

COURTEEN ~~SEED~~ FARM

Courteen Seed Building
Milwaukee, Wisconsin, USA

Project Proposal

We propose urban farming / gardening for the 'Courteen Seed' building. The focus of urban gardening is the production of food in the city, with a special emphasis on the ecological cultivation of regional and old cultivars. Here, people of all ages come together to garden, build with recycled materials, sell their products, cook together, and participate in various workshops on topics such as environmental education and nutrition, in the garden café and at cultural events.

To conclude this specific proposal we studied the context and the building itself. It was a difficult task to find an appropriate function that would harmonize with the building as well as the context. The nature of the structure was an important criterion for the proposal of this specific function. However, a lot of technical and urban issues are related to our proposal. We started with this simple idea of involving local people in the building and making it a productive place.

At the same time, we had to look closely at the questions that we had in mind. Such as, how much the building could take. How to maintain its history and originality? How to minimize the intervention and get

the most benefits from it? How to provide safety and security to the user and many more.

Another aspect that we considered was a little bit abstract. The building was associated with producing "Seed / Grain". We wanted to carry that notion into growing plants which basically emerged from the "Seed". So that we can say, the building is carrying its legacy and connecting itself with its past.

It was important for us to design it as barrier-free as possible. We also wanted to raise awareness of healthy eating, the sustainable use of resources, and the possibilities of partial or complete self-sufficiency. In this urban garden, interested parties can lease their own bed for a season, thus providing themselves with home-grown food.

Content

1.	Existing condition	4
2.	Urban plan	5
3.	Analysis of the existing	
	a. Value of the existing	6
	b. SWOT analysis	7
4.	What do we want to achieve	8
5.	What, why and how	9-12
6.	Urban proposal	13-16
7.	Plaza 1 + Plaza 2	17-19
8.	Prescedent	20
9.	Function diagram	21
10.	Floor plans + Inteior	22-27
11.	Section	28-29
12.	Structure analysis	30
13.	Detail section (Facade)	31-32
14.	Mesh detail (Facade)	33-35
15.	Spider diagram	36

Existing conditions



West facade of the building



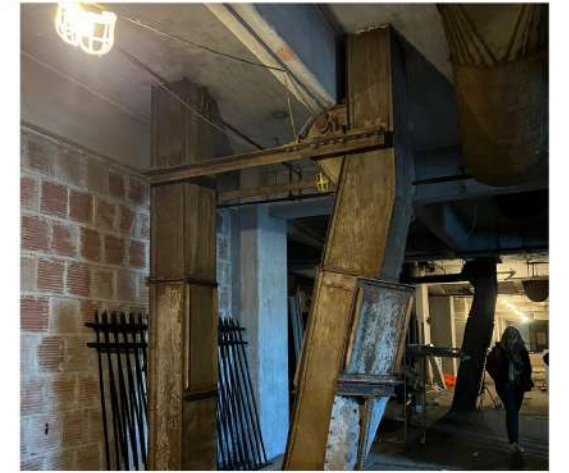
Brick cladding on the east facade



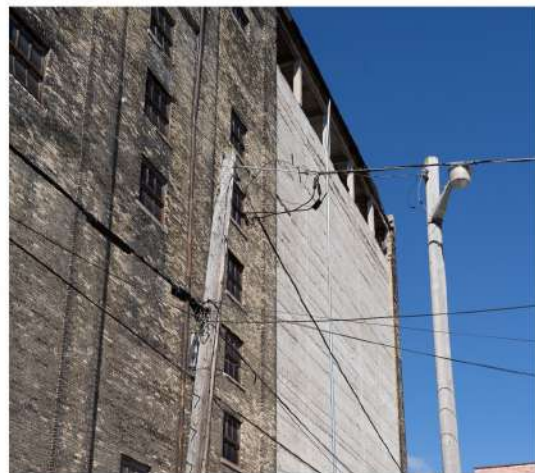
Reinforced concrete supporting structure



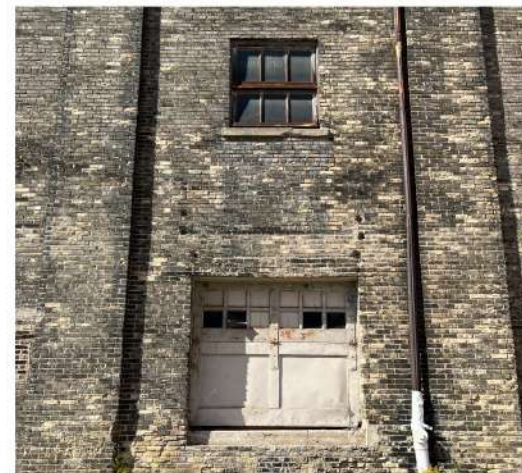
Silo elements towards supporting structure



Vertical metall shaft



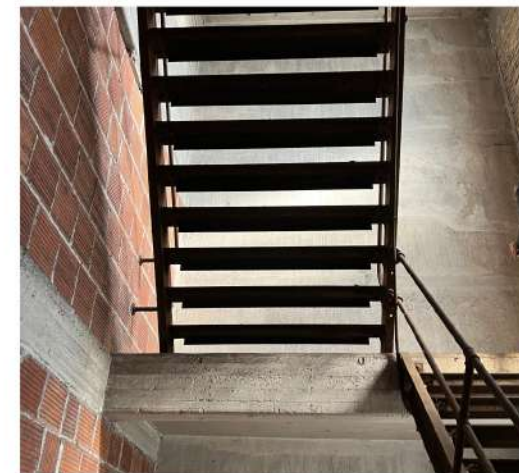
Demolished part of the east facade



Brick condition on the east facade



Reinforced concrete supporting structure



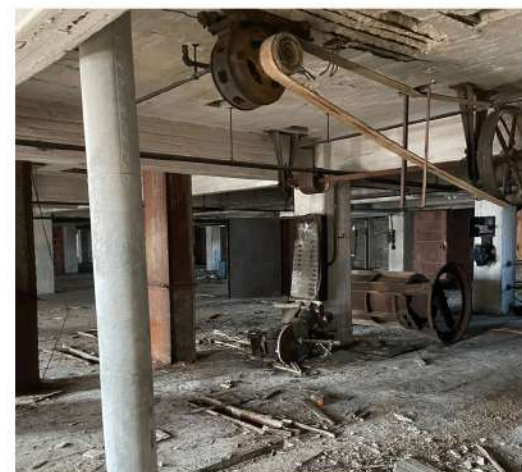
Condition of the stairs



Brick condition on the rooftop



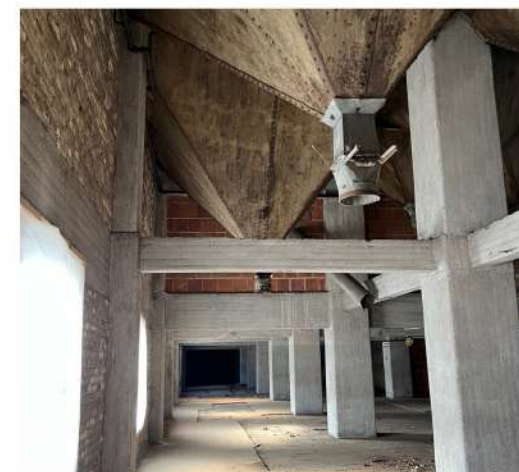
Peace of the south facade



Demolished part of the east facade



Bottom part of the silo construction



Bottom part of the silo construction



Brick condition on the rooftop

Urban plan

+The site is located in Milwaukee city, Wisconsin, USA and it is very close to Lake Michigan's western shore.

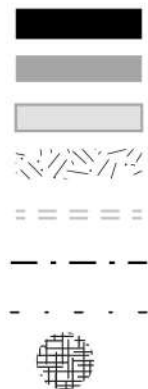
+It has a prominent location with a great view of the Menomonee & Milwaukee river and green spaces.

+It is situated in the middle of the Milwaukee business district.

+It has easy accessibility with public and private transport.

+It has a variety of public places and services, cafes, restaurants, and gardens.

- Courteen Seed (Site)
- Context
- River
- Green spaces
- Railway line
- Major Road / vehicular
- Manior Roads
- Bus Stop/Station



Value of Existing

Positive

Negative

1. Urban Context -Situated in the heart of Milwaukee's business district but not as developed as neighboring district Third Ward
2. Site -Acts as permeable transition area, has potential to create public engagement and connection to waterfront
3. Structure -Reinforced concrete modular structure but the rigid and dense layout of structure limits functional usability
4. Floor plans -Flexible open plans, because of such nature each level can be used for mutually exclusive functions
5. Skin -Brick facade that is not insulated, is wearing off and nearly damaged
6. Rarity value -The interior of this building has the rarest quality because of the existing silos which is unique in character
7. Historical value -A hundred year old seed producing and processing multi story industrial warehouse
8. Aesthetical value -The aging of this stereotomic building with time is what gives this structure its charm

S

- Situated in the heart of Milwaukee's business area
- Gives impression of a stereotomic architecture
- Flexible open floor plans
- Views to Milwaukee skyline,landscape and riverfront
- An over-engineered structure that can support additional floors

W

- Reconditioning of the "Fifth Ward" lacks in comparison to the reawakened neighboring district the "Third Ward"
- Lack of accessibility
- Significant signs of weathering damage on facades
- Height constraints between floors limiting wide-ranged functional usability
- Parking lot occupying large hard surface & interrupting the connection with riverfront
- Dysfunctional vertical circulations

O

- The building's structure allows a wide array of multi-purpose usage
- Possibilities of enabling community integration through adaptive reuse
- Reusing the existing unique elements
- Establishing connection with the river via interactive public squares
- Each floor bears potential for mutually exclusive uses

T

- Abandonment of the building
- Losing public access and forming a dead spot right in the middle of a busy district
- Bricks falling off façade can cause life threatening hazards
- Structure with great strength turning into junk instead of being used to its full potentiality

WHAT DO WE WANT TO ACHIEVE ?

- 1. Maximising output through minimum intervention**
- 2. Adapt the function to the building ; not the building to the function**
- 3. Enhance community integration**
- 4. Promoting environmentally healthy scenario**
- 5. Revenue generation**

What could Courteen Seed be used for?

