Università Politecnica delle Marche

Scuola di Dottorato di Ricerca in Scienze dell'Ingegneria

Curriculum in Ingeneria Civile, Edile e Architettura

Transformation of architectural/urban identity of Nikšić city, Montenegro

Ph.D. Dissertation of: Vladimir Bojković

Advisor: Prof. Antonello Alici

Curriculum supervisor: Prof. Stefano Lenci

Cycle: XVI

Ancona 2018.

Contents:

Acknowledgements…5

Abstract…6

1. **Introduction**…7
   Motivation for research…7
   Definition of research subject, research objects and scientific project assignment…7
   Research goal…8
   System of the main hypothesis and auxiliary hypotheses…9
   Research methods…9
   Expected results of the research…10
   Structure of the work…10

2. **Methodological approach – State of Art**…12
   Character, structure and meaning of the place…14
   The meaning of the place…16
   Definition of architectural and urban identity…18
   The formation of the architectural / urban identity…21
   Conclusion…24

3. **Natural characteristics of the Nikšić region**…26
   The relief characteristics…27
   Seismic characteristics…27
   Hydrological characteristics…28
   Climate characteristics…29
   Vegetation…30
   Conclusion…31

4. **The periodization and development of the city of Nikšić**…33
   Illyrian period…33
   Roman period…33
   Gothic period…36
   Slavic medieval period…36
   Turkish period…41
   Conclusion…44

5. **Liberation of Nikšić from Turks**…47
   The first regulation plan for the new Nikšić, the beginning of a modern city development…50
   Urban form and physical structure of the first regulatory plan…51
   Conclusion…56

6. **Typical city architecture and its characteristics**…58
   Architecture of the city houses…59
   The most important buildings built after the liberation of the city…61
   Significant urban facilities…65
   Architectural spaces of Nikšić in the period after the liberation from the Turks…72

Indicators of the architectural and urban space of Nikšić…73
Conclusion…76

7. **The city development through post-war urban plans**…78
   The brothers Stojanović Regulatory Plan, 1952…80
   General urban plan of Nikšić, Josip Saisel, Dragan Boltar, 1954-1958…81
   The marshal Tito Square, competiton, Feđa Košir, 1971…83
   Spatial Plan of Nikšić Municipality and General Urban Plan of Nikšić, Urban Planning Institute of Croatia, Zagreb, 1984…85
   The Boris Kidrič" ironworks and its impact on urban planning…87
   The workers' settlement Humci…88
   The workers' settlement "Budo Tomovic"…91
   Conclusion…92

8. **Construction of the buildings in Nikšić after the Second World War**…93
   Architect Petar Periša Vukotić (1899-1988)…93
   Architect Bruno Milić (1917-2009)…97
   Architect Rajko M.Tatić (1900-1979)…103
   Conclusion…106

9. **The buildings by architect Đorđije Minjević, the development of modernism in Nikšić**…107
   Historical and political context…108
   Characteristics of architecture…109
   The most important objects…111
   Conclusion…122

10. **Objects by architect Slobodan Vukajlović, Continuity of city building and individual interpretation of modernism and postmodernism**…125
    Characteristics of architecture…127
    The most important objects…130
    Conclusion…138

11. **Memorial building Home of Revolution, an indicator of urban identity transformation of Nikšić city**…139
    The Home of Revolution building, some characteristics…140
    Organization of space, network of cultural and memorial contents in Home of Revolution…143
    Home of Revolution, transformation of identity over time…147
    Conclusion…148

12. **Genesis and characteristics of the Sava Kovačević Square**…150
    Basic characteristics of the square…151
    Structural characteristics of the square…151
    Functional characteristics of the square…152
    Genesis and square development over the time…153
    Current time and the Sava Kovačević Square…160
    Conclusion…160

13. **Indicators of architectural and urban identity of the city core**…164
    Quadrant A, basic characteristics…166
    Quadrant B, basic characteristics…169
    The streets of the core…170
    Identity Indicators…172
    Conclusion…179

14. **Devastation of space, influence on the identity of the city**…181
    Possible causes of space devastation in Nikšić…182
    Possible solutions to the problem…185
    Conclusion…186

15. **Conclusion**…188
16. **Bibliography**…194
17. **Photo attachments**…198

Acknowledgements

I would like to thank my supervisor, Prof. Antonello Alici, for the patient guidance, encouragement and advice he has provided throughout my time as his student. I have been extremely lucky to have a supervisor who cared so much about my work, and who responded to my questions and queries so promptly. I would also like to thank all the members of staff at Department of Civil Engineering and Architecture (DICEA), Università Politecnica delle Marche, who helped me. In particular, I would like to thank Giovanni Bellucci for the suggestions and support he made in the process of writing. I would like to thank Professors Eva Savina Malinverni, Fausto Pugnaloni and Peter Gabrijelčič for advices and support. I would also like to thank Università Politecnica delle Marche for giving me the possibility to conduct my research.

I am grateful to all of those with whom I have had the pleasure to work during the period of research, from City Archive of Nikšić staff to my friends and colleagues.

Last but not the least, I would like to thank my family: my mother Ljubinka, my father Dušan and my brother Velibor for supporting me spiritually throughout writing this thesis and my life in general.

Abstract

Transformation of architectural/urban identity of Nikšić city, Montenegro

This work put focus on defining the notion of identity from the perspective of architecture and urbanism, or in other words from perspective of architecture phenomenology.
This work brings two new concepts, basic identity and vibrant identity. These two concepts were created based on synthesizing several fundament views on the phenomenon of identity, from the position of sociology, psychology, the theory of architecture. The synthesis of these views gives a framework that abstracted some of the key features of the identity phenomenon. This framework served as a basis for defining architectural/urban identity in accordance with basic definitions of architecture and urbanism. After this, the basis for defining Basic identity and vibrant identity has been obtained as a manifestation of the architectural/urban identity of a city. In short, the basic identity represents the relation of the oldest objects/urban plans to the natural and historical conditions in which they were created. Vibrant identity represents the state of the basic identity in the time of observation. Since architectural/urban identity is a dynamic structure, the transformation of a basic identity is given in the form of a vibrant identity, and it can be positive or negative depending on whether it represents degradation or upgrade. This leads us to the next phenomenon that is closely linked to the identity and that is continuity.
Nikšić city in Montenegro is especially interesting example for research. Over time, the genesis of the city's identity had dramatic manifestations, depending on the political and social environment. In this context, it was particularly important and interesting to study urban ring with buildings from the period of modernism and postmodernism designed by some of the most important Montenegrin and Yugoslav architects.

Key words: identity, continuity, Nikšić, Montenegro, modernism, postmodernism

Chapter 1:

Introduction

Motivation for research

By adopting the first regulation plan in 1883, which was made by a Trogir architect Josip Šilović Slade, Nikšić became one of the first cities not only in Montenegro, but also in the region with a document that would regulate its urban development.

From the moment the regulatory plan was applied, Nikšić begins to develop by respecting urbanistic laws that shape its space both in the form of urbanism as well as in the form of architecture. The consequence of such an interaction is reflected in the formation of Nikšić's specific recognition and distinction with respect to other cities. We can say that by the implementation of the first regulatory plan Nikšić begins to form its own urban and architectural identity. The identity of a city should have its continuity in the sense that every new time values past and bases its development on it, respecting the postulates on which identity was developed throughout the life of the city, but also contributing with new ideas refreshing the already established identity. It is especially important to notice those spatial and architectural themes that over time appear as the basic elements of the city's identity. In variations of these themes and in their interpretation in a given time we may see the presence of continuity as a basis of identity. If the variations are based on the upgrading of already established themes, they contribute to the already existing identity by carrying out its transformations in a positive direction. The negation of the existing patterns in the urban and architectural design of the city and the creation of completely new patterns that do not find their foundation in a given location and urban and architectural heritage produce discontinuity and transform the inherited identity mostly in a negative direction. The challenges of modern times put the phenomenon of the city identity into a test. Nikšić, as a city of specific genesis, is an interesting example for observing the identity and its transformation from the very beginnings, different historical circumstances up to the modern times in which the transformation seems to go in a negative direction.

Definition of research subject, research objects and scientific project assignment

The subject of the research comes directly from the following questions:

- What is identity as a phenomenon?
- What is architectural and what is the urban identity of a city?
- What is the basic identity and what is the vibrant identity of Nikšić?
- What are the identity elements of Nikšić?
- Is there a continuity in the identity of Nikšić?
- What are the causes of the devastation of identity elements?
- What is the relationship between the processes of devastation of space and identity?

Accordingly, the subject of research is the city identity of Nikšić with all its characteristics from the past (basic identity), but also from the present times (vibrant identity). The subject of research is also the transformation of the city identity of Nikšić over time.

The research objects are dominant elements that influence the creation of the identity base of a city from which the basic identity is then established. The dominant elements are given in natural conditions and the location in which the city was created in correlation with the historical circumstances that shaped the city. In this way, it is possible to notice the urban and architectural

forms that make up the base of the city or its basic identity. Transformations of basic identity over time are given in the form of a vibrant identity that can be positive in the presence of continuity and positive transformation, or negative in the presence of discontinuity and negative transformation. In this context, the city was observed through historical and spatial genesis. All stages in the development of the city were analysed through urban and architectural manifestations in the form of morphology, squares, streets and specific objects.

The second group of research objects is constituted by the urban plans that shaped the city. The accent was put on the first regulation plan, and then the urban plans that were adopted after the Second World War, as they had been based on the first city regulation plan and thus contributed to the maintenance of the urban identity that had existed until then.

The third group of research objects are the phenomena of destruction and space devastation, as examples of discontinuity and negative transformation or negative vibrant identity. Since the causes of these phenomena are various, this work tries to explain the primary causes that are most significant for the profession of architects and urbanists.

The fourth group of research objects represent various manifestations of the interaction of the previously mentioned research objects.

The scientific project assignment in its essence refers to a number of procedures and steps in which the research is conducted. Having in mind the subject and objects of research it was necessary to carry out field work in order to collect photographic material. After that, it was necessary to collect all the available literature dealing with the topic and in the end it was necessary to investigate the available archival material. This last step was carried out in the Archive of the Nikšić Municipality, in the Archives of the city museum of Nikšić as well as in the State Archives of Montenegro in Cetinje. A major problem in the research was the lack of previous studies of Nikšić city on this or similar topics. In this regard, this work can be considered as one of the first to try to explain the research phenomena in the area of Nikšić.

Research goal:

One of the aims of the work was to study the identity of Nikšić and in general the elements of the city's identity from several aspects. The basic elements are determined in the natural characteristics of the area and in the genesis of the city.

In addition, the aim of the work was to determine the continuity in urban construction through the study of urban plans created in the post-war period, which further builds the identity of the city on an argumentative basis. These aspects of the observation and exploration of the city served to draw a conclusion on the strong base on which the identity of the city is created as well as its recognisability.

Furthermore, the goal is to determine which architects influenced the shape of the city and the transformation of its identity. In this way, it is possible to determine the position over time of the architects to the existing continuity and the architectural and urban situation in the city. In this context, we emphasize the buildings by architects Đorđije Minjević, Marko Mušič and Slobodan Vukajlović among others.

Finally, we show the elements of the basic identity and their transformation over time from the positive to the negative side on the example of the Sava Kovačević Square. Elements of basic identity are given in the spatial and social characteristics of the square. On this example, it is possible to determine the causes and consequences of space devastation, as well as their prevention.

In general, the aim of the work was to determine the following:

- The current, vibrant identity of the city of Nikšić
- Did the transformation of the basic identity of a city go in a positive or negative direction over time, or to what extent is the continuity of identity present
- Architects who shaped the city and their understanding of continuity
- What are the elements that make identity transformation go in a positive or in a negative direction
- Causes of space devastation and possible prevention

The practical aim of the work is to present a review of the historical development of the Nikšić city in the context of architecture and urbanism, since there is not much research on this topic.

System of the main hypothesis and auxiliary hypotheses

Main hypothesis: The urban identity of a city is a dynamic structure that changes and transforms over time. Transformation of urban identity can go in two directions. The first one is the transformation in the positive direction, the so-called positive transformation. Its main characteristic is the logical continuity in the construction and development of the city. The second one is the transformation in the negative direction or the so-called negative transformation. Its basic characteristic is the absence of a logical connection between the inherited forms of city development and the current, given construction, or in one word its basic characteristic is discontinuity. An example of the city where the transformation of identity in the context of architecture and urbanism will be studied is the city of Nikšić in Montenegro.

Auxiliary hypothesis 1: The transformation of the city identity can be traced through a relation of basic and vibrant identity over time. Basic identity is determined on the basis, primary themes presented at the oldest, the first buildings in the city, but also in the oldest squares and streets. A vibrant identity refers to the interpretation of basic themes in a given time and moment in given historical and socio-economic conditions.

Auxiliary hypothesis 2: The basic identity of the city is conditioned by its location, natural conditions, climatic conditions, traditional construction, as well as the system of identification and orientation.

Auxiliary hypothesis 3: Through genesis of urban planning in the form of urban plan according to which a city was built, it is possible to determine the relation between the basic and vibrant identity of a given period. The relation between architects and their objects to given architectural and urban heritage can influence the transformation of the identity in a positive or negative direction.

Auxiliary hypothesis 4: By detecting key historical events, it is possible to see to what extent they have influenced the transformation of the city's identity through the relation of basic and vibrant identity.

Auxiliary hypothesis 5: Identity indicators and their transformation can be found on the example of the squares and the central city core.

Auxiliary hypothesis 6: The presence of space devastation shows a positive or negative transformation of the city identity.

Research methods

Taking into account the subject, objects, purpose and system of the hypothesis of research, the work was conducted using the following methods:

- an empirical cycle based on observation, induction, deduction, testing and evaluation

- normative method,
- generic method,
- method of analysis and synthesis,
- as well as a case study on the example of the Sava Kovačević Square

The basis of the methodological approach is to define the phenomenon of identity and its basic characteristics in the general case and the definition of the identity phenomenon in the context of architecture and urbanism. In this way, the work gives definitions of architectural / urban identity and its characteristics.

This work brings two new concepts, basic identity and vibrant identity. These two concepts were created based on synthesizing several fundament views on the phenomenon of identity, from the position of sociology, psychology, the theory of architecture. The synthesis of these views gives a framework that abstracted some of the key features of the identity phenomenon. This framework served as a basis for defining architectural/urban identity in accordance with basic definitions of architecture and urbanism. After this, the basis for defining Basic identity and vibrant identity has been obtained as a manifestation of the architectural/urban identity of a city. In short, the basic identity represents the relation of the oldest objects/urban plans to the natural and historical conditions in which they were created. Vibrant identity represents the state of the basic identity in the time of observation. Since architectural/urban identity is a dynamic structure, the transformation of a basic identity is given in the form of a vibrant identity, and it can be positive or negative depending on whether it represents degradation or upgrade. This leads us to the next phenomenon that is closely linked to the identity and that is continuity.

A more detailed methodological approach is given in the second chapter.

Expected results of the research

It is expected that with an adequate methodological setting, first of all adequate definition of the research phenomenon and then the subject of the research, obtained results that will confirm the auxiliary hypotheses and then the main hypothesis presented in the work.

The basic identity of the Nikšić city was determined based on the natural conditions in which the city was developing, the first regulation plan from 1883, and the typical architecture of that time. The research will show which the basic themes from which it was built are. Following the transformations of basic themes, the results will show that each of the particular historical periods characterizes the vibrant identity and its relation to the basic one. These results are expected to help determine the degree of transformation.

It is expected that the results of the research of post-war urban plans, according to which Nikšić developed, show continuity or discontinuity in the logical, morphological development of the city in relation to its basic identity. The attitude of the architects towards the architectural and urban heritage through the objects that shaped the city will also point to positive or negative transformations of the architectural or urban identity of the city.

The results of the investigation of specific cases, such as the Sava Kovačević Square but also the buildings of the most important Yugoslav architects that designed their buildings in Nikšić, will determine the extent to which they contributed to the architectural and urban identity of the city and its transformation.

Structure of the work

Researched topics "Transformation of architectural/urban identity of Nikšić city, Montenegro "consists of fourteen (14) main chapters, final conclusion and bibliography.

1. ***Chapter:*** The motive of the research of the work, the subject and the purpose of the research, the hypotheses with shorter explanations, the research methods and the expected results
2. **Chapter**: Methodological approach – State of Art, Definition of architectural and urban identity
3. ***Chapter***: Natural characteristics of the Nikšić landscape, relief, soil morphology, climate, hydrology, vegetation
4. ***Chapter:*** Periodization and development of the city, Illyrian, Roman, Gothic, Slavic and Turkish periods with spatial characteristics
5. ***Chapter:*** The development of the city after the liberation from the Turks, the first regulation plan of the city and its characteristics
6. ***Chapter***: Typical city architecture and its characteristics, the most important objects, the specific architectural spaces of the city and the basic theme of identity
7. ***Chapter***: Development of the city through urban plans after the Second World War, the beginning of the work of the iron factory and the construction of the workers settlements Humci and Budo Tomović
8. ***Chapter:*** Construction of the buildings in Nikšić after the Second World War
9. ***Chapter:*** The buildings by architect Đorđije Minjević, the development of modernism in Nikšić
10. ***Chapter:*** Objects by architect Slobodan Vukajlović, Continuity of city building and individual interpretation of modernism and postmodernism
11. ***Chapter:*** Memorial building Home of Revolution, an indicator of urban identity transformation of Nikšić city
12. ***Chapter:*** Genesis and characteristics of the Sava Kovačević Square
13. ***Chapter:*** Indicators of architectural and urban identity of the city core
14. ***Chapter:*** Devastation of space, influence on the identity of the city
15. ***Chapter:*** Conclusion
16. ***Chapter:*** Bibliography

Chapter 2:

Methodological approach – State of Art

This work inspiration for methodological approach had based on some fundamental works that dealt with the phenomenon of identity in general and its manifestation in architecture and urbanism. As a broad term, the identity emerged from the general point of view to the more specific point of view from architecture and urbanism of the city. As the result of the synthesis off all these approaches, this work brings two new concepts the basic (architectural/urban) identity and vibrant (architectural/urban) identity.

Every city has its own genesis. The line of this genesis shows a series of cultural indicators over time presented in architecture and urbanism. If there are objective conditions to determine the oldest layers and manifestations of the city genesis, we can understand how at that time human demands for these activities were met. These primary cultural indicators are a good basis for better understanding of the city development or its identity. However, it should be emphasized that cultural indicators are only current indicators of the city identity, as they are related to the time in which they are determined. They can be an indicator of continuity in the city development and in its identity. In general, every new building or group of buildings contributes to the city development or its identity, in fact without the city development there can be no identity development. This leads us to the very essence of the identity problem of a city that is the way in which the primary identity of the city was formed through its first buildings and their mutual relation. In what way will the first buildings be formed, what kind of relation they will have depend primarily on the location, natural environment, all of which affects the development of the future city morphology. The foundations of morphology will determine the spatial organization, but also the meaning and symbolism of the city.

In what way the primary identity of the city will be formed depends on the understanding and relation of the man to the concept of the place. Let us see how the concept of place was observed in some of fundamental work. From this review, we can make a frame for methodological approach for defining the concept of identity in architecture / urbanism.

In his book "Space and the Place-Perspectives of Experience", geographer Yi-Fu Tuan emphasizes that space is freedom and place is security. (1)

He also notes that space is an abstract term that is defined by places and objects. If we analyse the first sentence in which space is freedom and place is security, we can conclude that the space, so defined, has no visible limits, it is not fully understood and defined by physical limitations, therefore it is unknown and unexplored, unidentified. A place on the other hand, characterized as security, clearly represents a cognitive and recognizable category, which it becomes over time. If the person's experience for a particular location is positive, that means that positive feelings, emotions, sensations and the memories are developing. Given location gets positive meaning and creates security in humans. However, if a site causes negative emotions, sensations and memories a person will assign a negative meaning to it. It is important to note that in both cases, based on experience, a person assigns a meaning to a particular location, in other words identifies, thus creating the identity of the location or place. Yi-Fu Tuan also emphasizes that the object also defines space apart from places. Similar to places, if a person grants a certain meaning to objects by their experiences, they identify them. In this way, a cognitive map and the perception of a conditionally said narrow space, defined by places and objects, is obtained.

This is of great importance in determining and monitoring the genesis of a city, which from its beginning represents security for a man or a known place.

In psychology, the identity of the place also refers to the personal identity of each individual. One of the famous works dealing with the problem of place identity is the work "City and Personal Identity" by author Harold M. Proshansky. (2)

He defines the place identity with those dimensions that define a personal identity created by the relation with the physical environment. These dimensions are related to the complex system of conscious and unconscious ideas, beliefs, feelings that are significant for the given environment. In general, Proshansky explains that the environment influences the formation of personal identity because of the interaction between a person and their environment. It should be noted that this is a double relation. The site affects the formation of a personal identity, but also people want to influence their surroundings, changing them, whereby they become a reflection of the user's identity.

German psychologist and psychoanalyst Erik Homburger Erikson was particularly concerned with the identity phenomenon. He believes that identity is shaped by the experiences of the individual during their life but also under the influence of social interaction. (3)

If we look at social interactions in the context of space or place, it becomes clear that spatial identity is an important dimension of social and therefore cultural life in urban areas. This leads us to the human need for belonging as the ultimate goal of socialization and social interaction. Psychology of the place teaches us that in the human nature the feeling of belonging, just like security, is bonded to place. Therefore, in addition to physical manifestation the place identity also includes the meaning of both the individual and the collective. Considering this, we can say that cities (here we consider the city as a general place, a set of all meanings that people attribute to a particular location, which is urbanistic shaped) are not only physical creations but also social ones. There is a mutual influence between the physical characteristics of the city and its citizens. While the physical dimensions of the city, as places with a special meaning ensemble, are shaped and formed under the influence of citizens, we can say that all those physical dimensions also shape citizens, their way of life and social identity over time.

Hence, cities, as places of particular concentration of the most diverse meanings, represent the product of the interaction of the natural, so far built physical environment, and the social life of the past. Cities are reflections of the experiences, values and beliefs of the community. The intention is to emphasize the "past" in previous claims. Changes in urban environments are often due to changes in lifestyle habits, although it can be said otherwise. This again influences the formation of the city identity, or of urban spaces, as places of special significance for both the individual and the collective.

One of the authors, who observed in a specific way the problem of place identity, more specifically the city identity, is Kevin Lynch. According to him, identity is part of the city's image. In the work "The Image of the city", he states that the identity of a city depends on its readability, or on the ease of identifying its parts, that is the elements conditioned by composition and interaction with each other. (4)

Primarily, the city is understood by observation, using all senses in correlation with emotions. The city is legible if all its urban elements can easily be identified, and if they can easily fit into a single general picture. Lynch introduced the paths, corners, districts, nodes and benchmarks that shape and help the readability of the city. The integration of all individual fragments and associations on them into one whole and the general impression of the same precedes the process of getting to know or viewing, or moving through these fragments. In the very process of getting to know, moving or viewing, an important role is played by the orientation, as a pre-order for the beginning of the formation of the city identity to its inhabitants or visitors.

Therefore, two key preconditions in shaping of the place or city identity would be the identification of its components and their mutual correlations and orientations.

Another author dealing with the relationship between the physical elements of the city, in the first place of architectural objects, is Brent C. Brolin, who in his book "Architecture in the Context" gives insight into the basic problems that arise in the design of buildings outside the concealed context. The book explores in particular the modern movement in architecture that largely ignored the historical heritage of cities. The result was mainly the interruption of the visual continuity of cities and the disagreement of new facilities with the old ones. Such actions also affect the identity of the space in this case of the city. Here we come to another key characteristic of city, which is its continuity or transformation. (5)

The author who was particularly interested in the phenomenon of place, more specifically for the genius loci of place, i.e. his identity is Christian Norberg-Schulz. His renowned work "Genius Loci Towards a Phenomenology of Architecture" focuses on the ways of interpreting the notion of the place and place identity in architecture. The term place implies totality with a material substance, shape, texture and colour. Together, they determine the CHARACTER of the environment, its essence. He talks about what things actually are. In other words, the site receives a character or an ATMOSPHERE. (6)



Figure 1, City View Sassi di Matera, southern Italy

Here it is important to note that the place represents the qualitative totality of the nature complexity and as such cannot be described by the meanings of the analytical, scientific conception. Therefore, we use phenomenology, in this case PHENOMENOLOGY OF ARCHITECTURE. To better understand, define and determine the concept of a place, it is necessary to make a division into the phenomena of nature and human-created phenomena that influence the creation of a place and its identity. This introduces a division into natural sites and human created places or a division between landscape and settlement. Interaction and mutual conditioning between these two groups is crucial for understanding the phenomenon of the place in the general case. A typical place with a pronounced identity that manifests itself through structure and atmosphere is Sassi di Matera. The relation between the natural elements and the human made elements is strongly connected in a harmonious, recognizable whole. (Figure 1)

Character and structure and of the place

From the architectural and urbanistic point of view, the structure of a place can be described in the context between architectural object or settlement and the natural environment or landscape in which it is located. Therefore, the STRUCTURE of the site has aspects of CHARACTER, which defines its general ATMOSPHERE and SPATIAL aspects.

The character of the place is a function of time, it changes during the day and seasons and weather conditions. It is clear that the light and its effects give its basic manifestation. These effects also relate to specific characteristics of places such as materialization, colours, shapes and the like.

The spatial aspects of the place are related to the layout and the mutual characteristics of the elements that built it in material form. Spatial aspects are relatively static, or over the time, they change slowly. However, this does not mean that a change cannot come suddenly; a natural disaster can cause devastation or a complete destruction of the elements. Social, economic and, in particular, political factors can often cause changes in the spatial aspects of the place. Often these changes are negative, which affects the devastation of the place and its identity, and less often positive, whereby the place and its identity are logically developed and upgraded. (Figure 2)



Figure 2, Hiding the Brutalistic Architecture with the plaster Antique in Skopje, FYR Macedonia, cration of the new city identity

Each new object that is added to the architectural object-landscape system can affect it in many ways. First, each added element can become a center or focus for its environment. From the center the space spreads in different directions and different rhythms, in the direction of the sky or the earth, horizontally or vertically. In this way, each new architectural object either upgrades or devastates the already existing relation between natural and human-created phenomena in space.

The system is devastated if the object does not correspond to the already established relationships between the elements, bringing in tension, illogicality and disrespect of already existing forms. It improves the system if the object interprets recognizable forms, in accordance with the given time, with the existing ones and makes a harmonious whole. In this way, the genius loci or identity is protected and is not conserved, it focuses on further development. Therefore, the development and dynamics of the identities of places means to concretize the essence of the genius loci in each new historical context. (Figure 3)



Figure 3, Modern architecture in the historic core of Ancona

The meaning of the place

Christian Norberg Schulz in his work “Genius Loci Towards a Phenomenology of Architecture” states that the task of architecture is to make place in space, or to discover the potential meanings presented in the given environment. Identification and orientation are crucial in shaping the site. Identification objects are specific spatial elements according to which a person develops a childhood relation, forming a pattern of identification and consequently orientation. Where identification is the basis of man's sense of belonging, orientation is a function that allows him to be a homo-viator, which is part of his nature. Finally, Schulz concludes that the task of science is to abstract while the task of art is to concretize. The task of architecture would be to concretize the genius loci. (7)

In order to achieve a more complete understanding of the place spirit, the genius loci or the place identity, it is necessary in addition to the structure and character to take into account the concept of the present meaning in the given place. While the structure and character on the one hand represent, conditionally, the formal features of a place, on the other hand the meaning represents its specific relation to other places, or if we consider its elements, then the relation of the object to other objects that surround it.

If by the elements that build a place we mean architectural objects, then they should have their base in the location where they are built or in nature in general. Why this is necessary and important? If we look at the Greek polis, we can conclude that it was in excellent correspondence with the nature as an urban creation. The Greek polis allows you to navigate through different content and therefore the MEANINGS. This is achieved by visualization of the landscape quality through human-created objects and through complementation and at the end of symbolization. In the end, polis is a collection of several different and in this way treated landscapes, consistent with the synthesis of nature and human structures.

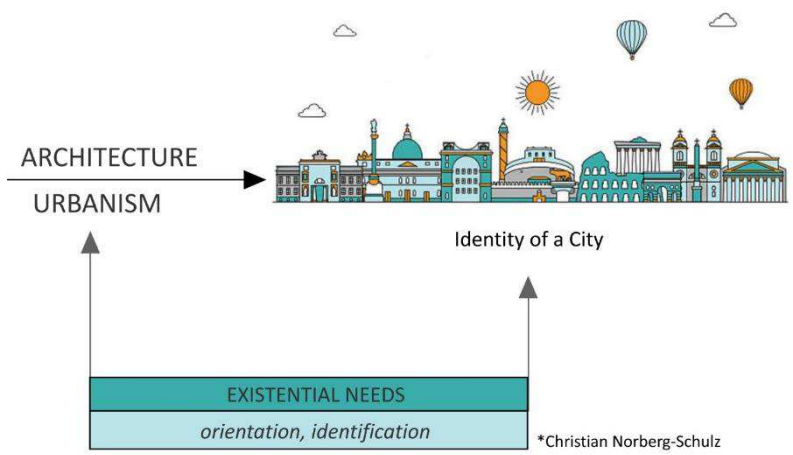


Figure 4, Architecture/Urbanism should provide some of the existential needs, such as orientation and identification, (C.N.Schulz)

In other words, nature's meanings are abstracted and presented in a new way in the form of buildings, in accordance with human needs. Depending on these needs, there will be different types of gatherings of people and, consequently, meanings. All this suggests that the Greek polis was a good example for the formation of an identification and orientation process, which is of great importance if we consider a man as a homo-viator. Generally speaking the place represents the synthesis of natural elements and human elements. The primary relation of these two groups of elements is the location. A man will build his settlements in those locations where nature gives the conditions for it to be built. In the context of CHARACTER these are locations where water, wood, stone, rock are presented. In the context of SPACE these are the sites that are defined and in line with the natural elements. If the natural conditions of good visualization become the main meaning of place concretization, and if the conditions are not the best then complementation and symbolization are used. Ultimately, from the synthesis a meaning or set of meanings are obtained, thus the existential aspect of the place is realized. We can say that all types of

settlements actually represent variations of the object-ground figure, whereby the object should represent the visualization of a potential focus, which allows orientation and identification.

When we talk about human settlements, we introduce a general division into a rural and urban settlement in the context of the place formation and its relation to the natural environment. On the one hand, we have a traditional, rural architecture that has the ability to adapt to the natural environment, and on the other hand should be urban architecture and its ability to interpret local conditions with the goal of preserving the possibility of identification and orientation. Every new architectural object in the urban area should interpret the inherited experiences and meanings of the previous objects in a new way. In this way, the continuity of the place and its logical upgrade is carried out, and in fact maintains its identity. The possibilities of interpretation are determined by the location, the historical circumstances that can favour a particular approach and method. Christian Norberg-Schulz in the book "Genius Loci Towards a Phenomenology of Architecture" emphasizes the importance of themes as a basis for artistic concretization. It is clear that in the genesis of some, especially urban settlement, it is possible to notice certain formal, stylistic repetitions also some systems and complexes of meanings that are projected in the form of architectural objects. In addition, over time, variations of the given theme, which were created by the acquisition of different circumstances, are also noticed.

Variations of the same theme represent continuity. Uniformity and monotony are imposed here as a possible consequence of inadequate interpretation of the observed topics. However, variations allow expression, even individual identity within a system that manifests common meanings. (Figure 5)



Figure 5, Variations of the same theme, street front in Ljubljana

After examining some of the fundamental works that have a phenomenon of identity for the subject of research, we can form a framework to define architectural and urban identity. This frame contains some of the basic features of the identity in the context of space or city. Based on the previous

observations we can conclude the following: The genesis of the city represents also the genesis of its identity. The experience of the city's identity depends on the possibilities that affect the formation of the individual identity of all citizens. The identity of the city changes over time depending on the circumstances that affect it. The identity of the city is formed by the interaction of spatial elements (architecture) and the sensations that are causing the citizens. In this interaction the meaning of the place is formed. Each new element can contribute to the identity positively or negatively.

Definition of architectural and urban identity

James D. Fearon points out even though everyone knows how to use the word properly in everyday discourse; it proves quite difficult to give a short and adequate summary statement that captures the range of its present meanings. (8) Let us try to give the basic, dictionary definition of the identity.

The concept of identity can be defined and studied in many ways depending on the scientific or artistic discipline. In the Oxford English dictionary, the word identity comes from the Latin word "identitas", which means the fact of being who or what a person or thing is. (9)

From this general definition, two basic traits of identity are noticeable. The first is that identity contains characteristics, whether qualitative or quantitative, by which a thing/someone is different from another thing/someone. Another trait of identity refers to the comparison of something/someone with another something/someone. The first basic characteristic of the identity, therefore, would be the uniqueness of an object whose identity is determined (whereby an object is understood as a general term for something/someone), and the second basic characteristic of identity would be the relation of an object whose identity is determined to other object or objects. The differences or similarities obtained by the object comparison will actually contribute to determining the degree of uniqueness of the object.

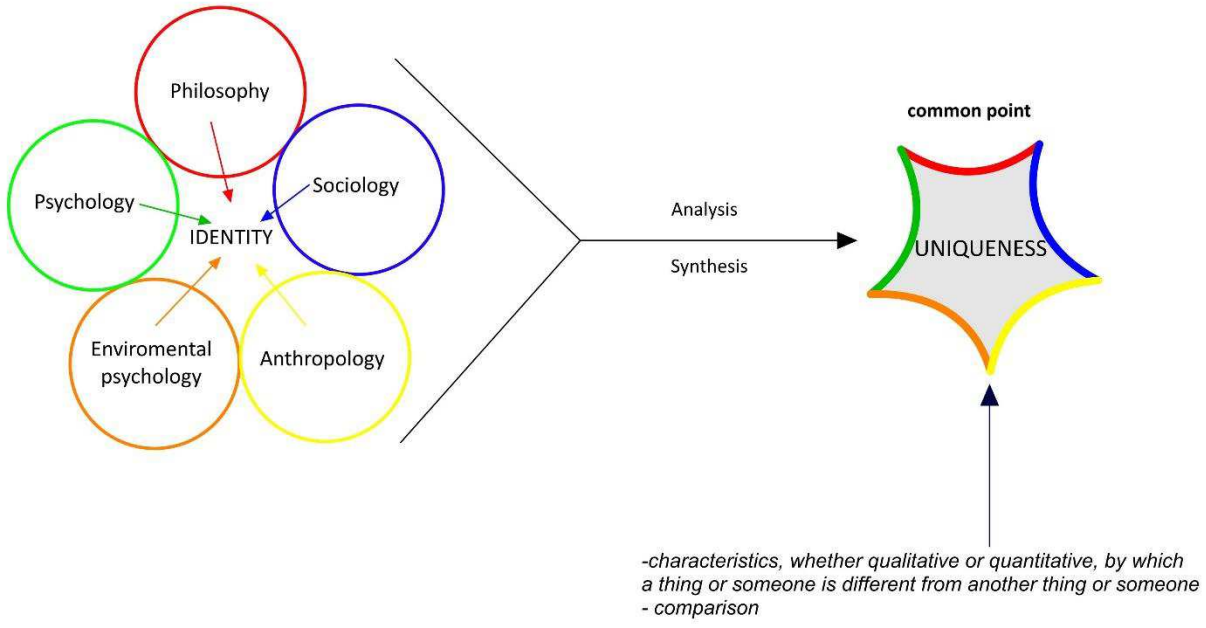


Figure 6, Uniqueness, the starting point in defining the identity phenomenon

If we expand the analysis of the above definition of the identity concept, a question arises: if identity clearly speaks of what is what and who is who, how these objects are created, and how their identity is created. This leads us to the following traits of identity, viewed from the general point of view, and this is its timeframe or genesis.

Since objects, things and living beings exist in time and space continuum, the flow of time brings constant changes, causing identity transformation. These changes also relate to the qualitative and quantitative characteristics of the observed objects. In order to explain better the transformation of identity, it is necessary to introduce and explain two new concepts, which are basic identity and vibrant identity.

Basic identity is a system of characteristics, either qualitative or quantitative, which occurred at the same time as the observed object. In other words, the basic identity describes the observed object, as it should be. Basic identity represents the essence of the observed object, its core, which distinguishes it from other objects.

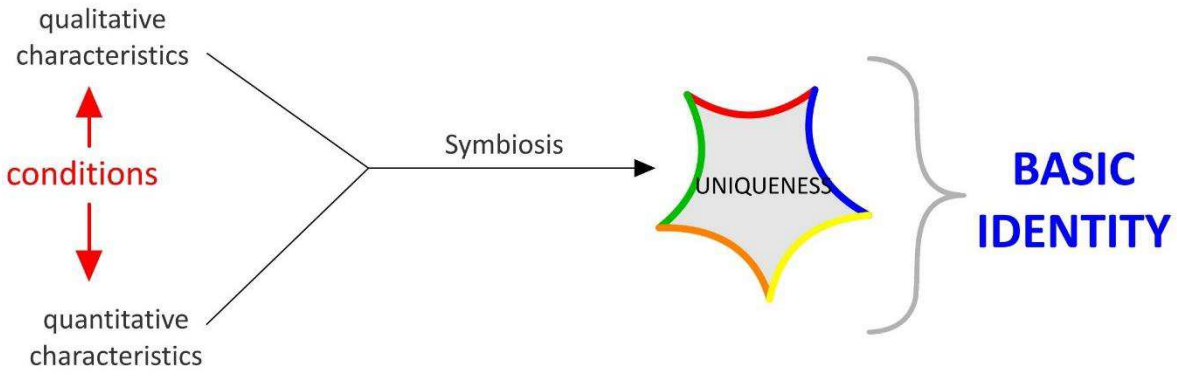


Figure 7, Scheme of the basic identity formation

Vibrant identity represents the state of identity of the observed object in relation to its basic identity in a given time period. A vibrant identity can be positive or negative.

If the changes do not affect the essence of observed object or its uniqueness and identity, we can talk about the positive vibrant identity, continuity of identity or its positive transformation. Positive vibrant identity is actually a logical upgrade of basic identity.

If the changes cause the disappearance of qualitative and quantitative properties of objects, then we talk about the negative vibrant identity, discontinuity of identity or its negative transformation. An extreme case of negative vibrant identity would be a loss of identity.

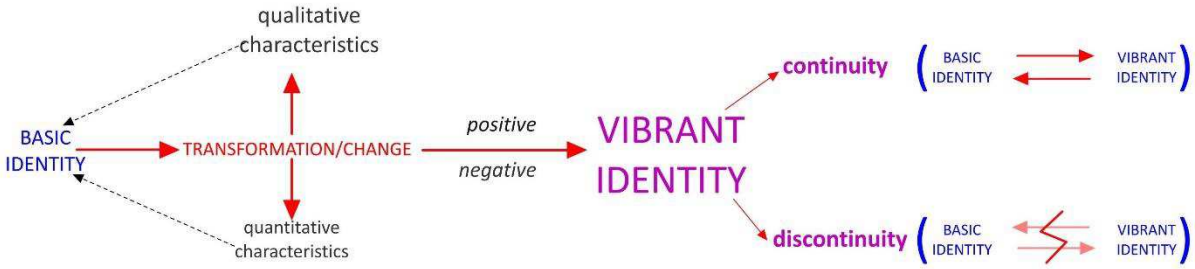


Figure 8, Scheme of the vibrant identity formation

This leads us to the following characteristic of identity, viewed from the general point of view, and this is its *relative dynamics*. Changes do not arise only because of the temporal continuum, but because of the different circumstances and factors. We can conclude that another feature of the identity is its interaction at the level of causes and consequences.

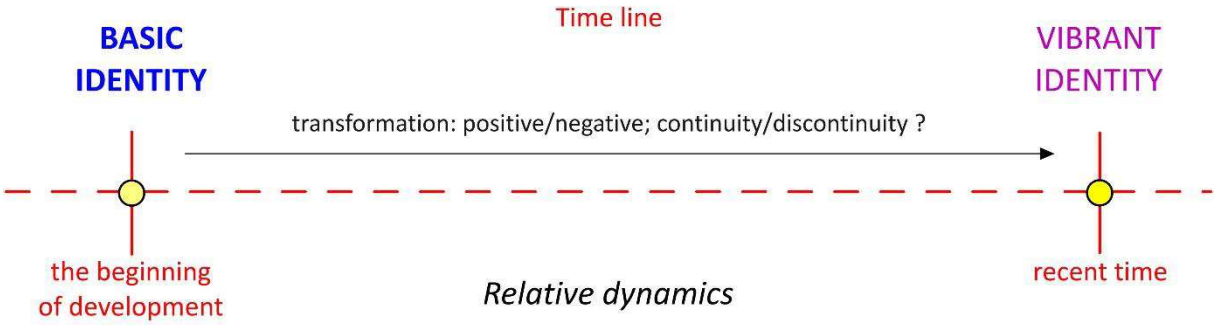


Figure 9, Relative dynamics of identity phenomenon

On the analytical base of extremely general explanation of the identity concept, we could conclude that identity is a complex system of relatively stable qualitative and quantitative characteristics of an object, created by the interaction of different factors, and by comparing it with other objects of the same or different kind; we get the degree of uniqueness of that object. Such a starting point in defining the notion of identity is a framework that directs us to the possibilities and specifics of defining it in different disciplines.

Let us try to look at the concept of identity from the point of view of architecture and urbanism. In order to achieve this it is necessary to define what architecture is and what urbanism is, as the areas in which we observe the identity phenomenon. We note that the ultimate definition of any concept is controversial by itself, because it carries the danger of not seeing the concept in all its aspects. However, any attempt to define a concept should contain its fundamental characteristics. We will try to give the framework definitions of architecture and urbanism and to bring them into line with the identity phenomenon.

Architecture (Latin architecture, from the ancient Greek word arkitekton, ἀρχιτεκτονική, from ἀρχι - main and Τεκτονική - builder) in the narrow sense is the science and art of buildings, of design of interior and exterior architectural space. (10)

Therefore, architecture, in its narrowest sense, deals with the design of space. The space that is architecturally designed is of course conditioned by climate, so we can say that in this respect architecture depends on the natural conditions and on the characteristics of the already built space, which already enters the field of urbanism. Design as a product provides an appropriate form that has an aesthetic, visual dimension determined by materialization. The design is conditioned by a construction that is again conditioned by the technological possibilities in the given time. The form and construction are conditioned also by the requirements of the users of the space as well as the intended purpose, the content that is provided. As an artwork, the architectural object should have an answerable meaning, which again depends on the ability of the architect to convey universal meanings to his object. Due to the intertwining of the scientific and artistic aspect, the architectural object is often referred to as the cultural symbol of a certain time. It is interesting to note that historical civilizations are identified according to the architectural buildings, so we can say that architecture has the role of identification.

Based on these framework guidelines and definitions, which explains WHAT architecture is and with WHAT it is conditioned, we can make a correlation with the notion of identity that will result in its manifestation in the form of architectural identity.

Architectural identity would be a system of all qualitative and quantitative characteristics of an architectural object that makes it unique. The architectural identity of the object is conditioned by its

location or natural environment, its physical manifestation given in its form, spatial organization and materialization and, ultimately, its meaning or symbolism. Since architectural objects exist in the spatial and temporal continuum, the architectural identity will have a relatively stable or dynamic structure, in accordance with this duality. A stable structure refers to the location on which it is located while the dynamic structure depends on the time and the culturally historical context from which the object is observed and used, making its meaning and significance dynamic. The structure of architectural identity depends, first on man or his approach to solve the problem of the relation between the architectural object and its location and meaning as a product of cultural understanding of the particular time. This approach is of great importance and can be best viewed in the development of a city, which conditionally falls under the field of urbanism.

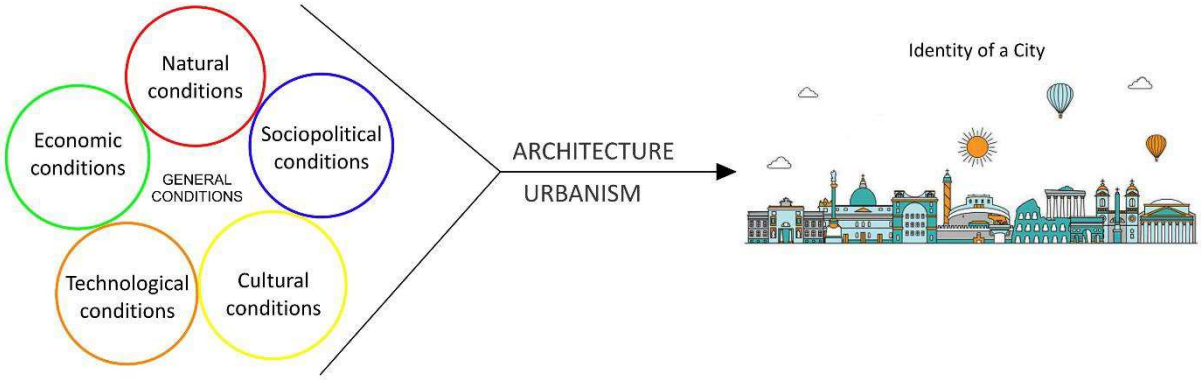


Figure 10, Architecture/Urbanism is the main factor in formation of city identity

The word urbanism comes from the Latin word urbs that means the city. Urbanism is a scientific discipline, skill and technique of settlements organization that takes into account the aesthetic, hygienic and practical needs of the inhabitants. (11)

Activities in the field of urban planning are realized based on the development of spatial and urban plans and projects. Based on this framework definition of urbanism, we can conclude that the aesthetic needs of the inhabitants relate to aspects of architecture in the city, from individual buildings to their groups - districts, urban blocks, streets to squares. Hygiene needs to refer to infrastructure, ventilation, insolation etc. while practical needs relate to everyday life, situations and activities of citizens. In general, the city would be an architectural response in terms of designing, positioning and organizing physical manifestations on all of the above mentioned requirements. All these responses arise in a given time, which means they depend on historical, social and economic circumstances, and as such are cultural indicators.

The formation of the architectural / urban identity

We have seen that architectural / urban identity is a set of qualitative and quantitative features of an architectural object, or urban groupings, or in the broadest sense of the city, a specific significance that has arisen during the time in the process of visualization, complementation or symbolization in order to achieve the best possible orientation and identification. The purpose of this definition is to emphasize the essential characteristics of both architectural and urban identity, with the fear that the subject of definition cannot be seen in all its aspects. In addition, the line of distinguishing architectural from urban identity is problematic. Architectural identity can relate to an individual object, but it can also relate to several and more architectural objects, which already passes to, to put it more precisely, the determination of urban identity. In other words, urban identity would be the sum of all individual architectural identities.

However, simplifying urban identity at the collection level would be difficult and almost impossible because it is a multivalent and complex phenomenon. The complexity of urban identity arises from complex conditions and consequences of mutual relations not only of those elements that can be considered as architectural or urbanistic phenomena, but also all other natural, social, economic, political and other elements. In this context, we can consider the history of architecture among other things as a set of experiences that have been created over time under the influence of the natural and then economic, social factors of a society. In summary, it is a product of a culture of a society.

We have seen that for the formation of architectural and urban identity, the relation between the built objects and the natural environment is of great importance. From the specific relations between human built elements and natural built elements it will depend the genius loci or the spirit of a given place, whereby the place is considered as a fully consistent synthesis of these primary groups of elements. It should be noted that the genius loci of a natural site could exist independently of architectural objects, while the genius loci of architectural objects or settlements cannot properly exist without relations with the natural environment. This starting point sets the hierarchical relationship between nature and architecture.

Taking into account all the above, if we want to determine the basic characteristics of the architectural identity of an object or urban identity of a city, we should start from determining the basic characteristics of the natural environment in which they are located. Location gives its basic characteristics that will significantly affect the shape, positioning, materialization, solution and significance of the architectural facility or settlement. All this will affect the processes of orientation and identification.

If the conditions allow, exploring the genesis of a place, in this case of the city, we can consolidate its oldest layers given in the form of individual architectural objects as well as in their groups. For cities that did not have dramatic historical circumstances, determining the oldest layers should not be a problem due to the presence of material evidence. However, in cities that, due to various reasons, have less material evidence, the identification of the oldest layers can be a problem.

When we detect the oldest buildings of a city, and then the streets and urban elements, we can determine the relation between those elements and natural environment of the location. From this relation we can determine the BASIS of the architectural or urban identity of a city. This leads us to definition of the basic architectural / urban identity of the city

The basic architectural/urban identity of a city represents the relation of the oldest/first urban plan of the city and the oldest established architectural objects to the location on which the city was built. This relation is defined by the physical manifestation of the buildings and their existential meaning, but also with the urban concept of the city.

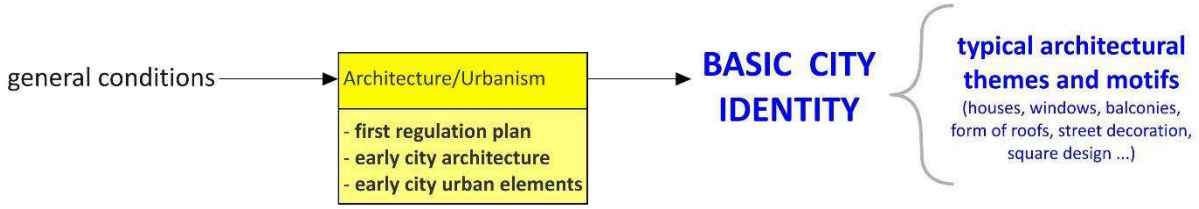


Figure 11, Scheme of the basic architectural / urban identity

The physical manifestation of the object is given in the form of materialization, construction, organization. Based on the physical manifestation of the oldest buildings in the city and their function, which they had or continue to have, it is possible to carry out their typology. Typological classification

can be useful in determining the basic characteristics of objects, which determine their specification. This is of great importance for determining the BASIC TOPICS/THEMES of typology groups. With the numerous typological groups of the oldest buildings, there are numerous basic themes and possibility of establishing a common pattern, or a basic theme that is common to all types of objects.

The basic themes can be determined based on the orientation of the objects in relation to the world's sides and the dominant winds, which is also conditioned by the experience of people from that inhabited area. Positioning of the object in relation to natural conditions also entails the positioning of the object in relation to the neighbouring objects, which in the original urban areas can be a challenge, since it seeks to achieve optimal conditions for architectural objects. The buildings will influence the orientation or movement, which will also determine the formation of the streets again depending on the natural factors. It should be noted here that we are talking about the experiential grouping of objects, which introduces the urban design of a city, before its planning regulations.

The next aspects that affect the formation of the basic identity of a city are the physical dimensions of the objects. It deals with the height of objects and numbers of floors, dimensions of openings, doors and windows, type of roof, dimensions and number of rooms within objects, which means quantitative characteristics of an architectural object. Depending on the typology of the objects, we can expect the variations of dimensions.

The next aspect relates to materialization of, in this case, the oldest buildings. It depends directly on the available resources used in construction but also on natural, climatic conditions. It is important to understand how the materials were used, processed and treated.

In the end it should be noted what meanings and what kind of symbolism constructed objects used to have, what was the organization of the inner and outer space, or in general what they were representing in the existential sense In this case we are talking about the quantitative characteristics of the object.

Existential meaning of the oldest buildings of a city is presented in the system of physical manifestations of objects and through the processes of orientation and identification. Here the processes of the grouping of objects, which form the streets, blocks and districts, are of particular importance.

When we determine the basic architectural identity of a city or its basic urban identity, we can follow its course over time. On the time line, it is of particular importance to determine specific historical moments in the life of the city. Often, through these moments, we can see how the circumstances influenced the architectural identity of the city.

Key figures in the history of the city, for the shaping of its architectural and urban identity, relate to changes in its political and eco-base. Different political systems can make decisions that break the links to the previous systems, which also applies to the spatial design of the city. The economic conditions in the city dictate the rhythm that the city will develop. Some specific events such as natural disasters or wars can permanently and irreversibly disturb the city's appearance. As we can see basic architectural / urban identity over time transforms. In this way, its relative dynamic structure is presented. The next step is to identify the so-called VIBRANT architectural or VIBRANT urban identity of the city.

The vibrant architectural/urban identity of the city represents architectural and urbanistic condition of its basic architectural/ urban identity. In other words, the vibrant architectural/urban identity is the response to historical, political, economic, social circumstances in a given moment.

Vibrant identity would be the architectural and urban relation of the recently built objects to the inherited, basic identity. It represents the transformation of basic identity over time. In this context, a vibrant identity can be positive or negative.

If this relation is given through a logical and harmonic interpretation of architectural and urban works, it is a clear presence of continuity, and then the vibrant identity represents the upgrade of the basic one and we talk about the positive vibrant identity or positive transformation of basic architectural/ urban identity. Otherwise, the vibrant identity becomes an independent entity that creates tension with the existing state and does not contribute to continuity. In the case, we talk about the negative vibrant identity or negative transformation of basic architectural/ urban identity.

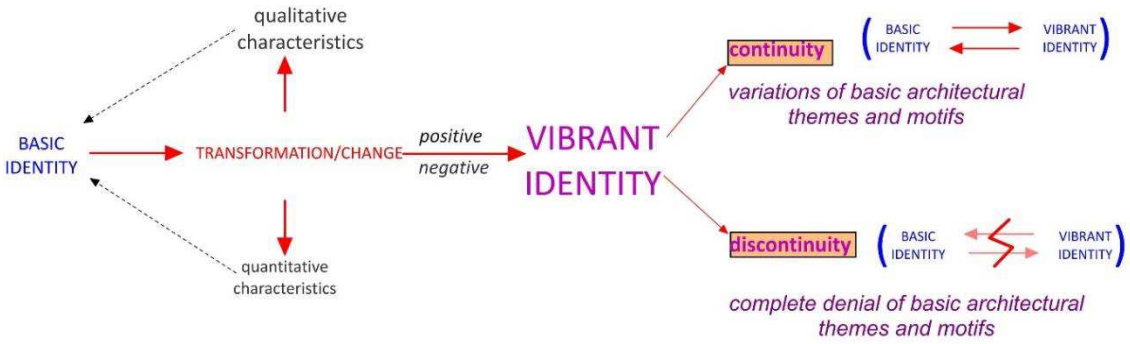


Figure 12, Scheme of vibrant architectural / urban identity

Conclusion

On the example of city of Nikšić, it is possible to see the phenomenon of architectural or urban identity through the emergence and definition of basic identity and its upgrading through a positive vibrant identity, or negative transformation when it comes to devastation of space. The city of rich history gives the opportunity to study the phenomenon of identity through various aspects, primarily through the relation between the natural and the human-created place. Then it is necessary to observe the city's genesis through the long historical period in which it exists, taking into account all the problems that can arise, primarily the lack of material and written evidence. It is necessary to determine the basic identity of the city through the themes and their variations in the first periods of constitution of the settlement as a city. Finally, it is necessary to notice the transformations of basic identity through the appearance of a vibrant identity over time and their relations through examples of positive transformation and negative transformation or devastation.

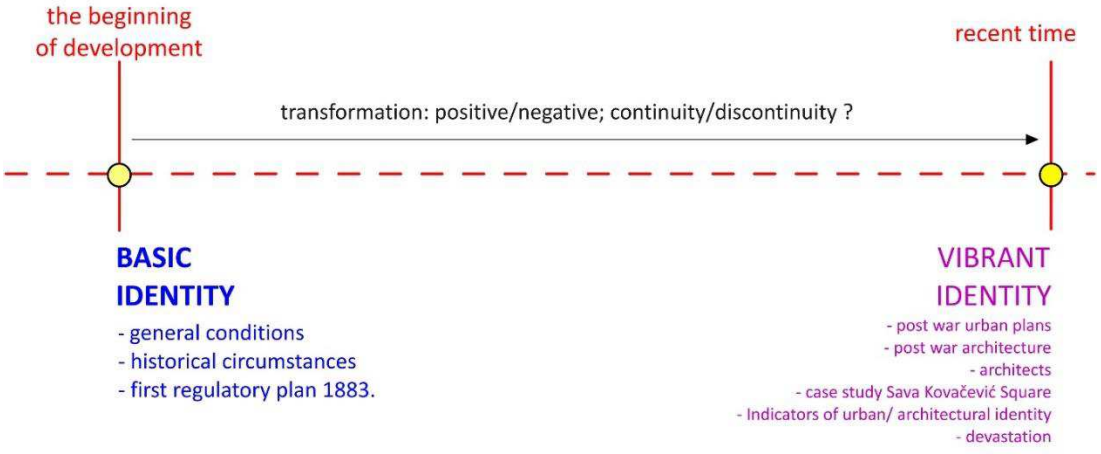


Figure 13, Scheme of research, example of the Nikšić city

Bibliography:

(1) Yi-Fu Tuan, Space and Place: The Perspective of Experience, University Of Minnesota Press, Minnesota 2001, p.8
(2) Harold M. Proshansky, The City and Self-Identity, Environment and Behavior no 10, volume 2, SAGE Publications, Thousand Oaks, California June 1978, pp. 147-169
(3) Erik Homburger Erikson, Identity: Youth and Crisis, W. W. Norton, New York 1968, p.45
(4) Kevin Lynch, A Theory of Good City Form, The MIT Press, Cambridge 1981, p.46
(5) Brent C. Brolin, Architecture in Context, Yugoslav edition, IRO Građevinska knjiga, Beograd, 1985, pp. 3-14
(6) Christian Norberg-Schulz, Genius loci: towards a phenomenology of architecture, Rizzoli, Edinburgh College of Art Library, Edingburgh 1980, pp. 11-23
(7) Ibid (6) , pp. 50-78
(8) James D. Fearon, WHAT IS IDENTITY (AS WE NOW USE THE WORD)?, Department of Political Science, Stanford University, Stanford, 1999, pp.1-45
(9) Oxford Dictionary of English, OUP Oxford; third edition, Oxford 2010.
(10) Milan P. Rakočević, 24 časa arhitekture,Orion Art, Beograd, 2010, p.17
(11) The Merriam-Webster Dictionary New Edition (c) 2016

Photo sources:

Figure 2- Downloaded from the site

http://www.thebohemianblog.com/brutalist-modernist-mad-the-yugoslav-architecture-of-skopje

Others Figures- Private collection of author

Chapter 3:

Natural characteristics of the Nikšić region

The city of Niksic has developed in the western part of Montenegro, in the Nikšić field, the largest karst field in the country. Geographical coordinates are 18o 57 '28' egl and 42o 46' 29 '' ngw. By size, it is the second largest Montenegrin city. Nikšić field is a closed karst depression, surrounded by mountains of an average altitude of 1200m. The height of the field ranges from 600 to 661 m, while its surface is about 67 km2. In the plain of the field there are hills Trebjesa (751m) and Studenačke Glavice (679m) between which the city of Niksic has developed. (1).



Figure 1, Geographical position of Montenegro on the map of Europe

If we look at the morphology of the terrain, which influenced the location of this city, the expansion of the Nikšić field in this area, it is evident that the terrain is degraded, which is of great importance since it is a periodically flooded karst field. The absolute height of the field in this area is not the same in all places, because it is inclined from north to south and ranges from 661m in the northern part to the lowest point of 602m in the southern part.

With gradual territorial expansion Niksic received today's morphological boundaries. On the west side, the city borders with the river Zeta, on the north side with the Bistrica River. On the eastern side, the city borders the Gračanica River and on the south side with the Trebjesa and Studenačke Glavice hills.



Figure 2, The position of Nikšić on the map of Montenegro

Nikšić municipality is the largest in Montenegro, it covers an area of 2065 km2, which makes 14, 95% of Montenegrin territory. It borders with 6 Montenegrin municipalities: Kotor, Cetinje, Danilovgrad, Kolašin, Šavnik and Plužine. In the west there is a state border with Bosnia and Herzegovina. (2)

According to the last population census from 2003, the number of inhabitants in the municipality of Nikšić was 75282. In comparison with the previous one from 1991 (74706), this is a slight increase, so in the population movement Nikšić is experiencing stagnation. In relation to the list after the Second World War of 1948 (38359), the number of inhabitants is almost doubled.

The relief characteristics

A relatively flat bottom, a very loose bend and many steep sides characterize the relief of the Nikšić Field, in which the city is located. From its bottom, which is from the quaternary layer, there are numerous limestone - dolomite hills, of which the highest one is Trebjesa hill 762 m above sea level.

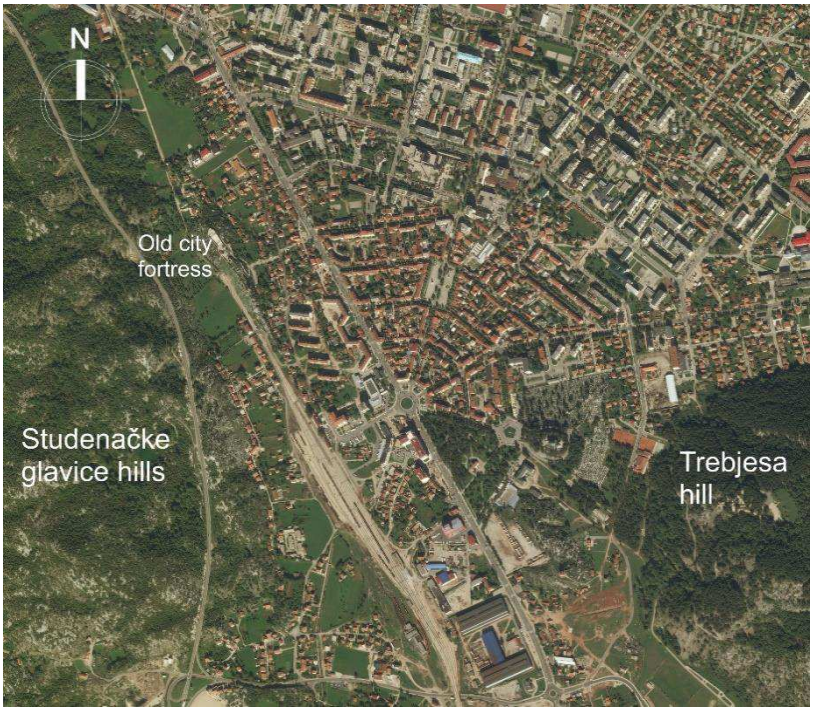


Figure 3, Satellite view of the narrower part of the city

The circumference of the Nikšić field is so dismayed that it has a several smaller fields that have their own local names (Gornje field, Krupačko field, Slano field). The field as a whole has a triangular shape and is surrounded on all sides by the mountains, so it represents a closed depression. From the Zete valley the limestone narrow chain Budoš - Kunak, separates it. On eastern and northeastern side of Nikšić field there are the mountains Prekornica, Štitovo, Maganik, Žurim and Vojnik. On the west, the mountain Njegoš extends, and in the southwestern, there is a plateau of Old Montenegro, from which the Budoš and Pusti Lisac mountains rise in the immediate vicinity of the field. The field is clogged between these mountains and its surface is 66.5 km2. Its long axis is 18.5 km long and its width is about 3.5 km on average.



Figure 4, A view of a part of the city from the north side

Seismic characteristics

As for seismicism, the municipality of Nikšić is located along the northern edge of the seismically most active area in the Montenegrin and Dubrovnik coastal areas.

Within the Nikšić field, relatively weaker earthquakes with a maximum amplitude of 4.9 degrees Richter scale were detected. The most frequent earthquakes in this area occur between Nikšić and Grahovo towards Gatačko field along the seismic border of the municipality. The strongest earthquake was detected in 1979.

The heterogeneous and complex composition of the terrain in the presence of deep fragmentary structures and complex systems of folds gives an abundant model in the context of seismic.



Figure 5, Bedem, city fortress, in the background, Tović Hill and Vojnik mountain, the northern edge of the city

Earthquakes that have occurred in the past have confirmed a direct connection with tectonic disorders that occur along longitudinal, transverse and diagonal dissection structures.

Hydrological characteristics

A relatively dense network of shorter watercourses was developed on the pleistocent water-resistant deposits of fine sand and marl clay, which at the edges of the field is demolished. The longest and most important river in the Nikšić field is Zeta. Its biggest tributaries are Bistrica, Mrkošnica and Gračanica. Due to the low permeability capacity of the sinkhole, part of the Nikšić field during the abundant winter precipitation is occasionally flooded. (3)



Figure 6, View of the city from the west side, Slano lake

The difference in the composition of the land between the southwestern and northeastern part of the Nikšić Field, caused great differences both in terms of the density of the hydrographic network and the wealth of these two parts. The southwestern part has no surface flows, and the area of high mountains and areas in the northeast is shaken by rivers.

In the field, there are about 300 springs, 30 smaller and larger streams and a large number of sinks, around 886. On the territory of the municipality of Nikšić there are also artificial lakes: Krupac, Slano, Vrtac, Liverovići, Grahovsko Lake and Bilećko Lake.

Climate characteristics

In the Nikšić field, there is a moderate continental climate with the influence of the Mediterranean. The influence of mauntainous areas climate is also evident. However, important microclimatic specificities are also present.

Climate in Nikšić, among other things, is determined by the basin look of the field, with a slight distance from the sea-30km by the airline, and proximity of the high mountains. The maritime influence is felt mostly through the Zeta Valley and less from the passage of the Trubjela from Trebinje. (4)

The average temperature is 11.7 ° C, the highest was 38.4 ° C on July 28, 1974, and the lowest was -24 ° C on January 19, 1929.

The highest annual precipitation in Nikšić was 2994 mm in 1979 then 2982mm in 1937 and 2663mmm in 1963. The lowest annual rainfall was 1096mm in 1953 then 1270mm in 1983 and 1270mm in 1993. The monthly minimum of precipitation sometimes appears in February and May.

The average number of days with precipitation of at least 0.1 mm in Nikšić is 114. Average days are mostly days with precipitation in December - 25, and in November - 24.

The share of snow in the total amount of precipitation in Nikšić is 1.8%. The average annual number of days with snow cover in Nikšić is 150 days. The mean annual number of days with thunder in Nikšić is 46. The relative humidity is 63%.

The most common winds are north winds 42%, and the southern wind is 38.8% of the total number of measurements. It's 21 days on snow, but snow in the field can stay longer.



Figure 7, The Liberty Square, under the snow

On the latitude of Nikšić (42 ° and 46 '), the height of the sun above the horizon during the year varies from 23 ° on 21st of December, 47 ° on March 21st and September 21st, to 70 ° on 21st June. The astronomical duration of the day (the time when the sun is above the horizon, provided there is no cloudiness) in Niksic on January 15 is 9, 22 h, 15 March 11, 51 h, 15 June 15, 18 h.

Average annual sunshine is: spring 534 hours, summer 875 hours, autumn 526 hours, winter 309 hours. The sun in Nikšić shines an average of 2,550 h. The most absolute year was 1961 - 2,739 hours, while the least sunsets were 1965 - 1,917 hours. The average sunshine was mostly in July, 322 hours, while the monthly maximum of 374 hours was recorded in August 1956. The average lowest sunshine is in December, 97 hours. The monthly minimum of sunshine, 41 hours, was recorded in February 1954.

Vegetation

Vegetation in Nikšić is continental. Anthropogenic, degraded and highly degraded vegetation types such as vegetation in cracks, rocks, ruderal and meadow vegetation, vegetation of stonecutters and modified forest communities of grass, oak and black ash, dominate this area. (5)

On a very rough, skeletal surface with deep cracks and scratches, many plant species appear as so-called epilates and endolytes, adapted to very unfavorable conditions.

Vegetation of stonecutters was created by the final degradation of hornbeam forests. Its transient forms towards the appropriate climatogenic forest community are rare open-air scrubs and shrubs, and they have curtailed the forms of extinct forests. In the total forest area the most common are the bushy low forests.



Figure 8, Linden trees in the Liberty Square

Paddy afforestation zones should create a system that is suitable for the general morphological situation of the basin. Most of this sector is typical rocky, which significantly complicates the process of afforestation and fortification, but on the other hand, it also gives the greatest ecological and ambient effects.

Unlike the vegetable cover in the surroundings, the city itself is abundant with quality vegatation potentials that is presented in parks, squares, green areas along the roads and home gardens.

Parks, as a category of green areas of Niksic, capture a relatively small surface and represent the largest massifs of greenery and nodal points of the entire greenery system in the city.

Trees are one of the most important components in the organized greenery system of the city. Visually, trees are very striking, for Niksic a characteristic, category of greenery. Apart from favorable impacts on the microclimate of the streets, they also appear as the physiognomic-aesthetic component of the city space. Trees follow about 70% of the existing city street network.

Taking into account the briefly stated natural characteristics of the Nikšić region, primarily the configuration of the terrain, vegetation and climate characteristics, we can conclude that they have greatly influenced many characteristics of the future settlement. This influence is primarily reflected in the use of materials that will be used for construction, and therefore influenced the way of construction.

Vegetation has influenced the experience of both space and the environment, as well as the experience of all future stages in the genesis of the settlement, to the very end when we have a modern city.

A relatively flat Nikšić field, surrounded by hills and mountains, was the ideal stage where the future city would be formed.

Conclusion:

Taking into account the briefly stated natural characteristics of the Nikšić region, primarily the configuration of the terrain, vegetation and climate characteristics, we can conclude that they have greatly influenced many characteristics of the future settlement or city. This impact is reflected primarily in the use of materials used for construction, and therefore influenced the construction method.

Vegetation influenced with its visual qualities the experience of the space and the environment as well as the experience of all future stages in the genesis of the settlement, to the last one when we have a modern city.

The relatively straight Nikšić's field, surrounded by hills and mountains, was the ideal stage for the formation of the future city.

Bibliography:

(1) Dr Zdravko Ivanović, Nikšić, urbano-geografska studija, Srpska akademija nauka i umjetnosti, Geografski institut „Jovan Cvijić" , Beograd, 1977, p.30
(2) Dr Branko Radojičić, Opština Nikšić, priroda i društveni razvoj, Filozofski fakultet Nikšić i opština Nikšić, 2010, p.45
(3) Dr Branko Radojičić, Vode Crne Gore. INSTITUT ZA GEOGRAFIJU, Nikšić, 2005
(4) Dr Branko Radojičić, Geografija Crne Gore – regije. DANU, Podgorica, 2008
(5) Služba za zaštitu životne sredine opštine Nikšić, Informisanje o stanju životne sredine za teritoriju Opštine Nikšić, Nikšić, 2009

Photo sources:

Figure 1- http://www.youreuropemap.com/

Figure 2- http://www.balkaninsight.com/en/article/montenegro-makes-history-with-war-compensation-offer

Figure 3- Satellite photo taken on 01.6.2016.

Figure 4- http://www.mladiniksica.me

Figure 5- http://openmonte.com/community_item/montenegro/486.html

Figure 6- http://mapio.net

Figure 7- http://www.vijesti.me/vijesti/zabrana-saobracaja-kroz-centar-niksica-borba-za-sportski-centar-ne-jenjava-60282

Figure 8- http://www.vijesti.me/vijesti/ekoloski-pokret-ozon-iz-nksica-nastavlja-borbu-za-lipe-na-gradskom-trgu-885427

Chapter 4:

The periodization and development of the city of Nikšić

In order to better understand and explain the present and the genesis of the city identity, it is necessary to explore its past and analyse all stages in development, as much as possible in given conditions and known facts. Studying the past of the Nikšić city, one can conclude that the rich and mostly turbulent historical circumstances have influenced this city to have a dynamic transformation that is reflected in periodic settlement and construction, then displacement and demolition. These processes were accompanied by a change in the city's name in different historical phases: Anderba (Anderva), Anagastum, Onogošt and today Nikšić.

From the periodization point of view, the past of Nikšić can be divided into several periods: Illyrian, Roman, Gothic, Slovenian, Turkish, and the period of liberation from the Turks and modern development of the city.

Illyrian period

For several reasons it is very difficult to talk about the origin of the oldest settlement, from which will later develop today's Nikšić. The first reason is the lack of preserved archaeological sites and the insufficient precision of historical sources to determine the original location. With the arrival of the Romans, it is possible to follow the development direction in which the original settlement evolved. We can claim that the original settlement was built under the Illyrian inhabitants that has passed through various phases of the ancient era, changing the masters, the role and significance, in order to finally become the settlement and headquarters of the Slavic population. (1)

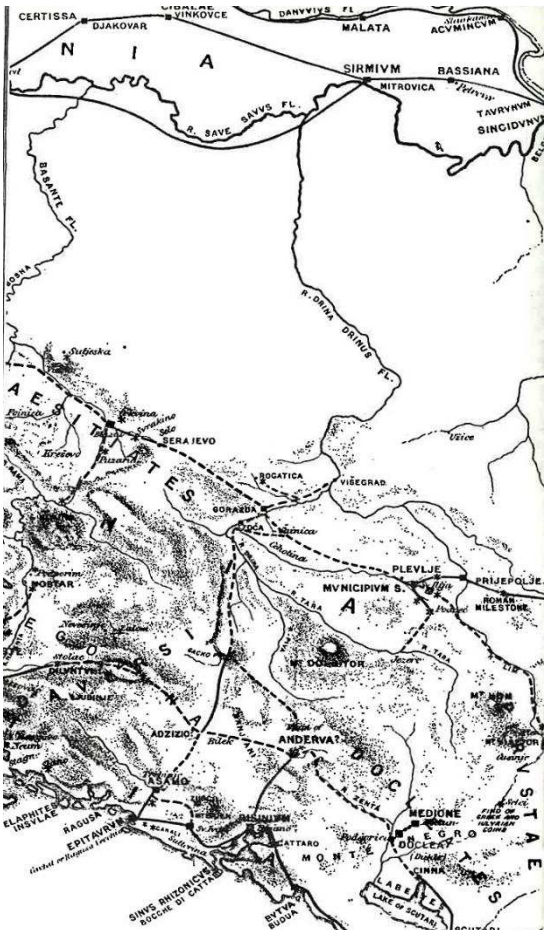


Figure 1, Artur Evans: Map of the Roman Dardania with Anderba

The prehistoric era, according to the preserved traces, is related to the Illyrians, to tribe Dokleati that lived in the area between Grahovo and Skadar Lake. The long-standing Illyrian wars in the second half of the 3rd century BC, ended with the collapse of the Illyrian state and the collapse of the Illyrian tribes, including Dokleati, under the Roman rule, about 59 years BC at the time of Gaius Julius Caesar (100-44) . The tribe Dokleati entered as a special unit within the Roman province of Dalmatia, retaining their tribal structure.

It is assumed that the Illyrian population built their settlement on the location near today's Nikšić, even before Roman conquests. This Illyrian settlement is known from the historical sources of the later Roman period under the pure Illyrian name Anderba or Anderva.

Roman period

From the Roman period, reconstructing a small number of reliable historical and archaeological sources, we can talk about two settlements in the area of today's Nikšić, one built in the Illyrian period and the other in the late Roman period.

The first, older settlement is the Illyrian settlement Anderba whose name was accepted by the Romans and displayed in the files and road maps. For the first time, Anderba was mentioned in the preserved handwriting Itinerarium Antonini. This manuscript contains a list of the military and maritime routes of the Roman Empire, as well as the names of the main stations on them. The second time Anderba (Anderva) was mentioned under the name of Sanderva on the map Tabula Peutingeriana. This map was made in the III century of the New era and was preserved in a copy in 1264 contains the main communications of the Roman Empire. It is clear that in the era of Roman rule, through Anderba went several important routes, some of which were important merchant and passenger, and others were of great military importance as via militaris. (2)

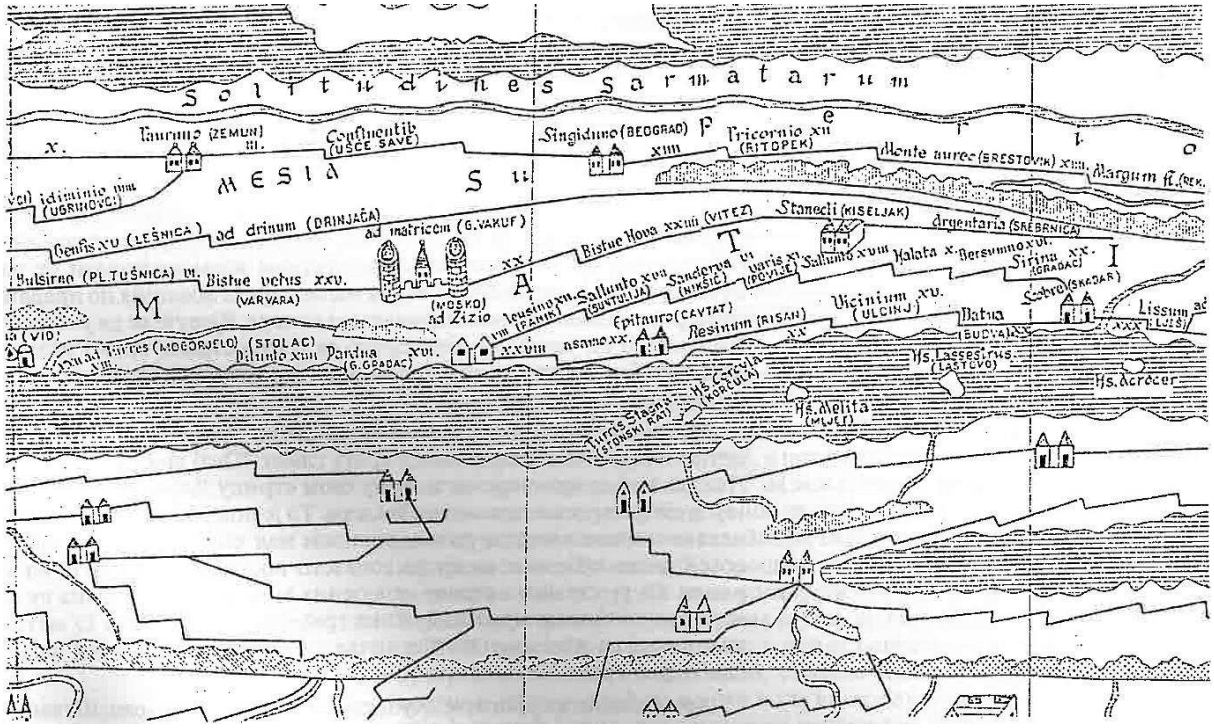


Figure 2, Peutinger's map, section with towns, military stations and roads in the part of the Adriatic and its hinterland. Original map was designed in II and copies in the XII century

When Niksic was liberated from the Turks in 1877 with the Montenegrin army was the famous English archeologist Sir Arthur John Evans (1851-1941). He assumed, by reconnaissance of the architectural remains of Roman roads and a milestone that Anderba was probably located in the western part of the Nikšić Field at the crossroads of the main roads, taking into account the distances in the Roman miles of the places mentioned on Tabula and Itinerarium. The folk tradition says that the oldest city was near the village of Moštanica, which approximately corresponds to the location stated in the assumption of Evans. At this location, there is a famous bridge on the river Moštanica from the Roman period. The folk tradition says that the city was located near this bridge in the field.

The famous chronicler of the Nikšić region, Petar Šobajić (1891-1958), in the first monography of Nikšić from 1938, states that the area, where it is assumed that once was a city, was completely modelled. The traces of the existence of the city have long been lost and that the removed stones, from the ground, can be seen on the fences. Furthermore, Petar Šobajić states that some fifty years ago Maksim Šobajić recorded the existence of the foundations of the two towers that served to defend the city. In addition, there is a folk tradition saying that the Turks took the stone from this place when they built their city. (3)

It is difficult to determine the degree of development that Anderba had. However, the discovery of the remnants of Roman waterworks, money, bronzed, sturdy emperors, prove that Anderba was of great importance. It cannot be said with certainty whether this settlement was a road station, a military fortification, or perhaps the seat of the municipium. It is certain that, by its position, it was constantly developing and rising until the late Roman Period, when it was probably destroyed by the barbaric attacks.



