

## TERMS OF REFERENCE

for

### TECHNICAL ASSISTANCE FOR PREPARATION OF TECHNICAL DOCUMENTATION- DETAILED DESIGNS FOR LOCAL ROADS AND STREETS IN MUNICIPALITIES IN THE REPUBLIC OF MACEDONIA

#### Definitions

Capitalized terms used in any part of this document shall have the meaning set forth herein, unless the contents otherwise require.

- **"Employer"** means the Ministry of Finance (MOF) of the Government of Republic of Macedonia as represented by the Minister of Finance (or any person authorized by Ministry).
  - **"PIU"** means Project Implementation Unit established by The Ministry of Finance for facilitating the Project implementation
  - **"Agreement"** means the Consultancy Agreement to be signed with the Consultant to provide Technical Assistance: Preparation of Technical Documentation for Local Roads and Streets in Municipalities in the Republic of Macedonia.
  - **"Client"** means the Ministry of Finance represented by the PIU
  - **"Consultant"** means the Consultant contracted for the Service Agreement by the Ministry of Finance for Preparation of Technical Documentation for Local Roads and Streets in Municipalities in the Republic of Macedonia in accordance with the terms and conditions of the Service Agreement.
- "TOR"** means Terms of Reference

#### 1. Background

In order to improve transparency, financial sustainability and delivery of local services, which are essential for fostering local economic growth and improving living standards in municipalities, the Government of Republic of Macedonia has agreed the Municipal Services Improvement Project (MSIP) to be financed by the World Bank.

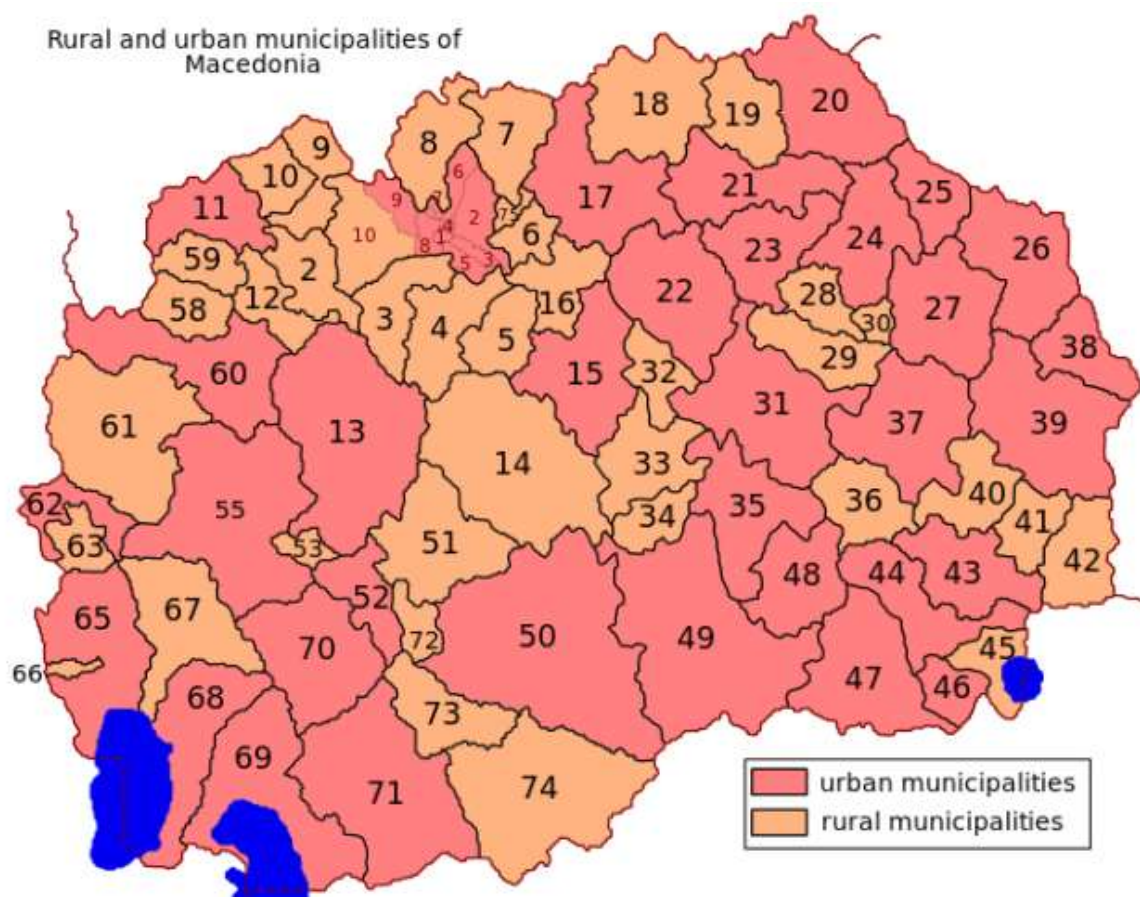
The major objective of the MSIP project is to support infrastructure investments in participating municipalities and their communal service enterprises, in the area of water supply, sanitation, and solid waste management, as well as support to other functions such as energy efficiency improvements, urban transport, and other services under municipal provision. Ministry of Finance is in charge of overall implementation and therefore the special project implementation unit (PIU) was established within the Ministry.

