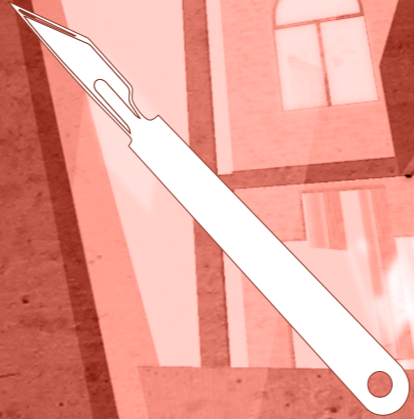


# STRUCTURALISM





**INCISION AND ADDITION**

// EXPOSING THE INHERENT STRUCTURALIST SYSTEM  
COMPOSING THE FACULTY OF HUMANITIES IN LEIDEN

**GRADUATION JELLE HETTEMA**

// 11 APRIL 2019

*"EVERY NEW WORK OF ARCHITECTURE  
INTERVENES IN A SPECIFIC HISTORIC SITUATION.  
IT IS ESSENTIAL TO THE QUALITY OF THE  
INTERVENTION THAT THE NEW BUILDING SHOULD  
EMBRACE QUALITIES THAT CAN ENTER INTO A  
MEANINGFUL DIALOGUE WITH THE EXISTING  
SITUATION."*

**PETER ZUMTHOR**

# CONTENT

ANALYSIS EXISTING BUILDING

//

NEW PROGRAM PROPOSAL

//

THEORETICAL FRAMEWORK

//

INTERVENTION PROPOSAL

//

TECHNICAL CONSEQUENCES

//

REFLECTION

# CONTENT

**ANALYSIS EXISTING BUILDING**

//

NEW PROGRAM PROPOSAL

//

THEORETICAL FRAMEWORK

//

INTERVENTION PROPOSAL

//

TECHNICAL CONSEQUENCES

//

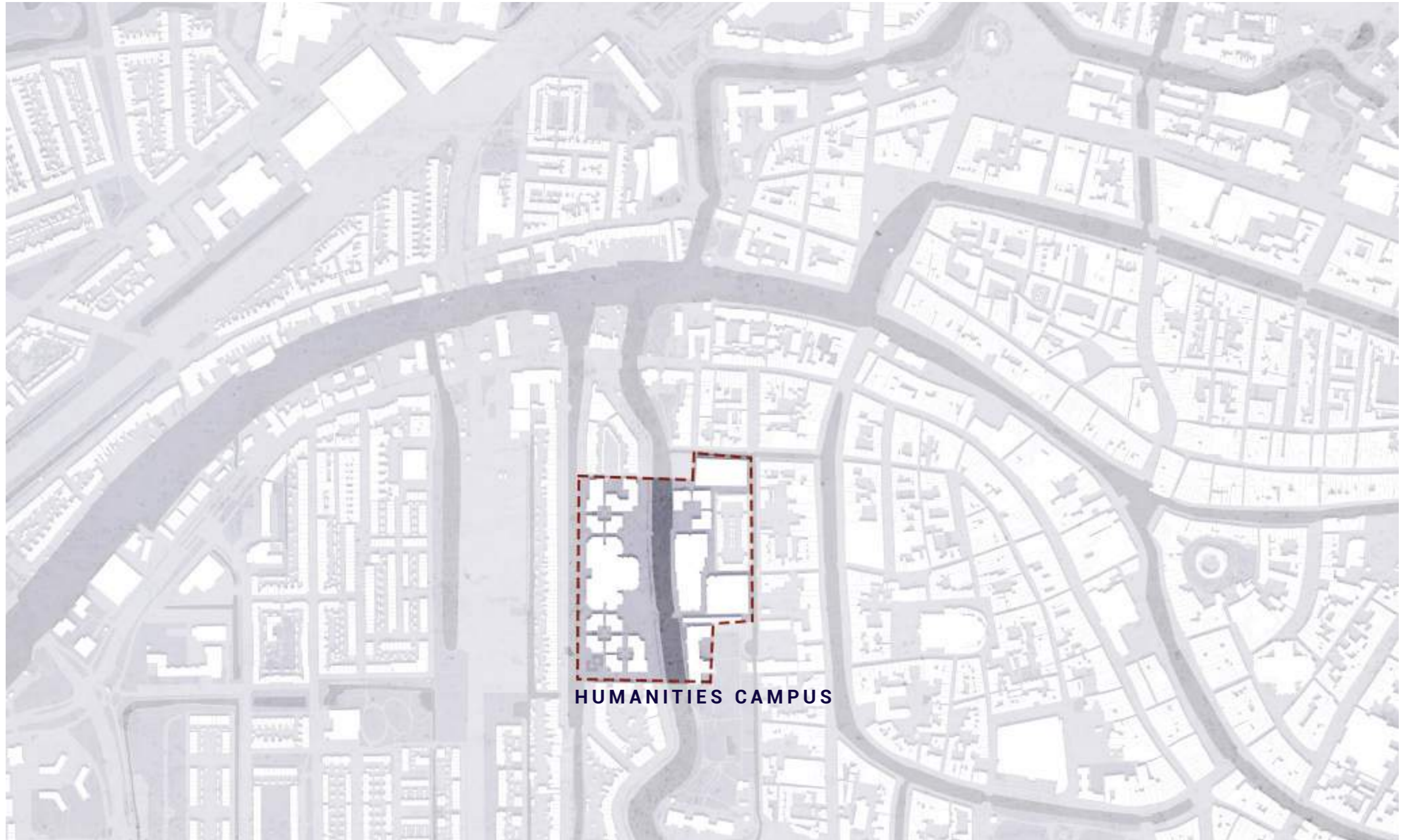
REFLECTION



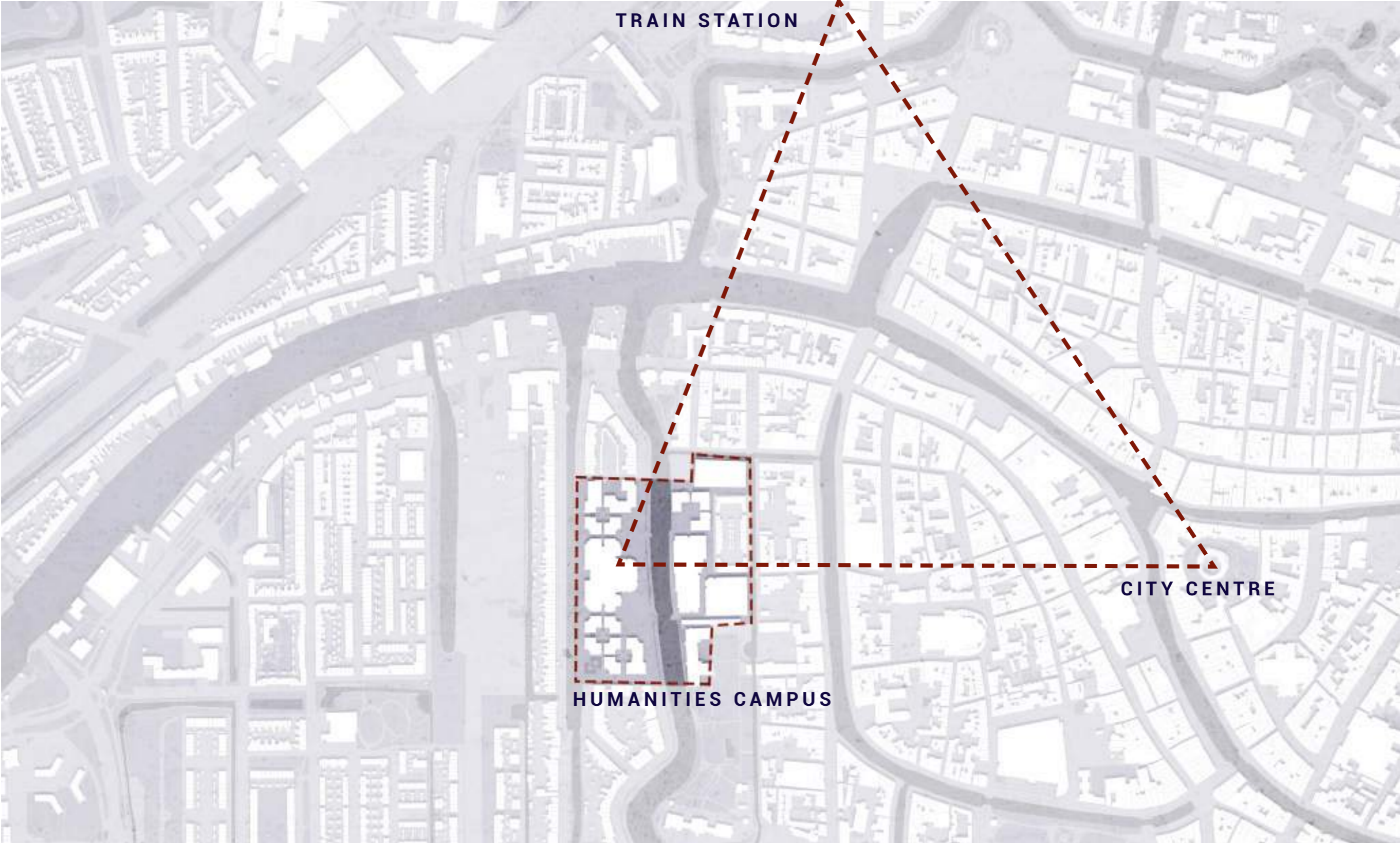
# ANALYSIS // SITUATION



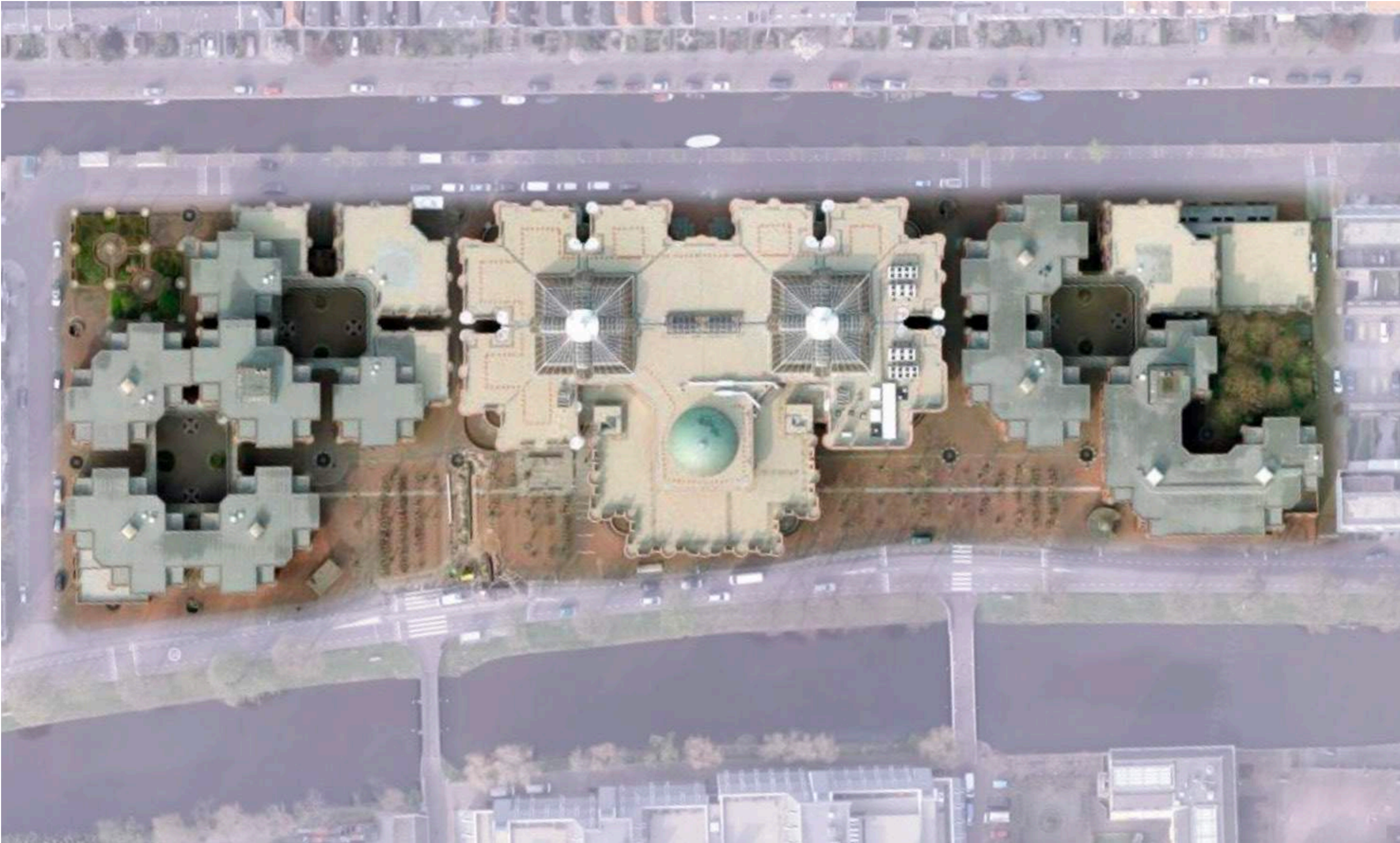
# ANALYSIS // SITUATION



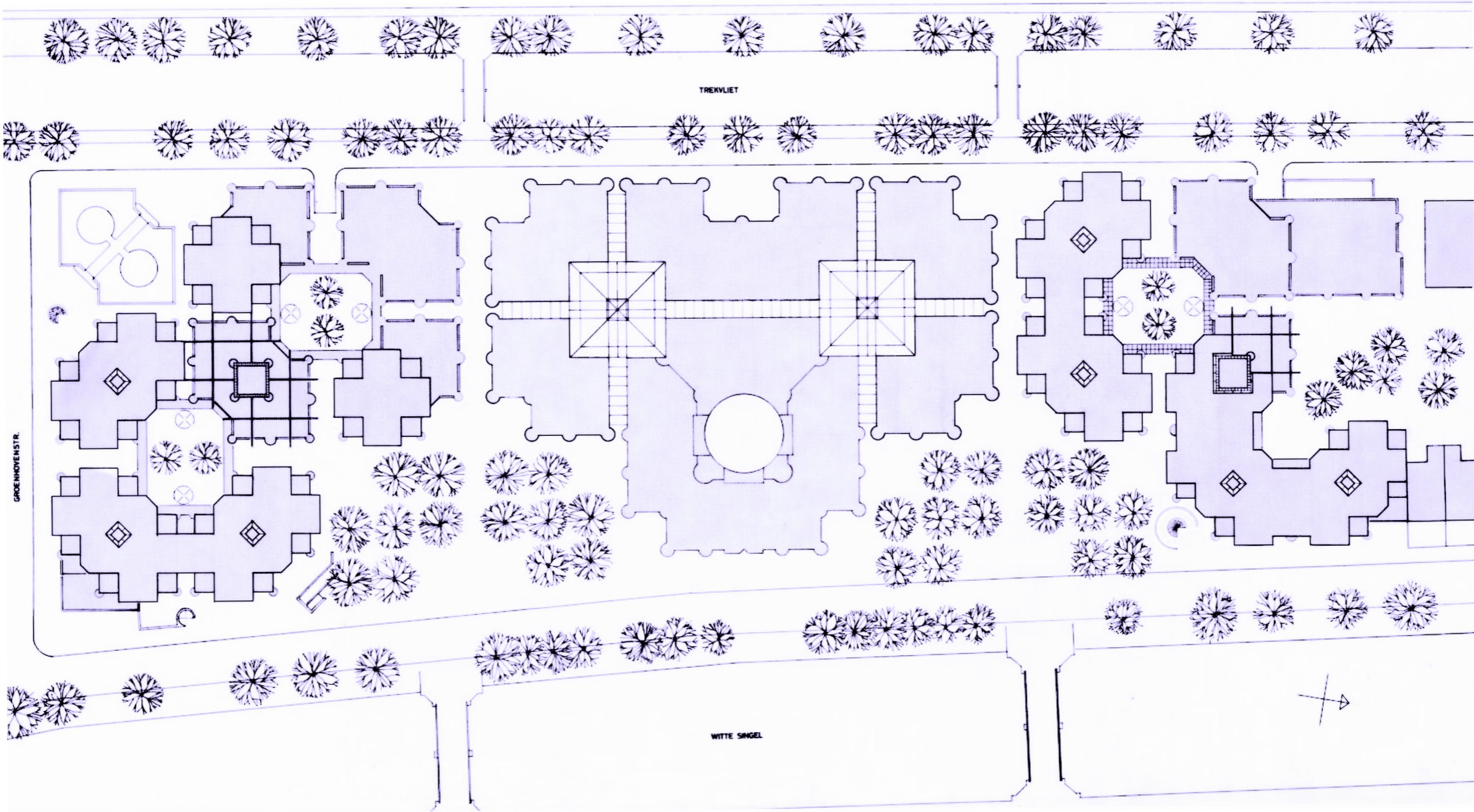
# ANALYSIS // LOCATION



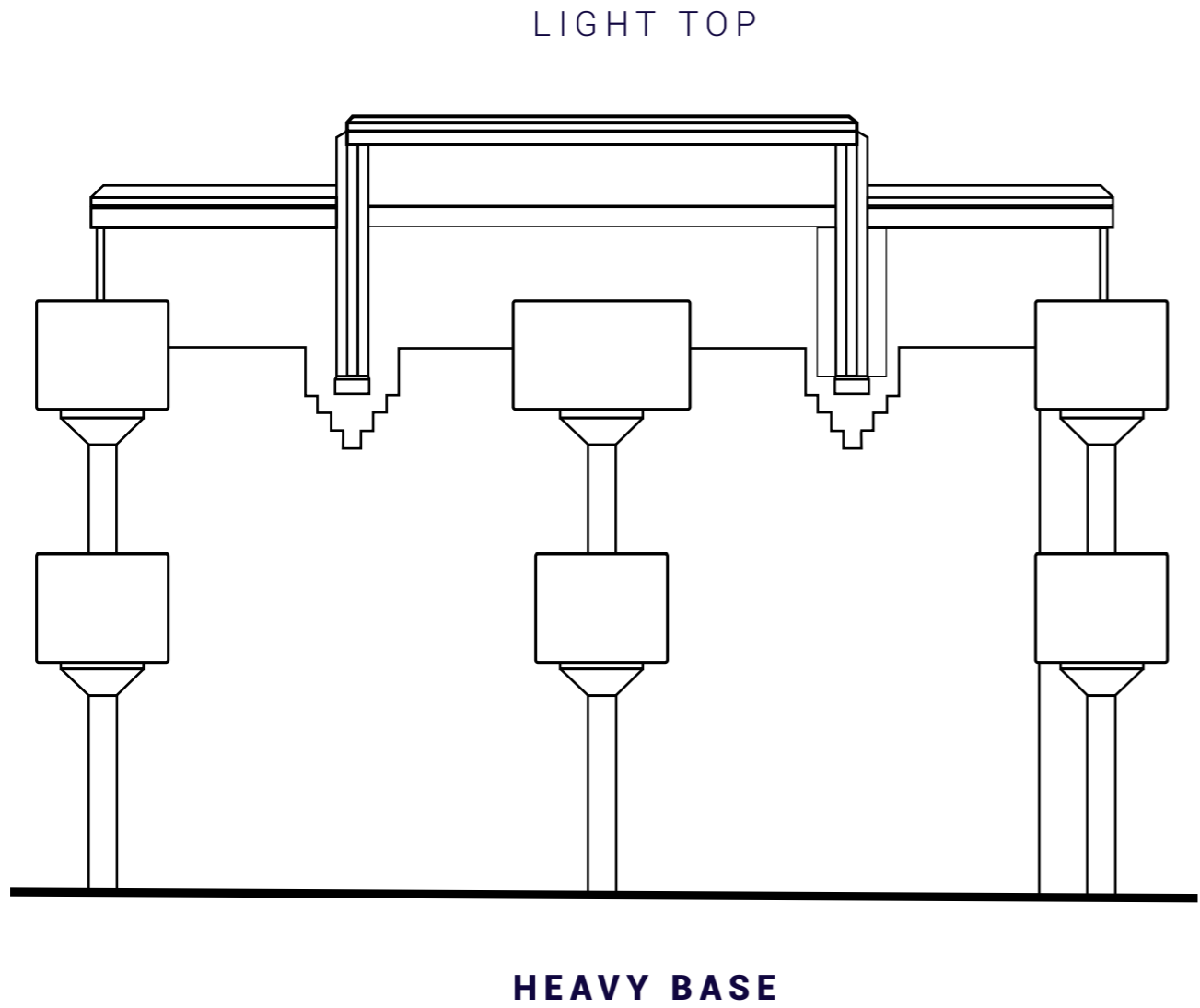
ANALYSIS // FACULTY



# ANALYSIS // ARCHIVAL DRAWING

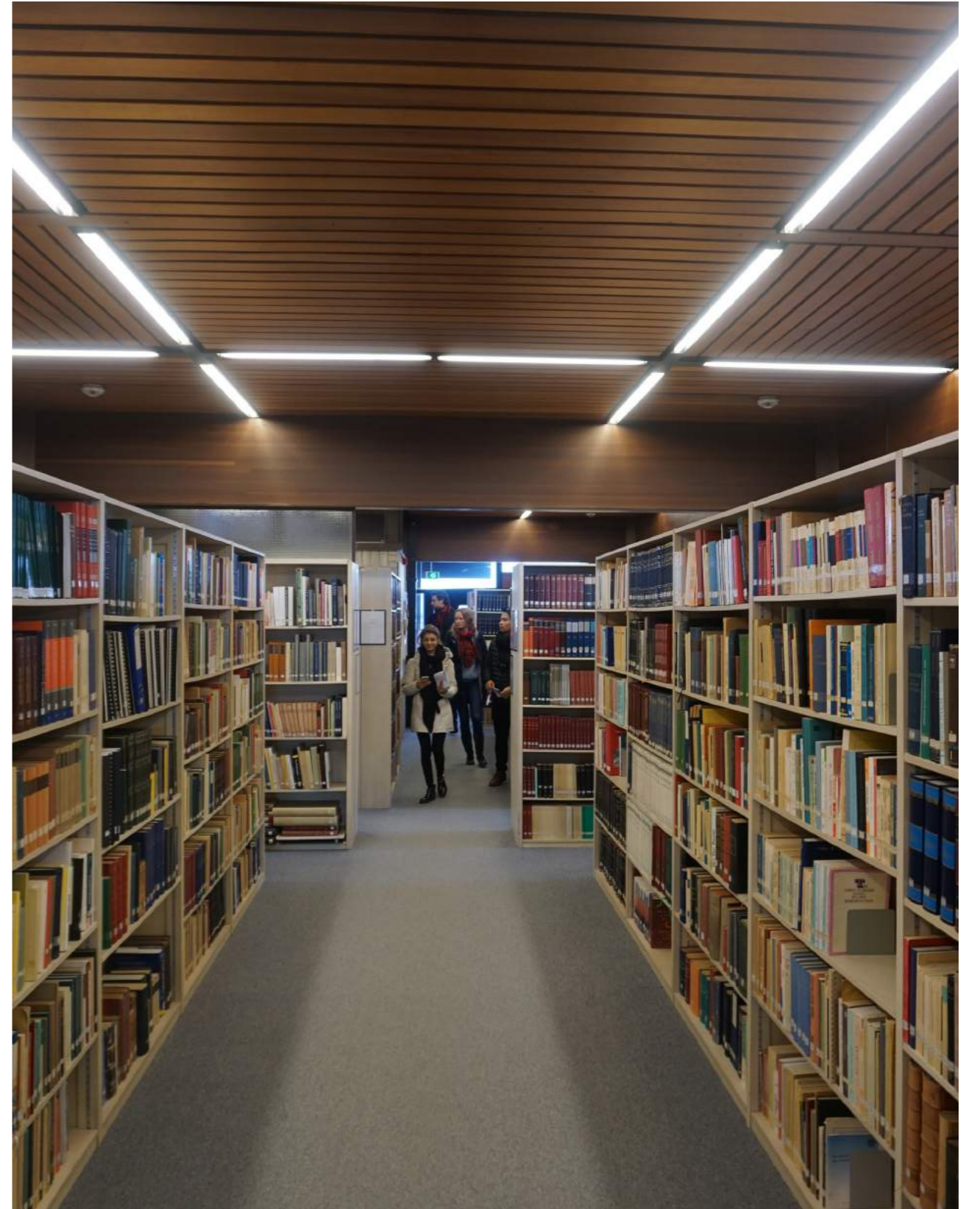
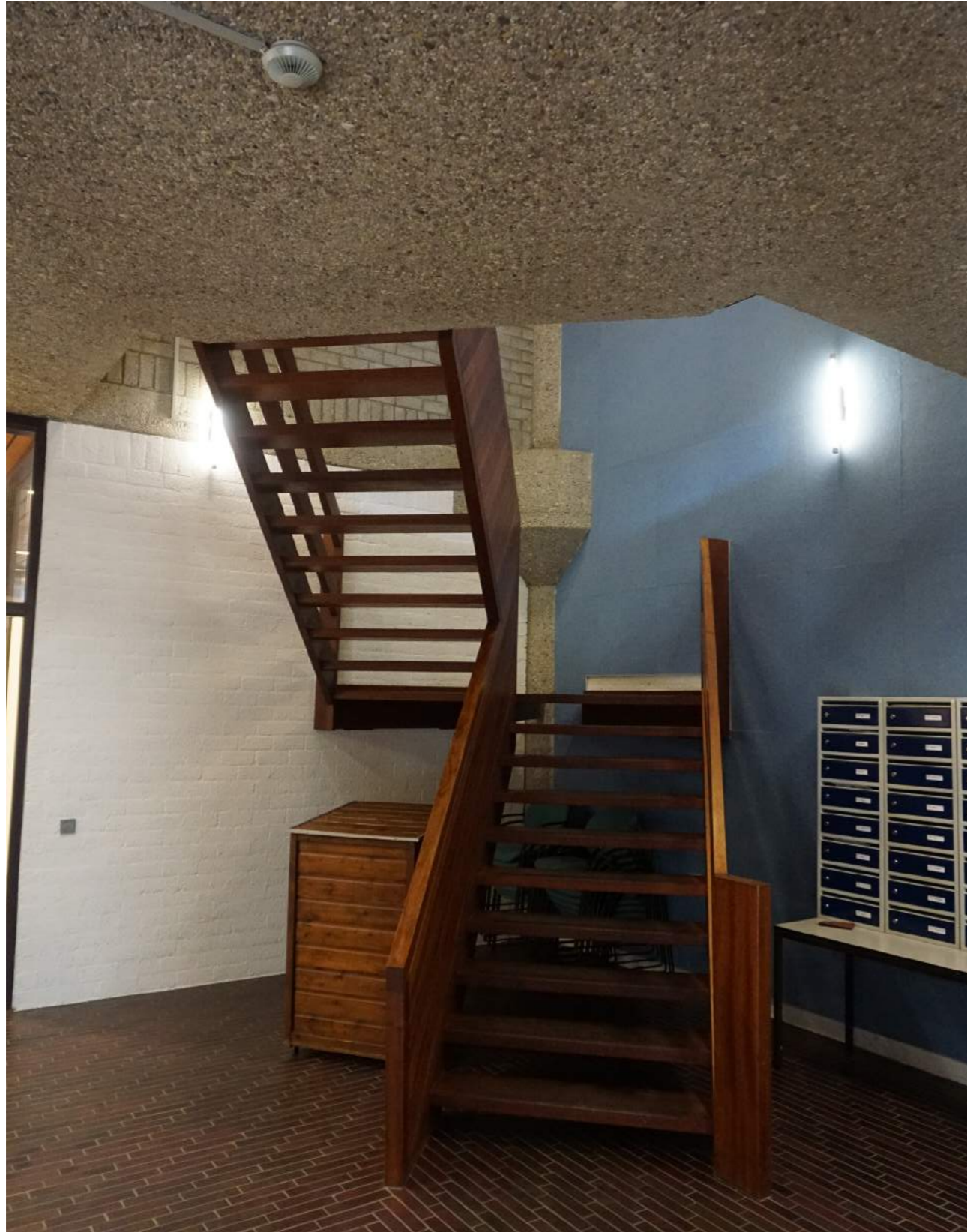


# ANALYSIS // EXISTING SITUATION



# ANALYSIS // EXISTING SITUATION







**JOOP VAN STIGT**

// ARCHITECT SCHOOLED BY ALDO VAN EYCK

// PRACTICAL AND EFFICIENT ARCHITECT

// EXPERIMENTATION WITH THE NEVERENDING GRID

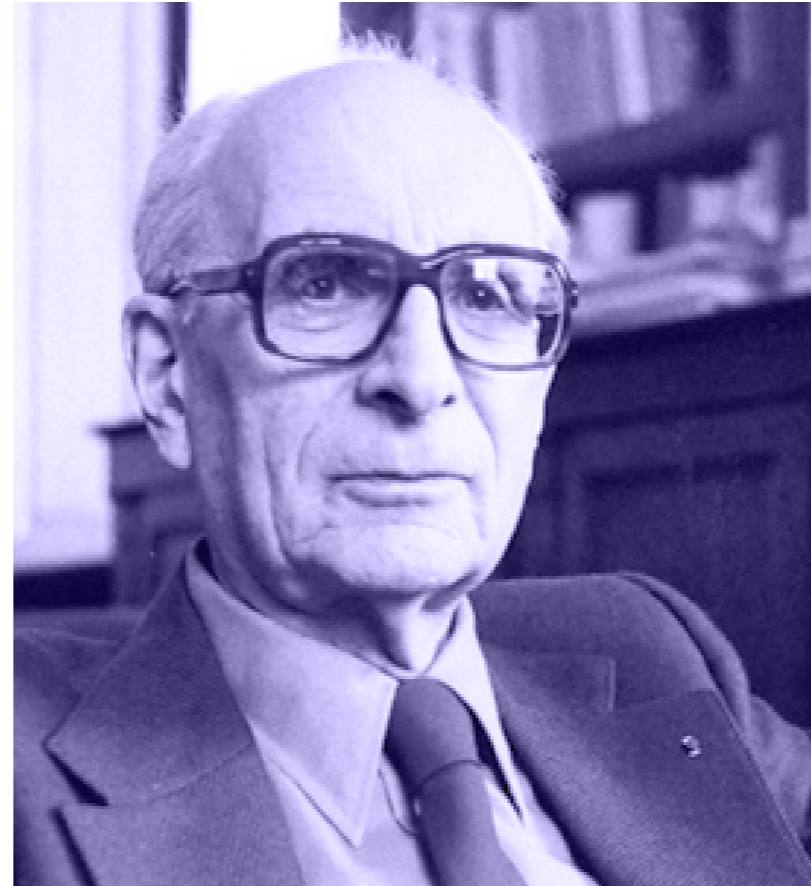
// HIS FINAL LARGE SCALE NEW PROJECT IN THE  
NETHERLANDS

**DOES THIS BUILDING BELONG  
TO STRUCTURALISM?**

# ANALYSIS //ORIGIN OF STRUCTURALISM



**F. DE SAUSSURE**



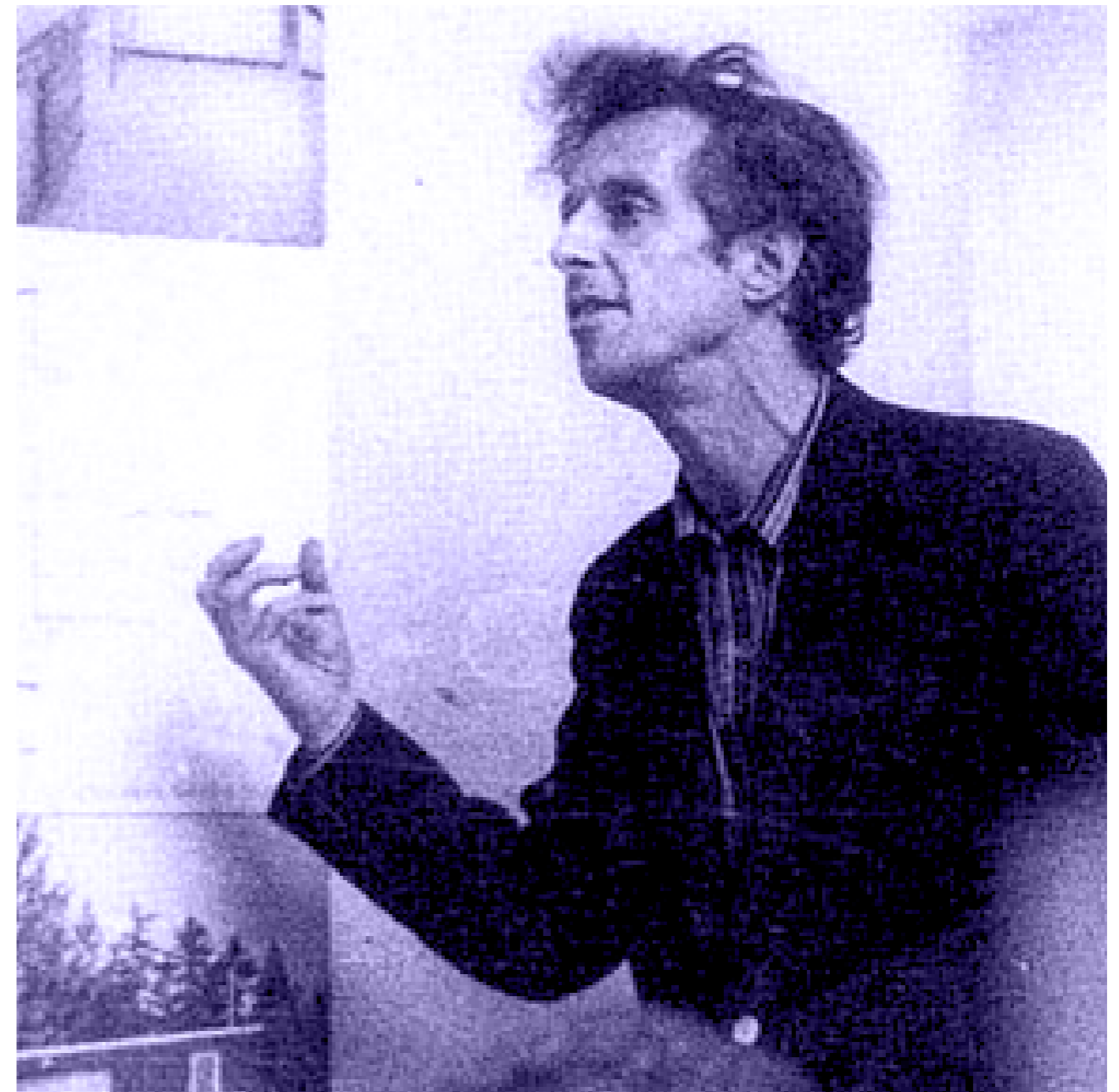
**C. LEVI-STRAUSS**

**STRUCTURE**



**INTERPRETATION**

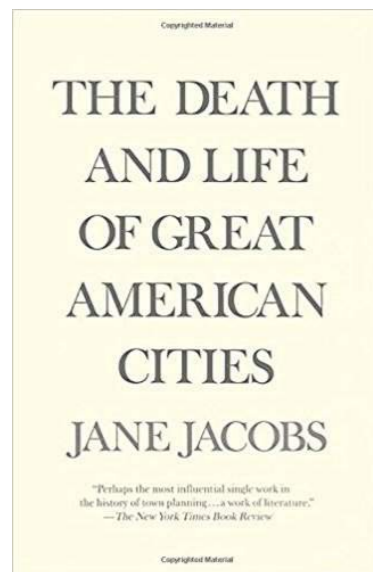
# ANALYSIS // STRUCTURALISM IN ARCHITECTURE



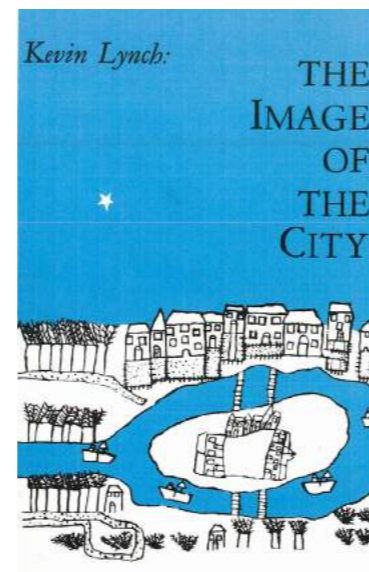
**FOUR FUNCTIONS OF CIAM**

**TEAM10** // ALDO VAN EIJCK AT 1959 OTTERLOO

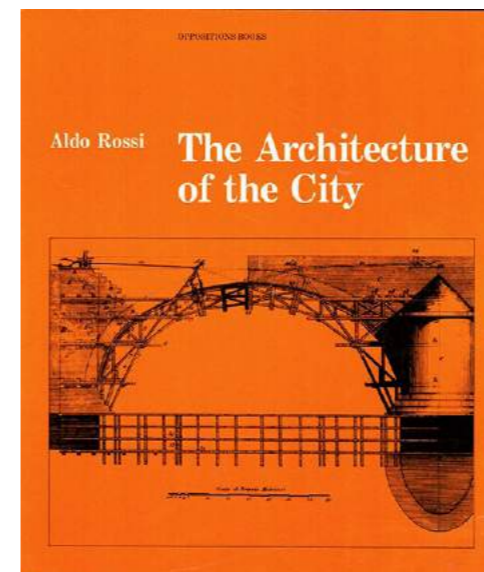
# ANALYSIS // ZEITGEIST OF STRUCTURALISM



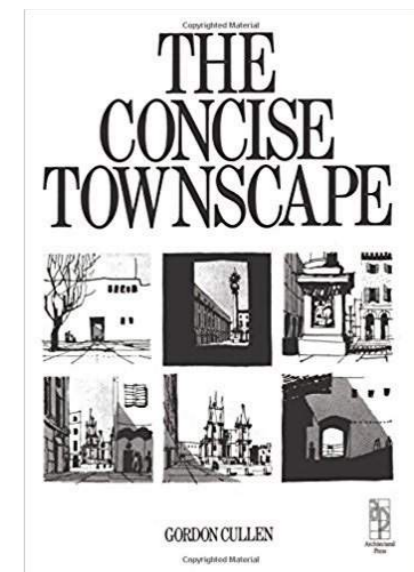
JANE JACOBS



KEVIN LYNCH



ALDO ROSSI

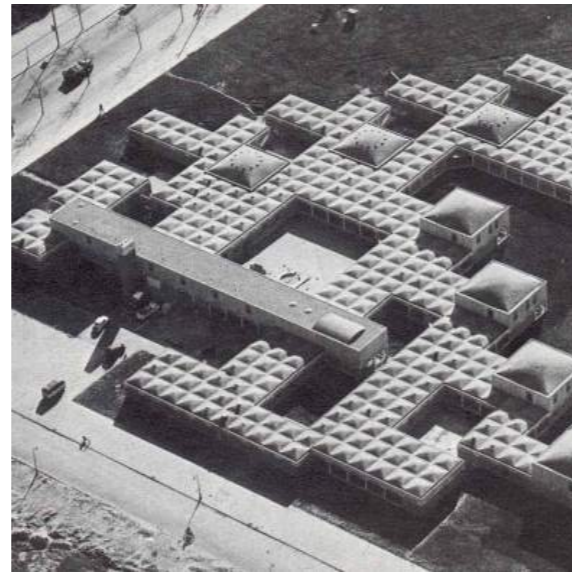


GORDON CULLEN

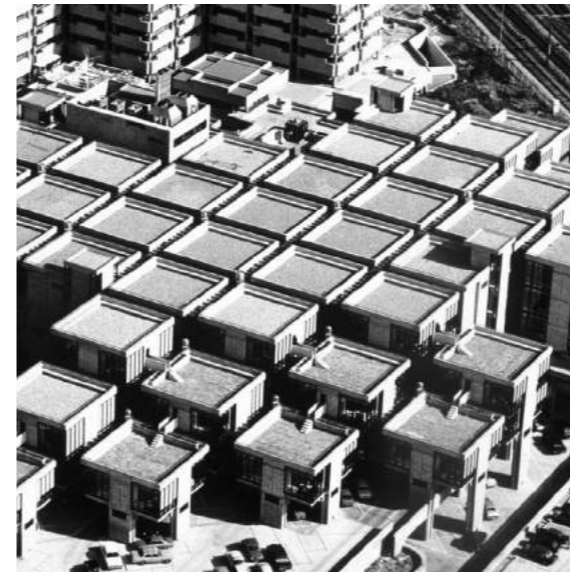
# ANALYSIS // EXAMPLES IN ARCHITECTURE



**CUBE HOUSES**  
// PIET BLOM



**ORPHANAGE**  
// ALDO VAN EYCK

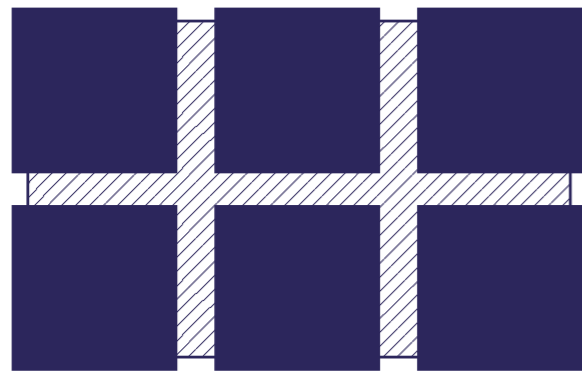


**CENTRAAL BEHEER**  
// HERMAN HERTZBERGER

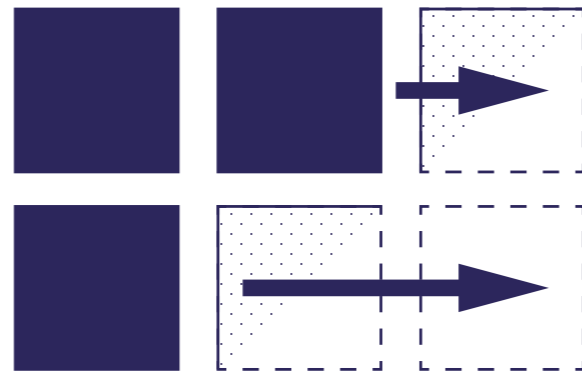


**'T KARREGAT**  
// FRANK VAN KLINGEREN

# ANALYSIS // CORE PRINCIPLES OF STRUCTURALISM



1. UNITS



2. OPEN ENDED

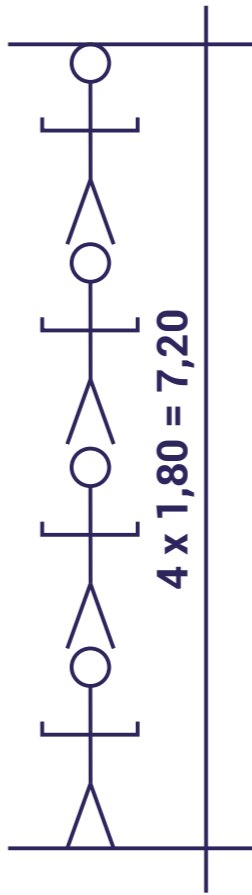
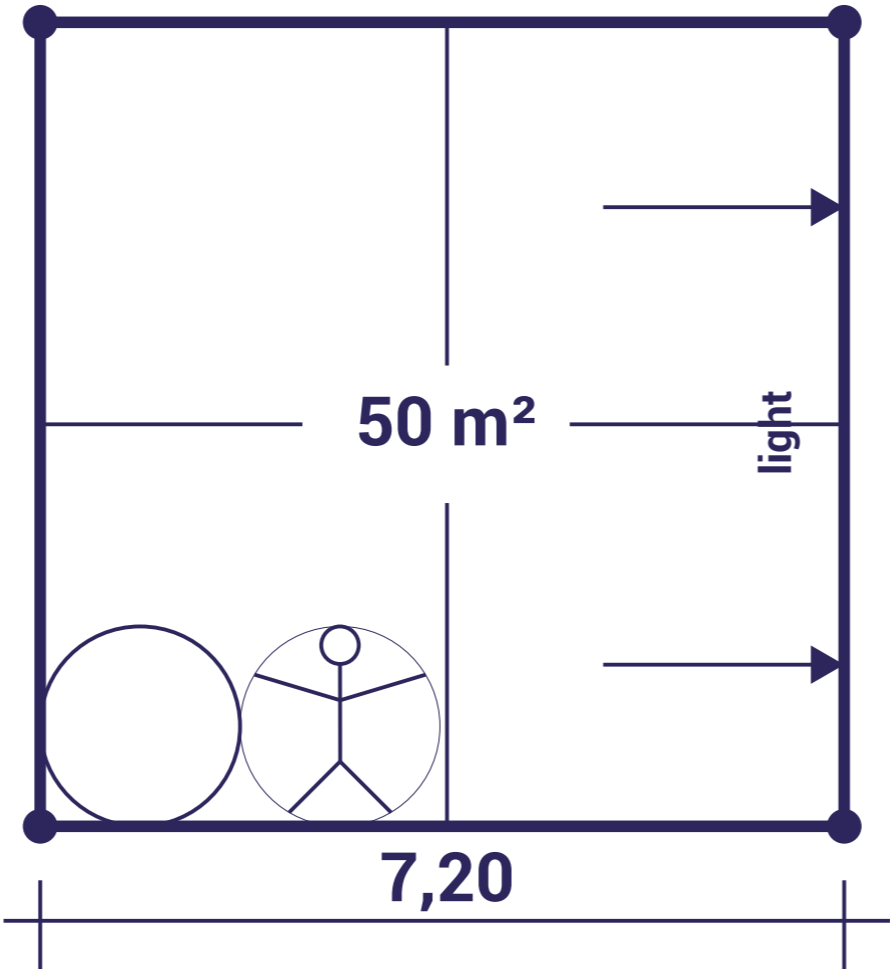
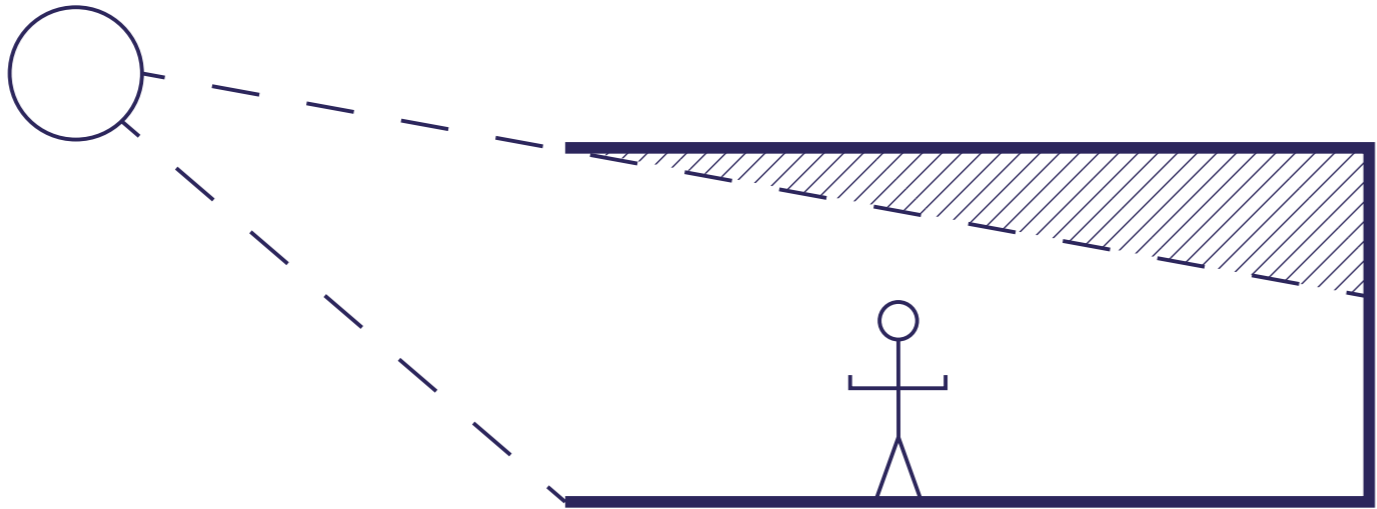
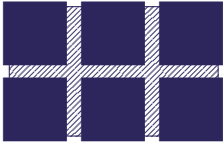