Figure 3, Bridge on the river Moštanica during the restoration in 1957 by architect Đorđije Minjević

The second, younger settlement was probably formed during Gothic attacks on the border of the Roman Empire. The Romans for the defence of Anderba, probably, made a smaller fortress somewhere further in the middle of the field, on a rocky hill that has a good defensive position. The research and conclusions from the aforementioned English archaeologist Arthur John Evans give support to this claim. As already said, he entered the liberated Nikšić in 1877 with the Montenegrin army. The old city, which partly spread on a hill in the shape of a citadel and the other part at the base, has captured his attention and he has determined that this is a medieval town built on ancient foundations. This claim was particularly relevant to the part of the city at the foothill of the castle, while for citadel, Evans left the possibility of being built in the middle ages.

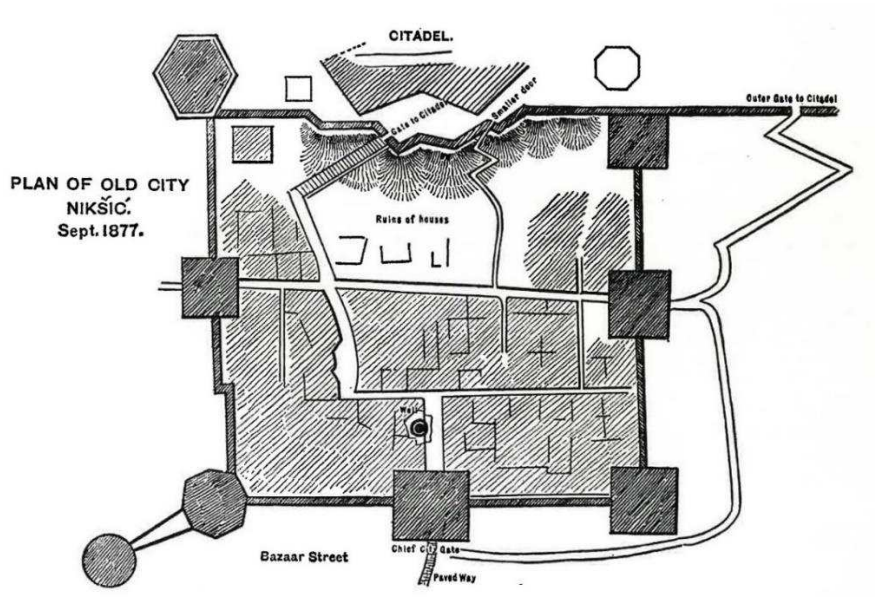


Figure 4, Artur Evans, Old Nikšić Plan, 1877.

Evans studied the walls of the Lower Town as well as the general plan of the city that represents the quadrangle with towers on the corners and towers in the middle of the walls and found that the liberated Nikšić was built on the foundations of the Roman city. According to Evans, this Roman city was a typical strong military fortification built up in the late Ancient era, probably in the III or IV century of the new era. Evans did not find more precisely, material evidence in the old city. What was the name of this Roman, it is not known.

Gothic period

Reforms of Emperor Diocletian in 297 region of Anderba was separated from the province of Dalmatia and became part of the newly established Prevalitania (Praevalis, Praevalitana, Privalitana, Privantina). Divison of the Roman Empire in 395 made this province a part of the Eastern Empire as a border region. With the emergence of the Eastern Goths - Ostrogoths, province of Prevlitania, with Anderba will have hard times that will bring the total destruction of settlement.

Ostrogots ruled Prevalitania for half a century from 480 to 596. They restored the ruins of the Roman fortification, and they acquired the right to call it by the name of their military leader, Anagast. Accordingly, Anagastum was a Gothic city built on the remains of a Roman fort from the 3rd or 4th century AD. More detailed research about the location where Anagastum was located has never been done, so its architectural plan is not known.

The Slavs found the Gothic name of the city, so it was held throughout the Middle Ages, as can be seen from written documents and monuments.

Slavic medieval period

Emperor Justinian expelled Ostrogoths in 536 and included Prevalitania as part of the Eastern Roman Empire. It is difficult to say whether Anagastum developed after the retreat as a settlement or if it had any other role than the defensive one.

At the end of the VI and during the VII century, the Slavs settled the Balkan Peninsula and began the process of spiritual, political and national maturation. The Slavs inhabit the abandoned or demolished Illyrian-Roman centers, restoring them and upgrading them to the system of the parish with all their early economic and political institutions. Over time, Anagastum was transformed into Onogošt, which will become the center of the most important parish in Doclea region, Župa Onogošt. In Onogošt there was also the headquarters the mayor, parishioner.

The first time Onogošt was mentioned in the Chronicle of Pop Dukljanin in the 30th chapter as Onogoste. During the Middle Ages through the Župa Onogošt passes an important road known as Via Jesera or via Anagasta, which led to Polimlje from Dubrovnik through Trebinje, Onogošt, Piva, Jezera and Tara. Since Onogošt was a station on that road, the inhabitants could participate in commercial traffic with seaside towns, primarily in Dubrovnik. (4)

The reconstruction of the Moštanica bridge supports the claim about the restoration of trade routes, thanks to a medieval stećak that was found in basis of the bridge. Trade was the primary activity in Onogošt as numerous data from the Kotor and Dubrovnik archives show. These data are mainly related to trading. The assumption is that due to these jobs in Onogošt there was also the market where the trade took place. This would also mean that there were other activities and services accompanying trade such as inns, lodging, warehouses, etc.

Župa Onogošt belonged to Zeta, which in 1183 was joined by the Mayor of Raška Stevan Nemanja. Since then, Zeta, along with Onogošt, remains in the state of the Nemanjić dynasty for the next 200 years.

In the early middle ages, Onogost retained his reputation in the time of Nemanjić, when he would become a city for the occasional stay of Serbian emperors, but also a place to perform important state affairs. In Onogost, King Milutin negotiated with Drubrovac's deputies in 1318, and in 1362, Emperor Uros concluded peace between Dubrovnik and Prince Vojislav. (5)

Onogošt earned a reputation in the early middle ages, which retained during the Nemanjić dynasty, when become a city for the occasional stay of Serbian emperors, but also a place for performing important state affairs. In Onogošt, King Milutin negotiated with deputies of Dubrovnik in 1318, and in 1362, Emperor Uroš concluded peace between Dubrovnik and Prince Vojislav. (5)

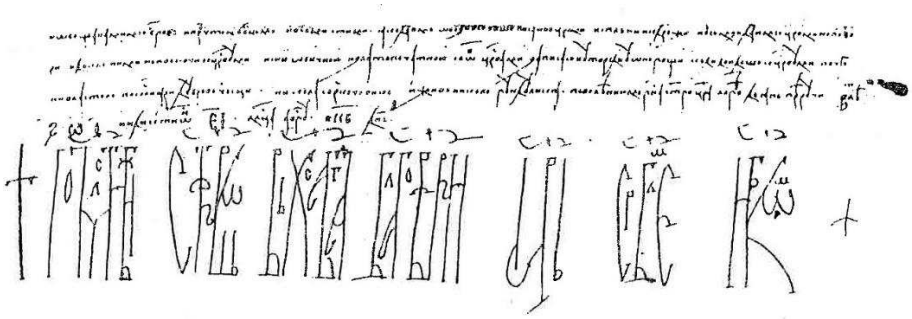


Figure 5, Signature of Emperor Uroš on the Charter of the Peace between Dubrovnik and Prince Vojislav, Onogošt on August 22, 1362

As we have already mentioned about the complexity of determining the layers, forms and architectural plans of medieval Onogošt, we can only find out thanks to the description of the town found in 1877 by the already mentioned English archaeologist Arthur John Evans. He determined that the liberated city of Onogošt or Nikšić is a medieval city, which the Turks after the conquest only rebuilt using already existing stone blocks. As we saw, Evans divided the fortified town into the Upper Town which forms a citadel built in the Middle Ages and Lower Town, also built in the Middle Ages, but on the late Roman foundations from the 3rd or 4th century. This conditioned that the position of most objects would be in the late Roman manner, although the design of objects and their architecture belonged to the existing Islamic architecture.

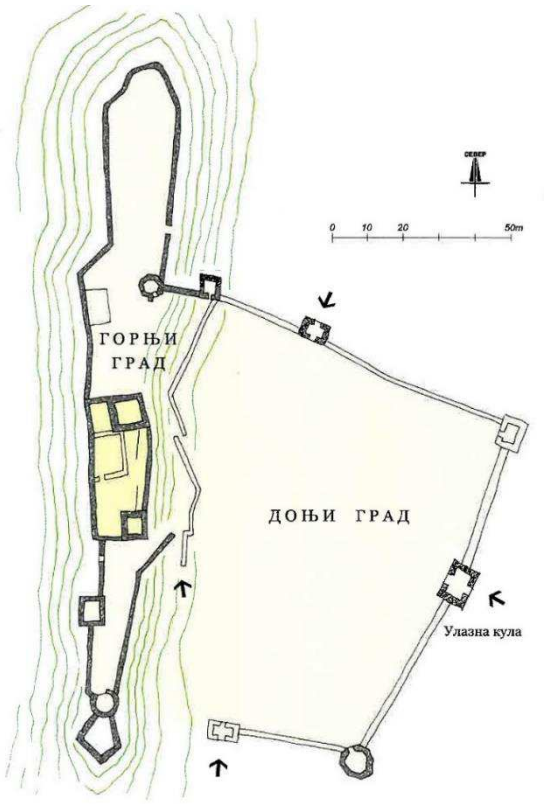


Figure 6, The plan of medieval Onogošt

<u>Donji Grad- Lower Town</u> according to the Evans reconstruction was a four-legged settlement surrounded by high walls on three sides, while on the fourth, west side was covered with a hill on which Gornji Grad-Upper Town was located and with which it was connected. At each corner, one tower did

not have entrances from the outside, while the towers built in the middle of the walls were with entrances through which they entered the city from three directions. Evans gave opinion that the main institutions of medieval Onogošt were probably inside the Lower Town, where there used to be two crossing streets from different directions. Evans claims that Onogošt was the medieval town according to the analysis of the four-legged form of the Donji Grad and on the basis of the characteristic towers that the town had on the corners and the middle of the walls, and ultimately on the basis of the construction and stone syllables of the lower parts of the town walls. Although Evans at the Turkish Onogošt's Gate found a Turkish inscription that speaks when and who built the fort, he concluded based on the analysis that it was a medieval town, built on the late Roman foundations that the Turks during their reign had restored and strengthened. (6)

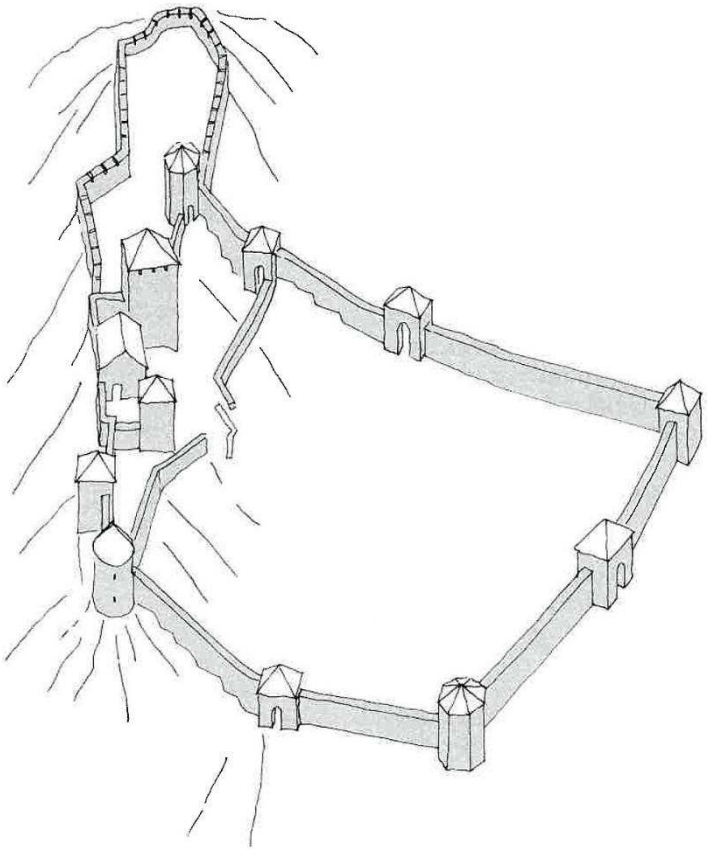


Figure 7, Medieval Nikšić, reconstructed model

Upper Town-Gornji Grad- Bedem is the only partially preserved part of the medieval or Turkish Onogošt. Evans describes the Upper City as a long, curving fortress, a citadel that overflows Lower Town. There are two towers on opposite sides of citadel, while two blocks are located in the middle of the fort, one bigger than other is. From these blocks, there is a good view of all the positions in the city and around the city.

Petar Šobajić (1891-1958) in the first monography of Nikšić from 1938 states that Onogošt with its high walls and towers was a strong fortress in the Middle Ages, which was difficult to conquer with the then weapons. The population was shelled in the city during enemy attacks. Considering that there was custom in Onogošt, it is quite certain that the city also had a market square in which the stores took place. Šobajić states that, based on the characteristics of Serbian medieval fortresses to which Onogošt belonged, the square was probably located outside the city walls in a suburb where traders and craftsmen used to live. (7)

The castle of dynasty Nemanjić probably was located outside the walls of the medieval Onogošt. In the tradition of Serbian medieval towns, governing castles were usually located inside the city walls, where the church was usually located. However, Onogošt is an exception. In the opinion of some researchers, in the first place of Constantine Jirechek (1854-1918), the imperial castle was located outside the city walls in the immediate vicinity, in today's place called of Popi. (8)

Petar Šobajić, in his already mentioned monography of Nikšić, presents the claims of his uncle Maksim Šobajić about the possible location of imperial castle. Namely, Maksim Šobajić says that the imperial castle used to be at the site where towers of Turkish captains family Mušović. Before the Turks, these

towers used to be the property of Onogošts metropoli as a residence for bishop Vasilije. Alongside the tower were found marble, sumptuous stairs and marble poles, probably intended for construction of larger dimensions. This entire complex was fenced with thick and strong walls. The castle was probably taken over by the metropolis and it was not excluded that a larger church was located in the courtyard. About the existence of a larger church in Onogošt there are also some historical sources, from the later post Nemanjić era. In one Dubrovnik document from 1448 there is a mention about the monastery in Onogošt (de Xamostane d'Onogoste). (9)

Church of the Holy Apostles Peter and Paul is another building from the middle ages, which has been preserved to this day. There are no written information about the church's existence, and according to the folk tradition, it was built in the time of Nemanjić dynasty on the old necropolis of tombstones. The church is characterized by simple architecture, materialization and construction. The bases is elongated with width of 3m and length of 9.35m, with a longitudinal half-shaped vault covered with tigol. What characterizes this church is the presence of tombstones-stećci in the western half of the walls. By analysing the church, we can notice four stages of construction.

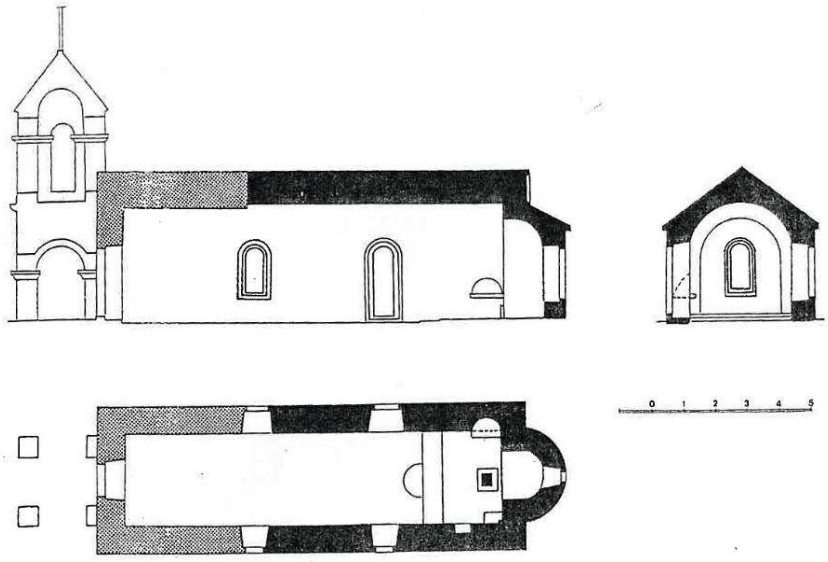


Figure 8, The basis and sections of the Holy Apostles Peter and Paul Church

The first and oldest phases can be identified in the lower zone of the eastern part. The second phase is recognized in the eastern part of the church at the place where the remains of the frescoes are found. The third phase is between this part and the bell tower, and the youngest stage of the construction of the church was created during the construction of the belfry.

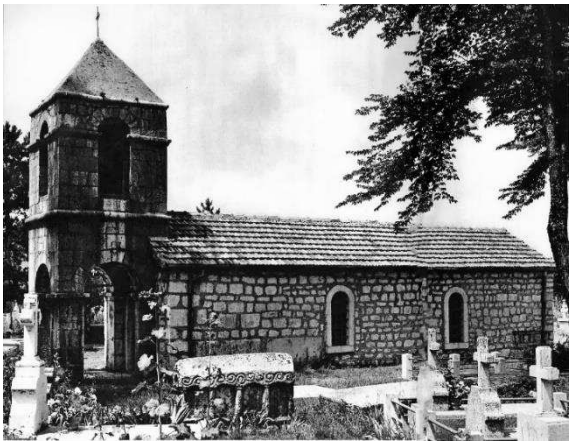


Figure 9, Church of the Holy Apostles Peter and Paul surrounded by stećci

It is difficult to talk about the remains of the oldest medieval temple of St. Peter and Paul. However, wall fragments can be seen on the site of the present altar barrier as the rest of an older sacral building. On the threshold of the western entrance, the Latin letters are noticed, suggesting that there was a Roman site, settlement or necropolis nearby. (10)

Stećci are tombstones from the medieval period of Onogošt city, made in the Christian period. In the city area, they were found near the church of St. Peter and Paul. Both Constantine Jireček and Arthur John Evans believe that these necropolises represent the oldest medieval tombs in this area and that their rich ornaments, most often in the vineyards of the vine, were made according to the reputation of the Roman tombs.

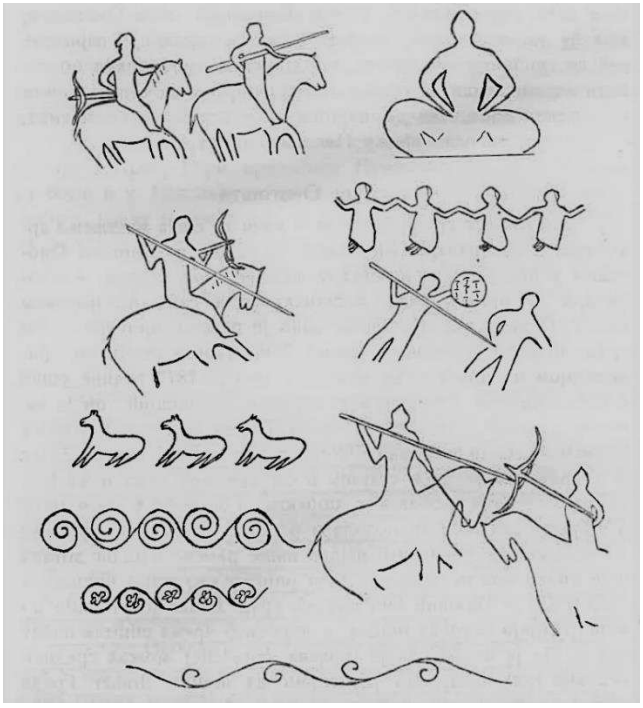


Figure 10, Ornaments on stećci near the church of St. Peter and Paul

We can divide the stećci into three groups. The first group consists of monuments decorated with arcades, with the appearance of frieze, rosettes, crosses, palms. The second group consists of stećci with figural ornaments, the appearance of a female figure, a torn band, a vitic. The third group consists of stećci with parallel ribs, transverse ribs, discs, triangular teeth. (11)

With the collapse of the Serbian medieval state Onogošt became part of the Bosnian state of King Tvrtko in 1373. Under the rule of Stjepan Vukočić Kosač in 1448, Herzegovina was founded, and Onogošt as region was part of it. Already around 1465, Herzegovina fell under the rule of Turkey where Onogošt will remain until the liberation in 1877 when it became a part of Montenegro.

It is interesting to note that, besides the name Onogošt, in time, there was a new name for the medieval city, which is Nikšić. The new name of the city came from the Nikšić tribe, which moved to the Onogošt parish and eventually became the most powerful and largest tribe.

The new name Nikšić did not immediately suppress the old name Onogošt, but both names were held under the Turks for a long time, until recently name finally prevailed. It is interesting to point out, on the basis of historical sources from the 16th, 17th and 18th centuries, that both names for the same city have been kept for a long time, which is a rare occurrence. (12)



Figure 11, Typical stećak

Turkish period

The Turks won the largest part of Herzegovina in 1465, including the medieval Onogošt. The conquered territories turned into a vilayet called Hercek. Onogošt or Nikšić was under the rule of Turks for more than four centuries until the liberation in 1877.

It should be noted that in the period of Turkish rule the city was not always inhabited. There is no historical data what happened to Onogošt when it was conquered by the Turks. However, in the monography of Nikšić, Petar Šobajić claims the story given to him by Andrija Luburić (1891-1944), a famous historian and collector of folk epic poems. According to this story, the Turks first attacked and then demolished the city on Moštanica River. Probably the remains of the old Anderba served as a fortification for inhabitants of Onogošt as defence from the Turks. After that the Turks conquered Onogošt and stay in it for a while. Luburić said that in the first years of the 16th century there was a rebellion of the tribes, particularly Nikšić tribe. Prince Pjerotić led the rebels from Trebjesa. The tribes attacked the Turks and expelled them from the city. Onogošt was then demolished so the Turks would no longer return. In support of this story, historical sources from the 16th and 17th centuries mention the names Onogošt and Nikšić only as the names of the countryside, but not as a city name.

There are many doubts about the construction of the Turkish city. The first dilemma refers to the exact time of construction. Andrija Luburić thinks that the Turks first built the city around 1696 based on the reconstruction of one folk story given as an epic poem. According to this reconstruction in 1696, the Duke Ilija Kosorić was executed in the town of Onogošt. The rebellious tribe Drobnjak then drove the Turks out of town. Rexhep Pasha then returns with numerous army in 1702, upgrades, and renews the city again. (13)

Professor Jovan Ivović, based on Venetian sources, thinks that the construction of the Turkish city took place in the first years after the Karlovac Peace (1699). According to one inscription, Rexep Pasha built the town in 1703, while according to the oral testimony written by Petar Šobajić, the construction took place in 1702. According to Venetian sources, the rebuilding and construction of the fortress did not take place properly, because the walls were built of only one row of stone, so they were demolished several times. About 30 masters worked on the construction, of which five were from Dubrovnik. The local population, whose houses were demolished and the stone was used for the construction of the fortress, was also involved in the construction. (14)

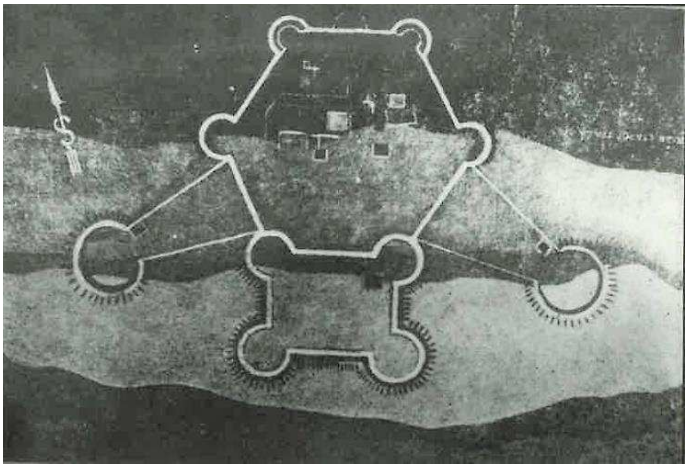


Figure 12, Plan of Nikšić, 1708.

The next concern is the shape of the built city. Namely, Vjekoslav Klaić describes in his book "Bosna", Nikšić, as a town with a fortress. Town rises on a hill between the Zeta and Gračanica streams. It counts 3-4,000 inhabitants, mostly Muslims. The town or fortress is hexagonal, surrounded by walls and bastions. The fortress itself is called Onogošt. Important towers around the town are Čadjalica, Ozrinić, Rudopolje and Rastovac. In this book there is an engraving "Onogošt-Gornji grad" which states the organization of the town as it's shown in town plan from the 1708. (15)

It remains unclear why Evans did not draw a hexagonal formation when he was drawing up a plan for the liberated city in 1877. We can see that Klajić published the book "Bosna" in 1878 only a year after

the liberation of Nikšić from the Turks, which means that he collected the information about Nikšić earlier. Evans does not specify a hexagonal formation in any of the papers, although four-legged formations with side towers could be seen from his engravings. What is certain is that the Turks built a city on the remains of medieval Onogošt.

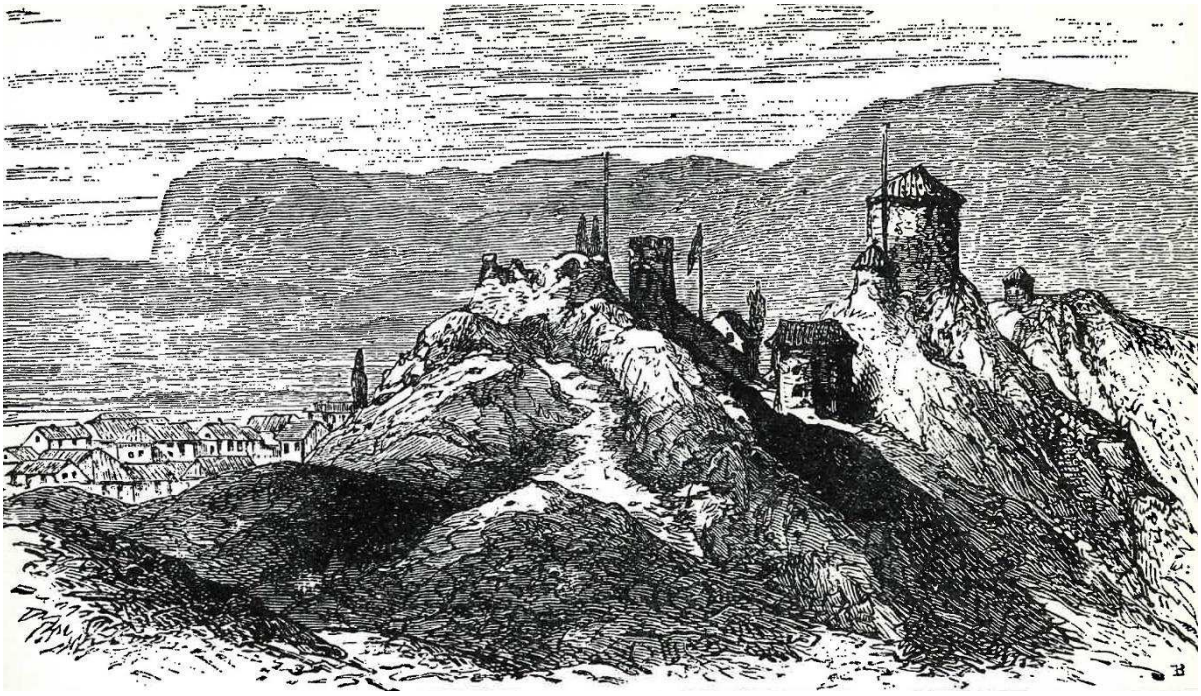


Figure 13, Town and fortress in the middle of the XIX century, engraved from the book "Bosnia", Vjekoslav Klajić

Turkish Nikšić had the characteristics of a typical casaba. It had, besides borders and territory, a mosque, imaret, tekya, han or karavan-saraj and other institutions that characterize him as a city settlement. In time, the number of inhabitants increased, so the city expanded beyond the walls, so the Turkish Nikšić consisted of two parts of the city. The city, like the medieval Onogošt, was divided into Gornji Grad or Upper Town and Donji Grad or Lower Town.

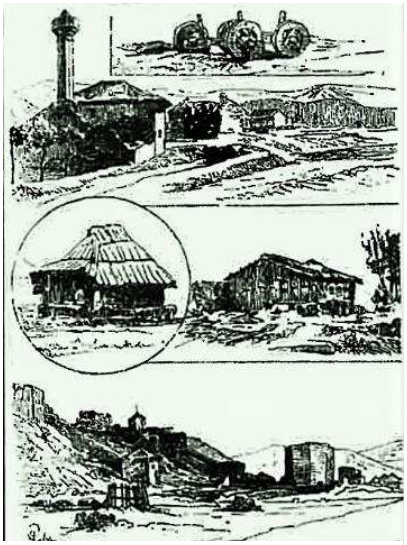


Figure 14, Parts of the Turkish city, Turkish house, northern part of the fort

The Upper Town was used as a fort. Petar Šobajić gives a detailed description of Upper and Lower Town. It is located on a rocky hilltop with the length of 250m. The thickness of the walls ranges from 1m to 2m while the high is 4 and more meters and contain loopholes. On the southern part, there is three floors, pentagonal tower Nebojša. This tower was used to defend the city from the south. In the northern part is an octagonal tower behind which extends the broad platform with cannons. In the middle of Upper Town, there are two buildings of square shapes of 5m long and wide. The fortress also has two smaller buildings, possibly for the accommodation of the city guard. In addition to these, building there is a deep basement, buried in the rock and in the vault. Near the Tower Nebojša, above the place called Popi, another cellar served as a prison.

The Lower Town is located below the hill. It is surrounded by a fortress on three sides whose walls have a height of about 4m. The lower town is somewhat narrower than the upper one but it is expanding considerably. At the corners

and the middle of the walls, there are three-side defence towers that are interconnected by walls. The main gate to enter the city was on the eastern wall and it was called The Big Gate. The southern tower on this wall was called the Osa tower while the north was called the Prosena tower. The Osa tower was hexagonal and contained a well and a jar for the wheat that moved by the horse. A transversal wall into the norther part called the «Old Town» and the smaller southern part divided the Lower Town. In the northern part, there were 18 houses, which were very tight with narrow girdles between them. In the southern part used to be the house of the city commander, hospitals, kitchen and warehouses for spare food.

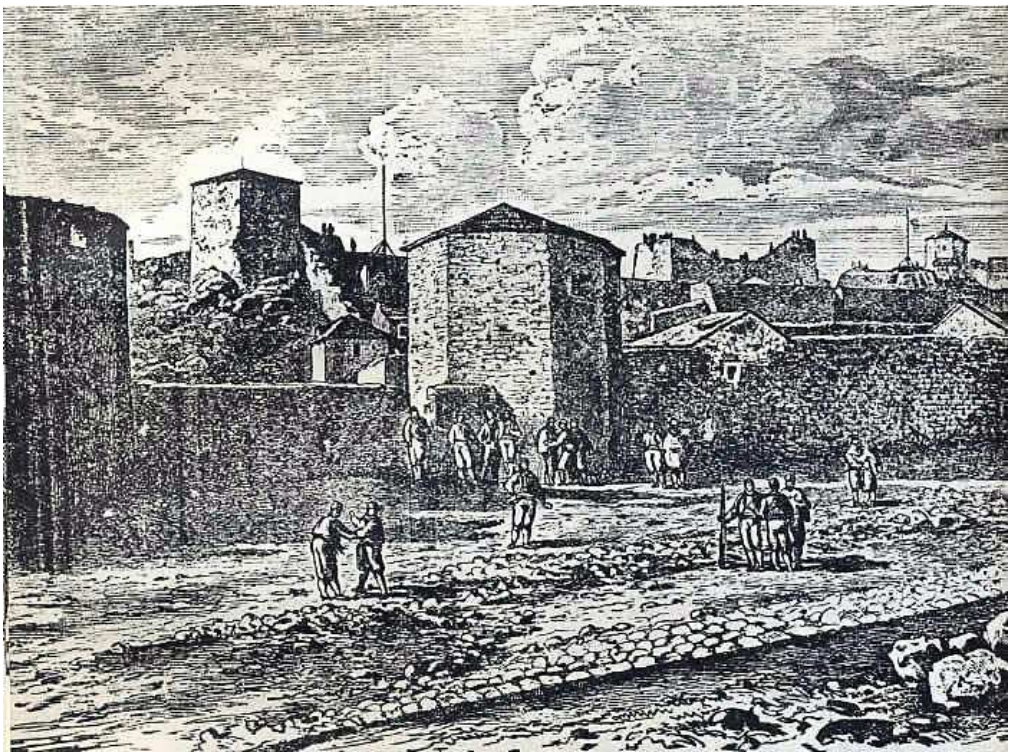


Figure 15, The walls of Lower Town from the southeast side

Downtown or Varoš was built in a field outside the city walls when the number of inhabitants rose rapidly. Varoš occupied mostly the same area as the current Nikšić. Most of the houses were located directly near the walls of the Lower Town, where the streets were narrow and curved. Further from the town, the houses were scattered or grouped by Muslim fraternities and tribes. These groups were called mahals and there were several of them: Mušovina, Hercegovačka, Podgorička, Spuška, Kučka, Piperska, Ferizovića and Grudska mahala. The houses are made of stone, while several houses used to have one more floor covered with ceramide and straw. The lower floor is usually paved with stone while the wooden staircase went to the floor where inhabitants lived. The windows are small with wooden or iron bars and high walls surround the courtyard. The roof of the house is mostly two-way side oriented north south.

Beg Mušović house was located in place called Popi on the south side of the town. We have already mentioned that Mušović family occupied this building belonging to the Onogošts Metropolis at the beginning of the 18th century and turned them into harems. In addition, we have seen based on the description that in this place, on all occasions, was also the medieval castle of Nemanjić dynasty. Captain Mušović lived in a large, four-story tower built of beautifully carved stone. Over time, Mušović family built new facilities, which were later enclosed with shanks, for defense.



Figure 16, View on the Bedem, The house of Beg Mušović house is visible in the lower, left part of the hill

The Hadzi Ismail Mosque is the only preserved mosque of four in number in the Turkish Nikšić. Hadži Ismail Lekić built the building in 1804. The mosque has a square base with an oval niche mihrab. Along the right wall of the mosque, from the outside, viewed from the main entrance, a stone 15 meters high minaret is located.



Figure 17, Hadzi Ismail's mosque in the 1930s

Conclusion

Until the moment of liberation from the Turks, Nikšić was developing unevenly and we cannot say that it had the city's features in any of the above historical periods. During the time of settlement in the area of the present city of Nikšić, there were either military fortifications or towns within the framework of military fortifications. Fortifications are usually by their design a strictly defined geometric formation. We have seen that the forms that dominated the genesis of Nikšić as settlements were in their bases fourfold, hexagonal and octagonal. These shapes were present in almost all of the above-mentioned fortifications through distinctly dominant visual elements such as towers, walls and buildings. Even after frequent destruction during the history, it was possible to discern these forms in the ruins from which they were re-renewed.

Another characteristic of the Nikšić genesis is reflected in its position as the crossing point of extremely important trade and military roads throughout history. The intersection represents a powerful visual element in orientation, as one of the prerequisites of existence and therefore the identity of each individual.

We have seen that the city was often demolished and repaired by almost the same material; a carved stone that was either brought from the ruins of the old Anderba from the shore of Moštanica or a stone was used from the late Roman period through different historical periods. The dramatic demolition and regeneration of the city is accompanied by changes in the name. It seems that every new epoch changed the identity of the city through the change of its name.

Taking into account the above mentioned peculiarities from the history of Nikšić's development, we can assume that they have served to architect Josip Šilović Slade (1828-1911) to unify and present them in the first city regulation plan, which he did in 1883 immediately after the liberation from the Turks in 1877.

Bibliography:

(1) Dr Tomica Nikčević, Ostaci materijalne kulture i pisana dokumenta, Monografija Nikšić, Grafički zavod Hrvatske, Zagreb, 1972, p.21
(2) Arthur John Evans, Antiquarian Researches in Illyricum, Westminster, 1883, p.78
(3) Petar Šobajić, Nikšić-Onogošt, La Ville de Nikšić-Onogošt, Posebna izdanja geografskog društva, sveska 22, Beograd 1938, p.7
(4) Katarina Mitrović, Nikšić (Onogoste, Anagastum, Nagoste), Leksikon gradova i trgova srednjovekovnih srpskih zemalja, redaktor Siniša Mišić, Zavod za udžbenike, Beograd, 2010, pp.187-188
(5) Slobodan Raičević, Spomenici u staroj župi Onogošt, Beograd 1992, p.21
(6) Arthur John Evans: Illyrian letters, London 1878, p.202
(7) Petar Šobajić, Nikšić-Onogošt, La Ville de Nikšić-Onogošt, Posebna izdanja geografskog društva, sveska 22, Beograd 1938, p.22
(8) Konstantin Jireček, Istorija Srba III 10, prevod Jovan Radonjić, Drugo dopunjeno izdanje, Naučna knjiga, Beograd 1952.
(9) Dr Tomica Nikčević, Ostaci materijalne kulture i pisana dokumenta, Monografija Nikšić, Grafički zavod Hrvatske, Zagreb, 1972, p.32
(10) Slobodan Raičević, Spomenici u staroj župi Onogošt, Beograd 1992, p.64
(11) Dr Slobodan Vukajlović, Arhitektura, urbanizam i spomenici kulture, Monografija Nikšić, Grafički zavod Hrvatske, Zagreb, 1972, p.185
(12) Dr Zdravko Ivanović, Nikšić, urbano-geografska studija, Srpska akademija nauka i umjetnosti, Geografski institut „Jovan Cvijić“ , Beograd, 1977, p.45
(13) Andrija Luburić, Drobnjaci, pleme u Hercegovini, Beograd, 1930, pp.71-74
(14) Jovan Ivović, Obnova tvrđave 1709-1713.goddine, Nikšićke novine br.6,7,8, Nikšić, 1961.
(15) Vjekoslav Klajić, Bosna, Podatci o zemljopisu i poviesti Bosne i Hercegovine, Pučna knjižnica matice Hrvatske, Zagreb 1878, p.205

Photo sources:

Figures 1,4- Downloaded and edited from the book Arthur John Evans, Antiquarian Researches in Illyricum, Westminster, 1883

Figure 3- Downloaded and edited from the book Arhitekta Đorđije Minjević, graditelj i prostorni planer, Beograd 2007.

Figures 5,8- Downloaded and edited from the book Slobodan Raičević, Spomenici u staroj župi Onogošt, Beograd 1992.

Figure 6,7- Downloaded and edited from the book Leksikon gradova i trgova srednjovekovnih srpskih zemalja, redaktor Siniša Mišić, Zavod za udžbenike, Beograd, 2010.

Figures 9,11- Downloaded and edited from the book Monografija Nikšić, Grafički zavod Hrvatske, Zagreb, 1972.

Figures 10,17- Downloaded and edited from the book Petar Šobajić, Nikšić-Onogošt, La Ville de Nikšić-Onogošt, Posebna izdanja geografskog društva, sveska 22, Beograd 1938.

Figure 12- Downloaded and edited from the book Nikšić, tragom starih fotografija, AB, Nikšić 1995.

Figure 13- Downloaded and edited from the book Vjekoslav Klajić, Bosna, Podatci o zemljopisu i poviesti Bosne i Hercegovine, Pučna knjižnica matice Hrvatske, Zagreb 1878.

Figure 14- Downloaded and edited from the book Maksim Vujačić, Nikšić nekad i sad, Nikšić 2008.

Figure 15-John W. Frey: Grad Nikšić

Figure 16- Downloaded and edited from the site http://sandzackaknjizevnost.com/slobodan-drobnjak-sait-s-sabotic-kulturne-prilike-i-kulturni-stvaraoci-niksica-iz-osmanskog-perioda/

Chapter 5:

Liberation of Nikšić from Turks

When the Turkish Empire reached the Balkan Peninsula, it gradually conquered the lands of the South Slavs, imposing them state social order, which was in many ways different from the European feudalism formation. However, many mountain areas have maintained their independence. Among them was Montenegro and some mountain tribes in its immediate neighbourhood.

When the Turks conquered Herzegovina in 1465 among the conquered cities were Onogošt, Nikšić. Nikšić remained under Turkish rule for almost four centuries, but it was not always inhabited, as was the case in the 16th and 17th centuries due to destruction and demolition. In the liberation struggles, the tribes of Herzegovina had great and constant help from Montenegro with which it sought to unite. Over a long period and a large number of battles, historical circumstances and events enabled Nikšić to reach the final liberation in the second half of the 19th century.

After the great victory over the troops of Sulejman Pasha, Prince Nikola (1841-1924), the successor of the Petrović dynasty that ruled for centuries in Montenegro, at the end of July 1877, occupies Trebjesa Hill near Nikšić. In July 27, the Montenegrin army began artillery bombardment of the city, which could not destroy the walls. Prince Nikola asked for help from the Russian emperor to send him cannons of a larger caliber to bomb the Nikšić fortress. After the delivery of Russian cannons, the Turkish captain realized that the city's defense makes no sense and decides to accept the conditions of Prince Nikola. Montenegrin troops liberated the city on September 9, 1877. The liberation of Nikšić had a great echo in all South Slavic countries and Russia. (1)

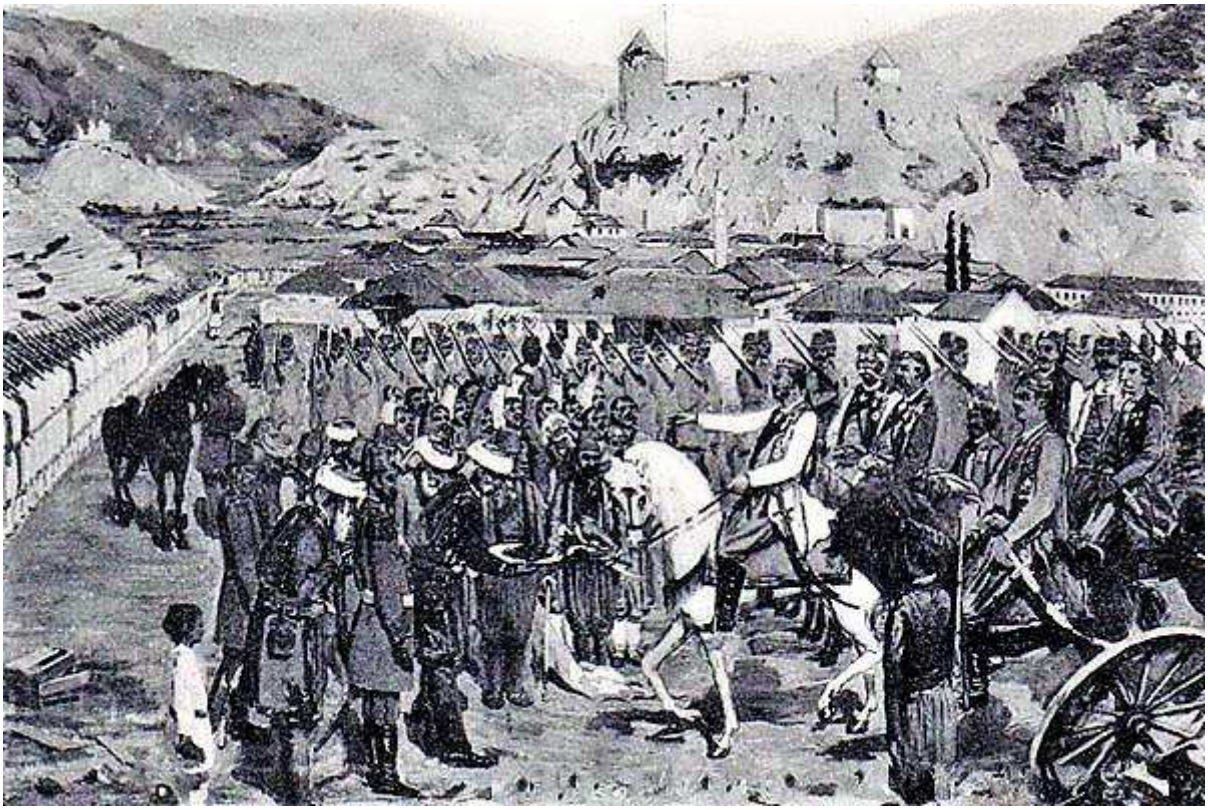


Figure 1, Surrender of Nikšić in September 1877. Graphics by M.Vrbica

The famous English archaeologist Sir Arthur John Evans (1851-1941) came to the liberation of Nikšić with the Montenegrin army. He wrote in the notes of September 23, 1877 that the city was very much

injured from the bombing and that there was no house that was not hit by a shell. He wrote that because of the small caliber of Montenegrin artillery, larger buildings such as city ramparts, towers and the main mosque were only slightly damaged, while ordinary houses were badly damaged and destroyed, especially the Turkish town.

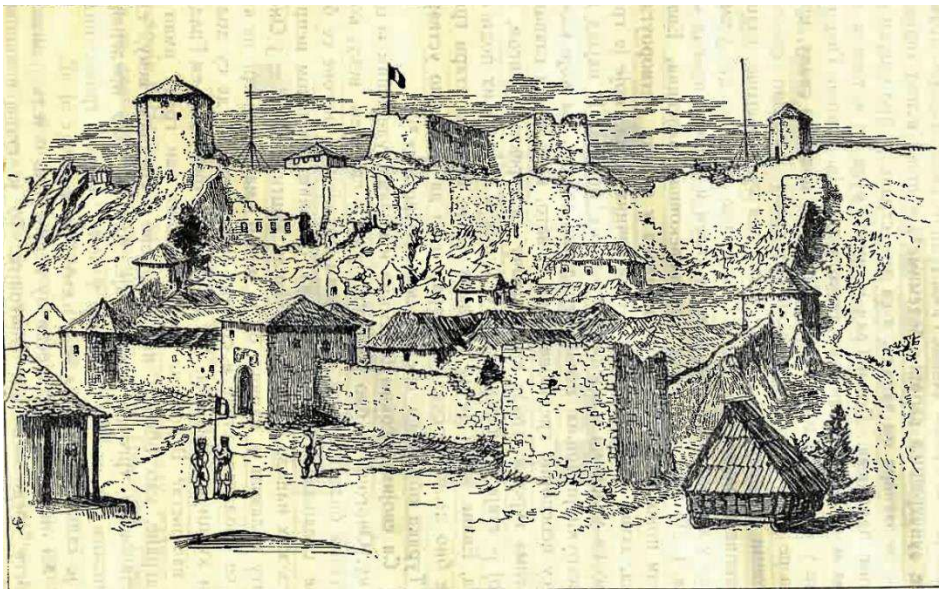


Figure 2, Arthur John Evans, Nikšić after liberation from the Turks in 1877.

Evans writes that the city was divided into three parts: a fortress, an inner city-Lower City surrounded by a rampart and a spacious part of town outside the ramparts with a market and the main streets. Evans was especially interested in the inner, old part of the city whose plan is Roman, four-cornered. On each corner were four-cornered towers, except for one that was octagonal, like the Diocletian's palace in Split. The central towers of each wall used to have arches underlying the streets. In the original city, the two main streets were crossed at a right angle, as was the case in Roman Chester. (2)

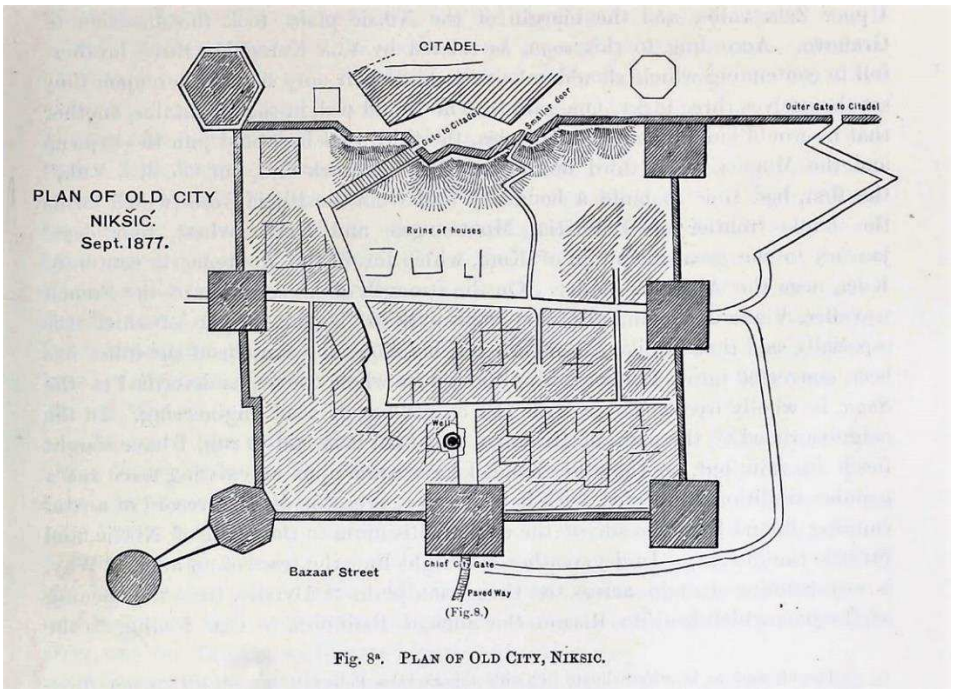


Fig. 8ª. PLAN OF OLD CITY, NIKSIC.

Figure 3, Arthur John Evans, Plan of the Old City Nikšić, 1877. The Lower City is shown; the contours of the Upper City are given to the inscriptions of the fortress

Within a few years after the liberation, the city generally retained the same morphology that it had under the Turks. Nikšić then settled new inhabitants from certain parts of Montenegro, and there was a need to build new houses, territorial expansion and new organization of the city.



Figure 4, Old, Lower City, typical house architecture, 1890.

On the proposal of the citizens to get a place for raising the new city, in spring of 1884, Prince Nikola came to Nikšić and he brought the plan of the new city, which was made by Dr Josip Šilović Slade (1828-1911) in 1883. At that time, architect Slade was one of the most engaged architects in Montenegro. Born in Trogir, he studied in Split and received his doctorate at the University of Padua. With the permission of the Austro-Hungarian authorities at the invitation of Prince Nikola, he designed a number of infrastructure objects, such as roads and bridges, as well as a number of important buildings in Cetinje, royal city where Prince Nikola lived. Josip Slade's plan from 1883 is the basis for the development of the modern city of Nikšić.



Figure 5, Nikšić,postcard from 1895, the view from the ramparts. A panorama of the city starts to be established

The first regulation plan for the new Nikšić, the beginning of a modern city development

Prince Nikola decided to start building a new city in Nikšić in 1883. The project for the construction of the future city was entrusted to the architect Josip Šilović Slade from Trogir.

In March of the same year, Josip Slade came to Nikšić to record the current situation and started drafting a regulation plan for the future city. He encountered a typical Turkish casaba with narrow squares and swirling streets, a small number of undamaged residential and military buildings and a neighbouring spacious plain with a small number of buildings.

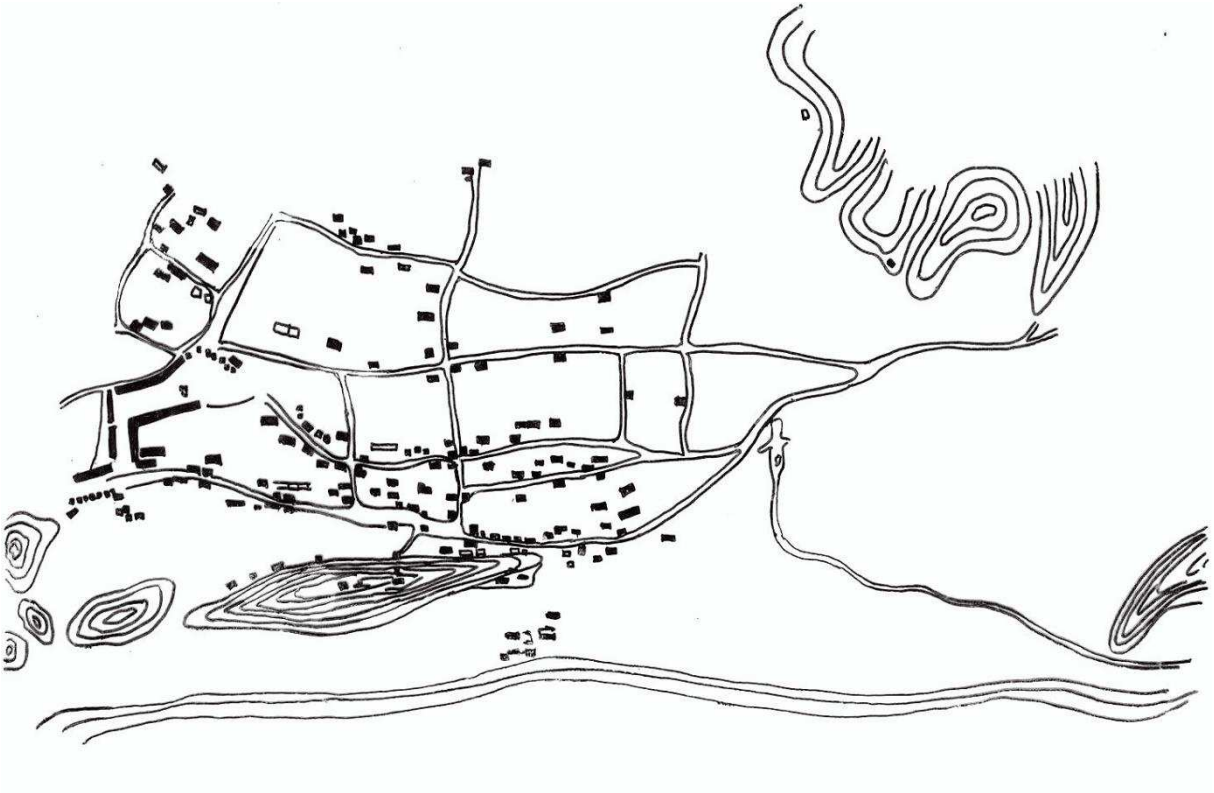


Figure 6, Plan of Nikšić, situation after the liberation in 1877, reconstruction of the author

In the spacious field, east of the Turkish casaba, surrounded by rivers and wooded hills, architect Slade realized the regulation plan of a new city with simple, clear shapes, open to the sun and nature, for the optimal life and work of future inhabitants-an exemplary of Italian urban school inspired by Renaissance. (3)

After recording the current situation on the ground, Slade gave a plan for a new urban solution on the regulatory plan. There were 185 facilities on the regulation plan represented the existing housing facilities. At the far north of the plan, there are objects that represent Turkish military facilities that do not exist today.

The regulation plan was designed to accommodate about 10,000 inhabitants. With the development of its streets, it was quite possible, with the appropriate changes, to expand the city several times, but still in terms of organization and traffic, it will remain a modern city. This is certainly contributed by the initial organization and urban matrix of the city that is spreading freely around the field. It seems that architect Slade was deeply inspired by the urban matrix of the Italian, ideal Renaissance town of Palmanova, which he probably visited, as it is located not far from Padua where he was doing his doctorate.

The core of the future city is a large four-cornered square and four smaller in other areas, connected by wide, straight streets radially oriented. Attention is given to the smaller southern square on the perimeter where is located one of the future buildings, the castle of Prince Nikola. From this southern square, start seven streets, so we can notice that this square represents, in a way, the miniature of the Paris Place de l'Etoile.

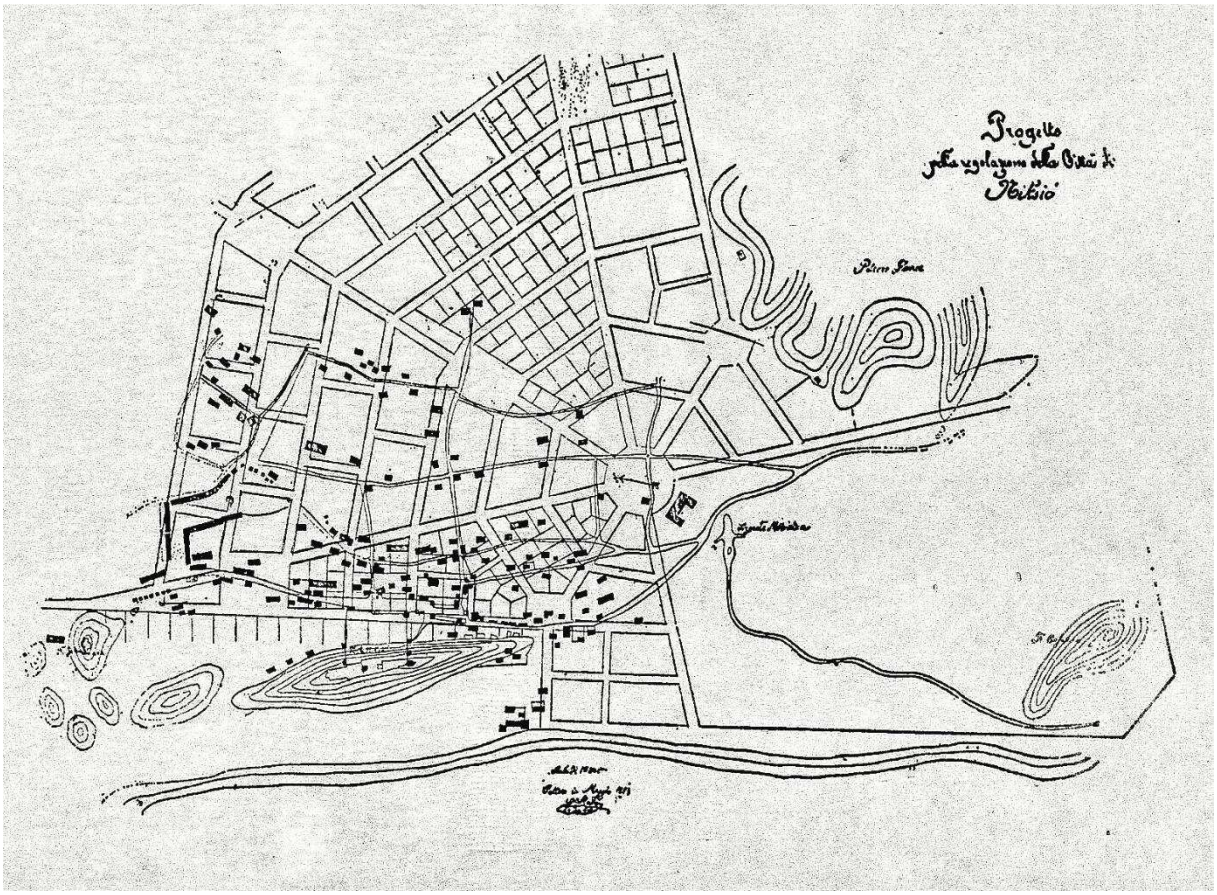


Figure 7, Regulatory Plan of Nikšić, architect Dr Josip Šilović Slade (1828-1911)

The plan provided the construction of green areas, the necessary city infrastructure, sewage and water supply, as well as the construction of terrestrial and one-storey buildings on borders of urban blicks. (4)

The regulation plan of the new city architect Slade finished in his studio in Kotor in May 1883. Prince Nikola accepted the plan and in June of the same year, he brought a plan to Nikšić and showed it to future builders of houses. Prince promised that citizens would not pay the plots and that the building material would be obtained from the old walls of the Turkish town. It is interesting that the interested citizens pulling out the papers with their names made the division of plots randomly.

The famous chronicler of that time, Bekica Šobajić, described the construction of a city square in the spring of 1884: the streets were placed in a rather uneven area of arable land and garden, which were sprinkled, gently with streams, and slightly raised to ruins. To get all this straight, it was necessary to transfer material from one place to another, in general, all the space had to be filled with stone and then aligned with sand. All this had to be done quickly. Engineer Vicko from Trogir (Rubinoni) - distributed the entire space of streets and streets to flat parts, plots, and when the army came, each battalion stood on one of its parts. (5)

In this period, special attention was paid to the arrangement of the city, in particular by the construction of famous tree avenues, insisted in particular by Duke Šako Petrović. Trees were brought from mountains Budoš, Duga and Vojnik, and mostly they were lindens and lesser elms. In addition, along with the construction of the new city, some of the basic utility problems such as drinking water supply, lighting, drainage of surface waters and the like were solved.

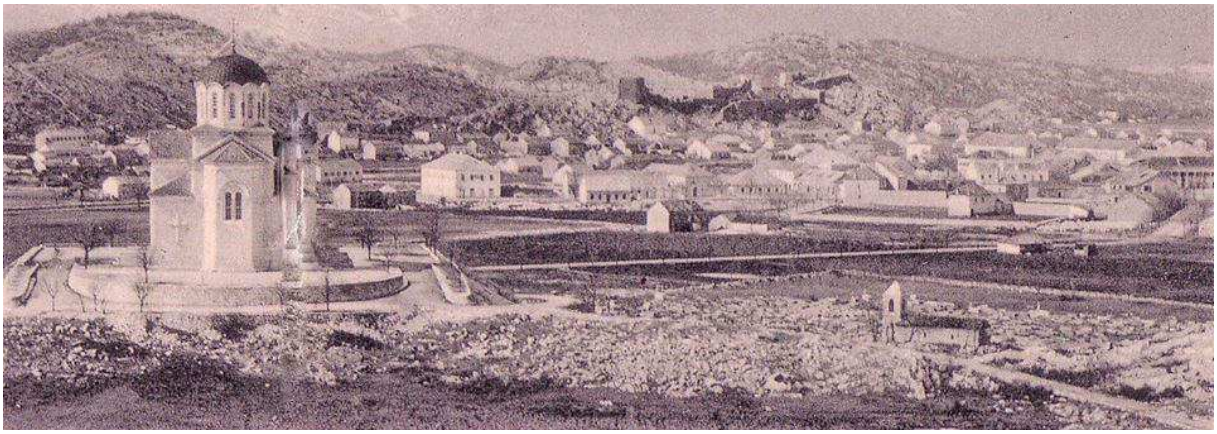


Figure 8, One of the first photography of the city skyline, captured from the hill Trebjesa, the first decade of the XX century, in the forefront the newly built Cathedral of St. Vasiliy Ostroški

The date of settlement and grand opening of the new city was March 1, 1885. Architect Slade did not fully implement the urbanized area, but he left the possibility of a logical urban city development, which allows the creation of the so-called poor non-urban areas. This conditioned that several unregulated suburbs appeared on the borders of the newly built city.

The first of these was the old Turkish casaba, today known as Stara varoš (Old Town) which was not reconstructed at that time for several reasons. There were already old Muslim houses with inhabitants, then the homes of Christian families living in Turkish Nikšić and a large number of officials, whom Prince Nikola donated the houses of Turkish officers.

The other suburb was located south in the area of the former road towards Podgorica and the river Mrkošnica. Immigrants from different parts of the country, around a number grounded houses and cottages, built small settlements. In this area, which was not covered by the regulatory plan, immigrants built objects on their own.

The third suburb was located in the northeast part of the new city, in the area that covered the regulation plan. Immigrants, mainly from the Zaporje regions, built their houses, covered with straw and surrounded it with gardens, stalls and pantries, immigrants, , without keeping up with the plan. The settlement has long been called Zatarske kolibe.

At the beginning of May 1885, Prince Nikola visited Nikšić and was pleased with the results of the construction project, so he decided to free all the houses that were built by the end of the same year, from all the taxes for the period of five years. In the same year in October, architect Slade came to inspect the construction of a new town and was very satisfied with the results.

The increase in the population and the economic growth influenced the further development and construction of Nikšić. Further development and expansion of the city imposed the need for the construction of new streets and a small square. Fourteen streets and the eastern circular square were built, the church, the new castle, the consistorium, the green area and the old cemetery was reconstructed. Two new streets connected this square with the city center and the road towards Podgorica.

In a very short period as the city evolved and expanded, the concept of the regulatory plan began, just as the architect Slade had imagined it. If today we observe the realization of Slade's plan, it can be seen that the city is set on a radial scheme of a communal network similar to the schemes of the ideal cities of the Renaissance (multi-legged schemes enrolled in a circle) with characteristics of strictly geometric regularity. When the needs of the city grew beyond the scope of the scheme and the rigidity of the geometric cladding, construction was carried out through the conquest of new territories. Nikšić was a typical example of a city that had a regulatory plan since 1884. Construction-urban discipline, culture and harmonization of the urban plan with socio-economic possibilities have contributed significantly to Slade's concept of plan realization.

The regulation plan provided a total of five squares, one octagonal, other pentagonal and three rectangles. According to this plan, only three squares were built. The central rectangular square was the first square to be built, and it kept the same shape until today. Today the name of square is the Liberty Square.



Figure 9, The western part of the central city square, Today's the Liberty Square, photo by Bekica Šobajić, beginning of the 20th century

At a distance of 180 meters, there is a second octagonal square, which is realized according to Slade's plan. Today, the name of square is the Square of Sava Kovačević.

The third pentagonal square is located in front of the Cathedral Church and its name is The Square of Duke Šako Petrović. Octagonal and hexagonal squares could be classified as baroque squares in their conception and effects. In these squares, architect Slade create new visual effects with the strongest emphasis on the main, monumental object. Therefore, the aesthetic effects of enlargement and perception of the main and central object (the Cathedral Church and King-Prince Nikola's Castle) are enhanced and enlarged.

Unlike them, the central rectangle square can be classified into a group of conditionally said renaissance squares.



Figure 10, The Square of duke Šako Petrović in front of the Cathedral church in 1906. Author Theodor Norgate (archive of the National Museum in Cetinje)

Urban form and physical structure of the first regulatory plan

Conditionally said, the shape of the Nikšić city belongs to the radial form. This is a rare form of city even for European developed environments. The radial matrix is particularly suitable for the morphological conception of small and medium-sized cities. (6)

Like any other type of urban matrix, the radial matrix has its advantages and disadvantages. The main advantages are related to the good traffic connections between the center and the periphery, the hierarchical position of objects and functions within the city structure. The Square of Sava Kovačević was the center of the radial matrix of Nikšić. As such, at the beginning, it appeared on the edge of the city, with the expansion of the city it should be its center. However, due to insufficient shaping of all structural elements of the city's form, from the aspect of radial directions, we cannot accurately say that the square represents the city center.

As a basic defect of the radial form, we can indicate the difficult orientation and the occurrence that intersections of the main radial directions with transverse streets are not comfortable enough and do not allow the formation of clear and rational functional-physical circuits.

Every structure, even the urban, is built from elements. Elements of a physical structure of a city would be objects of infrastructure, communication objects, objects of green surfaces and at the end the buildings as the most important elements that define the primary structure we see the first. Before it is formed as a material representation by human intervention and activity, the urban form is created on paper in the form of an urban plan. Josip Slade's plan has incorporated all these aspects into an adequate and logical composition of urban elements, as well as the position and arrangement of objects.

Overall, we can say a city, or its structure is made by its architecture in the broadest sense. The visible part of the city structure are the city's buildings. In this group of objects, there are usually objects that are distinguished by their quality or lack of quality in the broadest sense. However, the very structure

of the city consists of all architectural objects. Just as Professor Ranko Radovic (1935-2005), the famous architect and theorist says, architecture, beside individual architectural objects, is also an ambience, urban image or the physical presence of the whole city. (7)

Position of Individual objects, groups of objects, their equivalence with the regulation or the construction line, the connection of these objects with communication surfaces, then the grouping of objects in the form of suburban settlements or smaller urban units all of these form the basis of the city urban. One of the many specificities of cities is their uniqueness. There are no two identical cities, just as there are no two identical men. Structure is what distinguishes cities from one another. At the same time, the structure can be the basis for the ambient qualities of individual parts of the urban structure or structure as a whole. The 1883 regulation plan is an example that contains all the above guidelines, which additionally contributes to its quality. As the first regulation plan of the city, it represents not only its base, but also the code of recognition and uniqueness of the city.

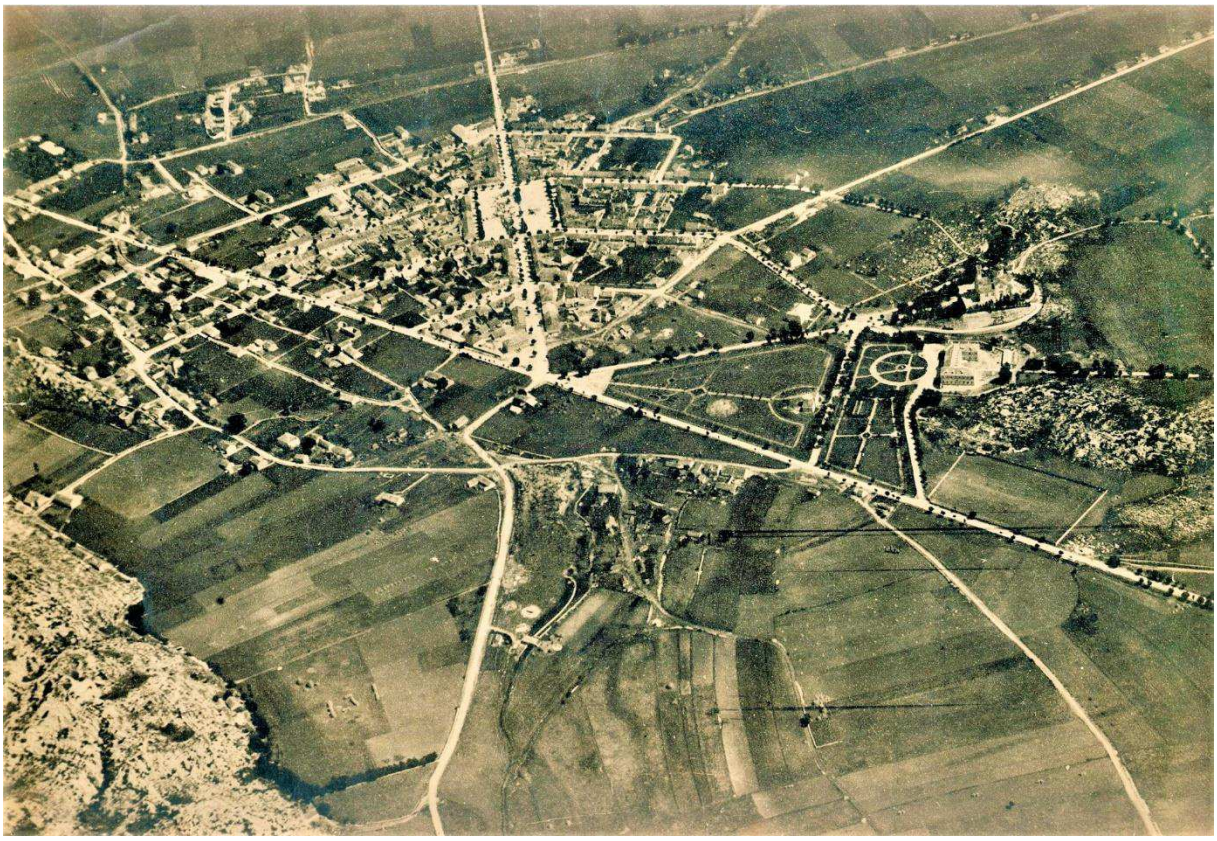


Figure 11, Nikšić from the airplane, 1926.

One of the first interpretations of Josip Slade's regulation plan is given by architect Đorđije Minjević: While I was touring the city and entering the essence of its conception, I was fascinated. I discovered that this is a Renaissance ideal city built consistently in one move with some elements of Baroque city. In this respect, the city of Nikšić is a unique example in the Balkans. From the Slade family in Trogir, the Municipality of Nikšić has received the original plan on the parchment in a well-preserved, semi-assembled wooden box with a lid. Then I had the opportunity to study it. Architect Slade spans the segment of the spider's network between Trebjesa and the ridge of the Nikšić fortress, the Roman Anderba and the Turkish Onogošt. This segment of the octagonal spider's matrix consists of three radial streets: Vuk Mićunović, Njegoševa Street and Vuk Karadžić Street, whose shafts are in the center of today's Sava Kovačević square. Among them, the blocks are built in the same way as the correct

trapezes, apart from the blocks around the Liberty square, which have trapezoidal shapes due to the cutting of the rectangular square into this scheme.

As the city starts from the Sava Kovačević square and extends towards Bistrica the long blocks after the Liberty square are divided with orthogonal streets into smaller blocks. The city has five squares, three rectangles, one pentagonal and one octagonal. The squares that are built are central rectangular, as well as pentagonal and octagonal. The three squares are located along the central axis and two are peripheral. The network of city streets set up by the scheme covered the whole area between Trebjesa and Bedem, not respecting anything that was built earlier. On the eastern side, the street that is parallel with the present Vuk Karadžić Street with two-sided blocks overlaps today's old cemetery, which even then existed, without. In addition, the streets that are parallel with the street of Vuk Mićunović, cross the old town, below Bedem, without respecting anything existing. I was in a dilemma, is it ignoring of all that existed there or ignorance of the entire actual situation, which would deny the scribbled outlines of the old villagers houses in the field. However, not to mark the old cemetery, which is an ethical question, still holds me in this dilemma. (8)

In Slade's plan, only one building is drawn in the axis of Njegoševa Street. It is assumed that such a representative form could be the royal castle. This conclusion is based on the prototype of the Renaissance ideal cities of Versailles. In the center of the city of Versailles, and on the other side of the Versailles Park, there is a grandiose castle with radial streets on the one and a walking trail on the other side. The castle is a symbol of the King Louis XIV power. The scheme corresponded to the idea of a king as a powerful sun whose rays (built roads) have the origin in his power, or in himself. If we take the assumption that the castle of the then Prince Nikola was drawn in the axis, and that the actual building of the castle was built next to the cathedral church on the south side, behind the park, which occupies two blocks according to the radial scheme, the question is why this was done? Why did it depart from the scheme and the Versailles concept? There are several explanations. First, it would relate to the incomparable size of Montenegro and the sovereign itself with the French example. The second would be that the castle was more a summer residence. The third reason is not to disturb the intimacy of life in the castle and to avoid the everyday view of an ordinary, very poor people.

During the Second World War, the former city archives were destroyed, and with it, all the documentation of the then built buildings in the city. After the death of Josip Slade in 1911, the original plan of Nikšić was found in his legacies at the home museum of Trogir, where his successors live today.

Conclusion

In order to realize the concept of an ideal city, which architect Slade only presented schematically, it was very difficult to implement in full since Montenegro was after all the wars very poor. It has done a real curiosity at all. Behind this, the sovereign, the army and the people had to stand. Construction was carried out without mechanization, with bare hands and without elaborated plans and projects. The unique case of building the Nikšić city, according to the type of urban matrix, as well as the time and method of construction, deserves the attention of further study. Although by typology it did not correspond to the time in which it was applied, it can be considered the beginning of articulation of planned urbanization in Montenegro.

In contrast to the orthogonal scheme of Novi Bar, Pristan port and Podgorica, architect Slade made the exception, fitting the segments of the already seen cliché of Renaissance cities, between Trebjesa and Bedem with the tendency of spreading towards Bistrica, Gračanica and Zeta. He experienced the realization of the first part around today's Liberty Square, absorbing the needs of the entire population for construction. This is an extremely rare phenomenon in urban practice, since this discipline is suitable for successive upgrading in continuity.

Bibliography

(1) Dr Branko Pavićević, Oslobodilački ratovi od XVI-XX vijeka, Monografija Nikšić, Grafički zavod Hrvatske, Zagreb, 1972, p.61
(2) Arthur John Evans: Illyrian letters, London 1878, p.145
(3) Veljko Šakotić, Nikšić u knjaževini (kraljevini) Crnoj Gori, Centar za informativnu djelatnost, Nikšić, 1996, p.98
(4) Maksim Maksimivić, Prvi regulacioni plan Nikšića, Komuna br 9, Beograd 1961.
(5) Bekica Šobajić, Odzivi prijatnih uspomena, Nikšić 1899, pp 17-18, 24-26
(6) Vladan Đokić, Urbana morfologija: Grad i gradski trg, Arhitektonski fakultet u Beogradu, Beograd 2004, p.163
(7) Ranko Radović, Forma grada, osnove teorije i praksa, Građevinska knjiga, Beograd 2009, p.83
(8) Đorđije Minjević, Nikšić u sjećanjima, Nikšić 2008, p.10

Photo sources:

Figure 1, 7- Taken and edited from the book Monografija Nikšić, Grafički zavod Hrvatske, Zagreb, 1972.

Figure 2, 3- Taken and edited from the book by Arthur John Evans: Illyrian letters, London 1878.

Figure 4- Bibliothèque nationale de France

Figure 5, 8, 9- Private collection

Figure 6- Reconstruction of author of the text

Figure 10- Archive of the National museum in Cetinje

Figure 11- Private colection of Boško Roganović

Chapter 6:

Typical city architecture and its characteristics

When Nikšić was liberated from the Turks in 1877, a new period in the development and design of the city started. For a few years after the liberation, the city kept the shape of the former Turkish casaba until 1883 when it was completed and in 1884 the first regulation plan was implemented by the architect Dr. Josip Šilović Slade.

This plan represents a response to multiple requests. The city should represent a new beginning and a new stage that will be shown by the design and city organization completely different from the one during Turkish rule. Architect Slade made a plan for the city of open spaces, wide streets, spacious squares and parks. This plan is completely the opposite from tightness and closeness of the Lower City. In contrast to the curving, narrow streets, straight and wide streets are designed. And contrary to the randomly positioned construction, the strict, marginal construction is foreseen. The new city plan envisages the construction of the necessary infrastructure for optimal functioning such as atmospheric sewage, water supply and lighting, as well as greening of public areas. In contrast to the founding square base of Lower City, the plan of the new Nikšić is radial, open, fluid and enables development in all directions.

The new city plan also required a new and diverse architecture of facilities that were supposed to respond to new demands and lifestyles of citizens.

Probably the oldest photo, which is located in the National Library of France and which represents the look of the Lower City was taken in 1890. This photograph is an important testimony of the appearance of old Nikšić thirteen years after the liberation, and six years after the start of the new Nikšić construction.



Figure 1, Old Nikšić, Lower City, 1890

If we start with the analysis of the photo, we will see that in the foreground there is a much higher concentration of houses, while if we continue to the field, we will see that the number and the concentration of houses decreases. Distant houses are different from those we see in the foreground. The distant houses are compact, the roof is on two sides with a higher inclination, the houses are not

enclosed by high walls. For these houses we can say that they were created after the implementation of the first regulatory plan and that they represent a new way of space conception.

Unlike them, houses that are closer to the observer have a more dynamic design, mostly with a roof of four sides, covered either by shingle or ceramide, the slope of the roof is smaller. These houses are surrounded by high walls where the so-called loopholes are visible. There are also gates on individual houses. One of the houses has a porch on the ground floor, while some have a porch on the floor. A well is visible in the central part of the photo. The space around it is only slightly wider than the street that passes between houses in the foreground. It is possible that this space had the character of a public gathering. It is clear that these houses are modified and adapted to the typical Turkish house of that period. Form of existence in Islamic society was a family house, a residential complex. It is the main cell of the city and a closed unit that develops in its own circle, turned to itself. We can see the best example at the first house in the foreground. The residential complex consists of a house that spreads on two floors. On the ground floor there is a storage room or livestock. The residential complex is surrounded by high walls, whereby a hall- avlija is formed, with the kitchen-mutuqa, toilet, various types of storage and at the end of the yard there is vegetable garden and possibly water. Today, none of these types of houses were preserved in Nikšić.

