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Krasnoyarsk Urban Environment: Main Characteristics

**Yulia S. Zamaraeva^a, Anastasia V. Kistova^{a, b},
Maria A. Kolesnik^a, Natalia P. Koptseva^{a*},
Ksenia V. Reznikova^a, Natalia N. Seredkina^a
and Aleksandra A. Sitnikova^a**

^a*Siberian Federal University*

79 Svobodny, Krasnoyarsk, 660041, Russia

^b*Krasnoyarsk Art Museum named after V.I. Surikov
36 Karl Marks Str. / 20 Parizhskoi Kommuny Str.,
Krasnoyarsk, 660049, Russia*

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The article discusses the main features of the urban architecture of Krasnoyarsk, the specifics of public transport and the availability of urban space for residents, the problems of public safety in the city; features of parks and public recreation areas; the peculiarity of urban management and the involvement of citizens in the processes of city management.

The study is based on modern approaches to the consideration of the urban environment as a result of the interaction of residents and city government. The article is based on a wide range of sources: modern studies of the urban environment in Russia and abroad, official sites of the administration and city services, statistics, modern studies of the urban environment of Krasnoyarsk conducted by scientists of the Siberian Federal University.

The results of the study reveal the transitional state of the urban environment of Krasnoyarsk, its rich potential and indicate the main problems and prospects for further development.

Keywords: urban environment, Krasnoyarsk, city management, city architecture, city transport, parks and recreation areas, public safety.

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* Corresponding author E-mail address: decanka@mail.ru

ORCID: 0000–0003–1299–6741 (Zamaraeva); 0000–0002–5309–4616 (Kistova); 0000–0002–1622–2797 (Sitnikova); 0000–0001–8194–7869 (Kolesnik); 0000–0003–3910–7991 (Koptseva)

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Introduction

Issues of studying the urban environment of Krasnoyarsk and finding ways to solve key problems have become acute in connection with the organization and implementation of the 29th World Winter Universiade in 2019. The upcoming celebration of the 400th anniversary of the city also became a catalyst for an active analysis of the current state of the urban environment by representatives of the city and regional administration, business and various experts in the field of economics, management, architecture, culture and other spheres of social and cultural life of the city and region. The analysis and search for solutions to the problems of the urban environment of Krasnoyarsk is impossible without recourse to the Russian and international experience of such studies.

Foreign urbanists (Townsend, 2013; Lydon, Garcia, Duany, 2015) and Russian researchers (V International science practice conference..., 2017; Sanina, Dzhafarli, Korshunova, 2016; Veselova, Khackevich, Ezhova, 2018) are actively involved in the study of the issues of modern city management.

There are studies of urban planning of Krasnoyarsk (Smolina, Koptseva, Sertakova, 2018).

There are not so many modern studies of the architecture of Krasnoyarsk (Kukina, Fedchenko, 2013, 2015). The main topics under discussion are the proposals for changing the master plan and the quality of the city's environment, housing fund renovation, landscape design, developing interactive maps, practical solutions for the introduction of modern technologies in construction engineering. There are scientific publications on the identification of the stylistic features of urban architecture (Merkulova, 2005, 2017) and on the analysis of the modern socio-cultural space of Krasnoyarsk (Sertakova, 2015; Reznikova et al., 2016).

Studies of recreation areas of the city of Krasnoyarsk are focused on the problem of the man-induced impacts on the quality of natural objects (Podluzhna, Badmaeva, 2016), as well as agricultural landscape solutions for land improvement (Avdeeva et al., 2016; Demidenkov, Shadrin, 2018). Much attention is paid to the analysis of the Stolby National Park (Bezrukikh et al., 2018; Unagaeva, 2018).

Foreign researchers are studying the urban public transport (Kyaw, Oo, Zaw, 2019; Lionjanga, Venter, 2018; Nguyen, 2019).

A question of how to improve the quality of living in the city, including by means of ensuring security, is the subject of attention of many researchers around the world (Il'ina, 2015; Acosta, Camargo, 2018). Many authors consider the excessive amount of transport (Gabsalikhova, Sadygova, Almetova, 2018; Haque, Chin, Debnath, 2013) and the issues of design and development of modern cities (Herzberg, 2013; Kiianenko, 2011) as serious problems.

Assessment of public safety in the light of the ecological situation in Krasnoyarsk is provided in the article titled “Anthropogenic pollution of the atmospheric air of cities of the Krasnoyarsk Territory” (Badmaeva, Zimmerman, 2015). The article by T.E. Ivanova (Ivanova, 2013) is devoted to the connection of quality of life and public safety.

Methods

The study is based on modern approaches in urban planning, which are focused on understanding urban space in the context of the interaction between urban management and residents (European commission..., 2016; Garau, Pavan, 2018; City survey..., 2002; City of Overland Park..., 2017). The study of these sources made it possible to establish that today the most important parameters for describing urban space are the following: 1) urban architecture; 2) public transport and accessibility of urban space; 3) public safety in the city; 4) parks and recreation areas; 5) city management and the involvement of citizens in the processes of city management. This principle will be applied when considering the urban environment of Krasnoyarsk.

