FACULTY
OF ARCHITECTURE
CTU IN PRAGUE

CZECH TECHNICAL UNIVERSITY

ARCHITECTURE & URBANISM

DIPLOMA PROJECT

Experimental Architectural School

In PRAGUE

-Hands-on learning approach to a practical profession

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INTRODUCTION

Over the last 10 years, numerous reports and studies have described how changes in society and construction affect architecture and other construction professions. The need for greater client sensitivity and the ability to respond to the needs of users in the construction industry and more effective interdisciplinary teamwork between professionals in the field was identified.

Nowadays, not all architecture students go into mainstream architecture when they leave formal studies: an increasing number are embarking on a career that has only a marginal connection with construction. And due to changes in society, technological advances and the rapid growth of information, people who enter the profession are likely to have to update their knowledge and skills many times in their lives.

All this calls on architects to become more qualified in the human dimensions of professional practice and more adaptable, flexible and versatile throughout their professional careers. Architectural education must respond to these changes: it must enable students to develop the skills, strategies and attitudes needed for professional practice and it must lay the foundations for lifelong lifelong learning.

The public image of architecture and architects has also been increasing scrutiny of the architectural profession by the general public and building users. Demographic developments such as the aging population, new patterns of work and leisure, technological changes and society's demand for a more sustainable environment are leading the public to demand that architects develop a wider perspective of design responses to the built environment.

As a result there have been calls in the media, and elsewhere, for architects to demonstrate greater sensitivity in their designs to the needs of building users and society, and for them to communicate more clearly the meaning behind their work. Not only must architects develop interpersonal skills in relationship to clients and other professionals, but they must also become better at listening and responding to, and communicating with, building users and the public.

In addition they must become more effective advocates of the contribution that they make to the quality of the built environment and to society.

APPROACH TO ARCHITECTURAL EDUCATION

The rapid growth in knowledge

Over and above the necessary technical and interpersonal skills, there are other skills that architects must possess. The rapid pace at which knowledge is growing means that they, like all other professionals, need to develop strategies to deal with new information that may be relevant to their professional development. There are two aspects to this. It is essential that architects, as part of their training, have learned how to learn, so that they can keep up to date as the industry and the profession change.

But also, because of the sheer volume of new information and the range of media by which this is made available, architects need expertise in accessing, identifying, evaluating and prioritizing information. All this implies a high degree of autonomy and flexibility in learning throughout life.

Design education, as undertaken in the schools of architecture, appears to be preparing students for models of practice that are no longer in full accord with the current professional context. But what is it about design education that is not supportive of the needs of professional practice?

Architecture is a multidisciplinary field of study that draws on the arts, sciences and social sciences. The five areas of study are: architectural design; the cultural context of architecture; environmental design, constructional and architectural technologies; communication skills; professional studies and management. However, the most important part of architectural education in terms of curriculum focus and time spent by students is architectural design.

It is in the design studio that students are expected to bring together knowledge from the different disciplines to inform the development of their architectural designs. The design studio offers the potential to provide a multifaceted and enriching learning experience.

One inherent educational strength in studio teaching is the implicit commitment to 'experiential learning' or 'learning by doing ". In a context that approximates a practice world, students learn by doing, by undertaking projects that simulate and simplify practice; free of the pressures, distractions and risks of the real world, to which it never refers. Studio becomes a collective world in its own right, with its own mix of materials, tools, languages and appreciations. For the student it embodies particular ways of seeing. It is this feature of the studio which is seen to hold both the strength and, potentially, the greatest weakness of architectural education as a preparation for practice.

SHORTCOMINGS OF THE CURRENT ARCHITECTURAL EDUCATION

In the syllabus it would appear that professional skills are already included under the subject headings Communication Skills and Professional, economics, building Management Studies, and it is assumed that students will acquire these skills through their design studio work. However two points are worth making here.

Firstly, achieving a balance across a number of skills areas (both interpersonal and technical) in the design studio context is exceedingly difficult. At the very least it requires careful planning. Secondly, it is noteworthy that within the prescribed syllabus, communication skills are primarily described in terms of the ability to present to others rather than as a two-way interactive process. This might be one reason why some key skills for professional practice-such as listening to others, questioning and negotiation-are not sufficiently developed in the undergraduate years.

Lifelong learning

Another challenge for architectural education is to prepare students for a changing profession where knowledge is growing at a rapid rate and the needs of the construction industry and society are continuously evolving. For this students will need to acquire skills and attitudes that are transferable across contexts and permit continuous and lifelong learning. In this changing context, architecture students do not just need to learn about architecture and acquire design skills; they must also learn how to learn, learn how to manage and take responsibility for their own learning throughout life. They must know how to identify the existence of new information, access it and judge if it is good and useful. And they must be able to develop and agree success criteria for their own working, alone and with clients (and with the rest of the team), and be able to monitor and evaluate achievements.

The studio environment, where students work independently on a design project in relative freedom, would seem to be an ideal situation in which to develop these lifelong learning skills. But the potential of that environment for the development of self-reliance in learning is not always fully realized, for a number of real programs are consciously structured to lead students from dependence to independence in learning during the undergraduate years. Not all design tutors agree that teaching students transferable skills such as communication, group work and management of learning is their responsibility.

It is not yet common to provide students with regular opportunities to reflect on their own learning, and in particular to monitor and evaluate their own processes of working, even though regular reflection, self-monitoring and self-evaluation are crucial to the development of self-responsibility. Some of these points can be illustrated by examining the way in which assessment, including the architectural review or critics, is organized in schools of architecture.