Although in some segments are similar, new city houses in Nikšić are different from typical Islamic houses in Lower City. Perhaps the only similarity refers to the position of the garden. Both in the one and the other typical home garden is located in the inner courtyard outside the street, although some new city houses also had a front garden. The new city houses were built side by side, and for the first time the facade of the street and its front appeared.

Architecture of the city houses

Architecture of Nikšić's new buildings was influenced by the three factors. The first factor relates to economic conditions in the country. Although Montenegro emerged from the wars as a winner and expanded considerably its territory, numerous wars still left consequences on the country. It is therefore not surprising that for the needs of the city's construction, mostly stone from the destroyed towers and parts of the Lower Town was used. (1)

Another important factor that influenced the appearance of the future city was the ability of builder to respond to the functional and architectural requirements of user facilities. The beginning of construction attracted a large number of builders and other workers from Herzegovina, Boka, Dalmatia and Italy, who, although in the absence of professional designers, limited by money and time, were able to recognize the needs of future space users.

In the end, the regulation plan with its structure and morphology influenced the position of the objects and therefore the physiognomy of the city. According to the principles of scientific urbanism insolation plays a major role in the orientation of housing and space, however, at that time the main factor of orientation was the street. Considering the economic situation of the population inhabited in Nikšić, the plan envisages the marginal construction of ground-level buildings or facilities with one, up to two floors. (2)

The basic characteristic of the architecture of city houses and facilities in Nikšić is simplicity and modesty almost we can talk about archetypal models of houses. They are oriented towards the street and built largely side by side with which the concept of the Slade's plan has visually and morphologically further grounded. The roof is usually tilted from 25 to 35 degrees, on two sides and most often covered with roof brick-ceramide. The houses were built of semi-carved stone and carved

stone. The facades are finely plastered and painted in white or some of the pastel colors most often green.

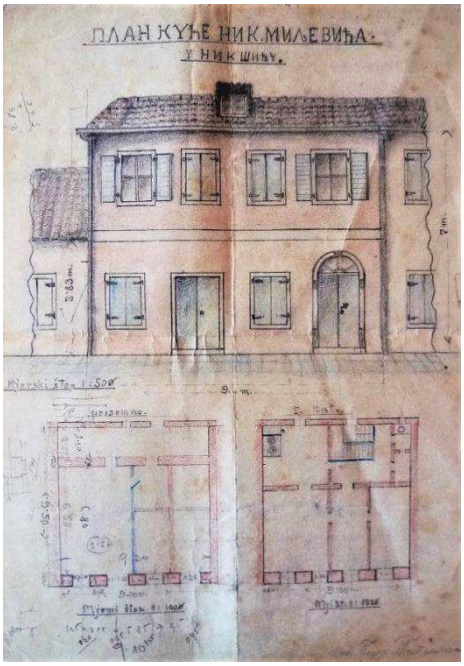


Figure 2, Plan of a two-storey house

The houses are either ground level or one, less often on two floors. In terms of dimensions, the houses vary, so in the width of the front or the main facade, the houses are 11.00m, 12.50m, 16.00mi less than 18.00m, while the depth is usually 10.00m, 12.00m or 15.00m, the bright height of the rooms both in the ground and in the floor facilities usually range from 3.20m to 3.50m. The ground floor of the building is rarely in the same level with the height of the pavement of the street, usually sculpted by one step 15cm. The door is usually 125cm wide and about 2.20m high, either rectangular or arched. The windows were initially built as single-sided windows measuring 1.00 m wide and up to 1.80 m high and later people used two-sided windows and, in some cases, three-sided windows, with a raster division of window.

Considering that, the houses with the main facade oriented towards the street and the marginal building in urban blocks was carried out, almost every household owned a yard that was in the interior of the block. Depending on the way communication is made between the yard and the street, it is possible to classify houses into those that contain a port (portico) portun and houses that do not have a port or as it is known in local dialect portun. Houses with a portun are provided with direct connection between the street and the yard of the house. Houses that do not have portun communicate directly through a warm connection or corridor. Portun, as a passage, is used for the economic needs of the household and is designed and dimensioned so that the horse with the cargo can go undisturbed. In this way, the household is

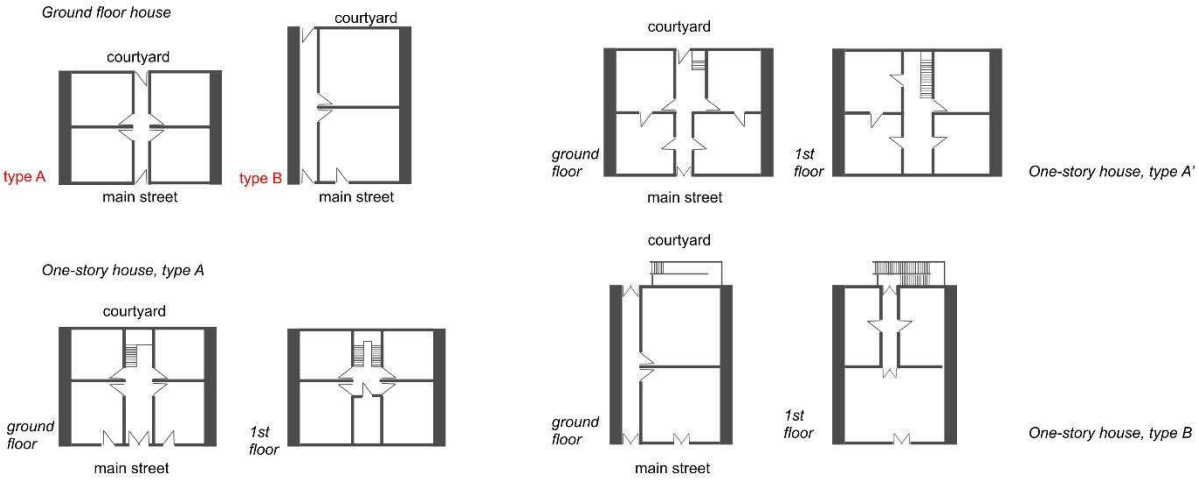


Figure 3, Typology of the city house

provided with food, wood for fires, materials and seed for the garden, as well as garbage removal and ventilation of the inner courtyard or block, which could be fenced with objects from all sides.

On the ground floor of one-store houses, besides the port, there are shops with so-called ardija, a smaller auxiliary room, and then there were houses with cramped rooms for goods or apartments or

just apartments. Houses that had one floor were different in the fact that on the ground floor there were mostly shops, pantries, shops for business, while the living was on the floor.

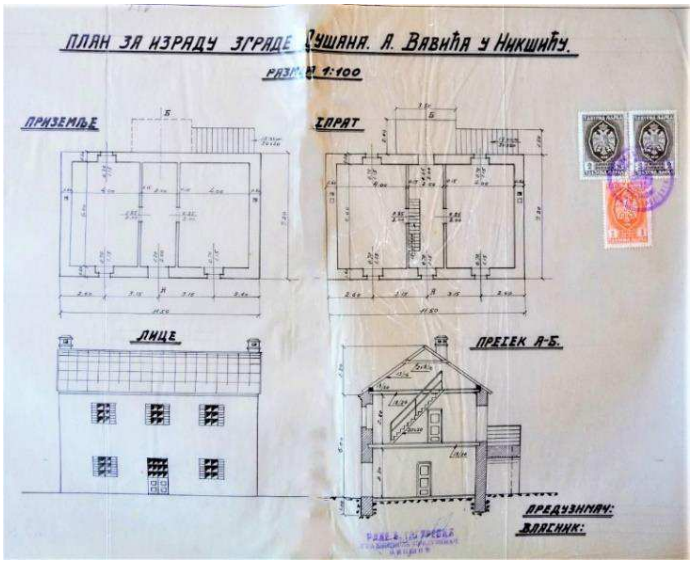


Figure 4, A plan and section of a typical two-storey house

When we talk about the organization of space, we mostly distinguish two types of ground floor house. At the first type the entrance is centrally placed forming symmetrical composition on the facade is. From the main entrance to the house, from the street, a wide corridor leads to the opposite, parallel facade with the doors leading to the yard of the house. In this way, the house is divided into two parts. Transversely placed walls in relation to the corridor divide house on more two parts forming two rooms oriented to the yard and two rooms oriented to the street. In the second type of house the corridor is set eccentrically to one or other side of the main street facade. By a transversal wall set to the corridor, it would usually have two rooms, one of which is oriented to the street and the other to the yard.

Similar to the organization of the ground floor houses, there was also the organization of floor houses. The staircase can be seen either in the corridor of the house or outside the house along the inner courtyard facade. Usually, staircase is single or double when placed in the corridor while it is usually double when it is outside the house.

Over time, as the economic conditions of the population improved, the possibilities for decorating the houses were better. Particular attention was paid to the entrance, main door, pillars, windows and especially the balconies. Over time, houses will contribute significantly to urban landscape by their architecture.

The most important buildings built after the liberation of the city

Although there were difficulties in implementing the regulatory plan, we can still say that the construction of Nikšić was successful. Encouraged by the results of the construction, Prince Nikola decides to build some of the most beautiful buildings in city during his reign: the Emperor's Bridge, the King's Palace and the St. Vasilije Ostroški Church.

The Emperor's Bridge

The construction of a bridge on the Zeta River, in the southern part of the Nikšić Field, began on May 23, 1894, after the road that connected Podgorica and Danilovgrad was opened. The architect of this object is Dr JosipŠilović Slade. By building this bridge, Nikšić became better connected with other parts of Montenegro, confirming once more that it represents an important crossroad.

The construction of the bridge involved a large number of builders, who came from different parts, mostly from Boka. In addition to the builders, the army also took part in the construction. Since it was a period of economic crisis, the daily wages were paid to workers and the army in grain, which was largely delivered from Russia.

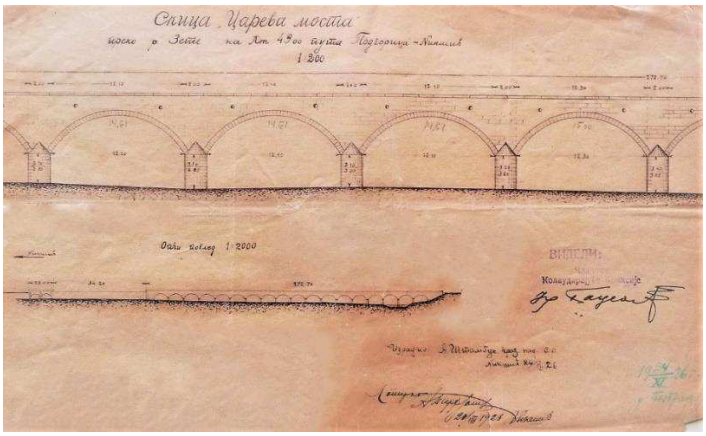


Figure 5, the Emperor's Bridge, drawing 1926.

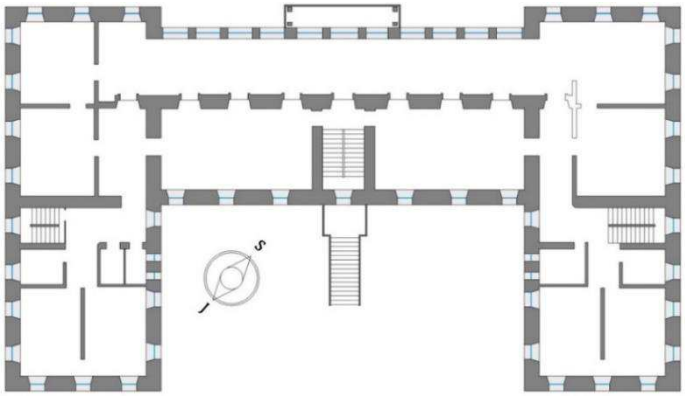
For the time when was built, the bridge on the Zeta river was a real, big project with its 18 openings and 269 meters in length. An additional 600m embankment with two auxiliary openings was made through the junction, which separated the bridge from continuing to the city. (3)



Figure 6, Opening of the Emperor's Bridge

On October 20, Prince Nikola opened the bridge for traffic. It was then decided that in honor of the Russian Emperor Alexander III, who financially helped the construction, the bridge get name the Emperor's Bridge.

<u>King Nicholas's Palace</u>



On the celebration of the fortieth anniversary of Prince Nikola reign, preparations have begun for the building of a new palace at the foot of Petrova Glavica Hill, where works on the construction of the church have been carried out. The palace project was done by the architect Dr. Josip Šilović Slade.

Figure 7, First floor of the palace

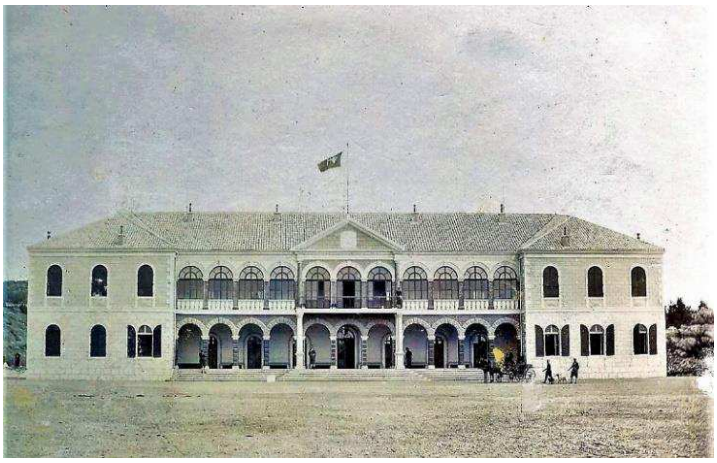


Figure 8, The main entrance, facade of the palace

The building of the palace lasted from the beginning of 1899 when the contract on its construction was signed by the middle of August 1900. The opening was prolonged due to the death of the Italian king for whom the daughter of Prince Nikola, queen Jelena, was married. The palace is conceived as the summer residence of the Petrović dynasty. Over time, the palace has changed its purpose from residence, primary school, and gymnasium and at the end to the city museum with a library, reading room and exhibition galleries.

This representative building of the renaissance style consists of basement, ground floor and first floor. The basis is given in the Cyrillic letter p. The yard is made of semi-shaped carved stone. The side wings are stretched at the level of the stairs that lead to the entrance - above which there is a balcony on the pillars. The main, entrance facade faces west and is further emphasized by two arcades with 11 pillars. All facades are characterized by the design and positioning of the windows. The main masters of the building of the castle were Italian workers. In front of the palace is planned the construction of a small, access plateau that connects the courtyard with the city park. (4)

The St. Vasilije Ostroški Church

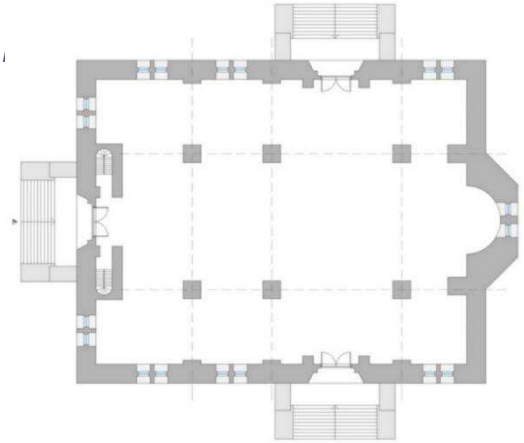


Figure 9, Ground floor of the church

In 1885, Prince Nikola visited Nikšić in order to follow personally the beginning of the new city construction. However, his stay was also a reason to announce to the citizens the decision to build a temple dedicated to Saint Vasilije Ostroški in honor of the Montenegrin and Herzegovinian warriors killed for the liberation from the Turks in the wars of 1875-1880.

In the following year a commission was formed whose task was to establish a suitable place for the future temple. With the expert consultation of engineer Slade, it was accepted that Petrova Glavica hill would be the location of the temple. At the foot of the elevation, according to the regulation plan, a smaller square was inscribed, so the choice of this location was quite logical. It is interesting to note that architect Slade originally had the idea to build a church in the central part of the city, in the central city square. (5)

The elevation was 16 feet high and it was necessary to make its alignment in order to get the necessary space. The alignment of Petrova Glavica lasted for several years with interruptions due to clumsy years, when money instead of construction was used to help the population. After the alignment, the elevation was 12m high.

According to the Order of the Holy Synod of the Russian Orthodox Church, with the task of designing a temple, in 1891 in Niksic came the famous Russian architect of sacred objects, Mihailo Mihailovich Preobrazhenski. After the site was surveyed architect Preobrazhenski created sketches and drafts of ideas for the new temple could look like. The next year, the ultimate plan of the building was presented to the Prince. In the period from 1892-1895, material was collected and the foundation stone was finally installed on July 4, 1895.

The church was completed on August 10 in 1899. It is important to note that during its construction there were no incidents and that none of the workers was injured. This is important since until that time there was no such construction of such a large and significant facility in Montenegro.

St. Vasilije Ostroški Church is built on Petrova Glavica, a hill that has a height of about 12 meters. The entrance to the church, from the north and south, can be reached by ramps. From the west side, directly from the pentagonal, the Duke Šako Petrović Square, the main entrance of the church comes with a monumental staircase with a total of 65 steps. The staircase is wide and spacious. The staircase is separated with three spacious plates. Pine trees are planted on the plateau. Upon going to the plateau, on which the church is located, on the left and right are stone benches for rest and fountain made of finely processed stone. On the eastern side of the plateau, on the left and on the right side of the church there are the access parts of the asphalt ramps which lead to the plateau from the foothills of Petrova Glavica. Directly to the church, on its north and south sides, there are the memorial plaque of Stojan Kovačević and Novak Ramov, built in 1955. The plateau in front of the church is not paved, but only paved with gravel, which is also located on the resting plates between the approaching stairs. Petrova Glavica is paved with tassel on its sides. The impression is that the elevation with the church represents a unique and harmonious whole.

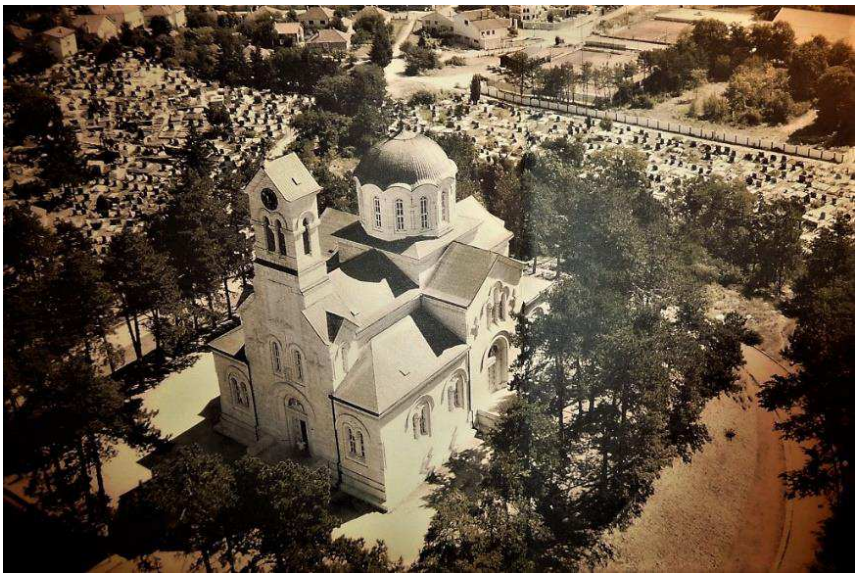


Figure 10, St. Vasilije Ostroški Church, today

The church has a width of 23m, length 33m and height 34m. The ratio of width and length corresponds to relations from the golden cross section, which makes the harmonic impression additionally confirmed. The church has three doors, the main on the west side, one on the north side and one on the south side. Ten steps lead to the main door that has a height of 3.90 m and a width of 1.92 m. The side doors have a height of 3.90 m and a width of 2.0 m. The doors are made in a sculpture and decorated with a rich ornament of vertical rectangles with crosses. The church is a three-necked, Serbian-Byzantine style building made of white carved stone from local maiden by well-trained local and masters from Italy and Dalmatia.

Cube, dome with tambourine is 11m height and 8.60m width. On top, there is a gold-plated apple, 60 cm in diameter and there is a gold-plated cross with a height of 2 m. On the cube there are lateral 12 monofilament windows 3.9m height and 80cm wide. The dome is covered with a copper.

The bell-tower is 14m high and also covered with a copper on a dual roof. On top there is a gold-plated apple with a diameter of 30cm and a 1.6m height cross. On the north and south sides there are monophonies and on the eastern and western bifores. On the belfry there is also a watch, which in 1929 was given by the watchman Pavle Pantelić from Zemun. There are five bells in the belfry, which were given by Prince Peter Karađorđević. These bells were poured into the famous workshop of Pietro Colbacchini in Bassano in Italy.

Not counting the openings on the cube, the church has ten windows of which there are eight bifors with a height of 3.65m and a width of 90cm. Two triphores have openings of 90 cm in width and 3.65 m in height except for a medium opening whose height is greater and is 4.70 m. The apsid is three-sided and with one bifor. The Cordon wreath, in a vertical way, divides the apsid wall into two uneven parts.

The interior of the church is harmonious and dignified. The whiteness of the stone from which it was built, has received in the interior a special patina. The church floor is paved with white octagonal and pale red quadrangular stone slabs. The three-neck of the church is divided with four square, massive pillars, connected with arcades carrying cubes or a dome with tambourine. The space is divided into three ships with four pillars in two rows. To the extent, the columns have 1.30m and are over 5m high. Like the church, they were made of finely carved and processed white granite from local majdan.

Iconostasis is made of white and green marble. The center is 8m high and 8.5m wide. The side doors are 3.15m height and 90cm width. The royal doors are 3.35m height and 1.3 m width. Above them, there are 12 icons of 80cm height and 34cm width, then three larger icons of 1m height and 41cm width then comes the Secret Dinner and finally a cross. The icons were made in Russia and represent the gift of the Russian Orthodox Church Synod. The door was made by famous master Vasilije Đinovski. The iconostasis itself is the gift of Greek Andrew Singros. (6)

Special beauty to the interior space comes from chandeliers. The largest of them, which goes from the top of the dome, is particularly distinguished by the richness of ornaments. Four chandeliers are the gift of the Italian Queen Jelena Savoy, the daughter of Prince Nikola. Chandeliers come from the old royal court in Caserata and were brought by a court architect Artur Flores. (7)

It is interesting that the interior of the church does not have frescos. In June 1899, Prince Nikola invited a famous Serbian painter Uroš Predić to paint the interior, but due to the scope of work, the artist did not agree to this job. (8)

The St. Vasilije Ostroški church was built in a specific time. After liberation from the Turkish authorities, it took time to recover from long-standing wars for liberation. The city needed a symbol that would pour new energy and encourage the city's development in a better and more beautiful way. Hence, it is not surprising that Prince Nikola accepted, at the request of Nikšić citizens to build a new temple in this city after years of occupation. Since for the liberation of the city Montenegrin and the Herzegovinian warriors gave their lives, the temple was built in their honor.

Significant urban facilities

With the city development and the increase of the population, new demands and activities emerged and required the construction of facilities in which to take place. In a short time in the city, apart from the trade activity, which is featured in a large number of various shops, there are specific activities such as printing houses and bookstores. There is also the opening of the first city hotels. Cultural life demanded the opening of the first professional theater in Montenegro as well as the singing society.

There is also the emergence of the first industries of beer and wood. The first schools and hospitals are opened.

Central City Square, today's Liberty Square

Construction of the central city square began in 1884 after subdivision and division of sites for the construction of future owners buildings. The square has strengthened the planned dimensions by the built objects on its sides.



Figure 11, Central square in 1925

Since the square was formed on former arable land and pastures, it was necessary to clean the terrain, stone it and sand it. Early in 1885, the People's army with the help of citizens completed the arrangement of the main square and the six streets that flow into it. (9)

The basic characteristics of the square from the period of construction are related primarily to its function and character. The square played the role of the market and this activity gave the basic character to it. Unfortunately, no object of social significance or public purpose has been built on this square. Because of its dimensions and shape it would be expected that an object of more pronounced architecture would appear on one of the fronts, but this did not happen.

Some indication of the public spaces differentiation can be found on the northern facade of the square, which is otherwise divided into two sides east and west by the main promenade street. In the west half of the square, on its northern side stands house where theater performances were held in the period 1886-1887. In the eastern part of the square, its northern front faces a building with a high gash that gives a special accent to this part. However, none of these houses has a good position or architectural power to give a character to the central city square. Perhaps they could have affected it if they were built in the middle of the eastern or western facade of the square.



Figure 12, The northeast side of the square, the first half of the 20th century



Figure 13, Square with tree avenues on the postcard from 1914

Differentiation of the square surface, conditionally said, was made by two important elements: the trees that had additionally shaped the promenade and its penetration into the square as well as the construction of two smaller buildings in the middle of the eastern and western part of the square. Later, they will be upgraded with wells and with round shelves for selling food.

Later, around 1929, the square would get four city fountains located at each corner of the square. Over time, the square suffered minor changes of generally poor quality. The changes relate to the construction of inadequate architecture objects as well as the relocation of fountains inside the market and their replacement with the new ones. The square has changed its name several times. Initially, it was called Piazza, then Karađorđe's Square then Marshal Tito Square and finally Liberty Square.

The City Theatre

This building was built in 1925 and was first called the Home of Craftsmen-Workers' Association. In its construction, artisans also participated, as well as citizens, with their contributions. It is interesting to note that the residents of the surrounding villages have donated large quantities of construction materials. The hall had a loggia and a parter and could accommodate 250 viewers, with a later addition the seat number was increased to 450.



Figure 14, Former City Theater

The architecture of the building consists actually of three different buildings, two massive lateral and one smaller interpolated between them. This central building with four modified Tuscan pillars is the central element of the composition. A larger massive building in which the municipal authority will be placed later is given a quiet and modest architecture without decorations.

In contrast to this building, the Home of Craftsmen-Workers' Association is richly decorated. Two Tuscan pillars that hold the architrave and frieze in the central part where is a semicircular window or skylight, while the next floor ends with a mansard roof on which the inscription is located frame the entrance. The windows in the ground are richly ornamented and symmetrically set while on the floor are simple and reduced.

The impression is that this architectural ensemble, which consists of 3 formally different objects, is an interesting phenomenon in the street front of the then Nikšić. Unfortunately, none of these buildings has been preserved.

School Polyclinic, Health Center

This building was built in 1927 as a school clinic and next year already grown into a health center with a permanent hygienic exhibition and public bathroom. (10)



Figure 15, Entrance, east facade

The design of this facility is a complete novelty in the city architecture of Nikšić in the first half of the 20th century. It is the first public building with a dome. The base of the building is rectangular, with shorter sides facing north and south. The eastern side of the building is the main facade on which a central, symmetrical staircase rises to the main entrance. The facade is decorated with a massive but still harmonious pair of modified Tuscan pillars. The entrance facade looks monumental but also harmonious. On the side of the entrance, there are arched windows while the front of the entrance is elegantly highlighted with a sign on the gable.

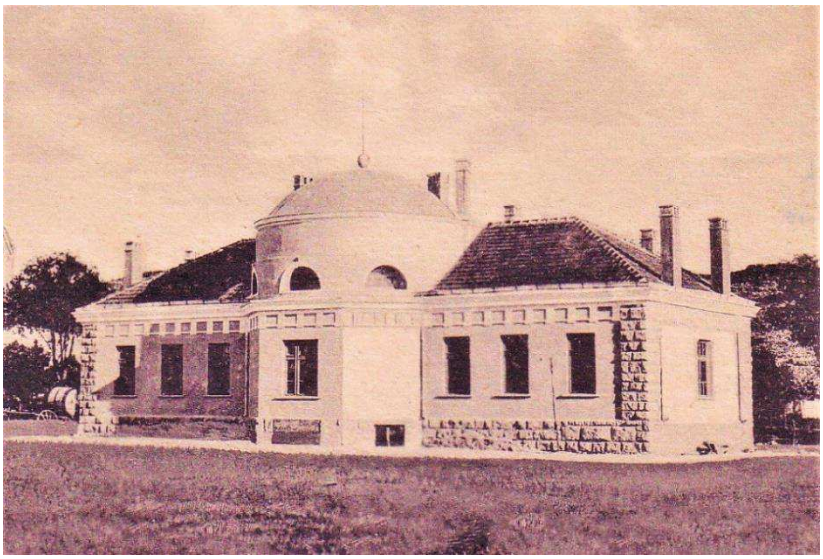


Figure 16, West facade

The postament of the building is made of stone, roughly squatted squares that are providing to the half of entrance. The roof is quadruped and covered with roof brick. Below the crown of the roof, the building is richly decorated with stone squares. The side wings have classic rectangular windows. On the north, side there is an entrance with a staircase for the auxiliary spaces. The large number of harmoniously shaped chimneys and only visible domes from the entrance side accentuates the verticality of the building.

The west facade of the building is characterized by a centrally placed erker arranged in half of the hexagon. The tambourine domes have semicircular openings and seems very light.

The Health Center is now used as a city house. The spacious composition makes it the most important element of the city park.

Women's association "Kosovka djevojka"

In 1921, the women's association "Kosovka djevojka" was founded in Nikšić with the aim of promoting the education of women, their cultural and mental work, as well as humanitarian activities. By voluntary contributions, this association will build a building for its needs in 1927. In the basement of this building, there was a kitchen where about 50 poor students of the Nikšić gymnasium were fed on a daily basis, while various types of receptions and festivities were held on the ground floor. Today in this building is located one of the city kindergartens.



Figure 17, Women's association «Kosovka djevojka» in the 1930s

In terms of architecture, the main characteristic of the building is a nicely shaped and composite port, which is a couple of steps raised from the pavement level. The entrance is decorated with two Tuscan pillars that carry a frieze. The composition is symmetrical, consistent and contributes to the ambient value of the street in which the object is located. Behind and above the frieze is the gable on which once was written the name of society. At the entrance facade there are eight windows symmetrically arranged. The roof is four side, covered with roof brick.

Singing Society "Zahumlje"

This building was built in the period from 1928 to 1930 by the voluntary work of the members of the society, as well as the contributions of a large number of citizens, not only Nikšić, but also from all Montenegro. (11)



Figure 18, Former old building of the Singing Society "Zahumlje"

This building is symmetrically conceived. On the main facade, there is an arched-shaped entrance section with arched door that is pulled inside from the level of the facade. There are two pairs of arched windows on the side of the door. It is characteristic that the building is designed to be ground floor, and in all likelihood, it has a flat roof, at least above the entrance part. This type of roof was an unusual solution for that time and was not characteristic for the Nikšić climate; it is likely that the roof is used as a terrace.

The building has been upgraded and restored over time and is not preserved in its original form.

Railway station

The building of the building started in 1935 and the formal opening was in 1938 when the train, from the direction of Bileća, was welcomed. (12)

For the time of construction, this building was a big project, considering that alongside it, the construction of a railroad to Bosnia was taking place. The building is ground floor with floor, strict rectangular forms, with symmetrically arranged openings. The roof is on four side and covered with roof brick. The windows on the ground floor are arched while those on the floor are rectangular. It is made of properly tiled stone blocks that give the rustic facade. On the south facade, the platforms exits are covered with a simple roof design. To date, the building has been preserved in an unchanged form.



Figure 19, View on the train station, right after the opening ceremony

Sokolski Home- Howk Home

One of the most interesting objects, which, unfortunately, has never been built due to probably political decisions and historical circumstances, is Sokolski home-Hawk home. Architect Alfred Felner did the project in 1939. The building was supposed to respond to all the demands of the Hawk movement, which was founded in Prague in 1862 in response to the attempts of Germanization of the Slovenian people by the Austrian monarchy.

In the period of modernization of Yugoslav society, Hawk homes were most often the key and often the only locations where cultural life took place, especially in smaller towns. The Hawk homes was the center where the Hawk society, apart from practicing sports in the gymnastics hall, conducted its cultural and educational mission through a diverse program. In addition to cultural and educational content, Hawks's homes were often the factors of urban modernization. (13)

If this building was built it would certainly be one of the most beautiful in the city. The object was presented in the central zone of the city in the immediate vicinity of the Women's association "Kosovka

devojka". The location is positioned on the corner, at the intersection of Pašić Street and Janko Vukotić Street.

The content of the building is intended for young men and girls with clearly separated and positioned dressing rooms and sanitary facilities. In the central part, there is a hall for different types of sports and cultural events.



Figure 20, Facade of the Hawk Home

The building is divided into cubes whose mass is attached to the centrally positioned tower that forms the axis of the building. Architecture is dynamic with the clean forms that make the front street more interesting.

In the period after the liberation from the Turkish authorities until the First World War II, in Nikšić, other important facilities such as brewery, wood industry, numerous schools, ambulances, bookshops and hotels were built. The problem of water supply of the city is solved as well as the problem of city lighting.



Figure 21, The Hawk Home in Nikšić, Alfred Felner, 1939.

Architectural spaces of Nikšić in the period after the liberation from the Turks

Christian Norberg Schulz in book “Architecture, Existence, Space”, defines architectural space as a concretization of existential space, whereby the existential space represents the psychological concept of a relatively stable system of perceptual schemes or images of the environment. (14)

Existential space, as one of the structural elements of man's survival in the world, has its real reflection in the architectural space. The relation between man and his environment is a two-way relationship and from it the architectural space appears as the ultimate product. There is a problem of personal, individual interpretation of existential space and collective interpretation. We can conclude that urban plans should reconcile the appearance of two opposing views. An individual as a person should be satisfied, and should be seen as an integral part of a wider whole. In other words, our personal, individual expressions should have common denominator. These denominators are actually topics whose variations allow an individual expression without great concern about disturbing the collective display.

In this context, some basic characteristics of the Nikšić city are observed, after the liberation from the Turkish authorities, which help us to better understand the elements that formed its basic architectural and urban identity.

The first characteristic relates to the strong meaning of the first regulation plan from 1883. This plan is actually a symbol and as such, it is the main element of Nikšić's urban identity. The Regulatory Plan unites all those differences arising from the individual, subjective understanding of the existential space. After centuries of slavery, the existential space of a free man should be different from the existential space of a man without freedom. The concretization of these two spaces should be opposite. Unlike the Turkish Nikšić, which was built at the foot of a rocky hill, surrounded by high ramparts and under the constant control of the army from Upper City-Bedem, the plan of the liberated city provides a new conception and understanding of space. The city radially spreads in all directions; it is moved into a wide and spacious, flat field. The streets are wide, breezy, and observable and placed in the correct geometric matrix that flows into the regular polygonal squares. It seems that the plan symbolizes free and unhindered movement.



Figure 22, City panorama on the postcard from the 30s

Another characteristic is directly related to buildings built after the liberation. Most of the buildings were built from the old fortress stone, in this way they wanted to remove the material reminder of the former times, but also to use the material for construction due to extremely unfavorable economic circumstances. Texture stone is not visible because the houses are plastered with lime mortar and then painted. The buildings were built marginally, along the edges of the urban blocks and oriented towards

the street in contrast to the Turkish houses of the old city. The houses are either with ground floor or with one floor more with defined door and opening positions, but also with passage to inner courtyards. Roofs are on two side apart from those belonging to houses at the end of the row or corners, where they are on three side. These are enough data for forming a large number of different building variations, mostly individual housing. Buildings of public character are not numerous and usually they are separated and they are not part of the street fronts. In this way, their function and purpose is further defined. Although there are some similarities in design and proportional relations with profane buildings, the interpretation of the theme is more diverse. In this way, the first signs of continuity in building shaping as basic elements that make city's image are noticed.

The next characteristic does not apply so much to the understanding and interpretation of architecture as to the spirit of collectivism and the common idea of raising the city that was tied to the first regulation plan. In the time of great poverty in which Montenegro was at that time, to build an entirely new city with the entire necessary infrastructure and all the contents, some of which for the first time appeared, is a great undertaking.

Indicators of the architectural and urban space of Nikšić

The most important indicators of the architectural and urban space that appeared in Nikšić, immediately after the implementation of the first regulation plan, are given through the basic elements as the nodes, places and paths in correlation with the landscape level of the architectural space.

Places and nodes

According to Kevin Lynch, places or nodes are strategic points in which an observer can enter, such as intersections of important roads, high concentration areas of certain characteristics. (15)

Concentration or density is the ability of a certain object mass to make the building the center of different activities. The effect of mass, density and concentration increases with the symmetry of the object and certain solitude of it in relation to the environment. Usually the mass of the object is accentuated by its verticality or by the rise in relation to the environment. In this context, we can mark the St. Vasilije Ostroški church as a typical place or node. Its verticality stems not only from its height, which is larger to its width, but also on its location at the top of the hill and the particular horizontality of the Prince Nikola's Palace, which is in the immediate vicinity.

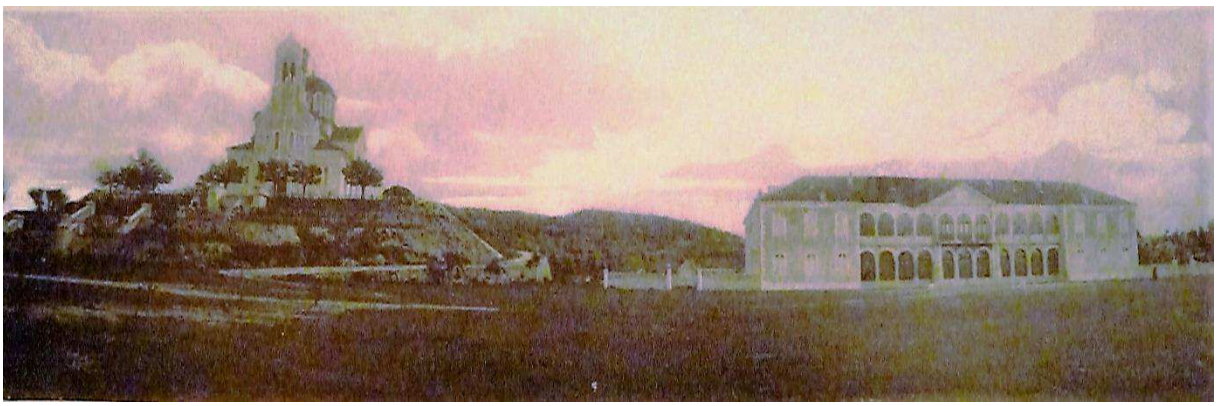


Figure 23, Verticality of the church and horizontality of the palace, photo by Rudolf Mosinger in the 30s

The enclosed spaces have a strongly expressed social character and importance. Fenced space invites people to gather with a public common goal. In this context, the central city square or today's Liberty is a typical example.

It is, conditionally said, fence originates from its fronts, which clearly define the rectangular base in which corners the streets flow and along its long axis, crosses the main pedestrian street.

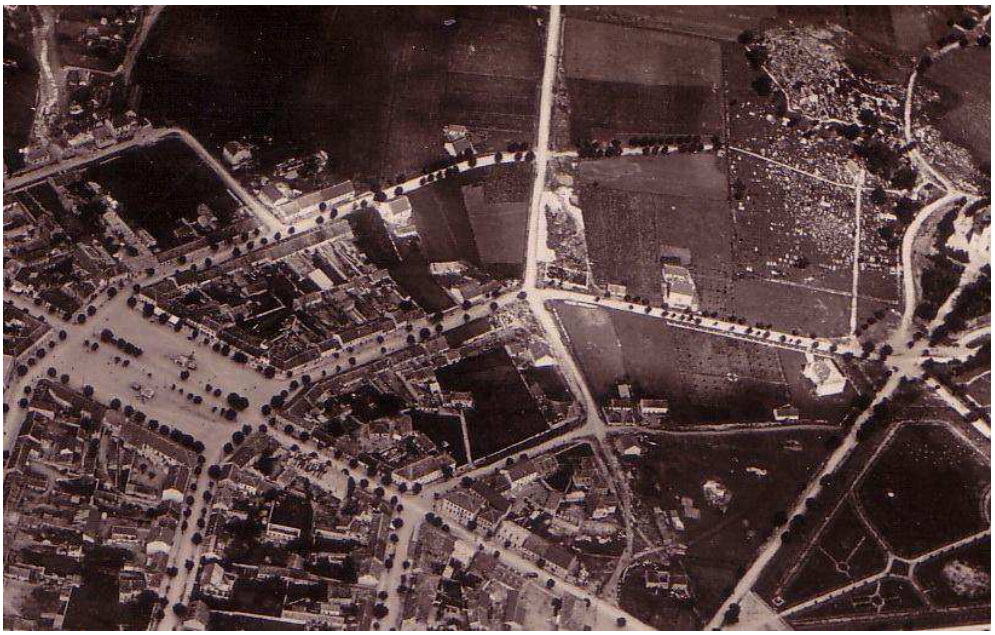


Figure 24, View on the central city square, streets, church and city park in the 30's

Paths

According to Lynch the path is a road by which the observer usually or potentially moves while the axis is a symbolic direction that connects elements into a whole. In practice, these terms usually coincide. There are several streets in the newly built Nikšić, which correspond to the main roads in the city. There is the street connecting the old, Turkish city with the central square, the streets that are entering the square, the street that connects the south with the central square and the street that connects the south with the square in front of the church. This street system is strictly geometric with clearly defined directions. These streets mostly have a figural character that is achieved by a two-sided, continuous, connected surface that assumes a certain density and requires that houses belong to the same type. Therefore, we look at buildings as surfaces and not as volumes. The monotony is avoided by the fact that the streets possess a dynamic continuity.

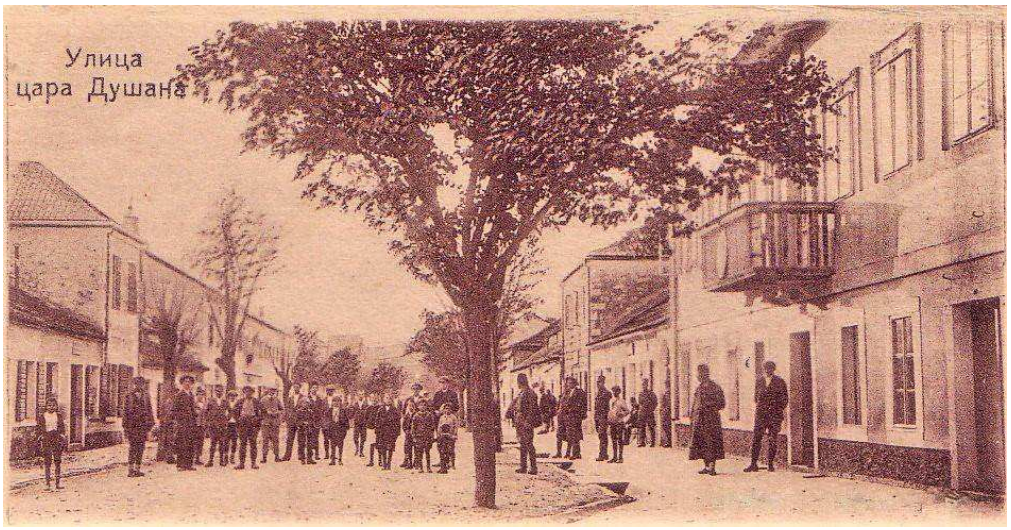


Figure 25, The Emperor Dušan Street, today's Karađorđeva Street in 1925.

We can consider the path as a symbolic phenomenon. In ancient Egypt, the roads are mostly straight and lead into a place or object. In ancient Rome, we have the occurrence of the paths doubling around one axis, which gives the effect of better understanding of the object and the whole environment. And here the St. Vasilije Ostroški Church can be taken as a typical example. The access to the church is provided through a monumental staircase and two lateral, symmetrically mounted ramps. These structures enhance the verticality of the object. The staircase as a specific type of path itself have a highly vertical nature. They provide a person with a sense of winning over gravity and they are a powerful expression element. For example, the city stairs are often built to establish a link between a temple on the top and a square at the foothill. In this way, the transition from one existential level to another was concretized.

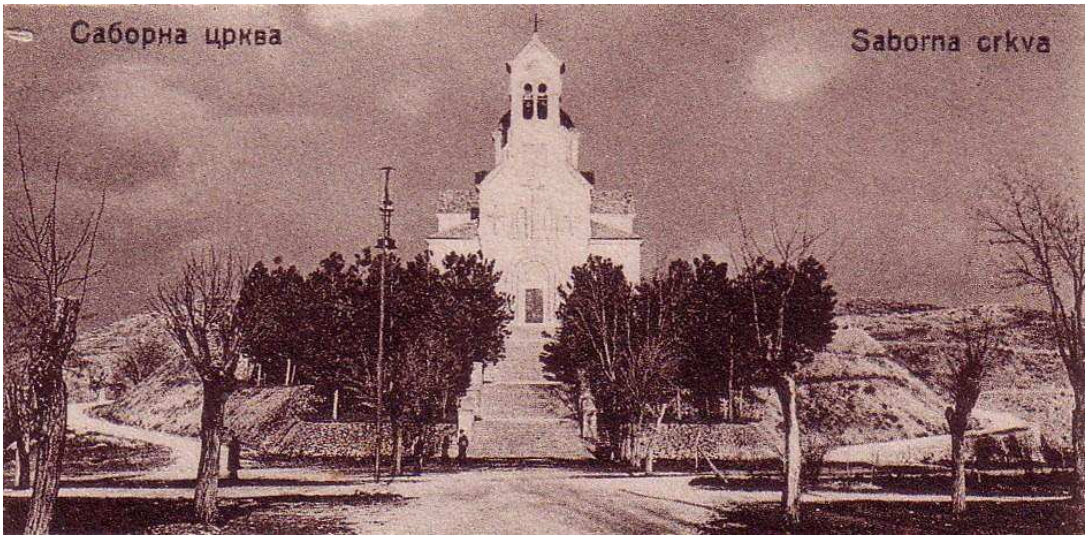


Figure 26, Staircase and access ramp to St. Vasilije Ostroški church, in the 20's

Landscape level

Architectural space is also concretized through the relation of the existential space perception to nature. Here, park architecture is seen as an example of this interaction. For example, if we look at the Baroque landscape, it is always slightly more than a geometric network.

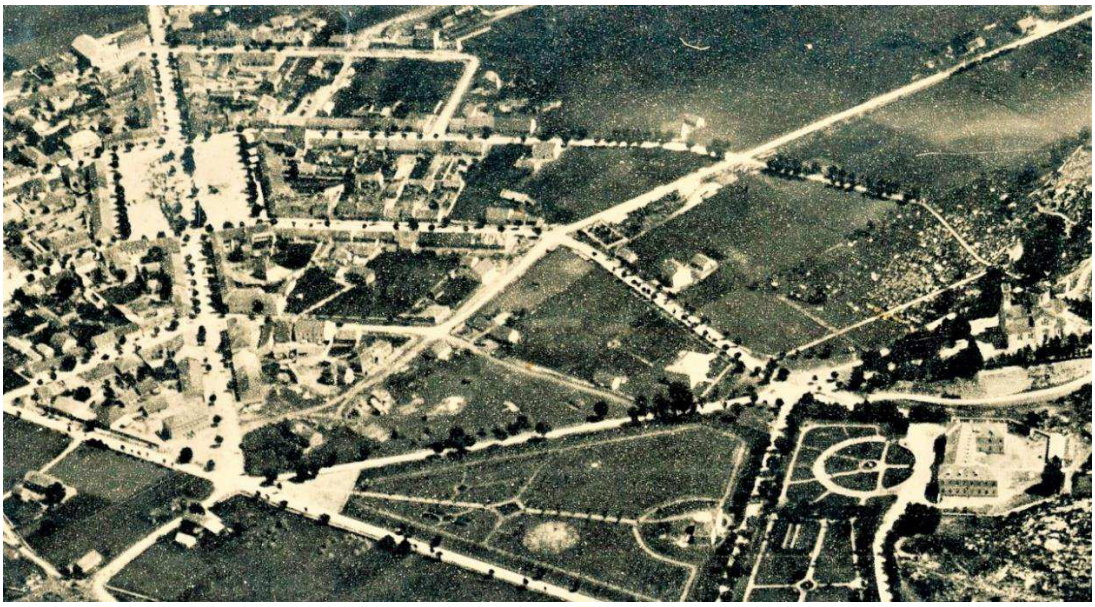


Figure 27, View on the central city square and city park in front of the palace in the 30's collection B.Roganović.

It connects three qualitatively different views, such as the civilized world, shaped nature and unformed, wild nature. This structure becomes more complete when it includes an urban environment that, in the case of a baroque landscape, is located on the other side of the castle. The castle itself is a real life from which the world opens. Today, such gardens are considered a desire for absolute power. However, these parks also have a human trait since they are humanized by the structure. In this context, we can observe the city park and the palace of Prince Nikola. Although it was originally intended to build the courtyard in the axis of the main pedestrian street, it was abandoned, probably due to the pretentiousness of the building in relation to the buildings of the ordinary citizen. The palace was moved to a location near the church. With its horizontality, palace is contrary to the verticality of the church. Still with the church, it makes a harmonious composition. The Baroque-designed Park extends in front of the palace and further enhances its monumentality. However, that the whole system were not subordinate to luxury, the verticality of the church seemed to warn and make the experience of the architectural space calmer.

Conclusion

After liberation from the Turks, Nikšić gets the features of a modern city thanks to the first regulation plan by the architect Slade. This plan is a base that gave the direction and the way of building a city. By increasing the number of inhabitants, the old habits and customs are abandoned. Ten years have passed since the liberation and the Reading Room, the Singing Society, the Theater, and then all important facilities necessary for the urban life of citizens such as schools, hotels, bookstores, banks, railway stations have been built in the city. Soon the first industrial facilities started to work, and the publishing activity was rising since there were two informative magazines "Nevesinje" and "Narodna misao" for such a small city.

The period from liberation to world wars is significant in order to establish an urban base where the continuity of all future periods in the city life will be built.

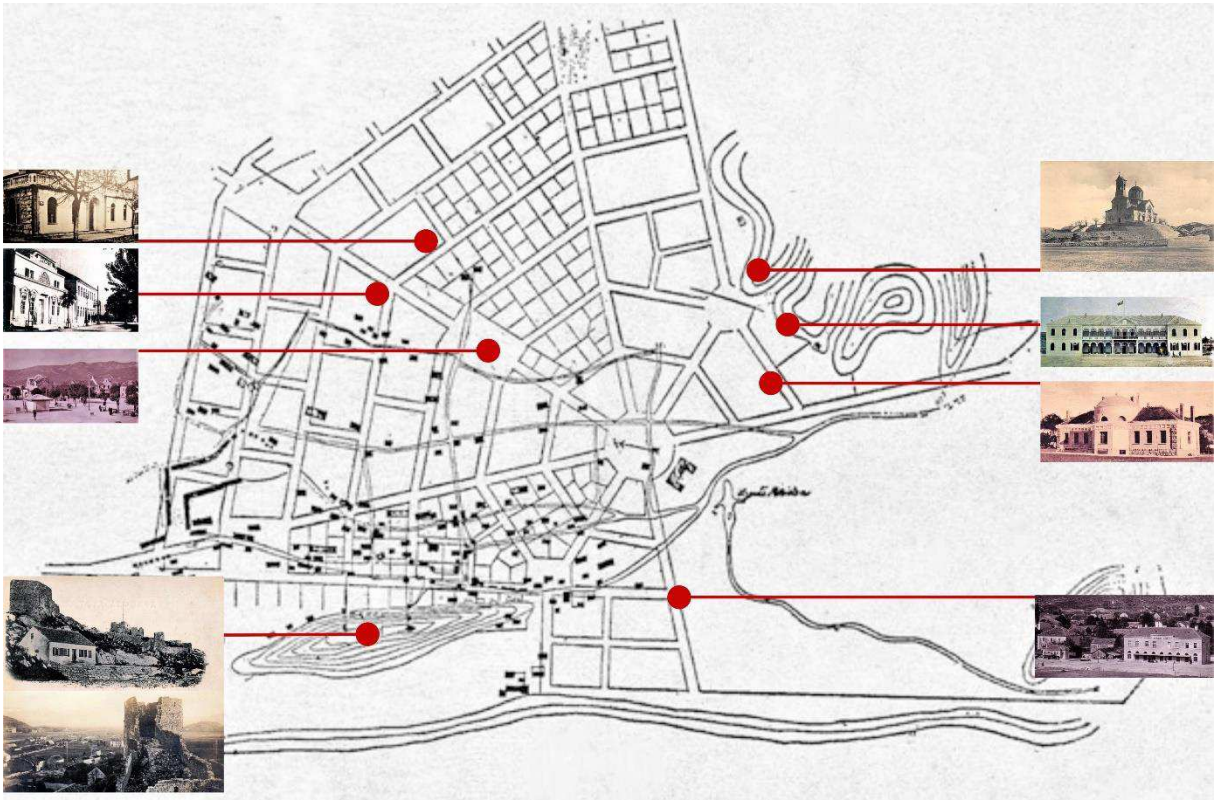


Figure 28, Locations of some characteristic buildings

Bibliography:

(1) Veljko Šakotić, Nikšić u knjaževini (kraljevini) Crnoj Gori, Nikšić 1996, p.101
(2) Maksim Maksimović, prvi regulacioni plan Nikšića, Komuna br.9, Beograd 1961.
(3) Glas Crnogorca, br.25, Cetinje 1894.
(4) Dušan J. Martinović, Portreti, Josip Slade (1828-1911), Cetinje 1991, p.45
(5) Glas Crnogorca br. 40, 1885.
(6) Nebojša Adžić, Arhitektura crkve, Caborna crkva Svetog Vasilija Ostroškog u Nikšiću 1900-210, Saborna Crkva Svetog Vasilija Ostroškog, Nikšić 2010, p.50
(7) Veljko Šakotić, Nikšić u knjaževini (kraljevini) Crnoj Gori, Nikšić 1996, p.117
(8) Onogošt br.8, Nikšić 1889.
(9) Veljko Šakotić, Nikšić u knjaževini (kraljevini) Crnoj Gori, Nikšić 1996, p.103
(10) Slobodna misao br.240, Nikšić, 1927.
(11) Slobodna misao br.299, Nikšić, 1928.
(12) Dr Zdravko Ivanović, Nikšić, urbano-geografska studija, Srpska akademija nauka i umetnosti, Geografski institut „Jovan Cvijić“, Beograd 1977, p.87
(13) Vladana Putnik, Uloga sokolskih domova u modernizaciji jugoslovenskog društva (1918–1941), naučni rad
(14)) Christian Norberg Schulz, Exsistence, Space & Architecture, Studio Vista, London 1971, p.42
(15)) Kevin Lynch, The Image of the City, The MIT Press, Cambridge 1960, p.72

Photo sources:

Figure 1- Bibliothèque nationale de France

Figure 2,4,5,20,21- Archives of the Nikšić

Figure 3, 28- author of the text

Figure 6,8,11-17,19, 22,25,26- Private collection

Figure 7,9- Elaborates on protection of cultural heritage in the territory of Nikšić, Uprava za zaštitu kulturnih dobara, Cetinje 2014.

Figure 10- Taken from the monography Caborna crkva Svetog Vasilija Ostroškog u Nikšiću 1900-210, Saborna Crkva Svetog Vasilija Ostroškog, Nikšić 2010.

Figure 18, Taken from the monography Nikšić, tragom starih fotografija AB, Nikšić 1995.

Figure 23- Private collection of Ognjen Bjelica

Figure 24, 27- Private collection of Boško Roganović

Chapter 7:

The city development through post-war urban plans

Josip Šilović Slade's regulation plan was applied in the continuity in the first half of the twentieth century, as long as historical circumstances allowed it. The Balkan wars, the First World War and the Second World War, have left an indelible mark on this region, both in terms of human victims and material destruction.

One historical event from the Second World War has left an indelible mark in the city's life. The occupation of the city began when the Italian troops entered the city on April 17, 1941. Occupation lasted until September 18, 1944.

Academician Branislav Kovačević in a series of texts titled "Allied bombing of Montenegro in 1943 and 1944" says that nothing indicated that the bombing would come. In the early spring of 1944, numerous formations of allied airplanes were flying over Nikšić almost every day. They headed north to bomb Romania / oil resources in Ploiesti, then the northern parts of Yugoslavia, Hungary, Germany and Austria. The exhausted and hungry population of the city beneath Trebjesa was pleased to observe them and to listen their recognizable sound, which we perceived as an indication of the almost defeat of fascism and the arrival of freedom. Nobody suspected that "allies" also for our city have prepared a terrible, deadly cargo of bombs. (1)

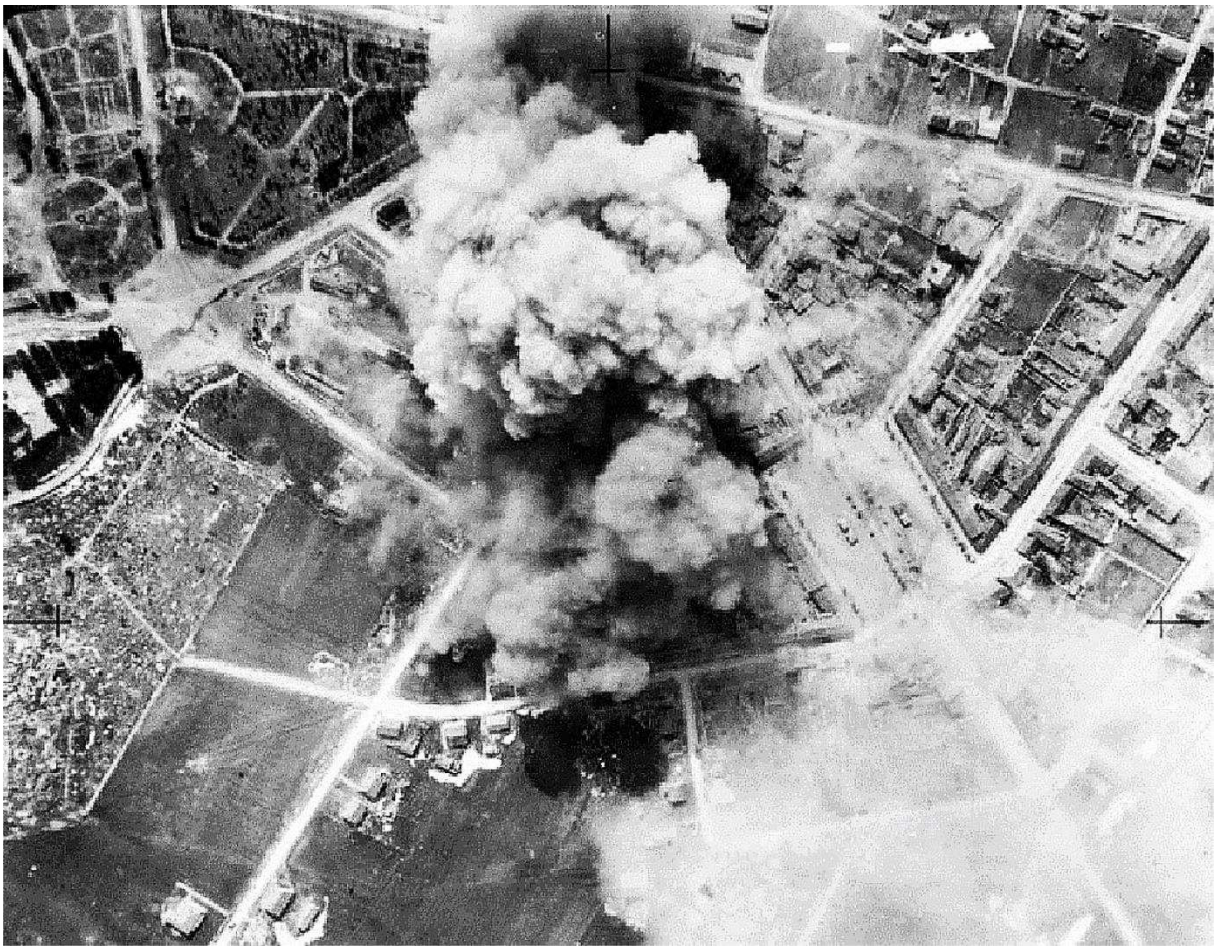


Figure 1, Allied bombing of Niksic in 1944

Niksic was bombed twice on April 7th and 8th. At that time, the city had about 5,000 inhabitants and 10,000 refugees. The then mayor of city, Jevrem Šaulić was writing to the International Red Cross in

Geneva, that under the ruins were found about 500 men, women and children, while the other parts of the population were without shelter and help. Enemy planes not only filled the city with the heaviest caliber bombs, but were still shooting civilian population by machine guns and firearms from aircraft.

On Saturday, April 9, Radio London reported, that during the attack of the British "Velington" on Nikšić were dumped blocks bomb of 2,000 kilograms. Half of town was ruined or damaged. Nikšić was bombed at the request of Marshal Tito. (2)

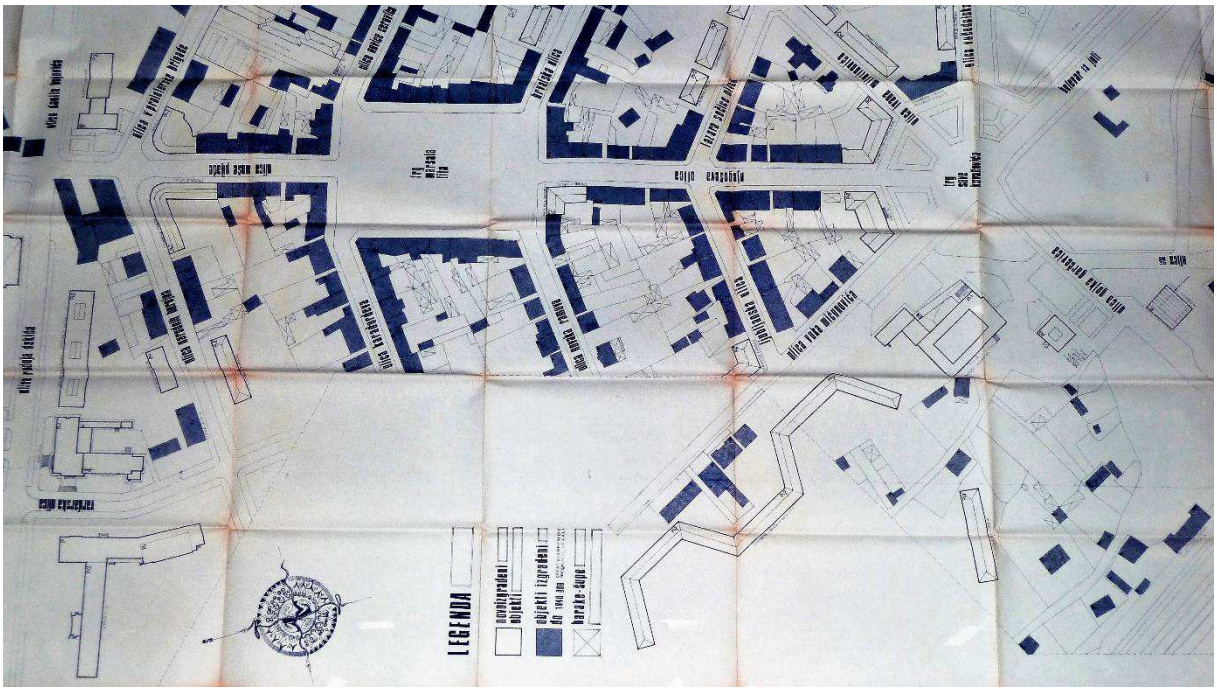


Figure 2, Buildings built up to 1940 - dark color and those built later-bright color in the narrower core of the city

Apart from Nikšić, the allies bombed other major cities in Yugoslavia, such as Belgrade, Novi Sad, Niš, Zemun, Podgorica, Danilovgrad, Zadar and others. This controversial event remains to be investigated. According to some interpretations, the bombing was carried out with the aim to destroy the remaining enemy units. However, the local population had the greatest losses. One fact is clear, that is, the number of victims was high and that cities were almost completely destroyed. In Nikšić more than half of the buildings were destroyed as well as the entire archive of the city.



Figure 3, Regulatory Plan of Nikšić, 1941

The post-war development of Nikšić required the rapid development of the urban planning. There was no institution for dealing with the implementation of urban plans and controlled construction of the city after the Second World War. The organization of the urban planning service was gradually implemented.

By investigating the city archives of Nikšić, a plan dating from 1941 in a rather damaged condition was found. The plan demonstrates the continued application of the Slade Plan.

The Council for Urbanism, Communal and Housing Affairs was first formed, during the time it become a Council of Urbanism in 1955. The Municipal Institute for Urban Planning and Design was founded in December 1963, led a unique and thoughtful policy of urban and architectural design of the city, from studies, and analyzes to detailed projects. Hence, design organizations or individuals outside of Montenegro did all post-war urban plans of Nikšić. We can notice that Nikšić was without urban plans in the period from 194-1958.

The brothers Stojanović Regulatory Plan, 1952

Niksic's first post-war urban plan was given to be done to the project studio of the brothers Stojanović from Belgrade. They built the basis of a new plan on which the Municipal Commission gave critique, and plan was abandoned.

According to this plan, the city should to be built in stages over a period of 20 years, when, as predicted by the rapid growth of the industry, the city will have 30,000 inhabitants. The plan was designed so that the city area was 430 ha. Of this, 48% of the dwellings went to the apartments, 20% on public spaces, 14% on the streets, squares, and 18% on green and other areas. The population density was 150 inhabitants per hectare. Of the entire space on which the city was spreading to educational and cultural facilities, 19ha was used, on health-social 12ha and on recreation 10ha. (3)



Figure 4, Model of the urban plan from 1952

This urban plan predicted the city's expansion towards Zeta and Bistrica, where a 500-meter forest zone will be lifted to protect the city from the smoke of the Boris Kidrič ironworks. Construction of Nikšić continued on the existing housing construction. This urban plan envisaged only the replacement of old and worn-out buildings with new residential buildings. The plan envisioned urban units of three to six thousand inhabitants, which would include primary schools, cultural centers and other facilities. The periphery of the city will be the ironworks and the future aluminum combine, the railway node

traffic with two separate station one for passengers and other as cargo station, and the old part of the city - Onogošt where free construction will be provided.

This urban plan suggests that the main roads, which connect Nikšić with the cities from its surroundings, such as the then Titograd and Trebinje, as well as the main roads that connect it with the north and south of the country, have to bypass the city. It was foreseen that they only have contact with the city in three places. It was planned to raise the main city park, recreational zones, etc.

As we can see, this plan has shown the desire for realization and regulation of wide-scale interventions. The then economic conditions were not matured for such great undertakings, so we can conclude that this plan was not in line with economic possibilities. Hence, it is not surprising that its application has been dropped.

General urban plan of Nikšić, Josip Saisel, Dragan Boltar, 1954-1958.

The second postwar urban plan of Niksic was done in 1954 by the Urban Planning Institute of the Faculty of Architecture, Construction and Geodesy in Zagreb, whose designers were professor, architect Josip Saisel and assistant professor Dragan Boltar.

Dr Zdravko Ivanovic, who was the first one to deal with the research of urban plans that were shaping Nikšić as city, gives a description of this plan. Within the boundaries that go from the Duklo Bridge on the Zeta River, then by Bistrica River to the eastern fence of the Boris Kidrič ironworks crossing the Nikšić-Šavnik road. Then it goes by straight line to the bank of The Gračanica River. From there goes by the right bank of the river, including the "Budo Tomović" settlement to the bridge on Gračanica River, from this bridge to the Ozrenići road in front of Trebjesa and then to the source of the river Mrkošnica, then by this river to the Small bridge. From the Small Bridge by industrial railroad of ironwarks to the railway, from the railway line to the Petrović houses. Then by the foothill of Studenačke glavice to the place where the railway line and the Nikšić-Trebinje road are crossed, from there by the railway line by the river Zeta to the Duklo bridge.

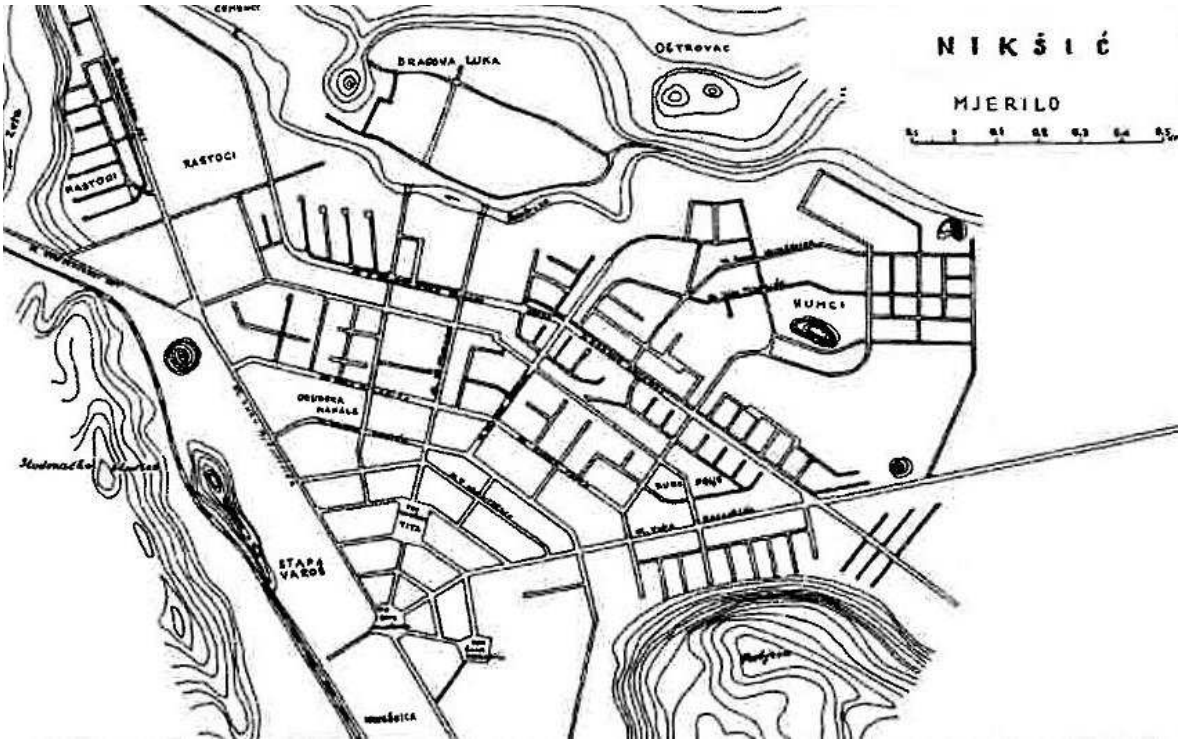


Figure 5, General UrbanPlan of Nikšić, Josip Sajsel 1958

It is important to note that this urban plan for the first time clearly defines and determines the wider and narrower construction area of the city.

This plan has some similarities with the Slade's plan regarding the central green belt in which the construction of social, public and representative facilities is foreseen. The Slade's plan also forsees that the central part of the city remains as it was built according to Slade's plan.

In addition to the green zone, Saisel's plan also has a zone of collective housing, or a zone of high construction. In this belt, there is block type of buildings with soliter and accompanying objects. It is a multi-storey zone with wide, spacious streets and alleyways where workers from the industrial zone of the city live.

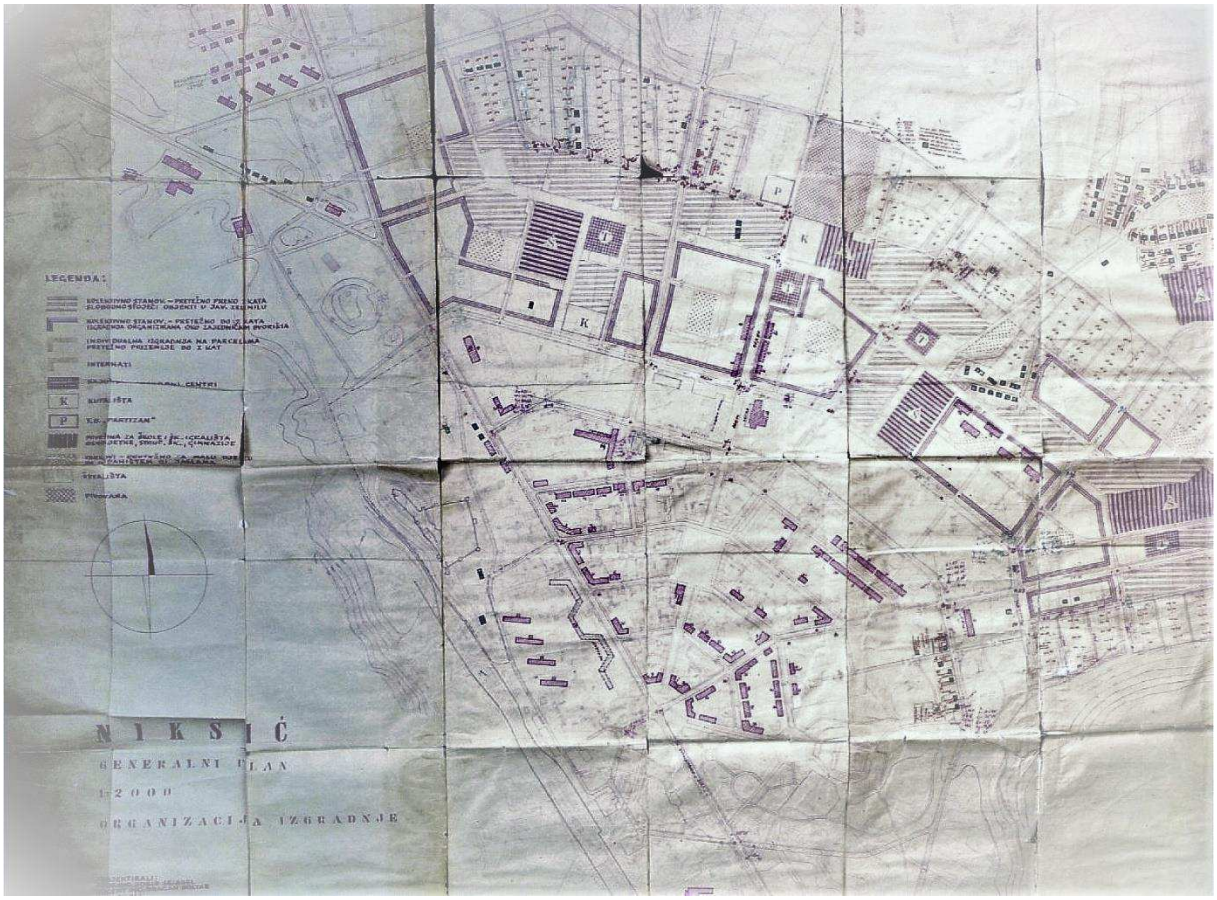


Figure 6, The original plan from 1958

After this zone, the zone of mixed construction, collective and individual, is followed, and after this zone, there is an individual, peripheral, satellite, suburban settlement. The industrial zone is located outside the settlement, but is in direct relation with the city and transit traffic.

Territorial expansion of the city is planned towards the Bistrica River in the north, northeast and east to the industrial zone. In the city, the border construction with business and commercial facilities would still be retained.

The quality of this urban plan is reflected in the fact that it fully accepted the solutions and basic principles of Slade's regulatory plan as the basis from which the modern city evolved. Consequently, there is continuity in the development of the city. In addition, the quality of this plan is reflected in the adequate positioning of buildings of social significance in the continuous zone along the historical core.

Considering that experts outside Montenegro made this plan, it did not contain detailed planned construction, there are only some conceptual and partial solutions, without shooting the terrain and without very important economic analyzes that are necessary for the reconstruction of certain parts of the city. One of the disadvantages of this plan was the position of the beer industry kept in the center of the city, followed by the primary school. Then the location of an eight-floor building was problematic because disturbed the panorama of the city and did not fit into the concept of the Sava Kovačević Square and many other things.

Although this plan envisaged that, the buildings be with two floors and one floor, city planners subsequently reconstructed a series of buildings with three or four floors and five or six floors, which was in complete contradiction with the 1958 plan.



Figure 7, Model of the Sajsel Plan from 1958.

The plan from 1958 provided a lot of space for individual construction, while for the construction of social facilities; it was possible to select easily objects of various sizes. The plan provided terrain for block building construction, both for individual and for social facilities, which contributed to the development of the so-called wild construction in Nikšić, as in other Yugoslav cities of that time.

After the development of this urban plan, the municipality of Nikšić has entrusted the revision of the plan to a special expert commission made by architects Somborski, Maksimović and Radovanović who concluded that the plan should be complemented with a preliminary project of sewage, a preliminary water supply project and a preliminary project of city leveling.

The marshal Tito Square, competiton, Feđa Košir, 1971

In 1971, the Municipality Nikšić gave a general-public competition for the development of the city's main square and the city's central move with the accompanying areas. Although the name of the competition was related to the main city square, Marshal Tito Square, however, the competition

requirements required complete solutions for trade, roads, streetlights, shops and other business premises.

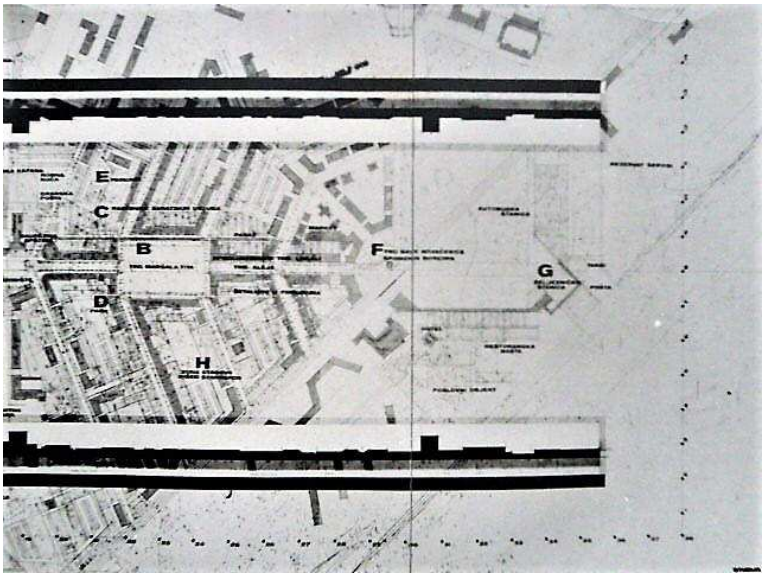


Figure 8, Košir's solution

The working group of the jury was made by eminent expert's architects Stanko Mandić, Uroš Martinović, Ivan Antić, Ljubomir Vojvodić, then Anika Skovran curator of the museum in Belgrade, Radomir Glučević construction engineer and Đorđije Grujičić president of the municipality. From the twelve received solutions for a new urban plan of the city, the first prize was given the solution under the code number 1200 to Feđa Košir, an architect from Ljubljana. Košir liked Nikšić so much that he refused any compensation for his arrival to this city.

Despite the efforts of the leading people of the municipality until 1974, Feđa Košir's plan was not properly implemented that caused city great demage.

