Plan of reorganization of the architectural space of military campus No. 19 for the needs of the Suvorov Military School

N A Skorikova

1Department of History and Philosophy Irkutsk National Research Technical University, 664074, 83 Lermontov str., Irkutsk, Russia

E-mail: skorikova_natalya@mail.ru

Abstract. The possibilities of implementing of a project to adapt the buildings and structures of the former military campus No. 19 in Irkutsk for the needs of the Suvorov Military School are examined in the article. The author proposes a set of specific architectural and planning solutions. The principle of compact development and rigid functional zoning has been the basis for the proposed project. Recommendations for accommodation of the personnel, arrangement of the residential and educational premises, taking into account age-related characteristics and relevant legislative norms and requirements are given.

1. Introduction

In 2009, the Irkutsk Higher Military Aviation Engineering School (IVVAIU) was disbanded. Military campus No. 19, on the basis of which IVVAIU functioned, remained ownerless. On the campus territory there were 73 facilities maintaining the operation of the school with a total area of more than 100 thousand square meters. More than 10 of them are still monuments of architecture. More than 10 years have passed since then. Many buildings and structures have fallen into disuse. However, there is a chance of revival and salvation of a part of this architectural ensemble. One way of solving this problem may be to adapt these facilities to the activities of a new educational institution - the Suvorov Military School.

They started talking about the "reanimation" of the complex and the possibility of placing the Suvorov Military School in the buildings of the former Irkutsk Higher Military Aviation Engineering School almost immediately after the liquidation of the school. The experience of reorganizing the architectural space of the former IVVAIU to the needs of Suvorov Military School can be used in practice both in existing similar institutions and when designing new ones.

The project proposed in this article is connected not only with the problem of preserving a unique educational and residential complex on the area of military campus No. 19 and the upgrading of Irkutsk. It also has great social significance. Unfortunately, young Siberians, residents of Irkutsk and the Irkutsk region, who decided to take on a military career from an early age, have no opportunity to realize their ambitions in their native region. Today in Russia, the Suvorov Military Schools operate in Yekaterinburg, Kazan, Moscow, Vladikavkaz, St. Petersburg, Tver, and Ulyanovsk. Russian youths have the opportunity to enter the Minsk Suvorov Military School. In each instance, we are talking about military educational institutions outside our region. This involves remoteness from home, difficulties connected with leaving for vacation and the morale and psychological stability of a teenager. The emergence of the Suvorov Military School in Irkutsk will provide an opportunity for many children to
start realizing in the military profession and will attract young people from our region and some other regions of the country to the city.

2. Materials and methods
The architectural and planning decisions in the process of organization of the Suvorov Military Schools (or similar institutions) rarely became the subject of scientific research. Therefore, there is, in fact, no specialized literature.

Throughout the 1990s and early 2000s, the theses devoted to various aspects of the reconstruction of educational and residential complexes of Suvorov Military School, Cadet School and universities of St. Petersburg were defended. A group of researchers, including Mukhin A.I., Klimanova S.G., Pavlova I.A., Aleksandrina A.V., published a number of articles that examined the demographic features of military educational institutions, analyzed the functional zoning of the St. Petersburg Suvorov Military School and its compliance with the moral, psychological and domestic needs of the cadets [1].

It is also possible to refer to the thesis by A.V. Alexandrin "Urban reconstruction of the educational and residential complex of the St. Petersburg Suvorov Military School" and the article "Modern foundations of the organization of the living environment of the cadet corps students” co-written by him. [2,3].

The thesis by S.G. Klimanova, which is closely related to the content of our study, concerns the architectural and planning organization of a residential complex for cadets of military universities in St. Petersburg. The author’s recommendation to consider the university as a complex, i.e. a special system with strong bonds between the elements, turned out to be very useful. This principle, according to S.G. Klimanova, should be reflected in the compactness of development [4].

The book by V.M. Polyukh and V.G. Stakhanov “Not to interrupt the thread of the traditions” was used to identify the stages of the Military camp development [5].

As the proposed project should take into consideration the specifics of the educational process in the Suvorov Military School with reference to architectural and planning decisions, the relevant regulatory acts have been studied [6,7,8,9,10,11,12,13].

The main research method is the pre-project analysis method, as well as conducting field surveys and buildings and structures photofixation.