Indoor + Outdoor farming

Indoor farming is a type of agriculture (CEA) in buildings, containers, or greenhouses and is a closed, controlled system that is independent of the seasons and sunlight. Lighting is provided by LED lamps; the system uses absolutely no soil to support the plant roots. This method of farming replaces the soil with mineral nutrient solutions in a water solvent. It will additionally include indoor fish farming that also works under such controlled environment.

What can be grown?

- +Herbs
- +Microgreens
- +Fishes

How to integration into the building?

Module idea: plant wall can be over 2 meters high and about 1.34 meters wide. Growroom: a walk-in wooden pavilion that can fill with different plants and have to be built following a blueprint. A feature that can be placed under silos as interactive or performative exhibition space.

Revenue from public market: A 84 centimeter high box can be sold as kitchen module to grow herbs & salads. The Cube regulates watering, light and temperature automatically. There will be other products related to farming can be sold in the same market. The restaurants are also a good source of income and fresh healthy food.

Who will be the user group?

- +Restaurant owners/Chefs
- +Pharmaceuticals
- +Microbiology Researchers
- +Engaging activities for public
- +Private users

How does it work?

Hydroponic farming is the practice of growing crops by using mineral nutrient solutions instead of soil to deliver water and minerals to the crop roots. This system fosters rapid growth, stronger yields, and superior quality. The six things needed are light, air, water, nutrients, heat and space. In aquaponic, the plants are grown in the grow bed, and fish are placed in the fish tank. The nutrient-rich water from the fish tank that contains fish waste is fed to the grow bed, where billions of naturally occurring beneficial bacteria break the ammonia down into nitrites and then into nitrates.

How is it beneficial?

Vertical farming is significantly more space saving than conventional agriculture. Particularly, profitable since automated systems help prevent crop failure. Moreover, Cultivation is independent of the environmental fluctuations of the seasons. It reduces land usage, water consumption and manual labor, usage of pesticides.

Why should Farming be the new identity of Courteen Seed?

Appropriation

+The existing structure is capable of taking good amount of load

+Modular structure giving guidelines to the entire planting and circulation system

+The proposed functions do not require ample light

+Low height of the ceiling is not an obstacle for shelves

+The nature of the structure serves well for machinery rooms and incubators/ stacks for plants

+A performative exhibition space can be placed under the Silos to attract public

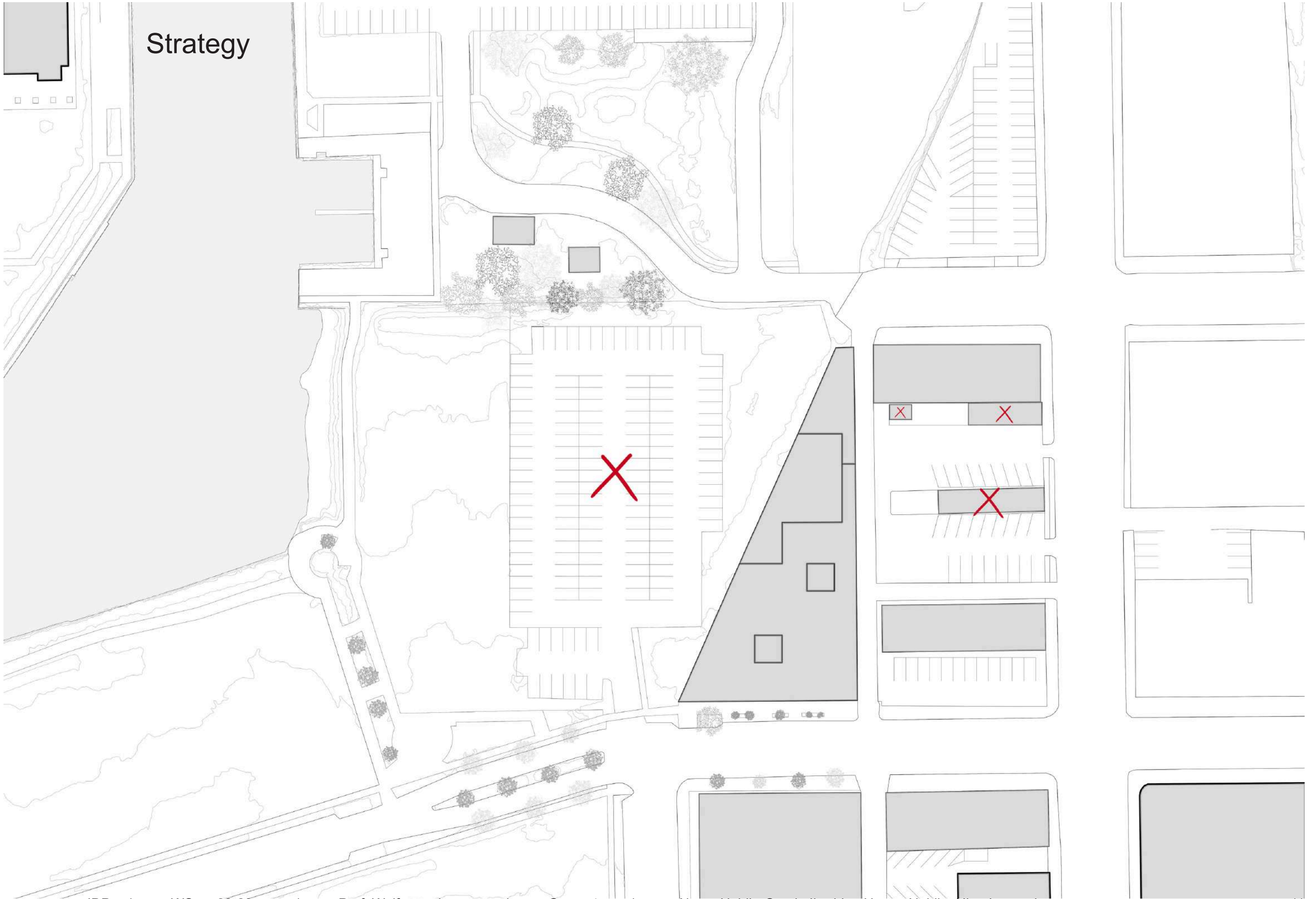
+Abundance of open space to accommodate outdoor urban farming

+Creating a urban green node in the middle of a busy area that also help raise awareness

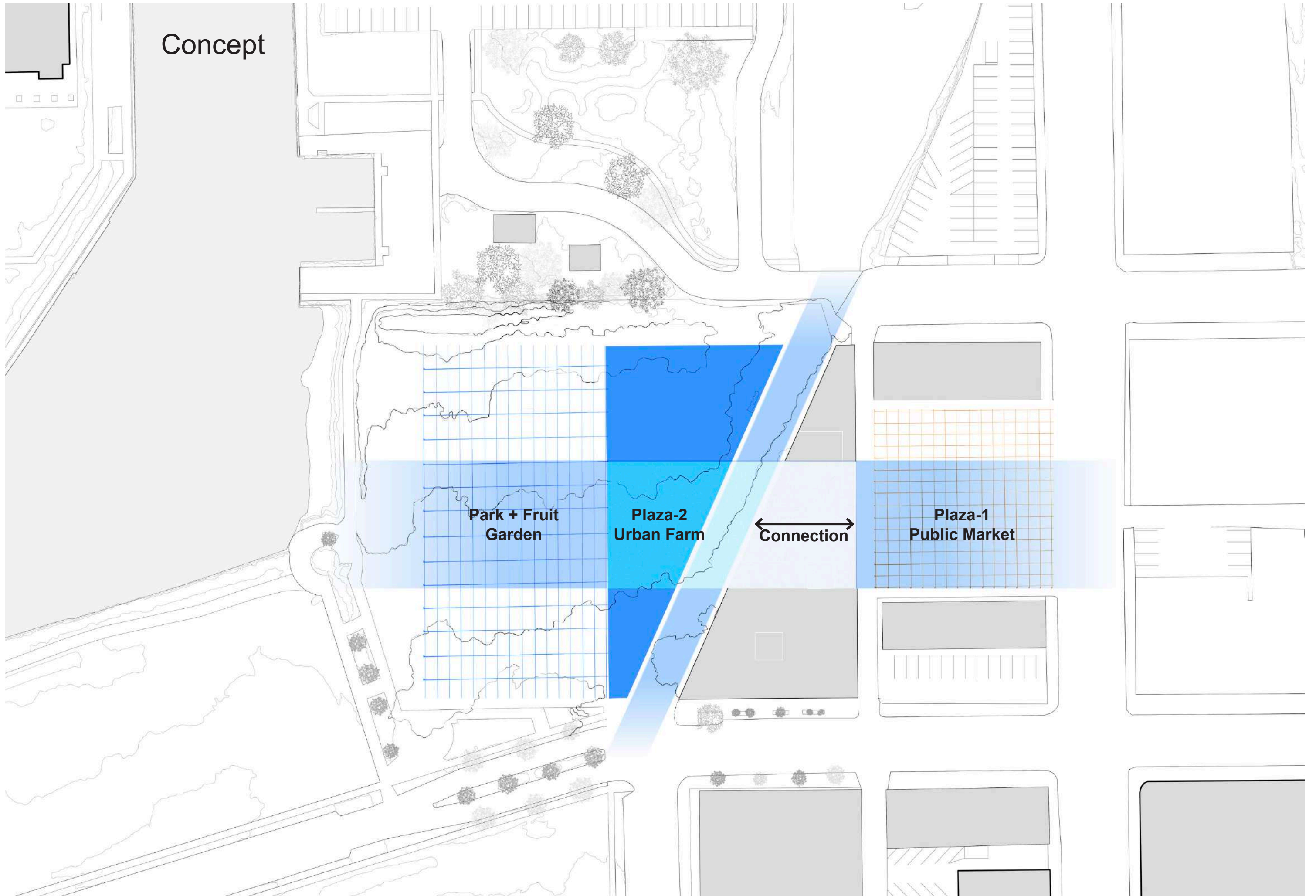
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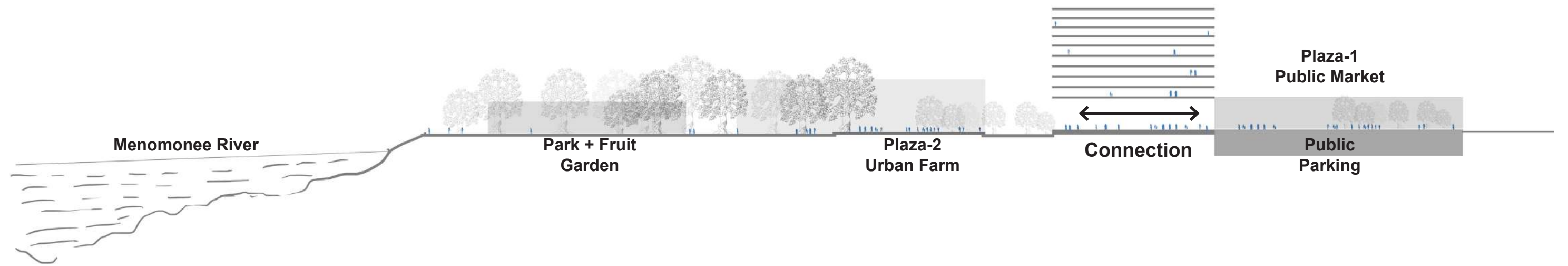
Strategy