3. BUILDING AS A CITY

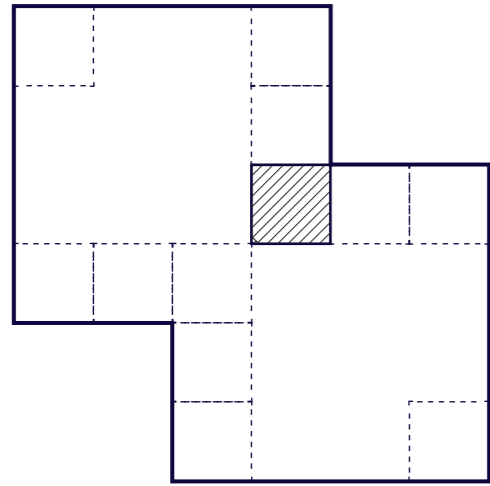
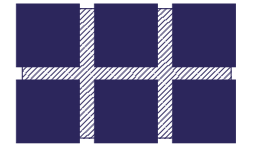


4. SOCIAL INTERACTION

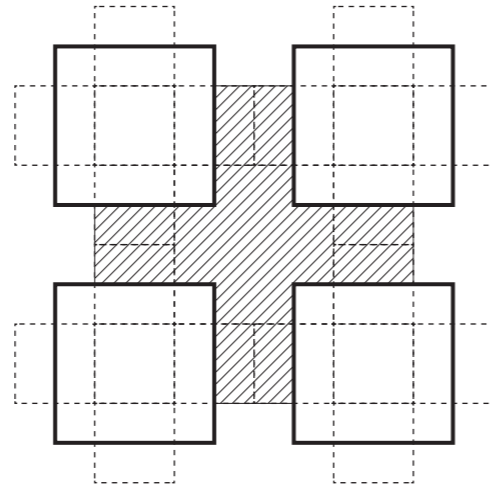
# ANALYSIS // GRID SYSTEM



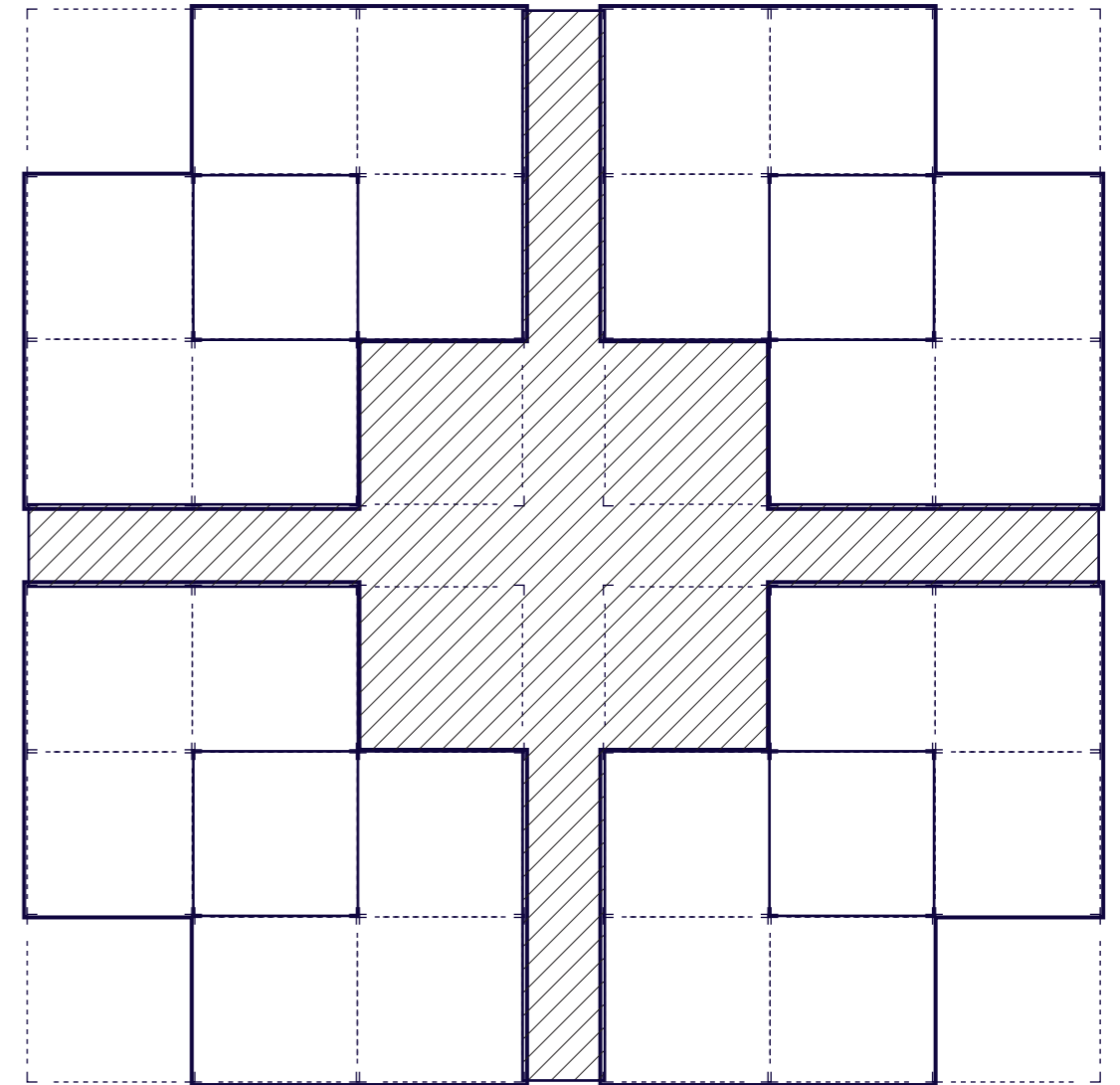
# ANALYSIS // OPEN-ENDED UNITS



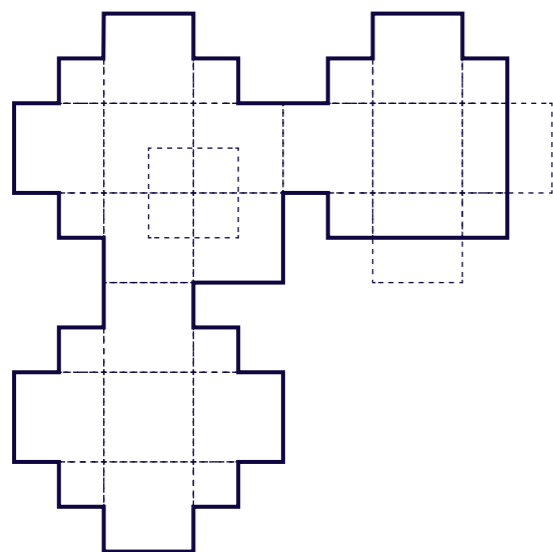
PRIX DE ROME // 1962



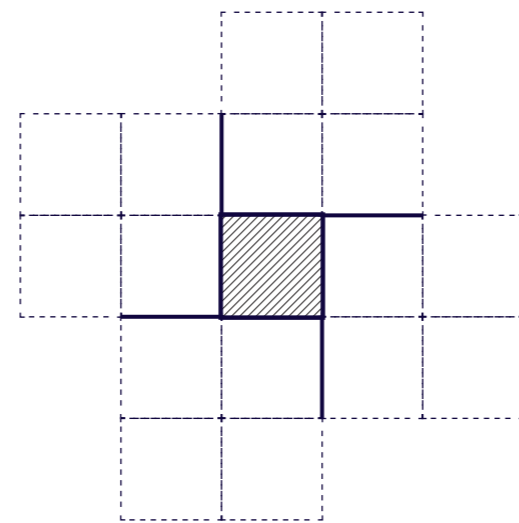
TER AAR // 1965



FACULTY OF HUMANITIES // 1983



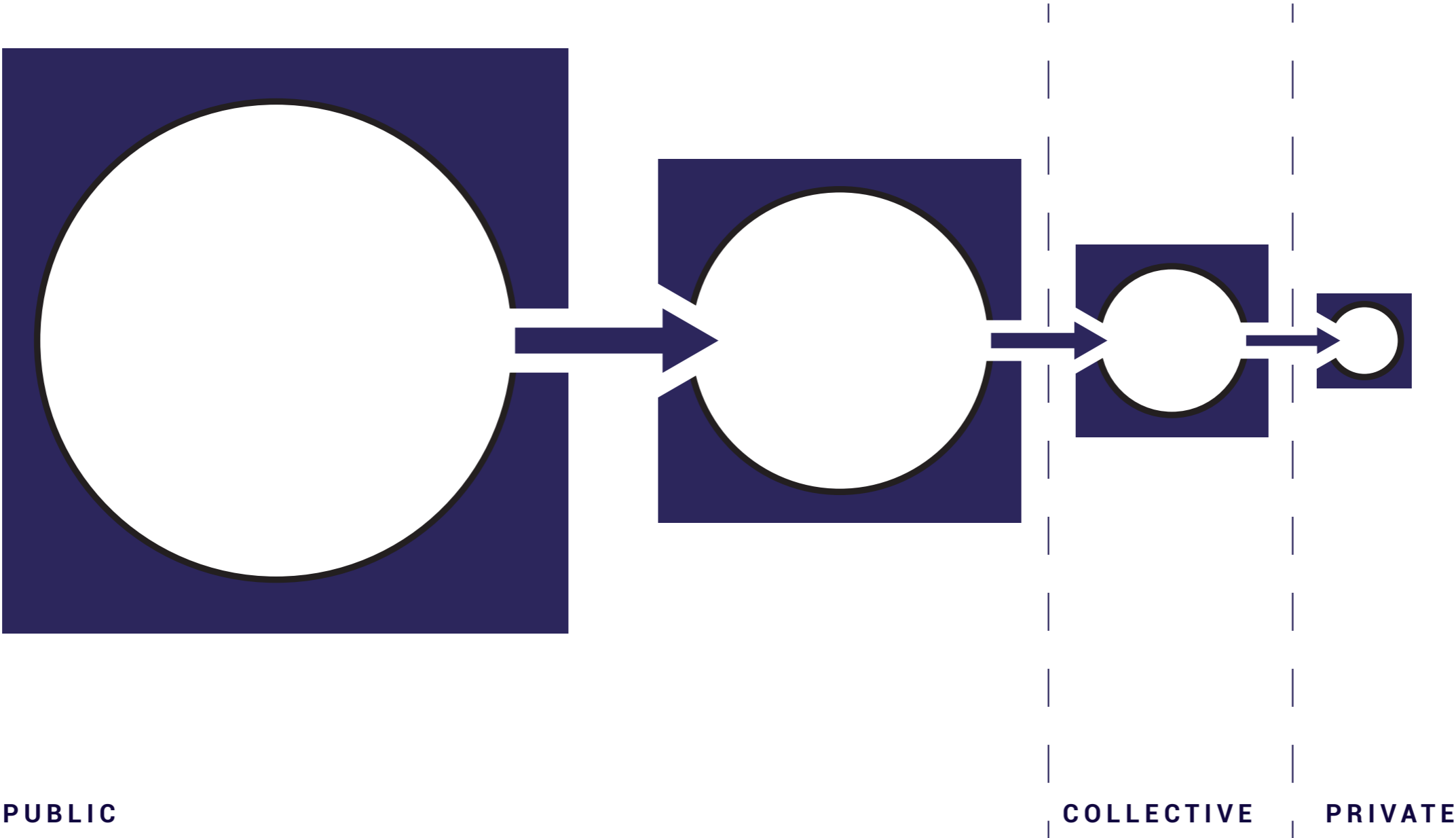
CANTEEN TH TWENTE // 1963

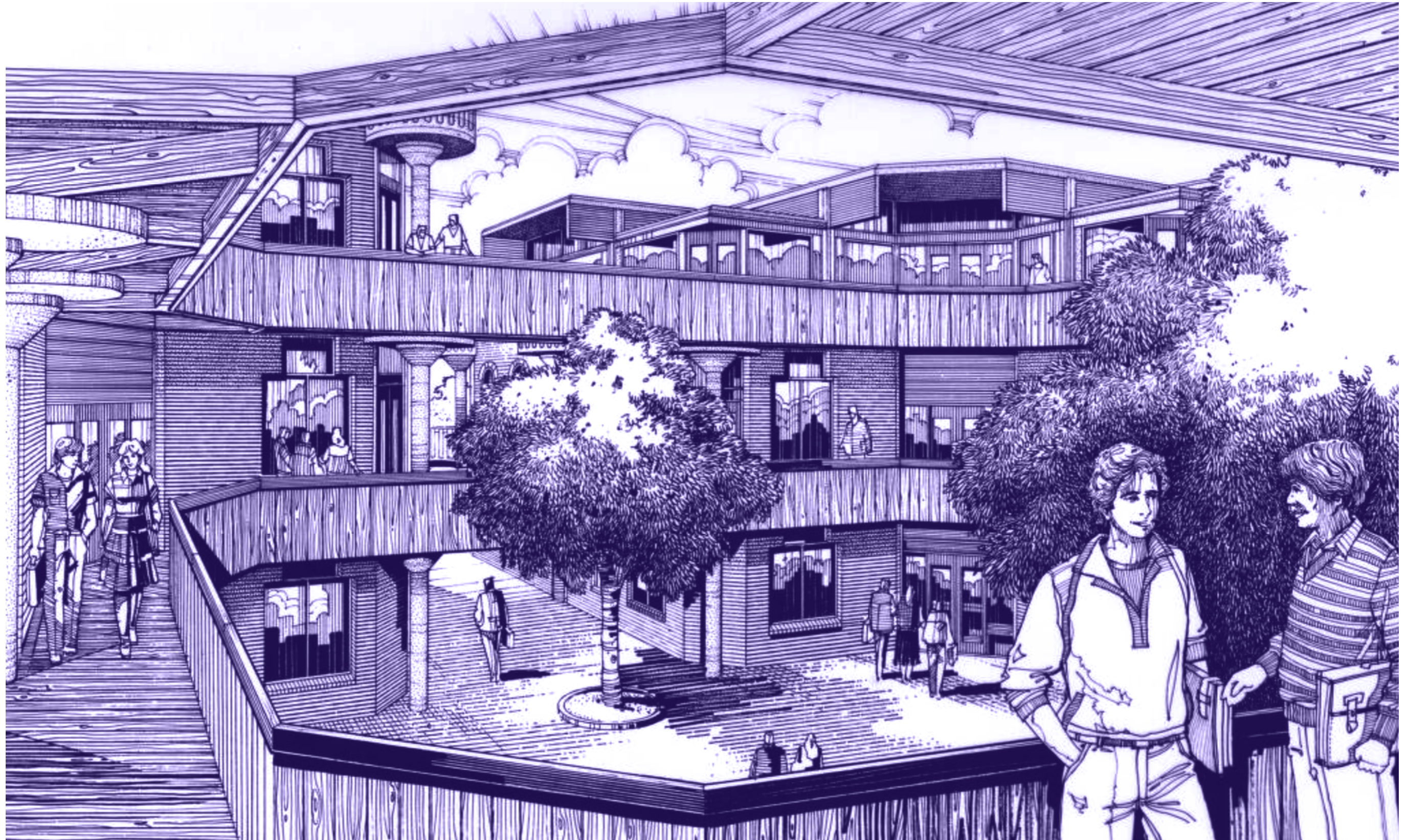


BIJLMERFLAT 'DE GOUDEN LEEUW' // 1968

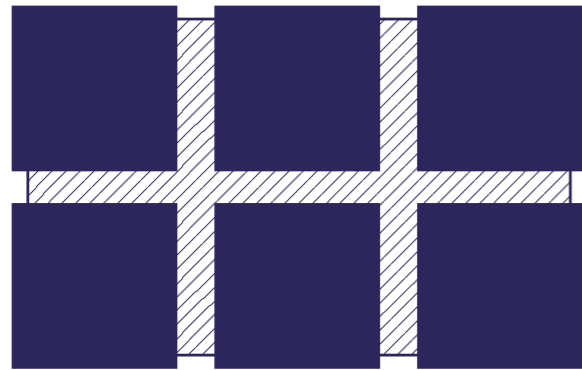


**ANALYSIS // SEQUENCE OF SPACE**

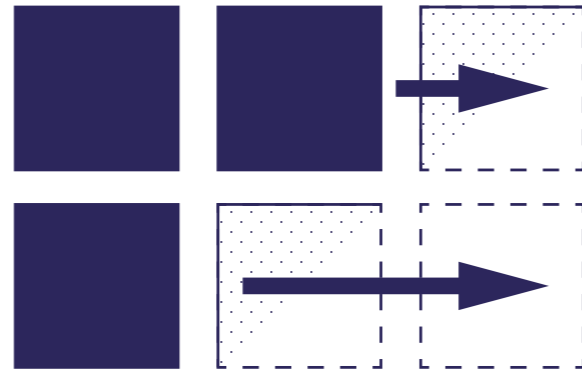




# ANALYSIS // CORE PRINCIPLES OF STRUCTURALISM



1. UNITS



2. OPEN ENDED

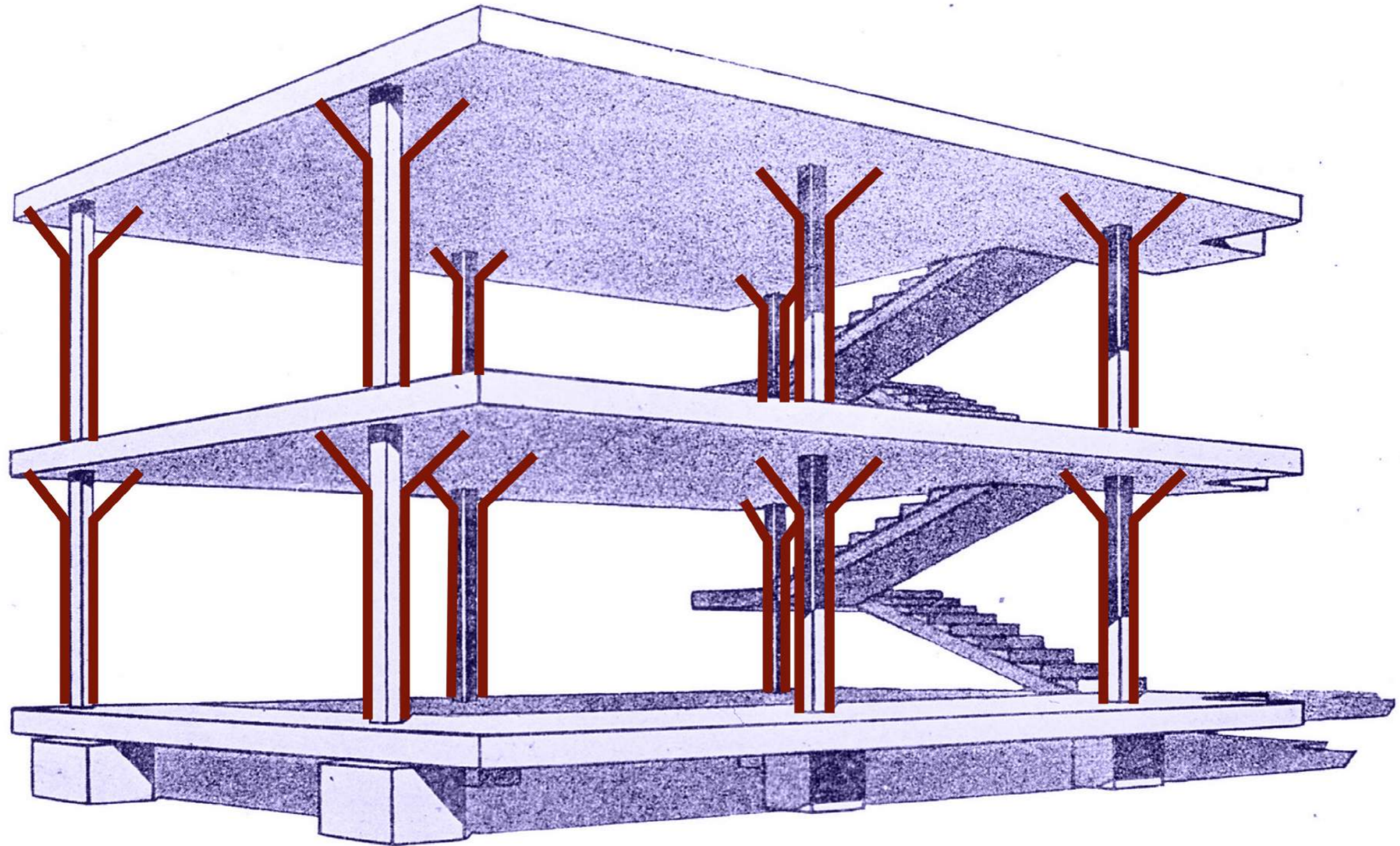


3. BUILDING AS A CITY



4. SOCIAL INTERACTION

# ANALYSIS // PLAN DOMINO



# CONTENT

ANALYSIS EXISTING BUILDING

//

**NEW PROGRAM PROPOSAL**

//

THEORETICAL FRAMEWORK

//

INTERVENTION PROPOSAL

//

TECHNICAL CONSEQUENCES

//

REFLECTION



# PROGRAM // EXISTING PROGRAM

## SOUTH CLUSTER

OFFICES	3400 sqm
LECTURE ROOMS	1050 sqm
LIBRARY	100 sqm
RESTAURANT	100 sqm

HORIZONTAL ROUTING	2000 sqm
VERTICAL ROUTING	150 sqm
BUILDING INSTALLATION	40 sqm
EXTRA	960 sqm

**TOTAL** **approx. 7500 sqm**

## NORTH CLUSTER

OFFICES	2500 sqm
DISCUSSION ROOMS	100 sqm
LECTURE ROOMS	625 sqm
LABORATORY	200 sqm
LIBRARY	600 sqm
RESTAURANT	125 sqm
STORAGE	300 sqm

HORIZONTAL ROUTING	1500 sqm
VERTICAL ROUTING	150 sqm
BUILDING INSTALLATION	200 sqm
EXTRA	1200 sqm

**TOTAL** **approx. 7500 sqm**

**PROGRAM // 21<sup>TH</sup> CENTURY CAMPUS**

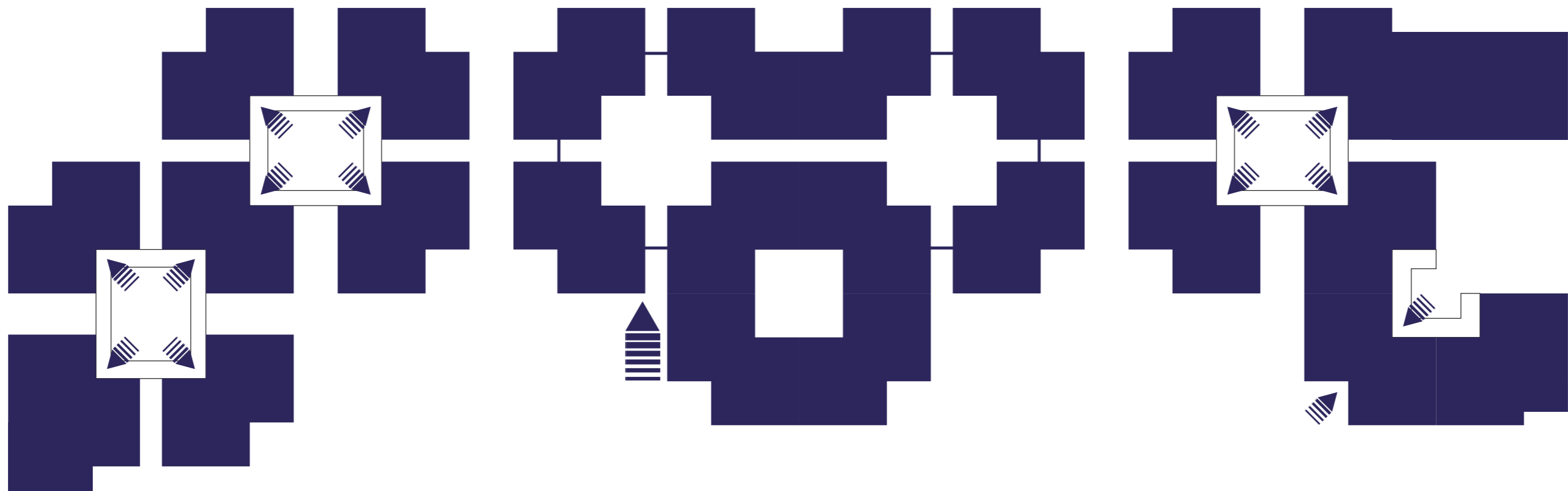


# PROGRAM // EXISTING SITUATION

SOUTH CLUSTER

CENTRAL LIBRARY

NORTH CLUSTER

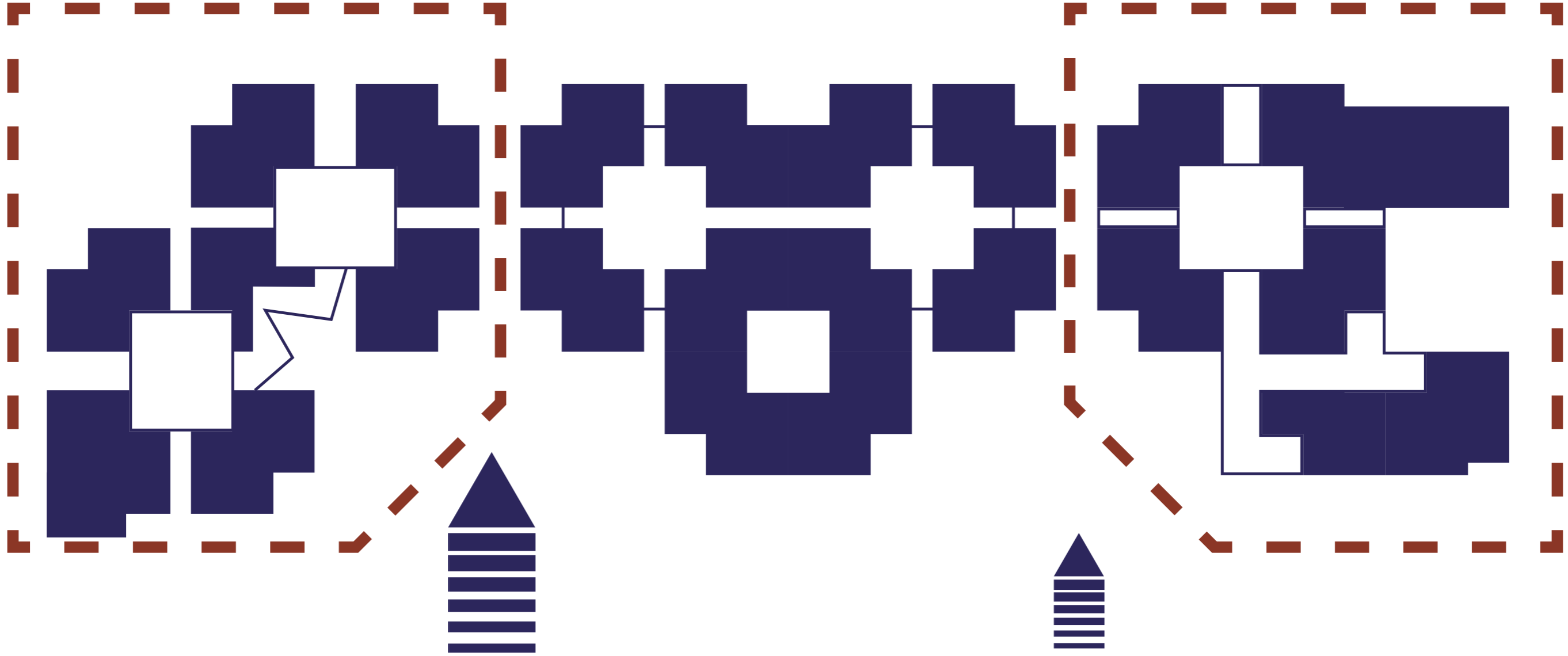


# PROGRAM // INTROVERT VS EXTROVERT

SOUTH CLUSTER

CENTRAL LIBRARY

NORTH CLUSTER



EXTROVERT // MAIN ROUTE

INTROVERT // SECONDARY ROUTE

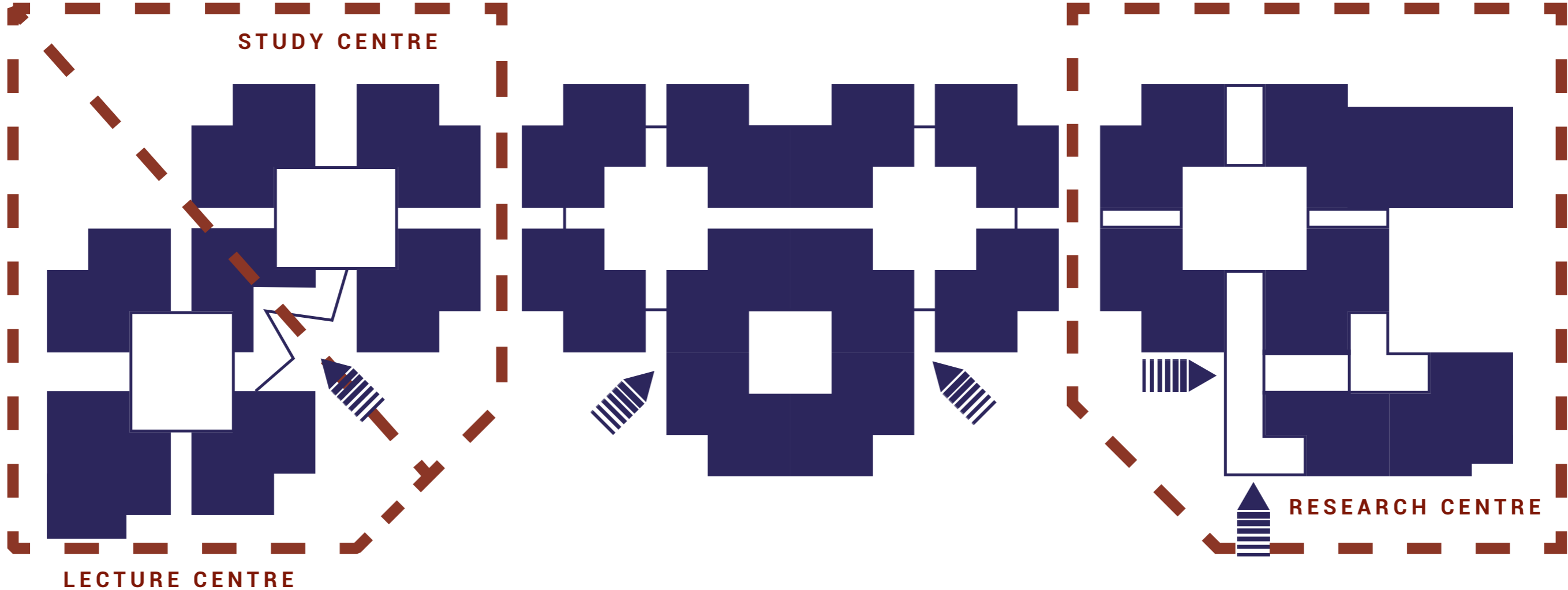


# PROGRAM // REFOCUSING OF PROGRAM

SOUTH CLUSTER

CENTRAL LIBRARY

NORTH CLUSTER

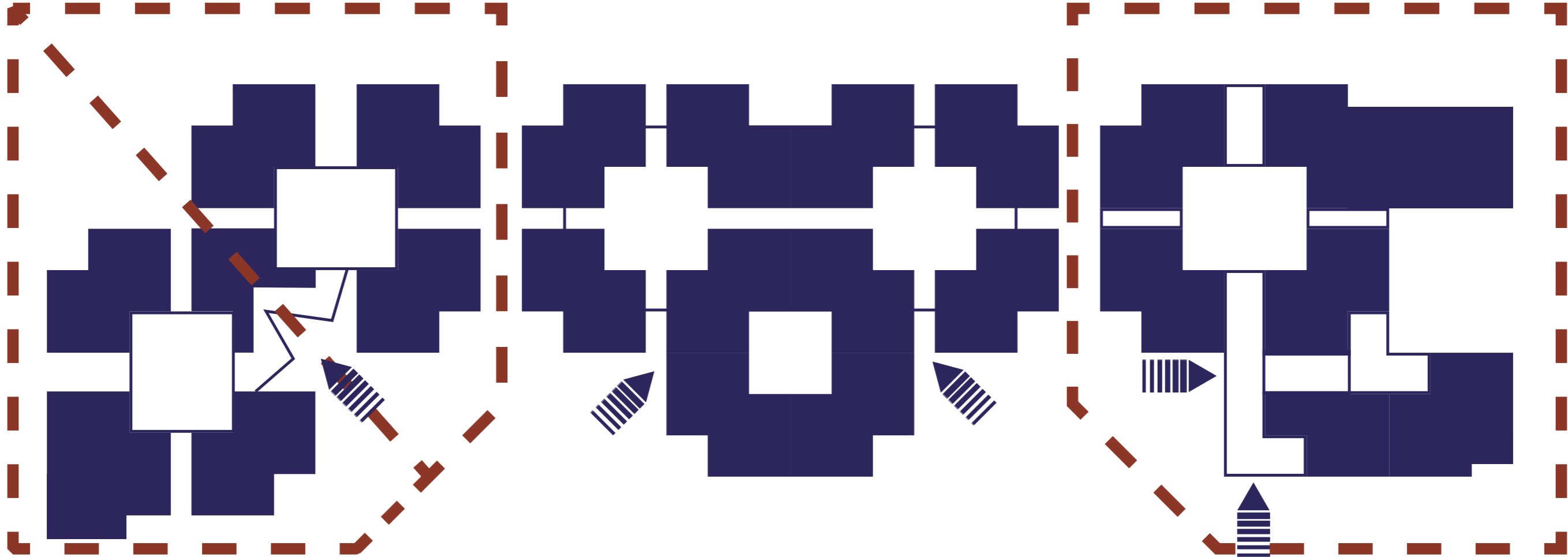


# PROGRAM // REFOCUSING OF PROGRAM

## SOUTH CLUSTER

## CENTRAL LIBRARY

## NORTH CLUSTER



- 2 LECTURE ROOMS
- CLASSROOMS
- ESPRESSO BAR

- BOOKSHOP
- STUDY SPACES
- RESTAURANT

- 'WET' LAB
- 'DRY' LAB
- LIBRARY

- STUDENT ADMINISTRATION
- RESEARCH OFFICES



# PROGRAM // NEW PROGRAM

## **NORTH CLUSTER**

- 2 LECTURE ROOMS
- 4 DISCUSSION ROOMS
- 4 CLASSROOMS
- OFFICES
- LIBRARY
- RESTAURANT

~ 30 P.

~ 140 P.

## **RESEARCH CENTRE**

- STUDENT ADMINISTRATION
- STUDENT ADVISORS
- 'WET' LABORATORY
- 'DRY' LABORATORY
- LIBRARY
- OPEN OFFICES
- SMALL OFFICES
- SMALL RESTAURANT

~ 50 DESKS.  
~ 250 M.  
~ 200 DESKS.  
~ 100 DESKS.

## **SOUTH CLUSTER**

- 4 LECTURE ROOMS
- 5 CLASSROOMS
- 6 DISCUSSION ROOMS
- OFFICES
- 4 LARGE OFFICES
- CANTEEN

~ 30 P.

~ 160 DESKS

~ 16 DESKS

## **EDUCATION CENTRE**

- 2 LECTURE ROOMS
- 5 LECTURE ROOMS
- 10 CLASSROOMS
- 9 DISCUSSION ROOMS
- ESPRESSO BAR

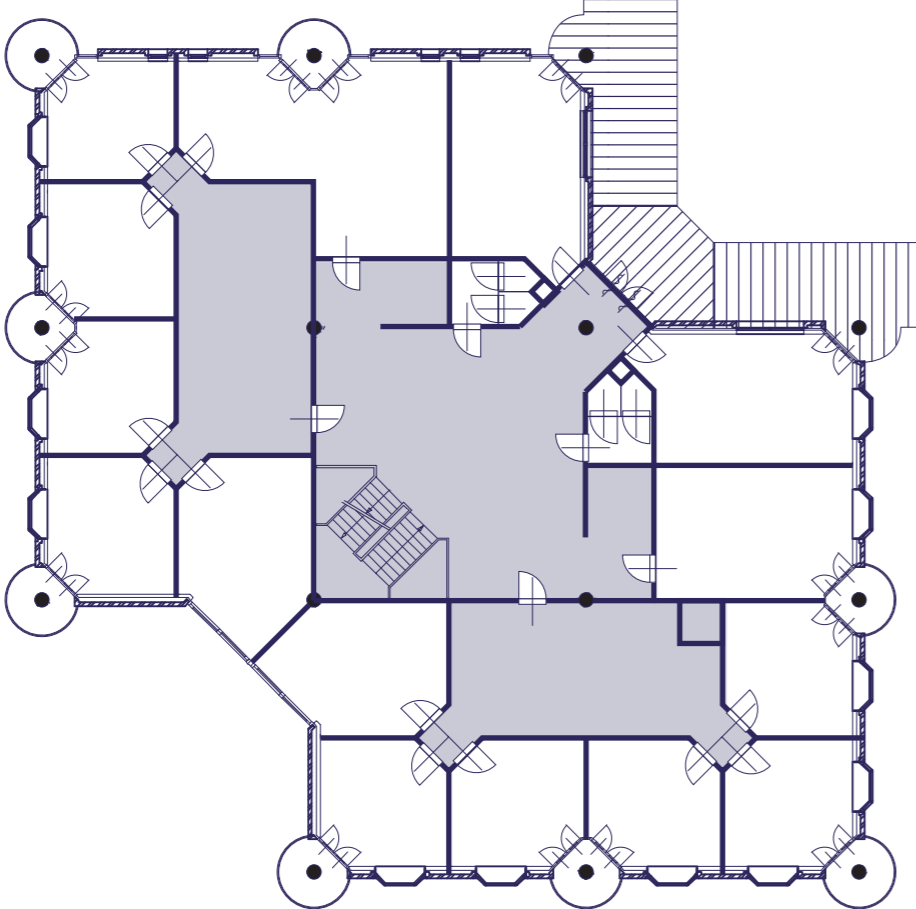
~ 50-80p.  
~ 30-40p.

## **STUDY CENTRE**

- STUDY SPACES
- RESTAURANT

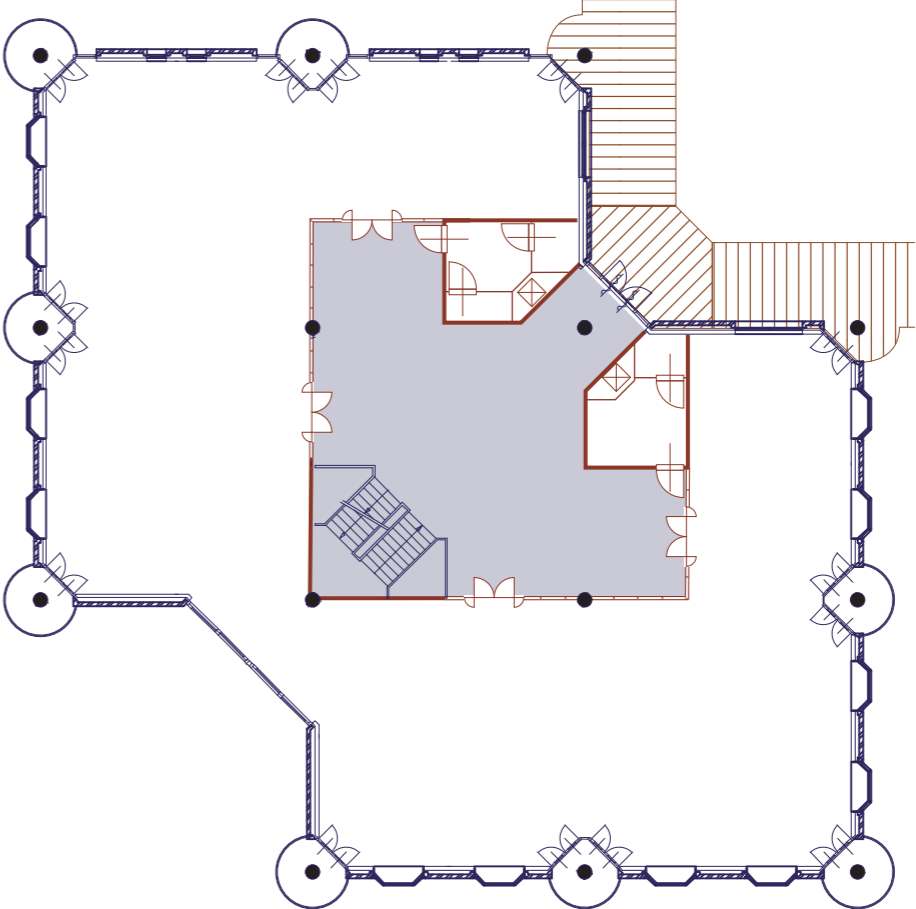
~ 500 tables

# PROGRAM // OPEN FLOORPLAN



**ORIGINAL // TYPICAL FLOORPLAN**

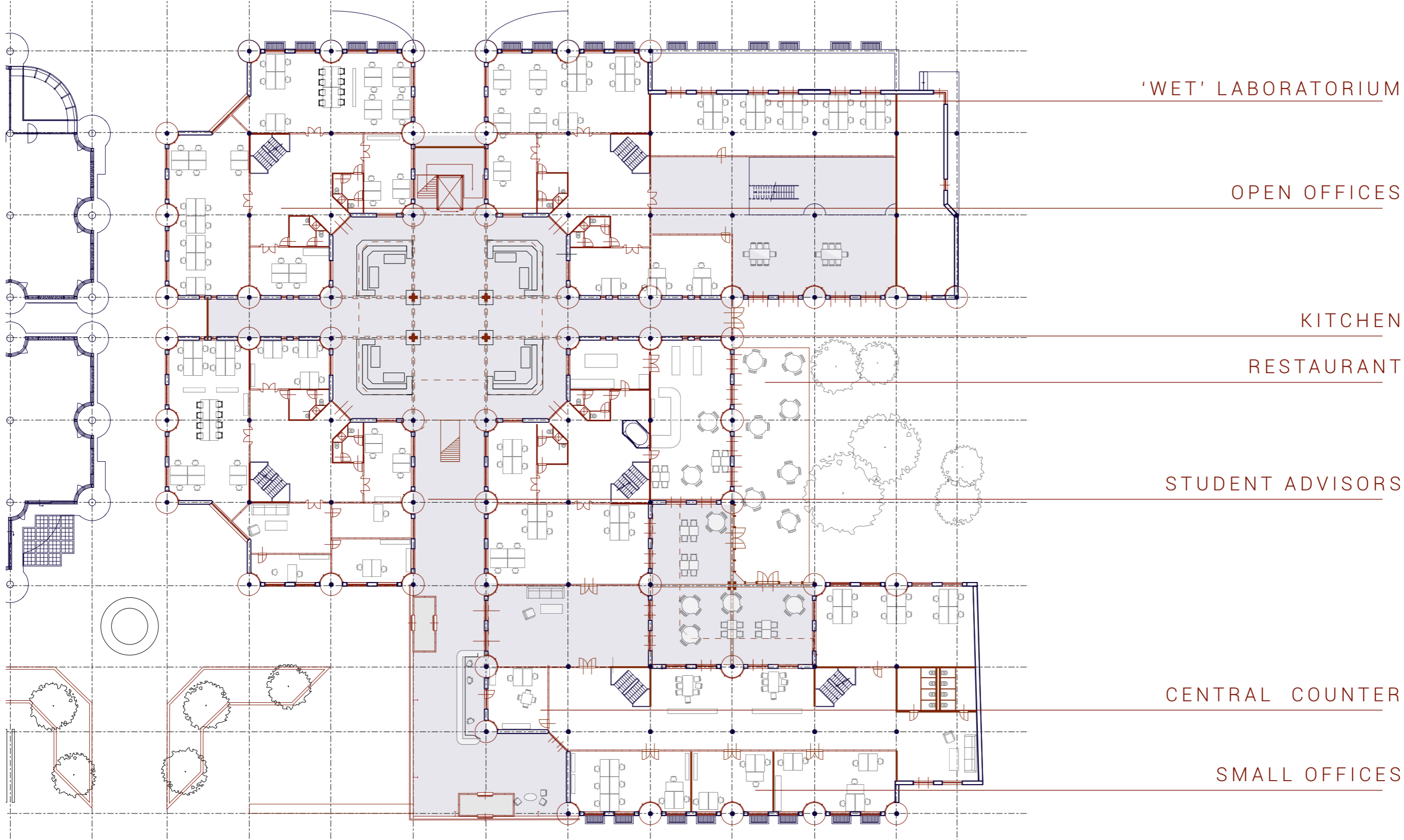
<b>TOTAL:</b>	<b>357 sqm</b>
<b>CIRCULATION:</b>	<b>115 sqm</b>
<b>TOILETS:</b>	<b>15 sqm</b>
<b>OFFICES:</b>	<b>227 sqm</b>



**PROPOSAL // TYPICAL FLOORPLAN**

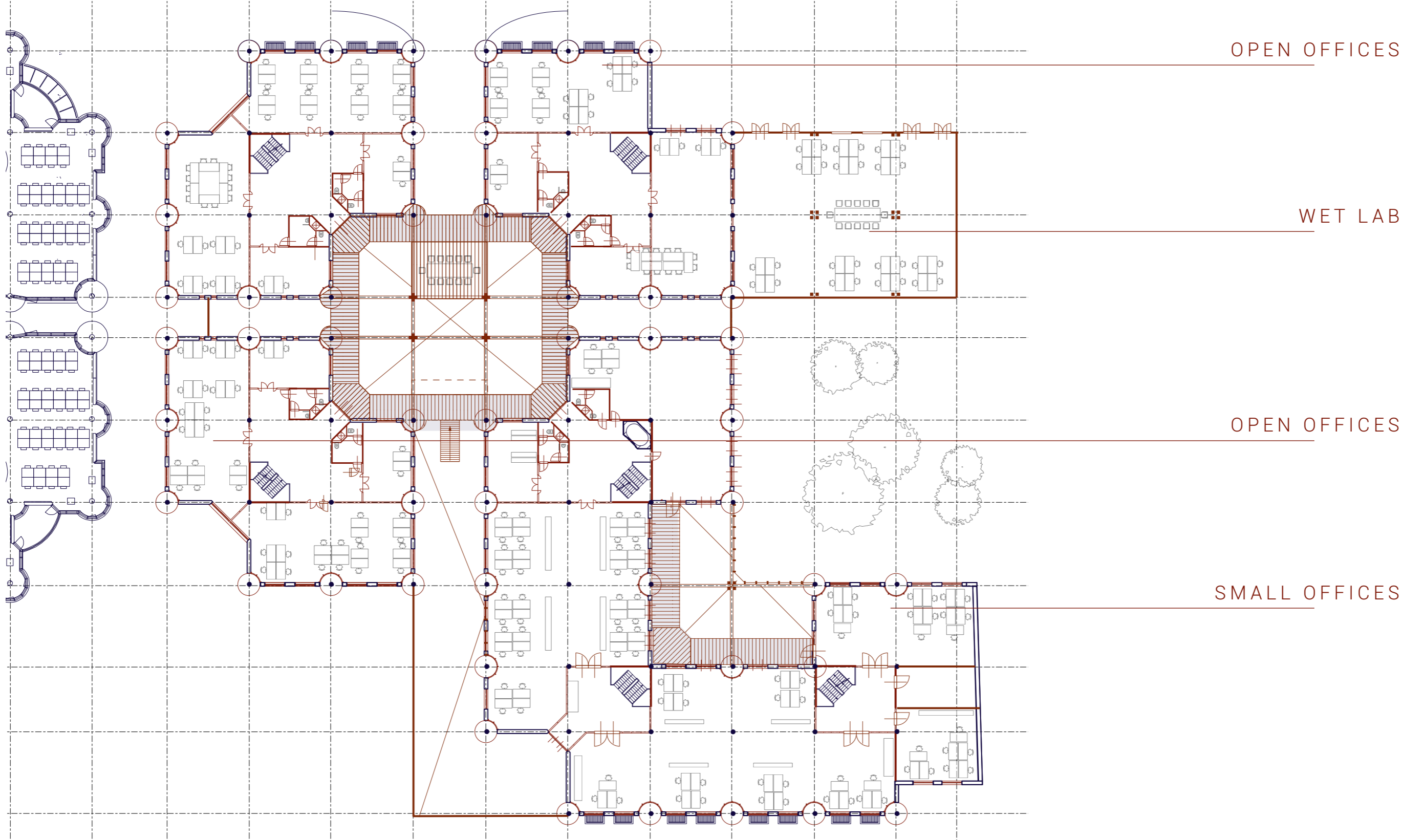
<b>TOTAL:</b>	<b>357 sqm</b>
<b>CIRCULATION:</b>	<b>78 sqm</b>
<b>TOILETS:</b>	<b>16 sqm</b>
<b>OFFICES:</b>	<b>263 sqm</b>

