ROMA INTEGRATION
Regional Cooperation Council

HOUSING FEASIBILITY STUDY FOR ROMA SETTLEMENTS IN THE CITIES STIP AND KUMANOVO

Skopje, 2021

Co-funded by the European Union

OPEN SOCIETY FOUNDATIONS

Address: Ruzveltova 61, Belgrade, Serbia
T: +381 11 4046 891 F: +381 11 4046 894
Web: www.rcc.int/romaintegration2020
E-mail: romaintegration2020@rcc.int

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Introduction

Sustainable housing solution affects the well-being of any individual in the society. Adequate housing is a basic human right leading to exercising of social, economic and cultural rights. Living in poorly developed settlement with badly constructed houses, no access to water, sewerage network, paved roads, electricity and other fundamental utilities available in the modern world contributes to unequal starting point and life opportunities in comparison with other individuals living in a developed neighborhood, settlement, district, area or a city. Consequently, poor housing solutions affect the access to education, health services, employment and other universal human rights, which must be available for any individual.

The lack of such access makes a community marginalized, poor, and uneducated while being limited in their own settlements, segregated from other communities and groups in the city, and wider. The Roma as a group with its own specifics that often live in such undeveloped or poorly developed settlements are faced with numerous challenges in their everyday life. These challenges lead to a negative perception towards Roma by the non-Roma communities, leading to discrimination in different areas and low quality of life overall. These facts further contribute to lower attendance rate in school, lower employment rate, shorter lifespan, higher mortality, higher migration rate, higher informal economy participation, among other parameters relevant to the community development.

Following the pilot mapping of the substandard settlements in Kumanovo and Stip, supported by the Regional Cooperation Council's Roma Integration action, further support was provided for this study. A team of a Civic Engineer, Economist and a Legal Advisor conducted this Housing Feasibility Study with an aim to provide sustainable housing solutions for the Roma in the cities Kumanovo and Stip. For this purpose, the team conducted fieldwork in the cities, discussed the proposed solutions with the local Roma citizens and analyzed laws, by-laws, construction projects and other documents relevant to the study. This document offers ideas, solutions and approximate costs for the provided solutions while also providing rationale for the solutions. From the provided study and analysis in the cities of Kumanovo and Stip, it can be concluded that most common challenges are related to lack of or worn out water and sewerage networks, lack of paved roads, inadequate garbage disposal solutions and lack of social housing solutions.

Even though representatives of the local government are focusing on solving the housing challenges of the Roma community on a declarative note, still, the pace of the process of infrastructural developing of the Roma settlements is slow. In most of the cases, the financial burdens of such endeavors or simply not prioritizing the issue by the decision makers, heavily impact the pace of the process, while Roma are struggling on an everyday basis to integrate in the normal flows of the society.

Municipality of Stip

Background information on Roma in the Municipality of Stip

Stip is located in the central-eastern part of North Macedonia. The total population of Stip according to the latest census estimates up to 47,796 citizens. The ethnic Roma population in Stip consists of 2,195 citizens and they represent 5% of the total population in the city based on the census done in 2002. According to estimates, there are approximately 5,000 Roma citizens living in Stip divided in approximately 1160 households. There are several Roma settlements, among which the biggest are "Radanski Pat", "Kosovska" and "Sveta Nedela", with some 80% of the total Roma population living in these three settlements.

The general household population averages 3,86 family members per household. The settlement "Kosovska" averages the highest household members while it also has the smallest households with less than 50 m2 in size. Around 90% of the Roma population have legalized their properties while 4% of the population located in the settlement "Sveta Nedela" has improvised cardboard houses.

In terms of employment and education, the Roma population mostly work in the garment industry, as seasonal workers, taxi drivers, musicians and other professions. 24% of the ethnic Roma make their living within the informal economy; 27% are employed, while 38% are unemployed. 40% of the population in "Kosovska" are beneficiaries of social assistance based on the Law on Social Protection.

Roma settlement "Radanski Pat" – Stip

Settlement "Radanski Pat" (Source: Cadastre)

The settlement called “Radanski Pat”, now known also as Cerenje (Черење) is located in the eastern part of Stip. This settlement consists of approximately 400 housing objects in which approximately 1,600-1,800 Roma citizens live. The settlement has no houses constructed from inappropriate materials i.e., cardboard materials, sheet metal or similar. The area borders with the nearby Roma settlement “Kosovska” and the streets “Sirok Dol”, “Sutjeska”, “Pance Karagjozov”, “11-ti Oktomvri” and others. The city has adopted General Urban Plan and Detailed Urban Plan, which establishes the fact that there are no legal challenges for developing the infrastructure in this settlement. Parts of the settlement have access to water, sewerage network, electricity, paved roads and garbage disposal solutions, but not the whole settlement. In terms of legalization, each house is legalized, but there are areas where the houses are adjacent to each other making the space for movement limited.

Access to water and sewerage network in settlement “Radanski Pat”

Based from the available data and information,[1] approximately 375 housing objects have access to water, which leaves approximately 25 objects with no access to tap water. In conversation with the local Roma citizens, some of them make use of the water accessible to their neighbors that have access to water. As stated by the local government representative, there is need of reconstruction and construction of water supply network of approximately **1150 meters in length**.

When measuring the length of the water supply network, the subject of measurement of the water supply infrastructure are the objects that make up the water supply infrastructure for drinking water and the water supply infrastructure for technical water.[2] Drinking and technical water supply network is measured in a way that determines spatial 3D data (Y, X, H) for all breaking points by position and height (characteristic points) that define the highest line of the water supply pipeline. Apart the spatial data, descriptive data is also collected for the infrastructure facility, as follows: identifier of the infrastructure facility; type of infrastructure facility in the basic classification; type of sub classification within the basic classification; name of the infrastructure object (building); beginning and end of the infrastructure object; data of the entities holding the rights to the infrastructure object (Unique Tax Number / Unique identification number, name / surname, headquarters / address). For the water supply infrastructure, data is collected on the length, profile of the pipe ("fi") and the material from which the pipe is made (plastic, galvanized, etc.).

