

# DAH International Collaborative Performing Arts Center in Belgrade

## Master thesis

### Design of a performing arts centre

performed for the purpose of obtaining the academic degree of Diplom-  
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About



## Prologue

This master theses is about an International collaborative performing arts centre in Belgrade, Serbia.

In last years Belgrade has caught the eye of many investors, due to the unused potential of its riverside fronts.

Project Marina Dorcol and Belgrade waterfront have proposed their master plans that are along Sava and Danube riverside for developing residential, office and retail buildings. Both of these projects include cultural centres but in a more classical manner. Such as opera, classical theatre or heritage museums, none of them have proposed an unconventional centre. Belgrade has never had a contemporary performing arts centre.

This is how the idea for the master theses was born.



## Introduction and Motivation

As my last school project I wanted to combine two of my greatest passions architecture and performing arts. Designing a space where artists domestic as well as international can meet, exchange their experiences, visions and concerns in between themselves and involving local population, children, women, people with special needs and ethnic minority groups, with their art.

The problematic that caught my eye is that Belgrade lacks of a centre of this sort where alternative theatres, dancing troupes, workshops and seminars about performing arts and similar topics can be held and discussed. As well as that the new projects Marina Dorcol and Belgrade waterfront are focusing on reconstructing the city centre river fronts, therefore I wanted to focus on the part of the city that can be counterpart of the city center. Ada Huja, location is only 10min away from the city centre, yet it lacks of social integration and has no theatres or cultural objects of any kind. It would be a great improvement both culturally and socially. This kind of centre can be of great importance for cultural growth not only for this part of the city but to Belgrade and Serbia as a whole.

One theatre has dedicated its life for social, political and cultural changes in my country. They exist for over 20 years now and have made a big impact on my life. I dedicate this project to them, DAH theatre.

# Odin Theatret

was created in Oslo, Norway, in 1964, and moved to Holstebro (Denmark) in 1966, changing its name to Odin Teatret/Nordisk Teaterlaboratorium. Today, its members come from a dozen countries and three continents.

They have established a centre that is through out the year involved with many social events. They are a theatre which pushed and set the boundaries really high for other alternative collaborative theatres and dancing groups. The founder of Odin is Eugenio Barba (29 October 1936, Italy) and has been a great mentor to the DAH theatre group.

Their centre was built from a barn that the city of Oslo gave them in 1970ies from this building they developed and built new objects to create a centre that now includes the main building where they have the black room, red room and white room which are used as a black box theatre set and workshop rooms, a pavilion for hosting/housing international groups, office building and mensa.

[www.odinteatret.dk](http://www.odinteatret.dk)



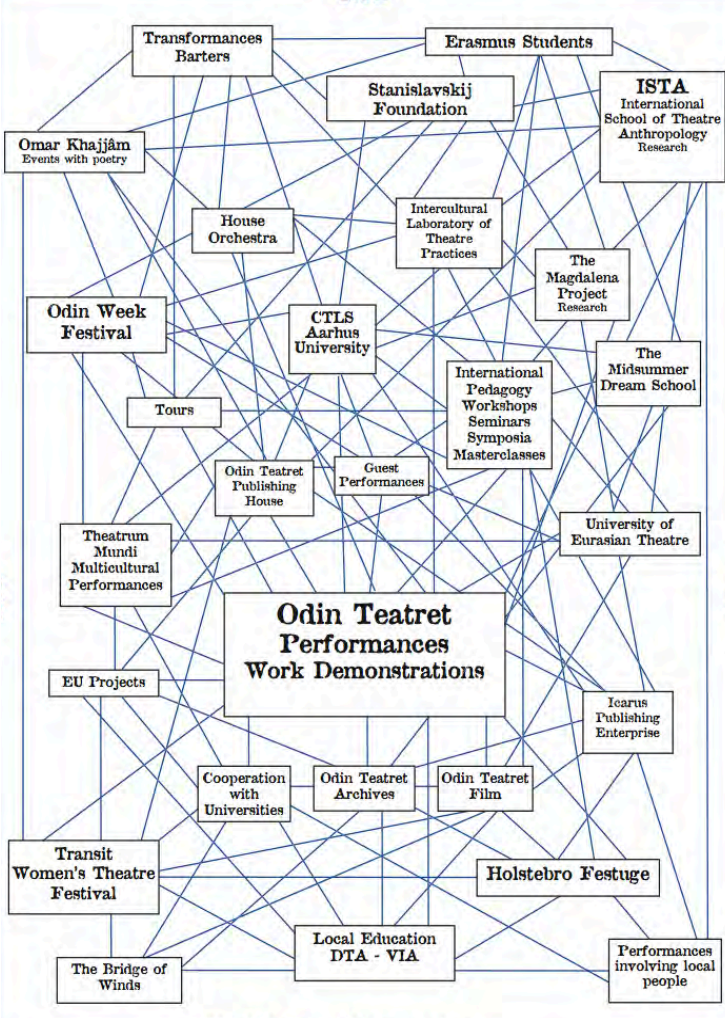
Picture 01.01 Særkærparken 144 / Box 1283 - 7500 Holstebro - Denmark



Picture 01.02 Odin main entrance



Picture 01.03 Odin backyard



Picture 01.04 Logistic of Odin annual

Odin Teatret/Nordisk Teaterlaboratorium's activities include: Odin's own productions presented on site and on tour in Denmark and abroad; organisation of encounters for theatre groups; hosting other theatre groups and ensembles; teaching activity in Denmark and abroad; periodic performances with the multicultural Theatrum Mundi Ensemble; collaboration with the CTLS, Centre for Theatre Laboratory Studies of the University of Århus; the Festuge (Festive Week) in Holstebro; the triennial festival Transit devoted to women in theatre; OTA, the living archives of Odin Teatret's memory; artists in residence; co-productions; children's performances, exhibitions, concerts, round tables, cultural initiatives, transformative processes and community work in Holstebro and the surrounding region.



Picture 01.08 Performance 'On the two banks of the river'

The Black room  
height: 3.7 m  
length: 14.8 m (use of  
performance space 9m)  
width: 9.8 m



Picture 01.05 Black room theatre space

The Red room  
height: 5.0 m  
length: 17.0 m (use of  
performance space 13 m)  
width: 11.9 m



Picture 01.06 Red room theatre space

The White room  
height: 3.7 m  
length: 17.9 m (use of  
performance space 13.5 m)  
width: 8.5 m



Picture 01.07 White room theatre space



Picture 01.09 Performance 'Inside the Skeleton of the Whale'



DAH Teatar

In 1991, directors Jadranka Andjelic and Dijana Milošević formed DAH Theatre out of a need for profound experimental work in Belgrade, Serbia. Actress Maja Mitic joined the group from the beginning. In 2003 DAH Theatre enlarged its activities by founding DAH Theatre Research Centre (DTRC) to deliver an ongoing program of workshops, lectures, seminars, guest performances and festivals. In 2008 an actress Ivana Milenovic Popovic joins the theatre.

They are independent non-governmental group in Serbia. Through their work the members of DAH Theatre have strongly opposed the war and violence. The DAH Theatre Research Centre is addressing the general public's interest in contemporary theatre and culture through its program of activities. The Centre has the goal of becoming a place of gathering for the Vracar Municipality. This local community will, through various programs encounter the performing arts through Dah Theatre in collaboration with other artists (visual, video, film, writers, theoreticians etc).

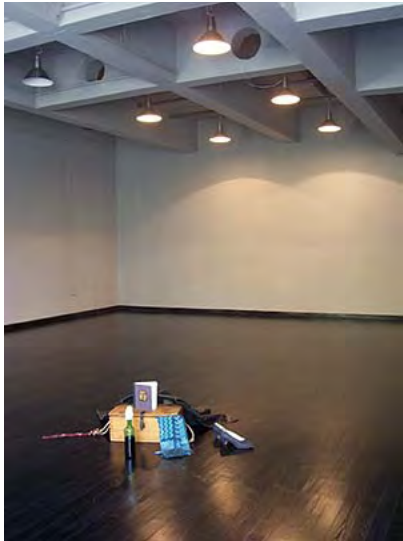
Likewise the Centre wants to collaborate with different organisations and associations that would find this mutually beneficial - such as informal initiatives, networks, women's associations, peace organisations, special needs and ethnic minority groups.

[www.dahteatarcentar.com](http://www.dahteatarcentar.com)

*"The forming of DAH Theatre and its cry of creation coincided with the fall of ex-Yugoslavia and the general destruction that followed. Theatre directors Jadranka Andjelic and Dijana Milosevic, together with the actress Maja Mitic, decided, perhaps subconsciously, to oppose the destruction with creation, to create, in the midst of a world falling apart, a microcosmos of theatre."* Dubravka Knezević  
(*"Till the Last Breath"*, SCENA no. 5/6, Sept/Dec 1995.)  
[www.dahteatarcentar.com](http://www.dahteatarcentar.com)



Picture 01.10 Theatre space arch Ivana Milošević and Jelena Dakić



Picture 01.11 Theatre space arch Ivana Milošević and Jelena Dakić



*"We want our centre to be a meeting place for artists, managers of culture, specialists, different organisations and initiatives, young people and audiences regardless of age or gender from the local community, the region and beyond by:*

*Bringing the cultural worker, artists, managers, and experts from the region to meet among themselves and with the local community"* **Dijana Milošević**-[www.dahteatarcentar.com](http://www.dahteatarcentar.com)



Picture 01.12 'Performance Presence of Absence'



Picture 01.13 'Performance 'Ins/visible city in a city bus'

Creating the conditions for collaboration and common projects touring with their productions in the Region, exchanging experiences between young people from Serbia and countries in the region through working together for longer periods. Developing a modern educational centre for contemporary arts and management that gives an opportunity for practical work in the organisation and realisation of the programs. They have established them selves through their work and through inspiring people to face the difficulties of the society in translation.

The Dah Theatre research centre represent a bridge between Serbia and the wider community. The new centre would be a place where their years of experience and good name can bring many well known artists, professors and groups to Belgrade and help Belgrade in social and cultural development.

## Black box theatre “empty space”

*“Theatre must be an empty space with only a roof, a floor, and wall. Inside this space one set up for each new type of play a new sort of stage and temporary auditorium”*

**Edward Gordon Craig**  
from ‘A short history of western performance space’  
by David Wiles



Picture 01.14 MoMA White cube

*"I am ready to disclaim my opinion, even of yesterday, even of 10 minutes ago, because all opinions are relative. One lives in a field of influences, one is influenced by everyone one meets, everything is an exchange of influences, all opinions are derivative. Once you deal a new deck of cards, you've got a new deck of cards."*

**Peter Brook book The Empty space**



Picture 01.15 Black box theatre

A black box theatre is a theatrical space with a very simple, unadorned design that makes it flexible for rehearsals and productions. These theatres began to proliferate in the 1960s, as part of a groundswell of interest in experimental theatre in Europe and the US. Today, black box spaces are common and used for everything from experimental theatre to kid's plays to the kind of classical repertoire you would normally find in a typical proscenium-style theatre.

As per the name, black boxes are often painted black and are square or rectangular in shape, with the idea that it's the most neutral setting in which to give productions a wide array of design and staging choices. Seating is not fixed, so the audience can be seated in the round or any other configuration the director desires. Ironically, a "white box" can also be a black box - Peter Brook's seminal production of Shakespeare's "A Midsummer Night's Dream" in 1970 used the concept of the black box, but with walls and floor painted white.

This concept was maybe first made in the MoMA 1939 where the most celebrated example of the white cube concept as an exhibition space.



Location



Picture 02.01 Mountain Zlatibor

## Serbia



is located at the crossroads of Central Europe and Middle East, also known as the heart of Balkan. The northern portion belongs to central Europe, where as the south part belongs to southeastern Europe. In term of geography and climate it is also partly Mediterranean country, but generally Continental. Serbia borders Hungary to the north, Romania and Bulgaria to the east, Macedonia and Montenegro to the south, and Croatia and Bosnia to the west, it also borders Albania through the disputed territory of Kosovo. It is land locked but as a Danube country it is connected to distant seas and oceans, and a geopolitically important territory. The historical heritage and culture begins with prehistorical archaeological sites and its legacy from classical antiquity.

The capital of Serbia is Belgrade, which is one of the oldest cities in Europe. Important cities are also Novi Sad, Subotica, Nis and Kraljevo. Serbias land scape is very colourful with over 70 rivers, mountain of Kopaonik (2017m) and Zlatibor mountain (1496m)

Total area of Serbia is 88,361 km<sup>2</sup> and population with around 7,5 million people. (Compering with Austria: 83.871m<sup>2</sup> with 8,2 milion people.)

Picture 02.02 Map of Serbia





Picture 02.03 Belgrade/Kalemegdan view of New Belgrade



## Belgrade



Belgrade is the capital and largest city of Serbia. It is situated in South-Eastern Europe, on the Balkan Peninsula, at the confluence of the Sava and Danube rivers, with an area of 359,96 km<sup>2</sup>, divided into 17 municipalities. The population of the city is 1.23 million, while 1.65 million people live in its metro area. Comparing with Vienna: 414,65 km<sup>2</sup>, and population of 1.79 million people).

It is the capital of Serbians culture, education, science and economy. Belgrade is a place where East and West meet in a wonderful collusion of culture and beauty. More than 90% of the population are Serbs with Orthodox Christian religion. Belgrade has a rich history that dates back to the 4th century. Since Belgrade has been founded by prince Stefan Lazarevic over 600 years ago it went through numerous renovations and changes. While lying on the two rivers, Belgrade is still not completely down on its riverbanks. Length of river banks Belgrade is 200 km. In this area there are 16 river islands. Danube is one of the largest rivers.

Danube passes through Serbia with its 588 km navigable during the whole and it is a natural connection with Germany, Austria, Hungary, Romania and Bulgaria.

The Sava river (945 km) in the Belgrade area runs the length of 30 km upstream of the confluence Obrenovca. All the 207 km course through Serbia has the perspective to gain the status of an international waterway.

Confluence of the Sava and Danube rivers, below Kalemegdan is at an altitude of 68 meters.

It is beautiful city with a great potential for new developments.

Picture 02.04 Map of Belgrade



Picture 02.05    Ada-Huja peninsula

## Ada-Huja



Picture 02.06 Ada-Huja peninsula

Ada Huja is a peninsula on the right bank of the Danube. It is bordered by the neighbourhoods of Viline Vode and Deponija to the east and Bogoslovija and Karaburma to the south. It engulfs a bay of armlet on the Danube, which separates its eastern half from the neighbourhood of Višnjica to the south. The area is generally bordered by two traffic facilities: the Visnjicka street to the south and the bridge of Pancevacki most to the west. Ada Huja was previously an island, as its name suggests (ada huja, Turkish/Serbian for rustle island). After the World War II the filling up of the Danube's bed between the bank of Belgrade and Ada Huja began, with garbage and dirt being the most used materials, turning it into a peninsula. The filled area covers the eastern part of Ada Huja while the former island now forms the western half, with a separate island-like extension on its eastern tip. Today, from the Pancevacki most to the eastern tip, Ada Huja is almost 4 km long and the entire area (filled and former island) covers 5 square kilometres.

Western section generally spawns around the bridge. It is filled with many hangars and companies for building and construction, including a series of concrete plants and gravel and aggregates storing and treating facilities.

Central section is still mostly unused. Except for several hangars, the area is grassy, forested and marshy.

Eastern section, is generally referred to as Ada Huja by most people, as the former island begins here. Some of the largest industrial facilities of Ada Huja are located here: paper and cardboard factory Avala-Ada, furniture factory Novi Dom, gravel storage of Tembo and DV Trade, etc.

It offers peace and quiet, since it is facing a natural reserve on the Danube river.



Analyse



Two projects that will transform old and dysfunctional industrial zones into quality locations with mixed uses, combining residential, commercial, cultural and sport character. Belgrade is certainly among the last few European capitals which haven't used nor integrated great potential of its waterfront into the existing city core. Current state shows inadequate and degraded facilities, along with devastated industrial zones. The potentials of big, neglected areas remain unused without attractive points and final destinations.

Belgrade Waterfront is planned to create an extension of the city to Savas river banks and to make an isolated district, with an appealing riverside promenade. Attractive public spaces for residents and visitors, distinct neighbourhood communities and a high-value centre with a strong brand identity. Pic 03.01  
Egale hills

Marina Dorcol "City on Water" is a mixed-use project, consisting of prime residential, hotel, office and retail premises. With pedestrian lanes for walking and cycling on the rive bank. Pic 03.02  
Daniel Libeskind Studio

<http://www.engel-marina-dorcol.com>, <http://www.belgradewaterfront.com/en/>



Picture 03.01 Master plan for Belgrade waterfront

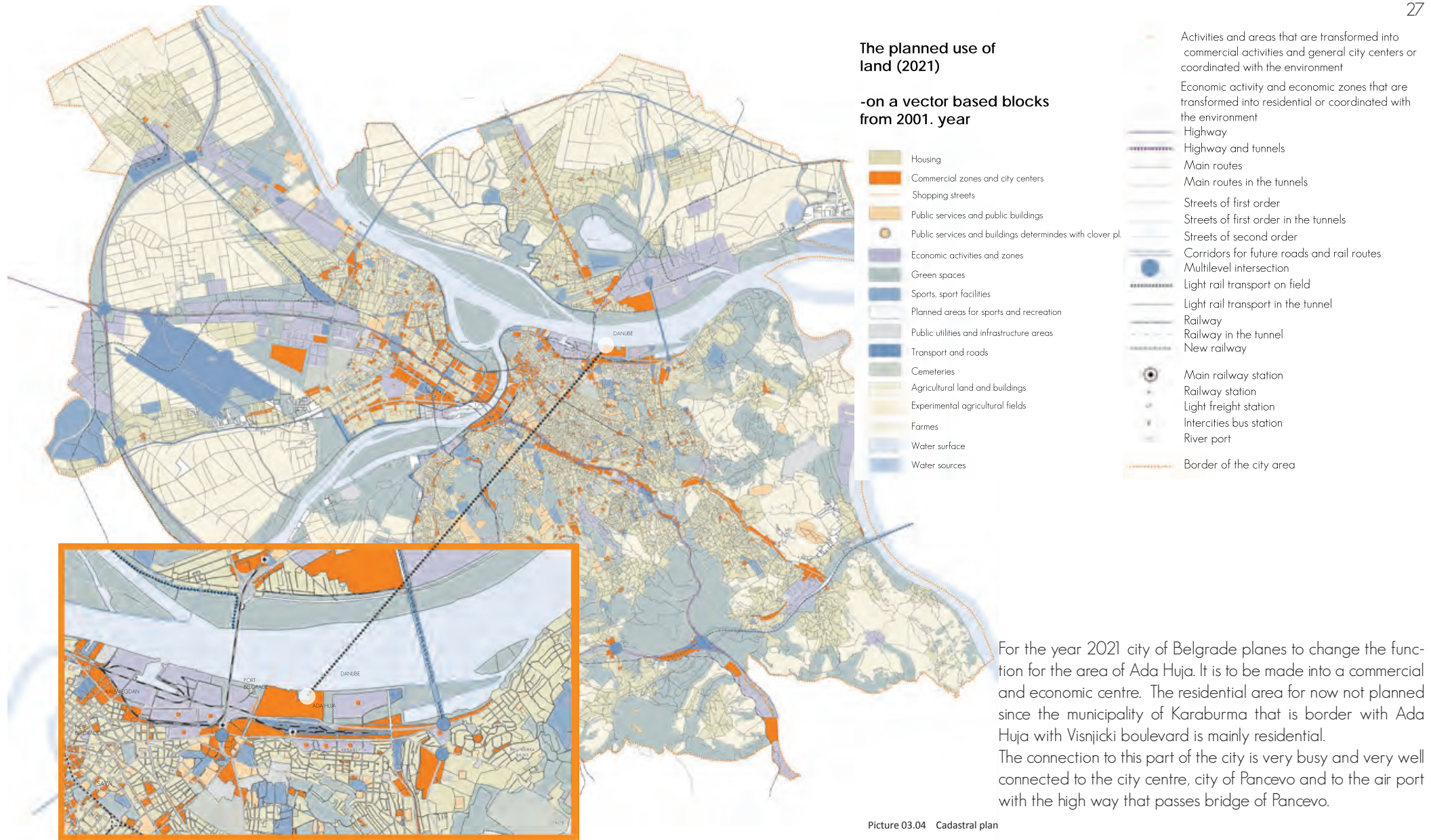


Picture 03.02 Master plan for Port Dorcol



Picture 03.03 Map of Belgrade





## Vegetation

On the site the following vegetation is found : english oak, that is used for construction purposes, shipbuilding, barrels for wine; castanea sativa, that is used for furniture, barrels, roof beams, fencing as well as for fuel; turkey oak, also used for construction and fencing. Reed that is used for thatching roofs. The soil near the water is usually mold also known as humus, it is very fertile soil. From les we make bricks which is the most used material for building, as well as the concert, prefabricated elements and steel.



Picture 03.05 Ada-Huja peninsula





## Climate

Climate of Serbia can be described as moderate-continental with more or less pronounced local characteristics. Spatial distribution of climate parameters are caused by geographic location, relief and local influence as a result of combination of relief, distribution of air pressure of major scale, terrain exposition, presence of river systems, vegetation, urbanisation etc.

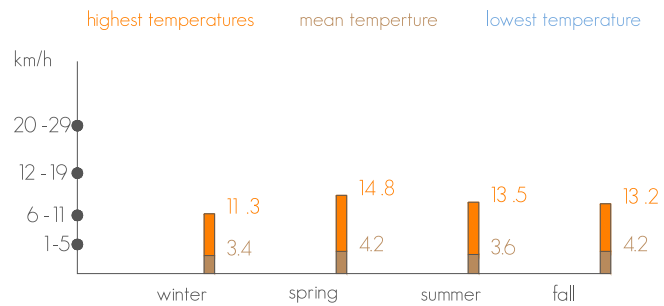
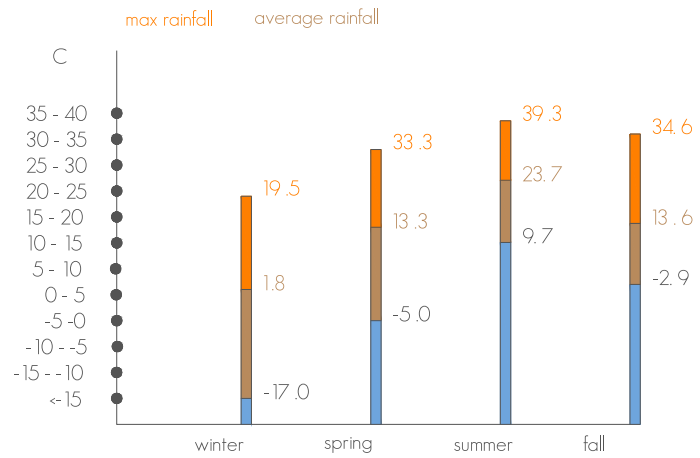
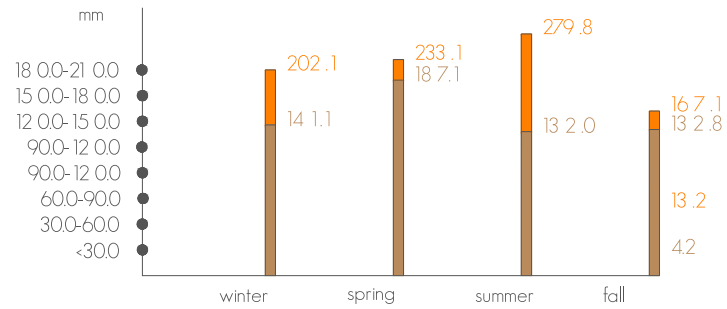
The average annual air temperature is 11.70C.

The average annual rainfall on Belgrade and its surroundings is 669,5 mm. The average number of snowy days is 27. Mean atmo-spheric pressure in Belgrade is 1.001 millibars and mean relative humidity is 69.5%. Annual sums of solar radiation range are in the interval from 1500 mm to 2200 hours annually.

Surface air circulation is to a great extent caused by orthography. In warmer part of the year winds from northwest and west prevail. During colder part of the year east and southeast wind, koshava, dominates. Winds from southwestern direction prevail in mountainous part of southwestern Serbia.

