

RÉPUBLIQUE DU CAMEROUN
Paix – Travail – Patrie

RÉGION DU NORD OUEST
DÉPARTEMENTALE DE MOMO
COMMUNE DE MBENGWI



REPUBLIC OF CAMEROON
Peace – Work – Fatherland

NORTH WEST REGION
MOMO DIVISION
MBENGWI COUNCIL

MBENGWI COUNCIL INTERNAL TENDERS BOARD

OPEN NATIONAL INVITATION TO TENDER EMERGENCY PROCEDURE

TENDER FILE

N° 04/ONIT/MC/MCITB/2025 OF 26/02/2025
FOR THE CONSTRUCTION OF TWO BOREHOLES WITH SOLAR
POWERED PUMPING SYSTEM IN UPPER-GRA MBENGWI, MBENGWI
COUNCIL, MOMO DIVISION OF THE NORTH-WEST REGION

PROJECT OWNER: THE MAYOR OF MBENGWI COUNCIL

FUNDING: MINDDEVEL - PUBLIC INVESTMENT BUDGET 2025

AUTHORIZATION N°: _____

IMPUTATION: _____

LOT:	NAME OF PROJECT	AMOUNT OF PROJECT	AMOUNT OF BID BOND	COST OF TENDER FILE :	FINANCIAL YEAR
SINGLE	CONSTRUCTION OF TWO BOREHOLES IN UPPER GRA MBENGWI	22,000,000 FCFA	440,000 FCFA	37,000 FCFA	2025

Re: 28/02/2025

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PART 01
TENDER NOTICE



TENDER NOTICE

**OPEN NATIONAL INVITATION TO TENDER
N° 04/ONIT/MC/MCITB/2025 OF 26/02/2025
FOR THE CONSTRUCTION OF TWO BOREHOLES WITH SOLAR POWERED PUMPING SYSTEM
IN UPPER-GRA MBENGWI, MBENGWI COUNCIL, MOMO DIVISION OF THE NORTH-WEST
REGION.**

**FUNDING: MINEE - PUBLIC INVESTMENT BUDGET
Exercise 2025**

1. Subject of the invitation to tender

Within the framework of the 2025 Public Investment Budget, the Mayor of Mbengwi Council, Delegated Contracting Authority, on behalf of the Republic of Cameroon, hereby launches an Open National Invitation to tender, for the construction of two boreholes with solar powered pumping system in Upper-Gra Mbengwi, Mbengwi Subdivision, Momo Division of the North-West Region. It is a single lot.

2. Work consistency

The works include the following:

Lot 100: Preparatory works;

Lot 200: Drilling works

Lot 300: Design, cleaning, development and pumping test

Lot 400: Installation of a solar pump system with a 3200Wp solar system, an AC/DC hybrid solar submersible pump with a minimum flow rate of 3.8m³/h and TMH of about 150m, a MPPT charge controller with automatic operation of 48A/12V, the lighting of the control room and other installation accessories;

Lot 500: Installation of a pipeline with:

- HDPE100 pipe Ø40mm to pump water from the borehole to the elevated storage tank and for main distribution;
- HDPE100 Ø32mm to connect the tank to the valve chambers;
- HDPE100 Ø25mm for the connection of the main line from the valve chambers to standpipes that will be constructed at a certain distance of the tower;

Lot 600: Construction of water structures with:

- Construction of two 2.8x2.8x6m height towers with pillars (30x30cm) chained at every 2.4m with cross beams (20x20cm) and three slabs of 20cm thick (one at the top of the control room as well as at the 6m height chaining and the other one at 4m height to carry the tank) in reinforced concrete dosed at 350Kg with a roof and embedded protected metallic ladder of 5.5m for each borehole;

- Construction of two double standpipes equipped with valve chamber and a soak away pit (1 per borehole);
- Equipment of each tower with a 5m³ Polyéthylène vertical water storage tank;
- Construction of one control valve chamber (50x50x50cm) in reinforced concrete for each borehole;

Lot 700: Project sustainability with:

- Training of two caretakers provided by the Mbengwi Council;
- Supply of a complete tool box and spare parts.

3. Execution deadline

The maximum deadline provided by the Contracting Authority for the execution of the works forming the subject of this Invitation to tender is **one hundred and twenty (120) days**.

4. Lot

The work is in unique lot: the construction of two boreholes with solar powered pumping system in Upper-Gra Mbengwi.

5. Estimated cost

The estimated cost after preliminary studies is **twenty-two million (22,000,000) FCFA**.

6. Participation

Participation is open under the same conditions to all Cameroonian companies and business concerned that are in compliance with the Cameroon laws.

7. Financing

The works, subject of this invitation to tender, are financed by the Public Investment Budget MINDDEVEL 2025 budget head N° _____

8. Consultation of the tender file

The tender file may be consulted at the Mbengwi Council Office Secretariat, during working hours, as soon as this tender notice is published.

9. Acquisition of the tender file

The tender file may be acquired from the Mbengwi Council Office Secretariat, upon presentation of a non-refundable treasury receipt of **thirty-seven thousand (37,000) FCFA payable at the Mbengwi Council Treasury representing the cost of the tender file**. Such a receipt shall identify the payer as representing the company that wants to participate in the tender.

10. Submission of bids:

Each offer drafted in English or French in 07 (seven) copies including 01 (one) original and 06 (six) copies marked as such, should reach the Mbengwi Council Office Secretariat not later than **___/___/2025 at 10:00 noon** local time and should carry the inscription:

<< OPEN NATIONAL INVITATION TO TENDER

N° 04/ONIT/MC/MCITB/2025 OF 26/02/2025

**FOR CONSTRUCTION OF TWO BOREHOLES WITH SOLAR POWERED PUMPING SYSTEM IN
UPPER-GRA MBENGWI, MBENGWI COUNCIL, MOMO DIVISION OF THE NORTH-WEST
REGION. >>**

"To be opened only during the bid-opening session"

11. Admissibility of bids

Under penalty of being rejected, only originals or certified true copies signed by the issuing service or administrative authorities (Senior Divisional Officer, Divisional Officers) must imperatively be produced in accordance with the Special Regulations of the Invitation to Tender.

They must obligatorily not be older than three (3) months preceding the date of submission of bids or may be established after the signature of the tender notice

Any bid not in compliance with the prescriptions of the Tender File shall be rejected. This refers especially to the absence of a bid bond issued by a first-rate bank approved by the Minister in charge of Finance.

12. Opening of bids:

The bids shall be opened in a single phase. The opening of the administrative documents, the Technical and Financial offers will take place on the ___/___/2025 at **11:00 am** local time, in the conference hall of the MBENGWI Council, by its competent Members. Only bidders may attend or be represented by duly mandated persons of their choice and having a good knowledge of their files.

13. Evaluation criteria

The bids shall be evaluated according to the main criteria as follows:

A. Eliminatory criteria

1. Absence of bid bond in the administrative file;
2. Deadline for delivery higher than prescribed;
3. A bid with the external envelope carrying a sign or mark leading to the identification of the bidder;
4. Incomplete financial file;
5. Change of quantity or unit;
6. Non respect of **75%** of essential criteria;
7. Suspended by MINMAP in 2025.
8. Pre financing capacity of atleast 8,000,000FRS.

B. Essential criteria

- 1- General presentation of the Tender Files;
- 2- Financial capacity;
- 3- References of the company in similar achievements;
- 4- Quality of the personnel;
- 5- Technical organization of the works;
- 6- Safety measures on the site;
- 7- Logistics;
- 8- Attestation of site visit duly signed by honour of the bidder.
- 9- Special Technical Clauses initialed in all the pages;
- 10- Special Administrative Clauses completed and initialed in all the pages.
- 11- Categorised companies shall be exempted from presenting documents relating to suspension in their technical file on related documents, on turnover, their references, own minimum logistic means, permanent staff.

14. Award

This evaluation will be done in a binary way (**yes**) or (**no**) with an acceptable minimum of **37/43 (75%)** of the essential criteria taken in account.

The Contract will be awarded to the bidder who would have proposed the offer with the lowest amount, in conformity with the regulations of the Tender Documents and having satisfied to **100%** of the eliminatory criteria and at least **75%** of the essential criteria.

15. Validity of bids

Bidders will remain committed to their offers for ninety (90) days from the deadline set for the submission of tenders.

16. Complementary information

Complementary technical information may be obtained during working hours from the Mbengwi Council.

Mbengwi, on _____

The Mayor of Mbengwi Council
(Delegated Contracting Authority)

Copies:

- ARMP BAMENDA
- DD MINMAP MOMO
- DD DDMINDDEVEL MOMO
- Chairperson of TB
- The project owner
- Notice Board
- File/archive





TENDER NOTICE

AVIS D'APPEL D'OFFRES NATIONAL OUVERT

N° 04/AONO/COMMUNEMBENGWI/CIPMCM/2025 DU 26/02/2025

LA CONSTRUCTION DE DEUX FORAGES EQUIPPES D'UN SYSTEME DE POMPAGE SOLAIRE A
UPPER-GRA MBENGWI, ARRONDISSEMENT DE MBENGWI, DEPARTEMENT DE LA MOMO,
REGION DU NORD-OUEST.

FUNDING: BUDGET D'INVESTIMENT PUBLIC MINEE
Exercice 2025

1.- Objet de l'Appel d'Offres

Le Maire de la commune de Mbengwi, Autorité Contractante, lance pour le compte de la République du Cameroun, un appel d'offre national ouvert pour les travaux de la construction de deux forages équipés d'un système de pompage solaire à Upper-Gra Mbengwi et Arrondissement de Mbengwi, Département de la Momo, Région du Nord-Ouest.

2. Consistance des travaux

Les prestations comprennent les opérations suivantes :

- Lot 100: Travaux préparatoires;
- Lot 200: Travaux de forage ;
- Lot 300: Travaux de development et de pompage;
- Lot 400: installation du système de pompage solaire;
- Lot 500: installation des canalisations;
- Lot 600 : Construction de trois chateaux et installation du reservoir plastique de 5m³ pour chacun ;
- Lot 700 : Pérénnité du projet.

3. Délais d'exécution

Le délai maximum prévu par le Maître d'Ouvrage pour la réalisation des travaux objet du présent appel d'offres est de **cent vingt (120) jours**.

4. Coût prévisionnel : vingt-deux million (22.000.000) franc CFA

5. Participation

La participation est ouverte à l'égalité de conditions à toutes les sociétés et entreprises de droits camerounais.

6.- Financement

Les travaux, objet du présent Appel d'Offres, sont financés par **Budget D'investissement Public MINEE, Exercice 2025, sur la ligne d'imputation budgétaire N° _____**.

7.- Consultation du dossier d'Appel d'Offres

Le dossier d'appel d'offres peut être consulté aux heures ouvrables auprès de Secretariat de la Commune de Mbengwi, dès publication du présent avis.

9. Acquisition du dossier d'Appel d'Offres

Le dossier d'appel d'offres peut être obtenu aux heures ouvrables auprès de Secretariat de la Commune de Mbengwi, sur présentation d'une quittance de versement d'une somme non remboursable de **trente sept mille (37.000) francs CFA** au Trésorerie municipale de Mbengwi. Cette quittance devra identifier le payeur comme représentant l'entreprise désireuse de participer à l'Appel d'Offres.

10. Remise des offres

Chaque offre rédigée en français ou en anglais en sept (07) exemplaires dont un (01) original et six (06) copies marquées comme telles, devra parvenir contre récépissé à la Secrétariat de la Commune de Mbengwi au plus tard le / /2025 à **10h00**, heure locale et devra porter la mention suivante :

**<< AVIS D'APPEL D'OFFRES NATIONAL OUVERT N° 04/AONO/COMMUNE DE
MBENGWI/CPMICB/2025 DU 26/02/2025 POUR LES TRAVAUX DE LA CONSTRUCTION DEUX
FORAGES EQUIPPES D'UN SYSTEME DE POMPAGE SOLAIRE A UPPER-GRA MBENGWI,
ARRONDISSEMENT DE MBENGWI, DEPARTEMENT DE LA MOMO, REGION DU NORD-OUEST.
«A N'OUVRIR QU'EN SEANCE DE DEPOUILLEMENT»**

11. Recevabilité des offres

Sous peine de rejet, les pièces du dossier administratif requises doivent être produites en originaux ou en copies certifiées conformes par le service émetteur ou une autorité administrative (Préfet, Sous-préfet...), conformément aux stipulations du Règlement Particulier de l'Appel d'Offres.

Elles doivent dater de moins de trois (03) mois précédant la date originale de dépôt des offres ou avoir été établies postérieurement à la date de signature de l'Avis d'Appel d'Offres.

Toute offre incomplète conformément aux prescriptions du Dossier d'Appel d'Offres sera déclarée irrecevable. Notamment l'absence de la caution de soumission délivrée par une banque de premier ordre agréée par le Ministère chargé des Finances.

12. Ouverture des plis

L'ouverture des plis se fera en un temps. L'ouverture des pièces administratives et des offres techniques et financières aura lieu le / /2025 à **11h00**, heure locale, dans la salle de conférence de la Commune de Mbengwi, siégeant en présence des soumissionnaires ou de leurs représentants dûment mandatés et ayant une parfaite connaissance du dossier.

13. Critères d'évaluation

Les offres seront évaluées selon les principaux critères suivants :

A - Critères éliminatoires

Il s'agit notamment :

- 1- Absence de la caution provisoire de soumission ;
- 2- Délai d'exécution supérieur à celui prescrit (supérieur à trois mois) ;
- 3- Fausses déclarations ou pièces falsifiées ;
- 4- Offres dont l'enveloppe extérieure porte des mentions permettant de reconnaître le Soumissionnaire ;
- 5- Offres financière incomplète,
- 6- Le changement d'une unité ou d'une quantité dans l'offre financière ;
- 7- Le non-respect de **75%** des critères essentiels ;
- 8- Suspendu par le MINMAP en 2025

B - Critères essentiels

Les critères relatifs à la qualification des candidats porteront à titre indicatif sur :

- 1- Présentation générale de l'offre ;
- 2- Capacité financière ;
- 3- Références de l'entreprise dans les réalisations similaires ;
- 4- Qualité du personnel ;

- 5- Organisation technique des travaux ;
- 6- Sécurité au chantier ;
- 7- Moyens logistiques ;
- 8- Attestation de visite du site signée par l'autorité de soumissionnaire.
- 9- Cahier des Clauses Techniques Particulières paraphé à chaque page ;
- 10- Cahier des Clauses Administratives Particulières complété et paraphé à chaque page.

Les critères essentiels sont soumis à des minima dont le détail est donné dans le Règlement Particulier de l'Appel d'Offres (RPAO).

14. Attribution

Cette évaluation se fera de manière purement positive (oui) ou négative (non) avec un minimum acceptable d'au moins **75%** de l'ensemble des critères essentiels pris en compte.

Le marché sera attribué au soumissionnaire qui aura proposé l'offre la moins disante, conforme pour l'essentiel aux prescriptions du Dossier d'Appel d'Offres, ayant satisfait à **100%** des critères éliminatoires et au moins **75%** des critères essentiels.

15. Durée de validité des offres

Les soumissionnaires restent engagés par leur offre pendant 180 jours à partir de la date limite fixée pour la remise des offres.

16. Renseignements complémentaires

Les renseignements complémentaires d'ordre technique peuvent être obtenus auprès de la Commune de Mbengwi.

Copie :

- ✓ ARMP ;
- ✓ DD MINMAP MOMO
- ✓ DD MINEE MOMO
- ✓ Maître d'Ouvrage
- ✓ Présidents CPM ;
- ✓ Affichage.
- ✓ Chrono/archive

Fait à Mbengwi, le _____
Le Maire de la Commune de Mbengwi
(Autorité Contractante)



Messia Kennedy Akon

PART 02
GENERAL REGULATIONS FOR THE INVITATION TO
TENDER (GRIT)

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GENERAL REGULATION FOR THE INVITATION TO TENDER

A.-GENERALITIES

Article 1: Scope of the bid

- 1.1. The Mayor Mbengwi hereinafter referred to as the Delegated Contracting Authority, launches an open national invitation to tender for the execution of the work described in the special clauses of this call for tenders (RFP). It is referred as "the construction of two boreholes with solar powered pumping system in Upper-Gra Mbengwi".
- 1.2. The successful bidder or contractor must complete the work within the period indicated in the RFP, and which runs from the date of notification of the service order (SO) to start the work.
- 1.3. In this present invitation to tender (LPO), the term "day" refers to a calendar day.

Article 2: Funding

The above works, subject of the present invitation to tender, are financed by the Public Investment Budget MINDDEVEL, Exercise 2025.

Article 3: Fraud and corruption

3.1. The Contracting Authority requires that bidders and contractors respect strictly the rules of professional ethics during the procurement process and execution of this contract. Under this principle:

- a. The following definitions are applicable:
 - I. Is guilty of "corruption" anyone who offers, gives, solicits or accepts any benefit to influence the action of a public official in the allocation or the execution of a contract.
 - II. Is engaged in "fraudulent practices" anyone who distorts or misrepresents facts in order to influence the award or execution of a contract.
 - III. "Collusive practices" are any form of agreement between two or more bidders (with the knowledge of the contracting Authority or not) to artificially maintain prices of the offers at a level not corresponding to those that would result from the competition.
 - IV. "Coercive practices" are any form of pressure to persons or their property or threats against them to influence their action in the attribution or the execution of a Contract.
- b. Shall reject any award proposal if it is proven that the proposed contractor is, directly or through an agent, convicted of corruption or engaged in fraudulent, collusive or coercive practices for the award of the said contract.

3.2. The Minister of Public Contracts, Authority in charge of public contracts may on a provisional basis, take a decision to ban or suspend any bidder for a period not exceeding two (2) years, that is found guilty of influence, conflicts of interest, fraud, corruption or production of no-authentic documents in the bid submission, without prejudice to the criminal prosecution that could be engaged against him.

Article 4: Qualification of bidders

4.1. Bidders shall, as part of their bid:

- a. Submit a power of attorney.
- b. Submit all information (complete or update the information attached to their application for pre-qualification may have change, to the case where the candidates were the subject of a pre-qualification) requested from bidders, in the OMPP, to establish their qualification to run the contract.

