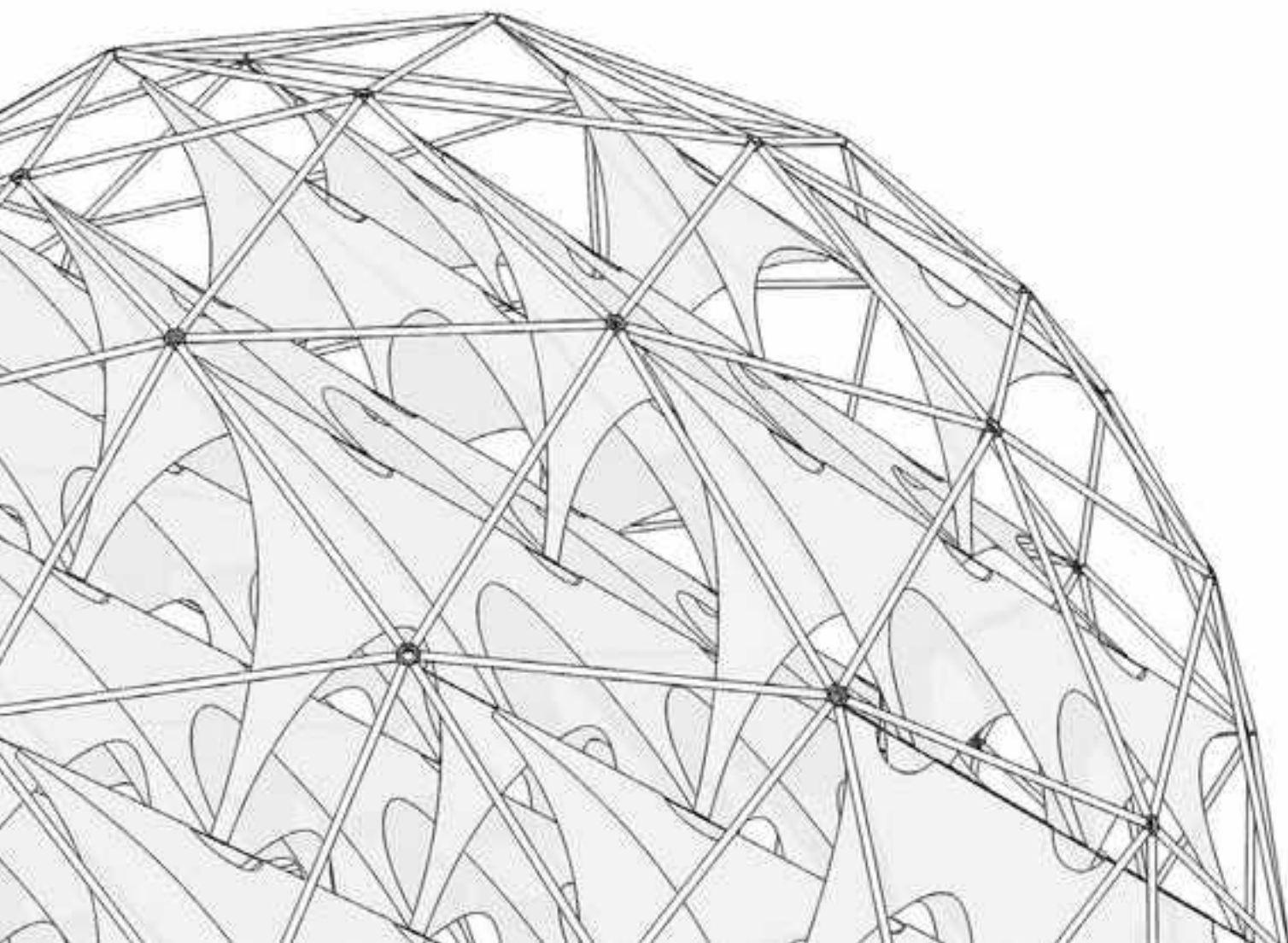


ARCHITECTURE PORTFOLIO

ESRAA REFAAT



About

Esraa is an M.A. Architecture graduate and LEED Green Associate (LEED GA). Her passion for art is a constant in her life. It started in her childhood and expanded to various creative activities during her architectural studies, including sketching, painting, woodworking, and photography. Esraa's career aspiration is to bring together sustainability, art, and architecture to create innovative and impactful designs.

Portfolio 2017 - 2023

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Note: [Red](#) or underlined text are hyperlinks.

Year: 2022 | **Location:** Westkreuz S-Bahn - Berlin | **Building:** Pedestrian Bridge
Software: Autocad - Revit - Photoshop | **Studio:** Master's DIA - Hochschule Anhalt - [Urban Topographies](#) - [Thilo Folkerts \(100land.de\)](#)

CROSS-RAILS

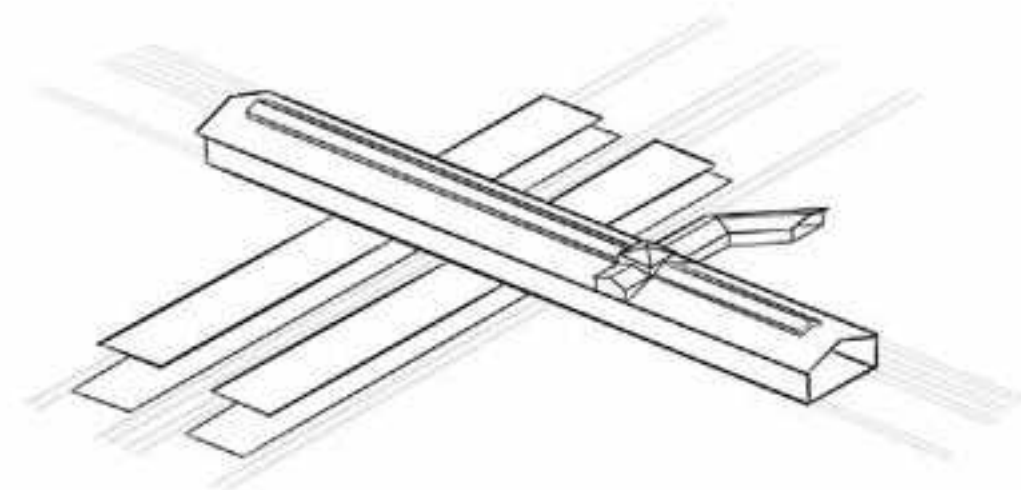
In connection with the current changes happening in Berlin, we find the Westkreuz green area lying with a large number of privately owned allotment gardens not participating in the realm of the city's public urban green. Subsequently, the task was directed to study the area's entry points to improve the accessibility and connection with its surroundings. While targeting the slightest intervention to the site and leaving the biggest impact, the choice went to providing a connection point between Westkreuz S-Bahn station to the opposite side, beside the "Verienshaus", by creating a bridge crossing the existing green valley. The new structure creates and adds a different quality to Westkreuz area by allowing the visitors to experience not only accessing a forest-like land but to walk through and between the trees from a height of 6 meters.

[Lars Lerup Award Nomination Video](#)

