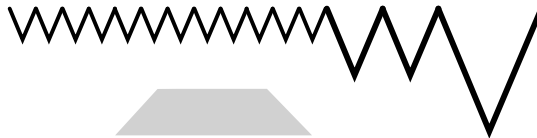


IDYLLIC HUB

TRANSPORTATION HUB IN HOLENDRECHT



AMSTERDAM-HOLENDRECHT
COMPLEX MSC4 P4
DUOWEN CHEN

15-12-2017

CONTEXT

Think about the future



Densification | Urban Sprawl | Tourist Growth

AMSTERDAM 2050

Opportunity and Challenge



Mobility | Health | Energy

AMSTERDAM SOUTH EAST

Opportunity and Challenge



Mobility | Health | Energy

AT THE BORDER



At the fringe of Amsterdam

WELL CONNECTIVITY

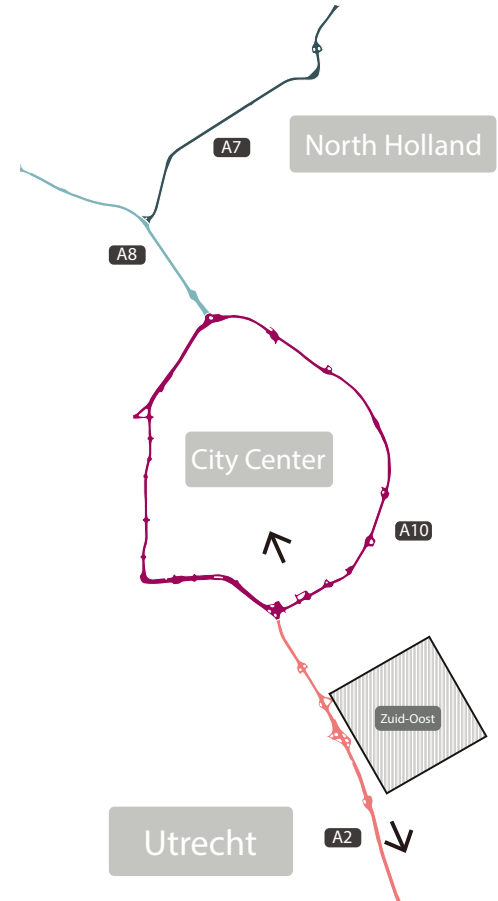
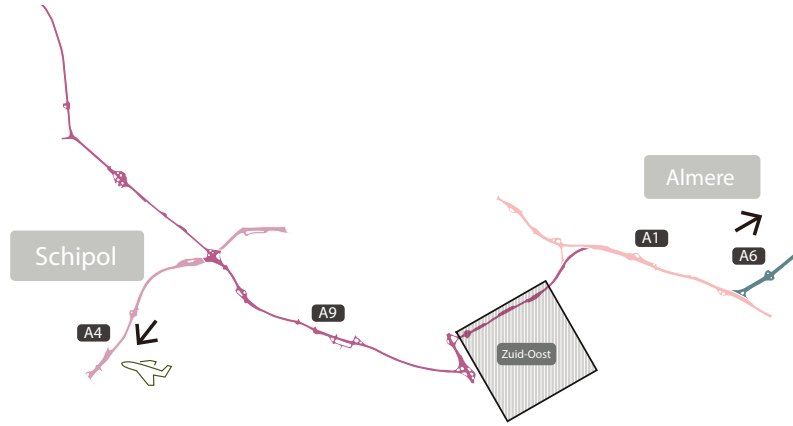
Metro | Train | Highway



Travel time less than 20min to city center | less than 30min to Utrecht

WELL CONNECTIVITY

South-North Axis | East-West Axis



MUNICIPAL PLAN

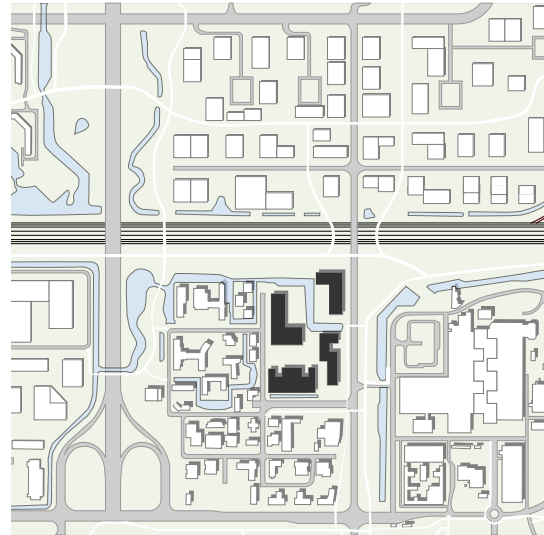
Densification along Infrastructure



Plan to build along the infrastructural bundle

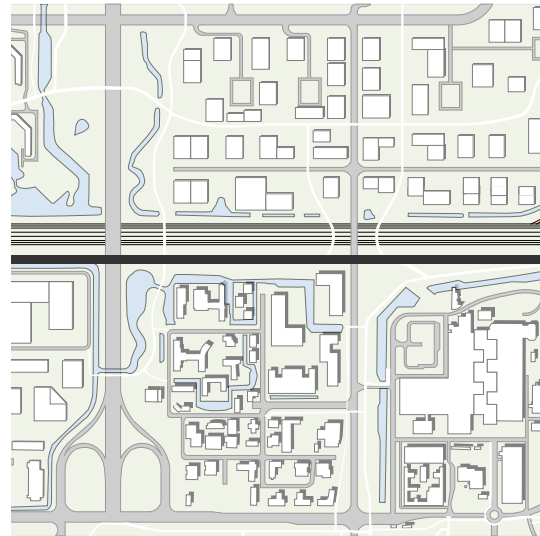
FUTURE | ON-GOING PROJECTS

Student housing



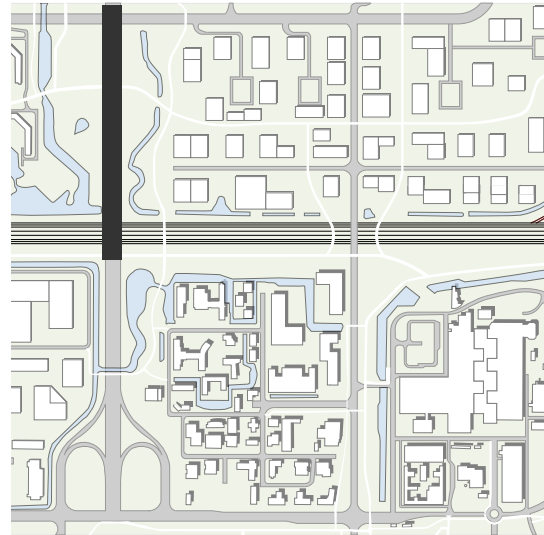
FUTURE | ON-GOING PROJECTS

Bike highway along train track



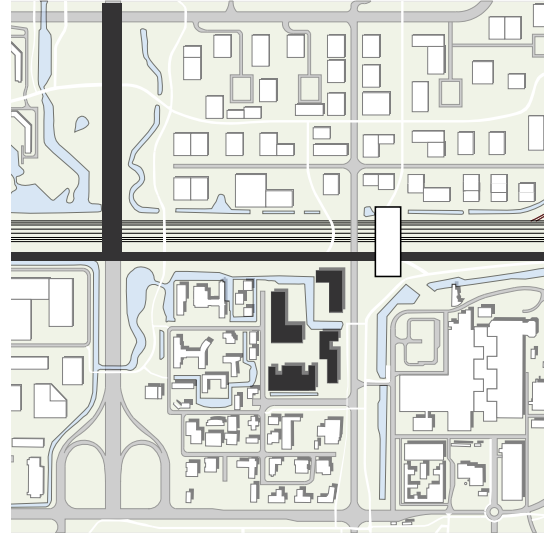
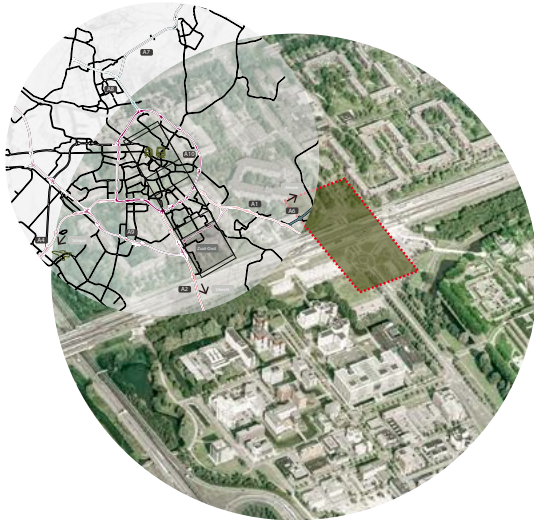
FUTURE | ON-GOING PROJECTS

A9 highway park



SITE SELECTION

Along the infrastructure line



Nearby the Holendrecht Station

GLORY OF THE STEAM AGE

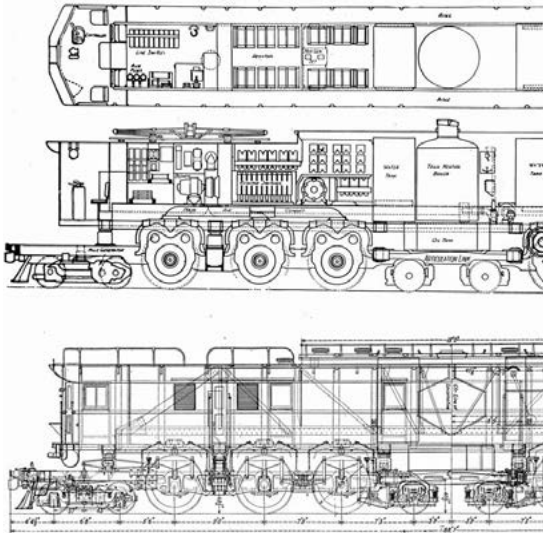
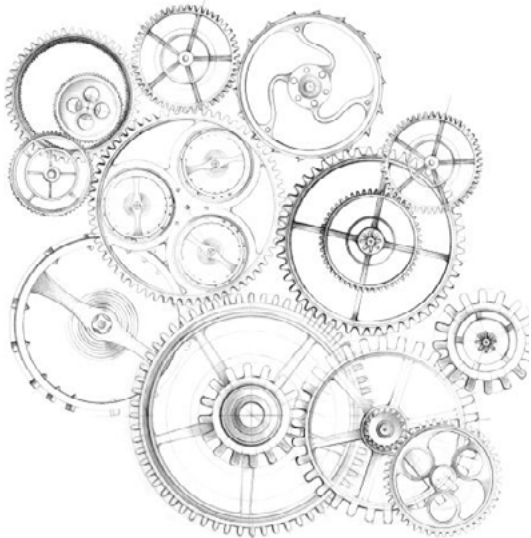
Revolution



Train station was one of the representatives for industrialization during 1770-1914

STANDARDIZATION

Vehicle dimension



The standardization of the machine make train station standardized. Smaller to little gear, bigger to locomotive, every element has their own dimension.

GLOBALIZATION

World-wide Phenomenon



The standardization of the machine make train station standardized and globalised.

TRANSPORTATION HUB AS AN GIANT MONSTER



Stations become bigger and bigger and try to stand out from the urban setting. It tries to stand out from the urban context.

AMSTERDAM SOUTH EAST SHOULD BE THE SAME?



4 SITE VISITS

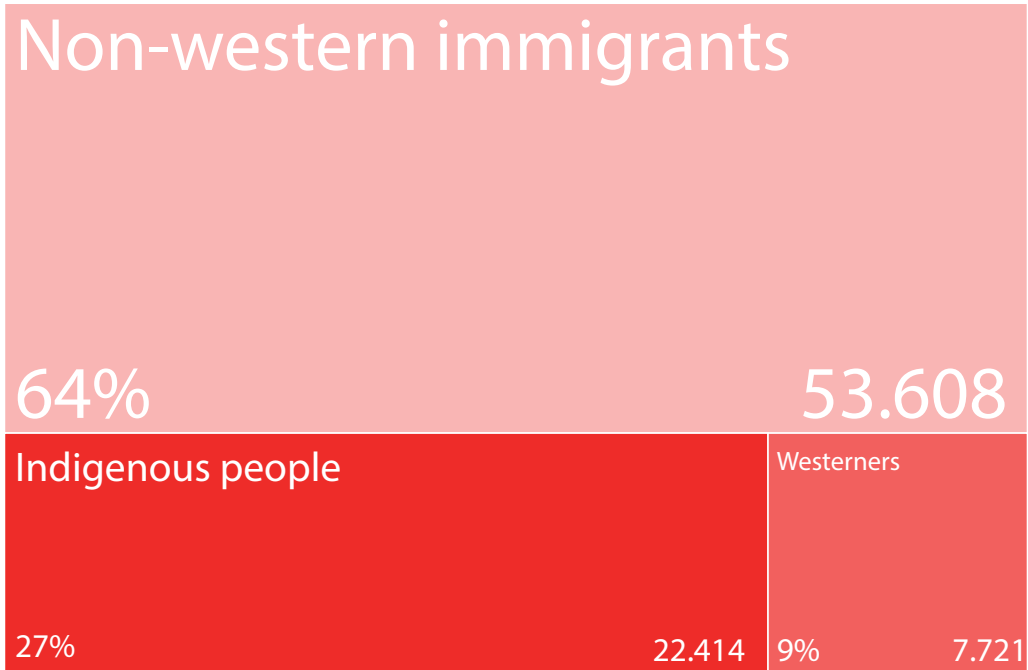
Diversity | Lively | Social | Nature



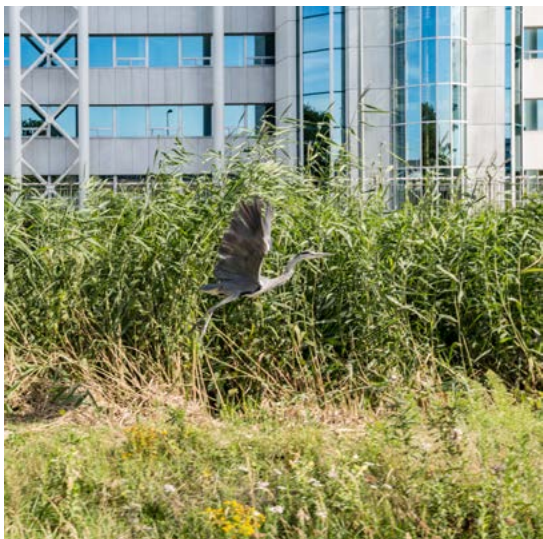
DIVERSITY



DIVERSITY



NATURE



LIVELY



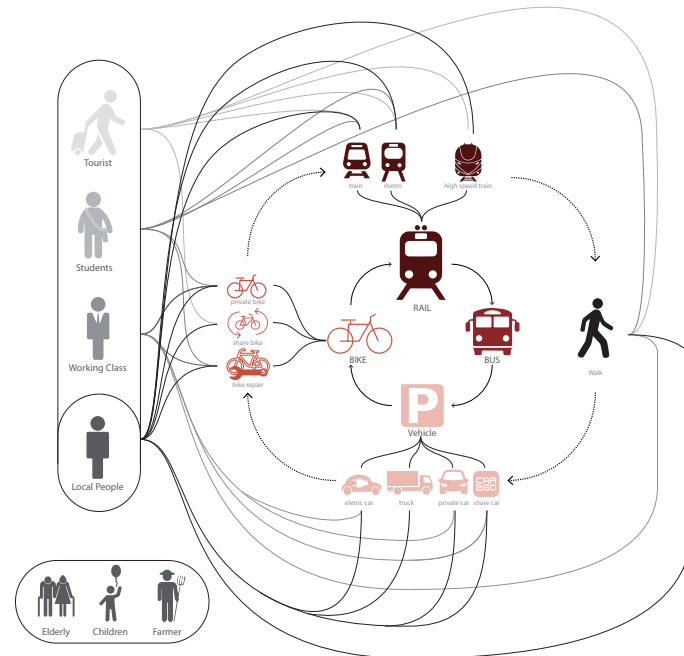
LIVELY



SOCIAL



PROBLEM STATEMENT 1



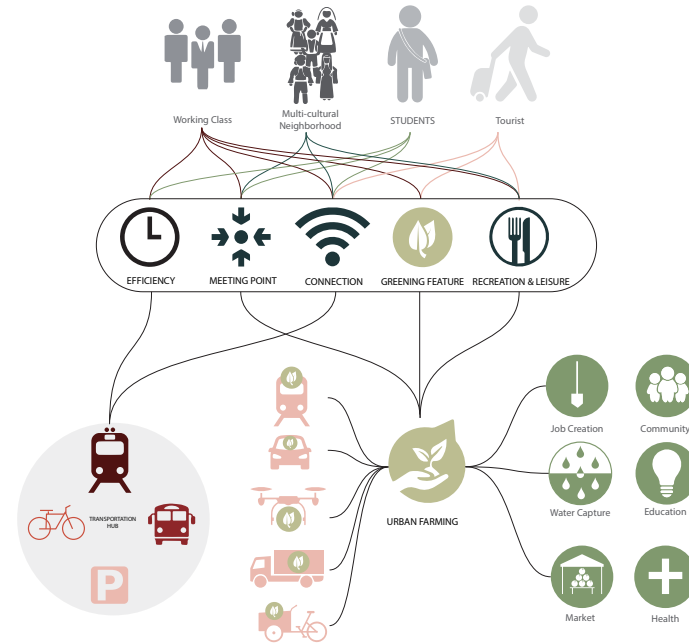
Train stations are often seen as an mega structure standing in the urban setting, taking up a lot of space.

In the city scale, infrastructural line help to connect the region

In the local scale, infrastructural line appears to be a barrier

The question is how to accommodate the future densification of the area and the public local life

PROBLEM STATEMENT 2



At, suburban area such as Amsterdam South East, the question is , how to make a often-seen standardized train station fits in the specific context and benefit the local people. There are contradictions between nature & machine, local & global, now & future etc. What's the role of a suburban transportation hub?

INFRASTRUCTURE & NATURE

Train station + Nature



Botanical Garden Inside Atocha Train Station, Madrid

DESIGN AMBITION

I

Connect the green infrastructure
Make the abundant greening more evident and
defined to reveal its quality

II

Break the barrier of the current elevated train track

III

Social inclusion in the site

IV

Introduce the lively activities in the site

DESIGN SOLUTION

I

Region Strategy

II

Urban Implementation

III

Architectural Intervention

DESIGN SOLUTION

I

Region Strategy

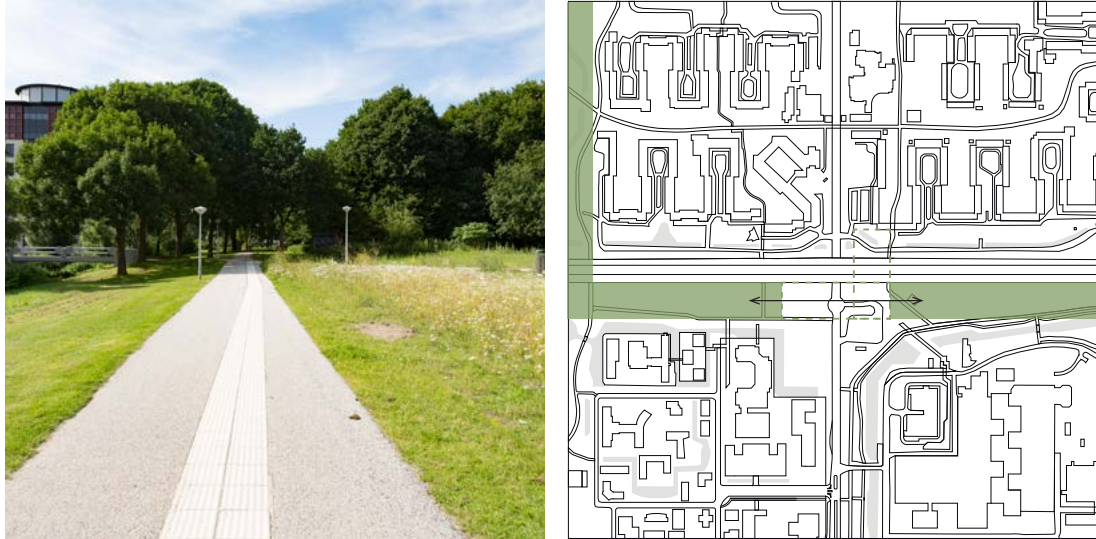
REGION STRATEGY I

Connect the Green infrastructure



REGION STRATEGY I

Connect the Green infrastructure



Greening as a strong dominant feature in Zuid Oost provide unique quality in Amsterdam . As the in the future the ground with be more and more human-centered, the green infrastructure serves as an ideal surrounding for walking and cycling.