The following information is required if applicable:

- i. The production of certified balance sheets and a recent turnover figure.
- ii. Access to a credit line or provision of other resources;
- iii. Previous jobbing orders and ongoing contracts attributed;
- iv. On-going disputes;
- v. The availability of the necessary equipment.

4.2. The bids submitted by two or more grouped entrepreneurs (co-contracting) must meet the following conditions:

- a. The offer must include for each of the bidders in the co-contracting, all the information listed in section 4.1 above. The special regulation of the Call for Tender (SRCT) must specify the information to be provided by each Member of the Group;
- b. The nature of the group must be specified and justified by the production of a group agreement in good and due form;
- c. The Member of the Group designated to lead, shall represent all the enterprises engaged in the consortium in front of the contracting Authority for the execution of the contract;
- d. In case of co-contracting, co-contractors share the amounts that are paid by the contracting authority in a single account; however, each company is paid by the contracting authority in a unique account, when it comes to a joint group.

4.3. Bidders must also submit detailed proposals to show that they conform to the technical specifications and the time frames specified in the special regulation of the Call for Tender.

4.4. Bidders requesting for a preferential margin, must provide all the information necessary to prove that they meet the eligibility criteria described in the special regulation of the Call for Tender.

4.5 The bidder must not have been excluded from bidding for public contracts.

Article 5: The site visit

5.1 Each bidder shall visit and inspect the site of the work and its surroundings and by himself, and under his own responsibility, gather all the information as may be necessary for the preparation of the bid and the performance of the work. An attestation of site visit shall be signed by the bidder. The observations of the bidder will be recorded in the site visit report annexed to the technical offer.

5.2 The Project Owner shall authorise the bidder and his employees or agents to enter the premises and the land for the said visit, but only on the express condition that the bidder, his employees and agents free the Project Owner, his employees and agents of any responsibility that may ensue and indemnify them if necessary and that they shall remain responsible for any deadly or corporal accident, loss or material damages, costs and fees incurred from this visit.

Article 6: Building materials, materials, supplies, equipment and authorised services

6.1 Building materials, the contractor's materials, supplies, equipment and services forming the subject of this contract must originate from countries meeting the criteria of origin defined in the Special Regulations of the invitation to tender and all expenditure done within the context of the contract shall be limited to the said building materials, materials, supplies, equipment and services.

6.2 Within the meaning of this 6.1 above, the term "originate" shall designate the place where the goods are extracted, cultivated, produced, manufactured and from where the services originate.

B. TENDER FILE

Article 7: Contents of tender file

7.1. The tender file describes the works, subject of the contract, establishes the consultation procedures of the contractors and special contract conditions. In addition to the amendment(s) published in conformity to article 8 of the General regulations of the invitation to tender (RGAO), it includes the following documents:

- 1) The invitation to tender written in French and English (AAO);
- 2) General Regulation of the invitation to tender (RGAO);
- 3) Special Regulation of the invitation tender (SRIT);
- 4) Specification of the Special administrative Clauses (CCAP);
- 5) Specifications of the special Technical Clauses (CCTP);
- 6) Unit price schedule;
- 7) Bill of Estimates and Quantities;
- 8) Format of Sub-Detail of unit prices;
- 9) Drawings and other elements of the technical file;
- 10) Model engagement letter by bidder;
- 11) Model bid submission letter;
- 12) Model bid bond;
- 13) Model performance guarantee;
- 14) Model bank guarantee for the refund of start-up advance;
- 15) Model of draft contract;
- 16) Lists of banks of 1st order approved by the Ministry in charge of finance;
- 17) Table of references of the bidder;
- 18) Table of key materials and equipment of the contractor;
- 19) Model of qualification and experience of the key personnel responsible for enforcement of the contract.

7.2. The bidder must consider all of the regulations, forms, conditions and specifications contained in the Tender File. He is invited to provide all the information requested and to prepare a compliant offer in all aspects. Any deficiency can lead to the rejection of its offer.

Article 8: Clarification made to the tender file

8.1. Any bidder seeking clarification on the Tender File can apply to the Contracting authority in writing at the address of the Contracting authority indicated in the tender notice. The Contracting authority will respond in writing to any request for clarification received at least fourteen (14) days before the date of depositing of bids.

A copy of the response of the Contracting authority, indicating the question but not mentioning its author, is addressed to all bidders who purchased the Tender File.

8.2. Between the publication notice including the phase for the pre-qualification of candidates and the opening of the bids, any bidder who is aggrieved in the public contracts award procedure may petition to the Minister in charge of Public Contracts.

8.3. The appeal must be addressed to the contracting authority with copies transmitted to the Chairperson of the Tender Board and to the organ in charge of the regulation.

It must reach the contracting authority not later than fourteen (14) days before the date of opening of the bids.

8.4. The contracting authority has five (5) days to respond. The response is transmitted to MINMAP and to the organ in charge of the regulation.

Article 9: Modification of the tender file

9.1. The Contracting authority can, at any time before the deadline of depositing of bids and for any reason, whether on its own initiative or in response to a request for clarification by a bidder, modify the tender file by publishing the amendment.

9.2. Any amendment so published will be an integral part of the tender file as presented in Article 6.1 of the RGAO and will be communicated in writing to all bidders who purchased the Tender File.

9.3. To give bidders sufficient time to take account of the amendment in the preparation of their bids, the Contracting authority could extend the deadline of submission of bids, as much as necessary, the deadline for offers, in conformity with the provisions of section 19 of the RGAO.

C. PREPARATION OF BIDS

Article 10: Costs of submission

The candidate will bear all the costs associated with the preparation and presentation of his bids, and the Contracting authority and the project owner are not responsible for any of these costs, or to settle them, regardless of the conduct or outcome of the tender procedure.

Article 11: Language of bid

The bid, all correspondences and all documents exchanged between the bidder and the Contracting authority will be written in English or French.

Article 12: Composition of bid

12.1. The bidder's bid will include documents detailed in the Special Regulations of the invitation to tender, duly completed and grouped in three volumes:

a. Volume 1: Administrative documents

It includes:

- I. All documents stating that the bidder:
 - ✓ Has complied with all declarations provided for by the laws and regulations in force;
 - ✓ Is current with his taxes, contributions, fees or levies of any kind whatsoever;
 - ✓ Is not in a State of liquidation or bankruptcy;
 - ✓ Is not caught by one of the prohibitions and disqualifications criteria provided for by the legislation in force.
- II. Bid bond(s) issued is in conformity with the provisions of article 15 of the present RGAO;
- III. A written confirmation authorizing the signatory of the bid to engage the bidder
- IV. The CCAP is duly initialed on each page and signed on the last page.
- V. Localization plan is duly signed by the authority concerned.

b. Volume II: Technical File

It includes:

- I. Attestation of site visit and the site visit report;
- II. Personnel: the contractor will present the competent technical staff and workers he intends to hire before the beginning of the work (attach to each staff CV signed by the candidate, certified copy of technical diploma, attestation of presentation of original and the attestation of availability signed by the candidate);
- III. Site equipment: The contractor shall justify the ownership and the State of the equipment necessary for the performance of the work (providing registration certificates, invoices and certificates of technical visit of rolling equipment);
- IV. References of the company (the contractor will provide contracts or Jobbing orders for similar work carried out as well as related minutes of reception);

- V. The technical note on the methodology of intervention of the work: the company will produce a technical note dated and signed providing all the information concerning the mode of execution of the works, the planning of intervention, the expected output, provision of materials or site materials, the potential advantages in terms of safety of the environment and the Organization of the company;
- VI. The CCTP duly initialed on each page and signed on the last page;
- VII. Attestation of solvency of the contractor.
- VIII. Commentaries (optional)

A commentary on the technical choices of the project and possible proposals.

c. Volume 3: Financial File

It includes:

- I. The tender specimen form, in original drafted according to the model attached, stamped at the rate in force, signed and dated;
- II. The unit price schedule duly completed, with an indication of the unit price excluding VAT in letters and figures;
- III. Bill of estimates and quantities completed;
- IV. Sub-details of the different prices according to the model attached;

Bidders will therefore use the parts and models provided in the Tender File, subject to the provisions of section 16.2 of the RGAO on the other possible forms of bid security.

12.2. If, in conformity to the provisions of the RPAO, bidders bidding for several lots of the same invitation to tender, they can indicate the discount or rebates in case of allocation of more than one lot.

Article 13: Amount of bid

13.1. Unless otherwise indicated in the Tender File, the amount of the contract will cover all of the work described in section 1.1 of the RGAO, on the basis of the bill of quantity and cost estimates presented by the bidder.

13.2. The bidder will fill the unit and total price of all the items as well as the detail estimated quantities.

13.3. Subject to contrary provisions in the RPAO and CCAP, all the taxes and fees payable by the contractor in respect of the future contract, where otherwise, thirty (30) days before the deadline for submission of bids will be included in the bid prices and in the total amount of its offers.

13.4. If the terms of revision and/or updating of prices are provided in the contract, the date of establishment of the initial price and methods of review and/or discount price must be specified. Provided that any contract whose execution time is at most equal to one (1) year may not be the subject of price revision.

13.5. All unit prices shall be justified by sub-details established in accordance with the format proposed in section of sub detail for prices.

Article 14: Bid Currency and settlement

14.1. The amount of the contract is written entirely in CFA FRANCS. The amount of the bid, the unit price of the prices schedule and quantitative and estimated detail prices are labeled entirely in CFA FRANCS in the following manner:

- (a) Prices will be entirely denominated in CFA FRANCS. The bidder willing to spend money in other currencies for the execution of the work, will indicate in annex to the submission, the percentage of

the amount of the offer required to cover needs in foreign currencies, without exceeding a maximum of three currencies of Member country of the institution financing the contract.

- (b) The exchange rates used by the bidder to convert its offer in national currency will be specified by the bidder in the annex of the submission. They will be applied for any payment in respect of the contract, so that no foreign exchange risk is supported by the winning bidder.

Article 15: Validity of bids

15.1. The bids shall remain valid for Ninety (90) days. Any offer with validity less than this period will be rejected by the Contracting authority.

15.2. In exceptional circumstances, the Contracting authority may seek the consent of the bidder for an extension of the period of validity. The application and responses to be made will be in writing. The validity of the submission guaranty under article 15 of the RGAO will be similarly extended for a corresponding period. A bidder may refuse to extend the validity of the offer without losing its bid bond. A bidder who agrees for an extension will not be asked to modify its offer, or will be allowed to do so.

15.3. When there is no article in the contract for the revision of prices and the period of bid validity is extended over sixty (60) days to the date of notification of the contract award or of the service order to start work to the successful bidder, as provided in the CCAP, the effect of actualization is not taken into account for the purposes of the assessment.

Article 16: Guarantee of submission

16.1. In application of article 10 of the RGAO, the bidder will provide a bid bond of the amount specified in the OMPP, which will be an integral part of its bid.

16.2. The bid bond must be in conformity with the model presented in the Tender File.

16.3. Any bid not accompanied by an acceptable bid bond will be rejected by the tenders' board as non-compliant. The bid bond of a group must be established in the name of the agent mandated to submit the bid and each member of the grouping must be mentioned.

16.4. The bid bonds and bids of unsuccessful bidders shall be returned within a period of fifteen (15) days from the date of publication of the results.

16.5. The bid bond of the successful bidder shall only be released as soon as the latter has signed the contract and has provided the required performance guarantee.

16.6. The bid bond may be seized:

- a. If the bidder withdraws his bid during the period of validity;
- b. If the bidder selected:

- ✓ Fails to fulfill its obligation to accept the contract pursuant to the results of award of the contract, or
- ✓ Fails to provide the performance guarantee pursuant to section 30 of the RGAO.

Article 17: Form and signature of the bid

17.1. The bidder will prepare an original of the constituent documents of the bid described in section 11 of the RGAO, in a volume bearing clearly the indication "ORIGINAL". In addition, the bidder shall submit the number of copies required by the OMPP, bearing the indication "COPY". In case of discrepancy between the original and the copies, the original will be taken.

17.2. The original and all copies of the offer must be typed or written in eligible ink and will be signed by the person duly empowered to sign on behalf of the bidder. All pages of the bid including overleaf will be initialed by the person (s) mandated to sign the offer.

17.3. In the offer there shall be no amendment, deletion or overloading, unless such corrections are initialed by the signatories of the bid.

the amount of the offer required to cover needs in foreign currencies, without exceeding a maximum of three currencies of Member country of the institution financing the contract.

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17.3. In the offer there shall be no amendment, deletion or overloading, unless such corrections are initialed by the signatories of the bid.

D. SUBMISSION OF BIDS

Article 18: Sealing and marking of bids

18.1. The bidder will place the original and copies of the constituent documents of the bids in two separate and sealed envelopes marked "**Original**" and "**Copy**", as the case may be. These envelopes will then be placed in an outer envelope which will also have to be sealed, but that should give no indication of the identity of the bidder.

18.2. The inner and outer envelopes

- a. Will be addressed to the Contracting authority as indicated in the OMPP;
- b. Will bear the name of the project, the number of the invitation to tender in the OMPP, and the mention "To be opened only during the bid opening session" and also specify the lots.

18.3. The inner envelopes shall bear the name and address of the bidder to enable the Contracting authority to return the offer sealed if it was submitted after the date and time limit under the provisions of article 19 of the RGAO or to satisfy the provisions of article 20 of the RGAO.

18.4. If the outer envelope is not sealed and marked as specified in sections 17.1 and 17.2 above, the Contracting authority will not be responsible if the offer is lost or open prematurely.

Article 19: Date and time limits to deposit bids

19.1. Bids must be received at the Mbengwi Council at the **specific date and time indicated in the Special Regulation for the Invitation to Tender.**

19.2. The contracting authority may at its discretion, extend the deadline fixed for the deposition of bids by publishing another date in accordance with the provisions of **section 7** of the RGAO. In this case, all the rights and obligations of the bidders and the Contracting authority previously governed by the initial date limit shall be governed by the new date limit.

Article 20: Bids out of time

Any bid coming in after the date and time limit for the submission of bids under article 19 of the RGAO will be declared out of time and, therefore, not receivable.

Article 21: Modification, Substitution and withdrawal of bids

21.1. A bidder may modify, replace or withdraw his bid after submission, provided a written notification for the modification or withdrawal is received by the Contracting authority before the expiration of the period prescribed for the submission of bids. Such notification must be signed by a mandated representative. Modification or the corresponding bid to be replaced shall be attached to the written notification. The envelopes should be clearly marked depending on the situation, the mention "Withdrawal" and "Offer of replacement" or "Modification."

21.2. The notification of the modification, replacement or the withdrawal of the bid by the bidder shall be prepared, sealed, marked and sent in accordance with the provisions of section 15 of the RGAO. Withdrawal may also be notified by fax, but must in this case be confirmed by a duly signed written notice, with the date, the postmark being authentic, and must not be after the deadline set for the submission of tenders.

21.3. The bids which the bidders asked for the withdrawal pursuant to section 21.1 will be returned to them without having been opened.

21.4. Bid cannot be withdrawn within the interval between the deadline for the submission of bids and the expiration period of validity of the bid as on the bid form. The withdrawal of bid by any bidder during this interval leads to the bid bond being forfeited pursuant to the provisions of article 16.6 of the RGAO.

C. OPENING AND EVALUATION OF BIDS

Article 22: Opening of Bids

The tender's board shall proceed to open the bids in the presence of the bidders or their duly mandated representatives having a perfect knowledge of the bid.

Article 23: Confidential nature of the procedure

23.1. No information on the examination, evaluation, comparison of the bids, the verification of the qualification of bidders, and the recommendation of award of the contract shall be given to bidders or to any other person not concerned in this process until the award of the contract shall be made public by the Contracting authority.

23.2. Any attempt by a bidder to influence the Tender's board or the Sub-Committee for analysis in the evaluation of bids or the Contracting authority in the award decision may lead to rejection of his bid.

23.3. Notwithstanding the provisions of paragraph 19.2, between the opening of bids and the award of the contract, if a bidder wishes to enter in contact with the Contracting authority for reasons related to his bid, he must do so in writing.

Article 24: Clarification on the bids and contact with the Delegated Contracting authority

24.1. To facilitate the examination and comparison of bids, the Chairman of the Council Internal Tender's board may, at his discretion, ask any bidder for clarification on the bidder's bid. The request for clarification and the response shall be in writing, but no change in the amount or the content of the submission is sought, offered or permitted, unless it is necessary to confirm the correction of arithmetic errors discovered by the Sub-Commission for analysis in the evaluation of bids.

24.2. Subject to the provisions of paragraph 1 above, bidders are not allowed to have contact with any member of the tender's board and that of the Sub-committee for analysis for issues related to their bids, between the opening of bids and the award of the contract.

Article 25: Determining the conformity of bids

25.1. The Sub-Commission for analysis shall carry out a detailed examination of the bids to determine if they are complete, if the required guarantees have been provided, if the documents were properly signed and bids are generally in good order.

25.2. The Sub-Commission shall determine if the bid is substantially responsive to the requirements of the Tender File based on its content without recourse to extrinsic evidence.

Article 26: Correction of errors

26.1. The Sub-Commission shall check the bids found substantially responsive with the requirements of the Tender File for any correction of arithmetic errors. The Sub-Commission for analysis will correct the errors in the following ways:

- a. If there is a contradiction between the unit price and the total price obtained by multiplying the price by the amount, the unit price will govern and the total price will be corrected, unless, in the opinion of the Sub-Commission for analysis, the comma of the decimal digits of the unit price is obviously poorly placed, in which case the total price indicated will prevail and the unit price will be corrected.
- b. If the total obtained by addition or subtraction of the subtotals is not correct, the subtotal as indicated will govern and total will be corrected.
- c. If there is a contradiction between the price indicated in words and figures, the amount in words will govern, unless this amount is related to an arithmetic error confirmed by the sub detail of the said price, in which case the amount in figures will prevail subject to paragraphs (a) and (b) above.
- d. If there is a contradiction between the amount in the unit price in the bill of quantities and estimates, and the unit price breakdown (sub-detail), the amount in the unit price break down shall govern.

26.2. The bid amount will be corrected by the Sub-Commission for analysis, in accordance with the procedure of correction of errors mentioned above and with the confirmation of the bidder, such amounts will be deemed to hire him.