SCOPE OF HANDS-ON LEARNING IN ARCHITECTURE

The hands on learning technique will help the students in developing the skills and attitude required for professional practice. The key principles include:

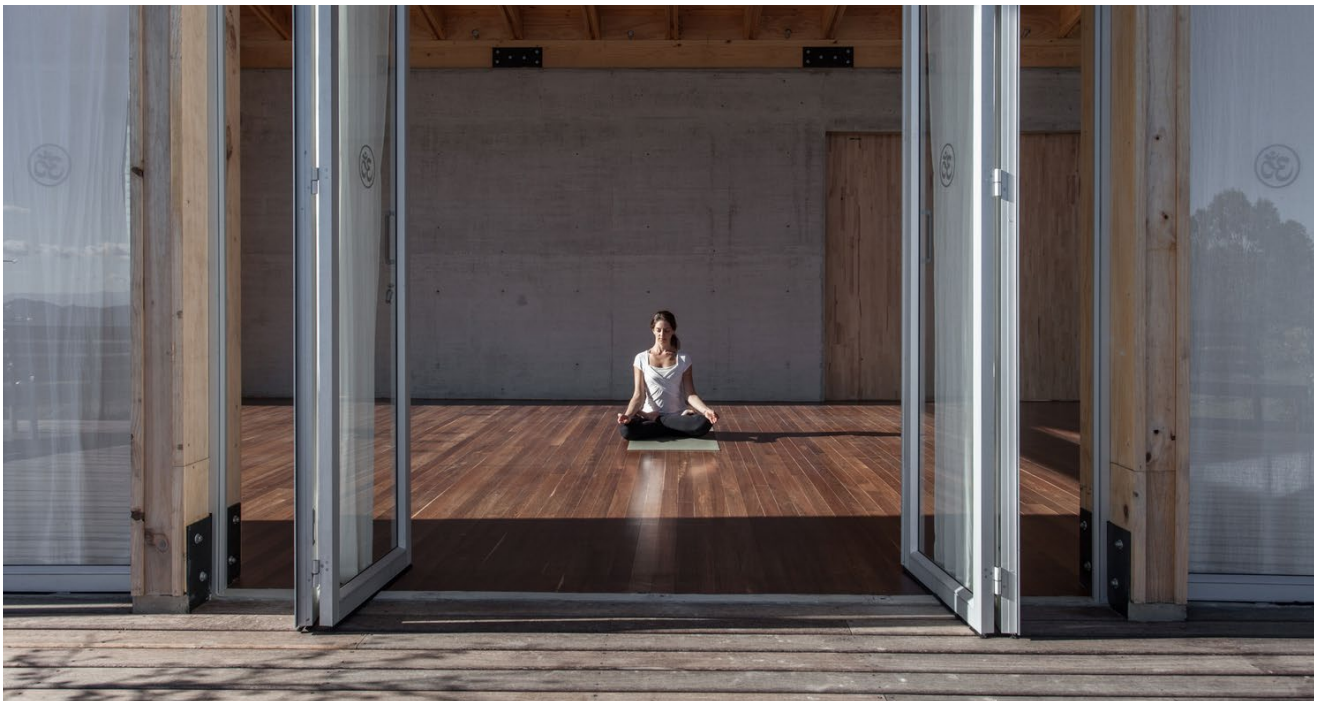
- Learning is an active rather than a passive process.
- Reflection on learning develops wisdom or artistry in practice.
- Collaborative learning enhances individual learning.
- Authentic learning tasks develop professional competencies.
- Self and peer assessment develop skills for lifelong learning.

In schools of architecture there has always been some use of peer group discussion and interaction around design projects. This can be considered a valuable feature of architectural education, as interaction and discussion in student groups positively enhances individual learning. Research in education has clearly demonstrated the benefits of collaborative and cooperative learning arrangements for the development of students' critical thinking and for the development of self-concepts, social skills, personal responsibility, values and attitudes.

Group learning gives students practice in thinking and explaining, it increases learner activity, it exposes students to multiple perspectives that help develop more robust and elaborated thinking, it often results in students teaching each other, which is as profitable for the teacher as it is for the students being taught. There are two other reasons for increasing the amount of group work in courses for the architecture profession.

Firstly, group discussion on learning tasks increases the focus of students on the processes of learning. A group discussion extends and amplifies the potential of reflection for learning. Secondly, group work makes it possible to focus the learning of students specifically on the processes of communication and interaction within groups. Thus group learning could serve as an important vehicle (or laboratory) for the initial development of the attitudes, communication and team working skills regarded as so important for architectural practice. Where group learning occurs in an inter- or cross-disciplinary setting there is additional value.

Architecture students could learn how to communicate perspectives of other construction disciplines, and how they might work together to solve design problems.



DIPLOMA PROJECT

Experimental Architectural School, Pragovka Art District

SCHWARZPLAN
LARGER CONTEXT

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0 270 540 m

ABOUT

The assignment of the diploma project was to restore and repurpose Hall 18, in Pragovka, located in Kolbenova, Vysočany Prague 9.
The history of the area dates back to 1907, when the “Praga car factory, Ltd.”, was founded. In the 1920s, during the burgeoning times of the ČKD company, the place became the largest engineering enterprise in former Czechoslovakia. Employing and housing over 3500 people, the workers called it “Pragovka”, a renowned moniker that has represented the location ever since.

The complex was expanded between 1931-33, including the addition of a new building known as E-Factory, designed by architect Josef Kalous, which would serve as a warehouse for the Ministry of Post and Telegraphs.

During WWII the Pragovka factory-made aircraft, and as a result, it was targeted by severe Allied bombing raids in March 1945 – destroying many of its buildings. When Czechoslovakia was brought into the Soviet sphere after the war, rebranding as the Czechoslovak Socialist Republic, Pragovka was rebuilt by the ČKD and nationalized by the communist government.

Czechoslovakia regained its democracy after the Velvet Revolution of 1989, and in January 1993 was dissolved into separate Czech and Slovak Republics. The government of the Czech Republic privatized ČKD in 1994, but as its former trade deals with the Soviet Union and other Central and Eastern European countries began to fall apart, business dried up, and by the early years of the 21st century this former manufacturing juggernaut ground to a halt.