REGION STRATEGY I

Connect the Green infrastructure



REGION STRATEGY II

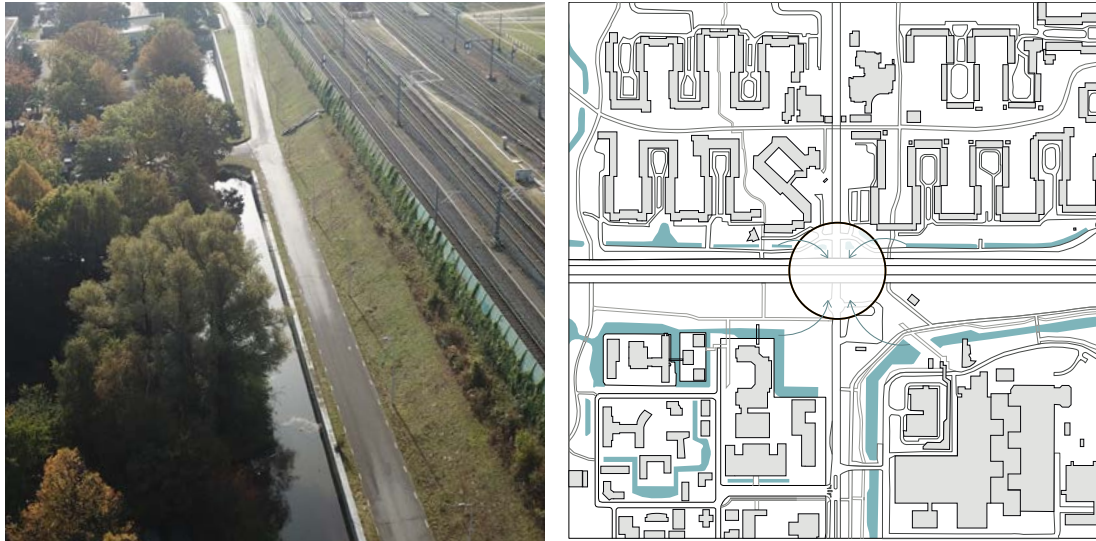
Connect the infrastructure system



Cycling system

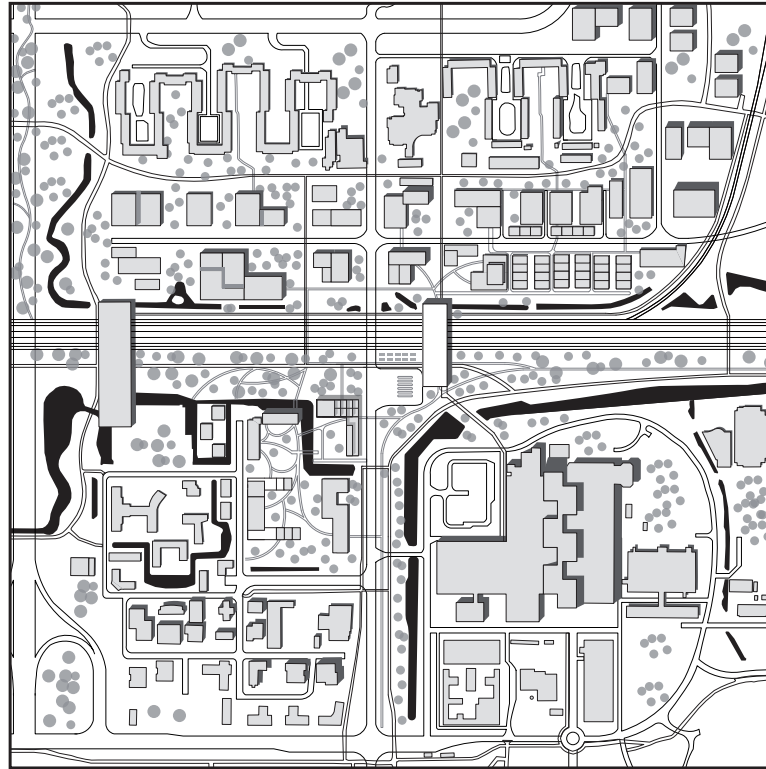
REGION STRATEGY III

Use Surface Water



Create Parks & Public Space around the water

REGION VISION

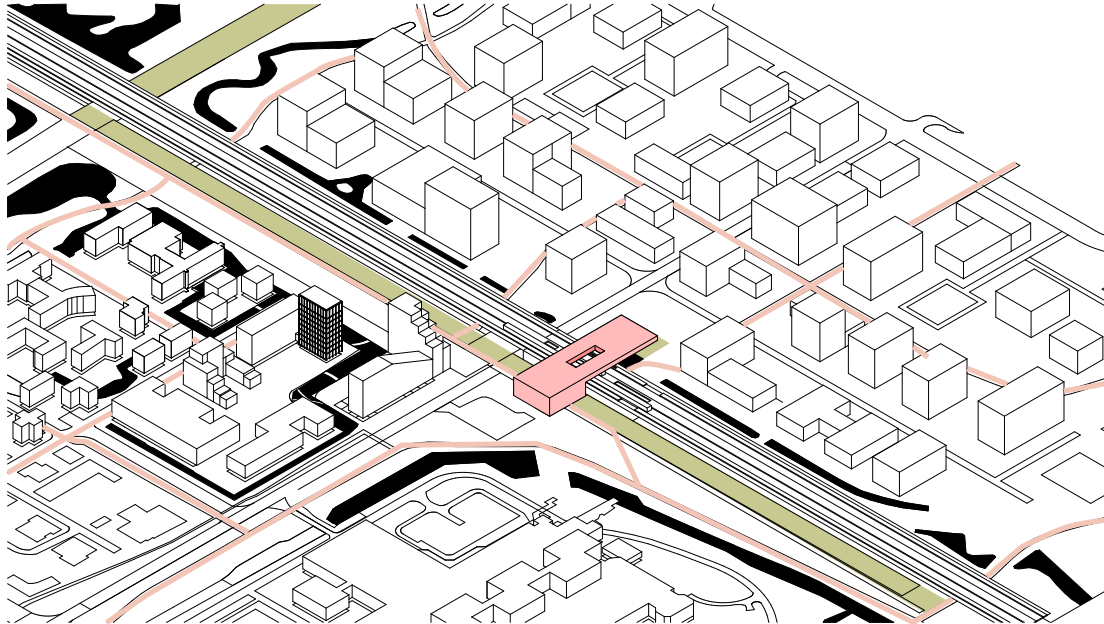


Site Plan

Renovated Holendrecht Neighborhood, Bike system connection, Green Infrastructure Connection

INTERVENTION VISION

Connector



My intervention will be a connector connecting the green, the bike system, 2 parts of the train track

DESIGN SOLUTION

II

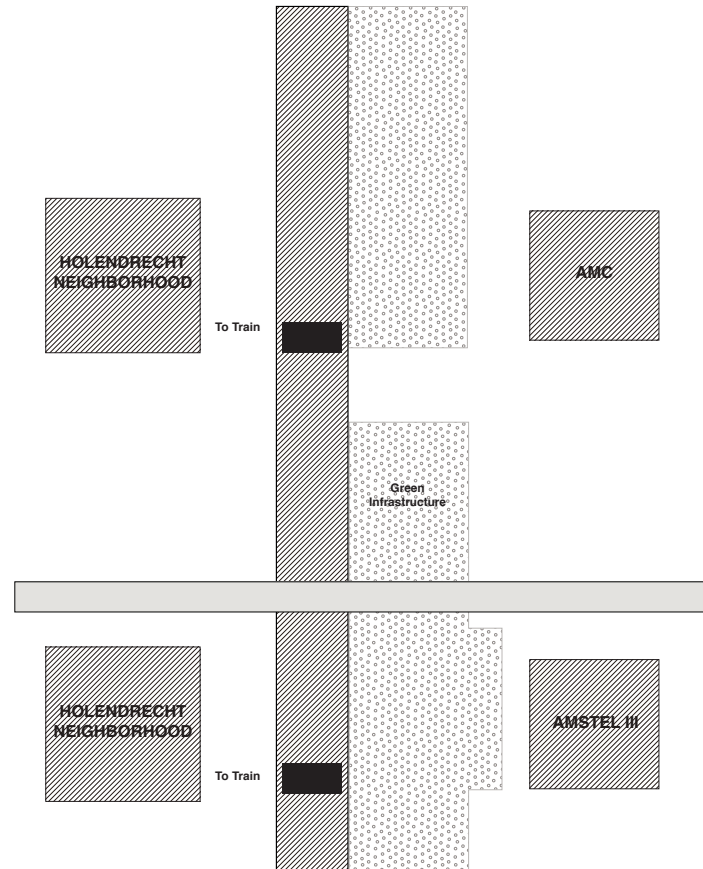
Urban Implementation

ON SITE URBAN IMPLEMENTATION



URBAN IMPLEMENTATION 1

Current situation

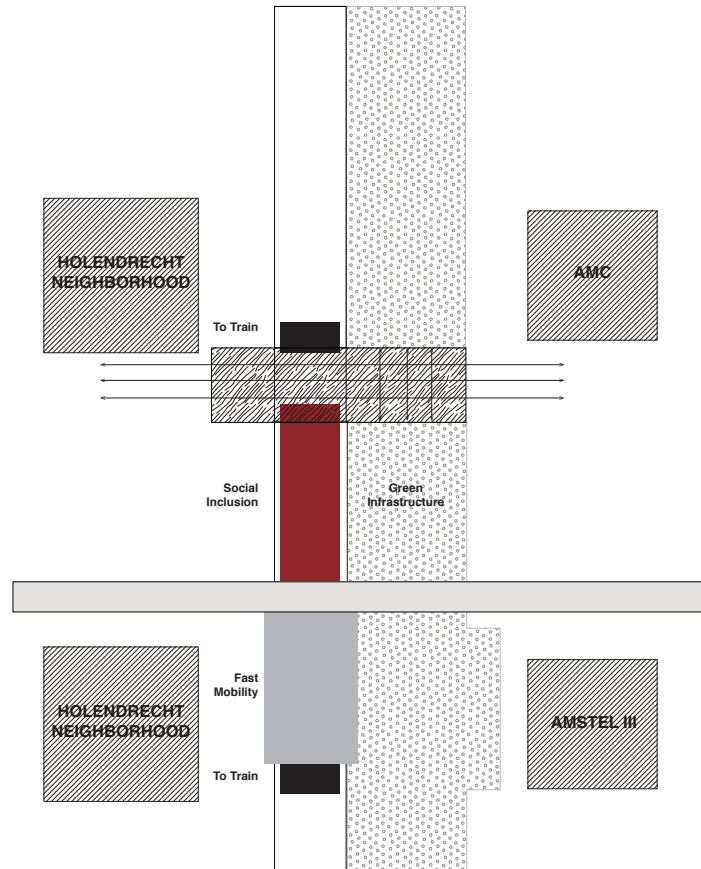


Holendrecht station stands in between Holendrecht **Neighborhood** and **AMC, Amstel III**

The train track as an **Barrier**

URBAN IMPLEMENTATION 2

Zoning the site



Strategy I

Open the dirk between 2 entrance of Holendrecht station

Strategy II

Connect the green zone on the west side of the train track

Strategy III

Separate social inclusion zone (slow mobility) and the fast mobility zone with the car road

Strategy IV

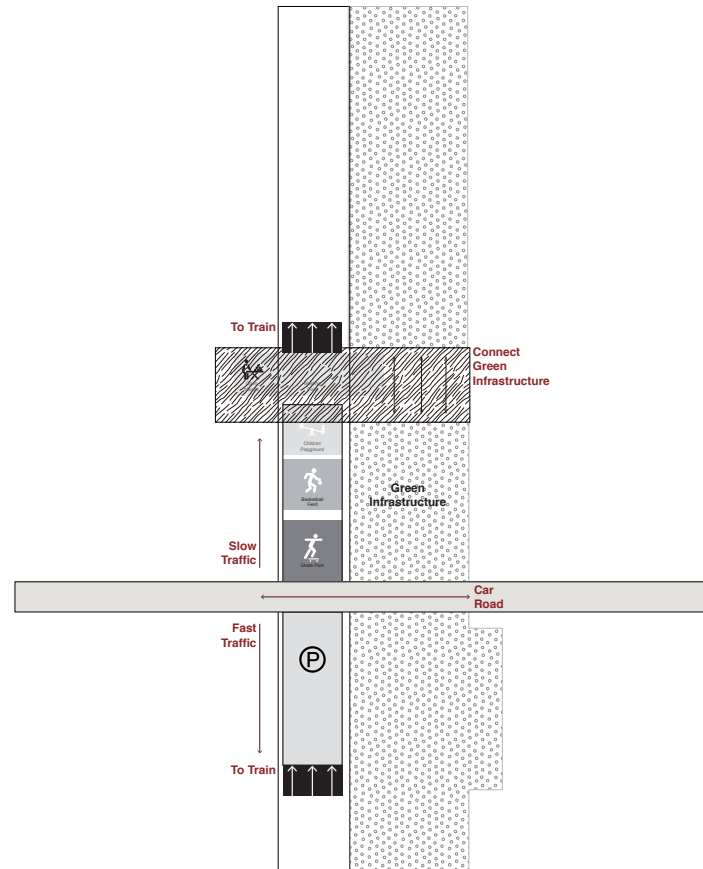
Implementation of architecture

URBAN IMPLEMENTATION 3

Specify the Zones

South Side
Connected with the AMC, Living Area and the Green zone, this part will be social inclusion zone with a skate part, basketball field and children playground etc.

The Green
Connected the green zones (urban farming, grass fields, forests)



North Side
Connected with s112 car road, this part will be the car parking area for private cars, electric cars, and car sharing spots

The Building
It crosses through all the zones and serves as an converging point of all the zones

URBAN IMPLEMENTATION 4

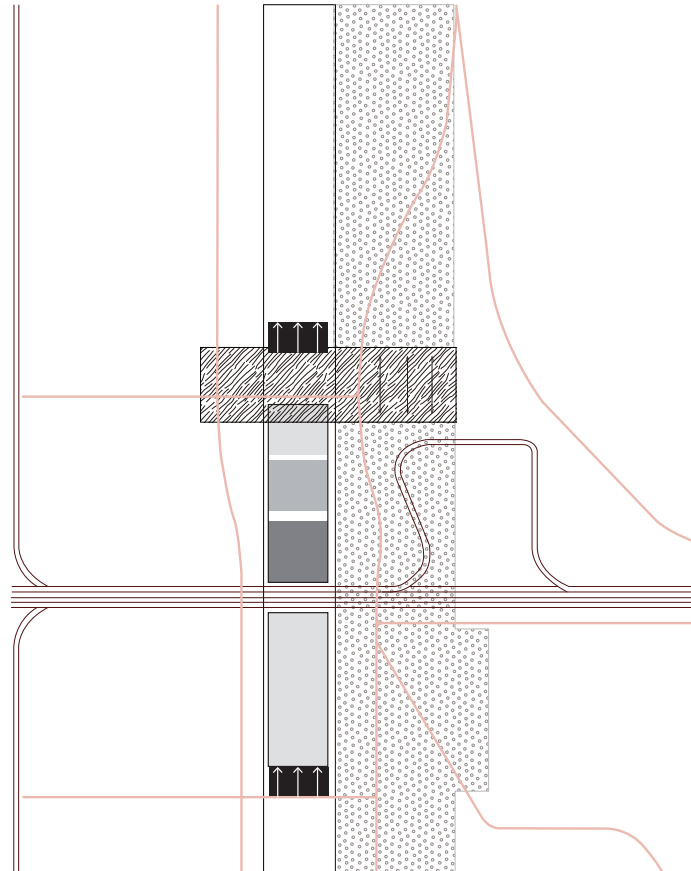
Mobility

Car

The bus stop and the under bridge parking area connected with S112, and further connected to highways

Bike

The implementation of the bike highway along the train track connect with the current cycling system

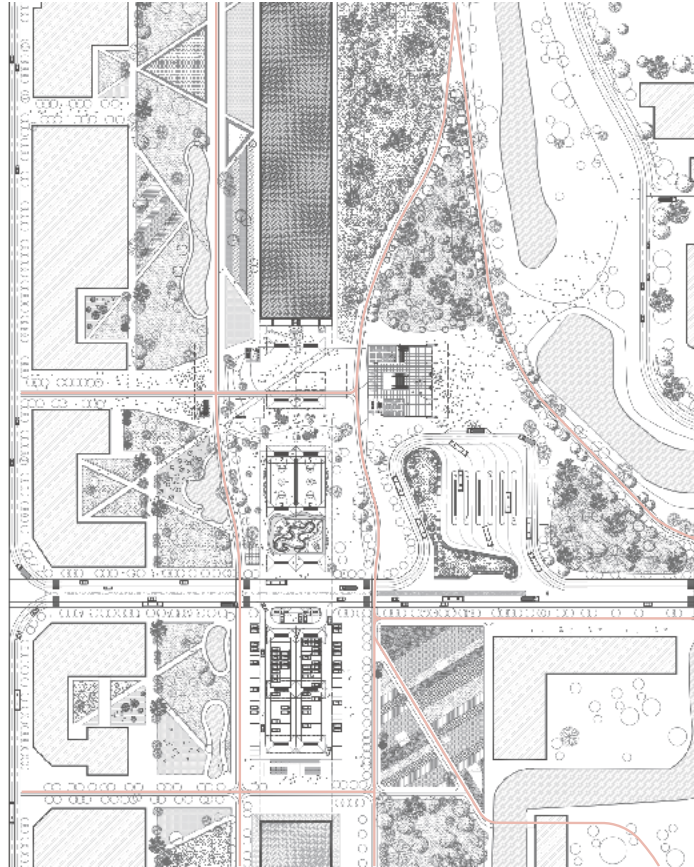


Walking

The green zone along the train track will be an urban jungle full of pedestrian path connected with the park above A9

URBAN IMPLEMENTATION 5

Final Plan



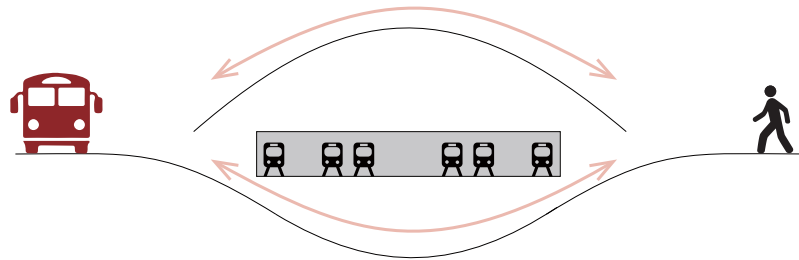
DESIGN SOLUTION

III

Architectural Intervention

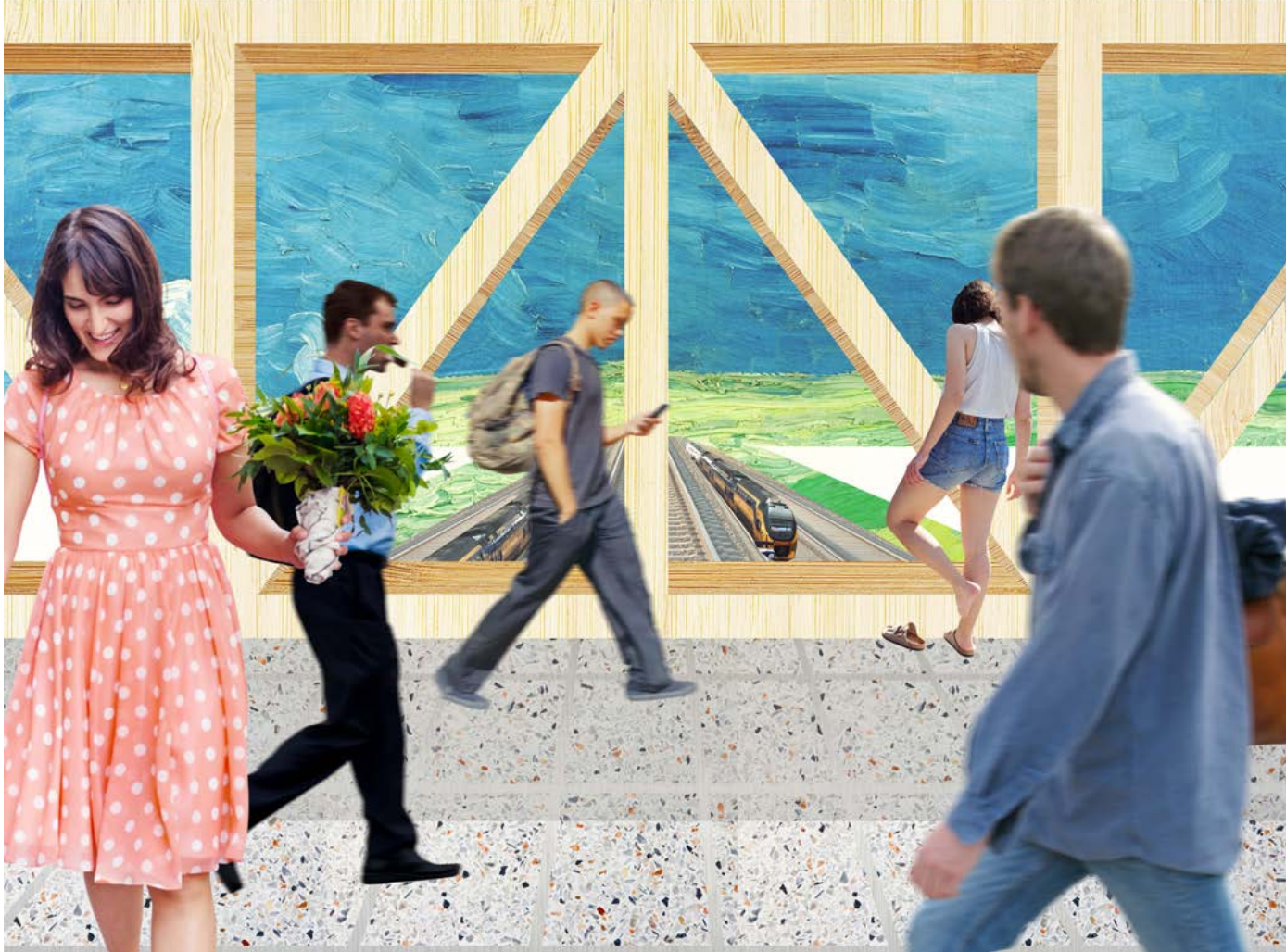
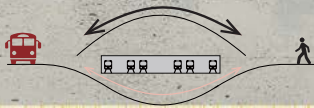
DESIGN CONCEPT

CONNECTOR



BRIDGE + UNDER PASSAGE

BRIDGE SCENARIO

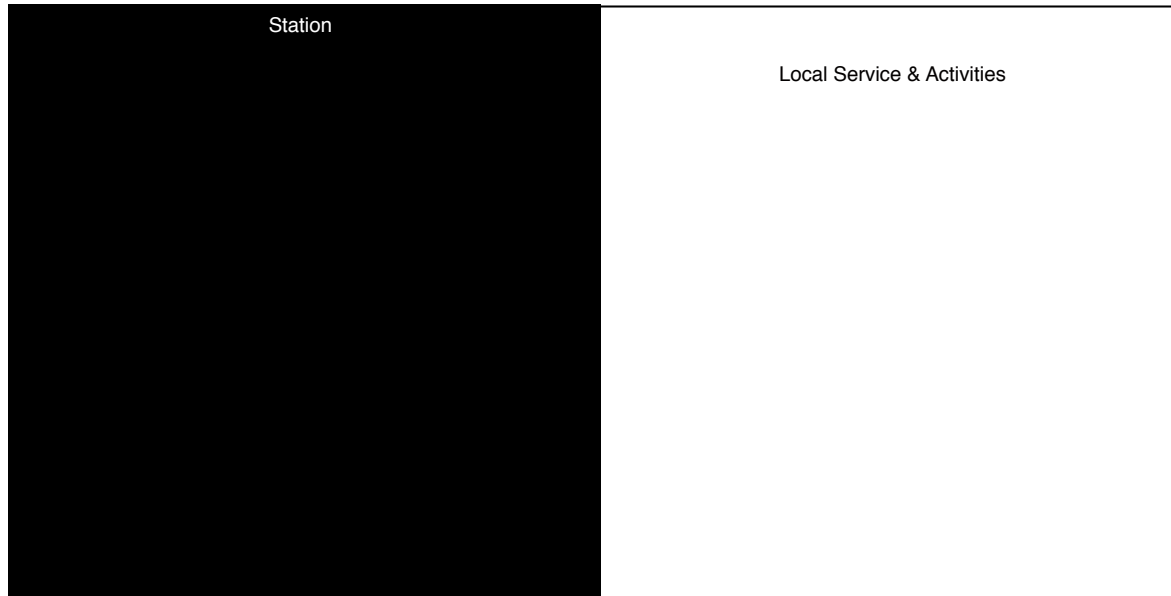


WHAT SHOULD BE THE PROGRAM?