# PROGRAM // PLAN NORTH CLUSTER



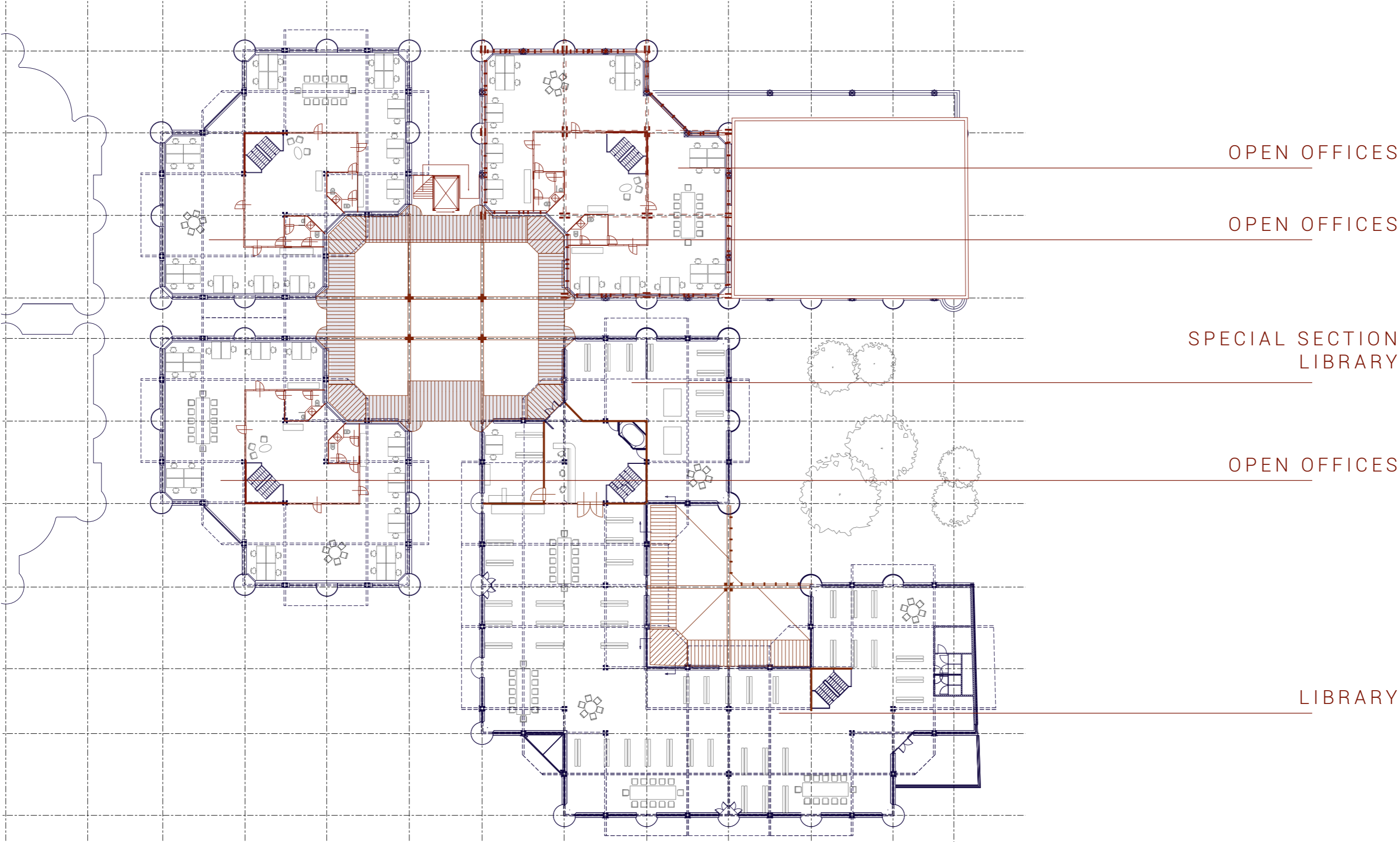
PLAN NORTH CLUSTER // GROUND FLOOR

# PROGRAM // PLAN NORTH CLUSTER



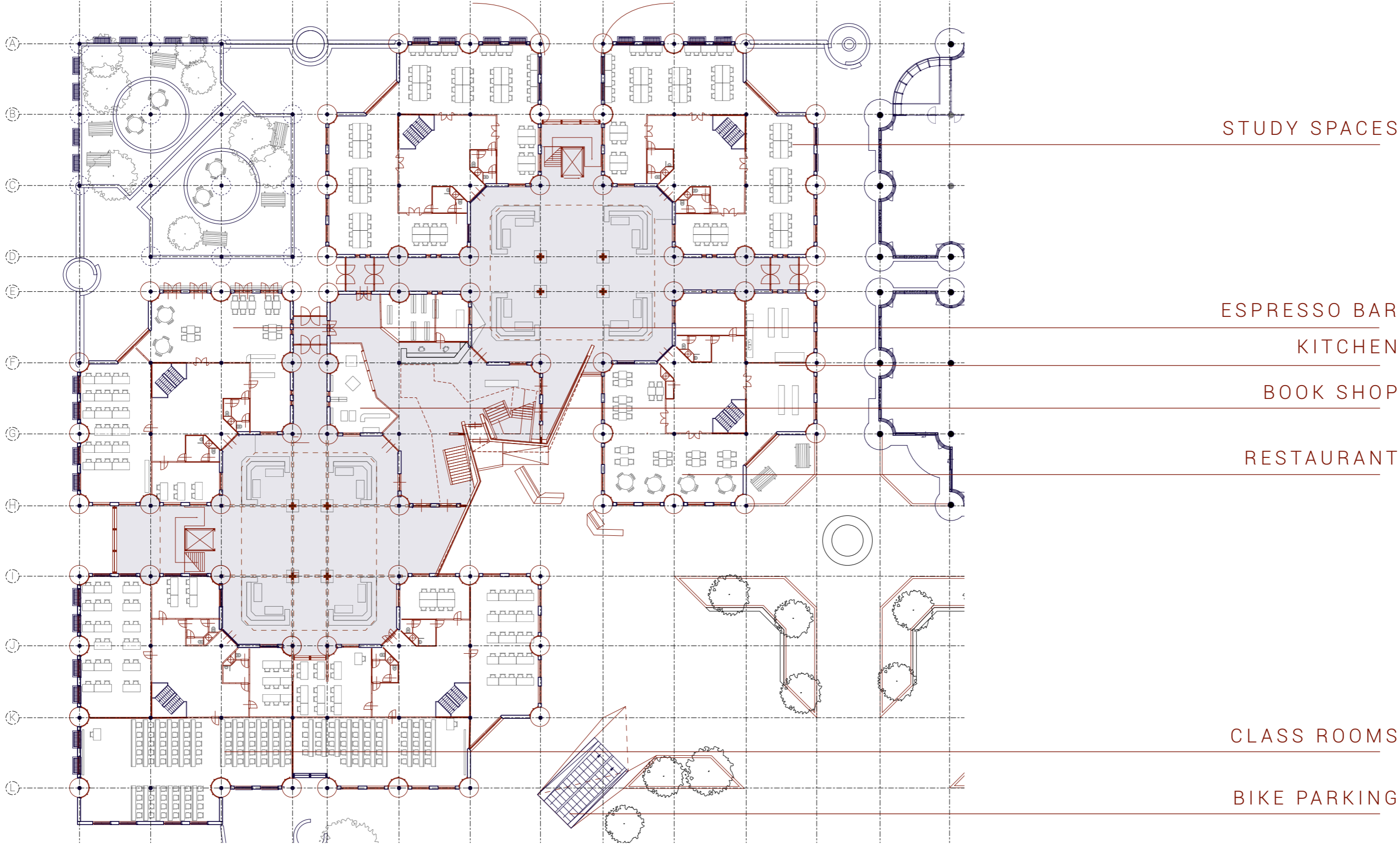
PLAN NORTH CLUSTER // FIRST FLOOR

# PROGRAM // PLAN NORTH CLUSTER



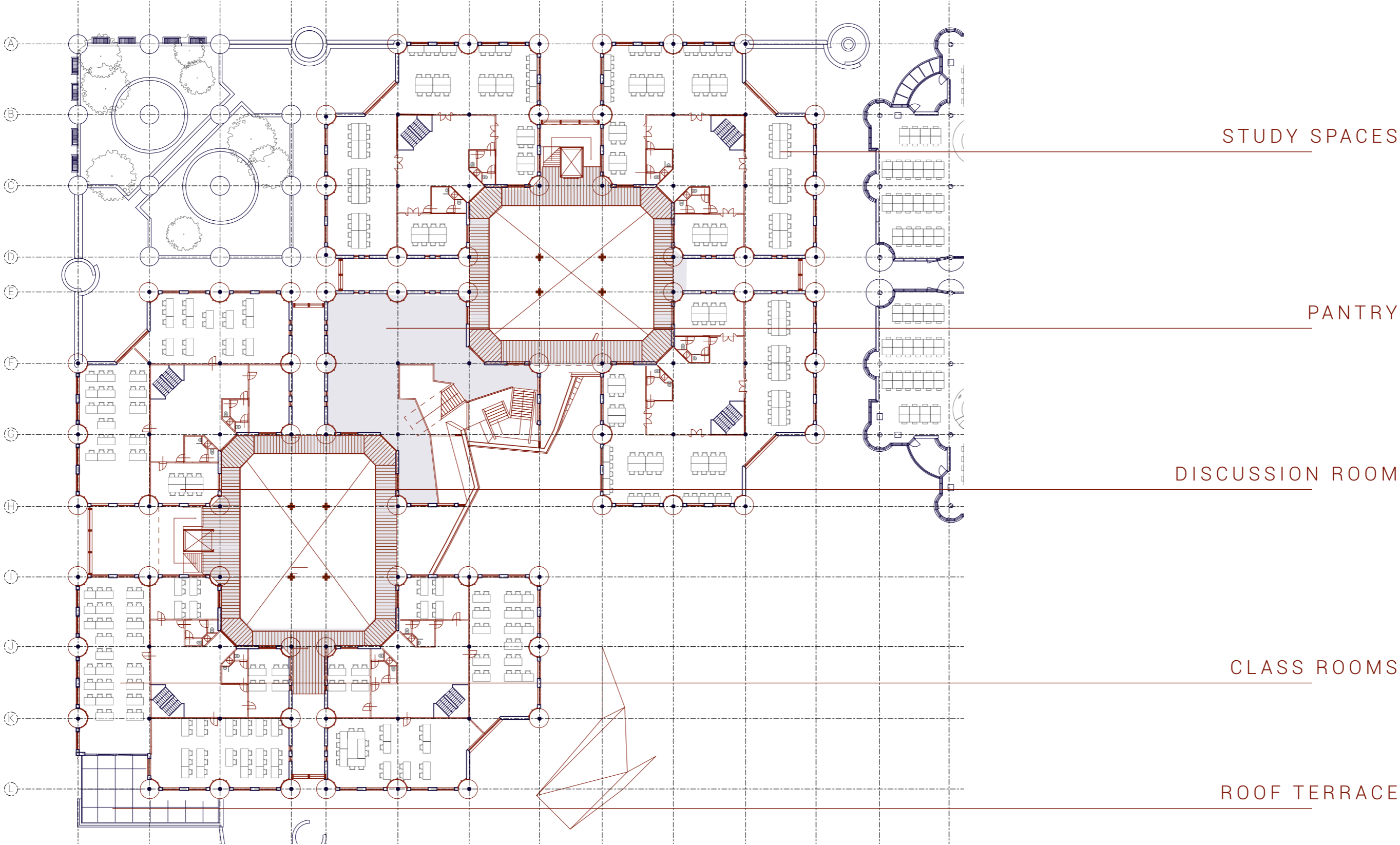
PLAN NORTH CLUSTER // SECOND FLOOR

# PROGRAM // PLAN SOUTH CLUSTER



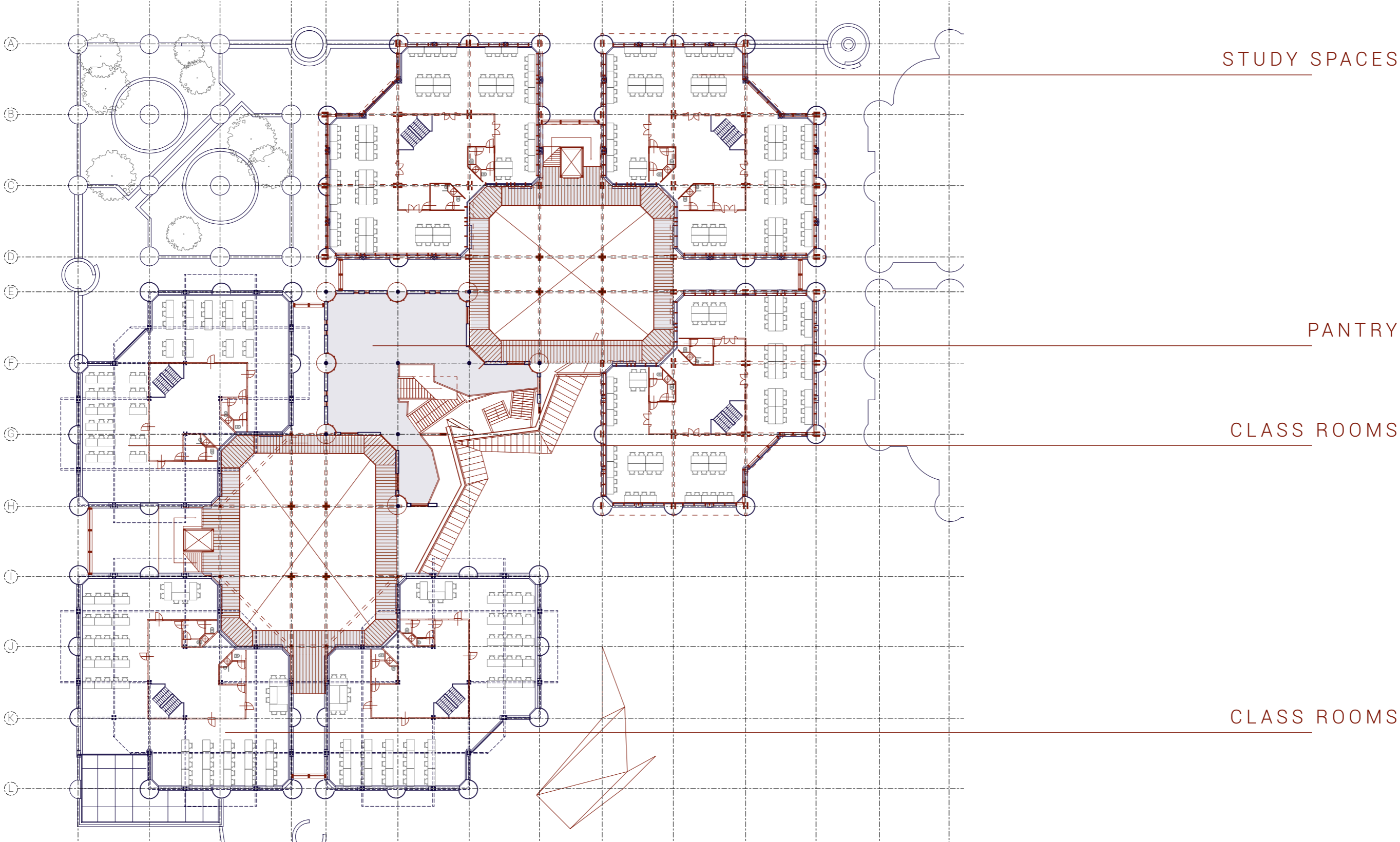
PLAN SOUTH CLUSTER // GROUND FLOOR

# PROGRAM // PLAN SOUTH CLUSTER



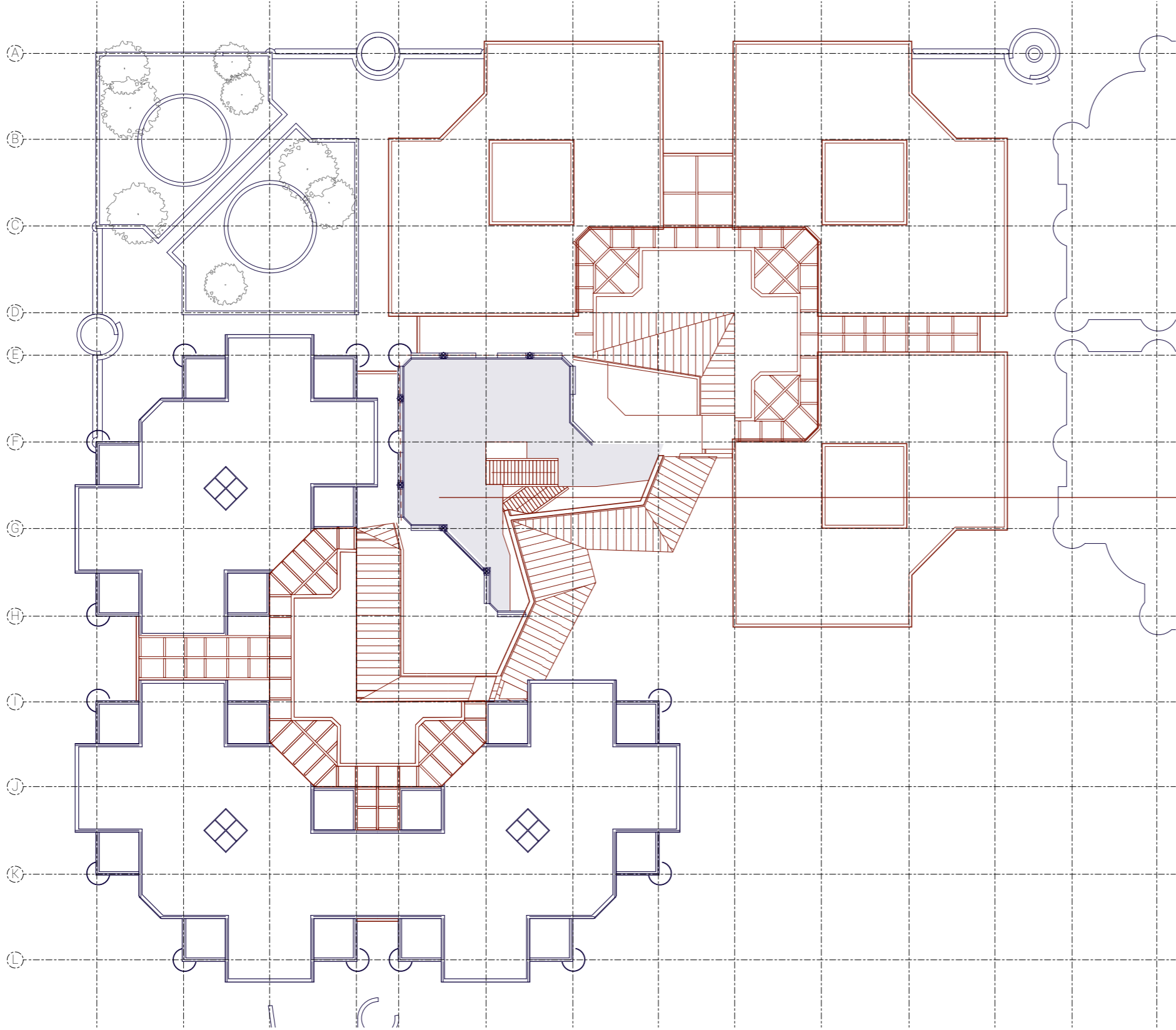
PLAN SOUTH CLUSTER // FIRST FLOOR

# PROGRAM // PLAN SOUTH CLUSTER



PLAN SOUTH CLUSTER // SECOND FLOOR

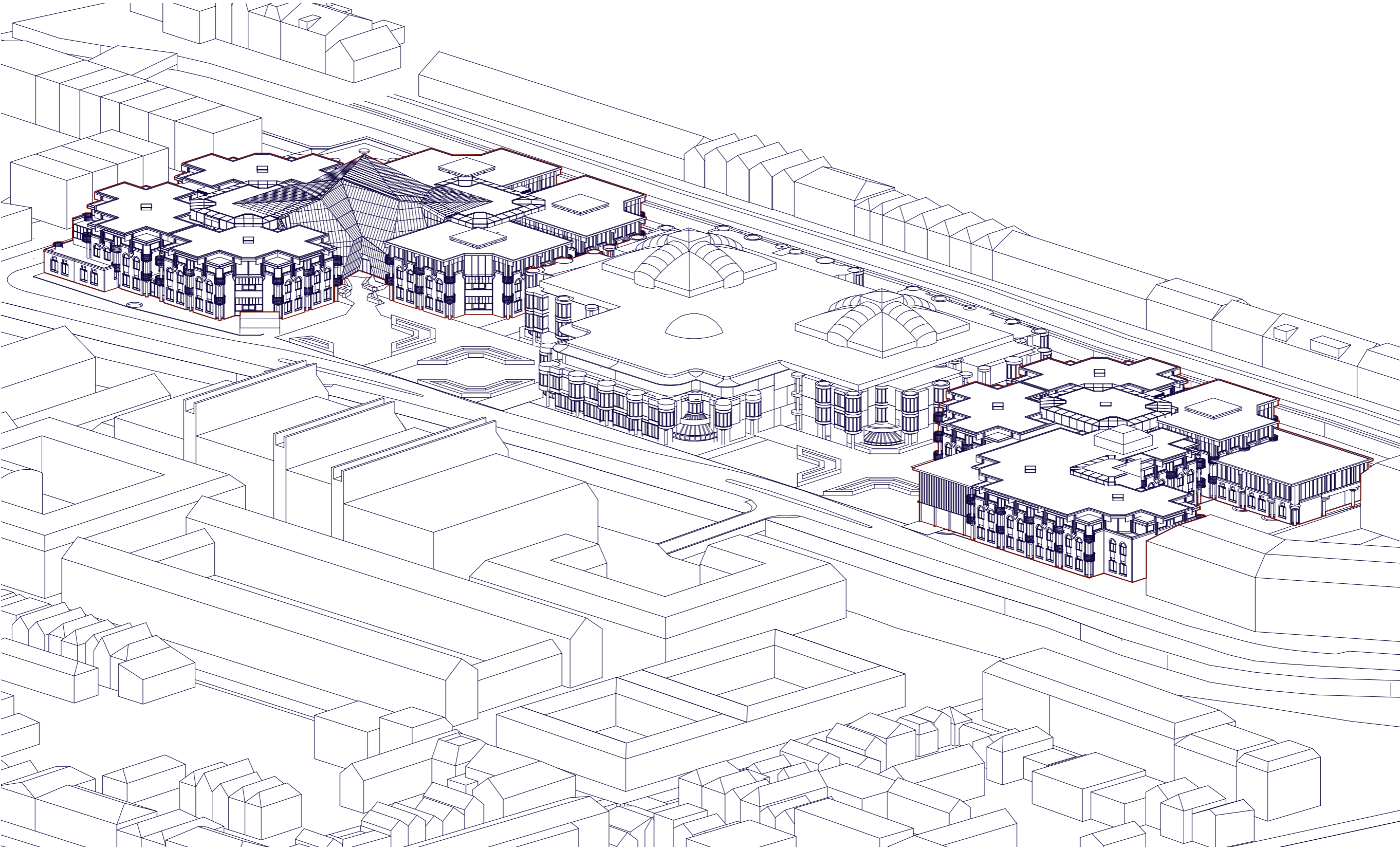
# PROGRAM // PLAN SOUTH CLUSTER



EXHIBITION SPACE

PLAN SOUTH CLUSTER // THIRD FLOOR

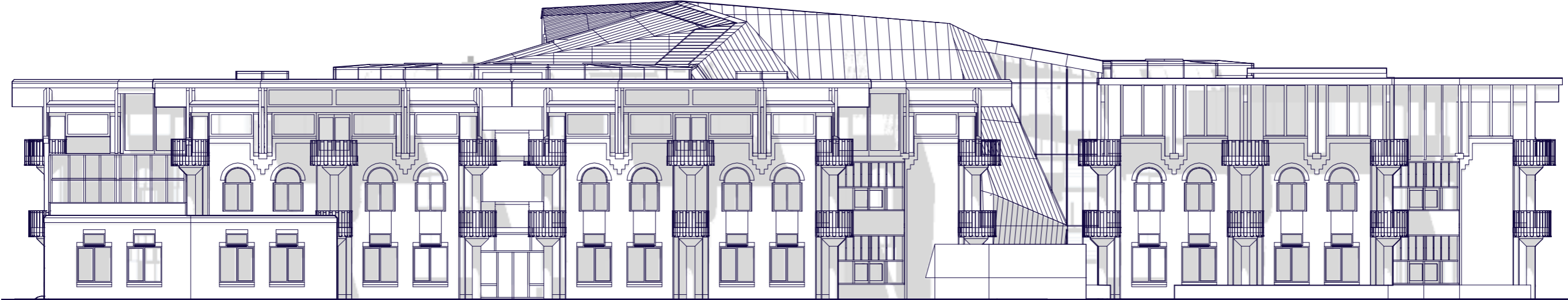
**PROGRAM // ISOMETRIC OVERVIEW**



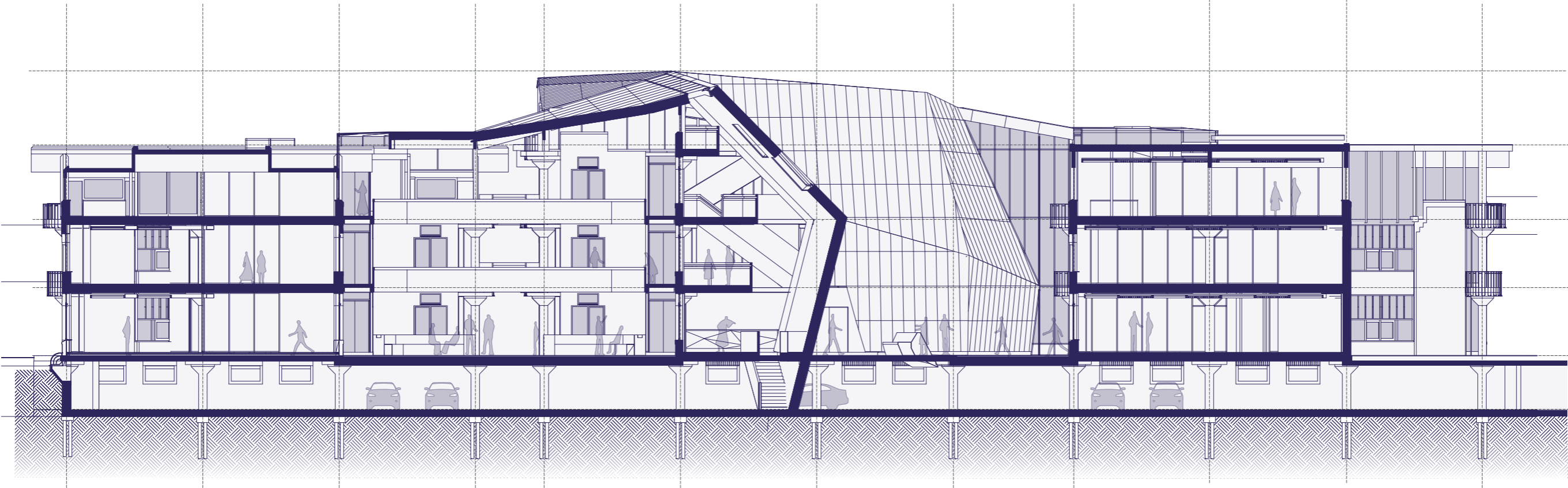
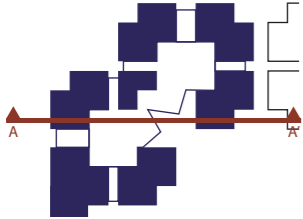
# PROGRAM // EAST FACADE



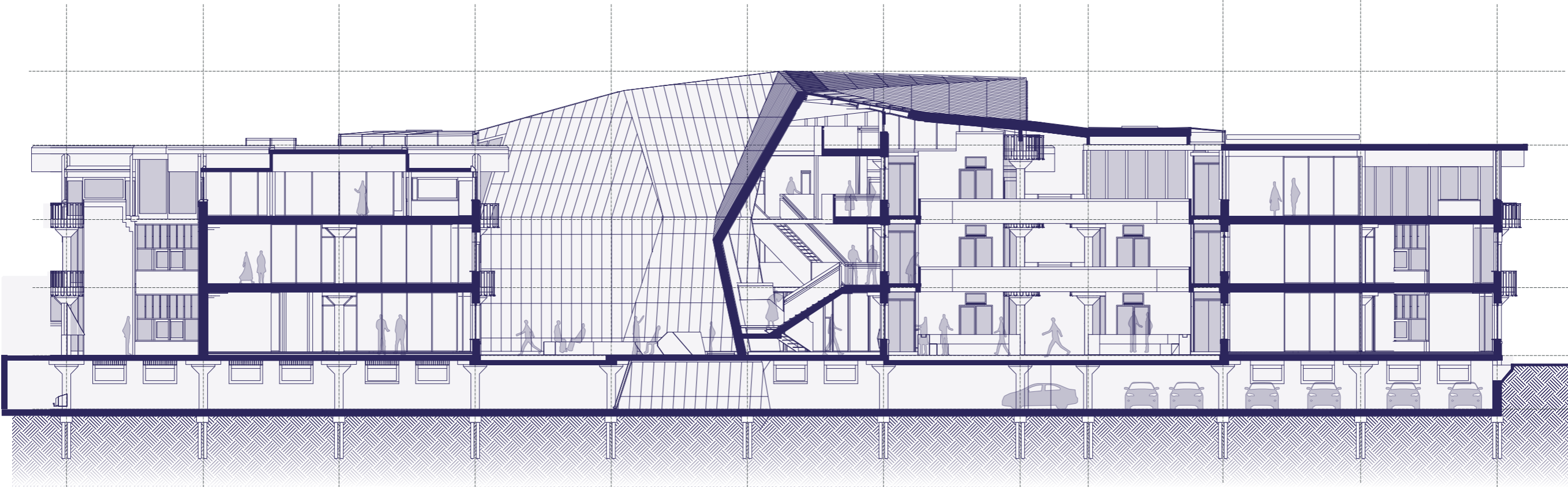
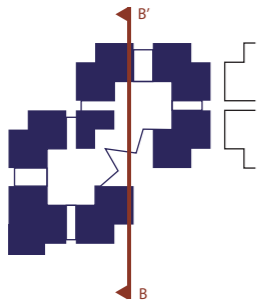
**PROGRAM // EAST FACADE**



# PROGRAM // SECTION



**PROGRAM // SECTION**



# CONTENT

ANALYSIS EXISTING BUILDING

//

NEW PROGRAM PROPOSAL

//

**THEORETICAL FRAMEWORK**

//

INTERVENTION PROPOSAL

//

TECHNICAL CONSEQUENCES

//

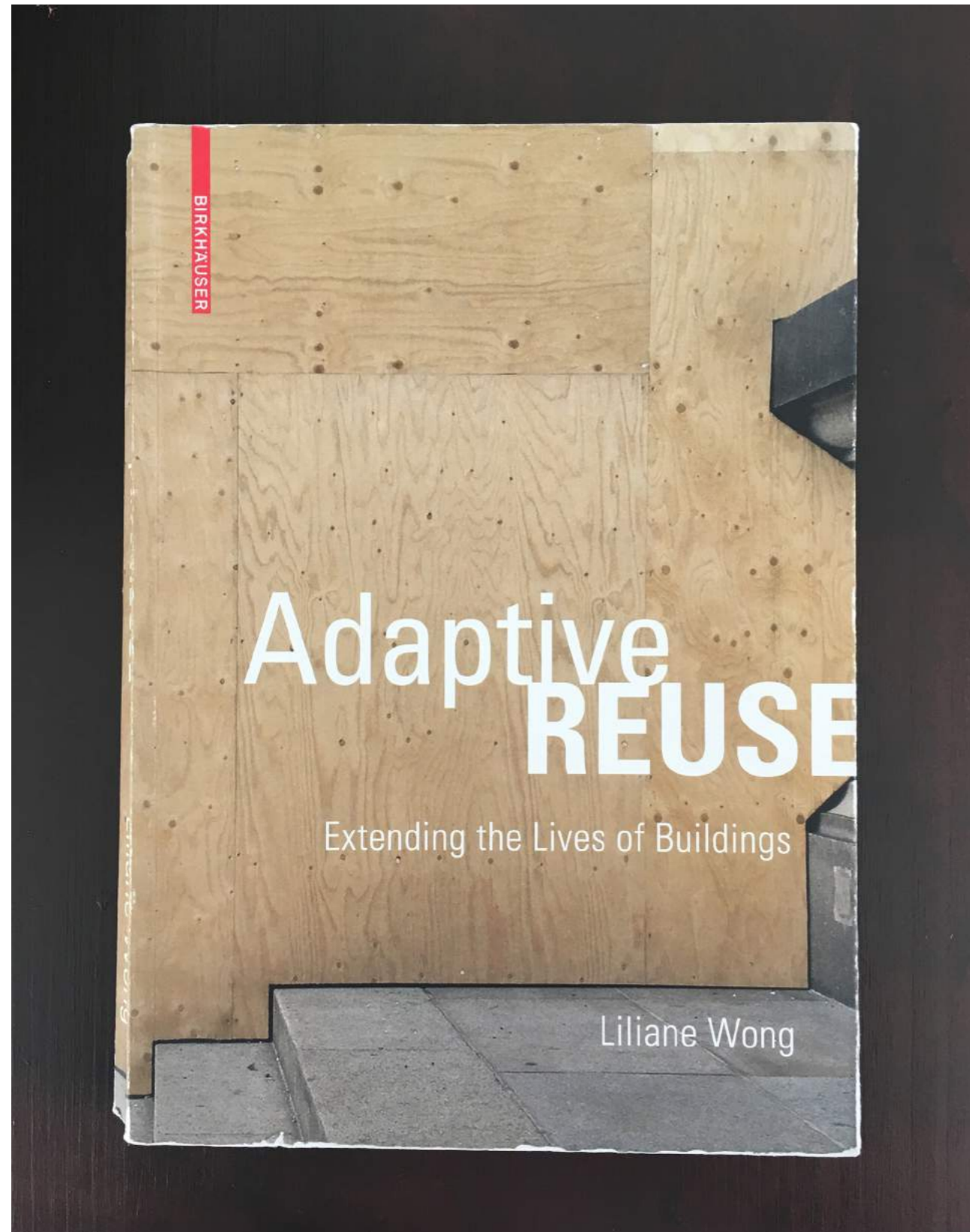
REFLECTION

# THEORETICAL FRAMEWORK // HERITAGE APPROACH

**1** // EXPOSE THE STRUCTURALIST SYSTEM

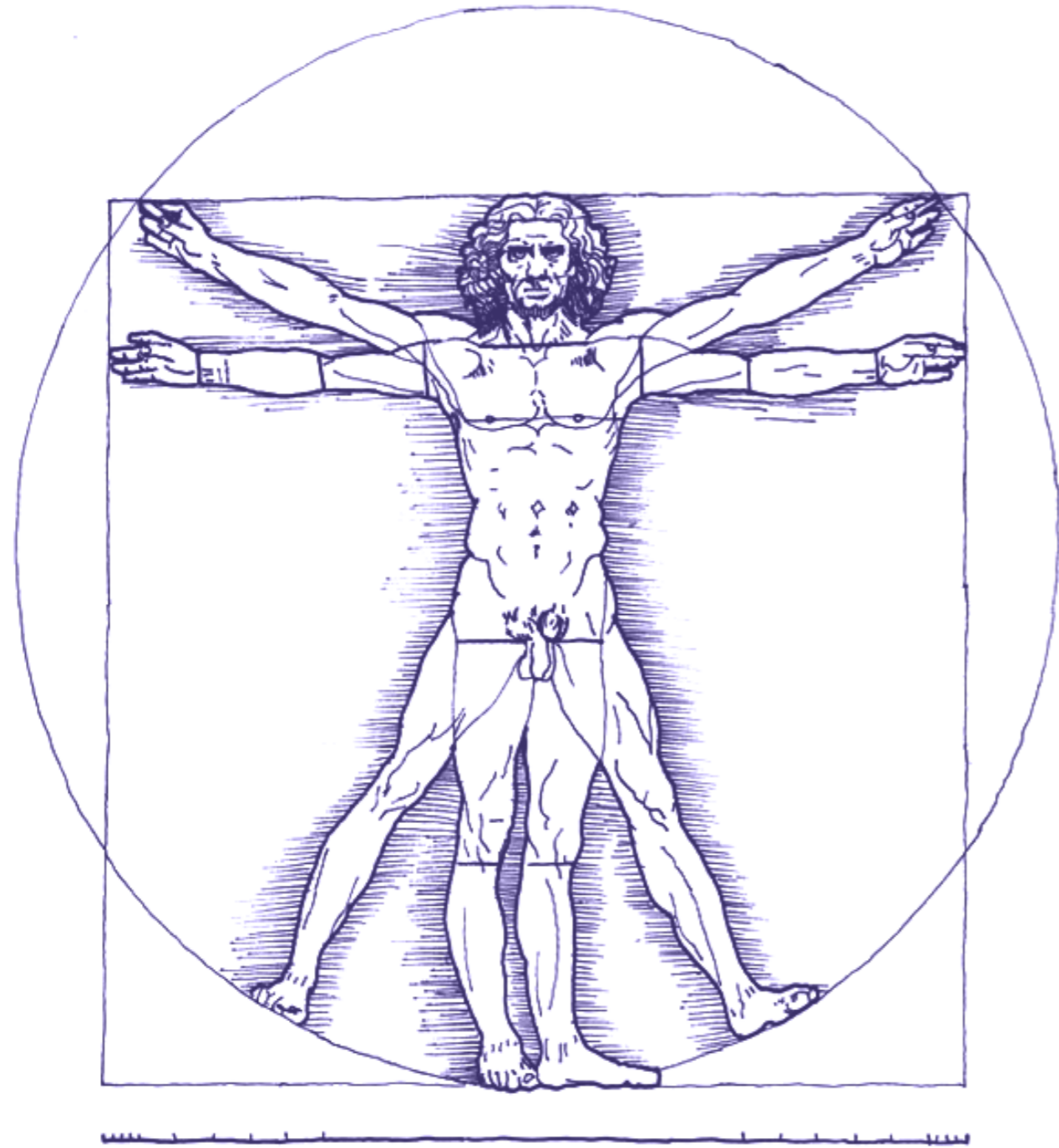
**2** // MAKE A CLEAR AND UNDERSTANDABLE  
FACULTY

**WHAT IS THE UNDERLYING  
STRUCTURAL SYSTEM  
CONSTRUCTING STRUCTURALIST  
BUILDINGS, AND HOW CAN THIS  
STRUCTURE BE EXPOSED?**



+  
ADDITION  
-  
SUBTRACTION

# THEORETICAL FRAMEWORK // ADAPTIVE REUSE



+  
ADDITION  
-  
SUBTRACTION

# THEORETICAL FRAMEWORK // GRID CITIES



MANHATTAN GRID IRON

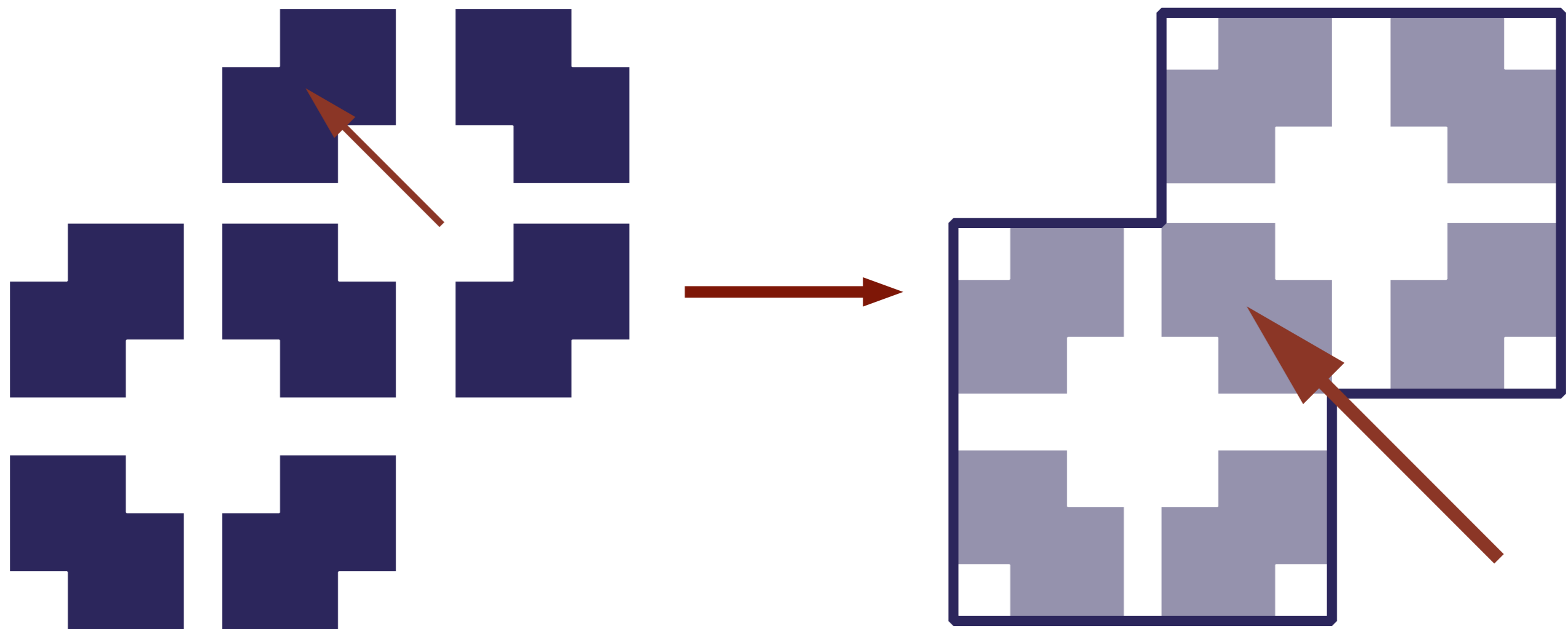


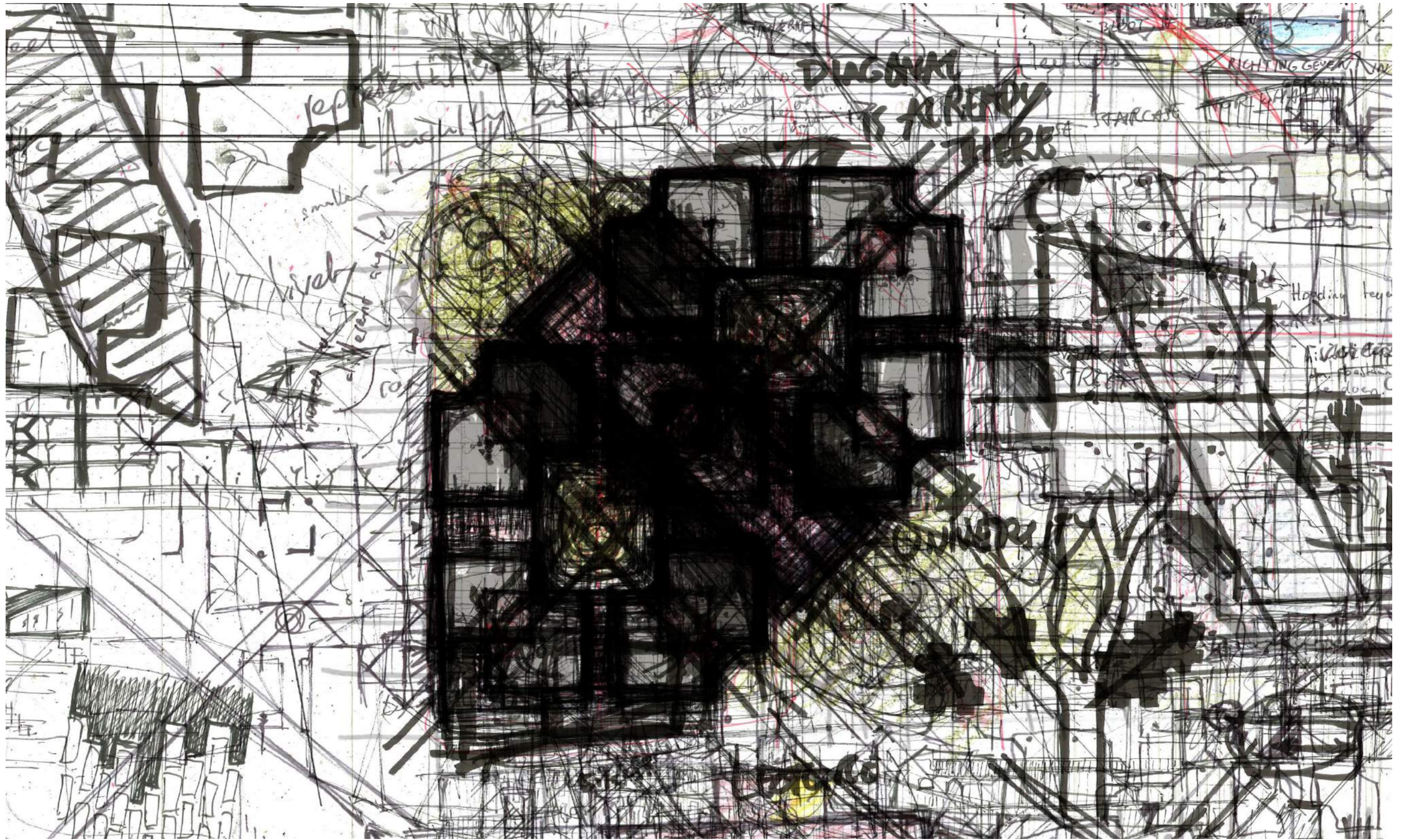
BARCELONA EIXAMPLE

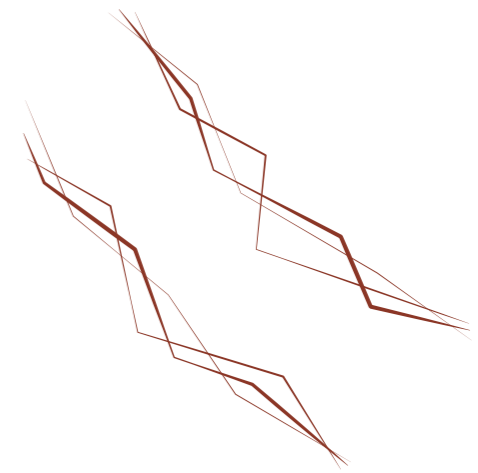
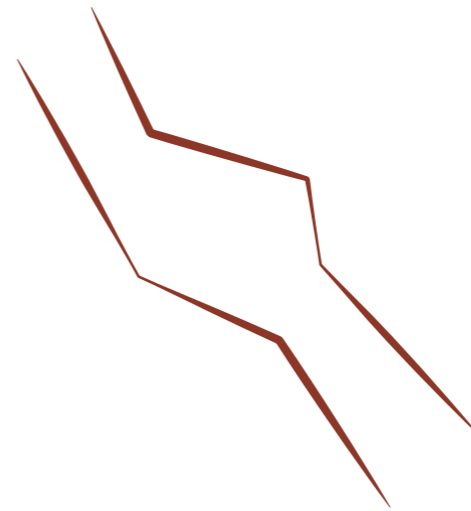
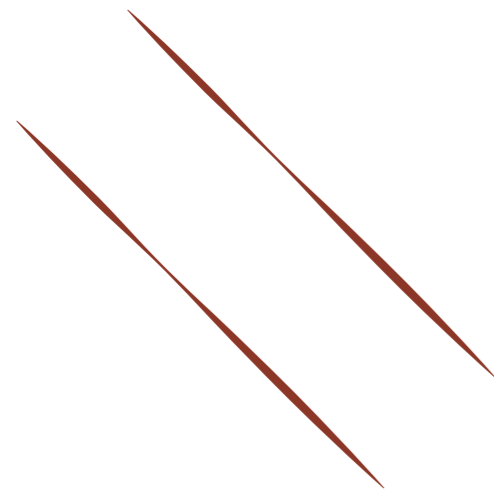
**A PRECISE INCISION CAN DIFFERENTIATE  
FROM THE SYSTEM TO EXPOSE IT, WHILE ALSO  
CREATING A CLEAR DIRECTION AND HIERARCHIE  
WITHIN THE EXISTING BUILDING.**



