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MINISTRY OF WATER AND ENERGY
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Water Supply and Sanitation Sector

URBAN WATER SUPPLY STUDY, DESIGN AND CONSTRUCTION SUPERVISION DESK

TERMS OF REFERENCES (TOR)

FOR

SELECTION OF CONSULTANTS FOR DESIGN REVIEW, SUPERVISION
CONSTRUCTION WATER SUPPLY & SANITATION PROJECT FOR
LEKU TOWN

November, 2025
Addis Ababa, Ethiopia



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TABLE OF CONTENTS

1.	INTRODUCTION	2
2.	GENERAL OBJECTIVES	3
3.	SPECIFIC OBJECTIVES.....	3
4.	SCOPE OF THE ASSIGNMENT	4
5.	GENERAL OVERVIEW OF THE PROJECT AREA.....	6
5.1.	Location	6
5.2.	Climate	6
5.3.	Existing Water Supply System	7
6.	TECHNICAL REQUIREMENTS.....	7
7.	CONSULTANT’S TEAM COMPOSITION	7
8.1.1.	COMPOSITION OF THE CONSULTANT'S STAFF	7
8.1.2.	EQUIPMENT	9
8.1.3.	CONSULTANT’S ADMINISTRATION	9
8.1.4.	Client’s Input for the Service	11
8.	PAYMENT MODALITY FOR THE CONSULTANT	11

LIST OF FIGURES

FIGURE 1: PROJECT AREA LOCATION.....	6
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1. INTRODUCTION

Drinking water is indispensable for human beings and is one of the most important natural resources on earth. Access to safe drinking water is essential for health, a basic human right, and a key component of effective health policy. Every effort should be made to improve access to safe drinking water to ensure better public health outcomes.

The **Ministry of Water and Energy** was established to give greater attention to the water supply sector in order to achieve the government's planned development goals. The Ministry supports and monitors the implementation of various water supply projects across all regions of the country. However, ensuring adequate water supply services for the growing urban population remains a major concern, particularly in improving living conditions and supporting sustainable urban development.

To provide an immediate solution to the serious water supply and sanitation challenges in Leku Town, Sidama National Regional State, a new system has been designed. This system is documented in the Detailed Design and Study Report, which forms the basis for implementing the water supply and sanitation project.

Population projections were made using cost-effective guidelines and urban growth rates for the Sidama region, as established by the Central Statistical Agency (CSA).

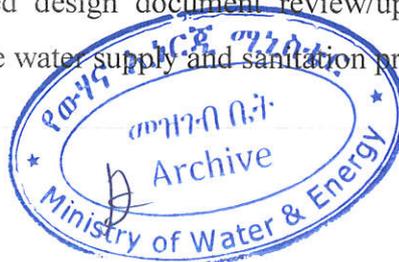
The existing water supply sources in the town are primarily boreholes. These are now integrated into the design of the new water supply system to ensure an immediate improvement in water availability and sanitation.

The overall objective of this assignment is to select a consultant to review design documents, carry out construction supervision and Contract Administration of the water supply and sanitation project for Leku Town.

The goal is to ensure a sustainable water supply system that addresses community water needs and provides water for human consumption at reasonable distances according to demand.

The consultant will serve as the Employer's authorized representative, providing supervision and administration as described in the Terms of Reference (TOR). This includes provision of qualified and experienced personnel, effective project management and coordination, and efficient execution of all services.

This consultancy will be conducted under a mixed **lump-sum and time-based contract**, with a total duration of **18 months** for detailed design document review/update, supervision, and contract administration for construction of the water supply and sanitation project.



The selected consulting firm must be highly competent and reputable, with experienced key professionals and appropriate support staff possessing extensive relevant work experience.

2. GENERAL OBJECTIVES

The general objective of this assignment is to address the existing shortage of potable water and sanitation challenges in **Leku Town**. This will be achieved through the preparation of a **Detailed Engineering Design and Study Document review and update**, and carry out **construction supervision and Contract Administration** of the water supply and sanitation project for Leku Town. The ultimate goal is to ensure that residents have access to an adequate, reliable, and sustainable water supply within reasonable distances and in accordance with current and future demand.

3. SPECIFIC OBJECTIVES

The consultant's main responsibility is to **Detailed Engineering Design and Study Document review and, update**, and **construction supervision and Contract Administration** all aspects of the **Leku Town Water Supply and Sanitation Project**, ensuring quality, compliance, and coordination with all stakeholders (Regional, Zonal, Woreda Water Offices, and local communities).

