

P5 presentation

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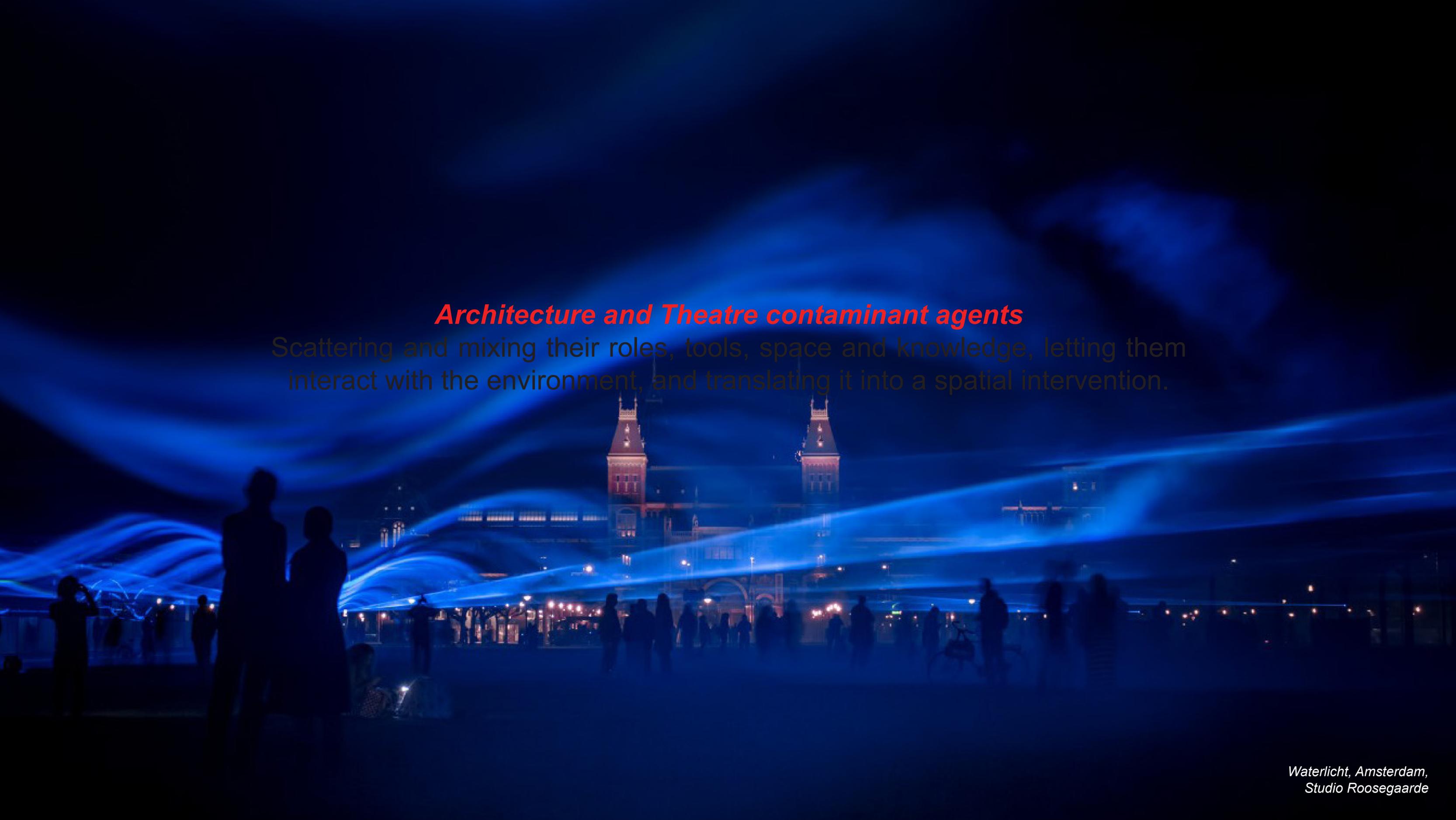
Ype Cuperus and Hubert van der Meel

Daan Vitner

Explore Lab 24

cross contamination

architecture and theatre as contaminant agents



Architecture and Theatre contaminant agents

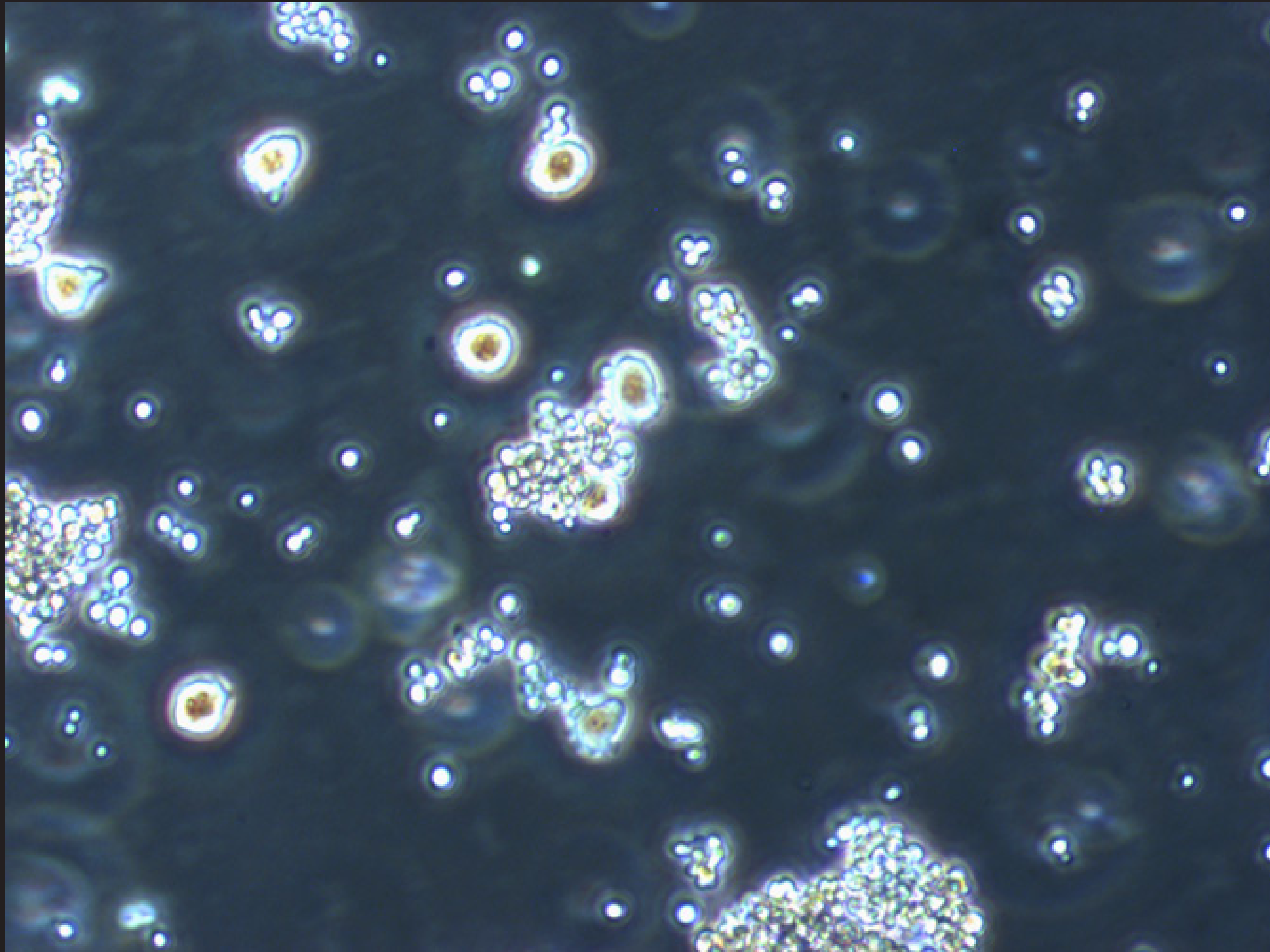
Scattering and mixing their roles, tools, space and knowledge, letting them interact with the environment, and translating it into a spatial intervention.

Architecture and Theatre as contaminant agents



*Jeanne d'Arc au bûcher,
Opéra de Frankfurt*

cross - contamination



Strongly contaminated culture of U937 suspension cells by yeast.

index

01 research

02 location

03 architectural composition

04 configurations

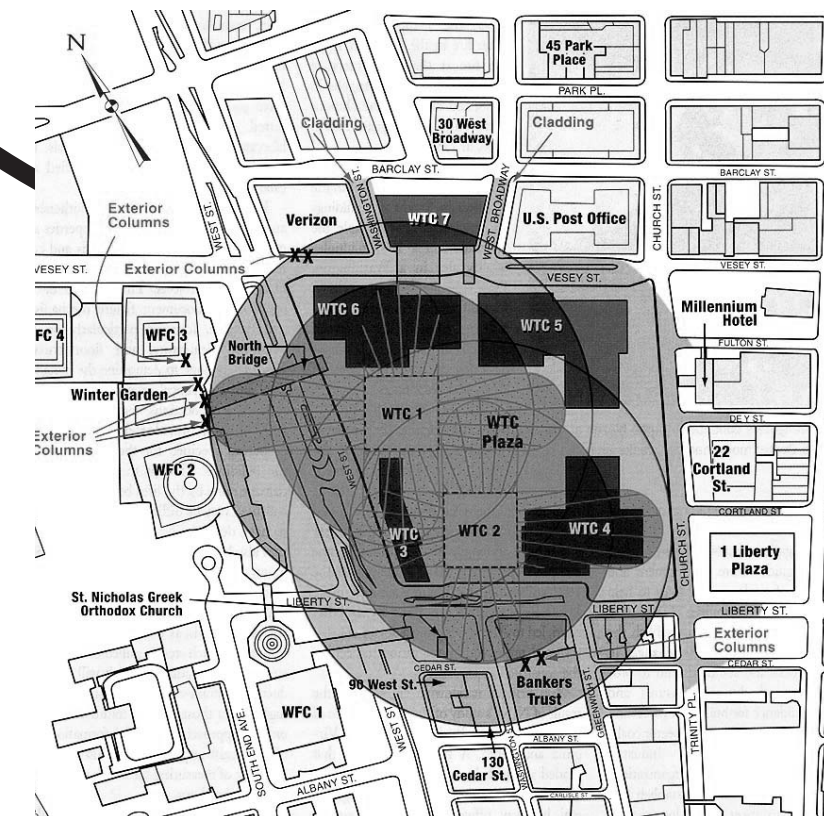
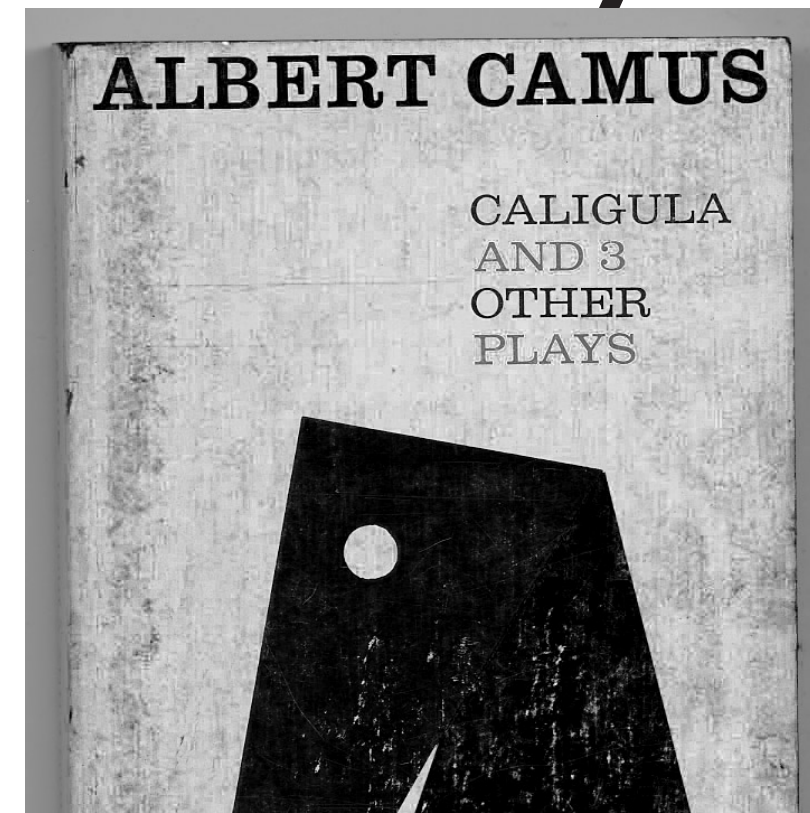
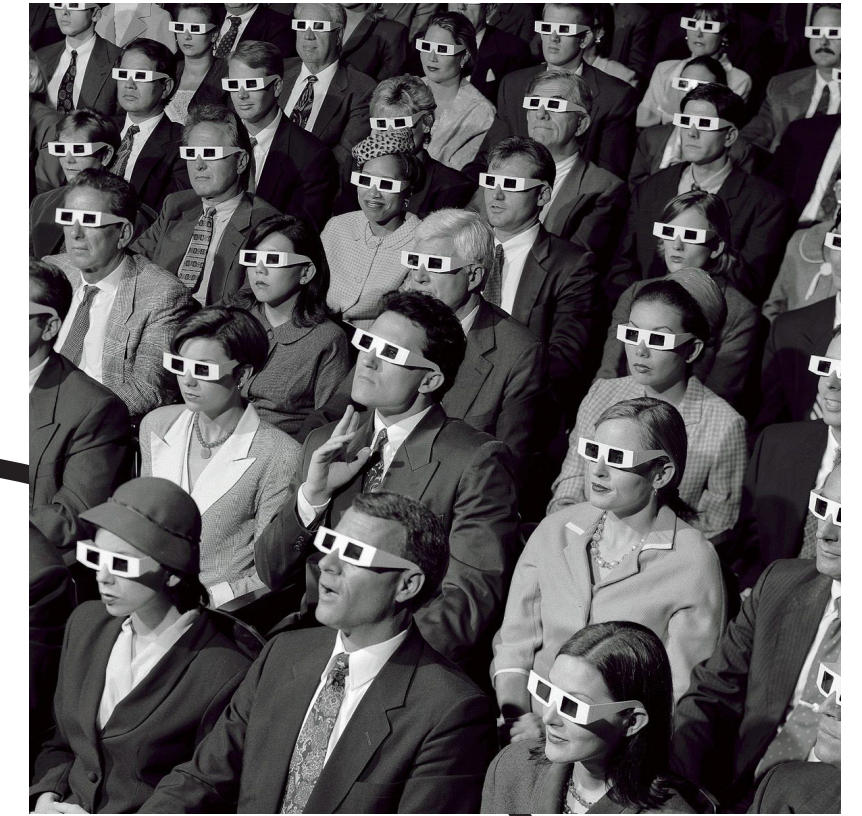
05 construction aspects

06 sustainable aspects

01 research

how :

- one entity
- challenge the existing convention
- shifting the roles
- position are ambiguous
- experimentality
- trigger contamination



research question

The image shows a theatrical stage set. In the center is a white, paneled door standing alone. To the left and right of the door are two large, conical chandeliers made of white wire mesh. The floor is dark with a grid of thin, light-colored lines. The background is dark, and the ceiling has visible stage lighting rigs.

Research question:

“How architecture and theatre can subvert the hierarchies and the conventions they are based on, and to what extent the edges of the disciplines can be blurred, contaminate and being contaminated by the users and the environment?”

analysed topics

10

- + *Performativity in Architecture*
- + *Hierarchies between disciplines*
- + *The black box concept*
- + *Case studies*

Performative Object

- “1. an object whose cornerstone is narrative and whose nature is completed by an action acted by the user*
- 2. an object designed and made according to the action that demands or dictates, not designed upon its function. By extention, every object that request to assume a certain number of positions, both physical and mental.”*

K. Niedderer, Designing the Performative Object: A Study in Designing Mindful Interaction Through Artefacts (Ph.D. thesis, University of Plymouth, UK, 2004)

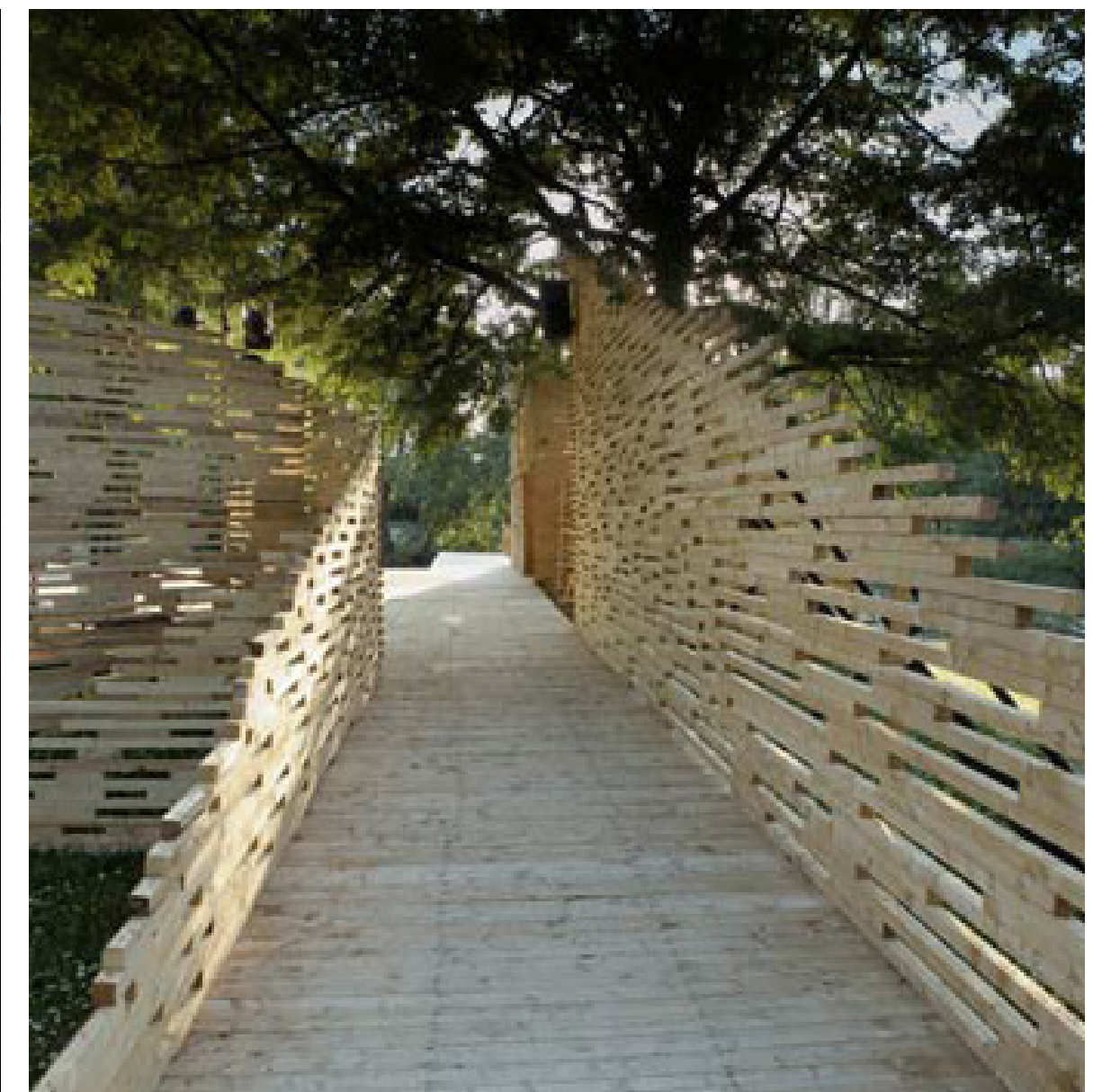


performativity in architecture

12

“In performative architecture, the emphasis shifts from building’s appearances to indeterminate patterns and dynamics of use, and poetics of spatial and temporal change.”

Performative Architecture, Branko Kolarevich, 2005



*Summer Theatre, Kadarik Tüür
Arhitektid, Estonia*

performativity in architecture

13

“The buildings characteristics are a reflection between the materials and to how they create the flexibility to the performance, instead of being a building that creates no movement visually or through. Both visually and structurally, the building is moving; the building complements the performance.”

Performative Architecture, Branko Kolarevich, 2005



hierarchies between disciplines

14

How to avoid that Architecture blindly produces containers for Theatre?

- *Starting to treat the building processes as performances*
- *Operating a disjunction between form and function, allowing mismatches to create certain friction*



black box concept

15

The black box is that concept that sees the stage or the auditorium of a theatre as a pure aseptic black container which is not influencing its content at all. But that doesn't exist.

