

## Modern and contemporary architecture within Maksimir - Faculty of Agriculture, University of Zagreb

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**Abstract:** East of the Maksimir park-forest and the Bliznec stream, the first modern complex of the University of Zagreb was built based on an architectural competition in the 1930s according to the design of the Zagreb Working Group. The pavilion complex enabled a phased construction along the main axis, Green Street, which was shifted towards the southeast with the aim of achieving uniform insolation of the southern and northern areas of the pavilions. A sequence of different architectural expressions characterizes the southern buildings, the mastodon of Pavilion IV, which degraded the original concept, Pavilion V by architects Radimir, Auf-Franić and Pleština, Pavilion VI by architects Auf-Franić and Oluić – which reinterprets the original pavilions in a contemporary way. The Green Pavilion student restaurant of 3LHD, built based on the competition, is supported by a garden frame and fits into the exceptional complex of the University of Zagreb. Realizations based on architectural competitions testify to the exceptional achievements of modern and contemporary architecture. The Faculty of Agriculture complex represents a multi-layered architectural achievement enriched by an exceptional landscaped environment, which proves the connection between top results and a quality spatial environment.

**Key words:** University of Zagreb Faculty of Agriculture, modern architecture, contemporary architecture, Maksimir

## Moderna i suvremena arhitektura u okrilju Maksimira – Agronomski fakultet Sveučilišta u Zagrebu

**Sažetak:** Istočno od maksimirske park - šume i potoka Bliznec izveden je prvi moderni sklop zagrebačkog Sveučilišta na temelju arhitektonskog natječaja tijekom tridesetih godina XX. stoljeća prema projektu Radne grupe Zagreb. Paviljonski sklop omogućio je etapnu izvedbu duž osnovne osi, Zelene ulice, koja je otklonjena prema jugoistoku s ciljem ostvarivanja ujednačene insolacije južnih i sjevernih prostora paviljona. Slijed različitih arhitektonskih izraza obilježava južne zgrade, mastodonta IV. paviljona koji je degradirao izvorni koncept, V. paviljon arhitekata Radimira, Auf-Franić i Pleštine, VI. paviljon arhitekata Auf-Franić i Oluića – a koji suvremenim izrazom reinterpreтира izvorne paviljone. Na temelju natječaja izveden Zeleni paviljon studentski restoran 3LHD-a podređuje se perivojnom okviru i uklapa u izniman sklop zagrebačkog sveučilišta. Realizacije na temelju arhitektonskih natječaja svjedoče o iznimnim dosezima moderne i suvremene arhitekture. Sklop Agronomskog fakulteta predstavlja slojevito arhitektonsko ostvarenje oplemenjeno iznimnim perivojnim okruženjem, koje dokazuju povezanost vrhunskih rezultata i kvalitetnog prostornog okruženja.

**Ključne riječi:** Sveučilište u Zagrebu Agronomski fakultet, moderna arhitektura, suvremena arhitektura, Maksimir

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## 1. INTRODUCTION

The pavilion complex of the Faculty of Agriculture, University of Zagreb, has been gradually built and expanded over the course of almost a century. The exceptional natural environment of the faculty complex at the foot of Medvednica, and east of the Maksimir park-forest, forms the highest quality natural framework for the buildings of all thirty-four components of the University of Zagreb. When it comes to the spatial context, the faculty complex was built east of the Maksimir park-forest and the Bliznec stream. The toponym Maksimir comes from the name of the founder, Bishop Maksimilijan Vrhovac, who had the bishop's oak forests and hunting grounds converted into a park and opened to the public in 1794. It was transformed in the middle of the 19<sup>th</sup> century during the time of Bishop Juraj Haulik, when the Vrhovac estate was expanded with a silk factory and a series of farm buildings that today border the faculty complex [1]. In 1922, Maksimir was purchased from the Archdiocese, and today it is protected as a monument of nature and culture. The main alley with Vidikovac is the focal point towards which the arch of Zvonimirova Street led from the Lower Town and today's Croatian Nobles Square, according to Milan Lenuci's regulatory plan for the new eastern part of the city. The continuity of this arch was degraded by the construction of the Sokol Stadium on the corner of Maksimirska Street and Svetice.