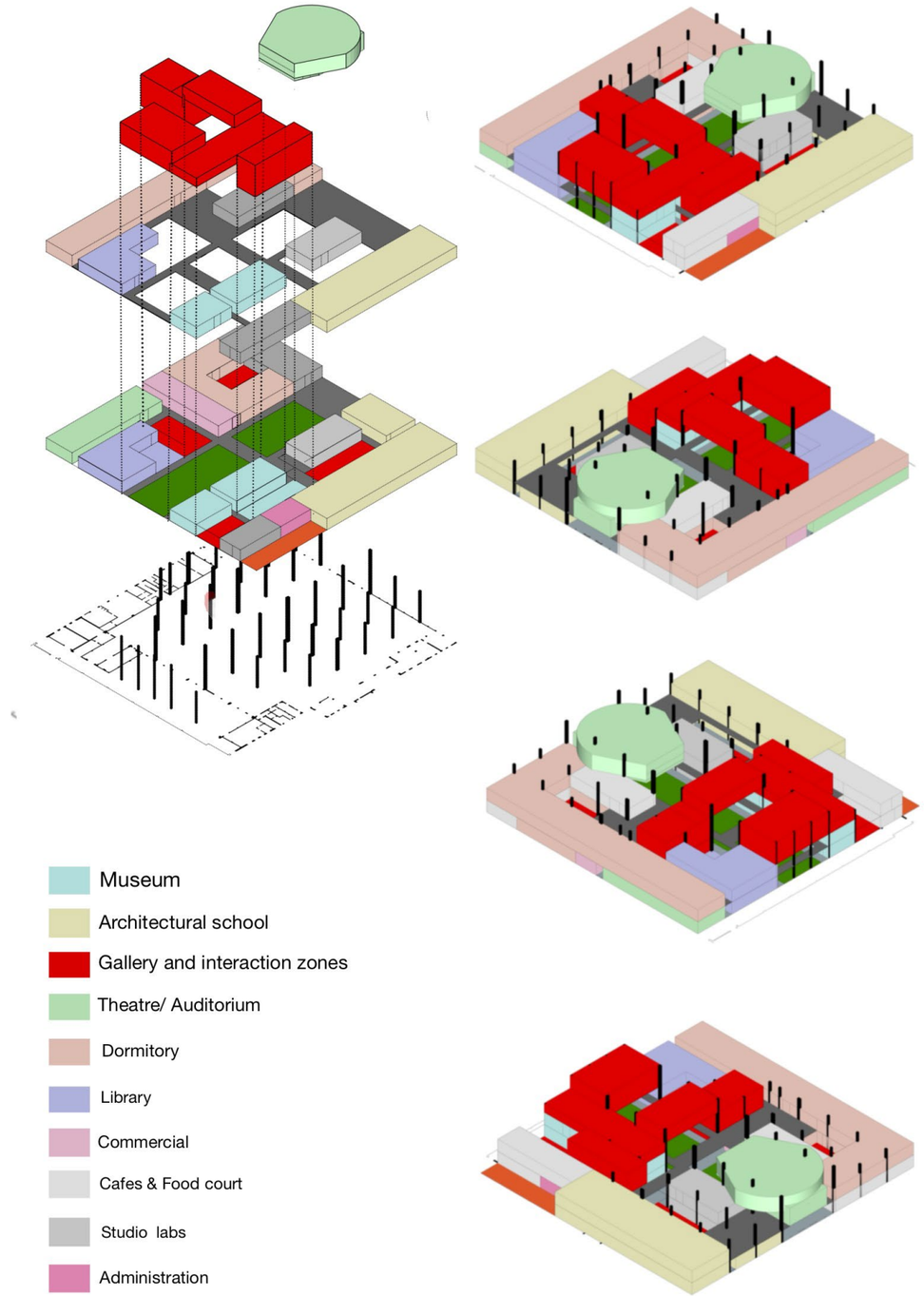
Due to the strong history and the dominant nature of the building, it was necessary to develop a design that respects its past and could be repurposed for its future use. The grid form created by the group of the column and the volume they encase gave the building its character. It was important to not lose the actual character of the building in the course of restoration. Hence care was given to retaining as much of the wall as possible and took an approach of designing around them.

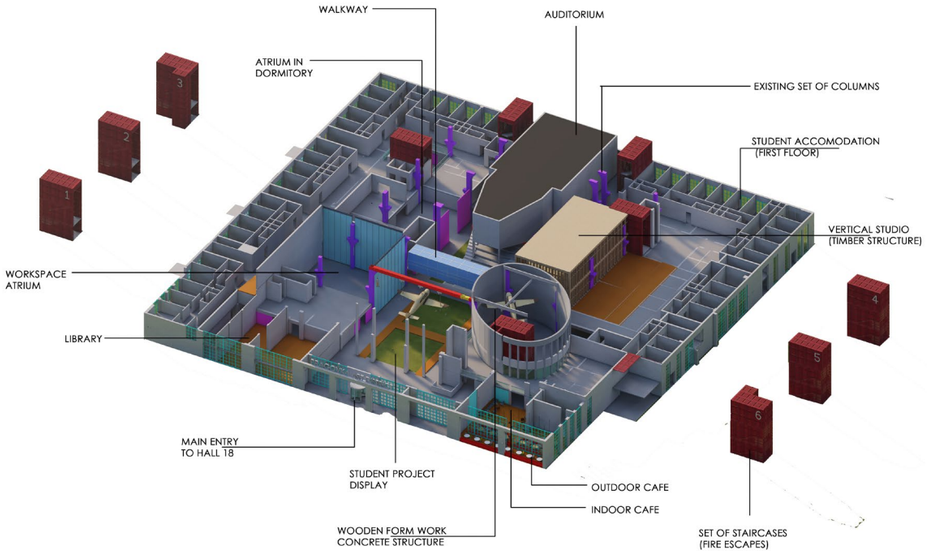
The line of windows and the concrete structure spoke for themselves, ensuring sufficient lighting in the building. The arched roof in the center of the symmetrical plan served as the aisle/ axis of planning, with other functions developing around it. The linearity of the space is continued with a feeling of illusion by the hanging auditorium in the end.

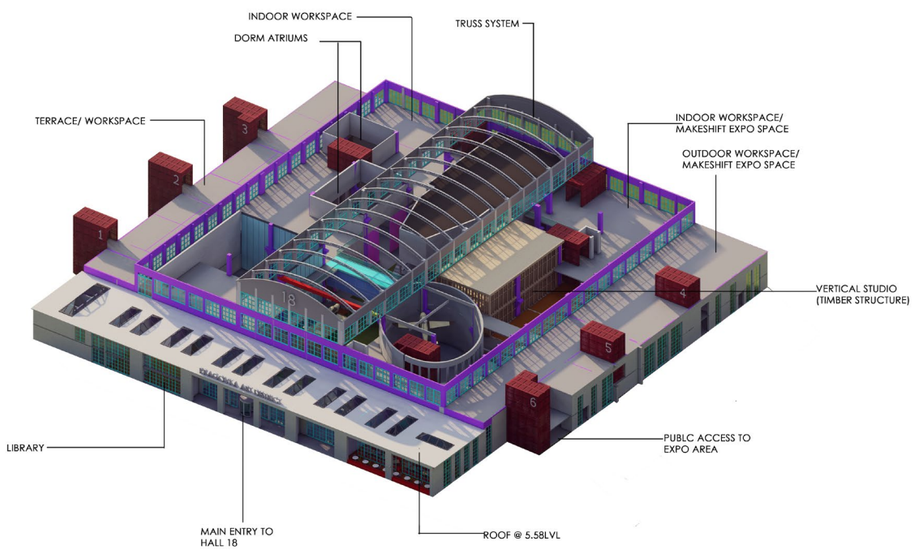
All spaces are designed in a way that ensures maximum engagement of users through a variety of activities.

