# PORTFOLIO

2021

ARKITEKTUR


MIHAI ADRIAN ALUPULUI

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# M A
# A R K

PORTFOLIO

2021

SELECTED WORKS

ARKITEKTUR

With a background in architecture and a danish bachelor in Architectural Technology and Construction Management- specialisation: architecture, I stand between the architect and the "bygningskonstruktør".
I have a big passion for sustainability and I am really interested in modern ways of visualization methods such as renderings,  virtual and augumented reality.

FOR DETAILED INFORMATIONS VISIT MY

WEBSITE : https://maark.dk/

WHAT I DO:

## 01 VISUALISATION VR/AR

Scandinavian House
Light Study
Marble & Wood

## 02 SUSTAINABILITY & RENOVATION

Gethsemane church-New Construction
Gethsemane church-Renovation
Prosolve-renovation

## 03 CONCEPT DESIGN & PLANNING

Prosolve-New construction
Hand Drawings
Vases & Furniture

## 04 BUILDING CONSTRUCTION/REVIT

Multi-storey Social Housing
Multi-Purpose Centre

## PERSONAL PROFILE

Resume cv

C.V.

# MIHAI ADRIAN ALUPULUI

BUILDING CONSTRUCTOR I ARCHITECT I PR. CONSULTANT
DESIGNER I PHOTOGRAPHER

## CONTACT INFORMATION


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## EDUCATION

2012 2016 Denmark
**BACHELOR DEGREE**
Architecture Technology & construction management
VIA University College - Denmark
Focus: building design, building planning and management, building services, structural design

2009 2012 Iasi/Ro
**SPECIALISED HIGHER EDUCATION**
Architecture and design
National College of Arts - Romania
Focus: various architectural projects, competitions, exams, prizes

2004 2009 Iasi/Ro
**GYMNASIUM**
Art High school
National College of Arts - Romania
Focus: visual art - Drawing, painting, building, graphics, modeling

## PROFICIENCY

- REVIT
  Sketchup
- LUMION
  Vray
  Artlantis
  Enscape
- Cinema 4D
- Word
  Excell
  PowerPoint
- Adobe
  Premiere
- Photoshop
  Lightroom
  Indesign
  Illustrator

## EXPERIENCE

2021 2021 Denmark
**PROJECT CONSULTANT (time limited)**
SKALA Architects
- Strengthening the sustainable profile
- Creating a common vision and direction for future development
- Branding, marketing and CSR

2018 2020 Denmark
**FREELANCE WORK**
- Professional and efficient development of architectural design, visualization drawings, 3D models and concept design through hand drawings
- VR and BIM Implementation and consulting
- Energy efficiency assessments
- Energy, including evaluation of building components, insulation to assess current performance levels and capabilities
- Space planning - Graphic study showing arrangements of space, room layouts and activities = floor plans

2017 2018 Antalya/Turkey
**MANAGER / COORDINATOR**
Akdeniz University
- Taught students in Revit, follow-up of projects
- Facilitation of workshops on Architecture, Design, -The Danish way-, BIM
- Focus on renovation and sustainability

2013 2013 Denmark/Spain
**VOLUNTER**
Solar Decathlon Europe 2014
- Development of architectural model for the competition, Solar Decathlon 2014
- The solar-powered house prototype was developed at VIA University College in Horsens, Denmark and University Jaume I (UJI) in Castellon, Spain
- Presented at Versailles, France

## PERSONAL INTERESTS:

- Being a talented architect is my childhood dream which I pursued all parts of my life. Aside architecture, SPORTS are in my everyday routine, DRONE FLYING is for sunsets and MOTORCYCLE for the weekend.

Curios of something else? just ask.

ROMANIAN NATIVE | ENGLISH FLUENT | DANISH CONVERSATIONAL | portfolia

M.A.ALUPULUI



## PROFIL

As a full package, I create value that goes beyond my drawing and design skills, by connecting architecture and building construction. I easily balance aesthetics, sustainability, functionality, and structure promoting safety and efficiency, resulting in fast results that are tailored to people, environment, cost-effectiveness, and high quality.

Having an understanding of seeing the big picture in any project right from the start, I quickly outline and visualize ideas and solutions on paper. Visualizations that I bring in Revit for making the project buildable and assuring that the building will be up to danish building codes and even more.

## CORE COMPETENCES

PERFECTIONIST IN RELATION TO:

- Significant progress in projects and rapid quality results
- Great attention, idea generation, and new angles on the tasks
- Thorough execution of work tasks

PROFESSIONALLY WELL-FOUND BUILDING CONSTRUCTOR

- Solid knowledge of design thinking and innovation management – BIM, VR/AR
- Routine use of graphics programs such as Revit, Lumion, Sketchup, Adobe
- Experience in all phases of projects as a freelancer/project consultant

CREATIVE, QUALITY-ORIENTED – A BIG HEART FOR ARCHITECTURE

- Understanding to see the big picture in any project and can quickly outline and visualize ideas and solutions on paper
- Design of functional, visually appealing spaces that meet all requirements
- Composes artistic, functional, and technical requirements. Updated with the latest trends, materials, and products

01

# VISUALIZATION & VR/AR

Virtual reality technology applied to architectural design became a powerful marketing tool. It helps the construction industry present ideas through 3D visualization, virtual and augmented reality.

## EXPERTISE IN:

### VISUALIZATIONS IN 3D AND 2D

- 3D exterior visualizations
- 3D interior visualizations
- Project and product renderings

### VIRTUAL REALITY & 360$^0$ VIRTUAL TOURS

- Full virtual reality simulations
- 360$^0$panoramas and 3D models of interiors

### AUGMENTED REALITY

- Interactive 3D-floor plans
- 3D furniture showcase

## FOLLOWING PROJECTS:

SCANDINAVIAN HOUSE - exterior design
LIGHT STUDY INTERIOR DESIGN - workshop
MARBLE & WOOD - interior design

# SCANDINAVIAN HOUSE

## +Exterior Design

PROJECT DETAILS

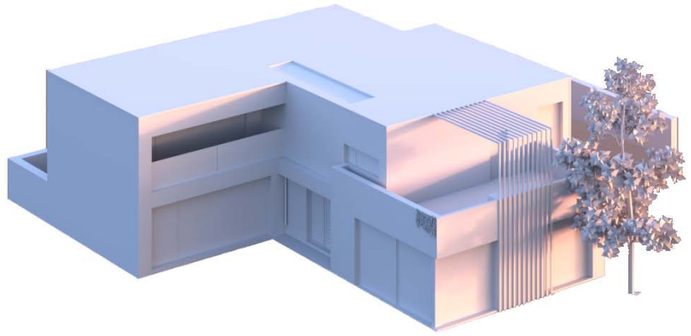
**CATEGORY:** Design; Visualizations

**LOCATION:** Denmark

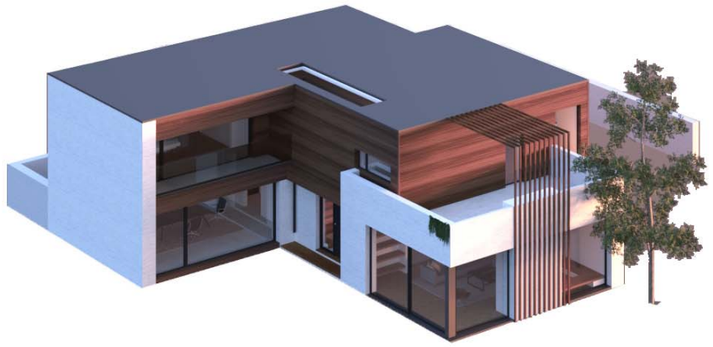
ABOUT THE PROJECT

Simple Scandinavian Design with insertions of wood. The house represents a single-family summer house with big windows and beautiful views of the garden. The house is positioned in a way that has light every time of the day.









# LIGHT STUDY
# INTERIOR DESIGN

+Workshop

PROJECT DETAILS

**CATEGORY:** Design; Visualizations

**LOCATION:** Denmark

ABOUT THE PROJECT

It is presented as a summer house that shares an open living room with a kitchen area and a HYGGE-reading zone. The project is based on a workshop from the Chaos group about the light study. Different design options are given with new perspectives of the house.



# MARBLE & WOOD

## +Interior Design

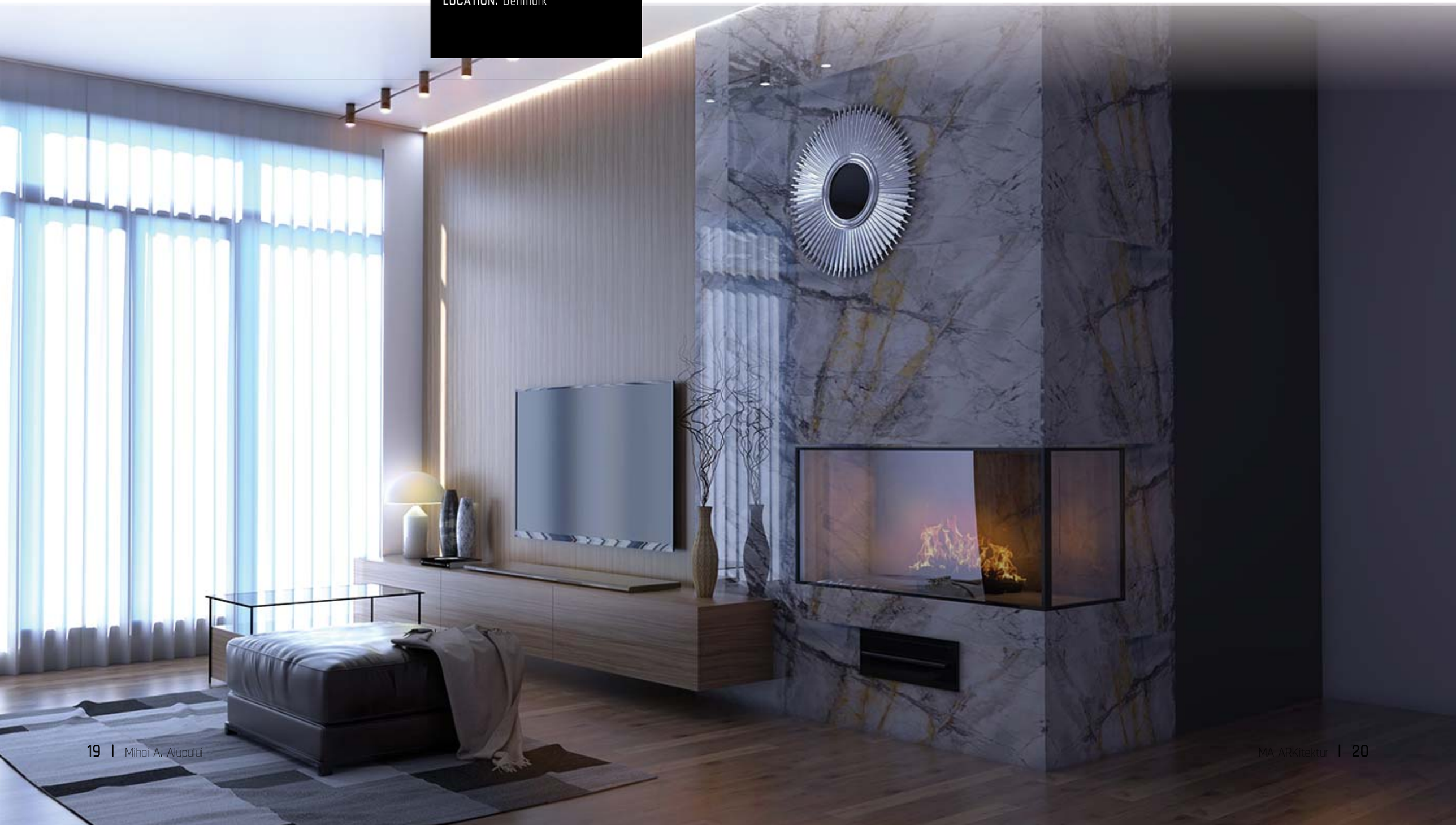
PROJECT DETAILS

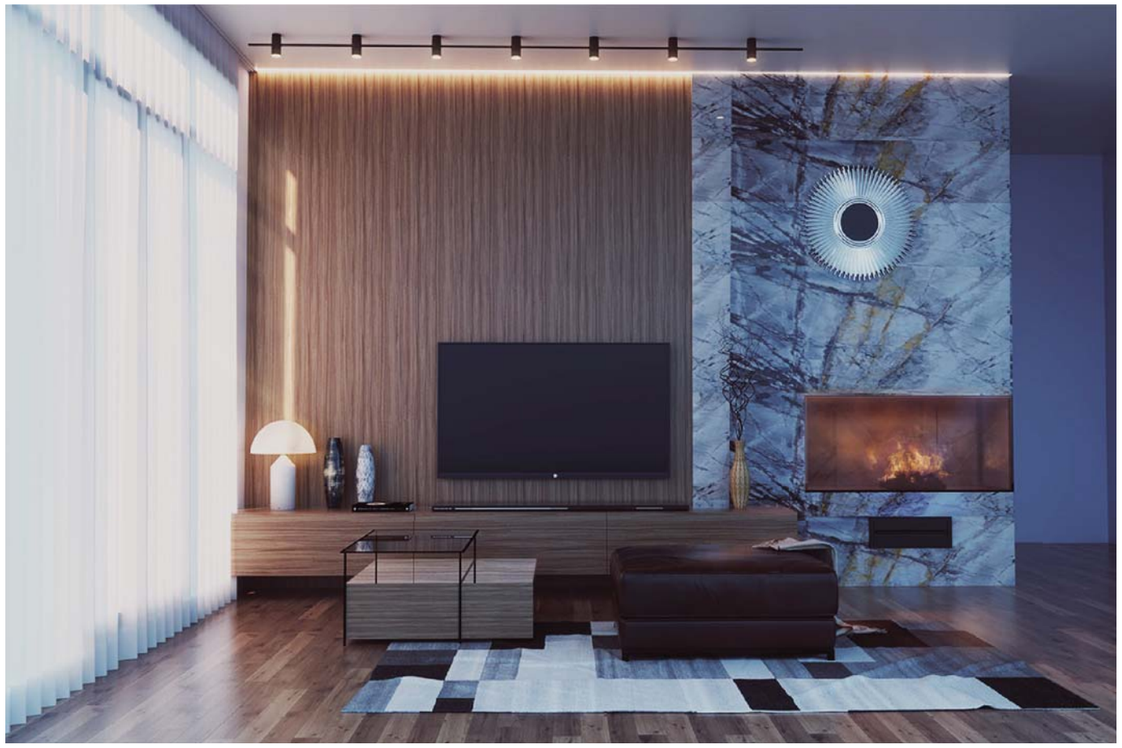
**CATEGORY:** Design; Visualizations

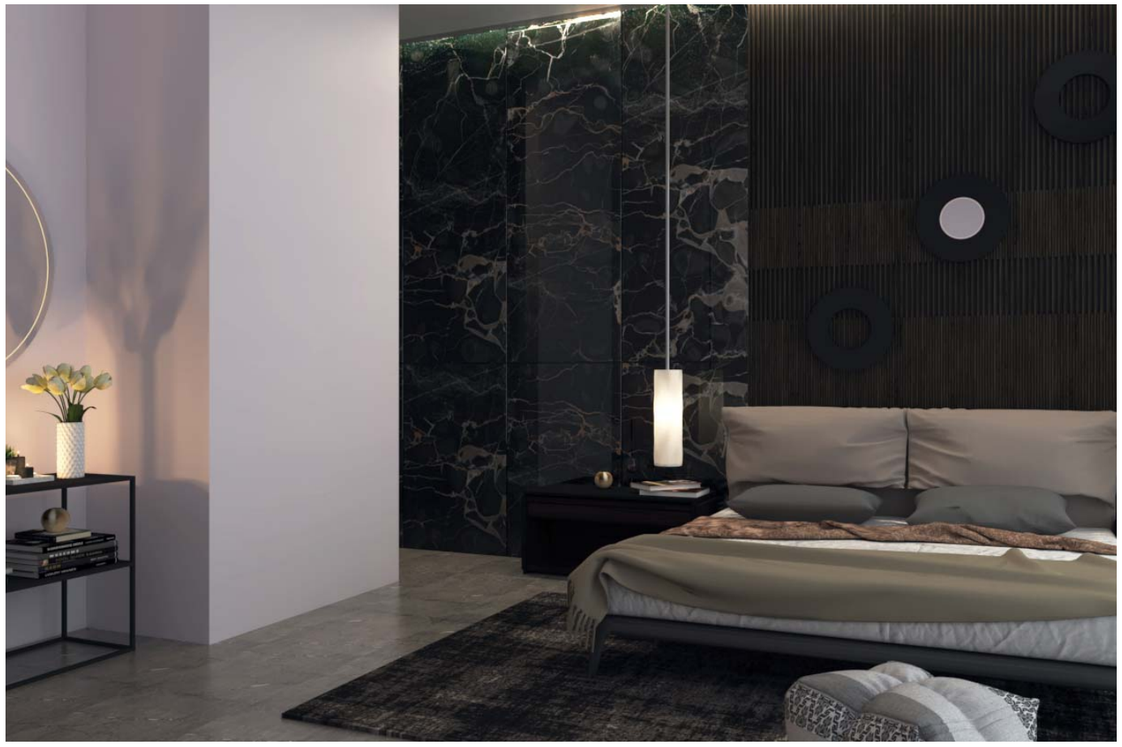
**LOCATION:** Denmark

ABOUT THE PROJECT

The project shows the design of a spacious penthouse apartment with a focus on marble and wood. Natural materials bring life to a modern apartment. Pairing marble with wood is a new trend in home decor creating an interesting contrast. Marble gives a cool, cold tone to modern rooms, while wood as an organic material is warming up space. This is why these two materials work so beautifully together.