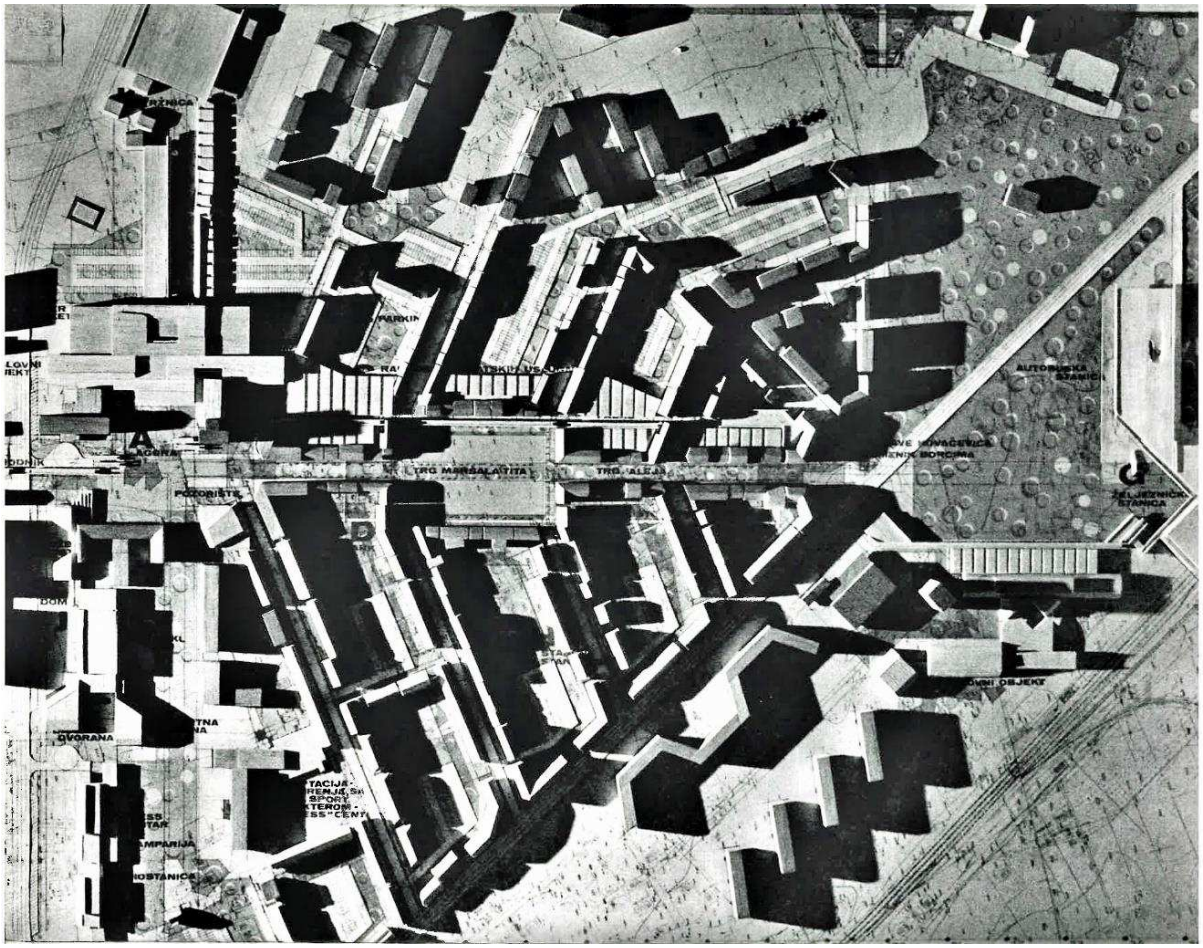


Figure 9, Model solution of the square, Feđa Košir, 1971.

The jury estimated Košir's plan with positive comments on both the traffic solution and the urban concept:

„In a completely adequate way, the scheme of traffic with simplified hubs and a direct organization of wheel and pedestrian traffic is solved. The traffic solution scheme within the city has been successfully solved and acceptable in all, with the remark that the parking space may be oversized for Nikšić both in the present and in the near future.

An accentuated central avenue with attractive surfaces and objects incorporated into a harmonious unity of the old and modern. Functionally and spatially are successfully coordinated structures of bus and railway stations, hotels, restaurants, post offices, and business facilities towards the Square of Sava Kovačević. Successfully are resolved walking tours that open this area towards the city center and the park at the same time. The organization of the Home of Cultural Institutions and the shopping center with the market was carried out with a fine feeling of a measure for spatial relations between the areas and the volume of the city ambience, as well as for the differentiation of functions and traffic flows and surfaces. It is a very successful solution fot the recreation complex and its connection with the city center. The architectural treatment of the foreseen objects and free surfaces shows that the author is excellent in this matter with a lot of sense. "(4)

The Košir solution offered the best connection between the old and the new. The author describes the concept:

„The development of the city center, of course, will rely on what we already have positively and usable on the existing focal points of city life, that is the SavaKovačević Square and the Marshal Tito Square and a recent intensive concentration of activities around the Municipality building, soliter. The distribution of these focal points is linear and sufficiently convincing to define the direction of development, i.e. location of new entrances to the city (railway and bus stations), recreational agglomerations along the 29thNovember Street and sports park on the other side of Bistrica. The inherited elements of the "ideal" city in Nikšić are "historical", but they are so strong that the attempt to create a competing composite dominant will prove prepotent and ineffective. Thus it suddenly reveals that the past and the future can still be friendly if the urban heritage of the Slade theme is supplemented with variations in the rhythm of contemporary design, following the vision of humanistic and human urbanism, whose symbol is the square as such.“ (5)

Košir’s solution gives special attention to pedestrians. Namely, the main city axis from the new railway station to the sports park is the main city street and it will be exclusively pedestrians. The solution offered good coordination of the bus and train stations, hotels and restaurants, post offices and other business facilities towards the Sava Kovačević Square.

Spatial Plan of Nikšić Municipality and General Urban Plan of Nikšić, Urban Planning Institute of Croatia, Zagreb, 1984

The adoption of the Spatial Plan and the General Urban Plan of Nikšić was conditioned by the decision of the municipality to involve the surrounding villages, which gravitated in the immediate vicinity of the city, into the urban area. This decision was necessary because a large number of houses were completely unplanned in these villages, with nearly 18,000 inhabitants living in it, while in the city were about 38,000 inhabitants. The 1958 plan envisioned the city to have about 56,600 inhabitants. This phenomenon was due to inexpensive land outside the city's real estate district, which did not require communal expenditures. The expansive development of the city in the period from 1960 to 1980, accompanied by rapid population movements in the peripheral parts of the city and the nearest villages, caused the unplanned development of these parts. (6)

The Urban Planning Institute of Croatia from Zagreb has done in 1984 the Spatial Plan and the General Urban Plan of Nikšić, which will be adopted in 1986. The General Urban Plan envisaged the division of city region into four units: the central area, the northern area, the southern region, the western area and the industrial zone.

The central area is a completely urbanized area that tends to preserve authentic, inherited urban forms. It is envisaged that the replacement of ground-level houses with multi-storey ones will not disturb the existing ambience. The system of streets and squares is fully retained.

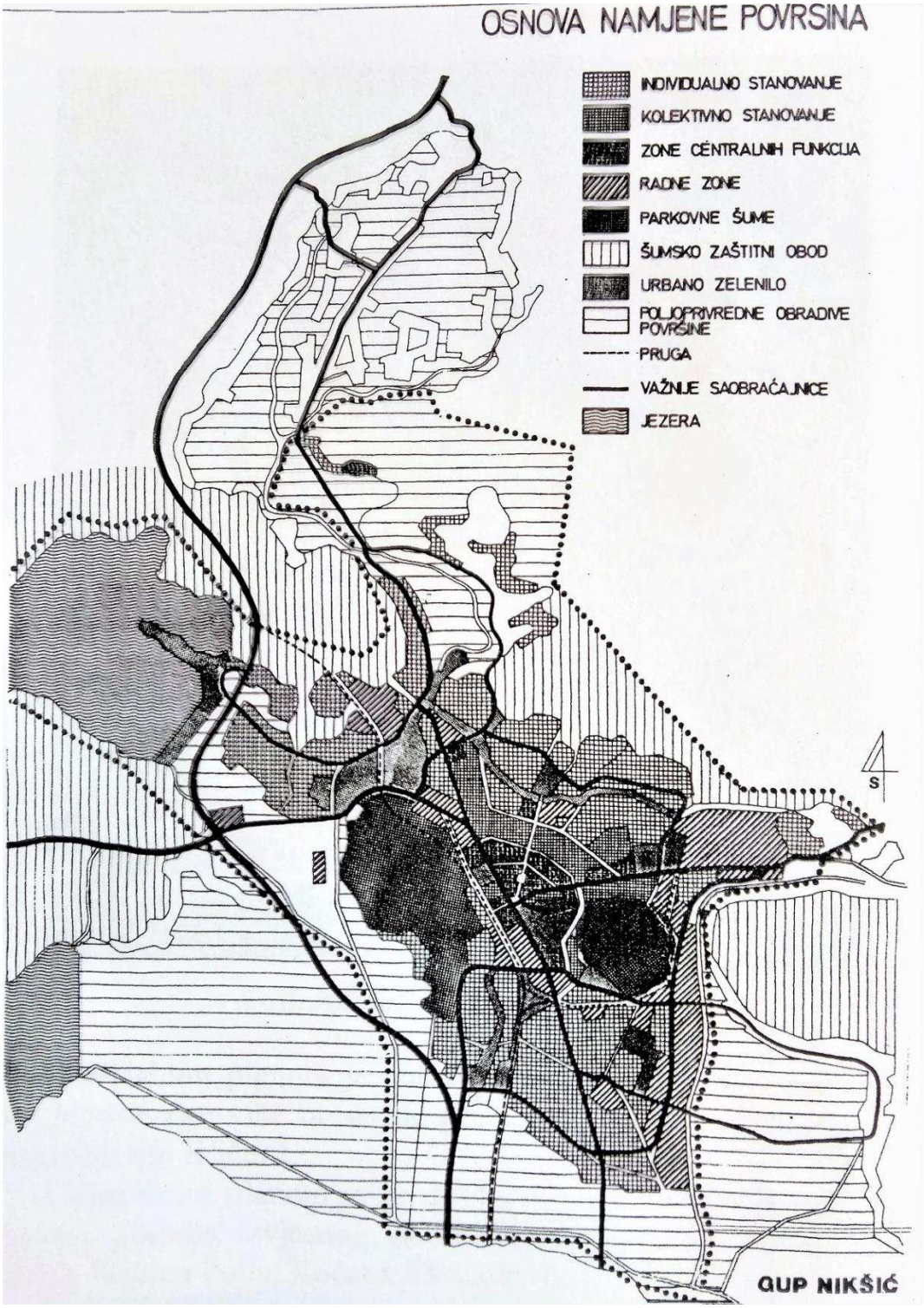


Figure 10, Nikšić General Plan 1986

The northern area proposes the planned arrangement of green areas along the Bistrica River. This part of the city is intended for individual housing construction.

The southern area envisages the shaping of suburban settlements that gravitate in this area, primarily the local communities of Kličevo and Straševina. This part also provides the so-called working space.

The western area is like the northern one, also envisaged for individual housing construction. The green belt is planned along the river Zeta as well as the reconstruction and arrangement of the existing transport infrastructure.

The importance of the General Urban Plan is reflected in the protection of the historic city core and the protection, expansion and improvement of green areas in the first place of the city park and the city forest of Trebjesa hill, Studenačke Glavice, Uzodmir, Bistrica and Zeta rivers, as well as the accumulation lakes Krupac and Slano. The plan particularly highlights the preservation of cultural heritage facilities.

In the implementation of urban plan, some inconsistencies left a greater impact on the city. One of the major failures was the construction of the Department store in the early 80's, which prevented the vision of the 1958 plan to shape the so-called green belt by linking the streets of the eastern part with a boulevard in the western part of the city. However, considering the post-war urban plans of Nikšić, we can conclude that they relied strongly on the Josip Slade plan. The authors of these plans tried to enable the expansion of the city in a logical way, starting from the first city's regulatory plan, sometimes they were less and sometimes more successful.

The first regulation plan not only imposed the urban form and urban elements as its dominant. It brought with a specific architecture that developed on its basis. Post-war plans contained solutions to which this architecture was respected and to which it was given a new life.

The consequence of more or less successful application of post-war plans is directly related to the continuity of the city's construction. This is the main quality of these plans.

The "Boris Kidrič" ironworks and its impact on urban planning



Figure 11. A part of the ironworks complex

The industrial company "Boris Kidrič ironworks Nikšić", was founded in 1950, and the planned construction was completed in 1961. Engineer Rihard Merker supervised the construction of the building. From its opening until the early 1990s, this industrial giant was one of the most important industrial facilities not only in Montenegro, but also in Yugoslavia. After major political and social changes in Yugoslavia and Montenegro that occurred in the early 1990s, ironworks experienced significant transformations. Production and sales of steel dropped rapidly. Salvation was required in privatization; however, none of the several privatizations was successful. All this led to the fact that the former giant, who employed some 7.5 thousand employees at the time, reduced the number of employees to 1300, until a few hundred employees

today. Only time will show the future of the factory and former supporter of the economy not only of the city, but also of the entire country. The uncertain future of the ironworks reflects on Nikšić's perspective too.

It is important to note that with the ironworks opening the basic guidelines for the overall socio-economic development of Nikšić were formed: the development of communal economy, trade and catering, health, cultural, educational and other institutions and activities. The impact of the ironworks on the city is reflected in the construction of the Humci and Budo Tomović workers' settlements, which significantly influenced the shape of the peripheral city parts.

The workers' settlement Humci

Architect Vsevolod Butovski designed this settlement in the early 60 of the 20th century according to the urban plan. The plan provides settlement settings for several thousand workers and their families in the immediate vicinity of the ironworks. Accommodation facilities consist of two types of buildings in terms of floors, ground and one-floor facilities.

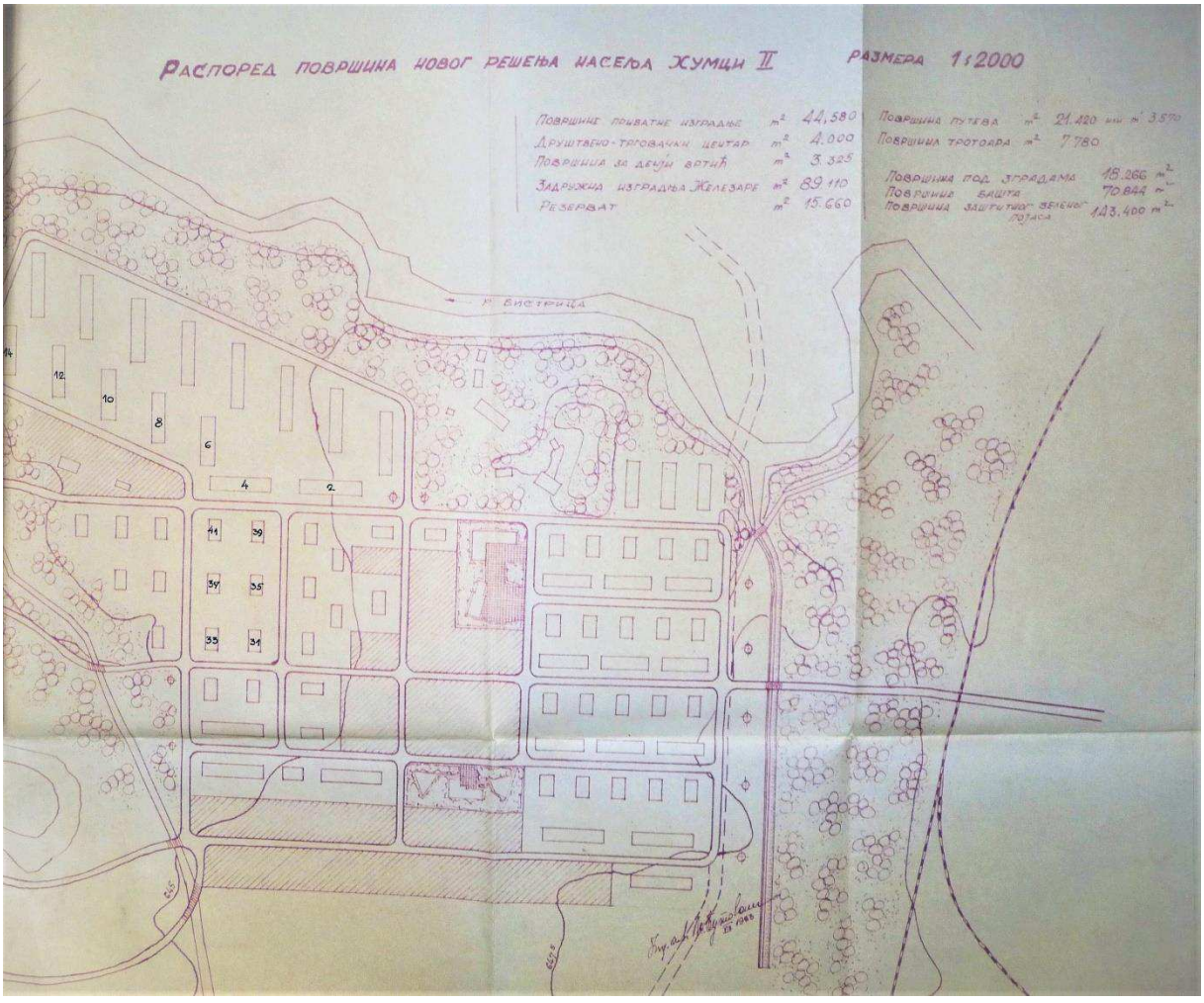


Figure 12, Urban plan for the workers' settlement Humci, Vsevolod Butovski, 1963

The ground floor, rectangular shaped, buildings are positioned in the western part of settlement. These objects are set in two parallel rows. Buildings with two-bedroom apartments make a lower order compared to buildings with one-bedroom apartments. With the shorter side, buildings are facing north.

This part of the city is in the immediate vicinity of the foothills of the surrounding mountains with the strong north winds. The shafts of the lower row of buildings are arranged so that the shorter side comes to the axis of the streets of the upper row. In this was the impact of wind is not so strong. The buildings are without special architecture, built of brick with a pitched roof.

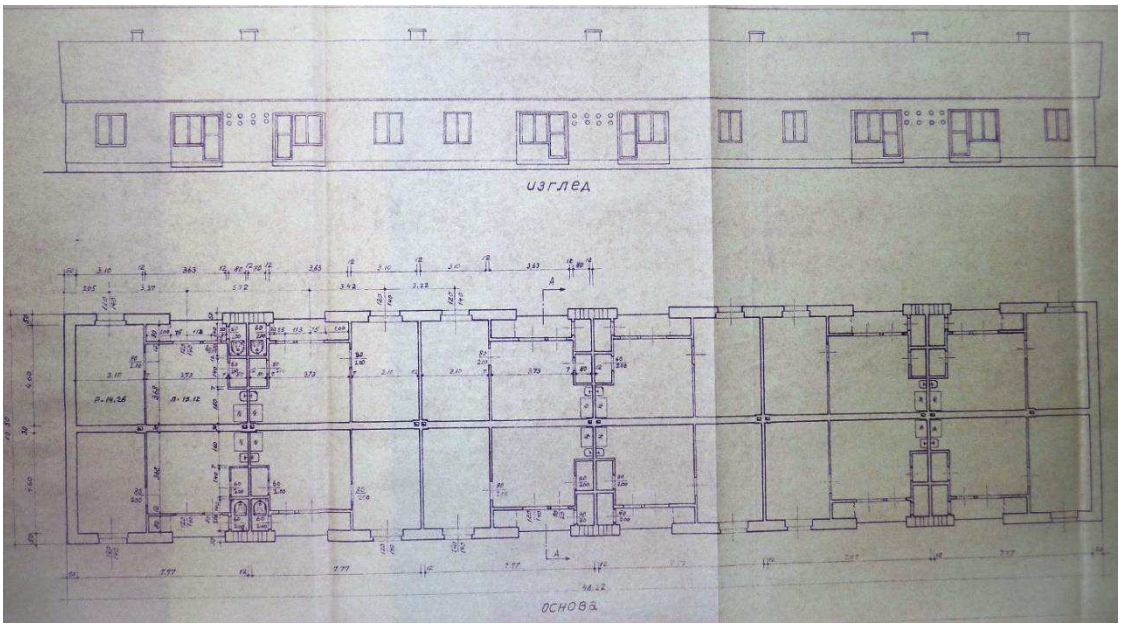


Figure 13, The ground floor and facades of a typical workers building

Over time, this part of Humci will have significant changes primarily by upgrading inhabitants' apartments. The increase in the number of family members as well as the dysfunction of apartments has influenced a larger number of users to build up and to shape their living space. This led to large unplanned construction and devastation of space. However, the positive aspects of life are related to social interaction, the formation of a social milieu. In addition, the settlement has large green areas given in the shape of landscaped gardens in front of each apartment. Almost every apartment unit has a vineyard and a green bushes fence.

One-storey buildings are located in the eastern part of the settlement. They were set parallel to each other without shear. Buildings are made of bricks and they have pitched roof with a simple and modest architecture, which stands out only in the presence of loggia and glazed stairways. Between the buildings are green areas.

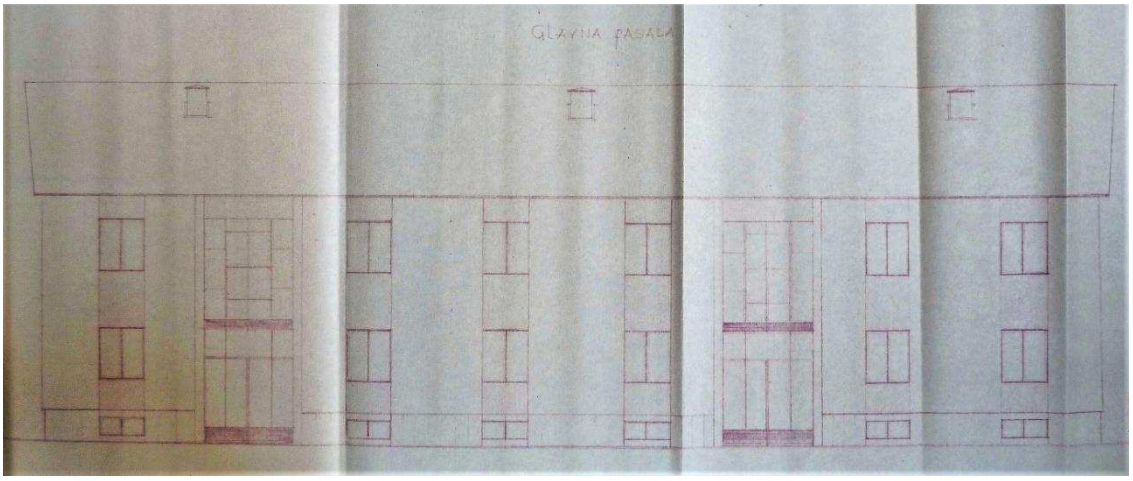


Figure 14, The facade of a typical two-story building

The workers settlement Humci has many facilities such as shops and craft shops. As a particularly valuable object, with its architecture stands the kindergarten "Sun" which was designed by an architect Pavle Popović in 1975.

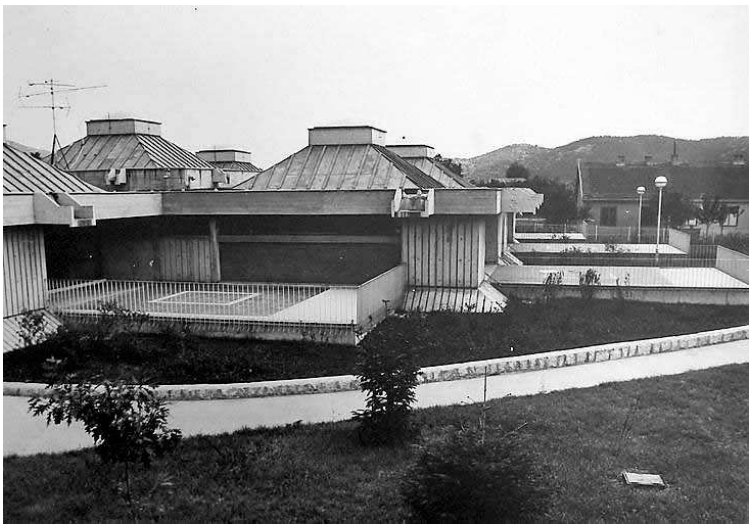


Figure 15, Kindergarten "Sun", architect Pavle Popovic, 1975

For this object, architect Popovic received the republic's "Borba" award. This award was granted to the best architectural solutions individually in each of the six Yugoslav republics as Republic “Borba” award. The most important award was the Federal “Borba” award, which was granted to best architectural objects on completely Yugoslav territory.

The kindergarten is the multiplication of the house modules in the almost archetypal form, just as the children represent the house. The construction of the building was done in concrete with filling of a brick wall. The dominant elements of architecture are the roof surfaces with the drainage of water on four sides. Lanterns allow zenith lighting. The facility and spaces around it are completely suitable for the child's stay.

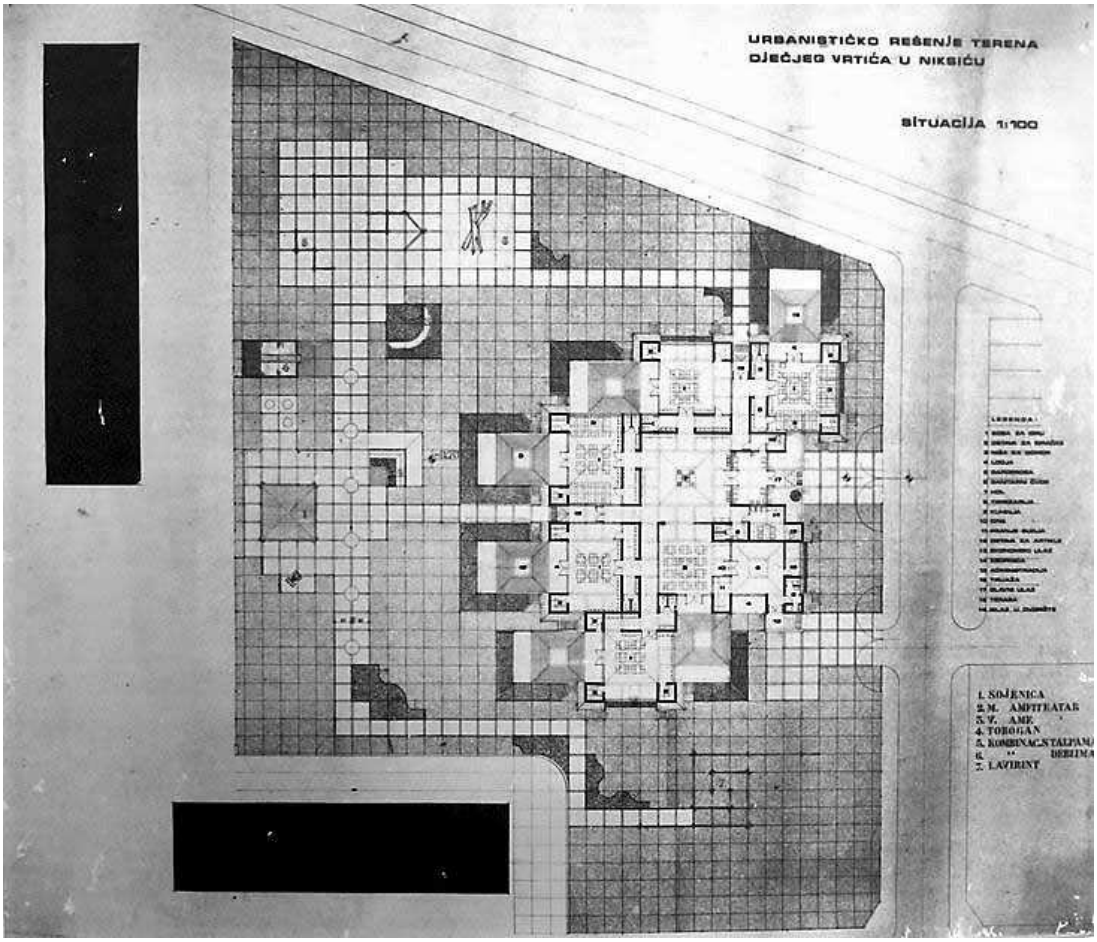


Figure 16, The ground floor of the kindergarten with parterment solution

Architect Butovski plan provided a large park area around the settlement that would represent an additional quality of life. However, socioeconomic conditions left a trace in Humci mainly in the form of unplanned construction and devastation of space.

The workers' settlement "Budo Tomovic"

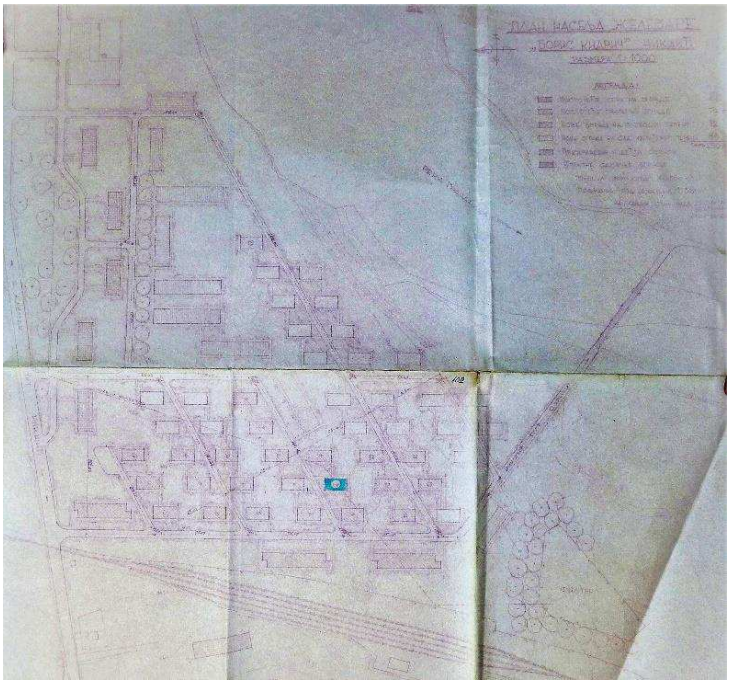


Figure 17, Urban plan for the workers settlement "Budo Tomović"

This workers' settlement is located near the ironworks and is planned for several hundred workers and their families. The settlement is given in the form of parallel streets, which are joined by double-sided rectangular buildings in the form of clusters. Architect Vsevolod Butovski also built the settlement according to the plan.

Buildings have cubic forms with four apartments, which have a day zone on the ground floor, while the night zone is located on the floor. The unusual characteristic of these buildings is reflected in the application of a flat roof, which was not the common solution for Nikšić until then.

It seems that this settlement, especially in the later period, became a place of great devastation.

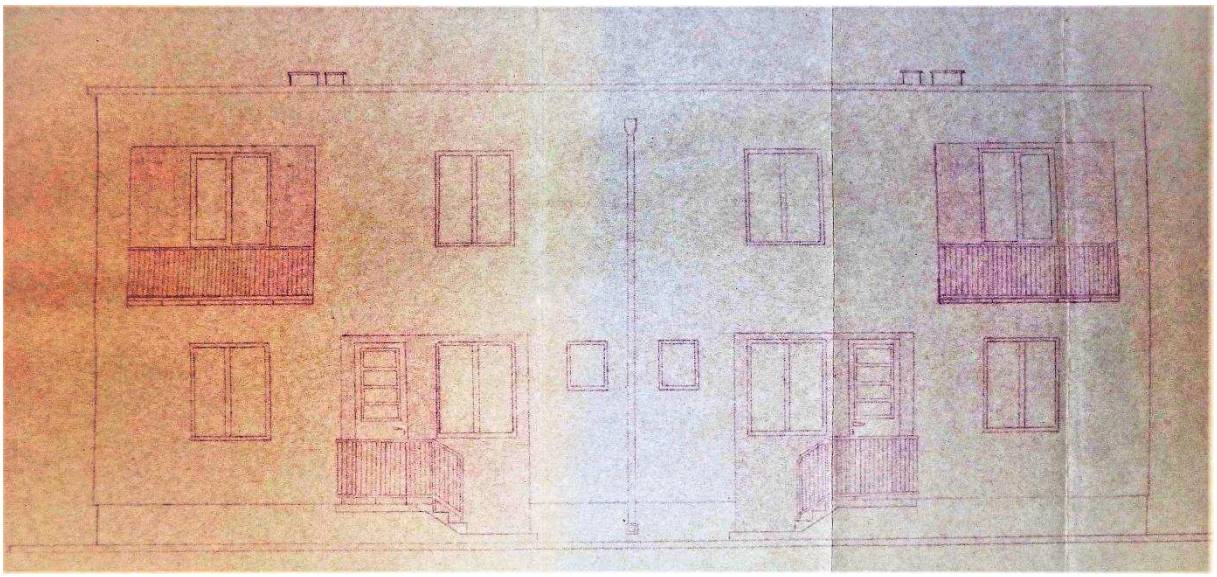


Figure 18, The facade of a typical two-storey building

Between workers' villages Humci and Budo Tomović, the ironworks predicted the construction of a large sports complex according to the plan by architect Kosta Popović. This complex had terrains for various types of sports, an athletic track and terrains for children. Unfortunately, this plan was not realized.

Conclusion

Looking at the post-war urban plans of Nikšić, we can conclude that they are related on the Slade's plan. The authors of these plans tried to enable the expansion of the city in a logical way, starting from the first city's regulation plan.

The first regulation plan not only imposed the urban form and urban elements as its dominant, it brought a specific architecture that developed on its basis. Post-war plans contained solutions to which this architecture was respected and which gave it a new life.

The "Boris Kidrič" ironworks, as the most important industrial enterprise, was a key element in the economic security of the city. As such, it influenced the shaping of the city through the buildings and facilities for the lives workers, striving to make the quality of their lives better. In this way, it certainly influenced the sense of belonging to workers and, consequently, their identity both in terms of work and in terms of housing.

Bibliography:

(1) Prof. dr Branislav Kovačević, Savezniko bombardovanje Crne Gore 1943 i 1944.godine, Montenegrina, Digital library of Montenegrin culture
(2) Ivan Miladinović, text" Peko traži da se gađa Nikšić", printed in daily newspaper Večernje novosti 13.01.2015.
(3) Dr Zdravko Ivanović, Nikšić, urbano-geografska studija, Srpska akademija nauka i umjetnosti, Geografski institut „Jovan Cvijić", Beograd, 1977, p.93
(4) Izvještaj žirija za Konkurs za uređenje Trga Maršala Tita u Nikšiću, Nikšić 1971, pp. 1-2
(5) Feđa Košir, Urbanističko- arhitektonsko rešenje Trga Maršala Tita, centralnog poteza grada sa pratećim prostorima u Nikšiću, Nikšić 1972, pp. 1-3
(6) Dr Branko Radojičić, Opština Nikšić, priroda i društveni razvoj, Filozofski fakultet Nikšić i opština Nikšić, 2010, pp. 566-567

Photo sources:

Figure 1- the Air Force Museum of Great Britain

Figure 2,3,6,8,12,13,14,17, 18- Archive of Nikšić, building section

Figure 4,7- Taken from the book Dr Zdravko Ivanović, Nikšić, urbano-geografska studija, Srpska akademija nauka i umjetnosti, Geografski institut „Jovan Cvijić" , Beograd, 1977.

Figure 5,10- Taken from the book Dr Branko Radojičić, Opština Nikšić, priroda i društveni razvoj, Filozofski fakultet Nikšić i opština Nikšić, 2010.

Figure 9- Taken from the book Monografija Nikšić, Grafički zavod Hrvatske, Zagreb, 1972.

Figure 11,15,16- Private collection

Chapter 8:

Construction of the buildings in Nikšić after the Second World War

After the end of the Second World War in Nikšić, intensive construction of buildings and reconstruction of the demolished city begins. Some of the most important names of Yugoslav architecture have built their buildings in this city, such as Rajko Tatić, Bruno Milić, Ivan Strauss, Marko Mušič, Đorđije Minjević, Slobodan Vukajlović and others. Objects of the first educated architects in Montenegro, such as Petar Vukotić and Vujadin Popović, were built in Nikšić, whose hotel "Onogošt" was finished by Đirđije Minjević.

Petar Periša Vukotić, was born in Čevo, Cetinje in 1899. He graduated at the Faculty of Architecture in Belgrade in 1931. After completing his studies, he worked on numerous jobs as a leading architect and designer, especially after the Second World War when he and his colleague, construction engineer Veliša Popovic perform a number of tasks entrusted by the state.



Figure 1, Petar Periša Vukotić (1899-1988)

Petar Vukotić and Veliša Popović received tasks from the Ministry of Construction. Due to lack of staff, they used to have the tasks of designer, contractor, republic inspector, members of commissions and state exams, teachers at the Construction and Technical School, and others. (1)

The basic characteristic of Vikotić's architecture is reflected in the simple, mostly symmetrical setting of the building, most often built on the foundation of stone blocks. The constructive system is massive. Either a construction or an attic accentuates the roof. The rhythm of the openings is calm and uniform.

Elementary school was built in period from 1947 to 1948. After the allied bombing in which the elementary school building was destroyed, it was necessary to build a new one. In addition to the National Primary and Teachers' School, the Pedagogical Academy and the Elementary School "Olga Golovic" were located in this building.



Figure 2, Location plan of primary school

There are no reliable data to confirm the primary school was the work of Petar Vukotić. Anyway, we can claim that he is still the author. The approach of solving the object with a symmetrical basis and an interesting solution of the roof level show that Vukotić is the author. In addition, Vukotić is the only educated architect in Montenegro after the end of the Second World War, so it is certain that for such an important building he was engaged as the author of the building.

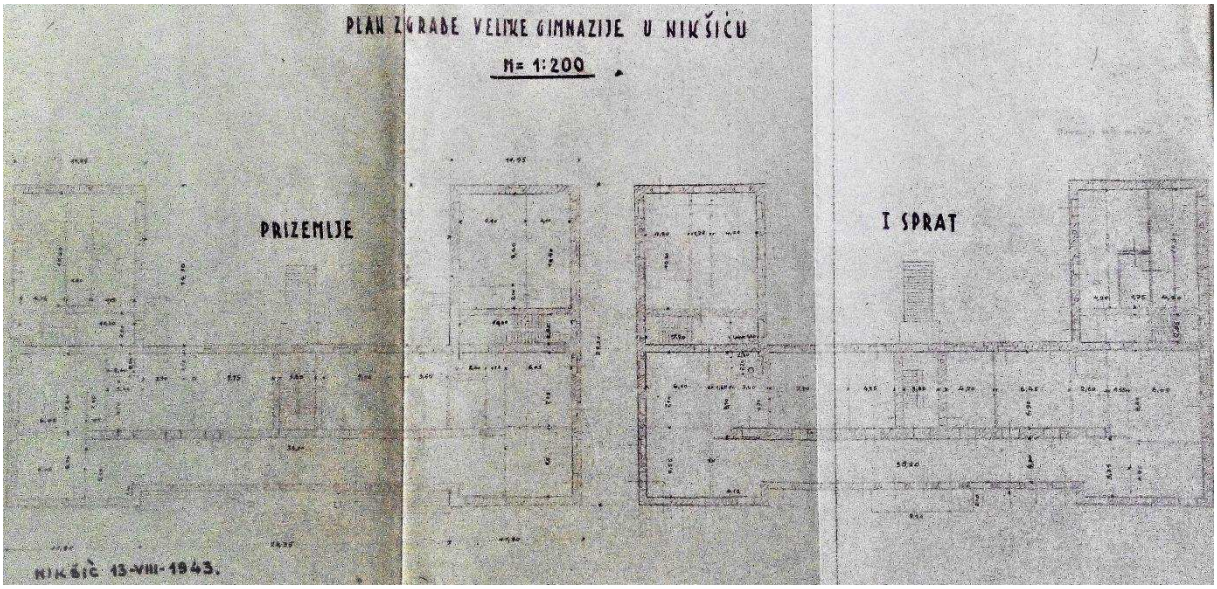


Figure 3, The base of the ground floor and the floor of the King Nikola's Palace, in which the gymnasium and elementary school used to be

The elementary school used to have basis that had the shape of the letter E, with the longest, entrance facade facing east and the side facades towards the north and south. Later, architect Đorđije Minjević will build a gym hall on the central part of building. The inner facade is facing west and a spacious courtyard. The building was probably created on the example of Prince Nikola Palace, where classes were held until the construction of the primary school. Unlike the palace that is decorated with arched windows, the entrance balcony and pillars, the primary school building is without decorations and ornaments with rectangular windows of clear rhythm.

The structure, in terms of surface design, can be seen through the setting of three horizontal strips that extend along the entire building. The first strip starts from the ground and is made of stone blocks. The second strip consists of two rows of windows on the ground floor and the first floor. The third strip is an attic that is slightly withdrawn in relation to the previous two surfaces. Attic hides a single roof facing the yard, which was not the usual solution.



Figure 4, Primary School, "Milorad Musa Burzan"

The entrance is withdrawn inward from the plane of the main facade and is covered with the first floor. Two strong pillars that form a partition of the opening of the entrance into three parts additionally accentuate it. The proportion and decent architectonics made this building striking. It is interesting to note that in Pogorica there is the "Milorad Musa Burzan" elementary school, which, with its design, especially the entrance part, strongly resembles the school from Nikšić.

Over time, this building has become an element of a positive, vibrant identity for all citizens. Firstly results achieved by students and their professors were among the best in Yugoslavia. In this way, positive identification with the construction has been achieved. Secondly, in front of the school a beautifully landscaped park was used by all citizens and contributed to the quality of public areas.



Figure 5, Entrance facade

Unfortunately, the building of the elementary school was demolished in April 1980 in order to build a magnificent building, the Home of Revolution in its place.



Figure 6, View on the school park school

The administrative building of the Construction Company was built in the period from 1955-1958. The rescript issued by the Department for Public Utilities states that the building should be rectangular in the approximate dimensions of 45m with 12m. The height of the ground floor ceiling must be at least

1.50m from the ground level. The roof must be on four sides and the building must have three floors. In the original request of the building, the main facade should have been facing Vuk Karadžić Street. Later, the decision was made that the building should be turned with shorter side towards the street, probably due to the influence of the northern wind.



Figure 7, West facade

In the final solution, the entrance facade is facing towards the west. It is interesting that it was required that the building should be in the Montenegrin-Dalmatian style, adapted to modern conditions. (2)

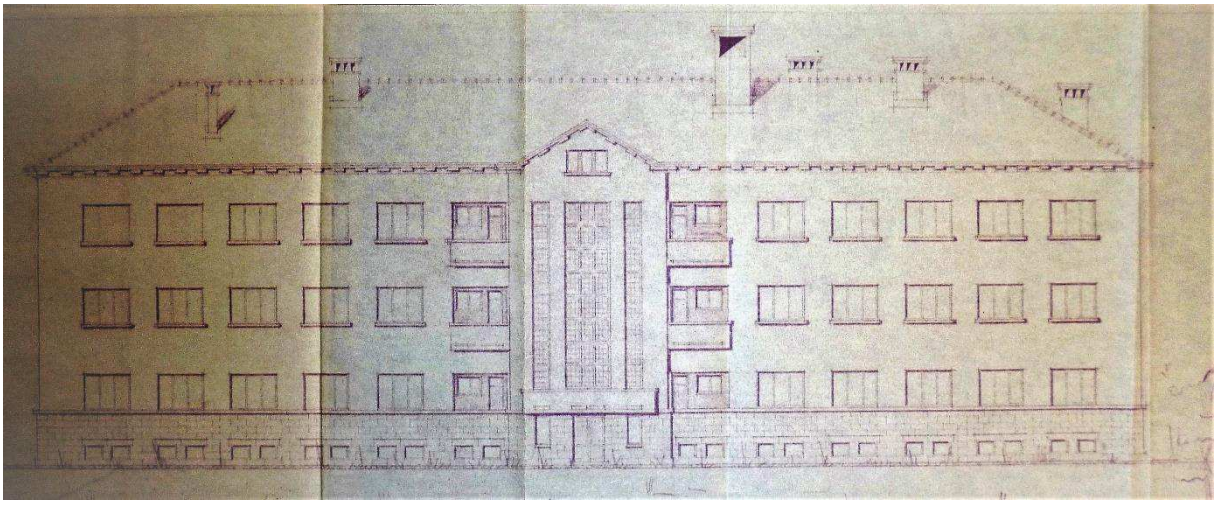


Figure 8, East facade

The building of the Construction Company is a three-story building symmetrically conceived, with two sideways wing, north and south. The ground floor is raised 1.5m from the ground level. The outside is defined by carved, stone blocks. A staircase and a canopy mark the entrance. The backyard facade is

highlighted with a centrally positioned erker with vertically positioned window strips. Within it there is a staircase. Also on the rear facade, there are the balconies.

On the ground floor there is a hall from which it goes either to the offices that are placed on both sides or on the floors that have the same organization of space. Today in this building is the Police Station Nikšić.

Bruno Milić was born in Rijeka in 1917. He graduated at the Architectural department of the Technical Faculty in Zagreb in 1942, after which he was involved in team of architects Jamnicki and architect Jurišić on the project of the building complex of the Technical Faculty. In his long and rich career, he designed a number of important buildings and urban plans for the reconstruction of cities after the Second World War. In particular, the project for the urban renewal of Zadar is highlighted. (3)

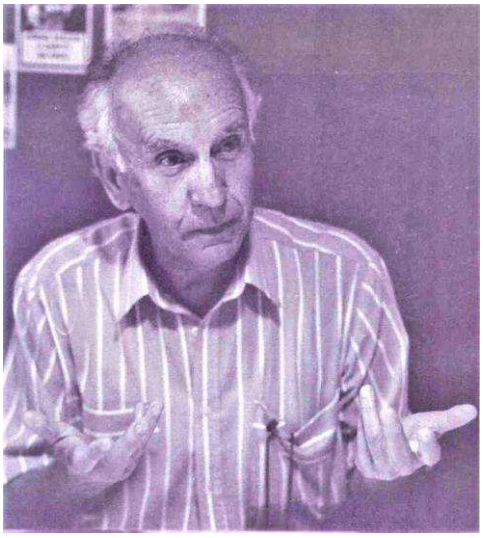


Figure 9, Architect Bruno Milić(1917-2009)

For Nikšić, architect Milić is significant for two reasons. Firstly, he was associate to professors Josip Sajsel and Dragan Boltar, on the first post-war urban plan of Nikšić. This plan is significant because it enabled the logical development of the city in continuity with the first regulation plan of Josip Slade from 1883. The Sajsel's plan clearly defined the city's zones and their purposes. In this way, the old city core is protected and new contents are enabled to develop smoothly and in accordance with the original setting of the regulation plan. The consequence was the continuity of the city's construction and the transformation of its urban and architectural identity in a positive direction. Another reason why Minić is significant for Nikšić is the "Meander" building in the context of architecture.

"Meander" is located in urban block that reminds of two examples from Sweden from the same period.

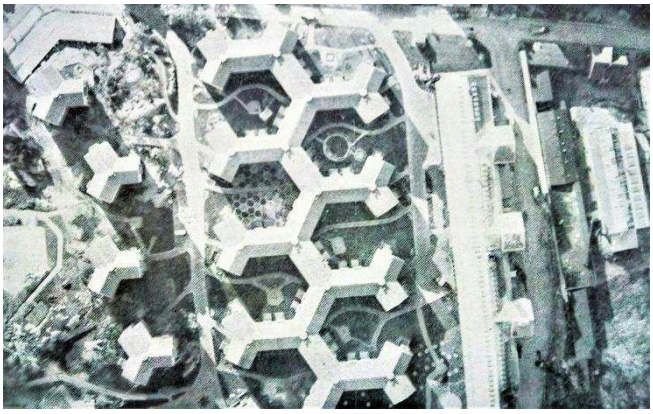


Figure 10, Gröndal settlement

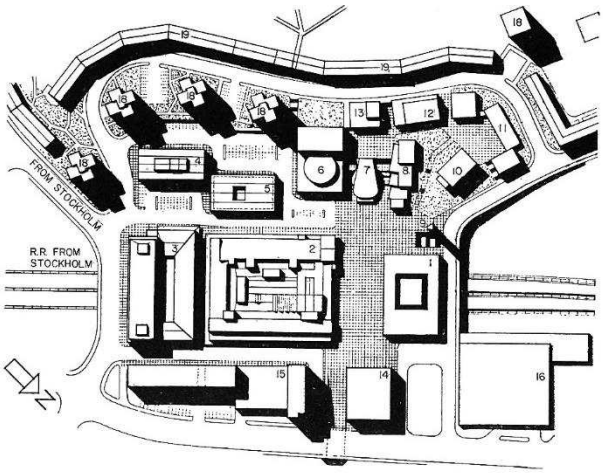
During the fifties in Sweden, the new tradition was built in brick-built construction. The positive contribution of this decade was the abandonment of a monotonous scheme of settlements in favor of differentiated planning, in which the architects tried to create an environment more suitable for housing. In addition, building plans are often studiously conceived. Associates Sven Backström (1903-1992) and Leif Reinius (1907-1995) are the most famous architects of such projects. (4)

Their typical project from that time was Gröndal settlement built in the period from 1944 to 1945. According to architect historian Fredric Bedoire, the star houses in Gröndal belong to Stockholm's finest housing groups. (5)

Almost the same design principles can be found in the "Meander" project. In the period when the building was built, it had the most comfortable apartments, mostly for workers. Close to the building were almost all public buildings necessary for everyday life.

The architects' interesting and innovative architecture, especially the star houses, soon began to imitate in Europe. At home, however, the renowned functionalists criticized Backström & Reinius. (6)

The next example is the satellite settlement Vällingby built between 1952 and 1956 by architect Sven Markelius (1889-1972), most of all reminds to low apartments buildings.



1 Rapid transit station
2 Department store and shops
3 Office building and shops
4-5 Offices and shops
6 Theater
7 Cinema
8 Meeting rooms
9 Clock tower
10 Church
11 Town Hall
12 Library
13 Youth center
14 Shops (projected)
15 Offices and shops (projected)
16 Garage (sunken)
18 High-rise apartments
19 Low apartments

Figure 11, Urban plan of Vällingby (1952-1956)

Vällingby shows to a beautiful degree how the suburbs, which increasingly envelop the world's cities, can be well planned, parklike, viable centres, and not haphazard accretions strangled in transportation, mired in shopping and frantic for enough schools and public facilities. (7)

These associations are only the first impression because the urban block in Nikšić with the "Meander" building is an answer to the modern post-war urbanism that is adapted to local conditions. This urban block is by its content and size is far smaller than Vällingby, but it is interesting to note that these two similar ideas of modern urbanism were created in almost the same period.

"Meander" is a building intended for collective housing, built in 1958 in a brand new urban block. The urban block has approximately regular rectangular shape, whose long sides are facing east, where the Vuk Mićunović Bulevar borders the city core built according to the first regulation plan. In the west, it borders with the Railway Station and the foothill of the fortress Bedem. In the south, it is limited by straight, Gojko Garčević Street, which connects the Save Kovačevića Square with the Railway Station. In the north, it borders with the remains of a Turkish city called Stara Varoš or Down City.

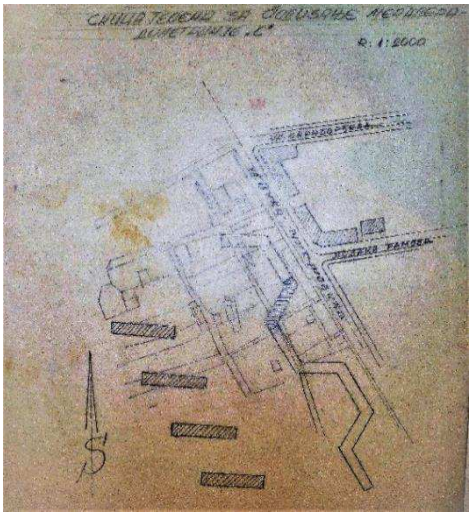


Figure 12, The location of "Meander"building

According to the first regulation plan of the city, it is envisaged that through this urban block the street from the direction of the Sava Sava Kovačević Square will pass. Since the implementation of the first regulatory plan until the beginning of the First and Second World War, this street was not built. The question arises why Sajsel's plan did not go into the realization of this urban block according to Slade's plan. The answer may be that after the Second World War, it was necessary to start with the reconstruction of the city in accordance with the requirements of the given moment. The Sajsell plan seems to offer a new fenergy and concept of city life but without negating the past. On the contrary, the urban core of the first regulatory plan is fully protected and communicates with the new urban block completely. The

"Meander" building by architect Milić, the Syndical Home and the residential tower by architect Minjević, contributed to the transition between the old and the new, and give the logical transformation of the basic identity.



Figure 13, Urban block built according to Sajsel's plan, postcards from the 1960s

Characteristics of the "Meander" building

The basic characteristic of the building is its shape. In the former Yugoslavia from the post-war period, and later, this is a unique building precisely because of its shape. The "Meander" name is justified because the building is associated with a river meander. River is a dynamic formation, constantly on the move, which carries changes. As if in a symbolic way, architect Milić wants to present the spirit of change and movement with this building. The area of the urban block was moved by a facade that comes out to Vuk Mićunović Boulevard. The pockets formed in the front and back yard give the opportunity to form intimate spaces for greenery and rest, both the inhabitants of the building and all citizens. On the one hand, we have oblique trapezoidal blocks of the urban core, which firmly hold the morphology of the urban matrix. On the other hand, a fluid and dynamic space form "Meander". However, they are only seemingly opposed.

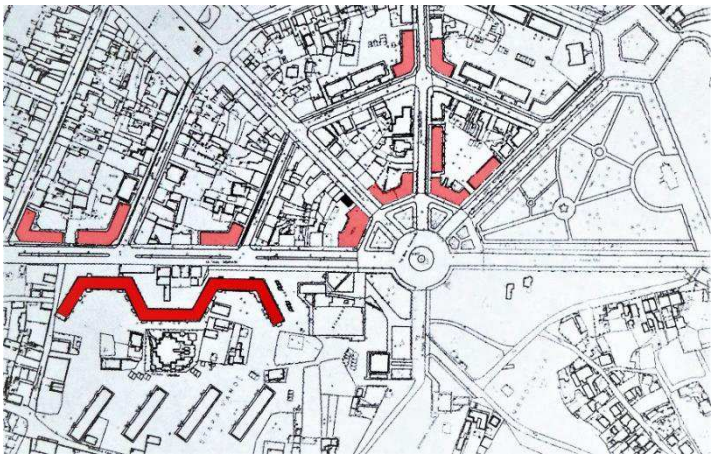


Figure 14, The shapes of the buildings as a motif for the shape of the building "Meander"

If we carefully analyse the shape of the "Meander" building, we will see that it is directly derived from the buildings shape that were built on the corners of the city's urban blocks core. The shape of these buildings seems to represent the fragments that Milić linked to the chain-shaped "Meander". In this

way, communication with the past is accomplished in an interesting way. Continuity in building is respected through the interpretation of the already established construction patterns in accordance with the requirements of a given time. The transformation of the basic identity was carried out in a positive direction, and an object that was built, upgraded the already existing architectural identity.

In addition, in terms of materialization and facade design, architect Milić was consistent in the interpretation of the enclosed architectural patterns. The building is two-storey with a four-hole roof, just like the already existing building. It seems that Zirojevic's house, which is located on the eastern edge of the Sava Sava Kovačević Square, has served as a model for interpreting the observed topics in a new way.



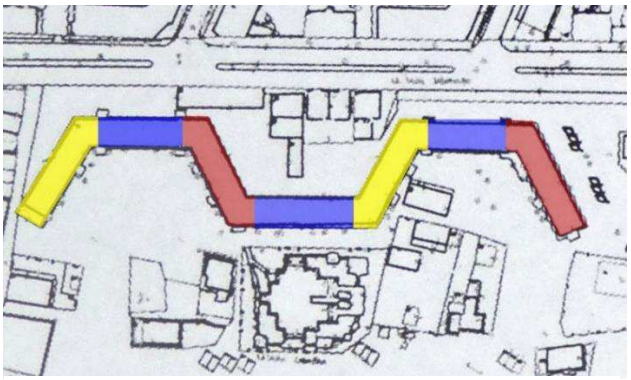
Figure 15, Zirojević House on Sava Kovačević Square

And in terms of materialization and facade design, architect Milic was consistent in the interpretation of the enclosed architectural patterns. The building is two-storey with a roof on four sides, just like the already existing building. It seems that Zirojevic's house, which is located on the eastern edge of the Sava Kovačević Square, has served as a model for interpreting the observed topics in a new way.

A special feature of the building is the stairs that have come out on the facade and are illuminated with large window surfaces. The windows of the housing units form, long horizontal strips that divide the object by the floors. The windows of the sanitary and auxiliary rooms are represented by circular openings. It is interesting to note that in the central part of the building, architect Milić formed a vast passageway that connects front and inner courtyard. This is a practical solution because the building has a large length, but this is also a reminiscence of portun, a typical element of city houses built according to the first regulatory plan.

The organization of housing units

The shape of the "Meander" building is composed of seven linearly connected fragments. The chain of these fragments forms three halves of hexagons, a form that will be especially applied in the work, also in Nikšić, by architect Slobodan Vukajlović.


Figure 16, Diletation positions on "Meander" building

These seven fragments represent, in some way, a modular combination of rectangles that are connected by the shorter sides at an angle of 120 degrees, forming the half-hexagons in space. In places of connection within the object, irregular hexagons are formed in which architect will organize individual housing units. The building is divided by dilatations within which we distinguish three rectangles that are parallel to Vuk Mićunović Boulevard and four

polygons, two of which are parallel to each other.

The ground floor of rectangular dilatation contains two groups of housing units that are actually identical and symmetrically placed in relation to passage. We see a solution of a studio that has about 25m2 and contains a hallway, a bathroom and a room. The second apartment has toilet, bathroom, kitchen, living room and one room. The size of the apartment is about 62m2. Apartments can be reached through the main entrances positioned within the passage. The entrance is spacious and illuminated. It has a single-sided staircase that is illuminated through the window tiles on the façade.

Passage contains four smaller storage rooms for the needs of four apartments on the ground floor.

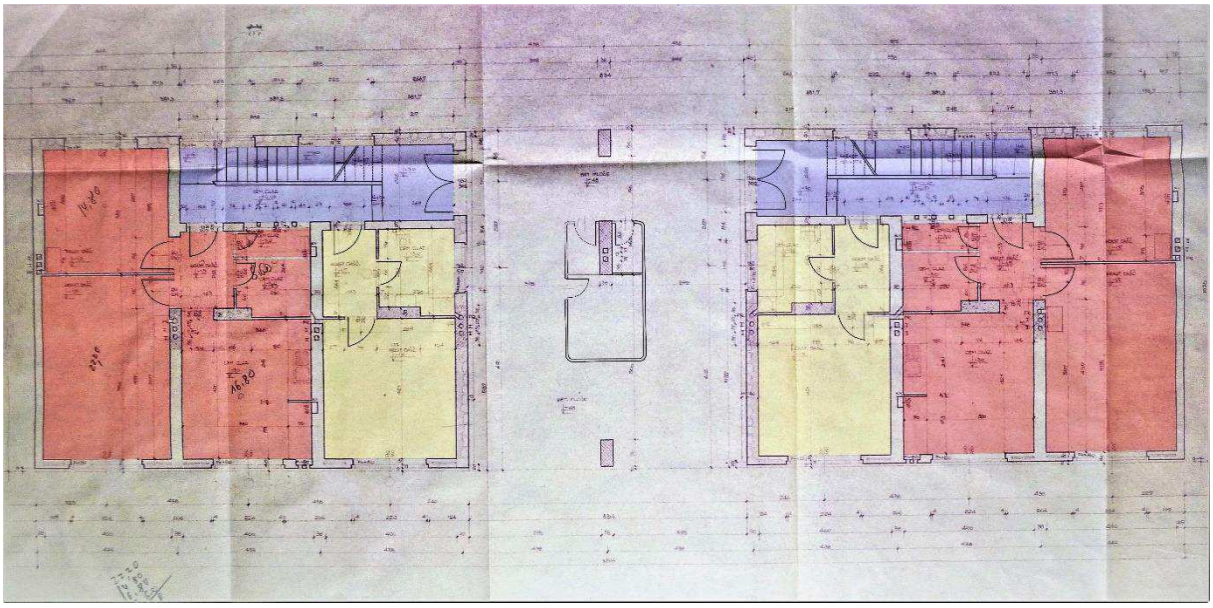


Figure 17, Ground floor of rectangular dilatation

The floor of rectangular dilatation consists of four comfortable one-bedroom apartments with an area of about 62m2. The apartments contain storage room, bathroom with toilet kitchen with pantry, living room and one bedroom. These apartments also have an advantage over one-bedroom apartments on the ground floor, since they have balconies. The apartments are symmetrically positioned in accordance with the constructive system.

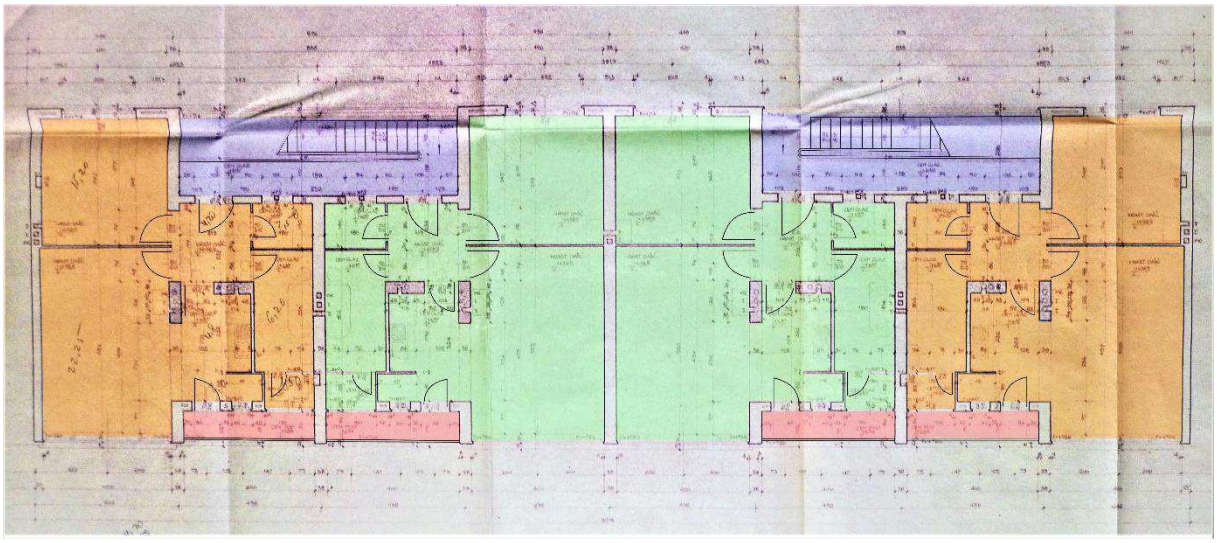


Figure 18, The floor of the rectangular dilatation

The ground floor of the polygonal dilatation contains six apartments of different sizes. To one-bedroom flats located side-by-side, at the point of connection with rectangular dilatations, it is possible to come across the entrances that are pulled into the exterior of the facade. The apartments have a hall, bathroom, kitchen and living room. In the central part of the dilatation, there are two symmetrically set spacious entrances with halls. In the hallway of each of the entrances, there is a spacious staircase. From the hall, it is possible to enter two identical apartments that contain a hall, bathroom, toilet, storage room, kitchen and bedroom.

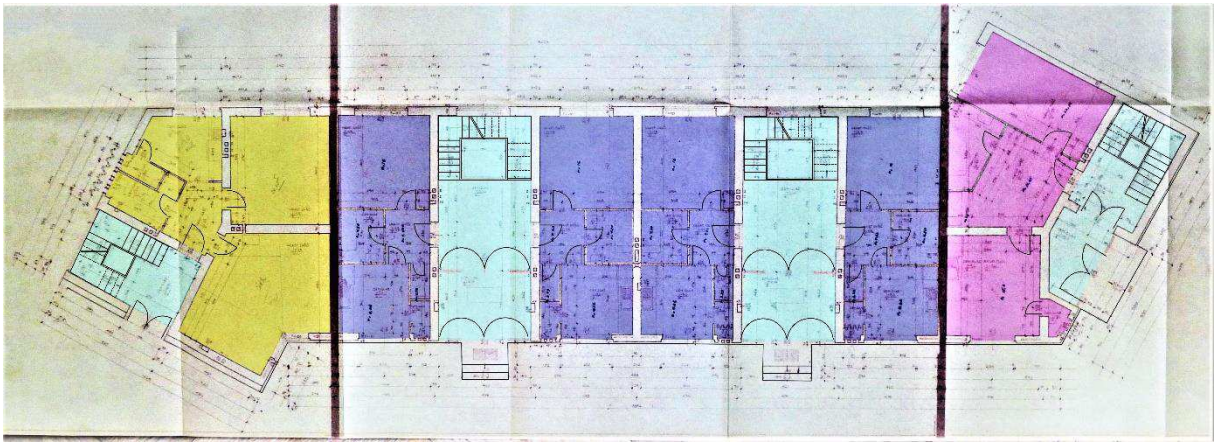


Figure 19, Ground floor of polygonal dilation

The floor of the polygonal dilatation has many one-bedroom apartments and one studio apartment. Residential units are of different sizes. Studio and four one-bedroom apartments have balconies.

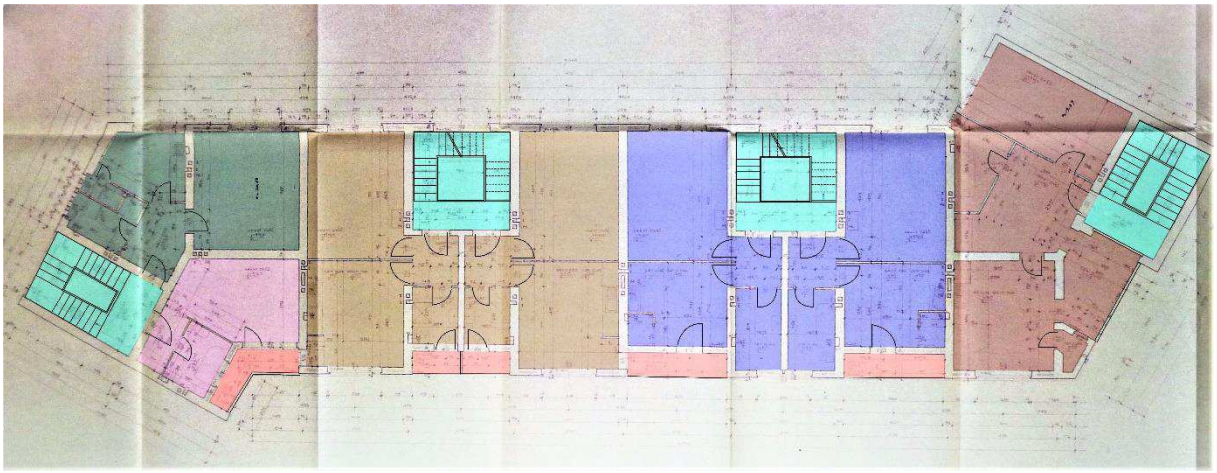


Figure 20,The floor of the polygonal diletation



Figure 21, "Meander" at night, photo by Miloš Zvicer

For the time in which "Meander" was built, it is an unusual and unique solution on the Yugoslav architectural scene. The demands of the then inhabitants were fulfilled. However, the lack of two-bedroom or three-bedroom apartments at a time, when population growth in Nikšić was the largest in the country, could be the lack of this building in the context of functionality. However, in terms of design and communication with the

environment, this building is a successful solution that transforms traditional elements into modern patterns.

Rajko M. Tatić was born in Niš in 1900. After the completion of the gymnasium, he intended to dedicate himself to the Slavistics, but under the influence of his older brother, the famous researcher of the Serbian medieval heritage and architect Žarko Tatić, he enrolled at the Architectural Department of the Technical Faculty in Belgrade, where he graduated in class of Professor Svetozar Jovanović in 1927. At the faculty that was oriented to the national medieval heritage and European historical styles, in addition to acquiring professional knowledge, he matureed on the creative plan as well. The creative opus of architect Tatić has over 180 projects, of which, despite war and post-war disturbances, nearly half were carried out. (4)



Figure 22, Architect Rajko M.Tatić (1900-1979)

Tatić is author of three buildings in Nikšić. He designed residential building with a offices on the ground floor and a building of the National Bank in the 29th November Street, today's Njegoševa street. The residential building was built in 1955 and the National Bank in 1956.



Figure 23, National Bank building on the left and residential-business building, right

The third building, built by architect Tatić, is actually two identically resolved residential buildings in a newly built urban block, in the Dr. Niko Miljanić Street, whose author is also architect Tatić. The urban plan as well as the solutions of residential buildings have been modified and have not been completely built up according to the original solution. Deviation in buildings refers to the reduction of floor

number, while deviation from the original urban plan refers to the positions of individual buildings within the block. Residential buildings were built in 1956.



Figure 24, Residential buildings in Dr Niko Miljanić Street

Characteristics of buildings

The residential building and the National Bank are located at the very border between the part of the city that was built according to the first regulation plan and part of the city, which is planned for the construction of modern facilities in accordance with the needs of that time. The position of the facilities for interventions is additionally more sensitive given that it is a crossroads of streets and the resolution of the angle as a topic that is quite challenging. However, architect Tatić managed to create one of the most recognizable parts of Nikšić using these two buildings. By using material, their combination, schedule, rhythm and proportional mass ratio, he created a monumental but not a pretention gradient benchmark, thus transforming the basic identity in a positive direction.

It looks like these two objects are similar. However, the similarity arises only from the position, which requires that the ambience of the main pedestrian street does not get disturbed, but at the same time, it is required to create a special shape of the corners. Due to the different purposes of the buildings, different façade treatment was also obtained. This diversity, however, is not large, because as an ensemble, these two buildings act coherently and in no way opposed.

The residential building has a facade that develops along the horizontal with the rhythm of the recessed loggia giving an interesting rhythm of light and shade. The rhythm of the window follows the rhythm of the loggia. The ground floor is indented on the part that indicates the angle. The last, reduced floor that can be reached on the roof surface is also indented. On the ground floor, there are various business premises, while on the floors there are apartments.



Figure 25, Residential building, corner of Njegoševa Street

The National Bank has a different facade treatment. The ground floor is covered with rustic, carved stone blocks that are associated with stability and security, which must be related to the bank as a system. The floors are shaped easily but still firmly and convincingly with the raster division along the horizontals and the verticals in the form of a parapet and a window.

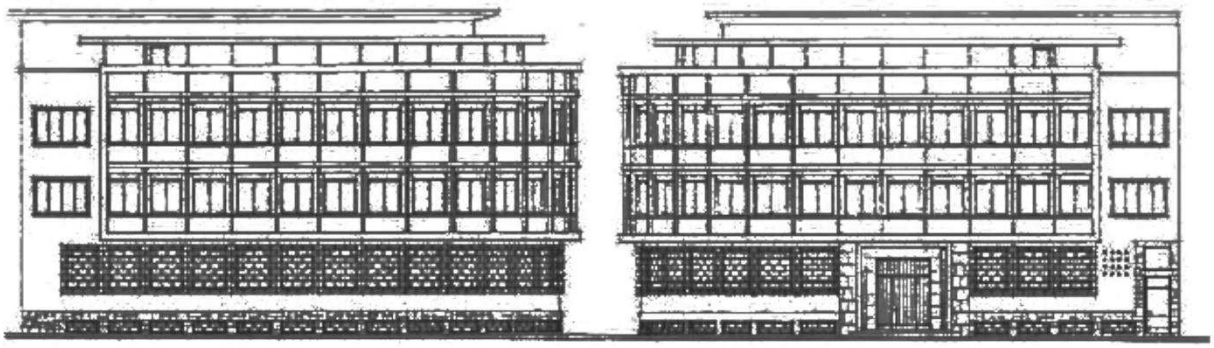


Figure 26, Facade of the National Bank

Residential buildings in Dr Niko Miljanić Street on the ground floor have business premises of various purposes, which make the street front and content interesting. In the design, there are balconies on the southern facades, since the living areas of the apartments are oriented to the south. The architecture is calm, unpretentious but still interesting in rhythms, especially the southern facades dominated by balconies.

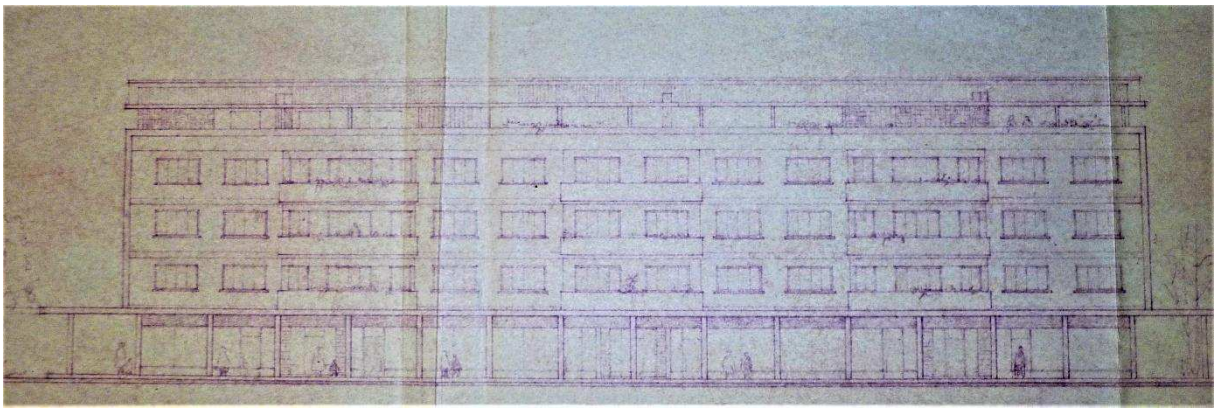


Figure 27, South facade of one of the buildings

Conclusion

After the end of the Second World War, Nikšić has an intensive construction that is regulated by urban plans, primarily by the plan of Josip Sajsel, which is related to continuation of the first regulation plan. However, urban transformation is not interrupted; on the contrary, it is done in a positive direction. Quality urban plans are bases for quality architecture, in the first place, its position. Examples of buildings by architects Vukotić, Milić and Tatić are a good indicator of the city's politics at that time. This practice and politics deeply appreciated the past, but also understood the demands of a given time. The compromise gave the best solutions in architecture and urbanism, which enabled the continuity and positive transformation of urban and architectural identity.

Bibliography:

(1) Andrija Markuš, 50 neimara Crne Gore, Arhitektonski forum, Podgorica 2008, p.53
(2) Rešenje Sekretarijata za komunalne poslove NO Nikšić, br.6984 od 31.03.1955.pp.1-2
(3) Dražen Arbutina, Zadarski urbanistički i arhitektonski opus Brune Milića, Narodni muzej Zadar, 2002, p.8
(4) Hatje Gerd, Enciklopedija moderne arhitekture, IP Građevinska knjiga, Beograd, 1970, p.270
(5) Fredric Bedoire, Henrik O Andersson, Stockholm's buildings: a book about architecture and cityscape in Stockholm, Prisma, Stocholm 1977, p. 253
(6) Olof Hultin, Guide to Stockholm's architecture (2nd edition), Architecture Publishers, Stockholm 2002, p.211
(7) G.E. Kidder Smith, Sweden Builds, Reinhold Publishing Corporation, New York, 1957, p.94
(8) Saša Mihajlov, Rajko M. Tatić 1900-1979, Zavod za zaštitu spomenika kulture grada Beograda, Beograd 2013, p.183

Photo sources:

Figure 1- Taken from the book „50 neimara Crne Gore“, Arhitektonski forum, Podgorica 2008.

Figure 2,3,8, 15,16,17,18,25,26,27- Archives of the Nikšić city

Figure 4- Taken from the site http://www.rtcg.me/vijesti/drustvo/141009/za-rekontrukciju-skole-650-hiljada.html

Figure 5,6,7,13,21,22,23- Private collection

Figure 9- Taken from the site http://www.zadarskilist.hr/clanci/12032009/povijest-grada-zapisana-u-gradevinama

Figure 10, 11- taken from book G.E. Kidder Smith, *Sweden builds*, New York, 1957

Figure 12,14- Author of the text

Chapter 9:

The buildings by architect Đorđije Minjević, the development of modernism in Nikšić

Architect Đorđije Minjević was born in Bijelo Polje (Montenegro) in 1924. He completed his studies in architecture in Zagreb where he graduated in 1952 in the class of Professor Stjepan Gomboš, at the Department of Industrial Buildings Design.

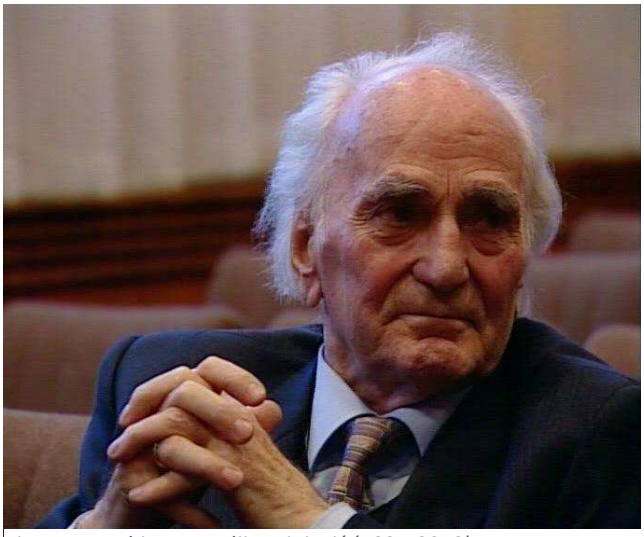


Figure 1, Architect Đorđije Minjević (1924-2013)

The topic of graduation work was the design of the Furniture Factory in Varaždin. The task of graduation thesis included the design of entire production complex facilities, including the administrative building with the construction bureau and the cinema hall. On the construction offices of the administrative building, oriented to the south, architect Mijević designed the vertical rotary shields from the sun, so-called brise-soleil.

This is an interesting fact, since in the Yugoslav practice the use of horizontal brise-soleil was under the strong influence of public buildings from Brasilia, the capital of Brazil, that were designed by architects Oscar Niemeyer and Lucio Costa. According to architect Minjević, the use of vertical brise-soleil in graduate work caused a great discussion among professors, however architect Minjević was well prepared with diagrams and data on the benefits of vertical brise-soleil. The work was rated with the highest grade. Vertical brise-soleil have become some kind of a trademark for, perhaps, the most significant work of architect Minjević, the Syndical Home from 1962.

After the completion of the faculty, architect Minjević was deployed to work in the "Construction Company Montenegro" in Nikšić. It was the time of the city's renewal, which was greatly destroyed in the wars. At the same time, Nikšić became the city with the fastest and largest population growth compared to other Yugoslav cities. The increase in the population and the beginning of the construction of large investment facilities such as ironworks, the Hydroelectric System "Gornja Zeta" and the Bauxite Mine demanded an accelerated construction of the infrastructure and all necessary facilities for the normal functioning of the city. However, when it comes to the beginnings of modern architecture in Nikšić, this period has one key characteristic that can be observed either as an aggravating circumstance or as a challenge. Our opinion is that the constructed buildings in this period nevertheless prove that they were created as a successfully solved challenge. Namely, this time was characterized by a lack of experts, qualified workers, machinery and especially quality materials for construction and finishing works.

Professor Branislav Mitrović, in his review for the Monography "Architect Đorđije Minjević, builder and spatial planner", says that the architect Minjević, with his activity covered a wide spectrum and all aspects of planning, design and construction. The diverse, almost Renaissance range of interest and action in architecture has resulted in outstanding professional opus. (1)

Đorđije Minjević worked intensively in Nikšić in the period from 1953-1963 when he designed around thirty objects for various purposes, such as schools, hotels, recreational, cultural, industrial and administrative facilities. Alongside the design and construction of facilities, he worked on the urban

plans of the city's zones, so the facilities were accurately integrated into the respective zones. In addition to Nikšić, objects of various purposes were designed in Bijelo Polje, Žabljak, Grahovo, Plužine and on the coast. After leaving Nikšić he dealt with urbanism, he particularly emphasized his work in the South Adriatic project, which was made under the auspices of the United Nations, and for some time he managed it.

