REPUBLIC OF CAMEROON

Peace - Work - Fatherland

MINISTERE DE LA DECENTRALISATION ET DEVELOPMENTAL LOCALE

> REGION DU NORD OUEST DEPARTEMENT DE LA MOMO COMMUNE DE MBENGWI B.P 02 MBENGWI

EMAIL: <a href="mbengwicouncil007@gmail.com">mbengwicouncil007@gmail.com</a>
WEBSITE: <a href="mbengwicouncil.site">www.mbengwicouncil.site</a>



REPUBLIQUE DU CAMEROUN

Saix – Travail – Satrie

MINISTRY OF DECENTRALISATION AND LOCAL DEVELOPMENT

MORTH WEST REGION
MOMO DIVISION
MBENGWI COUNCIL
P.O BOX 02 MBENGWI

EMAIL: <a href="mailto:mbengwicouncil007@gmail.com">mbengwicouncil007@gmail.com</a> WEBSITE: <a href="mailto:www.mbengwicouncil.site">www.mbengwicouncil.site</a>

## MBENGWI COUNCIL INTERNAL TENDERS' BOARD

OPEN NATIONAL INVITATION TO TENDER, EMERGENCY PROCEDURE N°05/ONIT/MC/ITB/2025 OF 12/03/2025
FOR THE EXTENSION OF THE MUNICIPAL MORTUARY, MBENGWI SUB DIVISION, MOMO DIVISION, NORTH-WEST REGION.

## PROJECT OWNER/ CONTRACTING AUTHORITY

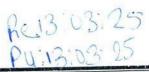
: THE MAYOR OF MBENGWI COUNCIL

FUNDING: MINSANTE PUBLIC INVESTMENT BUDGET Exercise 2025

### AUTHORIZATION No:

#### IMPUTATION:

Name of project	Amount of project	Amount of bid bond	Cost of tender file:
EXTENSION OF THE MUNICIPAL MORTUARY	50 000 000F CFA	1 000 000F CFA	60 000F CFA



## SUMMARY CONTENT OF THE TENDER FILE

PART N ° 01 TENDER NOTICE

PART N  $^{\circ}$  02 General regulations for the invitation to tender (GRCB)

PART N ° 03 SPECIAL REGULATIONS FOR THE INVITATION TO TENDER (OMPP)

PART N ° 04 SPECIAL ADMINISTRATIVE CLAUSES (CCAP)

PART N ° 05 SPECIAL TECHNICAL CONDITIONS (CCTP)

PART N ° 06 UNIT PRICE LIST

PART N ° 07 BILL OF QUANTITIES

PART N ° 08 MODEL OF UNIT PRICE BREAKDOWN

#### ANNEXES

PART N ° 09 TECHNICAL DRAWINGS (PLANS)

PART N ° 10 MODEL OF CONTRACT

PART N ° 11 MODEL OF UNDERTAKING BY BIDDER

PART N ° 12 MODEL TENDER LETTER

PART N ° 13 MODEL OF BID SECURITY

PART N ° 14 MODEL OF PERFORMANCE GUARANTEE

PART N° 15 MODEL OF BANK GUARANTEE FOR ADVANCE PAYMENT

PART N ° 16 MODEL OF RETENTION GUARANTEE

PART N ° 17 FORMATS OF REFERENCES OF THE BIDDER

PART N ° 18 PRINCIPAL EQUIPMENT OF THE CONTRACTOR

PART N ° 19 MODEL FORMS OF QUALIFICATIONS AND EXPERIENCE OF THE KEY PERSONNEL

PART N° 20 LIST OF BANKS OF FIRST ORDER APPROVED BY THE MINISTRY OF FINANCE

REPUBLIC OF CAMEROON

Feace - Work - Fatherland

MINISTERE DE LA DECENTRALISATION ET DEVELOPMENTAL LOCALE

> REGION DU NORD OUEST DEPARTEMENT DE LA MOMO COMMUNE DE MBENGWI B.P 02 MBENGWI

EMAIL: <a href="mbengwicouncil007@gmail.com">mbengwicouncil007@gmail.com</a>
WEBSITE: <a href="mbengwicouncil.site">www.mbengwicouncil.site</a>



REPUBLIQUE DU CAMEROUN

Paix – Travail – Patrie

MINISTRY OF DECENTRALISATION AND LOCAL DEVELOPMENT

NORTH WEST REGION MOMO DIVISION MBENGWI COUNCIL P.O BOX 02 MBENGWI

EMAIL: <a href="mbengwicouncil007@gmail.com">mbengwicouncil007@gmail.com</a> WEBSITE: <a href="www.mbengwicouncil.site">www.mbengwicouncil.site</a>

## MBENGWI COUNCIL INTERNAL TENDERS' BOARD

OPEN NATIONAL INVITATION TO TENDER, EMERGENCY PROCEDURE N°05/ONIT/MC/ITB/2025 OF 12/03/2025
FOR THE EXTENSION OF THE MUNICIPAL MORTUARY, , MBENGWI SUB DIVISION, MOMO DIVISION, NORTH-WEST REGION.