02

# SUSTAINABILITY & RENOVATION

We build higher and denser, so there is room and a big need for healthier architecture where sustainability takes the first place.


## EXPERTISE IN:

SUSTAINABILITY

- Sustainable development world goals
- Cradle to cradle
- Sustainable renovation solutions
- Sustainable design
- Passive houses
- Implementation of sustainability into architectural practice

## FOLLOWING PROJECTS:

GETHSEMANE CHURCH PROJECT- new construction
GETHSEMANE CHURCH PROJECT- renovation
PROSOLVE PROJECT - renovation

# GETHSEMANE CHURCH- PROJECT

## +New construction

PROJECT DETAILS

**CATEGORY :** New construction
**SIZE :** 485m$^2$
**PLOT SIZE :** 1300m$^2$
**LOCATION :** Horsens-Denmark

### ABOUT THE PROJECT

Gethsemane Church was originally built as a Methodist Church in 1906. Eventually, the congregation became so small that the church had to close and it stayed closed for almost two years. It was bought in 2007. A new space for the community must be created while the church is kept, upgraded, and given another utility. The church represents a symbol of community.

### GOAL & DEMANDS

The main purpose of the new building is a restaurant, where high nutritive cuisine will be available for those who are willing to try new culinary experiences.
At the same time, this is a modern and attractive environment where office workers will be able to spend some quality time during lunch breaks. Having in mind the location unicity provided by the church and the beauty and modernity of the new extension, all of the three functionalities will be attractive for the neighborhood inhabitants and also for the rest of the citizens living in Horsens.

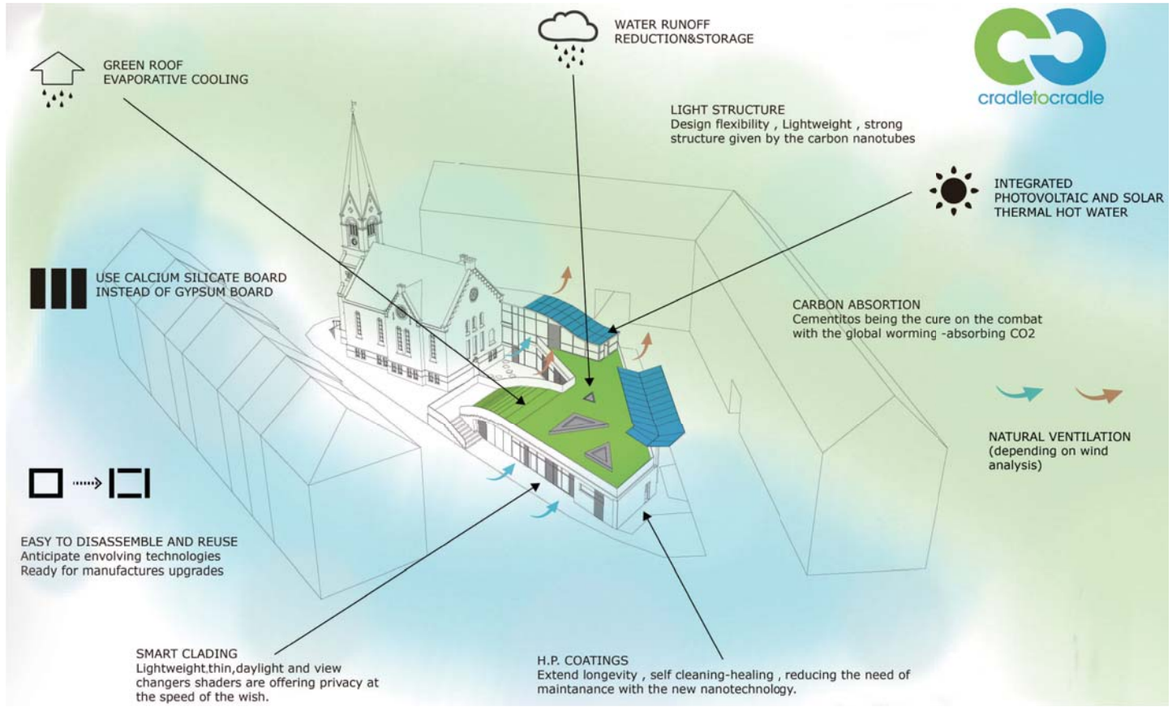
Cradle-to-cradle design is a biomimetic approach to the design of products and systems that models human industry on natural processes. Materials are viewed as nutrients circulating in healthy, safe metabolisms. This is where the inspiration for purpose of the new extension came from.

### DESIGN

The church's extension has been designed with great consideration for sunlight and green area. At the same time, the slim and low profile of the new construction allows the people living in the surrounding buildings to be able to still have direct sunlight and a nice view of the greenery.
The building has a modern light shape with a combination of curves and sharp lines that will enhance and improve the aspect of the area.

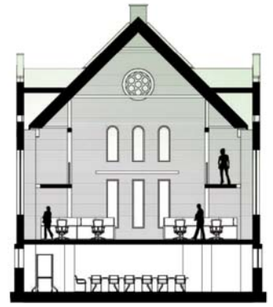
### SOLUTIONS

The new construction will consist mostly of sustainable materials such as wood, glass, and metalcombined in refined and fashionable ways. The actual green area is being moved on the top of the building and the three near the church will be preserved and used for visual improvement of the internal garden.

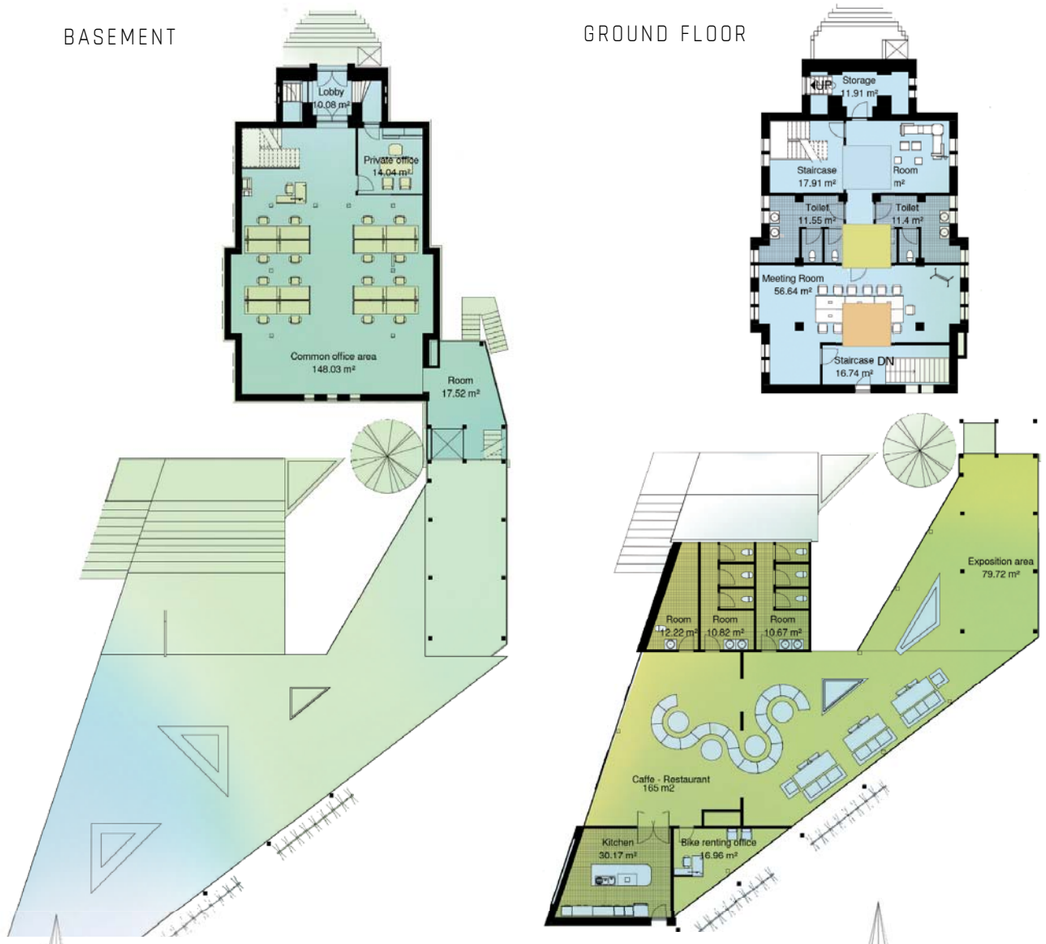


# PLANS
review

OUTLINE



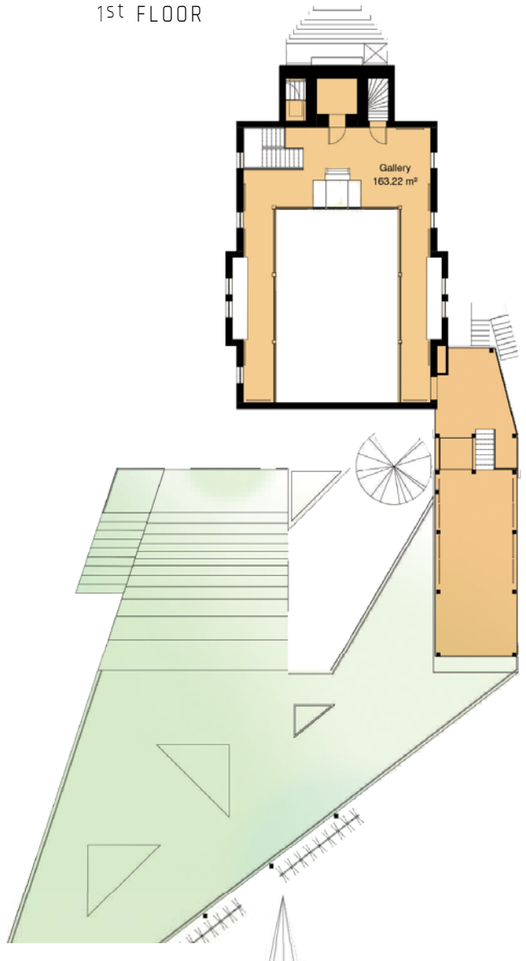
BASEMENT



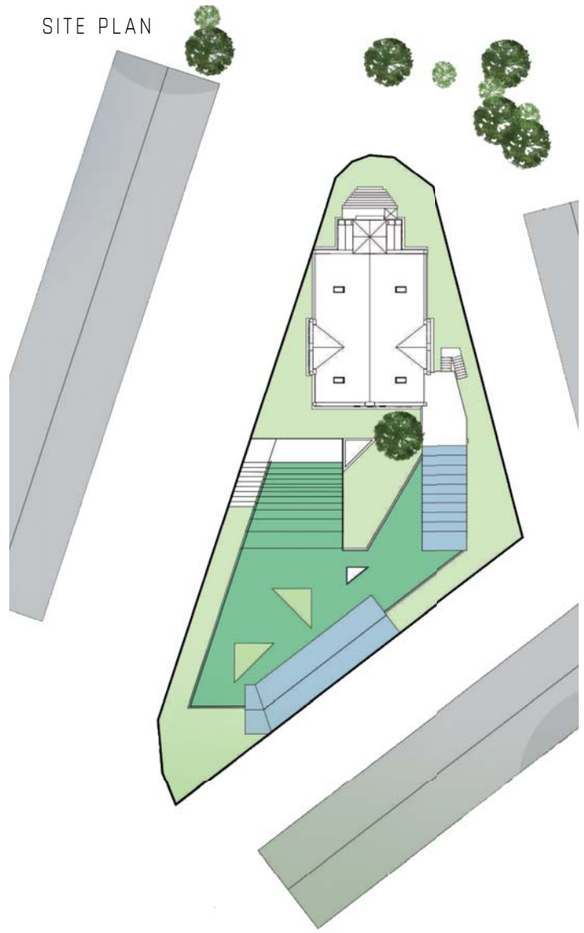

GROUND FLOOR

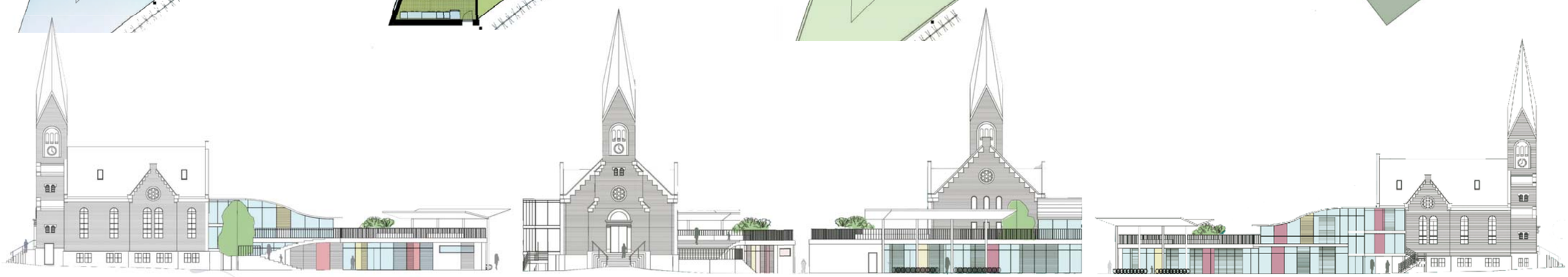



1st FLOOR




SITE PLAN





# +Renovation

PROJECT DETAILS

**CATEGORY:** Renovation
**SIZE:** 485m$^2$
**PLOT SIZE:** 1300m$^2$
**LOCATION:** Horsens-Denmark

## ABOUT THE PROJECT

The project contains three functionalities. The main one is business orientated and it will take place inside the church, where the ground floor is developed as a flexible office area. The basement of the church contains toilets, a relaxing space, and a meeting room for the office, which is the main user and financial contributor. The second function is represented by a library and an art gallery, which will have a small financial contribution, but a great visual and cultural impact.

## GOAL & DEMANDS

THE CLOCK WATCH MUST BE KEPT. The clock represents a symbol for elders. It came with the first buildings that started to transform Horsens into a city. It had a really high-cost value in the past and now it has even a bigger value on people's hearts.

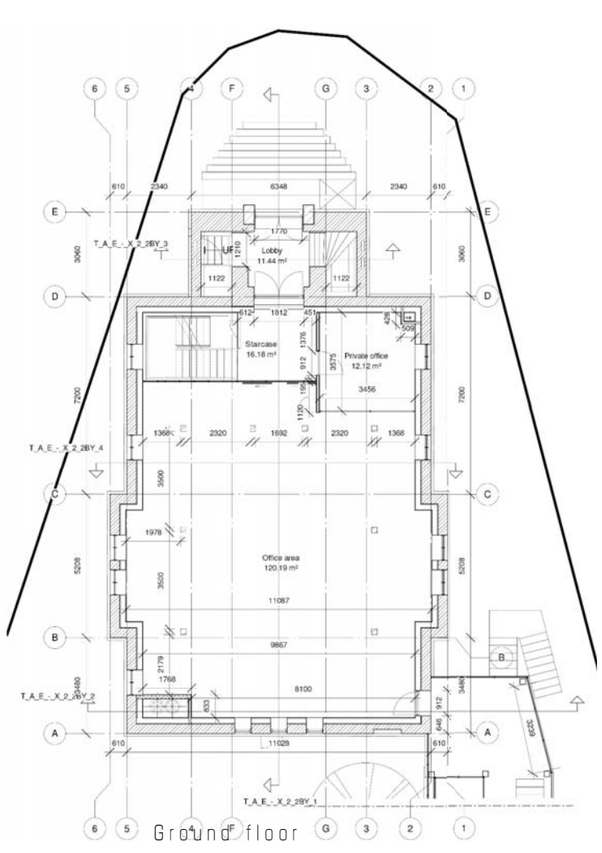
Building codes are the biggest hurdle when converting an old building to a new use. Safety and accessibility are the two biggest concerns with old buildings. Redesigning the building is sometimes required to ensure that all precautions are taken for the new use. Today, building materials are better than what was used in the past as well. Electrical, plumbing, and HVAC usually need to be gutted and replaced entirely. In some cases, ensuring the reuse is both safe and functional.
As with all construction, a strong analysis of the specific location should be meticulously reviewed.