The Republic of Macedonia has rural population of about 1.2 million which comprises 58% of its total population, while in terms of territory 71% is rural territory and 29% is urban (official data from the 2002 census). Macedonian rural population is scattered over the whole territory of the country i.e. in all 80 municipalities, out of which 61 municipalities are completely rural and 19 municipalities have their urban and rural areas.

Road network of the Republic of Macedonia in the current total length of 14,182 km consists of 242 km of motorways, 911 km of national roads, 3,771 km of regional roads and 9,258 of local roads. Such road network represents a solid starting point for the country's further development.

In the Republic of Macedonia, the road transport has the largest share in the total transport of goods and passengers. In the structure of goods transport on the roads in the Republic of Macedonia, the national transport dominates the international and transit transport. Road transport also prevails over the rail transport.

Despite the fact that the physical decentralization process leads to strengthening of municipal functions, stimulation of local economic development and increase in infrastructural investments in municipalities, most of the municipalities suffer from inadequate basic infrastructure. Furthermore, most of the Municipalities don't have prepared technical documentation (Detailed designs for road infrastructure) to apply for using international funds. Therefore, the Republic of Macedonia has focused on infrastructural investment during the last decade.



No.	Municipality	No.	Municipality	No.	Municipality	No.	Municipality
1	Aerodrom	21	Debrca	41	Kriva Palanka	61	Rankovce
2	Arachinovo	22	Delchevo	42	Krivogashtani	62	Resen
3	Berovo	23	Demir Kapija	43	Krushevo	63	Rosoman
4	Bitola	24	Demir Hisar	44	Kumanovo	64	Saraj
5	Bogdanci	25	Dojran	45	Lipkovo	65	Sveti Nikole
6	Bogovinje	26	Dolneni	46	Lozovo	66	Sopishte
7	Bosilovo	27	Gjorche Petrov	47	Mavrovo and Rostushe	67	Staro Nagorichane

8	Brvenica	28	Zelino	48	Makedonska Kamenica	68	Struga
9	Butel	29	Zelenikovo	49	Makedonski Brod	69	Strumica
10	Valandovo	30	Zrnovci	50	Mogila	70	Studenichani
11	Vasilevo	31	Ilinden	51	Negotino	71	Tearce
12	Vevchani	32	Jegunovce	52	Novaci	72	Tetovo
13	Veles	33	Kavadarci	53	Novo Selo	73	Centar
14	Vinica	34	Karbinci	54	Ohrid	74	Centar Zhupa
15	Vrapciste	35	Karposh	55	Petrovec	75	Chair
16	Gazi Baba	36	Kisela Voda	56	Pehchevo	76	Chashka
17	Gevgelija	37	Kichevo	57	Plasnica	77	Cheshinovo and Obleshevo
18	Gostivar	38	Konche	58	Prilep	78	Chucher Sandevo
19	Gradsko	39	Kochani	59	Probishtip	79	Shtip
20	Debar	40	Kratovo	60	Radovish	80	Shuto Orizari