The new proposal for hall 18 includes:
1. Architectural school
2, Gallery & Cafe
3. Library
4. Auditorium
5. Student Accommodation
6. Foodcourt
7. Workshop spaces
8. Expo spaces.
9. Public halls

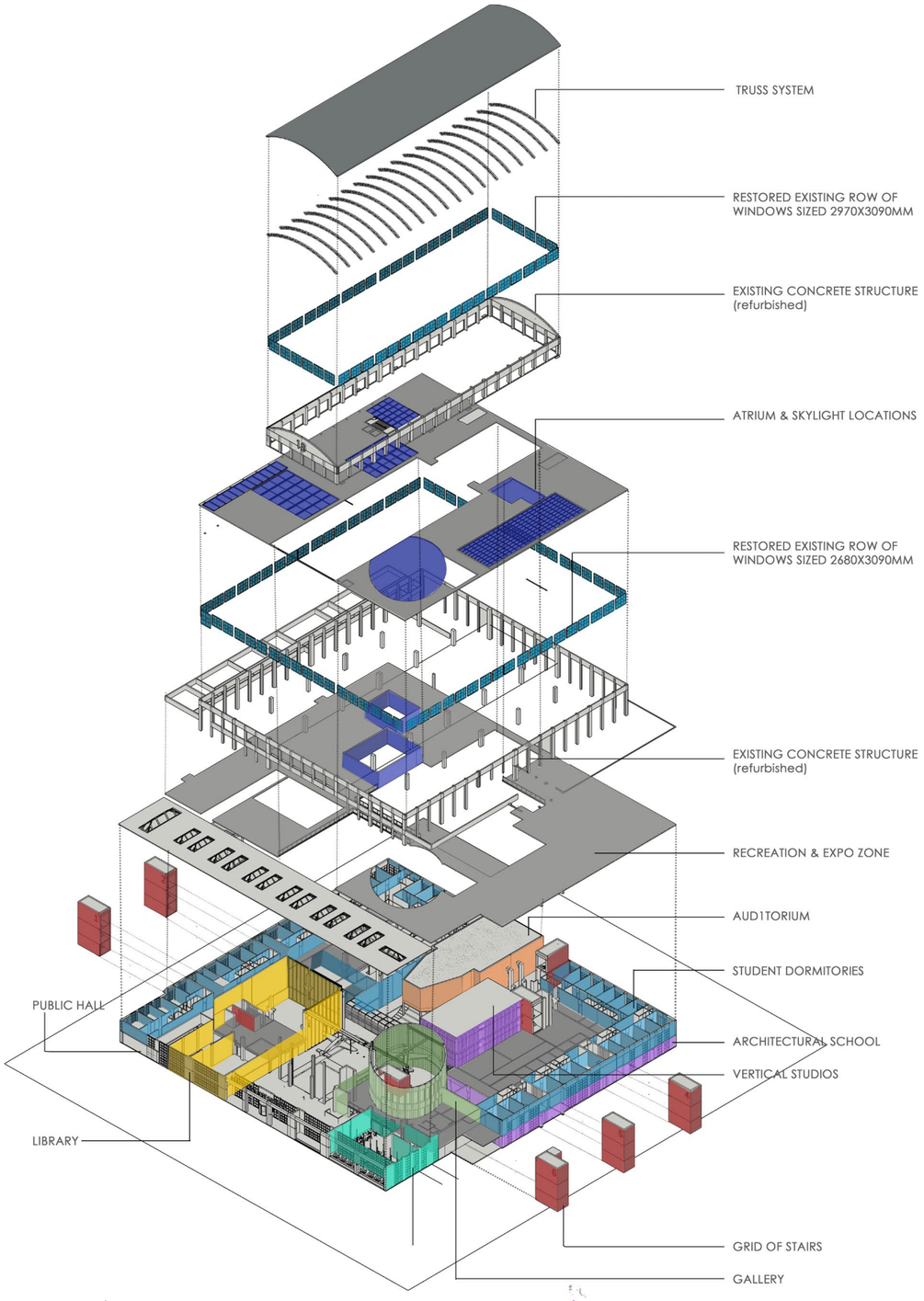
CONCEPTUAL & FUNCTIONAL DIAGRAM







FUNCTIONAL DIAGRAM



SITE PLAN

SCALE 1:500

PLOT taken up for reonstruction
Jakub Cigler Architects
STATUS: Concept study, 2016-2017
Urban study, 2017 First phase study