City management

Modern urban studies indicate that the city management processes are carried out by three collective participants — city administration, citizens and civil communities, and business structures. Effective city management is possible only with an equal balance between all the “participants” of this process, therefore the task of this section is to describe the features of Krasnoyarsk management on the part of each “participant” at the beginning of the 21st century.

Krasnoyarsk administration

The city of Krasnoyarsk is managed by a mayor and his deputies, as well as by individual departments for the development of certain areas of city life. The structure of the administration of Krasnoyarsk is specified on the official website, the district

administrative offices of Krasnoyarsk are a part of the city administration. Thus, the management of the city by the officials is divided into independent areas with their agendas and problems (architecture, information policy, culture, urban transport, etc.). The city administration work provides for a function of feedback for citizens — the administration's website presents a schedule of citizens reception hours from the mayor and from the heads of district administrative offices of the city, and also provides for the possibility of sending appeals from citizens to the administration in an electronic form via the website. Despite the modern convenient services for communication between officials and residents, the results of a survey among more than 500 residents of the city of Krasnoyarsk, which was conducted in 2018, showed that this resource was used by only 5 % of the survey participants, and everyone pointed out a high level of difficulty in contacting the administration, which indicates that this system needs to be updated.

When the Mayor S.V. Eremin came to power in 2017, the degree of publicity of the city authorities' actions has increased due to changes in the information policy: activity of the city administration began to be highlighted in social networks, the mayor began communicating with the “popular” urban bloggers. There came precedents of public hearings on the issues of public use of the city — for example, in April 2019, public hearings were held on the construction of the Cathedral of the Nativity of the Theotokos on Strelka in Krasnoyarsk.

Since 2005 an important platform for negotiations between the city administration, residents, representatives of large and small businesses, urban initiative communities in Krasnoyarsk has been the City Forum. In 2018, the forum was held under the title “We design the future together”; it discussed issues of urban marketing, the prospects for turning Krasnoyarsk into a modern “smart city”, problems of the historical environment, development of medical services, a “green city”, inclusive programs, city clusters, etc.

Business structures

Business investors that ensure the economic development of Krasnoyarsk are also active participants in the city management processes. The structure of the approved business investments in Krasnoyarsk is described in the Investment Passport of the city (the most recent published version of the passport is dated 2014): OJSC Krasnoyarsk Plant of Non-Ferrous Metals named after V.N. Gulidov invests in the modernization of production; CJSC Sibagropromstroy — construction of new residential areas; CJSC Production and Construction Company Soyuz — integrated development of

Krasnoyarsk housing estates; CJSC Krasnoyarsk City Development — construction of a multifunctional complex on Molokov Island called Yenisei Park City; LLC Novy Gorod — construction of the residential complex “Yuzhny bereg” (South Coast); LLC Chisty Gorod — construction of a plant for sorting and processing household waste; LLC Monolitstroy — construction of a housing estate; OJSC Krasnoyarsk Electric Car Repair Plant — technical re-equipment of the plant.

Business companies are interested, above all, in the development of residential infrastructure, and moreover, mainly in the construction of new housing estates that meet the new standards of city life. Also, in Krasnoyarsk, industrial investment projects aimed at modernizing equipment and technologies at factories are being implemented.

Participation of citizens in the city management

The main vectors of the Civil Initiatives in Krasnoyarsk are: charitable activities to help children (for example, the “Happy Children” foundation); ecological movements (for example, the movement “For a clear sky” and the action “Mobile warehouse”); development of neighbouring communities, improvement of the local area and improvement of the system of housing and public utilities (for example, “Academy of house management”, neighbouring communities of the residential complex “Yuzhny bereg” and residential complex “Obraztsovo”); protection of homeless animals (Bely Klyk (White Fang), Khvostiki (Tails) communities); initiatives to improve the aesthetics of the city and enhance the humanism of urban spaces (for example, the street-art project Flagi (Flags), the activity of the creative association Kipish-grad).

City architecture

Over the past twenty years, Krasnoyarsk has gradually changed its appearance from an industrial to ecological and economic centre of Siberia, which significantly affected the architectural environment of the city. Since the 2010's, the former industrial sites with the Krasnoyarsk plants that thrived during the military and Soviet periods have been successfully built up with well-equipped residential micro and mini districts. Their architecture implies the idea of a new comfortable social and friendly environment for the residents and guests of Krasnoyarsk. Earlier, city residents figuratively divided the two sides of the city on the Yenisei as follows: the industrial centre (factory) with the same typical buildings (right side) and the historical, educational centre of the city (left side). The change of economy, the collapse of factory giants, the influx of labour migrants, the need to consolidate ethnically different groups, the formation of a

nationwide identity at the regional level and sustainable ethno-cultural development — all this was a good reason for creating a new and modern architectural environment of Krasnoyarsk.

