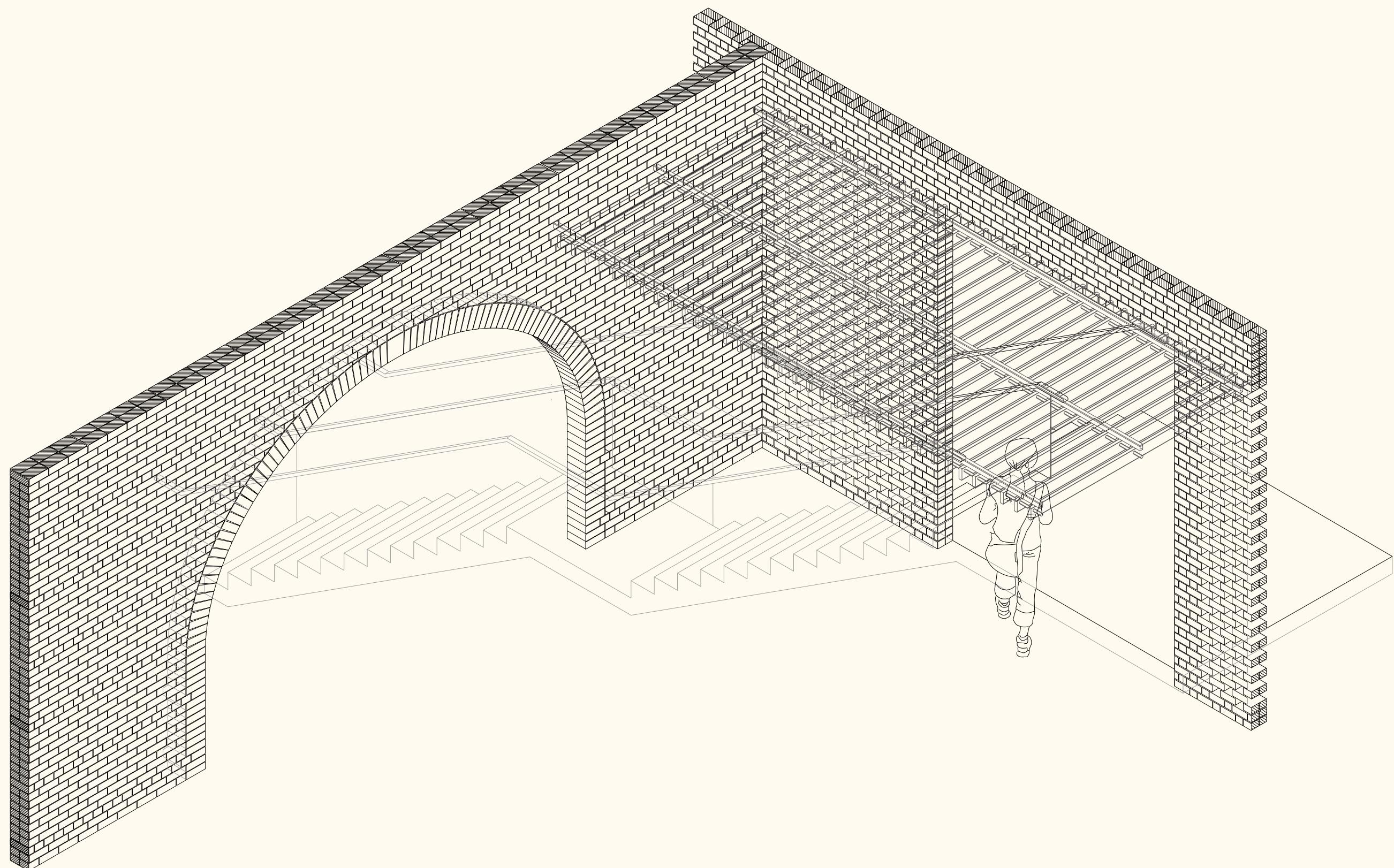
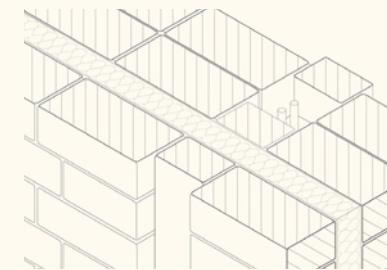
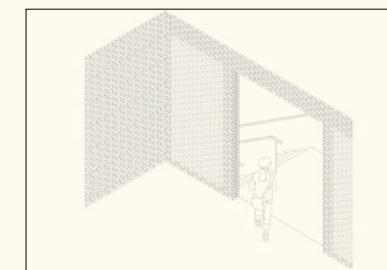
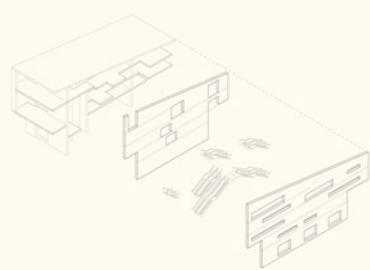
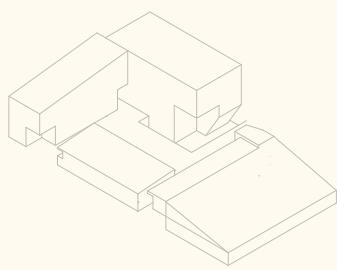
**Semi open wall onto circulation**

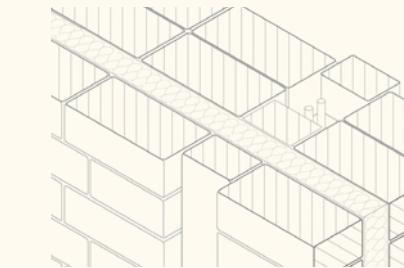
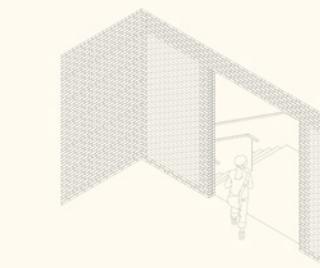
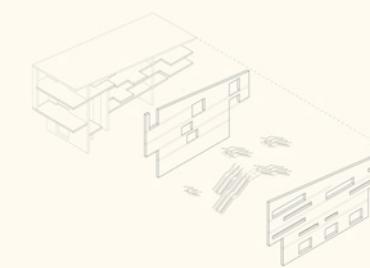
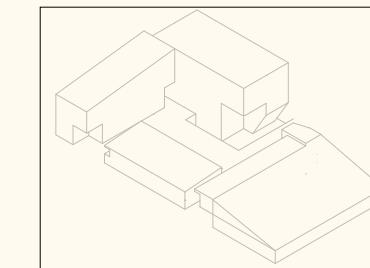




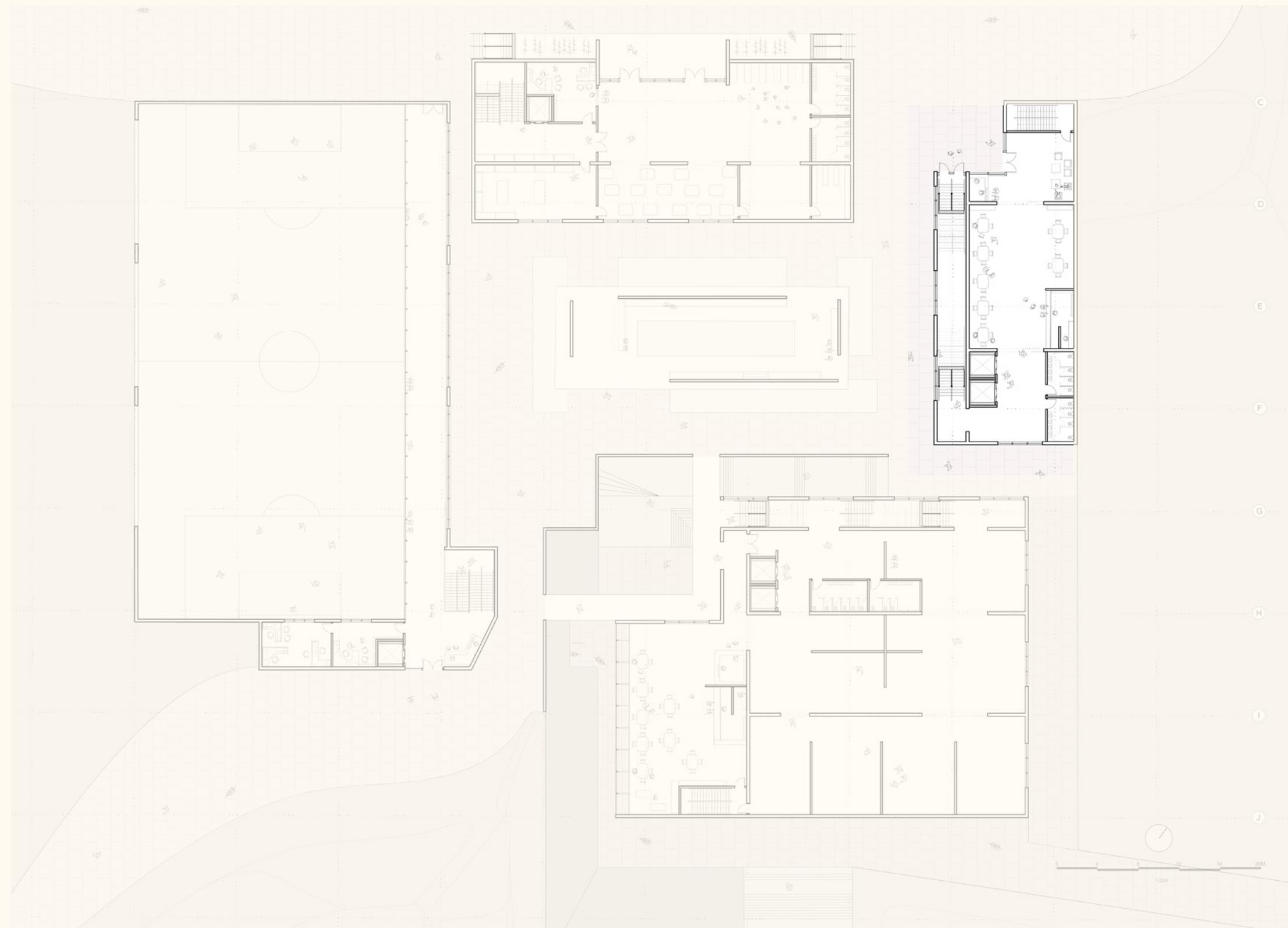
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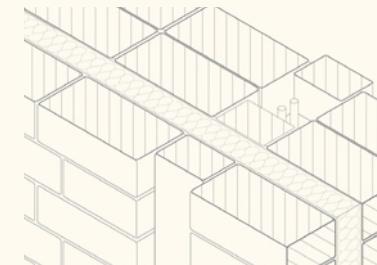
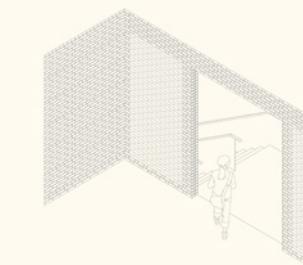
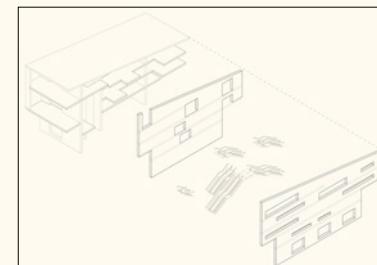
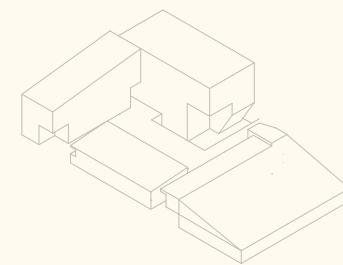




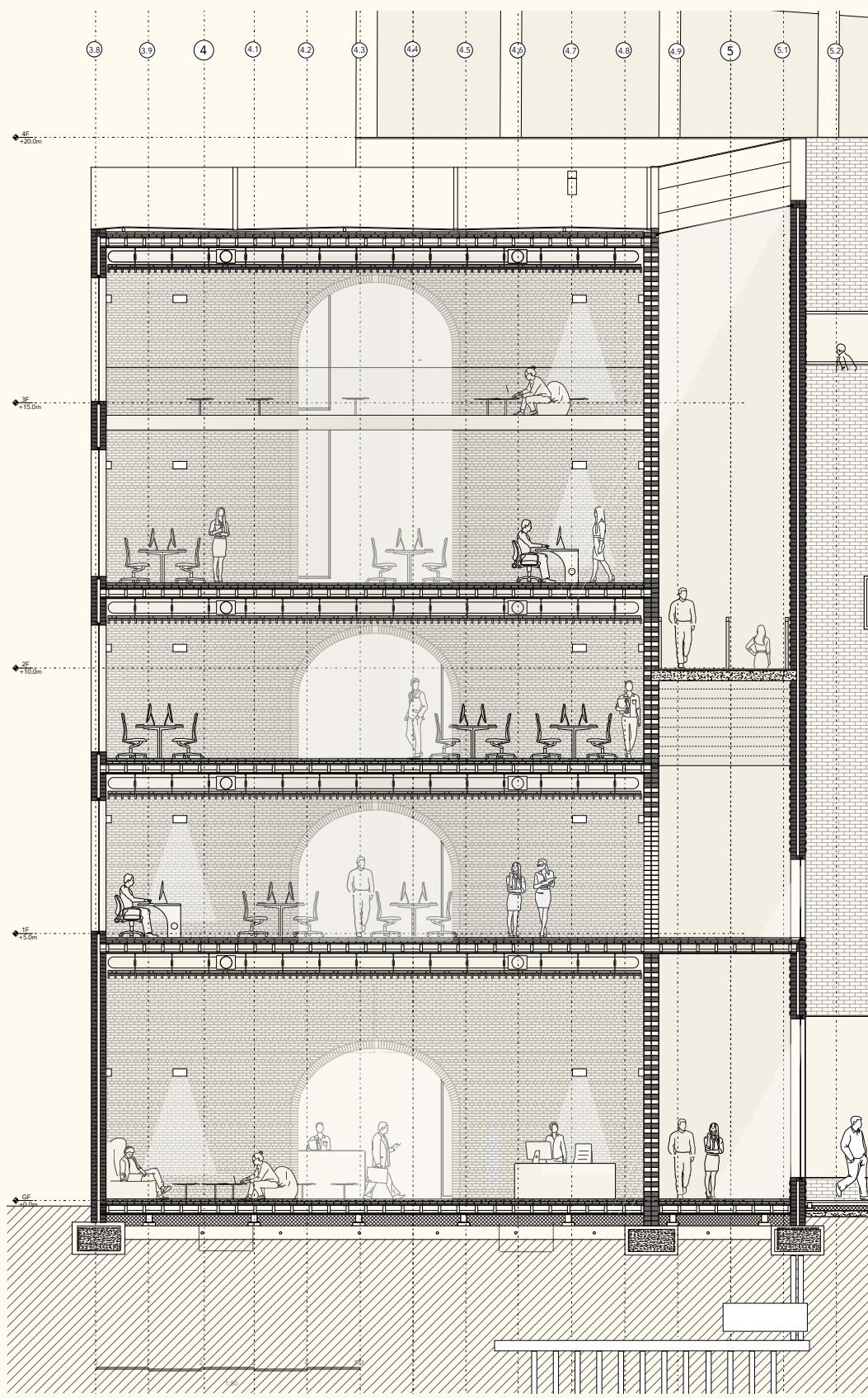
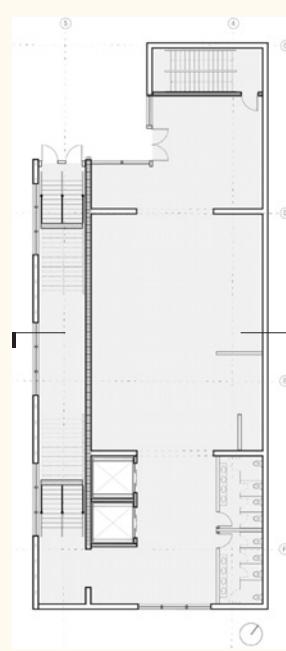


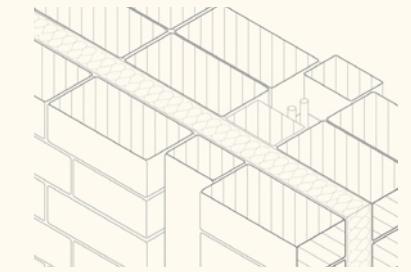
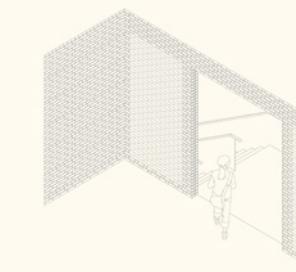
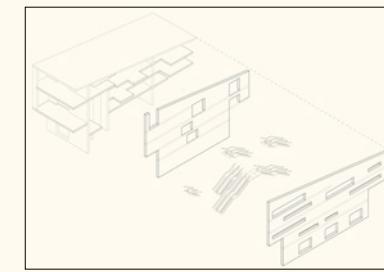
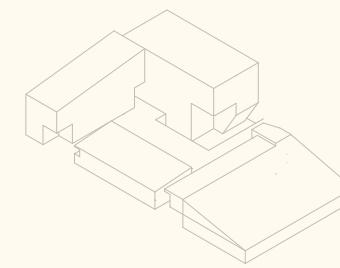
## ENVIRONMENTAL PROPERTIES



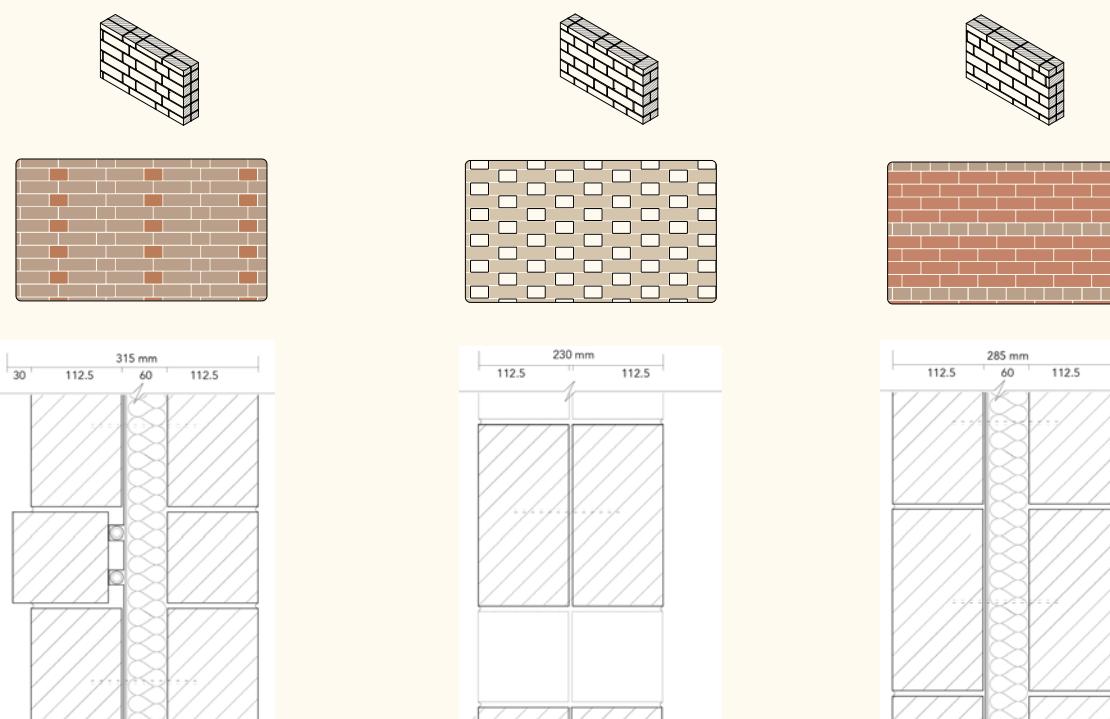
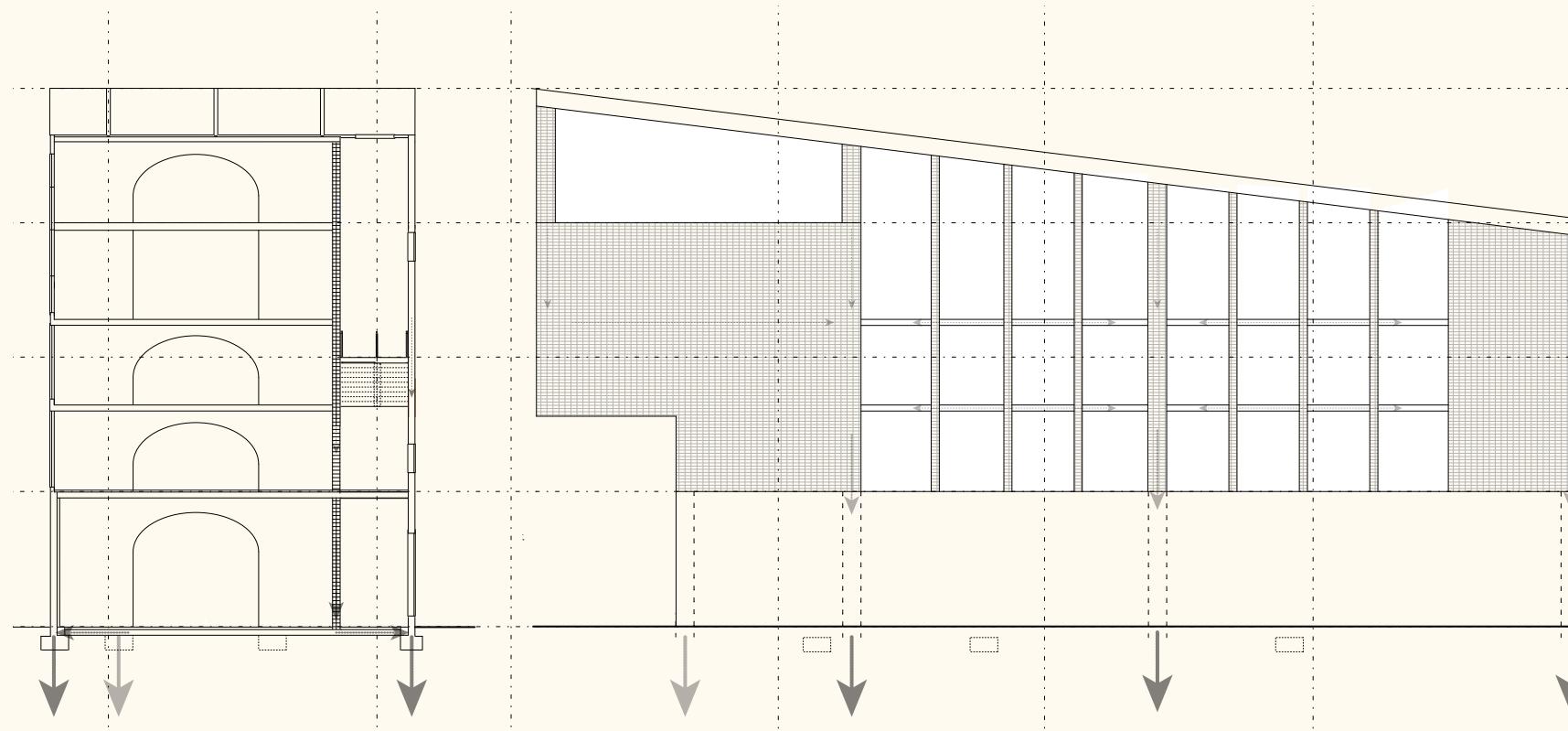
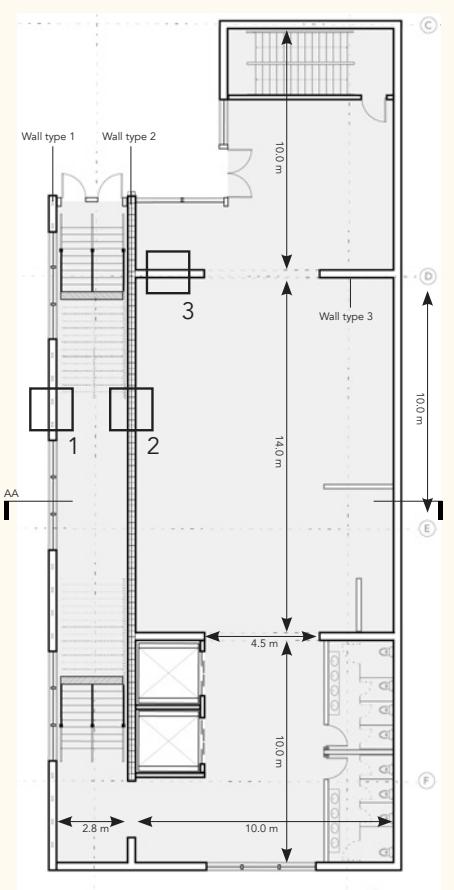


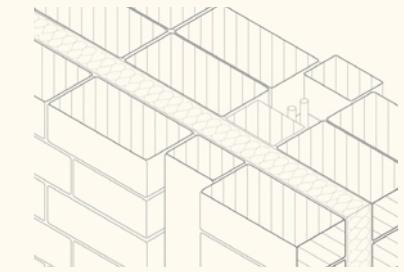
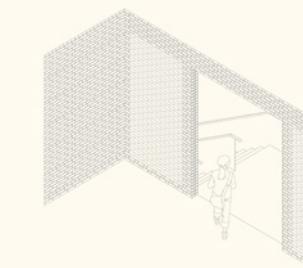
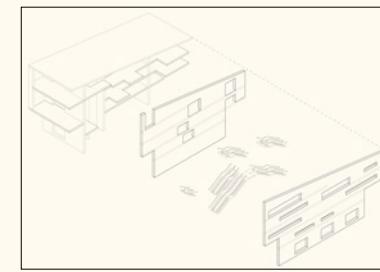
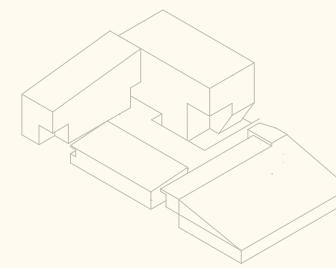
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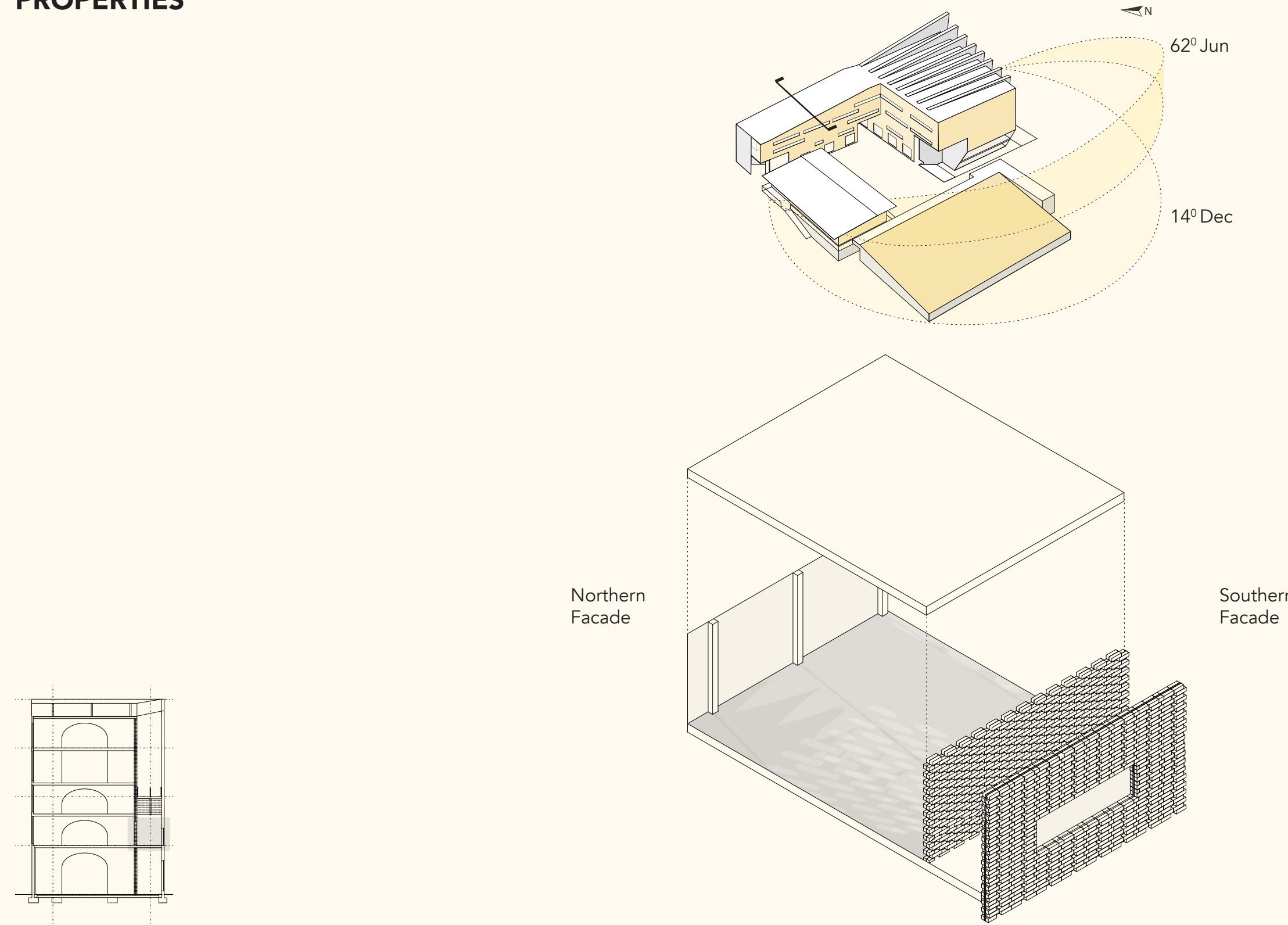


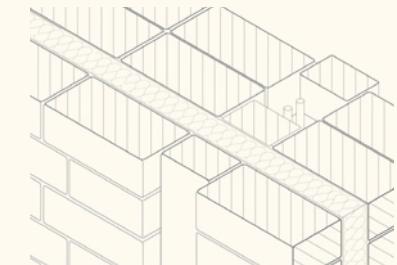
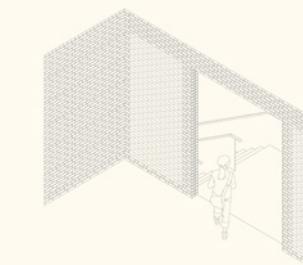
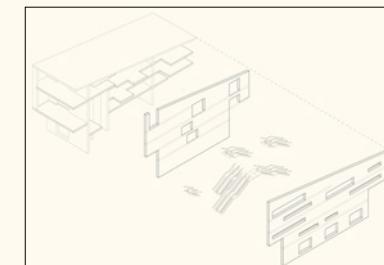
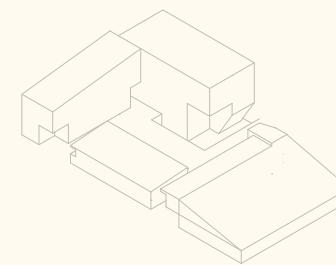
## MASS PROPERTIES



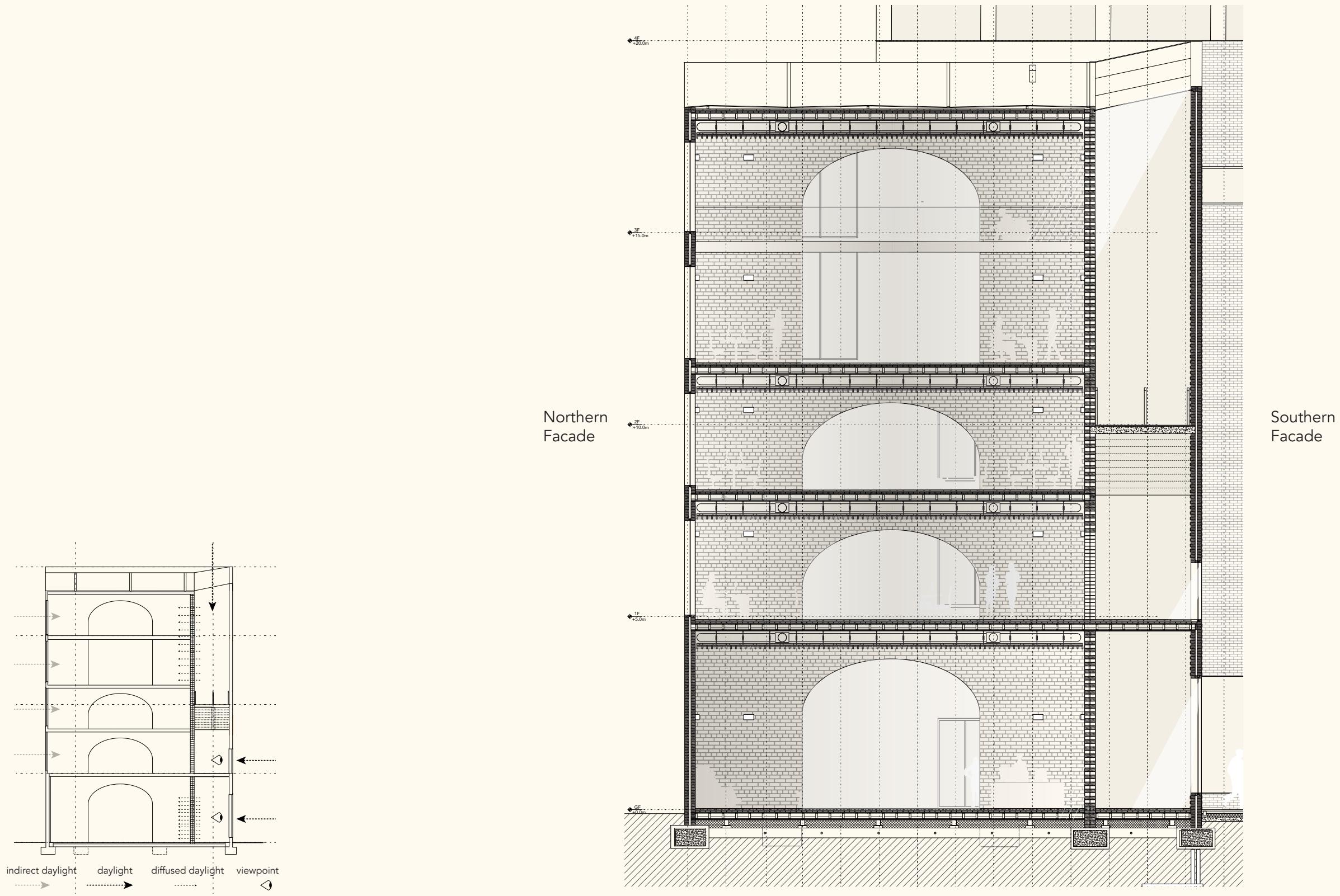


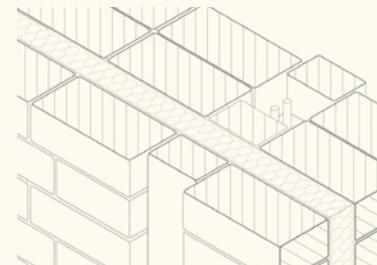
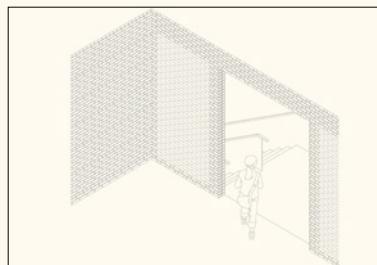
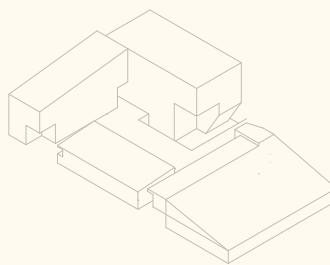
## THERMAL AND LIGHTING PROPERTIES





## NATURAL LIGHTING

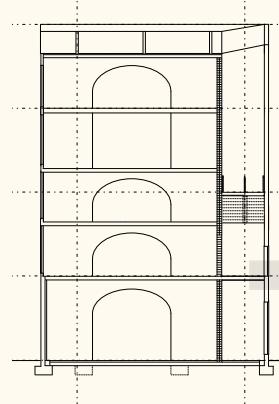
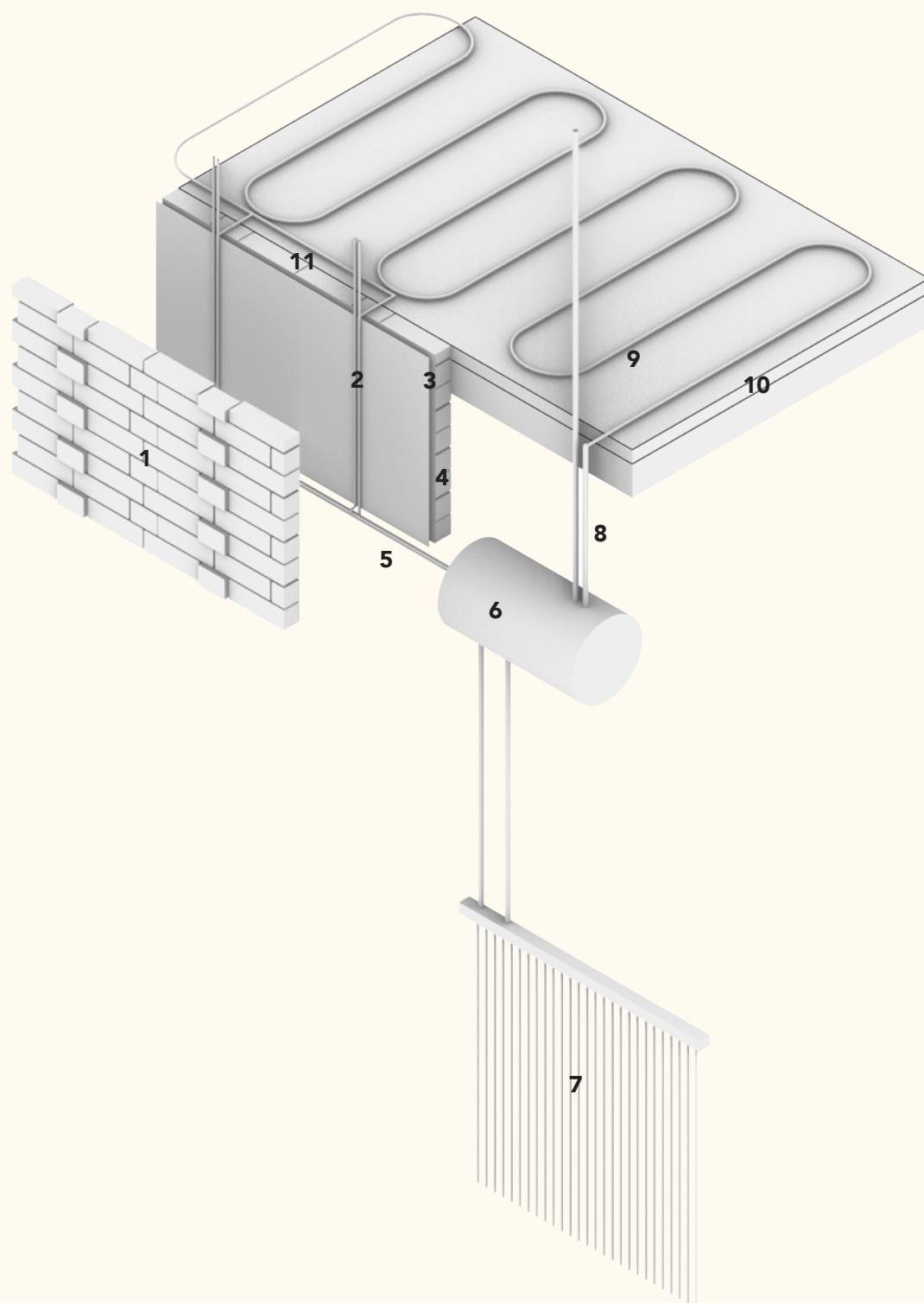


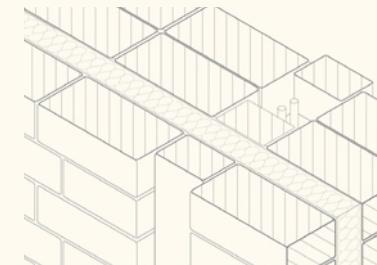
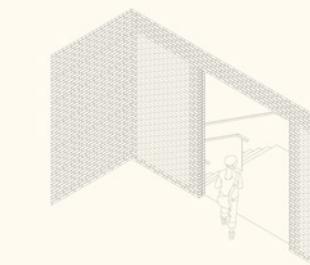
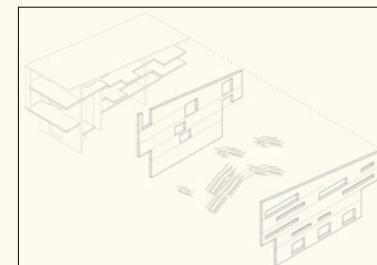
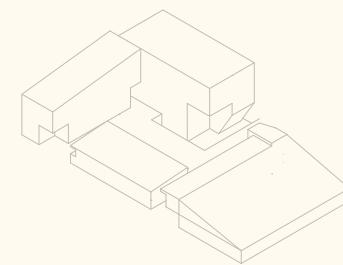


## PASSIVE THERMAL SYSTEM

### CLIMATE ACTIVE HEATING SYSTEM

1. south facing facade
2. heating pipes
3. 60mm insulation
4. 112.5 mm brick layer
5. heated pipes
6. heat pump
7. borehole heat exchanger
8. heat distribution unit
9. underfloor heating pipes
10. slab insulation
11. cooled fluid returning into heating pipes