Concept



Urban Section



Site Plan

Menomonee River

FRUIT TREES GARDEN

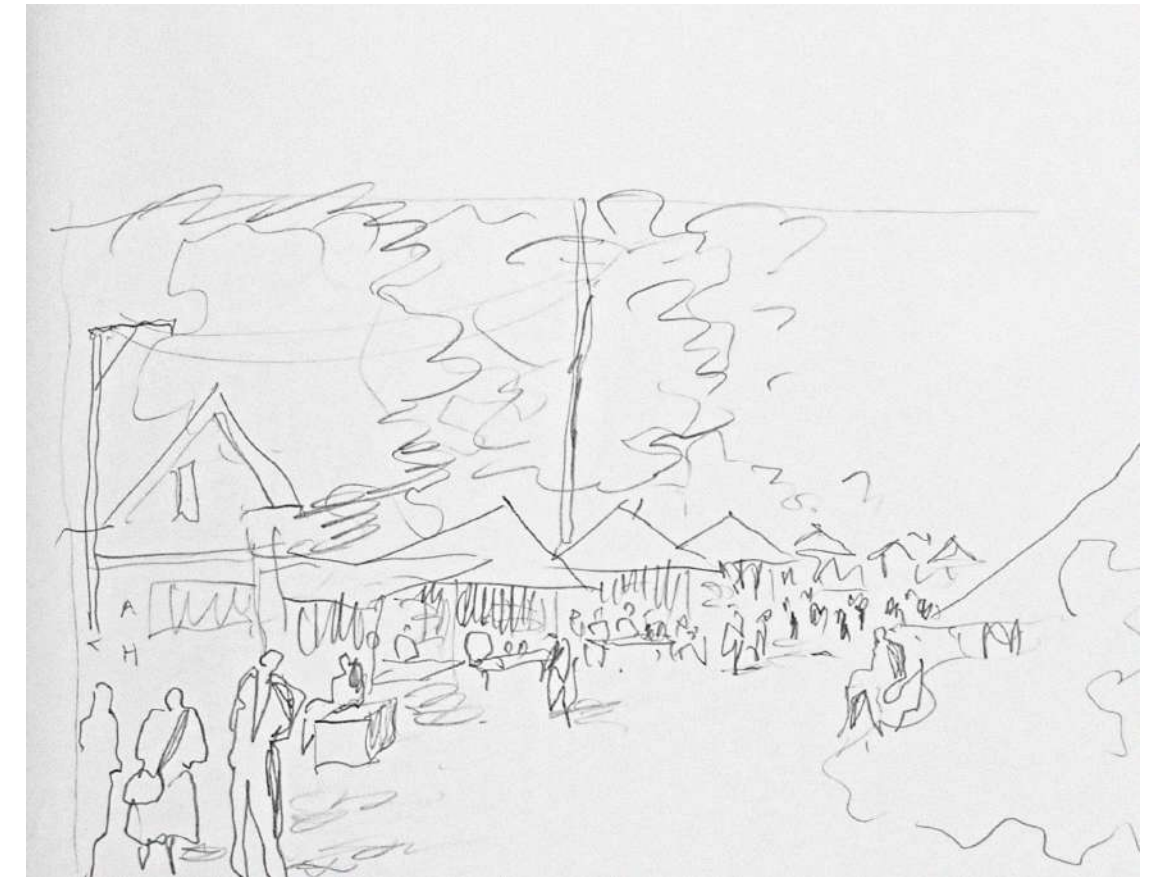
FARMING BEDS

FARM MARKET





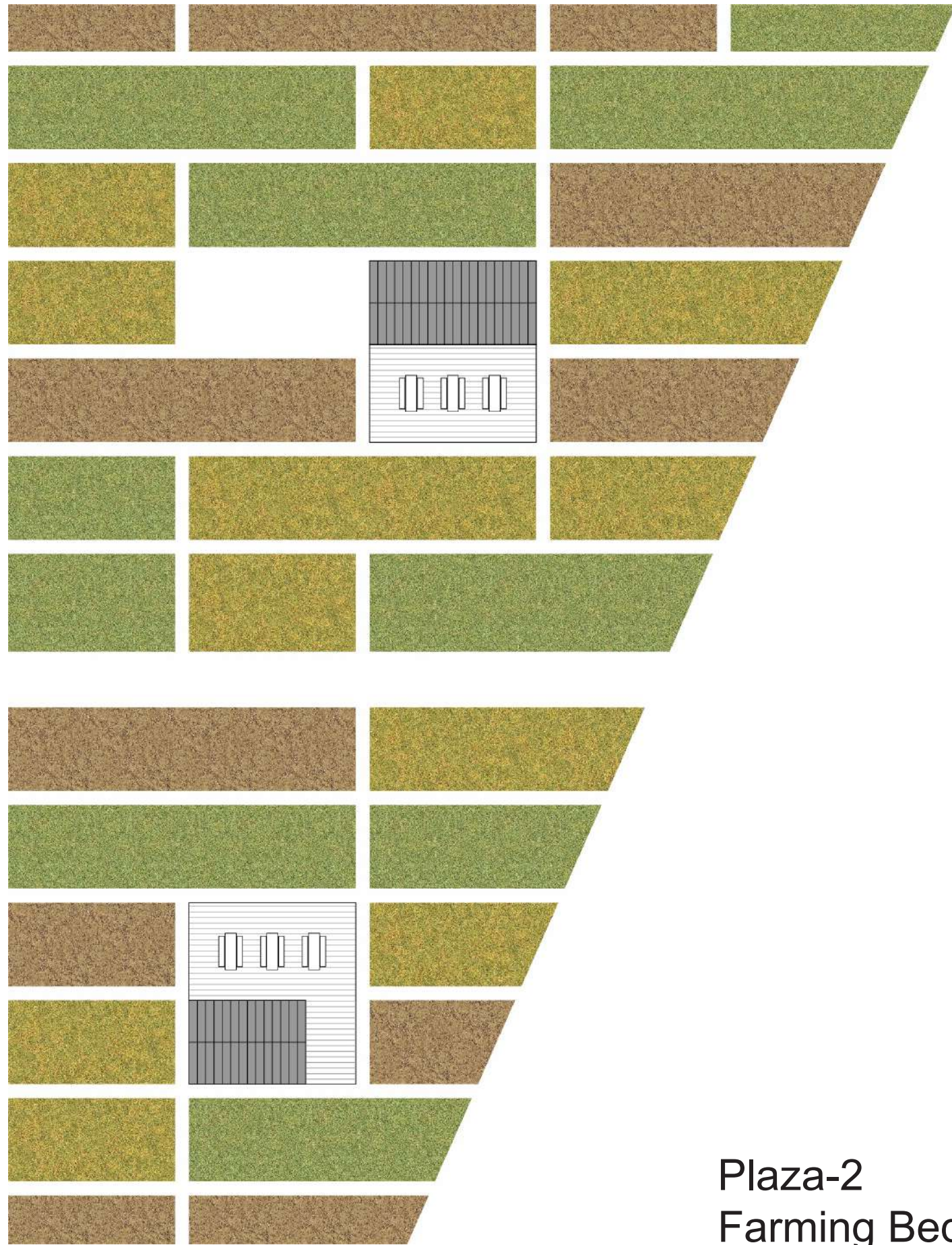