In the urban and architectural design, the significance of Minjević is also reflected in the foundation of the Institute for Urban Planning and Design, which in Nikšić carried out a number of important facilities and urban plans.

Historical and political context

If one wants to understand better the circumstances in which the architect Minjević worked, it is necessary to look at the historical and political circumstances that preceded the time in which he was creating his buildings.

After the end of the Second World War, in November 1945, six republics: Slovenia, Croatia, Bosnia and Herzegovina, Serbia, Macedonia and Montenegro formed the Socialist Federal Republic of Yugoslavia. The Communist Party of Yugoslavia, led by leader Marshal Tito, managed the country. SFR Yugoslavia, among other things, was created also because Partisans were the only pan-Yugoslav movement that fought against occupation and for the equality among all South Slav nations. At the same time, the Partisans established communist rulers in liberated territories.

Expectation was that SFR Yugoslavia will be another Eastern European country under the strong influence of the Soviet Union, this did not happen. In June 1948, the Comintern (the Association of European Communist Parties, the pre-convened USSR) excluded Yugoslavia from this organization due to the confrontation of Marshal Tito with Stalin's plans that Yugoslavia be one of his subordinate states, although the Yugoslav peak wanted to be allies. (2)

After the breakup with Stalin, the Communist Party of Yugoslavia began a series of reforms. The most significant and most revolutionary reform was the decentralization of political, economic power through the method of self-management, according to which workers are responsible for the work of the company, they are owners and they decide on the work while the state has the role of patron. This political and economic method has resulted in great economic growth, and in the period from 1957 to 1961, Yugoslavia was immediately behind Japan as the fastest growing economy in the world. (3)

From these brief reviews of the historical and political circumstances, it is clear that after the Second World War, although in difficult circumstances, Yugoslavia was moving through recovery, development and construction. Soon there will be a transformation of most agricultural economies to developed industrialization, which will also affect the transformation of society, from the once underdeveloped rural to developed and urbanized population.

The great transformations that Yugoslav societies had taken had an impact on architecture as a profession, too.

It is important to note that, after the end of the Second World War, nationalizations of all economic branches and activities, including private architectural practices, came about. Architectural offices work under state control. Federal and regional ministries and institutes for buildings and universities are formed. Already in 1947, 60% of Yugoslav architects and engineers worked in such institutions. (4)

Self-Management also referred to architectural practice. This system allowed architects to freely organize and make decisions, of course in accordance with the priorities and requirements of the state

at that time. It is important to note that Self-Management favored collective coordination, so professional criteria determined architectural production. As a result, there was high quality architecture, despite the fact that there were negative phenomena such as wild construction in suburban areas.

At the beginning of the 1950s, architecture in Yugoslavia recorded very high quality results, better than in other Eastern European countries. (5)

Thanks to the numerous bilateral agreements between Yugoslavia and the Western countries and the good political position and reputation of Yugoslavia, it was possible for architects to travel and gain experience and knowledge across Europe and the world. Many talented architects were trained in the studies of Lous Kahn, Alvar Aalto, Paul Rudolph, Jaap Bakema, and I.M.Pei. (6)

Architect Minjević in his book "Nikšić u sjećanju" underlines that three events of global importance had a great influence on his work, the exhibition Interbau in Berlin in 1957, and the World Expo exhibition held in Brussels in 1958.[1] Minjević in the book states that it was not possible to apply all the construction methods and materials he saw at the exhibitions, because the economic situation did not allow it, so he adjusted his ideas to the given conditions. (7)

Characteristics of architecture

The architecture of Yugoslavia has accepted the principles of functionalism and rationalist architecture that are in line with the tasks and needs of socialism in relation to society and the economic potential. (8)

Minjevic's architecture is a response to the demands of a small city that were in line with political, social and economic developments in Yugoslavia at that time. In addition, Minjevic's architecture is a personal interpretation and response to architectural events and trends in Yugoslavia of that time.

The basic characteristics of the objects designed by the architect Minjević were crated are due to several factors. First, the time in which these objects were built was in itself a great desire to rebuild the destroyed land and cities and to design it in the spirit of contemporary architectural trends. Also, this time, besides the great desire for progress, had a great disadvantage both in professional personnel and in materials. The combination of these two factors has led architects to evoke great enthusiasm and in that way represent the profession of architecture in the most beautiful and best form. A wide range of functionally completely different objects, Minjević designed by active improvement in the field of technology, functional processes and activities that those objects demanded. The result was a clear and pure functional organization. Minjević replaced the lack of modern materials, especially for finishing, with the use of local materials, which in the era of modernism nevertheless achieved an associative connection with traditional construction.

Minjević's architecture is clear, suggestive, in other words, associative. If we consider architecture as an interpretation, that is, the concretization of the function, the objects of the architect Minević, present function in a clear way. The typology of objects, made primarily based on the purpose, requires that the design be completely done accordingly to function. If he designs a school, Minjević clearly gives the positions of the entrance, main hall, corridors, sanitary facilities, offices, gymnasiums and classrooms. Each of these rooms with clearly defined functions gets its own design. The same

[1] Architect Minjević also mentions a visit to the exhibition of building materials in Paris, but does not specify which year this exhibition was.

methodology is present in projects of health, administrative, hotel, industrial or collective accommodation facilities.

The author best defines the basic criteria in design when he says that approaching to objects, in almost all cases, he starts from joining two fundamental settings of modern architecture, function and design.

In the physiognomy of the building, special attention is paid to the following elements: the entrance, the corridors with the staircase or the communication, windows, the attics and the roof slopes.

The entrance is always centrally positioned in relation to the composition of the entrance facade. Although the objects are not symmetrically conceived, the whole part is divided into a harmonious ratio. In administrative buildings such as the Municipal assembly building or Court, the entrance approaches the stairs, which further emphasizes the character of the public, administrative building. The canopy is usually present. The door surface has never been withdrawn from the facade but is at the same level. However, the canopy does not act as a supplement, the artificially inserted element. On the contrary, it stems from the construction of the object and relates to it and the composition. The row of columns completes the entrance ensemble making it the primary element in meeting the object.

Communications begin with the main entrance position, followed by corridors and stairs. The corridors are mostly visible from the outside through transparent, window strips that make the buildings bright and airy. The staircase position is always emphasized by being separated as a clearly defined functional and design completely or is emphasized by construction and transparent curtains.

Window bands in the spirit of modernism are present with one raster division, especially in administrative buildings, while in school buildings, window strips have a different raster pattern. To a lesser extent there are separate windows placed mainly in the niches that were created by the raster position of concrete planes or pillars.

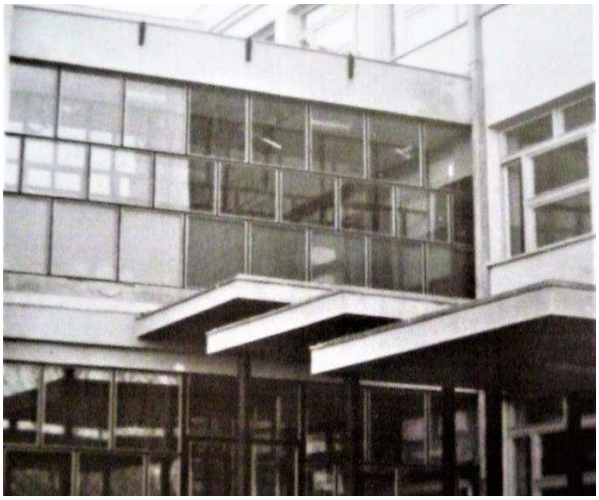


Figure 2, Detail of the entrance with window raster, Primary school "Ratko Žarić", 1961.

The roof surfaces are mostly horizontal in the form of flat roofs, which were used for the first time in Nikšić. However, on a couple of objects there are roof rails that have a slope that makes it possible to use lantern space lighting. Attics follow the slope of the roof level. Deviations from only flat horizontal or vertical lines on the facade, although small, make a striking design and visual element of the composition. Especially these characteristics will reflected in the projects of hotels in the north of Montenegro in Žabljak, where the ground level of the Hotel "Žabljak" presented as one of the most

striking contours in the architecture of mountain objects of Yugoslav construction, according to Professor Mitrović.

Minjević mainly designed in a skeletal constructive system, sometimes combining it with a massive system. The element that he often used in the façade composition is a reinforced-concrete canvas coated with a stone called bunja. The bunja is a flat stone, with rectangular shape and rustic surface. This stone obtained by cutting the lateral sides and the back, while the front face subjected to a flattening of the curling or relief carving.



Figure 3. Municipal court, detail of the stone foundation made from bunja,, 1963.

Charles Jencks gives the definition[2] of modern as a universal international style based on the facts of new constructive means, suited to a new industrial society that aims to change society, both in its taste or perception, and in social ordering. (9)

The spirit of modernism, better to say the so-called International style, is present in Minjević's architecture, but it interpreted in a personal way. The basic characteristic of Minjević's architecture reflected in the design that arises from the purpose and function of the object. In general, we can say that his objects characterized impeccable functional and rational solutions.

The most important objects

Among the thirty objects built in the Nikšić area, several typologically different buildings have contributed to the recognition of the city, its architectural identity. The building of the Gymnasium stands out, today's Elementary School "Olga Golović", then the Elementary School "Ratko Žarić", the City Hall building of Nikšić, The building of the Pedagogical Academy, later the Faculty of Philosophy the Surgical and Gynecological Hospital and the Syndical Home .

High school - Elementary school "Olga Golovic" is the first realized object by architect Minjević in Nikšić. He previously participated in the renovation of the city hotel "Onogošt", whose project was done by the pioneer of modernism in Montenegro, Vujadin Popović. However, after the emigration to Australia, the project of the hotel completed architect Minjević with the help and suggestions of architect Branko Bon.

The high school project is the first, independent facility of Minjević. At the Yugoslav competition for the new schools in 1955, this solution won the first prize. Initially, the facility was designed for a gymnasium and adapt to the elementary school with minor corrections. Back in the design stage, when

[2] Charles Jencks in Modern Movements and Architecture in Postscriptum II states that the definition was roughly set for the first time in the AD Journal, Newspaper Attachment, July 1981, p. 8 and that had already been substantially reduced in comparison to the thirty sets that he had applied in book Late-Modern Architecture, p. 32.

the project was completed but not realized, it was published in the publication "Schools" in Zagreb in 1955 as one of the four contemporary projects of schools in Yugoslavia. The other schools were built in the cities like Zagreb, Belgrade and Ljubljana. Schools from these cities were presented as successful examples at a great Consultation on programming and designing of schools held in Zagreb in 1955. It is important to note that architect Minjević became a member of the Commission for designing elementary schools, led by famous architect Juraj Najdhart. The gymnasium will be built after two years, in 1957.

The gymnasium building, the current elementary school, is located in the narrower city core in the zone defined by the Saisel plan as a zone for the construction of public buildings. This clearly defined zone, framed and limited by the streets, made it possible for contemporary designed objects to be prominent in their design and displayed as a new moment in the city life.

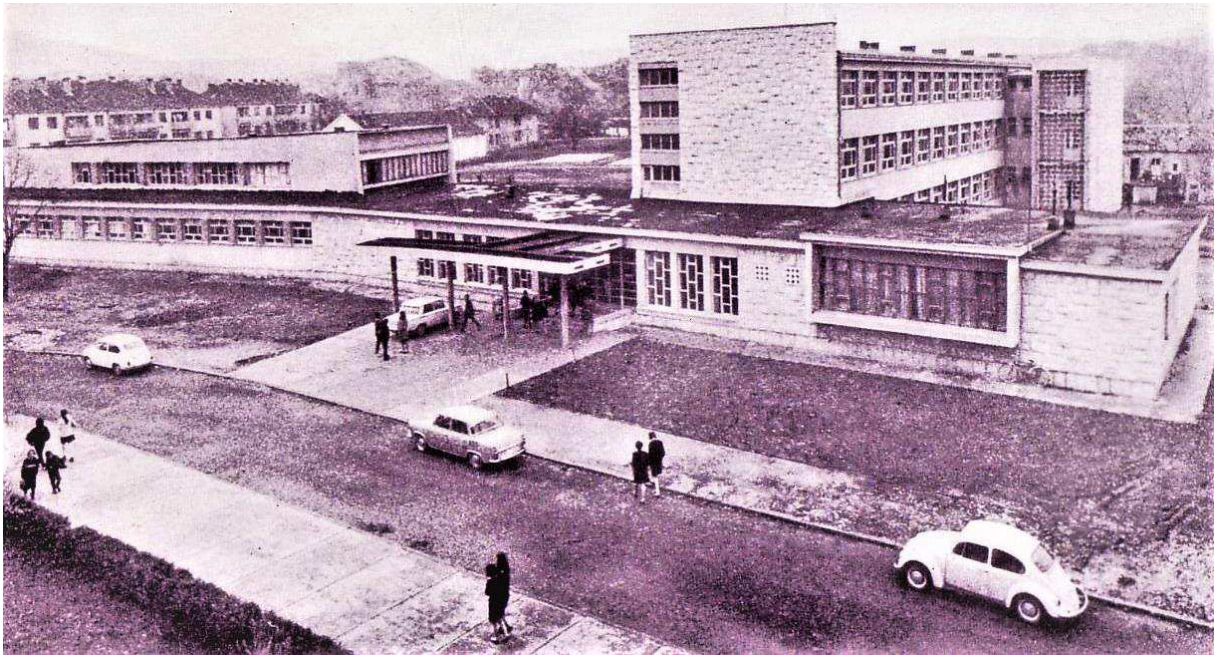


Figure 4, High school, Gymnasium,today Elementary School "Olga Golović", 1957.

In the architectonic of the building, we can see a harmonious compositional unit built from the volume of the entrance part with the offices and administration, the volume of the gym and the volume in which the classrooms and cabinets with accompanying contents are located. The entrance facade is facing east. A centrally positioned entrance with a T-shaped canopy, covered with four pillars, characterizes it. On the right side are the teachers' offices with the Chamber and the offices of the school administration. On the left side, there is a gym with wardrobes and necessary facilities.

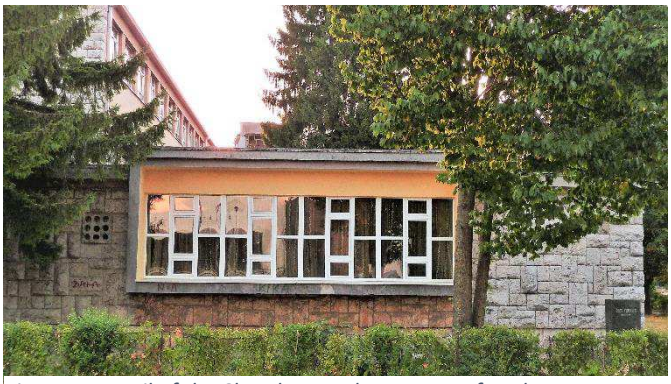


Figure 5, Detail of the Chamber, at the entrance fesade

From the entrance facade, we can see a tract with classrooms and cabinets located on the ground floor and two floors. Classrooms and cabinets are oriented to the south while corridors, sanitation and communications are located on the northern facade. The emphasized horizontality of the facade is restrained by the mild tilt of the roof above the gym and the cubic insole on the part where the

chamber is held for teacher meetings. In this way, an interesting, rhythmic composition setting achieved in the gradation relation of the mentioned volumes. In the façade processing, the familiar Minjević element, a stone bunja, was used.

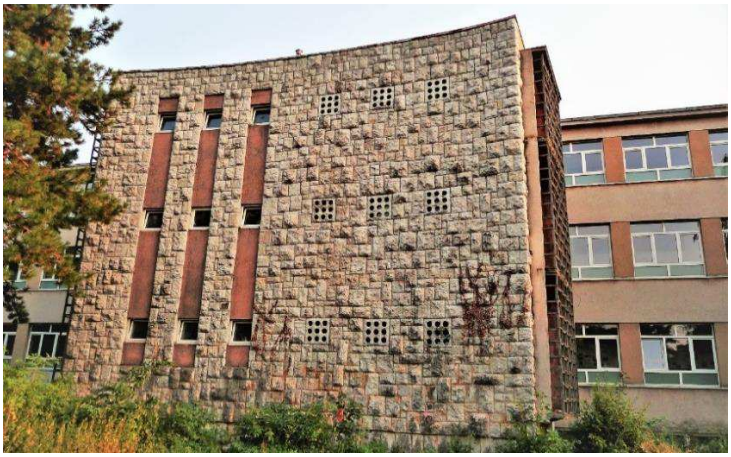


Figure 6, A wall made in stone bunja, a detail from the northern façade

Elementary school "Ratko Žarić" is the first experimental school in Nikšić, built in 1961. In addition to classical classrooms, gym and all necessary supporting contents, this school had enhanced cabinet teaching as well as a cinema hall for displaying a teaching content. Interesting is the fact that a zoo was located in the yard of the school.

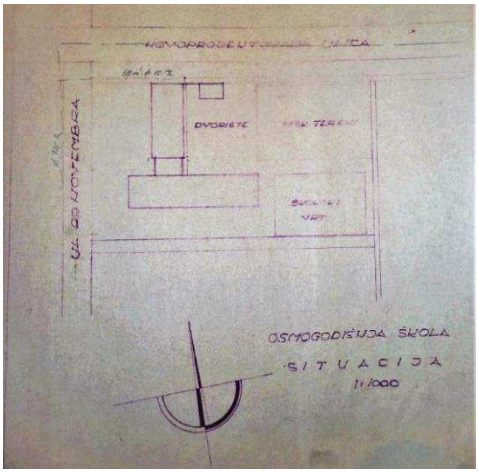


Figure 7, Location, Elementary school "Ratko Žarić"

The entrance facade of the building is facing west. It gives a special effect to the street front, enriching it with a rhythmic yet decent facade and a nicely decorated yard. Two volumetric parts are distinguished. The higher, in which the classrooms are located, is transversal towards the street, while the long side faces south. The lower part is parallel with the street and in it there is a gym, two-sided illuminated from the east and west sides. These two parts are connected harmoniously by the central lowest part, which represents the entrance hall with communications. The central part is glazed with windows whose raster supports the rhythm of thestone blocks that are framing the reinforced concrete canvases of the higher part. Moreover, here, Minjević uses recognizable bunja stone. On the north, side there is another entrance to the inner courtyard.

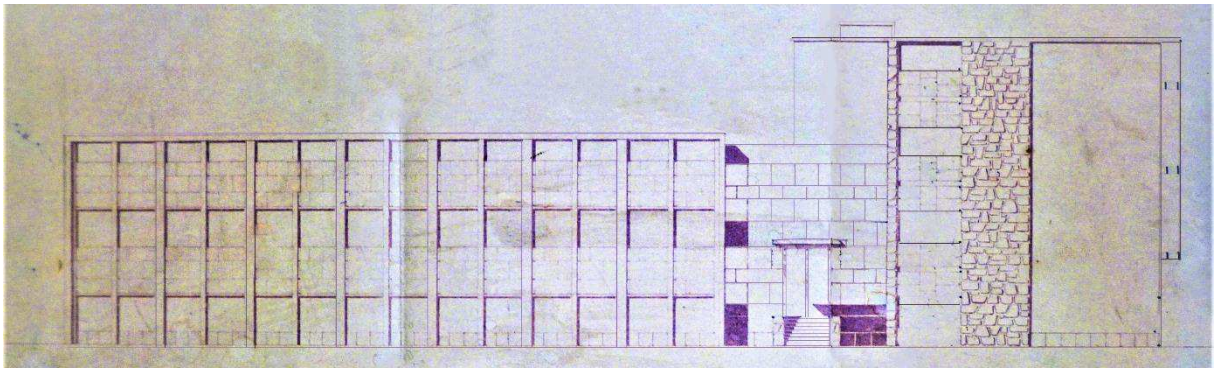


Figure 8, Entrance, Western facade of the school

On the experimental school, horizontal brise-soleil on the southern facade, above the classrooms, made for protection from the sun. For this reason, the southern facade is expressive with a strong orthogonal split of almost all surfaces. Regardless of such a strict division, school acts humane and appropriate for children.

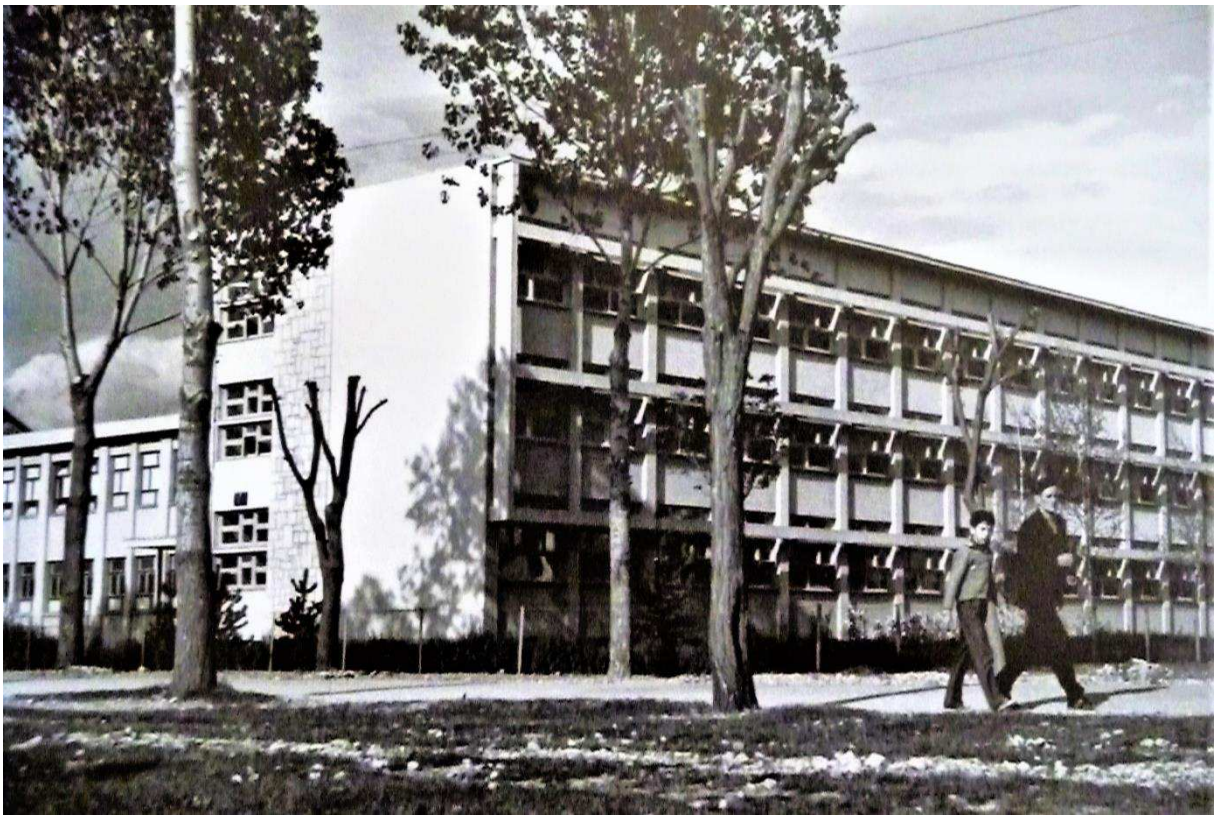


Figure 9, Southern facade with horizontal brise-soleil

The city hall of Nikšić is an object built in 1962. This multi-story building has become the city's benchmark and one of the most dominant verticals in city's panorama image. The building built of two cubes, the first facing west, and its smaller base lies on a foundation that raised from a dozen steps in relation to the height of the pavement.

This box formation, which has the shape of the letter T, has a ground floor and eight floors. On the ground floor, there is a reception service for issuing documents to clients and daily administrative affairs of citizens. The entrance is placed slightly eccentric to the left and covered. On the floors there are numerous municipal services that are arranged in two rows of offices, between which is a hallway illuminated from the south. Raster of the glass surfaces in the hallway imitates the style of stone bunja that were used often by architect. The area of the hallway is pulled in relation to the level of the office, whereby the southern façade is divided into two vertical strips from the first to the eighth floor. The base of these tiles is based on two massive pillars on the ground floor, which represent a typical pattern of the international style.[3]

Offices with sun-protected curtains are oriented to the west and east. Six offices of standard dimensions are located on the west side, while from the east, number is smaller and usually there are

[3] Maroje Mrduljaš and Vladimir Kulić in the book Modernism In-Between, The Mediatory Architectures of Socialist Yugoslavia, at p. 36 state that at the end of the fifties and in the beginning of the sixties, every major city in Yugoslavia would have at least one recognizable Corbusian structure. In Minjević's case, they are pillars on the ground floor of the City Hall building.

three to four. From the ground floor, there are elevators and a large staircase with corridors. The staircase is illuminated with large glass blinds on the south and north sides.



Figure 10, the City Hall building, view from the south

A smaller part of the building, with its larger base, is oriented towards the high part and represents in some way a counterpart, a horizontal formation. However, these two parts well connected creating a harmonious whole. In the horizontal part, there is a ceremonial reception hall and assembly sessions, as well as three floors for municipal administration. Strong pilasters that play the role of brise-soleil on the southern facade. There is one window between them.

The general impression is that this building represents a clear whole composed of two opposing elements, the eastern box and the western box. However, gradation is given by a central tract that contains communications. The large, transparent staircase of the stairs made this gradation logical.

The Pedagogical Academy, later the Faculty of Philosophy was built in 1962. This building is located in an urban ring, which according to the urban plan of the architect Saisel anticipates objects of public character. A vast site allowed the design of an expanded base in which several parts are noticeable. The first part is a gym oriented to the long side towards the east and west and three other parts are transversal to the gym. These remaining three parts are parallel and exterminated, and contain auditoriums, cabinets, professors' offices, reading rooms and a large library.

The facility has a clear and clean functional basis from which it is easy to read the purpose of the rooms and the activities that take place in them.

The building has a ground floor and two floors and is one of the few buildings that do not have a recognizable Minjević wall in a bunja rock. The corpus of the cabinet, auditorium, reading room and

libraries are executed and slightly routed, forming an interesting division of volumes on the southern facade.

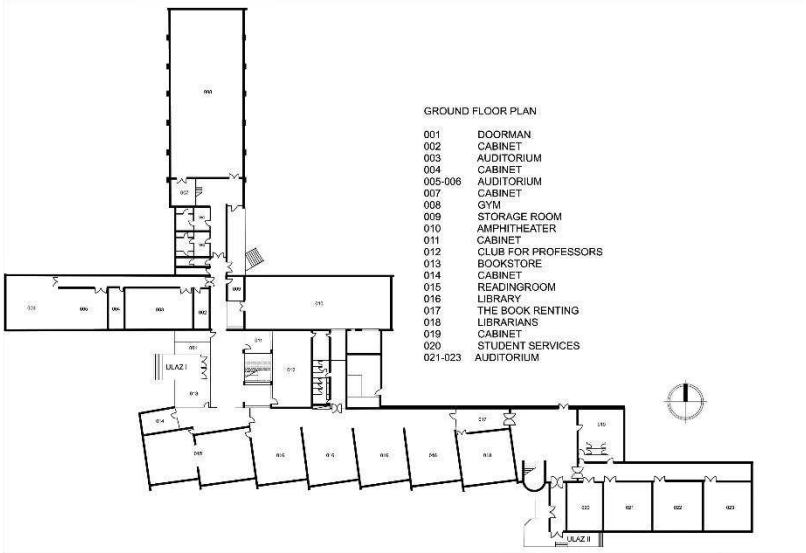


Figure 11, ground floor



Figure 12, View of the southwest part of the building

The Surgical-gynecological hospital was built in 1960. This building contains basement, ground floor two floors and third auxiliary floor. The building has orientation with the entrance façade to north and with hospital units to south.

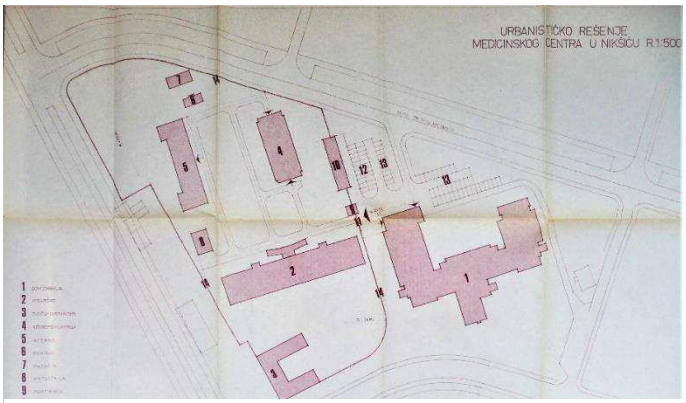


Figure 13, The urbanistic solution of the medical center, Surgical-gynecological hospital is marked with number 2

The building is in its conception is made of the three-track system. It contains a north-oriented tract and a south-oriented tract. There is a hallway between them. The facility with its shorter sides is east west oriented. The first tract is oriented towards the north and contains three entrances on the ground floor. In the central part, there is a main entrance with the waiting room facing to the south side. Further sorting and targeting of patients go from the waiting room. The second entrance from

the north leads to the X-ray department and blood transfusion, while the third entrance is for the personnel in the operational department.

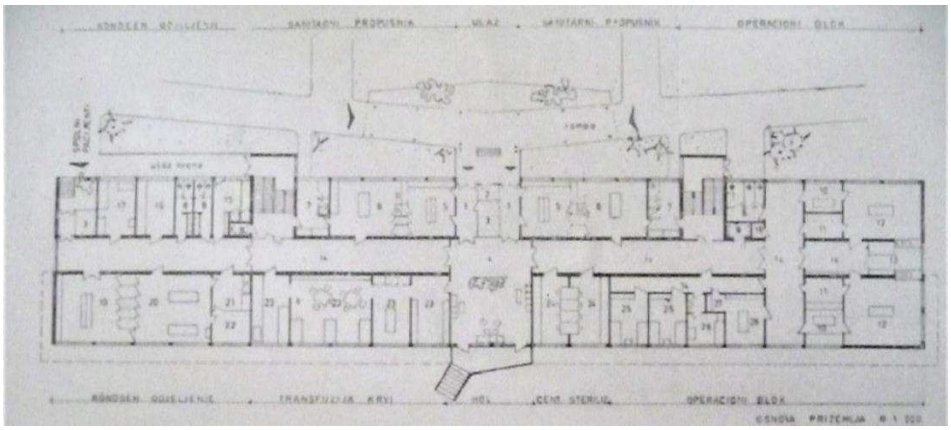


Figure 14, Ground floor

The southern tract contains all those rooms and activities that take place in the X-ray department, the transfusion and the operating block, which are necessary for the smooth functioning of the patient's treatment. On the floors, that are located in the northern tract, there are a doctor's office, nurses, ambulances, sanitary facilities, daily stays, while in the southern wing there are rooms for patients. All rooms come to spacious balconies.

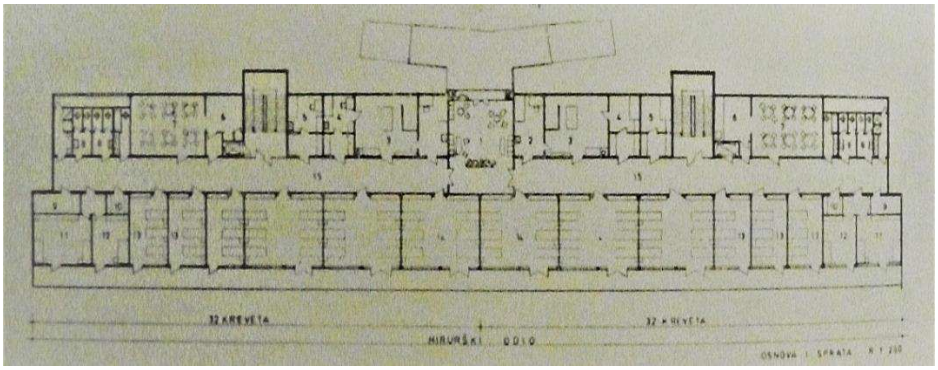


Figure 15, typical floor

This is the first object of this type in Nikšić. In the design sense, the object emphasized by horizontal conceptions; however, the entrance facade is divided into fragments with strong vertical cubes in which stairs are located. The principle that the reinforced concrete canvases are covered with bunja stones is present on the stair canvas but also on the south facade at the ends, below the balcony. The compositional and volumetric facility is calm and harmonious in full with the purpose it has.

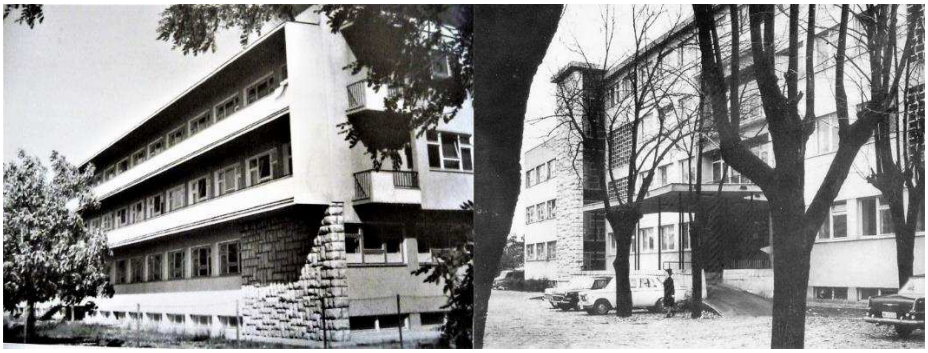


Figure 16, South and North façade

The Syndical Home was built in 1962 and is the first building in Montenegro, and among the first in Yugoslavia with vertical brise-soleil built on the southern façade. The building contains a large cinema hall on the ground floor and the first floor with 800 seats, including halls, dressing rooms, stage with orchestra part with the possibility of holding smaller performances. The building contains a library with reading room, several classrooms for Worker's University, two smaller rooms with a buffet and a terrace. The building was built in the urban block "Meander" and together with the residential soliter, which was also designed by the architect Minjević in 1963, create the corner of the Sava Kovačević Square and the Gojko Garčević Street that leads to the railway station. The building with its broken and dynamic dimensions gives the final emphasis to the block at the beginning of Vuk Mićunović Bulevar and gives the character to the square.

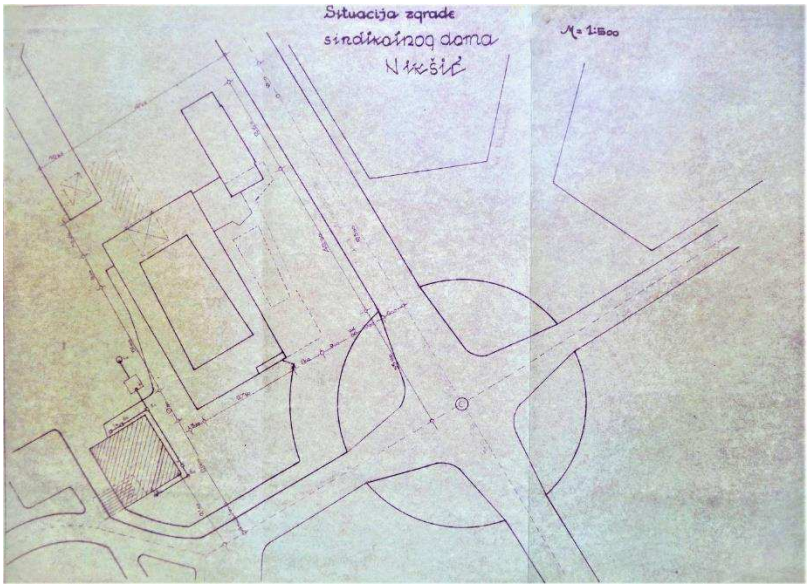


Figure 17, Location of the Syndical Home

There is a justifiable question whether the position of the Syndicate House, which determined by the Josip Sajsel city plan, is actually a violation of the Josip Slade concept of the city. The location of the building is on the place where according to Slade's plan one of the streets, which leaves Sava Kovačević's Square, is drawn.



Figure 18, Construction of the Syndical Home, and Housing Solitair in 1962.

Reasons for giving up this street may be different. Whether architect Sajsel in designing a new urban plan of Nikšić, wanted to mark the space for objects of modern architecture that will not disturb the enclosed architectural ensembles. The clear delineation of the old and new part is due to the clear purpose of the surfaces and new content given by the request of time. It seemes that Sajsel wanted to show that the new era in the city development began with a new concept of architecture. The meeting of the old and the new played in the focus, the center of the urban matrix, on the Sava

Kovačević Square. The Syndical Home is positioned at that place. We are of the opinion that the ultimate product in design is still a directional upgrade of the encountered, basic identity, or transformation towards a positive vibrant identity.

Disposition of space

The technical design report provides a detailed description. According to the construction program, the Syndical Home has a main trade hall with an entrance and side foyer, two smaller meeting rooms, classrooms for the needs of the Workers' University, an administrative part, a library and a hall in the basement.

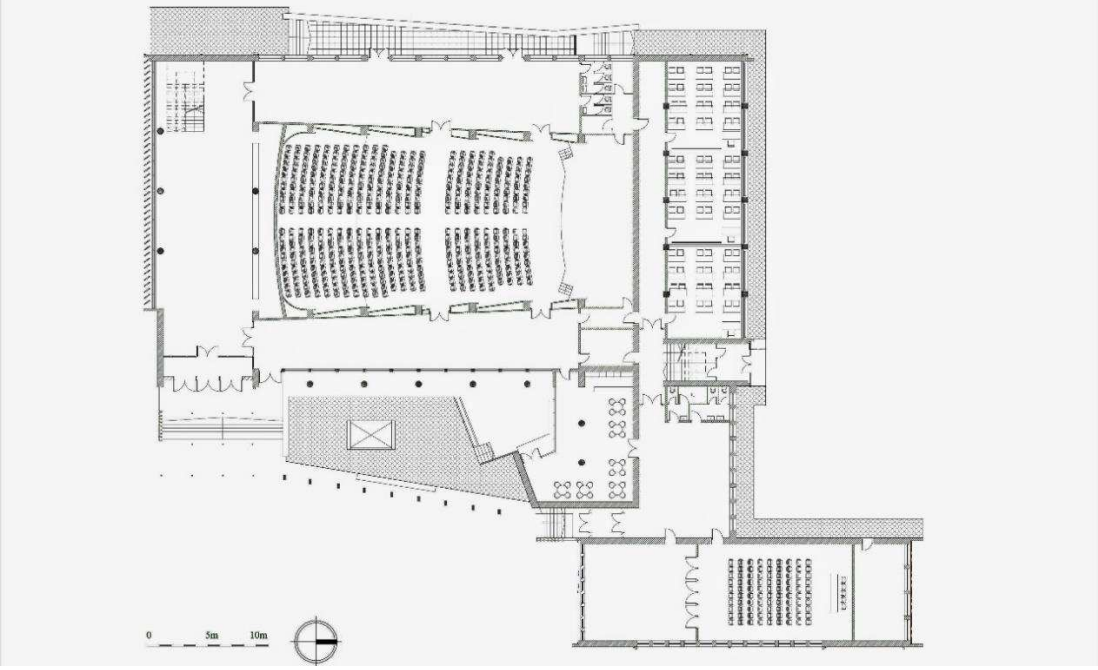


Figure 19, groundfloor, reconstruction by architect Branko Todorović

The object is designed to contain several functions, which are integrated into one whole and can be completely separated. The gala hall has a separate entrance through the main foyer that has a dressing room and two side foyers, one of which is connected to the toilets and the other to the buffet. It can also receive other content such as shows and concerts. By doors, they can be completely separated from other rooms. However, during concerts, the stage is tied to the door for the part serving the work rooms so that it can be used for dressing rooms and auxiliary rooms. The buffet is set up to serve both the foyer and the administrative part.

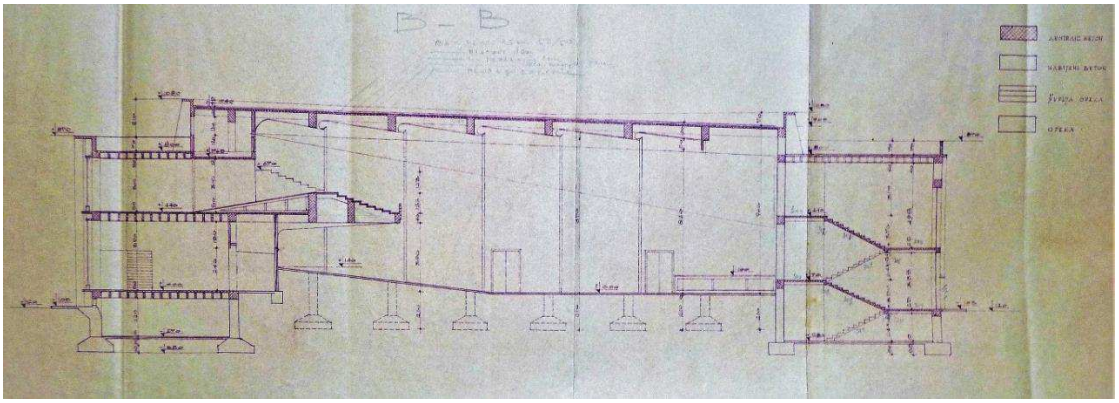


Figure 20, longitudinal section through the hall

On the separate entrance, independent of the hall, an administrative part has been designed, which besides that, has the task to receive in its part work courses and other meetings of professional organizations. It is organized in such a way that there is a wardrobe with a club and a buffet, and then two meeting rooms, and on one corridor three classrooms for worker's courses. On the first floor there are eleven trade union offices, two smaller shops that can serve for lectures or, in the end; they can be rearranged for offices, then library with reading room and accompanying, necessary premises.

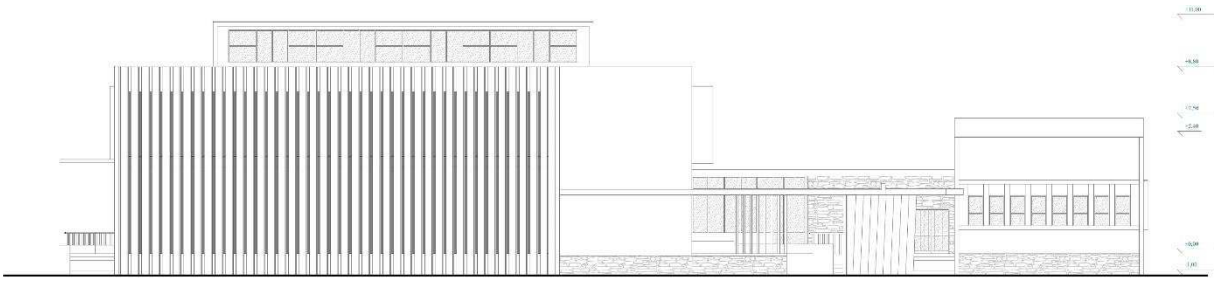


Figure 21, South facade

In the basement, there is a Youth hall with the special entrance, which is intended for smaller events, dances, sports. The Youth hall is designed not to disturb the order in the building. In the basement are located, also boiler room, coal and machine room for ventilation devices.

The floor as well as the ground floor, that is located directly around the hall can be turned off and organized by a separate entrance from the club and meeting rooms in the main foyer. A special characteristic of the entrance party is a monumental staircase that climbs up to the floor where the gallery is.

In front of the building is an atrium connected with the club.

Characteristics of the object

The construction of the building is a reinforced concrete skeleton combined in certain places with a massive system while the hall is foreseen in the frame construction. All ceilings are provided in a small flat ceiling.

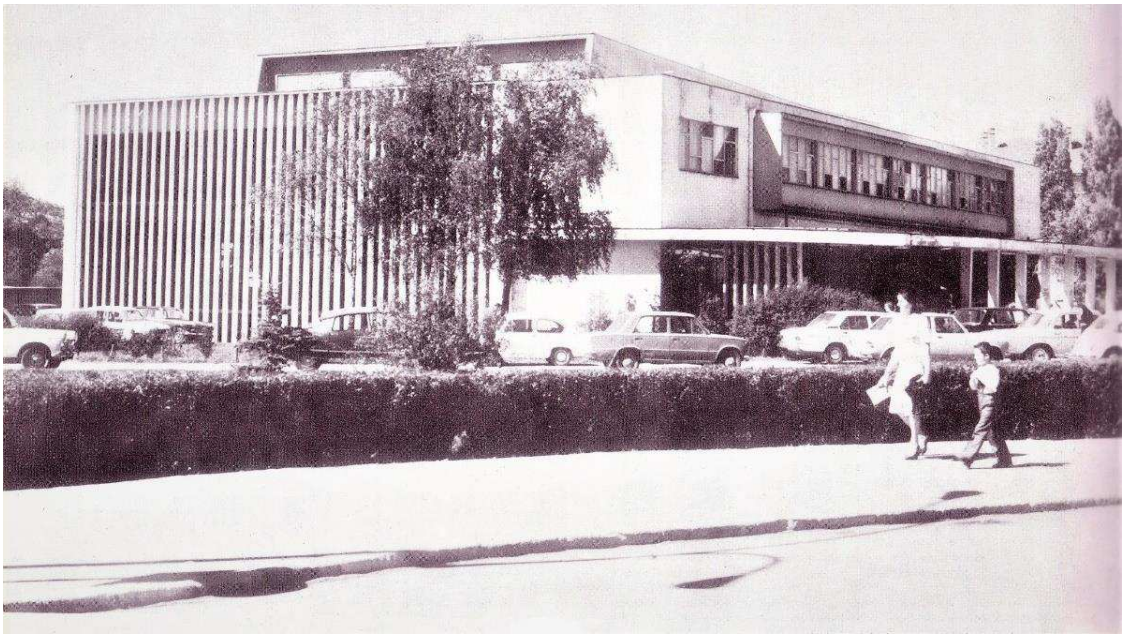


Figure 22, South facade

The achievement of acoustics in the hall, Minjević solved in a specific way. In order to avoid echo, special acoustic boards installed, which were not in production, nor in the market. Studying this problem in many halls in the country Minjević, decided to make acoustic boards, gypsum panels sprinkled with wooden nuts, half of which were polished and half rough. The panels were built in alternating order and the acoustics were achieved in a quite satisfactory degree.

The building of the Syndical Home is designed to fill all those gaps in the social content that Nikšić did not have in that time and above all the needs of the workers due.

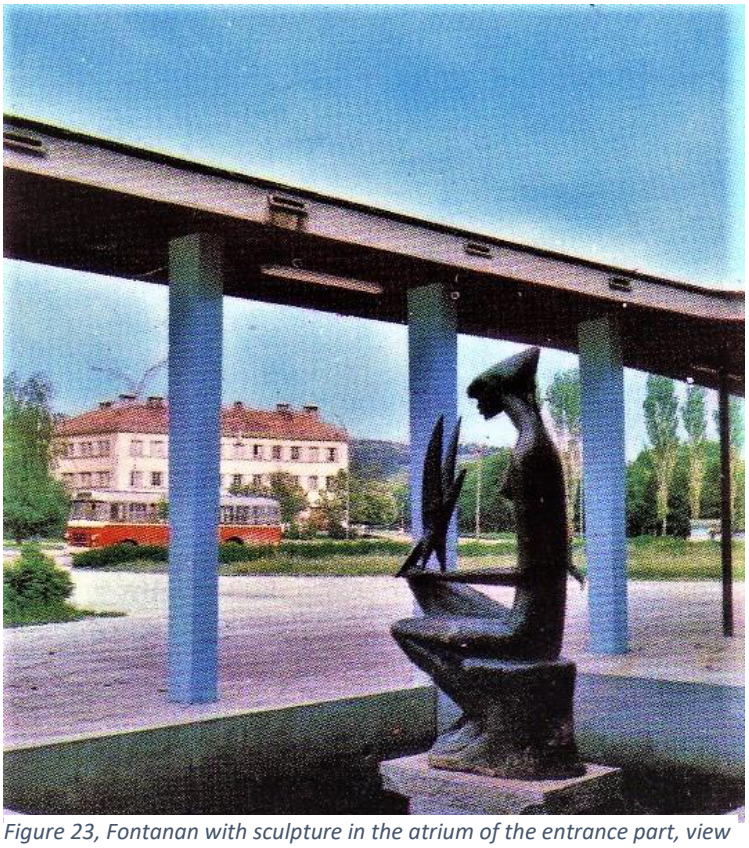


Figure 23, Fontanan with sculpture in the atrium of the entrance part, view on the Sava Kovačević Square

There are many reasons why the Syndical Home can be considered as the most important Minjević work. This building combines different functions and purposes, so in this respect it is a polyvalent building. This characteristic required that this polyvalence be expressed through the form of the object. Minjević expresses the complexity of the purpose through the design of an object in the form of volumetry and used elements of the composition. Although it looks like a compact, orthogonal object, the Syndical Home is actually a playful formation. The entrance facade is facing east towards Vuk Mićunović Boulevard. A wide, spacious path approaches the covered entrance, which, like the ground floor, has raised a few steps from the ground. From the entrance to the right side, nine pillars carry a roof. This canopy leads to the side wing entrance where the administration is located with all of the aforementioned contents. Between the level of the entrance facade and this roof, which is parallel to it, a smaller atrium is formed in which fountain with a sculpture is formed, creating an intimate, pleasant environment that cultivates the entire entrance area and represents a well-integrated whole of architecture, landscaping and sculpture.

On the left side of the entrance, the canopy is discreetly connected to the southern facade, which is all represented by vertical brise-soleil, giving expression to the whole object. The canopy is on the south side carried by eight brise-soleil. On the entrance façade, there are two entrances one leading directly to the foyer of the auditorium and the other leading to the halls and stairs leading to the gallery. Lobbies and foyers are connected to the door. Foyer looks at the entrance yard or atrium, through the window's lanes. On the first floor, there are seven windows with a flat split placed on the cube that frames them and are slightly left in relation to the dominant plane of the facade. In this way, the effects of light and shadow enhance the rhythm of the facade with relations forward, backward. Lantern located on the roof level is a slight inclination giving almost poetic and easy strokes of design and gradation.



Figure 24, Entrance part with a canopy

The building of the Syndical Home was for a long time the first public building that people met when entering the city, on the Sava Kovačević Square. The expression and impression of the unusual and convincing compositional ensemble was achieved by the effect of unifying the south and east facade into one, since the position of the object is such in relation to Bulevard 13th July, which enters the city from the direction of Podgorica. What makes this Minjević object different from others is the use of the basic colors as blue, red and yellow.

Unfortunately, the building of the Syndical Home is completely devastated by the urban plan that enabled the construction of a shopping center along the south facade of the building.



Picture 24, One of the most famous postcards of the city from the 1960s, the Syndical Home, a residential tower and a bastion of Sava Kovačević on the square of the same name

Conclusion

Talking about the work of the architect Đorđije Minjević is a great challenge. The main difficulty in interpreting his work is the lack of original projects and drawings of buildings. These projects seem to have been lost. In the Archive of Nikšić, for now only fragments of a small number of projects can be found, even those fragments are in poor condition. The data from the magazine or books in which Minjević's projects were published are a true rarity and can hardly be reached. Even the architect Minjević, in his monography on his work and life, states that because of the loss of project material,

this monography is of a documentary character and not representative. Minjević made the monography to distribute the material that he possessed to the readers and to preserve, from time and apparent negligence, as far as possible his work.

In his last interview with the journalist Sonja Vujadinović, Minjević spoke, among other things, about the relation to the architectural heritage and the urban and architectural identity that emerged from the base of the urban matrix of the city. Minjević responds that he has always asked for special studies and analyzes that would evaluate the urban and architectural heritage of Niksic, before building on a given location. Minjevic, in fact, never built in the urban core of the city, which, according to his own admission, sought to preserve his authenticity in which objects of international style could not fully integrated. When we carefully analyze the positions of Minjevic objects, we will see that they are always or in an urban ring that is concentrically spreading from the urban core to the north of the city or in the touching boundary lines between new and old urban blocks. Places of contact between the old and the new urban interpretation of the city were ideal for the setting up of Minević's modernist objects, which could be logical in such sensitive transitions. In this way, the architectural and urban identity of Niksic has gained new elements that have enriched it. Although the interception of traditional motifs in Minjević's architecture is only formally formulated using stone-built walls, we cannot say that its architecture was not a positive upgrade of the architectural fund of the city.

Just as architect Minjević, at the beginning of his career, the lack of associates, professional staff, machines and high-quality materials understood as a challenge from which he created objects that became an integral part of the life of Nikšić citizens, and therefore part of their identity, the lack of archive material should be viewed as a challenge, too. From this challenge we can give equally positive interpretations as well as when the material would be available. The buildings by architect Minjević give inspiration and help to see architecture again, poetically.

Bibliography:

(1) Professor Branislav Mitrović Introduction for the monograph „Arhitekta Đorđije Minjević, graditelj i prostorni planer“, Batatisak, Beograd, 2007.
(2) Sabrina P.Ramet, The three Yuogoslavias, Satate Building and Legitimation, 1918-2005. Washington, D.C.: Woodrow Wilson Center Press and Bloomington and Indianapolis: Indiana University Press, 2006.
(3) P.H. Liotta, Paradigm Lost: Yugoslav Self-Management and the Economics of Disasters, Balkanologie V, no.1-2, December 2001.
(4) Vladimir Kulić, Land of In-Between: Modern architecture and the State in Socialist Yugoslavia, 1945-65, doctoral disertation, Austin: University of Texas at Austin, 2009.
(5) Udo Kulterman, Savremena arhitektura, Izdavačko preduzeće „Bratstvo i jedinstvo, Novi Sad, 1971, p. 200
(6) Vladimir Kulić, Maroje Mrduljaš, Modernism In-Between, The Mediatory Architectures of Socialist Yugoslavia, Jovis Verlag GmbH, Berlin, 2012. p.29
(7) Djordjije Minjević, Nikšić u sjećanjima, JU „Stari grad Anderva“, Nikšić, 2008, pp 31-32
(8) Bogdan N. Nestorović, Arhitektura novog veka, Naučna knjiga, Beograd, 1964, p.316
(9) Charles Jencks, Modern Movements in Architecture, Građevinska knjiga, Beograd, 2003, p.449

Photo sources:

Figure 1- taken from http://www.novineniksica.me/?p=787

Figure 2,3,9 - Monography „Arhitekta Đorđije Minjević, graditelj i prostorni planer“, Batatisak, Beograd, 2007.

Figure 4,5,6,10,12,16,18,22,23,24,25- Private collection

Figure 7,8,13,17,20- Archive of Nikšić

Figure 14,15- Magazine „Arhitektura, urbanizam“, no 27 1964.

Figure 11.21 – reconstruction by text author

Figure 19- reconstruction by architect Branko Todorović

Chapter 10:

Objects by architect Slobodan Vukajlović, Continuity of city building and individual interpretation of modernism and postmodernism



Figure 1, Slobodan Vukajlović in Bari, Italy during the opening ceremony of the Grotta Regina Motel, 1974.

Architect Slobodan Vukajlovic was born in Nikšić on 12.08.1934. He finished Real gymnasium in 1954 and the Faculty of Architecture in Belgrade in 1961 in the class of a very important professor and architect Bogdan Bogdanović. The topic of his graduation work was the reconstruction and revitalization of the old town fortress in Nikšić, the so-called Bedem. We have seen that by its structure, the fortress Bedem was built according to the system of Roman castrum and as such, it is quite geometric. The pure geometric structures of individual towers are noticed, which represent either a square or hexagon or octagon. It seems that the fascination of the architect Vukajlovic with hexagon began exactly on the preparation of the diploma paper, where his studious analysis of the fortress was especially focused on hexagonal towers.

In the daily newspaper Politika published after Vukajlovic's graduation, journalist Vlado Mićunović writes that the collision of new and old, modern architecture and heritage, tradition and present will not be felt here. The author tried to preserve the morphology of the stone. Stone and glass are mostly used materials. All elements are harmonized with the original whole with clearly stated accents of what architect really wanted to emphasize. Keeping the historical value of the fort as a monument, the author was guided by practicality, did not sacrifice modern comfort; next to towers with cannons and loopholes, he gave modern architectural solutions. He sought to put the history within the limits of a beautiful and possible, into the current framework and transfer the present into history. (1)

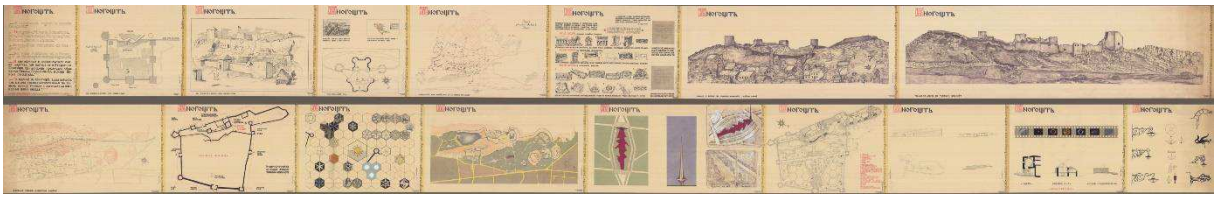


Figure 2, The 45 meters long parchment sheet, graduation work by Slobodan Vukajlović

It seems that graduation work for Vukajlović was a basis for forming a way to design future facilities. In the case where these objects are projected in the enclosed environment, they are always part of the context and complement it, forming a harmonious whole without losing their peculiarity. In case there is no existing built-in context, the building is in harmony with nature and never acts as a foreign body without dialogue with the environment. This suggests that building for Vukajlović is an act of continuous development of the built space, respecting its already established identity.

After the completion of the studies, Vukajlović worked in the Department of Public Works of the Nikšić Municipality a year after which he served military service. He returns again in 1963, when the Institute for Urbanism opened in the city, where he will work as head of the Urban Planning Department until

1967 when he was elected as Director of the Institute for Urban Planning and Design. He remains on this duty until 1974. During this period, he was the chief city urban planner and designer. In the period from January 1975 to July 1978, architect Vukajlović worked as the director of the Bureau for Design and Technological Development at the Construction Company "Crna Gora".

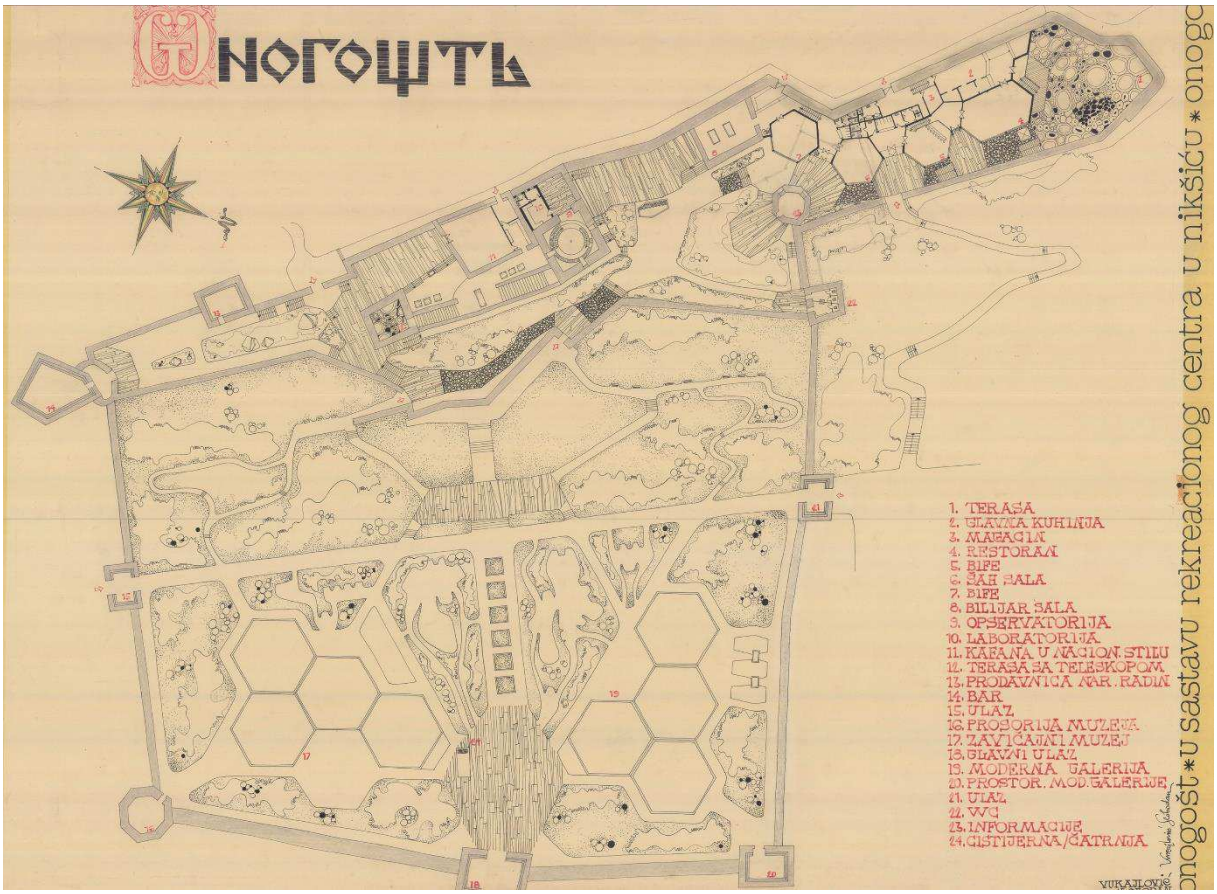


Figure 3, Segment of graduaation work, a solution for the revitalization of the fort

Vukajlović was a participant of all symposiums, consultations and congresses about urban and architectural activities in Yugoslavia. From international meetings, two influenced his work the International Congress of Architects Conservators in Venice and the International Congress of Urbanists in Barcelona. He was a member of the international organization IKOMOS. His work was influenced by the work of Frank Lloyd Wright, but also by the work of Bogdan Bogdanović.

As a scholar of the Polish government, Vukajlović attended the doctoral studies in the field of architecture from 1974 to 1978 when he defended the thesis "Hexagonal Systems in Architecture" under mentorship of Professor Tomasz Mankowski (1926-2012). It is interesting to note that Professor Mankowski was a student of the architect Julius Żórawski and Louis Kahn. It is certain that such a significant personality of architecture, especially Kahn, left an impression on Professor Mankowski, who then gave to his students understanding of architecture from the points of view of architects Żórawski and Kahn.

For work in architecture, Slobodan Vukajlović received a number of significant awards such as the 1st prize at the Yugoslav "Stan Jugoslovena" competition at the micro-level Senjak in Osijek in 1969, then the “18th September” award given by the city of Nikšić to prominent individuals who contribute to the city by their actions. Vukajlović received this award for the buildings of the city chapel built in 1969. Next is Borba award for the best achievement of architecture for 1971 for kindergarten built in 1971.

It is interesting to note that Vukajlović designed most of his facilities in Nikšić and its surroundings. Some of these objects, typologically for the first time were designed in the city and thus influenced the transformation of spatial identity in a positive direction.

Architect Slobodan Vukajlović died in Nikšić in 2006.

Characteristics of architecture

The architectural characteristics of the objects designed by Slobodan Vukajlović can be discussed with several starting points. One of the essential characteristics of his work is the diversity that relates both to the typology of the projected objects, the number of objects and to the different style approach to solutions, even within the same typology groups.

The typology of projects made by Slobodan Vukajlović is quite large. In general, we can divide it into urban solutions, reconstructions of objects, memorial-monumental architecture and architectural solutions. Urbanistic solutions mostly refer to Detailed Urban Plans, individual parts of Nikšić. The urbanistic solution of the promenade and beaches on Lake Krupac is an interesting example of interweaving urbanism, architecture and landscaping, and as such, it is rarely among the first examples in the area of Montenegro. The competitive solutions of the squares in Nikšić and Podgorica are valuable evidence of the relationship of the architect Vukajlović with the inherited urban designs where his solutions contribute to the continuity of the urban morphology. Even at the first impression, almost all urban projects and competitions that Vukajlović worked on show respect for the context. However, the interpretation of the solution in addition to the harmonious and logical upgrades of the founders also speaks of the author's impressive, unique style.

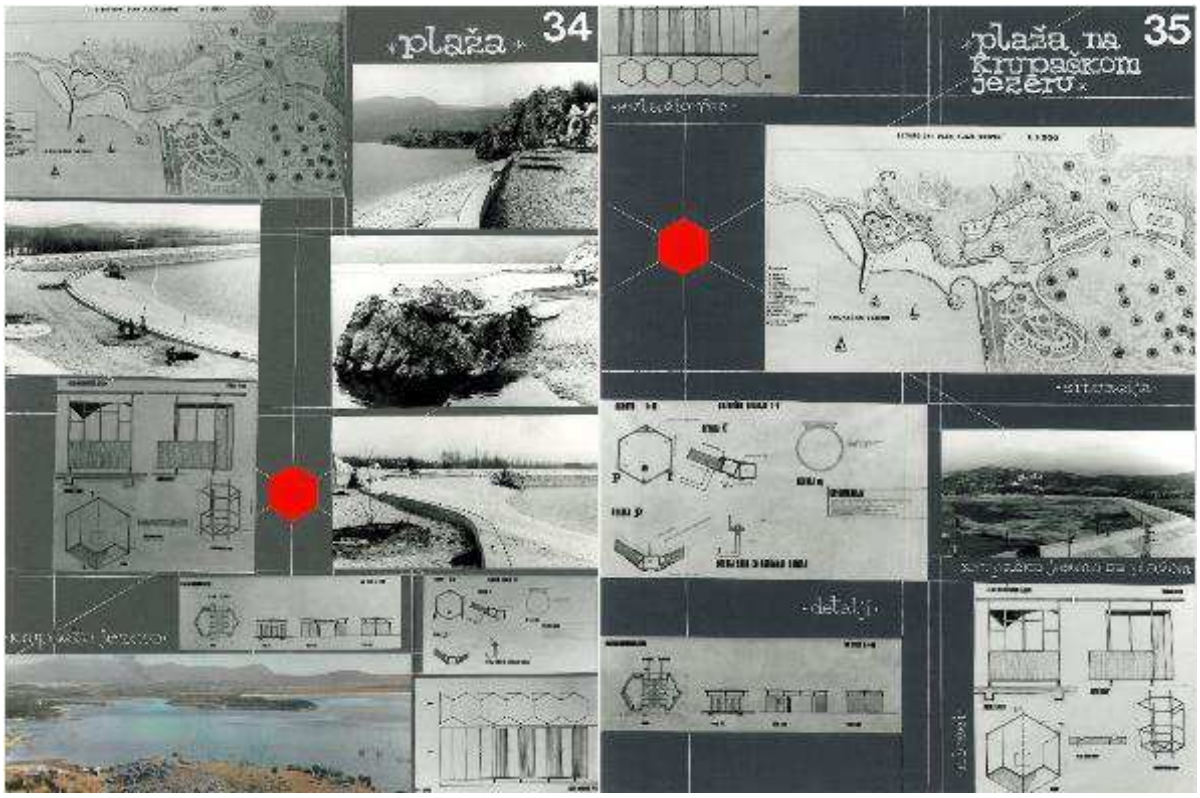


Figure 4, Plan for the beach of Krupac lake

Architect Vukajlović worked on reconstruction solutions, mostly of old city houses and some important public buildings. In particular, the reconstruction of the King Nikola Castle, which is beside the reconstruction of the building accompanied by an adequate landscape and urban solution, as a kind of

supplement. Moreover, in these solutions, the urban and architectural patterns that have been presented are fully respected and the architect gives solutions that upgrade them.



Figure 5, Monument to patriots, Nikšić

Memorial and monumental architecture takes a special place in the entire work of the architect Vukajlović. This architecture has been present since the graduation thesis in which the synthesis of the square and monuments dedicated to all those victims for freedom is also presented. In a formal sense, the monumental architecture is also diverse and it is difficult to talk about variations of some of the topics present in each of the monuments constructed. On the contrary, every architect's solution has been re-considered, taking into account the spatial but also the historical context, offering non-repetitive solutions, whether they have a strict geometric or figural character. The influence of the architect Bogdan Bogdanović is noticed, but it is only fragmented and in the notes, it is quite enough that the originality and the particular poetics of the architects of Vukajlović come to the fore.

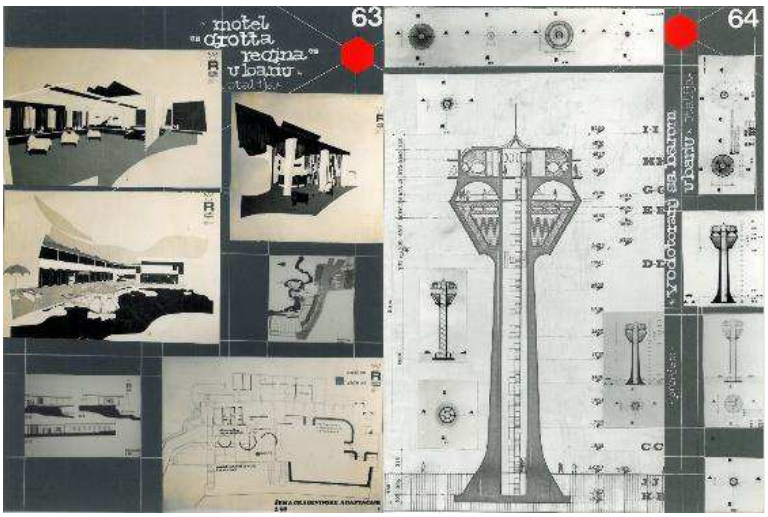


Figure 6, Some of the details of the Motel Grotta Regina and Water tower in Bari, Italy

Architectural solutions are also diverse depending on the purpose of the objects. Typologically there is the architecture of houses, collective housing, architecture of hotel facilities, public, health, sports and architecture of school facilities. Slobodan Vukajlović is the only Montenegrin architect whose buildings were built in Italy, the Grotta Regina motel in Bari and the Water towe rwith a restaurant on the top, also built in Bari in 1974.

The stylistic characteristics of the Vukajlović's architecture are as diverse as it is difficult to talk about just one or a few patterns and stylistic postulates that he applied. Although his work has recently been characterized as "hexagonal architecture", that is, the architecture in which the shape of object is solved by the various combinations of volumes created from the hexagon as a base, yet interpretations should not and should not be so one-sided. The work of Vukajlović is far more complex and cannot be said about the manner in which he worked. It is true that in a large number of objects hexagon is present, but its use is never without reason and it is never arbitrary. There are some similarities with Frank Lloyd Wright, who had a strong influence, primarily in philosophy and the design of objects at a given location, on Vukajlović's work. Wright, on the one hand, used a simple orthogonal raster to organize different zones of space; he also used diagonal planning methods, especially in dramatic landscapes with uneven terrain. His project for Hanna House, in which he used the bee collar in the

form of hexagon for floor motif, is a synthesis of these principles. (2) Similarly, Vukajlović uses orthogonal design systems, but in terms of the hexagons usage, he, unlike Wright, nevertheless recourse to a calmer linear method of multiplying hexagons.

The time in which Vukajlović began to create is very important in the context of understanding, especially the basis of his stylistic approach or better to say the methodology of object designing. Vukajlović began to create in the mid-1960s in an international, modernist style. One of the objects that is significant in his work as well as in the work of the architect Djordjie Minjević (1924-2013) is a building of collective housing in Jola Piletić Street built in 1962. It is intensely important that both architects sign this building. In the Archives of Nikšić city, in a bad condition and with incomplete leaves there is a project of a building signed by architect Minjević while in the personal archives of the architect Vukajlović there is the project of this building signed by him.

If we take the year of construction, it is clear the year in which Vukajlović begins to work. This is also the year of the last Minjević performances in the town of Nikšić. There is a conclusion that on this building they both worked together. If we look at the facades of the building, this claim gets important. Namely, the eastern facade was made in a strict international, modernist form with a clear division of windows that indicates the content of the object and the purpose of the premises. The long balconies set along the entire eastern facade and the pronounced horizontal composition most likely belong to the architect Minjević. This formative approach is present on several of its facilities, especially at the Gynecological and Surgical Hospital.

The western façade is completely different with the emphasized verticality, using reinforced concrete panels on the staircase. The two entrances are set symmetrically and on an angle, that is an unusual solution for that period. Balconies on the side facades, south and north, are also placed on an angle. The facade is dynamic and is driven by different widths of the vertical tape. Most probably, this façade is the work of Vukajlović. However, it is clear that both architects appreciated the sensitivity and approach of the other because the impression is that this building represents a harmonious whole.

Vukajlović's first architectural objects were designed in a modernist, international style, but with respect to the conceived context. It should be noted here that Nikšić as a city of a specific urban matrix was in a special situation. Namely, the radial setting of the city, with its strict geometrical, has a clear differentiation of the city zones and the purposes of the surface and accordingly the purpose of the objects. The city urban plan of Sejsel, Boltar and Milić made in the period from 1954-58 is clearly related to the urban matrix of the First Regulatory Plan. This upgrade gave precise zoning by introducing new urban rings that radially spread from the old urban city map, where new objects were built after the Second World War. This way, as if to avoid the possibility of building new buildings besides the inherited, old ones. However, this construction was still in places that were not built in the old city center.

Alongside the growing interest in public monumental buildings, mid-to-late Fifties, two aesthetic ideals emerged. One was a new humanism, and the other, less prominent was the new regionalism. Especially critical regionalism will be present in the territory of SFR Yugoslavia in the mid-sixties, precisely at the time when Vukajlović begins to build his facilities. In the time of the definition of regionalism, it began to imply that architects should take into account the architectural heritage of a particular culture, which sometimes referred to its national construction, and sometimes to the author's artisanship. (3) In this View, Vukajlović always conceives objects based on the local experience derived from the urban matrix of Nikšić. Strict geometry of the matrix logically requires that the objects be concise, geometrically and integral.

Critical regionalism has advocated the idea that projects that take into account the particular climatic conditions will satisfy the aesthetic and ecological conditions, and thus resist the homogenizing forces of modern capitalism. (4) Vukajlovic's bildings could be seen in this context without any doubt.

Another important feature of Vukajlovic's buildings is that it is meaning. His objects usually have a pronounced narrative characteristic given in the form of associativity and metaphors, even those objects made in the spirit of modernism. Norberg-Schulz observes that one could say that the architecture of modernism ignored the dimension of meaning, and hence the fact that the common denominator of postmodern experiments is a search for communicative, content-based architecture. (5) However, on the example of Vukajlović's architecture, the interpretation of meaning, through the symbiosis of function, form and often detail, is always present. Hans Hollein in the sixties concludes that architecture is not meeting the needs of mediocrity. It is not the environment for the small joys of the masses, that is, architecture is a matter of elite. (6) If in this context we observe Vukajlović's architecture, we will see that his work is actually intended for the citizen, as a representative of the elite. Citizen as a user of the space should be conscious of the significance of the city, its morphology and all the elements that make it, in which individual architectural works make up the whole and enrich it. In this respect, Vukajlović always has in mind the urban context of his buildings. In the architectural definition, the presence of the urban context can be diversified, from virtually no representation in typical objects, to superior architecture that is unthinkable without any special sensibility to the environment. Therefore, the architect in his approach determines which value of the constants, that is, of the urban parameter, will be incorporated into the design process. (7) At Vukajlović's architecture, the thought is always present.

Over time, started the crystallization of Vukajlović's design pattern. It seems that this crystallization came along with his improvement in terms of both profession and personal view. For a time, his work will function within the framework of postmodernism in the waves of brutalism, structuralism, and reinterpreted constructivism, which often defines the poetics of the object.

Vukajlovic's work is a distinct, individual work that does not reject the universal aesthetic and ethical criteria of the profession and which the spirit of time respects, but interprets it in a unique way enriching it so.

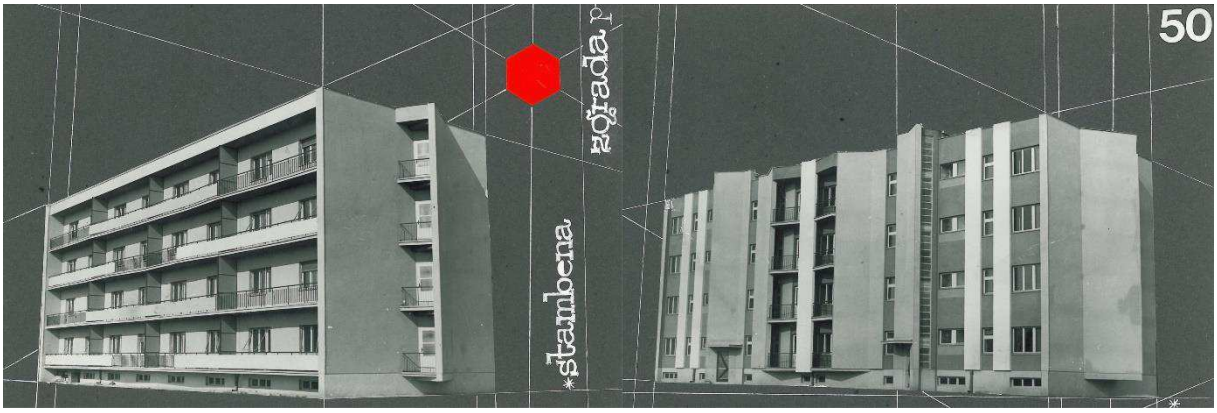


Figure 7, The west and east facade of the colective housing building in Jola Piletić Street

The most important objects

Over thirty objects by architect Slobodan Vukajlović have been built, the majority of which is in the area of Nikšić. Among his most successful works are the Motel "Jastreb" (1971), the Catholic Church (1973), the Investment Bank (1974), the Kindergaten (1971) and the Town Chapel (1969).

The city chapel was built in 1969 and represents one of the first Vukajlović objects. For this object, we can say that it represents a multilayered work, both by its spatial conception and by its meaning.

Vukajlović designed city chapel in the narrower city core within the urban matrix of the first regulation plan. The chapel's location is next to the northern edge of the spatial focal point, which consists of a church church on the top of a hill, a square and a monumental staircase with two side ramps connecting the plateau in front of the church and the square. This whole area is characterized by a strict geometric division and a baroque scheme dominated by the cathedral church as the center of the composition.