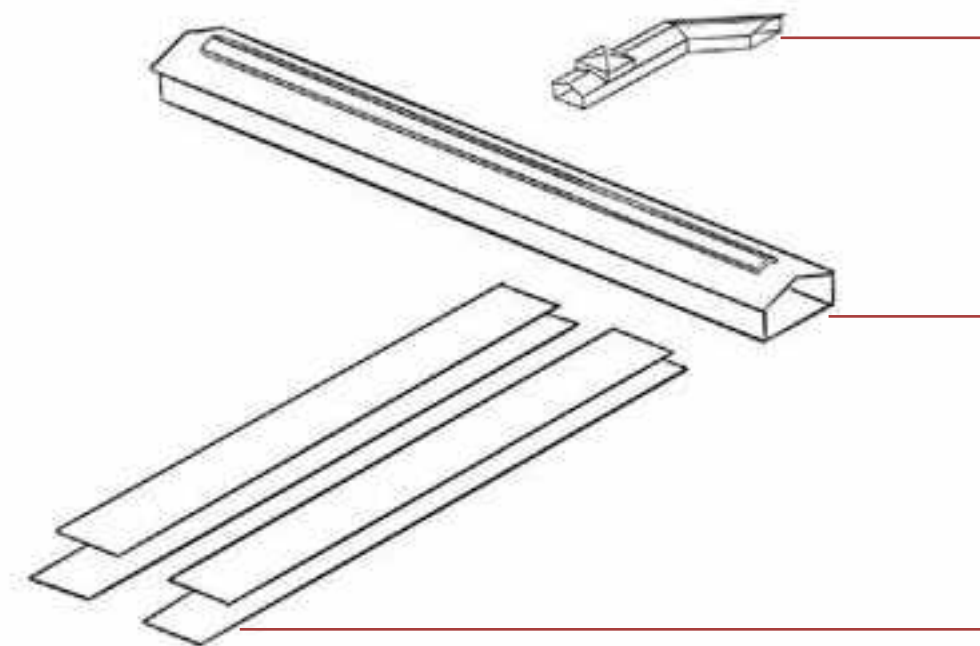




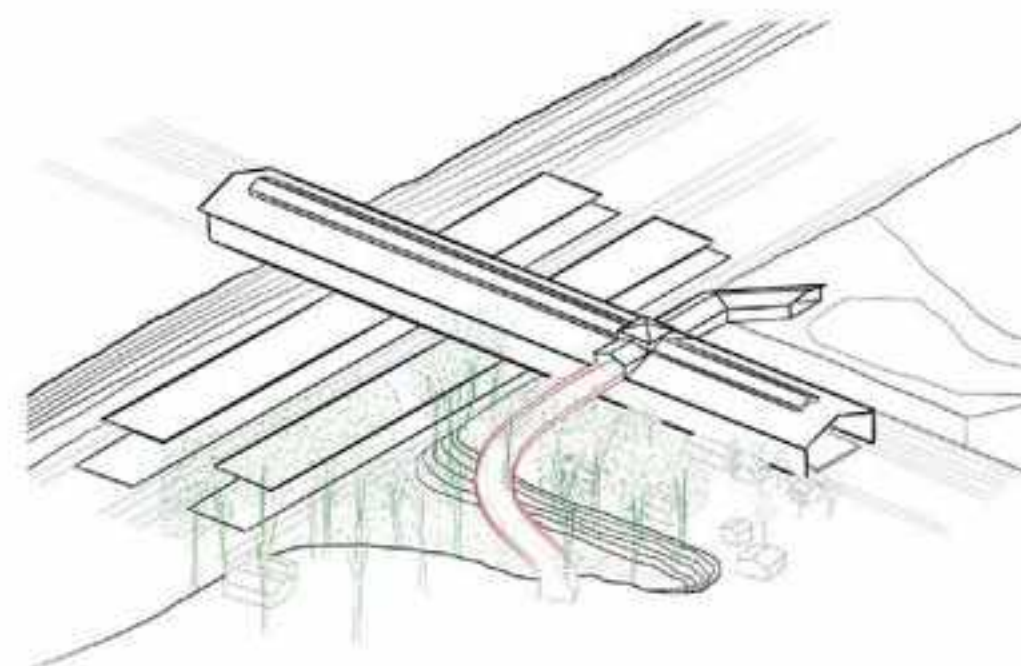
Site Plan



Level One



Level Two



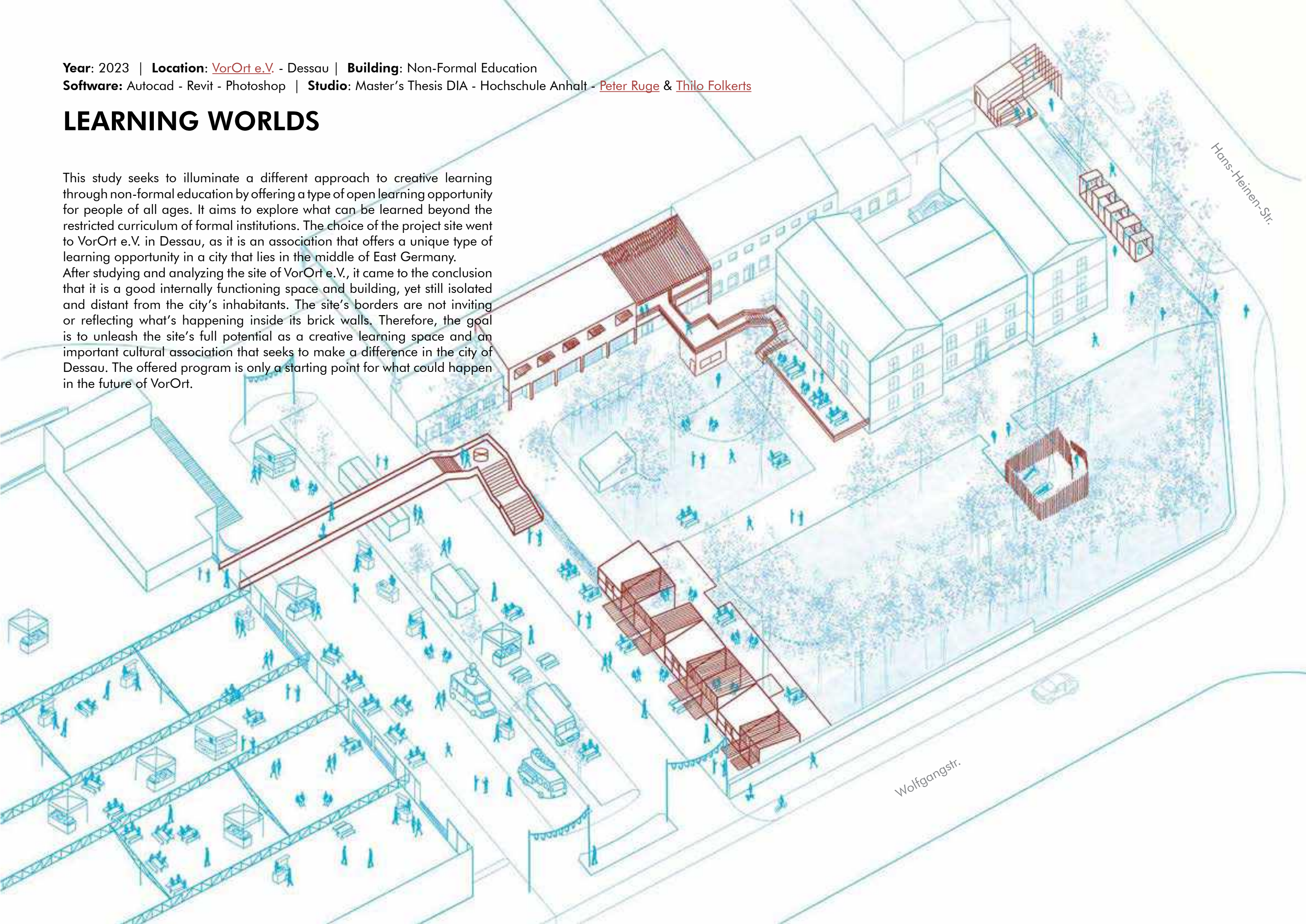
Level Three

Design Process

Year: 2023 | **Location:** VorOrt e.V. - Dessau | **Building:** Non-Formal Education
Software: Autocad - Revit - Photoshop | **Studio:** Master's Thesis DIA - Hochschule Anhalt - Peter Ruge & Thilo Folkerts

LEARNING WORLDS

This study seeks to illuminate a different approach to creative learning through non-formal education by offering a type of open learning opportunity for people of all ages. It aims to explore what can be learned beyond the restricted curriculum of formal institutions. The choice of the project site went to VorOrt e.V. in Dessau, as it is an association that offers a unique type of learning opportunity in a city that lies in the middle of East Germany. After studying and analyzing the site of VorOrt e.V., it came to the conclusion that it is a good internally functioning space and building, yet still isolated and distant from the city's inhabitants. The site's borders are not inviting or reflecting what's happening inside its brick walls. Therefore, the goal is to unleash the site's full potential as a creative learning space and an important cultural association that seeks to make a difference in the city of Dessau. The offered program is only a starting point for what could happen in the future of VorOrt.

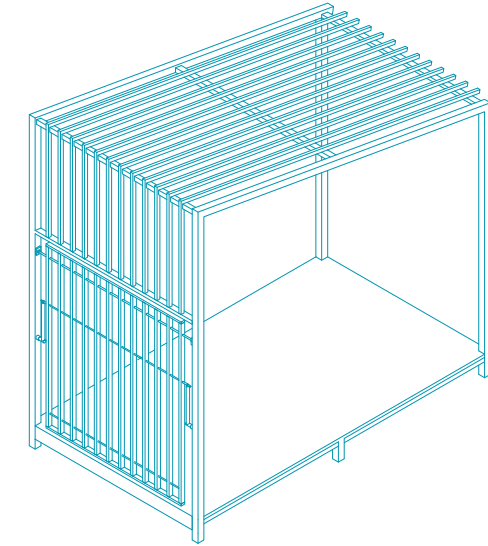
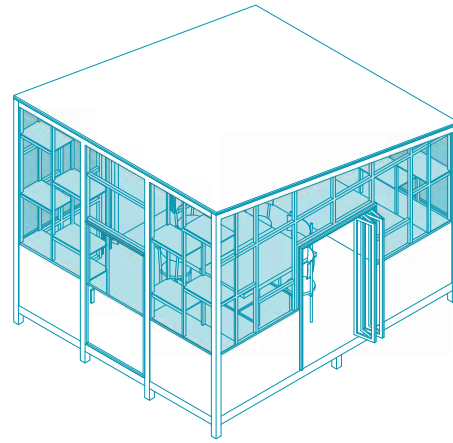




3D section showing the sun terrace's relation to the site and cutting through the rooftop co-working/Library (on the left) as well as the workshops (on the right)



Physical model of the workshops' closed and open space



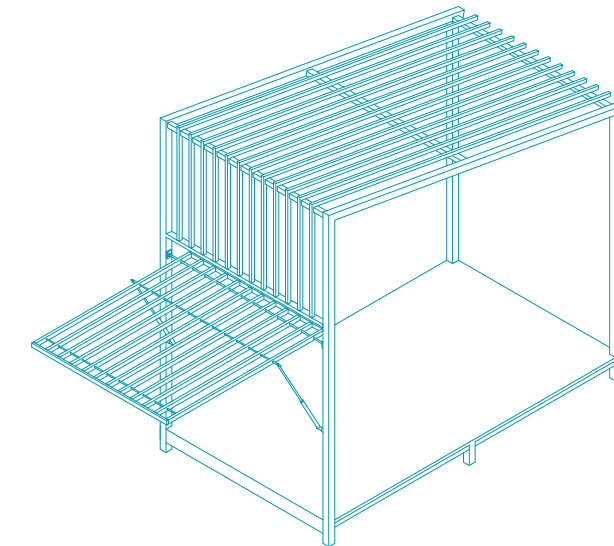
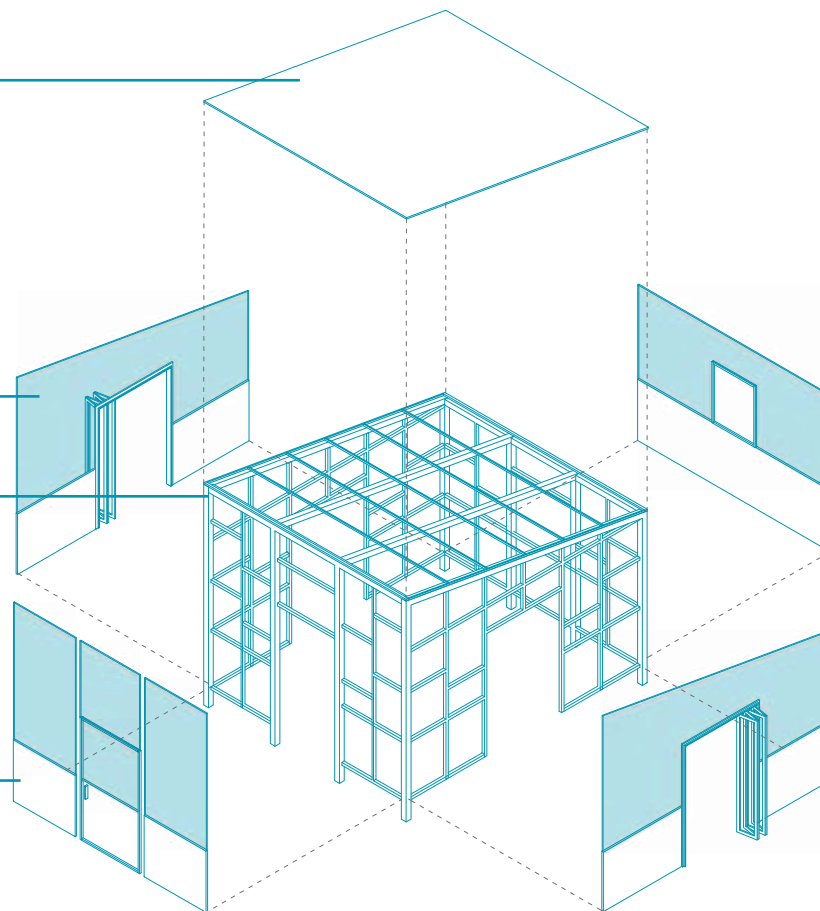
Recycled Compressed Plywood Boards

During weekdays

Recycled Polycarbonate Sheets

Solid Construction Timber

Recycled Compressed Plywood Boards



During weekends

Material Analysis for the workshops' unit

Opening mechanism analysis for the workshops open structure

Year: 2019 | **Location:** Museumsdorf Düppel - Berlin | **Building:** Museum

Software: Autocad - Revit - Archicad - Rhino - Illustrator - Photoshop | **Studio:** Erasmus+ - MA TU Berlin - **Re:Düppel** - **Natural Building Lab** - Eike Roswag-Klinge

