LOST IN TRANSITION

Revitalization of University Campus in Post-war Sarajevo

TECHNISCHE
UNIVERSITÄT
WIEN
Vienna | Austria

DIPLOMARBEIT

LOST IN TRANSITION

Revitalization of University Campus in Post-war Sarajevo

ausgeführt zum Zwecke der Erlangung des akademischen Grades
eines Diplom-Ingenieurs / Diplom-Ingenieurin unter der Leitung

Ao.Univ.Prof. Arch. Dipl.-Ing. Dr.tech. Erich Raith

E260/S
Institut für Städtebau, Landschaftsarchitektur und Entwerfen

eingereicht an der Technischen Universität Wien
Fakultät für Architektur und Raumplanung

Nada Spiljak
01128494

Wien, Juni 2019

Abstract

The areal that makes up today's "University Campus of Sarajevo" has always had important influence on the city of Sarajevo. It was one of the first projects built when the Austro-Hungarian Empire came to Bosnia and Herzegovina. It marked a morphological change in development of the city. Sarajevo went through a sudden political, social and economic transition after the war and even now, 20 years after, it is still trying to find its footing. This flawed transition is reflected on the university campus, leaving it fragmented, scarred and ignored. The aim is to explore the potential of the space and to create better environment for the students by re-using old military buildings, strengthening its connection to the city and creating new spaces for new faculties to move in.

Das Areal, das heute den "Universitätscampus von Sarajevo" bildet, hatte schon immer großen Einfluss auf Sarajevo. Es war einer der ersten entwürften Projekte, als das Österreichisch-Ungarische Reich nach Bosnien und Herzegowina kam. Es hat eine morphologische Veränderung in der Stadtentwicklung beinflusst. Nach dem Krieg erlebte Sarajevo eine plötzliche politische, soziale und wirtschaftliche Veränderung. Sogar mehr als 20 Jahren nach dem Krieg versucht die Stadt immer noch ihren Platz zu finden. Diesen fehlerhaften Übergang merkt man auf dem Universitätskampus besonders da er ihn fragmentiert, gezeichnet und ignoriert hinterlässt. Ziel ist es, das Potenzial des Raumes zu erkunden und eine bessere Umgebung für die Studenten zu schaffen und zwar durch die Wiederverwendung der alten Militärgebäuden, die Stärkung der Verbindung zur Stadt und die Schaffung neuer Räume für den Einzug neuer Fakultäten.

Table of Contents

INTRODUCTION

Introduction

Post conflict reconstruction is a difficult process and there are many ways to go about it. The nature of past is what makes reconstruction unique compared to other forms of urban reconfiguration. Architects and urban planners in Sarajevo have debated this topic for the last two decades. Ever since the end of the most recent war in 1996, there have been new plans, new discourse and new controversies on how to approach this urban reconfiguration.

For the last 25 years local architects and government have implemented different types of reconstruction. Some buildings, mostly historic and symbolic ones, have undergone a complete reversal to their original state. On the other hand, some ruins were cleared up and something completely new was built on the same place.

Post war or post conflict reconstruction raises many questions for architects and urban planners. Is it appropriate to re-use an existing damaged building for a new activity or should it be re used as a simple monument? Monuments are symbols of past but at what point does it become ruin fetishization?

Another interesting discussion is if it is possible for these places which are rich with history and meaning to represent the starting point for moving on and healing but with the respect and observation of the past?

The site of this project is Campus of the University of Sarajevo, which makes it an ideal place to discuss these questions. Prior to being a university campus, the site hosted military functions. The campus more often referred to as Maršalka, has always been important part of the urban whole of Sarajevo. Since it was the center of resistance it has sustained a lot of damaged during the war.

Due to lack of funding it has only been partially reconstructed. It is an interesting area since it isn't as symbolic or historically important as some other buildings such as National Library or National Museum, so there isn't a pressure for it to be completely re-done or polished back into its pre-war state.

There is more freedom to approach this site. The area has hosted different types of military function over the last hundred years, and now it was suddenly given an educational function. It was probably the best purpose it could be given, since it is a function that looks towards future.

In order to approach this discussion, we need to look at the link between the memory, war and architecture. Architecture and public spaces have acquired over time complex layers and meaning through history.

War is something that destroys the continuity of memory – but it something we can learn from. Instead of nostalgically looking at the past, we should use history as a tool of understanding, of creating knowledge. It should give us clue of how important is architecture for the preservation of individual and collective memory.

Methodology

Research Question

What are possible scenarios and spatial solutions for a re-vitalization of Campus of University in post-war Sarajevo, which will enable the expansion of university while still being coherent with the historical identity of the site?

The site chosen for this thesis is the current Campus of University of Saraje-vo. It has sustained a lot damage in the most recent war, and since then it was only partially reconstructed.

The first part of this thesis looks into his-torical development and different cultural practices of Sarajevo. The focus of historical analysis was the siege of Sarajevo, since the site was the center of resistance and played important role during the war.

First method is mapping. Mapping is done on two scales: city scale and neighborhood scale. The city scale was necessary to understand different morphologies and contextualize the site more.

Mapping of siege line and sniper nests gives us better understanding of how the damage came to be and what po-litical or symbolic charge this site has. Mapping on the neighborhood scale shows us the surrounding functions, axis, infrastructure and what relation-ship does the campus have with the neighboring areas. The area is an interesting mix of different morpholo-gies.

A problem with a site is the lack of his-torical information. There are no origi-nal plans or any other plans from more recent years. That is why important part of this thesis was a site visit and taking the necessary measurements. Some of the more damaged buildings were inaccessible, but nevertheless the site visit was necessary for differ-ent analyses of the campus.

The second part of the this is more of a theoretical part which discusses what is the right way to approach the post war reconstruction. In order to approach this, I looked into a link be-tween memory, war and architecture.

This discussion was approached by many architects and designers over the years, but in this thesis, I focused on the works of Lebbeus Woods, who even proposed some architectural solutions specifically for Sarajevo. Alongside Woods, interesting theories were made by Foucalt, Rossi and civic friche movement.

Third part is the analysis of one of the few masterplans created for Sarajevo. This masterplan was created by Nei-dhart in 1950s for the neighborhood of Marijin Dvor. Short discussion of the Bosnian Oriental and Yugoslav Mod-ernism was necessary to understand how Neidhart was influenced and what exactly led to final design. Even though the masterplan was never ful-ly implemented it still influenced the neighborhood and created interesting discussions.

Last part is the concept and design. The project is a small-scale urbanism project so there was a lot more focus on landscape architecture. The main focus was creating new experiences for students and linking old remaining buildings with new ones. First step was the analysis of couple of scenari-os. After collecting the data from these analyses came to my final design. The design is shown through typical archi-tectural plans and sections. The focus was on axonometric drawing and col-lage in order to show the atmosphere.

BOSNIA AND HERZEGOVINA

Geography

Fig 1. Map of Europe

Bosnia and Herzegovina is a land of contrasts – geographically, ethnically and politically. It is situated in western Balkan region - west of Croatia and east of Serbia. Geographically the country can be divided in to three areas. The very south of the country or Herzegovina is a very typical Mediterranean karst area. The largest river in the south is river Neretva which leads to Bosnian coast on Adriatic Sea – a short 20 km strip of coast in the city of Neum. In a complete contrast to these karst areas, the very north of the country is made of flat, arable lands in Pannonian basin with a typical continental climate. Many rivers pass through these areas, including the river Bosna, which is the river the country was named after. The name Bosna is believed to come from old Illyrian word Bass-an-as, which is derived from Proto-Indo-European root "bos" which means running water. [1]

In between the karst areas and very flat north areas, lay the Dinaric Alps. Many important and historic cities are to be found in these central areas, since the mountains provided a sufficient protection from foreign attacks. The old capital of Bosnian Kingdom, town of Bobovac, was built in these mountainous areas. Though the town lost its importance after the fall of Bosnian Kingdom in 1463 to Ottoman Empire. Shortly after the conquest, the city of Sarajevo was founded, which would grow to be the capital and largest city in the country. The country was part of different empires over the last couple of centuries and that is reflected in its architecture. Cities are the patchwork of ancient ruins, Ottoman houses and Austro-Hungarian and contemporary buildings.

1. Malcom, Noel. *Bosnia: A Short History,* New York: NYU Press, 1996.

Political System

Bosnia and Herzegovina has one of the most complicated political systems in Europe. The current political system was created when the leaders of the country signed the Dayton Agreement in 1996. Signing of the Dayton Agreement in Paris in 14.12.1995 marks the official end of the war. It proposed the creation of the two political entities – Federation of Bosnia and Herzegovina and the Republic of Srpska. Interestingly, these two entities have noting to do with geographical regions of Bosna and Herzegovina. A border between Bosnia and Herzegovina has never been officially determined, the south of the country is simply referred to as Herzegovina.

Political entities are divided so that Federation of Bosnia and Herzegovina owns around 51% of land and the Republic of Srpska has control over 49% of land. The exception is town of Brčko, which is an autonomous region. Each of the two entities has a capital, Banja Luka for the Republic and Sarajevo for the Federation.

Federation is further divided into 10 cantons, which are administrative units. In the canton 9 (Canton Sarajevo) is where the capital of Sarajevo is located. Sarajevo is situated right on the border between entities. The ethnic division between the Federation and Republic is further reinforced by an artificial boundary crossing the south-east of the city, the IEBL (Inter-Entity Boundary Line).

Everything in Bosnia has to be referred in threes. The three constituent people is what makes the country function in such complicated way. The Bosniaks make up around 43,5% of the people, Serbs make up around 31,2%, Croats 17,4% and remaining 7,9% are other.[2]

Bosniaks and Croats mainly live in Federation while Serbs live in the Republic. Members of presidency, a three-member body replace a single president. Each of the members of the presidency represent one of the three constituent people.

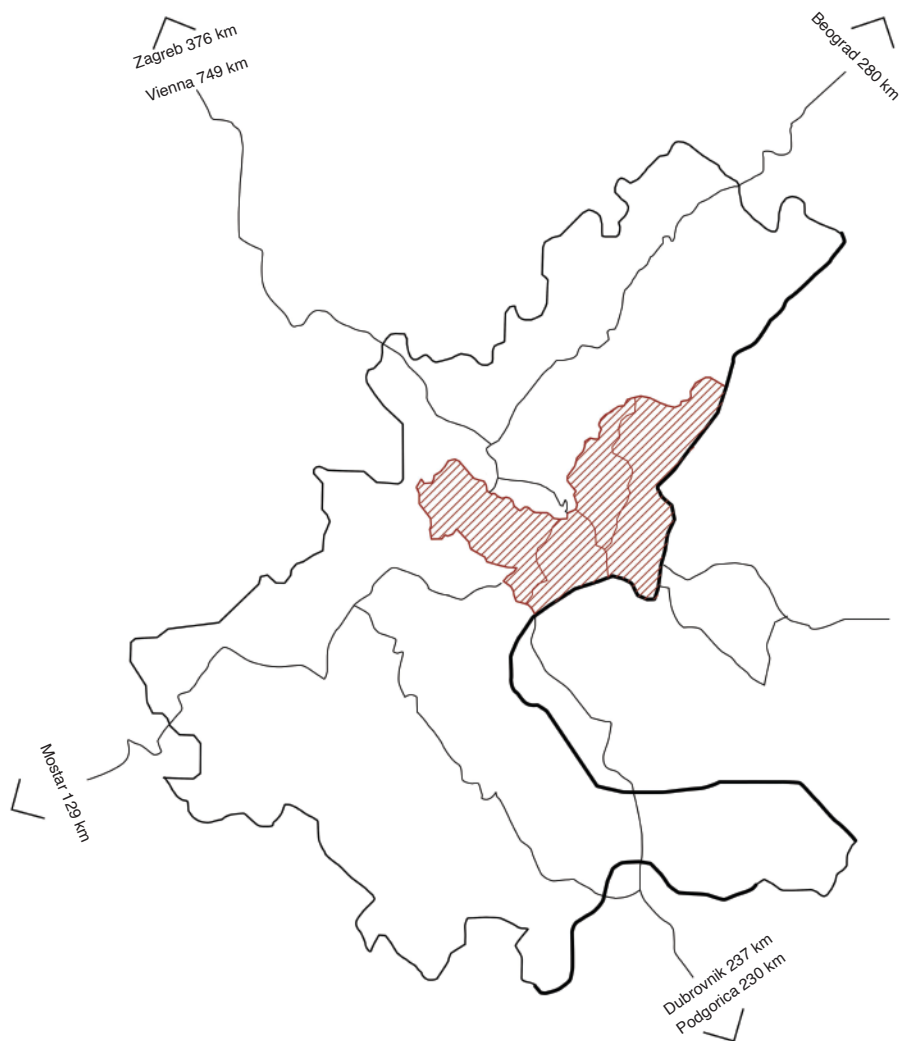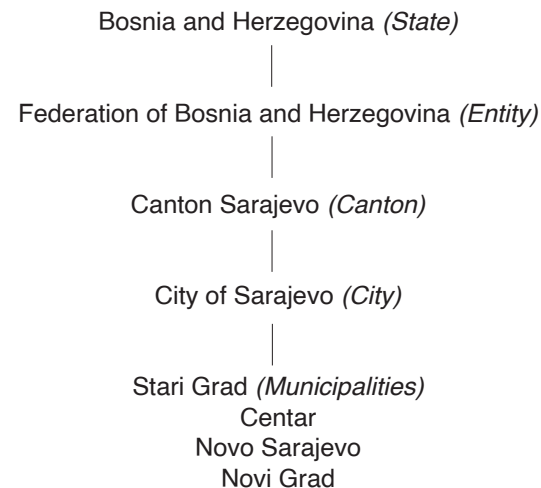*Fig 2. Map of Bosnia and Herzegovina (Canton Sarajevo in red)*

Zagreb 376 km

Vienna 749 km

Beograd 280 km

Mostar 129 km

Dubrovnik 237 km
Podgorica 230 km

Fig 3. Map of Canton Sarajevo (City of Sarajevo in red)

Governance Structure

Bosnia and Herzegovina *(State)*

Federation of Bosnia and Herzegovina *(Entity)*

Canton Sarajevo *(Canton)*

City of Sarajevo *(City)*

Stari Grad *(Municipalities)*
Centar
Novo Sarajevo
Novi Grad

Canton Sarajevo is made out of nine municipalities and four out of those nine municipalities make up the town of Sarajevo (marked in red). It is economically the strongest canton and it generates more than 37% of the countries GDP. [3]

Population density of the canton is around 350 people per km². Novi Grad is the largest municipality in this canton with around 125.500 inhabitants. [4]

Geographically, it is a mountainous area, mostly made out of 5 different mountains (Bjelašnica, Igman, Treskavica, Jahorina and Trebević). Bjelašnica's tallest peak rises to an elevation of 2067 m.

3,4. *The estimate of the present population by age and sex, June 30, 2013*. Federal Office of Statistics, Federation of Bosnia and Herzegovina. PDF File. Accessed June 22 2018.

HISTORICAL OVERVIEW
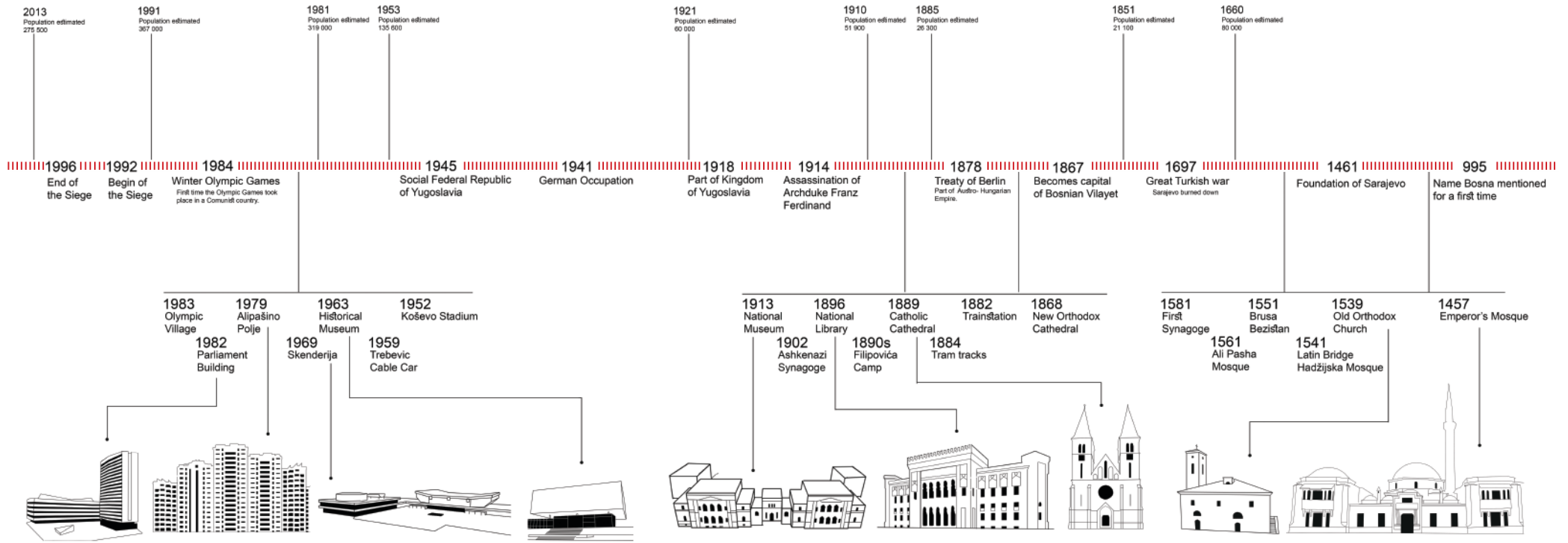
Historical overview of Sarajevo

2013
Population estimated
275 500

1991
Population estimated
367 000

1981
Population estimated
319 000

1953
Population estimated
135 600

1921
Population estimated
60 000

1910
Population estimated
51 900

1885
Population estimated
26 300

1851
Population estimated
21 100

1660
Population estimated
80 000

1996 | **1992** | **1984** | **1945** | **1941** | **1918** | **1914** | **1878** | **1867** | **1697** | **1461** | **995**

End of
the Siege

Begin of
the Siege

Winter Olympic Games
First time the Olympic Games took
place in a Comunist country.

Social Federal Republic
of Yugoslavia

German Occupation

Part of Kingdom
of Yugoslavia

Assassination of
Archduke Franz
Ferdinand

Treaty of Berlin
Part of Austro- Hungarian
Empire.

Becomes capital
of Bosnian Vilayet

Great Turkish war
Sarajevo burned down

Foundation of Sarajevo

Name Bosna mentioned
for a first time

1983
Olympic
Village

1979
Alipašino
Polje

1963
Historical
Museum

1952
Koševo Stadium

1913
National
Museum

1896
National
Library

1889
Catholic
Cathedral

1882
Trainstation

1868
New Orthodox
Cathedral

1581
First
Synagoge

1551
Brusa
Bezistan

1539
Old Orthodox
Church

1457
Emperor's Mosque

1982
Parliament
Building

1969
Skenderija

1959
Trebevic
Cable Car

1902
Ashkenazi
Synagoge

1890s
Filipovića
Camp

1884
Tram tracks

1561
Ali Pasha
Mosque

1541
Latin Bridge
Hadžijska Mosque

Fig 4.

Ottoman Empire
1463 - 1878

5,6. Diona, J. Robert, *Sarajevo: A Biography,* University of Michigan Press, 2006. Google Books. Web. Accessed 15.09.2018, p.9-10

7. Diona, J. Robert, *Sarajevo: A Biography,* University of Michigan Press, 2006. Google Books. Web. Accessed 15.09.2018, p.8

8. Diona, J. Robert, *Sarajevo: A Biography,* University of Michigan Press, 2006. Google Books. Web. Accessed 15.09.2018, p.15

9. Grabus, Tarik. *Analiza demografskih process na području općine Novi Grad Sarajevo*. Thesis. University of Sarajevo, 2015. Web. Accessed 22.09.2018

Sarajevo is capital city of Bosnia and Herzegovina situated in the central part of the country. Built in the valley between mountains it has predominantly linear orientation. It lies along Miljacka river and is currently extending 10 kilometers from old town Baščaršija in the east to Ilidža in the west. Due to its turbulent past and frequent alterations of regimes, it has never had consistent urban expansion. Interestingly the different urban expansions have been built in a chronological order along the Miljacka river from east to west.

Parts of Sarajevo have been constantly inhabited since the Neolithic period. The earliest settlements belonged to the Neolithic Butmir culture, which has had their own unique pottery and ceramic designs. Illyrians have inhabited the area of Sarajevo for many centuries but were taken over by the Roman empire in 9 A.D. Romans have built their colony of Aquae Sulphurae in Ilidža – the most western part of the city. The area was shortly inhabited by Goths before the Slavs came in 7th century.[5]

Not a lot is known about Sarajevo in Middle ages. It was a part of the province of Vrhbosna of Kingdom of Bosnia and there is some written evidence of couple of markets and churches being built in and around the area which is today known as Sarajevo. [6]

Sarajevo was officially founded by the Ottoman Empire in 1461. The first governor was Isa-beg Ishaković and he was the one who transformed all the small villages in valley into the capital city. He ordered construction of many important such as public baths, mosque, hostel and castle. The name Sarajevo came from the Turkish phrase *saray ovasi* which roughly translates to a field around the castle.[7] The old town which was built during the Ottoman period known as Baščaršija, is located in the narrowest part of the Miljacka valley.

Many Jews came to Sarajevo due to expulsion from Spain and small Jewish neighborhood was built next to the Old town.[8] Gazi Husrev-beg was a second governor and he was the one who shaped the old town as we know it today. During his reign he order construction of many marketplaces and mosques. In the middle of 17th century Sarajevo had around 80 000 inhabitants making it the second largest city in the Balkans, after Istanbul.[9]
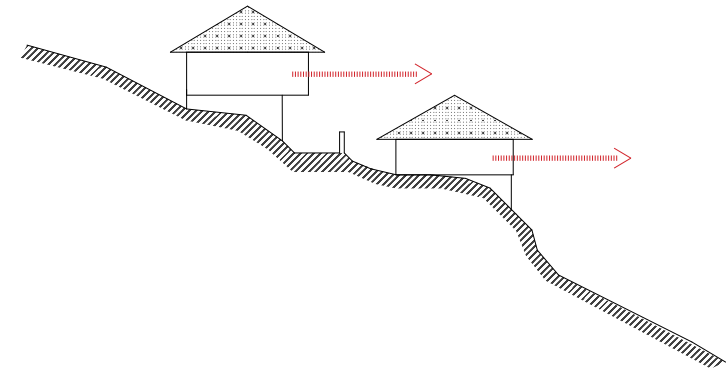

Fig 5. Right of the view in old town

Unfortunately, in 1697 Prince Eugene of Savoy from Habsburg Monarchy led a raid to Sarajevo and completely burned the city to the ground. The city never fully recovered and in 1807 had only about 60 000 inhabitants.

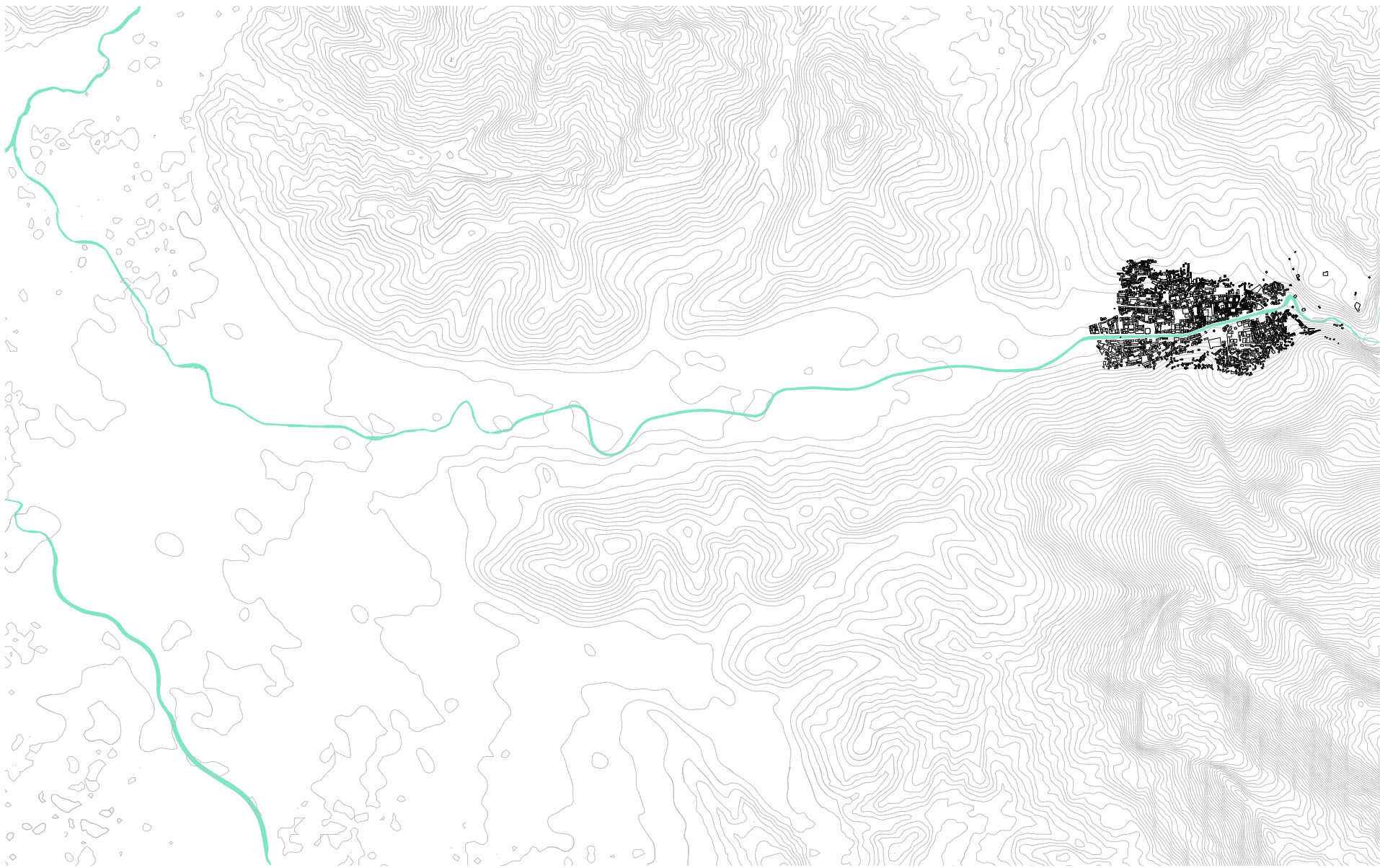*Fig 6. Old town street known as "mahala"*

Fig 7. Sarajevo during late Ottoman period   Scale: 1 : 50 000

10. Avdagić A., Bećirović D., Hajrudinović A., Hukić E., Krpo M., Marić B., Mutabdžija S., Omanović M., Pintarić, Avdagić B., Salihović A. *Landscape of Sarajevo Region*. In: Le:Notre extraordinary Landscape Forum 2014.p.19

11. Alic, Dijana. *Transformations of the Oriental in the Architectural Work of Juraj Neidhardt and Dušan Grabrijan*. Thesis. The University of New South Wales, 2010. Web. Accessed 17.11.2018. p.64

There is a clear distinction between residential parts- *mahale*- and more commercial parts - *čaršija*. The residential houses were built on the slopes and have followed the rule of respecting "the right of a view" towards the old city center, overlooking the more commercial part. That is why the entire area resembles the amphitheater which is open to the west. Difference between these two parts is that čaršija is more enclosed and potentially contains all in itself, where as the mahale is more open to all.

Gardens have always been important part of the old town. Due to micro climate and a lot of water the city was named "a garden city" by many.[10] In Islam gardens have always represented an earthly reflection of paradise. That is why every residential house and its organization was very open towards these gardens. Even though the houses within their walls were very open, they were completely shielded from the outside through walls and gates. These walls were often deep with gates that lead to the courtyard.

City planning has been heavily influenced by the regional topography. The urban morphology of Baščaršija consists of small and narrow streets, even though it may seem as random at first but they were serving an ideal of privacy . Minarets were used as visual markers. Sarajevo soon became an important trade and administrative center and the city began expanding fast. Sarajevo was a taxfree city, which furthered Bašaršija's economic development.[11]
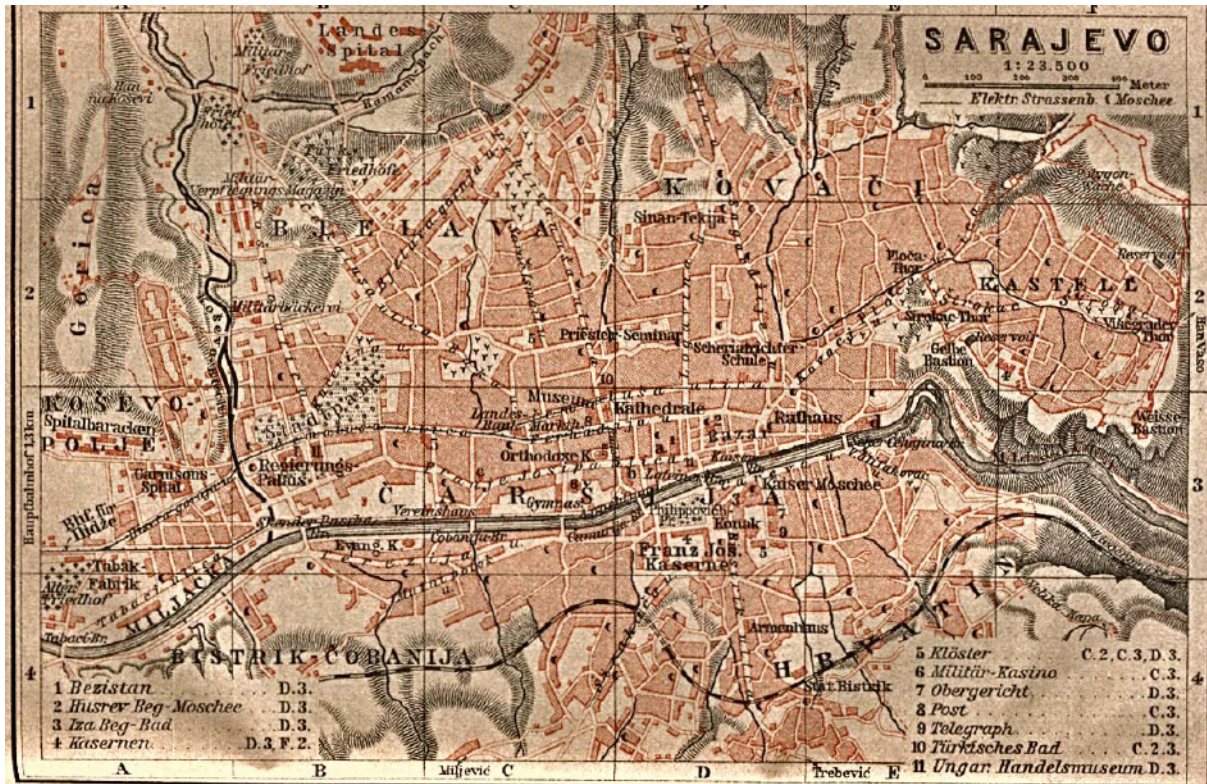
Fig 8. Historical map from 1905 - Barracks are not drawn in

Austro-Hungarian Empire
1878-1914

In 1878 Treaty of Berlin was signed and Bosnia and Hercegovina was taken over by the Austro Hungarian Empire. Austro-Hungarian brought in architects and engineers with a goal of industrializing and "westernizing" Sarajevo. City started expanding westward. The area between Baščaršija and Marijin Dvor was strongly developed during this time.

The urban development and architecture was a typical Gründerzeit architecture, which consists of blocks of

multi-story buildings, combining residential with other functions. During this time first city regulation plan was produced.

Many architects and engineers used Sarajevo as a testing ground for different projects. That is why Sarajevo ended up being first European city to introduce tramway, couple of years before they were introduced Vienna.[12]

Austro-Hungarians have reorganized green structure of city and created first

official parks and have connected the city to its surrounding mountains by building access roads. They also took advantage of fire that burned down most of the western part of Čaršija in 1897. They didn't waste their time rebuilding the area, but instead used it as a starting point for new city morphology. [13]

12. Sparks, Mary. *The Development of Austro-Hungarian Sarajevo, 1878-1918: An Urban History,* Bloomsbury Academic, 2014.

13. Bertram, Carel. *The Urban History of Sarajevo in the Ottoman Period and Into the Period of the Dual Monarchy.* Web. 1997. http://www.friends-partners.org/bosnia/cb1.html Accessed 11.10.2018
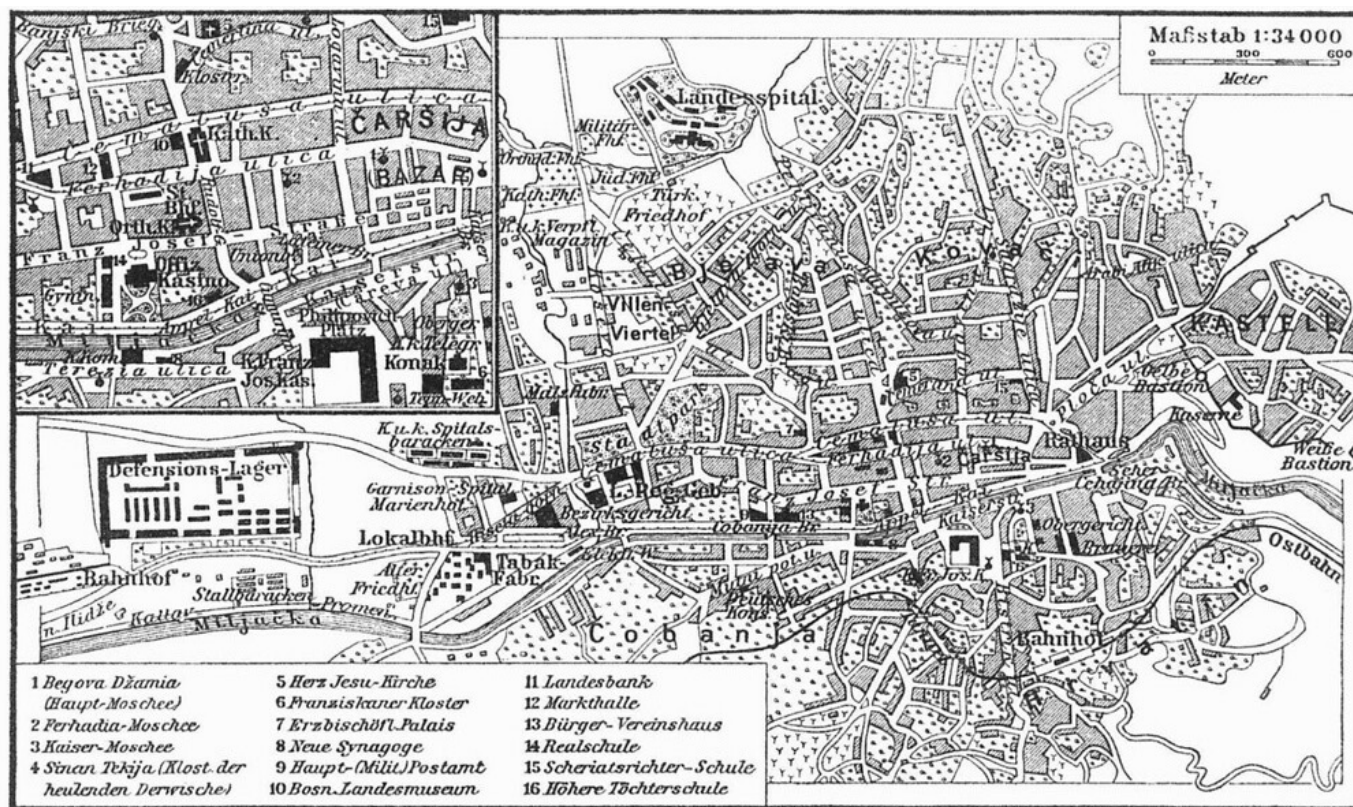
Fig 9. Historical map from beginning of 20th century with newly built Barracks

14. Balic, S. *Kultura Bosnjaka, Muslimanska Komponenta,* Zagreb, Bosnjaka Bastina, 1994. p.164

Central electricity grid and sewerage as well as rail system contributed to rapid development. Because of all this the city started growing for the first time in centuries. Majority of the building that make up todays central municipality were built during this time.

Architects used Sarajevo as the playing ground by constructing buildings in many different styles such as neo/gothic, Romanesque, Secession and Pseudo Moorish style.

The archduke Franz Ferdinand, heir to Austro Hungarian throne came to Sarajevo in 1914, to strengthen the presence of the empire of the city. On the 28th June 1914, Gavrilo Princip, a militant in the Independence movements of Bosnia, assassinated the archduke and his wife Sophie, the Duchess of Hohenberg. This event sparked the First World War. Sarajevo for the most part escaped the damage of the war since most of offensives occurred in Belgrade.

Fig 11. Main street and typical Austro-Hungarian architecture

"Who wouldn't be hypnotized today by the city of the Bosnian capital? It is incomparable in the strength of its contradictions." [14]
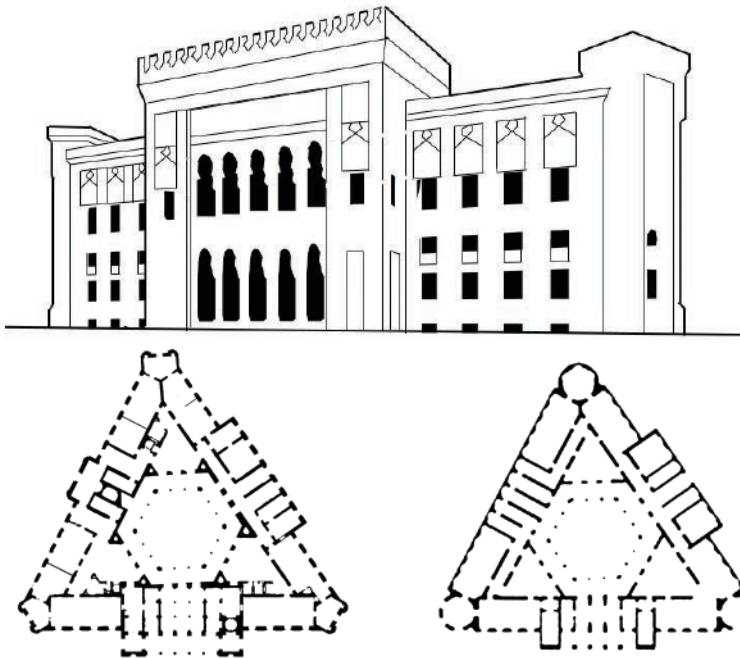
Fig 10. City Hall built in 1896
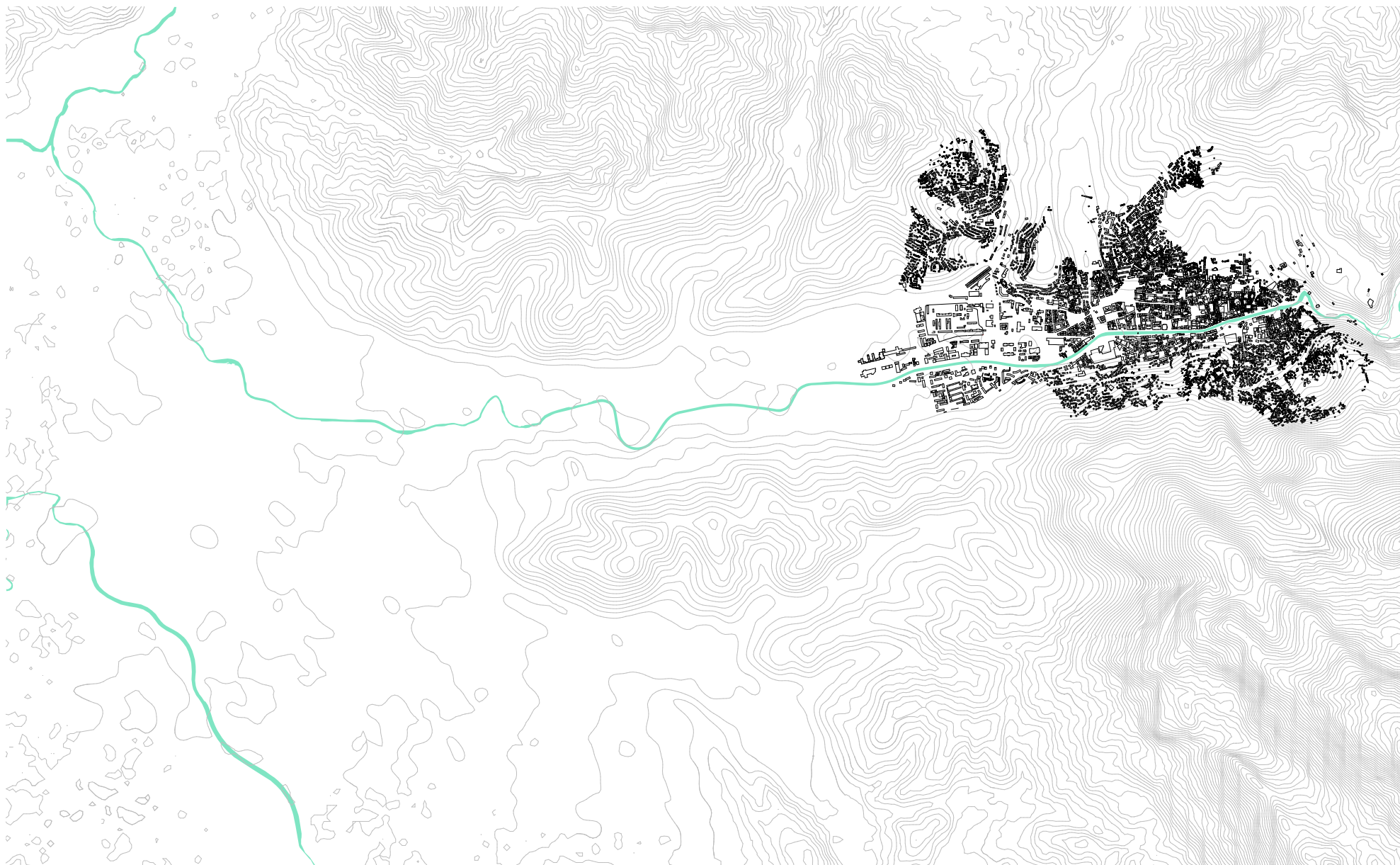
Fig 12. Sarajevo during Austro-Hungarian period   Scale: 1 : 50 000

Kingdom of Yugoslavia and SFRY
1914-1992

15. Zejnilovic, E; Husukic E, *Culture and Architecture in Distress - Sarajevo Experiment*. International Journal of Architectural Research. Web. 2018. Accessed 10.01.2019. p. 22

16. Diona, J. Robert, *Sarajevo: A Biography,* University of Michigan Press, 2006. Google Books. Web. Accessed 15.09.2018.

17. Statistika.ba, *Popis stanovništva 2013,* Accessed 22.10.2018, http://www.statistika.ba/

After the First World War Sarajevo became part of Kingdom of Yugoslavia but since it wasn't a state capital anymore there was a decline in influence. During the Second World War from 1941/1945 Sarajevo was occupied by Independent State of Croatia, which was a puppet state of Germany and Italy. The state was governed by the fascist Ustaše movement as a monarchy. The city has suffered from bombings and finally was liberated on 6. April 1945 it became part of Socialist Federal Republic of Yugoslavia. The country consisted of six socialist republics: Bosnia and Herzegovina, Serbia, Croatia, Slovenia, Montenegro and Macedonia.

After about 30 years of stagnation the government started expanding the city. Yugoslav era, top-down urban development continued, executed through centralized planning regulations, and Sarajevo's physical urban appearance underwent a large-scale transformation.

In the 1960's Sarajevo got its first master plan which was heavily influenced by the Corbusian modernism. Public transport system was expanded including a new cable car from old town to Mt. Trebevic. Station Vidikovac is on 1,164 m.

Since Bosnia and Herzegovina was now part of communist state of Yugoslavia focus shifted from agricultural practices to strengthening the industrial society, which resulted in decline in agricultural population.

Sarajevo experienced linear expansion westwards and a smaller expansion northwards along the Kosevo Stream.

Architecture was used as a political instrument to depict the ideology of a ruling party. The socialist doctrine coincided with a modernist movement across Europe, especially in lack of symbolic decorations and minimalist and abstract designs.[15] Residential architecture built during this time was a typical to socialist regime. Long, orthogonal blocks were built throughout the city, culminating in Alipasino Polje. A neighborhood designed across the industrial zone for 60 000 citizens. Government believed that a uniform and strict visual appearance reinforced the strategy that a just social order would resolve and nationalist issues relating to the different ethnic groups.