[1] Provided by representatives from the local government in Stip and the local Public enterprise for communal-production and service works ISAR-Stip

[2] https://www.katastar.gov.mk/wp-content/uploads/Regulativa/Pravilnici/precisteni/Pravilnik%20za%20Premer_precisten%20tekst.pdf

Based on the current prices on the market with approximate specification and pricing for construction and reconstruction of water supply network of approximately **1150 meters in length** for the settlement Radanski Pat, the cost table would look like this:

No.	Objects	Unit Price	Quantity	Total (EUR)
Water Supply Line				
1.	Main Water Line	62,000	1	62,000
2.	Water Distribution Network	43,360	1	43,360
3.	Split Shaft	8,000	2	16,000
4.	Main Shaft	4,600	2	9,200
5.	PP Hydrant	2,800	1	2,800
6.	Service Valve	600	20	12,000
7.	Purchase of a water meter	79.9	25	1,997
8.	Installation of the water meter	58,7	25	1,467
			TOTAL I	**EUR 148,824**
Sewer Line				
1.	Main Line	86,000	1	EUR 86,000
2.	Distribution Network	82,000	1	EUR 82,000
3.	Accessing the distribution network	134	25	3,350
			TOTAL II	**EUR 171,350**
			TOTAL I + II	**EUR 320,174**

The pricing is set as guideline only

In terms of description of the abovementioned general framework, the works would involve *earthworks* (ground excavation, transport, loading and unloading of dirt, materials and earth) and *assembly works* (Procurement transport and installation of materials and various elements). Additionally, based on the Law on Construction[3], a project documentation needs to be developed by authorized civil engineer with License B regarding design of second category buildings. The approximate cost for developing the project documentation is 6,000 EUR.

The solution for water and sewerage network would benefit the whole Roma settlement as the old water, sewerage network would be renewed, and approximately 50 Roma houses would gain access to water and sewerage network. This would improve the quality of life and satisfy most basic needs of the Roma community.

[3] Law on Construction (Закон за градење) (Official Gazette of the Republic of Macedonia No 130/09)

Dirt Roads in the settlement "Radanski Pat"

The settlement has unpaved side roads, which causes difficulties for the citizens in certain weather conditions. Consequently, during winter the roads freeze and it becomes difficult to the local population to move around while in windy days a lot of dust spreads across the settlement. Two dirt roads were pinpointed as a priority to be paved. One of road is called "Shirok Dol I", which is approximately 700 meters in length and 2 m wide, and the other "Shirok Dol II", which is approximately 300 m in length and 2 meters wide. Based on the current market prices for works and services the approximate cost for transforming the dirt roads into roads with concrete would be 56,938 EUR for the road Shirok Dol I and 24,402 EUR for Shirok Dol II. The beneficiaries for the roads will be all of the citizens of the settlement "Radanski Pat" which would contribute to ensuring safety and healthier environment for the children and adults as well.

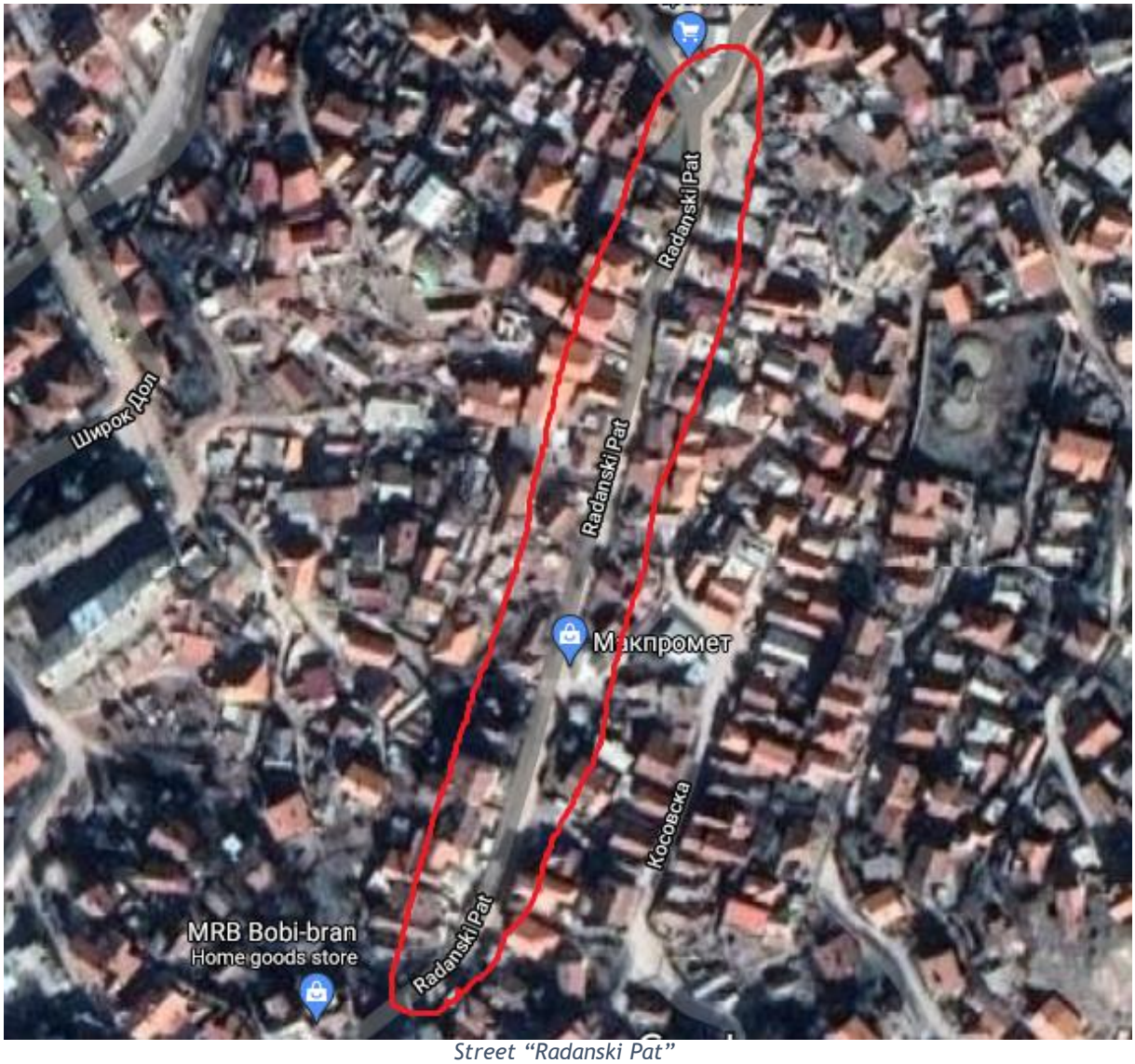
Dirt Roads in "Radanski Pat"


