



Albertine Rift Conservation Society/Société de Conservation du Rift Albertin		
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**Tender Reference Number :001/LLBCP/ARCOS/2023**

**METHOD OF ACQUISITION: OPEN COMPETITIVE BIDDING**

**CLIENT: ARCOS**

**FINANCING AGENCY: LLBCP**

**Tender reference number: 001/GNF/ARCOS/2023**

**Publication Date: 8-03-2023**

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***Collaborative Action for Nature and People / Action Collaborative pour l'Homme et la Nature***  
UK Charity No. 1102123 - Company No. 4103967, Uganda NGO No. S 5914/5195, Rwanda NGO No: 118/RGB/18

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## TITLE OF THE TENDER

### CONSTRUCTION OF IRRIGATION WATER SUPPLY SYSTEM WITHIN BWERAMANA AND KANEMBWE VILLAGES IN TEBA CELL, GIHANGO SECTOR, RUTSIRO DISTRICT.

#### I. About us

The Albertine Rift Conservation Society (ARCOS) is a regional conservation organization with the mission to enhance biodiversity conservation and sustainable management of natural resources in the Albertine Rift region, Africa Great Lakes region and African Mountains through the promotion of collaborative conservation actions for nature and people ([www.arcosnetwork.org](http://www.arcosnetwork.org)).

#### Background Information

The Albertine Rift Conservation Society (ARCOS) in the partnership with Global Nature Fund (GNF) secured funding from the German Federal Ministry of Environment, Nature Conservation, Nuclear Safety and Consumers Protection (BMUV) on behalf of the International Climate Initiative (IKI) to implement a project entitled “**Living Lakes Biodiversity and Climate Project (LLBCP)**”. The main objective of this project is the conservation and restoration of lakes and wetlands, promoting the protection of their biodiversity and ecosystem services.

Through this project of Living Lakes Biodiversity and Climate, we will restore the sub-catchment of Lake Kivu and Koko River as one of the majors draining the western party of Rwanda from Gishwati-Mukura Mountain landscape and is tributary of Lake of Kivu. This project has two main component such are capacity building for the farmers and fishermen, young generation on sustainable production, biodiversity conservation and wetland management, the second component is for the frontrunner activities. Under this component ARCOS is going to establish the radical terraces on six (6) hectares, for reducing the soil erosion upper Koko river sub catchment and increasing the agriculture production, and for the sustainable production of the established radical terraces its will be irrigated under the gravity water irrigation system for all area of 6ha.

The irrigation system is expected to help local community to access small scale irrigation during the dry season to enhance productivity of their small farms in which the project is supporting to grow vegetables and fruits.



In this framework, ARCOS is looking for an experienced company with the skills experience to construct the irrigation water supply system within Bweramana and Kanembwe Villages in Teba Cell, Gihango Sector, Rutsiro District.

## **TENDER**

### **Construction of the irrigation water supply system within Bweramana and Kanembwe Villages in Teba Cell, Gihango Sector, Rutsiro District.**

**Tender reference number:** 001/GNF/ARCOS/2023

**Procurement method:** Open Competitive Tender

**Date of Publication :** 8<sup>th</sup> March 2023

#### **PART I: Tender summary**

ARCOS invites bidders to bid through a competitive tender process on equal ground; please read the tender package carefully and comply with all submission guidelines using the reference number above for all correspondences. Failure to comply with submission guidelines may prompt ARCOS to disqualify your submission.

The table below provides basic information about the construction of the gravity water supply including the proposed type of award contract for the company which will be selected from this process.