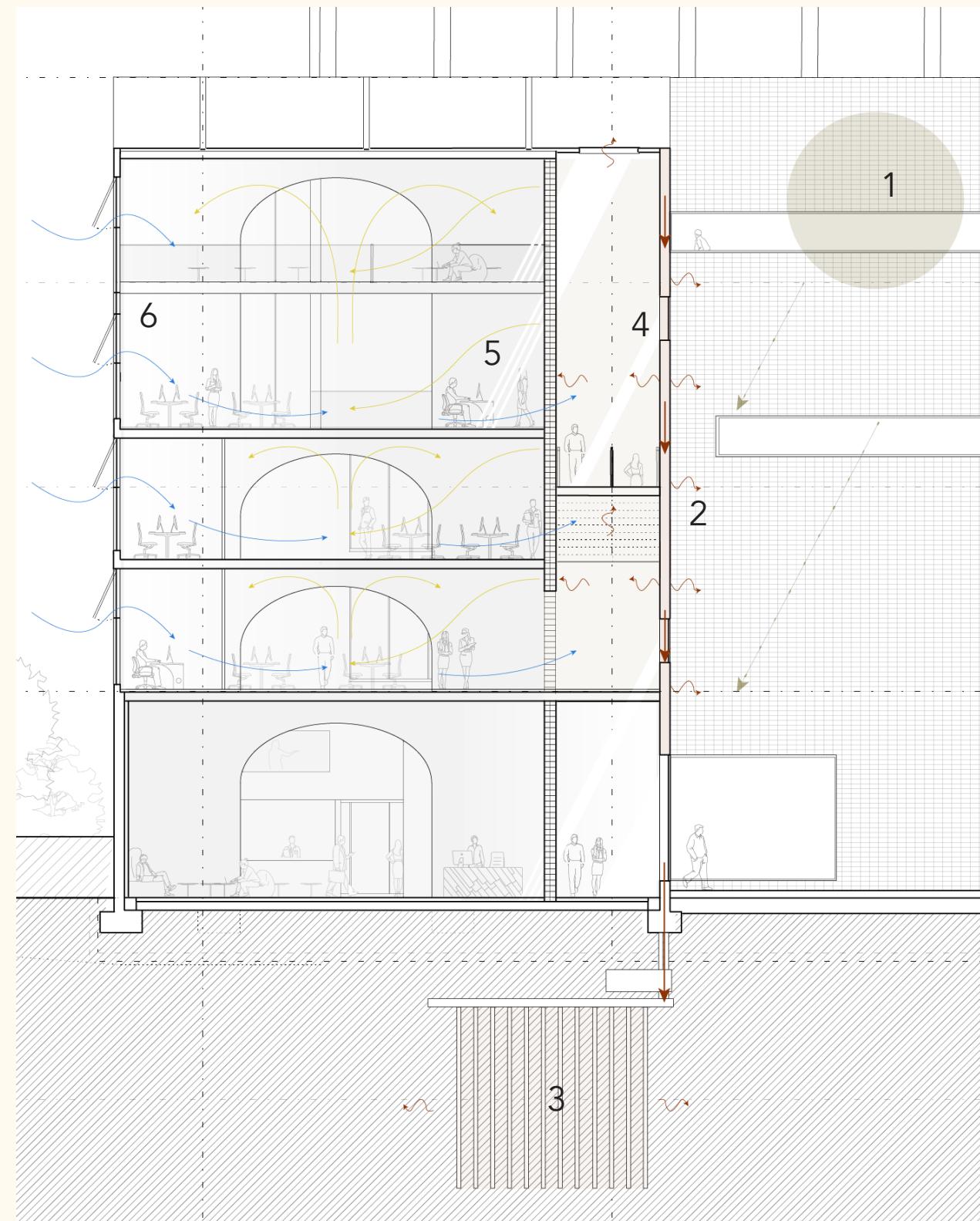


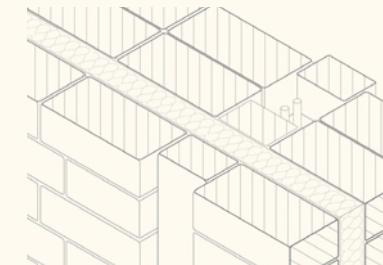
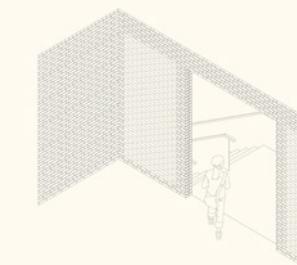
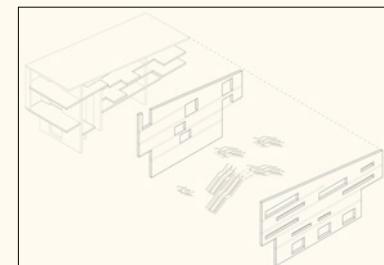
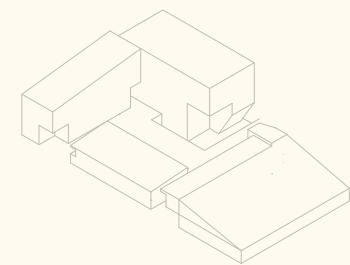


## CLIMATE SYSTEM - SUMMER

The June sunshine in the Netherlands reaches a solar angle of  $62^\circ$  (1). During this period solar active facade is heating up (2) which enables the borehole heat exchanger to pump unwanted heat into the soil to be stored for later usage in colder months. (3)

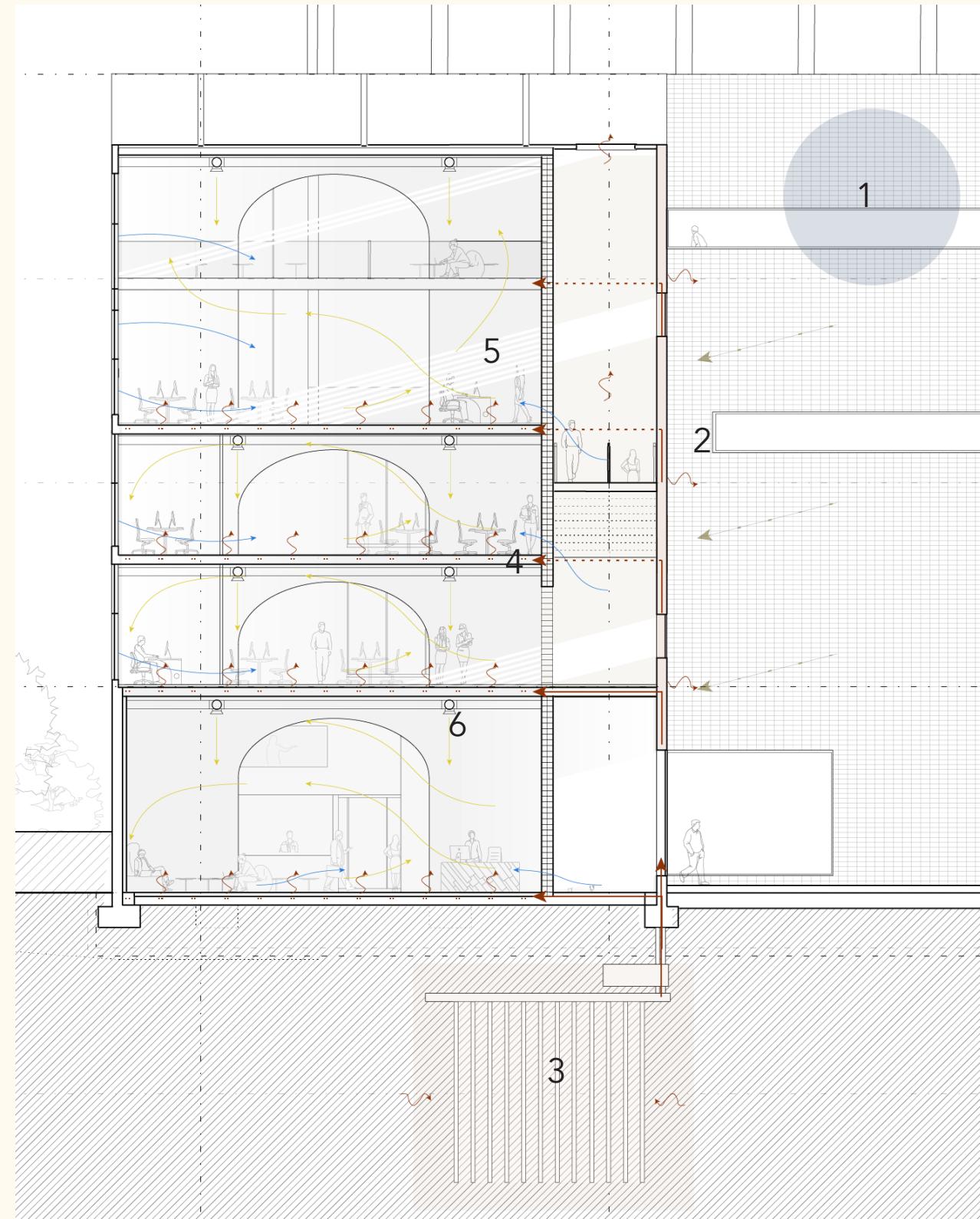
Because of the limited openings in the facade, only a restricted amount of direct sunshine is allowed in which limits the internal heating (4). The perforated secondary wall filters this direct sunshine and the brick's thermal natural qualities enable a constant and pleasant internal temperature (5). Windows on the North facade can be open for natural ventilation (6).

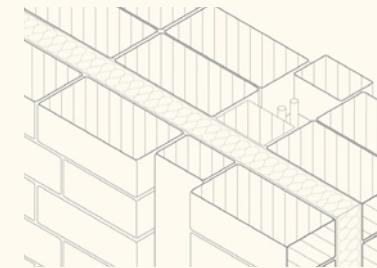
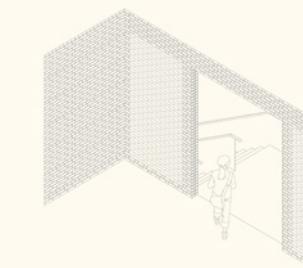
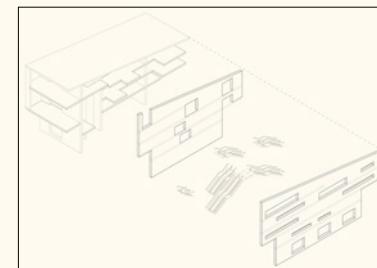
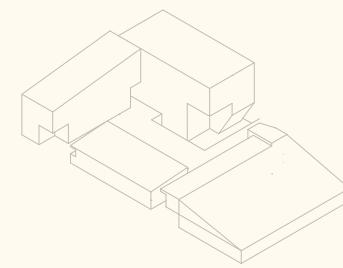




## CLIMATE SYSTEM - WINTER

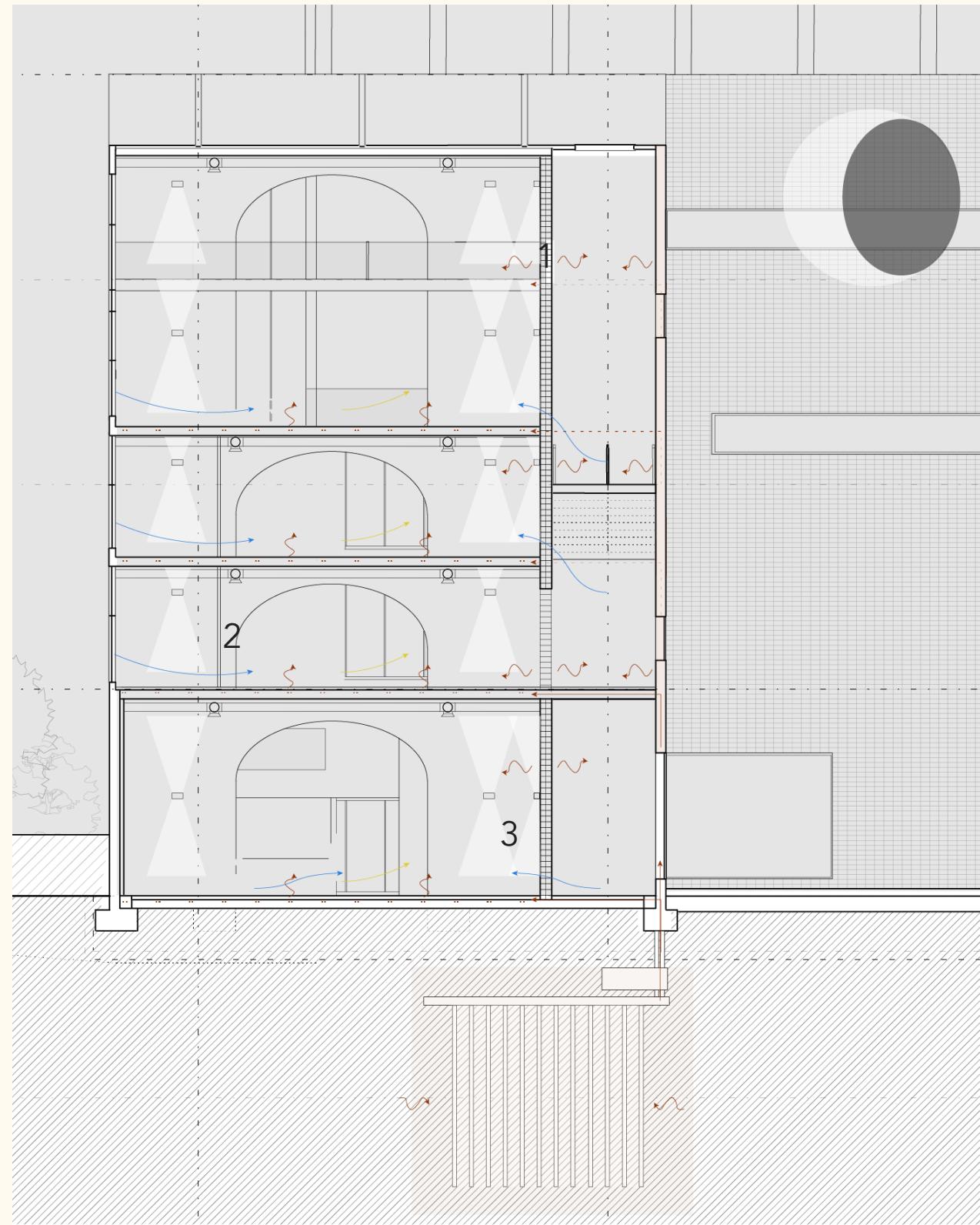
The December sunshine in the Netherlands reaches a solar angle of  $14^{\circ}$  (1). During this period solar active facade is experiencing relatively little heating up (2). During this period, the climate system recuperates the stored heat from the borehole via the heat exchanger which pumps the heat from the soil (3) into the in-built floor heating system (4) which provides a more even distribution and the building is maintained at a regulated temperature. Because of the change in solar angle, a larger proportion of direct sunshine is allowed through to heat the open spaces as well as provide a greater natural light (5). Windows on the North facade are kept shut to retain internal heat, but ventilation is artificial (6).

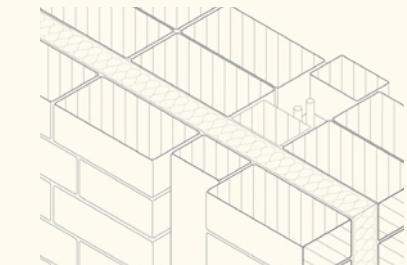
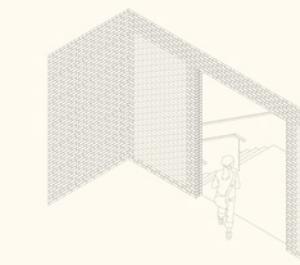
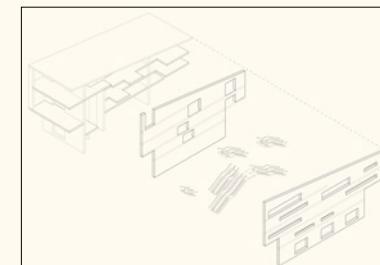
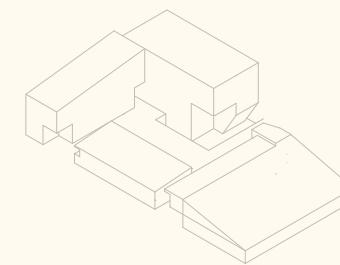




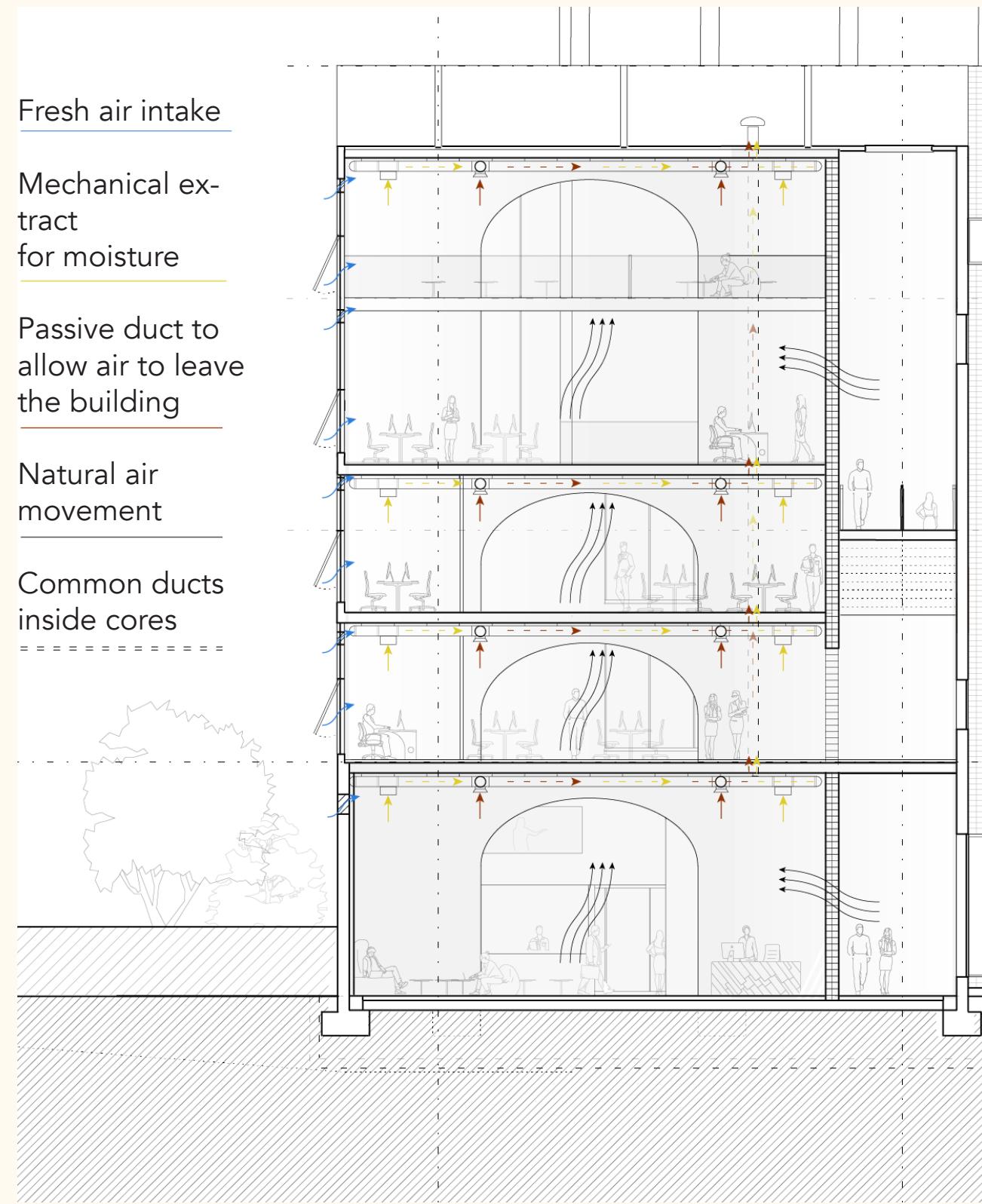
## CLIMATE SYSTEM - NIGHT

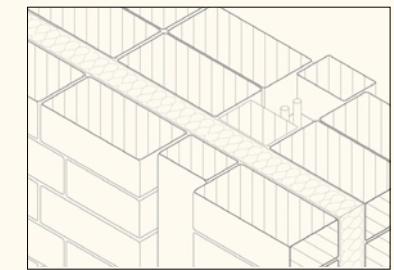
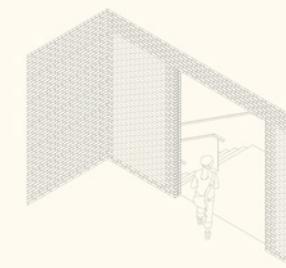
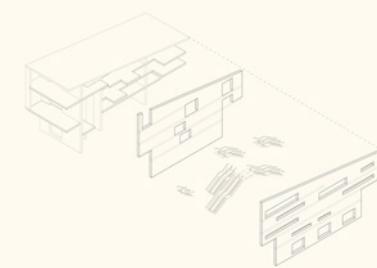
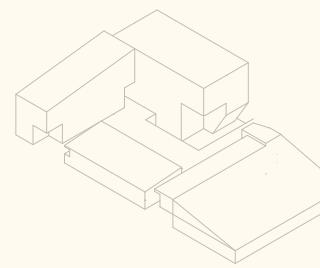
The nighttime climate is a system used for all seasons, during which the natural mass of the building's materials retains the heat of the day (1). Due to fewer activities requiring them, the mechanical ventilation is turned off and underfloor heating reduced to minimum (2). Artificial light is turned on (3)..





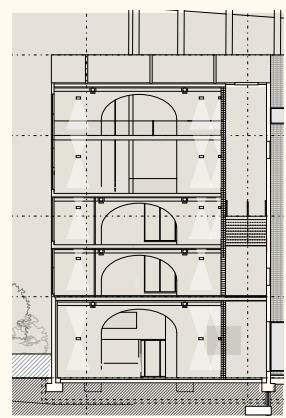
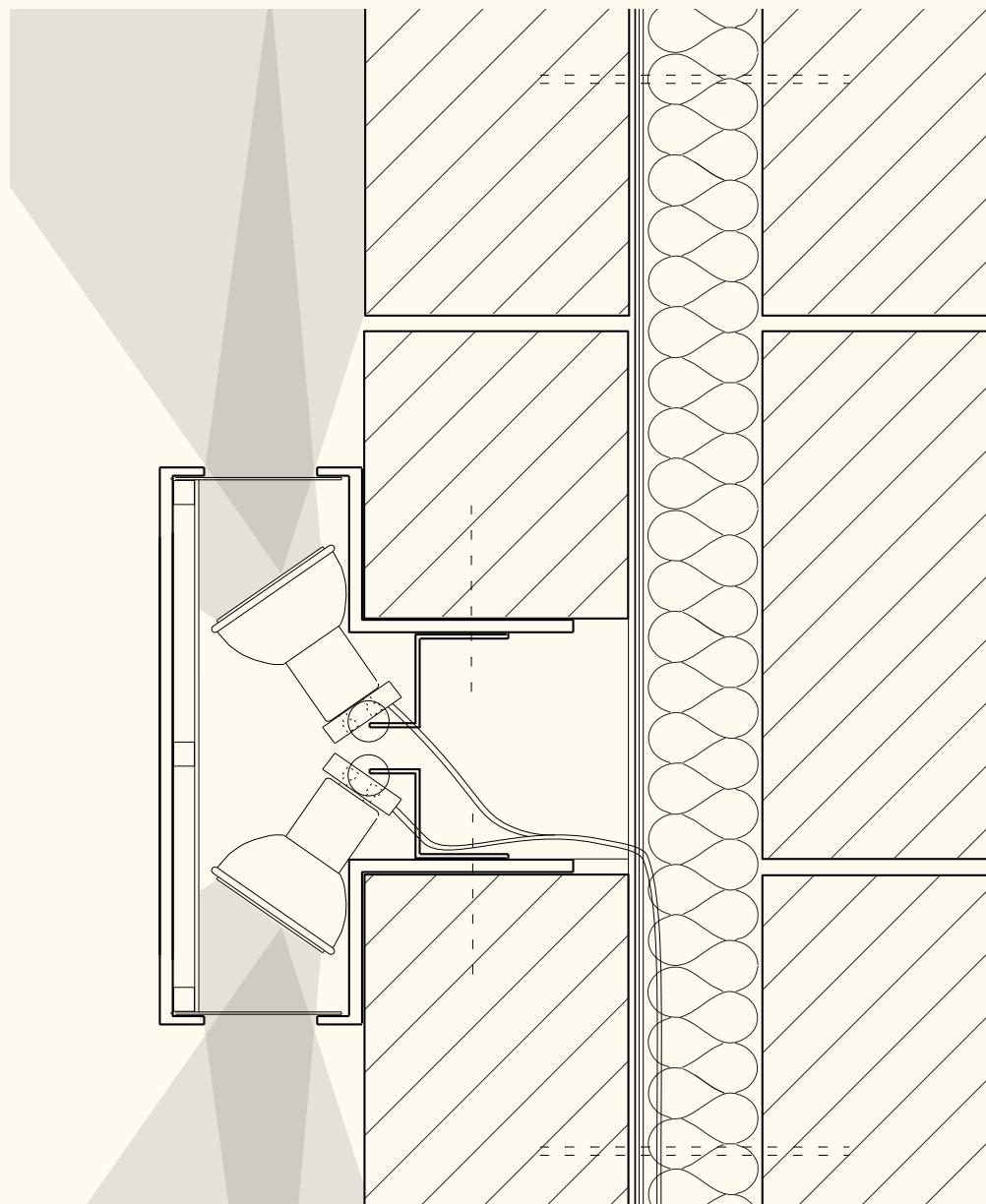
## VENTILATION

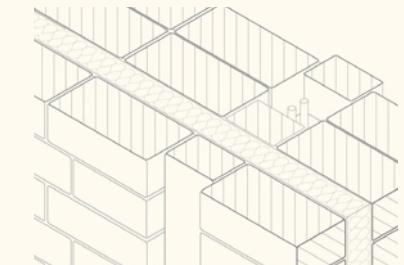
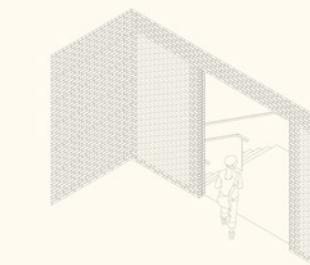
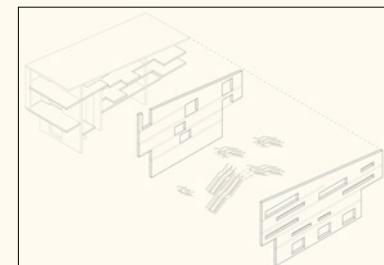
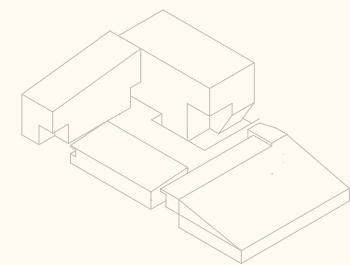




## ARTIFICIAL LIGHTING

Artificial lighting detail 1:5





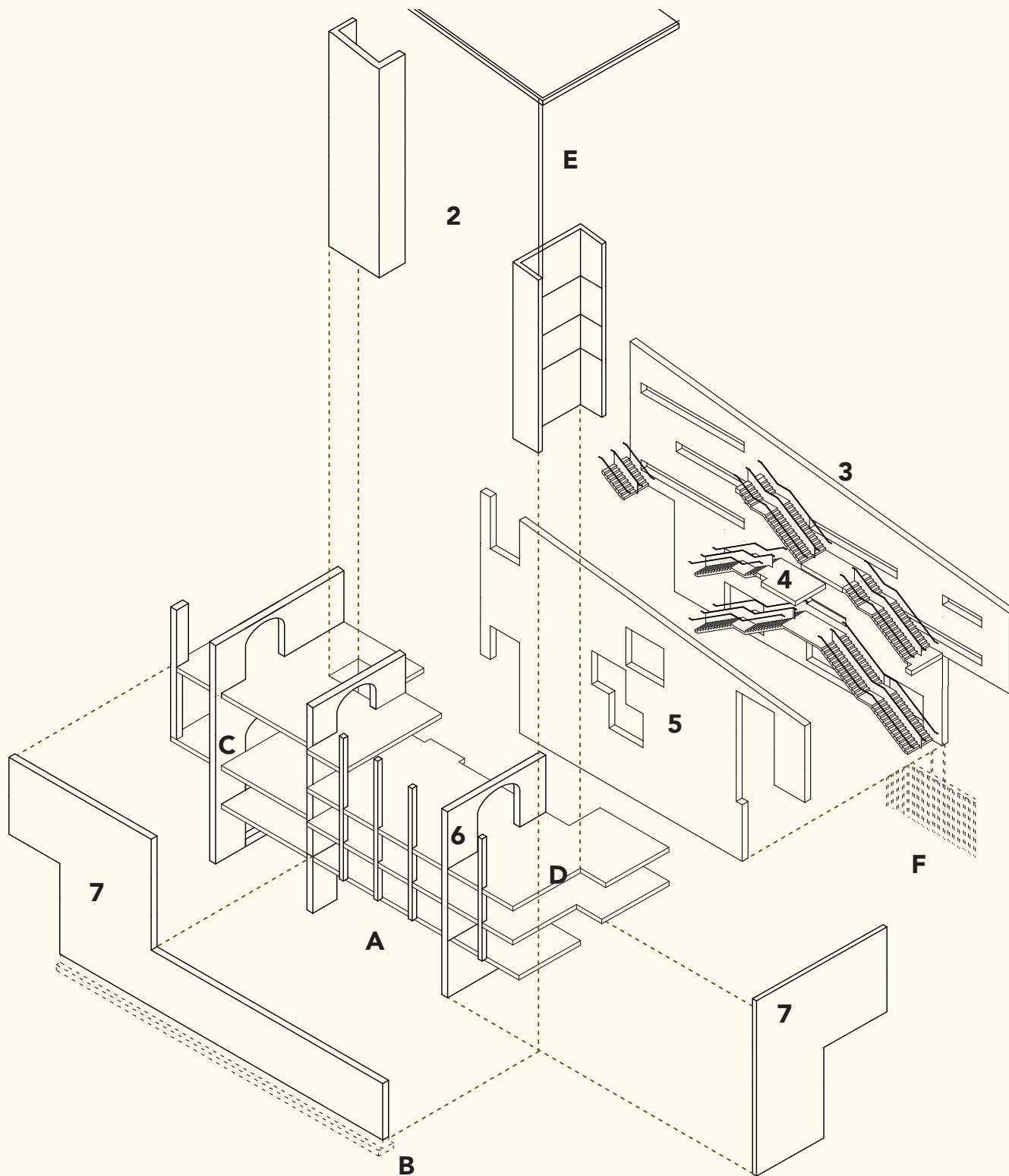
## COMPONENTS

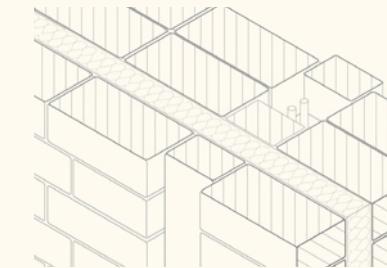
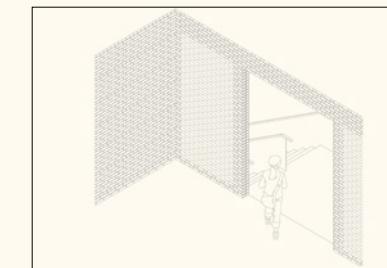
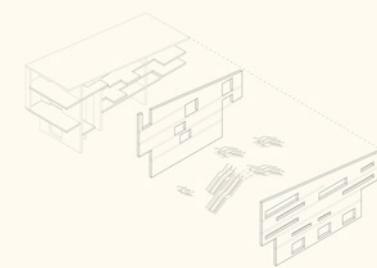
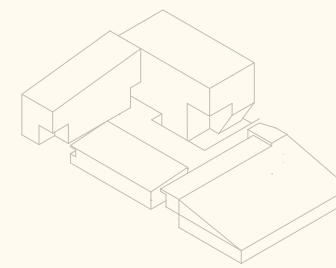
### BUSINESS CENTRE ELEMENTS

1. Roof
2. Cores
3. Thermal-active facade wall
4. Circulation system
5. Semi transparent transition wall
6. Structural walls
7. Facade walls

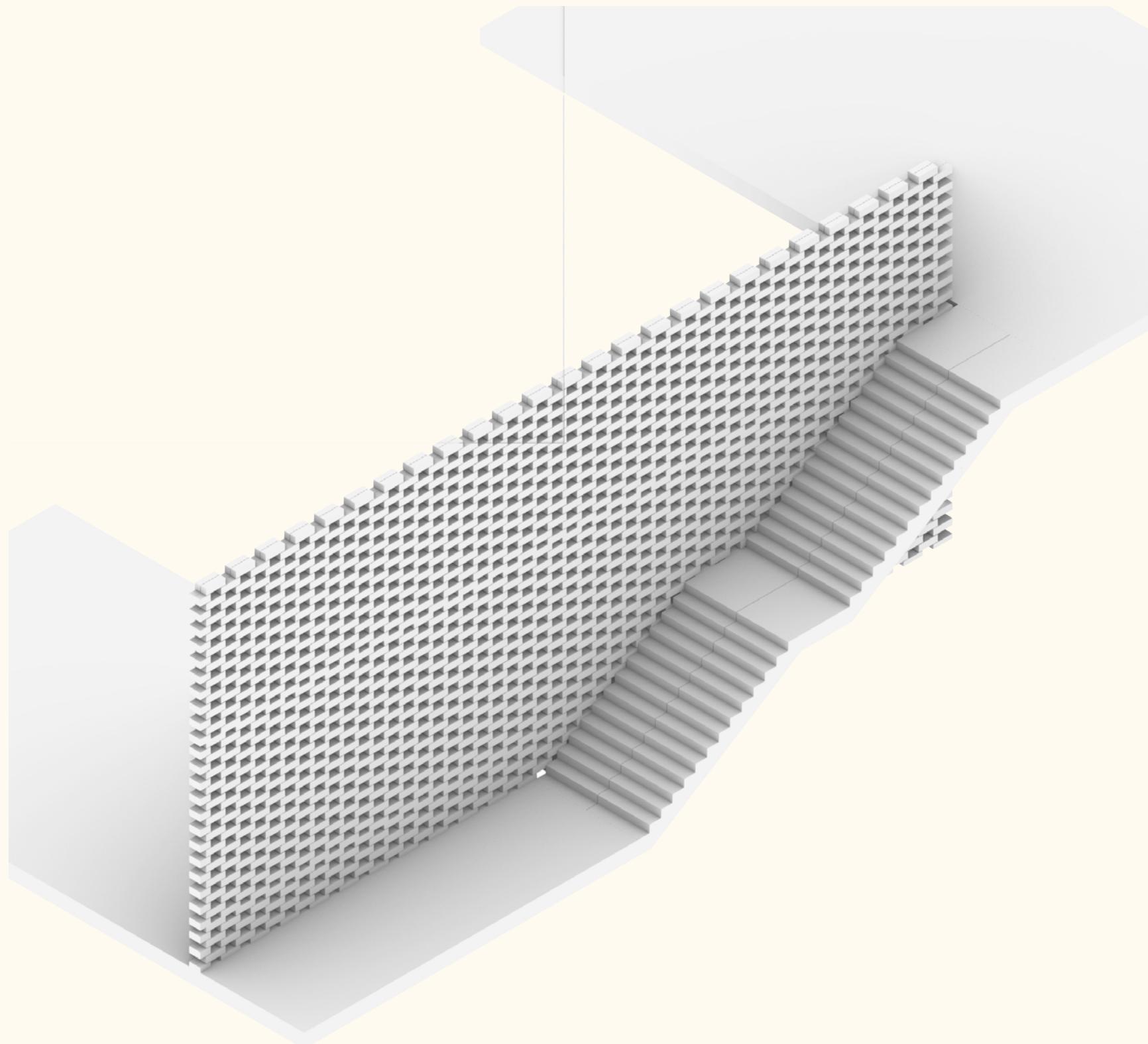
### SYSTEMS

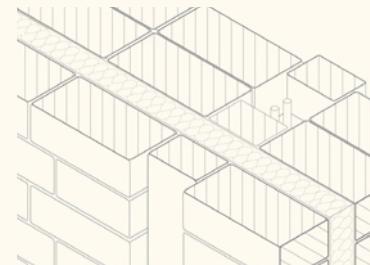
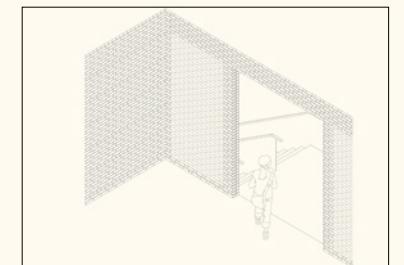
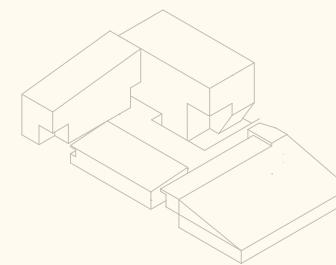
- A. Structural span
- B. Foundations
- C. Floor connections
- D. Cores
- E. Rain water collection
- F. Thermal storage



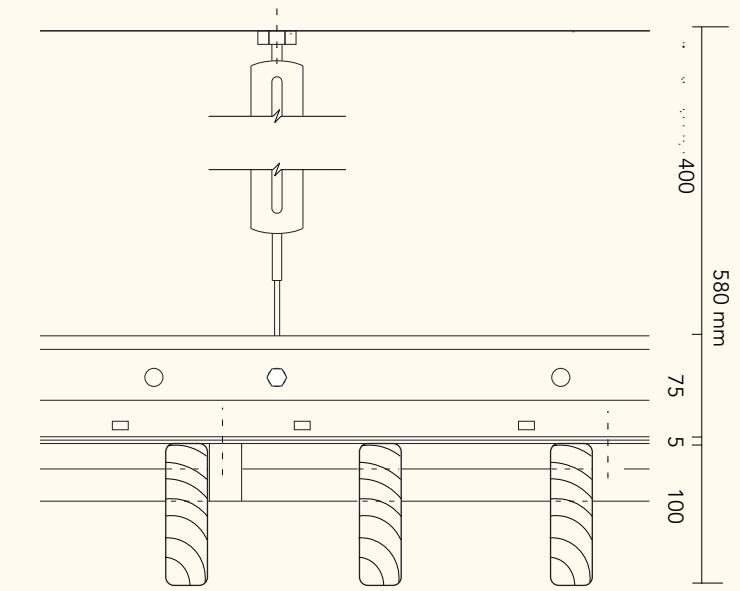
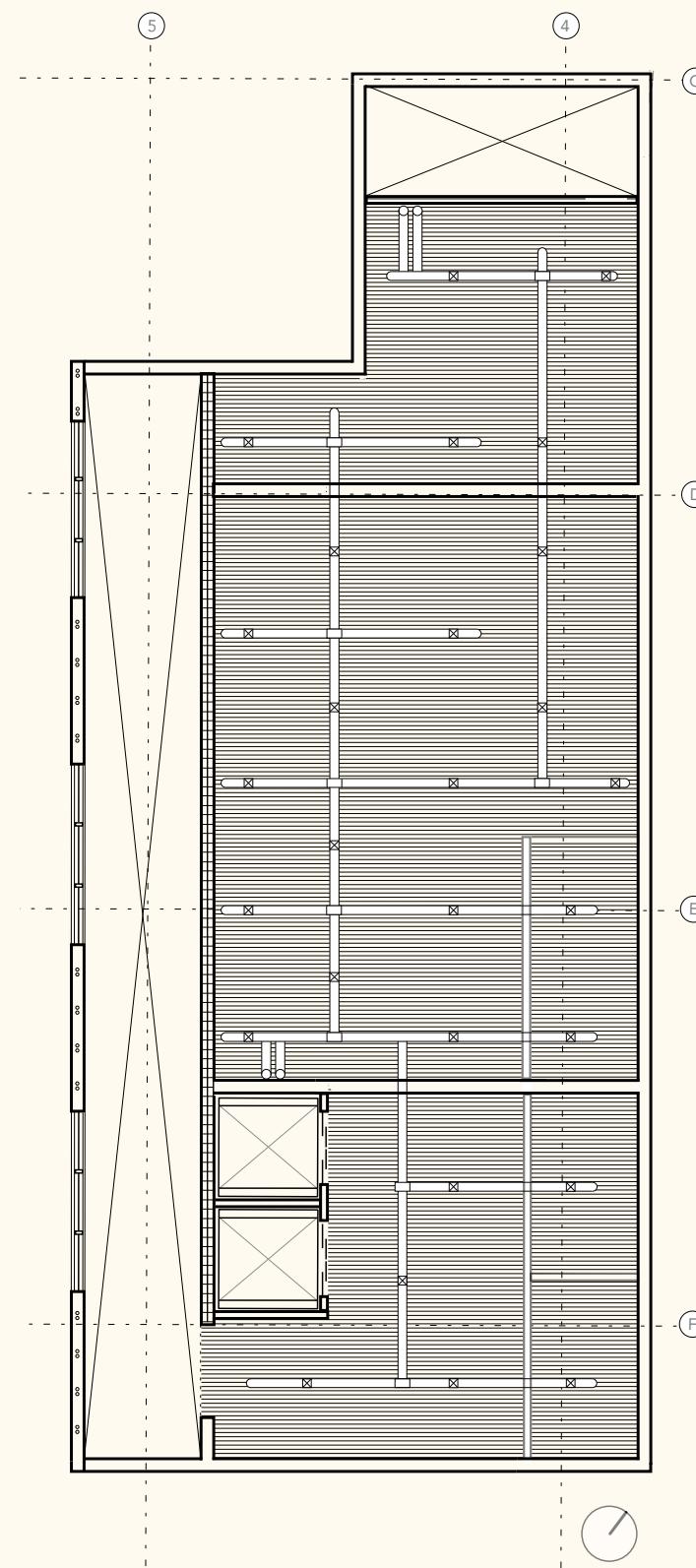
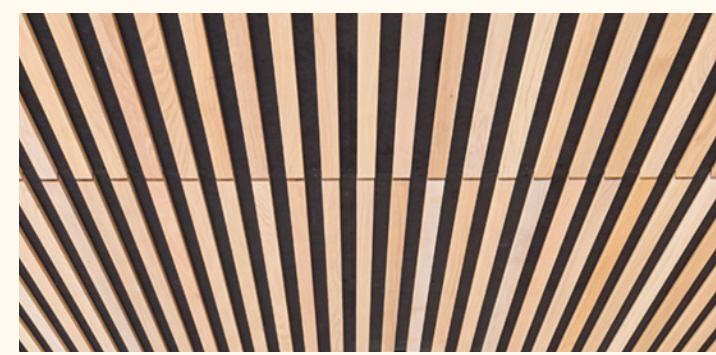


## PRECAST CONCRETE STAIRS



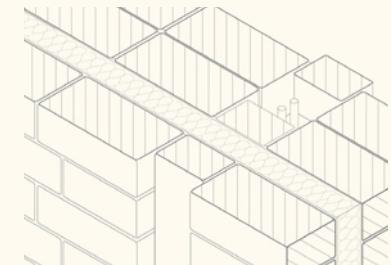
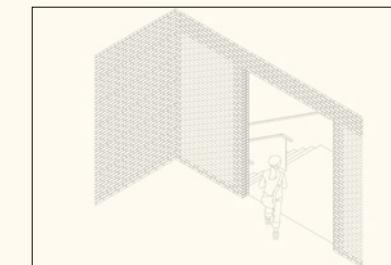
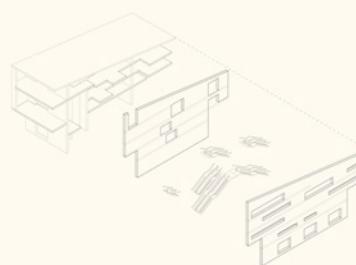
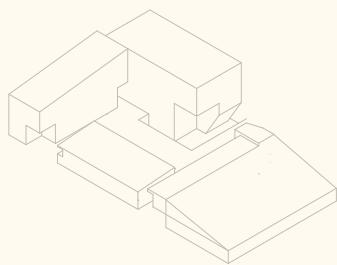