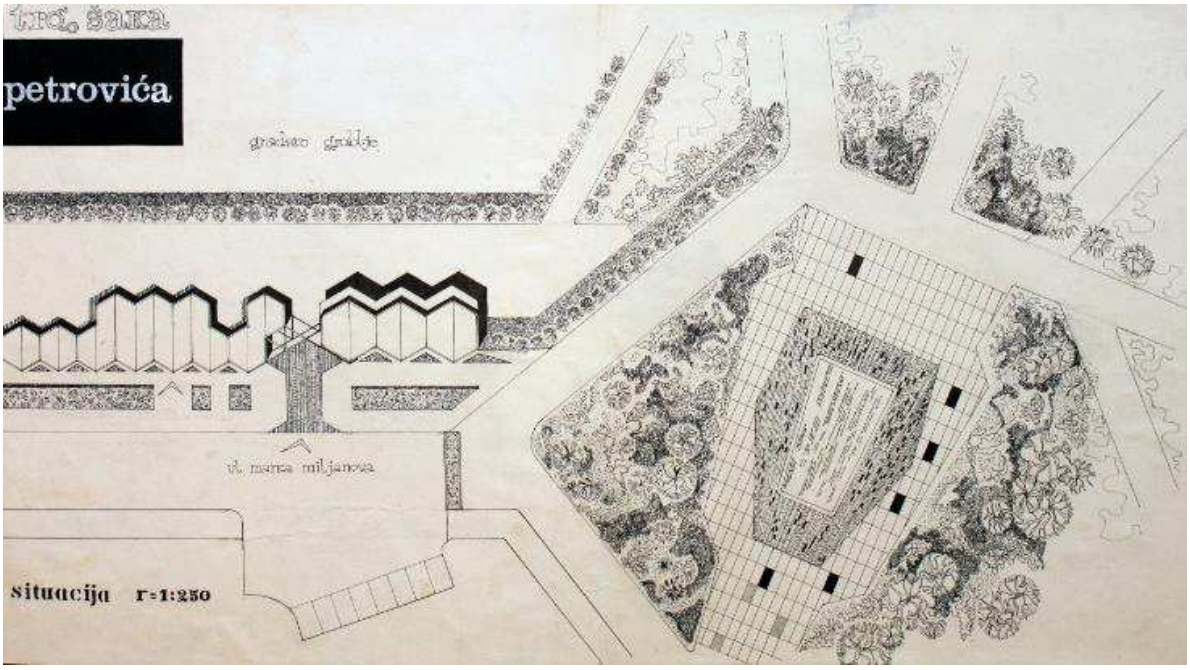


Figure 8, Location of city chapel with the proposal for the Šako Petrović Square patern design

Vukajlović designed a chapel so as not to disturb the spacious composition of the composition. The shape of the chapel was derived from the shape of the old Slavic medieval monuments Stećci, which are still in the city cemetery today. Vukajlović, through a series of analyzes, shows how he got the shape of the chapel.



Figure 9, The concept of idea

Hexagon is used as a geometric figure as a module and model for forming the base of the object by multiplying it. The volumes obtained from the hexagonal base differ in height and dimensions of the opening.

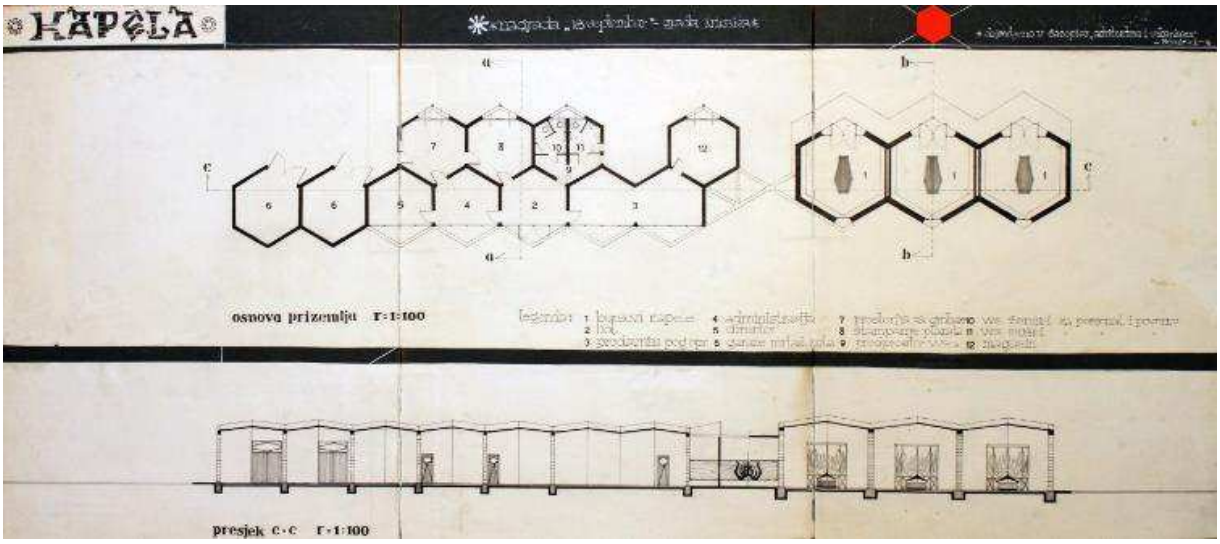


Figure 10, Groundfloor and section of the chapel

While the accompanying contents are located in thickly compact but clearly defined lower prisms, three clearly defined chapels are located in the highest altitude. In addition to their height, these three chapels with window openings located on the western facade at the site of the cross-section have a certain mysticism and spirituality that is related to the notion of death.

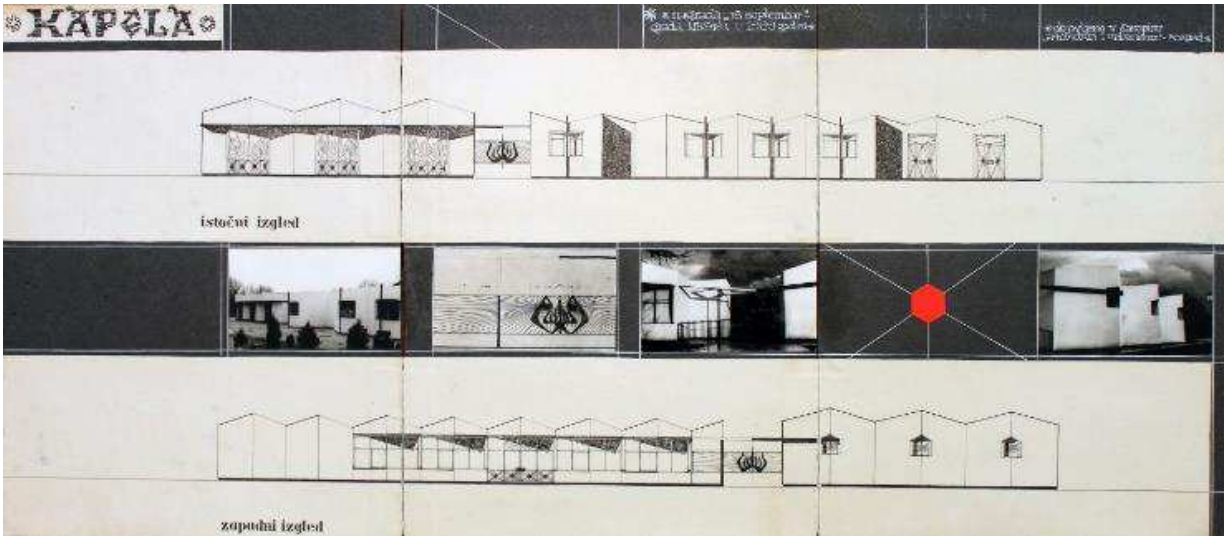


Figure 11, Eastern and Western façade

The lower prism openings are larger and more transparent adapted to the accompanying contents that are located in them.

One of the important compositional elements on the chapel is the gate. The gate represents and marks a precise place, a point in the space where a person passes from the outside into the inner space from the known to the unknown. (8)

This gateway is a passage to the plateau that lies in front of the inner, east facade of the building. The western facade is in this regard like a wall that separates the silence of the city cemetery from street

noise on the other. The gate is made of iron with a stylized omega letter, taken from the medieval name Nikšić, when the name of town was Onogošt. This letter is styled to represent eternal fire and life. The combination of black and white beams above the gate further emphasizes its symbolism and mysticism. The author seems to want to present in this way a meeting of life and death.

The pronounced form of the building, its individual elements but the whole has clearly defined shadows as an integral element of narrative. It has certain parallels and similarities, especially in the way of forming the atmosphere with the Cemetery of San Cataldo from Modena architects Aldo Rossi and Gianni Braghieri built between 1971 and 1984. Shadows mark the flow of time and the shift of seasons. However, the shadows on the empty window niches of the cemetery also evoke the melancholy of de Kiriko's works; Silence rules where dead is. (9)

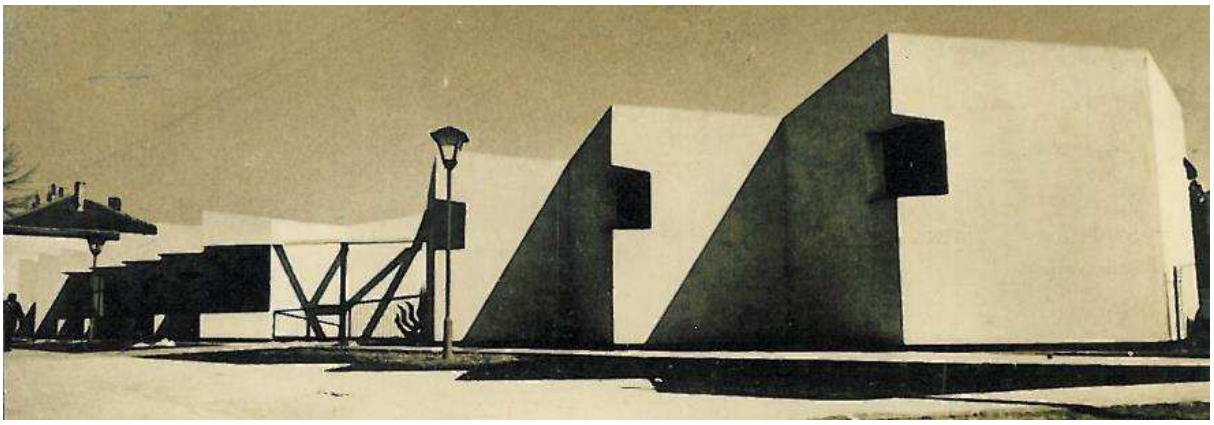


Figure 12, City chapel, Nikšić

Motel "Jastreb (Natel)" was built in 1971. It is characterized by a roofed mass that is the basic dynamic component of the building. On first sight, it seems that all the building is subordinate to roof construction; however, a more carefull observation of the static concept of constructive elements here becomes a major challenge for interpretation. This object seems to reminiscent of the principles and attitudes used by Frank Lloyd Wright.

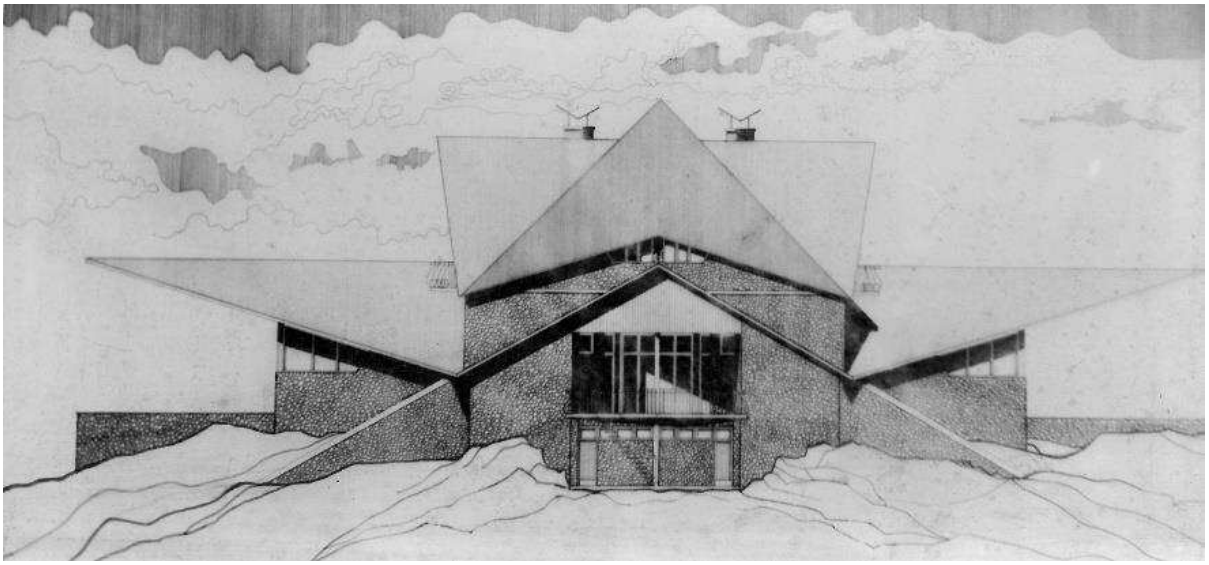


Figure 13, North facade

Frank Lloyd Wright retained a distinct and unique position in relation to the international style architecture, attacking the "ready-made" culture of internationals and applying warm materials and

volumes that followed the outline of the terrain, which had little to do with light machine perfection, promoted by other modernists. (10)

Similarly, Vukajlović also refuses to interpret the object in already established forms in terms of materialization, use of materials, finished factory windows, doors and other elements.

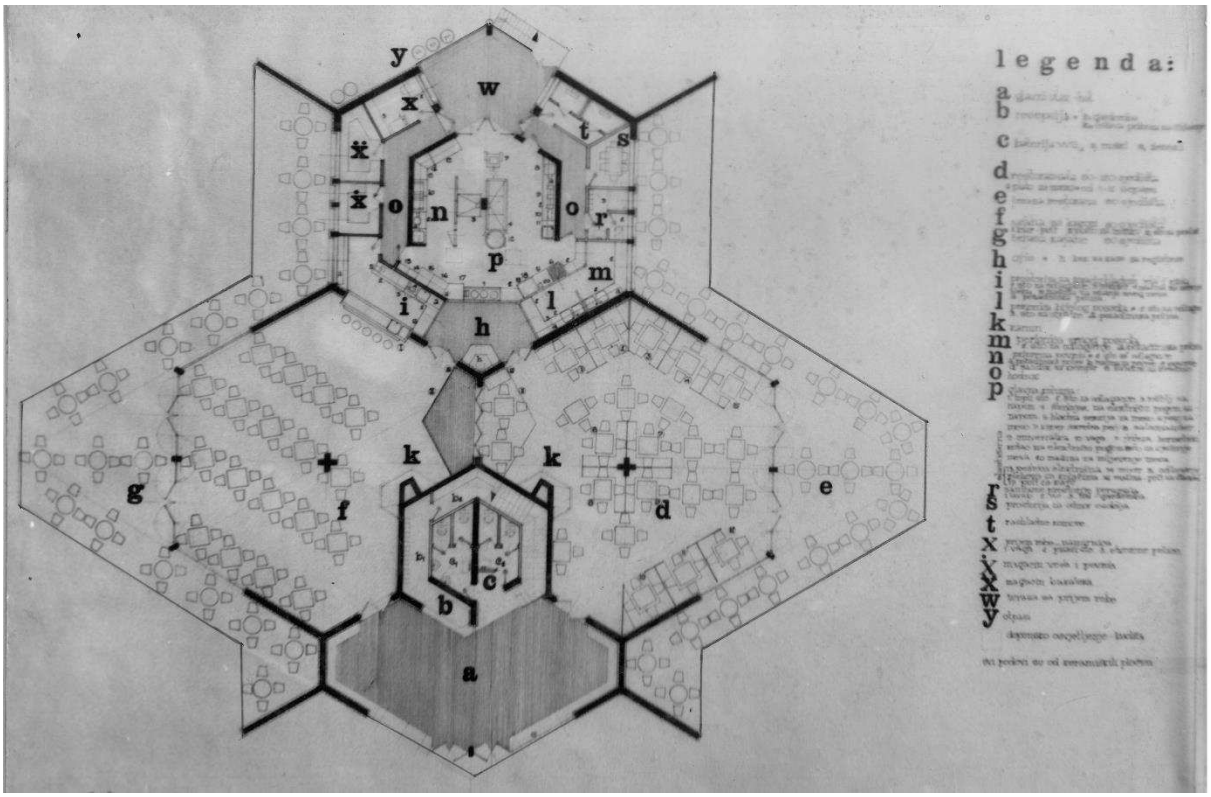


Figure 14, Ground floor of the motel

Organic architecture can also be viewed as the introduction of individual parts into a whole so that the general form decides on the shape of the individual part. This means that the forms of a building that are melted into a harmonious whole are expressed just like organisms in the nature of their purpose.[4] (11)

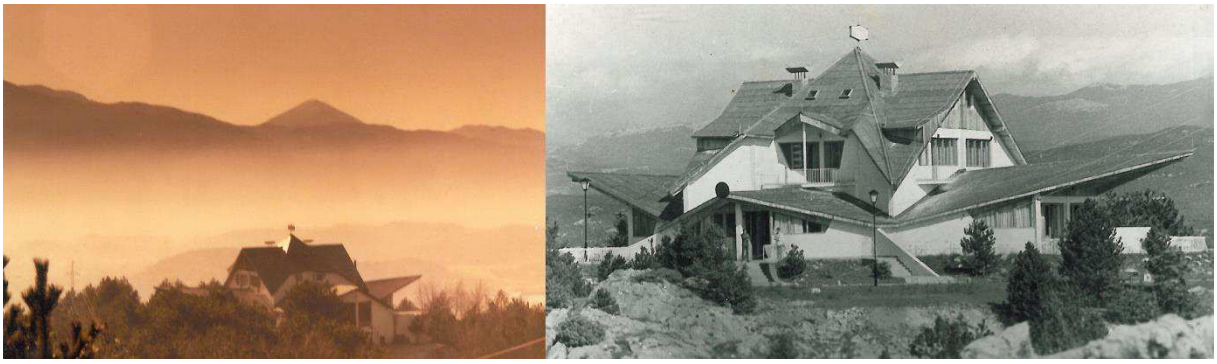


Figure 15, Motel Jastreb

[4] Most architects who build on the theory of organic unity do not apply solely on the building itself, but also on the relationship of the building to the respective area. Frank Lloyd Wright was particularly concerned about this: the building should not stand on the hill but should be part of the hill, as if it had grown from the ground.

The principles of organic architecture are used here; the building is not on the hill but has emerged from it.

The function and contents of the motel Vukajlović interpreted in three hexagons by forming a harmonious whole. It seems that the entire building exists only in a limited roof space. However, the unusual treatment of the wall and window openings is only in the service of emphasizing the roof as the main driving mass of the building. The name of the motel "Jastreb-Hawk" also reminds that the object acts like a bird that can fly every moment.

Considering that it is located on one of the tops of the Trebjesa hill, which is the main city recreation park, the motel is visible from the city center and is one of the points of reference. In the eastern panorama of the city, the motel is one of the key elements of the identity of the space.

The kindergarten was built in 1971. Building represents the object of a circular base with a circular atrium in the center. Design is adapted to content and purpose, and above all to children. Eight children's rooms are also provided in a circular manner by forming dynamic segments of space that encourage children to imagine and see space from different angles. For this object, Vukajlović received the most significant Republic Award for Architecture, Borba Award.

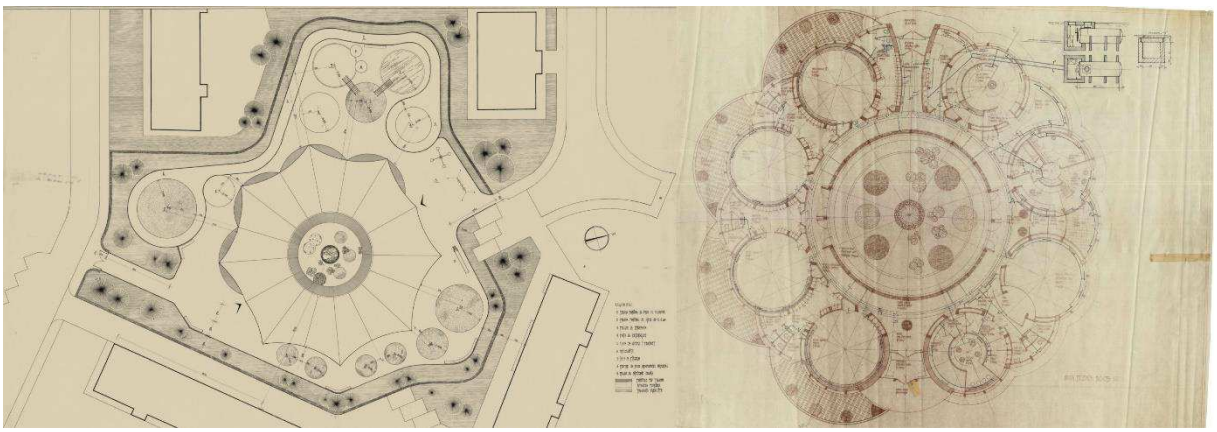


Figure 16, Location and groundfloor



Figure17, The central kindergarten

The building is located in the urban city ring that is intended for collective housing. In the strict orthogonal position of the building, the circular kindergarten becomes the main focal point. Although in this contradiction, the kindergarten acts as an element of positive spatial identity.

The Catholic Church was built in 1973 in reinforced concrete as a fragment of hyperbolic paraboloid. Composition is a polyvalent solution. Different associations, which contribute to the significance of this work, arise from the relation of individual elements to the whole as well as to each other. Moreover, here the principles of organic architecture are consistently applied in a way that the whole dominates in relation to the elements that form it.

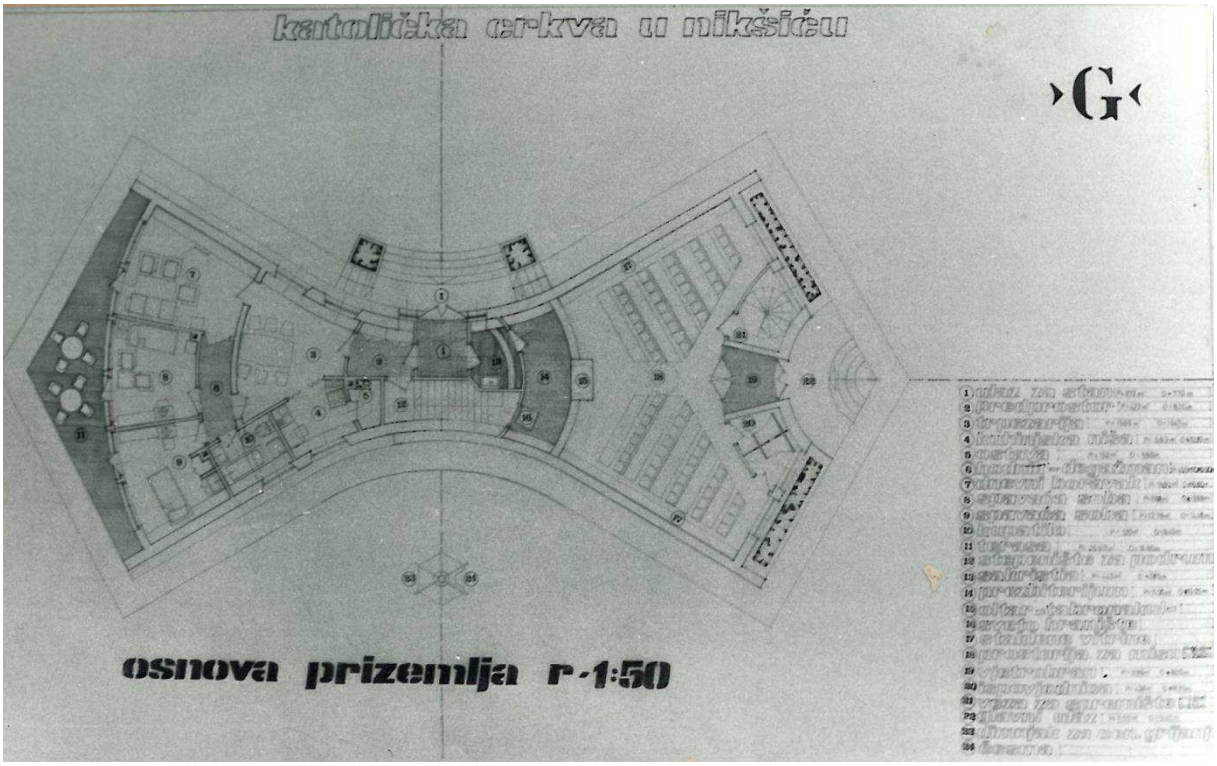


Figure 18, Groundfloor

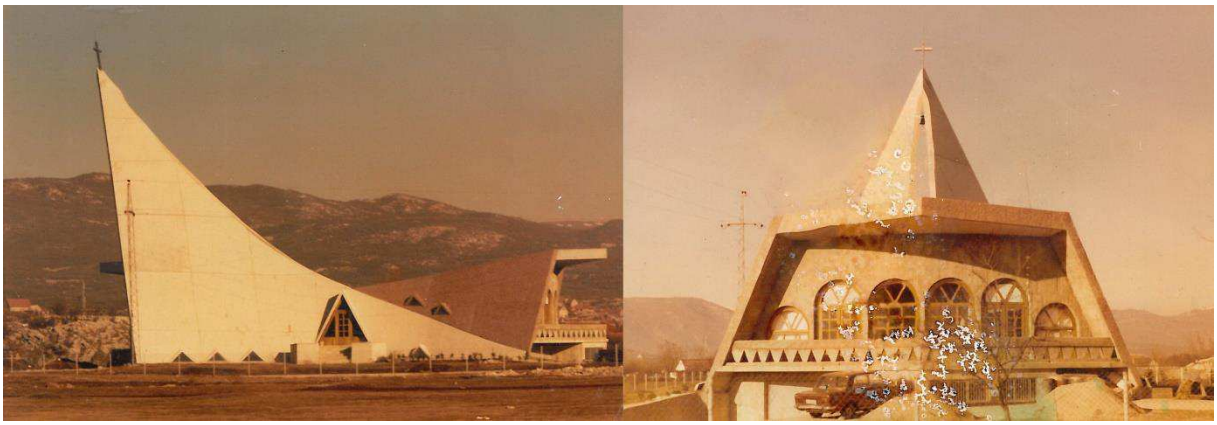


Figure 19, The Catholic Church

The east facade of the building is quiet and compliant with six arched windows and a concrete fence with triangular openings. The western façade, in which the altar is located, is moving dramatically to the sky. In the encounter of the side facades is a cross.

The investment bank was built in reinforced concrete in the period from 1974 to 1975 and is a hexagonal structure with square gaps in the form of entrances and offices on the south facade and offices on the north side. In the center of the building there is a reception hall illuminated by a zenitally large hexagonal lantern.

With a clear allusion to Le Corbusier, Louis Kahn spoke of the ground floor as the harmony of the illuminated rooms-rather than the masses-and accordingly sought to deny independence to individual elements. The design of its buildings reflects the duality of access roads and workspace, public space and intima. (12) In a similar way, Vukajlović approached most of his facilities. This method is especially expressed in the investment bank project. The ground is clearly indicated and illuminated, but not independent, but is an inseparable part of the building. The structure grew on a hexagonal basis and was given in the form of a tower that resembles the former tower of the medieval Nikšić. From the towers of the then towers, the bank was built in reinforced concrete, whereby the association with stability and solidity and safety was further emphasized. The postmodern design pattern in this object is present.[5] (13)

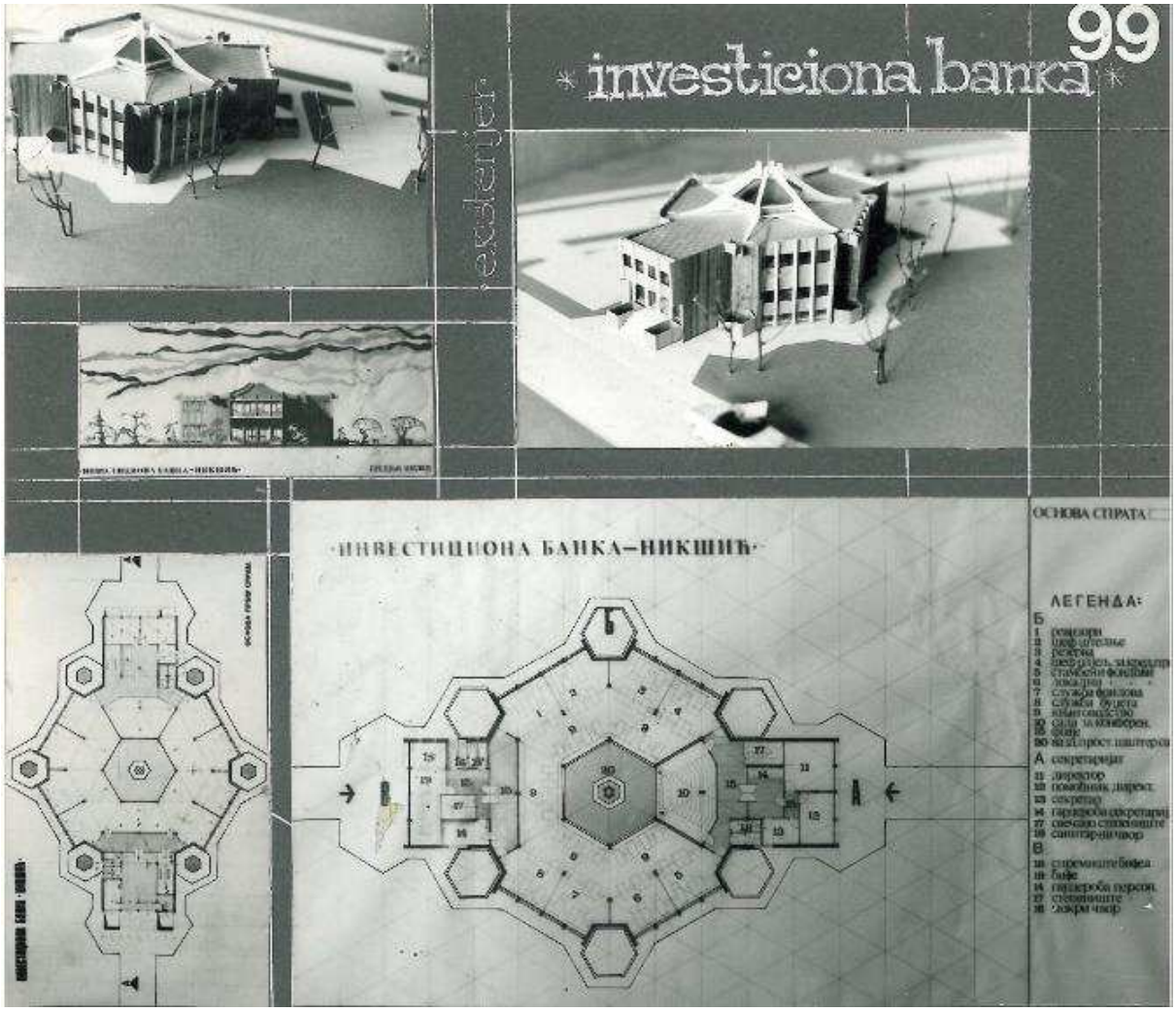


Figure 20, The invesmtent bank

[5] Architect Borislav Vukićević in the introductory text for the Retrospective exhibition arh Slobodan Vukajlović (1934-2006) catalog, states that the building of the Investment Bank is one of the few successful accomplishments in the field of postmodernist architecture in Montenegro.

Conclusion:

Today, if we look at the Vukajlović's architecture, built in the Nikšić city, we will see that it has become an inseparable part of the spatial identity of individual urban blocks as well as the city as a whole.

Vukajlović's buildings for the Nikšić architecture have multiple significance. First, many of the buildings that he designed typologically were built for the first time in the city and most of them are public buildings. This provides a key framework for the observation and analysis of buildings. As public buildings of importance for the optimal functioning and life of citizens, these objects became generators of gathering and social interaction.

In this way, the buildings eventually became part of the collective memory. Subtle reference to the past, transformation and contemporary interpretation of already present topics and motifs in the city architecture of Nikšić, are contained in Vukajlović's architecture. His opus is an example of a positive transformation of the urban and architectural identity of the city from a positive vibrant identity when objects were built to this day when they have already become part of a positive basic identity.

This work for the first time presents the selected works of the architect Vukajlović with the hope that the research of his rich opus will yet to begin.

Bibliography:

(1) press clipping from daily jurnal „Politika" archive of David Delibašić
(2) Anthony Alofsin, Frank Lloyd Wright and Modernism, Terence Riley/Peter Reed,eds, Frank Lloyd Wright Architect, The Museum of Modern Art, New York, 1994, pp32-57, prevod Milica Cvetković
(3) Sarah Ksiazek, Architectural Culture in the Fifties: Louis I. Kahn and the National Assembly Complex in Dhaka, Journal of the Society of Architectural Historians, LII, 4, December 1993, pp 416-435, prevod Vesna Mujičić
(4) Kate Nesbitt, Theorizing a New Agenda for Architecture: 1965-1995, Introduction, Princeton Architectural Press, New York, 1996, pp.12-70, prevod Ksenija Todorović
(5) Christian Norberg-Schulz, The Two Faces of Post-Modernism, Architectural Design, LVIII, 7/8, July/August, 1988, pp 11-15, prevod Ksenija Todorović
(6) Hans Hollein, Arts and Architecture, California 1963, p.14
(7) Velimir Neidhardt, Čovjek u prostoru- Antroposocijalna teorij projektiranja, Školska knjiga, Zagreb 1997, p.20
(8) Milan P. Rakočević, 24 časa arhitekture, Orion art, Beograd, 2010, p.95
(9) Peter Gesel i Gabriele Lojthojzer, Arhitektura u 20.veku, prevod Marija Obradović, Taschen-IPS, Beograd, 2007, p.441 (Aldo Rossi, Gianni Braghieri Cemetery of San Cataldo, Modena, Italy, 1971-1984)
(10) Christian F. Otto, International Style, Vittorio Magnago Lampugnani, The Thames and Hudson Encyclopedia of 20th Century Architecture, Thames and Hudson, London,1986, pp 160-164, prevod Vladimir Kulić
(11) Hatje Gerd, Enciklopedija moderne arhitekture, IP Građevinska knjiga, Beograd, 1970, p.211
(12) Ibid (9) p.381
(13) Borislav Vukićević, text for catalog of retrospective exhibition „Arh Slobodan Vukajlović (1934-2006)", author of the exibition David Delibašić, KC Punkt, Nikšić, 2016, p.8

Photo sources: All photographs, as well as drawings and posters, are the works of Slobodan Vukajlović and they are part of the personal archives that the architect assigned to his grandson David Delibašić.

Chapter 11:

Memorial building Home of Revolution, an indicator of urban identity transformation of Nikšić city

In the former Yugoslavia during the seventies, it was common to build memorial monuments and buildings dedicated to memory of victims killed during the liberation struggles in World War II or to the victories on Fascists and Nazis during this war. One of the biggest memorial buildings called the Home of Revolution, that is still unfinished, began with constructions in 1977 in the city of Nikšić, republic of Montenegro, when the Yugoslav competition for this building won Slovenian architect Marko Mušič in 1976. Construction was stopped in 1989 and in 1992, the building was preserved.



Figure 1: Architect Marko Marjan Mušič (1941)

Marko Mušič was born in Ljubljana in 1941. He studied and graduated in 1966 in Ljubljana under mentorship of professor, architect Edvard Ravnikar (1907-1993). He continued his studies in Denmark with professor, architect and archeologist Ejnar Dyggve (1887-1961) and in the U.S. with architect Louis Kahn (1901-1974). (1)

Architect Mušič is the author of a recognizable style. In his career, he designed a numerous objects of different purposes and typologies. It is possible to make, conditionally said, the division of his work into three periods. The first period represents the time after the completion of studies in which architect receives a large number of awards at architectural contests throughout Yugoslavia. The second period mainly relates to the construction of memorial and cultural objects that were mostly built after winning the Yugoslav architectural competitions during the seventies. The third period relates to the mid-eighties of the last century to the present. A period synthesizes many of the leitmotifs and stylistic features of Mušić's architecture.



Figure 2: Location of the building in the city matrix

Urban conditions, on which will be built Home of Revolution, are based on the second post-war urban plan of Nikšić city. It is important to note that this urban plan for the first time clearly defined and determined wider and narrower area of city. The quality of this urban plan was reflected in the fact that it has fully accepted the basic principles of the first regulatory plan as a base from which the modern city developed. The result was a continuity in the development of the city. In addition, the quality of this plan is reflected in the proper positioning of the important social structures and buildings in a continuous strip along the historic core.

Although this plan was envisaged that the buildings are single-storey and double-storey, city planners submitted series of buildings with three or four storeys even five or six storeys, which was in stark contrast to the plan from 1958. (2)

The Home of Revolution building, some characteristics

The Home of Revolution building is symbolically designed to celebrate the courageous role played by the citizens of Nikšić in liberation struggles with the partisans against Nazism and Fascism. In addition to the commemorative role, the building was supposed to be a place for all cultural events in the city that would be reminiscent of the glorious past and to bring new and modern trends.

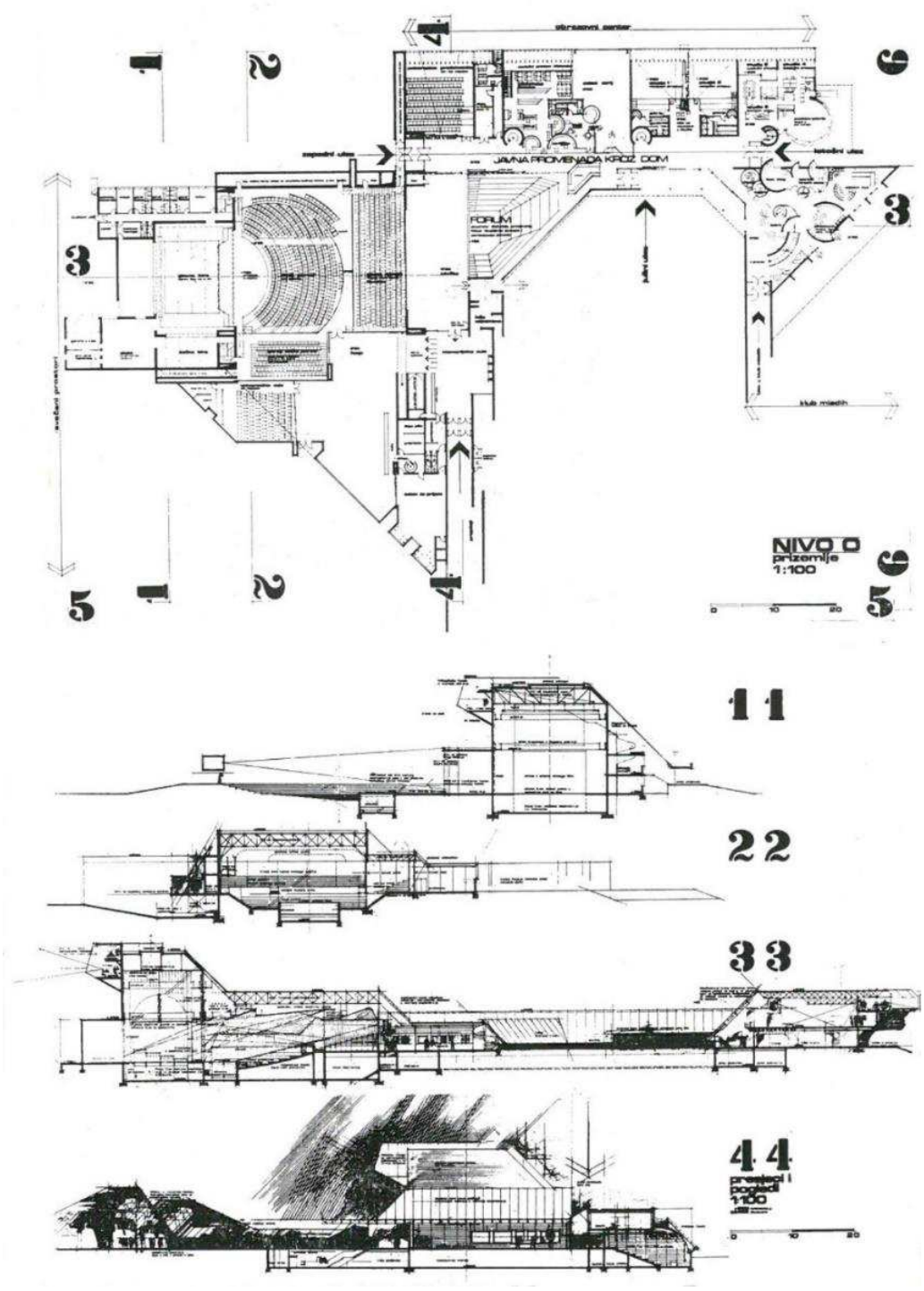


Figure 3: Entrance, ground floor of the building with cross-sections

The Yugoslav Journal of Architecture, Urbanism, Design and Applied Art "Architecture" No. 158-59 from 1976 was dedicated to the cultural objects. Among the many objects, the Home of Revolution was presented. The text about this building presents the view on the creation of architectural space in specific, Yugoslavian conditions:

"First of all, we consider that with all the forces and in spite of the internationalized schemes of modern architecture, we need to preserve the identity of our space, our customs, our traditions and temperament. Secondly, we need to conceive an inspired, dynamic architecture that is not a formal backdrop, but a wealth of all internal and external spaces with the maximum possibility of adapting to the concrete situation. It remains within the limits of our technology and materials, within the limits of rational constructions and creative logic. "(3)

From this quote, there are a few things clear. First, the Home of Revolution project insists on the identity of the space in which the building will be built. Although the relation of the building to the built space is almost abstract, it is clear that the form originated from the morphology of the surrounding hills and mountains that borders Nikšić. It is also interesting that text mentioned the temperament of the Yugoslav and the form that most suit it. Is the calm horizontal volume, which gradually grows into a vertical volume, a spatial interpretation of the Yugoslav temperament, it is an open question. Often, the Home of Revolution is interpreted as a utopian project. We think that this should not be exactly the case. From the quote, it can be clearly seen that the Home of Revolution is designed for the real conditions of the technology and materials with rational constructions. If an object is not completed due to historical circumstances, it does not necessarily have to be a utopian project.

This building represents a symbolic synthesis of the memorial and cultural contents. The memorial contents are located along the building in corridors and halls. It seems that architect wanted to remind visitors on their way to the hall and the rooms where the cultural contents were placed, that thanks to the lives and sacrifice of the liberators, they can freely enjoy the culture. In addition, the building through the memorial role was reminding about the victims of other Yugoslav nations, so the ideas and values on which Yugoslavia was built were promoted too. In this way, the building seems to be the guardian of memories. In the design and compositional context, the Home of Revolution has an emphasized, horizontal character that is harmoniously levelled. From the horizontal base, on the western part, the area of the theatre scene rises slightly. In the context of the form, there is even a certain association with the Egyptian sphinxes.



Figure 4: Associativity with Egyptian sphinx!?

It is difficult to say precisely to which architectural style the Home of Revolution belongs. Evident use of concrete and its design features make this building brutal. Is it possible to talk about the spark of postmodernism in this work by architect Marko Mušič, remains an open question to be discussed. It is interesting that in almost the same time period, when the Home of Revolution was designed and built, another building, which Charles Jencks labelled as the epitome of postmodernism, was also designed and built, the Neue Staatsgalerie building by architect James Stirling. (4)

The Neue Staatsgalerie was designed after Stirling and Wilford won competition in 1977. Building was constructed between 1979 and 1984. The design echoed the neoclassical design of the older building. Elements also alluded to Stirling's earlier, unbuilt designs, as well as referring to the Altes Museum in Berlin, the Guggenheim Museum in New York and the Pantheon in Rome. (5)

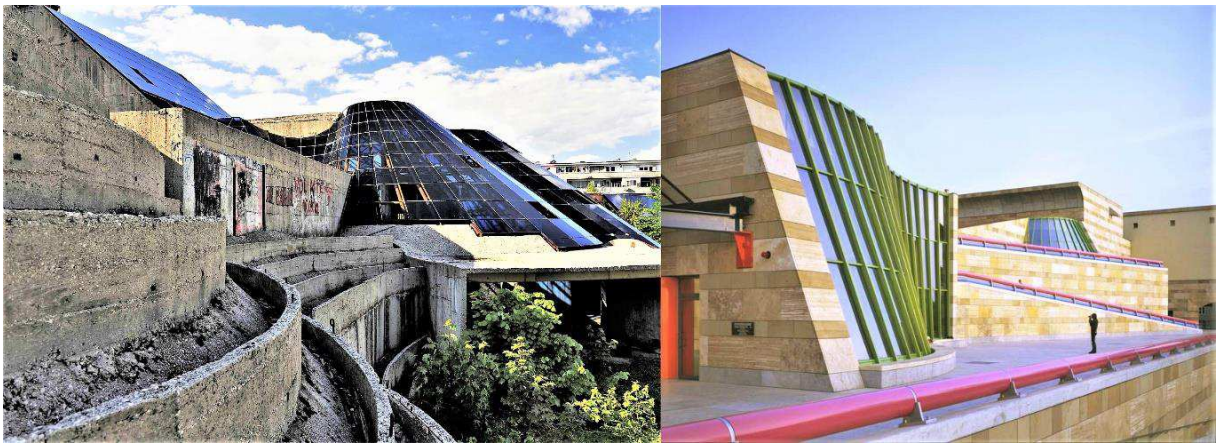


Figure 5: Entrance facades, Home of Revolution and the Neue Staatsgalerie

What are the similarities and differences between these two buildings? The main similarities relate to the treatment of some spatial solutions, primarily halls and access paths. In addition, a certain similarity can be seen in the relation between the full surfaces and openings and the relation between the mass of walls and glass surfaces, but also to the use of steel structures as composite elements. The differences relate mainly to the relation to the built context. While the connection between The Neue Staatsgalerie and the environment is obvious and logical in shaping the continuity of the built space, the Home of Revolution is connected with the environment in an almost abstract way, although the reference to traditional Montenegrin gathering places called gumno attempt to invoke the past.

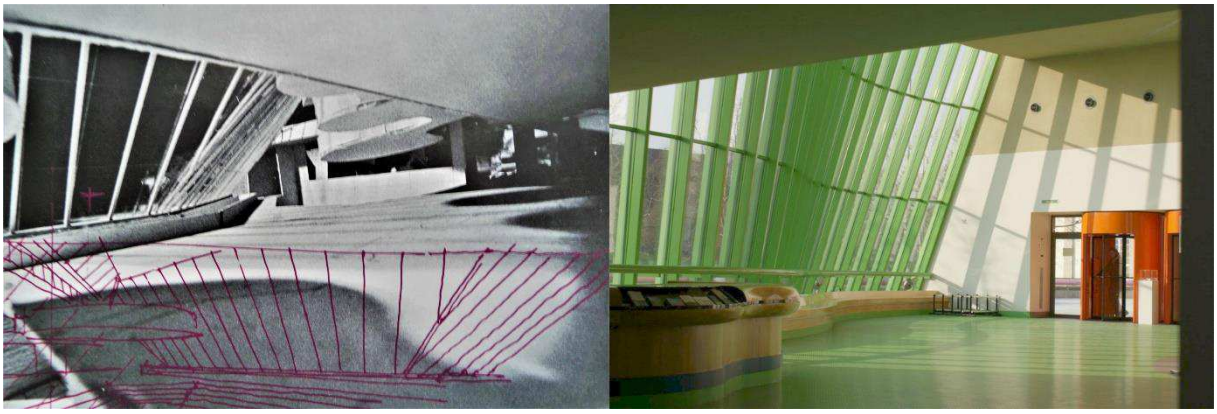


Figure 6: Interior spaces, Home of Revolution and the Neue Staatsgalerie

It is interesting the way in which these two buildings treat monumentality. The Neue Staatsgalerie incorporates sandstone and warm natural elements of travertine in classical forms, contrasting with bright pink and blue steel handrails and industrial pieces of green steel framing system. Monumentality seems to be calm with compositional solutions and a specific usage of material. On the other hand,

the Home of Revolution monumentality stands out with the composition of a gradually growing horizontal which is opposed by the vertical volume on the west side. The coldness of concrete on this object is accentuated by usage of dark, blue glass. The atmosphere obtained in this way is unusual and mystical. One thing is certain, both objects offer a strong semantic and symbolic interpretation.



Figure 7: Interior spaces, Home of Revolution and the Neue Staatsgalerie

The original plan provided that the Home of Revolution should have 7,000 square meters, but because of the request of political structures it grows on the 22 000 square meters. The project is anticipated that the building can accommodate 7,000 visitors, which at that time represented a quarter of the population of the city. The building is designed to have the following facilities: a large amphitheatre with 1200 seats, a summer amphitheatre, cinema, conference halls, radio and television centers, libraries, educational centers, art studios, galleries, a youth center, a national restaurant etc. Finally, a memorial of the building occupied only 250 square meters.

When Yugoslavia broke up in 1991, there was a suspension of construction of all federal projects including Home of Revolution". Today the building is completely abandoned and left to time.



Figure 8: Home of Revolution, today

Organization of space, network of cultural and memorial contents in Home of Revolution

In the Bulletin No. 1, the Committee for the Construction of the Home of Revolution presented a detailed description of the spatial form of the building.

By entering the urban reality and transferring from urban matrix to the spatial essence of the Home of Revolution, it was noted that the main problem and the key to a successful life and work of all the programmed content is in live action, inclusion and participation of the widest circle of citizens.

The ambiance of public passage through Home of Revolution is ambience where passer-by the way is facing with activities and events in which can participate.

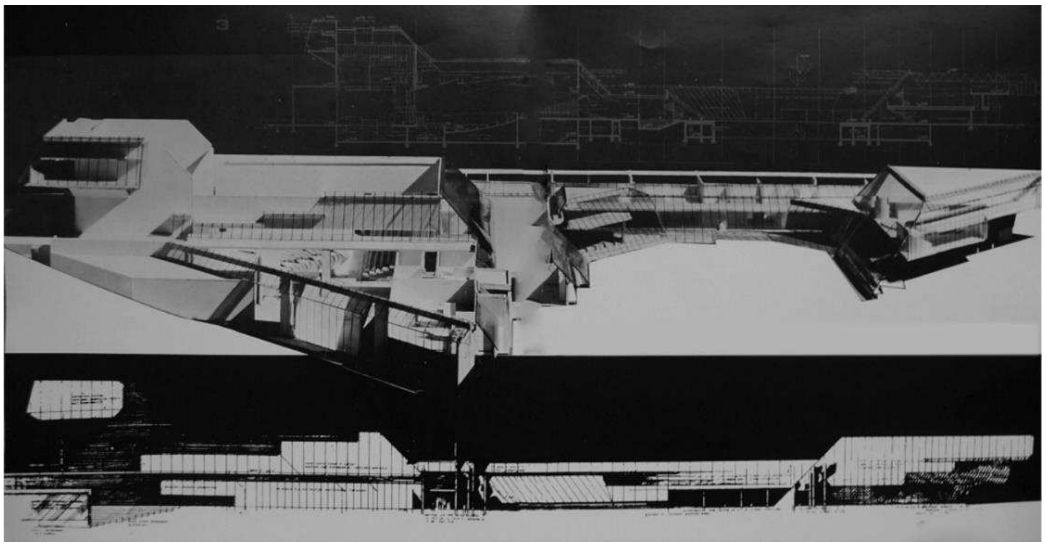


Figure 9: Scale model of the building

The ground level is rising slightly to a terrace of the Park, which is open to the sun and greenery, creating a quiet oasis and a humanized shell that protects the Home from the noise and the dynamics surrounding roads.

Open squares are the spaces for multiple purposes, which over the glass shell extends to the building, creating a public promenade, the contact zone outside inside. An area is a part of the building, which is climate-controlled environment that is at once always open and passable in all directions of the public movement. Thus, the basic structure of the building directly connected to the city network footpaths. (6)

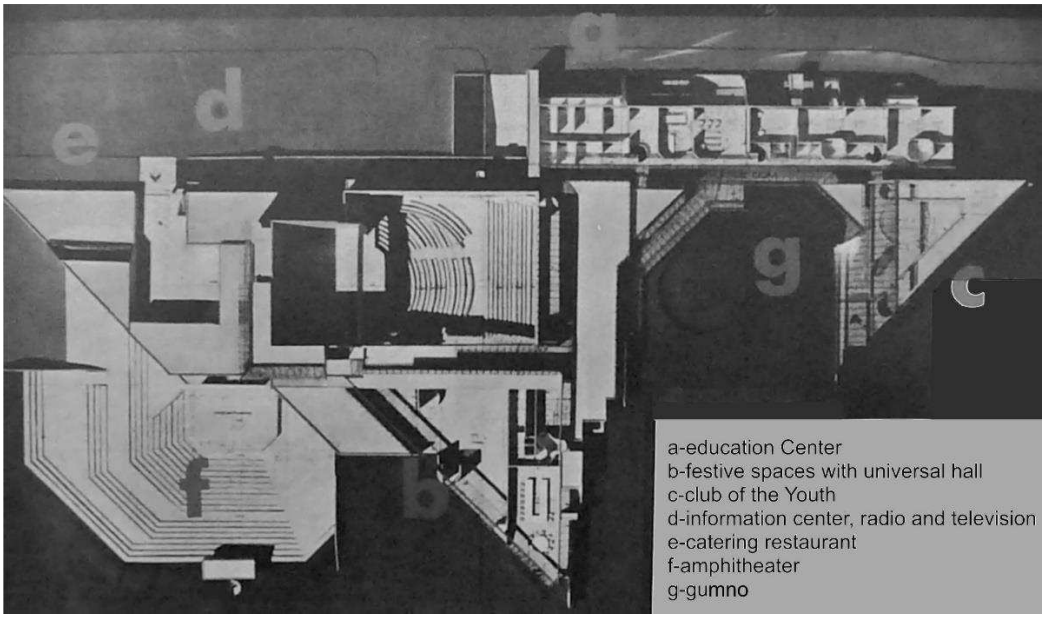


Figure 10: Spatial organization of the building

In the Catalogue of the winning solution, printed in Nikšić in 1978, a detailed description of the interior space and content was given:

Passage of public promenade through the building represents a major move by the spine of experiencing the activities in the building. Like a city street in sequent series of different environments, promenade goes from the east entrance and free fair with books, artistic products and design activities with the youth club to an open forum. Forum, like the town square is a functional extension, intended for spontaneous and organized activities on the hub west entrance and the transition to a group of memorial space.

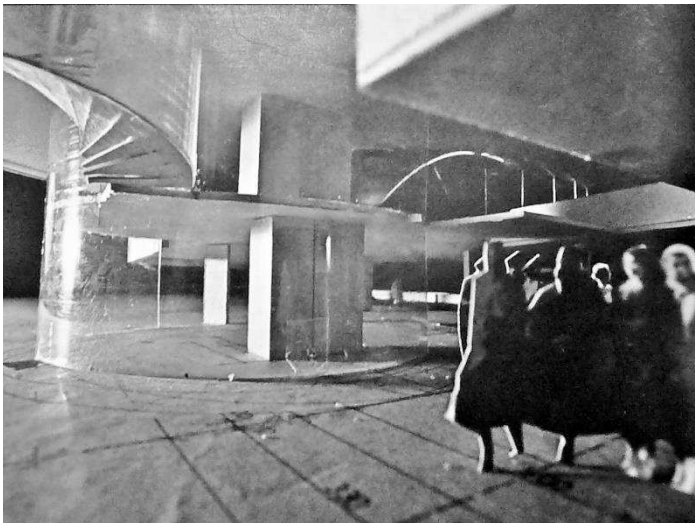


Figure 11: Scale model of interior

Instead risking that workrooms would be unused, placed somewhere on the side, or that work in them give institutional character of the school, everyday crossing through the Home cannot be without meeting the educational center at least passively. Going from the essence of creativity that has every man, and that can be slowly lost in the tempo of life and schematized routine, all the efforts of disposition and organization of this part of the Home, are in the creation of a creative environment and open contact with passers actions and activities.

The sequence and character of the rooms in the level of movement through the building provides contact with the contents of the most interesting groups:

- Universal lecture hall, complemented by an open public forum along the promenade (lectures, meetings, public forums, spontaneous discussions, etc.)

- Library with a niche for reading of periodicals, open to the promenade and the open reading rooms to the green atrium. All funds are available for the visitor.

- A group of artistic activities by location and the opening is the most intensely associated with youth club. Passers, of public promenade in the work of these activities, is informed by improvised exhibition in spatial niches that is supplemented with permanent exhibition gallery, creating a challenging direct involvement in the operation.

Those contents are complemented with store items for participating in the studies like drawing supplies, paints, books, instruments etc. Loft Gallery, presented in the airspace of the promenade, includes the study room for historical and socio-political, literary and theoretical circles with club extensions, contact zones and a number of separate niches for individual and group work with the discussion.

Glass promenade

The characteristic circular form, as a sign in the landscape architecture of the Home, represents informal gathering spaces, spaces of human contact, rest areas and knots of spontaneous events in the linear dynamics of today's man. With such a connotative celebration, circle and its segments become

symbolically and substantively linked with the traditional Montenegrin social life presented in the formation of gumno.

Artistic study spaces of drama, music, ballet, sculpture, painting and design as well as libraries and universal classrooms are located in a three-storey space beneath the glass roof with northern diffuse lighting.

Working in the studio is constantly present in the visual area of the promenade. Direct access to the stands allow, encourage monitoring of public exercises and improvised performances while they necessary support area is located below promenade at the level of the main phase of study.

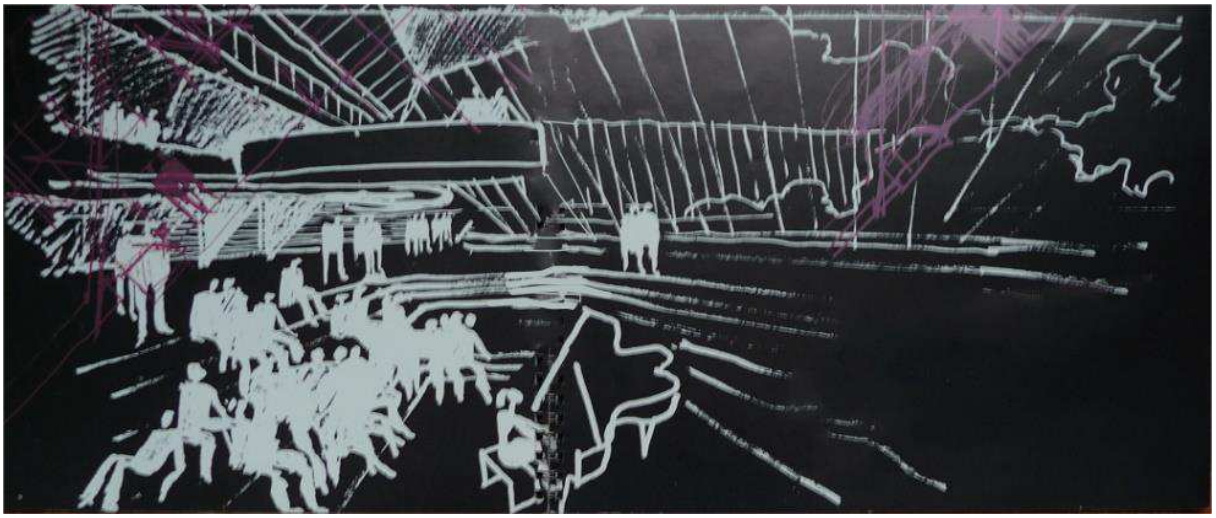


Figure 12: Scatch for glass promenade

The ceremonial spaces with a large hall

Memorial Propylaea, of the main entrance and in the formal spaces with purpose hall and youth club, are stretching, as spatial plastic markings deep through the green belt coinciding directions of the entrance, while in the longitudinal movement are transient portals among the sequences of the southern parks.



Figure 13: Scale model for interior

Freely waving contour of the depth plans could tie the wealth skyline of square to the distinctive interweaving blue silhouettes of the surrounding mountains, the unique poetic scene that nature gave to Nikšić.

The complex group of large hall with memorial aura and exhibition space is multi-system rooms, which is possible, with minimal changes, to adapt to real-life situations and events.

Schedule of major side room in the general is such that It is possible to combine them in mergers and divisions.

Youth club with crystal ballroom

Events in the youth club are very diverse. The contents are arranged in four main levels associated by glass-covered promenade in support of mental representations of the physical unity of the Home. The landscape of the large hall youth club hanging in the air space above the public promenade could be, in a spatial solution, a particular attraction.

Inside the glass, shell, as a segment of large crystals, separates the air space of the public promenade. Thus, it is possible to maintain different heating regime and the necessary acoustic insulation and still to guarantee the visual presence of events in the hall in the wider area of the Youth Club and the entire building the Lenin Square.

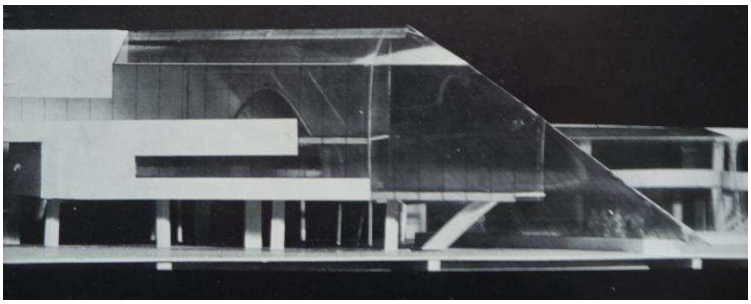


Figure 14: Scale model of the Youth club

In a wide range of uses and purposes of the Youth Club hall, transferring programs from drama, dance or music studies would have to become an everyday habit as much as the experience of time that young visitors has in one of the studios, which will all create an atmosphere where work and leisure, enjoyment and creation are connected. (7)

Home of Revolution, transformation of identity over time

Not long after Tito's death in 1980, started anti-bureaucratic revolution with a deep political and economic crisis that will lead to the gradual suspension of the construction of the Home of Revolution. (8)



Figure 15: Home of Revolution,interior, today

Over time, disappeared blue glass, which has coated the building, and then lower steel elements. There were water and groundwater that have flooded most of the basement rooms. Building has become a place for the homeless and drug addicts. From the moment of the construction of this building in an accident claimed the lives 15 people.

It is interesting to note that during the construction, about 50 million DEM was spent, around 400 tons of steel and so much concrete that it

was possible to make 3000 comfortable apartments or 50 buildings of 14 floors. (9)

In the former Yugoslavia, there used to be a great number of different nations and ethnic groups and yet this country was a unity of all the people. The Home of Revolution symbolically represented the spirit and unity of Yugoslavia. During construction, the building has become one of the main elements of urban identity and pride of all citizens.



Figure 16: Home of Revolution, today

However, when it came to ethnic conflict and civil war in Yugoslavia, it disappeared the political base and ideology of unity. At the same time disappeared the ideas on which it was conceived the Home of revolution.

Conclusion

Home of Revolution has become a negative element of urban identity in the Nikšić. The building is not finished and never used. Over time, the building became the antithesis of everything that is supposed to represent. In this way, become a negative element of urban identity. A large number of citizens think that this building should be demolished although in the construction of this building participated some same people who for decades have been giving the 3 per cent of their salary as a contribution to construction.

However, many citizens are aware of the historical value that this project had and they agree that the building should be completed. The idea of the unity of diversity, on which the Home of revolution is based should be still guiding idea, especially for future generations.

In November 2015, the Ministry of Sustainable Development and Tourism of Montenegro announced an International, public, conceptual, one-stage, anonymous competition for the Architectural solution of the adaptation and reconstruction of the Home of revolution building in Nikšić. Nine works were received for the competition and the expert jury, in March 2016, decided that the best solution was under the code 300666 by the authors SADAR + VUGA (Slovenia) and HHF Architekten (Switzerland). This solution developed a 10/20/70 strategy. This means that 10% of the surface of the object will be used for different contents and activities, 20% of the surface will be public promenades and 70% of the surface will be closed to the public and adopted and used in some better times.

Time will show what the fate of the House of Revolution will be.

Bibliography:

(1) taken from the official site http://www.ateljemarkomusic.si/biography.html
(2) Zdravko Ivanović, Niksic, urbano-geografska studija. Beogra: SANU, Geografski institut „Jovan Cvijic“, Beograd 1979.
(3) Marko Mušič, Dom revolucije, Nikšić, Arhitektura, Savez arhitekata Hrvatske, Zagreb 1976, no 158-59, pp.129-132
(4) Jencks, Charles, The New Paradigm in Architecture: The Language of Post-Modernism, Yale University Press, 2002, p. 110
(5) Rainer Naredi, Oliver Hilger Paul, Museum Buildings: A Design Manual, Basel: Birkhäuser, 2004, pp. 70–72
(6) Odbor za podizanje “Doma revolucije”, Dug revoluciji, Bilten 1, Nikšić, 1976.
(7) Odbor za izgradnju “Doma revolucije” u Nikšiću, Katalog pobjedničkog rešenja, Nikšić, 1978.
(8) Sunčica Milošević, Seeking identity in Former Yugoslavia’s Architecture, Master thesis, University of Cincinnati, 2013, p.102
(9) Isidora Damjanovic, Anarhija od betona, Studentski časopis Indeks, br 32, pp.30-35

Photo sources:

Figure 1- taken from the official site of the Slovenian Academy of Sciences and Arts, http://www.sazu.si

Figure 2- taken and edited from www.google.com/maps

Figure 3- taken and edited from magazine “Arhitektura” no.158-9, 1976.

Figures 4,15,16- private collection

Figures 5,7- collage made of photo from private archive (Home of Revolution, Marko Mušič) and photo taken from site archi-learner.blogspot.it (The Neue Staatsgalerie, James Stirling)

Figure 6- collage made of photo taken from the original catalog of construction of “Home of revolution” and photo taken from site archi-learner.blogspot.it (The Neue Staatsgalerie, James Stirling)

Figure 8- Photo edited scene from the documentary film “Revolutionary Home” by director Sead Šabotić

Figures 9-15- were taken and edited from the original catalog of construction of “Home of Revolution”

Chapter 12:

Genesis and characteristics of the Sava Kovačević Square

Sava Kovačević square is the center or beginning of the urban structure of Nikšić. At the same time, this square represents the most important city traffic hub, which is why its square purpose questioned. The square is also one of the most important elements of Nikšić's identity as a city, and represents a part of the collective memory of citizens.

With the first regulation plan from 1883 contained several squares, three rectangular and two polygonal squares. The largest of these polygonal squares is the one that today represent the Sava Kovačević. We can say that this large, octagonal square was the beginning, or the focal point of the regulatory plan around which the future city is developed

This square represents the hub of all major roads that come to Nikšić from the direction of Podgorica, Trebinje, eastern Herzegovina and northern Montenegro. All these roads melt in the heart of this square, at the same time, it also represents the main city intersection that offers six major city streets, from which two are boulevards.

The square is conceived as an octagonal almost circular square from which the city streets are spreading. In the fifties immediately after the Second World War the name of square was Sava Kovačević Square and since then it has not changed its name, the same is the case with the names of the streets that plunge into the market. Streets that flow into the market share the urban core around the square in several parts: Center 1, City Park, Mrkošnica 1 and Stara Varoš south.



Figure 1, Satellite view on the square with a narrow urban core, 2006

The Sava Kovačević Square is located near the railway and bus station, as public buildings from which passengers arriving or leaving. This is especially important because the market is also the first meeting with the city, its welcoming.

The entrance to the city is determined by the locations of the bus and railway stations that border this square from the west and south sides. Architects Sajsel and Boltar designed the west part of the square

according to the plan. Among the objects that are located, here are the eight-door building, the devastated building of the city cinema called “The18th September cinema”, and the social housing building called Meander. This western part belongs to the urban fragment of Stara Varoš south. Opposite this part on the south, there is the urban fragment of Mrkošnica 1 and the bus station stands out as the most important building. On the north side, the urban fragment called Center 1 surrounds the square, and the most important buildings are the Post office building and the house of Zirojević family. On the east side, a city park surrounds the square.

From the direction of Podgorica to square goes Boulevard 13th July. From the west, side goes the Gojko Garčević Street and from the north-west goes Vuk Mićunović Boulevard. From the north, direction to the square goes Njegoševa Street and from the northeast goes Ivan Milutinović Street. From the east, direction to square goes Vučedolska Street.

Njegoševa Street connects the Sava Kovačević Square with the main city square, the Liberty Square and the Vučedolska Street connects the Sava Kovačević Square with the Duke Šako Petrović Square.

Basic characteristics of the square

To define any term, even the square is always an ungrateful task, because it is easy to forget all those factors and influences that contribute to the characteristics of the observed concept. If we want to define the square, we need to take on its structural, functional and cultural characteristics. (1)

Under the structure, we mean the construction, the physical form of the square itself. The function represents all those contents, programs and activities that can be found in one square. Structure and function are often conditioned by each other, but it is difficult to clearly determine which of these two have the advantage of defining the square space.

Another important factor that should be taken into account when we define the square is the issue of cultural identity, the environment in which the square evolved. Under the cultural identity here, we mean all those sociocultural features of the space created in different historical circumstances.

Professor Vladan Đokić says that the definition of a city square with the help of the three mentioned groups of characteristics could be that the square is part of a city structure that is characterized by a defined, adequate and organized relation between the open space and the buildings that surround it.

In general, the Sava Kovačević Square would have a physical structure made up of buildings on its edge; the function could be linked in one part for traffic that takes place on the square, and in the second part to the contents and programs in the ground floors of the buildings that are on the edge of the square. Cultural identity is related to the development of the modern city and all the socio-cultural events and situations from then until today.

Structural characteristics of the square

Square on the edge of the city

These squares usually have one function at the beginning and during the time this function can be replaced with some other.The original function was usually, although not a rule, less important than the function those squares have today. In addition, one of the characteristics is that at the beginning of the formation, these squares were at the edge of the city and over time they became squares located in the center.The sava Kovačević Square was built at the edge of the city. From the original function of gathering the citizens (especially students, since the first primary school in the city was built in the edge of this square, which will be demolished later and the post office building will be built on its place), the square has received a traffic function and became the main traffic hub in the city. The

square, conditionally said, did not become the center of the city, because the city was not properly formed in the spatial and a cultural way equally from all sides, which is also a curiosity. On the one hand, the square is surrounded by an urban matrix that exists since its formation, and on the other hand, it is surrounded by a suburban landscape that very little has the character and features of a cultivated urban block.

The squares with border straight or curved lines

The Sava Kovačević Square is octagonal. The facade of the post office building, then facade of the residential business building, facade of the Zirojević house, front of the city park, front of new residential building, the street front that leads to the railway station and the front of shopping center Mex, they all shaped the square.

Polygon with more equal sides was used as a suitable form for the square shaping. Professor Vladan Đokić in the book "Urban Morphology: The City and the City Square" states that the most common example of a polygon used for the shape of the square is octagon which represents a transitional solution between the circle and square shape, and therefore has the characteristics of both.

The relation between the city form and the square form

Conditionally said, the shape of the Nikšić city belongs to the radial form. This is a rare form of city even for European developed environments. The radial form is best seen in small or medium-sized cities. This form has one particular charactteristc in a presence of an urban space located in the center of the radial form; In this case, it is a square.

Like any other type of urban matrix, the radial matrix has its advantages and disadvantages. The main advantages are related to the good traffic connections between the center and the periphery, the hierarchical position of buildings and functions inside the city structure. The Sava Kovačević Square is the center of the Nikšić radial matrix. As such, at the beginning, this square appeared on the edge of the city, with the city expansion it begin to be its center. However, due to insufficient shaping of all structural elements of the city's form, from the aspect of radial directions, we cannot say that the square represents the city center.

As a main defect of the radial matrix, we can indicate the difficult orientation and occurrences that intersections where the main radial directions are crossed with transverse streets are not comfortable enough and do not allow formation of clear and rational functional-physical circuits.

Functional characteristics of the market

The functions of the city square it is possible to classify into two categories: the functions of the public square space and the functions of buildings that surround the square.

According to the function of the public space that the Sava Kovačević Square has the square it can be classified as a traffic square.

Traffic square

Almost all the squares that were built before the era of motorized traffic mostly had the character of the pedestrian square, it is better to say the places of gatherings. With the advent of motorized traffic and its development, there is a need to bring the traffic on the sufaces of square. At first, this phenomenon was less represented. Today, generally speaking, pedestrians all over the world been pushed towards the edge of the square. In this respect, the square of Sava Kovačević is not an exception.

In general, this square was initially pedestrian, and then with combined function both pedestrian and traffic, so at the end it was increasingly traffic, with very little attention paid to pedestrians.

According to the function of the buildings that surround it, the Sava Kovačević Square can be seen as the square of social center.

The social center square

In the squares of a social character, the entire public life of the city take place. Once, the Sava Kovačević Square was called the King Aleksandar Square, and its first name was in a way modest and perhaps the prettiest, called the South Square. At that time, after the first decades of the formation of the city's urban core, this square was at the same time a kind of schoolyard for the first primary school in the city, built at the edge of the square. Later the school was be demolished and the post office building was built in its place. The square dominantly had a social character until the appearance of a road transport, when, as a square on the edge of the city, had to accept the introduction of traffic to its surface. Over time, it is becoming a traffic square.

Genesis and square development over the time

The Sava Kovačević square is the central point of the urban setting and morphology of Nikšić. Having in mind its importance, none of the urban plans of the twentieth century could skip this square. Josip Slade's plan unambiguously shows the future significance of it, so it is interesting to look at the development of the square until today.

The South square



Figure 2, The first primary school, 1906.

By the middle of 1903, the South Square, as today Sava Kovačević Square was called, had little significance for the life of its citizens. It had the function of one of the many crossroads where people with livestock, horses loaded with goods and everyday necessities were passing by. The square was important as a place of transit for passengers from Podgorica and Trebinje.

In October 1903, municipal administration began preparations for the construction of a school building. There was disagreement among municipal councillors about the location for a future school. Most of the councillors wanted to build it on the land on the northern edge of the South square. A smaller number of councillors demanded that the school should be built on the opposite side of the square, at the place where the Prince's Palace was marked. However, it was estimated that this location was not suitable for school. (2)

The Ministry of Internal Affairs approved the decision of the municipal committee and instructed the administration to ask from the Ministry of Education a license for a school building.

The primary school gave a content of general significance for the entire city to the South Square. For many years, the square was called the South Square, until its name was the King Alexander's Square, when it comes to the first arrangement of the square.

The King Alexander's Square

About the arrangement of the square testifies only one document related to its paving done by a certain author S. Krstic after 1918. The name of square then was King Alexander's Square.

It seems that the Vučedolska Street had the name Saborna Street and the Ivan Milutinović Street was named Janko Vukotić Street.

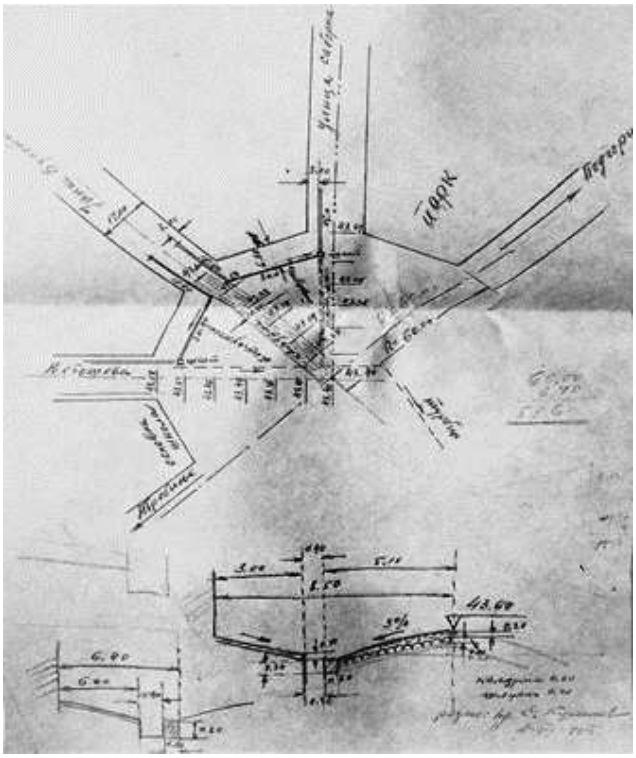


Figure 3, King Alexander Square paving scetch

The 1941 Regulatory Plan

By investigating the archives of the Nikšić city, a plan dating from 1941 was found, which is in a rather bad condition. A certain G. Ivanov signed the plan.

It is noticed that the square does not have a name except that it is a square in front of primary school. Probably the reason for deleting the previous name lies in the historical circumstances of the time.

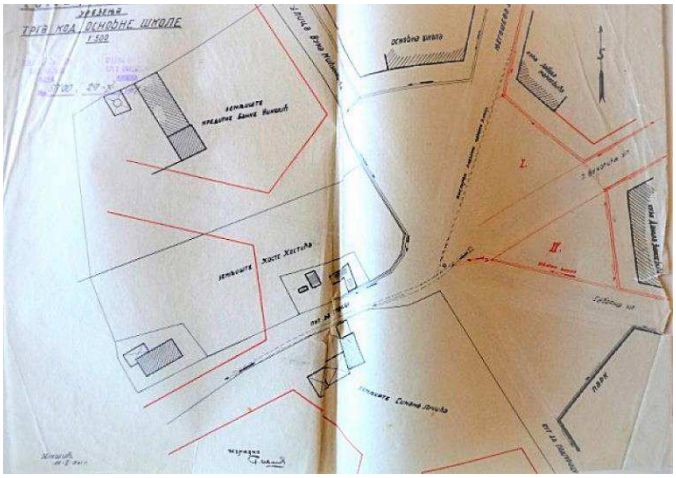


Figure 4, The Regulatory plan, 1941.

The Sava Kovačević Square in period 1952-1958, Urban plans of the brothers Stojanović (1952) and Josip Sajsel (1958)

Niksic's first post-war urban plan was given to be done to the project studio of the brothers Stojanović from Belgrade. They built the basis of a new plan on which the Municipal Commission gave critique, and plan was abandoned.

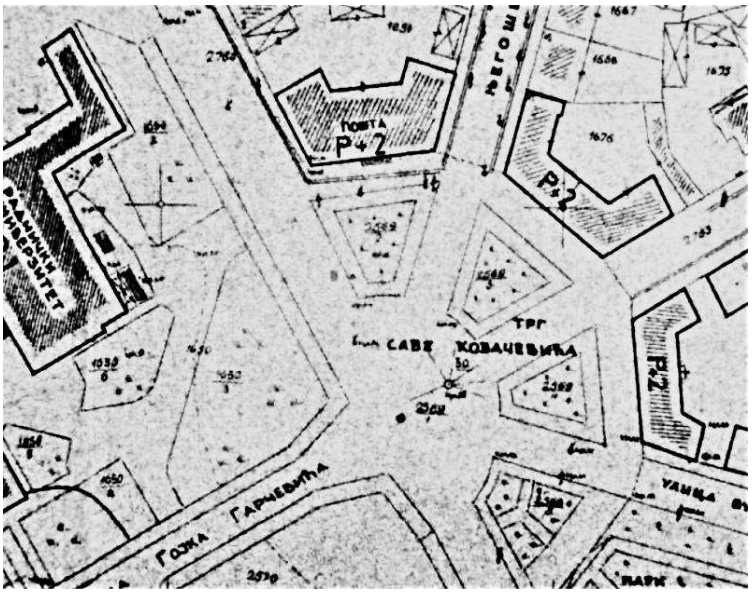


Figure 5, The Sava Kovačević Square in the Saisel plan,the loss of shape

Since this plan has not been accepted or used ever, its significance has a historical value in the city's urban development. In addition, the plan did not specifically refer to the Sava Kovačević Square, which after the Second World War received this name and since then has not been changed.

The second postwar urban plan of Niksic was done by the Urban Planning Institute of the Architectural Building and Geodetic Faculty in Zagreb, whose authors were Professor Josip Sajsel and Dragan Boltar, in 1954.

One of the critique we could attach to this plan is distortion of the shape and conception of the square. As we see, the square has some kind of transition between the right sides and rounded fronts. This is a direct consequence of the extension of the 13th July Street, from the direction of Podgorica, to Vuk Mićunović Street from the direction of Trebinje.



Figure 6, The Sava Kovačević Square in 1964.

The marshal Tito Square, competition, Feđa Košir, 1971

According to Košir's plan, the central axis of the city would be at the cross-section between the Municipal Assembly and the avenue from the train station to the sports park, and avenue from the new hospital to the new market. In this part plan provides department stores, marketplaces, a new hotel, a health center. In addition, there is a new square which location is the same one that was drawn in the regulation plan of Josip Slade. The Košir plan avoided the construction of an eight-floor building; it is mainly based on the reconstruction of the city's objects.