## DESIGN

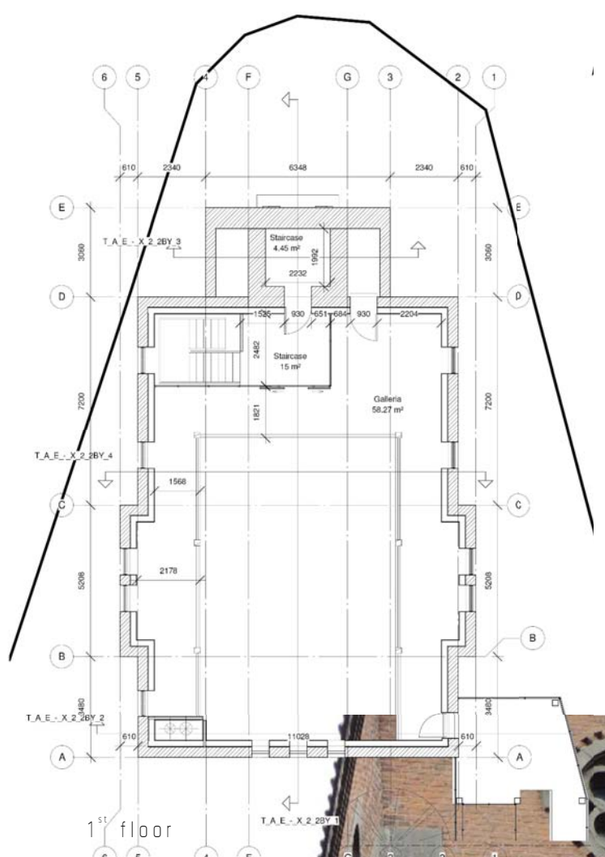
Through rigorous cross-discipline knowledge, the design delivers balance aesthetics, function, cost, and quality. Each part of the church is taken separately and analyzed. The final plans include the best materials and solutions so the renovation project can be finished according to the building regulations. Each process of renovation is calculated and 3D visualization examples are provided.

## SOLUTIONS

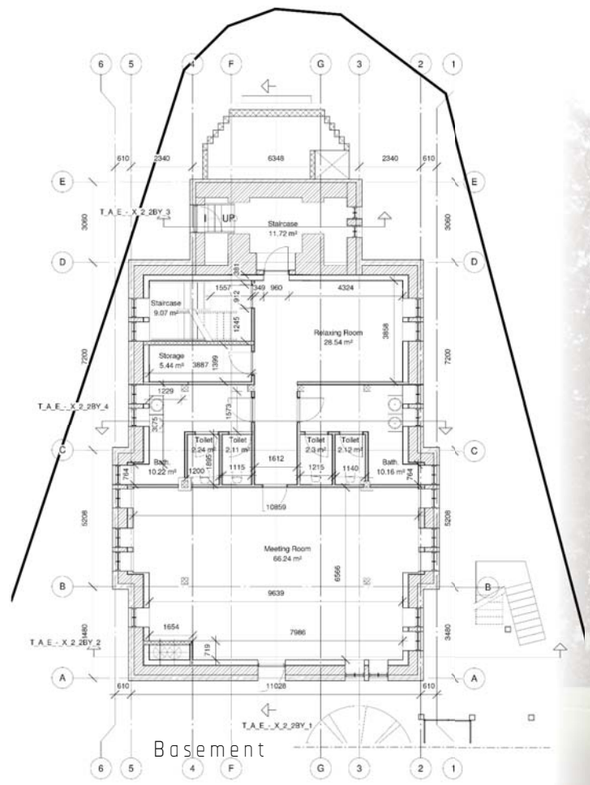
There are many factors that will play a role in finding the right Adaptive Reuse renovation. Preconstruction services with contractors, architects, and engineers will help you establish constructability. However, there are both advantages and disadvantages to taking on an adaptive reuse project. Hidden costs and unexpected issues will arise in most projects, and planning for them early on will make the construction process much smoother. The services before construction can offer you peace of mind, provide a cost-effective way to preparing for construction, without having to commit to the entire project.



Ground floor

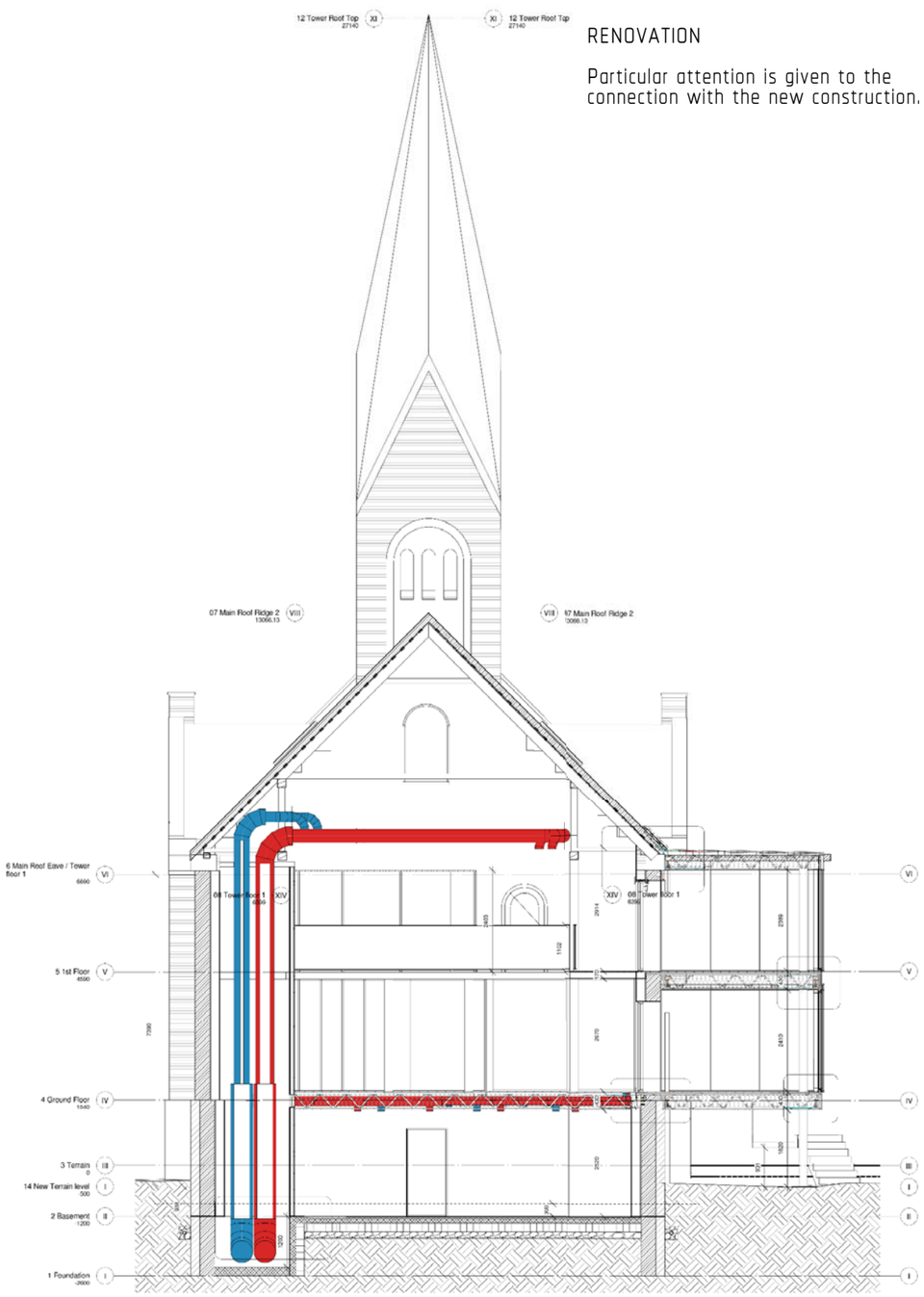


1 ST floor



Basement

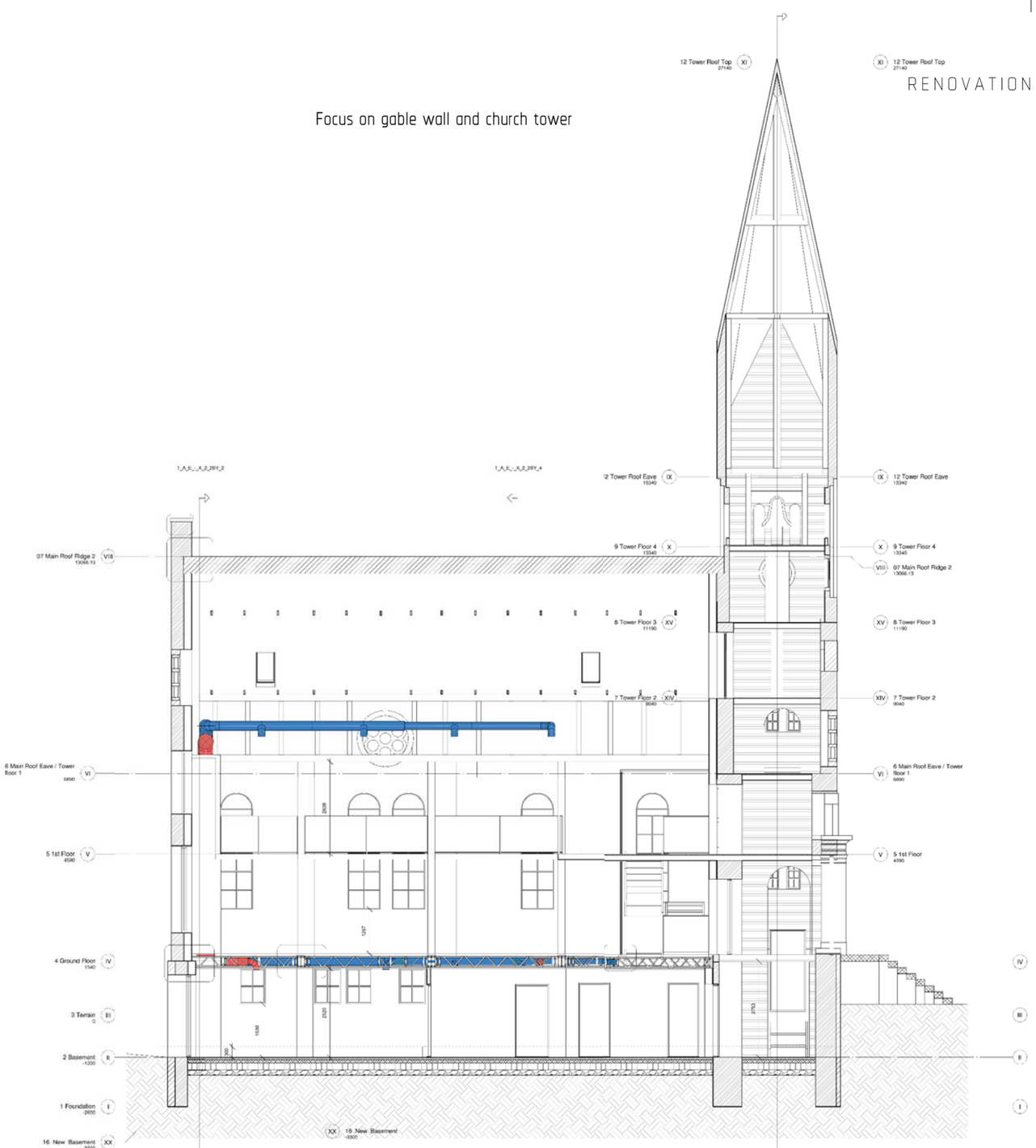
# SECTION
review




RENOVATION

Particular attention is given to the connection with the new construction.

Focus on gable wall and church tower



# PROCES
## registration

REGISTRATION | MEASURES

### Trusses/Main Roof

Most of the timber is dry, cracked and it has a low degree of insect infestation (termites/house longhorn beetle). At the eave level, the timber presents traces of moisture and deterioration. The soleplate and the eave region are in a bad condition. The steel bars (supports) are rusted.

The roof is removed and replaced with a new structure. The materials are replaced with more efficient structures and materials. The timber is replaced with new, fireproofed materials according to regulations.

### Tiles, Slates

The tiles and slates are in good condition excepting the mortar around the tiles which in some places has holes.

They are reused for the new roof structure.

### Insulation

The insulation is soft wool. At the sides of the roof, a membrane is used to keep the insulation in place. It`s quality is too low.

Insulation is replaced with much higher quality materials in a bigger quantity to fulfill the energy demand.

### Roof windows

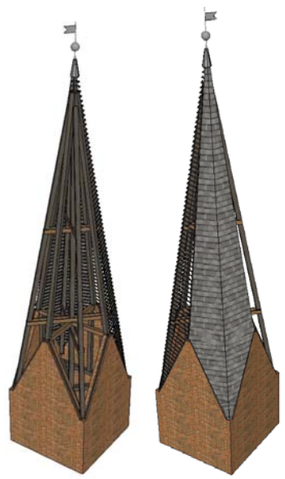
The roof windows are mounted in the roof tiles. They are covered in rust.

New windows with better energy features are required.

### Other

No sharking felt is found. No roof anchoring is noticed.

Is replaced in the new roof structure. The roof anchoring is done according to wind structural calculation.

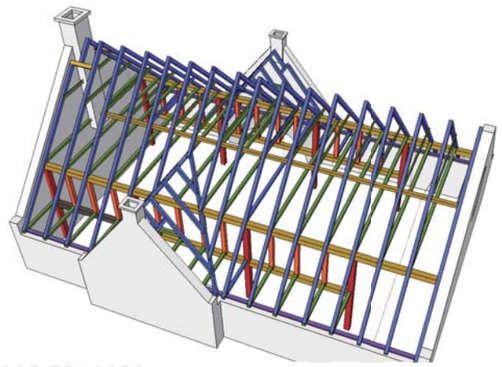


ROOF SPIRE

ROOF STRUCTURE

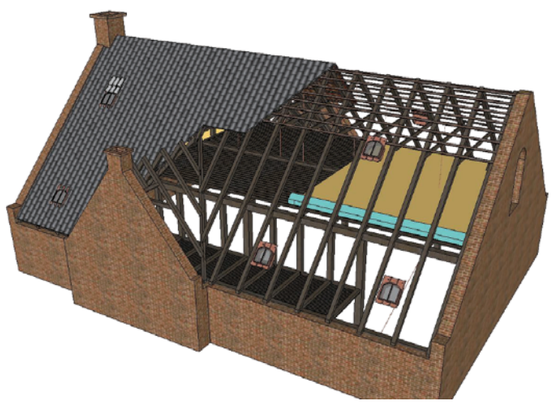
The resulting timber may be used for other internal structures as a crade to cradle strategy.

ROOF CONNECTION



ROOF TRUSSES

AFTER RENOVATION

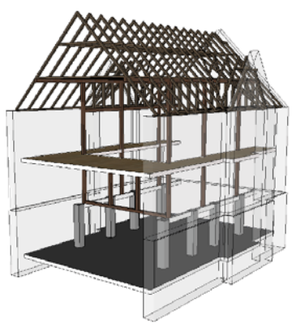


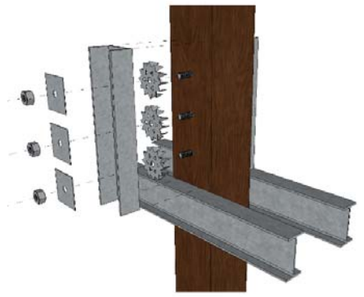
ROOF MAIN COMPONENTS

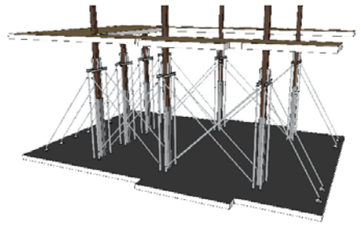
# SHORING in renovation

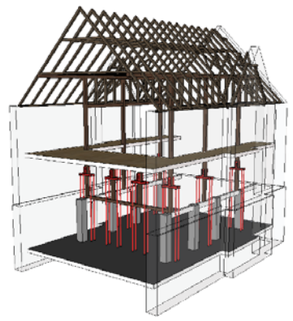
Shoring is a form of temporary support, which can be given to the existing buildings (building components). The primary function is providing the necessary precautions to avoid damage to any person or property from the collapse of the supporting structure during alteration work.

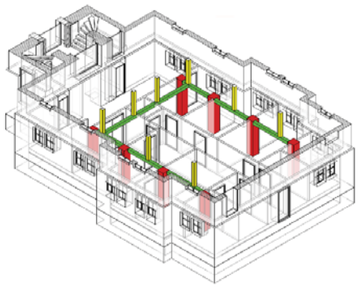
TRANSFORMATION SEQUENCE
Focused on column

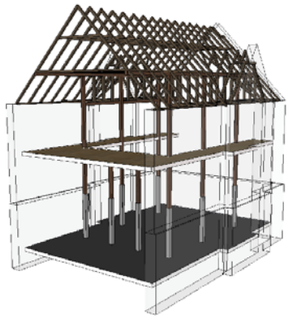


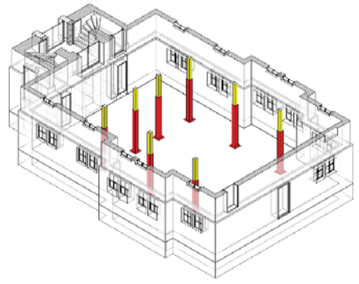












There are three basic systems which can be used. Combinations of them are also possible.