The master plan from 1965 was created in vision of 1984 Winter Olympics. Winter Olympics were another important event in city's history. The games were held from 9 to 18 of February 1984. Many sports facilities were constructed for the games. There was a large scale upgrade to the airport and the mountains were populated with

Fig 13. Olympic Games 1984 Logo and Mascot.

sport and leisure facilities, accessible roads, restaurant and other attractions.[16] City also started expanding a long the north axis where the main hall and all purpose stadium were built. This period in Sarajevo history was characterized by an extreme population growth up to 430 000 (metro area) in 1991.[17]
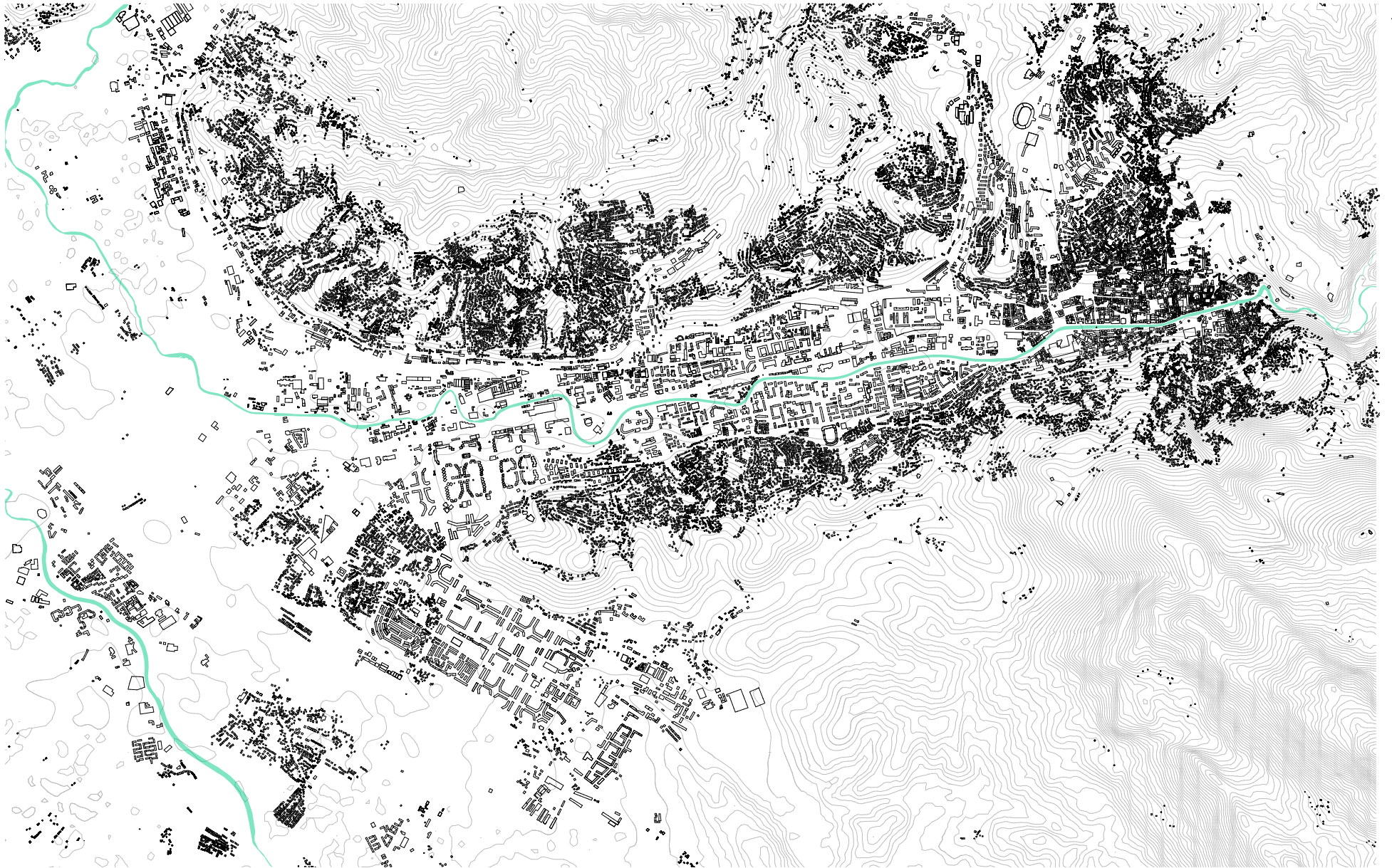

Fig 14. Alipasino Polje neighborhood for 60 000 citizens

Fig 15. Sarajevo before the siege   Scale 1 : 50 000

Siege of Sarajevo
1992-1996

18. *Najgrozomorniji rekord / Na današnji dan 1993. na Sarajevo je palo 3.777 granata*.radiosarajevo.ba. 22.07.2010, Retrieved 3.10.2018. https://www.radiosarajevo.ba/metromahala/teme/na-danasnji-dan-1993-na-sarajevo-je-palo-3777-granata/269316

19. Lamphere-Englund, Galen. *Rebuilding Sarajevo*. The Aleppo Project. 2015. p.4

20. Ristic, Mirjana. *Sniper Alley: The Politics of Urban Violence in the Besieged Sarajevo*. Built Environment, 40(3). Web. 2014. Accessed 15.09.2018

Compared to the rest of Yugoslav states, Bosnia and Herzegovina has always been the ethnically most diverse state consisting of Croats (Catholic), Bosniaks (Muslim) and Serbs (Orthodox). Because of this the situation regarding the separation from Yugoslavia was the most brutal compared to the other states. Croats and Bosnians called for the independence, but Serbs wanted for Bosnia to remain under Yugoslavia. When Bosnia and Herzegovina declared independence in 1992 referendum, Serbs rose up against it. After the Serbs snipers killed students at the peace rally in April the siege officially began.

Mountains of Sarajevo, which only eight years prior hosted Olympic games, were a perfect place for Serb snipers and allowed them to have the best view over their targets. The siege lasted until 29.2.1996 resulting in 11 541 victims, 1 500 of them children and additional 56 000 people were wounded. Sarajevo has been shelled daily. On average, 329 grenades fell on a city daily and a record has been set on 22.07.1993 when 3777 grenades fell on a single day.[18] The siege was almost two times longer than the siege of Leningrad.

Sixty percent of the city's buildings were damaged or destroyed and 80 percent of its electricity and water-mains were destroyed.[19]

The Siege line for the most part was on the surrounding hills of the city, except for neighborhood of Grbavica.

Grbavica was completely under Serbian control and high-rise buildings were perfect spot for the snipers.

High-rise building offered snipers great view of the surroundings and of the main road of the city, the Zmaja od Bosne road. Because of proximity to sniper nests, people weren't able to pass through this street and have renamed the street in "Sniper Alley". Because of this the city was divided into two entities.

The Pofalići bridge was one of the only spots of the rare exchange between the two sides of war. Ironically it was called the "bridge of friendship". The division was a problem for the supply of aid material. Aid packages were delivered to the airport outside of the siege line, at the very west of the city. Key to the survival of people was the DB Tunnel. Volunteers secretly dug out almost a kilometer-long tunnel connecting the airport and the neighborhood Dobrinja, which was inside of the siege line. This tunnel was used to sneak in humanitarian supplies and weapons.
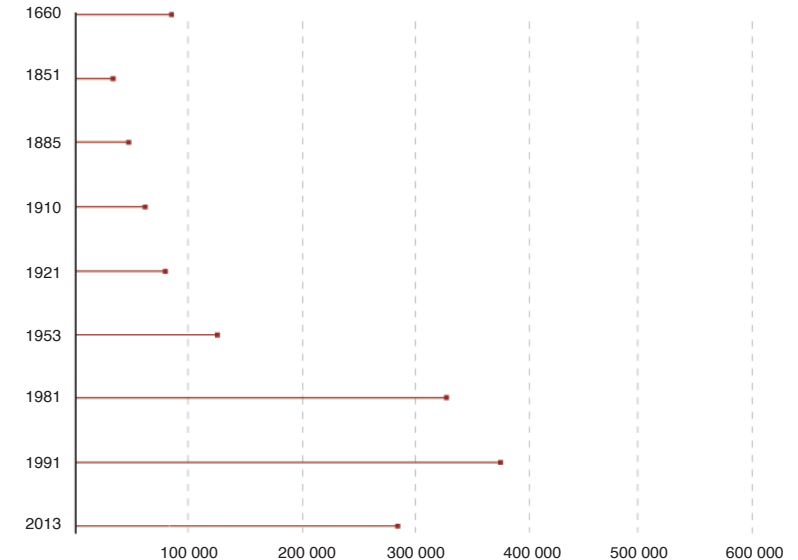
Fig 16. Sarajevo population over the years

The exit door was hidden inside a garage of an apartment building and from here in order to reach city center one had to go through the so called "salvation road" which consists of trenches and container barriers that enabled people to avoid Sniper alley.[20]

Fig 17. War ruins
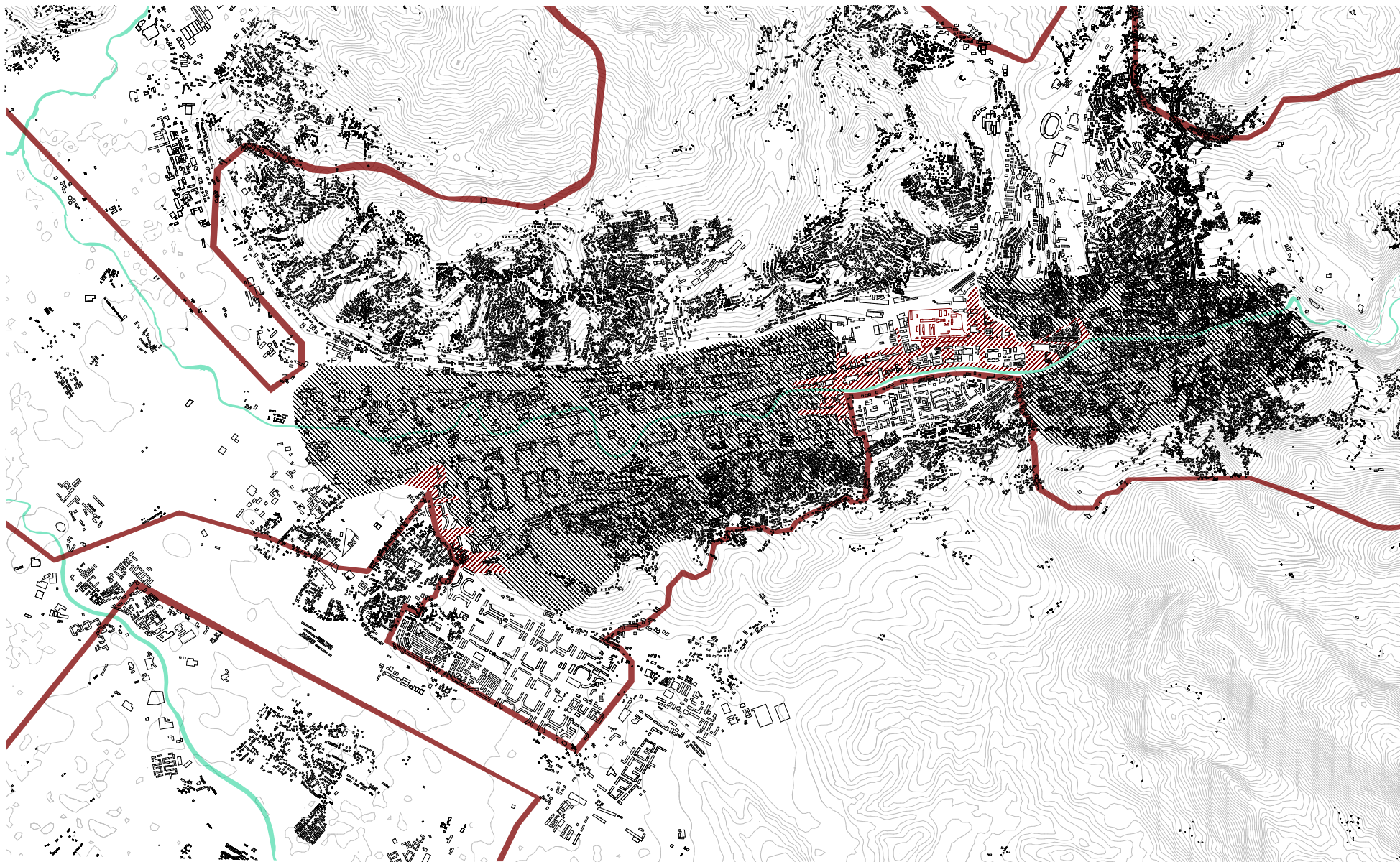
Fig 18. Siege line - Since neighborhood of Grbavica was occupied the city was divided into two entities   Scale 1 : 50 000

Siege of Sarajevo
1992-1996

1. March 1992
Referendum for the independence of Bosnia and Herzegovina. 99,71% vote for independance.

9. April 1992
Demonstration for freedom. First victims of war.

2. May 1992
17 000 people evacuated from one part of the city. Main street were blocked. City is officially under siege.

25. August 1992
Burning of National Library.

October 1992
Phone connection to the world cut off.

March 1993
Digging of the tunnel in Dobrinja begins.

July 1993
Tunnel is completed.

15. August 1993
Electricity is back on after three months.

5. February 1994
Markale Massacre.

9. January 1996
Attack on a tram, last victims of siege.

29. February 1996
Bosnian army officially declares end of siege

Fig 19. Time line of Siege and DB Tunnel
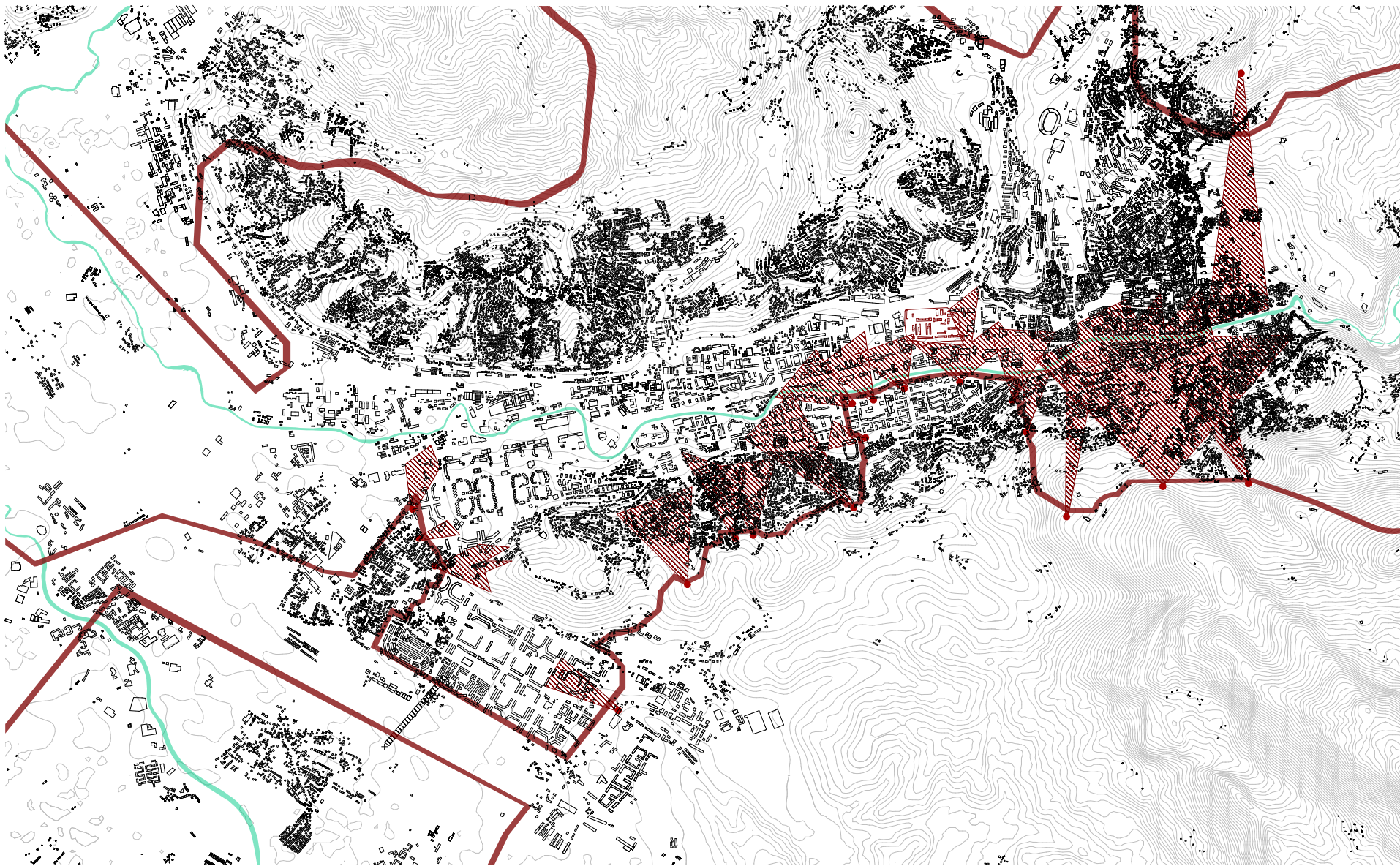
Fig 20. Sniper Nests - Areas of the city which sustained the most damage   Scale 1 : 50 000

RECONSTRUCTION

Post-war Reconstruction in 20th Century

10%
Others

20%
Bosnian Croats

40%
Bosnian Muslim

30%
Bosnian Serbs

10%
Others

5%
Bosnian Croats

4%
Bosnian Serbs

81%
Bosnian Muslim
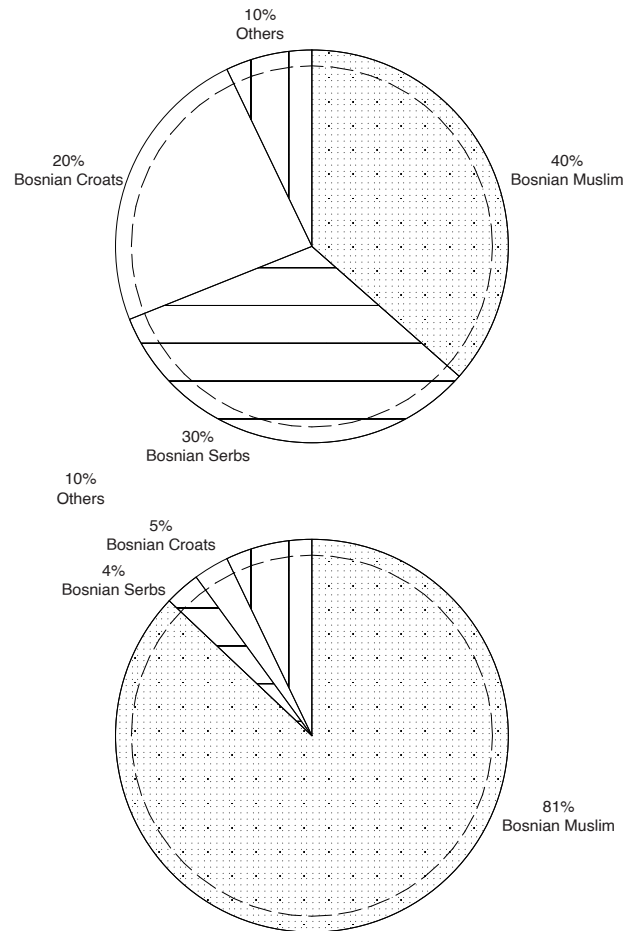
Fig 21. Ethnic structure of Sarajevo pre and post war

The city underwent three post war reconstructions in 20th century. First reconstruction refers to the post WWI period in Kingdom of Slovenes, Croats and Serbs. This compared to the other two was the least intensive one. Sarajevo didn't sustain a lot of damage during the WWI, even though it is a place where the war started. Most of the bombings happened in Belgrade. Sarajevo as much more affected by famine. During this era Sarajevo was left to its own devices, while the Kingdom funded reconstruction of Zagreb and Belgrade.

Situation was different during WWII. City sustained far more damage than in WWI. Government of Yugoslavia had to invest more in the reconstruction, especially since Sarajevo gained more importance, by becoming a capital of one of the Republics. It is important to note that Yugoslavia's government at the time was very anti-historicism, which reflected in architecture. Even though the government used architecture to promote unity, the government was far more removed from architectural decision than in any other Eastern Bloc country. This is the reason why today there is no Yugoslav style, since the government never prescribed any. Architects of this time had more freedom and were influenced primarily by their education in other European countries. [21]
Many new neighborhoods, like Otoka and Alipasino Polje were built in these after war years. Post war Sarajevo was playground for modernist movement. Modernist movement was a perfect tool for new Sarajevo. It had no roots in past and it offered a fresh start. Even though Sarajevo was always overlooked in favor of Zagreb and Belgrade,

still post-war period brought new masterplans, like the masterplan from Neidhart and Grabrijan, for Old town and later for the neighborhood of Marijin Dvor. This approach would be later criticized by likes of Lebbeus Woods, since he argues that we shouldn't ever try to erase past, no matter how traumatizing it is.

The most recent post-war reconstruction is by far the least successful one. In order to understand the difference between this post war reconstruction and the most recent one, it is important to know what Yugoslavia's vision for future was. Socialist Federal Republic of Yugoslavia consisted out of 6 republics. Each one of these republics is inhabited by people belonging to many different ethnic identities. One of the most important aspects in Yugoslav vision for future was building the Yugoslav nationalist and socialist spirit. Difficult aspect was acknowledging the many ethnicities but still putting the spirit of unity above anything else. That is why the country invested a lot of resources in surprising the Nazi, Chetnik and Ustasa movement.

First difference between these to time periods is that during the Yugoslav post war reconstruction, government focused on unity and suppressing ethnic differences, while today we see post war reconstruction focus on ethnic identifying objects and monuments. Most important distinction is that Yugoslavia had vision and Bosnia and Herzegovina doesn't. Every project that was undertaken after siege, has been an isolated project, barely considering its surrounding and context. Not a single master plan was created and there is no defined vision for future.

21. Burgard, Robert and Kirn, Gul. *Yugoslavian Partisan Memorials: The Aesthetic Form of the Revolution as a Form of Unfinished Modernism.* Unfinished Modernizations: Between Utopia and Pragmatism, Zagreb. 2012. Web. p.89

Physical Reconstruction

22. Lamphere-Englund, Galen. Rebuilding Sarajevo. The Aleppo Project. 2015. p.5

23. Garcia, Sofia, Kotzen, Bronwyn. *LSE Cities Reconstructing Sarajevo: Negotiating Socio-political Complexity.* LSE. 2014. Web. p.17

In 1995, only one fifth of the city had water and power.[22] The first step once the war was over, was to restore Sarajevo's basic infrastructure - telecommunication, electricity supply, roads, water networks. Prioritized as well was the glassing of buildings. Naturally, during the initial years after the siege no new buildings were built as all the money was spent on repairing damaged buildings. City government focused so much on physical reconstruction while completely ignoring improving local administration or urban planning capacity. There has been no vision for post war urban planning of Sarajevo. Not a single masterplan was created, and all new projects have been isolated projects.

One example of bad planning is the expansion of the neighborhood around airport without any concerns about the plans of airport expansion.[23] If you look at the physical reconstruction that has happened in Sarajevo in the last 25 years, someone might think it was successful. Most of the most important historical building have been reconstructed to their original state, more and more residential buildings are getting new façades. On a surface level it seems like the post war reconstruction was successful, but the that is not the situation. There is no cohesive future plan for the entire city and there hasn't been any attempt to create a new masterplan.

Fig 22. Shelling of Alipasino Polje
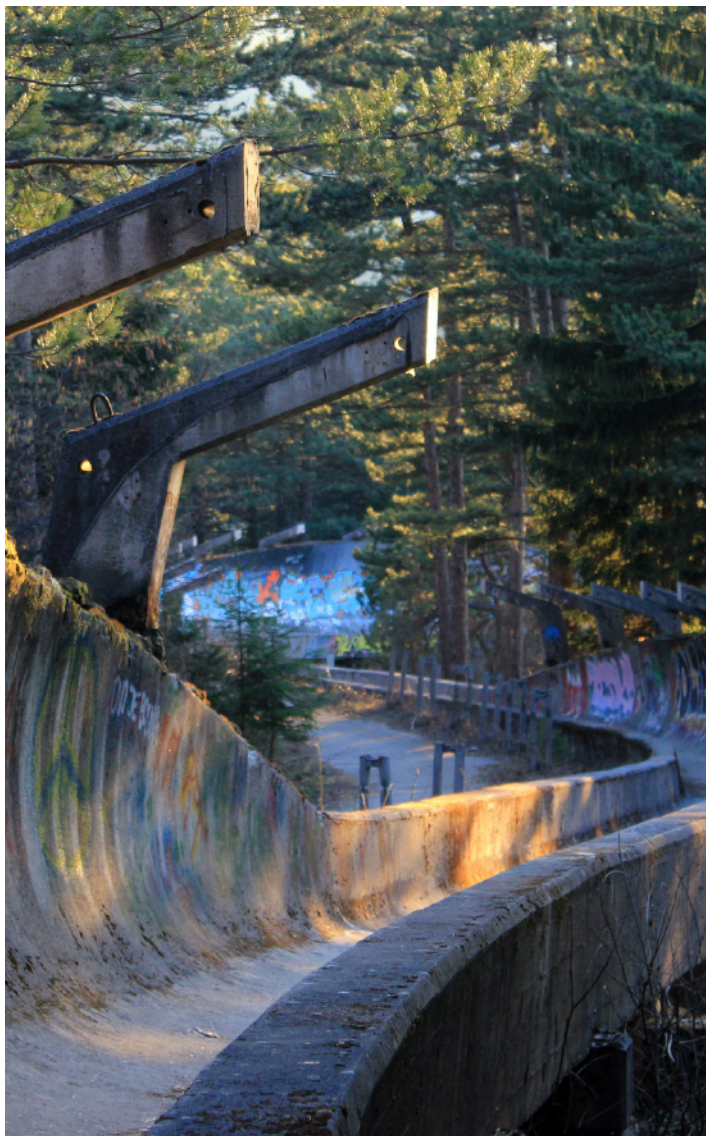
Fig 23. Destroyed bob sleigh track on mountain Trebevic

Sultan Barakat defines post war reconstruction: "*Range of holistic activities in an integrated process designed not only to reactivate economic and social development but at the same time to create a peaceful environment that will prevent a relapse into violence*".[24] Reconstruction is a difficult process and there are many ways to go about it. The violent past is what makes this type of reconstruction different or unique compared to other forms of urban reconfiguration. First question is should the building be reconstructed at all? What should the relationship be between the reconstructed building and the building before the conflict? If architects decide that the correct way is to reconstruct building new question is posed: Should the building be a replica, or should it be changed or improved?

Another dilemma in urban reconstruction is whether we should focus on reconstructing symbolic heritage sites. Some say it should be understood as satisfaction of emotional needs and that it contributes to restoring the functioning of a community and reinstates the sense of place. Argument against it is the sheer cost of these reconstruction. Some saying that already limited budget should be spent reconstructing more practical parts such as residential areas or new factories or industry. John Yarwood, who has worked in many post-conflict areas, argues that people who went through a conflict "*don't need their personal traumas to be focused on, but rather they need practical problems to be resolved*" [25]

According to him the urban reconstruction will help people more in terms of dealing with trauma rather than a reconstruction of a symbolic mosque or church.

The functional or physical reconstruction is important and a priority, but the reconstruction should be at a broader scale. After we deal with more pragmatic problems we should focus on new social and political issues.

24. Barakat, Sultan. *After the Conflict: Reconstruction and Development in the Aftermath of War.* London: I.B. Tauris, 2005

25. Yarwood, John. *Rebuilding Mostar: Reconstruction in a War Zone.* Liverpool University Press. 1999

Ethnic Monuments

26. Viejo-Rose, Dacia. *Reconstructing Spain: Cultural Heritage and Memory After Civil War* , Brighton: Sussex Academic Press. 2011

27. Lamphere-Englund, Galen. *Rebuilding Sarajevo. The Aleppo Project*. 2015. P.4

Memorialization of the war has played a large role at shaping post war Sarajevo. Monument design from all over the city have been designed to emphasize dividing memories, values and practices. City government has focused mostly on ethnic-identity structures. What the government chooses to reconstruct and not reconstruct carries a certain message. According to Dacia Viejo-Rose reconstruction can also be an act of violence.[26] It can be used to suppress diversity, which is what happened in Sarajevo. Once multi-ethnic city now is mostly a mono-ethnic city. Bosniaks, making about 84% of population.[27]

This focus of reconstruction of ethnic-identity buildings has been a direct response to a phenomenon which Bogdan Bogdanovic calls "urbicide": a deliberate targeting of urban life and cosmopolitanism. The reconstruction has been the answer to that, since the Muslim identity has been targeted, now government has focused on reconstructing monuments which represent Muslim identity but completely ignore places of common memory.

Vraca monument of 78 000 m² which was built in remembrance of the victims of II World War was never reconstructed after 1995.

This type of urban reconstruction has both functional and symbolic dimension. It tells us a lot about how people relate to past by what they choose to reconstruct, to demolish and how to remember.

Bosniak

Serbian

Croat
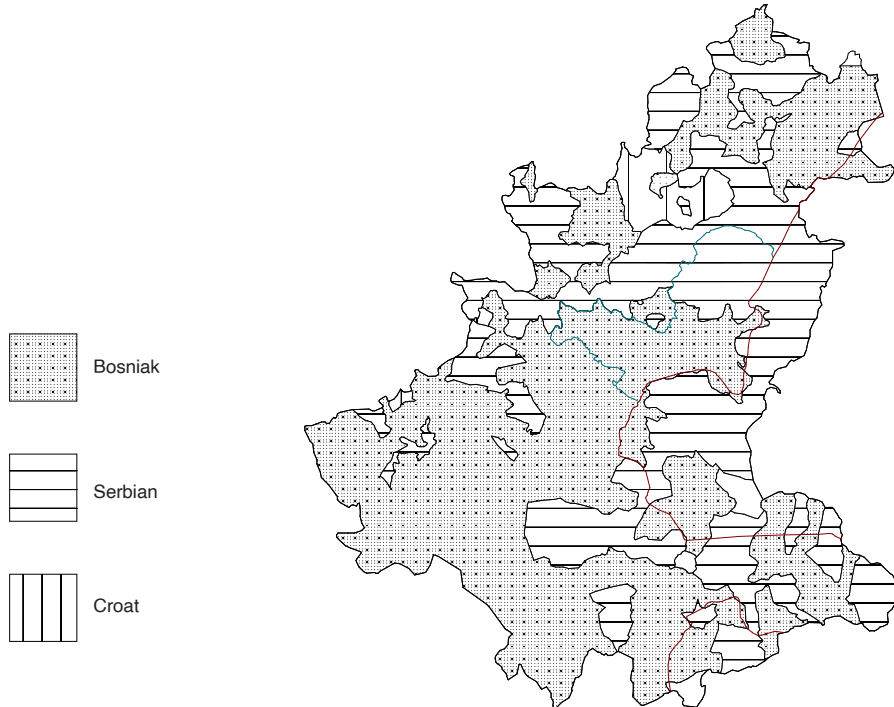
Fig 24. Ethnic structure of Canton Sarajevo pre war (IEBL in red)
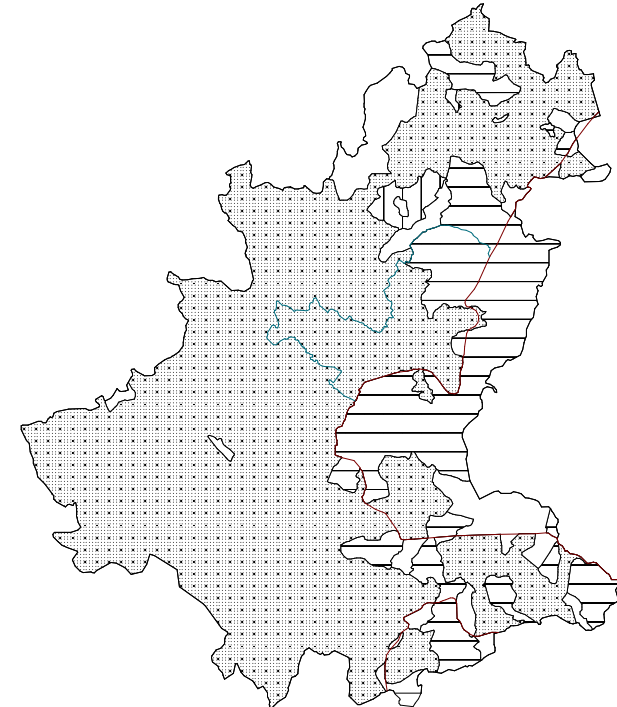
Fig 25. Ethnic structure of Canton Sarajevo post war (IEBL in red)

Fig 26. David Bowie Mural on site drawn on one of the destroyed buildings

URBAN TYPOLOGIES

Typologies

Due to different historical affiliations, Sarajevo has extremely different morphologies, from irregular Ottoman family houses to socialist blocks for 60 000 people. Unique to the city development is that we can track the historical progression easily from east to the west. During the war the different historical morphologies offered as well different degrees of protection.

Fig 27. Main streets of Sarajevo   Scale 1 : 75 000

Old Town - Mahale and Bosnian House

28. Alic, Dijana. *Transformations of the Oriental in the Architectural Work of Juraj Neidhardt and Dušan Grabrijan.* Thesis. The University of New South Wales, 2010. Web. Accessed 17.11.2018.

The Ottomans brought their architecture with them once they conquered Bosnia in 15th century. They started converting the locals to Islam and in that way altering the customs and ways of living. According to the Neidhart and Grabrijan one of the greatest legacies of the Ottomans is the introduction of so-called Oriental House.[28] The house responded directly to the dynamics of the family unit, privacy and position of woman in society. The floor plan was clearly gendered, and public/private zones directed the circulation within the house. The ground has no or only few small windows overlooking the street.

Traditional Bosnian house has tall walls on the ground floor with only large gate that leads to avlija (garden). Privacy played a big role in Ottoman culture. The closed off ground floor was balanced by light and transparent first floor. Parts of the first floor were built above the street. The residential houses were built on the slopes and have followed the rule of respecting "the right of a view" towards the old city center. City planning has been heavily influenced by the regional topography. This type oh home is mostly situated in the eastern part of the city.

Fig 28. Mahale in old town

Fig 29. Ottoman typology distribution

Austro Hungarian Building Blocks

Austro Hungarians came in 19th century and their architecture stand in stark contrast to the Ottoman architecture. Austro-Hungarian goal was to westernize the city. They heavily influenced what is today considered a city center. The architecture is a typical Gründerzeit architecture, that can be found in other European cities like Vienna or Budapest. Austro-Hungarian had big influence on urban planning, because they also brought rules and regulations with them. Such as regulated wall thickness, required building permit and building heights. Big emphasis was on harmonious design with immediate surroundings.

The majority of projects during the time of Austrian influence dealt with administrative building designs. The residential buildings were 4-5 stories high with places designated for shops on the ground floor. There has been an attempt to incorporate some of the traditional Bosnian elements in to the facades like decorative lace, doksat and even domes. City center was mostly built during this era
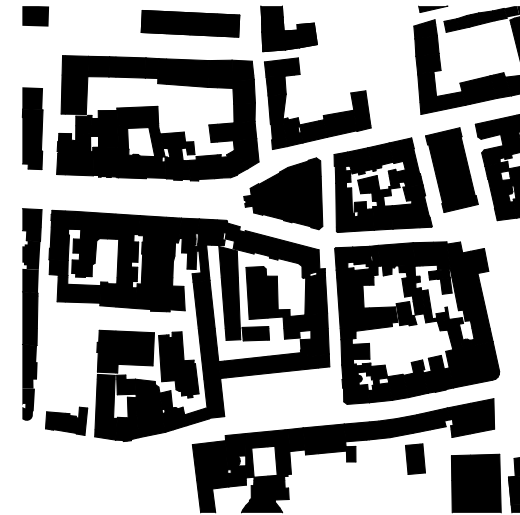
Fig 30. Austro-Hungarian city center

Fig 31. Austro-Hungarian typology distribution

Modern Movement

29. Zoranic, Adnan. *Heritage of early modernism in residential architecture in Sarajevo.* OP Conf. Ser.: Mater. Sci. Eng. 471 112040.

First building built in modernist style was Damic apartment by graduates of Prague school of architecture, Smiljanic and Baldasara. The modernist areas were created under recognizable influences of modernist from other European countries, such examples are Weisenhoff village and Baba Housing in Prague. These modernist buildings are mostly to be found on the north axis of the city, in the neighborhoods of Kosevo and Ciglane. Modern architects tried to combine the domestic traditions brought over by the Ottomans and central European style.

A lot of this new houses were built in nature and they had summer kitchens. Unlike the socialist buildings that came after, these building built in modern style were able to blend into existing urban continuum (and are often not seen as a distinct layer). The infrastructure was further developed after the Austro-Hungarians (regulating lines, water, sewer and streets).[29]

Fig 32. Modernist buildings in Ciglane

Fig 33. Modernist architecture distribution

Socialist Tower Blocks

The established ideology of socialist Yugoslavia, with its communistic doctrine affected all parts of life. For Bosnia, just as for the other federal republics of socialist Yugoslavia, this was a period of transformation from constitutional monarchy of the Kingdom of Yugoslavia into a communistic state. There was more emphasis put on the new industrial society. Huge orthogonal blocks were created throughout the city. The typical socialist grid can be seen in the city and further away you go from city center, the blocks get larger and larger.

There was an absence of color or decorations and the architecture was minimalistic, uniform and very strict. Alipasino Polje was a culmination of all these elements. A huge neighborhood across the industrial zone which was built to house middle class working population of 60 000 people. This architecture has been criticized to be inhumane and contributed to weakening the community ties.
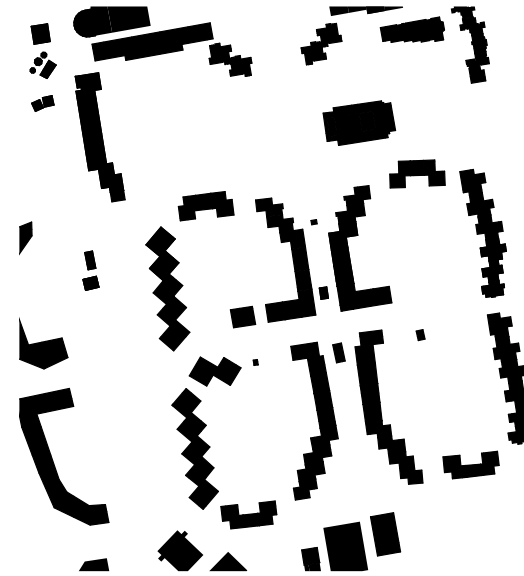
Fig 34. Alipasino Polje

Fig 35. Socialist blocks distribution

Informal Settlements

30. Martin-Diaz, J.,Palma, P., Golijanin, J., Nofre, J., Oliva, M., Čengić, N., *The urbanisation on the slopes of SARAJEVO and the rise of geomorphological hazards during the post-war period,* Elsevier, 2018. Web, Accessed 23.03.2019

After the WWII Sarajevo became an important industrial city in Yugoslavia. There has been a significant increase in Sarajevo's population which led to increase in construction of private homes on the hills around the city. The program "Rehabilitation of housing area on the slopes of the city" was created in 1974 and the government was sort of able to regulate these settlements. After the most recent war a lot of displaced people moved back to Sarajevo. These people faced many difficulties in securing permanent and stable housing and many of them were evicted from temporary apartments, so they turned to self-constructing homes.

These homes were often illegally developed meaning they lack proper infrastructure networks such as sewers, septic tanks, water supply or waste water extraction which enhances the potential occurrence of landslides. Landslides are a huge problem for these settlements due to inadequate construction, poor infrastructure and climate, since Sarajevo is influenced by Mediterranean climate, meaning that the precipitation can be heavy over short periods of time.[30] Also, due to budget constraints it is common for people to keep on adding extra floors on existing buildings instead of building a new house from a scratch.
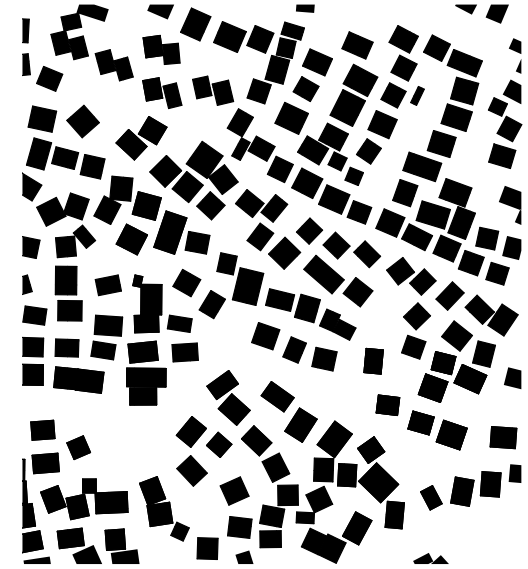
Fig 36. Informal settlements

Fig 37. Socialist blocks distribution

Consumer Oriented Architecture

After the war architecture in Bosnia and Herzegovina hasn't been able to find its footing. In first couple of years after the siege, city government was preoccupied with renovation and cleaning out the debris. Everyone was focused on the past rather then finding a new architecture style. One morphology that sticks out is the consumer oriented architecture. These malls are built on a few open spaces in a city center and have absolutely no connection to their surroundings. They are also much taller then surrounding buildings. These malls usually have a large square or open space in front of them.

In a lot of other European cities these types of malls are built on the outside or in the suburbs of the cities but in Sarajevo they are envisioned to be a new center in their respective neighborhoods. This is Bosnia's attempt to catch up with other capitalist cities in Europe. This sort of "sleek, tall and glass skyscrapers" is what local government sees as proof of contemporary, modern capital city that has moved forward from its war past, even though this style has nothing to do with the history of the architecture in Sarajevo.
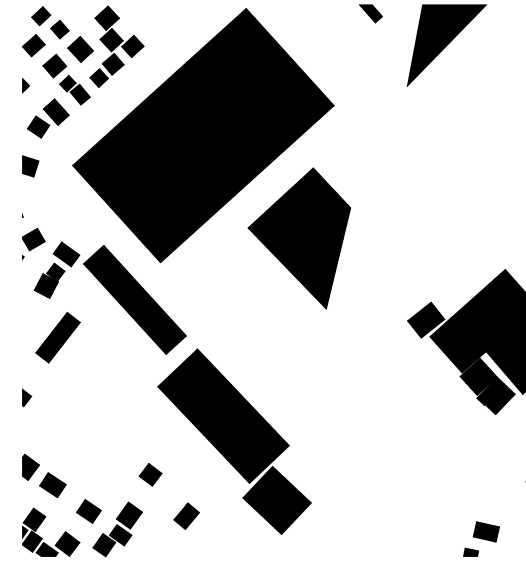
Fig 38. Sarajevo City Centar shopping mall

Fig 39. Shopping centers distribution

Green Space

31. Gärtner, Phillip. *European capital greenness evaluation.* 07.10.2018. Web. https://philippgaertner.github.io/2017/10/european-capital-greenness-evaluation/ Accessed 29.09.2018

32. Avdagić A., Bećirović D., Hajrudinović A., Hukić E., Krpo M., Marić B., Mutabdžija S., Omanović M., Pintarić, Avdagić B., Salihović A. *Landscape of Sarajevo Region.* In: Le:Notre extraordinary Landscape Forum 2014. Web. Accessed 10.01.2019

Urban and forestry researcher Phillipp Gärtner, raised a question of which European capital city is the greenest. At the top of that research was Sarajevo, as the greenest capital of Europe.[31] But this not due to positive work from government, this is only due to Sarajevo specific location. Sarajevo is a city nested between mountains, which means that it is surrounded with green areas. Citizens have developed a close relationship with natural surroundings, since these areas offer a great hiking routes and relaxing spots with view of the city and all of them are reachable with a less than a half hour drive.

The situation is different for the urban green space. A pan-European research project evaluated 23 European cities for the quality of urban green and Sarajevo landed on the last spot. It means it had less than 5% green area and a downward trend in urban green space.[32] There is a huge increase in Sarajevo population in recent years. The new construction is taking place without any consideration of the land-use capacity of the city and citizens' needs for healthy environment and recreation. This has led to a drastic loss of trees and forest cover within and around city.
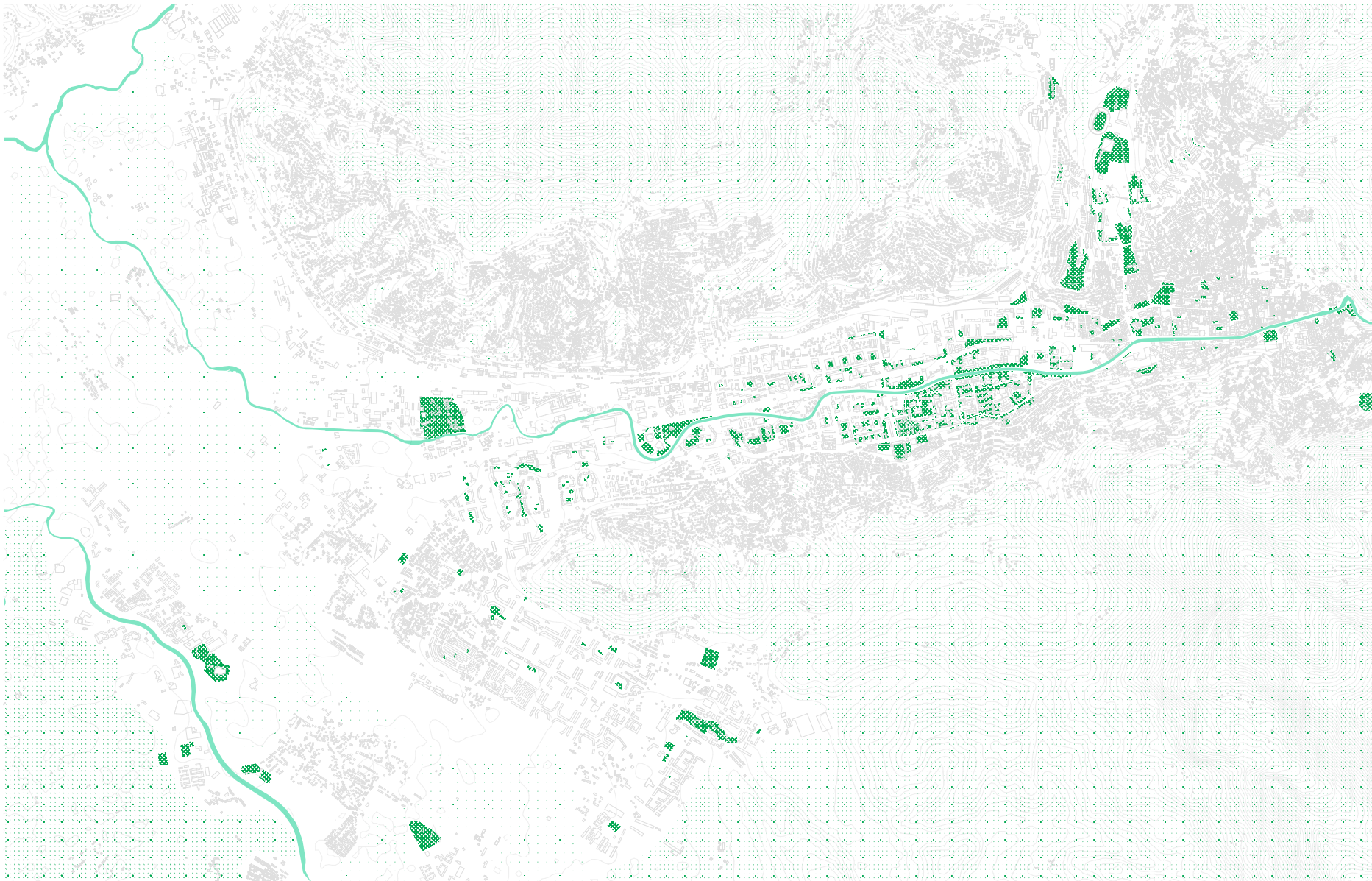
Fig 41. Green Spaces in Sarajevo   Scale 1 : 50 000

Green Space

33. Avdagić A., Bećirović D., Hajrudinović A., Hukić E., Krpo M., Marić B., Mutabdžija S., Omanović M., Pintarić, Avdagić B., Salihović A. *Landscape of Sarajevo Region*. In: Le:Notre extraordinary Landscape Forum 2014. Web. Accessed 10.01.2019

Urban development plan in 1965 proposed a solution to increase the urban public space from 5,38 m² to 20,8 m² per person, but the urban area actually ended up decreasing. Before siege the number fell down to 4 m² per person.[33] The siege led to more destruction of the green space, trees were cut down for heating and parks were quickly turned into urban gardens for agriculture. Since the city was cut off from rest of the world, these urban farming areas became a necessary for survival.

The city lies on Dinaric Alps on the river banks of Miljacka. The relief in entire Canton of Sarajevo is very varied, with mountains, canyons and rivers. One of the highest peaks of the country - Bjelašnica (an Olympic mountain with a peak at 2067m) is situated within the Canton area. City developed between the Canyon of Miljacka (east) and Sarajevsko polje (most western point). Sarajevsko polje has the average altitude of 510 m and the highest point of the city is on mountain Trebević at 1629m.

