

VOIDNESSERING

P5 PRESENTATION

Encountering The Voidness
Mashhad, Iran

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July, 7th, 2021

Borders & Territories
Graduation studio (2020-2021) - Emerging border conditions in Eurasia
Faculty of Architecture and the Built Environment, TU Delft

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MASHHAD

MASHHAD CONTEXT





URBAN ITERATION

2004



2006



2009



2011



2014



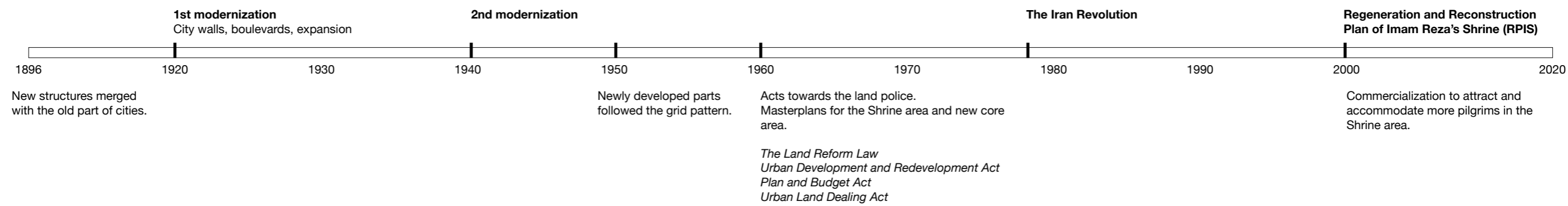
2017



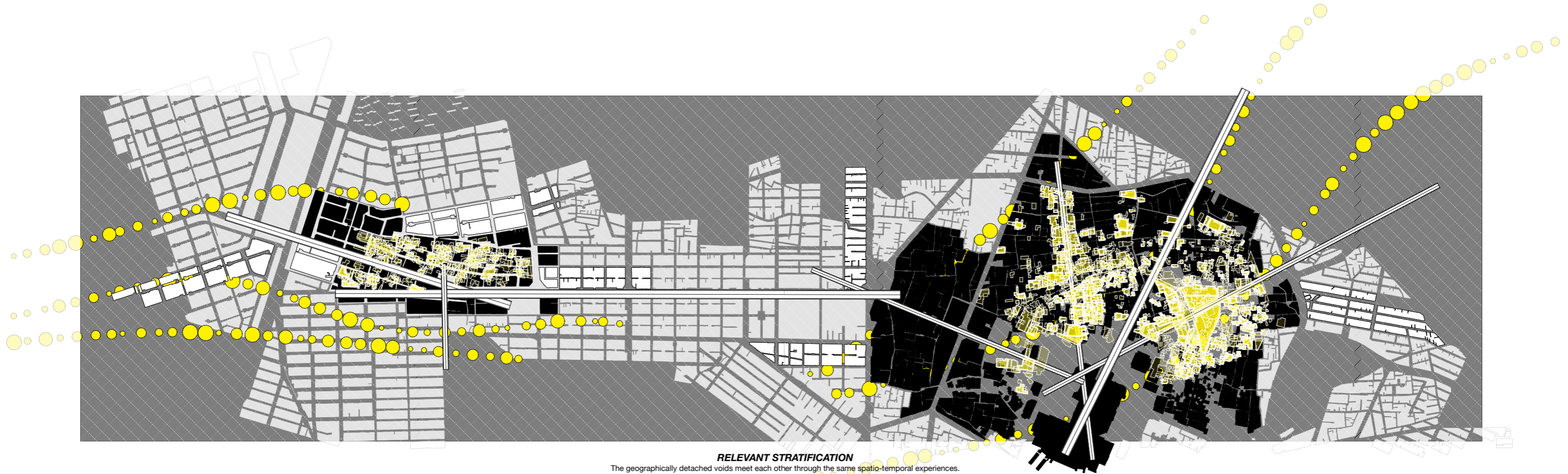
2020



URBAN DEVELOPMENT







- Due to value of the land switched from socio-cultural/religious to commercial aspect, the geographically detached voids meet each other through the same spatio-temporal experiences.
- Patterns of infrastructure are the evidences of (dis)continuity.
The city turned into a situation of fragmentation and thus juxtaposition.

RECOGNITION OF THE VOIDS

**Urban voids are the indispensable configurations
within the urban environment.**

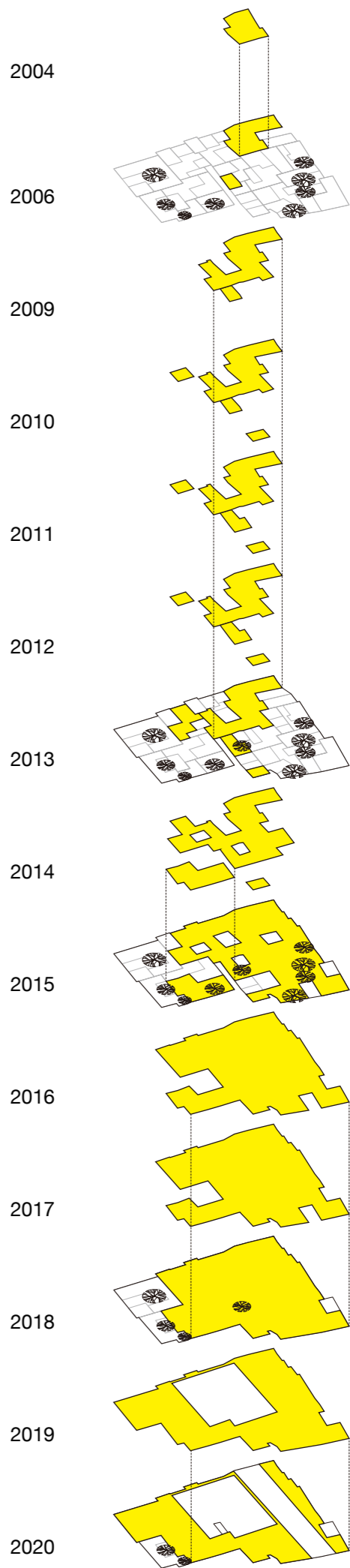
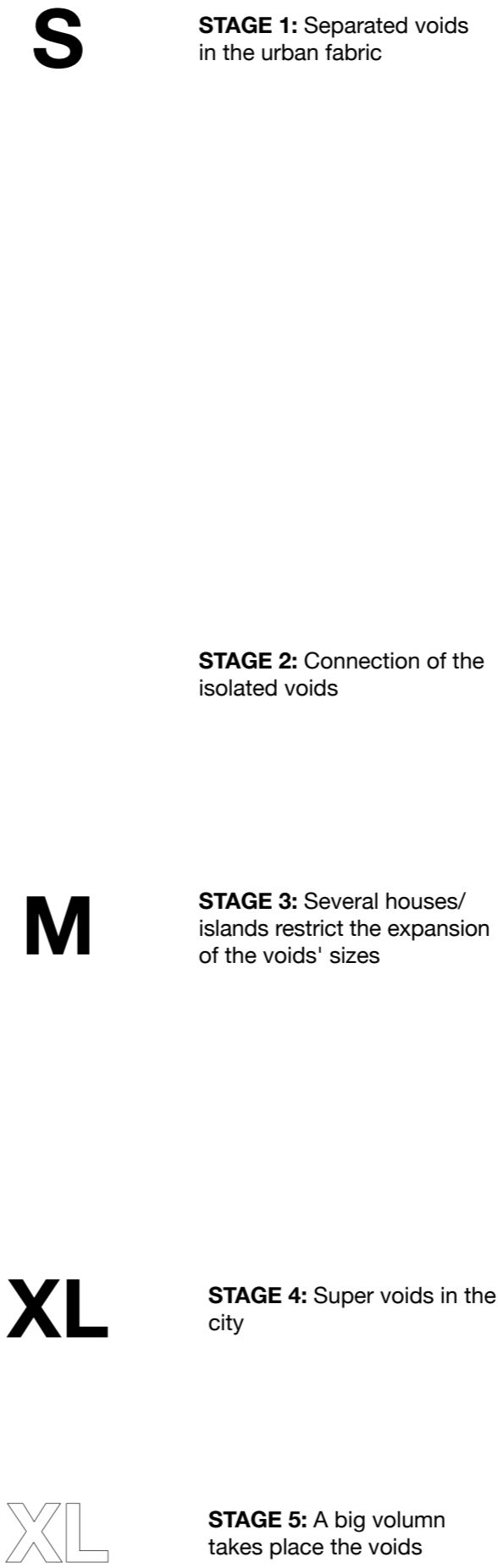
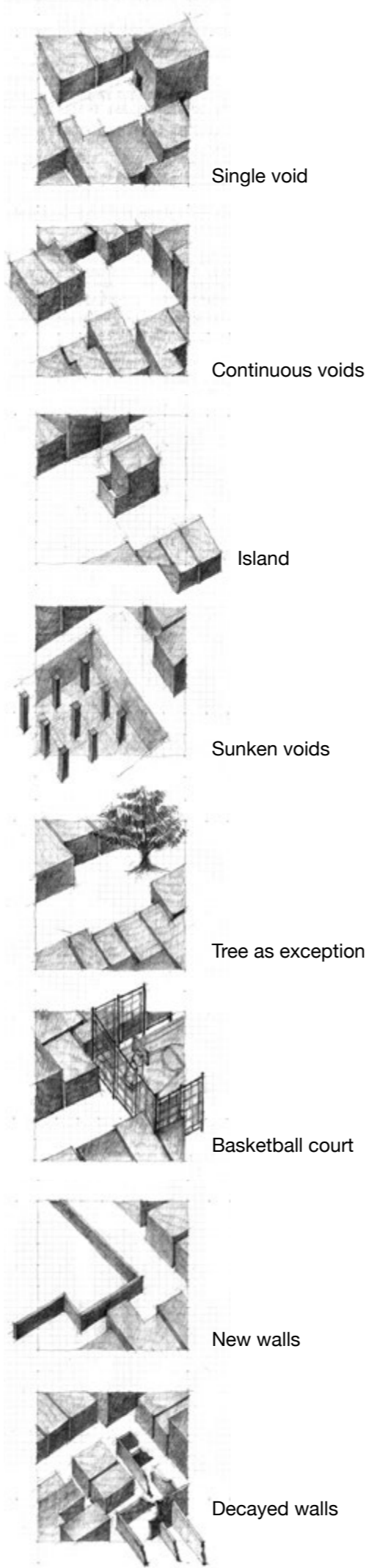
**They should be recognized as distinct spatial
entities within the cities and also in the sense of
human culture, as the holder of the memory and
historical layering of the life of the city.**

VOID

CONDITIONS OF THE VOID

Typologies of voids in Mashhad feature themselves in the sense of time whose suspended processing transcends the notion of space.

Development of voids started from separated ones which can be considered as its self-development, to political intervening connection, to the super voids and super buildings. This course shows the unbalanced relation between commercial engagement and the complex social and political history within such a fast transformation.



SCENARIOS IN THE VOIDS

Loss of identities leaves the illusion that no one has ever set his foot into this place. The fact is that, Mashhad is meeting its past. Before the rational zoning and massive volume being materialized in reality, the land is temporarily turned into a suspension in the form of various voids.



"Further away from Akhavan's burnt house that is no trace of it any more and it's been forgotten..."



"The old texture of every city shows the background and history of that city"



"Music..."



"The root of the matter is the humiliation of humans and preferring personal interests to the public interest."

ATMOSPHERE IN THE VOIDS



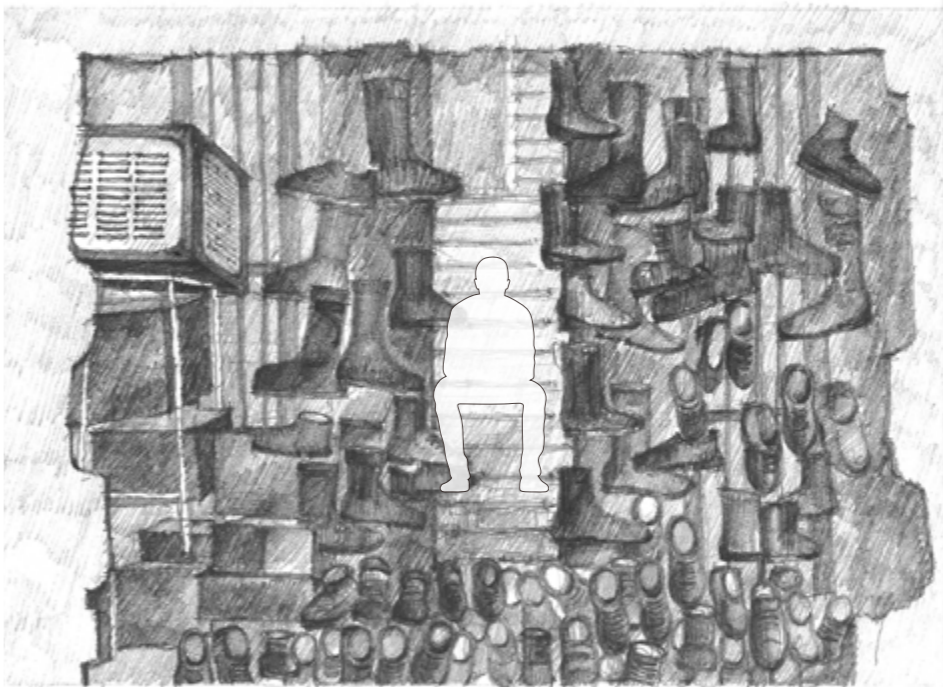
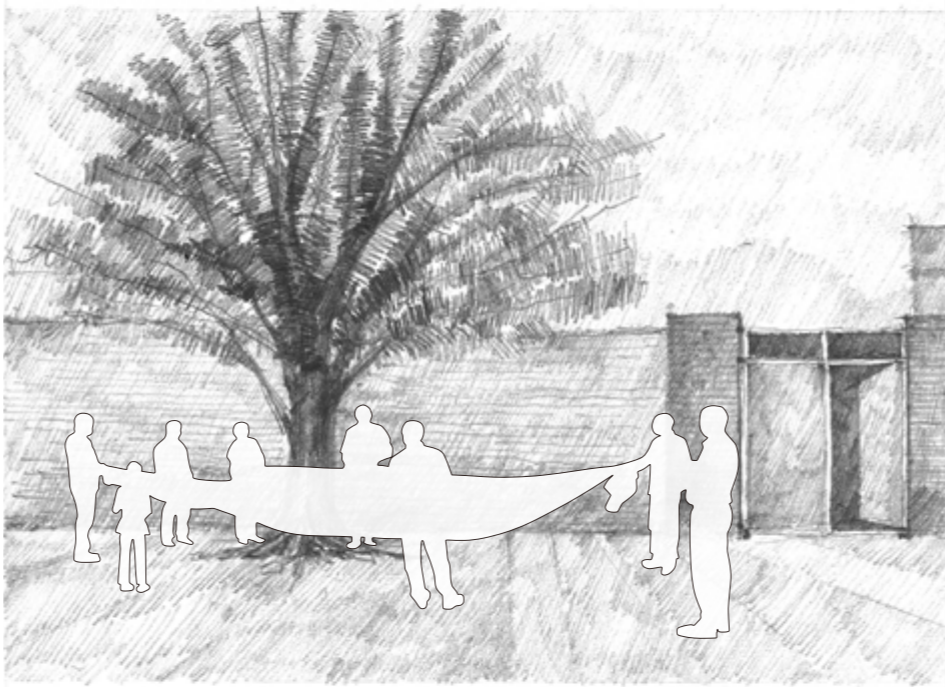
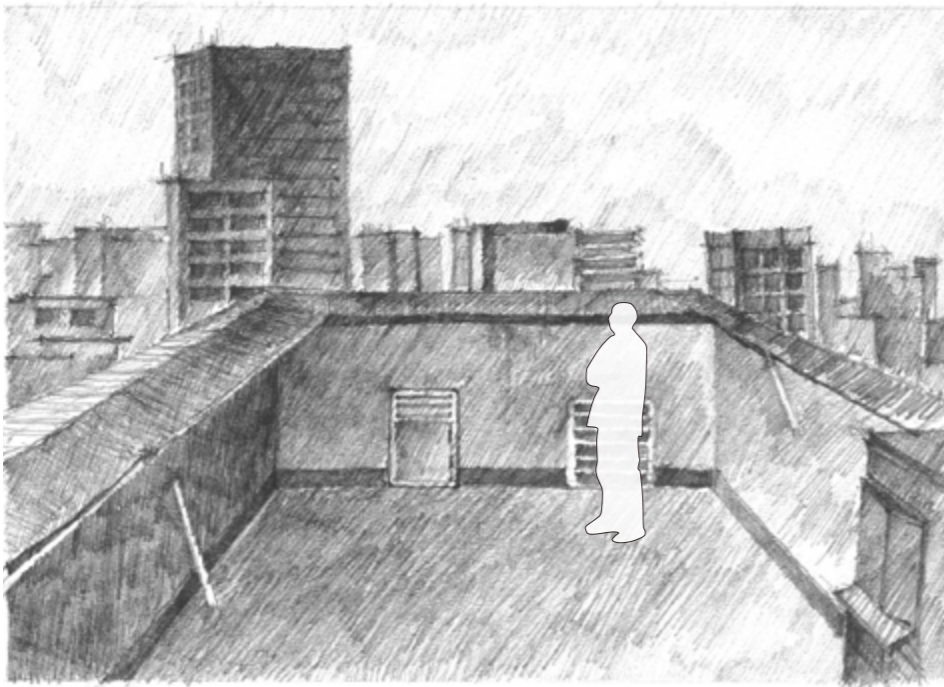
The pigeons create a lively scence on the roof.



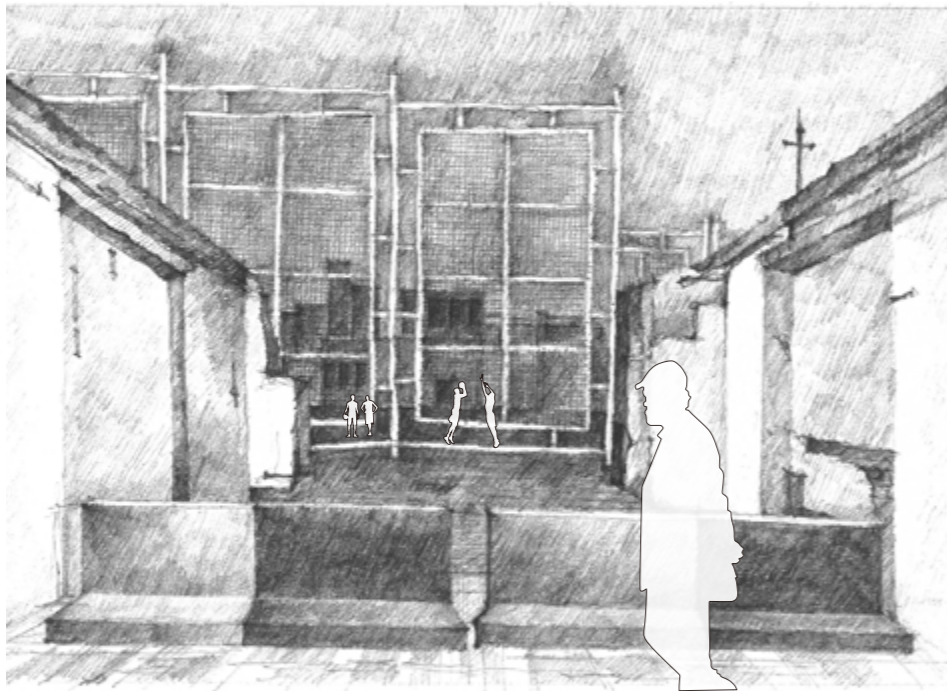
Reflection of the window on the other concrete wall.



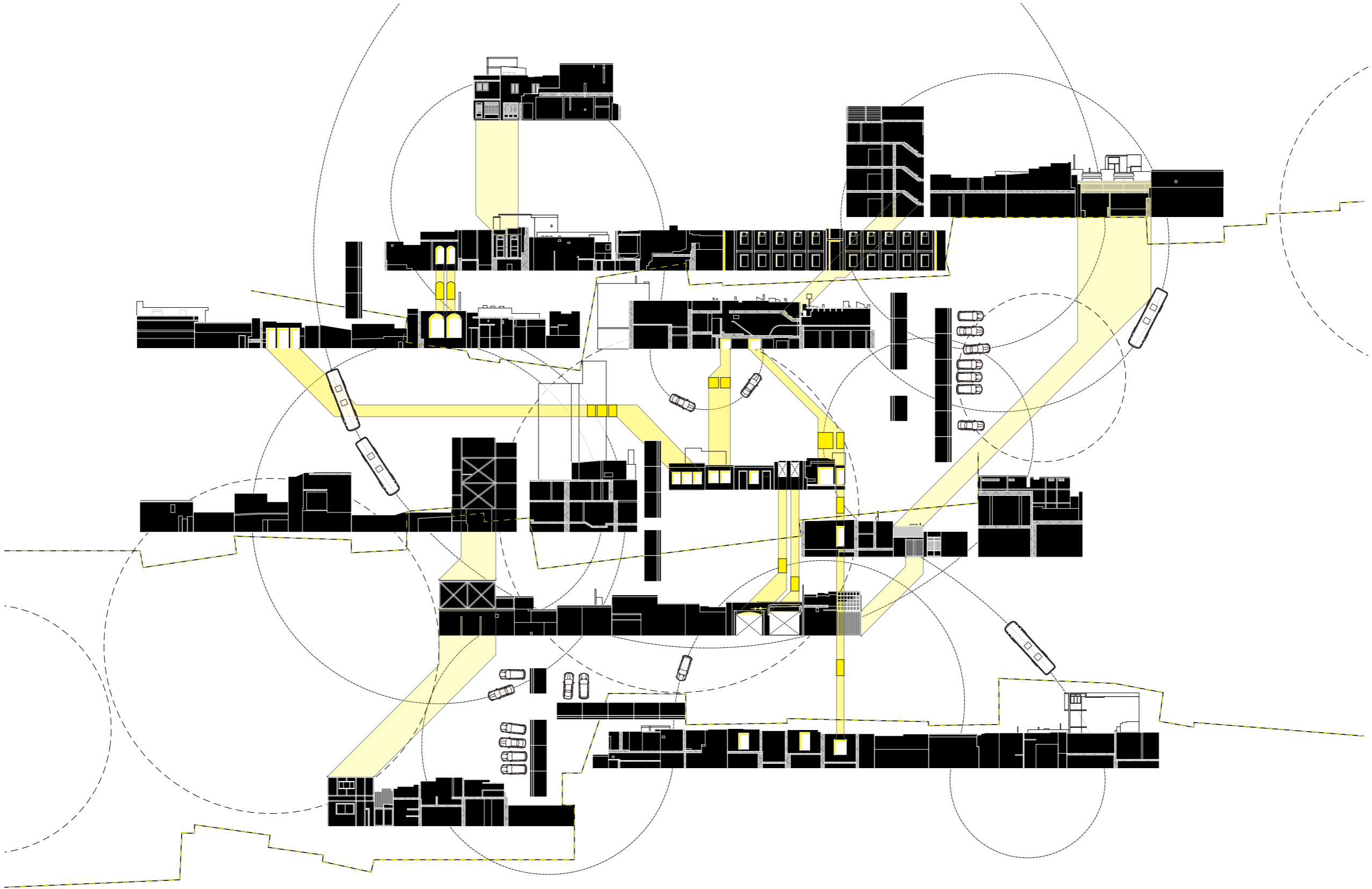
Perspective layers of the old urban fabric.



The intimate and collective connections between the people and the land altered since the urban voids were generated.

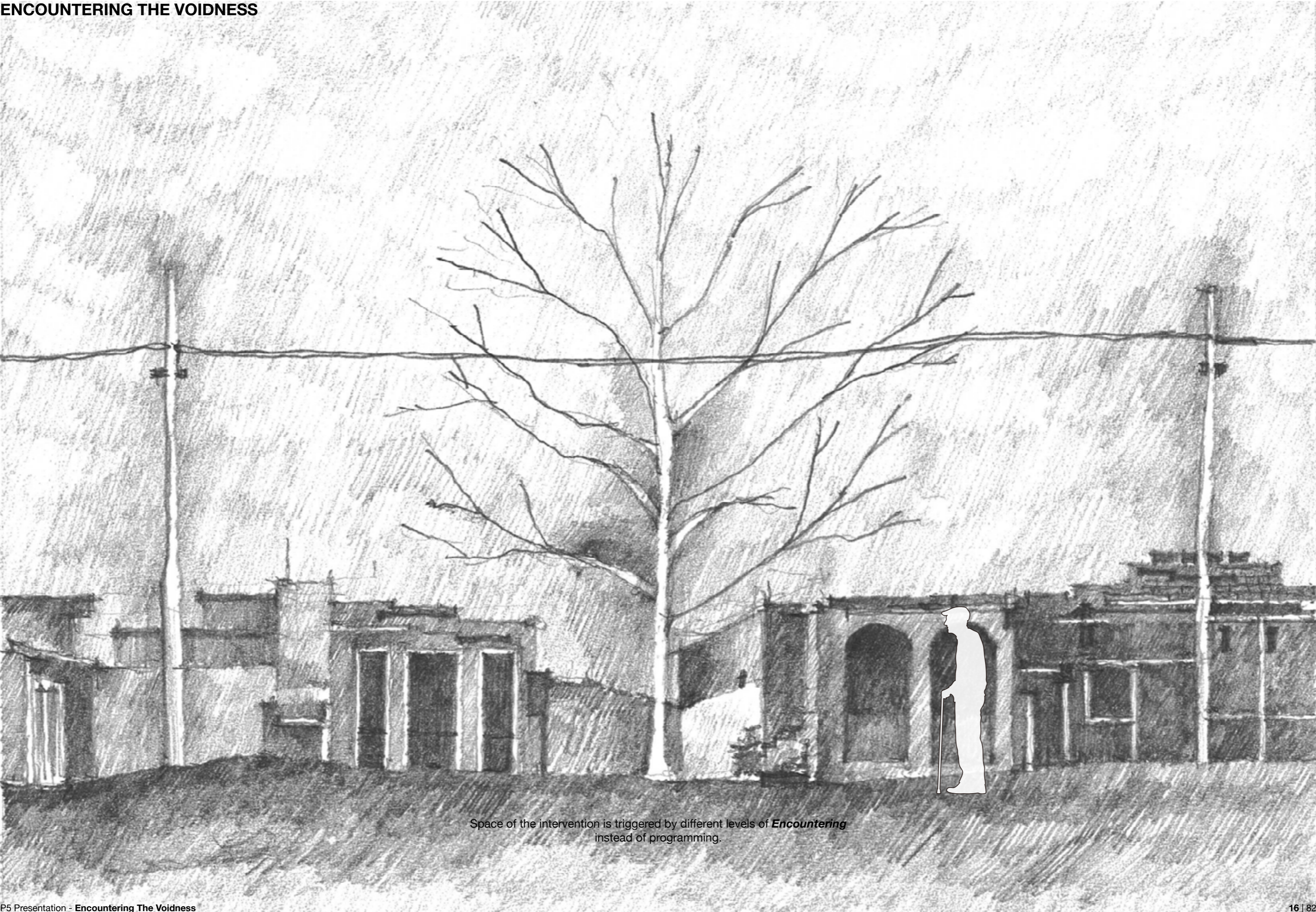


Scenes in a void are framed and veiled, while suspension of the void allows their temporal occupations and activities to engage in.



AN UNDEFINED AGENT

The project aims not only to represent the palimpsest of the territory but also to topologically connect the city throught the translation of voidness.



Space of the intervention is triggered by different levels of *Encountering* instead of programming.