## ACOUSTIC

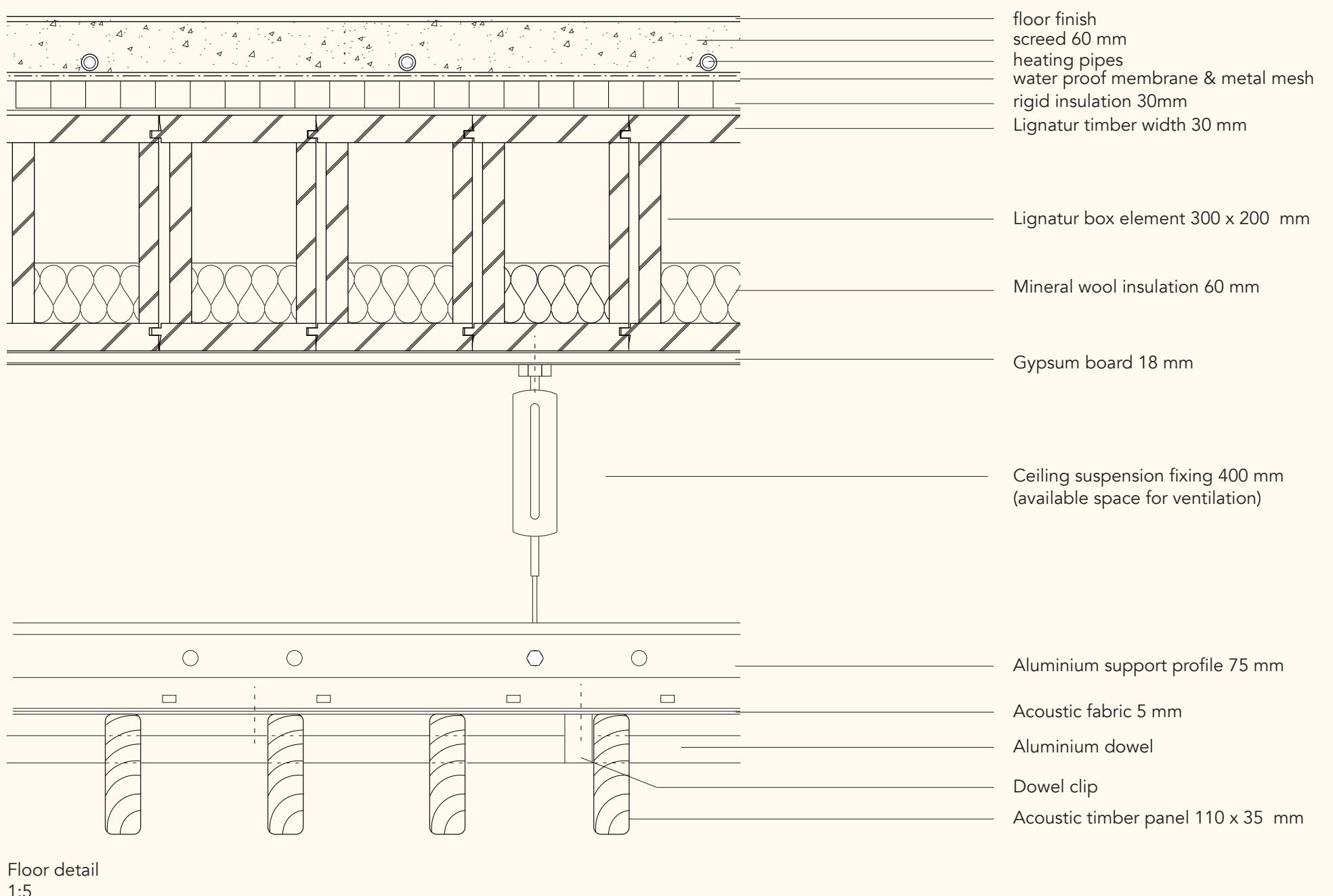
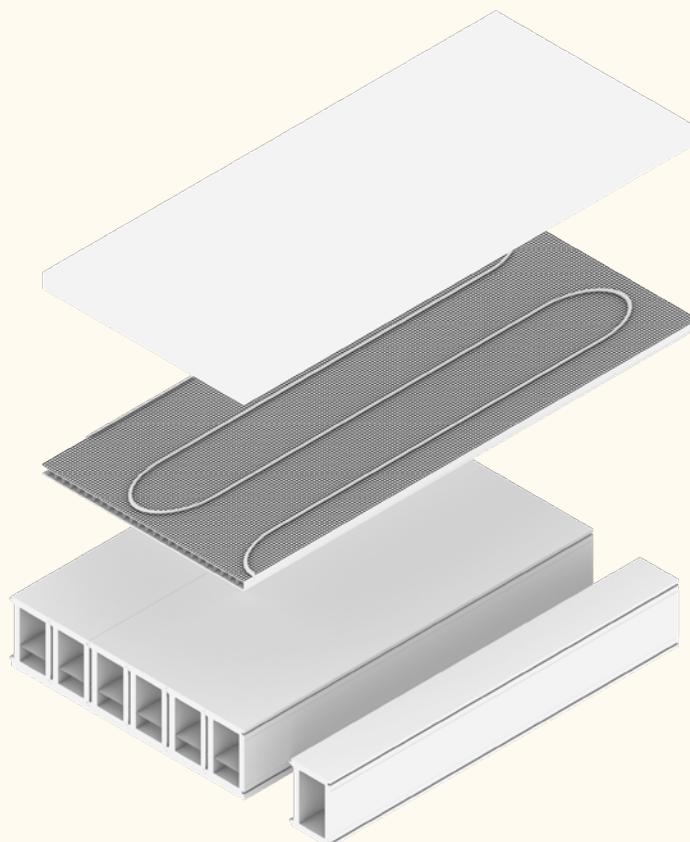


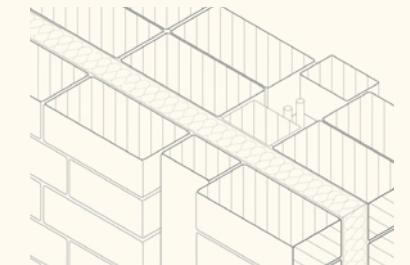
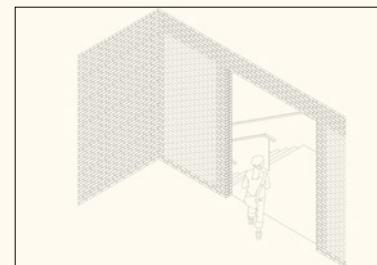
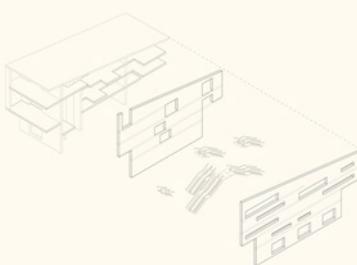
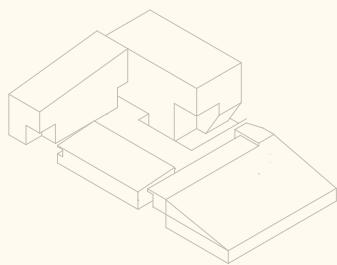
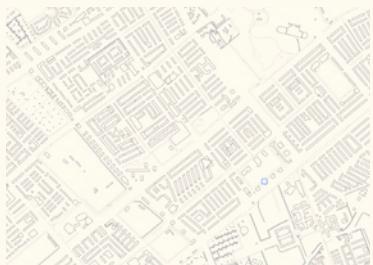
1:5 Acoustic vertical timber slat roof detail

Material rendering



## TIMBER



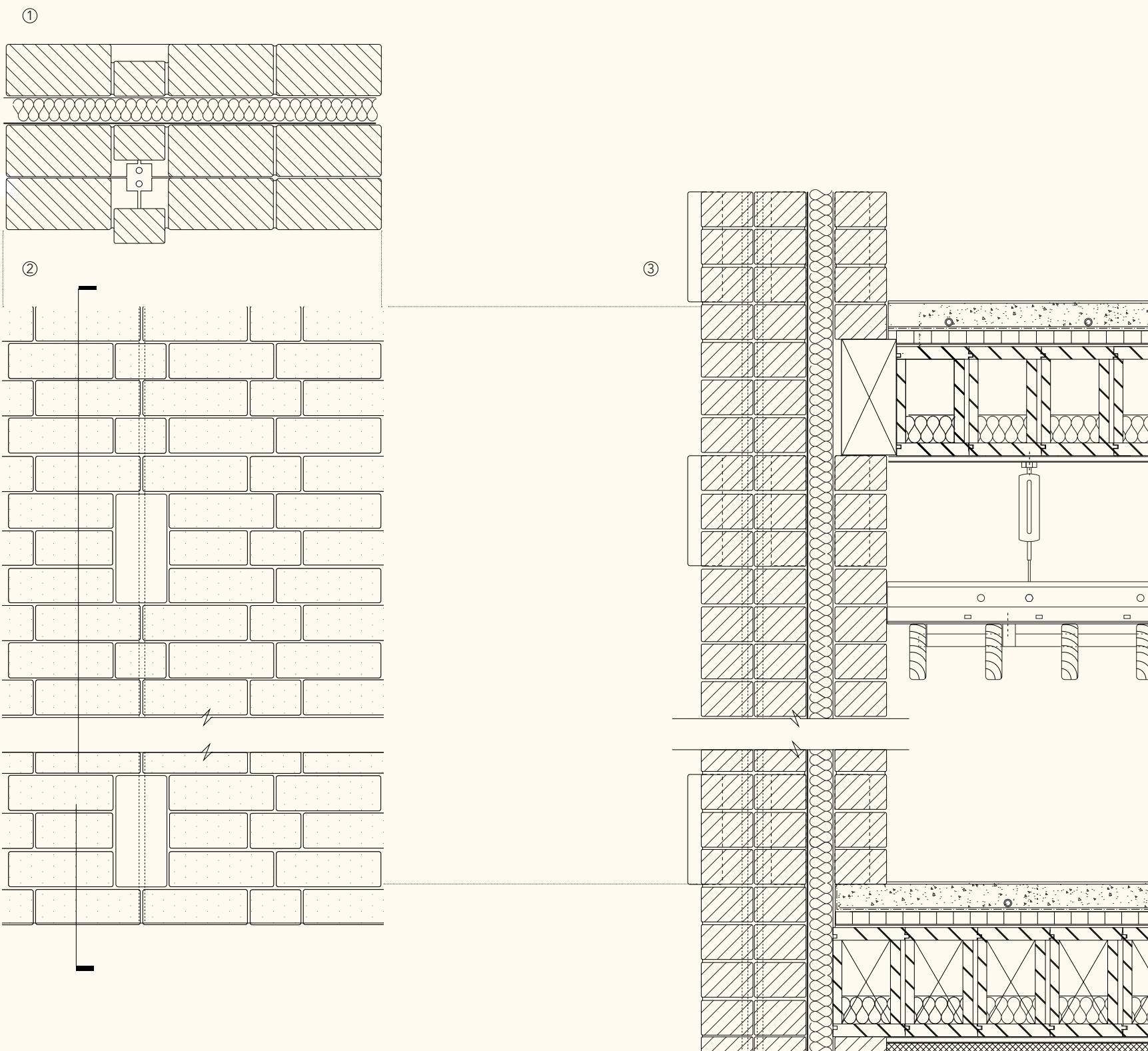
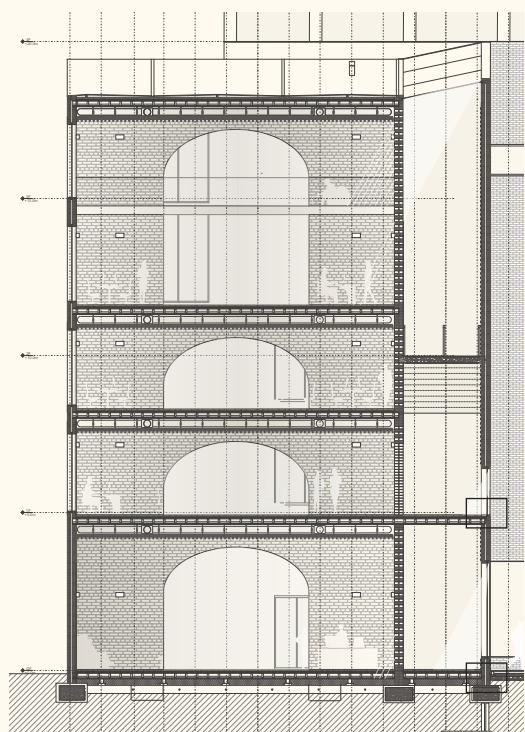


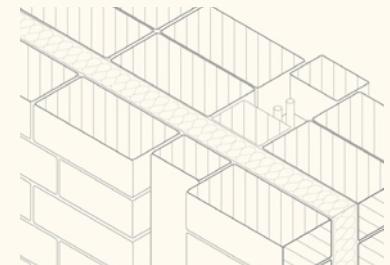
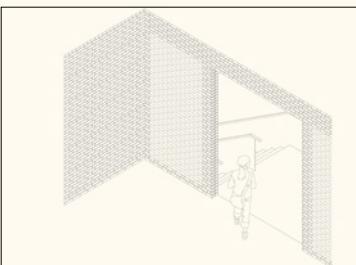
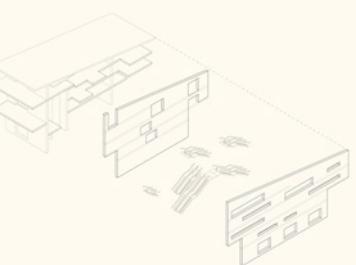
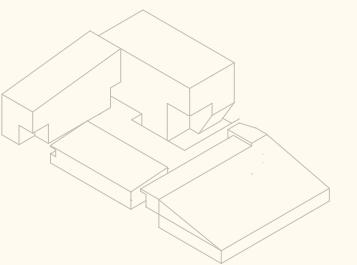
## CONNECTIONS

### Floor to ceiling

1:10 details of wall type 1

1. Plan cut
2. Elevation (both internal and external)
3. Sections at ceiling and floor



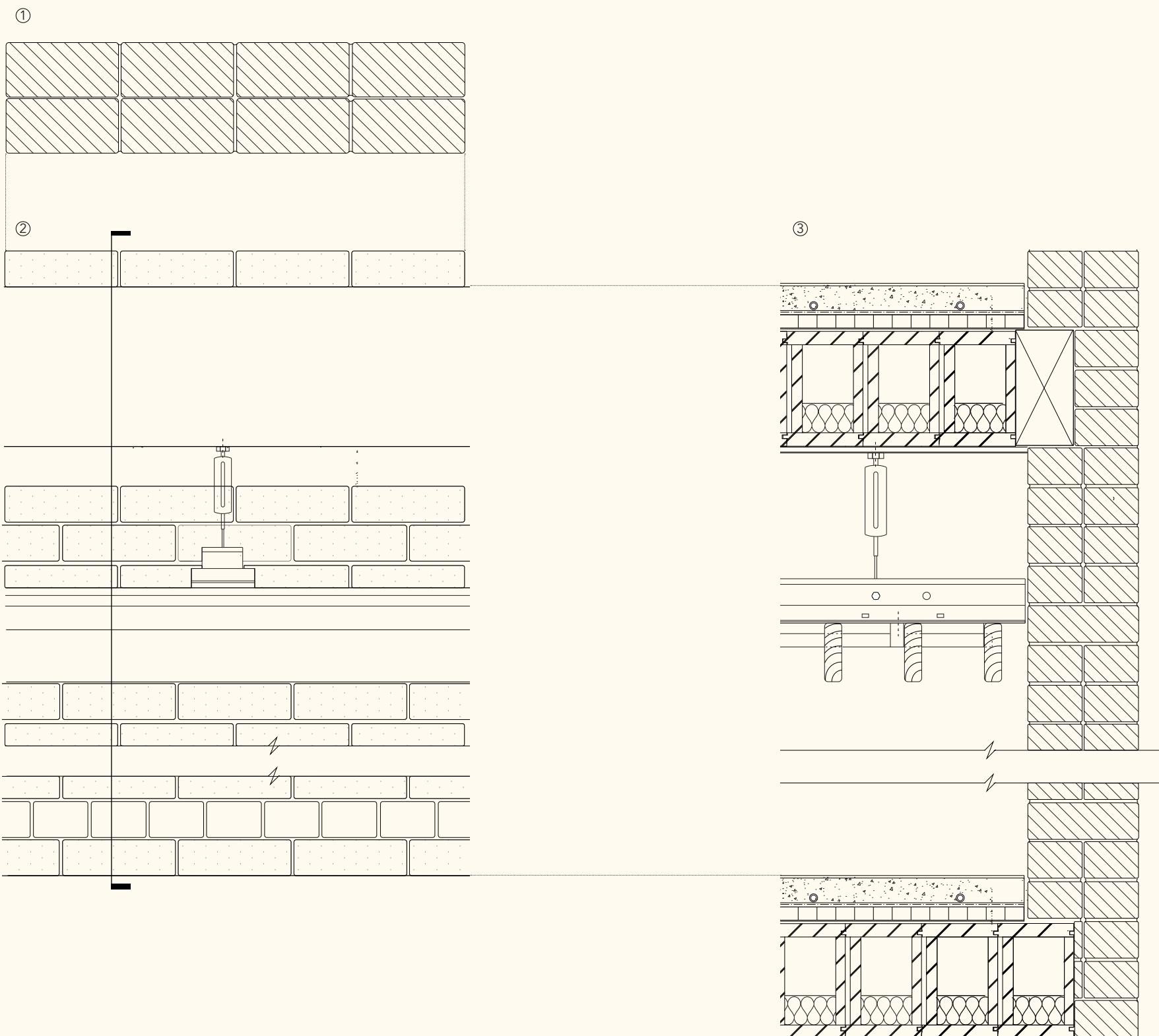
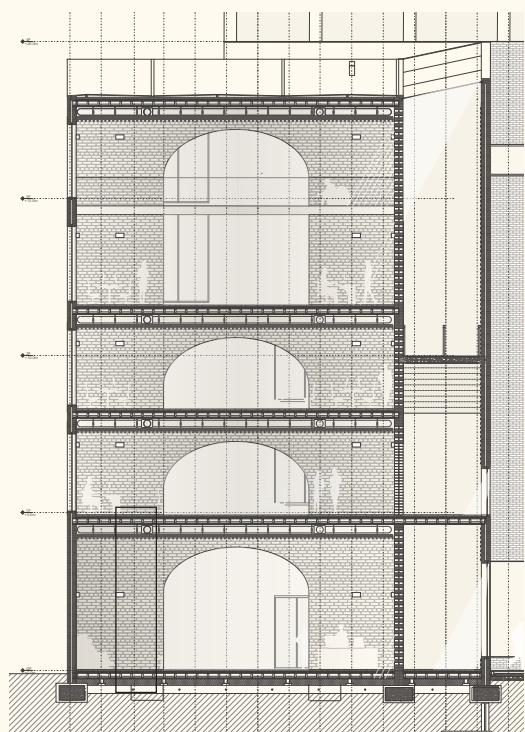


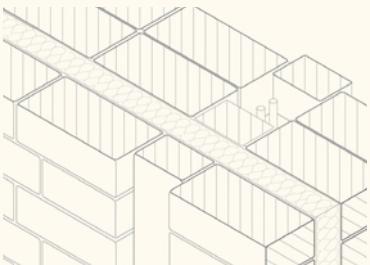
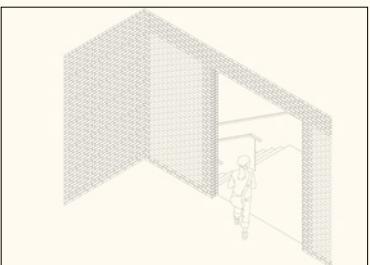
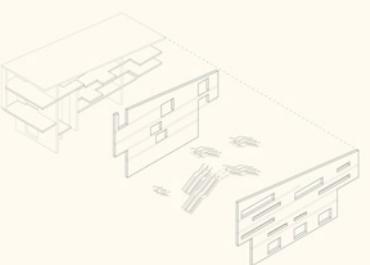
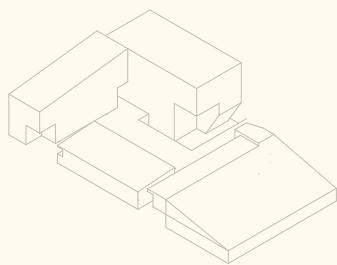
## CONNECTIONS

### Floor to ceiling

1:10 details of wall type 2

1. Plan cut
2. Elevation (both internal and external)
3. Sections at ceiling and floor



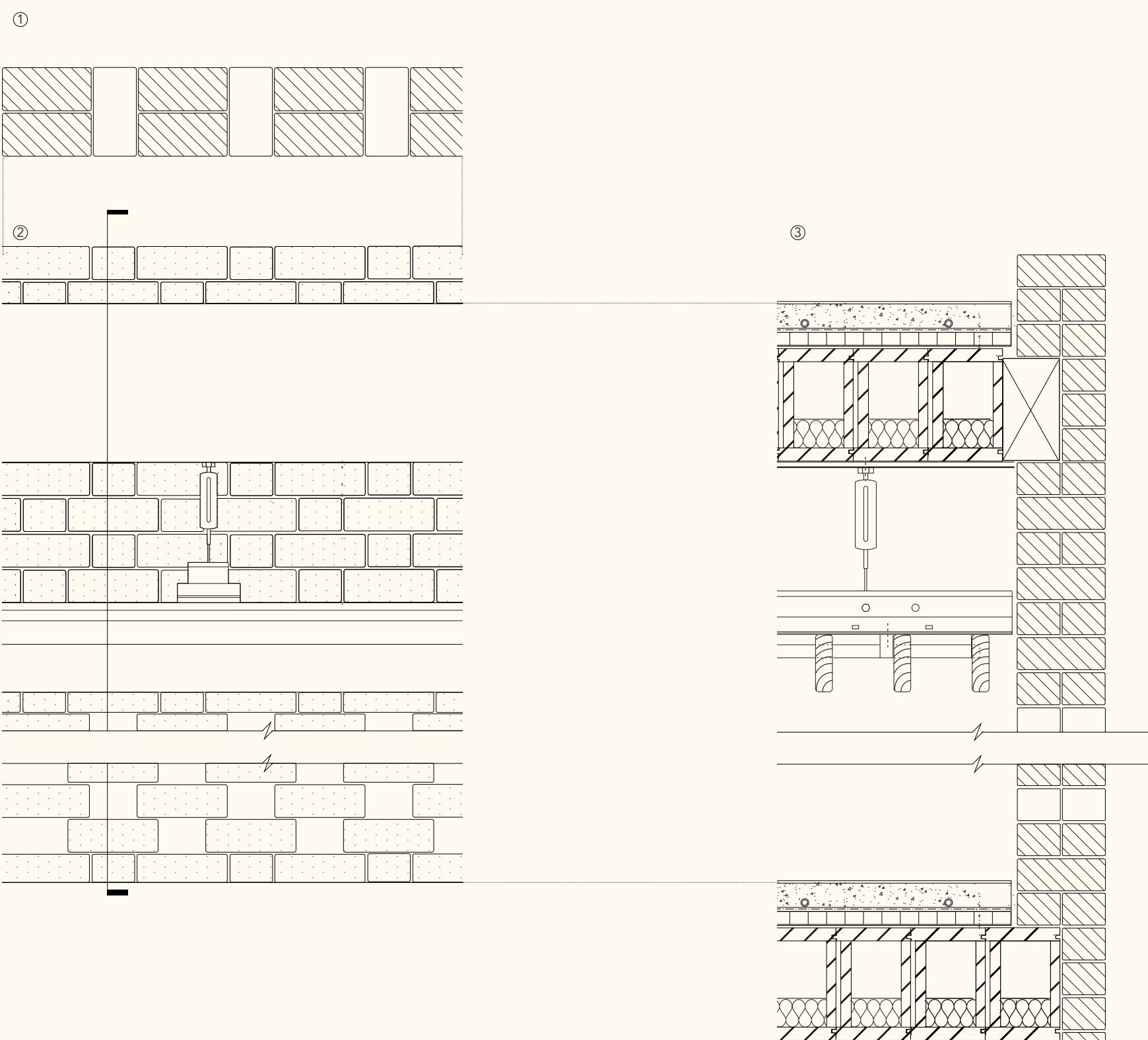
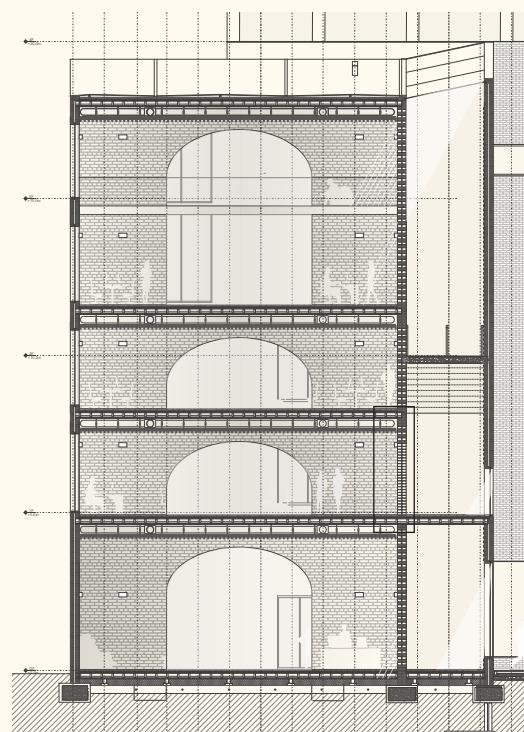


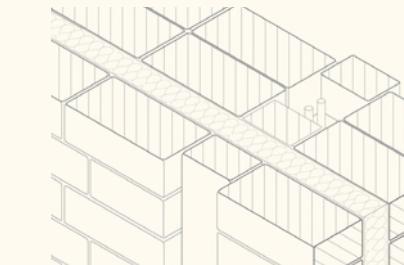
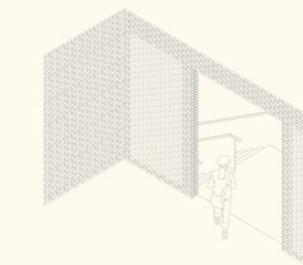
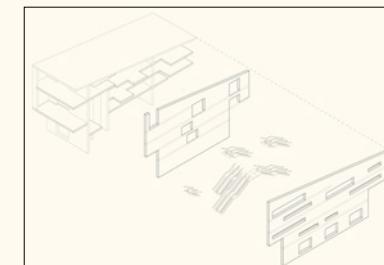
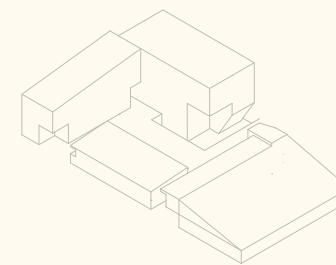
## CONNECTIONS

### Floor to ceiling

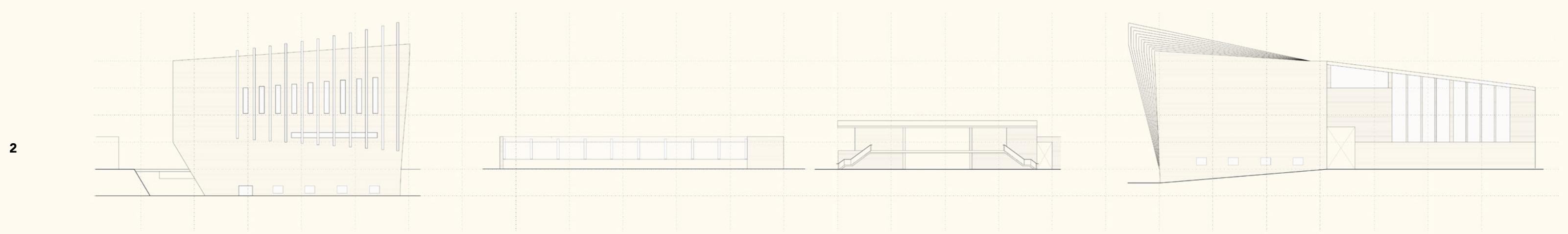
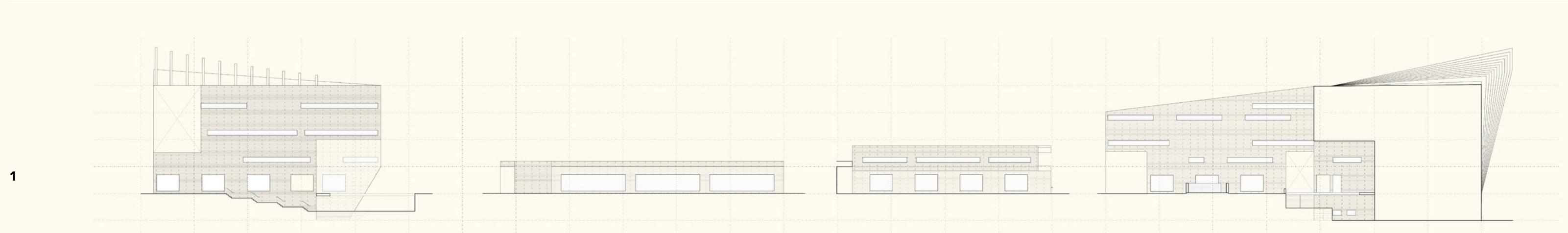
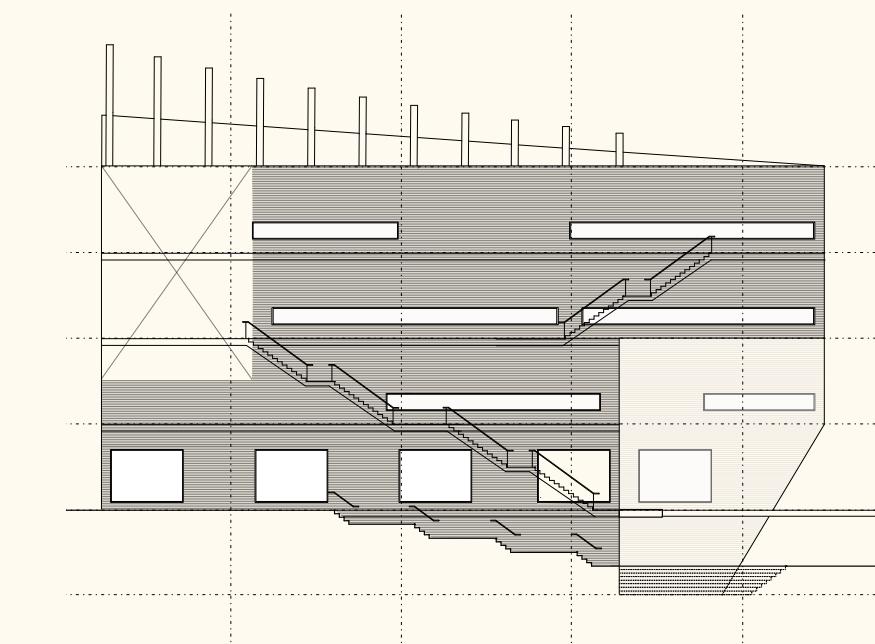
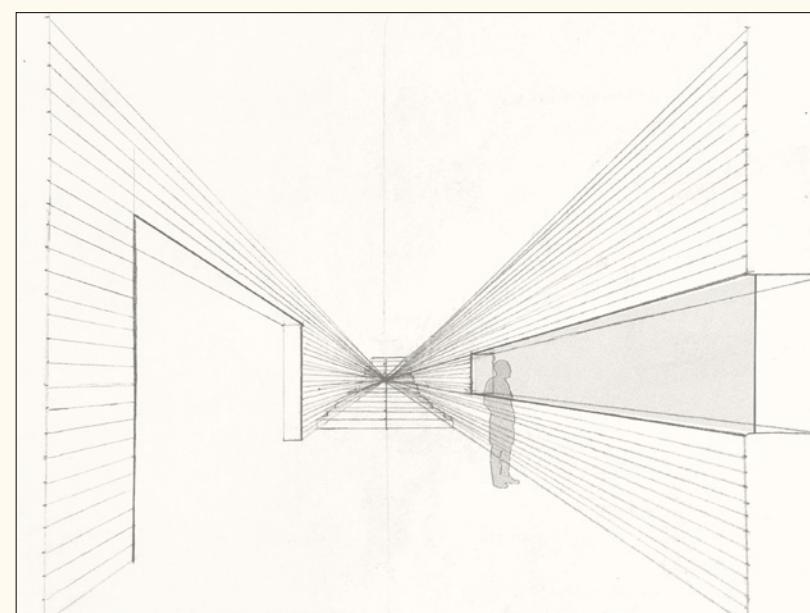
1:10 details of wall type 3

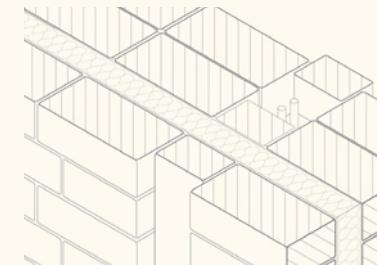
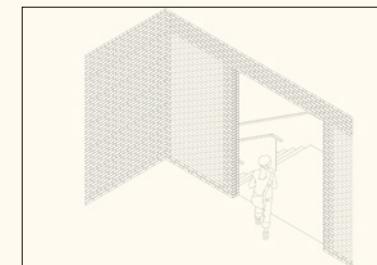
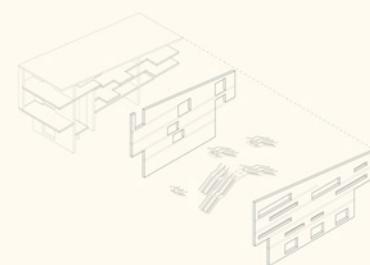
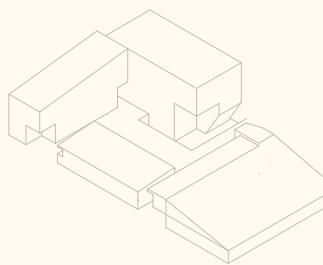
1. Plan cut
2. Elevation (both internal and external)
3. Sections at ceiling and floor





## PUBLIC CONDENSER APPLICATION





## FOR AND AGAINST THE LONG WINDOW

### THE PERRET - LE CORBUSIER CONTROVERSY

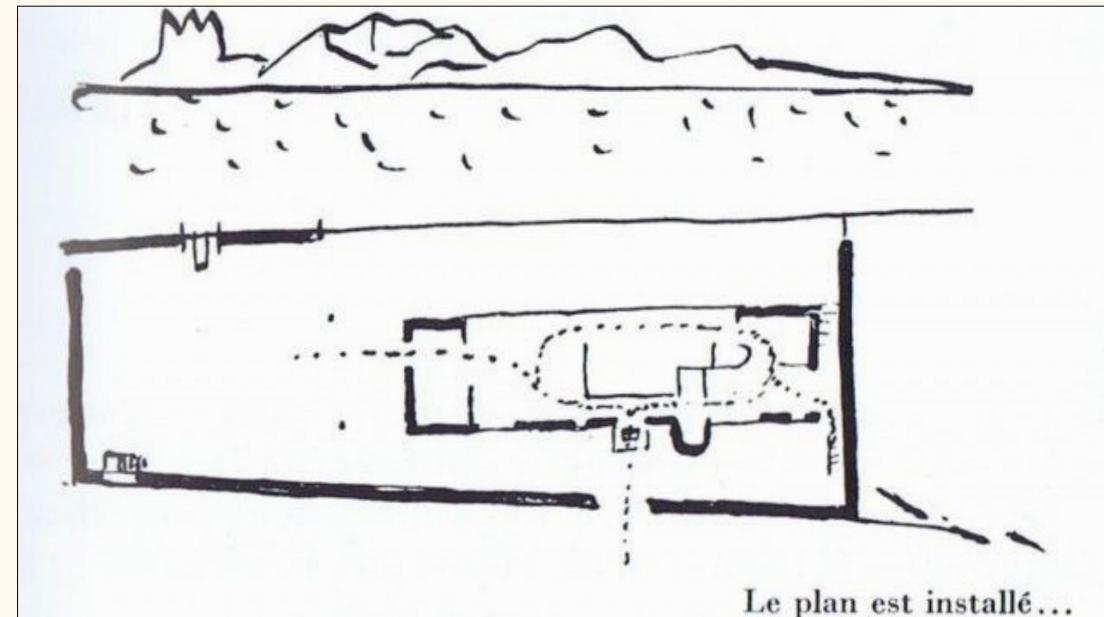
Constructing Architecture, materials, processes, structures. A Handbook (p175)  
Bruno Reichlin

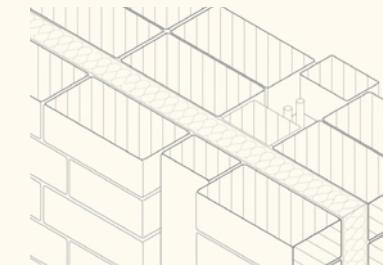
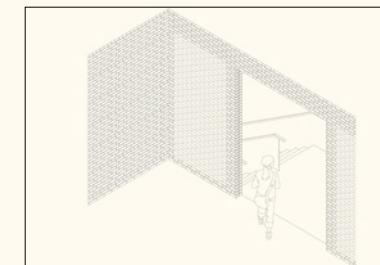
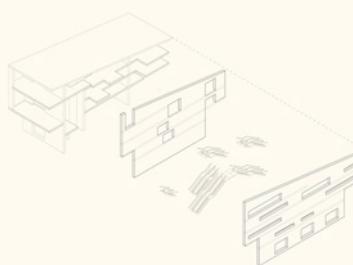
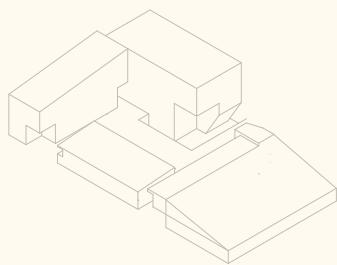
### PRACTICALITY

"windows with an excessive horizontal elongation [...] taking originality too far." - Perret

"intentionally create bi-zarreness [...] in order to allow a maximum of light and air into my houses" - Le Corbusier

Reichlin, B., 2005. For and Against the Long Window. In: A. Deplazes, ed., Constructing Architecture: Materials, Processes, Structures : a Handbook. Basel: Birkhäuser, p.175-182.