F

900m
850m
800m
750m
700m
650m
600m
550m

E

900m
850m
800m
750m
700m
650m
600m
550m

D

900m
850m
800m
750m
700m
650m
600m
550m

C

900m
850m
800m
750m
700m
650m
600m
550m

B

900m
850m
800m
750m
700m
650m
600m
550m

A

1100m
1050m
1000m
950m
900m
850m
800m
750m
700m
650m
600m
550m
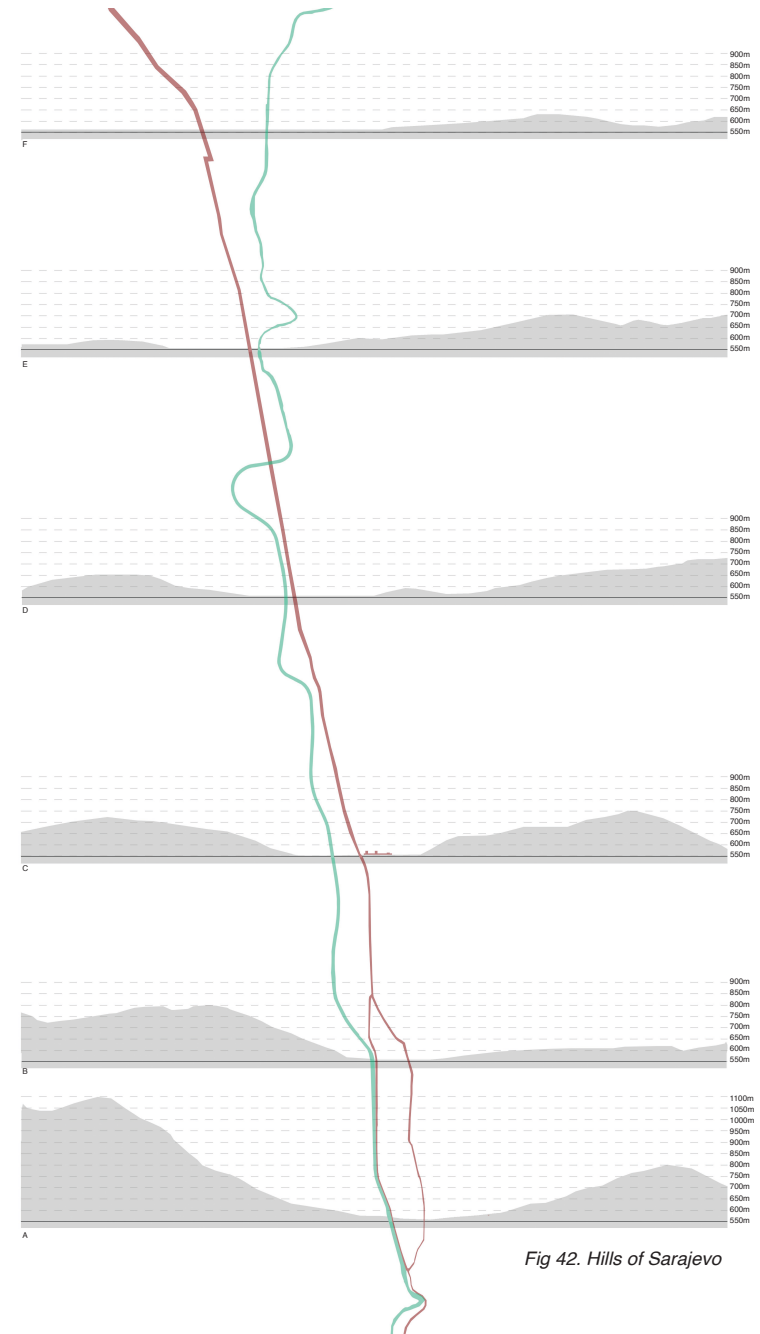
Fig 42. Hills of Sarajevo

F   E   D   C   B   A

+870
+890
+710
+810
+620
+680
+770
+670
+530
+498
+510
+810
+995
+1005
+660
+114
+1100
+116
+525
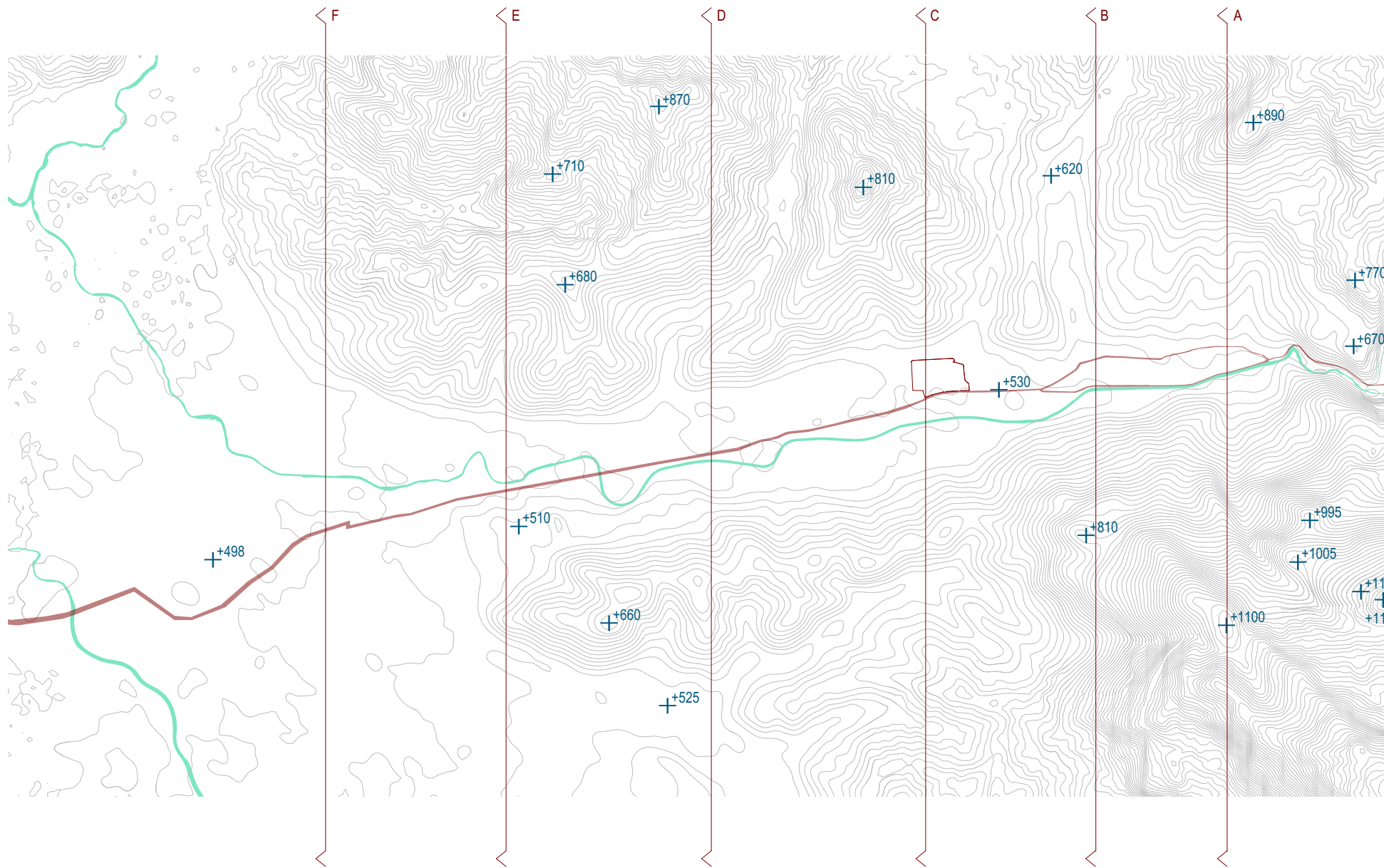
Fig 43. Differences in elevation   Scale 1 : 50 000

MARŠALKA

Fig 45. Satellite image of campus and city center

Fig 46. Satellite image of campus and neighbouthood of Marijin Dvor

PHOTO DOCUMENTATION

Fig 47. Entrance

Fig 48. After Entrance/Main Axis

Fig 49. Buffer zone between campus and main road

Fig 50. Tito Monument
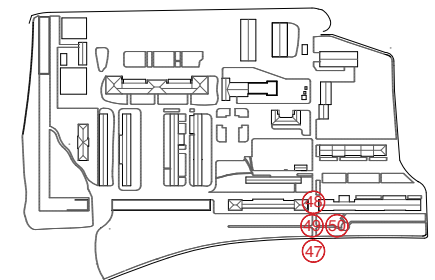
Fig 51. Faculty of Criminology

Fig 52. Faculty of Criminology Side VIew

Fig 53. Watch out, Bullets!

Fig 54. Barrier behind Library
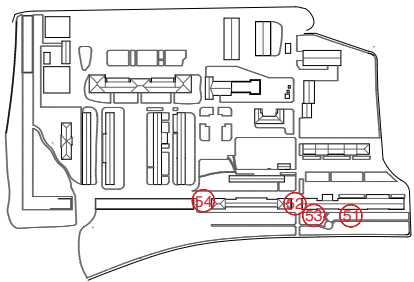
Fig 55. Parking behind Library

Fig 56. Parking

Fig 57. Third Horizontal Axis

Fig 58. Parking
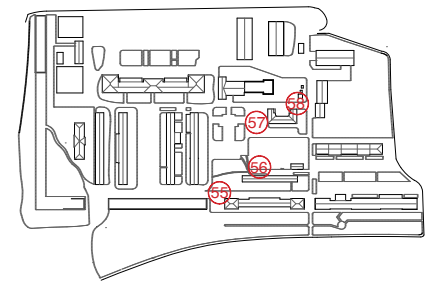
Fig 59. Lab and Solar Tree

Fig 60. Damaged Buildings

Fig 61. Bus Parking

Fig 62. Side Entrance / David Bowie Mural
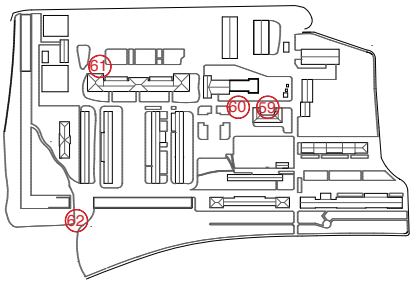
Fig 63. Damaged West Side

Fig 64. Damaged West Side

Fig 65. Damaged West SIde

Fig 66. Faculty of Pharmacy
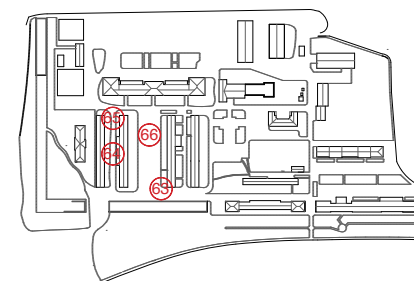
Fig 67. Ruins West Side

Fig 68. Green Space
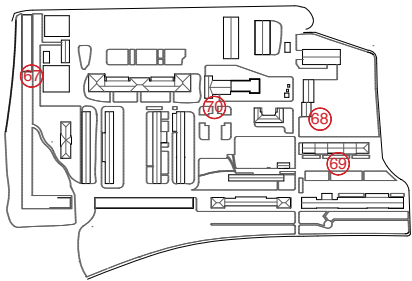
Fig 69. Faculty of Electrical Eng./ View to USA Embassy

Fig 70. Central Square

Fig 71. View From Main Street

Fig 72. Main Road

Fig 73. Main Road

Fig 74. Side Entrance
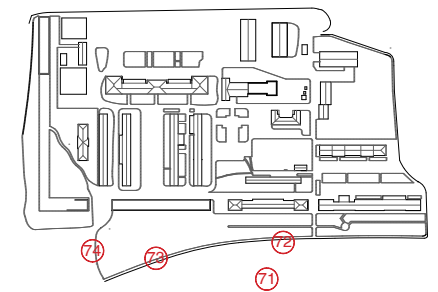
HISTORY

Fig 75. View of the barracks and neighborhood of Grbavica 1954

Maršalka - Through Time

34. Filipovića Lager – Kompleks Kasarni u Sarajevu, Bosna i Herzegovina", Networld Database, https://bit.ly/2Q27GBG

35. FAMA Collection, Siege of Sarajevo 1992-1996. Retrieved September 2018. http://famacollection.org/eng/

The exact year this military complex was built is not known. It was built shortly after the Austro-Hungarians occupied the area in 1878.[34] After the Austro-Hungarians came the Barracks were one of their first urban development's westwards. Not a lot is known about this area before the Barracks were built. On one of the Austro-Hungarian maps drawn before the construction started it says Zigojna, indicating that probably a lot of small illegal houses were in this area. Another map was created in 1911 which shows further development of the city towards the west.

For the most part the areal stayed isolated due to its introverted structure and sheer size. After WWII the barracks housed the military school of the JNA (Yugoslav National Army).

The areal, when first built, consisted of around 30 buildings. They were built in a very introverted style, like a fortress. Long buildings were built on the outer edge while smaller ones were built on the inside. If looking from the outside a person might think that inside structure is pretty densely built, but the opposite is true.

There has always been a lot of open space, which was planned for the various military exercises.

During 1992 the barracks belonged to the Bosnian Serb army. The barracks were filled with weapons and artillery belonging to the JNA (Yugoslav National Army). The situation changed shortly after. The defense troops organized a successful attack and managed to seize the barracks and the barracks became the headquarters of resistance.[35] The areal as mentioned before is situated right across from the neighborhood of Grbavica which belonged to the Serbian army.

Since it was so close to the siege line it sustained a lot of damage. The infamous sniper alley passed right in front of the Barracks. This areal played important role during the war. It was where hostages were held and would later be transferred to the "bridge of friendship" for an exchange.

////// Destroyed buildings
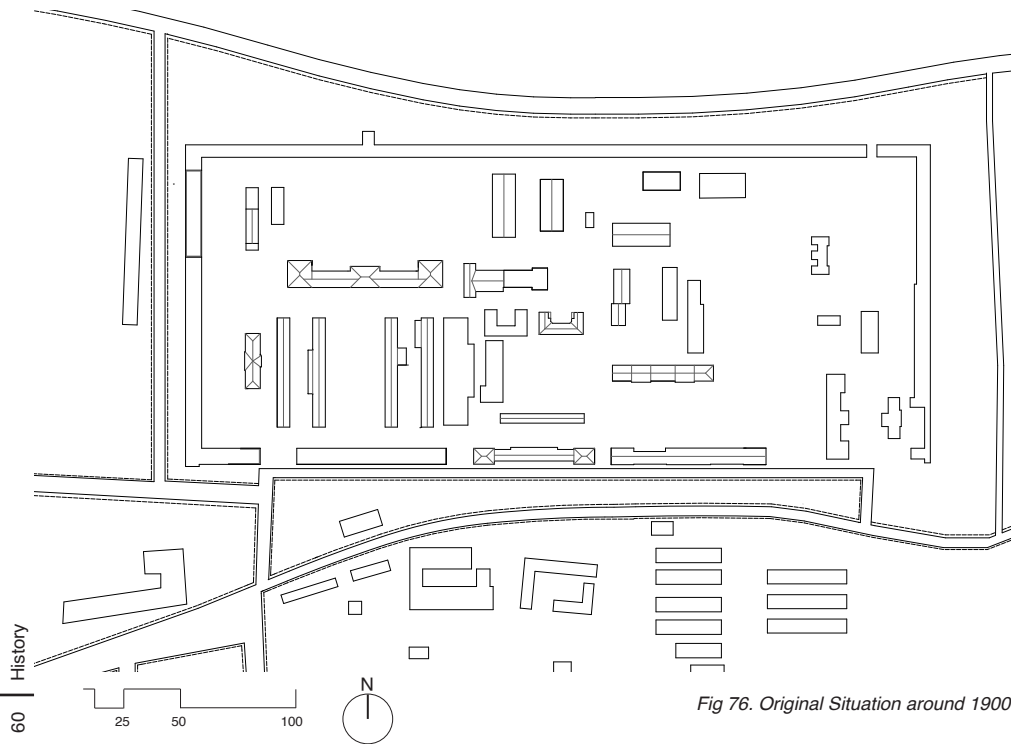
Fig 76. Original Situation around 1900

Fig 77. Completely destroyed buildings during the Siege
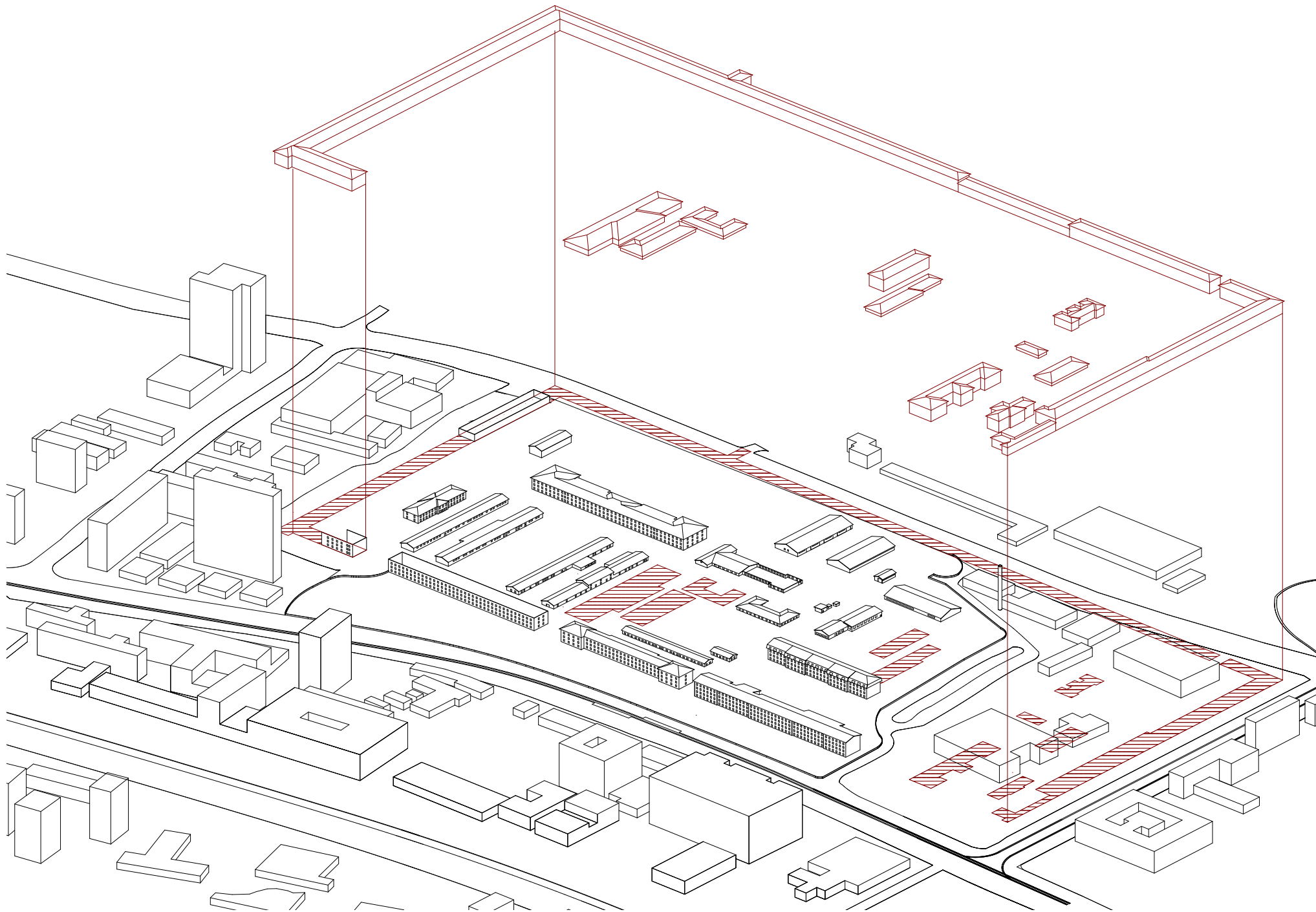
Fig 78. Current situaton superimposed by original buildings in red
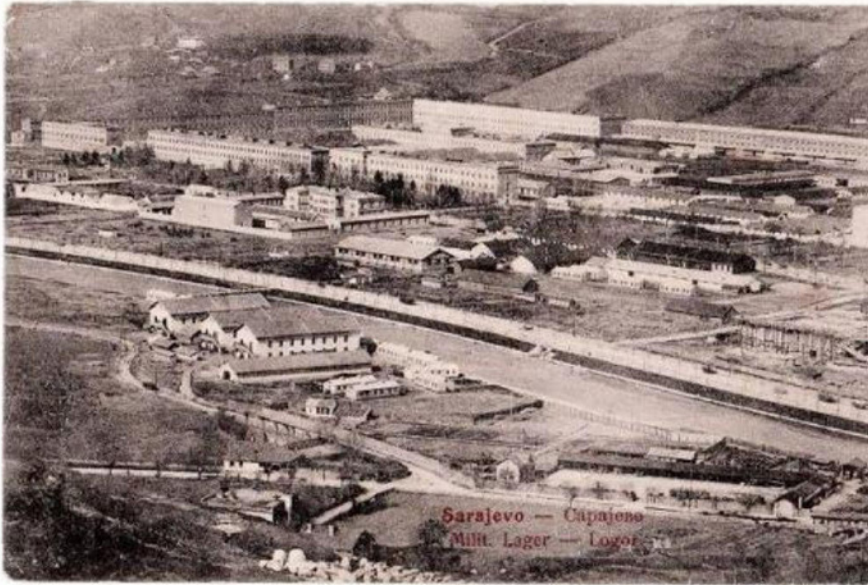
Fig 79. Barracks beginning of 20th century

Fig 80. View of the Main Railway station and norther side of barracks
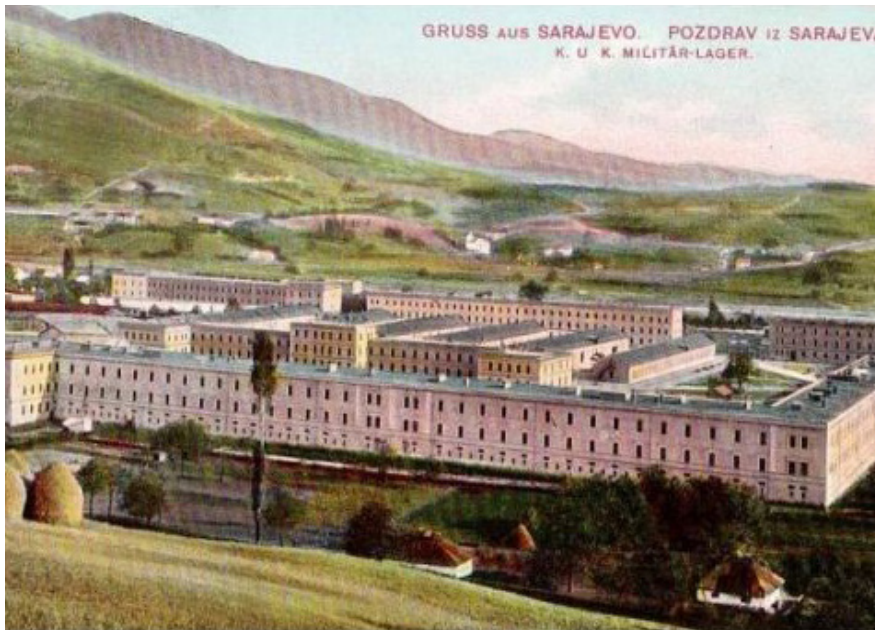
Fig 81. Barracks in 1902

Fig 82. Barracks in 1990s
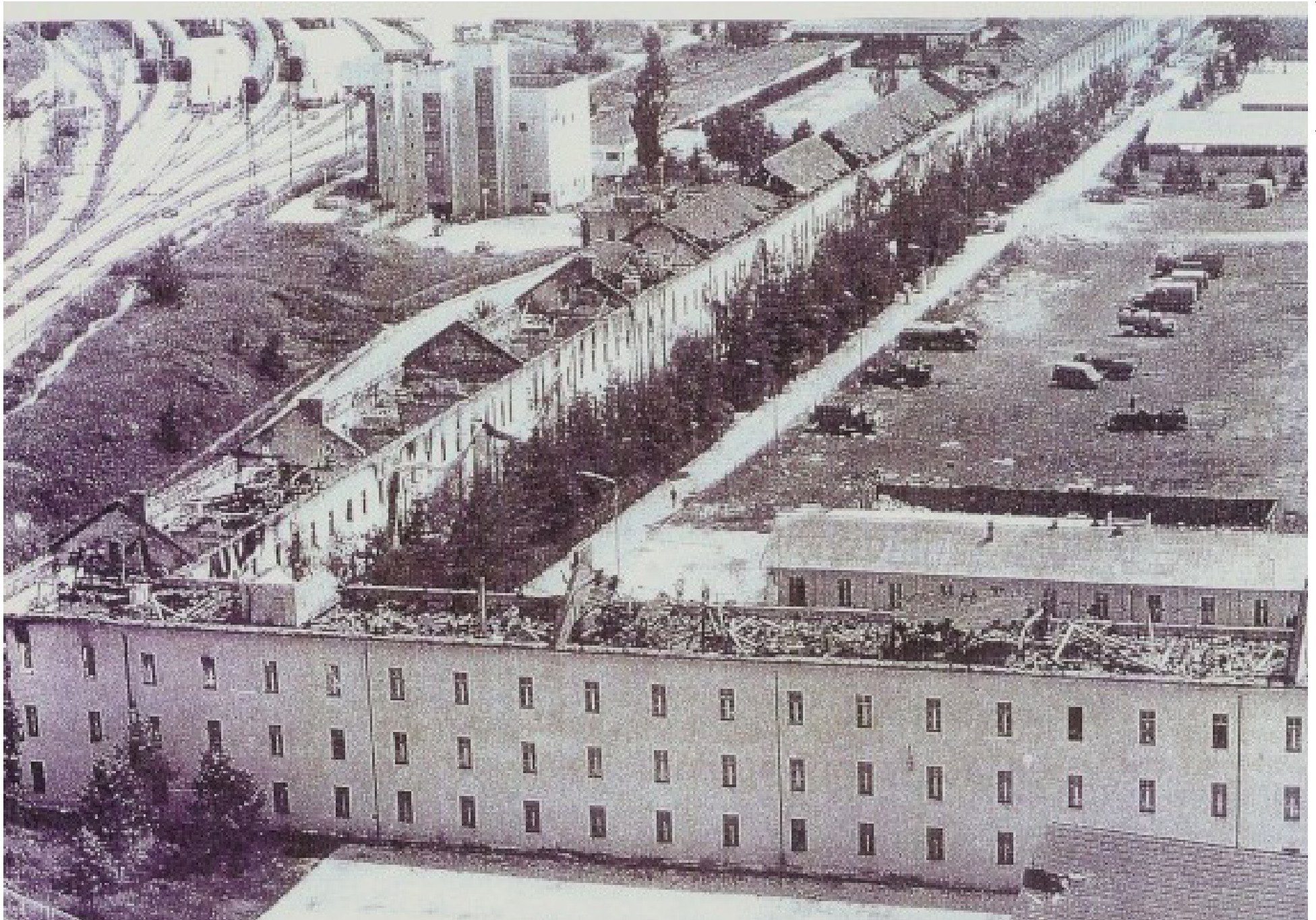
Fig 83. War damage

After War

36. *Odluka o pristupanju izradi izmjena i dopuna regulacionog plana Kvadrant C1-Marijin Dvor.* Gradsko vijece Sarajevo, April 2018. Web. Accessed 24.08.2018

37. S.H. *Za izgradnju Univer-zitetske biblioteke prepreka izmještanje toplovoda u Kampusu.* Radiosarajevo, 26.03.2018. https://www.radiosarajevo.ba/vijesti/lokalne-teme/za-izgradn-ju-univerzitetske-biblioteke-pre-preka-izmjestanje-toplovo-da-u-kampusu/294985 Accessed 11.09.2018

38. NINA, S*arajevo: Danas protesti protiv prodaje Maršalke.* Klix.ba. 22.02.2005. https://www.klix.ba/vijesti/bih/sarajevo-dan-as-protesti-protiv-prodaje-mar-salke/050221015 Accessed 16.09.2018

NATO forces were that last ones to stay in the Barracks, but they have left the area shortly after the war ended. In 1996 once the war was over the city gave the Barracks to the university. For the first time since its construction the barracks didn't host any of the army functions and were given to the citizens of the city. But the Barrack sustained a lot of damage and the city never had the funds to completely reconstruct the areal.

Slowly, the different faculties started moving in once the designated buildings were reconstructed. Today, faculties which are located inside of the campus are: Faculty of Electrical Engineering, Faculty of Criminalistics,

Criminology and Security Studies, Faculty of Transport and Communication, National and University Library, Oriental Institute, Faculty of Pharmacy, Faculty of Agriculture and Food Science, Institute for Genetic Engineering and Biotechnology.

There have been plans to bring other Universities into the areal and transform these barracks into a proper campus. It was envisioned to bring in Faculty of Forestry, Economy, Political Science, also Botanical Garden, Cultural center and Music and Theater academy.[36]

Though the plans exist none of it has ever been implemented since the

university doesn't have the necessary funds. Arab investors have offered to build a new modern library, which as of now should begin the construction 2019.[37]

The most eastern part of the complex was sold to the American government. Since it is founded by the American government, they completely cleared the area of the old buildings and constructed a new American Embassy, with sports terrain and pool. This move criticized by the citizens and they even organized protest against the selling of the site to the American government.[38] Since it is an embassy it is heavily guarded, and they have completely

closed off the street on the eastern part of the campus. Rest of the campus has a varying degree of damage. As you go from east to west the damage increases. East part of the areal has sustained far less damage and was more reconstructed then the west. There is almost an invisible border between these two parts.

The completely destroyed buildings are on the east side. They are now used by the graffiti artists and provide cover for the homeless people. Entire campus is completely ignored by the city, but the eastern part is even ignored by the university itself. Big areas of free space are in between those two parts .
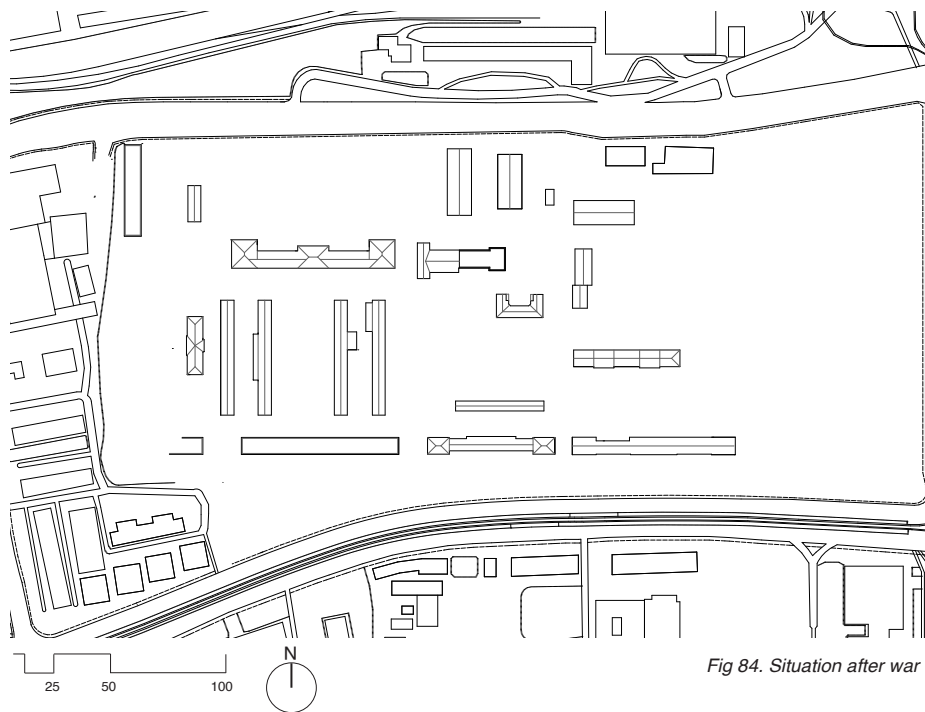
Fig 84. Situation after war

Remaining ruins

Sold to US Embassy

Built after war
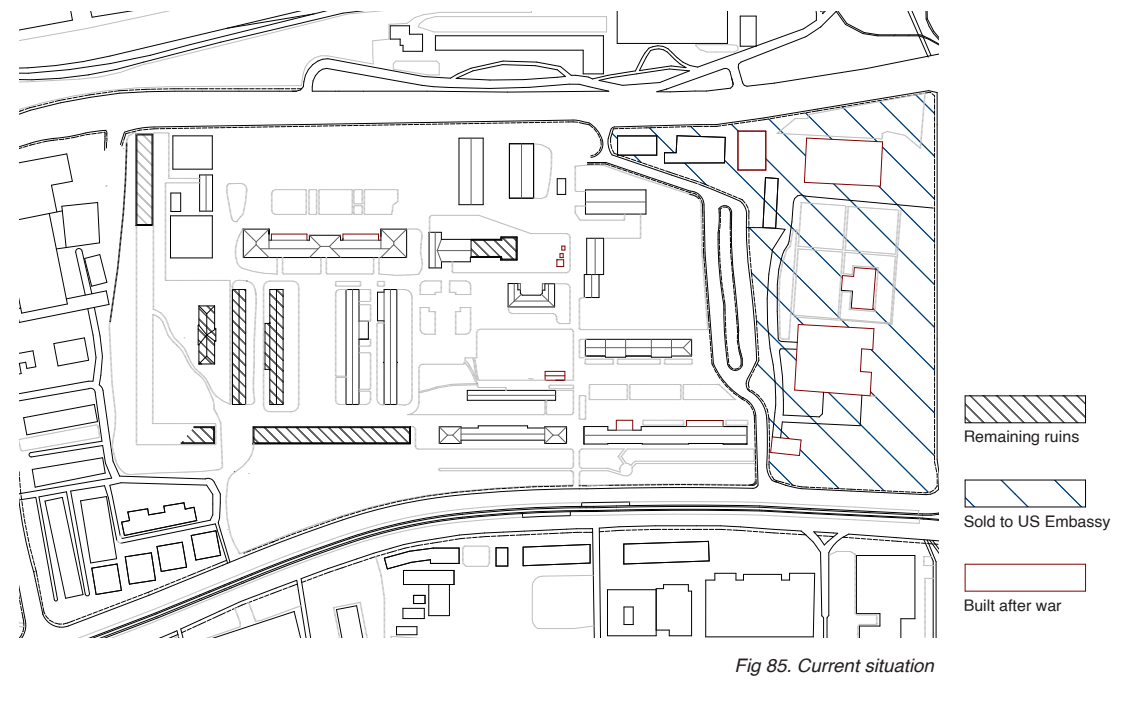
Fig 85. Current situation
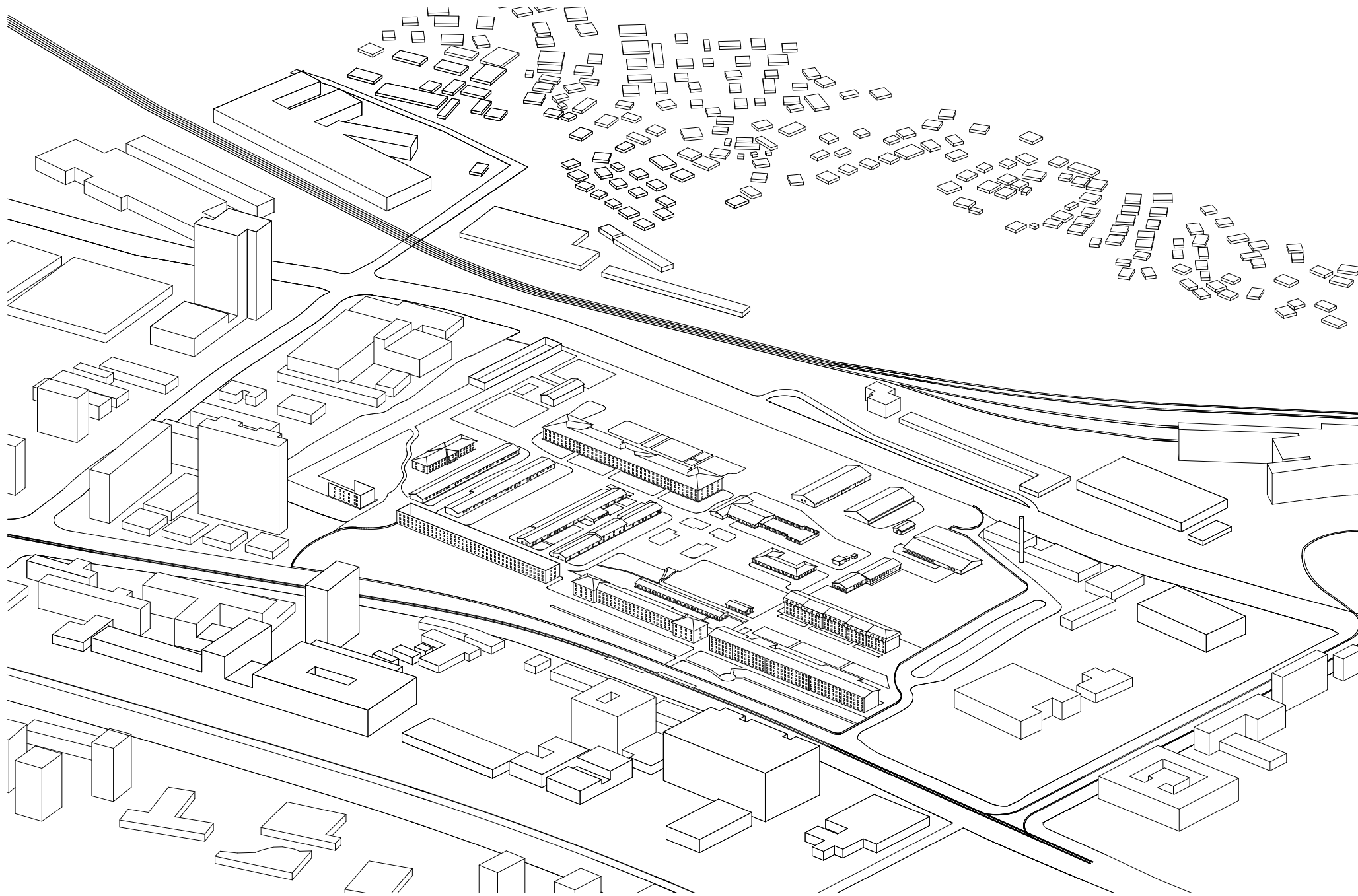
Fig 86. Current situaton

Proposed Masterplan 2002

39. Zukanovic, Adna. *Lijepa ideja, valjda ćemo dočekati realizaci- ju, dok smo mladi...* Source.ba 25.02.2017. http://ftp.source.ba/ clanak/BiH/296073/Lijepa-ide- ja-valjda-cemo-docekati-real- izaciju-dok-smo-mladi Accessed 12.05.2019.

The Barracks were given to the "Univer- sity of Sarajevo" in early 1996. Three years later, in 1999 IDB (Islamska Ban- ka za Razvoj) donated money for the creation of new masterplan for the uni- versity campus. This masterplan should be created in accordance to the EU standards and should accommodate all needs for the next 50 years. The plan was created in 2002. right before east- ern part of the campus was sold to the American Embassy. This meant that a few faculties would be cut from the new plan, those are: Faculty for Civic Engi- neering, Architecture, Design Center, different labs and student dorms. The area was sold for 300 million dollars

and this money was supposed to fund the new construction. The money was "lost in transaction", which meant that this masterplan will never be fully real- ized.[39]

According to the new masterplan, all of the remaining buildings should be re- moved and replaced by new ones. The masterplan had a very monumental feel. There is no connection to its sur- roundings or to its previous form. The city hoped for a new "start" for the cam- pus, meaning completely ignoring the past and context of the area.
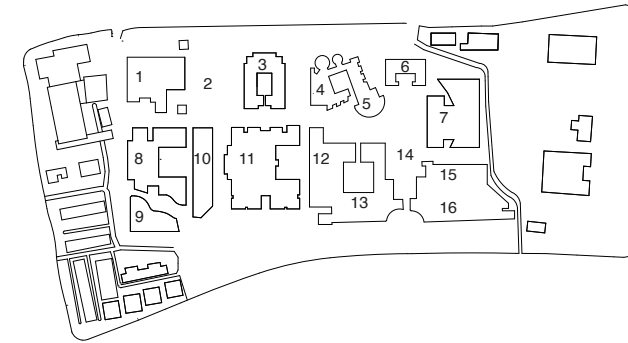
1. Athletic Faculties   2. Open Sports Fieldd   3. Faculty of Political Science
4. Music Academy   5. Academy of Theatrical Arts   6. Rectorate   7. Univeristy Library
8. Faculty of Forestry   9. Botanical Garden   10. Faculty of Agriculture   11. Faculty of Economics   12. Faculty of Law   13. Faculty of Criminology   14. Plaza   15. Social and Cultural Center   16. Faculty of Communication and Transport
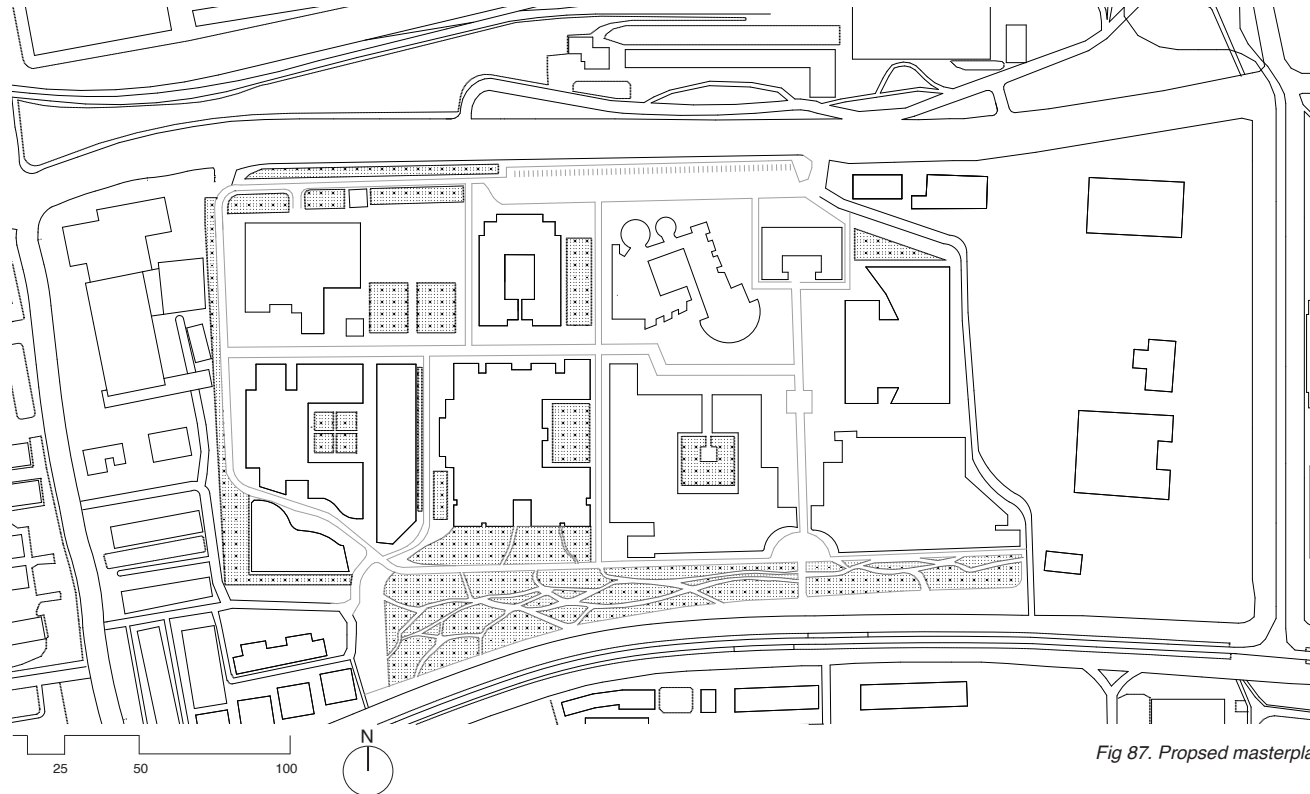
Fig 87. Propsed masterplan
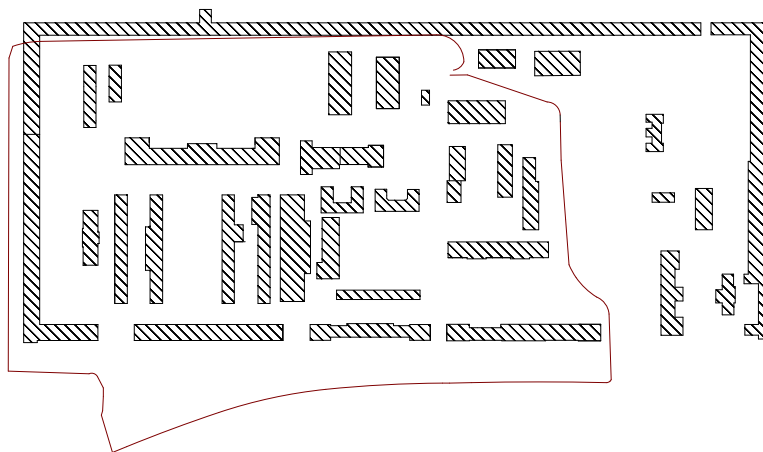
1980s

The area has changed a lot during last hundred years. Before the war most of the original structures were still intact.

- The most distinctive feature are the extremely long buildings on the perimeter of the area
- It gives off the feeling of a very dense structure but it actually has a lot of open spaces
- Though some central areas are very dense
- Buildings inside are also very long, often longer than 100 m
- It gives of a very introverted feel
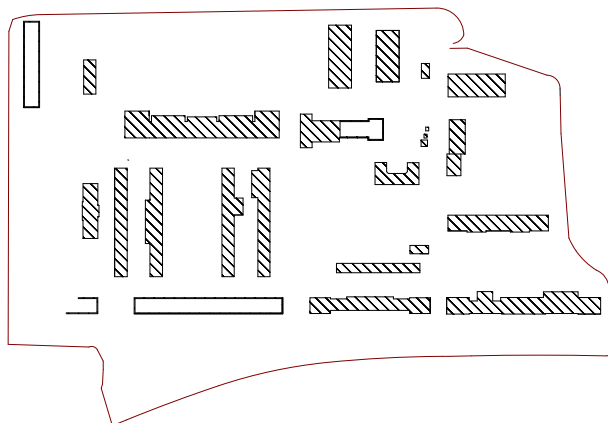
2018

Half of the buildings were lost during the war and one third of the area was sold to the American Embassy.

- Long buildings on perimeter are destroyed completely opening the norther side of the area
- Northern street was redesigned, taking off small part of the area
- There is more open space due to destroyed buildings
- Most of those open spaces goes to parking
- The entire area is unevenly used
- No new buikdings were constructed, but a few additions have been added to old buildings
- The original clear axis are preserved
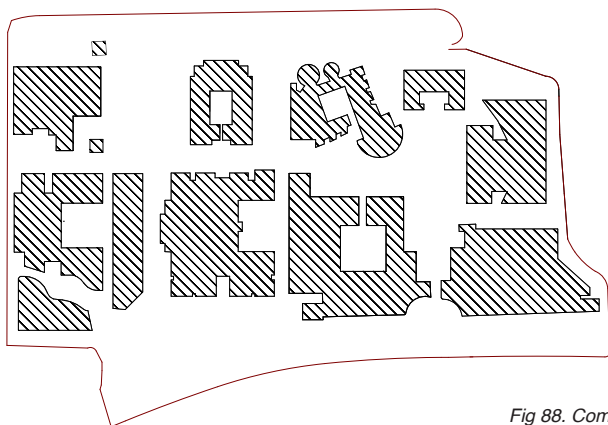
Future

Proposed masterplan, but due to lack of funding it will not be implemented.