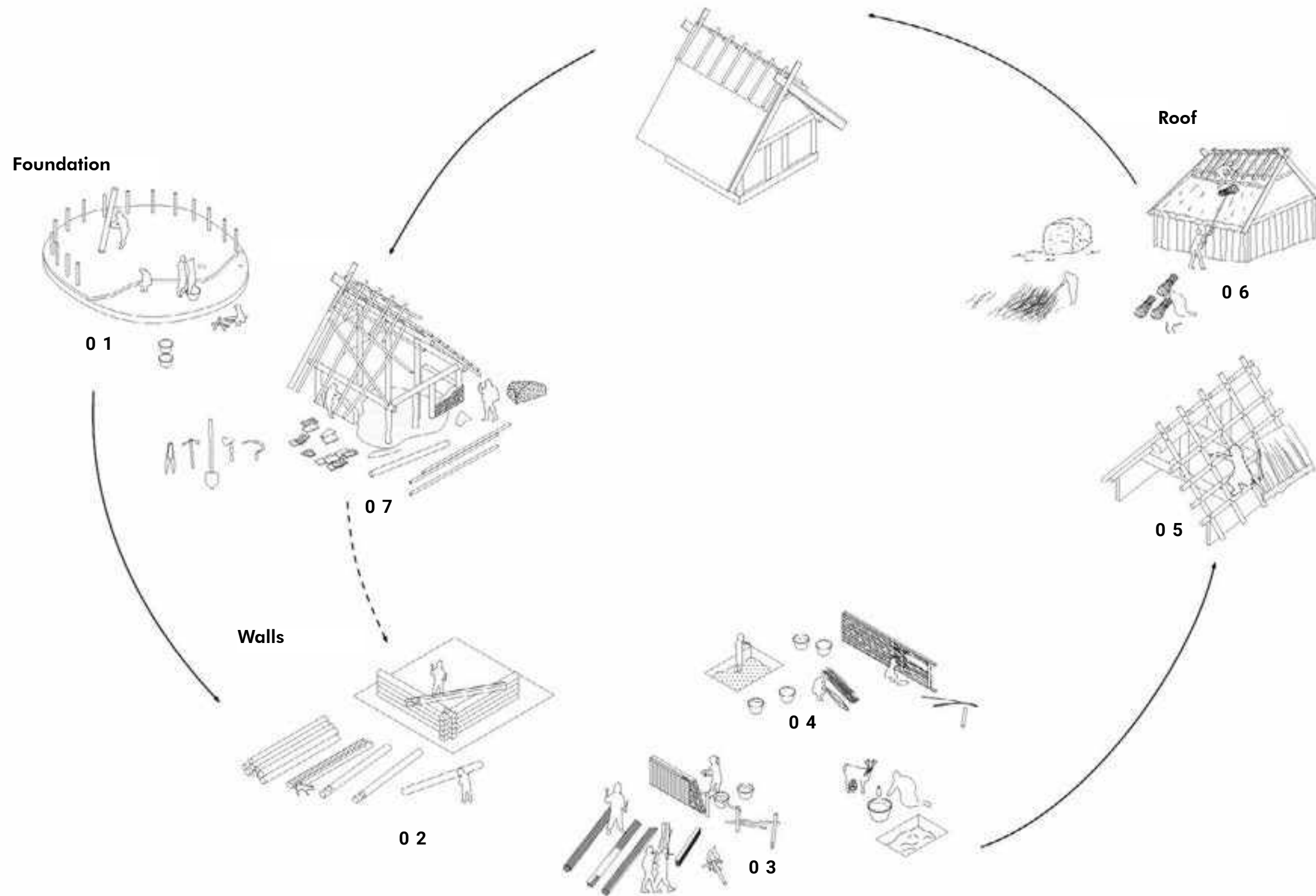
LIGHT MUSEUM

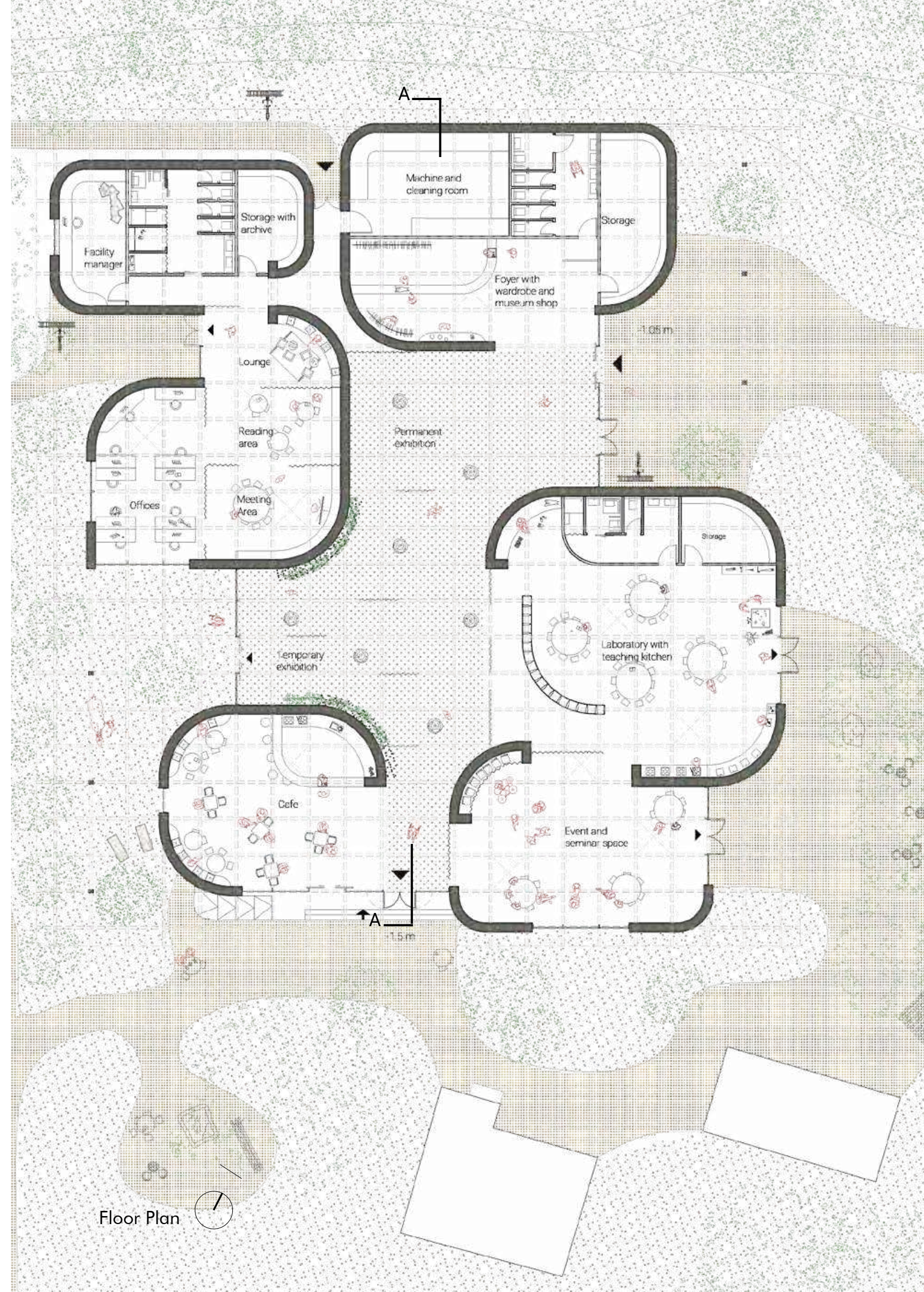
Visitors find themselves walking through a forest filled with high trees and long narrow pathways. As they slowly merge themselves into nature, they are captured by the serenity of the place. The path helps in creating the feeling of isolation from the hustle and bustle of the city and creates a relaxed atmosphere, preparing the visitors for their journey through the medieval era found in Düppel. The new building of the museum is hidden behind the trees, one storey, as close to nature as possible. Project in collaboration with: Daniel Dieren, Katia Schmit, and Monika Pawlak.





Section A-A





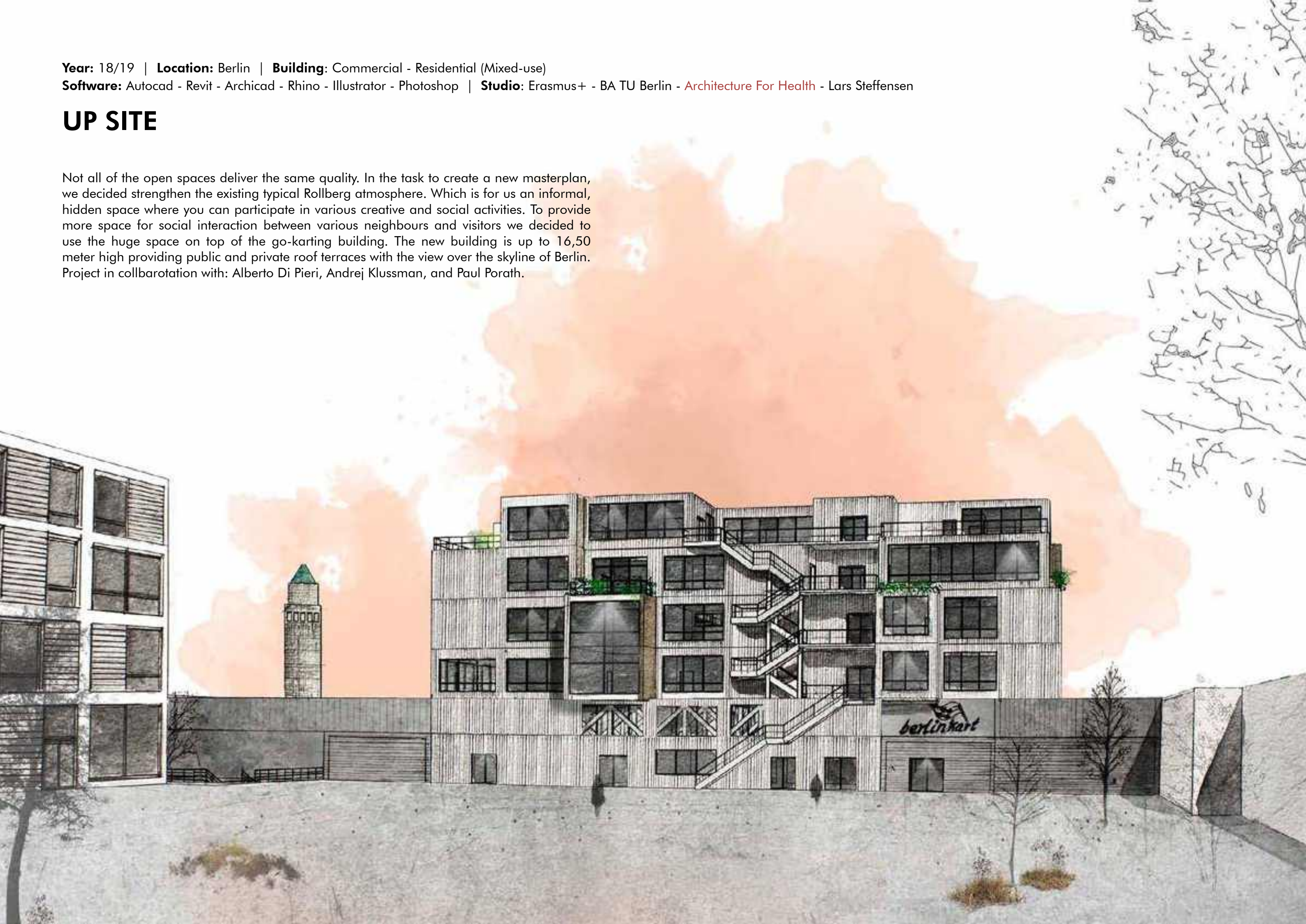
Floor Plan

Year: 18/19 | **Location:** Berlin | **Building:** Commercial - Residential (Mixed-use)