“Architecture should not disappear when the lights go down”

Dorita Hannah

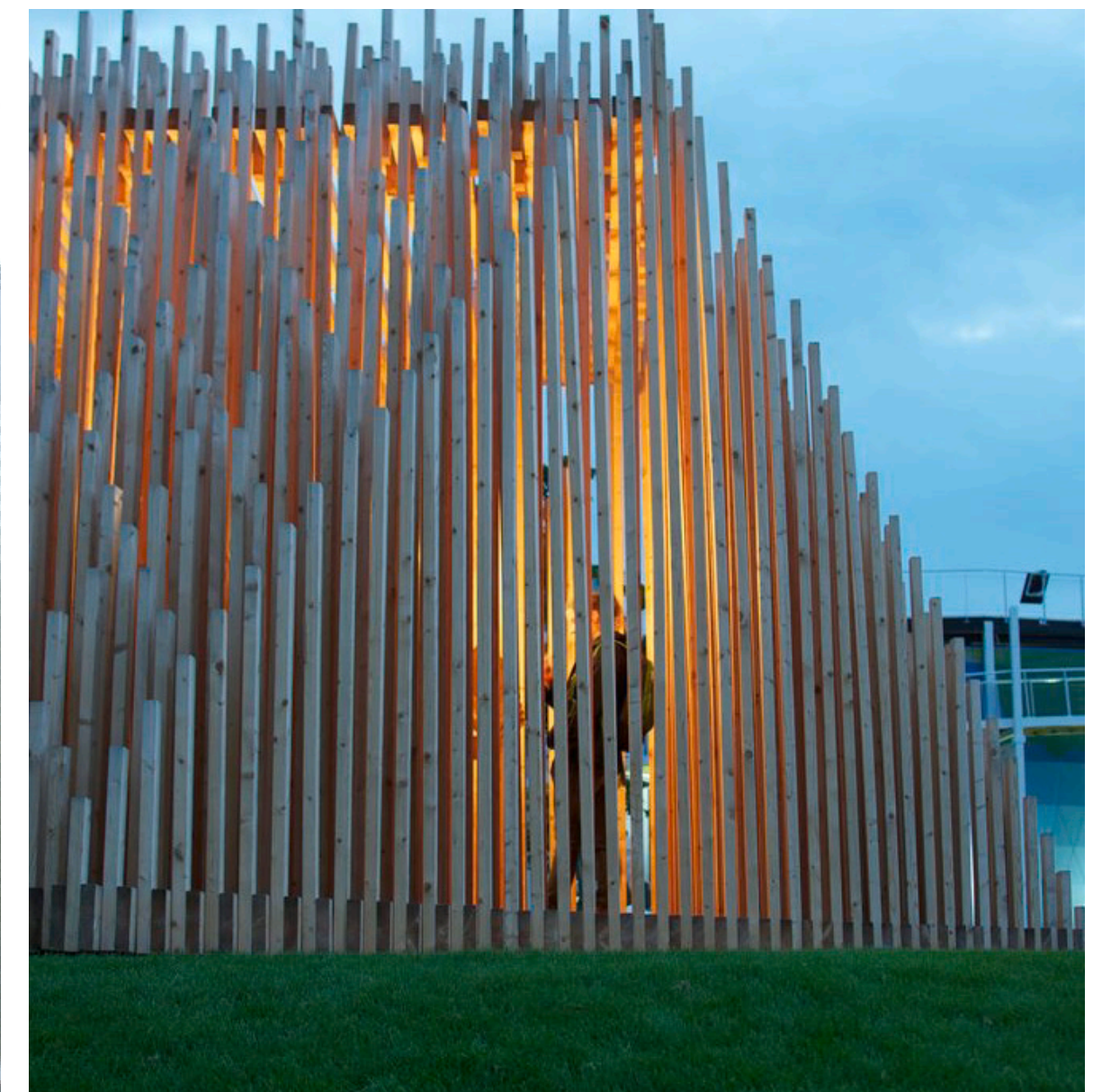


*Teatro Oficina, Lina Bo Bardi,
Sao Paulo*

case studies

16

- *modular and transforming configuration of the space*
- *integration in the urban-natural env.*
- *itinerant*
- *playing with perception and senses*
- *ephemeral and poetic*



*Folly for flyover, Assemble,
London*

*Teatro del mondo, Aldo Rossi,
Venice*

*Crown fountain, Jaume Plensa,
Chicago.*

*Khor I, TAAT,
Venlo*

About performativity in architecture:

- *Design upon the action they suggest rather than on the function.*
- *Focus more on the flexible use rather than the shape*
- *The building is changing nature, so in a way kinetic, and interacts with audience.*

How to eradicate hierarchies between the disciplines?

- *Allowing the unexpected*
- *Disjunction form - function*
- *Avoiding that architecture dictates strict spatial and social cues, but rather be flexible.*

How to avoid the black box?

- *With rupture between the stage and the rest, no dedicated spaces univocally for performance*
- *With structure and technical elements that are the stage, and they can be used to co-create the meaning.*

02 location



Ter Apel



3 reasons

1 Unconventional place



2 Unconventional audience



3 *It's the first location of a series*

assessment location

1 **Five typologies of camps.** 2000 people max including kids.
*Variety of nationalities. Maximum stay 3 months. Good living conditions.
No chances of connection with locals, nothing in common.*



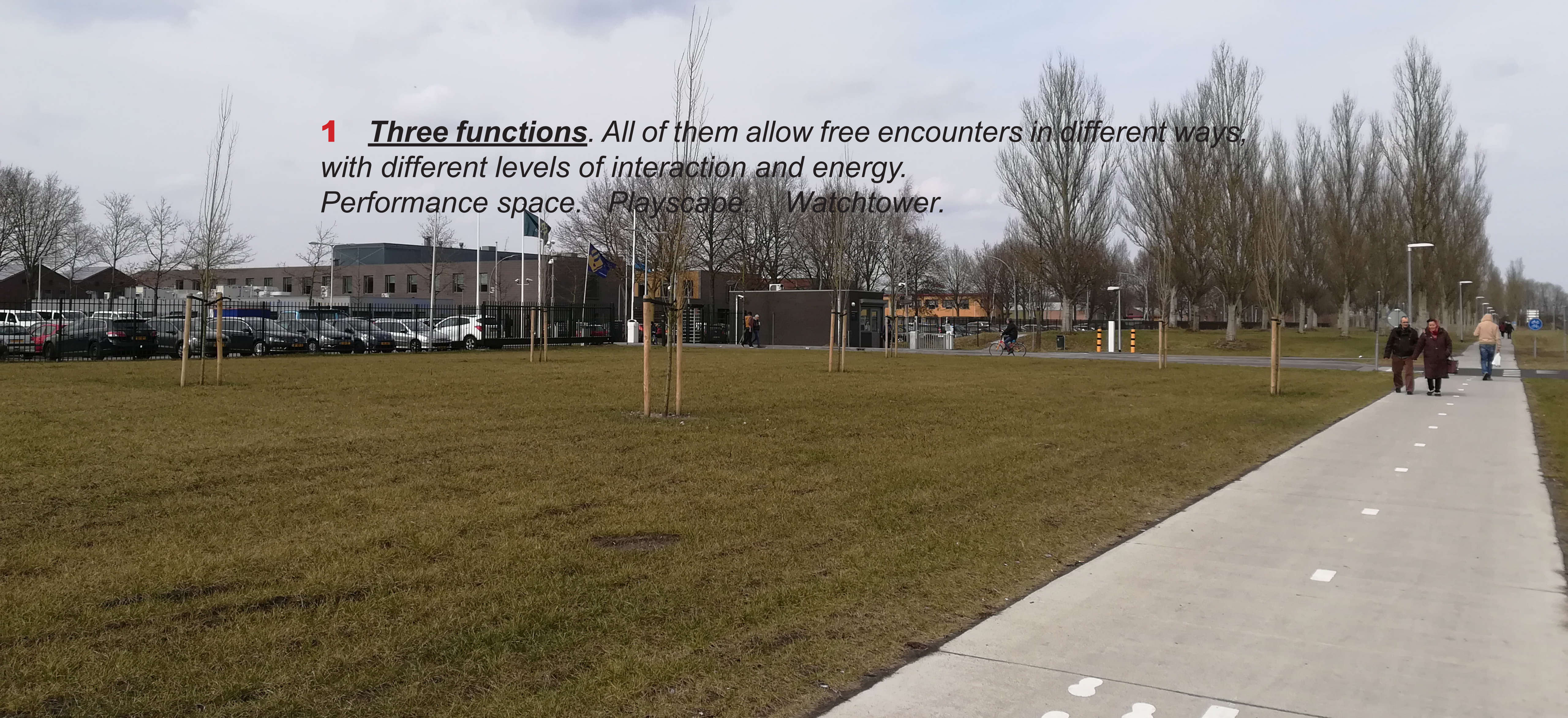
assessment location

2 Small town. 9000 inhabitants, mainly between 50 and 70 y.o.
Intolerance is present, tolerance and respect too. Also the inhabitants
think it is difficult to connect with refugees.



from assessment to design

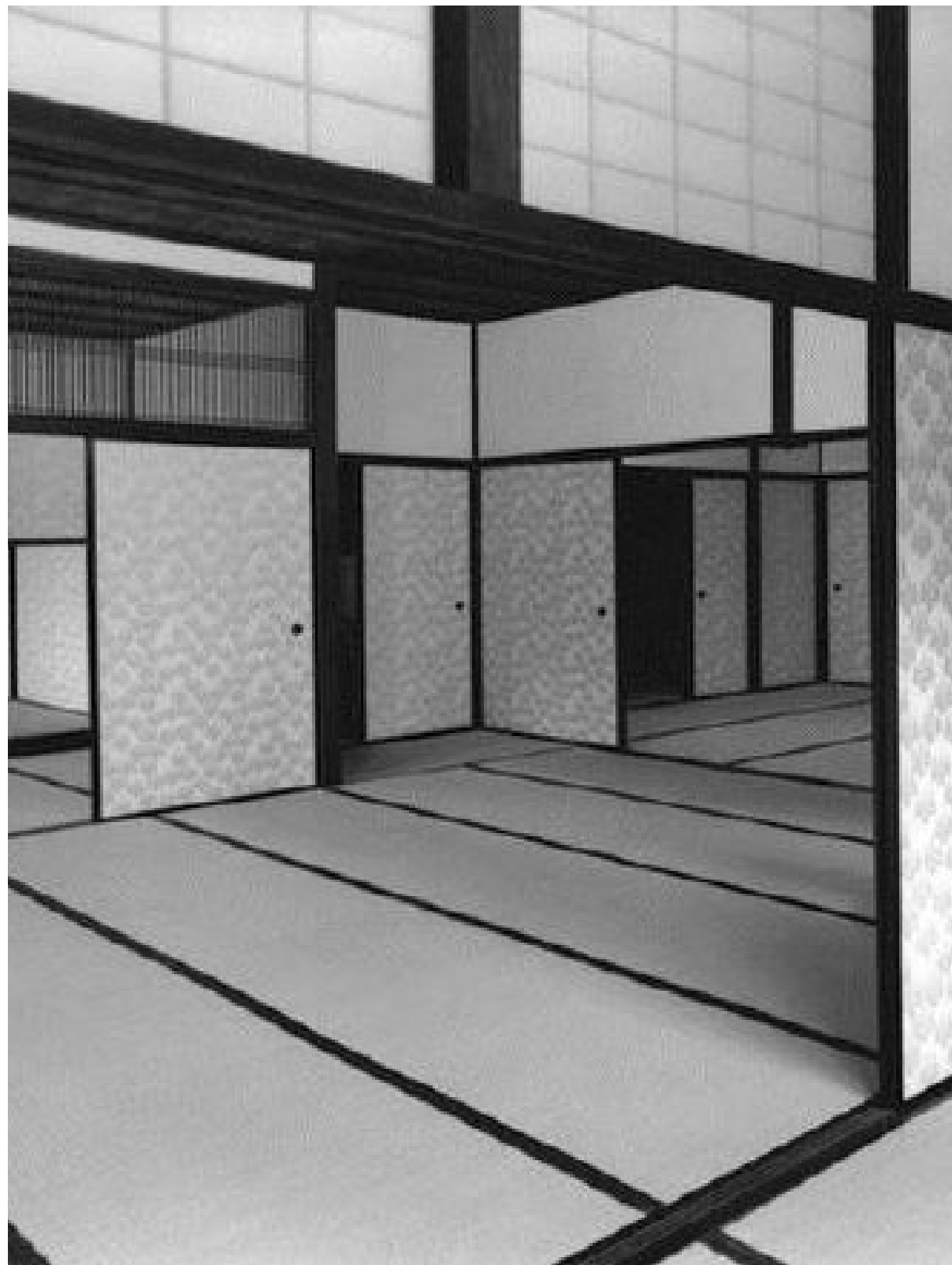
1 **Three functions.** *All of them allow free encounters in different ways, with different levels of interaction and energy. Performance space. Playscape. Watchtower.*



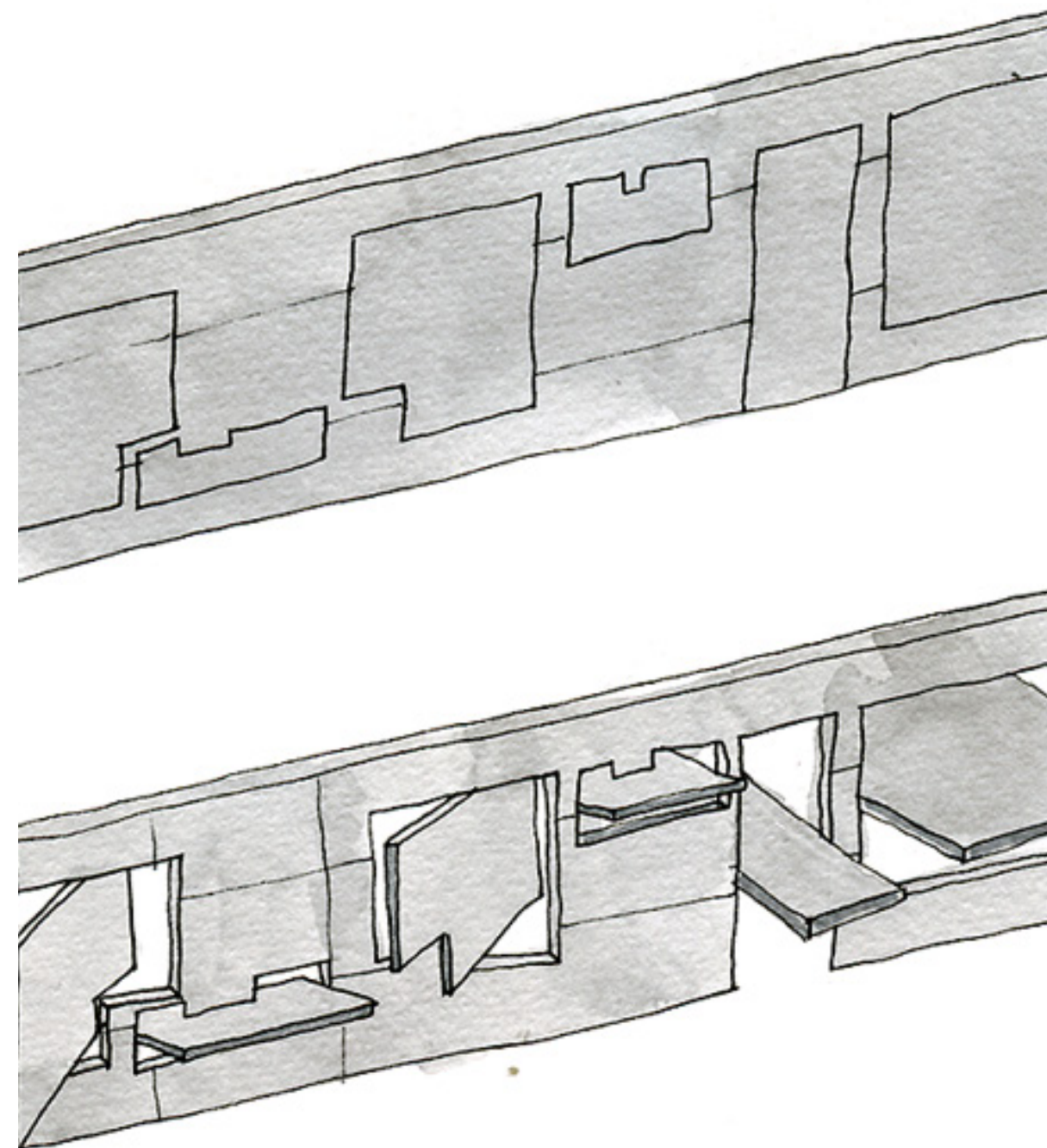
2 *The type of performance is influencing the space*

*Immersive theatre,
classic performances,
contemplation space,
.....and open for any future use of the municipality of Ter Apel
.....or any private that wants to rent it*

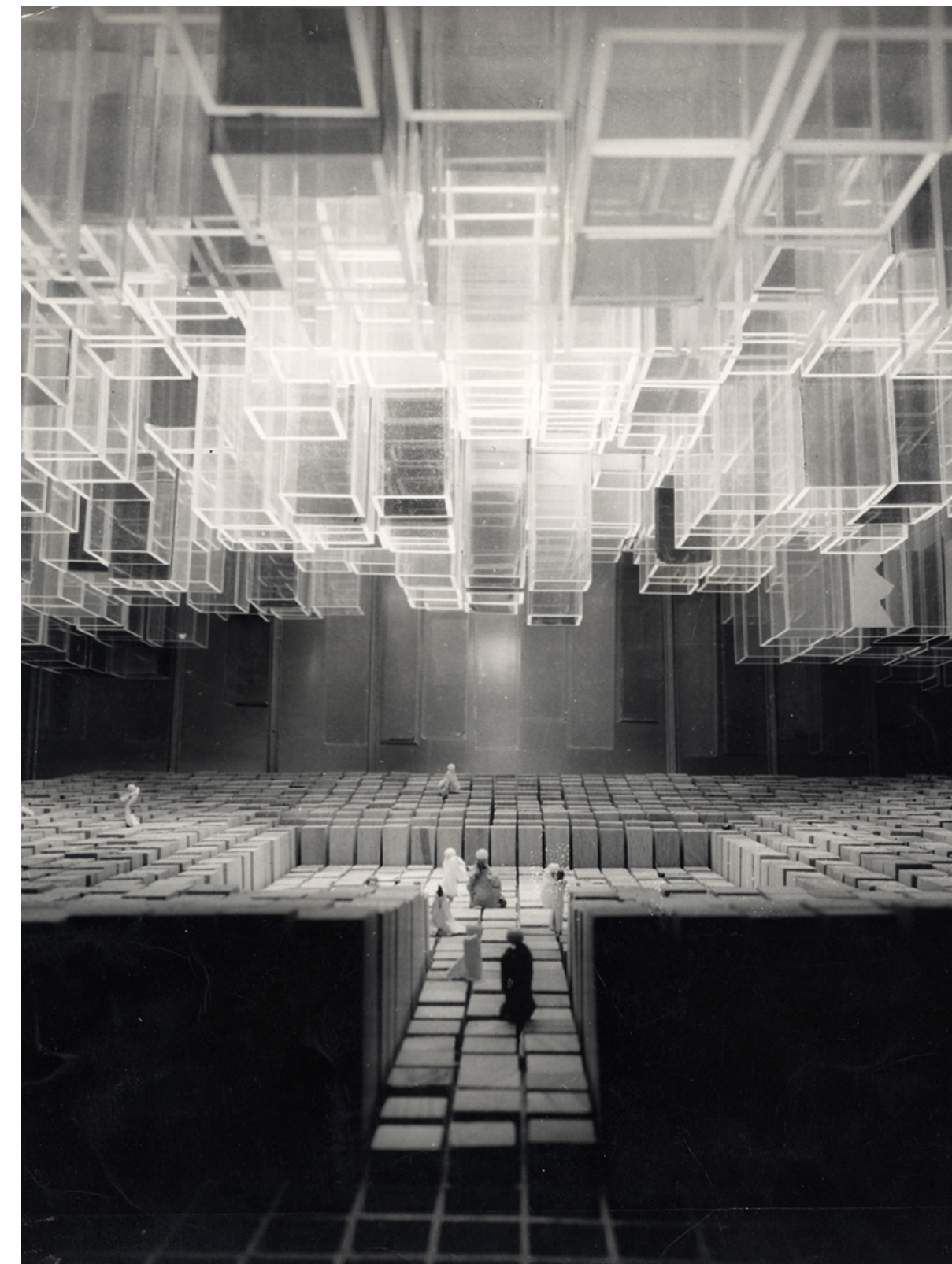
4 ***Flexible space** that can host any type of performance and suitable for any future use, even from the local community*



Imperial villa in Katsura, Kyoto



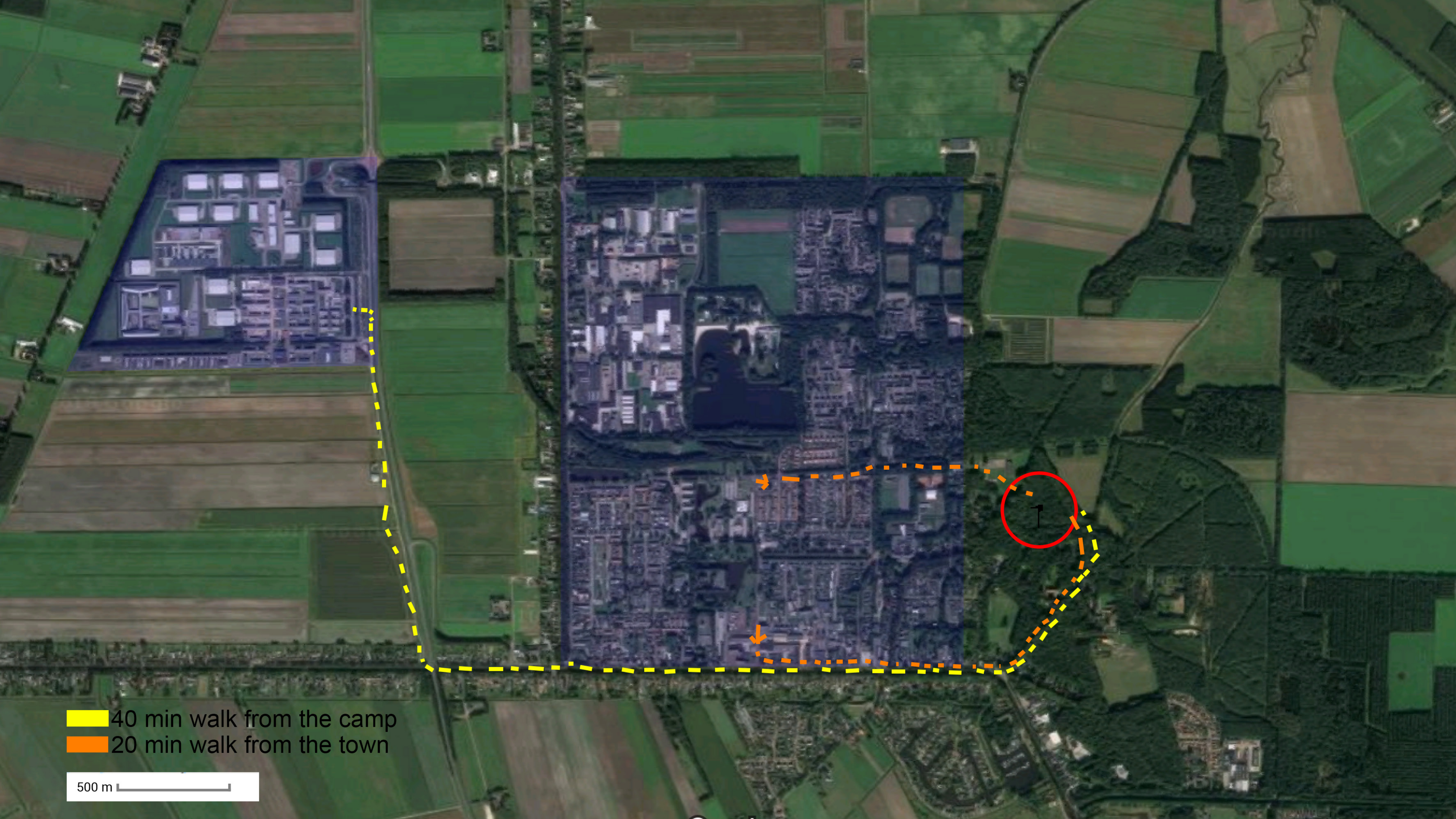
Storefront for Art and Architecture, New York