**THE DIAGONAL IS ALREADY THERE!**







**A FACETTED FACADE CAN FORM ITSELF WITHIN THE EXISTING SYSTEM, DIFFERENTIATING FROM IT AND THEREBY EXPOSE THE SYSTEM.**

# CONTENT

ANALYSIS EXISTING BUILDING

//

NEW PROGRAM PROPOSAL

//

THEORETICAL FRAMEWORK

//

**INTERVENTION PROPOSAL**

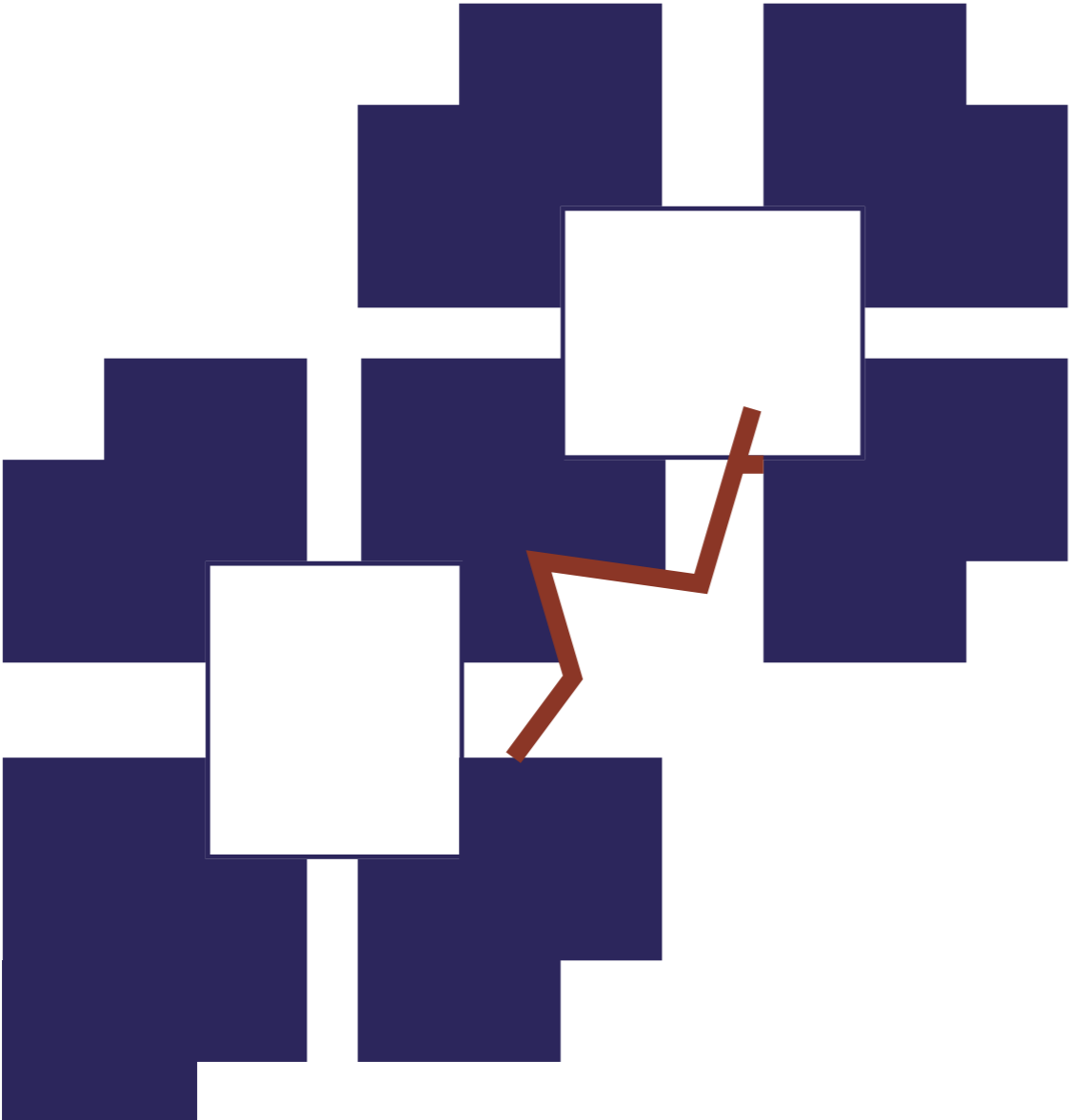
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TECHNICAL CONSEQUENCES

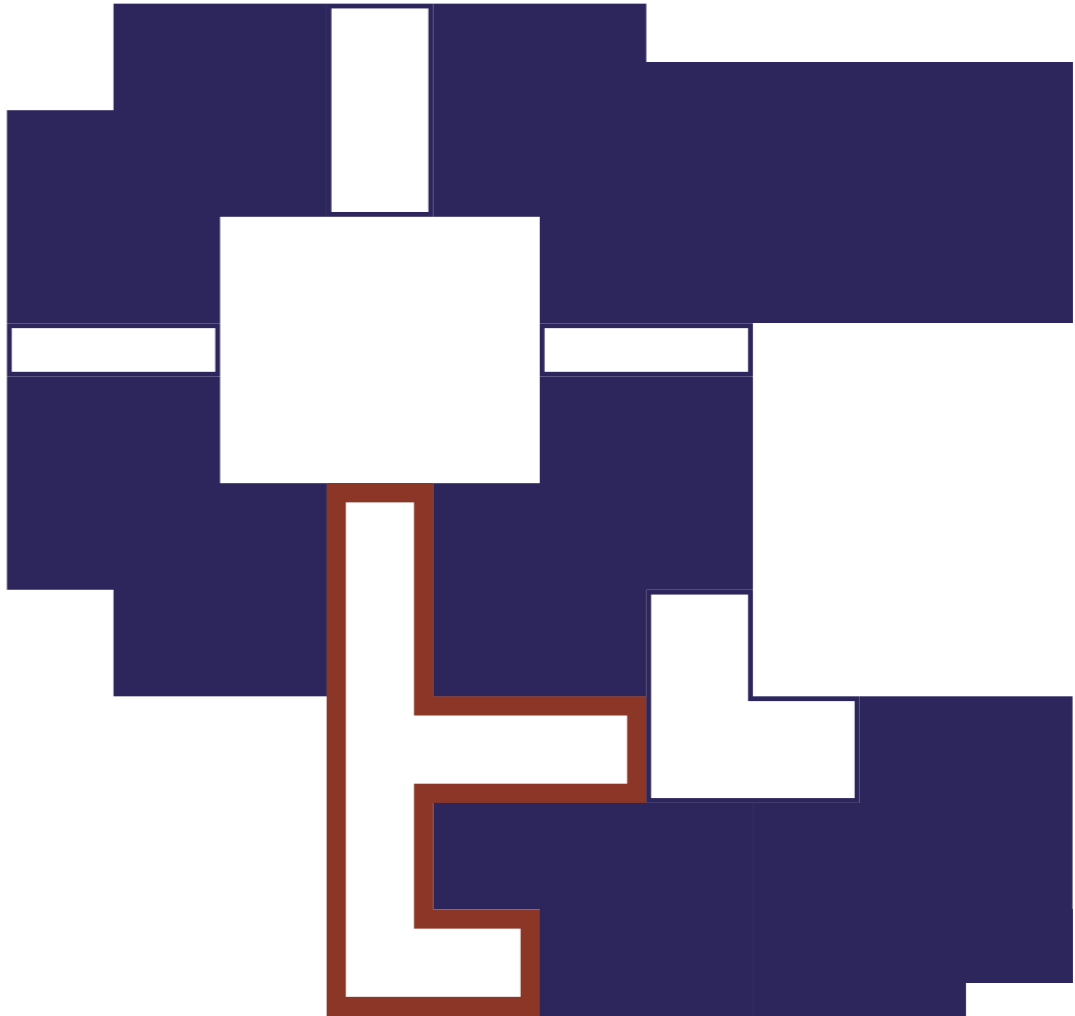
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REFLECTION

**INTERVENTION PROPOSAL // TWO APPROACHES**

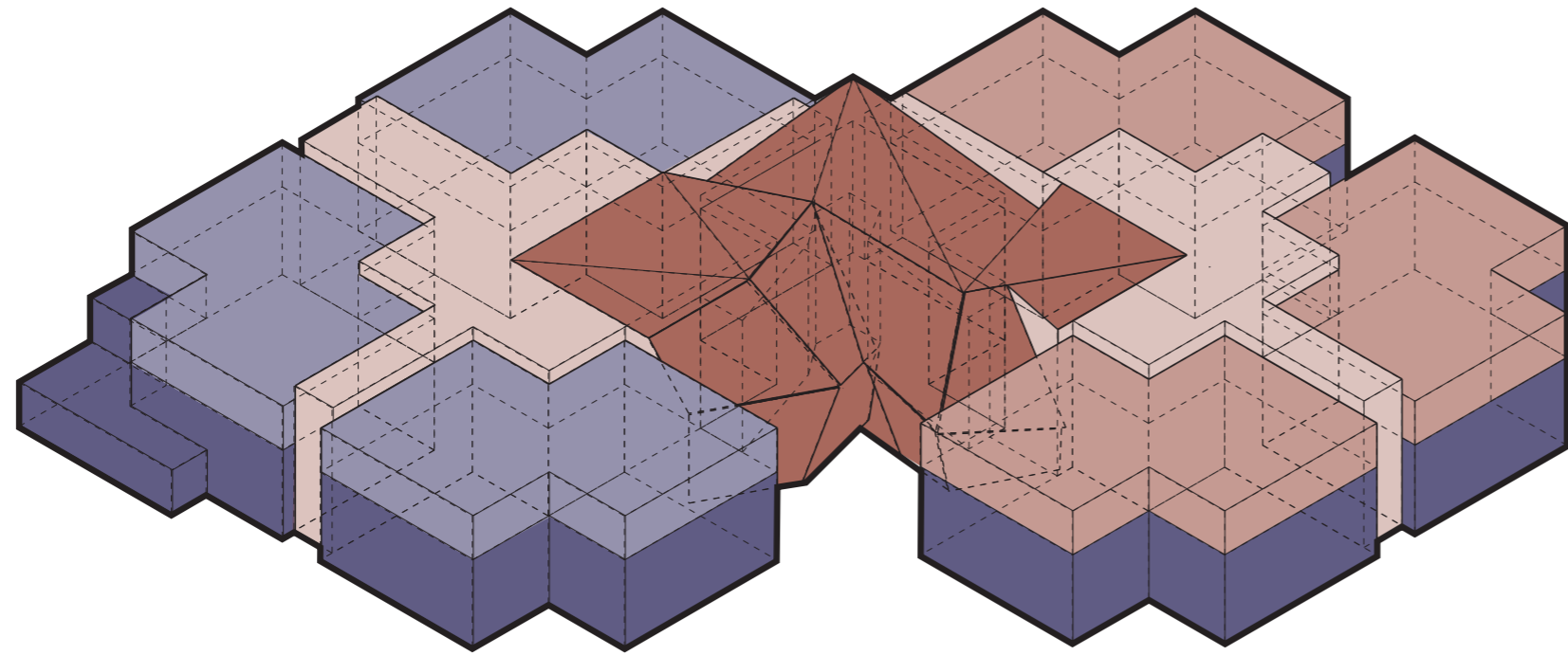


**SOUTH CLUSTER // INCISION**

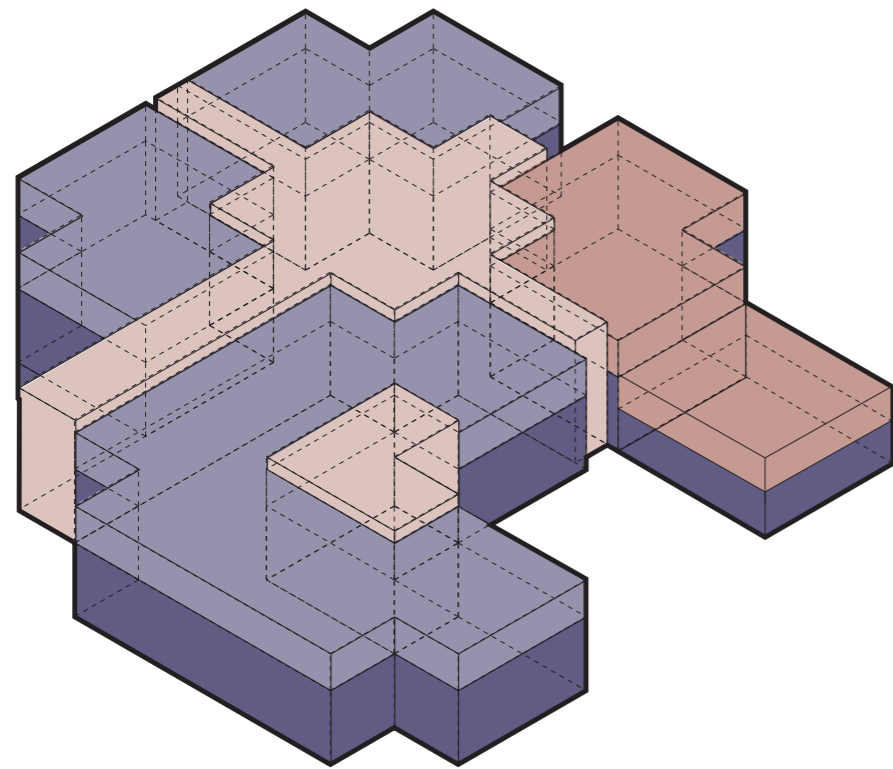


**NORTH CLUSTER // ENHANCING**

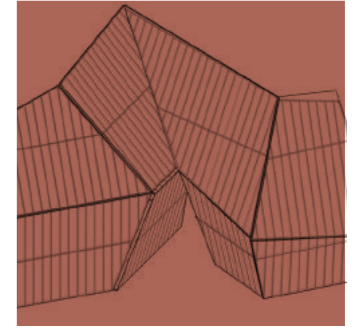
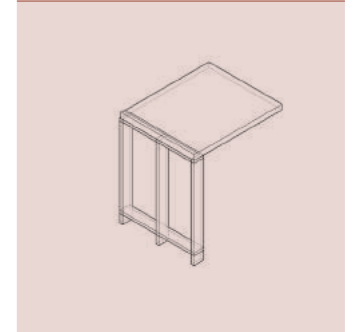
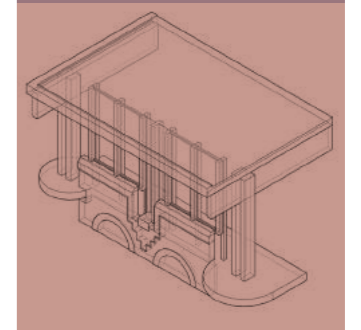
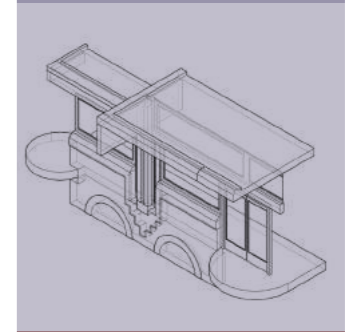
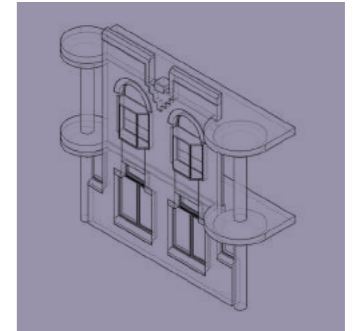
# INTERVENTION PROPOSAL // ARCHITECTURAL IDIOM



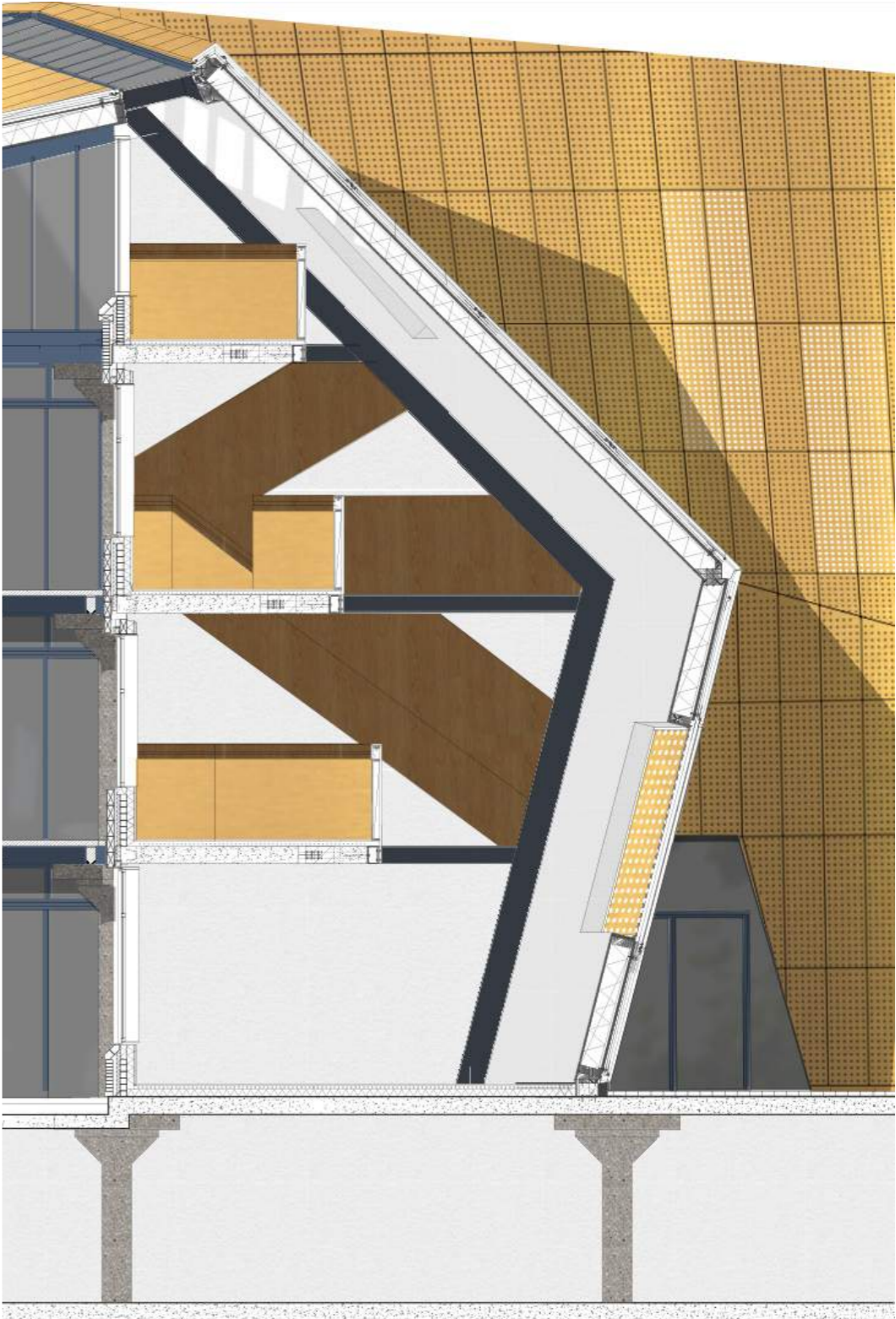
**SOUTH CLUSTER**



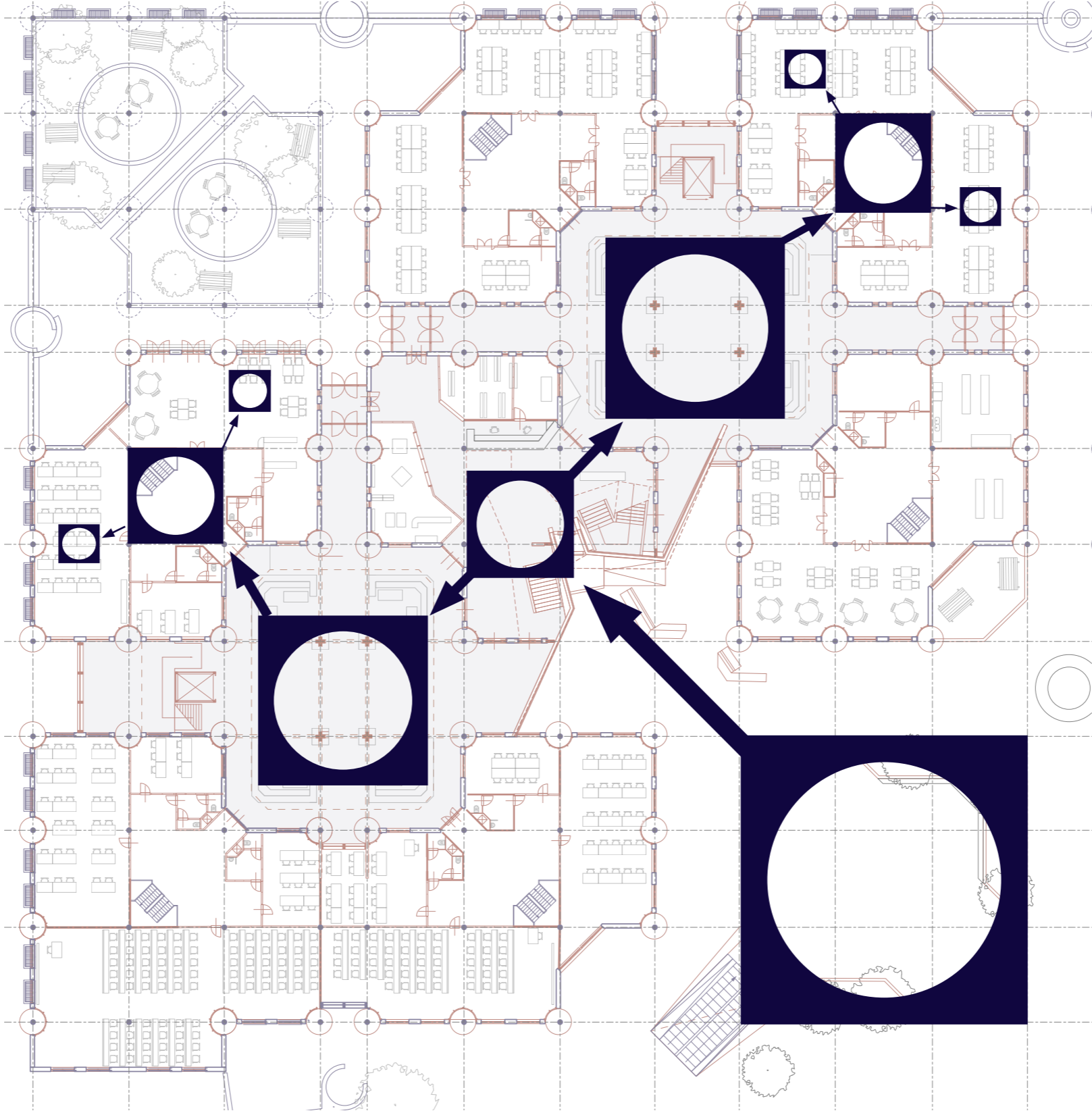
**NORTH CLUSTER**



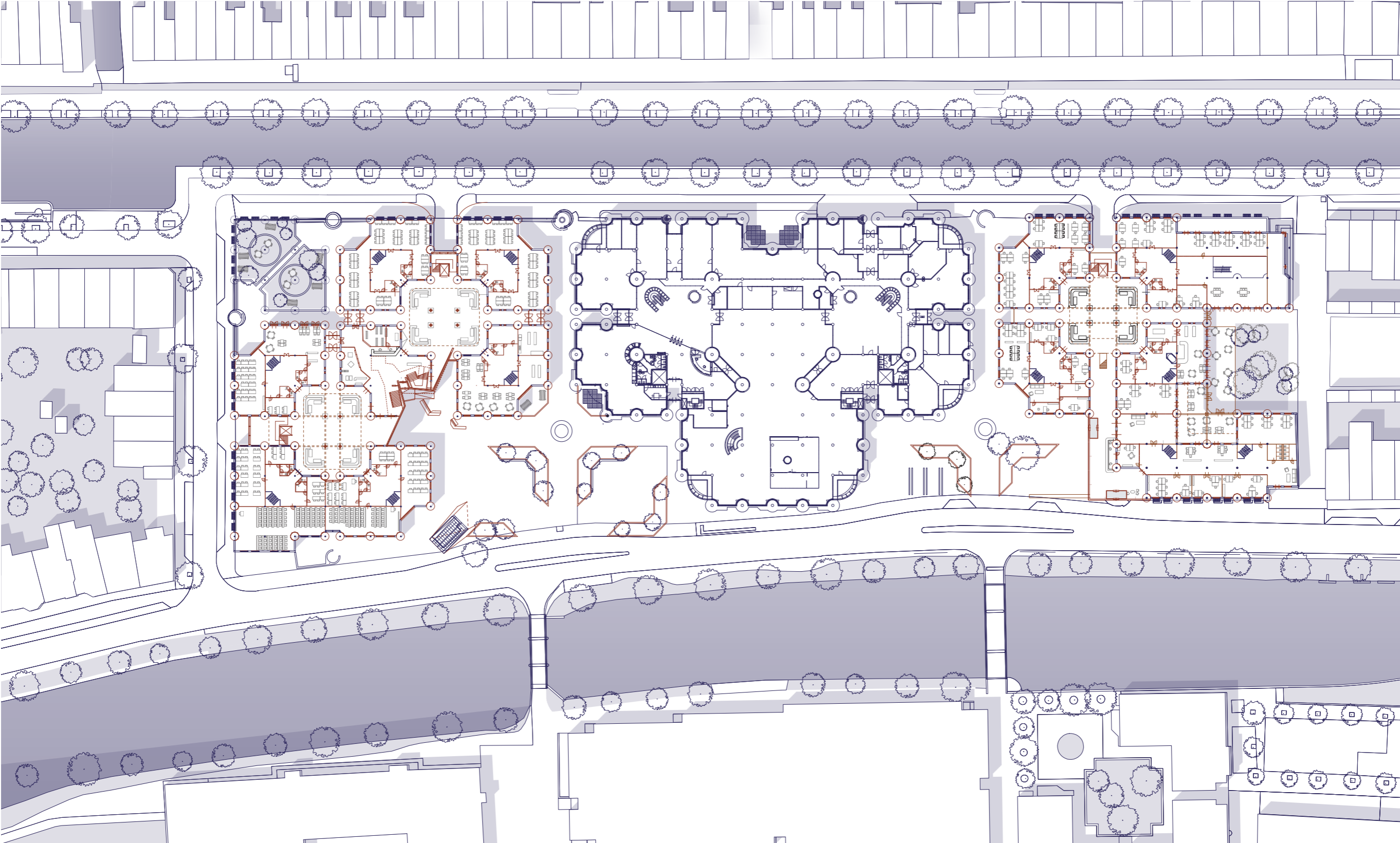
# INTERVENTION PROPOSAL // ARCHITECTURAL IDIOM



# INTERVENTION PROPOSAL // SEQUENCE OF SPACE



# INTERVENTION PROPOSAL // SITUATION

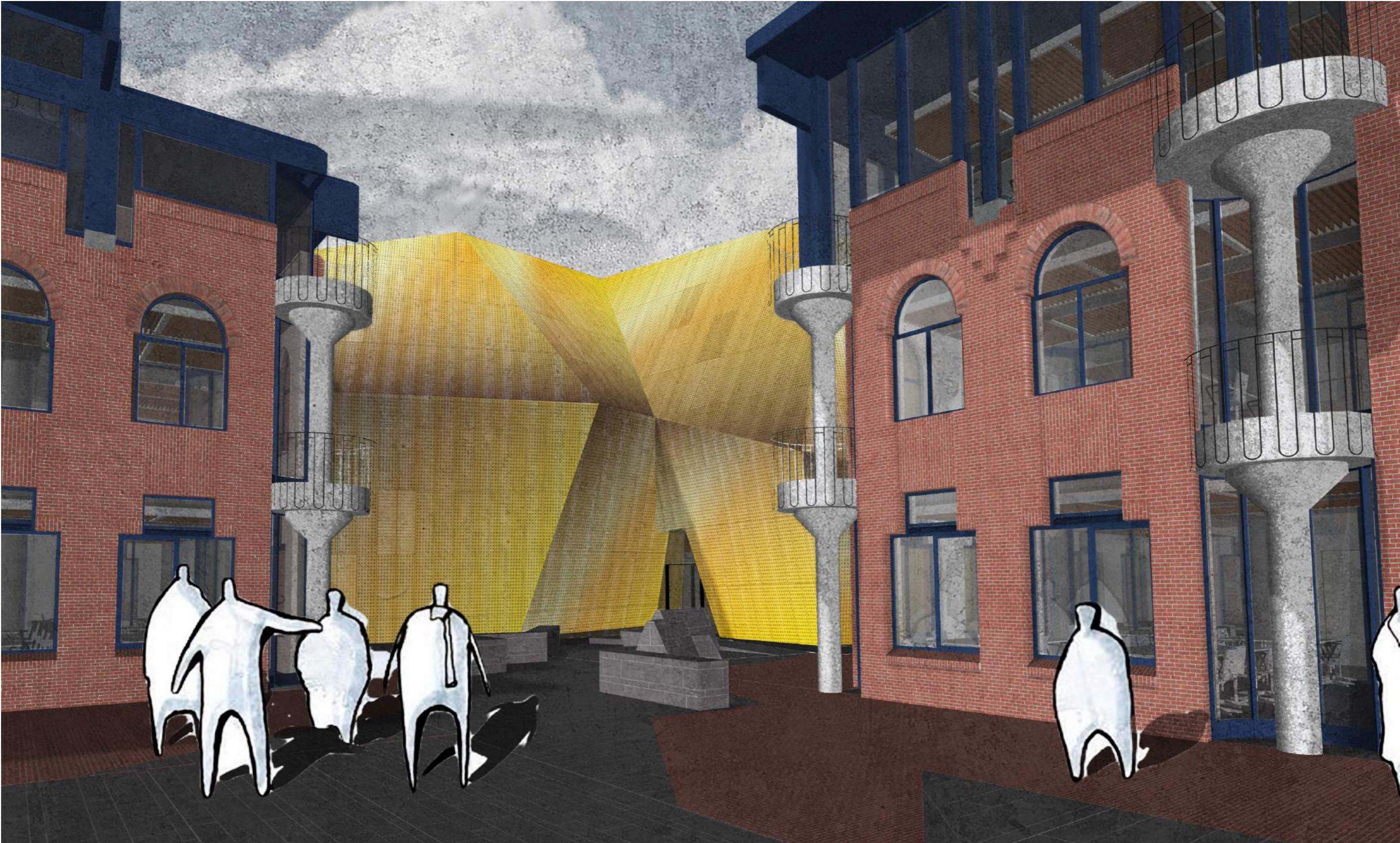




# INTERVENTION PROPOSAL // SQUARE



INTERVENTION PROPOSAL // ENTRANCE



INTERVENTION PROPOSAL // NIGHT VIEW



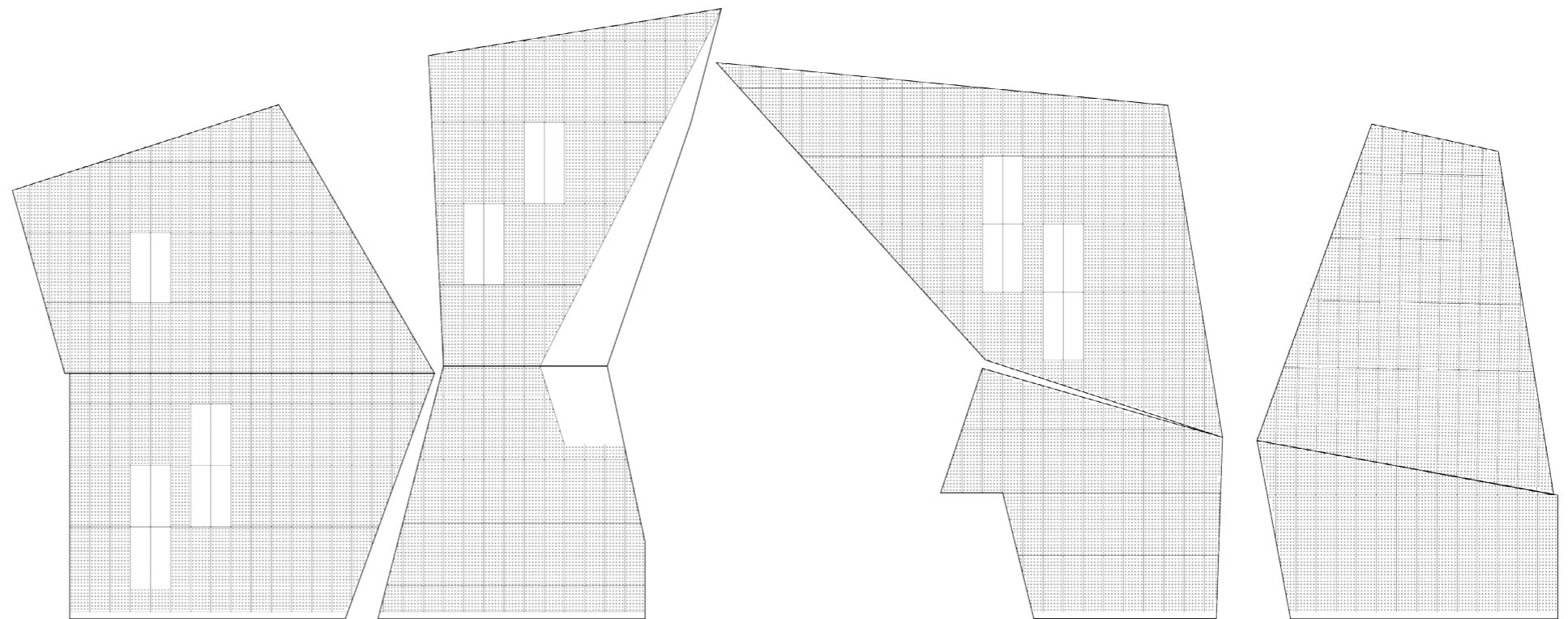
# INTERVENTION PROPOSAL // FACADE MATERIAL



**STADTMUSEUM RAPPERSWIL-JONA** // MLZD ARCHITECTS

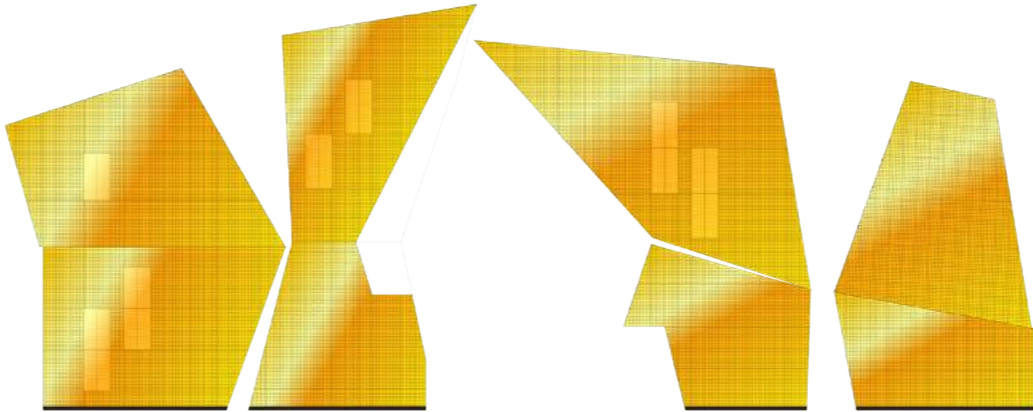


**PALAZZO DI VIGONOVO  
CAMPIELLO** // 3NDY STUDIO



# INTERVENTION PROPOSAL // MATERIAL PATINA

YEAR 1



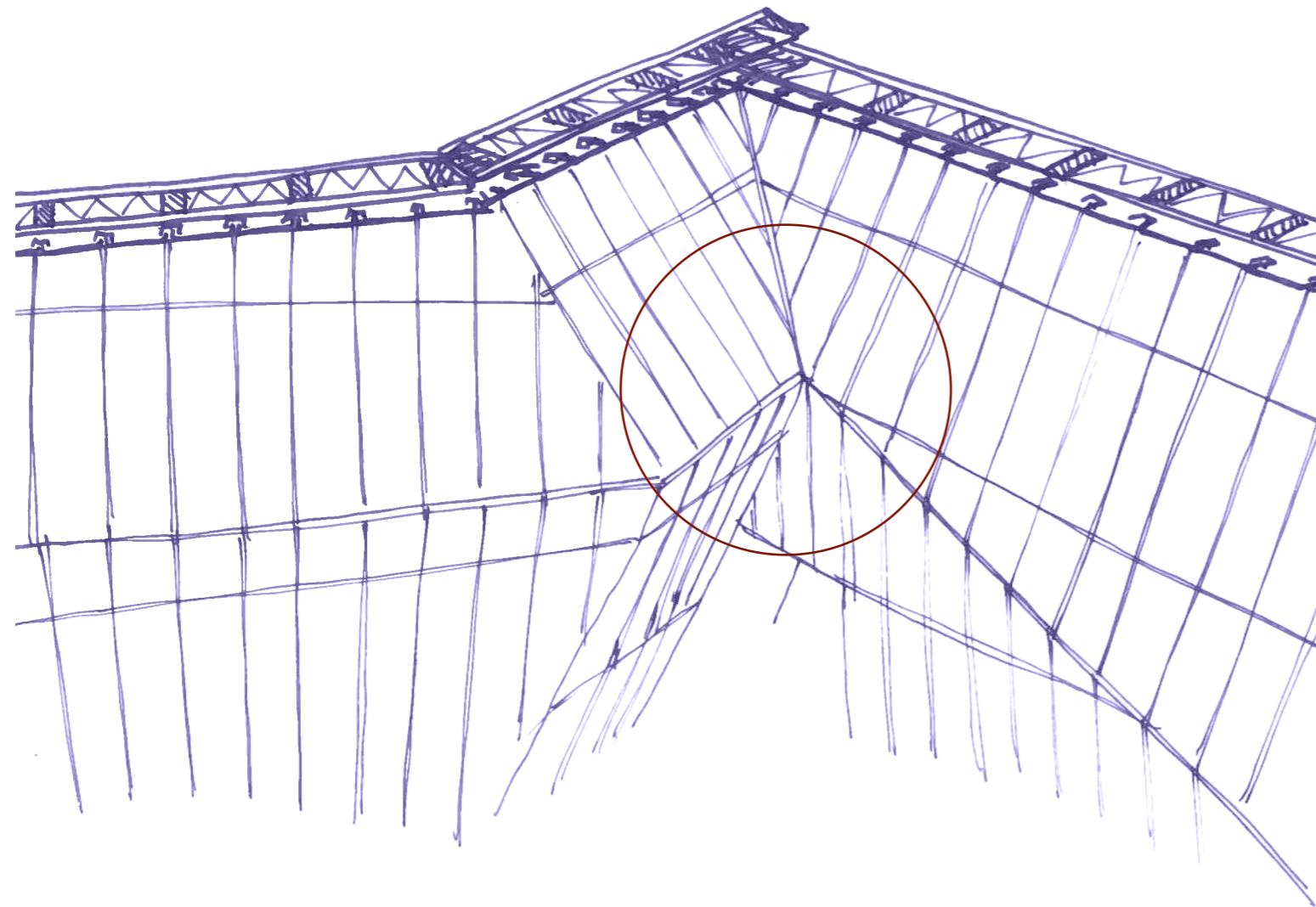
YEAR 5



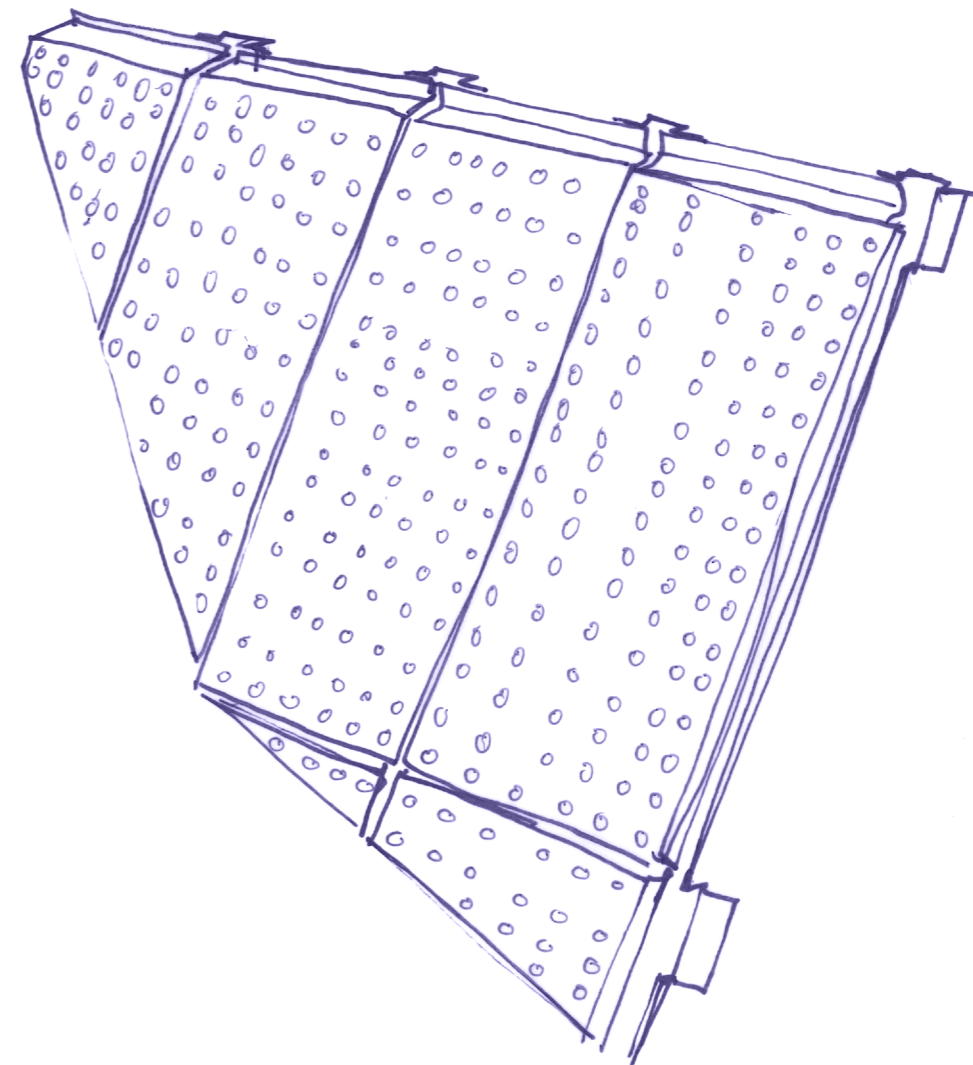
YEAR 10



# INTERVENTION PROPOSAL // FACADE SYSTEM



CONNECTION OF PLANES

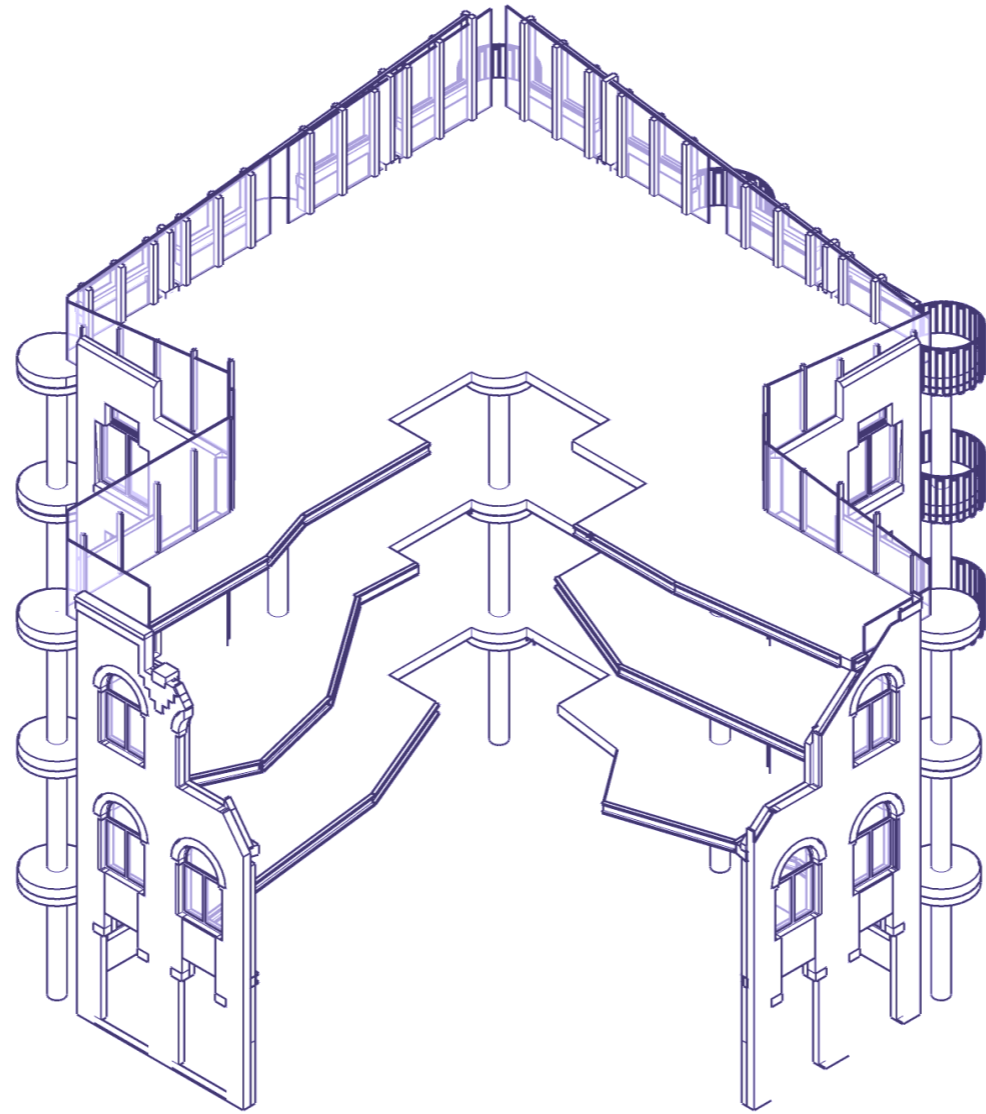


JOINED FACADE PANELS

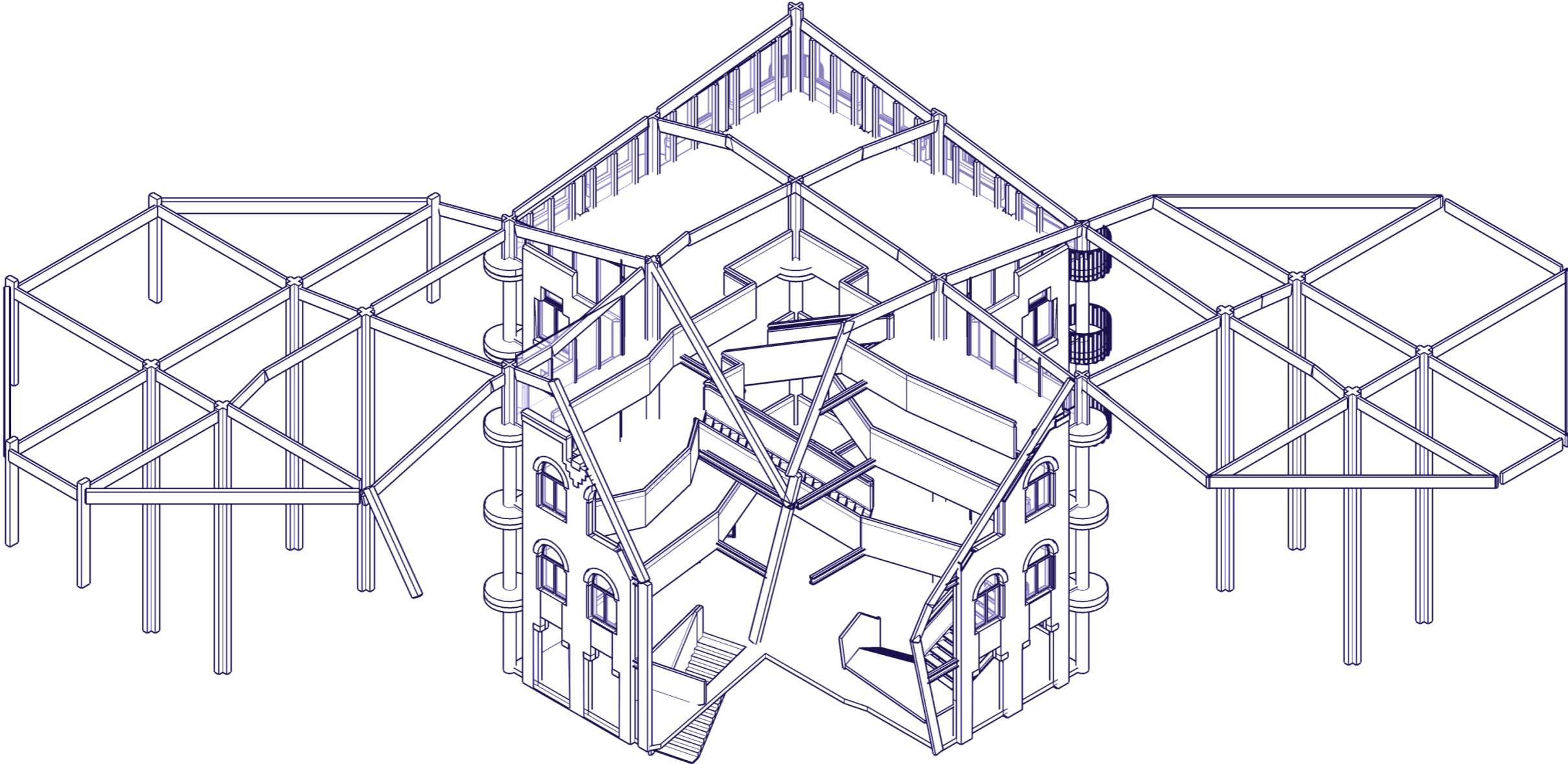
**INTERVENTION PROPOSAL // INTERVENTION**