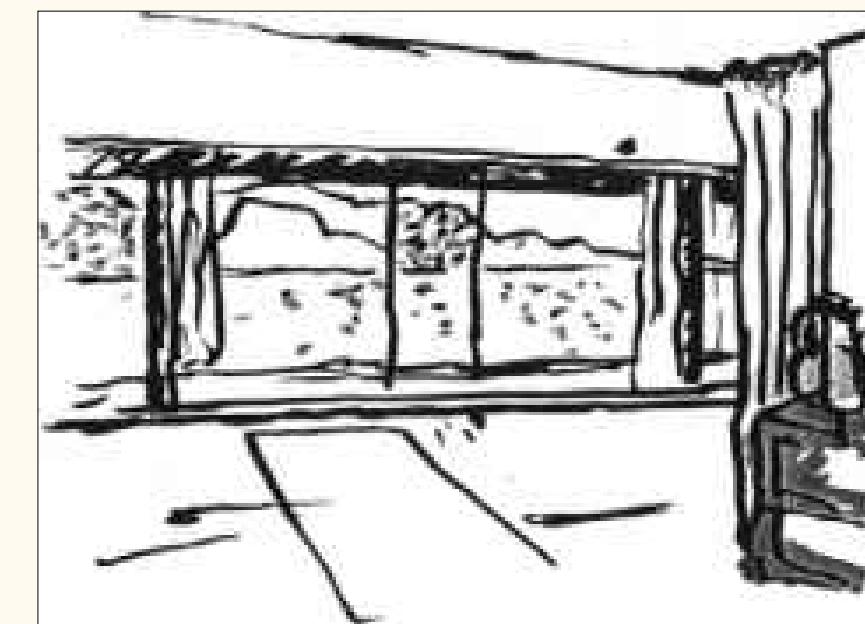
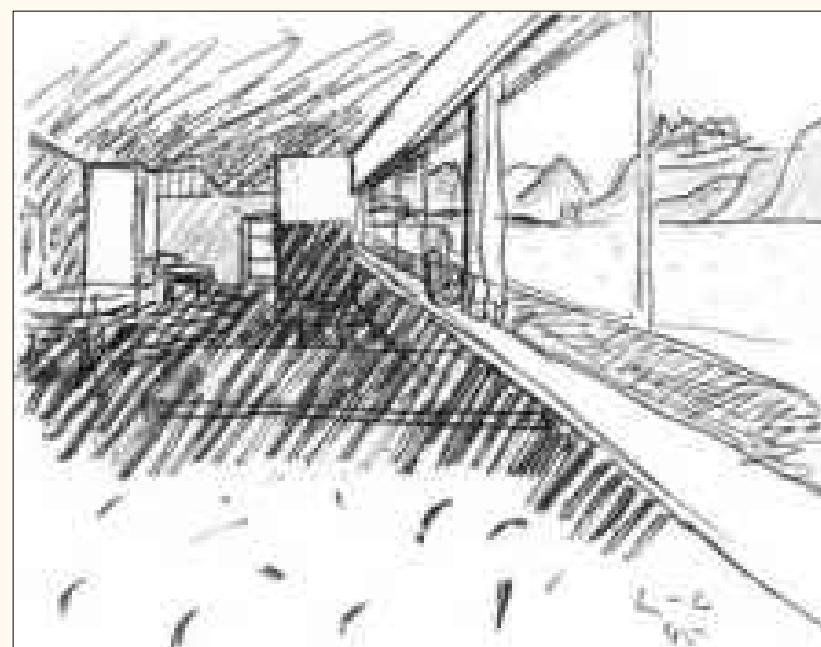


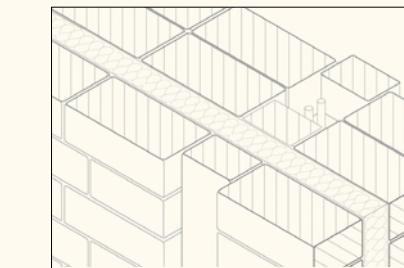
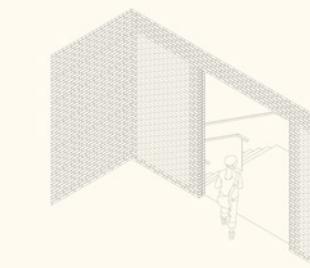
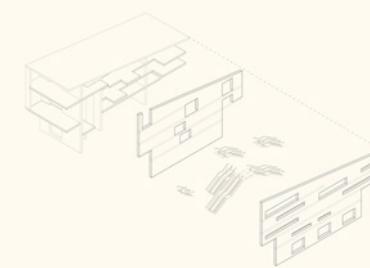
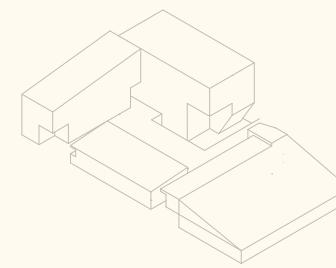


## FOR AND AGAINST THE LONG WINDOW

VILLA IN CORSEAUX, LAKE GENEVA

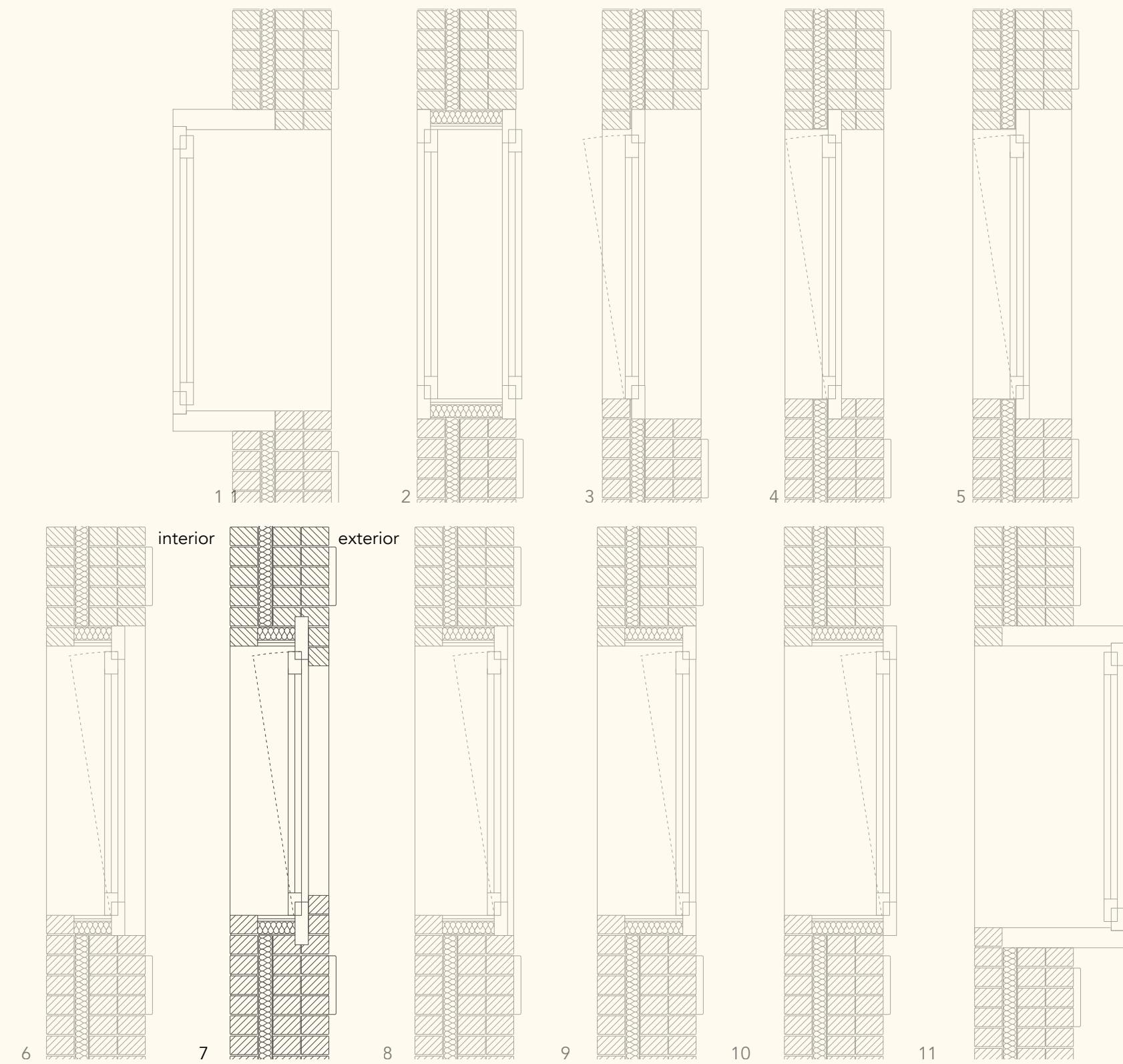
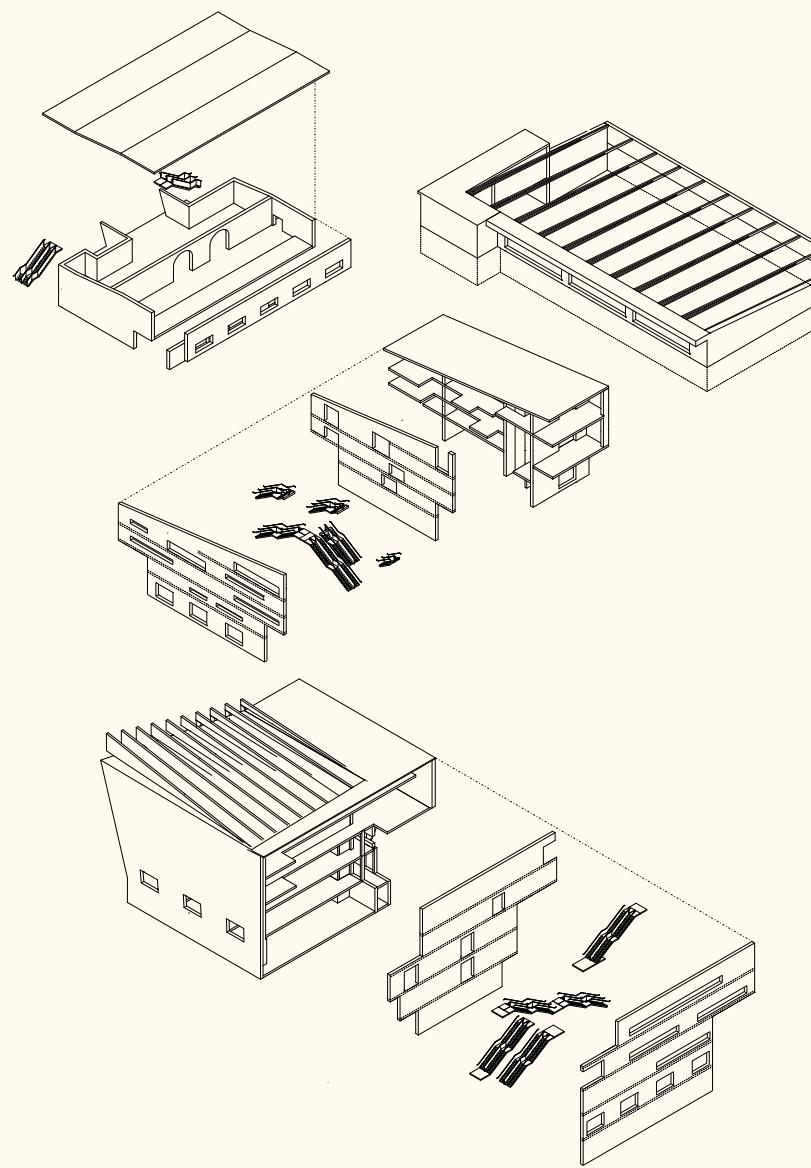
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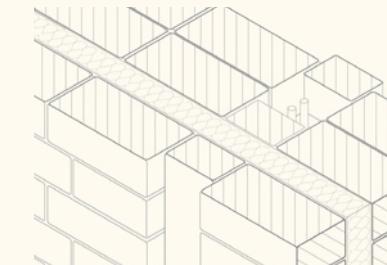
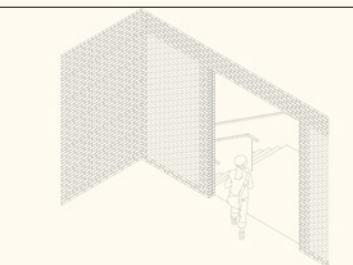
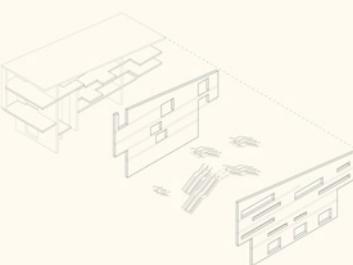
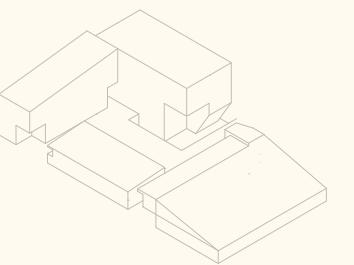




## OPENINGS

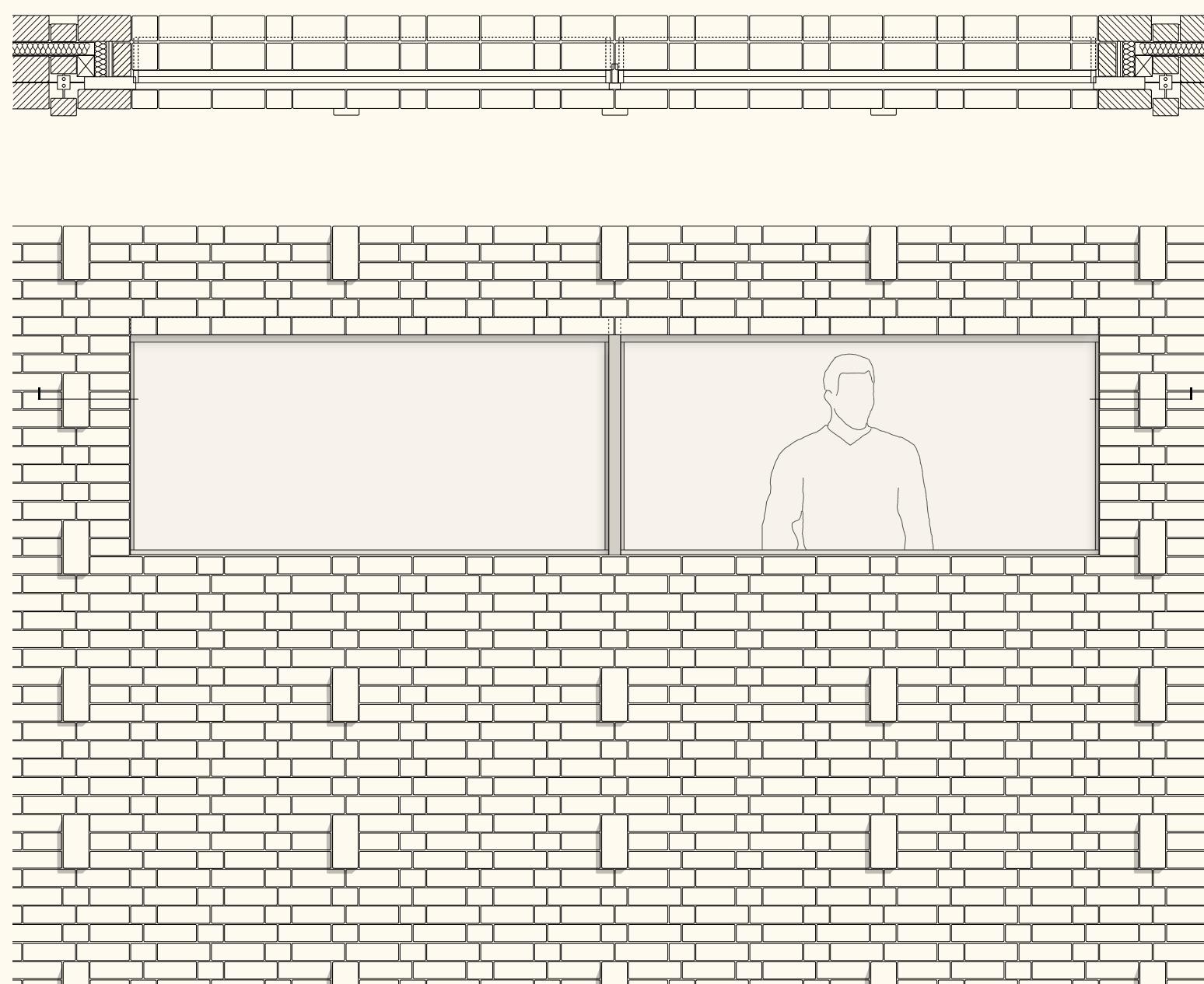
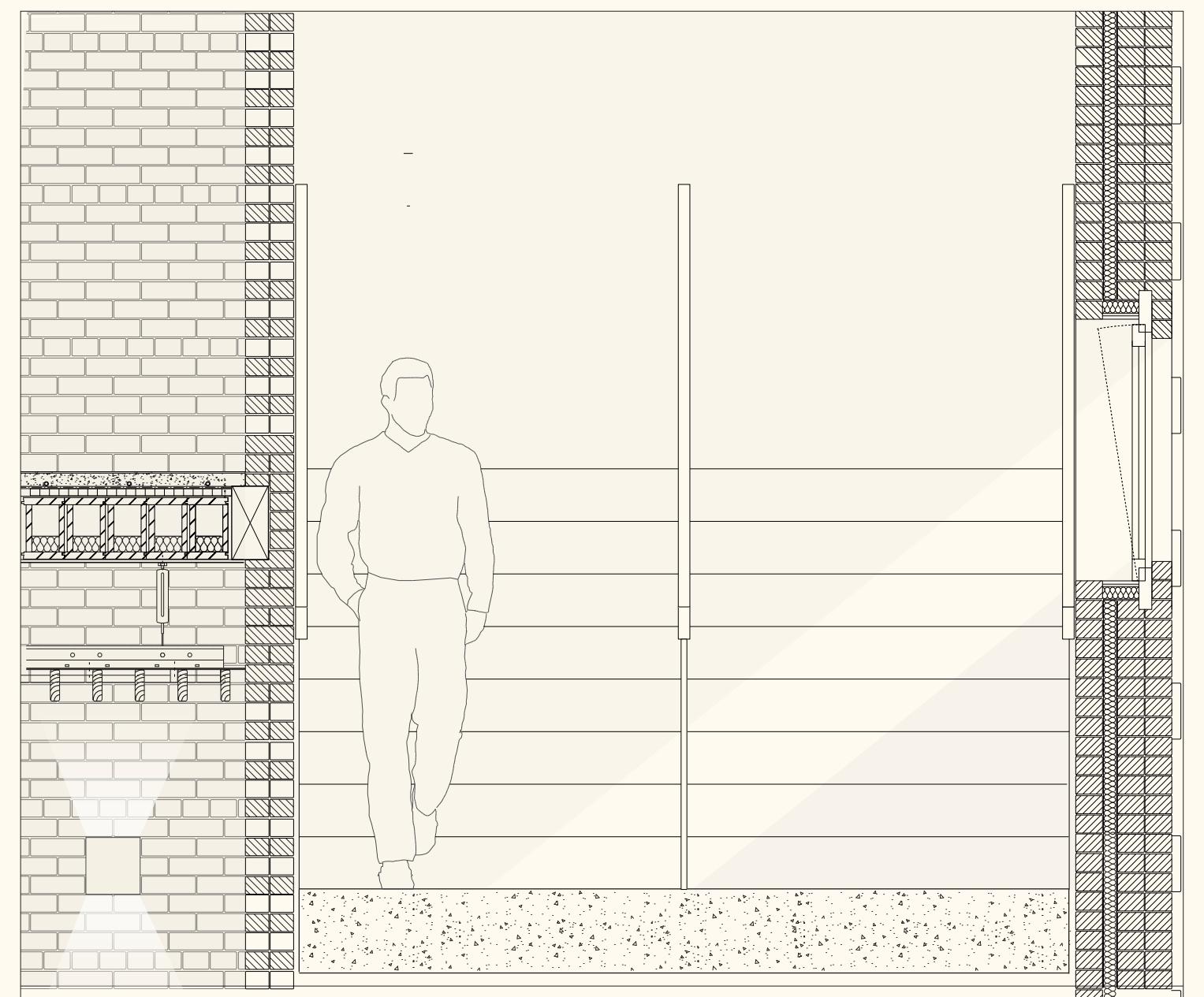
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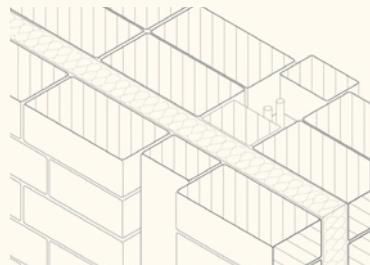
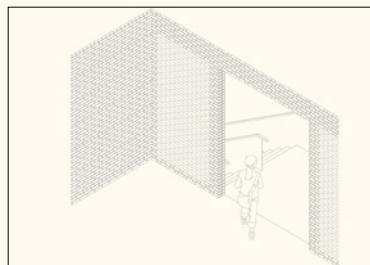
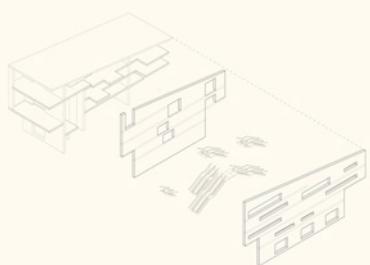
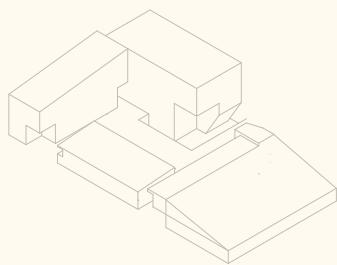


## OPENINGS

### Facade windows

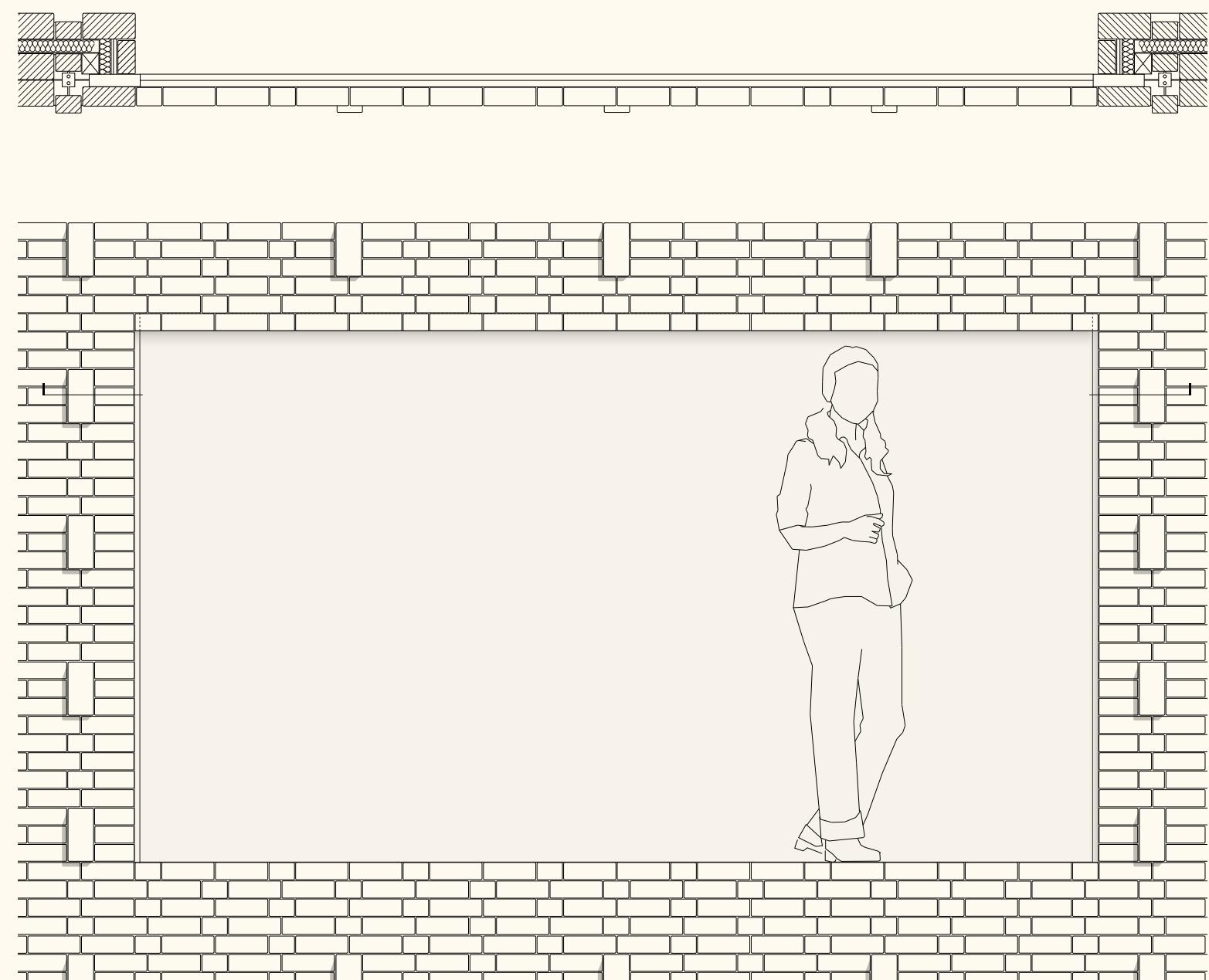
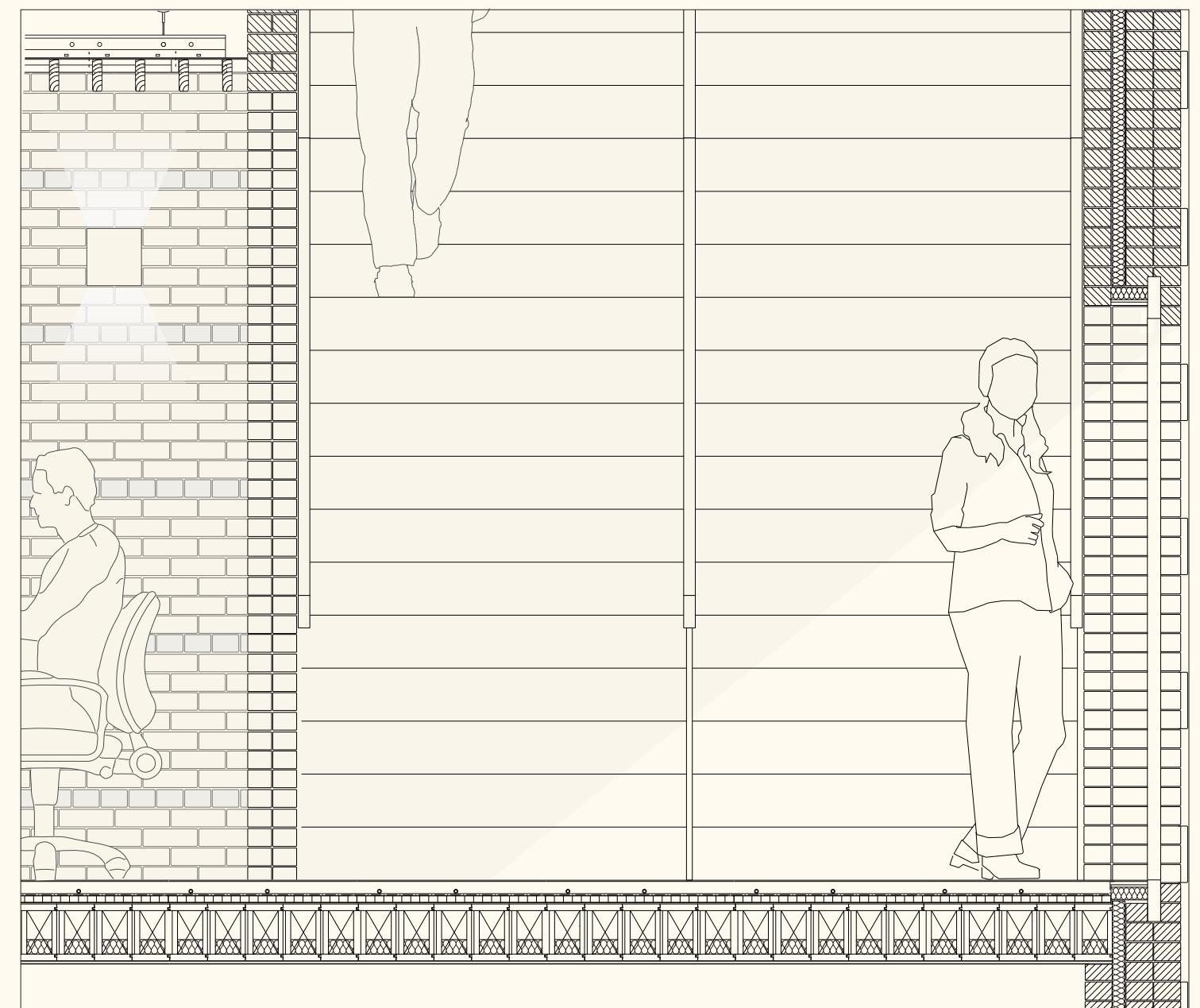


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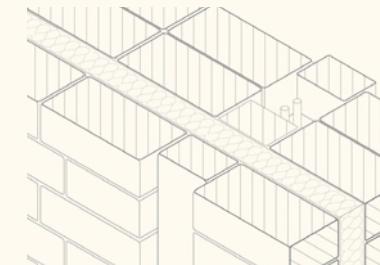
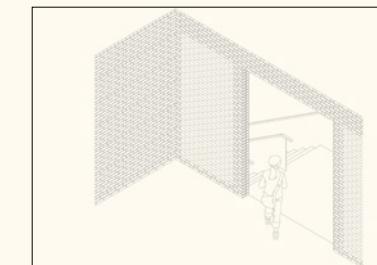
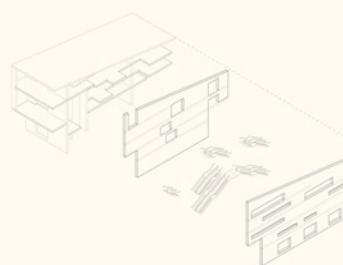
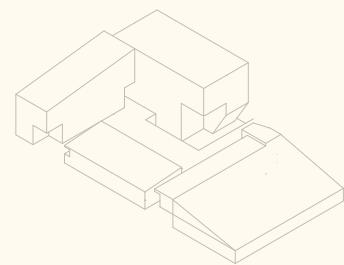
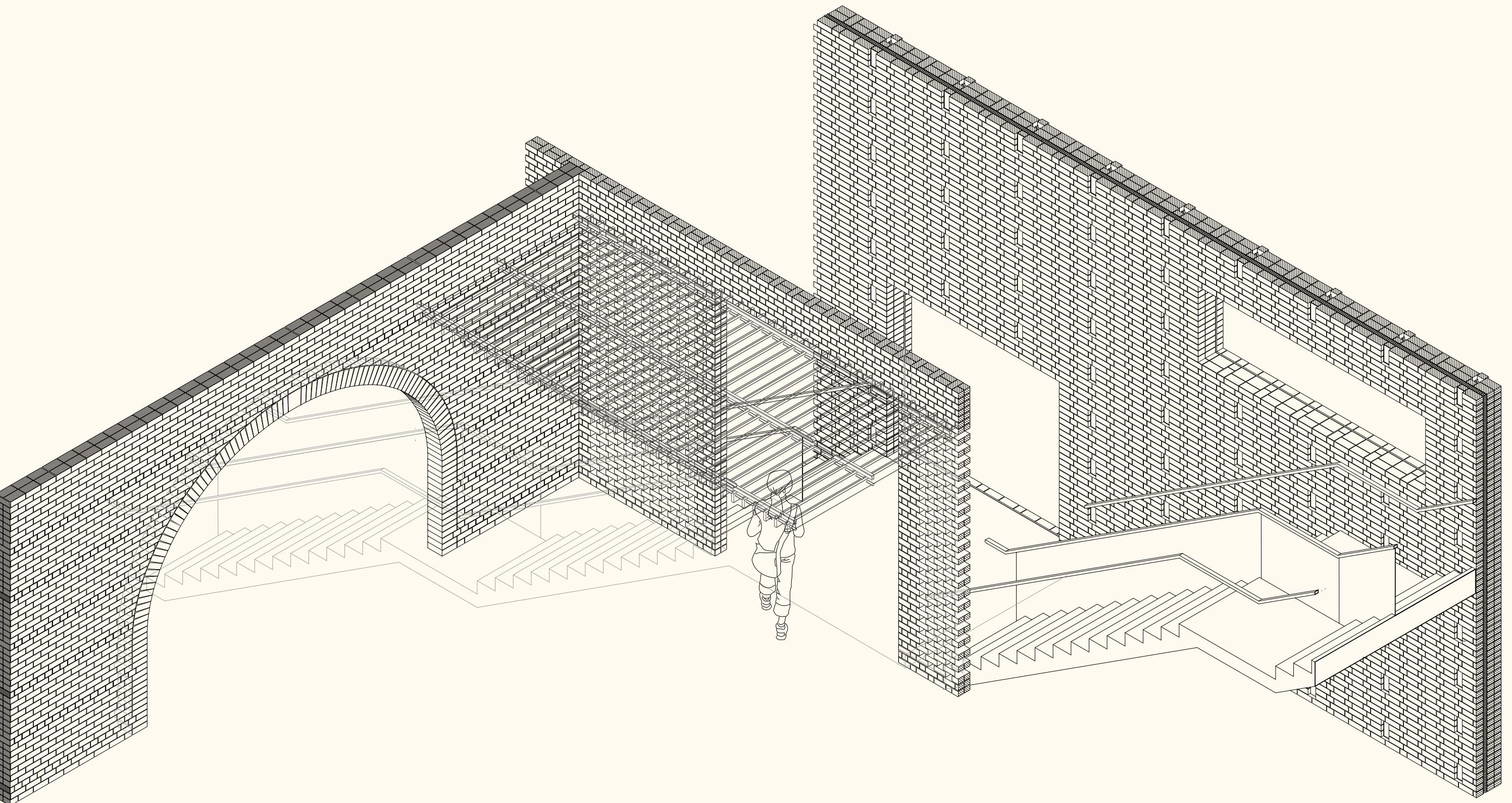


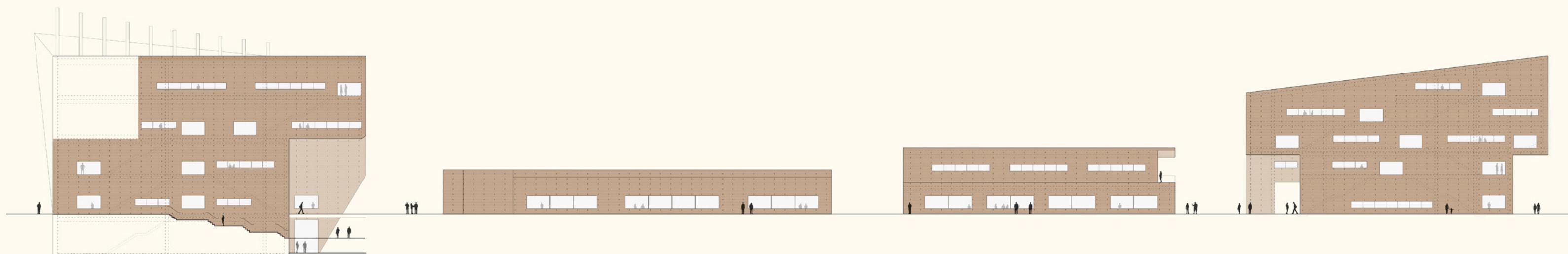
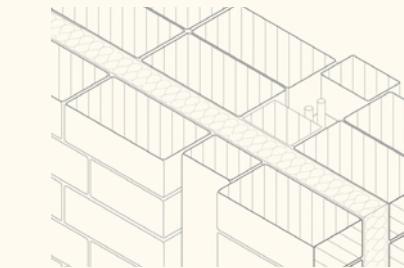
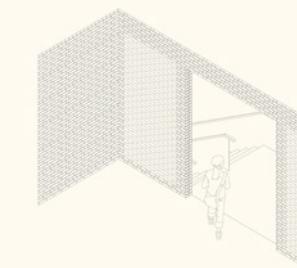
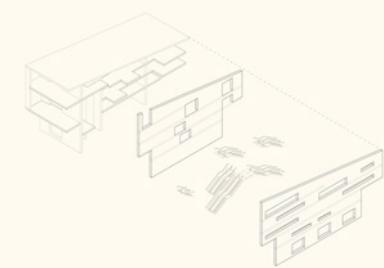
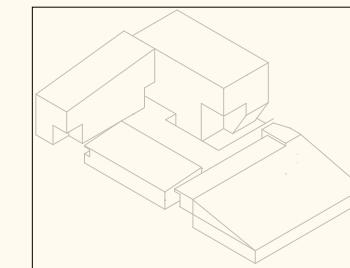
## OPENINGS

### Facade openings



1:20 internal section



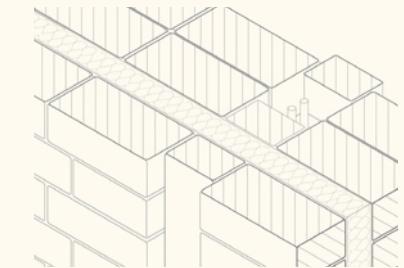
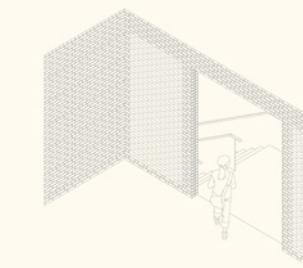
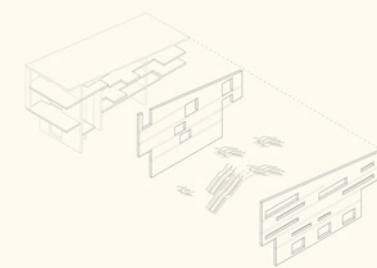
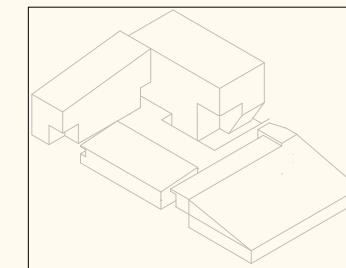


RESEARCH AND BRIEF

PUBLIC BUILDING TYPOLOGY

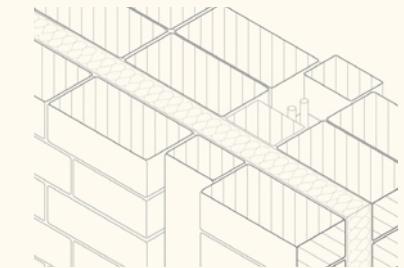
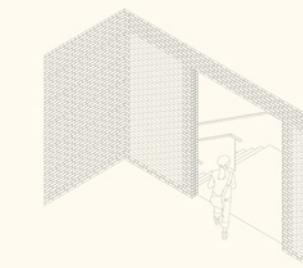
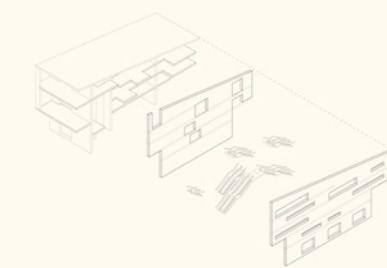
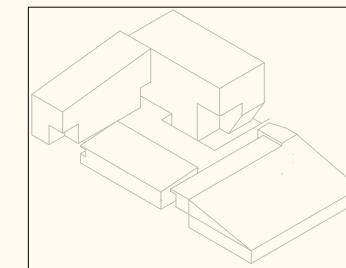
DESIGN

**USAGE**

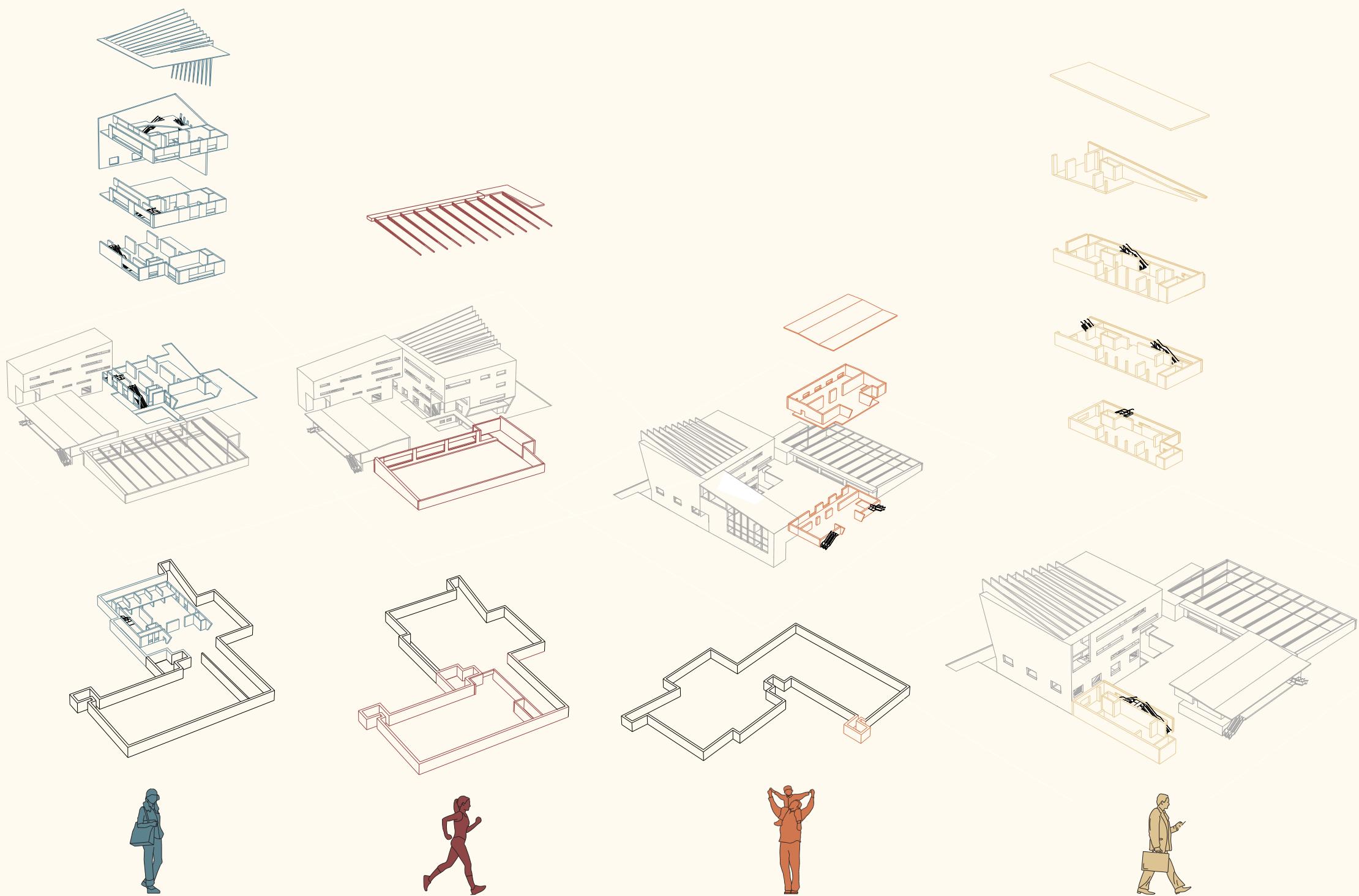
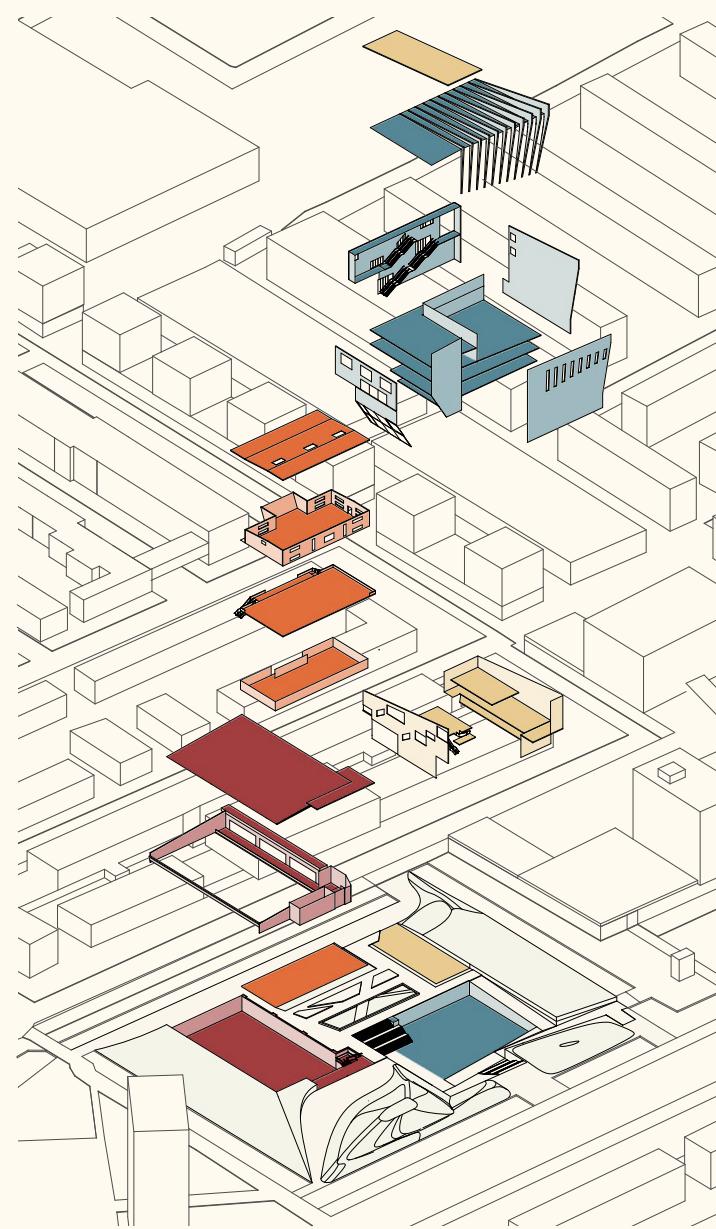


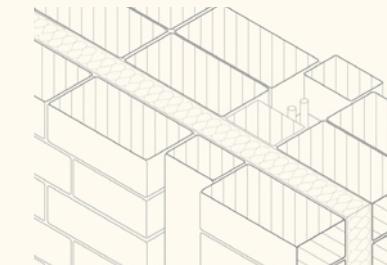
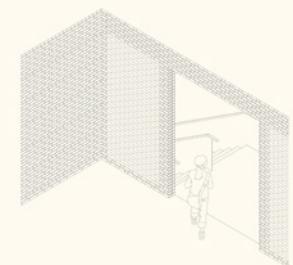
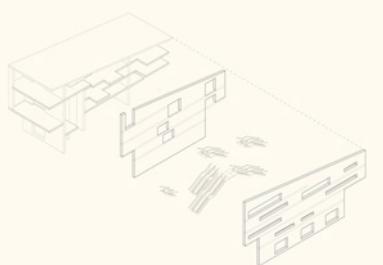
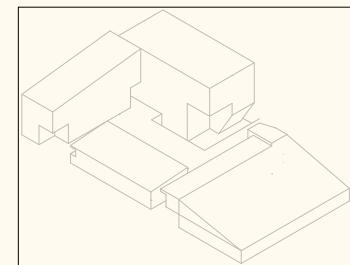
## APPROACH