Teatro Lirico di Cagliari, M. Sacripanti



Wooden sculpture, Beijing



40 min walk from the camp
20 min walk from the town

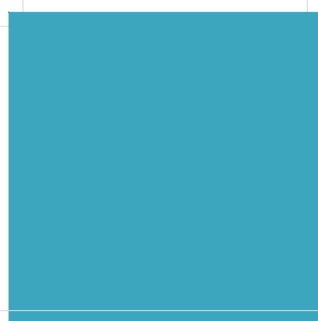
500 m

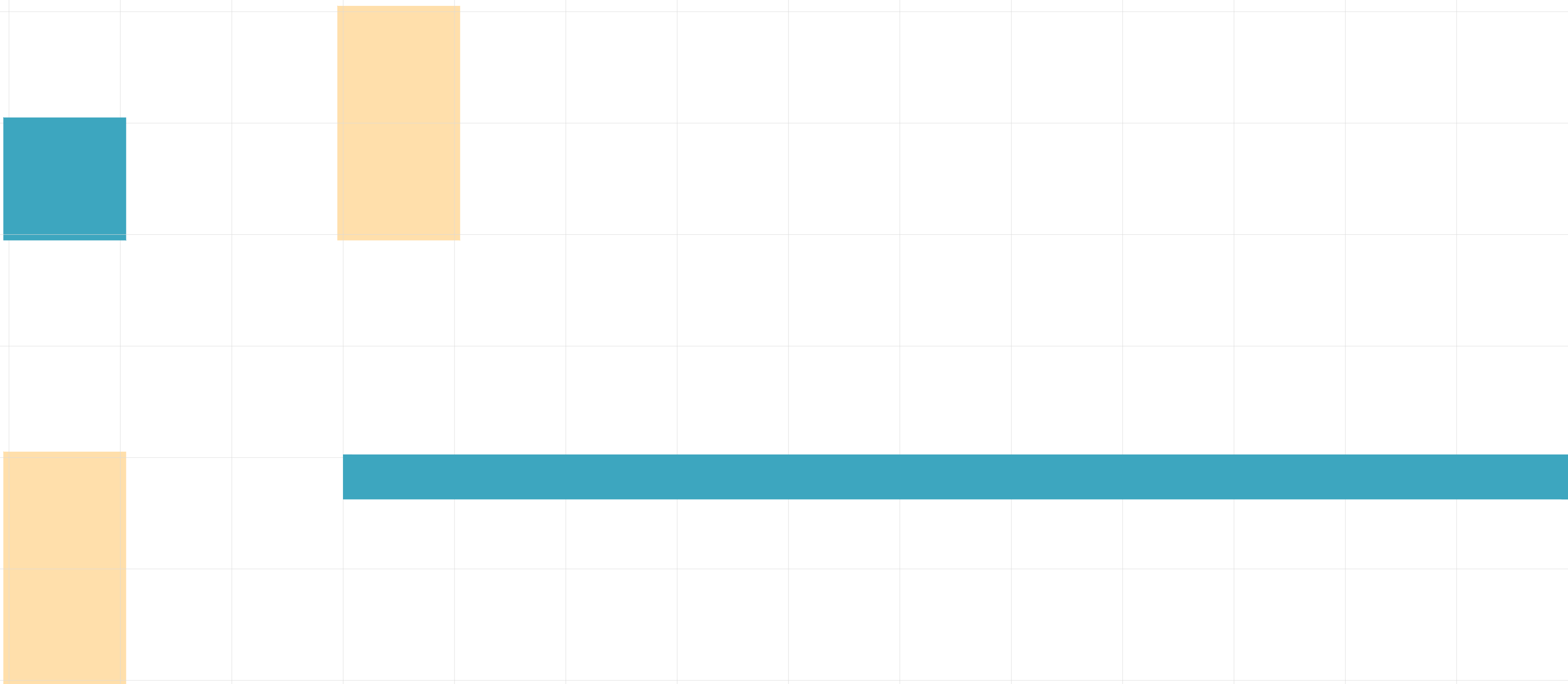
why the specific place

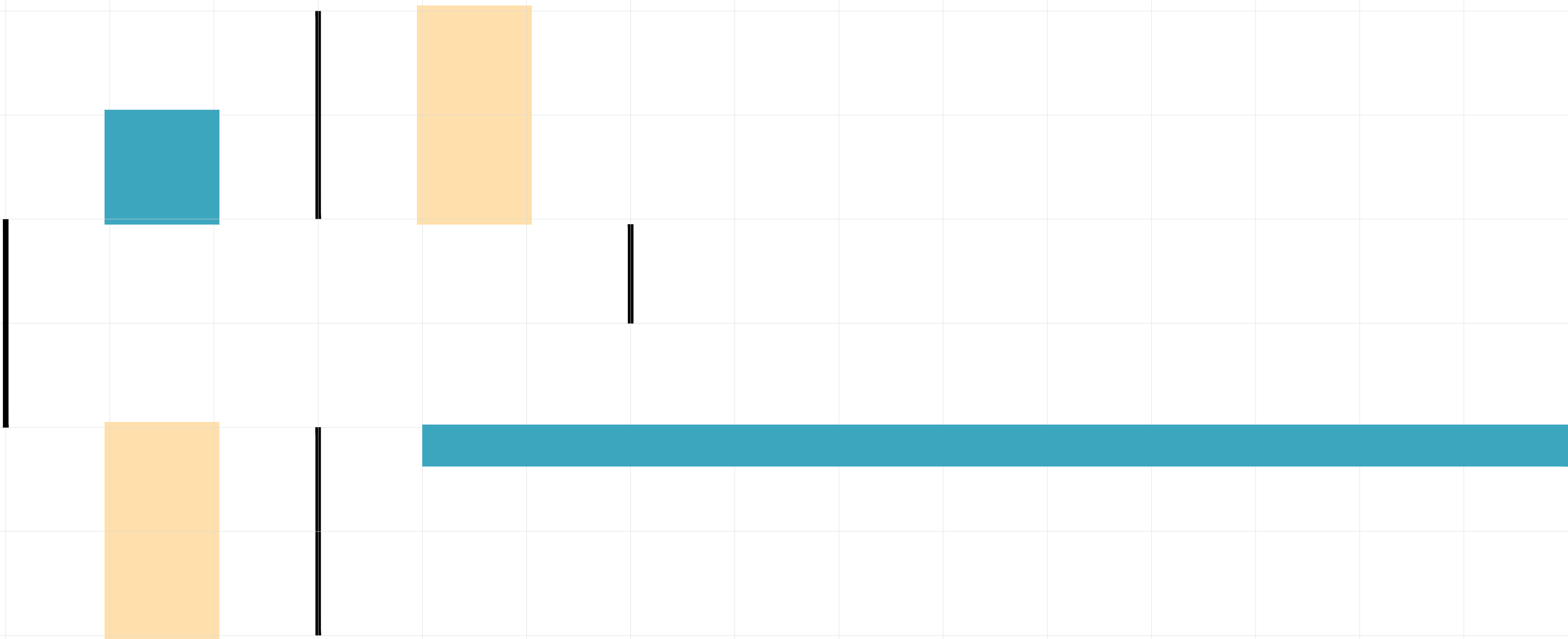
30

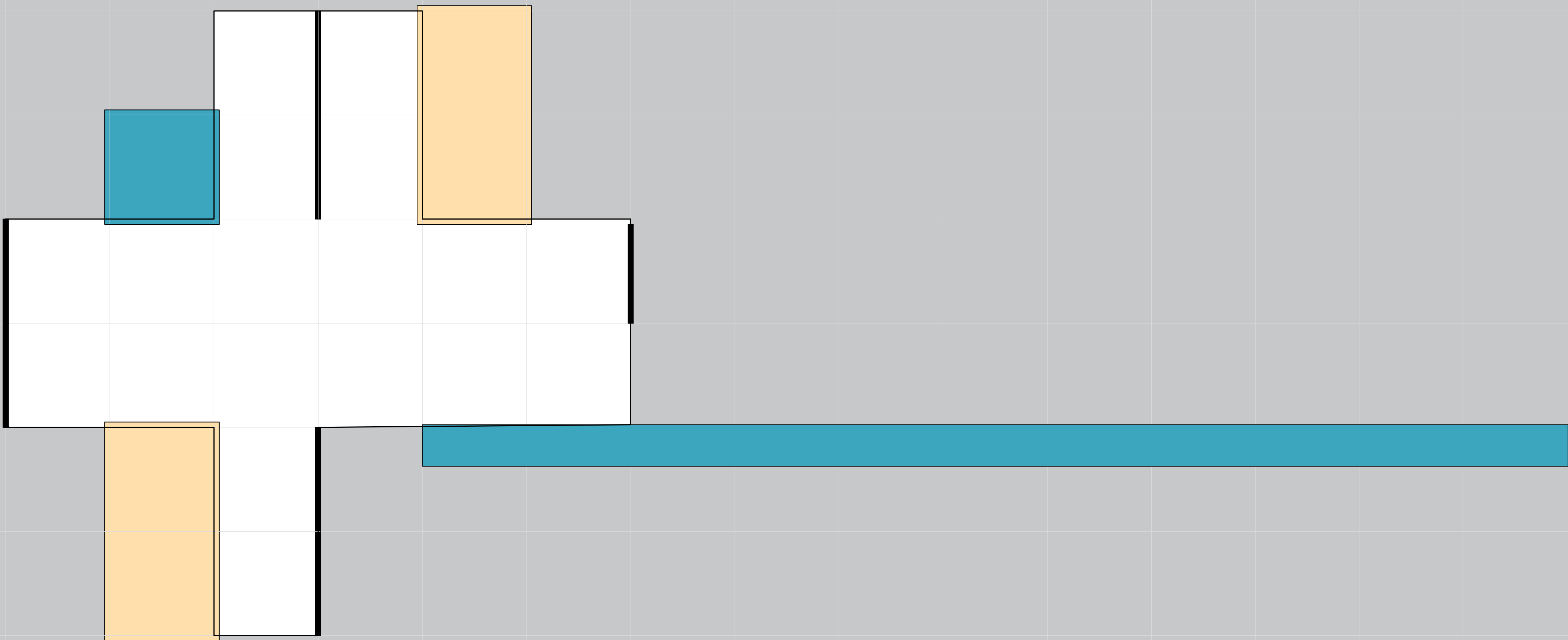


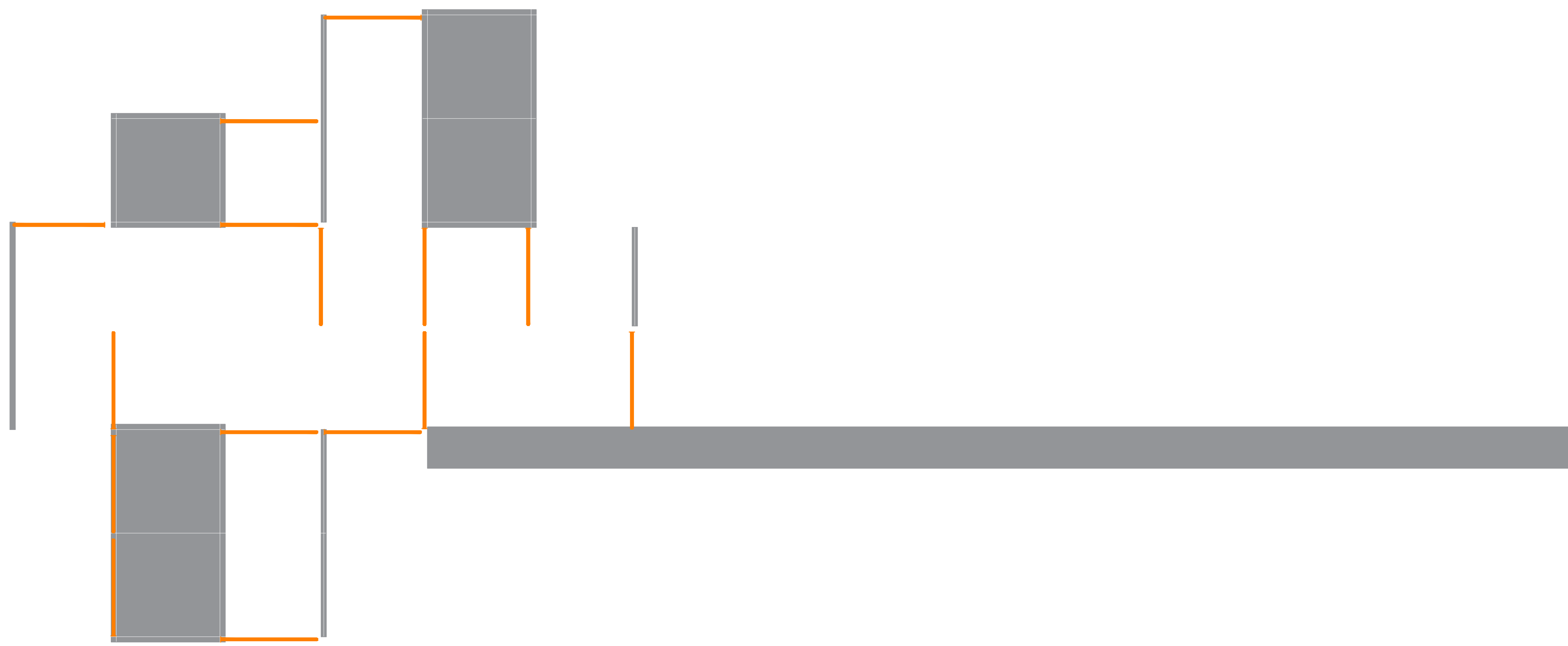
03 architectural composition

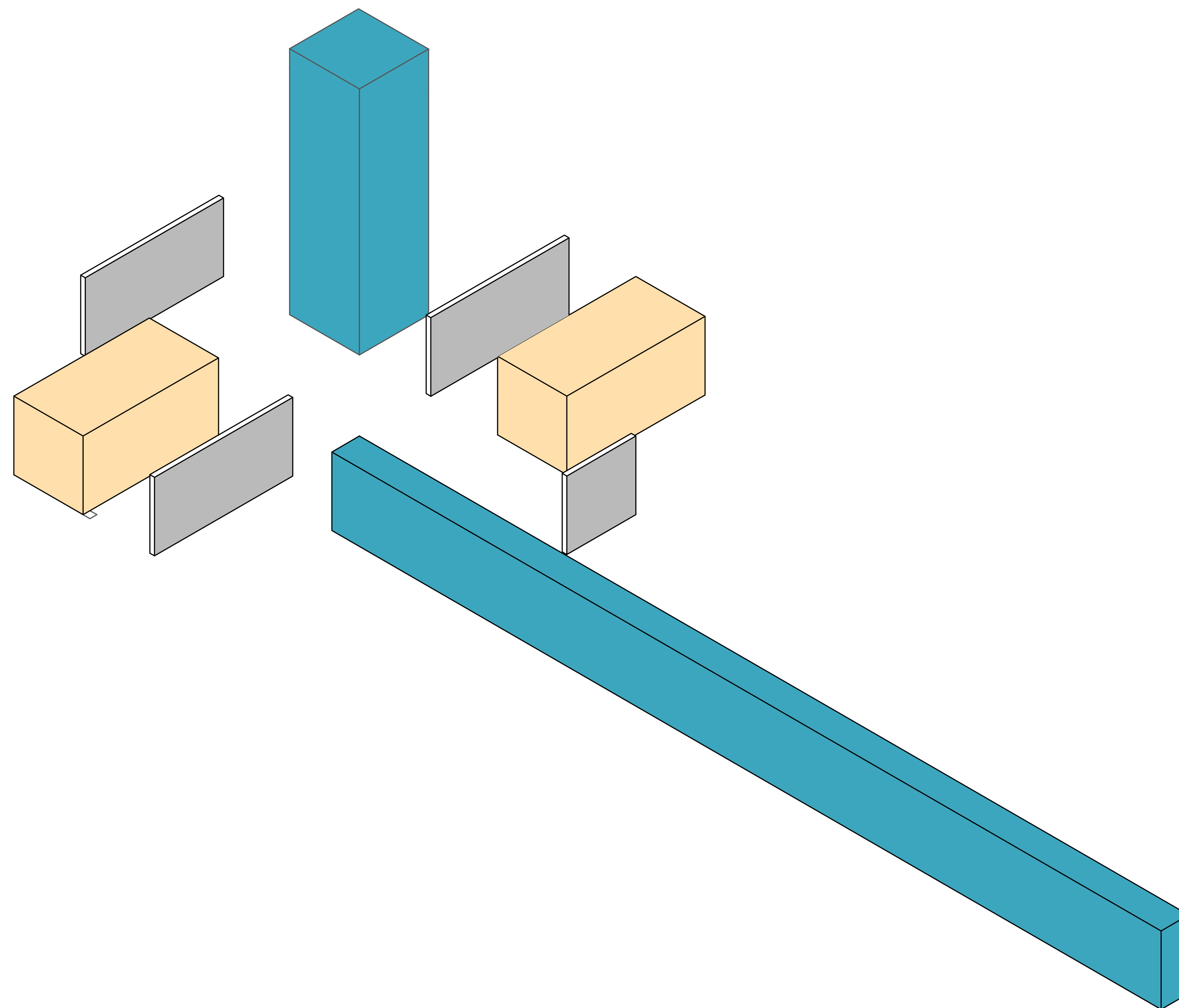












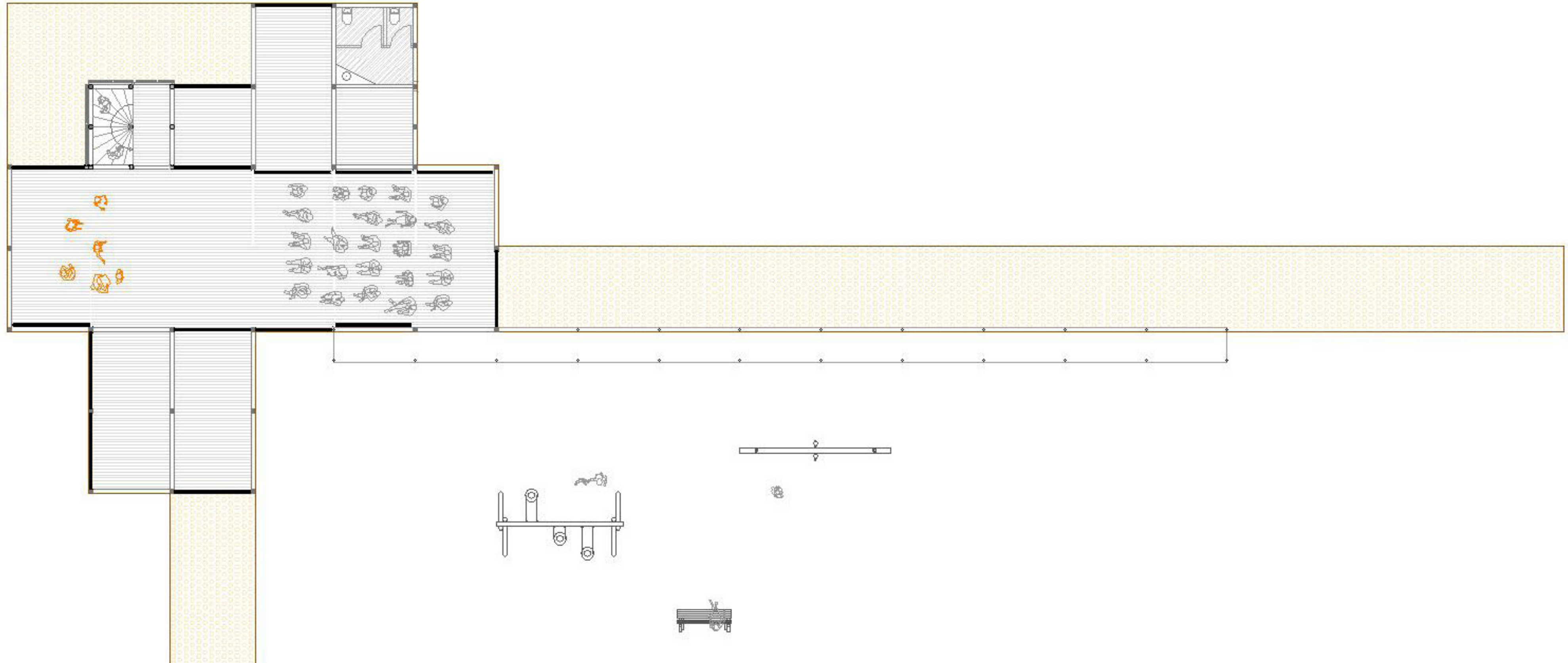
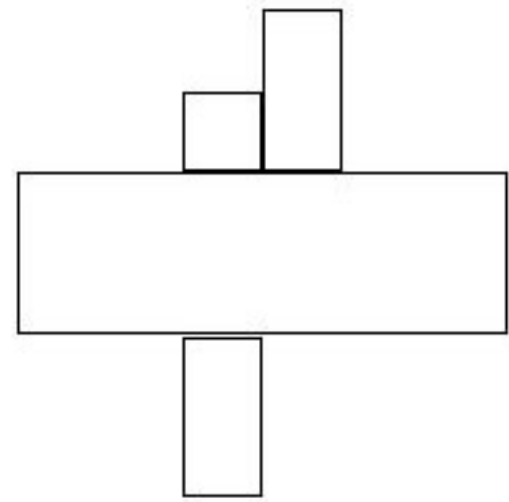
04 configurations