PROGRAM

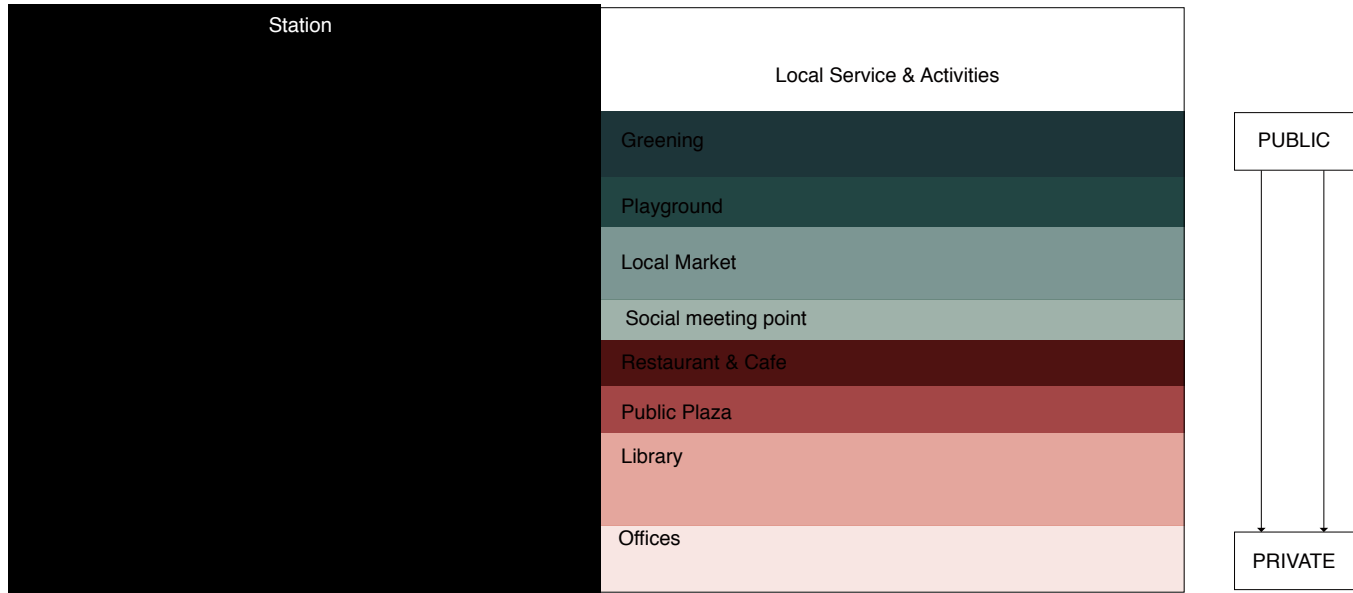
Integrated Mobility + Public Life



The idea is to integrate the Local Public Activities with the transportation hub

PROGRAM

Integrated Mobility + Public Life



The idea is to integrate the Local Public Activities with the transportation hub

LIBRARY

Social | Electronical | Accessible



Conference | Salon



Electric Library



Magazine | Newspaper

Nowadays, people rely more and more on Internet, which help to get people more connected but also bring loneliness. Internet make people connected but not really feeling connected.

2050 a library will be a place for meeting, social, exhibition.

OFFICE

Small Scale | Start up | Share | Ideas | Accessible



South East is now a relatively underdeveloped area compared to the rest of the city. However, there are great opportunities here. In the future, more and more young people will come and live in this area

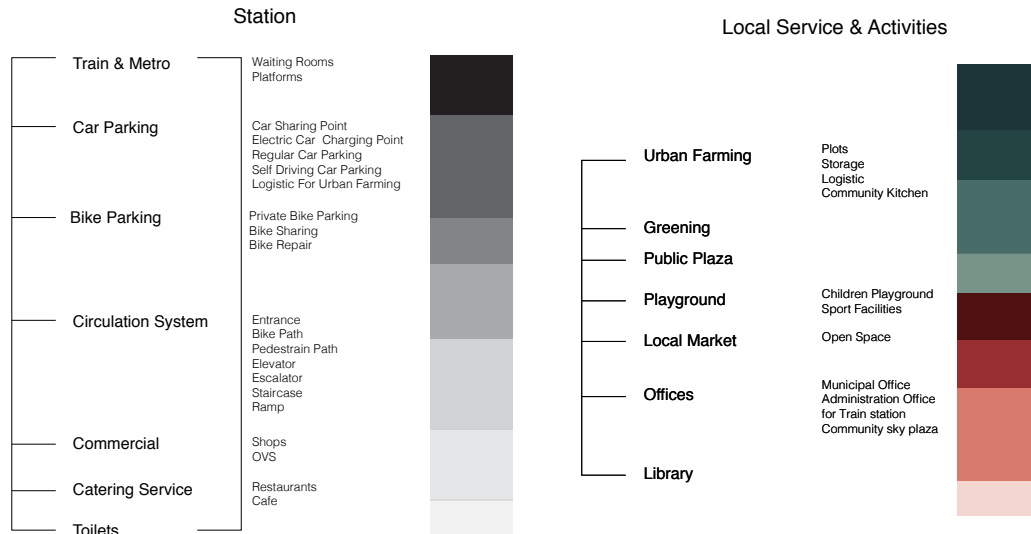
The office: In 2050, large scale top-down companies will decrease
Small companies: people needs ideas, platform and sharing ideas

Architectural solution:

Sharing space | cafe | meeting spot | salon | exhibition space |

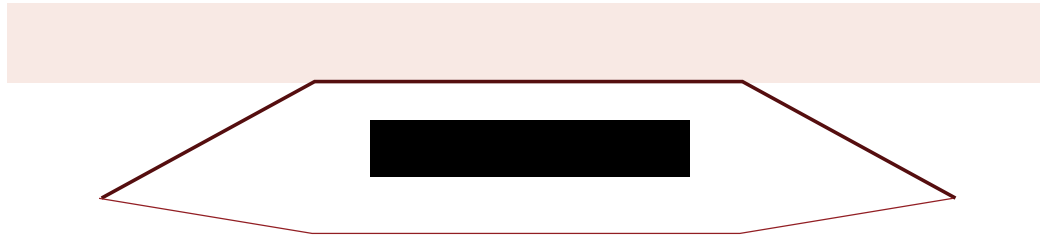
PROGRAM BAR

Integrated Mobility + Public Life



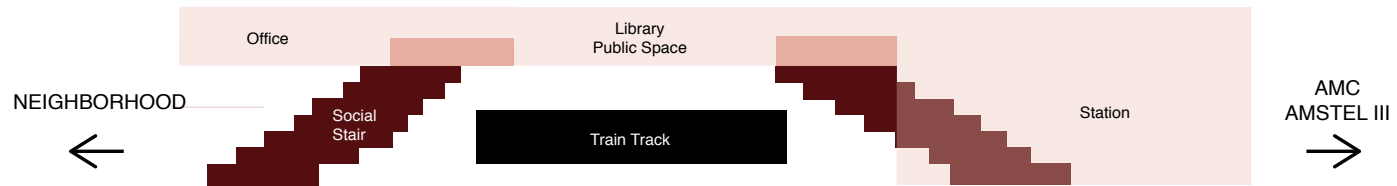
The idea is to integrate the Local Public Activities with the transportation hub

ARCHITECTURE GENERATION 1



Crossing the Train Track

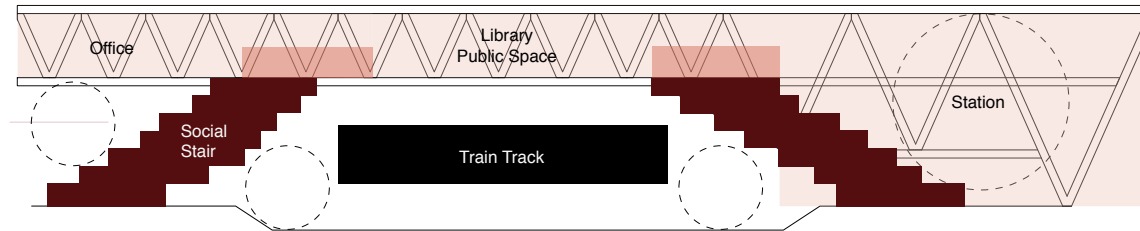
ARCHITECTURE GENERATION 2



East - West

Office - Library & Public Space - Station

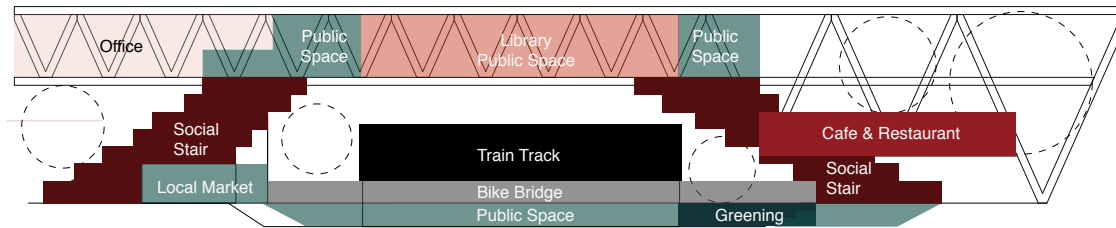
ARCHITECTURE GENERATION 3



The main volumn is constructed with truss structure. Social staircases are the supporting structure.

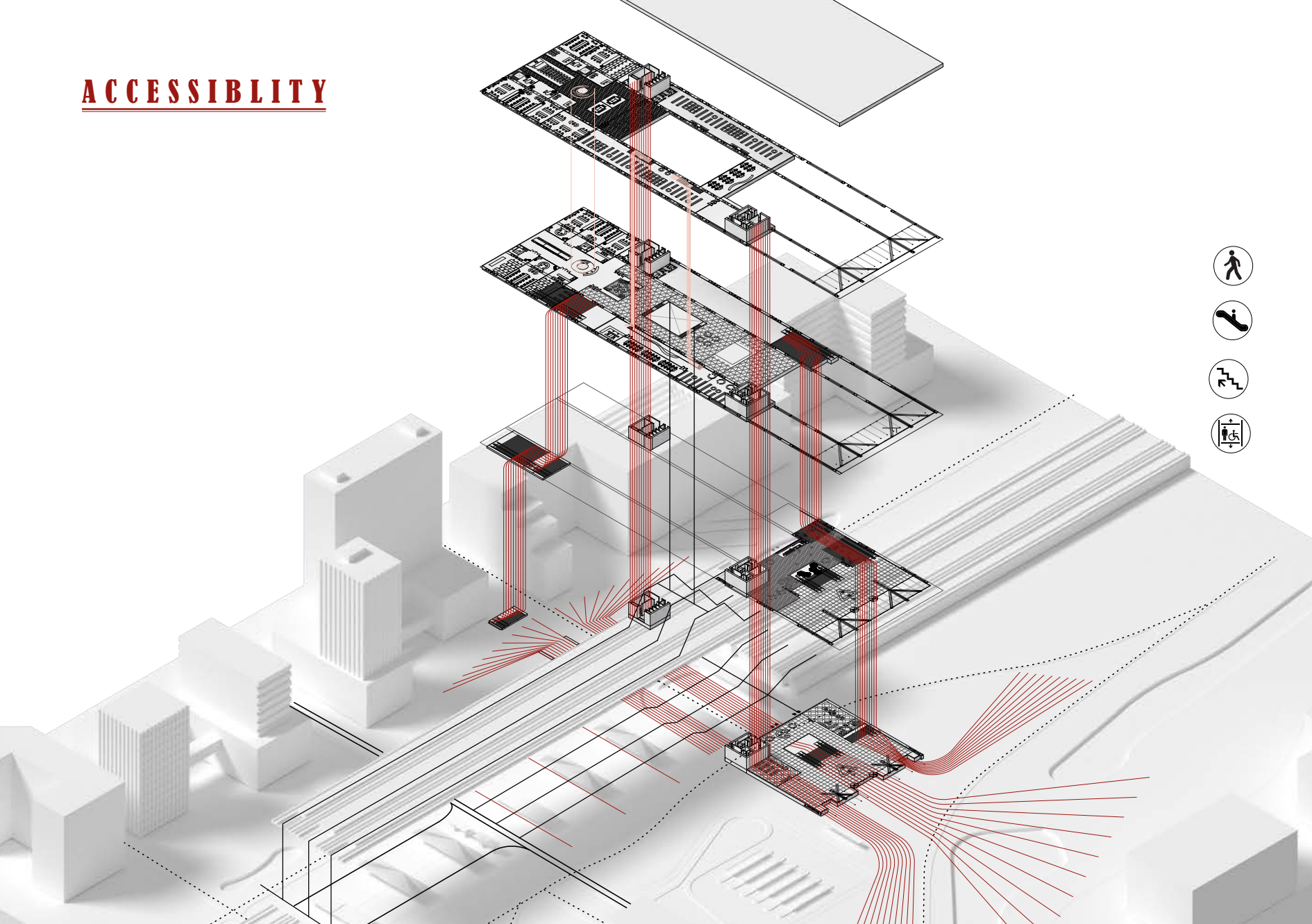
The structure creates several Voids that enable green flows and people go.