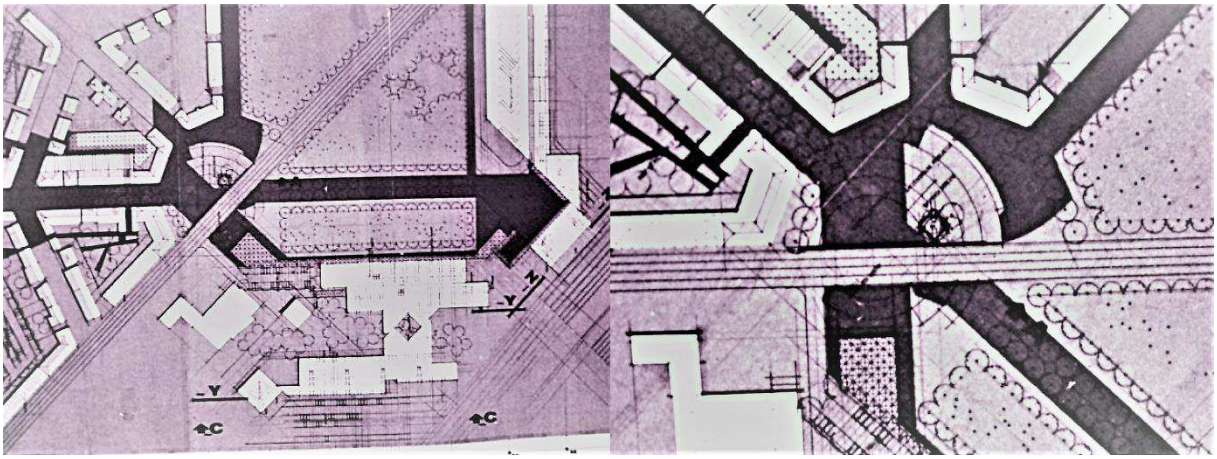


Figure 7, Relation between Košir's plan and the Sava Kovačević Square

The plan provided the construction of a circular road that passed through today's Vuk Mićunović Boulevard to the present railway station. In this way, the newly designed square and the newly designed marketplace have been circumvented. From this roundabout, vehicles would turn to certain crossroads, which would bypass the central avenue.

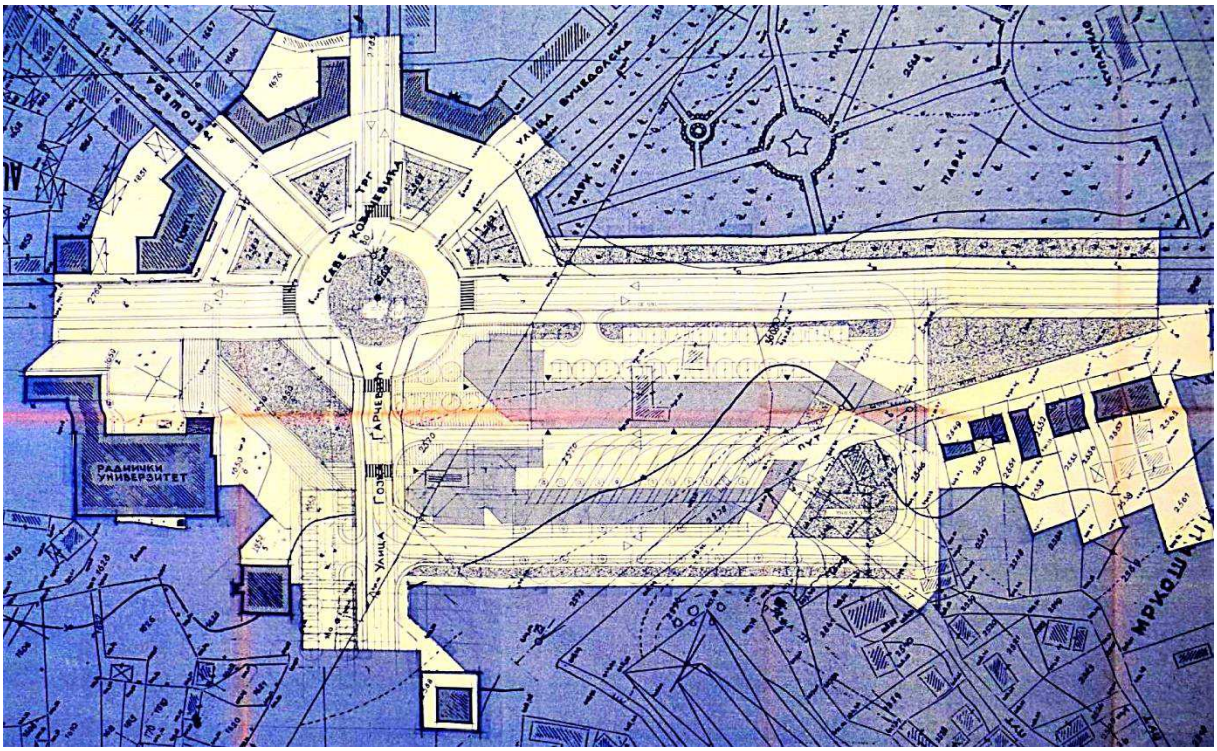


Figure 8, Location of Bus station and the solution of Sava Kovačević Square, Feđa Košir 1977.

However, this plan also had some disadvantages, especially regarding the position of the monument to the fallen soldiers on the Sava Kovačević Square, as well as the non-connection between the city and old fortress Bedem. The good thing about this plan is that it return the original shape of the square again.

Architect Košir made the concept project of the bus station in 1977 and the project included a part of the square that borders the plot. Unfortunately, this plan has not been implemented. Characteristic of this plan is the introduction of the 13th Bulevard and Vuk Mićunović Bulevard.

Project of Sava Kovačević Square, Ratibor Đorđević, 1961

One of the few urban solutions solely related to Sava Kovačević Square is given in the plan of Ratibor Đorđević who analyzed the square and its surroundings in 1958. As a result, he provided a plan for the square in 1961 also with the plan for the reconstruction of the Old Park, which borders the square, and a proposal for a New Memorial Park in the area of today's bus station. Unfortunately, these plans, although attractive and valuable, have not been implemented. Architect Đorđević witha a lot of knowledge, wisdom, worked on this solution, as we can from the results of his analysis, which we cite in the following lines. If these solutions were accepted, many current problems would be avoided.

Plan of the Sava Kovačević Square arrangement, Nikšić 1961 (3)

General part: The Sava Kovačević Square is the first image of the Nikšić city when arriving from Titograd (Podgorica). This spacious square is insufficiently built, without important city features although is an important crossroads. So far, partial arrangement of this space has been envisaged: The 13th July Street and the area in front of the park, all the way to the post office, was built. Vučedolska Street was reconstructed and became only a pedestrian street, and a road only for local supply. This street connects visually the Sava Kovačević Square and the vestibule of the Syndical Home (City cinema) with The Duke Šako Petrović Square and the Cathedral Church. Analogously to Vučedolska partial reconstruction of Njegoseva Street is foreseen.

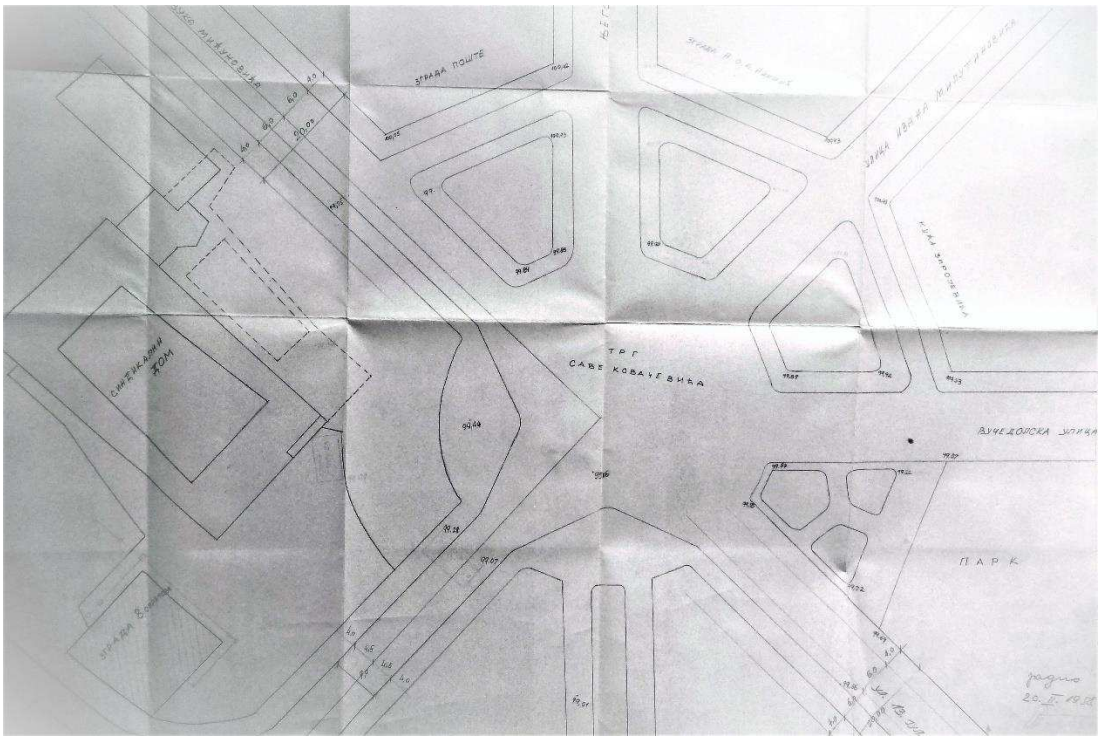


Figure 9, The square in 1958.

The square does not have the adequate monument to national hero Sava Kovačević, although the bust was placed before in the entrance of the park. Visually, it seems that the bust is losing in this vast area and cannot mark the square by its size and location.

Solution: In order to run the traffic normally and without crossing, a circular solution was selected with the maintenance of only four main directions as it is foreseen by the urban plan. The square is the beginning of the Nikšić city, every vehicle needs to slow down the ride, and passengers have to be greeted with something that will leave a pleasant impression on them. Therefore, solution provides a circular fountain with twelve high water jets and one central. All these jets are coming up and falling into the vase that is like a slice of the ball. From this vase, as if it floating on the water of a large pool that has a cross section of 24.6 meters, water flows along the perimeter into this large pool. The vase has 10 meters diameter and lies on a 2x2 meter cube. Vase and water jets are illuminated with strong reflectors of yellow light. There is stream of water, with high of 1.2 meters that at an angle of 45 degrees goes towards the center of the pool. The consumption of water for such a water-sculptural spectacle would be very high if water from the city water supply was used. It is envisaged that only the water supply for the filling of the swimming pool will be provided from the water supply system, so it can be used and drained through the pump.

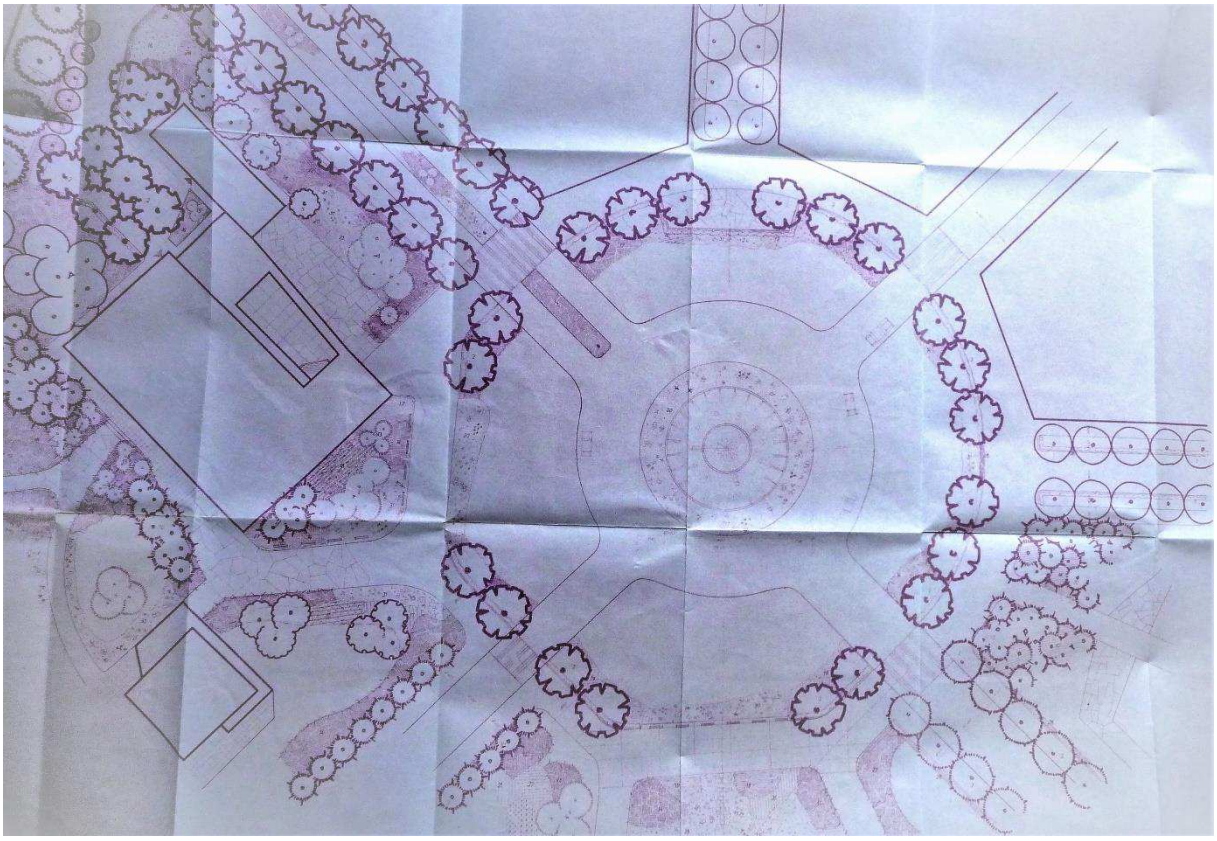


Figure 10, Dendrological solution of the square with the fountain, 1961

This solution notes the asymmetric connection of Vuk Mićunović Street. The profile of this street, that is very traffic, requires greenery not only as an isolation belt for pedestrians but also for faster and easier traffic flow. Crossing this street would be allowed only at certain intersections. The middle vegetation tract in a width of 4 meters is reserved for the sewage collector. Existing trees would stay in greenery until the final reconstruction of the street.

The greenery has a secondary importance for the square formation. For the square it is more important to carry out the adaptation of buildings that surround the square, the ground floors should be shops,

buffets, pastry shop, mostly in glass and the roof of the building should be flat. The completion of the roof panel should enable installations for placing a series of luminaires; the facade of the post office should also be processed with adaptation.

Movement of pedestrians is restricted only to the peripheral part of the square and through crossings on the roads. In the axis and at the end of Njegoševa Street is foreseen the monument for national hero Sava Kovačević. The monument for this site should be about 5 meters high. In front of the monument, there is a large terrace for break. In front of it, there is area with flowers.

From the terrace of the Syndicate home (City ciema) through fountain, it is possible to see the Vučedolska Street, The duke Šako Petrović Square and Cathedral Church. The buffet terrace was expanded by the project outside the pergola and the pool with a fountain was moved to the corner. The displacement was due to the functionality of the terrace, and the prediction of the entrance staircase.

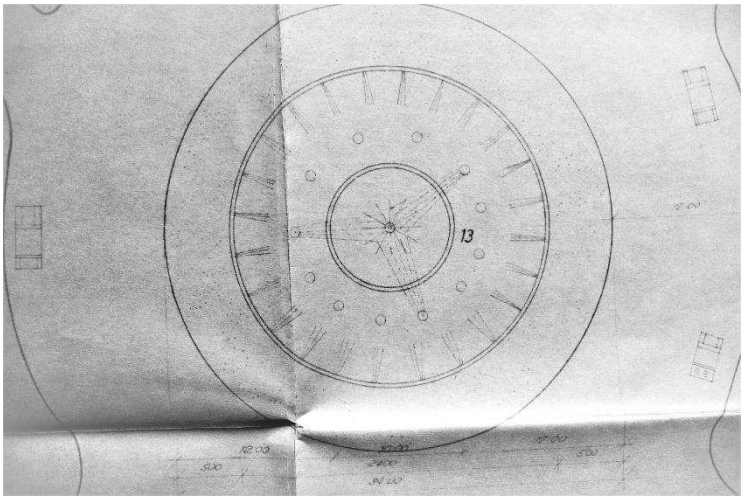


Figure 11, The central position of the sqare fountain

Parking is provided in the area behind the soliter and to the present railway station. This parking will also serve to residents of the solitaire and visitors of the event in the Syndicate home. The lighting of the space around the home should be given as solely solution for the square and the Vuk Mićunović Street. For the Vuk Mićunović Street, I think that the best is to make lighting in the middle of the green belt by placing the candelabra route. The illumination of the square should be achieved first reflexively from the fountain, the second with the set of lamps along the pedestrian walkways and the third with array of fluorescent lights from the perimeter of the building. The Syndicate home should be illuminated except on the access, roof and terrace with the reflects that are placed in the greenery, on the side facing the new park. Plan provides a plane tree as the most commonly used tree in greenery.

About the terrain levelling It is necessary to excavate the surplus of the soil, the excavation of the soil surplus should be done and mainly compensate to the area around the Syndicate Home. The ground level should be raised about 10 cm in relation to the curb along the sidewalk. For easier maintenance and washing of terraces and paths, a roadside should be placed everywhere, and to raise it plus 6 cm in relation to the pavement. The roadside thickness should be 4 cm. The sidewalks should be made of asphalt and a terrace paved with stone slabs.

The fountain pool is made up of white concrete, as well as vase. The cube on which stands vase should be covered with black marble or granite slabs. The pool on the terrace should be covered with blue ceramic tiles on the inside.

The floors of all sidewalks and terraces should allow the drainage of atmospheric water towards the driveway around the fountain where the drains and drainage network should be installed and which will enable the discharge of the pool.

How then, so today Njegoševa Street, which according to the logic of things should be exclusively the pedestrian street, was a classic street for automobiles. Over time, pedestrians are completely expeled to the sidewalks, so one of the most attractive parts of the city is completely absurd.

The same situation is with Vučedolska Street, which could revive and make more attractive the whole area of the Nikšić urban core if it would become an exclusively pedestrian street with the possibility of service traffic. However, this does not happen. The significance of Đorđević's urbanistic plan is reflected, among other things, in the transformation of these streets into pedestrian areas, whereby the square is transformed into a square intended for pedestrians.

Architect Đorđević in Novi Sad in 1958 also made sketches for the New Memorial Park in the area of today's bus station. Park, as the peripheral border of the square of Sava Kovačević, offered something completely new in this area. Despite its attractiveness and value, it has not been implemented.

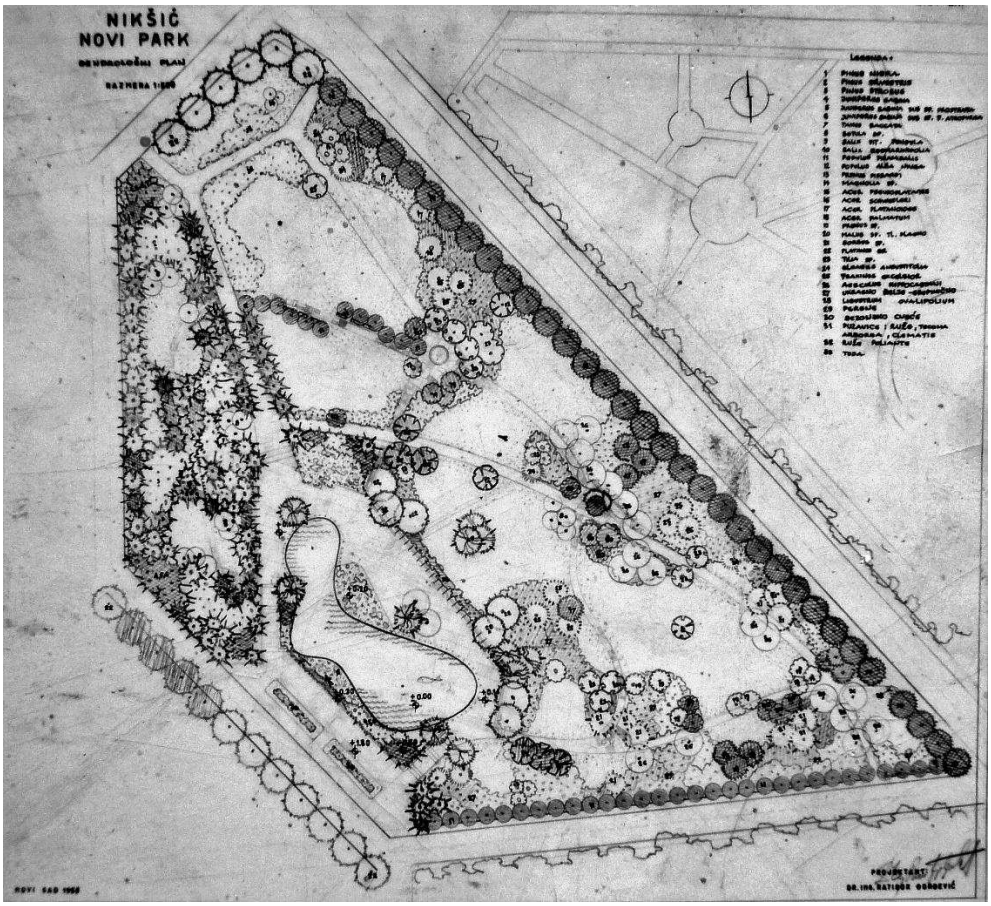


Figure 12, solution for the New City Park, 1958.

Current time and the Sava Kovačević Square

To talk about the Sava Kovačević Square in current time can only be in the concept of devastation. This square as the city's gate is pretty ruined.

The most important places for traffic transitions or nodes serve as the gates of the city or city center. The main crossroads, bypass, pedestrian paths, parking lots, railway and bus stations are all access points. Emphasizing their perceptibility is important in order to make it clear where the center starts (usually marked by changing the purpose and height of the buildings) and to prevent the undisturbed merging of the center and the edge of the city. (4)

This guideline is somewhat respected. The Sava Kovačević Square could be developed in the direction of the city gate and twelcome place. Today, this square, if it can be called like that, is a traffic hub and a crossroads.

The rhythm of the city's structure can be harmonious or disharmonious, depending on whether it is or not, devastation of space present in a smaller or larger extent.

The insistence on road traffic now is presented with the reduction of the green areas in favor of parking spaces. The shape of the parter which used to form the correct circle, now has the concave ends. The building that gave perhaps the main feature to the square and formed its character the City theatre (former 18th September Cinema or Syndicate Home) the first modern building in city , now is completely devastated and unrecognizable.

Those places for which we say that have identity, those places also have a special kind of sensation for all senses. Since these places in every person cause special emotions, it is quite certain that they create special memories and impressions. The space is shaped man and their identity, but also man and whole generations form the identity of a place.[6] (5)



Figure 13, Square in the 70s

Identity is the degree to which a person can recognize or remember one particular place as distinctive in relation to other places, which have a clear or unique or at least a special character. (6)

People who live in it make the city besides buildings. People and architecture of the city in a specific interaction form the atmosphere of the city, and this atmosphere shapes the city's identity in a long way. Urban way of life implies responsible, educated and civilized behaviour with all shades specific for groups and subgroups of people. All citizens that can be classified in these three basic attribute groups contribute to the spread of urban patterns and behaviours, resulting in the appearance of the atmosphere elements of the city, which in time form its identity as a set of socio-cultural qualities.

The identity of a place can be observed from two different levels: one is related to the spaces and peculiarities of its construction; the other refers to the activities that take place within that space. These two sets of characteristics need to be observed at once, together, because only in this way they express the complete character of a particular environment. (7)

[6] Professor Juhani Pallasmaa in his work “Space, Place and Atmosphere. Emotion and Peripheral Perception in Architectural Experience” states that the quality of a space or place is not merely a visual perceptual quality as it is usually assumed. The judgement of environmental character is a complex multi-sensory fusion of countless factors, which are immediately and synthetically grasped as an overall atmosphere, ambience, feeling or mood.



Figure 14, The current time, deformed edges and reduction of green areas

We can say that the identity of the city at the same time represents the self-consciousness of the whole city, both its individual citizens and all the groups of citizens who live in it, which exists depending on the criteria that this city establishes in relation to its past and its future. On this path of identity, Nikšić somehow got lost. The city, formed at the end of the 19th Century, was first a city of profane culture with the theatre, libraries, bookstores, then began to develop the industry, without rejection of the past. When at the end of the twentieth century city lost its industrial base, it forgot its past and soon became a city of improvisation. Improvisations are also related to the city's spiritual and cultural life, all significant cultural events are extinguished or replaced by cheap entertainment. Improvisations at the level of the city's infrastructure and its architecture did not bypass the city's core.

Conclusion



Figure 15, The current time and square

During its development and life, the Sava Kovačević Square contributed to the identity of Nikšić, first to visitors who first came to the city, welcoming them as one of the most beautiful elements of the city's architecture. Previously, the square itself changed its identity depending on the social or political circumstances that had taken place. The crisis of the society has also reflected on this square and it relates mainly to the way it is used, to the valuation of space and content, to its rehabilitation and some new aspirations in design. The square got a new face, which was not expected from the standpoint of a healthy profession, and this face is talking about both the city itself and its citizens.

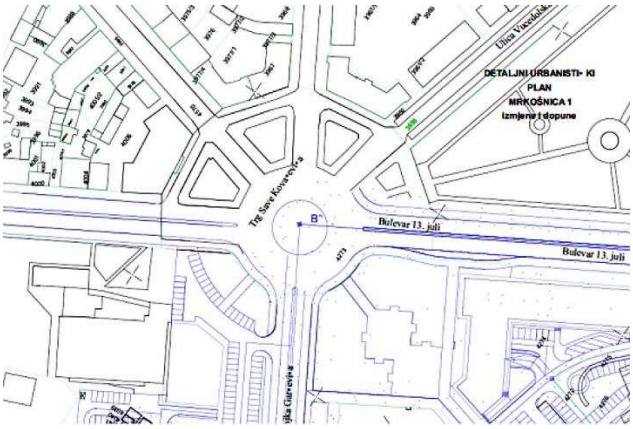


Figure 16, At the edge of Sava Kovačević Square, a new square has been planned!

If we accept that "the circle is a symbol of the psyche, and the square is the symbol of the body or reality," then the form of the proper octagonal can be considered as a connection between those two symbols. The Sava Kovačević Square is and should be an octagonal square.

It is interesting to see how Karl Gustav Jung looks at the shape of the circle and the shape of the square that form the basis of an octagonal form. The shape of the circle is a symbol of the psyche, or the spiritual being of man. The shape of the square is the symbol of the body,

reality and the material world. The ideal combination is an octagonal form that integrates both the square and the circle.

According to Jung, the connection between the form of square and the form of the circle does not exist or is quite coincidental in the art of the twentieth century. [7](8)

From the beginning of the Josip Slade's regulation plan application to the eighties of the twentieth century, there was a tendency to realize the octagonal form of the Sava Kovačević Square until the end. However, in the early nineties of the last century, historical circumstances left behind many contradictions and absurdities in all spheres of life, even in architecture.

Instead, to finally be formed square in an octagonal form, on the last, eighth side, a new rectangular square is planned out of any logic, beyond any common sense, and beyond any aesthetic criteria. This is sufficient proof of the profession state and its relation to the past. The negative vibrant identity is obvious here.

Bibliography:

(1) Vladan Đokić, Urbana morfologija: Grad i gradski trg, Arhitektonski fakultet u Beogradu, Beograd 2004, p.187
(2) Veljko Šakotić, Nikšić u knjaževini (kraljevini) Crnoj Gori, Centar za informativnu djelatnost, Nikšić 1996, p.215
(3) Ratibor Đorđević, Plan za uređenje Trga Save Kovačevića, Nikšić 1961, pp.1-4
(4) Yean Davies Llewelyn, Priručnik za urbani dizajn, Orion Art i Prograf, Beograd 2008, p.112
(5) Juhani Pallasmaa, Space, place and atmosphere. Emotion and peripheral perception in architectural experience, Lebenswelt, 4.1 (2014), p.231
(6) Kevin Lynch, A Theory of Good City Form, The MIT Press, Cambridge 1981, p.8
(7) Vladan Đokić, Urbana morfologija: Grad i gradski trg, Arhitektonski fakultet u Beogradu, Beograd 2004, p.219
(8) Carl Gustav Jung, Man and his Symbols, A Windfall Book Doubleday & Company Inc, New York 1964, p.249

Photo sources:

Figure 1,14-View from the satellite

Figure 6,7,13,15- Private collection

Figure 3,4,5,8,9,10,11,12,16- Archive of the Nikšić Municipality

[7] Jung continues: "In most modern arts, the connection between these two basic forms either does not exist or is coincidental. Their separation is a symbolic indication of the psychic state of a man. The frequency with which the circle and square appear must be well conceived. There seems to be a continuous psychic tendency to incorporate into the consciousness the basic factors the life they symbolize. "

Chapter 13:

Indicators of architectural and urban identity of the city core

The task of studying the urban core of Nikšić would be an assessment of the urban and architectural identity of the city. The basis of the methodological procedure is the analysis. The results of the analysis indicate what the architectural characteristics of the Nikšić urban core are and what the main elements of the concept of city urban identity are. The task of analyzing and researching the urban core of Nikšić is to identify the characteristic elements that influence the specific spirit and atmosphere of the city, its structures projected according to Josip Slade's regulation plan, which at the same time represent the basis on which identity is created.

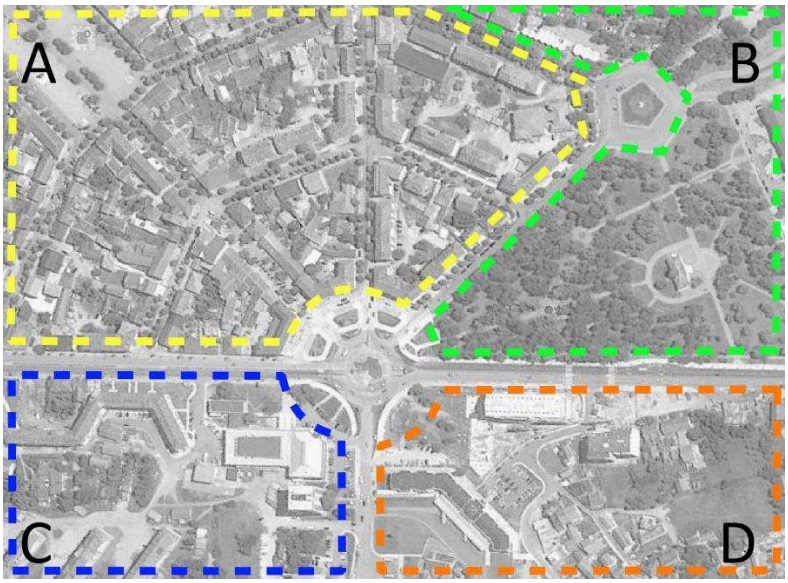


Figure 1, Research boundaries, A-Urban core B-City park, C-Modern urban block D- Undefined urban block

The structure of Nikšić, its narrower part, was analyzed in terms of some of its physical components. The results of the analysis confirm that the urban core of Nikšić has special characteristics such as physical identity, historical values, harmony, unity and meaning. Also, the results points to the dangers of distortion, which is evident and existing, in the narrower urban core, which can seriously undermine the urban and architectural identity of the city. Basic identity transformations are given in the form of a negative vibrant identity that warns of the possibility of losing some of the city core features.

To identify urban identity indicators we can do based on multiple criteria and multiple ways. This work was guided by primary impressions and sensations in the formation of parameters based on which the image or the identity of the city can be formed.

As we can see, the reon of research is divided into four quadrants marked with A, B, C, and D. Each of these quadrants has a specificity in relation to others and as such contributes to the creation of a special impression in the ambient, urban and architectural sense. The characteristics of the quadrant of research are essentially elements of the urban identity of the city, which contribute to the recognition of Nikšić in relation to other Montenegrin cities. Elements of urban identity are mostly identity indicators that are treated differently over time.

Traffic analysis

The explored area is limited to the streets of different functions and purposes, such as boulevards, two-way, one-way and walking streets. The basic characteristic of the investigated parts is reflected in clearly defined boundaries between them. The urban matrix is present and fixed in the strict geometric design of the streets.

The framework of the research area consists of three city squares, Liberty Square, as the largest city square, Šako Petrović Square and Sava Kovačević Square, which represents the epicenter of the Slade's plan and its most representative element.

The squares are well connected by a network of one-way streets. However, besides the part of Njegoševa Street, there is no single exclusively pedestrian street, and this is one of the main disadvantages of this city part. There are possibilities for introducing these streets, but to date it has not been realized.

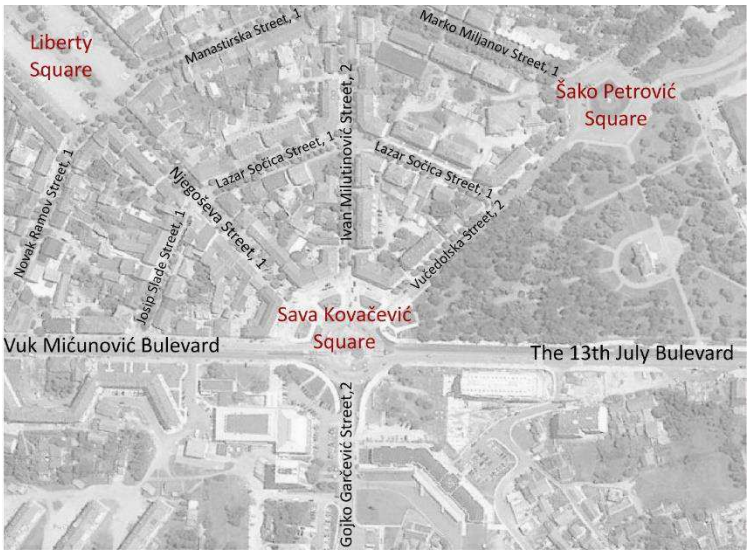


Figure 2, Traffic analysis, two boulevards, one-way streets marked with 1, two-way streets marked with 2

One-way streets are Vučedolska, Marko Miljanov, Manastirska, Novak Ramov, Sladeova, Lazar Sočica, Djuro Salaj and part of Njegoševa Street. The two-way streets are Ivan Milutinović Street, which runs from the east direction towards the Sava Kovačević Square and Gojko Garčević Street, which is located west of the Sava Kovačević Square. These streets, by default, divide the exploration zone by y-axis.

We have two boulevards: the Vuk Mićunović, which goes from the north to the Sava Kovačević Square and the 13th July Bulevar, which goess from the Sava Kovačević Square to the south. These two boulevards divide the exploration zone by x-axis.

Analysis of the purpose of the surface

From the purpose of the surface point of view, there is no clearly defined division within the observed area. In the quadrants, a defined division of surfaces partially appears, although this division has not been fully implemented.

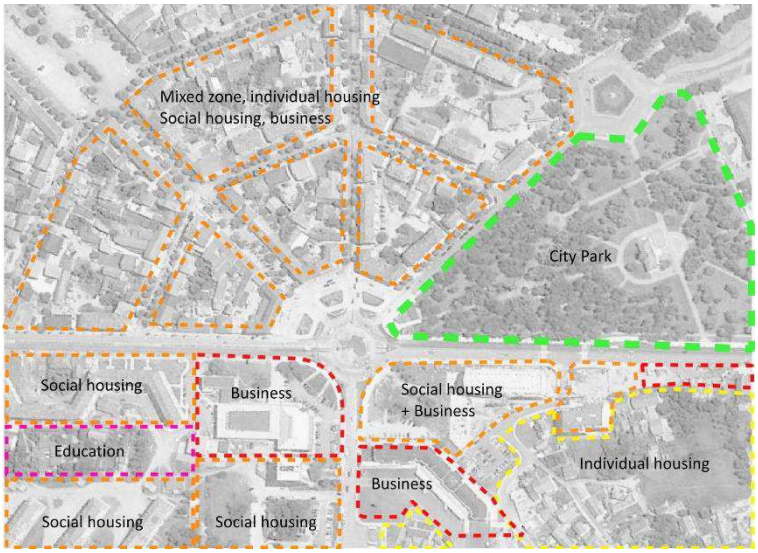


Figure 3, Purpose of the surface

Except the zone of recreation or the zone of the city park, no other zone is defined by clearly determined limits.

Thus, in quadrant A we have a mixed zone in which collective housing with individual housing, business, public institutions, school buildings is intertwined. Similar situation is in quadrant B, with a better definition of collective housing and clear boundaries of the recreation area.

In quadrant C there was a good basis for defining each zone individually,

but in this quadrant there is a heterogeneous structure with insufficiently clearly defined functions. Quadrant D also has a disagreement in defining the clear boundaries of each zone individually.

Analysis of the purpose of the objects

As can be seen from the insufficiently defined zoning of surfaces, the mixed purpose of the objects or the heterogeneous distribution of objects within individual blocks, in this case the quadrant of research comes.

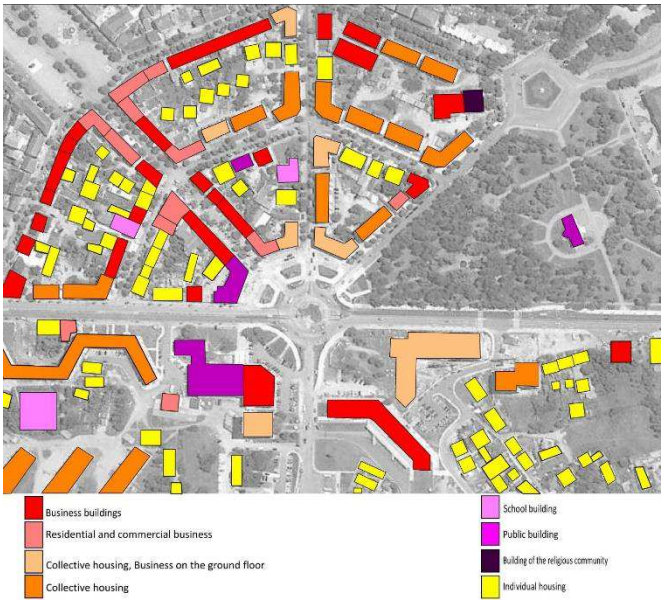


Figure 4, Purpose of objects

There is no clearly defined boundary between collective and individual housing. It is noticeable that in the interior of blocks that are limited by collective housing, individual housing usually occurs in objects without special architectural value. The unevenness of the architectural interpretation of objects further emphasizes the heterogeneity, which in these cases cannot be characterized as valuable and representative. Such characteristics do not contribute to the formation of quality elements of identity of the Nikšić urban core.

The heterogeneity in the purpose of the objects is also noticed in the quadrants C and D as the quadrants in which the city developed after the Second World War and where such heterogeneity should be expected at least.

It is important to note that quadrants C and D are not studied in detail because they represent the boundary spaces with quadrants A and B, which are the city's urban core created on the Slade Plan.

Quadrant A, basic characteristics

Quadrant A represents the core of Slade's plan, the street matrix between which blocks of objects were formed with all their specificities. The border consists of one-way streets Manastirska and Novak Ramov Street on the one hand, while on the other we have a two-way Ivan Milutinović Street and Vuk Mićunović Bulevar. Inside the quadrant, there are one-way Josip Slade and Lazar Sočica Street, as well as the main Njegoševa Street, which is in one part walking and one-way street from the Sava Kovačević Square.

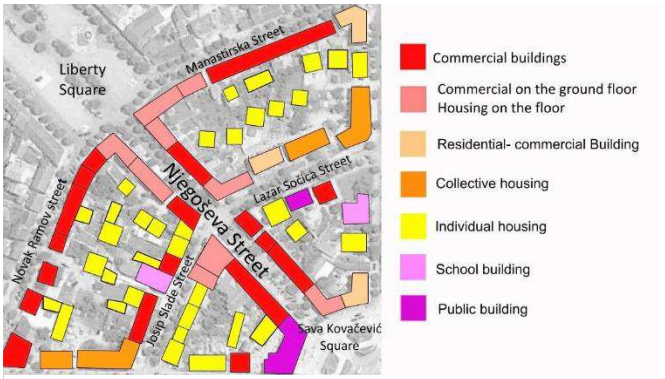


Figure 5, Quadrant A, objects purpose and traffic

As can be seen, there are four blocks of approximately correct geometric shape of an equilateral trapezoid. The streets border the blocks. The two blocks, which border with the Liberty Square with their periphery, are larger in relation to the two blocks, which border with the Sava Kovačević Square.

Due to the mixed purpose of the surface, or better to say the insufficiently delimitated positioning of the surfaces, heterogeneous

distribution of objects of different purposes has also developed. We note that most of the individual housing objects are positioned mainly within blocks with the exception of one block whose peripheral side is formed from the objects of individual housing that make front of Josip Slade Street.

Abiental characteristics of street fronts

The ambient characteristics relate to elements of both buildings as architectural units and streets that border block, whereby a specific atmosphere and ambience are formed.



Figure 6.Manastirska Street



Figure 7, Novak Ramov Street



Figure 8, Josip Slade Street

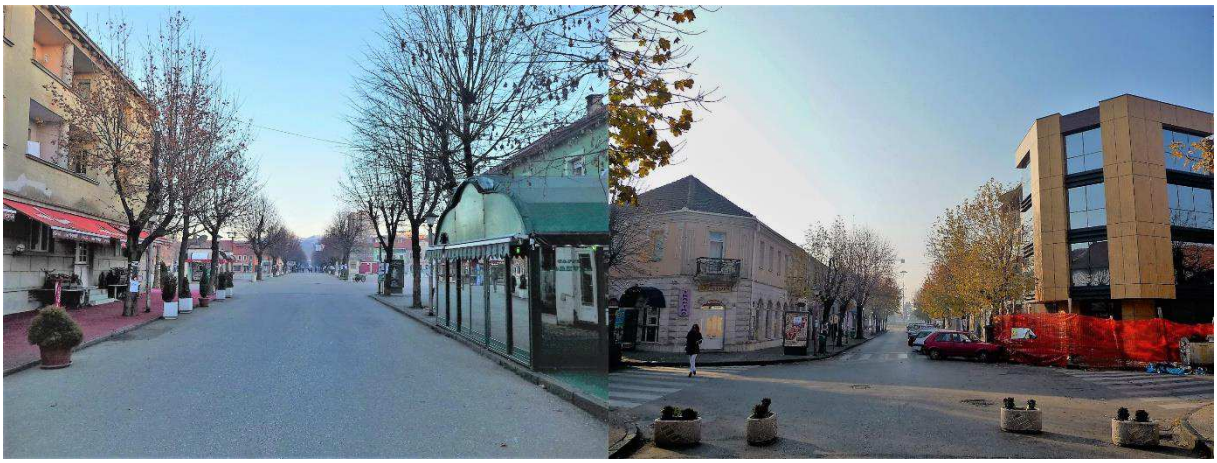


Figure 9, Njegoševa Street



Figure 10, Lazar Sočica Street



Figure 11, Ivan Milutinović Street

In Quadrant A, the streets that go into the Liberty Square are Manastirska Street, Njegoševa Street that connects this square with the Sava Kovačević Square and Novak Ramov Street. In addition to Njegoševa Street, all the others are one-way streets with sidewalks for pedestrians. The streets also have tree alley and parking spaces. Ivan Milutinović Street is two-way and as such does not have parking spaces, but on both sides, it has wide sidewalks.

Streets have dynamic and diverse fronts in terms of architecture. There are objects of traditional city architecture as well as newer buildings. There is a negative vibrant identity. The built objects disturb the concept of established construction patterns.

Quadrant B, basic characteristics

As we can see, quadrant B represents the logical continuation of the quadrant A with which it forms the matrix realized by Slade's plan. Quadrant B borders with Šako Petrović Square on the east side and Sava Kovačević Square on the west, linking them with Vučedolska Street. From the north, it borders with Ivan Milutinović Street, while from the northeast it borders with Marko Miljanov Street. From the south, it borders with City Park or the 13th Boulevard.

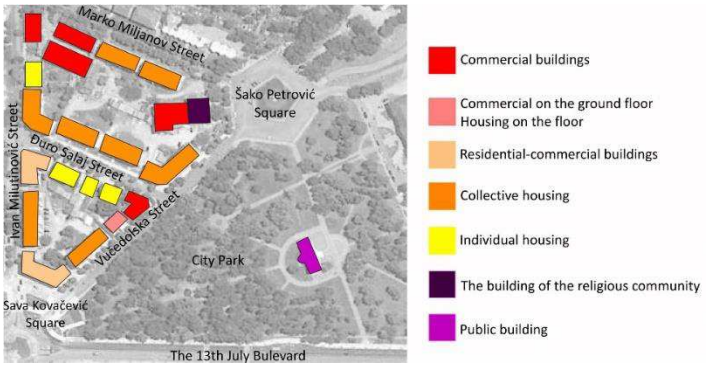


Figure 12, Quadrant B, the purpose of buildings and traffic

One-way streets that are present are Vučedolska Street, Marko Miljanov Street and Đuro Salaj Street. Ivan Milutinović Street is a two-way street and there is the 13th July Bulevar.

In this quadrant, due to the mixed distribution of the purpose of the surfaces, the heterogeneous distribution of the purpose of the objects occurs. There are two blocks of different sizes. A smaller block whose periphery makes front of the Sava Kovačević Square, has the shape of an equilateral trapezoid, whose edges are mainly made up of two-storey collective housing or business-residential two-storey buildings. The exception is the periphery towards Đuro Salaj Street where we have a few individual residential buildings.

The larger block has only one facility of individual housing, while the others are mostly made up of collective housing and a few business buildings. In this block, there is a parochial home as well as an object that operates within that same parish block. The interior of the blocks is not fully defined and serves to park vehicles and auxiliary facilities.

Abiental characteristics of street fronts

The special ambient elements are the City Park, the Šako Petrović Square, St. Vasilije Ostroški Church and Prince Nikola Palace. The streets with a rare but valuable architecture of the buildings are also contributing to the ambient whole.



Figure 13, Marko Miljanov Street



Figure 14, Đuro Salaj Street



Figure 15, Vučedolska Street

In this quadrant, street fronts are dynamic and diverse. All streets have trees and sidewalks for pedestrians. The impression is that the parterial arrangement could be better and more quality. There are also individual cases of identity impairment.

The streets of the core

Street is a stage where, more or less, all happenings that make up the city life, its energy and the essence happen. At the same time, these are the places where the days of each individual often form, forming different sensations, associations, memories and opinions. Today, people often discuss about the problems of modern streets. One of the key problem is the undifferentiated public space on them, ie the lack of a clear boundary between private and public space. As a result, there is often a problem of different uses of these spaces and their more diverse functional design.

The traditional street always had a clearly differentiated boundary between the domains of space, which also defined their use and use of street in general. In this sense, forms of socialization always had their clear area-place and were conditioned by culture, which dictated the way of using urban spaces. (1)

The street without people is unimaginable. The street fulfils its purpose when it satisfies all the communication needs of a pedestrian when it gives a sense of security, a pleasant visual experience and offers all the social content necessary for a normal life.

The basic association to the meaning of the word streets are pedestrians. The street is there for them. Man is a social being that all creates due to social interactions and achievements. In order to come to them, it is necessary that there is a place for these interactions to take place. The street is certainly one of those places.

In the urban core of Nikšić, there are streets whose potentials are not fully developed. The basic quality of these streets is a good connection with the Sava Kovačević Square. However, this quality cannot be fully appreciated from the inadequate relation towards the streets. This problem arose from the introduction of road traffic as the primary in relation to the pedestrian, which should not be the case because it is the urban core from which the city evolved. The streets that are in this context are Njegoševa Street, Vučedolska Street, Ivan Milutinović Street, Đuro Salaj Street (Bajo Pivljanin Street), Manastirska Street, Novak Ramov Street and Josip Slade Street.

Program concept of the urban core streets

Two elements essentially determine each street. We distinguish the street program and street content. The street program represents all those activities that happen occasionally in it. It usually refers to events, manifestations, various gatherings that can occur at a certain time of day, week, month and year. In Nikšić, for example, the city orchestra pass a custom with adequate music in the city's main streets in the evening. Then the streets would come to life even more, a special and festive atmosphere would be felt. Unfortunately, this beautiful custom has been discontinued.

Unlike the program, street content is of a lasting character and is primarily related to the purposes and activities offered on that street. Usually it is about trade and catering, there are cultural content such as theater, cinema, bookshops, libraries, etc. Most of these contents are presented on the ground floor of buildings that make up the fronts of the street. The ground floor is at the level of pedestrians and contribute to the life of the street.

By the beginning of the twentieth century until the First World War, and even after it, in Nikšić, in the ground floors of the main city buildings were located cafeterias and mostly bookstores. This is an information that fascinates and makes a special moment in the city life. Today, the situation is completely different. The bookstores are only a few, but the number of shops and cafes has exceeded more than hundred. It seems that there have been drastic changes in the habits of citizens, all of which has affected the identity of the city being changed and the atmosphere in it.

In addition to the program and the content of the streets, another element is important and that is a parterre arrangement. Parter should give the pedestrian maximum comfort, and again with its aesthetics, it should contribute to the quality of the space. However, in Nikšić more attention is given to parking spaces and cars. Prioritizing the car, in relation to pedestrian traffic, is the main cause of the devastation of the streets in Nikšić city core.

In the urban core of Nikšić, the dominant element of urbanity are the streets and, as the most important element, decisively influence the formation of the city image and its identity. Depending on the space that they create, we distinguish two types of streets

The first type of street generates a feeling of closeness, which is analogous to the experience of the room, the yard, the square. Objects and streets are inseparable, dependent elements of urban tissue, creating closed ambiences of a specific atmosphere. From the identity formation point of view, this is a special indication of it. This type of street is usually linked to settlements and cities that were built, before modern urbanism.

To this type of street belong all streets of the urban core: Marko Miljanov Street, Manastirska Street, Novak Ramov Street, Josip Slade Street, Lazar Sočica Street, Njegoševa Street and Ivan Milutinović Street.

The other type of street is built by freely standing objects and structures, which do not establish an adequate relation with the environment. This type of street is usually associated with the postulate of modern urbanism. To this type of street belong two boulevards and Vučedolska Street, but this street as a positive example.

Another street element is significant. It is a window shop. If one starts from the premise that urbanity is the city identity and that culture and the way of life build urbanity, it can be concluded that the city identity depends on the level of culture of its inhabitants. The shop window is one of the most accessible indicators of urban identity because by own location it's belongs mainly to the most effective areas of the city, where, in an explicit and often narrative way, shows the face and the backwardness of the cultural and political-economic status of the nation. (2)

We can say that the streets as a structural and morphological element of the city and an essential element of its architectural and cultural identity represent the great potential of every city. The city life takes place on them, and the social phenomena of the broadest spectrum and cultural sensations take place on them. All these events contribute to the life of every individual and the life of the city itself.

Identity Indicators

Based on the analysis of the urban core in the context of architecture and urbanism, the identity indicators that we recognize in the urban core of Nikšić are:

- elements of traditional architecture
- landscape architecture
- symbols of the city
- spatial integrity
- the silhouette of the city
- morphology and urban planning
- continuity of public urban spaces

Elements of traditional architecture

Traditional architecture in the Nikšić urban core mainly refers to typical family house, through simple shapes, reduced openings and material use.



Figure 16, Examples of typical city architecture

These city houses were built at the end of the nineteenth or early 20th centuries. We distinguish between ground and one or two-storey houses. They are made of stone, covered with roof brick. The openings are made of quality wood. Since these houses are made of stone, in the facade processing we distinguish the one on which the stone can be seen and the plastered ones. Facades are usually coloured in white or some of the pastel colours. The richer houses had a specific ornamentation that involved the treatment of window and doorframes, and in most cases on balconies and balcony fences.

The beginning of the Nikšić construction as a city brought a large number of workers and other masters from Herzegovina, Boka, Dalmatia and Italy who, although limited by money and time, were able to recognize the needs of future owners.



Figure 17, Examples of traditional city architecture

The basic characteristic of the architecture of city houses and facilities in Nikšić is simplicity and modesty almost we can talk about archetypal models of houses. They are oriented towards the street and built largely side by side with which the concept of the Slade's plan has visually and morphologically further grounded.



Figure 18, Typical elements of traditional city architecture, gate and port- portun

Wealthier families who, in accordance to their later status, raised larger and more prestigious objects. Particular attention is paid to the entrance doors that are usually made of high quality oak that can be carved. Sometimes there are modified and customized versions of Tuscan pillars on the side of the door. Above the door, among wealthy families, there was a balcony with a richly decorated fence. This balcony also had the role of a roof and protection from rain or snow during the winter.



Figure 19, Entrance and the balcony on a traditional city house

During the 1920s and 30s, appeared houses in which the façade was divided by masses of volume for the first time, although it still does not deviate from symmetry. Roofs are usually in two waters and are covered with ceramides. Special attention is paid to the arrangement of the chimney.



Figure 20, Facade of the house from 1924.

Landscape architecture

In creation of a recognizable city image, there are three basic elements: streets and squares, the typology of objects being built and park design or landscape architecture.

The park as a human creation with aesthetic qualities derived from the proper use of material, and use of the composition as a method of design can be considered as an architecture in organic material, that is, as an artificial space just like the city itself. We can consider the city as a polyvalent composition of urbanism and architecture, as well as park surfaces, since it is difficult and possibly impossible to determine the boundary between urbanism and park architecture.

The city park in Nikšić is a good example of the composition polyvalence between urbanism and architecture because the city park borders the edge of the Sava Kovačević Square in a not intense and pretentious way. On the contrary, this is a completely logical and successful projected meeting of two urban elements. The consequence would be that the Sava Kovačević Square can even be seen as a park square.

On the example of park squares, we clearly demonstrate the unity and indivisibility of urbanism from park architecture, as well as interlinking and interweaving ideas and shapes. (3)

Nikšić, as a city, has a unique quality. Only a few minutes' walk from the narrowest urban core, there is Trebjesa Hill, which is also the forest park and the main recreation place and a reserve of dozens of plant species. Even the forest park is subtly connected to the city park. In addition, this connection is a specific composition of the park as a human creation and Trebjesa hill as natural.

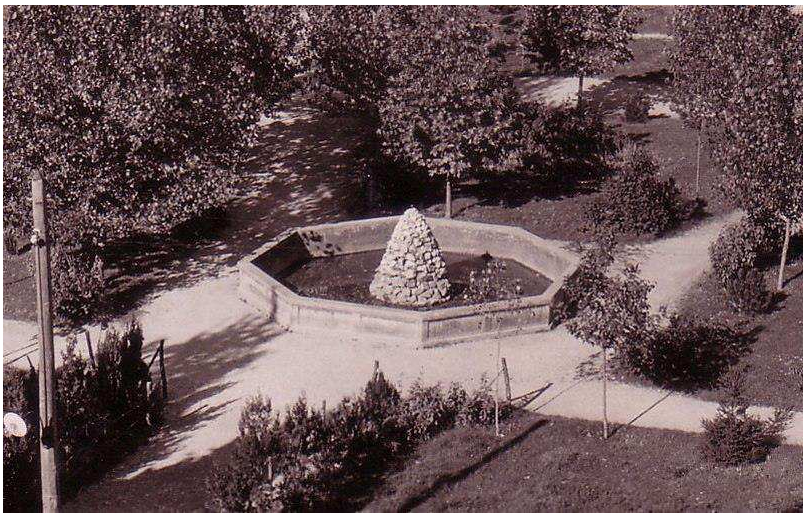


Figure 21, Fountain in the City Park from 1938.

Water has always been closely linked to the city, its formation and functioning. The first cities were always created near the water, whether it is about rivers, port cities or cities in the river valley. Water as the element from which life originated, is one of the eternal topic and a symbol of extraordinary power, so it is not surprising that it is used in presenting messages through various elements of art and its manifestations. Architecture is not an exception; it is not urbanism in the context when water is used as an element of design or an element of sensation and spatial expression. The fountains are the most representative, and the most effective indicators of water use. Thus, fountains as a specific city form can be interpreted differently. (4)



Figure 22, Newly built fountain in the City Park on the site of the former

When referring to the fountains from the urbanistic point of view, it can be said that they are one of the most important elements of free urban spaces, squares and parks. The compositional significance of the fountain is large and it is reflected in relation to the surrounding objects and its position in the free space. They are usually placed in the central perspective of the space in front of the building or in the spatial viewpoint axis. We can say that the fountain always puts emphasis on something and as an effective element of the urban composition participates in the formation of the identity of the same through recognition or memory.



Figure 23, One of the four city fountains on the square and one of the wells in front of the building

In Nikšić, water is always treated in a special way due to the dry and stony landscape. The lack of water was present in the past, so it is not surprising how much attention was paid to solving all those, especially urban elements, which contain the element of water as a tool of expression. In the first regulation plan of Josip Slade, the fountains occupied a significant place. Treated with special care then, it is clear that, as a manifestation of modernization, they played a significant role in the formation of Niksic's urban identity.

Wells as elements of urban composition are very rare. They are usually related to the rural environment. In Nikšić they had special and significant importance until the moment of construction of modern water infrastructure, and still then they will play a significant role in the coming years. Today they are completely forgotten both as a design and as an element of identity.

Symbols of the city

The most important visual symbolic elements are the St. Vasilije Ostroški Church designed by Russian architect Mihail Timofeevich Preobrazhenski and the Prince Nikola Palace designed by Josip Slade. The importance and architectural characteristics of these two objects have already been discussed in one of the previous chapters.

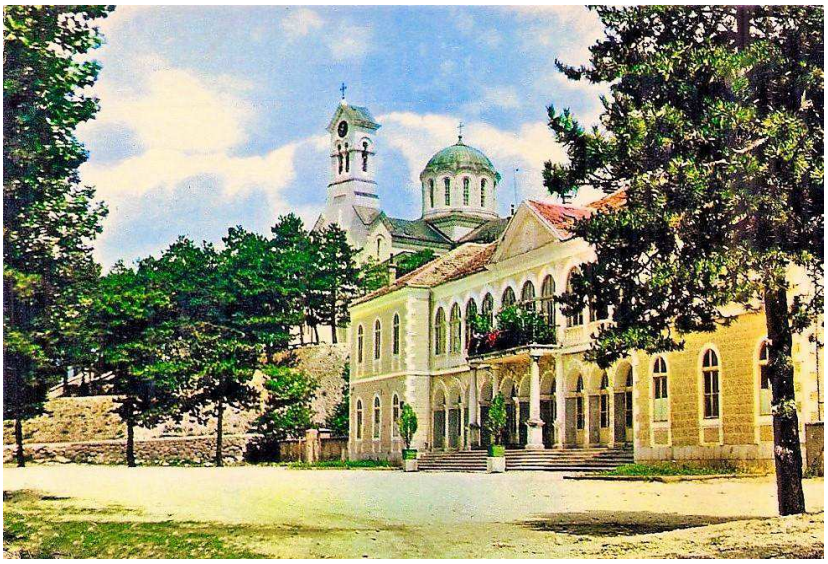


Figure 24, Palace and church on one of the typical postcards

Spatial integrity

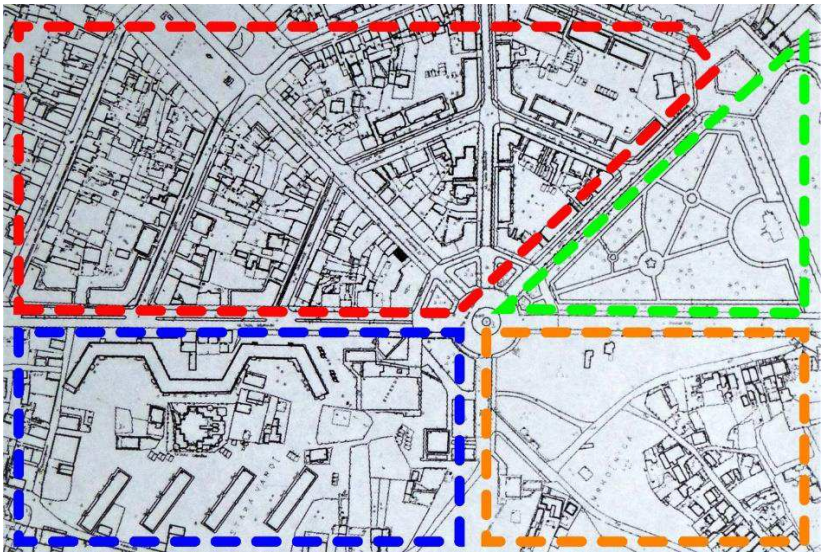


Figure 25, Spatial Integrity, units and a common point in the Sava Kovačević Square

Looking at the urban core of Nikšić, we can notice four conditionally stated structural components. The first component is a part of the city that was built according to the guidelines of Josip Slade's Regulatory Plan. This part is subtly connected with the city park as the second structural component. The third structural component belongs to the functional urbanism of the 50s or 60s and is connected to the urban core in a less or more successful way. The fourth component is given by an urban block that still has modern design given through objects of collective, individual and public character. This part is characterized by an extremely negative vibrant identity, since in its design; there is no connection with the inherited patterns.

Silhouette of the city

The silhouette of the city shows not only its physical structure, contributing to the visual identity of the city, but also the concentration of the appropriate purposes or functions that take place in the city. In the city silhouette, we can easily recognize religious activities based on the designation of religious objects in the silhouette and then we can identify various types of business based on the design of business, administrative buildings in the silhouette.

The city silhouette can conceal everything that makes city less beautiful. However, once it begins, the process of devastation is rarely occurring without being shown through the city silhouette. In this way, all evidences of human activity are often displayed clearly.

Silhouette of the city is perhaps the most expressive form of physical structure, its most eminent representative and as such is a particularly important part of the urban image and identity of a city.

Silhouette of the city physical structure is primarily an expression of a number of individual and predominant units, which are combined with the morphology of the terrain in each given case of the city. The focal central units in the group or individually arranged along the terrain of agglomeration give a macro-form of urban tissue, a silhouette. (5)

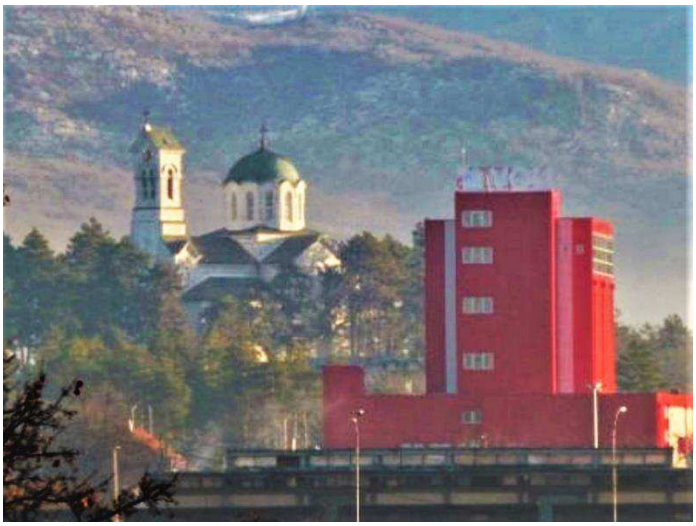


Figure 26, Basic and vibrant identity elements

The silhouette of the city, as a separate visual sensation and experience, it can be experienced again every time, depending on the aspect of the city, depending on the place from which it is viewed and depending on the time of day when it is observed. In this sense, we can distinguish the silhouette of the city observed per day by the silhouette of the city observed at night. The so-called night silhouette of the city, which is based on specific lighting and special light effects, is very interesting.

Morphology and urbanity of the city



Figure 27, Manastirska Street

From urban morphology or form, urbanity plays also an important role, as an element of identity formation. There are many definitions of urbanity. We can say that this term represents an ordered urban landscape system, that is, the unity of the urban elements of a city.

In the urban core of Nikšić, the dominant element of urbanism are the streets and, as the most important element, decisively influence the formation of the city image and its identity.

Continuity of public urban spaces

In addition to the streets and the city park, the public spaces of the Nikšić urban core are also related to two squares, the Sava Kovačević Square and the duke Šako Petrović Square.

Conclusion

The spirit of one place is determined by its material and immaterial characteristics. The material characteristics include everything that surrounds us, every aspect of the material place, starting with its architecture and urbanism in the widest sense. On the other hand, the intangible characteristics relate to memories of people, memories, art, history, events significant for the community as well as for individuals, meaning all those sociocultural sensations important for the lives of people.

The spirit of the place offers a more complete understanding of the living, and at the same time of the permanent character of the monuments, sites and cultural landscapes. It provides a richer, more dynamic and comprehensive vision of cultural heritage. The spirit of the place exists in this or that form, practically in all cultures of the world, and human beings who respond to their social needs make it. Communities that inhabit a place should be intimately connected with the preservation of its memory, vitality, continuity and spirituality.



Figure 28, Dynamic street front

Bibliography:

(1) Dr Darko Reba, Ulica, element strukture i identiteta grada, Orion art, Novi Sad, 2010, p.47
(2) Mr Dragana Panić, Izlog-PR urbanog identiteta, Društvo urbanista Beograda, Zbornik radova-Urbani dizajn, Beograd, 2006.

(3) M. O. Šćitaroci, B. Bojanić-Obad Šćitaroci, Parkovna arhitektura kao element slike grada, Prostor Vol.4 (1996), No.1, p.81
(4) Nataša Jovičić, Simbolizam vode i oblikovanje zagrebačkih fontana, "Život umjetnosti", Zagreb, 1991, p.6
(5) Ranko Radović, Forma grada, osnove, teorija i praksa, Građevinska knjiga, Beograd, 2009, p.90

Photo sources:

Photos are from private collection of author

Chapter 14:

Devastation of space, influence on the identity of the city

The destruction of space by construction has started rapidly and has expanded since the early 90s. Buildings of not so good architecture have become new city landmarks, valuable ambient units of traditional architecture are threatened by violently designed buildings that imitate their architectonics.

Although formally on paper, many laws and regulations are not applied sufficiently. The reasons for this practice are numerous, from corruption, nepotism, interests of certain groups and so on. In such an environment, the most vulnerable are the ideals on which most people quickly give up making compromises that may bring profit in a short period, but in the end, they have bad consequences, in this case, especially on the environment and space. Often it happens that even a conscientious investor, although a very rare species is blackmailed directly or indirectly by the design of a particular architect, in order to obtain a building permit. It seems that the problem of devastation is a product of deep problems present in society.

The fundamentals to be implemented in order to prevent further devastation are that architecture should be defined and protected by law as an art, and then as a creative practice. In this sense, the choice of architects can be legally regulated, especially for the design of buildings and urban units of interest for the whole city. In the end, it is necessary to implement a more detailed and purposeful knowledge and development of a spatial culture into the education system.

The city as a multivalent creation, besides architects and urban planners, has to be observed by other professions too. A one-sided interpretation of the city complexity is not good and does not lead to a fuller understanding of the problems that arise in it. In addition to architects and urban planners, other factors of social life, in particular from law, sociology, political science, psychology, social psychiatry, must be involved in the process of research and eventual rehabilitation. (1)

The International Charters of the city have the task of improving the living conditions of the city. This particularly refers to the creation of a favorable social and cultural environment in the cities. The goal is to achieve public awareness on how to participate actively in development planning, improving the quality of the urban environment and improving the quality of life in general. All these items contribute to the preservation of the city and its structure and at the same time contribute to preserving the identity of the city.

However, one should keep in mind the specificity of the environment in which the city developed. In societies that are burdened with the weight of a long-standing lag; the reality is that cities are not going to solve the problems of the past, let alone the present or the future. That is why there is less understanding of the consequences due to inappropriate use of space in the present. (2)

The Movement and the project "Healthy City", the European Charter of the City, Local Agenda 21 and URBAN 21 have numerous common goals, among which are the emphasis on preserving the environment, implementing human rights, ensuring the healthy environment in which we live and work.

Only in this way, the city can become an environment for the existence of equal people, with different needs and an ambience that will provide the man with such a structure of offers that provide rich identification possibilities. It is vital for a person to identify with a living environment, since it is the basic stimulus for communication and socialization. Such identification can only be achieved by a designed urban space, because only a coherent space as an expression of articulated consciousness can sensitize socio-urban behavior. (3)

Based on everything exposed in this paper, the conclusion can be that inadequate space management has violated the city identity of Nikšić, often by inadequate professional interventions. If we identify the causes of the devastation problem, it is possible to prevent further disturbance of the space and direct the vibrant identity in a positive direction, thus achieving a logical and continuous transformation of identity.

Possible causes of space devastation in Nikšić

The causes of the space devastation in Nikšić area are numerous. However, it is possible to notice several basic groups of causes, whose further analysis would result in a greater number of causes. All of these causes occur over a period, often referred to as transitions. This period lasts, conditionally speaking from the breakup of the former Yugoslavia until today. A period of less than thirty years has brought many dramatic changes, including the space devastation. Then we can talk about regulations that mainly restrictively affect the process of creation as an indispensable part of good architecture. We can also mention the emergence of the so-called private investor as an increasingly important factor in the space design. The problems of the profession in the first place are insufficiently professional architects.

The process of transition and changes in social system

By the beginning and in the mid-1990s, Montenegro had a socialist, one-party system. After historical events, Montenegro becomes a democratically organized society, at least on paper.



Figure 1, Industrial complex "Metalac" on a boulevard leading to the city

One of the basic processes that took place during socialist governance was the nationalization of land. From the architectural and urbanistic point of view, this process should favor development in the first place of urbanism and with it of architecture. The development of cities was under the wing of the "social interest". However, in the socialist self-management, there were mistakes, especially in the selection of locations for projected purposes and facilities. The common case was that large industrial facilities were built at the entrance to the cities. In Nikšić, such a case was with Metal Factory “Metalac”. An example of an inadequate site is also the Home of the Revolution, which, despite the good intentions, created great problems for the city.

Democracy, as an opposite system of state regulation, should favor the development of urbanism and architecture. The maxim of democracy is not a "social interest" but a "public interest". Not noticing the difference between these terms has created problems. An arbitrary interpretation has created strange products of "public" interest in the form of satisfaction or personal interests or interests of certain companies. In almost all areas of Montenegrin society in the process of transition from communist ideology to democratic ideology, public interests are neglected to a less or more extent. Especially in public architecture, public interest is neglected.

We should not forget the mentality of people. We saw that the denial of the material existence of previous social systems was present in the Nikšić area from the very beginning of the settlement. With the change of social system at the end of the 20th century, the heritage of the previous social organization, especially architectural objects, was denied. This is supported by the fact that in Montenegro there is no facility built after the Second World War, which is protected as a cultural heritage.



Figure 2, The most important work of the architect Đorđije Miljević, was completely devastated after the upgrade of the shopping center

However, it is clear that transition from one social system to another can be done without large spatial consequences if one wants to maintain a logical continuity in the construction of the city, in other words if there is a will to upgrade its morphology and transform the identity in a positive direction. Correct urbanism creates a valid architecture. Urban projects that have been adopted in accordance to urban rules, theory and scientific practice will place future architectural objects at the most optimal location. As a rule, good urban projects relate to the historical development of the city, will maintain the continuity of the city and will valorize its identity giving it a new hues.

Regulations as a restrictive measure that can cause devastation of space

The regulations are the result of state policy and legislation and as such must be respected and implemented. Most often, problems arise in the arbitrary interpretation of these same regulations and laws, both by the high and by the lower administration, and especially at the local level.

Politics has a decisive influence on the present state of architecture. Negative impacts on architecture have found their expression through policy in the creation of laws and regulations and in the operation of more and lower administrations. The higher administration creates laws and regulations, and lower administration interprets implements and abuses them to the detriment of architecture and at the same time culture and economy in their communities. (4)

Often urbanistic plans set out the conditions and regulations for the design of facilities whose interpretation goes either in the direction of modern architecture imitation or in the direction of traditional architecture imitation. This imitation process, in both cases, is often given to the work of superficial educated architects, unskilled designers or, in the worst case, to civil engineers. All of them literally interpret regulations from urban plans. The absence of any reference to the design patterns or reference to traditional architecture leads to the formation of a negative vibrant identity. Here we should mention the absence of any kind of analysis and critical attitude, especially according to current trends in architecture. The use of modern materials without their connection to traditional materials creates buildings completely alienated from the environment.

In general, the main causes of space devastation related to regulations can be grouped into several groups, so we have:

- Inadequate urban plans that put future objects without much critical observation and appreciation of the location, natural or physical environment
- The impression is that engineers who are not architects allow the design of objects also; it is often the case that the civil engineers design buildings. This happens because there is no explicit regulation that strictly prohibits civil engineer to handle architectural design.
- The problem of the creative process that is suppressed for the benefit of the administrative procedure where the regulations of the lower administration must be met
- Another characteristic phenomenon relates to competitions that usually by their so-called regulations favors cheap solutions by suppressing the quality of architecture, which increasingly takes on the merits of trading activities.

The private investor as a factor of space shaping

A private investor is a factor that cannot be bypassed lately. Investors are slowly becoming one of the main players in the decision-making process, designing projects, even those related to reconstruction. Often, personal interests and personal uncritical understanding of aesthetics and values are expressed, without reference to continuity. Christopher Lasch, in his book “Narcissistic Culture”, described that with the growth of personal interests, there is a decline in interest for the common good. (5)

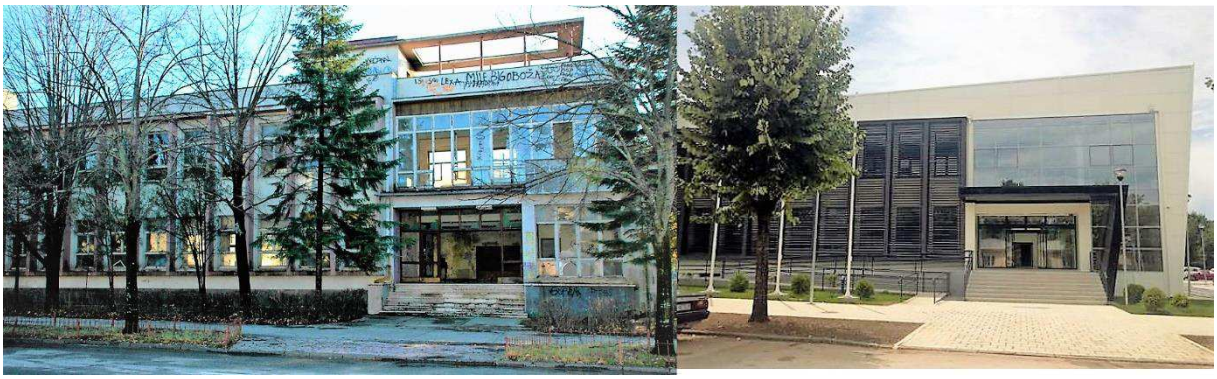


Figure 3, The Home of Army built in 1964, before and after the reconstruction in 2016

Problems of the profession

The carries of the architecture development at all time periods were architects as the authors of the project. Regarding the problems of the profession, two important characteristics are noted:

- In the story of devastation, most often are included and insufficiently qualified, insufficiently educated or insufficiently informed architects. Individually, the architect should bear responsibility. However, in our country, still no architect responded to the devastation of space.
- It became the rule that an architect who is not the author of the project is engaged for supervision, which again can cause many contradictions in the interpretation of the project. On the other hand, European practice is reversed and insists that the architect who is the author of the project has to be a supervising architect.

Generally, the profession's problems are related to the profile of the architect. Brent C. Brolin, as one of the key factors in the space design system in the book "Architecture in Context", states the

personality of the architect. Often due to narcissism and the need to emphasize oneself and their work, architects ignore inherited patterns. (6)

Possible solutions to the problem

The causes of devastation, especially of Nikšić urban core, are many. We tried to answer what are the possible reasons, with a certain amount of reservations, but also with hope that time will show the truth.

An irresponsible relation toward it endangers the shape of the urban core. The solution lies in a serious and responsible attitude towards the shape of the city that was formed by the first regulation plan back in 1883. This form should not be understood as a petrified and final formation that does not allow further development; on the contrary, it is an excellent foundation for the upgrade and vision of the city. At the same time, it is the city shape, the geometric, radial distribution of all urban elements, the basis for Nikšić's recognition in relation to all other cities, and hence it is perhaps the most important element of identity.

The streets of the urban core are completely covered with cars, even the sidewalks are parking spaces. This is contradictory to the norms by which the city core remains reserved for pedestrians.

The chaotic and unorganized distribution of surface uses also results in an unorganized allocation of objects. Central functions are also inadequately distributed and additional content that would refresh and make an attractive urban core, or do not exist or are uniform. The impression is that the Nikšić urban core has nothing to offer except coffee shops, betting shops and the so-called Chinese shops.



Figure 4, The Sava Kovačević Square, today, foto Esad Bazdulj

The squares are endangered. The Šako Petrović Square is a large parking lot with a green island centrally located. The Sava Kovačević Square is a large intersection, also with the parking places on the premises that should be intended for pedestrians. Njegoševa Street connects this square with the Liberty Square is subordinated to cars. By simple regulation, this street without any consequences can become pedestrian.

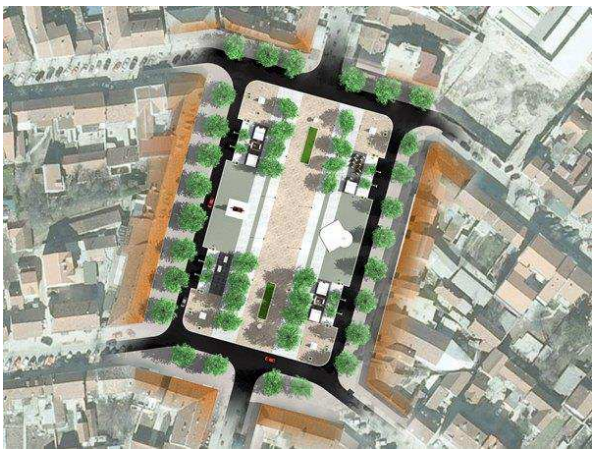


Figure 5, The reconstruction of the Liberty Square in 2016.

Reconstruction of the Liberty Square, although it has good intentions, has made an isolated, urban island surrounded by streets. There is unnecessary intersection of Njegoševa Street with crossroads for cars. The only pedestrian street of the city central part does not make a whole with the square, as foreseen in all previous urban plans.

It is permitted to build objects that cannot even fit into the existing environment. These buildings usually have more floors than one would expect, have mixed functions of different contents. Materialization is very aggressive and usually represent a kitsch. It is astonishing that architects

design most of these objects. Architecture is far from the one that finds its base in traditional urban architecture.



Figure 6, A newly constructed object does not fit into an existing ambient, a negative vibrant element

The panorama of the city, due to all the problems mentioned above, best demonstrates the relation of a vibrant and basic identity. The once prominent objects that have been the focal points of the city for more than century, which contributed to its recognition, now, are suppressed in the second plan, mainly by new buildings.

The loss of economic security, the crisis of values at all levels, is also reflected in the man's attitude towards the city. The discontinuity of value forms the discontinuity of identity of both the individual and the city itself.

Conclusion

The process of transition and changes in social system with all socio-economic phenomena have contributed to the devastation of the city's urban core and, consequently, its identity. The emergence of a private investor as a spatial design factor also contributed to the negative attitude towards the city. Regulations as a restrictive factor that can cause devastation of space have their negative role, especially if an insufficiently qualified person interprets them. Taking all the conclusions we have made, one general can make a statement that Nikšić, as a city of rich history and once recognizable identity, today faces devastation of it. It remains hoped that the process of devastation will be stopped by the application of adequate regulations.