26.3. If the bidder having presented the lowest evaluated bid price does not accept the corrections on his bids, his offer will be rejected and the bid bond forfeited.

Article 27: Evaluation and comparison of the financial bid (offer)

Only offers accepted, in conformity according to the provisions of section 24 of the RGAO, will be evaluated and compared by the Sub-Commission for analysis.

By evaluating the bids, Sub-Commission for analysis will determine for each bid the evaluated amount by correcting the amount as follows:

- ✓ By correcting any possible error in accordance with the provisions of article 25 of the RGAO.
- ✓ Excluding provisional sums and, the provisions if any, for contingencies in the detail bill of quantities and summary, but by adding the amount of day work, when they are competitively priced as specified in the OMPP.

F. ATTRIBUTION OF JOBBING ORDER

Article 28: Award

The contracting authority will award the contract to the bidder whose bid has been recognized substantial responsive to the requirement of the Tender File and which has the technical and financial capacity required to carry out the contract in a satisfactory way and in which the bid has been evaluated the lowest.

Article 29: Right of the Contracting authority to declare an invitation to tender unfruitful (unsuccessful) or cancel a procedure

The Contracting authority reserves the right to cancel a tender procedure only after **approval from the Minister Delegate in charge of Public Contracts** when the bids have opened or declare a tender unsuccessful following the opinion of the competent tender's board, without thereby incurring any claims from the affected bidders.

Article 30: Notification of the award of the Jobbing order

Before the expiry of the bid validity period fixed by the Special Regulation for Invitation to Tender, the delegated contracting authority shall notify the award of the contract to the successful contractor confirmed by fax, by registered letter or by any other means available to do it. This notification letter will indicate the amount HT that the contracting authority shall pay to the contractor in respect of execution of works and the duration.

Article 31: Publication of the award decision and redress

The award of a contract shall be materialised by a decision of the Contracting Authority and notified to the successful bidder.

Any decision by the Delegated Contracting Authority to award a public contract shall be published; including the price and deadline, in the Journal of Public Contracts (JDM) published by the organ in charge of the regulation of public contracts or in any other publication authorised to do so.

Once the results awarding a contract are published by the Contracting Authority, bidders whose bids were not retained shall be informed of the rejection of their bids and invited to withdraw them within fifteen (15) days, except the copy meant for the organ in charge of the regulation of public contracts. Tenders that are not withdrawn within this deadline shall be destroyed without any claims being lodged by the bidder.

After publication of the results of the award, the Independent Observer's report, as well as the minutes of the award session to which is attached the report of the evaluation of bids, shall be

communicated to any bidder or administration concerned upon request addressed to the Contracting Authority.

In case of any petition, it must be addressed to the Minister in charge of Public Contracts, with copies to the organ in charge of the regulation of public contracts, the Contracting Authority as well as the chairperson of the tenders' board.

On risk of being declared null and void, any petition must be formulated within a maximum of five (5) working days after the publication of result.

Article 32: Signature of the Jobbing Order

The award of a contract shall be materialised by a decision of the Delegated Contracting Authority and notified to the successful bidder.

32.1. After the publication of the award decision, the draft contract subscribed by the successful bidder is transmitted to the competent tenders' board for examination and adoption.

32.2. The Contracting Authority has a time-limit of seven (07) days from the date of reception of the approved draft contract from the competent's tenders' board and subscribed by the successful bidder to sign the contract.

32.3. The contract is notified to the contractor within five (05) days of signature.

Article 33: Guarantees

33.1. The final bond must be constituted within twenty (20) days following the notification of the contract by the Contracting Authority guaranteeing of the complete execution of the contract.

33.2. The final bond may not be less than two percent (2%) and more than five percent (05%) of the initial value of the contract. It may be replaced by a bank caution issued by a banking establishment or first-rate financial institution authorized in accordance with the instruments in force.

33.3. Small and medium-sized enterprises (SME) constituted of National capital and managed by nationals may, in lieu of the final bond, provide a stator lien or a bond issued by a banking establishment or first-rate financial institution authorized in accordance with the instruments in force.

33.3. The absence of the final bond within the prescribed time-frame, the Contracting Authority may decide to cancel or terminate the contract at the fault, expense and risk of the said contractor according to the conditions provided in the General Administrative Clauses (CCAG).

PART 03
SPECIAL REGULATION FOR THE INVITATION TO
TENDER (SRIT)

Special regulations of the Invitation to Tender

References of the General regulations	General
1	Definition of works: Construction of two boreholes with solar powered pumping system in Upper-Gra Mbengwi, in Mbengwi Subdivision, Momo Division of the North-West Region. Name and address of the Contracting Authority: The Mayor of Mbengwi Council Reference of Invitation to Tender: N° ____/ONIT/MB/MCITB/2025 of ____/____/2025
2	Execution deadline: one hundred and twenty (120) days
3	Source of financing Works which form the subject of this Invitation to Tender shall be financed by the 2025 Public Investment Budget of the Ministry of MINDEVEL
4	List of pre-qualified candidates, not applicable
5	Origin of building materials, equipment, materials, supplies and equipment: The materials will generally be from natural sources in Cameroon.

6.1 Evaluation criteria

The bids shall be evaluated according to the main criteria as follows:

C. Eliminatory criteria

1. Absence of bid bond in the administrative file;
2. Deadline for delivery higher than prescribed;
3. False declaration or falsified documents;
4. A bid with the external envelope carrying a sign or mark leading to the identification of the bidder;
5. Incomplete financial file;
6. Change of quantity or unit;
7. Non respect of 30/40 (75%) of essential criteria;
8. Suspended by MINMAP in 2025
9. Prefinancing capacity

D. Essential criteria

- 1- General presentation of the Tender Files;
- 2- Financial capacity;
- 3- References of the company in similar achievements;
- 4- Quality of the personnel;
- 5- Technical organization of the works;
- 6- Safety measures on the site;
- 7- Logistics;
- 8- Attestation of site visit duly signed by the Bidder in his honour.
- 9- Special Technical Clauses initialed in all the pages and signed at the last page;
- 10- Special Administrative Clauses completed and initialed in all the pages and signed at the last page.
- 11- Categorisation shall be exempted (see page 6)

The criteria relating to the qualification of candidates could be indicative on the following:
 The essential criteria are subjected to minima whose detail is given in the Special Tender Regulation (RPAO).

This evaluation will be done in a purely positive way (yes) or negative (no) with an acceptable minimum from at least 30/40 (75%) of the essential criteria taken in account.

The Contract will be awarded to the bidder who would have proposed the offer with the lowest amount, in conformity with the regulations of the Tender Documents and having satisfied to 100% of the eliminatory criteria and at least 30/40 (75%) of the essential criteria.

ARTICLE 6: Language of the bids:

The offer like any correspondence and all documents concerning the tender, exchanged between the renderer and the Project Owner will be written in French or English. The complementary documents and the printed papers form provided by the Bidder can be written in another language in condition of being accompanied by a precise translation in French or English; in which case and for purposes of interpretation of the offer, the translation will be taken.

PRESENTATION OF THE TENDER.

The bids prepared in English or French and in seven (07) copies with one (01) original and six (06) copies marked thus, shall be presented in three (03) volumes as follows:

- A) Administrative Documents
- B) Technical Documents
- C) Financial Documents

5.1 External envelope.

Each bidder shall seal these three (03) envelopes (A, B and C) in one common envelope on which shall be written.

**<< OPEN NATIONAL INVITATION TO TENDER
N° 04/ONIT/MC/MCITB/2025 OF 26/02/2025
FOR THE CONSTRUCTION OF TWO BOREHOLES WITH SOLAR POWERED PUMPING SYSTEM
IN UPPER-GRA MBENGWI, MBENGWI COUNCIL, MOMO DIVISION OF THE NORTH-WEST
REGION. >>.**

"TO BE OPENED ONLY DURING THE BID-OPENING SESSION"

N.B: The external envelope should not carry any mark or sign that can lead to the identification of the bidder.

8.2 Internal envelopes

Three (03) internal envelopes must be sealed in an external envelope.

The first internal envelope shall be labeled;

<<ENVELOPE A: ADMINISTRATIVE DOCUMENTS>> and shall contain the administrative documents of the enterprise. These documents shall be original or copies certified by competent authorities not more than three months.

ADMINISTRATIVE DOCUMENTS.

DOCUMENT N°	DESCRIPTION
A.1	Certified Copy of the Business Registration, not more than three months old.
A.2	Declaration of intention to tender stamped with the tariff in force (written by the bidder) with a fiscal stamp.
A.3	Certificate of non-bankruptcy established by the Court of 1st instance or the Chamber Commerce, Industry and Trade of the place of residence of the bidder, not more than three (03) months.
A.4	Attestation of bank account of the bidder, issued by a first rate-bank approved by the Ministry in charge of Finance or by a foreign bank the first order not more than three months.
A.5	Purchase receipt of Tender File of thirty-seven thousand (37,000) CFAF issued by public treasury
A.6	A bid bond of four hundred and forty thousand (440,000) CFAF issued by a first rate-financial institution approved by the Ministry in charge of Finance in conformity with COBAC conditions

A.7	An attestation of non-exclusion from Public Contracts issued by the Public Contracts Regulatory Board (ARMP)
A.8	An Attestation of the National Social Insurance Fund stating that the bidder has met all his obligations vis a vis the Fund; the attestation valid within the given time.
A.9	A Clearance Certificate signed by the chief of Centre of Taxes that the bidder has met all the statutory declarations in issues of taxes in the current financial year; this certificate should be less than three months old.
A.10	Certified Copy of a valid taxpayer's card.
A.11	Plan and attestation of location of the Company.
A.12	Power of attorney if necessary
A.13	Special Technical Clauses initialed in all the pages and signed at the last page
A.14	Special Administrative Clauses completed and initialed in all the pages and signed at the last page

In the absence or non conformity of one of these documents, the bidder shall be given 48hours to provide the correct document, failure of which it will result to the elimination of the offer.

The second Internal Envelope shall be labeled <<ENVELOPE B: TECHNICAL DOCUMENT>> and shall contain the following:

MARKING GRID				
N°	CRITERIA	CONFORMITY		OBSERVATIONS
		YES	NO	
GENERAL PRESENTATION OF THE BIDS				
	Presence of all the documents			
1	Properly bind			
2	Table of content			
3	Page separators in colour apart from white			
4	Order prescribed respected			
5	Clearness of the documents			
6	Presence of all the documents			
REFERENCES OF THE COMPANY IN THE DOMAIN OF POTABLE WATER SUPPLY				
7	Minimum two (02) registered contract (1st and last pages) certified by a competent authority			
8	Minimum two (02) Minutes of reception corresponding to the-joint contracts certified by a competent authority			
PERMANENT OR MOBILIZABLE MATERIAL MEANS				
9	Proof of a motorized drilling rig in good operating condition			
10	Proof of a vehicle (Pick up 4 x 4 or van) (own or hire)			
11	Proof of a concrete vibrator, wheel barrow, head pans, rubber buckets, spades, shovels, dig axes, hammers.			
QUALIFICATION OF SITE PERSONNEL				
12	Organizational Chart of the company			
13	Organizational Chart of site with comments			
14	Works Director (Civil or Rural Engineer with at least 05 years of experience in similar works)			
15	Certified copy of National identity card not more than three months old			
16	Certified copy of the Diploma of Work Director not more than three months old and signed by an administrative authority			
17	CV signed and dated by the works Director			

18	Attestation of availability			
19	Site foreman (at least Higher Technician in Civil or Rural Engineering with at least 03 years of experience in similar works)			
20	Certified copy of certificate of Foreman			
21	Certified copy of National identity card signed not more than three months old			
22	CV signed and dated by the site foreman			
24	certificate of availability signed times by the owner			
25	Assistant site foreman (at least a technician in civil or Rural Engineering with at least three 03 years of experience			
26	Certified copy of certificate of Foreman			
27	Certified copy of National identity card not more than three months old			
28	CV signed and dated by the site foreman			
29	certificate of availability signed times by the owner			
METHODOLOGY OF INTERVENTION AND EXECUTION OF THE WORKS				
30	Attestation of site Visit with pictures			
31	Site Visit report			
32	Detailed technical note concerning the organisation and the execution of works			
33	Planning of execution of works			
34	Respect of the duration of work			
35	Description of safety measures at the building site			
36	Description of socio - environmental measures for the protection the site			
37	Coherence in the execution of works			
38	Coherence in the organisation of the site			
39	CCTP dully initialled on each page and signed and dated on the last page			
CAPACITY OF SELF-FINANCING				
40	Attestation of credibility of at least 8,000,000			

ENVELOPE C- FINANCIAL FILE

No.	DESIGNATION.
C1	A submission letter, signed, dated and stamped. (see ANNEX 3)
C2	Completed and signed frame work of unit prices.
C3	Signed Bills of quantities and cost estimates indicating the total amount without taxes (HT) and with taxes (TTC)
C4	Sub details of unit prices

- The bidders will use for this purpose the documents and models envisaged in the Tender Documents, subject to the provisions of Article 19.2 of the RGAO concerning the other possible forms of bid bond.
- The various parts of the same file must be separated with colour guides from as well in the original as in the copies, so as to facilitate its examination

Supply price

ARTICLE 8: Currency of payment

This National Invitation to tender is awarded on total and Contractual price, inclusive of all taxes, firm and non-revisable for the whole of the works and the equipment defined in the present Invitation to Tender.

The corresponding amount will be calculated inclusive of all taxes and the prices will be obligatorily expressed in francs CFA.

The unit schedule price expressed out in figures and letters and in seven (07) copies will be joined to the offer. In the event of error between the prices in figures and letters, the latter will precede and be used as a basis of calculation of the amount of the offer.

The establishment of the prices will be done on the basis of economic condition into force in Republic of Cameroon at the handover date of the offers.

ARTICLE 9: Transport and delivery

The materials for work must be protected during transportation through packaging whether by air, railway or road according as the case may be. The conditions of storage must be of tropical type.

ARTICLE 10: Guarantee and retention guarantee

10.1 Provisional guarantee

The amount of the provisional guarantee or guarantee of tender is fixed at **four hundred and forty thousand (440,000) CFAF**.

The time of validity of this guarantee is ninety (90) days as from the date of depositing of the offers.

10.2 Final Bond

The final Bond is fixed at two percent (2%) of the initial amount of the services envisaged in the country. It could be replaced by a guarantee personal and interdependent of a banking house approved by the Ministry of Finances following COBAC conditions.

It will have to be made up in the twenty (20) days following the notification of the signature of the Contract in a bank approved by the Minister in charge of Finances.

10.3 Guarantee Retention

Guarantee Retention of ten percent (10%) will be operated on amount including all taxes of the Contract. The corresponding sum will be paid or the released guarantee, with the final acceptance of work.

ARTICLE 11: Period of validity of the offers

The bidder will remain committed to his offer for sixty (60) days as from the handover date of the offers.

If at the end of this period, the Contract were not notified to him, the bidder will be able, either to cancel his offer, or to ask for a new negotiation of the unit prices.

ARTICLE 12: A number of copies of the offer which must be filled and sent

The tender, as all the parts accompanying it will have to be given in seven (07) copies, including one (01) original and six (06) copies. The bidder will present his dossier inside a sealed outer jacket being marked:

<< OPEN NATIONAL INVITATION TO TENDER

N° 04/ONIT/MC/MCITB/2025 OF 26/02/2025

**FOR THE CONSTRUCTION OF TWO BOREHOLES WITH SOLAR POWERED PUMPING SYSTEM
IN UPPER-GRA MBENGWI, MBENGWI COUNCIL, MOMO DIVISION OF THE NORTH-WEST
REGION. >>.**

"TO BE OPENED ONLY DURING THE OPENING SESSION"

ARTICLE 13: Date and latest time of deposit of offers

The offers will have to arrive under closed fold and seal latest __/__/2025 at 10:00am, by mail registered with acknowledgement of delivery or by deposit against receipt to the following address:

THE SERVICE OF THE CONTRACTING AUTHORITY, THE SECRETARIAT OF THE MBENGWI COUNCIL

Beyond this time no offer will be received nor accepted.

ARTICLE 14: Opening of the tenders

The opening of the folds will be carried out in the conference room of the Mbengwi Council on __/__/2025 as from 11:00am, by the Mbengwi Council Tender Board sitting in the presence of the duly elected bidders or their representatives and having a good knowledge of the file.

AWARD OF THE CONTRACT

ARTICLE 15: Award of the Contract

The Tenders Board will propose to the Contracting Authority to award the Contract to the bidder who will have presented the offer with the lowest offer, essentially conforming to the regulations the Tender File, having satisfied to **100% of all the eliminatory criteria and at least 75% of the essential criteria** taken into account.

The decision carrying attribution of the Contract will be published by way of press release or any other means of Publication of use in the Administration.

If the Contract passed on the basis of technical alternative suggested by the bidder, the Contracting Authority reserves the right to introduce all the provisions there allowing him to guarantee itself against the real overrun costs of the alternative compared to his estimate of origin. In the absence of these last precise details, any additional charge due to an alternative will be inadmissible.

To this end, it is specified that a bidder cannot claim to be compensated, if it is not taken action on his offer.

The Contracting Authority reserves the right not to take action on an Invitation to Tender, if it did not obtain a proposal which appears acceptable to him.

ARTICLE 16: COMMENCEMENT OF WORK:

Before the commencement of work, the Contractor must be installed on the site by the following:

- ❖ The Authorizing Officer or his representative, **MAYOR MBENGWI COUNCIL;**
- ❖ The Contract Engineer, **DD MINEE - MOMO;**
- ❖ The **DD MINMAP MOMO** or his representative;
- ❖ The project Manager is the CDO of MBENGWI Council;
- ❖ The Contract manager is the DD MINDDEVEL MOMO;
- ❖ Representative of the beneficiary communities;

PART 04
SPECIAL ADMINISTRATIVE CLAUSES (C.C.A.P)

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CHAPTER I: GENERALITIES

ARTICLE 1: Subject of the Jobbing order

The jobbing order has as subject the construction of two boreholes with solar powered pumping system in Upper-Gra Mbengwi, Mbengwi Subdivision, of the Momo Division, North-West Region.

ARTICLE 2: Procedure of the award of the jobbing order

The present jobbing order is awarded after an Open National Invitation to tender, following procedures laid down for the award of public contracts in Cameroon.