- Dead Shoring–used primarily to carry vertical loads.
- Raking Shoring–used to support combined loads –vertical and horizontal.
- Flying Shoring–the same function as ranking shoring but gives the possibility to work below ground level.

THE WOODEN COLUMNS OF THE CHURCH NEED SUPPORT, THE LOAD IS VERTICAL, SO IT IS USED DEAD SHORING, USING STEEL COMPONENTS

Materials available for constructing the different shoring systems are timber, steel, or a combination of these two materials. Timber shores may be quite satisfactory and less expensive by using sound second-hand timber.

The use of adjustable steel props is highly recommendable. These are very strong, easy to fit, adjust and remove.

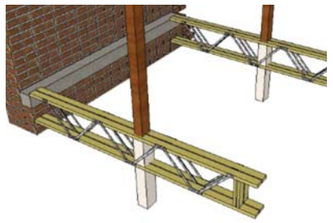
Wooden columns
Brick / Concrete
Columns (old & new)
Beams (old)

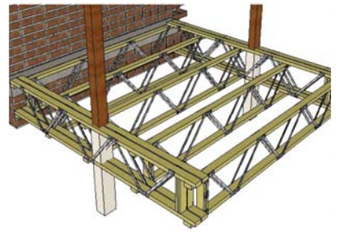


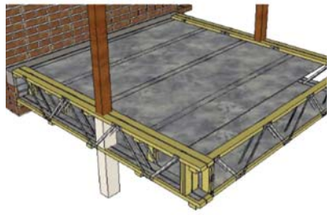
# FLOORS renovation

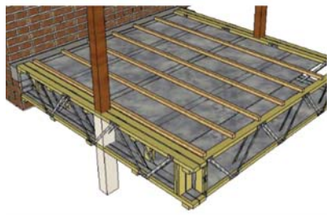
Solution for replacing suspended floor (the new solution can be considered when designing new building)

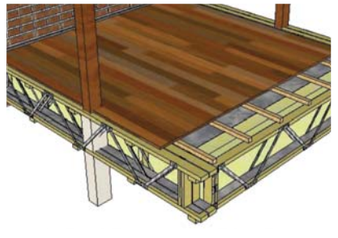
TRANSFORMATION SEQUENCE
Suspended floor change











All the fittings are removed after removing the flooring. The old wood flooring is massive, so it is reused for other purposes.

The old insulation and the wooden from below are removed. The structure remains and it is handled with care because it has structural properties. Due to this reason, it gets disassembled in steps and not at once.

Wall support is added to the load bearing walls. Wall bearing easi joists are connected to the support. Non-load bearing easi joists are connected to the load bearing once

EASI JOISTS ARE A VERY EFFICIENT SOLUTION, LIGHT, HIGH U-VALUE, SPACE FOR PIPES, EASY TO WORK WITH

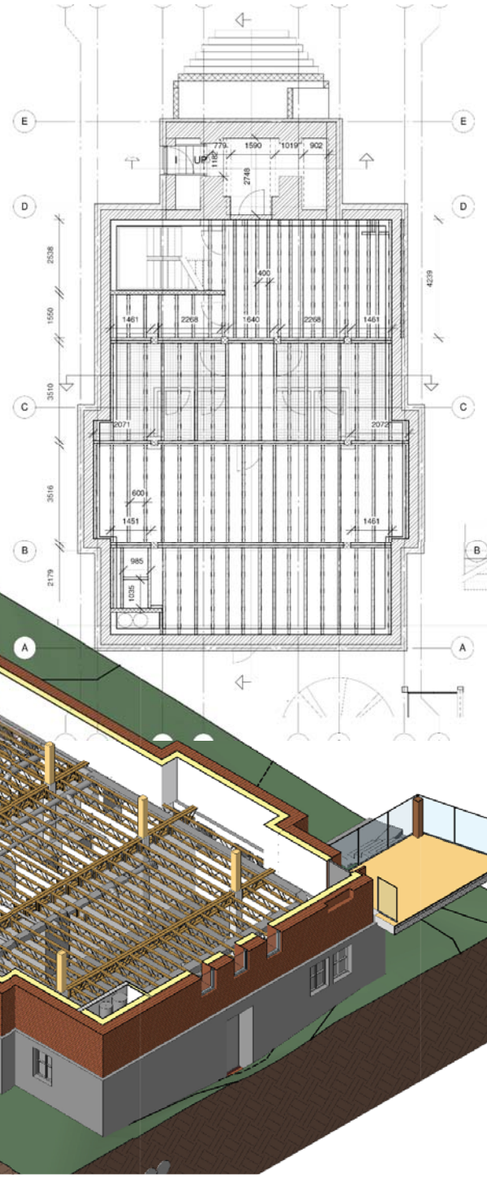
Moisture membrane is added. It is needed to let the floor to breathe but to be airtight.

Blowed in Cellulose and battens are added. Wooden floor is placed. A gap is created but not filled being used as a ventilation path.

# EASI JOISTS



The easi joists are placed after the transformation of the basement with the upgraded column system.





# VENTILATION SYSTEM

1. Main pipes outside the church construction will be placed underground, inside a horizontal shaft, reaching the technical room under the extension.

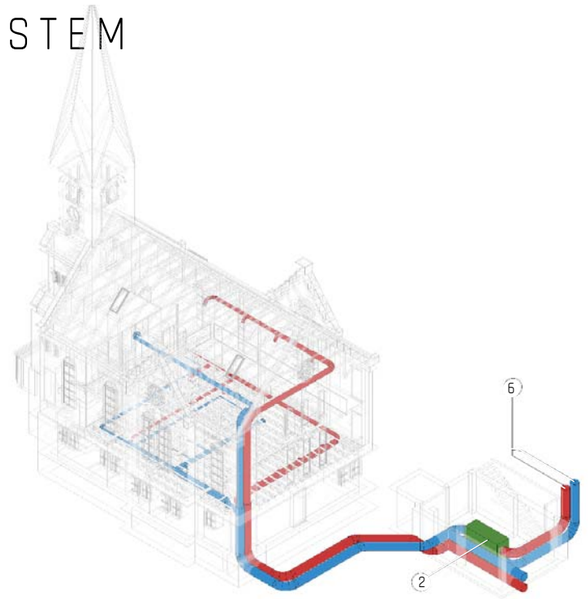
2. The ventilation unit will be placed inside the technical room, under the new extension. Model: VEX350H (945 x 1904 x 2632). Max air flow capable 3920 m3/h.

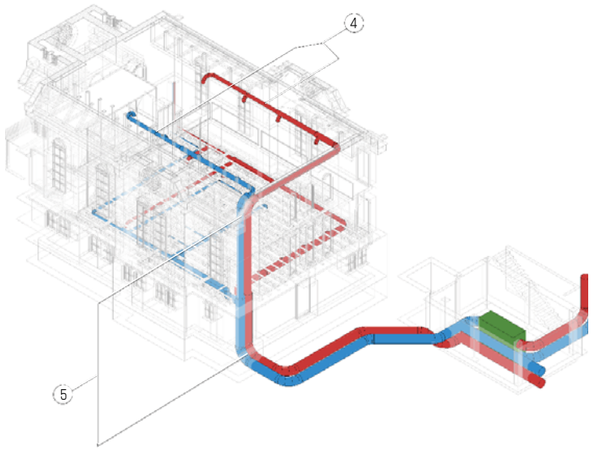
3. Ventilation pipes for the basement are placed inside the ground floor structure, between the Easi-Joists. (Available space: 232 mm).

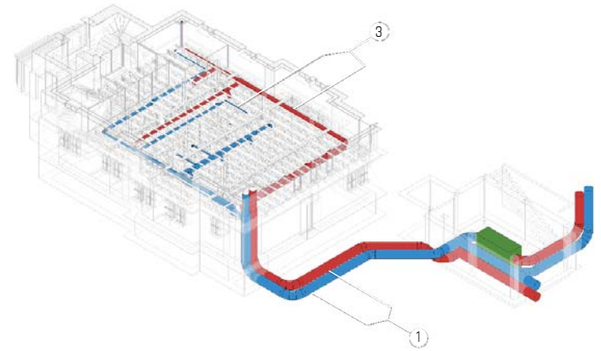
4. Ventilation pipes for the Ground floor and 1st floor are placed below the roof structure and the reset in the common open area.

5. Connection pipes are placed inside the shaft. Maximum diameter: 520 mm. The shaft walls are fire resistant and the pipes are insulated (60 mm).

6. The air supply pipe and exhaust pipe are placed outside next to the technical room.



# PROSOLVE PROJECT

## +Renovation

PROJECT DETAILS

**CATEGORY:** Renovation
**SIZE:** 3200m$^2$
**LOCATION:** Iasi-Romania

ABOUT THE PROJECT

The renovation project is part of the PROSOLVE' project, where the historical building is preserved but upgraded to nowadays standards.

GOAL & DEMANDS

The first and second floor is just restored and not STRUCTURAL changed.

No additional ventilation system besides wetroom is added. Access to the new construction from inside the building is created. A new staircase is added to Ground Floor and floors are changed on new Levels. The terrain movement and time have affected the structural connections that hold in place the building.

DESIGN

The access to the building and the roof structure is changed. The C2C principle of renovation is used, where the materials found are reused for interior static furniture. The building has 4 floors and 2 bathrooms that are distributed to each floor. The function of the rooms is assigned by the town hall in the best interest of the community. The plasters from the historical building are removed so the brick is shown.

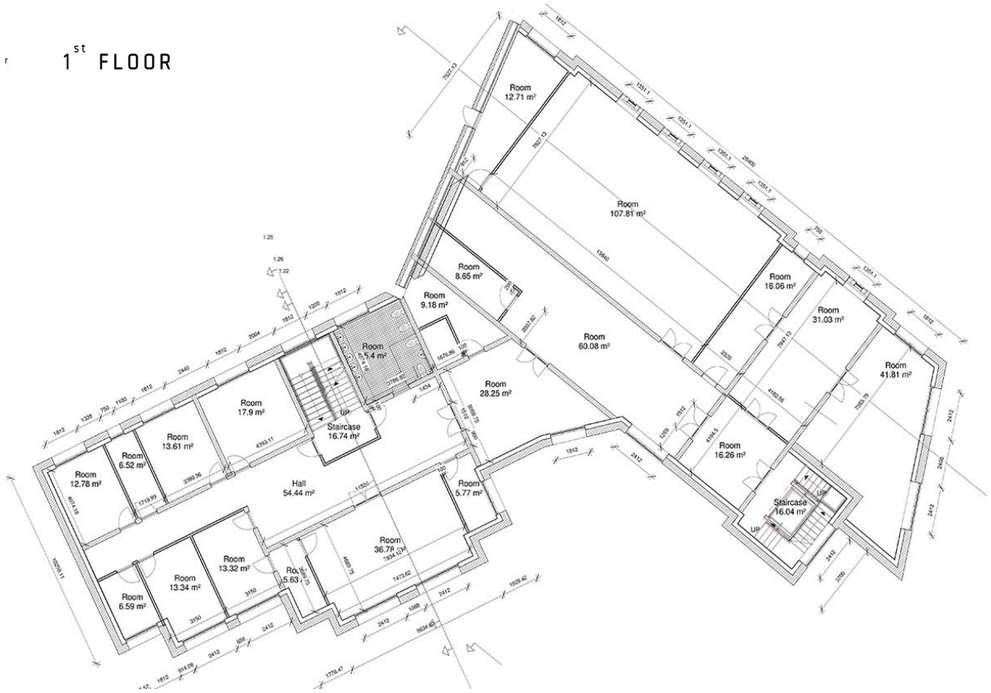
SOLUTIONS

Through rigorous DESIGN, several detailed solutions are offered. The connection between the historical building and the new construction is possible due to the upgraded old building, where the change of internal floors is prior.

The historical building is upgraded with new EASI JOISTS floors. The floor from the new building is supported with an IPE 160 BEAM transferring the weight perpendicular to IPE 240 BEAM. The cold bridge is resolved with the exterior suspended ceiling. The cavity inside is filled with paper insulation for fire and acoustic resistance.

# 2 FLOOR PLANS

## 1st FLOOR




## GROUND FLOOR




# SECTION

**External wall**
Existent:
368 mm brick wall
New:
Steel stud wall (100 mm x 2) filled wit paper insulation like ISOCELL
(λ=0,039 W/ mK).
Fire Classification: B – s2, d0
Ceiling 12.5 x 2 like FARMACELL on 2mm steel profiles;

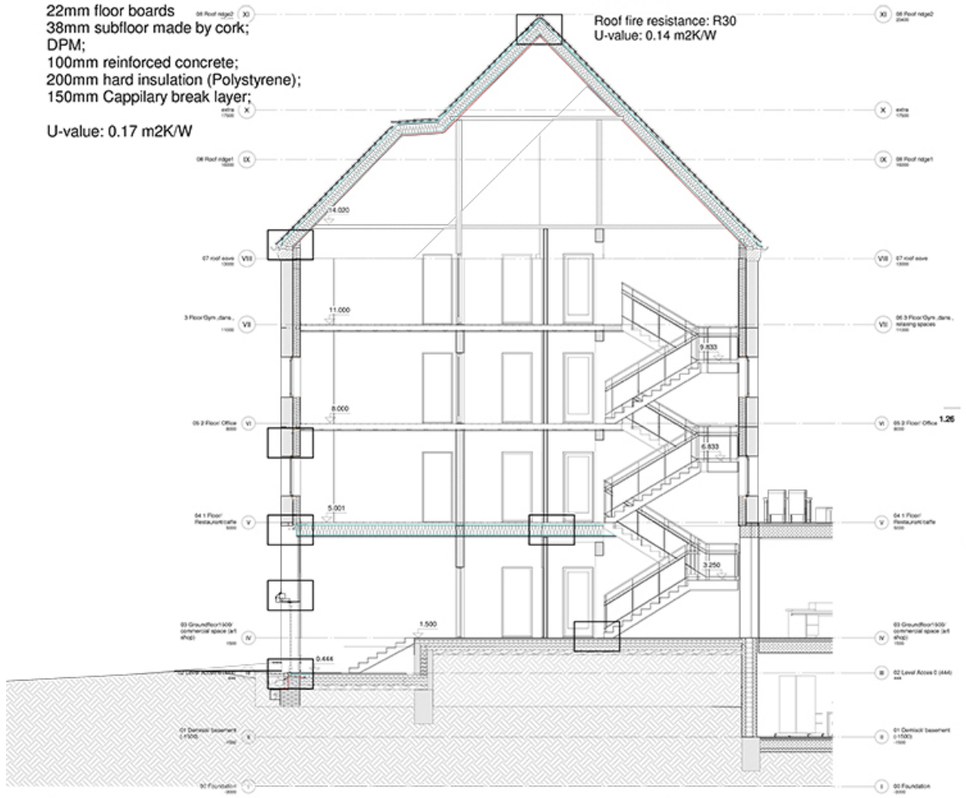
Wall fire resistance: R30
U-value: 0.18 m2K/W

**Ground slab**
22mm floor boards
38mm subfloor made by cork;
DPM;
100mm reinforced concrete;
200mm hard insulation (Polystyrene);
150mm Cappilary break layer;

U-value: 0.17 m2K/W

**Roof**
Existen: rafters 120 x 120 mm;
New:
Roof tiles 2.5 mm;
Distance battens 38 x 56 (vater resistant timber);
Difussion open roof underlay like OMEGA on t&G timber inpregned boards;
OSB boards 12 mm extension for encreasing the insulation cavity
Roof cavity filled with paper insulation like ISOCELL
(λ=0,039 W/ mK).
Fire resistnace: B – s2, d0;
Diffusion open DPM like AIRSTOP Vapour barrier sd= 18m. The membrane is surrounding the joist structure containing the cellulose insulation.
Fiber gypsum board 12.5 (for wall), 12.5 x 2 (for ceiling) like FARMACELL

Roof fire resistance: R30
U-value: 0.14 m2K/W




**Ground floor partition**
Ground floor joists like EASI - JOISTS WS300 (94 x 302)
Wall fire resistance: REI 60 A2 S1, d0 (BS 60)
Diffusion open DPM like AIRSTOP Vapour barrier sd= 18m. The membrane is surrounding the joist structure containing the cellulose insulation.
Floor cavity filled with paper insulation for fire and acustic insulation like paper insulation like ISOCELL
(λ=0,039 W/ mK).
Fire resistnace: B – s2, d0
Ceiling 12.5 x 2 like FARMACELL on 2mm steel profiles;

