



**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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### ASSIGNMENT of the Diploma project

Master degree

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Academic Year / Semester: B212/2022

Department Number / Name: 15128 / Department of Architectural Design II

Diploma Project Tutor: doc. Ing. arch. PETR KORDOVSKÝ

#### Diploma Project Theme:

See the Application Form for DP

EXPERIMENTAL ARCHITECTURAL SCHOOL IN PRAGUE - Hands on learning approach  
to a practical profession.

#### Assignment of the Diploma Project:

1/description of the project assignment and the expected solution objective

2/description of the final result, outputs and elaboration scales

3/list of further agreed-upon parts of the project (model)

To this list further attachments can be added according if necessary.

Date and Signature of the Student: 17.02.2022 *[Signature]*

Date and Signature of the Diploma Project Tutor: *[Signature]* 17.2

Date and Signature of the Dean of FA CTU: 25.2.2022 *[Signature]*

1. Experimental architectural school- Hands-on learning approach to a very practical profession. Architecture is a subject that is vast and boundless, hence its necessary to provide grounds for the students to learn and master the profession at the academic level. This practise have been deteriorating over the years and as a result we can find graduates become less equipped for the professional practise. The proposed school aims to equip students for their future. The program consists of material labs, studio labs, outdoor workshops, working library, gallery spaces, seminar halls, 3D printing and other technical labs to ensure good exposure. The expected solution is to create an environment where students can learn the skills in studio labs and implement their concepts in live scales. The program is designed for 100 students (across 4 years).

2. The final result will consist of an academic building and outdoor labs where the program will be implemented. The site of Hall 18 in pragovka is used for the same. A floor area of minimum 4500 sqm will be required for the realisation of the program.

3. The final output will consists of analysis of the site, floor plans, schematic and detailed sections, structural drawings, elevations, and other relevant detail drawings. The project will be presented in both 3D and physical model.



**CZECH TECHNICAL UNIVERSITY IN PRAGUE  
FACULTY OF ARCHITECTURE**

**AUTOR, DIPLOMANT:****AUTHOR OF THE DIPLOMA WORK / DIPLOMA PROJECT**

Academic Year .....2021....., .....2022..... Semester

**TITLE OF THE DIPLOMA WORK / DIPLOMA PROJECT**

(IN CZECH LANGUAGE)

**TITLE OF THE DIPLOMA WORK / DIPLOMA PROJECT**(IN ENGLISH LANGUAGE) EXPERIMENTAL ARCHITECTURAL SCHOOL,  
PRAGOVKAART DISTRICT**LANGUAGE OF THE DIPLOMA WORK / DIPLOMA PROJECT:**Diploma Work  
/ Diploma  
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/ Diploma  
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OpponentKey Words  
(Czech)obnovení, adaptivní opětovné použití, pragovka, architektonická škola,  
experimentální,Annotation  
(Czech)

Experimentální architektonická škola zahrnuje zázemí pro studenty a návštěvníky budovy. Hala 18 byla navržena s designem, který zahrnuje rozmanitost soukromých a veřejných funkcí. Hlavní prostory návrhu zahrnují galerijní prostor, vertikální studia, hlediště, galerijní kavárnu, food court, architektonickou školu, knihovnu, terasové prostory a uličku, která zapojuje interakci. Nejvýraznějším konceptem designu je obnova stávajících sloupů a zapouzdření více funkcí ve starém plášti haly 18.

Annotation  
(English)

The experimental architectural school includes facilities for students and visitors of the building. Hall 18 has been proposed with a design that includes a diversity of private and public functions. The main spaces of the design include a gallery space, vertical studios, auditorium, gallery cafe, food court, architectural school, library, terrace spaces, and an aisle that engages interaction. The most prominent concept of design is the restoration of existing columns and encasing of multiple functions within the old shell of Hall 18.

**The Author's Declaration**

I declare that I have elaborated the submitted diploma work / diploma project independently and that I have stated all the used information sources in coherence with the "Methodological Instruction for Ethical Preparation of University Final Works".

*(The complete text of the methodological instruction is available for download on <http://www.fa.cvut.cz/En>)*

In Prague on .....Signature of the Diploma Project Author

*This document is an essential and obligatory part of the diploma project / portfolio / CD.*



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# 1. 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 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.

## 2. 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.

## 3. 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.

## 4. 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.



## 5. LITERATURE CASE STUDIES Aarhus School of Architecture / ADEPT + Vargo Nielsen Palle

**Architects: ADEPT, Vargo Nielsen Palle**  
**Area: 12500 m<sup>2</sup>**  
**Year: 2021**  
**City: Aarhus**  
**Country: Denmark**

Inspired by 21st-century learning principles, the new Aarhus School of Architecture was designed as an incubator for architectural experiments, workshop-based learning, and unplanned synergies between students. The architecture is raw, almost resembling an industrial building, but only at first glance – the refined detailing and strong spatial organization deliberately communicate how a building is constructed.

The Aarhus School of Architecture was designed as a laboratory for learning and exploring architecture, both inside and out. The building is located at a former rail yard with traces of industrial history forming a raw authentic identity.

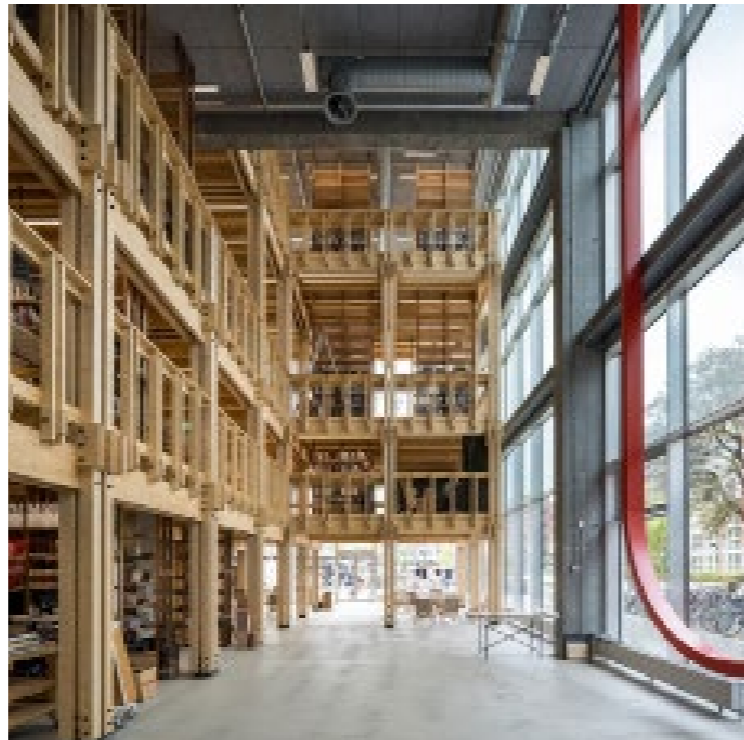
The simplicity of the design is a design solution to the school's need for functional and robust spaces. The completed building allows the tutors to experiment with new and contemporary ways of architecture education. The new building is the school's best showcase allowing activities to become visible to the public, just as the spatial organization and interior transparency make studio activities visible and present to all the students. This is architecture encouraging communities and synergies.



The building is an example of with design-integrated solutions that maximizing spatial flexibility.

A narrow material palette reduces the building's construction resources, including local production and transportation chains where possible.

Other sustainable initiatives are the up cycled wood floors made from leftovers from industrial window production and the large library structure spanning several floors. The library is partly made from an up cycled shelf system from a nearby historic building. The urban landscape surrounding the building is part of a research project aiming to up cycle leftover construction materials from building to landscape, testing climate adaption solutions and moving biotopes from one location to another.



**STUE PLAN**

1:500 @ A4



**1. SAL**

1:500 @ A4

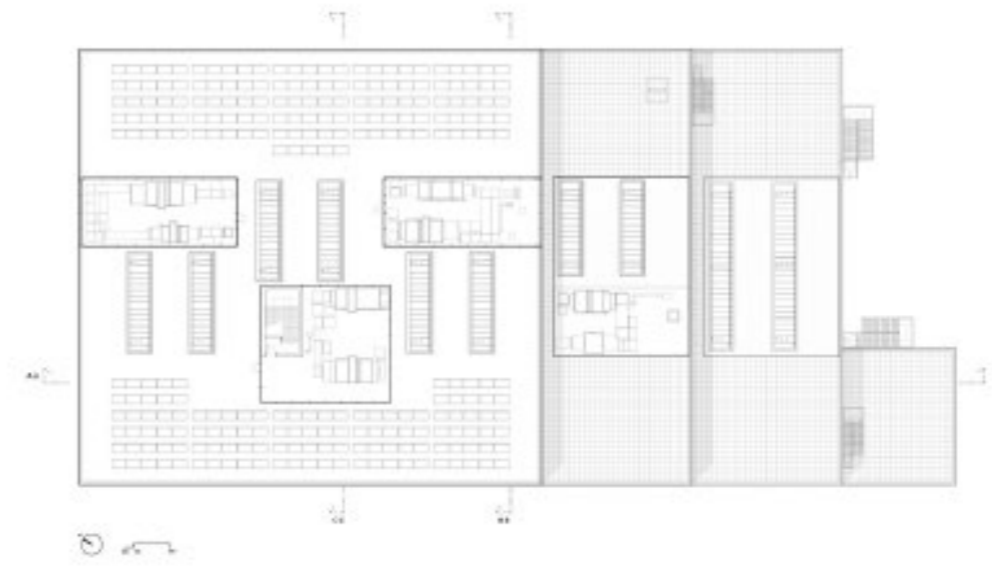




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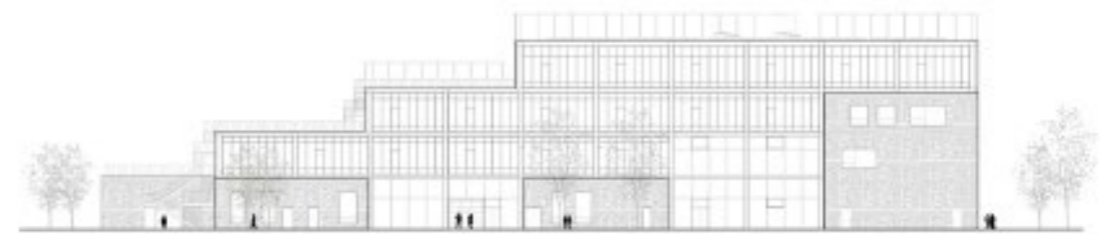
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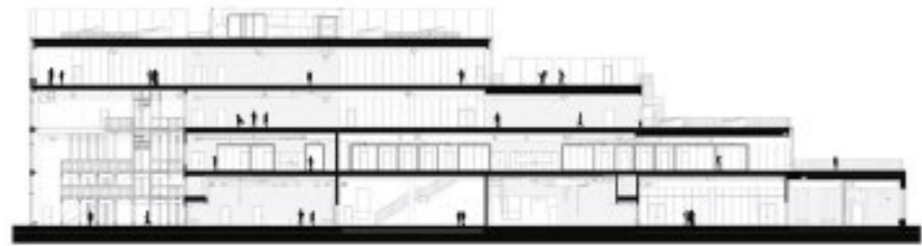
3. SAL  
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North Facade  
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Section AA  
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Section CC  
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## 5.2. Frank Lloyd Wright School of Architecture, Taliesin

### A Place for Hands-On Learning

The School of Architecture at Taliesin has its origins in Wright's apprentice/fellowship program, which he started in 1932. It was clearly dear to his heart. In his will, Wright left his entire estate to the program and the foundation, which was created in the 1940s to support the school and encourage the "teaching of the art of architecture and collateral crafts."

Wright hoped the school would foster an education where students learned, in part, by getting their hands dirty: shoveling dirt, mixing concrete, putting up the walls and raising the rafters integral to their designs. He hoped to promote the ideas of organic architecture, but also described the program's goal as developing a "creative human being with a wide horizon."

The School of Architecture at Taliesin is an independent, experimental, accredited Master's of Architecture Program that accepts students from any background that show an aptitude for design. Current students have undergraduate degrees that range from communications to construction management. The blend of backgrounds, coupled with the immersive experience turns classmates into teachers and teachers into collaborators. This method of teaching was pioneered at Taliesin as a social experiment that continues to this day.

The program was associated with daily life by interacting with, serving and studying peers. Frank Lloyd Wright's greatest feat at Taliesin and Taliesin West are the experimental social relationships, which Students of Architecture participate in every day.





## 5.3. ARCHITECTURAL ASSOCIATION- School of Architecture, London

The Architectural Association (AA) is the oldest independent school of architecture in the UK. The school was founded in 1847 as a student-centred collective that aspired to radically transform architectural education.

The outcome of this is an environment that encourages students to speculate without limitations, to take risks with confidence and to cultivate individual, radical research agendas that will shape the future of the architectural discipline. The school is progressively redefining the nature of architecture both in academia and in practice worldwide. As a participatory democracy, this endeavour relies on the students to continuously contribute to the identity of the school and to critically engage with the broader cultural discourse in London and beyond.

Today, the school comprises over 900 full-time students, approximately 7,500 members, 250 tutors and 125 administrative staff from across the globe. It occupies eight Georgian houses in the centre of London, as well as a 350-acre woodland site at Hooke Park in Dorset, and an ever-expanding number of digital spaces. Quite unlike any other institution operating today, the school offers a broad range of flexible, self-directed programs, courses and curricula that empower students and staff to challenge the accepted methods within contemporary architectural education and professional practice.

The collection of courses, programs and initiatives aim to achieve a plurality of topics and agendas, allowing students from different backgrounds with varied interests and ambitions to find their own individual and unique path through the school.



The AA curriculum is enhanced by the Public Programme, which focuses on the unique opportunities and challenges of the present through a series of lectures, exhibitions, studio visits, symposium and book launches, and by the Communications Studio, a media, publishing and graphic design studio.

Collectively, the courses, programmes, public events and publications exist alongside spontaneous discussions, unexpected encounters and vibrant exchanges that take place throughout the academic year. This confluence of activity keeps the AA in a constant flux of transformation that does not allow the status quo a moment to ingrain itself into the walls, floors, stairwells and digital worlds of the school or the projects, ideas and ambitions of the students.





## 6.1.ARCHIP- Prague Štulcova 98/1, Prague

A Progressive New School Of Architecture

ARCHIP is a hybrid of global and local scales (international yet Prague-specific); of conceptual and technical training (highly speculative yet practically applied); of a productive workshop-studio environment and a philosophical space (where debate is advanced in both material and words), and which also combines the best of the European and American traditions of architectural education into its own unique type.

All of the studio leaders are active in the professional field of architecture. The students thus have a unique chance to gain insight into the actual processes and intricacies of practicing architecture, planning and construction. While proposing their academic, conceptually-driven projects students also learn how to think about challenges from the perspective of „real life“ practice.

The programme provides you with a broad foundation of knowledge and a range of transferable skills, leading to many academic and career options.

The Bachelor programme at ARCHIP is a three-year undergraduate professional degree programme. They place emphasis on conceptual thinking, on the passionate discovery of new questions, on the rigorous path towards design excellence, on well-rounded intellectual development, and on cultivating each student for a breadth of career choices.

The Master programme at ARCHIP is a two-year graduate professional degree programme. While independent from the Bachelor programme, within the interdisciplinary studio environment, they are linked. The emphasis on incorporating all aspects of architectural practice, through design, history, theory and research, as an in-depth understanding of the field, with a focus on practical and project-based work.



## LIVE QUESTION & ANSWER

1. What are the major differences that you see in the education you got from ARCHIP. How well do you think that it helped you?

Since it was a smaller school, the major difference was the ability to get to know the teachers, staff, and students better.

2. How did a day in your life look like in ARCHIP?

Well, I would have to think back to pre-lockdown days. Those were obviously the best ones. The school wasn't far from my flat so it was nice to spend the day in lectures and the studio space, which was, at the time, set up as a student's studio should, with our own personal spaces. There was a nice cafe downstairs that belonged to the DOX building, so that is where I would go for lunch in between classes. But the school had to move out of that building and is now within the walls of Vysehrad. It is in a beautiful building, but it was never as pleasant of an experience there as the old location at DOX.

3. The program.

It is actually quite similar to CTU. However, half of my time at ARCHIP was under lockdown so I did not get the most out of the program as previous classes had. No trips to other cities or local workshops, etc.

4. Hands-on learning.

Only pre-lockdown. There was an emphasis on making models, which I always enjoyed. But once studio went online, there were only a few models made and they usually went unappreciated. There were also many required art classes at the school, but I didn't have to take them since I had transferred art credits from an art and design school I attended in Los Angeles.