## 2. Objective and scope of work for the Consultant company

The overall objective of the assignment is to prepare technical documentation - detailed designs (construction, reconstruction and rehabilitation) for local roads and streets in the municipalities in Republic of Macedonia, in accordance with Macedonian Law on construction, location conditions, and all relevant and valid legislative.

Consultant shall prepare technical documentation – detailed designs for local roads and streets for 80 municipalities in Republic of Macedonia.

The Consultant company shall be responsible for the following activities:

- To prepare the Detailed design for local roads and streets in accordance with the Macedonian Law of construction, and all other applicable technical specifications, standards and regulations.
- To arrange for (provide) Technical Review of the Detailed designs<sup>1</sup>.
- To provide updated topographic survey.

## 3. Allocation methodology

Considering the limited funding, government policy is to support all municipalities in Republic of Macedonia. Therefore, to all municipalities has been allocated preparation of technical documentation for local roads and streets with total length of maximum three (3) km per municipality, but not more than three (3) Detailed designs for local roads and streets with cumulative length of three (3) km.

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<sup>1</sup> Through attraction of a licensed company.

#### **4. Description of each Detailed design**

**The consultant must deliver detailed design for local roads and streets in accordance with the Macedonian Law on construction, and other valid relevant legislative.**

The Consultant must develop the Detailed Design for local roads and streets according to the Macedonian legislative, based of the results of previous investigations and those carried out by the Consultant during this assignment.

The Detailed Design should include, as a minimum:

- Updated Topographic surveys;
- Detailed Design for local road/ Detailed Design for local street;

**It is required to provide complete relevant documentation (textual part, numerical part, graphical part) for each detailed design.**

Textual part includes as minimum:

- Technical description
- Technical requirements for construction of the works
- Bill of Quantities and Priced Cost Estimate

Numerical part includes:

- Numerical data for the road alignment
- Numerical data for each cross section

Graphical part includes drawings required by the design level but should consist minimum:

- overall layout of the alignment at scale 1:25,000 (topographic map);
- layout in sections of the alignment at scale 1:1,000 (topographic map);
- longitudinal profile of the alignment at 1:1,000/100;
- standard (typical) cross-sections of the alignment at 1:100;
- cross-sections on every 10 meters of the alignment at intervals 1:100.

#### **5. Implementation arrangement**

The Team Leader from the Consultant company will report directly to the Client Coordinator and the Ministry of finance – MSIP PMU, which will hold all proprietary rights to the materials and results of the activity. During the implementation period, the consulting company will be responsible for providing complete technical documentation for local roads and streets for 80 municipalities in Republic of Macedonia. The technical documentation must contain detail design and technical review of the designs, according to the Law on construction and other standards and technical regulations valid in the Republic of Macedonia.

#### **6. Consultant qualifications and relevant experience**

The Consultant's proposal shall be prepared according to the requirements of these Terms of Reference. The proposal shall consist of two parts, a Technical Proposal and a Financial Proposal. The Technical Proposal shall comprise the Consultant's discussion of the project comprehension, work program, man-month input schedule, curricula vitae and details of Consultant's experience. The Financial Proposal shall comprise the Consultant's fee proposal, and any other financial matters.