ARTICLE 3: Definitions and attributions (CCAG article 2).

1- General definitions

- The Contracting authority is **the Mayor Mbengwi**. He is responsible for the conservation of the originals of the jobbing order and the transmission of copies to ARMP through the focal point designated to that effect.
- The Project owner is **the Mayor of Mbengwi Council** responsible for the general administrative, financial and technical assistance at the definition, preparation, execution and acceptance stages of the services forming the subject of the jobbing order.
- The contract engineer is **the Divisional Delegate of MINEE for Momo** and is responsible for the follow-up of the execution of the contract.
- The project manager is the **CDO** for Mbengwi council and is responsible the defense of interest at definition, preparation, execution and acceptance stages of the services forming the subject of the jobbing order
- The beneficiary is **the company**.
- The contract manager is **DD MINDDEVEL**

2- Security

In view of the application of the law on collateral prescribed in the Decree N° 2018/366 of 20th June 2018, the following are designated:

- The authority in charge of ordering payment shall be the **Mayor of Mbengwi Council**.
- The body or official in charge of payment shall be the **Municipal Treasury of Mbengwi Council**;
- The authority in charge of the clearance of expenditures shall be the **Divisional Controller of finance-Momo**;
- The official competent to furnish information within the context of execution of this jobbing order shall be the Project owner, **DDMINMAP** and the contract engineer.

ARTICLE 4: Language, law, and regulation

4.1. The language used during the submission is either English or French,

4.2. The laws and regulations are the laws and regulations in force in Cameroon;

4.3. The Contractor undertakes to observe laws, regulations, and order in force in the Republic of Cameroon, and as well in its own organization in the implementation of the contract.

If in Cameroon, these laws, regulations, administrative and fiscal obligations in force are changed after the signature of the contract, the eventual costs will be borne by the contracting parties.

ARTICLE 5: Constituent Parts of the Jobbing order (CCAG article 4).

The constituent parts of this contract are in order of priority:

- The letter of undertaking;
- The letter of submission corrected eventually;
- The special administrative Clauses (CCAP);

- The special Technical Clauses (CCTP);
- The unit price schedule;
- The bill of estimates and quantities;
- The unit price break down;
- The duly approved work plans;
- The Planning of the work (the work schedule).
- The bids of the contractor;
- The tender file;

ARTICLE 6: General applicable texts

This jobbing order is subject to the following General texts of law;

1. Framework Law N°. 96/12 of 5th August 1996 on the management of the environment;
2. The Mining Code;
3. Instruments governing the various professional bodies;
4. Decree N°. 2001/048 of 23rd February 2001 relating to the Setting up, Organization and Functioning of the Public Contracts Regulatory Agency
5. Decree N°. 2003/651/PM of 16th April 2003 to lay down the Procedure for Implementing the Tax and Customs System applicable to Public Contracts;
6. Decree N°. 2018/366 of 20th June 2018 to institute the Public Contracts Code;
7. Decree N°. 2012/075 of 8th March 2012 to organise the Ministry in charge of Public Contracts;
8. Letter N°. 00908/MINTP/DR of 1997 to publish guidelines for the consideration of environmental impact of road maintenance;
9. Circular N° 00013995/C/MINFI of 31st December 2024 bearing instructions relating to the implementation of the Finance laws, the monitoring and control of the execution of the Budgets of the State and other entities for the 2025 fiscal year;
10. Unified Technical Documents (DTU) for building works;
11. Applicable standards;
12. Order N° 212/A/MINMAP of 28th September 2021 organizing the functioning of SIGAMP;
13. Other instruments specific to the domain concerned with the Contract.

ARTICLE 7: Communication (CCAG article 2 and 10).

7.1. All communications within the framework of this contract shall be written and notifications sent to the following address:

- a) In the case where the contractor is the addressee: Sir/Madam.....
Beyond the time-limit of 15 days fixed in article 6(1) of the GAC to make his domicile known to the Project Owner and Contract Manager, correspondences shall be validly addressed to the [to the specified] council, chief town of the region in which the work Was done;
- b) In the case where the Project Owner is the addressee:
Sir/Madam_____ [to be specified] with a copy addressed to the Contracting Authority, Contract Manager, Contract Engineer, Project Manager and where need be, within the same deadline.
- c) In the case where the Delegating Contracting Authority is:
Sir/Madam [to be specified] with a copy addressed within the same deadline to the Project Owner, Contract Manager, Contract Engineer and Project Manager, where applicable

7.2. The contractor shall address all written notifications or correspondences to the Project Manger with a copy to the Contract Manager and the contract Engineer.

ARTICLE 8: Service Order (CCAG article 8).

8.1. The different service orders will be established and notified. The administrative service order to start work will be signed by the Contracting Authority and notified to the contractor by the project owner with copies to the Contracting Authority, the Contract Manager, and the Contract Engineer.

- 8.2. On the proposal of the project owner, service orders having an incidence on the subject, the amount of delay in the execution of the contract will be signed by the Contracting Authority and notified by the project owner to the contractor with copies to the contract manager and the contract engineer.
- 8.3. Technical service orders on technical issues concerning the execution of the contract will be signed by the contract manager and notified to the contractor by the contract engineer with copies to the Contracting Authority.
- 8.4. Service orders on warning notices will be signed by the project owner and notified by his services to the contractor with copies to the Contracting Authority and the Contract Engineer.
- 8.5. Service orders on suspension and restart of works because of unforeseen circumstances will be signed by the Contracting Authority and notified by his services to the contractor with copies to the Contract Manager and the Contract Engineer.
- 8.6. Service orders concerning remedial actions during the guarantee period will be signed by the Contract Manager on the proposal of the Contract Engineer and notified to the contractor by the Contract Engineer.
- 8.7. The contractor has fifteen (15) days to issue reservations on any service order received. The fact of issuing reservations does not prevent the contractor to execute the service orders received.
- 8.8. The Contracting Authority has the right to notify service orders signed by him that are to be notified by the project owner in case this is done within 30 days.

ARTICLE 9: Contractor's Equipment and Personnel (CCAG article 15).

9.1. Personnel: In his bid the contractor engaged to mobilize human and material resources necessary for the proper execution of the works in conformity with the standards and norms in force in Cameroon, and according to the stipulations of the CCAP/CCTP. All these personnel should be effectively present on site up to the end of works. The contract was awarded on the basis of an elaborated list of equipment and personnel requested by the contracting authority.

Within fifteen (15) days following the notification of the administrative service order to commence works, the contractor should obligatorily designate on the approval of the contract engineer the works director, the works foreman endowed with powers of representation and decision to manage the site. Any modification of the technical bid can only take place after a written approval to the contract engineer. In case of any modification, the contractor shall replace any personnel with one having the same qualification, experience and competence or with appropriate performant equipment.

9.2. Replacement of a senior staff: The contractor's representative and the site foreman shall be approved by the contract manager. Their workers can be replaced or excluded from the site without a prior accord by the contract manager.

Any partial and total changes on the technical bid, shall take place only after a written approval by the contract manager. In case of any changes, the contractor shall replace any personnel with one having the same qualification, experience and competence. The list of personnel to be replaced will be transmitted to the project manager for approval.

The contract manager has the right to order for the replacement of any worker or labourer for reasons of misconduct, insubordination and incapacity. The contractor is responsible for all crimes and disorders committed by his workers. Any replacement of any senior staff shall have a lumpsum fine of Two hundred thousand (200 000) FCFA per person except for unforeseen circumstances. Any such replacement shall not interrupt the execution of the contract. The charges shall be born by the contractor. In case of any accident or illness, the contractor shall replace the worker in question without delay.

9.3. Any one-sided decision to effect change of personnel of the technical bid before and during the execution of the contract constitute a justified reason for the cancellation or termination of the contract.

CHAPTER II: FINANCIAL PROVISIONS

ARTICLE 10: Guarantees (CCAG articles 29 and 41).

10.1. The performance bond:

Within twenty (20) days from the date of notification of the contract, the contractor shall produce a performance bond of three percent (3%) of the amount of the contract TTC, to guarantee the complete and proper execution of the contract. Beyond this time-limit, the Contracting Authority has the right to terminate or cancel the contract to the detriment of the contractor.

The contractor may replace the performance bond with a bank guarantee of corresponding or same amount, from financial or banking institution approved by the Minister in charge of finance which must be furnished prior to each payment on account. The bond or the security will be released simultaneously with each monthly payment, proportionately to the amount of work done.

The performance bond or the bank guarantee shall be released within thirty (30) days after the provisional acceptance of works by a waiver issued by the Contracting Authority after a written application from the contractor.

10.2. The retention guarantee:

A 10%, taxes inclusive, retention guarantee on the amount of the work actually carried out or executed shall be retained. It is obtained through successive deductions on all the installmental payment. It will be restituted at the final reception.

The retention guarantee shall be released within thirty (30) days after the final acceptance of works by a waiver issued by the Contracting Authority after a written application from the contractor.

If, for any reason, the contractor refuses to comply with the service orders on corrections of imperfections or defects after the provisional acceptance and in the extra time allocated after the period of twelve (12) months, the amount of the holdback the Project Owner, the Contract Engineer and the Contracting Authority shall have the right to have the repairs carried out by their own workers or another contractor and to collect the money at the expense of the contractor through deductions on all sums due the latter by virtue of the contract.

10.3. The start of advance guarantee:

A startup advance that is at most equal to twenty percent (20%) of the amount of the contract all taxes inclusive(ATI) may be granted to the contractor on express request and without justification on his part. This advance must be guaranteed at one hundred percent (100%) by a first-class Bank approved by the Ministry in charge of finance. This advance may be released after the notification of the Service order to start the work.

It shall be reimbursed by deductions done on the payments on account made to the contract holder during the execution of the contract and in accordance with the terms and conditions laid down in the said contract. The advance must be completely reimbursed not later than when the value of the basic price of the goods and services rendered shall have reached eighty percent (80%) of the price of the contract.

Following of the rate of reimbursement of the advance, the Contracting authority will authorize the payment of the corresponding part of the contractor upon written request.

ARTICLE 11: The Amount of the Contract (CCAG articles 18 and 19).

The amount of this contract, from the detailed quantitative cost estimates here attached stands at the sum of _____ (_____) FCFA. i.e.

- Amount (EVAT): _____ (_____) francs CFA;
- Amount VAT : _____ (_____) francs CFA;
- Amount net to be paid: _____ (_____) francs CFA;

The amount of the contract is calculated using conditions stipulated in article 19 of the General Administrative Clauses (CCAG),

ARTICLE 12: Payment Modalities

The contractor may obtain periodic payments on account. These periodic payments may be spread out during the term of the contract in several periodic installments. The contractor shall be bound to submit to the project owner, before the sixth day of each month, a detailed account, accompanied by a justificatory calculations and job cost sheet establishing the total amount spent at the end of the period under consideration, sums he may be entitled approved by the contract engineer and the contracting authority. The bills must correspond to the amount of work done, obtained from the amount of work actually

executed under the conditions of the contract and the unit price, as contained in the schedule of unit price, quantity and estimated specifications and the unit price Sub-Details and the amount of deductions.

The payment of an account to the contractor shall be determined from the corresponding provisional detailed account established simultaneously, from which is deducted the amount of the balance due. Payments on account are not considered to be the final payment. The contractor is debited with such payments until the final settlement of the contract.

Works executed by the contractor and entered into the job cost sheet give entitlement to payment on account.

At the end of the work, a final account of the work is established.

ARTICLE 13: Mode of Payment

The payment of an account to the contractor shall be effected in accordance with the conditions specified in this contract and made base on justifying documentation required to credit of account:

1. Open: _____ agency;
2. Account number: _____

ARTICLE 14: Price variation

The prices are definite (fixed) and not to be changed. The contractor before submitting his bids or signing his contract must have had perfect knowledge about the local conditions under which he has to execute the contract.

ARTICLE 15: Price revision

The prices are not to be revised. Hence there is no price revision formula.

ARTICLE 16: Work using local direct labour (CCAG article 22)

Not required or necessary.

ARTICLE 17: Valorisation of works executed (CCAG article 23)

This contract is lump sum. The contract shall be paid on the basis of approved plans by the contracting parties. Possible differences noticed, for each type of structure or each element of the structure, between the quantities effectively executed and the quantities in the cost estimates shall not lead to the modification of the said price. This applies to errors that the cost estimates may include.

ARTICLE 18: Valorisation of supplies (CCAG article 24)

If need be, each payment on account shall include a part corresponding to building materials bought for the execution of the works and are on site. The amount for these materials is obtained by taking into account the prices from the sub-details. Materials having been the subject of payment on account cannot be taken away from the site without a written authorization of the project owner or the contract engineer.

ARTICLE 19: Advances (CCAG article 28)

The contractor may, upon simple request addressed to the project owner and without any justification, and after providing the guarantees required in the Public Contracts Code, obtain a so-called "start-off" advance or advance "for purchase of building materials".

This advance whose amount shall not exceed twenty percent (20%), all taxes inclusive, of the initial contract price shall be guaranteed at one hundred percent (100%) by a banking establishment governed by Cameroon law or a first-rate financial institution authorized according to the instruments in force.

It shall be reimbursed by deductions done on the payments on account made to the contract holder during the execution of the contract and in accordance with the terms and conditions laid down in the said contract.

The advance must be completely reimbursed not later than when the value of the basic price of the goods and services rendered shall have reached eighty percent (80%) of the price of the contract.

ARTICLE 20: Payment of works executed (CCAG articles 26, 27 and 30)

Works assessment: Before the 30th of each month, the contractor and the control engineer shall jointly establish a job cost sheet which summarises and fixes the quantities executed and established for each item on the schedule during the month and capable of giving entitlement to payment.

No later than the fifth (5th) of the month following the month of the services, the contractor shall hand over to the control engineer two draft provisional monthly detailed accounts in seven copies (one detailed account exclusive of VAT and the other inclusive of taxes), according to the agreed model and establishing the total amount of the sums to which he may lay claim as a result of the execution of the contract since the start of the contract.

Only the detailed account exclusive of VAT shall be paid to the contractor. The detailed account of the amount of the taxes shall be the subject of an entry into the budgets of the Ministry in charge of Finance

Only the amount exclusive of VAT shall be paid to the contractor as follows:

- [100 - 2.2 % paid directly into the account of the contractor;
- 2.2 % paid to the public treasury as AIR due by the contractor.

The contract engineer has a time-limit of seven (7) days to forward to the Contract Manager the detailed accounts he has approved.

The Contract Engineer has a maximum time-limit of twenty-one (21) days to forward the detailed accounts he approved such that they are in his possession not later than the twelfth of the month.

The Contract Manager has a deadline of fourteen (14) days maximum to sign the detailed accounts.

Payments shall be done by _____ within a maximum deadline of _____ calendar days from the date of submission of the approved detailed accounts.

ARTICLE 21: Interests on overdue payments (CCAG article 31)

Where the delay in payment fixed in the special administrative clauses is attributed to the Contracting Authority or accounting officer, the contract holder shall be fully entitled to interest on overdue payments calculated from the day following the expiry of the said deadline up to the day of issue of the payment voucher by the accounting officer.

Possible interests on overdue payments are paid by statement of sums due in accordance with article 88 of Decree N°. 2018/366 of 20th June 2018 to institute the Public Contracts Code.

ARTICLE 22: Penalties (CCAG article 32)

A. Penalties for lateness.

In case of overrun of the contractual deadlines set in the contract, the contractor shall be liable to penalties after a formal prior notice.

In the event of force majeure, the contractor must file a comprehensive request for an extension of time. The Contracting authority after consideration of the relevance of the request shall notify a new time frame. After this new time frame, the penalties for delay will be applied entirely without further notification. Except by waivers provided for in the contract, the amount of penalties for time-limit overrun shall be set as follows:

- a. One two thousandth (1/2000th) of the amount ATI of the contract per calendar day overrun from the first to the thirtieth (30) day beyond the contractual time-limit provided for in the contract;
- (b). One thousandth (1/1000th) of the amount ATI of the contract, per calendar day overrun beyond the thirtieth day;
- (c). The cumulative amount of penalties is limited to ten per cent (10%) of the amount ATI of the contract under pain of termination.

B. Specific penalties.

23.1 Apart from penalties of overrun of the contractual deadlines, the contractor is liable to the following special penalties for the non-respect of the provisions of the contract, notably:

- Late submission of final bond;
- Late submission of insurances;
- Late submission of the draft execution programme if the the lateness is caused by the contractor.

ARTICLE 23: Final detailed account (CCAG article 34)

23.1 After completion of the works, and within fifteen (15) days after the provisional acceptance, the contractor shall draw up the draft final detailed account from the joint sheets to which he may be entitled as a result of the integral execution of the contract.

23.2 The Contract Engineer has twenty (20) days to notify the corrected final detailed account.

23.3 The Contractor must within ten (10) days following the date of this notification, send back the final detailed account with his signature, with or without reservations, or make known the reasons for which he refuses to sign it.

ARTICLE 24: Final detailed General Payment (CCAG article 35)

24.1 Within a deadline of one (01) month after the final acceptance, the Contract Engineer shall draw up the detailed final payment.

At the end of the guarantee period leading to the final acceptance, the Contract Engineer shall draw up the detailed final payment sign by the contractor and the Contracting authority, which includes:

- The final detailed account;
- The balance;
- The summary of the monthly payments on account.

The amount of the general payment is equal to the result of this last summary.

24.2 The general detailed account signed by the Contracting Authority must be notified to the contractor by an administrative service order. The contractor then has one (01) month from the date of this notification to return this general detailed account, with or without reservations, to make known the reasons for his refusal to sign the general detailed account.

24.3 If the final detailed account is signed without reservations, this acceptance definitely binds the two (02) parties, except in the case of interests on overdue payments; if there are any. The detailed account thus becomes the final general detailed account of the contract.

24.4 If the contractor does not return the general payment within the deadline referred to above, this general detailed account shall be considered as having been accepted by him and thus become final.

The detailed account shall become final once it is signed without reservations by the contractor, except in the case provided for the preceding paragraph. The acceptance of a claim from the contractor shall be regularized by a rider to the general detailed account.

