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TRANSFORMATION OF THE ESTABLISHED OBJECT-SPATIAL ENVIRONMENT OF THE STUDENT HOSTEL

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The inconsistency of the existing subject-spatial environment of typical student dormitories, built in the XX century, with the modern requirements of students' socialization during their studies at the university is revealed. Improving the comfort of living without reconstruction of hostels is possible due to the transformation of the subject environment. The developed plans for minimum redevelopment of floors, subject filling of the spatial environment of living rooms, taking into account anthropological, ergonomic, environmental requirements, will provide students with comfortable living.

Keywords: student dormitory, subject-spatial environment, design, transformation.

Introduction The subject - spatial human environment, with unconditional compliance with the functional purpose, should provide comfort, contribute to the formation of a positive emotional and psychological background of life. Comfort for students living in a dormitory is especially significant. In the post-Soviet space and in the Republic of Belarus, a large number of dormitory buildings were built in the 70-80s of the last century. They are characterized by corridor and sectional layouts with living rooms on floors without built-in domestic, sanitary and technical equipment. Most of these buildings are still in use and do not meet the modern requirements for this category of housing. Reconstruction of hostels requires large financial costs and time. The purpose of this study is to increase the efficiency of the student home, its comfort with minimal redevelopment, which does not require a change in the structural design of the building and reconstruction of engineering equipment by transforming the subject environment using modular and transformable furniture, colorizing techniques, navigation, and the use of innovative materials and technologies.

Main part. Consider the prevailing spatial environment of four typical hostels using hostel No. 3 of Polotsk State University as an example.

– 5-storey buildings, frameless, corridor type, with load-bearing longitudinal brick walls. On the ground floor there are administrative, storage rooms, assembly and rehearsal rooms as well as male and female shower rooms.

– On the next four floors there are living rooms for 2 to 4 students, two kitchens, women's, men's toilets, a washroom, a general purpose room.

Subject - spatial environment analysis of the premises revealed:

– on the 11.8m² kitchens 2 gas stoves, 2 tables and 2 sinks are located, which is not enough for students living on the floor, the area of the room does not allow placing additional equipment;

– the location of male and female showers on the first floor of the hostel creates inconvenience in use, in addition, there are 5 showers in the female shower room, with more than 100 female people, this amount does not comply with hygiene standards;

– there are 4 cabins in the women's toilet rooms, for more than 30 female people living on the floor, this amount does not comply with hygiene standards;

– dormitories do not provide laundry rooms, rooms for classes and recreation;

– the area of the living quarters, as well as the filling with furniture, complies with the applicable requirements and standards [1,2], but they do not provide for the design of residential areas for recreational activities and meals.

In order to optimize the living conditions of students with a minimum change in space-planning decisions, the following developments were proposed.

1. On each residential floor, attach one living room with an area of 14m² to the area of the kitchen premises and place additional equipment taking into account ergonomic requirements, the correct selection of finishing materials and creation easy access to work surfaces.

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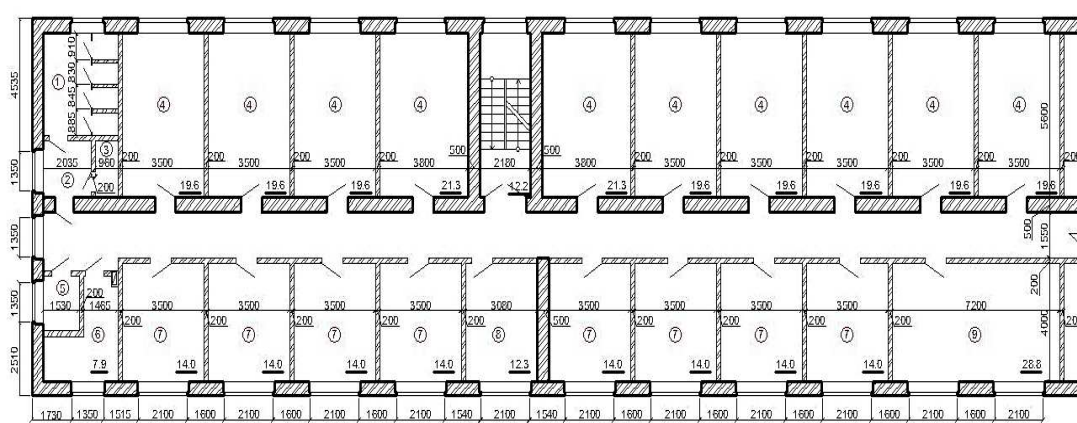
2. Place shower rooms on each residential floor by remodeling a 19.6m living room² located near the toilet rooms, the necessary plumbing equipment with accession to existing risers.

