

CONSERVATION OF THE WAR HERITAGE WITH THE MEMORIAL FUNCTION:
GERHARDT'S MILL CASE STUDY IN VOLGOGRAD, RUSSIA

MASTER'S DEGREE THESIS

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Master's degree course in Architecture for Heritage

**Conservation of the war heritage with the memorial function:
Gerhardt's Mill case study in Volgograd, Russia**

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TABLE OF CONTENTS

Abstract	6		
Part 1 – War heritage concept	9		
1. The characteristics of the war heritage	10		
1.1 Which assets does war heritage involve, and why does it have to be preserved?	10		
1.2 Problems with the preservation of the war heritage	12		
2. Development of heritage preservation in Russia	13		
2.1 18th- beginning of 20th centuries	13		
2.2 Soviet cultural context and its role in the development of the approach to architectural heritage	13		
2.3 Great Patriotic War influence on the approach to the architectural heritage	14		
2.4 Post-war heritage preservation development	15		
		3. Development of the war heritage approach in Russia	18
		3.1 The First World War	18
		i. Development of awareness of the cultural heritage during the war in Russia	
		ii. Heritage in the post-First World War period in Russia compared to Europe	
		3.2 The Second World War	22
		i. Urban restoration and its principles	
		ii. After Second World War urban restoration - Veliky Novrogod case	
		3.3 War memorialization in current Russia	28
		i. Rzhev memorial monument	
		4. War heritage preservation	32
		4.1 Introduction	32
		4.2 Case studies	36
		5. Enhancement of the war heritage	46
		5.1 European cultural routes	46
		5.2 Russian cultural routes	49

Part 2 – Gerhardt’s Mill case study	54	4.2 Ongoing actions with the Mill	91
1. Introduction	55	5. Project strategies	93
2. Historical analysis	57	Conclusion	95
2.1 Gerhardt’s Mill during the Second World War	59	Bibliography	96
3. Territorial analysis	62	Project boards	
3.1 Volgograd region: urban history and foundation	62		
3.2 Volgograd city	66		
i. History of the Volgograd city			
ii. Spatial forming of the city Traritsyn-Stalingrad-Volgograd			
iii. Heritage and tourism of the Volgograd city			
3.3 Localization of the Mill and its’ surrounding	84		
4. Structural description and spatial analysis of Gerhardt’s Mill	87		
4.1 Analysis of the state of conservation	89		

ABSTRACT

The topic of preserving war heritage has been relevant for several centuries; it is also important nowadays based on different assets. During the research, the values of war heritage and the reasons to preserve it were identified, as well as the problems of its' preservation in different time periods and parts of the world.

While working on the thesis research, strategies for preserving the war heritage after the First and Second World Wars were analyzed, comparing Russian and European approaches. For a deeper understanding of the Russian example, the formation of the topic of heritage conservation is also analyzed, starting from the foundations of the idea of architectural heritage preservation, ending with an analysis of the influence of the Great Patriotic War on the approach towards heritage monuments. Using examples from Russia, Europe, and Asia, different approaches are shown, from cases related to the First World War to present conflicts. The enhancement of the war heritage by considering it as a part of cultural routes is shown as a necessary step along with preservation.

The case study of Gerhardt's Mill, a monument to the Second World War located in Volgograd, is taken as the basis for a more detailed study of the war heritage of Russia. The goal of the thesis

research is, to emphasize the significance of the mill as a war heritage of the Volgograd region, Volgograd city, and Russia, to propose strategies for the restoration of the monument. For this purpose, a territorial, historical and state of conservation analysis of the monument was done. As a result, a detailed short-term strategy was proposed for preserving the monument, reducing the risk of collapse and the progression of decay, and giving the opportunity for a long-term restoration program with a view to further use as a tourist site.

ABSTRACT

La conservazione del patrimonio di guerra, tema rilevante da diversi secoli, è tutt'oggi un argomento importante sulla base di diversi valori. Nel corso della ricerca sono state individuate qualità e ragioni per preservarlo, in aggiunta alle problematiche della sua conservazione in diversi luoghi e periodi temporali.

Nella presente tesi sono state analizzate le strategie per preservare il patrimonio danneggiato durante la Prima e la Seconda Guerra Mondiale, confrontando l'approccio russo con quello europeo. Per una maggiore comprensione dell'esempio russo, viene approfondita l'analisi riguardante la formazione del tema della conservazione del patrimonio, partendo dai fondamenti dell'idea di conservazione dei beni architettonici, per finire con un'analisi dell'influenza della Grande Guerra Patriottica sull'approccio al patrimonio. Utilizzando esempi provenienti da Russia, Europa e Asia, vengono mostrati diversi approcci, dai casi legati alla Prima Guerra Mondiale ai conflitti attuali. La valorizzazione del patrimonio di guerra attraverso una sua inclusione in percorsi culturali si presenta come un'azione necessaria insieme alla sua conservazione.

La fabbrica Gerhardt, situata a Volgograd e divenuta monumento alla Seconda Guerra Mondiale, viene presa come caso studio per un approfondimento

del patrimonio bellico della Russia. La tesi si propone di enfatizzare l'importanza del monumento in quanto patrimonio di guerra all'interno della città di Volgograd, dell'intera regione e della Russia, presentando strategie per il suo restauro. A questo proposito è stata effettuata un'analisi territoriale, storica e dello stato di conservazione del monumento. Successivamente è stata proposta una strategia dettagliata a breve termine per la sua preservazione, riducendo il rischio di crollo e la progressione del degrado, dando l'opportunità per un programma di restauro a lungo termine in vista di un ulteriore utilizzo come sito turistico.

PART 1 - WAR HERITAGE CONCEPT

1. THE CHARACTERISTICS OF THE WAR HERITAGE

1.1 Which assets does war heritage involve, and why does it have to be preserved?

With the term ‘war heritage’ come such meanings as ‘preservation’ and ‘commemoration’. War heritage contains tangible and intangible elements, such as documents, stories, objects, and artifacts, and architecture – buildings with the function of museums, memorials, and historical landscapes which could help to remember and understand the impact of war on society, increase the meaning of peace, and honor the sacrifices of people involved. In Russian literature, the term ‘war heritage’ usually refers only to newly built objects such as monuments, memorials, and others, while a lack of attention is paid to the preservation and conservation of buildings involved in war events.

The importance of the preservation of the war heritage is declared by many assets:

- **Historical value.** War heritage is directly linked to history. It allows people to understand the historical events, circumstances, and experiences associated with war conflicts.
- **Memory.** Post-war heritage plays an important role in memorializing victims of armed conflict. For people who survived the war, this kind of legacy can provide psychological support - the ability to cope

with painful memories without forgetting them.

Emphasizing this asset, Nicolas Bullock wrote:

‘Both historiography and preservation should aim at a full and significant re-integration of war and post-war heritage into our present-day and future lives. That is indeed why heritage is preserved: ‘learning from history’ through ‘living with history’. As wars go on unstoppable and heritage - material and immaterial - continues to be destroyed by ever more aggressive war violence, profound understanding and radical preservation of war and post-war heritage could even become a critical reference for building peace.’¹

- **Education.** This asset is based on the fact that war heritage provides learning opportunities, especially for the younger generation. It allows them to understand the meaning of war from many perspectives, especially its influence on the world and society. Museums, monuments, and historical sites serve as valuable educational tools.
- **Tourism and economics:** The presence of the war heritage object increases tourism, which

¹NICHOLAS BULLOCK, Luc Verpoest (2021) Living with History, 1914-1964: Rebuilding Europe after the First and Second World Wars and the Role of Heritage Preservation / La reconstruction en Europe après la Première et la Seconde Guerre Mondiale et le rôle de la conservation des monuments historiques.

influences country and city economics by providing new opportunities and attracting people to visit this place. Based on that, there is a possibility to create touristic routes that contain several places of war memory.

- **National Identity.** War heritage is associated with national identity and collective memory. This aspect is due to the fact that memorializing war and military events that people went through strengthens the sense of unity, patriotism, and identity. Preservation of the war heritage helps to save the cultural identity of the country, to remember the origins and history of the people, changes and events that influenced the formation of the country.

- **Peace value.** The post-war legacy can serve as a reminder of the importance of peace. As a reminder of losses in wartime, the message is conveyed to people about how important it is to avoid military conflicts and live in peace.

However, there are several difficulties that can be faced while working with war heritage preservation.

*'Survivals from military operations in particular may have a great historic, military, documentary and symbolic value, but their value as an experience is often small or difficult to 'read', their artistic value is non-existent, and their physical condition often fragile. Even if the will to preserve the site is there, the preservation may go wrong for various reasons.'*² (Jo Braeken, 2021).

²Jo Braeken (2021) The Remains of War and the Heritage of Post-war Reconstruction in Flanders Today - NICHOLAS BULLOCK, Luc Verpoest Living with History, 1914-1964: Rebuilding Europe after the First and Second World Wars and the Role of Heritage Preservation

1.2 Problems with the preservation of the war heritage

Working with the legacy of war contains many problems that might prevent the full appeal of monuments to culture. As a result, many objects damaged during the war were not restored, and many lost their cultural connection since they were reconstructed without reference to the original.

Part of the problems related to the fact that after the war the attention of the authorities was concentrated on the as fast as possible renovation of the primary functions of structures. By those massive actions, many architectural objects lost their cultural part, since functional reconstruction was made with firstly just technical side. The priority in the first months after the wars was to restore water and electricity supplies, road connections, and the provision of necessary goods.

The other side of the reconstruction after the war was connected with lack of funding – especially in countries that suffered the most from destruction during battles and occupations. That's why, for example, more forces for the reconstruction were oriented toward the biggest cities and their centers and many heritage objects in smaller ones were lost or left without needed interventions. For example, after the First World War reconstruction

in Belgium was based more on economic motives than aesthetics³.

In the social part of the post-war period, in many cases, there was a need for fast residential sector building. This accent on the function of primary needs switched attention from cultural heritage objects.

It is also important to mention that problems exist not only with the technical part of post-war reconstruction but also with the ideological one. Since in many countries political ideology changes after the war (especially if we consider cases of civil wars), the restoration of the existing heritage was often directly related to the idea of returning to the old days. For this reason, more attention was given to the creation of new style architecture as a symbol of the new ideology. In Russia, this particular problem was often dominant, since national ideology was in the foreground. A similar problem was recognized in Germany after World War II. The purpose of post-war reconstruction has been discussed and questioned many times due to the enormous emergence of ideology of the regime in architecture before the war. Such architecture served as a connection with the regime that one wanted to completely exclude from the future of the country and not leave any memories of it.

³Marnix Beyen (2021) Chapter: Art and Architectural History as Substitutes for Preservation German Heritage Policy in Belgium during and after the First World War - NICHOLAS BULLOCK, Luc Verpoest Living with History, 1914-1964: Rebuilding Europe after the First and Second World Wars and the Role of Heritage Preservation - Leuven University Press

⁴Emmanuel Doutriaux (2021) Chapter: La fortune critique de la reconstruction Présence de l'histoire, politique du lien, poétique de l'intervalle - NICHOLAS BULLOCK, Luc Verpoest Living with History, 1914-1964: Rebuilding Europe after the First and Second World Wars and the Role of Heritage Preservation - Leuven University Press;

2. DEVELOPMENT OF HERITAGE PRESERVATION IN RUSSIA

2.1 18th- beginning of 20th centuries

From the 18th century to the beginning of the 20th century, most of the cultural heritage monuments were the property of the Orthodox Church. Religious and church architecture, together with other subjects of art, were seen as the best achievements of Russian architects and artists. For many years, the attitude towards cultural heritage in Russia was directly related to the church and religion: it made the process of forming the protection system for heritage monuments much more complicated. The difficulty of developing such a system increased due to the constant change in property relations from one entity to another.

Interest in ancient 'subjects' grew during Peter the Great's reign and his desire to learn Russian history, but this did not find a response in the tsar's closest community. Still, some acts related to the protection of the 'ancient monuments' were declared in 1722. Later, decrees related to the protection of heritage monuments appeared in the mid-19th century under Nicholas the First. The architect recommended turning to the traditions of Ancient Rus' and Byzantium. This entailed the creation of a number of Construction Decrees. In the 60s of the 19th century, a new direction of historical science was born: church archeology. When church museums

appeared, their task was to preserve and study objects of historical value. Till the beginning of the 20th century, the meaning of the cultural heritage monument was directly connected with the church objects; in 1911, in «Regulations on the Protection of Antiquities» church heritage was highlighted in a separate sector. Moreover, the synod (the highest ecclesiastical institution of the Orthodox Church), according to this law, had more rights and control. This was the cause of a lot of criticism from the side of art and science organizations.

2.2 Soviet time and its role in the development of the approach to architectural heritage

After the February Revolution (1917), after a statement on 'the great heritage of our ancestors', the property of the church transferred to state ownership. And on October 5, 1918, the 1st Law of the Protection of the Heritage took place. Changes in power were the reason why architectural heritage still had unclear status—architecture in those days was directly connected with the national identity and represented ideology and power. According to this, the primary reason for the preservation of monuments was educational character; the main role of heritage protection functions was given to local museum authorities. The idea of national identity became mainstream during the Soviet era,

which partly influenced the architectural sphere: on April 14, 1918, the “Decree on the demolition of monuments erected in honor of the tsars and their servants and the creation of plans for monuments to the Russian Socialist Revolution“ was issued. Immediately after this, the “Monumental Propaganda Plan“ was released, which included the placement of 69 statues in honor of figures of the revolution. These monuments were planned to be erected in major cities in Russia, primarily in Moscow.

The problem of the preservation of cultural heritage was also increased by the appearance of the industrialization process during 1931–40, which required financing. Big parts of museum collections were removed, and many historical museum buildings started to be used for other ‘more practical’ functions. There was also no stability in any strategies for the protection of the heritage because of the often changing responsibilities between different authorities. On August 10, 1933, the first list of heritage monuments was created, but it was followed by a lot of cuts to the monuments, so the final result was a reduction of the preserved buildings. Architecture still wasn’t taken as a national heritage, caused by doubting the correctness of attention to ‘old’ buildings toward the new Soviet ideas and values; in the first place, it

was cult to ‘new’. In the USSR, the attitude toward the before-revolution heritage was connected with the idea of bringing back ‘old ideology’; moreover, people forcing the preservation of before-revolution monuments were ricked to become enemies against the Soviet ideology.

2.3 Great Patriotic War influence on the approach to the architectural heritage

The Great Patriotic War changed the approach to architectural heritage. Due to the large amount of destruction during the war, the preservation of heritage took on a patriotic character and was an element of war propaganda. Destroyed heritage started to have a metaphorical character, emphasizing how cruel the enemy was.

22 May 1947 - A decree of the Council of Ministers of the RSFSR declared to increase protection of heritage monuments. The architectural committee was allowed to do reconstruction and demolition only in unique cases. Also, tighter regulations for the use of the monuments were given: historical buildings could be used only according to the functions they projected for or transformed into museums. The attitude changed not only for historical buildings but also for the city landscapes. Architects paid attention to the pre-revolution heritage while city planning works. More and

more 'Soviet' and 'Russian' (before revolution) architecture started to become unique category.

The after-war ideology, which declared architectural heritage preservation as a national value and patriotic duty, however, met with a decrease in attention to historical monuments during the Khrushchev era. Basically, Khrushchev wanted to switch from the Stalinist ideology to the earlier one. The «Decree on Architectural Excesses» of 1955 banned 'unnecessary' decorative elements and other details of the buildings that weren't worth the cost. Together with this, huge and fast modernization took place, followed by reconstruction of the cities, fast building, and a cult of functionality. A famous example of Khrushchev architecture – standard housing. The reason for those actions was the after war industrialization process: the building of a lot of factories and industrial buildings led people to move to the big cities and required a lot of living areas.

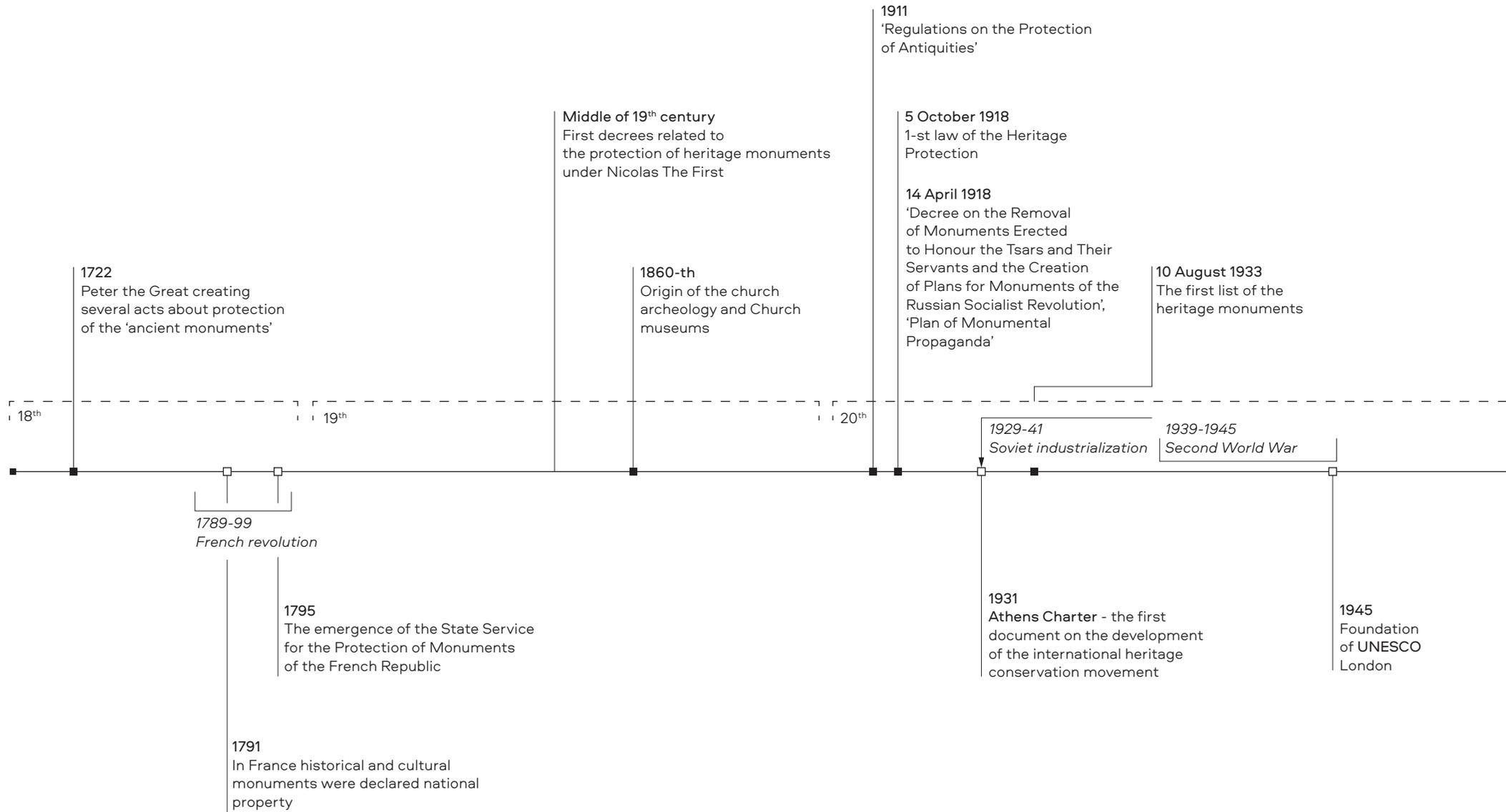
2.4 Post-war heritage preservation development

Only after 1960th the attention to the architectural heritage increased back and became more widely understood. Increased also the interest in the architecture itself. And still, the idea of architecture was strongly connected with politics.

In 1976, the USSR Law «On the Protection and Use of Historical and Cultural Monuments» appeared, where the principles of state protection and state registration of historical and cultural monuments were set out for the first time, and later it was shown more detailed in 1978 in the similar name law by the RSFSR.

Compared to the main events in European countries from the 18th to 21st centuries, it's clear that Russian development was on the step back and the main documents related to the protection of cultural heritage were taken later. In 2002, the State Duma adopted the Federal Law «On the objects of cultural heritage of the peoples of the Russian Federation».

DEVELOPMENT OF HERITAGE PRESERVATION - COMPARATIVE TIMELINE



22 May 1947

A decree of the Council of Ministers of the RSFSR declared to increase protection of heritage monuments

1955

'Decree on Architectural Excesses'

1976

The USSR Law "On the Protection and Use of Historical and Cultural Monuments"

2002

The State Duma adopted the Federal Law "On the objects of cultural heritage of the people of the Russian Federation."

21st

RUSSIA

EUROPE

1964

Venice Charter - "International Charter for the Conservation and Restoration of Monuments and Sites"

1956

Foundation of ICCROM - The International Centre for the Study of the Preservation and Restoration of Cultural Property

1954

The International Convention and Protocol "On the Protection of Cultural Property in the Event of Armed Conflict" at the initiative of UNESCO at the Hague Conference

15 October 2003

Charter on the Preservation of Digital Heritage - UNESCO charter creating a new legacy – the digital heritage Paris, France

17 October 2003

Convention for the Safeguarding of the Intangible Cultural Heritage - UNESCO Convention considering the importance of the intangible cultural heritage; Paris, France

3. DEVELOPMENT OF THE WAR HERITAGE APPROACH IN RUSSIA

3.1 The First World War

i. Development of awareness of the cultural heritage during the war in Russia

The idea of the war heritage in Russia started to develop during the time of the First World War. Even though the topic of the preservation of cultural heritage played an important role during the war events, connected with the national ideologies. Already in pre-war times, awareness began of the need for state participation in the formation of the protection of cultural heritage monuments. During the war, the goal of the government was to save as much as possible historical monuments and heritage objects on the territories controlled by the Russian Empire and important monuments on the enemy lands. Those actions were supposed to show a country as a civilized one and switch interpretations of the Russian Empire as a culturally undeveloped place.

The cultural upsurge became the basis for the emergence of a war heritage itself. Along with representatives of the Academy of Sciences and the Committee for the Protection of Heritage Monuments, many artists - writers, engineers, architects, and painters - went to the front. Many works devoted to the war appeared - sketches and publications, showing the idea of the cruel

destruction of historical monuments. Subsequently, many works of art became part of the exhibition «At War» in 1916. The same things were described in poetry and prose by Russian authors.

Since 1914, many expeditions of scientists, archaeologists, architects, and other specialists have been organized in order to evacuate and preserve cultural heritage monuments. One of the significant scientific enterprises was the historical and archaeological expedition to Trebizond; The Russian expedition worked in Turkey during the summer months of 1916 and 1917.

ii. Heritage in the post-First World War period in Russia compared to Europe

The First World War in Russia is considered a «forgotten» war. That's caused by much bigger attention to the Second World War and also a very small amount of historical places with the memory of the First World War. As a result of the negative attitude towards the war, not only were monuments not erected, on the contrary, in a number of places (Leningrad, Moscow, Vyazma and other cities) existing ones were destroyed. The reason for their destruction was motivated by ideological considerations or was associated with the low cultural level of officials and the lack of hereditary consciousness. However, in the post-

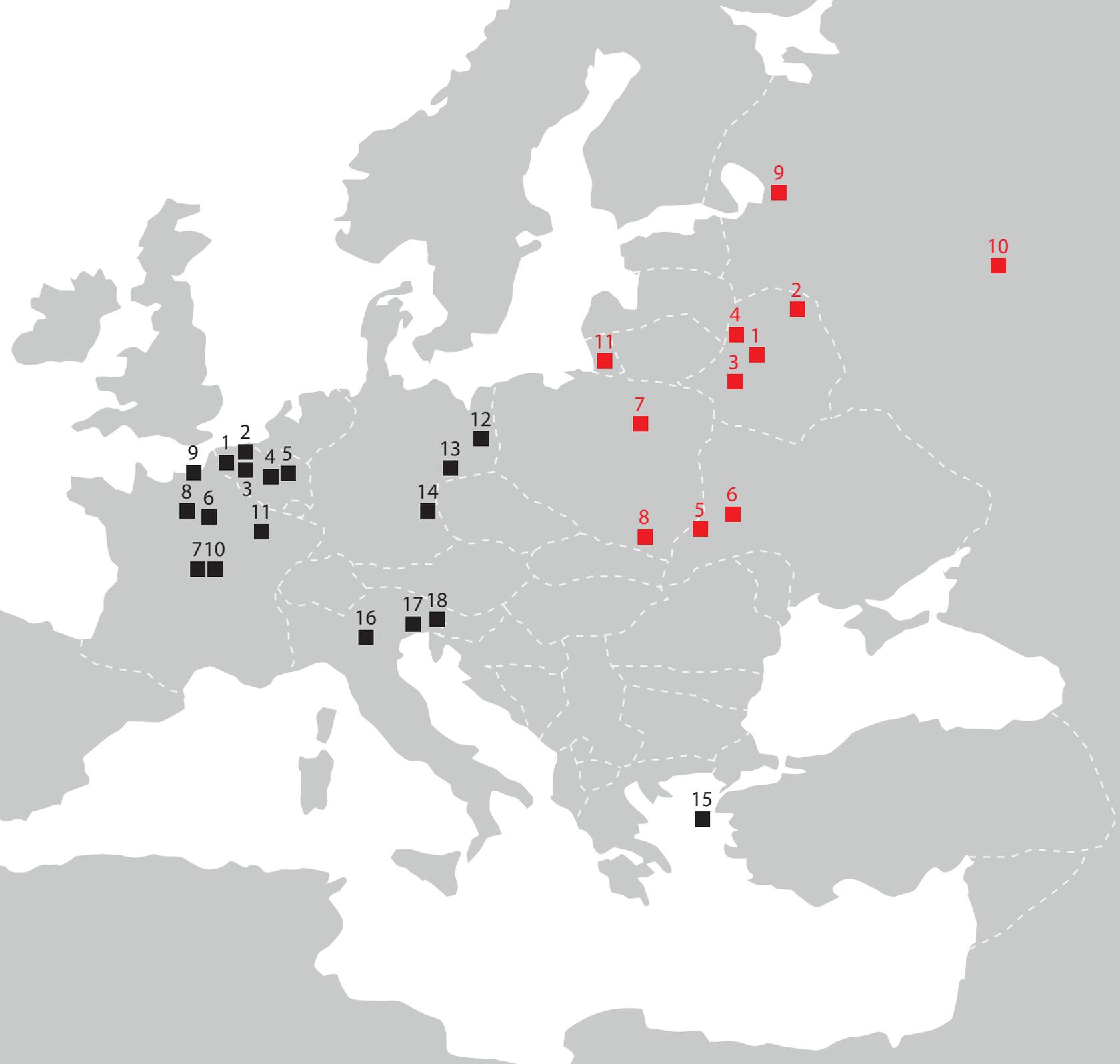
war period, along with numerous written works, the task was to perpetuate the memory of heroes and their feats associated with memorial and war memorial work, the arrangement of cemeteries and burials, the installation of monuments, the creation of memorials, museums, archives, and reference and information centers.