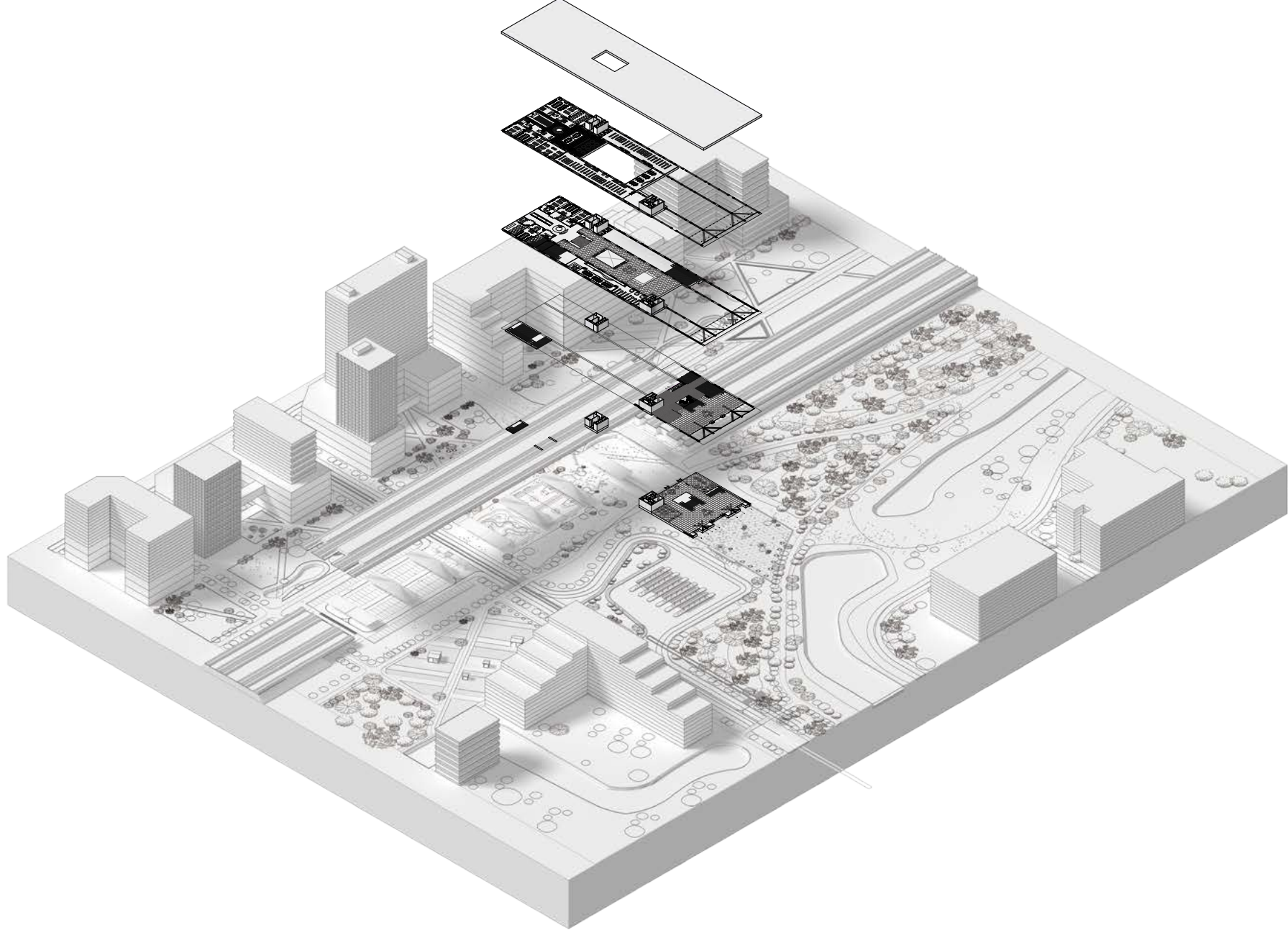
ARCHITECTURE GENERATION 4



Program in Section

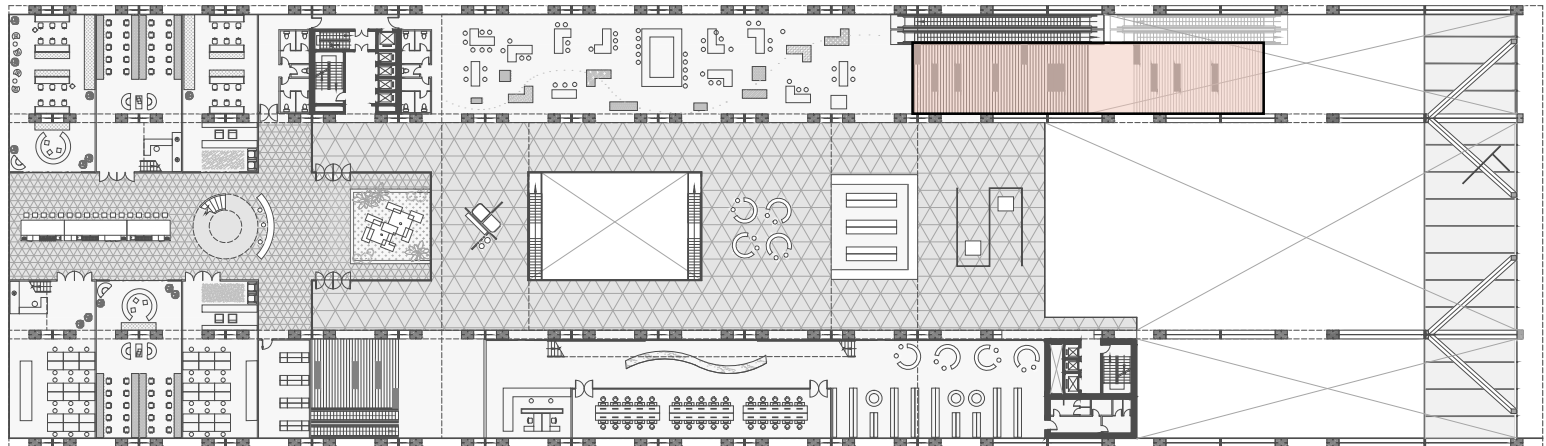
ACCESSIBILITY





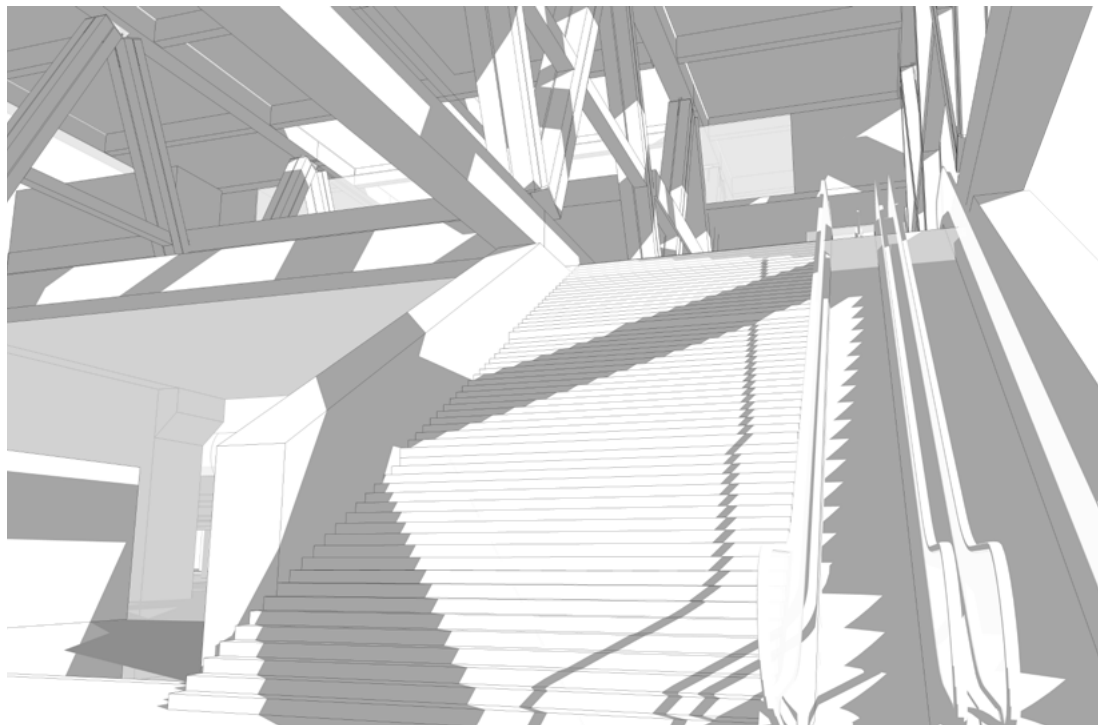
BIG STAIR

Continuity of the publicness



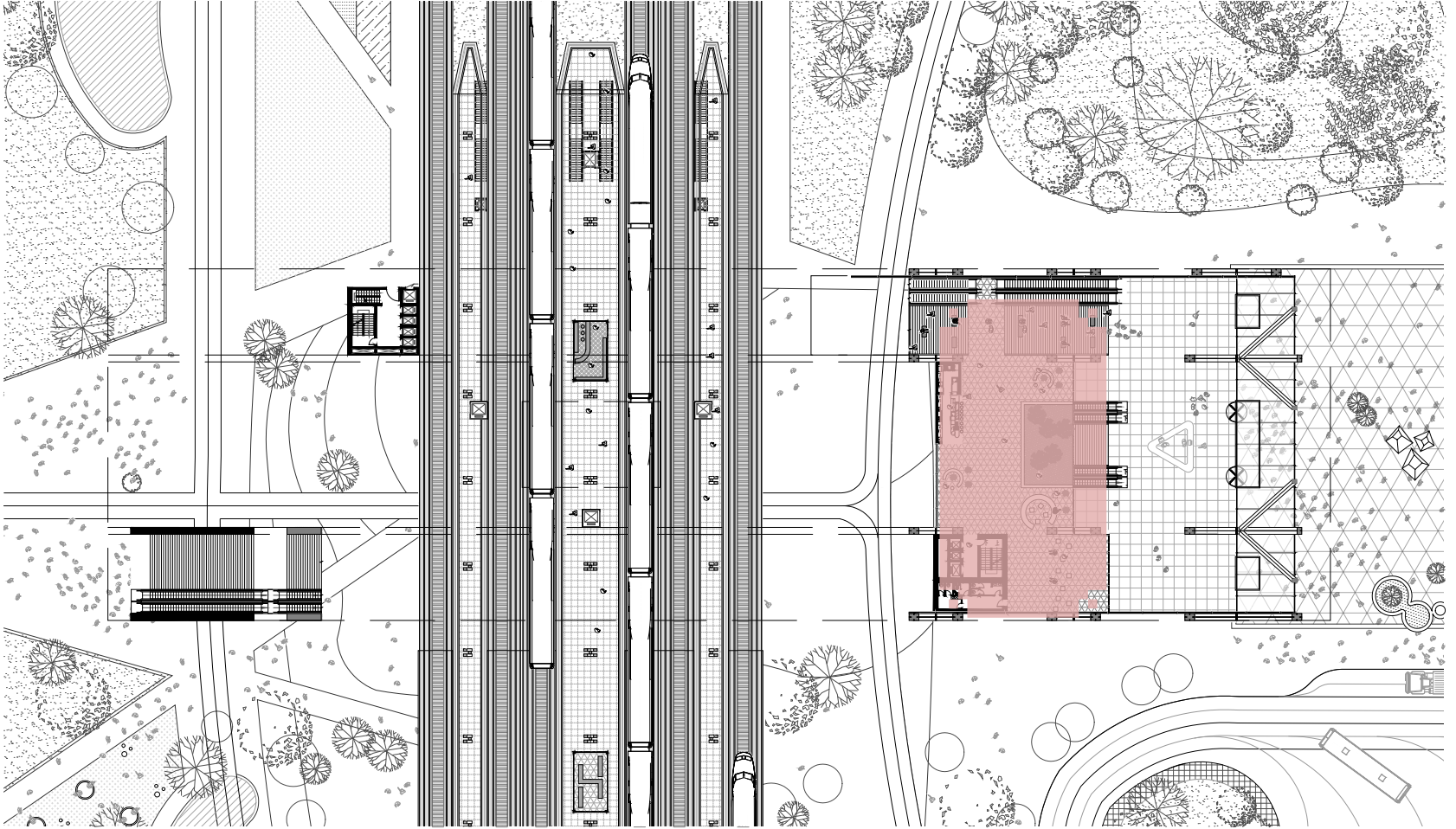
BIG STAIR

Continuity of the publicness



FIRST FLOOR

Bar & Restaurant



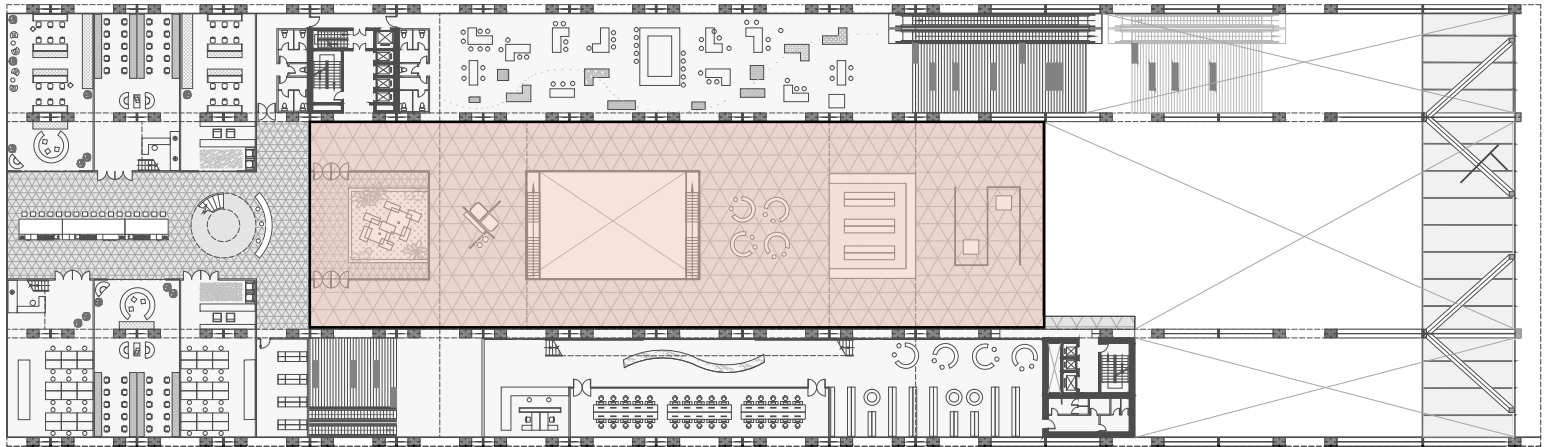
FIRST FLOOR

Bar & Restaurant



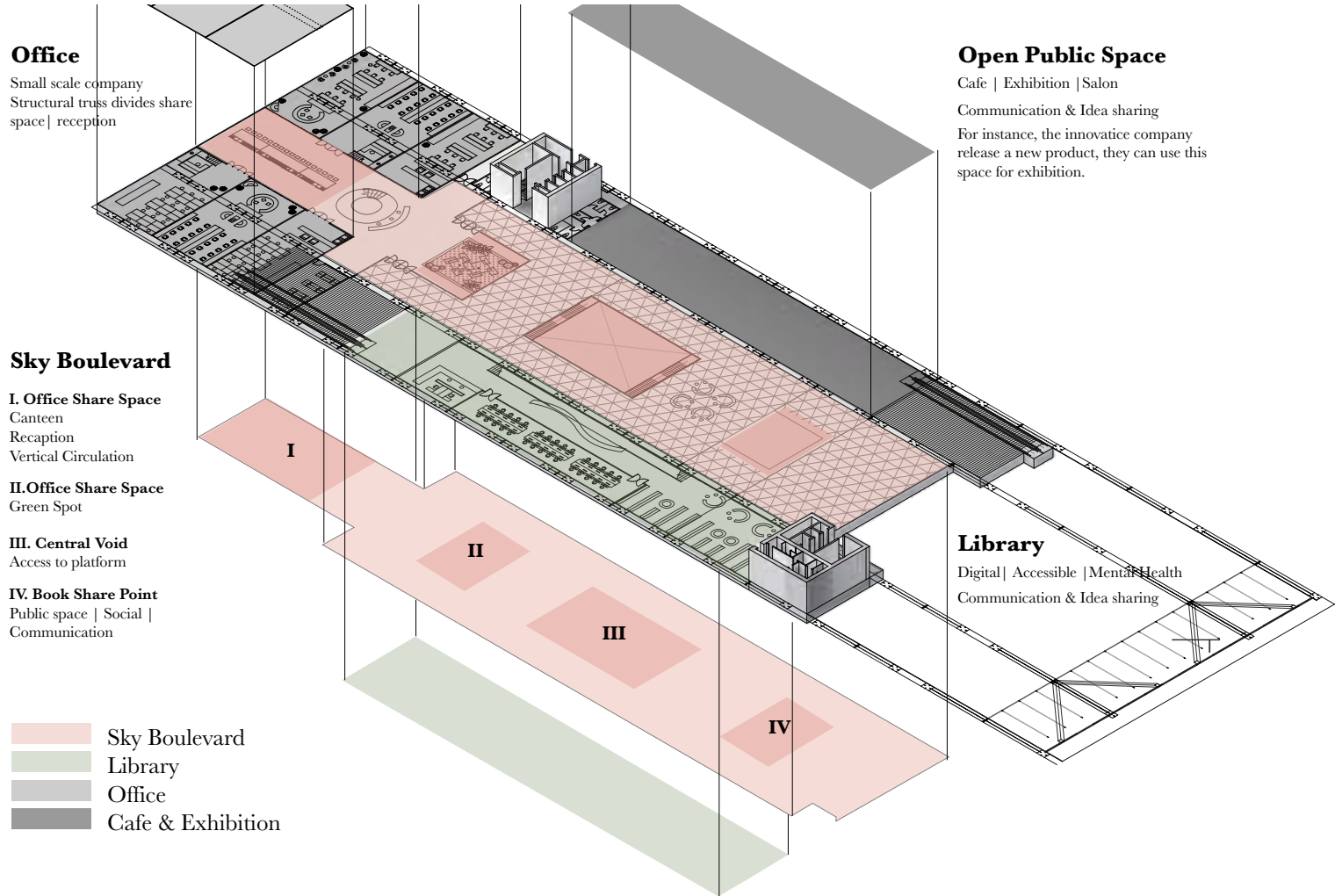
SKY BOULEVARD

Converge point of the Publicness

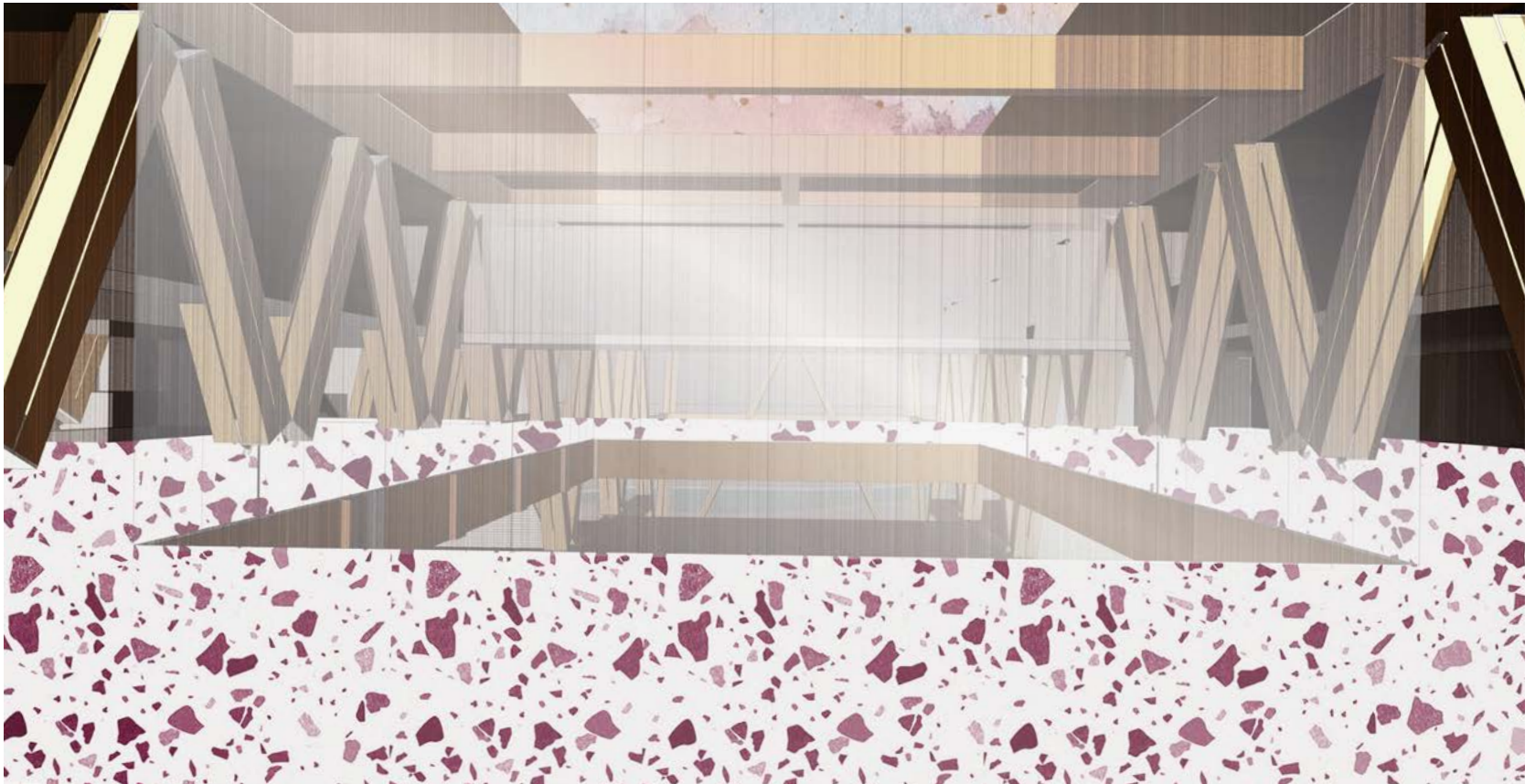


SKY BOULEVARD

Converge point of the Publicness

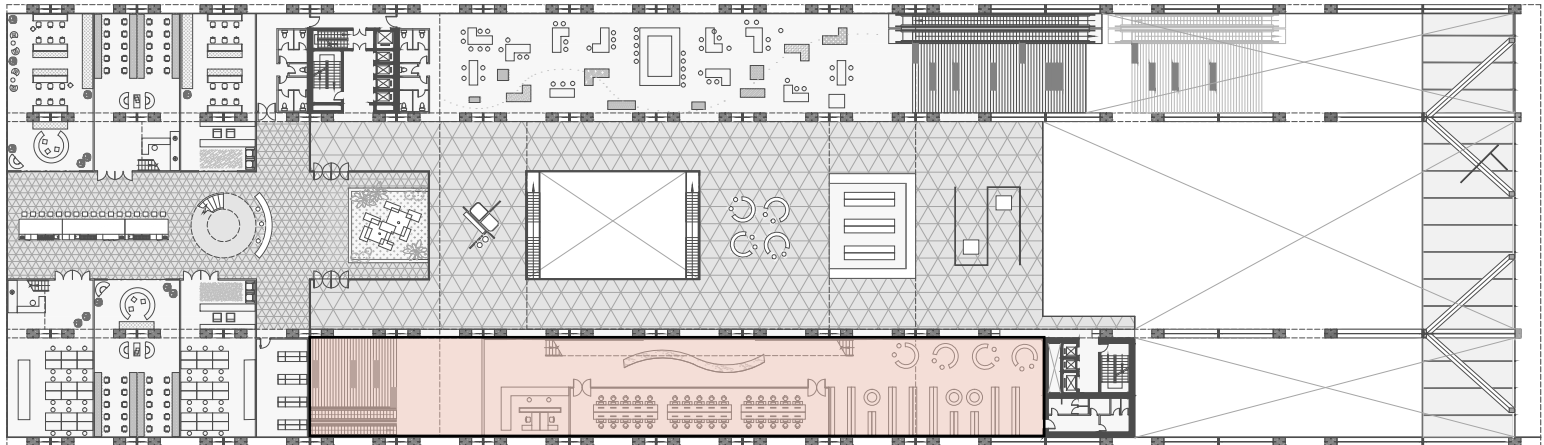


SKY BOULEVARD

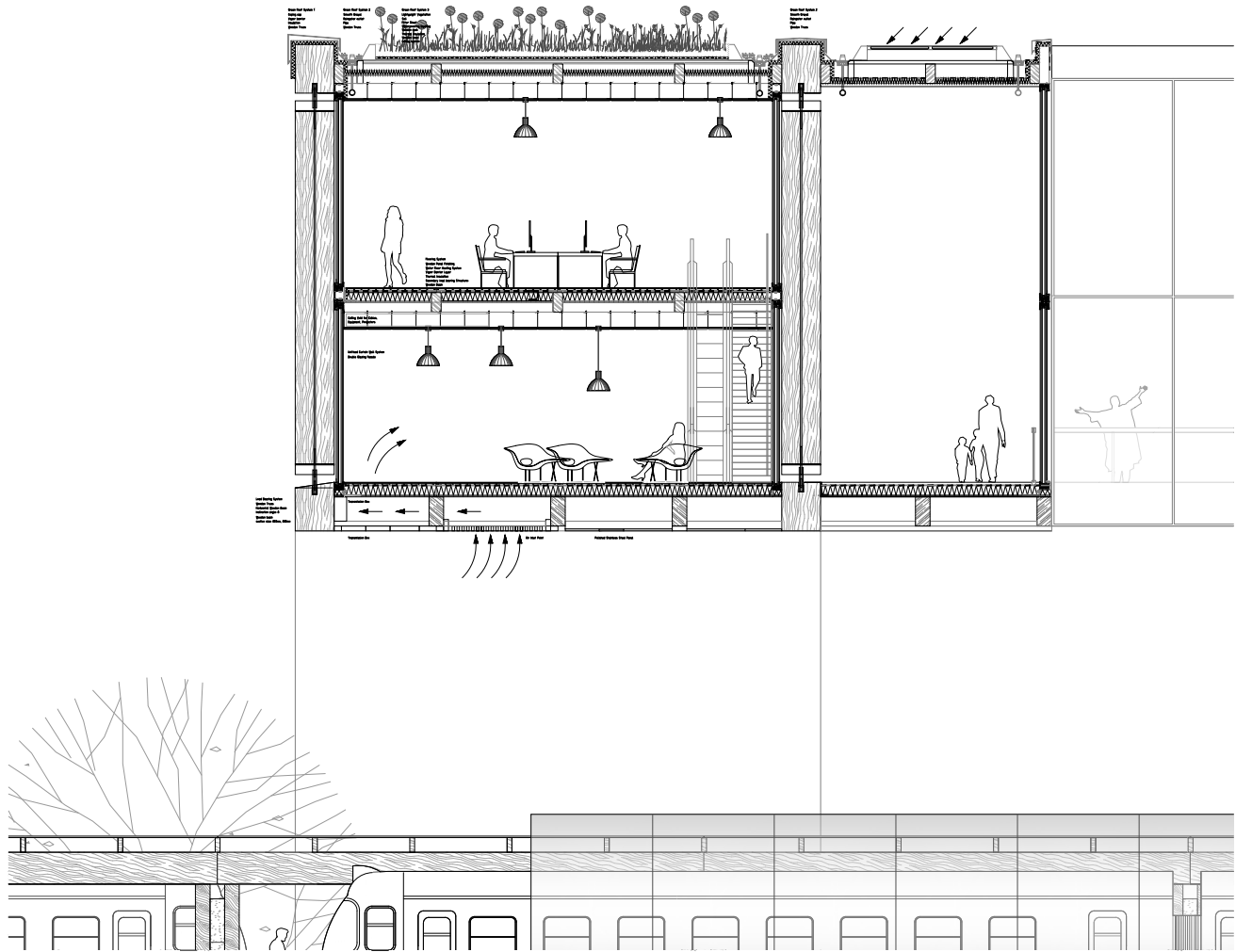


LIBRARY