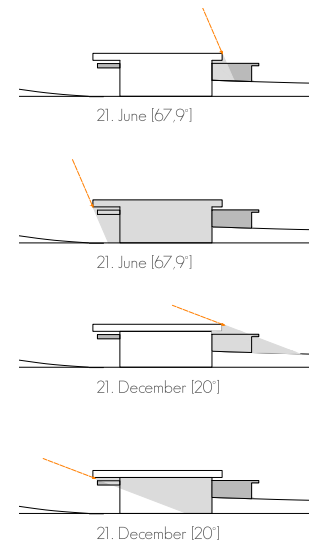


Picture 03.07 Belgrade mouth from Save and Danube, Kalemegdan

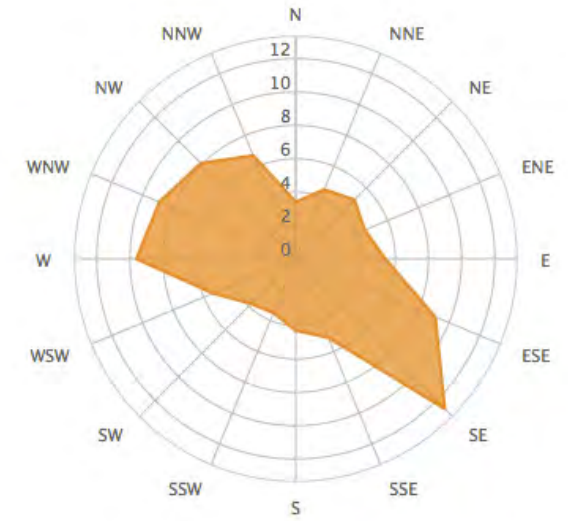


average wind speed average max wind speed

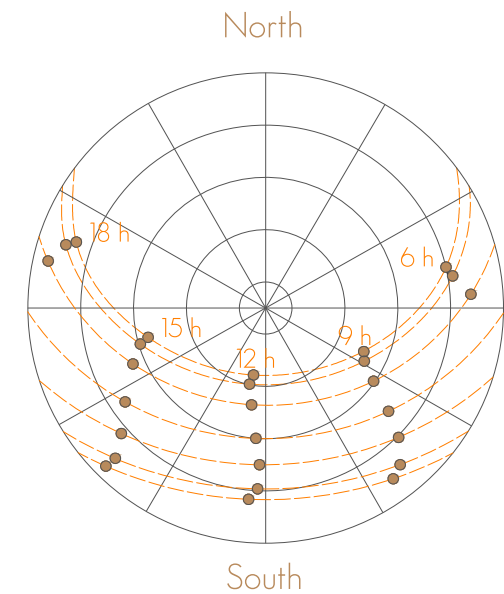
Picture 03.08 Diagrams rainfall, temperature, wind speed



Picture 03.09 Solar altitude at 12h



Picture 03.10 Wind rose



Picture 03.11 Solar altitude 45°

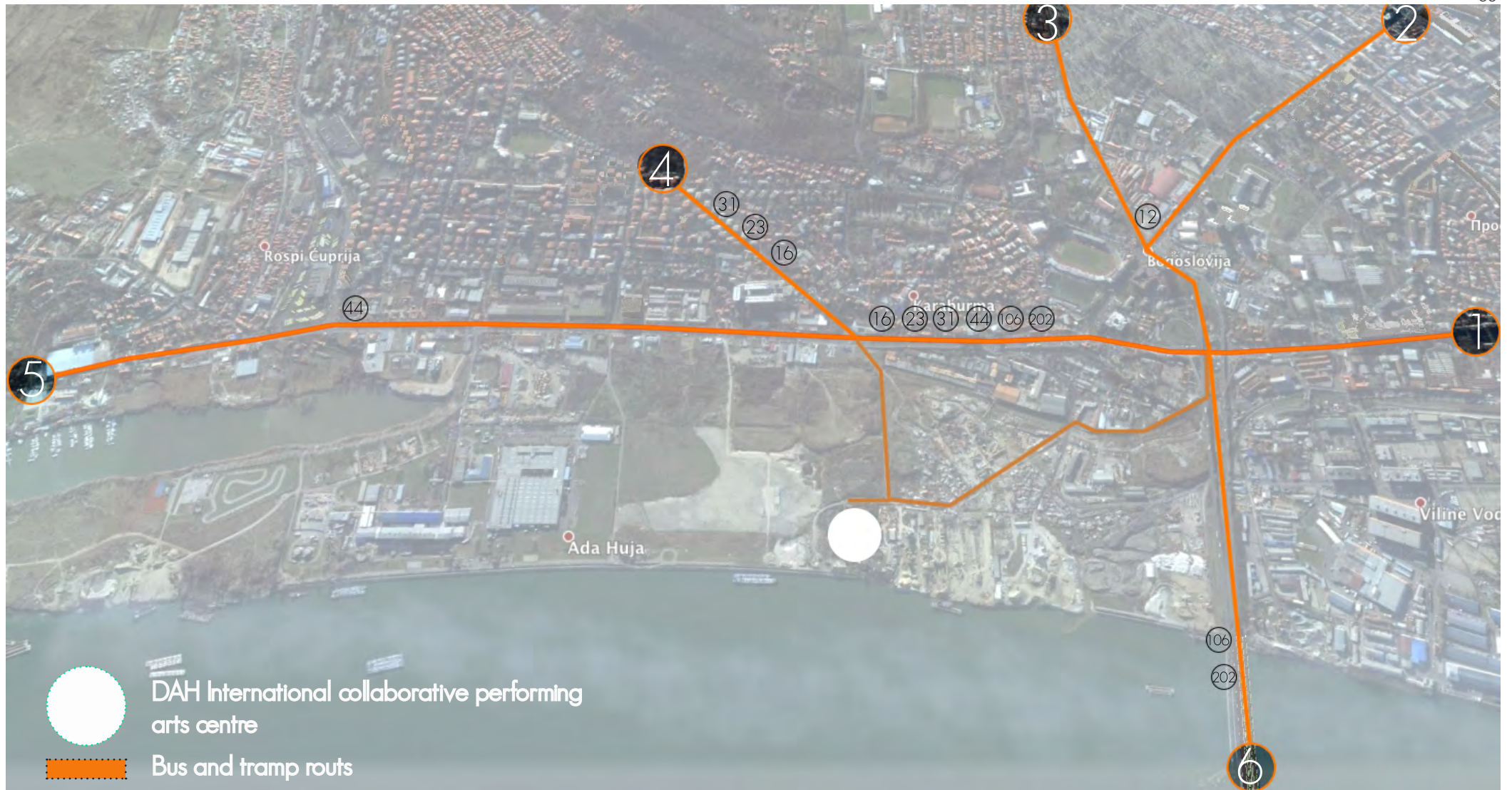


## Traffic

Public transportation in Belgrade includes transportation by bus, trams and trolleybuses. Daily transports about a million and a half passengers, the 166 line, with around 940 vehicles in traffic in a day. It employs about 6,500 workers. Connection with the location is very accessible, and it takes only 10min to the centre of Belgrade. There are several bus lines that connect this area with the Karaburma Višnjickim boulevard. In this part of the problem is the only pedestrian zone and sidewalks. Also not only that it is well connected with land traffic but also with river traffic with the port. It does lack of metro station but the plan for metro has been planed.

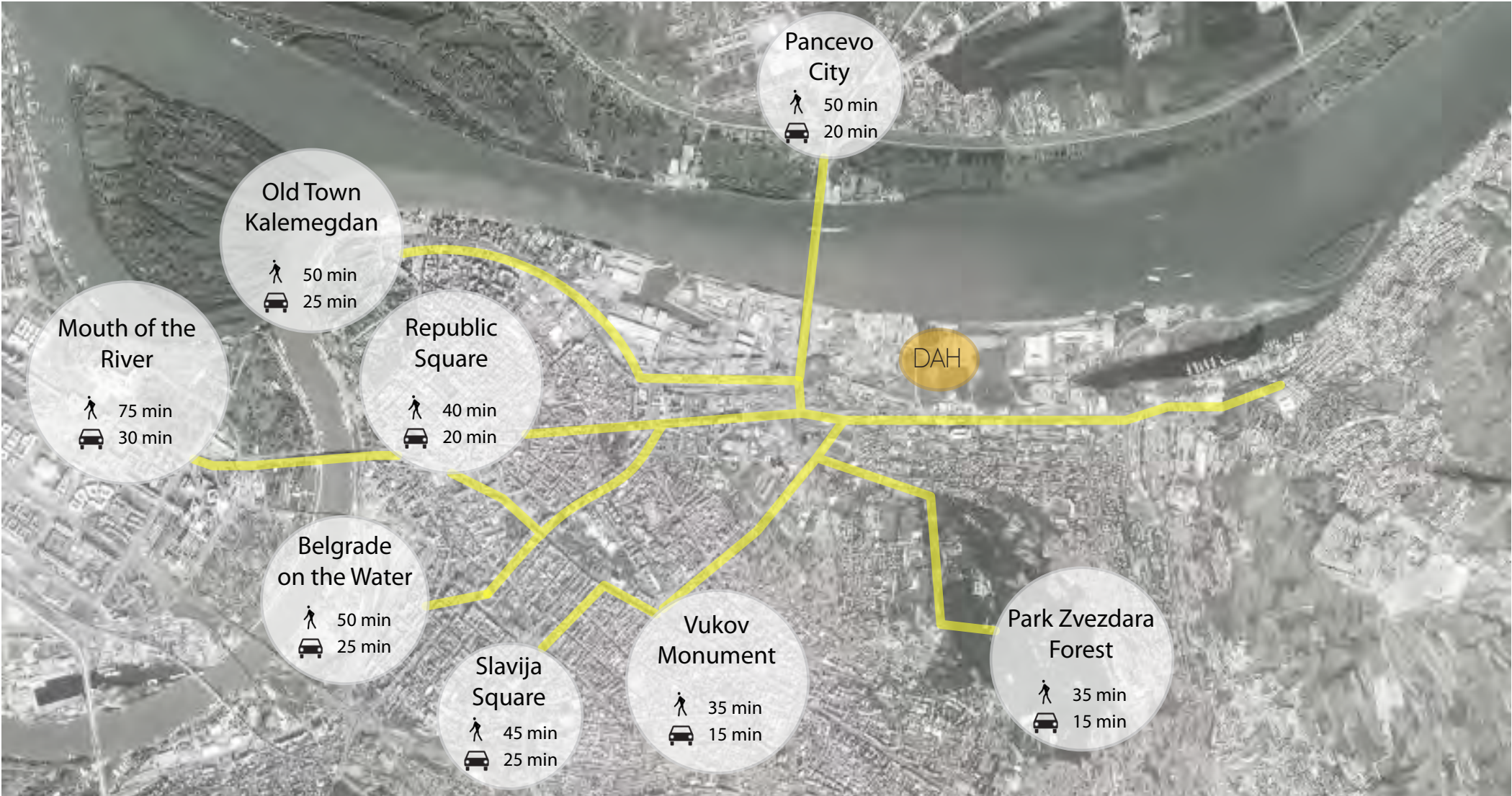


Picture 03.12 Belgrade from Space by night



Bus and tramp public transport lines that connect Ada Huja with the important parts of the city



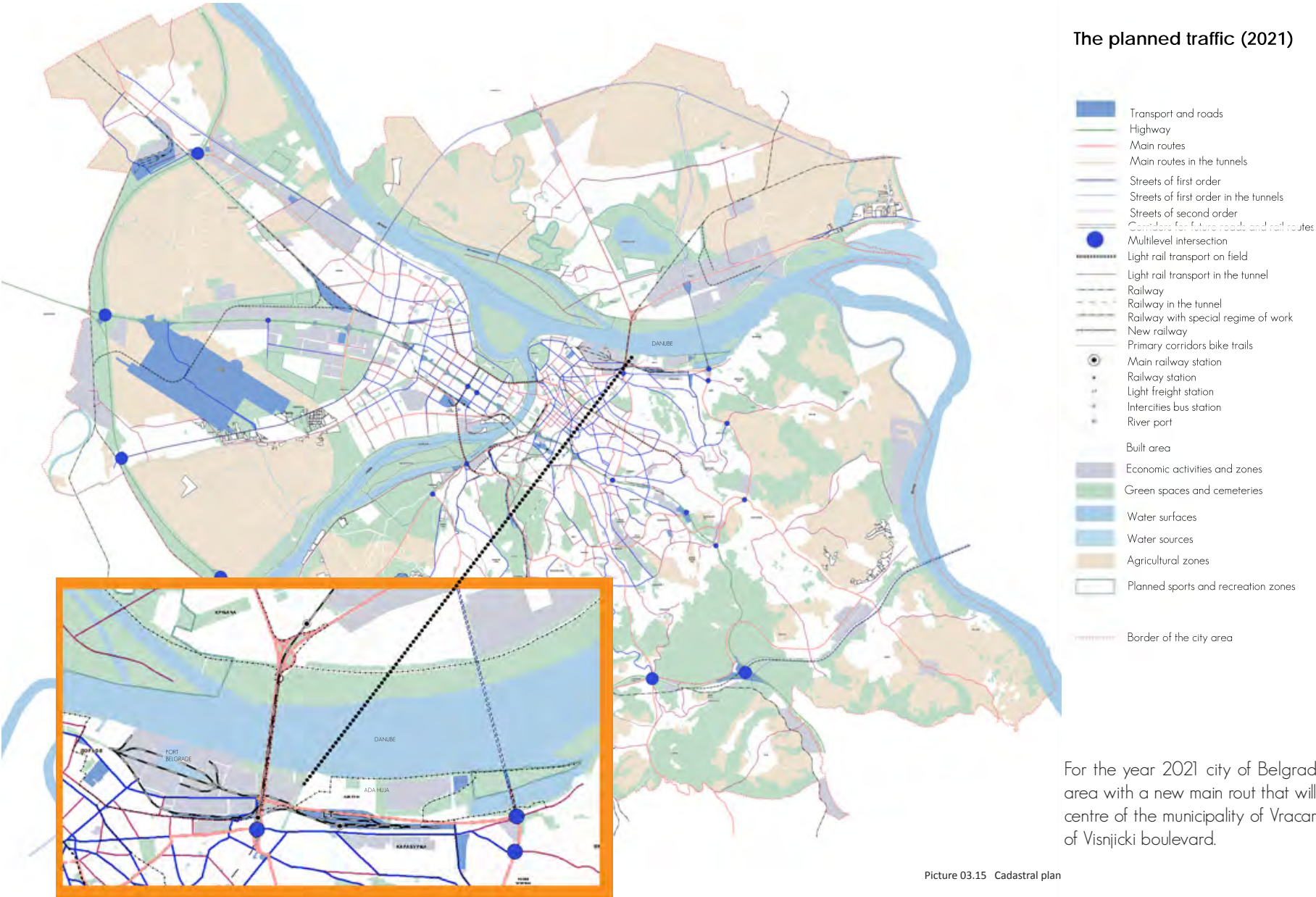


Ada Huja in connection some of the important Belgrade city centres

Picture 03.14 Map of Belgrade



The planned traffic (2021)



For the year 2021 city of Belgrade is planning to connect this area with a new main route that will connect it to the secondary centre of the municipality of Vracar and Zvezdara to the South of Visnjicki boulevard.

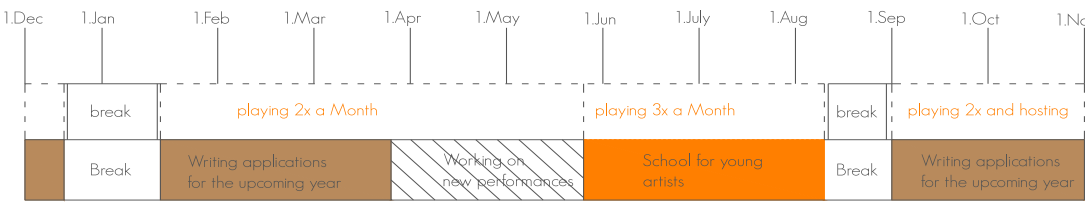
Picture 03.15 Cadastral plan





Design concept

Idea for the content



Picture 04.01 Dah calendar

Today DAH theatre has a very tight and organized schedule through-out the year. After 20 years of existence they have made their year schedule very clear . From working demonstrations, workshops, lectures, projects with marginalised groups, people with special needs, youth, to festivals and tours. Since they are a non-govermental group every year they apply for grants , seek for donors and have summer schools to maintain their existence. This paints a very distinguished needs for the space functionality.



Picture 04.02 Group workshop



Picture 04.03 DAH workshop performance



Picture 04.04 Vizualizator plakat



Picture 04.05 Bitef plakat



Picture 04.06 Ring ring plakat

On the other hand Belgrade is a host of many domestic and international events such as: Bitef, green zone, bemus, ring-ring, Kult fest , VIP, Vizualizator... and many more. Most of these happenings are held in the centre of the city and many performers are staying in hotels around the city.

From the needs of DAH and all the festivals held in Belgrade the centre calls for an a typical theatre requirements.



DAH

International collaborative  
performing arts centre

WHAT?

Centre where people exchange their knowledge, experiences and creativity among artists and theatre professionals from different artistic and national traditions

WHY?

Belgrade needs this kind of a centre where people will exchange their experiences, ideas and embrace their differences and creativity on daily bases.

! The project is intended to play an integral role in the social and intellectual life of the municipality of Ada Huja, city of Belgrade and Serbia as a whole

! The idea of the Centre being in the neighbourhood of Ada -- and not the centre is meant to awaken and integrate the people from this part of the city.

## HOW?

Performances  
Exchange  
Learning  
Informing  
Reading  
Participating  
Dancing  
Eating  
Sleeping

## WHAT?

Theatre  
Workshop stages  
Temporary housing  
Restaurant

**ex· change**

ex· changed, ex· chang· ing, ex· chang· es

1. To give in return for something received; trade:
2. To give and receive reciprocally; interchange: exchange gifts; exchange ideas.
3. To give something in return for something received; make an exchange.

Room program

I Theatre 0.00

The theatre in the centre contains on the first floor

- 1. Black box theatre space 200m<sup>2</sup>
  - changing rooms 125m<sup>2</sup>
  - props storage 20m<sup>2</sup>
  - chair storage 40m<sup>2</sup>
  - requisite storage 35m<sup>2</sup>
  - circulated hallway for users 85m<sup>2</sup>
  - terrace 75m<sup>2</sup>
- 2. Main entrance and Lobby with a small library 225m<sup>2</sup>
- 3. Coat and Information desk 55m<sup>2</sup>
- 4. Toilets 50m<sup>2</sup>
- 5. Office 145m<sup>2</sup>
  - office toilets 8m<sup>2</sup>
- 6. Mechanical room 90m<sup>2</sup>
- 7. Connection to the Workshop stages 30
- 6. Secondary entrance 50m<sup>2</sup> second floor
- 7. Entrance for load 150m<sup>2</sup>

1258m<sup>2</sup> (secondary entrance not included)

I Theatre +4.00

The theatre in the centre contains on the second floor

- 1. Black box theatre space
  - light room 100m<sup>2</sup>
  - sound room 20m<sup>2</sup>
  - chillout area 80m<sup>2</sup>
  - terrace 75m<sup>2</sup>
- 2. Secondary entrance 50m<sup>2</sup>
- 3. Connecting bridge to the sleeping area and restaurant 30m<sup>2</sup>
- 4. Connecting hallway to the workshop office and privet entrance for staff 45m<sup>2</sup>

355m<sup>2</sup> privet entrance not included

1613m<sup>2</sup>

This is the main part of the centre which workers through out the year. DAH group performers here when there are no visiting performers. It contains a black box theatre space with changing rooms, chair storage, requisite storage, props storage, lobby with the info desk where people can get more informations about the centre and when and how they can be a part of the workshops. There is a very imposing stair case that connects the lobby to the restaurant and the secondary entrance which leads to the riverbank. The centres office is there not only for the DAH group but also for the visit-ing professors and performers. It is connected with the sleeping area with a ramp and the back stage with a private hallway. The second floor of the theatre has the light and sound room which goes around the main stage. There is also a chillout area where performers can meet and exchange their experiences. It connected with a hallway to the workshop rooms and the sleeping area which is only for the use performers.

II Workshop space 0.00

The workshop space in the centre contains on the first floor

- 1. Stages together 180m<sup>2</sup>
- 2. Main entrance and Lobby with a small Library 130m<sup>2</sup>
- 3. Coat and Information desk 20m<sup>2</sup>
- 4. Toilets 35m<sup>2</sup>
- 5. Entrance for the load
- 6. Mechanical room 90m<sup>2</sup>
- 7. Connection to the chair, requisites and changing rooms

455m<sup>2</sup>

III Workshop space +3.00

The workshop space in the centre contains on the second floor

- 1. Balcony connection to the terrace and office 60m<sup>2</sup>
- 2. Private entrance
- 3. Office 40m<sup>2</sup>
- 4. Sound room 8m<sup>2</sup>
- 5. Connection to chillout area
- 6. Public terrace 140m<sup>2</sup>

245m<sup>2</sup>

700m<sup>2</sup>

This is the secondary part of the centre that can function by it self when needed. It is a working space that can be rented to other theatre, dancing and music groups for having their own calendar performances with agreement with the DAH centre schedule. It contains one stage that can be separated into two, a sound and light room, its own lobby and toilets for the users, info desk and connection to the balcony that leads to the terrace and office. It has its own privet entrance for the staff.

It is a necessary part of the centre, because the centre has periods when it has many visiting performers that need to rehearse their peace at the same time and there for it is use as a secondary scene for the main black box.



III Sleeping area +1.00

- The sleeping area in the centre contains on the first floor
- 1. 7 bedrooms 7x18m<sup>2</sup> + bethrooms 7x5m<sup>2</sup> + terrace 7x8,5m<sup>2</sup>
  - 2. connecting hallway and stairs 95m<sup>2</sup>
  - 3. Check in area 75m<sup>2</sup>

390m<sup>2</sup>

III Sleeping area +4.00

- The sleeping area in the centre contains on the second floor
- 1. 4 bedrooms 4x18m<sup>2</sup> + bethrooms 4x5m<sup>2</sup> + terrace 4x8,5m<sup>2</sup>
  - 2. Chill out area and a library 90m<sup>2</sup>
  - 3. connection to mensa/restaurant and the theatre, work-shops spaces 50m<sup>2</sup>
  - 4. Kitchen 75m<sup>2</sup>
  - 5. Hallway 20m<sup>2</sup>

265m<sup>2</sup>

755m<sup>2</sup>

This part of the centre is only for the visiting groups and professors the staff can also approach it but the main quality is that when the centre is not working this space can be used for professors or other artiest to be housed and not to stay in a hotel. If they are staying in Belgrade for few months they can feel more at home since the have the access to the kitchen, library, office and restaurant. It is connected on the first floor with a ramp to the office and on the second floor above the lobby they can pass over it without interfering with the audience or visitors of the centre to head to the working area.