5. How many students, faculties and staff.

Students, around 70. Faculties, 1. Staff, maybe around 25.

6. What are the spatial requirements; studio, lecture halls, common areas, staff rooms etc.

ARCHIP has been in 3 locations in the last 5-6 years. Each of them had lecture rooms (2-3), studio space (although it is not nearly enough space in their current location and is not set up properly), some common areas, toilets, staff rooms, staff offices, and a small kitchen.

7. Lifestyle

I would have to say it was far more relaxed at this school, so you would have a pretty easy time of it if you managed your time well. Plenty of time to enjoy Prague and explore other interests.



# 7.Experimental Architectural School in PRAGUE

-Hands-on learning approach to a practical profession

## REQUIREMENTS

- 1.Design studios
- 2.Gallery (interactive)
- 3.Lecture halls
- 4.Library
- 5.Workshops- Material experiments
- 6.Workshops- Wood works
- 7.Workshops- Model making
- 8.Workshops- Printing
- 9.Workshop- experimental
- 10.Toilets
- 11.Lounges
- 12.Dining area
- 13.Kitchen
- 14.Staff rooms
- 15.Cafeteria
- 16.Game room
- 17.Media room
- 18.Administration
- 19.Technical rooms
- 20.Graphics/ AV production Classroom and Lab
- 21.Theatre
- 22.Interaction rooms/ Gathering spaces
- 23.Storage
- 24.Machinery room
- 25.Counselling facility
- 26.Outdoor activity spaces
- 27.Outdoor dining
- 28.Outdoor learning labs
- 29.In house accommodation facility for students and teachers
- 30.Technical rooms

## PROGRAMME

Architecture is a subject that is vast and boundless. Hence mastering the profession within the boundaries of a classroom and textbooks is impossible. It should be an experiment that each student does and learns to master the profession in their way- As there is no one right way of mastering this art.Architectural school and its amenities serve as a tool for the students to understand the infinite possibilities this subject has. It should be flexible and the space should be experienced by its users. Interaction and communication play a crucial role in the formation of a professional. Architectural studies can be interpreted as the journey in which each student starts with a clean sheet and finishes it with a masterpiece. Hence an environment that encourages the students to involve in hands-on learning and experimenting is important. According to the issues discussed earlier, communication and interaction play a crucial role in the formation of this space.



Architectural LABORATORIES (workshops) can be considered the first step towards this goal. The examples of AARHUS and F.L.Wright school of architecture show us the advantages of student interaction. It need not be within the premises of a studio, but also even in a common kitchen/ dining area. Gallery spaces are another way of achieving better student interaction. It also plays a crucial role in portraying the face of the institution. Due to the advancement in technology in architecture, Graphics/ AV production labs will help to equip the students with the latest technology and tools. Along with architecture, it is also important to address the other talents that these young architects might have. Hence interaction rooms can serve as a talent exchange zone where students can interact through extracurricular activities. Game rooms and other relaxation zones help the students and the staff to take a break from their academic routines.

### Why Prague?

Prague's architecture is spellbinding. Many architectural gems from the Gothic, Renaissance and Baroque era remain intact because the city was not rebuilt like most European capital cities during the 18th or 19th centuries, when it was only a provincial town in the Austro-Hungarian Empire. Also, Prague was spared the tragic fate of cities such as Dresden during World War II. To be sure, Prague is a sort of "museum of architecture under the open sky." The largest urban historical center listed on the UNESCO World Heritage List, this well-preserved area covers 900 hectares that includes some 4,000 monuments. So why not PRAGUE?

## AREA REQUIREMENTS

No.	NAME OF ACTIVITY/ROOM	MIN. AREA (m <sup>2</sup> )	REMARKS
1.	Design Studios	<b>(8x20)5= 800</b>	8m <sup>2</sup> per student (100 students)
2.	Gallery	300	
3.	Lecture hall	200	1.5m <sup>2</sup> per student (100 students)
4.	Library	500	
5.	Workshop- Material experiments	180	8m <sup>2</sup> per student (20 students)
6.	Workshop- wood works	200	8m <sup>2</sup> per student (20 students)
7.	Workshops- Model making	180	8m <sup>2</sup> per student (20 students)
8.	Workshops- Printing	180	8m <sup>2</sup> per student (20 students)
9.	Workshop- experimental	180	8m <sup>2</sup> per student (20 students)
10.	Toilets	150	2m <sup>2</sup> per cubicle
11.	Lounges	200	
12.	Dining area	200	
13.	Kitchen	100	
14.	Staff rooms	<b>(20x10)= 200</b>	
15.	Cafeteria	150	
16.	Game room	100	
17.	Media room	50	
18.	Administration	200	
19.	Technical rooms	80	
20.	Graphics/ AV production Classroom and Lab	<b>50X2=100</b>	
21.	Theatre	120	
22.	Interaction rooms/ Gathering spaces	<b>50x3= 150</b>	
23.	Storage	100	
24.	Machinery room	80	
25.	Counselling facility	15	
26.	Outdoor activity spaces	200	
27.	Outdoor dining	100	
28.	Outdoor learning labs	<b>(8x20)5= 800</b>	8m <sup>2</sup> per student (100 students)
	<b>Total</b>	<b>5815m<sup>2</sup></b>	

## 8. Refurbishment and Adaptive Reuse

In recent years, refurbishment and adaptive reuse have become ubiquitous within the architectural discourse, as the profession is becoming more aware of issues such as waste, use of resources and embedded carbon emissions. However, the practice of updating the existing building stock lacks consistency, especially when it comes to Brutalist heritage. The following explores the challenges and opportunities of refurbishment and adaptive reuse of post-war architecture, highlighting how these strategies can play a significant role in addressing the climate crisis and translating the net-zero emissions goal into reality while also giving new life to existing spaces.

As the construction process can amount to half of a building's lifetime carbon emissions, the adaptive reuse and retrofit of existing buildings are critical strategies in reducing embodied carbon. Not only are resources conserved by recycling spaces, but the lifespan of structures whose fabrication generated large quantities of carbon dioxide is extended. The latter is especially important in the case of Brutalist architecture and its carbon-intensive concrete structures. Frequently disregarded and vulnerable to demolition, the concrete buildings of the last half of the 20th century can become fertile ground for experimentation in reuse, prompted by contemporary environmental imperatives.





### Technical Challenges

The rehabilitation or the adaptive reuse of brutalist buildings are not devoid of challenges. In many cases, building codes, policies and financial frameworks discourage retrofit projects, making demolition the more common option. Moreover, the process of adaptive reuse is often more costly and labour intensive than building anew, as it requires investigations into the building's condition and selective demolition. The situation of listed Brutalist buildings is even more complicated, often caught in the middle of conflicting energy codes and conservation imperatives. The preservation community is divided when it comes to the types of acceptable interventions, inadvertently limiting the possibilities for contemporary use.

### Changing Public Perception

In some instances, the adaptive reuse of post-war heritage also requires a reconciliation of the public opinion with either the aesthetics or the ideology that shaped the buildings. Some practices like Architecture Initiative see retrofit and reuse as the default design strategy not only to reduce embodied energy costs and save resources but to preserve the architectural identity of the urban fabric.



## 9. Site HALL- 19, PRAGOVKA HISTORY



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 of the former Czechoslovakia. Employing and housing over 3500 people, the workers called it "Pragovka", a renown moniker that has represented the location ever since.

The Pražská Car Factory was founded in 1907: a manufacturing site in the eastern suburbs of Prague, with just 30 employees. In 1927 Praga was incorporated into the new ČKD (Českomoravská Kolben-Daněk) group, one of the largest engineering companies in Czechoslovakia. Among other vehicles (including tanks, locomotives, tractors, motorcycles and metro cars), ČKD produced cars under the Praga, Škoda and Tatra brands.

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 nationalised by the communist government.

c 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.

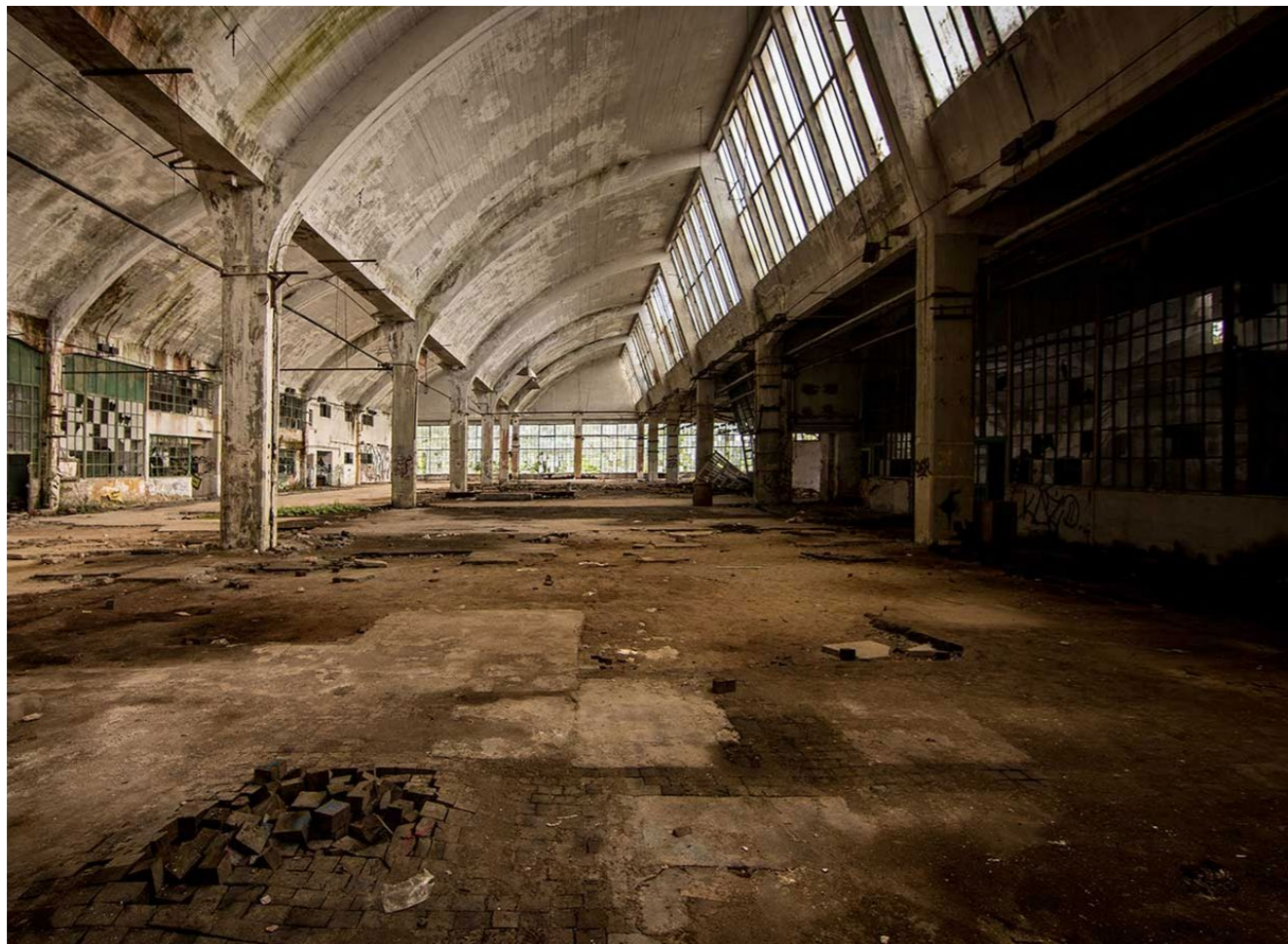
The complex was expanded between 1931-33, including the addition of a new building known as E-Factory, designed by architect Josef Kalous, which would serve as a warehouse for the Ministry of



## PRAGOVKA TODAY

In recent years, the Pragovka complex has been recognised as a heritage site and some of its spaces have been developed into an arts district. There is a retro-themed ‘Pragovka Cafe,’ and the place hosts film screenings, concerts and festivals. Reportedly as many as a hundred local artists have studios now on the former factory grounds, while the large E-Factory building has been converted into a gallery space. There is a proposal for building apartments in the future, a trendy new community rising up amidst the industrial decay.





# PRAGOVKA COMPLEX

## Present Scenario

In the spring of 2016, a new Pragovka concept was created - the gradual rebirth of the factory into an art center called Pragovka Art District., Which resurrected to life this legendary First factory of Czech Republic located in the center industrial parts of Prague 9. Various art studios and occasional art events from previous years have stimulated the emergence of a new story that will go down in the history of this famous area. Pragovka is becoming alive today a multicultural center and art district that provides an inspiring environment for collaboration and space for a fruitful exchange of ideas between different artistic groups.

Pragovka is the current home of many artists from various fields - from painters, sculptors, photographers, fashion designers, furniture designers and upholsterers. Their goal is to create a vibrant environment that encourages collaboration and sharing of various artistic approaches between creative communities. The aspiration is to become an ecstatic place where you can move freely meet and enrich the general public with the contemporary art scene.

## Future visions

The owners of the area, the development company Mount Capital, commissioned Jakub Cigler Architekti to create the company new forms of place. The aim of the urban solution is to revitalize the territory of former industrial plants, the so-called brownfields. A significant point is the design of the north-south boulevard. Here I quote the vision:

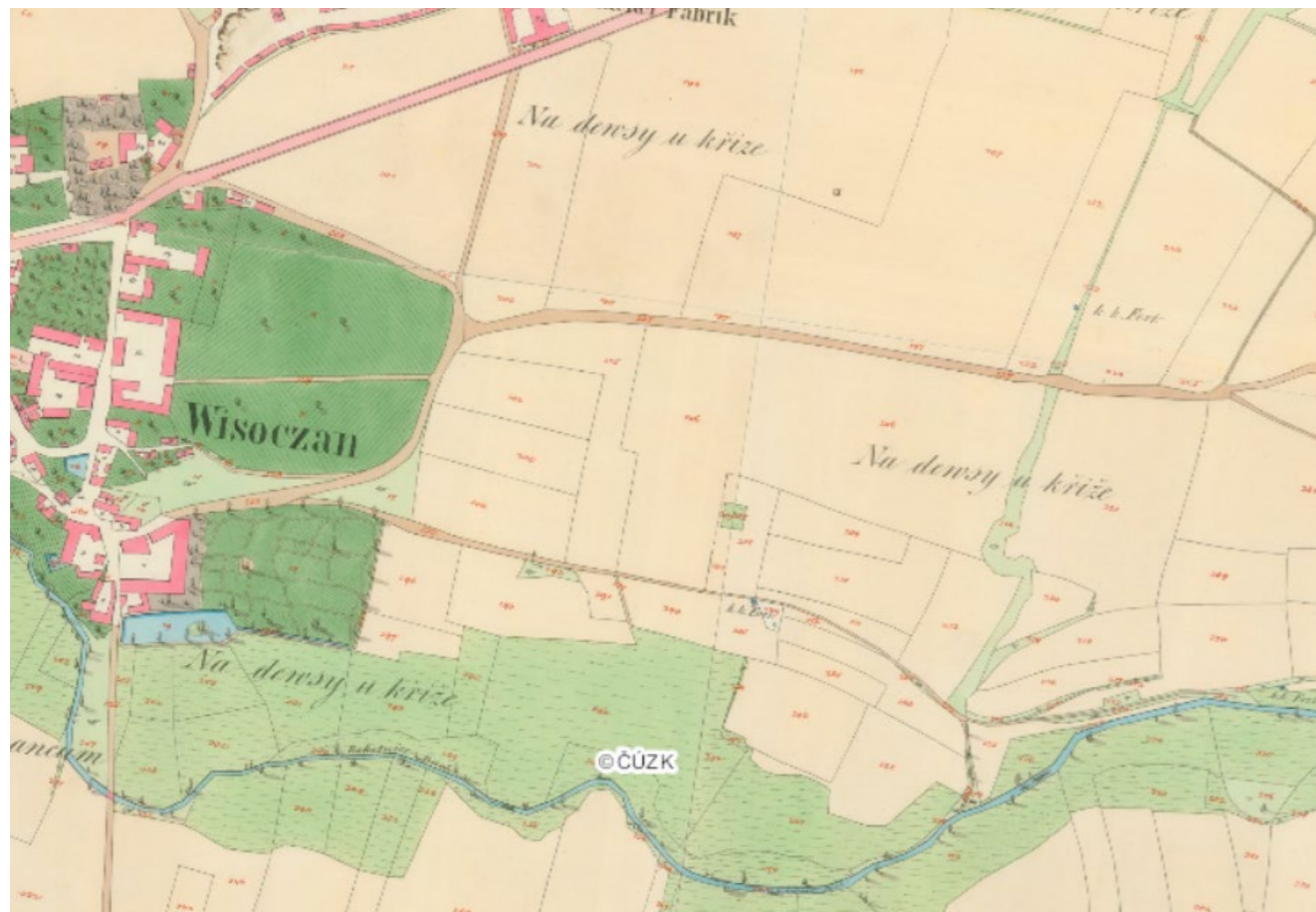
"The former Pragovka complex has the ambition to become the new heart of Vysočany. The size of the territory, its central location and The cooperation between the city district, the municipality, investors and architects aims to create an exemplary in the area an urban district according to the urban principles of the so-called "Creative District."