- This masterplan requires complete destruction of old buildings
- There is no reference to past
- There is no reference to its surroundings
- This masterplan is more dense than previous once and unlike the old ones buildings are more squer-like
- Strong and clear N-S axis
- There is a monumental feel
- The amount of free space is reduced to minimum
- More transitional spaces than open used spaces

Fig 88. Comparison of three situations

Program Distribution
Pre-War
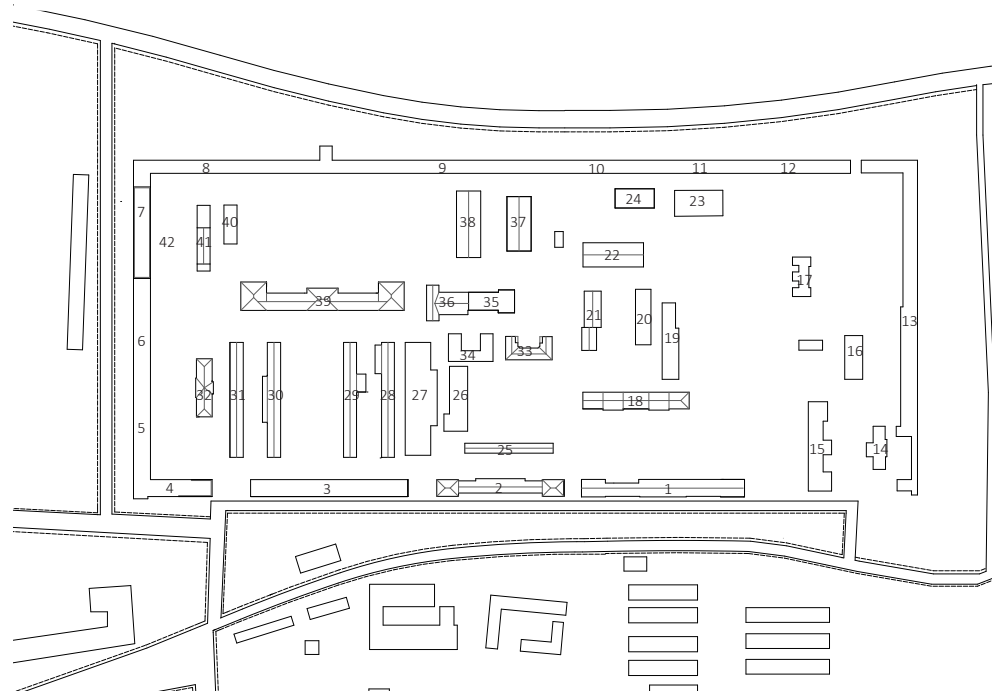
Fig 89. Program distribution

1. Military academy
2. Command CVŠ
3. Accommodation facilities cadets SVŠ
4. Military music school
5. Auditorium
6. Students of senior military academy
7. Infantry school and course, Hotel
8. Infantry military academy 4th year
9. SVŠ classroom 4th year
10. Recruitment center
11. Main equipment warehouse
12. Cadets accommodation
13. Classrooms and administration
14. Air rifle and pistol automatic and film shooting range

15. Alternating accommodation for cadets, SVS, secondary culinary school and ONO
16. Shops "VU Unity" ceremonial uniforms
17. CVŠ club
18. Quartermaster service and SVŠ
19. Central food warehouse
20. Restaurant for elders
21. Cadet's bathroom, laundry room and barbershop
22. Boiler room for heating
23. Heating plant
24. Boiler room
25. CVŠ archive
26. Cadets cantine
27. Cadets restaurant
28. Library, cinema

29. Extra club classrooms
30. 2st and 2nd year SVŠ classrooms
31. Sports hall
32. Infirmary
33. Technical workshop for easy refitting arms
34.
35. Production engineering cabinet
36. Tactics and topography cabinet
37. General technical station, garage, warehouse
38. General technical station, garage, warehouse
39. 1st and 2nd year SVŠ and 4th year infantry accommodation
40. Workshop for small repairs (shoemaker..)
41. Warehouse
42. Sports field for handball and gymnastics

NEIDHART'S MASTERPLAN

Marijin Dvor Masterplan 1955

40. Alic, Dijana. *Transformations of the Oriental in the Architectural Work of Juraj Neidhardt and Dušan Grabrijan.* Thesis. The University of New South Wales, 2010. Web. Accessed 17.11.2018. p.225

41. Alic, Dijana. *Transformations of the Oriental in the Architectural Work of Juraj Neidhardt and Dušan Grabrijan.* Thesis. The University of New South Wales, 2010. Web. Accessed 17.11.2018. p.237

Dušan Grabrijan and Juraj Neidhardt were two prolific architects who worked most of their lives in Sarajevo. Two of them have been important practitioners and theorist in post-war Yugoslavia. They worked together on two publications "Sarajevo and its Satellites" (1942) and "Architecture of Bosnia and the Way Towards Modernity" (1957). Most of their work has been on Bosnian Oriental and they primarily focused on the Old town of Baščaršija. They have worked on the New Čaršija in 1957 which aim was to create the Ottoman part of town in a new regional cultural center. The masterplan shows that the most prominent buildings would be preserved and smaller structures around them would be cleared. Neidhardt referred to remaining buildings as "jewels of the past" and since they are missing the context of their surroundings, the remaining building became a cultural „theme park ".[40] He also included new socialist monuments, amphitheater, cinema and new museums. All of the religious buildings would have bene preserved and were their to show that socialist movement with the ides of "brotherhood and unity" was based in Sarajevo on cultural foundations.[41]

It is important to note both Neidhardt's and Grabrijans fascination with "Bosnian Oriental" since it has heavily influenced their work, including the masterplan for the Marijin Dvor. Neidhart, a Le Corbusier's student, focused on integrating "islamic" values in his modernist research. Which has been met with a nationalist's discourse, since anything "oriental" has been seen as the burden to the "European" and modernist values.

Though Neidhart's and Grabrijan's outlook on the Islamic architecture has evolved through the years.

During the Nazi regime the Old Town was still seen as the burden to modernism, but by the time of their second publication that same Islamic architecture was regarded as something with modern relevance.

Neidhart was described as " a major player in creating modern architecture in the Yugoslav territories" by Tomislav Premerl in his book "Modern Architecture of Croatia Between the Two World Wars":
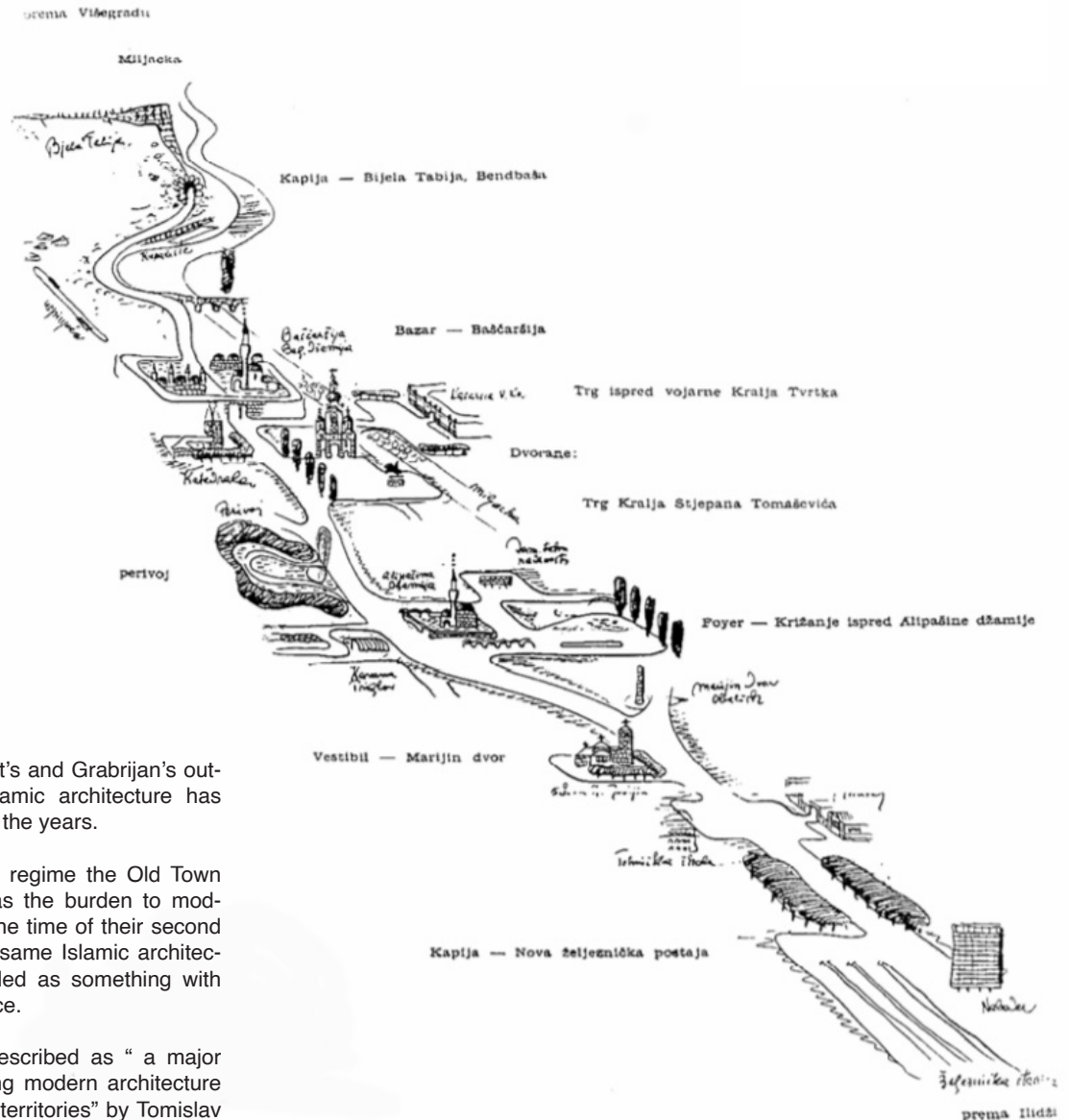
Fig 90. Sarajevo main street by Neidhart

The neighborhood of Marijin Dvor is supposed to be new political and administrative center so a national design competition for a masterplan was called in 1955. Neidhart's team won this competition. The masterplan involved many new administrative and cultural buildings, but the new center or the main building of the masterplan was the National Assembly. Some of the new building included a new opera house, exhibition center, radio and television center, hotel and department store.[42]

Fig 91. Sarajevo sketch from Marijin Dvor to Old Town

"It is through the work of Neidhardt that our architecture was strongly connected to the main European centre. He directly transferred and modified the ideas of Le Corbusier to our context… Neidhardt achieved the synthesis of logical traditional elements and the new achievements, paying a special attention to the relation between the individual buildings, their immediate surroundings and the broader city contexts or the landscape. The presence of Neidhardt's ideas in architectural debates between the two wars is felt today as an important link not only in building new spatial values at the time, but in linking us to the world and the world to us."[43]

42. Alic, Dijana. *Transformations of the Oriental in the Architectural Work of Juraj Neidhardt and Dušan Grabrijan*. Thesis. The University of New South Wales, 2010. Web. Accessed 17.11.2018. p.241

43. Premerl, Tomislav. *HrvatskaModerna Arhitektura Izmedju Dva Rata,* Nakladni Zavod Matice Hrvatske, Zagreb, 1989, p.16.
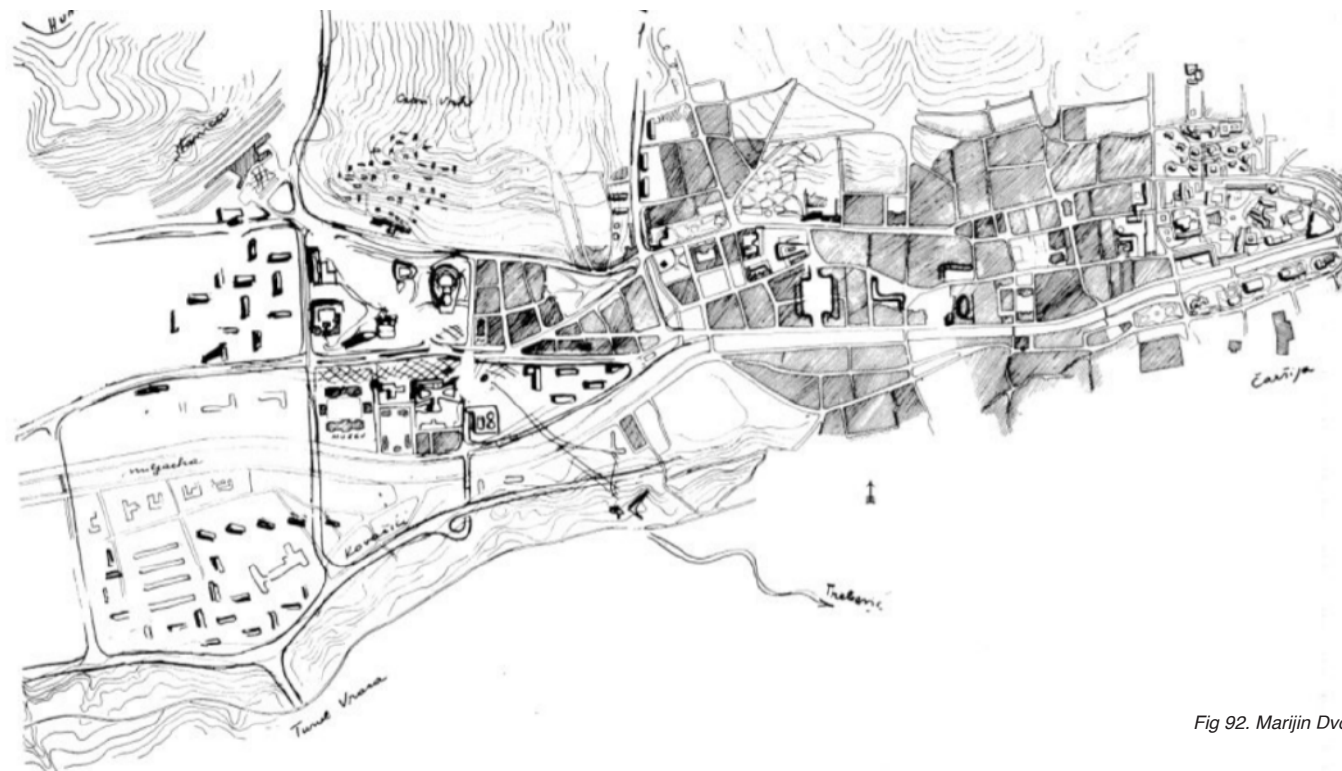
Fig 92. Marijin Dvor 1955 - Plan by Neidha

Marijin Dvor Masterplan 1955

44. Grabrijan,D. Neidhardt,J., *Arhitektura Bosne i Putu Suvremeno*, Ljudska Pravica, Ljubljana,1957. p. 416

45. Alic, Dijana. *Transformations of the Oriental in the Architectural Work of Juraj Neidhardt and Dušan Grabrijan*. Thesis. The University of New South Wales, 2010. Web. Accessed 17.11.2018. p.244

46. Karlic-Kapetanovic, J., *Juraj Najdhart, Život i Djelo*. Veselin-Masleša, Sarajevo 1990. p. 364

The form of the buildings had no connection to the function of the building and they were made from geometrical shapes, which were to Neidhart's liking. The plan had a somewhat free urban organization: *"The structures are by no means placed on the basis of some rigid principles but are laid out in a flexible and free manner, now on one side, now on the other, with the aim of making them the visual markers of the new areas of Sarajevo"*[44]

This site is a triangular and flat area interspersed with important buildings from different historical periods, such as Natural Museum, High Technical School and the railway station.

According to the brief it was important to take in mind these existing buildings and incorporate them into a new masterplan. This was the reason why Neidhardt's masterplan won. According to the judges it created a successful relationship between existing buildings and new structures.[45] Funnily enough on Neidhart's plan, the existing buildings were hardly shown as he focused more on the connection of the site to the greater city area. He tried connecting the Old Town as much as possible which is interesting since the neighborhoods aren't that close to each other. He disregarded the Austro-Hungarian areas of town considering them irrelevant and have tried to implement the Ottoman principle as much as possible. The important aspect that he tried to implement in the masterplan and in the National Assembly building is the relationship between modern structures and nature and balance between private and public, traditional and modern.

Some of the praise of this masterplan has been the successful implementation of historic forms and symbolic potency. Dzemalic Celic, a colleague of Neidhart, praised especially the public speaking platform of doksat, domes of mosques and high building in the form of stecak (a medival Bosnian graveston).[46] He praised the fact that Neidhart successfully reinterpreted and incorporated all important historical periods.

Structures are connected by winding paths. He tried to create free visual axes between structures and to encourage people to create their own links with monuments which should increase the engagement with the site.

Even though Neidhart's design won, the plan was never fully realized. The authorities at first said that the realization of the masterplan will be postponed due to lack of funding. It can be deduced that the authorities didn't really approve of the design and have also requested further development of the masterplan. In upcoming years authorities focused on implementing individual buildings rather than masterplan.

Masterplan was revisited in following years but never fully executed and the building for the National Assembly, was finally built in 1982 based on Neidhardt's design (the final design was the result of many redesign since the original design.)

Fig 93. Modelphotos Masterplan

1. Post Office
2. Residental Area
3. Hotel
4. Skyscraper
5. Elementary School
6. Opera House
7. Library
8. National Assembly
9. National Liberation Monument
10. Public Buildings

N

25   50   100
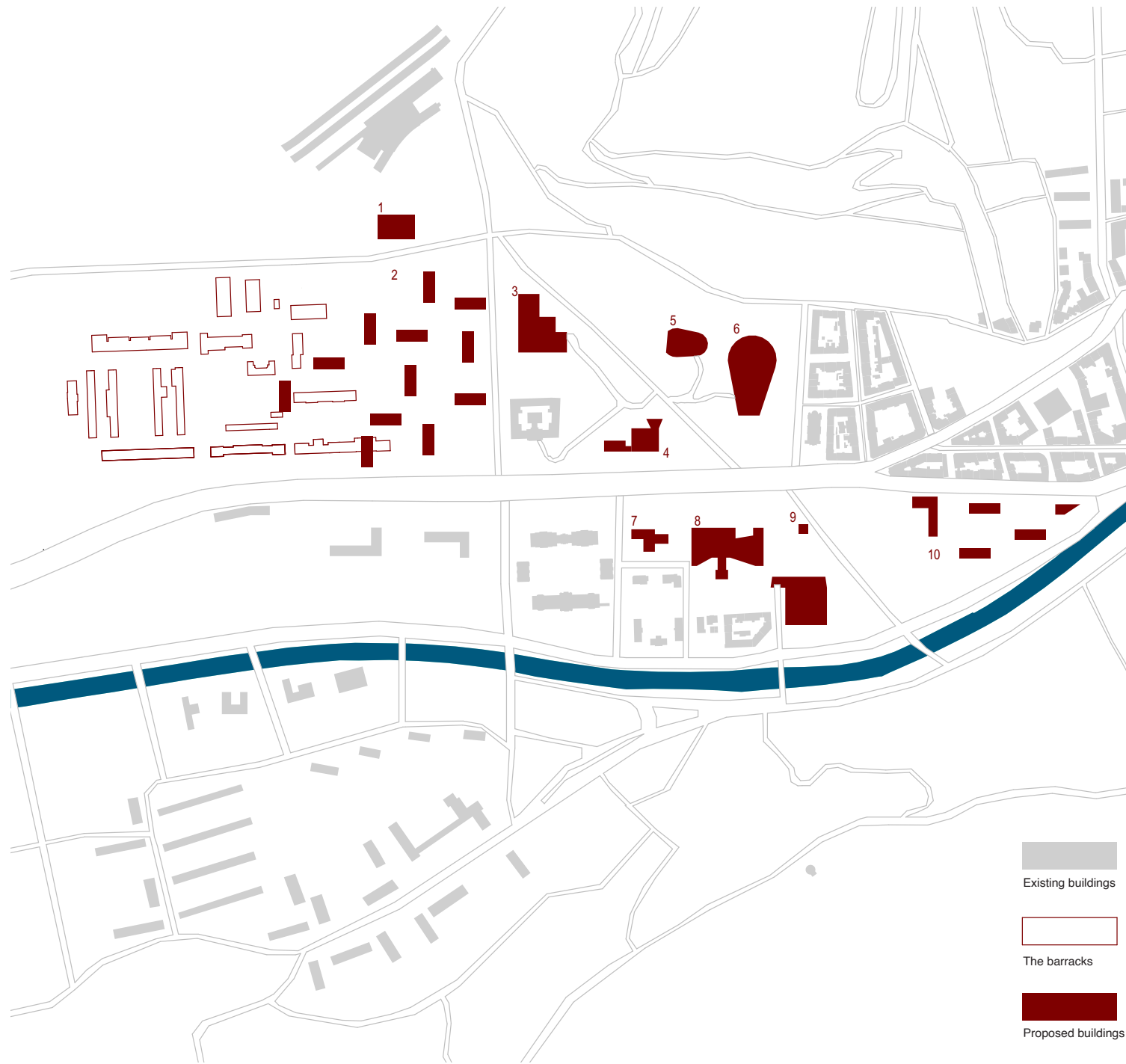
Existing buildings

The barracks

Proposed buildings

Fig 94. Masterplan 1955

ANALYSIS

Situation

25 50   100   250

N
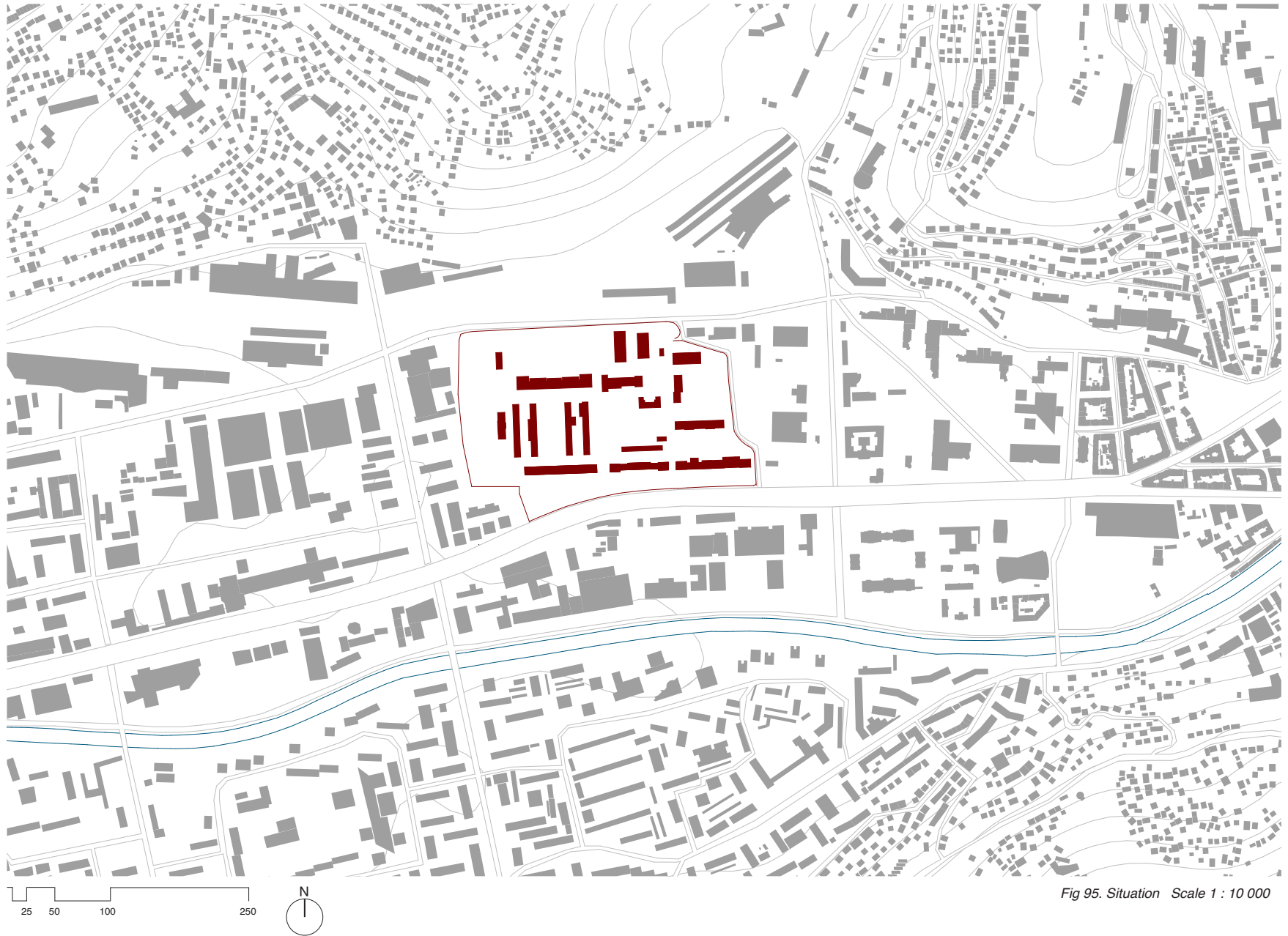
Fig 95. Situation   Scale 1 : 10 000

Distance

Old Town

City Centre

2600 m

1100 m

Fig 96. Distance from city center and old town Scale 1 : 25 000
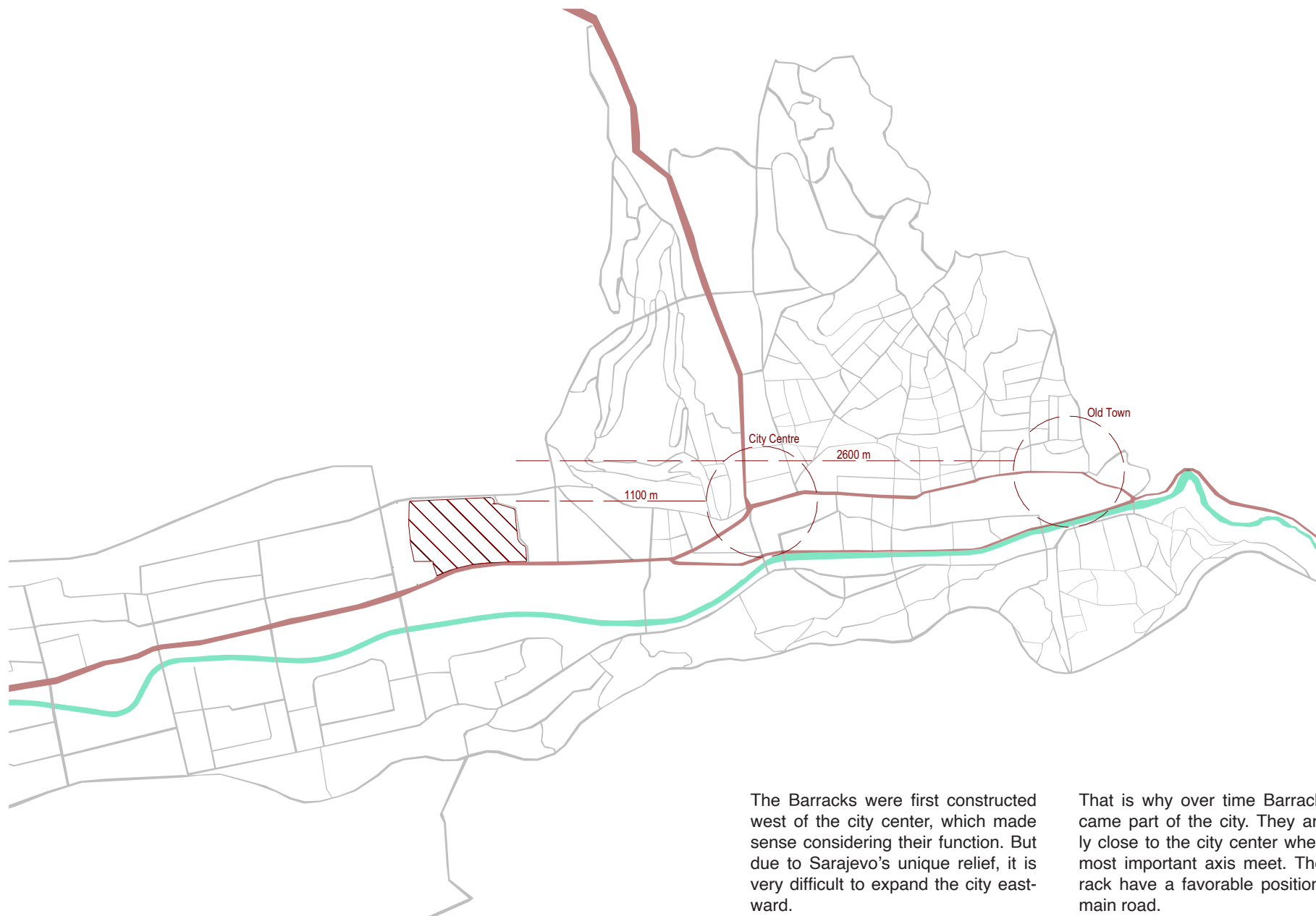
The Barracks were first constructed west of the city center, which made sense considering their function. But due to Sarajevo's unique relief, it is very difficult to expand the city eastward.

That is why over time Barracks became part of the city. They are fairly close to the city center where two most important axis meet. The Barrack have a favorable position on a main road.

Typologies of Neighborhood

Austro-Hunagrian

Block buildings -- Privet open spaces enclosed -- Dense -- 3 to 5 story apartment buildings -- Ground floor for commercial use

Socialist Blocks

Isolated buildings -- Continuous open spaces -- Not very dense -- No mixing of commercial and residential -- No ornaments

Main Railway and Bus Station

Built in mid 20th century -- Main square of the neighborhood -- Main axis point to railway station -- Border between city and illegal settlements

Mix of typologies

No distinct style dominates -- Mix from end of 19th century to today -- Mix of cultural, commercial, political, educational -- Quer-axis are maintained

Modernist

Follows the slope of the hill -- Blends into existing urban continuum -- Often not seen as a distinct layer -- Influenced by Sarajevo domestic culture

Industrial

Beginning of industrial zone -- Continues westward

Illegal Settlements

No urban planing -- Sometimes missing necessary infrastructure -- Not perimeter buildings like traditional bosnian house -- Dense

Overview

Fig 97. Different typologies of the neighborhood

Functions

Education

Consumer Industry

Residental

Museum

Goverment

Hospital

Hotel

Railway

25 50 100 250

N

Fig 98. Program distribution Scale 1 : 10 000

Period of construction

Ottoman
1463-1878

Austro-Hungarian
1878-1914

Yugoslavia
1914-1992

BiH
1992-2018
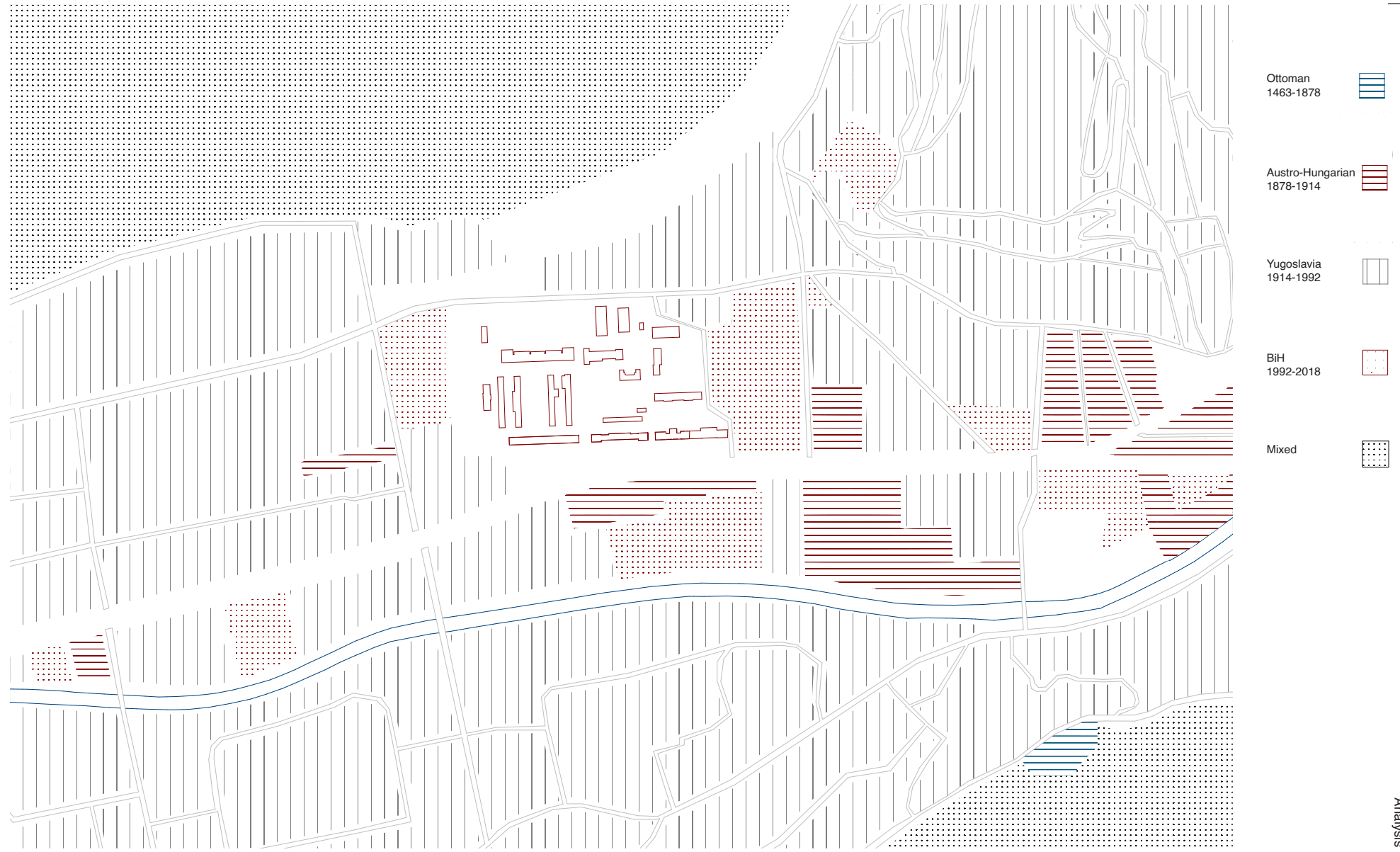
Mixed

Fig 99. Period of construction Scale 1 : 10 000

N

25 50   100   250
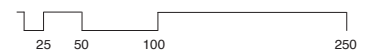
Main roads

Industry zone

Mixed use

Residental

Inaccessible

Main Railway Station
Focus point of the neighbourhood
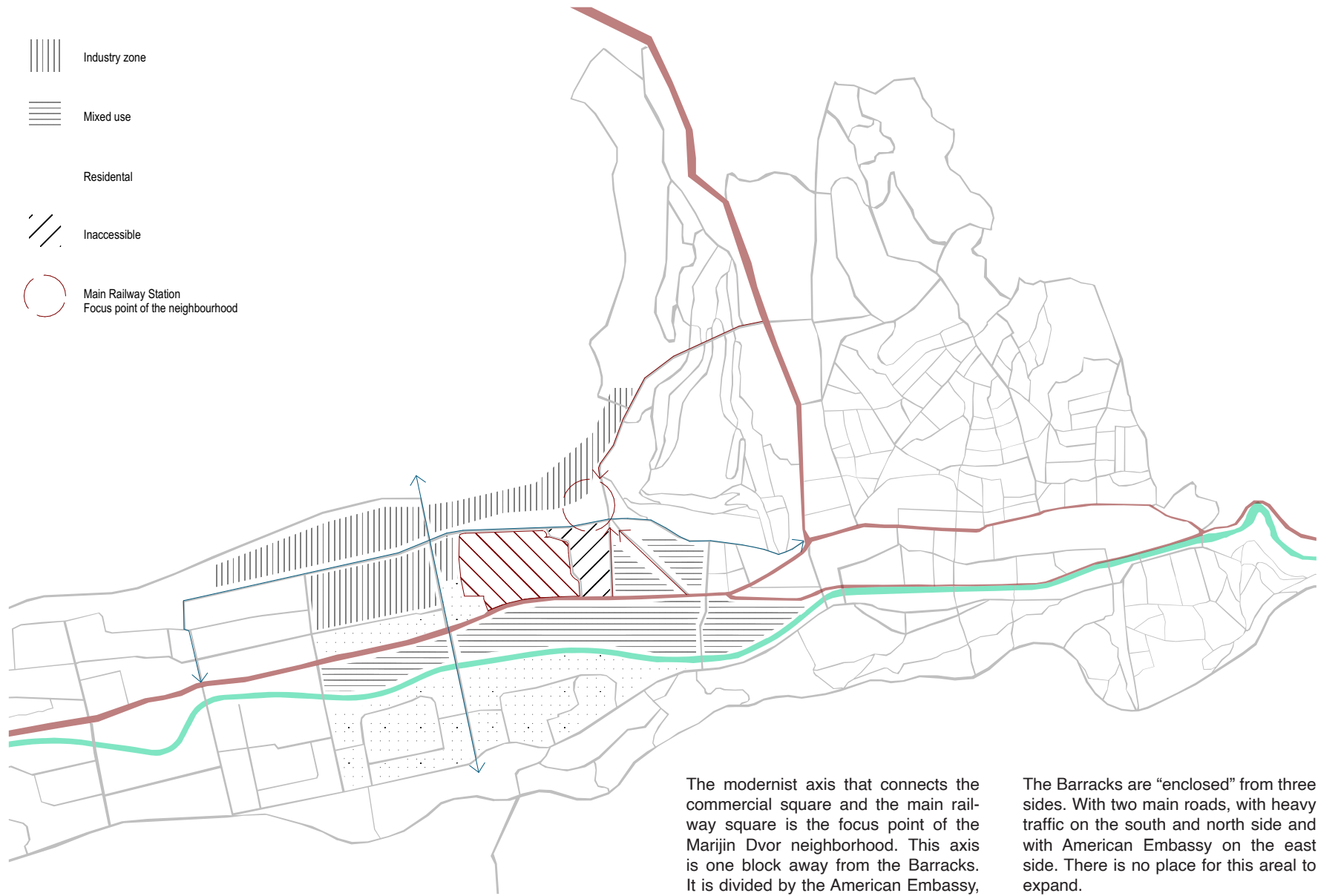
The modernist axis that connects the commercial square and the main railway square is the focus point of the Marijin Dvor neighborhood. This axis is one block away from the Barracks. It is divided by the American Embassy, which is notorious for its heavy security.

The Barracks are "enclosed" from three sides. With two main roads, with heavy traffic on the south and north side and with American Embassy on the east side. There is no place for this areal to expand.

Fig 100. Main streets Scale 1 : 25 000

Situation

Fig 101. Neighbourhood structure

The city west of the Barracks stand in stark contrast to the east of the Barracks. This area is more unified in its typologies and it is mostly socialist construction. The Blocks are divided through main axis that connect the north and south informal sprawl.

Green Spaces

25   50   100   250

N
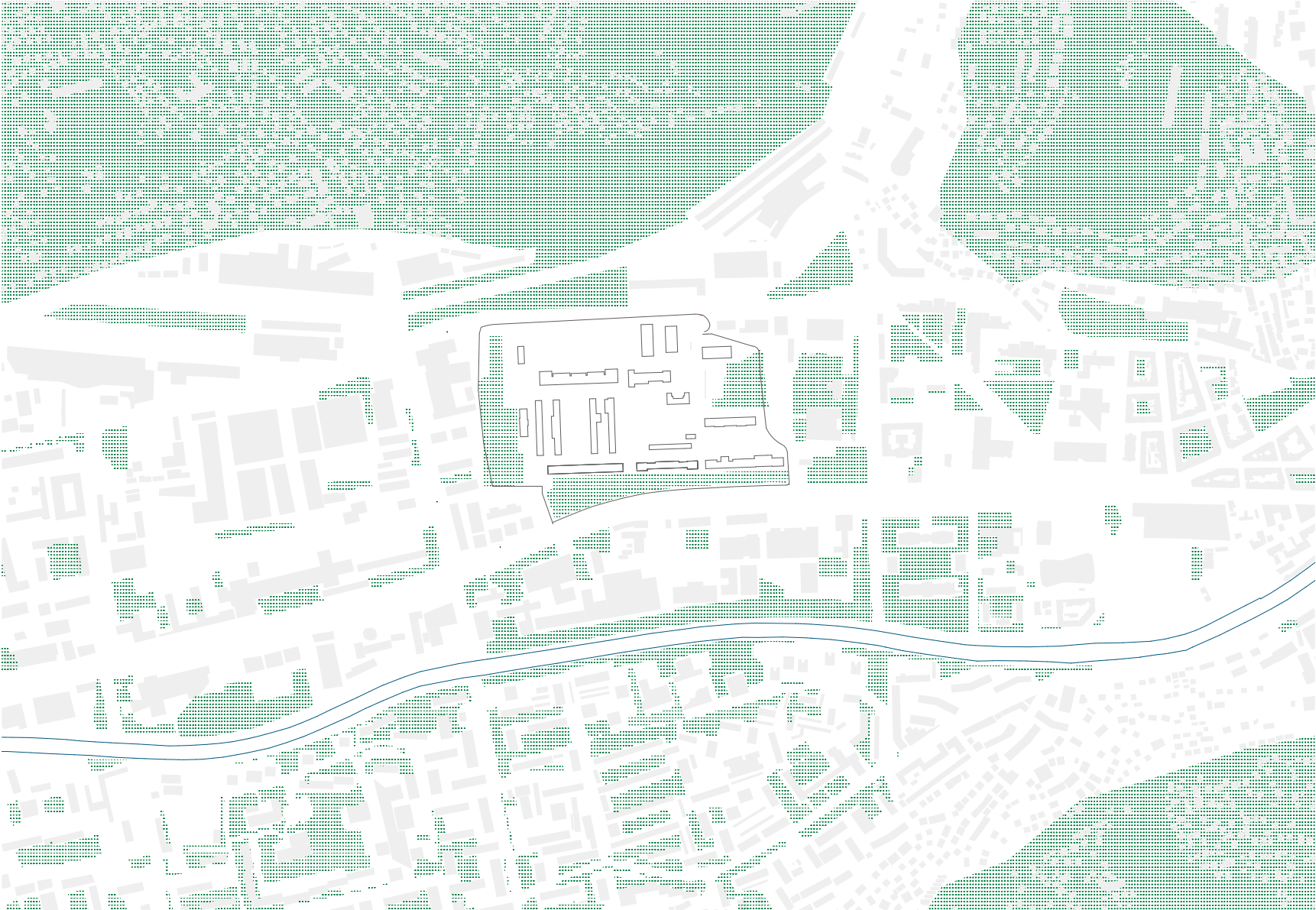
Fig 102. Green typologies of neighborhood

Green and Urban Spaces - Typologies of Neighborhood

The most important green spaces in the neighborhood are the small botanic garden in National Museum of Bosnia and Herzegovina, Jewish cemetery from 15th century and Wilson's Promenade along the Miljacka river. Riverbank is a very popular leisure spot for the citizens.