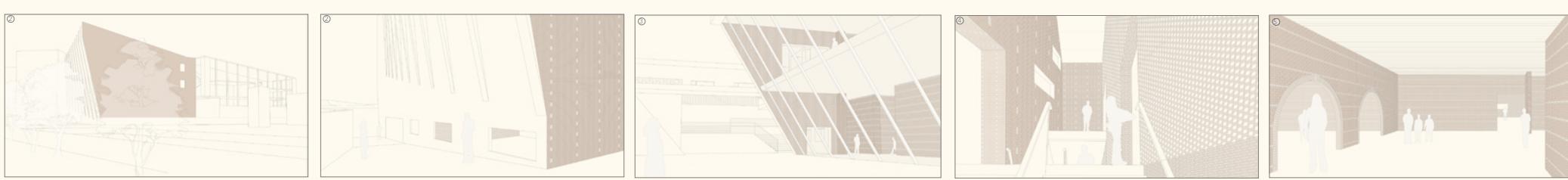
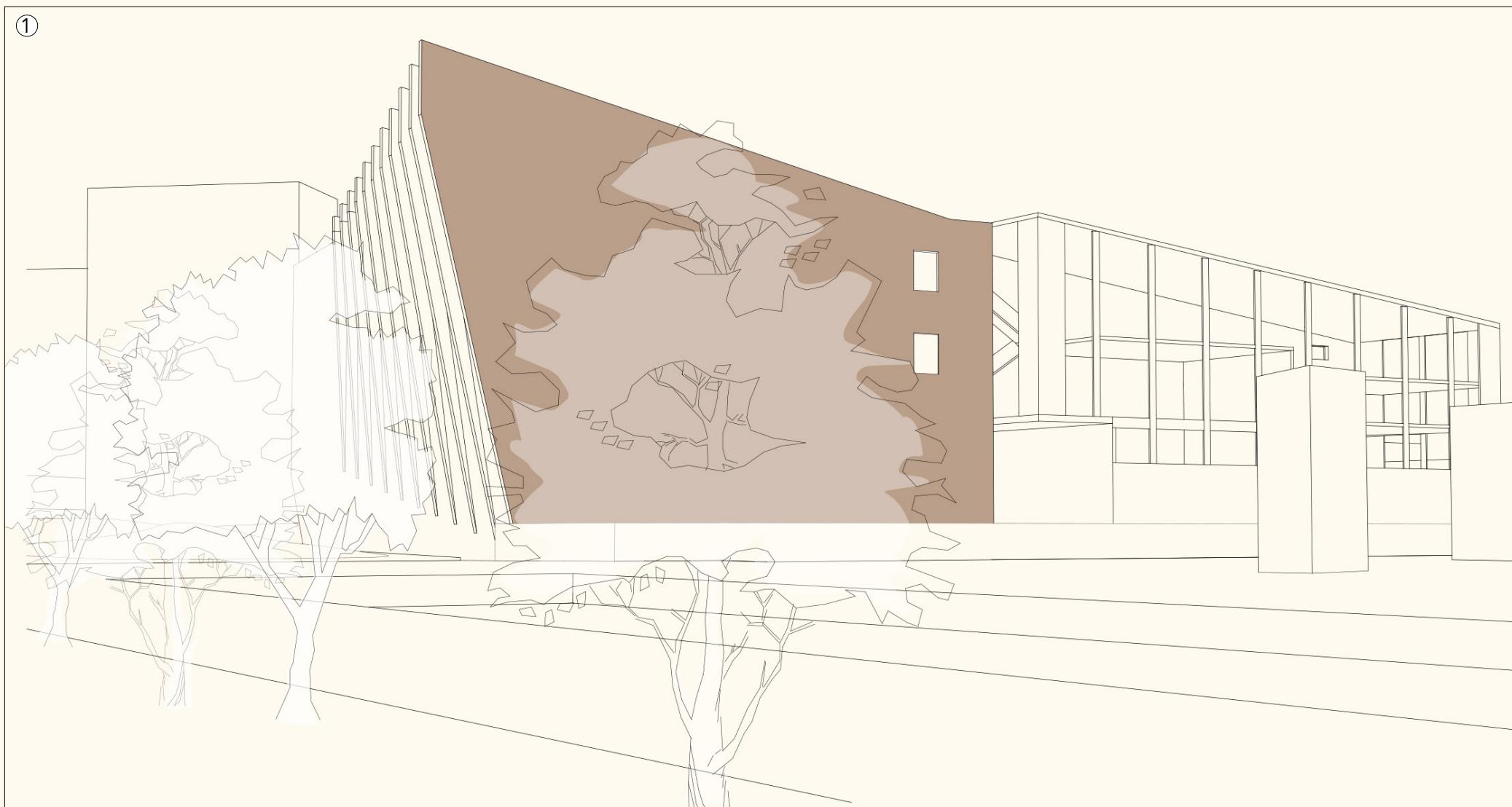
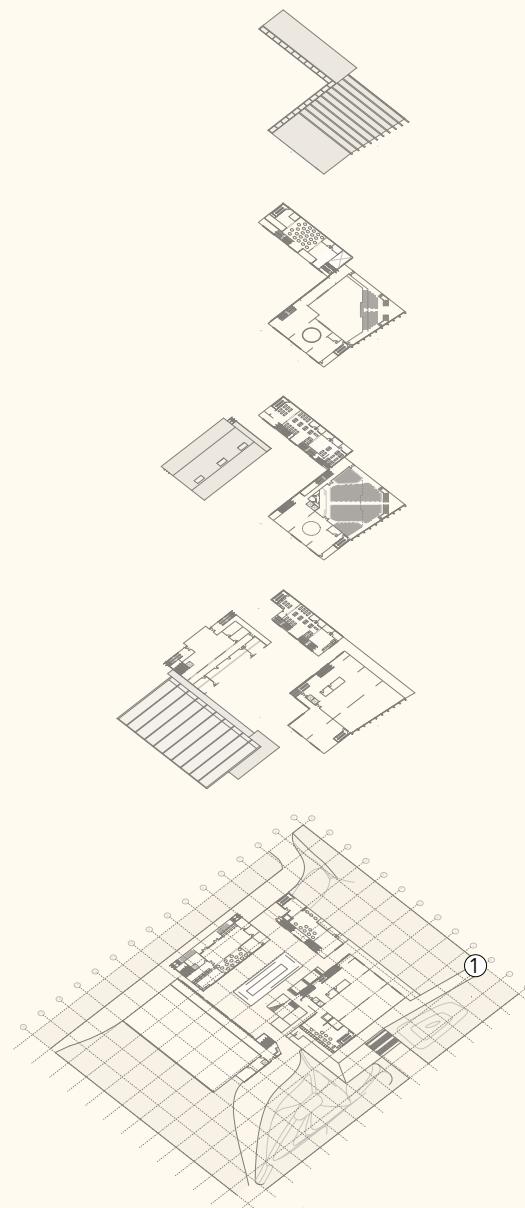
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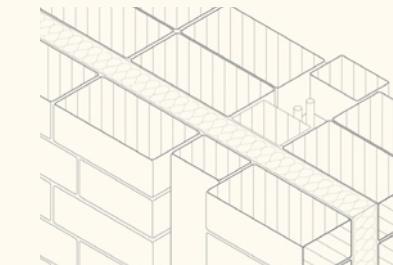
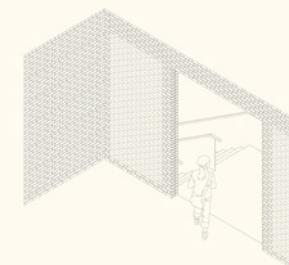
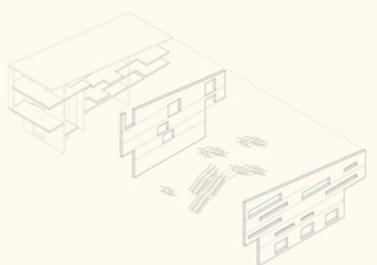
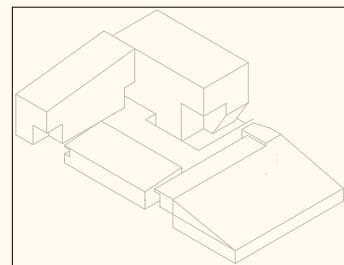




## STORYBOARD 1

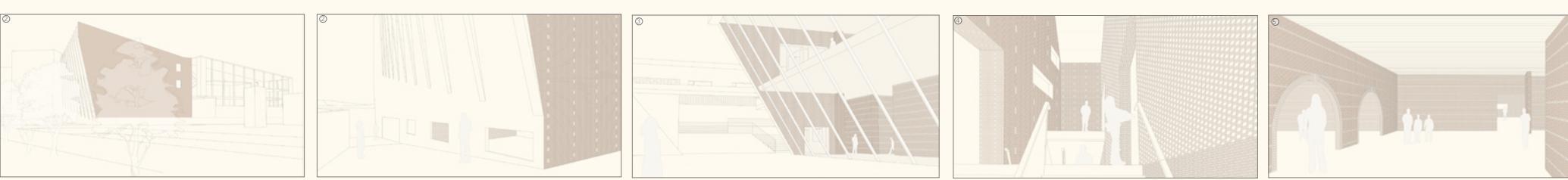
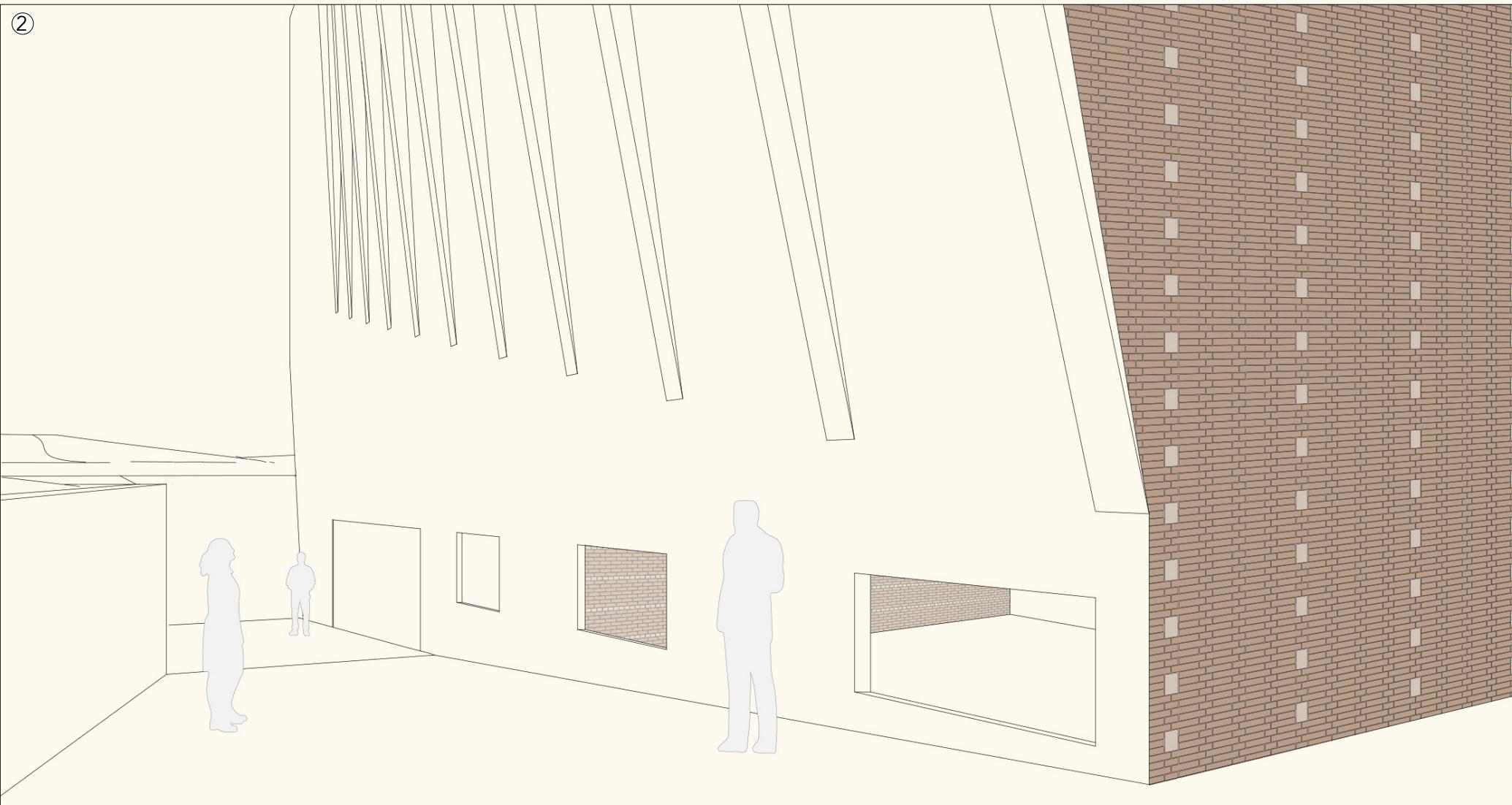
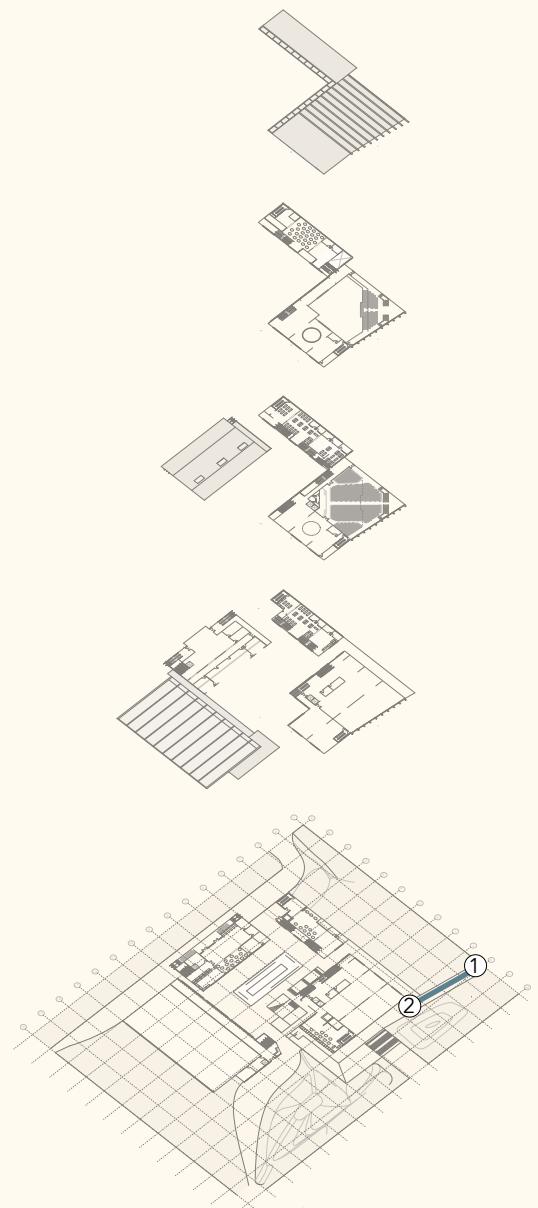
Melis Stokelaan North - Cultural centre

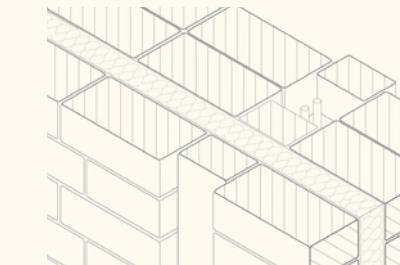
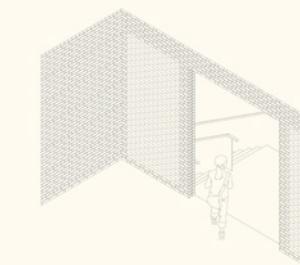
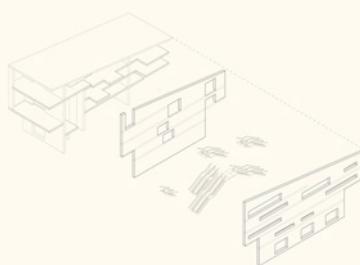
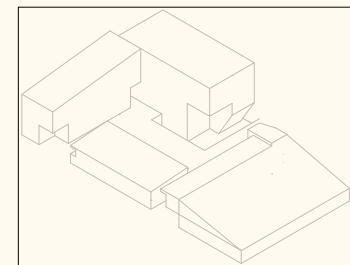




## STORYBOARD 1

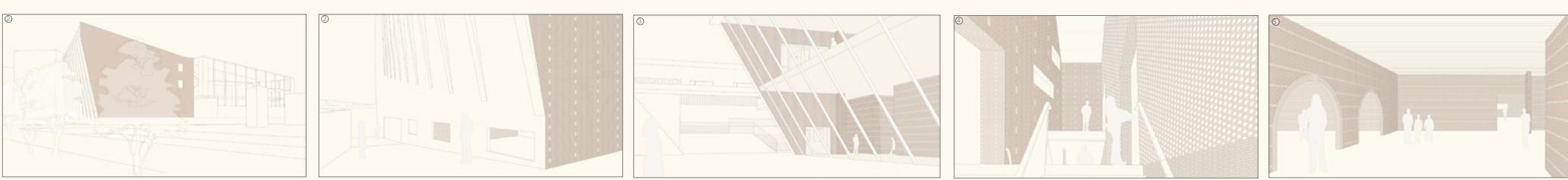
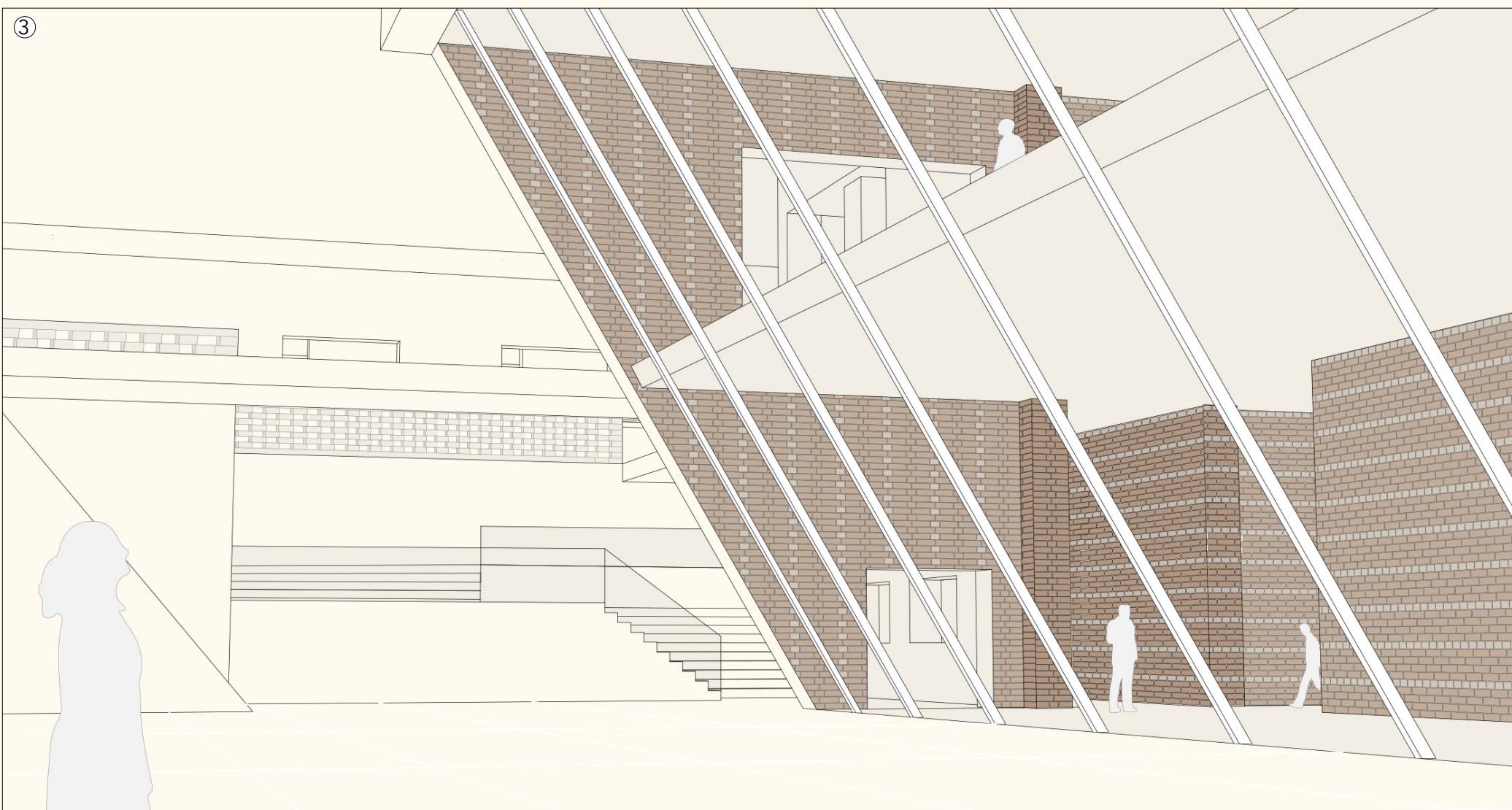
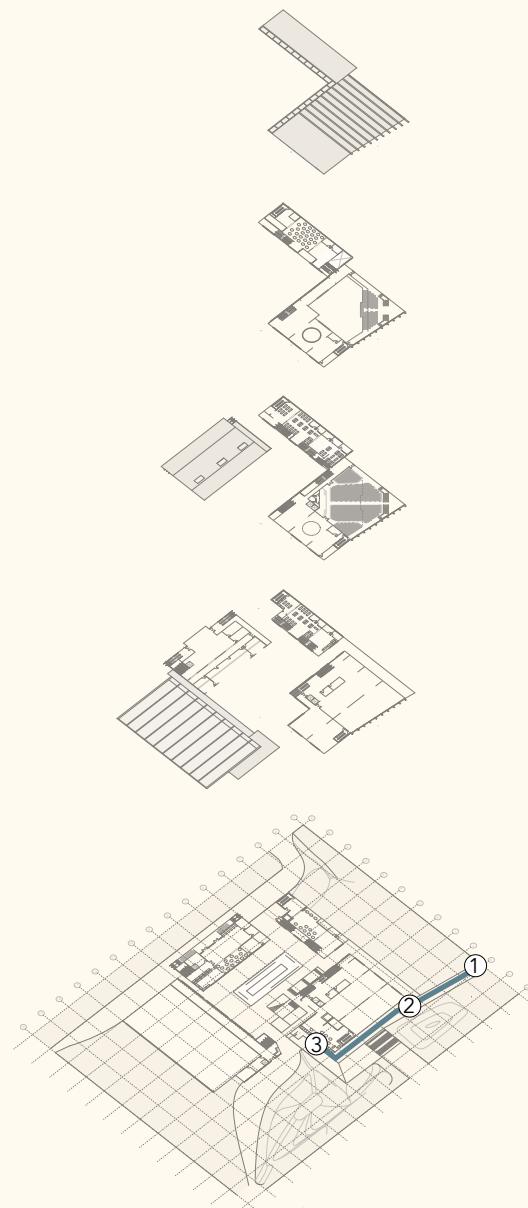
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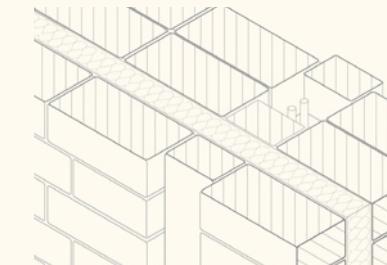
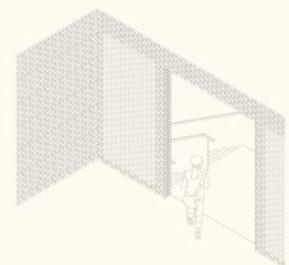
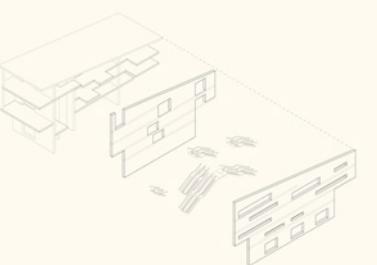
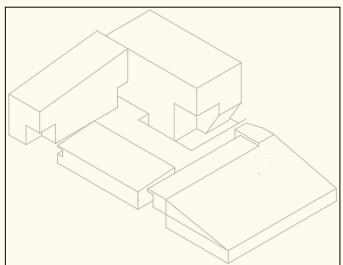




## STORYBOARD 1

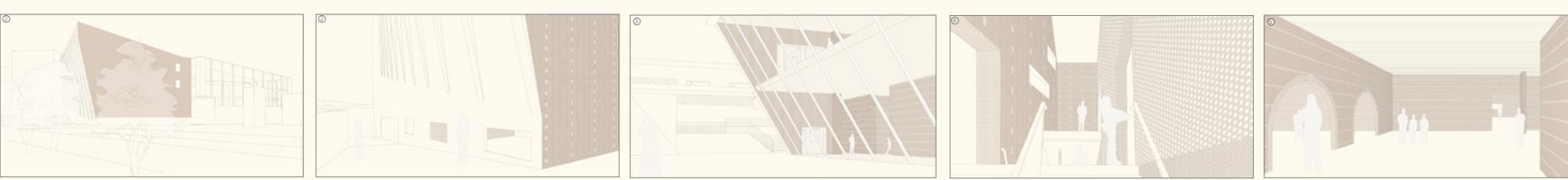
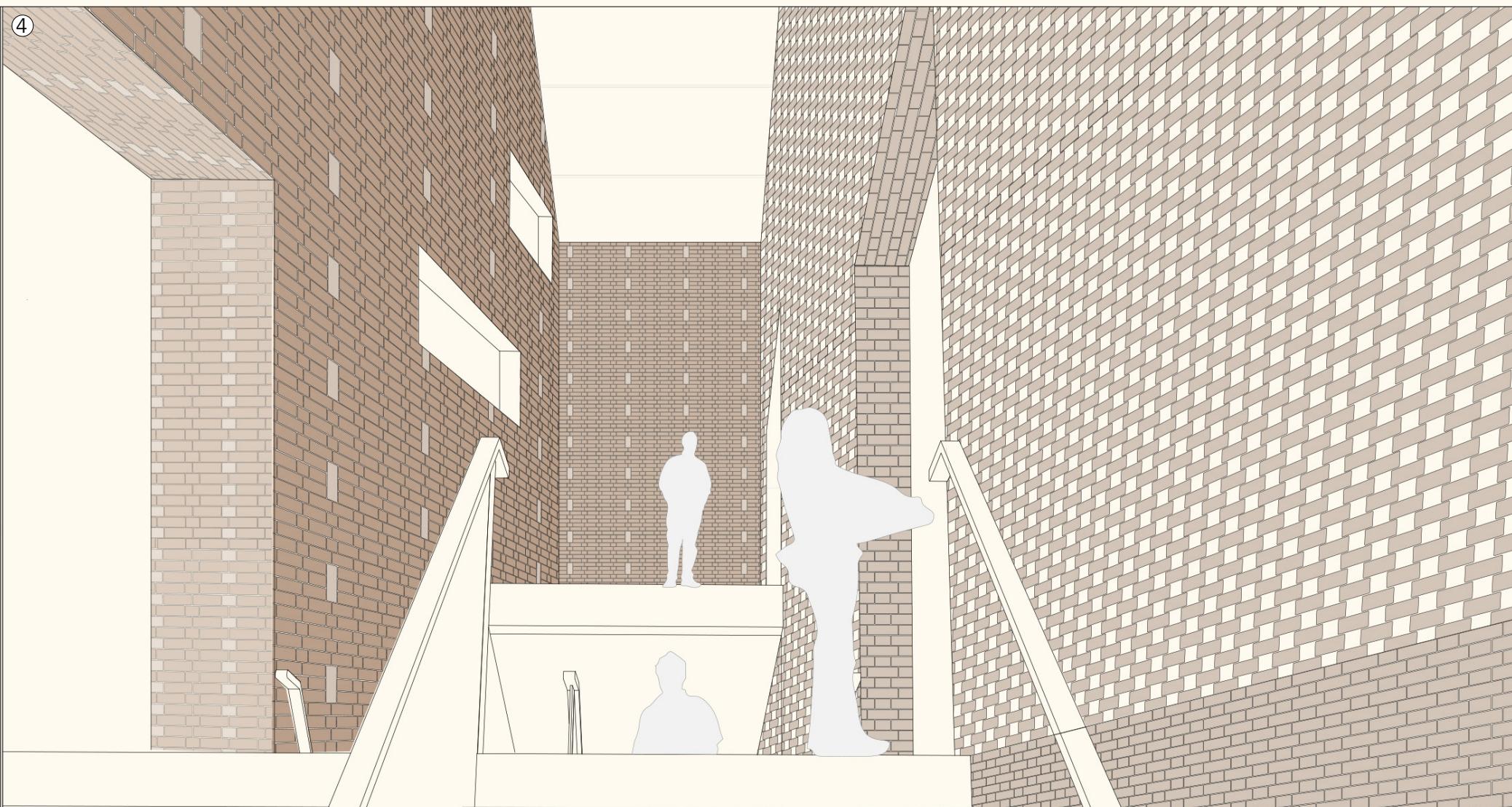
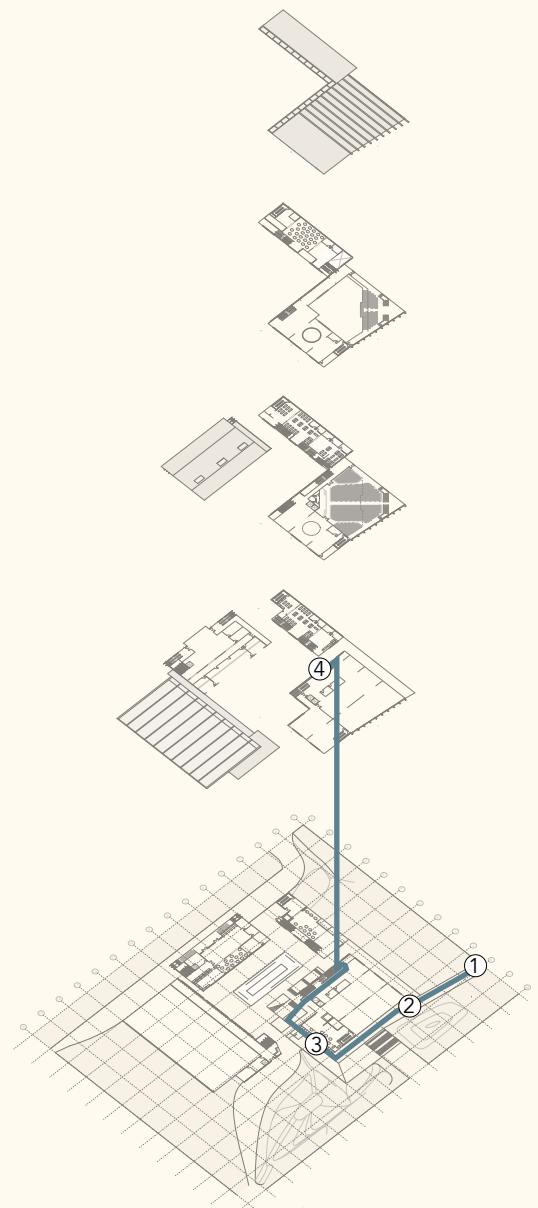
Melis Stokelaan North - Cultural centre

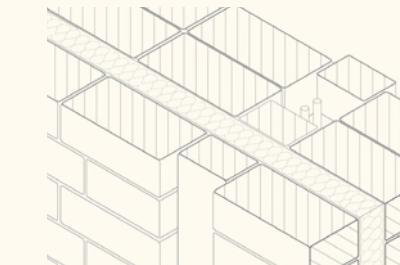
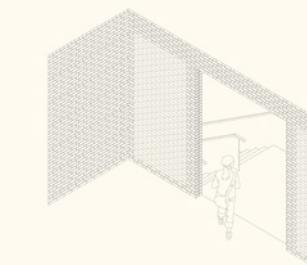
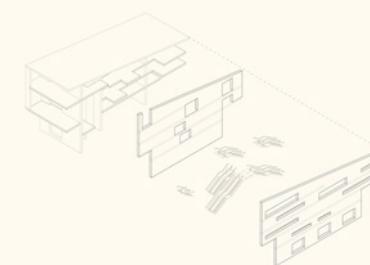
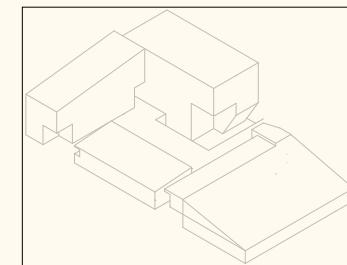




## STORYBOARD 1

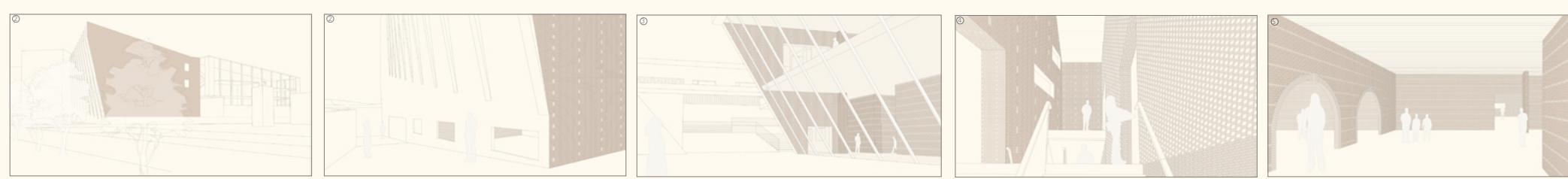
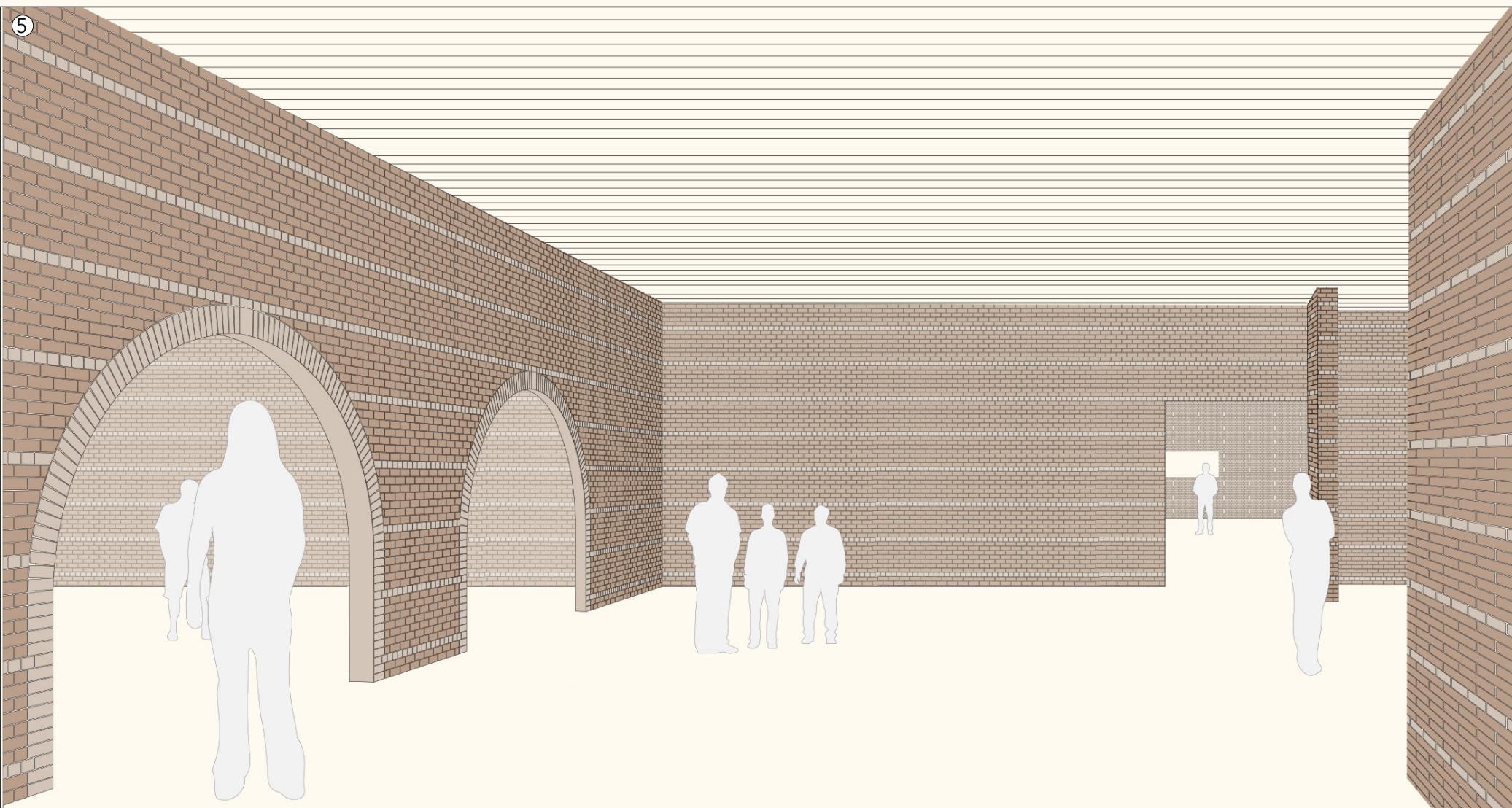
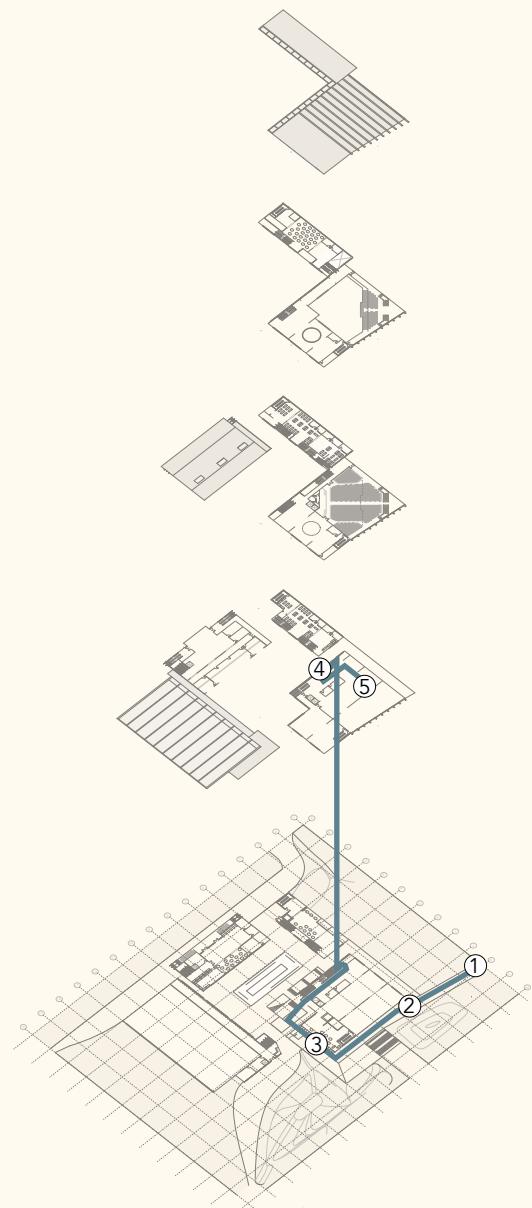
Melis Stokelaan North - Cultural centre

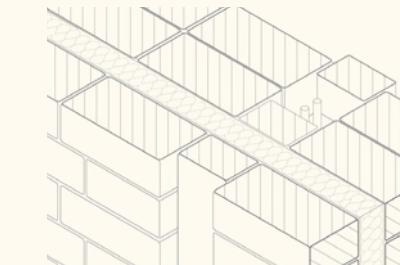
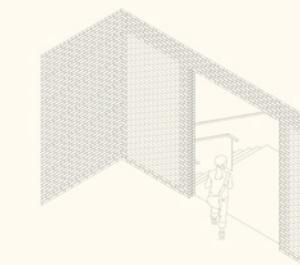
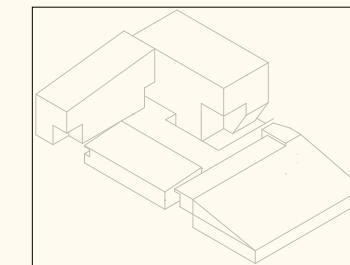




## STORYBOARD 1

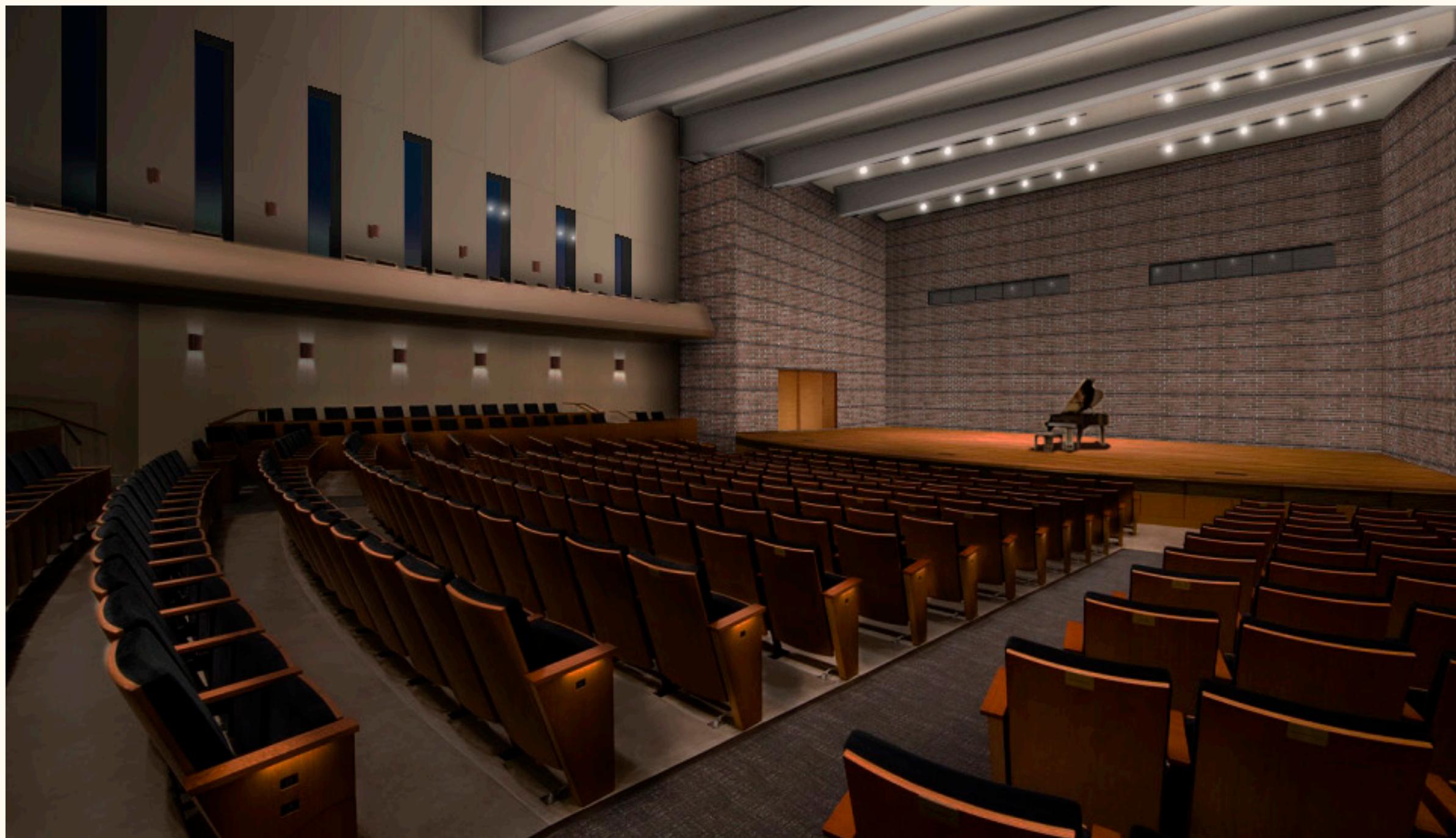
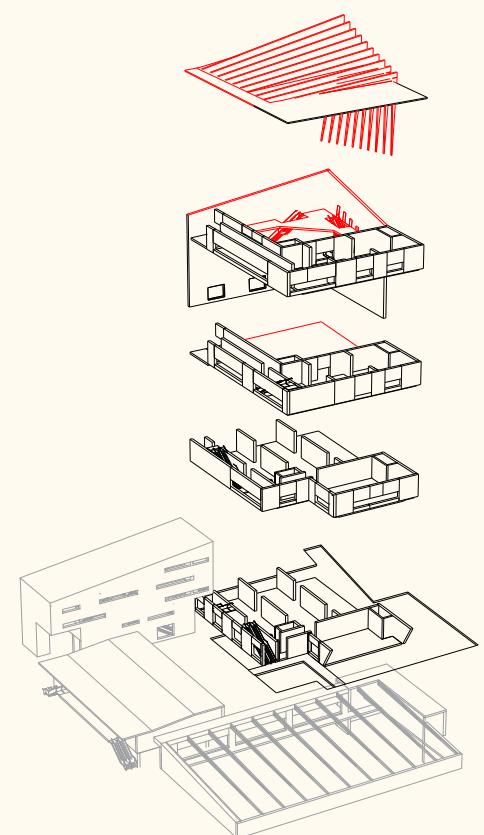
Melis Stokelaan North - Cultural centre