Interested Consultants should provide information in the Technical Proposal demonstrating that they have the required qualifications and relevant experience to perform the Services. The eligibility criteria are:

#### **Financial Performance**

**1.** If the Consultant is a *Single Entity* must submit balance sheets audited by certified accountant/auditor, or if not required by the law of the applicant's country, other financial statements acceptable to the Employer, for the last 3 years (2016, 2017 and 2018) to demonstrate:

- (a) The current soundness of the applicant financial position and its prospective long-term profitability, and
- (b) Capacity to have a cash flow amount of EUR 300.000 equivalent

**2.** If the Consultant is a *Joint Venture*, then:

- All Parties Combined must demonstrate the capacity to have a cash flow amount of EUR 400.000 equivalent  
- Each Partner must submit balance sheets audited by certified accountant/auditor, or if not required by the law of the applicant's country, other financial statements acceptable to the Employer, for the last 3 years (2016, 2017 and 2018) to demonstrate:

- (a) The current soundness of the applicant financial position and its prospective long-term profitability

### **General Experience:**

- 1.** If the Consultant is a *Single Entity* must have experience in preparation of technical documentation for local roads and streets (or similar)
- 2.** If the Consultant is a *Joint Venture*, Each Partner must have experience in preparation of technical documentation for local roads and streets (or similar)

### **Specific Experience:**

**1.** If the Consultant is a *Single Entity or Joint Venture* must have participated in detailed designs of roads and streets in at least 2 successfully completed contracts, completed within the 10-year period prior to the closing date for receipt of applications for this contract, worth at least 100.000,00 EUR each.

The Consultant Company should possess the following qualifications:

- License for Design of I category of buildings (License A), issued by the Ministry of Transport and communications of RM or ability to obtain verification of foreign Licenses for design as per article 42 of the Macedonian Construction Law.

The Consultants team must comprise specialists that have appropriate experience and shall obtain a verification of the personal licenses for each member of the team as per article 42 of the Macedonian Construction Law.

- The Consultant Company has to prove its capability and adequacy for preparing technical documentation for local roads with detailed list of at least five (5) conducted similar contracts for road designing with the units of local government (in the last 10 years). The duration of each of these five (5) contract should be at least for period of six (6) months.
- At least 20 full time employees.
- The Consultant should be certified under the following Standards:  
ISO 9001:2015 Quality Management System  
ISO 14001:2015 Environmental Management System

## **7. Staff requirements and relevant experience**

- The Consultant company has to nominate a **Team Leader** – Graduated Civil Engineer or Architect, with at least 15 years of working experience as main designer, reviewer and supervisor of construction of civil engineering structures, appropriate reference list for design, revision and supervision of at least 20 civil engineering or architecture works and Authorization A for design, revision and supervision of construction issued by the Chamber of Authorized Architects and Authorized Engineers of the Republic of Macedonia,

according to Art. 33 of the Law on construction (O.G. of RM, No. 130/09) and must be member of the Chamber of Authorized Architects and Authorized Engineers of the Republic of Macedonia.

- The Consultant Company also has to nominate 1 (one) team of engineers, members of the Chamber of Authorized Architects and Authorized Engineers of the Republic of Macedonia, for preparation of the technical documentation. The team shall contain the following engineers, as minimum:

1. 2 (two) Architects with valid Authorization A for preparation of design documentation in the field of architecture
2. 2 (two) Civil Engineers with valid Authorization A for preparation of design documentation in the field of civil engineering, with specialization in roads.
3. 2 (two) Civil Engineers with valid Authorization A for preparation of design documentation in the field of civil engineering, with specialization in hydrotechnics.
4. 2 (two) Civil Engineers, at least one with valid Authorization A for preparation of design documentation in the field of civil engineering, with specialization in structures.
5. 2 (two) Traffic Engineers, at least one with valid Authorization A for preparation of design documentation if the field of traffic engineering

All with appropriate reference list and one expert mandatory to have authorization in the field of health and safety.

The team of engineers must be hired as full-time employees, according to current relevant employment laws in the Republic of Macedonia.

It is expected that the Consultant will provide a team of local experts with experience in similar activities and work under similar conditions and constraints, with specific professional certifications and authorizations for the services provided in the project, required by the legal framework in the Republic of Macedonia. The core team will consist of key experts supported by a subsidiary team of senior and junior non-key experts, which the consultant can draw upon when needed.

