

FEATURES OF BUILDING IN KYIV AT THE END OF THE 19TH – EARLY 20TH CENTURIES

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Summary

The historical, topographic and stylistic features of the architecture of Kyiv in the late 19th and early 20th centuries are considered, and the role of the architectural and decorative plasticity of facades in the formation of the architectural image of the city is revealed. The main principles of the classification of facades are determined and the compositional solutions of the facades of buildings of the late 19th and early 20th centuries in the city of Kyiv are classified. One of the main features of the development of Kyiv is its connection with the relief. The topographic basis is reflected in the planning and in the methods of building the historical central districts. Accent buildings are located on high points of the relief, on squares, on street corners or separately or with an indentation from the red building line. The functional, compositional and stylistic structure of the building is revealed, which is necessary for a correct understanding of its role in the formation of the image of the city. At that time, Kyiv was characterized by a perimeter character and high density of building. The size, the architectural solution and the length of the building were dictated by the size and the length of the land plot and the wealth of the owner.

In the development of Kyiv in the late 19th and early 20th centuries, multi-storey “profitable houses” played a significant role. They are now receiving a new status of architectural monuments, which, according to the law on cultural heritage, must be protected and used wisely.

As a result of the study, based on the vertical divisions of facades (conditional axes), a classification of compositional solutions for facades was developed, which can be used in the reconstruction of Kyiv, in particular if new inclusions in the historical building are necessary.

Key words: architecture, facades, compositional construction, image of the city.

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1. Introduction

The destruction associated with Russian aggression, the rapid pace of reconstruction and development of the historical center of Kyiv lead to the destruction of the unique architectural fabric of the city. This is especially true to the buildings of the late 19th – early 20th centuries, which form the main framework of the central streets and squares, and individual buildings of which are often important architectural accents of the urban environment. The relevance of this study is due to the fact that the buildings of this period have interesting compositional solutions, valuable unique and typical details and elements for that time, which are often not taken into account in preserving the architectural and artistic image of the city. Hence, as a result, there is a large percentage of wear and tear of ordinary residential buildings of this period, significant distortions during repairs, which leads to a violation of the harmony of the architectural and artistic image of the city, the destruction of its originality.

The scientific novelty and practical value of this study lies in the analysis of the buildings of the late 19th – early 20th centuries, the identification of their features and the

first classification of the compositional solutions of the facades of the buildings of that period, which will allow optimizing reconstruction, stopping the process of destruction of individual buildings and gradually and methodically carrying out their preservation and restoration. Recommendations have been developed for architects in case of need to design new buildings in a historical environment.

The purpose of the study is to identify the features of the development of the late 19th – early 20th centuries, determine the principles of its classification, conduct a classification of compositional solutions of facades, and develop recommendations for architects in case of the need for new inclusions in the historical fabric of the city.

The main objectives of the study: identifying the features of the development of the late 19th – early 20th centuries; identifying important architectural accents of the historical environment; developing principles for classifying development and classifying compositional solutions of facades; developing recommendations for designing new buildings in the historical development of Kyiv based on the identified typical compositional solutions of facades

When developing the methodology of this study, previous developments of domestic and foreign authors were taken into account. Their works, in particular, the publications of Vodzynsky E. (*Vodzynsky, 2010*), Kalnytsky M.B. (*Kalnytsky, 1999*), Malakov D.V. (*Malakov, 2002*), Sidorova O.I. (*Sidorova, 2008, 2014*), Skibitska T.V. (*Skibitska, 1997*), Chepe-lyk V.V. (*Chepe-lyk, 2000, 2013*), Yasievich V.E. (*Yasievich, 2000*) became the basis for solving the tasks of identifying and preserving valuable architectural buildings in the structure of the city. At the first stage of the study, thanks to empirical and theoretical methods, materials were collected, literary sources were analyzed, and historical and topographic features of the formation of architecture of the late 19th – early 20th centuries were analyzed in Kyiv and urban planning practice. At the second stage, field surveys were conducted: photo fixation, measurements, graphic sketches and a description of the architectural plasticity of the building facades. At the third stage, a classification of compositional solutions for facades was developed. At the fourth stage, recommendations were created for designers in case of need for new inclusions in the historical building.