One of the used methods is the method of interviewing. Personal conversations with the former head of the school, a PhD in engineering, an honorary worker of a higher school, and retired major general A.G. Barsukov as well as with members of the IVVAIU Veterans Council retired colonel S.N. Kuznetsov and retired colonel M.I. Laikov were held.

A retrospective method and method of comparative analysis were used to answer the question about the rationality of adapting the buildings of the former IVVAIU to the needs of the Suvorov Military School and identify possible advantages in the material and technical support of the future Suvorov Military School compared to similar military educational institutions in Russia.

3. Results
The architectural appearance of military campus No. 19 was finally formed only in the 1980s. Gradually a network of residential, service and public buildings appeared there [14]. Historically, the service area had become divided into two separate complexes. In the western part of the campus, there was a barracks area; a small part of the educational buildings; the main parade ground №1, where graduates took the oath and said goodbye to the banner; a canteen; bathroom and laundry facilities and various outbuildings. In the eastern part, there was a huge educational complex. There were also separate buildings connected by passages with the main building, in which a computer center and rooms for designing functioned. The Club building was also located there. A wide «cadet» road interconnected the western and eastern complexes. The big stadium with a football field, tracks, stands, fitness equipment, an obstacle course, tennis, volleyball and basketball courts occupied the central area of the camp. Nowadays despite military campus desolation, sports and festive events are held on its stadium. Besides a military training airfield is still located on the territory of the camp.
Of course, it would be impractical to adapt the entire huge complex to the needs of Suvorov Military School. For these purposes, we offer to use the eastern part of the campus of 7.07 hectares, the so-called «Training zone” where the former educational building No. 1 (main building) is located.

Such a choice can be justified by several circumstances:

1. The territory is located along the so-called “main road” connecting checkpoint No. 1 and checkpoint No. 3 and has three convenient access roads.

2. The most important advantage of the “educational zone” is its compactness.

All buildings are connected by convenient transitions that makes the educational and support buildings to be a monolithic architectural structure, and provides free movement of personnel within the entire complex.

3. From the economical point of view, the redevelopment of educational building No. 1 is less expensive than redevelopment of the buildings located in the western part of the campus. This is because the classrooms but not the barracks were initially located in this building.

4. The number of buildings in the designated area, their internal layout associated with the former use, can fully satisfy all the needs of the Suvorov Military School and allows adapting them to a new functional purpose without radical rebuilding and redevelopment.

5. Our calculations allow us to conclude that the redevelopment of the complex with the proper approach can fully comply with the standards specified in Code of Practice CP 118.13330.2012 «Public facilities» [15] and other regulatory documents.

In general, the chosen territory can become a full-fledged campus of the Suvorov Military School, and its structure will meet all the needs of students’ daily live. In terms of the architectural space typology, the planned complex can be attributed to a multifunctional educational-residential complex, including premises for various purposes.

Particular attention should be paid to the main building, in which, according to our project, can house an educational zone, rooms of barracks, social support facilities and a library. Most likely, its building started in 1914. Due to the difficult situation in the country of that period, the construction and improvement lasted until the mid-30s of the XX century. This two-story building's layout is similar to that of shape of Russian letter "Ш". There is the basement around the perimeter. All wings of the buildings are interconnected. The main entrance is located in the center of the western facade. There is a vestibule and guardrooms. For convenience and safety, additional entrances and exits are located around the perimeter of the building. The total construction volume of the building is 126 106 cubic meters, its area is 18 609 square meters.

Classrooms, lecture halls, laboratories, a library, reading room and a book depository were located symmetrically in the north and south wings of the building. During the study time and the time allotted for self-study, more than 1,200 cadets and teachers could simultaneously be there.

The architecture of the central wing of the main building deserves special attention. The front marble staircase with a width of about 5 meters begins from the main entrance. It leads to the first and, through the corridor, to the second floor. There are columns along the perimeter of the stairwell on the second floor. Their height is 5 meters. The columns rest against a dome decorated with bas-reliefs. Unfortunately, the decoration was damaged in a number of fires, but this part of the building still looks majestic and solemn.