3. To increase the area of women's toilets on each residential floor to accommodate additional toilet cabins, combining the area of toilets, airlock and a toilet for staff, using materials that have high requirements for abrasion, shock, hygiene. The toilet for staff should be moved to the 1st floor.

4. On each residential floor, combine one living room with an area of 14m², with rooms for washing, storage of equipment, to convert the obtained space for the laundry room, placing 3 washing and drying machines with accession to existing risers.

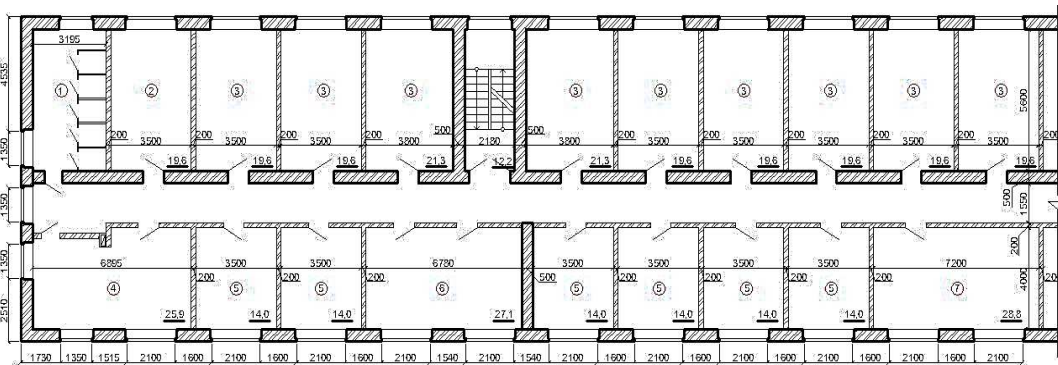
5. At each residential area, re-equip storage facilities with an area of 28.8 m² into common rooms and studies.

Changes in space-planning decisions are presented in (Fig. 1.2).



1 - female toilet; 2 - vestibule-airlock; 3 - toilet for staff; 4 - living room;
5 - room for storage of inventory; 6 - female washroom; 7 - living room; 8 - kitchen;
9 - living room

Figure 1. – Left (female) wing of a typical dormitory floor before redevelopment



1 - female toilet; 2 - female shower; 3 - living room; 4 - laundry;
5 - living room; 6 - kitchen; 7 - room for classes

Figure 2. – Left (female) wing of a typical dormitory floor after redevelopment

Design-engineering of living rooms was based on the fulfillment of the main social function of the home - to give everyone living a sense of comfort, taking into account functional, hygienic, functional, psychological and aesthetic requirements [3].

Were determined functional processes inherent to the housing of this purpose, conditional division into multifunctional zones is performed.

The filling of the subject environment was based on the method of transformation, which allows combining furniture into modules with a multifunctional purpose, corresponding to vital processes, the style of minimalism with a minimum of decorative elements in accordance with the average anthropometric features of the hu-

man body. Detachable furniture modules have been developed that allow for replacement blocks, change the function of the module: a module combining the entrance, dressing room and dining area with the design of a transformable table, modules with the transformation of the desktop block into a berth (fig. 3).



Figure 3. – 3D visualization of the content of the transformable furniture of the spatial environment of the living rooms of the hostel

Conclusion. The prevailing subject-spatial environment of hostels built in the 20th century and operated up till now does not satisfy the needs of modern students.

Design solutions developed without reconstruction and replacement of utility networks for a typical residential floor of a hostel, subject filling of the spatial environment of living rooms, taking into account functional, psychological, aesthetic, hygienic, anthropological, environmental aspects will significantly affect the socialization of students during their studies at the university.

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