The term "creative" is not limited to the presence of art studios, the presence of galleries and art. It's not also intended as a marketing sticker in which any content of uncertain quality can be placed. Creative approach we define it as one that integrates social, ecological and economic aspects to the construction of a comprehensive and complex urban space. The creative approach defines the qualities (compactness, variability of typologies, mixed functions, preference for pedestrians and public transport over road transport, preservation of historic buildings and high-quality diverse public and semi-public spaces), but at the same time allows for flexible future development responsive to demand, social change and economic development.

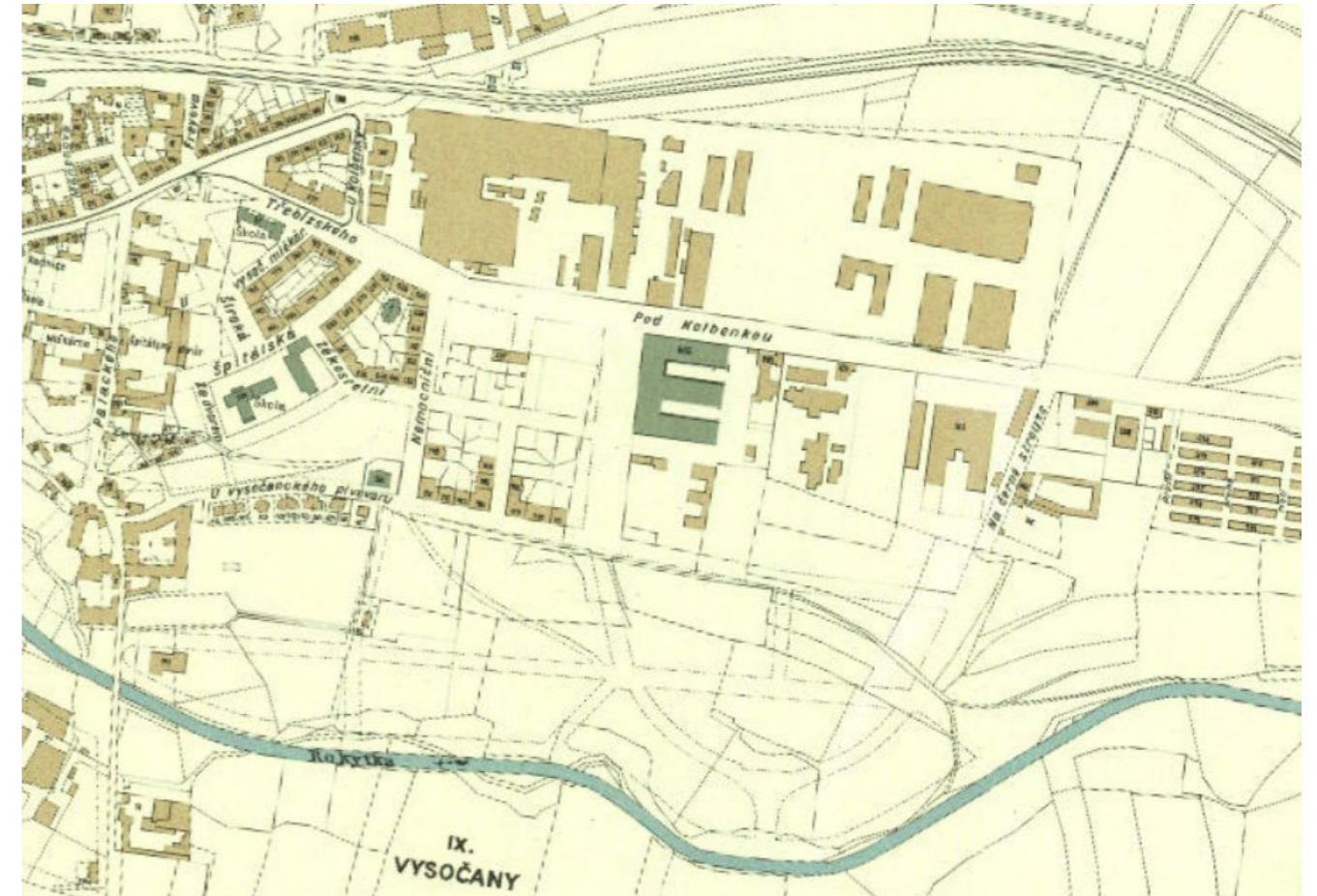
The vision of future construction is motivated by the creation of quality public spaces connecting a compact block urbanism with converted industrial monuments and buildings of city-wide significance (museums, schools, galleries and public facilities). The future complex will include, for example, the Praga car museum in reconstructed Hall 20 or the cultural center of city-wide significance - Kunsthalle in Hall 19. Both proposed functions will help to enroll the district in the mental map of the wider Prague, arouse increased interest in the area and favorably will affect the quality of life of current and future residents and visitors. "



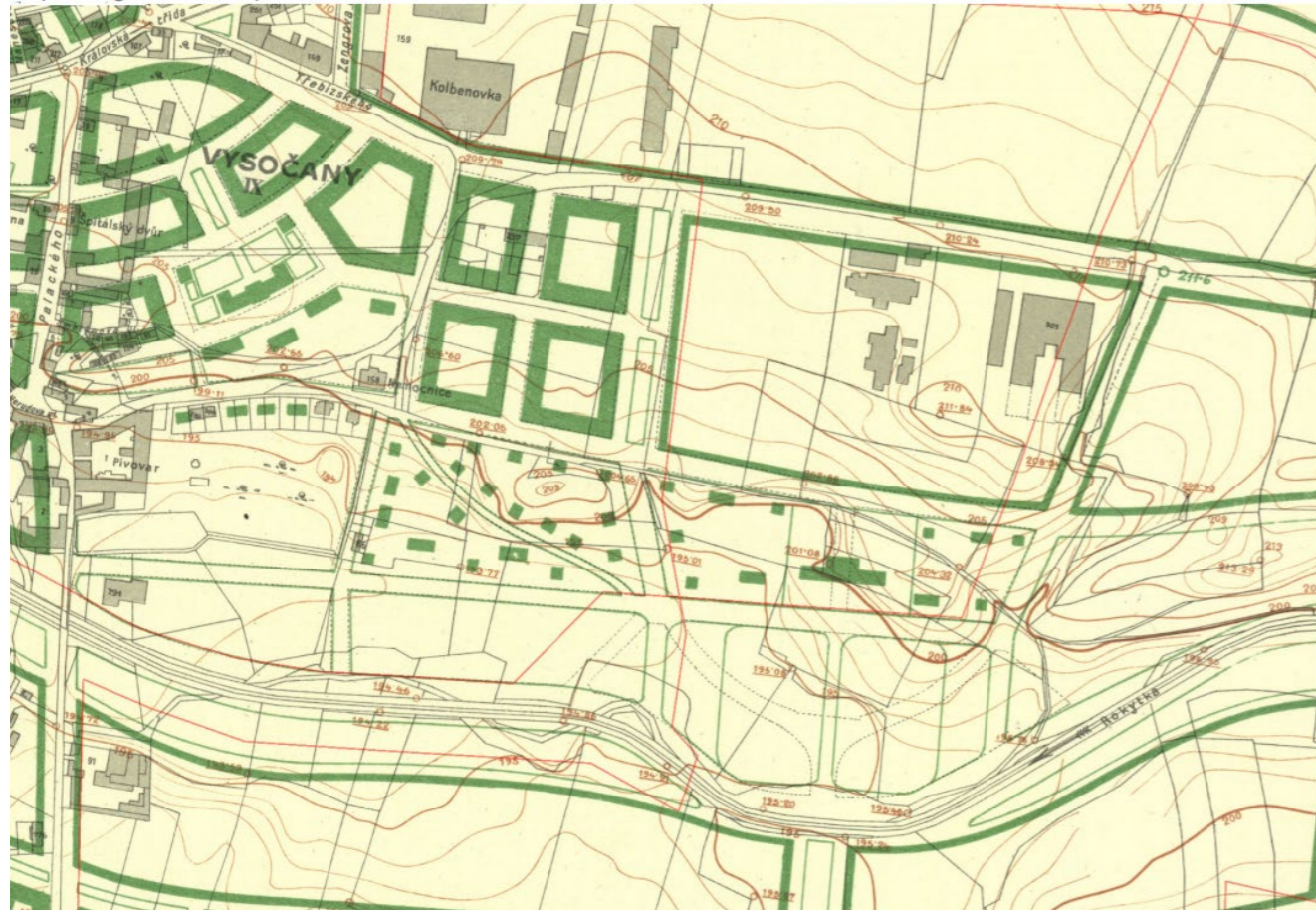
Map of the stable cadastre 1842



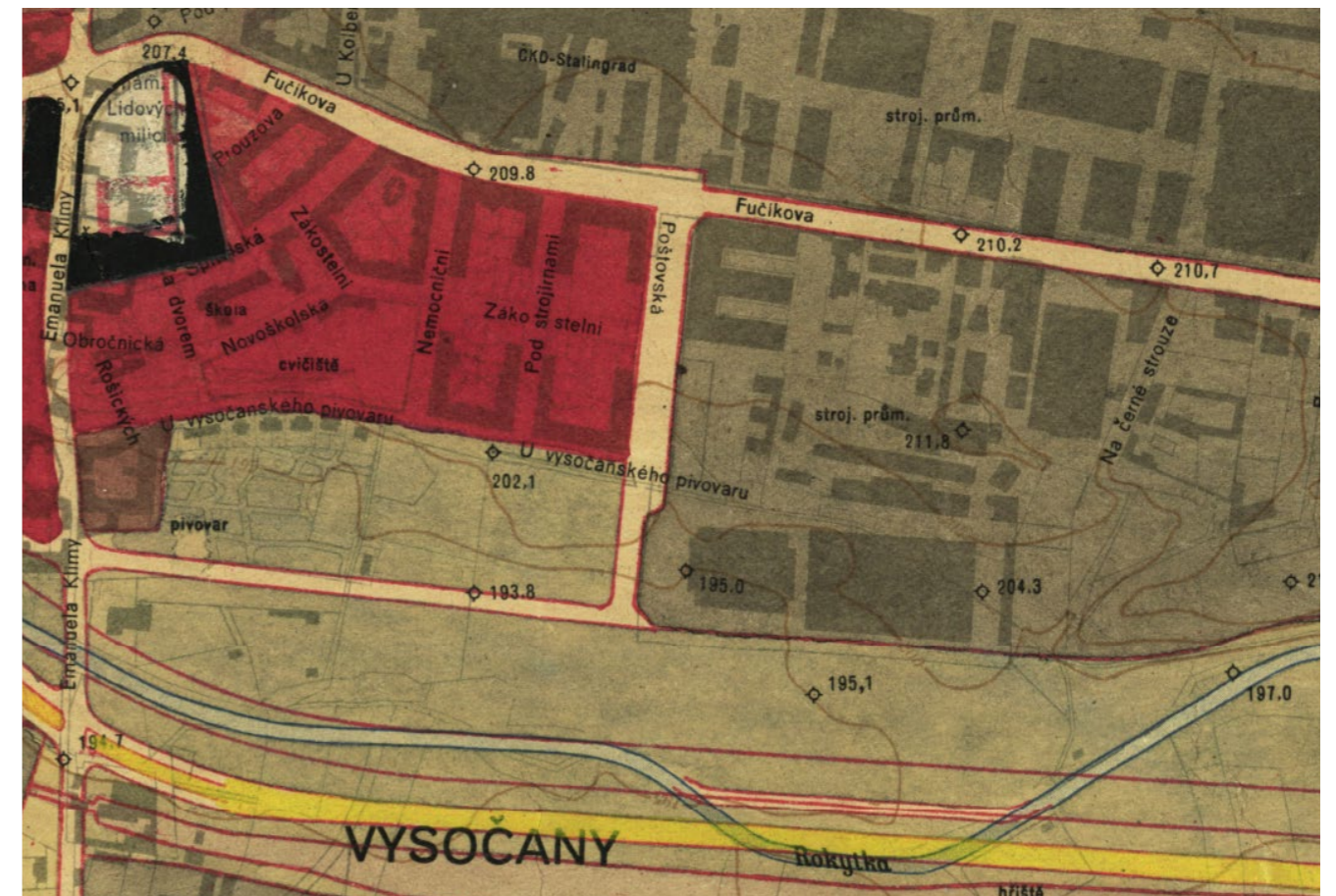
City of Prague with its surroundings 1938