2. Topolandscape and urban development features

The historical part of Kyiv is located on the right bank of the Dnieper, on a territory divided by deep ravines and valleys of small rivers into separate heights – mountains that divide the city into several parts. The Upper City is located on Kyivska Gora. Between the Khreshchaty Valley and the Dnieper and Lybid rivers is Pechersk. The territory with low relief between the Upper City and the Dnieper River is occupied by Podil. For a long time these areas existed independently and only in the middle of the 19th century were united into a single city.

A characteristic feature of Kyiv's architecture is its connection with the topographic basis and the natural environment. The topographic basis was reflected in the planning principles and in the methods of building the central historical districts – the division into the Upper City, which included the ancient historical part of the city – the territory of the city of Prince Volodymyr, the city of Yaroslav the Wise and Iziaslav-Sviatopolk, and the lower city – Podil; and the placement of accent buildings on high points of the relief. Andrew's Church dominates the area of Volodymyrska and Desiatynna streets of the Upper Town. It is also the main dominant of Podil. The ensemble of the St. Michael's Golden-Domed Monastery dominates the slopes of Volodymyrska Hill, Triohsviatytska Street. The ensemble of the St. Sophia Monastery dominates the Upper Town from the side of Khreshchatyk, Independence Square, Horodetskoho Street.

The structure of the Upper Town (within the streets of Yaroslaviv Val, Lvivska Square, V. Zhytomyrska, Desiatynna, Kostelna, Prorizna) is a unique synthesis of building elements of the 10th – 11th centuries, free-configuration blocks and elements with a regular planning structure. The planning system of the district is built on intersecting axes directed along the oldest streets – Volodymyrska and V.Zhytomyrska, and represents the unity of the landscape environment and, in fact, the development. On both sides of Volodymyrska Street there are two radial systems of streets, which converge on one side to Independence Square and on the other side to Lviv Square.

The beginning of the settlement of the most ancient Kyiv lands dates back to the end of the 5th – beginning of the 6th century (the time of the emergence of the city of Kyi). The beginning of the formation of Kyiv architecture, which has partially reached us with a number of subsequent layers of subsequent eras, dates back to the 10th – 13th centuries. of the Kyivan Rus'. Certain features of the architecture of this period have been preserved in a modified form in such buildings as the St.Sophia's Cathedral (1037), the Church of the Savior on Berestov (10th – 11th centuries), the St. Michael's Church of the Vyduhetsky Monastery (1070 – 1088), the Trinity Gate Church of the Kyiv-Pechersk Lavra (1108) and others.

After 1654, the Upper Town and Pechersk were strengthened, new fortifications were built on the old ramparts, and the development of Reitarska and Striletska streets was formed.

The dominant style of the 17th – 18th centuries. becomes baroque, which is reflected in all the notable ensembles of the city (the ensemble of the St.Sophia's Monastery, the Kiev-Pechersk Lavra, the St. Andrew's Church, the Mariinsky Palace).

The city has preserved some monuments of classicism, which in turn became the centers of ensembles – the main building of the University of Kyiv (1837 – 1842, architect V. Beretti), the building of the former present places (1854, architects I. Ikonnikov, I. Shtrom, K. Skarzshinsky). Features of classicism were preserved in the planning structure of Podol (1812, architect V. Geste). In the 19th century it was allowed to build in the city center only according to “model” projects, provided by only three types of private residential buildings, which differed only in the length of the facade along the street: from 11 to 32 m. One-story houses with 3 and 5–7 windows on the facade were built. The projects of “model” residential buildings were developed in 1809–1812 by architects V. Stasov, A. Ruska, V. Geste. In the 30s-50s of the 19th century the newly formed streets of the Starokyivskyi district and Podil were built up according to “model projects” in the classicism style. The areas of the old ramparts were built up mainly in the 50s. Drawings of some “model houses”, stored in the Regional Archive, were intended for residents of the Bulvarno–Kudriavska street. All of them were noticed in 1854–1855 (materials of the KMOA archive, 1542, 1–615).

In the Starokyiv district, the ancient ramparts were dug up from 1832–1855. At that time deep ravines began to fill in, and in their place appeared the streets of Oles Honchar, Bulvarno–Kudriavska, Ivan Franko, Yaroslaviv val.