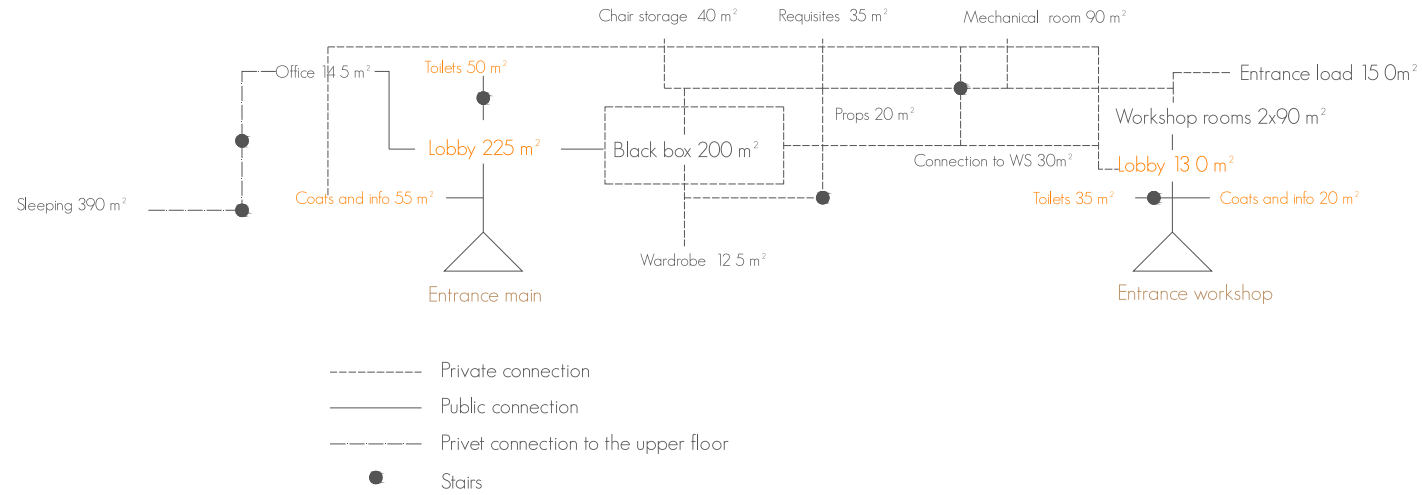
Eating area +4.00

The eating area in the centre contains

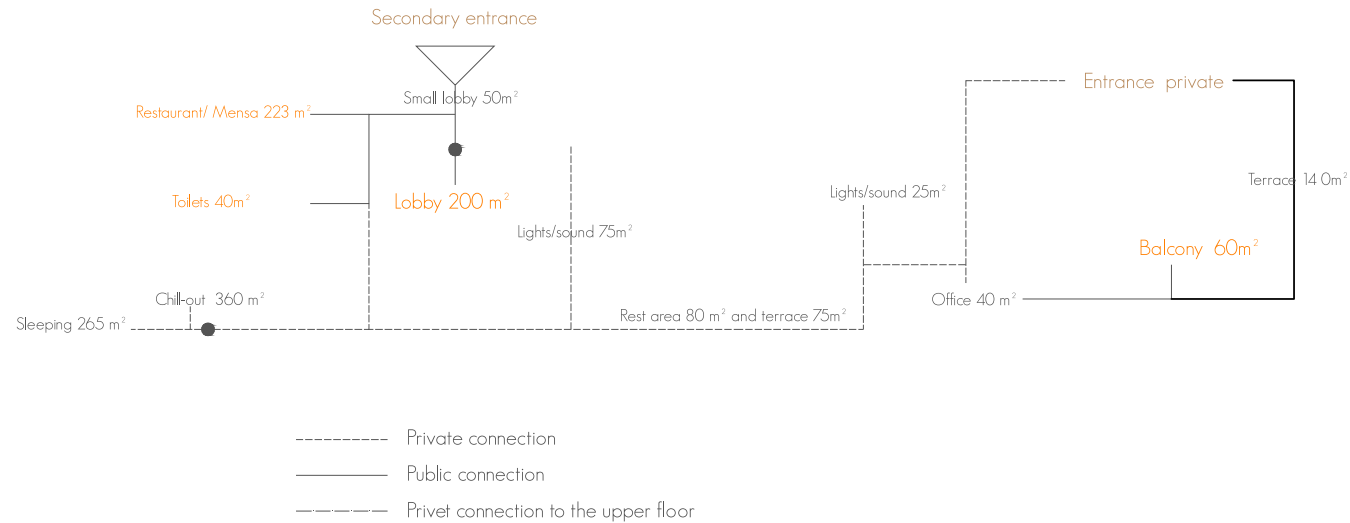
1. Restaurant area with a bar 165m<sup>2</sup>
2. Kitchen 30m<sup>2</sup>
3. Toilets 40m<sup>2</sup>
4. Connection to the lobby from the secondary entrance 8m<sup>2</sup>
5. Balcony that look down to the Lobby 20m<sup>2</sup>

263 m<sup>2</sup>

The restaurant or mensa is planned to run even when the centre is not working at night. Since it is positioned right on the river bank looking on the river and the Pancevo bridge. It is also a place for events and can be connected to the lobby for big events and celebrations. It also has a function as a mensa for the visiting groups that are staying in the centre.



First floor



4.944 m<sup>2</sup>



Design





## Site



The building site is located 500m from the main road of Visnjicki boulevard. And 25m away from the danube riverbank. Most of the building surroundings is unbuilt or as illegal houses and hangars that are planned to be moved. To the east there is the restaurant 200m away and a cardboard factory Avala-Ada 450m away from the site.

Picture 05.01 Site

## Infrastructure

Getting to the area of Ada Huja and the site by car or public transport from the city centre pic 05.02

The car infrastructure is very well built. Wide roads with two tracks each way and three in Visnjickin boulevard pic. 05.04

Visnjicki boulevard which is separating the area of ada huja from karaburma is a very busy street with many:

Grocery Stores that are mostly privet, and only 3 km away is a large supermarket Tempo.

Gastronomy in the are of Ada huja due to the existing infrastructure for sport, has a cafe/restaurant, that is located on the bank of the river, 200m away from the site. There are no bar, cafes etc because most of the land is unbuilt.

Port that is in the small harbour east of the building site mainly applied to small river boats.

Most of the needed infrastructure like schools, public facilities, commercial zones etc are all built on the other side of Visnjicki bul. and it is 500m away from the site.



Picture 05.02 Bogoslovija street



Picture 05.03 Neighbourhood of Karaburma



Picture 05.04 Visnjicki boulevard





Picture 05.05 Entrance to the site from Visnjicki boulevard



Picture 05.06 the unbuilt road to the site



Picture 05.07 Surrounding on the west of the site



Picture 05.08 Existing river bank west



Picture 05.09 Existing river bank east

The entrance to the site is still very unapproachable, it is not a public entrance but only for the load bearing trucks that go to the sand storage on the east. pic 05.05

The road is unbuilt and is not yet defined pic 05.06

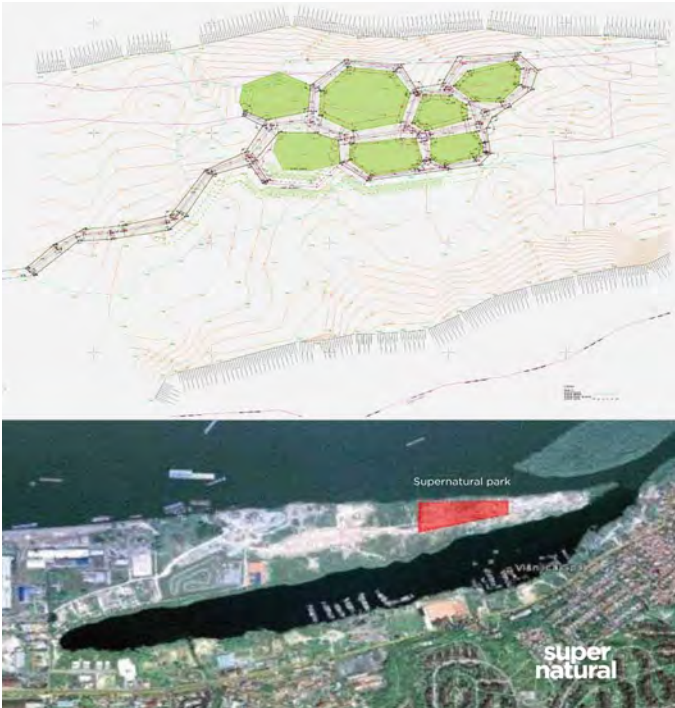
The existing riverbank is only built in the part where the restaurant is pic 05.08 from there till the bridge it is very unfortunate.



The Supernatural movement started in 2007, earth day 22. April. Through out the years many architects were involved in reconstructing this part of ada huja. Themes like green architecture, national competition for eco pavilion, edouard francois in 2010, green community, organic market, education 2011 etc.

The tip of the newly formed peninsula served as an illegal depot for industrial rubble, thus, completely devastating the one rich vegetation of Ada hujia,pic 05.10

With architects and experts in forest, geology, landscape and biology 500 cubic meters of quality soil was planed for plants and trees. 350 cubic metres gravel for pathways, 100 for sand, to trees were planted. pic 05.12, 05.13



Picture 05.12 placement of the park



Picture 05.10 Degradation



Picture 05.11 improvement of the site



Picture 05.13 vision of the park

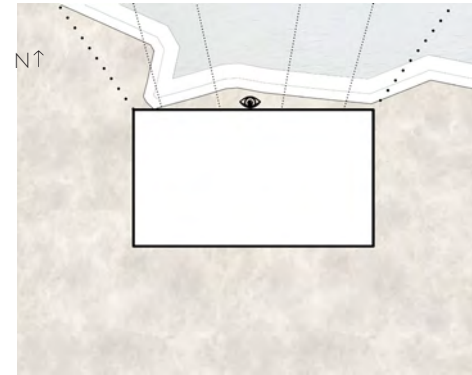


## Positioning



Picture 05.14 site

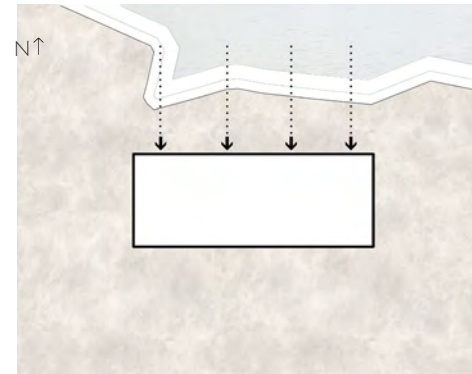
Site  
Rive front



Picture 05.15 view

View

Orienting the longer side towards the river



Picture 05.16 void

Public space

Creating public space in front of the building pushing it away from the river bank. And in the same time creating enough void to secure peace and quite.

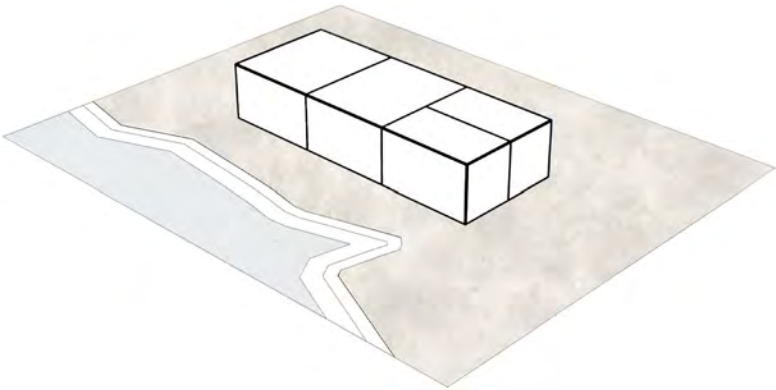


Picture 05.17 function

Function definition

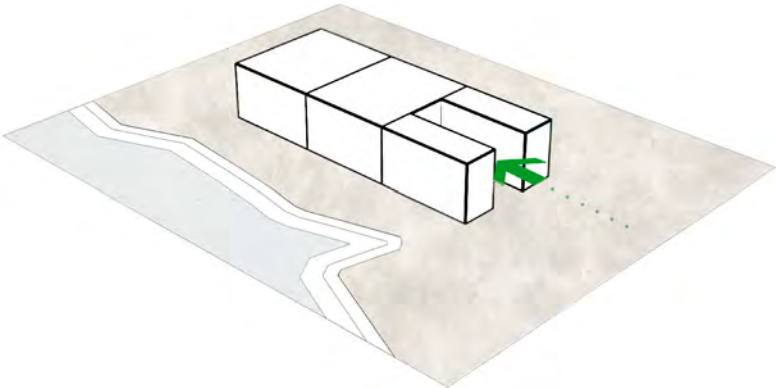
Most ideal positioning of the functions in the object for communication.

Volume



Volume

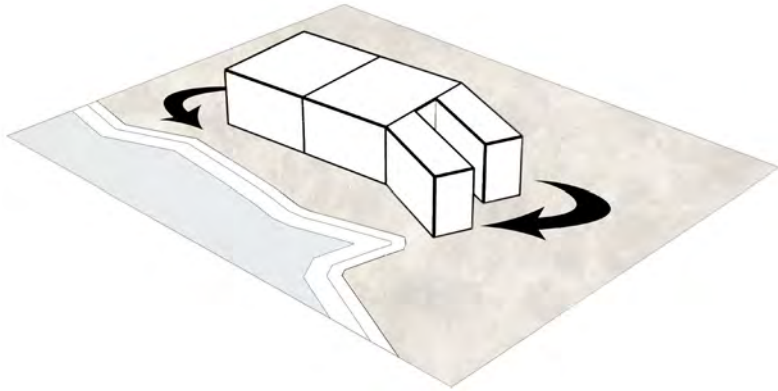
Picture 05.18 volume



Volume split

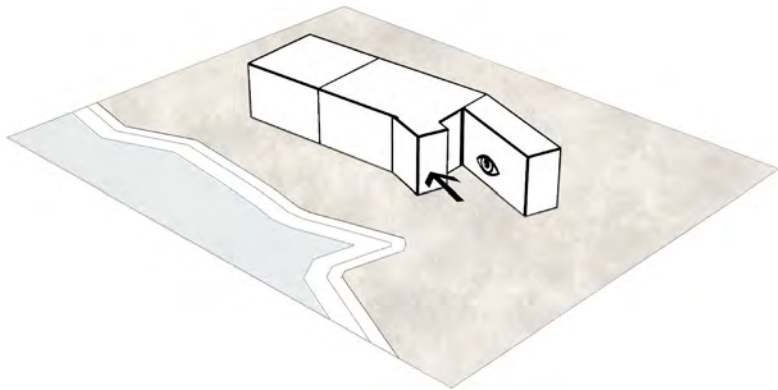
Picture 05.19 split

Bringing in the green as well as creating more sun accessibility for the sleeping area



Orientation

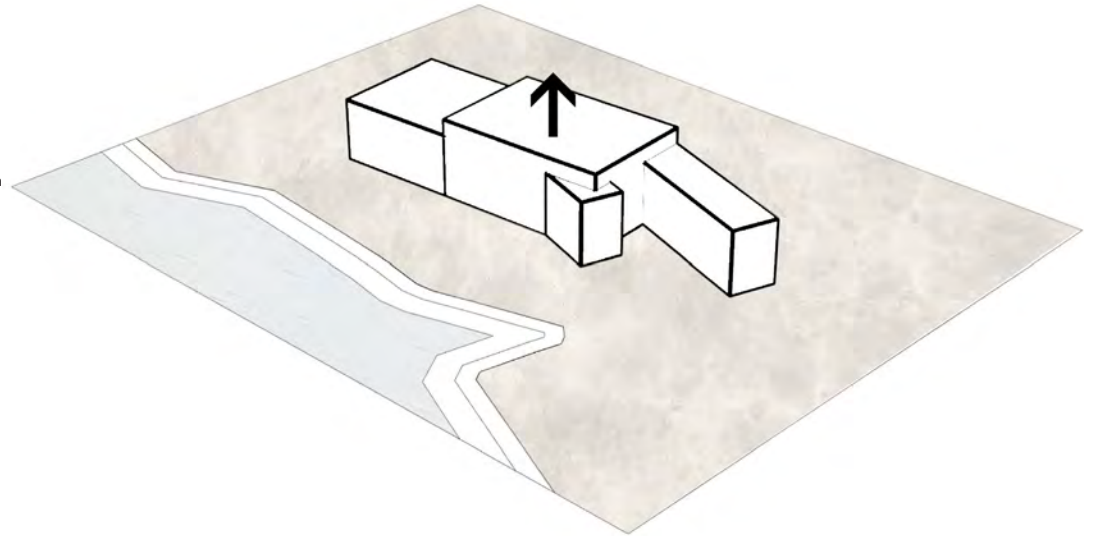
Rotating the ends towards the river



Re-sizing the volume

By the given room program and sizes the volume gets smaller, and the front part of the building is shorter so that the back end can have a better view of the riverfront.

Picture 05.20 orientation



Re-sizing the height

The needed heights for each function changes the high volume of the object

Picture 05.22 height

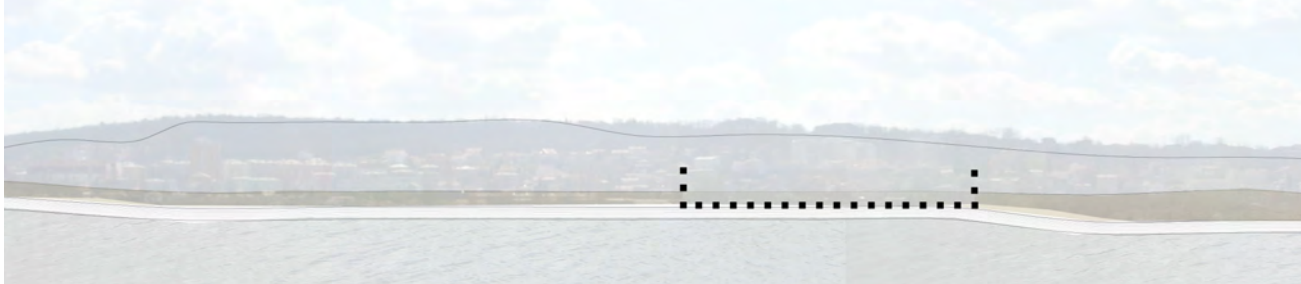
## Shaping

View of Ada Huja from the river



Picture 05.23 Ada huja from the river





Picture 05.24 merging with the surrounding

Site is located close to the riverbank

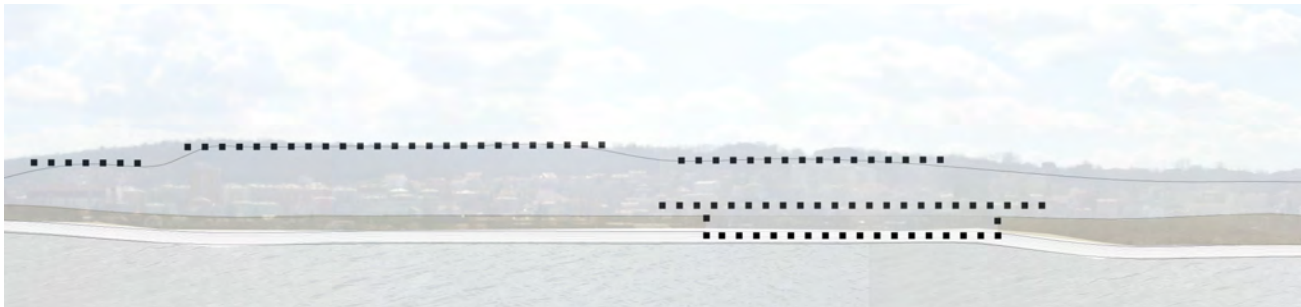
Since Ada Huga is very delevelled, placing the object directly on the riverbank, the height would have attacked the peaceful nature. Therefore the object is incorporated into the ground. Giving a more settled appearance and instead of attacking the riverbank it merges with the natural surroundings.

The hill behind is located 600m from the riverside is 218m high  
When looked from Danube, house roofs blur into straight lines

The hill itself has a blunt tip and its lower parts are as well only slightly curved



Picture 05.25 hill lines

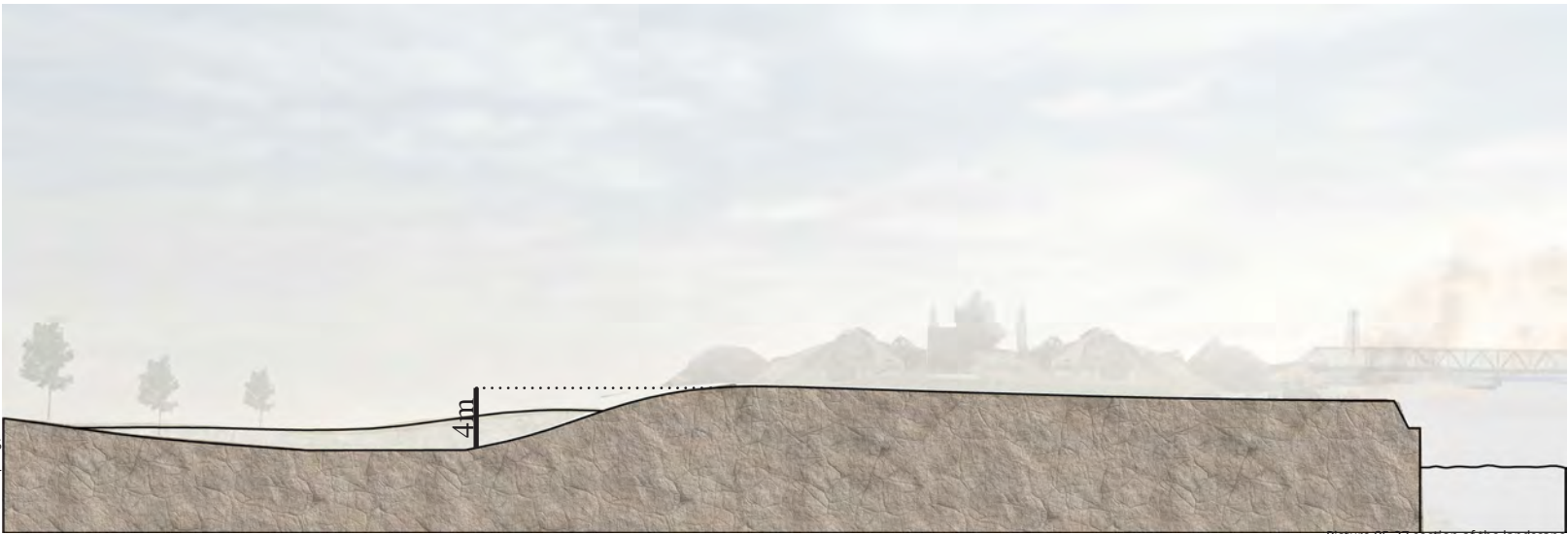


Picture 05.26 following the lines

Lines of the roof smoothly follow the lines of the house roofs in the distance and blur into the landscape.

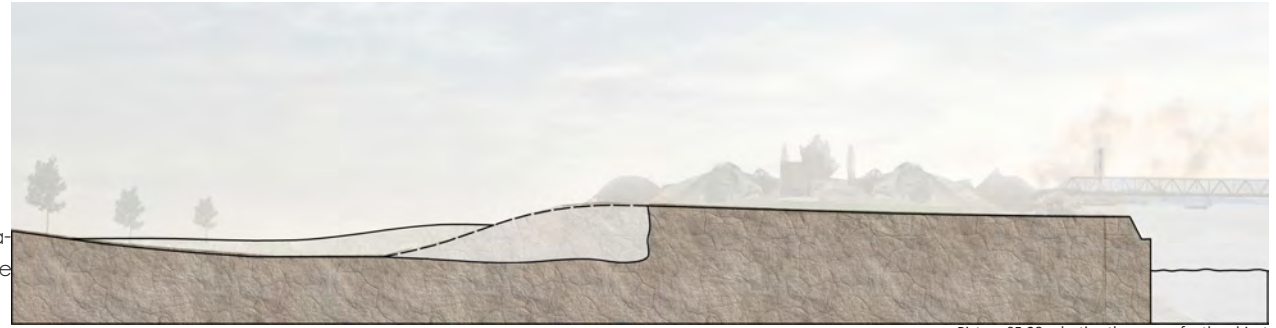
Tucking in to the hill

Section of the building site. The building site is a very leveled landscape. The highest height difference is 4m.



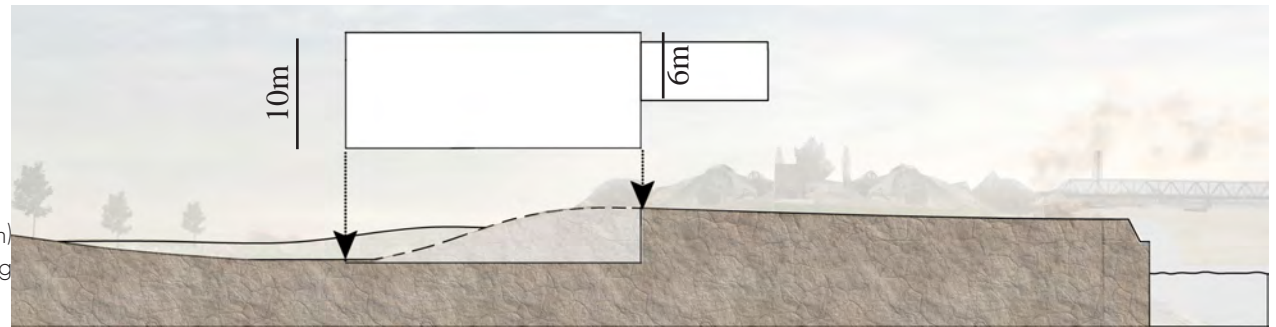
Picture 05.27 section of the landscape

Digging in to the ground, the object is not only better isolated, since the shorter facade is facing North (the river bank), but also the building itself does not attack the environment in which it is placed.