Plaza-1 Public Market



Urban Gardening, Market Place

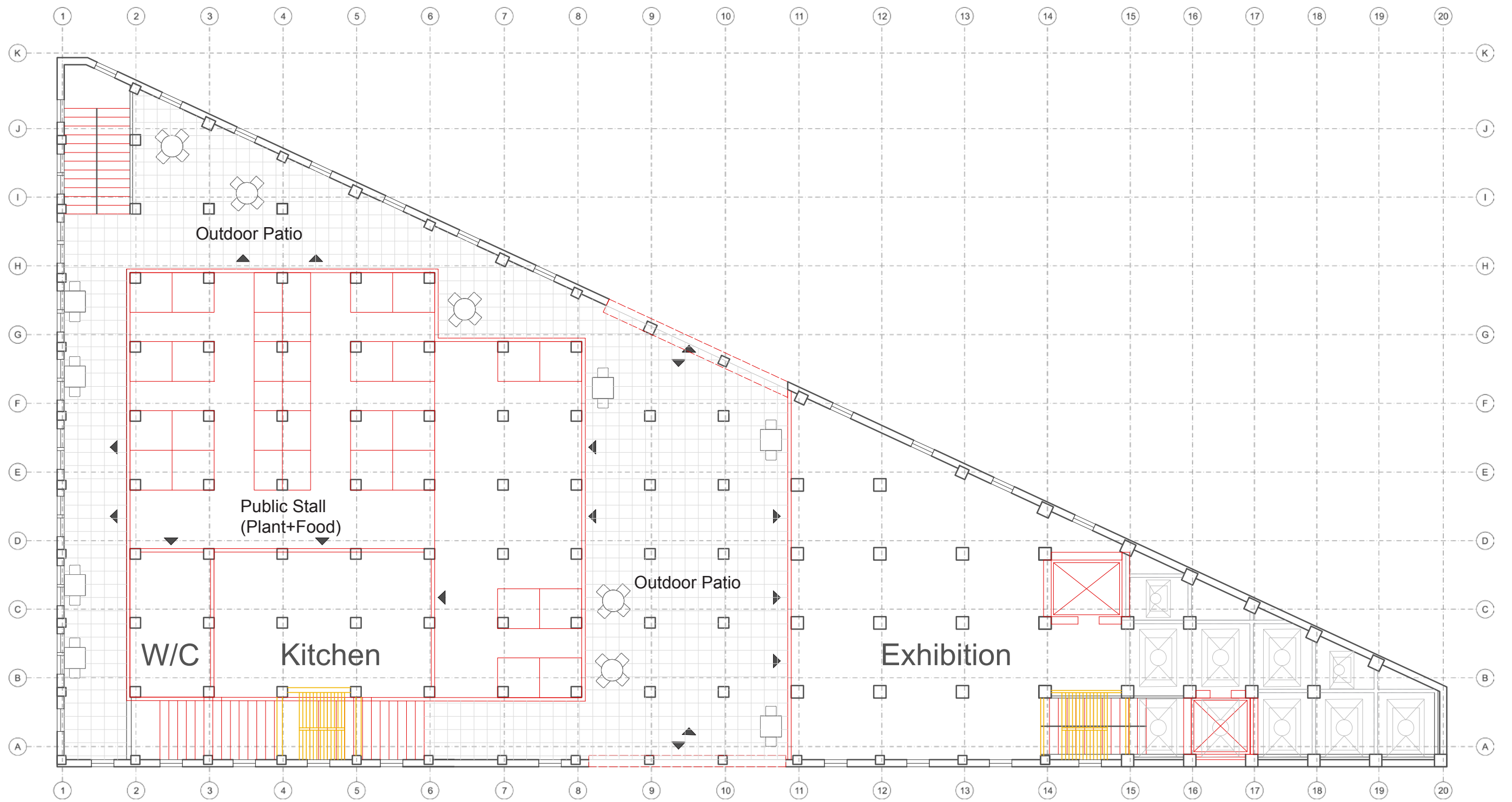


Urban Gardening, Weekly Shop



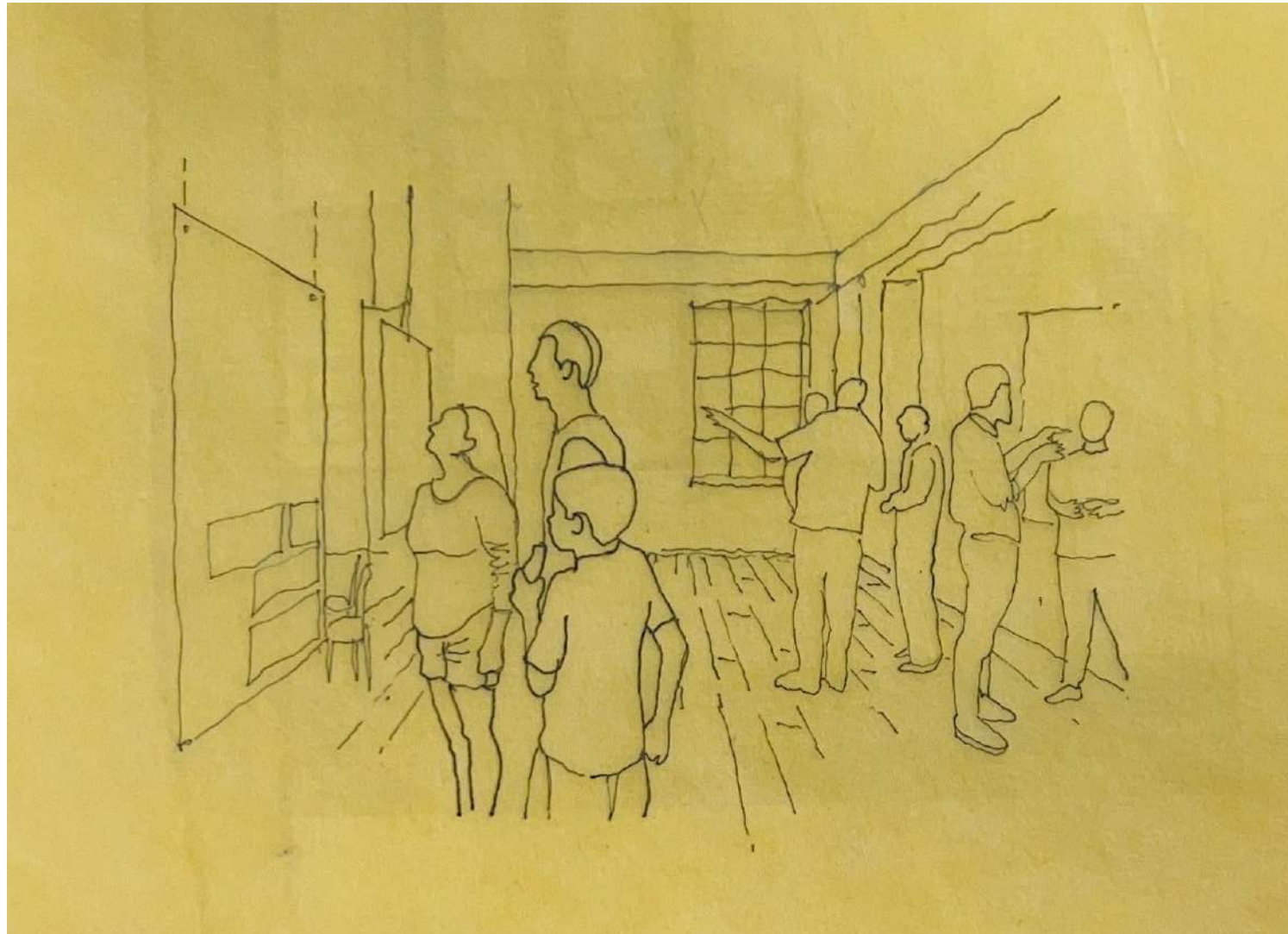
Plaza-2
Farming Bed