It is important to highlight that the presence of the Civil War increased the problem of memorializing the First World War in the USSR; at the same time, it was different in Western Europe, where much more effort was made according to war memorialization. Also, the absence of important battlefields on USSR territory was the reason why in Europe there are a larger number of First World War memorials and heritage monuments. Most battle places were concentrated on the Western Front, in Belgium and France, and later became spots for post-war memorials.

The largest number of tourists and pilgrims visit the battle sites on the Western Front. And although the Second World War swept through Belgium and France, and after it a lot of land was built up, in Western Europe there are a large number of surviving battlefields and war memorials created on them, which stretch for 700 km from the Belgian coast in the north to the Swiss border in the south.

In Belgium, for example, near the city of Waregem, there is an American military cemetery and memorial called «Flanders Fields», which consists of reconstructed trenches on poppy-covered battlefields.

In comparison, in the USSR (Russia), people began to actively think about the need to perpetuate the memory of Russian soldiers - heroes of the First World War in the 1980s and 1990s, especially in 1988 - the year of the 70th anniversary of the end of the war. A number of public organizations initiated appeals to the government and the Ministry of Defense of the USSR about the need to restore destroyed memorials (for example, the All-Russian Military Brotherly Cemetery at the Church of All Saints on Sokol) and create new ones. In memory of the heroes of the «Great War» in the 2000s, new monuments began to be erected in different regions of Russia, memorial plaques were installed, and names were given to streets and educational institutions. For example, in 2008, a monument to the heroes of the First World War was built in the city of Pushkin, in the suburbs of St. Petersburg. The establishment took place on the day of the 90th anniversary of the end of the war on the site of the Brotherly Cemetery, destroyed during Soviet times.



FIRST WORLD WAR HERITAGE

■ EASTERN FRONT

■ WESTERN FRONT



EASTERN FRONT MONUMENTS

In Belgium:

- 1 - Tyne Cot Cemetery and Memorial (fig.1)
- 2 - Langemar German War Cemetery
- 3 - Saint-Julien War Memorial near Ypres
- 4 - Archive Center and Library "In Flanders Fields" in Ypres
- 5 - Royal Museum of the Armed Forces and Military History in Brussels.

In France

- 6 - British War Memorial to the Missing at Thiepval (fig.2)
- 7 - Tomb of the Unknown Soldier in Paris
- 8 - Newfoundland Memorial Park and Cemetery at Beaumont-Hamel near Albert
- 9 - Etaples War Cemetery north of Etaples,
- 10 - Army Museum in Paris,
- 11 - Duamont Ossuary and Verdun Memorial in the village of Duamont

In Germany:

- 12 - Luftwaffe History Museum in Berlin
- 13 - Bavarian War Museum
- 14 - Military History Museum in Dresden

In Greece:

- 15 - International Allied Cemetery of the Entente near the town of Moudros on the island of Lemnos in the Aegean Sea (fig.3).

In Italy:

- 16 - Italian War Memorial and Pantheon in Fogliano on Mount Sei Busi
- 17 - Museum of the First World War in Veneto
- 18 - Redipuglia war memorial (fig. 4)



Figure 1 - Tyne Cot Cemetery and Memorial
Source:
https://www.history.org.uk/library/1407/0000/0159/tyne_cot_cemetery.jpg

WESTERN FRONT MONUMENTS

In Belarus:

- 1 - Memorial on the site of the Minsk Fraternal Cemetery in Minsk (fig.4)
- 2 - Memorial complex near the village of Russkoye Selo
- 3 - German memorial and cemetery near the village of Bolshaya Kolpenitsa
- 4 - German military cemetery No. 361 and a monument near the village of Desyatniki

In Ukraine:

- 5 - Memorial to the Austrian and Russian soldiers near the village of Guich, Lviv region
- 6 - monuments to Russian and Austro-Hungarian soldiers in the cemetery of the city of Zaleshnik Ternopil region

In Poland:

- 7 - Military cemetery with a memorial sign and an Orthodox cross to soldiers of the 41st Siberian Rifle Regiment in the village of Chojnowo, Przasnysz County, Mazovia Voivodeship
- 8 - Military Cemetery No. 123, where soldiers of the Russian, German and Austro-Hungarian armies are buried in the village of Luzna-Pustki, Gorlice County, Lesser Poland Voivodeship

In Russia:

- 9 - Museum "Russia in the Great War" in Tsarskoye Selo near St. Petersburg
- 10 - Monument to the heroes of the First World War on Poklonnaya Hill in Moscow (fig.5)
- 11 - Monument to the heroes of the First World War in Kaliningrad



Figure 2 - British War Memorial to the Missing at Thiepval
Source:
<https://dorkingmuseum.org.uk/wp-content/uploads/Thiepval-Memorial-%C2%A9-Andrew-Bailey-2014.jpg>



Figure 4 – Redipuglia war memorial
Source:
<https://www.travelpink.com/wp-content/uploads/2020/12/Redipuglia-War-Memorial-009-scaled.jpeg>



Figure 4 - Memorial on the site of the Minsk Fraternal Cemetery in Minsk
Source:
https://planetabelarus.by/upload/resize_cache/iblock/78d/1330_887_18e21fe612b4afb807a26ecc22279a1d9/78d362682c19ff26e4c1a78a1cd0da72.jpg



Figure 5 - Monument to the heroes of the First World War on Poklonnaya Hill in Moscow
Source:
<https://vrns.ru/upload/iblock/61b/61b8706f74d76d1acc528949d511b5fb.jpg>



Figure 3 - International Allied Cemetery of the Entente
Source:
<https://archive.cloud.cwgc.org/images-cemetery-images-prod/69001/East-Mudros--Military-cemetery3.jpg>

3.2 The Second World War

The Second World War in Russia (also called the Great Patriotic War contained 1941-45) caused a lot of destruction, especially in the European part of Russia. The loss of some regions in Western Russia got closer to 80-90% of destroyed houses, and the number of deaths was equal to millions of people. Around 1710 cities and 70000 villages were fully destroyed, and nothing left remained. Along with the residential complex, the infrastructure of the cities was severely damaged.

After the war, however, many global problems caused a lack of attention to memorizing the war and preserving war heritage. Some of those reasons relate to economics and the industrialization process, some of them are connected to the ideology of the USSR and often changing of power (as mentioned before). The development of the war memory started actively only in the 21st century. In 2012, Decree No. 1710 was made by the president of the Russian Federation on the creation of the all-Russian public-state organization «Russian Military Historical Society», which dealt with the development of the memorialization of Second World War events. This research is also being invested by government.

But still, modern Russians have the same problem

with war heritage preservation as they did in the USSR: heritage has a very close connection with national ideology, which dictates a way of dealing with it based on political interests.

i. Urban restoration and its principles in post-war period

Already in the middle of the war period, development began on further interaction with destroyed objects as a result of hostilities. The beginning of post-war restoration work in Russia coincided with the return of the Academy of Architecture and the Committee for Architectural Affairs to Moscow in 1943 after a period of evacuation. Subsequently, already in 1944–1945, a group of young architects, under the leadership of leading architectural experts, began to develop plans for the restoration and urban reconstruction of cities.

In 1945, by decree of the Council of People's Commissars of the USSR, the urgent restoration of 15 large cities that suffered numerous destructions during the war was announced: Bryansk, Velikiye Luki, Veliky Novgorod, Voronezh, Vyazma, Kalinin, Krasnodar, Kursk, Murmansk, Novorossiysk, Orel, Pskov, Rostov-on-Don, Sevastopol, and Smolensk. Restoration work had to be carried out according to clear instructions from management in accordance with principles established at the state level. In the

same year, based on state directives, the chairman of the Committee for Architecture, A. G. Mordvinov, outlined specific requirements for projects for the post-war restoration of the previously mentioned cities.

These were the requirements for the restoration of 15 large cities in the post-war period based on the preservation and renewal of the existing spatial structure of the city:

- Maintenance of the city's architectural and artistic uniqueness and the creation of its architectural and artistic identity.
- Establishment of a system of spatial landmarks, including:
 - Monuments and memorial complexes dedicated to the Great Patriotic War.
 - Preservation of historical and cultural heritage sites.
 - Prominent public buildings as spatial landmarks in the restored city.
 - The «City Gates» concept, with the railway station serving as a significant architectural focal point for the revitalized city.

- Enhancement of landscaping and the overall aesthetics of the city.
- Orientation of the city towards the river.
- City zoning and the development of new industrial and residential areas.
- Restoration and reconstruction of the city's transportation infrastructure.
- Regulation of building height and materials used in the central part of the cities.

However, those requirements weren't perfectly followed in every case as a result of external influences and problems. For example, while reconstructing Rostov-on-Don, architects faced such problems as: lack of funding, decisions of the local authorities not matching requirements, and the absence of objects related to cultural monuments.

ii. After Second World War urban restoration - Veliky Novrogod case

The city of Veliky Novgorod suffered greatly during the Great Patriotic War, and in the first post-war years it was included in the list of 15 cities subject to priority restoration (as mentioned in Chapter «Urban restoration and its principles in the post-war period»). During the restoration process, a lot of buildings were disassembled, but architects saved many historical churches. For example, the Temple of the Twelve Apostles (fig.1) which was built in the middle of the 15th century or the Trinity Church from the Holy Spiritual Monastery (fig.2), and the ruins of the Church of the Nativity of the Blessed Virgin Mary, built in 1397, were saved (fig.3). However, the center of the city was mostly rebuilt with the addition of memorials and monuments dedicated to the Great Patriotic War.

According to archival data, Veliky Novgorod, abandoned by the Red Army on August 19, 1941, was liberated on January 20, 1944. The city was in between Moscow and Leningrad (now Saint-Petersburg), and that's why it was important because of its connection role, and that's why it was attacked as one of the first.

There were a lot of attacks through the aviation of the Nazi army, and its goal was to destroy the

residential part of the city. So many houses were bombed and huge areas were destroyed leaving just ruins (fig.4,5). Because of the occupation of the city by the enemies, there was a lot of damage to the architecture and cultural buildings of Novgorod. Temples and historical buildings began to collapse under shelling and bombing, even during the capture of the city by German troops. After the establishment of occupation power, the destruction of monuments and theft of cultural property in Novgorod acquired enormous proportions. The remaining cultural values of the Novgorod Museum were looted. Temples and historical buildings were undermined to use the bricks to build fortifications.

On July 5, 1944, by Decree of the Presidium of the Supreme Soviet of the USSR, the Novgorod region was formed. The transformation of Novgorod into the administrative and economic center of the region influenced the speed of its restoration. While being one of the 15 cities related to the primary renovation program, it is important to notice additions about the restoration of architectural monuments.

A huge problem was related to the lack of materials – that's why some ruined shells of bombed buildings were disassembled to have more materials for primary place renovation. Later,

some of the historical buildings were renewed after disassembly (for example, Gostiny Dvor arcade). Together with renovation of Novgorod, industrialization is being developed. Due to this, a lot of multi-story residential buildings were built.

In 1974 a memorial monument was built dedicated to the victory of the Soviet People against fascism. (fig.6,7)

On June 23, 1983, by Decree of the Presidium of the Supreme Soviet of the USSR, Veliky Novgorod received the Order of the Red Banner of Labor. The title was received for great achievements in the cultural and economic spheres, as well as for active participation in the fight against the German fascists during the Great Patriotic War.

In 1992, by the decision of UNESCO⁵, the historical monuments of Novgorod and the surrounding area were classified as World Heritage Sites by three criteria: Veliky Novgorod is a cultural center, it influenced the development of Russian art; it shows the presence of Russian architecture from the Middle Ages and later periods (11th-19th centuries); Novgorod, with its monuments, is a center of culture and spirituality in Russia. (UNESCO, 1992)⁶.

On October 28, 2008, by decree of the head of state, Veliky Novgorod was awarded the title «City

of Military Glory». Since 2018, Veliky Novgorod has been included in a new tourist route through the northwestern cities of Russia - “Silver Necklace of Russia”.

The architecture of the new buildings after destructions due to the Great Patriotic War is supposed to be in three styles: ancient Russian architecture, ‘Italian Renaissance’ style and Russian classicism, dictated by architect Alexey Shchusev. Since the mid-1950s. In Novgorod, standard buildings began to predominate. All of this difference created a chaotic mood in the city.

⁵UNESCO official website- <https://www.unesco.org>

⁶Veliky Norgorod in UNESO website- <https://whc.unesco.org/en/list/604>



Figure 1 - Temple of the Twelve Apostles
Source: http://nashi-progulki.ru/albums/2020/VN/IMG_0727.jpg



Figure 3 - Ruins of the Church of the Nativity of the Blessed Virgin Mary
Source: http://nashi-progulki.ru/albums/2020/VN/IMG_0727.jpg



Figure 2 - Trinity Church
Source: http://nashi-progulki.ru/albums/2020/VN/IMG_0712.jpg



Figure 4 – Ruins of Veliky Novgorod after the Second World War
Source: https://cs8.pikabu.ru/post_img/big/2016/01/25/12/1453752105175384019.jpg



Figure 5 - Destroyed Yuriev Monastery
Source: https://sadchechulino.chechylino.edusite.ru/images/p60_razrushennyiyur-evmonastyir-.jpg



Figure 6 - Victory Monument
Source: https://upload.wikimedia.org/wikipedia/commons/thumb/1/17/Monument_Pobedy_VN.jpg/650px-Monument_Pobedy_VN.jpg



Figure 7 - Victory Monument
Source: <https://countryscanner.ru/wp-content/uploads/2019/01/monument-pobedy-v-velikom-novgorode-countryscanner-4.jpg>

3.3 War memorialization in current Russia

Nowadays, after creating the Russian Military Historical Society in 2012⁷, many projects supported by the government take place. One of those projects is Monumental Promotion⁸ which principles are:

- Preservation and popularization of the historical and cultural military-historical heritage of Russia, objects of cultural heritage related to military-historical topics;
- Preservation, restoration, and reconstruction of all types of monuments of the military history of Russia, and other objects of military-historical and cultural heritage;
- Perpetuating the memory of Heroes of the Fatherland and outstanding historical figures of Russia in order to foster patriotism and preserve the true vision of Russian military history.

Many sculptural monuments have been done since the beginning of this project, and it seems the most attention has been paid to this subject. Some monuments were built in Moscow - Monument to Twice Hero of the Soviet Union Marshal K.K. Rokossovsky in 2015, Monument to M.D. Skobelev in 2014 (fig.8), Monument "Farewell of Slavyanka" in 2014, and others; monuments were created in

other cities - Monument to the regimental priest in Maloyaroslavets in 2014, Monument to Vasily Agapkin and Ilya Shatrov in Tambov in 2015 (fig.9) and a big monument was created in Tver' as a memory of a Soviet soldier based on losses of Rzev during the Second World War.

Objectives of regional policy promoted to society:

- Implementation of federal projects of the Russian Military Society, holding events aimed at popularizing Russian military history;
- Exchange of experience between experts from different regions. Identification, support, and dissemination of best regional practices in matters of patriotic and military-historical education of youth;
- Work to perpetuate the memory of war heroes, military-patriotic education of youth;
- Local history, nurturing love for the small motherland, and pride in the exploits of our fellow countrymen. Personalization of the history of the Fatherland;
- Representation of the Russian Military Historical Society in the regions, expansion of the network of regional branches, coordination of their work.

⁷ Decree 1710 on the creation of the Russian Military Historical Society - <https://rvio.histrf.ru/official/decrees-no-1710>

⁸ Description of the project Monumental propaganda on the website of the Russian Military Historical Society - <https://rvio.histrf.ru/projects/monumental-promotion>



Figure 8– Monument to M.D. Skobelev

Source: <https://www.pravoslavie.ru/sas/image/101924/192426.p.jpg?rnd=507669>



Figure 9 – Monument to Vasily Agapkin and Ilya Shatrov in Tambov

Source: https://likengo.ru/media/place_cover/81/82/112289970262fc49d0e94a.jpg

i. Rzhev memorial

In 2020, with the help of the Russian Military Scientific Society and a monumental propaganda program, the Rzhev Memorial of the Soviet Soldier (fig.10) was opened to the public. The memorial complex, located in the city of Rzhev, Tver region, is dedicated to the events of the Great Patriotic War, in particular the battles near Rzhev in 1942-43. The project was carried out by sculptor Andrei Korobtsov and architect Konstantin Fomin. (fig.11).

The city of Rzhev was an important transportation hub since it is located 200 km from the Volga River. On July 19, 1941, German aircraft broke through Rzhev for the first time, and the city was bombed. Over 13 months, from January 1942 to March of the following year, a series of battles took place in the vicinity, known as the Battle of Rzhev. The Rzhevskaya battle mentioned as a second-most important battles and with the most losses after the Stalingrad Battle, and caused great destruction in the city (fig.12).

The first initiatives to create sites commemorating the battle were taken immediately after the liberation of the city. From August 3 to 5, during his only trip to the front, Stalin visited the city. The house where he stayed became a museum in 2015.

(fig. 13) The reconstruction of the small center proceeded quite quickly, but only in 1963, on the twentieth anniversary of the liberation of the city, the Obelisk to the liberators of Rzhev (fig.14) was opened. During the Soviet period, no action was taken to create memory objects.

Only in 2005 did some actions to develop the war heritage in Rzhev take place. In 2007, there was an exhibition dedicated to Great Patriotic War memories in the Kalininskiy Front museum. And the Rzhev Memorial, which was mentioned in the beginning, was built only after a program created in 2012.

This example shows problematic moments in heritage preservation in Russia after the Second World War. Firstly, lack of development in the war heritage during Soviet time. Secondly, lack of attention to the cultural asset of the city while creating a memorial object – occupied by 17 months’ city center has no mention of memory about the painful past while creating a big memorial not connected to history despite the celebration of the victory. In this case, there is a fundamental difference in the model of constructing the past of Russian arms compared to similar experiences in Eastern Europe.



Figure 10 – Rzhev Memorial of Soviet Soldier
Source: <https://rvo.histrf.ru/media/2021/09/13/1.webp>



Figure 11 – Rzhev Memorial of Soviet Soldier and its complex
Source: <https://i.postimg.cc/6QyhRDHM/263.jpg>



Figure 12 – Rzhev after war

Source: https://cdn-media.tass.ru/width/1200_4ce85301/tass/m2/uploads/i/20170105/4415543.jpg



Figure 13 – Kalininskiy front museum (ex. library visited by Stalin in 1943)

Source: <https://pobedarf.ru/wp-content/uploads/2022/10/1-foto-stavka-stalina.jpg>



Figure 14 – Rzhevskiy Obelisk

Source: <https://static.mk.ru/upload/entities/2019/04/02/08/articles/facebookPicture/74/97/74/2c/e2a10ab16bbebd32efd0c92da27b76af.jpg>

4. WAR HERITAGE PRESERVATION

4.1 Introduction

The topic of war heritage encompasses a diverse array of global events and actions. Post-war heritage preservation involves many conditions that influence the strategies employed for its conservation or reconstruction. In addition to the notable focus on preserving the heritage of the First and Second World Wars, considerable attention is warranted for military events that transpire within nations, such as civil wars. These conflicts, too, result in extensive areas requiring restoration. As contemporary warfare persists, it underscores the ongoing significance of studying viable approaches to preserve heritage after conflict and understanding the factors that impact such preservation efforts.

Europe and the UK

In Europe, the conditions and timing of post-war recovery and reconstruction varied from country to country, but at the center of reconstruction ideas was the argument between two positions: continuity from the past to the present and the contradiction between them. Also in Europe, especially in the post-World War II era, one can emphasize the openness to the adoption of innovative architectural ideas, the desire for modernity. Such approaches began to prevail in

relation to the restoration of war-damaged objects, as well as to architectural construction in general. There is a possibility that this was influenced by the modern movement and organizations such as CIAM (International Congress of Modern Architecture, founded by Le Corbusier in 1928).

After World War II, CIAM served as a platform for discussions about urban reconstruction after destruction caused by wars. The criteria for restoration were based on such important priority issues as: economic rehabilitation, industrial development, and political stabilization at first, including also the restoration of historical monuments and the restoration of the housing stock. During the interwar years, similar issues were also addressed by organizations such as the International Conference on Housing and Urban Planning. Another important organization is Docomomo, the International Committee for the Documentation and Conservation of Buildings, Sites, and Quarters of the Modern Movement, which plays a decisive international role in preserving the legacy of post-war reconstruction.

Taking into account international discussions and debates about after-war interventions and reconstruction was based on the conditions of each country, and different paths were taken

by architects in Europe. Ideas of modernization developed more in several places in the Netherlands such as Amsterdam and Rotterdam, also in some German cities, such as Frankfurt. The progress of reconstruction in the Netherlands was based on clear planning and centralized control over urbanization. While in France, Germany, and Britain, active modernization took place in only a few cases, and the restoration was supported by sensitive attention to the appearance of each city; Britain also saved the middle position and balance between old and new.

In the United Kingdom, the establishment of the National Trust in 1895 emphasized the connection between heritage and the national identity, and between the two World Wars, numerous historic buildings were successfully preserved for the benefit of the nation. In Britain, the post-war reconstruction era not only presented remarkable opportunities but also witnessed substantial practical changes. The introduction of a comprehensive system for urban and rural planning emerged as a significant transformation in shaping the physical structure of cities.

While even during the World War II, the ideas of saving the national identity of the country after the war were used to increase the spirit of the people,

later the question of modernization took place. Architects were trying to find a balance between old and new in urban and architectural reconstruction. Debates were quite hard at that time. For example, there can be mentioned a confrontation between the approaches of urban planners Abercrombie and Sharp to post-war city reconstruction: Abercrombie proposals were conservative and with the minimum possible interventions, while Sharp had a statement that each age should build in its own style. This confrontation is only one example of the general difference between the ideas of the young generation of architects and the conservative old ones. The idea of making the world better after the war was really important in getting the 1947 Planning Act passed. The act gave birth to the possibility of using juxtaposition – highlighting the importance of both past and future.

However, in Great Britain after the war reconstruction happened faster than in other European countries due to fewer occupied territories and less war damage. English architects followed some USA ideas related to industrial and urban architecture, which could later be discussed in international meetings such as CIAM. In the end, in UK the idea of paying more attention to the regional qualities of architecture was ahead of the idea of international style.

Asia

Asian countries have been involved in wars and other kinds of conflicts since ancient times. But also, there are many recent conflicts that exist, that require the attention to post-war reconstruction even nowadays.

In Japan, which suffered after the Russo-Japanese war in the beginning of the 20th century and a lot during the Second World War, especially on August 6 and 9, 1945, from two nuclear explosions carried out in the cities of Hiroshima and Nagasaki, the idea of post-war reconstruction together with economic recovery and commercial recovery included a symbolic part. It is clearly visible in the reconstruction of Genbaku Dome in Hiroshima and the creation of the Hiroshima Peace Memorial. The idea of symbolic memorialization has a lot of potential and is still valid today. Japan's attitude towards post-war reconstruction is seen as radical. This is especially emphasized by the example of the restoration project of the Hiroshima Dome. The importance of the psychological connection with post-war heritage sites can also be used at post-disaster heritage sites. For example, after the terrorism attack of Twin Towers in New-York symbolic void has been left on the site of towers called Ground Zero as a memory action to overcome

tragedy without forgetting it.

Syria is a country suffering from military conflicts recently. In 2011, the civic war in Syria came to an international level, involving many organizations. Due to those events, many Syrian cities were destroyed or damaged, including a lot of cultural heritage buildings and monuments. This leads to the question of which is the best way to reconstruct the heritage in Syria since the conflicts are continuing. Involvement of international organizations such as UNESCO to increase the protection of Syrian heritage monuments had different results, some of it wasn't really helpful and even caused more destruction. For example, the city of Aleppo was declared as 'World Heritage site in danger' by UNESCO. This action had a negative effect, and extremists decided to destroy some of the religious heritage buildings. The Syria case also opens the topic of how heritage monuments psychologically influence citizens, are a part of national identity, and have emotional value together with historical value. In this way, destroying the most important monuments in cities made people support rebels. Symbolic destruction also had religious character in the second hand.

After urban damages and heritage loss caused by the conflicts, the idea of post-war restoration in

Syria is not only about rebuilding the landscape, it also has a huge mental impact. The intention to forget about bad episodes correlates with the will to memorize history. Syrian city reconstruction has to be done with attention to the psychological side of the question; different strategies are being discussed at the international level nowadays due to the still continuing conflict in the Syrian lands. Strategies in conflict time can't be similar to those in peacetime. Many ideas of restoration actions, that can be used already now, are related to data collection and analysis together with the analysis of the influence of the destruction of heritage on people's emotions.

4.2 Case studies

Lochnagar crater



Lochnagar Crater (fig.15, 16) – memorial to the First World War events in France, was created by a big mine detonated beneath the German front line by the British Army's 179th Tunneling Company of the Royal Engineers on July 1st 1916. The explosion was a mark of the beginning of the Battle of the Somme and was the largest of the 19 mines laid beneath the German front line to aid the advance of the British infantry. This is the largest mine crater from the First World War on the Western Front.

The Lochnagar Crater Memorial was created by Richard Dunning on July 1st 1978. Before the place was used for motorcycle rides. The Lochnagar

Crater Foundation is guided by its Six Aims, which encompass several key facets. These include the imperative of conservation, with Lochnagar relying solely on donations for its preservation, while dedicated volunteers diligently maintain the site. Education is another crucial aspect, promoting research, sharing insights, and providing educational resources for schools and colleges. The foundation also actively fosters commemoration through annual Remembrance Ceremonies, welcoming all to participate. Moreover, Lochnagar has a profound inspirational effect on visitors, offering them insight into the impact of wars and their personal connections to historical events. The ultimate goal is transformation, urging individuals to bring more peace into their lives and the lives of others as a lasting tribute. Furthermore, Lochnagar has the power to unite people of all nations in the spirit of peace and goodwill, promoting reconciliation.

Lochnagar Crater is a part of 'Funerary and Memory Sites of the First World War (Western Front)' in the UNESCO heritage list⁹ by decision on 2023 by three criteria. It includes sections of the Western Front of the First World War in 1914-1918 where fighting took place.

⁹ <https://whc.unesco.org/en/list/1567>
- Funerary and memory sites of the First World War (Western Front)



Figure 15 – Lochnagar Crater
Source: <https://www.lochnagarcrater.org/>



Figure 16 – Lochnagar Crater during the memorial event
Source: <https://media.tacdn.com/media/attractions-splice-spp-674x446/0b/39/85/44.jpg>

Coventry Cathedral



In 1940, Coventry, located in the east-west part of England, suffered a big attack during the Second World War. As a result of this event, almost 600 people were killed and more than 4000 houses were destroyed. The historical center suffered a lot of damage, and numerous industrial facilities were also destroyed. Coventry Cathedral was one of the cultural heritage monuments among the destroyed ones. The cathedral, which was built in the 14th century, was hardly damaged by fire, with only the tower and spire remaining intact (fig. 17, 18).

The decision to reconstruct the cathedral was quickly made the next morning: it was decided to preserve part of the ruins of the building as a symbol

of reconciliation and in order to prevent further conflicts. In 1951, an architectural competition was announced for the reconstruction of the cathedral. Basil Spence & Partners triumphed with their innovative proposal to build a new, modern cathedral while preserving the ruins of the original.