Title of tender	<b>CONSTRUCTION OF THE GRAVITY WATER SUPPLY SYSTEM</b>
Type of contract planned	Construction contract
Date tender launched	8 <sup>th</sup> March 2023
Submission deadline	20 <sup>th</sup> March 2023 at 2:00 p.m Kigali time
Public opening date	Public opening at ARCOS head office on 20 <sup>th</sup> March 2023 at 2:30 p.m
Tender submission	Sealed envelope submitted at ARCOS head office
Performance guarantee	After selection, the selected bidder before signing the contract must be presented the guaranty security, issued by a local commercial bank only equivalent to 10% of the total amount of the contract.
Terms of Payment	40% of the total cost will be paid to the contract as the advance after signing the contract, and 30% will be paid as the second instalment after evaluation of activities completed at the 60%, third instalment of 20% will be paid after finishing the work and provisional handover, the last instalment of 10% will be paid after final handover and report.
Complain Email	<a href="mailto:info@arcosnetwork.org">info@arcosnetwork.org</a>

## **PART II: BID SUBMISSION GUIDELINES**

Bidders **MUST** comply with the format and content instruction in the table below, failure to comply with the submission format and content below may disqualify the offer.



## II.1 BID FORMAT AND CONTENT

Number of bid copies required	Technical proposal with clear design of gravity water supply (one original and one copy) Financial proposal (one original and one copy)
Bid language	Tipped in English or French
Bid currency	Rwandan Francs
Bid pricing	VAT Included
Bid validity	At least 30 days from bid receipt
Bid submission format	Bidders are requested to submit their bid in sealed envelope, mentioning the tender title and reference number, to ARCOS head office

## II.2. SUBMISSION AND HANDLING OF BIDS

1. Tender Bids are submitted physically in hard copies at ARCOS head office.
2. To be considered, the bid must be submitted and received at ARCOS head office in sealed envelopes no later than the submission deadline as mentioned in part I.
3. Bids must follow the format and content described in section II.1. Incomplete bid or bids which do not follow the submission guidelines may be disqualified from consideration.
4. Bids will be opened in public, the opening result and notification letters for both the successful and unsuccessful bidders will be shared through the bidder email provided in the bids documents.
5. Normally the complaint will be received through above mentioned email within the seven days after opened bids.

## II.3. REQUIRED DOCUMENTS FOR THE BIDDER

The submission letter signed. With

- Company profile showing the company background and physical address
- Registration certificate from RDB
- Certificate of tax clearance to RRA still valid
- RSSB Certificate still valid

- VAT Certificate
- Electronic Billing Machine (EBM) certificate
- Purchase slip of DAO of 10,000Frw
- Planning of implementation calendar
- Submit at least 2 certified attestations providing the execution of similar works, ( 2 contract and 2 completion certificate )
- Average annual Turnover of at least **four hundred million Rwandans Francs (400,000,000 Rwf at least)** for the last five (5) years (2022, 2021, 2020, 2019, 2018). This average annual turnover must be supported by annual financial statements (Income statement and balance sheet) certified by a recognized audit firm or approved by RRA. The client may also conduct the physical verification at RRA.
- A credit line of at least one hundred million Rwandan francs (**100,000,000Frw**) with contract.
- **Technical staff:**

**1.2 Project Manager:** Project Manager should have a bachelor's degree in water and environmental Engineering, Hydraulic Engineering or Civil Engineering with five (5) years of general experience. He/she should have a specific experience justified by at least four (4) projects executed in drinking water supply system proven by the original or notarized statement of services rendered (attestation de service rendu). He/she should provide notarized copy of degree, updated, and signed CVs, updated, and signed certificates of availability and exclusivity and copy of identity cards or passport, notarized certificate of Institution of Engineers Rwanda (IER).

**2. Hydrology Engineer:** Site Engineer should have bachelor's degree hydrology and water resources with a specific experience justified by at least four (4) projects executed in drinking water supply system proven by the original or notarized statement of services rendered (attestation de service rendu). He/she should provide notarized copy of degree, updated and signed CVs, updated and signed certificates of availability and exclusivity and copy of identity cards or passport.

**3. Quantity surveyor:** with qualification of a degree in quantity survey (A0), 3 years of experience in similar works (construction of water supply) and having conducted at least three similar projects as site engineer justified by notified working certificates.