### 1.1. Foundation of the Faculty of Agriculture within the University of Zagreb

Nowadays, the University of Zagreb celebrates the 355<sup>th</sup> anniversary of its existence. Its foundation dates back to 1669, when the Jesuit Academy in today's Upper Town was granted the status and privileges of a university institution. It was a visionary decision of the University of Zagreb to move from the building in which the Upper Town Gymnasium operates today to the northern front building of today's western wing of the Green Horseshoe. The university requested the removal of the then tobacco factory (architect Ludwig von Zettl, 1956-59) and initiated the conversion of the building, without any doubts regarding its industrial purpose at the time, which represents an avant-garde example of industrial archaeology. They also initiated the relocation of the southern economic fairground to the periphery, and the development of a new public city square, where the Croatian National Theatre would later be built (architects Ferdinand Fellner and Hermann Helmer, 1894-95).

After World War I and the collapse of the Austro-Hungarian Monarchy, a significant development of the University of Zagreb began. After the establishment of the Kingdom of Serbs, Croats and Slovenes (Kingdom of SCS), it consisted of a total of four faculties: the Faculty of Theology, the Faculty of Law and State, the Faculty of Philosophy (with a philosophy and natural science departments) and the Faculty of Medicine (which operated in Šalata) [2].

In 1919, the first newly established faculty of the University of Zagreb in the Kingdom of SCS was the Faculty of Economics and Forestry [2], from which the present-day Faculty of Agriculture and the Faculty of Forestry and Wood Technology would emerge as independent faculties. In the same year, the Veterinary College and the Technical College were founded (from which a number of engineering studies, including the Faculty of Architecture, would gradually be formed), which were transformed into faculties due to pressure to abolish them. All newly established higher education institutions began operating in adapted and repurposed buildings. Solving the spatial framework, obtaining land and funds for the construction of new modern faculty buildings was the focus of the activities of the newly established faculties [2].

The Faculty of Economics and Forestry was established by integrating the previous higher schools - the Higher School of Economics in Križevci, and the Forestry Academy that operated within the Faculty of Philosophy. Classes were initially held in the building of the Forestry

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House, formerly the Forestry Academy at Vukotinovićeve 2. In 1928, the agricultural departments were moved to the building of the former Economic Society, at Theater Square 3 (today's Republic of Croatia Square). Part of the practical classes also took place in Maksimir, on the Faculty Estate [2].

The Faculty Estate is the traditional name for the land of the Faculty of Economics and Forestry in the area southeast and east of the Maksimir park-forest. The greater part of the land with a total area of 725 ha is north of Maksimirska Street, and the smaller southern part extends to southern Badovinčeva Street. In 1921, the exemplary economic estate of Maksimir, "in the immediate vicinity of Zagreb", was purchased for the needs of the Faculty of Economics and Forestry, based on the needs and understanding of Archbishop Dr. Antun Bauer [3]. Former allegations of the award are denied by the Dean of the Faculty of Agriculture, Prof. Aleksandar Mešić, Ph.D. [4] and he emphasizes the existence of documents that support this. At first, agricultural and forestry scientific experiments and practical exercises took place on the Faculty Estate [2].

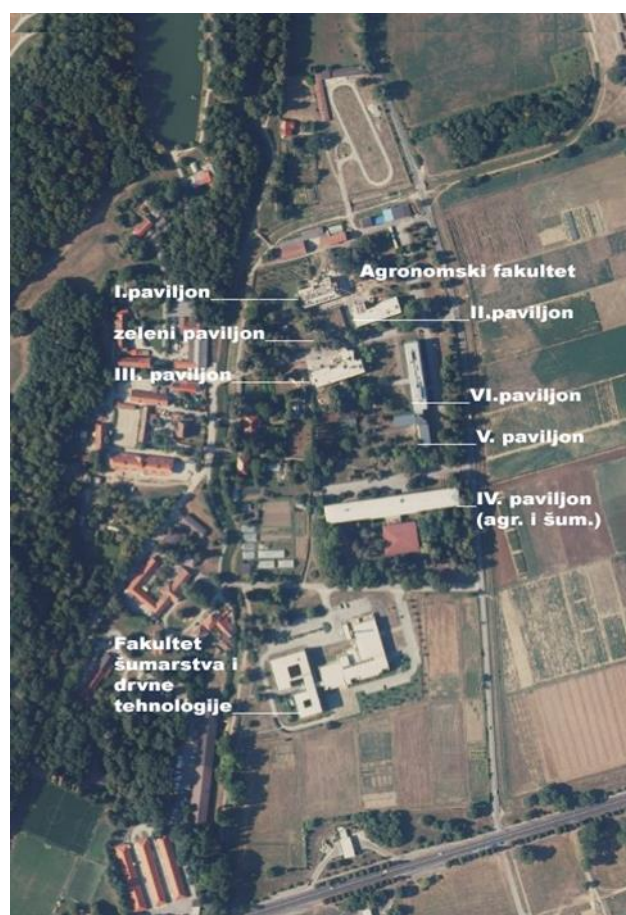


Figure 1. Pavilion complex of the Faculty of Agriculture and the Faculty of Forestry and Wood Technology [5]