The modern cathedral was erected in close proximity to the old ruins (fig. 19, 20). Red sandstone was chosen as the unifying material for the new building, creating a cohesive appearance despite the contrast between the ruins and the modern structure. Public opinion on the architectural project was varied and controversial, as the approach chosen was innovative for post-war reconstruction. Construction lasted six years, starting on March 23, 1956. The ruins of the original cathedral provide a monument and memorial, and the space is used for outdoor events.

Coventry Cathedral is not included in the UNESCO heritage list of monuments.



Figure 17, 18- Remains of the medieval cathedral, 11 October 1941
 Source: <https://heritagecalling.com/2019/08/14/the-destruction-and-rebirth-of-coventry-cathedral/>

Figure 19, 20 - Ruins of the destroyed cathedral connected to the new one
 Source: <https://i0.wp.com/heritagecalling.com/wp-content/uploads/2019/07/BLOG-old-cathedral-preserved-as-ruins-andrew-walker-creative-commons.jpg?w=800&ssl=1>
<https://www.telegraph.co.uk/content/dam/tv/2021/06/09/>

Hiroshima Peace Memorial



The Hiroshima Peace Memorial (fig.21), also called the Genbaku Dome, is the only structure that survived the explosion of the first atomic bomb on August 6, 1945. The building was left as it was immediately after the explosion. Now the building is part of Hiroshima Memorial Park - Peace Memorial Park (fig.23).

The A-Bomb Dome is what remains from the Prefectural Industrial Promotion Hall. The building was used to promote Hiroshima's industries. Hiroshima Peace Memorial is a UNESCO World Heritage Site¹⁰ added in 1996. Criteria: 'The Hiroshima Peace Memorial (Genbaku Dome) is a stark and powerful symbol of the achievement of

world peace for more than half a century following the unleashing of the most destructive force ever created by humankind.' The left structure after the explosion memorial keeps the focus on human suffering and memorizing losses, together with celebrating peace and rejecting atomic weapons. In the last three conservation projects in 1967, 1989-1990, and 2002-2003, there was a minimum reinforcement with steel and synthetic resin usage, with the goal of preserving the dome in the condition it has been in after the explosion of the atomic bomb. The idea of accepting the huge disaster and overcoming it without forgetting leads to this way of restoring the Hiroshima Dome.

The Hiroshima Peace Memorial is a historic site protected by Japanese law. It's managed by Hiroshima City with guidance from the Hiroshima Prefectural Government and the Japanese Government. Financial and technical support comes from the Japanese government. Daily maintenance happens in cooperation with the cultural property protection division, and a detailed condition survey is conducted every three years. This plan includes standards for building height, alignment, wall colors, materials, and advertising boards in the vicinity of the Hiroshima Peace Memorial Park's buffer zone.

¹⁰ <https://whc.unesco.org/en/list/775>
- Hiroshima Peace Memorial in
UNESCO World Heritage Site



Figure 21 - Hiroshima Peace Memorial
Source: https://www.japan-guide.com/g21/3400_03.jpg



Figure 23 - Hiroshima Peace Memorial Park
Source: https://www.japan-guide.com/g21/3400_01.jpg

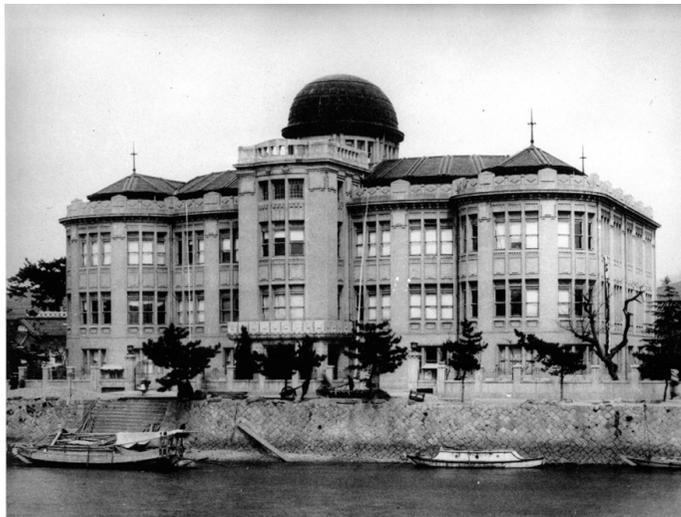
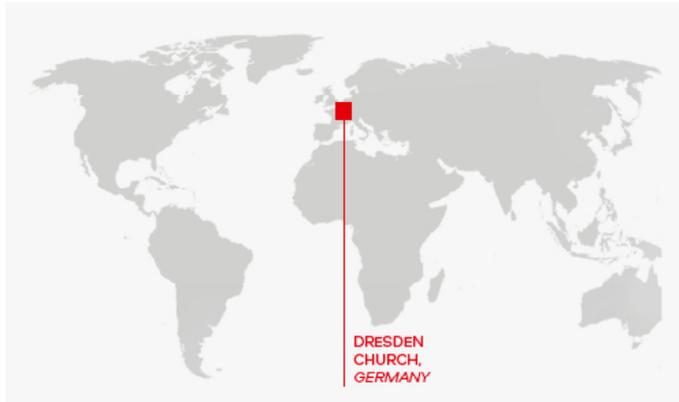


Figure 22 - Genbaku Dome before destroy
Source: <https://api.time.com/wp-content/uploads/2015/07/150730-hiroshima-peace-dome-01.jpg>

Dresden Church



The church in Dresden was built between 1726 and 1743 according to the architectural plan of Georg Baer in the Baroque style, and it was one of the most famous Lutheran churches in the city. On February 15, 1945, the church building was destroyed (fig. 24) during aerial bombing during World War II.

During the period of the German Democratic Republic, the Dresden Church (also called Frauenkirche) was turned into a war heritage monument: there was a part of the church that survived the bombing that remained untouched for a long time as a reminder of the devastating events of the war. A full restoration of the church was impossible due

to the lack of funding in the post-war period. Work on the reconstruction of the building began only in 1996, after archaeological research. Subsequently, the church was reconstructed in accordance with its previous appearance, leaving the remaining part of the destroyed building untouched - it stands out with its black color (fig. 27).

The church is preserved as a monument and a symbol of peace. Subsequently, efforts are being made to revitalize the Neumarkt quarter surrounding the church, with the aim of restoring its historical significance as the heart of the city.

The Dresden Church is not included in the UNESCO heritage list.



Figure 24 - Ruins of the church 1945

Source: https://ichef.bbci.co.uk/news/976/mcs/media/images/80974000/jpg/_80974609_025839892-1.jpg



Figure 26- Current church

Source: https://www.frauenkirche-dresden.de/assets/images/8/Spenden_Header_Luftbild-515_Foto%20Oliver%20Killig-042300fb.webp



Figure 25 - Rebuilding process beginning

Source: https://www.frauenkirche-dresden.de/assets/images/2/Wiederaufbau_Slider%2001_FK0-014_Foto%20J%C3%B6rg%20Sch%C3%B6ner-72d57a99.webp



Figure 27 - Dresden Church nowadays

Source: <https://upload.wikimedia.org/wikipedia/commons/thumb/5/57/FraunkircheSouth.jpg/1280px-FraunkircheSouth.jpg>

Ancient City of Aleppo



Aleppo city (fig.28) was included in the UNESCO World Heritage list in 1986¹¹ followed by two main criteria – it represents the changing culture and history of the living occupants, and works from the 13-14 centuries represent many architectural examples of defense and military structures. Aleppo city had a huge cultural impact due to the inclusion of many nationalities living in its territory, which also left a spirit in the architecture of the city. Many layers of different styles in architecture enrich a city and give it significant cultural value.

Due to the civic conflict in Syria that started in 2011, Aleppo city has been hardly damaged. After years of conflict more than half of the Aleppo city

areas were destroyed. A lot of Syrian and also world important heritage monuments, such as the Citadel (fig.29), and other historical buildings were partly or fully destroyed. The reasons for destroying the most important heritage monuments in the city were political and also religious, and the goal of influencing people's minds and pushing people to support one or another part, fight, and participate in the rebellion. In 2013, UNESCO declared Aleppo city 'World Heritage in Danger'. Later, people in Aleppo created the Social media campaign 'Save Aleppo'. The destruction of important sites such as the national Hospital building or the Justice Palace urged citizens to protect the Citadel building.

However, with conflict still continuing, the strategies of reconstruction can't be as similar as in peacetime. International level of discussion of the Aleppo case, including the collection and analysis of the data together with the question – how heritage destruction can influence citizens' emotions. Collecting data through social media can help to calculate the value of each monument and define priorities for past-conflict reconstruction. Besides, strategies can differ from case to case, influenced by many conditions also economical.

¹¹ <https://whc.unesco.org/en/list/21/>
- Ancient City of Aleppo in UNESCO website



Figure 28 - Ancient city of Aleppo
Source: <https://whc.unesco.org/en/documents/107646>



Figure 30 - Aleppo city destruction
Source: <https://resources.koha.net/images/2023/October/14/AP232876713021611697317496.jpg?w=1200>



Figure 29 - The Citadel of Aleppo after the explosion in 2014
Source: <https://i.guim.co.uk/img/static/sys-images/Guardian/Pix/pictures/2015/3/20/1426856462918/31d1f042-9fc0-49c8-827c-a9f3cb82505c-2060x1236.jpeg?width=620&dpr=2&s=None>

5. ENHANCEMENT OF THE WAR HERITAGE

5.1 European cultural routes

There were two major wars in Europe - World War I from 1914 to 1918 and World War II from 1939 to 1945. Many European countries have preserved military heritage sites that have become an important part of tourism and the economy. For example, in France, 10% of the most visited cultural sites related to military heritage are dedicated to the Second World War¹². According to Gordon, the meaning of war tourism from a visitor's point of view relates to educational purposes – especially for new generations, war heritage sites are the main source of historical information, interest in modern history, and national pride, while for local residents it is directly related to the importance of collective memory.

Military tourism in Europe includes both visits to individual iconic sites and routes based on different topics and dedicated to different time frames and events. In France, there is the Mémorial-Cité de l'Histoire pour la Paix, located in Caen—a city severely affected by wartime devastation—was inaugurated in 1988¹³. Museum surface area: 14,000 m² on 3 levels, including 5,600 m² of permanent exhibitions. The place itself involves a large number of international and local tourists.

In Northern Europe, there are several cultural

routes organized in Estonia and Latvia, dedicated to different kinds of events – First and Second World wars and civic wars, for example, 'In memory of the War of Independence in western Estonia' or 'Kurelians: for Latvia against foreign occupation powers'. Routes include several cities and sites to visit, depending on the timing and topic of the route. For example, the route 'In the footsteps of the Estonian Independence War' 3 days' duration dedicated to places of the Estonian War of Independence was fought from 1918 to 1920. (fig.31) Or a longer route containing cities in Estonia and Latvia together – which is 13 days long, is named 'The grand cross border tour - military heritage of the 100 years of independence of Latvia and Estonia' dedicated to 100 years from World War I (fig.32). In Poland, there is a route dedicated to the Battle of Warsaw in 1920, when the Polish army stopped the march of the Bolshevik revolution to the West (fig.33).

Local paths of war and military tourism exist in other big European countries and are not only located in city centers and urban areas, but also in landscapes. A great example of landscape war heritage is 'The Path of Peace' – the route in the Great War (The First Worlds War) places located in Trentino, Italy. It runs from Passo del Tonale to Marmolada and the entire route is more than 500 km long¹⁴ (fig.34) The

¹² Alice J. Strange (2021) War Tourism: Second World War France from Defeat and Occupation to the Creation of Heritage by Bertram M. Gordon (review) - *The French Review*, Volume 93, Number 4, May 2020, pp. 219-220 (Review)

¹³ <https://www.memorial-caen.com/> - Le Mémorial de Caen

¹⁴ https://www.visittrentino.info/en/guide/must-see/great-war/the-path-of-peace_md_2701 - Tourism in Trentino commercial organization

path was constructed between 1986 and 1990.

Second World War dedicated tourism takes place in the most active participants of the war, one of it is Germany, Touristic routes include several German cities to visit and important architectural heritage and urban heritage sites. One of the examples – 7 days’ tour, including Berlin, Dresden, Nuremberg, and Munich (fig.35). The route shows historical parts, influenced by Second World War events, examples of Nazi architecture, and also sites rebuilt after war destruction – one of them is Dresden Church, mentioned before.



Figure 31 - 'In the footsteps of Estonian Independence War' route
Source: https://militaryheritagetourism.info/g/Tour/00008/8_Tour_Military_Project.jpg?size=640



Figure 32 - 'The grand cross border tour - military heritage of the 100 years of independence of Latvia and Estonia' route
Source: https://militaryheritagetourism.info/g/Tour/00012/12_Tour_Military_Project.jpg?size=640



Figure 33 – Warsaw battle route

Source: https://inmasovianstyle.com/wp-content/uploads/2022/08/Szlak_Bitwy_Warszawskiej_1920_Ru.pdf

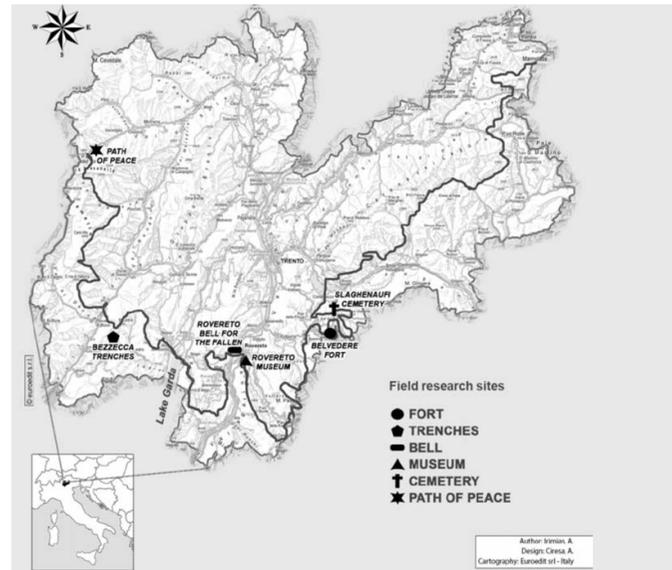


Figure 34 - 'The Path of Peace'

Source: <https://www.researchgate.net/profile/Anna-Irimias/publication/271672610/figure/fig1/AS:414510486704128@1475838409068/The-map-of-Trentino-with-the-path-of-peace-and-the-war-heritage-sites-of-the-field.png>



Figure 35 - Route between German cities dedicated to World War II

Source: <https://cdn.kimkim.com/files/a/maps/7f4b02658f4ce15c079e940833de6847265836b1/original-093913a639e7abc1d337365c949c2b6b.jpg>

5.2 Russian cultural routes

War-historical tourism in Russia has always been an important part of the tourism industry and continues to develop to this day. The importance of this type of tourism is associated with the concepts of patriotism, spiritual value, culture, and historical memory; these ideals have always existed.

Tourism to historical sites of memory began to develop in Soviet times after the Second World War. In the period 1960–1980, dozens of large memorial complexes appeared across the country, among which “places of memory” stood out in Volgograd (1967), Brest (1971), and Kiev (1981). During the same period, domestic tourism developed on the territory of the Soviet Union. If in 1969 the country served 7.2 million tourists, then in 1985 there were already 38.0 million tourists. In the period from 1965 to 1985, the circle of cities that received the honorary title of “hero cities” was finally determined. Almost all of them played a significant role in the development of Soviet tourism; a significant number of tourist routes at the all-Union and local levels passed through them. The largest tourist and excursion centers of the USSR (Moscow, Leningrad, and Kyiv) were among the first to be awarded the title of hero cities. The development of Soviet transport tourism led to the emergence of railway tours

to hero cities. Their routes, as a rule, were built on a circular basis (for example, Moscow–Kiev–Odessa–Sevastopol–Moscow). Sometimes such routes were limited to the territory of one of the union republics. So, in the 1980s, the railway route “Across the Hero Cities of Ukraine” (Sevastopol–Odessa–Kyiv) operated. Starting in the mid-1950s, the scale of foreign (outbound) tourism in the USSR rapidly increased. Thus, memories of the events of the Great Patriotic War became perhaps the main “ideological dominant” of Soviet tourism in the post-war period.

At the beginning of 2014, the Federal Tourism Agency and the Russian Military Historical Society signed an agreement on cooperation in the field of war historical tourism. This event updated a number of important initiatives in the field of management and stimulation of domestic and inbound tourism. Under Rosturism¹⁵ there was a working group for the creation and promotion of military-historical routes. Its activities were related to assessing the situation regarding the formation of patriotic routes, solving problems hindering the development of military-historical routes, studying international experience, improving interaction between the tourism business and executive authorities in the field of culture and tourism, as well as the development of recommendations for

the development of military historical routes.

Currently, in Russia, there are more than 300 war-historical routes¹⁶ in all the parts of the country dedicated to different events, including the First and Second World wars but also others, for example, civic wars. The most famous routes are: 'Breaking the Siege of Leningrad', 'Heroic Defense of Leningrad' and 'Nervsky Patch' in the Leningrad region; 'Victory Trains - Living History Lessons' in the Volgograd Region, 'Kursk Bulge - Great Escape' and 'Prokhorovskoe Field' in the Belgorod Region and others. Together with the local touristic routes represented in the boundary of the city, there are also longer cultural routes that include several cities and even connecting cities in other countries. For example, the route 'Great Monumental Triptych with the Sword of Victory' connecting two Russian cities – Volgograd and Magnitogorsk and Berlin is based on three monuments with the same symbol – sword, dedicated to the victory of the Second World War (fig. 36-38). Another example is a route containing 'hero-cities' after the Great Patriotic War or just 2-3 cities as the route 'Western Front: Russia 1941-1945' includes Moscow, Volgograd, and Kursk (fig.39).



Figure 36 - Monument to the Soldier-Liberator in Berlin



Figure 38 - Rear Front - monument in Magnitogorsk

Source: <https://histrf.ru/uploads/media/default/0001/21/e79671e168cb422e89198ff2e34456598eedc024.pdf>



Figure 37 - Monument 'Motherland Calls!' In Volgograd

Source fig.1 - https://rus.team/images/article/49359/avatar_1x1.webp?actual=1556789198

Source fig.2 - <https://histrf.ru/uploads/media/default/0001/21/e79671e168cb422e89198ff2e34456598eedc024.pdf>

¹⁵ Federal Agency for Tourism in Russia which in 2022 was liquidated and its functions were transferred to the hands of the Ministry of Economic Development

¹⁶ <https://histrf.ru/read/articles/voienno-istorichieskie-marshruty-rossii> - website of the History of Russia: the list of military historical routes

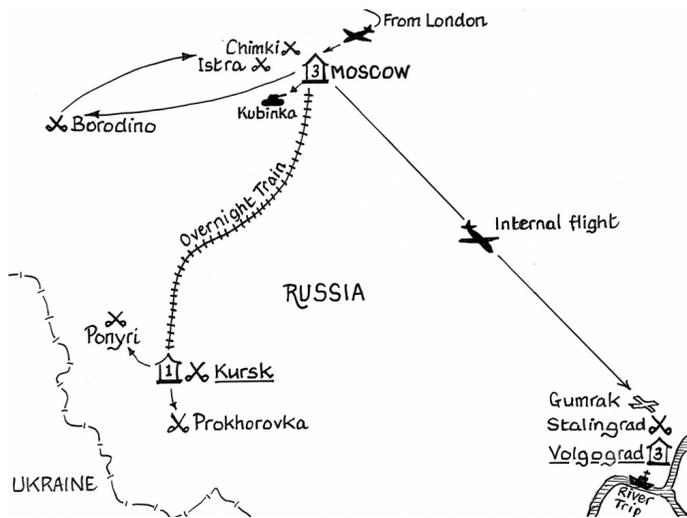
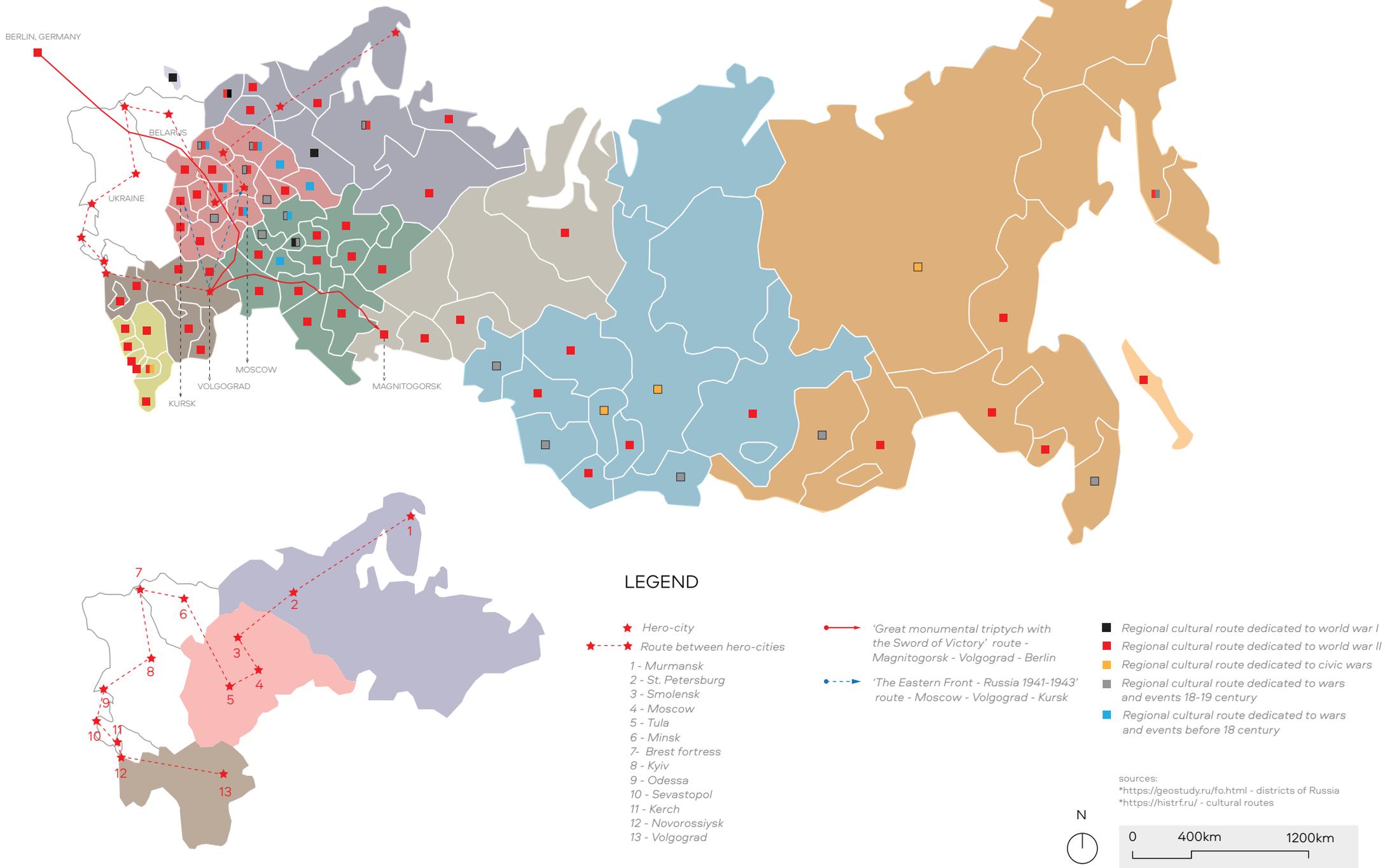


Figure 39 - 'Western front: Russia 1941-1945' route
 Source: https://www.theculturalexperience.com/images/tours_extra/i3/tce1000197.jpg

CULTURAL ROUTES IN RUSSIA



REGIONAL SCALE ROUTES

Districts of Russia:

- Central
- North-West
- Southern
- North-Caucasian
- Volga
- Ural
- Siberian
- Far-Eastern

CENTRAL DISTRICT

- Moscow - 'Moscow in a military overcoat Thunderstorm 1812'
- Moscow region - 'Podolsk cadets in the battle for Moscow on the road of two Patriotic wars'
- Belgorod region - 'Glory will not fade - traditions will live!'
- Bryansk region - 'Along the partisan paths of the Bryansk region'
- Vladimir region - 'Legends of the old manor'
- Voronezh region - 'To places of military glory'
- Ivanovo region - 'Regiment "Normandie - Neman" in Ivanovo'
- Kaluga region - 'Fiery Warsaw Territory of Kutuzov's victories and battles of the Great Patriotic War'
- Kostroma region - 'For faith, Tsar and Fatherland'
- Kursk region - 'Fiery heights of the Kursk Bulge Partisan glory'
- Lipetsk region - 'From the heroes of old'
- Oryol Region - 'Krivtsovsky memorial'
- Ryazan Oblast - 'Roads of military glory'
- Smolensk region - 'Smolensk in the Time of Troubles Grateful', 'Smolensk to the heroes of the war of 1812.' 'War - there is no crueler word Vyazma - City of military glory In the footsteps of heroic years: Rudnya during the Great Patriotic War'
- Tambov Region - 'An everlasting march for big heroes'
- Tver region - 'Military memory of Russia'
- Tula region - 'Heroic pages of the Tula land Belev - the western outpost of the Tula region'
- Yaroslavl region - 'Along the paths of militias or through the cities of military glory of Russia'

NORTH-WEST DISTRICT

- Saint Petersburg - 'Leningraders. Immortal names of Marine Petersburg'
- Leningrad region - 'Enemy at the Gates Vyborg – City of Military Glory Luga – City of Military Glory'
- Arhangelsk region - 'Arkhangelsk – City of Military Glory'
- Vologda Region - 'Defeated but not forgotten'
- Kaliningrad region - 'Bow to you, soldiers of the Great Victory on the roads of the First World War'
- Republic of Karelia - 'Karelia during the Great Patriotic War'
- Komi Republic - 'Pechora during the Great Patriotic War'
- Murmansk region - 'No one is forgotten, nothing is forgotten'
- Nenets Autonomous Okrug - 'The roads of the Reindeer Army'
- Novgorod region - 'Demyansk boiler'
- Pskov region - 'Pskov – City of Military Glory Heroic City Island'

SOUTHERN DISTRICT

- Republic of Adygea - 'Across Adygea to the Black Sea'
- Astrakhan region - 'Astrakhan – the southern outpost of Russia'
- Volgograd region - 'Hero City Volgograd Kalach-on-Don – City of Military Glory'
- Republic of Kalmykia - 'In the footsteps of the 28th Army'
- Krasnodar region - '"Malaya Zemlya" – a springboard of courage Timashevsk - the city of maternal glory'
- Rostov region - 'They fought for their homeland!'