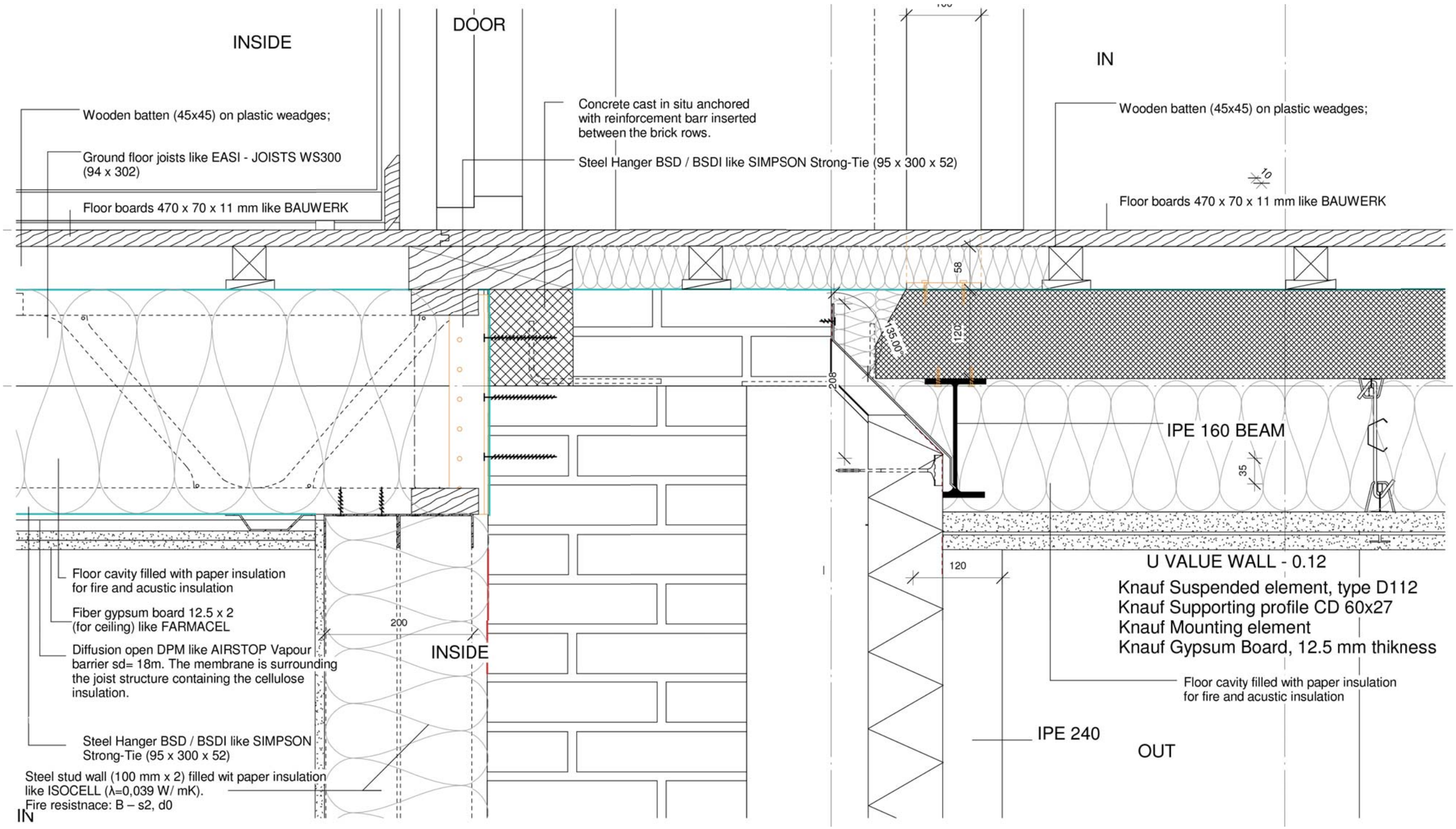
Floor fire resistance: REI 60 A2 S1, d0

**Basement Wall**
Existent:
512 mm brick wall
New:
Preasure resistant insulation (Polystyrene) 100 mm glued on the wall (with dry bonding mortar)and fasten with plastic anchors
Fire Classification: B1
Pressure resistant insulation 300 mm bellow the ground level;
Non-sliding fibre glass reinforcement fabric 1mm (orange dotted line) embedded in 5 mm emulsion-based reinforcing surfacer.
(λ=0.038 W/ mK);

# DETAIL GROUND FLOOR
## acces to the new building

Through rigorous DESIGN, several detail solutions are offered.

The connection between the historical building and the new construction is possible due to the upgraded old building.
The change of internal floors is prior to the conection of the new building with the historical.



03

# CONCEPT DESIGN & PLANNING-ARCH.

As technical art, architecture is the built realisation of a particular idea, or concept. It can be about people, about construction, about enviroment and has the ability to improve health, affect the way we relate to each other, support communities and in general to create a better space.

## EXPERTISE IN:

ARCHITECTURE - Renovations and New-Constructions

- Concept & sketches
- Interior design
- Exterior design
- Landscape analysis

## FOLLOWING PROJECTS:

PROSOLVE PROJECT - new construction/extension
HAND DRAWINGS - examples
VASES & FURNITURE- interior design

# PROSOLVE PROJECT

## +New construction/

## Extension

PROJECT DETAILS

**CATEGORY:** New Construction
**SIZE :** 4800m$^2$
**LOCATION :** Iasi-Romania

ABOUT THE PROJECT

The project is based on the idea of integration of a historical place, in the fluent life of a modern city.

Based on 3000m$^2$ area parking lot. The project includes 4800m$^2$ of new building construction and creates an inviting Main Street experience featuring a mix of restaurants, cafes, retail shops, art galleries, office space, housing, and open space.

GOAL & DEMANDS

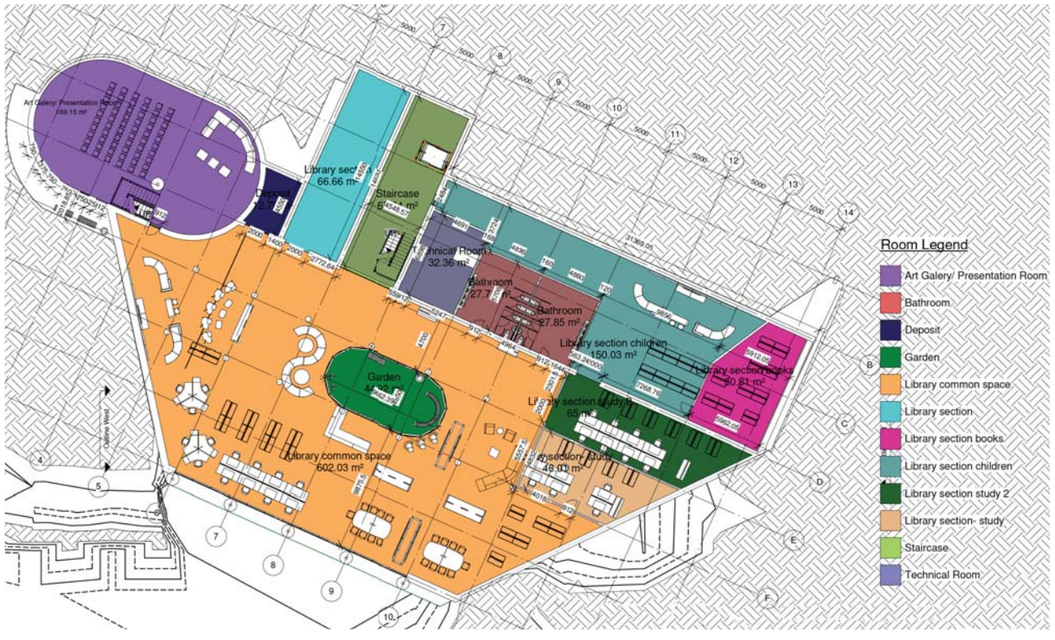
The goal is to create a vibrant walkable and sustainable gathering place for the community. The new building requires high standards related to the environment and 2050 demands. The use of a green roof is a must and in addition, "prosolve" products were applied on facades resulting in NZEB construction. The new building outline comes with plan documents-building design, local, state, and federal permitting urban design, U-value calculations, ventilation/sound/water, and heating analysis, management design, traffic analysis, roadway, and streetscape improvement design.

DESIGN

The new building combines simple geometrical shapes that have been cut on diagonal as the historical building, and added circular shapes as the modern. The Prosolve project is situated between a glass contemporary and historical building. The project is located on a historical street where always take place art events, and where are situated small antic boutiques selling books and collectible art. The building is DESIGNED in such a matter, so it creates spaces where the events can be held, a library for the books, and an art gallery for collectible art. The possibility of passing from the main street to the historical street invites the people to engage with the building that stands between. The project becomes a social common environment, where everything is green.

SOLUTIONS

"Prosolve elements" are reducing $CO_2$ Emissions 1m$^2$=1000 cars. The architectural role of the building is to create a bridge between the classic historical building and the modern glass building that stands in front of it. It is resulting in a strong, white, and organic shape.




## BASEMENT

Library
Interior garden
Meeting rooms
Common/ interactive space


## GROUND FLOOR

Green terrace
Access to 1 Floor Terrace
Art Gallery/Commercial
10 parking lots


## 1st FLOOR

Green roof
Restaurant
Common space with view


## 2nd FLOOR

Business floor-Offices


## 3rd FLOOR

Fitness Center
Pitch room-no celling

# HAND DRAWINGS

+A lifetime project that will always continue to grow.

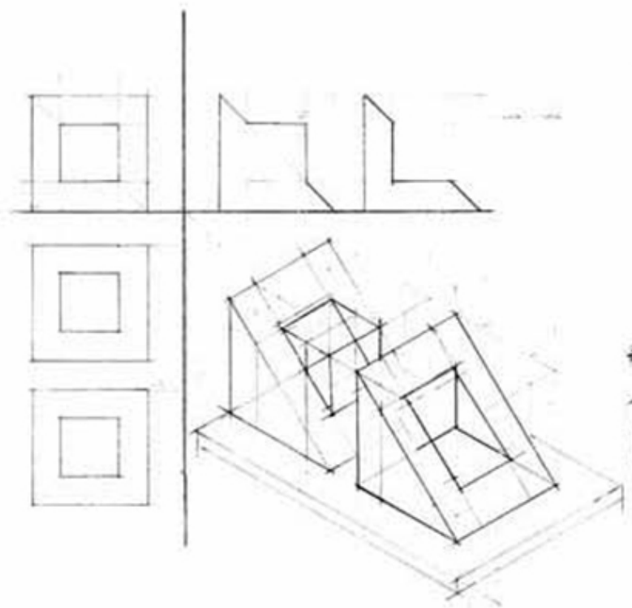
PROJECT DETAILS

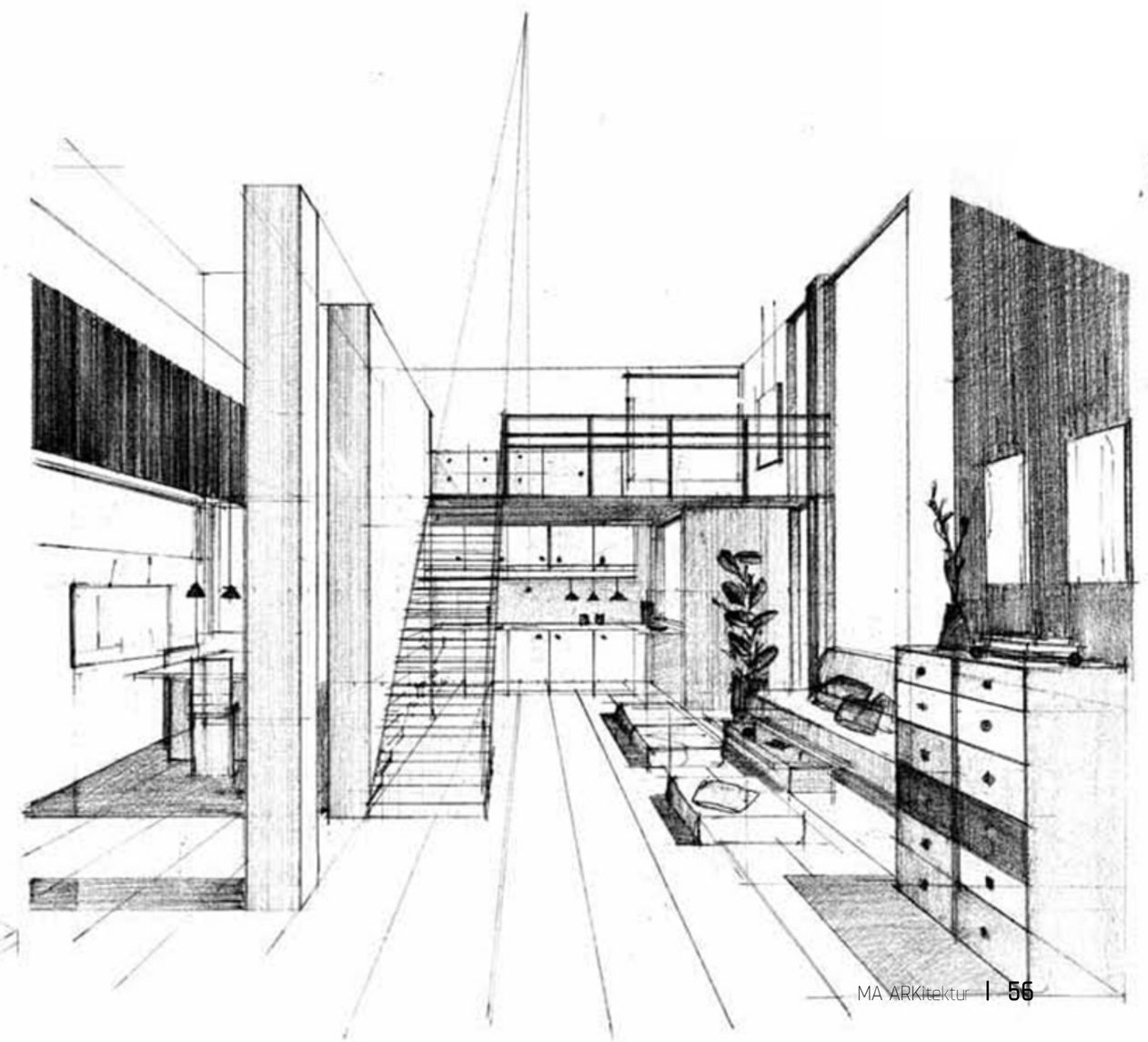
**CATEGORY:** Ideas & Sketches
**SIZE:** All formats
**LOCATION:** Everywhere

ABOUT

These are just several hand drawings, sketches, perspectives, axonometric projections made when I was studying Architecture and Design.

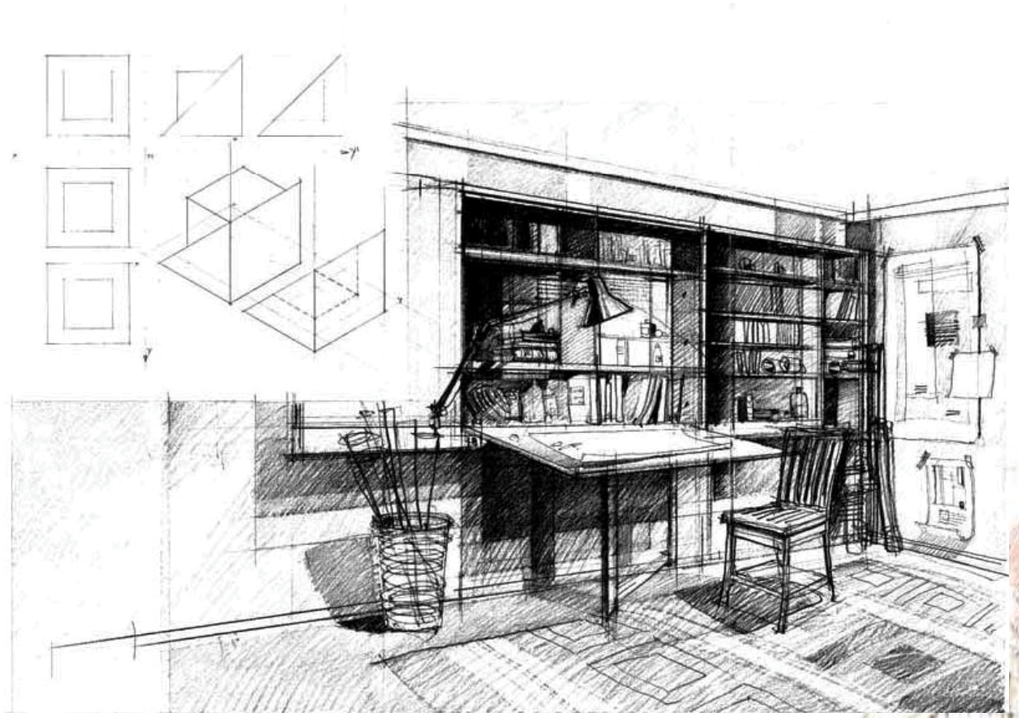
MY BIGGEST SATISFACTION IS TO HELP PEOPLE - AND WHERE TO START BEST IF NOT FROM MYSELF? HAVING THE POWER TO PUT ON PAPER EVERYTHING THAT COMES THROUGH MY MIND, HELPED ME TO CREATE A BETTER POSSIBLE WORLD FOR EVERYTHING THAT SURROUNDS ME.