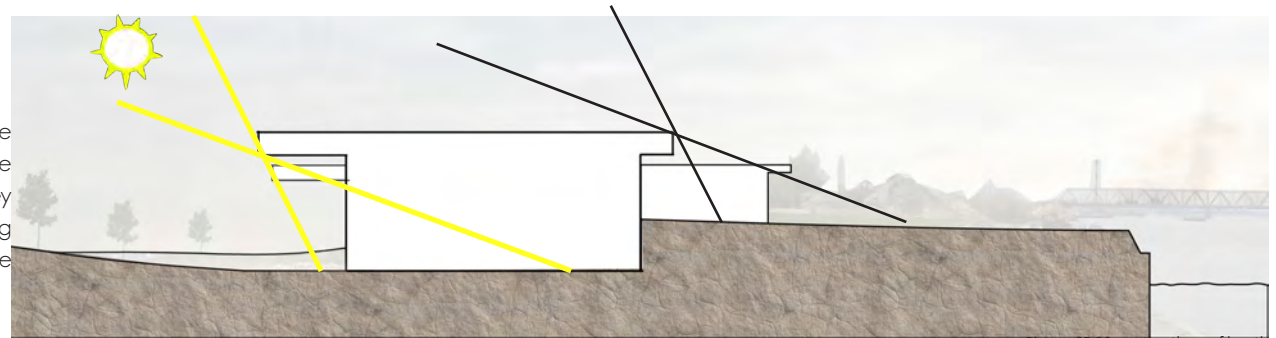
Picture 05.28 selecting the spaces for the object

Placing the building into the landscape, decreases the building actual height (10m). From the river side it goes up to only 6m and from the main entrance that is facing South and Visnjicki boulevard is 10m so that it emphasise the main entrance.



Picture 05.29 placing the object

When tucked into the hill, roof of the building, the canopy is becoming longer because of the direct sun rays (winter 20 degrees and summer 67,9 degrees). So that in the summer there is no direct sunray hitting the inside of the building and in winter they go pretty far into the building which is good for the heating. There for the glazing windows can be double -paned insulated glass. To the North and the river bank the roof is shorter so that the sun rays dont create to big of a shadow



Picture 05.30 creating the roof length



Planes

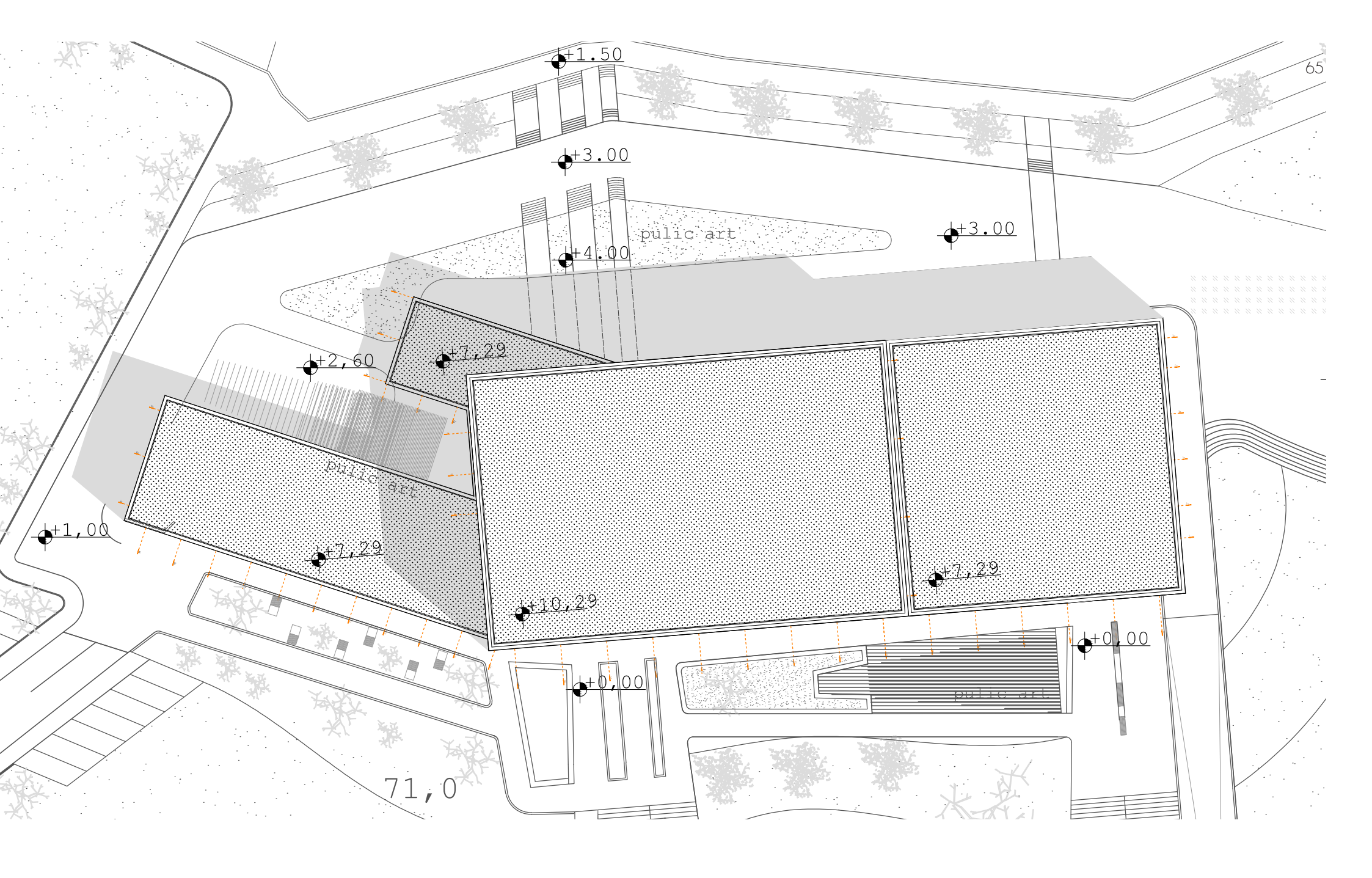
Situation

S 1:500

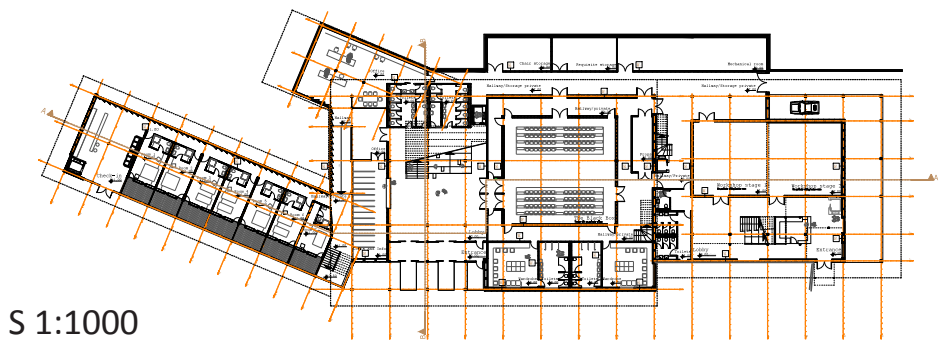
Picture 06.01 situation





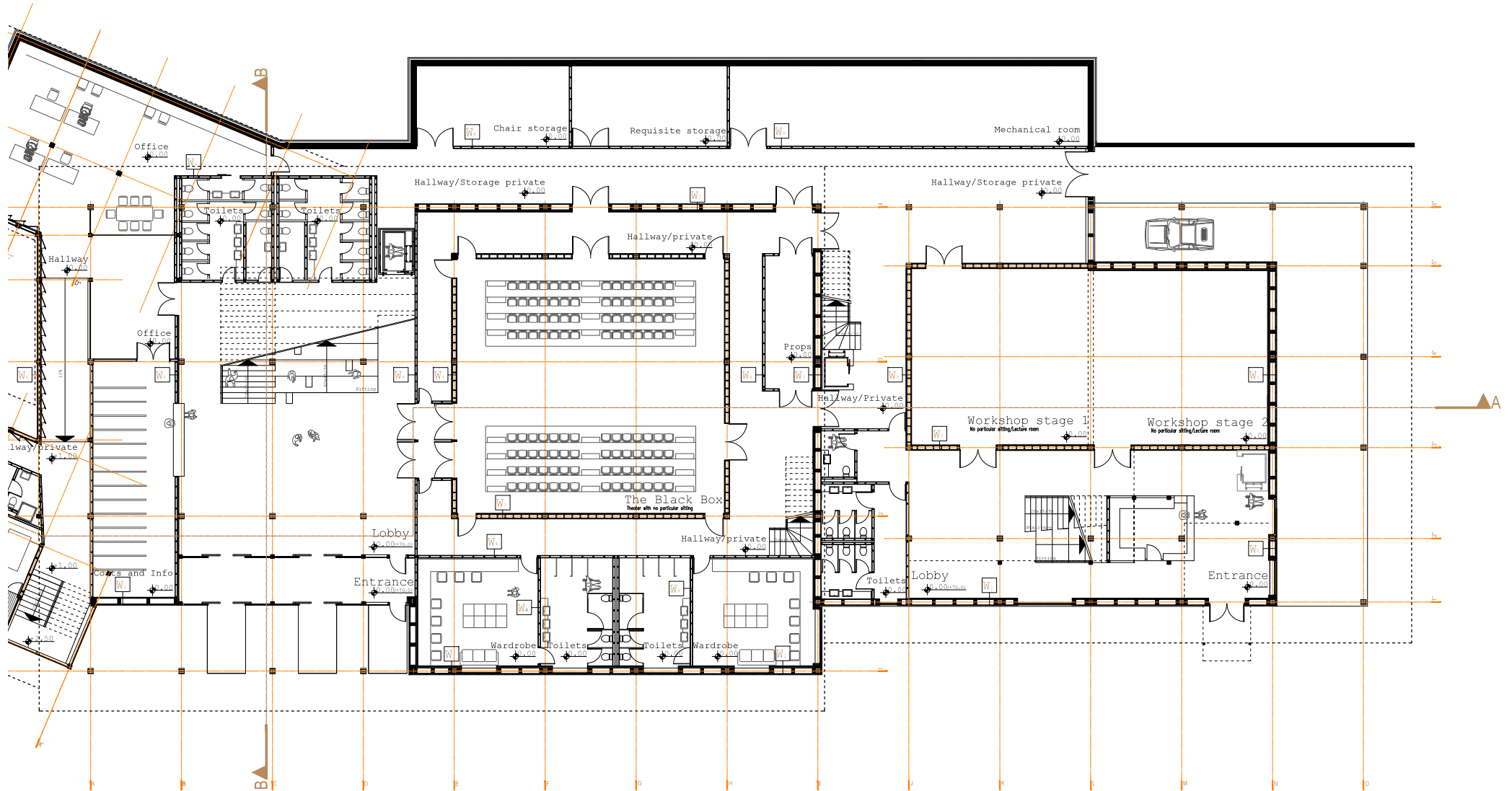


Ground floor 0.00 and +1.00



S 1:300

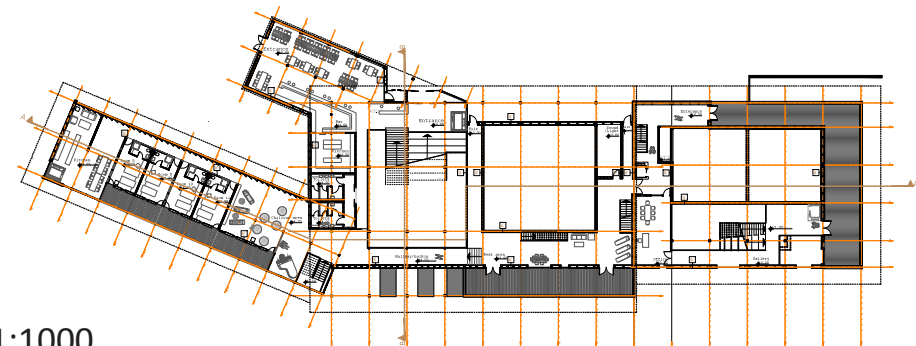




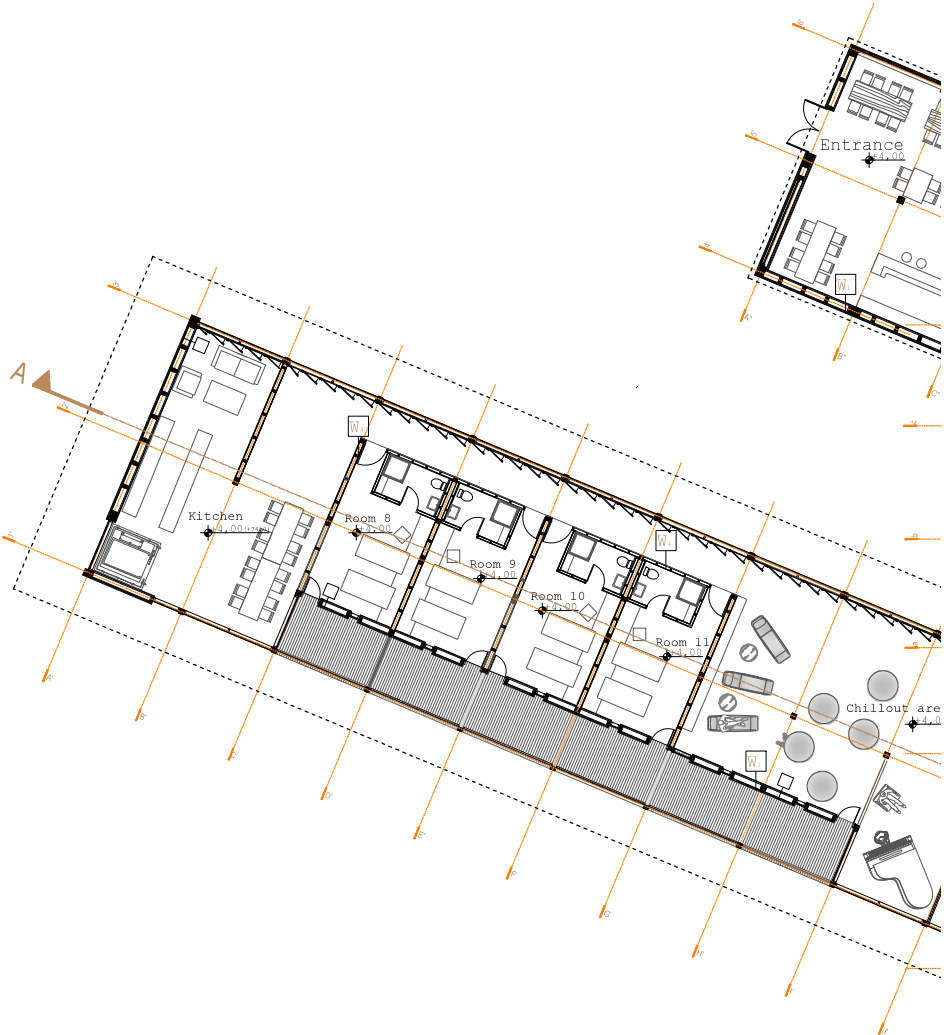
Picture 06.02 Ground floor

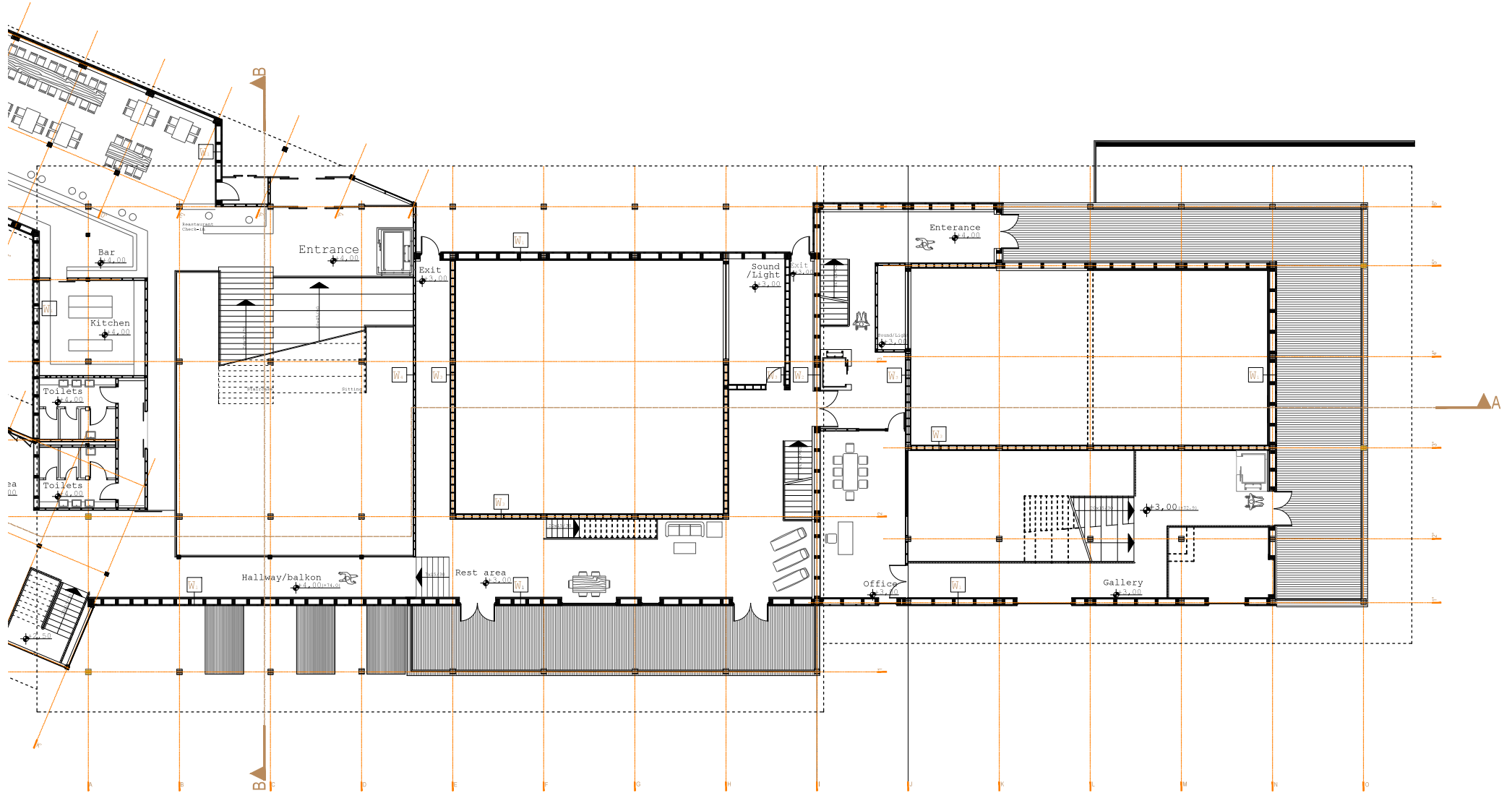
First floor +4.00 and +3.00

S 1:1000



S 1:300

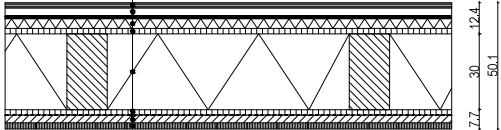




Picture 06.03 First floor

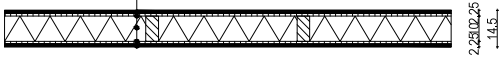
W<sub>1</sub>

- 21mm timber cladding
- 30mm installations space
- 13mm plasterboard
- 38mm mineral-wool thermal insulation between 40mm battens
- 22mm oriented-stand board
- 160/300mm studs
- 22mm oriented-stand board
- 80/30 battens, pressure-treated ;moisture-deffusing facade membr. rockwool insulation between
- 120/25mm softwood/fir boarding rough-sawn, screws visible ventilated cavity between



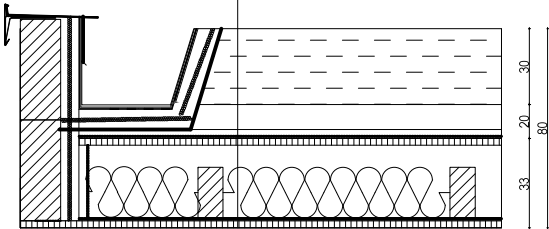
W<sub>4</sub>

- 12,5mm plaster cardboard
- 10mm oriented-stand board
- 50/100mm studs
- mineral wool between
- 10mm oriented-stand board
- 12,5mm plaster cardboard



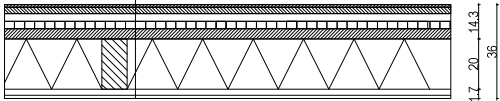
R

- extensive green roof 300mm
- drainage layer 100mm
- protective mat two-layer bituminous seal
- expanded polystyrene 120-350mm
- vapour barrier
- oriented strand board 27mm
- in between insulation moisture barrier, casing 2x50/300mm
- oriented strand board 27mm
- joist 200x100mm



C

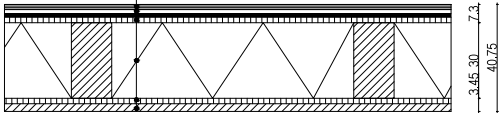
- wooden parquet 10mm
- plywood 25 mm
- mineral fiber plate 30 mm
- wooden slabs 4x3x3 cm
- felt
- plywood 38 mm
- joist 100/200 mm
- mineral wool 200 mm
- gypsum wallboard 17 mm





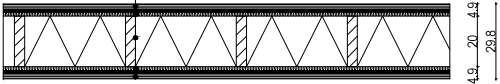
W<sub>2</sub>

- 21mm timber cladding
- 17mm installations space
- 13mm plasterboard
- 22mm oriented-stand board
- 160/300mm studs
- rockwool insulation between
- 22mm oriented-stand board
- 12,5mm plaster cardboard



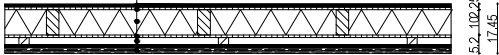
W<sub>3</sub>

- 21mm timber cladding
- 15mm oriented-stand board
- 13mm resilient channel
- 40/200mm studs
- mineral wool between
- 13mm plasterboard
- 21mm timber cladding



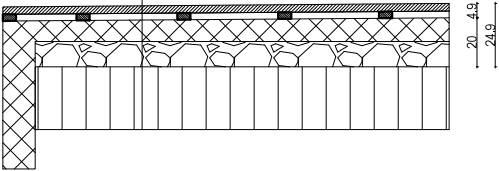
W<sub>5</sub>

- 12,5mm plaster cardboard
- 10mm oriented-stand board
- 50/100mm studs
- mineral wool between
- 10mm oriented-stand board
- 28/40mm battens
- 13mm plasterboard
- 21mm reed