Software: Autocad - Revit - Archicad - Rhino - Illustrator - Photoshop | **Studio:** Erasmus+ - BA TU Berlin - *Architecture For Health* - Lars Steffensen

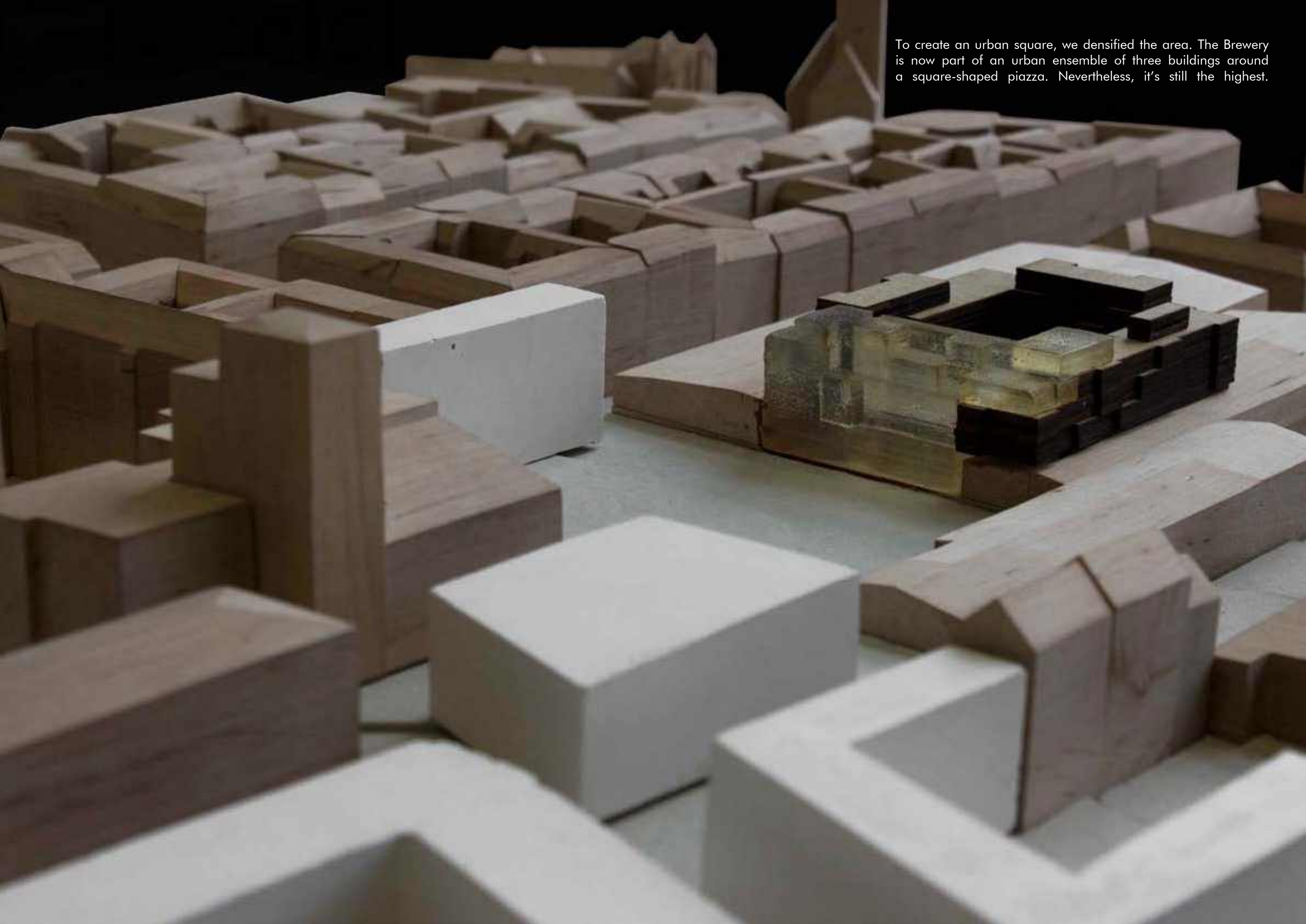
UP SITE

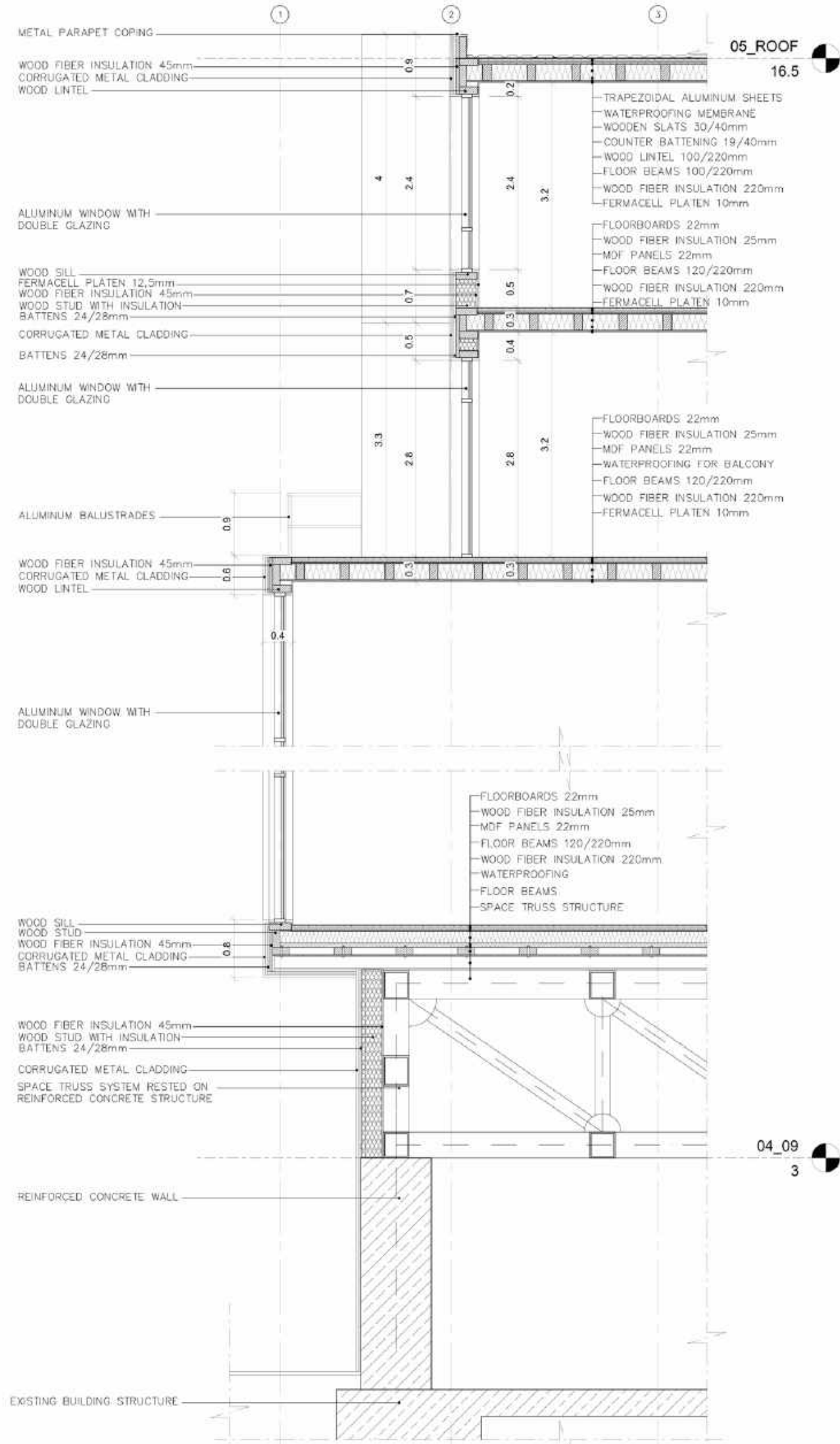
Not all of the open spaces deliver the same quality. In the task to create a new masterplan, we decided strengthen the existing typical Rollberg atmosphere. Which is for us an informal, hidden space where you can participate in various creative and social activities. To provide more space for social interaction between various neighbours and visitors we decided to use the huge space on top of the go-karting building. The new building is up to 16,50 meter high providing public and private roof terraces with the view over the skyline of Berlin. Project in collaboration with: Alberto Di Pieri, Andrej Klussman, and Paul Porath.





To create an urban square, we densified the area. The Brewery is now part of an urban ensemble of three buildings around a square-shaped piazza. Nevertheless, it's still the highest.





Year: 18/19 | **Location:** Berlin | **Type:** Flying And Floating Structures

Software: Autocad - Rhino - Grasshopper - Makerbot - Photoshop | **Course:** Erasmus+ - MA TU Berlin - Colab - Ignacio Borrego

FLYING SPHERE

Flying structures explore the manifold history of the kite through design, fabrication, geometry, and utility. The 2000 year history of the kite is deeply rooted in architectural and urban investigations. This seminar explores the architectural possibilities and future of what is the world's oldest form of aircraft. Design, construction and flying techniques are the basis. The concept of the kite was inspired by Hoberman's sphere, however, this one is not deployable, it is flyable. The model started with a geodesic sphere of 50 cm in diameter, then 100 cm, until reaching 120 cm as a final prototype.

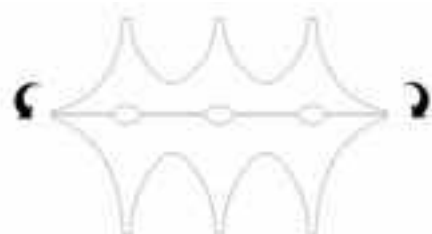
Project in collaboration with: Chloé Ozoux, Daniel Dieren, Eduardo Brizio, Iaria Hani, and Julie Laconte.