NORTH CAUCASIAN DISTRICT

- The Republic of Dagestan - 'For Victory Day'
- The Republic of Ingushetia - 'Malgobek – City of Military Glory'
- Kabardino-Balkarian Republic - 'Down memory lane'
- Karachay-Cherkess Republic - 'Passes of feat'
- Republic of North Ossetia–Alania - 'The collapse of Operation Edelweiss'
- Chechen Republic - 'No one is forgotten, nothing is forgotten!'
- Stavropol region - 'Along the defense lines of the Caucasus'

VOLGA DISTRICT

- Republic of Bashkortostan - 'In the homeland of Heroes of the Soviet Union'
- Kirov region - 'Marshal of Victory The weapon of Victory was forged here'
- Mari El Republic - 'Here the rear was the front. Yoshkar-Ola military'
- The Republic of Mordovia - 'In Ushakovo places'
- Nizhny Novgorod Region - 'The road of glory through the land of Minin and Pozharsky'
- Orenburg region - 'Route around the exhibition complex "Salute, Victory!"'
- Penza region - 'Everything for the front, everything for Victory!'
- Perm region - 'Blue line'
- Samara Region - 'Military valor of the alternate capital'
- Saratov region - 'Saratov frontline'
- Republic of Tatarstan - 'We remember. We are proud'
- Udmurt republic - 'Izhevsk during the Great Patriotic War'
- Ulyanovsk region - 'Simbirsk - guard fortress of the Russian state'
- Chuvash Republic - 'Symbols of the greatness of our native land'

URAL DISTRICT

- Kurgan region - 'Unquenchable fire of memory'
- Sverdlovsk region - 'Military and labor glory of the Sverdlovsk region'
- Tyumen region - 'In the footsteps of Ermak Khanty-Mansiysk Autonomous Okrug - Yugra Holy memory of days gone by'
- Chelyabinsk region - 'Chelyabinsk front'
- Yamalo-Nenets Autonomous Okrug - 'Memory Escort'

SIBERIAN DISTRICT

- Altai Republic - 'There was a war...'
- Altai region - 'Cossack horseshoe of Altai'
- Irkutsk region - 'Stars of Victory of Tulun residents Siberian Warriors. Army General A.P. Beloborodov'
- Kemerovo region - 'Kuzbass during the Civil War. Legends of Archekas'
- Krasnoyarsk region - 'Baja Republic'
- Novosibirsk region - 'Roads of memory of the Great Patriotic War'
- Omsk region - 'We remain faithful to traditions'
- Tomsk region - 'Front-line brotherhood'
- Republic of Tyva (Tuva) - 'Heroic pages of Tuva's past'
- The Republic of Khakassia - 'Down the streets of memory'

FAR EASTERN DISTRICT

- Amur region - 'The way of the winners'
- Jewish Autonomous Region - 'Jewish Autonomous Region during the Great Patriotic War'
- Transbaikal region - 'A' military operation like no other'
- The Republic of Buryatia - 'Selenginsky fort: lessons of memory and glory'
- Kamchatka Krai - 'Historical Petropavlovsk'
- Primorsky Krai - Vladivostok - 'Russia's eastern outpost The Forgotten Russo-Japanese War'
- The Republic of Sakha (Yakutia) - 'History of the Civil War in Yakutia'
- Sakhalin region - 'To the places of military glory of Sakhalin'
- Khabarovsk region - 'In the wake of World War II'

PART 2 - GERHARDT'S MILL CASE STUDY

1. INTRODUCTION

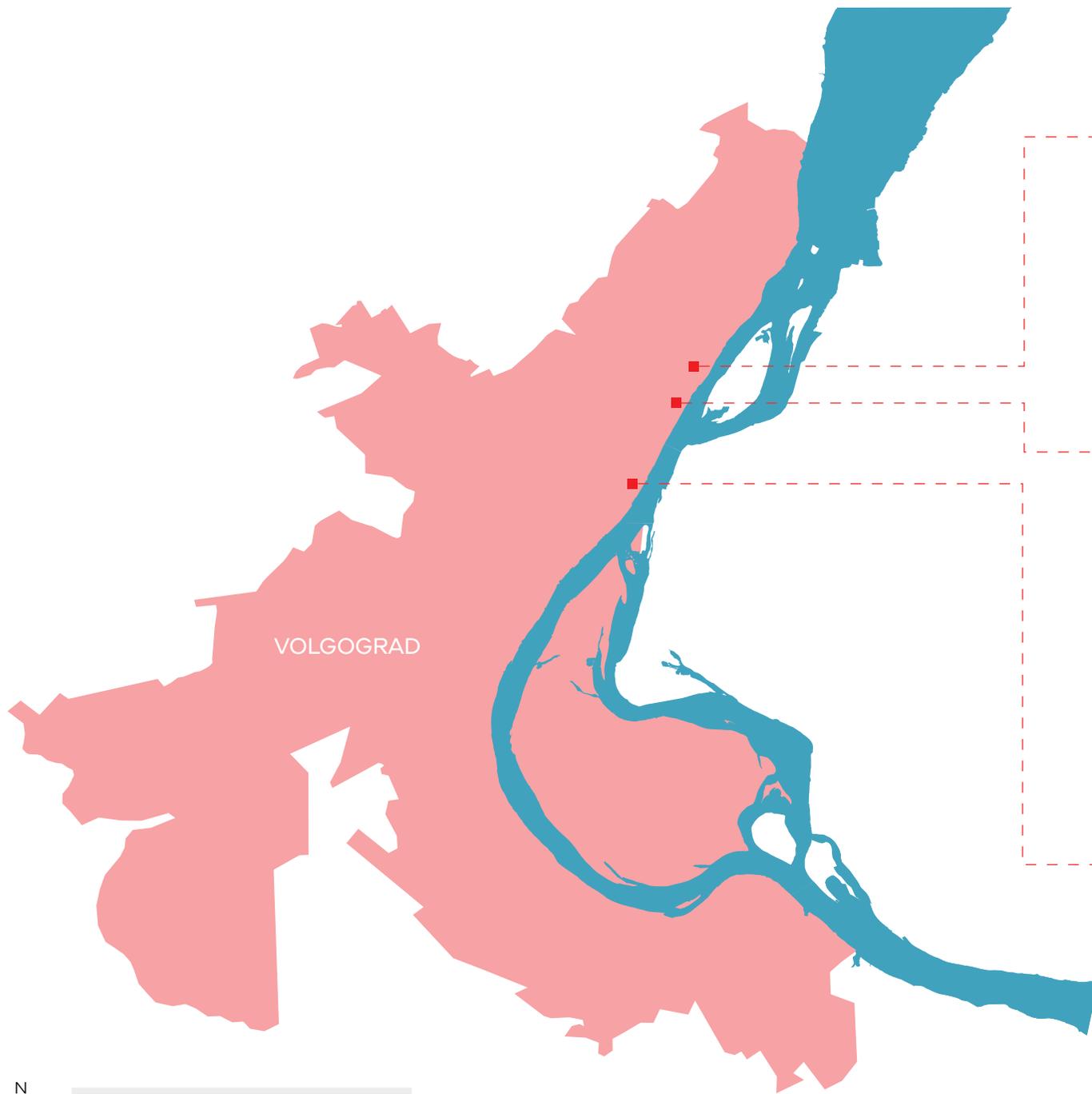
The Gerhardt's Mill (fig.42) is a war heritage monument located in Volgograd (before named Stalingrad) city in the southern district of the Russian Federation. Currently, Mill is a part of the museum complex – 'Stalingrad Panorama' created to memorize the events of the Great Patriotic War (part of the Second World War) and especially the Stalingrad battle – turning point in the war. Gerhardt's Mill has been run by the museum since 2008. Currently, the Mill is a cultural heritage site of federal significance 'Historical Reserve - Ruins of the Mill named after 'Grudinin'', registered in the Unified State Register of Cultural Heritage Objects (historical and cultural monuments) of the people of the Russian Federation under the number 341510306540006¹⁷. The mill is located at the address: Volgograd region, Volgograd, Central district, st. Sovetskaya, 47. The 'Stalingrad Panorama' complex is important site of military cultural tourism in the Russian Federation, highlighted by the fact that Volgograd is one of the 'hero-cities' – the most important cities where the actions of the Great Patriotic War took place.

Gerhardt's Mill has a long history before the Second World War as an important industrial factory. During conflict, Mill had strategic meaning and was hardly damaged by the attacks of the opponents. During the post-war reconstruction process, the

ruins of Gerhardt's Mill were left in the condition as they were in after destruction, led by the idea of memorizing the loss after the war. This method of war heritage conservation is different from other cases in Russia. After the Stalingrad battle in Volgograd, together with the Mill, two other cultural sites were left in ruined condition – Central laboratory building of the Red October Plant (fig.41) and Lyudnikov Island (fig.40). Among the three sites, Gerhardt's Mill is located in the most central and visited area of the city. Currently, the preserved ruined brick frame of the Mill and internal reinforced concrete frame are objects of museum display and part of outdoor exposition, but the internal space is not used.

Unfortunately, Gerhardt's Mill recently had several elements collapse. This happened due to old condition of the building, but also because of the lack of maintenance, which could help the monument be preserved in the latest condition. Access to the building nowadays is forbidden to visitors and governmental specialists are working on temporary conservation tools, while bigger restoration projects are being created for future interventions.

¹⁷ Federal law dated 25.06.2002 №73-FZ «About the objects of cultural heritage (monuments of history and culture) of people of Russian Federation»



0 5km 10km 15km



Figure 40 - Lyudnikov Island
source: <https://gorvesti.ru/files/1/2021/106714-2021720-28084-1bx86ub.xwhv.jpg>



Figure 41 - Central laboratory of the Red October plant
source: <https://files.volfoto.ru/original/2/6112920810675261480.jpg>



Figure 42 - Gerhard's Mill
source: <https://tourvlg.ru/images/eks/avt-eks1.jpg>

2. HISTORICAL ANALYSIS OF THE MILL

In the beginning of the 19th century in the Russian Empire the process of industrialization began, properly having its roots already during Peter the First's reign (1682-1721). By that time, the industrial revolution had already succeeded in Western European countries – especially in the Netherlands. During Catherine the Second (1762-1796) the number of factories grew, just as different types of industries were developed during Alexander the First (1801-1825) and Nicholas the First (1825-1855). However, in the 1860s Russian industry had a serious crisis. Due to the lack of technology, most production activities were still agricultural in nature, and the lack of technology prevented increases in labor productivity. All equipment was brought from abroad, and metallurgical production (thanks to which the first leap in industry took place) was not in great demand. Industry started to grow again during Alexander the Third, when the politics of protectionism (foreign trade policy of the state restricting the import of imported goods, which started with Alexander the First) had returned. Together with big increasing of the industry - railway construction was underway.

In the end of the 19th century, Tsaritsyn (now named Volgograd) had leading positions due to its location in the trading transportation of products to the central Russian districts, the Caucasus and abroad

to Caspian states. Grain was the most important commodity in the region, so the development of a flour milling industry was beneficial. The family of Gerhardt was the first who wanted to invest in the building of mills, so in February 1899 they sent a petition to the Tsaritsyn city government about buying a site in the central area near the Volga river bank – 346 quarters which was 3528 fathoms (6452,006 meters). After negotiations between the government and the Gerhardt brothers about the conditions of the mill building, in June 1899 work started by laying a foundation. Future building are also being advertised in the newspapers. In June 1899, the Tsaritsynsky Vestnik newspaper wrote: 'The construction of a grandiose steam flour mill has now begun. Gerhardt. The area for the mill has been leveled, and the foundation is currently being built.' (fig.43) Later, the trade house of 'A.D. Gerhardt and brothers' declares that Mill will start to work on 20 July of 1900 and on August 1 will start to sell the flour.

The five-story rectangular building of the Mill, measuring 53x20 m, 25 m high with a basement floor, was built on the northern outskirts of Tsaritsyn, near Nikolskaya Square (later named after Lenin) (fig.44). The building was standard: similar structures, composed of typological elements, very similar in form and built with the same industrial

functions, were built in many cities in Russia and in Tsaritsyn itself. On the territory, there was a flour mill, a fish smokehouse, an oil mill, a bakery shop and its own electric generator. The building was built traditionally - with brick walls and wooden ceilings inside. The earlier development of the river transportation system and railways – Gerhardt’s Mill had success from the beginning due to big demand. It provided work for more than 400 people.

On August 8, 1907 there was a severe fire at the mill, as a result of which the mill was almost completely burned out, only the outer walls remained. However, Gerhardt’s brother immediately started reconstruction of the building. It was decided to use new modern structures and materials for Mill reconstruction, which could prevent future fires. The building’s inside structure was made of reinforced concrete with the use of additional metallic, which increased the rigidity of the structure and the connection between the inside structure and outside break walls; load-bearing walls remained as a part of the structural system but were also reinforced (fig.45). This was necessary then to protect the building from vibrations that arose from the operation of flour-grinding machines. Also, more modern technical equipment was used. This way, Gerhardt’s Mill, which in 1922 was renamed into Grudinin Mill, worked properly for the next 34

years until the beginning of the Great Patriotic War.



Figure 43 - Advertisement of the Gerhardt's Mill
Source: http://наследие.царицын.рф/uploads/posts/2015-03/1427390326_g-1.jpg



Figure 44 - Wooden Gerhard's Mill

Source: https://upload.wikimedia.org/wikipedia/commons/e/e9/1915_Grain_mill_warehouse_Gergart_The_view_from_the_belfry_of_the_church_St_Nicholas.jpg

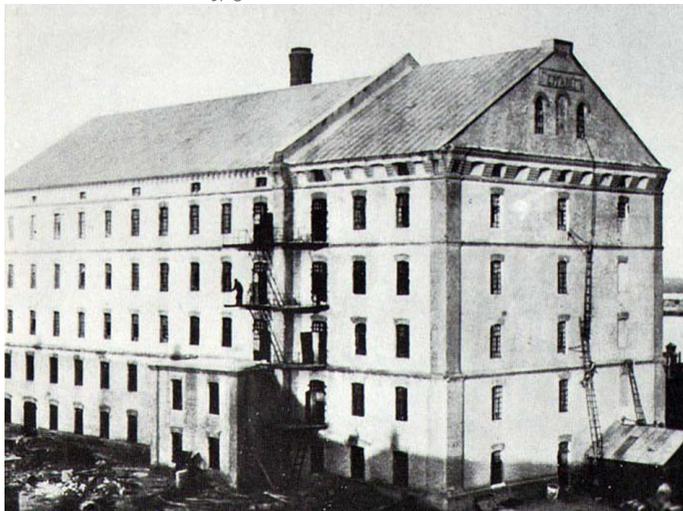


Figure 45 - Gerhard's Mill building after reconstruction

Source: http://наследие.царицын.рф/uploads/posts/2015-03/1427390292_g-2.jpg

2.1 Gerhard's Mill during the war

After the beginning of the Second World War in 1939 and the Great Patriotic War in 1941, the bombing of Stalingrad started in August 1942 (fig.46). Gerhard's Mill was still working until the first high-explosive bombs hit the mill building on September 14, 1942; the mill's operation was stopped only on that day. On the night of September 14–15, to solve the difficult situation that had developed in Stalingrad (renamed Tsaritsyn), the 13th Guards Rifle Division of General Rodimtsev crossed the Volga. The mill building was occupied as a military post. The fighting directly near the building began on September 20, 1942. German units entrenched themselves in houses on the opposite side of Lenin Square, and Soviet units held Pavlov's house and the mill on the Volga side. The active defense of the building lasted 58 days, after which the front moved away from the Volga and the fighting in the mill area stopped. During the war years and immediately after the war, some parts of the mill were hastily renovated and occupied due to the high need for overnight accommodation for locals. (fig.47)

In the 1970s, construction began on the Battle of Stalingrad Panorama Museum (fig.48). The mill was left untouched as a part of the outdoor exhibition; it was surrounded by overpasses on all sides and

left inside the small yard where now visitors are not allowed, but in the 1970s it was still open for museum trips.



Figure 46 - Bombing of Stalingrad, August 1942
Source: https://encrypted-tbn2.gstatic.com/images?q=tbn:ANd9GcQ_e0D7oSROvC_AN6Q_w7Ny61QEPuvS6Wo48EY4quEFotKyHrin



Figure 47 - Gerhardt's Mill after the war with the temporary accommodation

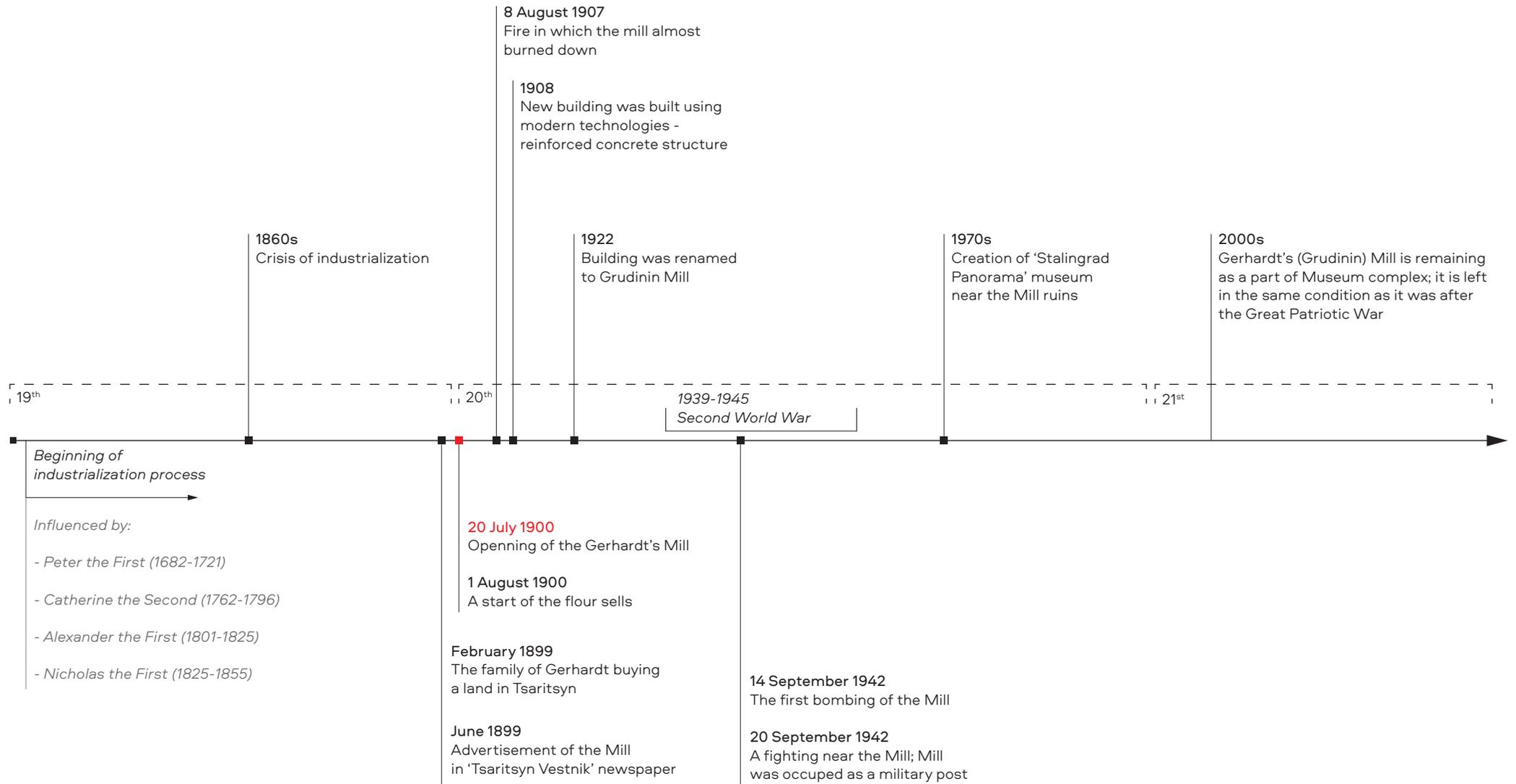
Source: http://наследие.царицын.рф/uploads/posts/2015-03/1427390319_g-2-1.jpg



Figure 48 - Construction of the Stalingrad Panorama museum

Source: http://наследие.царицын.рф/uploads/posts/2015-03/1427390231_g-4.jpg

HISTORY OF THE GERHARDT'S MILL TIMELINE



3. TERRITORIAL ANALYSIS

3.1 Volgograd region: urban history and foundation

The Volgograd region was founded in 1934 with the administrative center – Volgograd city.

The Volgograd Region is part of the Southern Federal District. This district includes eight constituent entities of the Russian Federation: the Republics of Adygea, Kalmykia, and Crimea; Krasnodar Territory; Astrakhan; Volgograd; Rostov Regions; and Sevastopol. The center of the district is the city of Rostov on Don.

The Volgograd Region is located in the southeast of the East European Plain. It is connected to the boundary with Kazakhstan with the western boundary and other regions: Saratov region with the northern boundary, Voronezh and Rostov regions in the eastern boundary, and Republic of Kalmykia and Astrakhan' region with the southern boundary. The largest cities are Volgograd, Volzhsky, Kamyshin, Mikhailovka.

The area of the territory as of January 1, 2019 was 112.9 thousand square meters - 0.66% of the territory of the Russian Federation. Two large rivers flow through the Volgograd region - the Volga and the Don and 190 small other rivers.

The population of the region as of January 1, 2020, was 2491.8 thousand people - 1.70% of the population of the Russian Federation¹⁸.

The tourist flow to the Volgograd region from January to December 2022 is 958969 trips¹⁹ which is 0,6% of the data of Russian Federation. Nevertheless, according to the national tourism assessment rating for 2022²⁰, the Volgograd region ranks 32 among the regions in terms of tourist attraction and tourism potential. The most popular destination of the tourism in the Volgograd region is Volgograd city. For 2018, the contribution of the tourism industry will be 0.6 percent of the total contribution of other areas of activity in the Volgograd region.

At the end of 2021, 40 museums of the Russian Ministry of Culture operated in the Volgograd region, the number of visits to which amounted to 2.8 million. At the end of 2021, 11 theaters of the Russian Ministry of Culture operated in the region, which were visited by 376.6 thousand people²¹.

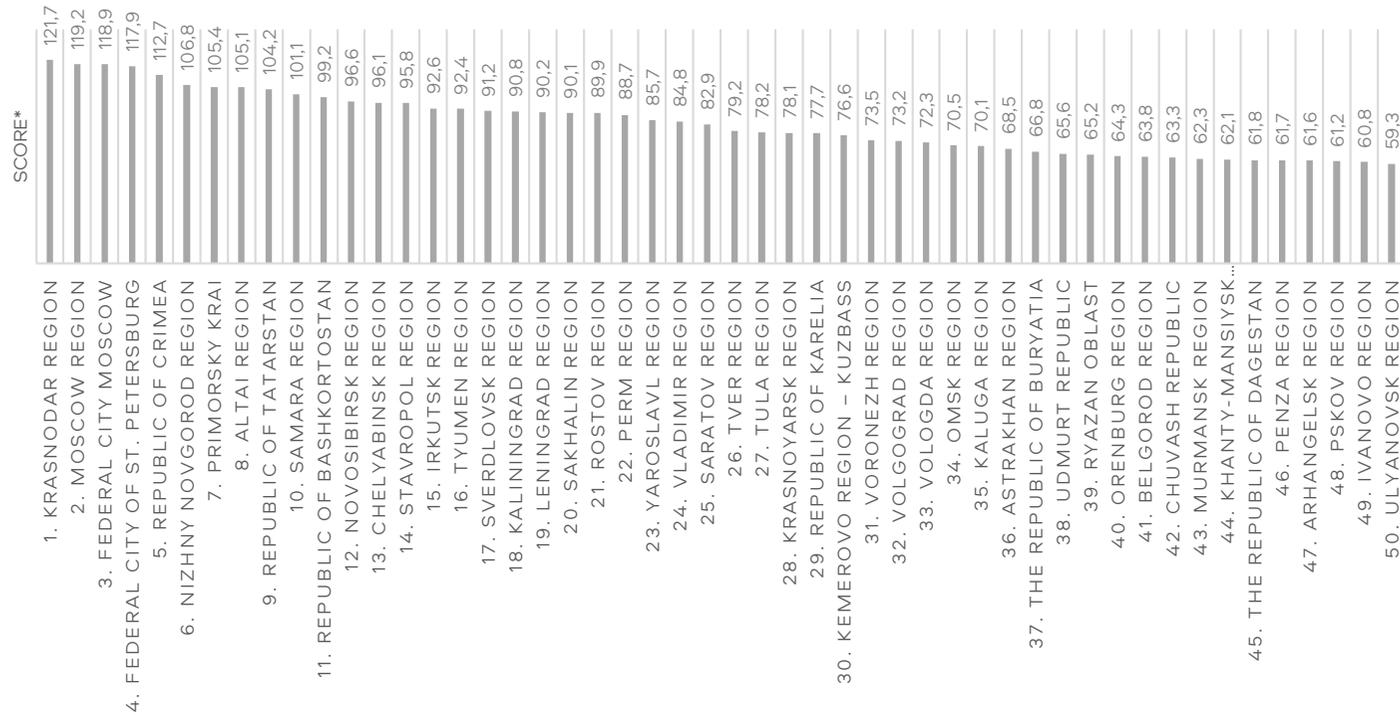
¹⁸ <http://ufo.gov.ru/district/VGG> - Plenipotentiary Representative of the President of the Russian Federation in the Southern Federal District

¹⁹ <https://rosstat.gov.ru/statistics/turizm> - Federal State Statistics Service of Russian Federation

²⁰ <https://russia-rating.ru/info/21283.html> - National Tourism Rating - 2022

²¹ Volgograd region in numbers. 2022: short Sat. / Terr. Federal authority government services statistics for Volgograd. region – Volgograd: Volgogradstat, 2023. – 386 p.