LOCATION

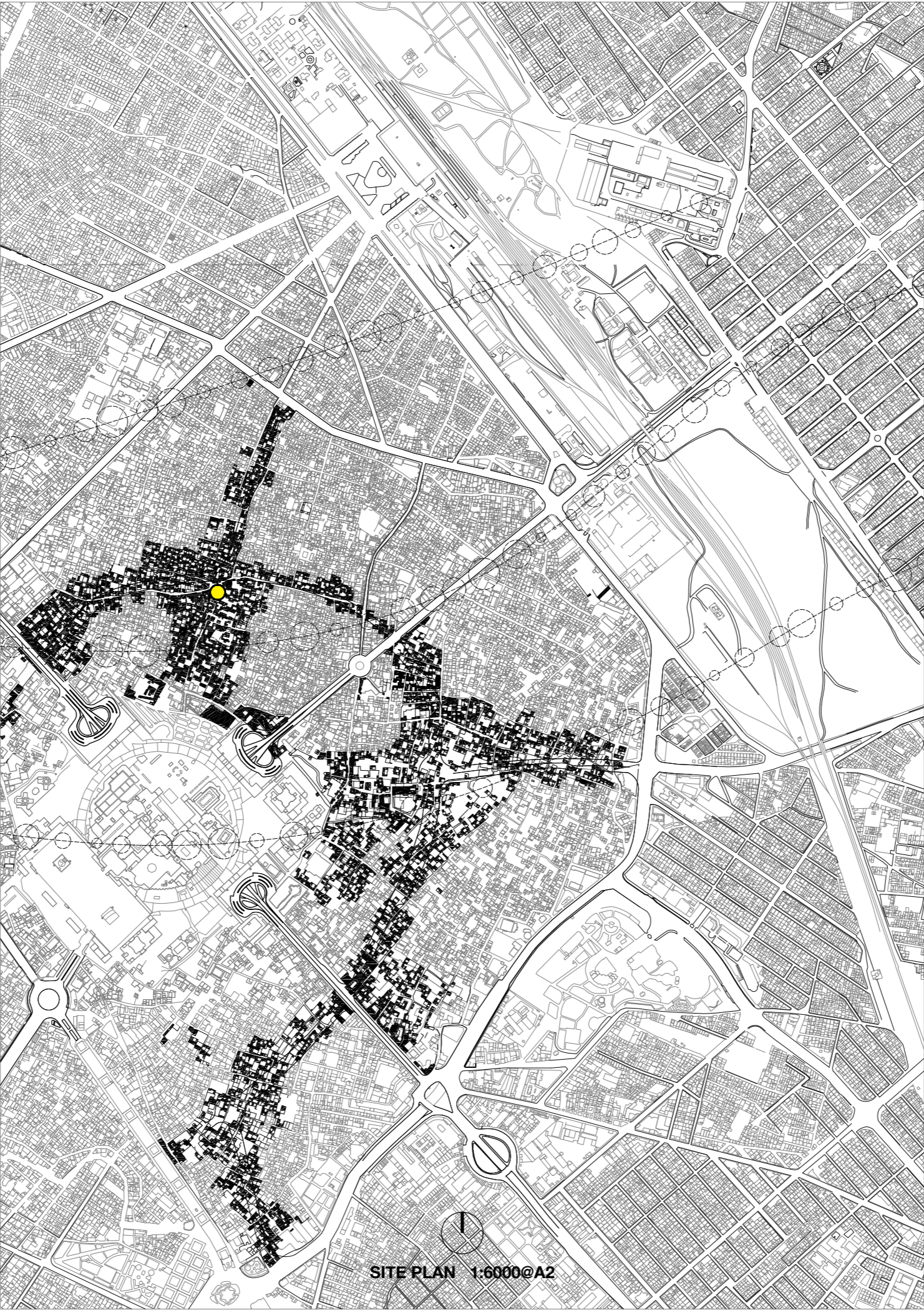
REQUIREMENTS OF THE SITE

1. Historical fabric with big voids
Large suspended voids are significant and prominent in the city. No more voids need to be constructed if this engagement involves in the current urban emptiness area.

2. At the edg of a territory/ Near a border
The intervention engages in the city/fabric as an action of transgression

3. Location of the regathering places
The original inhabitants put up a cloth around themselves, calling it Takiyeh, and do the mourning ceremony like what has existed in the history. These places indicate the events that happend within and due to the voidness.

4. Path of the qanats

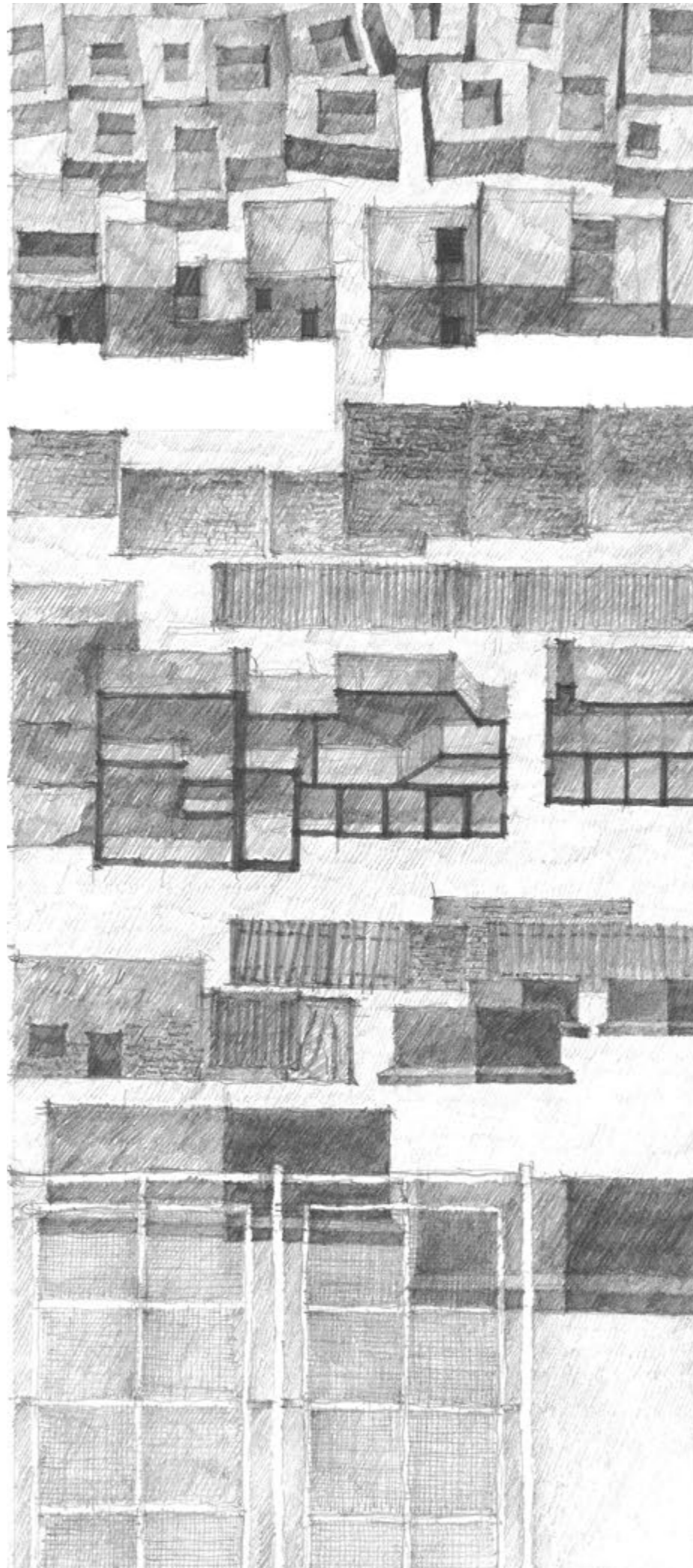


SUPERPOSITION

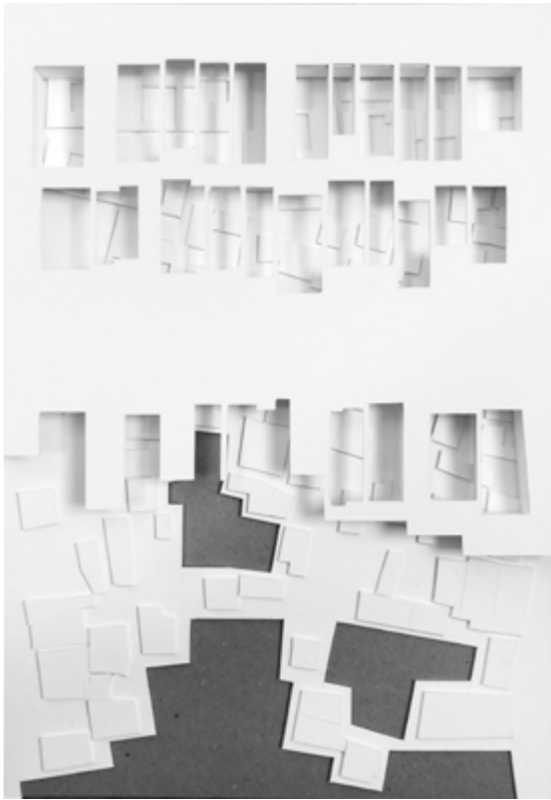
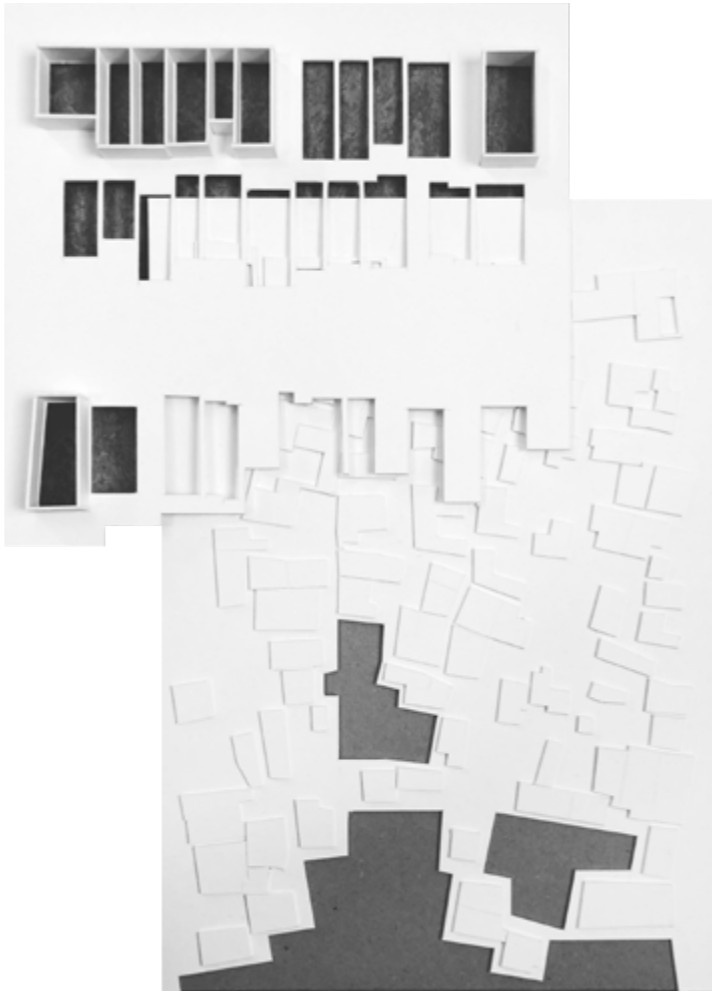
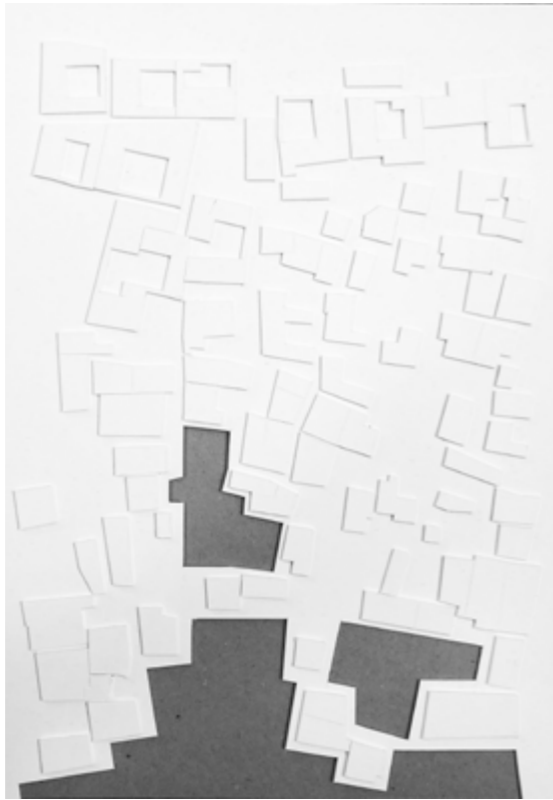
PALIMPSEST OF THE LAND

A cities' old structures comprise the primary core of a city formation.

Even the site boundaries contain the compromised and negotiated relations between the inhabitants. The palimpsestuous diversity of voids manifests a contradictory entity that in terms of its simultaneously emptiness and richness.

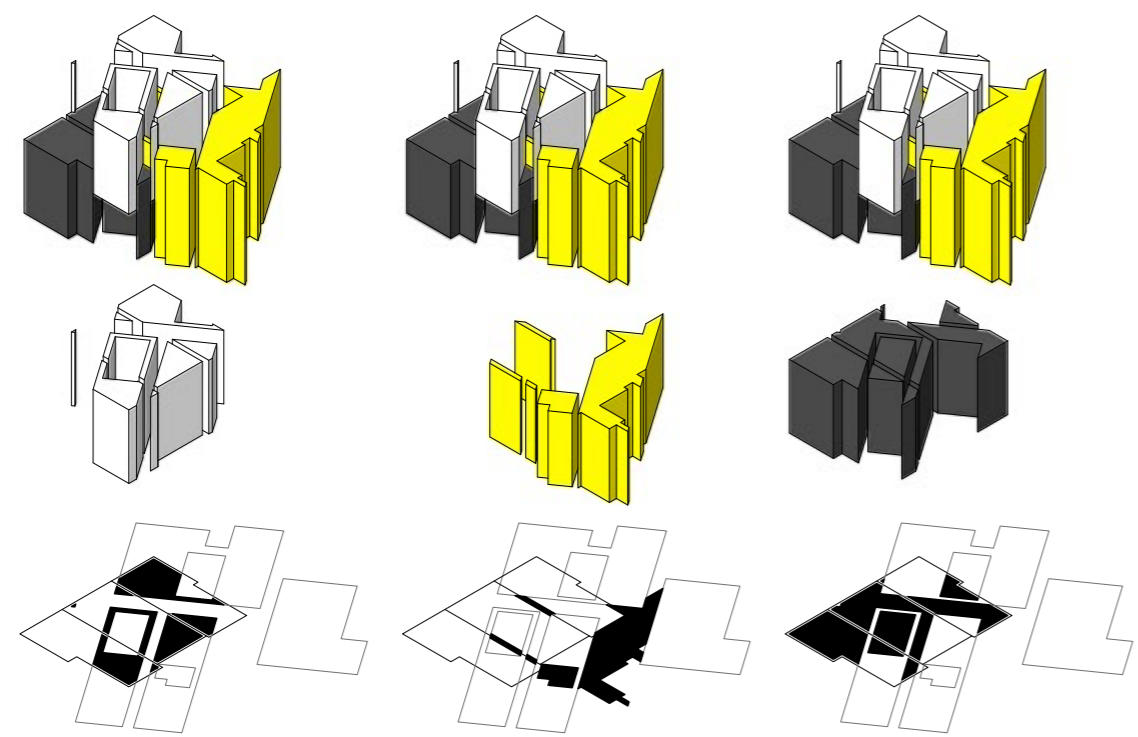


OVERLAYING THE CONTRADICTED FABRICS



The organic fabric and the modern grid fabric are the distinguished and prominent in the sense of urban iteration. This action of overlaying triggers the following intersection in terms of its space of void within these two layers.

VERTICALIZING THE STRATIFICATION

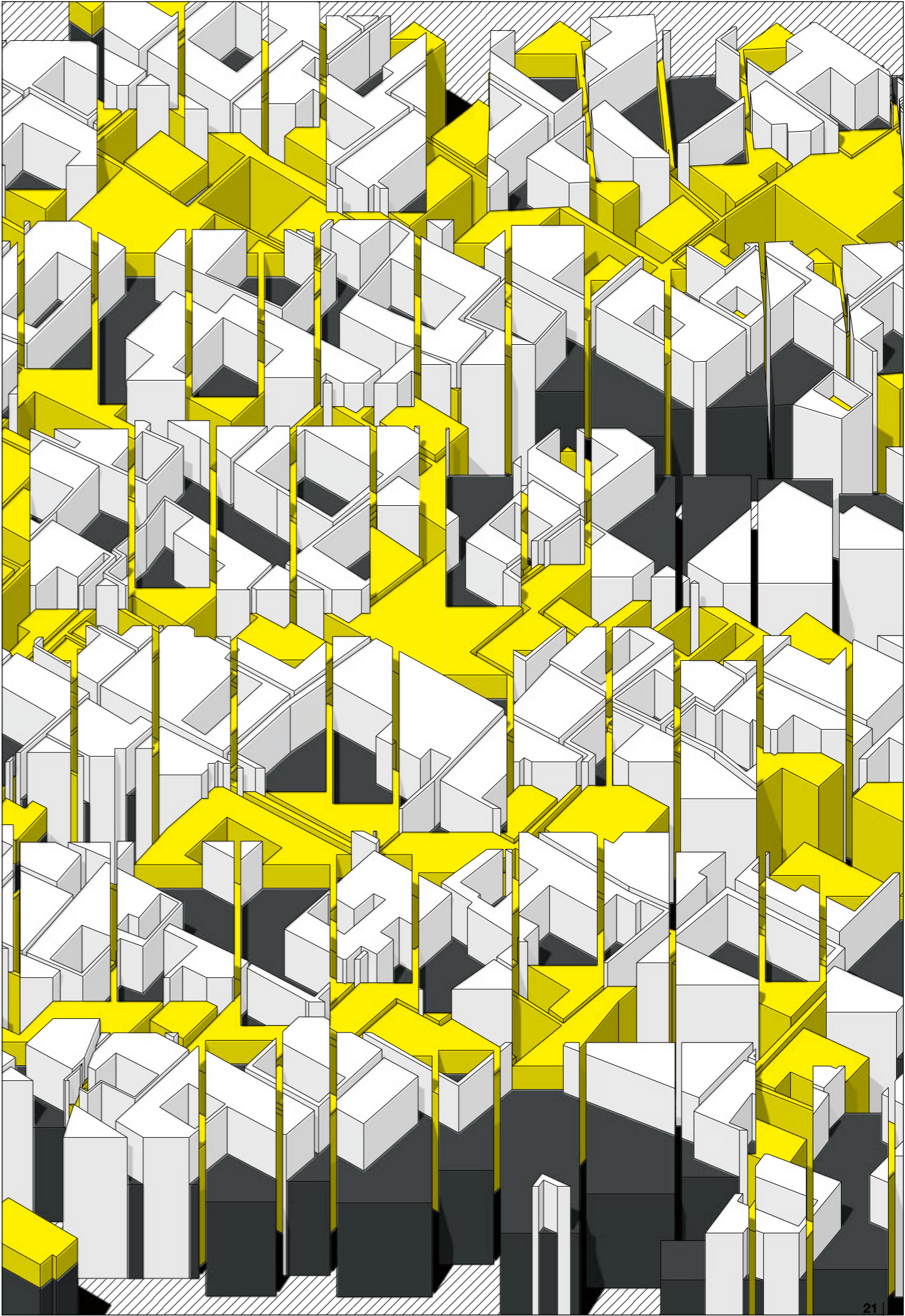


THE ACTION OF INTERSECTING

Houses intersection
The volumn of fabric, the counterpart of void

Voids intersection
Entity of voids in during the two periods

New houses and old voids
The new urban pattern takes over the autonomy of old fabric



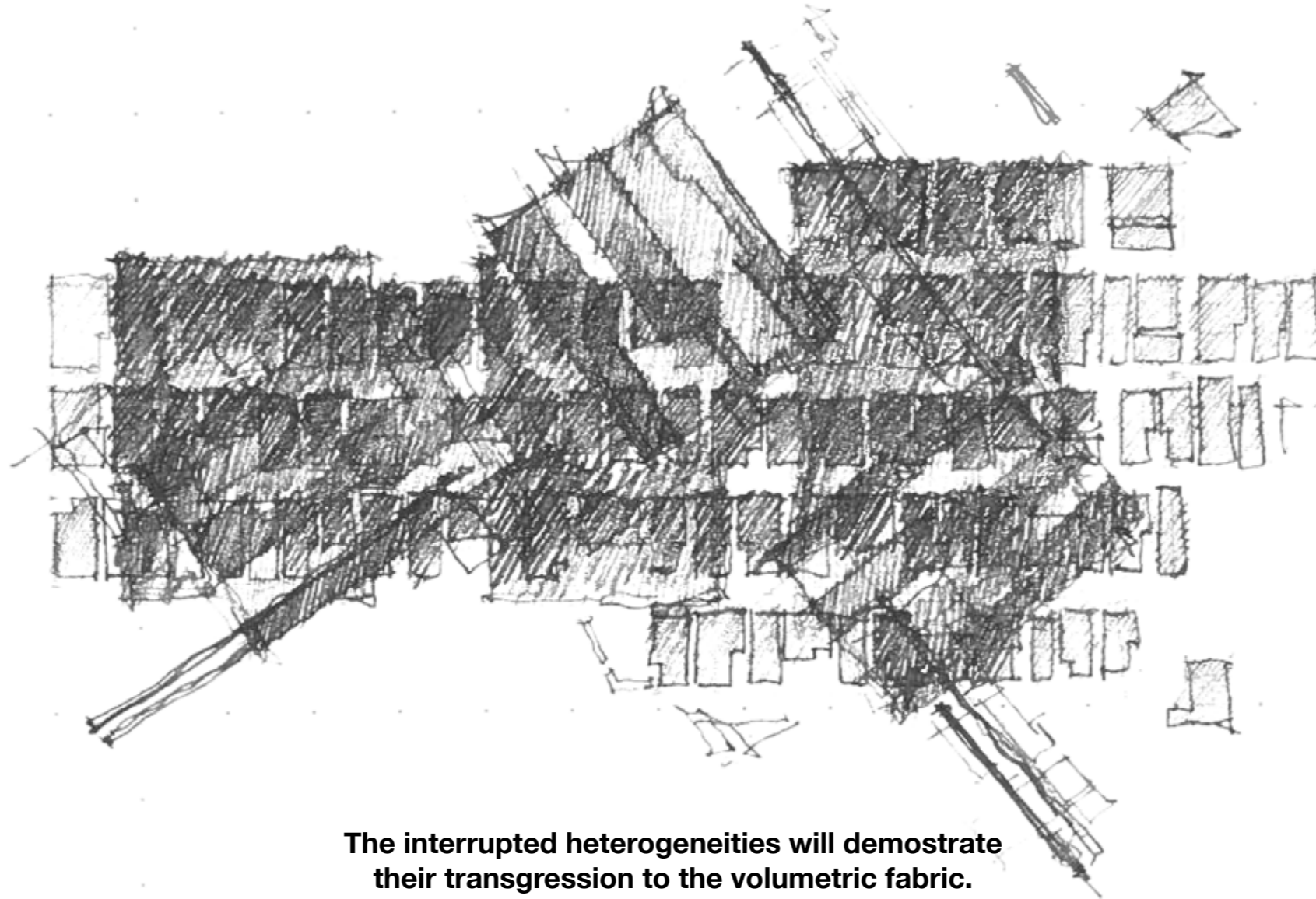
SITE LOCATION

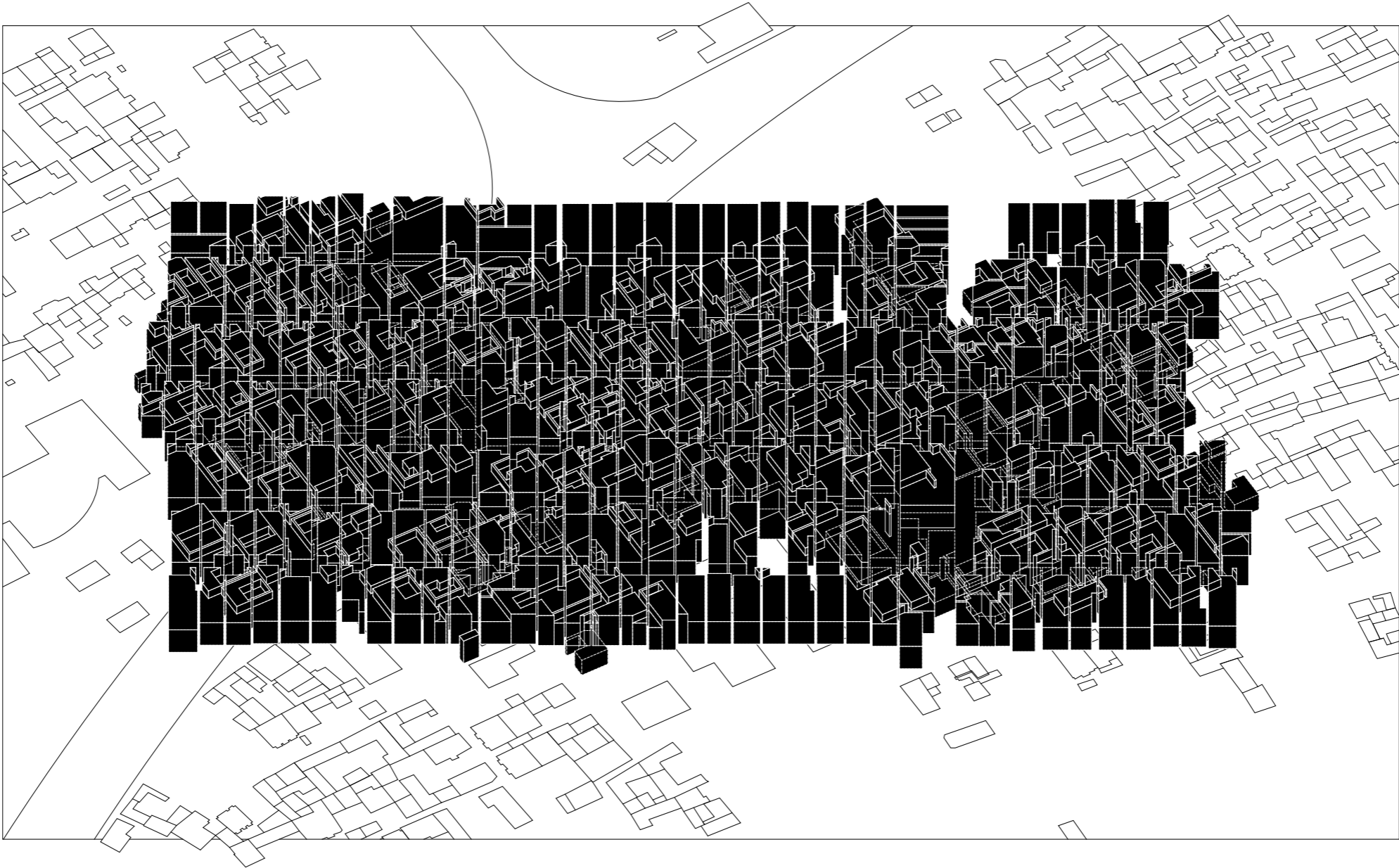
TWO PROMINENT URBAN PATTERNS

- Dominated by infrastructure and urban grids
- Dominated by organic organization whose morphology shows the intimate relations between each other