In the second half of the 19th century, Kyiv had typical features of all capitalist cities of that time: the contrast between the presentable center, where the wealthy classes of the population lived (Starokyivskyi, Pecherskyi, partly Lybidskyi districts) and the unrepresentable outskirts (Shuliavka, Lukianivka and others). At that time, the development of Kyiv was characterized by a certain chaos and spontaneity, a perimeter character and high density of development. The size, character, and length of the building was dictated by the size and length of the land plot and the wealth of the owner.

At that time, a large number of new presentable streets were formed in the Lypki district of Kyiv: Mykolaivska, Olhinska, Merengivska, now Gorodetskoho and Zankovetska.

The development of the city went mainly to the west along the modern Beresteyskoho Avenue, the railway station area, Shuliavka, Demiiivka, Solomianka, Kurenivka were being built.

The second stage of intensive construction began in Kyiv in 1907 and ended in 1912. During those five years, 1901 houses were built in the city ("Kievljanin", newspaper No. 65, 1913). The houses at this time were mainly three – four-story, but there were also five – six-story buildings equipped with elevators and steam heating.

The construction of Olesya Honchara Street (former Malovolodymyrska) began in the 60s of the 19th century with one-two-story wooden houses. Intensive construction of stone houses began in the 90s of the 19th century. Those were houses in estates No. 3,4,9 – 4-story house, No. 16 – 4-story house, No. 34 and 39 – 2-story houses. Construction of multi-story houses began at the beginning of the 20th century. Those were houses in estates No. 2, 15, 23, 32, 33 and others. Bulvarno-Kudriavska Street began to be built up in the 50s of the 19th century with wooden one-story houses up to Lviv Square.

In the 70s of the 19th century. the city begins to sell land plots for money from auctions. It was the land of the ravines and it was not very expensive, namely 1r.62 kopecks per square sazhen (Kyiv State Administration of Ukraine (KSCA) archive, FUND 163 –7, 26)

Until the 1930s and 1990s, the street was mainly built up with wooden houses.

The development of the territories in the late 19th and early 20th centuries took place in stages. The multi-storey buildings built at this time grew into the structure of low-rise (1–2 floors) buildings of earlier periods, that is why significant height differences arose. The dominant style of historicism at that time coexisted with the “typical” classicist buildings of the early 19th century. The complex mountainous terrain of Kyiv, deep ravines where land was cheap, and the ramparts of the Upper City determined the development of this area until the 1990s with low-rise buildings.

3. Architectural, planning and compositional features of the development

The architectural and urban planning accents of Kyiv's development of the historical central districts that were built up at that time were: the Art, Industry and Science Museum (1897–1900, architects V.V. Gorodetsky, G.P. Boytsov, sculptor E. Salia, now the State Museum of Ukrainian Art on M. Hrushevsky Street); banks on 9 Instytutska Street (1905–1909, architects O.V. Kobelev and O.M. Verbytsky) and on Khreshchatyk; the Opera and Ballet Theater (1899–1901, architect V.O. Shreter); St. Nicholas Church on 75 Velyka Vasylkivska Street (1899–1909, architect V.V. Gorodetsky). Interesting magnets that attract tourists and art lovers are the mansions at 33 Olesia Honchara, (architect I.K. Ledohovsky), at 23 Liuteranska (architect E.P. Bradtman), at 19 Shovkovychna (architect M.O. Vishnevsky), at 23 Veluka Zhytomyrska (probably I.K. Ledohovsky) and the especially famous house with chimeras at 10 Bankova (architect V.V. Gorodetsky) and some others. Those buildings largely determined new ideas about the architecture of Kyiv at the beginning of the 20th century.

For a correct understanding of the role and features of historical buildings, it is important to identify its functional, compositional and stylistic structure. Architectural and decorative plastic, due to its mobility, more than anything else, is a carrier of style attribution, it expresses the mood, emotions and associative ideas of the architect and the customer of the architectural form. All this determined, on the one hand, a certain randomness of forms, and on the other hand, a certain conditionality, consistency and logic, which are associated with folk traditions, mythology, semantics and the placement of certain sculptural, architectural and decorative elements on the facade in clearly defined places. All this constitutes a certain “unity of diversity” of Kyiv's buildings of the late 19th – early 20th centuries.