Map of the 1924 regulatory plan



Map of the zoning plan 1964 Orientation plan of the capital



Ortofotomap 1938



Ortofotomap 1988 -1989



Ortofotomap 1966



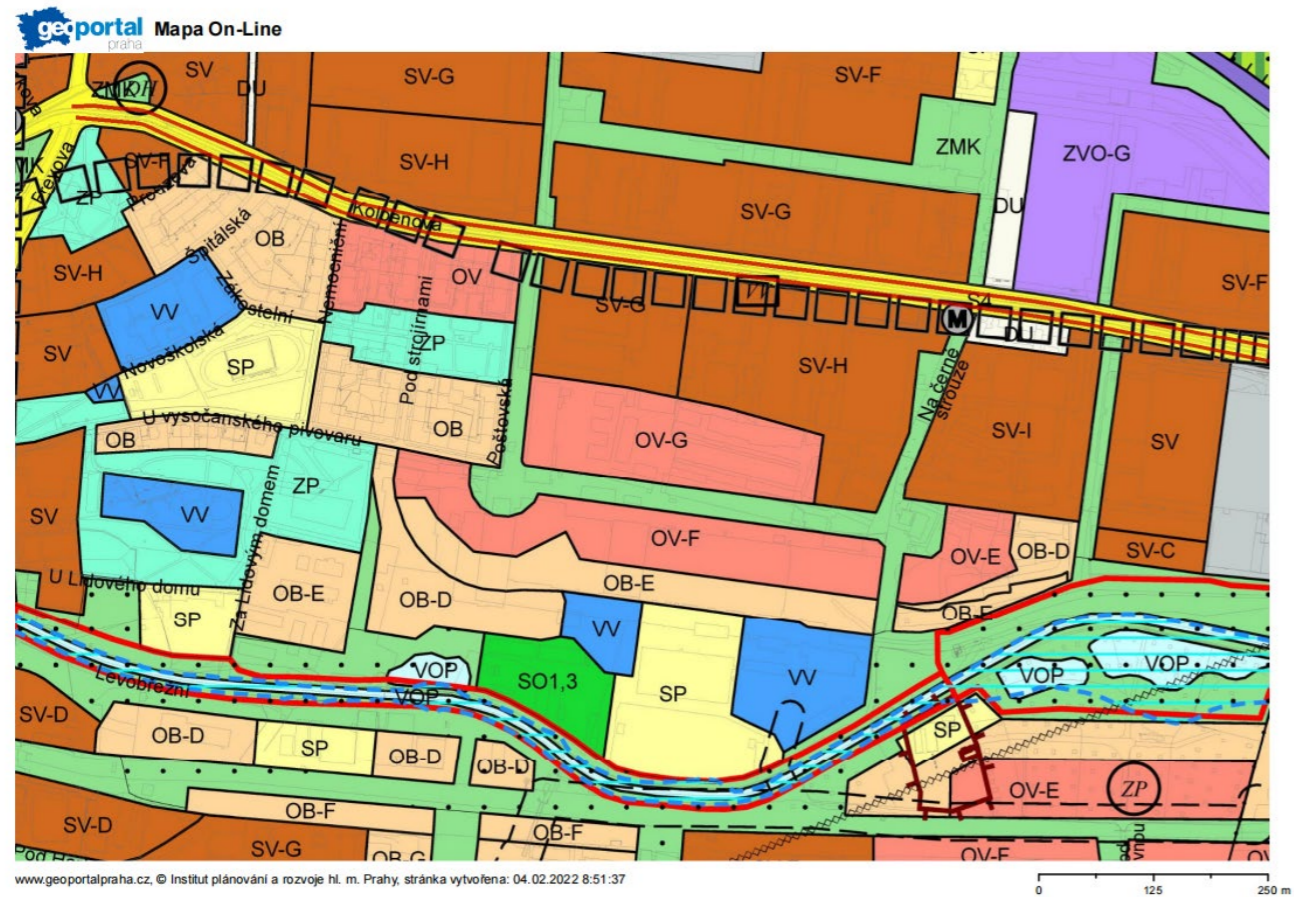
Ortofotomap 2020



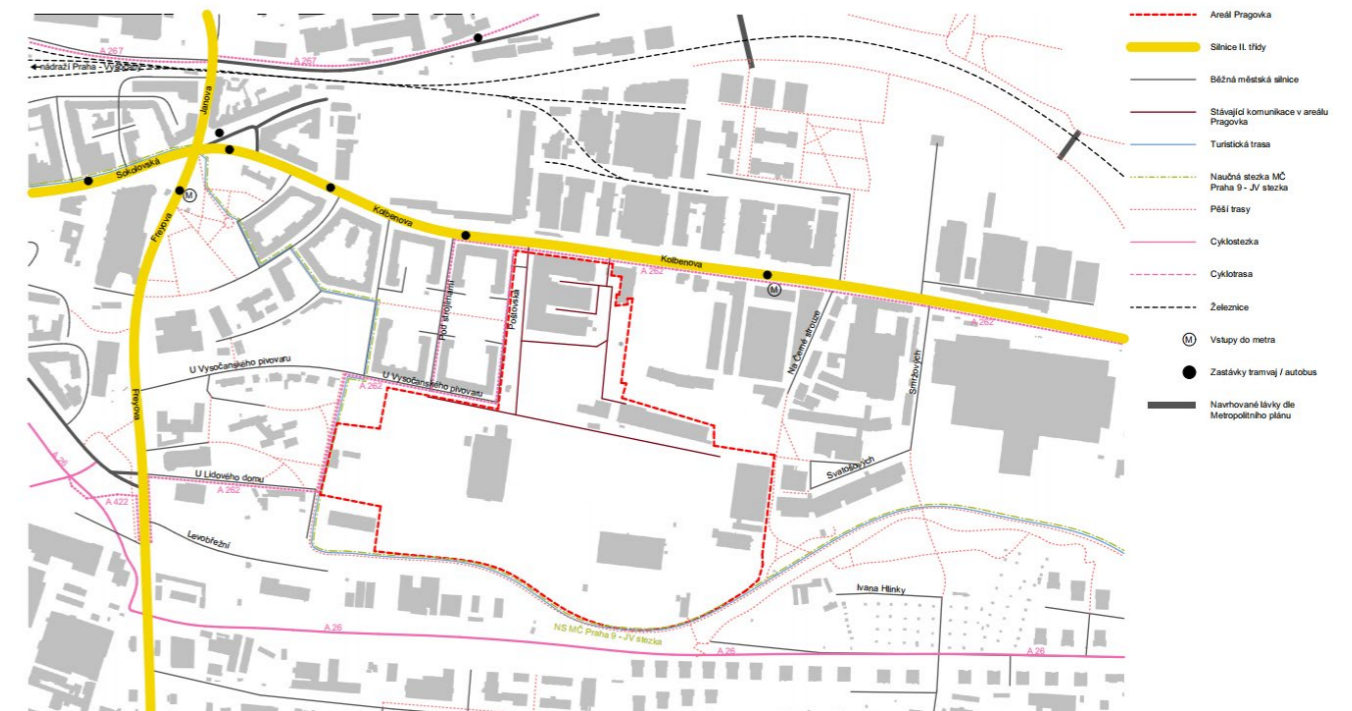
## 10. TYPES OF BUILDINGS NEAR THE RESOLVED AREA



## 11. LANDUSE PLAN



## 12. TRANSPORT SOLUTIONS

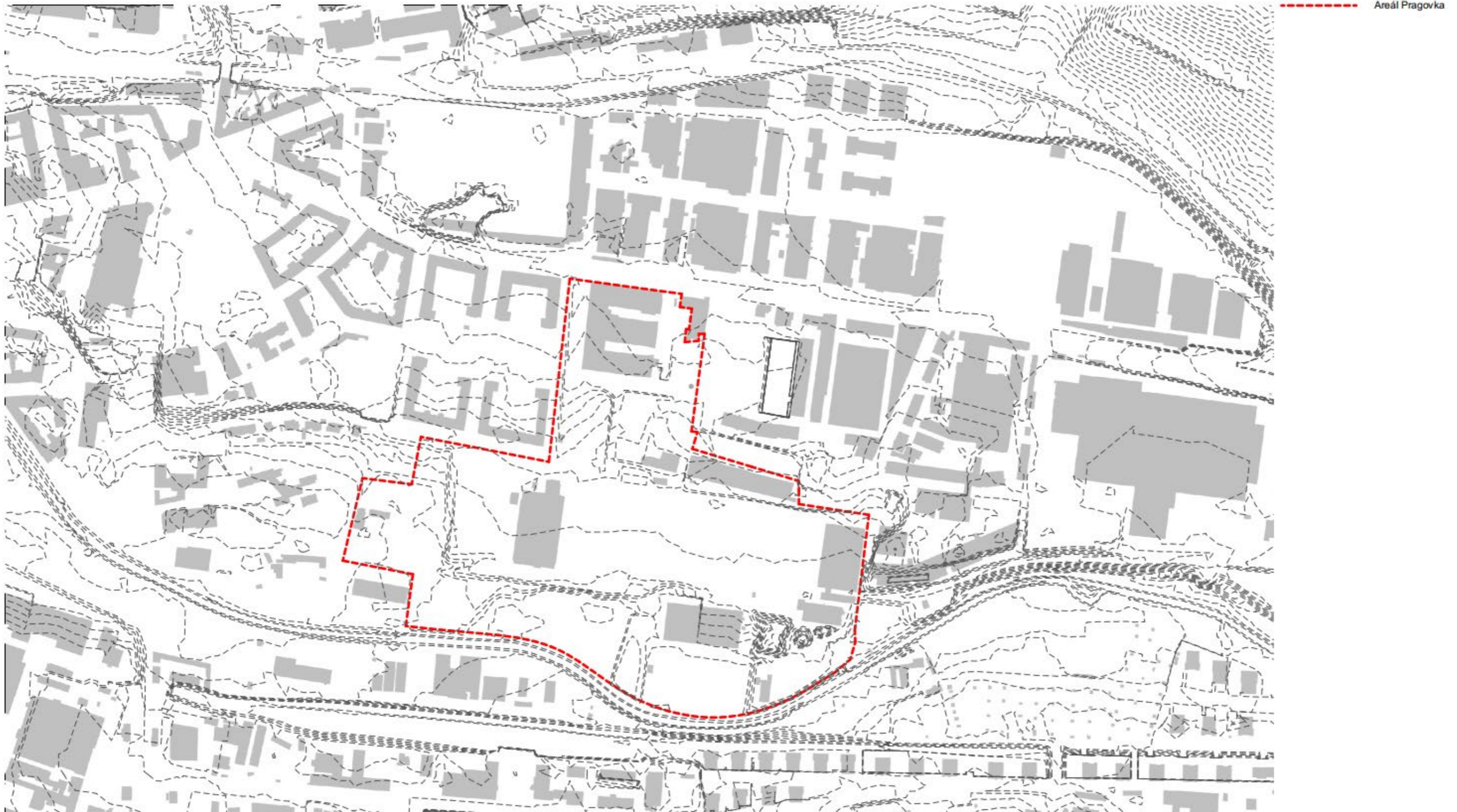


## 13. FUNCTIONAL MAP



## 14. MORPHOLOGY

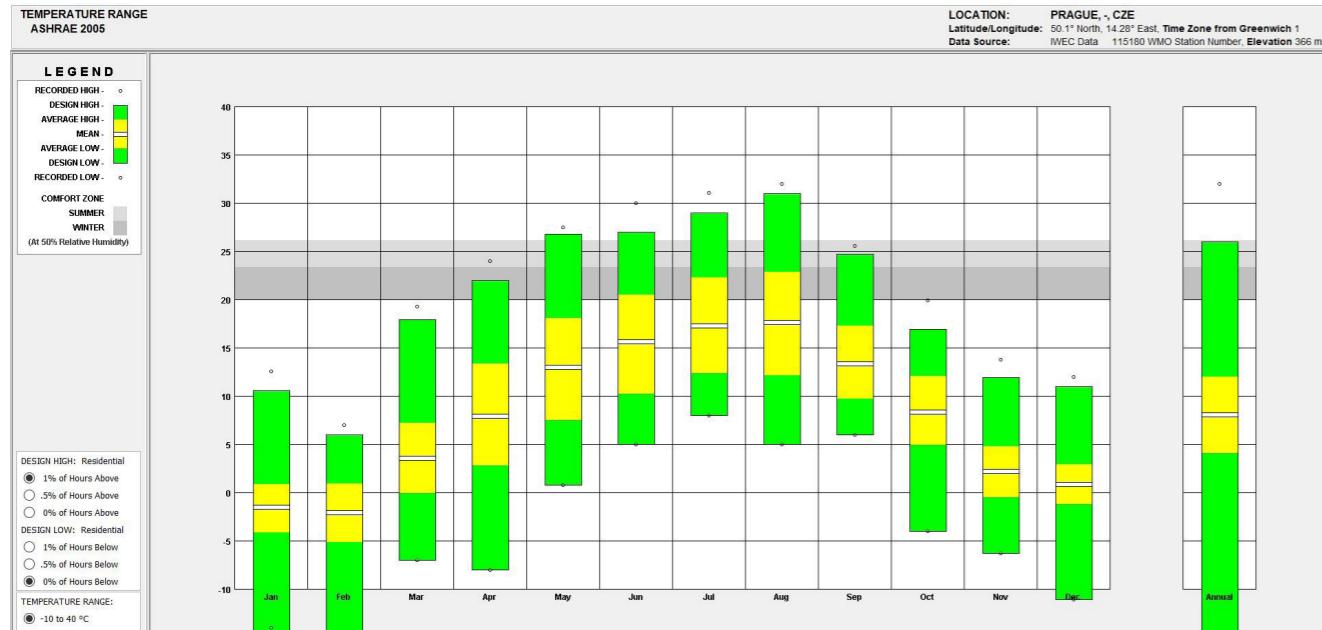
The map shows that the area is located on a gentle slope. The terrain decreases gradually from north to south. In the vicinity of building E there is a leveling, the middle part of the complex is on the slope and further leveling takes place in the lower part 19,18 and 20. Behind hall 19, the terrain slopes towards Rokytká, there is also a sports ground with facilities for Rugby.



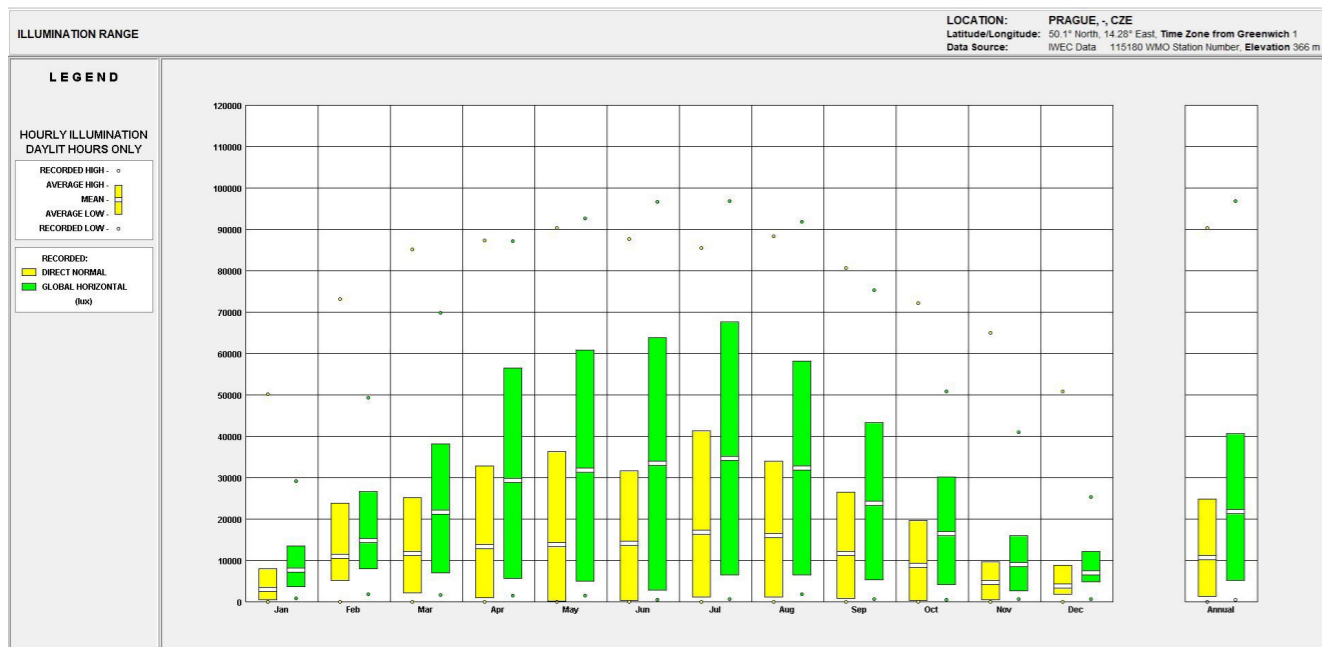
# 15. CLIMATE ANALYSIS

Adaptive reuse is highly challenging as a clear understanding of the existing site condition and the structural strength is necessary. In order to develop a sustainable design, analysing the climatic data of the region is important. The climatic factors such as wind movement, sun path, average and extreme temperatures plays a crucial role in proposing a suitable design criteria. In the case of adaptive reuse the possible design criterias is further limited due to the existing structures in the site.