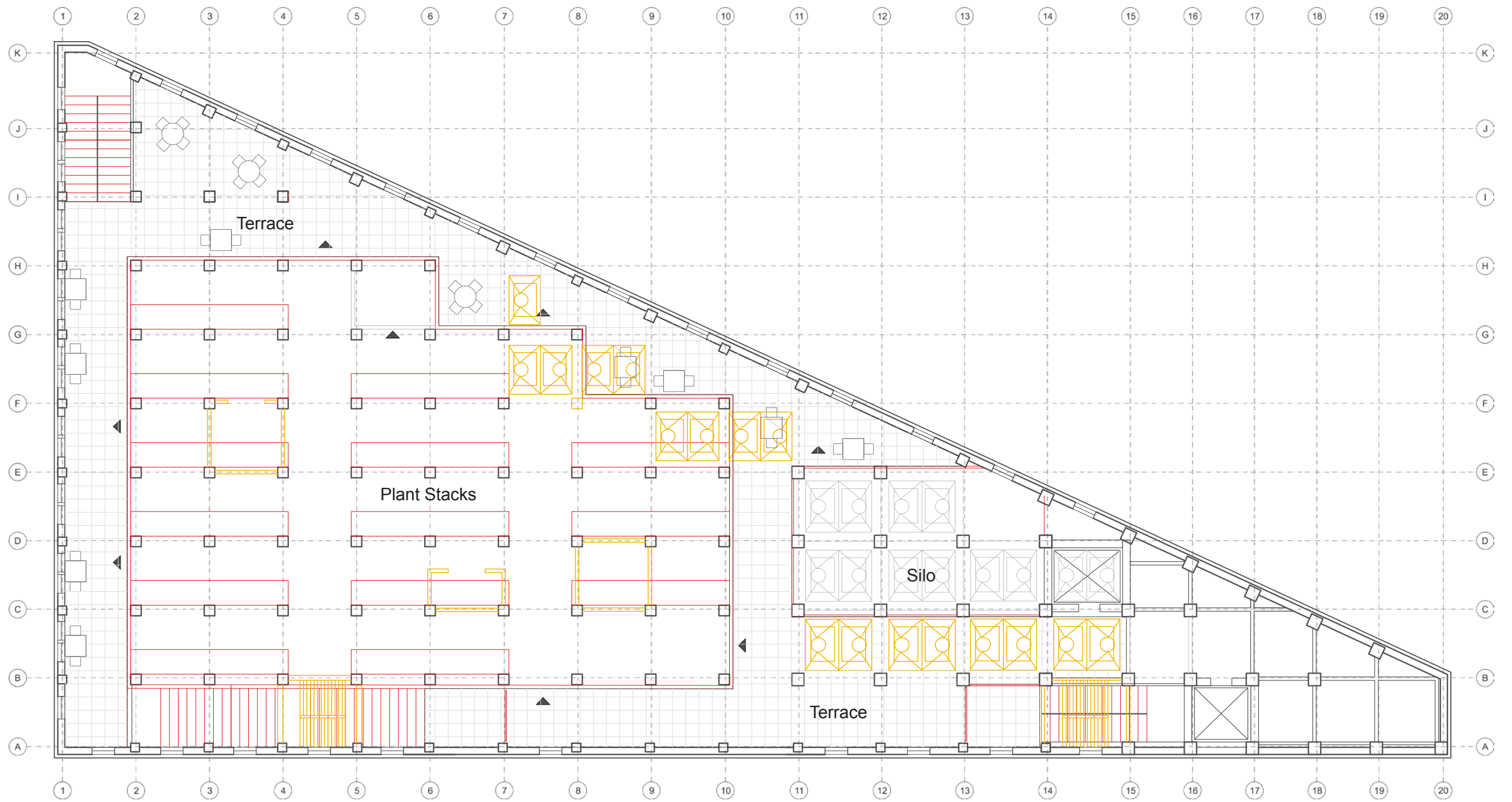




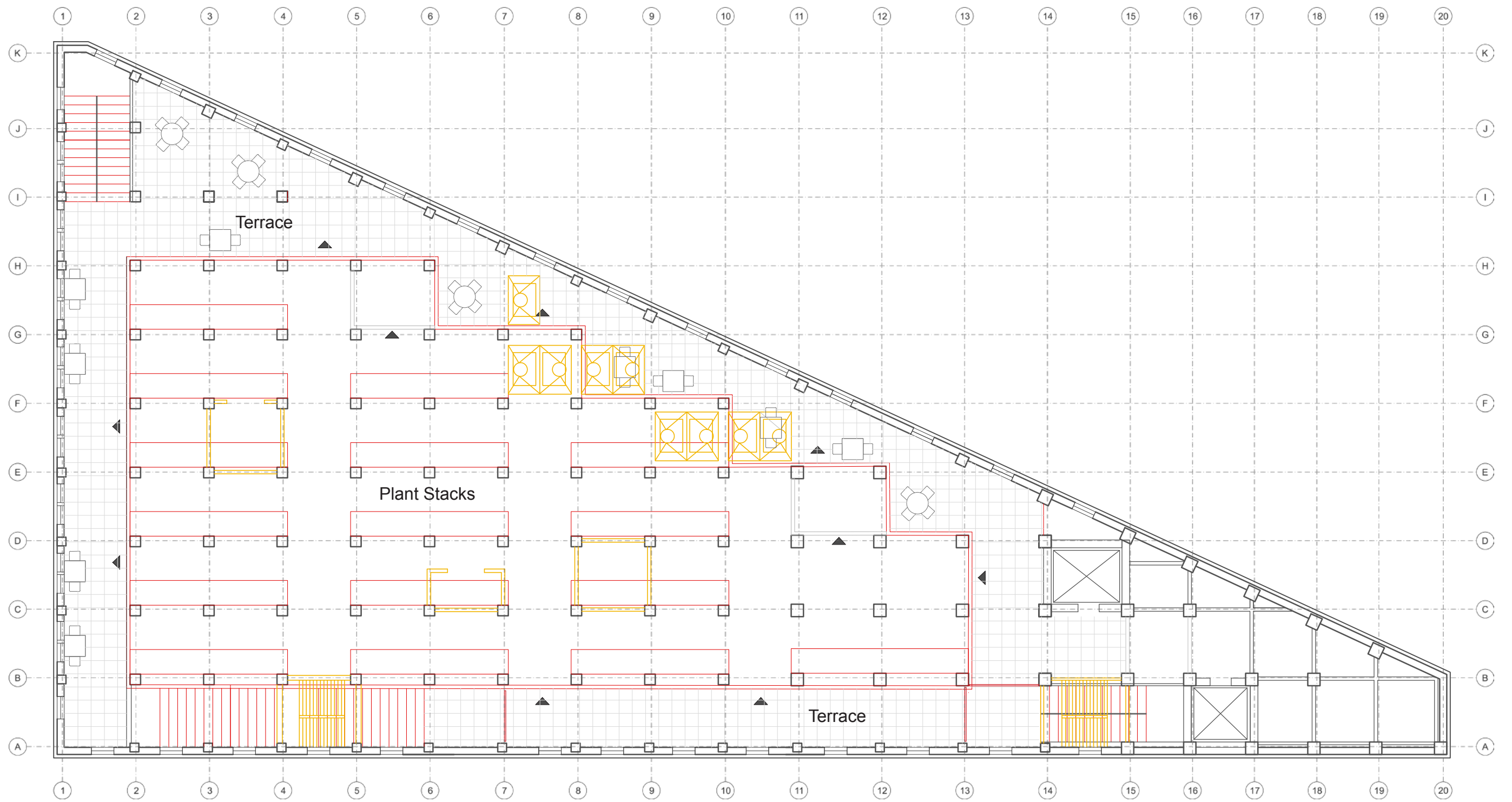
Ground Floor Plan

Exhibition Space



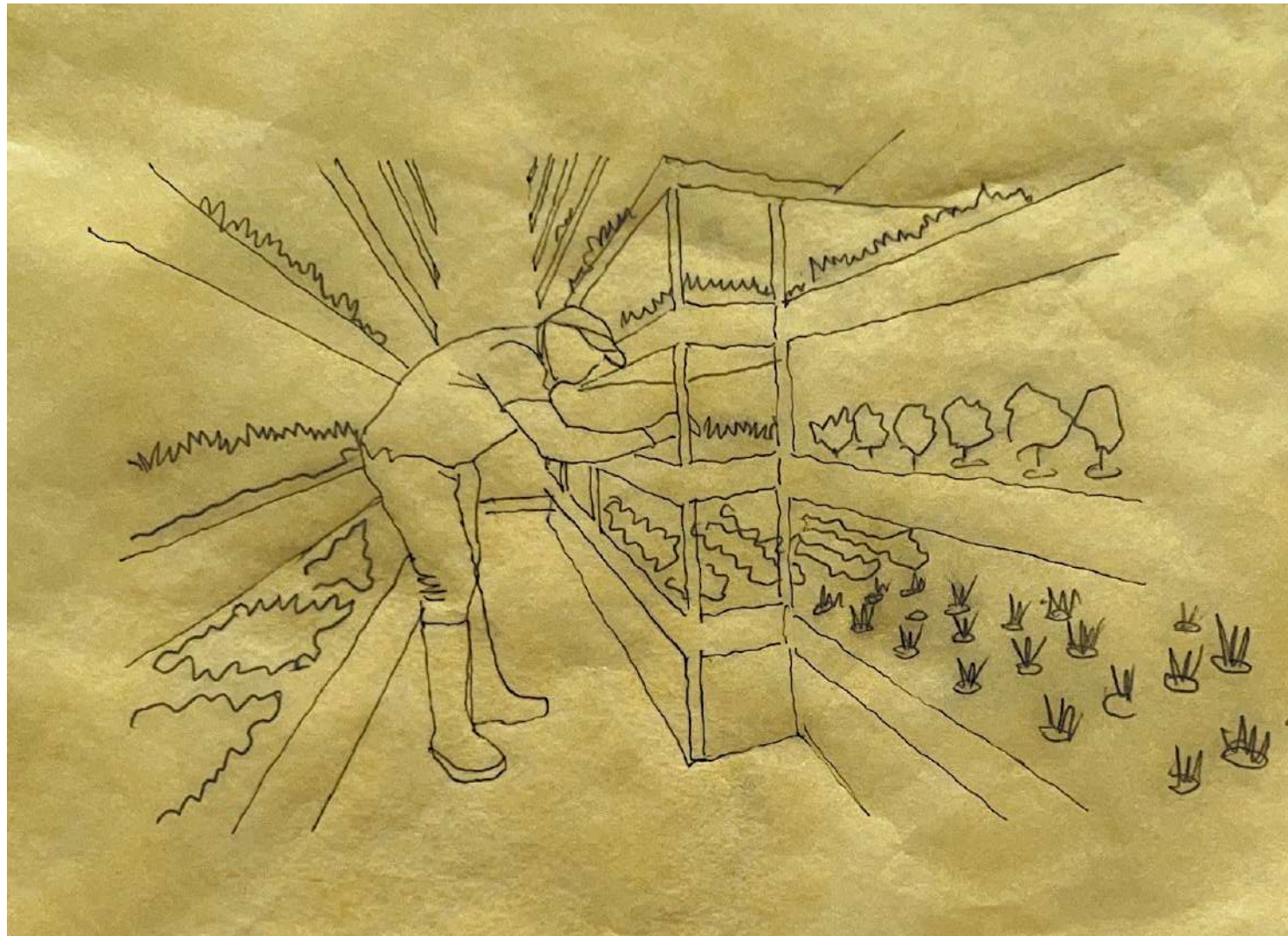


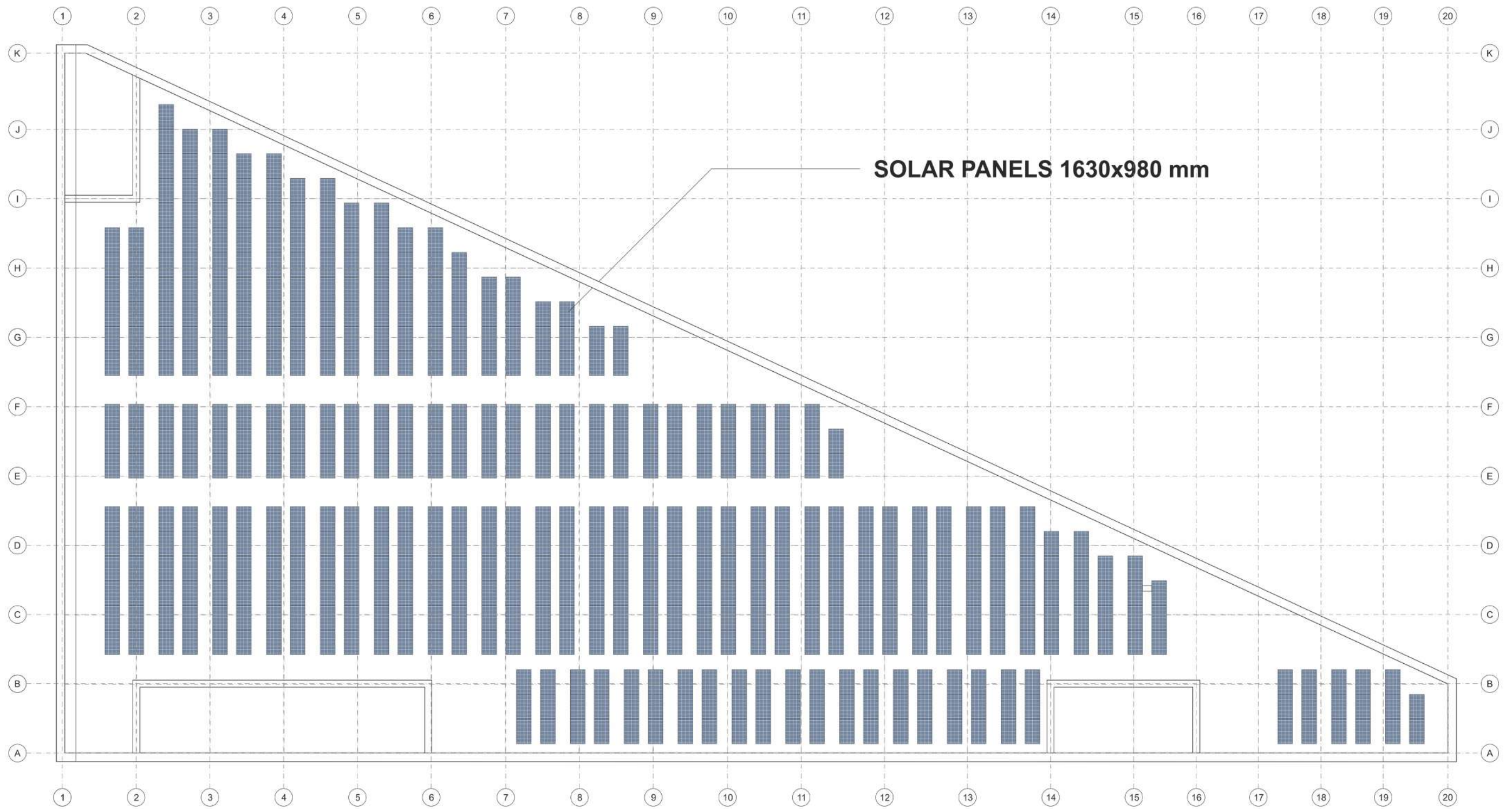