MAIN ENTRY

MAIN ENTRY ROAD

RAMP IN

RAMP OUT

EXISTING ROAD

PROPOSED ROAD

A

B

C

D

FF LVL +5.70

FF LVL +11.07

FF LVL +11.07

LVL +15.43

LVL +15.43

LVL +15.43

LVL +18.26

LVL +18.26

LVL +15.43

LVL +15.43

LVL +15.43

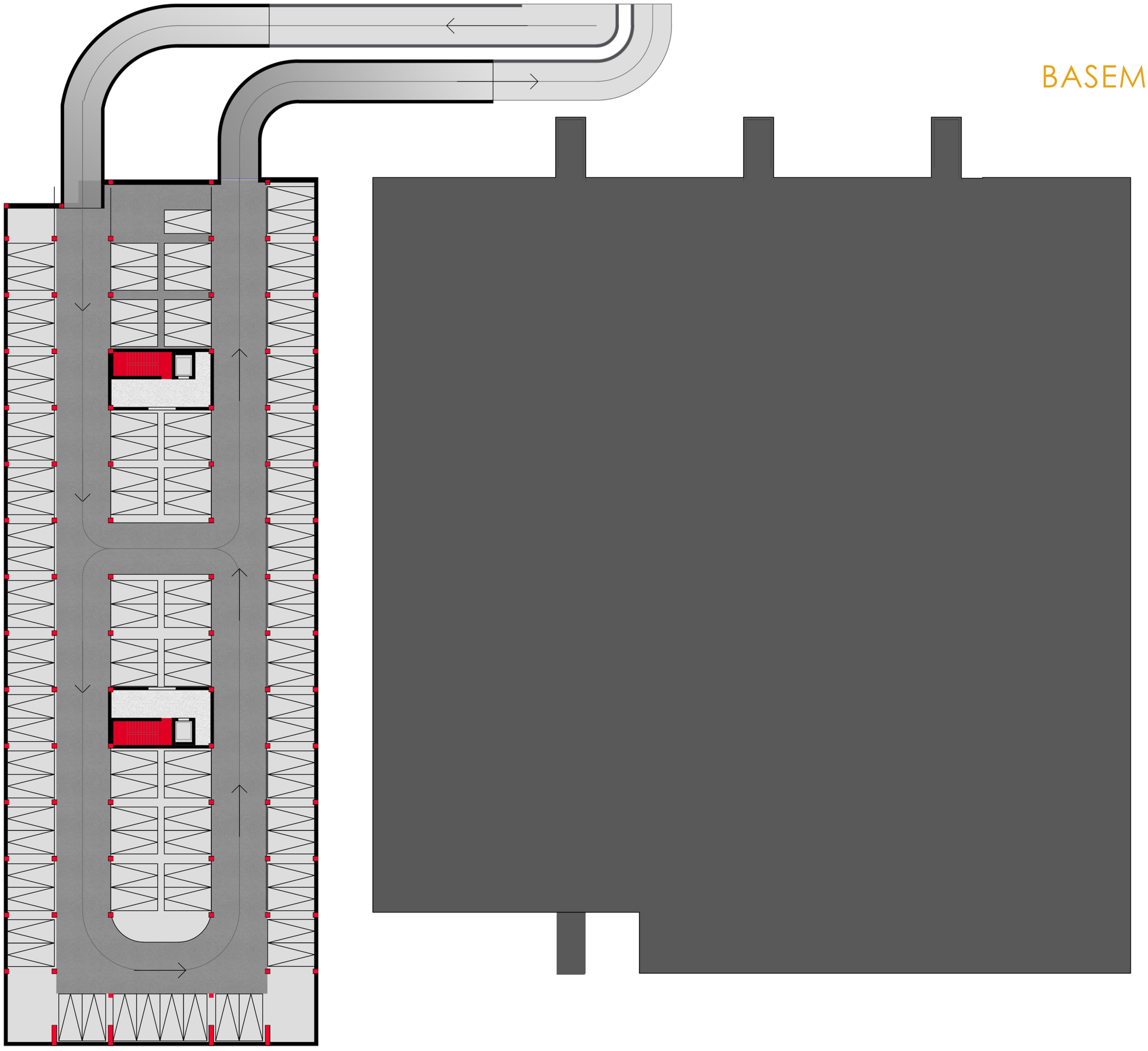
FF LVL +11.07

FF LVL +11.07

INSTALLATION
VIEWING GALLERY


18
1
FRAGOVKA ART DISTRICT
6
5
4

BASEMENT PLAN



GROUND FLOOR PLAN

SCALE 1:250

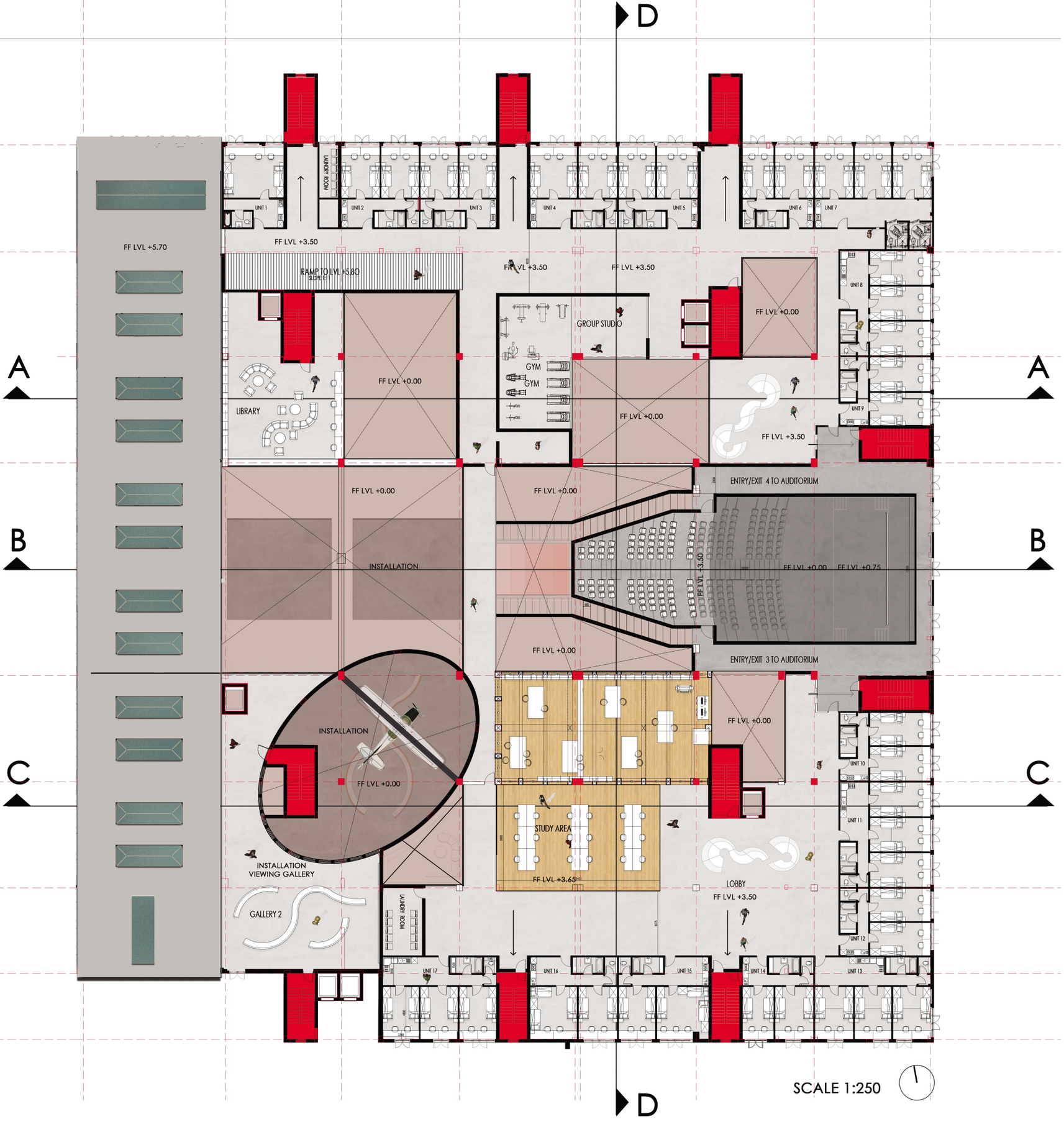
RAMP OUT

HALL 2
HALL 1
PANTRY
TOILET.G
STORE
HALL 1 & 2 MAIN ENTRY/ EXIT
ENTRY/ EXIT
TOILET.W
SHOP 1
STORE
DORM ADMIN
LOBBY
KITCHEN
SERVICE
STORE
STUDENT RECREATIONAL ZONE
FOOD COURT/ MENZA
128 seats
TECH. ROOM
ELEC. ROOM
SILENT ZONE
READING ATRIUM
SHOP 2
LIBRARY
ADMIN
FL +0.0
CLOAK ROOM