### 1.2. Architectural competition (1932)

Long-term efforts to obtain funds for the faculty complex modern by design and construction succeeded in 1932, because due to the significant share of agriculture, forestry and farming, priority was given to the construction of the Faculty of Agriculture and Forestry.

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The Ministry of Agriculture approved the project development funds, and the Faculty Council announced an architectural and urban planning competition for the design of the faculty pavilion complex on the land of the Faculty Estate in Maksimir [2]. The jury consisted of: Prof. E. Šen, eng. dr. Deutsch and I. Marjanović. The prizes for the conceptual sketches of the buildings of the Faculty of Agriculture and Forestry, University of the Kingdom of Yugoslavia in Zagreb, were awarded to M. Ivacić (1<sup>st</sup> prize), Zagreb Working Group (2<sup>nd</sup> prize), M. Kovačević (3<sup>rd</sup> prize – ex aequo), and to a group of architects at the address Radnički dol 42 (3<sup>rd</sup> prize – ex aequo, architect Stjepan Planić worked and lived at the aforementioned address) [6]. The practice of the competition authority between the wars was to purchase the copyright of the awarded works by paying authors' royalties, and award the execution according to the criteria important to it.

## **2. PAVILION COMPLEX OF THE ZAGREB WORKING GROUP (1932)**

Since the second-prize winning project met the requirements of the competition authority in several aspects, the execution was awarded to the Zagreb Working Group (ZWG), which consisted of the following members: Vladimir Antolić, Viktor Dušan Hećimović, Zvonimir Kavurić, Josip Pičman, Josip Seissel, Bogdan Teodorović and Ernest Weissmann [1,2]. Their design solution was conceived as a pavilion complex of a series of longitudinal wings with a flat roof, arranged in an alternating row along the access axis, a kind of dynamic axis that is the main access communication and along which the construction of each new pavilion extends like a spine. The loose structure of the complex also refers to the existing structure of the nearby summer house of Juraj Haulik and a series of accompanying outbuildings surrounding it, which is characteristic of such country-house complexes outside urban areas, used for the countryside and for supervising the harvest.

The prize-winning design of the modern pavilion complex of the Faculty of Economics and Forestry made it possible for construction to be carried out in stages – which was realized during the thirties. The two-tract layout of each pavilion represented an economical solution, and there was also the possibility of adapting and expanding individual faculty buildings. According to the original design of the complex, the basic dynamic axis of the Faculty of Agriculture and Forestry flowed into the extended line of Maksimir's main park alley, according to which the arc of Zvonimirova Street was positioned based on the Regulatory Plan of the eastern part of the city by Milan Lenuci from the beginning of the 20<sup>th</sup> century.

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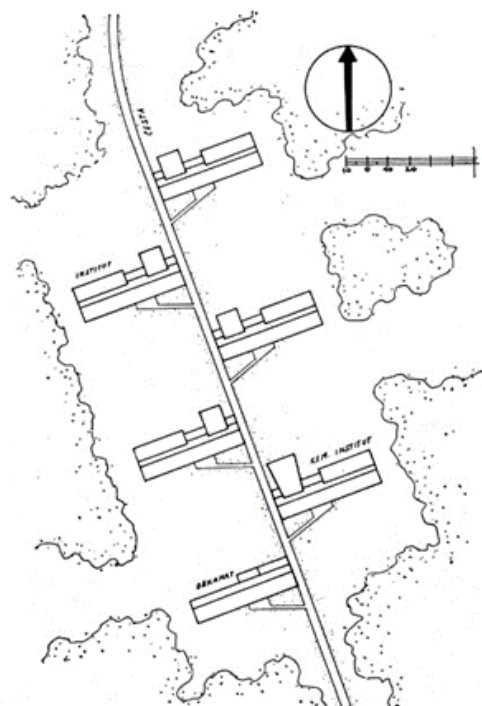