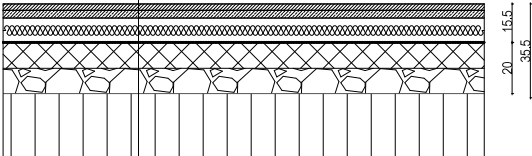
F<sub>1</sub>

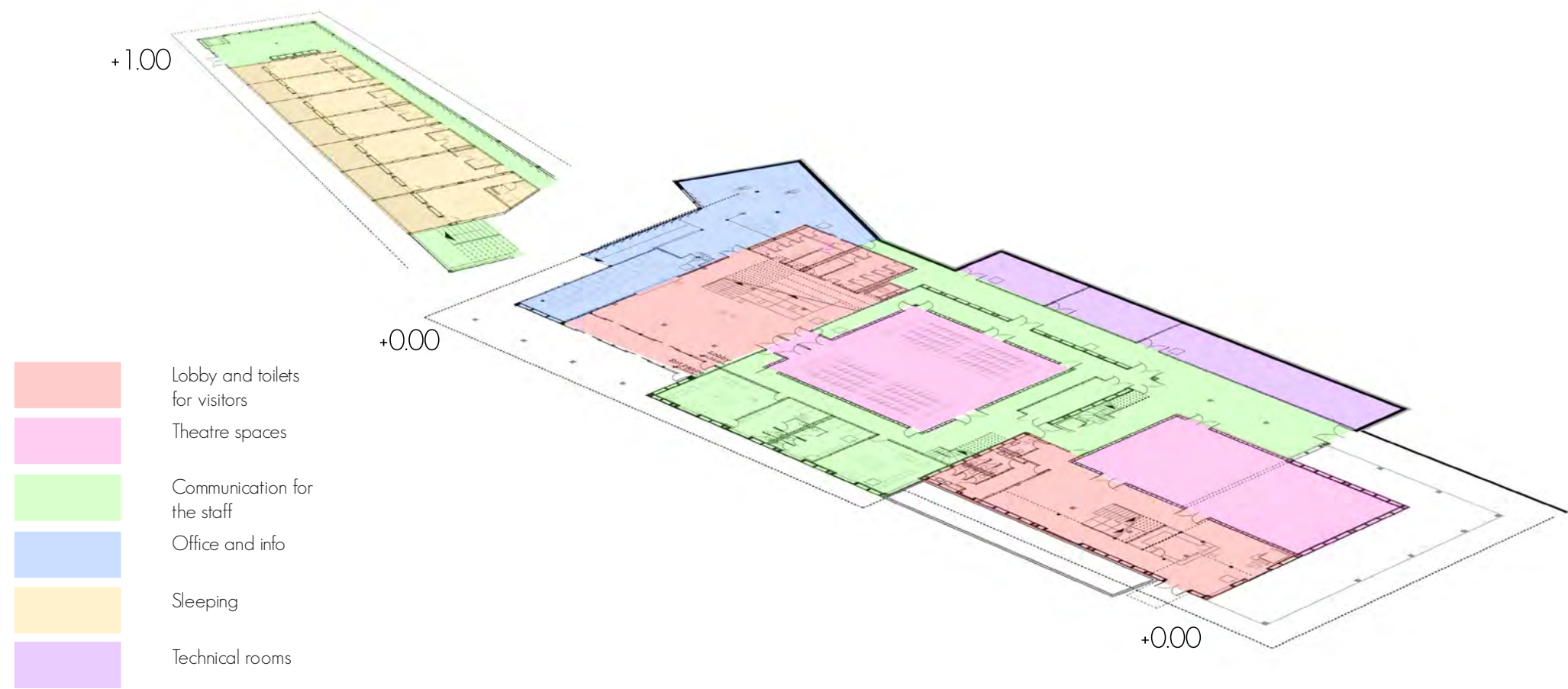
- wooden boarding 2,5 cm
- joists 2,4/4,8
- Concrete slab 10 cm
- gravel 10 cm
- metalled ground



F<sub>2</sub>

- wooden parquet 2,5 cm
- cement screed 3 cm
- isolation 10 cm
- waterproofing
- Concrete slab 10 cm
- gravel 10 cm
- metalled ground

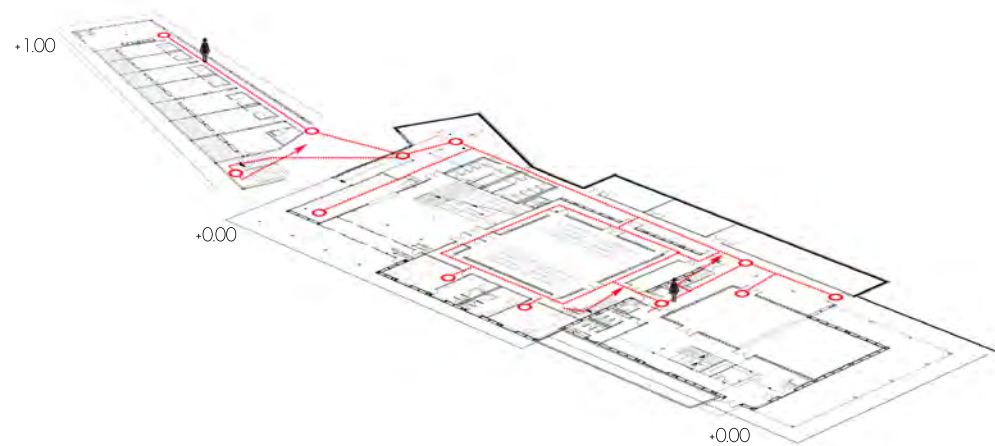




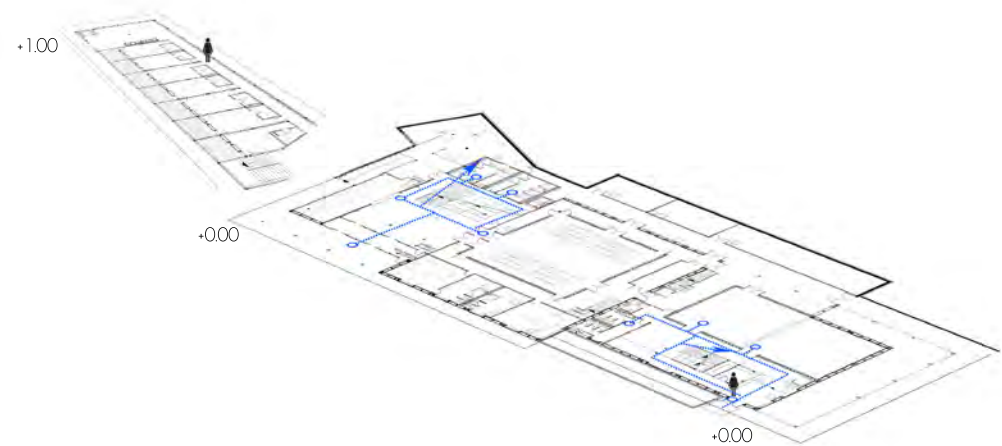
Picture 06.04 Ground floor function



Picture 06.05 First floor function

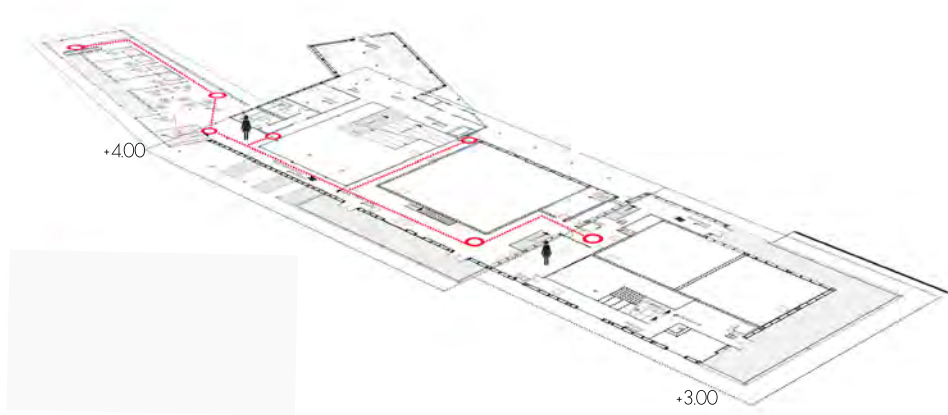


Communication on the first floor only for the staff and the participants of workshops, as well as the visiting groups.

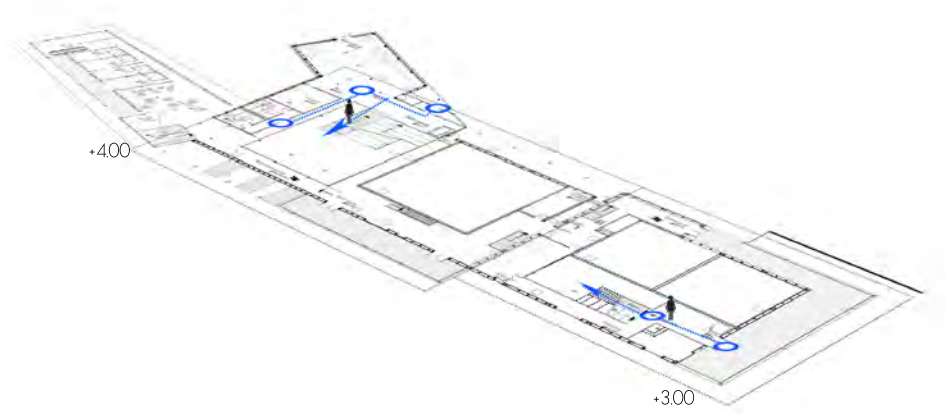


Communication on the first floor for visitors and users of the theatre, library, info desk and lobby.

Picture 06.06 Ground floor connection



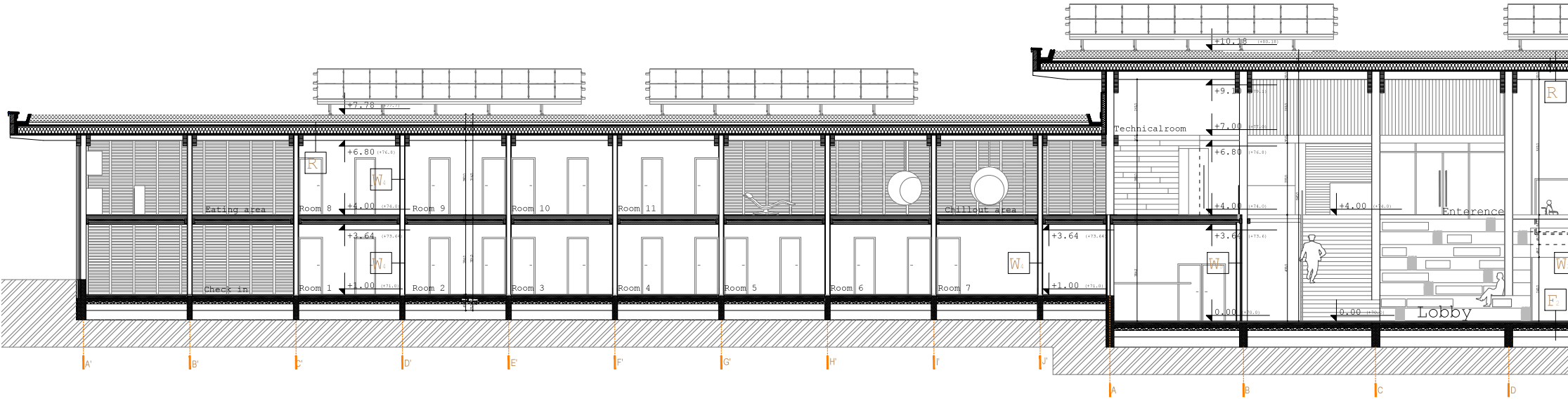
Communication on the second floor only for the staff and the participants of workshops, as well as the visiting groups.

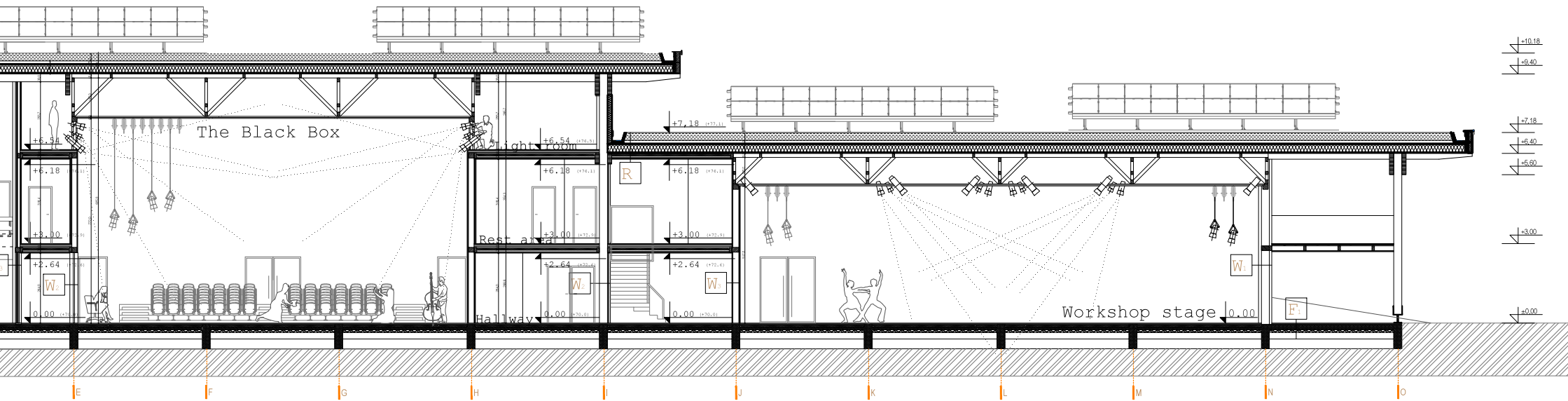


Communication on the second floor for visitors and users of the theatre, library, info desk, lobby and restaurant