Sails assembly detail (1)



Sails assembly detail (2)



Sewing/Stitching



Polyester Nylon Ripstop



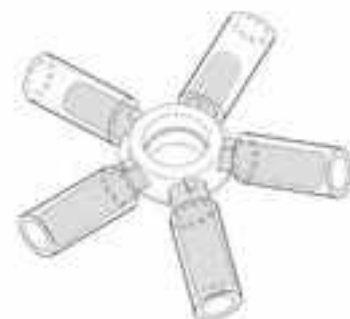
3D Printed Carbon Nodes



Fishing Wire



Polyester Round Tube





Location: Tempelhofer Feld
Photo: Chloé Ozoux

Year: 2021 | **Location:** Sharma - KSA | **Building:** Residential - Administrative | **Design Consultant:** Dar Al-Handasah (Shair and Partners)
Software: Autocad - Revit - Rhino - Photoshop - 3ds Max | **Project Management Consultant:** AECOM | **Client:** NEOM

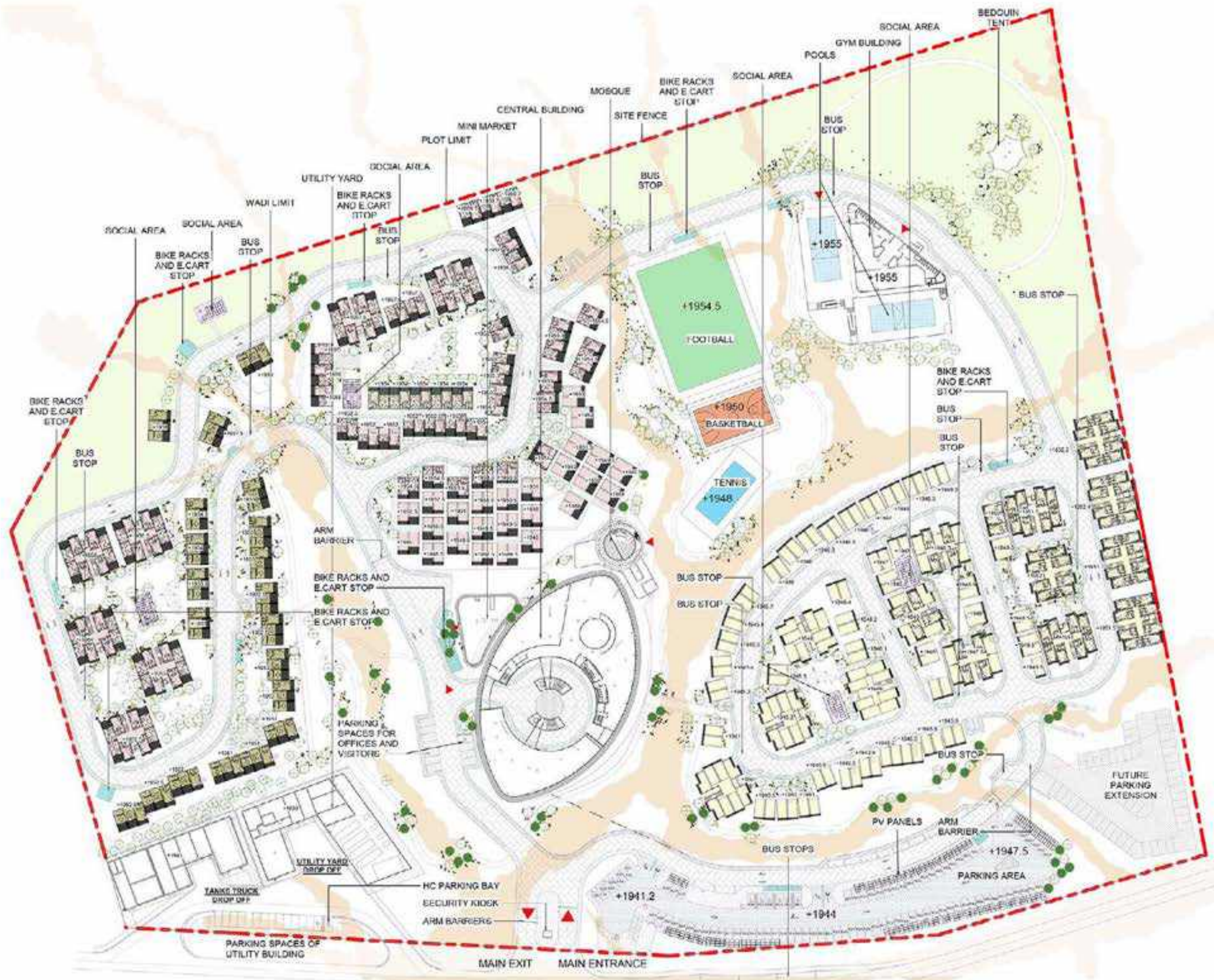
NEOM BASE CAMP

NEOM Mountain Base camp aims to be a premium asset and model residential camp development leading NEOM Company operations in the Tabuk region. Emphasizing on:

- Modular & demountable structures for most of the architectural assets, mainly the residential units.
- Minimizing the impact on the environment.
- Maintaining and following the topography of the site, considering the development will be demolished after more than 10 years.

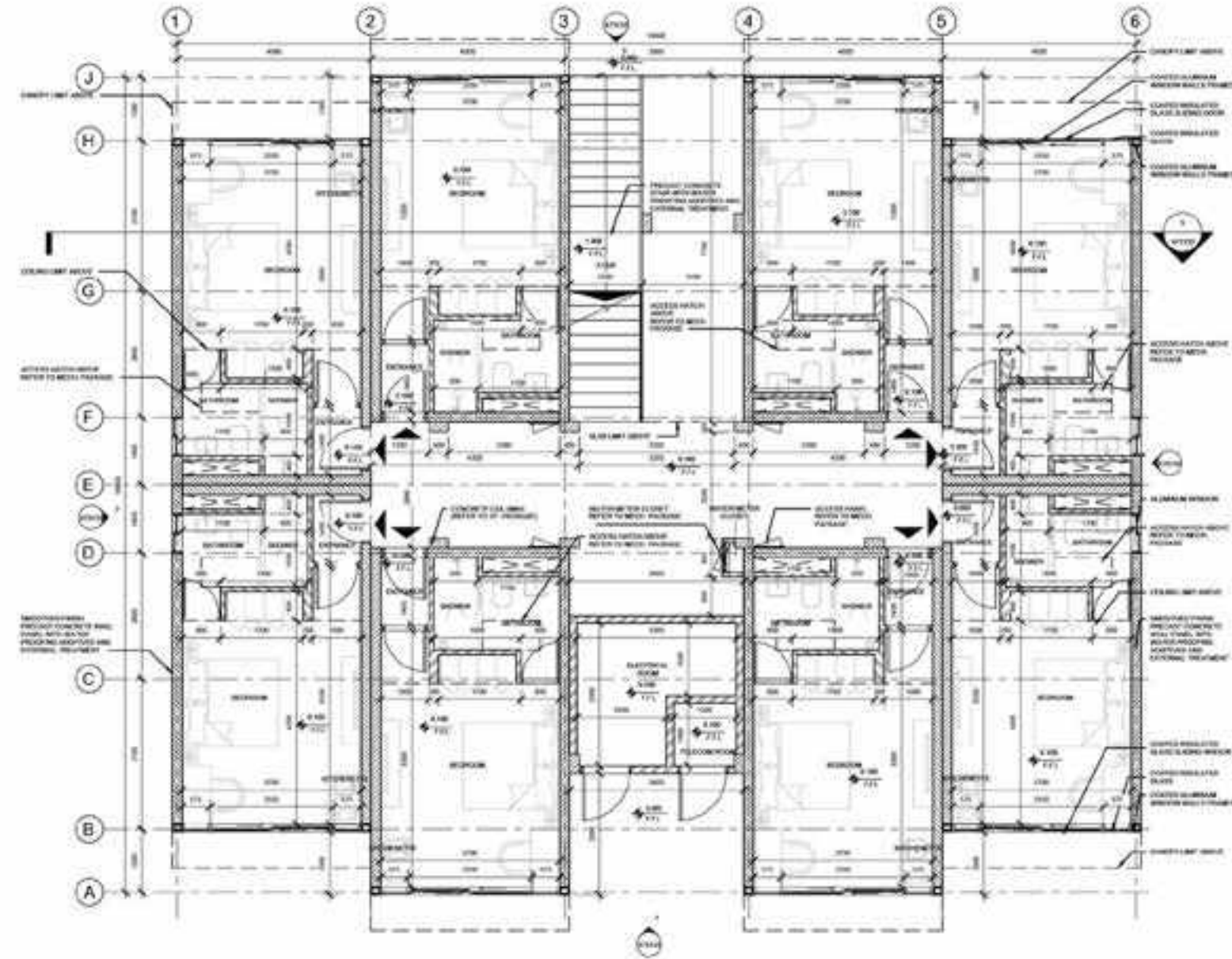
Design: Dar Design Team
Total Area: 126,737 sqm
BUA: 69,327 sqm