configuration 1

41

classic closed space





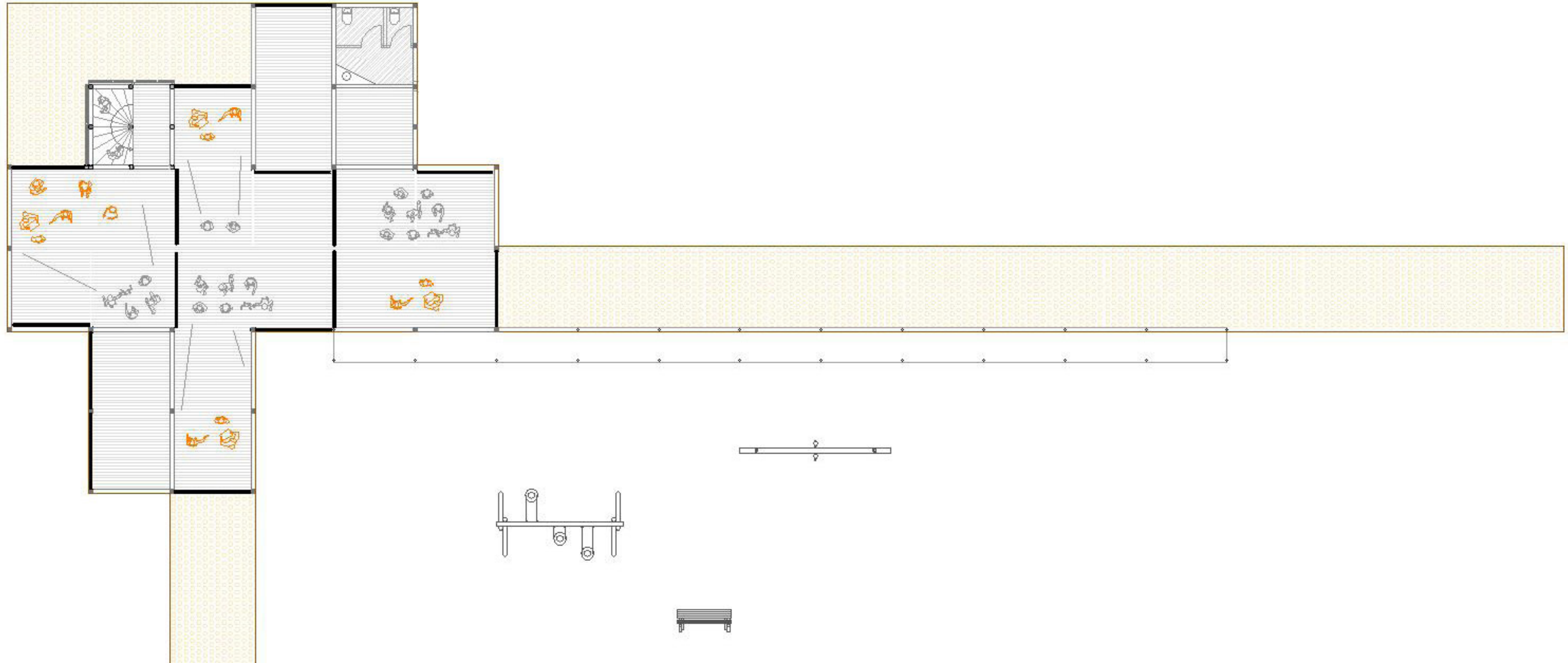
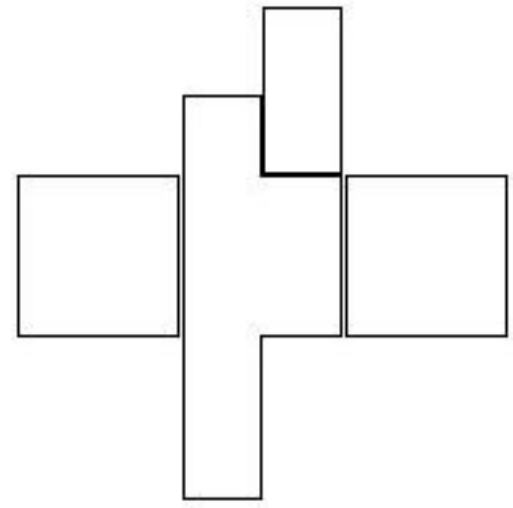




configuration 2

45

4 closed space

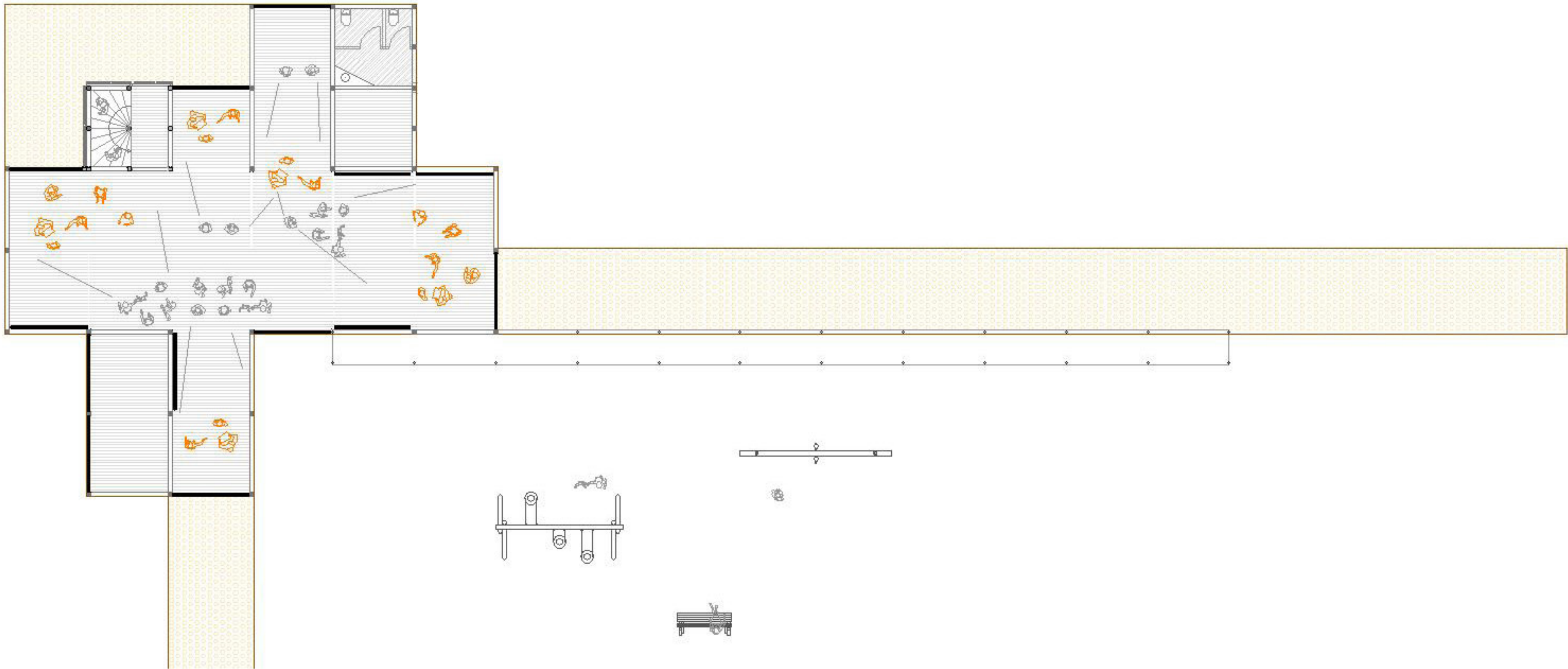
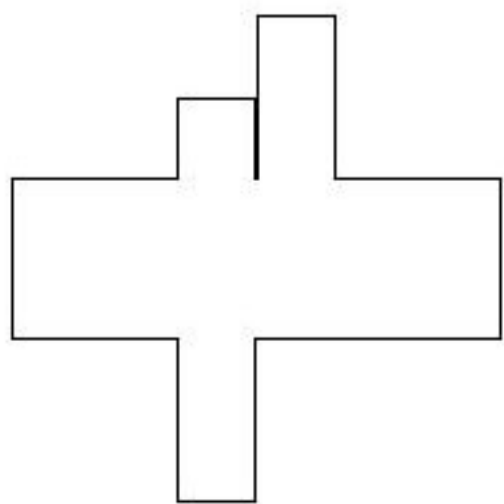






configuration 3

1 irregular closed space

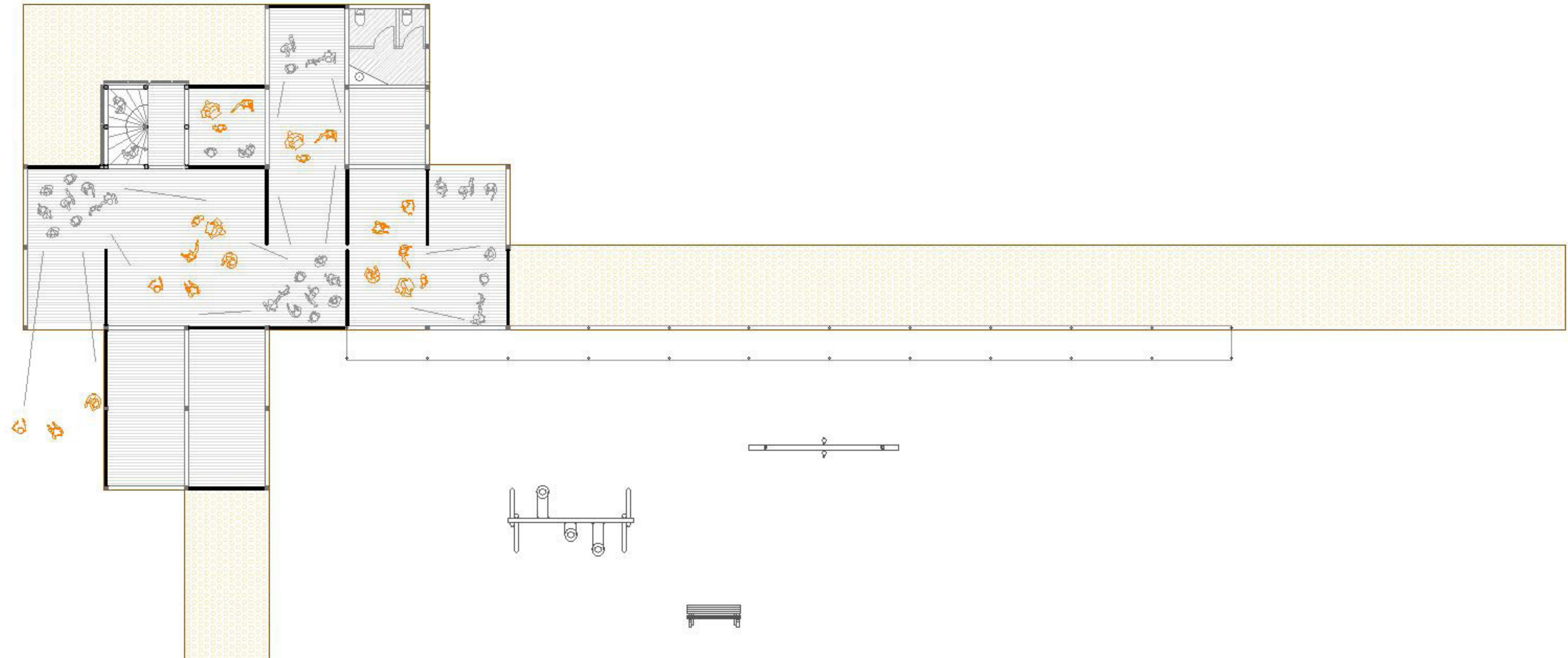
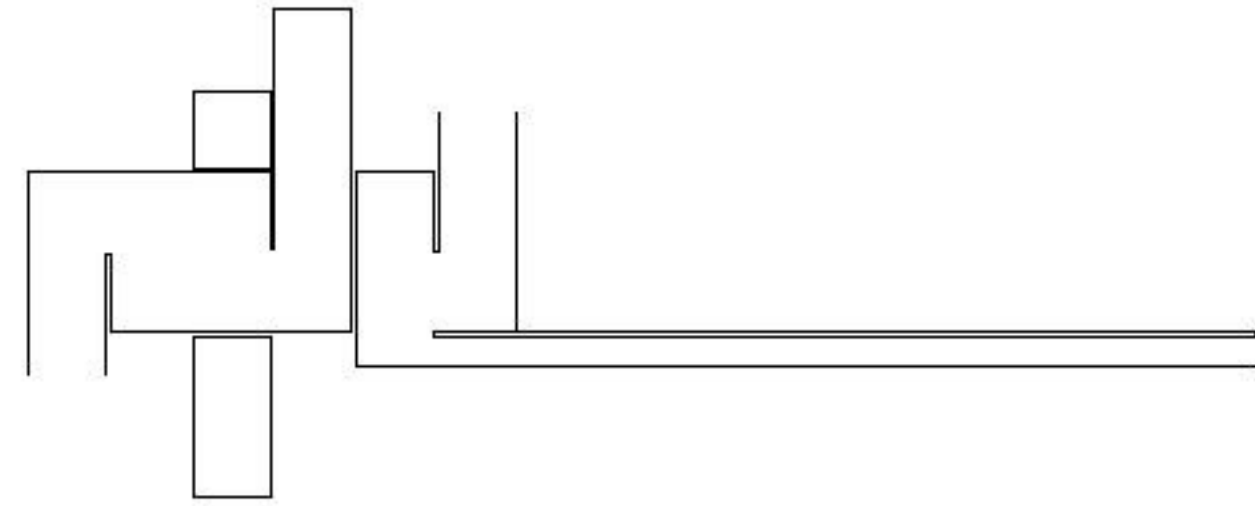






configuration 4

2 closed spaces, 2 semi - open















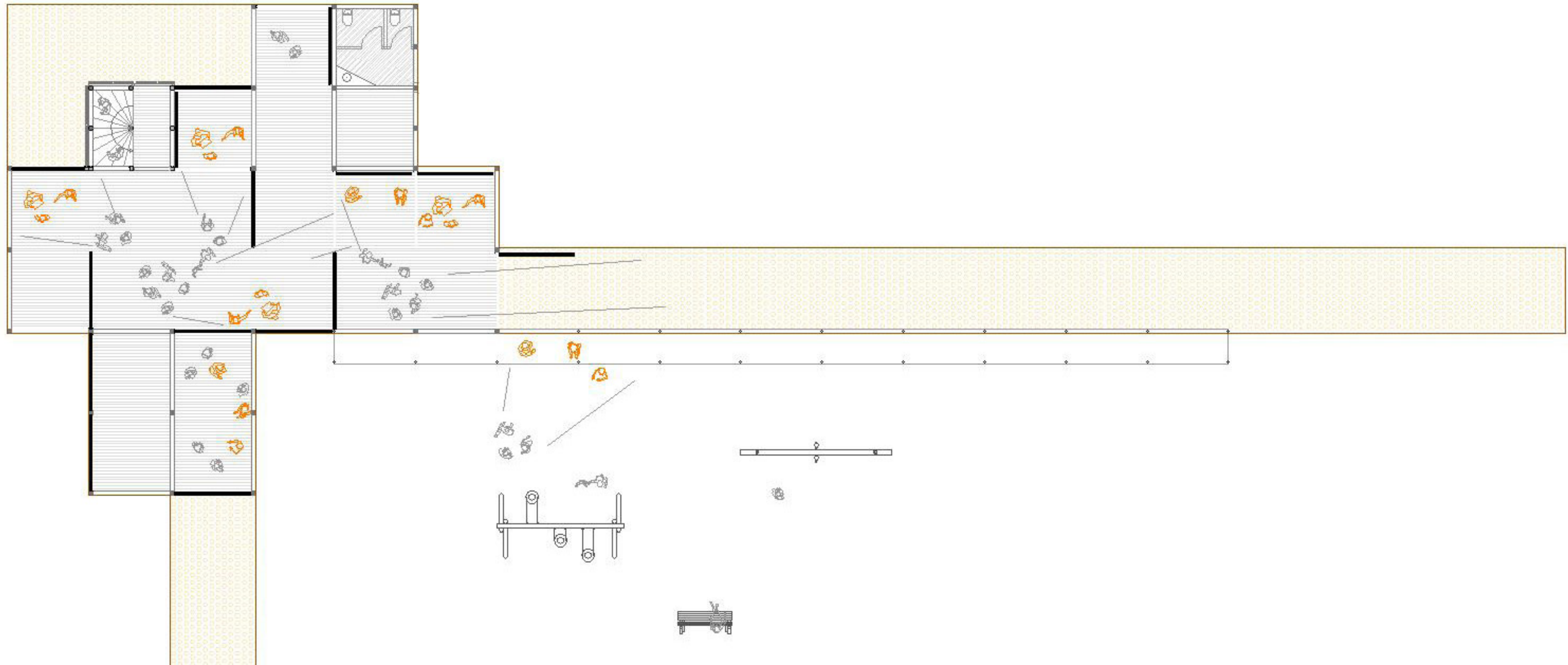
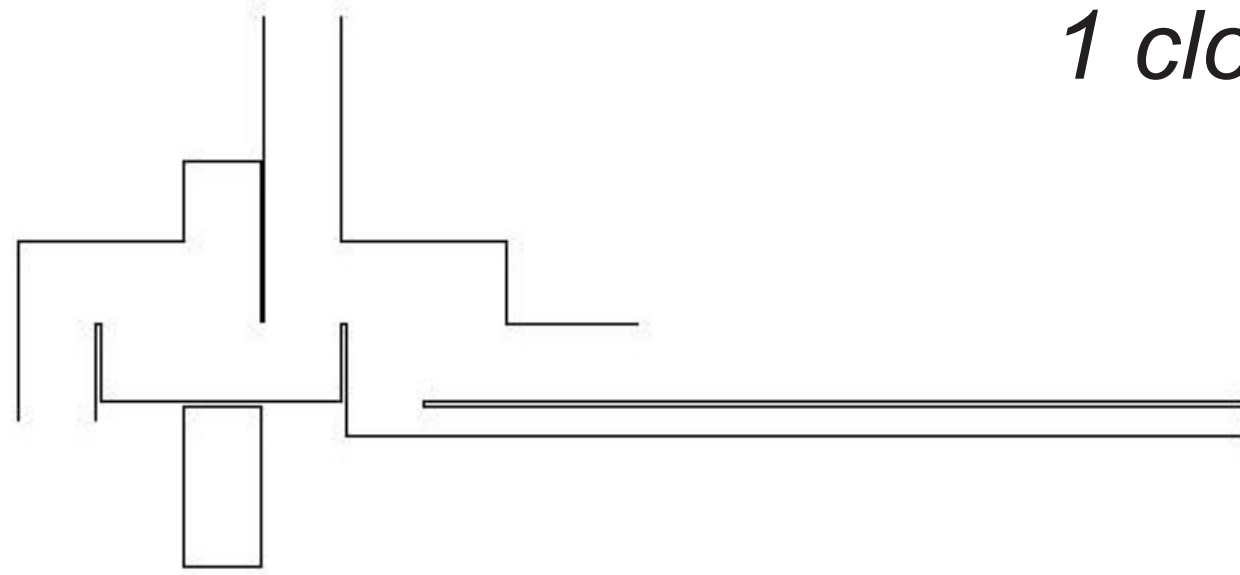