ARTICLE 25: Tax and customs regulations (CCAG article 36)

Decree No. 2003/651/PM of 16 April 2003 lays down the terms and conditions for implementing the tax regulations and customs procedures applicable to public contracts. The taxes applicable to this contract include notably:

- Taxes and dues relating to industrial and commercial profits, including the IAR which is a deduction on company taxes;
- Registration dues in accordance with the Tax Code;
- Dues and taxes attached to the execution of services provided for in the contract;
 - o Duties and taxes of entry into Cameroonian territory (customs duties, VAT, computer tax);
 - o Council dues and taxes;
 - o Dues and taxes relating to the extraction of building materials and water.

These elements must be included in the costs which the undertaking imputes on its running costs and constitute one of the elements of the sub-details of prices exclusive of taxes.

All taxes inclusive prices means VAT included.

ARTICLE 26: Stamp duty and registration (CCAG article 37)

Seven (07) original copies of the contract shall be stamped and registered by the contractor in the competent taxation unit within in accordance with the applicable regulations.

CHAPTER III: EXECUTION OF WORKS

ARTICLE 27: Work consistency

The works include the following:

Lot 100: Preparatory works;

Lot 200: Drilling works

Lot 300: Design, cleaning, development and pumping test

Lot 400: Installation of a solar pump system with a 3200Wp solar system, an AC/DC hybrid solar submersible pump with a minimum flow rate of 3.8m³/h and TMH of about 150m, a MPPT charge controller with automatic operation of 48A/12V, the lighting of the control room and other installation accessories;

Lot 500: Installation of a pipeline with:

- HDPE100 pipe Ø40mm to pump water from the borehole to the elevated storage tank and for main distribution;
- HDPE100 Ø32mm to connect the tank to the valve chambers;
- HDPE100 Ø25mm for the connection of the main line from the valve chambers to standpipes that will be constructed at a certain distance of the tower;

Lot 600: Construction of water structures with:

- Construction of two 2.8x2.8x6m height towers with pillars (30x30cm) chained at every 2.4m with cross beams (20x30cm) and three slabs of 20cm thick (one at the top of the control room as well as at the 6m height chaining and the other one at 4m height to carry the tank) in reinforced concrete dosed at 350Kg with a roof and embedded protected metallic ladder of 5.5m for each borehole;
- Construction of two double standpipes equipped with valve chamber and a soak away pit (1 per borehole);
- Equipment of each tower with a 5m³ Polyéthylène vertical water storage tank;
- Construction of one control valve chamber (50x50x50cm) in reinforced concrete for each borehole;

Lot 700: Project sustainability with:

- Training of two caretakers provided by the Mbengwi Council;
- Supply of a complete tool box and spare parts.

ARTICLE 28: The obligations of the Project owner

28.1 The Project Owner shall be bound to furnish the contractor with information necessary for the execution of his contract and to guarantee, at the cost of the contractor, access to sites of projects.

28.2 The Project Owner shall ensure the contractor of protection against threats, insults, violence, assault and battery, slander or defamation of which he could be victim by reason of or during the exercise of his mission.

ARTICLE 29: Execution Time Frame (CCAG article 38)

29.1 The execution time frame for the execution of this contract shall be four (04) months. This shall include the completion of the works provided incumbent on the contractor, the folding up of installations and restoring the sites and lands.

29.2 The execution time frame for the execution of this contract shall run from the date of notification of the administrative service order to start execution. It shall end upon provisional acceptance of the works.

ARTICLE 30: Roles and responsibilities of the contractor (CCAG article 40)

The contractor shall have as mission to ensure the proper execution of the works that he has been selected to carry out. For that reason, the works shall be executed under the supervision of the contract engineer and in accordance to the applicable rules and standards. Hence the works shall be executed according to the notified drawings, technical specifications and service orders from the competent authorities.

The contractor shall submit for the prior approval of the contract engineer, the local organization of the work, the work planning schedule, all structural calculations, trials and soil tests, list of skilled and unskilled workers.

The contractor shall be responsible for the implantation of the structures in relation to the original reference landmarks, lines and levels furnished by the project owner.

The contractor is responsible for the entire site, including interventions of certified subcontractors. He shall therefore:

- Put in place all the necessary conditions to enable his suppliers and sub-contractors, who are working with him to intervene in a timely manner and in accordance with the schedule of execution and under his leadership, and
- Ensure the proper execution of the service orders from competent authorities.

The contractor shall constantly keep a general and updated detailed schedule of the progress of the works and make available four (4) copies to the contract engineer at the beginning of each month.

To this end, the contractor shall take all measures and provide all necessary means, determine, choose and purchase all materials, equipment and supplies and hire any specialized staff if necessary.

ARTICLE 31: Provision of documents and site (CCAG article 42)

Within twenty (20) days after the notification of the contract, a reproducible copy of plans featuring in the tender file of the contract will be made available to the contractor by the project owner as well as the work site and its access

The contractor shall preserve in good state the site plan put at his disposal during the execution of the contract. He shall hand it back, at the request of the project owner in their initial state after the execution of the contract, with due consideration of its normal wear and tear.

ARTICLE 32: Insurance of structures and civil liability (CCAG article 45)

The following insurance policies are necessary for the execution of this contract within fifteen (15) days after the notification of the contract, and before the commencement of work guaranteeing against any loss or damage occurring on the structures and third parties up till the provisional acceptance:

Civil liability insurance and all construction risk.

The Contractor shall justify that he holds an insurance policy of civil liability for damage caused to third parties of all kinds:

- (a) By its current salarized personnels.
- (b) By the equipment in use.
- (c) As a result of the work.

Comprehensive insurance coverage

The working site must be covered for all the works by a construction site comprehensive insurance coverage issued by a company approved by the competent authority. The cost of this insurance is the responsibility of the contractor.

No settlement except the startup advance will be made without presentation of a certificate from an insurance company proving that the contractor has fully addressed the premiums or contributions for the work for this contract.

The contractor has a period of 15 (fifteen) days from the date of notification of the Service order to start the work to present a certificate of insurance proving the premiums or contributions for the work for this contract was fully settled. After that the contract may be terminated.

ARTICLE 33: Documents to be submitted by the contractor (CCAG article 49)

Within a maximum period of fifteen (15) days from the date of notification of the service order to start work, the contractor shall submit to the contract engineer, the programme of execution, his supply calendar, his draft Quality Assurance Plan and the Environment Management Plan in six (6) copies. A duly signed copy of the execution programme must be deposited at the DD of MINEE latest fifteen (15) days from the date of notification of the Administrative Order to commence execution. This working document shall include the following:

- General site installation;
- Company localization plan;
- Execution plans, drawings, calculations, detailed studies, quality control plan and work planning,

- Exhaustive list of personnel with their certified true copies of their diplomas
- Bill of estimate and quantities;
- Detailed list of materials and equipment available on the site;
- Detailed execution planning updated forecasts on the work progress in view of comparing the actual progress to the forecasts;
- The annexes files if the contractor deems it necessary.
- The site sign board

Two (2) copies of these documents will be returned to him within a deadline of fifteen (15) days from the date of reception with:

- Either the indication "GOOD FOR EXECUTION";
- Or the indication of their rejection including the reasons for the said rejection.

The contractor has eight (8) days to present a new draft. The Contract Engineer then has a deadline of five (5) days to give his approval or possibly make comments. Delay in approving the draft execution schedule shall stay the execution deadline.

The approval given by the Contract Engineer does not in any way release the contractor of his responsibilities. Meanwhile, works executed before the approval of the programme shall neither be ascertained nor paid for. The updated and approved schedule will become the contractual schedule.

The contractor shall constantly update on site, a schedule that will take account of real progress of the site. Significant modifications may only be made on the contractual programme upon receiving the approval of the contract engineer. After approval of the execution schedule by the Contract Engineer, the latter shall transmit it within five (5) days to the Contracting Authority without staying its execution. However, if important modifications alter the objective of the contract or the nature of the works, the Contracting Authority shall return the execution schedule accompanied by reservations to be lifted within fifteen (15) days of the date of reception.

- The Environment Management Plan should bring out notably the choice technical conditions of the site and basic life, conditions of the backfill of the extraction sites and conditions for reinstating the works and installation sites.
- The contractor shall indicate in this schedule the equipment and methods which he intends to use as well as the personnel he intends to employ.
- The approval granted by the Contract Manager or Project Manager shall in no way diminish the responsibility of the contractor with regard to the harmful consequences which their implementation may cause both towards third parties and the respect of clauses of the contract.

ARTICLE 34: Organisation and security of the construction sites (CCAG article 50)

34.1 The sign boards:

The contractor will be responsible to ensure day and night signaling of working site close to the main road in accordance with instructions given by the control engineer. Two (2) signs board are required per construction site and should be in conformity with the regulatory provisions such as:

- The title of the project;
- The Project Owner;
- The Contracting Authority;
- The Contract Engineer;
- The project manager;
- The Contractor;
- The funding;
- The execution time-frame;
- The date of notification of the Service order to start work.

The signboard shall have the dimensions of 2,00 x 3,00 m.

34.2 The site installation plan:

The site installation plan shall be done considering the following:

- Particular access roads;
- Vegetation to be protected;
- Temporal fence of the site;

34.2 The fencing of the construction site:

The construction site shall have a fence of 2m high.

34.3 The building site installation:

The contractor shall set up temporary constructions and facilities needed to execute the works, such as:

- Offices of the Contractor equipped with tables, chairs and lock-up cupboards.
- Building site toilet facility (if it does not exist)
- Storehouse for materials
- Removal of temporary work (fences, field office, sheds, signs, etc.).

34.4 The site logbook:

A site log book shall be kept by the contractor at the construction site before site installation.

It is a unique non contradictory document. Its pages are numbered and sign. No page should be removed. Strikeout or rescinded parts are reported in the margin for validation.

The following informations are recorded in it:

- Atmospheric conditions;
- The daily executed tasks, personnel and equipment used;
- The progress of the work;
- The requirements imposed;
- The detailed work quantities;
- The work carried out by subcontractors;
- The receptions of building materials;
- The incidents, accidents or events on the construction site;
- Nonconformities;
- The official visits;
- The administrative operations;

The site logbook shall be counter signed by the contract engineer and the person in charge of technical or administrative work at each site visit and systematically sign the minutes of site meetings.

Any refusal of presentation or any attempt of total or partial destruction or falsification of this log book may give rise to administrative sanctions.

34.5 The site meetings:

- Site meetings shall hold regularly at the behest of the Project Owner. The presence of the contractor or his representative in these meetings is obligatory or mandatory.
- Periodic meetings shall hold in the presence of the Contracting Authority, the Contract Engineer and the Project Owner or their representatives.
- Minutes of these meetings shall be entered in the site logbook. The contractor or his representative shall at the beginning of the meeting present the level of physical execution of the work and the difficulties faced.

34.6 Sub-contracting:

The ceiling of the percentage of the works to be sub-contracted shall be set at thirty (30) % of the total amount of the contract.

34.6 Site laboratory:

The contractor shall have his own laboratory on the site to enable him carry out all tests and studies on building materials defined in the Special Technical Clauses. The personnel and the equipment must be approved by the Contract Engineer.

34.7 Security Measures:

The contractor shall provide and maintain at his expense all lighting, protection, closing and guarding devices that will be necessary for the proper execution of the work or that will be required by the engineer.

The contractor shall be responsible for all the consequences directly or indirectly of deficiency of signaling during the work.

The Contracting authority reserves the right, at the request of the engineer, without prior notice and at the expense of the contractor, to take all necessary measures engaging the responsibility of the contractor.

CHAPTER IV: ACCEPTANCE OF WORKS

ARTICLE 35: Provisional acceptance (CCAG article 67)

Before the provisional acceptance, the contractor shall apply to the Project Owner with copies to the Contracting Authority and the Contract Engineer for a pre-technical acceptance. This pre-technical acceptance shall notably involve a proper evaluation of the works executed as per stipulation of the contract. The minutes of this evaluation is drawn on the spot by the contract engineer and signed by the contractor or his representative.

The provisional acceptance commission shall be composed of the following members:

- The project owner President,
- The contracting authority Member,
- The contract engineer.....Member,
- The project ManagerRapporteur,
- The contract Manager.....Member,
- The Stores Accountant MBENGWI Council.....Member,
- The Representative of the beneficiary communityMember
- The contractor or his representative.....Observer.
- DD MINMAP or his representative.....Observer,

The contractor is convened at the reception as observer. He is required to attend or to be represented.

The Commission after site visit, reviews the minutes of the pre-technical acceptance and proceed to the provisional acceptance.

The provisional acceptance site visit will be concluded with minutes of provisional acceptance signed on the field by all members of the Commission. Minutes of provisional acceptance shall precise or specify the date of completion of the work from which the guarantee period shall run.

ARTICLE 36: Documents to be submitted after execution (CCAG article 68)

During the execution of the works the contractor shall update all the modifications on the contractual plans. At the end of the works he shall then reproduce the modified, updated and validated drawings and submit them to the contract engineer, the contracting authority and the project owner.

The non-submission shall attract a penalty of 20% from the retention guarantee.

ARTICLE 37: The guarantee period (CCAG article 70)

The guarantee period is twelve (12) months from the date of the provisional acceptance.

ARTICLE 38: Final acceptance (CCAG article 72)

Final acceptance shall take place fifteen (15) days from the date of the expiry of the guarantee period.

The final acceptance commission shall be the same as that of provisional acceptance and shall meet in the presence of the contractor.

The final acceptance procedure shall be the same as that of provisional acceptance and under the same conditions. Before pronouncing the final acceptance, the commission shall verify by all means put at their disposal that all the contractual provisions were fully respected by the contractor during the guarantee period.

The minutes of the final acceptance shall be drawn on the spot and signed by all the members.

CHAPTER V: MISCELLANEOUS PROVISIONS

ARTICLE 39: Termination of the contract (CCAG article 74)

The contract may be terminated as provided for in Article 100 of the Decree 2018/366 of 20/06/2018 of the Public Contracts code and equally under conditions stipulated in articles 74, 75 and 76 of the CCAG, notably:

- Delay for more than fifteen (15) calendar days in the execution of a Service order or unjustified stoppage of work for more than seven (7) calendar days;
- Delay in the execution of work resulting to penalties above 10% of the amount of the contract;
- Default of the contractor;
- Refusal to repeat poorly executed works;
- Persistent non respect of payments on account.

ARTICLE 40: Case of force majeure (CCAG article 75)

40.1 No party to the contract shall be considered as having contravened his contractual obligations if he is prevented from doing so by a force majeure.

40.2 No claims shall be made against the contractor if he fails or delays in the execution of his contract due to cases of force majeure such as:

- Rains : 200 millimetres in 24 hours ;
- Winds : 40 metres per second ;
- Floods: frequent floods.

ARTICLE 41: Disagreements and disputes (CCAG article 75)

Disagreements and disputes during the execution of the contract shall be the subject of an attempt of amicable settlement, where need be, through mediation, in accordance with the provisions of the SAC and subject to the provisions of the Public Contracts Code.

Where the disagreements and disputes cannot be settled amicably, the matter shall be brought before the competent Cameroon jurisdiction, subject to the provisions of the SAC.

ARTICLE 42: Production and dissemination of this present contract.

Ten (10) copies of this present contract shall be produced and multiplied at the expense of the contractor.

ARTICLE 43 and last: Entry into Force of the Jobbing order

This contract shall be valid only upon its signature by the Contracting Authority. It shall enter into force as soon as it is notified to the contractor by the Contracting Authority.

PART 05

SPECIAL TECHNICAL CONDITION (C.C.T.P)

INTRODUCTION.

This specification aims to define the mode of execution of work to be done following the norms and approved standards, according to the documents of the Contract.

The choice of technological options for achieving the proposed work has the sole concern to ensure a better functionality of facilities in compliance with safety rules for the protection of property and persons. It has been established as a guide to clarify and supplement the guidance of the estimate and drawings notwithstanding the terms of the Contract.

B-MODE OF EXECUTION OF WORK

SPECIAL TECHNICAL CONDITIONS (STC)

TECHNICAL SPECIFICATIONS JOURNAL FOR THE CONSTRUCTION OF A BOREHOLE EQUIPPED WITH A SOLAR PUMP

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INTRODUCTION.

This specification aims to define the mode of execution of work to be done following the norms and approved standards, according to the documents of the Jobbing Order.

The choice of technological options for achieving the proposed work has the sole concern to ensure a better functionality of facilities in compliance with safety rules for the protection of property and persons. It has been established as a guide to clarify and supplement the guidance of the estimate and drawings notwithstanding the terms of the Jobbing Order.

The technical specifications presented herein below define the hydro-geological waterworks and electromechanical engineering works that shall be executed in Mbengwi town, Momo Division and the manner in which these works shall be carried out. So the Contractor is expected to read these specifications critically and identify all the articles that are applicable to his job

CHAPTER I: GENERAL INFORMATION.

Article 1: Subject

The following Technical Specifications Journal (TSJ) concern the works to be carried out in the construction of a borehole, the supply and installation of a manual pump in the said borehole and the construction of the superstructure respectively in the area between the Gendarmerie Brigade and the Mbengwi Police Station and at the Mbengwi Central Prison; as well as the setting up of measures to sustain the equipped borehole.

In each case, the volume of work to be executed is indicated by the bill of quantities, network maps and/or plans provided for the project. The various works to be executed shall conform to the relevant terms of the technical specifications given herein below.

Article 2: Contractor's role.

The Contractor who shall be chosen after this call for tender, shall be responsible to execute all the works outlined here. These include all the phases from site selection, through the drilling of the borehole, the borehole design, the cleaning and development of the borehole, the determination of the properties of the aquifer (Aquifer or Pumping test) and the superstructure construction, to the pump installation, water analyses and the taken of long-lasting measures to ensure the project sustainability.

It should be understood that the provision of a bill of quantities for any project does not absolve the potential Contractor of the necessity to affect a well-planned site visit, at his own expense, to gain complete knowledge of the conditions prevailing on the terrain. This knowledge shall come in handy when preparing the List of Tasks and the Unit Price Schedule. Potential Contractors (or Bidders) shall provide a detailed and sequenced List of Tasks to be effected on each component of the project. Within fifteen (15) days from the date of notification to start work, the Contractor shall provide the Supervising Engineer with:

- A detailed plan of the work, showing the scheduling of the various works to be executed in time
- Detailed technical drawing of the works to be realized
- A manpower deployment plan

-A schedule of the delivery of materials to the project site, showing possible delays

-Failure to forward the foregoing documents shall engender the postponement of the reception of project materials, which could result in a punishable overall delay in the execution of the project.