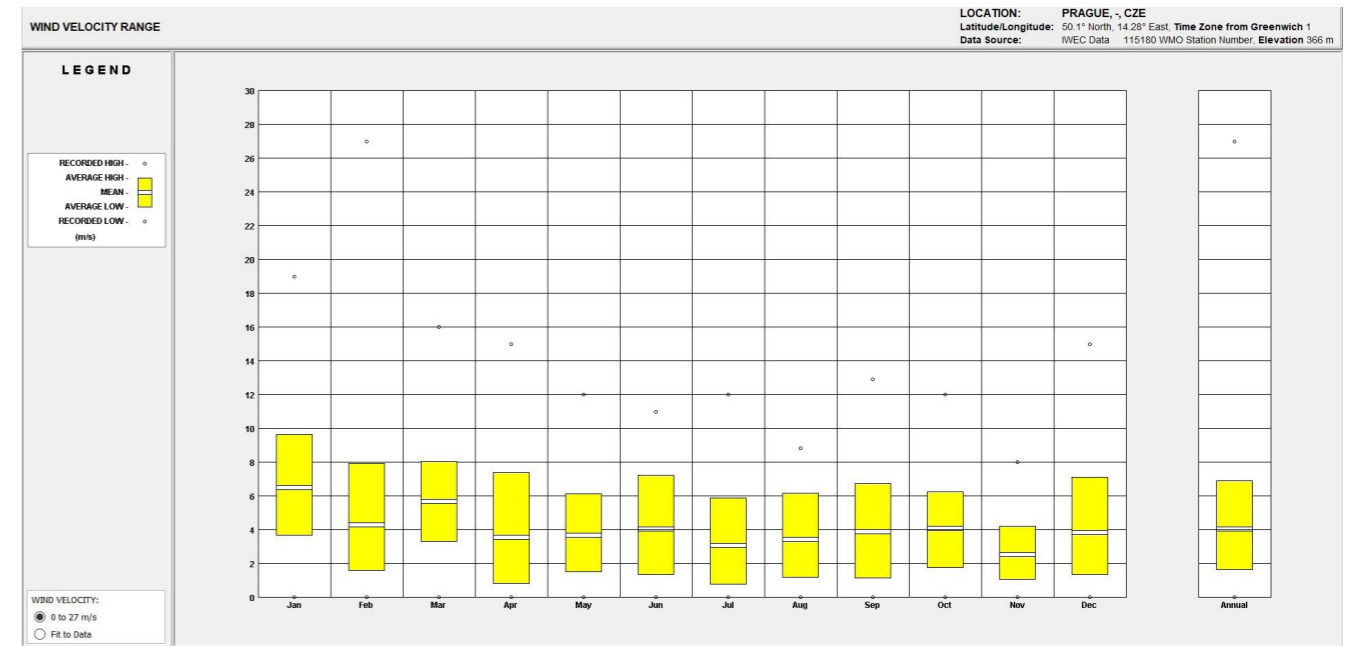
## TEMPERATURE RANGE



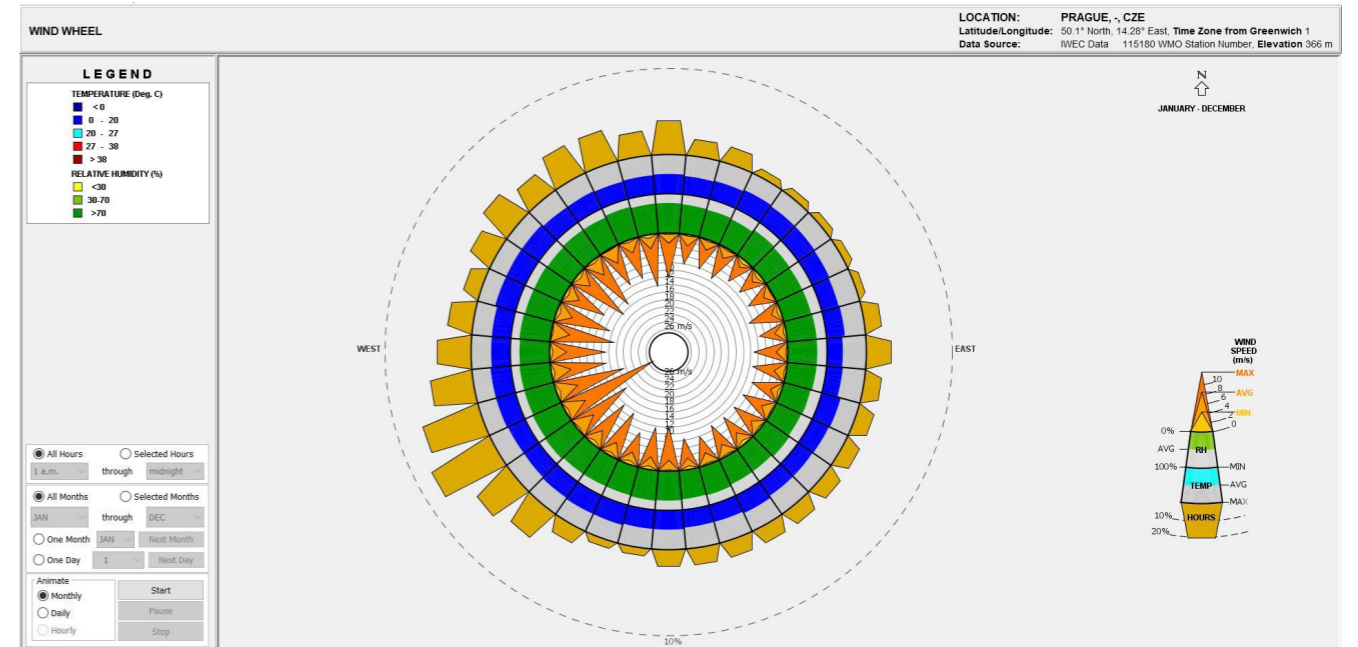
## ILLUMINANCE RANGE



## WIND VELOCITY RANGE



## WIND WHEEL



In Prague, the summers are comfortable; the winters are very cold, snowy, and windy; and it is partly cloudy year round. Over the course of the year, the temperature typically varies from -3°C to 25°C and is rarely below -12°C or above 31°C.

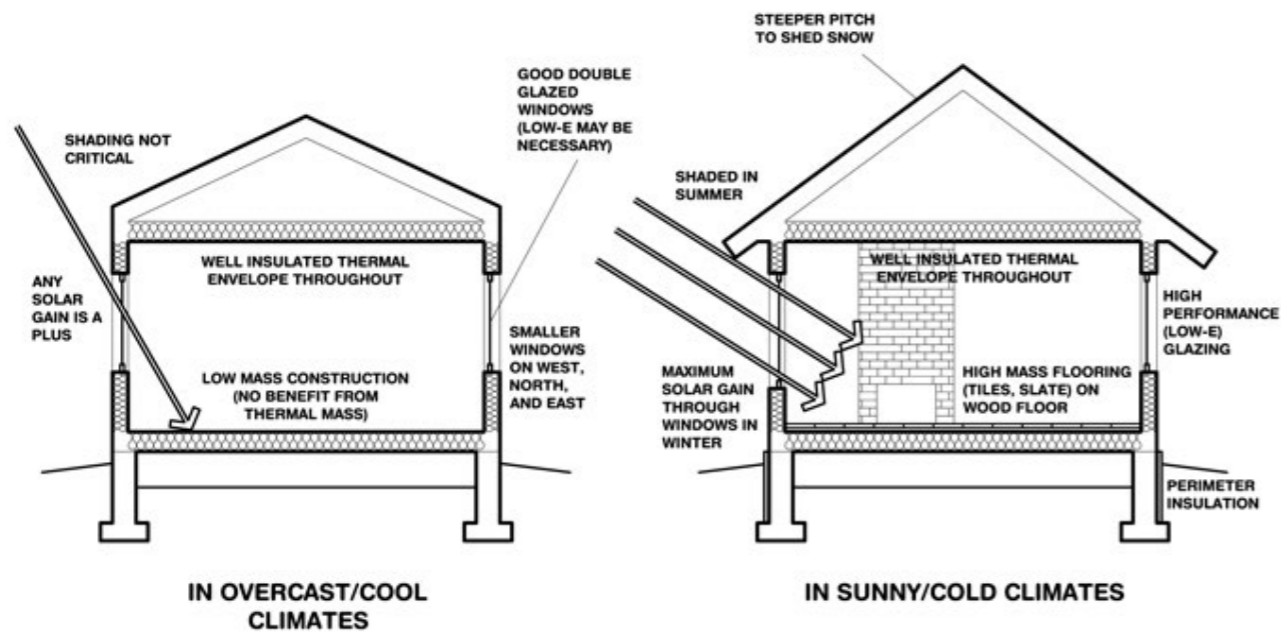
The warm season lasts for 3.4 months, from May 29 to September 9, with an average daily high temperature above 20°C. The hottest month of the year in Prague is July, with an average high of 24°C and low of 14°C.

The length of the day in Prague varies extremely over the course of the year. In 2022, the shortest day is December 21, with 8 hours, 4 minutes of daylight; the longest day is June 21, with 16 hours, 23 minutes of daylight.

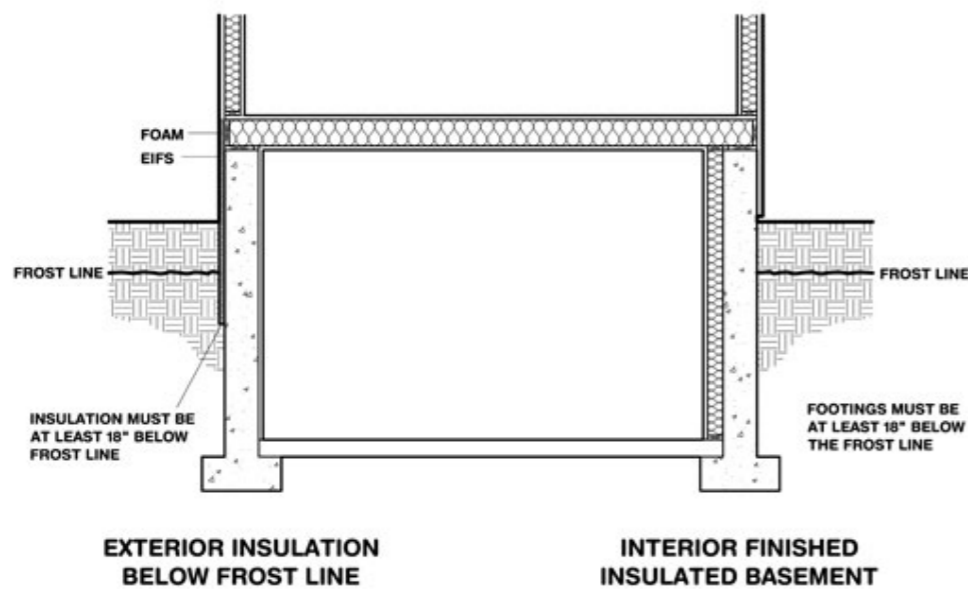
The predominant average hourly wind direction in Prague is from the west throughout the year.



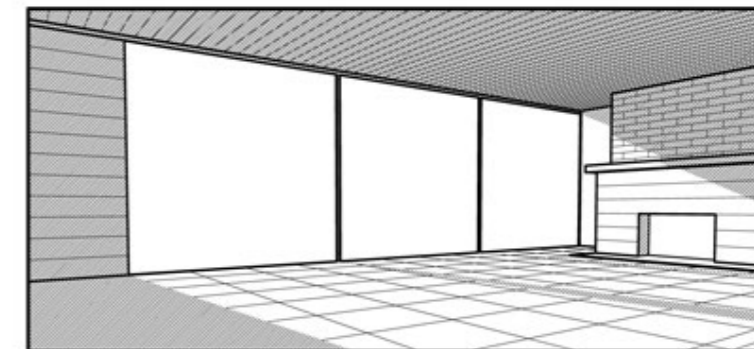
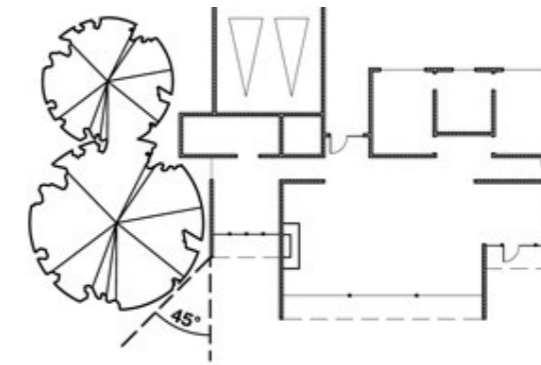
# 16. DESIGN CRITERIA



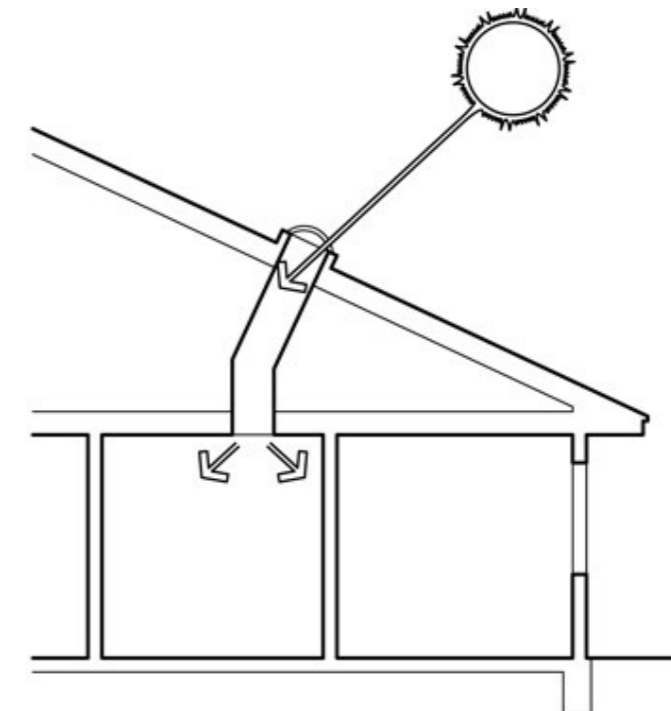
Tiles or slate (even on wood floors) or a stone-faced fireplace provides enough surface mass to store winter daytime solar gain and summer nighttime 'coolth'



If a basement is used it must be at least 18 inches below frost line and insulated on the exterior (foam) or on the interior (fiberglass in furred wall)



Organize floorplan so winter sun penetrates into daytime use spaces with specific functions that coincide with solar orientation



Small well-insulated skylights (less than 3% of floor area in clear climates, 5% in overcast) reduce daytime lighting energy and cooling loads

## 17. ADAPTIVE REUSE REFERENCES

### ADAPTIVE REUSE, CULTURAL CENTER STUTT GART, GERMANY

**Architects: ATELIER BRÜCKNER**  
**Area: 14000 m<sup>2</sup>**  
**Year: 2020**

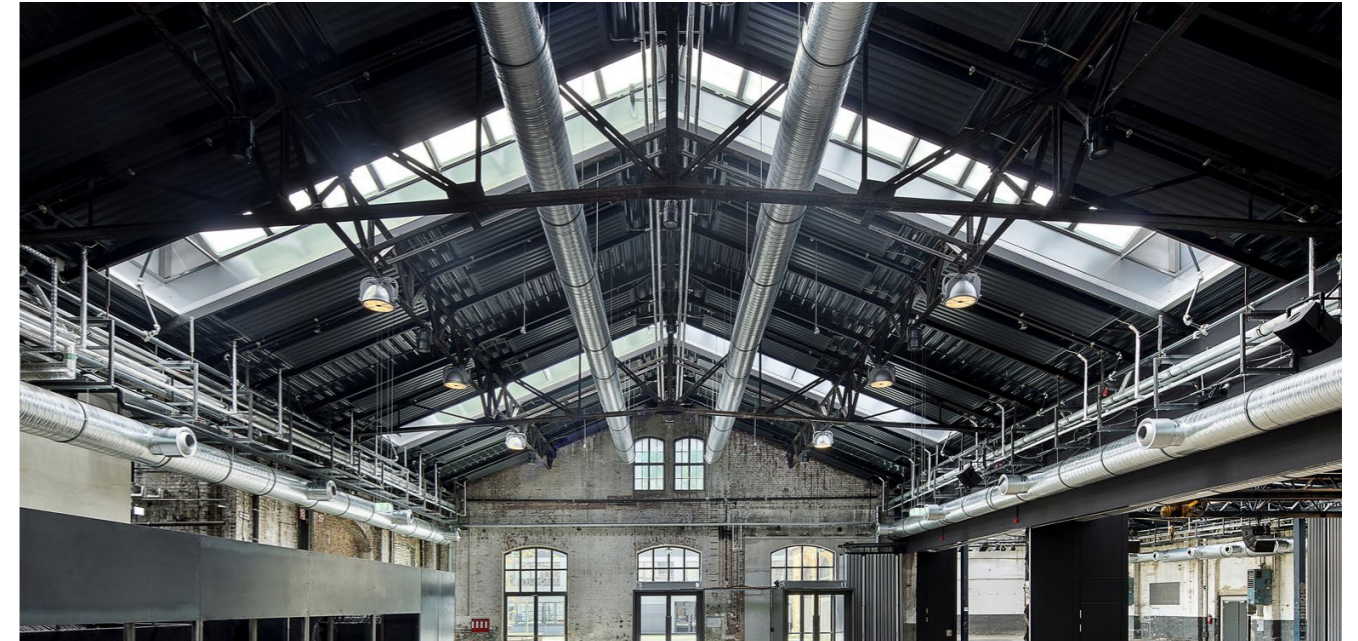
The Wagenhallen in Stuttgart were erected at the end of the 19th century in order to take some of the pressure off the main railway station at the time. They were initially used for locomotives and later for buses as a maintenance and repair depot. After being converted and extended several times, the Wagenhallen became established as a location for cultural uses from 2003 onwards.



ATELIER BRÜCKNER extracted the original shape of the Wagenhallen from the existing ensemble and aligned the historically grounded structure with the current uses of the building. For example, the design and positioning of a newly inserted firewall, which delineates the project room of the artists' society, are a reference to a former outer wall of the Wagenhallen.

Materiality is especially important for the architects. The original structure of the building has been lovingly restored, traces of the past have been uncovered and the living surfaces retained. In terms of the materials selected and implementation of the plans, the newly installed space and structural additions contrast with the clinker walls and the old steel structure.

The appearance of the spacious hall area, which is six to ten metres high and is characterised by steel supports and rhythmic skylights, has not been altered. Once again, the original spatial impression and its volume can be experienced in full.