Surrounding green spaces are predominantly from the Yugoslav era, which means larger green spaces, unlike the enclosed Austro-Hungarian gardens. The campus doesn't have any connection these green spaces. There is a quiet imposing view of mountain Trebević since the campus is situated on one of the deepest points of the city.
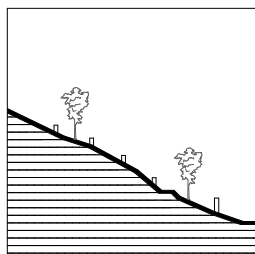
Cemetary -- Ottoman Empire
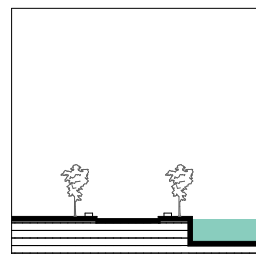
Riverbank Promenade -- Austro-Hungarian
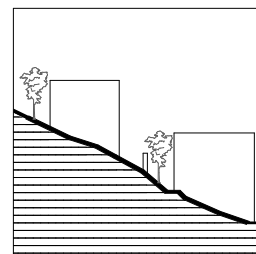
Private gardens -- Mixed
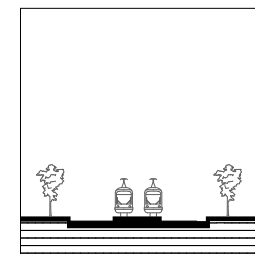
Tree lines/Tram green -- Austro-Hungarian
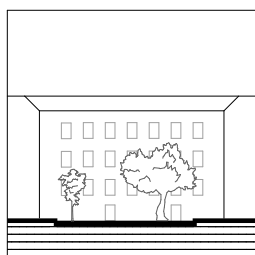
Hofgebäude -- Austro-Hungarian
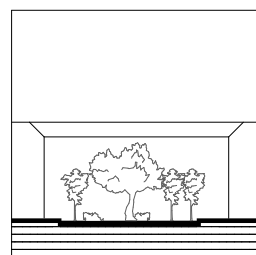
Botanic Garden -- Austro-Hungarian
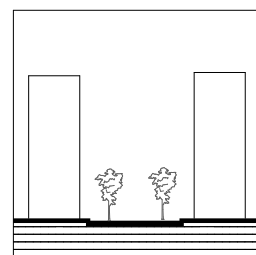
Open green space -- Yugoslavia
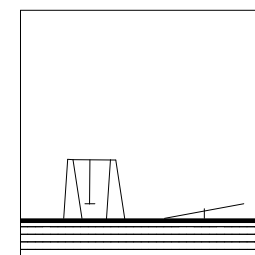
Playground -- Yugoslavia
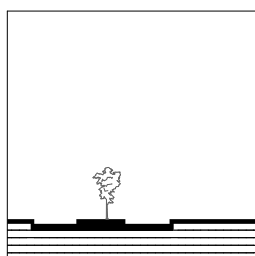
Rest space -- Mixed
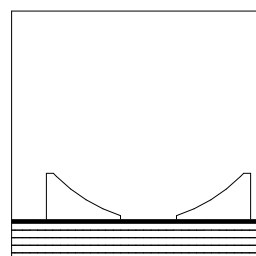
Skate park -- Yugoslavia
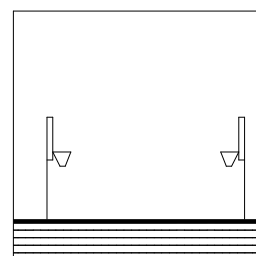
Sport fields -- Yugoslavia
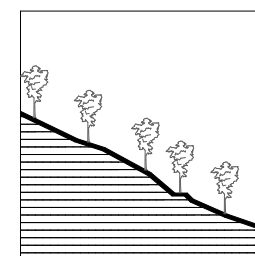
Hillside --

Fig 103. Green typologies of neighborhood
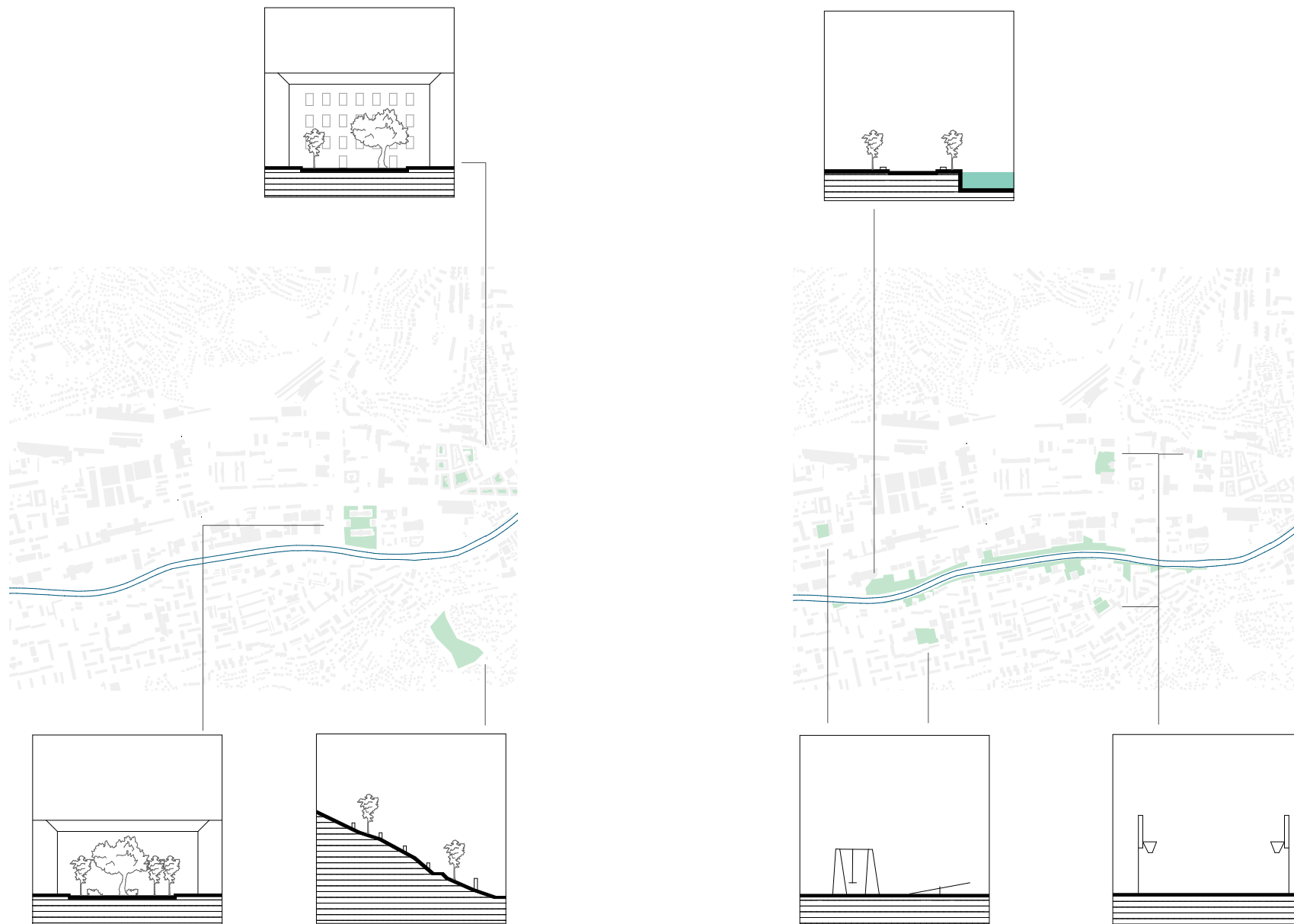
Fig 104 Green typologies of neighborhood

University of Sarajevo

47. *History of University*. University of Sarajevo. Web. https://www.unsa.ba/en/about-university/organization/history-university Accessed 22.10.2018

48. *Univerzitet u Sar ajevu*. City of Sarajevo. 19 May 2010. Web. https://sarajevo.ba/obrazovanje/univerzitet-u-sarajevu/ Accessed 22.10.2018.

University of Sarajevo has a long history. It is a public university located in Sarajevo first founded in 1537. It is largest and oldest university in Bosnia and Herzegovina, as well as the oldest institution of tertiary education in the former Yugoslavia. It was founded in 1537 by Gazi Husrev-beg as a medrasa. Medrasa is an Arabic word for any type of educational institution. Together with a medrasa Gazi Husrev beg founded "Gazi Husrev beg Library", and this library today is the oldest institution within the University of Sarajevo. [47]

At the beginning university focused on Islamic Law but slowly over the years new faculties were added. After the Austro-Hungarians arrived, they founded Sharia Judicial School in 1887, National Museum in 1888 (today the museum is an associate member of the University) and the Catholic Seminary of the Vrhbosna Archbishopric in 1890. Also, the Eastern Orthodox Seminary of Sarajevo was upgraded to an institution of higher learning in 1892.

Some faculties that moved in after the WWII were Faculty of Agriculture and Forestry and Medical Faculty. Soon after the rest faculties followed. In 1949 the university appointed its first rector, and this marks the official establishment of University of Sarajevo. In 1960s university organized and initiated the postgraduate studies.

In following decades, the university saw a significant growth. In 1970s university intensified involvement and promotion on the international academic plane. It has stayed the only university in Bosnia and Herzegovina until 1975, when University of Banja Luka opened, followed by the University of Tuzla in 1976 and the University of Mostar in 1977.

After the 1980 is when the university growth slowed down. This was a result of separation of scientific activities from the university and the formation of scientific institution outside of university. In general, this led to lower quality of education ad technological stagnation. During the Yugoslav period there was a significant increase in enrolled students which also led to lower efficiency. [48]

During the war, university continued with work, despite the destruction of many of its buildings. The resistance was fueled with enthusiasm, patriotism and perseverance of professors and students.

Ever since 1996 the University of Sarajevo focused on post-war reconstruction (both academic and physical). Even though some aspects and some faculties have under gone significant renewal, in general the university hasn't reached its full potential.

5481
Graduates in 2015/2016

2582
Employees (1306 Academic staff)

522
Study programes (185 Master programes, 93 Doctoral programes)

A lot of academics have left the country and quality and number of student dormitories is still below required. The quality of education has slightly increased after the introduction of the Bologna Process.

Today the University hosts 30 organizational units: 22 faculties, 3 academies and 5 research institutions. Some of the most prominent associate members are National and University Library, Gazi Husrev-beg's Library and the National Museum. Currently, there are around 30 000 students enrolled.

1. Faculty of Sports and Physical Education
2. Faculty of Health Studies
3. Faculty of Architecture and Civic Engineering
4. Faculty of Medicine
5. Faculty of Islamic Studies
6. Faculty of Catholic Theology
7. Music Academy
8. Faculty of Economics and Business
9. Academy of Performing Arts
10. Faculty of Political Sciences
11. Faculty of Law
12. Academy of Fine Arts
13. Language Institute
14. Institute of History
15. Faculty of Philosophy
16. Faculty of Forestry
17. Faculty of Mechanincal Engineering
18. Faculty of Natural Sciences and Mathematics
19. Faculty of Veterinary Medicine

2775 m
2350 m
2200 m
2075 m
1800 m
1700 m
1425 m
1325 m
1250 m
675 m
250 m

Fig 105. Different faculties in the city

People Distribution

Least to most visited places on campus
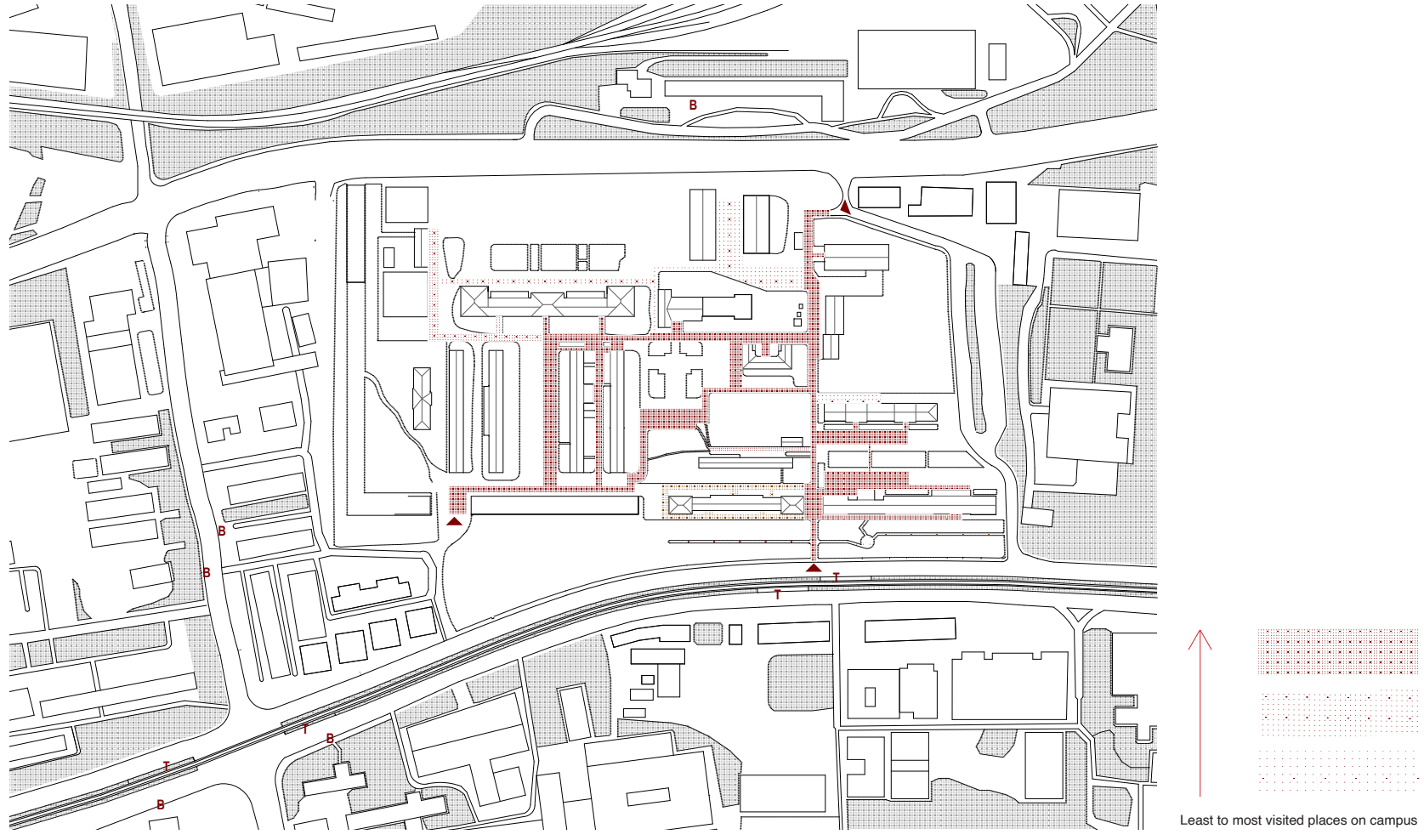
Fig 106. People distribution   Scale 1 : 5000

25   50   100

N

There is a serious disproportion, the east side is where the vast majority of people spend their time. Most of the faculties are in this area and it is a closest road to get to railway station. West is completely abandoned.

There is no real meeting spaces for people. Most of the time students spend either at the cafe behind the Faculty of Criminology or they sit at few benches in front of the various faculty entrances. There is no activity for non students.

The areal is well connected. Biggest tram lines have stop right in front of the entrance and there are three bus stops in proximity. There are three main entrances to the site (north, south east and south west). Vast majority of people use the main entrance in front of the tram stops.

Green Spaces
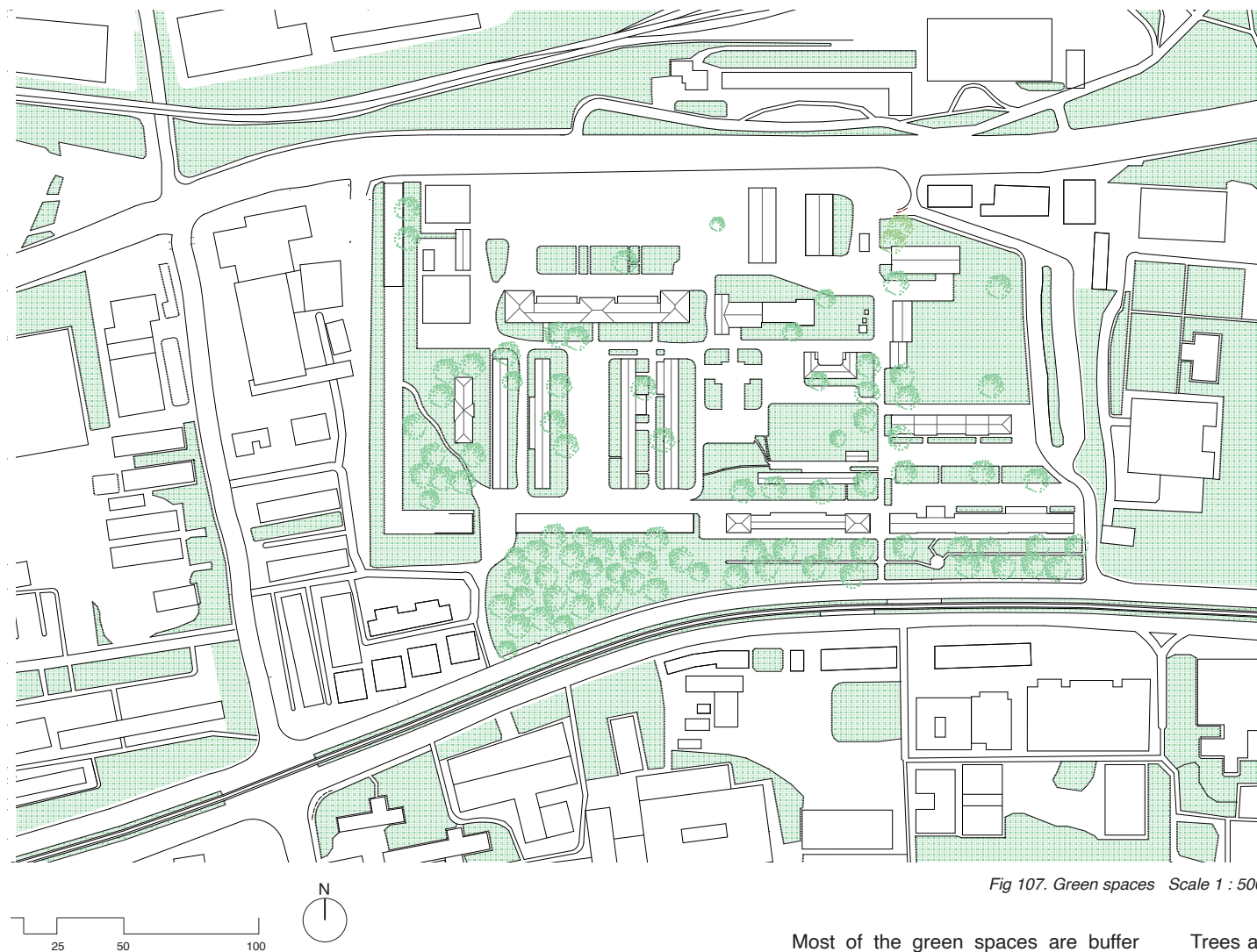
Fig 107. Green spaces   Scale 1 : 5000

N

25   50   100

Most of the green spaces are buffer zones between roads and buildings. Green spaces on the west side are abandoned. Some of the free green spaces are even used as parking spaces.

Trees along the main road of Sarajevo are very dense and shield the campus from the main road. Most of the trees are on the south side.

Program Distribution
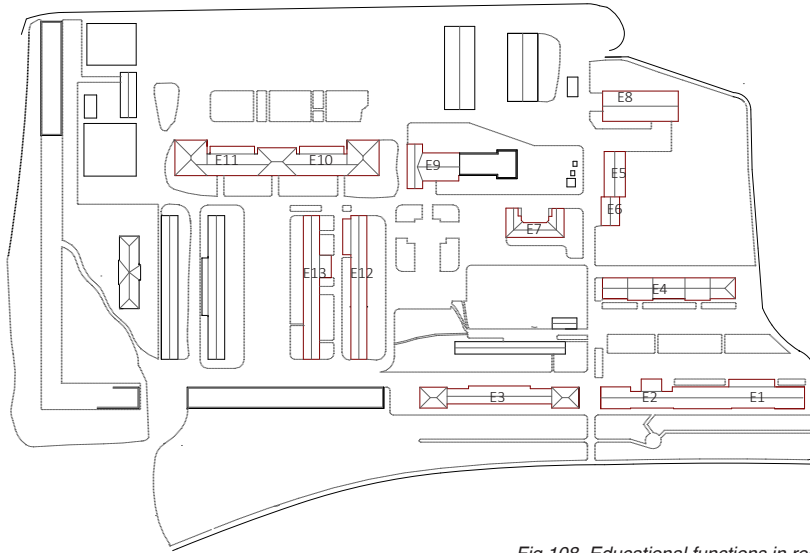
Fig 108. Educational functions in red
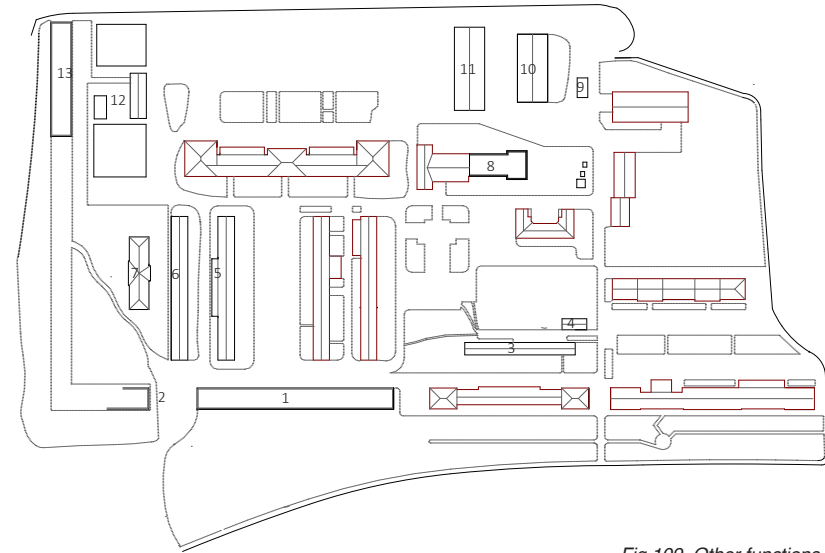
Fig 109. Other functions

E1. Faculty of Transportation and Communication
E2. Faculty of Criminology
E3. Library and Oriental Institute
E4. Electrical Engineering
E5. Institute
E6. Institute
E7. Lab
E8. Center for
Interdisciplinary Studies
E9. University Administration
E10. Faculty of Pharmacy
E11. Faculty of Agriculture and Food Science
E12. Institute for Genetics
E13. Institute for Biotechnology

1. Ruins
2. Demolished/David Bowie Mural
3. Storage/Archives
4. Print shop
5. Ruins
6. Ruins
7. Ruins
8. Ruins
9. Warehouse
10. Garage
11. Garage
12. Restaurant
13. Ruins

Buildings
20 817 m²

100 %

Buildings in use
15 470 m²

Buildings destroyed
5 346 m²

74 %

26 %

Restaurant
119 m²

Education
13 366 m²

Lager
681 m²

Shop
119 m²

2%

80 %

4%

13 %

1

Garage
2000 m²
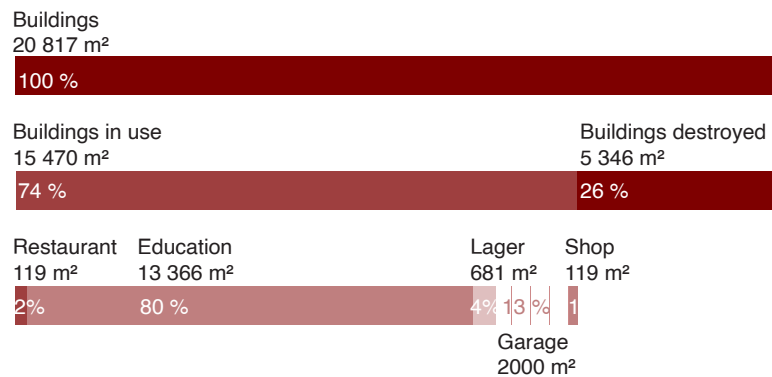
Fig 110. Percentage of different functions

Fig 111. Buildings

Entire area
148 000 m²

100 %

Open space
127 182 m²

Buildings
20 817 m²

86 %

14 %

Green area
61 205 m²

Parking
13 660 m²

48 %

4%

11%

38 %

Sport
5 081 m²

Roads and In between
47 234 m²
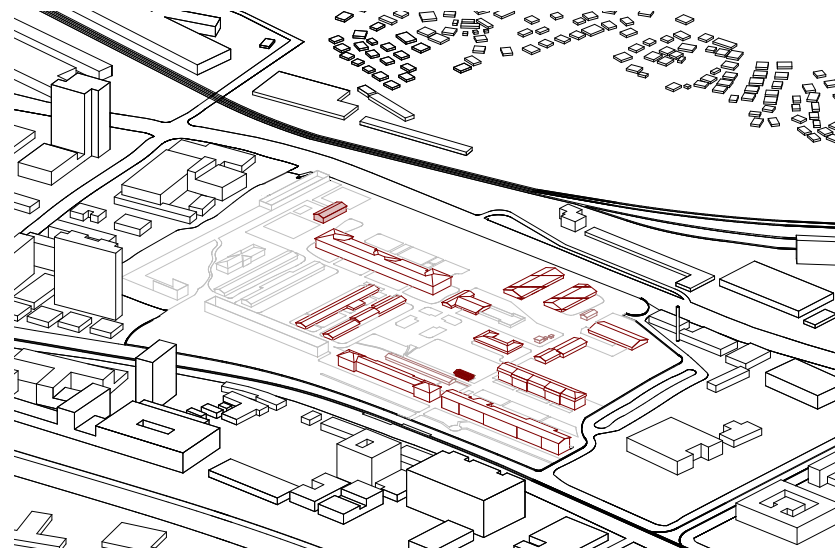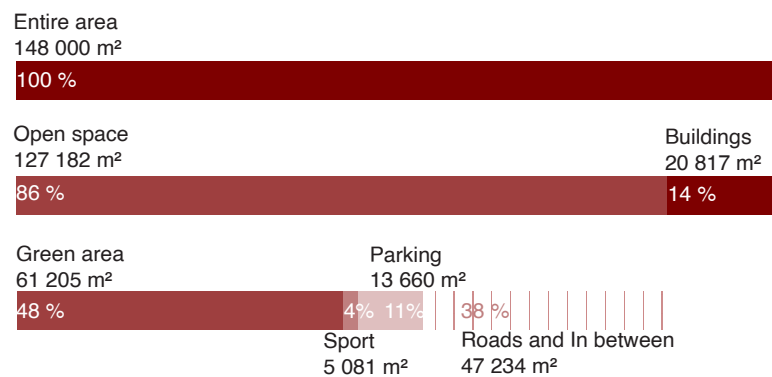
Fig 112. Percentage of different open spaces by functions
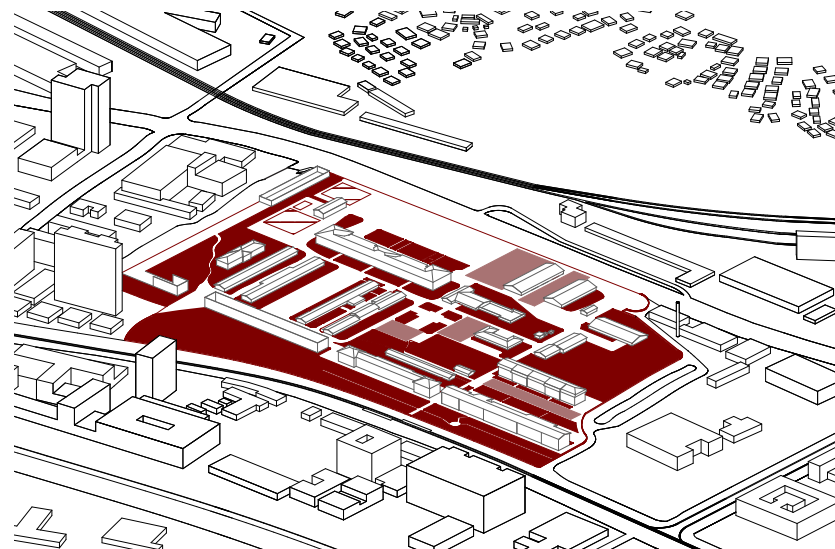
Fig 113. Buildings
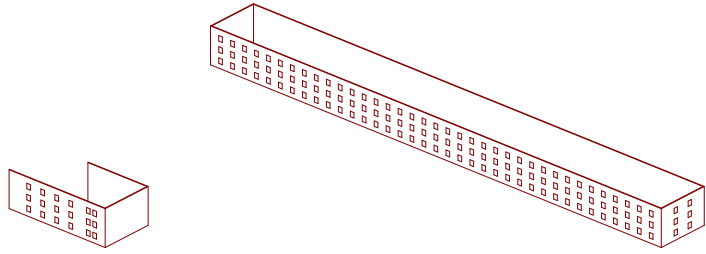
Military School of Music ---   Accommodation Facility ---   Military School Command --- University Library   Military Academy --- Faculty of Transport and Criminology
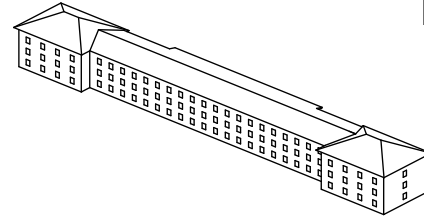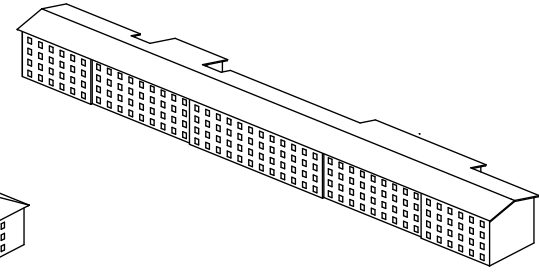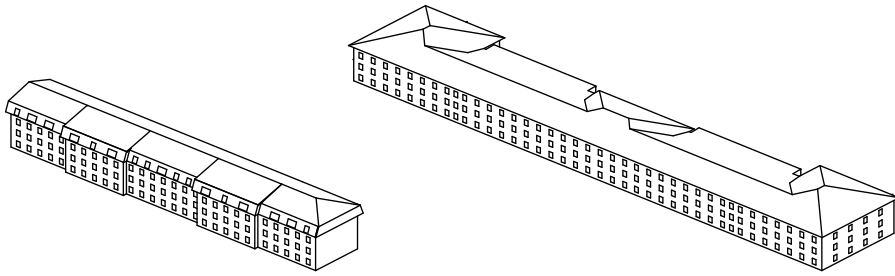
Quarter Service --- Faculty of Electrical Engineering   Dormitory --- Faculty of Pharmacy and Agriculture   Archives --- Archives   Technical Workshop --- Lab   --- Copy Shop
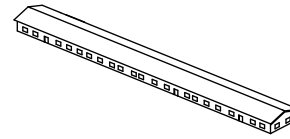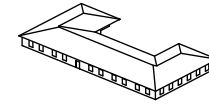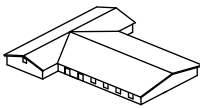
Cabinet of Tactics and Topography --- Administration   Cabinet of Production Engineering ---   Electrical Substation --- Electrical Substation   Boiler Room --- Center for Interdisciplinary Studies
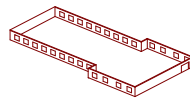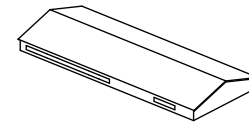
Infirmary ---

Sports Hall ---

Classrooms ---

Music Theatre and Library --- Institute for Biotechnology

Music Theatre and Library --- Institute of Genetic Engineering

Laundry, Bath and Barber --- Administration

Schools and Course Infantry ---

Storage --- Restaurant

Technical Station --- Garage

Technical Station --- Garage

--- Storage
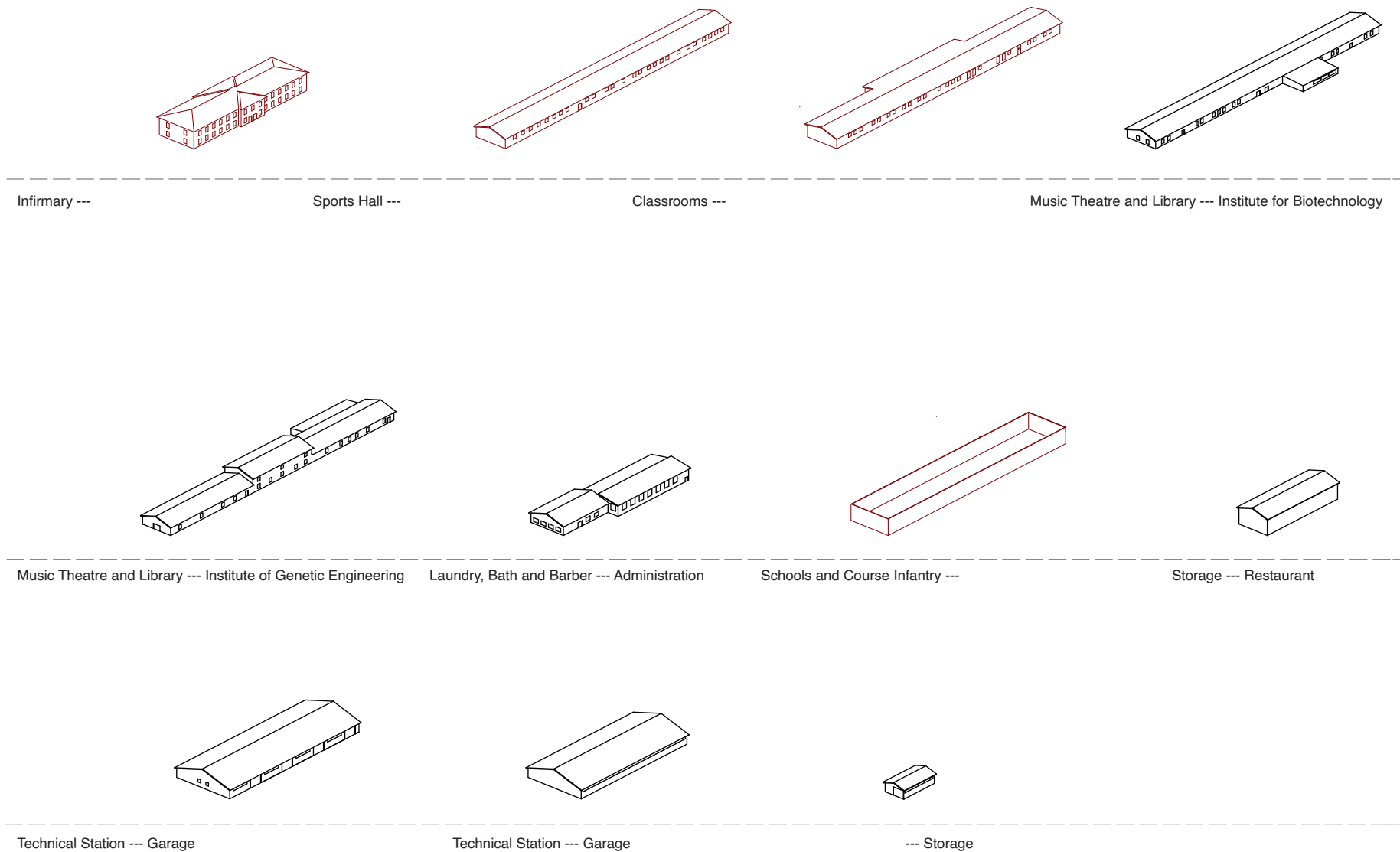
Fig 114. Existing buildings. Buildings in red are currently not in use

PROBLEM DEFINITION

The debate on how to approach the post war reconstruction has been addressed by many different architects and theorist over the years. This debate was focus of a theory part of this thesis.

There are more specific and physical on site problems. After the analysis I have divided the problems into three main groups

1. *Regarding the open space* - large areas of unused space

2. *Visibility and identity* - lack of connection to the city

3. *Unifying the east and west side* - new buildings should form a unified whole with the remaining buildings

① Undefined Open Space
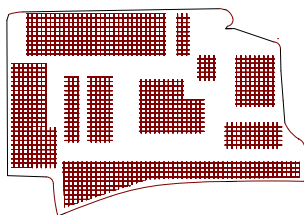
② Visibility and Identity
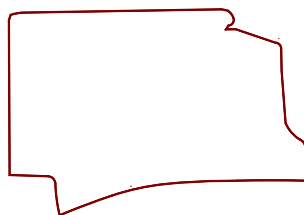
③ Unifying East and West Side

Use of Land

Entire area
148 000 m²

100 %

Open space
127 182 m²

Buildings
20 817 m²

86 %	14 %

No function
57 660 m²

Function
14 067 m²

45 %	10 %	11 %	

Parking
13 660 m²

Roads and In between
41 793 m²
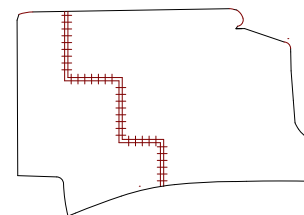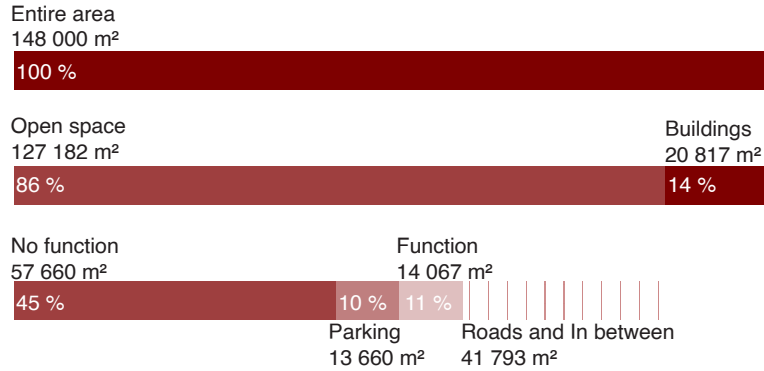
Fig 115. Percentage of open spaces in use

Buildings
20 817 m²

100 %

Buildings in use
15 470 m²

Buildings destroyed
5 346 m²

74 %	26 %

Fig 116. Percentage of buildings in use
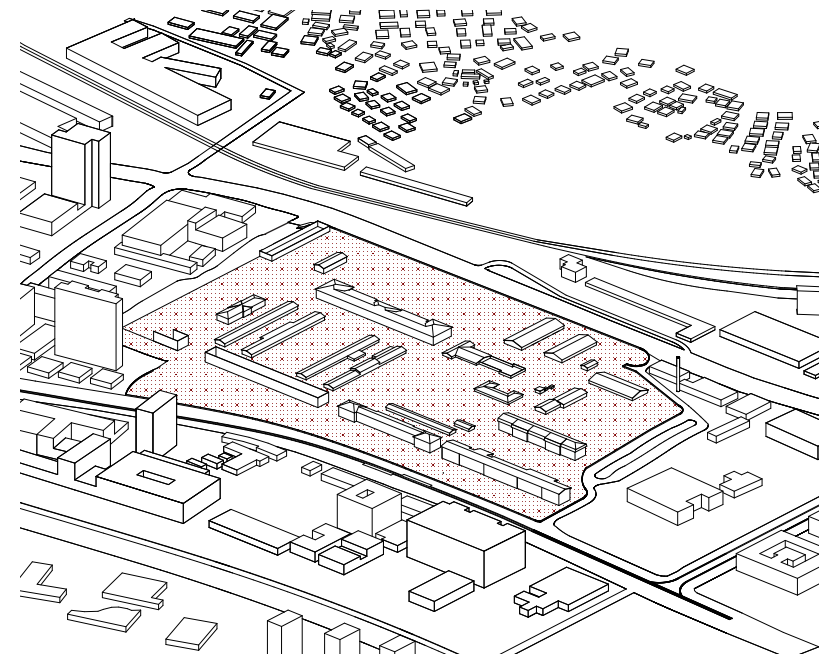
Entire areal has an area of approximately 148 000 m². An original barracks had around 45 000 m² more area. 44 000 m² was sold to the American Embassy and rest was lost by expanding the "Put zivota" road (in the north).

Military activities required large open spaces for different trainings. The areal always had a lot of open space, but after the war this increased even more. Today more than 85% of the area is open space. There is no designated park or urban area which is one of the main reasons that the students don't spend time at the campus. A shopping center nearby tends to be more popular with students.

Fig 117. Area

Extremely large open spaces

These spaces have no defined function

Most of defined spaces are used for parking
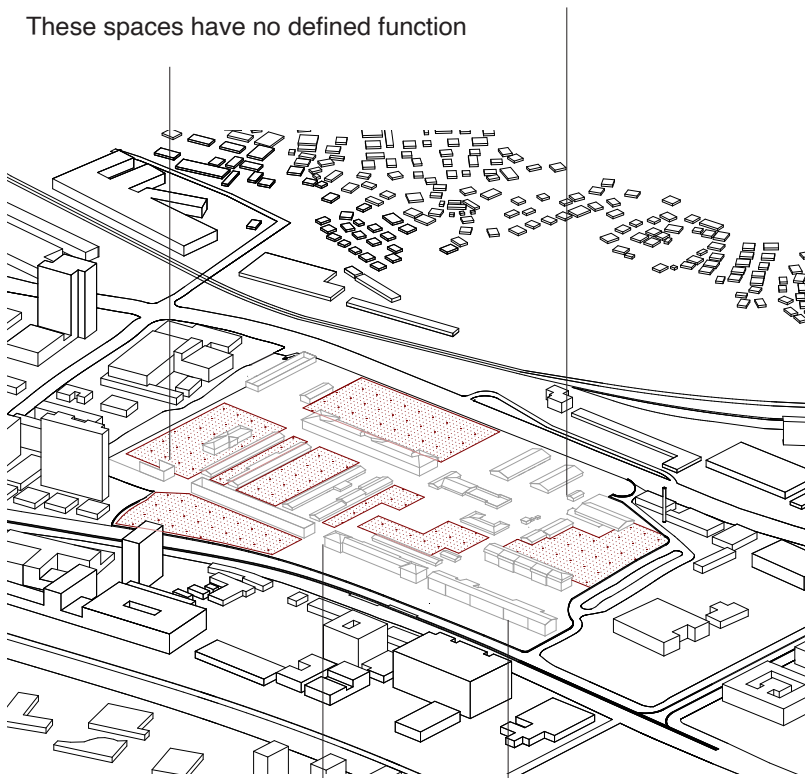
Fig 118. Open spaces with no defined function in red
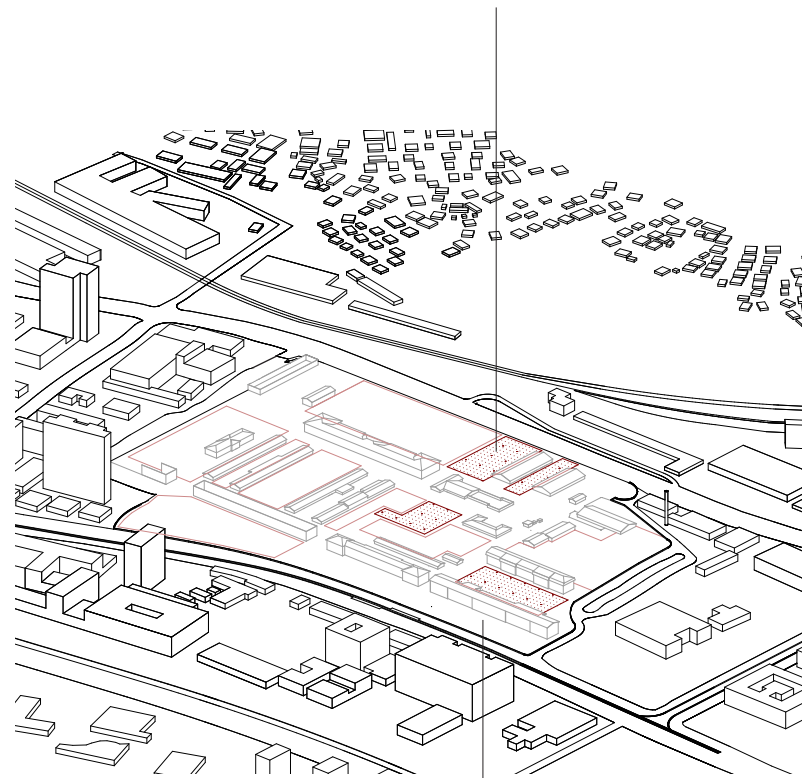
Fig 119. Parking spaces in red

Few benches along the main axis, only places to spend time outside

Only a few defined spaces

No defined central square

A fence goes around the campus

Lack of identity

Fig 120. Fence

Fig 121. Dense vegetation at the front side

A fence goes around the campus

At some parts the vegetation is overflowing to the public street

Some inner areas are closed through fence as well

Campus is not visible from the main street

Unbalanced place

No public activity at the ground floor of buildings

Ruins remain

Buildings are very introverted

Fig 122. Parts of campus to be completely changed

Fig 123. Buildings with no open activity on ground floor

All activity of east side

Non students use the area as
shortcut to railway station

Big differences between east and west side

No activity at night

MEMORY - WAR - ARCHITECTURE

Memory

This part of my research investigates a relationship between memory, war and architecture. Memory shapes and defines an individual, from ethnicity and religion to personal experiences. Architecture on the other hand is a concrete manifestation of memory. Over the years many architects and urban planners have tried to make sense of war so that new and creative values and meanings would emerge. Lebbeus Woods, an American architect has written many prepositions how we as architects should approach post war or post destruction (natural disasters) cities. He has written about Havana, San Francisco and Sarajevo among others.[49] This part looks into his principles of reconstruction for Sarajevo explicitly and how memory, war and architecture are interconnected.

Memory has been defined by Bergson as a continuum, a string of images.[50] Why is memory important to us? Neuroscientist have demonstrated that brain makes sense of the world through memory.[51] Everything we do, all our interactions with the world, our brains analyze "the data", we identify small parts that we consider relevant to our experience and values and treasure them as memory. Memories give us sense of belonging and continuity and offer purpose for the present. Woods suggests that memory can't be considered just a storage device.

Human memory is fluid and ever changing. Every time we think back on something our memories of that event will change, because we have new recollections and new experiences. That is the reason we can't see memory as something as simple as storage device. Also, everyone who participated in a certain event will remember the same event differently.[52]

Memory is not something that is only confined or reserved for memorials, museums but it is something that is practiced by individuals on everyday basis. We refer to this as collective memories. Maurice Halbwachs, a sociologist, has focused his work on this concept. He also managed to link collective memory to two main dimensions which are time and place.[53] The collective memory is different from individual memory. Individual memory is a mental skill, on the other hand collective memory is shared with individuals who all belong to a certain ethnic group, community or even a doctrine. [54]
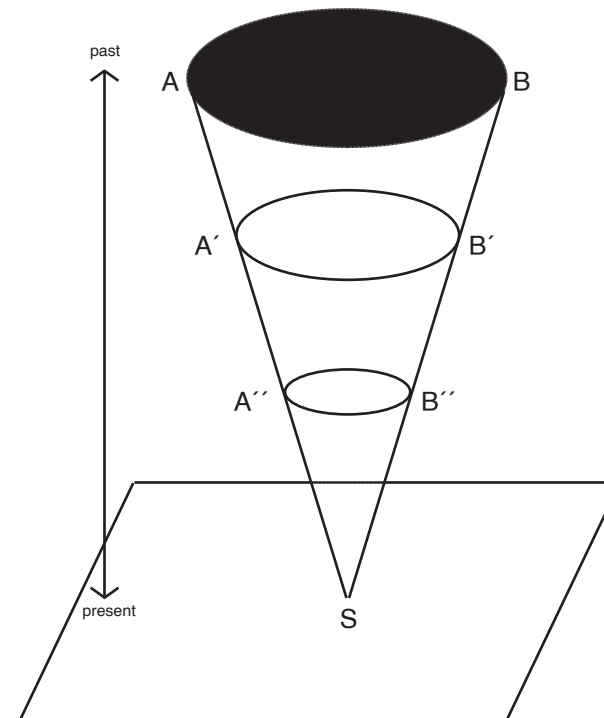
49. Woods, Lebbeus. *Radical Reconstruction*. New York: Princeton Architectural Press. 1997

50. Bergson, Henri. *Matter and Memory.* NewYork: Zone Books, 1991.

51. Gazzaniga, M., Who's in Charge? Free Will and the Science of the Brain, 2012, http://www.harpercollins.com/9780062096838/whos-in-charge Accessed 20.09.2018

52. Woods, Lebbeus. *Beyond Memory.* LEBBEUS WOODS, 22.03.2012, https://lebbeuswoods.wordpress.com/2012/03/22/beyond-memory/ Accessed 18.07.2018

53. Halbwachs, Maurice. *The social frameworks of memory (Vol. 5)* Mouton de Gruyter. 1976

54. Zerubavel, Eviatar. S*ocial mindscapes: An invitation to cognitive sociology.* Boston: Harvard University Press.1999

Fig 124. Bergson memory cone

55. Woods, Lebbeus. *Radical Re-construction*. New York: Princeton Architectural Press. 1997, p14

56. Michel Foucault, *Film and Popular Memory*, in Foucault Live, Manchester University Press, 2003

Since these memories do not represent personal experience, you don't have to live the same experience in order to be a part of a collective memory. These recollections are passed from one person or a generation to a another and in that way a sense of belonging is formed. Some of the collective memories are myths, which have lost their importance in modern times. Collective memory is more about the community than about the built environment. It is important to note that collective memory doesn't equal history, because collective memory is selective and doesn't necessarily deal with most important events.