VISITORS LOUNGE
TOILET.W
TOILET.G
TOILET.W
TOILET.G
LIBRARY ENTRY
ENTRY/ EXIT
STUDENT PROJECT EXHIBITION
HALL 18 ENTRY LOBBY
STUDENT PROJECT EXHIBITION
VISION ATRIUM
PROP STORAGE
AUDITORIUM
STAGE
BACK STAGE
FL +0.75
TECHNICAL ROOM
ENTRY/ EXIT
ADMIN ENTRY
SCHOOL ENTRY
COUNTER
GALLERY ADMIN/ LOBBY
FL +0.0
GIFT SHOP
GALLERY 1
FL +0.0
VERTICAL WORKSHOP STUDIOS
FL +0.15
CLOAK ROOM
STUDIO 2
LECTURE HALL 1
LECTURE HALL 2
FL +0.0
ENTRY/ EXIT
CAFETERIA
KITCHEN
FIRE EXIT
TOILETS
TOILET.M
TOILET.W
STORE
PANTRY
ADMIN
ENTRY/ EXIT
FACULTY ROOMS
TOILET.M
TOILET.W
TOILET.W
TOILET.M
STUDIO 1
EXISTING ROAD

FL -0.15
FL +0.0
FL +0.15

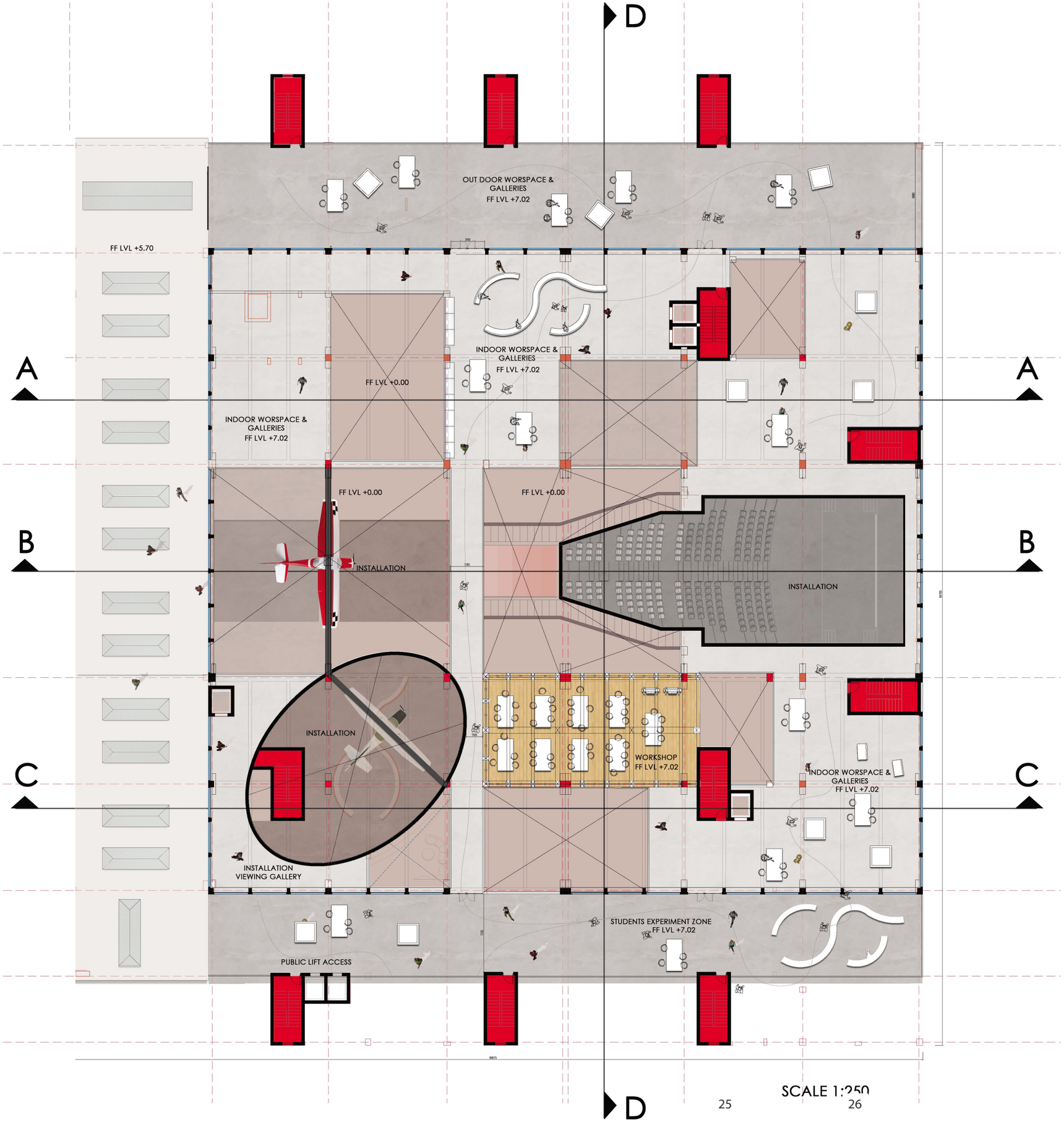
A
B
C
D

FIRST FLOOR PLAN



Plan not to scale, kindly refer the attachments.