Dirt Roads in "Radanski Pat"

Road Safety in the settlement "Radanski Pat"

The main road in the settlement "Radanski Pat" is long approximately 800 meters. Because the road is mildly narrow, pavements would be difficult be constructed on the road because of the fact that the road traffic would be jammed most of the times. The consequence of a narrow street is also caused by the fact that the housing objects have been built outside of their designated parcels. To increase the safety of the pedestrians, speed humps can be installed that would slow down the speeding vehicles on the road. The municipality in accordance with the Ministry of Interior determines the places for installation of safety fence for protection of pedestrians, safety posts, special technical and other equipment for slowing down the traffic and increasing the safety of children on local roads.[4] Additionally, the technical specification of the tools and equipment used for slowing down vehicles is stipulated in the "Rulebook on traffic-technical criteria that should meet the technical means for slowing down the road traffic" which is developed by the Ministry of Transport and Communications. Based on the information provided on local level, at least two speed humps are required to be installed on the main road in "Radanski Pat". Additionally, street signs need to be installed by the municipality based on the Law on Road Traffic Safety. The total cost for two speed humps would be approximately 5,000 EUR.

[4] Law on Road Traffic Safety



Street "Radanski Pat"

Roma settlement “Kosovska” - Stip

Settlement “Kosovska” (Source: Cadastre)

The settlement called “Kosovska” is located in the eastern part of Stip adjacent to the settlement “Radanski Pat“. This settlement consists of approximately 250 housing objects in which approximately 1,000-1,200 Roma citizens live. The area borders with the nearby Roma settlement “Radanski Pat” and the streets “Asnom“, “Pitu Guli“ and “11-ti Oktomvri“. The city has adopted General Urban Plan and Detailed Urban Plan, which establishes the fact that there are no legal challenges for developing the infrastructure in the settlement. Parts of the settlement have access to water, sewerage network, electricity and paved roads, but not the whole settlement. The settlement lacks garbage disposal solution, and consequently a landfill is created near the water reservoir Cherenja. 50% of the houses are legalized while 7% are in process of legalization. Even though the citizens have access to water, the water pressure is low in the points where the houses are on a higher point. The water and sewerage network are in need of reconstruction. Additionally, according the citizens of the settlement, in some parts even though electricity is accessible, still the available voltage is low which makes some of the house appliances to be unusable.

Dirt Roads in the settlement “Kosovska”

As is the case in the settlement “Radanski Pat“, “Kosovska“ as well has unpaved side roads which causes difficulties for the citizens in certain weather conditions. The roads are even steeper than those in “Radanski Pat” which makes them especially dangerous in periods with temperatures below zero. As stated by the local representative of the Government,

there is approximately 3,200 m2 road space (1,600 meters long by 2 meters wide road) which needs to be paved with asphalt. Because some roads are narrow, it would be a challenge for mechanical vehicles to complete the task so the action would need to be implemented with more human resources. Based on the current market prices for works and services the approximate cost for transforming the dirt roads into asphalt-layered roads would be 130,144 EUR. The beneficiaries for the roads will be all of the citizens of the settlement "Kosovska which would contribute to ensuring safety and healthier environment for the adults and children.

Dirt Roads in settlement "Kosovska"

Dirt Road in settlement "Kosovska"

Access to water and sewerage network in the settlement "Kosovska"

As is the issue with the settlement "Radanski Pat", the water and sewerage network need to be reconstructed in "Kosovska" as well. The above-stated **1,150 meters in length for** "Radanski Pat" is calculated/included for the needed reconstruction of the water and sewerage network in "Kosovska", based on the fact that these settlements are adjacent to each other.

Garbage disposal solution in the settlement "Kosovska"

There is no garbage disposal solution in the settlement "Kosovska". Consequently, the citizens in the settlement are creating landfill, which pollutes the earth and air near the settlement. Eventually, the municipality clears the landfill at least once a week, but a more sustainable solution is needed. The solution can be with either individual bins or at least two big containers, which would be located near the settlement. At least 125 individual bins with at least 240 L of capacity would be needed to serve around 250 housing objects in the settlement. The current average price per bin is 70 EUR, which makes the total price for 125 bins costing approximately 8,750 EUR. The maintenance cost for collecting garbage from an individual 240 L bin costs 4.80 EUR per bin. If the garbage is collected once a week, the monthly cost for collecting garbage from 125 bins would be 2,400 EUR and if it is collected two times a week, the cost would be 4,800 EUR per month. If two big containers with volume up to 9,000 liters were placed near the settlement, the total cost for purchasing the containers would be approximately 12,000 EUR. The maintenance cost for collecting garbage from a container costs 311 EUR per container. If the garbage is collected once a week, the monthly cost for collecting garbage from 2

containers would be 2,488 EUR and if it is collected two times a week, the cost would be 4,976 EUR per month.