Individual and collective memory can be used by political or administrative structures to maintain status quo and exerting control over individuals. Lebbeus Woods refers to these structures as hierarchies. Hierarchy produce monologues and are invested in "one". Opposed to hierarchies are heterarchies. They tend to be more subtle and organic systems. Heterarchies are defined by dialogue and others forms of interaction between people and objects, such as buildings and spaces.[55]

"Since memory is actually a very important factor in struggle ... if one controls people's memory, one controls their dynamism. And one also controls their experience, their knowledge of previous struggles." [56]

individual
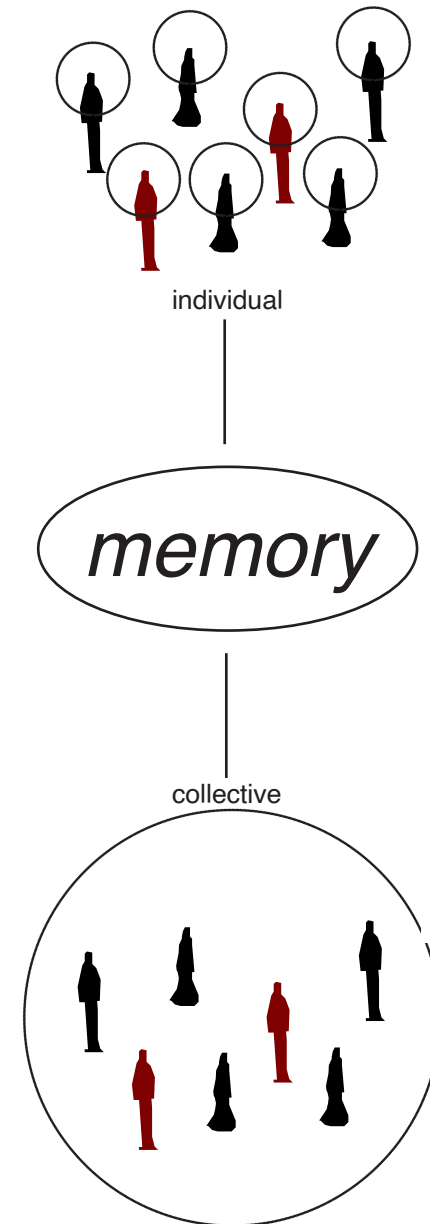
memory

collective

Fig 125. Individual vs collective memory

War
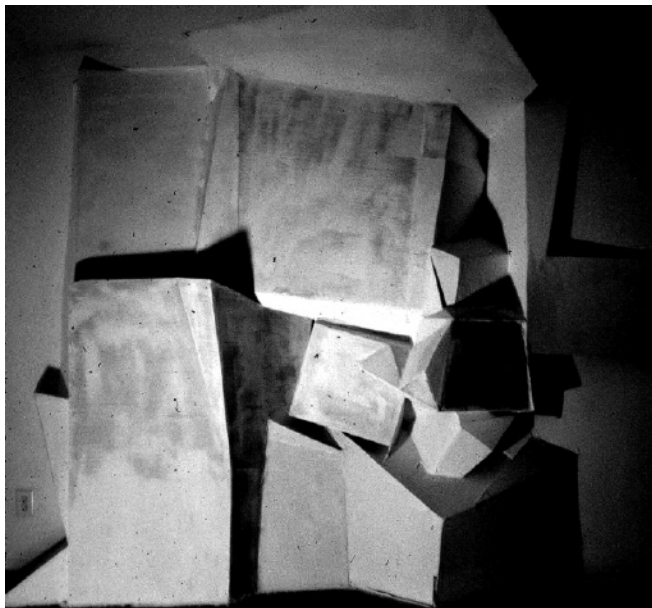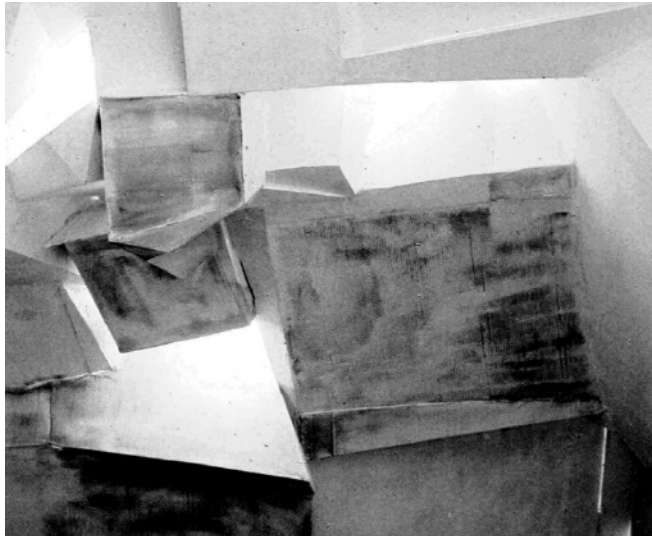
Fig 126. Sarajevo Window - Lebbeus Woods

"From the perspective of individual and collective memory, war is perceived as a temporary, violent state which destroys the continuity of memory, thus to obliterate shared values and meaning, in other words personal identity itself."
"the monologic, monomaniac structure of hierarchy as its most logical and terrible extreme: the all or nothing polarity imposed by radical ideology and its rational overdetermination" [57]

War reshapes and alters architecture. Public spaces acquire complex layers of meaning through history. According to Lebbeus Woods, citizens seek "eternal" existence through architecture. When their lives become radically altered following destruction, they should be able to see the change that they've been through. Architecture should be able to speak to the inhabitants of these buildings.

Once war or fighting has been over usually first instinct is an attempt to revert to past normalcy or to the pre-war state. Wars and environmental disasters generate memory crisis, a sense of disconnection from the past -which triggers our nostalgia which is a longing for a different and better time. Lebbeus states it is impossible to simply go back to pre-war times because war has generated a new memory, unpleasant one, but memory, nonetheless. Refusing these new memories will make it impossible to come with terms with trauma. Trauma and painful experience create valuable insights.

"The only thing we can learn from the experience is how to recover from it, and that is creative act of our choice that requires our transcending the pain, that is, not merely reliving it by remembering, but transforming the memory into something new and affirmative" [58]
Even though war is a traumatic experience we learn to recover from it and that in it of itself is something new.

For conclusion Woods argues that we should recover only by replacing hierechies with heterarchies – through decentralization. Scars should not be erased because erasure means denying the history. It should be analyzed and this traumatic experience turned into something positive. We shouldn't allow that the erasure becomes part of the city.

"Urban artifacts have their own life, their own destiny." [59]

"Cities fall not only physically, as a result of outside pressure; they fall spiritually, from within." [60]

57. Lebbeus Woods, *Pamphlet Architecture 15: War and Architecture,* Princeton Architectural Press (1993), p.3

58. Woods, Lebbeus. *Beyond Memory.* LEBBEUS WOODS, 22.03.2012. Retrieved 18.07.2018 https://lebbeuswoods.wordpress.com/2012/03/22/beyond-memory/

59. Rossi, Aldo, and Peter Eisenman. *The Architecture of the City.* Cambridge, MA: MIT Press, 1982 p. 101

60. Bogdan Bogdanović, *Murder of the City,* The New York Review of Books. 1993

Architecture

61. Ghazal, Jenan. *Architecture and Violence: Between Representation and Exchange*, Thesis. Carleton University, 2016. p. 38

62. Hoteit, Aida. *War against architecture, identity and collective memory.* International Journal of Development Research. 27.02.2015. Web. Accessed 12.10.2018

63. Bevan, Robert. *The Destruction of Memory: Architecture at War*. London: Reaktion Books, 2007.

Architecture has the potential of altering the future. Though Lebbeus argues that architecture doesn't stand only for buildings it can also create knowledge, preform ideas and is embodiment of order. Both Also Rossi and Woods see architecture as something temporal – *"as something that must be understood to transform and come into being through time."* [61] Public spaces have acquired complex layers over time and meaning through history – should as well embrace the scars and signs of healing.

Any event occurs in a private or public place, which means that this place will become an important part of the memory. If the place survives the memories related to the place will be preserved and the person or the group will feel safe and comfortable, but if the place is destroyed or it disappears the memories will disappear eventually as well. This means that architecture or place is important for the preservation of individual and collective memory. On the other hand, the changes and destruction to architecture might lead to serious changes to memories. Buildings and architecture store memories. Which means the violence against it is the violence against memory.[62]

According to Bevan Robert, the author of "The Destruction of Memory" "*This is the active and often systemic destruction of particular building types or architectural traditions that happens in conflicts where the erasure of the memories, history, and identity attached to architecture and place-enforced forgetting-is the goal itself. These buildings are attacked not because they are in the path of a military objective: to their destroyers that are the objective."* [63]

Which means when architecture is targeted, national identity is also targeted. The places mostly targeted are traditional buildings, that store huge collective memories, buildings with symbolic values, religious and cultural buildings.

This means that memory or individual knowledge are unworthy to be represented through monumental architecture. It is something reserved for private sphere. Which again brings us back to hierechies vs heterarchies and if we turn to heterarchies we forsake monumental, disregard authority and architecture is free to concerns itself with dynamic structures such as networks, matrices, tissue.
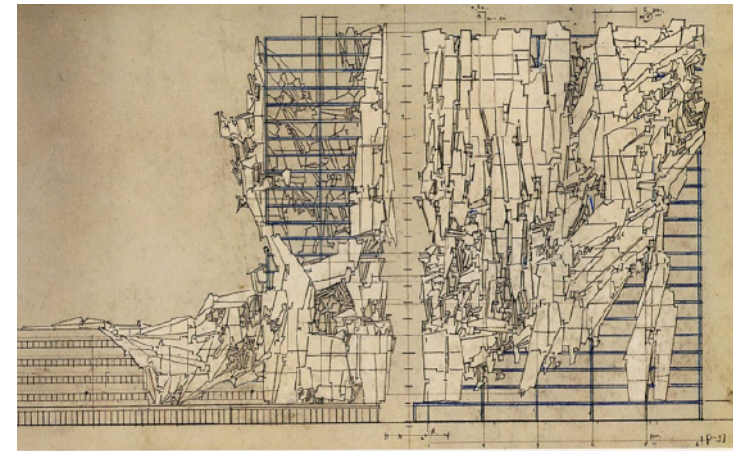
Fig 127. Sarajevo Radical Reconstruction - Lebbeus Woods
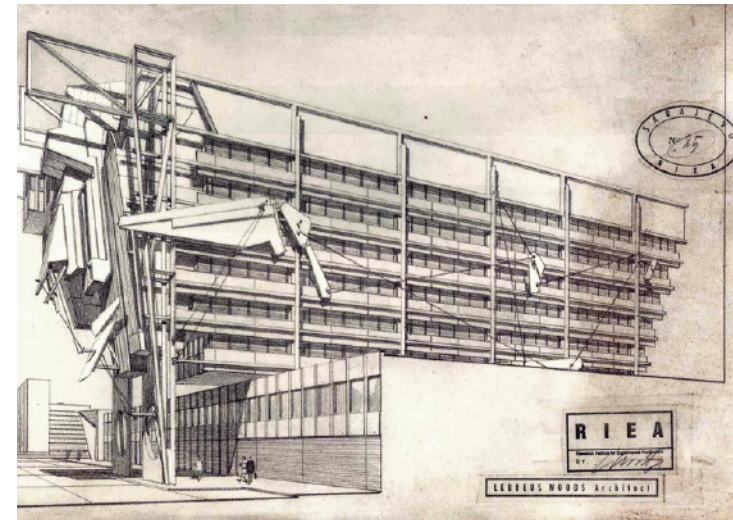
Fig 128. Sarajevo Radical Reconstruction - Lebbeus Woods

Radical Reconstruction

Sarajevo has had a turbelent past and the problem with Sarajevo is how to connect the post war city without losing the rich social heterogeneity of the city. Architects have discussed the possibilities of reconstruction even during the war. Project Warchitecture tried to begin the discussion on the future of the city, but once the war was over none of these projects were implemented.

In his book Radical Reconstruction Lebbeus Woods names three principles of reconstruction.

First Principle: It is a straight forward principle of restoring something to its pre-war shape. This principle sees a war as only an interruption of the flow of the normal. The war is something that has happened, and we should move quickly forward and not look back. It serves to bring back the illusion of normalcy as quickly as possible. Problem with this principle is due to rush to reconstruct we lose some complexity. Complexity of buildings, streets and squares can't ever be simply replaced.

If we try to link this principle to either hierarchy other heterarchy it is clearly seen that it aligns itself better with the principles of hierarchy. This principle only serves hierarchies as they try to reestablish their power and legitimization over people using sentimentality and nostalgia. This is very appealing to people struggling with recovery from extreme personal and cultural losses. The sooner we return to pre-war state, sooner will we feel normal.

Second Principle: Unlike the first principle where the goal is to restore damaged building to its pre-war state, in this principle we should destroy the ruin completely and begin again. It can either be something completely new or updated or modernized version of the pre-war building. Just like the first principle, this principle is linked more to the hiererachies than to heterarchies. In this way the hierarchies can claim the future, while in the first principle restoration allows them to claim the past.

The best example of this principle can be found in modernist architecture, since the architects of this time were tasked with rebuilding the cities after the Big war. They tried to move away as much as possible from cities from before the world war and tried to build more humane cities. It can be argued that this was never successful since modernist architecture was just as single layered and hierarchical as the old architecture.

Fig 129. Sarajevo Radical Reconstruction - Lebbeus Woods

Radical Reconstruction

64. Woods, Lebbeus. War and Architecture: Three Principles. LEBBEUS WOODS, 22.03.2012. Retrieved 18.07.2018 https://lebbeuswoods.wordpress.com/2011/12/15/war-and-architecture-three-principles/

The principle of complete erasing and rebuild cities is now a concept which is frowned upon. Another bigger downfall of this principle is the cost. Cost to create new design competitions, cost of complete destruction of ruins and cost of completely building from a scratch.

Third principle: To create something new from a damaged old. Both of the other two principles focus on starting a new. This is the principle that doesn't ignore the war rather embraces it as memory and as something that we must learn from. It is important to distinguish that this principle doesn't celebrate, symbolize the destruction. It is a principle of acceptance of what has been suffered and lost and gained as well. As mentioned above it is not possible to simply go back to the pre-war normalcy. This principle tries to salvage as much as possible of the ruins and tries to remodel them into something new. These new structures will enable us new ways of living.

"*The familiar old must be transformed, by conscious intention and design, into the unfamiliar new.*" [64]

Even though war is something traumatic there is still so much we can learn from the experience and we should try to incorporate this new experiences into our designs. Woods has said that this third principle focuses mostly on ordinary building such as residential buildings. Since churches or other cultural monuments should be restored to their pre-war state. The first two principles are quiet useless on ordinary buildings since there is nothing special about these buildings to restore them to their pre-war state. New cities need architecture that is fluid and is ever-changing.

Conclusion

The site of University Campus is a perfect place to try to implement the third principle of Radical Reconstruction. It is an areal of buildings that architecturally don't carry much meaning but because of its significant role during the war it became part of Sarajevo collective memory. This significance should be represented in future design.

The third principle offers a more of an utopian solution, but I propose more a realistic approach. The past, after all, shouldn't clash with the needs of students. Not every damaged building has to be preserved, but rather the buildings that offer sufficient place for new cultural activities.

The way to move forward is to reinterpret these ruined buildings and host activities that answer the current needs of university. These ruined buildings will host cultural or interactive activities and this should enable people to interact with the past in a new way. This is a middle road between completely starting new and fetishazing ruins.

These reinterpreted buildings can adapt or grow into something new, depending on the needs of university but they have played a significant role in the past and should carry that snippet of time with them.
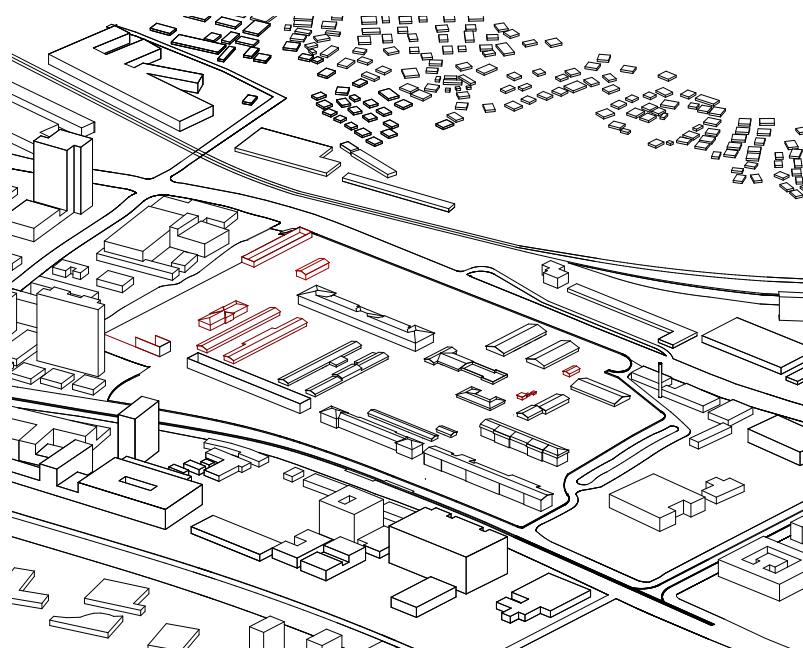
Fig 130. Buildings which will be completely removed

1. Garage
2. Garage
3. Damaged Building
4. Damaged Building
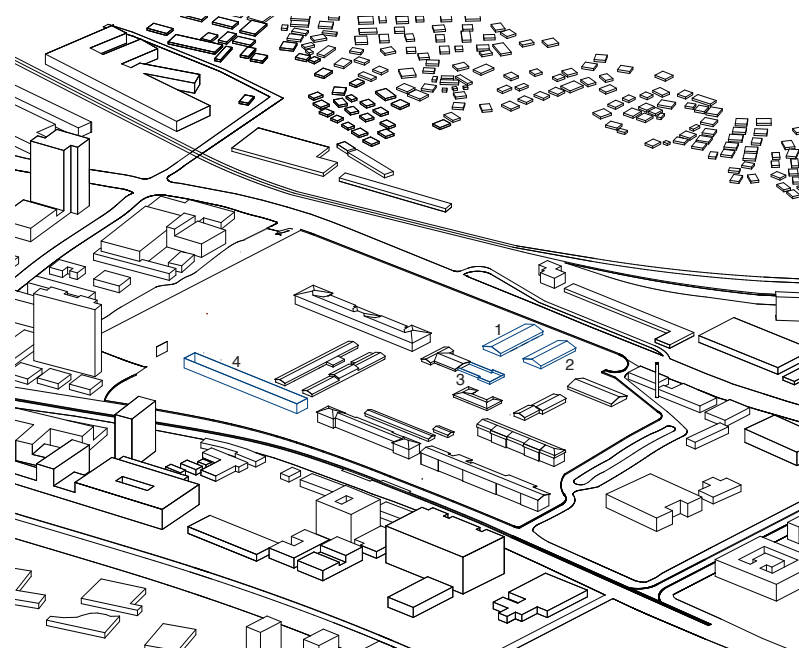
Fig 131. Buildings which will be reinterpreted

DESIGN
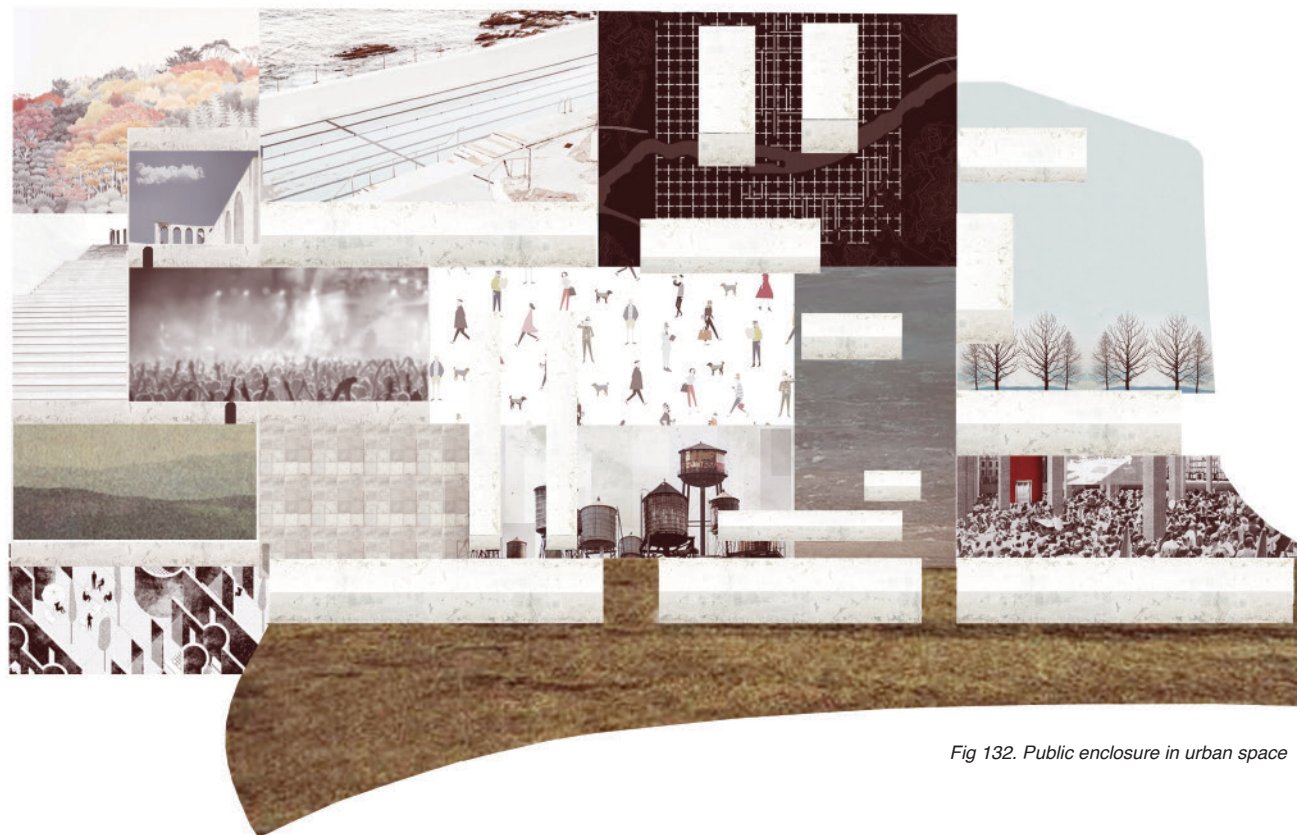
Fig 132. Public enclosure in urban space

Central Ideas

Urban room	Heterarchy	Civic Friche
public enclosure in urban space	unranked self-determing system	preservance, but not fetishization
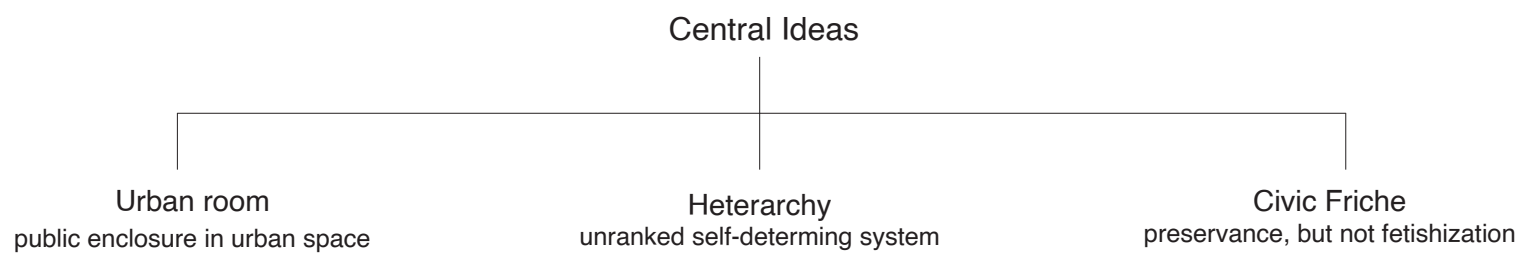
Organization Study
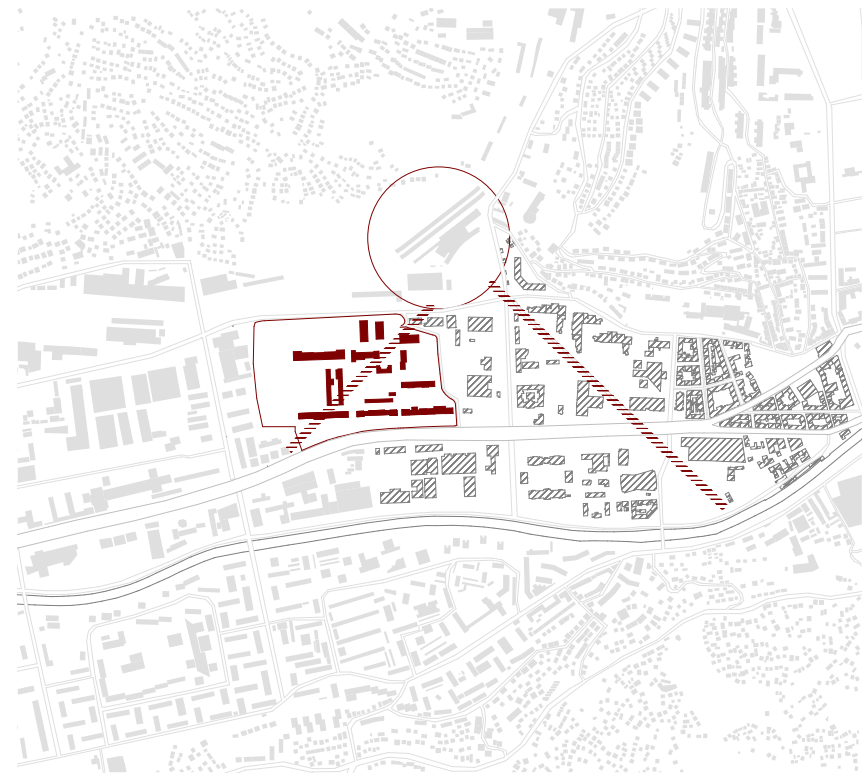
Fig 134. Modernist Axis

The military barracks have a strict or-thogonal axis. These axis have very little to do with neighboring areas. The barracks are the oldest buildings in the neighborhood and none of the future buildings took the barracks as refer-ence point. This can be due to introvert-ed style of the barracks.

There is a different axes that came to in existence much later. That is the mod-ernist axis, with the main railway station at the end. This is the main axis of Mar-ijin Dvor neighborhood, but the campus is removed from this axis.
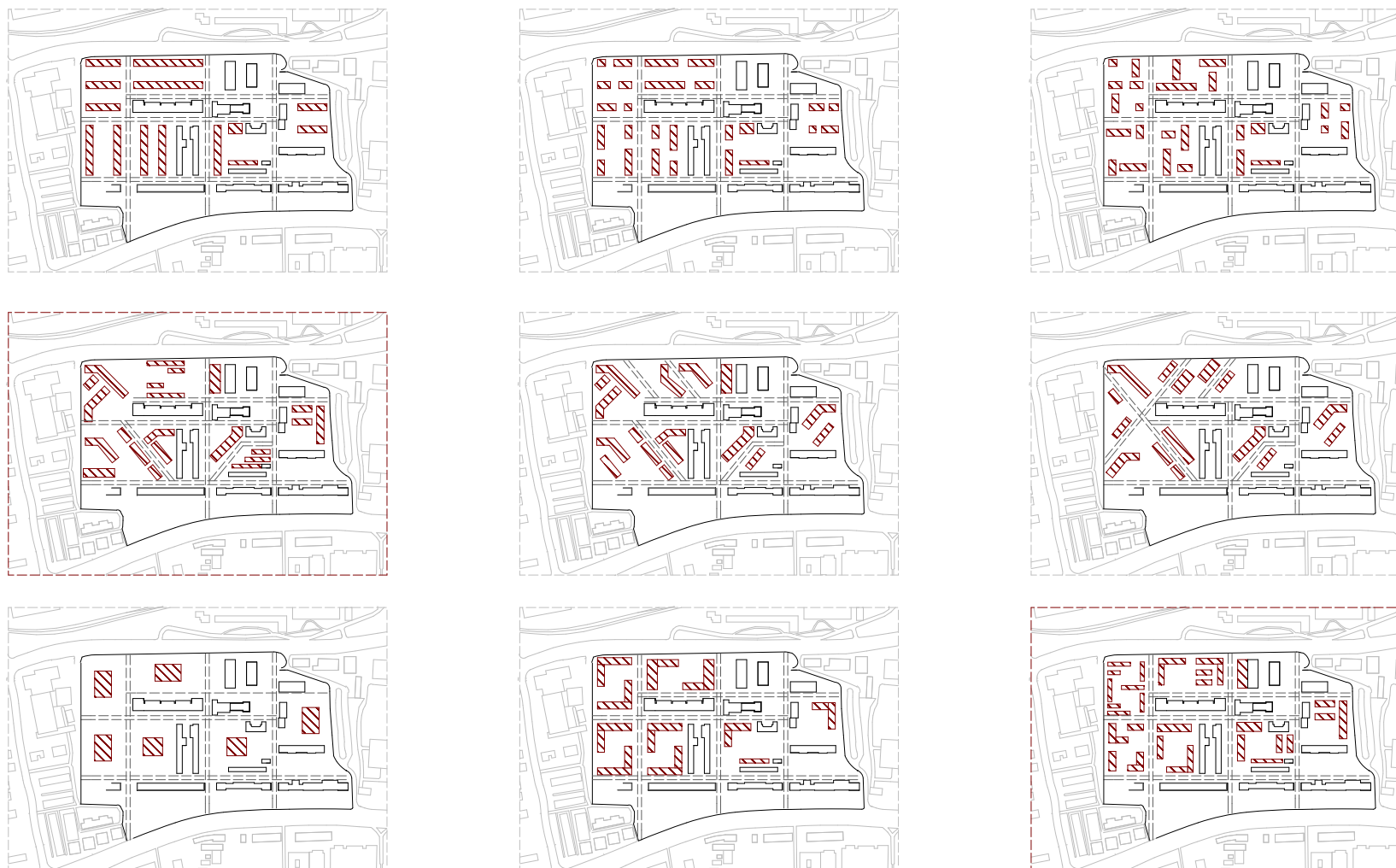
Fig 135. Organization study / Scenarios in red are further examined

This study shows different principles of organization within the area. Many of the original buildings remain and they restrict the organization of new buildings. New and old buildings should form a coherent area without coming to conflict with each other.

First three diagrams examine a situation with remaining original axis and simple longitudinal building heavily influenced by the original buildings. This offers very little diversity to the area and the open spaces are too similar.

Middle row examines the diagonal axis, trying to match the modernist axis. This approach offers the most diversity in terms of building shapes and open spaces. The problem is the conflict between the old and new buildings. This creates a lot of awkwardly shaped spaces and there seem to be lack of sense of direction.

One example examines the possibility of singular, monumental buildings, which is immediately discarded. The last two diagrams are the most promising. The approach is preserving the old axis but diversifying the open spaces through difference in density of buildings. Diagonal axis are implied through L-shaped buildings.

Diagrams in red are further examined.

Approach 1
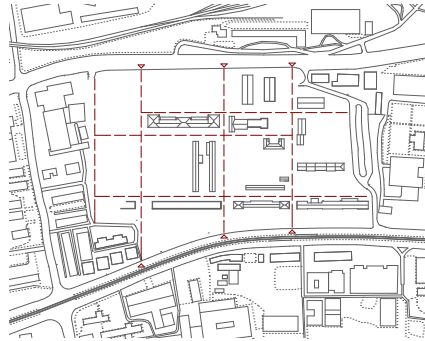
Fig 136. First phase with smaller centers
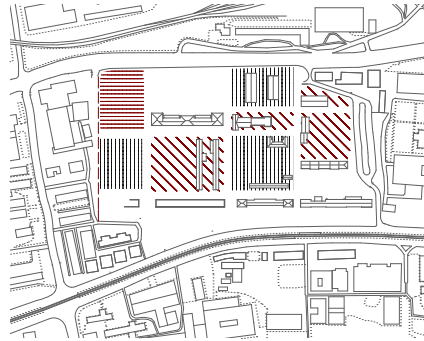
Fig 137. Zones with different functions
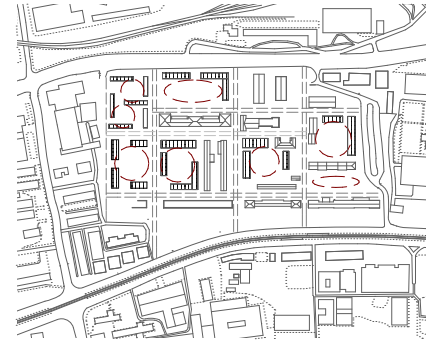
Fig 138. First phase
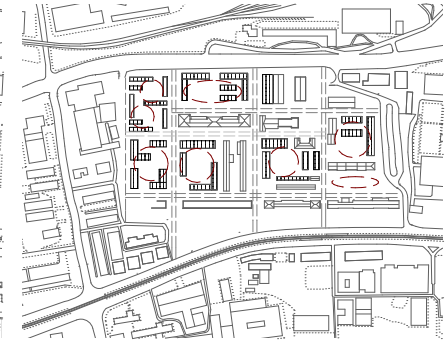
Fig 139. Possible development in future

Description: This scenario heavily follows the axis. Axis are easy to determine since they are mostly left over from the original concept. These axes divide the area into similarly sized zones. These zones are given different functions, green area, urban park, forum or just connecting area. The buildings are placed on perimeter of each zone, which is reinterpretation of original concept of the barracks, just repeated on a much smaller scale. New centers are created in every zone and each one should have a different atmosphere.

Type: Reinterpreted original buildings. Longitudinal buildings, façade elements involve a lot of repetition. There is no focal point, or the main building.

Process: Zones are not dependent on each other and can be built in what ever order. Buildings can be built in different architectural style since the zone are introverted. At the beginning the center might not be apparent, but as the density increases it should come about.

Social space: The smaller centers have different functions, there isn't much exchange between different groups since the zones are introverted. More social places should be at the meeting points of different axes.

Positives:
Few of the positives include the fact that the function are clear cut and separate from each other. It is easy to navigate through the area since the axes are clear cut and straightforward. The entire concept isn't much different from the original, so there shouldn't be much of an architectural clash with new buildings.

Negatives:
Even though the concept doesn't clash with the original buildings it is the reason why it lacks dynamic. The center can be too isolated and clash between different user groups could form interesting dynamics, but this approach doesn't allow for it.

Approach 2
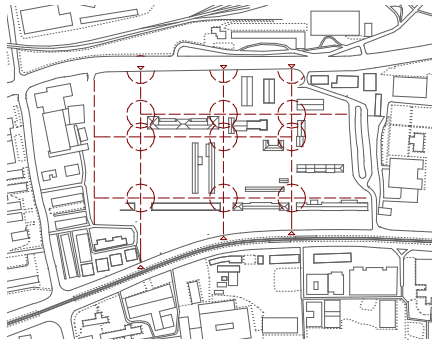
Fig 140. Main meeting points
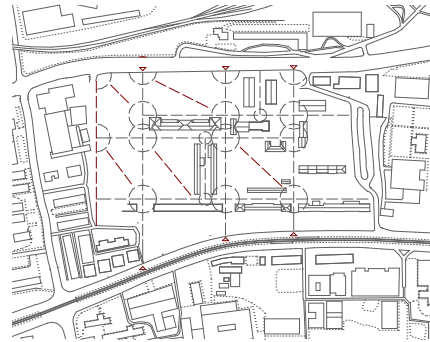
Fig 141. Connecting them diagonally
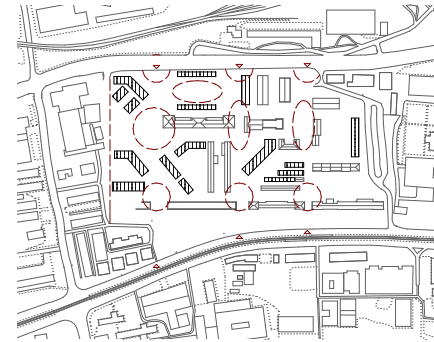
Fig 142. First phase with smaller centers
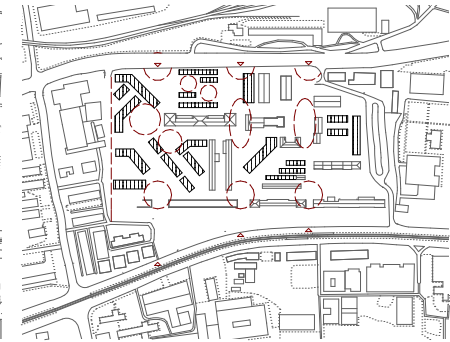
Fig 143. Possible development in future

Description: The focal point of this approach are the meeting points of the main axes. These meeting points are the new centers. The main downfall of previous approach was the lack of dynamic, which is what this approach is trying to fix by connecting these new centers diagonally. Through this concept it would be easy to distinguish between the old and the new. New formed centers are very different from one other in shape and size.

Type: Reinterpreted original buildings. Less focus on orthogonal buildings. More smaller scale buildings.

Process: First phase is the building of main faculties that should follow the diagonal axes. Later on smaller buildings are built to divide the larger urban spaces into smaller ones. The diagonal axes should still be preserved, but this scenario makes it more difficult to build larger volume buildings in the future. This is due to a clash of new diagonal and old orthogonal buildings are weirdly shaped rest spaces between them.

Social space: The smaller centers have different functions, there should be more exchange than in the first scenario since the centers aren't introverted. Students, tourist and local would meet here. The buildings are placed in different angles and space that emerges between new and existing buildings should be more dynamic than in the first scenario.

Positives:
Focal point are the free spaces and due to arrangement of buildings this approach is much more dynamic than the first one. There is more exchange between different user groups.

Negatives:
Negative spaces are awkwardly shaped and don't offer a good enough area for some functions, like sport. There would be more smaller scale buildings, which isn't so good for the university campus. The oddly placed building could be difficult and confusing for people, since the axes aren't so clear cut. Zones would be more difficult to determine.

Final approach

Existing Buildings
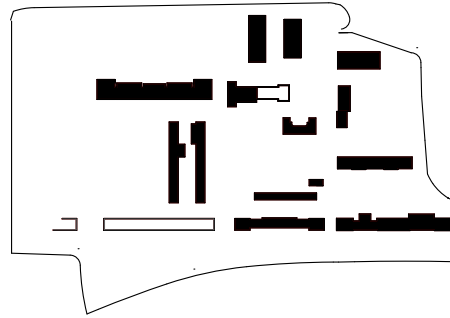
Entrances
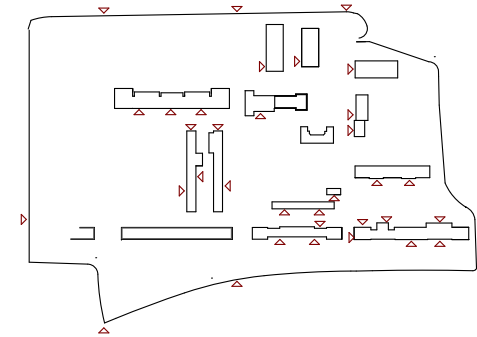
Hot Spots
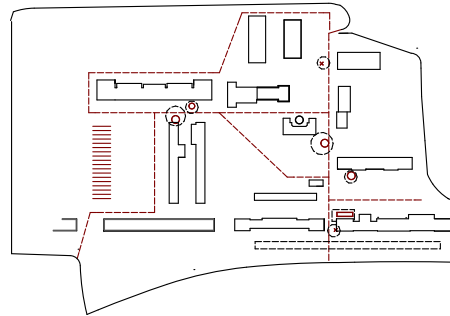
Main Grid
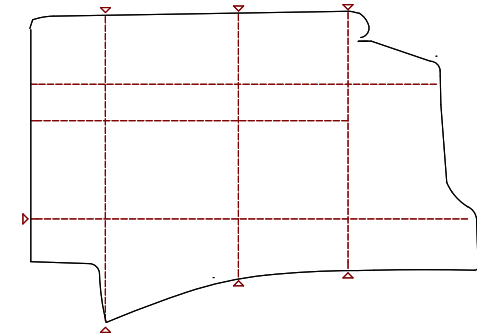
Temporal Layer
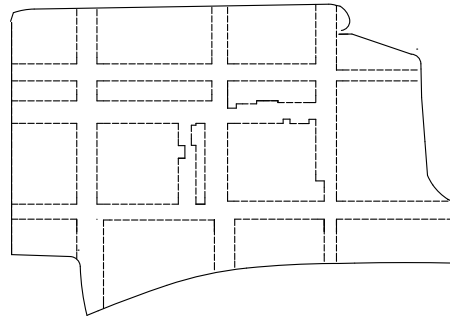
Characters
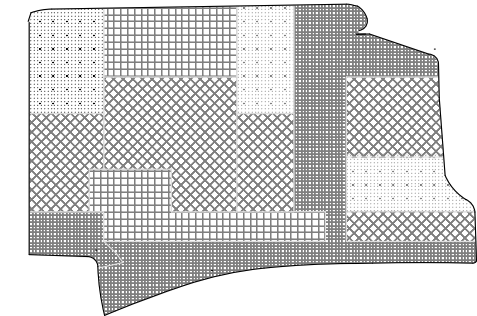
A challenging aspect has been finding a middle road between the old and new buildings. I decided to leave the existing axis and use them as a starting point for the design. By breaking down the analysis into their bare minimum we can translate them and get the initial design.

This is approach is a mix of the first two approaches in a sense that it builds upon the first one and tries to subtly imply the diagonally axes.

Fig 144. Leftover elements from current campus

Translations

Superimposition

Inspired by the Tschumi's use of superimposition, these diagrams suggest our perception of space. Through the non-physical context we can derive new meanings or understanding of uses, space and characteristic.
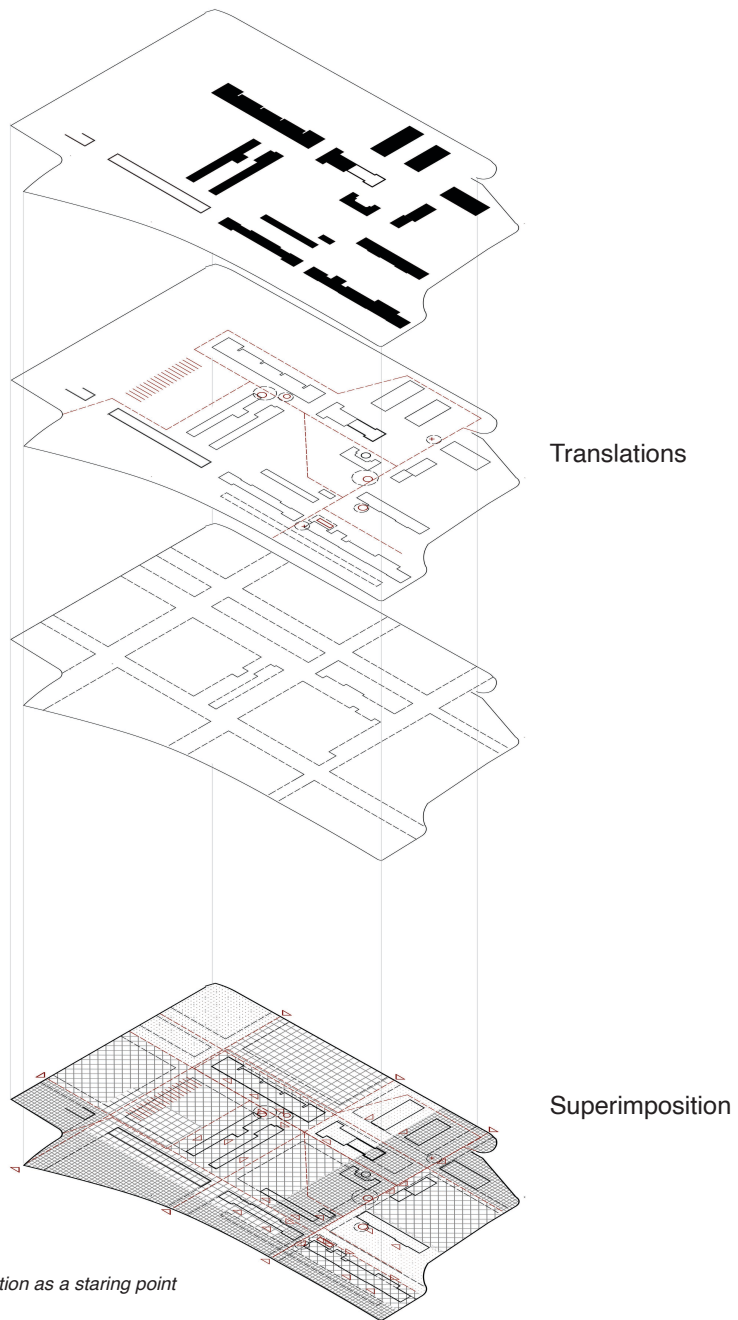
Fig 145. Superimposition as a staring point
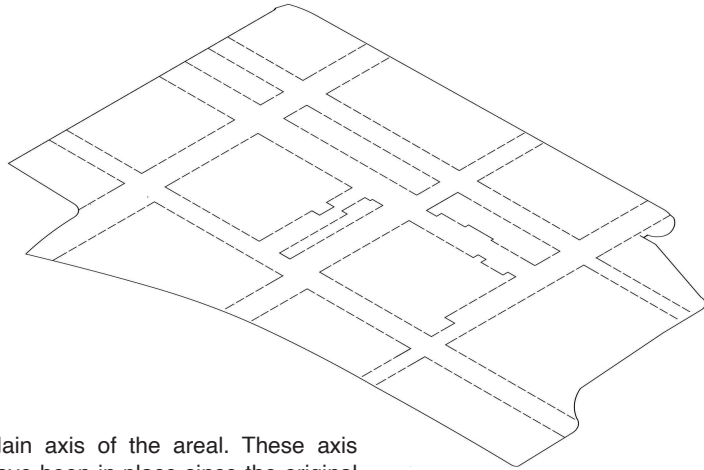
Buildings

Main axis of the areal. These axis have been in place since the original construction in the 19th century.
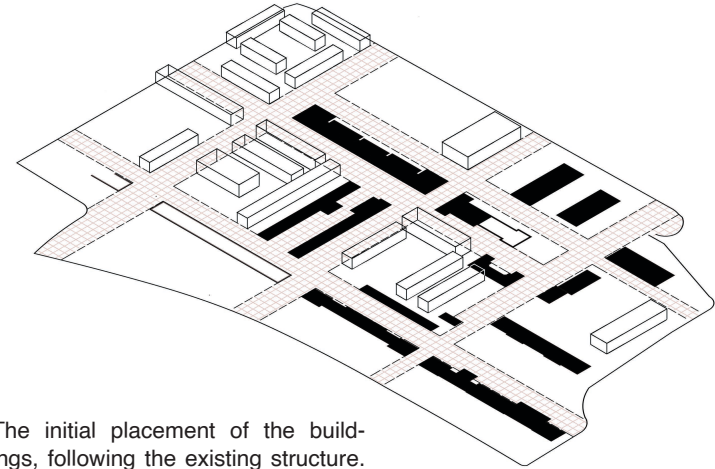
The initial placement of the buildings, following the existing structure. Longitudinal buildings parallel to one another. This was influenced by approach 1.
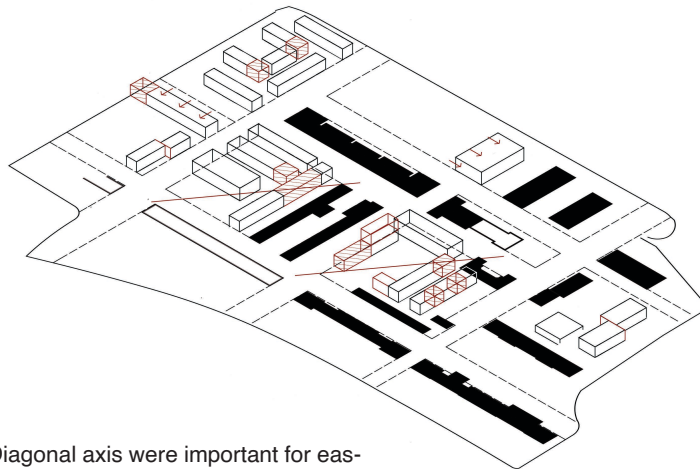
Diagonal axis were important for easier access of different parts of the campus. Which led to more dynamic spaces.
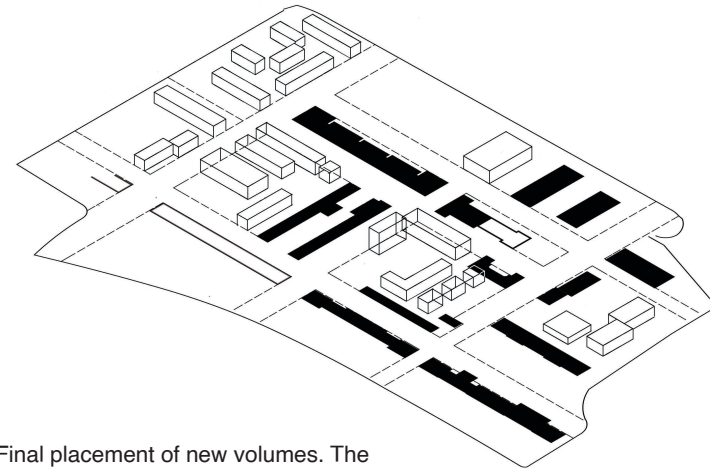
Final placement of new volumes. The height of these new volumes has never surpassed the existing buildings.