SECOND FLOOR



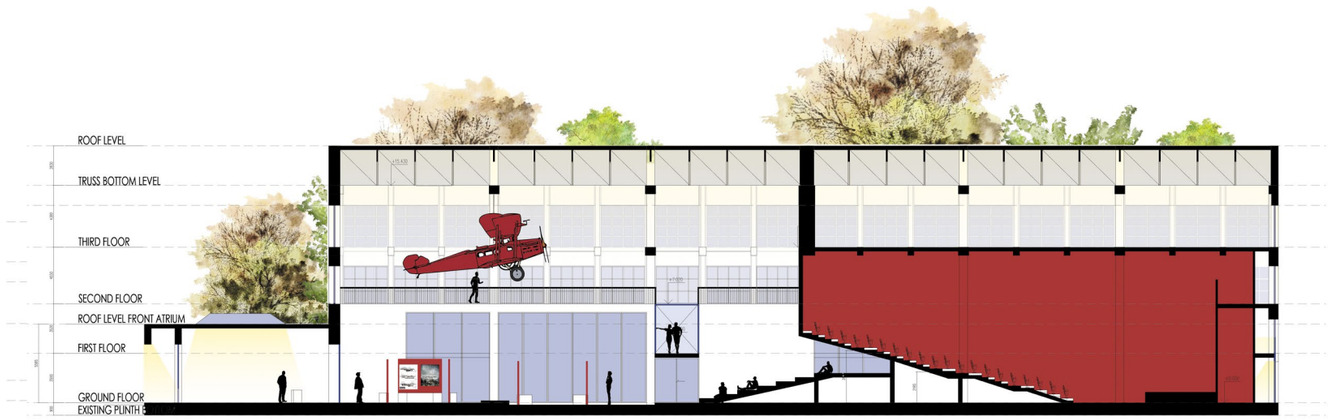
SCALE 1:250

Plan not to scale, kindly refer the attachments.

SECTIONS

SECTION C-C'

0 2 4 6 10 20



SECTION B-B'

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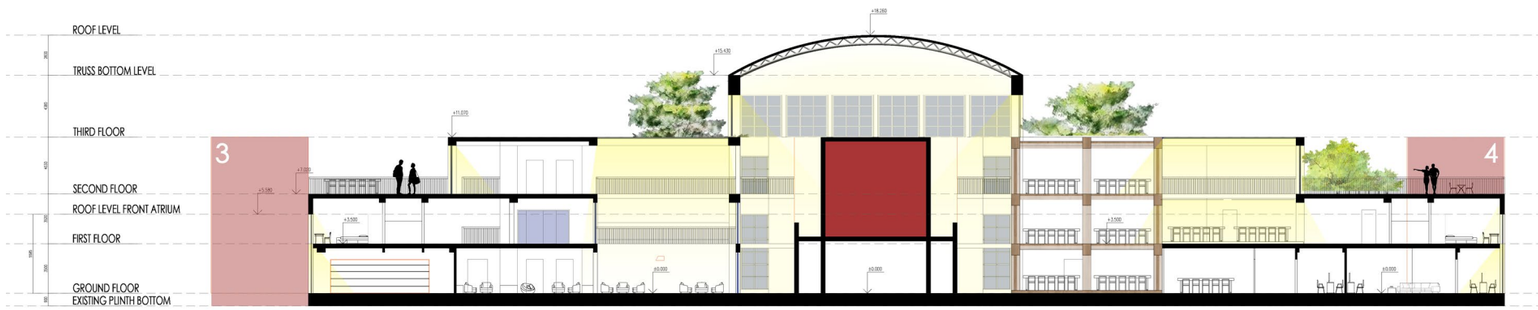

SECTION D-D'

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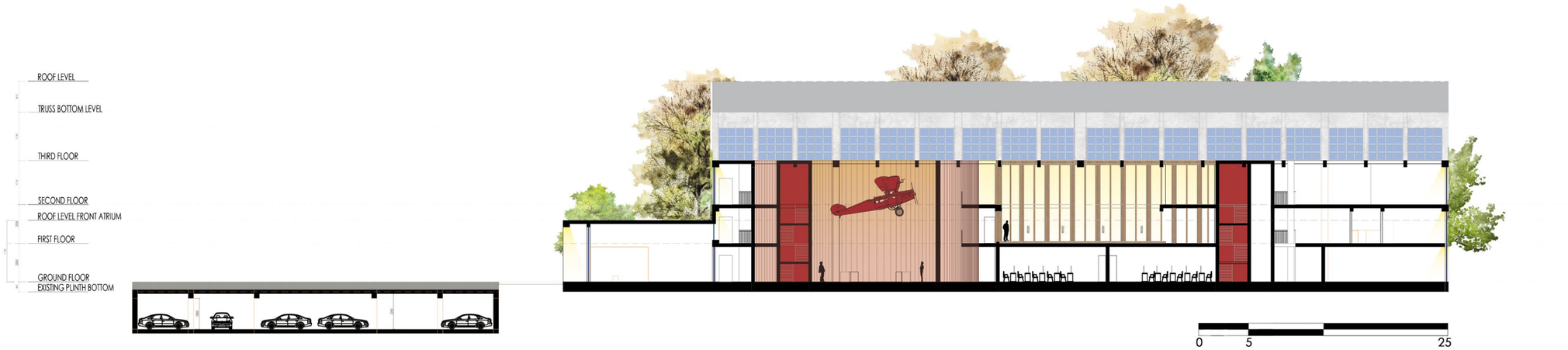
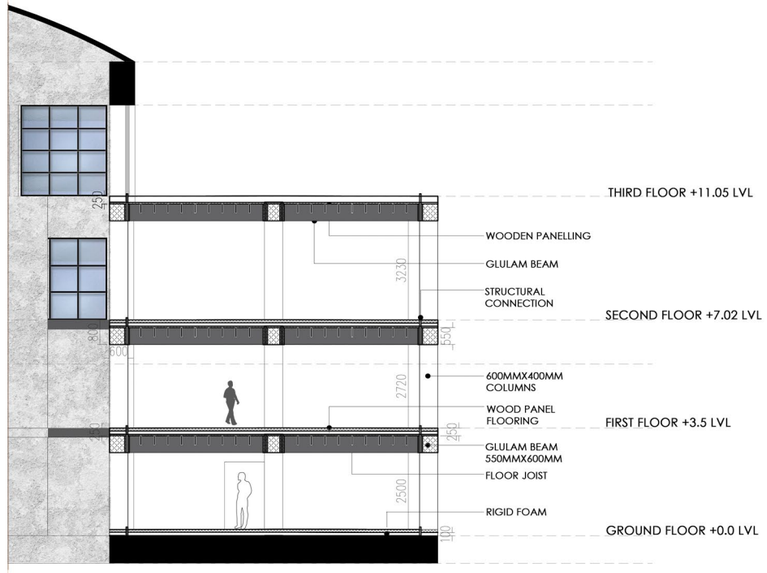
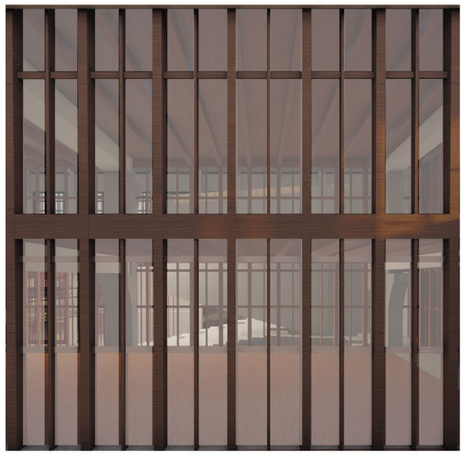


