

**UDC 711.4+72(043.2)**

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### **FEATURES OF BUILDING OF HISTORICAL KYIV**

Kyiv has a history of one and a half thousand years. Its historical core and some buildings have survived since ancient times. The building is partially destroyed because of natural disasters, wars, physical deterioration of buildings. However, the historical center of Kyiv still plays an important role in the structure of the modern metropolis.

Kyiv has a special planning, different from other cities. The modern planning structure is a continuation of the historical. The urban environment requires research to harmoniously combined historic and modern buildings in one city, new and old areas.

The historical building research of Kyiv was conducted based on historical maps, photographs and drawings. As a result of the research, the features of the urban structure of historical Kyiv were revealed:

The city has a complex landscape, central areas formed on the hills, so the planning composition corresponds to the shape of the hills;

The city had a low level of outposts, linearly located along the banks of the Dnieper;

The city developed simultaneously from two centers. One center was the very old Kyiv; the second center became a monastery;

The most important objects in each center were sacred buildings;

Ordinary buildings of various functional purpose and unique buildings were in the city;

In its structure, the city has many natural objects, which played an important role in the life and life of the inhabitants;

Squares and streets of Kyiv are one of the important components of the city structure. They formed spontaneously under the influence of natural factors. Only small fragments of urban spaces planned purposefully;

The city did not have tough borders and developed by separate spots. Roads united separate areas into a single whole;

The city structure of Kyiv due to the influence of relief has a mosaic character, where each area looked peculiar.

These features influenced the formation of urban composition and development during the 20th century and reflected on the life of modern Kyiv.

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### **CREATING HOLIDAY TIME USE**

Actuality of theme. Annually, in September, thousands of Hasidic Jews from different countries of the world arrive in Ukraine, carrying a pilgrimage to the grave

of the riba Nakhman in Uman, Cherkassy region, and celebrating the New Year (Rosh-a-Shana).

The short-term stay of the Hasidic Jews in Ukraine requires solving a number of problems, including residential ones.

International airports (Boryspil, Vinnitsa, Lviv, Odessa, Kherson), checkpoints (Krakovets, Mogilev-Podilsky) work according to special programs.

Problems in finding and renting housing, ensuring public order protection, sanitary hygiene, trade organization, catering, etc. are intensifying in the city of Uman.

For a partial solution of the housing problem, it is proposed to build a hotel complex, the so-called "town for Hasidim".

The complex may include:

- a stationary hotel that operates throughout the year;
- stationary seasonal hotel, which annually during July – September will meet the needs of the Hasidim;
- temporarily-transformable seasonal hotel.

The basic (stationary) components of the latter may be, for example, "winter garden – library", "greenhouse – exhibition hall". During the growing season of the number of tourists, they can be reorganized with the help of transformed partitions and vertical gardening systems in the premises for short-term residence.

Expected results and conclusions. The study and analysis of the principles of the design of temporary housing in greenhouses, winter gardens, makes it possible in the future to consider more actively the buildings with the exhibition function for the design of temporary housing in them. Consequently, such structures are a reserve fund for temporary accommodation.

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### **ARCHITECTURAL MORPHOGENESIS AUTOMATION USING TOOLS AND TECHNIQUES OF PARAMETRIC 3D MODELING**

During first stages of architectural designing architect is expected to create vast variety of potential solutions with similar geometric constraints coming from building code, zoning limitations, customer requirements. There is a way to increase efficiency of solution generation by using automated generative rules and parameter wiring.

Author conducted a research study to determine means of morphogenesis automation in free and open-source 3d computer graphics software blender3d using modifiers, constraints, parameter wiring, visual scripting in Animation Nodes addon and programming in Python.

The study resulted in making sketch-stage 3d model of architectural object that interactively updates number of parameters constrained by author while free parameters are changed.