**4. Plumber:** with having a certificate **A2 of plumbing** with at least 7 years of experience in similar works of construction and rehabilitation of water supply system with **4 certificates** of service rendered notified.

**5. Surveyor/Topographer** with qualification with A0 in land surveying/topography having five years of general working experience and least five similar projects as topographer/surveyor in water supply systems justified by notified working certificates.

**6. Site Foremen** with qualification of secondary school certificate (A2) in public works, construction, public works in having a general working experience **of more than 10 years** and at **least 6 years of specific** experience in construction/rehabilitation works of water supply systems. Present at least Five notified certificates of working experience in water supply projects.

The documents of the staff must be:

1. The key personnel must have the good, detailed C.V, updated and signed by the holder with the notified copy of certification of their qualification as stated above, copy of ID and certificate of availability and exclusivity.
  2. All engineers must submit their valid certificates from institution of Engineers of RWANDA.
  3. Surveyors must present their **valid certificate** of Rwanda Organisation of Land Surveyors (ROLS)
  4. For a foreign degree or diploma, it is imperative to join the equivalence issued by HEC (High Education council).
  5. Updated CV should not go signed beyond one month (30 Days) before submission.
  6. Notification should be notified in one months as evidenced by date of notary.
  7. The bidders who will submit notifications and CV signed greater than one month that key personal will not be considered.
- Providing the guaranty of 6months after provisional handover

## **II. TECHNICAL SPECIFICATION FOR THE WORK**

In this framework, ARCOS is looking for an experienced company or individual engineer with the skills to establish and operationalize the mentioned gravity water supply system as per the conditions below:

### **III.1 THE PRELIMINARY WORKS INCLUDE**

- Thorough and detailed reconnaissance of the field through the field visit;
- Respect the design and drawings with the shapefiles, altitude, and site boundaries;
- The exact definition of the layout of the pipelines, establishment of the plans showing the various layouts of the pipelines of existing and projected links;
- Establishment of working drawings for the pipe networks;
- Establishment of the book of specifications with of the sketches of the connections and the accessories basing on the plans of implementation;
- Verification of a list of pipes, fittings, and accessories;
- Setting up of the works, working plan;
- The geotechnical study where reservoirs shall be constructed;
- Static designs and plans of implementation of all hydraulic works;
- All the plans of implementation must consider the approved project drawings;
- Hire local community labors and respect gender equity for manpower and skilled persons if available with fair wages;
- Conduct kicks off with project management team at ARCOS;
- Conduct project launching for local people to be aware of the project.

### **III.2 MAIN ACTIVITIES TO BE CARRIED OUT DURING PROJECT EXECUTION**

- Site installation
- Catchment protection
- Supply and lay of pipes with all necessary hydraulic equipment
- Civil works which include construction of water capturing chambers and water points
- Finishing and putting network into operation
- Pressure testing and site cleaning
- Handover (Provisional and final) of the works.

### **III.3 DRAINAGE OF THE EXCAVATIONS**

- The Contractor is held to avoid the entry of surface waters coming from the roads into the trench. The removal of surface water from the trenches shall be the responsibility of the contractor and shall not be paid any extra remuneration for it. No possible prolongation of the



completion period will be authorized because of heavy rains except under circumstances beyond control.

- The water collected in the trenches from the ground due to the water table, infiltrations, or any other source will be channelled to temporary sumps, from which the contractor shall remove it on his own expense.
- The Contractor will be held to dig, clean, and maintain these sumps, as well as the drains and all special installations leading water to the sumps. These drains and installations will have to ensure the complete draining of the excavations.

#### **III.4 PREPARATION OF THE TRENCH BASES**

- Before the laying of the pipes, the base of the trench is to be prepared so that the pipes rest over all their entire length on the ground without stones. At fitting, niches will be carried out. In case of rock or stones, the bottom will be covered with loose soil or sand.
- Before any laying of pipes, the trench thus prepared will be checked by the Client who shall have been informed in advance. the contractor shall keep on site all the equipment necessary for checking depth and the levelling of the trench bases.