- **Detail Engineering Design and study Review and update:** Review and update the Detailed Engineering Design and study. Conduct a feasibility appraisal of alternative water sources.
- **Preparation of Tender Document and Reporting:** Prepare BOQs, tender documents, and final design reports with economic, environmental and technical justifications. Present findings and recommendations during client appraisal sessions.
- **Construction supervision and Contract Administration for water supply and sanitation project:** After completed the final Engineering Design and study Review and update Supervision construction, contractor performance, and compliance with design specifications. Manage progress reporting, dispute resolution, quality control, and payment verification.
- **Project Prioritization and Capacity Building:** Prioritize project clusters based on water source adequacy, cost-effectiveness, and socio-environmental factors. Assess existing water, sanitation, and hygiene (WASH) conditions and prepare baseline and capacity-building reports. Promote skills development, lesson sharing, and knowledge exchange among project stakeholders to strengthen the regional water sector. On-the-job training and knowledge transfer to client personnel will be facilitated throughout the project.



4. SCOPE OF THE ASSIGNMENT

The Consultant shall carry out comprehensive **Detail Engineering Design and study Review and update, and provide and construction supervision and Contract Administration** during construction of the **Leku Town Water Supply and Sanitation Project**.

The Consultant shall work in close collaboration with all relevant stakeholders, including Regional, Zonal, and Woreda Water Offices, as well as local project communities.

The specific objectives of the assignment include, but are not limited to, the following:

1. Design and Study Review and Update

- Prepare an appraisal and feasibility study for the Leku Town Water Supply System, considering various potential source alternatives (if available).
- Conduct a comprehensive review and audit of the hydrogeological conditions in the project area, including:
 - ✓ Evaluation of recharge and discharge conditions;
 - ✓ Delineation of aquifer distribution;
 - ✓ Determination of hydraulic parameters;
 - ✓ Analysis of groundwater quality;
 - ✓ Assessment of potential impacts of future groundwater abstraction.
- Review and verify the final borehole design, including:
 - ✓ Depth intervals to be screened;
 - ✓ Screen slot sizes;
 - ✓ Gravel pack intervals and materials;
 - ✓ Installation EM and test pumping activities, ensuring conformity with the Bill of Quantities (BoQ) and technical specifications.
- Review and update all activities necessary for full project implementation and prepare a detailed implementation plan covering installation, testing, commissioning, and all associated civil works (wells, transmission mains, transfer mains, and distribution networks).
- Review and update the detailed engineering design of wellfield electromechanical components, including borehole equipment, pipes, fittings, accessories, and power supply alternatives.
- Prepare revised working drawings for the wellfield electromechanical, mechanical, electrical, and civil components, based on the approved design review report.



- Present design review findings, identified deficiencies, and proposed technical and administrative solutions during client appraisal sessions.
- Prepare a comprehensive detailed design report covering water sources, transmission and distribution pipelines, fittings, electromechanical equipment sizing, and power supply options.
- Provide recommendations and justifications based on economic, technical, and environmental considerations.
- Perform hydraulic simulations of the transmission and distribution systems using Water CAD or equivalent modeling software to ensure appropriate pipe and fitting selection.
- Prepare a revised Bill of Quantities (BoQ) and detailed technical specifications for all works and goods associated with the reviewed design.

2. Tender Document Preparation

- Prepare complete tender documents and detailed working drawings for borehole drilling and for the detailed engineering design, including electromechanical (EM) components of the Leku Town Water Supply System.

3. Construction supervision and Contract Administration of Water Supply and Sanitation project

- Using the final detailed engineering design and study report, carry out construction supervision for civil works, pipe fittings, EM supply and installation, and overall water supply construction and contract management for the Leku Town project.
- Ensure that all works are implemented in accordance with the technical specifications and contract documents, including testing, commissioning, and project handover.
- Supervise the supply and installation of pipes, fittings, electromechanical equipment, accessories, and related civil works as per the approved design, Bill of Quantities, and technical specifications.

4. Project Prioritization, Assessment, and Capacity Building

- Prioritize project clusters based on confirmed water sources, technical feasibility, cost-effectiveness, and socio-economic and environmental considerations.
- Conduct a comprehensive assessment of existing water supply, sanitation, and hygiene (WASH) services, including management structures at the town level.
- Prepare detailed baseline data and a capacity-building needs assessment report related to service delivery and institutional performance.