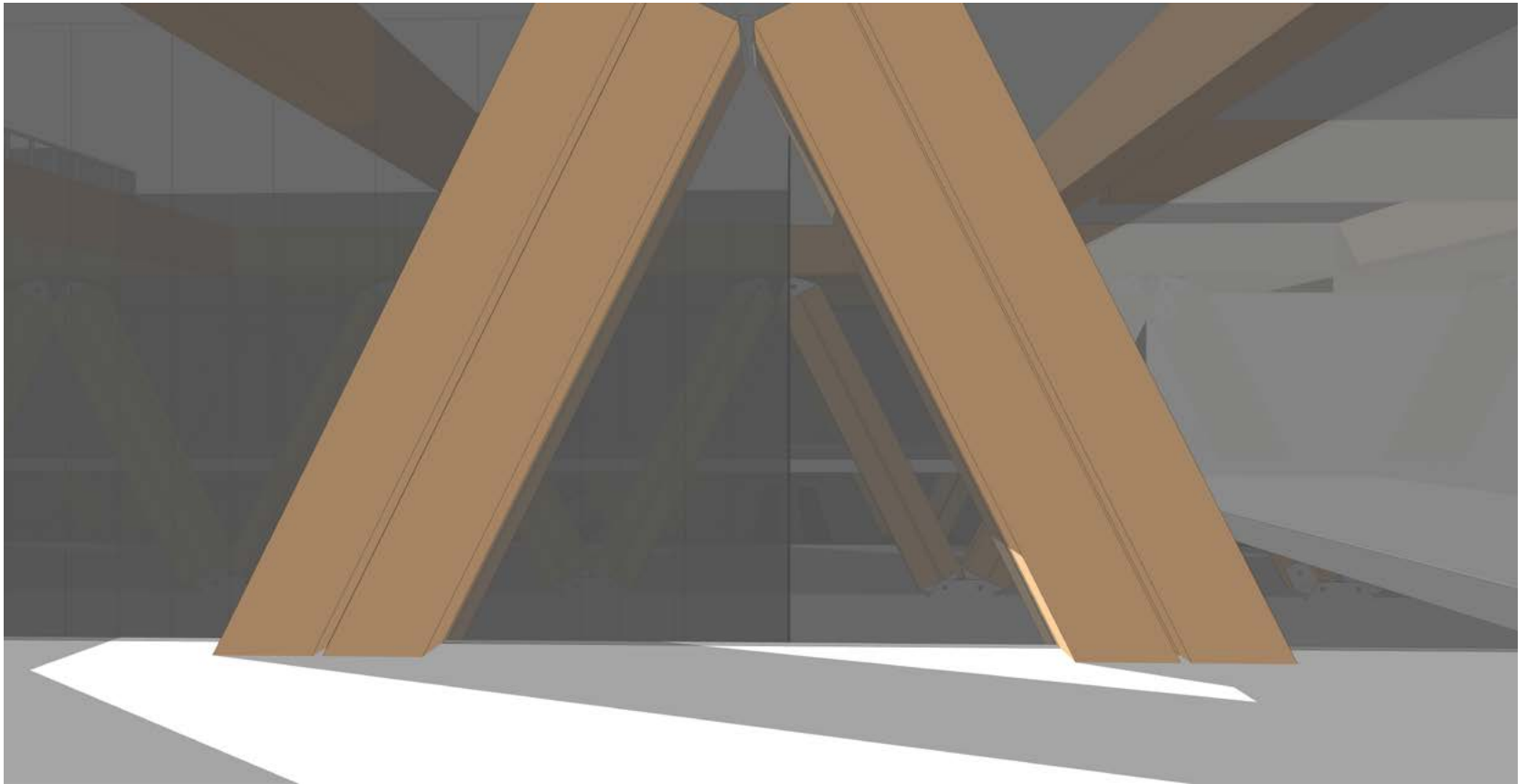
Continuity of the publicness



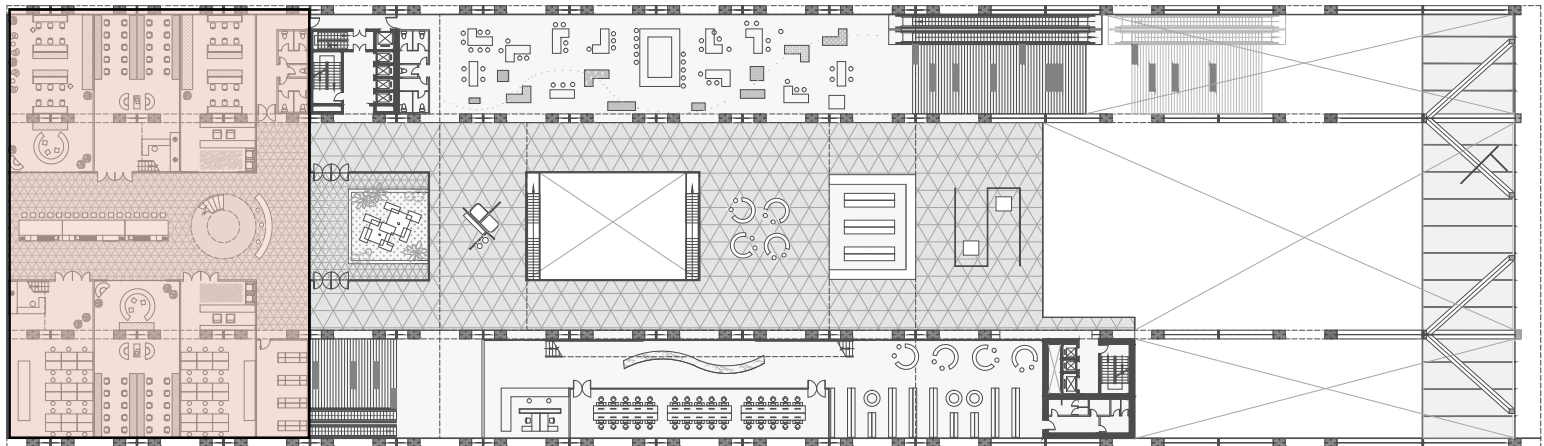
LIBRARY SECTION



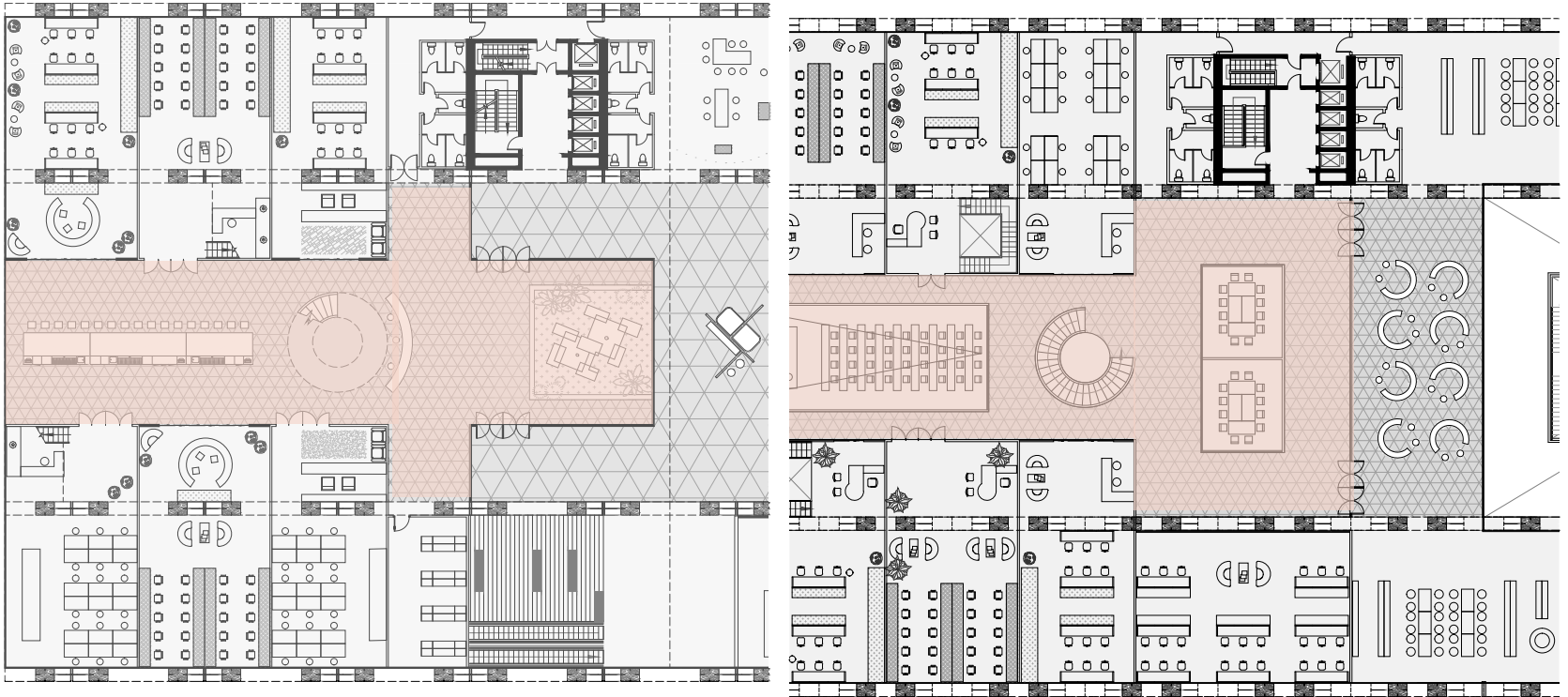
LIBRARY



OFFICE



OFFICE

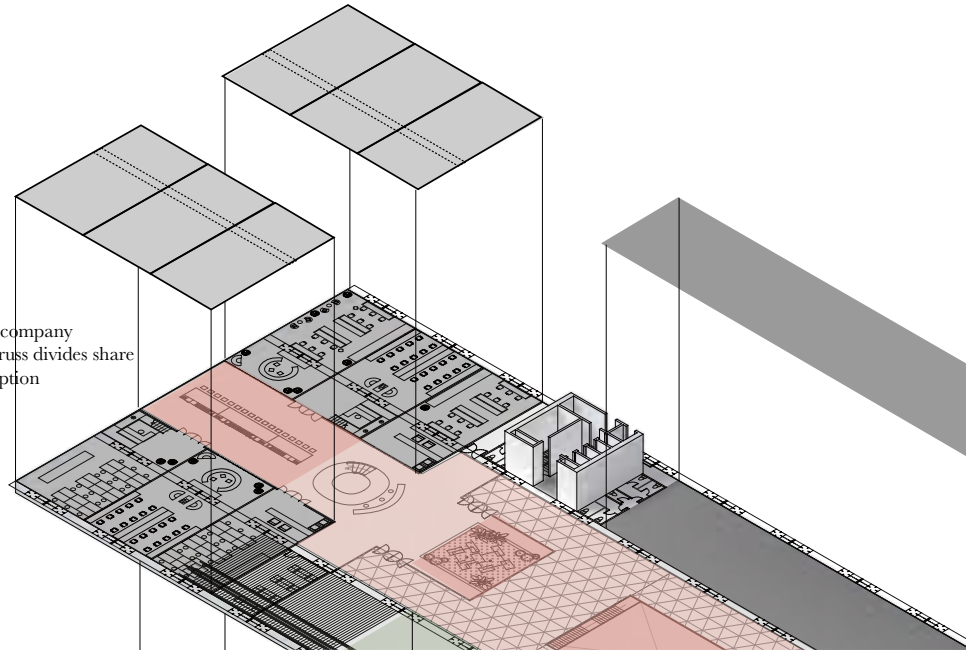


Small scale working space on the sides
Shared Public Space in middle

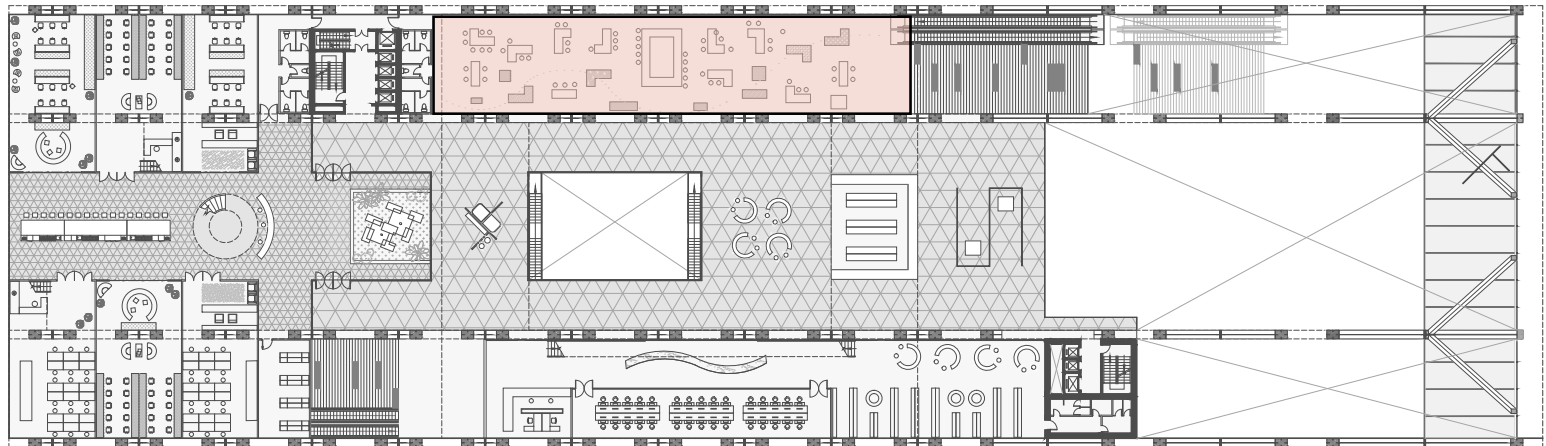
OFFICE

Office

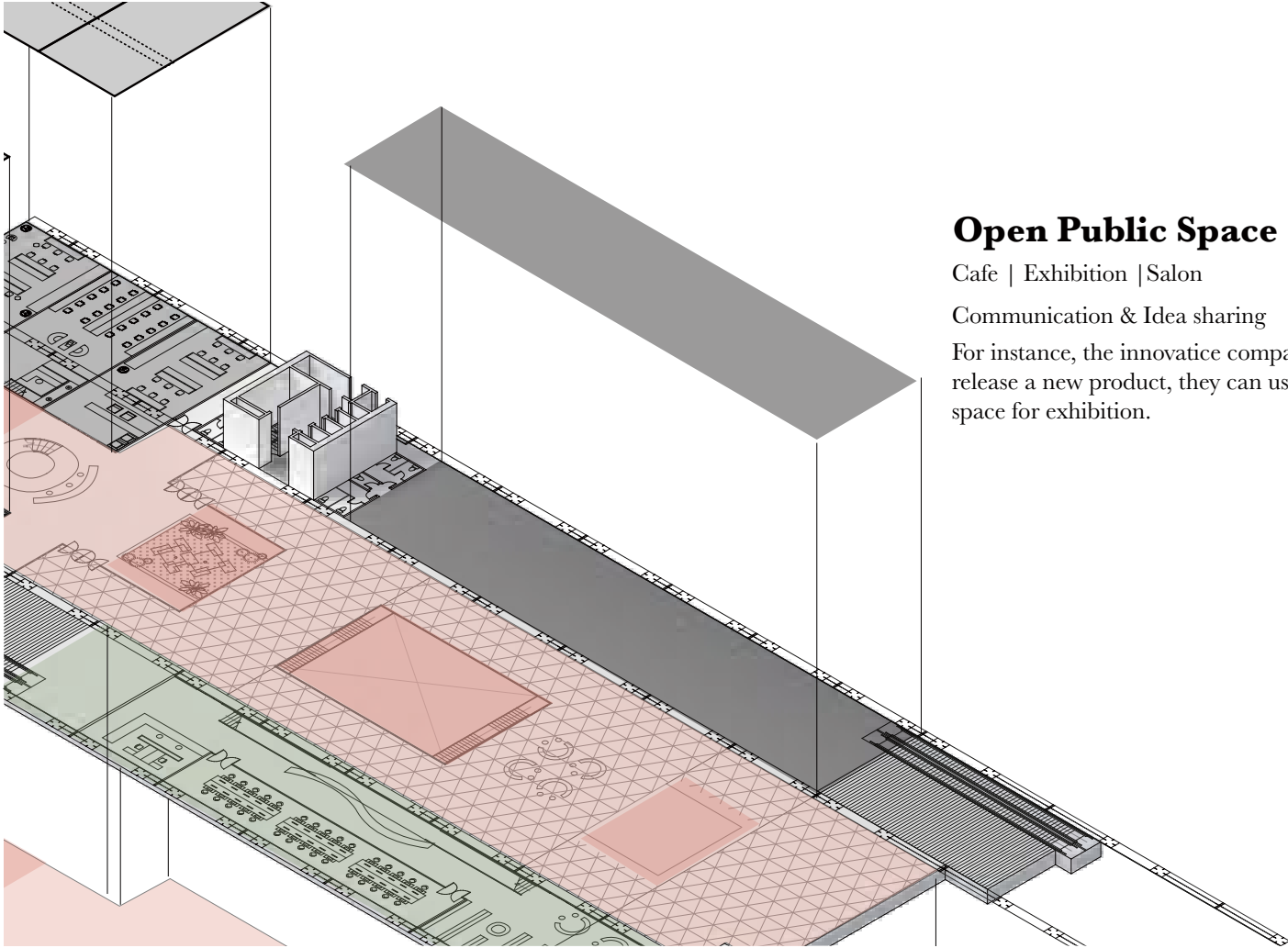
Small scale company
Structural truss divides share
space | reception



EXHIBITION & CAFE



EXHIBITION & CAFE



Open Public Space

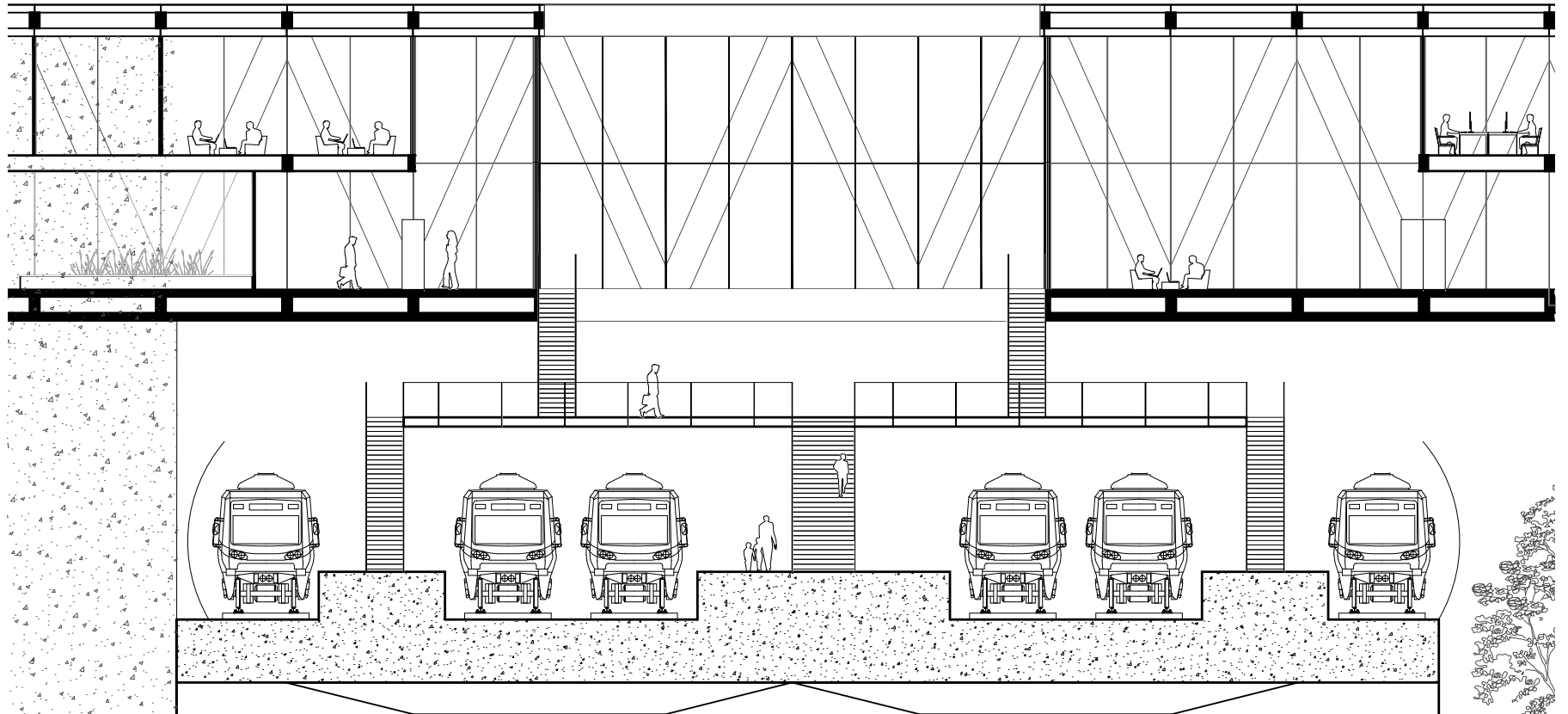
Cafe | Exhibition | Salon

Communication & Idea sharing

For instance, the innovative company release a new product, they can use this space for exhibition.