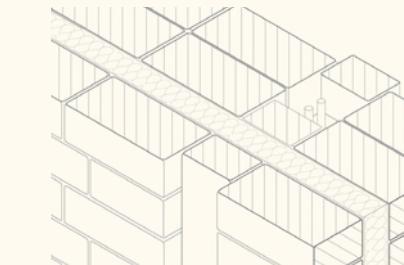
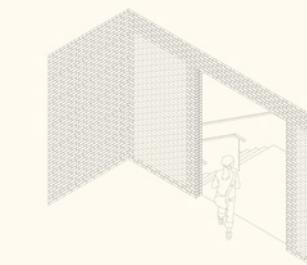
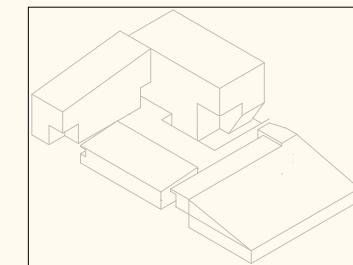




## AUDITORIUM

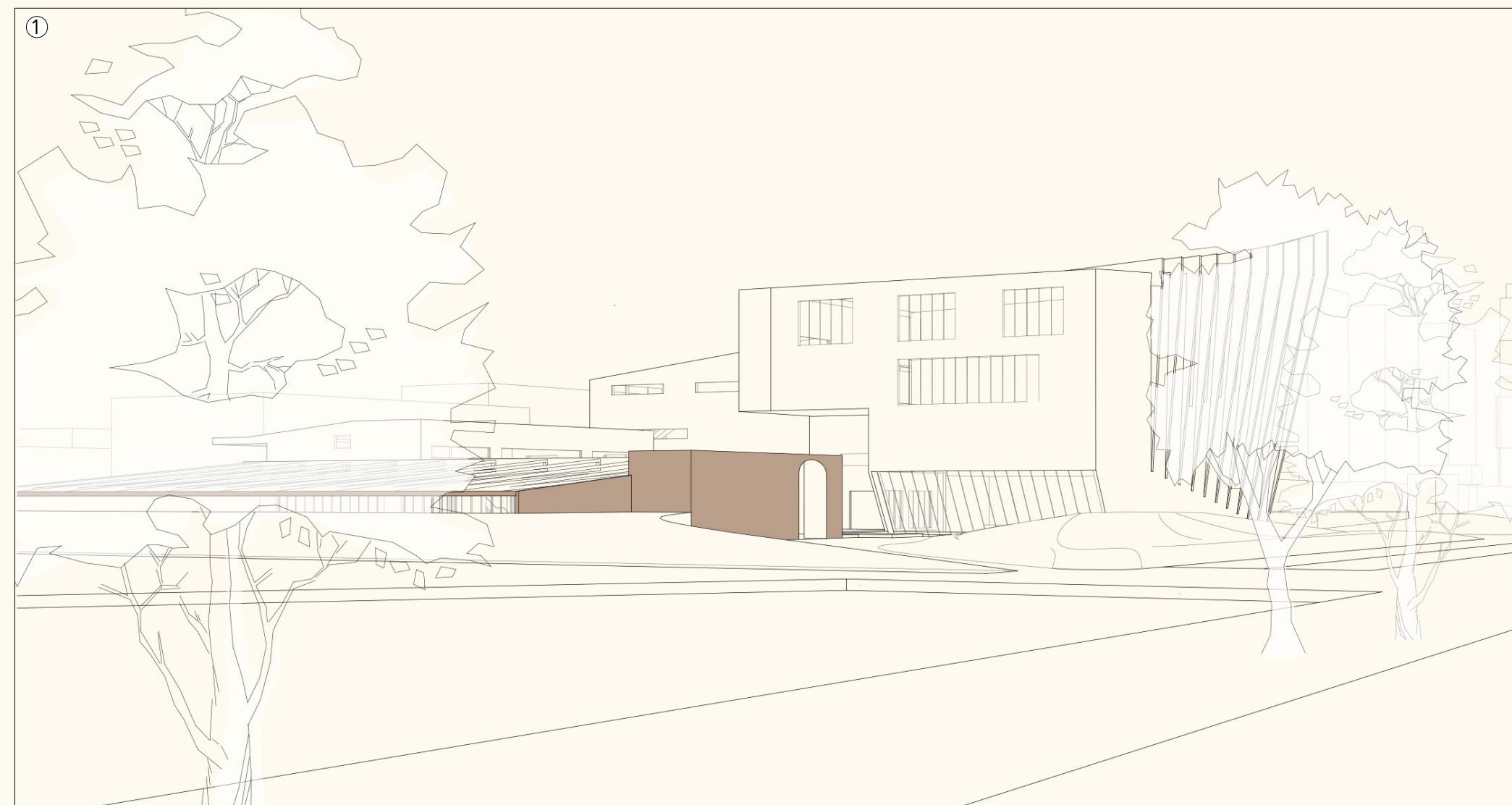
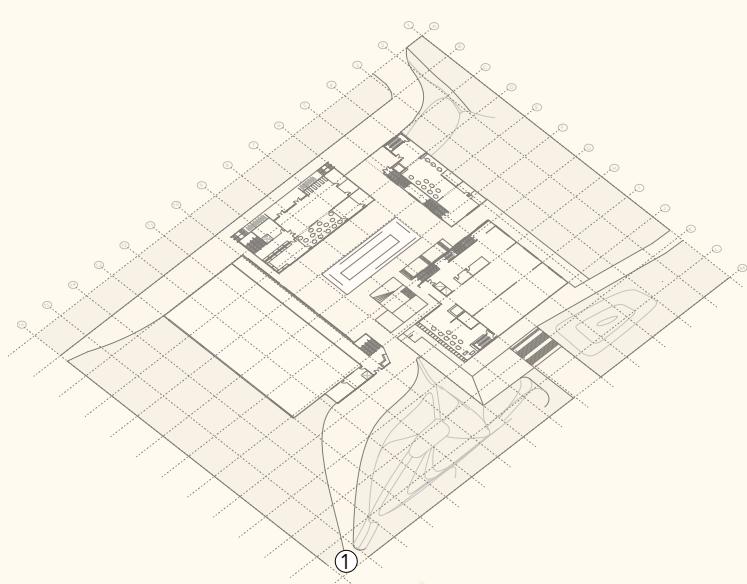
Cultural centre

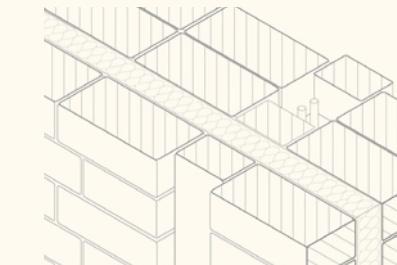
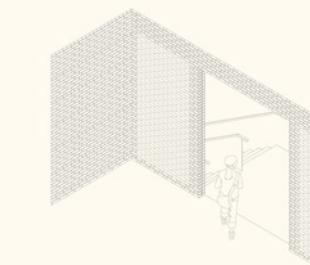
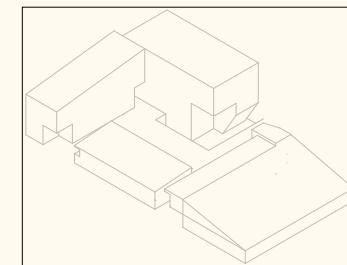




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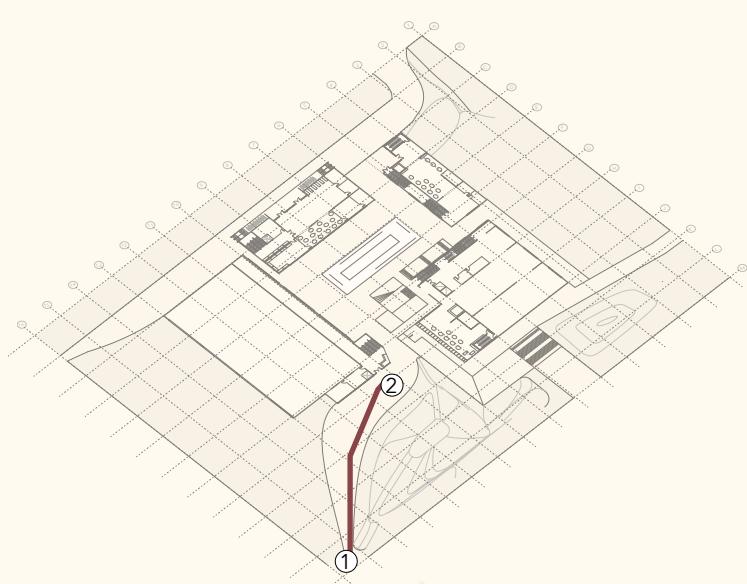
Melis Stokelaan South - Sports centre

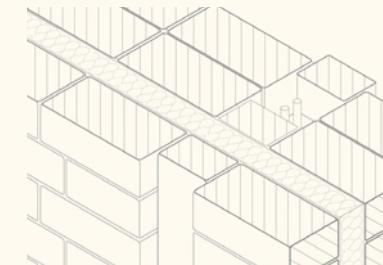
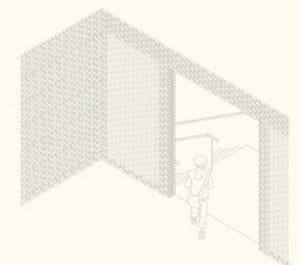
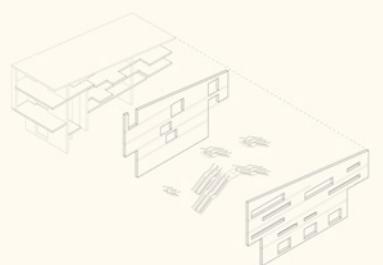
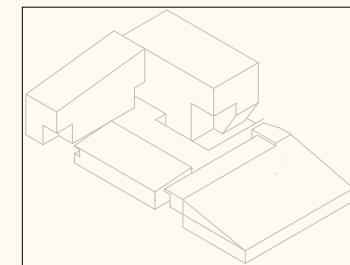




## STORYBOARD 2

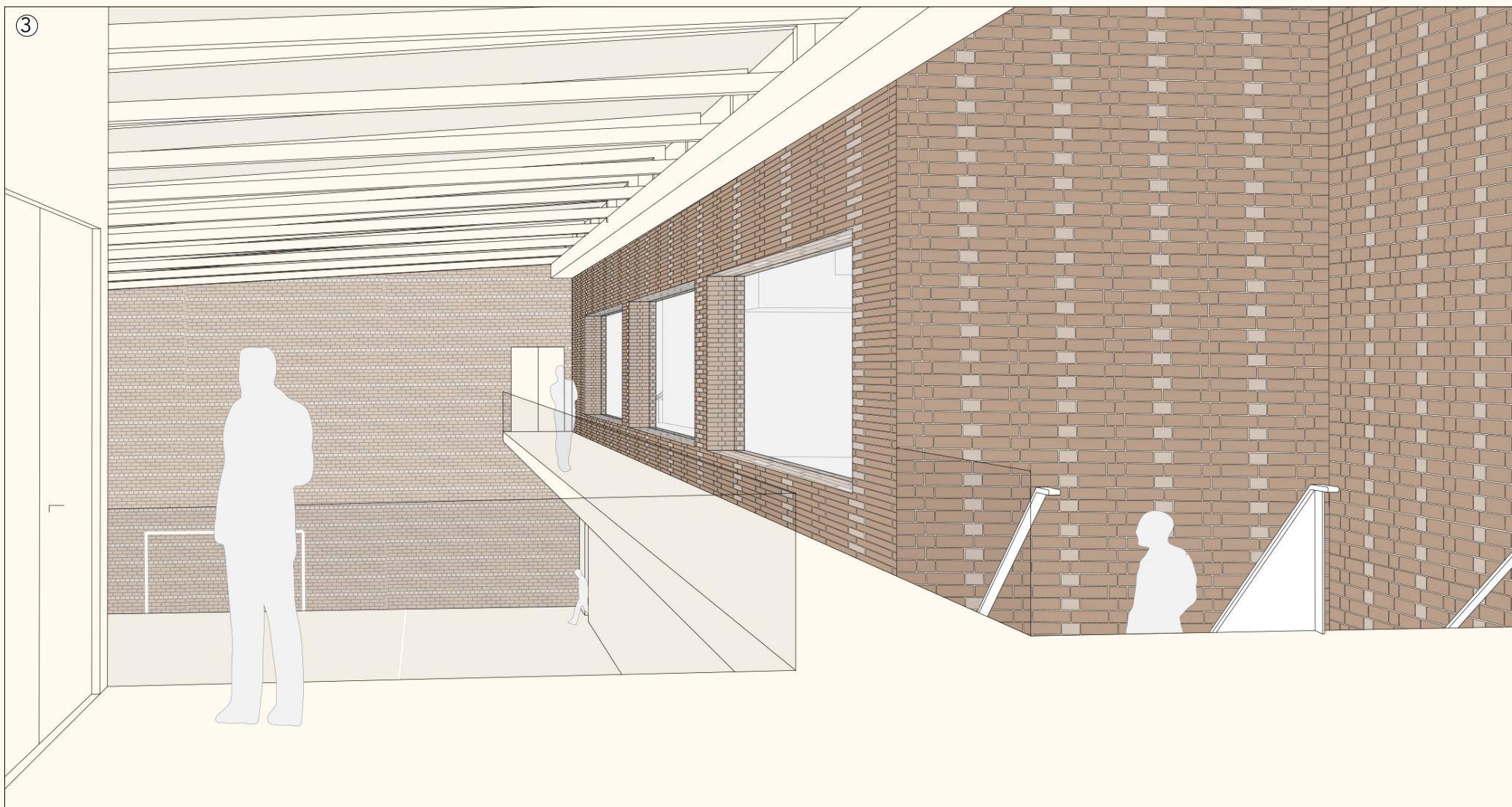
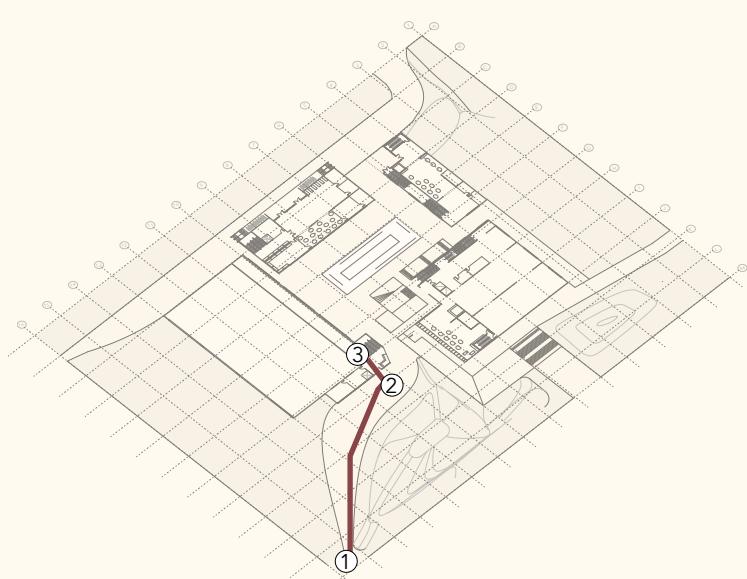
Melis Stokelaan South - Sports centre

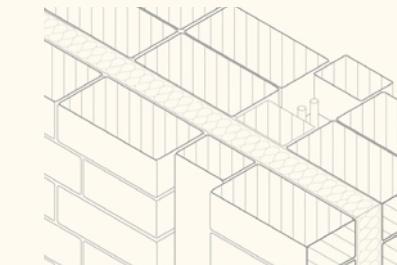
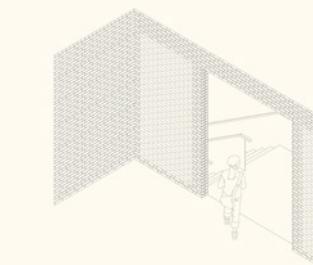
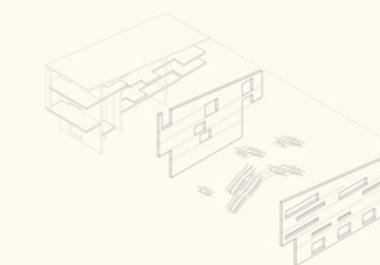
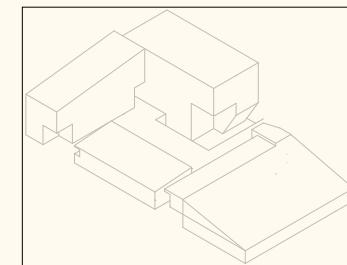




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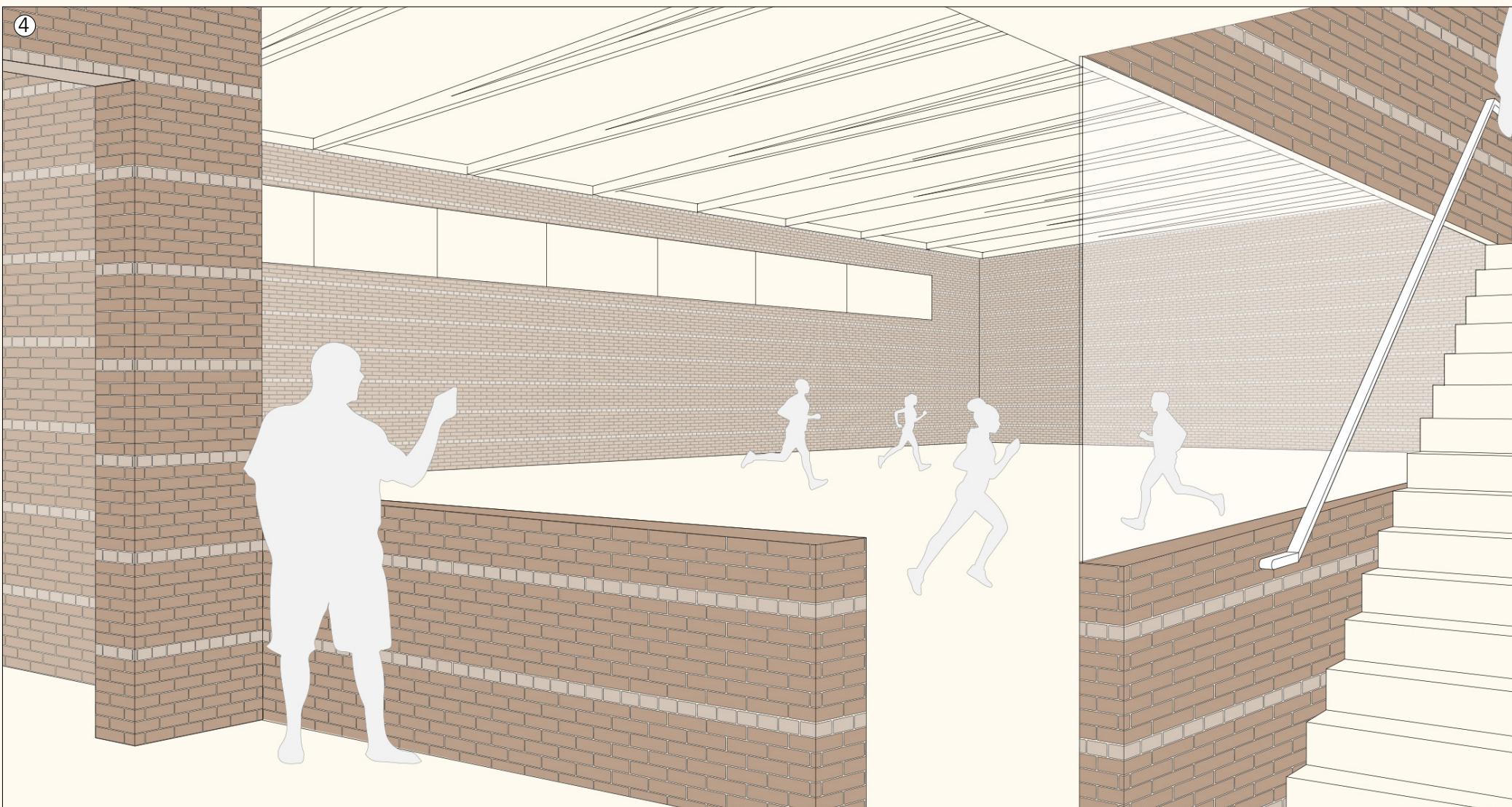
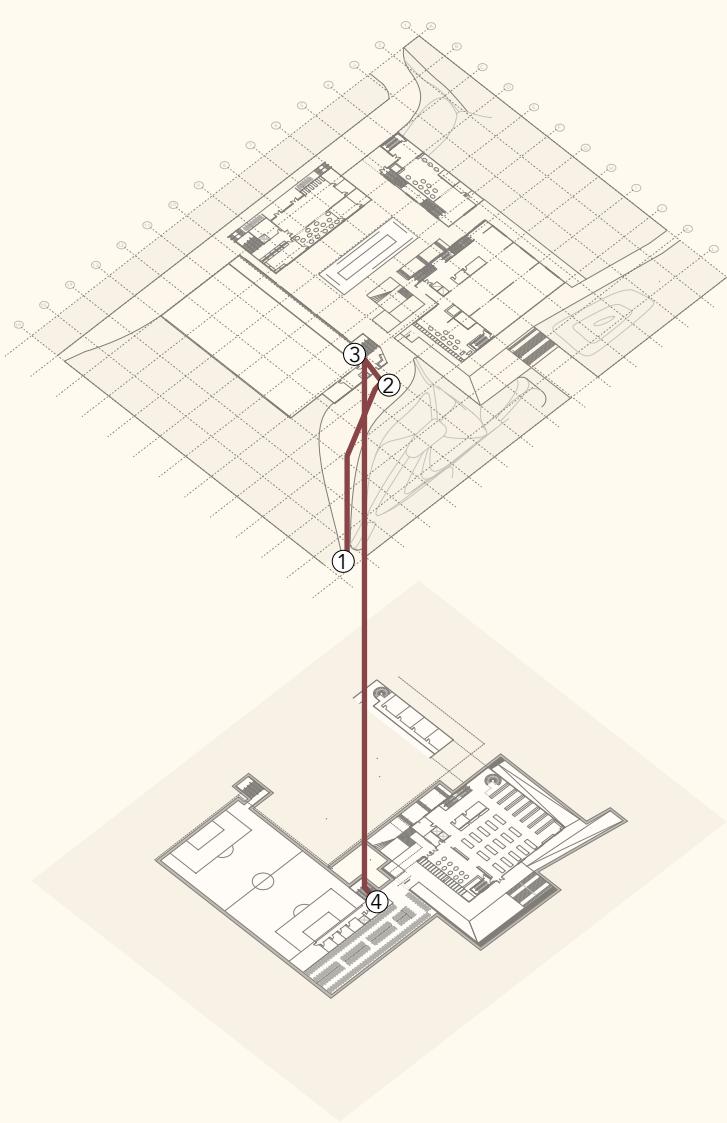
Melis Stokelaan South - Sports centre

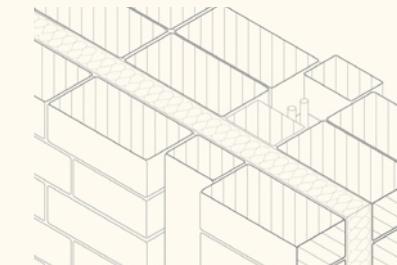
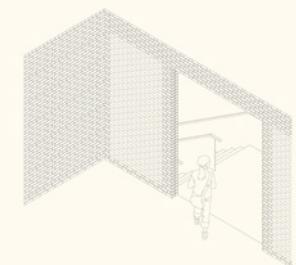
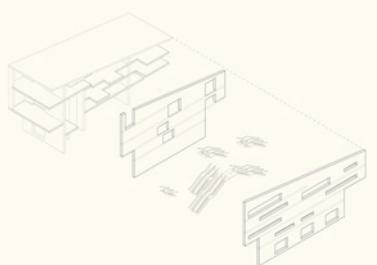
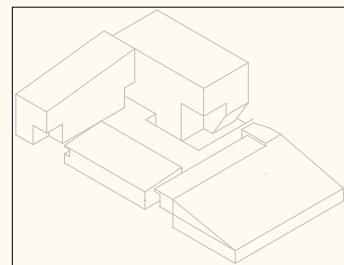




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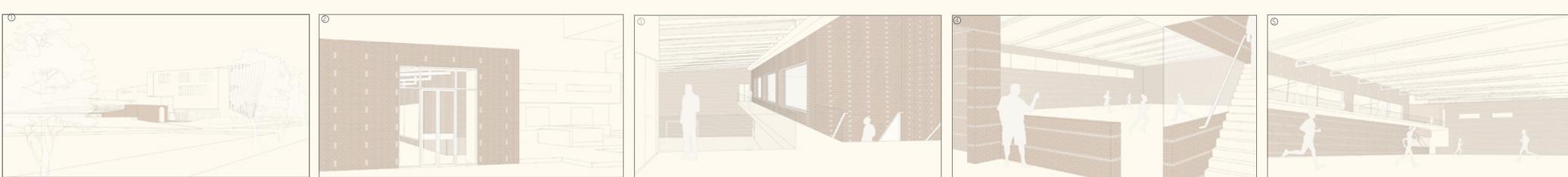
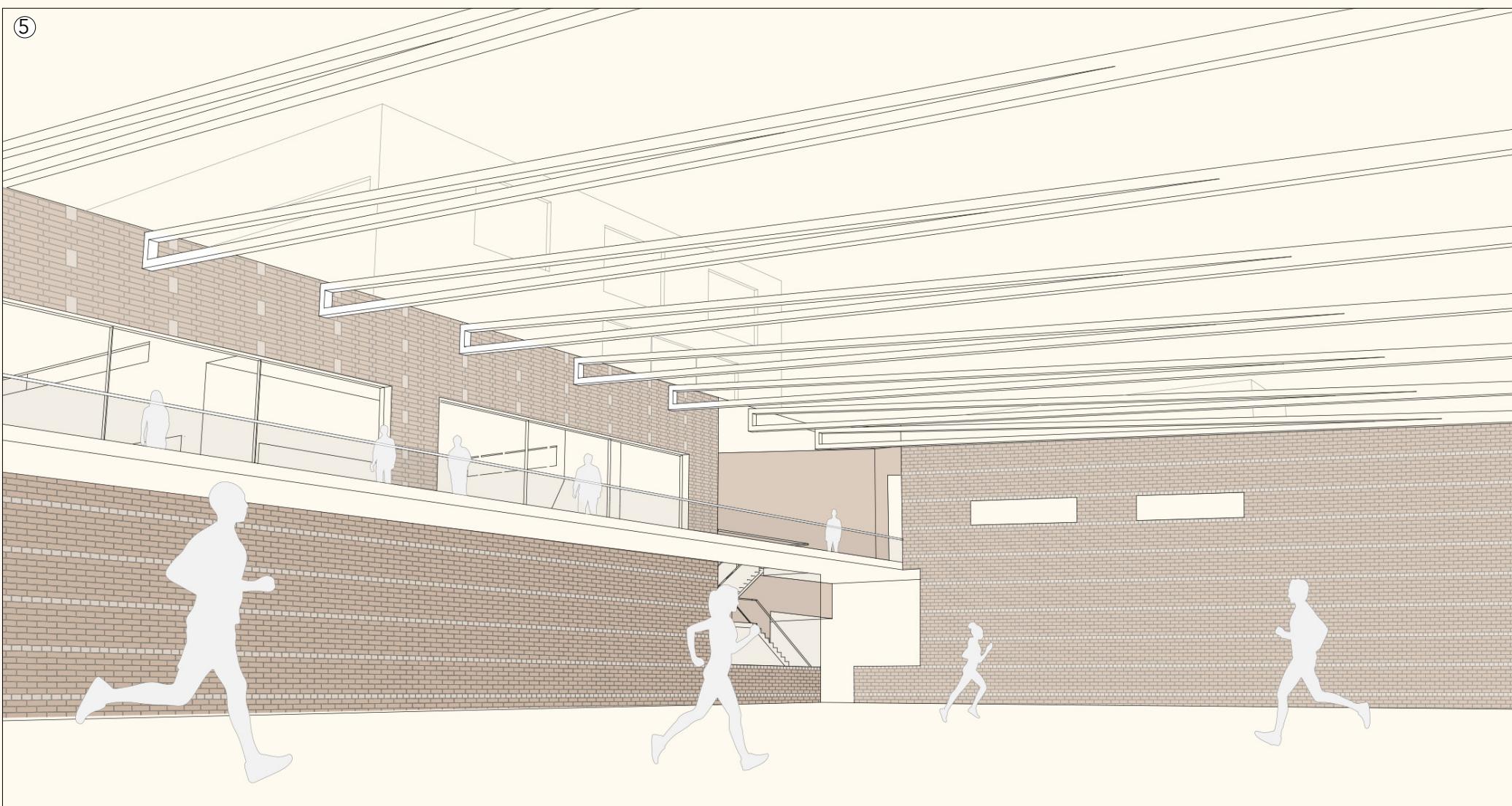
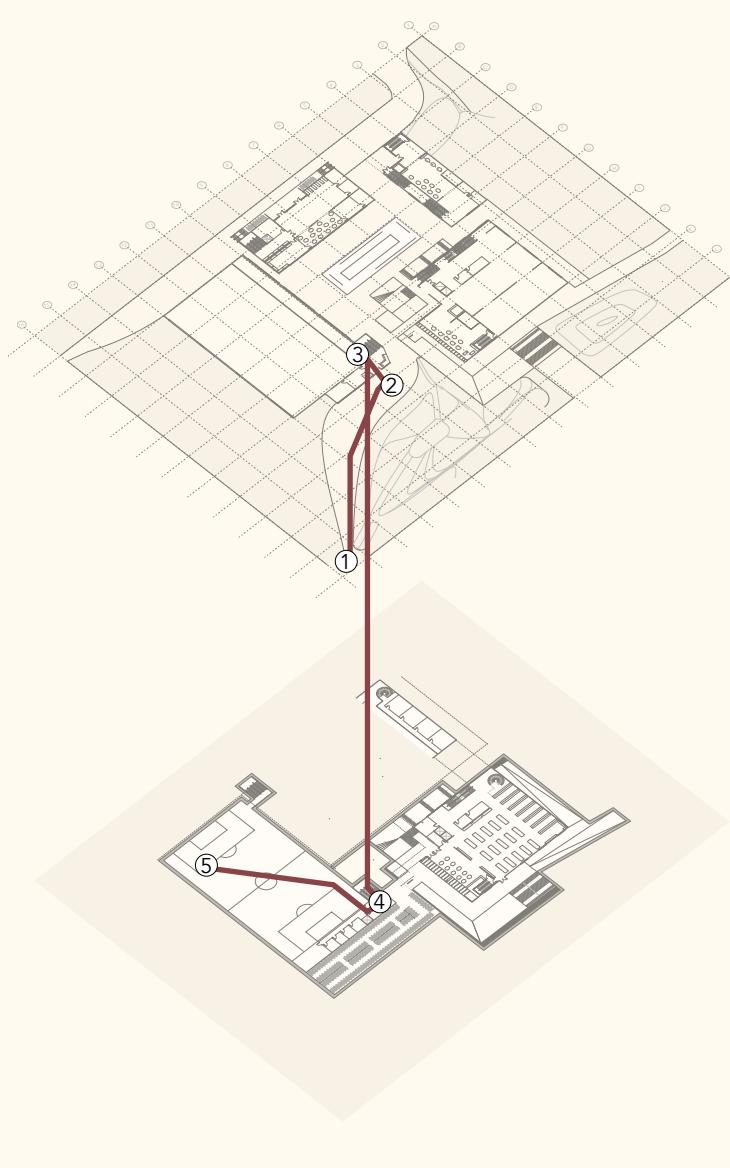
Melis Stokelaan South - Sports centre

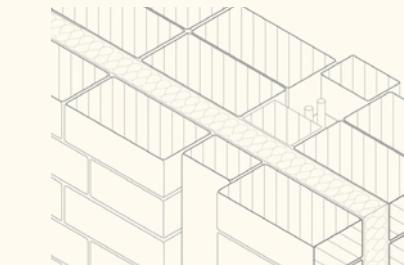
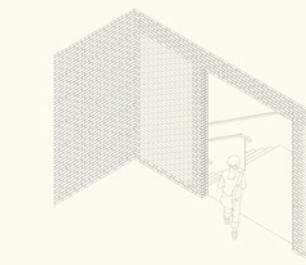
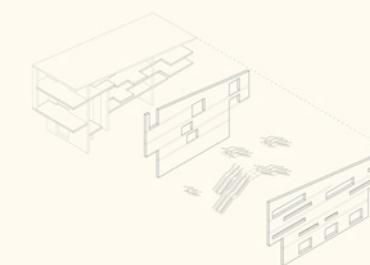
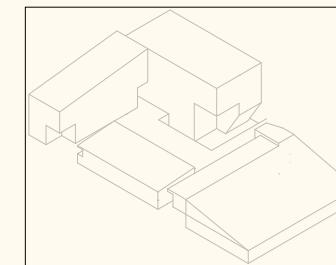




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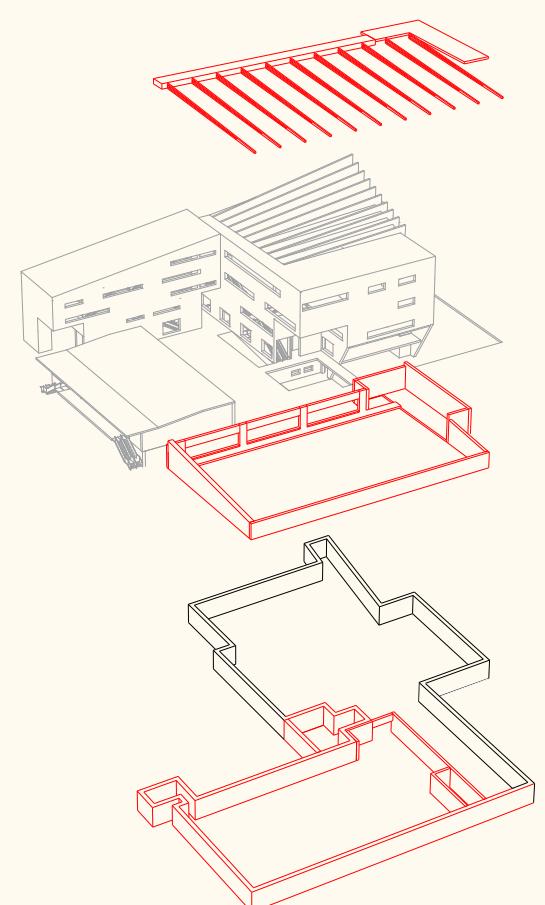
Melis Stokelaan South - Sports centre

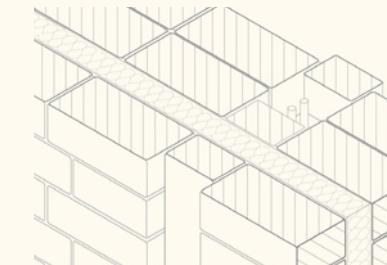
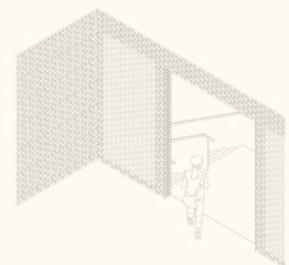
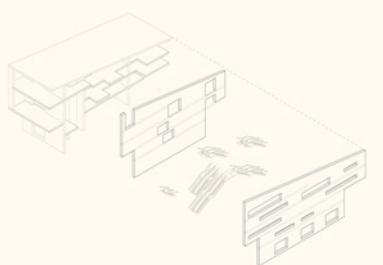
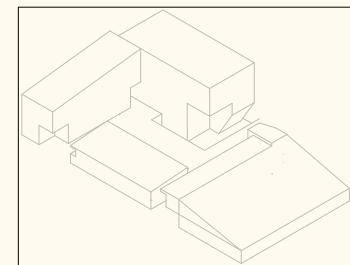




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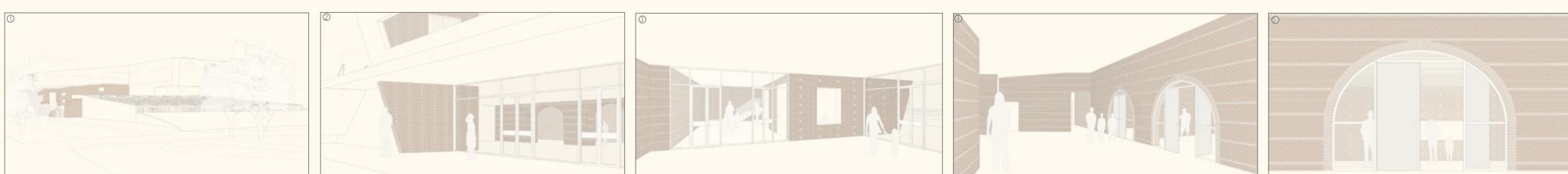
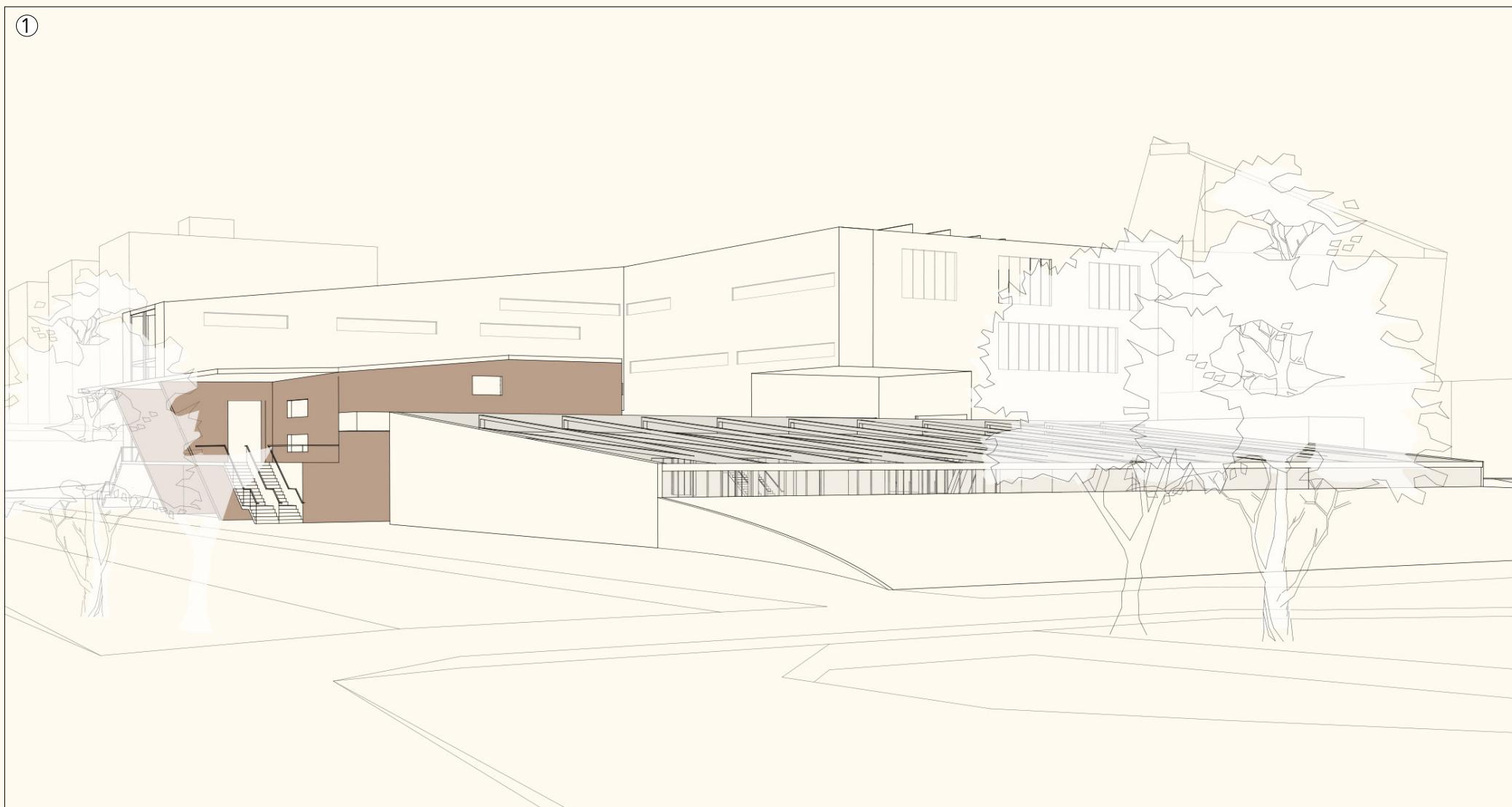
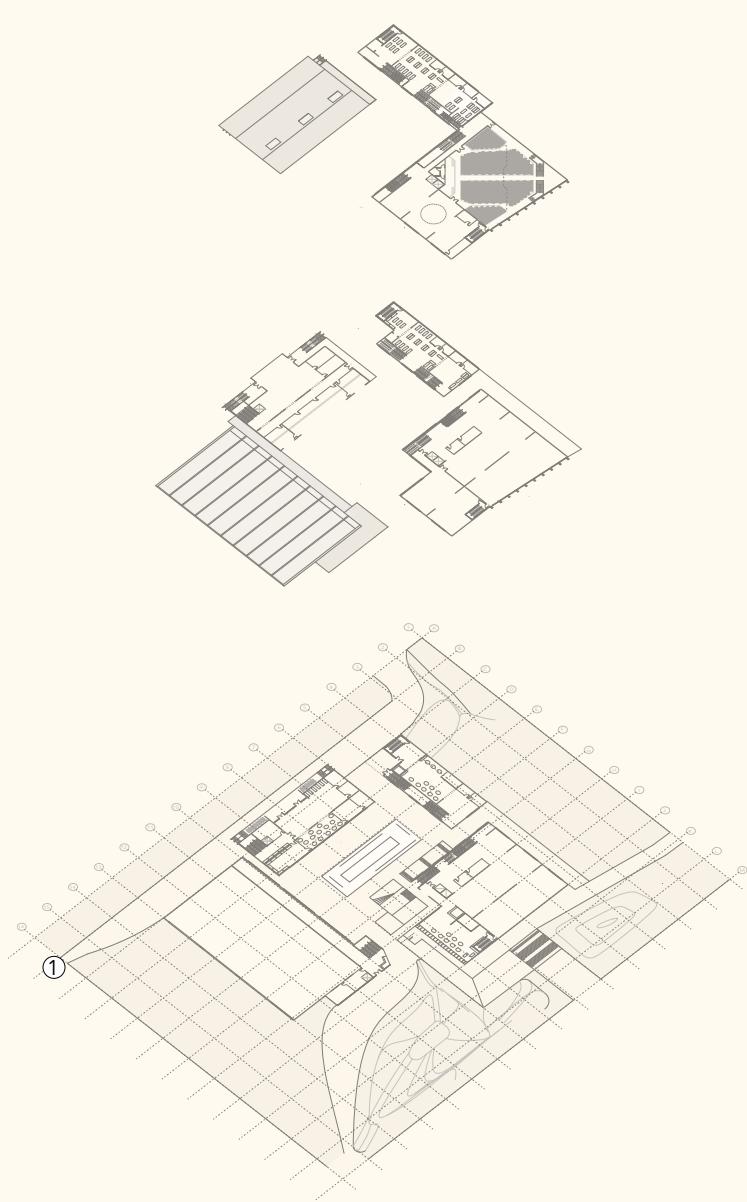
**Sports centre**