# Adaptation of Hall 3 of the Central Park to Cultural Facilities / Contell-Martínez Arquitectos

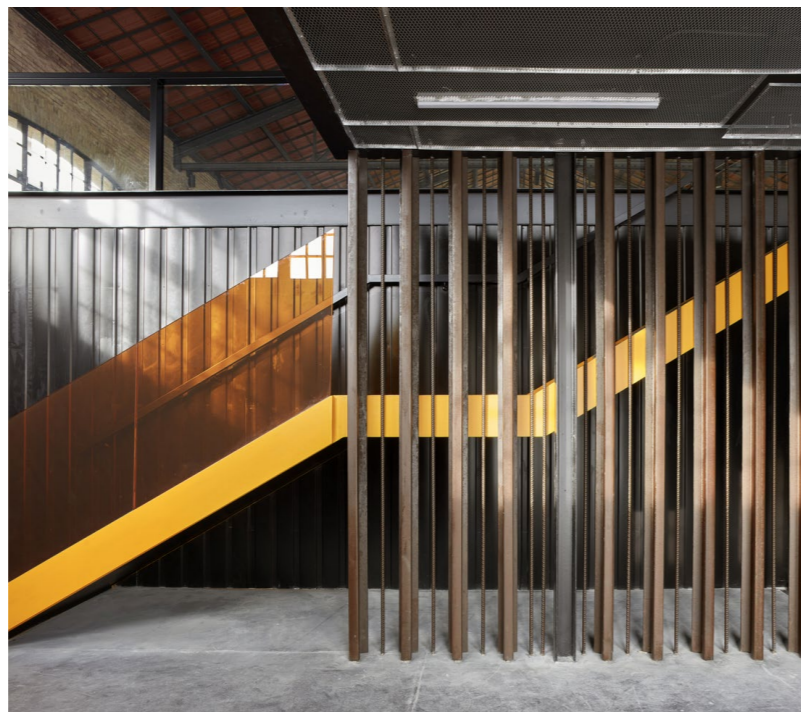
**Architects: Contell-Martínez Arquitectos**  
**Area: 604 m<sup>2</sup>**  
**Year: 2019**

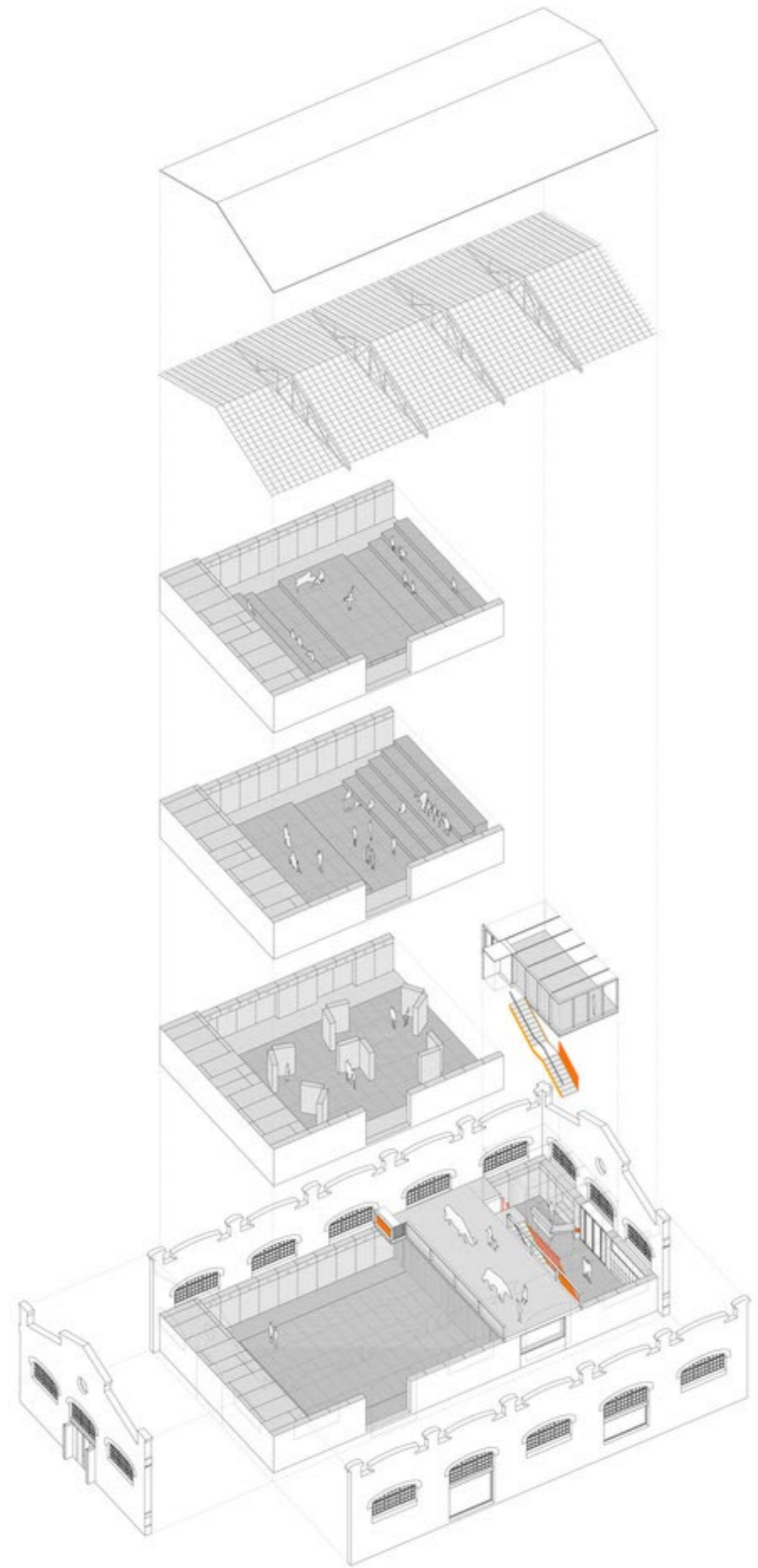
The Project aims to transform an old railway warehouse into a cultural facility within the new Valencia's Central Park which nowadays covers the old railway tracks of the main city station. The shed was built in 1917 by Demetrio Ribes and it is a valuable example within the railway architecture of Valencia.



The design allows maximum flexibility of use so different activities can happen simultaneously while respecting the industrial character of the building. In order to make visible the original use of the building, train rails are also reproduced on several glazed surfaces. On the upper level a multipurpose room enriches the transition from the access to the main space. This glazed space has also a translucent acoustic ceiling, preserving the spatial conception of the shed.

The steel plates used to build the closets, a hundred percent recyclable and recoverable material, come from a nearby local warehouse. Also, in the design process the plate sizes were taken into account to minimize the waste.





# DIPLOMA PROJECT

# Experimental Architectural School, Pragovka Art District



18. SCHWARZPLAN  
LARGER CONTEXT



## 20. CONCEPTUAL & FUNCTIONAL DIAGRAM

### 19. 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.

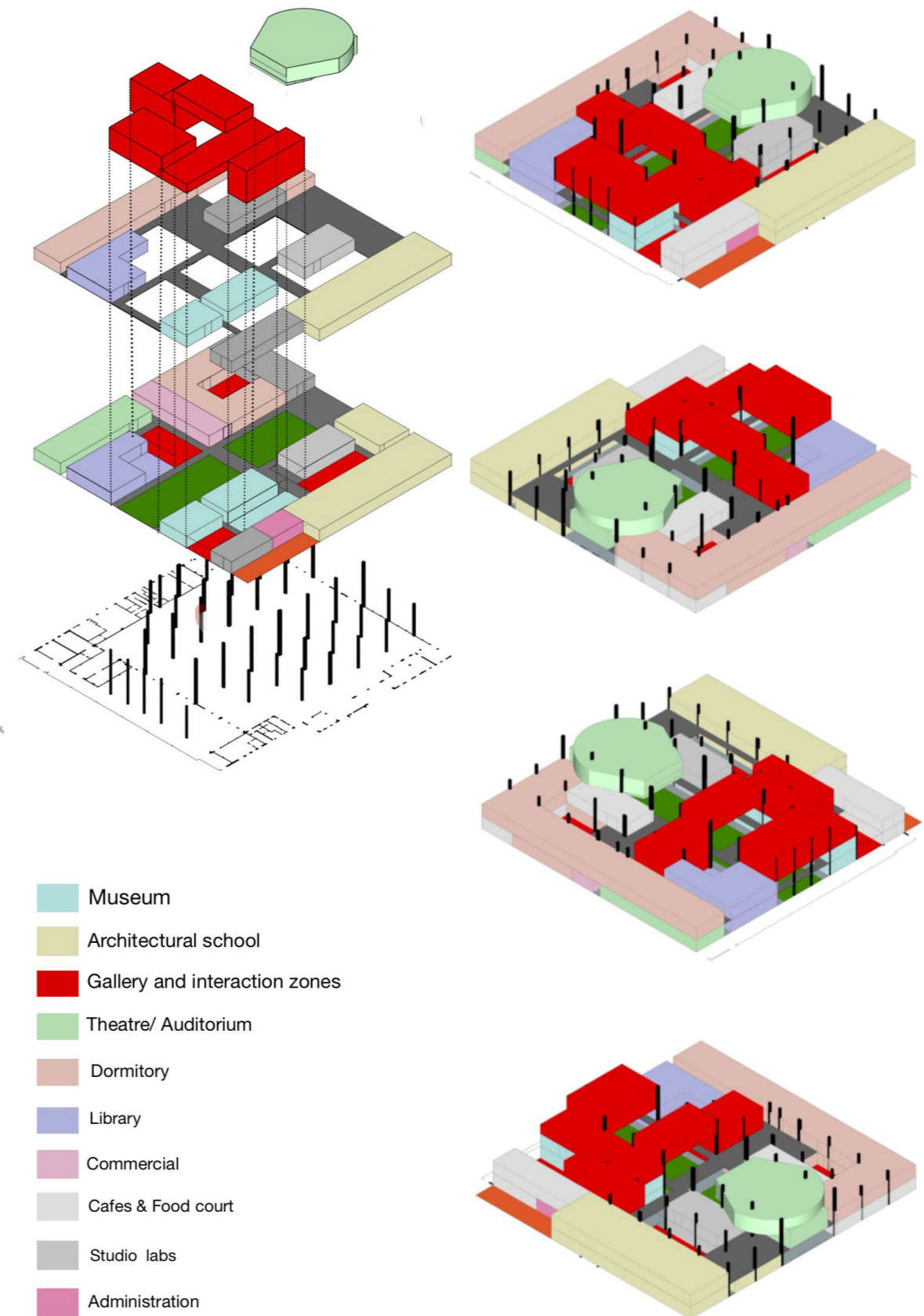
Due to the strong history and the dominant nature of the building, it was necessary to develop a design that respects its past and could be repurposed for its future use. The grid form created by the group of the column and the volume they encase gave the building its character. It was important to not 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.

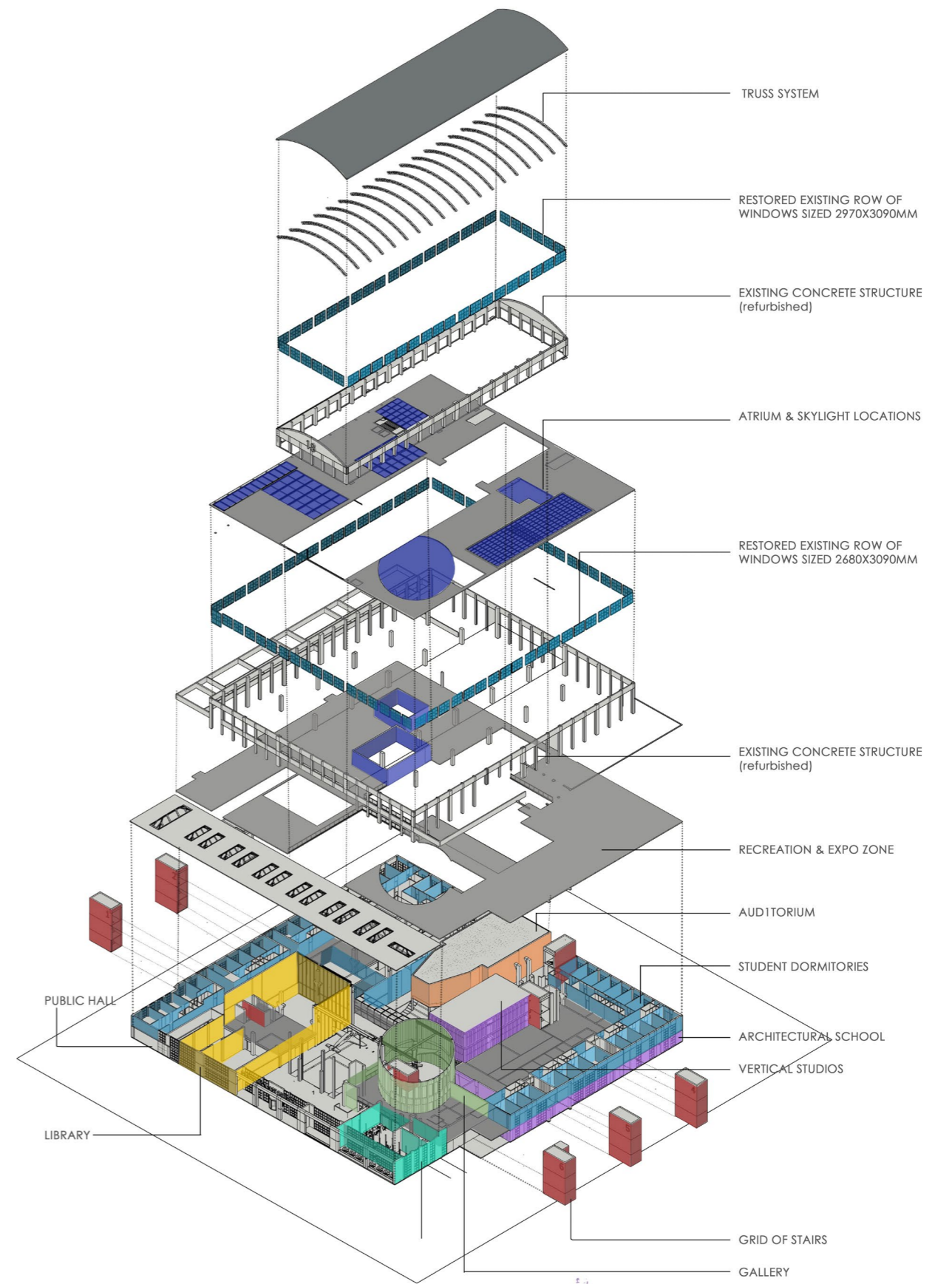
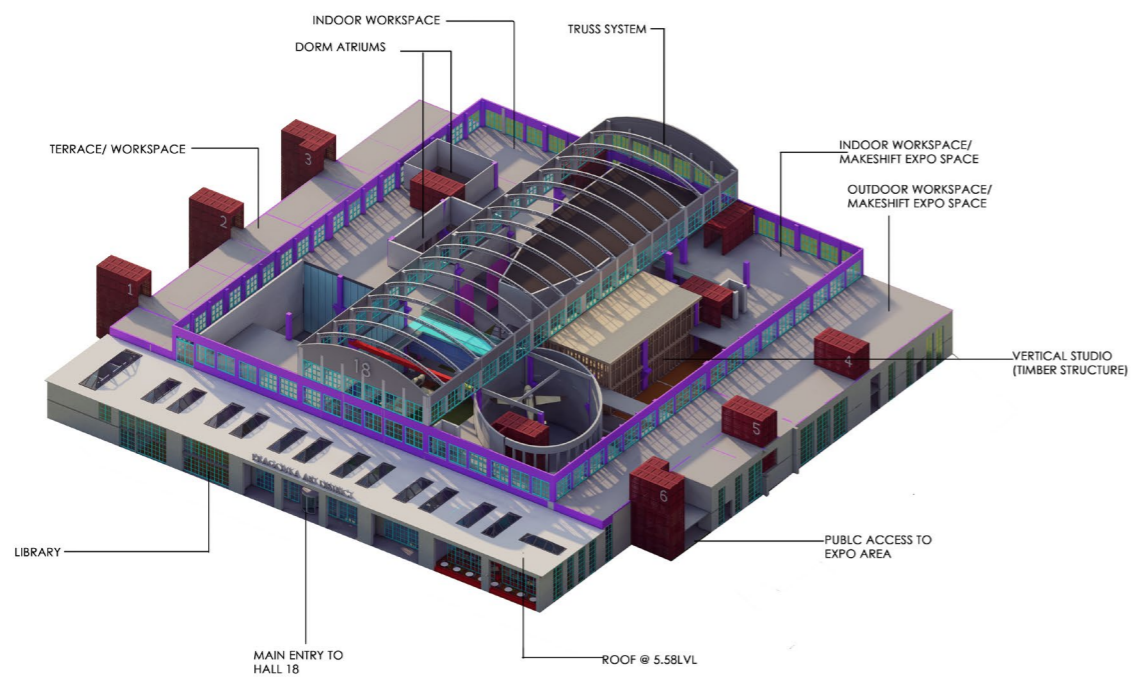
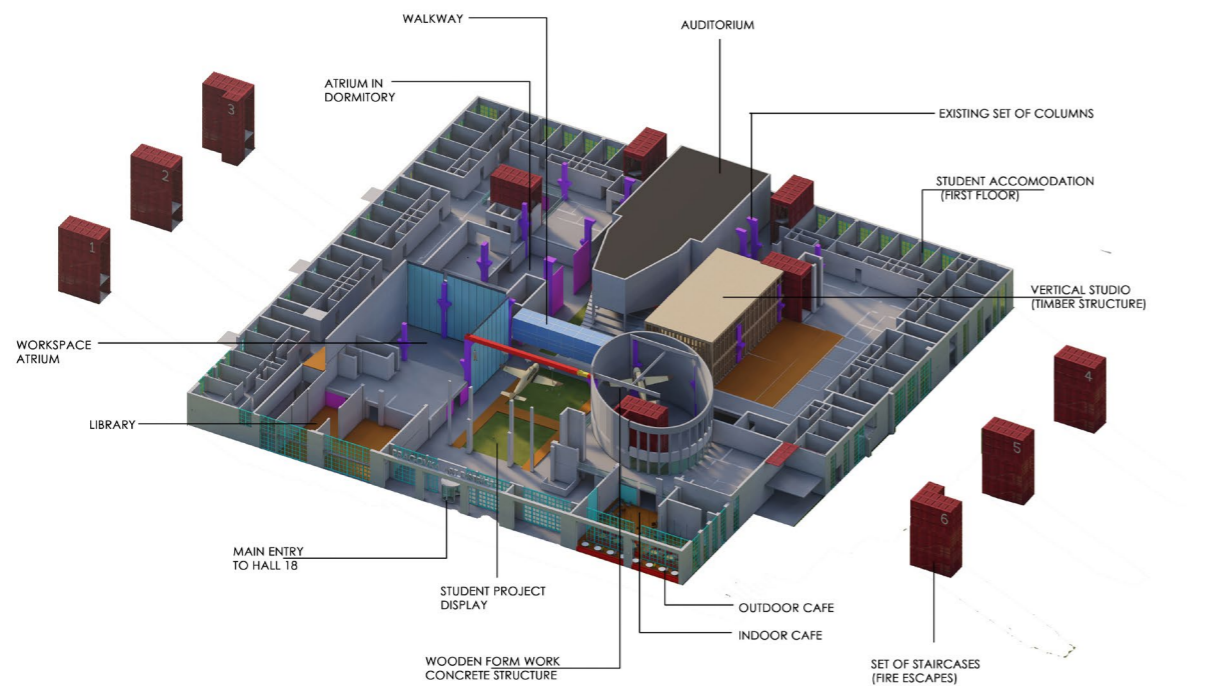
All spaces are designed in a way that ensures maximum engagement of users through a variety of activities.