#### **III.5 LAYING OF PIPES**

- Before the execution, all the pipes, the special parts and fittings will have to be ready for use, carefully cleaned and purged of any foreign element. During the installation, all the precautions will be taken to avoid the entering of refuse or foreign body and not to damage the lower surface of the pipe.
- The ends of laid pipes will have to be closed carefully with plugs of wooden during the interruptions of work, in particular at the end of each working day.
- External and interior protections, which would have been damaged during transport or by the cuts, are to be repaired before the installation.
- The pipes, special parts and fittings must be lowered carefully in the trenches and the galleries where they must be laid without shocks, falling, etc.
- The installation and the assembly of the conduits and the valves and fittings will have to be carried out by skilled workers.
- The pipes will be lowered in the trenches with adequate means to preserve the integrity of the structure as well as coating and will be laid out in their exact positions.

- The locations of the special parts and the fittings shall be observed and approved by the client. each section of pipeline will have laid in as much as possible with whole pipes in order to reduce the number of joints to the minimum.
- The contractor will have the right to use cuts of pipes when the action is justified by the necessity of trench. In case of abuse of the works, the contractor shall at his own expense repeat the poorly done works. Negligence of installation of washouts or air vents at their designed locations shall in no way be tolerated.
- The contractor shall have to bear all the necessary work accruing from that negligence, including the removal of pipeline already laid and the eventual replacement.
- No section of pipeline should be laid horizontally.
- The Contractor will have to bear upon himself all works done contrary, including the removal of the pipes already laid and their reinstallation.