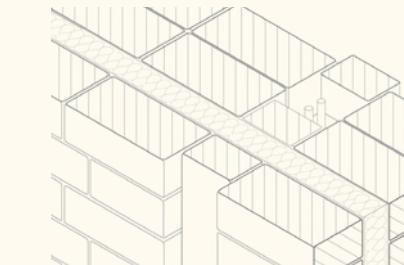
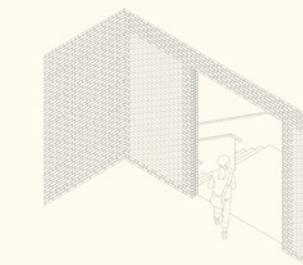
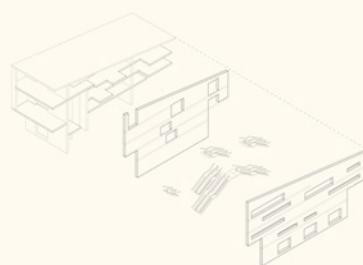
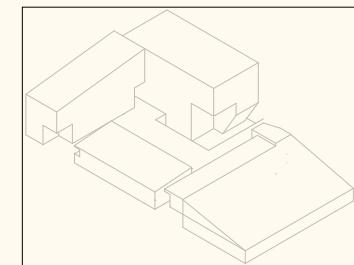




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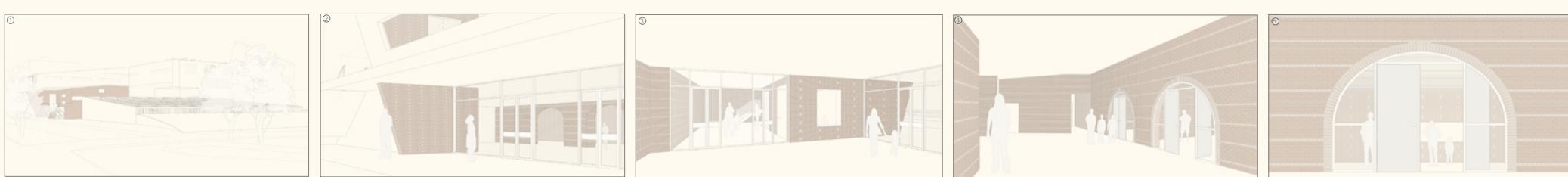
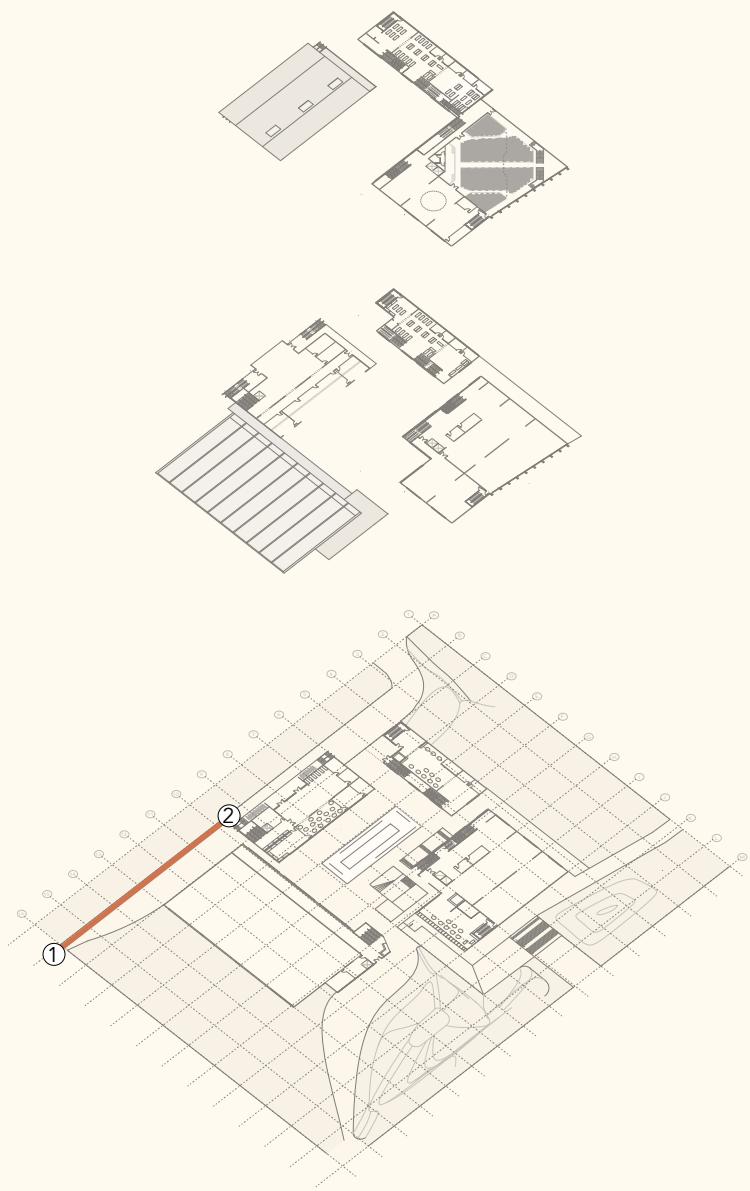
Melis Stokelaan South - Education Centre

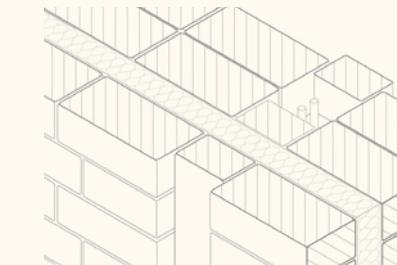
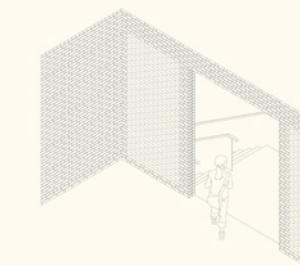
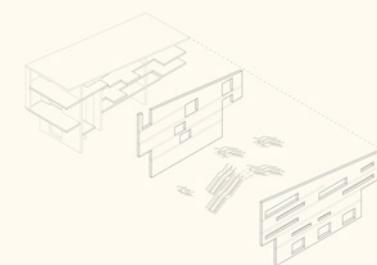
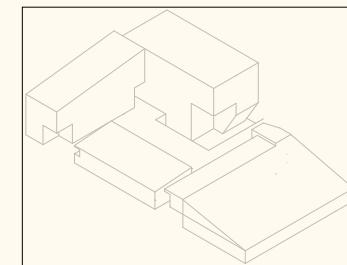




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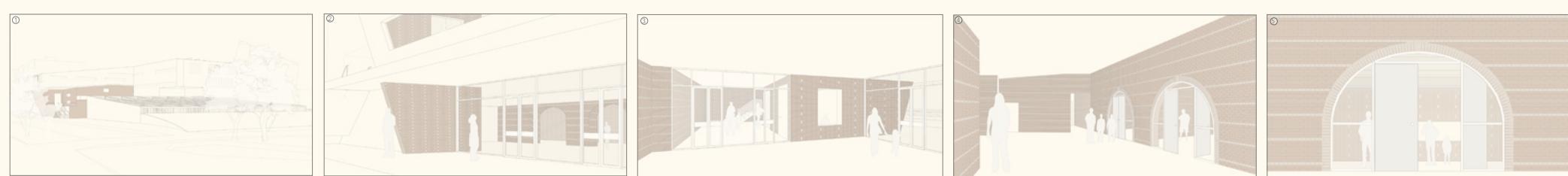
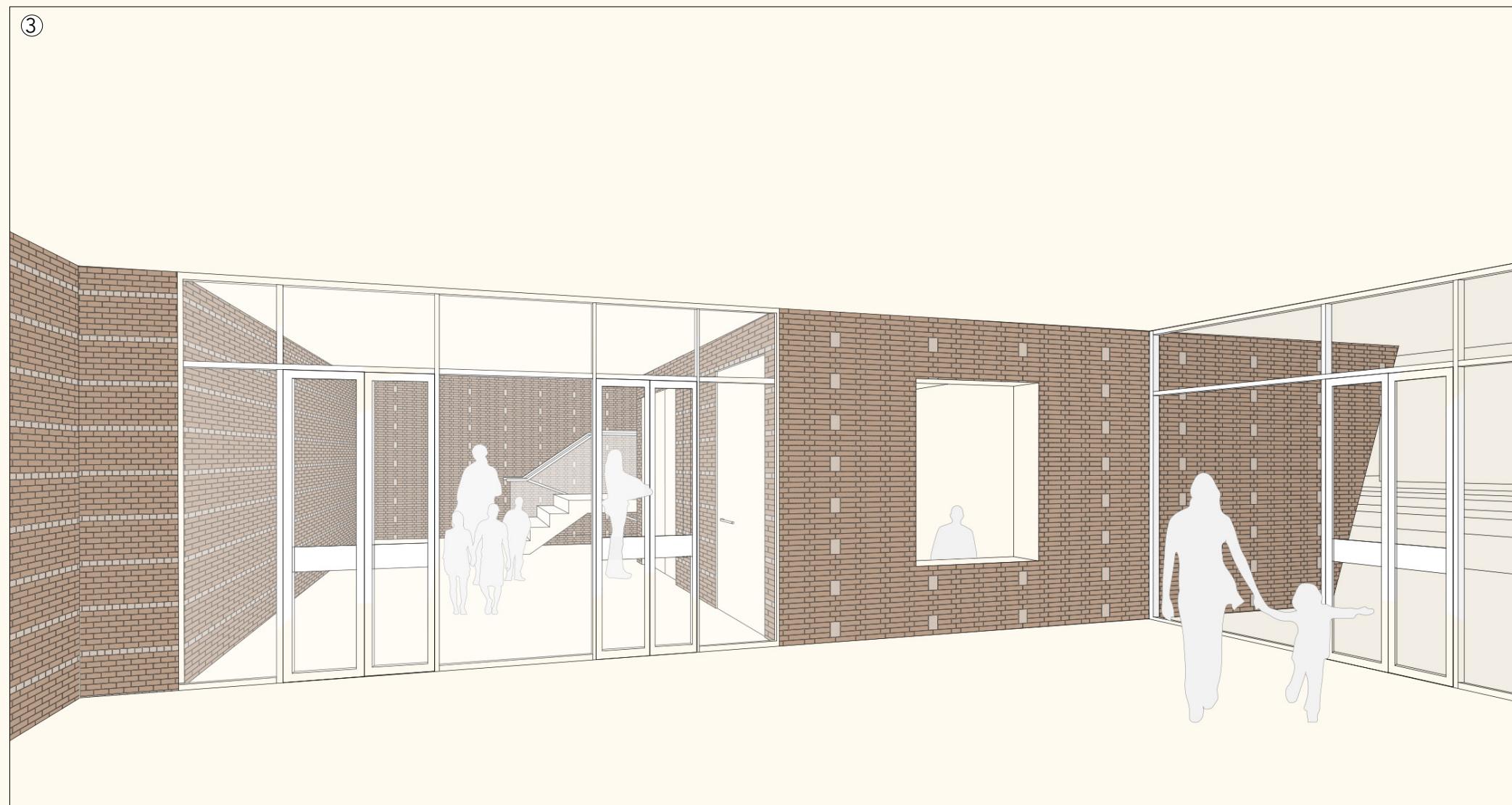
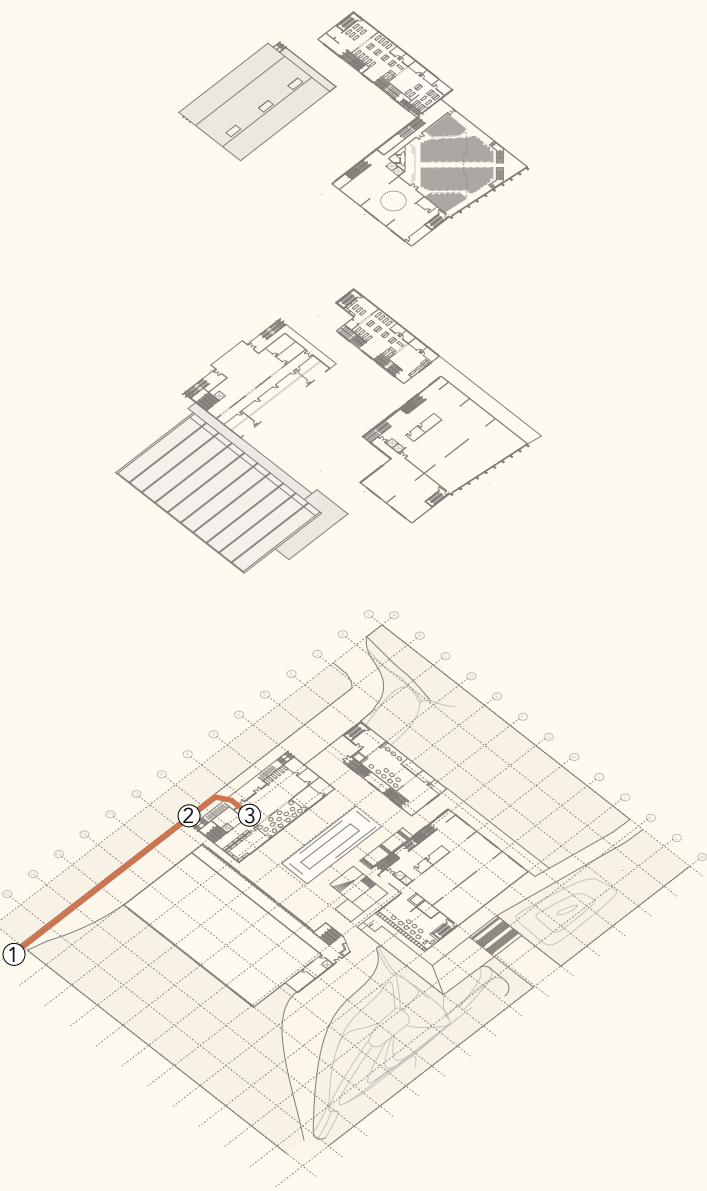
Melis Stokelaan South - Education Centre

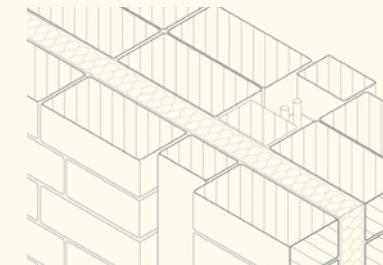
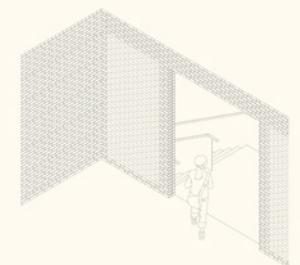
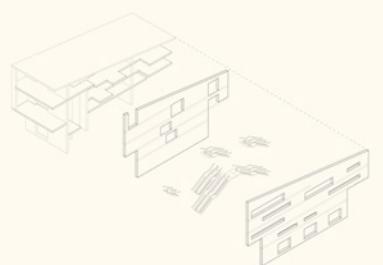
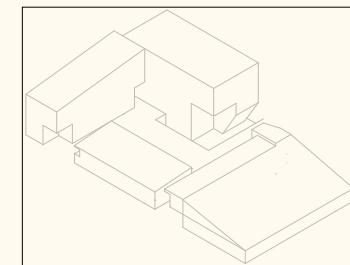




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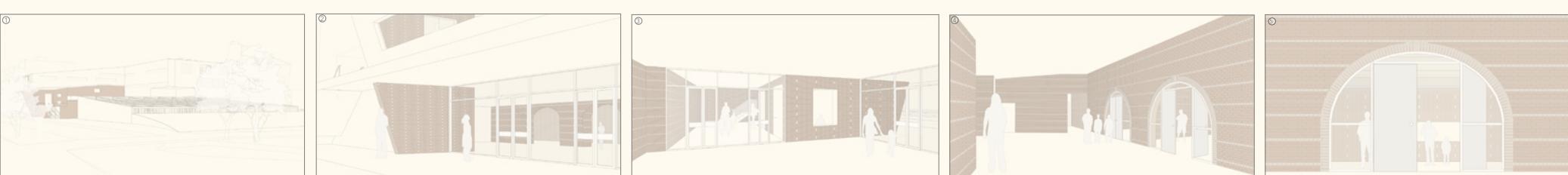
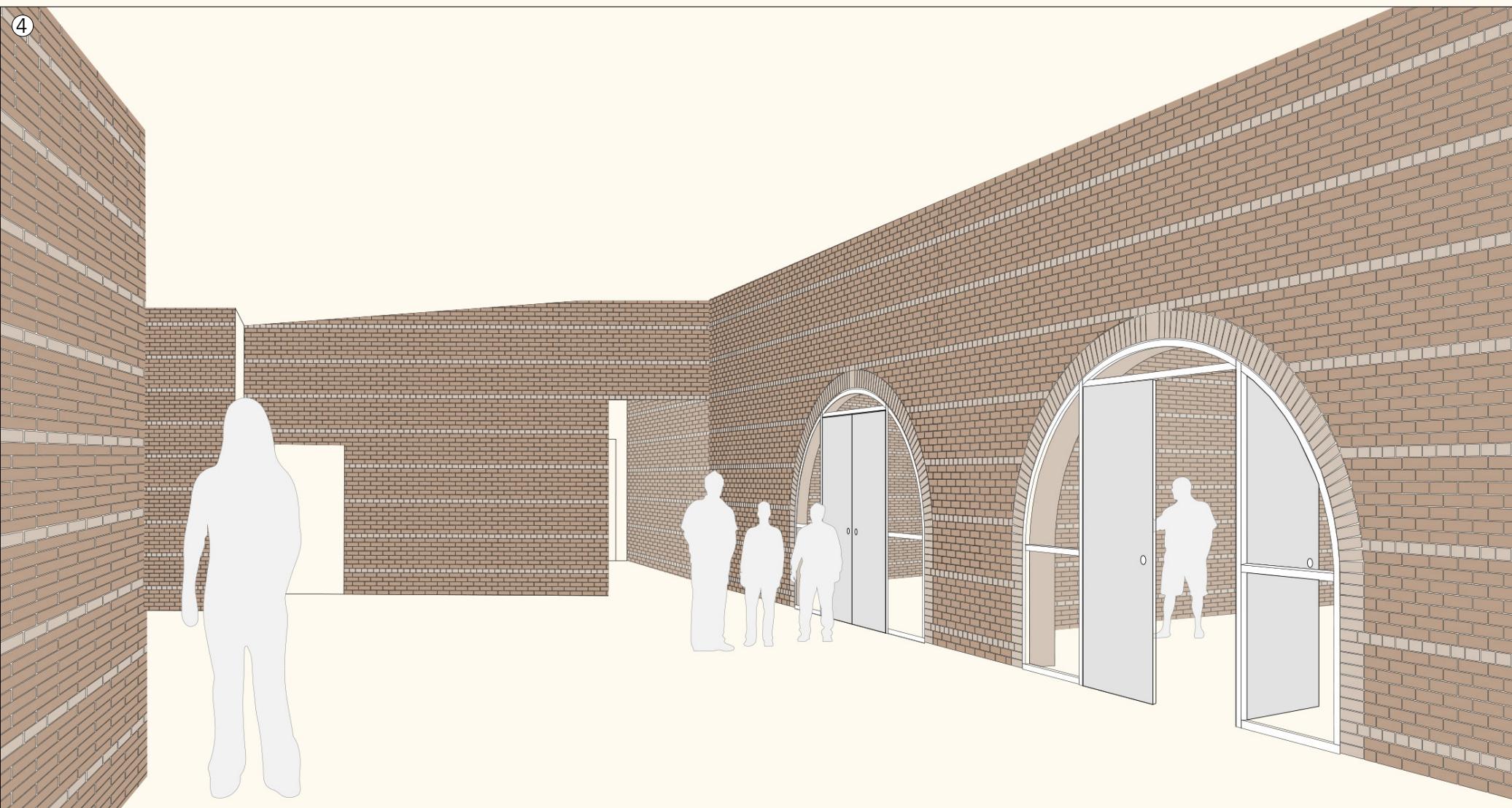
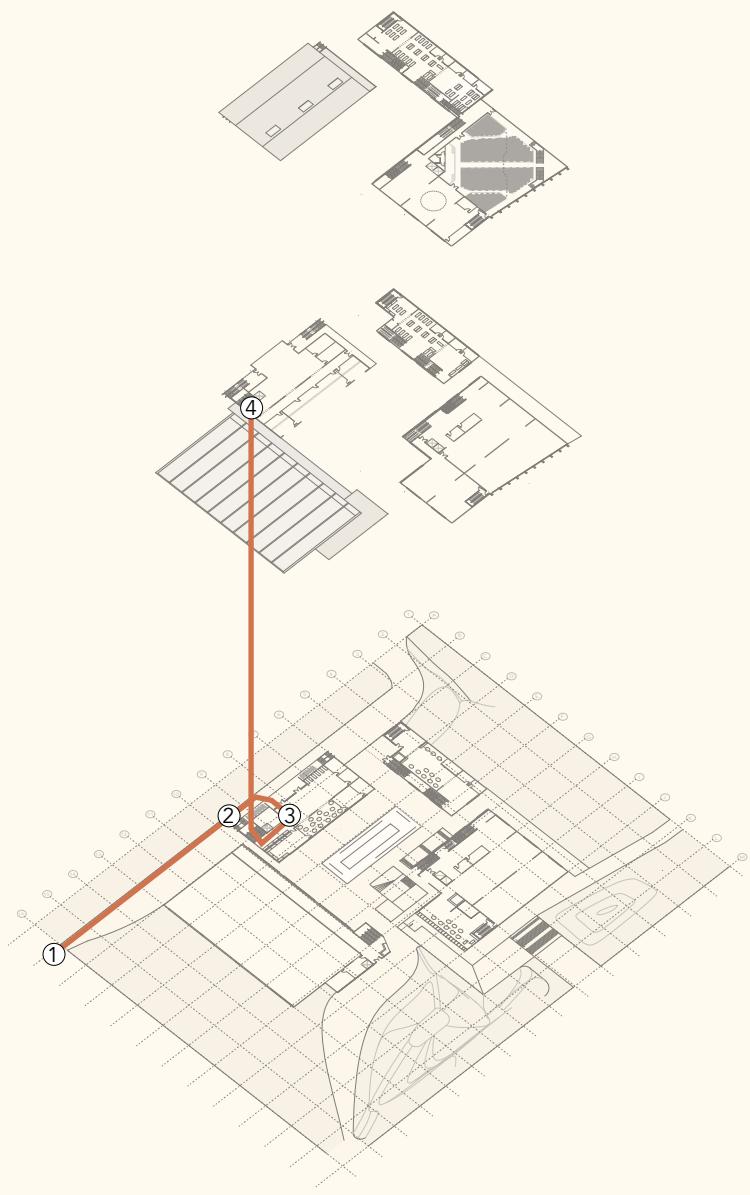
Melis Stokelaan South - Education Centre

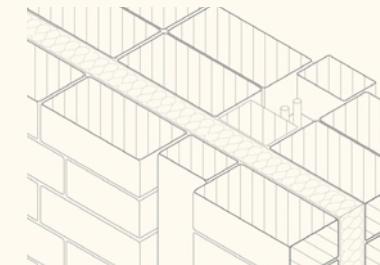
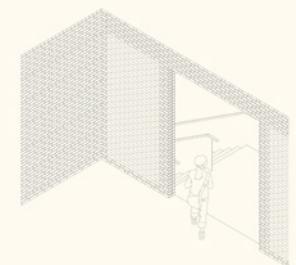
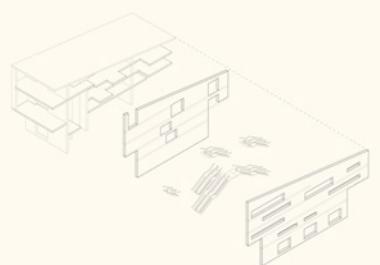
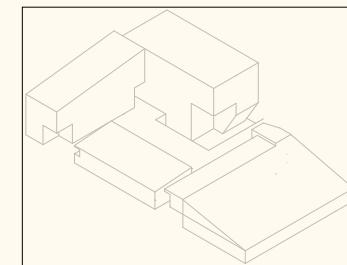




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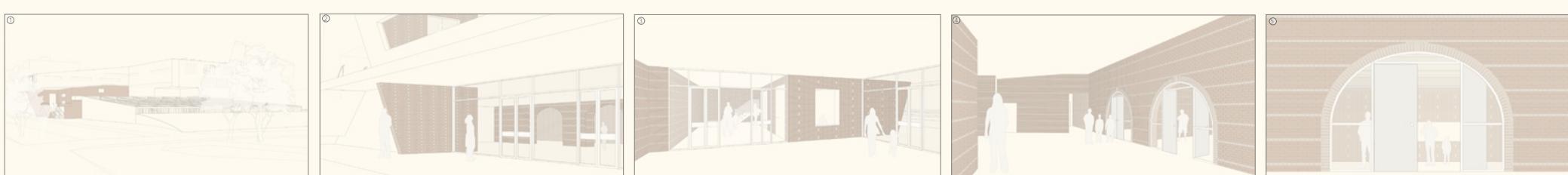
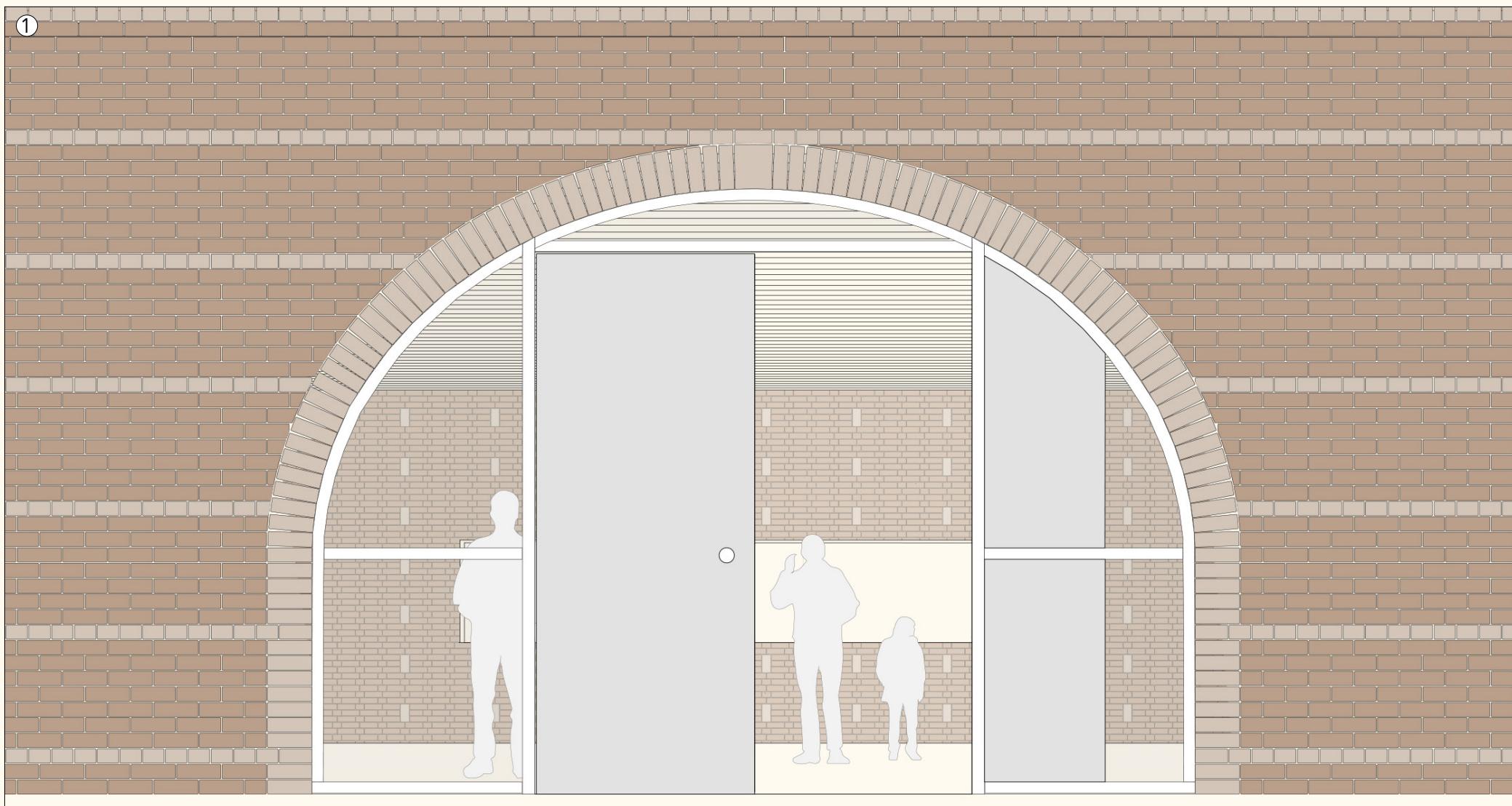
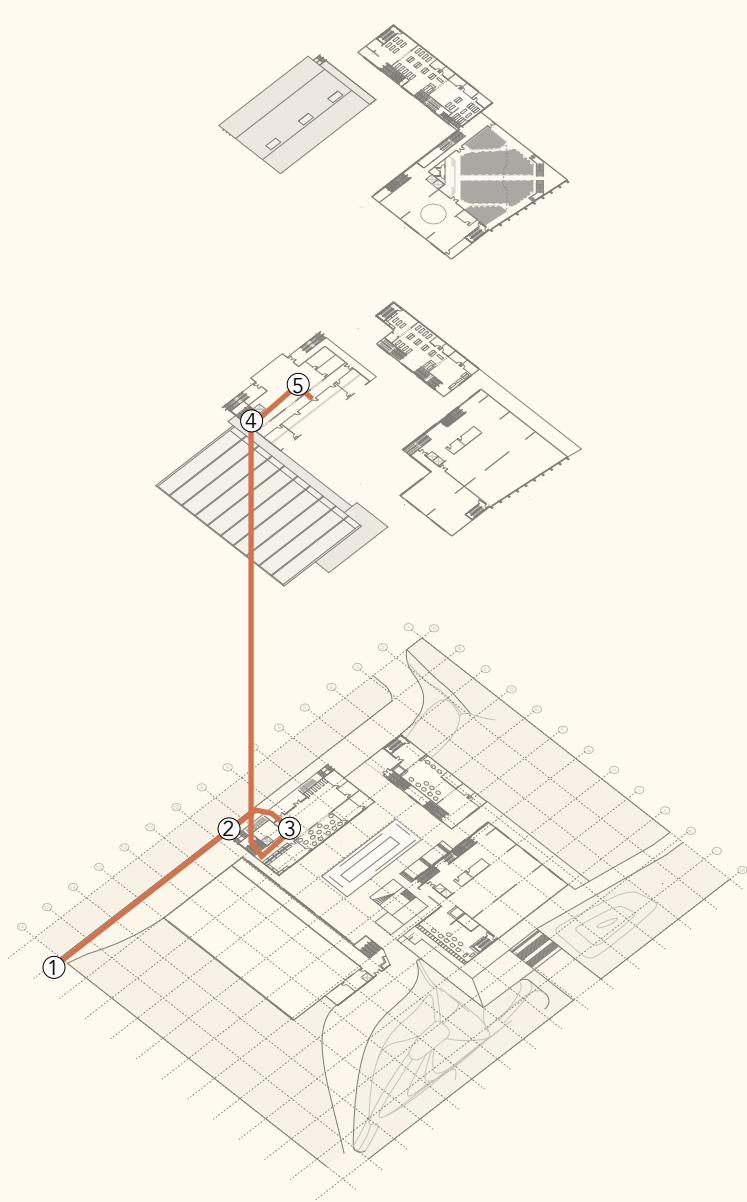
Melis Stokelaan South - Education Centre

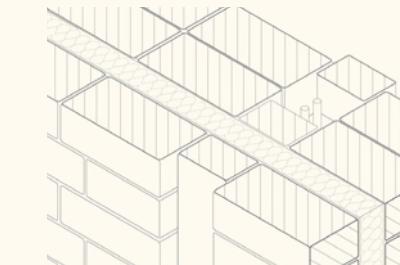
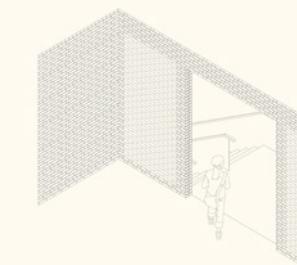
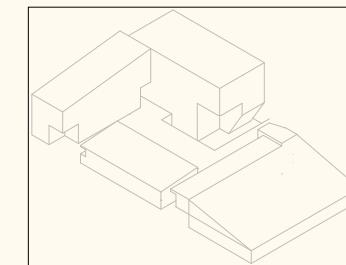




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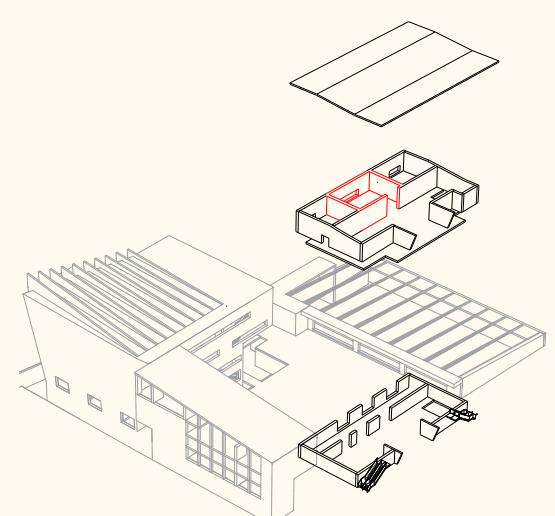
Melis Stokelaan South - Education Centre

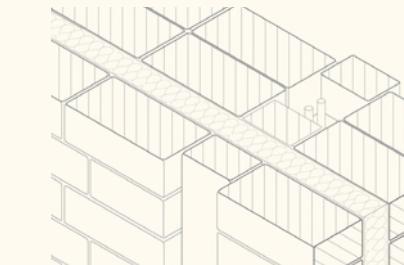
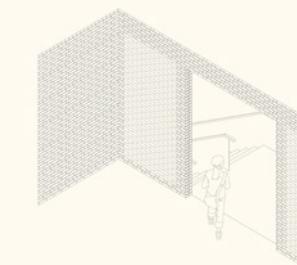
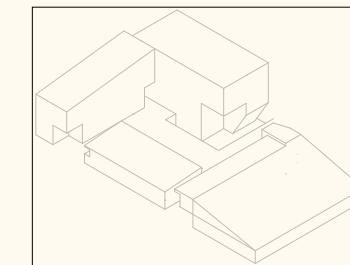




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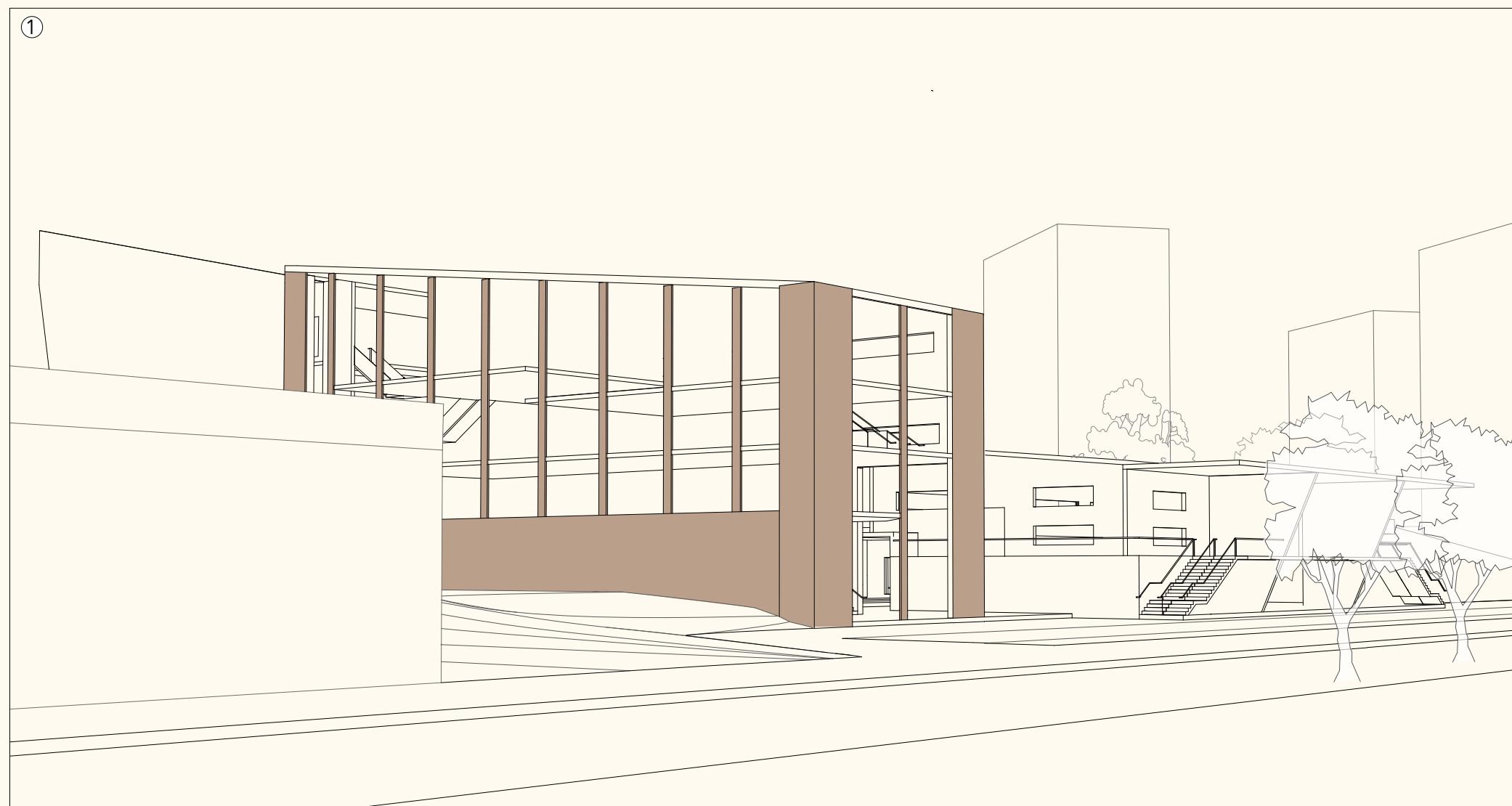
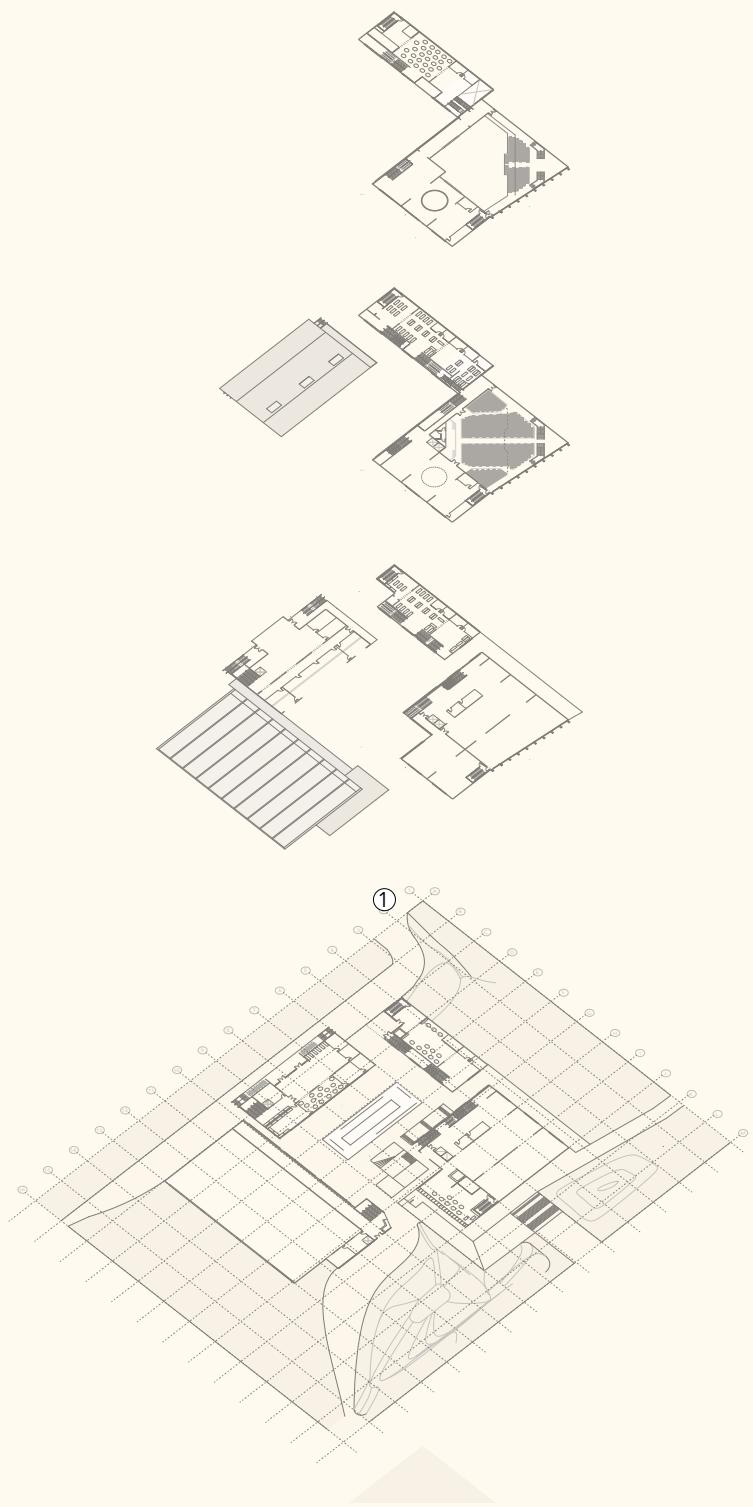
Education centre

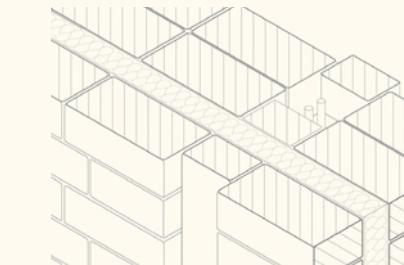
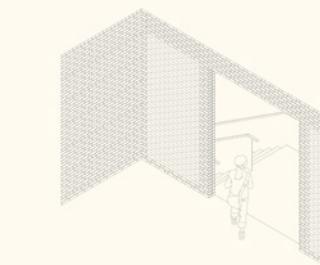
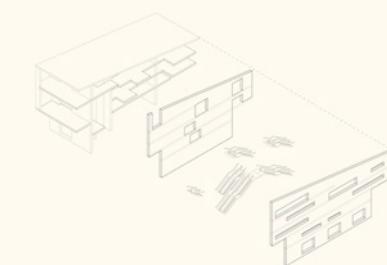
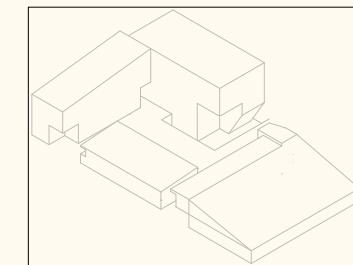