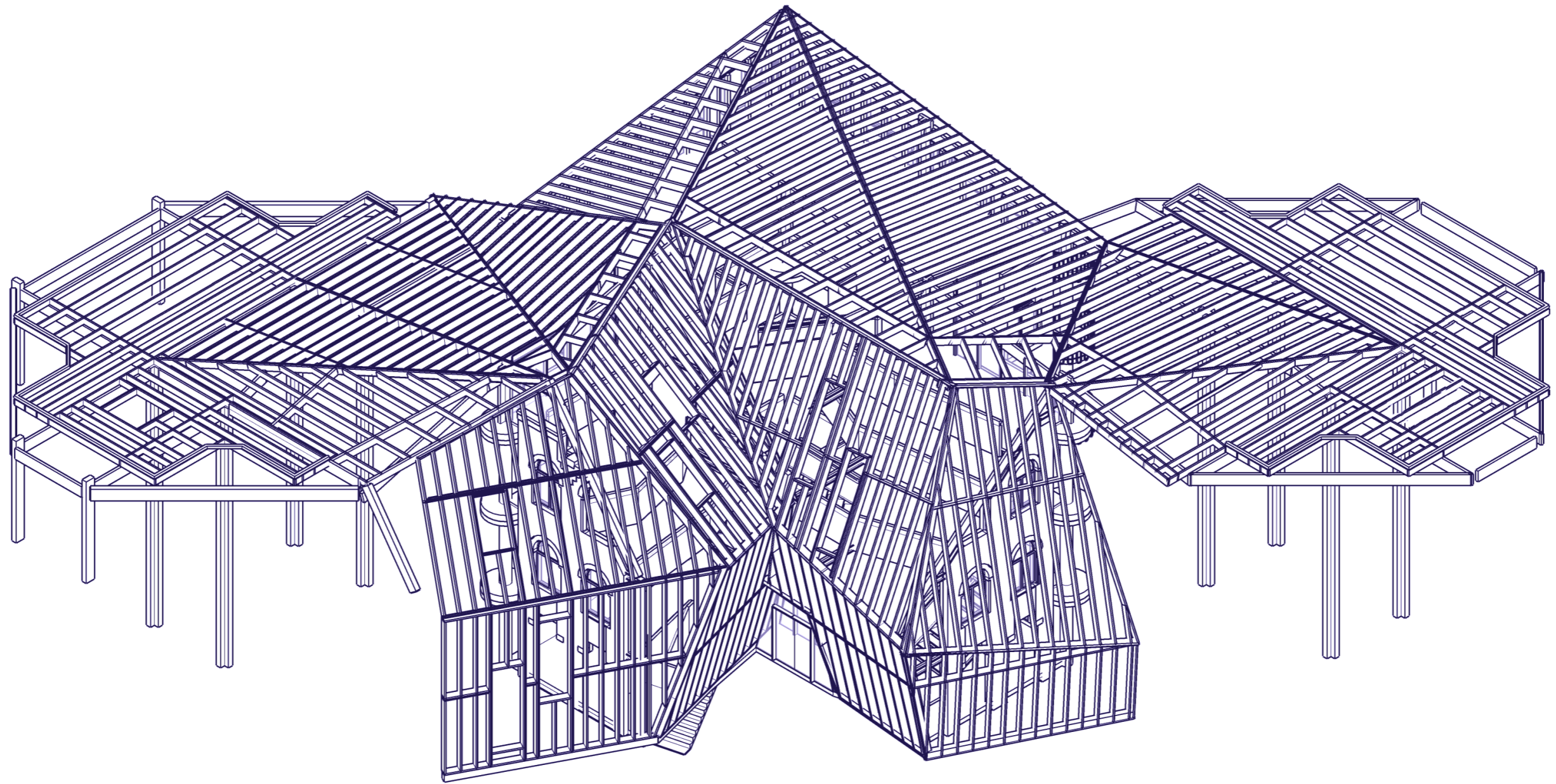
# INTERVENTION PROPOSAL // FACADE CONSTRUCTION



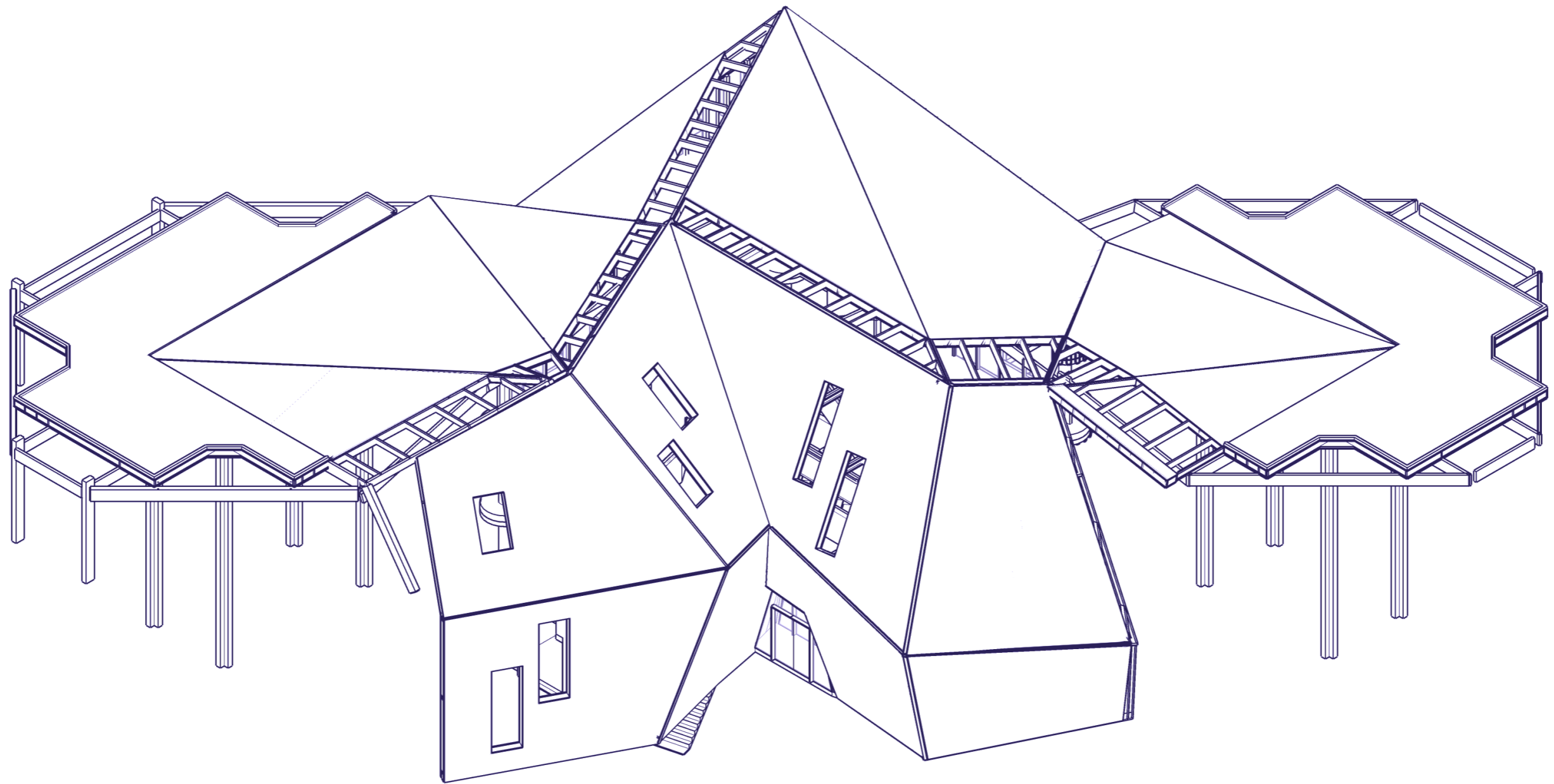
# INTERVENTION PROPOSAL // FACADE CONSTRUCTION



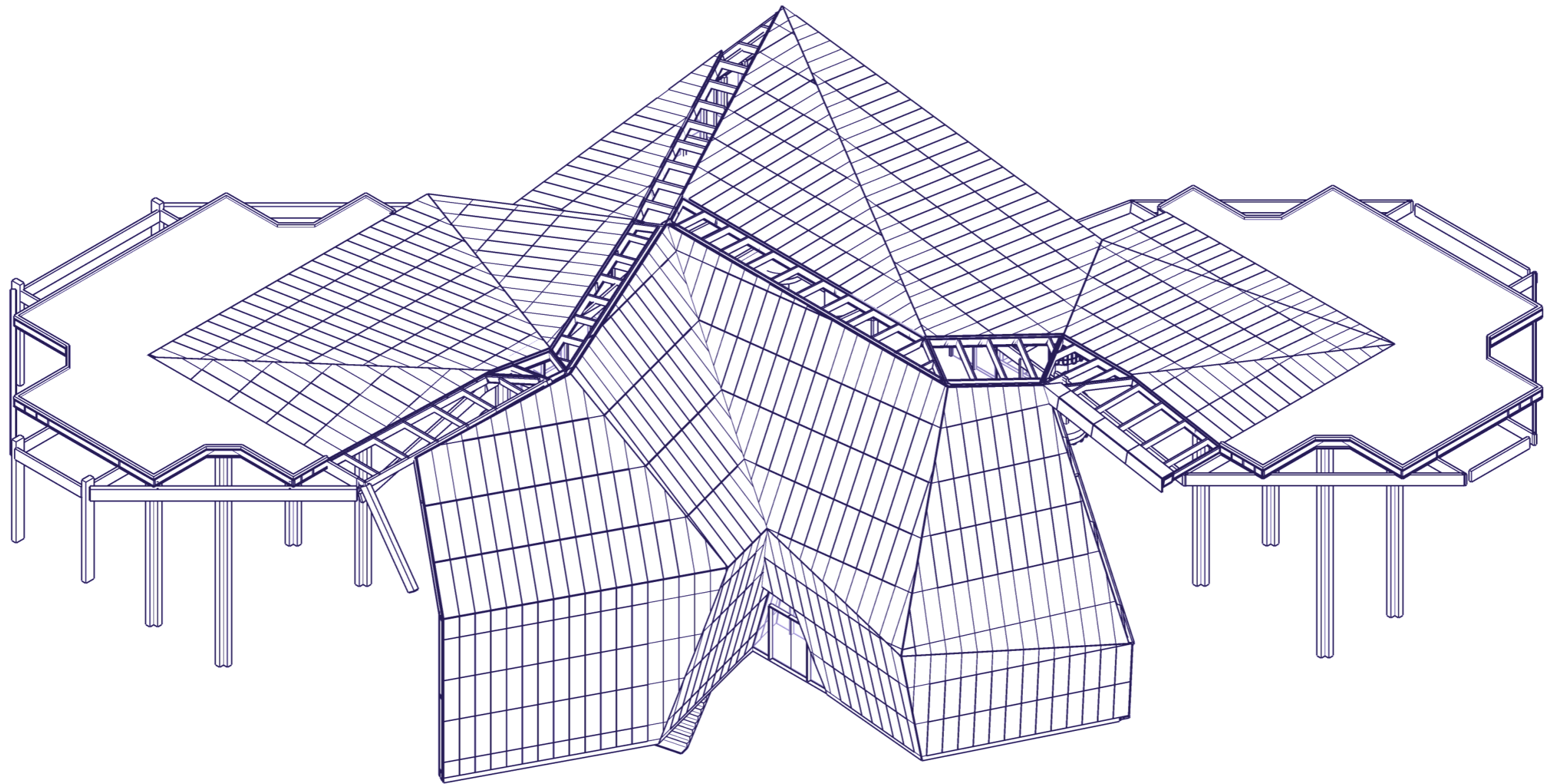
# INTERVENTION PROPOSAL // FACADE CONSTRUCTION



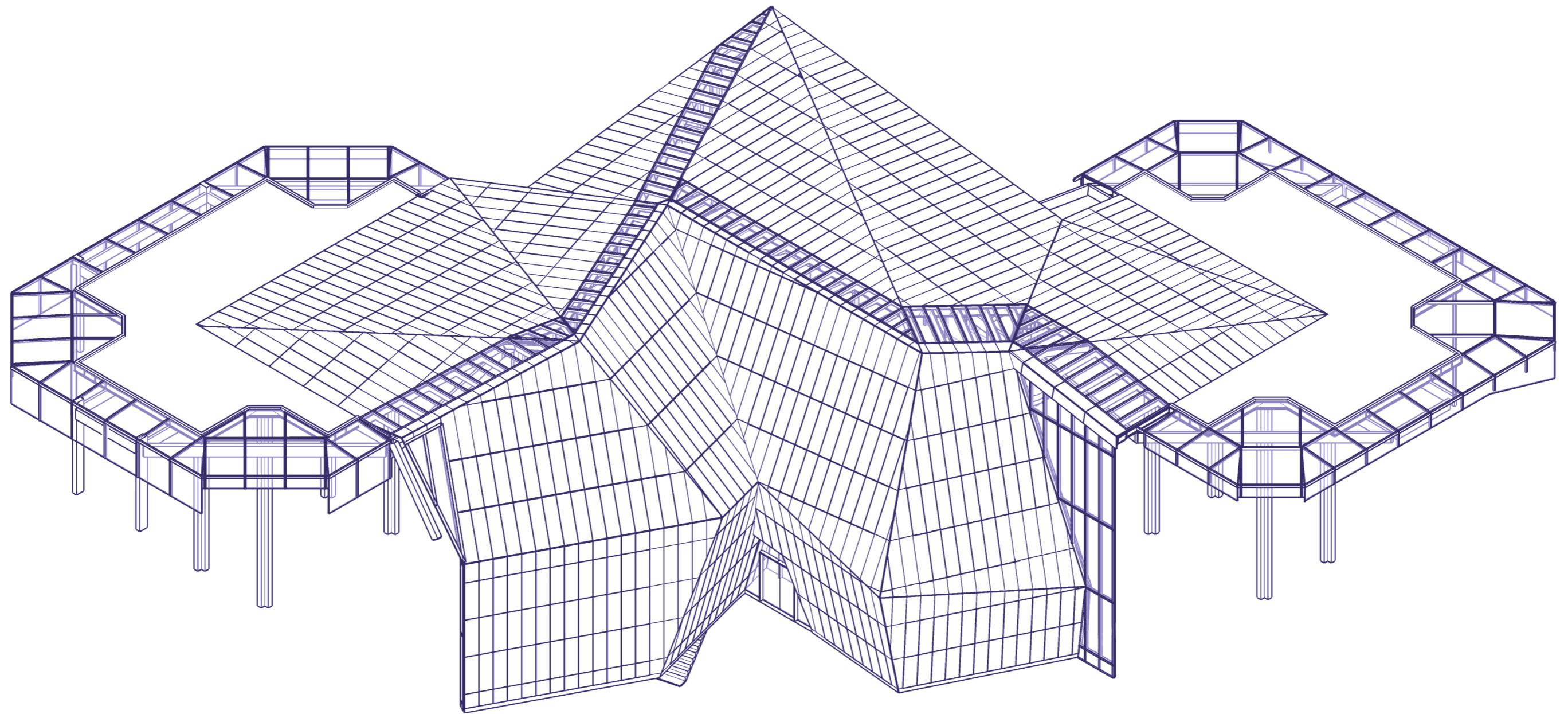
# INTERVENTION PROPOSAL // FACADE CONSTRUCTION



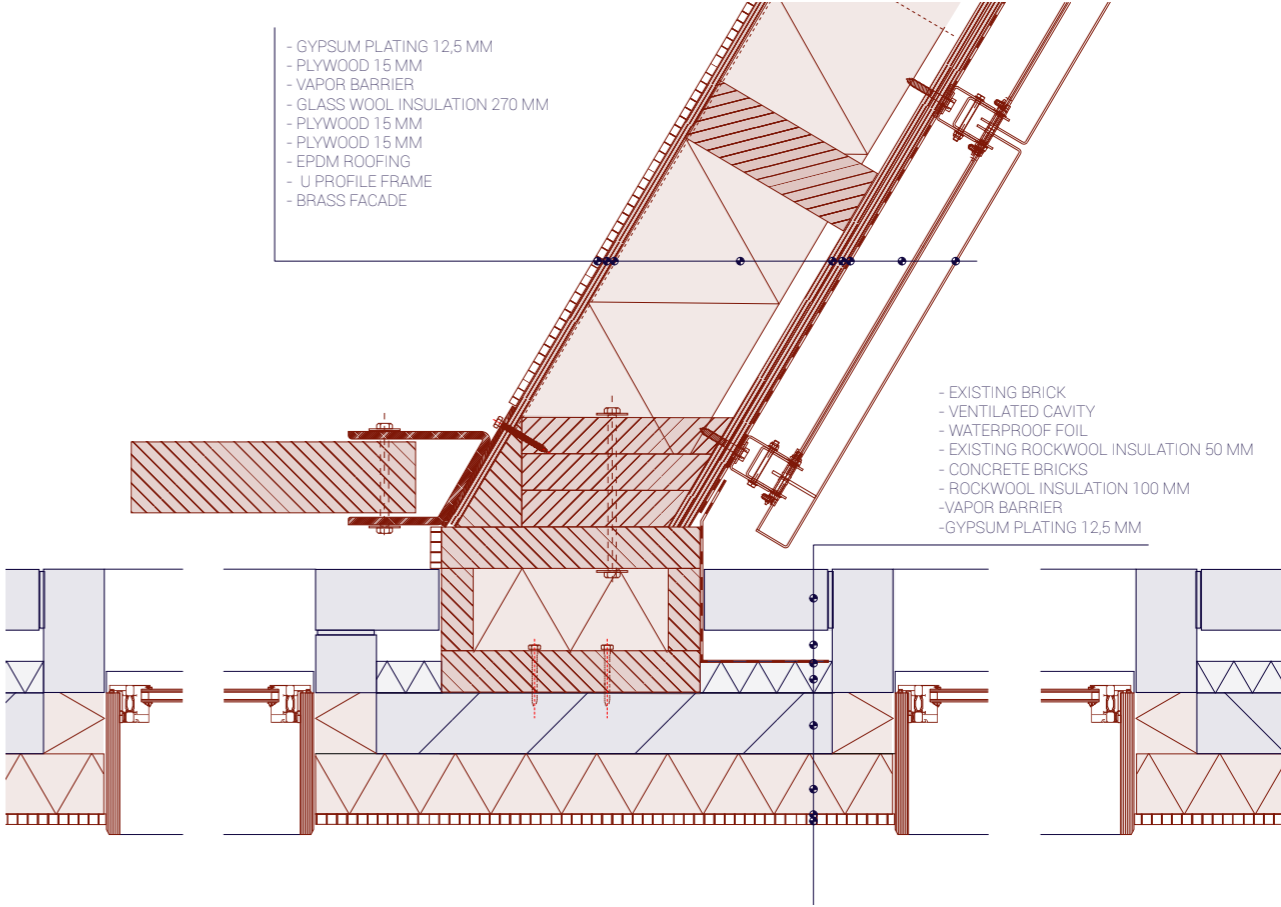
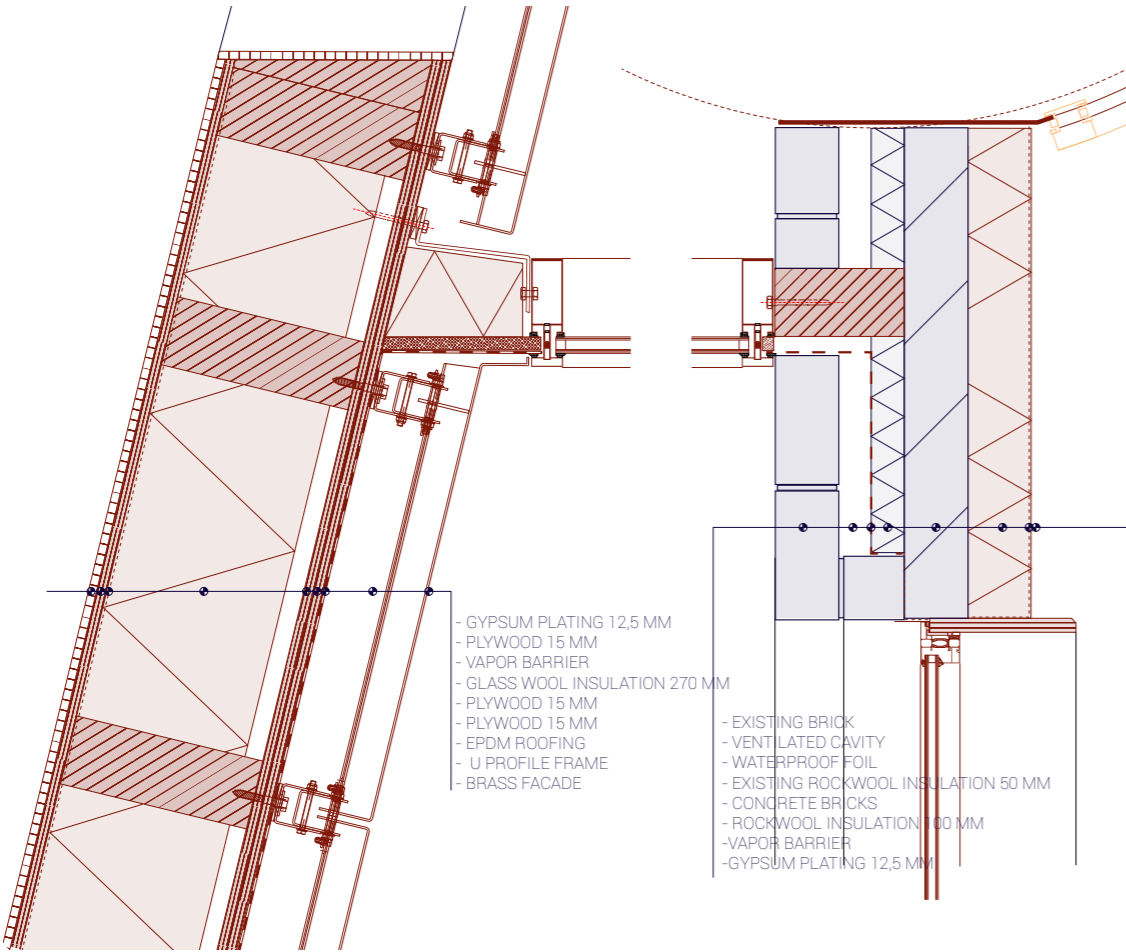
# INTERVENTION PROPOSAL // FACADE CONSTRUCTION

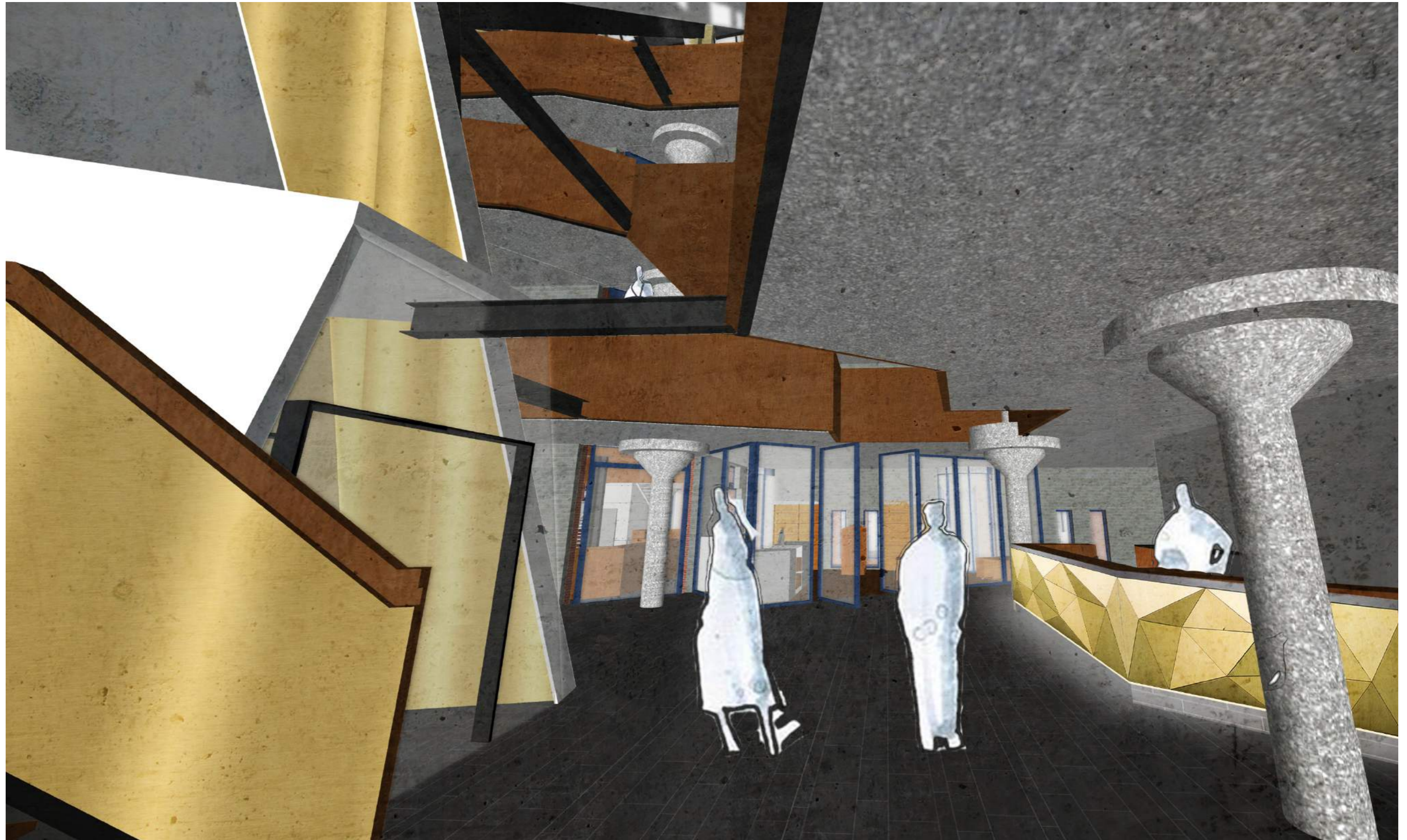
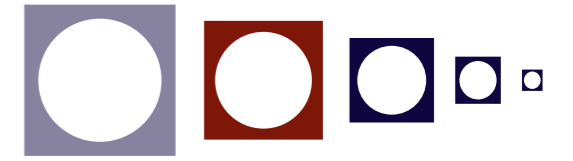


# INTERVENTION PROPOSAL // FACADE CONSTRUCTION

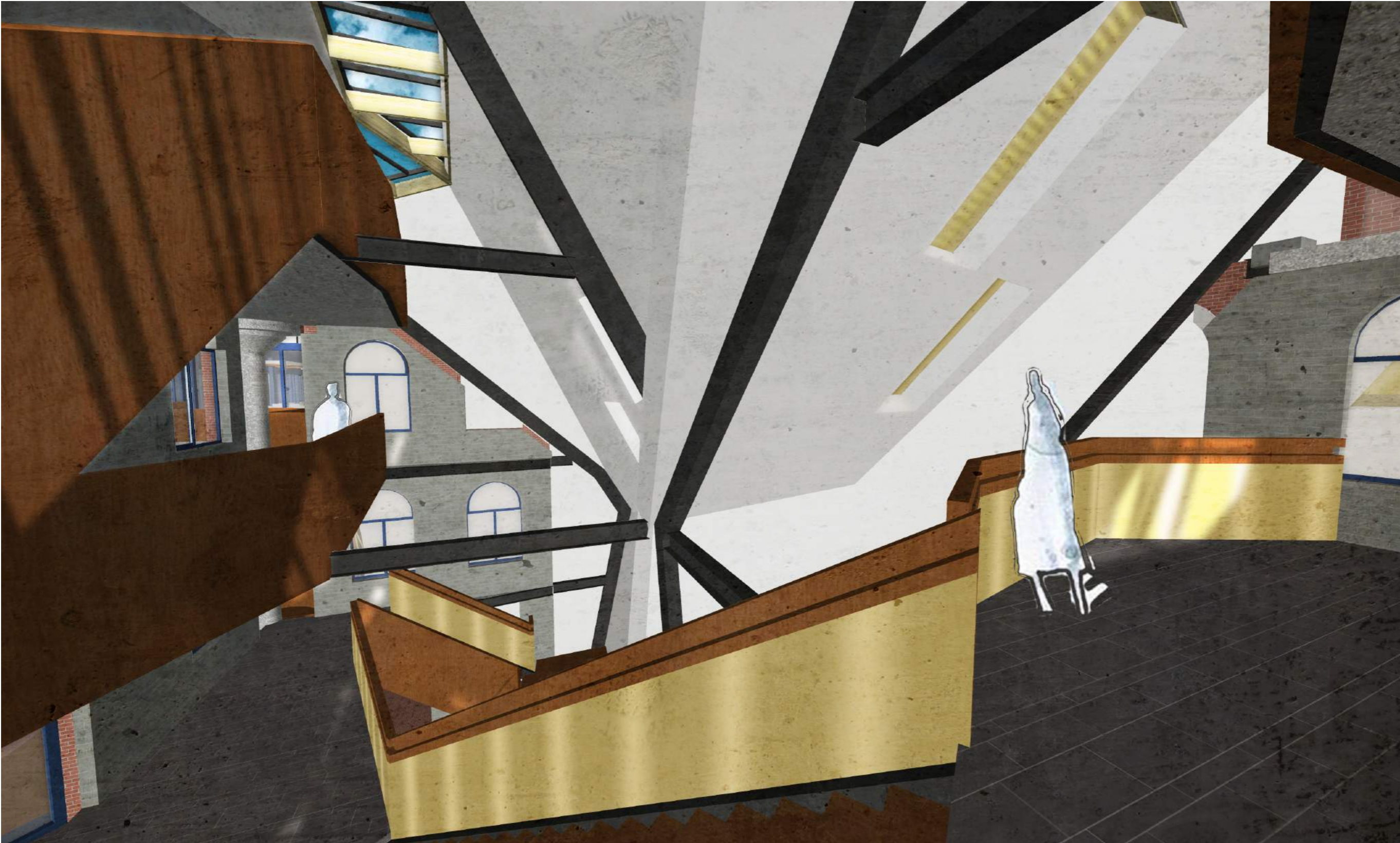


# INTERVENTION PROPOSAL // FACADE CONNECTION





INTERVENTION PROPOSAL // ENTRANCE



# INTERVENTION PROPOSAL // SPACE AND MATERIAL

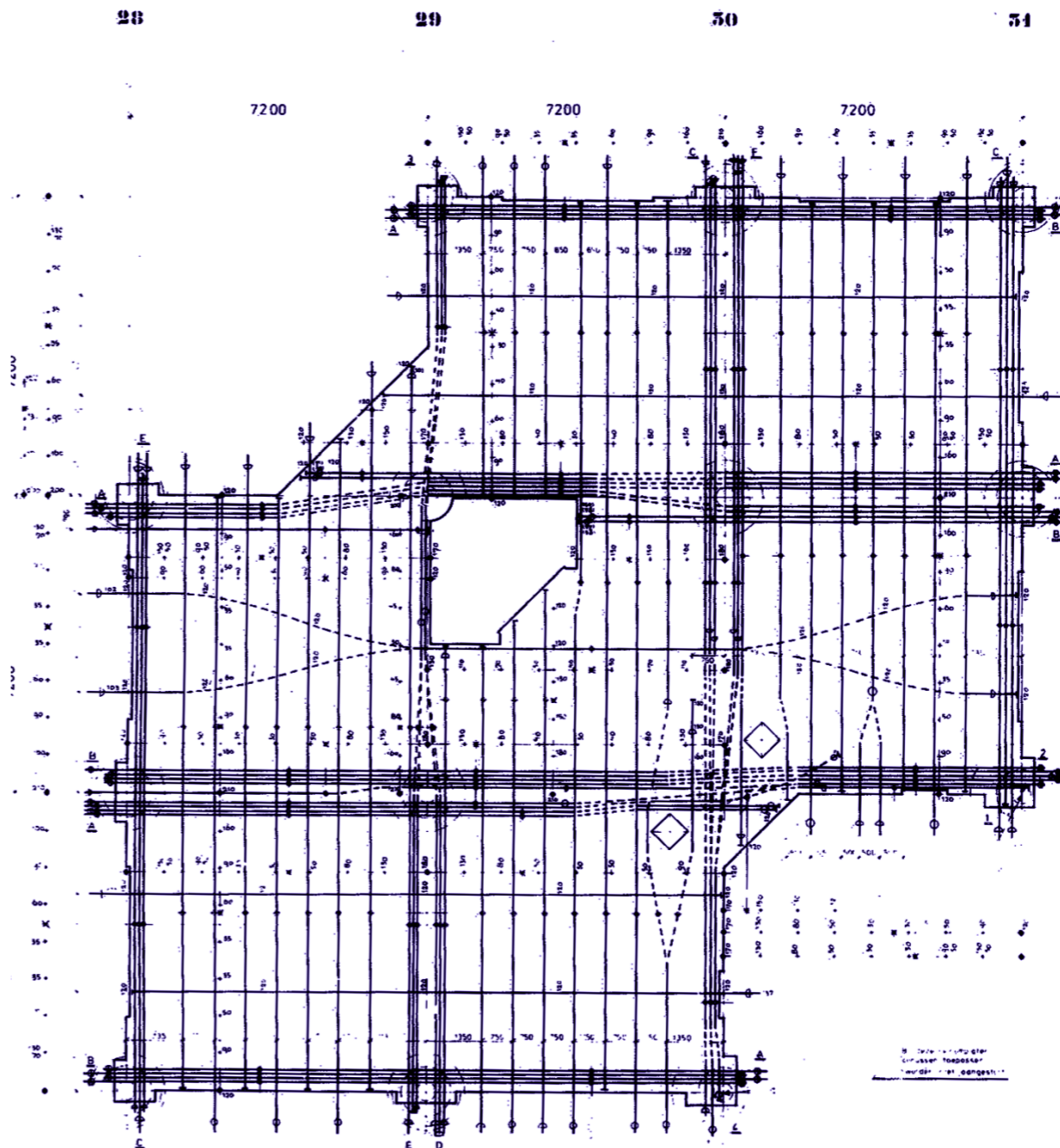
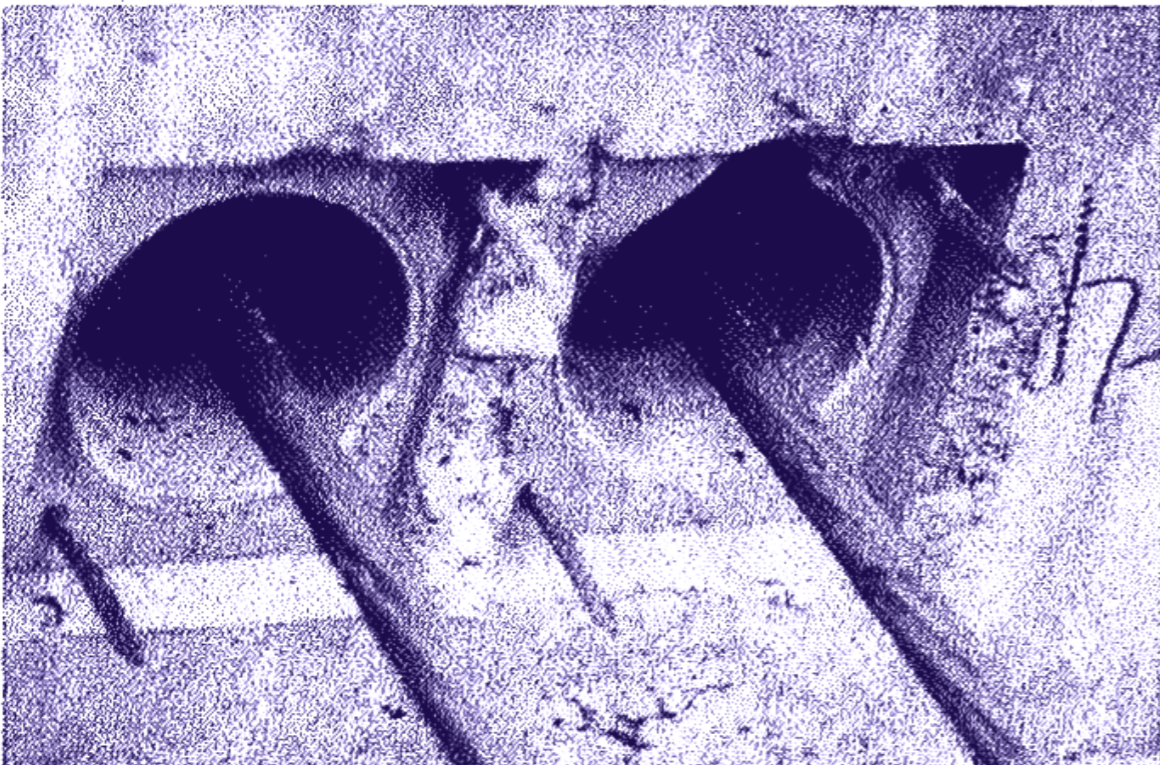
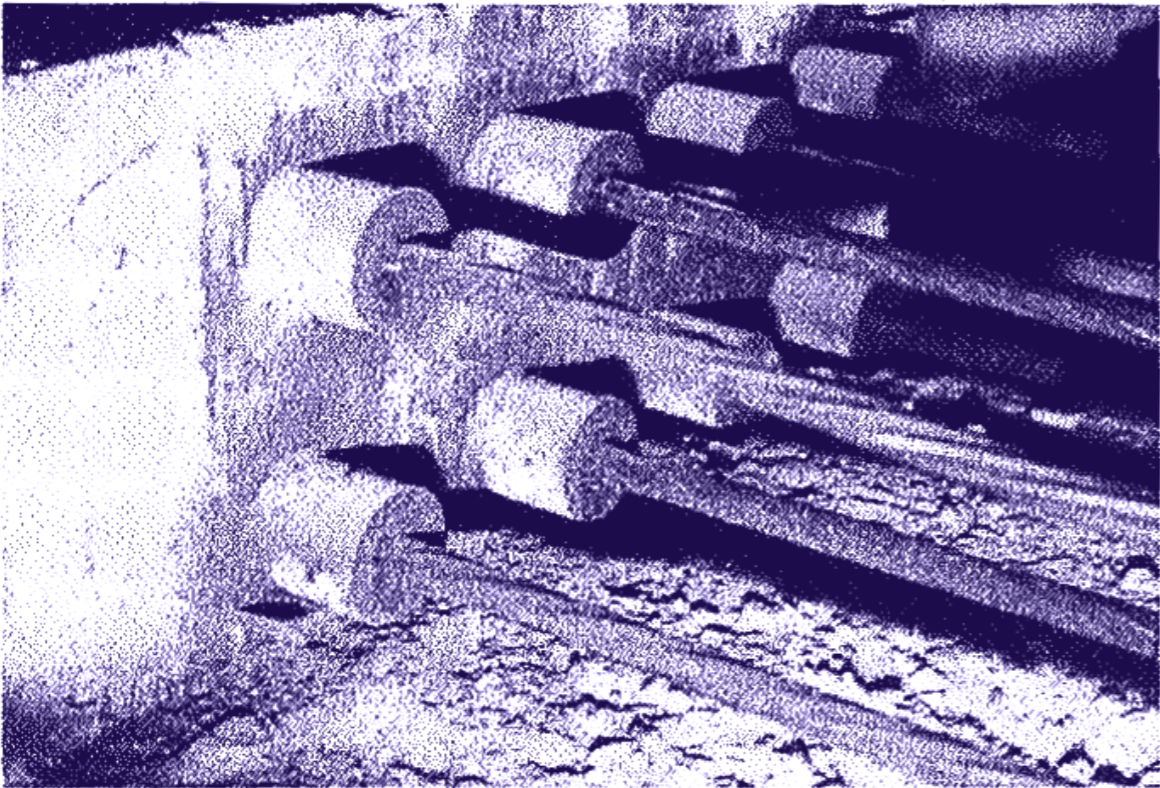