SECTION A-A'





VERTICAL TIMBER STRUCTURE ELEVATION AND TEXTURE

FRONT ELEVATION (WEST)

SIDE ELEVATION (SOUTH)

BACK ELEVATION (EAST)

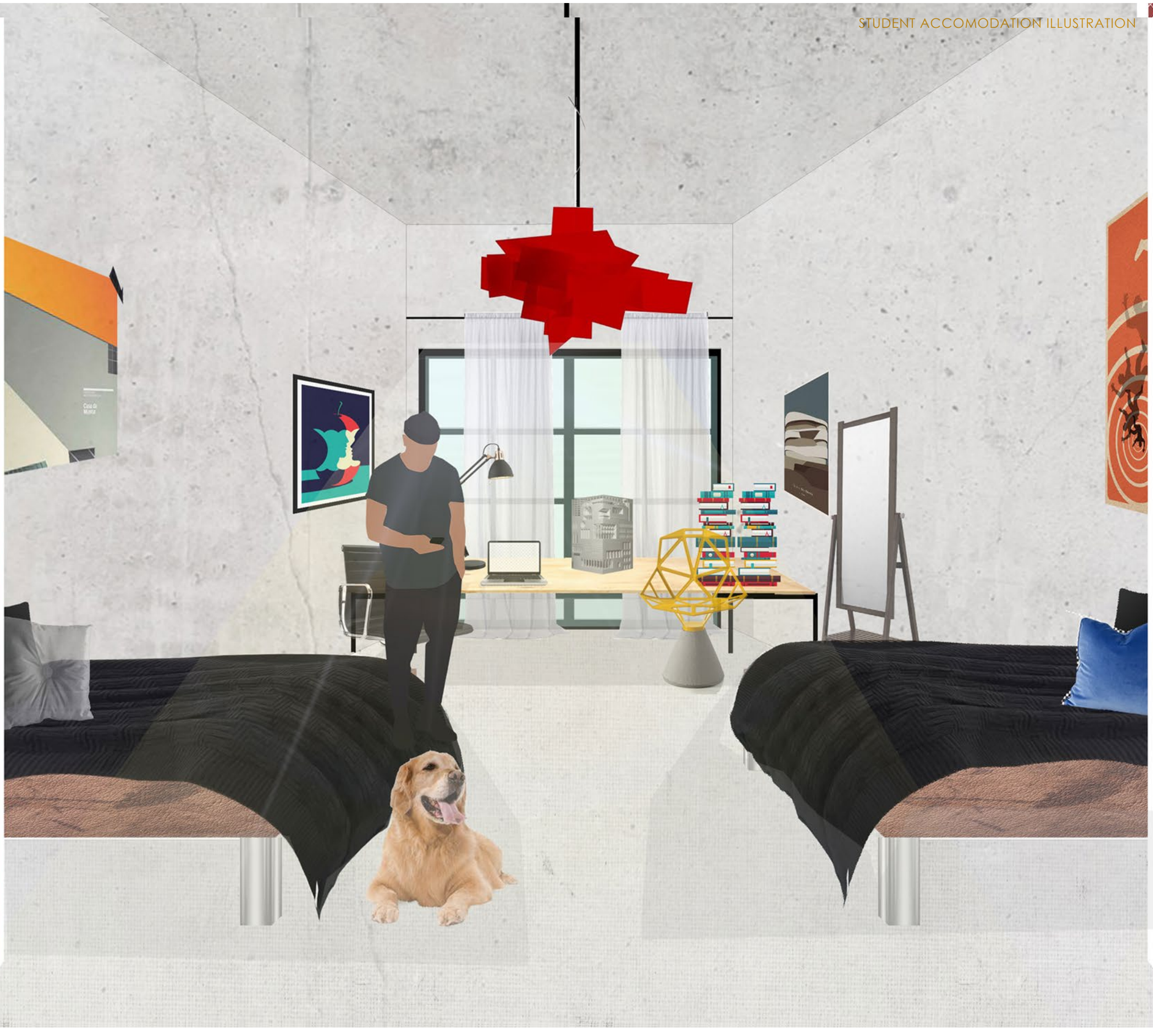
SIDE ELEVATION (NORTH)

VISUALISATIONS

OUTDOOR SPACE OF CAFE

TERRACE SPACE ILLUSTRATION

HALL 18 ENTRANCE LOBBY ILLUSTRATION




18
PRAGOVKA ART DISTRICT
6

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