NATIONAL TOURISM RANKING



Data source: <https://russia-rating.ru/info/21283.html>

Scores are based on:

- Level of development of the tourism industry and hotel infrastructure;
- Profitability of the tourism and hospitality industry, its contribution to the regional economy;

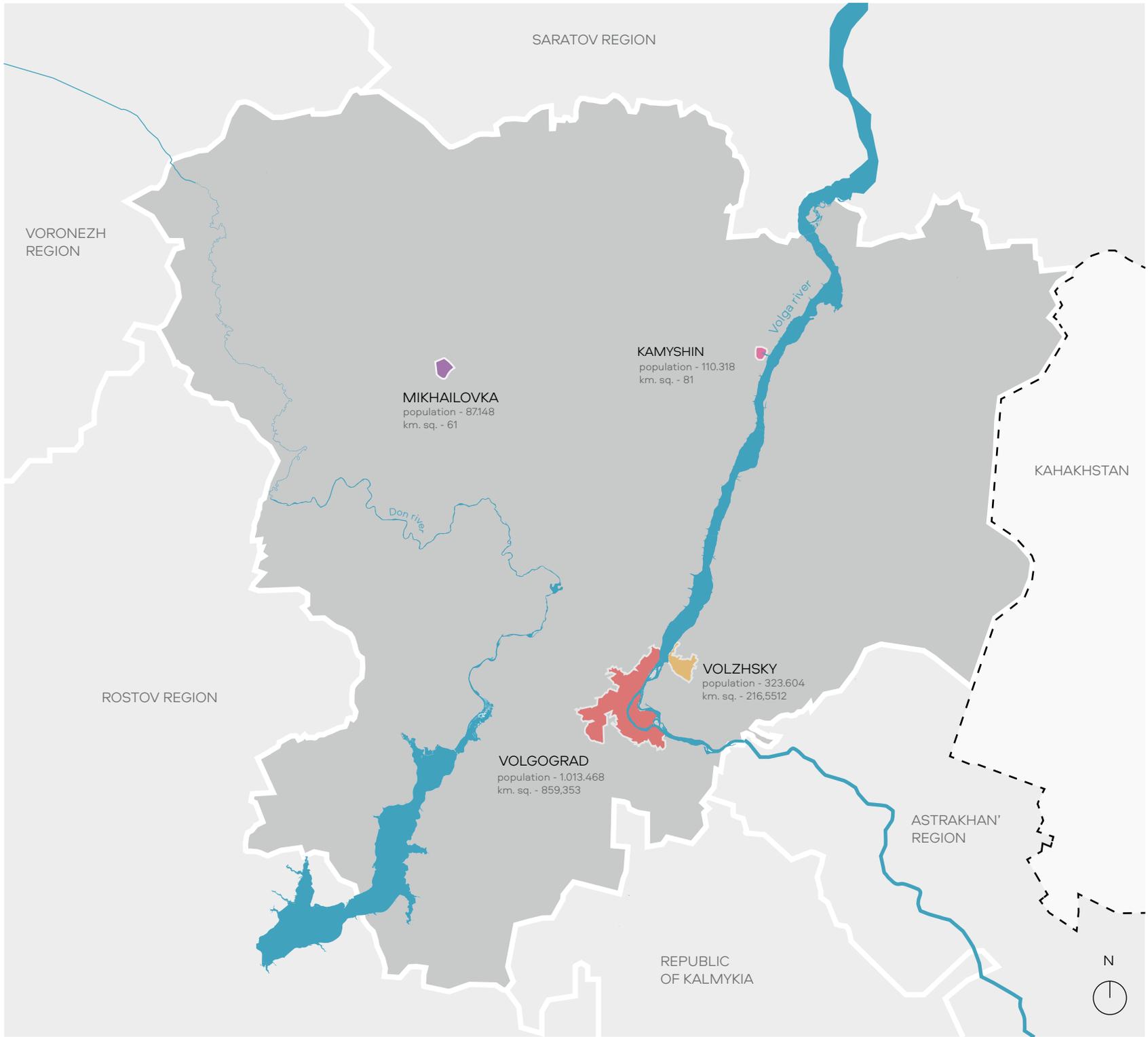
- Development of the region's health resort industry;
- Popularity of the region among tourists coming for several days;
- Popularity of the region among foreigners;
- Tourist uniqueness and attractiveness of the region;
- Crime rate in the region;
- Interest in the region on the Internet as a holiday destination;
- Promotion of the region's tourism potential in the information space;



VOLGOGRAD REGION

VOLGOGRAD REGION ON THE MAP OF RUSSIA





VOLGOGRAD REGION MAP

* population data based on 1 January 2019
source: <http://ufo.gov.ru/district/VGG/>

* territorial data based on 2019 year except Volzhsky city based on 2012
sources: <https://admvol.ru/>
<https://www.gks.ru/>
<https://volgoduma.ru/>

3.2 Volgograd city

Volgograd (which until 1925 had the name Tsaritsyn and in 1925–1961 was called Stalingrad) is the regional center of the Volgograd region of the Russian Federation. It is also an important industrial, transport, scientific, and cultural center. The total area of the city is 859 square kilometers²², population number is 1.004.763²³ Volgograd is a linear city located along the Volga. Its width is 5 km and its length up to 65-70 km. To maintain the status of a million-plus city, 28 settlements and Sarpinsky Island were attached to the city.

Volgograd consists of eight districts - Traktorzavodsky, Krasnooktyabrsky, Central, Dzerzhinsky, Voroshilovsky, Sovetsky, Kirovsky, and Krasnoarmeisky.

Volgograd is a linear type of city.

‘When defining ‘linear’ cities, it is common that these are cities with a large extent, where the length of the city is many times greater than its width. In the case of Volgograd the shape of the city is based on the presence of the Volga river, which has enough width to make reaching another bank hard’.²⁴

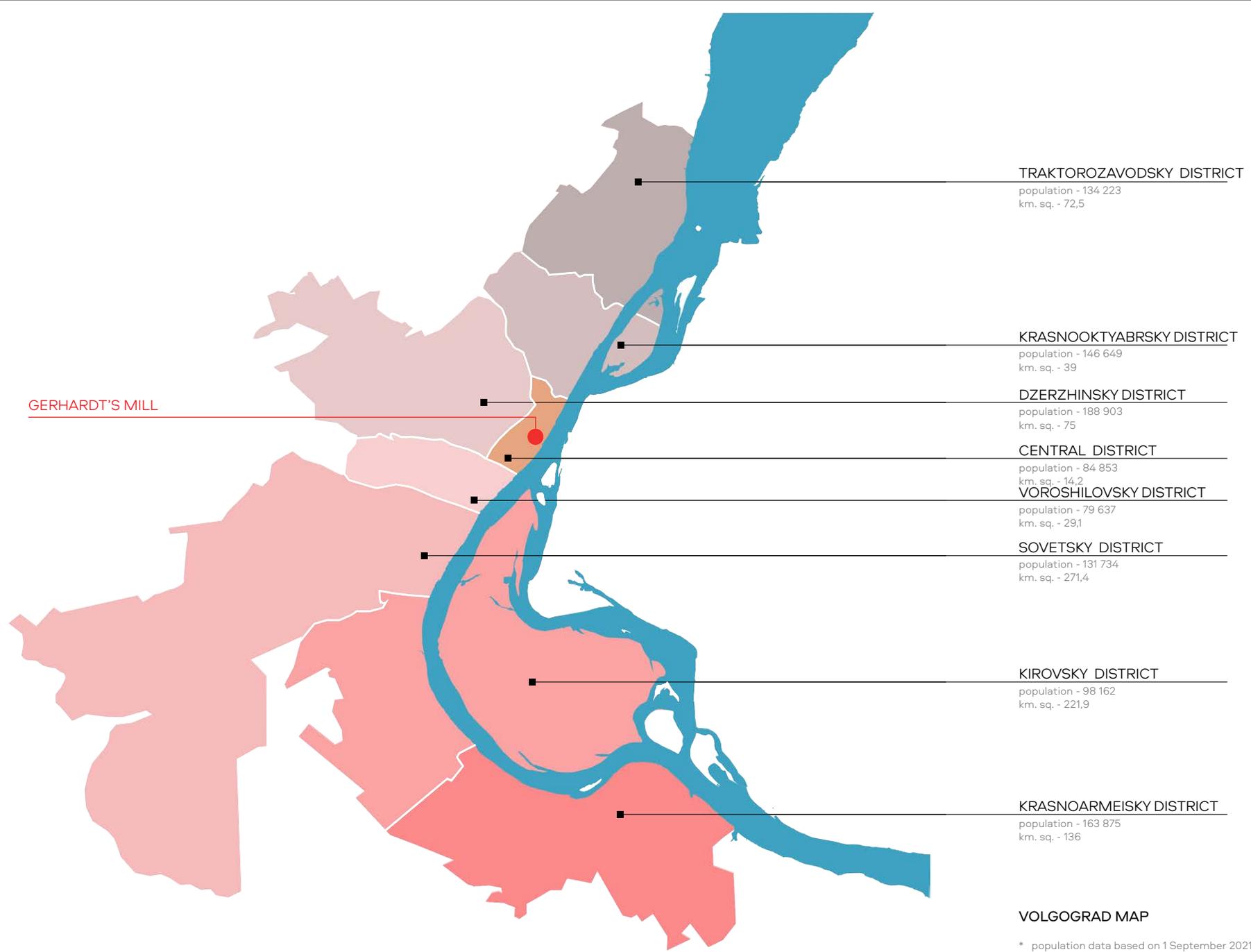
The Volga River in Volgograd and the Volgograd

region has long been used as a waterway. Thus, extensive reservoirs have been created on both of them, as well as large hydroelectric power stations. Water is used to irrigate fields and generate energy. The biggest HHP in Europe – Volga HPP located between the cities of Volgograd and Volzhskiy. The hydroelectric power plant is an important link in the Unified Energy System of Russia.

²² <http://docs.cntd.ru/> - data based on march 2017

²³ <https://rosstat.gov.ru/> - data based on 1 September 2021

²⁴ L.V. Detochenko (2018) «Linear» city: historical and geographical features of the territorial organization, economic and transport components (by the example of Volgograd)/ BULLETIN OF UDMURT UNIVERSITY. T. 28, no. 2)



GERHARDT'S MILL

TRAKTOROZAVODSKY DISTRICT

population - 134 223
km. sq. - 72,5

KRASNOOKTYABRSKY DISTRICT

population - 146 649
km. sq. - 39

DZERZHINSKY DISTRICT

population - 188 903
km. sq. - 75

CENTRAL DISTRICT

population - 84 853
km. sq. - 14,2

VOROSHILOVSKY DISTRICT

population - 79 637
km. sq. - 29,1

SOVETSKY DISTRICT

population - 131 734
km. sq. - 271,4

KIROVSKY DISTRICT

population - 98 162
km. sq. - 221,9

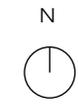
KRASNOARMEISKY DISTRICT

population - 163 875
km. sq. - 136

VOLGOGRAD MAP

* population data based on 1 September 2021
source: <https://rosstat.gov.ru/>

* territorial data based on march 2017
sources: <http://docs.cntd.ru/>



i. History of the Volgograd city

Volga trade route

Initially, the city of Volgograd had two other names during different periods of its existence. The first mention of the city was in 1555. The city was first located on the left bank cape and then was built again in 1615 on the right bank of the Volga river, after being fully burned in XVII. The city was located on the place where the river Tsaritsa connected with the Volga river, that's how, from 1589 to 1925, it received the name Tsaritsyn. And from 1925 to 1961, the city was renamed Stalingrad, dedicated to Joseph Stalin. On November 10, 1961, by the Decree of the Presidium of the Supreme Soviet of the RSFSR, the city was named Volgograd²⁵.

The founding of the city can be explained by the importance of the Volga trade route, the Volgodonsk crossing, and shipping activities on the Volga, which have a long historical presence. A Russian settlement arose on Lake Tsaritsyn, originally a wooden fortress. This settlement played a decisive role in protecting the Volga Route at the confluence of the Volga and Don, protecting against raids by steppe nomads and marauding bands crossing the Volga region.

The Volga trade route (or, in other words, the Volga-

Baltic route) is the earliest of the three great river routes of Ancient Rus' that connected Scandinavia with the Caliphate in the early Middle Ages. The "Great Volga Road" facilitated trade between the Varangians, Slavs, and Finno-Ugric peoples with the Khazars and Arabs. By the end of the 10th century, the Khazar state was destroyed, and the Volga route was cut by the Pechenegs. However, by the 16th century, in connection with the conquest of the Kazan and Astrakhan khanates by Ivan the Terrible, the entire system of Volga connections remained in the hands of Russia. It is on this basis that cities such as Samara, Saratov, and Tsaritsyn arise.

²⁵ DECREE of the Presidium of the Supreme Council of the RSFSR dated 11/10/1961 «On rename the Stalingrad region to the Volgograd region and the city of Stalingrad to the city of Volgograd»



- VOLGA TRADE ROUTE
- - - BRANCHES OF VOLGA TRADE ROUTE

* data source: arheologija.ru

Tsaritsyn

Due to its strategic geopolitical location, Tsaritsyn-Stalingrad-Volgograd and the surrounding region found themselves at the epicenter of major events in the modern history of Russia: the Civil War, industrialization, collectivization, and the Battle of Stalingrad.

*'Revolutionary crisis of the early twentieth century and the Battle of Stalingrad divided the history and culture of the region into completely different stages, when new layers of cultural heritage were created to replace those lost.'*²⁶

Until the last quarter of the 18th century, Tsaritsyn remained an independent fortress in the southeast of the country, changing several forms of self-government over the years (fig.49). Since the spatial structure of fortified cities was determined primarily by their defensive significance, fortresses in the Volga region were built according to a single model approved by royal decree. The plans and views of the Tsaritsyn fortress, dating back to the 17th century, are similar to other Russian fortresses located at the mouths of large rivers (Samara, Saratov, Simbirsk, etc.).

On March 2, 1784, a city magistrate was opened in Tsaritsyn - a local government body. On March 5,

1797, Tsaritsyn became a district town of the newly restored Saratov province. In the 17th century, Tsaritsyn suffered from attacks by rebel Peasant-Cossack detachments and troops. The wooden city at that time burned down several times, as a result of which local archives dating back to the early period of Tsaritsyn's history were lost. Until the middle of the 19th century, the development of the city of Tsaritsyn was not much different from the development of other cities of the Lower Volga region, but construction began in the second half of the 19th century. The railway line makes the city an important transport and trade center.

In accordance with the approved plan of 1820 (fig. 50), the city was organized into two separate territories, separated by the bed of the Tsarina River: the Old Town and the New Town, also known as the Zatsaritsyn suburb. The plan of the New Town was a regular structure with streets parallel and perpendicular to the coastline, and at its center was a shopping area with an adjacent church. The plan of Tsaritsyn in the mid-19th century determined the development of the city in the northwestern and southeastern directions from the fortress, assuming its total length to be within 5 km. By the end of the 1920s, Tsaritsyn stretches out in a narrow strip along the banks of the Volga for 30 km. However, the areas surrounding the old

²⁶ Komissarova E. V. (2018). Tsaritsyn - Stalingrad - Volgograd: the tragedy of the cultural heritage of the fighting city. News of the Volgograd State Pedagogical University, (6 (129)), 211-222.

fortress of the city weren't touched by architects until the end of the 19th century. By the beginning of the twentieth century, Tsaritsyn was a series of suburban settlements, loosely connected in compositional and spatial terms. Industrial development started to increase at the beginning of the 20th century – that's exactly when Gerhardt's Mill was built. The city kept being wooden (fig.51).

Having become a major industrial center and transport hub by the beginning of the 20th century (fig.52), Tsaritsyn was later at the epicenter of the events of the revolution, the Civil War in 1917–1920 (change of the ruling class as a result). This was followed by a severe famine of 1921–1922.

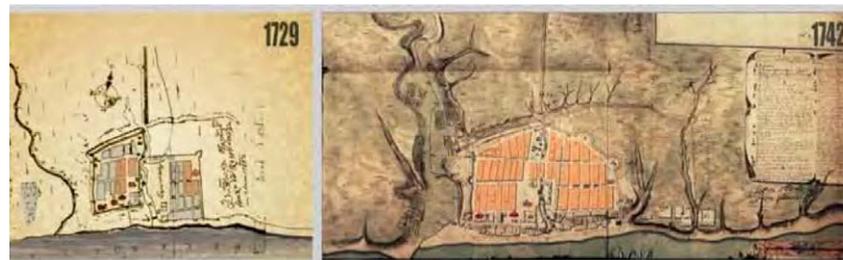


Figure 49 - Tsaritsyn in the last quarter of 18th century

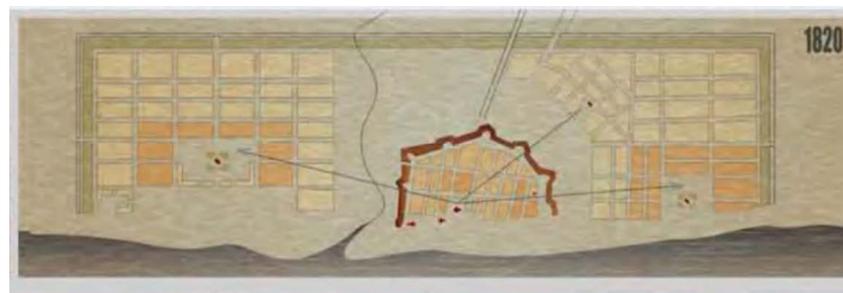


Figure 50 - Plan of the Tsaritsyn city of 1820



Figure 51 - Wooden Tsaritsyn

Source: <https://gorvesti.ru/files/2022/120306-202262-11235-u3hdoy.4mwid.jpg>



Figure 52 - Tsaritsyn in the beginning of 20th century

Source of figures 1,2,4: Yanushkina Yu. V. (2014) Architecture of Stalingrad 1925-1961 The image of the city in culture and its embodiment: textbook / Ministry of Education and Science Ros. Federation, Volgograd. state architect-builds. un-t. URL: <http://www.vgasu.ru/publishing/on-line/>

Stalingrad

In 1925 the city was renamed Stalingrad. The change in the ruling class and the search for new ways of socio-economic development in Russia in the 1920s led to the formation of new architectural types: a socialist city, a communal house, workers' clubs, Labor Palaces, and Houses of Soviets. Second half of the 1920s - the period of spontaneous construction of workers' settlements in Stalingrad. Despite the ideas of consistency that dominate the ideology of the new government, until 1929 the city grew chaotically and unsystematically without even a partial plan. Since 1929, the growth of industrial construction has significantly outpaced the natural growth of the city. The era of directive planning in Stalingrad began, when it was dictated to build cities that corresponded to the ideas of the new era - the city of the future.

Stalingrad, named after Josef Stalin, was supposed to be a representation of the ideal Soviet model of the city – monument of the era of socialism. Stalingrad was delimited into relatively equal territories, within which a figurative and compositional system was gradually built up, similar to the general structure of the center - a processional road leading through a system of open spaces to the dominant. Also, buildings had a strict

classification hierarchy. The solution to general issues of figurative and semantic expediency prevailed over the solution to functional and socio-economic problems. The ideological context of Soviet architecture was determined by two types of relations: between mass consciousness and state power, and between power and the individual. Ideology destroyed everything that did not fit into its framework and sought to create a stable conceptual grid.

From the 1930th on, Stalingrad was considered the modern city of the future. At the turn of the 1920s-1930s. the image of Stalingrad was interpreted as an expression of the linear, progressive movement of technical progress. But already in 1932-1933 there were plans to form it as a centralized production and socio-cultural plant. Ideas about the city as a functional entity give way to solving architectural and artistic problems. The development of a project for the reconstruction of Stalingrad begins, based on the theory of the city-organism, which became the core of the urban planning system of the Stalin era. But still, the future spatial development of Stalingrad was not clearly decided. Residential areas were built around industrial ones, right near. In 1931, the project of 'big Stalingrad' was presented, which declared new order of building Stalingrad related to the needs of

society.

*'The Stalingrad planning project adopts a system of four to five organized cities with a population of at least 50 thousand people in each. This system, as the most compact, allowing for the organization of a proper social base, makes it possible to most advantageously surround each city with a green strip, separating housing from industrial enterprises.'*²⁷

The Greater Stalingrad project of 1931 combined two concepts. On the one hand, the idea of a socialist city was preserved in the form of a structural organization of districts and a limit of the number of residents, but at the same time, the paving structure was flexible, following the ideas of disurbanism. However, Soviet ideology was ahead and developed utopian consciousness in society. There was psychological influence on people by Soviet ideas like everything put in order, instead of a wooden village – 'stone giant', and instead of small streets – big alleys with a lot of light. Great importance is attached to the construction of dominant features in the urban environment - central ensembles. Some of them are located on the Volga embankment. Even then, the urban environment acquired the effect of pomp and monumentality - this approach would subsequently

be reflected in the post-war reconstruction, but before the war Stalingrad was following the city – organism type.

The Great Patriotic War and the post-war rehabilitation of Stalingrad

On July 17, 1942, the Battle of Stalingrad began, a decisive conflict that changed a lot over the course of the Great Patriotic War and the Second World War. The battle lasted 200 days, and the defensive phase lasted almost three months (fig. 53). On February 2, 1943, the offensive Stalingrad operation ended, ending with the defeat of the Nazi troops. For 'Outstanding services to the Motherland', on May 1, 1945, Stalingrad was awarded the prestigious title of 'Hero-City'. In addition, on May 8, 1965, it was awarded the 'Order of Lenin' and the 'Gold Star' medal. After the Battle of Stalingrad, a huge part of the city was completely ruined. The destruction spread beyond residential areas, affecting many cultural areas and buildings and causing many heritage losses. The image of the aftermath (fig. 54) clearly illustrates the scale of destruction caused to the city center.

In the post-war period, the need for new levers of ideological influence resulted in the development of the concept of the city as a monument to victory. This defines the beginning of a stage within which

²⁷ Semenov V.N. 'Project of a new city' // Struggle. - 1931. - April 27.

a radical transformation takes place in the system of spatial connections in Stalingrad. Stalingrad was very suitable for the new idea of a monument city because it was so damaged that it actually had to be rebuilt. The design practice of Stalingrad in the 1945-1955s period was an attempt to materialize this idea.

Compared to the urban planning of the pre-war period, where organization was based on the principle - from the general to the specific, after the war all attention was concentrated on the construction of monuments dedicated to the victory - and the design of the center was based on this. A. V. Shchusev (a Soviet architect) proposed designing the center of Stalingrad as a single ensemble - a monument to victory. Therefore, the monument in the architecture of post-war Stalingrad becomes the main urban dominant. Also, there was a competition to create the biggest monument of victory. Together with this, there were a lot of different proposals for the reconstruction of the city. However, the project started to be developed right after the Stalingrad battle – in 1943.

Since before the war structure of Stalingrad wasn't clearly defined and the city looked like many small settlements separated by green natural areas, therefore, the main tasks that determined the

construction of the master plan of 1943-1945 were the unification of segregated urban space and its opening to the river. The biggest attention was paid to the center of the city; the idea was that the image of the center is the main representation of all city. The plans include 1944-1953, when tendencies towards orderliness and symmetry in the center of Stalingrad are intensifying. It is important to notice, that the structure of the after war Stalingrad was not anymore dealing with the landscape but was imposed on it compared to previous urban planning before the war. The openness of the city to the river is also emphasized - from the Volga side, the city should acquire a powerful compositional emphasis - this is the basis for the construction of the 62nd Army embankment and the perpendicular Alley of Heroes - leading to the river. The presence of the palace as a central element of the city structure – this principle developed even before the war time – after the war had additional city developing elements – the monument of the victory.

In 1943, A.V. Shchusev voiced the idea of building the center of Stalingrad (fig.55) as a grandiose Victory Forum, including all the main public buildings of the city. This set the main direction of the search for the architectural image of Stalingrad, which focused on the maximum compositional unification of all ensembles. The new planning project consolidated

the development of the city in the form of a linear group of separate planning areas. According to this project, each planning district in Stalingrad was to have a structure similar to the city center: a cross of main highways with a clearly defined area, an embankment, and a green ring boulevard. All this was connected to a single city-line system by three longitudinal highways.

The character of the after-war architecture of the buildings also changes. By 1953, the nature of the residential architecture of Stalingrad and its architectural image as a whole were gravitating toward increasingly monumentalization. The nature of the development of the central part becomes brutal - buildings are built in continuous arrays in the spirit of medieval palazzos. The scale and height of the building grew with the idea of grandiosity, along with the width of the streets and the area of open spaces and squares.

1960s – 1980s became an important stage in the development of cultural conservation and cultural-creative activities. During the renovation program, there were several cases of the preservation of objects destroyed during the war as heritage monuments. Thus, Pavlov's House was turned into a memorial, combining fragmentary conservation, namely in 1965, its end wall on the side of Lenin

Street was supplemented with a concrete relief and additionally laid out with bricks by sculptors P.L. Malkov and A.V. Golovanov (fig. 56, 57) Gerhard's Mill was saved without any restoration actions in its exact condition, which was after the battle.



Figure 53 - Stalingrad during the bombing in 1942
Source: <https://www.volgadmin.ru/Content/Images/History/stalingrad.jpg>



Figure 54 - Photo of Stalingrad, March 1943

1 – State Bank; 2 – Ruins of a brewery; 3 – Complex of NKVD buildings; 4 – School No. 6; 5 – Voentorg; 6 – “Zabolotny’s House”; 7 – “Pavlov’s House”; 8 – Gerhard’s mill; 9 – “Milk House”; 10 – “House of Railway Workers”; 11 – “L-shaped house”; 12 – school No. 38; 13 – Oil tanks; 14 – Oil refinery plant; 15 – Factory warehouse.

Source: <https://warspot-asset.s3.amazonaws.com/articles/pictures/000/048/585/content/shema2-1ab67ec3eac5674dbe11ee195d809a6b.png>



Figure 55 - Plan of the center of Stalingrad 1943 made by Shchusev

Source: <https://poruski.me/wp-content/uploads/2021/06/14-e1624309062793.jpg>



Figure 56 - Pavlov house after the Stalingrad battle

Source: https://upload.wikimedia.org/wikipedia/commons/1/1f/Pavlov%27s_House.jpg



Figure 57 - Pavlov house nowadays

Source: https://upload.wikimedia.org/wikipedia/commons/thumb/3/33/%D0%94%D0%BE%D0%BC_%D0%9F%D0%B0%D0%B2%D0%BB%D0%BE%D0%B2%D0%B0_03.jpg/548px-%D0%94%D0%BE%D0%BC_%D0%9F%D0%B0%D0%B2%D0%BB%D0%BE%D0%B2%D0%B0_03.jpg

ii. Spatial forming of the city Tsaritsyn-Stalingrad-Volgograd

An analysis of the spatial formation of the city of Tsaritsyn-Stalingrad-Volgograd allows us to distinguish several stages of its formation:

16th-18th centuries - development of a regular planning structure for a military fortress, focused on external horizontal connections. Consolidating the concept of a 'crossroads city'.

18th - early 20th centuries - the construction of coastal, relatively independent suburban settlements, which determined the formation of the specific architectural image of the city of Tsaritsyn, first as a city-route, and then as a city-line. Orientation and bias towards industrial age technologies. The Gerhardt Mill was built in connection with the beginning of the industrialization process.

1925-1929 - renaming the city of Tsaritsyn to Stalingrad, taking a course towards industrialization. The construction of residential settlements during production and the search for the external style of architectural objects continue. The origin of the specifics of the meaning of Stalinist architecture.

1929-1931 - the era of directive planning for

Stalingrad. The development of a linear urban structure as a spatial expression of the idea of linear progressive movement of technical progress.

1931 - 1933 - a conflict between the linear principle of developing the planning structure of Stalingrad and the ideological guidelines for the formation of a socialist city that emphasized the desire for the center. The linear, progressively developing space began to change to the organization of public points in the form of nodes, concentrating attention on the central object of the area and spreading accents in the urban environment.

1933-1935 - formation of the hierarchy of city spaces. The problem of forming an urban center comes to the fore. The greatest attention is paid to the emphasis on individual components of the center - the most important zones, while the periphery recedes into the background. The idea of a central urban core prevailed over the idea of a progressively developing path.

1935-1941 — The idea of the city as a single organism, where the interaction and connections of public and private areas can be traced. However, the relationships between city spaces and the semantic hierarchy of city elements are focused not so much on connecting significant places, but more on separating intra-block and public spaces. There

was a tendency towards large-sized compositions, moving to the level of the entire region and the city as its center.

1943-1946 - the system of spatial connections became more complex. This was due to the emergence of double meanings in Stalinist culture: the House of Soviets and the Victory Monument. The semantic equality of the two centers and the need to differentiate them in formal architectural and spatial expression became the main problems of the design search. A conflict of conceptual attitudes emerged between the city-monument and the city-organism.

1946-1951 — the beginning of the implementation of the idea of a monument city. Within the idea of a monument city, the perception of architecture changes. Urban space was supposed to become static, comparable to a museum. A compromise is established between the linear planning structure of the city and the closed one.

1951-1955 - As a result of the natural self-organization of the city, a homogeneous planning structure of the center of Stalingrad is established. The scheme of spatial connections found for the central ensemble is reproduced in a simplified form in other planning areas of the city.