Buildings built in different styles often have a common compositional structure of facades. And the composition of facades, in turn, depends on the planning structure of the building, which is reflected in the vertical divisions of the facades and, in turn, depends on: functional purpose, place in the building and nature, length and shape of the land plot.

In the development of Kyiv in the late 19th and early 20th centuries, multi-story “profitable houses” played a significant role. These oldest representatives of the housing stock successfully fulfilled their purpose for 100 years and are now receiving a new status of architectural monuments, which, according to the law, must be protected and used wisely.

Conducted by the Kyiv National Research Institute of Architecture in 1976-1980, and later by the National Research Institute of Architecture and Design in Ukraine in the late 19th – early 20th centuries, the research was transferred to designers who were engaged in the reconstruction and repair of the old housing stock. Those studies included the typology of the layout of apartment buildings, means of their preservation and use.

But the study of the architectural plasticity of facades, their classification, typology, value and significance in the surrounding development was not conducted. That is, these studies are focused on the stage of identifying architectural monuments and are still not completed, many buildings are still waiting for their registration and granting the status of architectural or historical monuments.

The type of multi-storey apartment building began to take shape in Kyiv in the 70s of the 19th century. Initially, these houses had an individual layout and minimal equipment (stove heating). A typical example of one of the first multi-storey apartment buildings is the building on Shevchenko Boulevard (1873-1875, architect V.M. Nikolaiev). The first floor of this building had built-in shops, the second and the third – large apartments. The fourth floor contained cheap small apartments, which opened into a long corridor.

After the launch of the city water supply (1872) and especially the sewage system (1895), technical conditions for the construction of multi-storey residential buildings arose. Multi-storey buildings became one of the most typical forms of urban housing. The main function of such buildings for the customer was to obtain maximum profit from the land plot. Land prices in the city center were growing rapidly, which led to an increase in the number of storeys in buildings from 3–4 floors at the end of the 19th century to 5–6 floors at the beginning of the 20th century. New engineering equipment (water supply, sewage, elevator, electric lighting, centralized heating) gradually turned the apartment building into a complex engineering object that required large costs. For example, the 8-10-storey Ginzburg building in Kyiv (1910-1914) cost 1.5 million rubles, that is, the same as the opera house in Odessa. The construction of large apartment buildings in Kyiv grew rapidly during the first decade of the 20th century, so (based on directories and publications in newspapers of that time) in 1901 only 3 five-story buildings were built in Kyiv, and in 1911 there were already 45 buildings, in addition, at that time 25 six-story buildings and 5 seven-story buildings began to be built, which were erected in modern streets: Horodetskoho, V. Zhytomyrska, Antonovycha, Chykalenko, Saksaganskoho and others.

Based on the research of V.E. Yasyevych (*Yasyevych, 2000*), typical planning techniques for multi-story residential buildings of the early 20th century were identified.

The increase in the number of floors and the development of engineering equipment (water supply, sewage, elevator) necessitated the need to organize the functional structure of the building vertically and replace individual planning with sectional planning.

Single-section residential buildings had a compact layout and corridor. The type of compact single-section house became most widespread in Kyiv at the beginning of the century. It required a small plot and was economical in conditions of small plot width. Sometimes such

houses were paired with each other. The section plan determined the location of the main and back stairs: paired in one stairwell, or separately. The utility rooms of the apartment (kitchen, bathroom), as well as bedrooms, were usually grouped around the back (utility) stairs with access to the yard. And the main rooms (living room, study) were along the main facade. This differentiation allowed the apartment to be divided into two main functional zones – common and individual.

Gradually, single-section houses were complicated by two- and four-apartment sections. In the 19th century, a kitchen block with a black staircase was located inside the house. At the beginning of the 20th century, that block was taken outside into an independent volume, which gradually developed into an apartment. This made it possible to better design the entrance to the house and use the facade of the house to accommodate large rooms. Examples of this type of residential buildings are the following: 7 Kruglouniversytetska (1910, architect M.O. Damilovsky), 20 Bogomolets (1914, architect P.F. Alioshin), 101 and 103 Saksaganskoho and others. This type of house is the most common in Kyiv and was recommended by the National Institute of Industrial and Technological Research in the 1980s for reconstruction with a modern set of apartments.