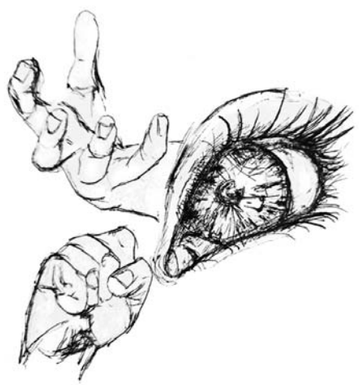


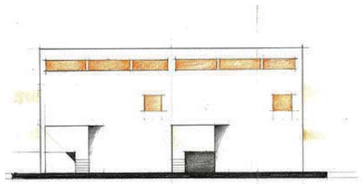


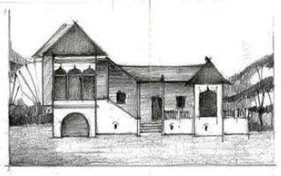
AXONOMETRY

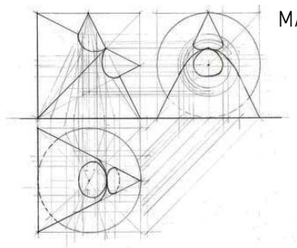
VOLUME STUDY DESIGN



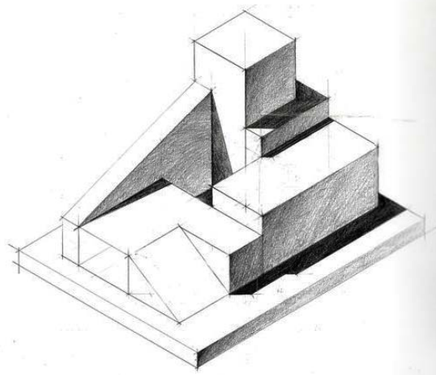








MANIFEST



# SKETCH

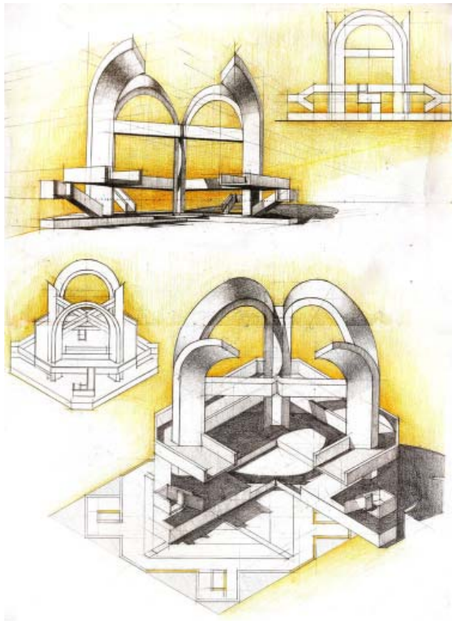
## DRAWINGS

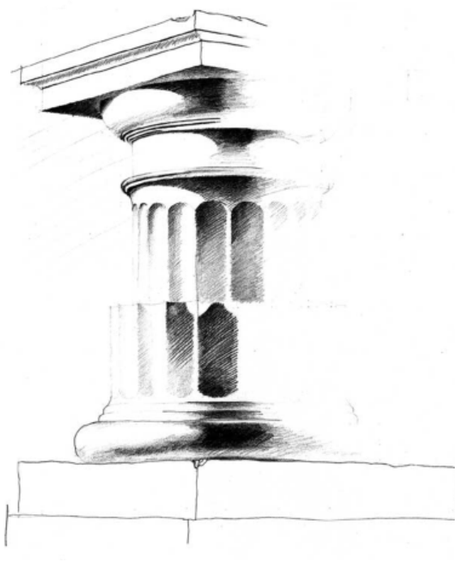
# ART

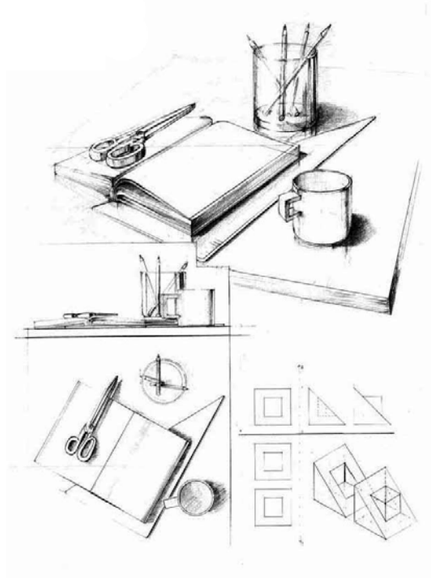
IDEA

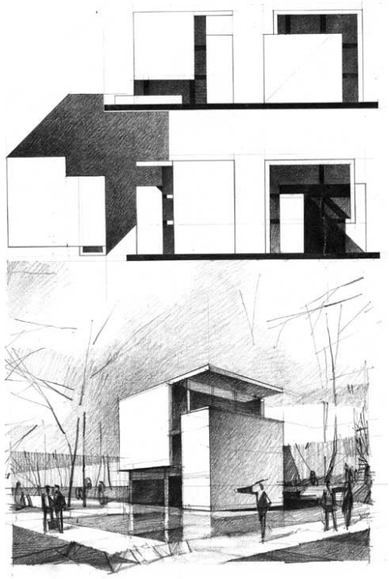
Lines, shapes and spaces

Architecture and design is not a skill is just a good eye and hard work.

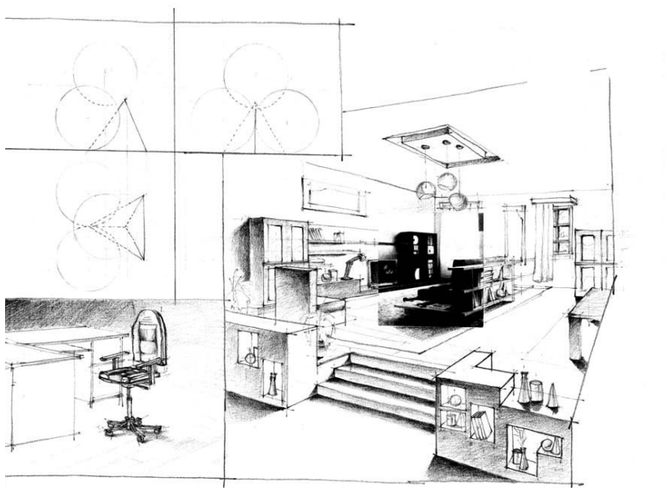


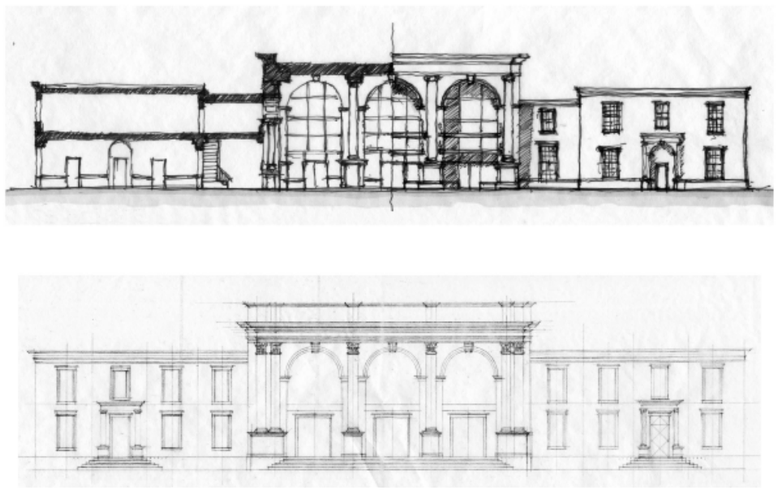


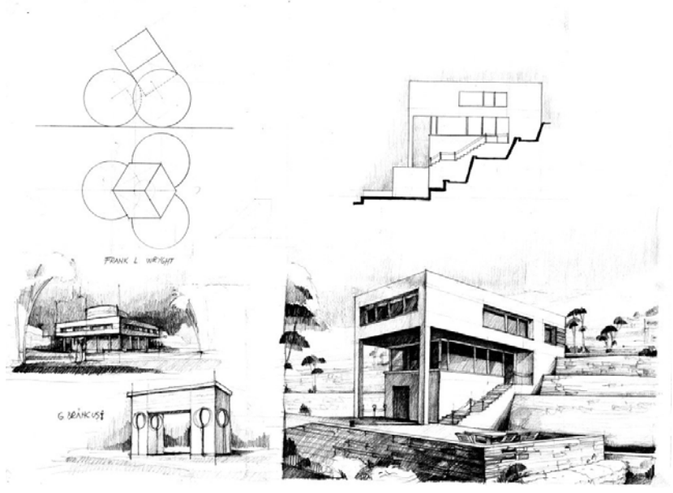




## PERSPECTIVE







# VASES & FURNITURE

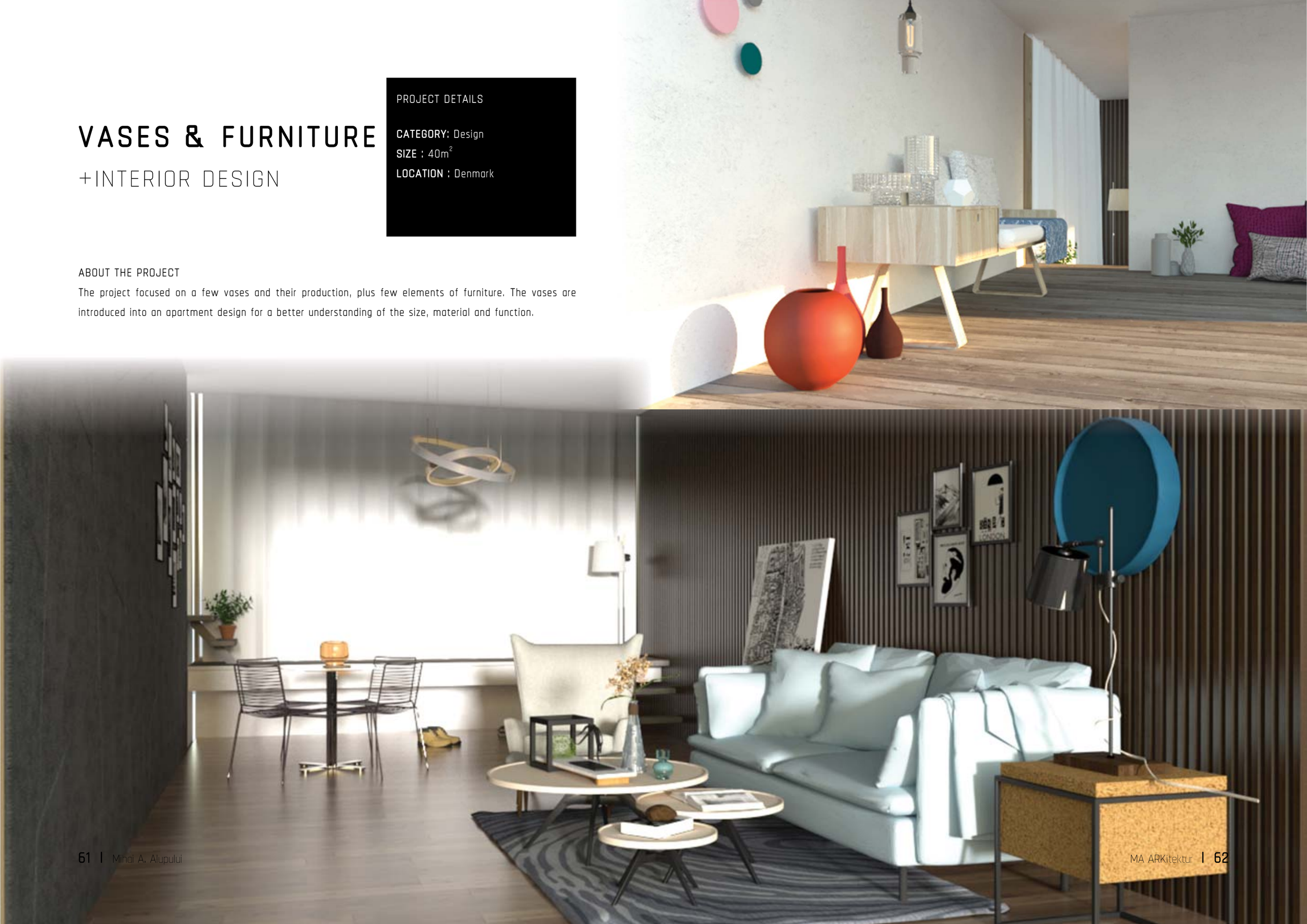
## +INTERIOR DESIGN

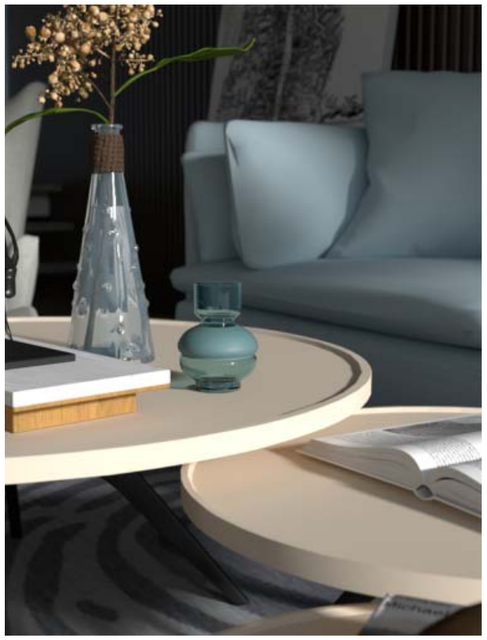
PROJECT DETAILS

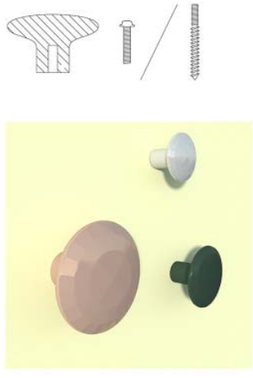
**CATEGORY:** Design
**SIZE :** 40m$^2$
**LOCATION :** Denmark

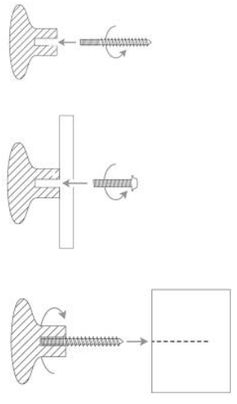
ABOUT THE PROJECT

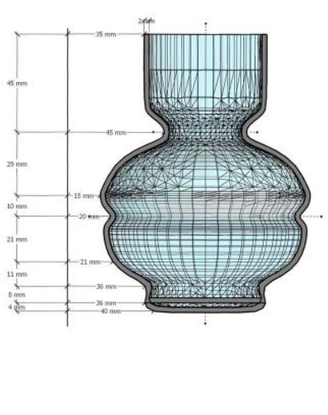
The project focused on a few vases and their production, plus few elements of furniture. The vases are introduced into an apartment design for a better understanding of the size, material and function.

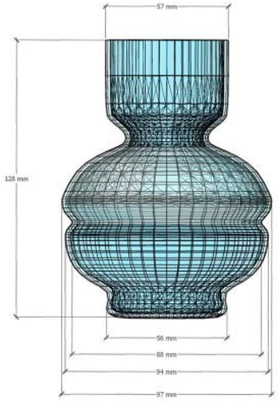


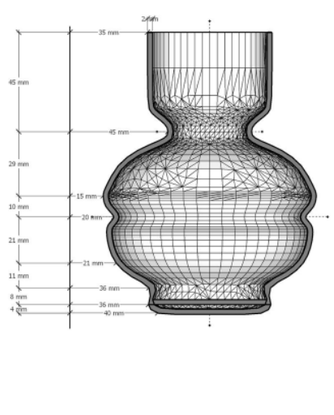


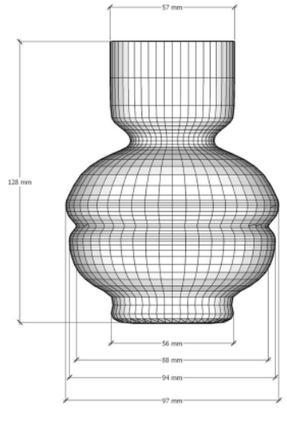












04

# BUILDING CONSTRUCTION/ REVIT

I am using Revit as the main power engine to create the 3D model and all the components, plans, details and buildings information. Everything is designed, and build according to Danish building regulations.