Social Housing and social infrastructure

This chapter discusses social housing and social infrastructure in the settlement "Kosovska", which would benefit the people from the settlements "Radanski Pat" and "Sveta Nedela" as well. Social infrastructure facilities are non-existent in the settlement Kosovska i.e., the nearest elementary school "Goce Delcev" is at least 1.2 km away from the settlement "Kosovska", the nearest kindergartens are 1,3 and 1,4 km away while the state hospital is 1,6 km away. Additionally, the settlement has no sports facilities, no parks and no recreation points for the citizens. The same applies for "Radanski Pat" as well. Because "Kosovska" and "Radanski Pat" are settlements adjacent to each other and the settlement "Sveta Nedela" is also nearby and even further distant from social facilities, there is a need for such facilities to be built, which would help these settlements to grow and develop in terms of the infrastructure.

Candidates that ran for local elections were envisaging building social housing buildings in the settlement "Kosovska". For this purpose, a planning documentation for social housing was developed but the project was never implemented. The planning documentation envisages building of 8,400 m2 (0.84 ha) of residential area which would be used to build a residential building, primary school, primary health care institution, kindergarten and sports and recreation points. The geodetic planning scope are defined with the following borders:

- north: axis on Street "Radanski Pat"
- east: axis on " ASNOM " Street
- south: axis on Street "broj 1"
- southwest: axis on Street "Broj 1 "

According to the planning documentation, the residential area envisages options for two categories of housing and a category for greenery and sports/recreation. The first category for housing: **A1 category - Housing in residential houses** includes compatible classes such as envisaging small business enterprises (30%), hotel complex (5%), education and science facilities (30%), sports, and recreation facilities (30%). The maximum participation of these subclasses cannot be bigger than **30%** of the total purpose as per the category **A1 category - Housing in residential houses.**

The second category/option for housing is **A2 category - Housing in apartment buildings.** This category envisages compatible classes such as small business enterprises (20%), big commercial units (20%), hotel complex (15%), facilities related to culture (40%), state institutions (10%) and sports and recreation facilities (40%). The maximum participation of these subclasses cannot be bigger than **40%** of the total purpose as per the category **A2 category - Housing in apartment buildings.**

The third category/option is **D3 category - Greenery and recreation.** This category envisages compatible classes such as temporary accommodation (20%), small business enterprises (10%), big commercial units (30%), big catering units (10%), business premises (10%), hotel complex (20%), assembly facilities (30%), culture facilities (20%) and parks and greenery (40%).

The basis for preparation of a detailed urban plan would mark the strategy for the intended use of the residential area in terms of the usage of the above-mentioned categories according to the planning documentation. The parking solution should take place in the construction parcel and in public parking lots. The solution needs to be in accordance with the Basic Project and with Article 61 of the Rulebook on Standards and Norms for Urban Design. The detailed urban plan needs to be developed in accordance with the Law on Spatial Urban Planning, Rulebook for standards and norms for urban design and the Rulebook on the detailed content, size and manner of graphic processing of urban plans.

The residential area is in accordance with the basic principles in terms of planning and arranging the space. The principles are related to:

- even spatial development;
- rational arrangement and use of space;
- conditions for humane living and work of citizens;
- overcoming the urban barriers of persons with disabilities;
- sustainable development;
- protection and improvement of the environment and nature;
- protection of immovable cultural heritage;
- harmonization with the European norms and standards in the planning and arrangement of the space.

Purpose of the area	Area	Percentage
Housing in residential buildings (A2 category)	2913 m^2	34%
Living in a residential house (A1 category)	2133 m^2	25.5%
Sport and recreation (D3 category)	641 m^2	8.0%
Communal infrastructure (E1 category)	2666 m^2	32 %
Communal suprastructure (E2 category)	47 m^2	0.5%
TOTAL	8400 m^2	100%

Purpose of the planned area (planning documentation)

The Municipality of Stip is already in a process of constructing 47 typical houses out of the planned 100 for social housing purpose in the settlement “Sveta Nedela”. Because of this, a social housing would not be needed in the settlement “Kosovska”. Because the settlement “Kosovska” is located between “Radanski Pat” and “Sveta Nedela”, residential facilities can be constructed as stipulated in the above-mentioned planning documentation. A total approximate cost for outdoor sports and recreation facility would be around 17,000 EUR, while a small ambulance, which would consist of general medicine, dental office, vaccination room, intervention room, laboratory, pharmacy, waiting room, as well as the optimal number of toilets for patients, would cost around 300,000 EUR.

Roma settlement “Sveta Nedela” – Stip

Sveta Nedela (Source: Cadastre)

The settlement called “Sveta Nedela” is located in the eastern part of Stip near to the settlement “Kosovska”. This settlement consists of approximately 150 housing objects in which approximately 600 – 800 Roma citizens live. The settlement has 4% of houses constructed from inappropriate materials i.e., cardboard materials, sheet metal or similar. The area borders with the nearby Roma settlement “Kosovska” and the streets “Pance Karagjozov”, “Vodenska”, “Asnom” and “Cerenja”. Part of the territory is covered by an urban plan. It has a general urban plan and a detailed urban plan and has the form of direct implementation for housing purposes. Regarding the form of implementation of the detailed plans for some parts of the settlement, there is a need to prepare a plan for implementation at a lower level.

Parts of the settlement have access to water, sewerage network, electricity, paved roads and garbage disposal solutions. Only 20% of the water access is legal while 80% are illegally connected to the water network. Even though the citizens have access to water, the water pressure is low in the points where the houses are on a higher point. The water and sewerage network are in need of construction and reconstruction. Municipality of Stip plans to adopt a new General Urban Plan after which adoption of Detailed Urban Plan is planned. The municipality of Stip is planning to urbanize this area/settlement with barracks – container type that would resolve the housing issue of most of the Roma that live there in poorly constructed dwellings. [5]

[5] This solution is explained bellow in the Heading “Construction of typical houses in the settlement “Sveta Nedela”

Access to water and sewerage network in the settlement "Sveta Nedela"

There is no water supply network near the area of Sveta Nedela, which establishes the fact that there is need of construction and extension of the water supply network in the length of **2,000 meters**. Consequently, with a technical solution, it is foreseen that the settlement with about 100 barracks/containers will be connected from the supply water line with the existing "Cherenja" reservoir, with a volume of 400 cubic meters, which would provide the necessary hydrodynamic pressure in the distribution network. The distribution network in the settlement will be divided into two parts - left and right, with a total length of 333 meters and will be connected to the barracks with PE Ogrlica and each consumer (each barrack) will be obliged to provide a water meter. The main pipeline outside the settlement should be marked with concrete markings along its entire length.