configuration 6

61

1 closed space, 1 irregular semi - closed









05 construction

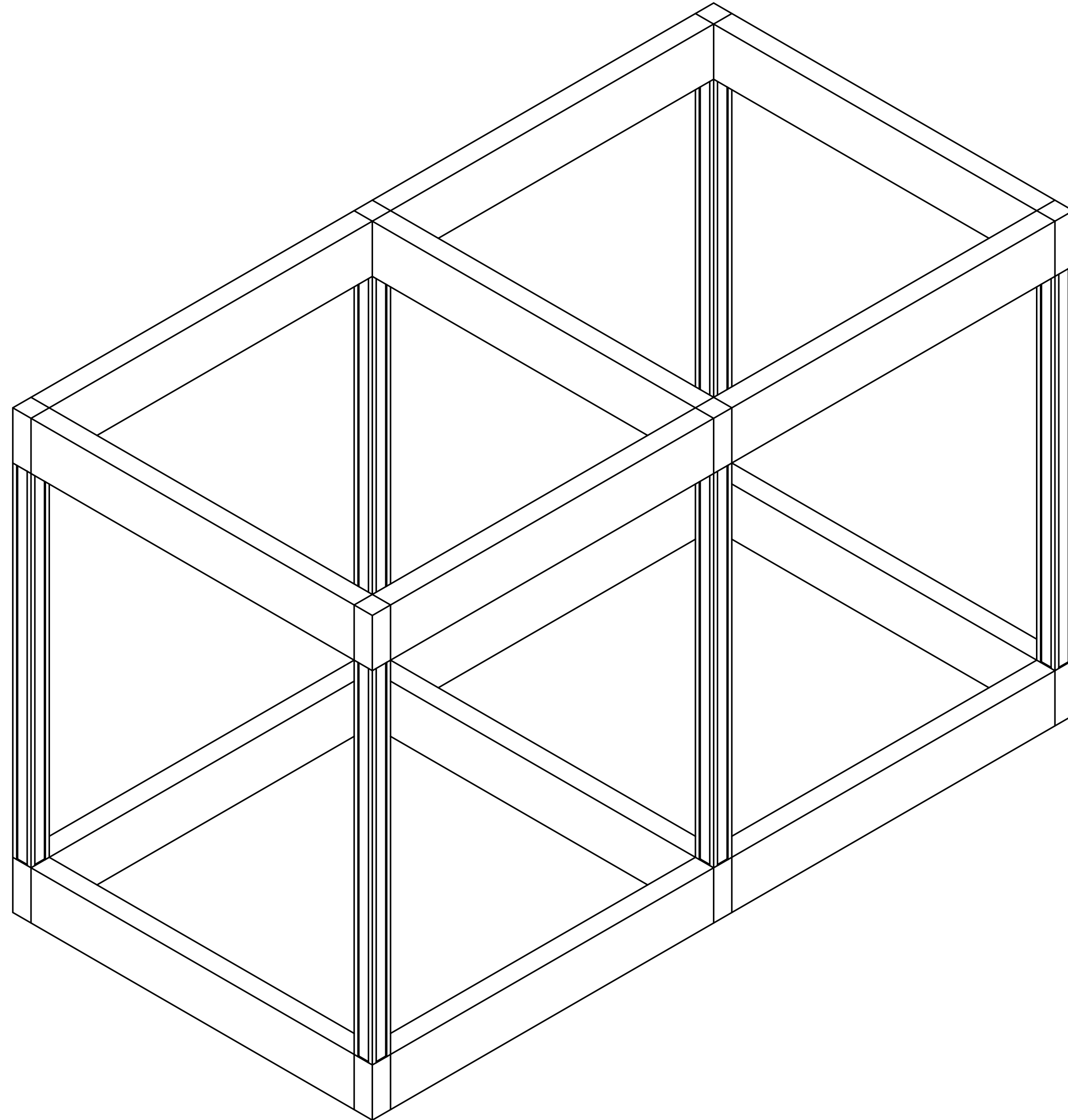
construction phases

66

- 1** *In the workshop*
- 2** *Transportation* *with wider trucks, no permits needed*
- 3** *On site: construction* *done only by builders*
- 4** *On site: changing configurations* *can be done by the users with minor effort and tools*
- 5** *Moving to the next location*

phase 1

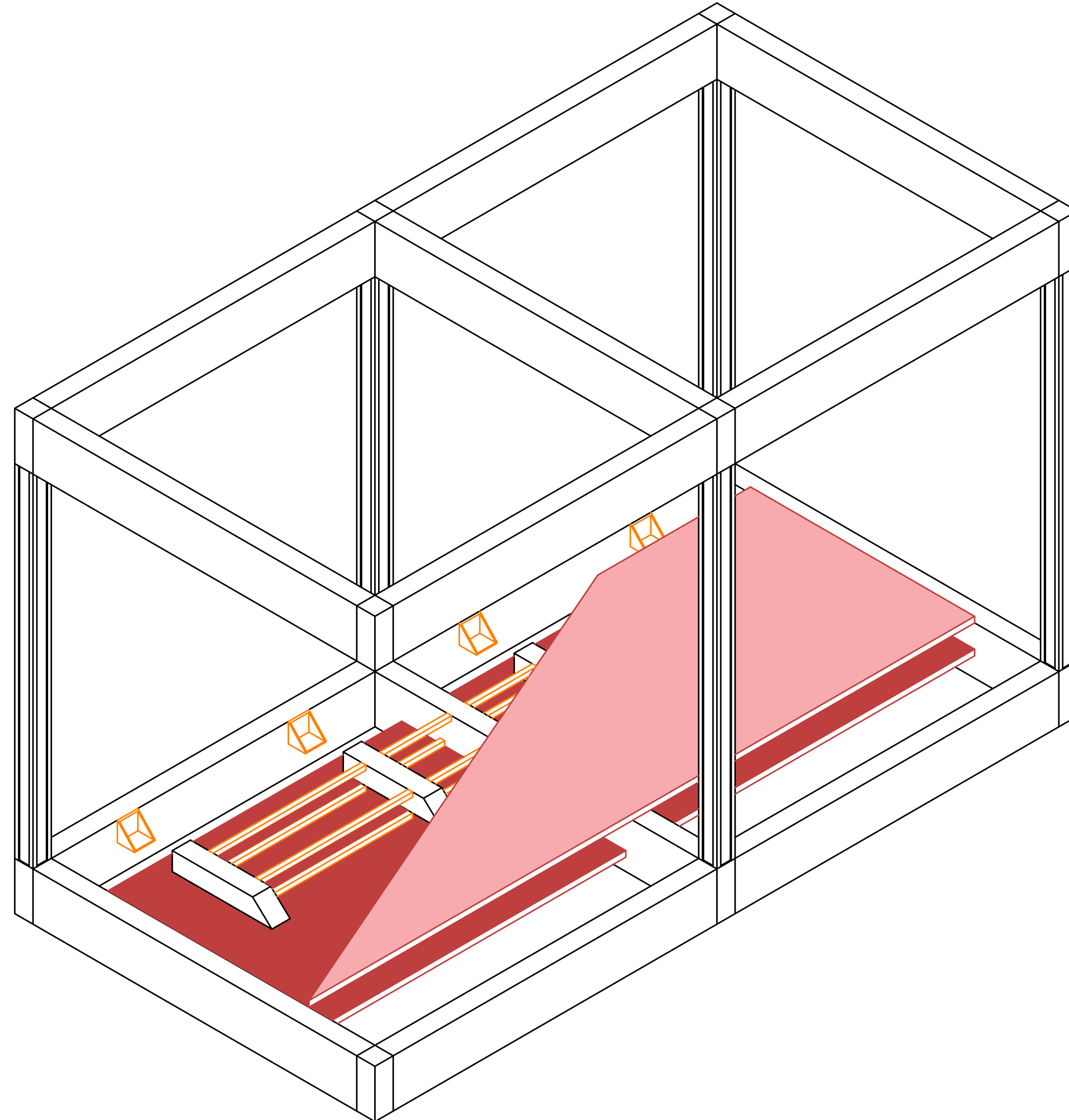
in the workshop



phase 1

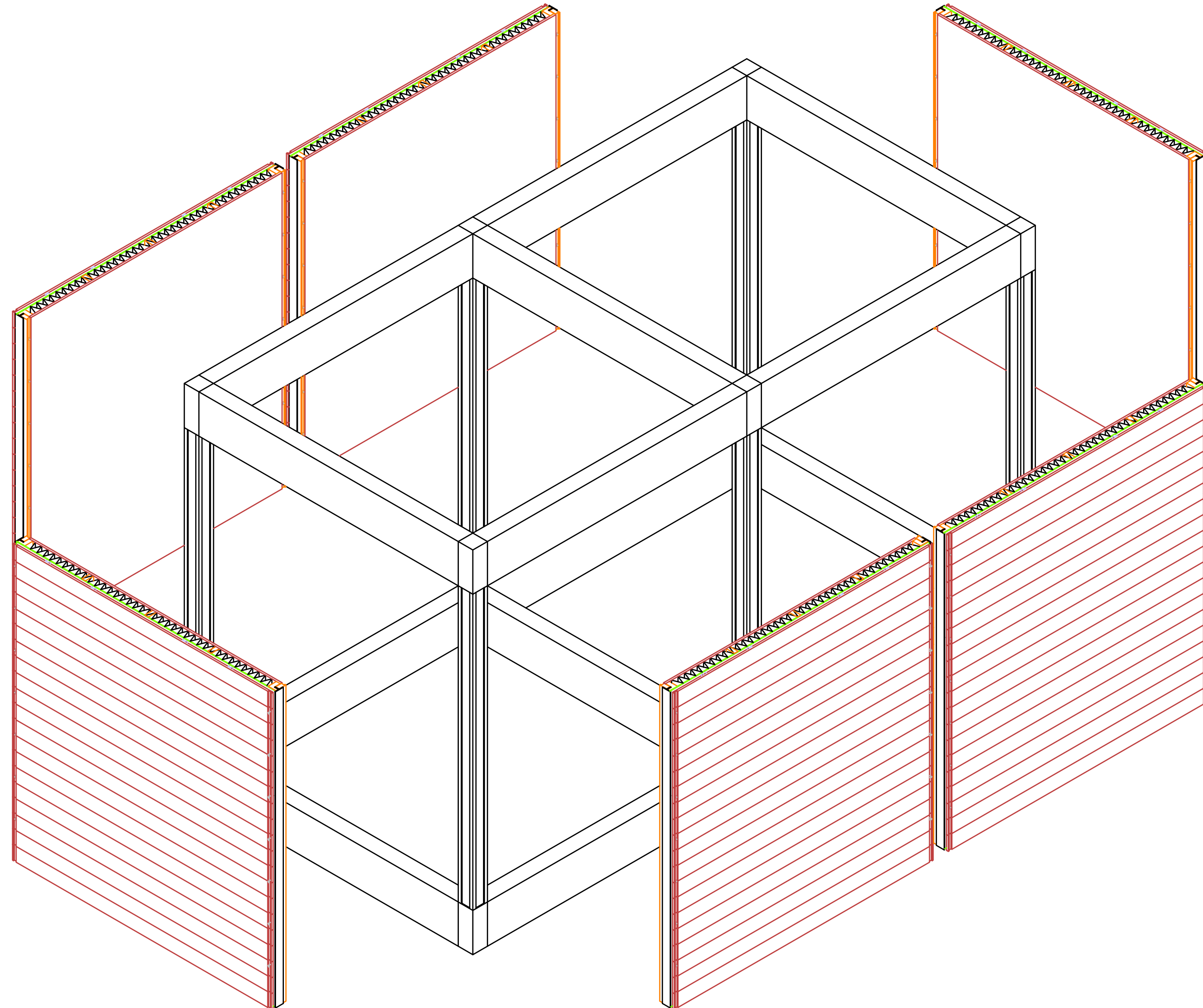
in the workshop

68



phase 1

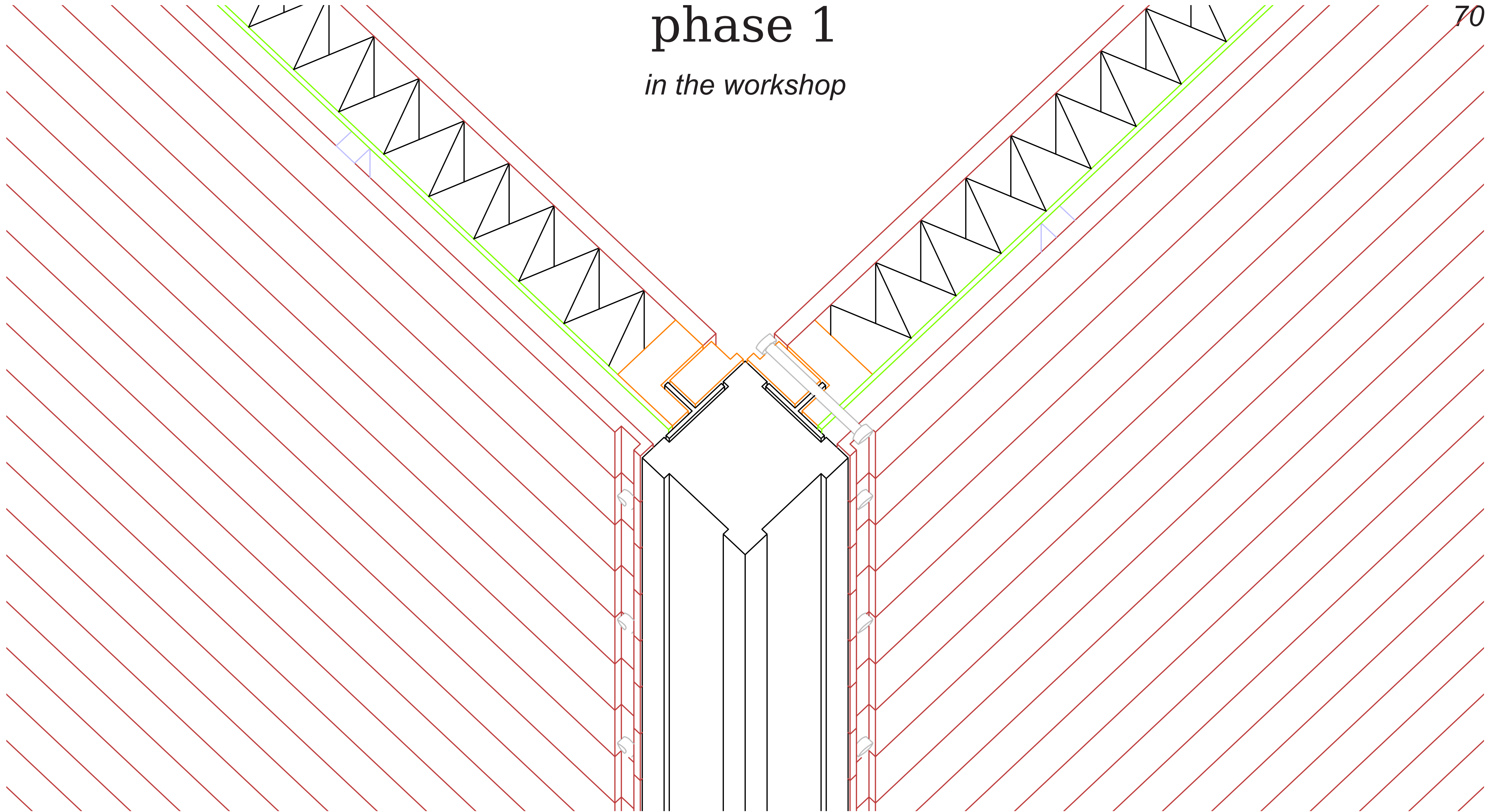
in the workshop



phase 1

in the workshop

70



phase 2

transportation, permits and exemptions

In order to be able to serve you as quickly and efficiently as possible, we have long-term permits for indivisible loads in the Netherlands, Belgium and Germany. In the overview below you can see with which dimensions and weights our vehicles can drive for you, without delay due to application deadlines. If these dimensions and weights are exceeded by your cargo, we will request an occasional exemption to get your cargo to its destination. We will then have to deal with a request period. You will also find the normal application periods in the overview.

The Netherlands

	Trailers	Semi-lowloaders	Euro low-loaders
Length:	27.00 m	27.00 m	27.00 m
Width:	3.50 m	3.50 m	3.50 m
Height:	4.25 m	4.25 m	4.25 m
Weight:	50,000 kg	63,000 kg	100,000 kg

Application period for incidental exemption:			
	2 working days	4 working days	10 working days
Length:	up to 27.00 m	up to 40.00 m	more than 40.00 m
Width:	up to 3.50 m	up to 4.50 m	more than 4.50 m
Height:	to 4.20 m	up to 4.50 m	more than 4.50 m
Weight:	up to 100,000 kg *	up to 100,000 kg	100,000-150,000 kg

* A delivery period of 2 days is not feasible if the weight exceeds 50,000 kg and the road authority (s) The Hague, Amsterdam, Rotterdam, Zuid-Holland and Noord-Holland are included in the route. You must then take into account a minimum of 5 working days.

Source: www.rdw.nl
(<http://www.rdw.nl/TET/nl/TET/transporteurs/ondeelbarelading/Pages/Levertijden.aspx>)