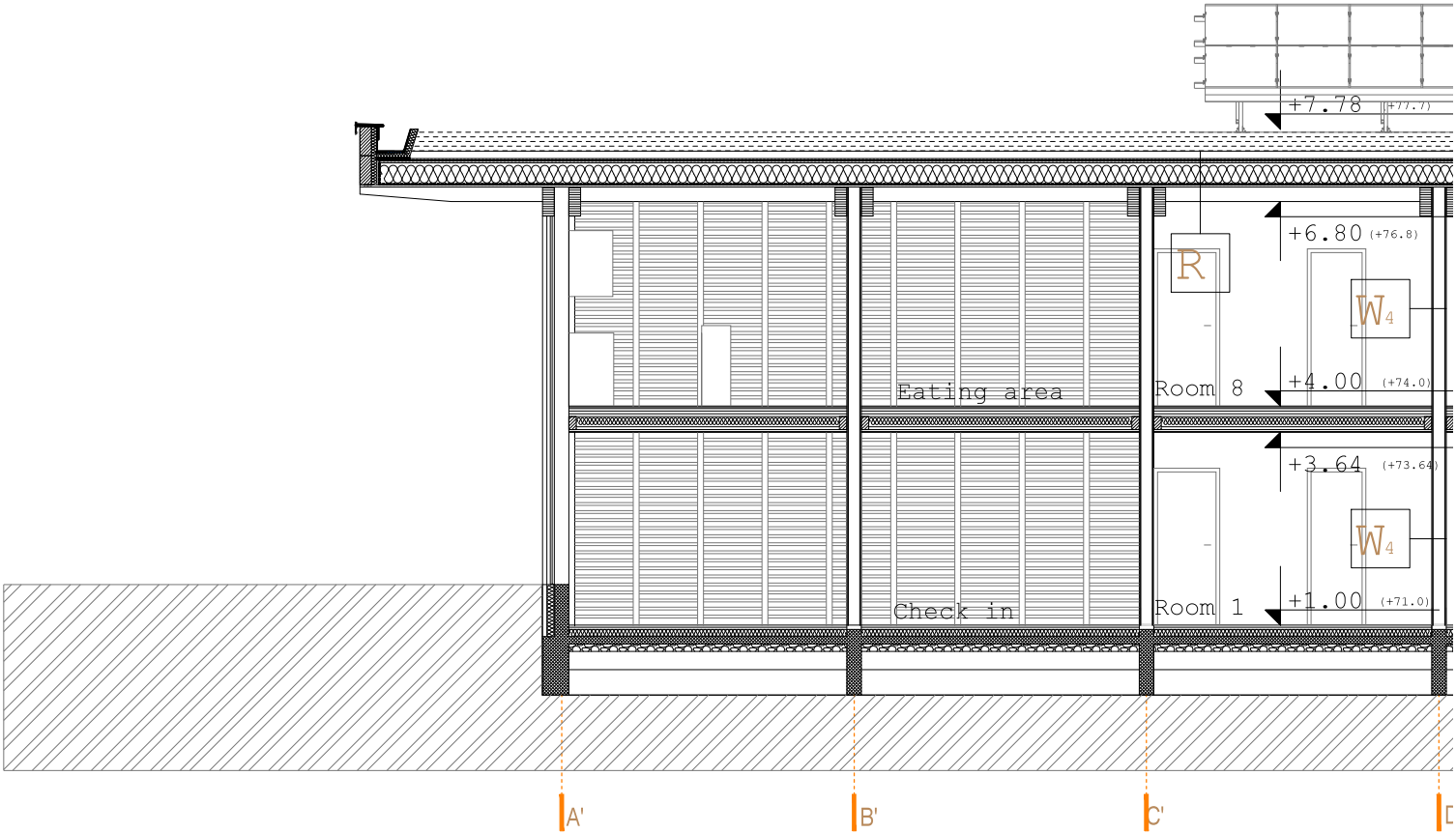
Section A-A



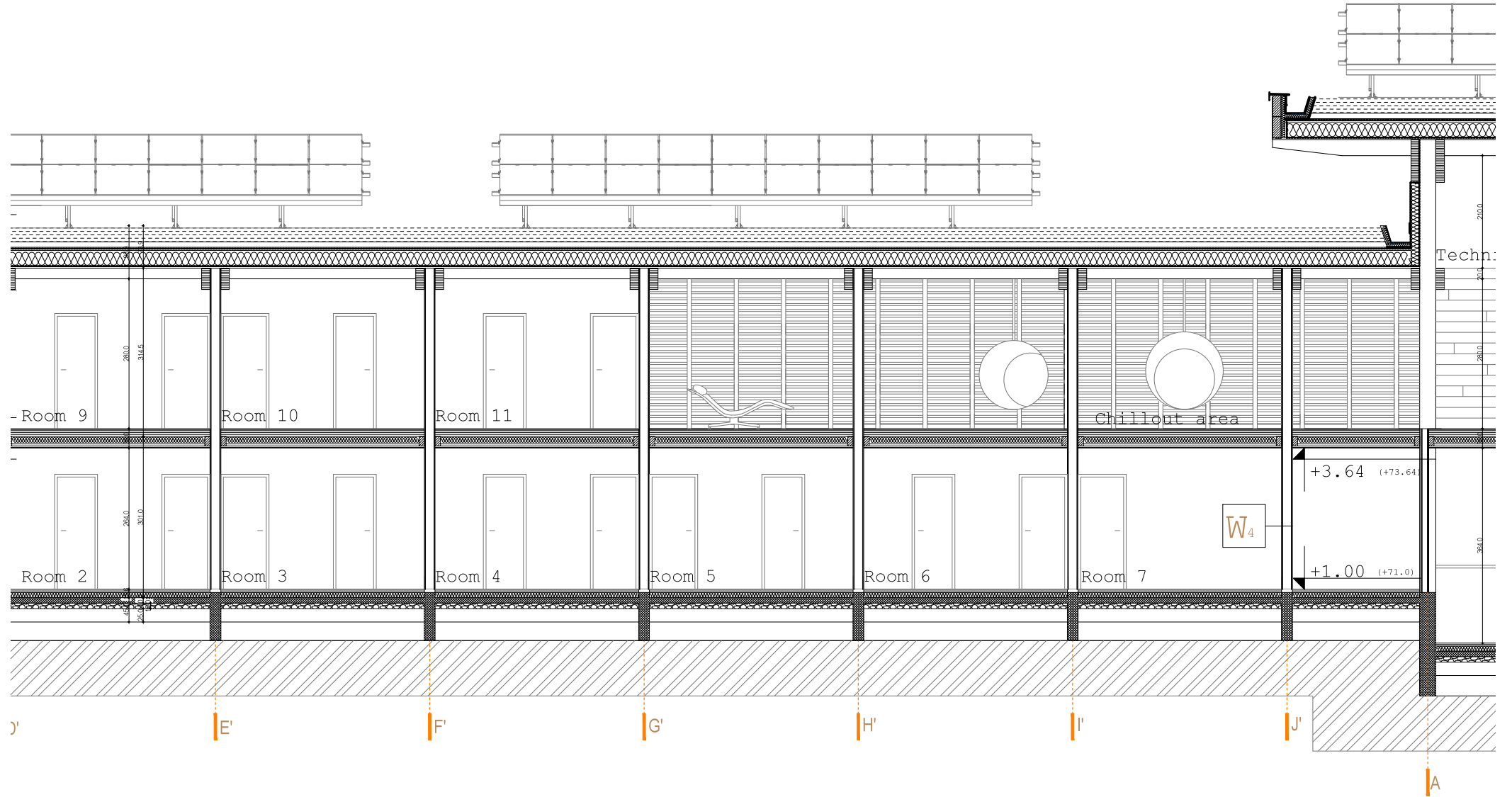


Picture 06.08 -06.11 Section AA

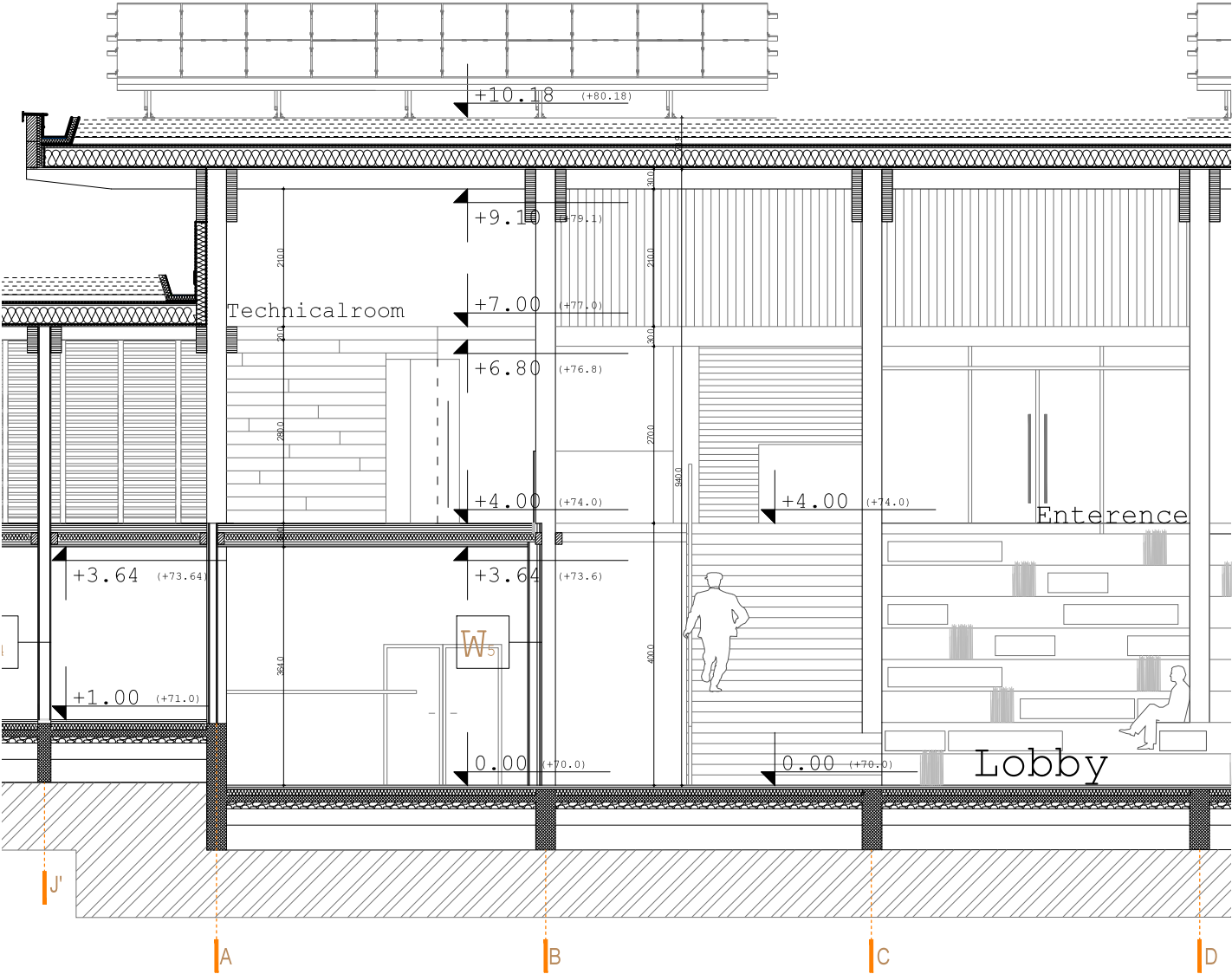
Section A-A sleeping area



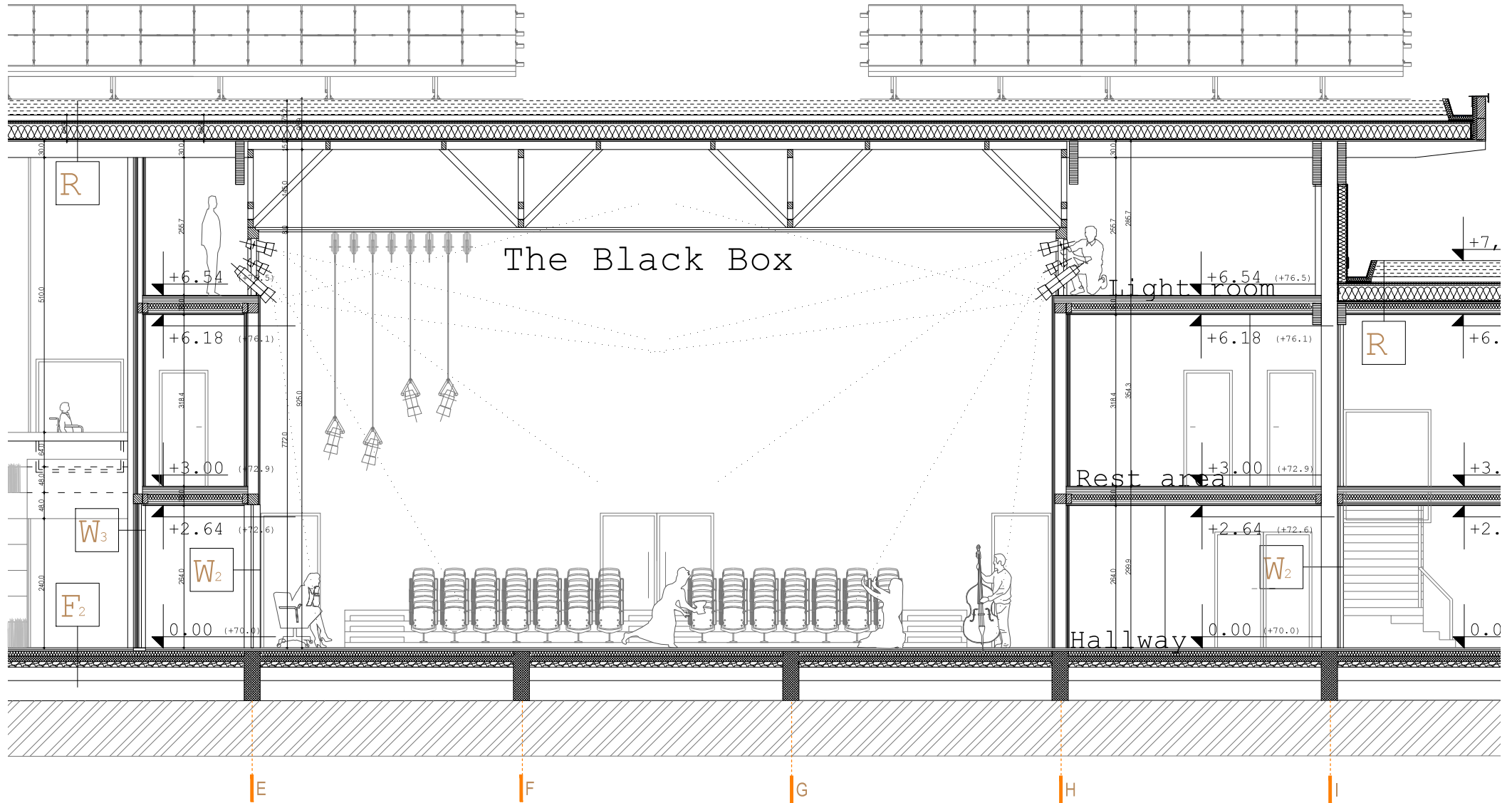
S 1:100



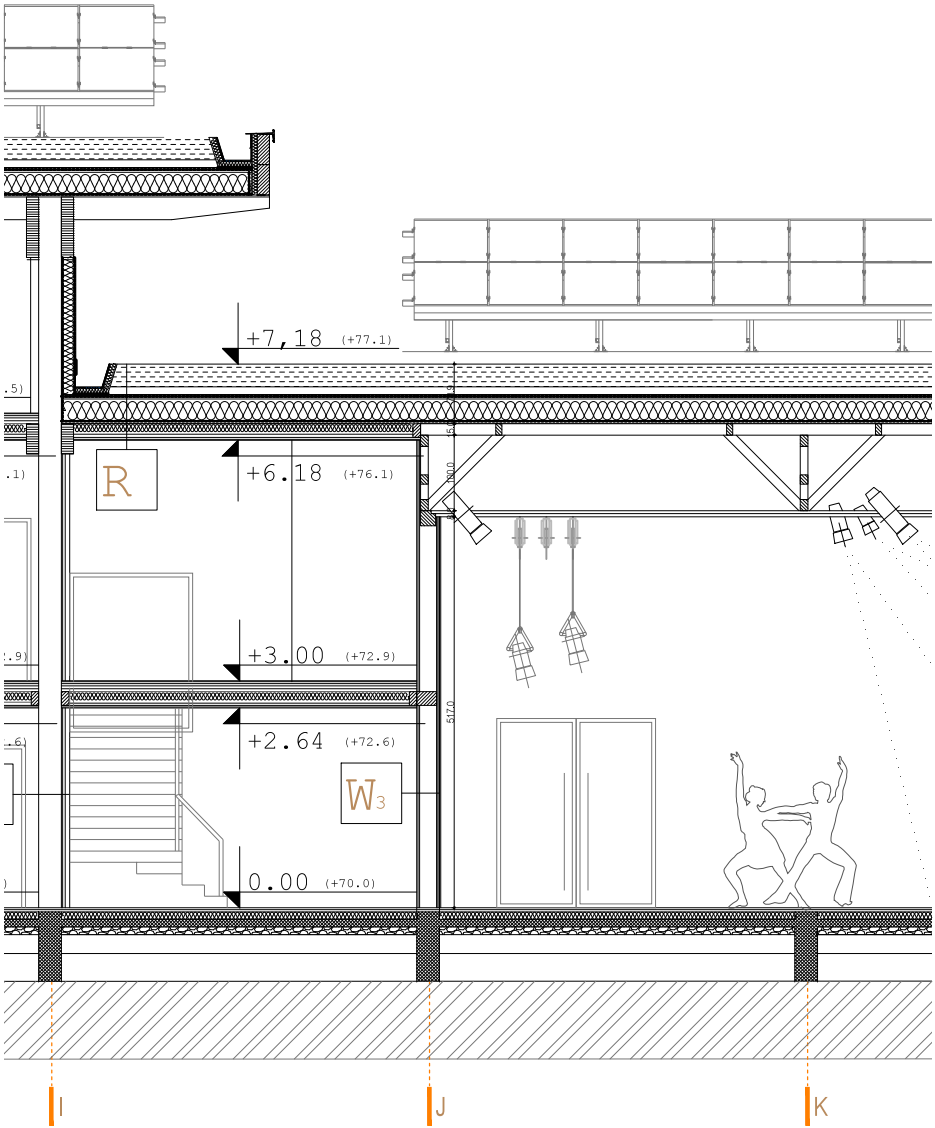
Section A-A Lobby and Black box



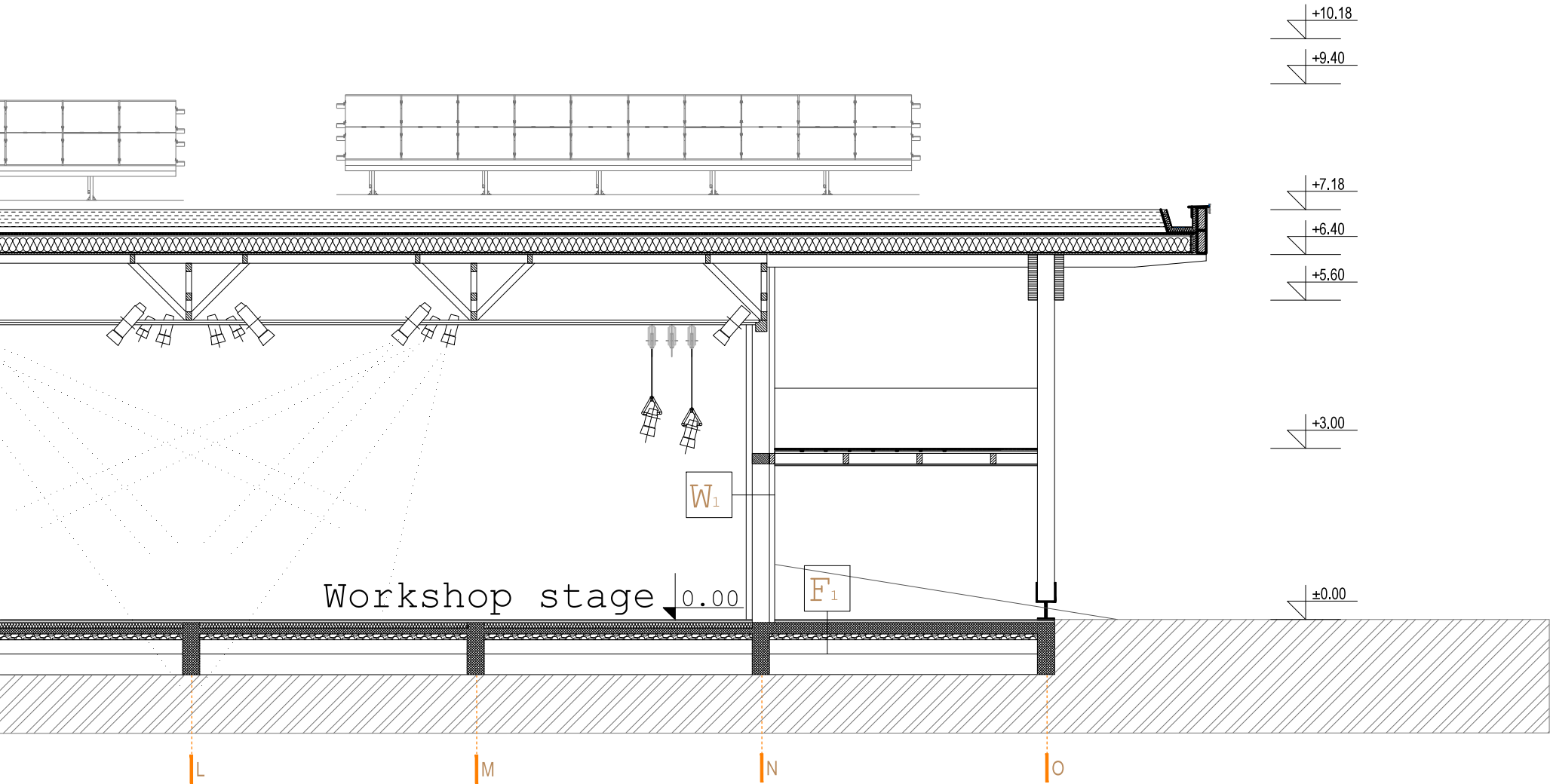




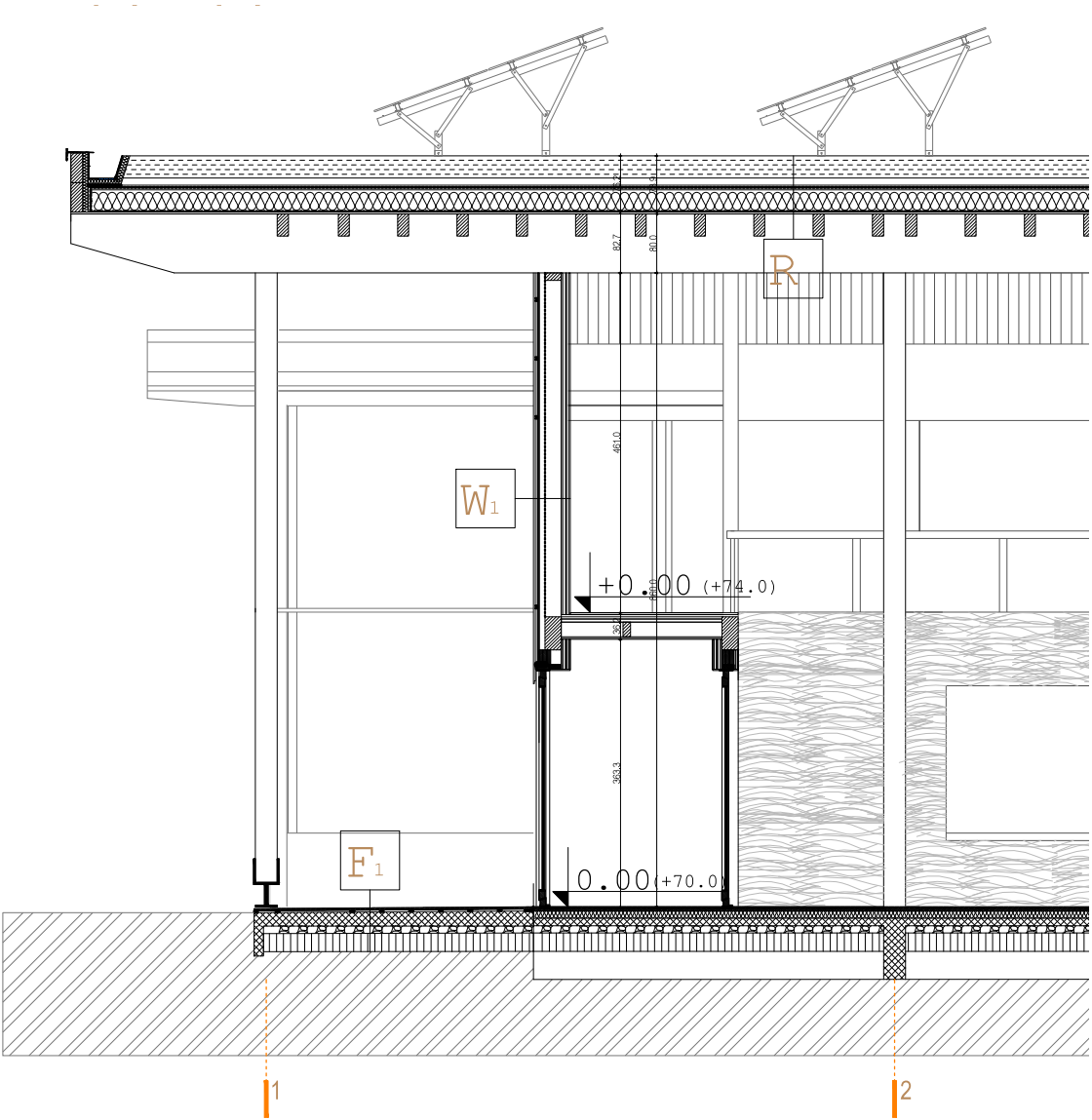
Section A-A Workshop stage



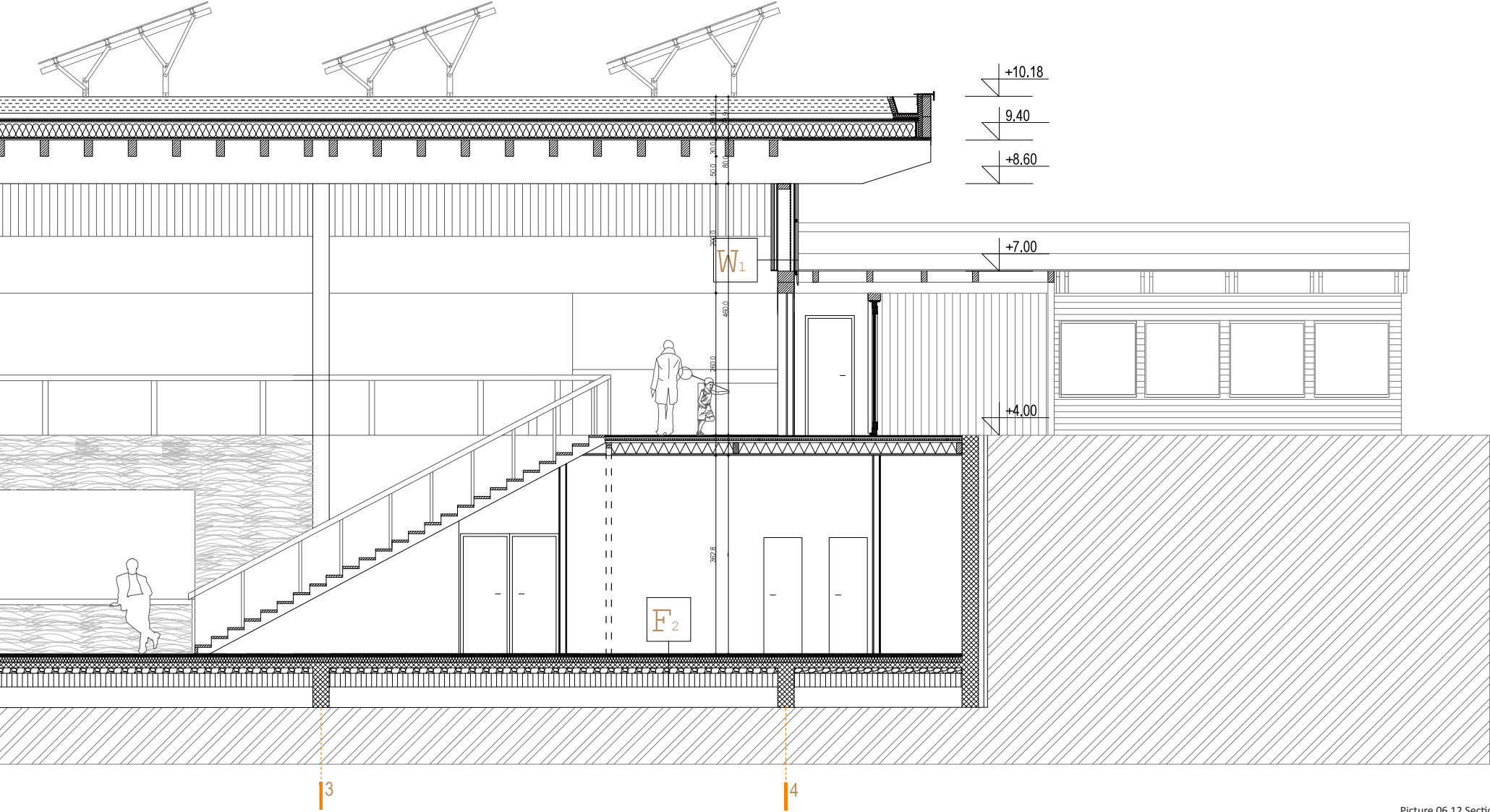
S 1:100



Section B-B Lobby and both entrances



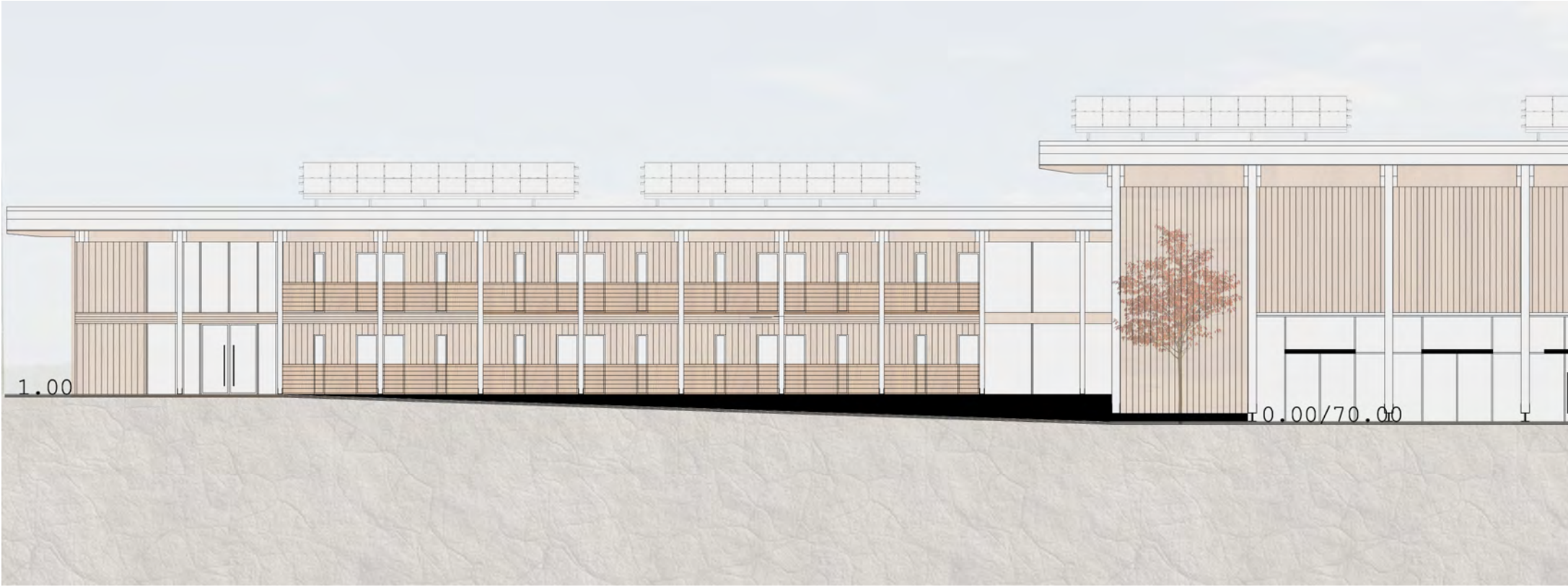
S 1:100



Picture 06.12 Section BB



South view



S 1:200



Picture 06.13 South view

North view





Picture 06.14 North view



East view



S 1:200

Picture 06.15 East view



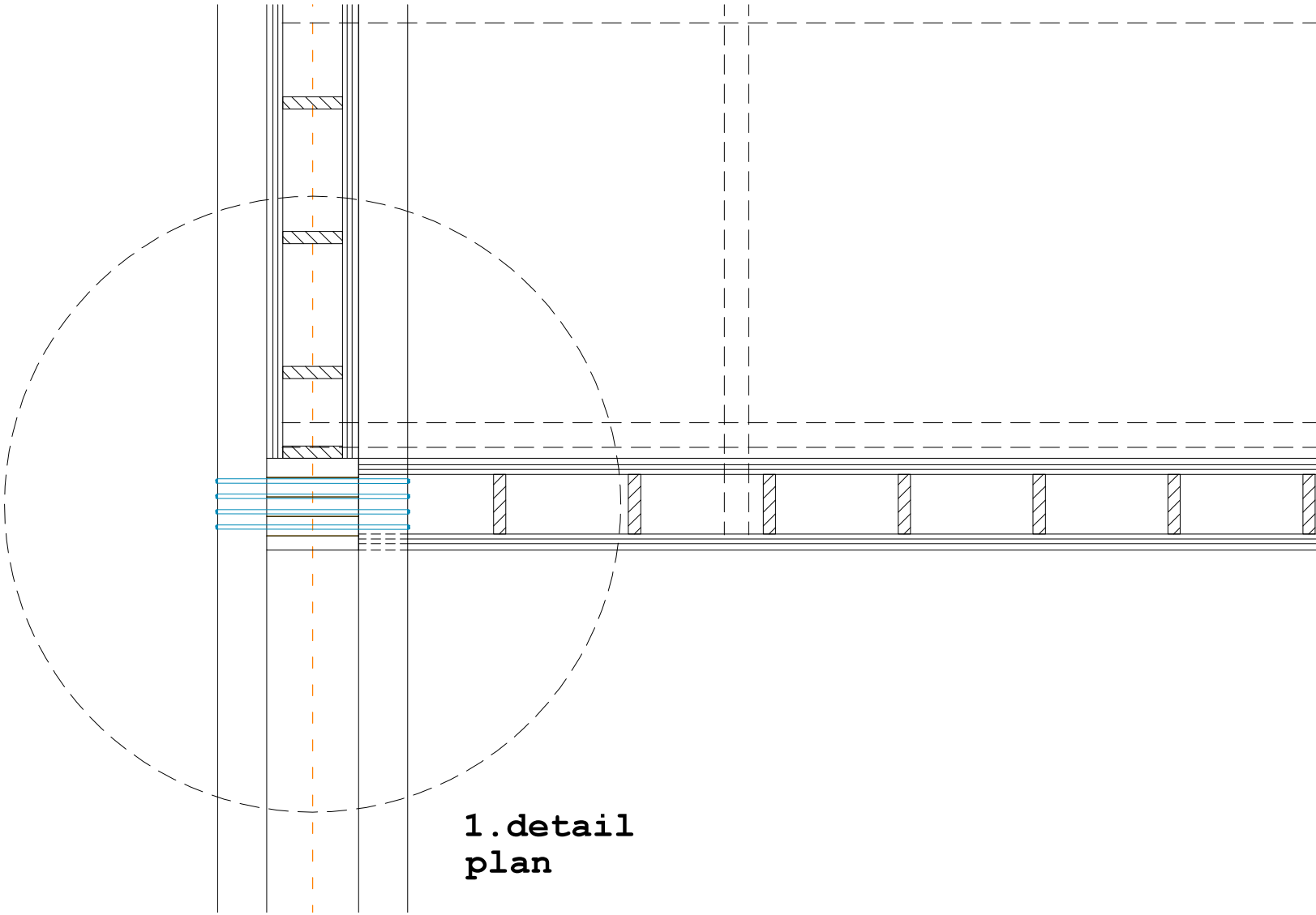
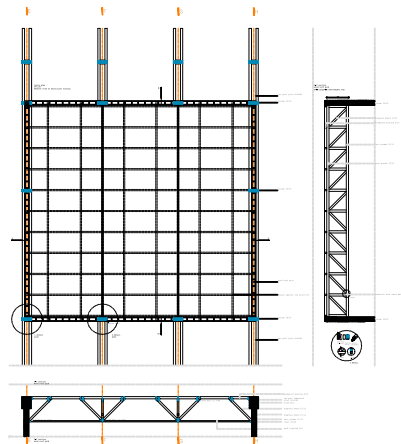
West view