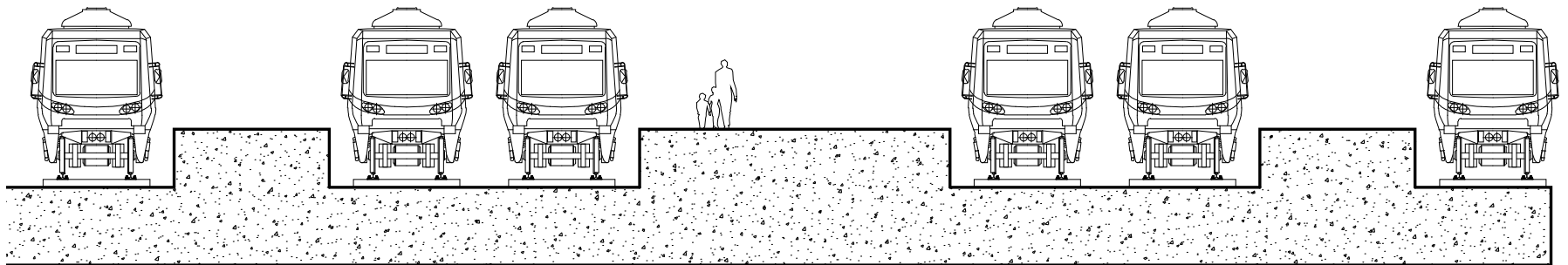
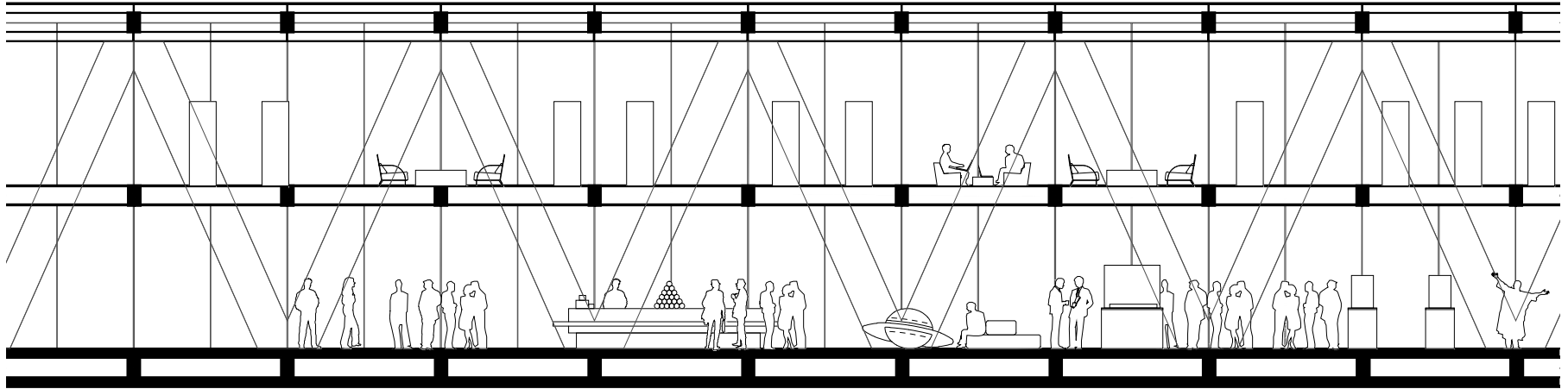
EXHIBITION & CAFE

Accessibility | Open Space | Interconnected



EXHIBITION & CAFE

Accessibility | Open Space | Interconnected



CONSTRUCTION

&

SUSTAINABILITY

CONSTRUCTION IDEA

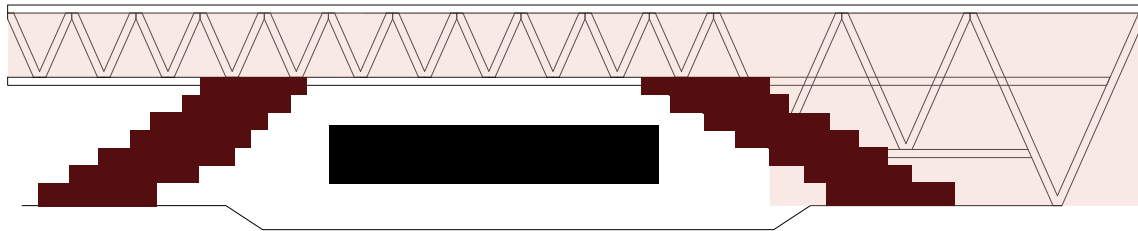
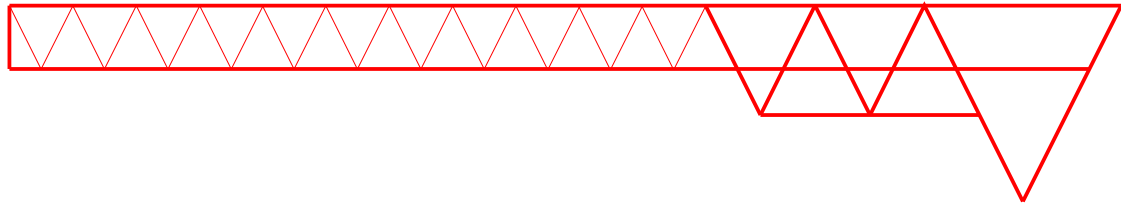
Bridge



The idea is to create a bridge over the train track.
The wooden truss is the ideal gesture to reflect the bridge concept.

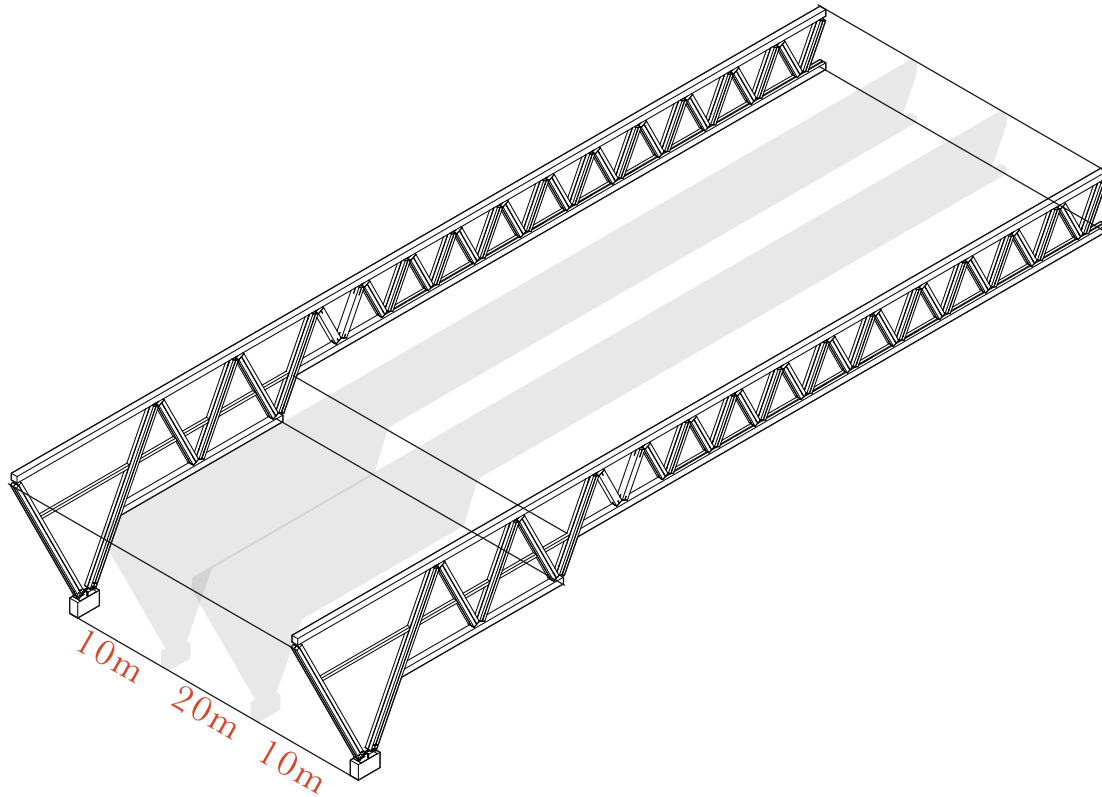
TRUSS CONCEPT

Rhythm

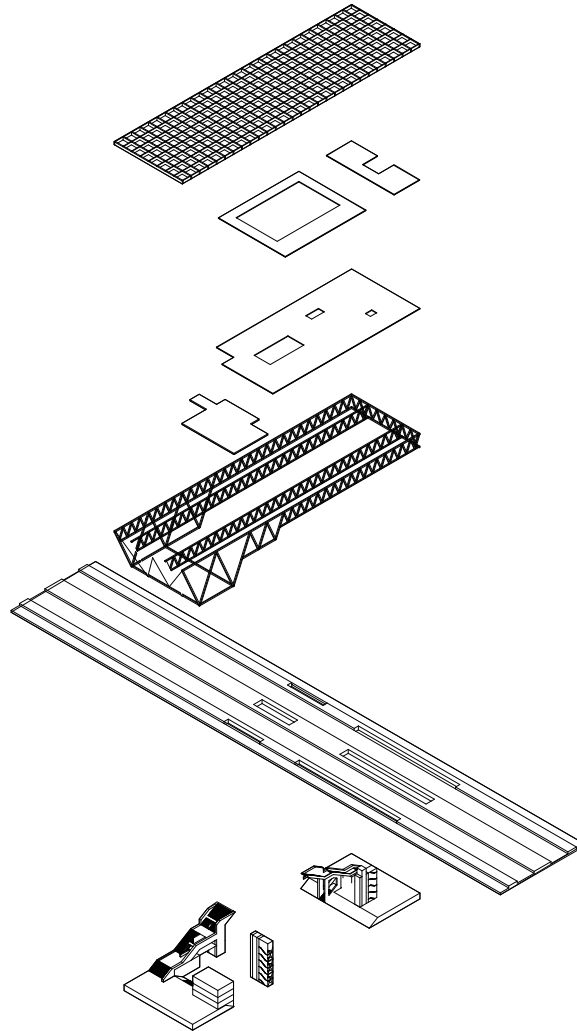


Consistent with the 'bridge' concept.

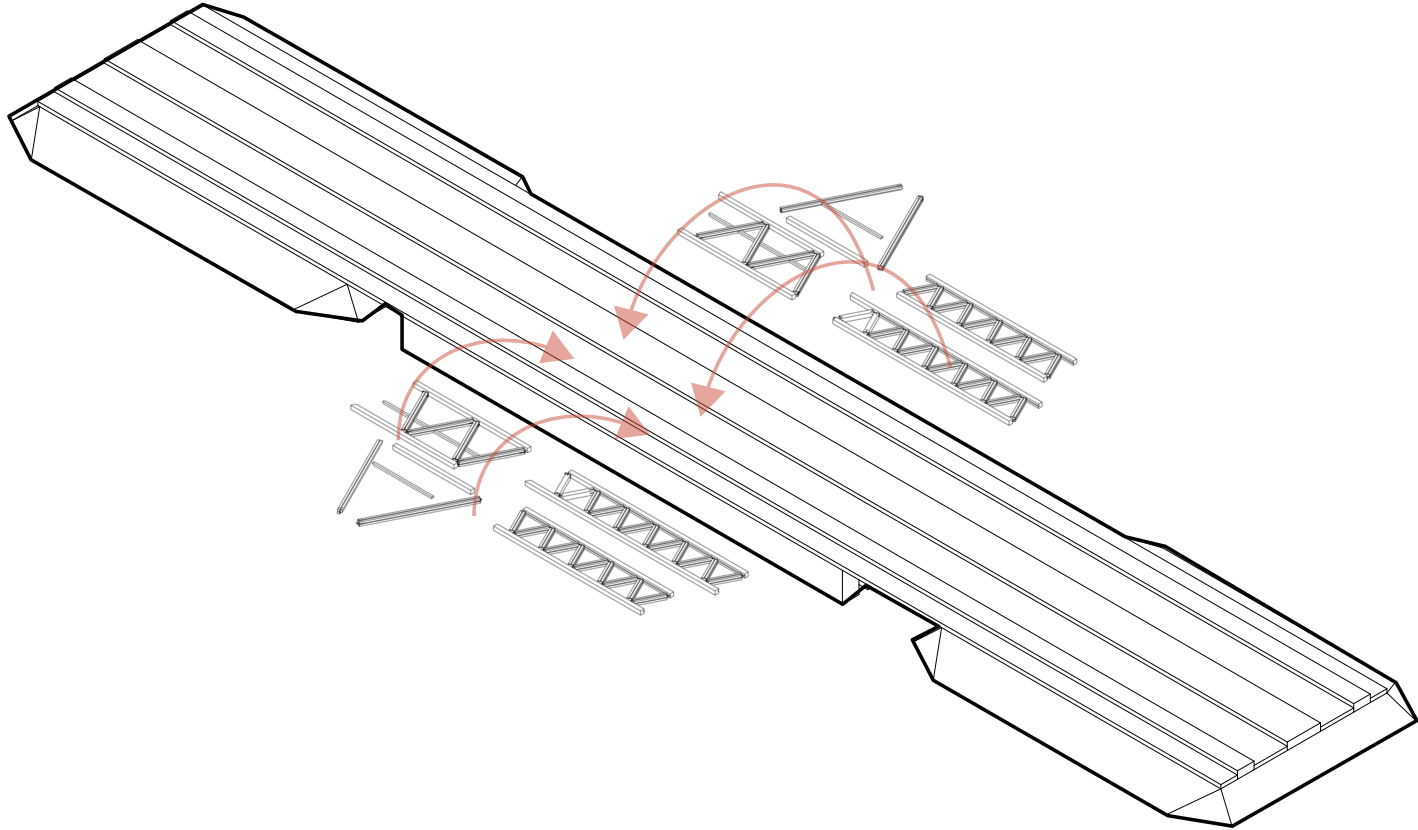
CONSTRUCTION PRINCIPLE



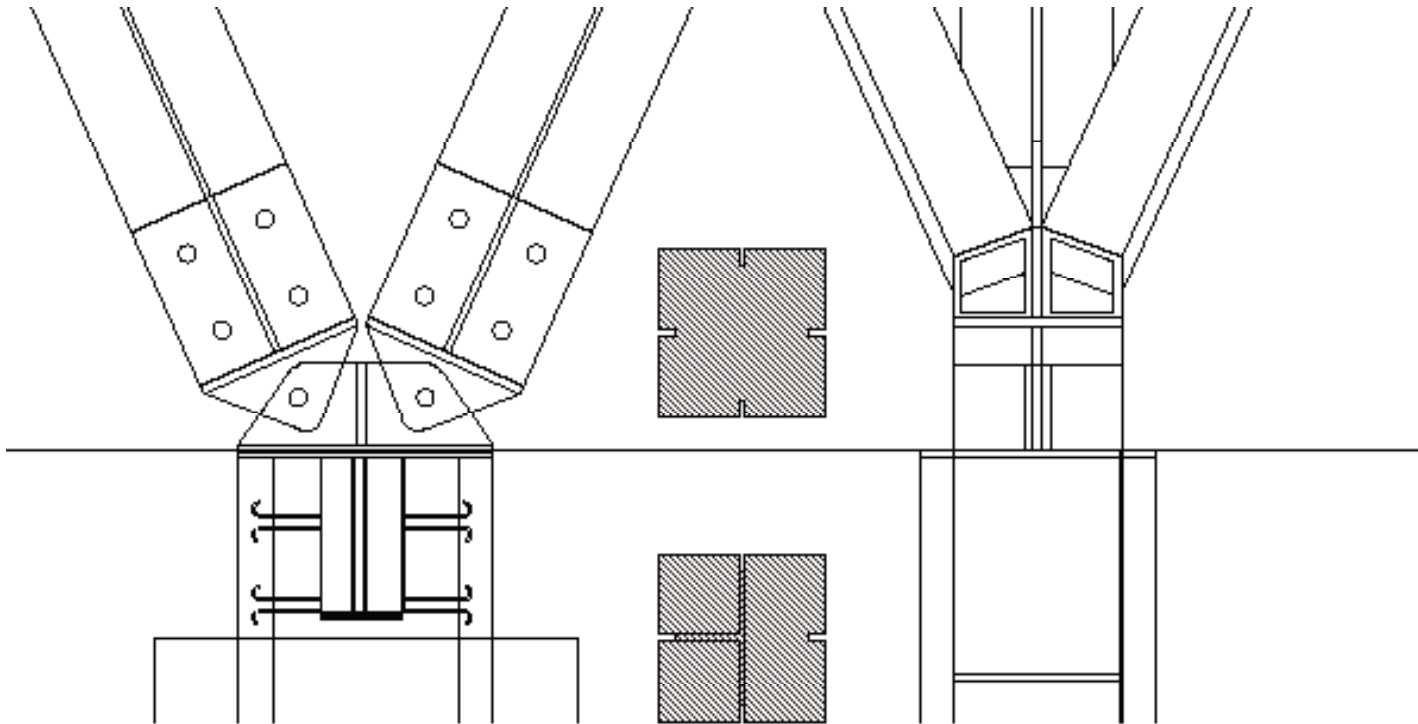
CONSTRUCTION PRINCIPLE



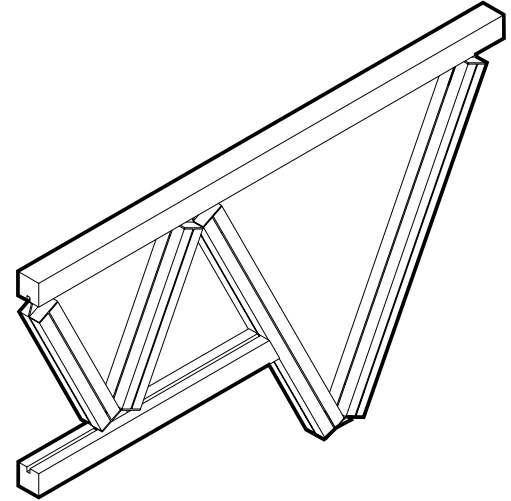
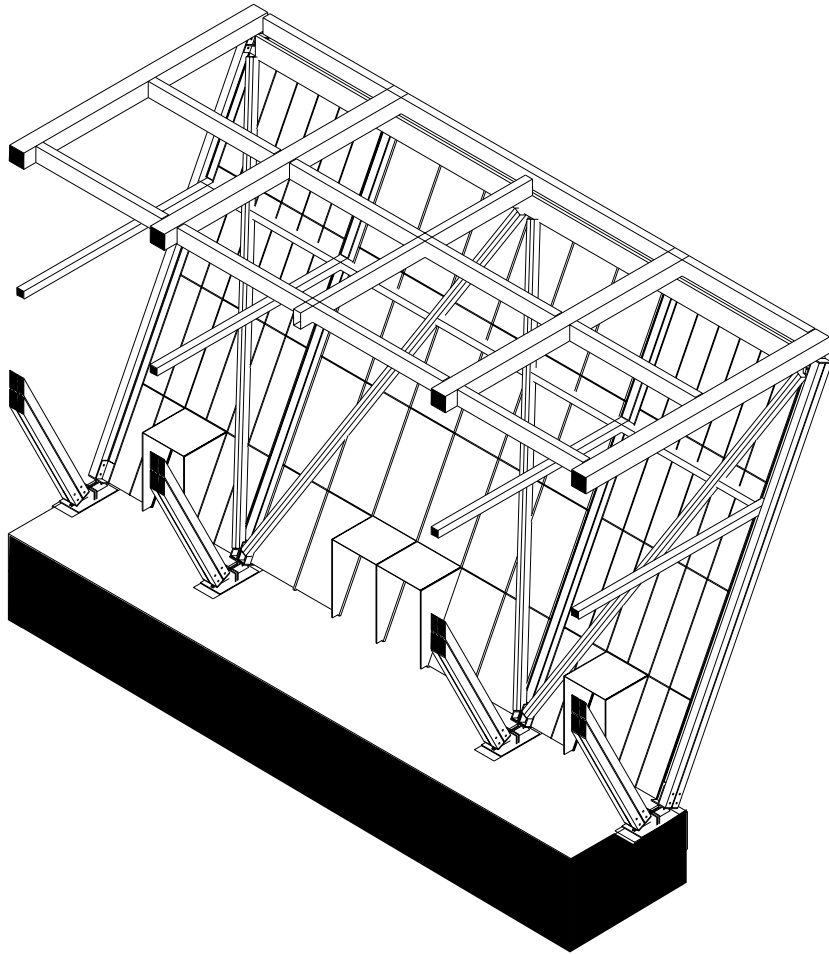
TRUSS ON SITE ASSEMBLE