Figure 2. Pavilion complex of the Faculty of Agriculture and Forestry, Zagreb Working Group

The original position of the pavilion complex of the Faculty of Agriculture and Forestry was proposed north of Bishop Juraj Haulik's estate and west of the Bliznec stream. In the southern zone of the Faculty Estate, according to the analogous spatial disposition, ZWG proposed the construction of other faculties founded in 1919: Veterinary Faculty north of Maksimirska Street, and the southern complex of the Faculty of Engineering. However, the Veterinary Faculty and Faculty of Engineering were not realized according to the aforementioned proposal on the Faculty Estate. The Veterinary Faculty was constructed in Heinzelova Street, opposite the City Slaughterhouse and the Livestock Fair, due to the complementarity of the facilities, and according to the design of architect Zvonimir Vrkljan (1937-1952). Partly built on an old brickyard, the Faculty of Engineering was bordered by Kačićeva Street, Klaićeva Street and Izidora Kršnjavoga Street, according to the design of Edo Šen and Milovan Kovačević, and constructed with J. Denzler in the period 1936-1947. The Faculty of Architecture, Faculty of Civil Engineering and Faculty of Geodesy presently operate in the first eastern building, constructed before World War II. The second building, completed after World War II, was used by the 10<sup>th</sup> Gymnasium and the 1<sup>st</sup> Technical School Tesla. The two constructed buildings were supposed to be connected by a transverse block in the axis of the main entrance from the east from Kačićeva Street, and according to some conceptual sketches, this row was to extend further west to the position of the City Houses on Ciglane (architect Pavao Jušić, 1920-1921), however, the western pavilions of the Faculty of Engineering were not realized.

### 2.1. Construction of Pavilions I, II and III (Working Group Zagreb, 1932-1940, partial construction of the complex)

The Society for Beautification of Zagreb and the City of Zagreb Administration opposed the planned location of the Faculty of Agriculture and Forestry complex on an elevated position



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north of the estate in Maksimir [7]. The construction was approved in the northern zone of the Faculty Estate, east of the Bliznec stream, northeast of the Maksimir estate [2]. The first, northeastern pavilion of the Faculty of Agriculture complex, the Pavilion of Technology and Fruit Growing, was built in the period 1933-1934, using credit funds from the Ministry of Agriculture allocated in 1932 and 1933 [2]. It is also the first realization of modern architecture of the University of Zagreb.

The second, agricultural and zootechnical pavilion (Dairy Pavilion) of the faculty was constructed in the period 1936-1940 from the credit funds from the Ministry of Agriculture obtained in 1936, and the first credit granted by the Ministry of Education for the construction of university buildings in 1937 [2]. The third faculty pavilion with the departments of economics was constructed as the last realization according to the original competition design of the Zagreb Working Group, and its realization according to the conceptual designs of ZWG was carried out by architect Đuro Peulić (Technical Department of the Sava Banovina) [8] after the tragic death of Josip Pičman.

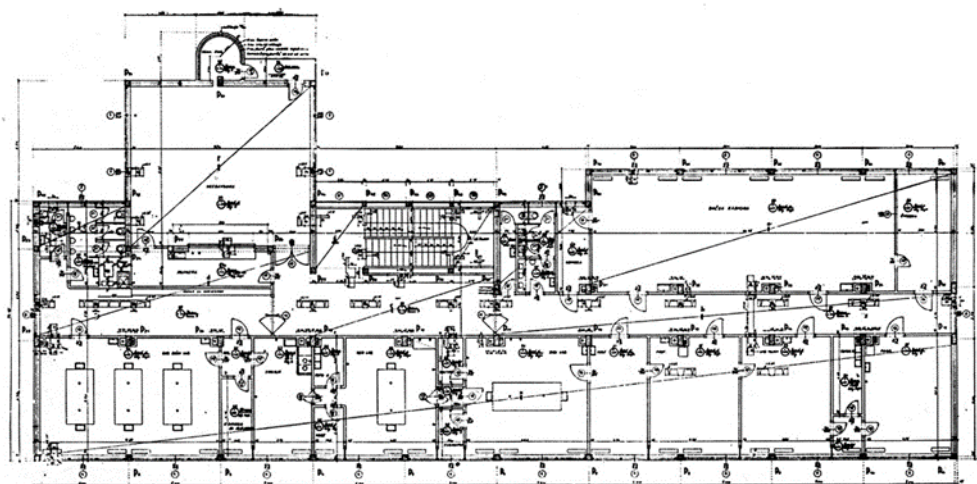


Figure 3. Ground plan of the pavilion according to the design of the Zagreb Working Group