No material shall be used that has not been checked for conformity with the technical specifications by the Supervising Engineer.

The Supervising Engineer reserves the right to modify the plans and Work schedule provided by the Contractor, which modification shall first be submitted to the Delegated Contracting Authority for approval. Under exceptional circumstances, the Supervising Engineer may suggest modifications to the technical specifications for any component of a project to the Delegated Contracting Authority, while making sure that the overall cost of the project stays within the limits of the financial bid of the Contractor.

Any modification must be done in writing, with sufficient justification. For this purpose, a numbered page book (the project log book) shall be kept on site in which the Supervising Engineer shall write his approved instructions. Both the Contractor, or his representative, and the Supervising Engineer shall initial every page of the project logbook

It is therefore obligatory for the Contractor to execute the works in conformity with:

- The Bills of Quantities and Estimates,
- The Special Administrative Clauses
- The Special Technical Clauses stated herein,
- Any other special rules and regulations that may be applicable to his job,
- The work schedule,
- The detailed technical drawings,

Subject to any approved modifications indicated in the project log book by the Supervising Engineer, the Contractor shall take note of any omission or discrepancies that may exist in the three documents mentioned in the preceding paragraph, which omission or discrepancies could fundamentally affect the technical or aesthetic quality of the works executed to his detriment, and call the attention of the Supervisory Engineer who shall remain at his disposal of the Contractor for necessary information and inquiries through the duration of the project.

In this regard, the Contractor shall not absolve himself of the responsibility for poor quality work by citing imprecision, omissions or discrepancies in the technical specifications or modifications thereof indicated in the project log book by the Supervising Engineer.

Any works effected without regard for the foregoing instructions or provisions shall be demolished at the expense of the Contractor

Article 3 - Work plan

The Contractor shall execute the work within a deadline of three (03) months as from the date of notification of the service order to start work.

Article 4 - Site selection and choice of Drilling Technique

4.1- Site Selection :

The site for the borehole shall be chosen after hydrogeologic and geophysical studies. These studies will start with the interpretation of aerial photos of the area aimed at locating fractures and structural traps to retent aquifers. Geophysical prospecting will then be carried out on these anomalies so as to confirm the hydrogeologic results and obtain precisions on the aquifers. This geophysical surveys will be done using the Electric Method, precisely Resistivity Profiling and Resistivity Depth Sounding.

Studies carried out on previous boreholes done in similar geological formations show that with the respect of minimum precautions during site selection, a success rate of% (minimum yield of 0,7m³/h after designing the borehole) is expected.

The selected site will therefore depend on the results obtained after these surveys ; but the ideal site will be that which will be easily accessible to the beneficiaries. A site selection report shall be presented indicating the methods used in choosing the site and also outlined in a sketched plan of location.

4.2- Choice of Drilling Technique:

The hydrogeologic nature of the area is such that drilling will be done in unconsolidated and hard formations and consequently requiring the use of a well equipped drilling rig in order to face any eventuality.

The borehole facilitates the extraction of water from deep aquifers in fractured hardrocks, thereby making it possible to prevent pollution from superficial waters. Precautions are therefore taken to isolate superficial formations so as to avoid the vertical downward propagation of superficial pollution.

Drilling through the loose formations may need the use of a drilling fluid which can be water or muddy water ; and of course the temporal use of PVC or metallic casing of diameter 175-195mm .
Drilling shall be done using compressed air supplied by a high pressure compressor. The tool and bit used should be adapted both to the loose and hardrock formations.

Studies on existant boreholes in the area reveal that the depth will be between 40m and 80m (averagely 60m) therefore the drill pipes or rods should be available to attain this depth.

The superstructure shall be of the classic type : a pump stand on a slightly inclined margelle with a ditch at the edges that lead to a drainage system which ends up in a soak away pit at a distance of at least 8m away from the borehole.

The borehole shall be equipped with a manual pump of the type SWN 80 or India mark II or Vergnet. The bodywork of the pump and its accessories should be composed of materials that are resistant to corrosive water and cannot be oxidised.

CHAPTER II – DRILLING WORKS.

Article 5 - Drilling of Borehole

The borehole shall be drilled respecting the technical specifications outlined here and shall be accepted as productive (positive) if its yield is at least 0,7 m³/h (700l/h) and the water is potable after analyses.

5.1. Organization of the work-site

Considering the results obtained after previous drilling campaigns of boreholes in the area, an average depth of sixty (60) m is proposed for the borehole.

The success of this project largely depends on the perfect coordination of the different activities by the Contractor (the Supply and the installation of the manual pump, the drilling process respecting the appropriate drilling technics, the appropriate borehole design, cleaning and development of the borehole, the pumping test, the construction of the superstructure with a good drainage system, water analyses, project sustainability). This coordination requires the strict respect of the execution plan of the borehole which contains the outlined execution plans of the different activities.

The Enterprise shall place its Technical Director who shall be responsible to the Administration and on the worksite, the work execution shall be supervised by a Foreman who is well qualified and experienced in the domain of borehole drilling, manual pump installation and project sustainability. The execution plan should be conceived in such a way that the different phases will be done without unjustified stoppage.

The state of work progression shall be established monthly and if after two months, the progression rate is considered low, the Contractor shall be asked to deploy additional means to the worksite so as to accelerate work progression and meet up with the deadline.

During the work execution, the Administration has the right to modify the work.

5.2. Working Hours.

The general conditions fixed for workers by the Cameroon Legislation also applies to the Contractor's workers in the worksite. There shall be no work at night.

5.3. Equipments and Materials for execution

5.3.1 General conception of equipments and materials

The Contractor shall be responsible for the choice of the equipments and materials. The general conception of the drilling rig and the materials to be used for the execution of the borehole should take into consideration the local milieu : the state of roads and accessibility, as well as the rate of execution stated above.

5.3.2. State of the equipments and materials

The execution calendar obliges the Contractor to be in possession of a drilling rig in order to execute this project, immediately he is notified of having been chosen to execute the job.

The serial number, the age and the origin of the drill ought to be specified in the bid. Anyway, the proposed equipment should be in a good state.

5.3.3. Description and specifications of the drilling rig.

The drilling rig that is needed for this project will be composed of:

The Drill

A conventional rotary apparatus using compressed air and water or mud, and specially adapted to using the tool and bit in loose formations and the down-the-hole hammer in hardrocks. Drilling through the loose formations and to

avoid frequent collapse of these formations especially when the hardrock is to be drilled, the use of temporal casing is very obligatory. This temporal casing can be of steel or PVC nature and facilitates drilling in both the loose and hardrock formations without any difficulty.

The drilling rig should have a capacity of attaining an average depth of 100meters with a boerhole diameter of:

- 12¼" (175-195mm) for rotary drilling with compressed air using tools and bits with water or mud,
- 6¼" (165mm) for rotary destructive drilling with compressed air by using the down-the-hole hammer.

Other Equipments.

The Air Compressor :

This should be a high pressure compressor of air, of at least 5 m³/mn at 7 bars.

Sufficient **Steel pipes**, attaining an average deth of 100m.

Pumping tests should be done using an **immersed electric pump** of diameter less than 110mm, and capable of supplying yields of 10 m³/h at a depth of 30meters and of 6 m³/h at a depth of 80meters.

An **Electric sounder** for the measurements of the water levels in the borehole should be available.

Each drilling team should have a rapid means of communication.

5.3.4 The Conformity Visit.

A conformity visit of all the equipments and materials shall be done at the beginning of the work execution in order to verify:

- their conformity with those avec proposed in the Contractor's bid,
- the relationship between the capacities of these equipments and materials, the prescriptions in the Technical Specifications Journal and the execution deadline.

The pronouncement of this visit shall be expressed in a Report which shall not in any way set free the Contractor from his engagements.

5.4. Description of the Borehole.

5.4.1 The Method of execution of the Borehole.

The choice of the methods and materials to be used as well as the exact diameters of the borehole would be at the initiative of the Contractor and under his sole responsibility.

The following specifications have been tentatively presented . Anyway, it is specified that:

- except by special derogation, drilling with the down-the-hole hammer in the hard bedrock shall never be done without the use of the temporal PVC or steel casing, at the levels of the loose or unconsolidated weathered formations,
- the drilling through the loose nonconsolidated sections of the weathered rocks may require the use of water or muddy water or mud. The substances used should have a composition that would not seal the productive layers and should be biodegradable.

5.4.2 Sampling.

During drilling, the samples of the cuttings shall be taken at every change of faciès (rock type) or every meter. The samples shall be placed in small labelled (depth of sample) plastic bags and kept in the worksite at the disposal of the Contract Engineer, who shall decide on their outcome.

5.4.3 Characteristics of the Borehole.

The principal characteristics of the borehole are summarized as follows:

Borehole in the hard bedrock:

- Drilling in the loose unconsolidated weathered rock formations by rotary drilling of minimum diameter 9"5/8 right to the contact with the hard bedrock,
- Putting in place of a colon of temporal Casing of diameter 178/195mm in PVC or in steel,
- Continuous drilling in the hard bedrock using the down-the-hole hammer, of diameter 165mm, right to a maximum total depth of 100meters,
- Putting in place of a catchment colon using the PVC Screen of diameter 110 – 125mm with slot openings of Ø ≤ 2mm,
- Putting in place of a gravel pack of a quartzeous nature and calibrated: (1 - 2mm) or (2-4mm),
- Putting in place of a seal composed of alluvium or elluvium,
- Withdrawal of the temporal Casing,
- Putting in place of a concrete borehole cap of 2m minimum.

5.5. Borehole Design.

If the borehole is considered exploitable, its design is carried out immediately the drilling process comes to an end. In all the cases, the productive borehole shall be designed all through the length of the catchment zone PVC casing of diameter 110/125 mm, of which the characteristics are specified further below in this file.

- This casing shall be armed with slot openings of $\varnothing \leq 2\text{mm}$ (Screen), which shall be placed at the levels of water arrivals by screen fragments of length 3 or 6 meters. The base of the colon shall be blocked with borehole stopper. The annular space between the soil formation and the PVC colon shall be filled with a quartz gravel pack of a grain-size: (1 - 2mm) or (2-4mm) all along the length of the screen plus 3 meters. The gravel shall be disinfected being introduced into the annular space of the borehole.

The grain size of the gravel shall be 1-3mm. The gravel shall be composed of clean quartzeous and smooth material.

On top of the gravel pack filter, a clayey seal of 1 meter thick shall be put in place, it has as goal to prevent the pollution of the borehole by superficial waters.

Above the clayey seal, the borehole shall be filled with alluvium or elluvium, in which case this substance shall constitute material for effective back-fill, and finally the top of the borehole shall be filled with concrete for a depth of 2 meters.

The casing shall overlap the earth surface by 0,50m. This casing shall be momentarily locked with a screwed cork.

5.6. Development

Development is done by air-lift with double tube using the drilling rig or an independent unit.

The yield obtained after the development should not be more than 10 % less than the yield obtained at the end of drilling.

Development shall continue until clean water with no residual sand grains nor clay particles is observed. The Contractor should control the yield in sand grains of the water, by applying the Method of observing sand deposit in a 10 litres bucket of water and of which the diameter should not be greater than 1cm at the end of development.

The average time for development shall be 4 hours.

If technical errors occur during the drilling process or during development, the additional time beyond the 4 hours, shall be under the responsibility of the Contractor and, if clean water is not obtained after development, the borehole will not be received.

In case an independent unit was used for development, the return of the drilling rig for the partial or complete repeat of the drilling process, shall be under the charge of the Contractor.

The yield shall be measured after every 15 minutes. The water level and the depth of the borehole shall be measured before and after the development.

The accepted tolerance for the measurements (including those obtained during pumping test) shall be :

- 10% for the yields,
- 1cm for the water level,
- 5cm for the measurements of depth.

5.7. Pumping [Aquifer] Tests-Superstructures-Disinfection of the Borehole and Water Analyses.

5.7.1 Pumping [Aquifer] Test.

These tests shall be executed using an immersed pump, of a minimal capacity of 10 m³/h at a depth of 30m or 6 m³/h at 80 meters. The pumping test (type CIEH) shall be done for a time lapse of 4 hours (3 phases of an increasing yield). The processes shall comprise : Restoration, Pumping and Recharge. The recharge after pumping shall be done for an hour. The measurements of the water levels shall be effectuated using an electric sounder, while the measurements of the yield shall be done using 200 litres drums. All the measurements shall be recorded in forms recommended by the Ministry in charge of Water.

5.7.2 Superstructures

The Contractor shall have to construct the following superstructures:

- A reinforced concrete corping of dimensions 1,5m x 1,5m and of height (20cm) which is compatible with the manual pump, and situated above the reinforced concrete slab,
- A reinforced concrete slab of minimum size 3m x 3m surrounding the reinforced concrete corping, raised above the soil surface of minimum height 15cm and and slightly inclined with a gentle slope of about 2% towards the evacuation outlet.
- A ditch surrounding the slightly inclined reinforced concrete slab to drain water from the latter to the outlet, through the buried PVC pipes of minimum length 8m, into the soakaway pit. The soakaway pit shall have a dimension of 1m x 1m x 1m and filled with stones ; and shall be covered by a concrete slab of thickness 10cm.
- A protective layer against erosion of width 1 meter all round the half wall and composed of lateritic gravel of thickness 10cm, shall be put all round the half wall.

A model plan shall be available. The superstructures would, however, be constructed on the basis of detailed plans that are convenient for the type of manual pump which shall be accepted by the Contract Engineer. The bidder ought to enclose these detailed plans in his bid. The concrete ought to have a composition of 350kg of cement per m^3 and after 28 days have a resistance of 28 kN/cm^2 , it shall be reinforced with welded iron rods forming a grid of 150mm (diameter of the rods being 5mm). Provision must be made for clean aggregate, gravel and sand, as well as non corrosive water.

The set-up shall be completed by the construction of:

- A half-wall surrounding the ditch of dimension : $l=3\text{m}$, $w=3\text{m}$ and $h=1,2\text{m}$; which shall be painted with oil paint or covered with tiles. It shall have an entrance which shall be equipped with a metallic gate of height 1,2m and width 1m. This gate shall be painted with a different color from that on the half-wall.
- The drainage system: a plughole or drain (with a grid capable of retaining solid particles) that leads to a concrete sewer manhole ($0,5\text{m} \times 0,5\text{m} \times 0,5\text{m}$) where resistant solid matter settles; and water flows into a buried PVC pipe of \varnothing for a distance of at least 8m and then empties itself into a soakaway pit of dimension $1\text{m} \times 1\text{m} \times 1\text{m}$ (completely filled with stones). This soakaway pit shall have a concrete slab as cover of thickness 10cm.

The identification number of the borehole and the date of execution shall be carefully engraved on a non oxidizing metallic plate permanently pasted on the concrete of the pump support; and on this plate shall also be indicated the origin of the funding.

5.7.3 Water Analyses.

Before the borehole design, the Contractor shall carry out the following measurements: pH, conductivity, temperature.

At the end of Development, the Contractor shall proceed to the disinfection of the borehole by the injection of Calcium hypochlorite (or its equivalent) into it.

At the end of the Pumping test, the Contractor shall proceed to the sampling of water to carry out physico-chemical analyses that shall be done in Laboratories recognized by the Administration.

5.8. Control of the Works.

The supervision and control of the works shall be done by a Controller or a Consulting Firm under the coordination of the Contract Engineer.

5.8.1 Worksite logbook.

In order to carry out an effective follow-up of the execution of the project, the Contractor shall make available in the worksite a logbook on which shall be recorded everything concerning work progression. This log book will help the Controller, on arrival in the worksite, to exactly know the state of evolution of the project.

The book will be held by the "Recorder", an employee of the Enterprise, and that will be his sole task in the worksite. The Recorder shall always put in writing all the daily activities in this book, as operations evolve.

In this book shall be recorded the following informations:

- Name of worksite (name of village),
- Serial number of borehole in the village,
- Dates and time of arrival and of departure of the drilling rig,
- Distance covered by the drilling rig from the previous site to get to the present site,
- Time used to run the compressor to execute the borehole,
- Time used in installing the drilling rig and time that drilling started,
- Drilling time for every pipe,
- Diameter and method used in sinking every pipe,
- Depth attained by every pipe,
- Nature of rock formations cut through "driller's cross-section",
- Depth of temporal casing, time used in placing and removing the temporal casing,
- Composition of the borehole design : length of casing, screen, volume of gravel pack, level of the emplacement of the clayey seal, thickness of the concrete, etc.
- Duration and yields of pumping test, water quality and levels following the instructions given by the Engineer during the Development and Pumping test operations,

- In short, all the technical details, incidents, breakdowns, difficulties specific to the evolution of the project, indicating the time these occurred.

The book shall be signed by the Representatives of the Administration and that of the Contractor, and shall serve as the basis for the establishment of vouchers.

Remarks and reserves made by the Contractor and/or the Administration shall be recorded in this book.

5.8.2 Control and supervision

The control and supervision of works shall be carried out by the Representative of the Administration and shall be based on the following items:

- Definition of the work plan and its execution calendar in agreement with the Contractor.
- Site implantation.
- Indicative forecasts on the geology and on the depth to be attained by the borehole.
- Decisions on whether to continue or stop drilling, its design or its abandonment.
- Elaboration of the borehole design in collaboration with the Chief driller, taking into consideration the yield.
- Supervision and interpretation of the Development and Pumping test results.
- Choice of the configuration of the superstructures depending on the landscape (topography).
- Supervision of the pump installation and the training of local pump caretakers.
- Supervision of the analyses related to water quality.
- Control the effectiveness of the activities concerning the training and sensitization of the Water Management Committee.

5.9. Origin and quality of materials

5.9.1 General dispositions.

The Contractor shall present to the Delegation incharge of Water Resources for approval the materials he intends using, indicating their nature and their origin. All the materials found faulty shall be evacuated by the Contractor at his own expenses. The Contractor shall be responsible for the regular supply of materials for the smooth running of the project.