**GIOVANNI BATTISTA PIRANESI**



**FONCADA DEI TEDESCHI // OMA**

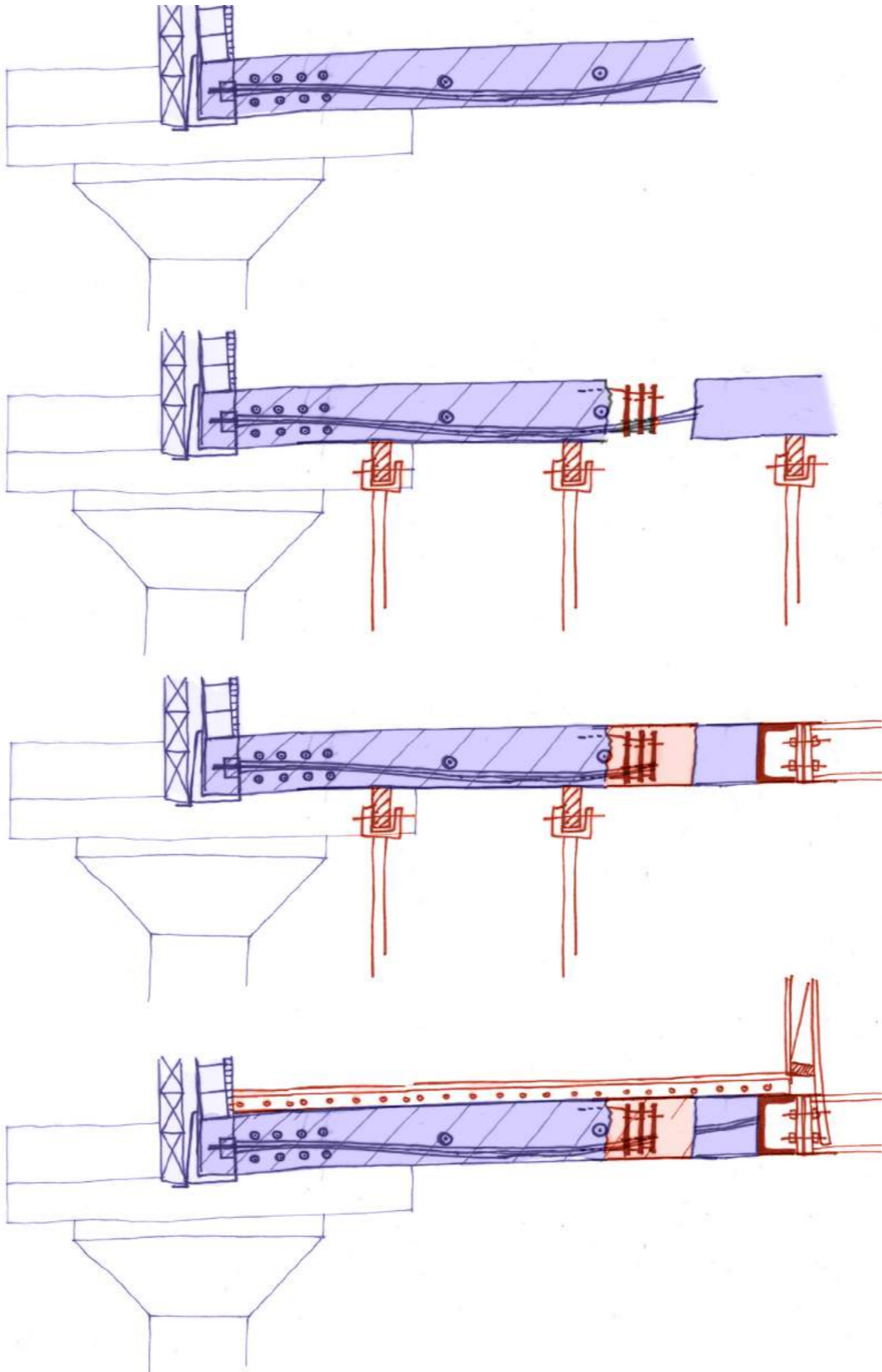
# INTERVENTION PROPOSAL // CONSTRUCTION



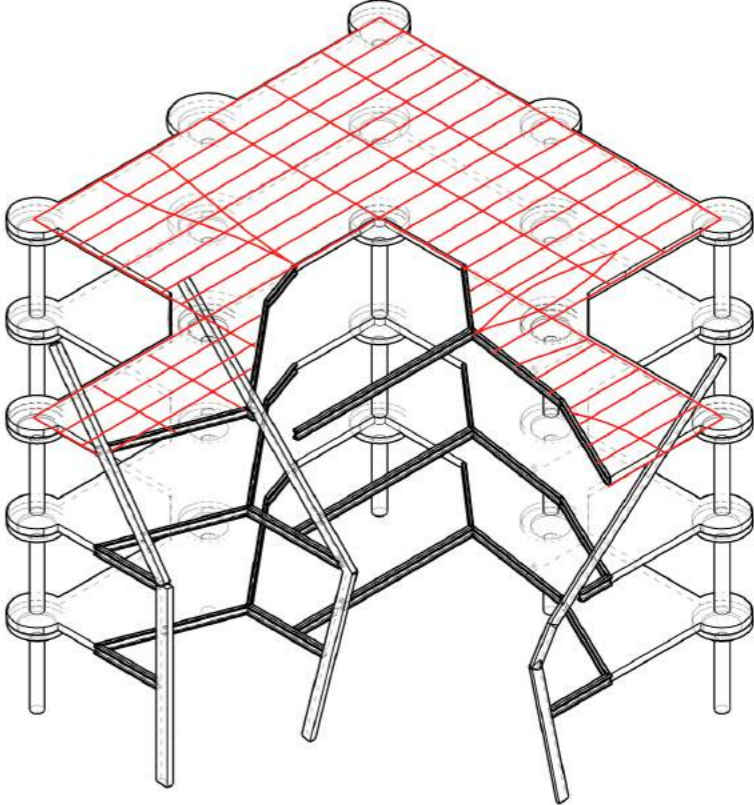
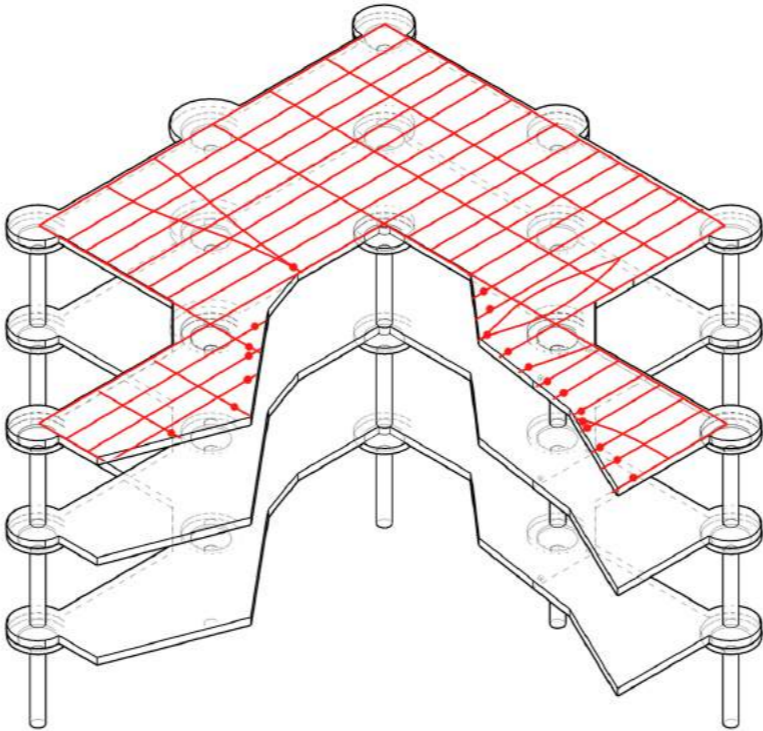
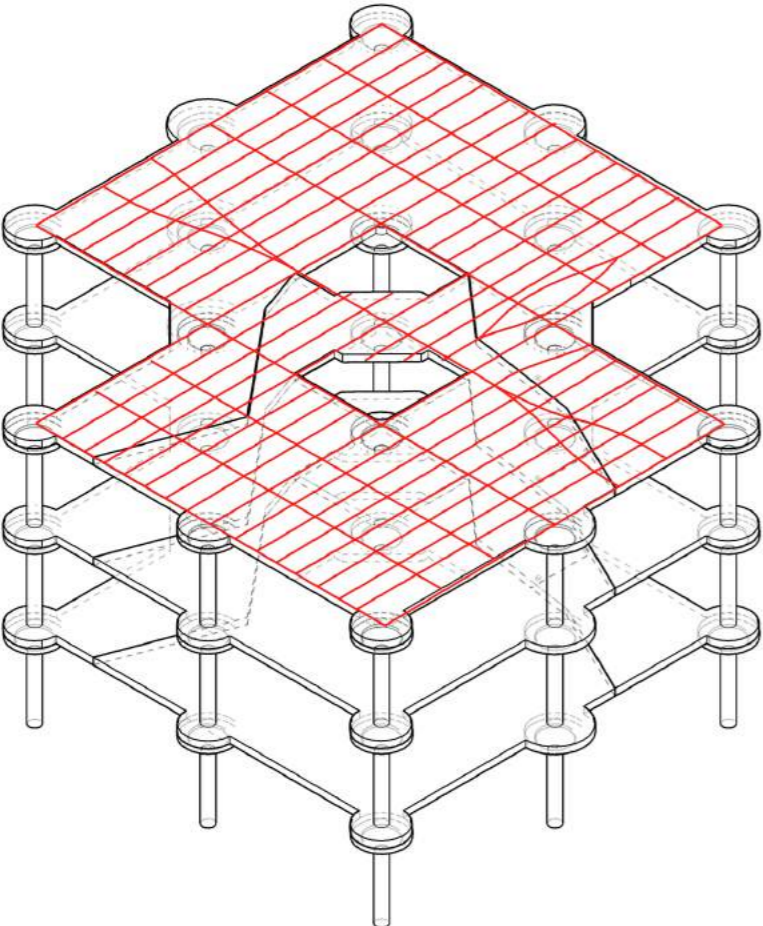
PRE-STRESSED POST TENSION CONCRETE CONSTRUCTION

CEMENT XXXIII // D. MOOIJ

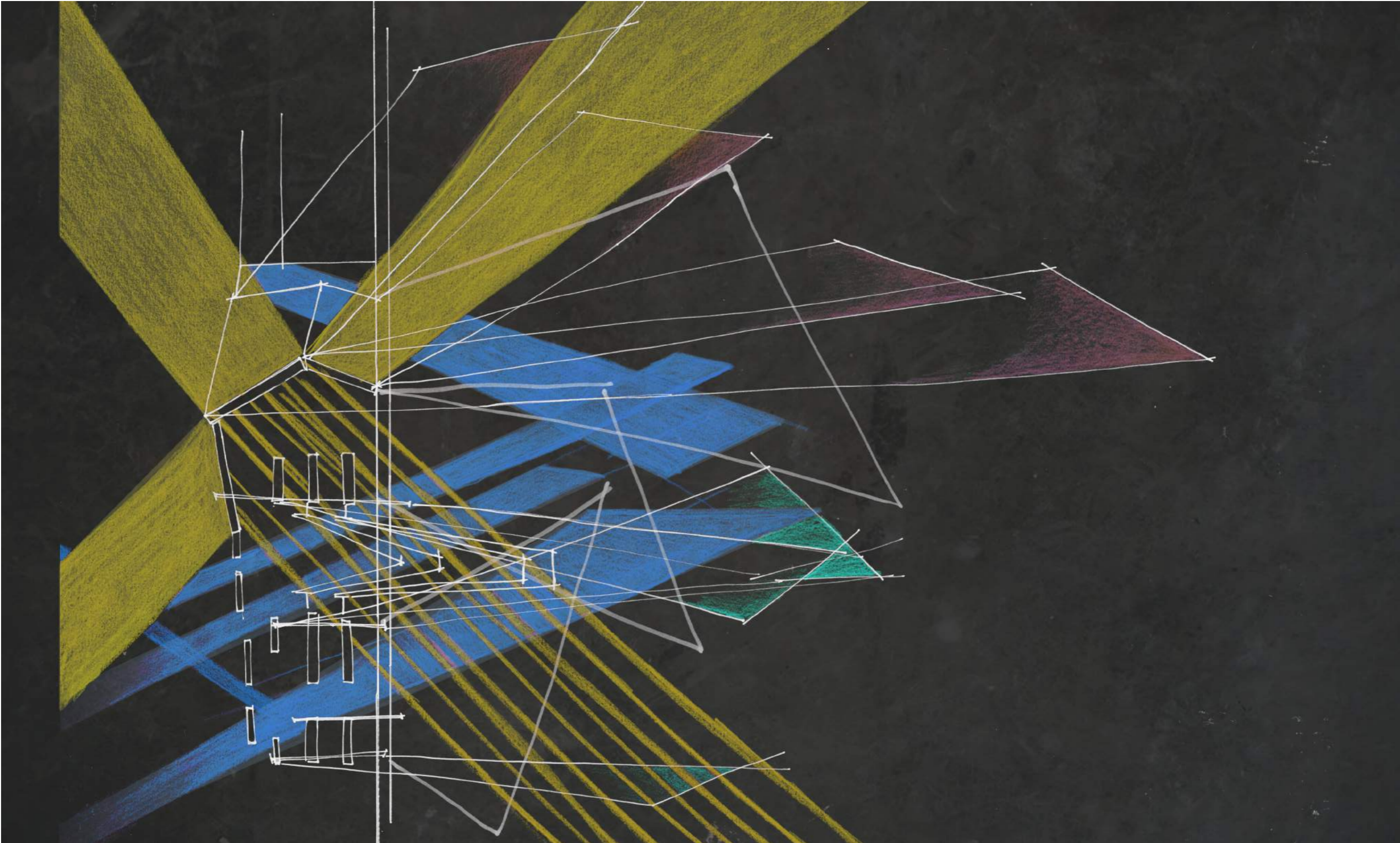
# INTERVENTION PROPOSAL // CONSTRUCTION METHOD



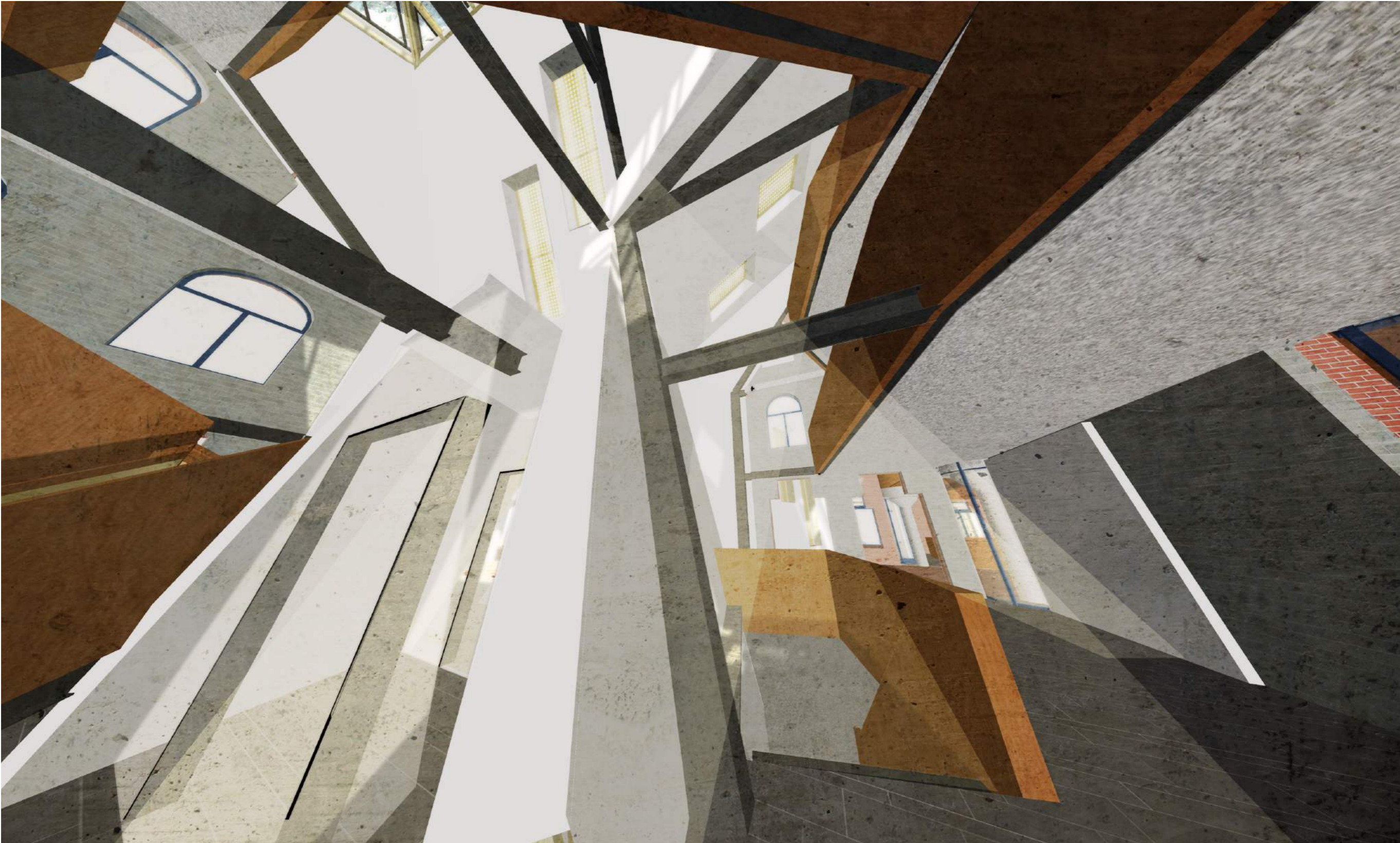
# INTERVENTION PROPOSAL // CONSTRUCTION METHOD



**INTERVENTION PROPOSAL // DAYLIGHT STUDY**



INTERVENTION PROPOSAL // DAYLIGHT STUDY



INTERVENTION PROPOSAL // DETAIL

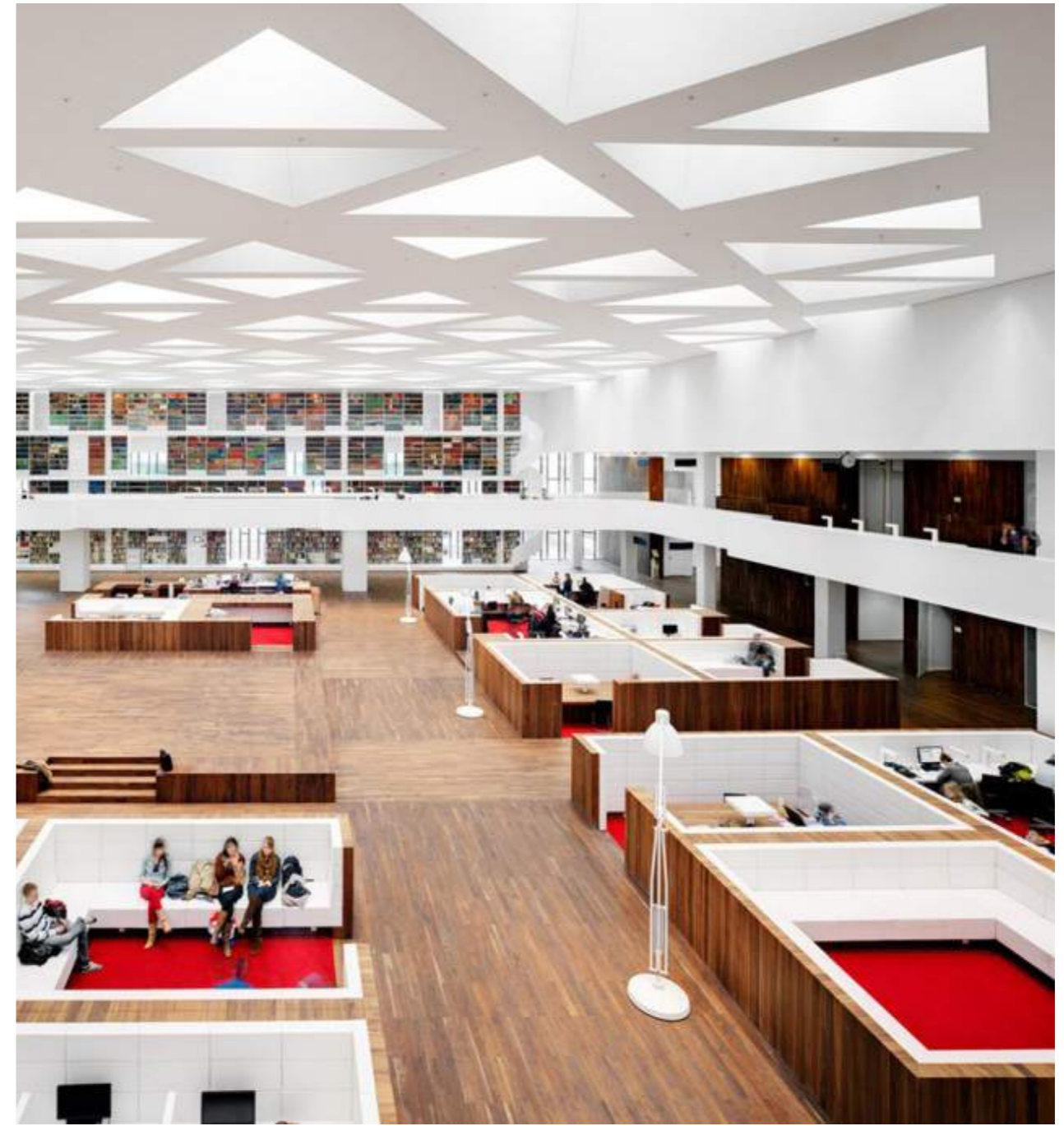




# INTERVENTION PROPOSAL // COURTYARD REFERENCES

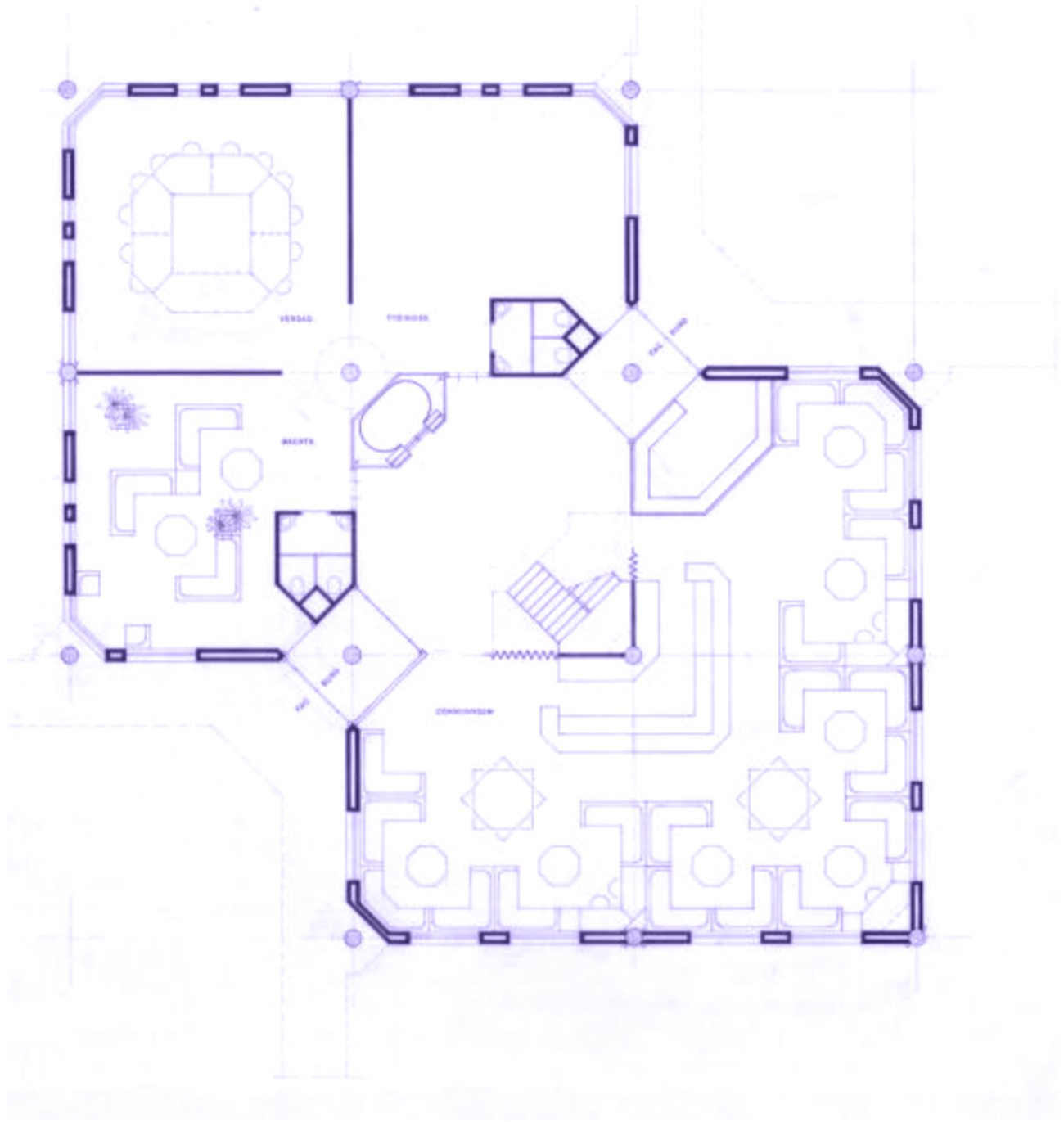


**ORIGINAL DESIGN CANTEEN**

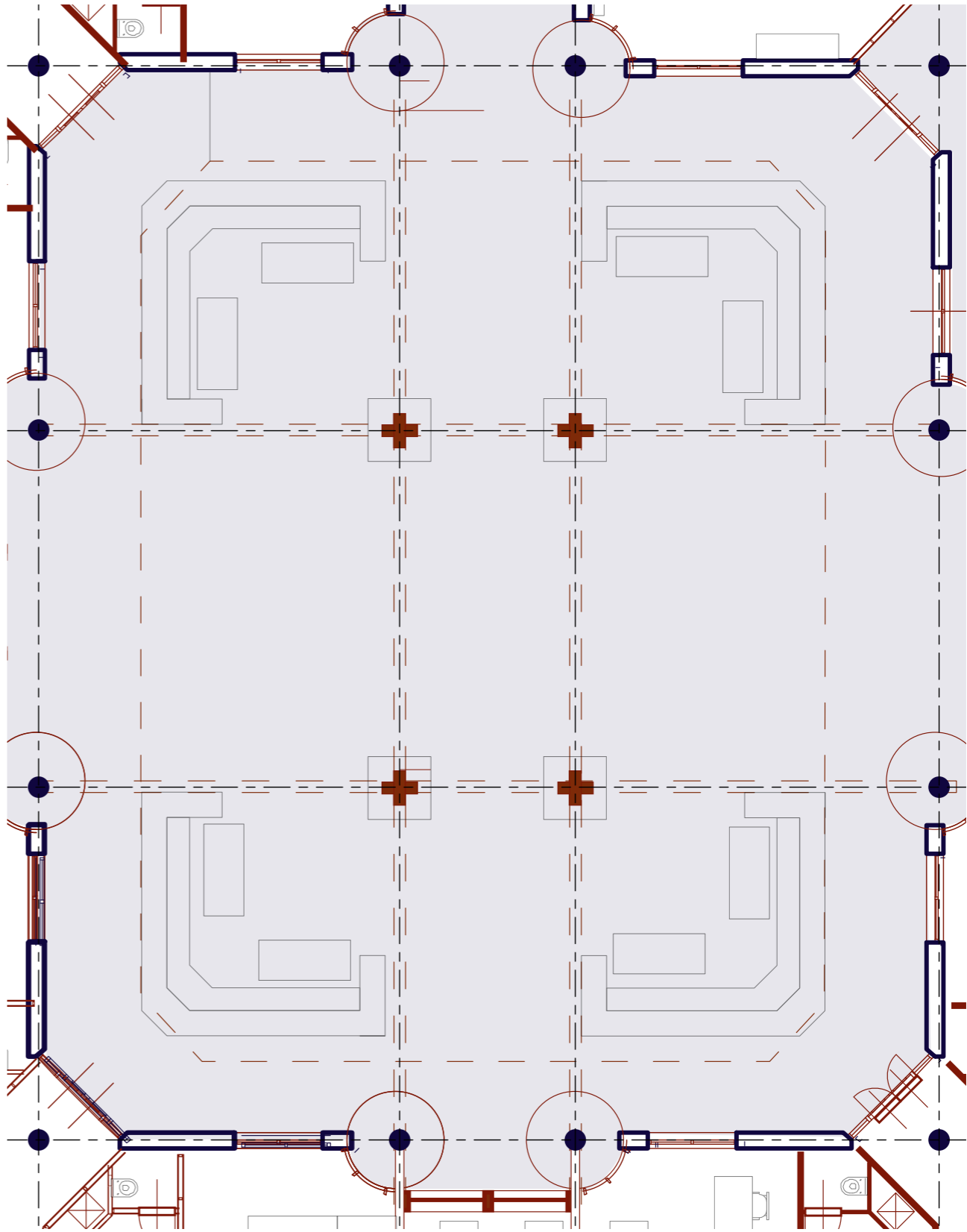


**ERASMUS MC // KAAAN ARCHITECTEN**

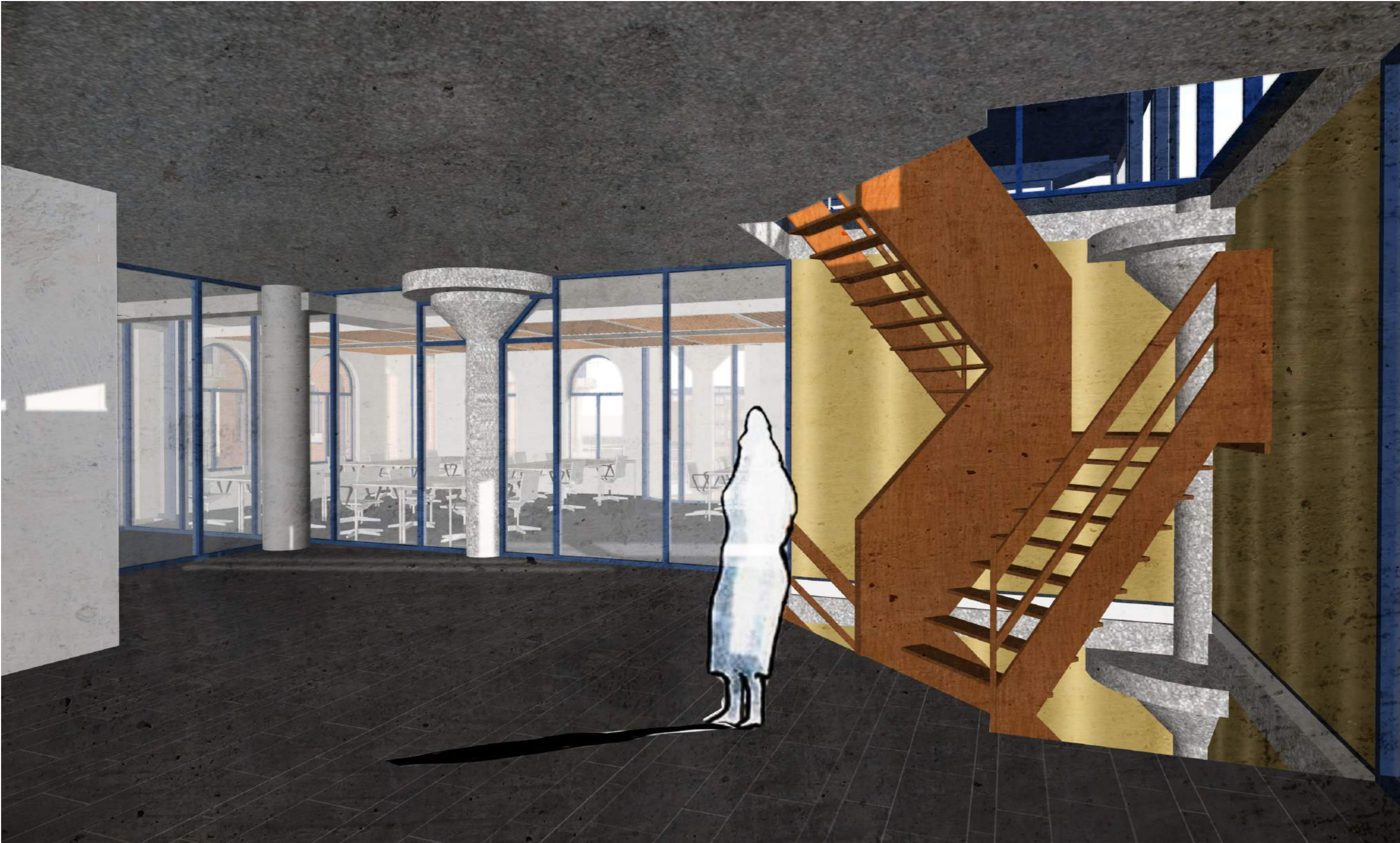
# INTERVENTION PROPOSAL // COURTYARD REFERENCES



ORIGINAL DESIGN CANTEEN



COURTYARD DESIGN



# INTERVENTION PROPOSAL // HALLWAY REFERENCES



**GOLDEN RIBBON** // JEAN VERVILLE



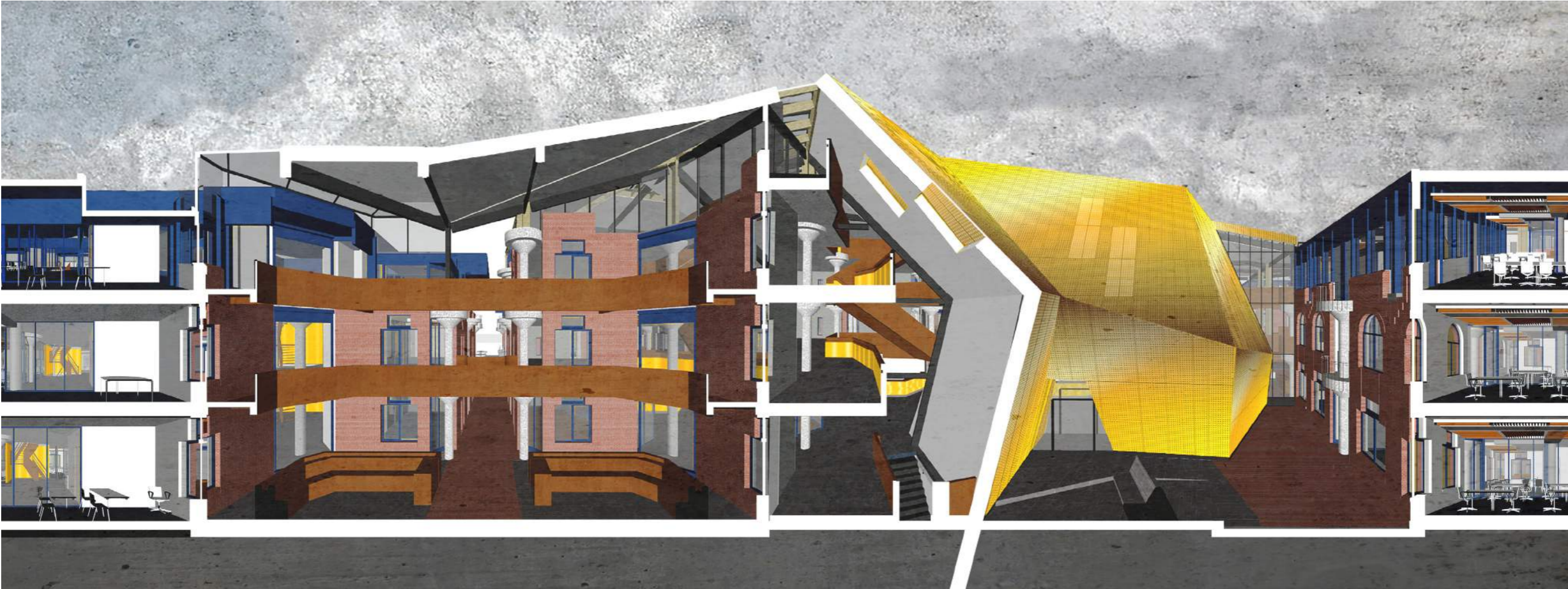
**NIDERA** // FOKKEMA & PARTNERS



**INTERVENTION PROPOSAL // CLASSROOM DESIGN**



# INTERVENTION PROPOSAL // MATERIAL AND SPACE



# CONTENT

ANALYSIS EXISTING BUILDING

//

NEW PROGRAM PROPOSAL

//

THEORETICAL FRAMEWORK

//

INTERVENTION PROPOSAL

//

**TECHNICAL CONSEQUENCES**

//

REFLECTION

# CONSEQUENCES // MATERIALISATION



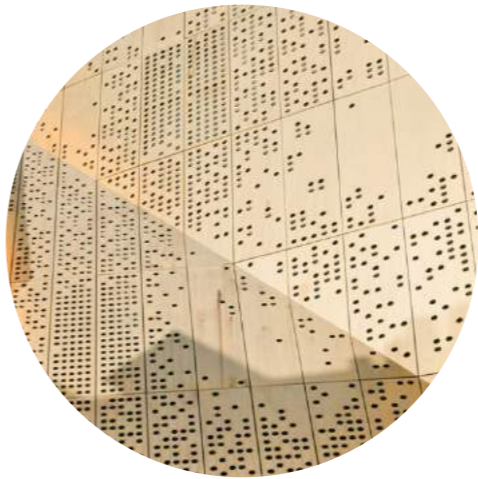
WASHED CONCRETE



RED BRICK



DARK WOOD /  
VARNISHED PLYWOOD



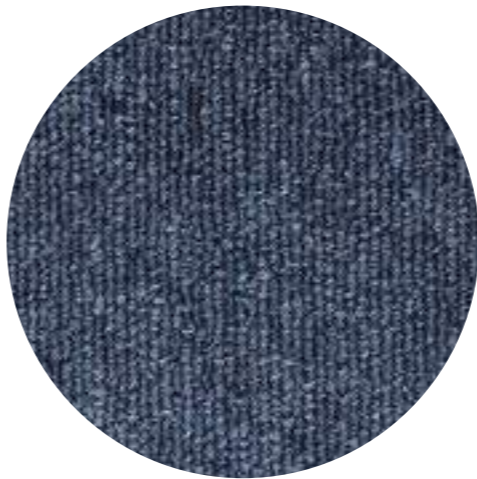
BRASS



SLATE STONE

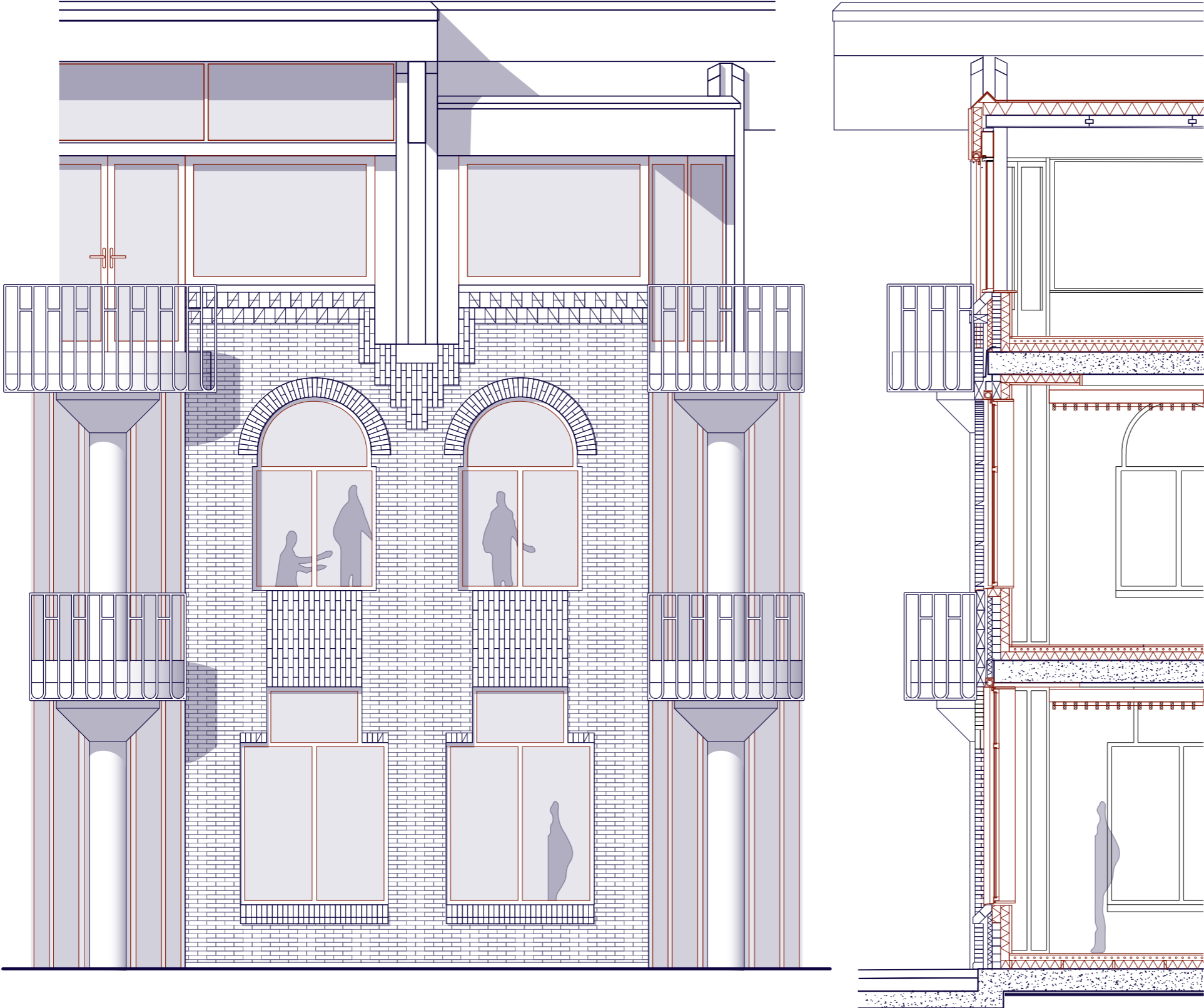


BLUE PAINT /  
ANODISED ALUMINIUM

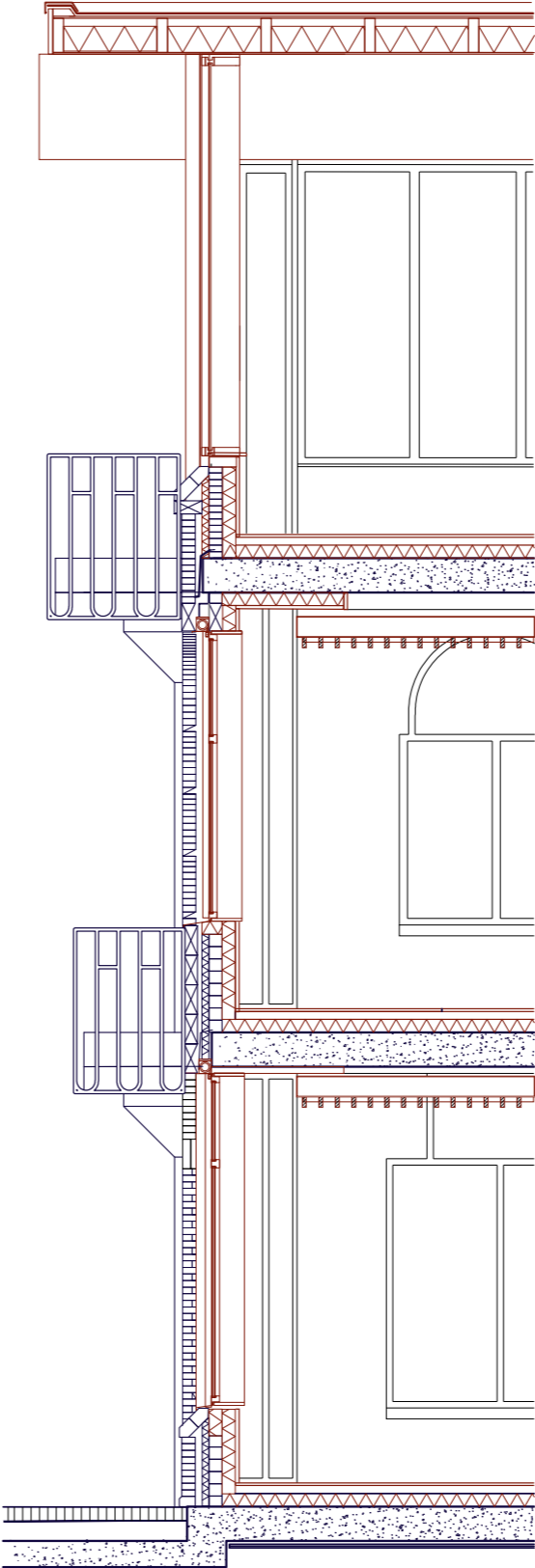
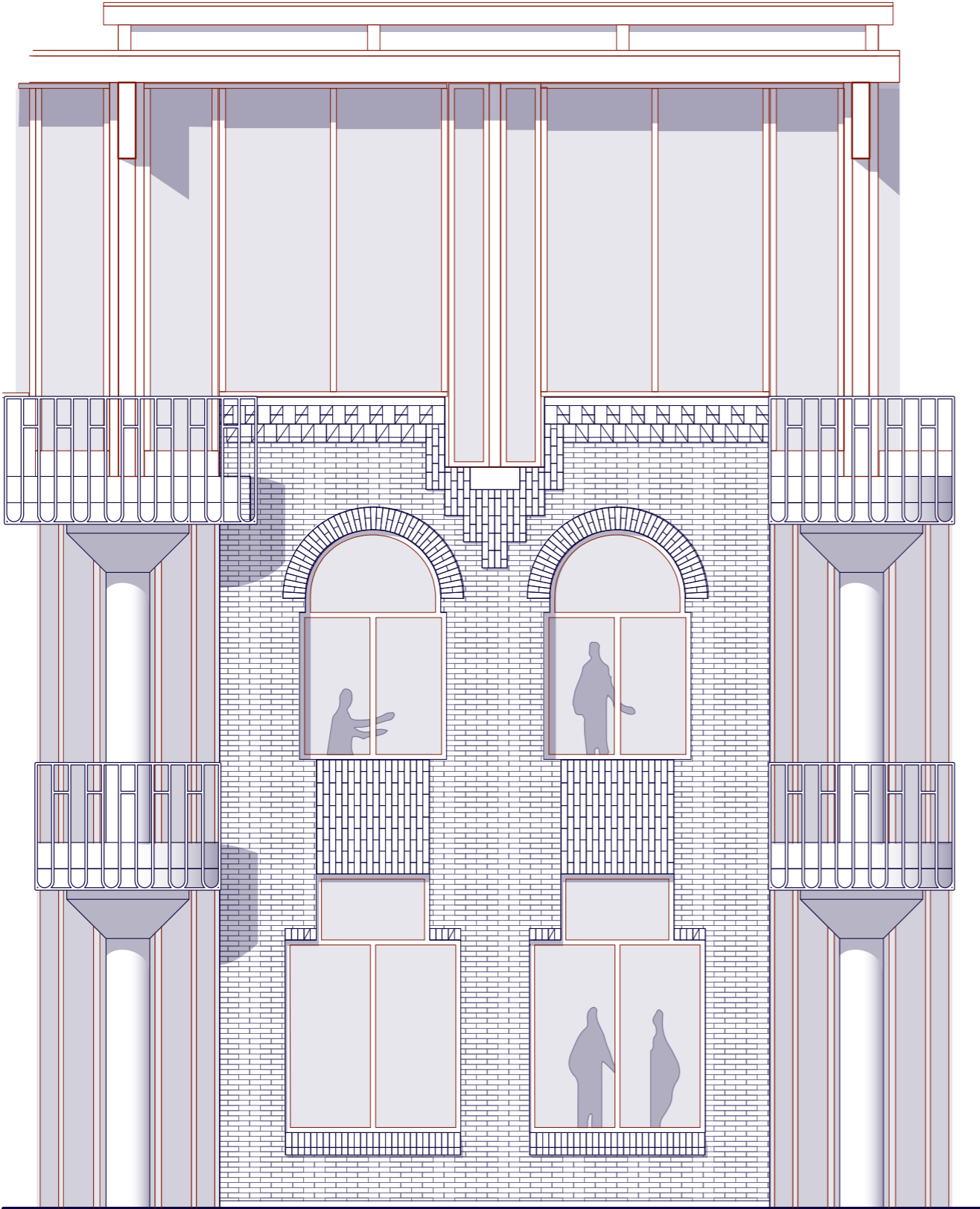