According to [9], it is stated "As with any living organism, some changes in the method of operation here will also require some modifications to the layout of rooms and installations in the future, and if necessary, the expansion of the pavilion itself. Therefore, the pavilion was designed so that any of these subsequent necessary changes could be implemented as easily as possible ... The constant parts of the pavilion are interconnected by a connecting road, while the adaptable parts are located in a free field." Academician Andrija Mutnjaković asserted half a century later, "This understanding of architecture as a living organism, this deliberate act of letting life define its own architecture, this creation of organized construction rules, rather than sacrosanct complacent buildings, is a great discovery unmatched even by our time." [7,2].

The use of reinforced concrete skeleton systems in Croatia was gradually applied in industrial buildings at the beginning of the 20<sup>th</sup> century, and from the end of the 1920s also in the architecture of public and residential buildings. A clearer articulation of the skeleton system in the exterior, with some achievements from the interwar period, would become more intensive in our architecture only in the postwar years. A more significant application and articulation of tectonic reinforced concrete load-bearing structures between the wars characterizes the works of the Zagreb Working Group, Marijan Haberle and Hinko Bauer, Zoja Dumengjić, and the Kiverov – Korka – Krekić group. Almost all of the mentioned architects

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were architectural engineers who graduated from the Zagreb Faculty of Engineering [2]. The realization of the Faculty of Agriculture and Forestry (1932-1940) represents the anticipation of the constructive possibilities of the time and its consistent application [2].



Figure 4. Pavilion III (Zagreb Working Group) [9]

About the Zagreb Working Group, fifty years later, its participant, Josip Seissel, states: "The group worked full of enthusiasm and dedication... The group entered the field of architecture and urban planning in a completely new way, appearing at competitions, exhibitions, surveys and discussions in public and societies, representing a progressive attitude. However, the main interest in the work of this group was the design of the Faculty of Agriculture and Forestry, which Pičman brought and led. Gradually opinions clashed, the functionalist position as a doctrine got in the way, there was a subcutaneous struggle and a straining of personal relationships. Although we all strived for a modern expression of architecture, the group could no longer survive." [11]. Strong author personalities could no longer work together and since the second half of the 1930s, the Zagreb Working Group no longer operated as a coherent group, J. Pičman was dead, and E. Weissmann worked in America [2].

The three completed pavilions represent a partial realization of the originally designed complex of four to seven pavilions. The partial realization of the first modern higher education project in Zagreb points to the negative aspects of phased construction and the failure to complete the final stages of the originally designed complex [2].

After damage during the 2020 earthquake, a complete reconstruction was carried out according to the design of architects Ana Alar and Emil Rohlik [10]. The southern facade of Pavilion III retained its subsequent remodeling with interpolated columns in the grid of original large-format windows and differs from the northern facades of Pavilions I and II and the design of the facade of the originally realized Pavilion III.

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Figure 5. Pavilion III (Zagreb Working Group) [10]

### 3. PHASED REALIZATION OF THE PAVILION COMPLEX (1941 - 2004)

#### 3.1. Construction of Pavilion IV (main building of the Faculty of Agriculture and Forestry, 1941-1953)

Until the beginning of World War II, at the Faculty Estate, classes were held in the three northern constructed pavilions of the originally designed complex by the Zagreb Working Group. The gradual construction of the complex of pavilions in an alternating row along the central axis was made impossible by the construction of the gigantic building that was supposed to integrate all the spatial needs of the faculty [2]. Construction of the so-called main and final building, Pavilion IV of the faculty complex, began during World War II, and the pavilion, with its grand dimensions and position in the middle of the main axis, devastated the basic conceptual complex. The original poetic concept was incomplete and abolished due to a lack of understanding of its quality as a "living organism" that is systematically built up [2]. The authorship of the building that intersects the main axis of the complex with its layout is unknown, and archive documents have not been preserved. During the visit to the Faculty of Agriculture as part of the Open House Festival in Zagreb, on 20 October 2024, Prof. emeritus Hildegard Auf-Franić claimed that the author was Prof. Zvonimir Vrkljan [12], but this claim has not been confirmed by archival research. However, even Prof. Vrkljan himself does not mention this project in the list of his works in the selection procedures at the Faculty of Architecture, which is preserved in the Personal Archives of Teachers of the Faculty of Architecture, University of Zagreb [13], or in the author's book "Memories" [14].