The next type of single-section house has a layout based on three staircases (front, two service). This type allowed to go from a two-apartment section to four and six-apartment. Examples of such houses in Kyiv are at 23 Yevhena Chykalenko (1910), 74 Olesia Honchara (1911, architect P.F. Alyoshin).

The third type of single-section houses, which are quite few, was a single-section house with a corridor system with a single-apartment section. The area of the apartments in such houses was 190 -280 sq.m. The stairs in them were located at the ends, which allowed to increase the area of the rooms that overlooked the main facade and to place the kitchens in the depths of the apartments. Examples of such houses in 16 Hrushevskoho street, 17 Chykalenko.

Multi-section apartment buildings had different combinations of sections – elongated along the street, corner and houses of complex configuration with closed courtyards, T-shaped, U-shaped. The houses of the first type often have two-apartment sections with stairs located on the same axis or shifted, they are quite rare, 14 Velyka Vasylkivska (1910–1911, architect P. Svatkovsky).

An example of the second type (corner solution) is the house in Pavla Skoropadskoho (formerly Tolstoho) Street (1910–1912, architects I. Zektser, L. Torov), it has a complex configuration and plasticity of volumes. Corner solutions were used to create architectural and urban accents, were often crowned with a tower, had a corner bay window, a high richly decorated attic.

The third type is multi-section houses of complex configuration with closed courtyards. Such houses usually had problems with insolation of apartments. Examples are the house in 21 Ye. Chykalenko St., 13 Repina St., 26 V. Vasylkivska St. In such houses there was a sharp contrast in the level of amenities, especially noticeable in the apartments that opened onto the courtyards.

Internal – closed courtyards were a significant drawback of the building, they created unsanitary living conditions and, since these apartments lacked a sufficient level of insolation. This problem was solved by multi-section houses of a p-shaped shape with kurdoners. An example of such a house is the so-called "House of Ginzburg" (1910–1914, architects F. Troupiansky, A. Minkus), as well as the house in 10 B. Khmelnytskyi (1910-th years).

The building's planning structure was partially read in the vertical divisions on its facade.

Before analyzing the compositional structure of building facades, it is necessary to classify buildings at the urban planning level, that is, to distinguish groups of buildings by location

in the development, since the conditions of their perception leave a certain imprint on the compositional solution of the facades.

Multi-storey construction (from 3 to 6 floors) is found mainly in the central districts of Kyiv in the streets of Horodetskoho, B. Khmelnytskyi, V. Zhytomyrska, Shota Rustaveli, Saksaganskoho, Velyka Vasylkivska, Shevchenko, Reitarska, Vorovsky, Honchar, etc., low-rise (1-2 floors) construction determined the appearance of the urban outskirts of Solomianka, Shuliavka, Podil, etc.

The location of the building in the development determines the possibility of its inspection, depending on this, the composition can be spatial or frontal.

In addition, determining the location of a building in a development allows us to analyze the perception of each individual building in relation to its surroundings, determines the choice of architectural means that determine the nature of the facade composition (contrast or nuance, dynamics or statics, etc.), which allows us to identify accent and background buildings. Let us highlight a number of main groups of building facades by the location of the building in the development.:

1. Ordinary:

a) ordinary in the building system, which do not have a significant viewing sector in front of them;

b) ordinary, which have a significant viewing sector in front of them, which complete the perspective of the streets, have retreated from the red line, are located at the turn of the street or in the square.

2. Corner.

3. Separately located and estates.

In terms of their artistic and emotional significance in relation to the surrounding buildings, building facades can be accent (contrast) and background (nuanced). The most significant in the urban planning plan are corner (angular), separately located and ordinary buildings, which have a significant viewing sector in front of them, that is, they are final for the perspective of the streets, located on a corner or on a square. In addition, among ordinary buildings, those that recede from the red line along their entire length or partially stand out. Such buildings are perceived locally, the gaze stops and is held on them in the process of perceiving the building as a whole.