3rd and 4th Floor Plan



5th and 6th Floor Plan

Indoor Plantbed



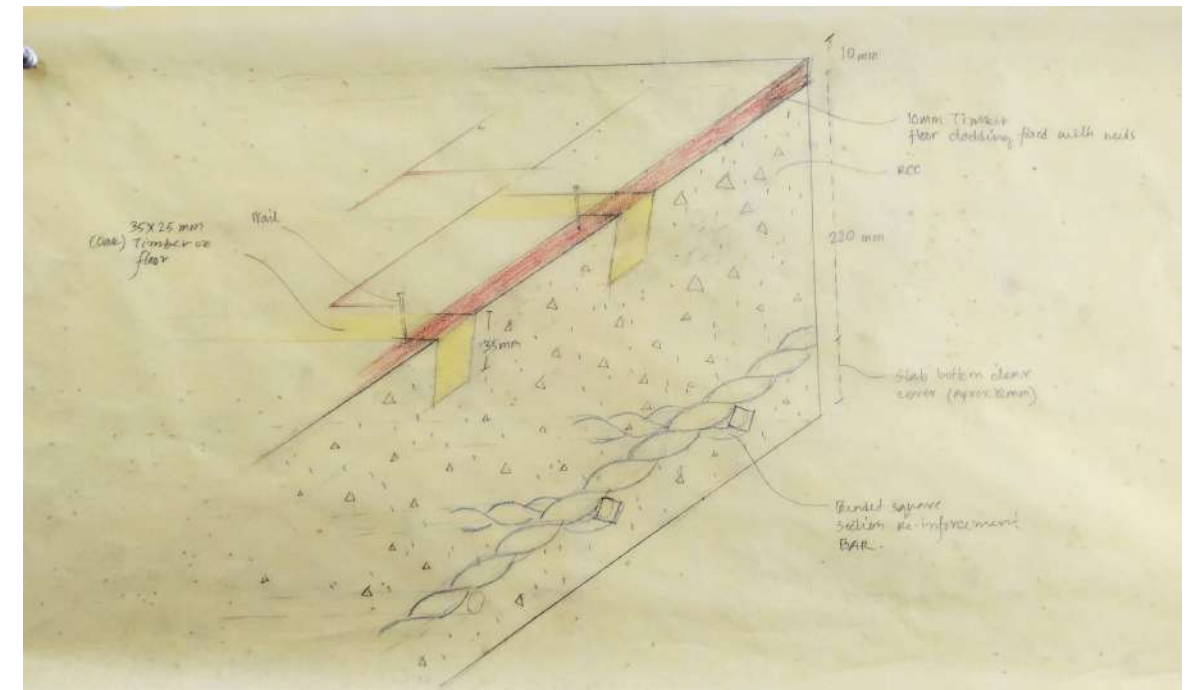
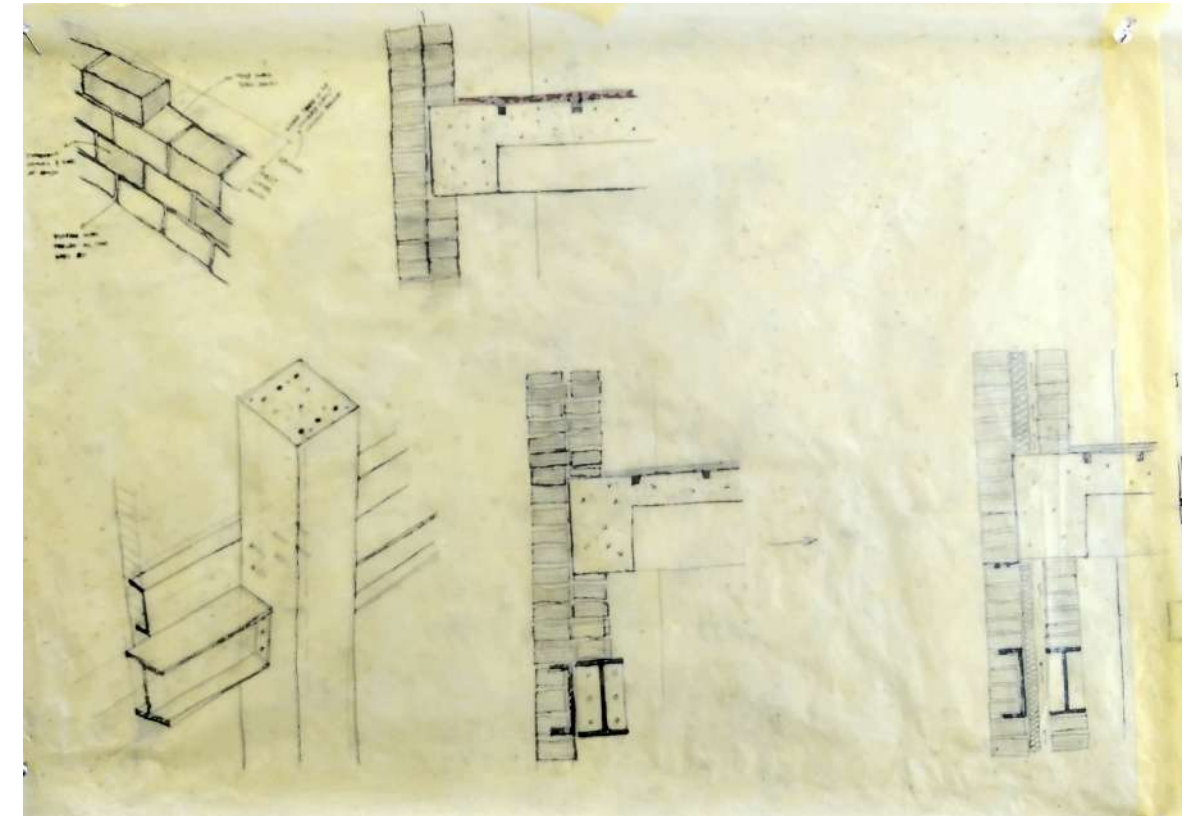
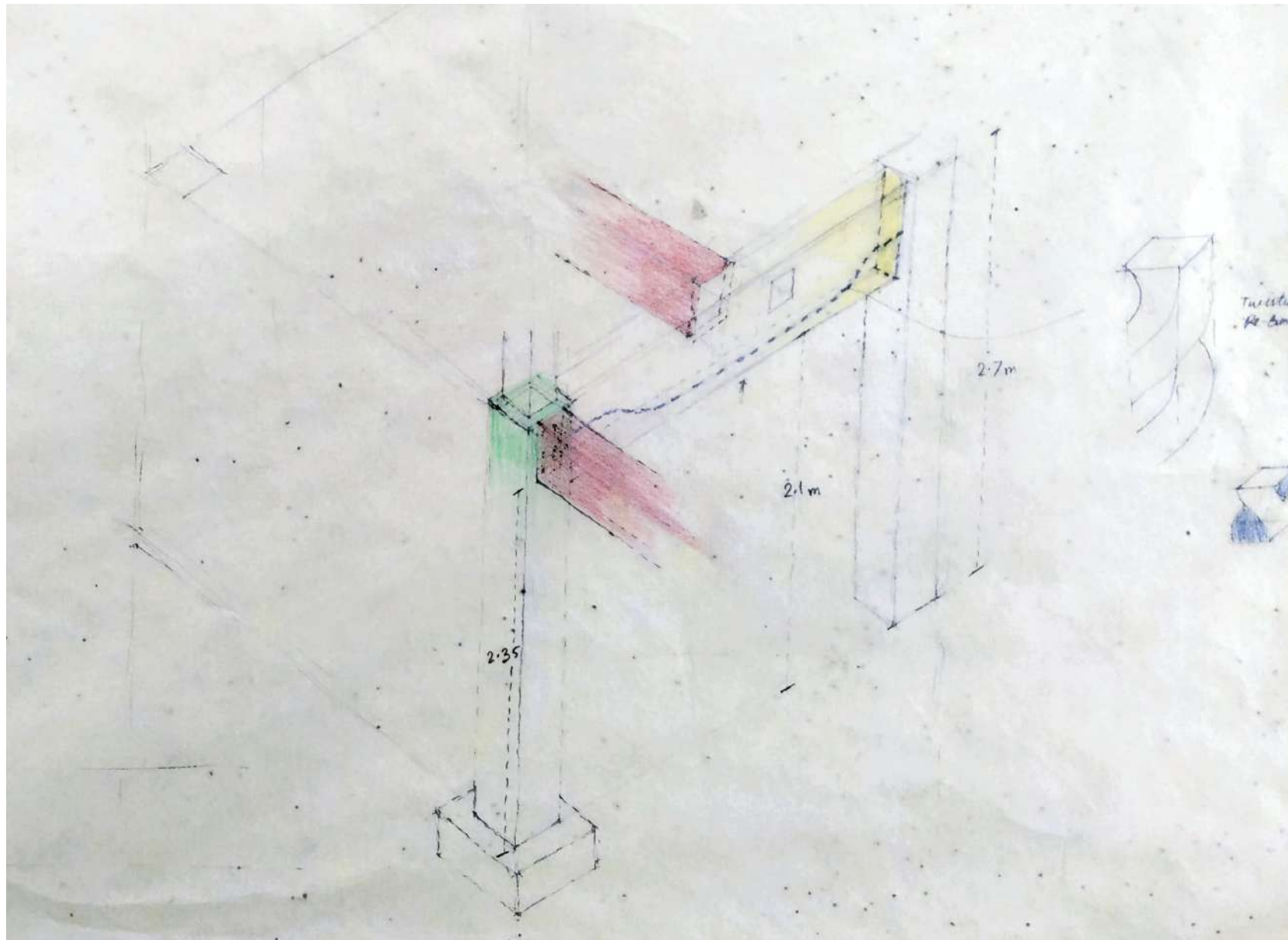