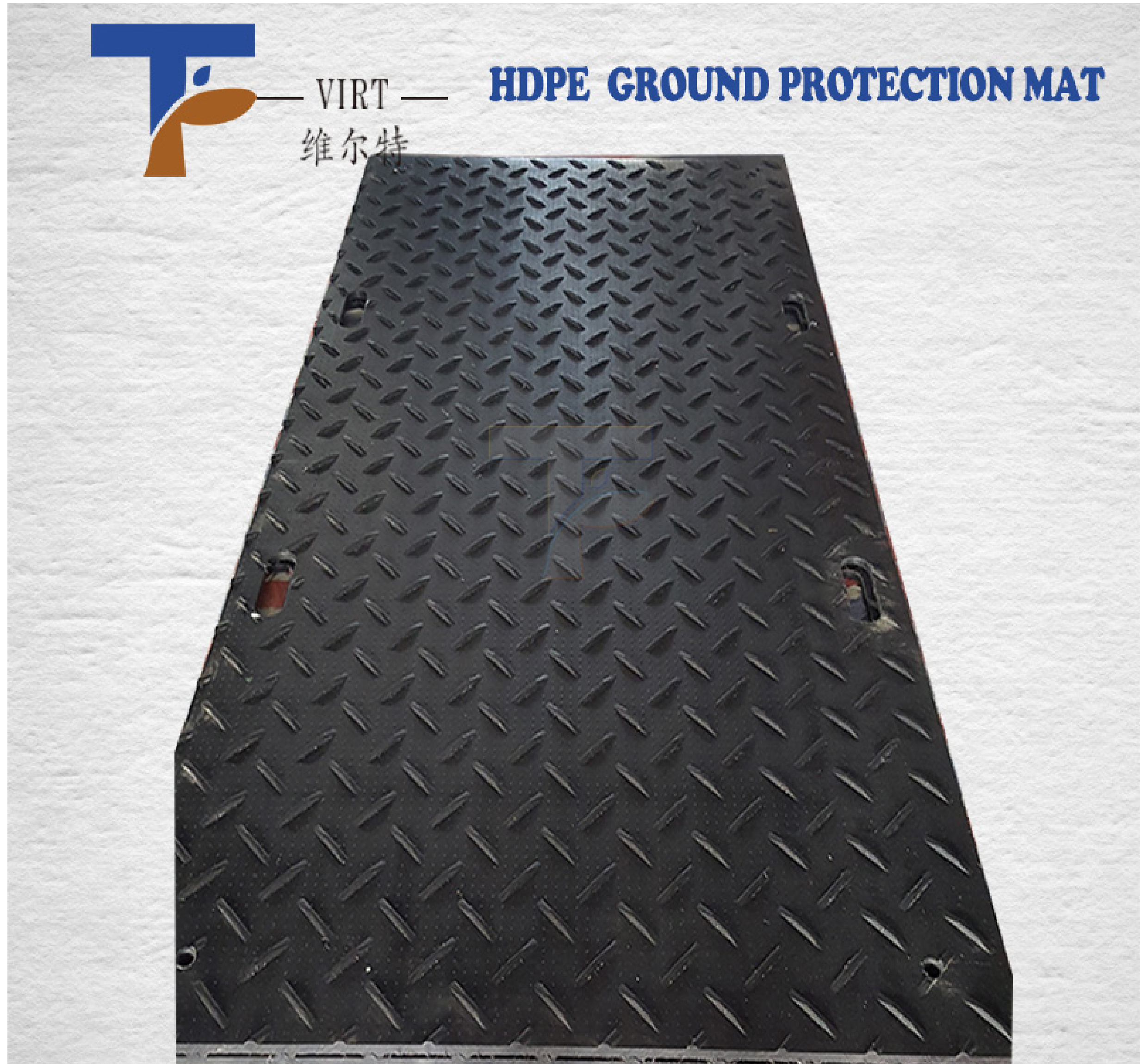
phase 2

transportation, types of truck



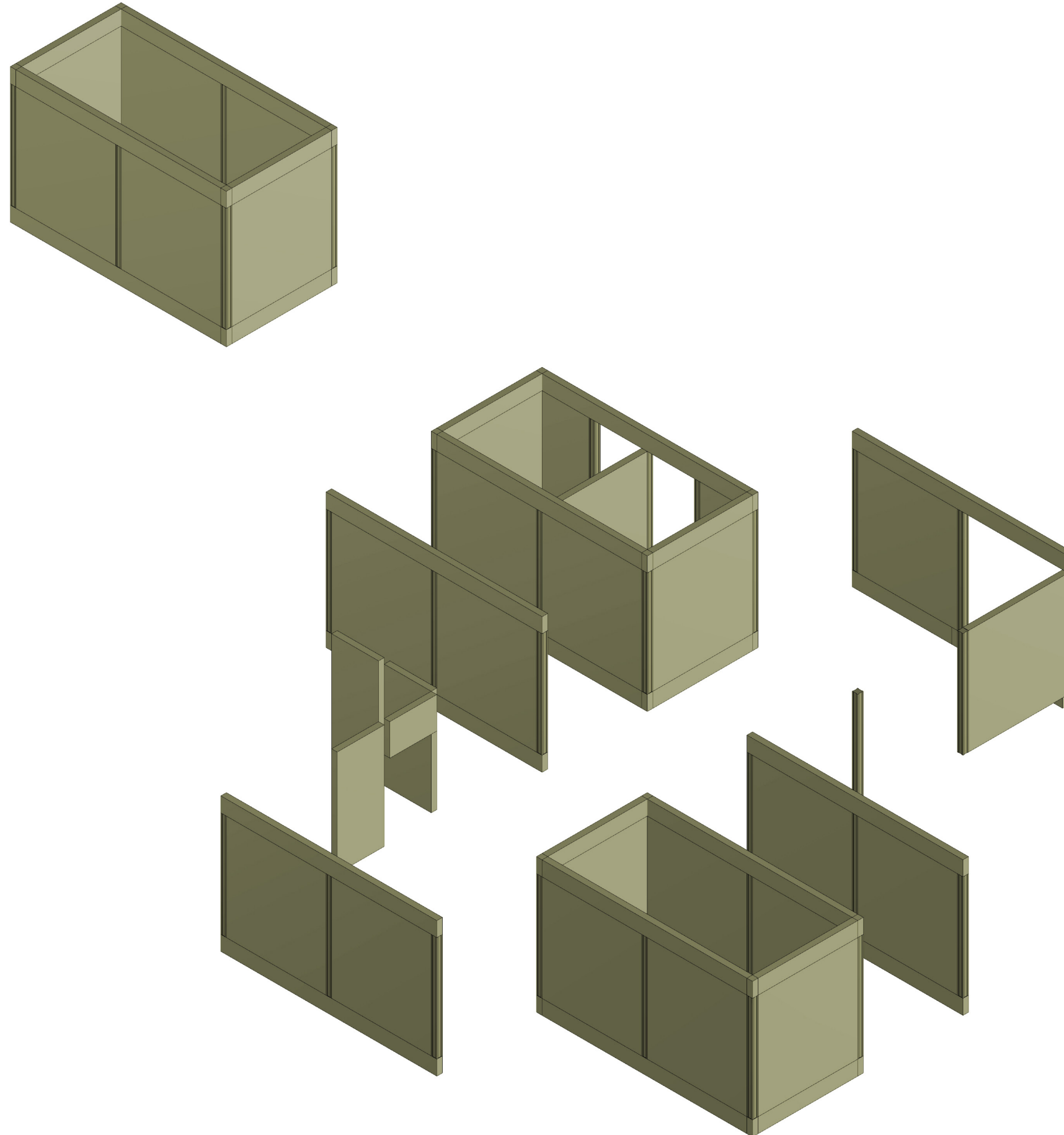
phase 2

transportation, arriving on site



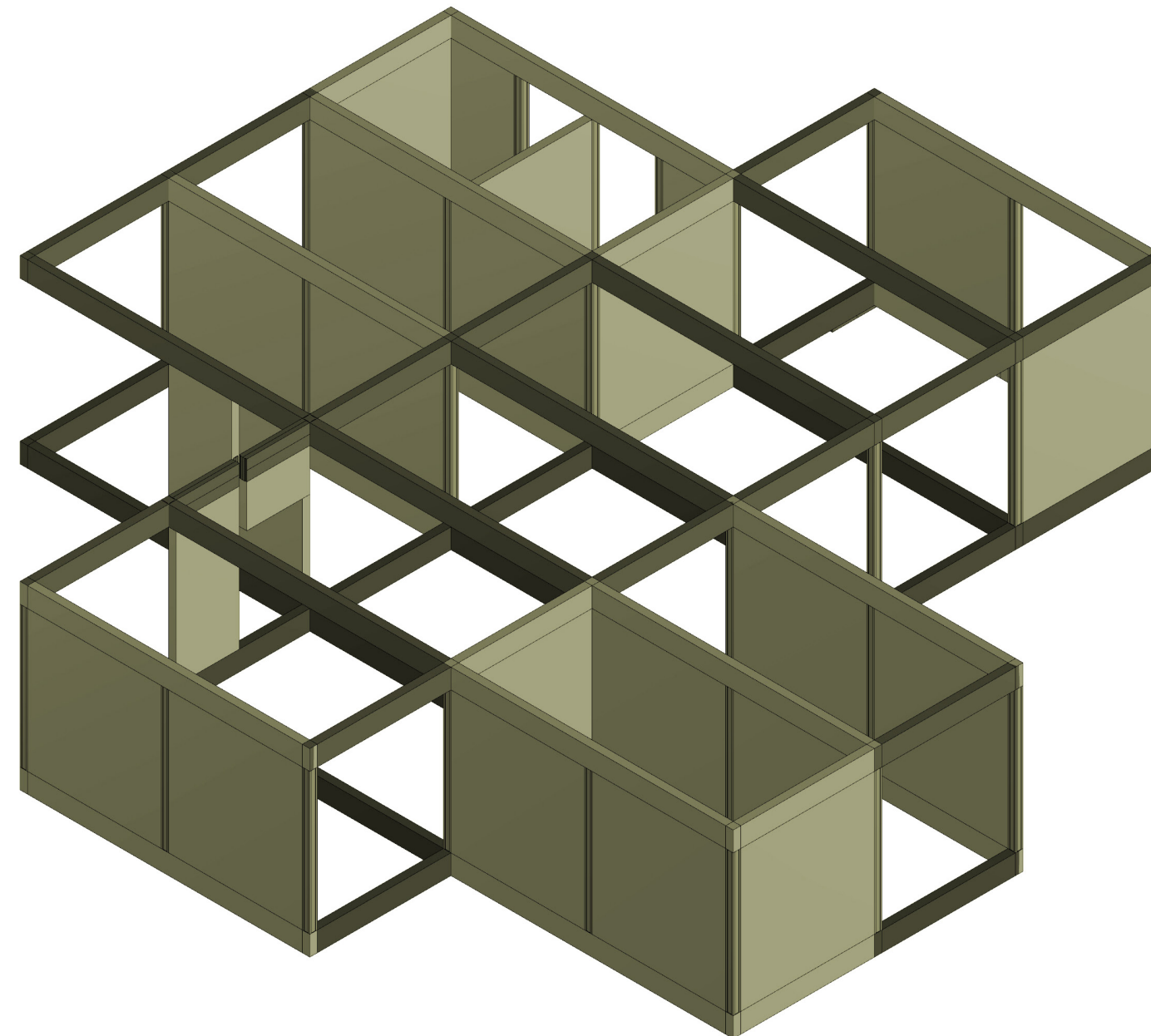
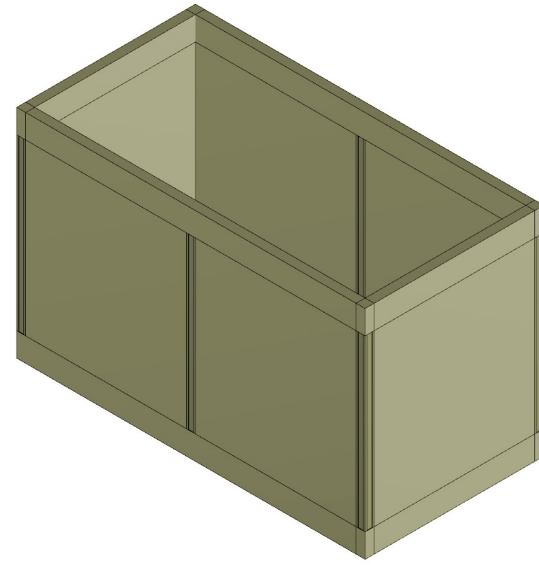
phase 3

building on site



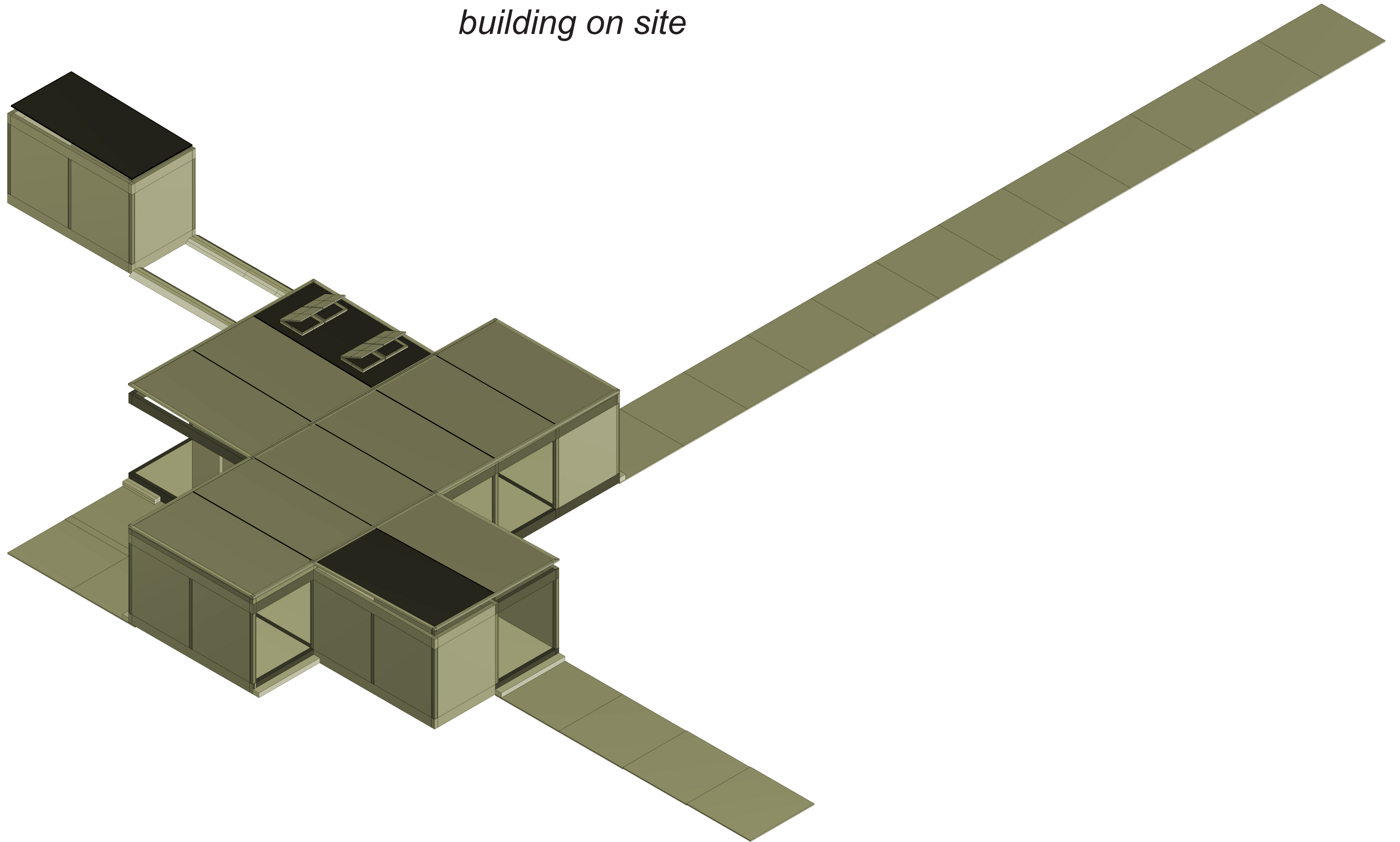
phase 3

building on site



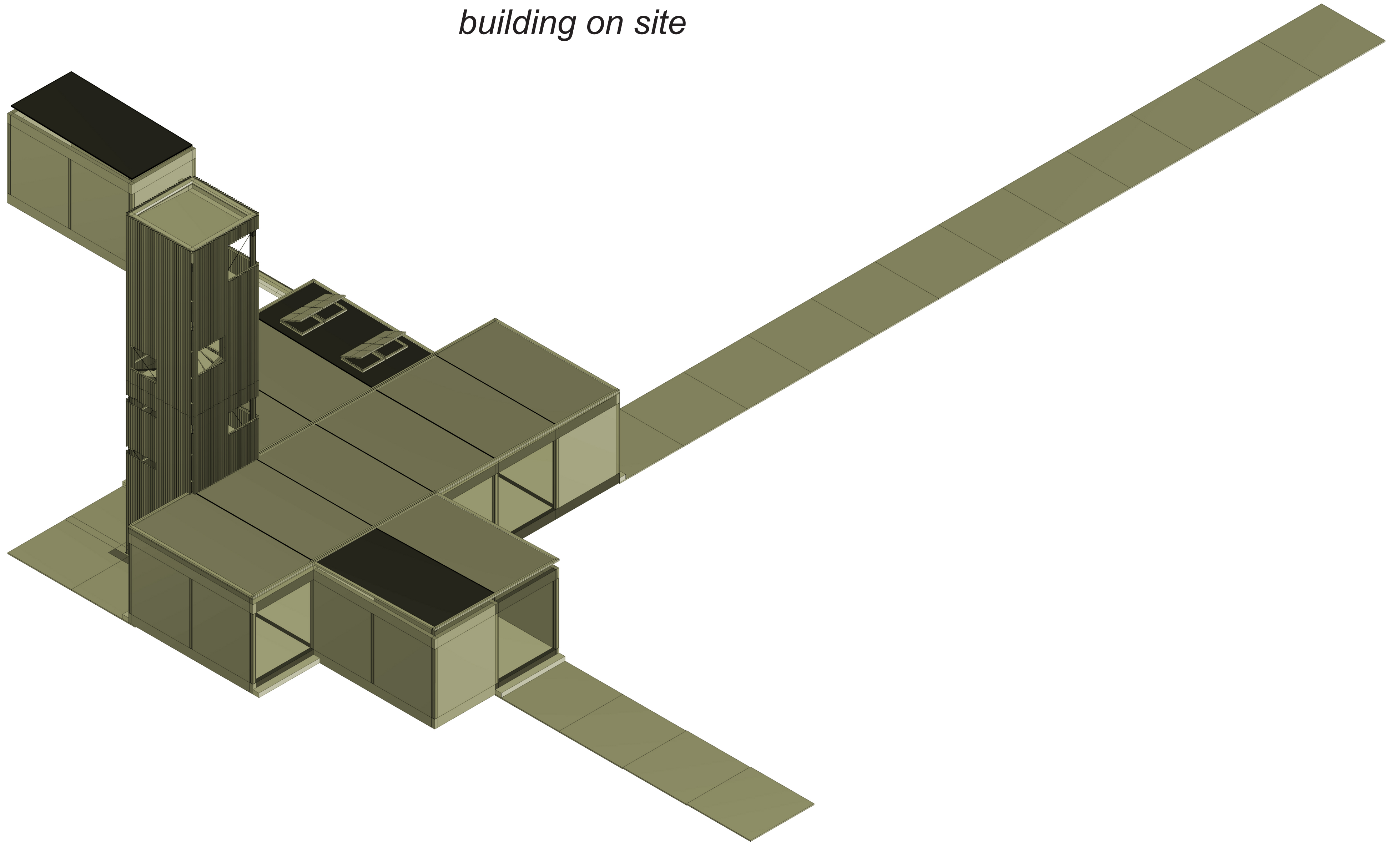
phase 3

building on site



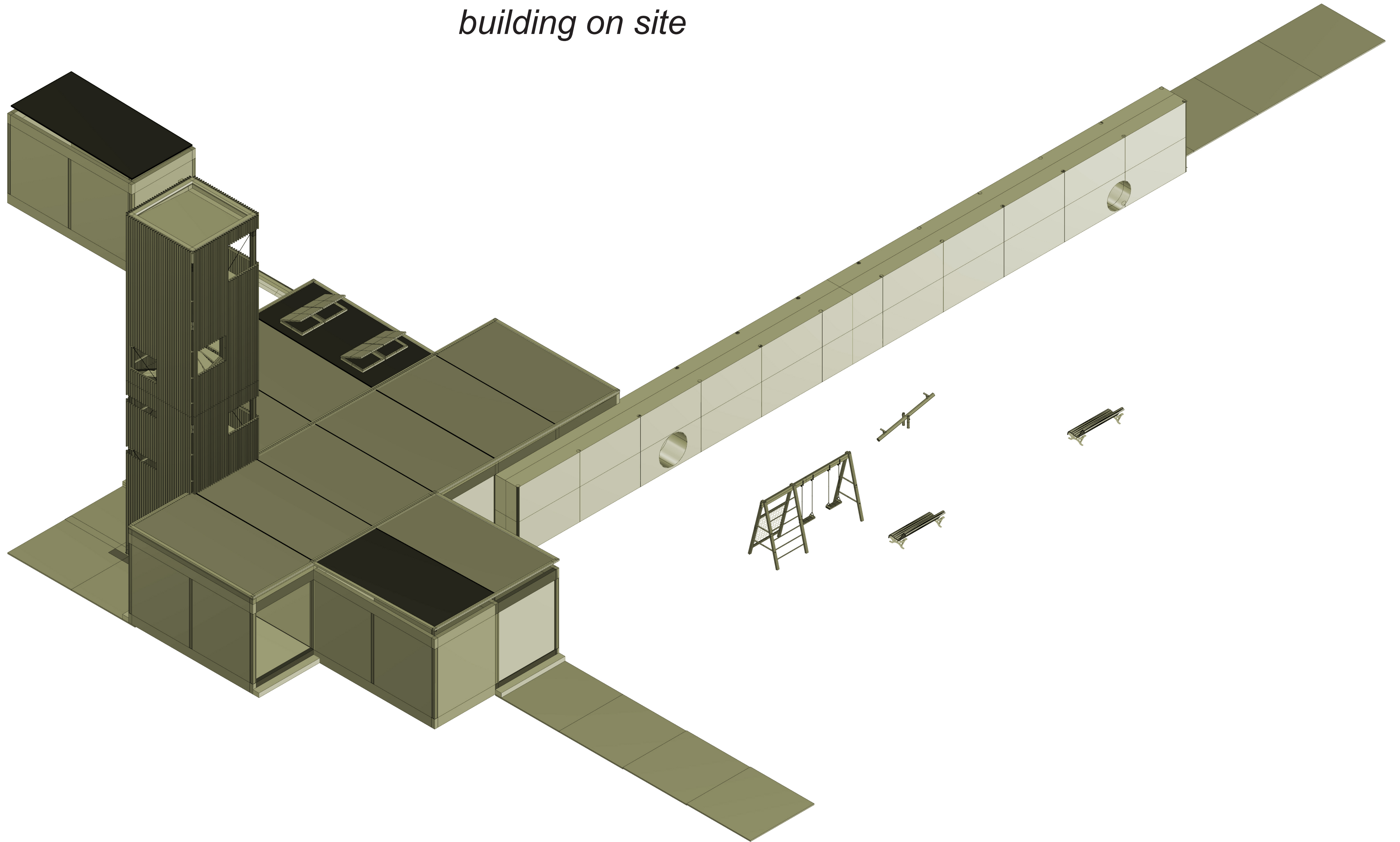
phase 3

building on site



phase 3

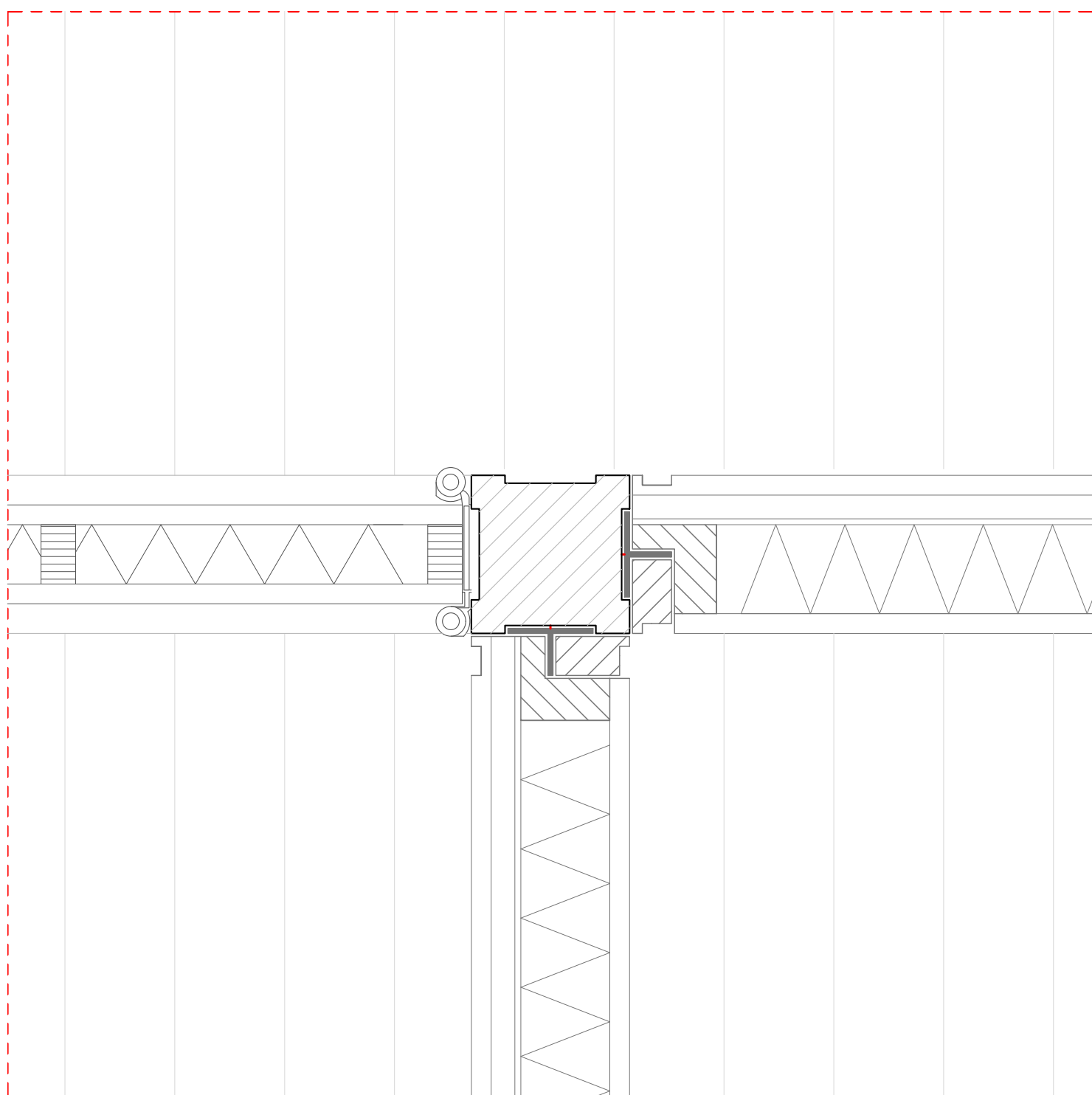
building on site



phase 4

*changing configuration done by performers
and municipality*

- 1** **Opening and closing doors** *to change the configuration of the space*
- 2** **Closing curtains** *to change light conditions*
- 3** **Changing infill of the walls** *with materials such as polycarbonate to change light and sensations*
- 4** **Moving the trusses carrying the lights** *where needed or can be removed*