INTERRUPTION

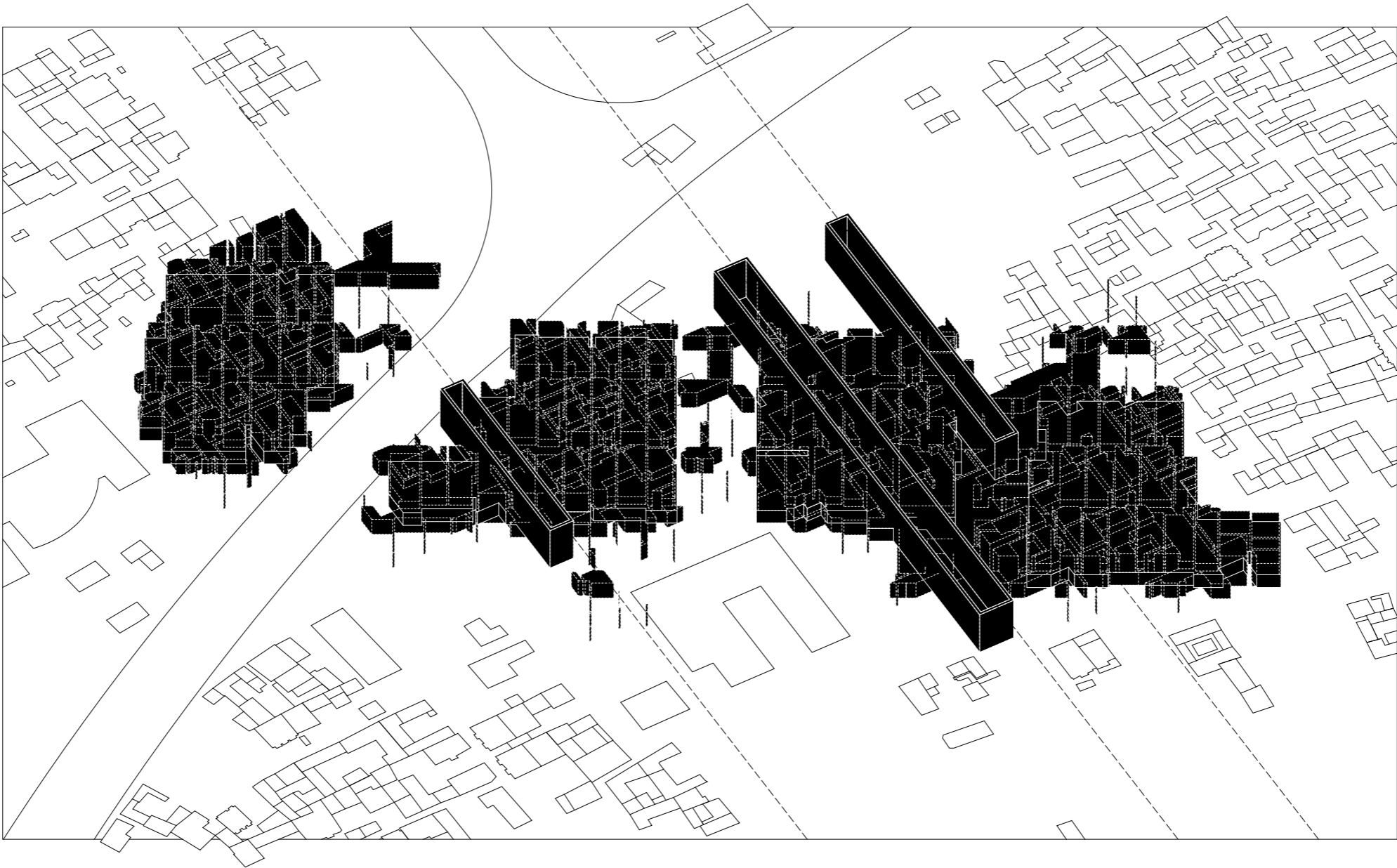




ALLOCATING THE VOLUMETRIC FABRIC

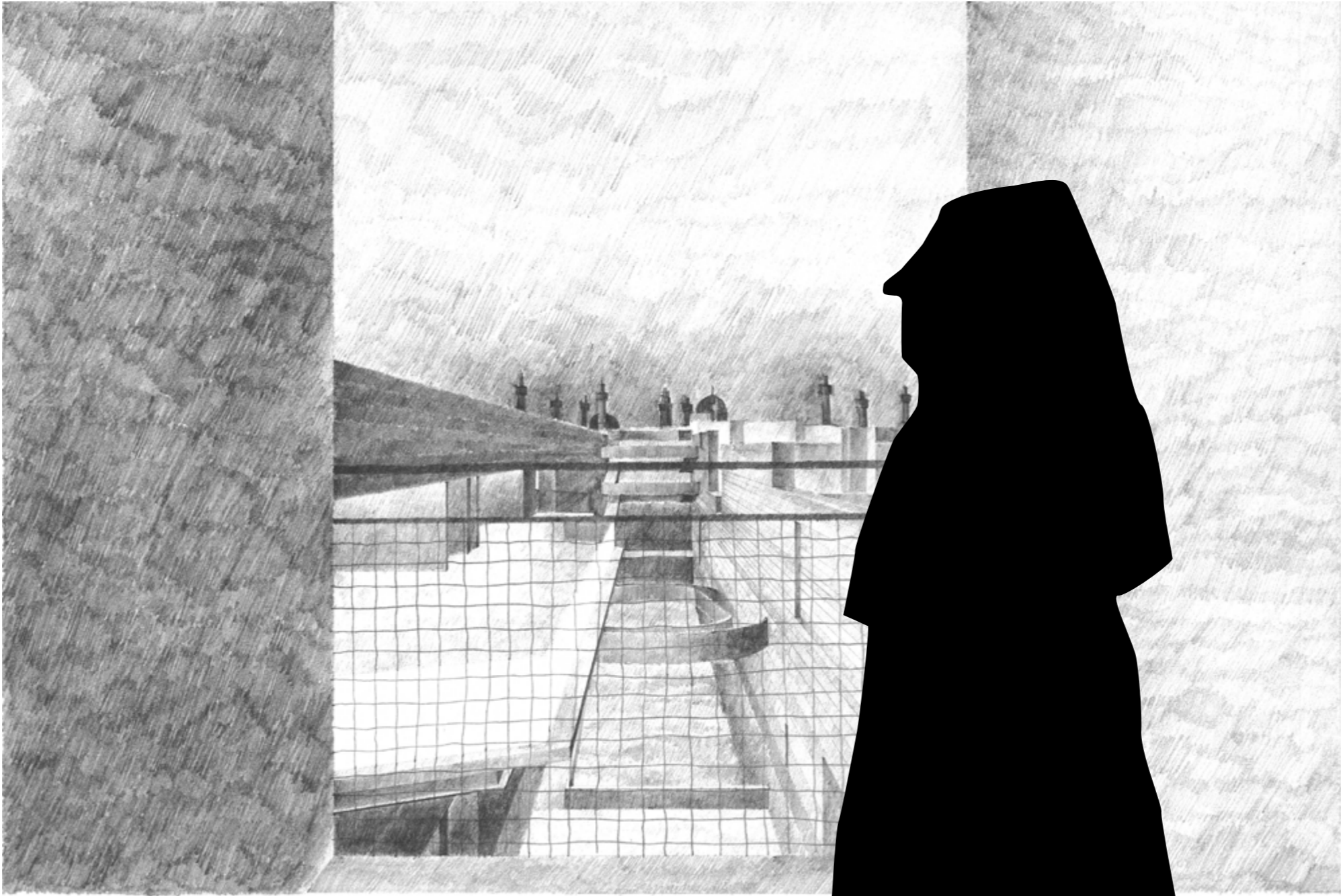


BREAKING DOWN THE BORDERS



INSERTING THE CORRIDORS

THE ALTERNATIVE SCENARIO
A void follow the way towards the Shrine



A TALK
Directionality of the corridors echoes the monumentality of a religious culture of an Iranian city - Mashhad.

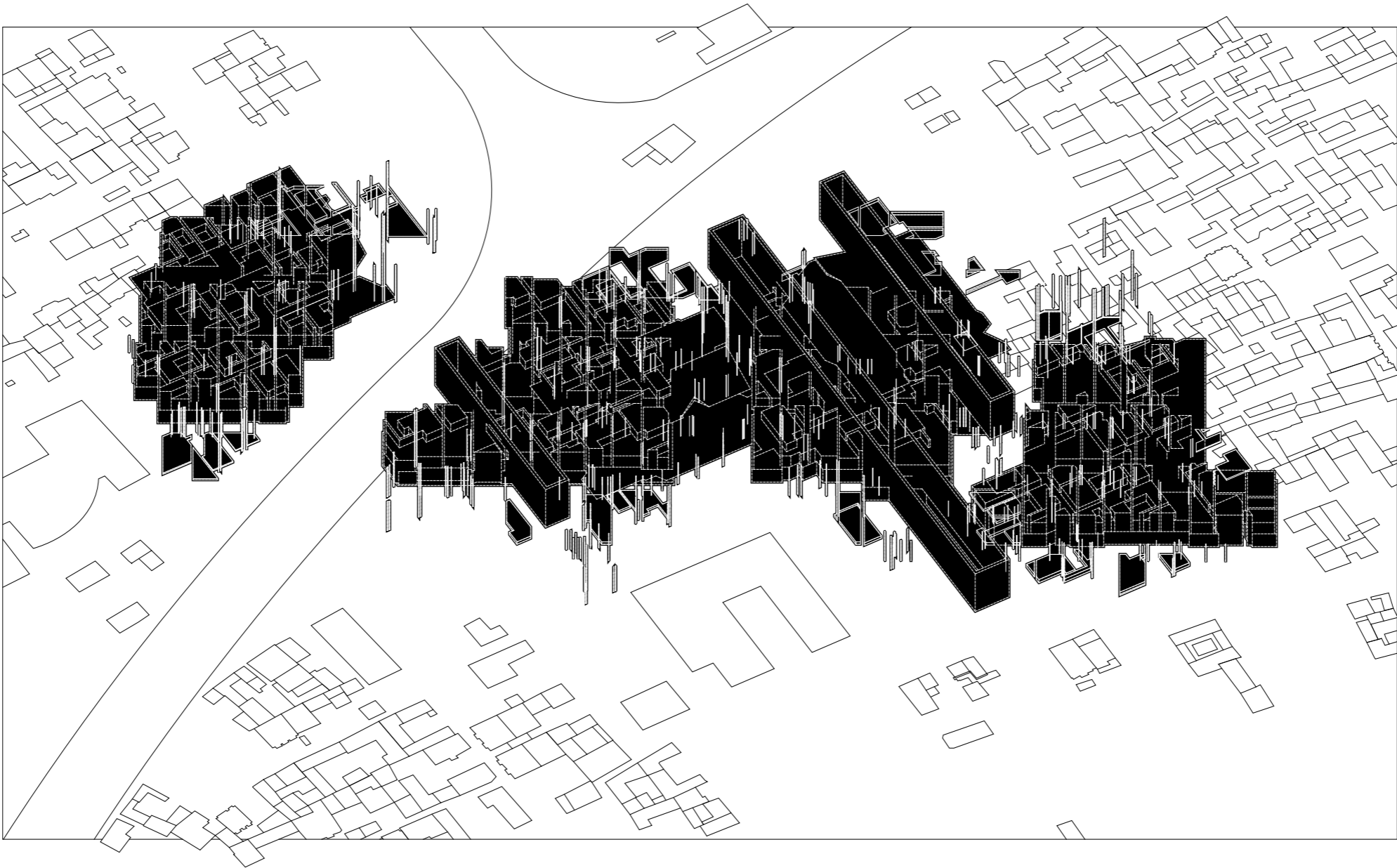
ACTION OF FOLDING AND SHIFTING



These create a mezzanine upon the superposed fabric, which act as the media to bind the fragmented fabric as well as the space of void together.



FOLDING AND SHIFTING THE FABRIC



ENTERING THE EXISTING FABRIC

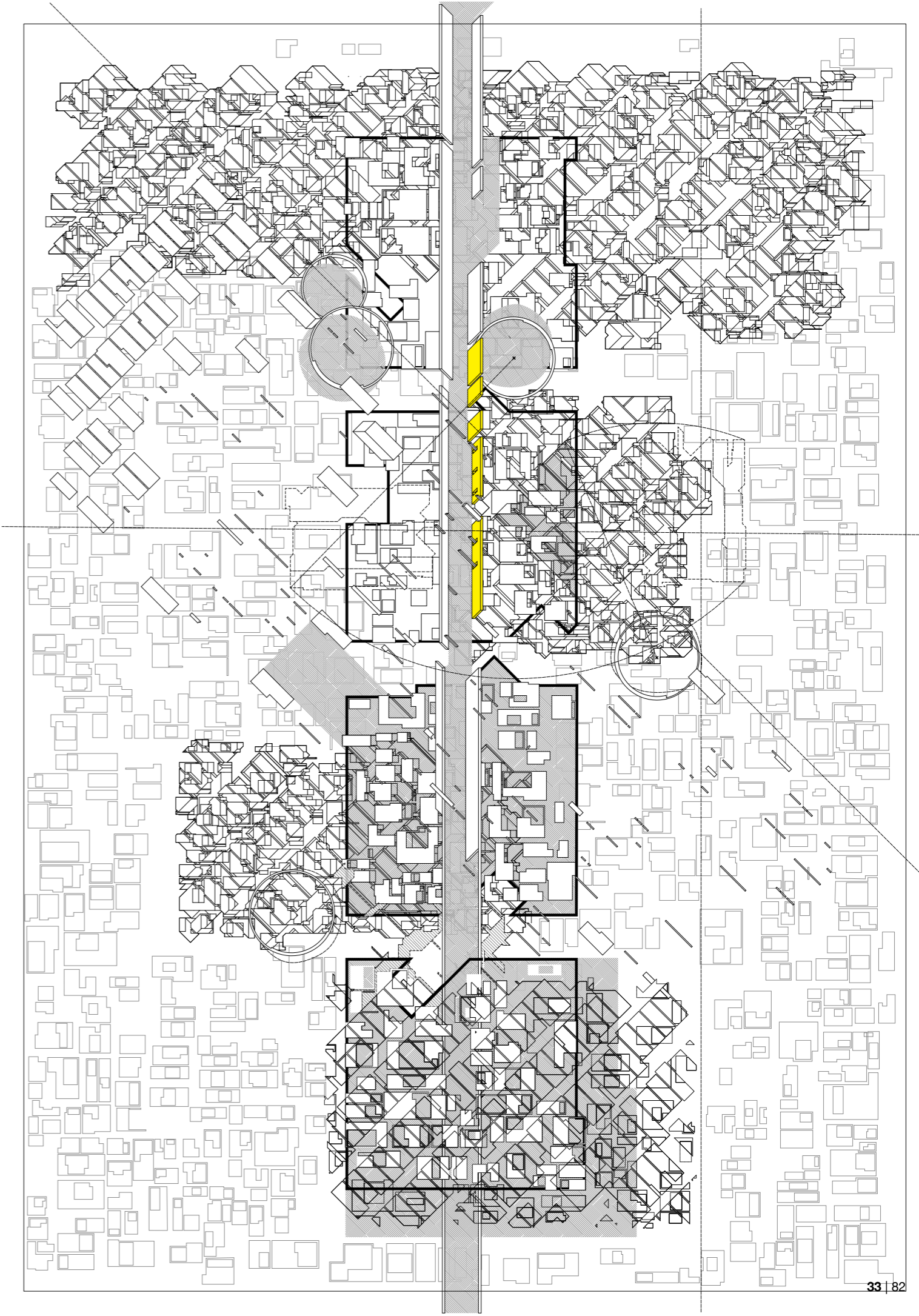
THE ALTERNATIVE SCENARIO
The voids split up and frame the scenes



THE ACCUMULATED ELEVATION
Timber columns are collected from the demolished houses and become the
landscape that connects the interventional and the traditional fabric.

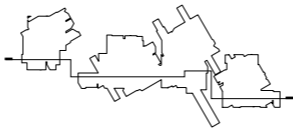
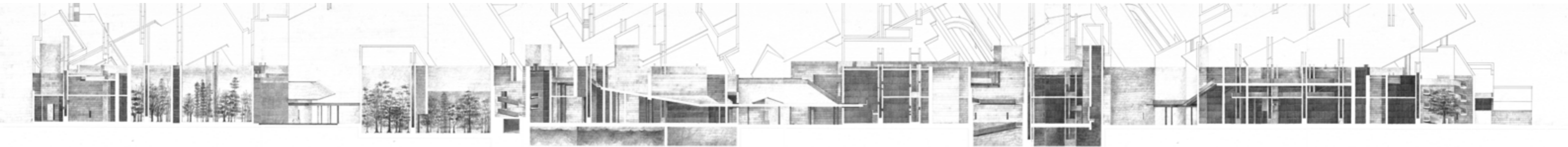
THE TRANSGRESSION AS ENCOUNTERING

Addressing their autonomies and transitional situation, the interruptions transgress the boundaries in or of the void, and define alternative thickness of the borders and the conditions of the territories.





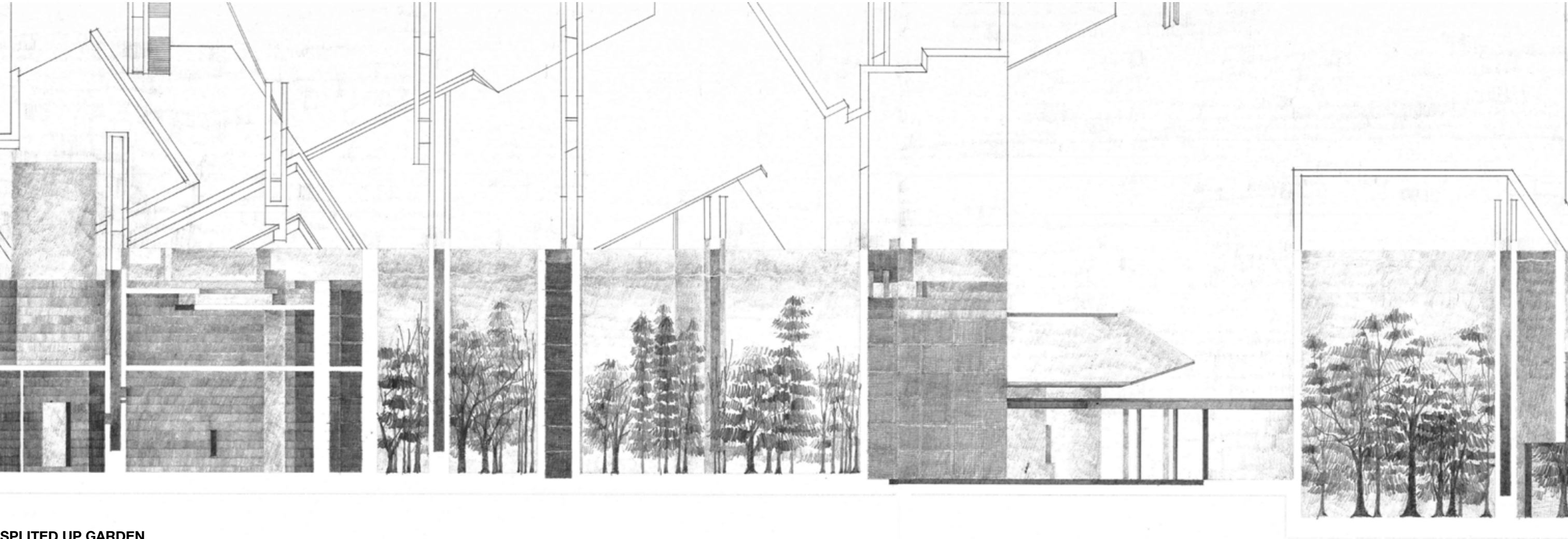
NON-HIERARCHICAL SEQUENCES



LONGITUDINAL SECTION 1:200@A4*6

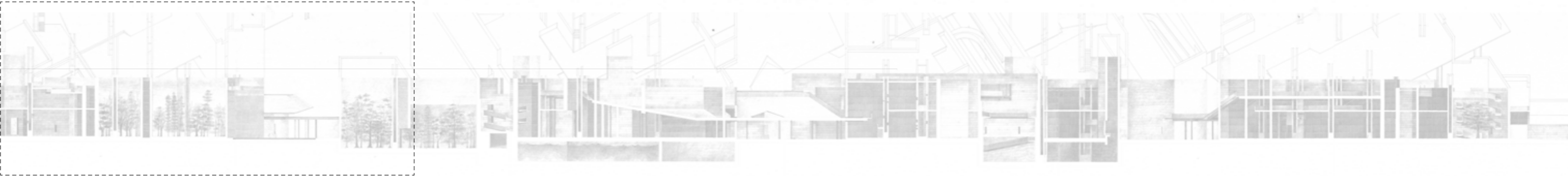
The discontinuity defined by the complexity of volumetric fabric and interruptions provides multiple opportunities for various understandings of the space as a place for events.

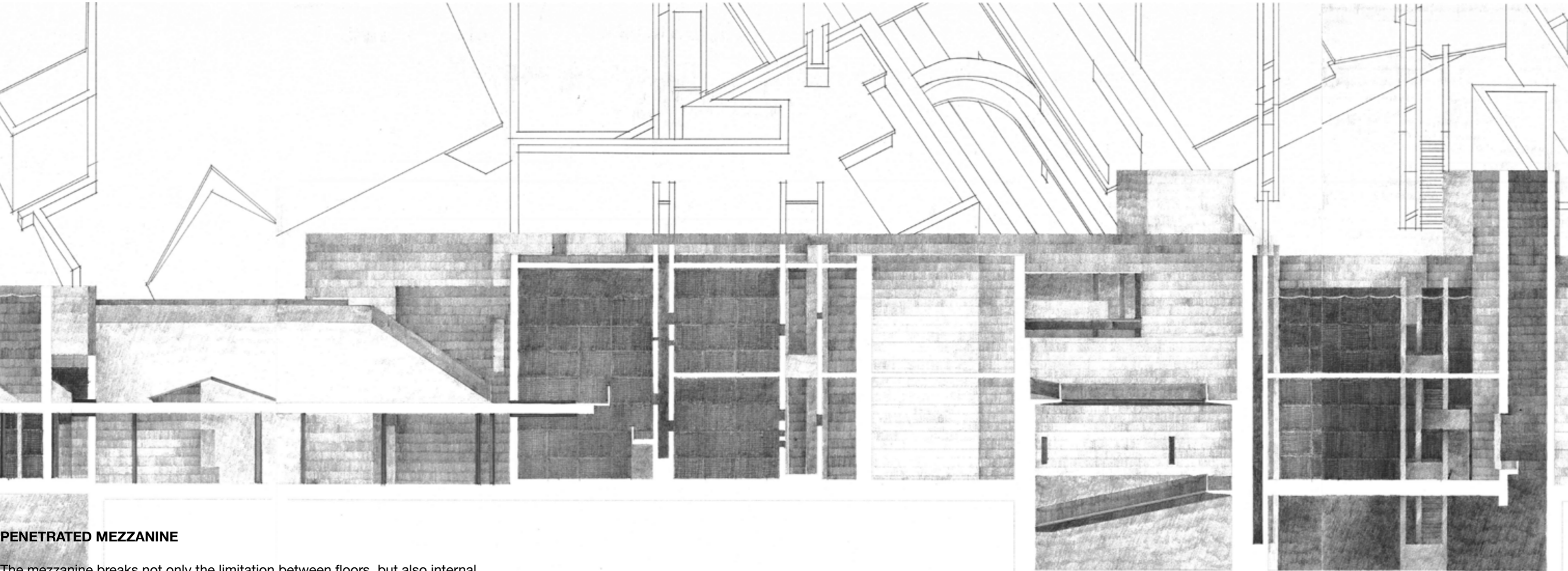
DISCONTINUOUS COHERENCE



SPLITED UP GARDEN

Trees maintain the momeries of history in the void. Fragementation of the gardens indicates the seemingly environmental connection and also the realistic separation from the infrustracture.



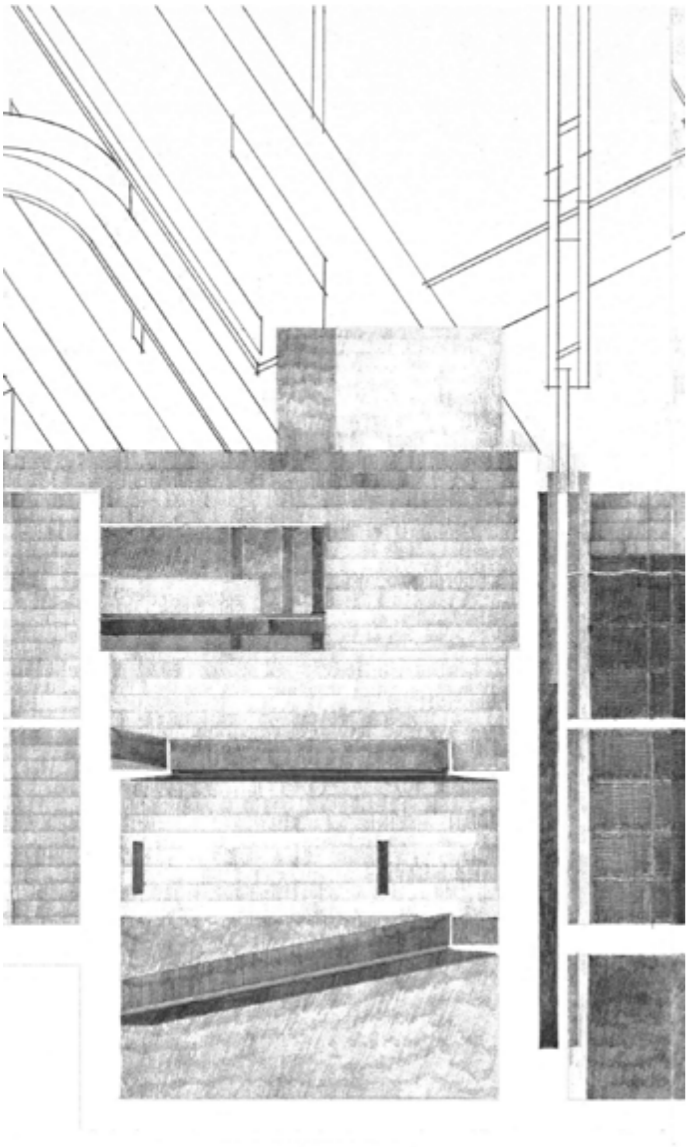


PENETRATED MEZZANINE

The mezzanine breaks not only the limitation between floors, but also internal and external enclosures. The fragmentary relation demonstrates contradicted situation embedded in the void as well as the intervention itself.