Fig 146. Placement of volumes

Zones
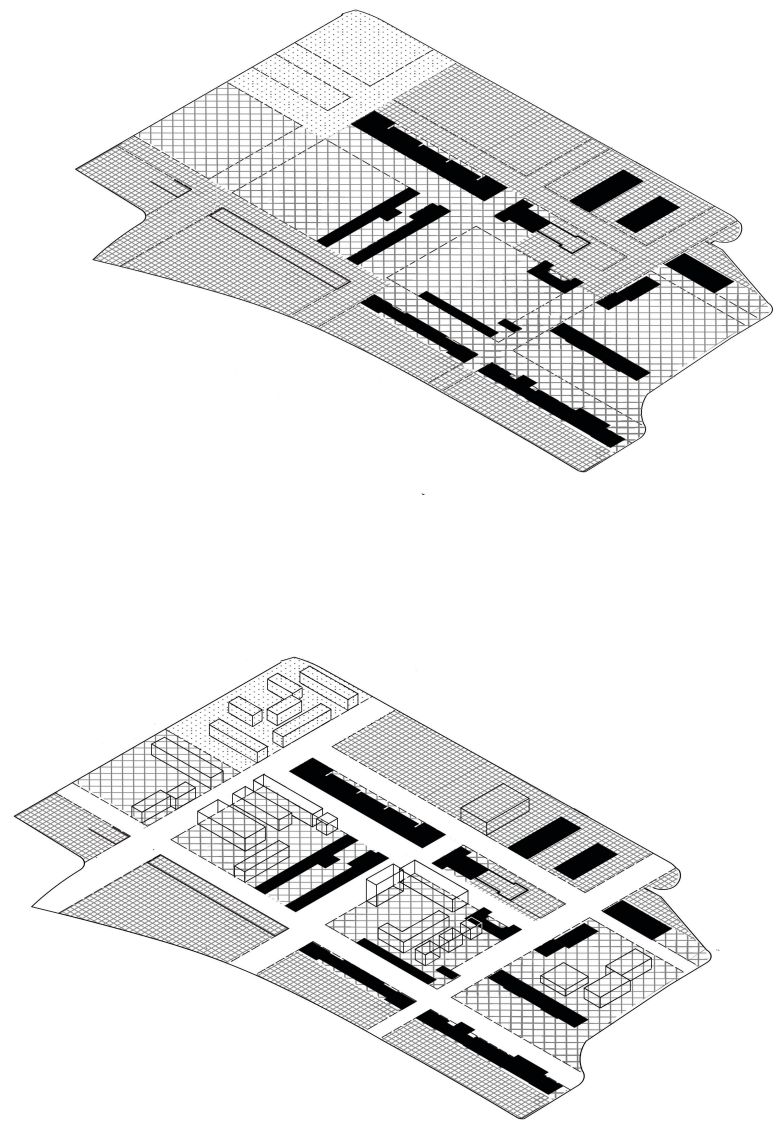
Residential

Education

Culture/Sport

Fig 147. Zones divided by main functions

NOW

Carelessness

Divided

Invisible

Ruins

FUTURE

Step 1
New Access

Step 2
Unify

Step 3
Old Axis

Step 4
Fill the void

Fig 148. Process

New Access Points

One of the disadvantages of this site is its introverted identity. It is enclosed by streets with heavy traffic on the north and south side and is even further enclosed by American Embassy on east side.

The Faculty of Mechanical Engineering and Natural Science is right across the main road.

As one of the solutions to even out the distribution of people on the site a new crossing is proposed. Even though these faculties aren't part of the Campus through new crossing I hope to encourage students of these faculties to spend more time at the campus.
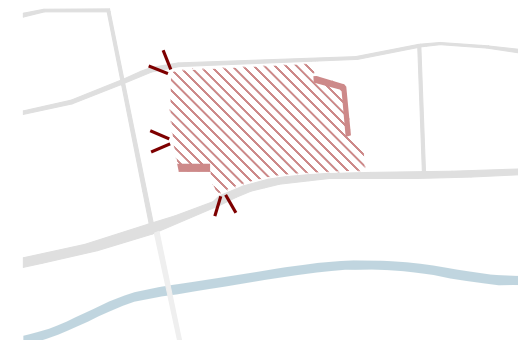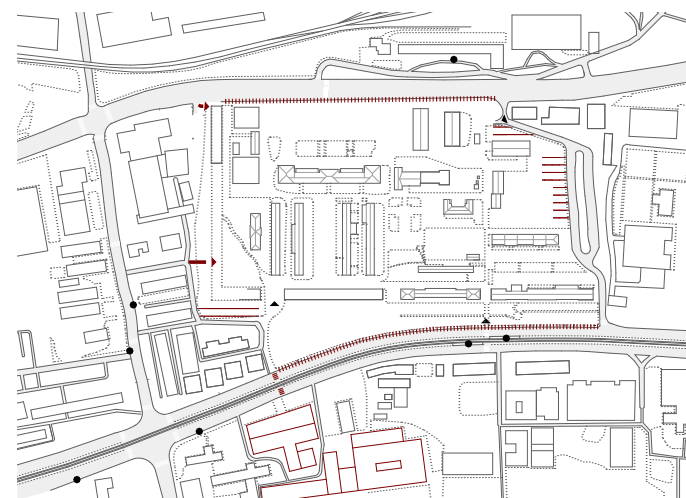
New solutions:

1. New crossing in front of Faculty of Mechanical Engineering and Faculty of Natural Sciences.

2. Taking down of fences on the north and south side

3. New defined entrances on west side

4. Parking spaces on the outside of the campus

5. Cars are completely removed from the inside of campus (Delivery routes and routes for fire department are accessible)
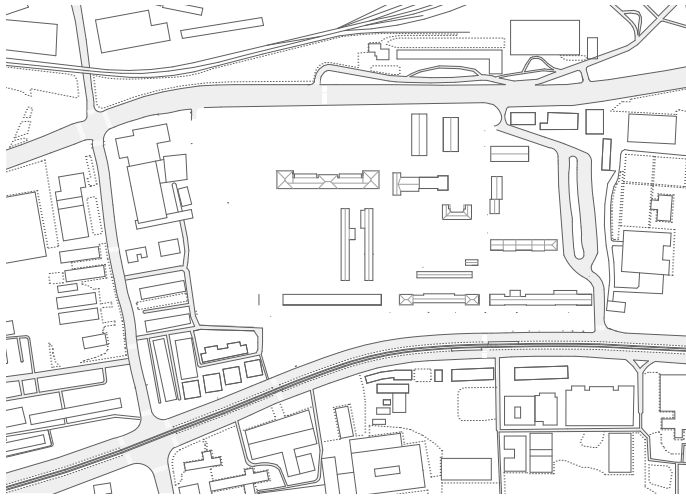
Situation with existing buildings, once the damaged buildings are removed.
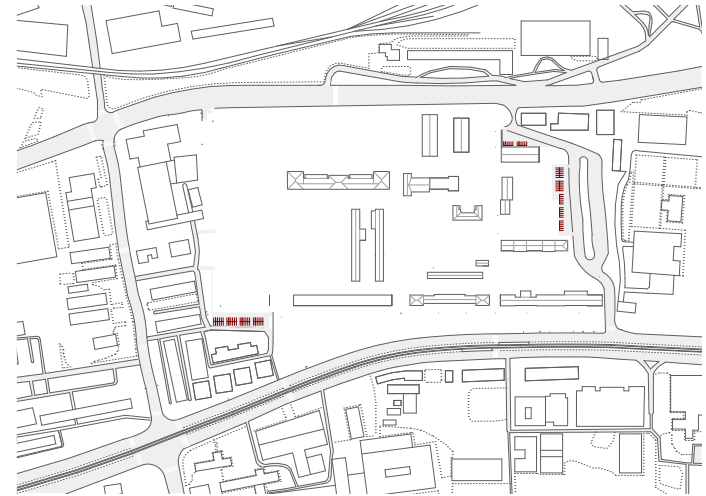
New parking spaces at the out-sides of the campus.
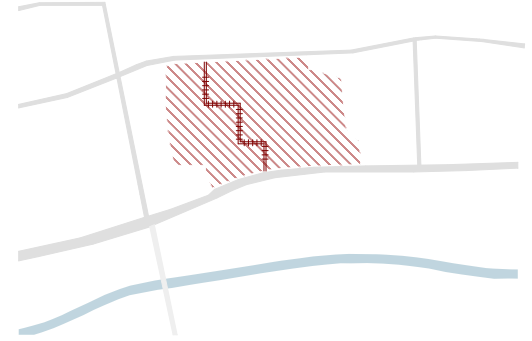
First zone
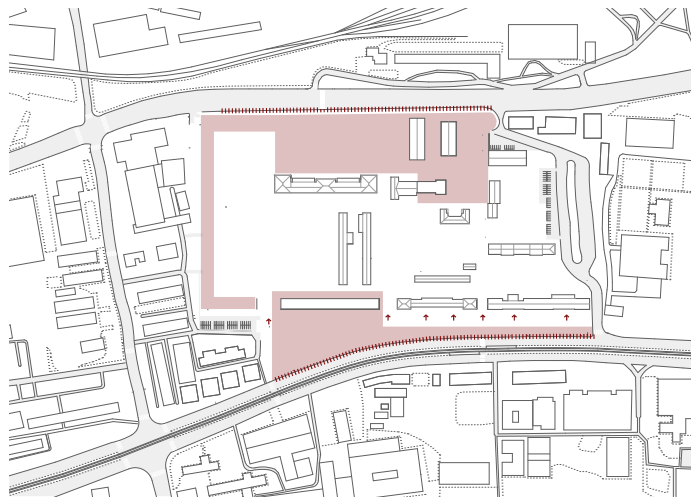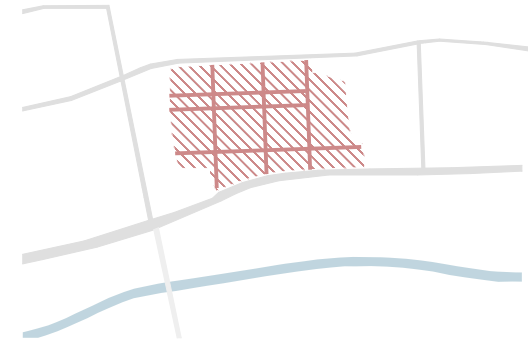
First zone is cultural and recreational zone. This is found on the north and south side of the campus. This zone is accessible for everyone. The reason why this is on the outside of the campus as opposed to the education zone is because through this citizens are encouraged to visit the site. It creates better connection with the city.
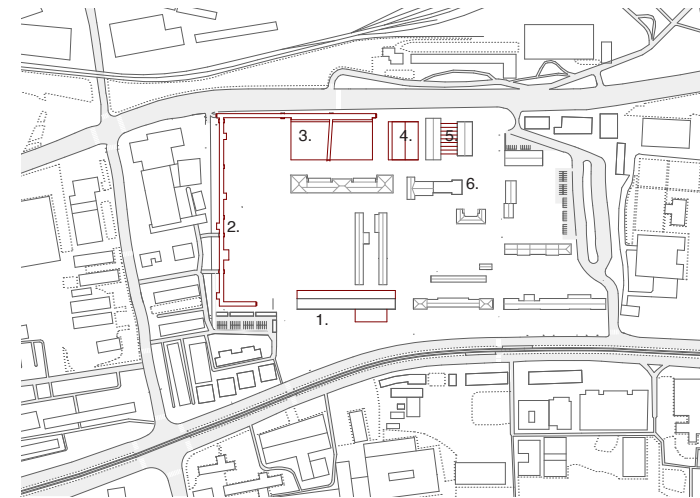
New buildings or elements:

1. Cultural center
2. Elevated promenade
3. Sports field
4. Swimming pool building
5. Restaurant and mensa
6. Market

Second zone
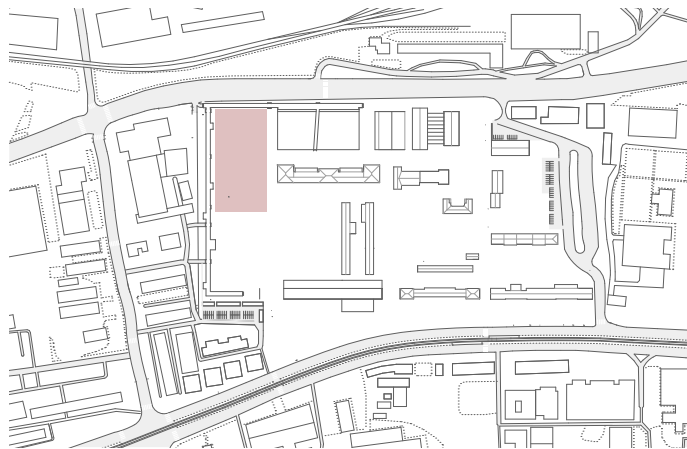
Second zone is residential. This zone is influenced by nearby housing from socialist times. It is placed in the most far off

corner of the campus in an attempt to create more isolated or privet zones from rest of the campus.
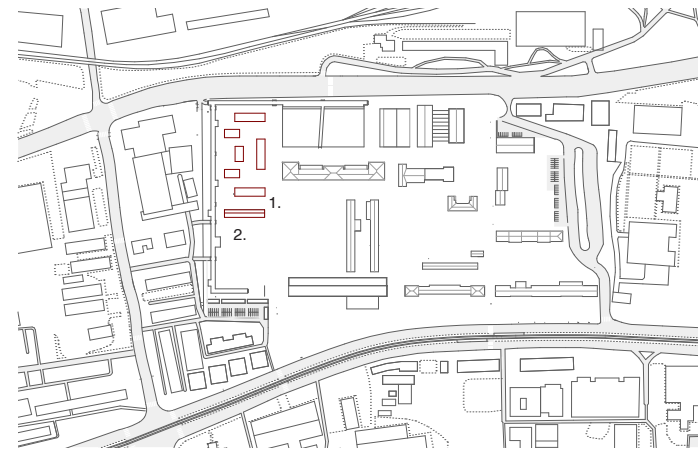
Student housing with nine new buildings that hosts 144 rooms. Each room is used by two students. The ground floor is used for different public activities.

1. Student housing
2. Fitness and center for student dorm residents

Third zone
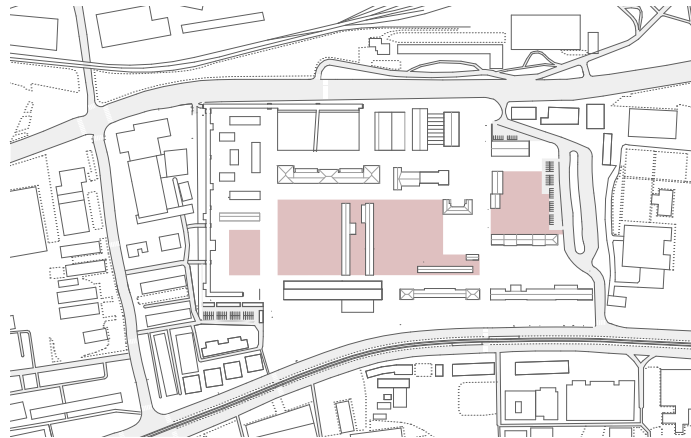
Third and largest zone is the education zone. This zone is situated in the middle of the campus and its placement is heavily influenced by the existing buildings.

Each new center should have different character. This zone is the core of the campus.
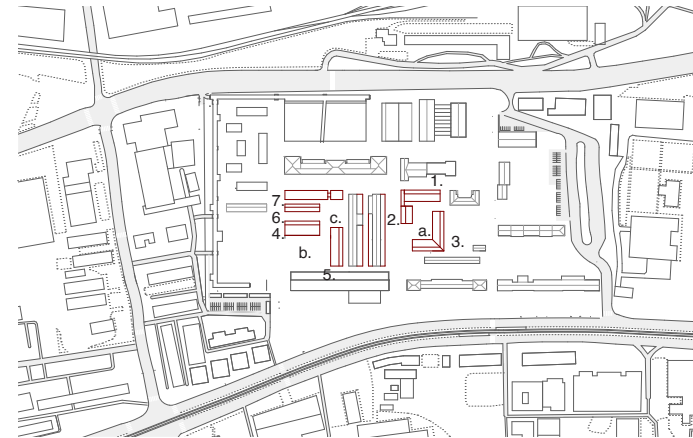
New buildings:

1. Faculty of political science
2. New auditorium
3. Faculty of Law
4. Music Academy
5. Performing Arts Academy

6. Workshop and seminar
7. Study and co-working space

New urban squares:
a. Forum
b. Performance
c. Secluded / Water element

New buildings:

1. Faculty of Economy
2. Faculty of Forestry
3. Botanical Garden

New urban squares:

a. Botanical garden
b. Flower garden
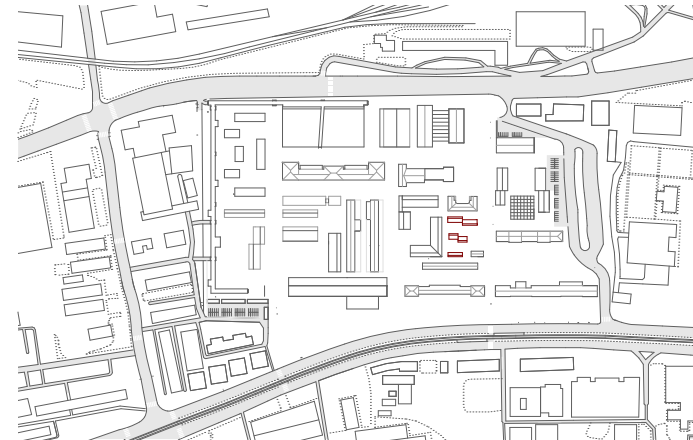
Third and largest zone is the education zone. This zone is situated in the middle of the campus and its placement is heavily influenced by the existing buildings.

Fig 149. Design process

Design

Fig 150. Situation Scale 1 : 2 500

N

25   50   100
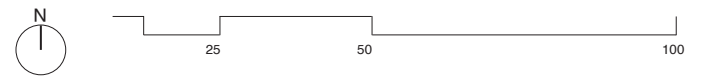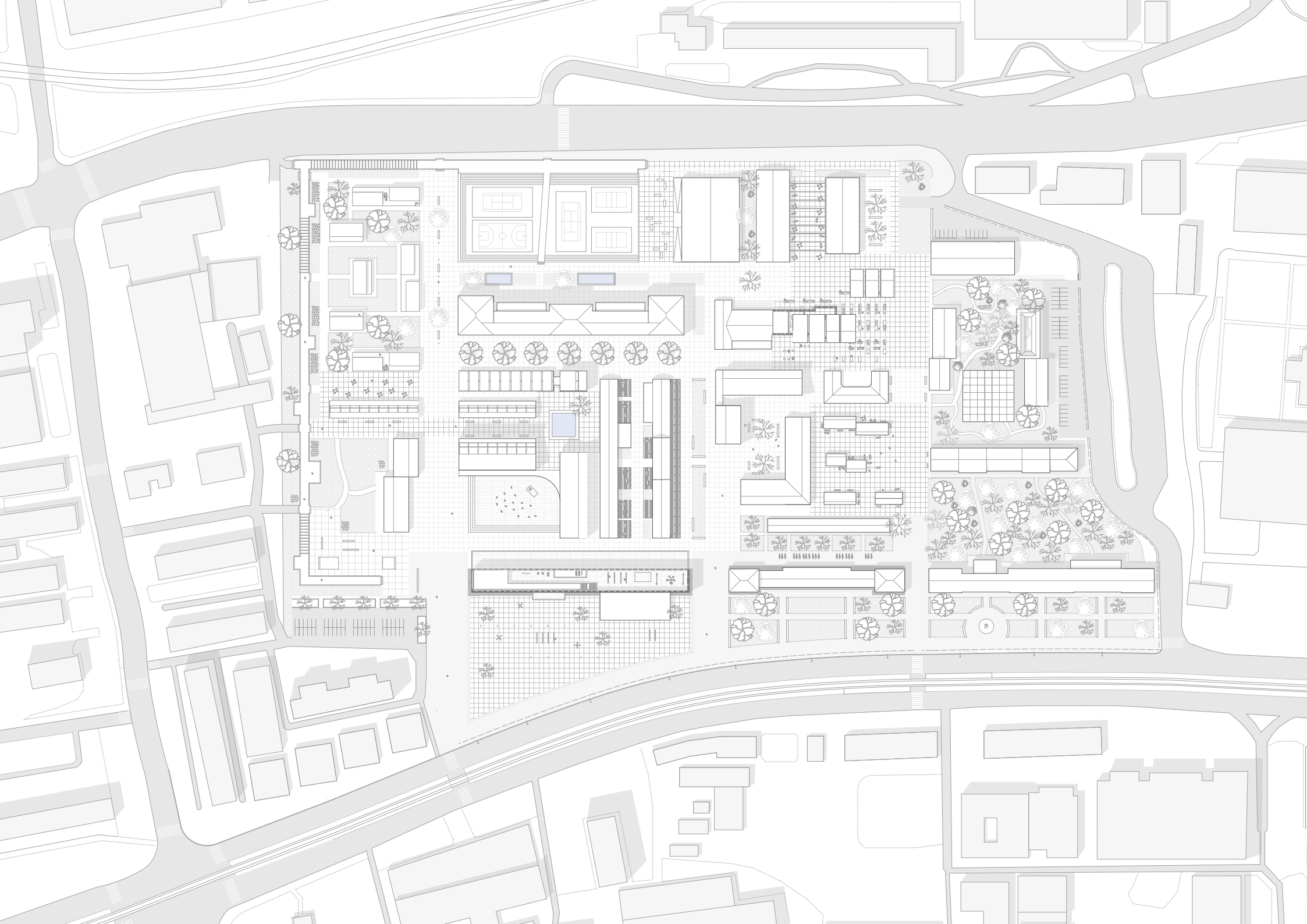
Reinterpretation

The ruined buildings are a result of human effort and should be analyzed and reinterpreted for future designs. First step of this process has been done by city of Sarajevo, when they decided to turn the old military barracks into a University Campus. In that way they freed the area of its political symbolism and have given it a function that is focused on future. Of course, just like with anything else, the process was only halfway done. A lot of physical ruins still remain. One of Woods hopes for the city was that the reconstructed buildings would interact or exist within and next to ruins. Important part is to integrate people's experiences into new designs.

One of the ways to move forward is to partially keep the ruins and add a new function that answers new and modern needs of users. This, of course, is only one of the possible solutions or conclusion of a post war reconstruction debate. Many others meanings or solutions could emerge.

Specific to the site, I decided to focus and reinterpret three areas. I didn't keep every damaged building. (like old Sports Hall or old Infirmary). Full implementation of Wood's third principle would clash with the needs of the University. The solution was to focus on cultural and recreational areas. These new functions are also not strict, meaning that in the future can be easily changed or adapted for new needs or purposes.
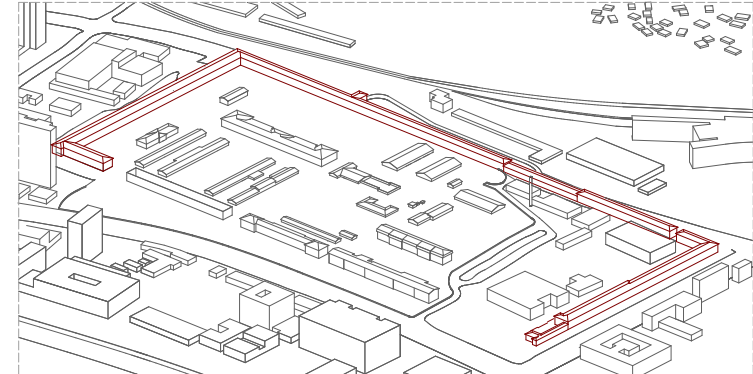
Fig 151. Before - Long sequence of buildings around three sides of the area / Completely destroyed
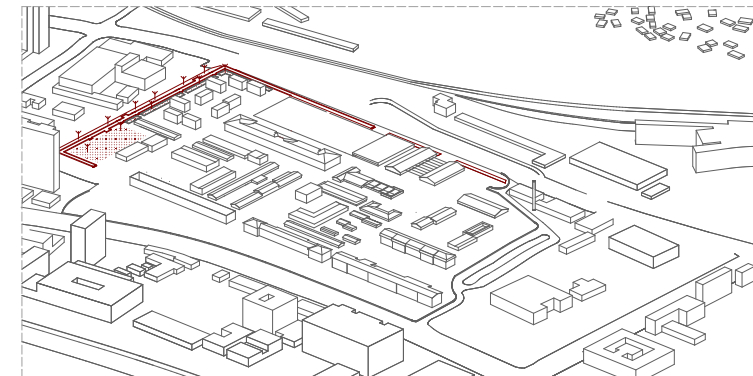
Fig 152. Now - Elevated promenade following the old forum as much as possible

One of the most prominent elements of the original structure was the extremely long sequence of building which encapsulated most of the area. This element gave the "fortress" feeling to the original structure. Only few walls remain today. As a reinterpretation I propose an elevated walking promenade which follows the original shape as much as possible. It is surrounded with trees and plants. It encapsulates and unites the area but unlike the original structure it allows easy access to the campus.
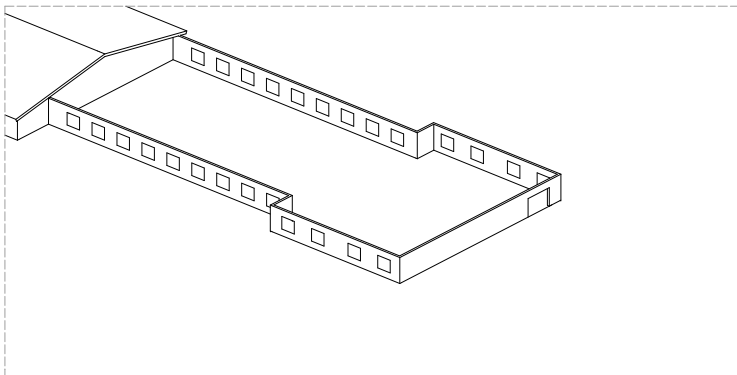
Fig 153. Before - Production Engineering Cabinet / outside walls remain
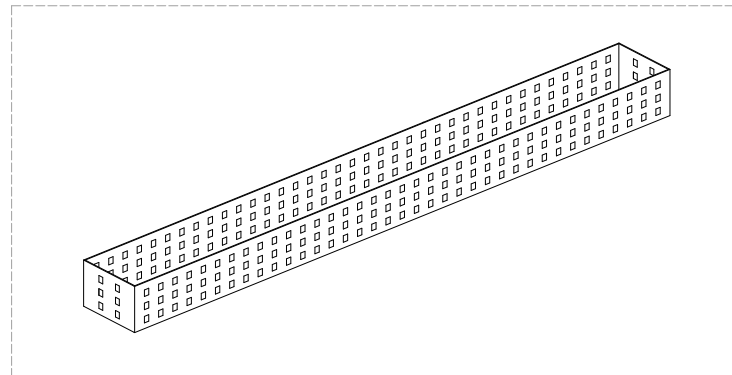
Fig 155. Before - Accommodation / Only outside walls remain
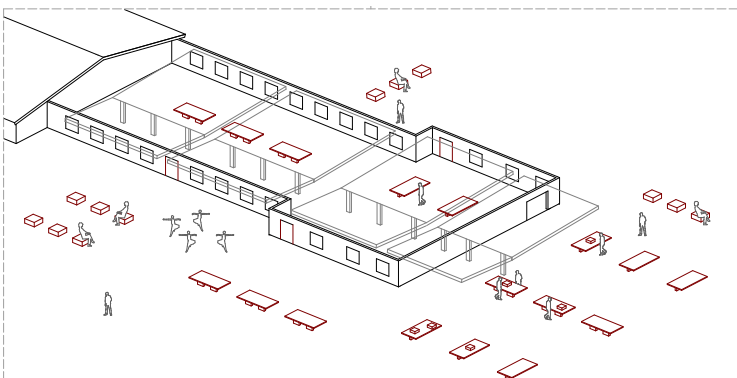
Fig 154. Now - Market and hang out space

Fig 156. Now - Cultural center

This area is reinterpreted as market or a hang out space on weekend evenings. It is placed on a meeting spot of two main axis. Easily accessible for students and other citizens. The function is not fixed. It is something that can be changed for future needs. The walls provide a central and enclosed space of the square. A roof structure is added to provide shelter from rain and sun.

Similar example is the old accommodation which has given a new function of cultural center. The inside is left open, while new building is added in front. The building has been important for the site, since it was one of the frontal buildings, even though architecturally it doesn't carry a lot of meaning. Now, it is structurally enforced and few changes were added to the windows. This area is something usually associated with fear and through new cultural purpose we can change that.

Process

Phase 1 - Clearing up ruins
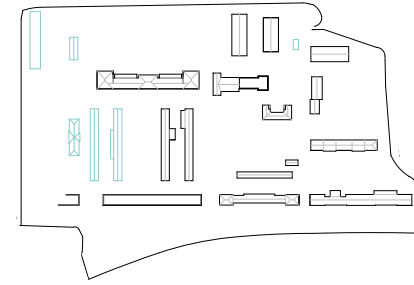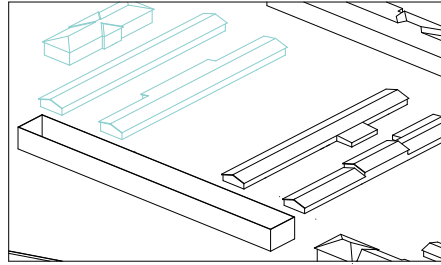
Phase 2 - Redesigning remaining buildings
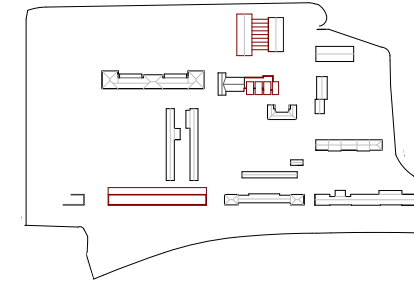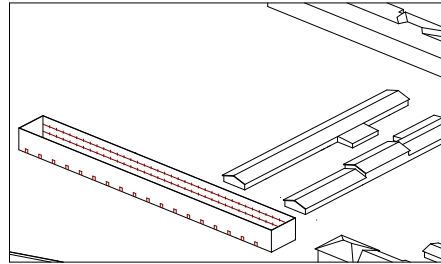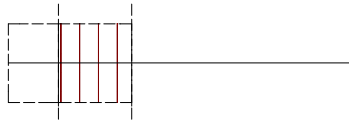
Phase 3 - Main University Buildings
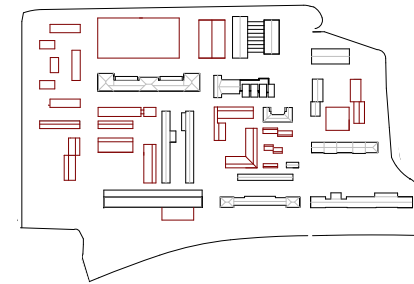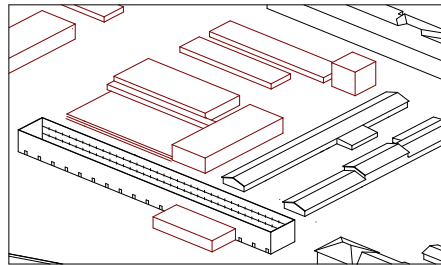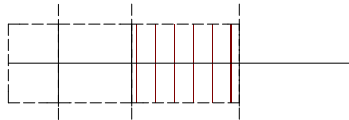
Phase 3.5 - Furniture outside / Details
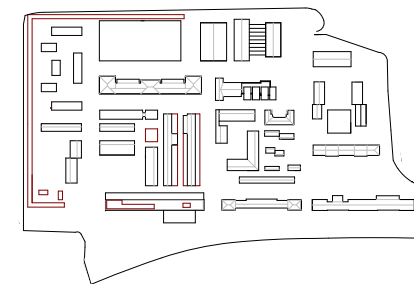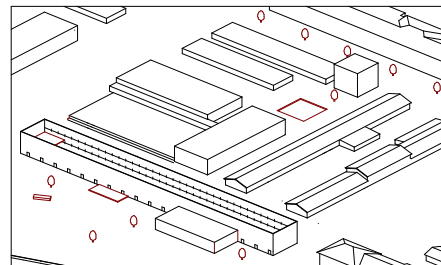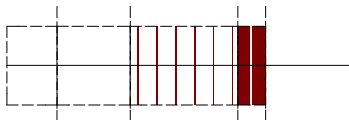
Phase 4 - Possible new faculties

Phase 4.5 Different urban parks
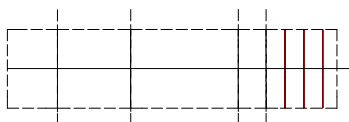
There is a possibility for a denser campus. If a new faculty needs to move into campus, there is a possibility next to the Faculty of Economy. New auditorium or more workshop places can be placed next to current workshop places and a building next to a swimming pool can host a new public function. If necessary, there is space for more students to move in. This is one of possible scenarios for the future, if the current state becomes too small for the needs of future students. It is highly possible that this will happen, since the population of Sarajevo has been on a rise.

People and cities grow and change through time and that should be reflected in architecture of the city. We don't know what future holds, that is why the reinterpreted buildings have a non-fixed function. Something that can be changed according to the needs of future students. This is a phase that might or might not happen, but the possibility is there. The areas can be re-purposed as party space, ice rink, orchid and many others, depending on the needs of future citizens and students.

Fig 157. Phases
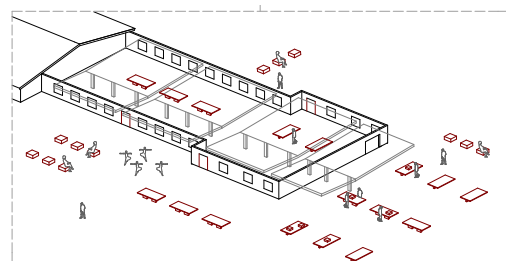
Market
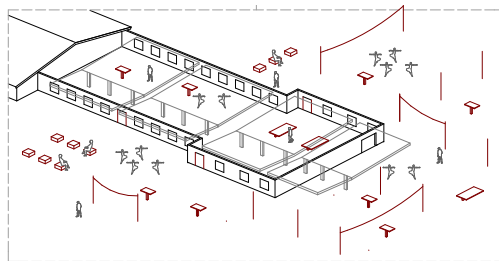
Party
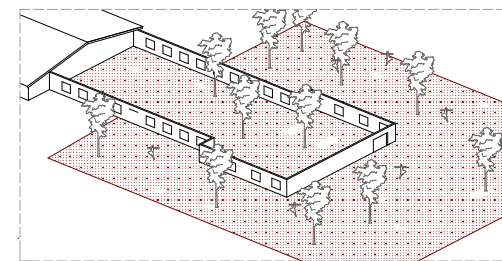
Orchid
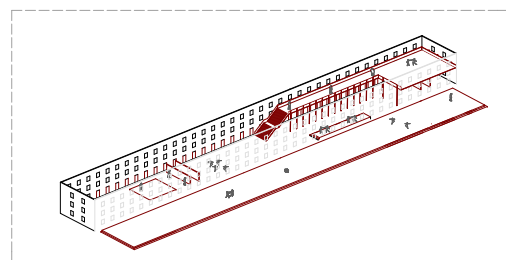
Culture center
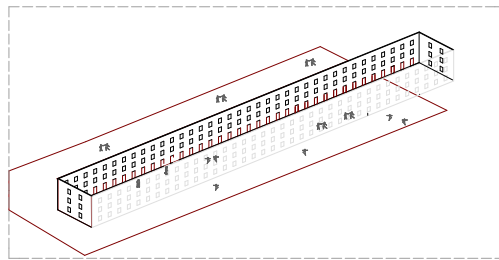
Ice - rink

Analysis

Largest green spaces are distributed on the east and west sides of area. Green spaces act like a buffer zone between the American Embassy on the east side and car repair shop on the west side. Green spaces in the middle of the campus serve more as a directional green.

The buildings are never higher than the highest point of the original buildings, in order to create a coherent area.

The emphasis was on activating ground floor on existing buildings as much as possible.
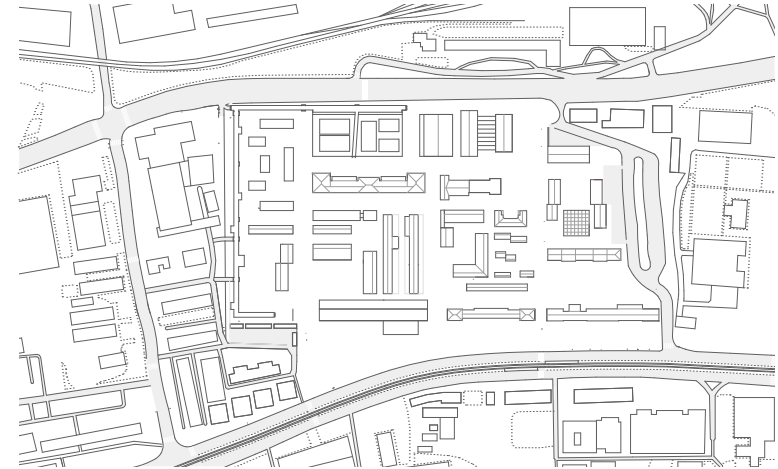
Fig 158. New situation
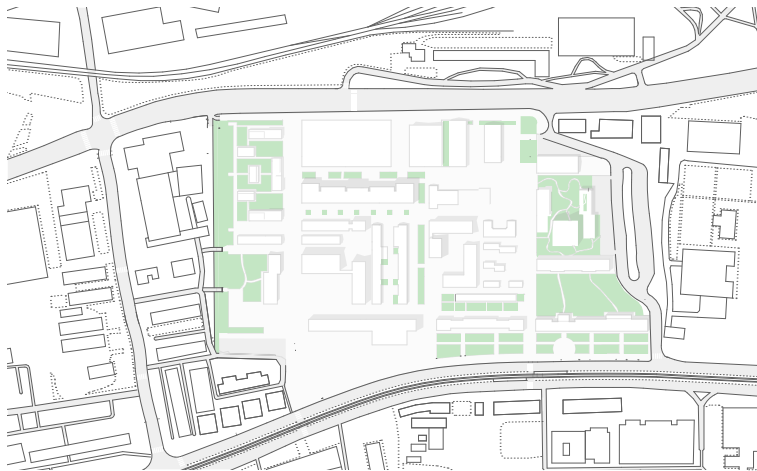
Fig 159. Green surfaces

Fig 160. Trees
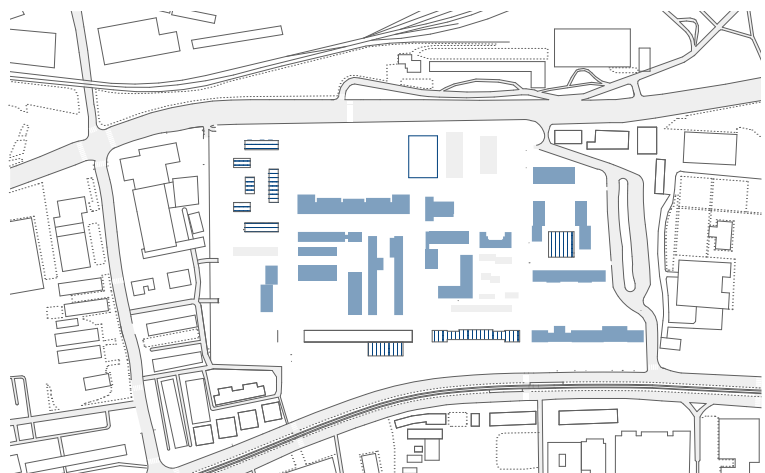
Fig 161. Program

Residential   Culture   Education   Gastro   Store
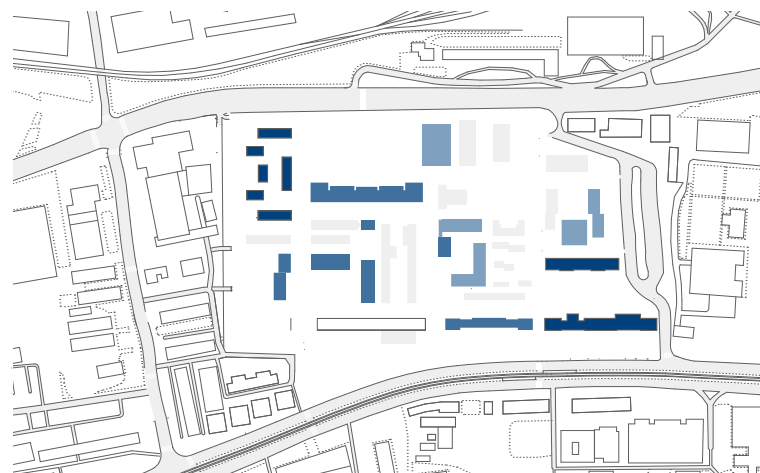
Fig 162. Height

4 floors   3 floors   2 floors   1 floors
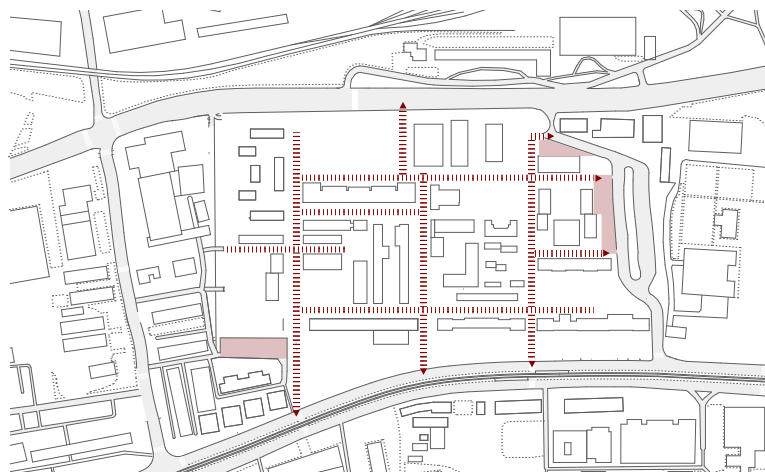
Fig 163. Parking and fire rescue
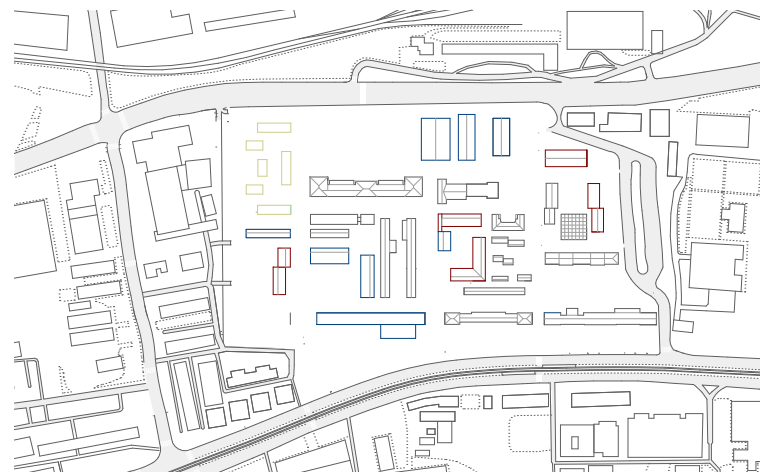
Fig 164. Ground floor

Public activities
for students   Offices   Public activities
for everyone

Program Distribution - Buildings

Program		Levels	Volume
1/2. Faculty of Transportation, Criminology	2101 m²	4	8404 m³
3. Library and Oriental Institute	1265 m²	3	3795 m³
4. Cultural Center	2492 m²	1	2492 m³
5. Faculty of Electrical Engineering	1245 m²	4	4980 m³
6. Faculty of Forestry	850 m²	2	1700 m³
7. Botanical Garden	900 m²	1	900 m³
8. University Administration	651 m²	1	651 m³
9. Center for Interdisciplinary Studies	1000 m²	1	1000 m³
10. Storage	598 m²	1	598 m³
11. Shops	729 m²	1	729 m³
12. Lab	547 m²	1	547 m³
13. Faculty of Law	1181 m²	2	2362 m³
14. Auditorium	345 m²	3	1035 m³
15. Faculty of Political Science	772 m²	2	1544 m³
16. University Administration	744 m²	1	744 m³
17. Restaurant	900 m²	1,5	1350 m³
18. Mensa	1100 m²	1,5	1650 m³
19. Swimming Pool	1733 m²	2	3466 m³
20/21. Faculty of Pharmacy and Agriculture	2727 m²	3	8181 m³
22. Study Area / Co-working Space	895 m²	1,5	1343 m³
23. Workshops / Seminar	465 m²	1	465 m³
24. Music Academy	862 m²	3	2586 m³
25. Performing Arts Academy	750 m²	3	2250 m³
26. Institute for Biotechnology	1018 m²	1	1018 m³
27. Institute for Genetics	1130 m²	1	1130 m³
28. Faculty of Economics	803 m²	2,5	2008 m³
29. Fitness/Student Dorm center	570 m²	1	570 m³
30. Student Dorms	1950 m²	5	9700 m³
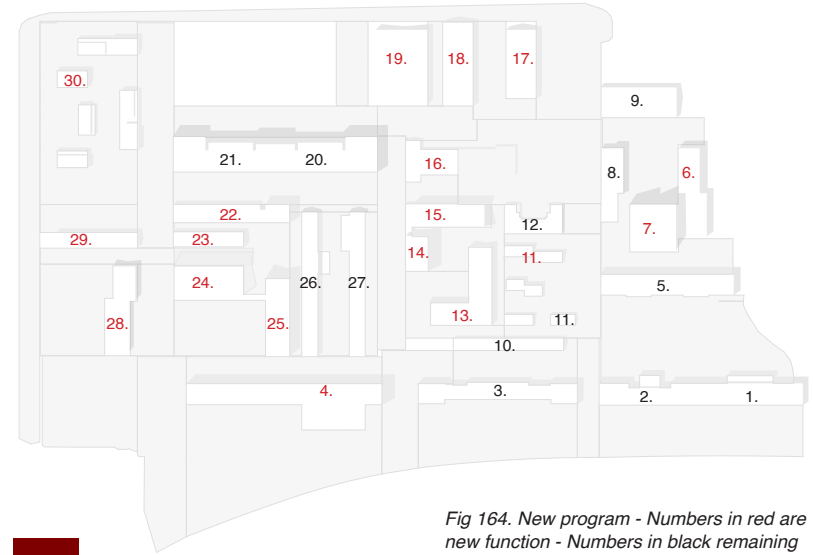
Fig 164. New program - Numbers in red are new function - Numbers in black remaining functions