1955-1961 — the phase of inertial development of the environment of the city-monument.

In 1961, Stalingrad was renamed Volgograd. The city is interpreted as an agglomeration of complex planning areas formed in green areas around large industrial hubs.

1961-1990s - Volgograd became the largest industrial center of the Volga region, developing in the form of a linear group system of settlement.

1990-2000s - the beginning of integration processes, the merging of individual planning areas by reducing green areas. Searching for a new image of the city and its' cultural identity.*

*The periodization of the spatial forming of the Tsaritsyn-Stalingrad-Volgograd is written using as a reference the source: Yanushkina Yu. V. (2014) Architecture of Stalingrad 1925-1961 The image of the city in culture and its embodiment: textbook / Ministry of Education and Science Ros. Federation, Volgograd. state architect-builds. un-t. URL: <http://www.vgasu.ru/publishing/on-line/>



Figure 58



Figure 60

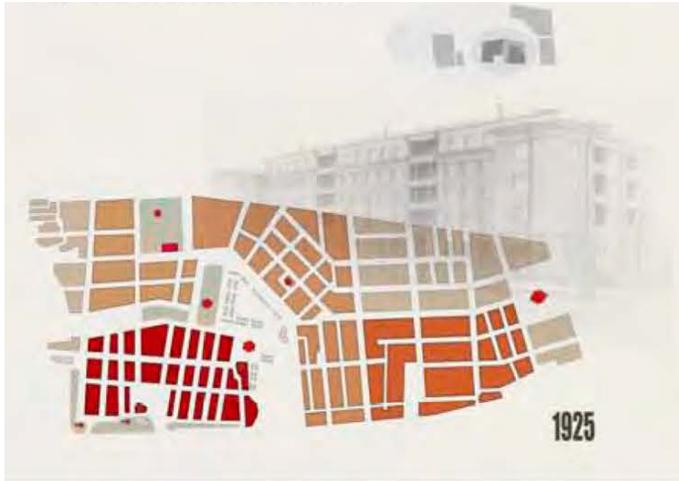


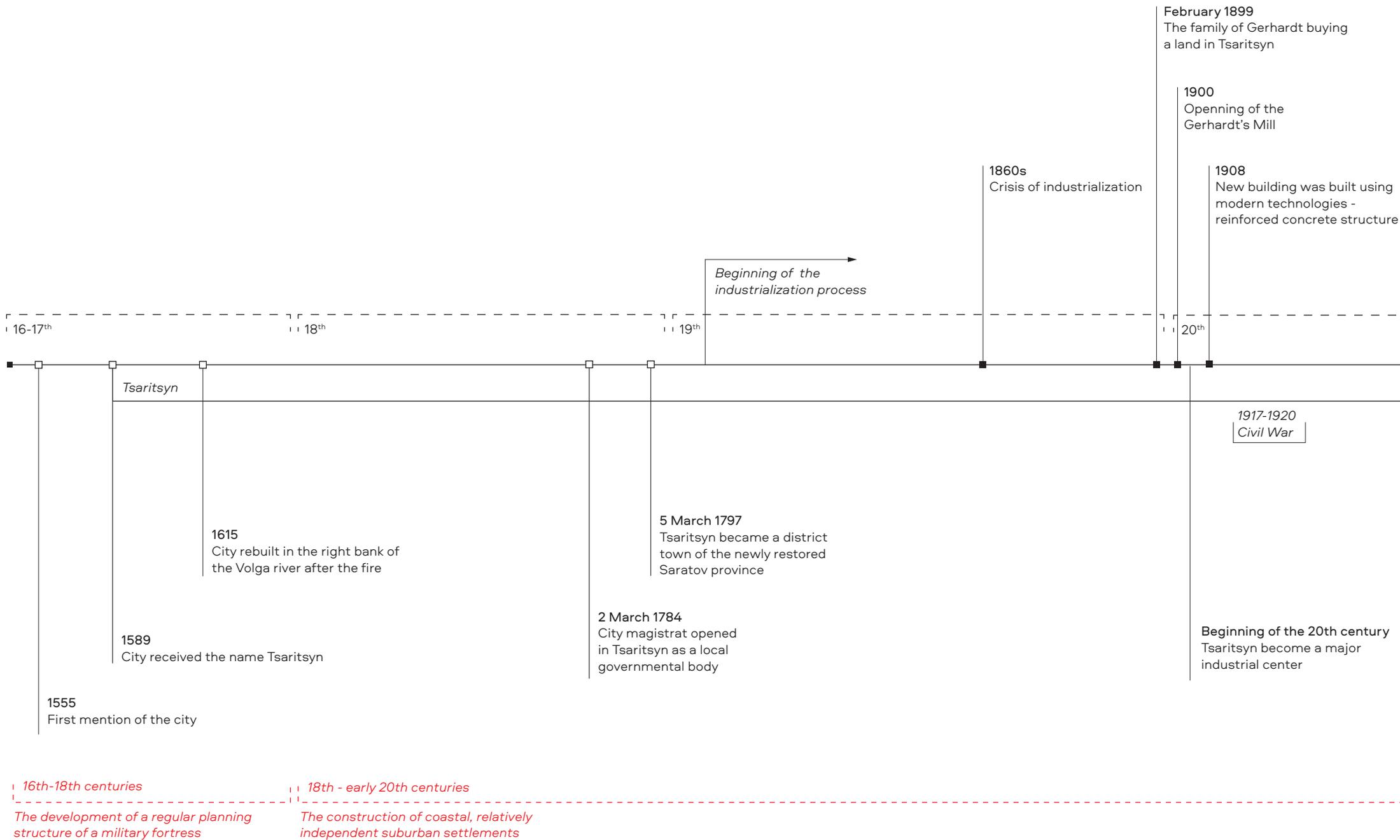
Figure 59

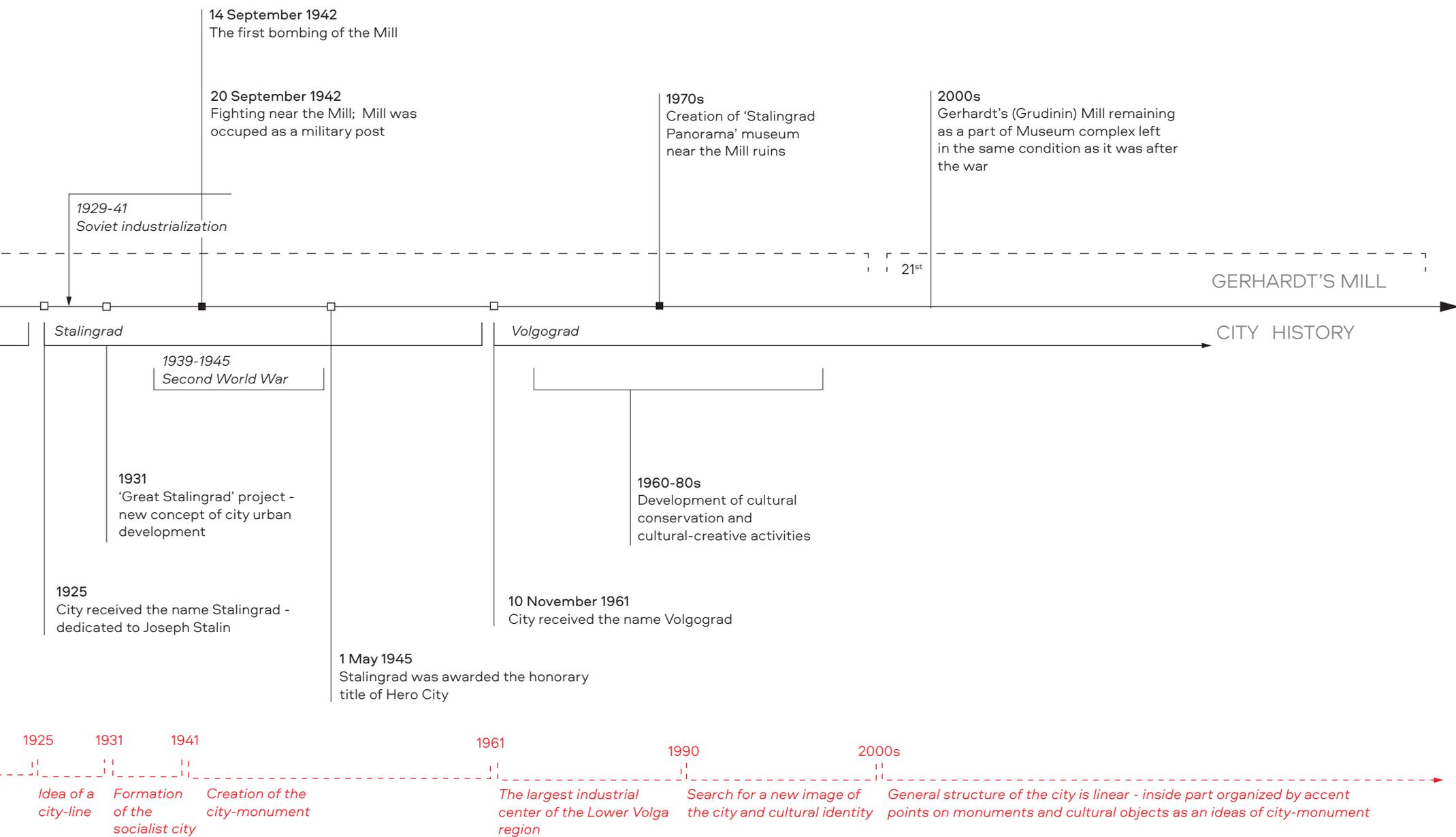
Figure 58 - Plan of the city of 1818 - forming of the base of planning system

Figure 59 - Plan of the city of 1925 - forming of the knot spaces instead of the only unique center

Figure 60 - Plan of the city of 1940 - continuing of the new planning system in the new bigger scale

Source of figures 1,2,3: Yanushkina Yu. V. (2014) Architecture of Stalingrad 1925-1961 The image of the city in culture and its embodiment: textbook / Ministry of Education and Science Ros. Federation, Volgograd. state architect-builds. un-t. URL: <http://www.vgasu.ru/publishing/on-line/>





iii. Heritage and tourism of the Volgograd city

The Volgograd region contains 45 historical monuments of federal meaning and 2646 of regional meaning – most of them are located in the Volgograd and Volzhskiy cities. In Volgograd city officially registered 264 cultural assets²⁸. According to the “State register of cultural heritage objects” monuments are divided into two main categories: Historical heritage and Heritage of Architecture and city planning.

The majority of the monuments are dedicated to the Second World War and Stalingrad battle, according to boundaries of battle²⁹ most of it located in Krasnooktyabrsky, Central and Voroshilovsky districts.

In Volgograd, in addition to many commercial tourist routes, the official ‘Hero City Volgograd’³⁰ is registered, dedicated to the events of the Great Patriotic War of 1941-1945. The route includes central monuments, starting from the embankment named after the 62nd Army, ending with a visit to the central monuments - the Museum ‘Battle of Stalingrad’, the Gerhardt’s Mill and the Mass grave.



Figure 61 - Hero-city Volgograd route
 source: <https://histrf.ru/uploads/media/default/0001/21/5fcbf214ccaf20d33b2177adda46ebc075890ff4.pdf>

- 1 - Embankment named after 62nd army;
- 2 - Square of Fallen Soldiers;
- 3 - Mira street;
- 4 - Volgograd Planetarium;
- 5 - Pavlov House;
- 6 - Mamayev Kurgan;
- 7 - Monument-ensemble to the heroes of the Battle of Stalingrad;
- 8 - Hall of Military Glory;
- 9 - Historical and Memorial Museum-Reserve 'Battle of Stalingrad';
- 10 - Gerhardt's Mill;
- 11 - Mass grave.

²⁸ <https://opendata.mkrf.ru/opendata/7705851331-egrkn> - open data portal of the Ministry of Culture of the Russian Federation

²⁹ https://mil.ru/winner_may/history/ - Ministry of Defense of the Russian Federation

³⁰ <https://histrf.ru/uploads/media/default/0001/21/5fcbf214ccaf20d33b2177adda46ebc075890ff4.pdf> - Hero-City Volgograd route in the official historical portal of Russian Federation

1. GERHARDT'S MILL



2. PAVLOV HOUSE



3. PANORAMA MUSEUM "BATTLE OF STALINGRAD"



4. MAMAEV HILL



WAR ZONE OF THE BATTLE OF STALINGRAD

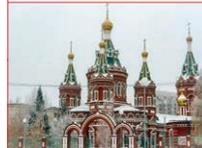
5. RIVER STATION



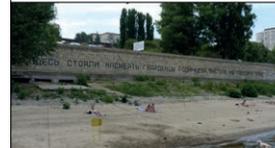
7. EMBANKMENT OF THE 62ND ARMY



6. KAZAN CATHEDRAL



8. "RETAINING WALL"



pictures sources:
 1 - <http://xn--80aapk2ad9a.xn--p1ai/>
 2 - <https://gorvesti.ru/guide/monuments/dom-avlova-76907.html>
 3 - <https://xcourse.me/images/showplaces/713/dadc73fc0abc45e323de853b11ea70f9.jpg>
 4 - https://s9.travelask.ru/system/images/files/00/317/189/wysiwyg_jpg/%D0%BA%D1%83%D1%80%D0%B3%D0%B0%D0%BD.jpg?1499253485
 5 - <https://xcourse.me/images/showplaces/718/0934a0ffe46bc9d4fb5a01db8092fde6.jpg>
 6 - <https://dynamic-media-cdn.tripadvisor.com/media/photo-o/16/86/8b/f7/caption.jpg?w=1000&h=800&s=1>
 7 - https://www.tripadvisor.ru/Attractions-g298537-Activities-c47-Volgograd_Volgograd_Oblast_Southern_District.html
 8 - <https://voopiik34.ru/wp-content/uploads/3629174--1200x630.jpg>

CULTURAL HERITAGE ASSETS

- HISTORY
- ARCHITECTURE AND CITY PLANNING
- STALINGRAD BATTLE ZONE

* Open data portal of the Ministry of Culture of the Russian Federation:
<https://opendata.mkrf.ru/opendata/7705851331-egrkn>
 * Volgograd Regional Research and Production Center for the Protection of Historical and Cultural Monuments:
<https://vonpc.ru/o-kulturnom-nasledii/map>
 * Ministry of Defense of the Russian Federation:
<https://mil.ru/>
 * <http://www.volgmap.ru/vlg.map/>



3.3 Localization of the Mill and its surrounding

The Gerhardt's mill is located on the high right bank of the Volga River, in the central part (Central district) (fig. 62, 63) of the modern city of Volgograd, in a quarter bounded on the north side by the Street Naumova, from the east - Marshala Chuikova street, from the south by 13th Gvardeyskaya Street and on the western side of the Soviet street. Near the Mill there is a brick chimney in the boiler room and a ventilation shaft. The mill, located within the boundaries of the Victory Routes tourist and recreational zone, in combination with the Battle of Stalingrad panorama museum, is a key object of outbound tourism in the Volgograd region.

The location of Gerhardt's Mill on a hill close to the river creates visibility of the monument long before approaching it, and the location of the ship pier allows easy access for tourists arriving by water transport. At the same time, visiting the monument is possible by arriving by road or rail, which is also located nearby. On both sides of the monument, there are residential and urban developments. This allows us to focus on the museum and the mill as the main objects in the area. This is also due to the wide area of the site on which the museum and the mill are located.



Figure 62 - Overview of the Mill location from South-west
source: <https://www.tourister.ru/world/europe/russia/city/volgograd/placeofinterest/25786>



Figure 63 - Overview of the Mill from Volga river
source: <https://www.tourister.ru/world/europe/russia/city/volgograd/placeofinterest/25786>

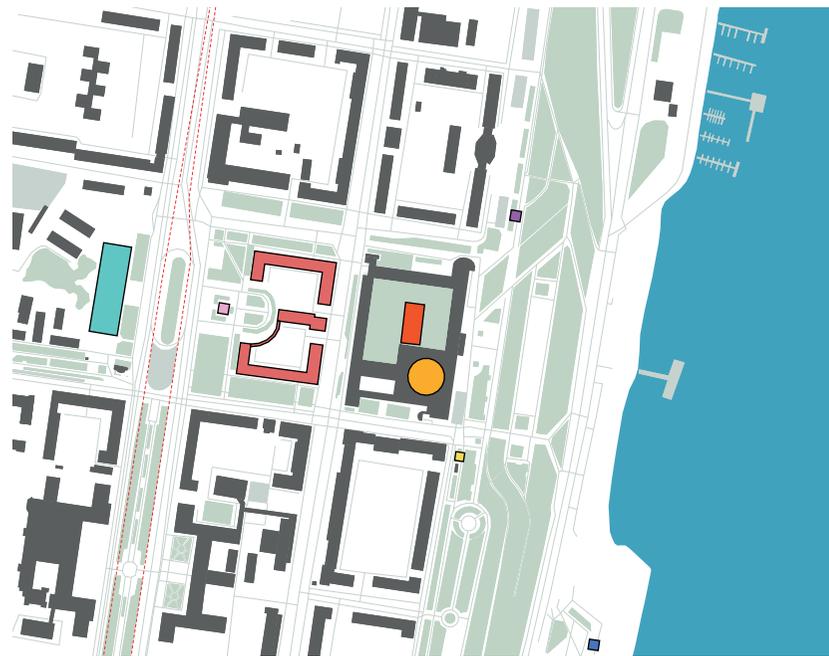


VOLGA RIVER

CENTRAL DISTRICT MAP

-  GERHARDT'S MILL
-  TRANSPORT ROADS
-  RAILWAYS
-  GREEN AREAS





GERHARDT'S MILL



source:
<https://welcomevolgograd.com/upload/iblock/b4a/b4a8ae8f72ea4126ce8be5a7d7265017.webp>

STALINGRAD PANORAMA



source:
<https://xcourse.me/images/showplaces/713/dadc73fc0abc45e323de853b1ea70f9.jpg>

SU-2 SHORT-RANGE BOMBER MONUMENT



source: <https://images.fooby.ru/1/44/73/2186045>

PAVLOV'S HOUSE



source:
<https://imgmedia.xgo.ru/cities/volgograd/sights/mn637800391119545440.jpg>

LENIN SQUARE



source:
<https://bankgorodov.ru/public/photos/sights/1440411496.jpg>

MONUMENT TO THE VICTIMS OF POLITICAL REPRESSIONS



source:
https://riac34.ru/upload/resize_cache/iblock/73c/900_600_1/72983627_615824422578912_1601532895963381760_n.jpg

HOUSE OF OFFICERS OF THE VOLGOGRAD GARRISON



source:
<https://cdn.culture.ru/images/9492a142-47bd-5905-83e2-d4aef5c974fe>

BK-13



source:
<https://files.volfoto.ru/original/2/1114062344491213526.jpg>

4. STRUCTURAL DESCRIPTION AND SPATIAL ANALYSIS OF GERHARDT'S MILL

The five-story rectangular building of the Mill, on plan - 53x20 m, 25 m high with a basement floor before the fire in 1907 had a wooden roof and pavements, which were later rebuild with reinforced concrete. The mill was originally divided into two parts, a larger one where flour milling, fish smoking, and other production were located, and a smaller one where there were granaries. Nowadays, there is no clear connection between these two parts.

The structural system is a frame, and the spatial rigidity and geometric immutability of the surviving parts of the frame are ensured by the rigid joints of the elements of the monolithic reinforced concrete frame and the joint work of the external brick walls.

'During the construction of the mill, reinforced concrete was used in large quantities for the first time. Before this, buildings in Tsaritsyn (Volgograd) were erected from brick walls and wooden floors.'
- Roman Shkoda³¹

A more specific system called 'not full frame' means that a building includes internal reinforced concrete columns, the crossbars rest on them, but near the external brick walls there are no columns,

that's why crossbars are attached to the wall itself. (fig. 64, 65) The crossbars lean in the columns in longitudinal and transverse directions (fig. 66), and are arranged along the beams, which became possible due to the small spacing of the columns. External brick walls of 770 mm thickness and reinforced concrete frames made the building last 110 years without restoration. (80 years after the bombing). Spatial rigidity is currently insufficient due to the local collapse of structures and the destruction of junction points for frame elements.

The masonry of the external walls is made of red ceramic fired solid bricks with lime-sand mortar. The facing masonry is made with a bonded dressing. Between the second and third, as well as between the fourth and fifth tiers, inter-tier cornices are installed. The crowning cornice is made in the form of stepped machicolations connected by a beam lintel. The corners of the facades are decorated with flat blades. The pediments are triangular in shape. Internal connections on the plane of the facades are decorated with figured cylindrical cotter pins. Interfloor ceilings are monolithic reinforced concrete beams.

³¹ <https://v1.ru/text/gorod/2017/05/23/51481491/> - News website of the city of Volgograd city



Figure 64 - Internal structure; attachment of the cross beams with the external wall



Figure 65 - External upper part; connection of beams with the end load-bearing wall



Figure 66 - General overview of the frame system of the Mill



Figure 67 - Reinforcement of the frame, on the right - a unit for supporting the crossbar on an external wall of three bricks (770 mm).
Source of the figures 1-4: photographer D. Zimin

4.1 Analysis of the state of conservation

There are numerous areas of masonry collapse, both vertical and horizontal through cracks, the destruction of partitions, and lintels formed as a result of hostilities during the Great Patriotic War, as well as a result of severe physical wear and tear of building materials over a long period of operation without maintenance.

The main defects are:

- collapse of jaimbs and window lintels (fig. 68);
- horizontal and vertical cracks (fig. 69);
- delamination of masonry due to corrosion of internal metal strands;
- damage caused by mechanical impact during shelling during the Great Patriotic War;
- traces of biological damage.
- collapse of the masonry of the pediments (fig. 70, 71);
- numerous areas of collapse of the main and secondary floor beams (fig.72);
- collapse of interfaces with vertical load-bearing structures (columns);

- significant areas of collapse of floor slabs as a result of mechanical actions and weathering, as well as high physical wear of building materials over a long period of operation without maintenance.

The other defects are:

- local collapses due to the bombing;
- corrosion and rupture of reinforcement bars;
- collapse of floor beams;
- biodamage from wild bushes on the 5th floor floor.



Figure 68 - Collapse of the piers and window lintels due to the war actions

Source: <https://v1.ru/text/gorod/2021/12/13/70274531/>



Figure 69 - Vertical cracks in the masonry walls



Figure 71 - Destruction of the masonry of the pediments
Source: <https://gorvesti.ru/story/mill-ruins>



Figure 70 - Destruction of the masonry of the pediments
Source: https://cdn.iportal.ru/news/2021/99/preview/62ab68c8fbb1767ea88ea03b357188b6033c99ad_727.jpg.webp-portal



Figure 72 - Collapse of the partitions of main and secondary floor
beams and pavements
Source: <https://v1.ru/text/gorod/2017/05/23/51481491/?imageView=ivRecord>

4.2 Ongoing actions with the Mill

On March 16 2021, part of the south gable collapsed at the mill. It became clear that the monument to the Great Patriotic War needed urgent repairs, given that until that moment the building had stood untouched. Due to recent collapses of the parts of Gerhardt's Mill – emergency work is underway. Workers have already cleared out some of the space on the first and second floors and are installing support pillars so architects and engineers can enter the plant and work on pre-design analyses and strategies for future restoration. The official representative in the work on the restoration project of the mill is the Federal State Institution “Central Scientific and Restoration Design Workshops”. The project is being implemented with funding from the Ministry of Culture of the Russian Federation.

As a part of the analysis of the state of conservation of the building - a geodetic survey of the building was carried out, and a three-dimensional model was created by a private company. (fig. 73, 74) Emergency response work directly at the construction site includes dismantling fragments of brickwork, installing formwork for monolithic reinforced concrete structures, and cleaning the premises of the mill ruins from construction debris. The parts of the collapsed pediment were saved for

future restoration work.

The design of the internal formwork consists of metal racks that support the ceiling beams (fig.75, 76), which in turn support the interfloor ceilings. This system solves two problems at once - the ability to safely enter the building and reducing the load on the building structure. The strengthened sections of the building will allow further work to analyze the condition of the mill structure. For now, workers access only the first two floors of the building, while the upper structure also requires a lot of work to prevent its' collapse. Much work remains to be done to remove construction debris from the upper floors of the building. These are fragments of a destroyed structure, which create additional stress on the already worn-out structure of the lower floors. Monitoring of cracks on the façade of the building is also carried out.

Accordingly, the building is fenced for work. Access to the building is strictly controlled. At the moment, designers are unable to enter the building due to insufficient emergency measures.

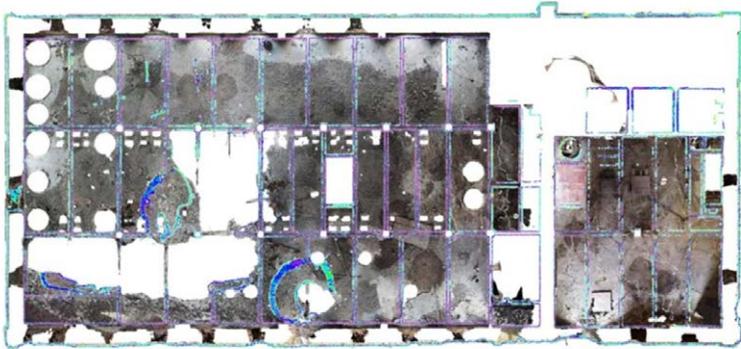


Figure 73 - plan of the first floor of the Mill
 Source: <https://fotometr.ru/wp-content/uploads/2022/03/melnicza-5.jpg>



Figure 75 - Temporary supporting structure
 Source: https://cdn.iportal.ru/news/2015/99/preview/fbbcd525f58a55b7bc7a1598cbda619b148702f82_727.jpg.webp-portal



Figure 74 - Façade of the Mill
 Source: <https://fotometr.ru/wp-content/uploads/2022/03/3d-model-menliczy-4.jpg>



Figure 76
 Source: https://cdn.iportal.ru/news/2015/99/preview/a93d69bf04d109e0d23201599a243e661460bb0f8_727.jpg.webp-portal

5. PROJECT STRATEGIES

Gerhardt's Mill is an important monument to the war heritage of Volgograd and Russia. Being a part of the Stalingrad Panorama Museum exposition it plays an important role as one of the only buildings saved in the same condition as it was right after the war. According to the comparison between approaches to war heritage preservation between Russia and Europe it's clear that the case of Gerhardt's Mill is an exception from the most usual approach, which was based on rebuilding instead of preserving, and it increases the meaning of the monument among the others. According to this, Gerhardt's Mill monument has to be preserved with minimal change.

Based on the fact that Gerhardt's Mill is now in critical condition (watch chapter 4), a restoration of the monument becomes necessary to avoid further collapses and to maintain it as part of the war heritage and as central touristic point of the Volgograd region. Project strategies can be divided into short term interventions and long term restoration: the former being necessary to make the very restoration possible because of the dangerous condition of the building.

Short-term strategies have two main goals:

- Preventing collapses and slowing decay in the upper and precarious parts of the building;

- Allowing the access to the ground floor of the Mill.

The first goal is mostly related to the upper part of the building since it contains the most collapses and unstable parts. Moreover, upper structures can be reached and reinforced from outside, without entering the building.