The Pavilion IV building was completed only in the post-war years, a large southern lecture room was added in the area of the southern entrance porch, and the entrance was moved to the northern face and oriented towards the original pavilions of the Zagreb Working Group. The building was moved into in 1949, and the interior design of the southern annex with the large lecture room was carried out in 1953 according to the design of architect Radovan Nikšić [2,15]. The building is currently used mostly by the Faculty of Forestry and Wood Technology, while the Faculty of Agronomy uses only a smaller part of the space. The building is currently undergoing a complete renovation following the earthquake that occurred in Zagreb and its surroundings in 2020.



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Figure 6. Pavilion IV

### 3.2. Unrealized projects for Pavilions V and VI

In the post-war year of 1946, Prof. Neven Šegvić designed Pavilion V south of the main building that follows the pre-war levels and achievements of Croatian modern architecture. At the same time, he introduced a theme that would mark his later works, namely the indentation of the glass membrane of the floor level and emphasizing the white horizontal of the parapet [2].

Fifteen years later, Prof. Vrkljan designed Pavilions V and VI in the period 1961-1964 (within the Department of Building Structures of the Faculty of Architecture, Civil Engineering and Geodesy, in collaboration with V. Balley) [2]. The longitudinal two-story building planned to the north of the main building, intersecting the original axis of the faculty complex, assimilates it as a passageway, and in this way reinterprets the original alternating row of pavilions. In order to adapt to the rhythmic row of the ZWG pavilions, the wing was loosened by breaking and shifting the dimensions. The smaller three-story Pavilion VI of the Faculty of Forestry is planned south of the main faculty building. The glazed facades are divided by a series of vertical prefabricated reinforced concrete panels. However, due to the failure to realize investment credits in the period 1964-1969, the buildings were not realized [2].

### 3.3. Construction of Pavilion V (B. Radimir, H. Auf-Franić, and L. Pleština 1975-1979)

It was not until the late seventies that the faculty's aspirations for new premises were realized. The new, Pavilion V of the Faculty of Agriculture was constructed in the period 1975-1979 according to the design of the Faculty of Architecture teacher, Prof. Berislav Radimir, and assistants Hildegard Auf-Franić and Lenka Pleština. North of Pavilion IV, the building was constructed with two perpendicular wings that border the building's entrance space, along a diagonal axis that connects the entrances of Pavilions IV and V. Following the alternating row of the original ZWG complex, the designers positioned the north wing parallel, while the south wing breaks perpendicularly along the eastern boundary of the plot [2]. At Open House Zagreb on 20 October 2024, Prof. Auf-Franić stated that the project was realized based on the urban development design of Prof. Mirko Maretić [12]. In addition to its L-shaped layout plan, the specificity of this realization is also the dark brown color of the facade brick that extends into the interior of the spatial corner joint along the staircase core. During the construction by GP Tempo, and following the client's desire to build primarily the necessary offices for newly formed departments (institutes), the basic ground floor with a marked rhythm of dimensions of

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larger volumes of lecture rooms was reduced [16]. Such partial implementation degraded the original composition and content of the lecture rooms, which were supposed to border the new "faculty square" [2]. However, in recent years, a third floor has been added to the pavilion, designed so as to respect the cascading indentation of each higher floor. A fire escape staircase was also added to the western gable wall.



Figure 7. Pavilion VI (H. Auf-Franić, V. Oluić) and Pavilion V (B. Radimir, H. Auf-Franić, L. Pleština)