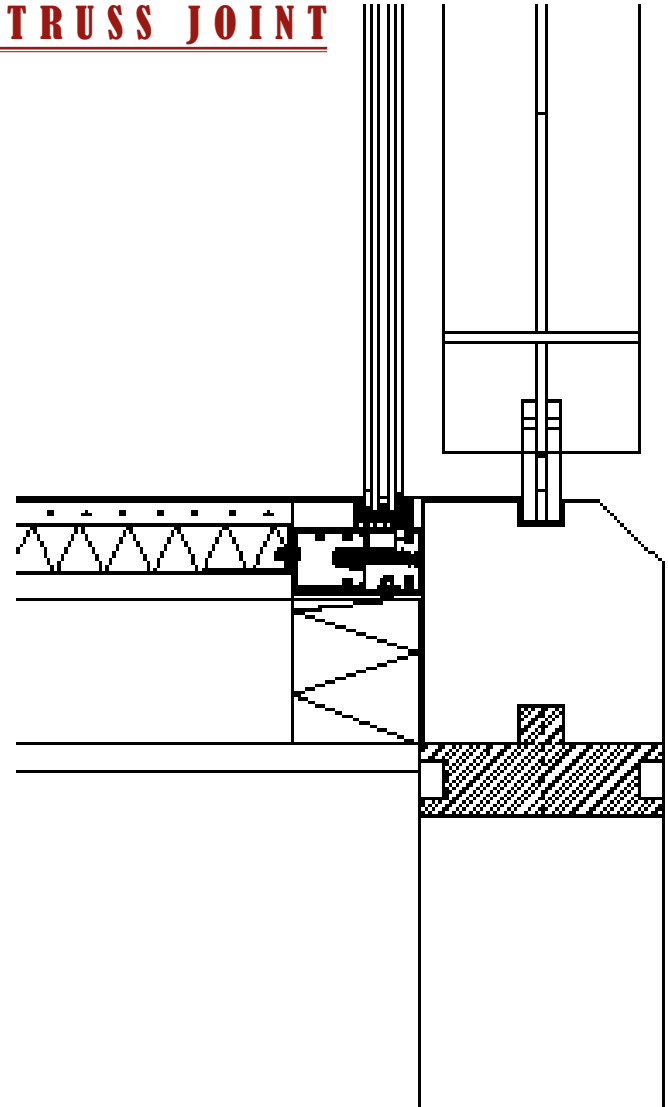
FRONT TRUSS DETAIL



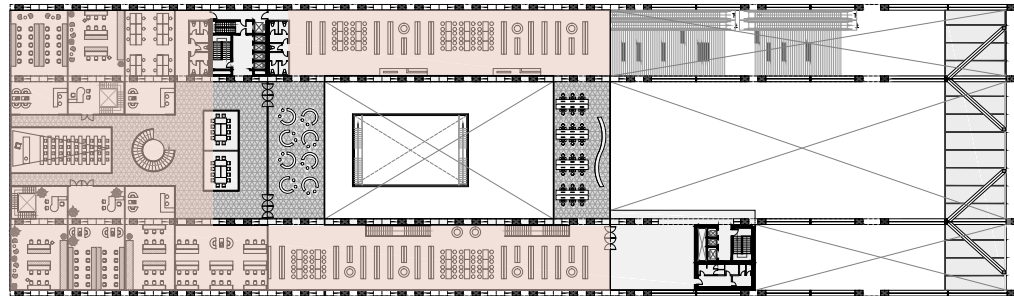
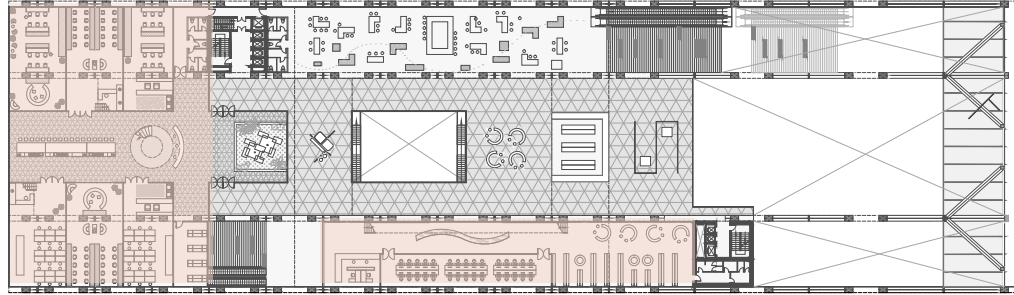
FRONT TRUSS CONNECTION



CONCRETE & WOODEN TRUSS JOINT

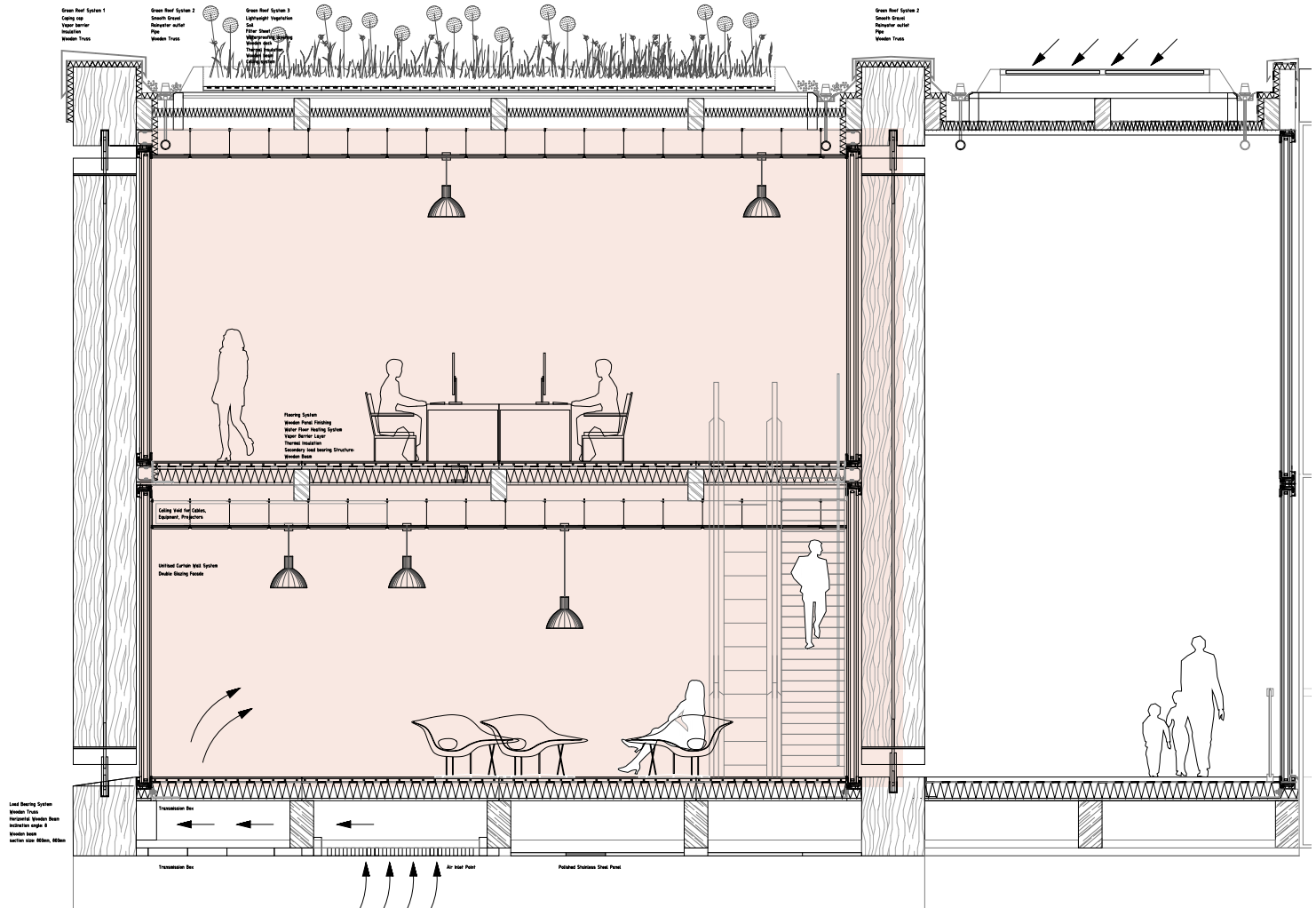


INNER CLIMATE

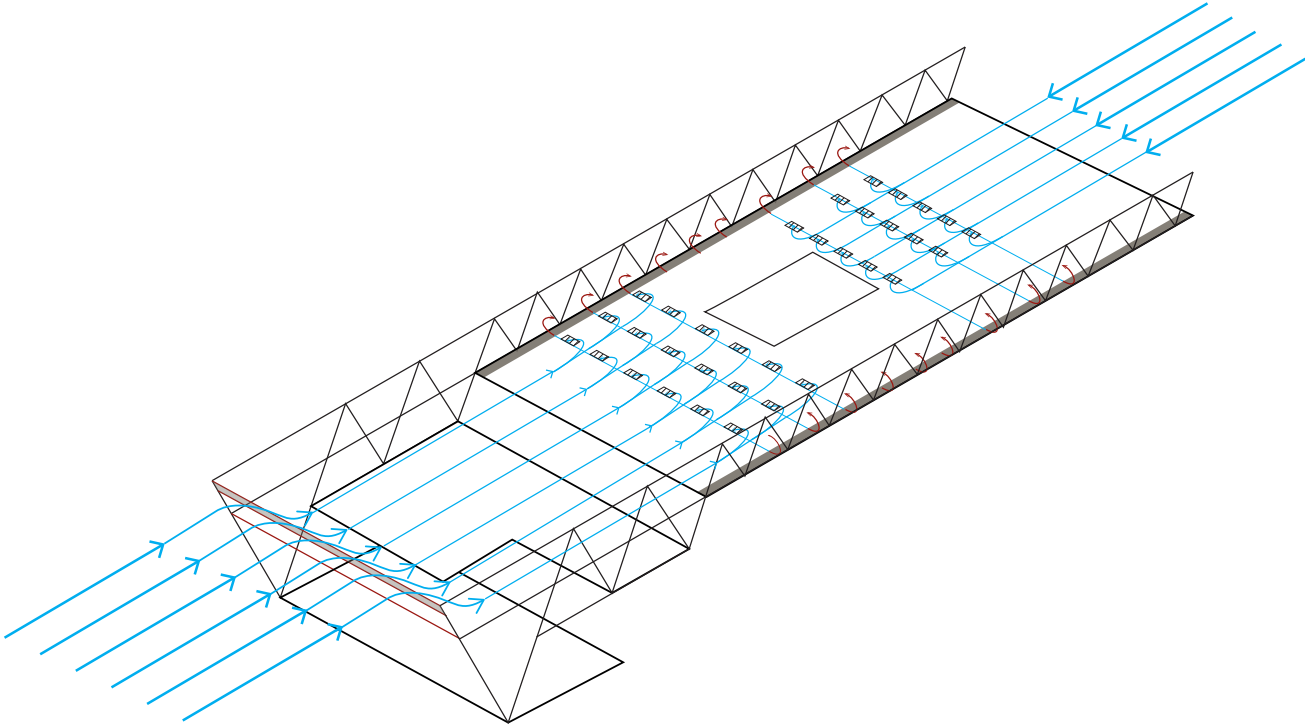


Office & Library

INNER CLIMATE

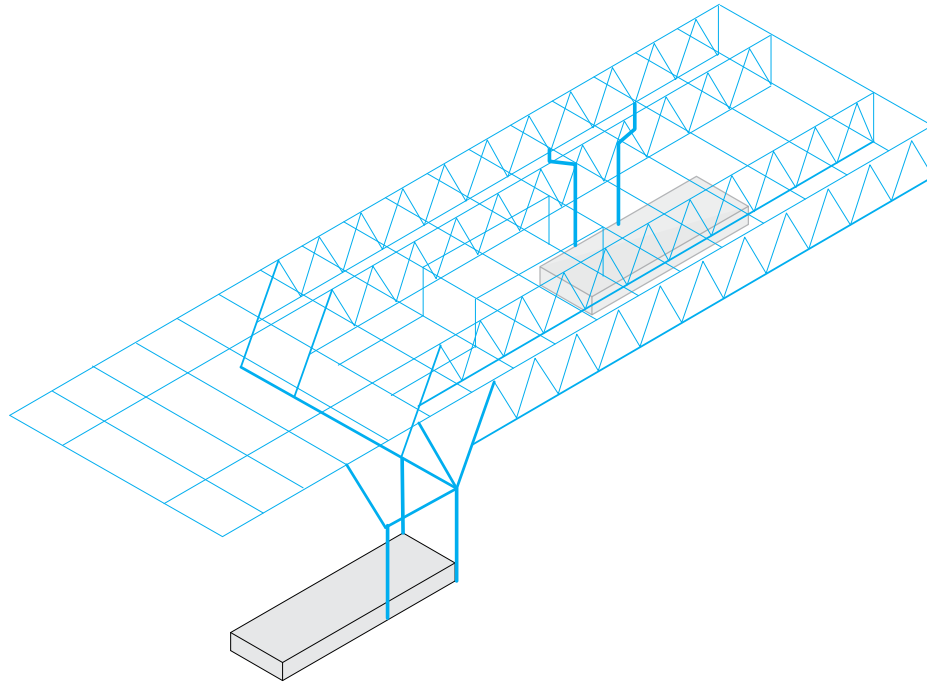


AIR COMFORT



WATER MANAGEMENT

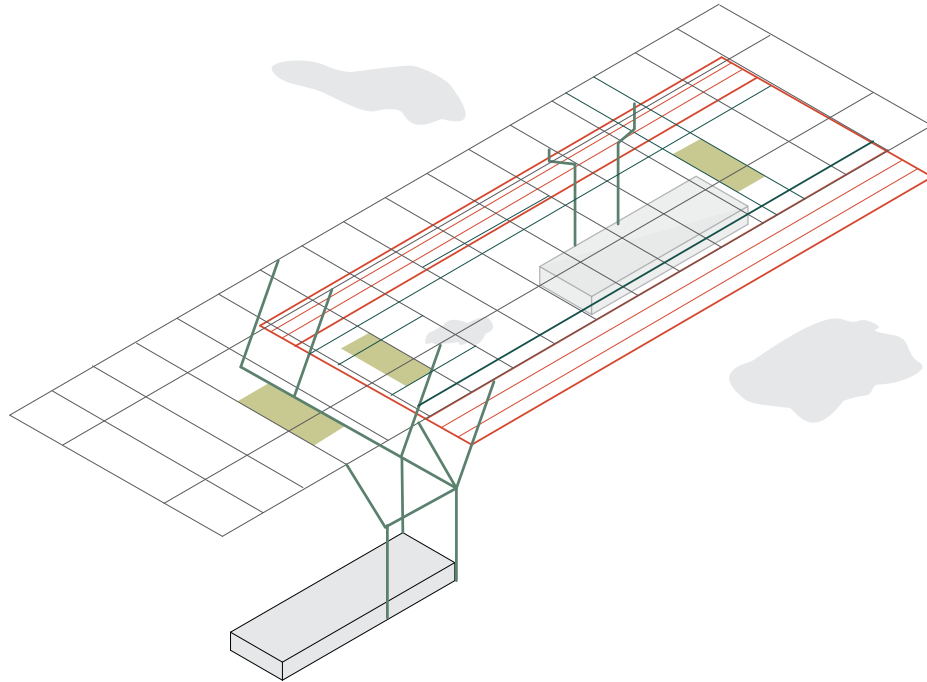
Water Collection



Use the big stair as and Water Storage

WATER MANAGEMENT

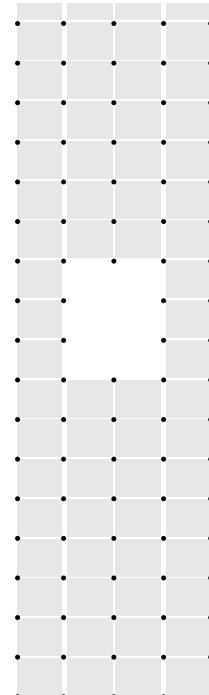
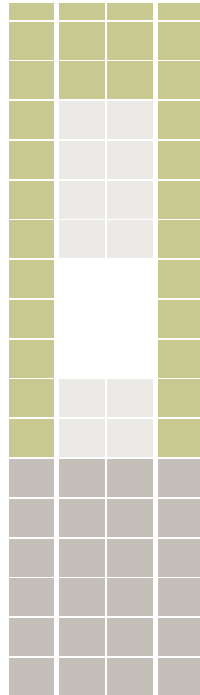
Water Re-Use



For Green Roof | Fire Protection

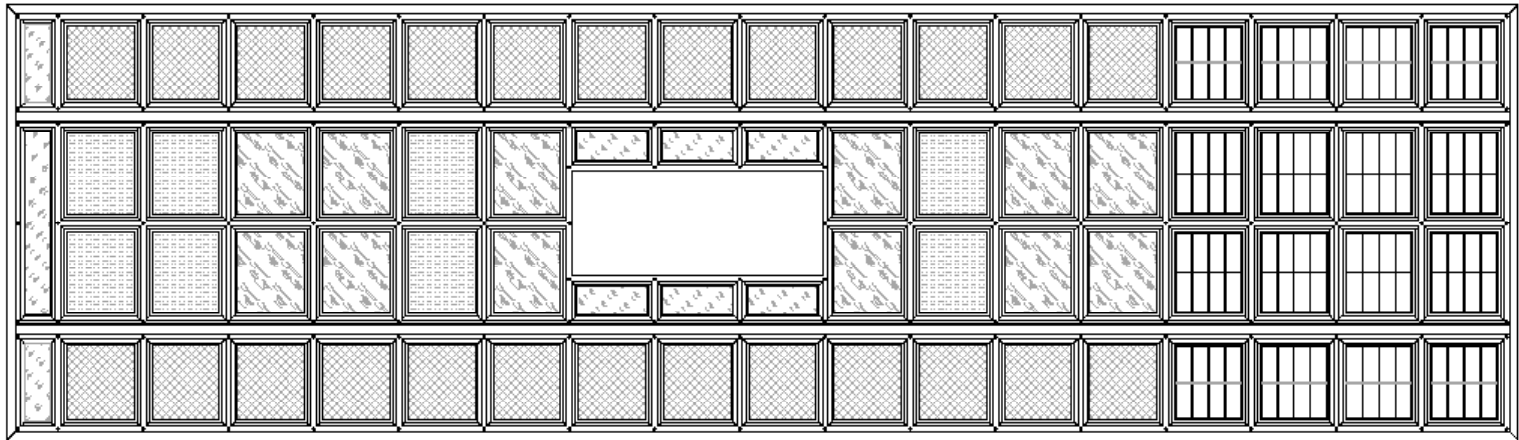
ROOF CONCEPT

PV-Green Roof-Light well



ROOF PLAN

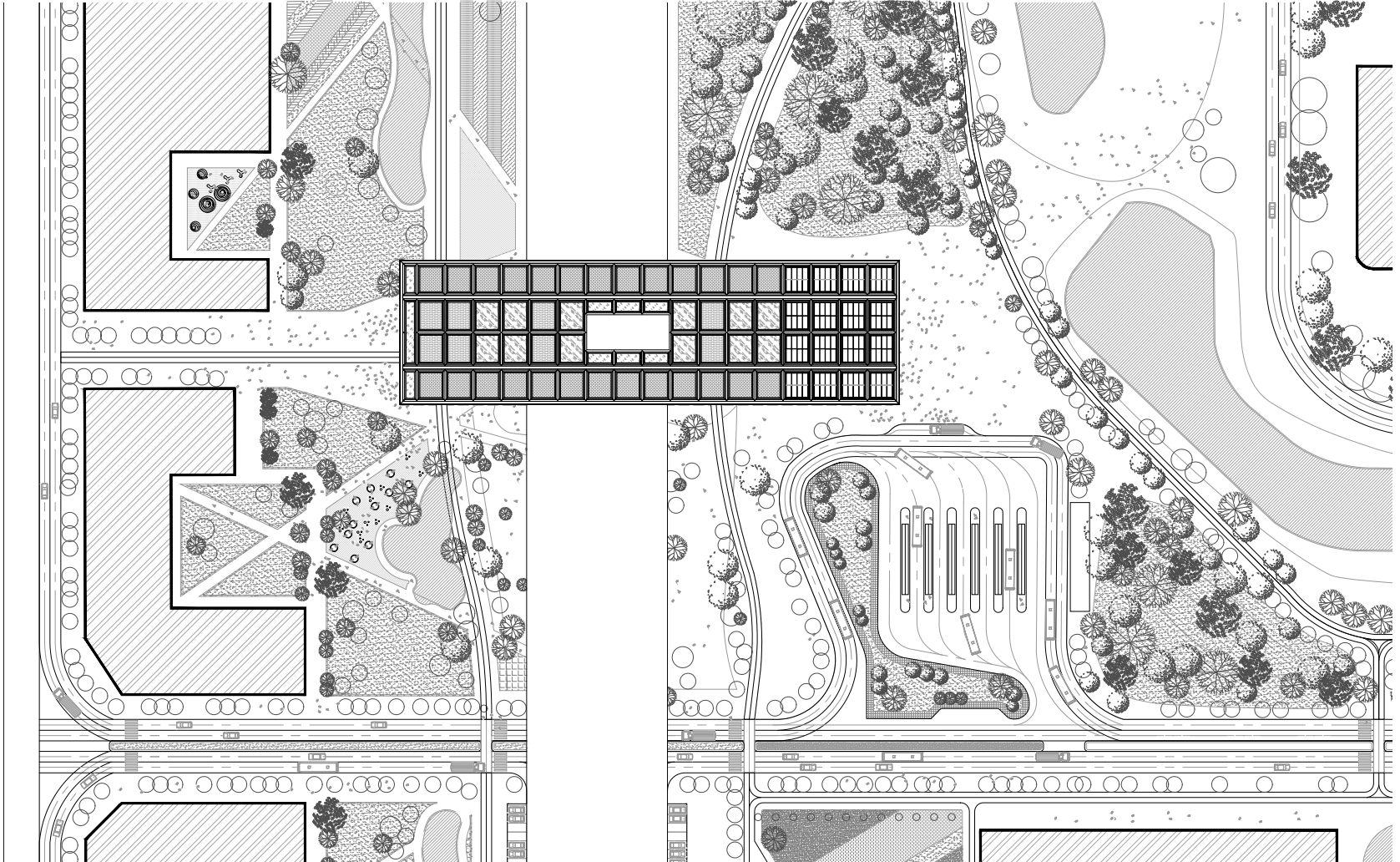
PV-Green Roof-Light well



The Roof structure is built on the truss below. So, the roof is divided into many 8m*10m units.