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



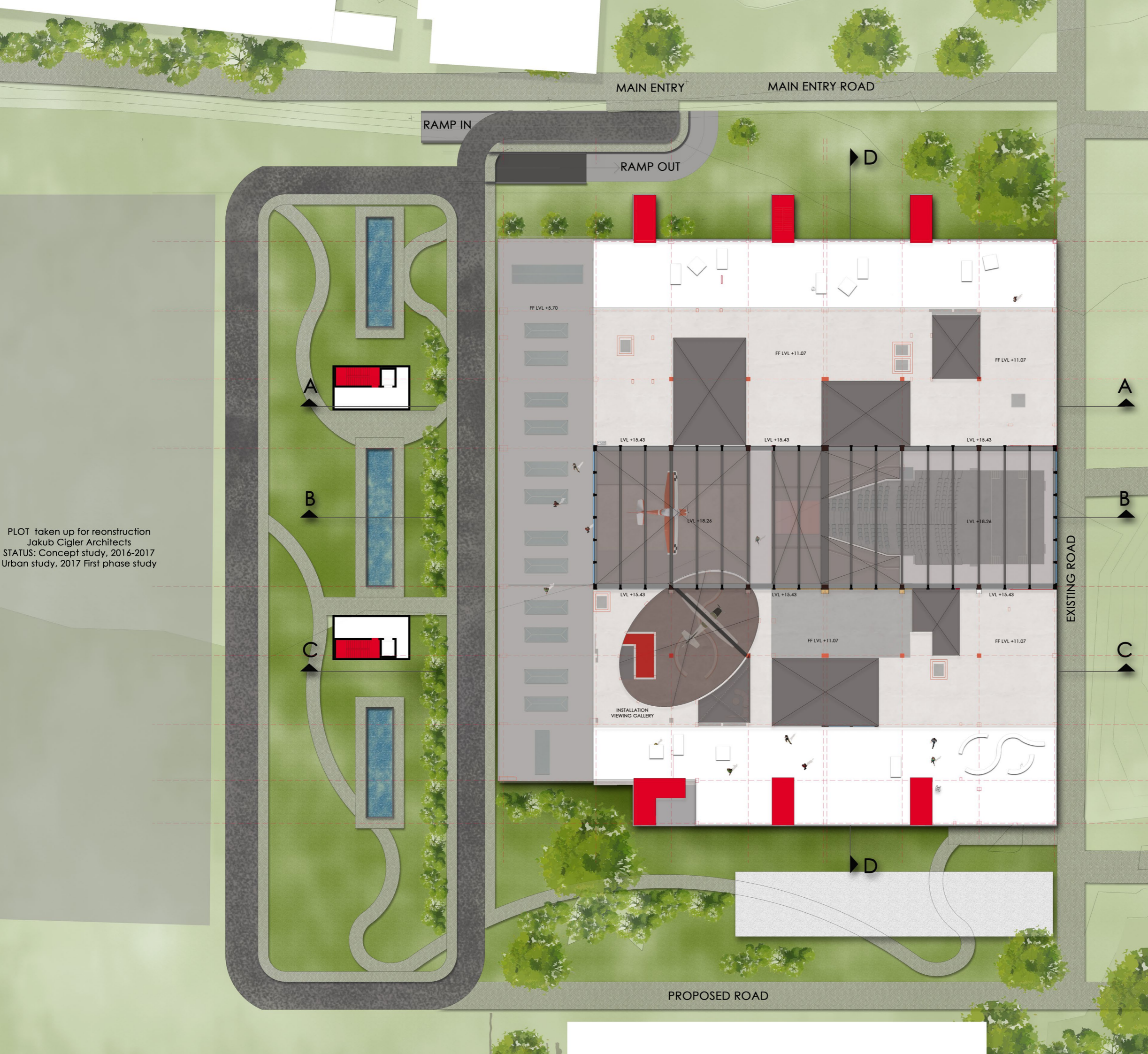
# FUNCTIONAL DIAGRAM





# 21. SITE PLAN

SCALE 1:500



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



18

ERAGONKA ARUDISRCT

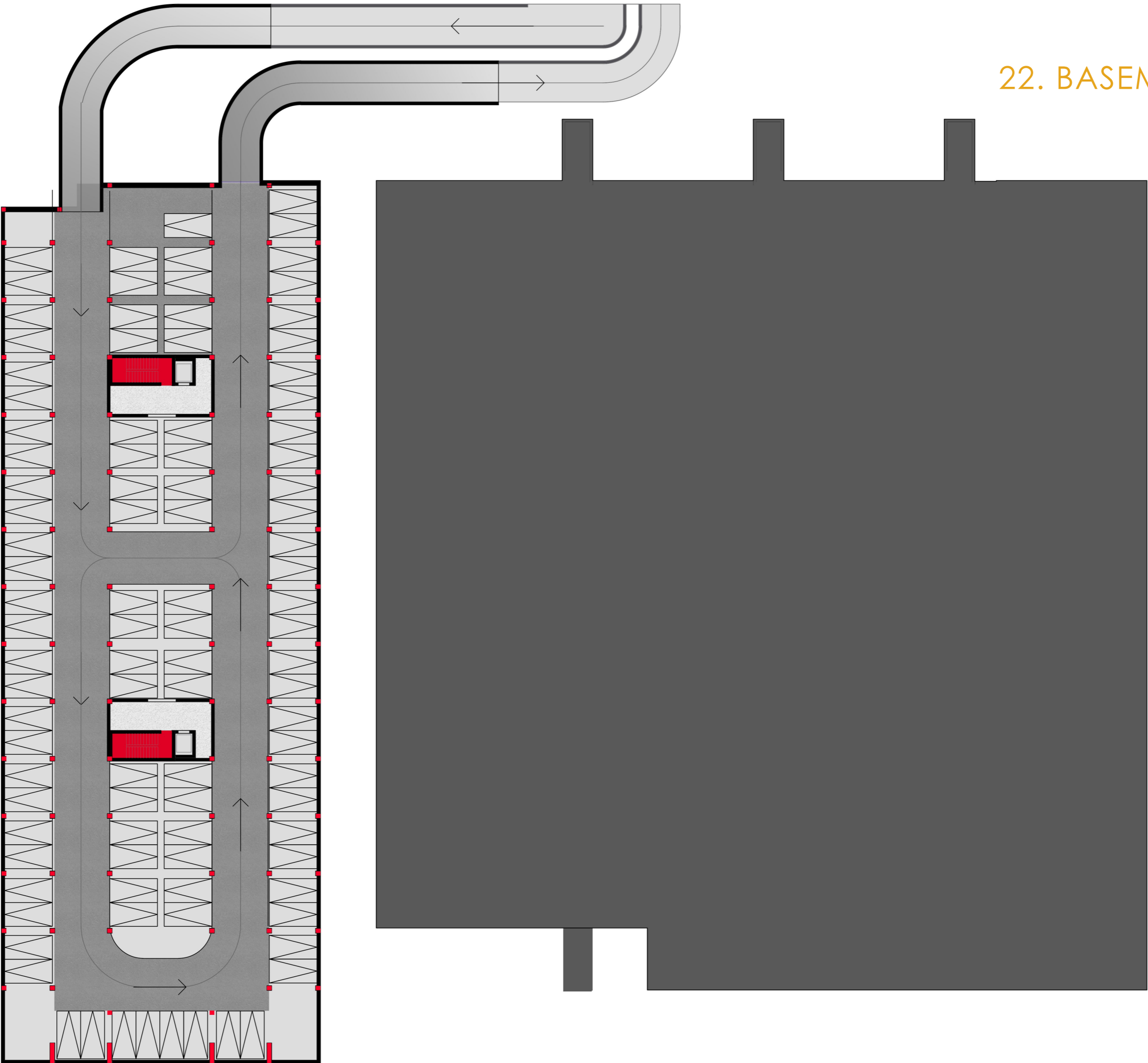
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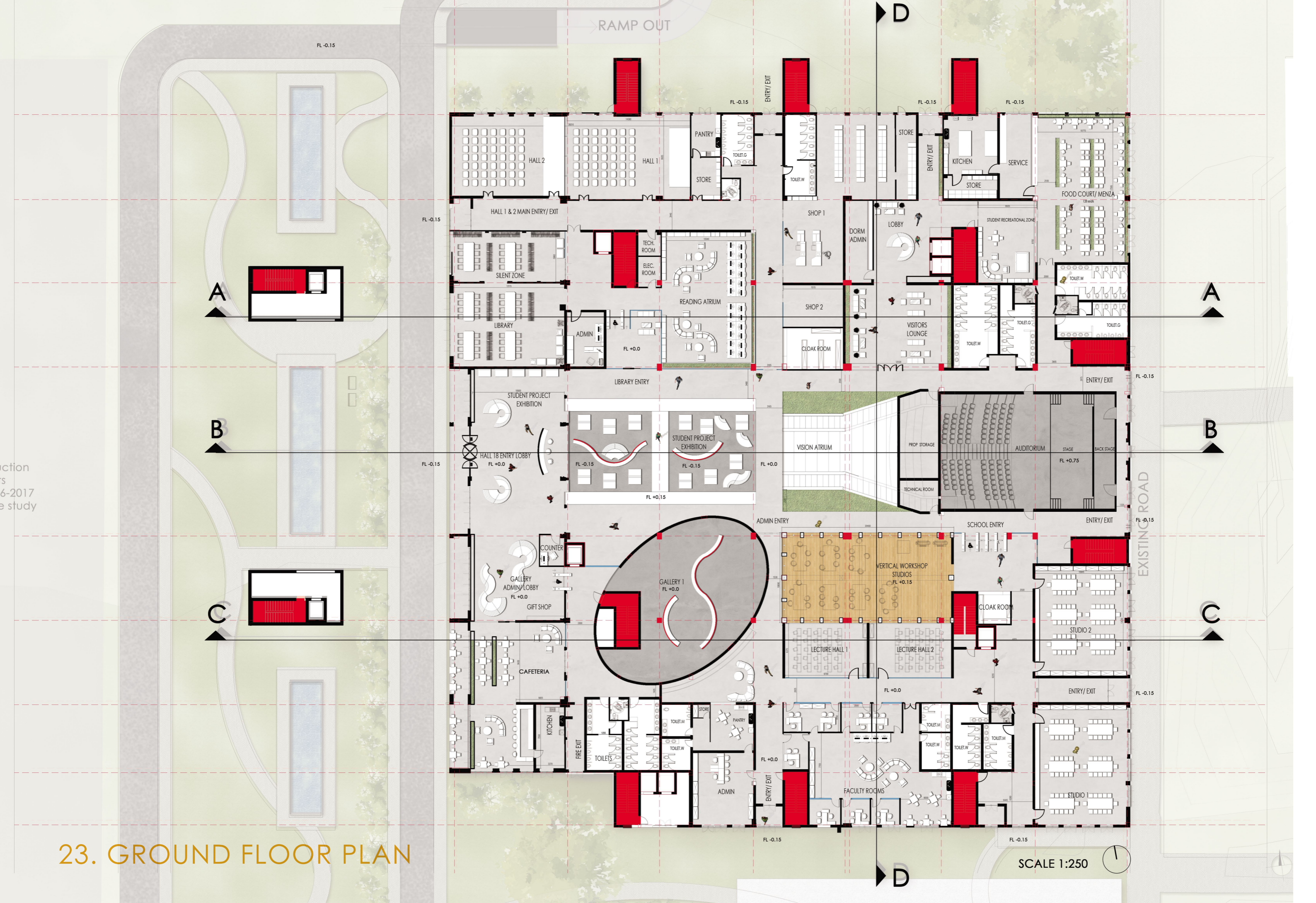
6