62 %	12 %	6 %	5 %	15 %
Education	Culture	Gastro	Sport	Residential
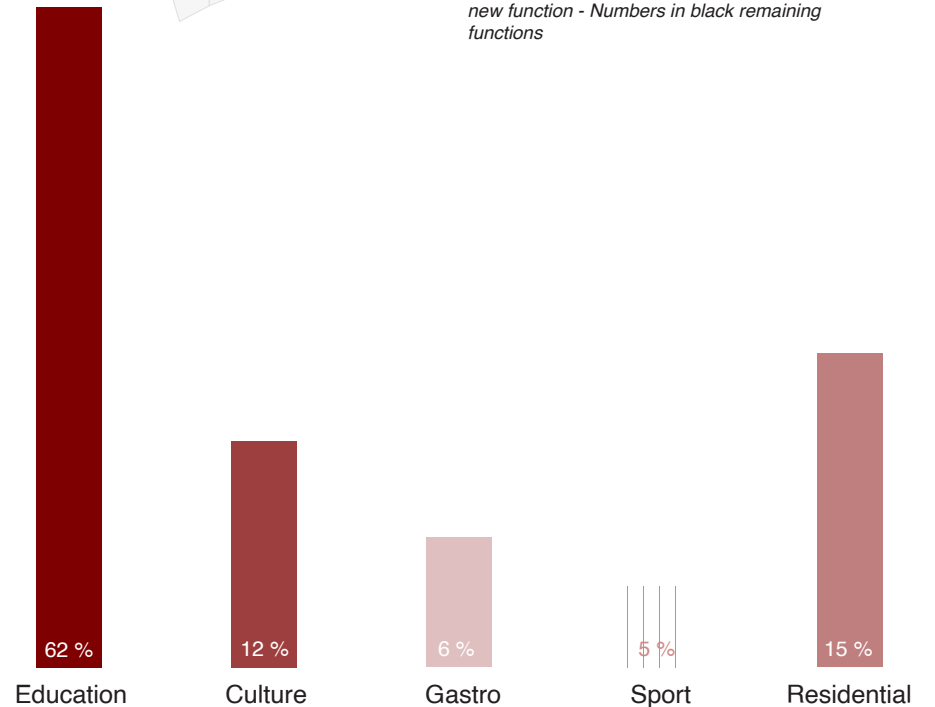
Fig 165. Distribution of different typologies

Program Distribution - Open Space

1. Access to Uni

2. Entrance

3. Reading Garden

4. Bike Storage / Rent

5. Shops

6. Botanical Garden

7. Market / Time Out

8. Mensa / Restaurant

9. Elevated Promenade

10. Urban Park

11. Open Sport Field

12. Flower Garden

13. Forum

14. Green Strip

15. Punctual Trees

16. Open Study Area

17. Secluded Garden

18. Performance Stage

19. Cultural Center

20. Skater Bowl

21. Flower Garden

22. Bar

23. Open Area, Outdoor Fitness
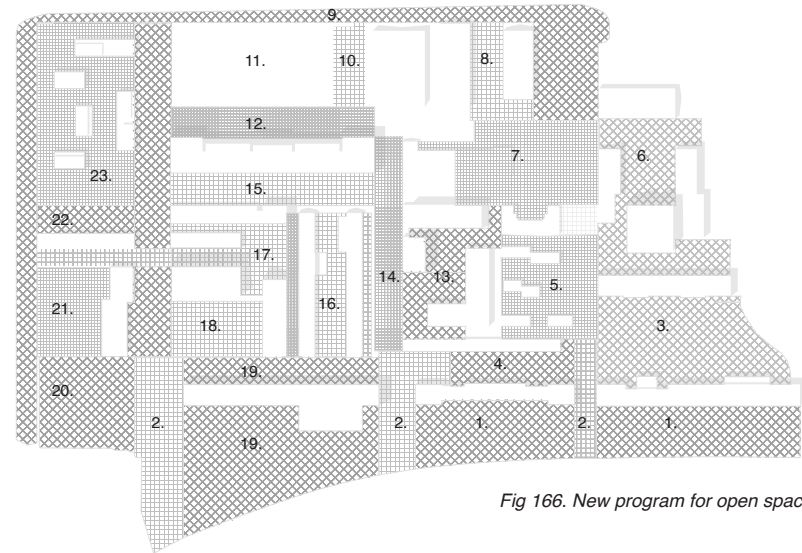
Fig 166. New program for open spaces

Program Distribution - Open Space

1. Access to Uni
Redesigning the green for more direct access to the buildings, by new smaller paths. Tito statue has remained.
Element: Trees, new paths

2. Entrance
Directed area for the entrance to the campus
Element: Light elements and benches

3. Reading garden
Serves to connect the two university buildings and to create a puffer zone from the embassy. A quieter place to get together, with trees at distance to accommodate hammocks.
Element: Trees, benches

4. Bike storage
Bike parking places and Nextbike rental station.
Element: Bikes and tress

5. Shops
Main commercial area of the campus, in between four faculties and on the main axis. It is easily accessible to anyone even to people only passing through to the train station. Mix of shops and bars. Possibility to get denser in future.
Element: Crates, tables, chairs

6. Botanical garden
Free space planted with different plant species, placed in front of the University of Forestry. Winding paths for exploration.
Element: Trees, winding paths, plates with plants explanation

7. Time Out/Market
During the weekdays serves as a place for students to hang out after university hours. Placed between mensa and shops. On weekends it is available for locals as a market space.
Element: Crates, tables, chairs

8. Mensa/Restaurant
Outdoor space for newly renovated buildings of mensa and restaurant. Available for both students and public. Built close to the market and recreational fields.
Element: Furniture, chairs, tables

9. Elevated promenade
Encircles the area. It offers a view of the areal.
Element: Elevated platforms

10. Urban park
Outdoor space hanging out. Close to bar.
Element: movable sitting elements

11. Sports fields
Available for both students and public. Slightly under the surface level.
Element: Surface intervention, fields

12. Green / Water Strip
A puffer zone between sport (recreational elements) and University building. Place for contemplation and relaxing.
Element: Flower beds

13. Forum
Placed at the center of the campus. This open area serves as a central announcement area, for public speaking and events. With movable parts to create different spaces for different discussions
Element: Surface intervention, speaking platforms

14. Green Strip
Free space with water elements, connecting the more active areas
Element: Green strip, benches

15. Punctual trees
This area serves as connecting zone for the areas around it. It is placed on the connection spot of two main axis and it serves to provide direction to neighboring zones. Trees are placed in strict order with sitting places around them.
Element: Trees and benches
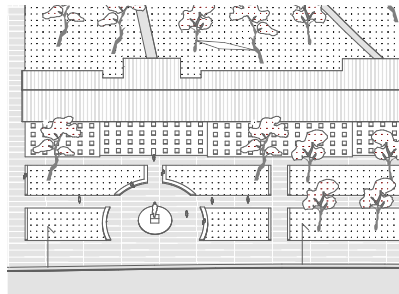
Fig 167. Access to Uni (Nr.1)
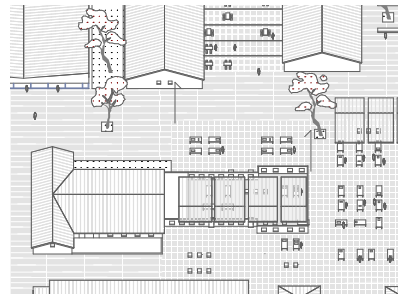
Fig 168. Market place (Nr.7)
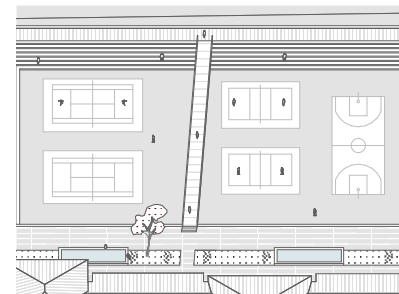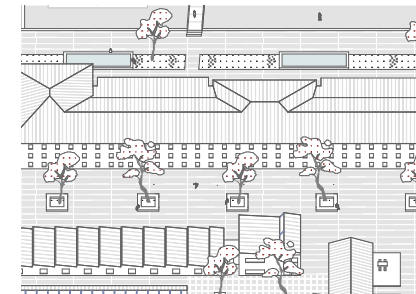

Fig 169. Sports fields (Nr.11)

Fig 170. Punctual trees (Nr.15)

16. Open study area
This area is envisioned as open workshop and study area with some green elements. Serves as connection between two buildings. The area is somewhat secluded so it offers quieter area for studying.
Element: Tables, chairs, trees

17. Secluded garden
Space for contemplation, more closed off than other free spaces. Close to workshops.
Element: Water element

18. Performance stage
New performance area enclosed by two academies and in close proximity to cultural center. Adaptable place like forum. This area is envisioned as a center of western area of campus.
Element: Platform

19. Cultural center
Envisioned as a new draw point, with no green around it. It provides view of the campus. Consisting of many different smaller performance and exhibition areas and a experimental places for music and theatre academy students.
Element: Furniture

20. Skater bowl and Graffiti Area
Urban park with walls for graffiti and skater elements. Serves as an alternative entrance to the areal from the residential area. David Bowie mural is preserved.
Element: Skater bawls and walls

21. Flower gardens
A puffer zone between university buildings and residential area.
Element: Flower beds
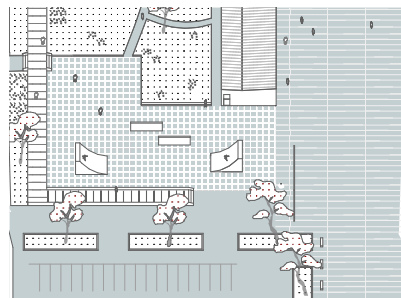
22. Bar
On a meeting point of different axis. Close to student dorms, workshops and creative commons. Place for events and party.
Element: Furniture

23. Outdoor Space
Green zone for residents of student dorms with outdoor fitness elements.
Element: Trees and outdoor fitness

24. Free Area
Buffer zone between residential zone and sports fields
Element: Benches and trees

Fig 174. Areas that are active during night

Fig 175. Areas mostly for students
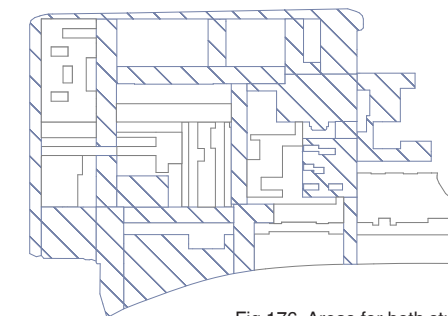
Fig 176. Areas for both students and other user groups

Fig 171. Secluded garden (Nr.17)

Fig 172. Skater bowl (Nr.20)

Fig 173. Outdoor space and fitness (Nr.23)

Cultural center

Fig 177.

Cultural center

Fig 178. View from the main street

Axonometric
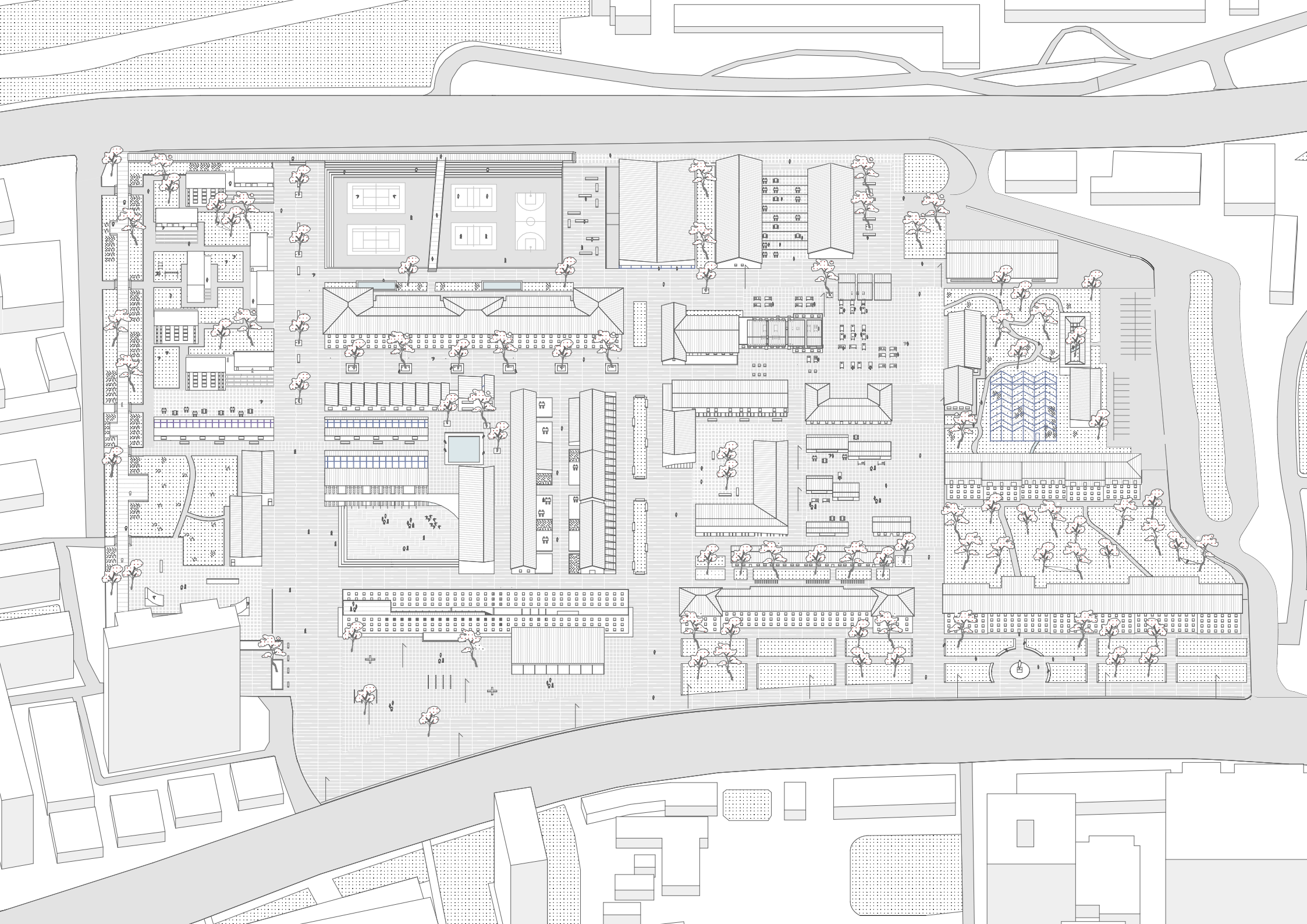
Fig 181.

Material Concept
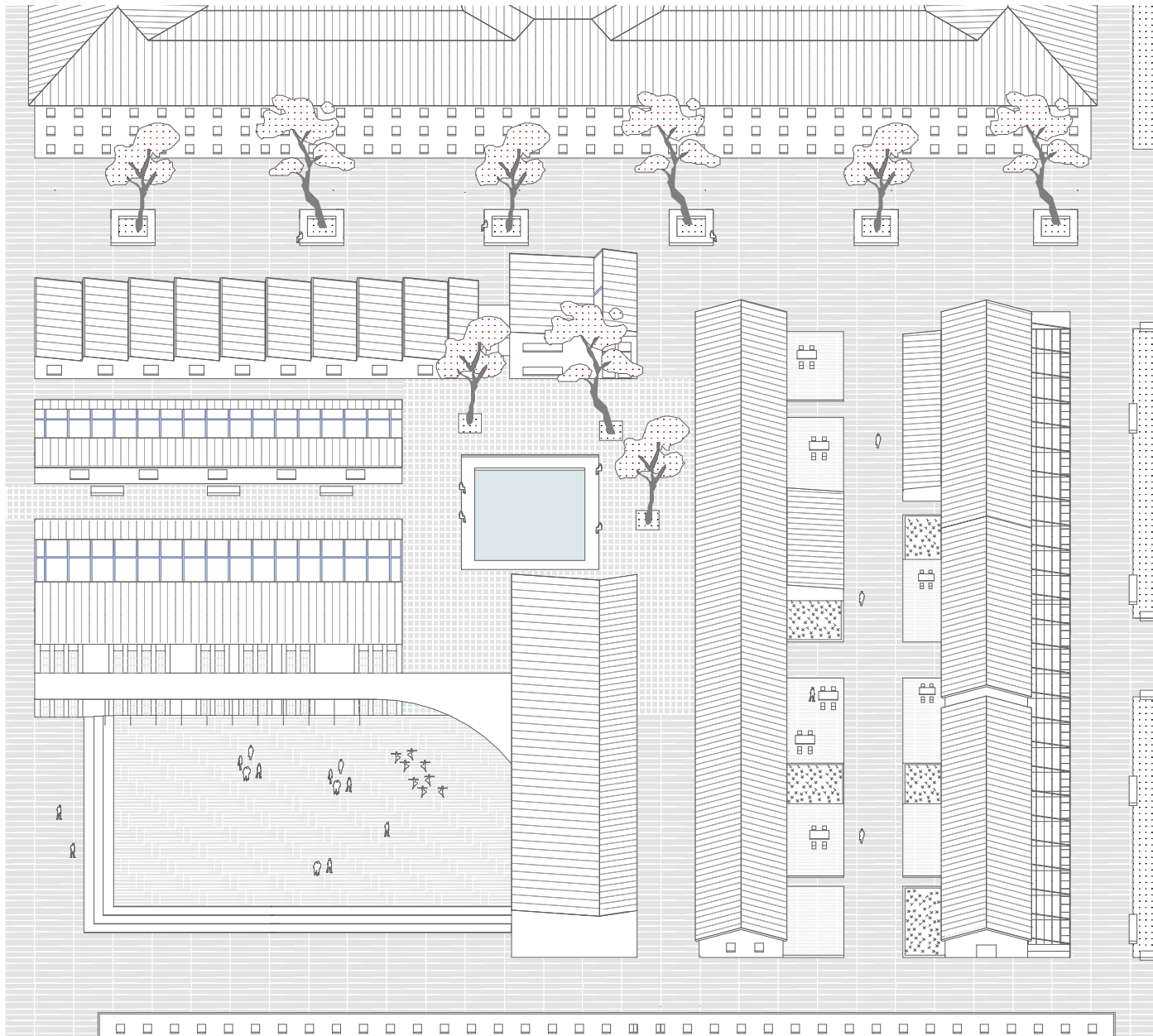
Connecting / In between

Events / Squares
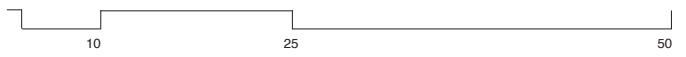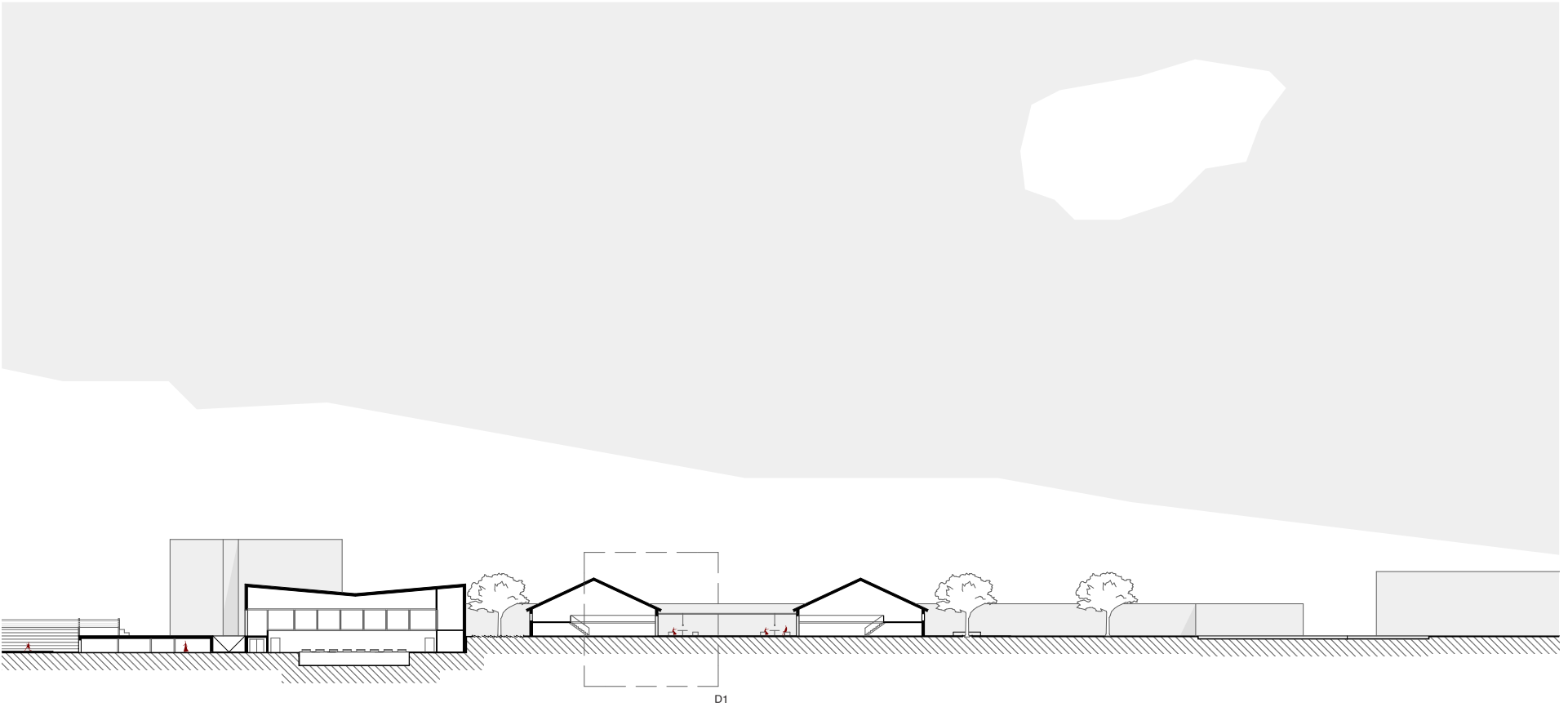
Wood platforms
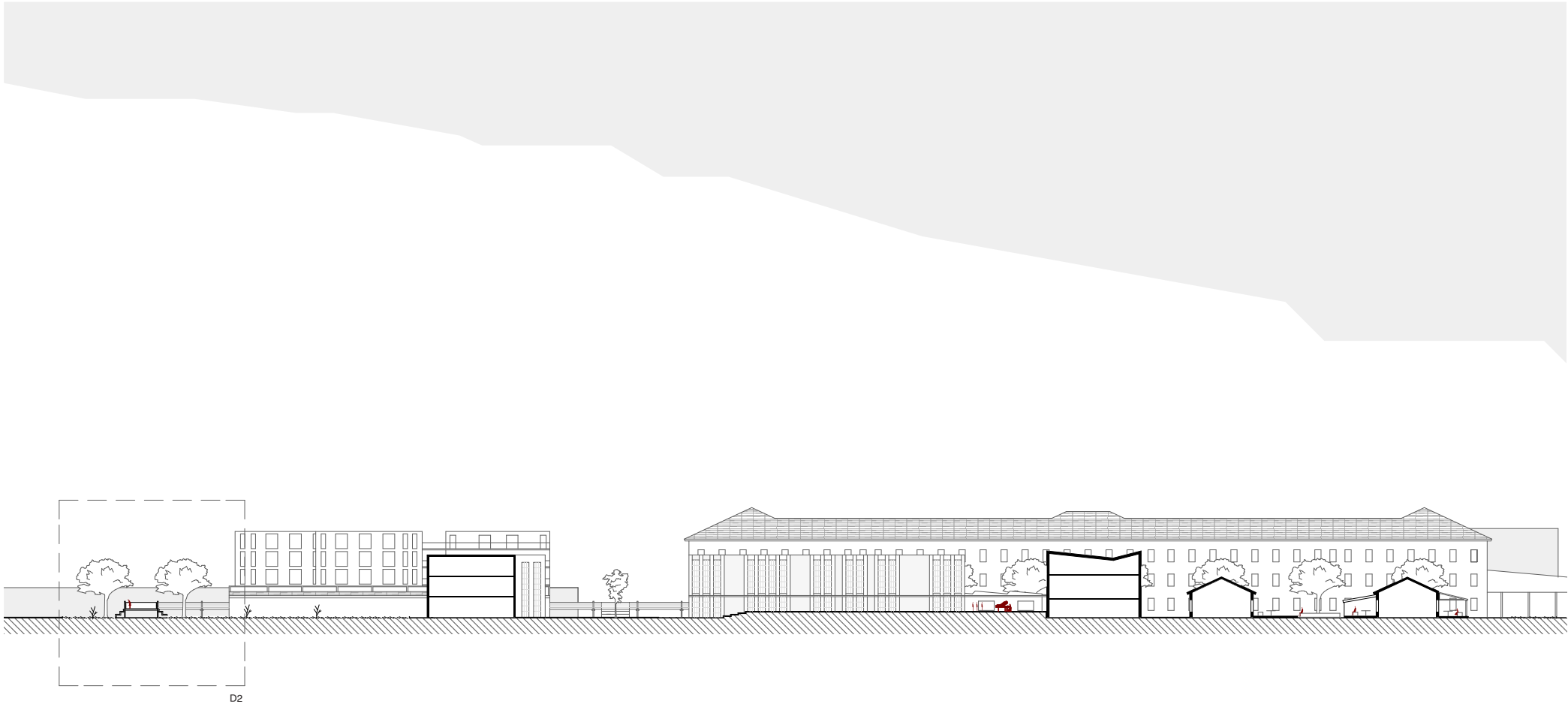
Performance

Fig 179. Performance square

Auditorium

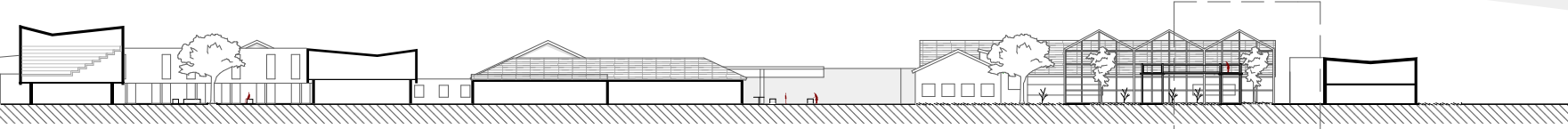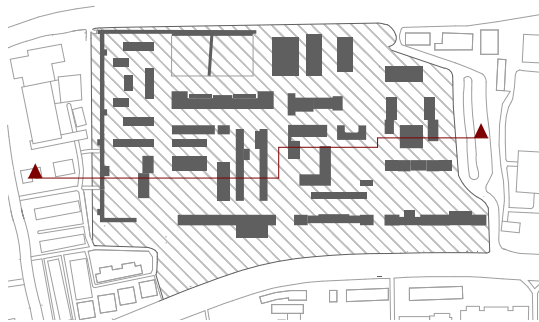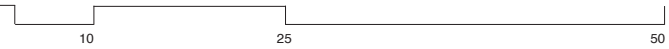*Fig 180. View of Faculty of Political science*

Section AA

Fig 182.

D1

10   25   50

Section BB

D2

Fig 183.

D3

10   25   50

Section CC

Design

Fig 184.

D4

10   25   50

Section DD

Fig 185.

10   25   50
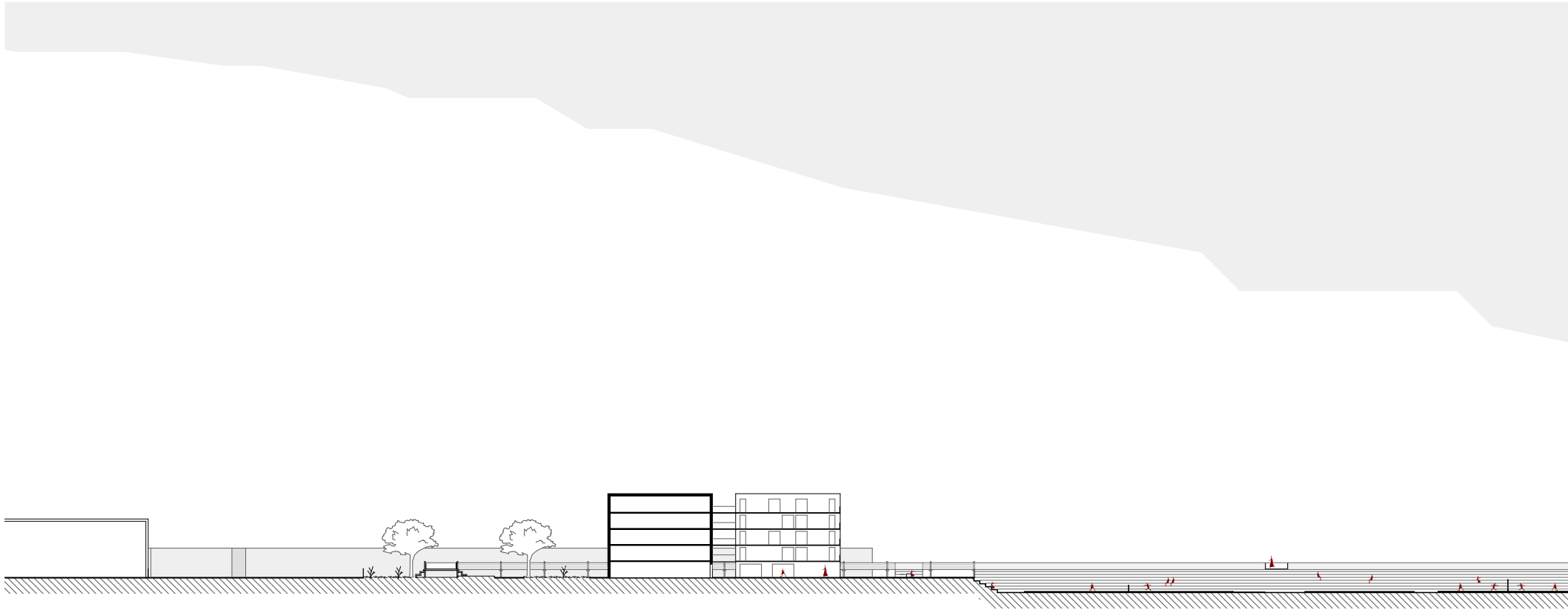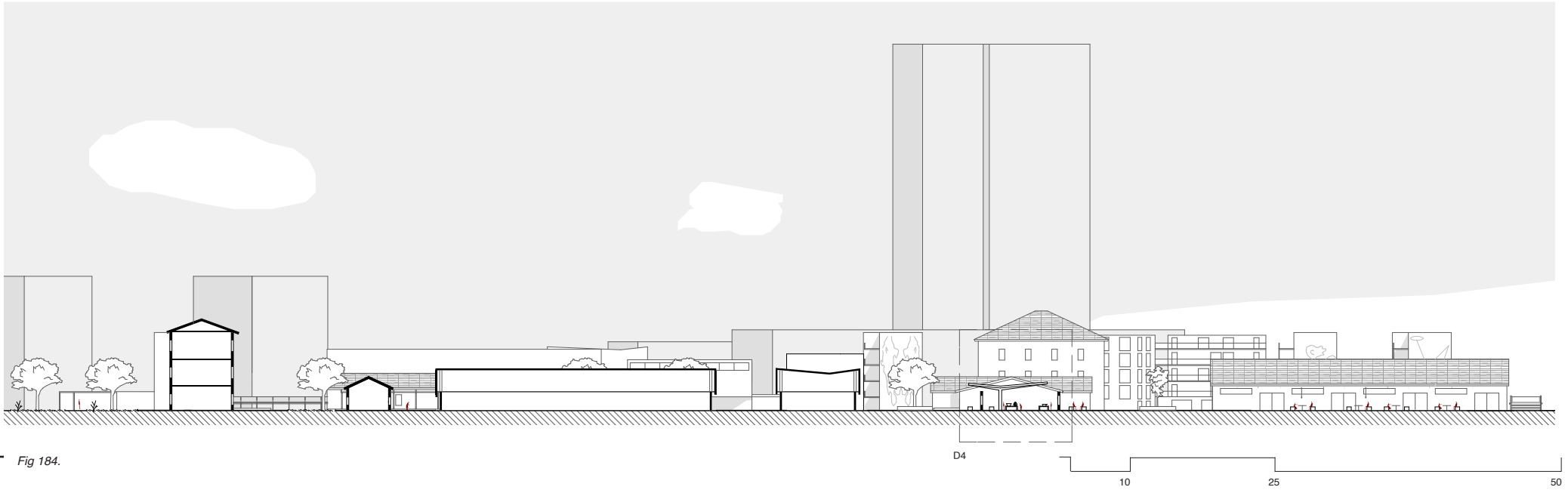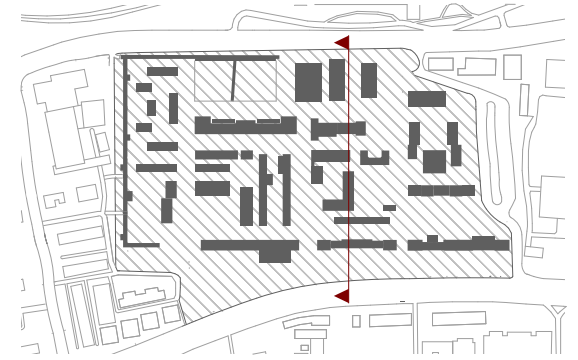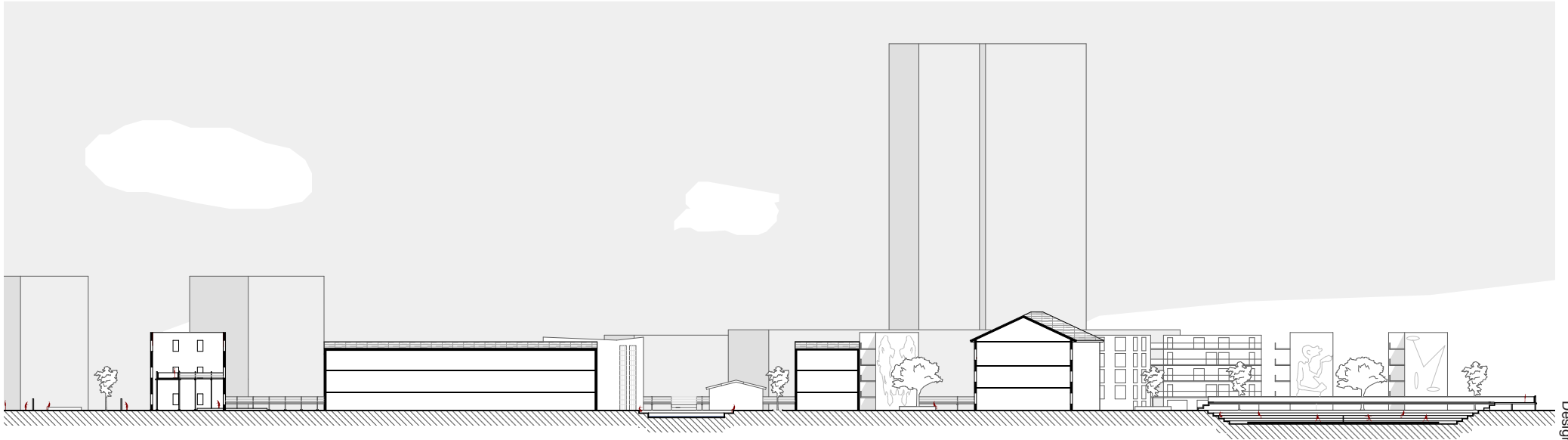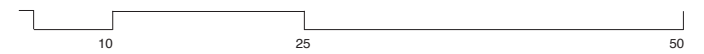
Sections
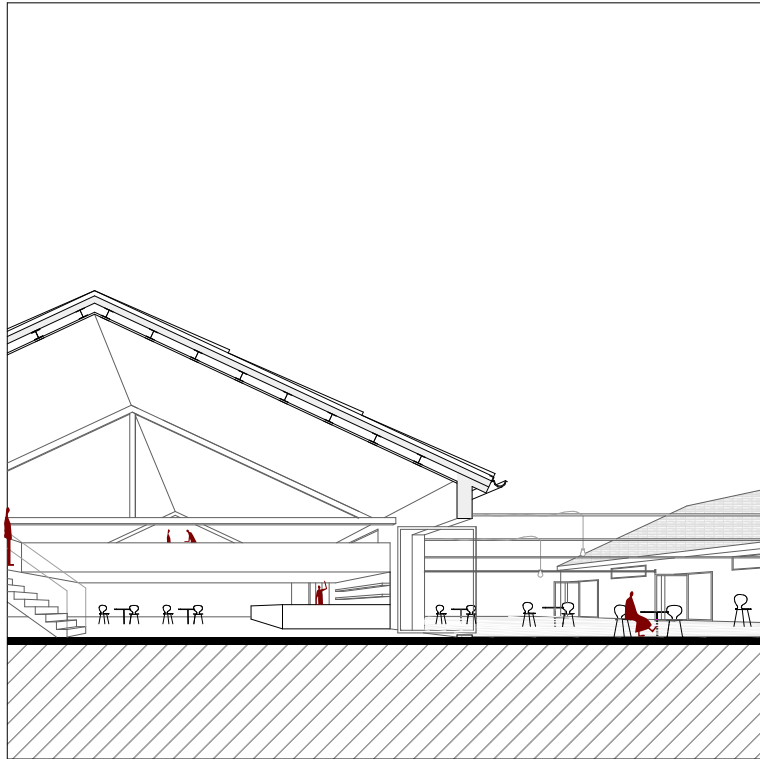
Fig 186. D1 Mensa in one of the old buildings
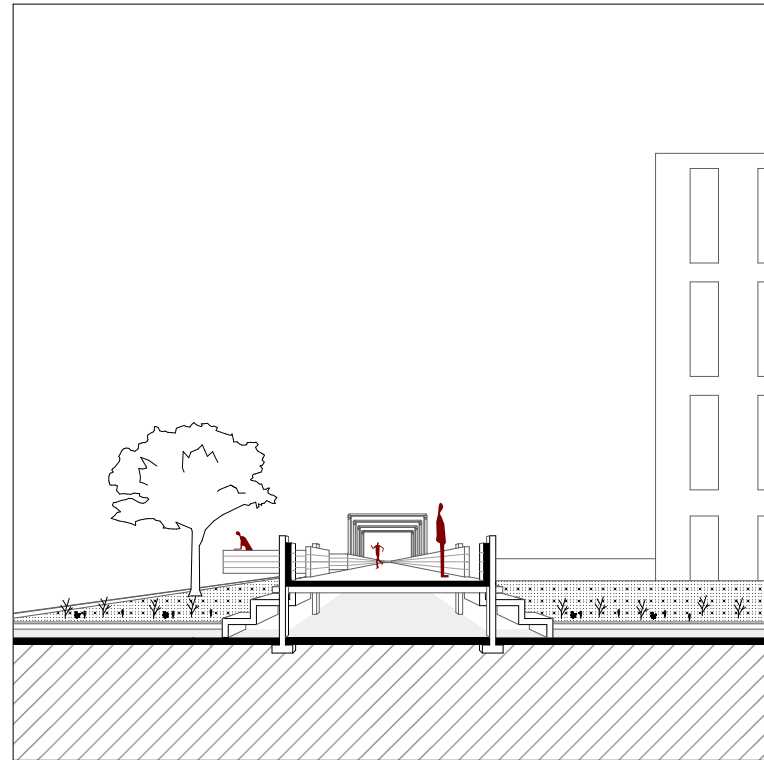
Fig 187. D2 Elevated platform

Design
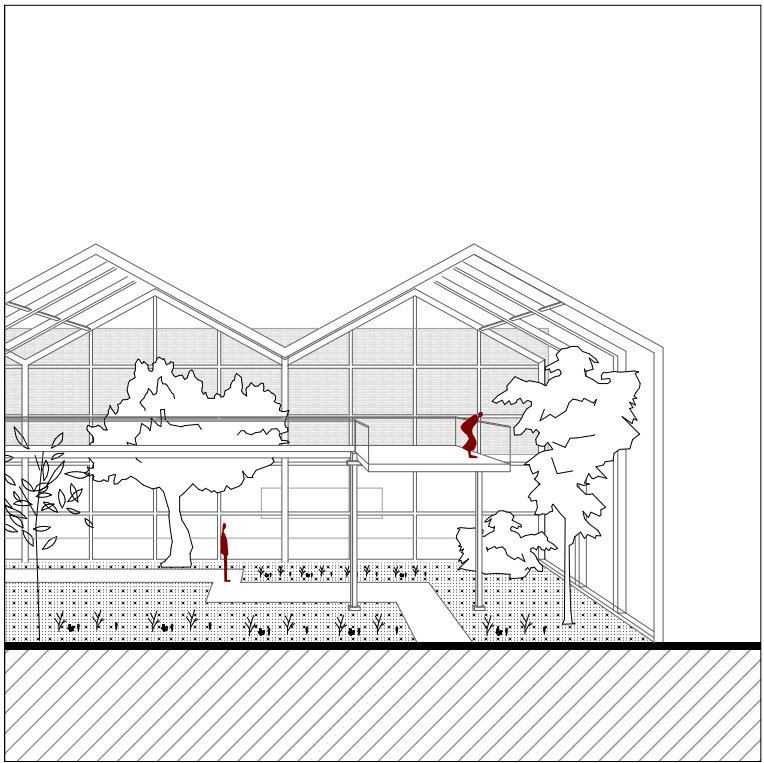
Fig 188. D3 Botanical garden
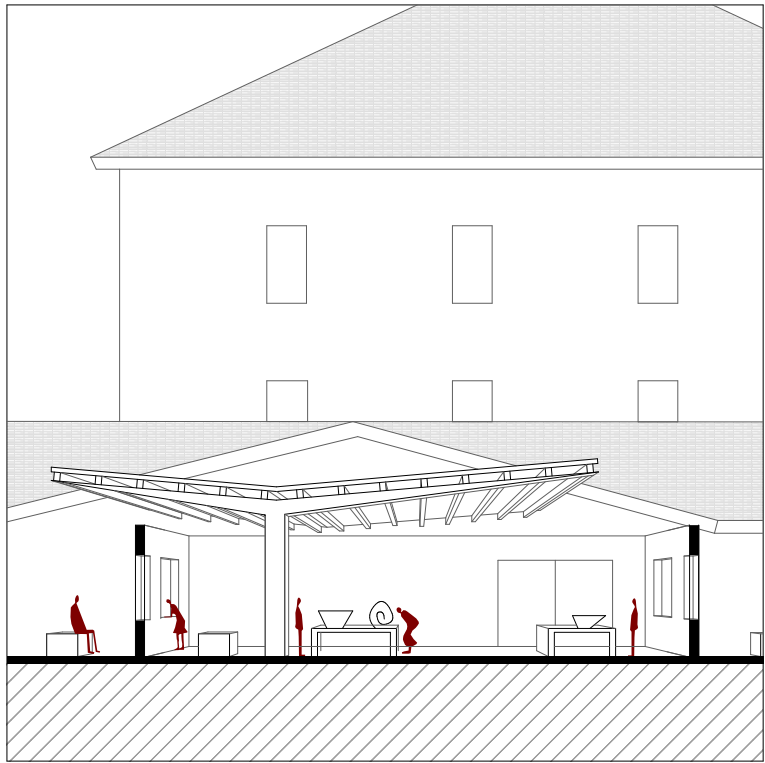
Fig 189. D4 Market place

Conclusion

University of Sarajevo is the oldest university in the country of Bosnia and Herzegovina and it has played a significant role in development of the city. The university campus should be able to reflect its long history. Unfortunately, due to "lack of funding" this wasn't possible. Government has failed to recognize the importance of campus and its placement in the city. This new campus could act as a trigger of reactivating this area of town, and spreading the importance of Marijin Dvor neighborhood away from commercial shopping malls.

Due to Sarajevo's specific linear growth, the city center and the old town are concentrated on very small area. This campus could help the city spread its cultural importance more west ward.

This area is not protected by any historic preservation laws, because the city doesn't find the original barracks important enough. Completely erasing the traces of old buildings like the city council suggested in one masterplan would be a mistake.

The focus of my design are the open spaces, since the city of Sarajevo offers so few green and urban spaces. Open space of this new campus has been envisioned as sequence of different characters. These spaces should merge with the reinterpreted ruins on the site and offer an unique mix of past and present.

By brining new activities such as creative center, sports fields, new bars and restaurant, campus should finally be a center for both students and other citizens.

The form and architecture style is inspired by the remaining buildings. New architecture with active ground floors should encourage people to interact with site rather then just use it as a shortcut to the main railway station.

The mix of old and new gives the campus an interesting layer and in a way it creates a blend of different historical influences. This should reflect the history and many layers of the city of Sarajevo.

The reinterpreted ruins should give the campus a unique character. Through these ruins, hope is to encourage both locals and tourist to visit and interact with the past, just like they would in any other historic site in the old town. This urban revitalization should encourage city to move away its focus from ethnic representing buildings and monuments and focus on places of common memory. The campus could finally be transformed into something new out of the damaged old.

Sports fields

Fig 190.

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List of Figures:

All images and diagrams, unless stated otherwise, are drawn by the author.

Fig 91.   Sarajevo sketch from Marijin Dvor to Old Town. Grabrijan and Neidhart, Sarajevo and Its Satellites. p. 272

Fig 92.   Marijin Dvor 1955 - Plan by Neidhart. Modelphotos Masterplan. Grabrijan and Neidhart, Architecture of Bosnia and the Way Towards Modernity. p. 408

Fig 93.   Modelphotos Masterplan. Grabrijan and Neidhart, Architecture of Bosnia and the Way Towards Modernity. p. 410-413

Fig 124. Bergson memory cone. http://www.presidentsmedals.com/Entry-15440 Accessed 13.02.2019

Fig 126. Sarajevo Window - Lebbeus Woods. https://lebbeuswoods.wordpress.com/2011/12/02/war-and-architecture-the-sarajevo-window/   Accessed 01.11.2018

Fig 127. Sarajevo Radical Reconstruction - Lebbeus Woods https://lebbeuswoods.wordpress.com/2011/12/15/war-and-architecture-three-principles/   Accessed 01.11.2018

Fig 128. Sarajevo Radical Reconstruction - Lebbeus Woods http://www.via-architecture.com/book-review-slow-manifesto-lebbeus-woods-blog/ Accessed 01.11.2018

Fig 129. Sarajevo Radical Reconstruction - Lebbeus Woods https://www.widewalls.ch/artist/lebbeus-woods/ Accessed 01.11.2018