It implies different actions:

- Removing collapsed parts of the structure that create extra loads underneath;

- Protecting pediments (which are in the most unstable condition and already partly collapsed) by reshaping the irregular and fragmented edges with new masonry (an intervention similar to that used by Raffaele Stern in Roman Colosseum);

- Supporting unstable parts of the walls with steel beams to improve the connection between load-bearing walls and internal structure and avoid overturning of the external walls (according to the common strategy used for towers – see, for example, the interventions of Lorenzo Jurina);

- Stitching existing cracks with the addition of steel plates in order to reinstate the walls' continuity without canceling the cracks (following a refined strategy invented by Francesco Doglioni);

- Checking connections between the internal structure and load-bearing walls on the upper part of the building to improve them if needed.

Access to the ground floor can be possible with temporary interventions – flexible structures, supporting the floor above, and reducing the loads on the ceiling beams. These temporary interventions are aimed at opening the possibility of safe access to the building for workers, architects, engineers, and other specialists to work on the analysis of the condition of the structure and the creation of a long-term restoration project. Short-term strategy doesn't consider the access for tourists and other visitors to the building.

The goal of the long-term strategy is to restore the building with the minimum changes to preserve its appearance as it was after the war. However, it contains full protection of the present structure inside and outside with the purpose of allowing access to visitors and the possibility of creating temporary exhibitions on the ground floor related to the theme of the museum complex. Process of the restoration has to start from the ground floor, step-by-step moving upwards.

CONCLUSION

The purpose of the thesis is to propose strategies for preserving Gerhardt's Mill as one of the central monuments of the war heritage of Volgograd. Studying the past experiences of different countries has helped to understand the variability of approaches that can be applied to a war heritage monument, as well as their validity in different contexts. The experience of Russian preservation of war heritage has shown from which factors the formation of these strategies proceeded, depending on time, political system, and place. Patterns in the approach to war heritage in Russia were identified, showing a direct connection with the country's political system. Other countries' experiences have shown the possibility of using various methods of preserving war heritage, different from Russian ones, but having their own immediate advantages, and thus could be possibly used in the Russian environment too.

The Gerhardt Mill is not only one of the most important heritage sites of the Second World War, it is also a unique example of the application of conservation strategies to post-war heritage in Russia. This aspect once again highlights the importance of preserving the monument, conserving it in its state of ruin as it was immediately after the Battle of Stalingrad during the Second World War. Moreover, its central position in the city

and in the region highlights its importance for the tourism and economic sectors. Also, the historical significance of the Mill, its direct location at the center of the events of the Battle of Stalingrad - one of the main events of the Second World War on Russian territory - imply the importance of preserving the monument at the national level.

An analysis of the current condition of the building showed the risks of its collapse. The current state of Gerhardt's Mill no longer allows visitors to fully enjoy viewing and exploring the monument. To ensure its preservation and to make the building enjoyable for tourists and other visitors, two strategies have been proposed: short-term and long-term. On a short-term basis, interventions that will preserve the building as it is have been proposed, including protecting the parts that are in critical condition from collapse, as well as providing access to the ground floor for specialists and workers in order to create a long-term restoration project. The long-term program involves a consistent step-by-step restoration of the building to provide access for tourists and visitors, as well as the possibility of creating temporary exhibitions, enriching the touristic program for studying the war heritage.

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Structure analysis

Structural system

The five-story rectangular building of the Mill, on plan - 53x20 m, 25 m high with a basement floor before the fire in 1907 had a wooden roof and pavements which were later rebuilt with reinforced concrete.

The structural system is a frame, and the spatial rigidity and geometric immutability of the surviving parts of the frame are ensured by the rigid joints of the elements of the monolithic reinforced concrete frame and the joint work of the external brick walls.

A more specific system called 'not full frame' means that a building includes internal reinforced concrete columns, the crossbars rest on them, but near the external brick walls there are no columns, that's why crossbars are attached to the wall itself.

External walls

External brick walls and firewall are 770 mm thick equal to 3 lengths of standart brick (1).
Material: red ceramic solid bricks with lime-sand mortar

1 - External walls



2 - Internal structure - upper level



3 - Internal structure - ground floor level



4 - Pavements between 2nd and 3rd floors



5 - Stairs between ground floor and 1st floor



6 - Top view with remained roof structure



7 - Hennebique structure system



Mobilierfabrik Rautlinger, Karlsruhe, interior view of the shell, 1899. Paris, CHAM&SAF/Cité de l'architecture et du patrimoine/Archives d'architecture du XIXe siècle, Fonds Mémoires armées Hennebique, dossier 076 (fr. 2190) (Photo CHAM&SAF)

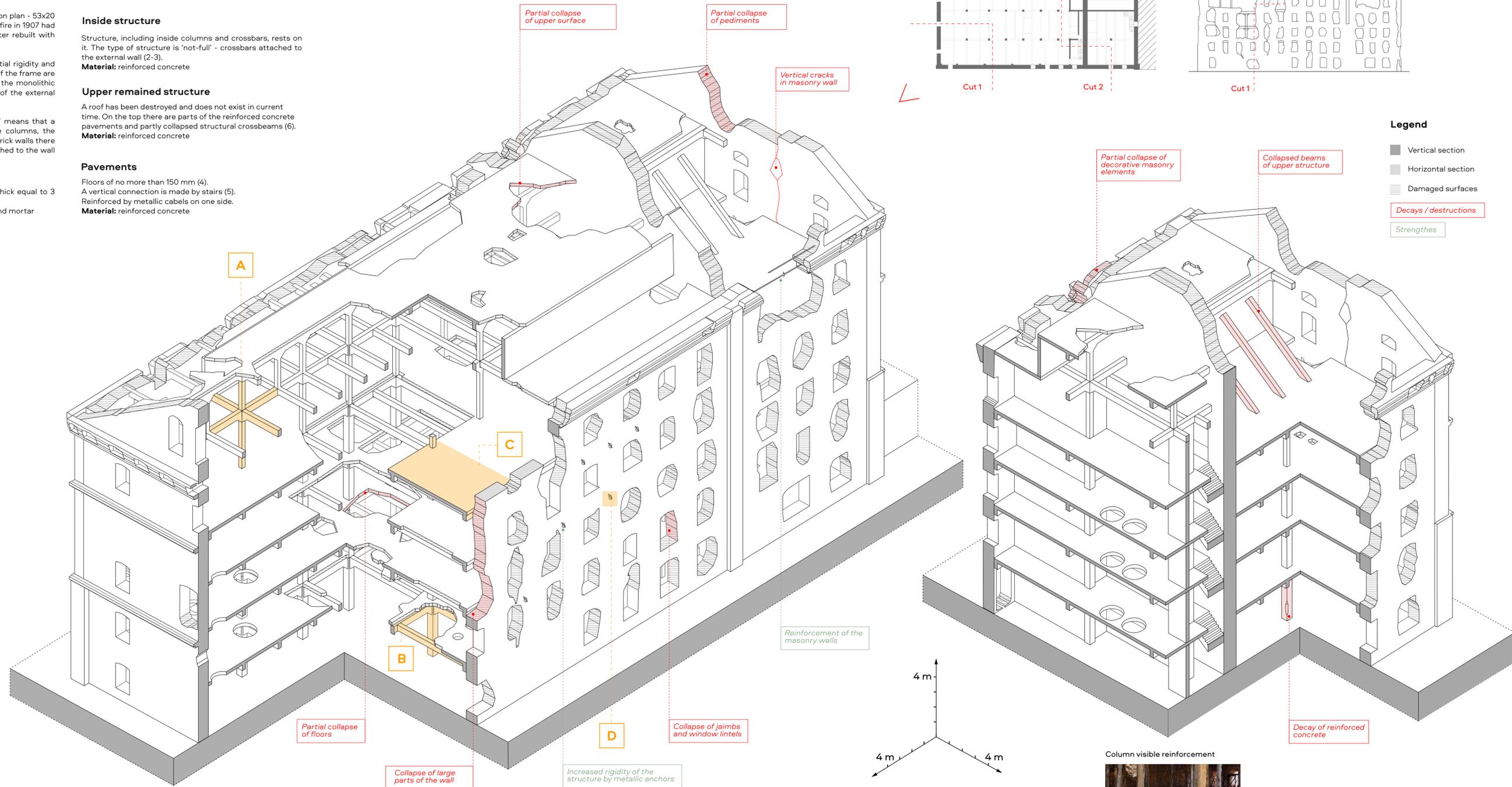
Inside structure
 Structure, including inside columns and crossbars, rests on it. The type of structure is 'not-full' - crossbars attached to the external wall (2-3).
Material: reinforced concrete

Upper remained structure

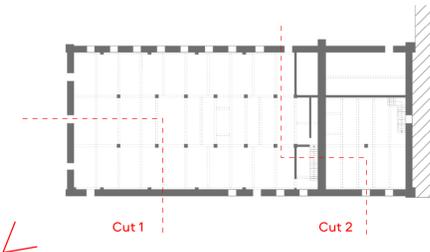
A roof has been destroyed and does not exist in current time. On the top there are parts of the reinforced concrete pavements and partly collapsed structural crossbeams (6).
Material: reinforced concrete

Pavements

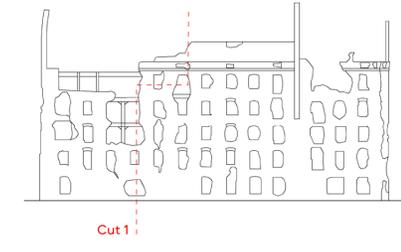
Floors of no more than 150 mm (4).
 A vertical connection is made by stairs (5).
 Reinforced by metallic cables on one side.
Material: reinforced concrete



Key plan

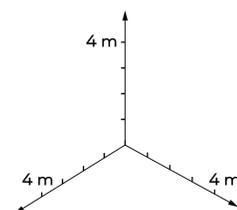


Facade

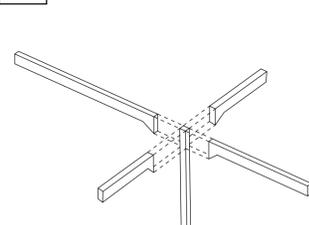


Legend

- Vertical section
- Horizontal section
- Damaged surfaces
- Decays / destructions
- Strengthes

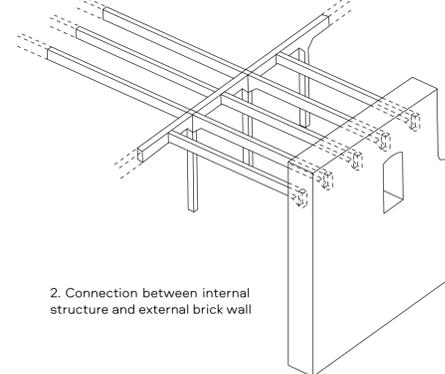


A 4th and 5th level structure



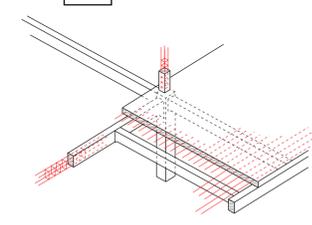
1. Structure basis
 - Column and beams attached to it with the presence of a dog-tail element, increasing the rigidity of the system. Similar to the Hennebique structural system. (7)

B 0 - 3rd level structure



2. Connection between internal structure and external brick wall

C Floor layers



- Concrete structure
- Reinforcement bars
- Invisible parts of structure
- Invisible reinforcement

Column visible reinforcement

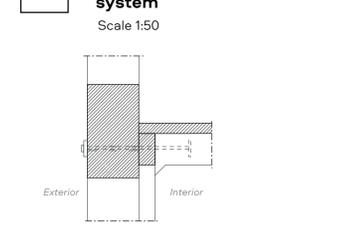


Beams and pavement reinforcement



source: photographer D. Zimin for Architecture of the town of Tseretyn - Chapter Residential, public and industrial buildings of Tseretyn - P. P. Oskov

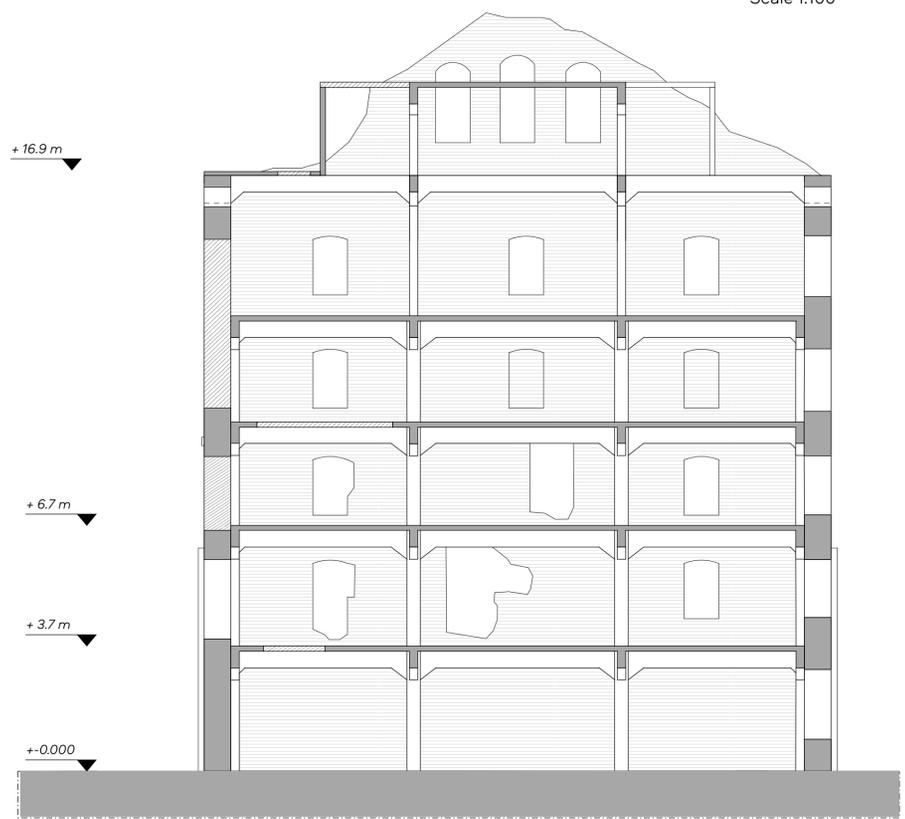
D Reinforcement with anchor system



source: http://xn--80agp2w9n-xn--p1a201503/523-melnice-gergardt.html

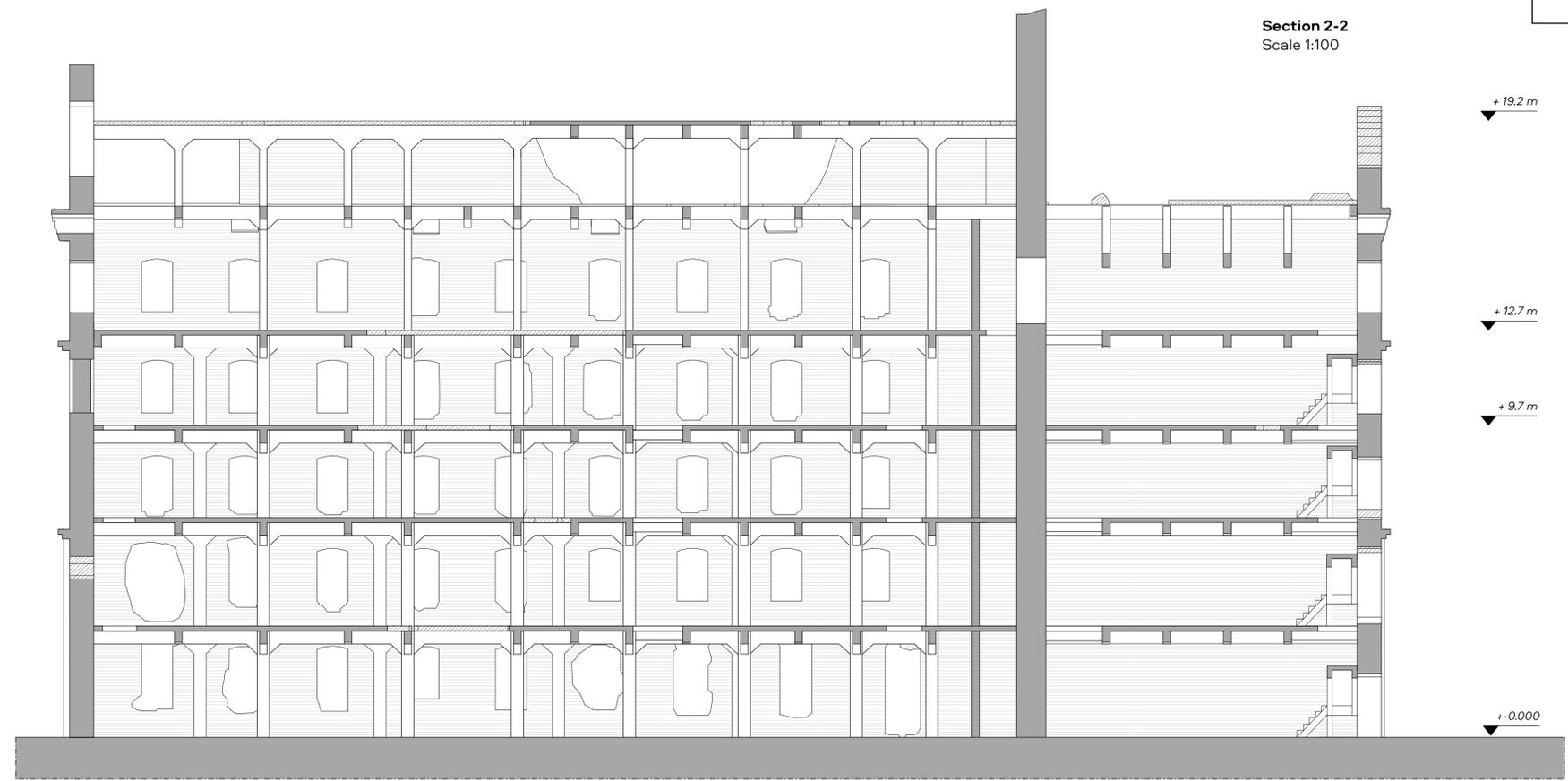
Constructional survey

Section 1-1
Scale 1:100

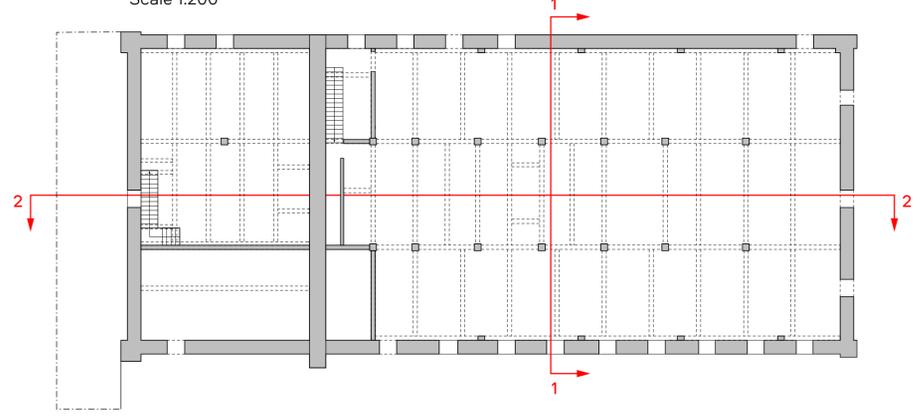


+21.5 m

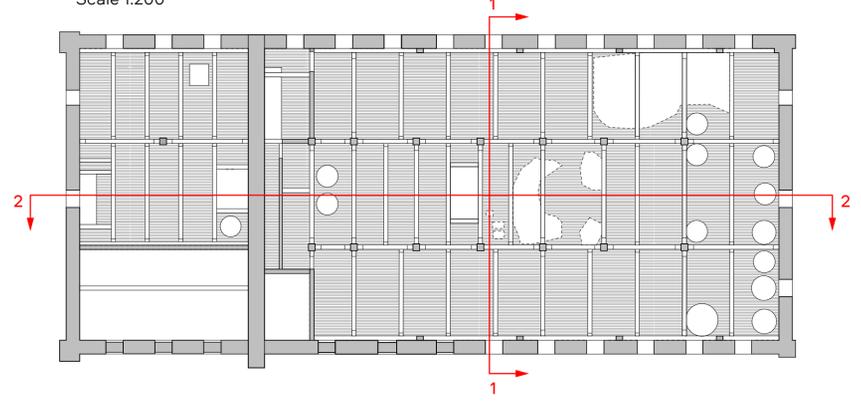
Section 2-2
Scale 1:100



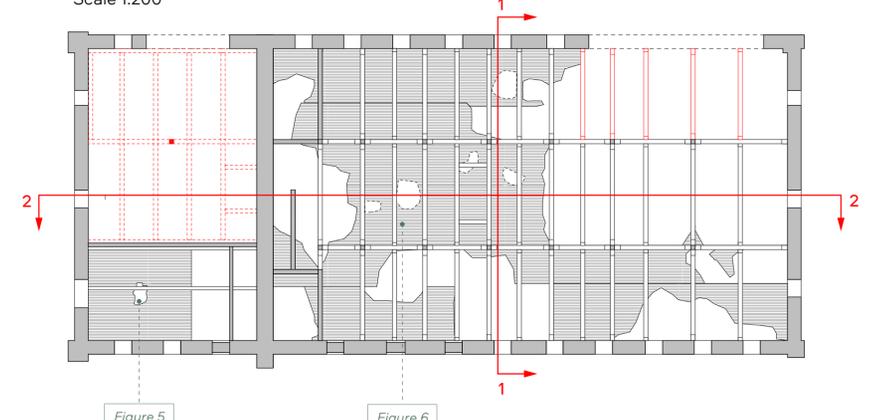
Ground floor
Scale 1:200



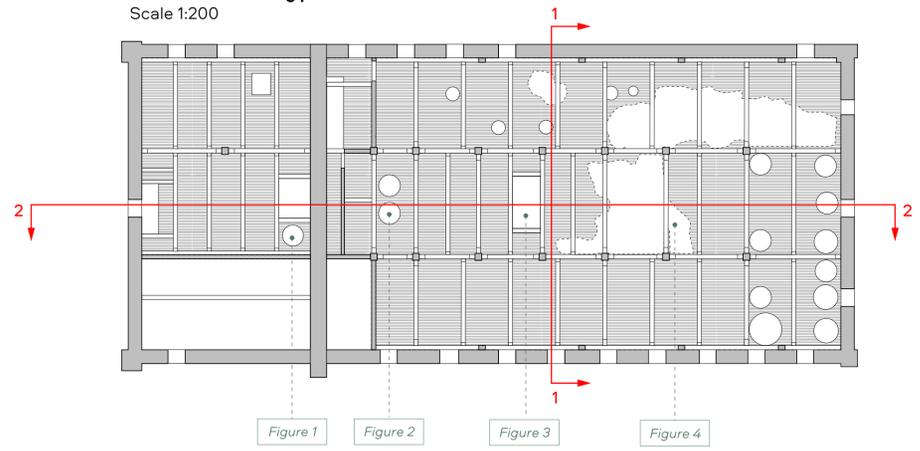
1-st floor ceiling plan
Scale 1:200



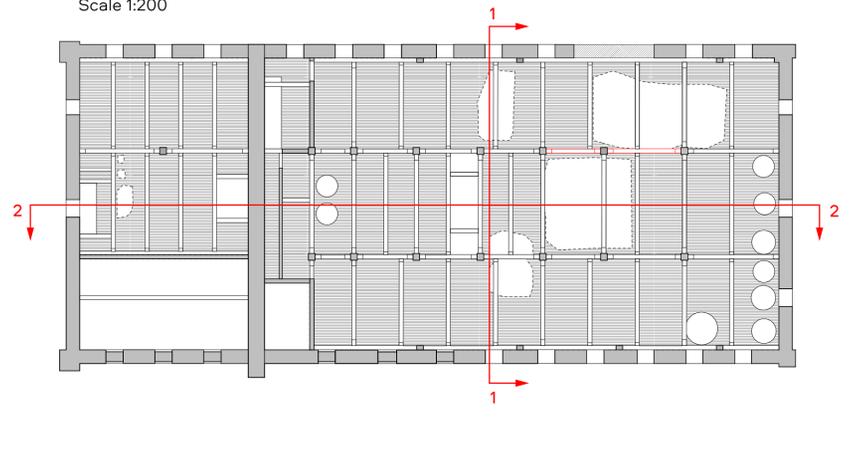
4-th floor ceiling plan
Scale 1:200



Ground floor ceiling plan
Scale 1:200



2-nd floor ceiling plan
Scale 1:200



Legend

- Vertical section
- Background wall
- Damaged surfaces
- Horizontal section
- Upper elements
- Damaged elements
- Collapsed elements
- Pavement surface
- Technical holes in pavement
- Collapsed part of pavement



Image sources:
 Figure 1 - <http://repositorio.unipar.br/bitstream/handle/123456789/14314/1/14314.pdf>
 Figure 2 - <https://repositorio.unipar.br/bitstream/handle/123456789/14313/1/14313.pdf>
 Figure 3 - <https://repositorio.unipar.br/bitstream/handle/123456789/14312/1/14312.pdf>
 Figure 4 - <https://repositorio.unipar.br/bitstream/handle/123456789/14311/1/14311.pdf>
 Figure 5 - <https://repositorio.unipar.br/bitstream/handle/123456789/14310/1/14310.pdf>
 Figure 6 - <https://repositorio.unipar.br/bitstream/handle/123456789/14309/1/14309.pdf>

Intervention criteria

Short term strategy

- Protect the upper part of the building from future collapse; (B1-B4)
- Allow access to the ground floor of the Mill. (A)

Actions

A - Temporary flexible structure to allow access to the ground floor;

B1 - Removing collapsed parts of the structure and other building garbage that creates dangerous loads underneath;

B2 - Protecting pediments (which are in the most unstable condition and already partly collapsed) by adding a new layer on top of them;

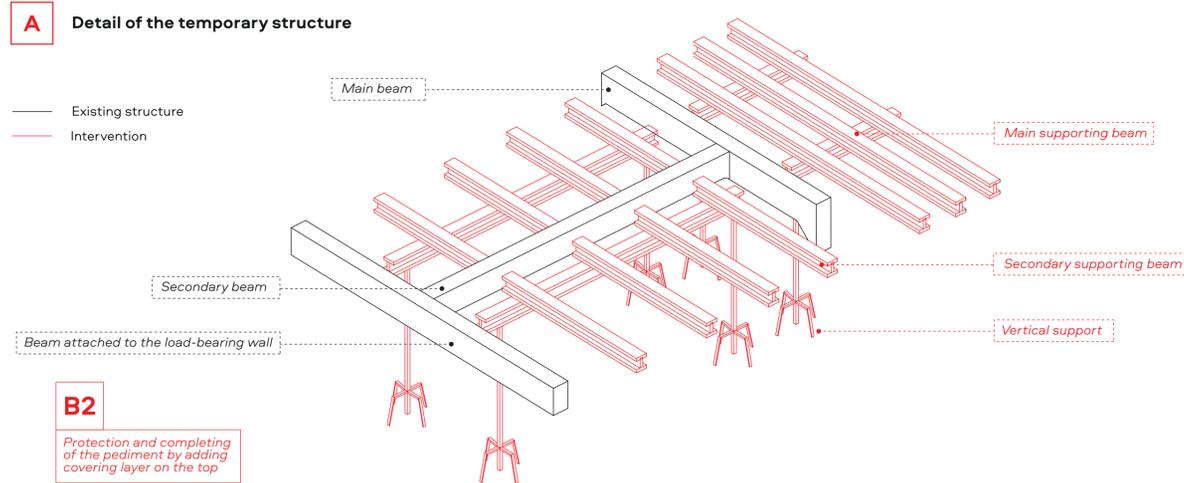
B3 - Supporting unstable parts of the wall (end walls) with the steel beam to increase rigidity of the upper structure and avoid collapse of the walls in the top;

B4 - Sticking existing cracks with the addition of steel plates;

B5 - Check the stability of the wall: more specific - check the effectiveness of the connections between structure and wall; in case of a need - improve it.