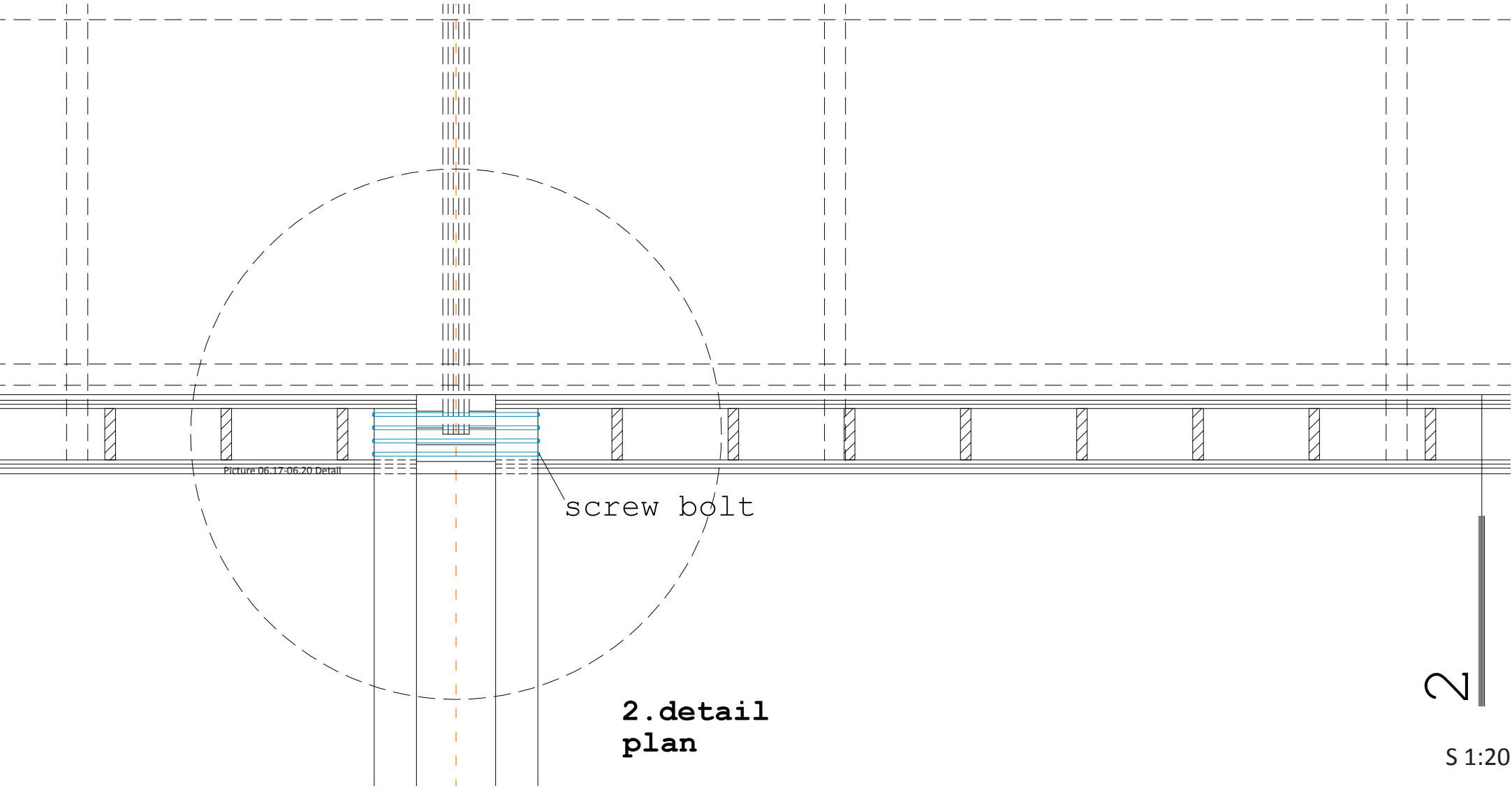


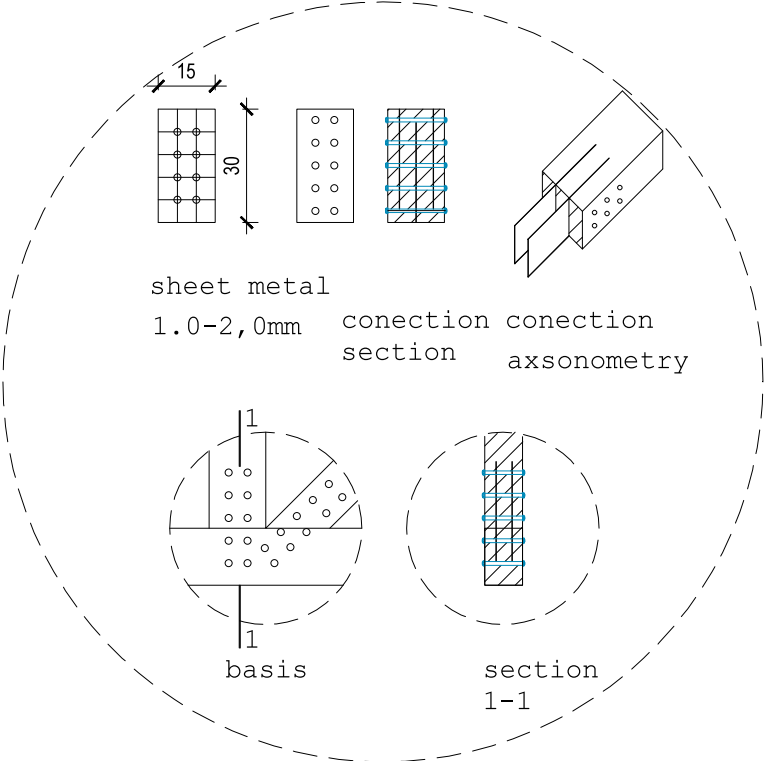
Picture 06.16 West view

S 1:200

Detail







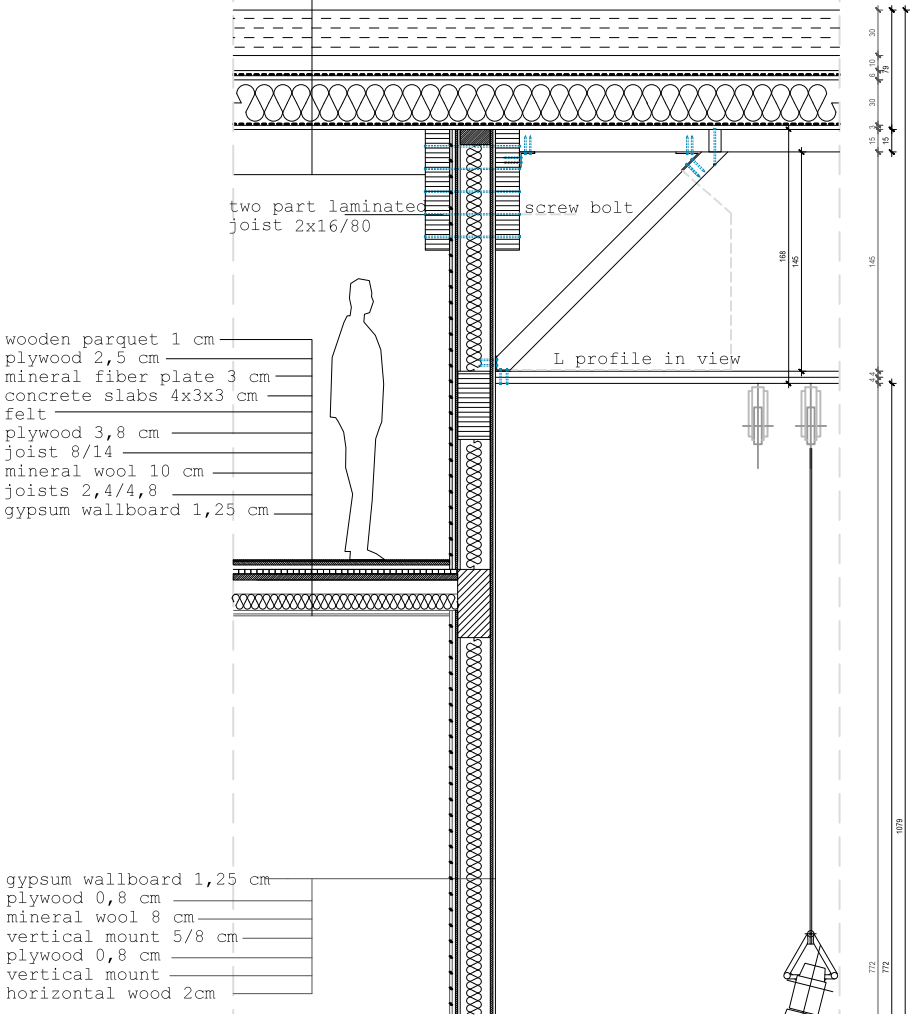
3.detail

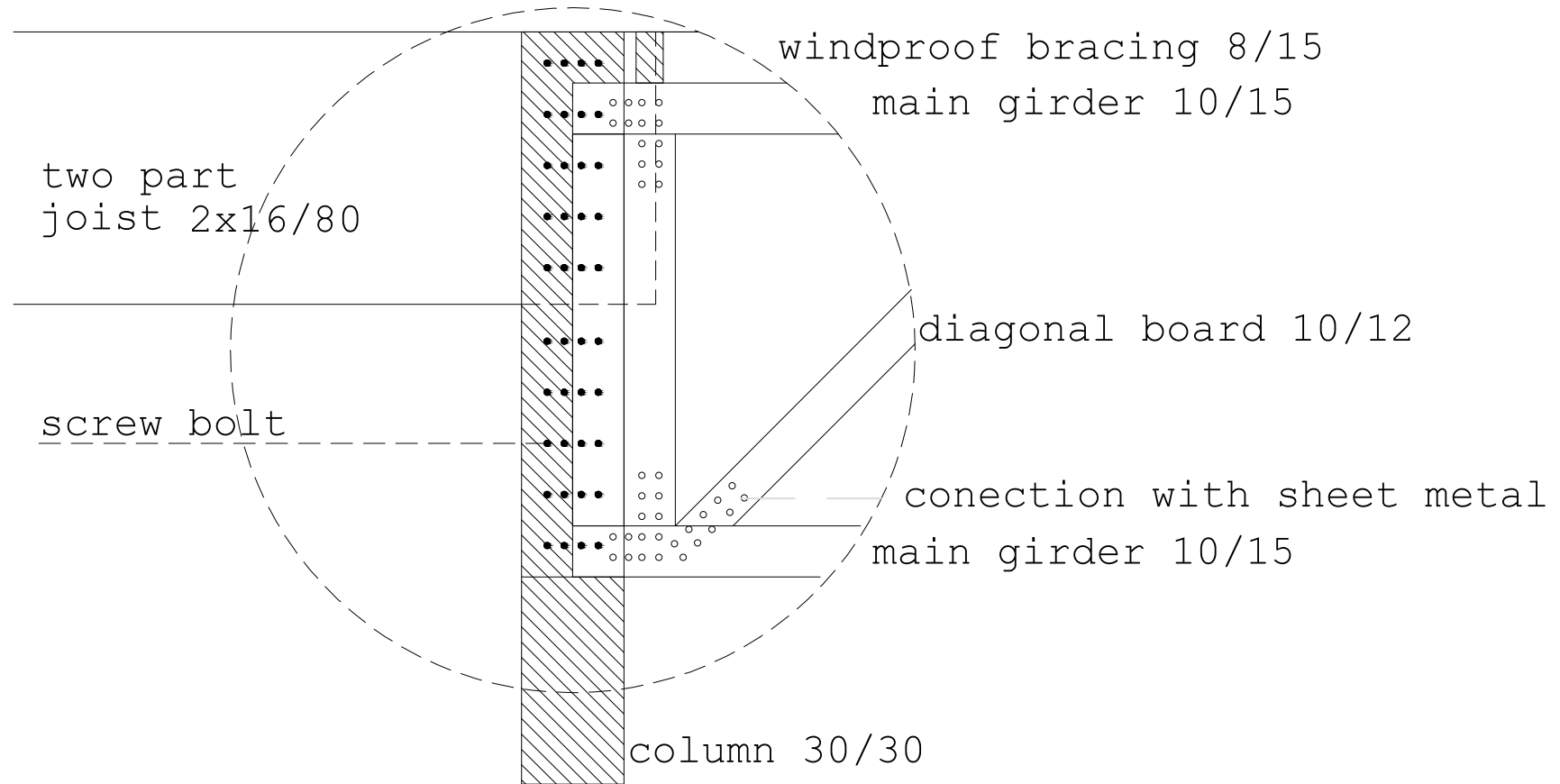
S 1:20

- extensive green roof 300mm
- drainage layer 100mm
- protective mat two-layer bituminous seal
- expanded polystyrene 120-350mm
- vapour barriere
- oriented strand bord 27mm
- in betwin insolation
- moisture brarriere, casing 2x50/300mm
- oriented strand bord 27mm
- joist 300x150mm

E

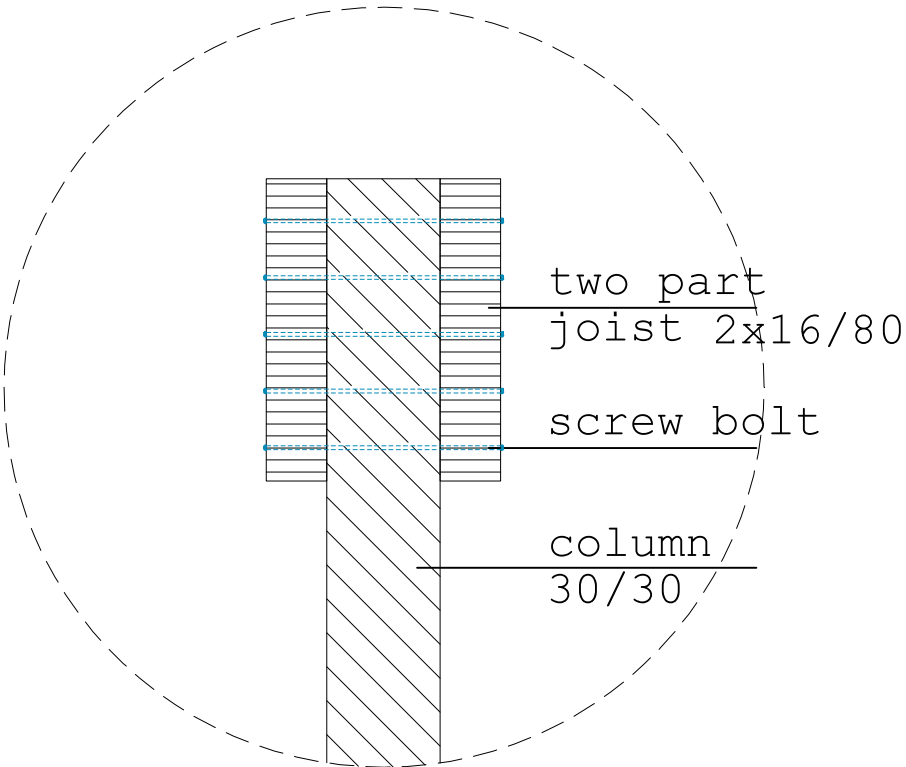
1.detail  
section R=1:20  
from top to the bottom



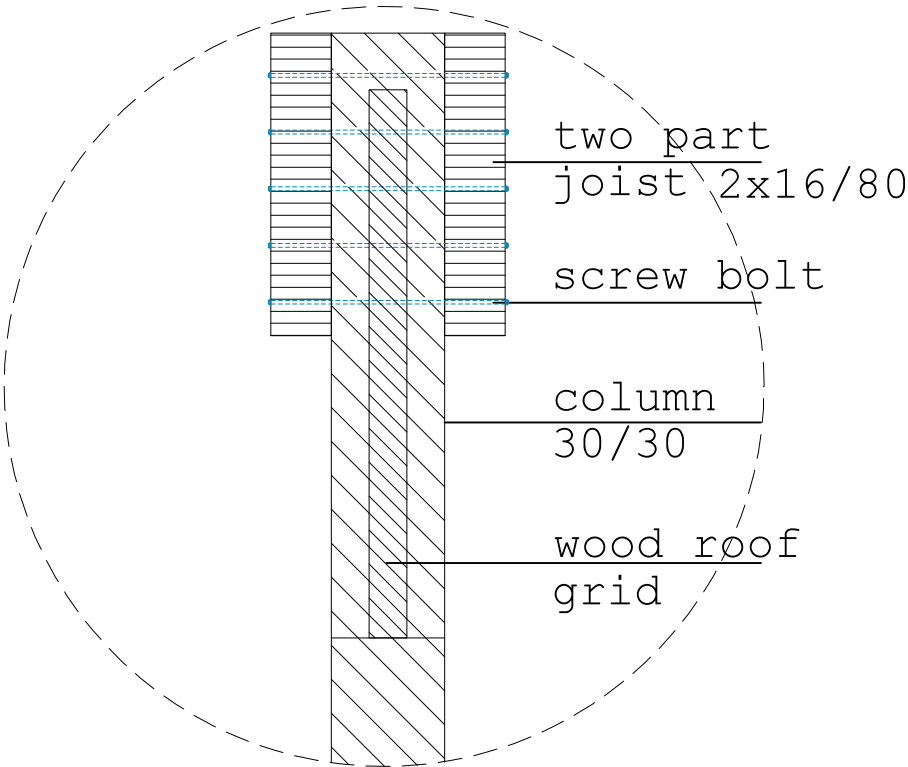


**2.detail**  
**section 2-2**

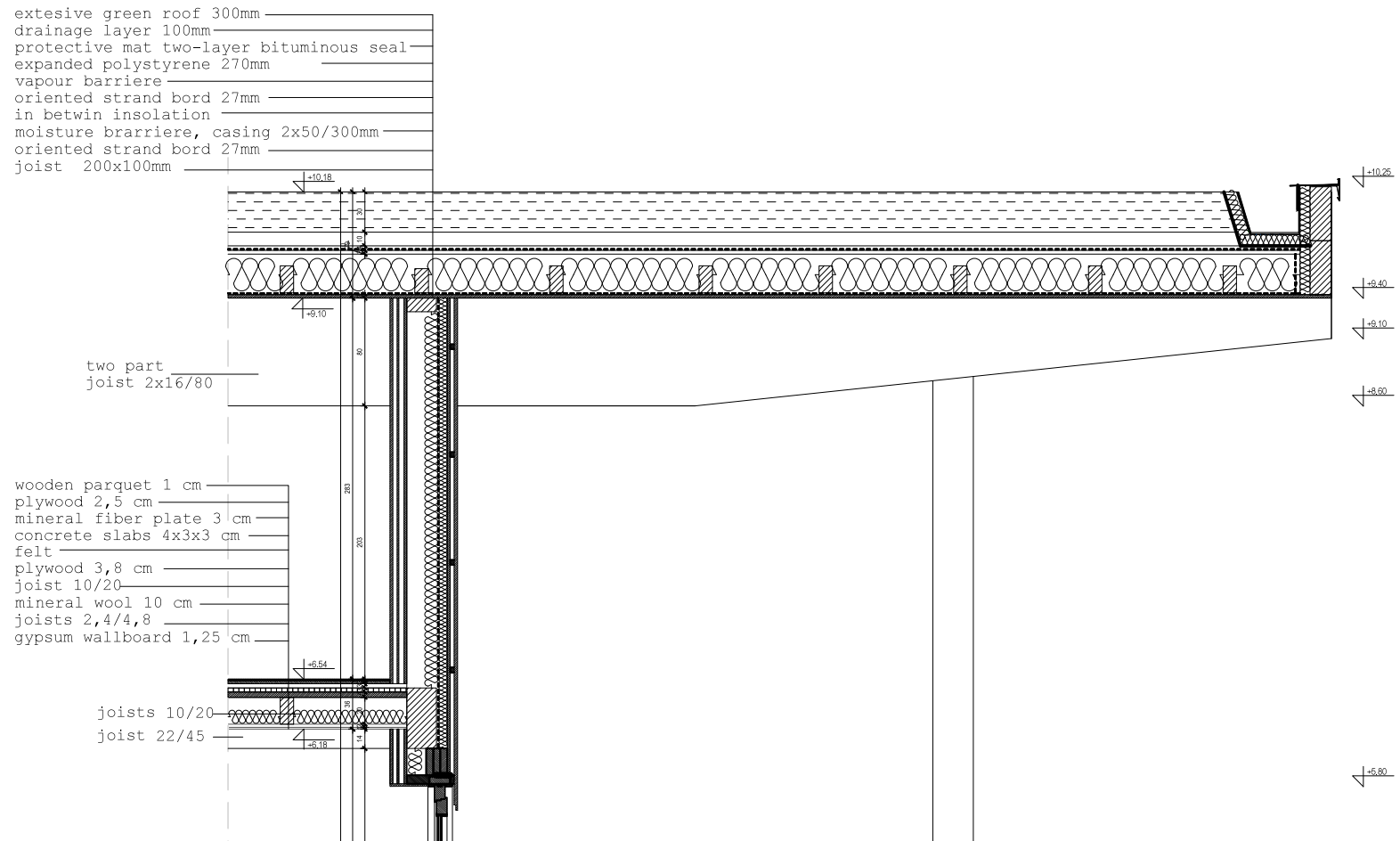


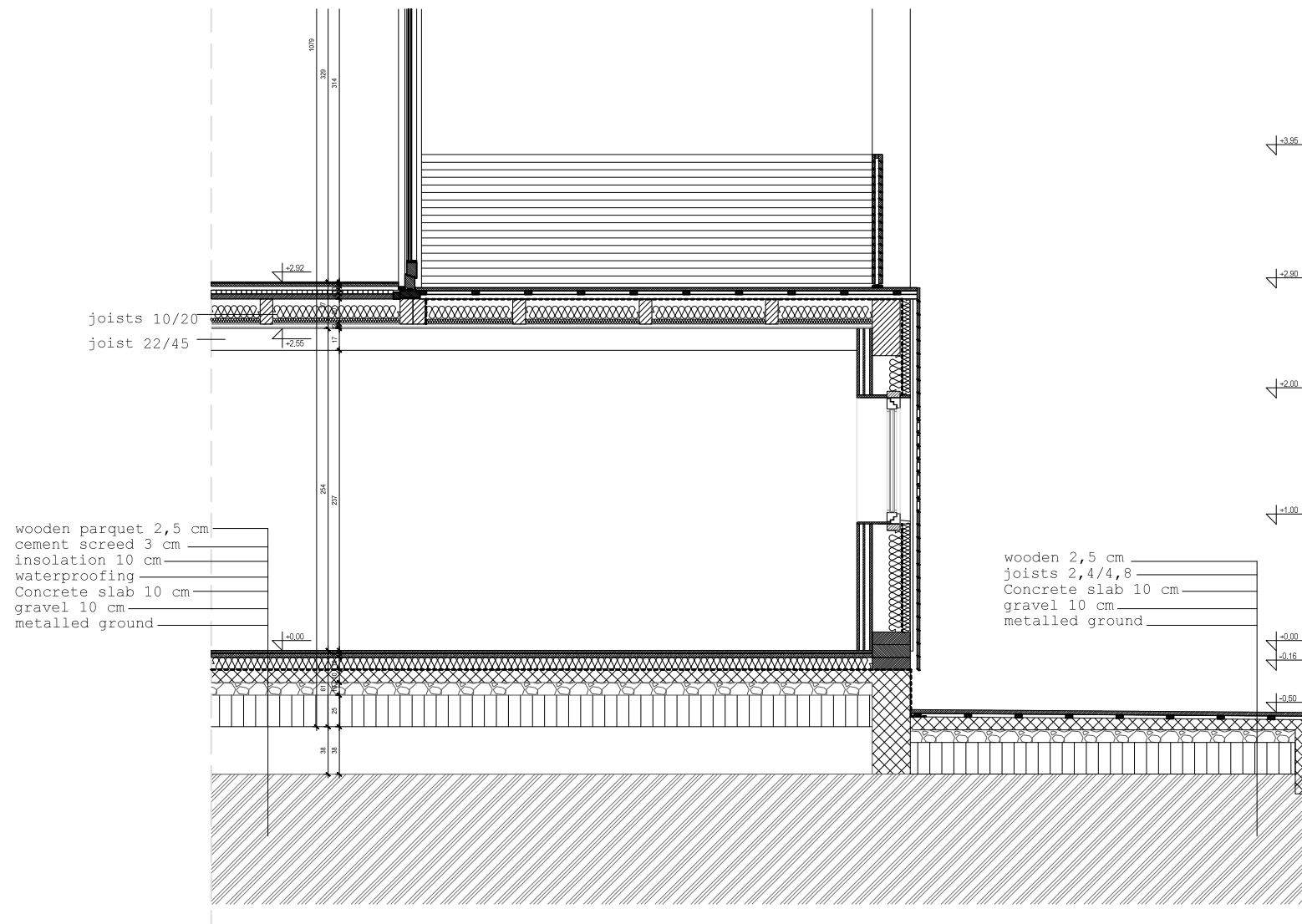


**1.detail  
section**



**2.detail  
section 1-1**





S 1:50

## Energy concept

### Building orientation

The buildings are positioned towards the south to ensure optimal exposure and production of electricity. By embedding the building in the north-south slope heat losses can be minimized.