A new approach to the development of urban architecture revealed itself in the construction of large-scale micro-districts in places of former industrial plants, on the airfield of the first airport of the city (Vzletka area), in remote forestlands and near the Yenisei River. In each new district, a unique concept has been implemented, which was aimed at designing its own living environment, where residents of any age feel comfortable and safe, where there is a friendly community of neighbours. The architecture of residential areas was created as an isolated urban area consisting of a complex of high-rise and low-rise buildings (14, 26, 32, etc.). Each house is a quarter with large closed courtyards, the neighbourhoods themselves are united by streets, driveways or pedestrian alleys. A striking example is the social project “Goroda budushchego” (Cities of the Future) in the mini-district Obraztsovo (O proekte “Goroda budushchego...”). Today, creating comfortable living conditions for residents and guests of the city is a key regional task, implemented in new architectural solutions for the development of the urban environment and public space. Conceptual ideas embodied in new residential areas construct the image of the city of the future as the capital of the Yenisei Siberia in the minds of citizens.

Today, the urban architecture of Krasnoyarsk is a unique synthesis of objects created during three historical periods: provincial period in the 18th and 19th centuries, Soviet period in the 20th century and post-Soviet period that began in the beginning of the 21st century. Each of the objects is a carrier of certain settings of its time, prevails over other communicative means of the sociocultural space, and at the same time interacts with every passer-by.

The first and, perhaps, timeless characteristic of urban architecture is its “collegiality” embodied in the monumental Orthodox church architecture (the Intercession Cathedral, the Church of the Nativity, the Paraskeva Pyatnitsa Chapel, the Dmitry Solunsky Chapel, Parish of the Church of St. John the Forerunner), in voluminous urban squares (Revolyutsii Square (Revolution Square), Mira Square (Peace Square), Vokzalnaya Square (Station Square), Teatralnaya Square (Theatre Square), Krasnaya Square (Red Square)) and unique regional museums (Museum Centre “Ploshchad Mira” (Peace Square), Regional Museum of Local Lore, Museum-Estate and Krasnoyarsk Art Museum named after V.I. Surikov, Literary Museum named after V.P. Astaf’ev). The theme of collegiality in Siberia is of particular importance as a historical memory

of settlers who came to live and work together in harsh conditions (first explorers, Cossacks, archers, monks, peasants, gold miners, refugees, prisoners of war, exiles), and as the idea of uniting modern people into the unity of a multicultural and multi-ethnic community.

The second striking feature of urban architecture is a trend to preserve cultural heritage in the modern city environment. The theme of “memory of a loved one” is performed by the memorial architecture. Today in Krasnoyarsk there are 107 monuments and memorials dedicated to the Victory and participants of the Great Patriotic War. During the war, Krasnoyarsk was of defence importance and national economic importance; residents of the occupied territories of the country were evacuated here, wounded soldiers were taken to hospitals. The most ambitious one is the Victory Memorial complex on the Poklonnaya mountain (the project of A. S. Demirkhanov).

The third characteristic is the affinity of the urban space and natural environment, in which the natural beginning originally defined the landscape of Krasnoyarsk. This characteristic was strengthened quite recently in connection with the 29th World Winter Universiade, thanks to which Krasnoyarsk received serious investments and became the capital of Siberian hospitality of international importance (Official website of the 29th World Winter Universiade 2019 in Krasnoyarsk). New and reconstructed architecture of sports facilities of European level: multifunctional complexes, sports clusters, ice rinks, stadiums, medical centres, dormitory complexes, is integrated into the natural-urban landscape, in which the urban space turns into a natural environment (outside the city — the Stolby Nature Reserve and the Sayan Mountains, inside the city — birch avenues and groves, pine forests).

The fourth characteristic is the modern integration into the urban space of new shopping and business centres and large shopping and leisure centres, the architecture of which emphasizes the idea of economic growth, stability and prestige, mobility and variability. A business centre “Pervaya Bashnya” (First Tower) is a skyscraper that dominates the city (134 meters high), and actively influences the formation of the image of the modern Russian city and its citizens as a city of international business and cooperation.

Parks and recreation areas

In Krasnoyarsk, there are all kinds of recreation areas for citizens. Their total number is more than a hundred. Mini-parks are the most numerous. Their amount in the city is more than 50 % of the total number of urban recreations. Squares and parks

take the second and third places in terms of quantity. In total, the city has 23 squares (29.4 %) and 17 parks (21.7 %). A separate category of public places of leisure includes the Botanical Garden named after V.M. Krutovsky, Yenisei River Embankment, district boulevards (in particular, Menzhinsky Boulevard, V. Mayakovsky Boulevard and others). This category of recreation areas composes 14.1 %.

A special role in the formation of recreation areas belongs to sculptures. Using the example of the analysis of the two most iconic themes of sculptural compositions located in the parks and squares of Krasnoyarsk, we will try to show their sign-symbolic role in shaping the image of Krasnoyarsk.