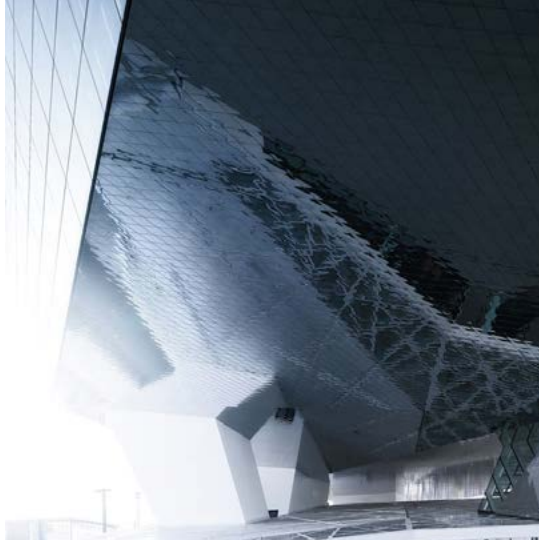
The roof design reflects the interior. The Green Roof will be placed above the indoor area - Office and Library. The light well will be placed above the semi-open space such as passage and public area. The PV panels will be placed on the front.

ROOF PLAN



CEILING FACADE CONCEPT

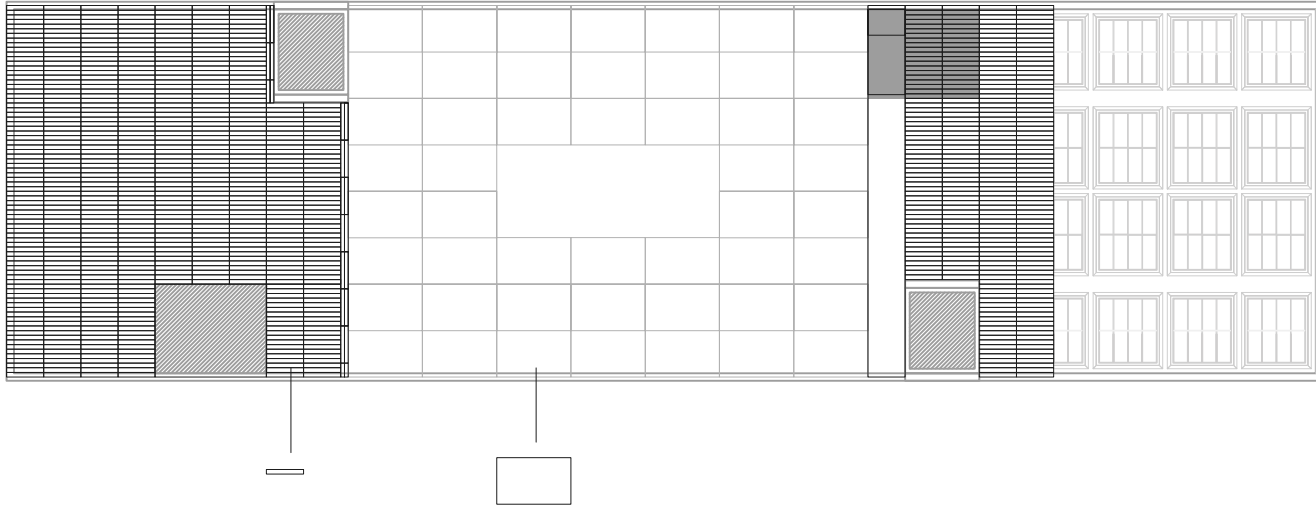
Reflective Material



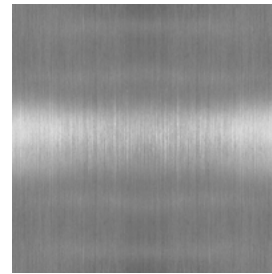
Use reflective roof to be the facade of the public living room below

CEILING FACADE CONCEPT

Reflective Material & Wood



Wood Cladding Panel

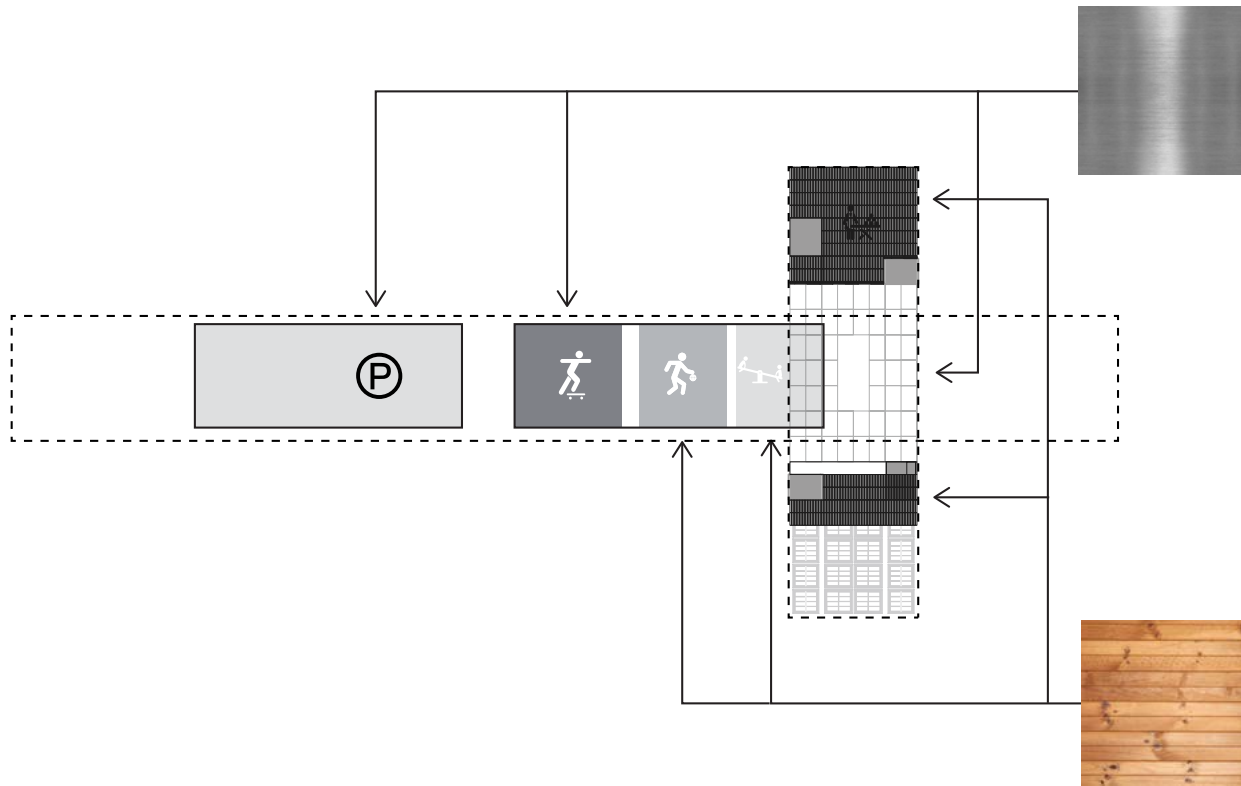


Stainless Steel

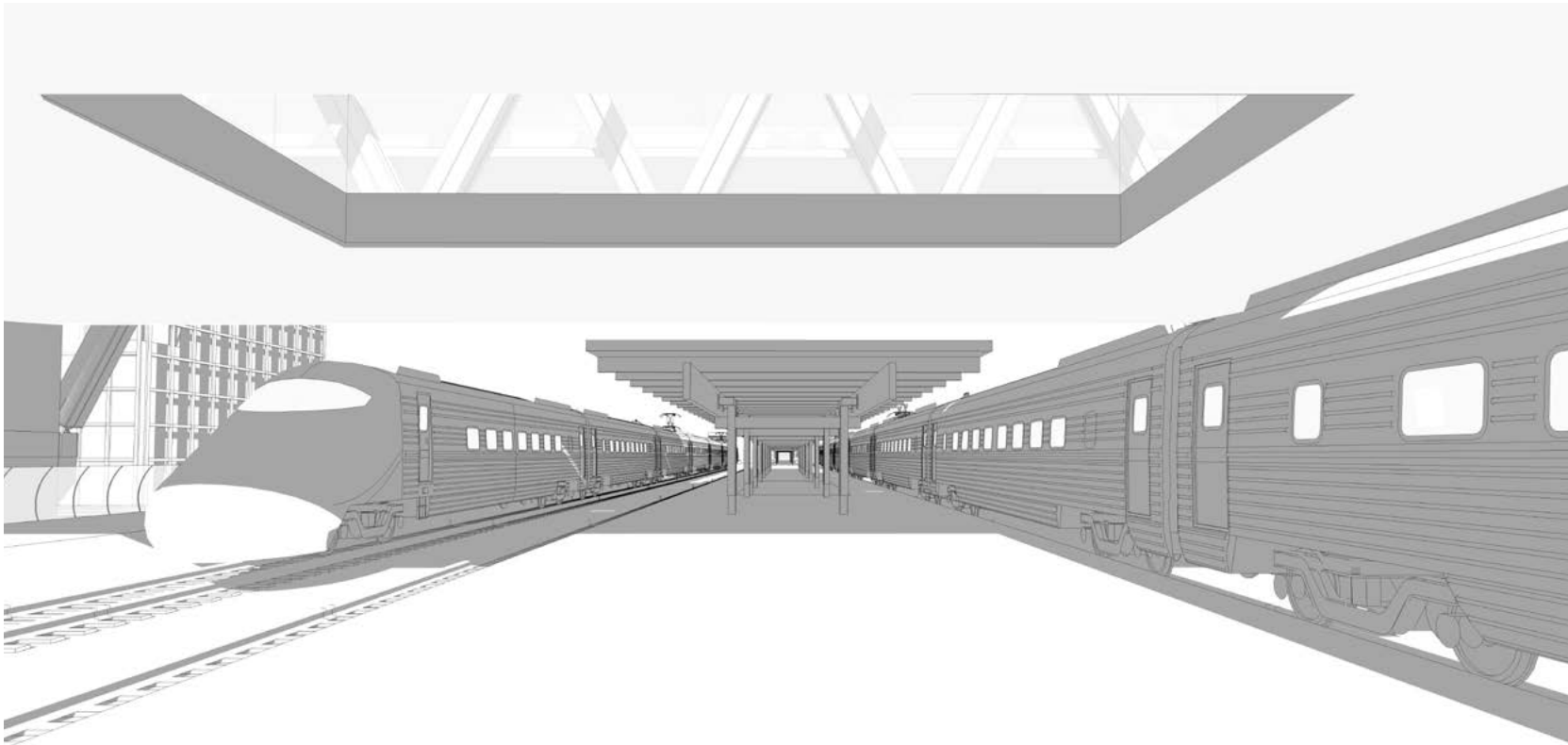
High melting
temperature
Fire resistance

reflective

CEILING FACADE CONCEPT

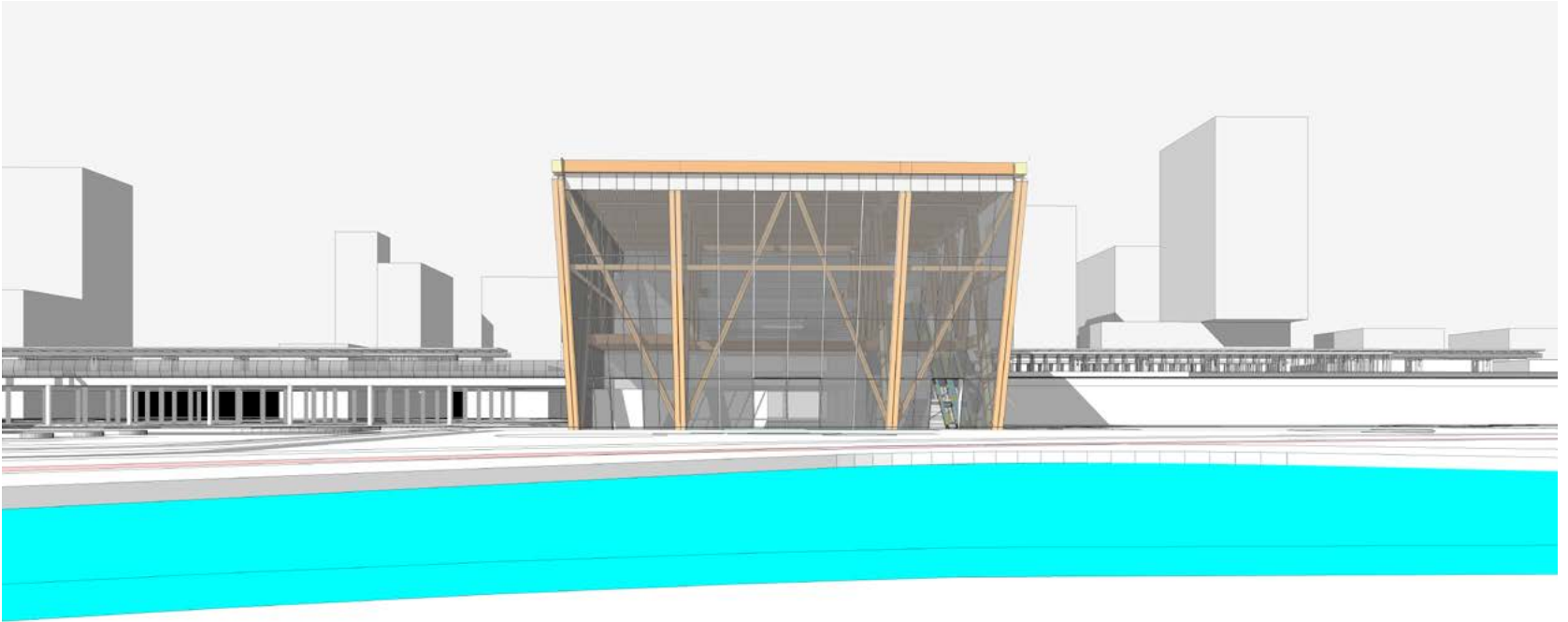


CEILING FACADE CONCEPT



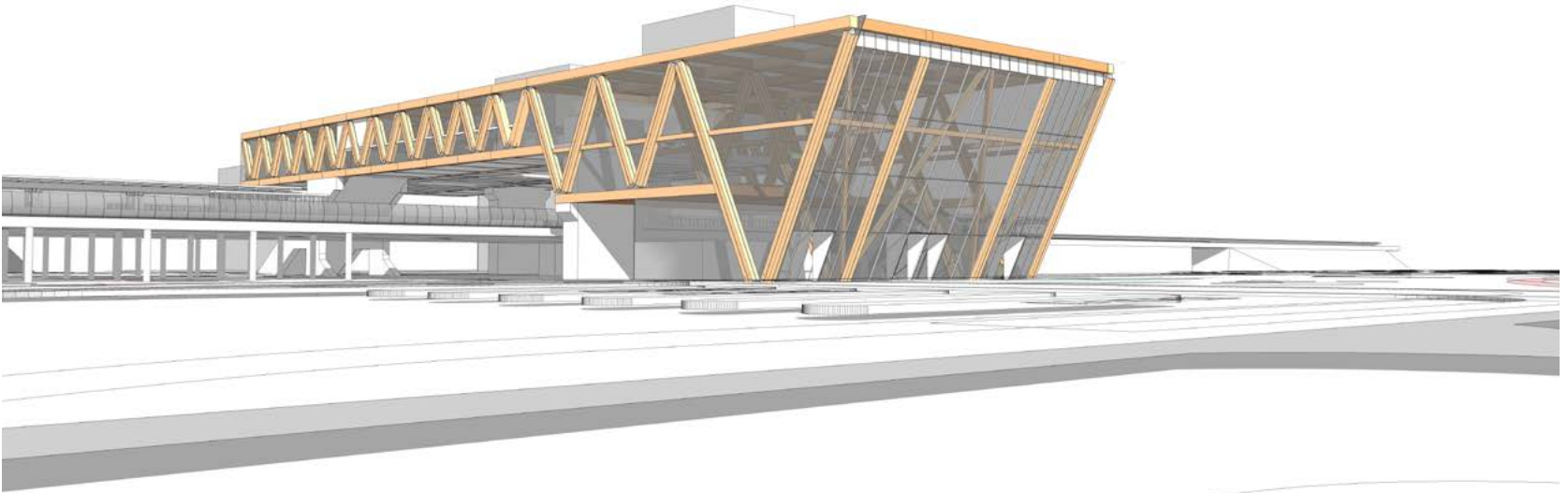
View from the platform: sense of the future

PERSPECTIVE



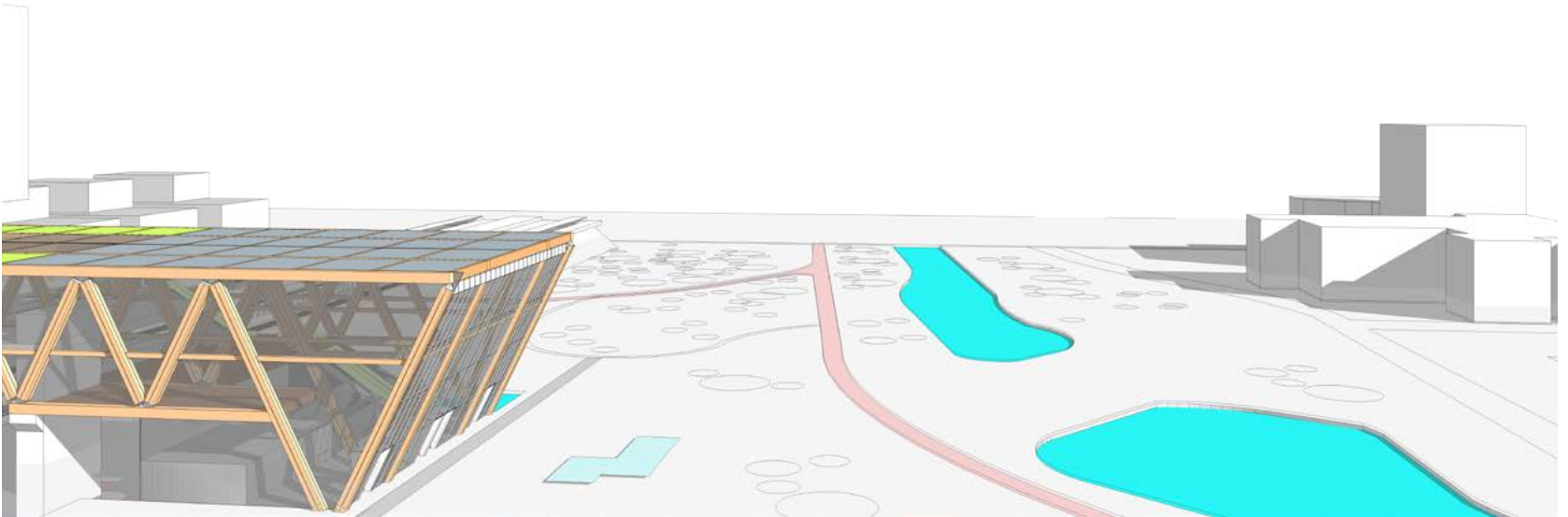
View from AMC

PERSPECTIVE



View from Amstel III Area

PERSPECTIVE



View from Roof Garden of Student Housing

THANK YOU!

AMSTERDAM-HOLENDRECHT
COMPLEX MSC4 P4
DUOWEN CHEN

15-12-2017