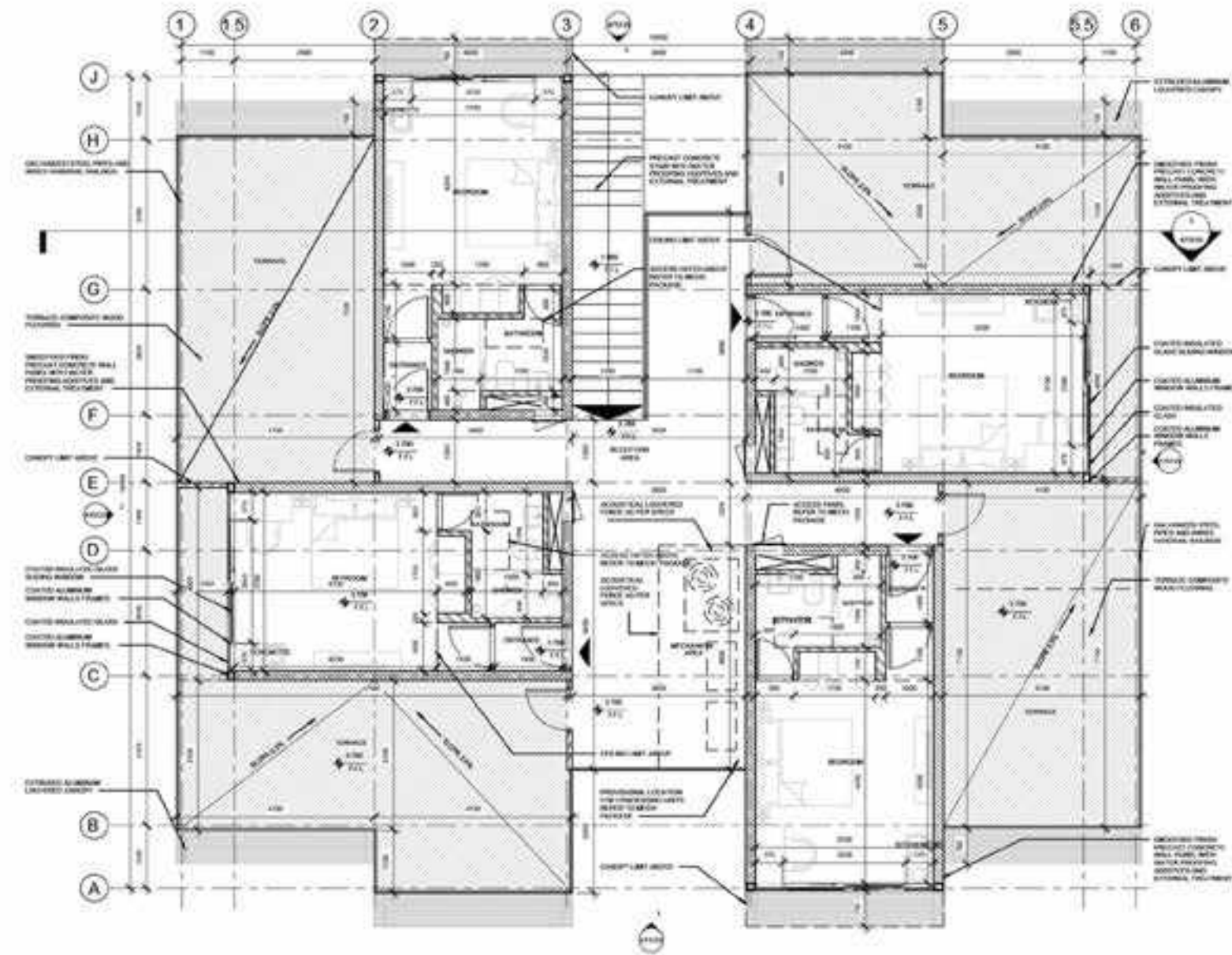


Site Plan

Residential Unit - Cluster C2



Cluster C2 - Ground Floor Plan



Cluster C2 - First Floor Plan

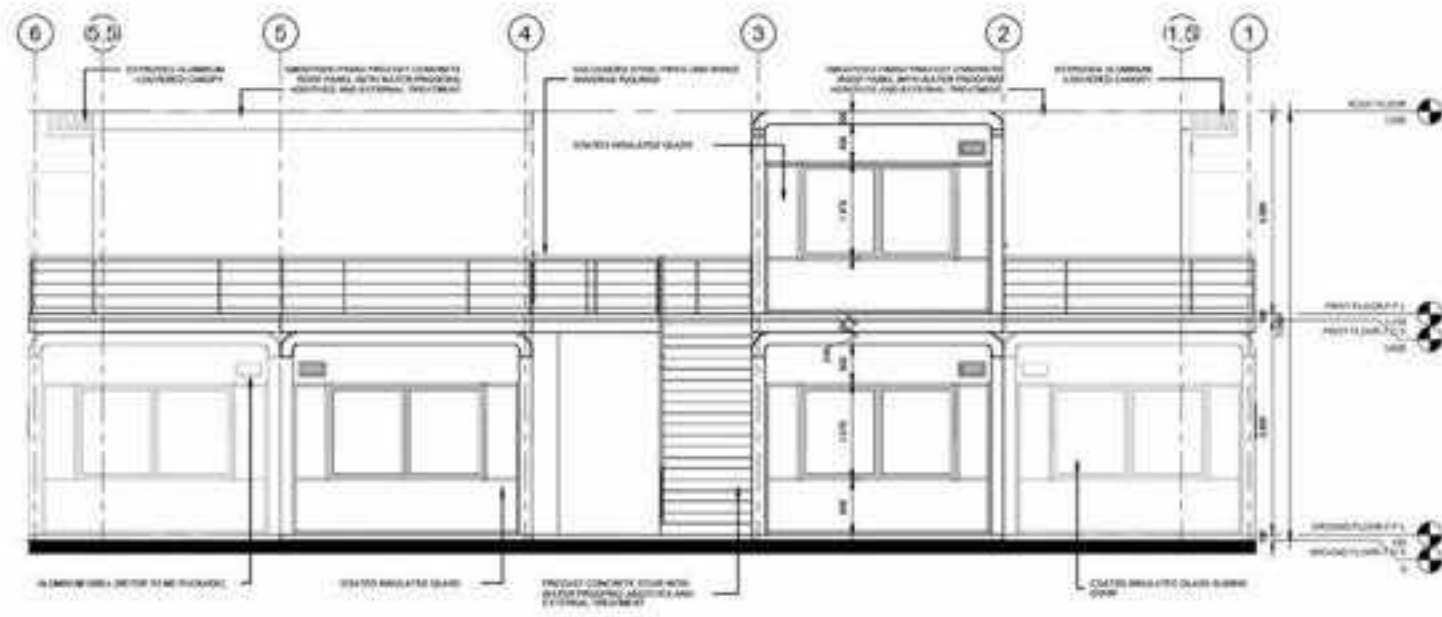
Residential Unit - Cluster C2

The project consists of 406 Modular & demountable structures and Residential Units. The concept of the Pods was introduced from the early design stages for all residential units, to ease and reduce the construction timeframe, considering customizable finishes, flexibility in assembling and forecast for an easy dismantling upon the end of the project lifecycle, anticipated 10 to 20 years from project completion date. A flexible modular unit design was selected for the easy possibility of module grouping, with various orientations.

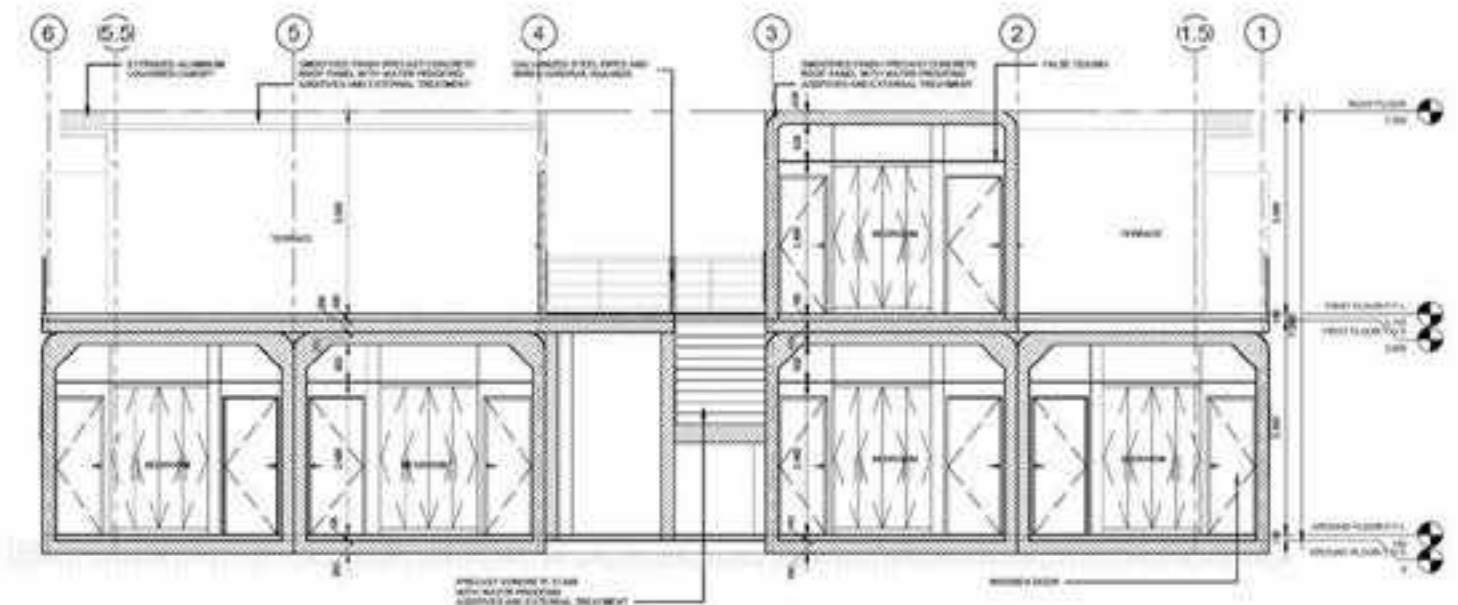
Role:

Design Development of the 8 residential units prototypes (406 in total) including:

- Modeling and full coordination with MEP.
- Preparation of different types of drawings, such as:
 1. Construction Drawings.
 2. Space Zoning
 3. Fire and Life Safety
 4. Acoustics



Cluster C2 - Elevation 03



Cluster C2 - Section 01

Year: 2022 | **Location:** Riyadh - KSA | **Building:** Administrative
Software: Autocad - Revit | **Lead Design Consultant:** AECOM | **Client:** [Majid Al Futtaim](#)

SITE OFFICE - MALL OF SAUDI

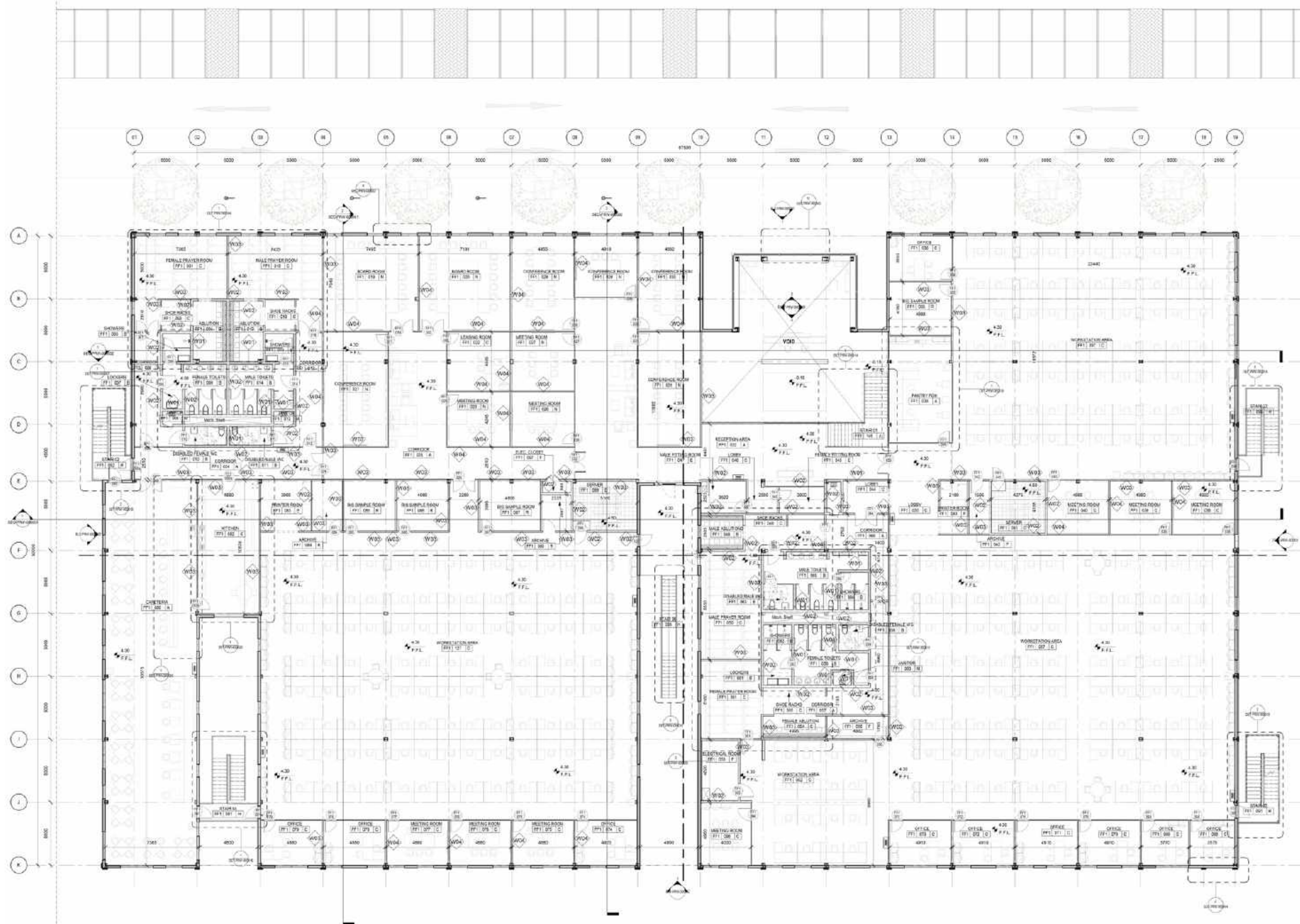
Under the directives of MAF (Mall of Saudi owner), the site office aims to accommodate the involved parties during the time of construction, providing a safe and healthy environment that eases communication between different disciplines & complies with all Local Municipality regulatory requirements for temporary buildings