Hero theme

The heroic theme is embodied in the sculptural compositions through various visual images.

First of all, these are portrait sculptural compositions representing individuals who are significant figures in the history of Krasnoyarsk. Among them there are a monument to Andrei Dubensky, the founder of the city (mini-park in the Sovetsky district); a monument to the doctor and priest Valentin Feliksovich Voino-Yasenetsky (Archbishop Luka) (mini-park in front of the Bishop's house in the Zheleznodorozhny district) These are the individuals whose labour activities aimed at the benefit of Krasnoyarsk and its inhabitants become the basis for recognizing them as heroes. Secondly, the heroic theme is embodied in sculpture visualizing the image of a fighter, defender of the city. Such a representative is a monument to a soldier in the Gvardeysky park in the Soviet district. Another artistic means of expressing the heroic theme in sculpture is the depiction of mythological characters. So, the main character of the sculptural fountain located in the Kosmonavtov park of the Soviet district is the mythological hero Ikar (Fig. 1).

Art theme

Quite a large number of sculptural compositions on the theme of art are presented in the territory of recreation areas in Krasnoyarsk. The representatives are the sculptural compositions "The Bremen Town Musicians" (Square of the Hall of Culture named after May 1st, Leninsky district, sculptor: A. Tkachuk), "Harlequin and Colombina" (Yunost Square, Kirovsky district, architect: A. Kasatkin, sculptor: A. Tkachuk); "Abduction of Europe" (Predmostnaya Square, Sverdlovsk district, sculptors: A. Tkachuk, V. Osmushkin, architect: A. Kasatkin); "Schoolchildren" (Solnechny minipark, Leninsky district, sculptor: K. Zinych); sculptures of Apollo,



Fig. 1. Sculptural fountain “Icarus”. Kosmonavtov park in the Soviet district, Krasnoyarsk. Sculptor: A. Tkachuk, architect: A. Kasatkin. 2008

A. S. Pushkin, A. G. Pozdeev, V. I. Surikov, V. V. Mayakovsky. These representatives, firstly, are a group of works, the sign-symbolic forms of which embody fabulous and mythological characters. Secondly, these are sculptural works representing images of real personalities who have made a certain contribution to the development of all-Russian and regional art. The mythologization of artistic images of sculptural compositions and appeal to the image of personalities of all-Russian significance allow us to speak about the continuity of the city’s traditions, the desire to develop in the general flow of the development of the world and Russian culture.

City transport

Krasnoyarsk is served by four main types of urban public transport: buses, trolley buses, trams and city electric trains. According to the Krasnoyarsk Administration’s Department of Urban Transport, the passenger traffic of public transport is about 205 million passengers per year (Transport).

Buses are the main form of urban public transport, as of the end of April 2019, there are 58 bus services operating in Krasnoyarsk covering both banks of the Yenisei.

The left bank is provided by bus services 2 times better than the right one; there are almost as many trans-coastal bus services as there are bus services that do not leave

Table 1. Distribution of bus termini in districts of Krasnoyarsk

City district	Population, people (2016)	Total number of termini, pcs	Those that are connected with termini in districts, pcs						
			Zh/d	Kir.	Len.	Okt.	Sv.	Sov.	Ts.
Zheleznodorozhny (Zh/d)	95 577	10		1	1	2	2	3	1
Kirovsky (Kir.)	116 400	9	1		1		2	4	1
Leninsky (Len.)	148 520	18	1	1		5	6	3	2
Oktyabrsky (Okt.)	177 971	24	2		5	1	4	10	2
Sverdlovsky (Sv.)	140 068	20	2	2	6	4	1	5	
Sovetsky (Sov.)	316 391	27	4	4	3	10	5	1	
Tsentrally (Ts.)	72 007	6	1	1	2	2			

the bank. At the same time, 61 % of all trans-coastal bus services pass through the Kommunalny Bridge; 29 % — through the Oktyabrsky Bridge; very few — through the 777 Bridge and the Nikolaevsky Bridge. This distribution can be partly explained by historical reasons (years of putting the bridges into service), their geographical location (central or peripheral), design features (streakiness) and functionality (combination with the railway, etc.).

Next, let us pay attention to the areas that the bus services connect (Table 1); for this, we will find out in which areas the bus termini are located, where the closure of spatial connections takes place.

Such distribution of bus termini may be due, firstly, to the population of the city's districts, and, secondly, to the geographical position of the districts. In areas with a larger population, a greater number of bus termini is recorded; on the left bank that is traditionally developed better than the right bank, the total amount of public transport termini is more than on the right bank: 67 against 47; in the areas that are transit (Tsentrally, Kirovsky), there are fewer termini than in the peripheral ones. It is interesting that in two districts of the city there are even internal bus services that do not leave the district (22nd and 38th buses).