According to the representatives of the local government, there is also a need to build a sewerage system in the length of **3,000 meters**. The connection of the Roma settlement to the sewerage network of the city of Stip will be performed in the nearest shaft in the settlement at a distance of 537 meters. The water supply and sewerage network after the construction and technical acceptance will be handed over for maintenance to JP Isar Stip and therefore, each user will be obliged to conclude an agreement for the use of the utility services for water supply and sewerage. The approximate cost for developing the project documentation is 15,600 EUR.

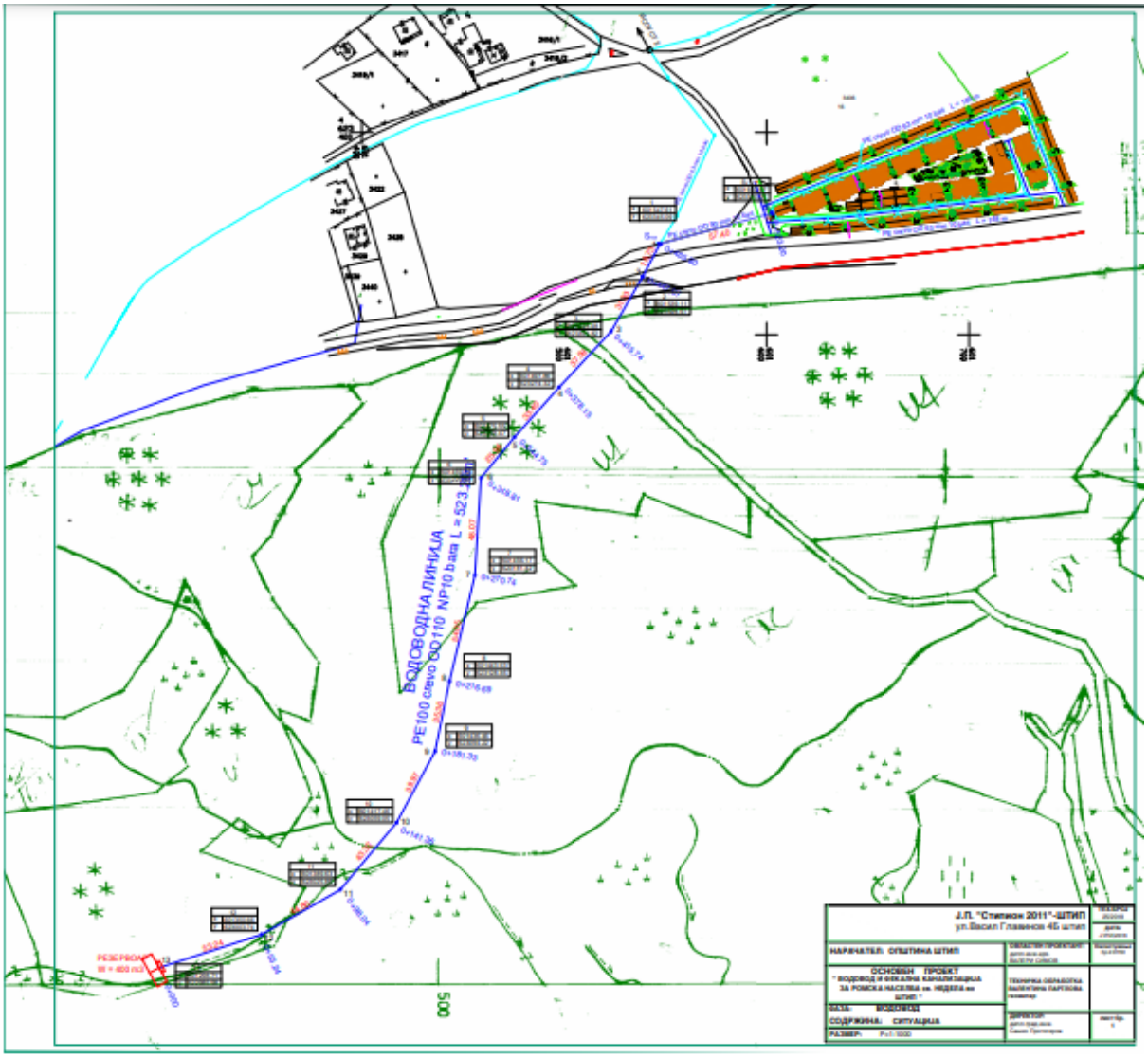
No.	Objects	Unit Price	Quantity	Total (EUR)
Water Supply Line				
1.	Main Water Line	107,826	1	107,826
2.	Water Distribution Network	75,408	1	75,408
3.	Split Shaft	8,000	3	24,000
4.	Main Shaft	4,600	3	13,800
5.	PP Hydrant	2,800	2	5,600
6.	Service Valve	600	40	24,000
7.	Purchase of a water meter	79.9	100	7,993
8.	Installation of the water meter	58,7	100	5,872
			TOTAL I	**EUR** 264,499
Sewer Line				
1.	Main Line	224,347	1	224,347
2.	Distribution Network	213,913	1	213,913
3.	Accessing the distribution network	134	100	13,400
			TOTAL II	**EUR** 451,660
			TOTAL I + II	**EUR 716,159**

The pricing is set as guideline only

In terms of description of the abovementioned general framework, the works would involve *earthworks* (ground excavation, transport, loading and unloading of dirt, materials and earth) and *assembly works* (Procurement transport and installation of materials and various elements).

Additionally, based on the Law on Construction[6], a project documentation needs to be developed by authorized project planning firm that will include civil engineer with License B regarding design of second category buildings.