### **Irrigation pipes**

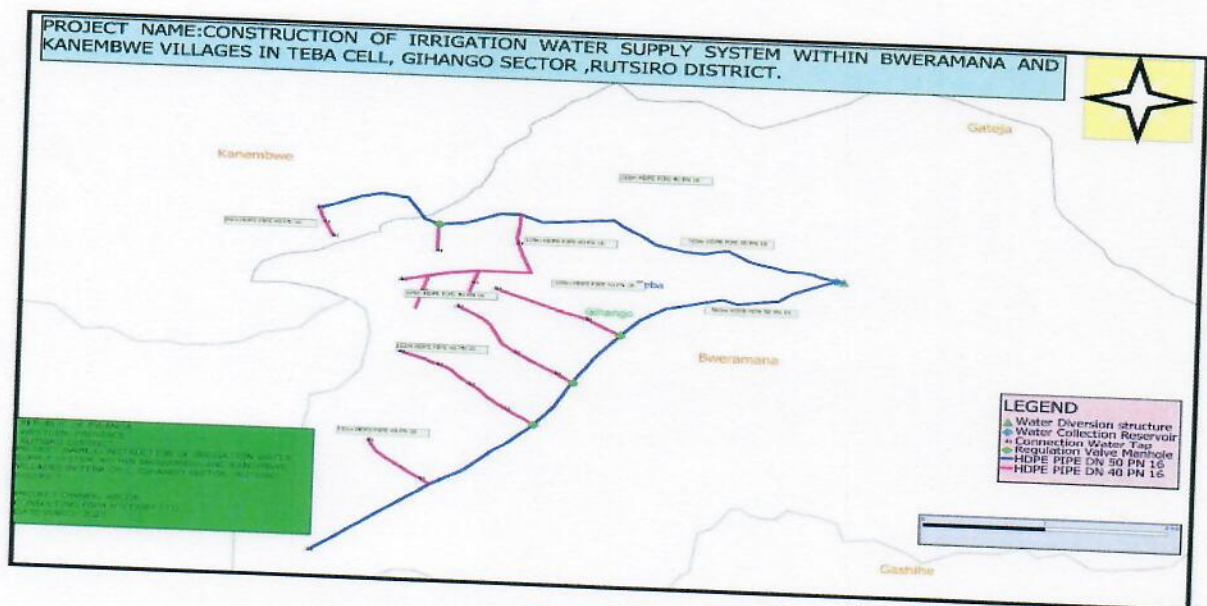
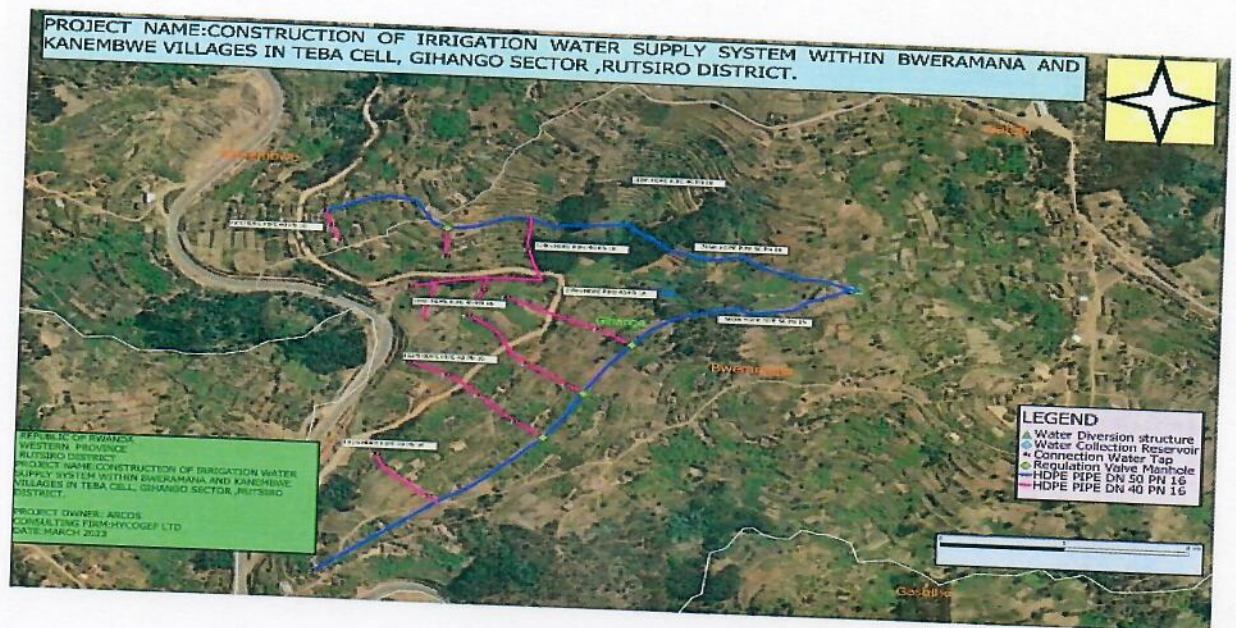
The contractor will provide small pipes used for irrigation with a length of at least 50 meters of radius from the tape, and the distribution of tapes will consider the possibility to cover all 20-ha targeted for this pilot phase.

### **Water drainage conditions**

The contractor should establish the gravity water supply system considering the normal flow of water from the source (irrigation when necessary and allow normal water flow in the river when farmers have satisfied the irrigation needs)

