



Analysis of Foreign Experience in Designing Architectural and Spatial Solutions of Medium-Rise Residential Buildings

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ABSTRACT

The article is devoted to the analysis of modern foreign experience of design and construction in the field of architecture. Analyzing the attempts of foreign experts in architecture to improve medium-rise residential buildings in order to make it more comfortable and accessible to the general mass of consumers.

Keywords:

medium-rise residential buildings, architecture, construction, composition, architectural forms, foreign experience, scientific analysis, urban factors.

Foreign and European medium-rise residential buildings are a centuries-old tradition of housing construction. They emphasize the modesty and minimalism of external forms, as much as possible they have a fully developed interior space of a residential building with useful and necessary areas and premises.

The projects of medium-rise residential buildings of the European and American schools offer a large living area, cost-effectiveness in construction, rational use of

the technical space of the house. All residential buildings are designed in such a way as to save electricity and heat, it is advisable to use every square meter of usable area. This is precisely the main advantages of foreign houses, which are built in a wide variety in large cities.

Over time, foreign customers and architects refuse to focus on outdated regulatory requirements and switch to the practice of individual developments, which involve the search for non-standard solutions, spatial compositions and layouts.



Modular-Hayloft house in Slovenia



Residential buildings in London

It is worth noting that most of the interesting and progressive architectural solutions approved during the construction of unique architectural objects were adopted in order to reduce the production costs of the object. At

the same time, greater adaptability of planning characteristics (transformation) is achieved, the area of the building and residential premises is reduced.



Modern buildings in Spain



Holland. Eco-city.

Abroad, most of the interesting and unique architectural decisions were made to reduce the cost of the object.

Let's consider the main factors influencing the architectural and spatial solution of medium-rise residential buildings are: climatic; - demographic; - seismic; - cultural, household, etc.



Residential building in Turkey.



Residential building in Yemen.

The architectural and planning solution of the building is made taking into account the climatic features of the region, taking into account - orientation by countries of the world, wind regime, natural lighting, the level of solar radiation.

The building was built taking into account the architectural and spatial solution of the exterior and interior. According to climatic features, Yemen relies on a dry-hot climate zone, so the layout of this house provides a courtyard that preserves the micro-climate of this residential building. The facades of the house are solved with the use of national elements in a traditional style.

One of the main solutions that take into account the climatic factors of medium-rise residential buildings for regions with a dry-hot climate are:

- a) the presence of an inner courtyard (the center of the organization of space), which creates a microclimate that reduces the penetration of warm air,
- b) landscaping,
- c) the use of architectural elements to reduce air temperature (the use of blinds in front of windows and loggias, shutters, awnings).



Modern medium-rise residential buildings abroad.



Residential building in Toronto



Residential building in Germany

The tradition of each country is closely interrelated with climatic factors. For countries with a dry-hot climate, an inner courtyard is necessary, since it is a strong insulator from external urban noise, creates microclimatic conditions for residents and provides tranquility inside the dwelling. For countries with a temperate climate and high humidity, it is compact in the layout of residential buildings, keeping the heat in the premises. As for the elements of traditional architecture: rainbow-colored glass, decorative and symmetrical elements in the interior and on the facade, as well as the use of brick as the main building material. They perform three main functions when solving residential buildings: aesthetics, static and take into account climatic features. Symmetry, centrality in the layout and facade of the building take into account the traditional philosophy of the peoples of the world.

As part of the analysis of aspects of architectural and planning formation of foreign residential buildings of medium height, it

should be noted about the identification of current trends in environmental architecture.

Ecological architecture, as a new category in architectural practice, began its development with the appearance of the first energy-efficient architectural objects. This was facilitated by the World Energy Congress after the world energy crisis of the 1970s. The MIREC Congress, accredited by the UN on Energy Issues, has been offering the global community a strategic dialogue every three years since 1924 on important problems of the energy industry to the ecological formation of an energy-efficient medium-rise residential complex based on an analysis of the world architectural practice of designing and implementing medium-rise residential complexes. [1]

During the construction of residential complexes in Germany, England, America, etc. Large trees are necessarily preserved, which protect against wind load.

Most streets are a continuous orthogonal grid that allows you to move around the area as quickly as possible on foot or by bike.

Several loop-like and dead-end streets are designed for the movement of vehicles, limiting the possibility of transit through the area by car. The restriction of transit through a residential area helps to reduce air pollution by exhaust emissions. [2]

Conclusion

Analyzing foreign experience, a number of similarities with the architecture of residential buildings in Uzbekistan are revealed, which are considered desirable for comfortable living: location in the center or on the outskirts of the city, landscaping of the site, proximity of shopping and entertainment centers, urban improvement facilities - parks, parking lots.

The features of mass urban development both in Uzbekistan and abroad are apartment buildings, their location in cities and districts.

The residential area includes social, transport and engineering infrastructure facilities, recreation and entertainment centers, retail outlets serving and providing services to residents, playgrounds and parks, etc.

The architecture of mass construction is characterized by multi-sectionality, the presence of balconies and loggias as summer rooms. Distinctive features in the planning structure are the increased areas of apartments, studio location of the main premises, maximum comfort solutions for residents.

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