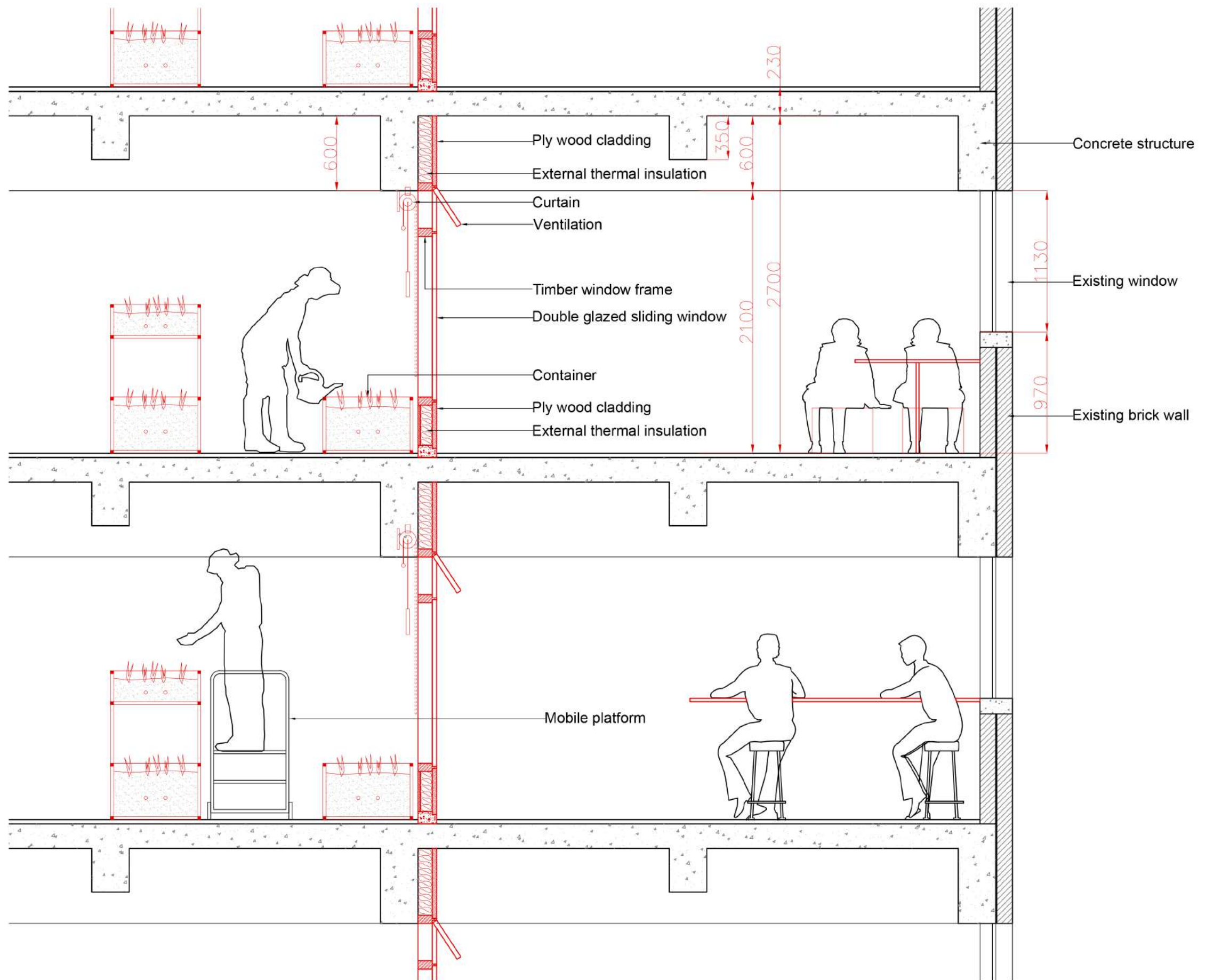
1 Longitudal Section A.A



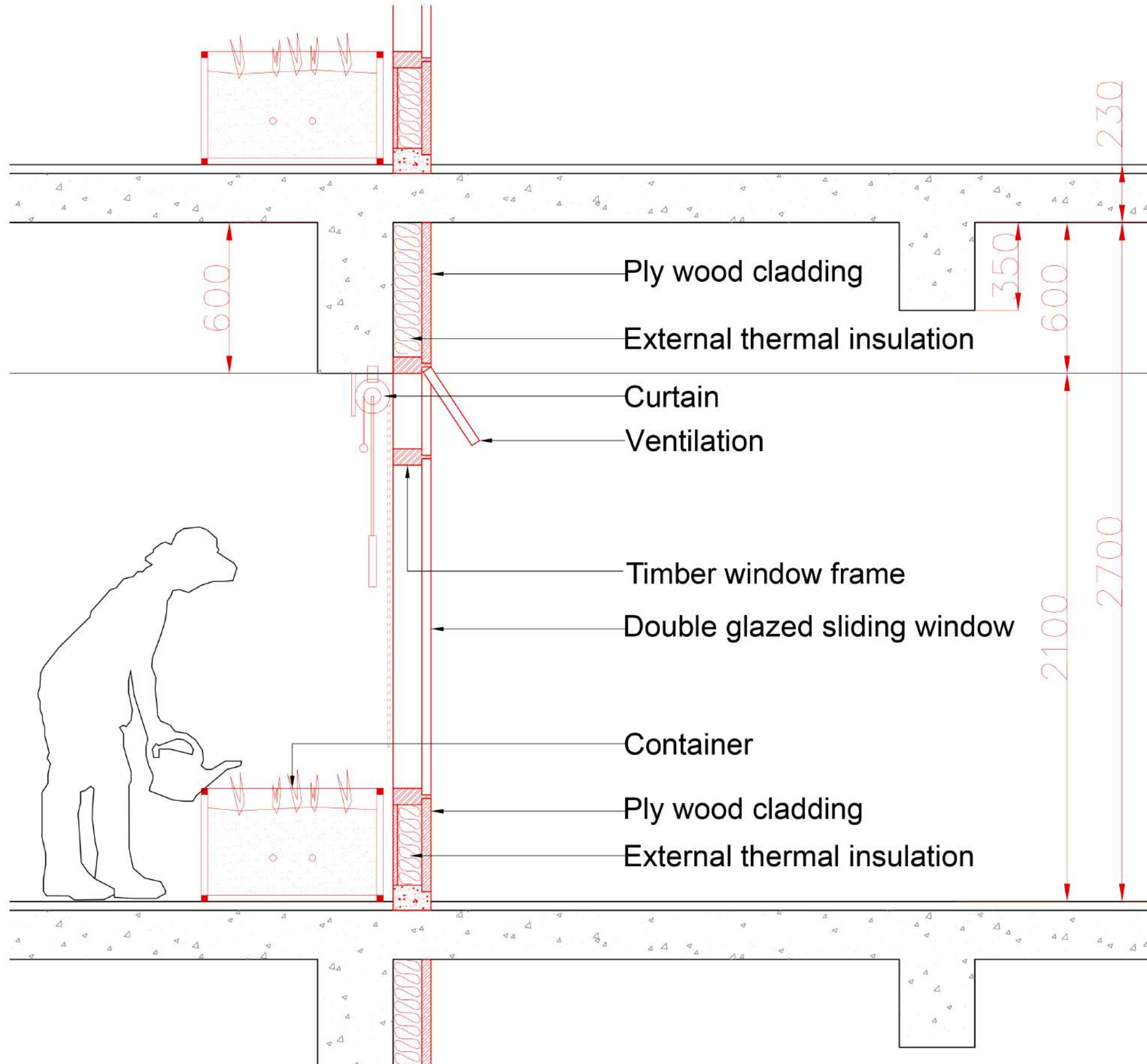
Structure Analysis



New Facade

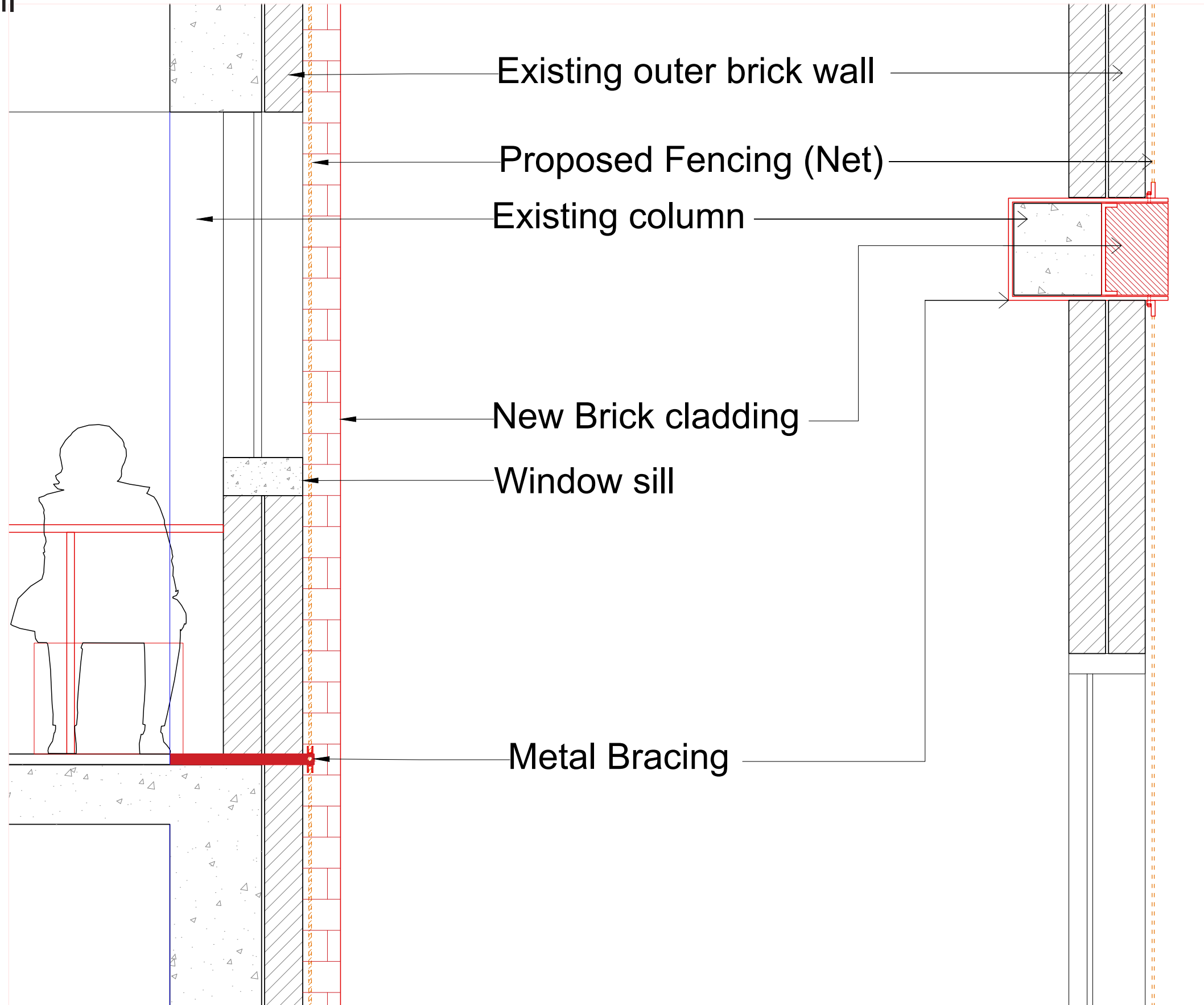


Facade Detail