#### STORYBOARD 4

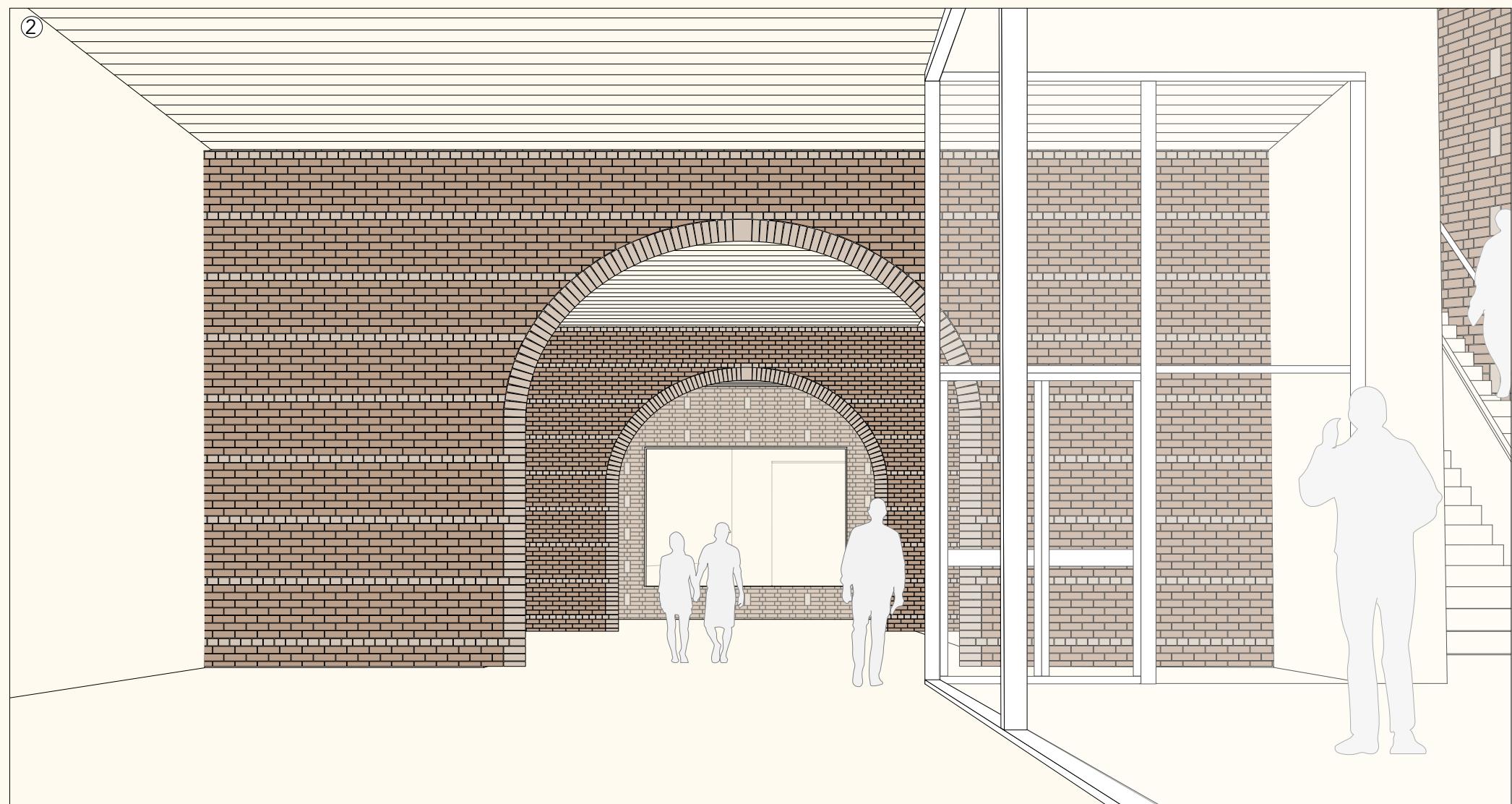
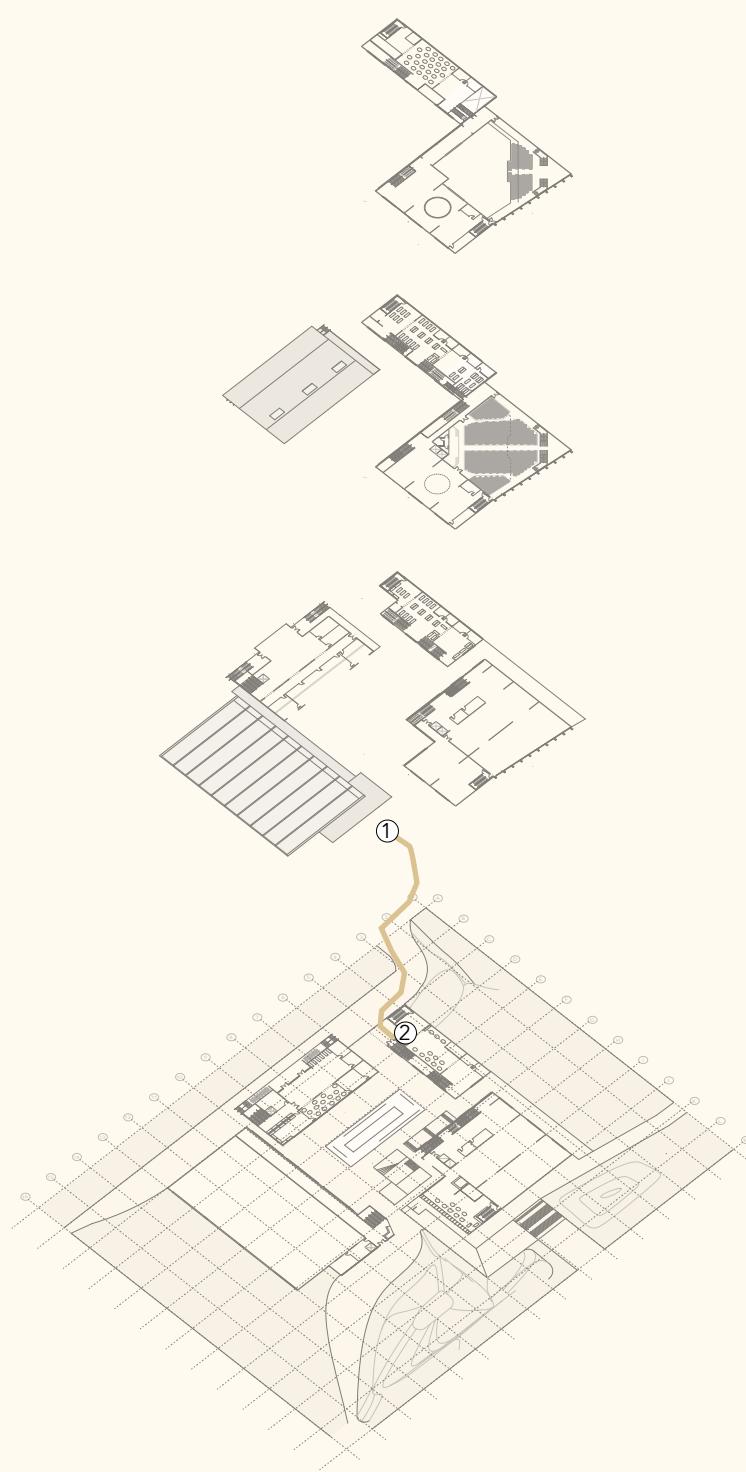
Bentelostraat - Co-working centre

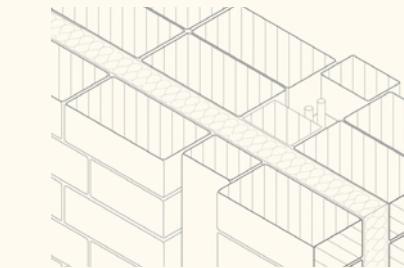
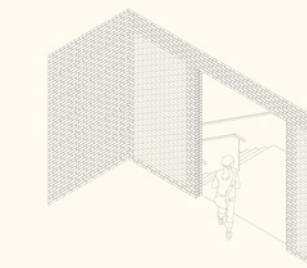
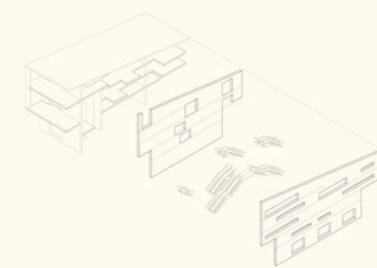
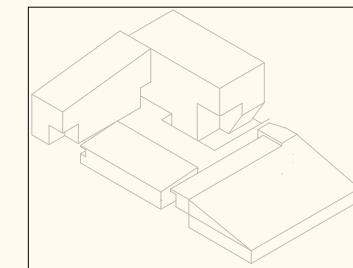




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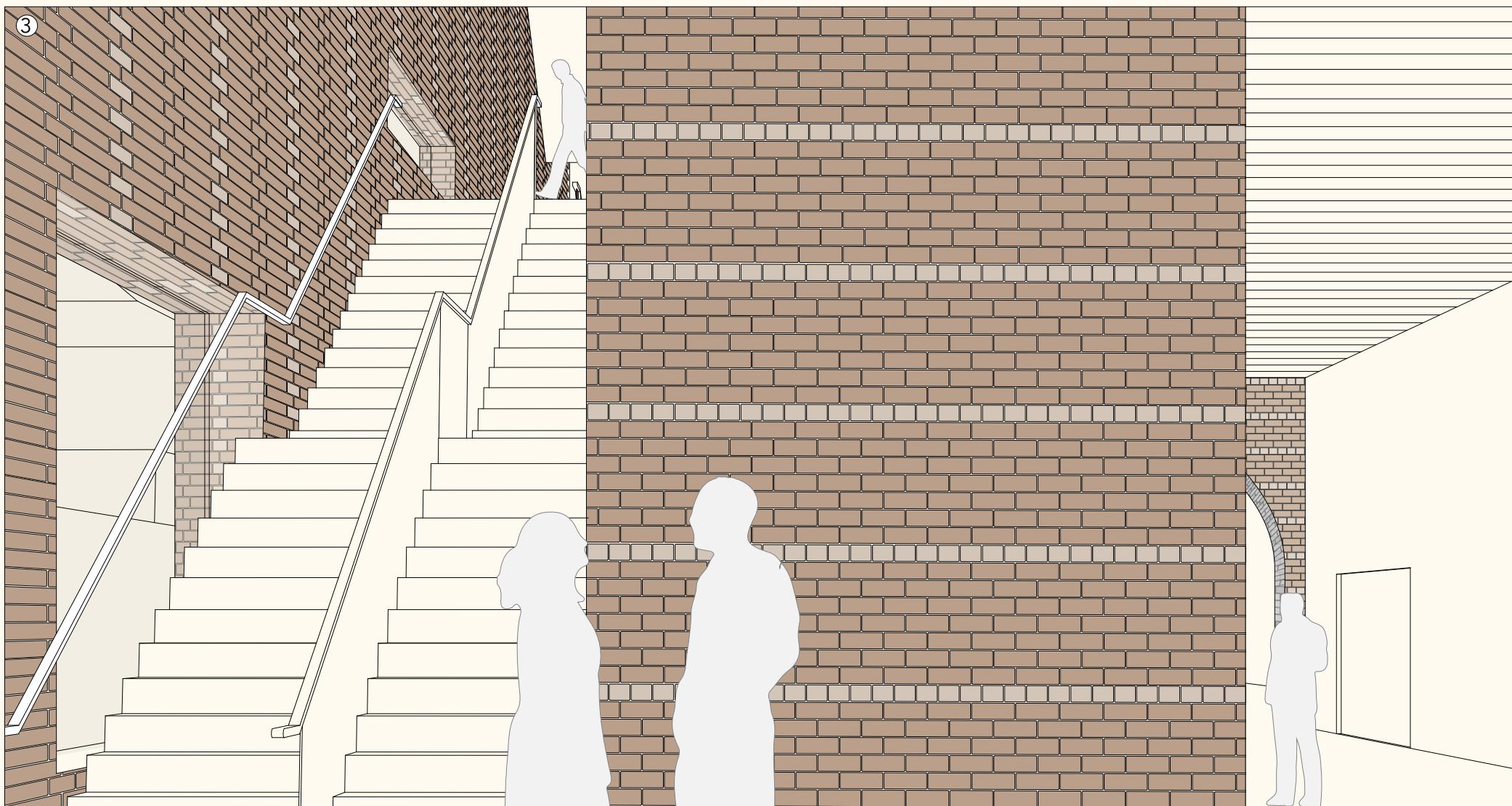
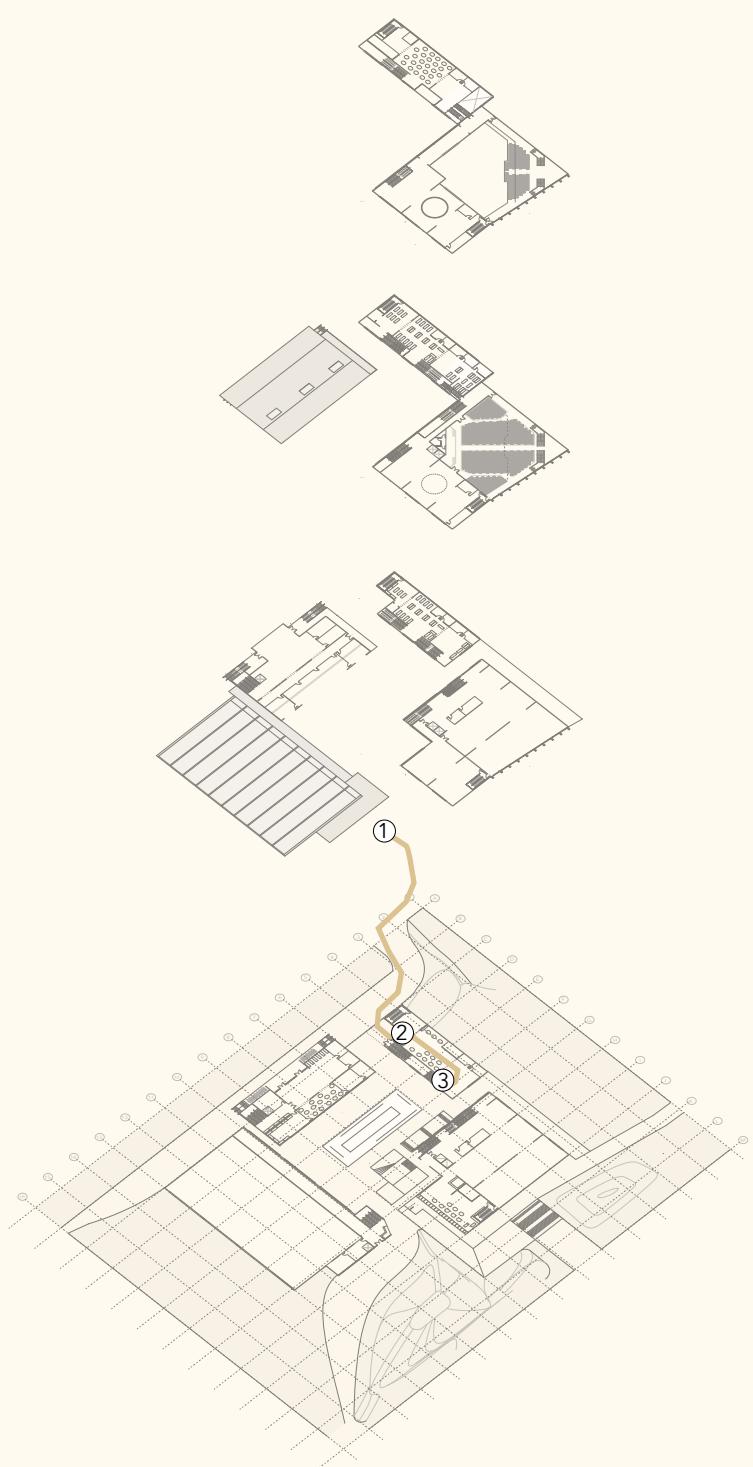
Bentelostraat - Co-working centre

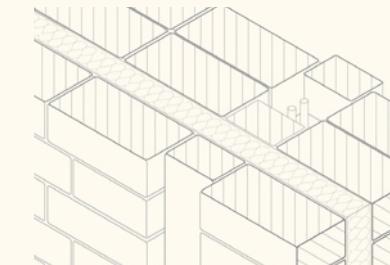
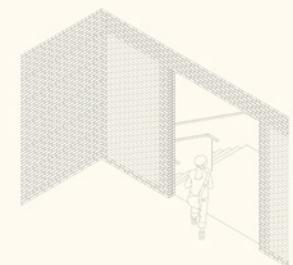
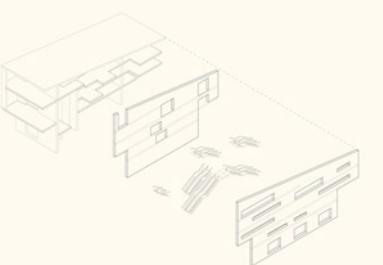
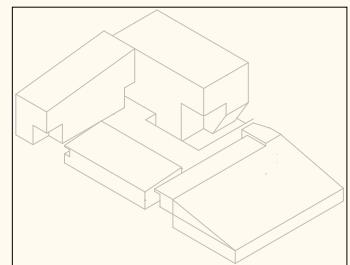




#### STORYBOARD 4

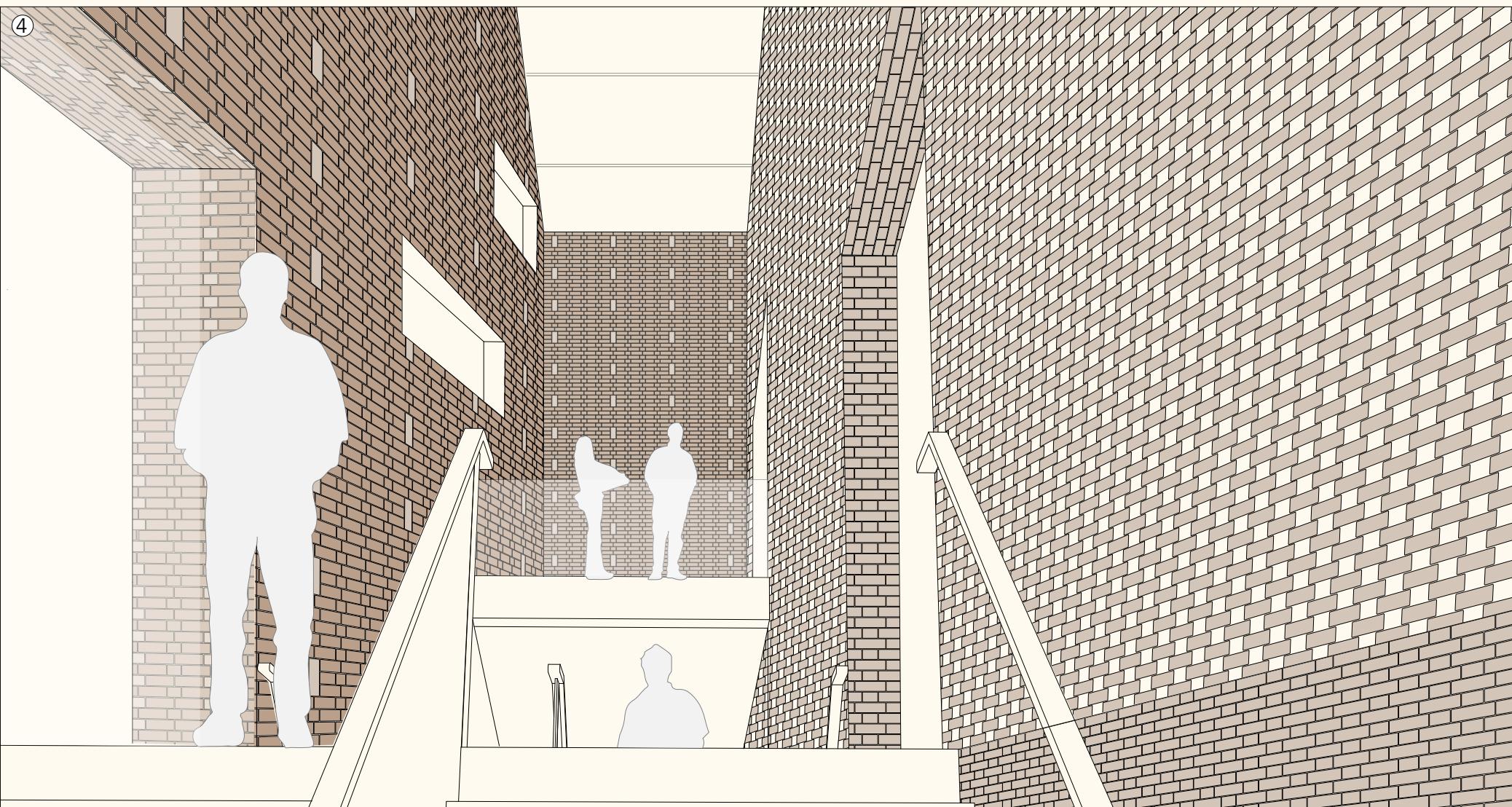
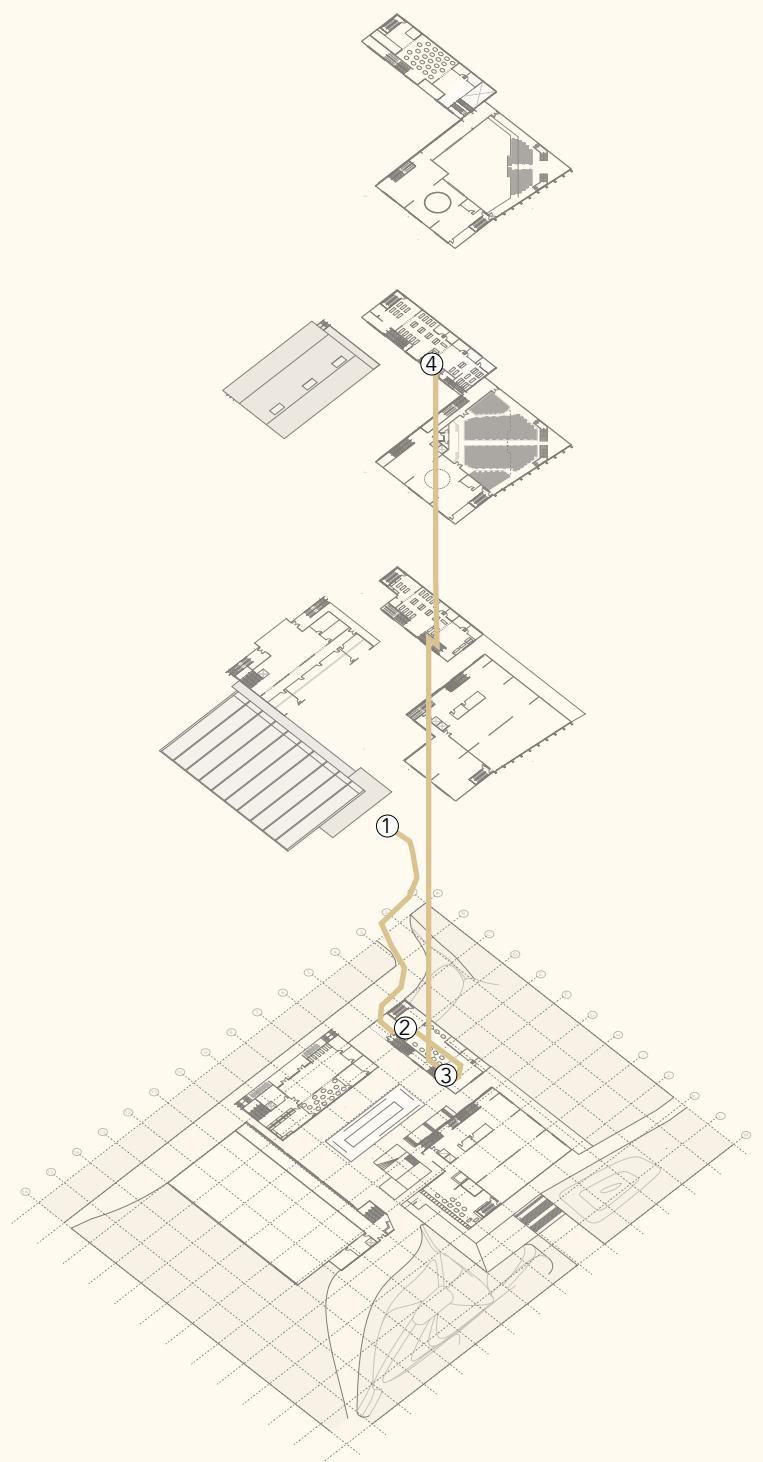
Bentelostraat - Co-working centre

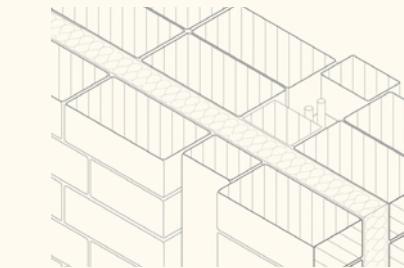
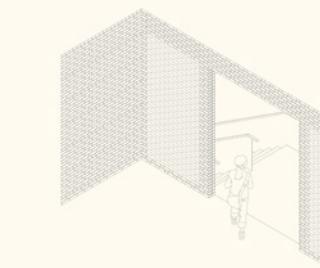
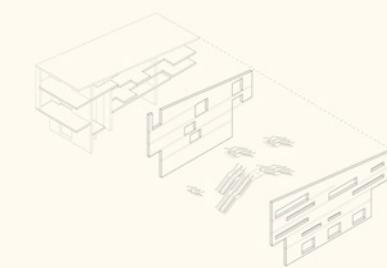
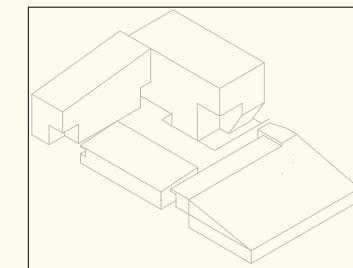




## STORYBOARD 4

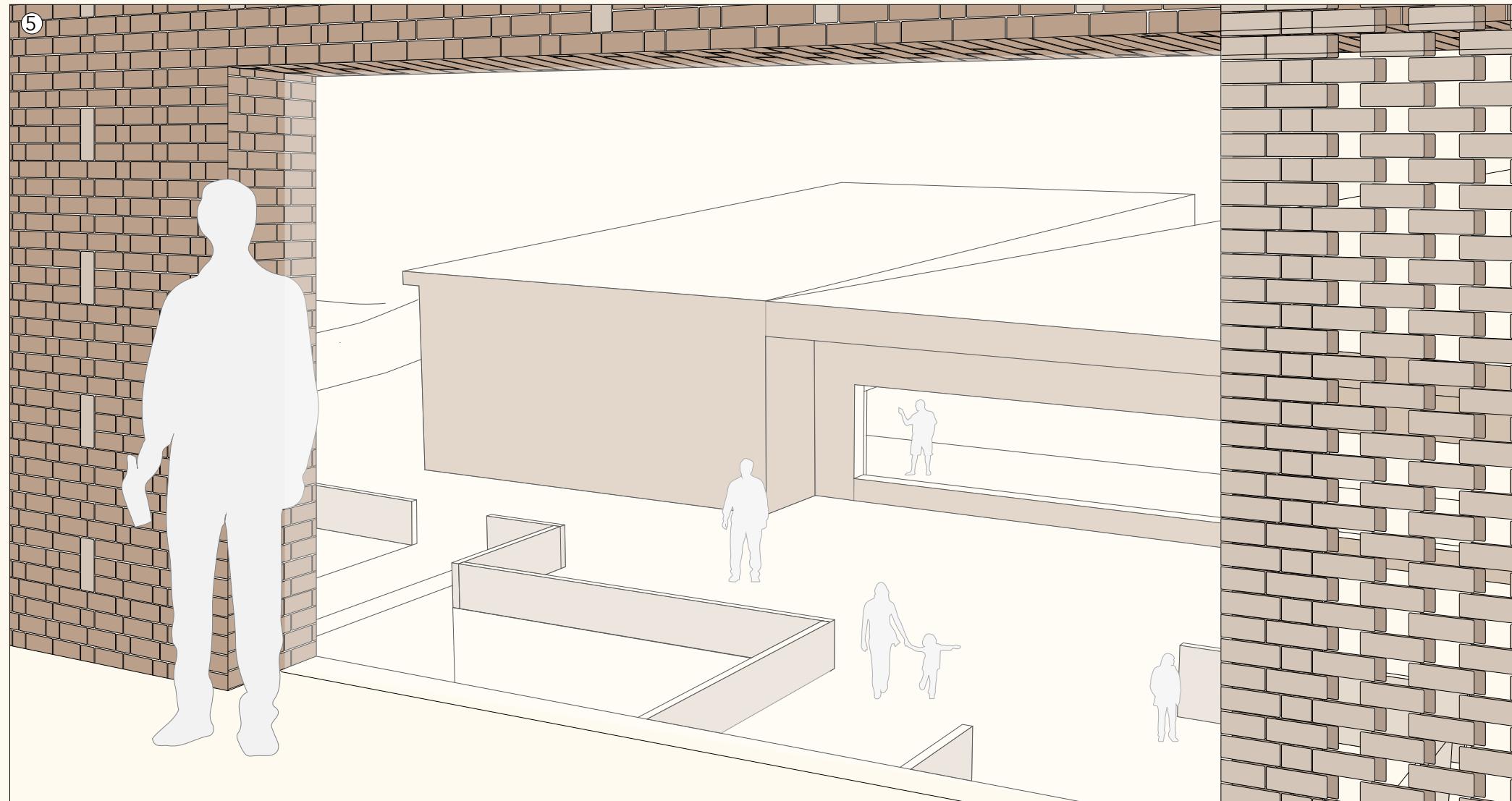
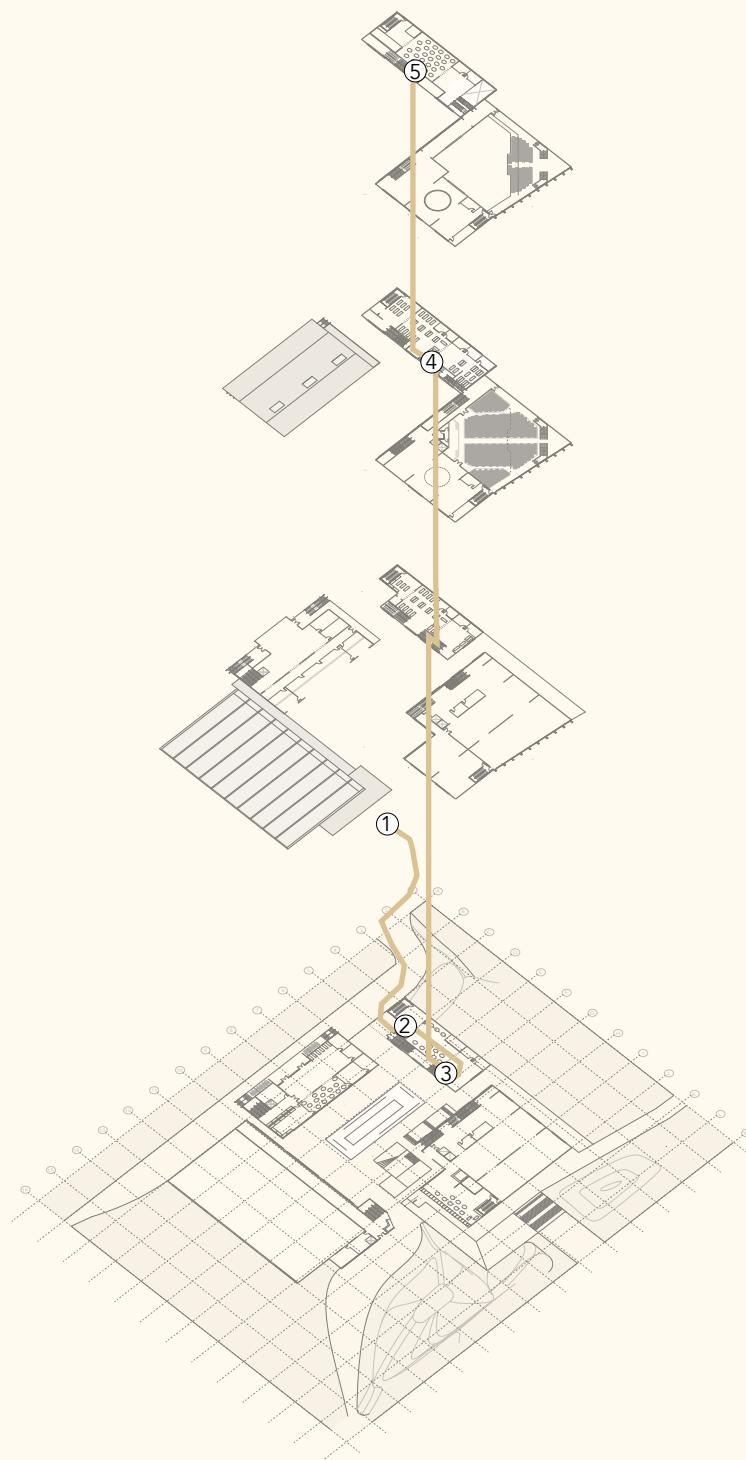
Bentelostraat - Co-working centre

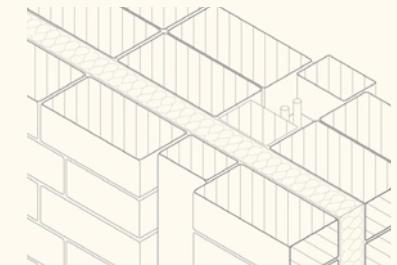
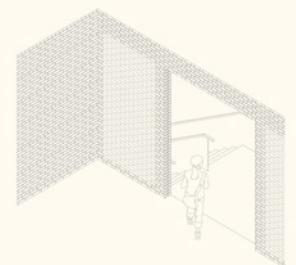
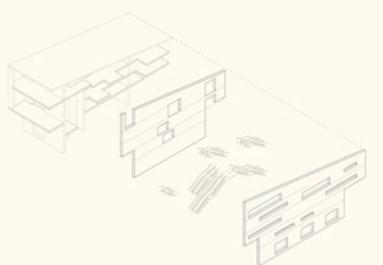
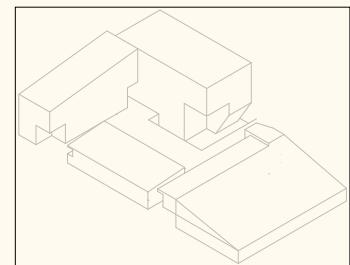




#### STORYBOARD 4

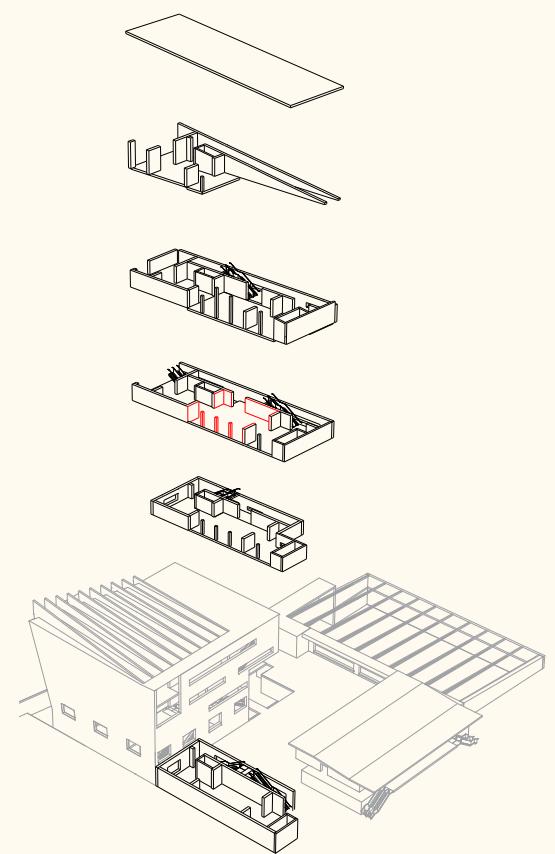
Bentelostraat - Co-working centre

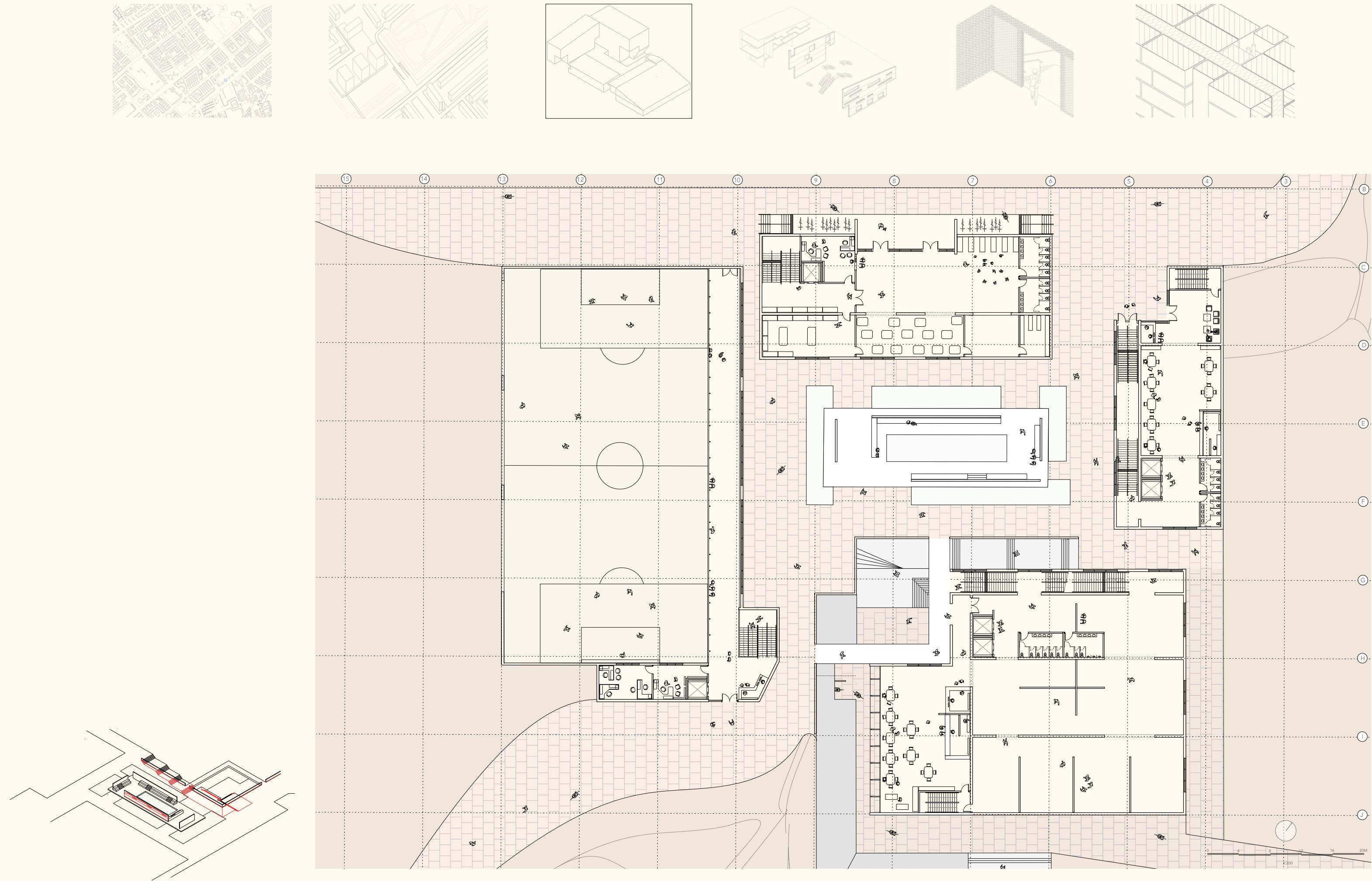


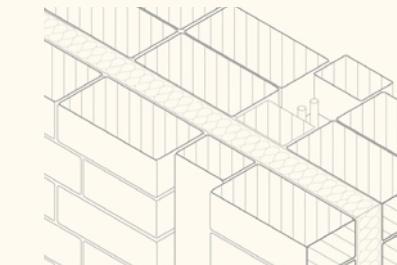
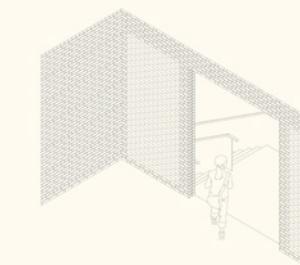
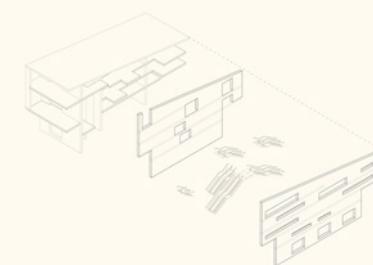
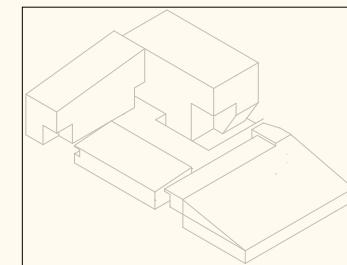


## OFFICE RECEPTION

Business centre

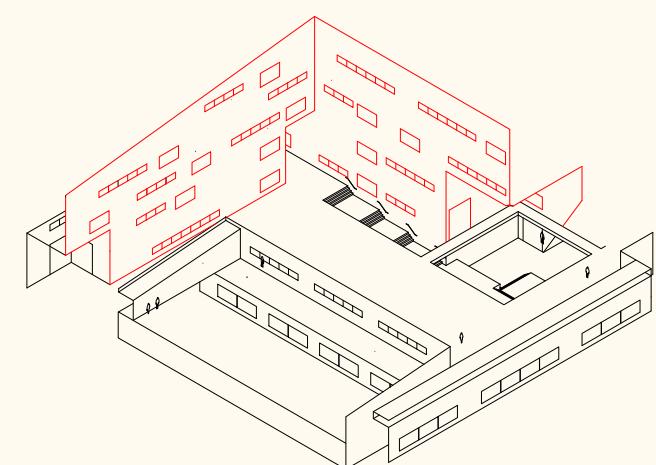


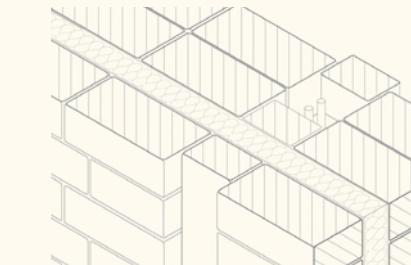
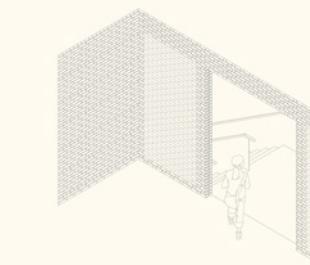
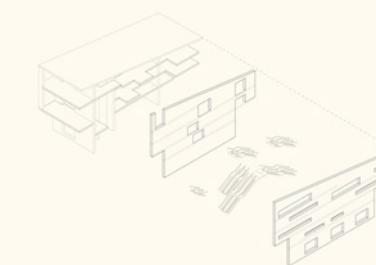
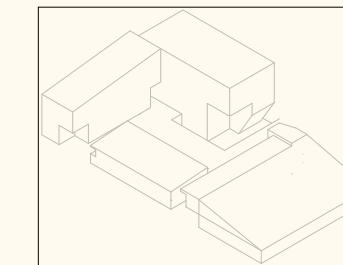




## COURTYARD

**Body of the design**





## COURTYARD

**Body of the design**