BLUE CARPET

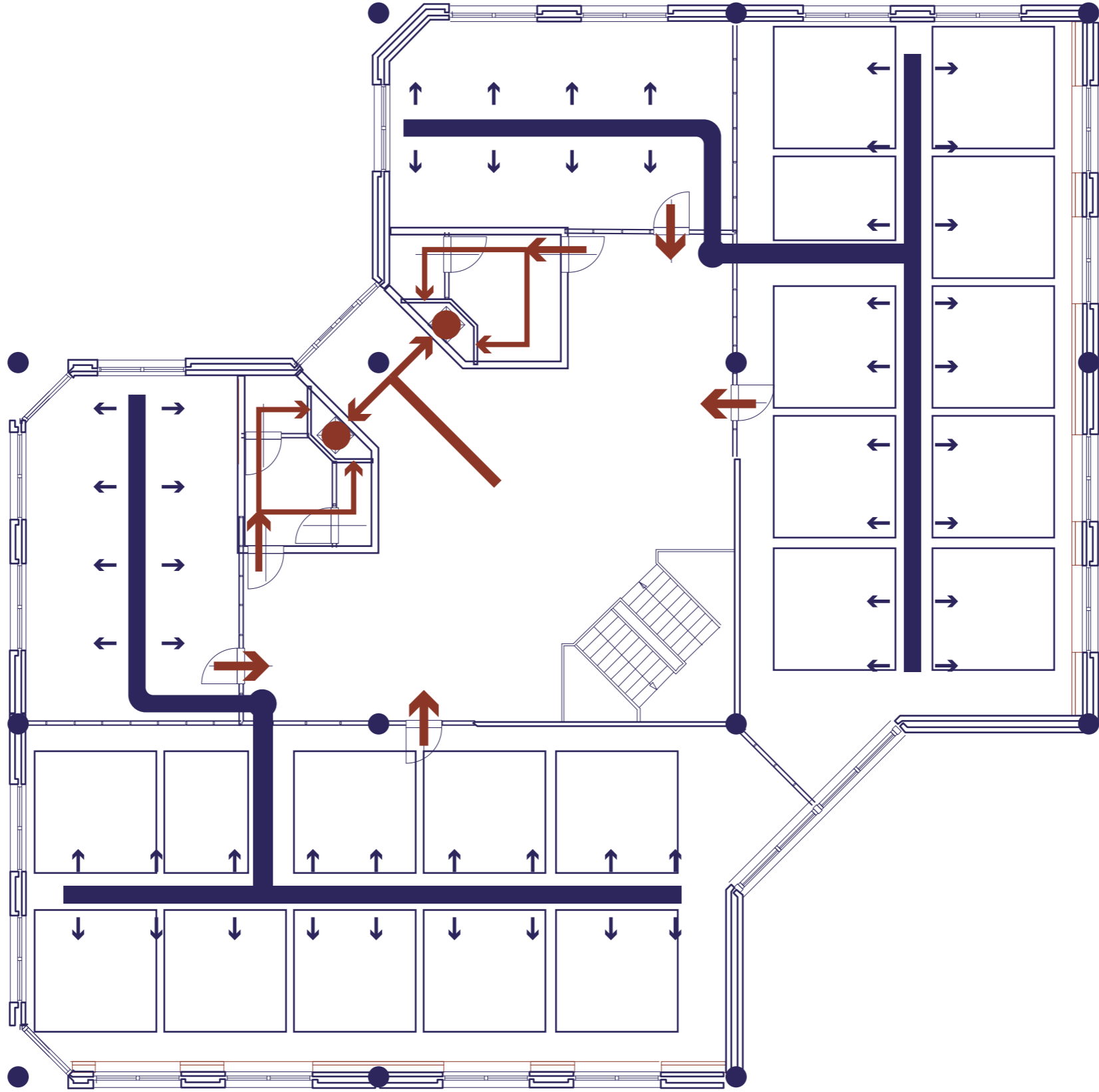
**CONSEQUENCES // ALTERATIONS EXISTING**



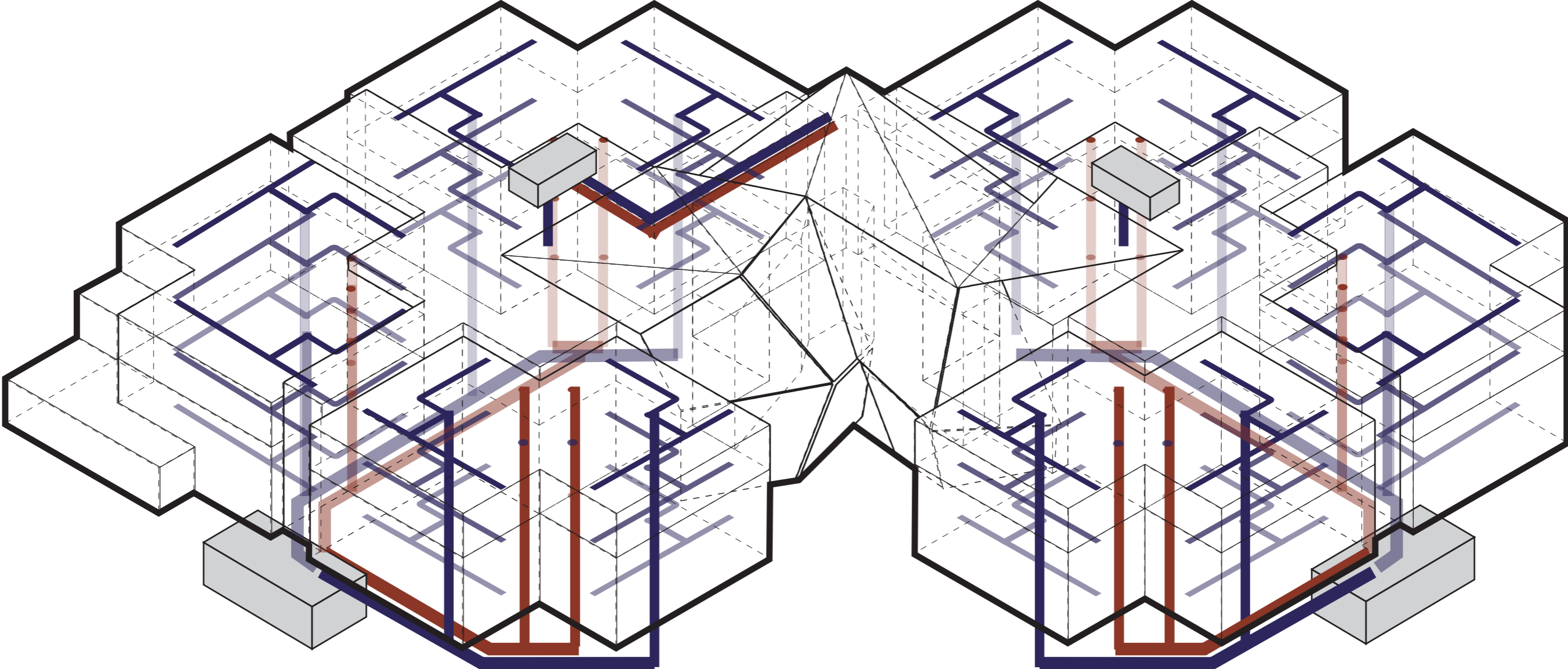
**CONSEQUENCES // ALTERATIONS EXISTING**



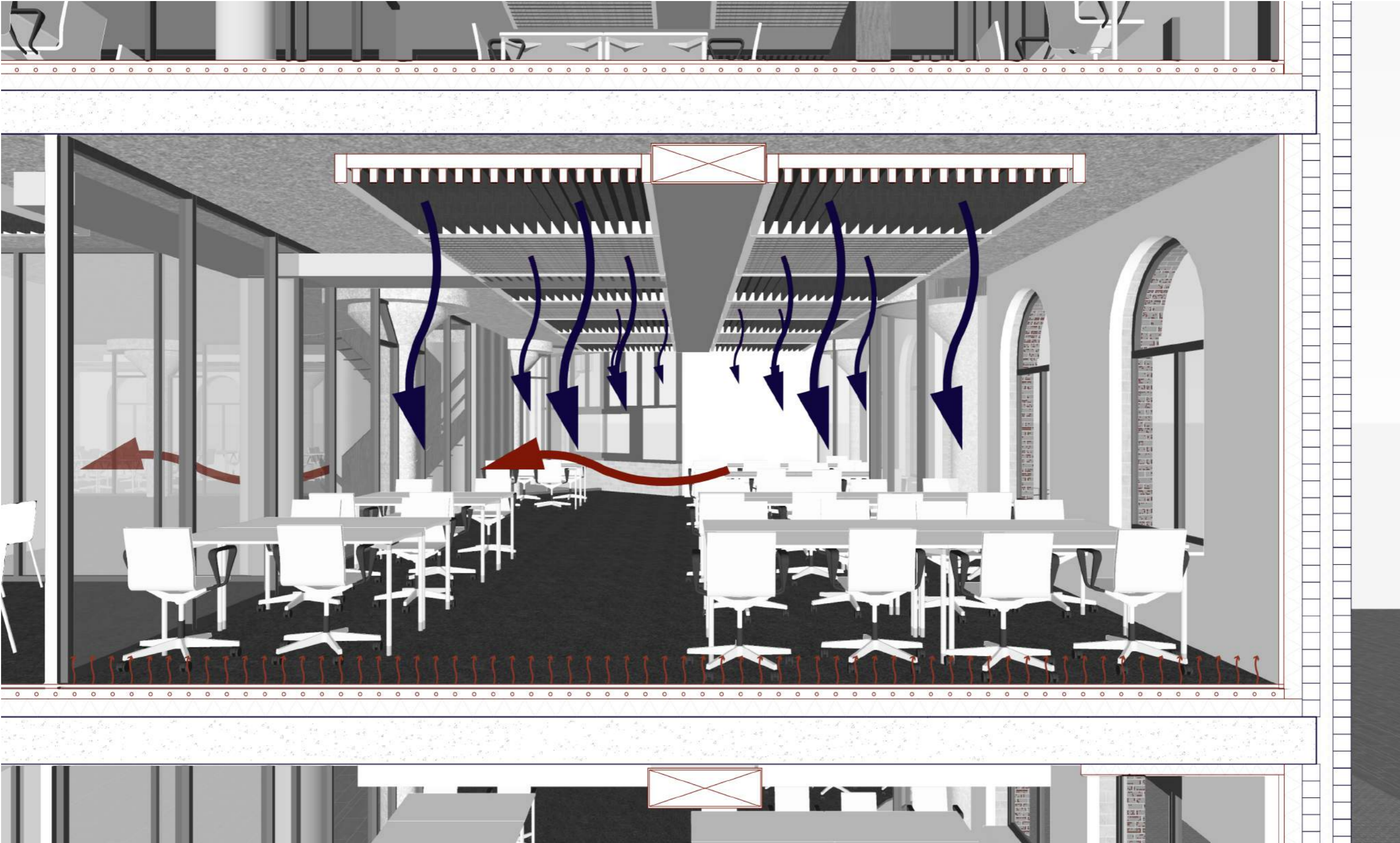
# CONSEQUENCES // VENTILATION SCHEME



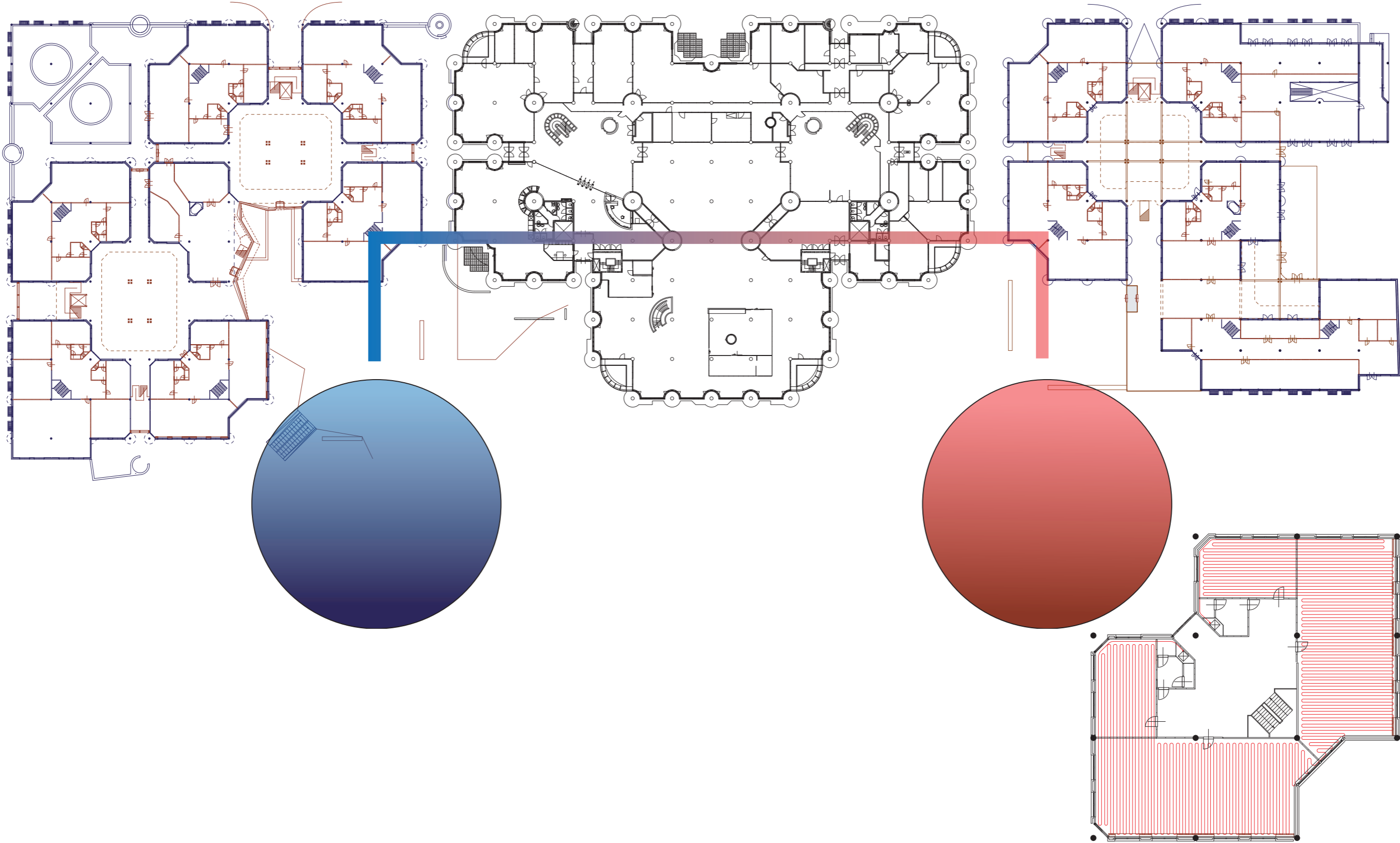
**CONSEQUENCES // VENTILATION SCHEME**



# CONSEQUENCES // VENTILATION SECTION

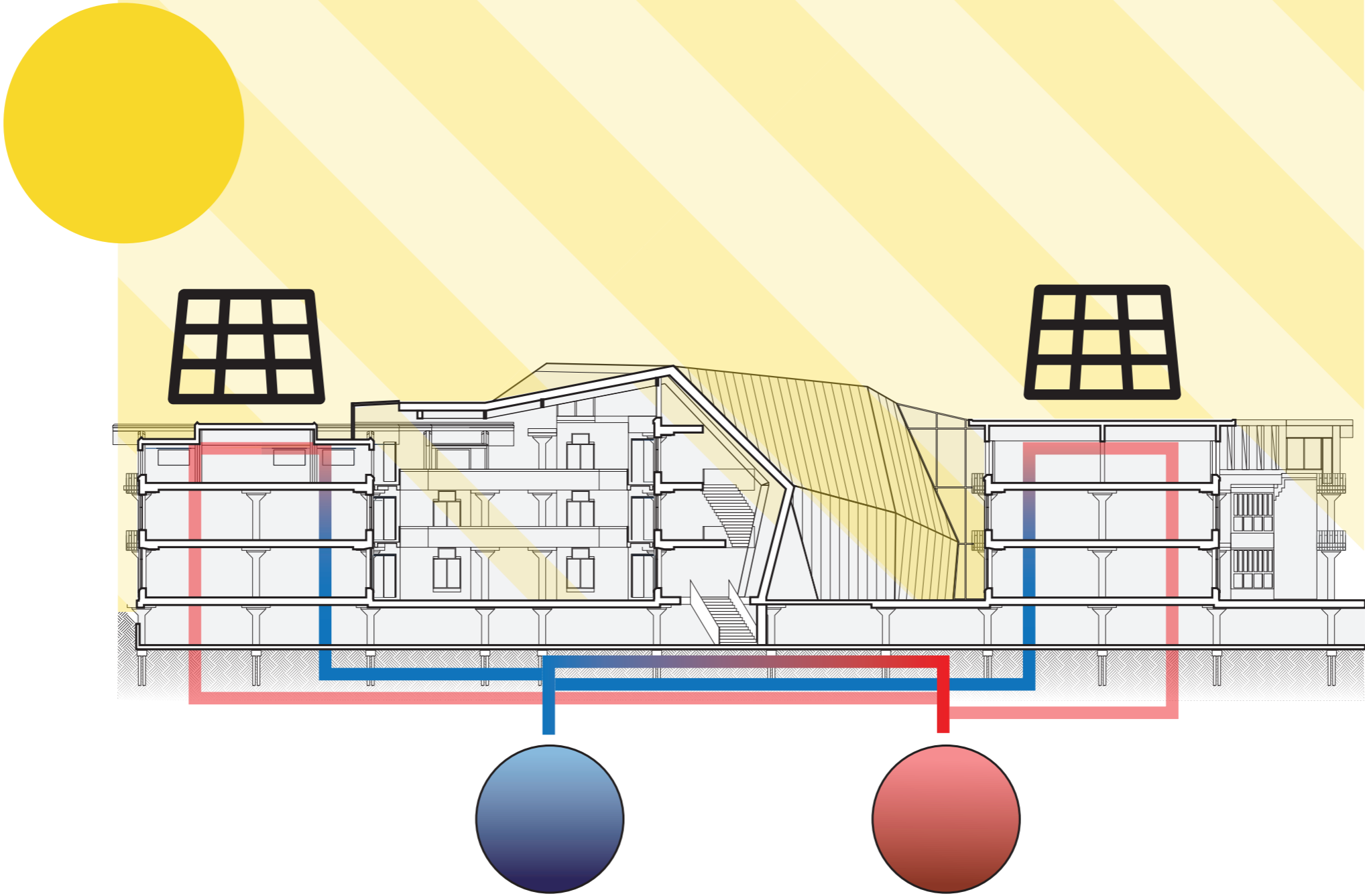


# CONSEQUENCES // HEATING SCHEME



**THERMAL STORAGE IN COMBINATION WITH FLOOR HEATING**

**CONSEQUENCES // SUSTAINABILITY SCHEME**



**SOLAR COLLECTORS ON ROOF**

ANALYSIS EXISTING BUILDING

//

NEW PROGRAM PROPOSAL

//

THEORETICAL FRAMEWORK

//

INTERVENTION PROPOSAL

//

TECHNICAL CONSEQUENCES

//

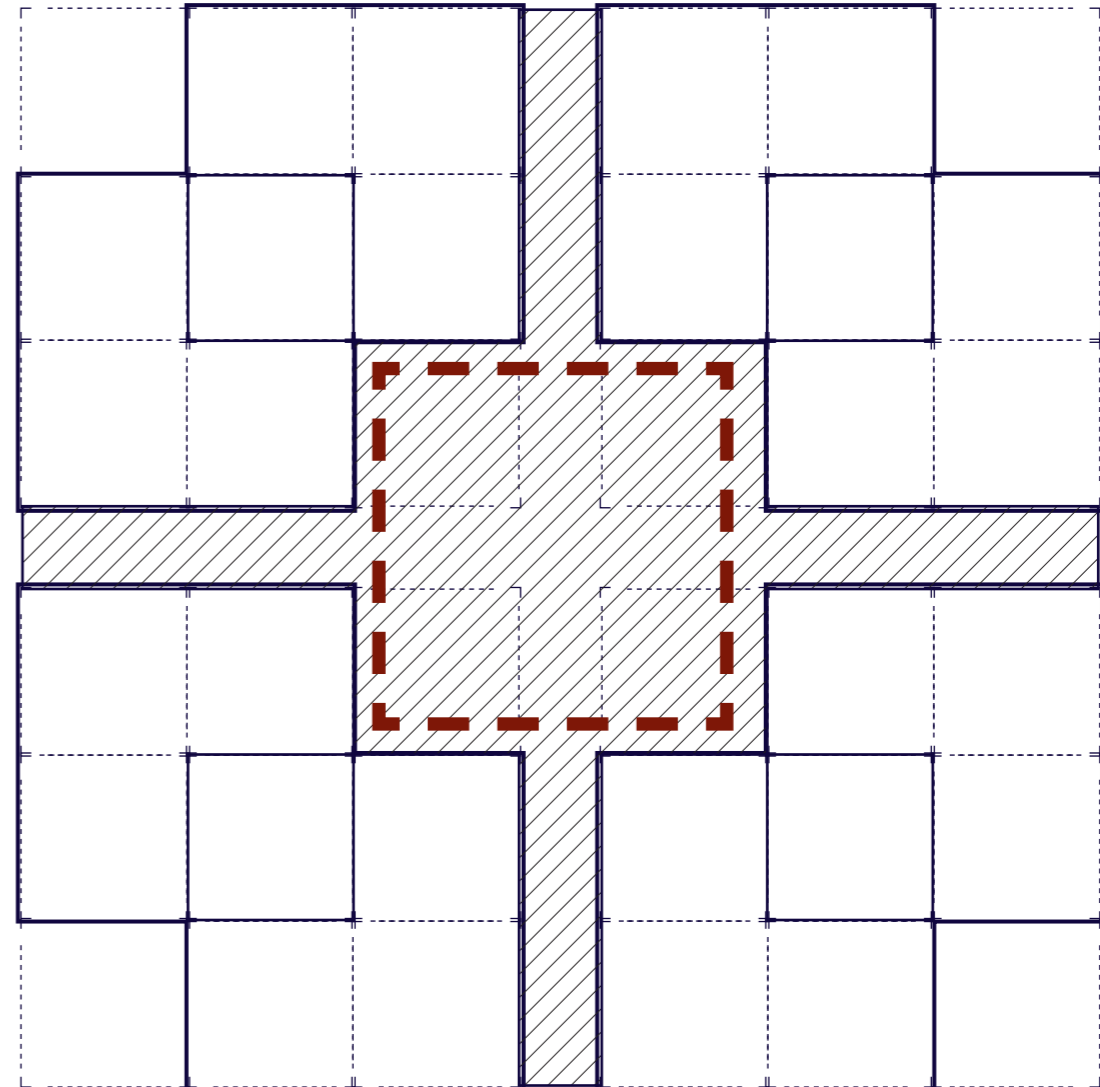
**REFLECTION**

# REFLECTION // THE FUTURE OF STRUCTURALISM

// RATIONAL SYSTEM

// SMALLSCALE UNITS, LACK OF HIERARCHIE

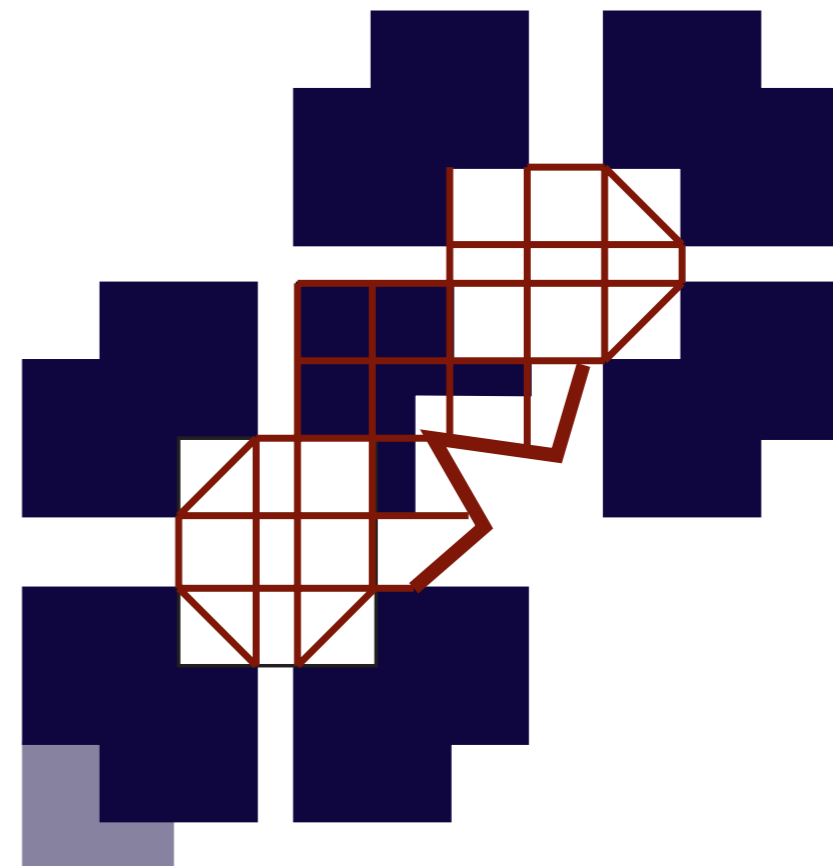
// NEEDS SOME KIND OF LARGE ATRIUM



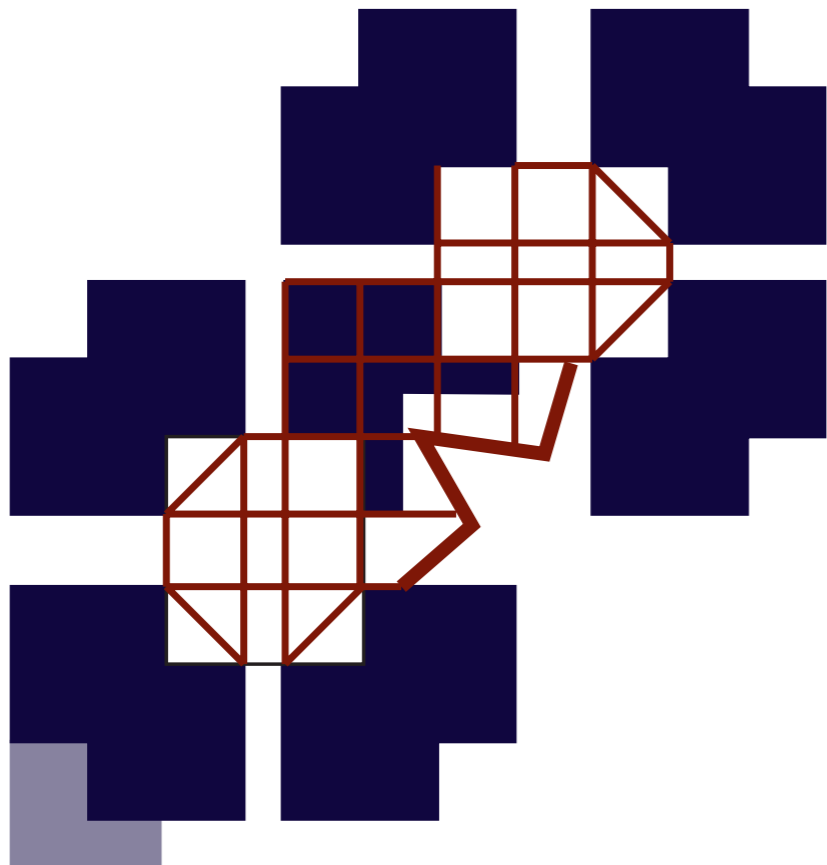
# REFLECTION // THE FLEXIBLE SYSTEM

// THE SYSTEM ONLY FLEXIBLE WITHIN ITS OWN LIMITS

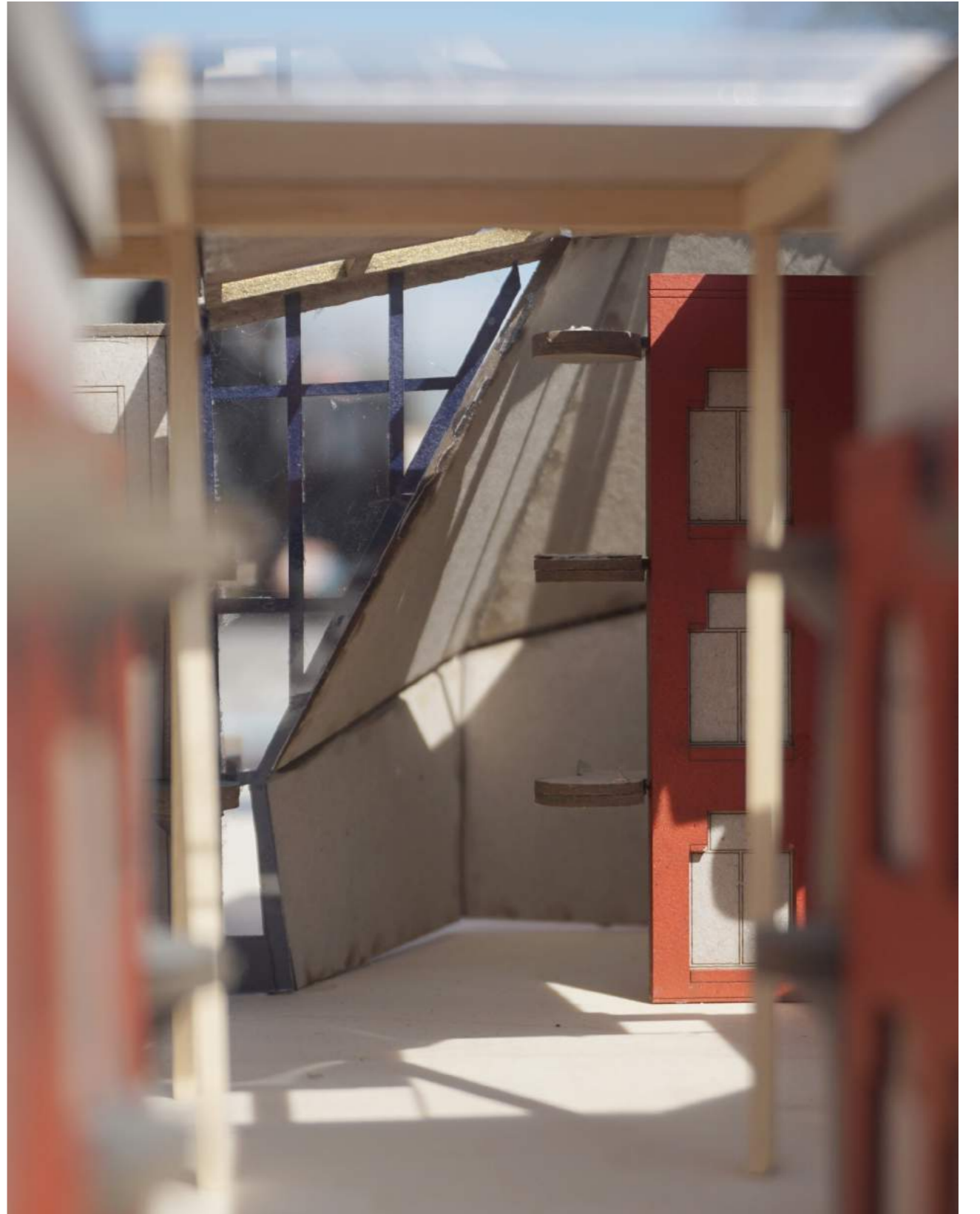
// GRAND GESTURES ARE NEEDED TO FIND FREEDOM. WITHIN THIS SYSTEM.

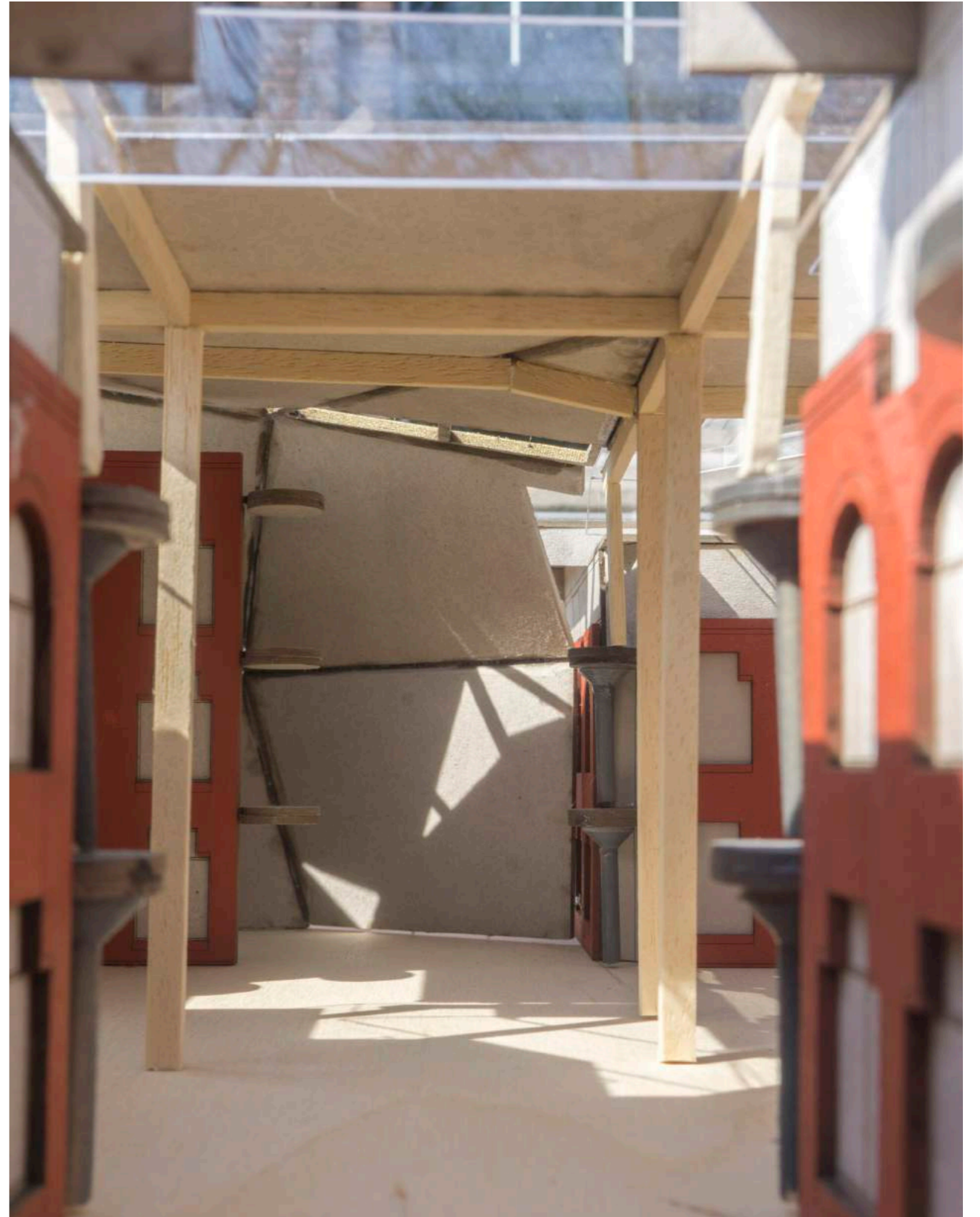


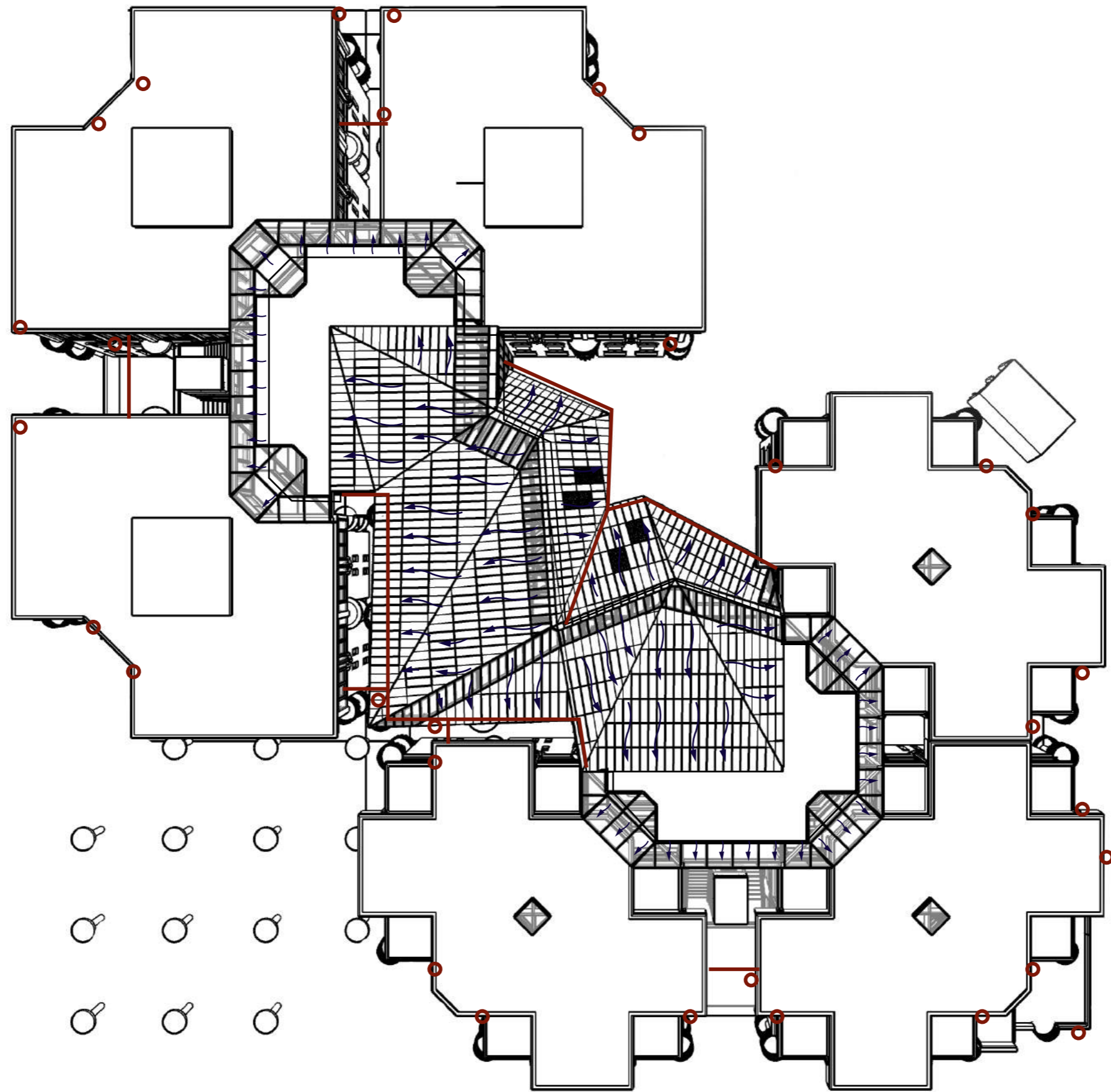
NEW ARCHITECTURE CAN PUSH AN EXISTING  
RATIONAL SYSTEM TO ITS LIMITS THROUGH  
SUBTRACTION AND ADDITION, THEREBY GOING  
IN DIALOGUE AND EXPOSING IT THROUGH  
DIFFERENTIATION.

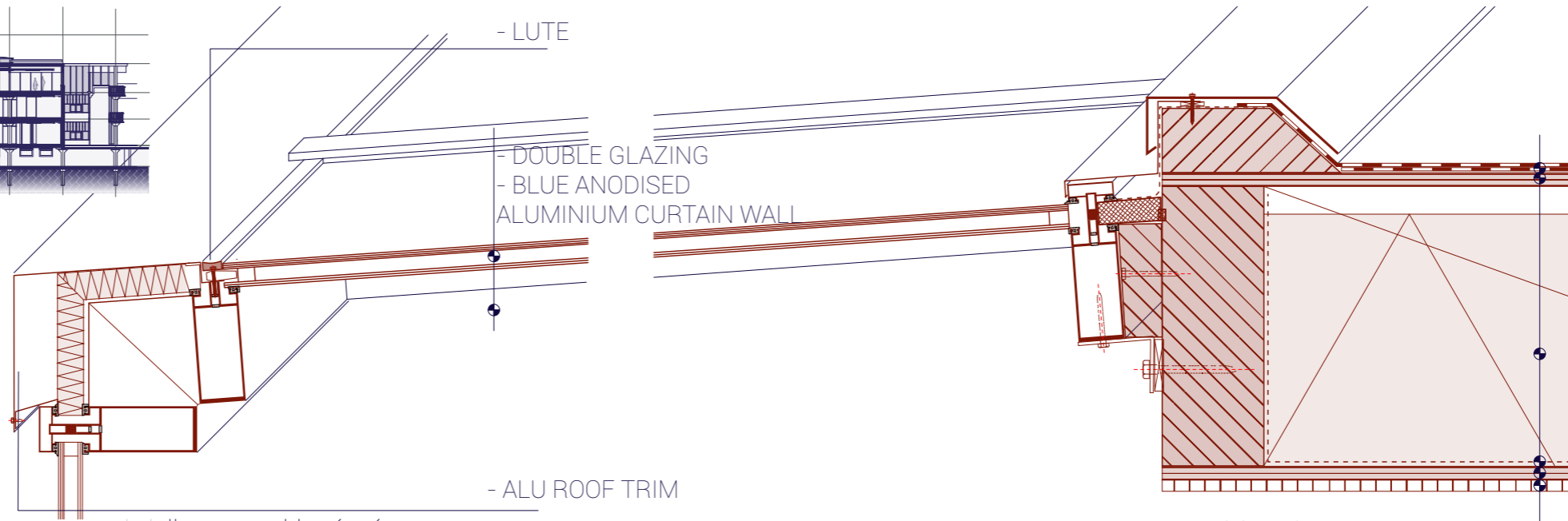
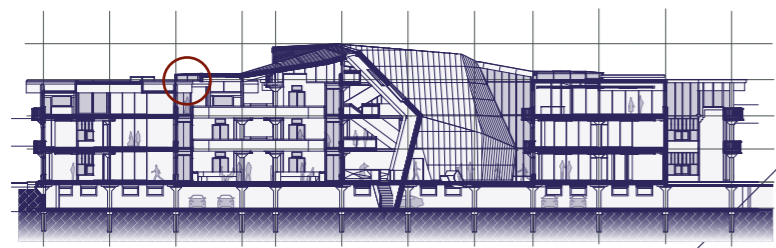




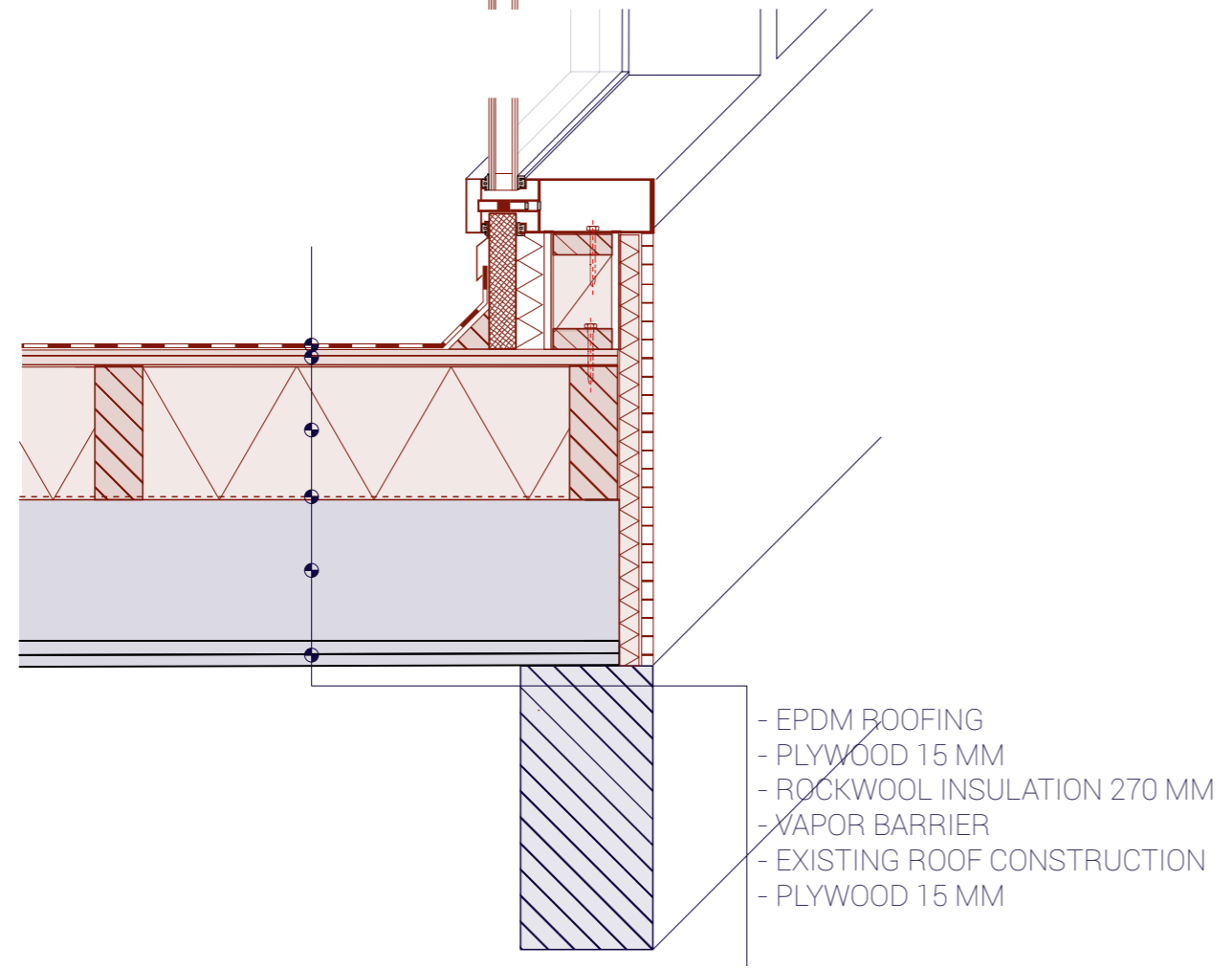




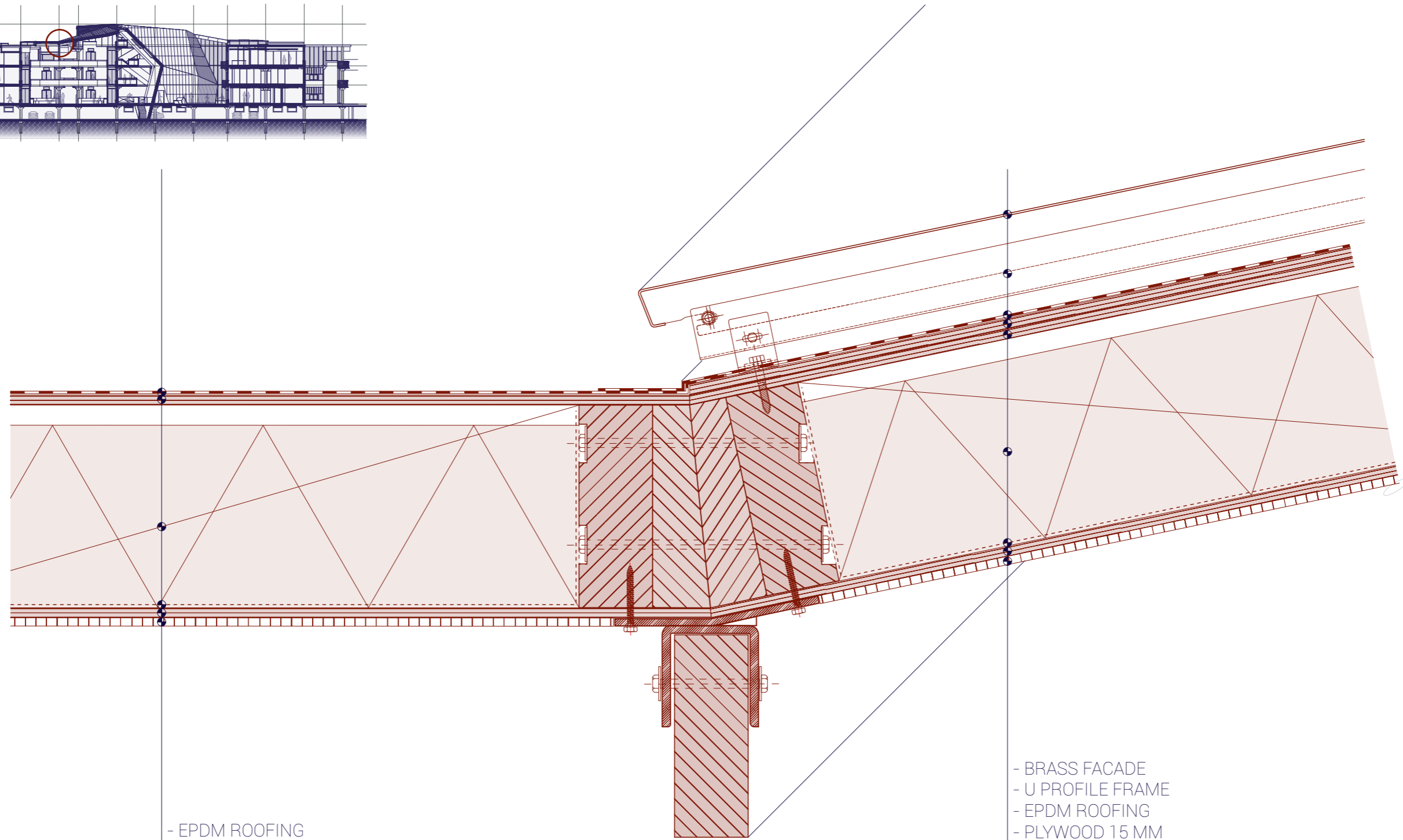
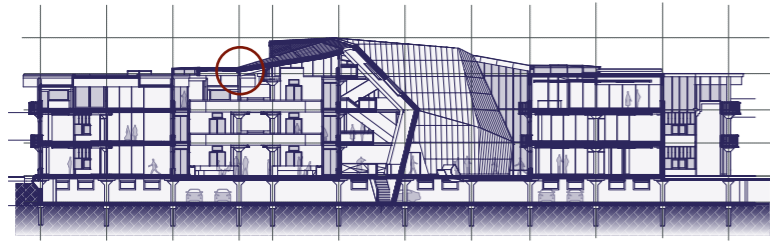