## EXPERTISE IN:

### BUILDING DESIGN

- Details
- Elevations
- Plans
- Sections
- Building components analysis
- U-value calculation
- Production drawings

### BUILDING PLANNING AND MANAGEMENT

- Building site plan
- Project planning
- Quanity sheet
- Construction cost
- Finishes completitions
- LCC

### BUILDING SERVICES

- Air amount calculations
- Pipe calculations
- U-value calculations
- Sound analysis
- Ventilation plans
- Sewer/Water/heating plans

## FOLLOWING PROJECTS:

MULTI STOREY SOCIAL HOUSING - new construction
MULTI-PURPOSE CENTRE - design & production

# MULTI STOREY SOCIAL HOUSING

+New construction

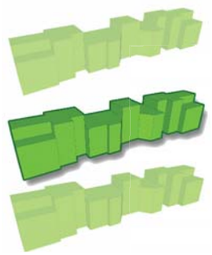
PROJECT DETAILS

**CATEGORY:** New Construction
**SIZE :** 2281m$^2$
**LOCATION :** Horsens-Denmark

ABOUT THE PROJECT

This is an academic project that won a student competition at VIA. The intention is to create dwellings for handicapped people with level access, and facilities accessible for them. The building is designed to fit with the surroundings, in a sustainable way, offering affordable prices for everyone.

The site is located on Sonderbrogade 44+48, Horsens. The surrounding offers interesting architecture. Buildings from the early 1900s appear with a degree of uniformity, held together by fairly uniform building height of predominantly three-story, listed as connected buildings in the road boundary.



GOAL & DEMANDS

The building is designed to exceed the "low-energy class".

DESIGN

The main concept is to create a maximum amount of flats on each floor while maintaining a price as low as possible. From this matter, it is used only one main staircase and access balconies. The building is harmonized with the surroundings and urban plan through the stairs case, which cuts open through the building and through the front balconies.

Play of lights and shadows is created. In order to make the building ECO- friendly a common area on the roof is created. The area includes green space, where people are able to admire the view and the sunlight.

SUSTAINABLE SOLUTIONS

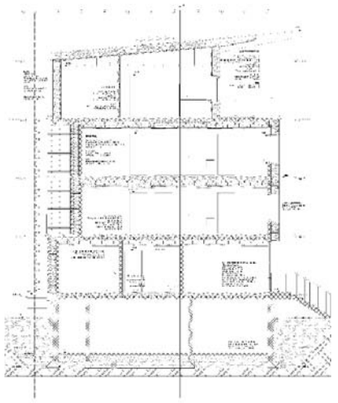
Mechanical ventilation is used with a heat recovery system to limit the usage of energy.

In addition, 2 different types of solar panels are used.

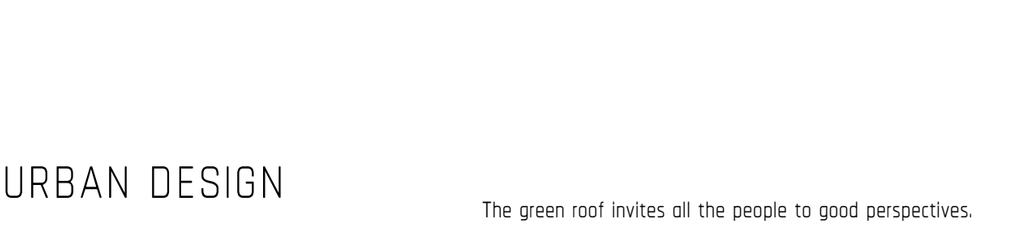
Thin-film technology cells are glued on the curtain wall from the main staircase and Polycrystalline cells are used on the roof.

# URBAN DESIGN

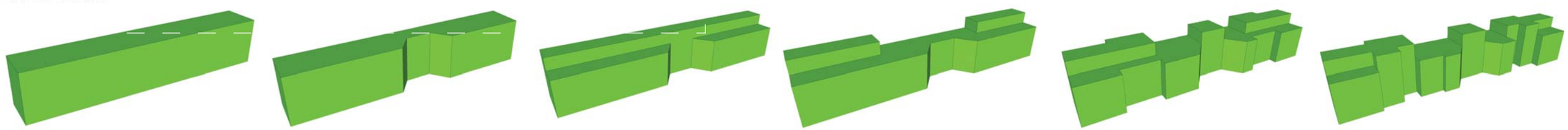
The green roof invites all the people to good perspectives.



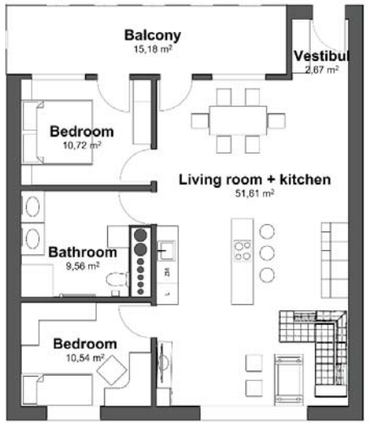




INTEGRATION



# DESIGN




## APARTMENTS

The building contains 21 APARTMENTS + 1 COMMERCIAL SPACE. Each floor is designed with 6 apartments: 4 big apartments with 3 rooms (112 and 115 $m^2$) and 2 small apartments with 2 rooms (90$m^2$). Each apartment is with its own private balcony. Bathrooms are suitable for handicapped people.

ALL THE APARTMENTS ARE WITH OPEN KITCHEN TO THE LIVING AND DINING ROOM, WHICH CREATES A ONE BIG OPEN AREA.

ON THE 3rd FLOOR ARE PLACED 4 BIG PENTHOUSES (95 AND 92$m^2$), WHICH INCLUDES PRIVATE TERRACE, TWO BEDROOMS, OPEN KITCHEN TO DINING AND LIVING ROOM

## RESOURCES

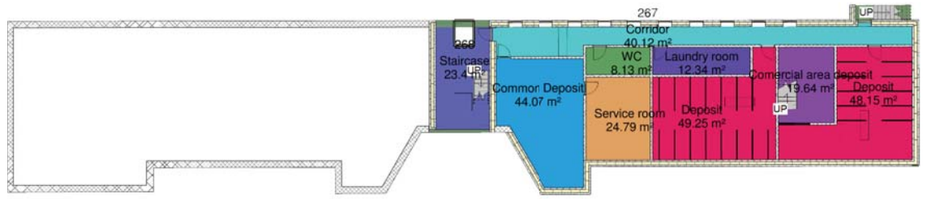
01 In order to make a more interesting design, MONO- PITCH ROOF with a slope to the Northside is used.

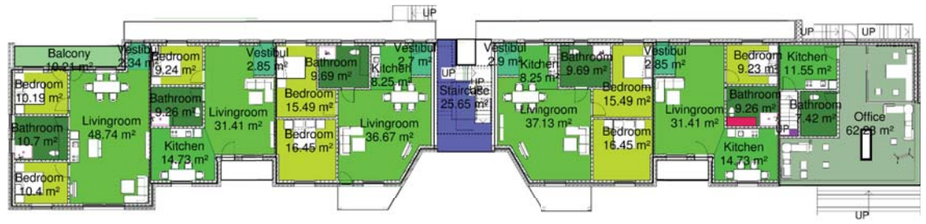
02 Concerning Technical installations, a shaft for each apartment is designed.
The shafts are connected with the bathroom and kitchen.

03 It is used mechanical ventilation and the bathrooms are floor heated.

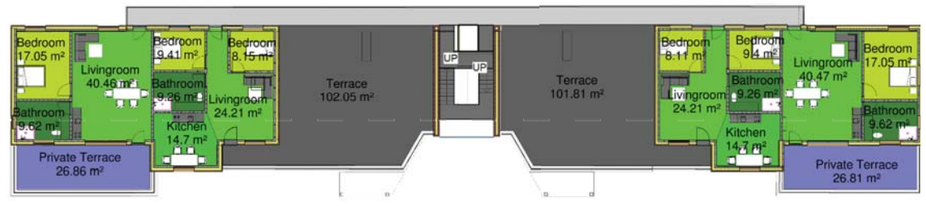
## URBAN DESIGN

OUTSIDE AREA is getting re-designed. On the building site, behind the building, 26 parking spaces for handicapped people are created, including approximately 40 covered parking spaces for bikes.
To make it closer to nature, places for trees, hedges, and grass are considered. The site also includes playgrounds for children such as slides, swings, sandbox. Pergola and benches are placed as a recreational space.

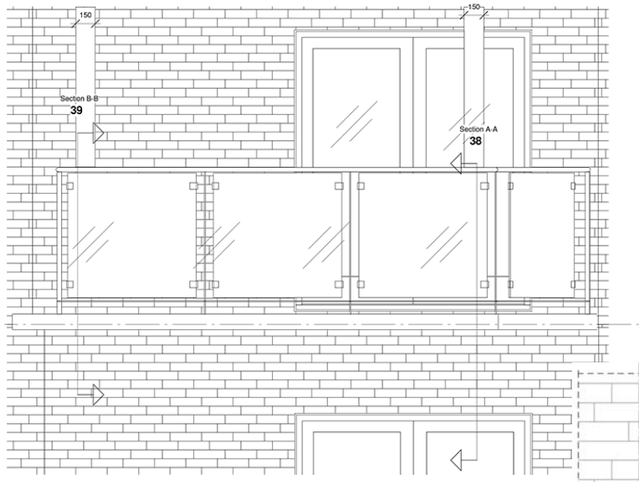







# BALCONY



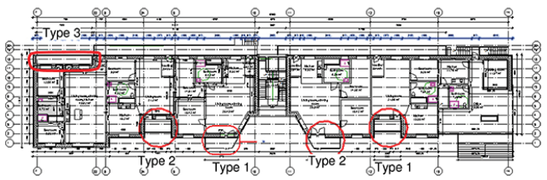

Private balcony description:
Cantilivered balcony made of **C**ompact **R**einforced **C**omposite (CRC) – a high performance concrete with a very high compressive strength and extremely good durability.

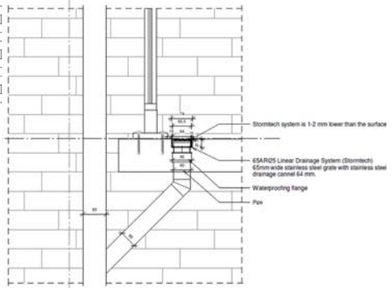
The incorporation of steel fibers gives the opportunity of having a slim design for the balcony slab.
Company: Hi-Con.

**Railing:**
Simple railing design with aluminium frames and laminated glass.
Company: Metalglas.

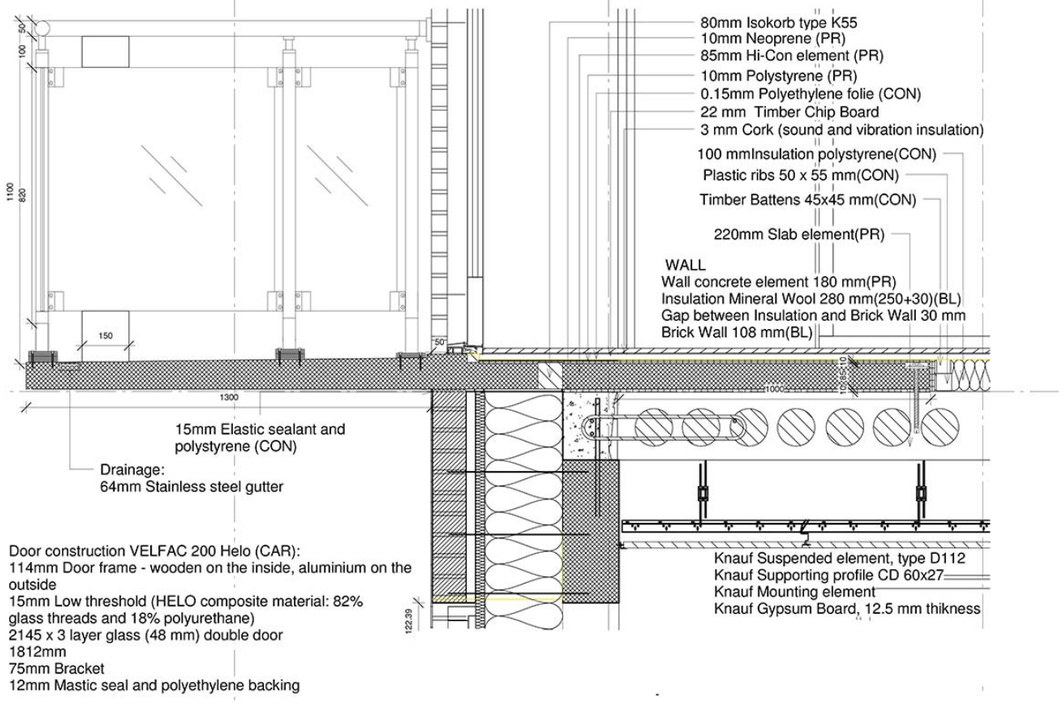
**Drainage:**
All balcony slabs have the slope of 15 ‰, connected to downpipe (Ø80 mm).
Company: Stormtech.

VI 04 2 F 7200 Number of balconies on each floor: 4
Total number of balconies in 1 building: 16



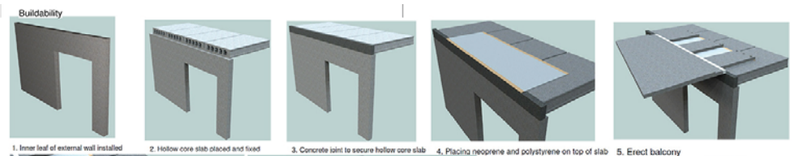

Rain water from balcony slab is removed by collecting water into a gutter (channel), which directs it to downpipe.
The system involves a 65 mm wide stainless steel grate and stainless steel drainage channel of 64 mm.
Pipe connected to downpipe: Ø60 mm
Downpipe: Ø80 mm
Slope: 15‰
Company: Stormtech

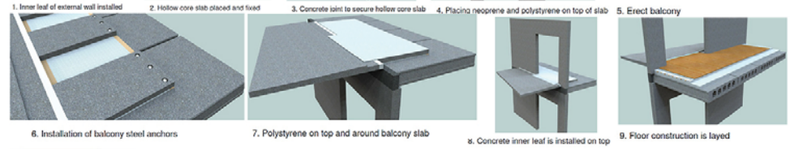



Door construction VELFAC 200 Helo (CAR):
114mm Door frame - wooden on the inside, aluminium on the outside
15mm Low threshold (HELO composite material: 82% glass threads and 18% polyurethane)
2145 x 3 layer glass (48 mm) double door
1812mm
75mm Bracket
12mm Mastic seal and polyethylene backing