SPATIAL PENETRATION



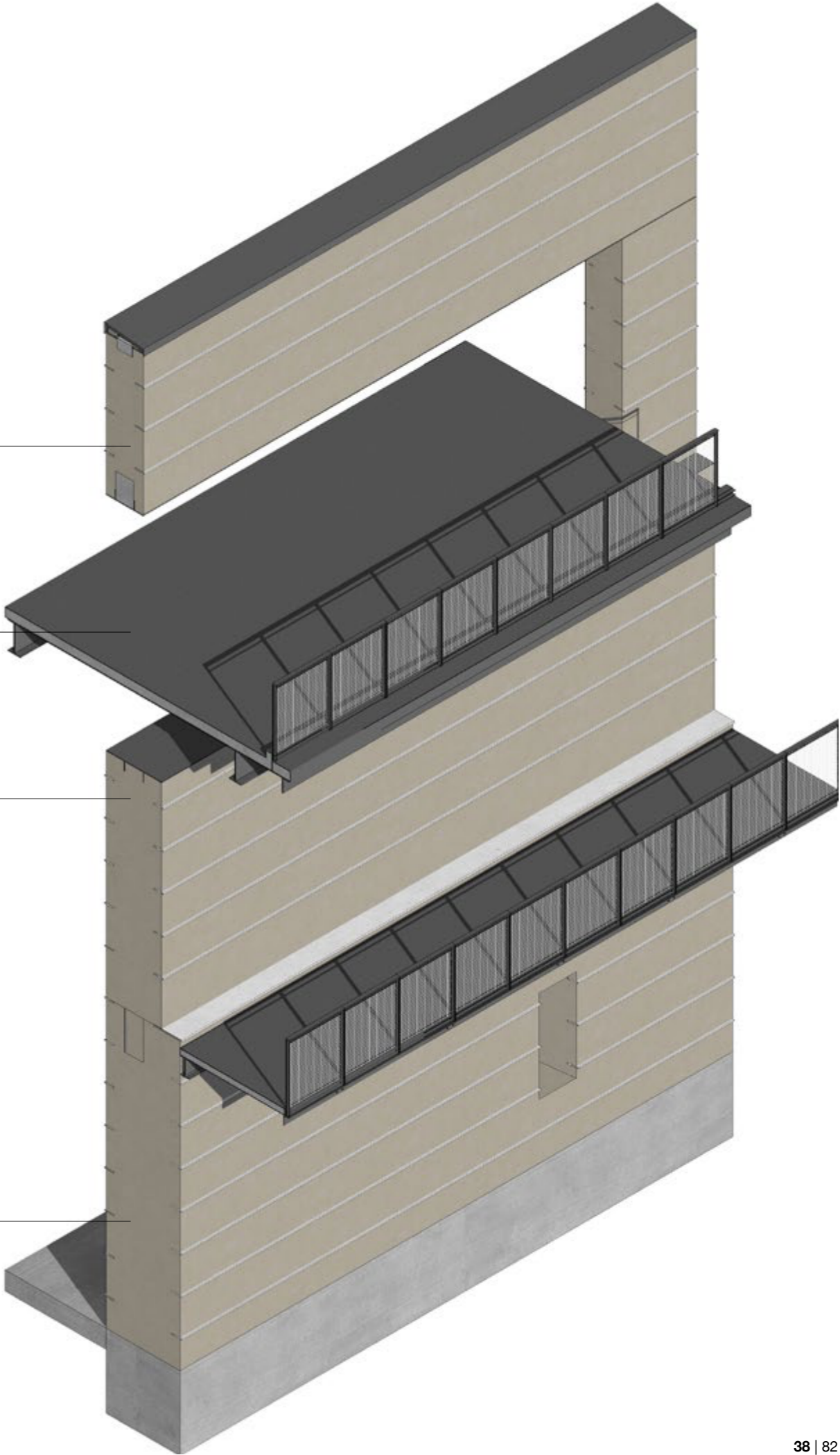
Rammed earth, 600mm

Steel mezzanine floor

Rammed earth, 900mm

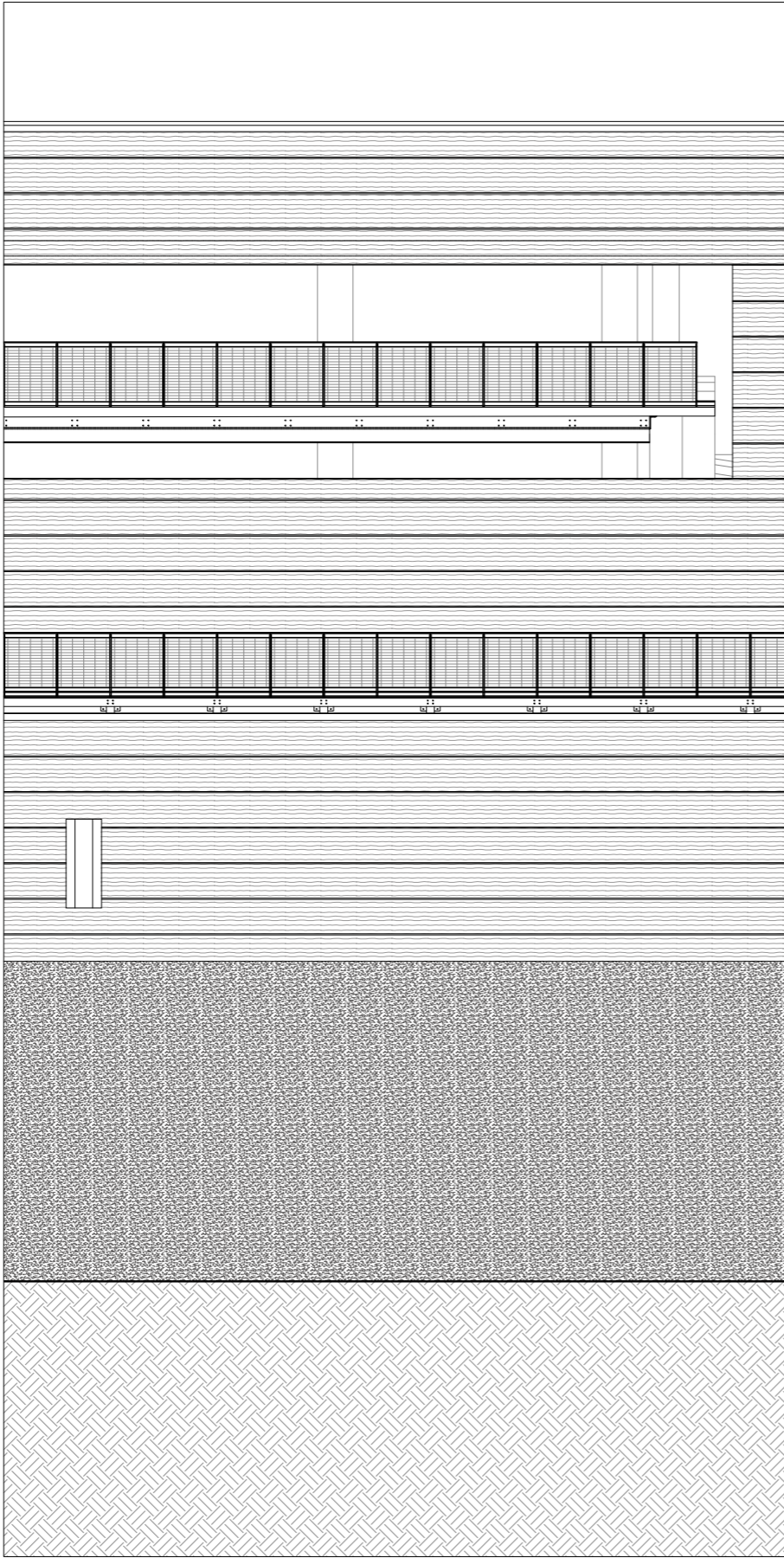
Rammed earth, 1200mm

PERMANENT RAMMED EARTH WALL
From 600mm to 1200mm

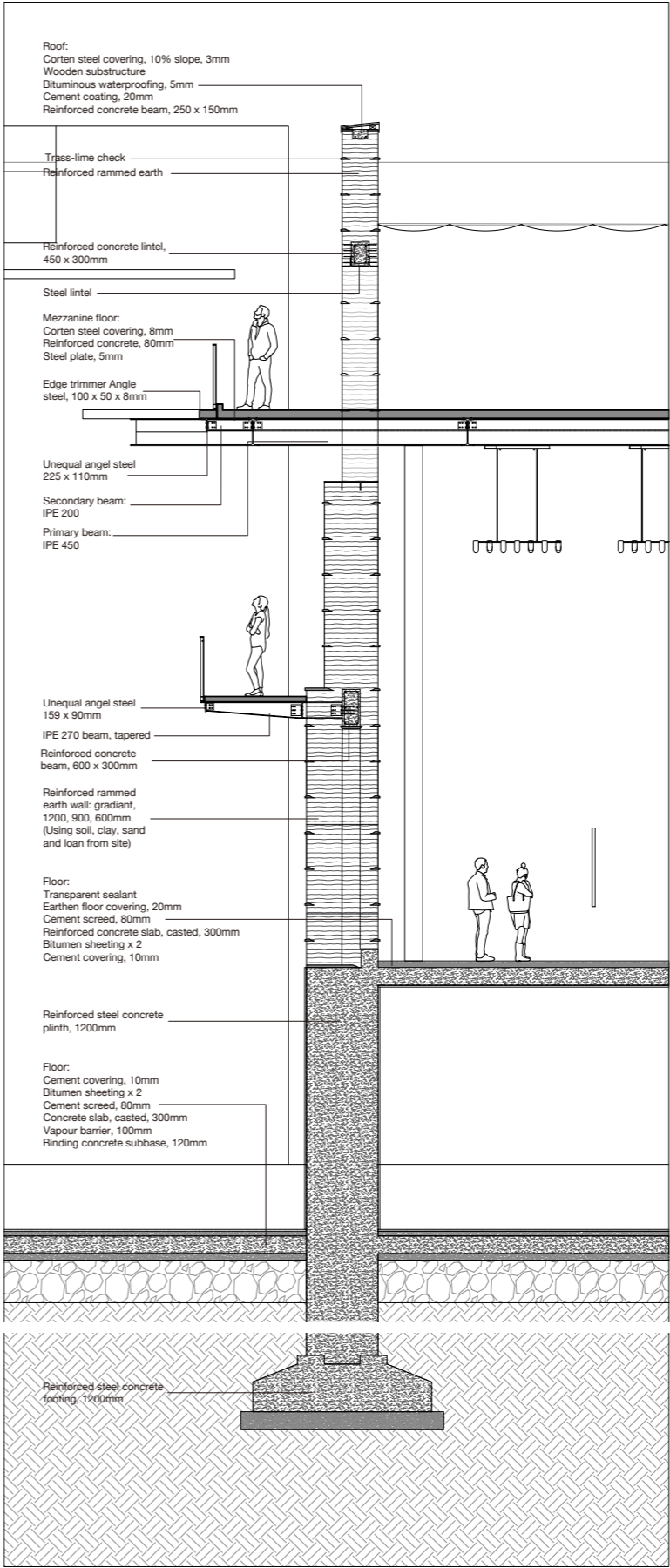


DETAIL DESIGN

Gradient rammed earth wall



ELEVATION 1:50@A1



SECTION 1:50@A1

DETAIL DESIGN

Gradiant rammed earth wall

Mezzanine floor:
Corten steel covering, 8mm
Reinforced concrete, 80mm
Steel plate, 5mm

Edge trimmer Angle steel
100 x 50 x 8mm

Unequal angel steel
225 x 110mm

Secondary beam: IPE 200

Primary beam: IPE 450

Unequal angel steel
159 x 90 x 8mm

IPE 270 beam, tapered

IPE 270 beam

DETAIL 1:10@A1

Roof:
Corten steel covering, 10% slope, 3mm
Wooden substructure
Bituminous waterproofing, 5mm
Cement coating, 20mm
Reinforced concrete beam, 250 x 150mm

Reinforced rammed earth
600mm

Trass-lime check

Reinforced concrete lintel
450 x 300mm

Steel lintel

Steel Covering

Reinforced concrete beam
600 x 300mm

Trass-lime check

Reinforced rammed earth wall:
gradiant, 1200, 900, 600mm
(Using soil, clay, sand and loan from site)

Reinforced steel concrete plinth
1200mm

DETAIL 1:10@A1

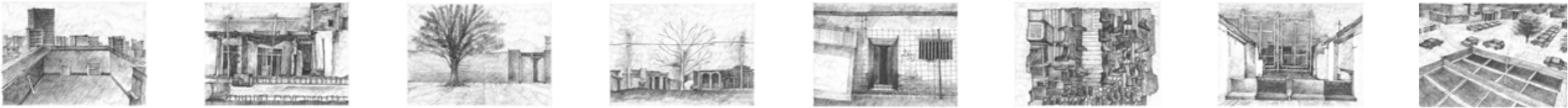


The interweaving connection addresses the discontinuity and strengthens the essence of being a void in the sense of its complexity, contradiction and ambiguity.

EVENTUALIZATION

INDEX FOR THE EVENTS

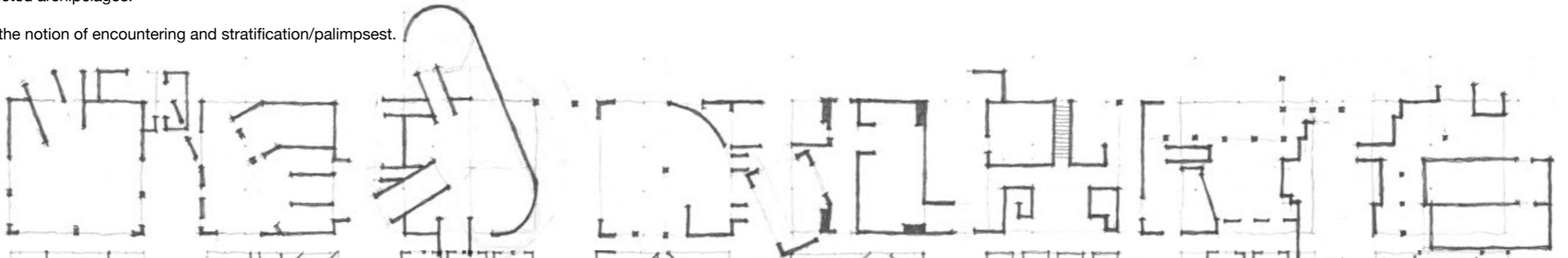
SCENARIO



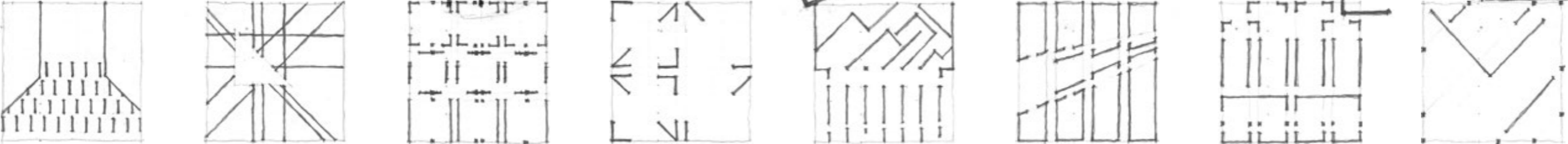
Reason for these translation is to understand the scenarios in different approaches and perspectives. These methods are relatively more intuitive, human scale, and visual compared to the intersected archipelagos.

They constantly bridge the notion of encountering and stratification/palimpsest.

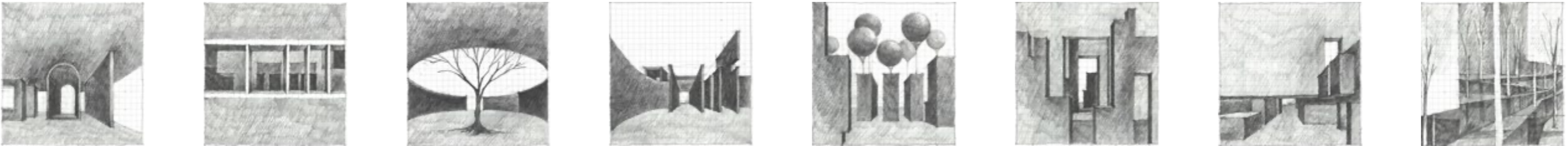
ELABORATED PLANS



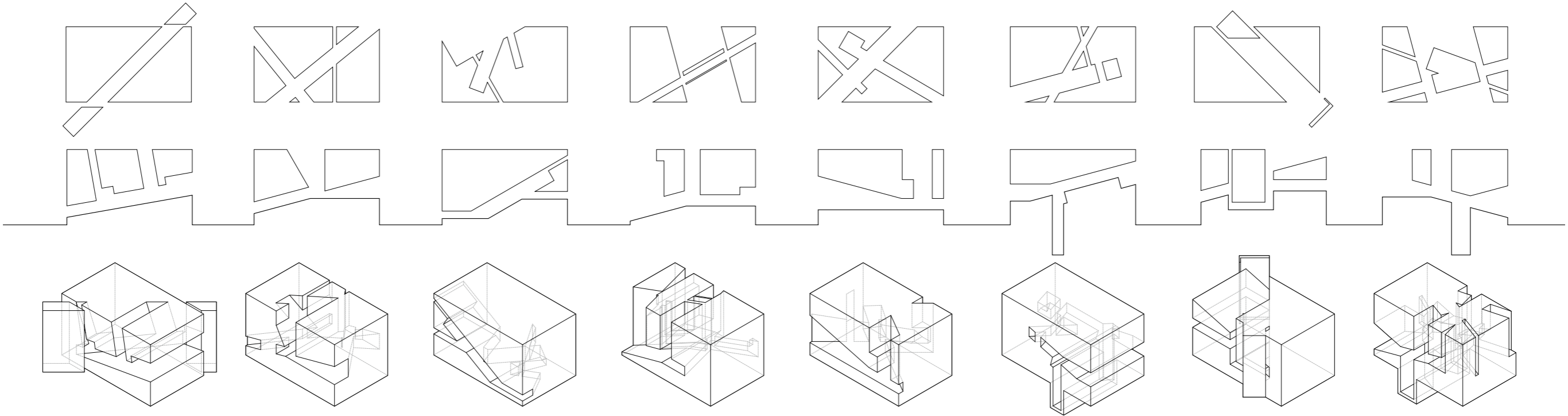
SPATIAL HIERARCHY



ATMOSPHERE



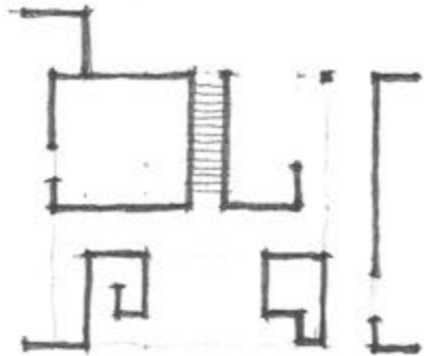
PLAN + SECTION INTERSECTION



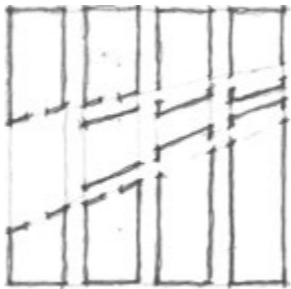
EVENT
Uncanny spatial quality

What if the frames are not for concentrations, the loss of a focal point can be also understood as one will have many chances to find their own concentrations.

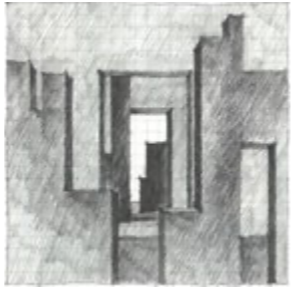
Frame by frame



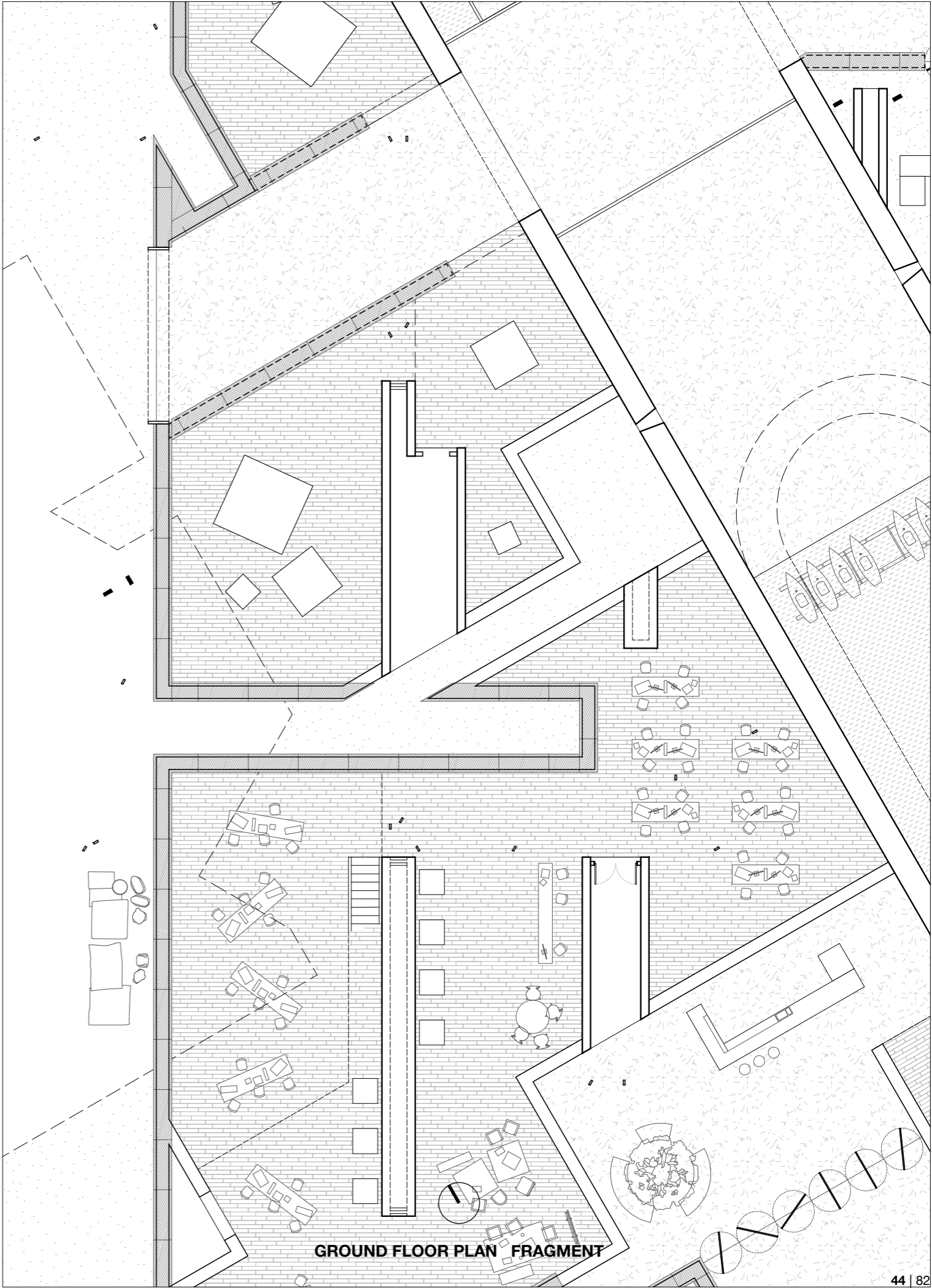
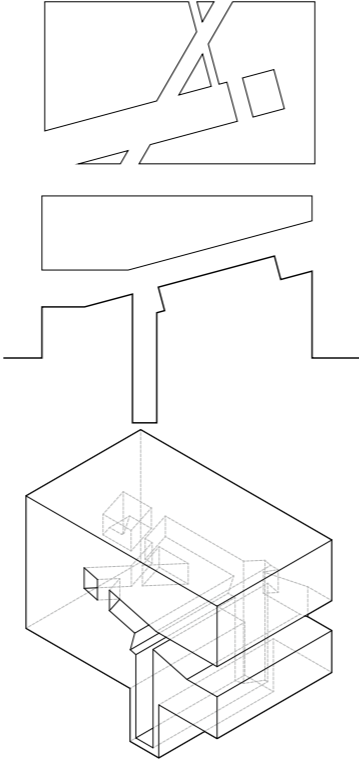
Gradually breaking and intensifying



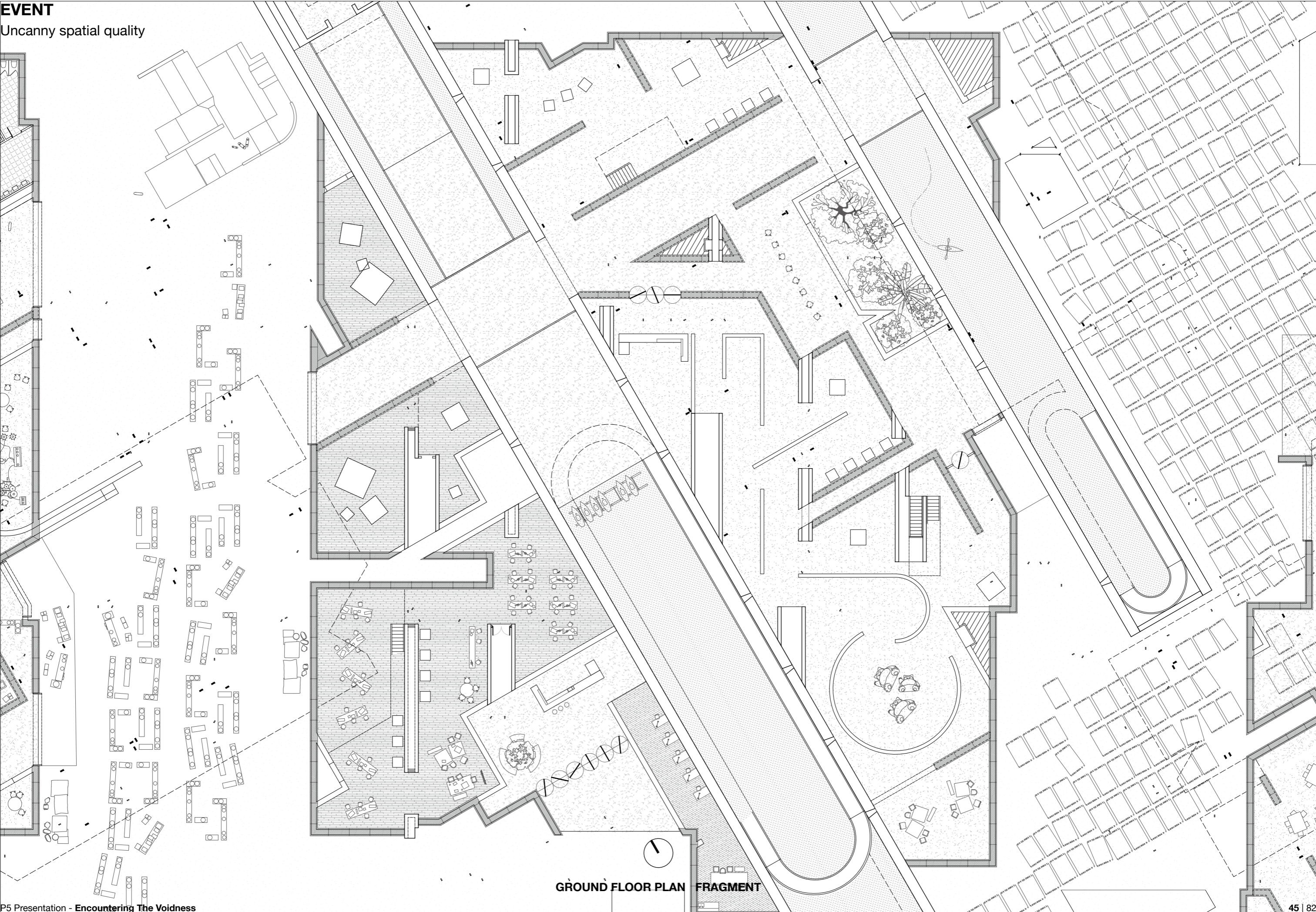
Layer after layer to generate the spatial ambiguity.



Gradually concentrating and getting smaller



EVENT
Uncanny spatial quality



GROUND FLOOR PLAN FRAGMENT

THE ALTERNATIVE SCENARIO

A void between in and out



OLIGOTICON

To discover outside through a narrow gap on the wall.