### 3.4. Construction of Pavilion VI (H. Auf-Franić, V. Oluić, 1997-2003)

In 1997, professors Auf-Franić and Oluić designed and by 2003 realized Pavilion VI of the Faculty of Agriculture [17]. The longitudinal pavilion with large fenestration zones and clearly articulated horizontals of the floor structure in the exterior is characterized by a unique disposition within the north-south complex. It was built as a specific extension of the southern wing of Pavilion V, with which it is indirectly connected via the existing staircase tract and an exceptional joint, through which galleries on different floors and differentiated layouts allow a functional link between the two buildings. The proportions of the elongated building and the large glazing zones in the applied reinforced concrete skeleton refer to the original project of the Zagreb Working Group from 1932 [2]. The skeletal structure allows different spatial layouts on each floor (ground floor with a double-tract dean's office and a large entrance hall that extends across the entire width of the pavilion, a classic double-tract layout of the 1<sup>st</sup> and 3<sup>rd</sup> floors, and an eccentric shift of communication to the west on the 2<sup>nd</sup> floor next to the laboratory area). Furthermore, the skeletal axis dilated from the outer membrane and internal walls allows the achieved impression of lightness of the glazed longitudinal facades. Elements of the original ZWG project have been reinterpreted with a clear formative articulation of the large lecture room space, roof accents and differentiation of the laboratory space from the modular double-tract layout of the cabinet. By displacing the communication of the 2<sup>nd</sup> floor and drawing in the skylight zone within the section, adequate ventilation of the laboratory space was provided, and also, a formative differentiation in the exterior was achieved [2]. Clearly articulated on the eastern facade is the volume of the large lecture room of the first floor, which is projected towards the east and covered with perforated sheet metal, and so is the projected laboratory floor of the 2<sup>nd</sup> floor.

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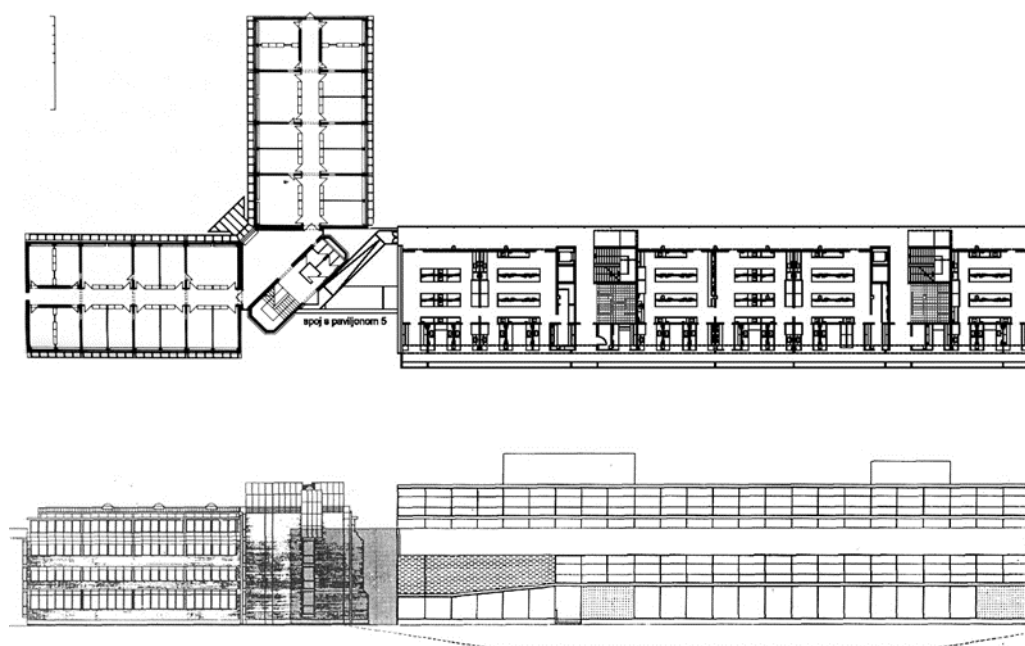


Figure 8. Plan of the second floor and eastern facade, Pavilion V (B. Radimir, H. Auf-Franić, L. Pleština) and Pavilion VI (H. Auf-Franić, V. Oluić)

### 3.5. Construction of the Faculty of Forestry and Wood Technology complex (architects Vulin-Ileković, 1992-2001)

The forestry study departments of the Faculty of Agriculture and Forestry are gradually constructing a complex of buildings south of Pavilion IV (the so-called main building), according to the design by academician Ante Vulin, Prof. Dina Vulin-Ileković, and Prof. Boris Ileković [18]. The layout of the complex of the now independent Faculty of Forestry and Wood Technology deviates from the concept of longitudinal pavilions of the original faculty complex. The northern, fragmented green volume, with its dimensions, refers to the large body of the southern lecture room of Pavilion IV, the so-called main building. With the green color of the cladding, it is aimed to achieve integration with the rich vegetation of the Faculty Estate. The northern realization of the Military Hospital from the 1980s, which also adapts to the northern slopes of Medvednica with its greenish and turquoise tones, can be considered a reference [2]. The southern annexes of the buildings are characterized by warm yellowish-ocher and terracotta colors, making this complex highly visible from the southern busy Maksimirska Street and the residential area of Ravnice.