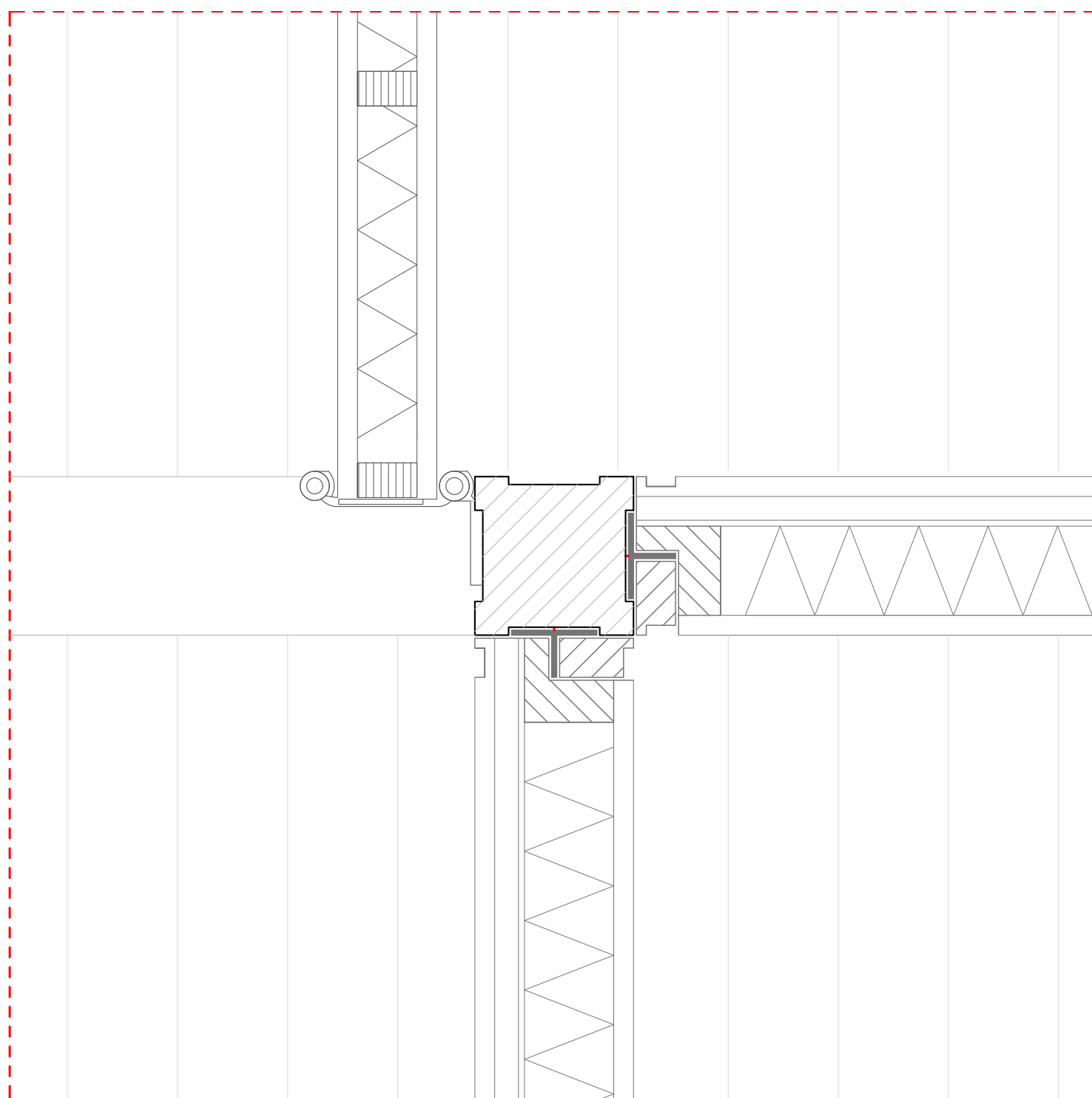


PILLAR - PANELS JOINT

laminated timber pillar with profile 16 x 16 x 300 cm
metal "t" shaped frame 0,5 cm

SANDWICH PANELS

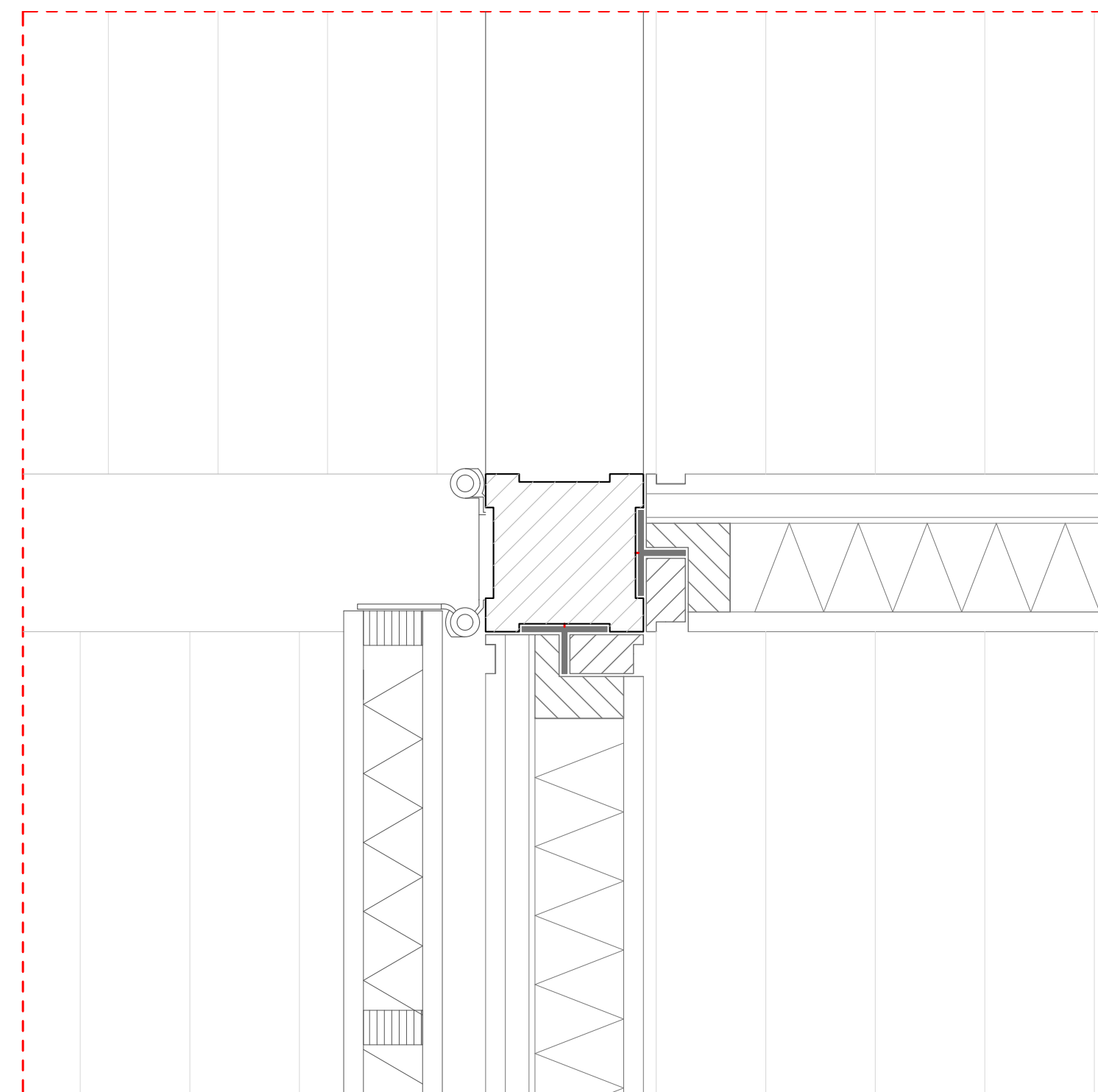
fir panelling 2cm
wooden sticks 2,4 x 2,4 x 100 cm
vapor barrier 0,6 cm
extruded polystyrene 9 cm
wooden sticks 9 x 4 x 150 cm
fir panelling 2cm



DOUBLE SIDE HINGE OPEN RIGHT

HINGE

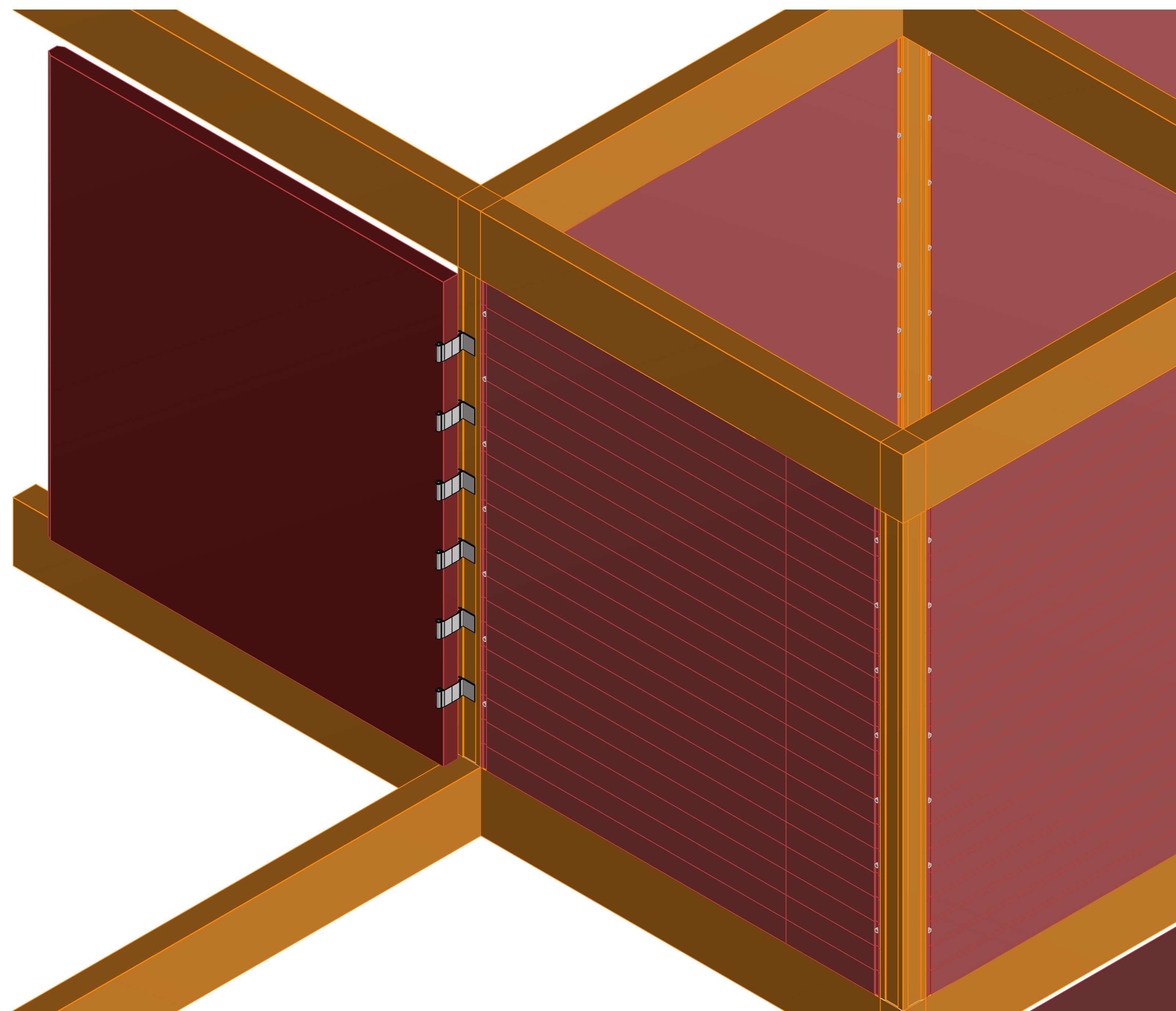
double sided hinge 17 cm width

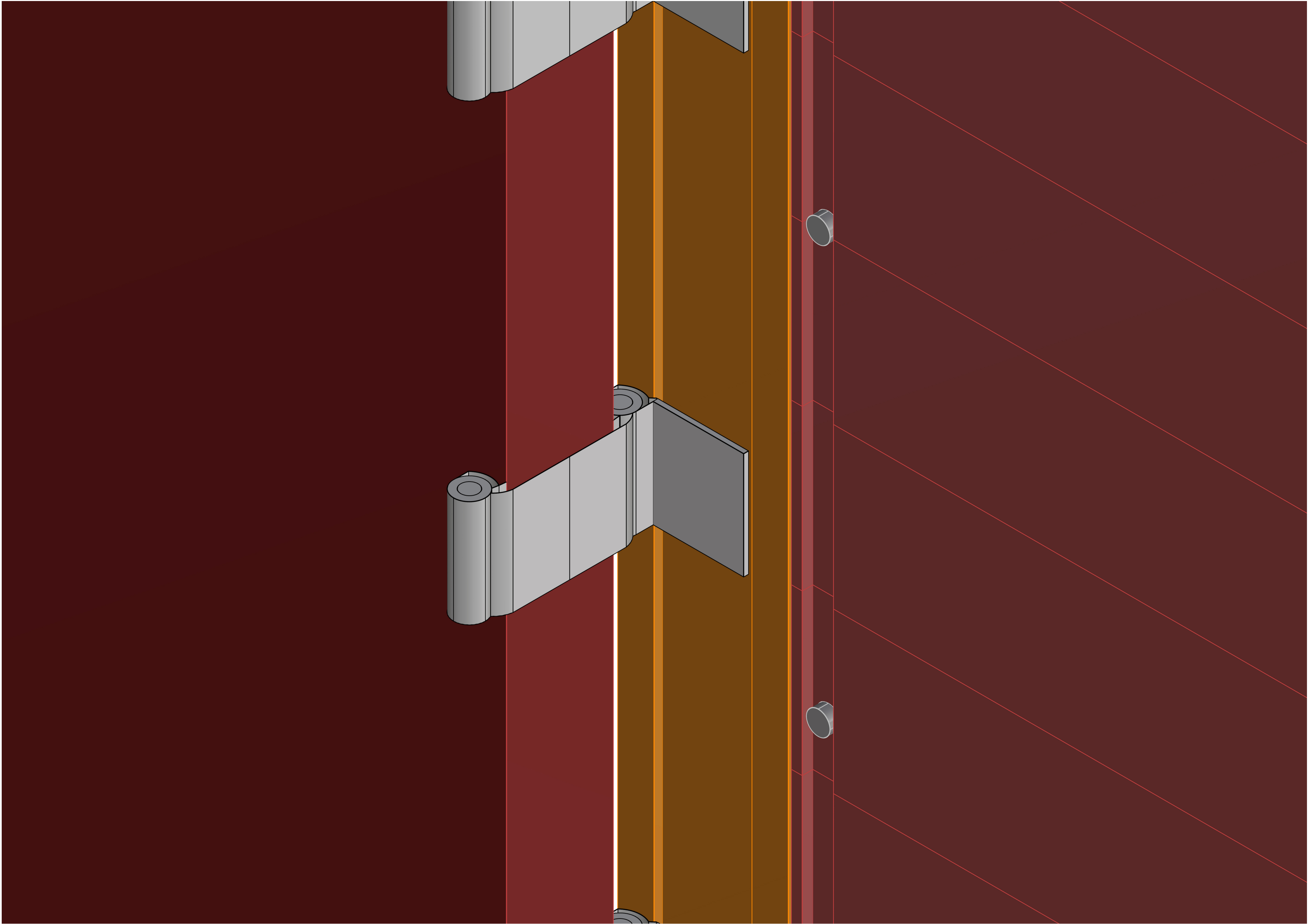


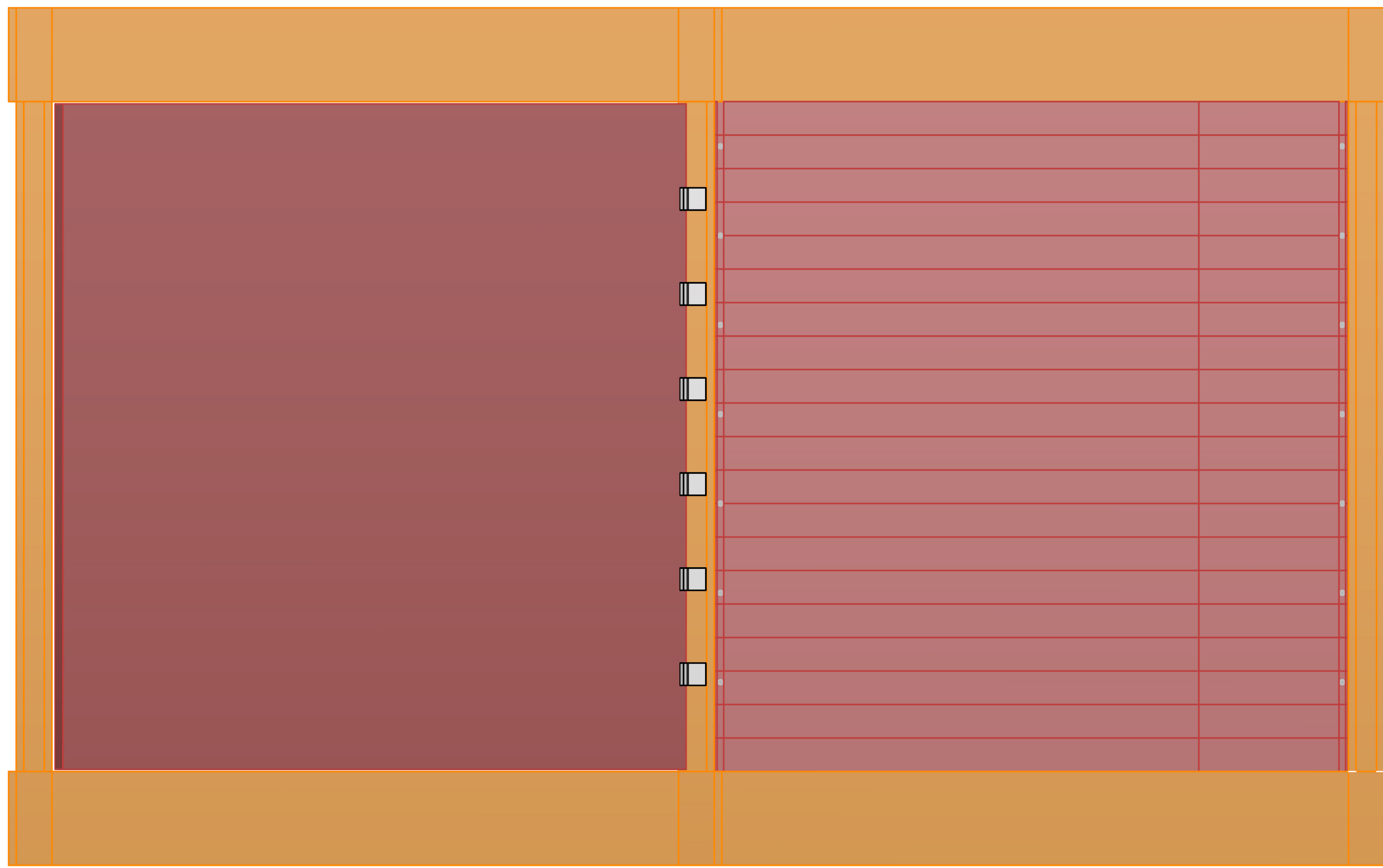
DOUBLE SIDE HINGE OPEN LEFT

DOOR

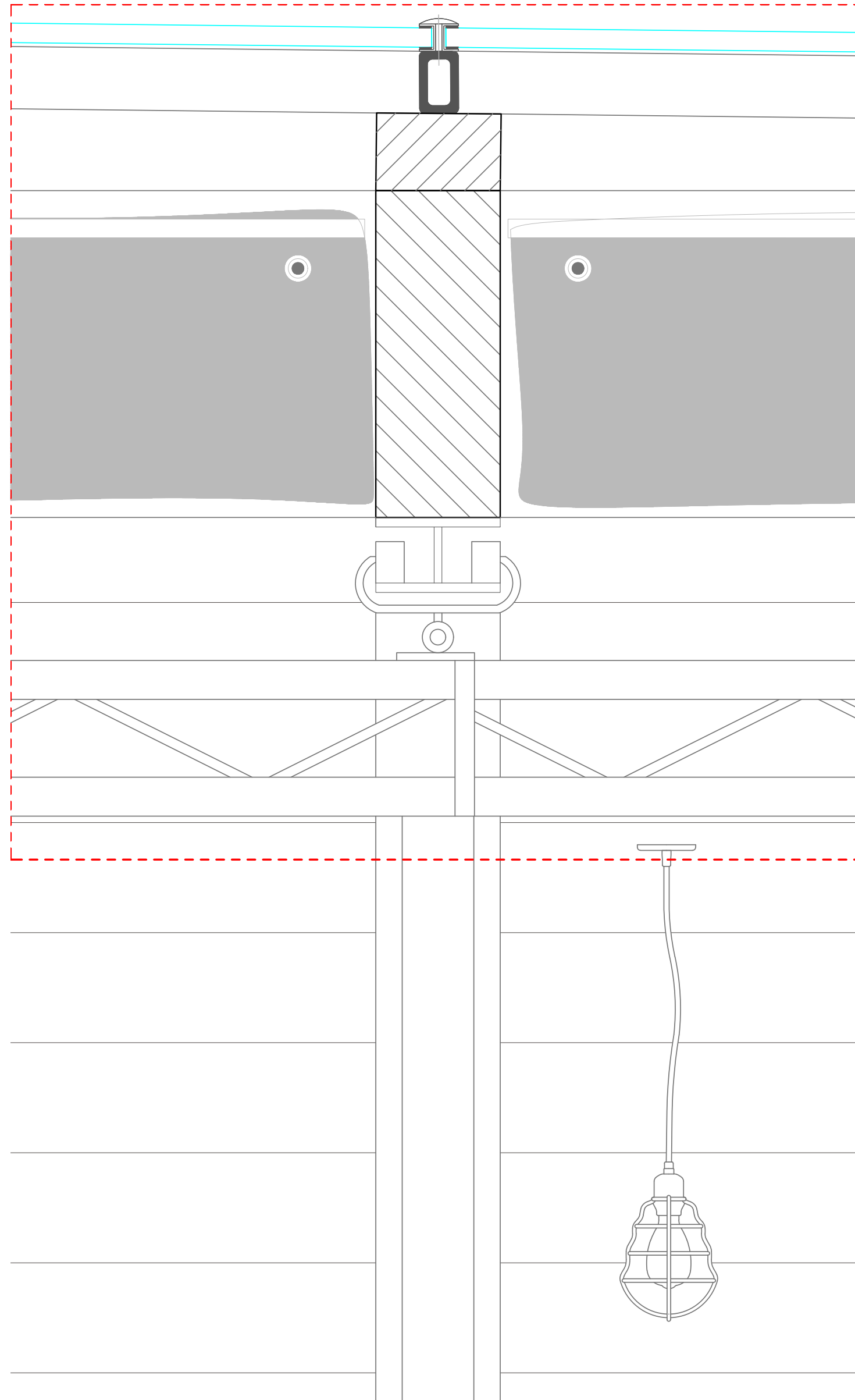
laminated panel 2 cm
insulation
internal frame 3,5 x 6 cm
laminated panel 2 cm