Notwithstanding the approval of the quality and origin of the materials by the Delegation incharge of Water Resources, the Contractor remains solely responsible for the quality of the materials used for the project. It is left for him to carry out at his own expenses all the necessary tests and analyses to be sure of the materials used.

It is left for him to make all the necessary moves to obtain autorisations or permissions, and carry out payments if necessary to enable him exploit quarries or other substances, and the site for the installation of the project.

5.9.2 Characteristics of the casing and screen.

The casing and screen shall be of strong PVC (types for boreholes). The diameters shall be 110/125 mm. The origin and quality of these tubes ought to be approved before being used.

These tubes should be smooth, with solid round or square centralized fittings that can enable the tubes attain a depth of 100meters.

The tubes should have the garanti of being resistant to all the stress manipulations during their installation and during pumping. The PVC shall be composed of matter that cannot dissolve in water and modify its quality.

The slot openings of the screen shall be done mechanically in the manufacturer's factory. The slot openings shall have a diameter of less than 1mm. The percentage of openings shall not be less than 2% of the total surface area of the PVC tube.

5.9.3 Cement

The cement to be used shall of the type PORTLAND artificiel CPA 325. It should be obtained in bags of 50kg. Any bag with hardened fragments shall be rejected. The recuperation of cement dust that has fallen on the ground shall be prohibited.

5.9.4 Gravel

The gravel introduced into the annular space of the borehole shall be clean gravel composed of smooth quartz and of grain-size 1-3mm.

5.10. Technical File.

A technical file of the borehole shall be prepared by the Contractor. This technical file shall contain:

- the location of the borehole on the plan of the village,
- the technico-geological cross-section of the borehole,
- the results of the Development and cleaning test,
- the interpretation graphs of the Pumping tests indicating the depth of pump installation.

Article 6 : Guarantee of works

The Contractor shall take an engagement to execute the borehole with the materials he proposes and to respect all the technical norms in force.

In case of an accident leading to the abandonment of the borehole, le Contractor may be compeled to another borehole near the previous site, except the geologic conditions are abnormally unfavorable. The Contractor shall not be entitled to any remuneration for the abandoned borehole.

The obligations of the Contractor during the guarantee period consist of changing, or repairing the worn out parts or those that have been damaged due an error by the manufacturer.

Article 7 - Origin and quality of materials and equipments

The Contractor shall present the materials and equipments he intends to use, with indications of their nature and origin, to the Contracting Officer, for approval. Any material or equipment that is found faulty shall be rejected and evacuated by the Contractor and at his sole expenses.

Notwithstanding the approval of the quality and origin of the materials by the Contracting Officer, the Contractor remains solely responsible for the quality of the materials used for the project. It is left for him to carry out at his own expenses all the necessary tests and analyses to be sure of the materials used. It is left for him to make all the necessary moves to obtain autorisations or permissions, and carry out payments if necessary to enable him exploit quarries or other substances, and the site for the installation of the project.

CHAPTER III - SUPPLY AND INSTALLATION OF MANUAL PUMP

Article 8 - Supply-Installation of a solar pump

Characteristics of the solar pump.

The choice of the pump shall take into consideration the government policy on the standards of hydraulic equipments for the rural communities.

8.1 .Diameter

The borehole shall be equipped with PVC tubes of which the usable minimum internal diameter shall be 110mm.

8.2 Yield

The dynamic levels in the project zone shall be situated at an average depth of around twenty meters, anyhow the proposed model of pump shall be one that have to function without the dispensation of too much effort for installation depths of about 50m and of dynamic levels of equivalent depths.

The yield during the normal rythmic exploitation with the manual pump should be at least 1m³/h at 25m and 0,7m³/h at 40m.

8.3 Resistance to corrosion

All the parts constituting the pump ought to be resistant to water and air corrosion (in this case, the Contractor is asked to present documents to ascertain that control tests were carried out in the factory on the supplied materiels or their equivalents to be supplied). The Contractor shall attach to his bid the list of parts that shall be in contact with water and specify their component elements and the anti-corrosion process to be applied on them.

8.4 Fittings.

The supply of the manual pump should also include:

- the supply of tools to fix the pump onto the base: wire mesh welded with bolts, nuts and fitting washers;
- the supply of seals.

The fittings that shall be used should have closing plates which should be put in place while waiting for the pump to be installed. All fittings shall be approved by the Supervising Engineer before use. The performance guarantee of work shall cover all defects in fittings, their handling and workmanship.

8.5 Maintenance

The Supplier shall fill a table describing the nature of the day-to-day maintenance operations with as information for each case:

- the periodic interval
- the parts concerned
- the costs of the parts in the locality
- the required set of tools

8.6 Repair works

The Supplier shall specify the breakdowns that shall require the withdrawal of the pump from the borehole as well as the different unit weights, notably:

- the whole fountain,
- the linear meter of the aspiration pipe (with the rod) with and without water,
- the pump cylinder.

For more frequent interventions, he shall specify the nature of intervention and its frequency.

8.7 Accessories

The Contractor should show the pump caretaker the key or keys required to help mount, dismount and replace parts that have broken down.

8.8 Spare parts

The spare parts ought to be, as from the beginning of the project, be available in the different sales points. A kit of spare parts shall be made available and handed to the Village Water Management Committee.

8.9 Technical and pedagogic brochures

The Contractor ought to make available technical and pedagogic brochures on the mounting, the good functioning, the maintenance and the repairs of the pump.

These brochures shall simultaneously contain three levels of information.

a) A level that exclusively illustrates the following themes:

- How to pump correctly (illustrations with photos or drawings).
- How to detect an abnormality in the functioning of the pump.
- How to carry out minor repair works.

b) A level that gives complete informations on the assembling of the pump for use and for maintenance. All the possible types of breakdowns that can occur should be mentioned as well as the means to remedy the situation.

c) A complete documentary level about all the aspects of the pump: manufacture, constituent parts, materials used, assembling, current maintenance, important repair works, list of the spare parts and their approximate lifespan, etc.

These brochures shall be delivered with the pump, a copy shall be kept with the Supplier's representative.

Besides, the Contractor should prepare a maintenance form for the pump (as well as extra copies), which shall be kept in the village, and in which all repairs and maintenance works shall be recorded.

8.10 Putting in place of the maintenance system

The Contractor shall take care of the training of two (02) to three (03) pump repairers to carry out minor maintenance and repair works on the installed pump. The training of these pump repairers shall be a condition for the provisional reception of the borehole.

Article 9 : Transport, Delivery and installation of pump

The Contractor shall equally take care of the transportation and installation of the pump on the site.

Article 10 : Provisional Reception

The materials to be used ought to undergo a qualitative provisional reception, which shall be based on the administrative and technical documents justifying the quality of the materials used are in conformity with the technical objectives.

This reception shall be later followed by a technical reception which shall take place in the worksite after the installation of the pump and after observing it functioning.

The decision taken during this reception does not liberate the Contractor from his engagements with respect to the deadline as well as the technical specifications.

Any change of material that was proposed in the bid (type, characteristics, origin, etc.) before or after the conformity visit and during the execution of the project, is forbidden except authorized in writing by the Contracting Authority, following the application forwarded by the Contractor.

If the works are not in conformity with the specifications, the Contracting Authority can reject them and ask for their replacement or necessary modifications, without any extra charge for this.

Article 11 : Conditions for the Final reception

The final reception shall be pronounced after the expiration of the guarantee date which comes one year after the provisional reception. There shall be no specific pumping test during the final reception, but a test of the equipments used in exploiting the groundwater and a survey among the population to confirm the good working order of the pump during the one year guarantee period.

CHAPTER IV: ORIGIN AND QUALITY OF GEOMATERIALS AND CEMENT.

Article 12: Quality and Quantity of Geomaterials.

The Contractor shall supply all the sand, stones and gravel that may be required for the execution of any component of a project. He shall also be responsible for the excavation and backfilling of the pipeline under the supervision of the Engineer. In that regard, it is obligatory for the potential Contractor (or bidder) to visit the project site, at his own expense, before preparing his bids, in order to verify whether available geo-material are of good quality and of sufficient quantity. He shall make any reservations concerning geo-materials in his bid (Site Visit Report).

Article 13: Origin and Quality of Sand

The nature and origin of sand remain subject to the approval of the Supervising Engineer. Sand shall be obtained either from rivers or through crushing of rocks. The sand shall be of high quality. It shall be crunchy, stable, clean and shall be free of dust particles, schistose, gypseous or clayey debris and organic matter. It shall contain neither sulphur compounds no substances that can react with cement or metallic reinforcements. The sand component shall be more than 80% and the very fine constituents, with a dimension not exceeding eighty (80) microns that can be eliminated by settling, should be less than four percent (4%). No grain of sand should have a dimension greater than four (4) millimeters. If deemed necessary by the Supervising Engineer, the sand shall be sieved and washed thoroughly before use.

Moreover, filter grade sand shall have a grain size ranging from 0.8mm to 1.2mm inclusive. Furthermore, it shall be fried in order to eliminate algae zygospores, bacteria and/or bacteria spores, fungi and/or fungal hyphae.

Article 14: Origin and Quality of Gravel.

Gravel shall be obtained from deposits or quarries chosen by the contractor and approved by the Supervising Engineer. It shall be clean, without an excess of flat elongated pieces, dust or impurities. Constituents that can be eliminated through settling should be less than 2%. Its grading should be suited to its use. If deemed necessary by the Supervising Engineer, it shall be washed before use.

Article 15: Origin and Quality of Stones

Stones shall be obtained from deposits or quarries chosen by the Contractor and approved by the Supervising Engineer. No stone shall have a dimension less than twenty (20) centimeters. Basalts stones, commonly called black stones, are highly recommended, or else stones of other quality, such as un-weathered granites, rhyolites, ignimbrites, etc, duly tested and approved by the Supervising Engineer may also be used.

Article 16: Origin and Quality of Cement

Cement shall be of the CPA 325 class and shall be obtained from an approved factory.

CHAPTER V: CONCRETE WORKS

Article 17: Preparation of Concrete

Concrete works shall be of three (3) kinds:

- i) Mass concrete for foundations works; it shall be a mixture of 250kg of cement per m³ of sand and of appropriate thickness.
- ii) Re-enforced concrete for floor and roof slabs and slab covers for storage tanks, valve chambers and interruption chambers; it shall be a mixture of 350kg of cement per m³ of sand and shall be of appropriate thickness.
- iii) Mass concrete for catchment's works; it shall be a mixture of 400kg of cement per m³ of sand.

CHAPTER VI: METHOD OF EXECUTION

Article 18: General Information

18.1 Security at the Work Site

The Contractor shall place at the entrance to work site signboards in bold letters indicating that work is underway and prohibiting the public and unauthorized persons from entering the work site. He shall be responsible for any accident that may occur on the work site or may be suffered by a third party, his staff and employees or officials of the Administration as a result of their presence on the work site. Organization of work and security on the work site shall therefore be the sole responsibility of the Contractor. Furthermore, the Contractor shall be bound by the labour legislation in Cameroon vis-a vis his workers and the Administration. Moreover, his insurance policy shall cover any damages he could cause to any one during the execution of the job.

18.2 Traffic

The Contractor shall be responsible for ensuring that traffic is not obstructed on the entire stretch of his work site through out the period of work, right up till provisional reception. No obstruction of traffic shall be allowed for more than two hours. Maintenance of traffic flow shall be the responsibility of the Contractor. In case of any breach of contract in this matter, the Supervising Engineer may bring in a third party to correct any shortcomings that may be impeding the traffic flow, and related expenses shall be borne by the Contractor.

Where interference of the traffic flow for a given period is inevitable, the Supervising Engineer shall be informed of the situation at least 7 days in advance, so that he can seek the opinion of local Administrative authorities and get everything arranged before hand.

In case a deviation has to be used, the contractor shall submit to the Supervising Engineer for approval after consultation with local administrative authorities, the deviation route and his plan for maintaining the deviation throughout the duration of the works that have necessitated the deviation.

Article 19: Stone Masonry

Stone masonry shall be aesthetical and in accordance with structure type and civil engineering rules.

Binding mortar shall be a mixture of 400kg of cement per m³ of sand, no grain of which shall have a dimension exceeding 4mm.

Mortar containing a mixture of 450kg of cement per m³ of sand shall be used for the finishing of the external joints of non-visible walls of stone masonry

Mortar consisting of a mixture of 500kg of cement per m³ of sand, to which shall be added a quantity of SIKKA N° 1 recommended by the manufacturer and approved by the Supervising Engineer, shall be used for waterproofing the interior surfaces of water-retaining structures (storage tanks, interruption chambers, sedimentation basin, filters, etc).

Article 20: Pointing and Plastering

20.1 Pointing

The joints of all external walls of stone masonry that are visible shall be carefully pointed to give them an aesthetic look. Mortar containing 600kg of cement per m³ of sand shall be used for pointing with a cement paste (1:0) finish

20.2 Plastering

Plastering of surfaces in contact with water shall comprise pointing of the mortar joints followed by a 1cm thick layer of spatter dash 1:2 (m625). This shall then be followed by the application of a rendering coat of 2cm thick 1:4 (m300) mixtures and a setting coat 2cm thick 1:2 (m625). The walls shall then be finished with cement paste. Plastering of surfaces not in contact with water, such as chambers for air valves, control valves and washouts shall consist of 1 coat of plaster 1cm thick and a mixture of 1:3 (m400)

Article 21: Plumbing Works

By plumbing works include:

- i) Laying of pipes in the trenches
- ii) Construction and installation of chambers for air valves, washouts and control valves
- iii) Installation of branch lines right up to the last plastic before the standpipes.

21.1 Pipe Specifications

Pipes should meet the physical characteristics presented in table 1 below:

Table 1: Physical Characteristics of pipes

Internal Ø & external Ø (mm)	Thickness (mm)			Socket length (mm)	Nominal service pressure (bars)	Length of pipe (m)
	Minimum	Nominal	Maximum			
21x25	1.9	2.0	2.3	28	10	6
28x32	1.9	2.0	2.3	32	6	6
26.8x32	2.4	2.6	2.9	32	10	6
35x40	2.3	2.5	2.8	40	6	6
33.6x40	3.0	3.2	3.5	40	10	6
43.6x50	3.0	3.2	3.5	50	6	6
42x50	3.7	4.0	4.3	50	10	6
56.6x63	3.0	3.2	3.5	63	6	6
53x63	4.7	5.0	5.4	63	10	6
68.6x75	3.0	3.2	3.5	75	6	6
66.6x75	3.8	4.2	4.5	75	10	6
63.2x75	5.5	5.9	6.3	75	10	6
80.6x90	4.3	4.7	5.0	90	6	6

Tolerances

Ovalization: ± 1 mm

Length of pipe: $\pm 1\% \Rightarrow \pm 6$ cm

Socket length: ± 0.6 mm

21.1.1 Control Tests for Pipes

i) Length

The tolerance for pipe lengths shall be $\pm 1\%$ (± 6 cm). For every 100 pipes, if the number of pipes not respecting this tolerance is less than 3 i.e. 3%, then the whole lot shall be considered okay, otherwise the Supervising Engineer shall request that as many pipes as possible be tested in the lot.

ii) External Diameter

The tolerance shall be ± 0.3 mm for pipes of external diameters between 25mm and 50mm, and ± 0.4 mm for pipes between 63mm and 75mm in external diameter. Before reception, the Supervising Engineer shall verify the external diameters of 15 pipes for every 300 pipes. If 6 or more pipes fail to meet the tolerances prescribed above, he shall reserve the right to reject the whole lot. If 5 pipes fail to meet the tolerance stipulated above, 15 other pipes shall be selected at random from the same lot and verified. If the same results are obtained for 5 pipes, the whole lot shall be rejected.

iii) Thickness

Thickness verification should adhere to the specifications presented in table II below.

Table II: Thickness Verification

No. of pipes in the lot	No. of pipes randomly selected for verification	No of bad pipes X	
		Lot accepted if X max =	Lot rejected if Xmin=
100-199	10	2	3
200-299	15	3	4
300-499	20	3	4
500-899	25	5	6
899-1300	30	6	7
1300-3200	40	8	9

The Supervising Engineer shall carry out thickness verification in accordance with table II above

iv) Socket length

The socket length shall be verified according to agreed norms. The value obtained should have the theoretical value of the diameter of the tube plus 1.3mm. The tolerance shall be 0.6mm.

v) Shrinkage cracks

Shrinkage cracks tests should be carried out according to agreed methods by the Supervising Engineer on a 15-30cm long sample. No shrinkage cracks should occur if the pipe is at 90° to its horizontal axis. If this occurs for 15 samples representing a lot of 100 pipes, the lot shall be rejected.

vi) Internal Pressure

Pipe samples shall be subjected to 1.5 times the service pressure for duration of one hour. If one out of every five samples ruptures, another set of five shall be selected for retest. If the second set respects the specified relation with

the service pressure, the set shall be considered satisfactory. Otherwise, either necessary adjustments shall be carried out to meet the required specifications, or the lot shall be rejected.

vii) Impact

This test shall be carried out on three samples, one from each extremity and the third, from the center, all three, one meter long. Perpendicular masses shall be dropped from a height of one meter onto the samples as shown in table III.

Table III: Impact Test Schedule

Pipe diameter	Mass (kg)
25	1
32	1
40	1
50	3.5
63	5
75	7.5
90	7.5

The pipes shall be accepted if, and only if, the percentage of broken pipes in the tested samples does not exceed 40%

viii) Labels

The Contractor shall ensure that all pipes for this project are labeled <H>. The Supervising Engineer shall reject any pipe not labeled as such

The Contractor shall furnish the Supervising Engineer with information (name, address, phone, etc) on the factory being used to procure pipes for any project.

The Contractor shall present to the Supervising Engineer a guarantee certificate from the factory of origin ascertaining that the pipes meet the required standards as described in the forgoing sections. The Contractor shall arrange for free access to the factory for the Supervising Engineer to enable him request, as required, for all factory tests described in the aforementioned sections to be carried out by the manufacturer.

The performance guarantee of works shall cover all defects in pipes, their handling and workmanship.

Fittings Specifications

The fittings required for these works, are presented in Table IV below. Contractors are required to strictly respect these specifications.