### **Key experts**

For performing all services under this TOR, the Consultant will appoint the following key experts:

1. Team Leader
2. Team of engineers containing following experts:
  - a.) 1 (one) graduated Architect
  - b.) 1 (one) Road Engineer (Civil Engineers graduated in the field of roads)
  - c.) 1(one) Hydrotechnical Engineer (Civil Engineers graduated in the field of hydrotechnics)
  - d.) 1 (one) Structural Engineer (Civil Engineer graduated in the field of structures)
  - e.) 1 (one) Traffic Engineer

#### **A. Key expert 1: Team Leader**

The Team Leader will be tasked with the overall coordination of the assignment, outputs revision, provision of technical documentation and delivery of activities within the budget and time limits contracted, and will also actively participate in the design activities. He/she will be the main contact person of the Consultant and interface with the Client Coordinator and the Ministry of finance – MSIP PMU. He/she will develop the work plan, manage deliverables, identify required expertise, and allocate tasks.

The minimum necessary qualification for the **Team Leader**:

- University degree in civil engineering or architecture;
- At least 15 years of professional experience

- Minimum of 15 years of relevant work experience with design, revision and supervision of construction, in the field of civil engineering or architecture
- Authorization A for design, revision and supervision of construction in the field of civil engineering or architecture
- Knowledge of the Macedonian laws, standards and technical regulations applicable in the field of design & construction;
- Computer skills;
- Fluency in Macedonian and English language;

**B. Key expert 2: Architect**

He/she will be responsible for the design of the infrastructural designs for the local roads, will be nominated as responsible designer and, hence, will be also in charge of cost estimates.

The minimum necessary qualification for the **Architect**:

- University degree in architecture;
- Minimum of 10 years of relevant work experience with design and revision in the field of architecture;
- Authorization A for design and revision of architectural projects
- Knowledge of the Macedonian laws, standards and technical regulations applicable in the field of design & construction;
- Computer skills;
- Fluency in Macedonian and English language;

**C. Key expert 3: Road Engineer**

He/she will be responsible for the design of the construction options and solutions for the alignment, will be nominated as responsible designer and, hence, will be also in charge of cost estimates.

The minimum necessary qualification for the **Road Engineer**:

- University degree in civil engineering; specialization in road engineering
- Minimum of 10 years of relevant work experience with design and revision of detailed road designs;
- Authorization A for design and revision of detailed road designs;
- Knowledge of the Macedonian laws, standards and technical regulations applicable in the field of design & construction;
- Computer skills;
- Fluency in Macedonian and English language;

**D. Key expert 3: Hydrotechnical Engineer**

He/she will be responsible for the design of the drainage options and solutions, will be nominated as responsible designer and, hence, will be also in charge of cost estimates.

The minimum necessary qualification for the **Hydrotechnical Engineer**:

- University degree in civil engineering; specialization in hydrotechnical engineering
- Minimum of 10 years of relevant work experience with design and revision of detailed hydrotechnical designs;
- Authorization A for design and revision of detailed hydrotechnical designs
- Knowledge of the Macedonian laws, standards and technical regulations applicable in the field of design & construction;
- Computer skills;
- Fluency in Macedonian and English language;

**E. Key expert 4: Structural Engineer**

He/she will be responsible for the design of the construction options and solutions for the civil engineering structures, hence, will be also in charge of cost estimates.

The minimum necessary qualification for the **Structural Engineer**:

- University degree in civil engineering; specialization in structural engineering
- Minimum of 10 years of relevant work experience with design and revision of detailed structural designs;
- Authorization A for design and revision of detailed structural designs;
- Knowledge of the Macedonian laws, standards and technical regulations applicable in the field of design & construction;
- Computer skills;
- Fluency in Macedonian and English language;

#### F. **Key expert 5: Traffic Engineer**

He/she will be responsible for the design of the traffic options and traffic solutions for roads, and hence, will be also in charge of cost estimates.