Footprint: 4,000 sqm
BUA: 7,000 sqm

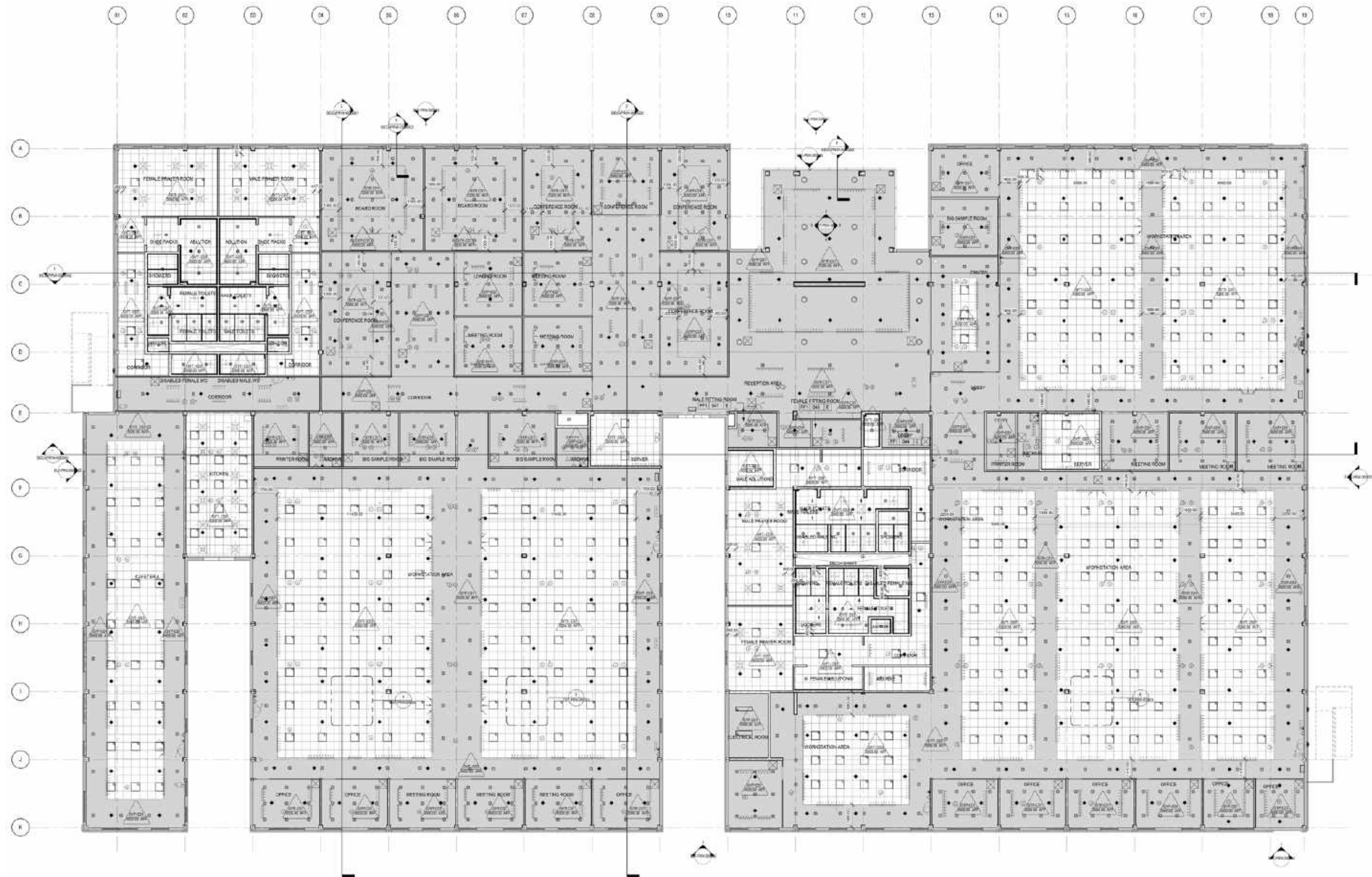
Design including:

- Modelling and MEP coordination.
- Preparation of different types of drawings, such as:
 1. Construction Drawings (IFC).
 2. Space Zoning.
 3. Fire and Life Safety.

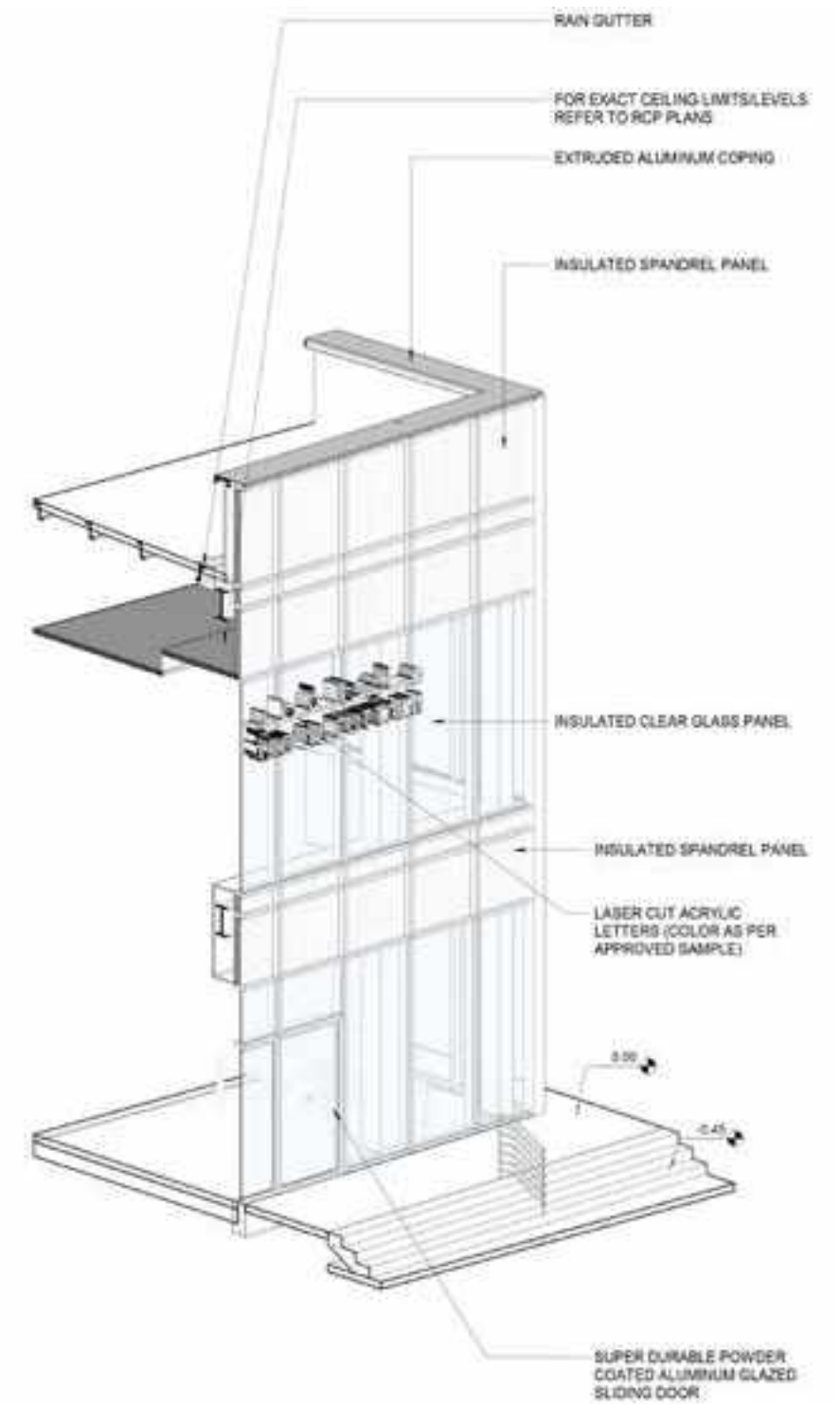
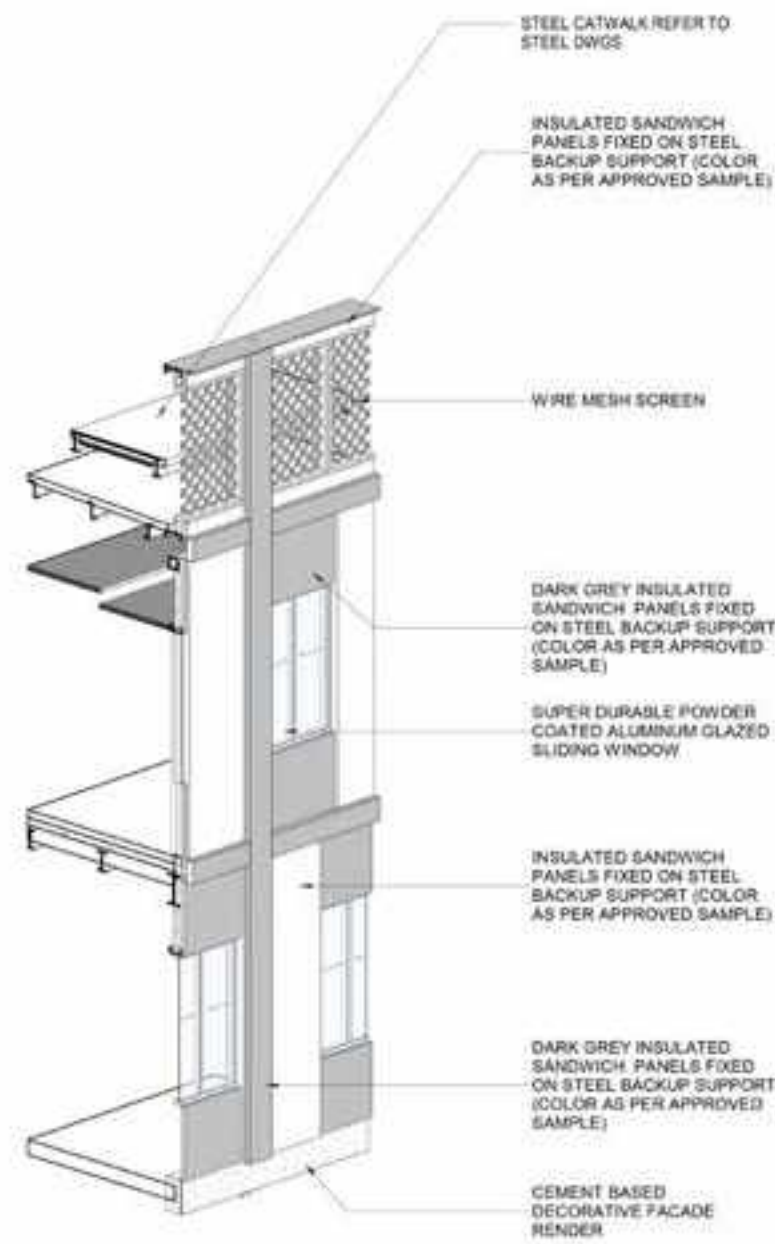
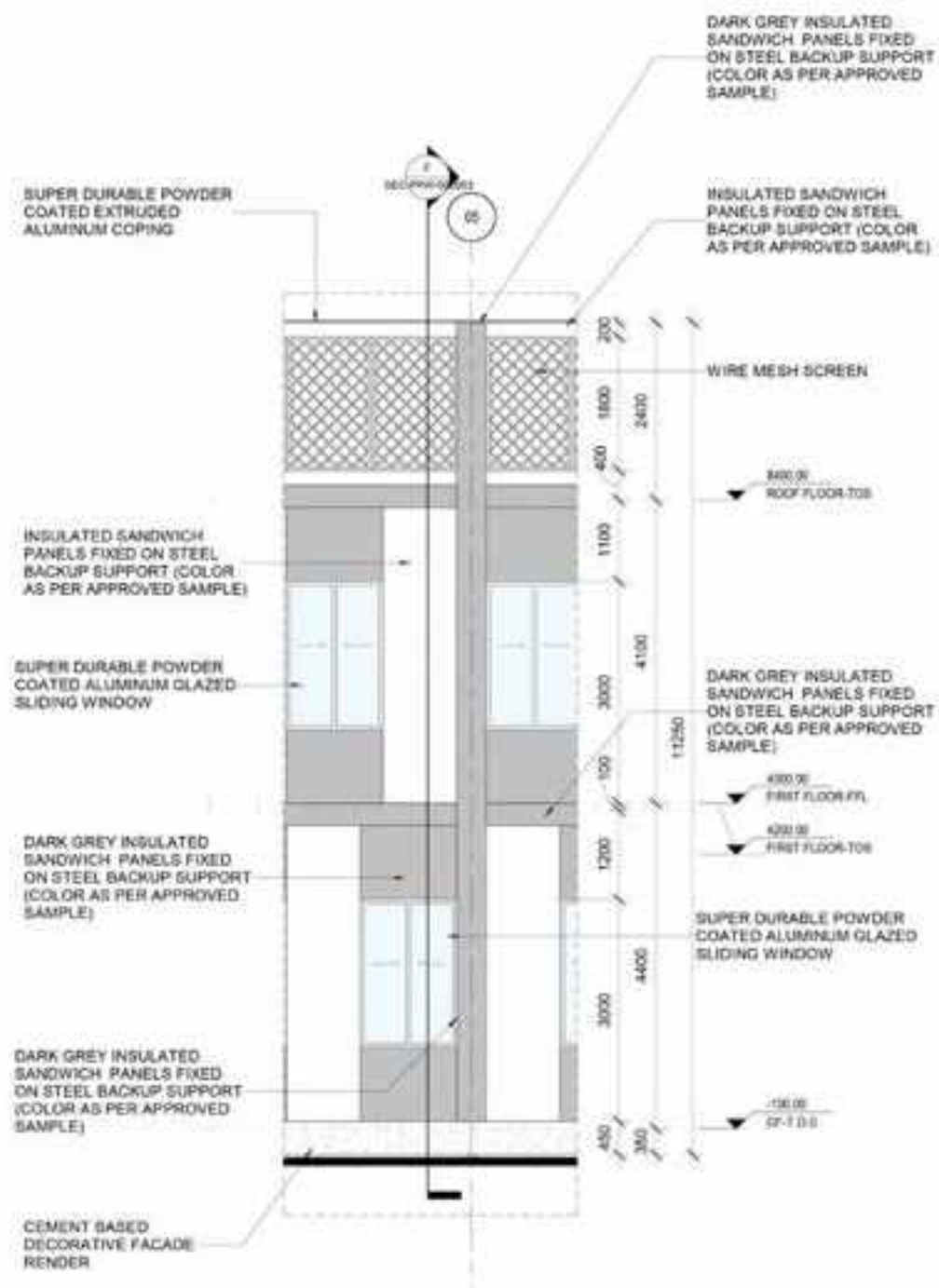