### 4. GREEN PAVILION - STUDENT RESTAURANT OF THE FACULTY OF AGRICULTURE AND THE FACULTY OF FORESTRY AND WOOD TECHNOLOGY (3LHD, 1<sup>ST</sup> PRIZE IN THE COMPETITION, 2010, 2014-2021)

The first-prize winning competition entry for the Student Restaurant on the Faculty Estate by 3LHD is based on the effort to maximally preserve the exceptionally high-quality natural environment east of the Maksimir park-forest [19]. On the location between Pavilions I and III of the Zagreb Working Group, they mapped the existing trees, and protected and preserved them by perforating the ground floor body with the rounded contours of the atrium around the



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trees. They raised the green parterre onto the green roof slab above which the crowns of the existing trees spread freely. With such a non-invasive intervention, the modern interpolation discreetly fits into the existing natural environment, which is additionally achieved by the transparency of the restaurant and student spaces to the east, and by glass walls in a greenish tone around the perimeter. The largest eastern atrium is also a propulsive space for north-south communication, and provides access to the western student restaurant and cafe, and to the east to the student union premises (which have not yet been handed over for use in 2025). The lighting fixture of the Root restaurant, designed for the Green Pavilion and inspired by tree roots, is now available in 3LHD's product range [20].



Figure 9. Northern facade of the Green Pavilion (3LHD) and southern facade of Pavilion I (ZWG) [10]

The location of wooden modular units for the accommodation of visiting faculty teachers is planned taking the existing storehouses and greenhouses at the location of the faculty complex as a reference. The reference is also read in the greenhouses on the roofs of the three pavilions of the Zagreb Working Group [21]. Such wooden pavilions dispersed on the planted flat restaurant roof are designed according to the original 3LHD project. The construction was to be carried out according to the student design awarded the Rector's Prize, and realized under the mentorship of Prof. Saša Begović at the Faculty of Architecture, University of Zagreb. Modular wooden elements were not constructed, except for one, which is of a technical nature.



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Figure 10. Interior of the Green Pavilion (3LHD)

## 5. CONCLUSION

The Zagreb University complex intended for the study of agronomy and forestry was constructed in stages for almost a century. The construction within the Maksimir park-forest represents an exceptional spatial framework that enhances modern and contemporary architectural solutions. The gradually formed park environment of the university complex harmoniously complements the high-quality architectural works [22]. The initial construction of the modern complex on the outskirts of the city is hidden away from busy city roads, and most citizens are completely unaware of this achievement. With the gradual modern construction of the Faculty of Forestry and Wood Technology on the southern part of the plot, the architecture of vivid color is also noticeable from the southern Maksimirska Street. The realization of the first modern complex of the University of Zagreb and the modern pavilions is large in scale. It is one in a series of large-scale architectural achievements that dominate the loose structure of the sub-Sljeme zone, which is dominated by the fine-grained structure of family houses. Other large-scale public-purpose complexes that dominate the surroundings are the Zagreb Clinical Hospital Center on Rebro and the Dubrava Clinical Hospital, the Maksimir City Stadium, and the Kraš factory on Ravnice.

The exceptional location east of the Maksimir park-forest and the Bliznec stream is the best spatial framework of the entire University of Zagreb. The first modern complex of the University of Zagreb was realized on the basis of an architectural competition. The architectural competition model made it possible to accomplish the most appropriate project for the construction of a modern faculty complex. The recent architectural competition and the design of the Green Pavilion based on it resulted in a modern achievement that harmoniously integrated into the layered architectural and natural environment. The continuity of architectural competitions to obtain the best designs characterizes the first and last realized buildings of the faculty complex on the Faculty Estate and clearly indicates that architectural competitions result in high-quality architectural designs. Finally, it should be noted that the Faculty of Agriculture of the University of Zagreb has been highly ranked in the last ten years in the process of ranking universities on world lists. The agricultural sciences of the University of Zagreb have been in the top 100 in the world on the famous Shanghai List [23], and the scientific projects that take place at the Faculty of Agriculture contribute most to such a ranking. This is irrefutable proof that a high-quality spatial environment and good architecture influence human well-being and exceptional results.

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