The solution for water and sewerage network represents the basis for urbanizing the Roma settlement "Sveta Nedela". Around 100 barracks/containers that are envisaged to be built in the settlement will benefit modern water access and sewerage network, which would directly improve the quality of life and satisfy most basic human needs. Out of the envisaged 100 barracks, 47 are already in the process of construction.



Overview of the waterline in Sveta Nedela

[6] Law on Construction (Закон за градење) (Official Gazette of the Republic of Macedonia No 130/09

Construction of roads in the settlement "Sveta Nedela"

Most of the settlement is covered with dirt roads, which as in the previous cases in "Kosovska" and "Radanski Pat", imposes difficulties for the citizens in extreme weather conditions (freezing winters and windy days). For solving this challenge, eight roads need to be constructed in the settlement. The total road coverage estimates up to 1,145 meters.

Road	Length	Total Cost EUR
Dirt road no. 1 on the street Asnom	41 meter	3,894
Dirt road no. 2 on the street Asnom	210 meters	17,187
Dirt road no. 3 on the street Asnom	165 meters	15,344
Dirt road no. 4 on the street Asnom	74 meters	6,881
Dirt road no. 5 on the street Asnom	182 meters	10,946
Dirt Road no. 6 on the street Asnom	160 meters	14,840
Dirt Road no. 7 on the street Asnom	172 meters	12,727
Dirt Road no. 8 on the street Asnom	141 meters	10,178
Projection of the roads	1000 EUR per KM (1,145 km *1000 EUR)	1,145
	TOTAL	**93,142 EUR**

The pricing is set as guideline only

Construction of typical houses in the settlement "Sveta Nedela"

The municipality of Stip is planning to build 100 typical houses for the Roma population in Sveta Nedela. In the area of Mirjanina church 47 typical houses are in the process of construction for the same number of families of the Roma ethnic community in Stip. The families that moved into the new homes left their old buildings in which they were housed, one of which is in the old abandoned ward for neurological diseases, and the other is in the very center of the city, next to the shopping center. The construction of the 47 houses is financed by the by the European Union the pre-accession assistance for 2019 from the IPA-2 program.

There are 20 more families that leave in the settlement "8 Noemvri" that are in need of dislocation and accommodation in the envisaged typical houses. In conversation with this population, they are willing to move out from their old houses and to be dislocated when the remaining typical houses are constructed. One typical house costs around 17,000 EUR so the total approximate cost for building of 20 typical houses would be 340,000 EUR. For construction of the rest planned typical houses (53), the total cost would be 900,000 – 1,000,000 EUR.

State of houses in 8-mi Noemvri

State of houses in 8-mi Noemvri

Municipality of Kumanovo

Background information on Roma citizens in the Municipality of Kumanovo

Located in the northeastern part of the Republic of Macedonia, Kumanovo is at the crossroads of the two most important corridors in the country (Corridor 8 and Corridor 10). The total population of Kumanovo according to the latest census estimates up to 105.484 citizens. The ethnic Roma population in Kumanovo consists of 4,256 citizens and they represent 4% of the total population in the city based on the census conducted in 2002. According to some estimates, there are approximately 5,000-8,000 Roma citizens living in Kumanovo divided in approximately 2,010 households. There are several Roma settlements, among which the biggest are “Sredorek”, “Baraki” and “Bavci”. It is estimated that most of the Roma in Kumanovo live in the settlement “Sredorek” in which about 2,800 to 4,500 Roma inhabitants live.

The general household population averages 3,9 family members per household. Regarding the size of the dwelling, about 36% of the dwellings fall into the category of less than 50 m2. The smallest housing objects (less than 30 m2 in size) are noted in the settlement “Baraki” for 7% of the inhabitants; in “Bavci” for 10% and “in Sredorek” for 2% of the habitats.

In terms of employment and education, the Roma population mostly work as collectors of secondary raw materials, paper and iron, as seasonal workers, employed in private sector, state administration and other professions. 55% of the ethnic Roma make their living within the informal economy, while 32% are employed officially and 38% percent are unemployed. 61% of the Roma families in Kumanovo are beneficiaries of social assistance based on the Law on Social Protection with the highest percentage noted in the settlement Stari Lozja (83%), Baraki (75%) and Bavci (62%).

Roma settlement “Baraki” – Kumanovo

Roma Settlement “Baraki” (Source: Cadastre)

The settlement called “Baraki” is located in the central part of Kumanovo near to the Roma settlement “Bavci”. This settlement consists of approximately 150-200 housing objects in which approximately 700 – 900 Roma citizens live, as well as some non-Roma. The area borders with the nearby Roma settlement “Bavci”, the streets “Angja Rankov”, “Veselin Maslesa” and the railroad – “Corridor 8”. A General Urban Plan and Detailed Urban Plan cover the territory/area with a purpose of direct implementation for housing purposes.

Parts of the settlement have access to water, sewerage network, electricity and paved roads. Yet, parts where the Roma are settled do not have proper sewerage network, access to water, public lightning and their houses are not constructed with strong materials i.e. some of the houses are at risk of falling apart due to the poor construction.

The main issue with this settlement is that most of the houses are not legalized because they are not planned with the Detailed Urban Plan while 2% are in the process of legalization. This is also because adjacent to the settlement a railroad is envisaged to be built which will connect North Macedonia with Bulgaria.

Railroad adjacent to the settlement "Baraki"

Railroad in Baraki adjacent to the settlement

State of houses above the railroad in Baraki

After seven years of construction, still it is unknown when the railroad connecting North Macedonia to Bulgaria (Corridor 8) will be finalized. Still, this prioritizes the issue of the Roma families that live just on top, near the planned railroad. There are approximately 20 Roma families living adjacent to the railroad. Their houses as shown in the picture above are poorly constructed which means that building of a railroad near their houses will impose danger to their lives. This is established on the fact that when a train passes, over some period, the vibrations of the ground may shake the poorly constructed houses, which can put the Roma in a life-endangering situation. Additionally, there is no protection fence or any other equipment built on the border that separates the Roma families and the railroad. Consequently, the children playing near the settlement could also be put in a danger. In a conversation with the families living in this part of the settlement, it can be concluded that they would want to be dislocated from this area. Additionally, the critical housing objects located just near the railroad are not legalized as shown in Picture 14. For this purpose, the municipality must develop a social housing solution for at least 20 families whose life may be in danger when the construction of the railroad is finished. For this, a detailed urban plan needs to be developed based on the planning documentation for the housing solution.