Trolleybuses and trams in Krasnoyarsk are much less developed than buses. In total there are 5 trolleybus services (4, 5, 7, 8, 13) and 4 tram services (4, 5, 6, 7). But both of these types, in contrast to buses, are “bank-identifying” types of transport: trolleybuses run exclusively along the left bank, trams — along the right bank; in connection with this, tram rails or trolleybus wires are an unmistakable identifier of the Krasnoyarsk bank.

Table 2. Hub stops of Krasnoyarsk bus services

Bus stop	Bank	Quantity of stops
Kinoteatr Luch	Left	23
Muzykalny Teatr (Profsoyuzov)	Left	23
Perensona	Left	23
Predmostnaya Ploshchad' (roundabout)	Right	20
Stadion Lokomotiv (Lenina)	Left	19
Organny Zal (Karla Marksa)	Left	19
Agroprom	Left	18
Matrosova	Right	18
Revoliutsii Ploshchad' (Lenina)	Left	18
Teatr Kukol	Left	18

In Krasnoyarsk, there are 665 city public transport stops¹, among them 392 stops are on the left bank, 271 stops are located on the right bank and 2 — on the islands: Otdykha Island and Tatyshhev Island. Further, let us dwell in detail on the hub stops, through which the maximum number of bus services passes (Table 2).

There are total 659 bus stops in Krasnoyarsk (536 of them are exclusively for buses and are not shared with trolleybuses or trams). Out of 10 stops where the maximum number of bus services stops, 8 stops are located in the historic centre of the city and 2 stops are on the Predmostnaya Ploshchad' (Square), i. e. near the exit from the Kommunalny Bridge that connects the historic centre and the right bank. There are 76 trolleybus stops in Krasnoyarsk and all of them are the bus stops as well. Hub trolleybus stops are concentrated in the area from the Muzykalny Teatr to the railway station, where all 5 trolleybus services pass. There are 53 tram stops in the city, 6 of which are exclusively for trams, the rest are shared with buses.

Names of the stops of urban public transport of Krasnoyarsk are of special interest.

Most often, the names of the stops are related to the peculiarities of the administrative-territorial division of the city — names of streets, neighbourhoods, towns and squares. The names of the stops associated with objects that have ceased to exist or have changed their names are of particular interest. Most of them are in sections “Plant” and “Cinema”; outdated names are characteristic of stops associated with the universities of the city. But the names of the stops that can be placed in the

¹ According to the information dated 27.04.2019 (Bus time).

“Sport” section, on the contrary, are the most relevant, named after the newly built (for the Universiade-2019) facilities. In addition, it can be noted that there are a lot of completely duplicate names in the city, for example, the leaders are “Shkola” (School) (13), “Magazin” (Shop) (9), “Poliklinika” (Polyclinic) (8), “Sady” (Gardens) (7), “Rynok” (Market) (5), “Apteka” (Pharmacy) (4), “Pochta” (Post Office) (4), “Stolovaya” (Canteen) (4), “Khlebozavod” (Bread-baking Plant) (4).

Public safety

A necessary component of the urban environment, of course, is public safety, since it affects the comfortable feeling of citizens on the physical and psychological levels. The high level of public safety is an important criterion in improving the competitiveness of the city in attracting tourists, which, in turn, is included in the list of priorities for the development of Krasnoyarsk.

Ecology in Krasnoyarsk has long been recognized as a factor that does not contribute to comfortable living in the city. Every day, information on air pollution is published on news resources, which causes reasonable anxieties of the people who more and more acutely feel discomfort and threats to their own health. Together with the chaotic construction of the city, which has been conducted in recent decades, social tension in connection with this problem only increases, which very often results in the form of pickets and actions. In addition, for Krasnoyarsk, the potential danger of anthropogenic origin is of no small importance, since there are quite a lot of enterprises on its territory, and in the event of an accident they may cause hazardous substances emissions. In addition, the city is located near the hydroelectric station, which also poses a potential danger. Also, citizens often suffer from smog resulting from seasonal fires in forests located near Krasnoyarsk.

Monitoring the situation on the streets in Krasnoyarsk is carried out through the commissioning of the complex automated system called “Safe City”. The system has been launched in Krasnoyarsk since 2012, and by the time of the Universiade in 2019, the system is already operating in all areas of the city. The installation of surveillance cameras has significantly contributed to the fact that the frequency of such situations has dramatically decreased, and the law enforcement officers can now carry out work on the protection of objects, detection of crimes and control over the situation on the roads of the city more effectively.

The situation with measures to control security in crowded places is also two-fold. On the one hand, the city services are conducting well-functioning work to prevent

extremism and criminal activities. On the other hand, the way in which it is introduced into the architectural environment of Krasnoyarsk cannot be called a successful experience. Since security should contribute to the formation of a sense of comfort among residents, and the presence of a sufficiently large number of checkpoints at many institutions (the number of which has only increased due to the Universiade), fences, forced adjustment of pedestrian routes create discontent and irritation among residents, this situation can be identified as a problem requiring close attention from the city administration.

Conclusion

The considered parameters of the urban environment of Krasnoyarsk allow us to draw the following conclusions.