Buildings that are perceived in a staggered manner, in the process of moving along the streets, when the gaze floats along the building, grabbing only individual architectural details, fixing the rhythm of vertical divisions – bay windows, rhyolites, do not have such urban planning significance. These are ordinary buildings that do not have a significant viewing sector in front of them and are located on the red line. But, undoubtedly, the rhythm of the vertical divisions of these buildings is of great importance when perceiving a building. As a rule, buildings that stand out in the urban planning situation are designed in contrast to the surrounding buildings, with bright means of architectural expressiveness, which makes them emotionally significant.

Separately located buildings in 15 Andriyivskyi Uzviz, 10 Bankivska have a complex extraordinary silhouette, they are easily remembered and have long become emotionally important architectural accents that determine the originality of Kyiv, a kind of visiting card of the city. These buildings organize the silhouette of the development, being located on the hills, they dominate the surroundings and are well perceived from most of the streets located in the lower part of the relief.

The first building is designed in the Romanesque style with a high spire-like tower, the second is made in the forms of Art Nouveau. Both buildings have a spatial composition, which

consists of increasing volumes and is due to their location in the environment, on a relief with several viewing points. The spatiality of the composition is most clearly expressed in the building in 10 Bankivska street – a house with chimeras (architect V. Gorodetskyi), where the composition of the building is based on a spiral – a gradual expansion of volumes.

The group of separately located buildings and mansions in Kyiv also includes a number of original houses in 1 Yaroslaviv Val St., 27 Vorovskogo St. (architect B.I. Sychugov), 12 Sre- tenska St., 23 Liuteranska St., 23 Gogolivska St. (architect V.A. Bezsmertnyi), and some others.

These buildings have completely or partially deviated from the red line, they are located at a distance from the row of buildings and differ from ordinary buildings in a special dynamism (*Lutheranska*, 23) or the balance of parts of the facade, careful development of details, sculpturality and elegance of forms (32 Velyka Zhytomyrska), or a picturesque asymmetrical composition with an accent shifted relative to the central axis of the facade – a high spire-like tower in the building at 23 Gogolivska St., 27 Bulvarno–Kudryavska Blvd.

Ordinary buildings that have a significant viewing sector in front of them, for example, 4 Muzeyny prov. (modern, architect Y.I. Rykov), 16 Hrushevskogo, as well as buildings located on the square, such as 45 Chikalenko (Russian style, architect M.G. Artinov) or on the corner or turn of streets – 23 Shota Rustaveli (late modern), 14 Yaroslaviv Val (modern, architect M.V. Klug) are also designed in contrast to the surrounding buildings and are important architectural accents. Most of them are made in modern forms and thanks to one style alone they differ from the surrounding historicist buildings. That is, in relation to ordinary buildings they are designed in contrast, have a distinct silhouette, and different proportions. The facades of these buildings are saturated with finely crafted details or have an extraordinary finish, an originally designed tower – a dominant, which is an important architectural and urban planning accent, as, for example, in the building in 45 Chykalenko Street.

From the point of view of emotional and aesthetic impact, it is necessary to consider a number of urban planning important corner (angular) buildings, such as 26/26 Saksaganskoho (modern), 108 Saksaganskoho (architect A.R. Khaynatsky, historicism with elements of neo-classicism and with a large number of sculptures), 20/24 Reitarska (architect A.M. Verbytsky, modern with a corner tower), 40 Artema (architect V.A. Bezsmertny, modern, with a high corner cone-shaped tower), etc. These buildings, mostly all built according to the designs of famous architects, are often made in the forms of modernism, saturated with elegant sculptural reliefs, they differ from the surroundings in mass, proportions or compositional structure, or have high expressive towers that contrast with the surroundings. All corner buildings, as a rule, are emotionally significant and are not only urban planning, but also architectural and artistic accents. The same can be said about some ordinary buildings that have deviated from the red line in whole or in part – 32 V. Zhytomyrska (modernism with exquisite stucco details of the bay window, characteristic smooth lines of the decor of the entire facade).