Illegal objects near the railroad (Source: Catastdre)

Part of the Illegal objects near the envisaged railroad

There is a possible location for building of social houses, which could accommodate the families living nearby the railroad. Just nearby their settlement, to the north, opposite of the Roma settlement “Bavci”, there is a parcel number 13644/1, which has a purpose for construction undeveloped land, as stated in the Catastdre. The owner of the parcel is Republic of North Macedonia. Some of the land can be used to dislocate the Roma families and build them typical houses as previously noted in the city of Stip in the settlement “Sveta Nedela”. Throughout the history in Kumanovo, there never has been social housing objects constructed for the Roma families living in the city. Bellow in the picture, it is visualized where the parcel is located and the location of the Roma settlements. In terms of the cost, for 20 families, 20 typical houses would cost approximately 540,000 EUR in total. Per family/house, the costs would be 17.000 EUR for construction of the house and approximately 10,000 EUR for project documentation, utilities and obtaining required documentation such as permits and other administrative costs.

Possible location (parcel in yellow) for dislocation of the illegal houses near the railroad

Access to water and sewerage network in the settlement "Baraki"

According the information from the local Roma NGOs, approximately 350 families have accessed the water on illegal basis. Additionally, there is no sewerage network developed in parts of the settlement, which leads to the fact that the Roma families improvise their sewerage system by digging septic holes (tanks) in the ground. Based on the information by a local government representative, there is a need of reconstruction of the water supply network in length of approximately 1,000 meters. The project documentation for the water and sewerage network would cost approximately 6,000 EUR.

No.	Objects	Unit Price	Quantity	Total (EUR)
Water Supply Line				
1.	Main Water Line	53,913	1	53,913
2.	Water Distribution Network	37,704	1	37,704
3.	Split Shaft	8,000	2	16,000
4.	Main Shaft	4,600	2	9,200
5.	PP Hydrant	2,800	1	2,800
6.	Service Valve	600	20	12,000
7.	Purchase of a water meter	79.9	350	27,965
8.	Installation of the water meter	58,7	350	20,545
			TOTAL I	**EUR** 180,127
Sewer Line				
1.	Main Line	74,782	1	74,782
2.	Distribution Network	71,304	1	71,304
3.	Accessing the distribution network	134	350	46,900
			TOTAL II	**EUR** 192,986
			TOTAL I + II	**EUR 373,113**

The pricing is set as guideline only

Construction of roads in the settlement "Baraki"

There is a main road in the settlement that is paved in asphalt. Still, there are side dirt roads up to 300 meters in length that are unpaved. Because the settlement is mixed with Roma and non-Roma population, only the parts where Roma live are not covered with asphalted roads. This solution would contribute to a better integration of the local Roma citizens and improve the quality of life. Based on the current market prices for works and services the approximate cost for transforming the dirt roads into roads with concrete would be 24,402 EUR for a road, which is 300 meters in length and two meters wide.

Roma settlement “Bavci” – Kumanovo

Roma Settlement “Bavci” (Source: Cadastre)

The settlement called Bavci is located in the central part of Kumanovo near to the Roma settlement “Baraki” and adjacent to the river “Kumanovska Reka”. This settlement consists of approximately 150 housing objects in which approximately 1,000 Roma citizens. The area borders with the nearby Roma settlement “Baraki”, the river “Kumanovska Reka”, the street “Gjorce Petrov” and the railroad – “Corridor 8”. A General Urban Plan and Detailed Urban Plan cover the territory/area with a purpose of direct implementation.

The settlement has access to water, sewerage network, electricity and paved roads solutions. Yet, in some parts, the Roma do not have proper sewerage network, and public lightning. In terms of legalization, the main issue with this settlement is that most of the houses are not legalized. Still, most of the houses are in the process of legalization but it is an ongoing process with little to no results. At the moment, the Government of North Macedonia is drafting a new Law on Legalization of Illegal Buildings, but until now, it is unknown when the first draft will be released in the public. Based on the current situation regarding the laws relevant to legalization, for a house to be legalized it would cost around 250 EUR per house which includes geodetic elaborate, project documentations, utilities, taxes, fees and penalties depending on the size of the house, location etc. The

settlement consists of approximately 150 houses for which to be legalized, it would cost approximately a total of 37,500 EUR. In terms of the garbage disposal solution, the local population creates a landfill on the envisaged railroad near the settlement, which the local municipality clears from time to time. The landfill leads also to soil, air and water pollution.

Access road and dirt roads in the settlement "Bavci"

The main road that leads to the settlement "Bavci" is covered with dirt. The road is long approximately 400 meters and 2 meters wide. The total approximate cost for paving the road would be 32,536 EUR. Additionally, there are dirt roads inside the settlement "Bavci" which are in approximate total of 1,000 meters. The total approximate cost for paving the roads in the settlement would be 81,340 EUR.

Atmospheric sewer in the settlement "Bavci"

The settlement lacks atmospheric sewer. Consequently, in rainy seasons, the water from the rain does not have a path to sewerage network, which results in damaging the roads overtime and lowering the quality of life of the citizens. Approximately 1,000 meters of atmospheric sewer needs to be constructed in the settlement. The approximate cost would be 243,000 EUR for the whole settlement. The price includes the projection, earthworks and montaging of the sewer in the settlement. It will benefit all of the citizens in the settlement and improve the everyday life.