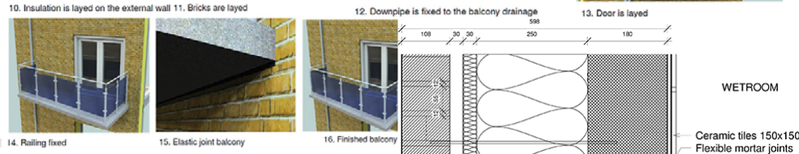


Buildability



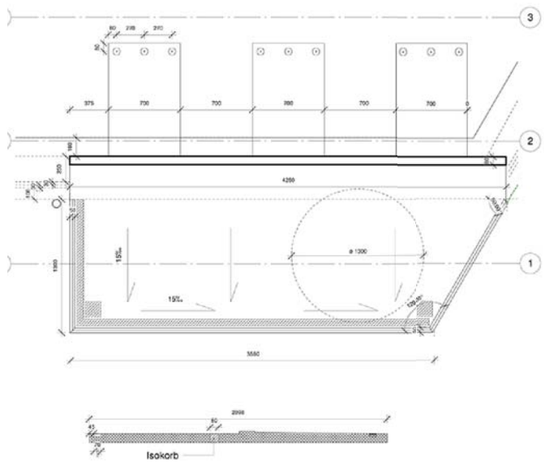




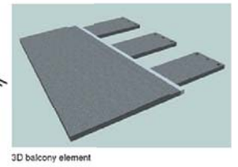




Component drawing
1 : 20

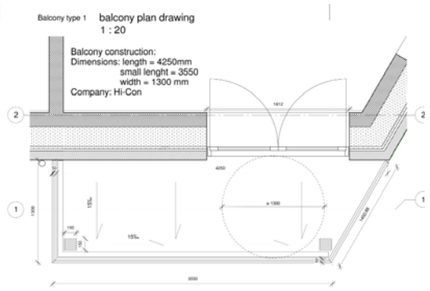







Balcony type 1 balcony plan drawing
1 : 20

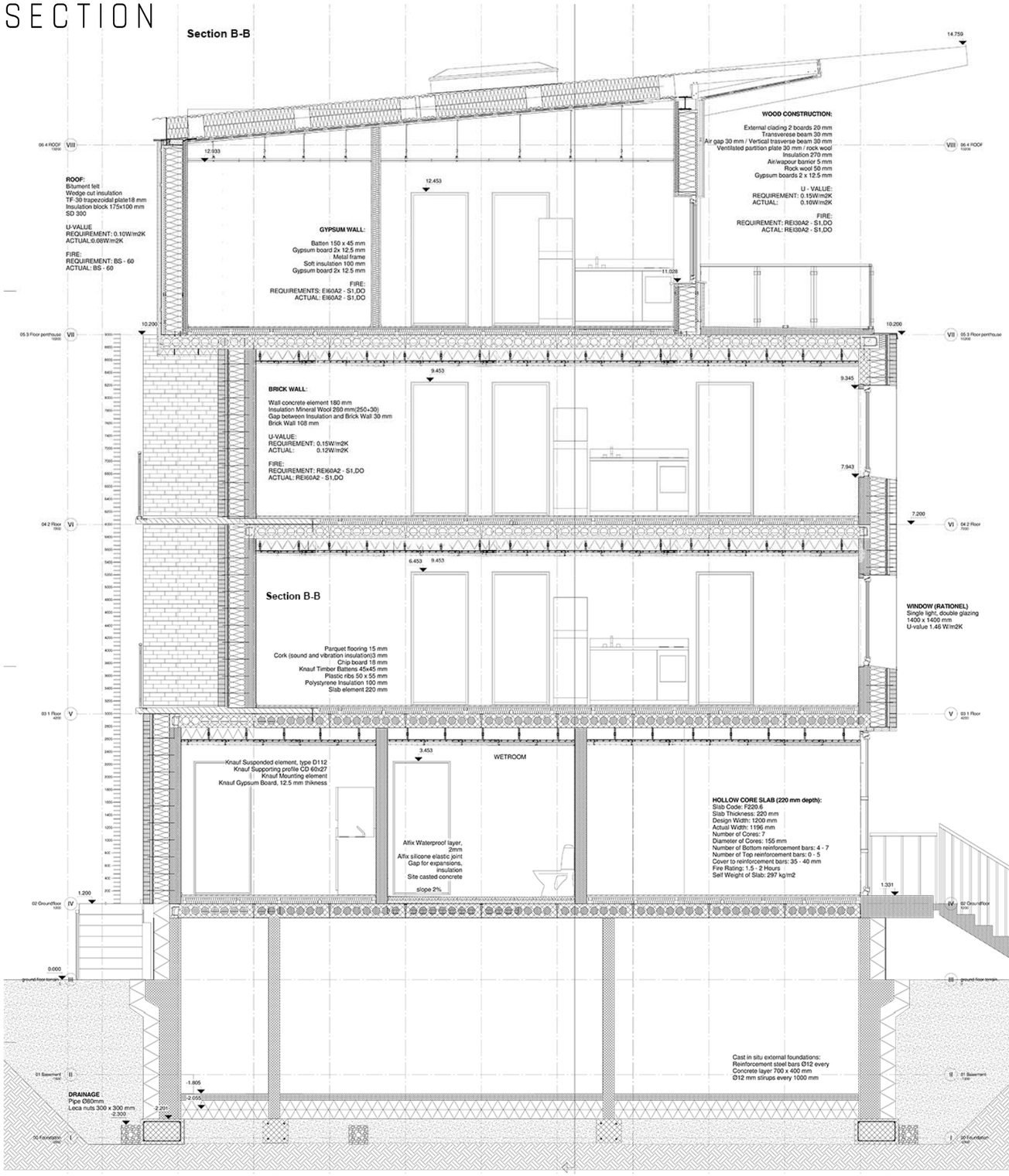
Balcony construction:
Dimensions: length = 4250mm
small lenght = 3550
width = 1300 mm
Company: Hi-Con



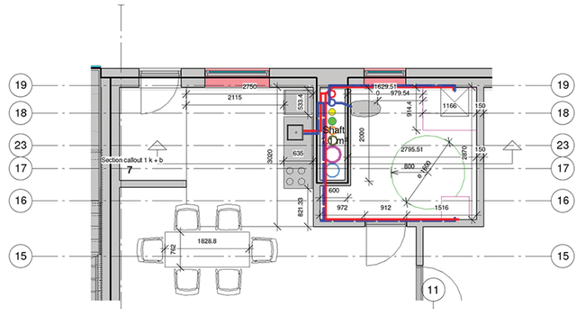

**Railing:**
Glass sheets: 772x830 mm
Aluminium frame: Ø50 mm
Company: Metalglas

**Drainage:**
Slope: 15‰
Gutter: 60mm
Downpipe: Ø80 mm

# SECTION




# Kitchen And Bathroom Analysis

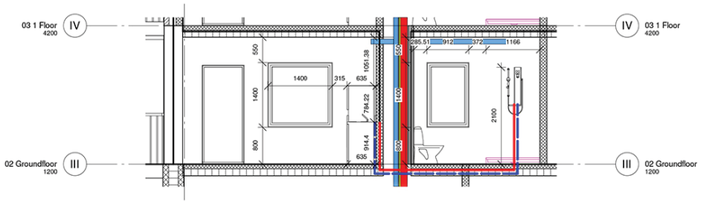



Callout1 kitchen + bathroom of 02 Groundfloor
1 : 50

Kitchen

-kitchen is containing storage space for tableware ,
a sinkwith a drain and space for hot plates and food preparation.
-celing hight is no less than 2.3m

Bathroom
-there is a clear manovering area with 1.5 m in front of the WC
-toilet seat is t a height of 48 cm
-the washbasin is at a height of 80cm




Bathroom

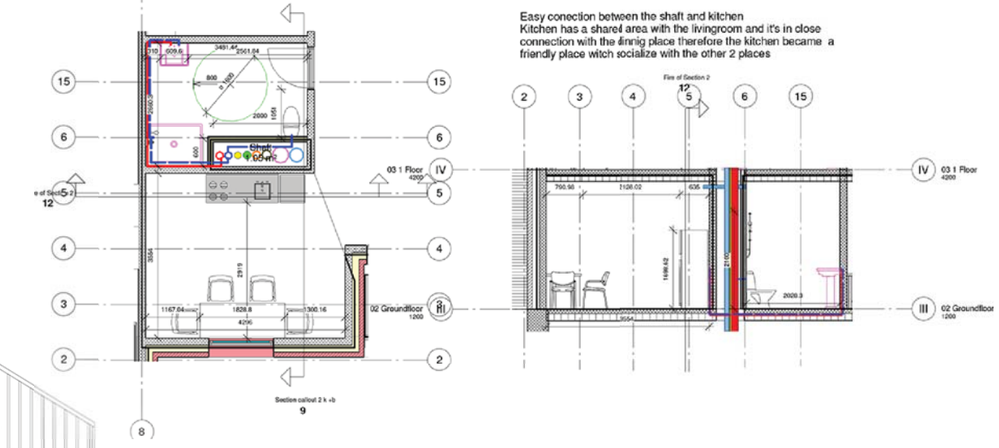
Flexibility in bathroom components.
Comming with easy acces for handicap people ( havingthe minimum of required of space )

Posibility of changing arangement ,short pipe ways from the shaft .

Easy acces to the shaft,(being placed between bathroom and kitchen )
and running all wayfrom up to down in all the apartments
Toilet connected with the shaft

Kitchen

Easy conection between the shaft and kitchen
Kitchen has a shared area with the livingroom and it's in close connection with the dinnig place therefore the kitchen became a friendly place wtich socialize with the other 2 places



# MULTI-PURPOSE CENTRE

## +Design & Production

PROJECT DETAILS

**CATEGORY:** New Construction
Conversion
**SIZE :** 2798m$^2$
**LOCATION :** Horsens-Denmark

ABOUT THE PROJECT

The project came with an Outline-design, to be remodeled and converted into a multi-purpose Centre. The new project includes a sports hall/ event center with all the administration departments. The building has to be modeled as an integrated modular system. The construction is entirely formed of prefabricated elements- both concrete and timber elements.

GOAL & DEMANDS

The initial project is not fulfilling the fire and sound regulations, together with the ventilation system in accordance with the Danish Building Regulations. The Building is split into 2 different parts. One is made out of prefabricated wood panels and one is out of concrete. The building must be built with prefabricated elements and they need to be calculated, split, and created.

DESIGN

This is just one way of presenting architecture: this project being very minimalistic, without too much information but at the same time creating warmth, peace, and calm.

The concrete building is designed for basketball games. The court is situated on the ground floor with lockers and bathrooms. For the second floor are designed offices.
The wooden building is a restaurant where players and people can enjoy a conversation and the time spent with friends. In addition, 3 big meeting rooms separately from the restaurant are designed.

PRODUCTION

Eight different prefabricated walls are designed and sent to production. It includes also calculations of anchors, the center of gravity, and concrete corrosion.
The wooden building can be easily redesigned and new spaces can be created with ease.

# DESIGN

Simple, but elegant design, friendly user and really fast build.



## DELIVERED DOCUMENTS

### BDS.

Details
Elevations
Plans-TTS/ELEMENTS
Sections
Building comp. analisys
PRODUCTION DETAILS

### BPM.

Building site plan
Project planning
Quantity sheet
Construction cost
(finishes, completitions)
LCC

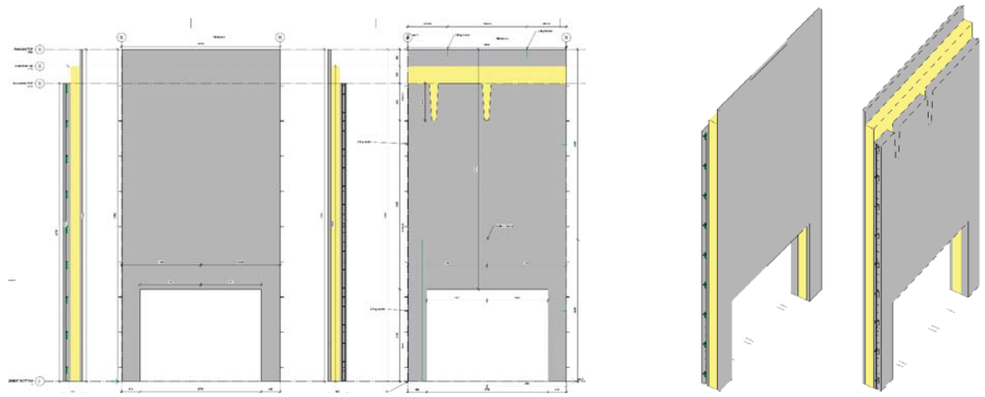
### BSE.

Air ammount
Pipes calculation
U-value
Sound analysis
Ventilation plans
Sewer section
Water+Heating plans

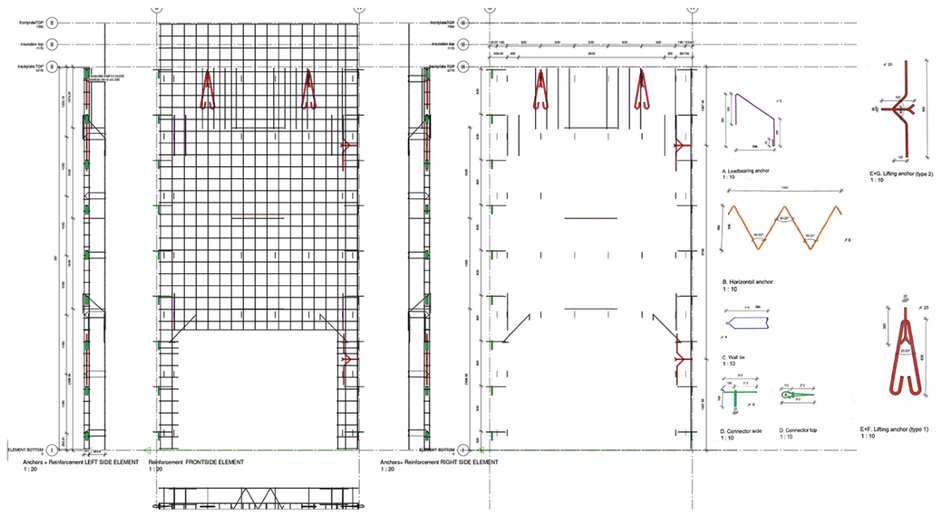
### STD.

Component
Dimensioning
Self weight
Snow load
Wind-facades
Wind action
Anchors

## PRODUCTION DRAWINGS



## ANCHORS, CENTER OF GRAVITY, CONCREATE CORROSION IS CALCULATED

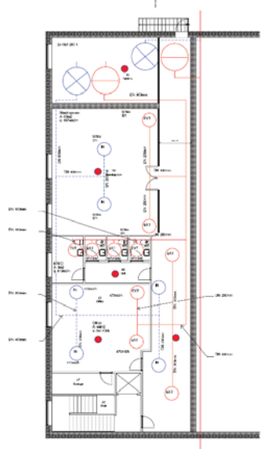


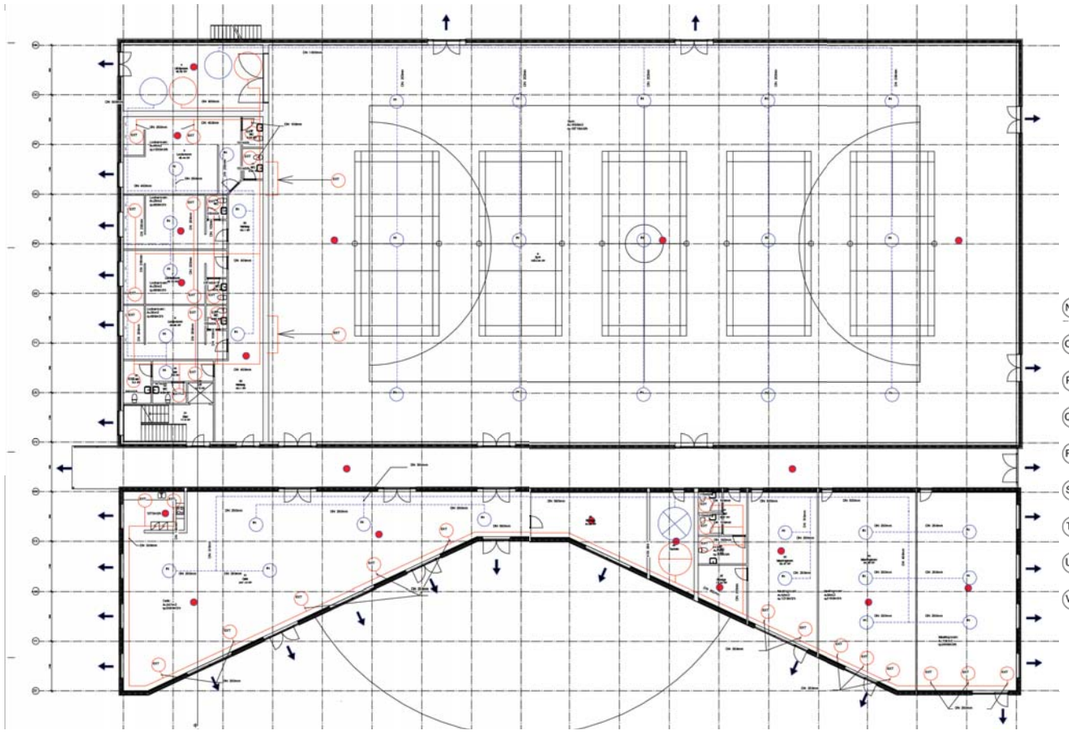
# VISUALISATION

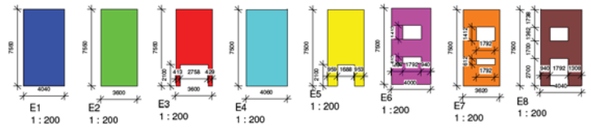
ABOUT THE DESIGN

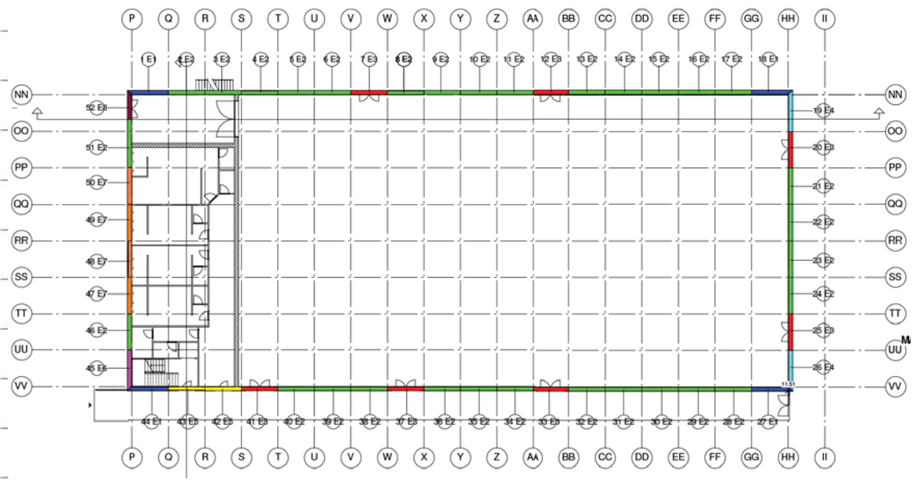
2 DIFFERENT FORMS HELD BY
A LONG LIGHTED CORRIDOR,
WHICH SPLITS THEM
AND AT THE SAME TIME
CONNECTS THEM

# PLANS & BUILDING ELEMENTS







ARKITEKTUR

# THANK YOU FOR STAYING WITH ME UNTIL THE END!

FOR DETAILED INFORMATIONS VISIT MY

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