However, even ordinary buildings in the building system, whose unusualness is supposedly not based on anything, can be accentual, contrasting and emotionally significant. Indeed, the owner of the house, who purchased the plot, simply ordered a project for the future house from an outstanding architect, and regardless of the location of the plot, the building became an extraordinary phenomenon only thanks to the extraordinary abilities of the architect. For example, the house at 19 Shovkovychna Street (architect Vyshnevsky, neo-Gothic) or the famous house with cats, 23 Gogolivska Street (architect V.A. Bezsmertny, modern), or 19 and 21 Nazarivska (architect I.K. Ledohovsky, modern), or 7 Kostyolna (modern, the house has an original system of compositional construction, decorated with extraordinary sculptures). Although the houses in 19 and 21 Nazarivska Street were probably visible from the current Petliura Street

when there were no trees, and the facade of the house in 7 Kostyolnaya Street was open to view from the former Duma Square, at a time when the modern building of the House of Trade Unions did not yet exist.

These buildings can be considered environmental landmarks in terms of their emotional and architectural significance. However, the facades of buildings that are environmental landmarks can be designed according to certain typological compositional schemes that are often found in development. Such buildings are architectural accents only due to original details (106 Saksaganskoho, 96 Saksaganskoho, 41 Chikalenko, etc.).

The division of building facades into groups by location in the development is of great importance when analyzing the compositional structure of facades, since the position in the building – ordinary, corner (angular) or separately located – affects the placement of the main compositional axes of the building.

The composition of separately located houses and mansions is usually spatial, designed for viewing from different points of view, corner ones – partially spatial, designed for viewing two facades with a volumetric dominant at the corner. The corner of the house in corner buildings is always a compositional axis. Since mansions in most cases in Kyiv development are included in the front of ordinary buildings and are often located on the red line, the types of their compositional solutions are often identical to the compositional solutions of low-rise ordinary buildings. In the classification of compositional solutions of facades of residential buildings of historical buildings in Kyiv, the vertical-belt principle of composition construction is of decisive importance, that is, the division of the facade by vertical elements – risalits, stairwells, bay windows. Structurally important vertical divisions, as a rule, are highlighted by architectural and artistic means and are the compositional axes of facades. Vertical divisions in the form of risalits, bay windows, stairwells have developed sculptural endings or are highlighted by the shape and size of windows. These vertical divisions, conventionally called axes, can have subordinate or balancing vertical divisions. The main vertical divisions can consist of one, two, three and four (in Kyiv buildings) vertical elements. The type of composition of the facade depends on the length of the building plot.

In the historical buildings of Kyiv, four main types of compositional solutions of facades have been identified: uniaxial, biaxial, triaxial and multiaxial (Fig. 1).

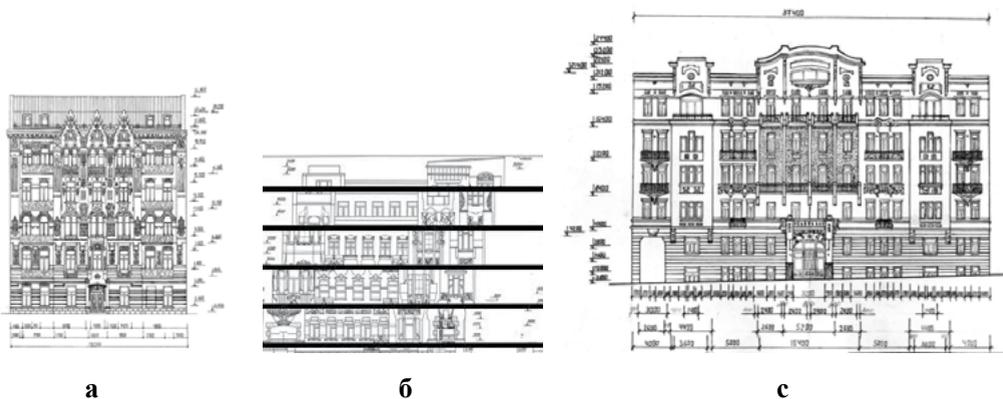


Fig. 1. Types of compositional solutions of facades:

a) uniaxial composition of the facade, Shota Rustaveli, 9; b) biaxial composition of the facade, Velyka Zhytomyr'ska, 32; c) triaxial composition of the facade, Chykalenko, 21. Measurements and drawings by Sidorova M.-J. A.

With a facade length L up to 25 m. a single-axis type of composition was chosen (Khoryva, 45/24 (24 m.); Saksaganskoho, 99 (17 m.); Shota Rustaveli, 9 (19 m)).