EVENT
Spontaneous utilities

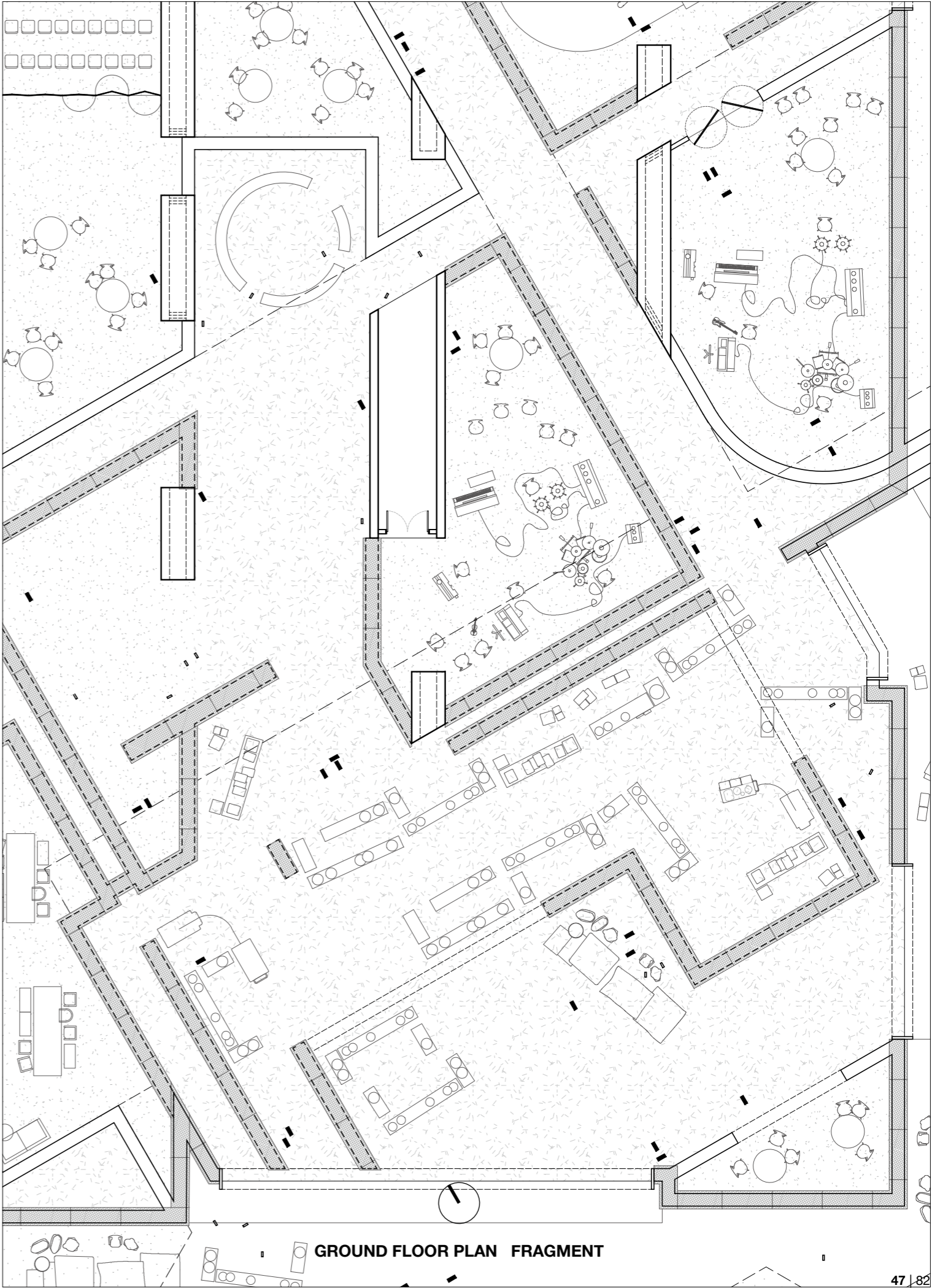
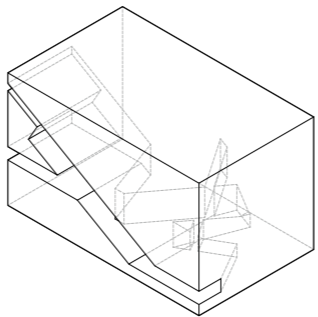
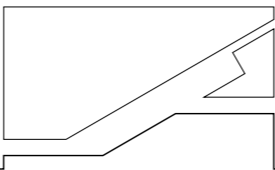
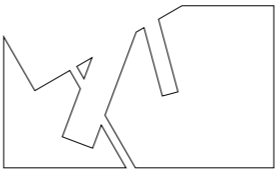
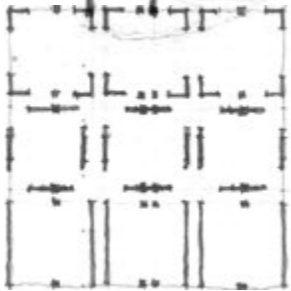
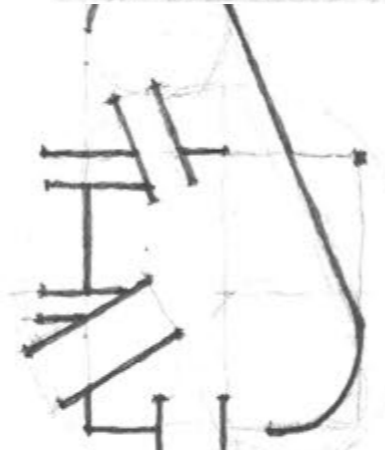
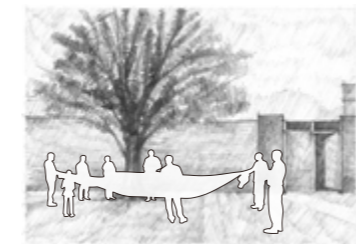
The intimate and collective connections between the people and the land altered since the urban voids were generated.

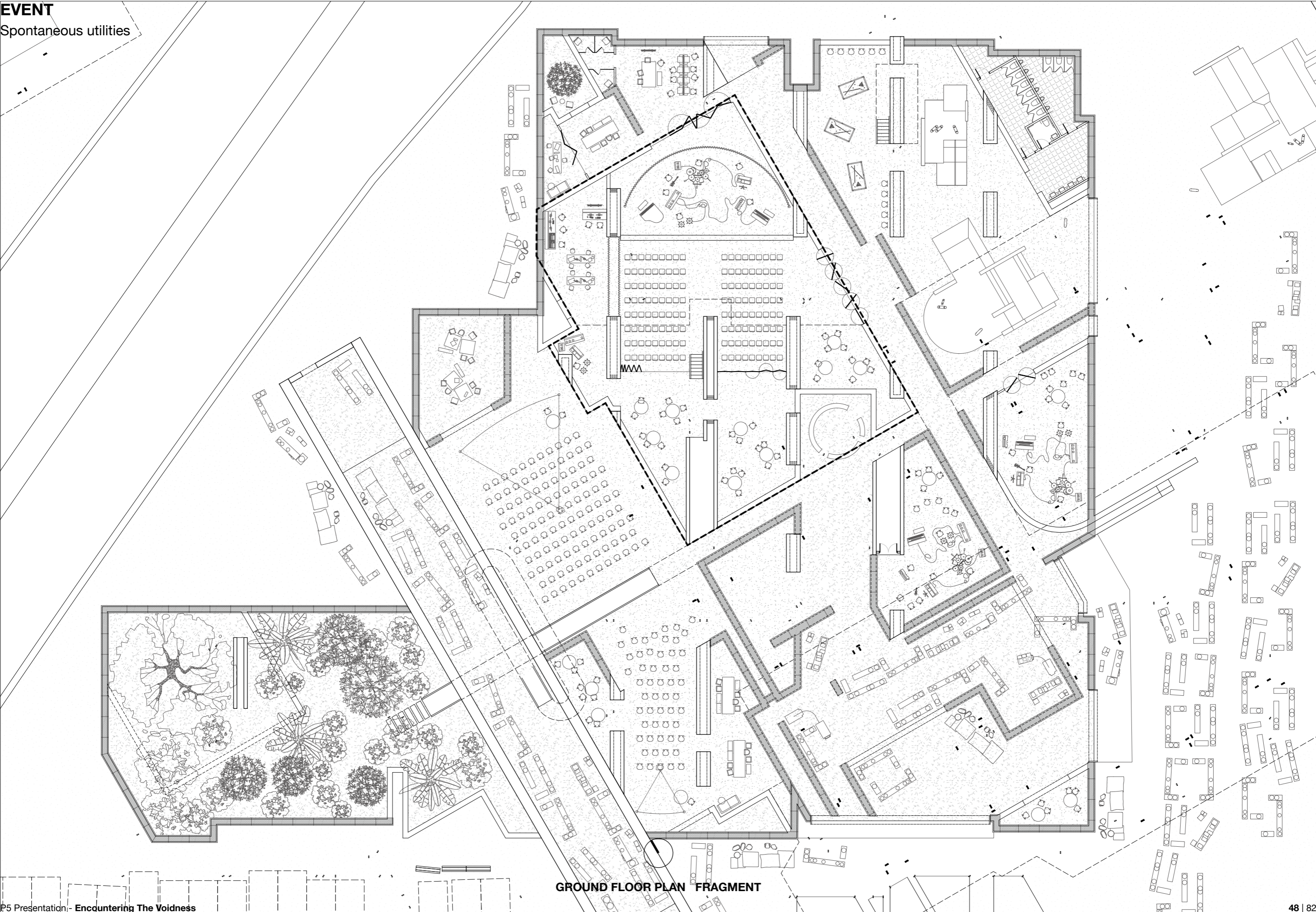
Enclosed but extended

A superimposing structure that seemingly breaks the old system and adds a reciprocal and interactive order on it

The periphery sees the place as a center

Disintegrated extensions from a venue

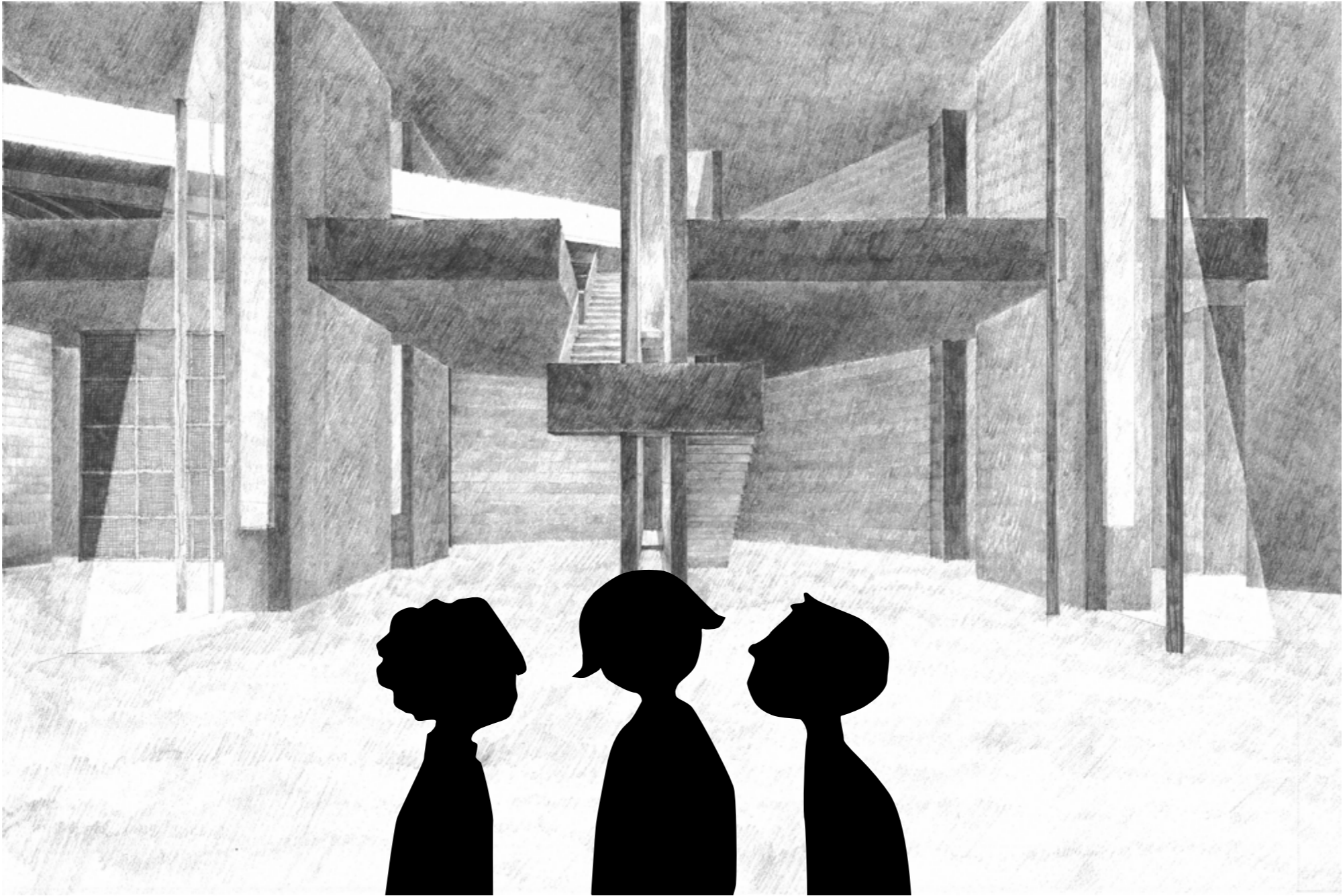




GROUND FLOOR PLAN FRAGMENT

THE ALTERNATIVE SCENARIO

The penetrated mezzanine as the void



THE ADAPTIVE PLACE

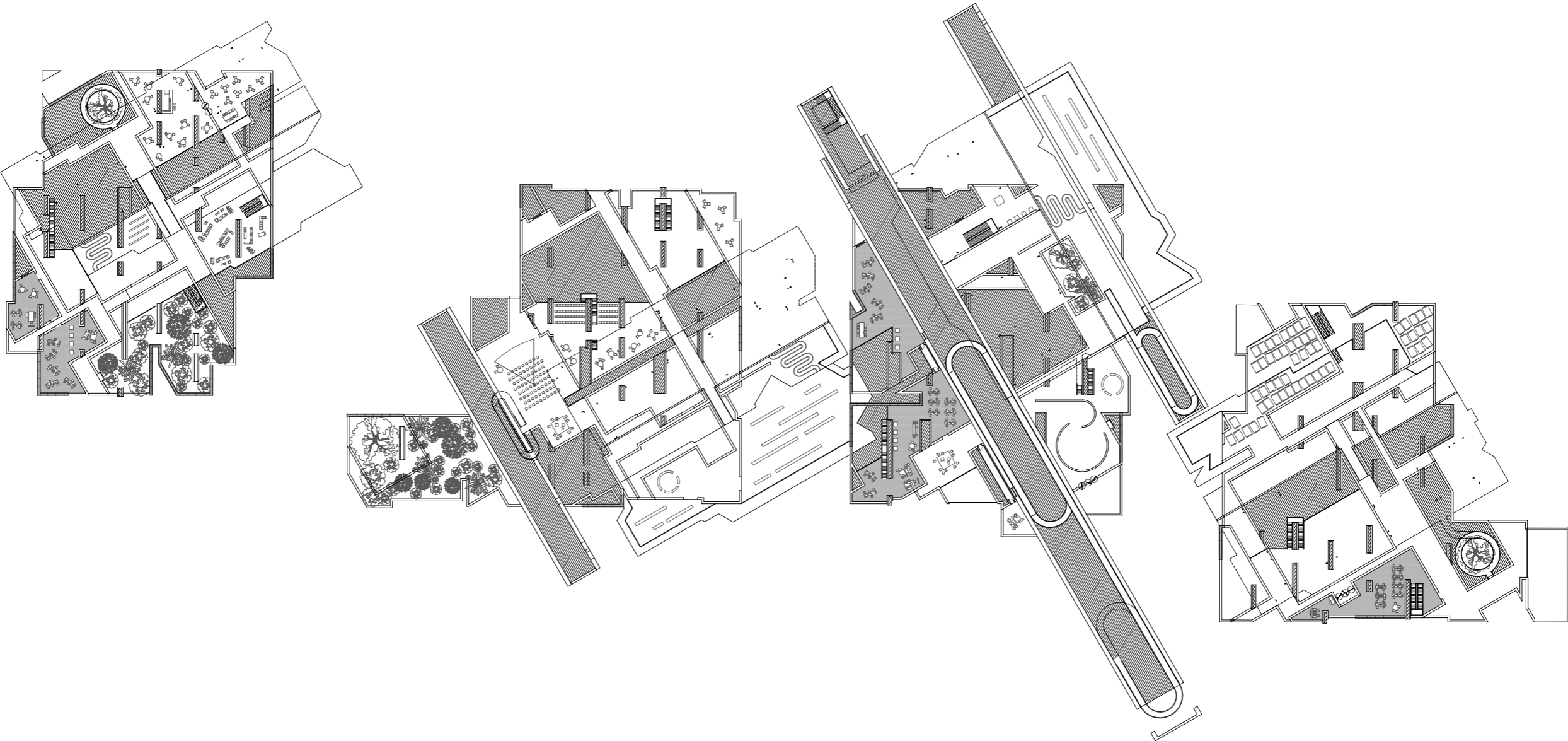
The concert area is also possible of being a poetic place where kids find their own paradise.



GROUND FLOOR PLAN 1:200@A3*14



GROUND FLOOR PLAN 1:200@A3*14



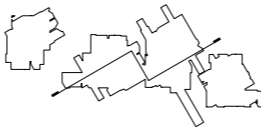
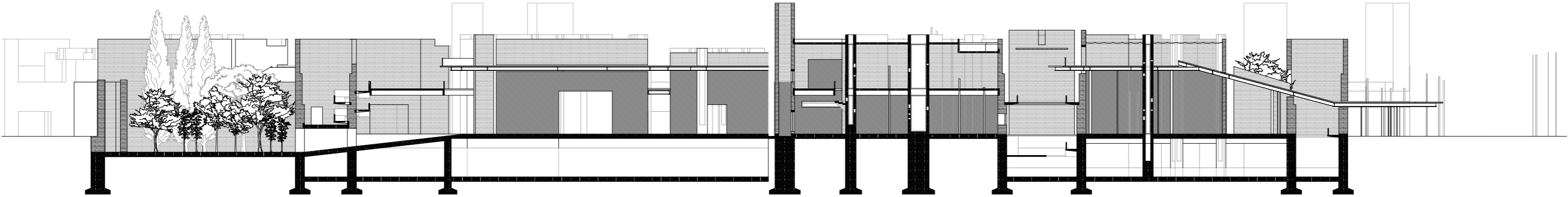
1ST FLOOR PLAN 1:200@A3*14

FLOOR PLAN



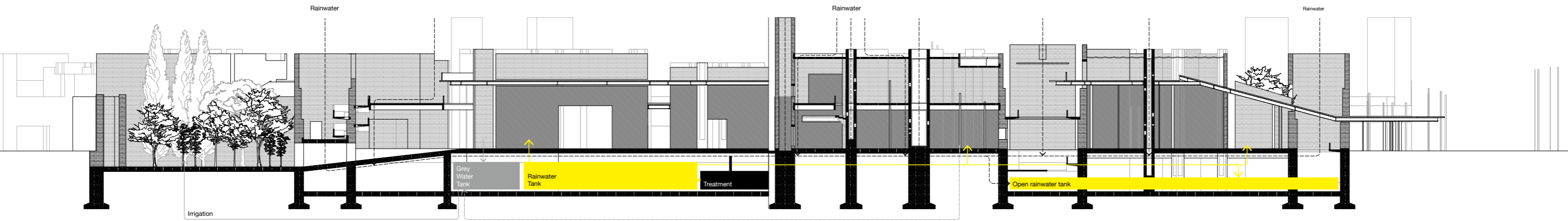
-1ST FLOOR PLAN 1:200@A3*14

SECTION



SECTION 1:100@A3*7

RAINWATER RECYCLE SYSTEM

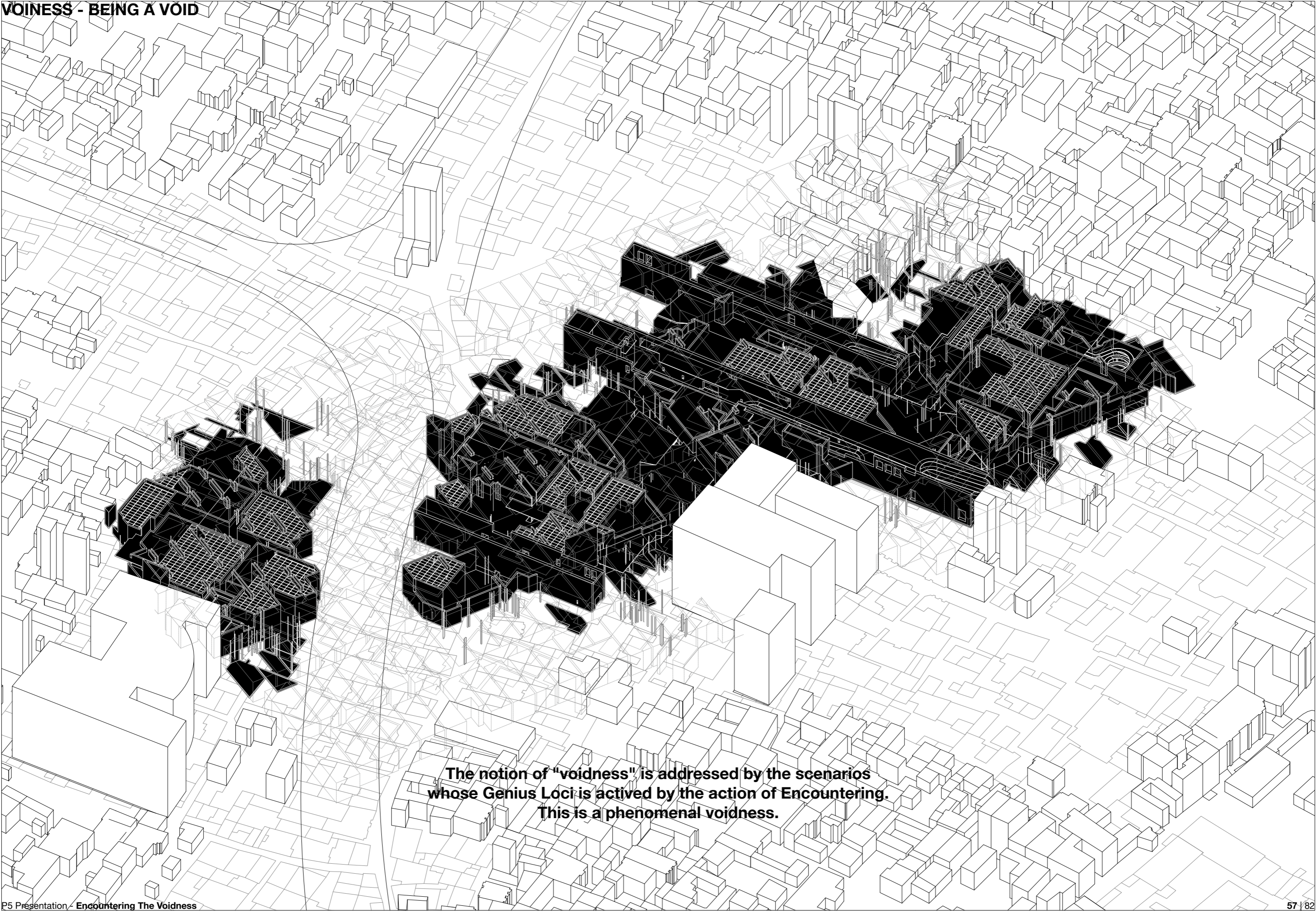


PARAMETER OF THE RAINWATER TANK:

Available roof area: 2,351 m²
Annual Rainfall in Mashhad: 255.7 mm
Rainwater tank capacity: 22,844 L

Rainwater tank area: 3,255 m²
Rainwater tank floor height: 8.7 m

PROCESS



**The notion of "voidness" is addressed by the scenarios
whose Genius Loci is actived by the action of Encountering.
This is a phenomenal voidness.**

MATERIALIZATION OF PROCESSING



RAMMED EARTH BLOCK

Size: 210 x 120 x 60 mm
Clay : Sand = 8 : 3
5 layers



Heat and evaporation
To simulate the warm and arid climate in Mashhad.

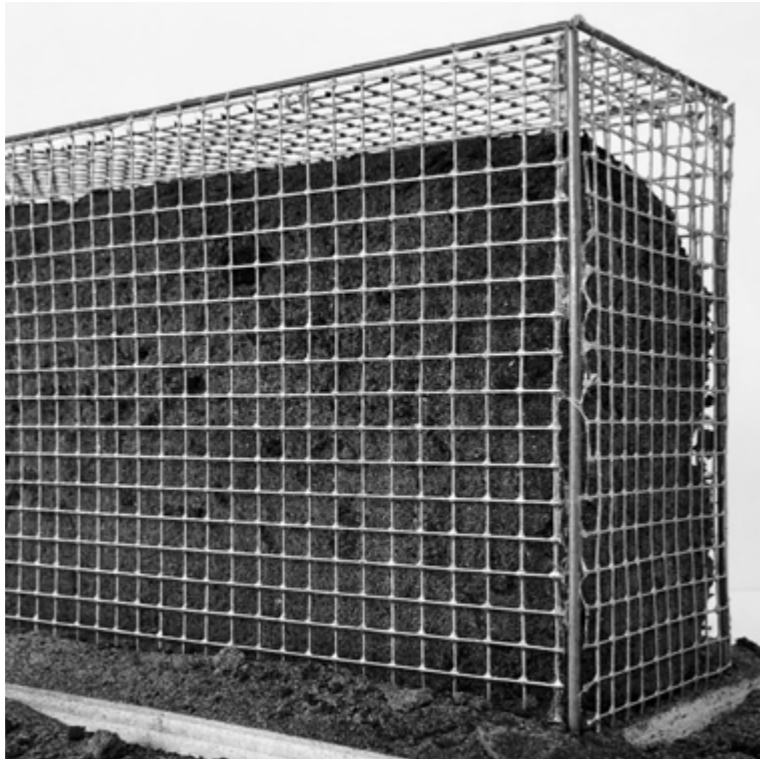


Wind and friction
To simulate the wind erosion during its lifespan.



Water and washing
To simulate the rainy weather happend to the intervention.