The minimum necessary qualification for the **Traffic Engineer**:

- University degree in traffic engineering;
- Minimum of 10 years of relevant work experience with design and revision of detailed traffic designs;
- Authorization A for design and revision of detailed traffic designs;
- Knowledge of the Macedonian laws, standards and technical regulations applicable in the field of design & construction;
- Computer skills;
- Fluency in Macedonian and English language;

Team Leader shall be responsible for overall designing process, communication, reporting and quality control.

- **Foreign Key experts lack of knowledge of Macedonian can be addressed by having a translator on board if the foreign licensed engineers are not fluent in Macedonian.**
- Foreign experts can get more information about confirmation of their Authorizations on the following link: **<http://komoraoai.mk/en/application-foreign-individuals.html>**

#### **Non-key experts**

The Consultant will identify additional senior and/or junior experts for the execution of the tasks of this assignment.

Additional experts required for the assignment are to be defined by the Consultant. The Non-key experts will assist the above key experts in their respective tasks.

### **8. Reporting requirements**

Completion and submission of the documentation, including:

Reports	Description	Time of submission
Quarterly Progress Reports	Short description of progress achieved, including problems encountered, and planned activities for the next 3 months.	No later than 10 days after the end of each 3month implementation period.
Reports for each municipality	Final reports after completion of the technical documentation for the roads in each municipality.	No later than 10 days after the end of completion of the technical documentation for the roads in each municipality.
Final report	Final Report after the completion of the technical documentation for the roads in all municipalities. Short description of the	No later than 15 days before the end of the implementation period.



	achievements.	
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The Consultant shall prepare all reports in A4 format, with appropriate headers and footers, and printable double-sided. Drawings and schedules shall be reduced to max. A3 size for incorporation into the reports.

All reports in Macedonian and English language must be sent for approval to the Client Coordinator specified in the Contract.

After the approval, the Client Coordinator shall send all the reports, to the Ministry of Finance, MSIP Project Management Unit.

## 9. Communication

The MSIP PMU will coordinate all the activities, including the communication between the Consultant and other competent authorities from the municipalities in the Republic of Macedonia. All activities will be carried out in close cooperation with the Client Coordinator. Regular monthly meetings will be held with the Client Coordinator and MSIP PMU representatives and other relevant stakeholders to report on and discuss progress achieved, critical issues and other implementation aspects of the assignment. Minutes of meetings will be prepared by the Consultant and distributed to all participants. In addition, ad-hoc meetings with the participation of MSIP PMU and municipalities representatives may be required.

The team leader of the Consultant will lead the assignment, and he/she will be responsible for the supervision of the team of experts, for ensuring the progress of the assignment in accordance with the planning set, for coordination with the stakeholders, and reporting. The team of experts will hold meetings with the stakeholders and will keep them informed of progress achieved and other implementation issues. The team of experts will work and coordinate with the MSIP PMU's team to complete the work, develop a constructive relationship with and ensure an effective transfer of knowledge and competencies to the MSIP PMU.

## 10. Duration of the assignment and type of procurement:

It is foreseen that the duration of the assignment will be 11 months during the period commencing April, 2019 through March 2020. It is expected that work will start immediately after signing of the contract.

The consulting company shall be selected in accordance with the World Bank's Guidelines: Selection and Employment of Consultants by World Bank Borrowers, published by the World Bank in May 2004, revised October 2006, January 2011, revised July 2014 under selection method Quality-and Cost-Based Selection (QCBS)

The Consultant shall carry out the task under the guidance of the Project Implementation Unit (PIU).

The contract shall be based on the standard World Bank Contract for Assignments (Lump-Sum Payments). Payments for the services shall be made in accordance with an agreed schedule after completion of each stage of work. Prior to each payment, PIU/MoF needs to approve the quality of the products received from the consultant.

## 11. Delivery and payment method:

**Complete technical documentation is delivered in Macedonian language and in electronic format in both PDF and DWG, in accordance with the Macedonian Law on construction and any other relevant legislation on 2 CDs, as well as 3 hard copies of each detailed design all signed and verified according to the Macedonian laws.**

Payment method will be after the delivery of complete technical documentation for five (5) municipalities.