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- Facilitate on-the-job training and knowledge transfer to client personnel seconded to the Consultant during the project.

5. Knowledge Transfer and Sectoral Learning

The Ministry of Water and Energy (MoWE) places strong emphasis on skills development, lesson learning, and knowledge sharing among consulting parties participating in this project. Accordingly, the Consultant shall actively contribute to capacity building and knowledge transfer, aimed at strengthening the knowledge base and performance of the regional water sector.

5. GENERAL OVERVIEW OF THE PROJECT AREA

5.1. Location

Leku town is found in Sidama regional state. It is the capital town of Shebedino woreda. The town is located at about 27Km away from Hawassa, the regional state center.

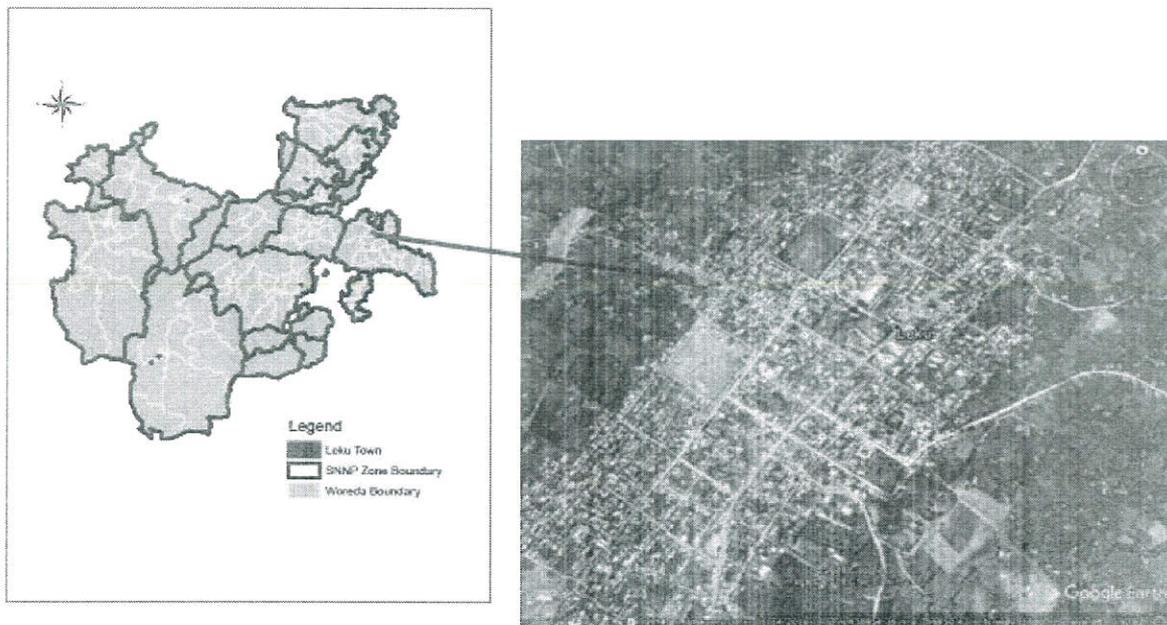


Figure 1: Project area location

5.2. Climate

The climate of leku-town is the reflection of its location altitude. However, its location seems to have a great impact on the climate. The mean annual rain fall in the area is around 1392.2. The study region is characterized by diversified agro-climatic climate regions. These include Kola, dega, Woinadega and Berha. Specifically, Leku town is classified as woinadega climatic zone.



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5.3. Existing Water Supply System

The existing water supply sources are three bore holes with a total estimated yield of around 23 liters per second (5 liters, 10 liters, and 8 liters) are now they are giving a total of 23 liters per second. only one borehole with safe yield of 10 liters per second is in considered integrated with the new water supply system design of the town. in order to give solution that is aimed at alleviating the serious problem of the existing water supply and sanitation system of Leku- town.

6. TECHNICAL REQUIREMENTS

Together with other requirements mentioned elsewhere in these terms of reference the following are the technical requirements of the assignment

The Consultant is expected to respond to all of these technical requirements in their proposal as a minimum level of compliance and to:

1. Demonstrate the depth of understanding of the technical requirements and project implementation,
2. Identify where quality and performance improvements can be made
3. Identify where technical innovations and creative solutions may be appropriately introduced to provide added value to the project.