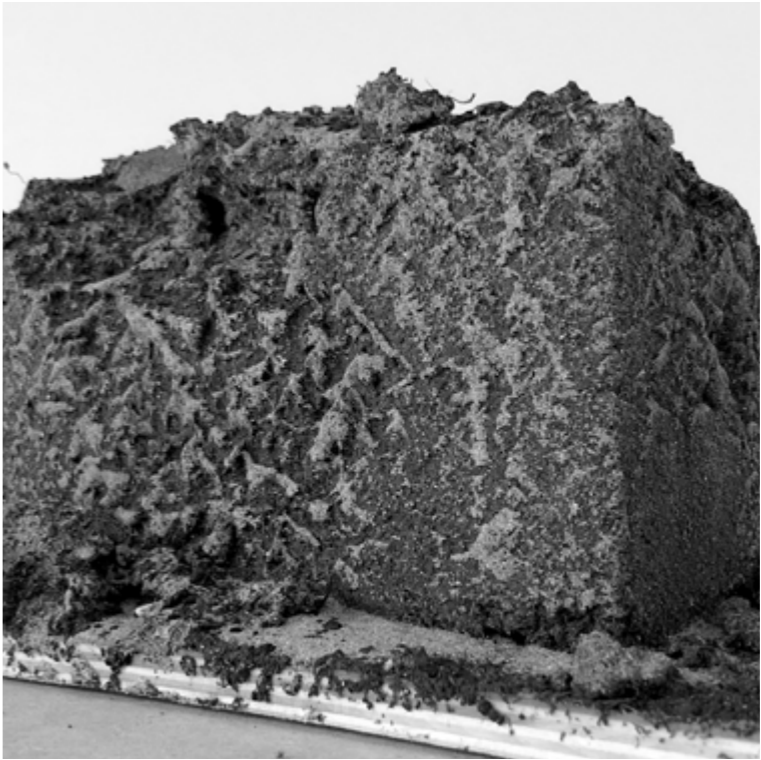
TEXTURE OF DECAY



HEAT AND EVAPORATION



WIND AND FRICTION



WATER AND WASHING

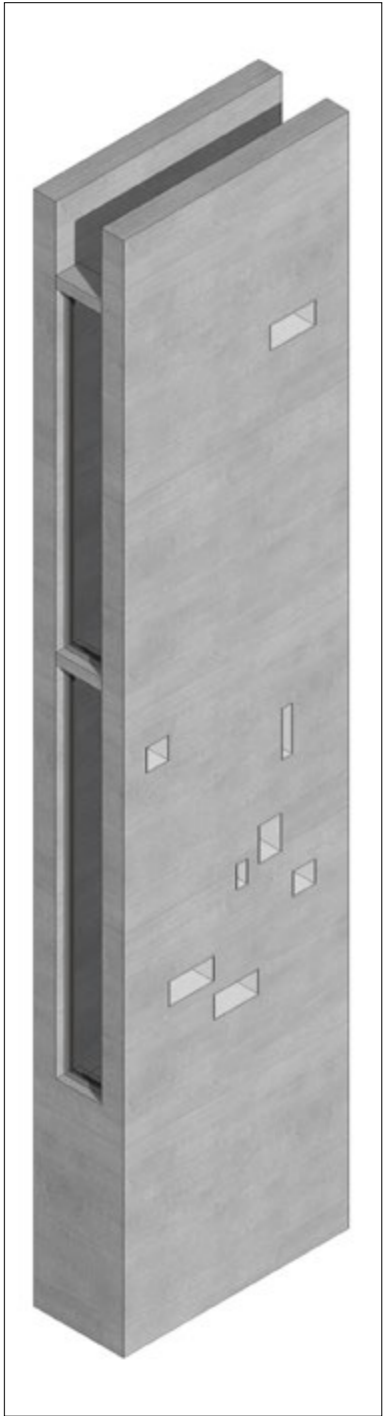


Wire mesh as the enclosed material
Steel column as structure

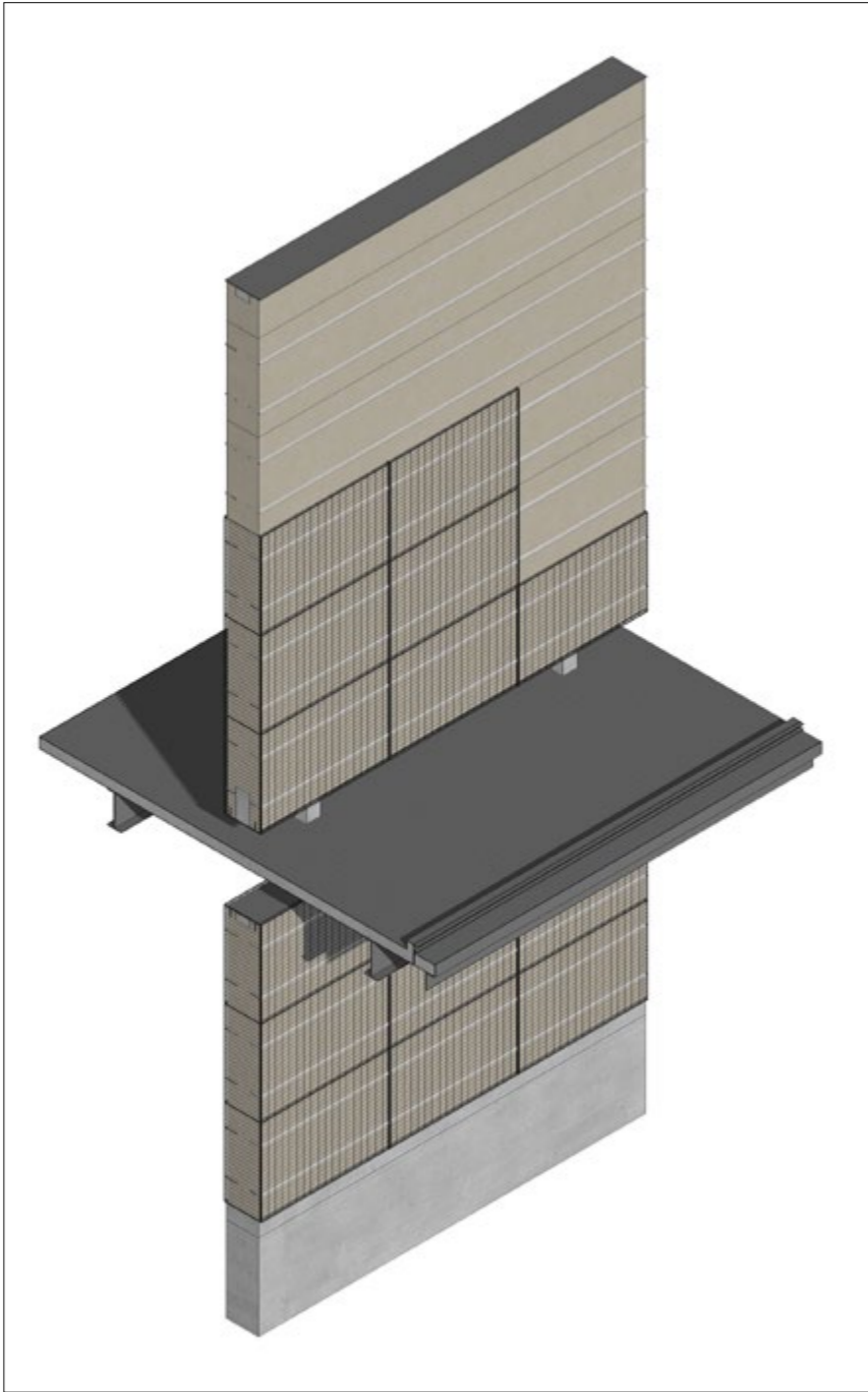
Wire mesh and its frames as the
enclosed material and strucure

Wire mesh as the structure

LITERAL VOIDNESS



SKYLIGHT WALL, 300MM
Vertical void



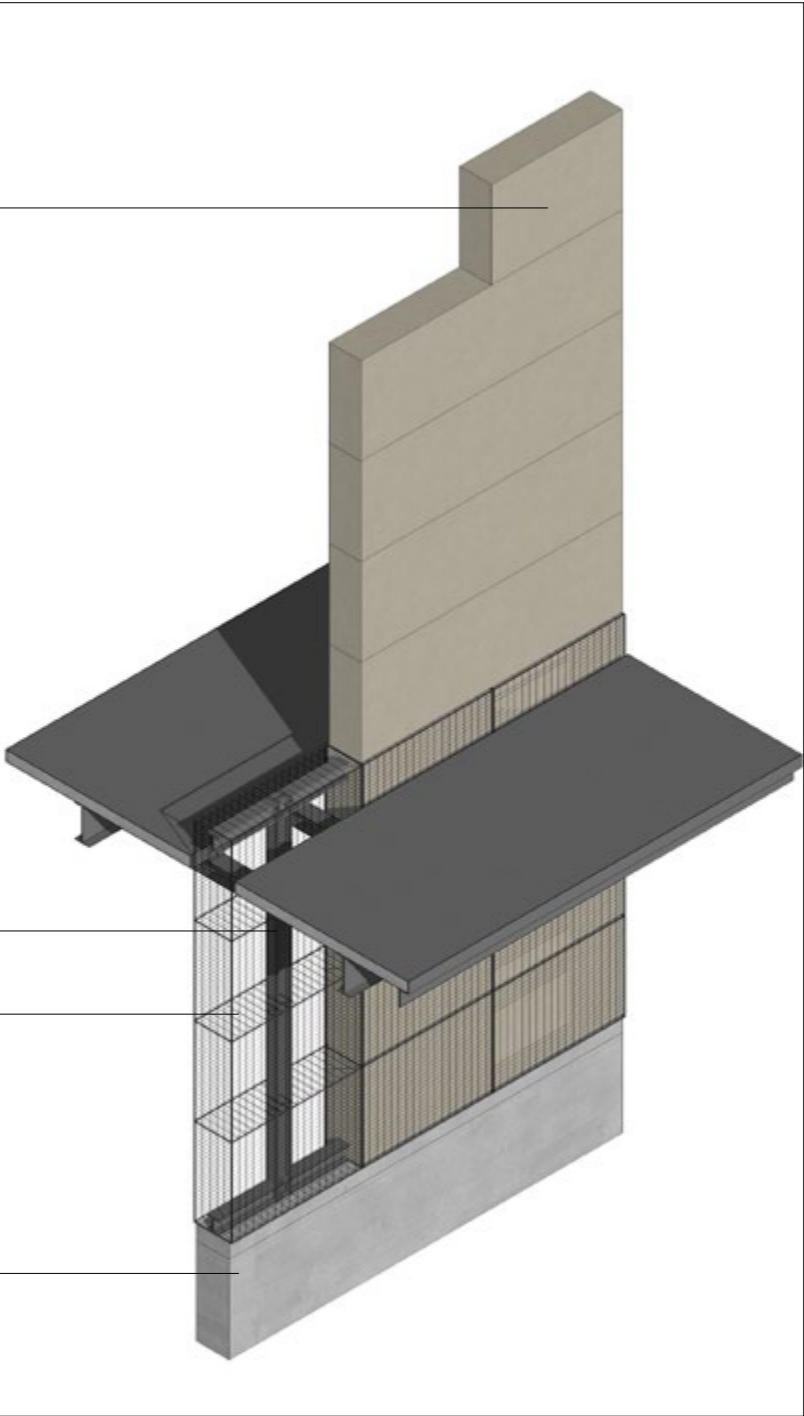
PERMANENT RAMMED EARTH WALL, 450MM
Horizontal void

Rammed earth wall, upper part
Self-support structure;
Prefabricated, 450x1200x1800mm
No protection from erosion;

Steel frame structure, lower part
HEB 200

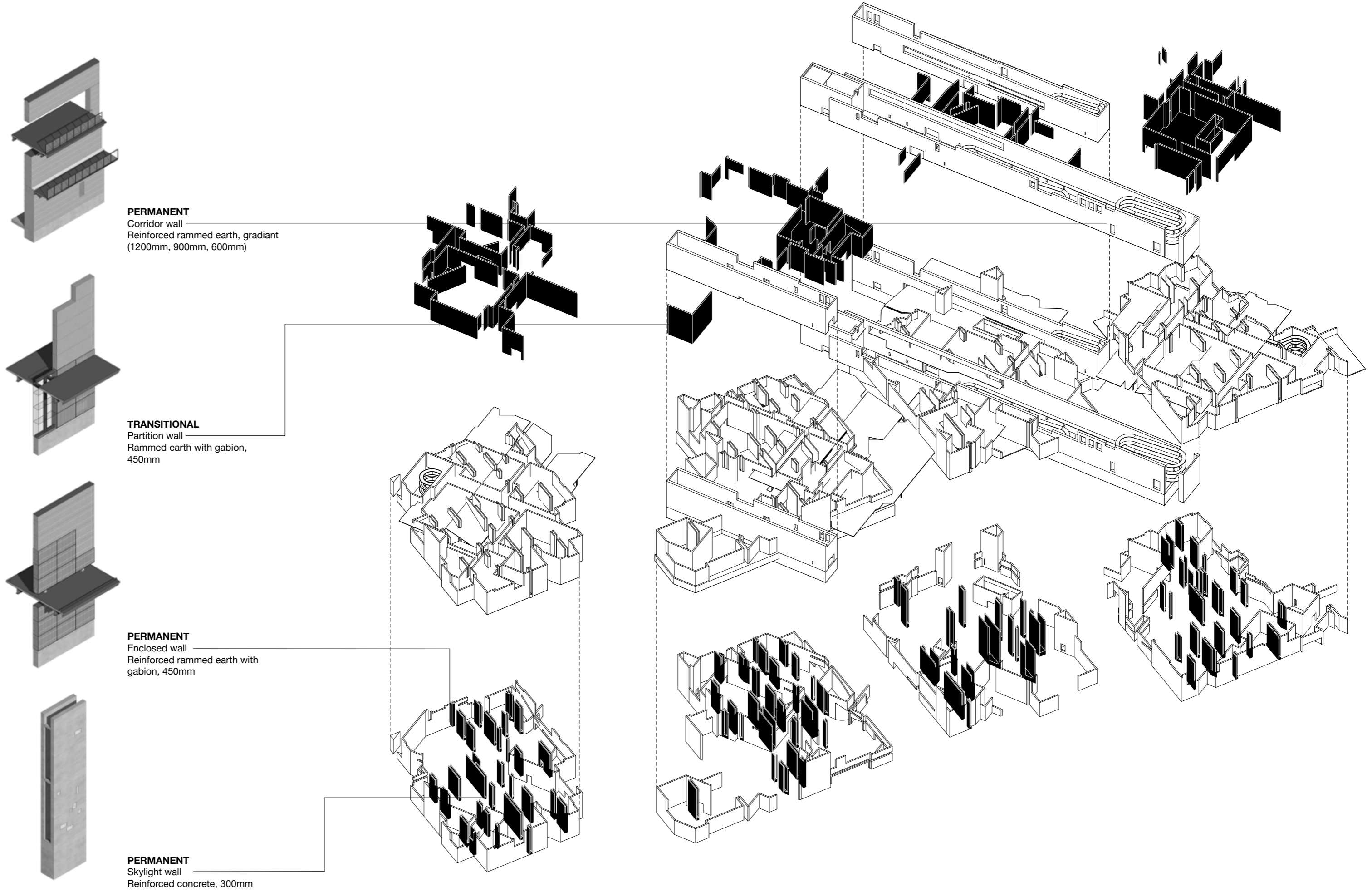
Wire mesh
Wire mesh covering rammed earth,
450x1200x1800mm

Plinth & foundation
Reinforced concrete plinth and foundation



TRANSITIONAL RAMMED EARTH WALL, 450MM
Decay to be a void

DEFINITION OF WALLS

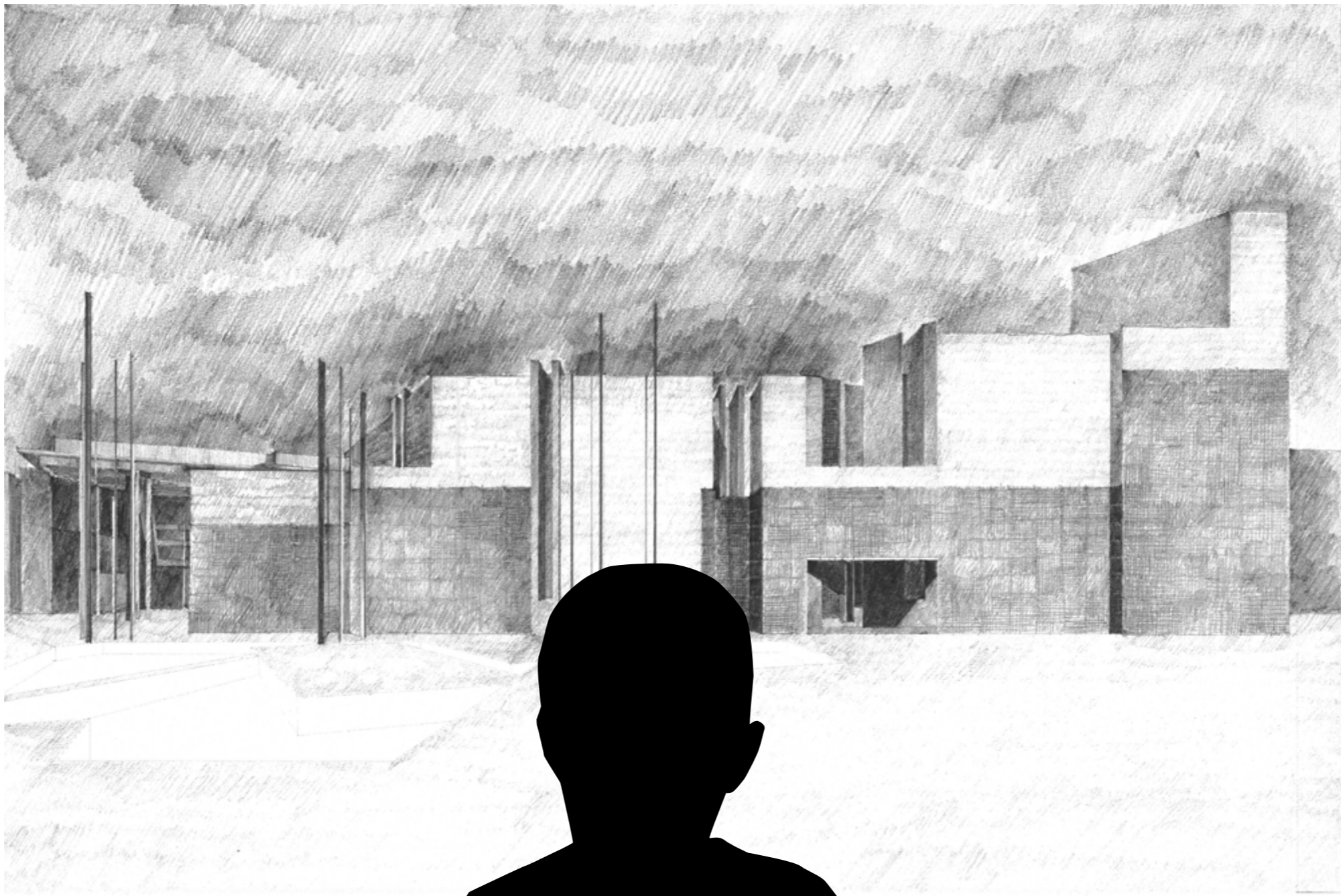


THE ALTERNATIVE SCENARIO
Windows on the skylight wall creates the voids in a void



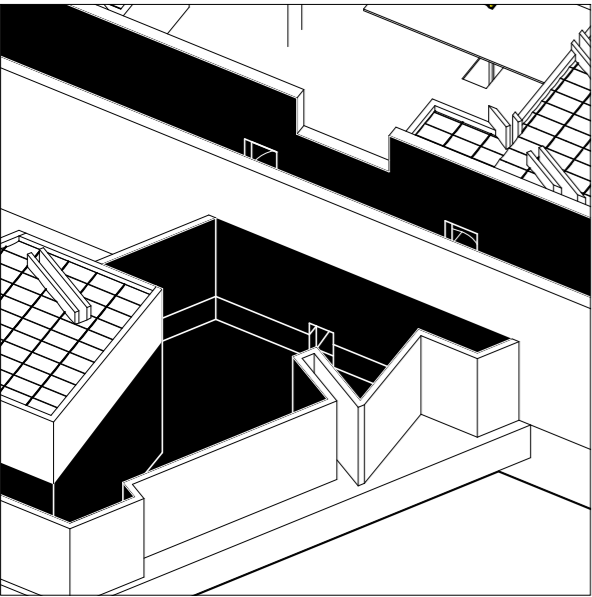
SKYLIGHT WALL
Sunlight from the skylight wall guides the direction towards sky and the direction towards the urban grid pattern.

THE ALTERNATIVE SCENARIO
The intersected fabric creates the voids as the landscape

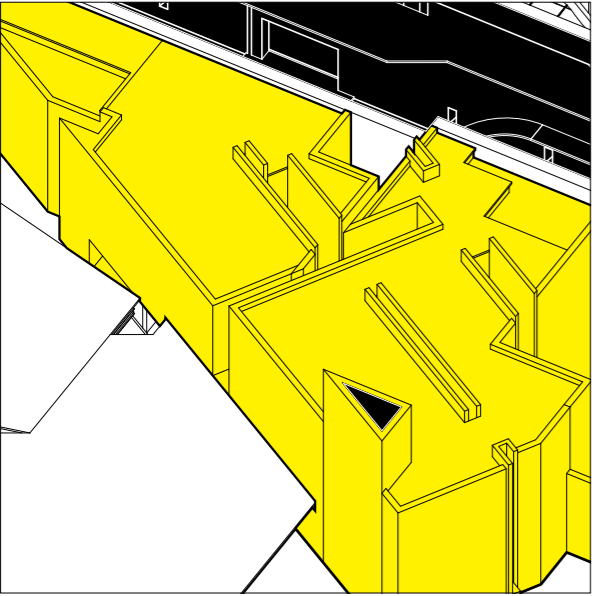


IF PASSES BY
Background of the void in the Shrine area becomes inhabitable and inclusive.

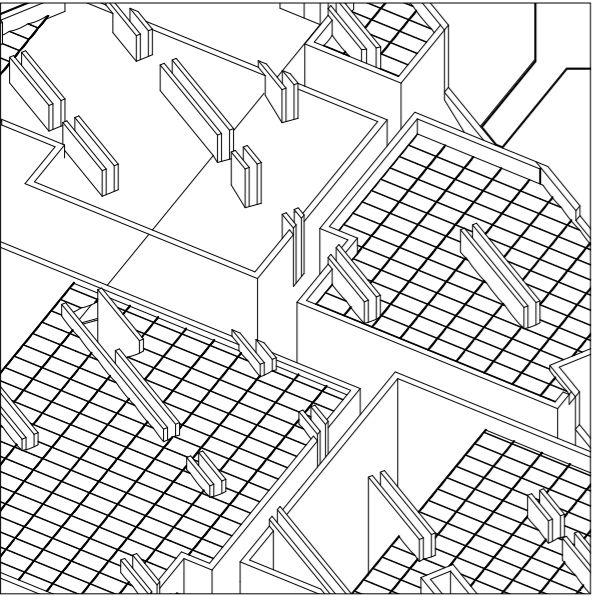
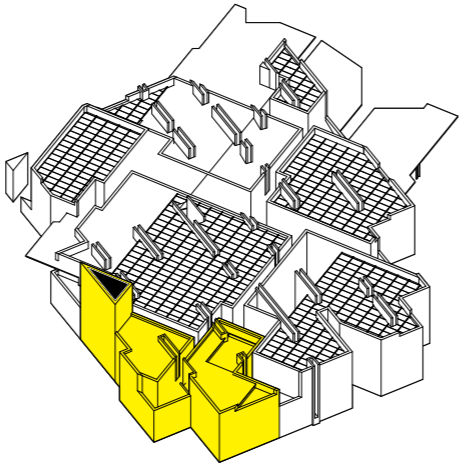
CLIMATE CONDITIONS