A Detail of the temporary structure

- Existing structure
- Intervention



B2

Protection of the pediment by completing it with the covering layer on the top

B1

Removing the collapsed parts to avoid extra loads on the structure underneath

B3

Increase the rigidity of the upper structure by adding a steel beam

B4

Sticking crack by adding steel plates

B5

Checking the effectiveness of the connections between structure and wall

B3

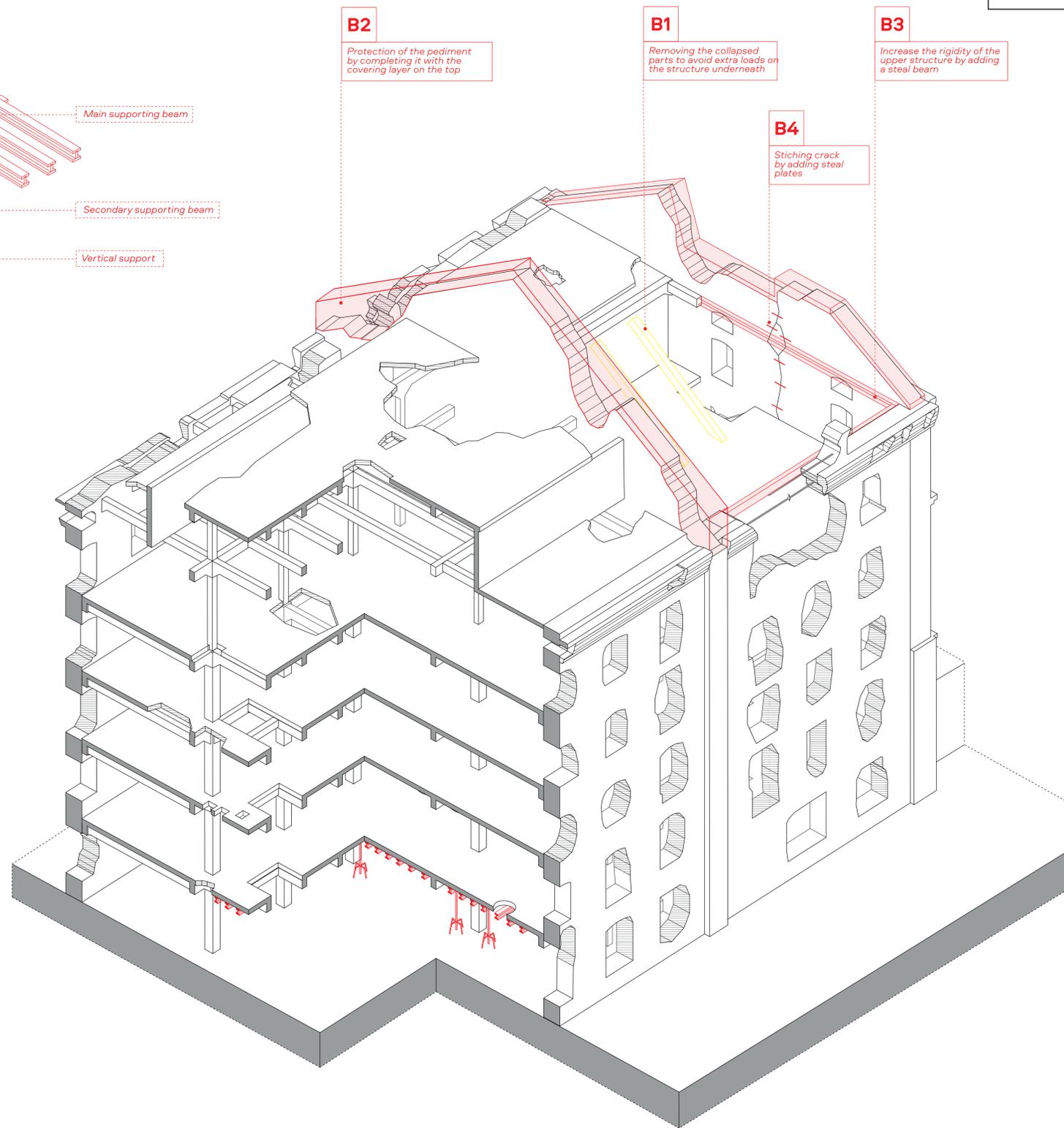
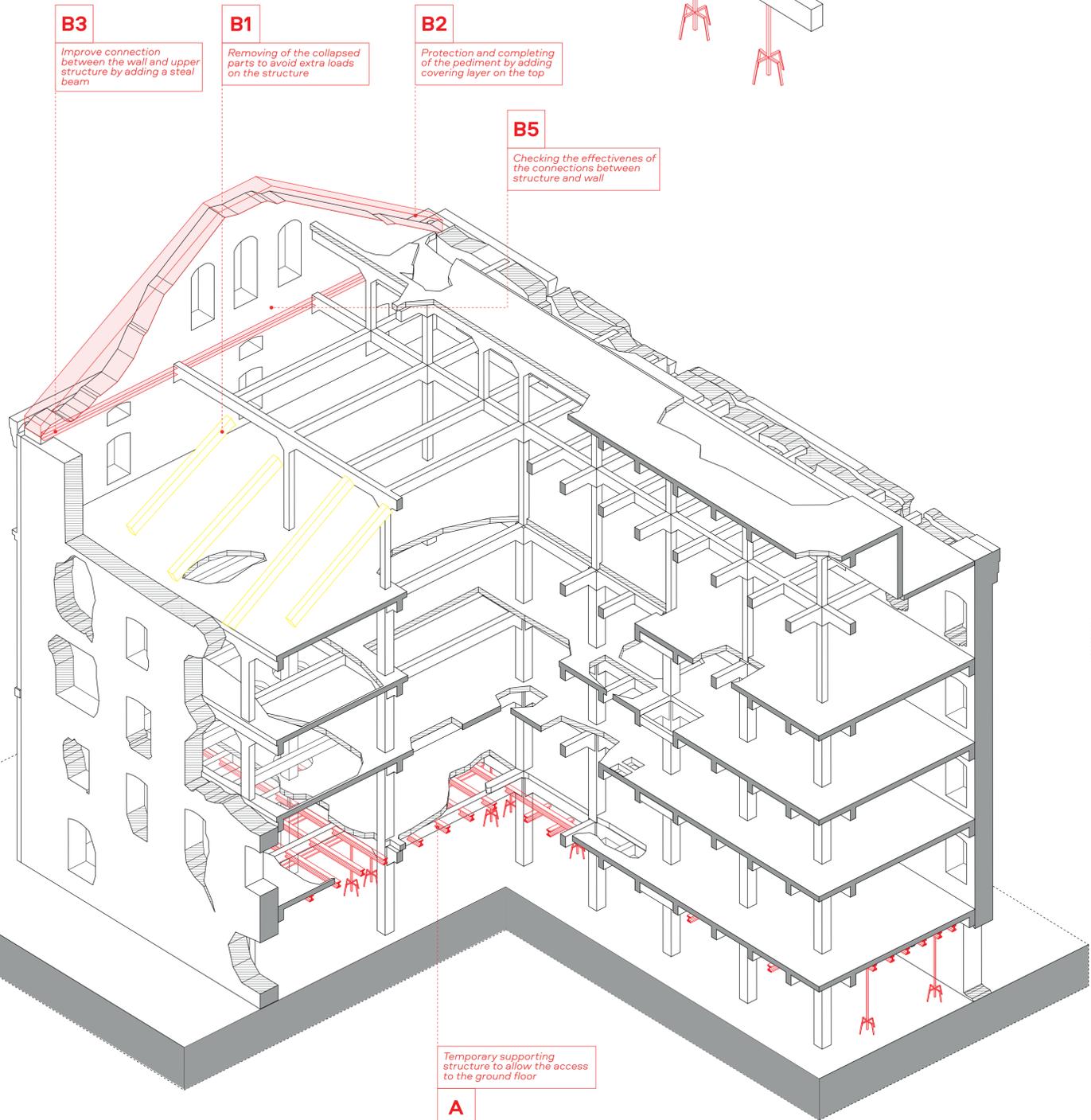
Improve connection between the wall and upper structure by adding a steel beam

B1

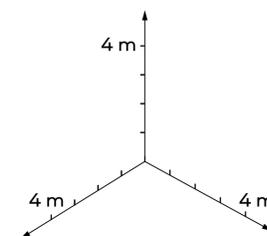
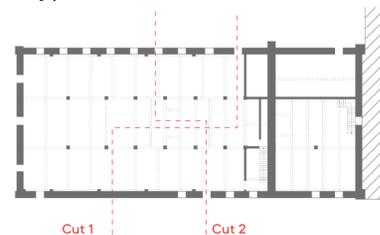
Removing of the collapsed parts to avoid extra loads on the structure

B2

Protection and completing of the pediment by adding covering layer on the top



Key plan



Territory analysis

Historical timeline

- Urban history events
- Gerhardt's Mill history events

Tsaritsyn

1555
First mention of the city

1589
City received the name Tsaritsyn

1800-s
Beginning of the industrialization

1860-s
Crisis of the industrialization

1900-s
Tsaritsyn is a major industrial city

1900
Opening of the Gerhardt's Mill

1908
Rebuilding of the Mill after the fire in 1907

1925
City received the name Stalingrad - dedicated to Joseph Stalin

1929-40
Soviet industrialization

1931
'Great Stalingrad' project - new concept of city urban development

1939-1945
Second World War

1942
First bombing of the Mill

1 May 1945
Stalingrad was awarded the honorary title of Hero City

1961
City received the name Volgograd

1960-80-s
Development of cultural conservation and cultural-creative activities

1970-s
Creation of 'Stalingrad Panorama' museum near the Mill ruins

2000-s
Gerhardt's (Grudinin) Mill remaining as a part of Museum complex left in the same condition as it was after the war

Stalingrad

Volgograd

Volgograd region on the map of Russia

Central district of Volgograd

Volgograd region

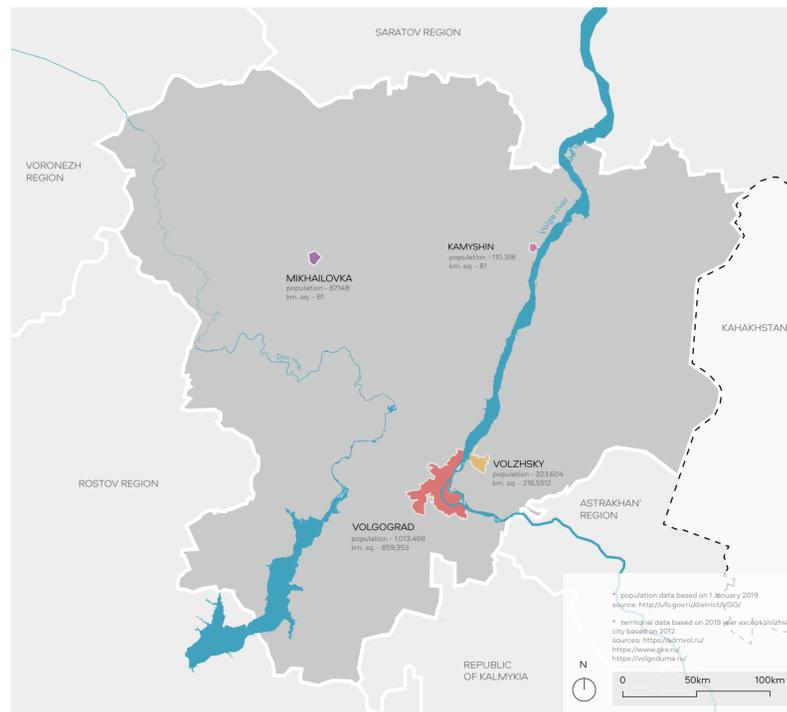
Volgograd city

Masterplan

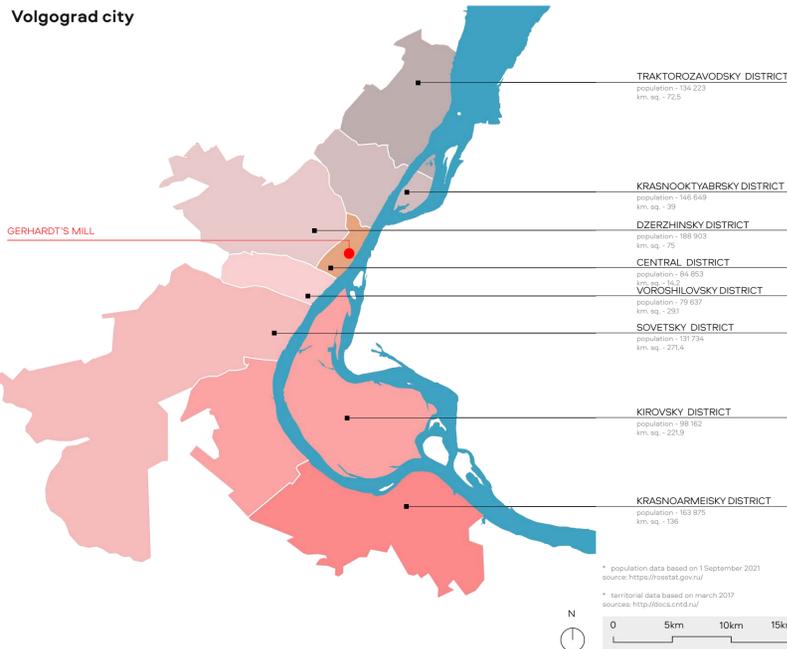
Volgograd region on the map of Russia



Volgograd region



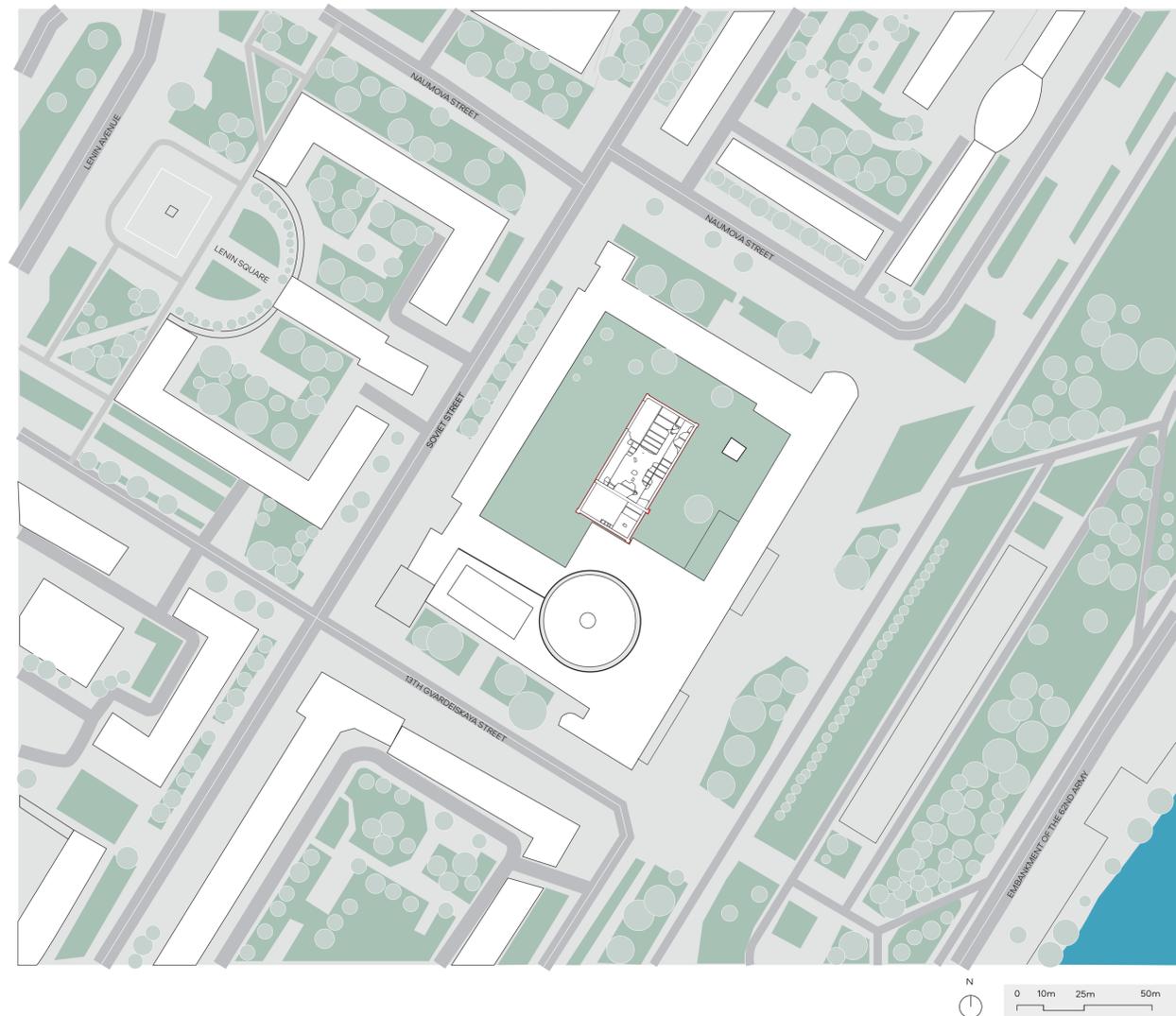
Volgograd city



Central district of Volgograd



Masterplan

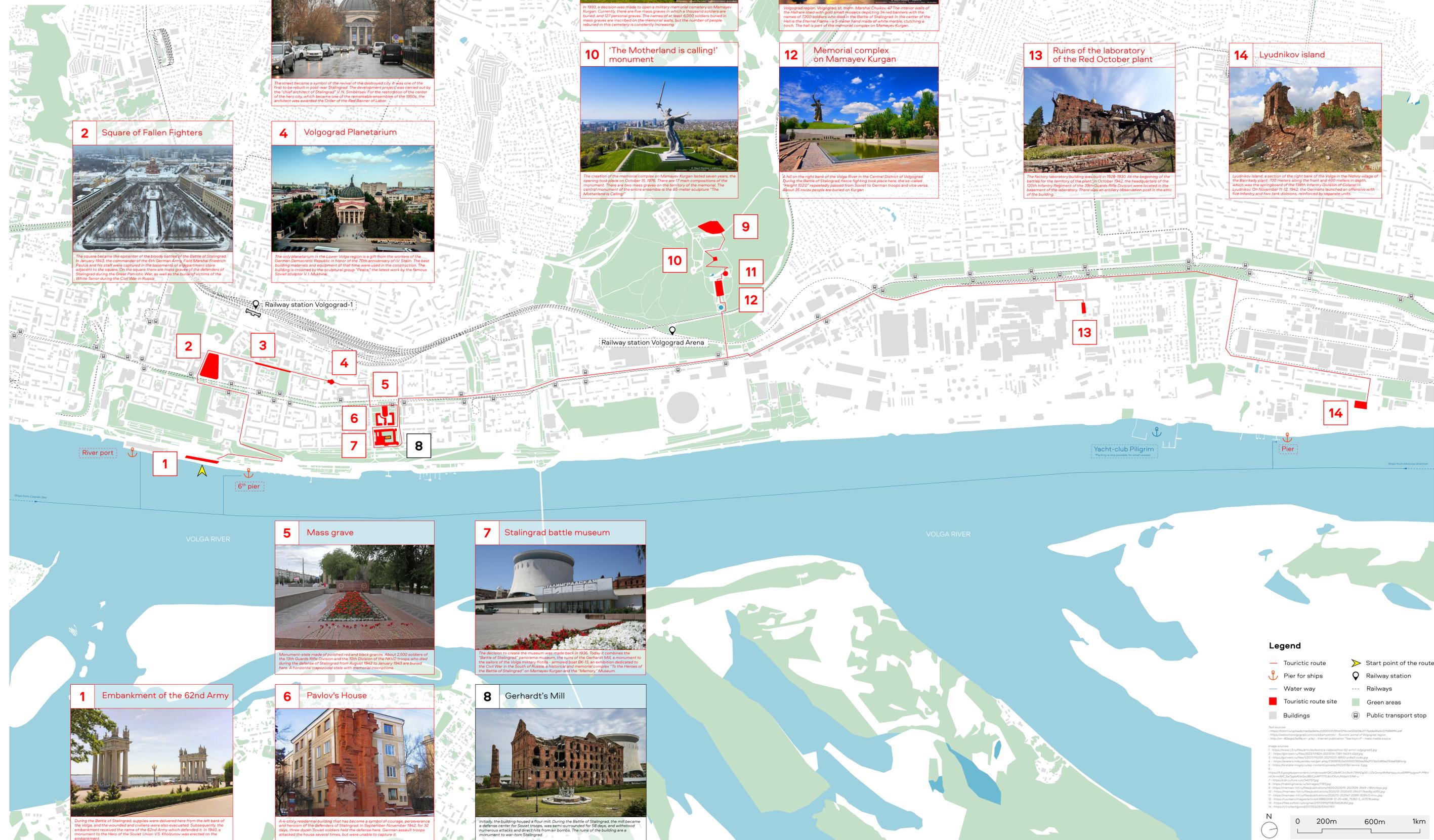


Enhancement

The war tourism route is located in the city of Volgograd and includes 14 sites to visit dedicated to the memory of the Second World War. The original route have 12 sites suggested by Russian military-historical society - 2 other sites were added to enrich the existing route: the ruins of the laboratory of the Red October plant and Lyudnikov island.

Arrival at the starting point of the route can be accomplished using water transport (ship, boat) from the side of the Caspian Sea and from the capital side, rail transport, and by car. It is recommended to take the route using the local tram and bus lines, by car, or any small transport (bicycle, scooter). This route can be done on foot.

Source of existing touristic route: <https://photojournalism.com/001215fcb24ccca22d321773d8a46bc075890f4.pdf>



2 Square of Fallen Fighters

The square became the epicenter of the bloody battles of the Battle of Stalingrad. In January 1943, the commander of the 6th German Army, Field Marshal Friedrich Paulus and his staff were captured in the basements of an apartment store adjacent to this square. On the square there are mass graves of the defenders of Stalingrad during the Great Patriotic War, as well as the burials of victims of the White Terror during the Civil War in Russia.

3 Mira Street

The street became a symbol of the revival of the destroyed city. It was one of the first to be rebuilt in post-war Stalingrad. The development project was carried out by the chief architect of Stalingrad, V. V. Smolenskiy. For the restoration of the center of the hero city, which became one of the remarkable ensembles of the 1950s, the architect was awarded the Order of the Red Banner of Labor.

4 Volgograd Planetarium

The only planetarium in the Lower Volga region is a gift from the workers of the German Democratic Republic in honor of the 20th anniversary of V.I. Stalin. The best building materials and equipment of that time were used in the construction. The building is crowned by the sculptural group "Peace", the latest work by the famous Soviet sculptor V. I. Muthusya.

9 Memorial cemetery

In 1993 a decision was made to open a military memorial cemetery on Mamayev Kurgan. Currently, there are five mass graves in which 310000 soldiers are buried, and 127 personal graves. The names of at least 6,000 soldiers buried in mass graves are inscribed on the memorial walls, but the number of people reburied in this cemetery is constantly increasing.

11 Military glory Hall

Volgograd region, Volgograd, st. High, Marshal Chukov, 47. The interior walls of the hall are lined with gold enamel plaques depicting 26 red banners with the names of 2000 soldiers who died in the Battle of Stalingrad. In the center of the hall is the Eternal Flame - a 5-meter hand made of white marble, clutching a torch. The hall is part of the memorial complex on Mamayev Kurgan.

10 'The Motherland is calling!' monument

The creation of the memorial complex on Mamayev Kurgan lasted seven years, the opening took place on October 15, 1925. There are 17 main compositions of the monument. There are two mass graves on the territory of the memorial. The central monument of the entire ensemble is the 65-meter sculpture "The Motherland is Calling".

12 Memorial complex on Mamayev Kurgan

A hill on the right bank of the Volga River in the Central District of Volgograd. During the Battle of Stalingrad, fierce fighting took place here, the so-called "Height 102.0" repeatedly passed from Soviet to German troops and vice versa. About 25,000 people are buried on Kurgan.

13 Ruins of the laboratory of the Red October plant

The factory laboratory building was built in 1928-1930. At the beginning of the search for the territory of the plant in October 1942, the head office of the 100th Infantry Regiment of the 39th Guards Rifle Division were located in the basement of the laboratory. There was an artillery observation post in the attic of the building.

14 Lyudnikov island

Lyudnikov Island, a section of the right bank of the Volga in the Makhov village of the Barminsky plant. 7000 meters long the front and 4000 meters in depth, which was the springboard of the 138th Infantry Division of Colonel I.I. Lyudnikov. On November 11-12, 1942, the Germans launched an offensive with five infantry and two tank divisions, reinforced by separate units.

1 Embankment of the 62nd Army

During the Battle of Stalingrad, supplies were delivered here from the left bank of the Volga, and the wounded and civilians were also evacuated. Subsequently, the embankment received the name of the 62nd Army which defended it. In 1943, a monument to the Hero of the Soviet Union V.S. Khlebnikov was erected on the embankment.

6 Pavlov's House

A 4-story residential building that has become a symbol of courage, perseverance and heroism of the defenders of Stalingrad. In September-November 1942, for 32 days, three dozen Soviet soldiers held the defense here. German assault troops attacked the house several times, but were unable to capture it.

8 Gerhardt's Mill

Initially, the building housed a flour mill. During the Battle of Stalingrad, the mill became a defense center for Soviet troops, was semi-surrounded for 58 days, and withstood numerous attacks and direct hits from air bombs. The ruins of the building are a monument to war-torn Stalingrad.

5 Mass grave

Monument-stele made of polished red and black granite. About 2,500 soldiers of the 13th Guards Rifle Division and the 10th Division of the NKVD troops who died during the defense of Stalingrad from August 1942 to January 1943 are buried here. A horizontal trapezoidal stele with memorial inscriptions.

7 Stalingrad battle museum

The decision to create the museum was made back in 1936. Today it combines the "Battle of Stalingrad" panorama museum, the ruins of the German Mill, a monument to the sailors of the Volga military flotilla - armored boat BK-13, an exhibition dedicated to the Civil War in the South of Russia, a historical and memorial complex "To the Heroes of the Battle of Stalingrad" on Mamayev Kurgan and the "Memory" Museum.