There is a big hall on the second floor. At the time, it was called "Greek”, because there are Pilasters in each window opening that makes the hall look solemn. Award ceremonies, celebrations, military rituals were held in there. The hall is fairly spacious. Its area is 700 square meters and the ceiling height is 12 meters. The floor is covered with the tiles made of marble chips. Despite the fires, tiled floor is in good condition. The mosaic image of a red star in the center of the floor can still be seen.

On the ground floor, under the “Greek” Hall, there is another hall called the “Column” Hall. The choice of the name is not accidental: at a distance of 4.5 meters from the walls and 3 meters from each other, 8 square columns are lined up in two rows. The height of a ceiling is 3.8 meters. The columns are elements of a load-bearing frame.
Along the entire perimeter of the building, there are over 350 windows. The width of the window openings on all floors except the basement is 1.5 meters, the height is at least 2 meters, the distance between the windows is 1.5 meters. This provides natural light in some classrooms during the day. Besides such windows give some “lightness” to this monumental building.

Initially, at the beginning of the century this building was supposed to be used for the needs of the cadet school. Therefore, the corridors are wide enough (on average 6.15 meters) to parade along them.

Based on the conducted research work, we have a number of recommendations relating, first of all, to the functional zoning of the territory.

1. In order to create the most favorable living conditions for students, we propose to equip the so-called bunkrooms, with a maximum capacity of 25 students (i.e. one room for one training group), abandoning the idea of standard barracks facility.

   There are at least two reasons for this:

   Firstly, the construction of the building allows such layout: a wide corridor gives the opportunity to carry out platoons parades. There are premises (former classrooms) on both sides of the corridor. They are quite spacious and can be used as bunkrooms based on 4 square meters per person, which meets the standards. At the same time, all the necessary and provided by our plan auxiliary premises of the barracks zone will be kept.

   Secondly, taking into account the specifics of such an educational institution as the Suvorov Military School, attention should be paid to the age of cadets. Presumably, students of 9th, 10th and 11th grades will be recruited, i.e. young people aged 15-17. It will be easier to provide an atmosphere of comfort, normal moral and psychological climate in such premises as bunkroom.

2. At the stage of construction in the courtyards of the building on the east side, two parade grounds were supposed to be built. The central wing of the building separated them. When it was the Irkutsk Higher Military Aviation Engineering School, they were turned into alleys. For the needs of the Suvorov Military School, the parade grounds should certainly be reconstructed. The separateness of the parade grounds will allow conducting military exercise of several units at the same time. A parade ground should be available at the entrance to the canteen, as the schedule of the Suvorov Military School provides for the parade of the units before and after visiting the canteen. The implementation of this plan is not difficult, because the space in front of the building chosen for the canteen is flat and building-free with a total area of more than 2,000 square meters.

3. It is necessary to use the building of Headquarters No. 1. This is a two-story building with a total area of 1,409 square meters. This building has 35 rooms, in which previously there were the offices of school commands and the reception of the head of the school. The building is connected to the main building by an arched structure, which provides access to the second floor. The internal layout of the building dictates us to preserve its functional purpose.

   In addition, our calculations show that a canteen, cafe and a health center might be placed in the buildings of this architectural and construction complex in compliance with all relevant norms and requirements [16].

4. Conclusion

Having analyzed military regulations, daily routine and living conditions of cadets, peculiarities of educational and cultural processes of the Suvorov Military Schools in Chita, St. Petersburg, Astrakhan, Ussurisk and some others, we concluded that the complex of buildings for the Suvorov Military School should combine 9 main components. They are the following:

   1. Classrooms to ensure the educational process according to the secondary school program.

   2. A complex of specialized premises and facilities for the implementation of military training, appropriate to the age and level of knowledge of cadets.

   3. A specially organized zone for sleeping and having rest, which must meet the requirements of boarding schools and the requirements of the barracks zone.

   4. A catering complex, consisting of a canteen for cadets, providing five meals a day for students, according to the requirements and standards of boarding schools and an officer canteen and a cafe-shop.
5. Own health center with a sick bay and a pharmacy.
6. A complex of facilities for recreation and additional education.
7. A complex of premises related to the household services of students.
8. The complex of premises for the command staff of the school, teachers and service personnel.
9. The complex of sports facilities.

The spatial framework of the architectural environment of the object are the most suitable for the implementation of processes associated with the functioning of the Suvorov Military School. There are certainly some disadvantages. For example, a common drawback for almost all buildings are wooden beams, which nowadays does not meet the fire safety requirements.