From the point of view of management, Krasnoyarsk's urban environment is an administrative model, in which processes and platforms for interacting with business structures and civil communities and establishing a balance in the distribution of rights and responsibilities in the field of city management are beginning to develop.

The architectural appearance of Krasnoyarsk is undergoing a number of changes related to the new role of the regional centre as an economic and environmental centre of Siberia. The key features of urban architecture are: the role of the natural landscape (Yenisei, Stolby, hills); conciliarity as the general quality of the public and cultural places of the city; preservation of cultural heritage monuments in the modern urban environment; integration of large shopping and business centres into the urban space.

Parks as the most common types of recreation areas are of great importance in the urban environment of Krasnoyarsk. The main feature of parks is their close connection with urban sculpture, which is dominated by the heroic and art themes (creativity).

Thanks to architecture and sculpture, the city appears as a territory characterized by heroic feats, appeal to the historical past and integration into the national and global context, as well as the territory of symbolic communication through various types of art — music, theatre, literature and visual arts.

Important features of the urban transport are: predominance of buses as the main form of public transport; concentration of the main bus services (trans-coastal and inter-district) in the city centre; the identifying role of trolley buses (left bank) and trams (right bank); “historical memory” of transport stops (preservation of the names of previously existing objects or old names); opportunity for change due to the opening of the fourth bridge.

The situation with public safety in Krasnoyarsk is ambiguous: it is negative from the point of view of ecology and transport problems, and positive from the point of view of attempts to improve the situation with public safety (the Safe City system, measures to control security in crowded places, etc.).

The urban environment of Krasnoyarsk has a rich potential, as well as some positive experience, despite the problems outlined above. With a comprehensive analysis of the current situation and proper planning based on the strong points of the current urban environment, qualitative changes in the urban space of Krasnoyarsk with its unique geopolitical position, landscape, history and character, are possible.

References

Acosta, S.F., Camargo, J.E. (2018). City safety perception model based on visual content of street images. In: *2018 IEEE International Smart Cities Conference (ISC2)*, 1–8.

Avdeeva, E.V., Vagner, E.A., Nademyanov, V.F., Shmarin, N.V. (2016). Gorodskie skvery — ikh rol' v ozelenenii gorodov. (Na primere istoricheskogo razvitiia, obespechennosti i sostoianii skverov g. Krasnoiarska) [City squares — their role in the greening of cities. (On the example of historical development, security and condition of Krasnoyarsk squares)]. In: *Khvoinye boreal'noi zony [Coniferous boreal zone]*, 1–2, 7–15.

Badmaeva, S.E., Zimmerman, V.I. (2015). Antropogennoe zagriaznenie atmosfernogo vozdukh gorodov Krasnoiarskogo kraia [Anthropogenic pollution of the atmospheric air of the cities of the Krasnoyarsk Territory]. In: *Vestnik Krasnoiarskogo gosudarstvennogo agrarnogo universiteta [Bulletin of the Krasnoyarsk State Agrarian University]*, 2, 27–29.

Bezrukikh, V.A., Kuznetsova, O.A., Ligaeva, N.A., Makarova, L.G. (2018). Current Systems of Protected Areas Integrated with Urban Agglomerations. In: *IOP Conference Series: Materials Science and Engineering*, 463(4), 042055.

City of Overland Park community survey: findings report (2017). Available at: <https://www.opkansas.org/wp-content/uploads/2016-ETC-City-wide-survey-Report-February-9-2017.pdf>

City survey: analysis and results (2002). Copenhagen, Denmark. Available at: <http://apps.who.int/iris/bitstream/handle/10665/107400/e75445.pdf;jsessionid=CE002E349E2E79E1189381139CD8477C?sequence=1>

Demidenkov, G.A., Shadrin, I.A. (2018). Sozdanie i sodержanie ob'ektov landshaftnoi arkhitektury dlia blagopriiatnoi gorodskoi sredy Krasnoiarska [Creation

and content of objects of landscape architecture for favourable urban environment of Krasnoyarsk]. In: *Vestnik Krasnoyarskogo gosudarstvennogo agrarnogo universiteta* [Bulletin of Krasnoyarsk state agrarian university], 6 (141), 308–313.

European commission. *Metis GmbH* (2016). Ex post evaluation of Urban development and Social infrastructures. Available at: http://ec.europa.eu/regional_policy/sources/docgener/evaluation/pdf/expost2013/wp10_final_annex_en.pdf

Federal'naya tselevaya programma "Ukrepnenie edinstva rossiiskoi natsii i etnokul'turnoe razvitiye narodov Rossii (2014–2020 gody) [Federal target program "Strengthening the unity of the Russian nation and the ethno-cultural development of the peoples of Russia (2014–2020)"]. Available at: https://cdnimg.rg.ru/pril/84/67/83/718_ghu.pdf (accessed 22 April 2019).

Gabsalikhova, L., Sadygova, G., Almetova, Z. (2018). Activities to convert the public transport fleet to electric buses. In: *Transportation research procedia*, 36, 669–675.