5

4

22. BASEMENT PLAN





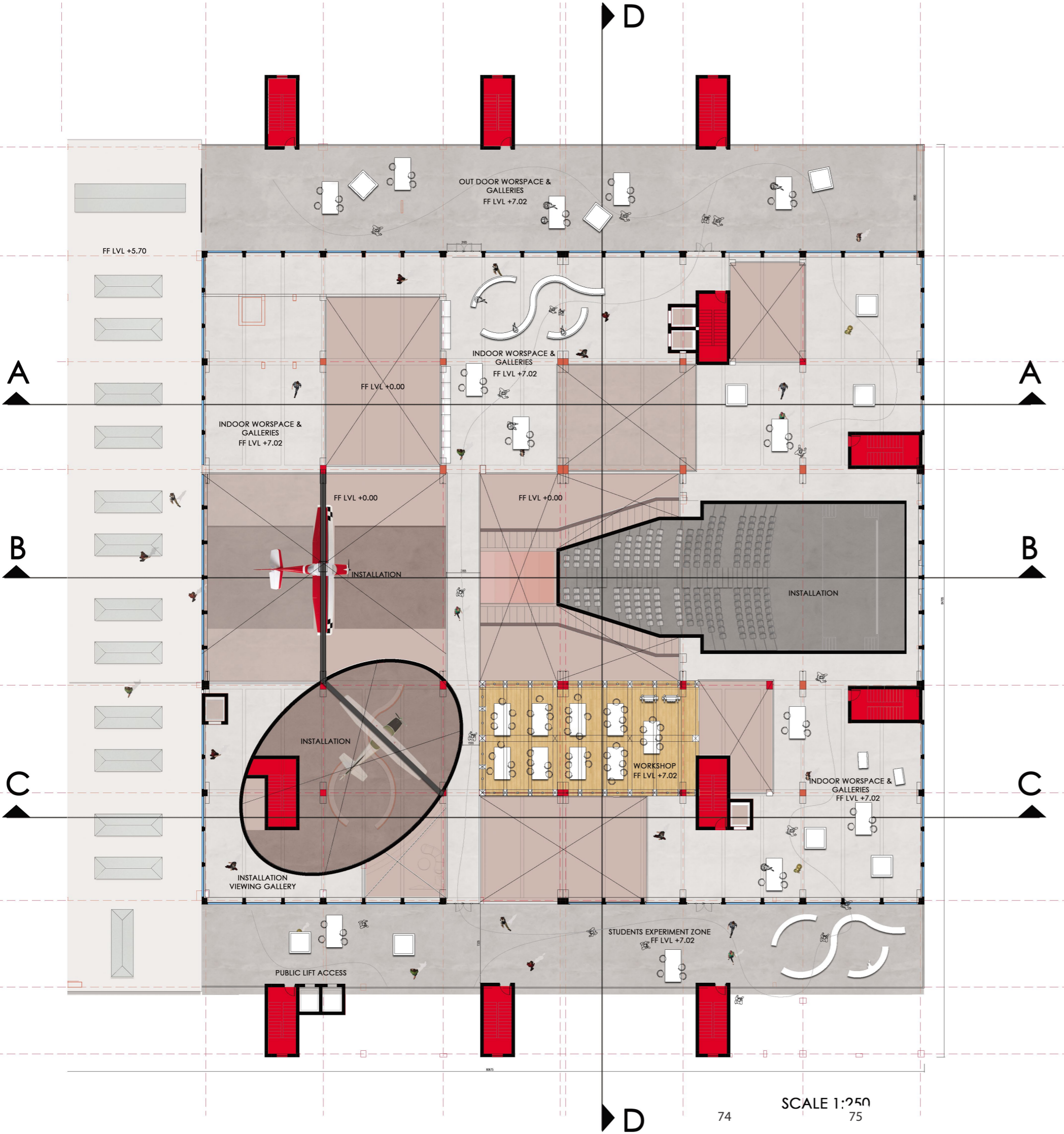
ction  
S  
6-2017  
e study

# 23. GROUND FLOOR PLAN

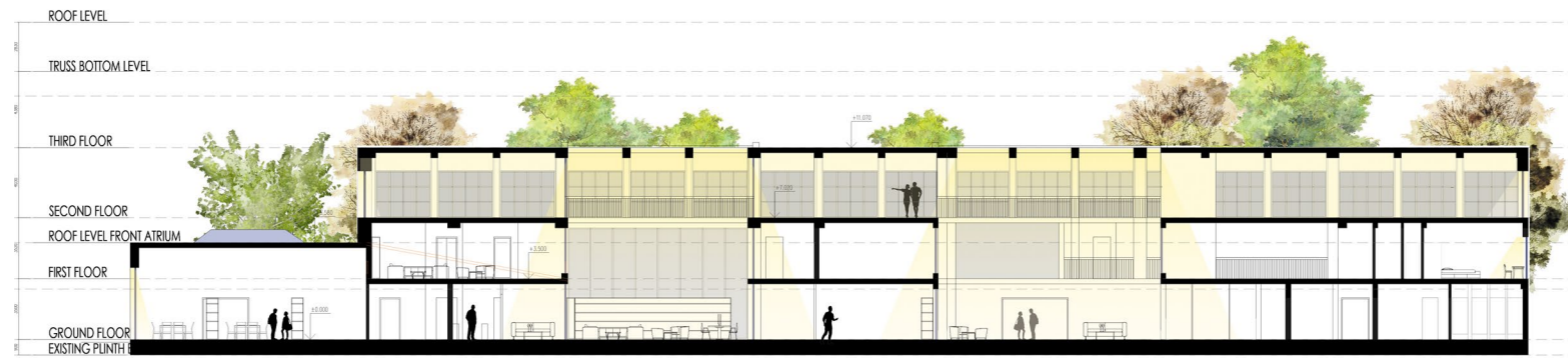
SCALE 1:250



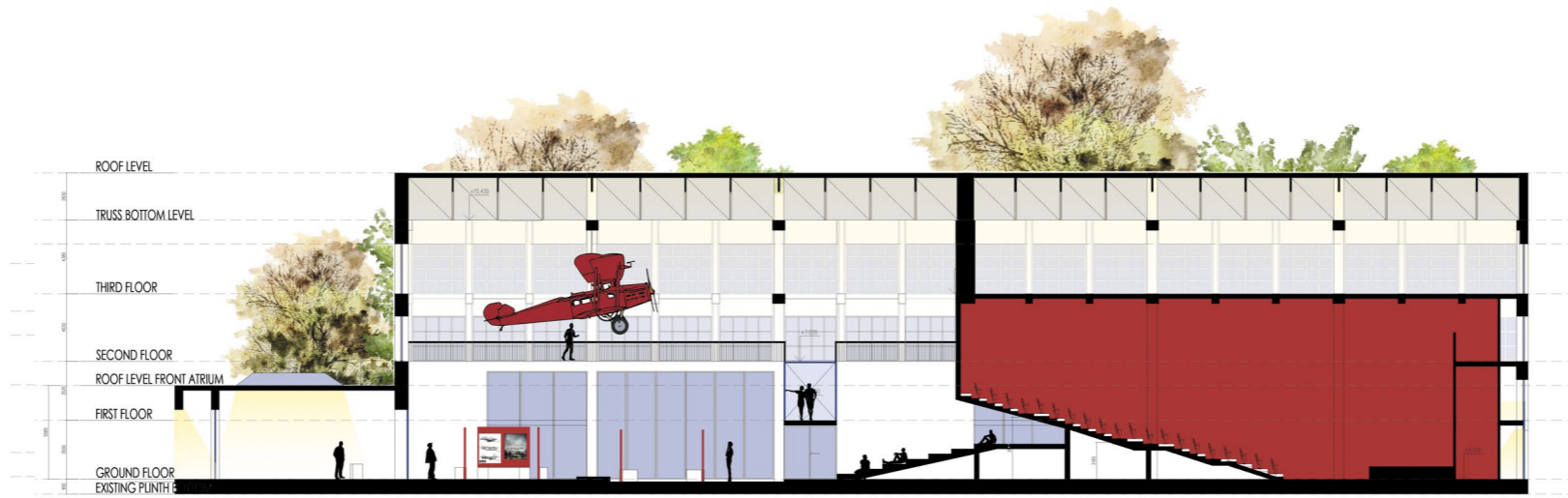
# 25. SECOND FLOOR



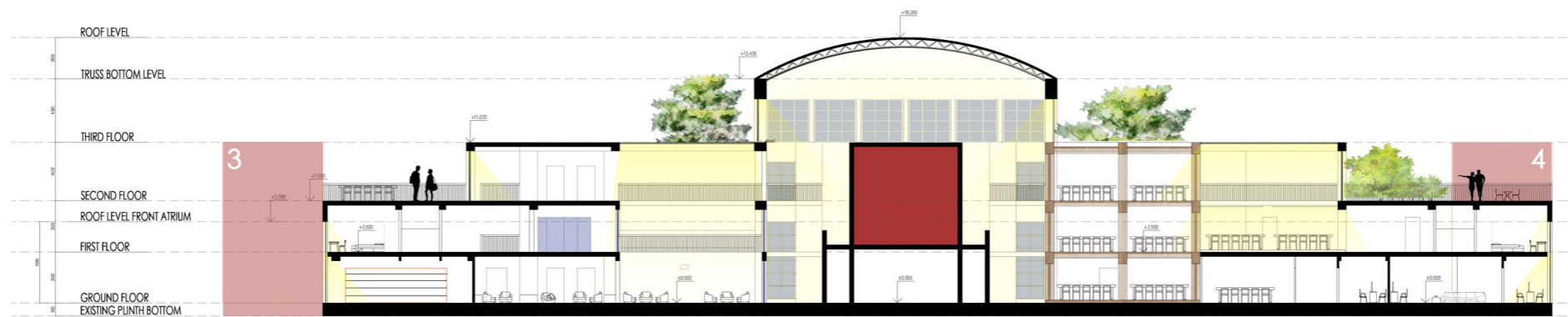
Plan not to scale, kindly refer the attachments.



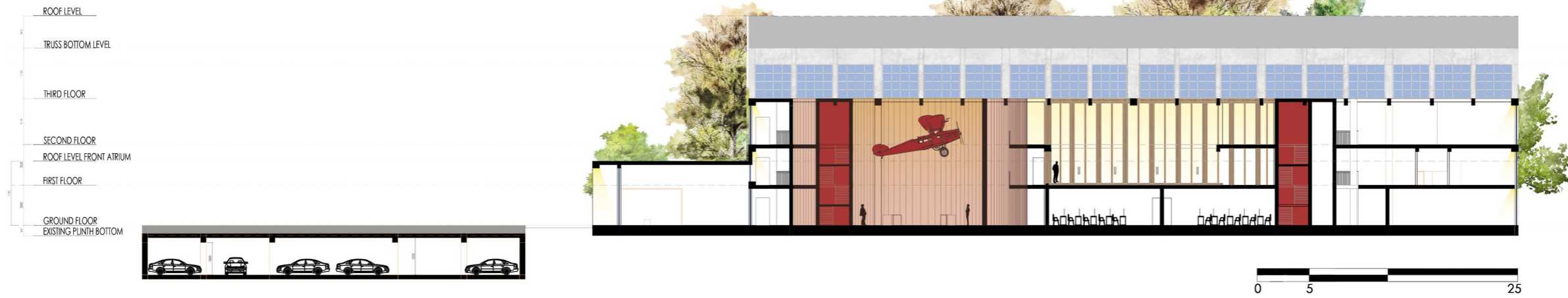
SECTION C-C'



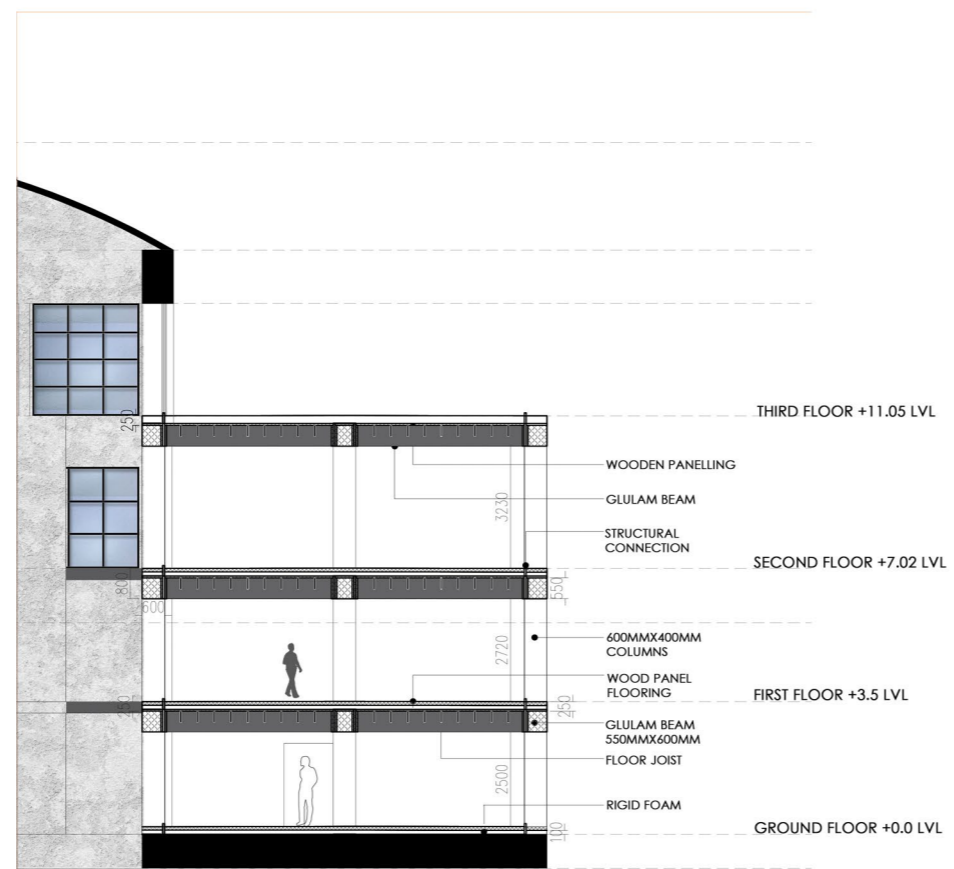
SECTION B-B'



SECTION D-D'



SECTION A-A'



VERTICAL TIMBER STRUCTURE ELEVATION AND TEXTURE



# 29. VISUALISATIONS



FRONT ELEVATION (WEST)



SIDE ELEVATION (SOUTH)



BACK ELEVATION (EAST)



SIDE ELEVATION (NORTH)



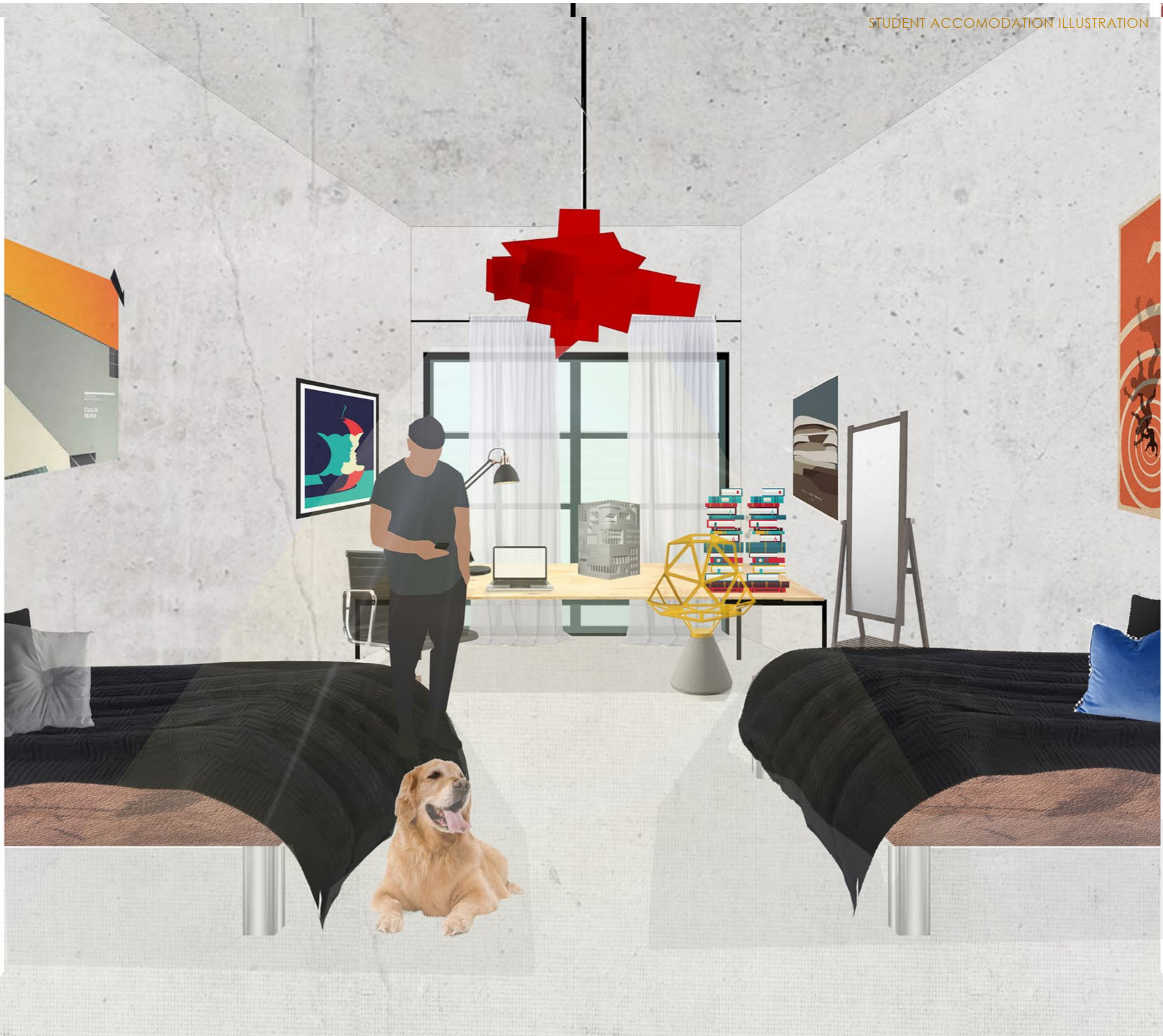
OUTDOOR SPACE OF CAFE





TERRACE SPACE ILLUSTRATION















## 30. BIBLIOGRAPHY

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<https://www.geoportalpraha.cz/>  
<https://app.iprpraha.cz/apl/app/ortofoto-archiv/>  
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<https://mapy.cz>