Garbage disposal solution in the settlement "Bavci"

There is no garbage disposal solution in the settlement "Bavci". Consequently, the citizens in the settlement are creating landfill, which pollutes the earth and air near the settlement. Eventually, the municipality clears the landfill at least once a week, but a more sustainable solution is needed. The solution envisages to be with either individual bins or at least two big containers, which would be located near the settlement. At least 75 individual bins with at least 240 L of capacity would be needed to serve around 150 housing objects in the settlement. The current average price per bin is 70 EUR, which makes the total price for 75 bins costing approximately 5,250 EUR. The maintenance cost for collecting garbage from an individual 240 L bin costs 4.80 EUR per bin. If the garbage is collected once a week, the monthly cost for collecting garbage from 75 bins would be 1,440 EUR and if it is collected two times a week, the cost would be 2,880 EUR per month. If two big containers with volume up to 9000 liters were placed near the settlement, the total cost would be approximately 12,000 EUR. The maintenance cost for collecting garbage from a container costs 311 EUR per container. If the garbage is collected once a week, the monthly cost for collecting garbage from 2 containers would be 2,488 EUR and if it is collected two times a week, the cost would be 4,976 EUR per month.

Roma settlement "Sredorek" - Kumanovo

Roma Settlement "Sredorek" (Source: Cadastre)

The settlement called "Sredorek" is located in the northern part of the Municipality of Kumanovo. Sredorek consists of approximately 1,100 houses with population up to 4,500 Roma citizens. The settlement has no houses constructed from inappropriate materials i.e., cardboard materials, sheet metal or similar. The area borders with the rivers

"Lipkovska", "Konjarka", and the street "Done Bozinov". The settlement is also nearby the Roma settlement "Bavci".

The city has adopted General Urban Plan and Detailed Urban Plan, which establishes the fact that there are no legal challenges for developing the infrastructure in this settlement. Parts of the settlement have access to water, sewerage network, electricity, paved roads and garbage disposal solutions. In terms of legalization, almost none of the houses in the settlement are legalized.

Access to water and sewerage network

There is existing water network in the settlement of approximately 650 meters in length. According to the estimates, there is need of reconstruction of additional 300 meters of water network in the settlement. The Roma in "Sredorek" do not have access to sewerage network in their settlement. Consequently, there is a need of construction of sewerage network in approximate 950 meters in length. The sewerage network can be constructed along the existing water network. The project documentation would cost approximately 3,400 EUR. The approximate price table would look like this:

No.	Objects	Unit Price	Quantity	Total (EUR)
Water Supply Line				
1.	Main Water Line	16,173	1	16,173
2.	Water Distribution Network	11,311	1	11,311
3.	Split Shaft	8,000	2	16,000
4.	Main Shaft	4,600	2	9,200
5.	PP Hydrant	2,800	1	2,800
6.	Service Valve	600	20	12,000
			TOTAL I	**EUR 67,784**
Sewer Line				
1.	Main Line	71,043	1	71,043
2.	Distribution Network	67,739	1	67,739
			TOTAL II	**EUR** 138,782
			TOTAL I + II	**EUR 206,566**

The pricing is set as guideline only

Reconstruction of Roads in "Sredorek"

Most of the roads in "Sredorek" are paved but some road are almost fully cracked. There is a need of reconstruction of the main road in the settlement, which is 350 meters in length. The full cost of reconstruction of the road would estimate approximately 28,469 EUR. The prices includes earthworks and paving of the road with new asphalt.

Garbage disposal in "Sredorek"

The municipality of Kumanovo has not secured individual garbage bins for each house in the settlement Sredorek even though for most of the other settlements this solution is implemented. For this purpose, there is need of at least 325 garbage bins that would serve around 650 houses in the settlement. The garbage bins need to have at least 240 L in

space. The current market price per bin is approximately 70 EUR. Consequently, 650 garbage bins would cost 22,750 EUR. The maintenance cost for collecting garbage from an individual 240 L bin costs 4.80 EUR per bin. If the garbage is collected once a week, the monthly cost for collecting garbage from 325 bins would be 6,240 EUR and if it is collected two times a week, the cost would be 12,480 EUR per month.

Summary at a glance (Overall Cost Table)

City: Stip

Settlement	Activity	Total (EUR)
"Radanski Pat"	Construction of water supply network in length of 1150 meters	148,824
	Construction of sewerage network in length of 1150 meters	**171,350**
	Project documentation for water supply and sewerage network	6,000
	Paving of dirt roads in length of 1000 meters	78,385
	Improving road safety on the main road "Radanski Pat"	5,000
	TOTAL I	**1,164,901**
"Kosovska"	Paving of dirt roads in length of 1600 meters	130,144
	Garbage disposal solution	8,750
	Small ambulance - general medicine, dental office, vaccination room, intervention room, laboratory, pharmacy, waiting room, as well as the optimal number of toilets for patients	300,000
	Outdoor sports and recreation facility	17,000
	TOTAL II	**455,894**
"Sveta Nedela"	Construction of water supply network in length of 2000 meters	264,499
	Construction of sewerage network in length of 3000 meters	451,660
	Project documentation for water supply and sewerage network	**15,600**
	Paving of dirt roads in total length of 1145 meters	93,142
	Construction of 20 typical houses – social housing objects	340,000
	TOTAL III	**1,164,901**
	TOTAL I + II + III	**2,785,696**

City: Kumanovo

Settlement	Activity	Total (EUR)
"Baraki"	Construction of 20 typical houses –social housing objects	540,000
	Construction of water supply network in length of 1000 meters	180,127
	Construction of sewerage network in length of 1000 meters	192,986
	Project documentation for water supply and sewerage network	6,000
	Paving of dirt roads in length of 300 meters	24,402
	Total I	**943,515**
"Bavci"	Paving of dirt roads in total length of 1400 meters	113,876
	Construction of atmospheric sewer in length of 1000 meters	243,000
	Legalization of 150 houses	37,500
	Garbage disposal solution	12,000
	Total II	**406,376**
"Sredorek"	Construction of water supply network in length of 300 meters	67,784
	Construction of sewerage network in length of 950 meters	138,782
	Project documentation for water supply and sewerage network	3,400
	Paving of dirt roads in length of 350 meters	28,469
	Garbage disposal solution	22,750
	Total III	**261,185**
	Total I + II + III	**1,611,076**

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