Garau, Ch., Pavan, V.M. (2018). *Evaluating urban quality: indicators and assessment tools for smart sustainable cities*, *Sustainability*, 10, 575.

Haque, M.M., Chin, H.C., Debnath, A.K. (2013). Sustainable, safe, smart — three key elements of Singapore's evolving transport policies. In: *Transport Policy*, 27, 20–31.

Herzberg, L. Ia. (2013). Kachestvo gorodskoi sredy: problemy proektirovaniia i realizatsii [The quality of the urban environment: problems of design and implementation]. In: *Gradostroitel'stvo* [Urban planning], 2, 29–33.

Il'ina, I.N. (2015). Kachestvo gorodskoi sredy kak faktor ustoichivogo razvitiia munitsipal'nykh obrazovaniy [The quality of the urban environment as a factor in the sustainable development of municipalities]. In: *Imushchestvennye otnosheniia v Rossiiskoi Federatsii* [Property relations in the Russian Federation], 5 (164), 69–82.

Ivanova, T.E. (2013). Kachestvo zhizni i bezopasnost' gorodskoi sredy [Quality of life and safety of the urban environment]. In: *Chrezvychainye situatsii: promyshlennaia i ekologicheskaya bezopasnost'* [Emergencies: industrial and environmental safety], 1(2), 135–149.

Kiianenko, K.V. (2011). Arkhitektura i bezopasnost': "Zashchishchaushchee prostranstvo" Oskara N'umana [Architecture and Security: "Protecting Space" by Oscar Newman]. In: *Arkhitekturnyi vestnik* [Architectural Herald], 5, 87–92.

Kukina, I.V., Fedchenko, I.G. (2013). Gorod, prigodnyi dlia zhizni [City suited for life]. *Materialy pervoi Mezhdunarodnoi nauchnoprakticheskoi konferentsii "Sovremennye problemy arkhitektury, gradostroitel'stva, dizaina"* [Materials of the first International scientific-practical conference "Modern problems of architecture,

urban planning, design”]. Krasnoyarsk. Available at: <http://iad.sfu-kras.ru/files/usr/Organic.pdf> (accessed 22 April 2019).

Kukina, I.V., Fedchenko, I.G. (2015). Gorod, prigodnyi dlia zhizni [City suited for life]. In: *Materialy II Mezhdunarodnoi nauchno-prakticheskoi konferentsii “Sovremennye problemy arkhitektury, gradostroitel’stva, dizaina”* [Materials of the II International Scientific and Practical Conference “Modern Problems of Architecture, Urban Planning, Design”]. Krasnoyarsk.

Kyaw, T., Oo, N.N., Zaw, W. (2019). Building travel speed estimation model for Yangon City from public transport trajectory data. In: *Advances in Intelligent Systems and Computing*, 744, 250–257.

Lionjanga, N., Venter, C. (2018). Does public transport accessibility enhance subjective well-being? A study of the City of Johannesburg. In: *Research in Transportation Economics*, 69, 523–535.

Lydon, M., Garcia, T., Duany A. (2015). *Tactical urbanism. Short-term action Long-term change*, Island press.

Merkulova, M.E. (2005). *Arkhitektura Krasnoiarska XIX-nachala XX veka. Stilevye kharakteristiki* [Architecture of Krasnoyarsk in 19th — early 20th centuries. Style characteristics], Krasnoyarsk.

Merkulova, M.E. (2017). Klassitsizm — osnova formirovaniia arkhitektury Krasnoiarska 1800–1850-kh godov [Classicism — the basis of the formation of the architecture of Krasnoyarsk in the 1800–1850’s]. In: *Proekt Baikal* [Project Baikal], 14 (52), 145–147.

Nguyen, X.P. (2019). The bus transportation issue and people satisfaction with public transport in Ho Chi Minh city. In: *Journal of Mechanical Engineering Research and Developments*, 42(1), 10–16.

O proekte “Goroda budushchego” na saite Fonda razvitiia mediaproektov i sotsial’nykh program [About the project “Cities of the Future” on the website of the Foundation for the Development of Media Projects and Social Programs]. Available at: <http://www.gladway.ru/projects/> (accessed 22 April 2019).

Official web-site of Krasnoyarsk city administration. Available at: <http://www.admkrsk.ru/administration/structure/pages/default.aspx>

Podluzhnaia, A.S., Badmaeva, S.E. (2016). Nakoplenie tiazhelykh metallov v drevesnykh rasteniiakh skverov i parkov pravoberezh’ia Krasnoiarska [Accumulation of heavy metals in woody plants in parks on the right bank of Krasnoyarsk]. In: *Vestnik Krasnoyarskogo gosudarstvennogo agrarnogo universiteta* [Bulletin of the Krasnoyarsk State Agrarian University], 8, 91–96.