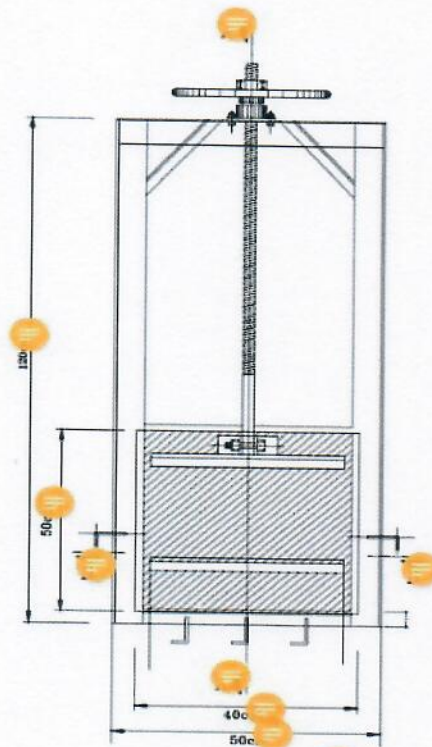


# THE DESIGN OF IRRIGATION SYSTEM



Irrigation design, pipeline

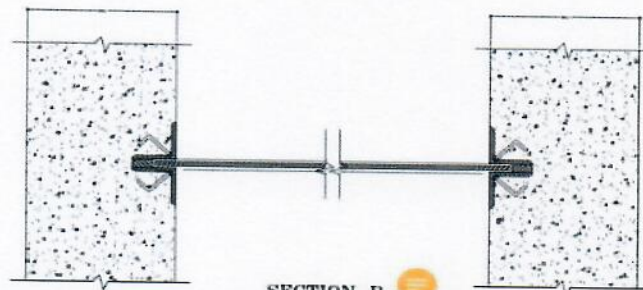
# DESIGN OF FLOW GATE VALVE AT INTAKE



ELEVATION VIEW



SECTION A-A

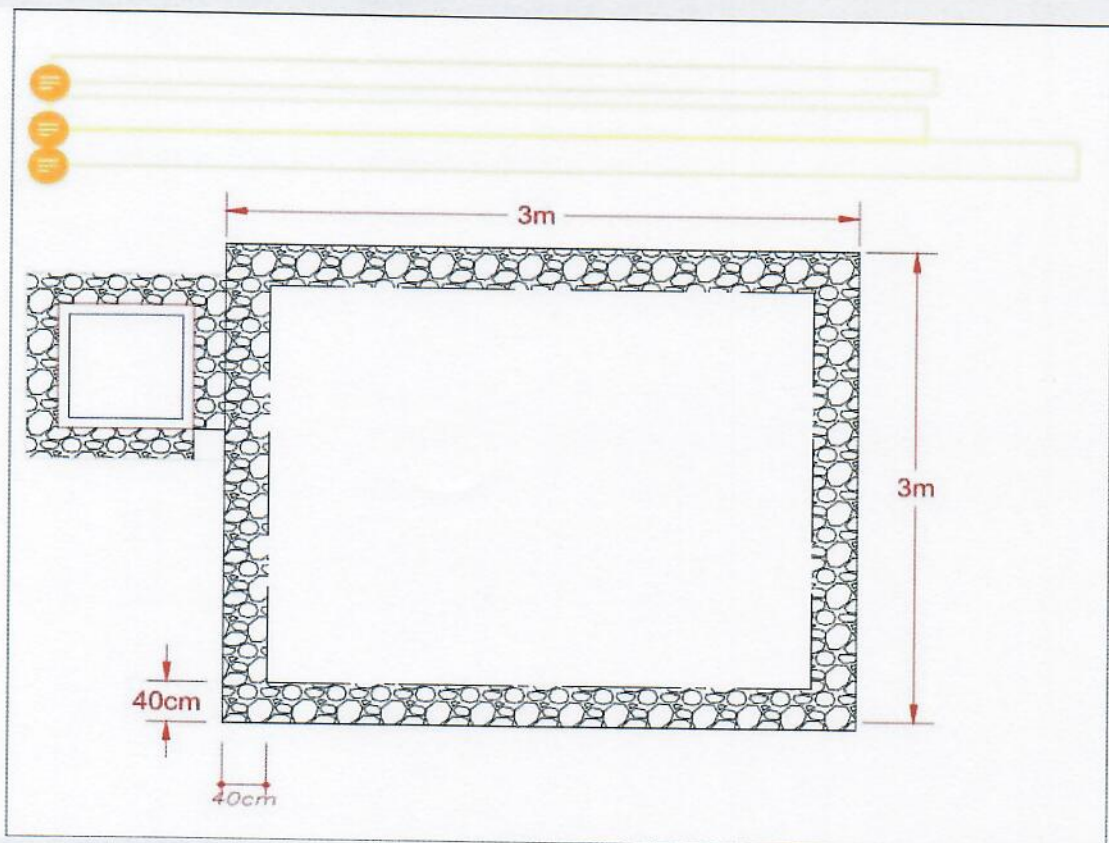


SECTION B-B

DONE BY ECOEF LTD.