- EPDM ROOFING
- PLYWOOD 15 MM
- GLASS WOOL INSULATION 270 MM
- VAPOR BARRIER
- PLYWOOD 15 MM
- GYPSUM PLATING 12,5 MM

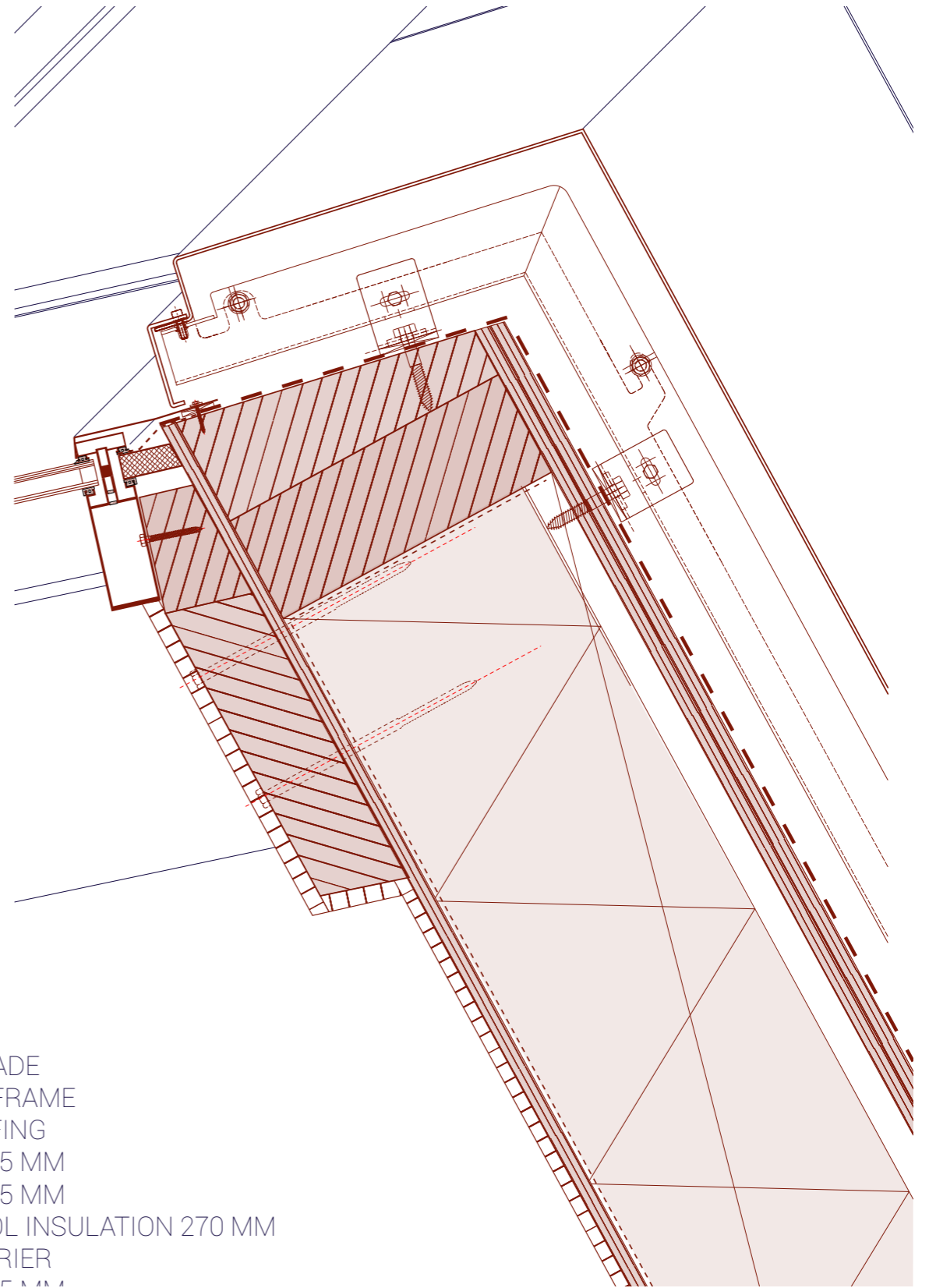
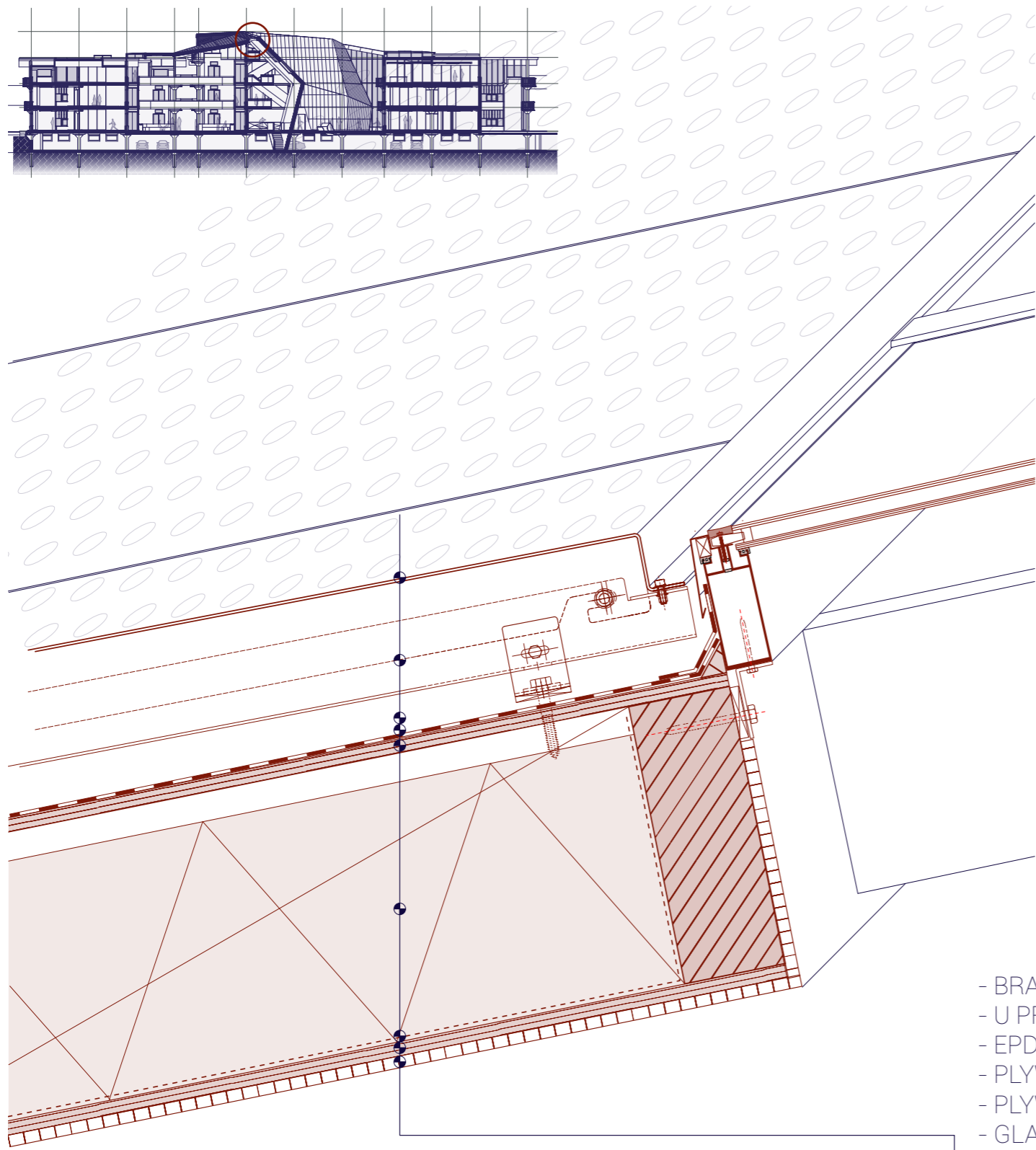


- EPDM ROOFING
- PLYWOOD 15 MM
- ROCKWOOL INSULATION 270 MM
- VAPOR BARRIER
- EXISTING ROOF CONSTRUCTION
- PLYWOOD 15 MM



- EPDM ROOFING
- PLYWOOD 15 MM
- GLASS WOOL INSULATION 270 MM
- VAPOR BARRIER
- PLYWOOD 15 MM
- GYPSUM PLATING 12,5 MM

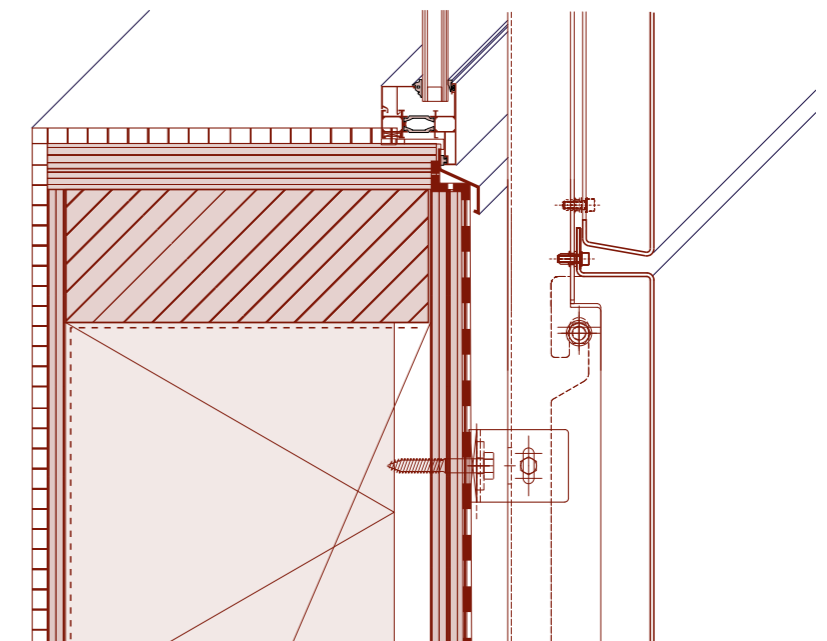
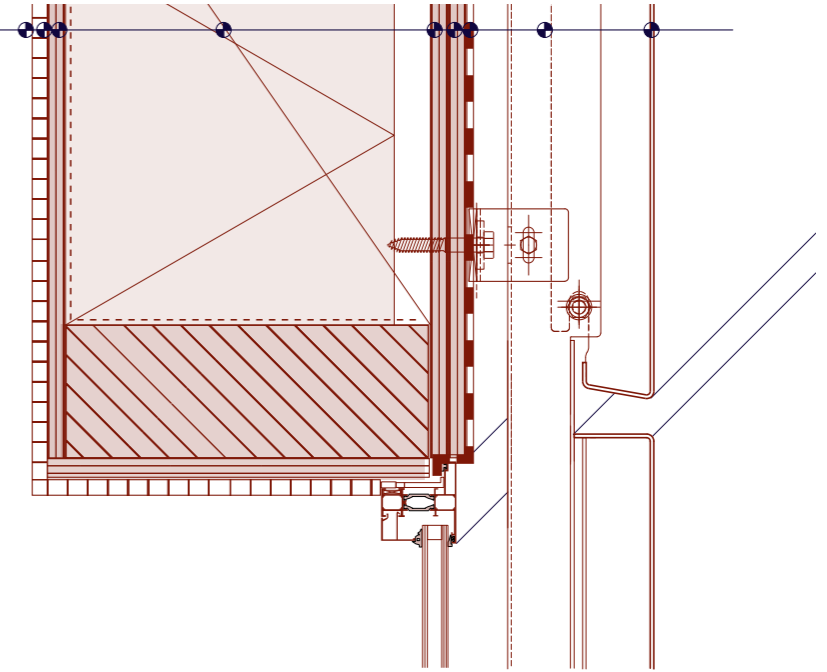
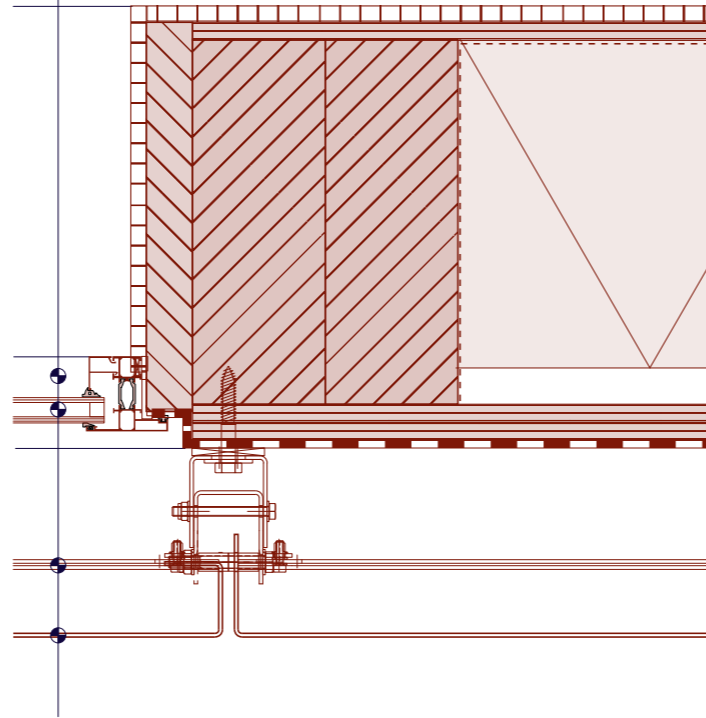
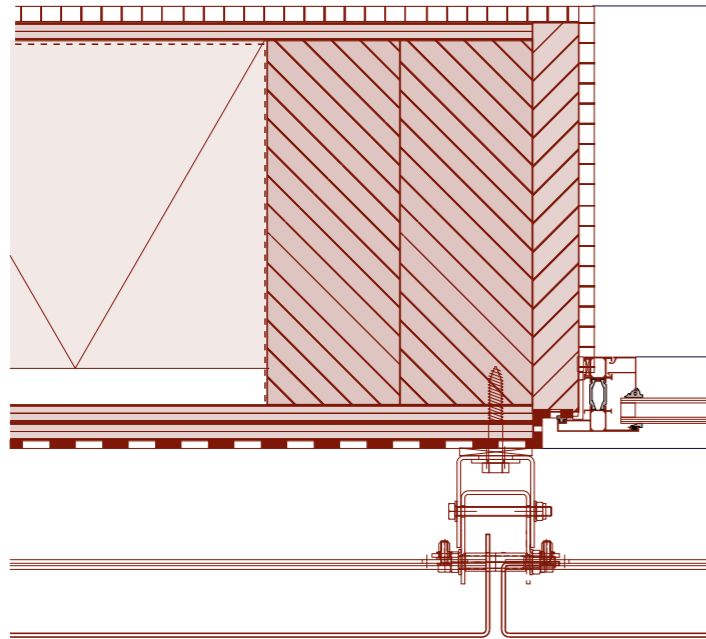
- BRASS FACADE
- U PROFILE FRAME
- EPDM ROOFING
- PLYWOOD 15 MM
- PLYWOOD 15 MM
- GLASS WOOL INSULATION 270 MM
- VAPOR BARRIER
- PLYWOOD 15 MM
- GYPSUM PLATING 12,5 MM

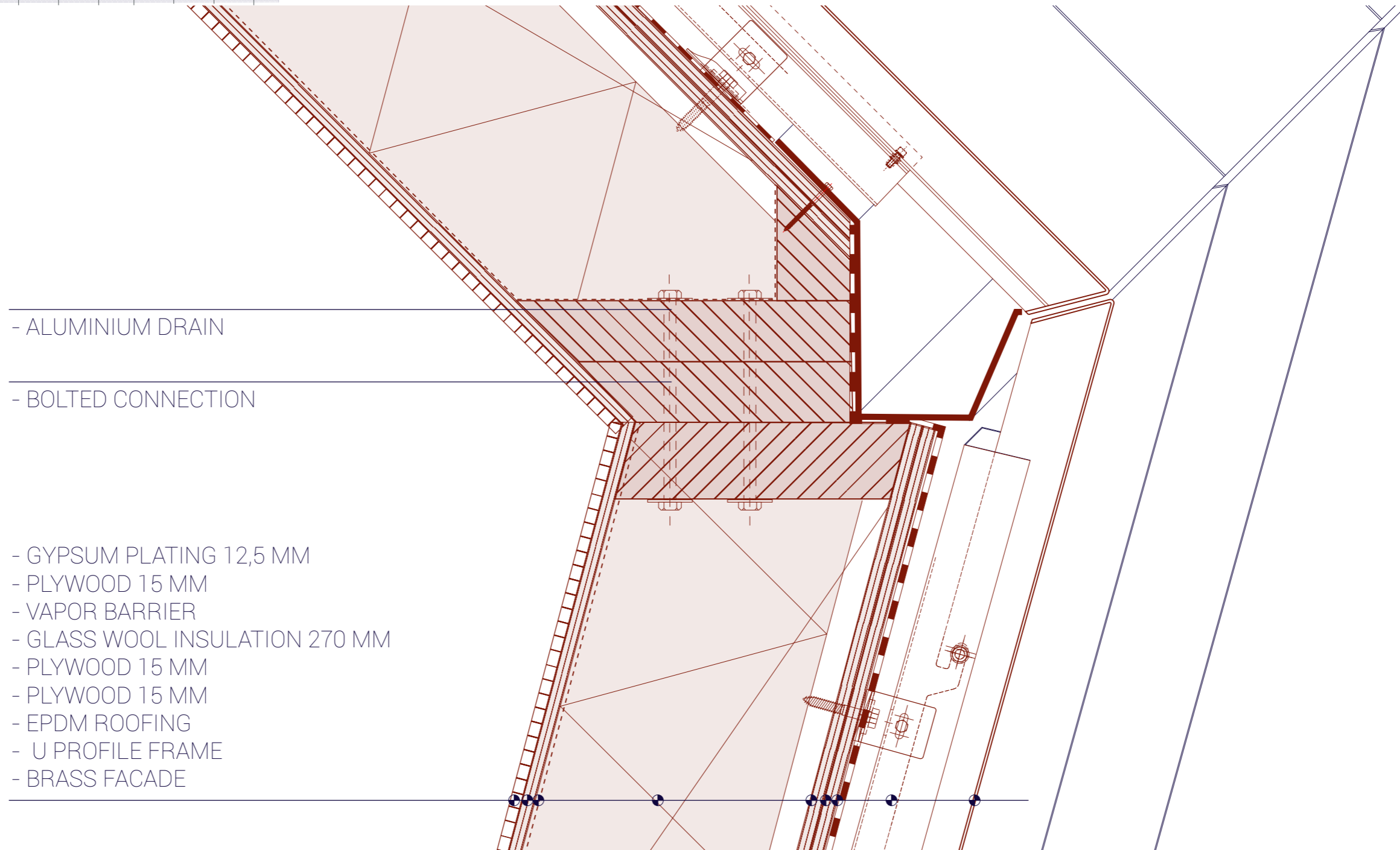
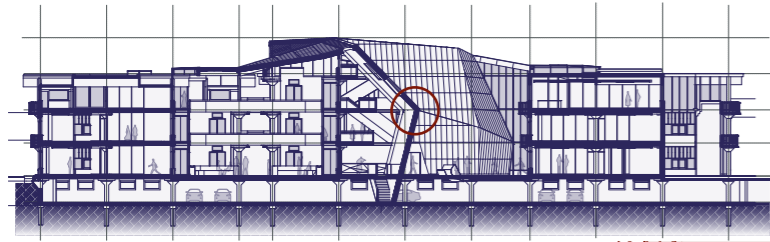


- BRASS FACADE
- U PROFILE FRAME
- EPDM ROOFING
- PLYWOOD 15 MM
- PLYWOOD 15 MM
- GLASS WOOL INSULATION 270 MM
- VAPOR BARRIER
- PLYWOOD 15 MM

- ALUMINIUM WINDOW FRAME
- DOUBLE GLAZING
- U PROFILE FRAME
- BRASS FACADE

- BRASS FACADE
- U PROFILE FRAME
- EPDM ROOFING
- PLYWOOD 15 MM
- PLYWOOD 15 MM
- GLASS WOOL INSULATION 270 MM
- VAPOR BARRIER
- PLYWOOD 15 MM
- GYPSUM PLATING 12,5 MM

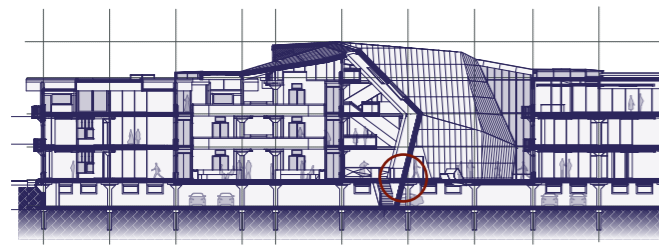




- ALUMINIUM DRAIN

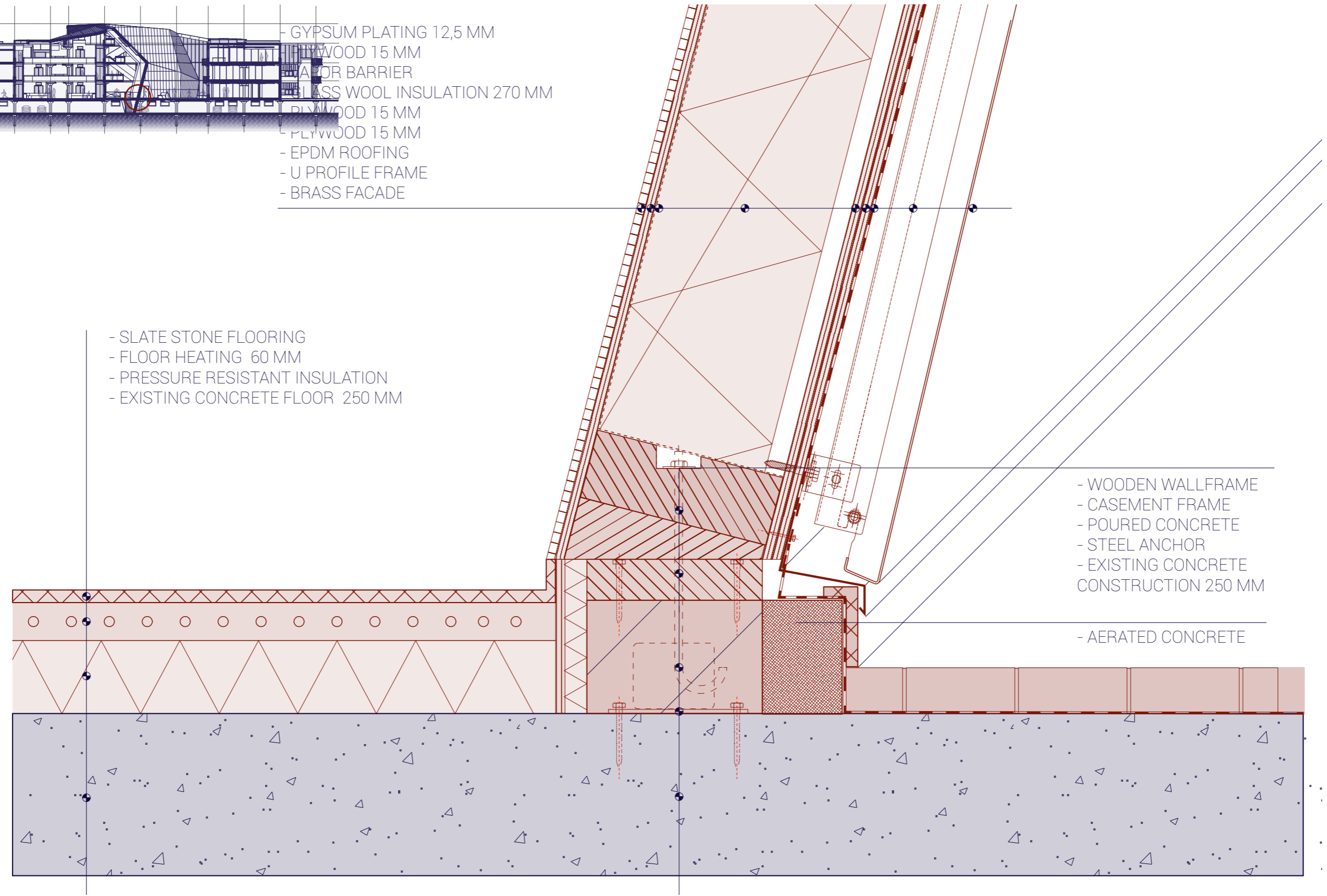
- BOLTED CONNECTION

- GYPSUM PLATING 12,5 MM
- PLYWOOD 15 MM
- VAPOR BARRIER
- GLASS WOOL INSULATION 270 MM
- PLYWOOD 15 MM
- PLYWOOD 15 MM
- EPDM ROOFING
- U PROFILE FRAME
- BRASS FACADE



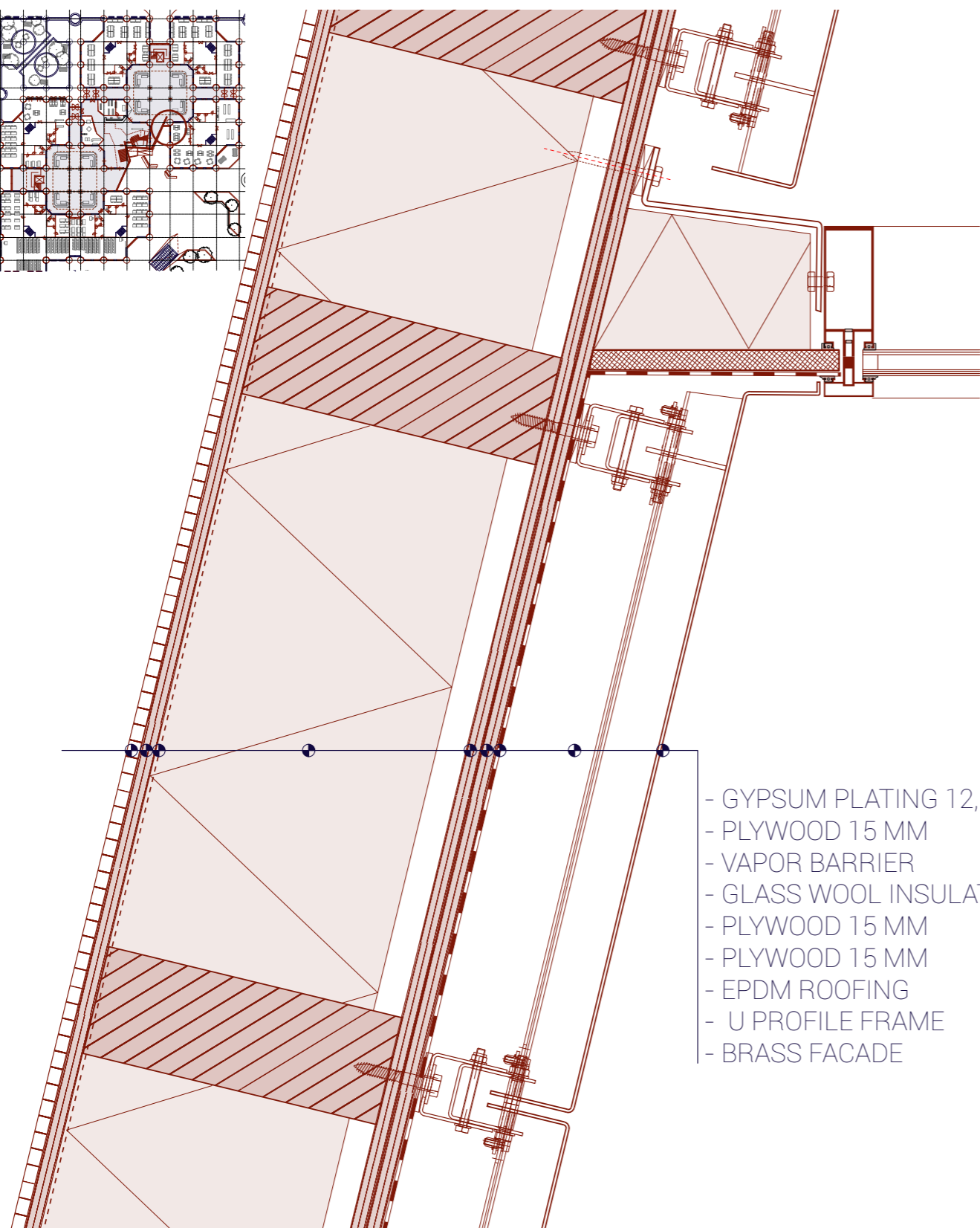
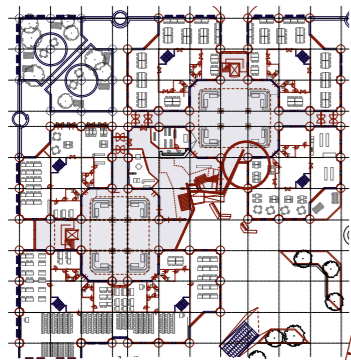
- GYPSUM PLATING 12,5 MM
- PLYWOOD 15 MM
- VAPOR BARRIER
- GLASS WOOL INSULATION 270 MM
- PLYWOOD 15 MM
- PLYWOOD 15 MM
- EPDM ROOFING
- U PROFILE FRAME
- BRASS FACADE

- SLATE STONE FLOORING
- FLOOR HEATING 60 MM
- PRESSURE RESISTANT INSULATION
- EXISTING CONCRETE FLOOR 250 MM

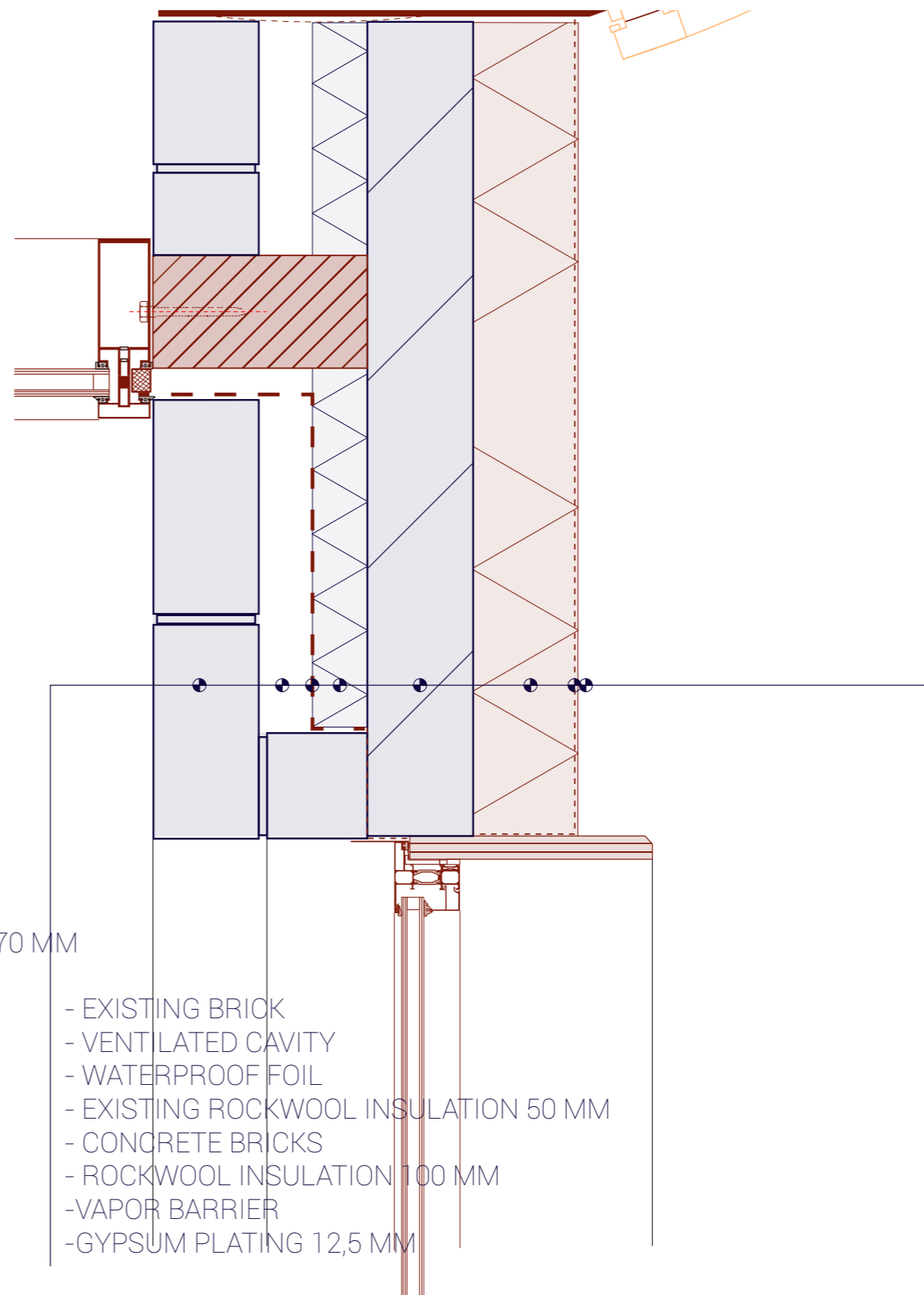


- WOODEN WALLFRAME
- CASEMENT FRAME
- POURED CONCRETE
- STEEL ANCHOR
- EXISTING CONCRETE CONSTRUCTION 250 MM

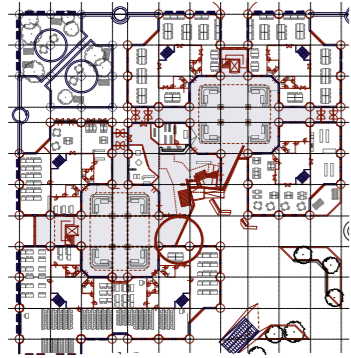
- AERATED CONCRETE



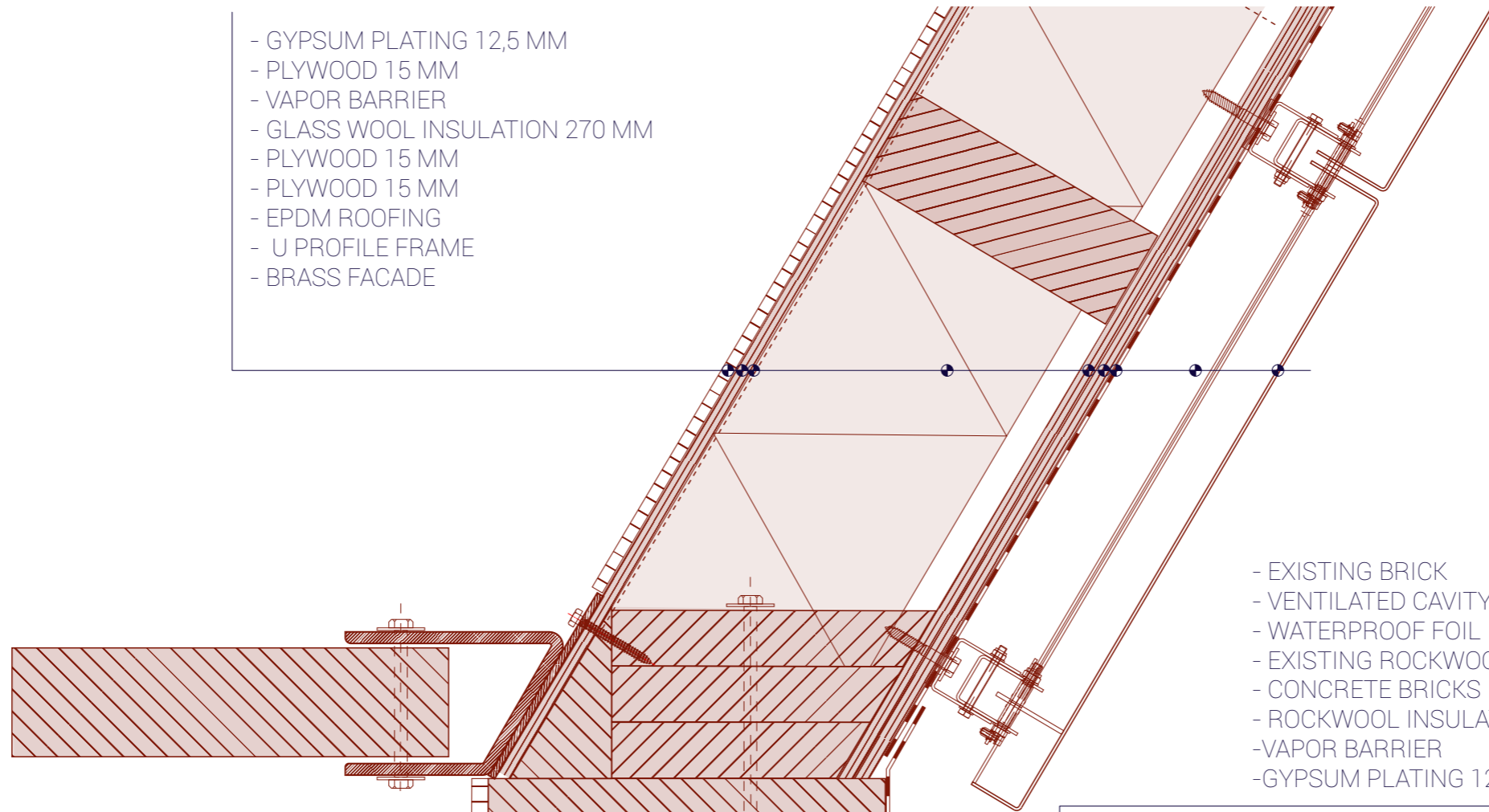
- GYPSUM PLATING 12,5 MM
- PLYWOOD 15 MM
- VAPOR BARRIER
- GLASS WOOL INSULATION 270 MM
- PLYWOOD 15 MM
- PLYWOOD 15 MM
- EPDM ROOFING
- U PROFILE FRAME
- BRASS FACADE



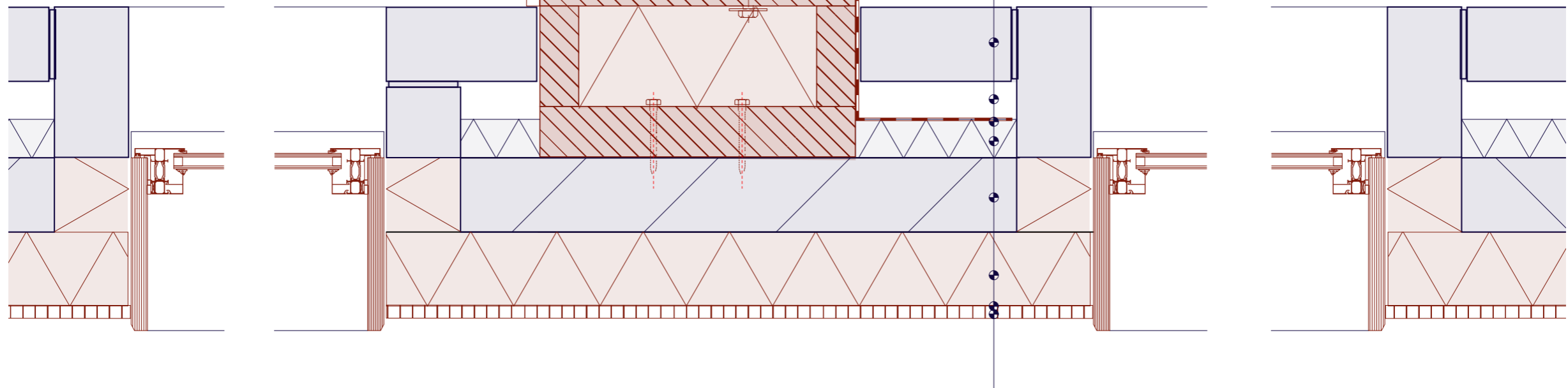
- EXISTING BRICK
- VENTILATED CAVITY
- WATERPROOF FOIL
- EXISTING ROCKWOOL INSULATION 50 MM
- CONCRETE BRICKS
- ROCKWOOL INSULATION 100 MM
- VAPOR BARRIER
- GYPSUM PLATING 12,5 MM

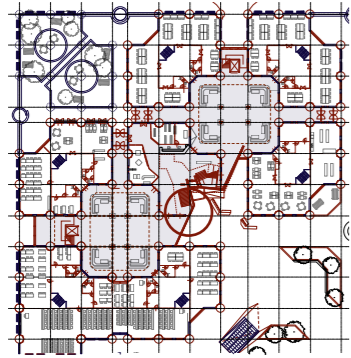


- GYPSUM PLATING 12,5 MM
- PLYWOOD 15 MM
- VAPOR BARRIER
- GLASS WOOL INSULATION 270 MM
- PLYWOOD 15 MM
- PLYWOOD 15 MM
- EPDM ROOFING
- U PROFILE FRAME
- BRASS FACADE



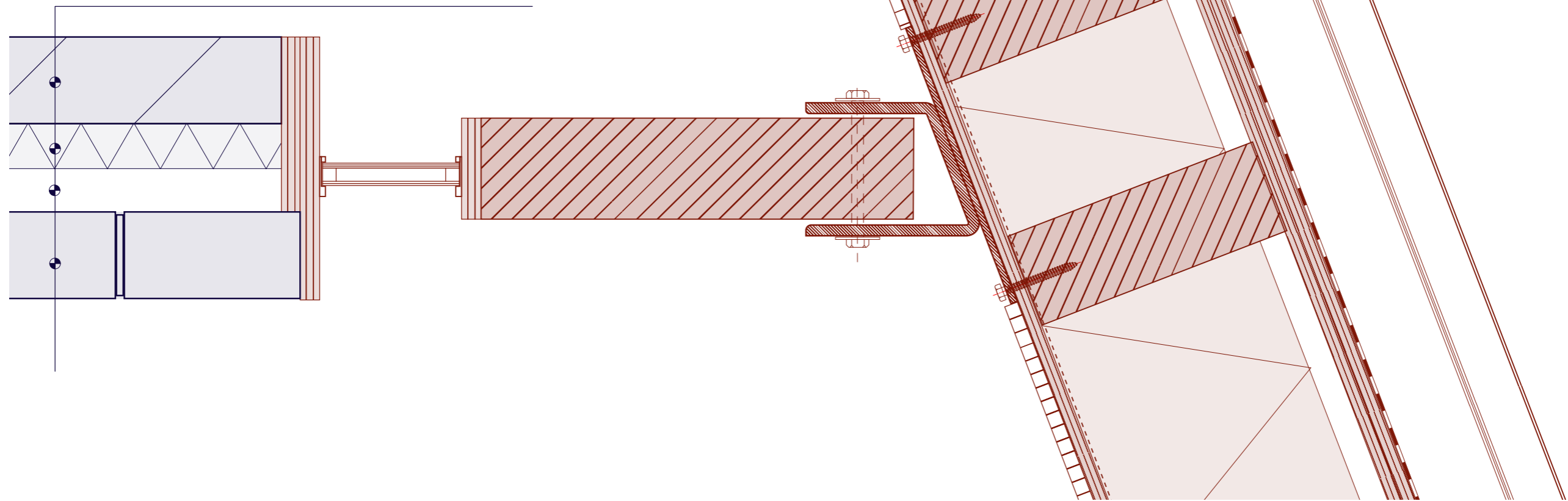
- EXISTING BRICK
- VENTILATED CAVITY
- WATERPROOF FOIL
- EXISTING ROCKWOOL INSULATION 50 MM
- CONCRETE BRICKS
- ROCKWOOL INSULATION 100 MM
- VAPOR BARRIER
- GYPSUM PLATING 12,5 MM

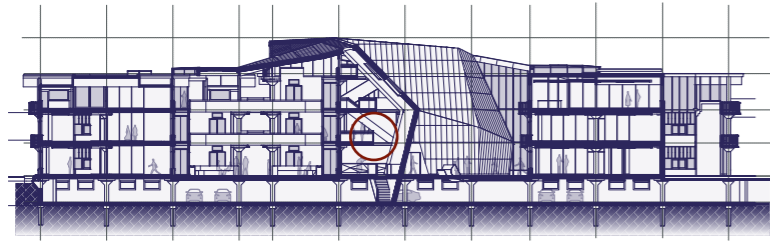




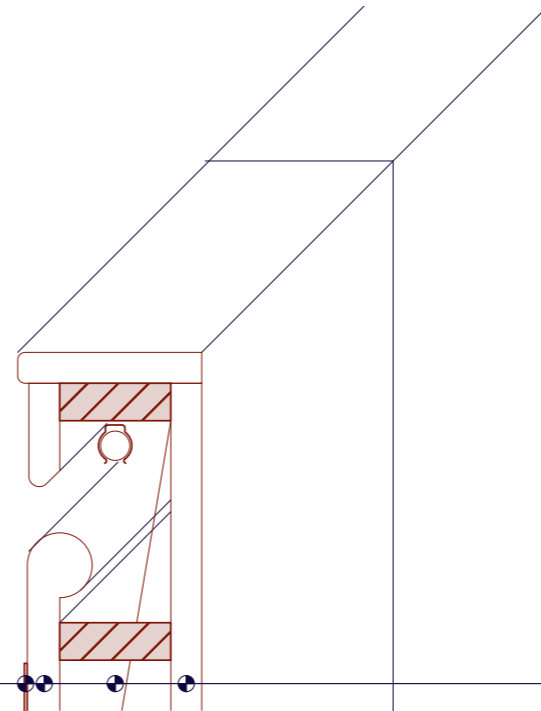
- GYPSUM PLATING 12,5 MM
- PLYWOOD 15 MM
- VAPOR BARRIER
- GLASS WOOL INSULATION 270 MM
- PLYWOOD 15 MM
- PLYWOOD 15 MM
- EPDM ROOFING
- U PROFILE FRAME
- BRASS FACADE

- CONCRETE BRICK
- EXISTING ROCKWOOL INSULATION 50 MM
- VENTILATED CAVITY
- EXISTING BRICK





- BRASS PLATING 0,5 MM
- VARNISHED PLYWOOD
- WOOD FRAMING
- VARNISHED PLYWOOD



- SLATE FLOORING
- FLOOR HEATING 60 MM
- NEW POORED CONCRETE
- STEEL ANCHOR