### Building façade

To keep heat losses as low as possible, a compact space is required. Furthermore, the insulation of all parts of the building must be ensured in order to reduce the transmission heat losses. The windows that are oriented towards the south allow a passive use of solar energy. The choice of materials of the building façade is also a decisive factor. The concrete used in the components with ground contact and the massive wooden slabs are used also as a storage mass.

### Exposure and shading

The south-facing windows allow for optimal exposure of the rooms. In order to prevent an overheating in summer these areas are in shadow due to overhangs of the building.

### Ventilation and cooling

A ventilation of the interior along the wood beams is guaranteed. The natural ventilation is possible due to proper positioning of the window openings. In spring and summer a pleasant room climate can be achieved with natural ventilation and shading without additional electric cooling. For the performing area additional mechanical ventilation systems are available, so as to ensure a faster air exchange.

### HVAC system

The building is heated through a hybrid system which provides up to 300% more energy (in the form of solar electricity + solar heat) than a conventional solar PV system. The heat energy captured from the PV modules is ducked into the building's HVAC system (heating, ventilation and air conditioning) where it is used to displace the conventional heating load. The secondary benefit is to provide PV cooling by reducing the operating temperature of the PV modules, which improves the electrical performance. The modular units are easy to install and are angled at an ideal orientation for maximum solar gain.

### Hot water

The hot water is processed through solar thermal panels on the roofs. The hot water can be stored over a certain period of time. In addition, a connection to the public long-distance heating system is in place.

### Water concept

The drinking water is taken from the public water network. The waste water is discharged through the public sewer system.

### Rainwater harvesting

Rainwater is collected over the roofs and used for watering of the existing vegetation.

### Vegetation

The existing vegetation on the property helps improve the microclimate.

### Power generation

About 1000 m<sup>2</sup> of roof area is available for power generation and heating the water. The photo voltaic modules are elevated, so as to avoid overheating and to increase the efficiency. The modules are connected to the public grid.

solar photovoltaic panels

B-B

21. June [67.9°]  
21. December [20°]

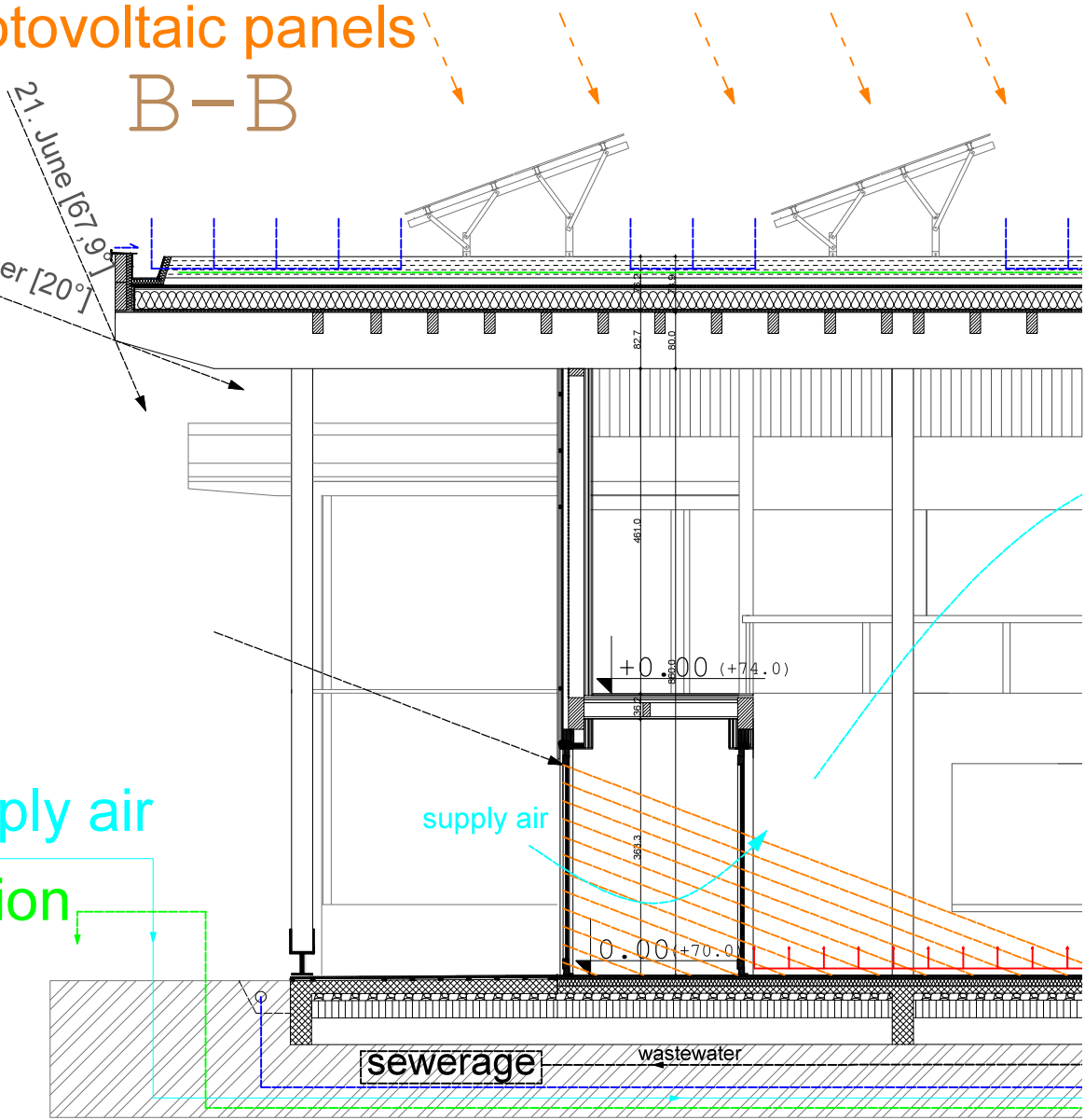
supply air  
irrigation

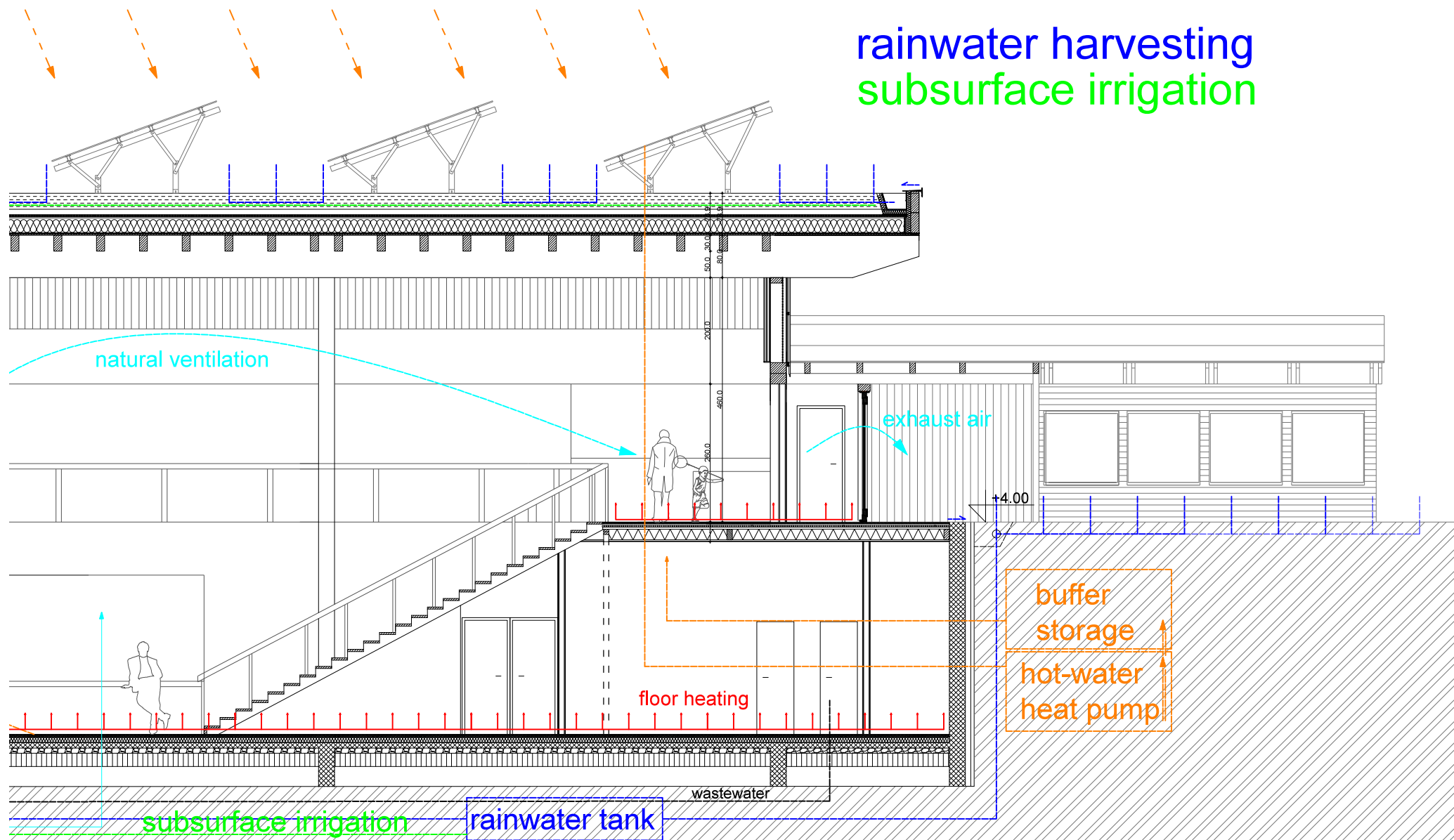
supply air

sewerage

wastewater

Picture 06.21 Energy concept



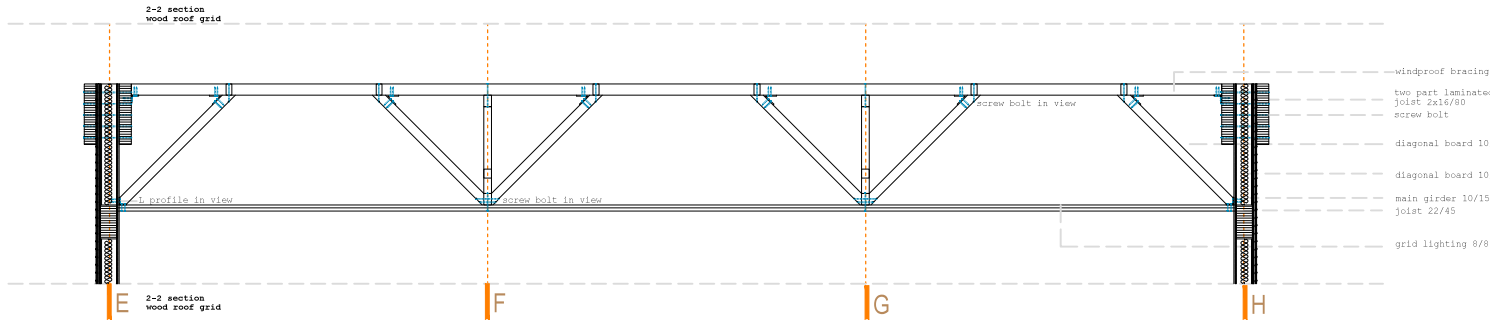
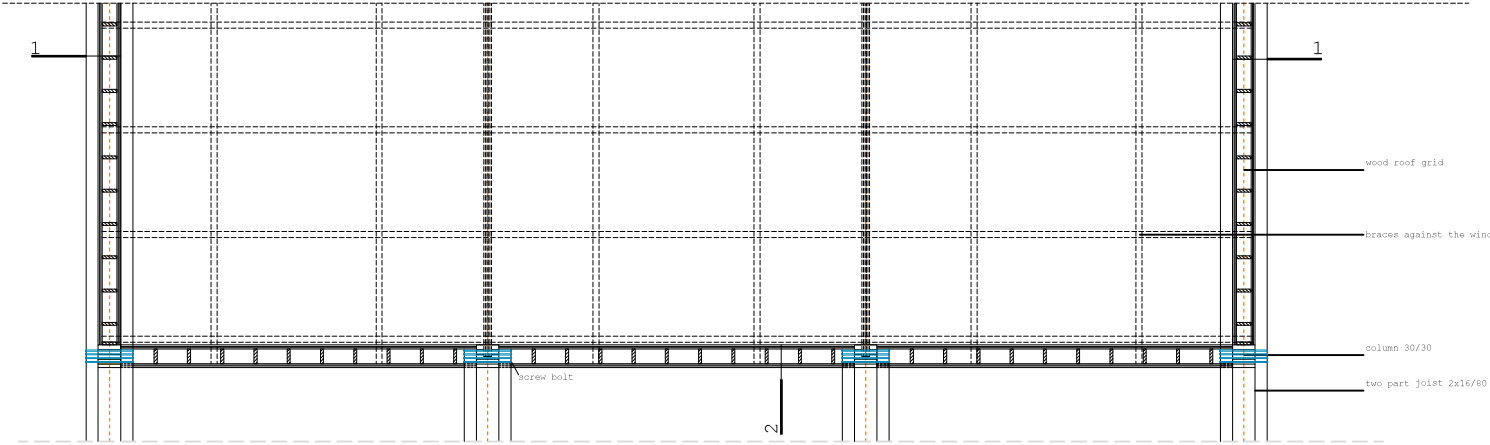
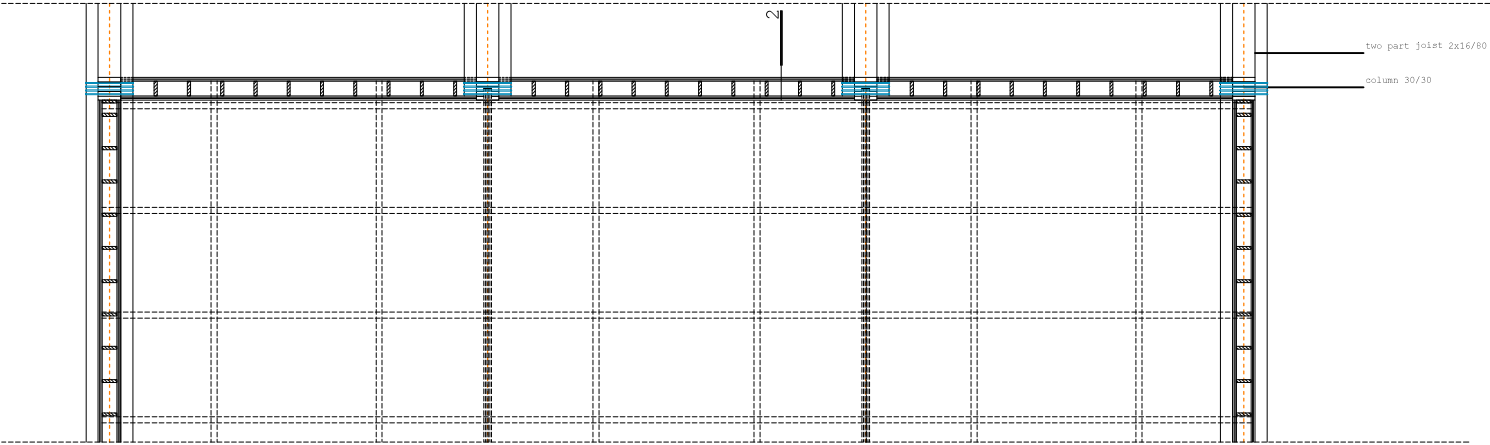




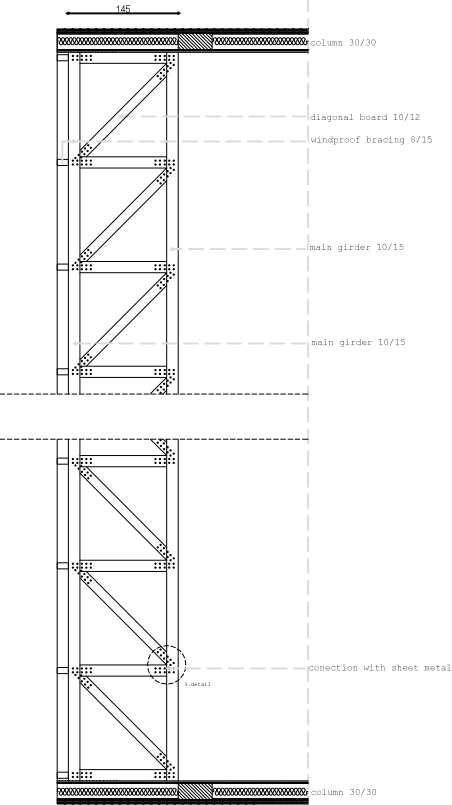
## Contraction

The whole centre is supported by columns 30/30cm and laminated timber two parted beams 2x16/80. The concept was that the walls are not bearing and that in time they could be reconstructed if the use or the function of the object is to be changed.

The main contraction that cares the roof area the two parted laminated timber beams 2x16/80 and horizontal supporting joists 15/30cm. Only in the area of the black box theatre where the could be no columns the contraction goes from laminated timber and becomes a wooden truss. A truss support structure built from a connected elements and joints. H=145cm the length that is caring is 14,30/14,30m h=1/10 1430=143= 145cm.



2-2 section  
wood roof grid  
h=1430=143cm=1.43m

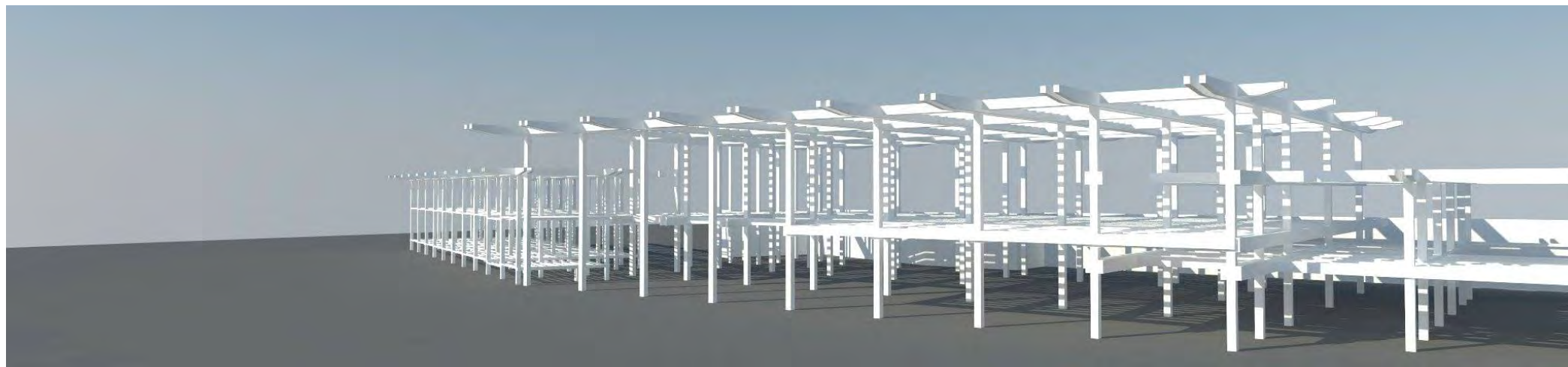


S 1:100

Picture 06.25 Truss



Picture 06.22 Contraction



Picture 06.23 Contraction 3D



Picture 06.24 Contraction 3D



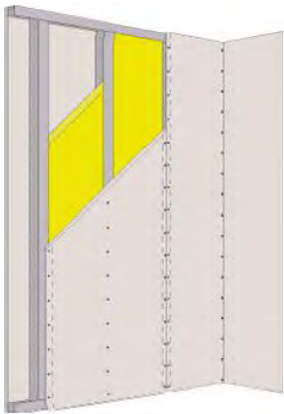
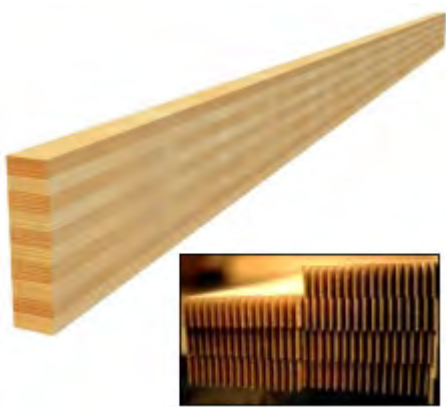
Materials

The material used in the centre are 95% wood, except from the floor which is concrete. The inner walls are either wood cladding or gypsum panels and in the restaurant and the lobby reed since in at the site there is plenty of it.

The firm JAF from Nova Pazova is only 25km away from Belgrade, they also produce wooden cladding.  
<http://www.frischeis.rs/profil-drvo/drvene-grede/laminirane-grede-12m/>

Marmil is a distributor for concrete and its head quarters are in Belgrade  
<http://www.marmil-ing.co.rs>

As for the gypsum panels there is Rigips  
<http://www.rigips.rs>





Picture 06.26 3D Entrance main









Picture 06.28 3D Chill out area





Picture 06.29 3D Restaurant mensa

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