Flow gate valve at the intake





#### **Water reservoir**

#### **V.FINANCIAL PROPOSAL**

- 1.Certified bank statement for at least the last 3 months
- 2.Well Completed of the Bill of quantity in excel format indicating unity cost and the total cost
3. The bidder must also submit the BoQ in excel format through the email [info@arcosnetwork.org](mailto:info@arcosnetwork.org)

**BILL OF QUANTITY****BILL OF QUANTITY FOR CONSTRUCTION OF IRRIGATION WATER SUPPLY SYSTEM  
WITHIN BWERAMANA AND KANEMBWE VILLAGES IN TEBA CELL, GIHANGO SECTOR,  
RUTSIRO DISTRICT.**

#	Work description	Unit	Quantity	Unit Price (Rwf)	Total Price (Rwf)
<b>1.SITE INSTALLATION</b>					
1.1	Site installation	lumpsum	1		
1.2	Topographical survey for project implementation (6hactares of radical terraces)	Hectare	6		
	<b>Total1</b>				
<b>2.CONSTRUCTION OF WATER INTAKE STRUCTURE AND STORAGE RESERVOIR</b>					
2.1	Construction of small water diversion point with masonry stones and concrete	item	1		
2.3	Construction of starting chamber	ls	1.00		
	Construction of storage reservoir 0f 3mx3mx1.5m in masonry stones with RC Base, plastered with 3 layers of coating with sika latex, finishing with epox layer including supply and installation of all plumbing fittings and fencing with wires (treillis soudes)attached with metallic tubes	item	1.00		
	<b>Subtotal 2</b>				



### 3.Construction of regulation valves manhole(0.8mx0.8mx0.6m) int.

3.1	Construction of valve chamber of (0.8mx0.8mx0.6m) int. with small metallic cover including all fittings	m <sup>3</sup>	4.0		
	<b>Total of 4 manholes</b>				

### 4.Construction of connection taps

4.1	Supply and laying of fittings for irrigation connection taps and construction of anchorage structure	item	20		
	<b>Subtotal 7</b>				
	<b>Total of 20 connection taps</b>				

### 5.Supply and laying of pipes

5.1	Tracing and staking out on the total length	Ls	1.00		
5.2	Trench excavation in soil of 0.6m depth and 0.5 width	M	2,858		
5.3	Supply and lay of HDPE (polyethylene) ND 50 NP16	Lm	1,563		
5.4	Supply and lay of HDPE (Polyethylene) ND 40 NP16	Lm	1,295		
5.5	Supply and laying of casing pipes 2	Lm	12.00		
5.6	Supply of horse pipe 40mm	item	20		
	<b>Total</b>				
	<b>General Total</b>				

B1

## SELECTION CRITERIA

The ARCOS procurement team will evaluate the bidder based on the following criteria.

No	Activities	Point
1	Presentation of all Documents required	10
2	Well-presented Technical proposal for the implementation of work	40
4	Proof of experience of company and staff technicians	20
5	Finance cost	30

The offer well typed, appropriately bound and presented in **technical proposal** (one original and one copy) and **financial proposal** (one original and one copy) must reach in sealed envelopes to the ARCOS head officer not later than **20<sup>th</sup> March 2023 at 2:00pm** local hour, late bids will be rejected and returned unopened; bids will be opened at ARCOS head office Kigali on **20/03/2023 on 2:30 p.m.** local time, ARCOS reserves the right to reject any bid deemed inappropriate.

Done at Kigali on 8<sup>th</sup> March 2023



**Dr. Sam KANYAMIBWA**  
CEO, ARCOS