*moving trusses carrying the lights where
needed*



phase 5

in the future, in another location



06 sustainable aspects

water and energy autonomy

- 1** *Self composting toilet*
- 2** *Rain water harvesting system*
- 3** *Energy autonomy with a generator*

toilet system

number of toilets needed based on the European standard EN-16194

Kind of employment

A - Events ▼

Number of users

Up to 249 ▼

Duration of the event

Up to 6 hours ▼

Food and drinks served

No ▼

Total number of bathrooms required

2

Kind of employment

A - Events ▼

Number of users

Up to 249 ▼

Duration of the event

Up to 12 hours ▼

Food and drinks served

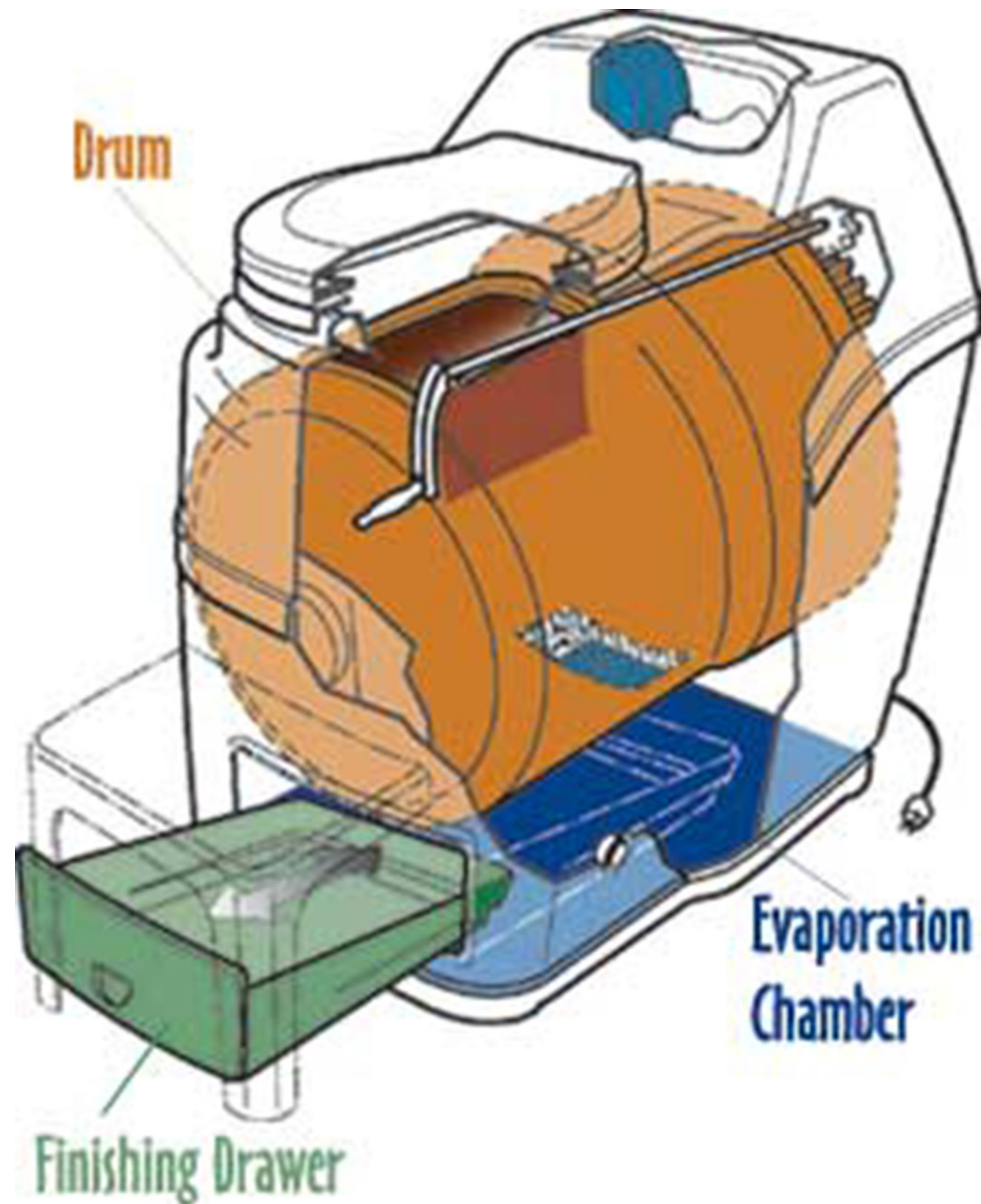
Yes ▼

Total number of bathrooms required

4

toilet system

self composting toilet: how does it work



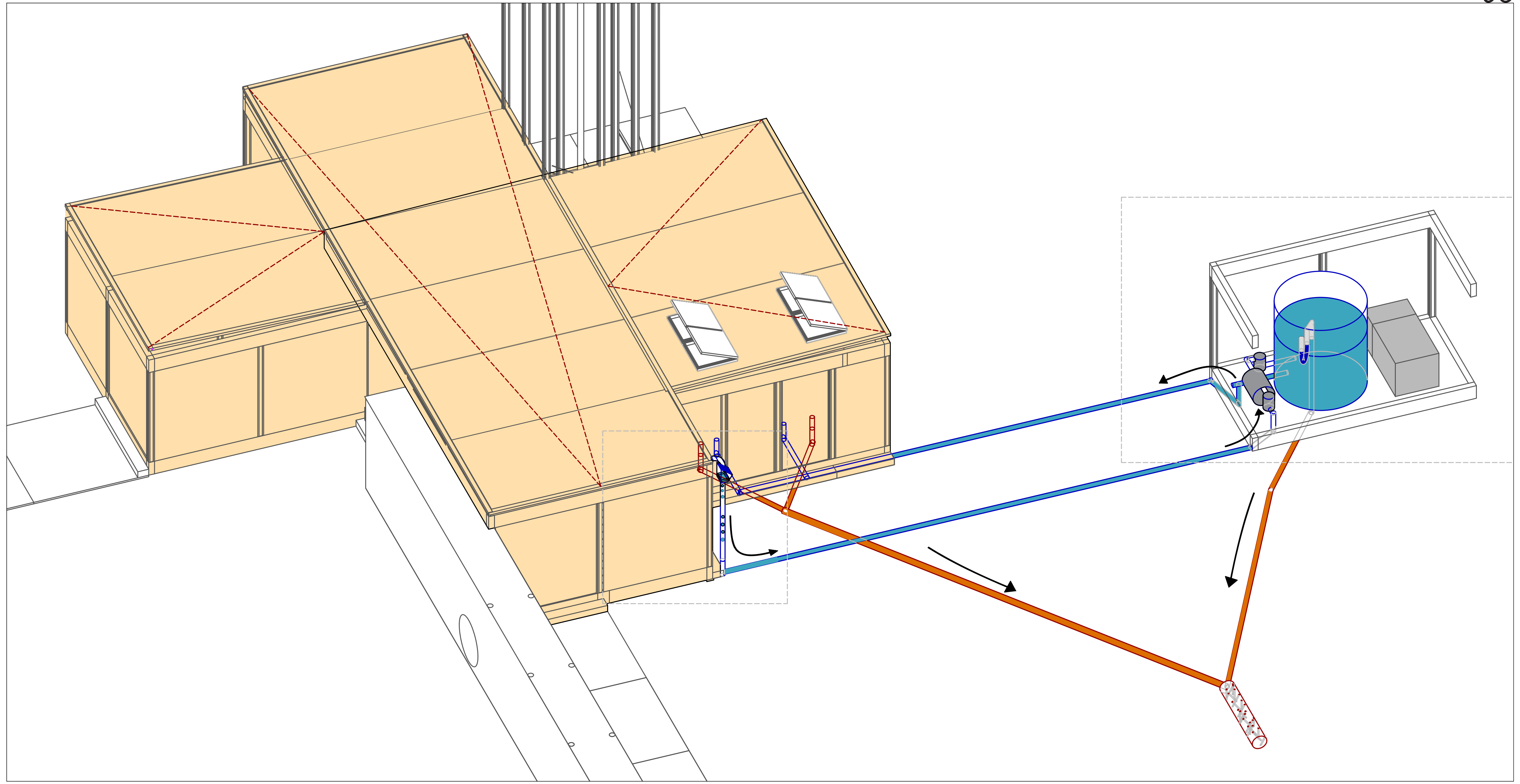
- 1** *maintenance once a month*
- 2** *no need of connecting to sewage system*
- 3** *no need of water*
- 4** *110 volt power supply*
- 5** *produces fertilizer*
- 5** *needs ventilation*

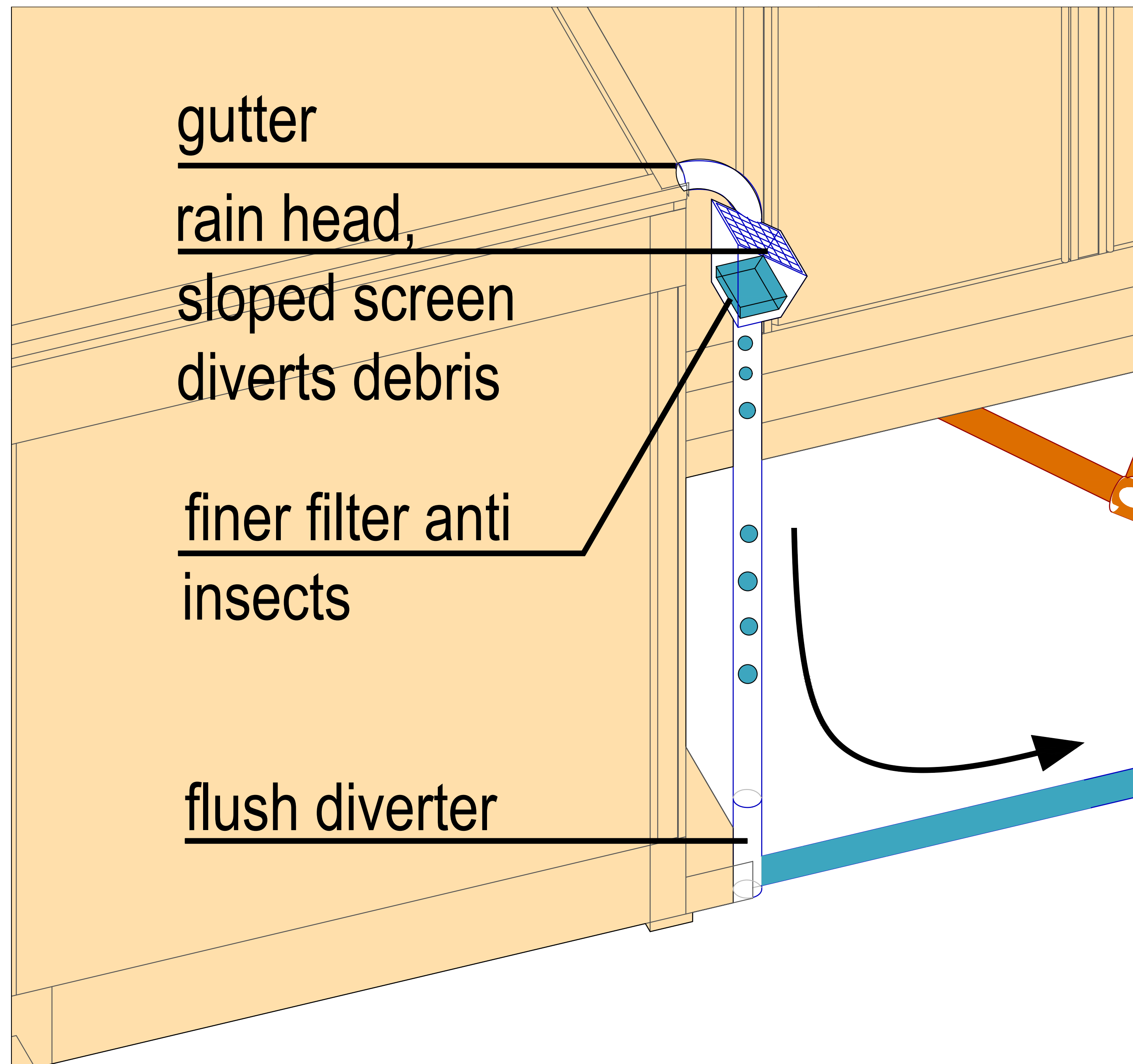
rain water harvesting system

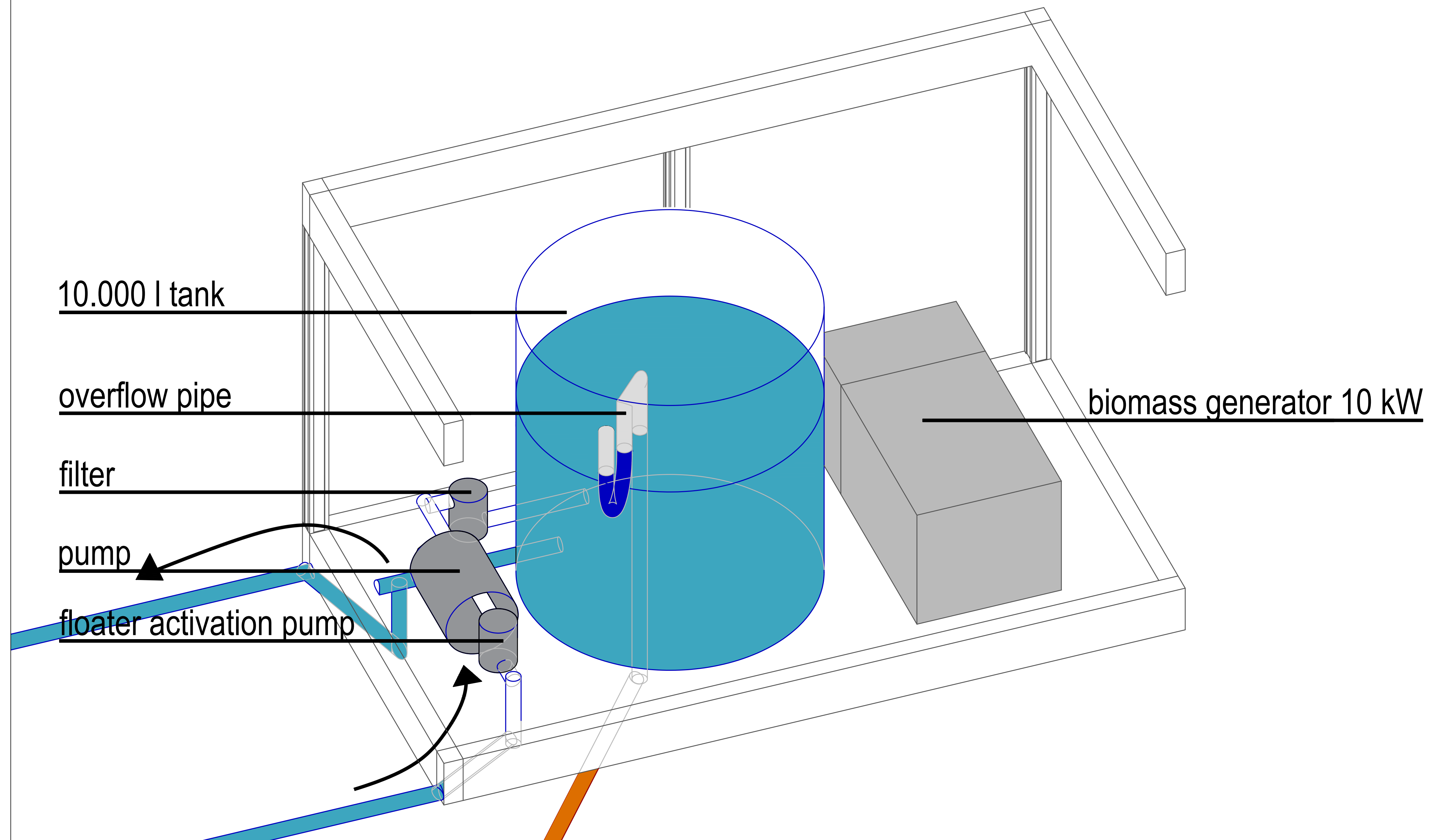
92

calculations

- 1** *time frame: 6 months, from April to September*
- 2** *average rainfall April-September in the area: 391 mm*
- 3** *my roof surface: 224 sq m*
- 4** *total liters possible to harvest in 6 months: 87.000 liters*
- 5** *in April the driest month: 356 liters per day*
- 5** *average waterbasin water usage per person per day: 7,5 l per 6 uses*
- 5** *2 or 3 uses is: 2,5 / 4 liters*
- 5** *125 people using the toilet twice in 1 day consume: 312 liters*
- 5** *even at it's maximum daily use (312 l) it's within the limit (356 l available)*

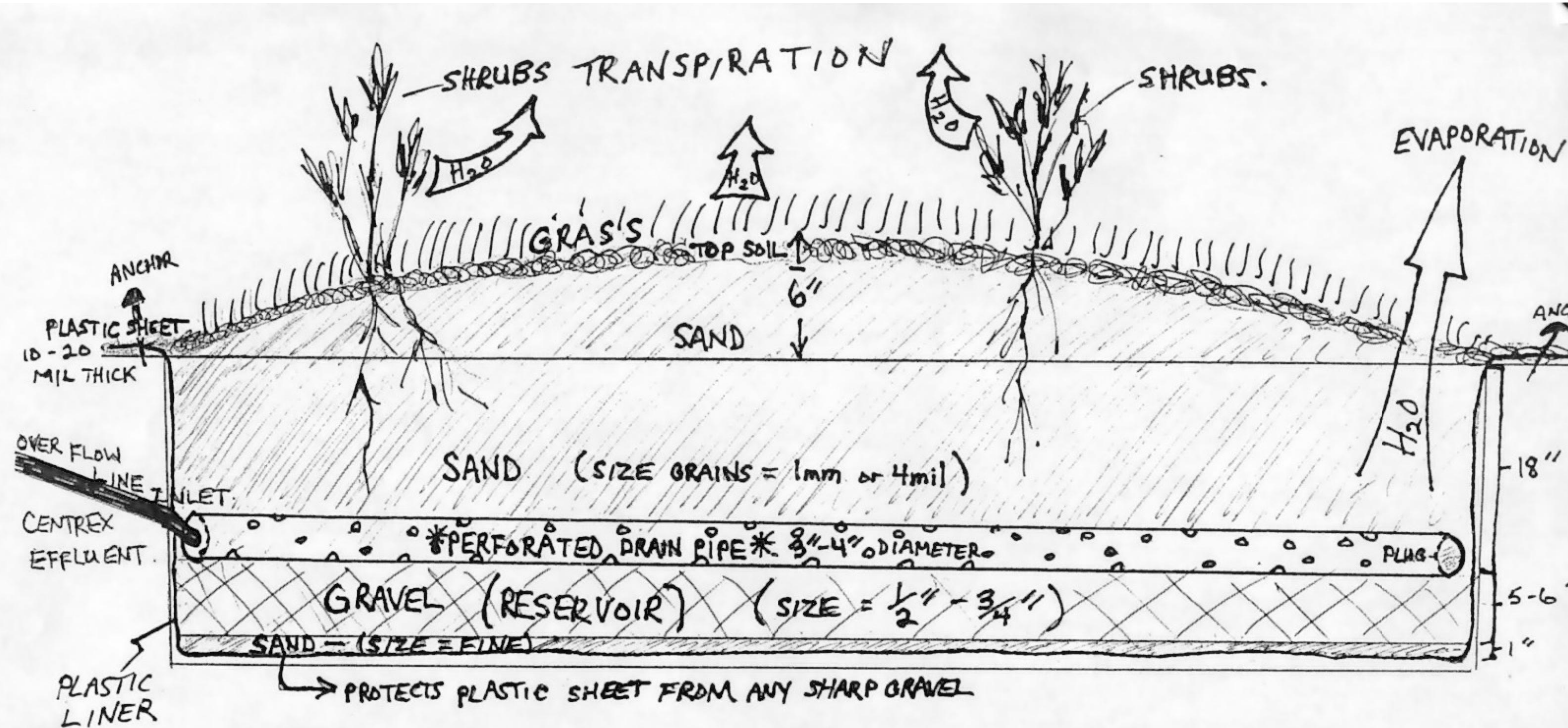






toilet system

sewage system for countryside recycling bed



- THIS SYSTEM MAY BE INCORPORATED INTO ① AN ABOVE-GROUND FRAMEWORK (TO SUPPORT THE SHEET & BED CONTENTS) OR ② A PIT OR HOLE IN THE GROUND.

* IF "IN-GROUND"... PERIMETER TRENCHES SHOULD BE EMPLOYED TO DIVERT STORM WATER.

- DIMENSIONS OF BED WILL DEPEND UPON EXPECTED INPUT
SEE CHART ON PREVIOUS PAGES.

- PERFORATED PIPE SHOULD BE WRAPPED IN NYLON OR CHEESE CLOTH
(OR SOMETHING SIMILAR) TO PREVENT SAND ENTERING INTO HOLES.

energy

bio mass generator

- 1** *power 10 Kw*
- 2** *contained measurements 120 x 65 x 110 cm*
- 3** *fuelled with compost from toilets and woodchips from near forests.*
- 4** *in alternative electricity from city.
this building can be provided with or without this type of generator for when we are in remote places*
- 5** *power needed in a house:
between 3 and 4.5 kw, this generator is 10 kw so more than enough*



management

98

- *done by the municipality*
- *done by privates in case it gets rented*
- *maintenance needed during events, otherwise 2-3 times a week*



thanks