7. CONSULTANT'S TEAM COMPOSITION

The Consulting firm shall be legally established firm and committed to put together a team of the required qualification with direct experience and excellent understanding in their area of engagement in the construction supervision and contract administration of the project.

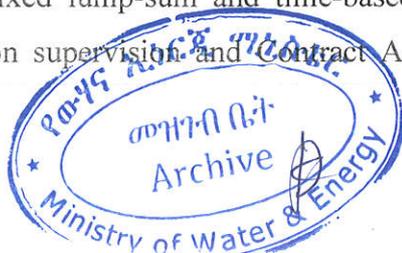
The consultant shall complete the team composition and task assignment in sufficient detail to ensure that all technical requirements fall under the responsibility of a named expert.

The consultant shall submit CVs for all the key staff in their proposed team. All CVs must meet the minimum requirements as indicated below. Resumes of the qualifications and experience of the key members of the team along with mandatory professional equipment's and transportation vehicles will be the key criteria used to evaluate proposals.

8.1.1. COMPOSITION OF THE CONSULTANT'S STAFF

In The team compositions of the key staffs for the consultancy service of the project is arranged by categorizing as per the Tasks.

Conducted under a mixed lump-sum and time-based contract, which is detail design review & update and construction supervision and Contract Administration of water supply and sanitation



project during implementing civil work, supply and installation of pipe and pipe fittings and electromechanical equipment for Leku- town water supply and sanitation project

Key personnel for the consultant selection for the project				
S/No	Position	No of person	Qualification and Experience	Person Month
1	Project Manager/ Team Leader	1	BSc or above in water supply, hydraulic, water resources, civil, and environmental engineering with a minimum of 10 years of professional experience in the water supply sub-sector with a high credit to experiences in Team Leader / project management, construction supervision, and contract administration of similar/lager water supply projects. - Skill on AutoCAD and Water CAD ^ water GEMS is also a credit	18
2	Hydro geologist	2	BSc or above in Geology/Applied Geology/Hydrogeology with a minimum of 12 years of professional experience in the water supply sub-sector with a high credit to experiences in project management, construction supervision and contract administration of similar/lager water supply projects.	6
3	Water Supply/ Hydraulic Engineer	2	BSc or above in water supply, hydraulic, water resources, civil, and environmental engineering with a minimum of 10 years of professional experience in the water supply sub-sector with a high credit to experiences in project management, construction supervision and contract administration of similar/lager water supply projects.	14
4	Structural/Civil	2	M.Sc. / BSc. degree in structural or Civil related fields and Experience 8 and 10 (and above) respectively, in Civil and structural design Buildings and Water of water supply projects with similar scope and complexity. Renewed Professional license	6
5	Electromechanical Engineer	1	BSc or above in Electrical and/or Mechanical engineering with a minimum of 10 years professional experience in the similar/lager water supply projects with treatment plant.	6
6	Socio-Economist	1	BSc or above in Economics with at least 10 years with experience of two similar purpose project. The expert shall have the experience in effective management of safeguard measures a redressing procedure.	3
7	Environmental Expert	1	BSc or above in Analysis and Environmental Management He/ She should have qualifications in Environmental Engineering and preferable have an advanced in an environment impact assessment.	3
8	Water Quality Expert	1	BSc or above in Sanitary/ Environmental Engineering Chemistry or related field with minimum 6/8 years' experience in water supply and sanitation and related infrastructure projects. Experience in water quality.	3



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9	Quantity surveyor	1	MSc or above degree in Civil with a minimum of 8 years of professional experience.	3
10	Structural Engineer	1	MSc or above degree in Structural/Civil related field/ Engineering with a minimum of 8/10 years of professional experience and construction supervision of large water supply Structural with similar scope.	3
11	CAD Expert	1	BSC in surveying or Diploma in AUTOCAD with minimum of 6 years similar working experiences in water supply project implementation	3

8.1.2. EQUIPMENT

The Consultant shall be responsible for all logistical requirements, including but not limited to office space and furnishings, accommodation, consumables, utilities, vehicles, transportation costs, and costs of duplication or acquisition of all reports, maps and other data shall include in the technical and financial proposal.

8.1.3. CONSULTANT'S ADMINISTRATION

The consultant firm is directly accountable to the MoWE but works in cooperation with the Regional Bureau & local sector offices on issues regarding execution of the intended work.