In addition, in our opinion the compactness of buildings and premises, their maximum compliance with the functional purposes should be a prerequisite for the planning and placement of the Suvorov Military School. Cadets remain isolated from the external environment; their daily life is associated with the school that is why the convenience of moving, life safety and the aesthetic perception of the surrounding architectural environment are very important. These conditions are also achievable.

For a more accurate analysis, we had to turn both to the history of military campus No. 19 and to the experience of the placement and functioning of the different Suvorov Military Schools in Russia [14, 17, 18, 19, 20, 21]. In the course of the study, we identified the specifics of such an educational institution as the Suvorov Military School, which combines the characteristics of a secondary school, a boarding school, a military educational institution and we considered this when planning architecture.

Placing the Suvorov Military School on the territory of military camp No. 19 will certainly be a salvation for the unique architectural complex. There will be a need for additional efforts aimed at improving the whole area: the restoration of roads, the stadium and park areas.

References
[1] Mukhin V I, Klimanov S G and Alexandrin A B 1996 Recommendations on the architectural and planning organization of military schools for the development and cadets Final report on design and survey program "Complex" (St. Petersburg: VISI) 1
[2] Alexandrin A V 2001 Urban reconstruction of the educational and residential complex of the St. Petersburg Suvorov Military School Dissertation for the Candidate of Architecture degree
[3] Mukhin V I, Alexandrin A V, Zhdankin N Yu and 0Sargsyan E R Modern principles of organization of the living environment of students of the cadet corps of the Ministry of Defense of the Russian Federation Viviliofik Electronic Library
[4] Klimanov S G 2000 Architectural and planning organization of a residential complex of cadets of universities of St. Petersburg Dissertation for the Candidate of Architecture degree
[5] Polyukh V M 1991 Not to interrupt the thread of the traditions: a brief historical outline of IVVAIU (Irkutsk: IVVAIU0
[6] Instructions on the organization of control over the activities of the Suvorov Military Schools, the Nakhimov Naval School and Cadet Corps Encyclopedia of Cadet Education
[7] The concept of the federal system of preparing citizens of the Russian Federation for military service for the period until 2020 Encyclopedia of cadet upbringing and education
[8] On amendments to the Regulation of the activities of the Suvorov Military Schools, the Nakhimov Naval School and Cadet Corps Laws, codes and normative legal acts of the Russian Federation.
[9] Regulations on military-patriotic youth and children's associations Laws, codes and regulatory legal acts of the Russian Federation
[10] The position of the Government of the Russian Federation on the Suvorov Military Schools, the Nakhimov Naval School, music schools and cadet (naval, musical) corps of April 30, 2008
[11] Decree of the Chief State Sanitary Doctor of the Russian Federation of December 29, 2010 N 189 Moscow "On approval of SanPiN 2.4.2.2821-10" Sanitary and epidemiological requirements for conditions and organization of training in educational institutions
[12] Decree of the Government of the Russian Federation of April 30, 2008 N 328 On approval of the Model Regulations on the Suvorov military schools, Nakhimov naval school, military music schools and cadet (naval cadet) corps

[13] Order of the Ministry of Defense of the Russian Federation N 337 09/22/2003

[14] Skorikova N A 2017 The history of planning and development of military campus No. 19 in Irkutsk News of the Laboratory of Ancient Technologies 13 pp 132-147

[15] Code of Practice CP 118.13330.2012 Public facilities

[16] Departmental building codes 34-95 Planning and development of military campuses Design Standards (M.: MO RF)

[17] Plekhanov A M, Popov A A and Heirs A V 2001 Suvorov. From the Cadet Corps of Russia to the Suvorov Military Schools of the NKVD (Ministry of Internal Affairs), KGB of the USSR (1731-1960) Historical outline pp 71-72

[18] Mironov V N 2002 Cadet educational institutions in Russia: history and modernity Dissertation for the Candidate of Historical Sciences degree

[19] Tolokolnikov G P Suvorov, Nakhimov Cadet, Suvorovets, Nakhimovets. URL: http://www.kadet.ru/louch/Tolok/Suv_nah/Intr/Introduction.htm (accessed: 01/10/2020).

[20] Gurkovsky V A 2014 The Gorky Suvorov Military School