All fittings shall be approved by the Supervising Engineer before use. All fittings not conforming to those specified in Table IV shall be rejected. The performance guarantee of work shall cover all defects in fittings, their handling and workmanship.

TABLE IV: SPECIFICATIONS FOR FITTINGS

Description of Goods
ADAPTOR UNION 25-3/4"
ADAPTOR UNION 32-1"
ADAPTOR UNION 40-1 1/4"
ADAPTOR UNION 50-1 1/2"
ADAPTOR UNION 63-2"
ADAPTOR UNION 75-2 1/2"
AIR VALVES
BALL VALVE 1 1/2"
BALL VALVE 2"
DEC VALVE 0 3/4"
DEC VALVE 1 1/4"
DEC VALVE 1 1/2"
DEC VALVE 2"
DEC VALVE 2 1/2"
ELBOW 0 3/4"

Description of Goods
NIPPLE 2"
NIPPLE 2 1/2"
PVC ELBOW 63
PVC RED SOCKET 40-32
PVC RED SOCKET 50-40
PVC RED SOCKET 63-50
PVC RED SOCKET 75-50
PVC RED SOCKET 75-63
PVC TEE 32
PVC TEE 40
PVC TEE 50
PVC TEE 63
PVC TEE 75
PVC VALVE 32
PVC VALVE 40

ELBOW 1 1/4"
ELBOW 1 1/2"
ELBOW 2"
ELBOW 2 1/2"
FLOAT VALVE 63
G.I PIPE 0 3/4"
G.I PIPE 1"
G.I PIPE 1 1/4"
G.I PIPE 1 1/2"
G.I PIPE 2"
G.I PIPE 2 1/2"
G.I SOCKET 0 3/4"
G.I SOCKET 1 1/4"
G.I SOCKET 1 1/2"
G.I SOCKET 2"
G.I TEE 1"
G.I TEE 1 1/4"
G.I TEE 1 1/2"
G.I TEE 2"
G.I TEE 2 1/2"
NIPPLE 0 3/4"
NIPPLE 1"
NIPPLE 1 1/4"
NIPPLE 1 1/2"

PVC VALVE 50
PVC VALVE 63
PVC VALVE 75
REDUCER G.I. 1"-3/4"
PVC RED SOCKET 75-63
SADLE PIECE 32-1"
SADLE PIECE 40-1
SADLE PIECE 50
SADLE PIECE 50-1"
SADLE PIECE 63
SADLE PIECE 63-1"
SADLE PIECE 75-1"
TAP 0 3/4"
UNION 0 3/4"
UNION 1"
UNION 1 1/4"
UNION 1 1/2"
UNION 2 "
UNION 2 1/2"
NON RETURN VALVE 2"
GEBAJUNT
GLUE 1 kg
HERM (ROLL)
SAND PAPER (ml)

Article 22: Piping

22.1 Description

This item shall consist of the supply and lying of all pipes, including the installation of accessories like couplings, tees, reducers, etc. etc. to entirely complete this item as per these specifications and plans provided.

22.2 Care/Laying of Pipes

The soil in the bottom of the trench shall be lightly scarified before laying the pipes or other hydraulic elements. During transport, storage, and assembling of piping element care shall be taken to avoid soil and other contamination from entering the system.

Lying of pipes, assembling of pipes and all other works directly related to piping works, shall only be executed during dry weather conditions.

Pipe elements and connecting accessories shall be assembled in such a way that no tension can occur in the separate elements.

Only skilled plumbers shall be employed on any plumbing work.

Pipe joints, reducers, tees, etc shall be connected in conformity with the manufacturer's prescriptions

22.3 Method of Determining Quantity of G.I and PVC Piping Laid

The quantity of PVC and G.I piping laid shall be measured per linear meter of laid pipe. Measurements shall be made for each class of pipe and each diameter of pipe separately.

22.4 Pipeline Indicators

Concrete indicators shall be implanted along the pipeline at an interval of 50m so as to locate the passage of the one meter (1m) buried pipes.

CHAPTER VII: CONSTRUCTION METHODS

Article 23: Setting out of Works

The Contractor shall be responsible for the setting out of all pertinent lines, works, grades, reference points and levels that may be required for the proper and accurate positioning of all the structures on the work site. The works so set out shall be received by the Supervising Engineer before construction work actually begins

Article 24: Excavation of Trenches

Pipe trenches shall be excavated to a depth of at least 60cm and at most 100cm and width of 40cm. The bottom of each trench shall be free of any stones or other materials which could damage the pipes.

Article 25: Backfill





The Contractor shall be responsible for all backfill operations. However, such operations shall only be carried out after the dimensions of the trenches have been approved by the Supervising Engineer.

After the pipes have been laid in the trenches by qualified plumbers, and the successful hydraulic tests conducted, they shall be carefully covered with soil and rammed in, in soil layers of 20cm thick.

The backfilling of pipes crossing motor able roads shall be done in conformity with laid down norms. The compaction requirement for backfill shall be at least 90% of the dry modified optimum proctor density.

PIB 2025								
CONTRACTOR:.....				CROSS - SECTION OF BOREHOLE				
P.O. Box		Phone N°		Locality:		Borehole with manual pump.		
BORE HOLE CONSTRUCTION PROJECT				Date:		Region:		
DEPTH		DESIGN		to		Division:		
<i>Drilled:</i>		<i>Nature:</i>				<i>Council:</i>		
<i>Designed:</i>		<i>Øinternal:</i>						
<i>Hardrock:</i>		<i>Øexternal:</i>						
<i>Yield at the end of drilling:</i>		<i>Length of Casing:</i>		<i>GPS Coordinates of locality: x= y= z=</i>				
		<i>Length of screen:</i>		<i>Geophysics:</i>				
		<i>Slot opening:</i>		<i>Development: Yield: Duration:</i>				
<i>Quantity of gravel pack:</i>		<i>Type of joining:</i>		<i>Date of Provisional Reception:</i>		<i>Casing Length above the surface:</i>		
OBSERVATIONS:		<i>Direction of Fractures:</i>		<i>Nature of gravel pack:</i>		<i>Nature of casing:</i>		
				<i>Grain size:</i>		<i>Type of relief:</i>		
ø (mm)	Depth (m)	Technical C.S.	Water level & Yield	Drilling Speed (m/h)	Depth (m)	Geological C.S.	Geological description	Nature of Aquifer:

DRILLING: R=Rotary using: a=air, m=mud. F → Fracture measured AW*=Arrival of Water H: Percussion Rotary using the down-the-hole hammer. WL= Water level •()=Water yield							CONTROLLER:
BOREHOLE DESIGN: PVC: tc=Temporal casing, c = Casing, s= Screen with slot openings. p= Packer. al.=Alluvium. c*=Concrete							

CONTRACTOR: BP	PHONE N° COUNCIL/ PIB 2025	SITE SELECTION FORM
SITE SELECTION OF BOREHOLE □ : Hydro-geologic site and serial n° *: Geophysical site and serial n° •: Existent Borehole. ± = Existent Well. S → =Spring  = Trees (Forest)  = Stream or River  = Habitat  = Road			Village: Region: Division: Council: Code N°:

<p>HYDRO-GEOLOGIC SITE SELECTION :</p> <p>Resource persons met with:</p>	<p>Date :</p>
<p>GEOPHYSICAL SITE SELECTION :</p> <p>Resource persons met with:</p>	<p>Date :</p>

<p>.....COUNCIL/ PIB 2025</p>		<p>REPORT ON BOREHOLE CLEANING AND DEVELOPMENT</p>			
<p>CONTRACTOR:</p> <p>BP</p> <p>PHONE N°</p>		<p>LOCALITY:</p> <p>COUNCIL:</p> <p>DIVISION: REGION:</p>			
<p>Depth Drilled:.....m/surface</p>		<p>Designed Depth:m/surface</p>			
<p>1st Arrival of Water:.....m. Yield measured at the end of Drilling:.....m³/h</p>					
<p>Static Water level:m/surface</p>					
DATE	TIME	DURATION (in minutes)	MESURED WATER YIELD	WATER QUALITY	OBSERVATIONS
		0			
		5			
		10			
		15			

	30			
	45			
	60			
	90			
	120			
	150			
	180			
	210			
	240			
	270			
	300			
	330			
	360			
	390			
	420			
	450			
	480			
	510			
	540			
	570			
	600			
	630			
	660			
	690			
	720			

"SAND GRAIN TEST": Sediments at the bottom of the container have a $\phi \leq 1$ cm.
Sediments at the bottom of the container have a $\phi > 1$ cm.

NAME AND SIGNATURE OF THE OPERATOR:

NAME AND SIGNATURE OF THE CONTROLLER:

.....COUNCIL/ PIB 2025			REPORT ON AQUIFER (YIELD) TEST		
NORTH-WEST					
CONTRACTOR: BP PHONE N°			LOCALITY: COUNCIL: DIVISION: REGION:		
Date:.....			Depth of Pump installation:		
:.....m/surface					
Static Water level:m/surface			Measuring Reference point:		
TIME (in minutes)	DURATION (in minutes)	WATER YIELD (m³/h)	Dynamic Water Level (m)	Water Recharge (m)	OBSERVATIONS
1	1				
2	1				
3	1				

4	1				
5	1				
6	1				
7	1				
8	1				
9	1				
10	1				
11	1				
12	1				
13	1				
14	1				
15	1				
20	5				
25	5				
30	5				
35	5				
40	5				
45	5				
60	15				
75	15				
90	15				
105	15				
120	15				
135	15				
150	15				
165	15				
180	15				
195	15				
210	15				
225	15				
240	15				
255	15				
270	15				
285	15				
300	15				
315	15				
330	15				
345	15				
360	15				

CONTROLLER:

OPERATOR:

PART 06

SCHEDULE OF UNIT PRICES

UNIT PRICE SCHEDULE FOR THE CONSTRUCTION OF TWO BOREHOLES WITH SOLAR POWERED PUMPING SYSTEM IN UPPER-GRA MBENGWI

N°	DESCRIPTION OF WORKS	UNIT	UNIT PRICE IN FIGURES	UNIT PRICE IN LETTERS
100	PREPARATORY WORKS			
101	Site installation and preparation of documents	LS		
102	Site selection: Hydro-geologic, geophysical studies and implantation and presentation of a report	U		
103	Mobilization: Transportation of materials and equipment	IS		
104	Environmental impact notice lump sum	LS		
200	DRILLING WORKS AT AN AVERAGE DEPTH OF 120m			
201	Installation and withdrawal of drilling rig and other equipment	U		
202	Air Rotary Drilling of Ø 9"7/8 in unconsolidated loose formations	LM		
203	Installation and removal of temporal PVC or metallic casing of Ø 175-195mm	LM		
204	Air Rotary and Percussion Drilling with the down-the-hole hammer of Ø 6" 1/2 to 6" 3/4) in hard rock	LM		
300	DESIGN, CLEANING, DEVELOPMENT AND PUMPING TEST			
301	Supply and installation of PVC casing of Ø 112 – 125mm	LM		
302	Supply and installation of PVC screen of Ø 112 – 125mm with slot openings of Ø ≤2mm	LM		
303	Supply and putting in place of a gravel pack of a quartzeous nature and calibrated: (1-2mm) or (2-4mm)	LM		
304	Putting in place of the borehole cap	U		
305	Cleaning and development of the borehole by the air lift method	U		
306	Pumping and recharge test[Aquifer test] and reporting	U		
307	Sampling and physico-chemical analysis of water from the borehole	U		
308	Disinfection of the borehole	U		
400	SOLAR PUMP SYSTEM INSTALLATION			
401	Supply and installation of a AC/DC hybrid solar submersible pump with a minimum flow rate of 3.8m³/h and a maximum head of about 150m	U		
402	Supply and installation of 400Wp/24V monocristalline solar panel	U		
403	Supply and installation of pump cable with sectional area 4x2.5mm²	LM		
404	Supply and installation of panel to charge controller cable with sectional area 4mm²	LM		
405	Purchase and installation of a MPPT charge controller with automatic operation of 12V/24V/48V or equivalence with circuit breaker	U		
406	Supply and installation of metal framework for solar system stand	LS		
407	Supply and installation of earth switch, surge arrester, AC 30A/Legrand, electricial control box, enclosure, switches, floaters etc.	LS		
408	Supply and installation of automatic control system with all necessary accessories for the pumping system	LS		
500	PIPELINE INSTALLATION			
501	Supply and laying of HDPE100 Ø40mm NP10 to pump water from the borehole to the elevated storage tank	LM		

502	Supply and laying of HDPE100 Ø32mm NP10 from the tank to the standpipe	LM		
503	Supply and installation of plumbing accessories	LS		
600	CONSTRUCTION OF WATER STRUCTURES			
601	Construction of a 2.8x2.8x6m height vertical pillars (30x30cm) chained at 2.4m and 6m with cross beams (20x20cm), and the top slab of 20cm thick in reinforced concrete 350Kg at height 4m and an embedded galvanised steel ladder of 5m.	U		
602	Construction of a pump house at the ground floor of the tower with 15x20x40cm cement blocks. Rendering and Painting of the walls with Pantex oil paint.	LS		
603	Purchase and Installation of a 5m ³ Polyethylene vertical water storage tank and all assorted accessories	U		
604	Installation of a metallic door of 90x210cm with a padlock for the control room	LS		
605	Supply and Installation of two standtaps for public use on the external side of one wall of the control room with tiles and construction of a superstructure with a soak away pit	LS		
700	PROJECT SUSTAINABILITY			
701	Disinfection of the pipeline and the tank	LS		
702	Supply of a plumbing tool box with spare parts	U		
703	Training as from day 1 of the project execution of two maintenance technicians provided by the Mbengwi Council	SESSION		

COMPANY:

PART 07
DETAILED BILL OF QUANTITIES

BILL OF QUANTITIES FOR THE CONSTRUCTION OF TWO BOREHOLES WITH SOLAR POWERED PUMPING SYSTEM IN UPPER-GRA MBENGWI

N°	DESCRIPTION OF WORKS	UNIT	QTY	U.PRICE	AMOUNT
100	PREPARATORY WORKS				
101	Site installation and preparation of documents	LS	1		
102	Site selection: Hydro-geologic, geophysical studies and implantation and presentation of a report	U	1		
103	Mobilization: Transportation of materials and equipment	LS	1		
104	Environmental impact Notice	LS	1		
	SUB-TOTAL 100				
200	DRILLING WORKS AT AN AVERAGE DEPTH OF 120m				
201	Installation and withdrawal of drilling rig and other equipment	U	2		
202	Air Rotary Drilling of Ø 9"7/8 in unconsolidated loose formations	LM	50		
203	Installation and removal of temporal PVC or metallic casing of Ø 175-195mm	LM	50		
204	Air Rotary and Percussion Drilling with the down-the-hole hammer of Ø 6" 1/2 to 6" 3/4 in hard rock	LM	140		
	SUB-TOTAL 200				
300	DESIGN, CLEANING, DEVELOPMENT AND PUMPING TEST				
301	Supply and installation of PVC casing of Ø 112 – 125mm	LM	124		
302	Supply and installation of PVC screen of Ø 112 – 125mm with slot openings of Ø ≤2mm	LM	96		
303	Supply and putting in place of a gravel pack of a quartzeous nature and calibrated: (1-2mm) or (2-4mm)	LM	48		
304	Putting in place of the borehole cap	U	2		
305	Cleaning and development of the borehole by the air lift method	U	2		
306	Pumping and recharge test[Aquifer test] and reporting	U	2		
307	Sampling and physico-chemical analysis of water from the borehole	U	2		
308	Disinfection of the borehole	U	2		
	SUB-TOTAL 300				
400	SOLAR PUMP SYSTEM INSTALLATION				
401	Supply and installation of a AC/DC hybrid solar submersible pump with a minimum flow rate of 3.8m³/h and a maximum head of about 150m	U	2		
402	Supply and installation of 400Wp/24V monocrystalline solar panel	U	16		
403	Supply and installation of pump cable with sectional area 4x2.5mm²	LM	240		
404	Supply and installation of panel to charge controller cable with sectional area 4mm²	LM	60		
405	Purchase and installation of a MPPT charge controller with automatic operation of 12V/24V/48V or equivalence with circuit breaker	U	2		
406	Supply and installation of metal framework for solar system stand	LS	2		
407	Supply and installation of earth switch, surge arrester, AC 30A/Legrand, electrical control box, enclosure, switches, floaters etc.	LS	2		
408	Supply and installation of automatic control system with all necessary accessories for the pumping system	LS	2		

	SUB-TOTAL 400				
500	PIPELINE INSTALLATION				
501	Supply and laying of HDPE100 Ø40mm NP10 to pump water from the borehole to the elevated storage tank	LM	312		
502	Supply and laying of HDPE100 Ø32mm NP10 from the tank to the standpipe	LM	60		
503	Supply and installation of plumbing accessories	LS	1		
	SUB-TOTAL 500				
600	CONSTRUCTION OF WATER STRUCTURES				
601	Construction of a 2.8x2.8x6m height vertical pillars (30x30cm) chained at 2.4m and 6m with cross beams (20x20cm), and the top slab of 20cm thick in reinforced concrete 350Kg at height 4m and an embedded galvanised steel ladder of 5m.	U	2		
602	Construction of a pump house at the ground floor of the tower with 15x20x40cm cement blocks. Rendering and Painting of the walls with Pantex oil paint.	LS	1		
603	Purchase and Installation of a 5m ³ Polyethylene vertical water storage tank and all assorted accessories	U	1		
603	Installation of a metallic door of 90x210cm with a padlock for the control room	LS	1		
604	Supply and Installation of two standtaps for public use on the external side of one wall of the control room with tiles and construction of a superstructure with a soak away pit	LS	1		
	SUB-TOTAL 600				
700	PROJECT SUSTAINABILITY				
701	Disinfection of the pipeline and the tank	LS	1		
702	Supply of a plumbing tool box with spare parts	U	1		
703	Training as from day 1 of the project execution of two maintenance technicians provided by the Mbengwi Council	SESSION	1		
	SUB-TOTAL 700				
	TOTAL WITHOUT TAXES				
	VAT (19.25%)				
	AIR (5.5%)				
	TOTAL AMOUNT WITH TAXES				
	NET TO BE PAID				

The present bill is fixed at the sum all Taxes inclusive of _____