With a facade length L from 26 to 35 m. a two-axis type of composition was used (V. Zhytomyrska, 32 (26 m), Gogolivska, 23 (26 m)).

With a facade length from 35 to 46 m. a three-axis type of composition was chosen (Chykalenko, 33 (35 m), Zankovetska, 7 (46 m), Chykalenko, 21 (37 m), Lyuteranska, 6 (45 m)). This type of composition is most common in the development of Kyiv.

If the length of the facade is more than 46 m – a multi-axis type of composition was used. In Kyiv development, this type is rarely found.

The classification of compositional solutions of facades developed by us can be used in the reconstruction of the historical center of Kyiv. If new inclusions in the historical building are necessary, it is necessary to conduct a historical and architectural study of the surrounding building, get acquainted with the style of neighboring buildings, determine their characteristic elements, take into account recommendations regarding the protection zones of architectural monuments, number of floors, style and scale of the building. Depending on the length of the plot for construction, it is recommended to choose the type of compositional solution corresponding to these dimensions – single-axis, double-axis or triple-axis composition of the facade (Fig. 2). Figure 2 shows an example of the author's schematic models of modular facades of new buildings for inclusion in the historical environment, which are presented in the sweeps of Andriyivskiy Uzviz, Saksaganskoho, Dmytrivska streets.



Fig. 2. Using different types of schematic models of the structural solution of facades in historical buildings (developed by Sidorova M.-J. A.)

4. Conclusions

The development of Kyiv is organically connected with the relief of the city. The topographic basis is reflected in the planning and in the methods of development of the historical central districts. Accent buildings are located on high points of the relief, on squares, on street corners or separately or with an indentation from the red line of development.

The development of the late 19th – early 20th centuries had a clearly expressed frontality (facade) due to its perimeter and density.

Buildings that are separately located in the development, corner, located on the corner of streets, as well as buildings located with an indentation from the red line of development are usually important architectural accents and urban planning landmarks.

Separately located buildings, located on hills, have a complex extraordinary silhouette, they are easily remembered and have become a kind of visiting card of Kyiv. These buildings organize the silhouette of the development and dominate the surroundings.

Corner buildings, usually built according to the designs of famous architects, are often made in modernist forms, saturated with elegant sculptural reliefs. They differ from the surroundings in mass, proportions or compositional structure, or have high expressive towers that contrast with the surroundings. That is, all corner buildings, as a rule, are emotionally significant and are urban planning and architectural and artistic landmarks.

Buildings that are completely or partially set back from the red line, are located with a separation from neighboring buildings, are designed in contrast to the surrounding buildings, differ from ordinary buildings in a special dynamism or balance of parts of the facade, careful development of details, sculpturality and elegance of forms, or a picturesque asymmetrical composition with a high spire-like tower. They are also important architectural accents and landmarks.

The division of building facades into groups by location in the development is of great importance when analyzing the compositional structure of facades, after the position in the development (row, corner (angular) or face-to-face) is of no greater importance than the building in the urban environment, but also affects the placement of the main compositional axes of the building.

Buildings built in different styles often have a common compositional structure of facades. The composition of facades depends on the planned structure of the building, which is reflected in the vertical facade divisions, on the functional purpose, as well as on the locations in the development and the nature, length and shape of the land plot.

In the classification of compositional solutions of facades of residential buildings of historical development in Kyiv, the division of the facade by vertical elements – risalits, stairwells, bay windows is of decisive importance. Structurally important vertical divisions, as a rule, are decorated with architectural and artistic means and are their own compositional axes of facades. Vertical elements in the form of risalits, bay windows, stairwells have developed sculptural endings or removals in the shape and size of windows.

In some historical buildings of Kyiv, four main types of compositional solutions of facades are distinguished: uniaxial, biaxial, triaxial and multiaxial. With a facade length L up to 25 m. a uniaxial type of composition was chosen. With a facade length L from 26 to 35 m. a biaxial type was used. With a facade length from 35 to 45 m. a triaxial type was chosen. This type of composition is most common in Kyiv buildings. If the facade length is more than 45 m – a multiaxial type of composition was used.

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