Bibliography

(1) Boris Morsan, Maja Vahčić Lušić, Ivan Mladina , Urbana ekologijai društveni uzroci devastiranja okoliša, Društvena istraživanja, Vol.16 No.3 (89) Lipanj 2007.
(2) Srečko Pegan, Tihomir Jukić, Polazišta održivoga prostornog razvoja grada, Prostor 1[21] 9[2001] pp.49-56,
(3) Ognjenka Finci, Čovjekov grad, Sarajevske Sveske br.21/22 , 01/12/08
(4) Boris Morsan, Maja Vahčić Lušić, Ivan Mladina , Urbana ekologijai društveni uzroci devastiranja okoliša, Društvena istraživanja, Vol.16 No.3 (89) Lipanj 2007.
(5) Christopher Lasch, Narcistička kultura, Naprijed, Zagreb 1986. p.67
(6) Brent C. Brolin, Architecture in Context, Van Nostrand Reinhold, New York, 1980, p. 134

Photo sources:

Figure 1,2,3,6- Private collection

Figure 4- by Esad Bazdulj

Figure 6- Downloaded from the site http://www.onogost.me/drustvo/foto-evo-kako-ce-izgledati-rekonstruisani-trg-slobode

Chapter 15:

Conclusion

As we can see, the elements of the urban and architectural identity of Nikšić and elements of the identity of the city in general were observed from several aspects. The elements are determined in the natural characteristics of the landscape, in the genesis of the city itself, the period of its pre-war period and the time in which the city began to develop. It was also found that through urban projects in the post-war period, continuity in the construction of the city was achieved, which further strengthened the identity of the city. These aspects of observation and exploration of the city core served to make a conclusion on the strong base on which the city's identity is created as well as its recognizability.

The following conclusions relate to the study of the urban identity indicators of Nikšić, which unambiguously demonstrated the specific and unique identity of the city. Indicators also show the processes of devastation of urban and architectural elements that destroy the identity of the city and form different pseudo-identity as a result of an irresponsible attitude towards space and discontinuity of urban construction. The Sava Kovačevvić Square, a typical element of the space that has been observed for this purpose, confirms the thesis of the former continuity in construction and the established urban-architectural identity that emerged from it.

Also, some of the causes of the devastation have been identified, which resulted in conclusions for possible solutions in preventing devastation.

Definition of architectural and urban identity

When we determine the BASIC architectural identity of a city or its BASIC URBAN identity, we can follow its course over time. On the time line, it is of particular importance to determine specific historical moments in the life of the city. Often, through these moments, we can see how the circumstances influenced the architectural identity of the city. Key figures in the history of the city, for the shaping of its architectural and urban identity, relate to changes in its political and eco-base. Different political systems can make decisions that break the links to the previous systems, which also applies to the spatial design of the city. The economic conditions in the city dictate the rhythm that the city will develop. Some specific events such as natural disasters or wars can permanently and irreversibly disturb the city's appearance.

The next step is to identify the so-called VIBRANT architectural or VIBRANT urban identity of the city. Under the vibrant identity, we mean architectural and urbanistic response to a given moment of historical circumstances as changes in the political system, economic circumstances and social circumstances. A vibrant identity would be the architectural and urban relation of the built objects to the inherited, basic identity. If this relation is given through a logical and harmonic interpretation of architectural and urban works, it is a clear presence of continuity, and then the vibrant identity represents the upgrade of the basic one. Otherwise, the vibrant identity becomes an independent entity that creates tension with the existing state and does not contribute to continuity.

On the example of city of Nikšić, it is possible to see the phenomenon of architectural or urban identity through the emergence and definition of basic identity and its upgrading through a positive vibrant identity, or negative transformation when it comes to devastation of space. The city of rich history gives the opportunity to study the phenomenon of identity through various aspects, primarily through the relation between the natural and the human-created place. Then it is necessary to observe the city's genesis through the long historical period in which it exists, taking into account all the problems that can arise, primarily the lack of material and written evidence. It is necessary to determine the

basic identity of the city through the themes and their variations in the first periods of constitution of the settlement as a city. Finally, it is necessary to notice the transformations of basic identity through the appearance of a vibrant identity over time and their relations through examples of positive transformation and negative transformation or devastation.

Natural characteristics of the Nikšić region

Taking into account the briefly stated natural characteristics of the Nikšić region, primarily the configuration of the terrain, vegetation and climate characteristics, we can conclude that they have greatly influenced many characteristics of the future settlement or city. This impact is reflected primarily in the use of materials used for construction, and therefore also influenced the construction method.

Vegetation influenced with its visual qualities the experience of the space and the environment as well as the experience of all future stages in the genesis of the settlement, to the last one when we have a modern city.

The relatively straight Nikšić's field, surrounded by hills and mountains, was the ideal stage for the formation of the future city.

The periodization and development of the city of Nikšić

Until the moment of liberation from the Turks, Nikšić was developing unevenly and we cannot say that it had the city's features in any of the above historical periods. During the time of settlement in the area of the present city of Nikšić, there were either military fortifications or towns within the framework of military fortifications. Fortifications are usually by their design a strictly defined geometric formation. We have seen that the forms that dominated the genesis of Nikšić as settlements were in their bases fourfold, hexagonal and octagonal. These shapes were present in almost all of the above-mentioned fortifications through distinctly dominant visual elements such as towers, walls and buildings. Even after frequent destruction during the history, it was possible to discern these forms in the ruins from which they were re-renewed.

Another characteristic of the Nikšić genesis is reflected in its position as the crossing point of extremely important trade and military roads throughout history. The intersection represents a powerful visual element in orientation, as one of the prerequisites of existence and therefore the identity of each individual.

We have seen that the city was often demolished and repaired by almost the same material; either a carved stone that was brought from the ruins of the old Anderba from the shore of Moštanica or a stone was used from the late Roman period through different historical periods. The dramatic demolition and regeneration of the city is accompanied by changes in the name. It seems that every new epoch changed the identity of the city through the change of its name.

Taking into account the above mentioned peculiarities from the history of Nikšić's development, we can assume that they have served to architect Josip Šilović Slade (1828-1911) to unify and present them in the first city regulation plan, which he did in 1883 immediately after the liberation from the Turks in 1877.

Liberation of Nikšić from Turks

In order to realize the concept of an ideal city, which architect Slade only presented schematically, it was very difficult for a much richer and more organized country than Montenegro, which after all the wars was very poor. It has done a real curiosity at all. Behind this, the sovereign, the army and the

people had to stand. Construction was carried out without mechanization, with bare hands and without elaborated plans and projects. The unique case of building the Nikšić city, according to the type of urban matrix, as well as the time and method of construction, deserves the attention of further study. Although by typology it did not correspond to the time in which it was applied, it can be considered the beginning of articulation of planned urbanization in Montenegro.

In contrast to the orthogonal scheme of Novi Bar, Pristan port and Podgorica, architect Slade made the exception, fitting the segments of the already seen cliché of Renaissance cities, between Trebjesa and Bedem with the tendency of spreading towards Bistrica, Gračanica and Zeta. He experienced the realization of the first part around today's Liberty Square, absorbing the needs of the entire population for construction. This is an extremely rare phenomenon in urban practice, since this discipline is suitable for successive upgrading in continuity.

Typical city architecture and its characteristics

After liberation from the Turks, Nikšić gets the features of a modern city thanks to the first regulation plan by the architect Slade. This plan is a base that gave the direction and the way of building a city. By increasing the number of inhabitants, the old habits and customs are abandoned. Ten years have passed since the liberation and the Reading Room, the Singing Society, the Theater, and then all-important facilities necessary for the urban life of citizens such as schools, hotels, bookstores, banks, railway stations have been built in the city. Soon the first industrial facilities started to work, and the publishing activity was rising since there were two informative magazines "Nevesinje" and "Narodna misao" for such a small city.

The period from liberation to world wars is significant in order to establish an urban base where the continuity of all future periods in the city life will be built.

The city development through post-war urban plans

The first regulation plan of Nikšić was done by architect Dr. Josip Šilović Slade. The plan represents the radial city form, referring to the plans of the ideal Renaissance cities. The plan has a pronounced geometric character and as such strongly influences the formation of all urban elements in the first place streets, blocks and squares.

Each structure, even the urban, is built from elements. Elements of a physical structure of a city would be infrastructural objects, communication objects and green surfaces objects and at the end the buildings as the most important elements that define the primary structure that we first feel with the sense of sight. Before it is formed as a material representation by human intervention and activity, the urban form is made on paper in the form of an urban plan. Slade's plan has incorporated all these aspects into itself through an adequate and logical composition of urban elements, as well as the position and arrangement of objects.

The plan represents a base on which not only the city of Nikšić is formed, but also its city identity, so we can conclude that any deviation of urban form and architectural practice, which does not contribute to the continuity of urban construction and the logical development of the city, is a devastation and a distortion of identity.

Although by typology it did not correspond to the time in which it was applied, the first regulation plan of Nikšić can be considered as the beginning of articulation and planned urbanization in Montenegro.

Looking at the post-war urban plans of Nikšić, we can conclude that they are related on the Slade's plan. The authors of these plans tried to enable the expansion of the city in a logical way, starting from the first city's regulation plan.

The first regulation plan not only imposed the urban form and urban elements as its dominant, it brought a specific architecture that developed on its basis. Post-war plans contained solutions to which this architecture was respected and which gave it a new life.

The consequences of the more or less application of the post-war plans directly relate to the continuity of the city's construction. The main quality of these plans is reflected in the continuity of construction.

For this reason, urban planners and architects should develop the city through their activities, taking into account the continuity, forming a pleasant place for the life of all its citizens. With more or less success, the post-war urban plans were related to this.

The "Boris Kidrič" ironworks, as the most important industrial enterprise, was a key element in the economic security of the city. As such, it influenced the shaping of the city through the buildings and facilities for the lives workers, striving to make the quality of their lives better. In this way, it certainly influenced the sense of belonging to workers and, consequently, their identity both in terms of work and in terms of housing.

Construction of the buildings in Nikšić after the Second World War

After the end of the Second World War, Nikšić has an intensive construction that is regulated by urban plans, primarily by the plan of Josip Sajsel, which is related to continuation of the first regulation plan. However, urban transformation is not interrupted, on the contrary, it is done in a positive direction. Quality urban plans are bases for quality architecture, in the first place, its position. Examples of buildings by architects Vukotić, Milić and Tatić are a good indicator of the city's politics at that time. This practice and politics deeply appreciated the past, but also understood the demands of a given time. The compromise gave the best solutions in architecture and urbanism, which enabled the continuity and positive transformation of urban and architectural identity.

The buildings of the architect Djordjije Minjević, the development of modernism in Nikšić

Talking about the work of the architect Đorđije Minjević is a great challenge. The main difficulty in interpreting his work is the lack of original projects and drawings of buildings. These projects seem to have been lost. In the Archive of Nikšić, for now only fragments of a small number of projects can be found, even those fragments are in poor condition. The data from the magazine or books in which Minjević's projects were published are a true rarity and can hardly be reached. Even the architect Minjević, in his monography on his work and life, states that because of the loss of project material, this monography is of a documentary character and not representative. Minjević made the monography to distribute the material that he possessed to the readers and to preserve, from time and apparent negligence, as far as possible his work.

Just as architect Minjević, at the beginning of his career, the lack of associates, professional staff, machines and high-quality materials understood as a challenge from which he created objects that became an integral part of the life of Nikšić citizens, and therefore part of their identity, the lack of archive material should be viewed as a challenge, too. From this challenge we can give equally positive interpretations as well as when the material would be available. The buildings by architect Minjević give inspiration and help to see architecture again, poetically.

Objects by architect Slobodan Vukajlović, Continuity of city building and individual interpretation of modernism and postmodernism

Today, if we look at the Vukajlović's architecture, built in the Nikšić city, we will see that it has become an inseparable part of the spatial identity of individual urban blocks as well as the city as a whole.

Vukajlović's buildings for the Nikšić architecture have multiple significance. First, many of the buildings that he designed typologically were built for the first time in the city and most of them are public buildings. This provides a key framework for the observation and analysis of buildings. As public buildings of importance for the optimal functioning and life of citizens, these objects became generators of gathering and social interaction.

In this way, the buildings eventually became part of the collective memory. Subtle reference to the past, transformation and contemporary interpretation of already present topics and motifs in the city architecture of Nikšić, are contained in Vukajlović's architecture. His opus is an example of a positive transformation of the urban and architectural identity of the city from a positive vibrant identity when objects were built to this day when they have already become part of a positive basic identity.

This work for the first time presents the selected works of the architect Vukajlović with the hope that the research of his rich opus will yet to begin.

Memorial building Home of Revolution, an indicator of urban identity transformation of Nikšić city

"Home of revolution" has become a negative element of urban identity in the town of Niksic. The building is not finished and never used. Over time, the building became the antithesis of everything that is supposed to represent. In this way become a negative element of urban identity. A large number of citizens think that this building should be demolished although in the construction of this building participated these same people who for decades have been giving the 3 per cent of their salary as a contribution to construction.

However, many citizens are aware of the historical value that this project had and they agree that the building should be completed. The idea of the unity of diversity, on which the Home of revolution is based should be still guiding idea, especially for future generations.

Genesis and characteristics of the Sava Kovačević Square

During its development and life, the Sava Kovačević Square contributed to the identity of Nikšić, first of all to visitors who first came to the city, welcoming them as one of the most beautiful elements of the city's architecture. Previously, the square itself changed its identity depending on the social or political circumstances that had taken place. The crisis of the society has also reflected on this square and it relates mainly to the way it is used, to the valuation of space and content, to its rehabilitation and some new aspirations in design. The square got a new face, which was not expected from the standpoint of a healthy profession, and this face is talking about both the city itself and its citizens.

Indicators of architectural and urban identity of the city core

The spirit of one place is determined by its material and immaterial characteristics. The material characteristics include everything that surrounds us, every aspect of the material place, starting with its architecture and urbanism in the widest sense. On the other hand, the intangible characteristics relate to memories of people, memories, art, history, events significant for the community as well as for individuals, meaning all those sociocultural sensations important for the lives of people.

The spirit of the place offers a more complete understanding of the living, and at the same time of the permanent character of the monuments, sites and cultural landscapes. It provides a richer, more dynamic and comprehensive vision of cultural heritage. The spirit of the place exists in this or that form, practically in all cultures of the world, and it is made by human beings who respond to their social needs. Communities that inhabit a place should be intimately connected with the preservation of its memory, vitality, continuity and spirituality.

Devastation of space, influence on the identity of the city

The process of transition and changes in social system with all socio-economic phenomena have contributed to the devastation of the city's urban core and, consequently, its identity. The emergence of a private investor as a spatial design factor also contributed to the negative attitude towards the city. Regulations as a restrictive factor that can cause devastation of space have their negative role, especially if they are interpreted by an insufficiently qualified person. Taking all the conclusions we have made, one general can make a statement that Nikšić, as a city of rich history and once recognizable identity, today faces devastation of it. It remains hoped that the process of devastation will be stopped by the application of adequate regulations.

Bibliography:

Historical sources and plans:

(1) Feđa Košir, Urbanističko- arhitektonsko rešenje Trga Maršala Tita, centralnog poteza grada sa pratećim prostorima u Nikšiću, Nikšić 1972.
(2) Ratibor Đorđević, Plan za uređenje Trga Save Kovačevića, Nikšić 1961.
(3) Rešenje Sekretarijata za komunalne poslove NO Nikšić, br.6984 od 31.03.1955.godine.
(4) Glas Crnogorca, br.25, Cetinje 1894.
(5) Glas Crnogorca br. 40, 1885.
(6) Onogošt br.8, Nikšić 1889.

Planning Regulations:

(7) Fotografije kopije Regulacionog plana Josipa Sladea iz 1883.godine iz knjige Veljko Šakotić , Nikšić u knjaževini (kraljevini) Crnoj Gori , Centar za informativnu djelatnost , Nikšić 1996.
(8) Regulacioni plan grada Nikšića, 1941., Arhiv grada Nikšića, Fond Ministarstva građevine, Tehnička sekcija Nikšić, br.reg. VIII od 105 do 120, 1919.-1949.
(9) Situacini plan uređenja trga kod osnovne škole, Nikšić 1941., Arhiv grada Nikšića, Fond Ministarstva građevine, Tehnička sekcija Nikšić, br.reg. VIII od 105 do 120, 1919-1949.
(10) Skice za uređenje Trga Kralja Aleksandra, Nikšić, 1941., Arhiv grada Nikšića, Fond Ministarstva građevine, Tehnička sekcija Nikšić, br.reg. VIII od 105 do 120, 1919-1949.
(11) Regulacioni plan grada Nikšića, Josip Sajsel, Dragan Boltar, Nikšić 1954., Arhiv grada Nikšića, Građevinska sekcija , nesortirani materijal
(12) Generalni plan grada Nikšića, Plan saobraćajnica, Josip Sajsel, Dragan Boltar, Nikšić 1954., Arhiv grada Nikšića, Građevinska sekcija , nesortirani materijal
(13) Regulacioni plan grada Nikšića, Feđa Košir, Nikšić 1971. Arhiv SO Nikšić, Agencija za uređenje prostora
(14) Plan za uređenje Trga Save Kovačevića, Ratibor Đorđević, Nikšić, 1961.
(15) GUP grada Nikšića, Dusper, Nikšić 1986.
(16) DUP Stara Varoš, Slavko Daković, Nikšić, 1988.
(17) DUP CENTAR 1A, Agencija za projektovanje i planiranje, Nikšić 2007.
(18) Služba za zaštitu životne sredine opštine Nikšić, Informisanje o stanju životne sredine za teritoriju Opštine Nikšić, Nikšić, 2009.

Articles and Studies:

(19) James D. Fearon, WHAT IS IDENTITY (AS WE NOW USE THE WORD)?, Department of Political Science, Stanford University, Stanford, 1999.
(20) Dr Zdravko Ivanović, Nikšić, urbano-geografska studija, Srpska akademija nauka i umjetnosti, Geografski institut „Jovan Cvijić“ , Beograd, 1977.
(21) Dr Branko Radojičić, Opština Nikšić, priroda i društveni razvoj, Filozofski fakultet Nikšić i opština Nikšić, 2010.
(22) Dr Branko Radojičić, Vode Crne Gore. INSTITUT ZA GEOGRAFIJU, Nikšić, 2005.
(23) Dr Branko Radojičić , Geografija Crne Gore – regije. DANU, Podgorica, 2008.

(24)Dr Tomica Nikčević, Ostaci materijalne kulture i pisana dokumenta, Monografija Nikšić, Grafički zavod Hrvatske, Zagreb, 1972.
(25)Katarina Mitrović, Nikšić (Onogoste, Anagastum, Nagoste), Leksikon gradova i trgova srednjovekovnih srpskih zemalja, redaktor Siniša Mišić, Zavod za udžbenike, Beograd, 2010.
(26)Dr Slobodan Vukajlović, Arhitektura, urbanizam i spomenici kulture, Monografija Nikšić, Grafički zavod Hrvatske, Zagreb, 1972.
(27)Jovan Ivović, Obnova tvrđave 1709-1713.goddine, Nikšićke novine br.6,7,8, Nikšić, 1961.
(28)Dr Branko Pavićević, Oslobodilački ratovi od XVI-XX vijeka, Monografija Nikšić, Grafički zavod Hrvatske, Zagreb, 1972.
(29)Maksim Maksimivić, Prvi regulacioni plan Nikšića, Komuna br 9, Beograd 1961.
(30)Bekica Šobajić, Odzivi prijatnih uspomena, Nikšić 1899.
(31)Dušan J. Martinović, Portreti, Josip Sslade (1828-1911), Cetinje 1991.
(32)Nebojša Adžić, Arhitektura crkve, Caborna crkva Svetog Vasilija Ostroškog u Nikšiću 1900-210, Saborna Crkva Svetog Vasilija Ostroškog, Nikšić 2010.
(33)Vladana Putnik, Uloga sokolskih domova u modernizaciji jugoslovenskog društva (1918–1941), naučni rad
(34)Prof. dr Branislav Kovačević, Savezniko bombardovanje Crne Gore 1943 i 1944.godine, Montenegrina, Digitalna biblioteka crnogorske culture
(35)Ivan Miladinović, tekst pod nazivom Peko traži da se gađa Nikšić, objavljen u dnevnim novinama Večernje novosti 13.01.2015.
(36)Sabrina P.Ramet, The three Yuogoslavias, Satate Building and Legitimation, 1918-2005. Washington, D.C.: Woodrow Wilson Center Press and Bloomington and Indianapolis: Indiana University Press, 2006.
(37)P.H. Liotta, Paradigm Lost: Yugoslav Self-Management and the Economics of Disasters, Balkanologie V, no.1-2, December 2001.
(38)Vladimir Kulić, Land of In-Between: Modern architecture and the State in Socialist Yugoslavia, 1945-65, doctoral disertation, Austin: University of Texas at Austin, 2009.
(39)Anthony Alofsin, Frank Lloyd Wright and Modernism, Terence Riley/Peter Reed,eds, Frank Lloyd Wright Architect, The Museum of Modern Art, New York, 1994, prevod Milica Cvetković
(40) Sarah Ksiazek, Architectural Culture in the Fifties: Louis I. Kahn and the National Assembly Complex in Dhaka, Journal of the Society of Architectural Historians, LII, 4, December 1993, prevod Vesna Mujičić
(41)Kate Nesbitt, Theorizing a New Agenda for Architecture: 1965-1995, Introduction, Princeton Architectural Press, New York, 1996 , prevod Ksenija Todorović
(42)Christian Norberg-Schulz, The Two Faces of Post-Modernism, Architectural Design, LVIII, 7/8, July/August, 1988. prevod Ksenija Todorović
(43)Peter Gesel i Gabriele Lojthojzer, Arhitektura u 20.veku, prevod Marija Obradović, Taschen-IPS, Beograd, 2007, p.441 (Aldo Rossi, Gianni Braghieri Cemetery of San Cataldo, Modena, Italy, 1971-1984)
(44)Christian F. Otto, International Style, Vittorio Magnago Lampugnani, The Thames and Hudson Encyclopedia of 20th Century Architecture, Thames and Hudson, London,1986, pp 160-164, prevod Vladimir Kulić
(45)Borislav Vukićević, text for catalog of retrospective exhibition „Arh Slobodan Vukajlović (1934-2006)“, author of the exibition David Delibašić, KC Punkt, Nikšić, 2016.
(46)Mr Dragana Panić, Izlog-PR urbanog identiteta, Društvo urbanista Beograda, Zbornik radova-Urbani dizajn, Beograd, 2006.
(47)M. O. Šćitaroci, B. Bojanić-Obad Šćitaroci, Parkovna arhitektura kao element slike grada, Prostor Vol.4 (1996), No.1

(48)Nataša Jovičić, Simbolizam vode i oblikovanje zagrebačkih fontana, "Život umjetnosti", Zagreb, 1991.
(49)Profesor Branislav Mitrović Predgovor za monografiju Arhitekta Đorđije Minjević, graditelj i prostorni planer, Batatisak, Beograd, 2007.
(50)Boris Morsan, Maja Vahčić Lušić, Ivan Mladina , Urbana ekologijai društveni uzroci devastiranja okoliša, Društvena istraživanja, Vol.16 No.3 (89) Lipanj 2007.
(51)Srečko Pegan, Tihomir Jukić, Polazišta održivoga prostornog razvoja grada, Prostor 1[21] 9[2001] 49-56,
(52)Ognjenka Finci, Čovjekov grad, Sarajevske Sveske br.21/22 , 01/12/08

Literature:

(53)Yi-Fu Tuan, Space and Place: The Perspective of Experience, University Of Minnesota Press, Minnesota 2001.
(54)Harold M. Proshansky, Environmental Psychology: People and Their Physical Settings, Holt McDougal; 2nd edition, Boston 1976.
(55)Erik Homburger Erikson, Identity: Youth and Crisis, W. W. Norton, New York 1968.
(56)Kevin Lynch, A Theory of Good City Form, The MIT Press, Cambridge 1981.
(57)Christian Norberg-Schulz, Genius loci: towards a phenomenology of architecture, Rizzoli, Edinburgh College of Art Library, Edingburgh 1980.
(58)Arthur John Evans, Antiquarian Researches in Illyricum, Westminster, 1883., c 78
(59)Petar Šobajić, Nikšić-Onogošt, La Ville de Nikšić-Onogošt, Posebna izdanja geografskog društva, sveska 22, Beograd 1938.
(60)Slobodan Raičević, Spomenici u staroj župi Onogošt, Beograd 1992.
(61)Arthur John Evans: Illyrian letters, London 1878.
(62)Petar Šobajić, Nikšić-Onogošt, La Ville de Nikšić-Onogošt, Posebna izdanja geografskog društva, sveska 22, Beograd 1938.
(63)Konstantin Jireček, Istorija Srba III 10, prevod Jovan Radonjić, Drugo dopunjeno izdanje, Naučna knjiga, Beograd 1952.
(64)Andrija Luburić, Drobnjaci, pleme u Hercegovini, Beograd, 1930.
(65)Vjekoslav Klajić, Bosna, Podatci o zemljopisu i poviesti Bosne i Hercegovine, Pučna knjižnica matice Hrvatske, Zagreb 1878.
(66)Veljko Šakotić, Nikšić u knjaževini (kraljevini) Crnoj Gori, Centar za informativnu djelatnost, Nikšić, 1996.
(67)Vladan Đokić, Urbana morfologija: Grad i gradski trg, Arhitektonski fakultet u Beogradu, Beograd 2004.
(68)Ranko Radović, Forma grada, osnove teorije i praksa, Građevinska knjiga, Beograd 2009.
(69)Đorđije Minjević, Nikšić u sjećanjima, Nikšić 2008.
(70)Christian Norberg Schulz, Exsistence, Space & Architecture, Studio Vista, London 1971.
(71)) Kevin Lynch, The Image of the City, The MIT Press, Cambridge 1960.
(72)Yean Davies Llewelyn, Priručnik za urbani dizajn, Orion Art i Prograf, Beograd 2008.
(73)Kevin Lynch, A Theory of Good City Form, The MIT Press, Cambridge 1981.
(74)Vladan Đokić, Urbana morfologija: Grad i gradski trg, Arhitektonski fakultet u Beogradu, Beograd 2004.
(75)Carl Gustav Jung, Man and his Symbols, A Windfall Book Doubleday & Company Inc, New York 1964.
(76)Dr Darko Reba, Ulica, element strukture i identiteta grada, Orion art, Novi Sad, 2010.

(77)Andrija Markuš, 50 neimara Crne Gore, Arhitektonski forum, Podgorica 2008.
(78)Dražen Arbutina, Zadarski urbanistički i arhitektonski opus Brune Milića, Narodni muzej Zadar, 2002.
(79)Saša Mihajlov, Rajko M. Tatić 1900-1979, Zavod za zaštitu spomenika kulture grada Beograda, Beograd 2013.
(80)Christopher Lasch, Narcistička kultura, Naprijed, Zagreb 1986.
(81)Brent C. Brolin, Architecture in Context, Van Nostrand Reinhold, New York, 1980.
(82)Charles Jencks, The New Paradigm in Architecture: The Language of Post-Modernism, Yale University Press, 2002.
(83)Milan P. Rakočević, 24 časa arhitekture,Orion Art, Beograd, 2010.
(84)Hatje Gerd, Enciklopedija moderne arhitekture, IP Građevinska knjiga, Beograd, 1970.
(85)Fredric Bedoire, Henrik O Andersson, Stockholm's buildings: a book about architecture and cityscape in Stockholm, Prisma, Stocholm 1977.
(86)Olof Hultin, Guide to Stockholm's architecture (2nd edition), Architecture Publishers, Stockholm 2002.
(87)G.E. Kidder Smith, Sweden Builds, Reinhold Publishing Corporation, New York, 1957.
(88)Udo Kulterman, Savremena arhitektura, Izdavačko preduzeće „Bratstvo i jedinstvo, Novi Sad, 1971.
(89)Vladimir Kulić, Maroje Mrduljaš, Modernism In-Between, The Mediatory Architectures of Socialist Yugoslavia, Jovis Verlag GmbH, Berlin, 2012.
(90)Bogdan N. Nestorović, Arhitektura novog veka, Naučna knjiga, Beograd, 1964.
(91)Charles Jencks, Modern Movements in Architecture, Građevinska knjiga, Beograd, 2003.
(92)Hans Hollein, Arts and Architecture, California 1963.
(93)Velimir Neidhardt, Čovjek u prostoru- Antroposocijalna teorij projektiranja, Školska knjiga, Zagreb 1997.
(94)Hatje Gerd, Enciklopedija moderne arhitekture, IP Građevinska knjiga, Beograd, 1970.
(95)Rainer Naredi, Oliver Hilger Paul, Museum Buildings: A Design Manual, Basel: Birkhäuser, 2004.
(96)Oxford Dictionary of English, OUP Oxford; 3rd edition, Oxford 2010.
(97)The Merriam-Webster Dictionary New Edition, 2016

Photo attachment



Figure 1, A view on city with some of the buildings 1. Railway station, 2.Bedem, 3.Bus station, 4.Syndical home, 5.Meander building, 6. Sava Kovačević Square, 7.City Park, 8. King Nicola's Palace, 9.Šako Petrović Square, 10. City Church, 11. Chapel, 12.Libery Square, 13. Elementary school "Olga Golović", 14. Bank, 15.Home of Revolution, 16. Municipality building, 17. Faculty of Philosophy, 18. Police, 19. Motel, 20.Kindergaten, 21. Catholic Church



Figure 2, Axonometric of the city core with some of the significant buildings, 1.Bedem, city fortress, 2. Meander building, 3.Railway station, 4. Bus station, 5. Sava Kovačević Square, 6. Šako Petrović Square, 7. King Nicola's Palace, 8. City church, 9. Motel, 10. Monument to the victims of II World War, 11. St Paul and Peter Church, 12. Liberty Square, 13. Police building, 14. Faculty of Philosophy, 15. Municipality building, 16. Home of Revolution, 17.Bank, 18. Elementary school "Olga Golović", 19. City Hospital Center



Figure 3, Bedem-City fortress, beginning of XX century

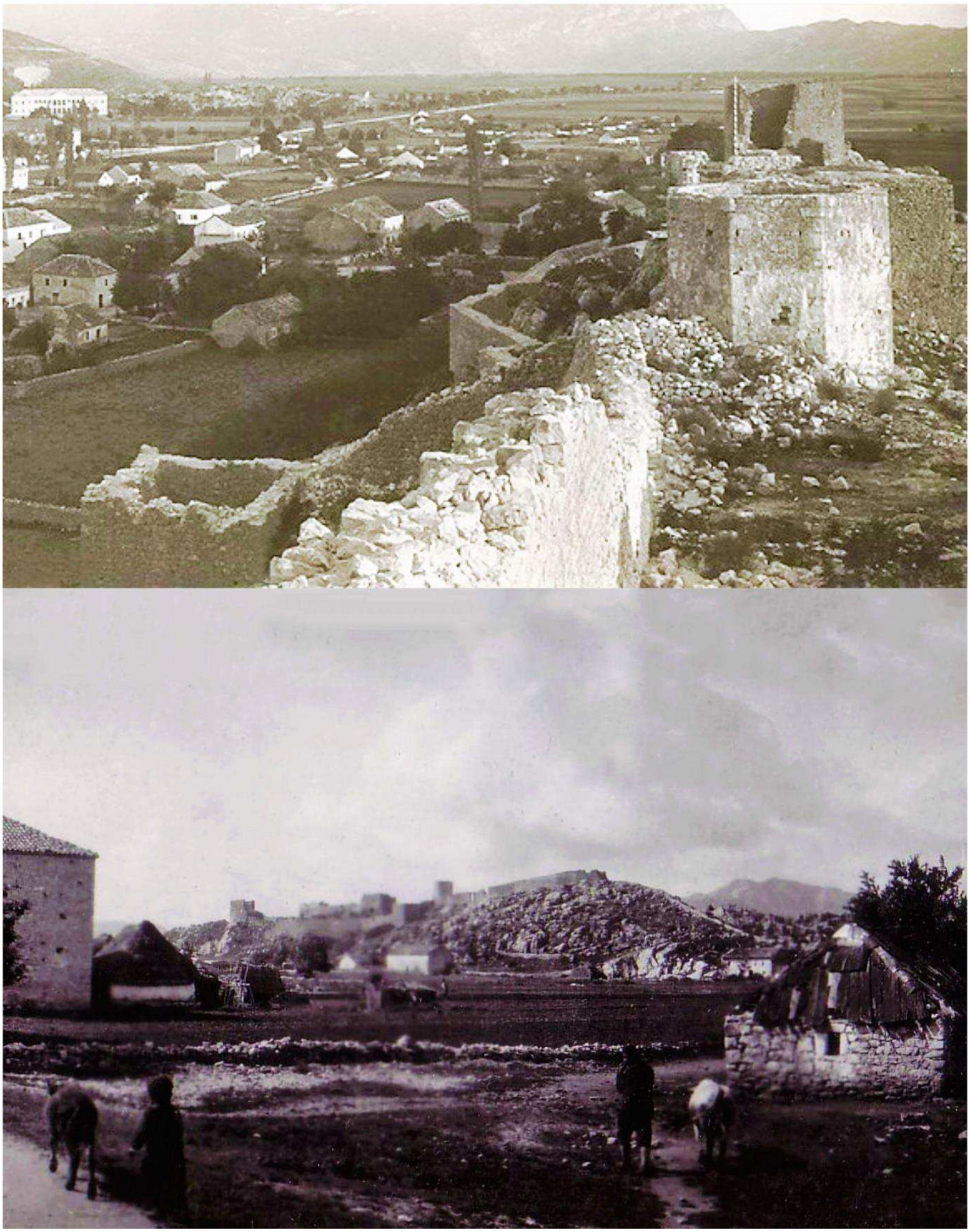


Figure 4, Bedem-City fortress, beginning of XX century

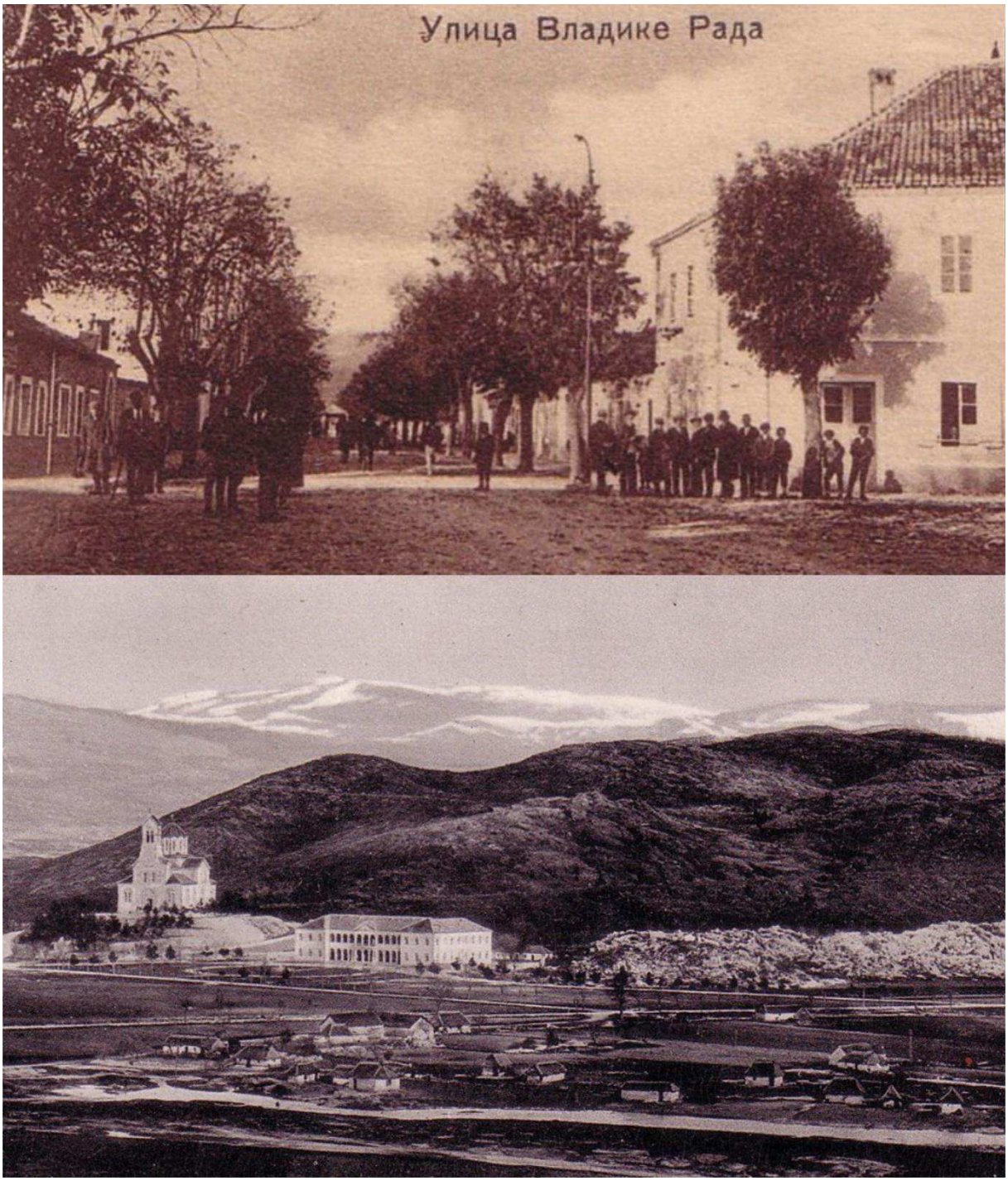


Figure 5, City street and view on Trebjesa Hill with City Church and King Nicola's palace, 1925

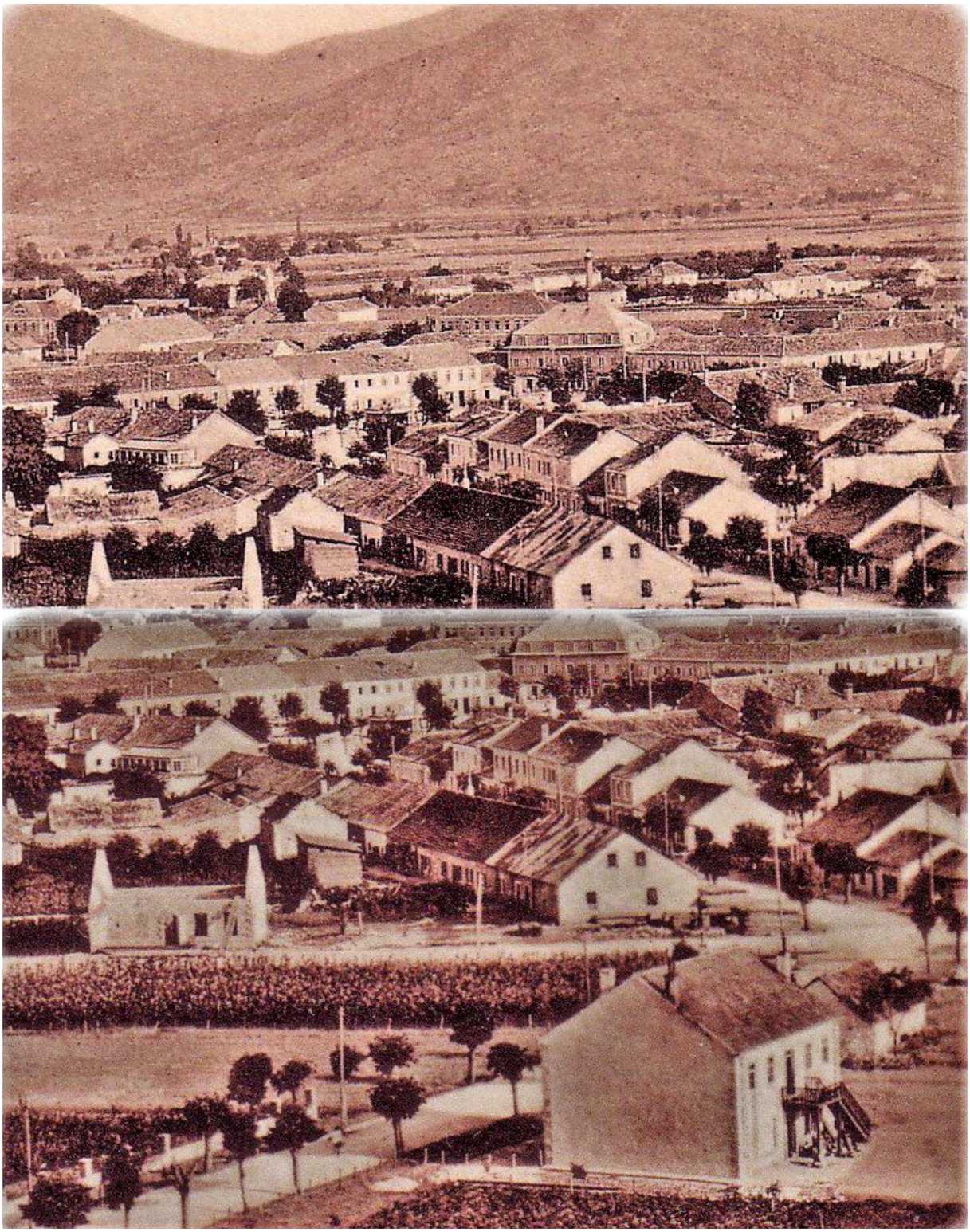


Figure 6, City houses, 1927

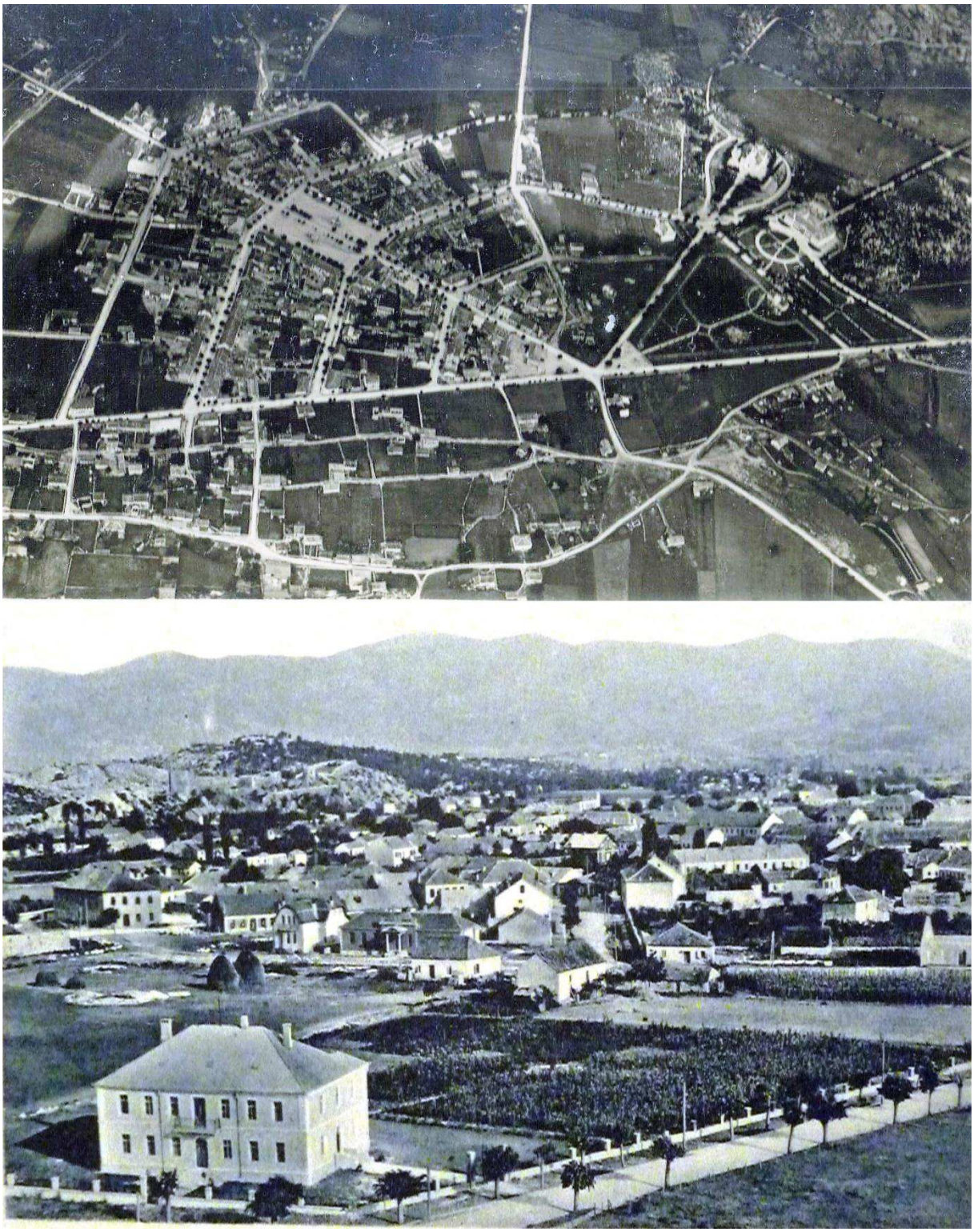


Figure 7, Nikšić during 30's

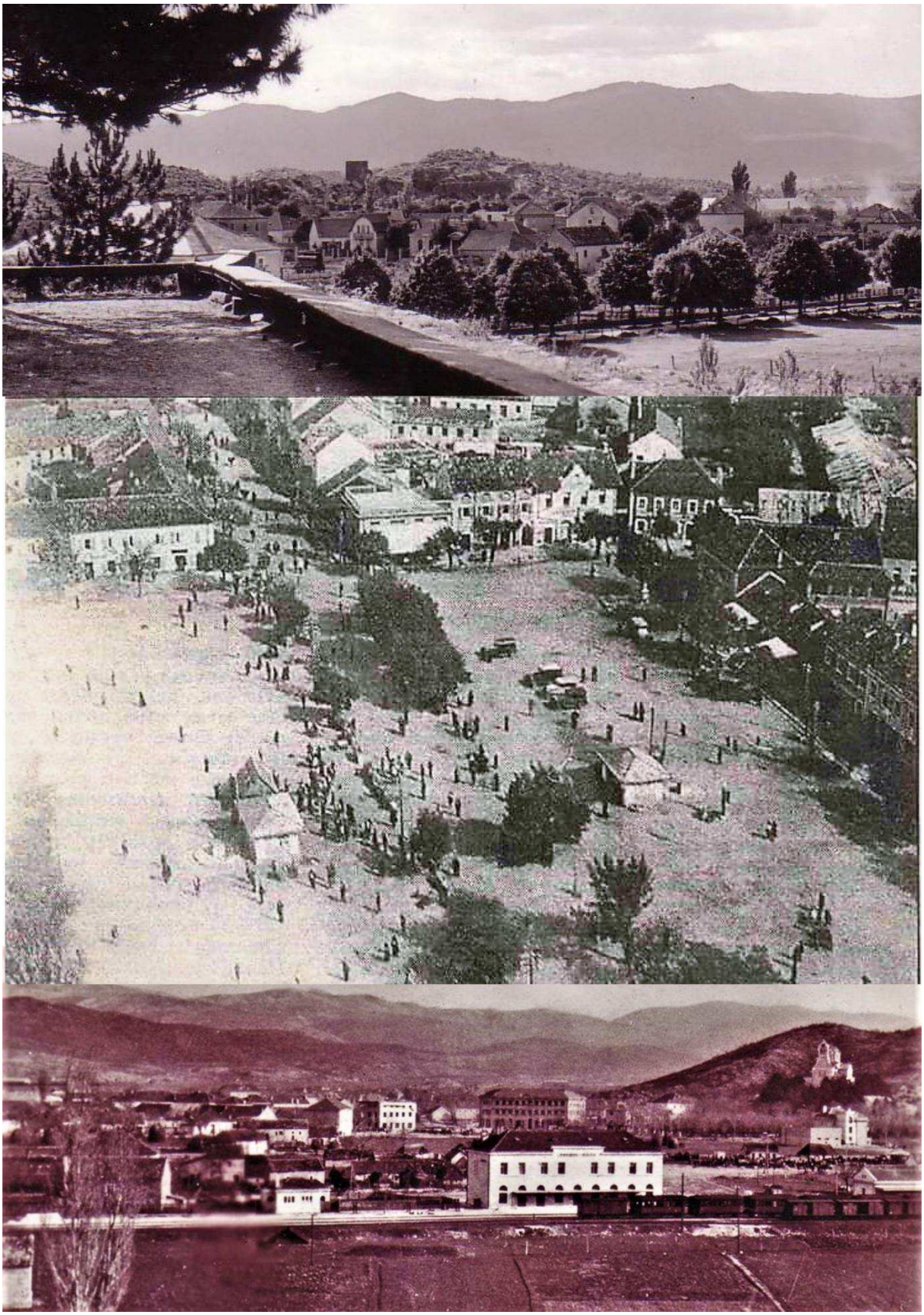


Figure 8, Nikšić during 30's



Figure 9, Nikšić during 30's

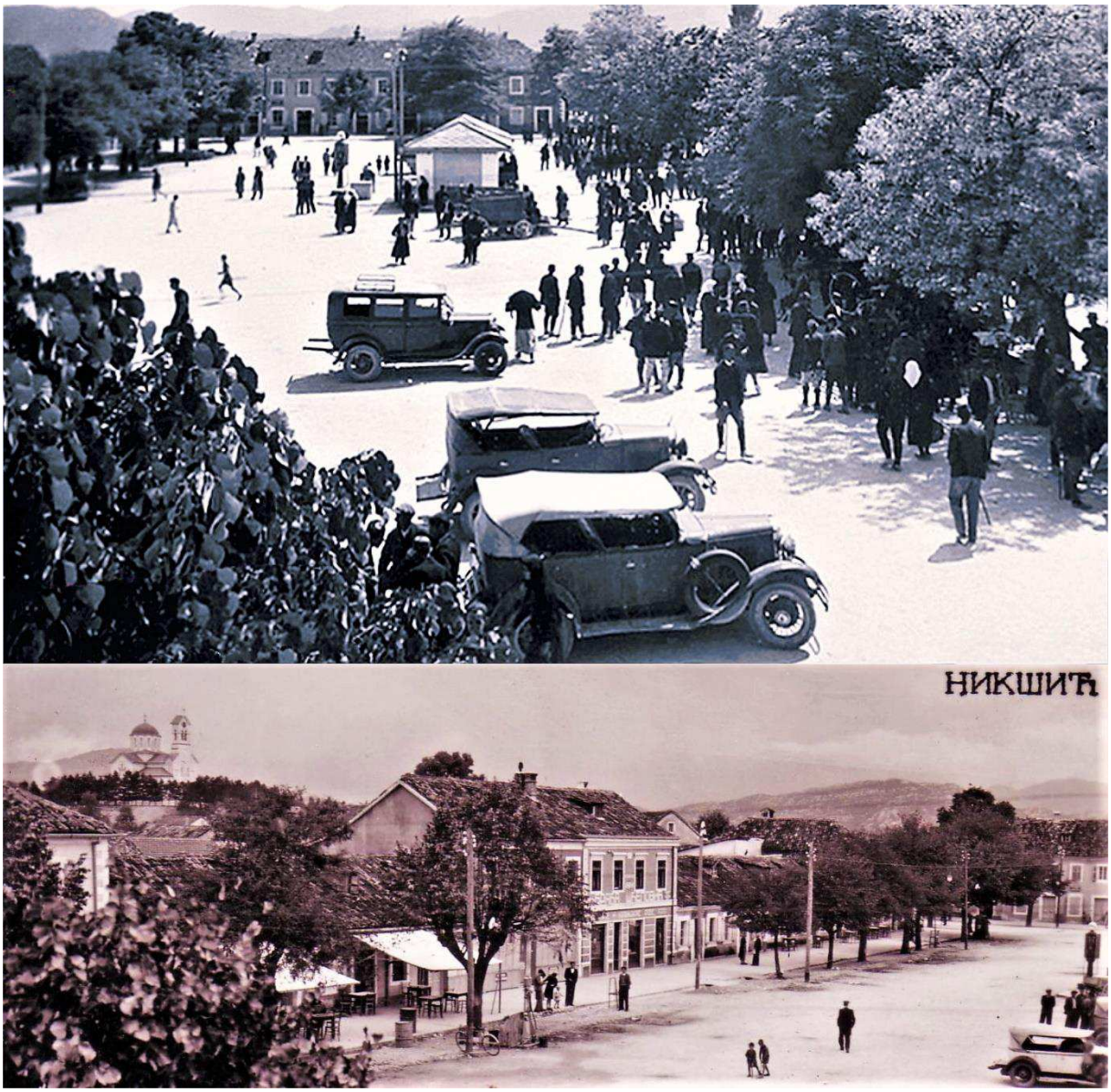


Figure 10, Liberty Square during 30's

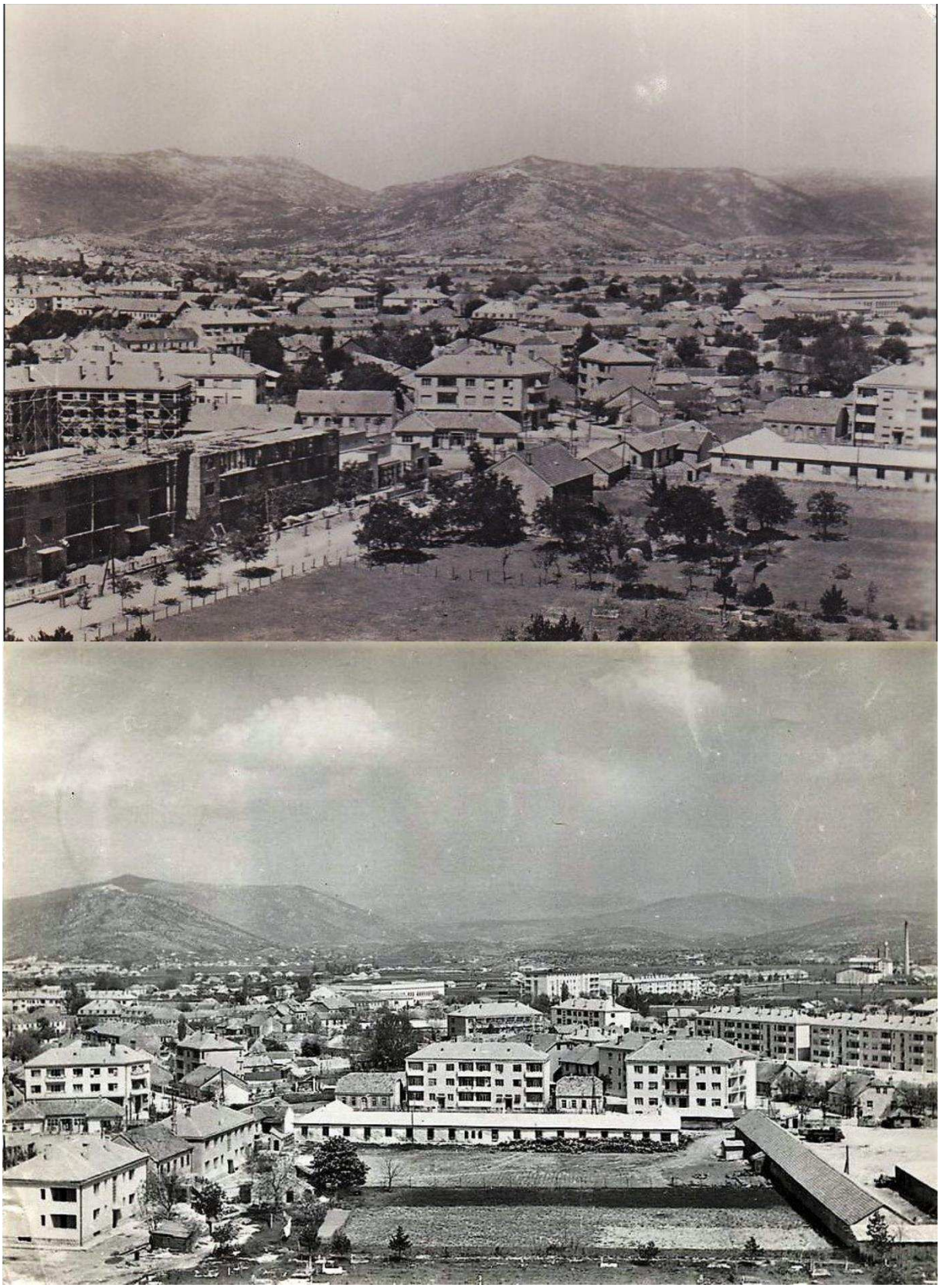


Figure 11, Citi after the II World War, 1950's

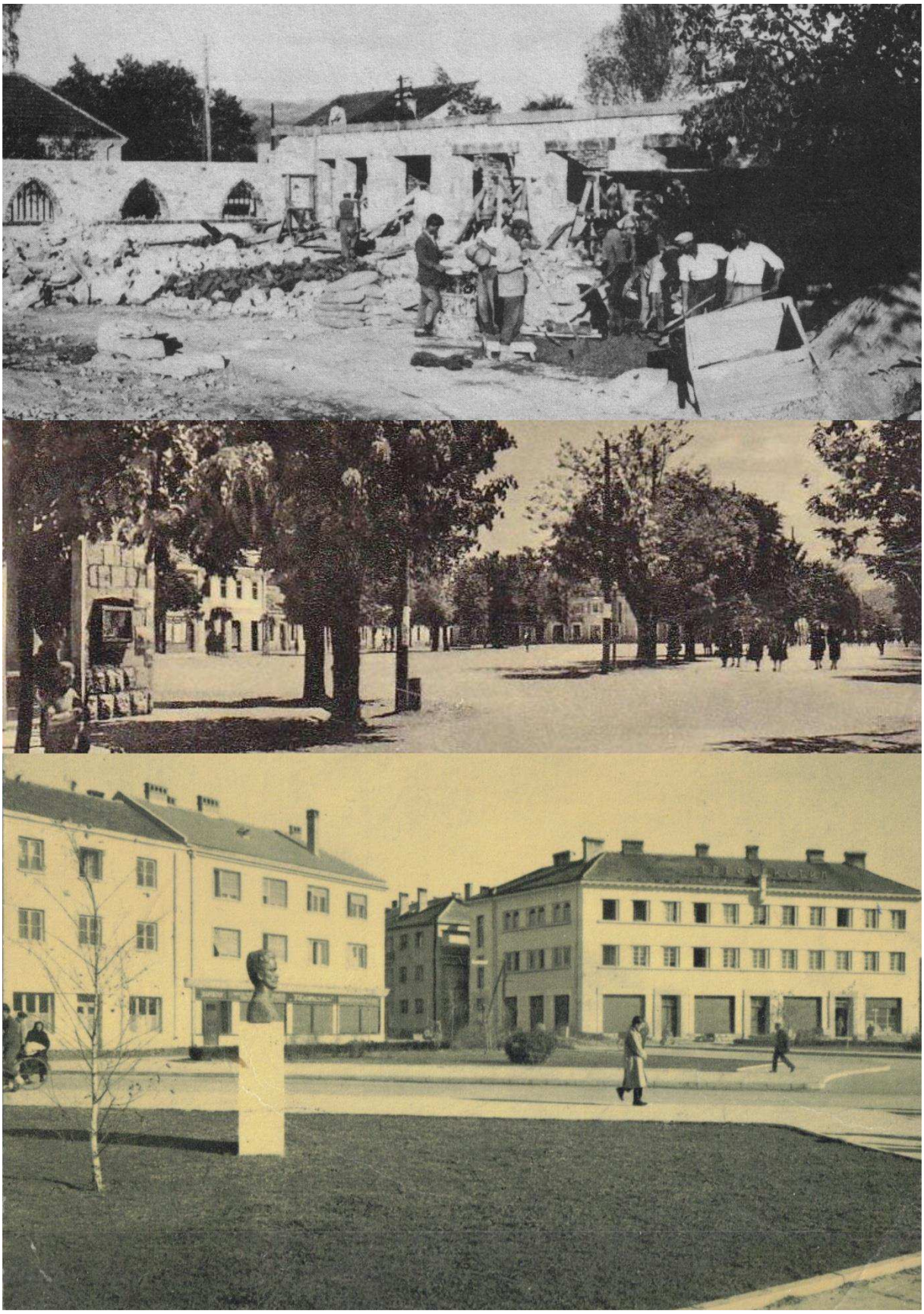


Figure 12, Citi after the II World War, 1950's



Figure 13, Citi after the II World War, 1950's

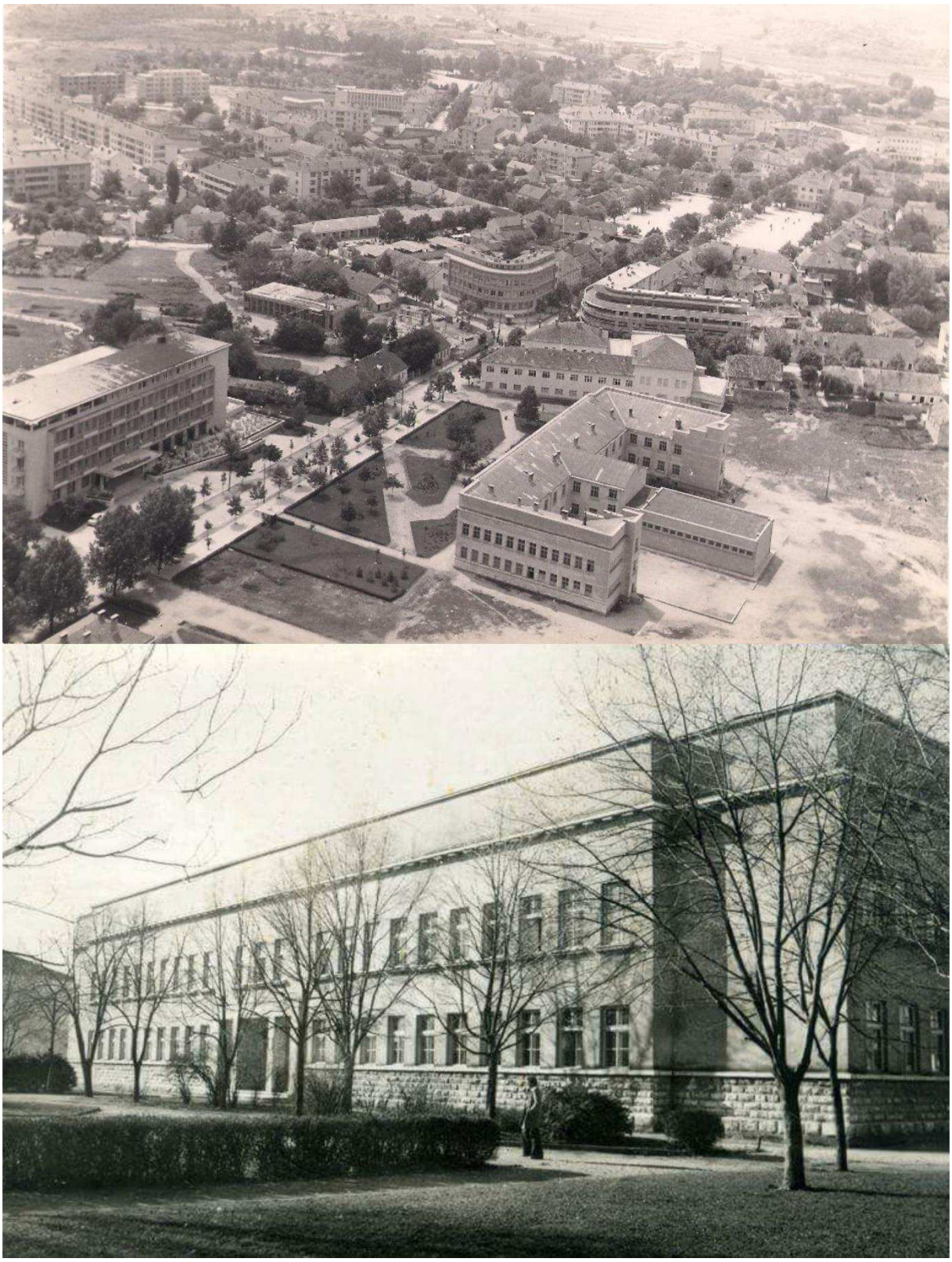


Figure 14 The first High school after the II World War, later demolished for the location of Home of Revolution



Figure 15, New bus station and the first hotel of "A "category in Montenegro, hotel „Onogošt"



Figure 16, Some of significant buildings from the 1960's



Figure 17, Some of significant buildings from the 1960's

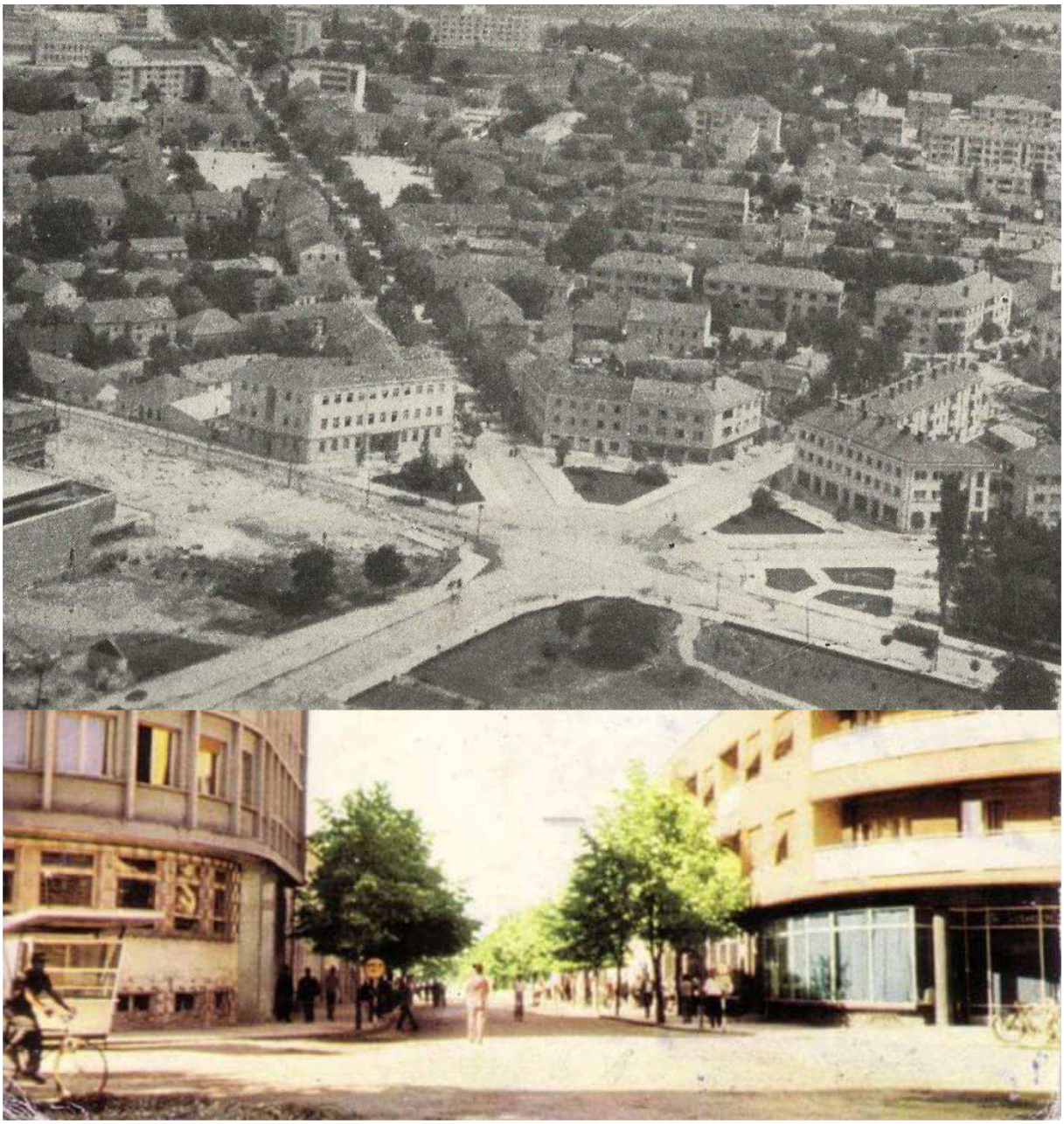


Figure 18, Some of significant buildings from the 1960's



Figure 19, Some of significant buildings from the 1960's



Figure 20, View on Synodical Home and Sava Kovačević Square



Figure 21, View on city, 1970's



Figure 22, City in the 1970's

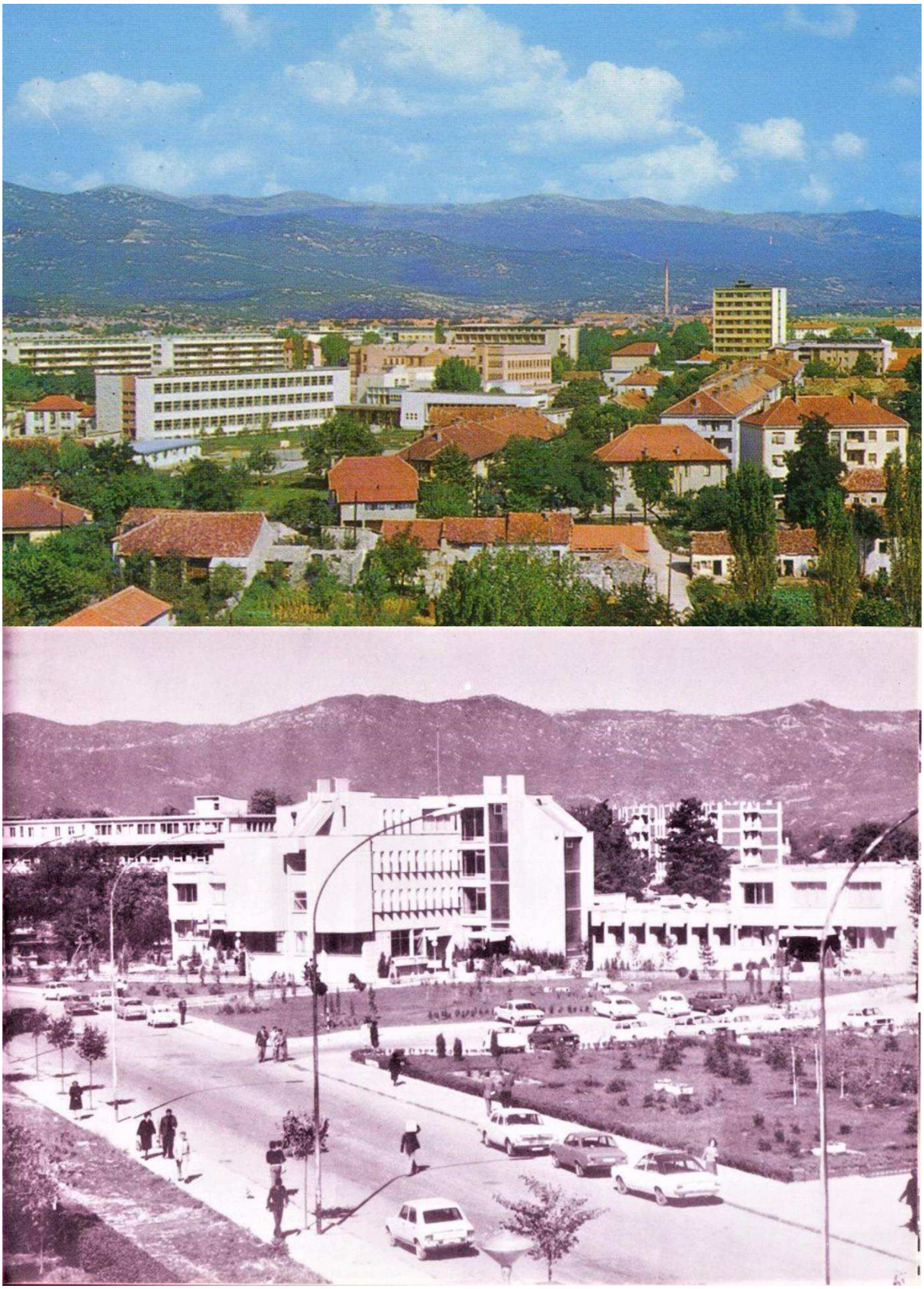


Figure 23, City in the 1970's, Nikšić's Hospital Center

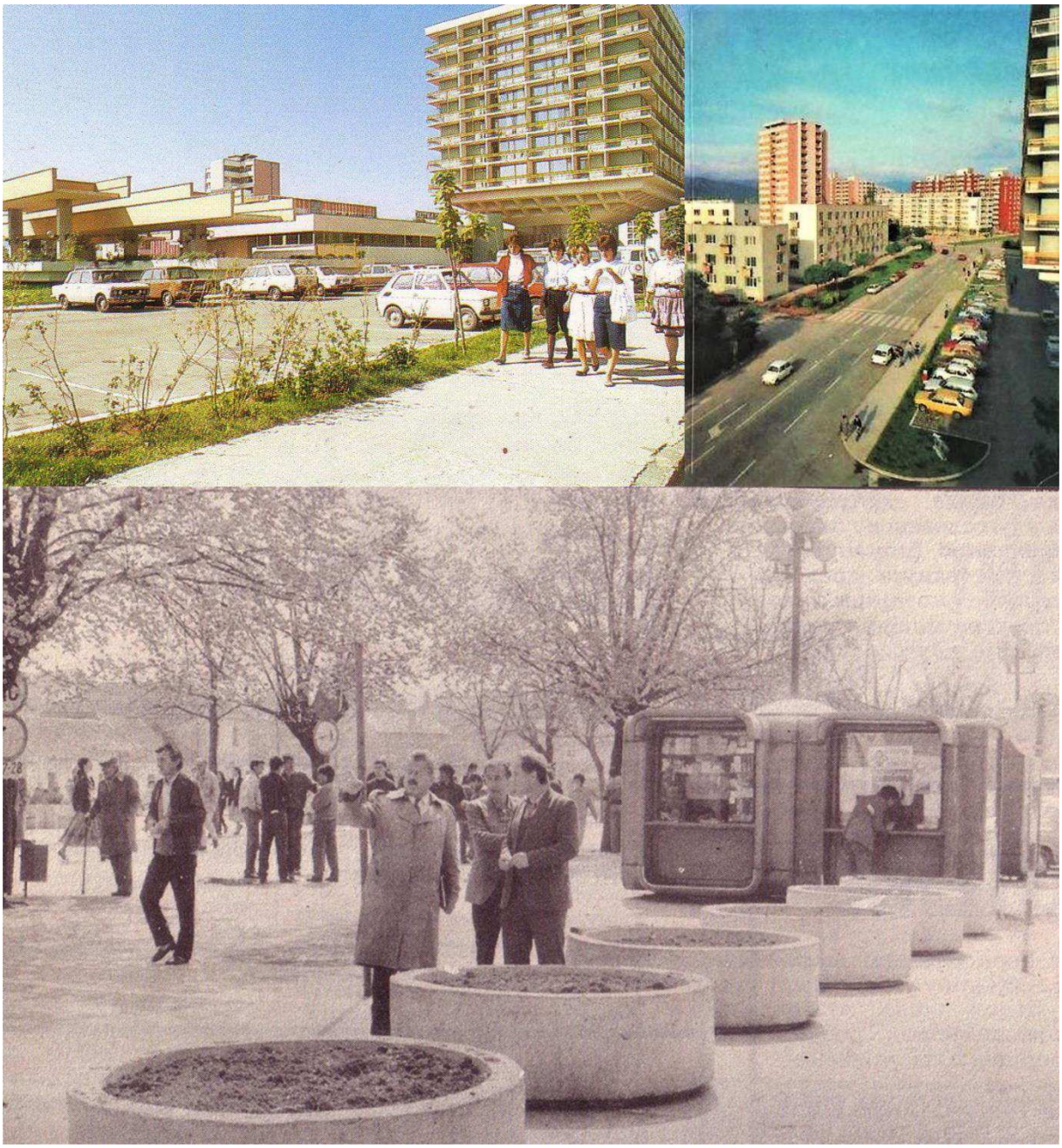


Figure 24, City life during 1980's

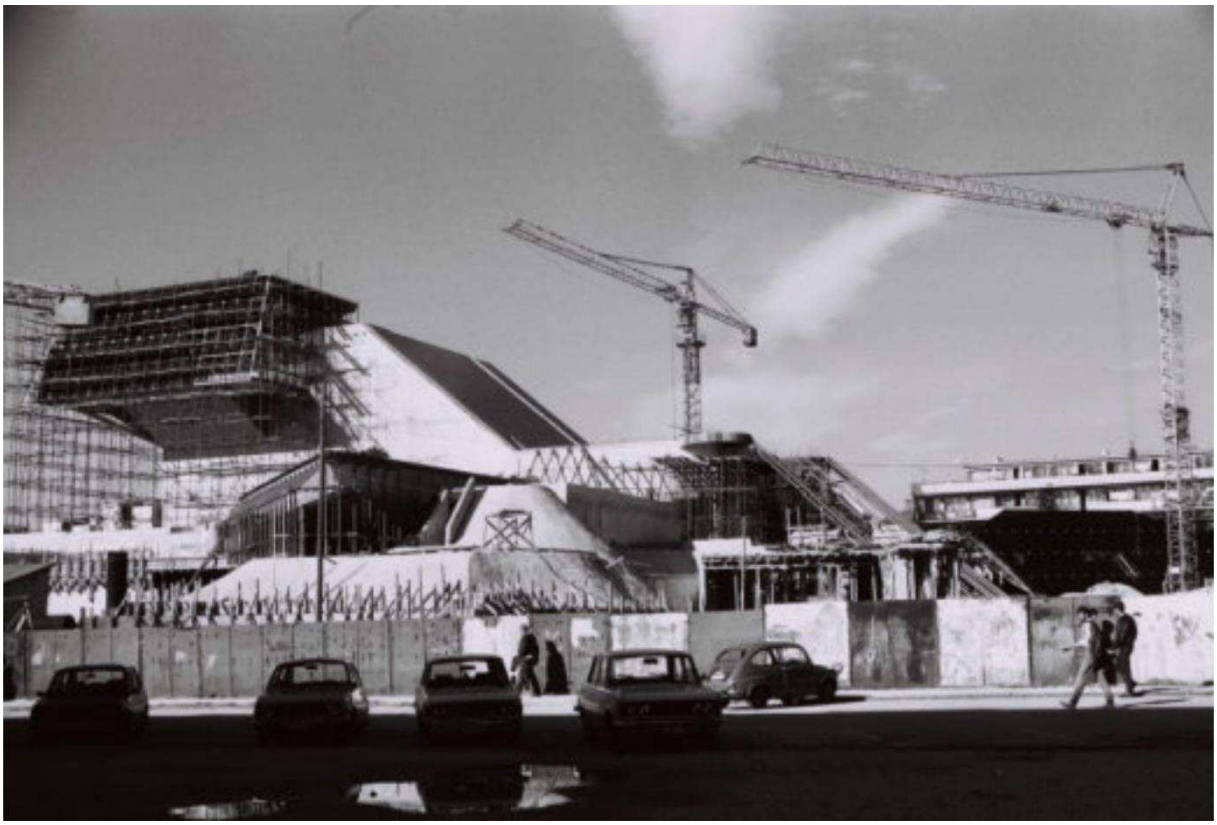


Figure 25, Construction of the Home of Revolution

Photo sources: Private collection of the author