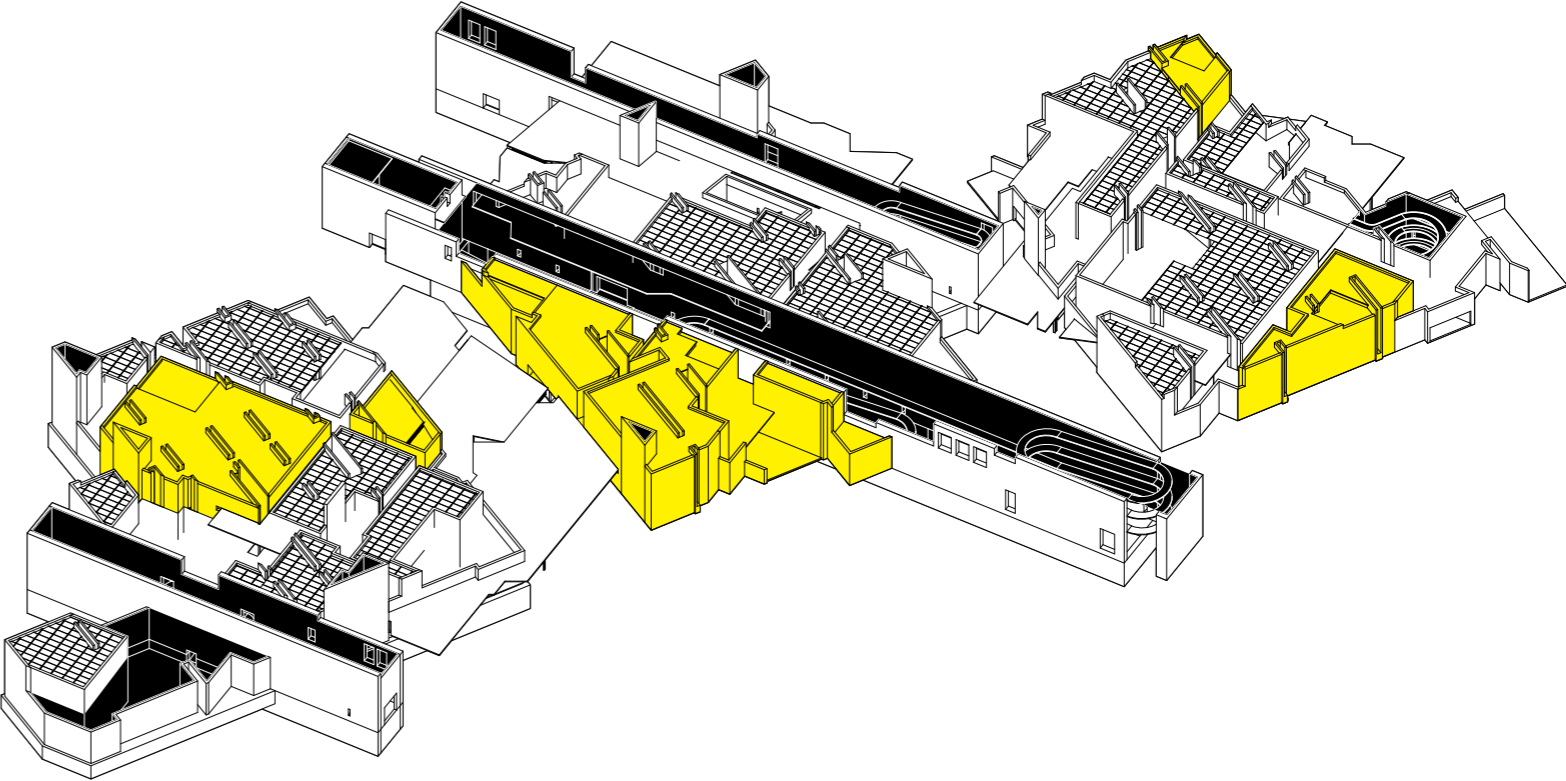
Outdoor



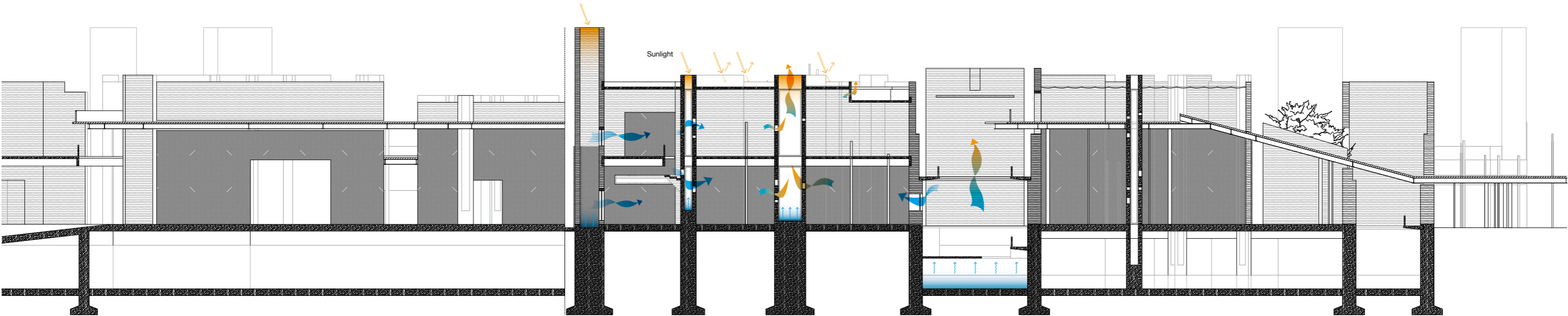
Indoor



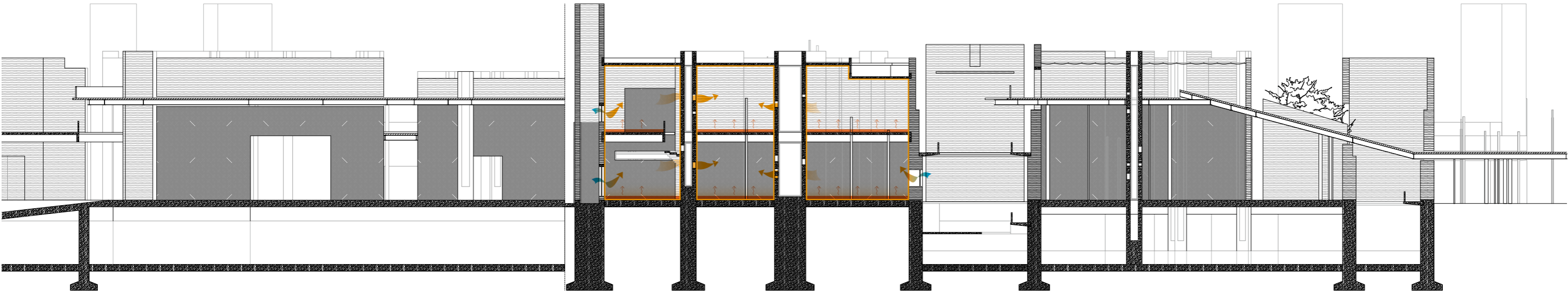
In-between



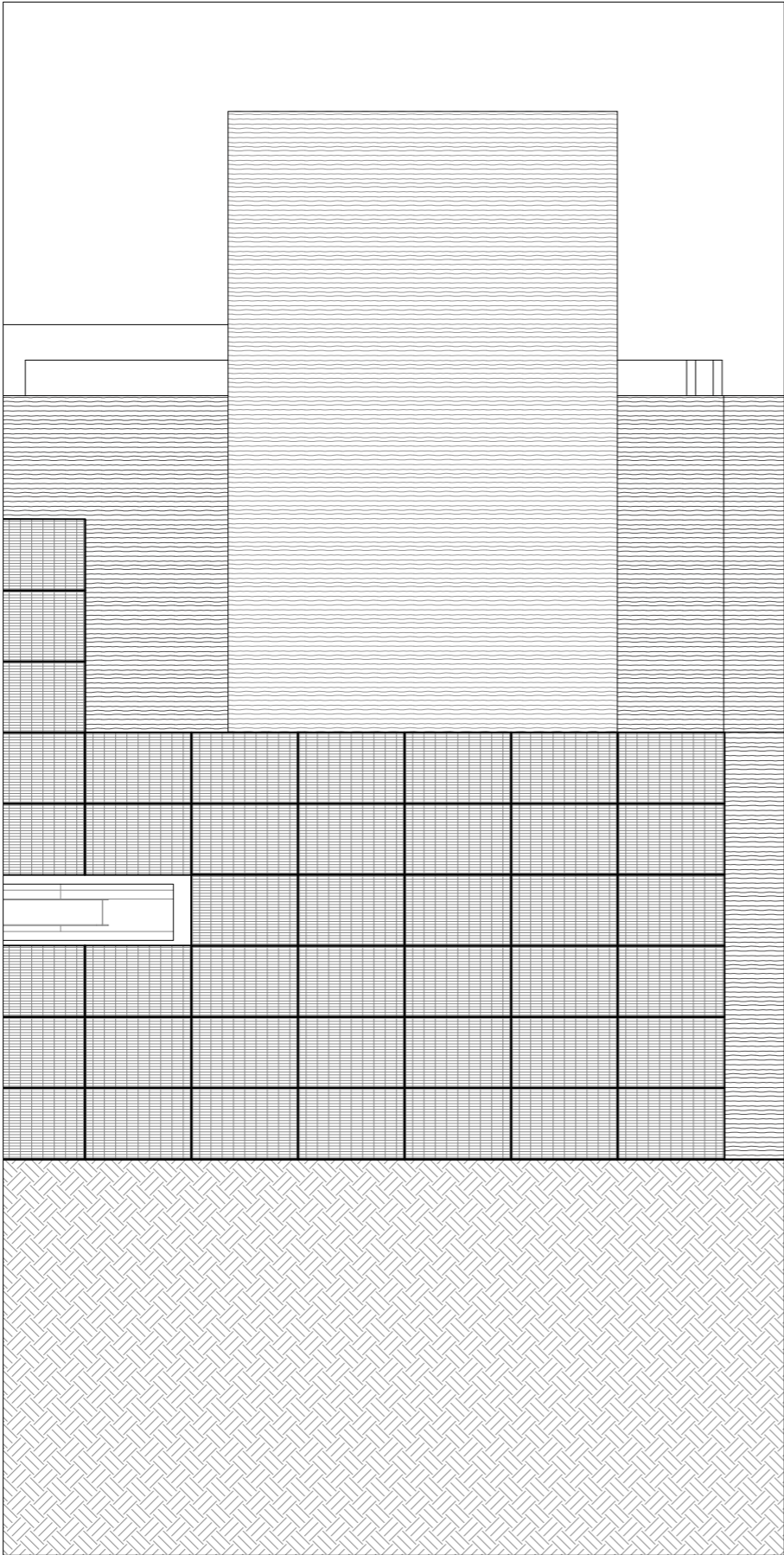
CLIMATIC ENVIRONMENT



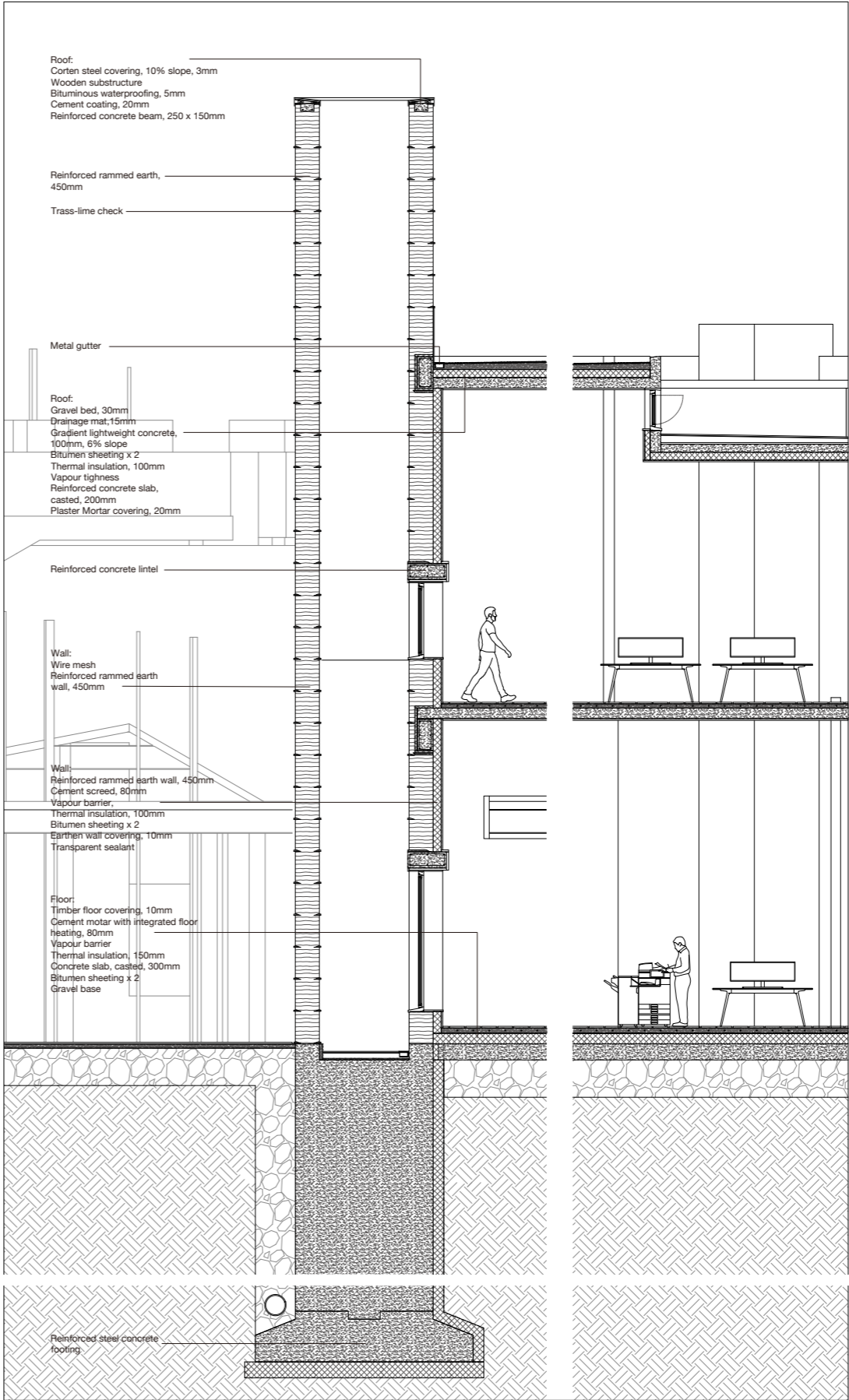
SUMMER



WINTER



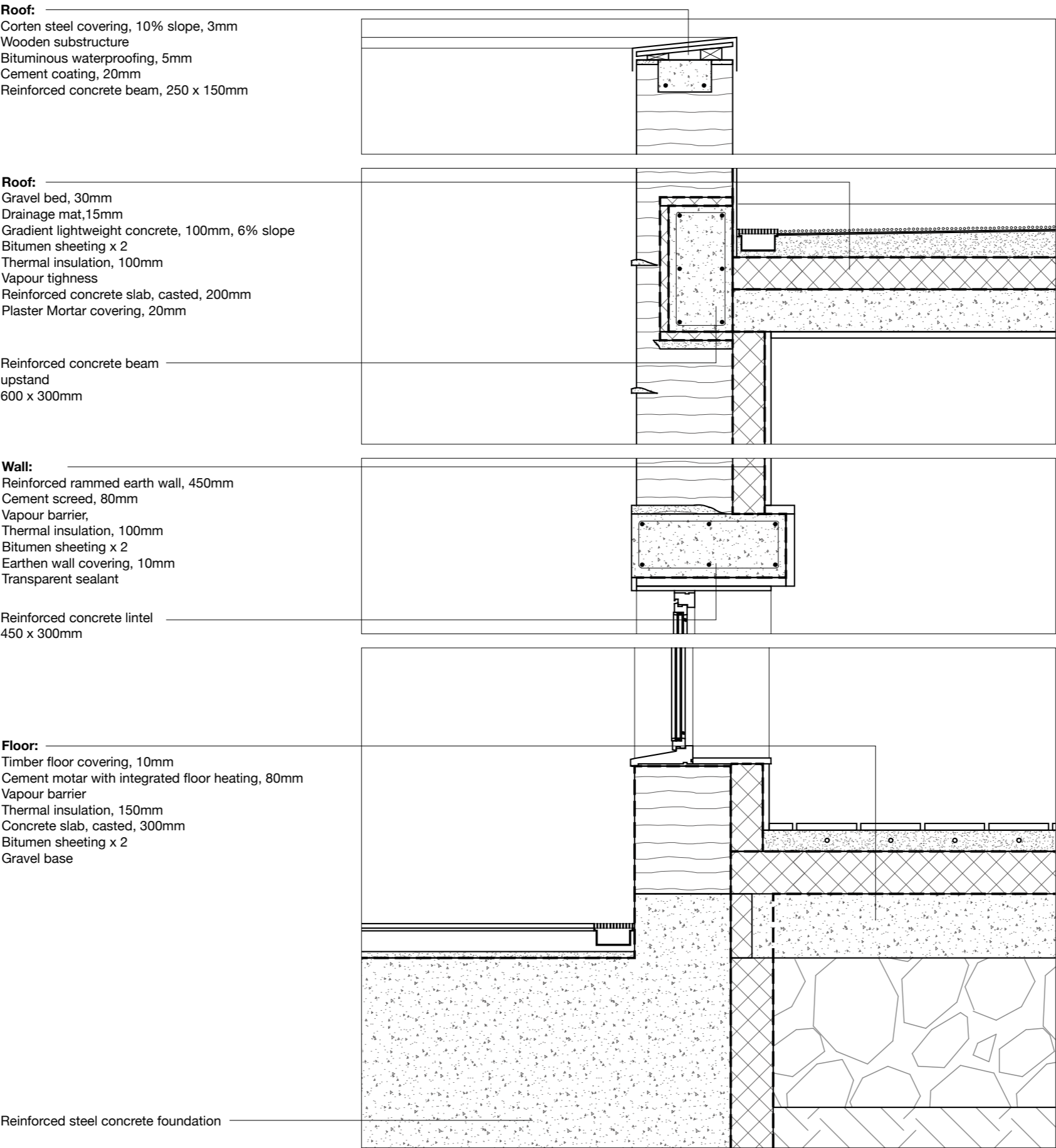
ELEVATION 1:50@A1



SECTION 1:50@A1

DETAIL DESIGN

Climate border



DETAIL 1:10@A1

EXPLODED STRUCTURE

MEZZANIZE
Steel frame structure supports the load.

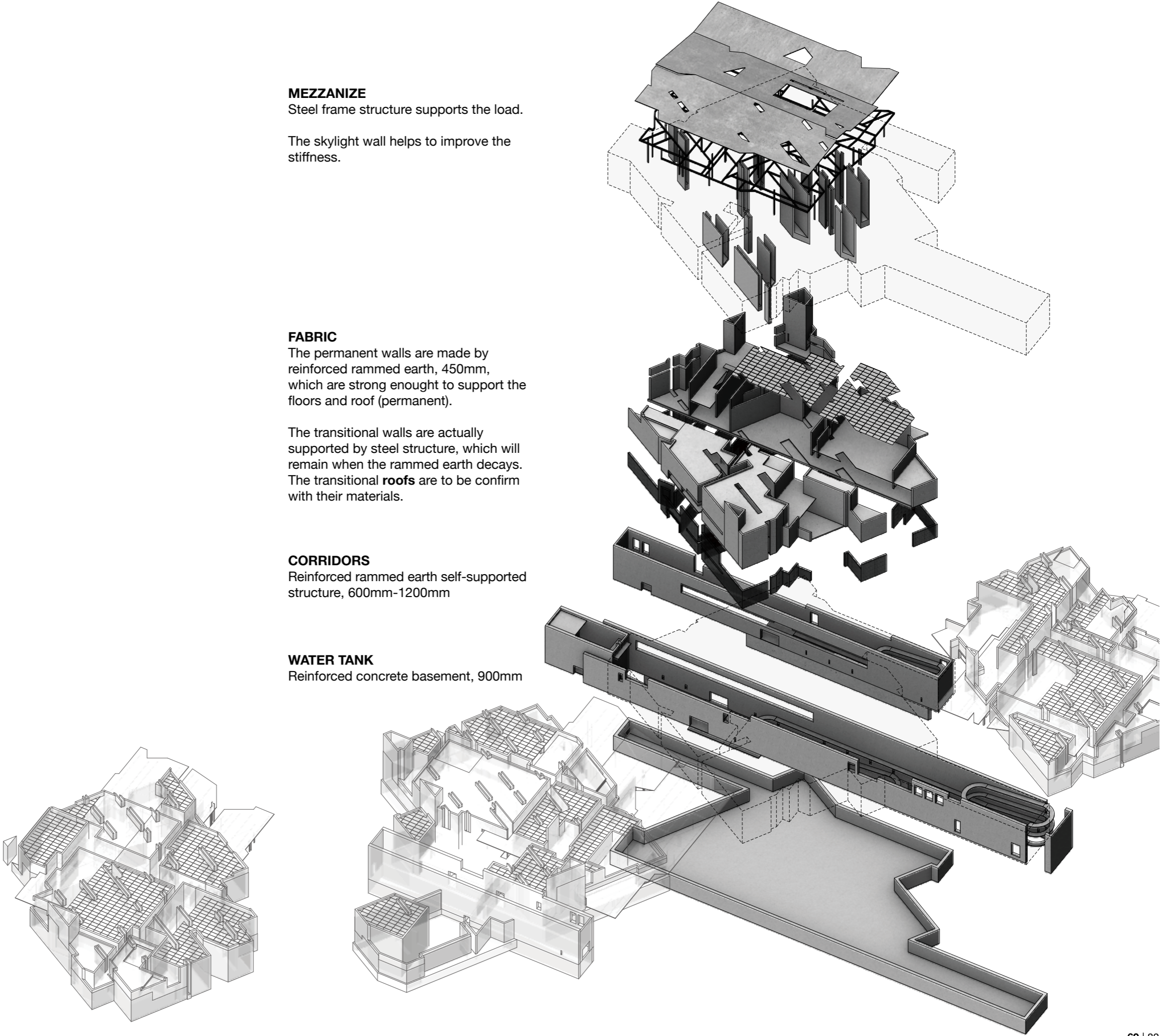
The skylight wall helps to improve the stiffness.

FABRIC
The permanent walls are made by reinforced rammed earth, 450mm, which are strong enough to support the floors and roof (permanent).

The transitional walls are actually supported by steel structure, which will remain when the rammed earth decays. The transitional **roofs** are to be confirm with their materials.

CORRIDORS
Reinforced rammed earth self-supported structure, 600mm-1200mm

WATER TANK
Reinforced concrete basement, 900mm



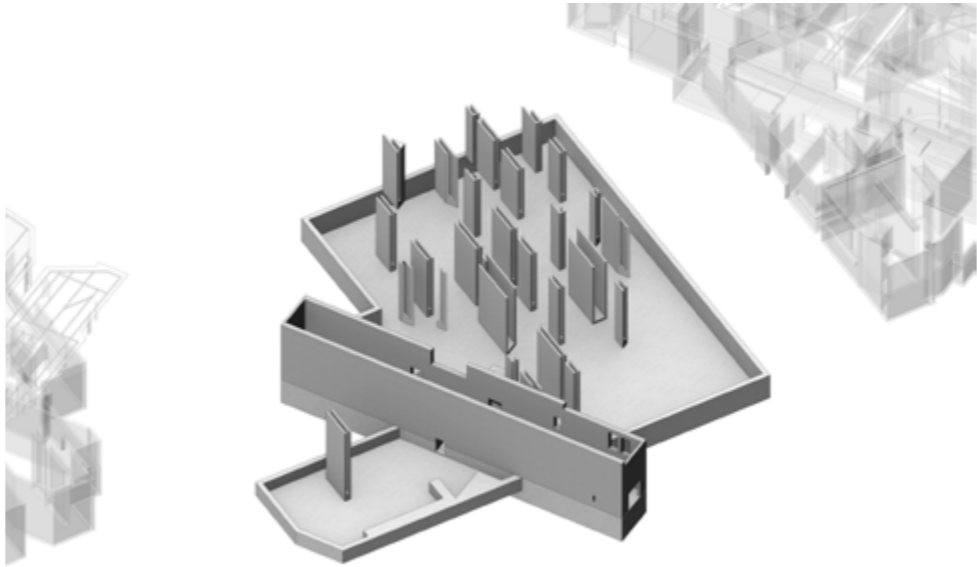
PROCESSING

Construction procedure



WATER TANK Reinforced concrete basement, 900mm

Water storage in the water circulation system.
Landscape and aquatic sports place

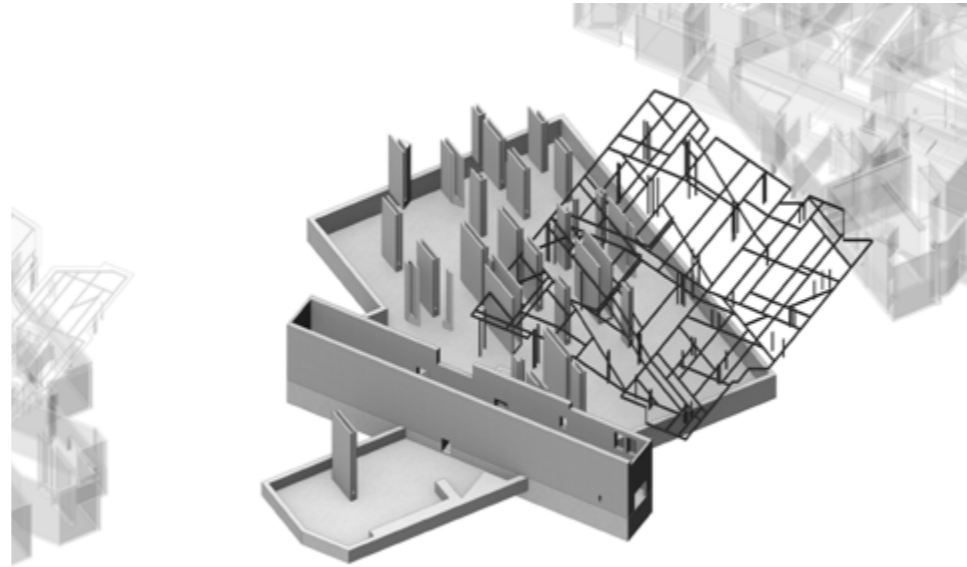


CORRIDOR Reinforced rammed earth, self-supported structure, 600mm-1200mm

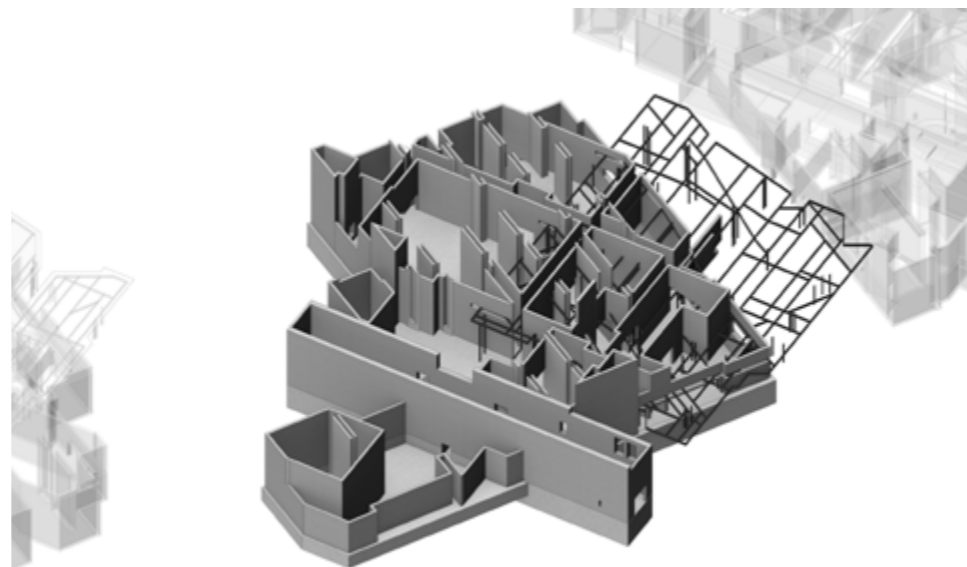
SKYLIGHTWALL Reinforced steel concrete, self-supported structure, 300mm

PROCESSING

Construction procedure



STEEL FRAME Structure supports the load from mezzanice, HEB 450 for beam, IPE 300 for column matrix

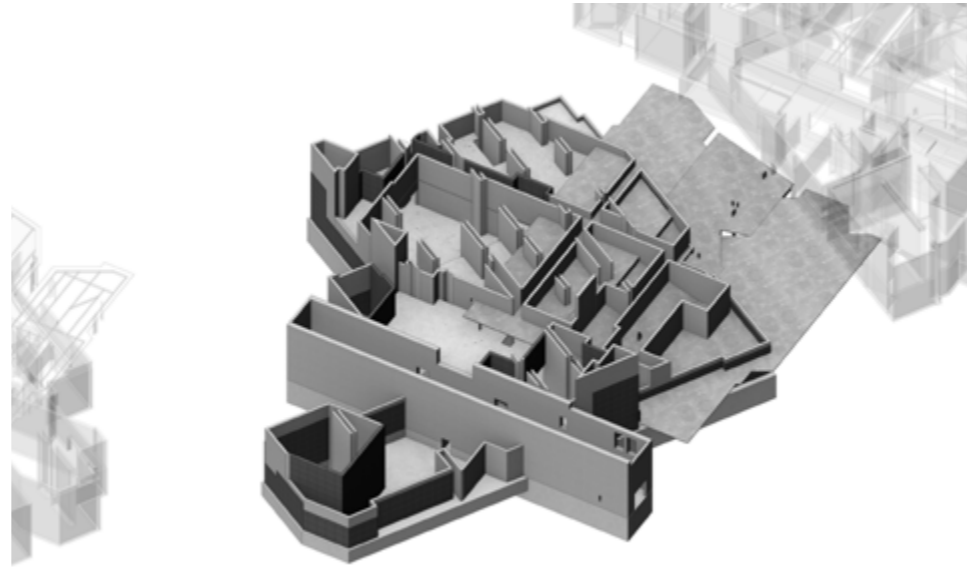


PERMANENT WALLS Reinforced rammed earth wall with gabion, self-support structure, 450mm

TRANSITIONAL WALLS Rammed earth wall with gabion, steel frame inside support, 450mm