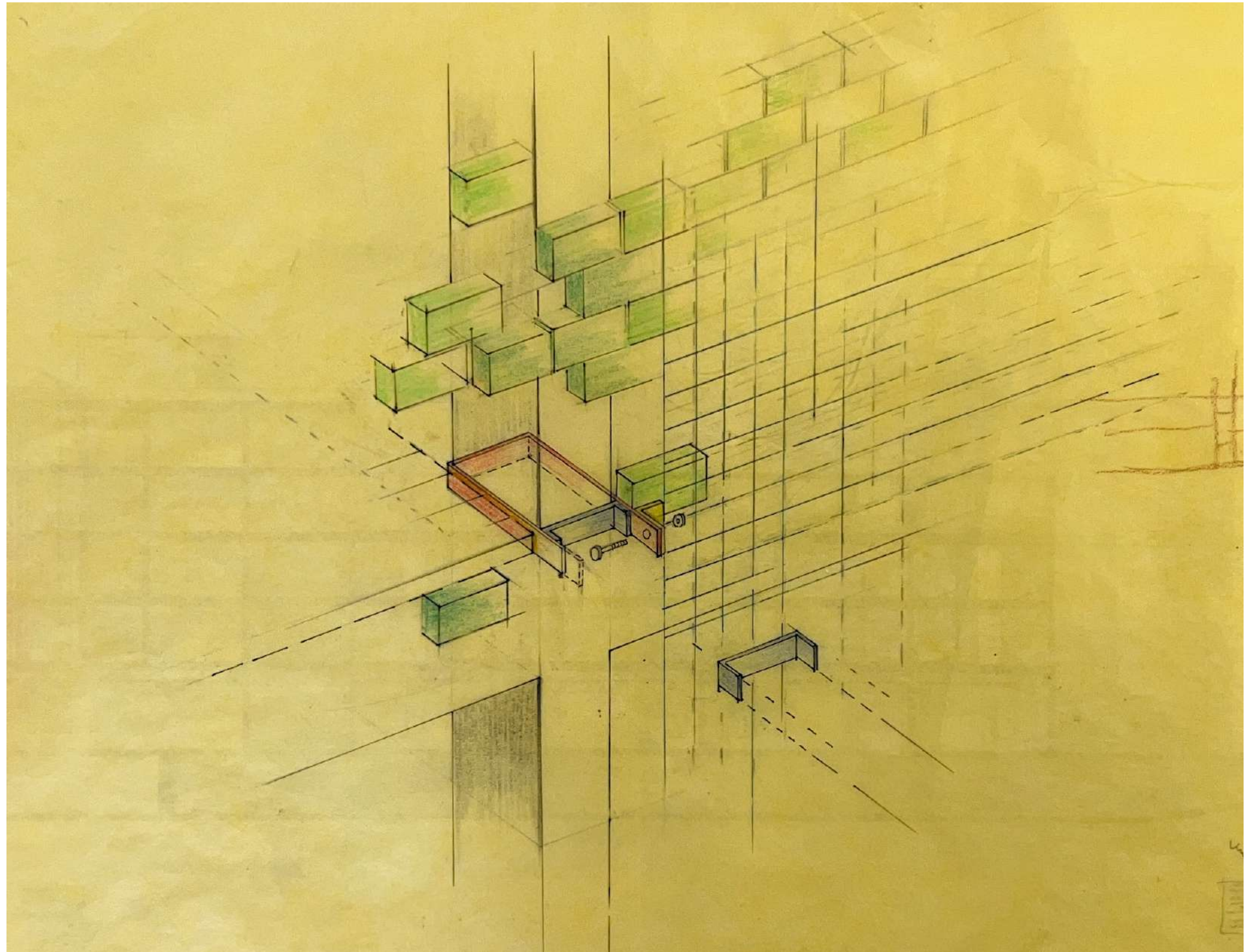




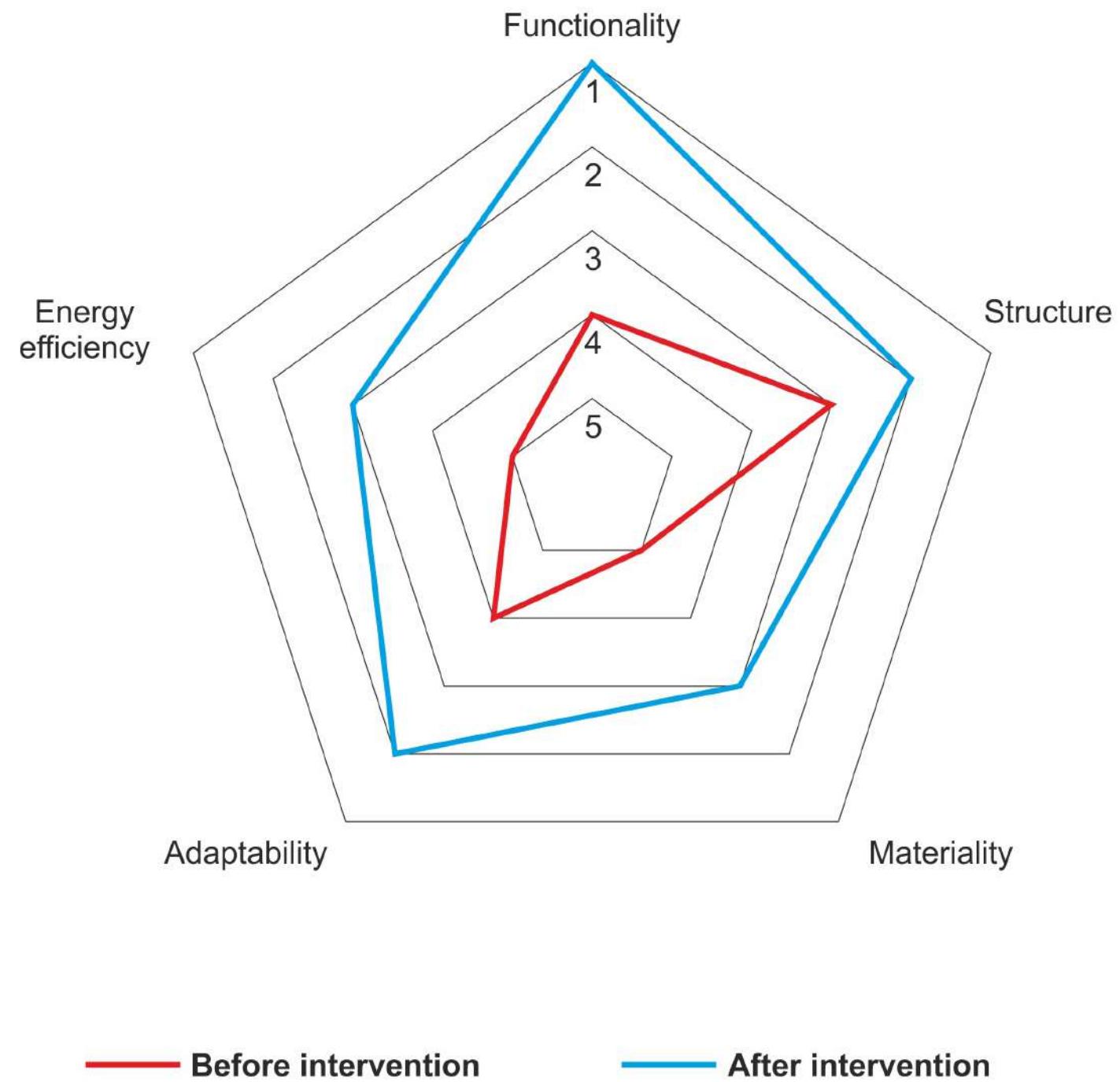
Technical Detail Hanging Mesh



Technical Detail Hanging Mesh



Spider diagram analysis



Thank You