Prognoz sotsial'no-ekonomicheskogo razvitiia goroda Krasnoyarska na 2017–2019 gody (kratkii variant) [The forecast of the socio-economic development of Krasnoyarsk for 2017–2019 (short version)] (2016).

Reznikova, K.V., Koptseva, N.P., Seredkina, N.N., Zamaraeva, J.S. (2016). Regional specifics of social values and their impact on Central Siberian territories' modernization (based on research of Krasnoyarsk region). In: *Economic Annals-XXI*, 160(7–8), 92–95.

Sanina, A.G., Dzhafarli, N.Y., Korshunova, E.V. (2016). Sovremennii gorod kak ob'ekt publichnogo upravleniia [A modern city as the object of public management]. In: *Gosudarstvennoe upravlenie, Elektronnyi bulletin [Public administration, Electronic bulletin]*, 56, 151–165.

Sertakova, E.A. (2015). *Sotsiokul'turnoe prostranstvo sovremennogo rossiiskogo goroda (na materiale analiza g. Krasnoyarska) [Socio-cultural space of the modern Russian city (based on the analysis of the city of Krasnoyarsk)]*. Krasnoyarsk.

Smolina, M.G., Koptseva, N.P., Sertakova, E.A. (2018). Literature Review on the Urban Environment of Krasnoyarsk. In: *Journal of Siberian Federal University. Humanities & Social Sciences*, 10, 11, 1653–1672.

The official website of the XXIX World Winter Universiade 2019. in Krasnoyarsk (2019). Available at: https://krsk2019.ru/ru/universiade_objects

Townsend, A.M. (2013). *Smart cities: big data, civic hackers, and the Quest for New Utopia*, N.Y.

Transport. Krasnoyarsk. Administratsiya goroda [Transport. Krasnoyarsk. City government]. Available at: <http://www.admkrsk.ru/citytoday/transport/Pages/default.aspx>

Unagaeva, N.A. (2018). Dal'neishee razvitie osobo okhraniaemoi prirodnoi territorii “Stolby”: zapovednik ili natsional'nyi park? [Further development of the specially protected natural territory of “Stolby”: reserve or national park?]. In: *Vestnik Yuzhno-Ural'skogo gosudarstvennogo universiteta. Serii: Stroitel'stvo i arkhitektura [Bulletin of the South Ural State University. Series: Building and Architecture]*, 18 (2), 28–38.

V International science practice conference “Management sciences in the modern world”. The management of cities and agglomerations (2017). Available at: <https://management-science.ru/site/public/elfinder/Sbornik/City%20Management.pdf>

Veselova, A.O., Khakelevich, A.N., Ezhova, L.S. (2018). Perspektiva sozdaniia “umnykh gorodov” v Rossii: sistematzatsia problem I napravlenii ih reshenia [The prospects of creation of “the smart cities” in Russia: systematization of the problems

and the ways of its solvation]. In: *Vestnik Permskogo universiteta, Ekonomika* [The Bulletin of Perm University, Economy], 13 (1), 75–89.

Vremia avtobusa [Bus time]. Available at: <https://www.bustime.ru/krasnoyarsk/stop/>
Yandex. Karty [Yandex. Maps]. Available at: <https://yandex.ru/maps/62/krasnoyarsk/?ll=92.852572%2C56.010563&z=12>

Городская среда Красноярска:

основные характеристики

**Ю.С. Замараева^а, А.В. Кистова^{а, б},
М.А. Колесник^а, Н.П. Копцева^а,
К.В. Резникова^а, Н.Н. Середкина^а,
А.А. Ситникова^а**

^а*Сибирский федеральный университет
Россия, 660041, Красноярск, пр. Свободный, 79*

^б*Красноярский художественный музей им. В.И. Сурикова
Россия, 660049, Красноярск,
ул. Карла Маркса, 36 / ул. Парижской Коммуны, 20*

В статье рассматриваются основные особенности городской архитектуры Красноярска, специфика общественного транспорта и доступность городского пространства для жителей, проблемы общественной безопасности в городе, особенности парков и общественных зон отдыха, своеобразии городского управления и вовлеченность горожан в процессы управления городом.

Исследование основано на современных подходах к рассмотрению городской среды как результата взаимодействия жителей и городского управления. Статья опирается на широкий круг источников: современные исследования городской среды в России и за рубежом, официальные сайты администрации и городских служб, данные статистики, современные исследования городской среды Красноярска, проведенные учеными Сибирского федерального университета.

Результаты исследования фиксируют переходное состояние городской среды Красноярска, ее богатый потенциал, обозначают основные проблемы и перспективы дальнейшего развития.

Ключевые слова: городская среда, Красноярск, управление городом, архитектура города, городской транспорт, парки и зоны отдыха, общественная безопасность в городе.

Исследование выполнено при финансовой поддержке Российского фонда фундаментальных исследований, Правительства Красноярского края, Красноярского краевого фонда науки в рамках научного проекта «Трансформация городской среды Красноярска в 1991–2017 гг.».

Научная специальность: 24.00.00 — культурология.