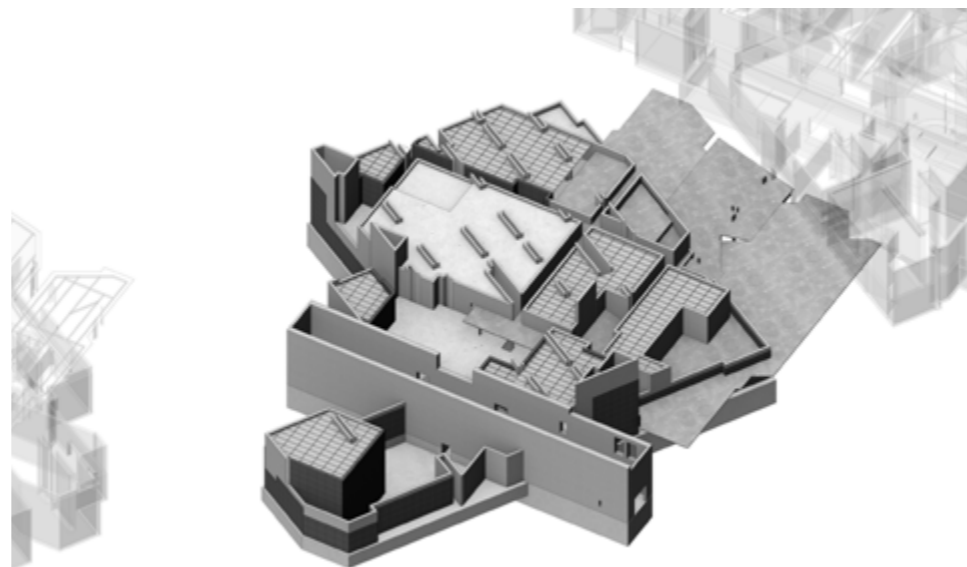
PROCESSING

Construction procedure



MEZZANINE Steel floor with sandstone/corten steel covering

FLOOR Reinforced concrete floor with sandstone/concrete tile

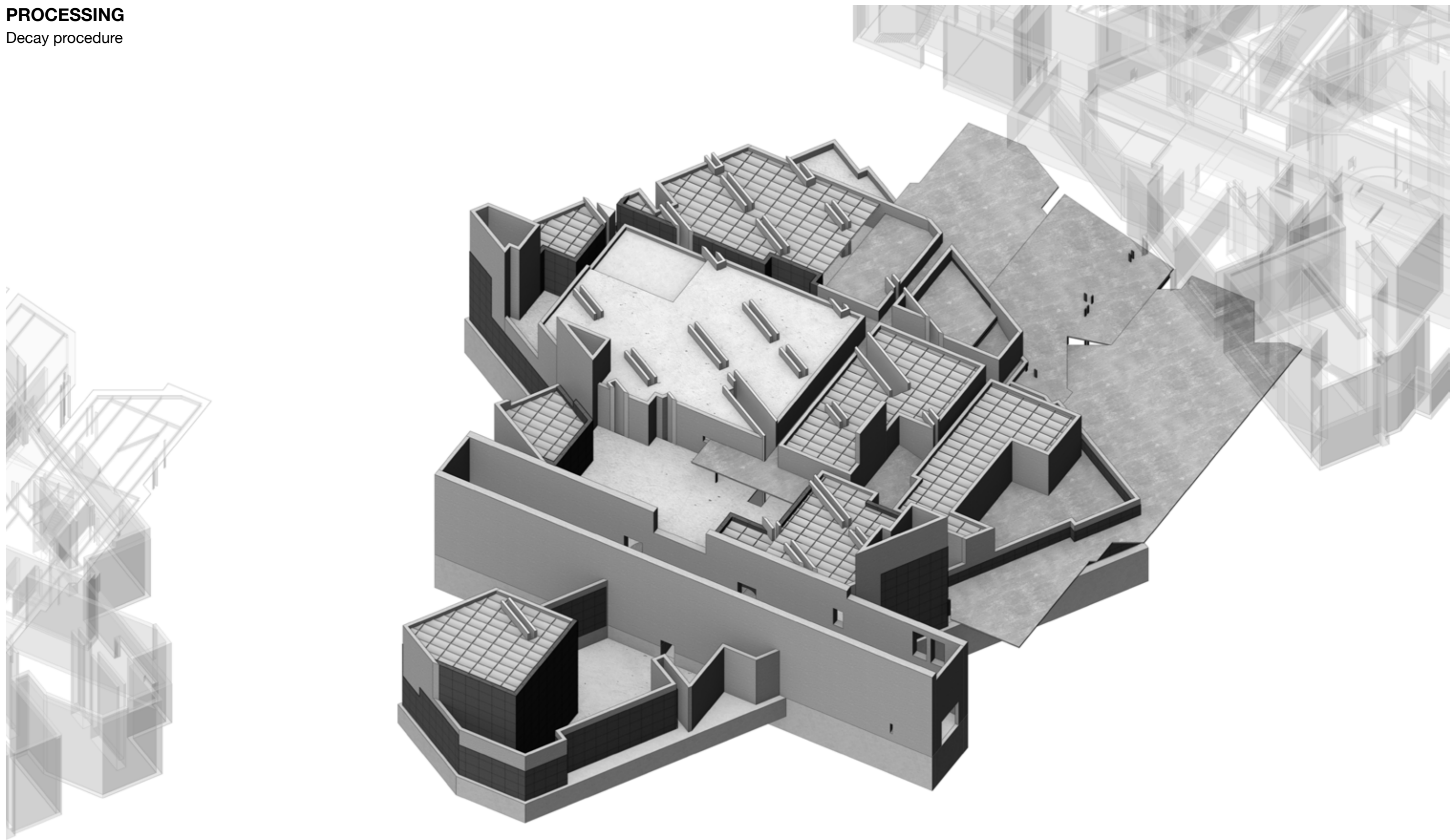


PERMANENT ROOF Reinforced concrete roof

TRANSITIONAL ROOF Flexible/retractable fabric

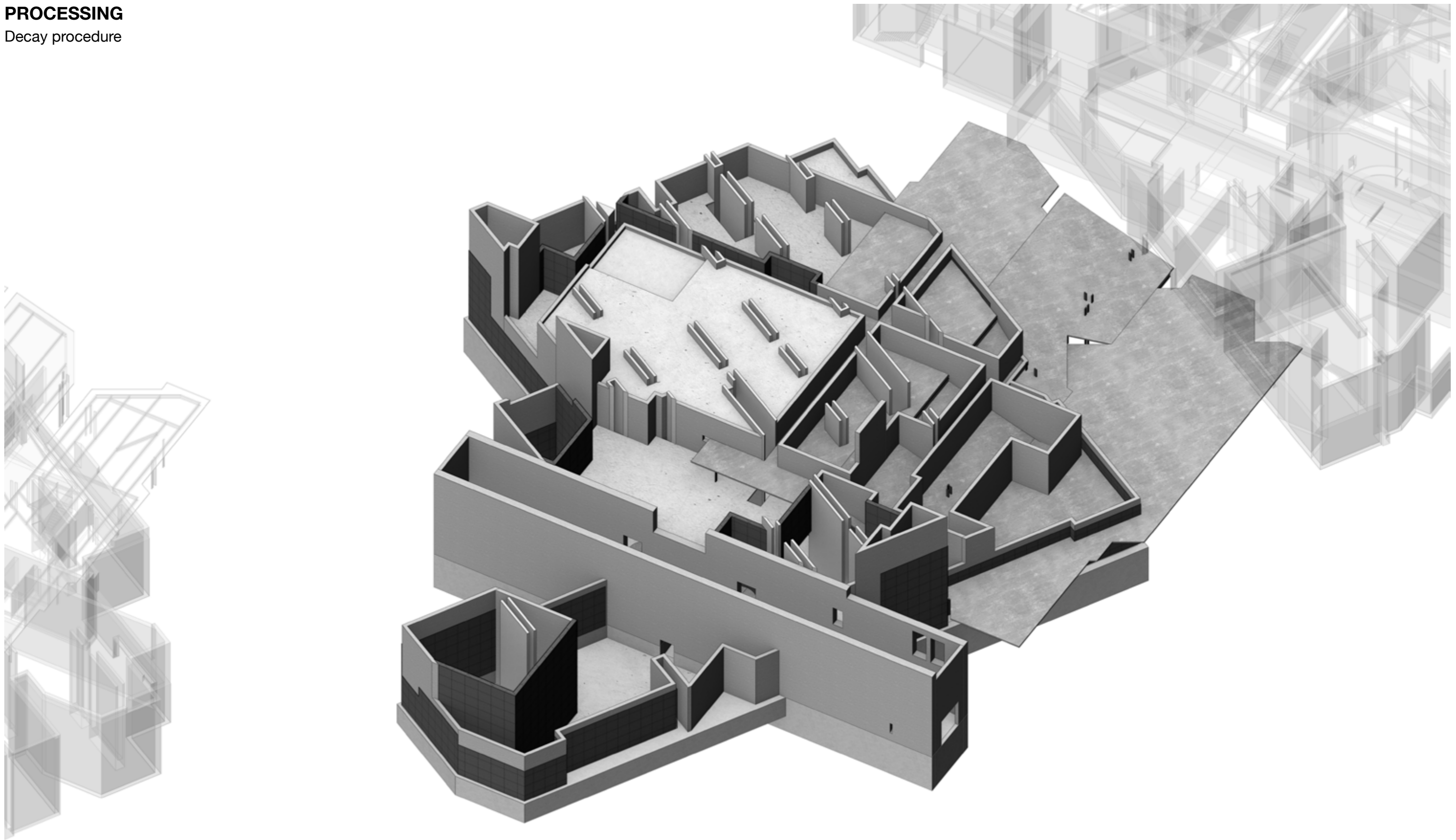
PROCESSING

Decay procedure



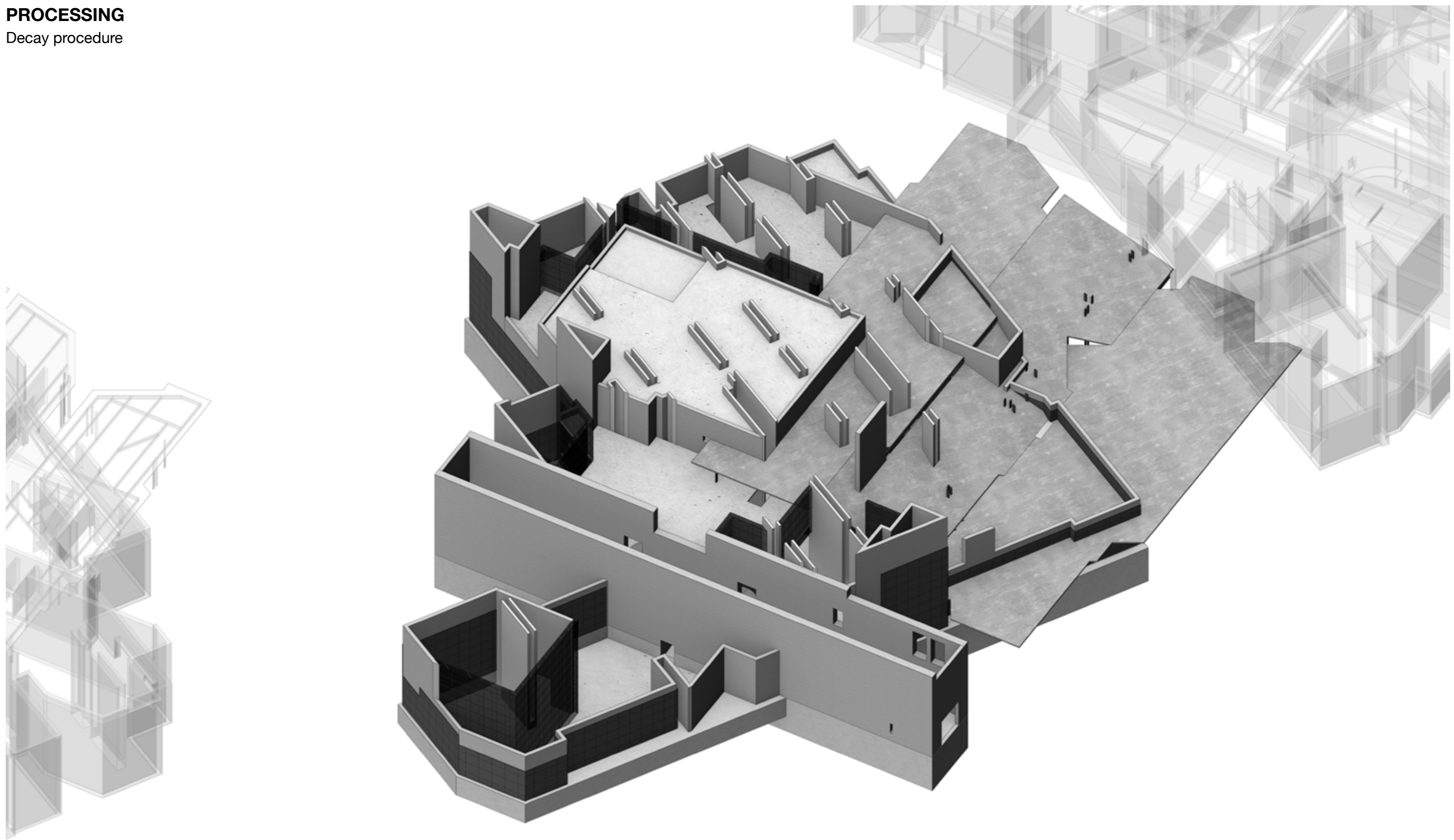
PROCESSING

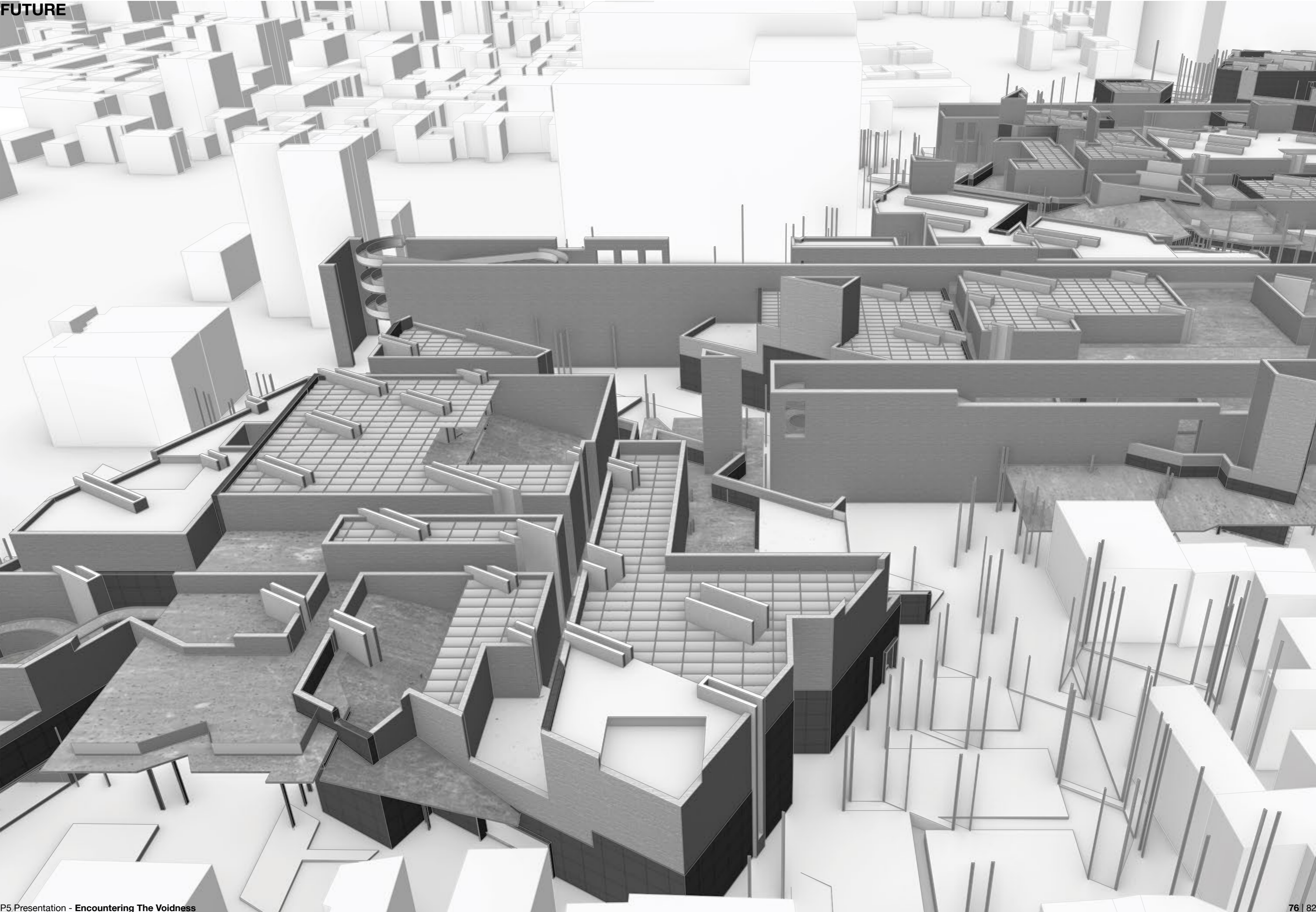
Decay procedure

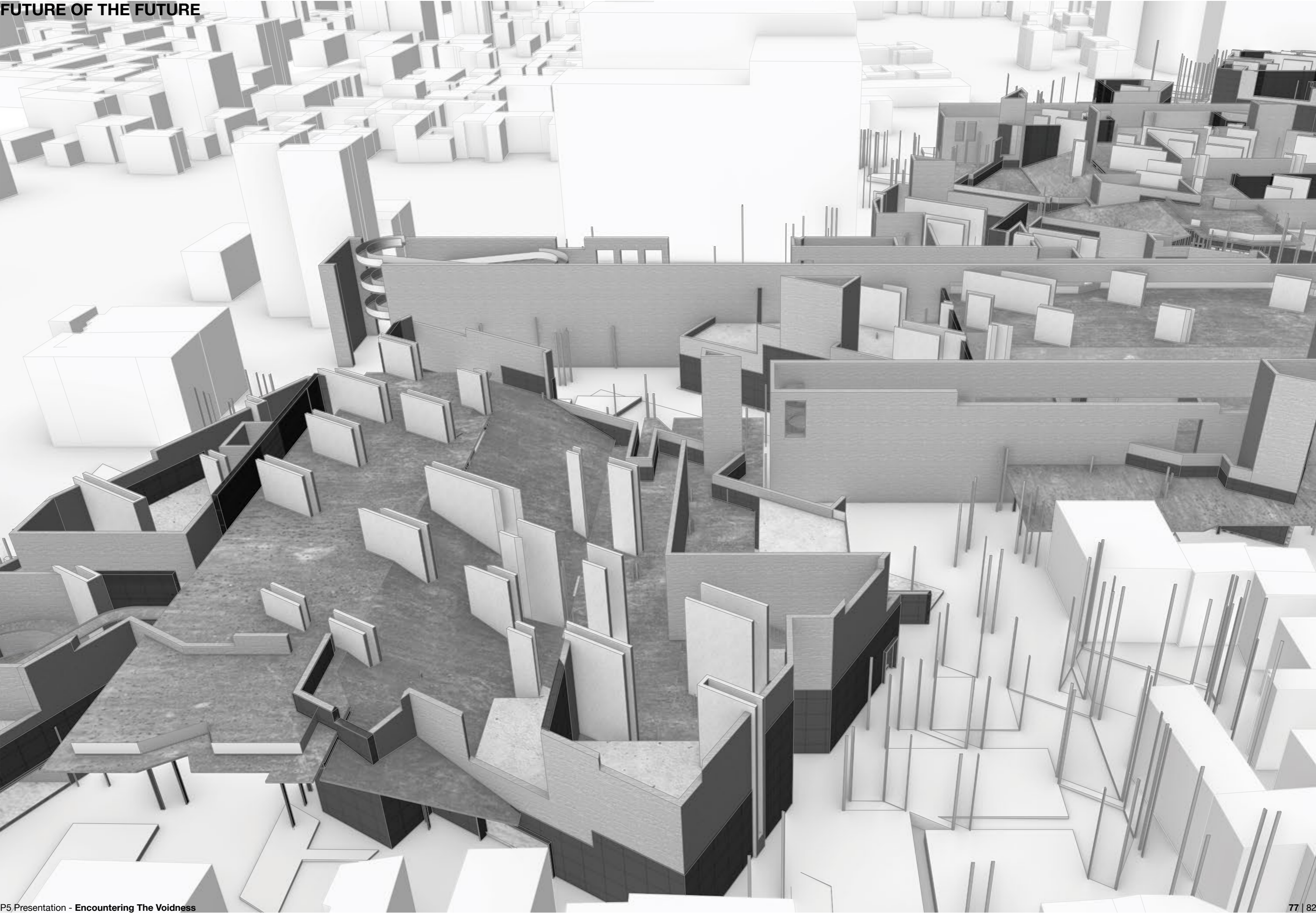


PROCESSING

Decay procedure







THE ENTITY OF VOIDNESS

埴埴以为器，当其无有器之用。
凿户牖以为室，当其无，有室之用。
故有之以为利，无之以为用。

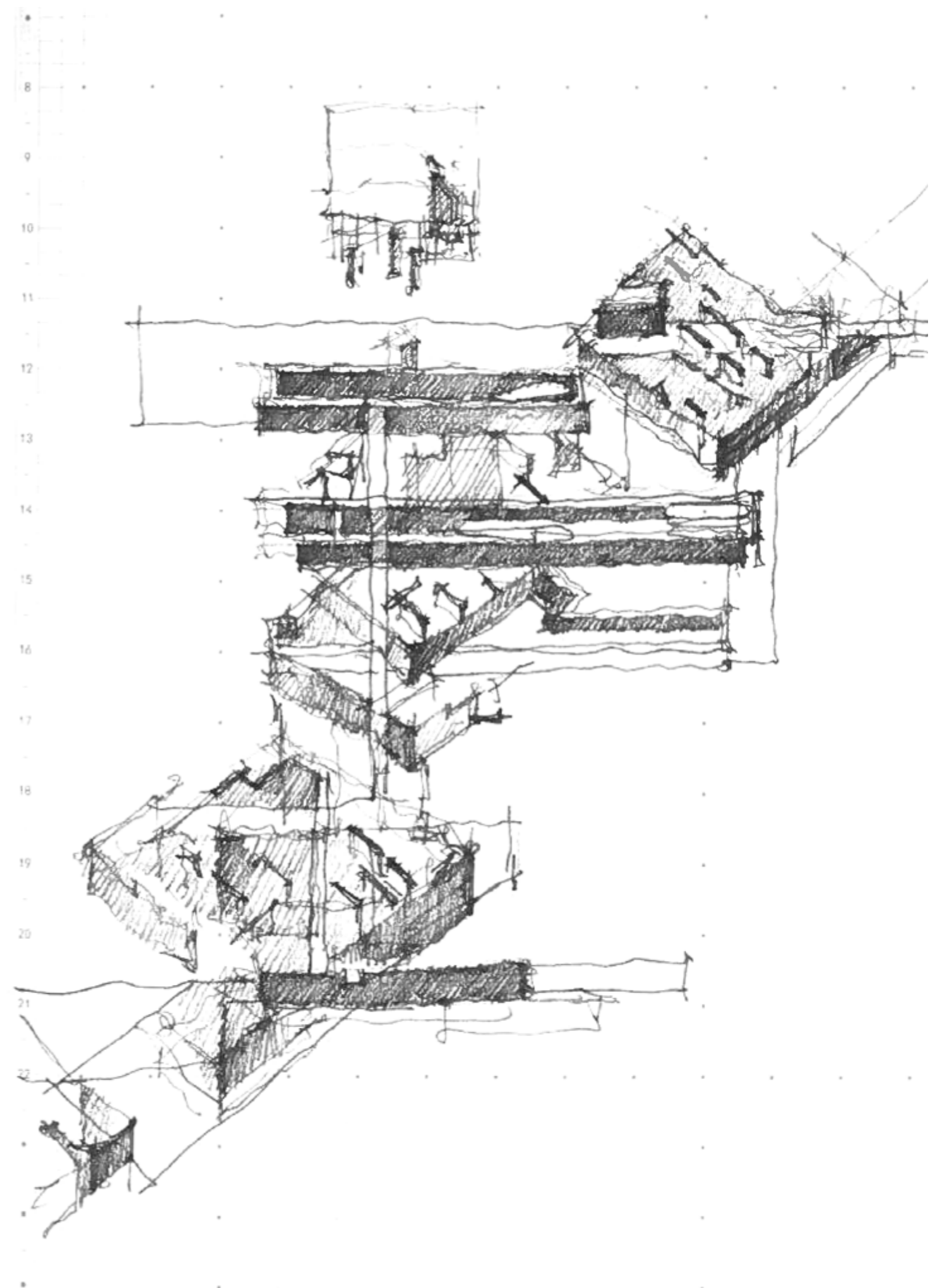
— 老子，《道德经》

Mold clay into a vessel; from its not-being (in the vessel's hollow) arises the utility of the vessel.

Cut out doors and windows in the house (wall) ; from their not-being (empty space) arises the utility of the house.

Therefore, by the existence of things, we profit; and by the non-existence of things, we served.

- *Lao-tzu*, translated by *Lin Yutang*, *Tao Te Ching*



THE COMPLEXITY OF VOIDNESS

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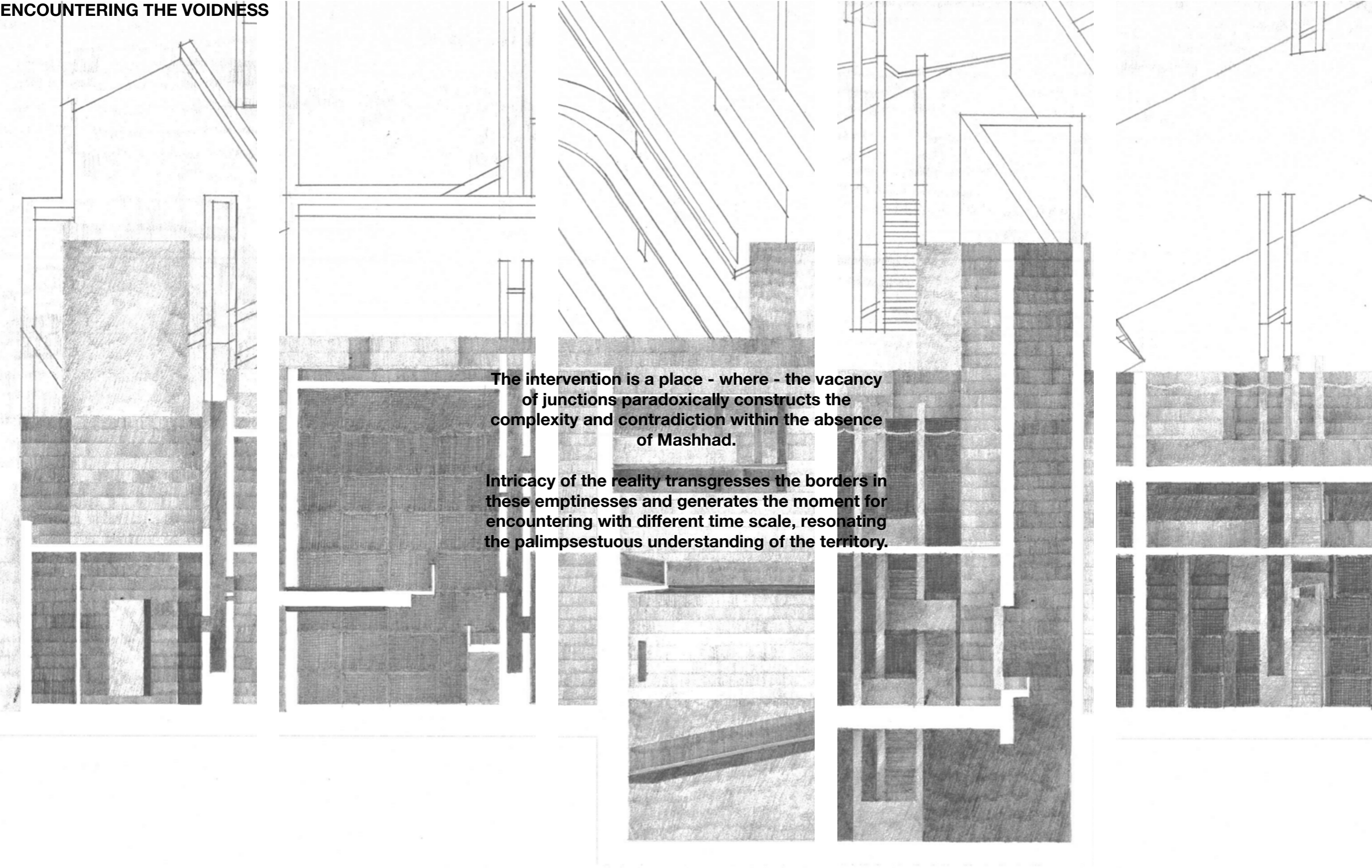
THE ALTERNATIVE SCENARIO

The void is part of the roof scape



ROOF-SCAPE

ENCOUNTERING THE VOIDNESS



ENDLESSER

THANK YOU!

P5 Presentation

Suihao (Jackson) Zhen, 4773004
July, 7th, 2021

Borders & Territories

Graduation studio (2020-2021) - Emerging border conditions in Eurasia
Faculty of Architecture and the Built Environment, TU Delft

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