First Floor Plan



First Floor - Reflected Ceiling Layout



Year: 2021 | Location: Cairo | Project: Coffee Table | Material: Pine Wood

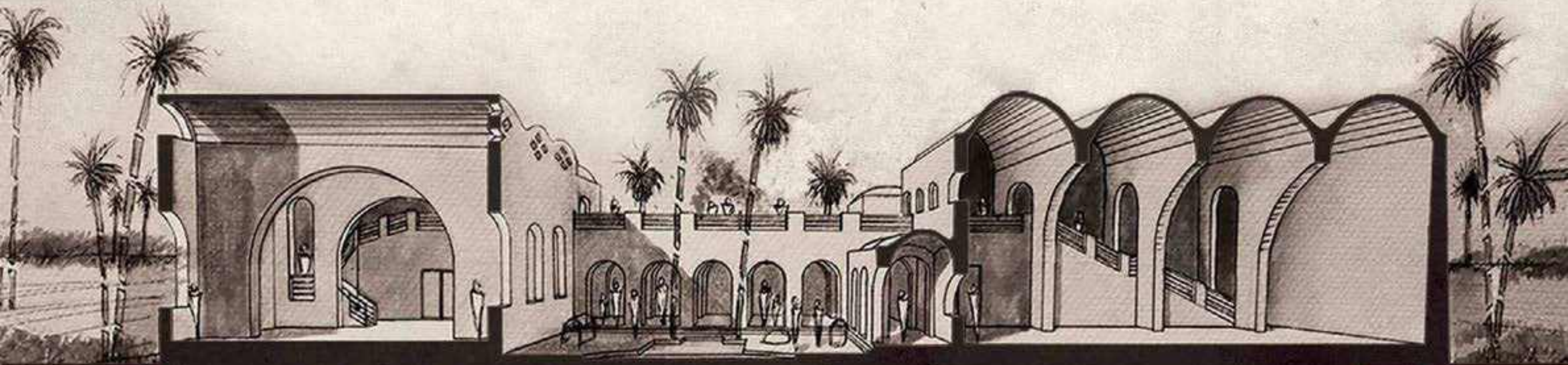
Woodwork | Coffee Table





Year: 2017 | **Location:** Egypt | **Type:** Analytical Section - Nubian Crafts Museum
Media: Ink - Shadow Markers - Watercolours on Paper | **Dimensions:** 29.7 cm x 42 cm

Sketches

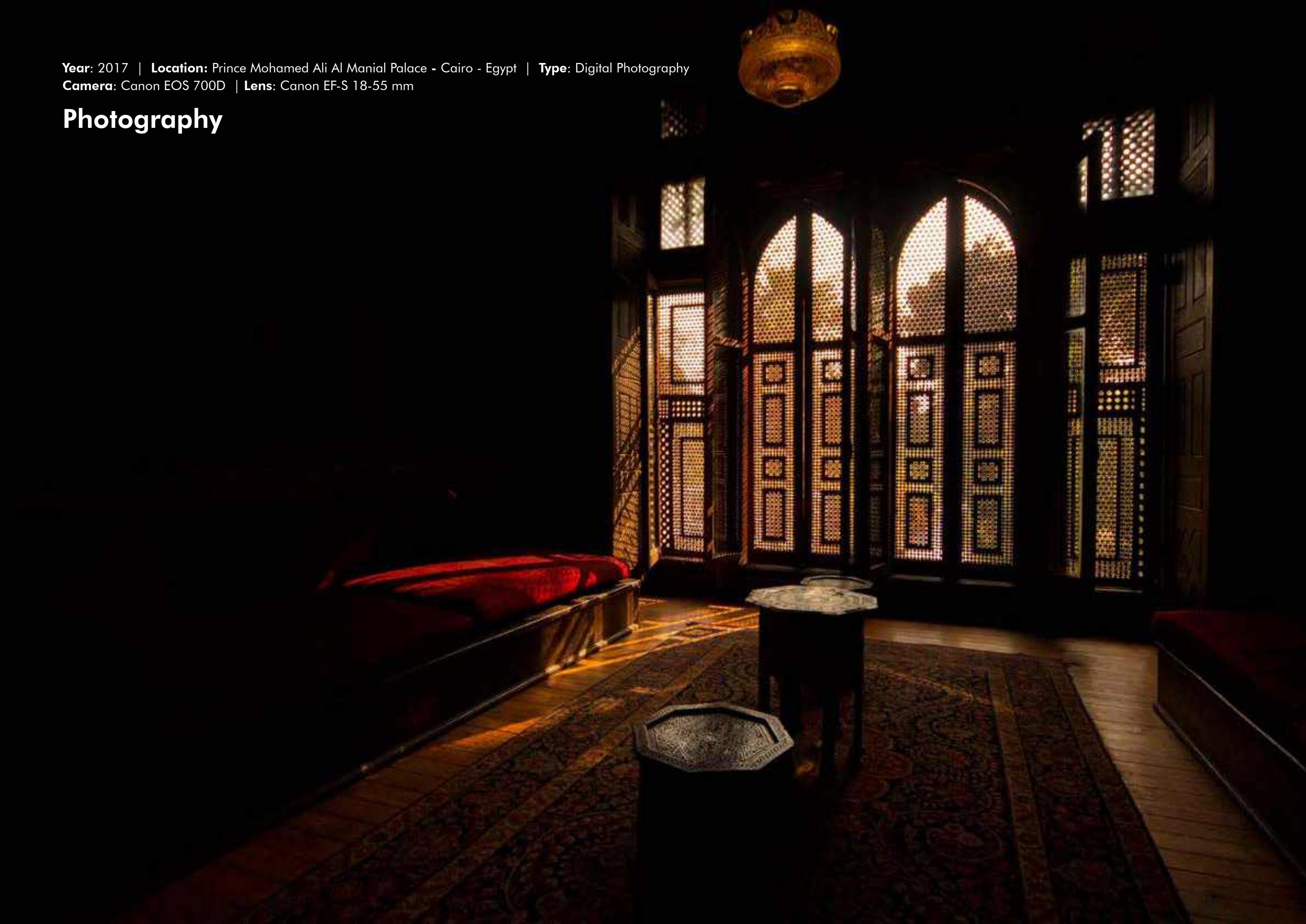


Year: 2017 | **Location:** Egypt | **Type:** Academic - Perspective Drawing
Media: Pencil - Watercolours on Paper | **Dimensions:** 80 cm x 100 cm



Year: 2017 | **Location:** Prince Mohamed Ali Al Manial Palace - Cairo - Egypt | **Type:** Digital Photography
Camera: Canon EOS 700D | **Lens:** Canon EF-S 18-55 mm

Photography



Year: 2021 | **Location:** Medinet Habu - Temple of Ramesses III - Luxor - Egypt | **Type:** Digital Photography
Camera: Canon EOS 700D | **Lens:** Canon EF-S 18-55 mm

Photography

More architecture and landscape photography can be found on my Istockphoto Profile
www.istockphoto.com/de/portfolio/era_design

Thank you.