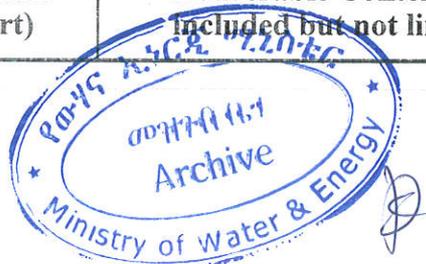
Reports to be submitted for the project

- ❖ Monthly Progress reports and completion Report of construction supervision and Contract Administration of water supply and sanitation project during implementing civil work, supply and installation of pipe and pipe fittings and electromechanical equipment for Leku-town water supply and sanitation project during implementing of civil work, supply and installation pipe, pipe fitting and electromechanical.
- ❖ Inception reports
- ❖ Final details engineering design review & update report, drawings, BOQ, completion Report and tender document
- ❖ Final Tender document for Detail Engineering Design and study update Report

Reports and Schedule of Deliverables

The consultant is expected to submit the following reports (5 hard copies and 5 electronic copies.) in due time, format and details acceptable as per national and international construction supervision and contract administration practices;

Item No.	Deliverable (Report)	Deliverable Contents to be included but not limited to	Number of Copies	Time frame (M-Month)	Payment Schedule
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Item No.	Deliverable (Report)	Deliverable Contents to be included but not limited to	Number of Copies	Time frame (M-Month)	Payment Schedule
1	Draft Inception report (Phase-I)	The report includes: Intensive review of available documents and collected data, different thematic layers for multi-criteria overlay Detail Engineering Design & EM for Water Supply system investigation using overlay analysis, identified data gaps for further phase works and proposed methodology and final work plan for the next phases	5	M+1	-
2	Final Inception report (Phase-I)	Final inception report submission after incorporating comments/feedbacks of Workshop-1	5	M+1.5	10%
3	Draft Feasibility studies and Detail Engineering Design Document Review and update Report	Review and update the draft Detail design report considering the sources, transmission line pipe and fittings, electromechanical equipment sizing, distribution pipe and fittings sizing, power supply alternative sizing and recommendations with justification considering economic, technological and environmental issues. Prepare a detailed implementation plan for the installation, testing and commissioning of the project.	5, 20-training manuals	M+4.5	-
4	Final Feasibility studies and Detail Engineering Design Document Review and update Report	Final Detail Engineering Design Document Review and update Report after incorporation of comments and suggestions from Workshop-3	5	M+5	30%
6	Final Tender document for Detail Engineering Design and study for Water Supply system. and update Report	Final Tender document for Detail Engineering Design Document Review and update and drilling boreholes with EM for Water Supply system. and update Report	5	M+6	20%



Item No.	Deliverable (Report)	Deliverable Contents to be included but not limited to	Number of Copies	Time frame (M-Month)	Payment Schedule
6	Supervision construction of water supply and sanitation project	By using final Detail engineering design and study report to carryout construction supervision civil work, pipe fittings & EM supply and installation and water supply construction supervision and contract management work	5	M+18	40%

8.1.4. Client's Input for the Service

The client will:

- ❖ Avail to the consultant copy of the contract agreement for the consultancy work
- ❖ Avail to the consultant the draft study and detail engineering design document to review and update report
- ❖ Assign project Coordinator,

8. PAYMENT MODALITY FOR THE CONSULTANT

Payment to the Consultant shall be made on a lump-sum basis, linked to the successful completion and submission of deliverables as per the agreed schedule. All payments will be made upon submission and approval of the corresponding reports by the Ministry of Water and Energy, following the incorporation of all comments and feedback provided by the Client.

First Payment – 10%: Condition: Paid after submission of the Final Inception Report, incorporating comments and feedback acceptable to the Ministry. Timeline: Payment shall be made within 45 days of acceptance. **Lump-sum contract**

Second Payment – 30%: Condition: Paid after submission of the Final Detailed Engineering Design Document Review and Update Report, including incorporation of comments and suggestions. **Lump-sum contract**

Third Payment – 20%: Condition: Paid after submission of the Final Tender Document for the Detailed Engineering Design Document Review and Update for the water supply system. **Lump-sum contract**

Fourth Payment – 40%: Condition: Paid after monthly report submitted during the construction supervision and Contract Administration of the water supply and sanitation project. **Time-based contract**