PROJECT OWNER: THE MAYOR OF MBENGWI COUNCIL/ CONTRACTING AUTHORITY

FUNDING: MINSANTE PUBLIC INVESTMENT BUDGET Exercise 2025

**AUTHORIZATION Nº:** 

IMPUTATION:

PART 01 TENDER NOTICE/AVIS D'APPEL D'OFFRES

#### REPUBLIC OF CAMEROON

Peace - Work - Fatherland

MINISTERE DE LA DECENTRALISATION ET DEVELOPMENTAL LOCALE

REGION DU NORD OUEST DEPARTEMENT DE LA MOMO COMMUNE DE MBENGWI B.P 02 MBENGWI

EMAIL: <u>mbengwicouncil007@gmail.com</u> WEBSITE: <u>www.mbengwicouncil.</u>site



REPUBLIQUE DU CAMEROUN

Paix – Travail – Patrie

MINISTRY OF DECENTRALISATION AND LOCAL DEVELOPMENT

NORTH WEST REGION
MOMO DIVISION
MBENGWI COUNCIL

P.O BOX 02 MBENGWI EMAIL: <a href="mailto:mbengwicouncil007@gmail.com">mbengwicouncil007@gmail.com</a> WEBSITE: <a href="mailto:www.mbengwicouncil.site">www.mbengwicouncil.site</a>

## MBENGWI COUNCIL INTERNAL TENDERS' BOARD

"Open National Invitation to Tender, Emergency Procedure
N°05/ONIT/MC/ITB/2025 OF 12/03/2025
FOR THE CONSTRUCTION OF 8 STALS IN MILE 18 MBENGWI, MOMO DIVISION,
NORTH-WEST REGION.

**FUNDING: PIB MINSANTE 2025** 

Name of project	Amount of project	Amount of bid bond	Cost of tender file :
EXTENSION OF THE MUNICIPAL MORTUARY	50 000 000F CFA	1 000 000F CFA	60 000F CFA

## 1. Subject of the invitation to tender

The Mayor of Mbengwi Council, the CONTRACTING AUTHORITY, on behalf of the Republic of Cameroon, hereby launches an open invitation to tender, emergency procedure FOR THE EXTENSION OF THE MUNICIPAL MORTUARY, Mbengwi Sub Division, MOMO Division, North-West Region.

It is a single lot.

## EXTENSION OF THE MUNICIPAL MORTUARY

#### 2. Work consistency

The works include the following:

Lot 100: SITE INSTALLATION

Lot 200: SITE PREPARATION

Lot 300: EARTH WORKS

Lot 400: FOUNDATION,

Lot 500: ELEVATION WORKS

Lot 600: ROOFING

Lot 700: METALIC WORKS

Lot 800: ELECTRICITY

Lot 900: PLUMBING

Lot 1000: PAINTING

Lot 1100: ENVIRONMENTAL MITIGATIONS

\*Construction of Borehole

3. Participation

Participation is open under the same conditions to all Cameroonian companies and business concerned that have proven experience in the field of building construction and civil engineering in general.

4. Financing

The works, subject of this invitation to tender, shall be financed by the Public Investments Budget MINSANTE 2025.

5. Consultation of the tender file

The tender file may be consulted at the Mbengwi council office of (SIGAMP) during working hours, as soon as this tender notice is published.

6 . Acquisition of the tender file

The tender file may be acquired from the Mbengwi council office(SIGAMP, ARMP, MINMAP) upon presentation of a non refundable treasury receipt of 60 000 (Sixty thousand) FCFA. Such a receipt shall identify the payer as representing the company that wants to participate in the tender.

7 .Presentation of the Bids

The tender file in three (03) volumes shall be enclosed in three sealed envelopes.

- > Envelope A containing the administrative documents (Volume 1);
- > Envelope B containing the technical offer (Volume 2);
- Envelope C containing the financial offer (Volume 3).

The three volumes shall then be enclosed in a single sealed envelope bearing only the reference of the tender in question. The different documents of each offer shall be numbered as indicated in the tender and separated by dividers of the same colour.

8 .Submission of the tender file

Each offer or bid drafted in English or French in seven (07) copies including the original and six (06) copies marked as such in accordance with the prescriptions of the tender file should be submitted against a receipt at the Mbengwi council office not later than 09/04/2025 at 10 a.m local time and should carry the inscription:

"Open National Invitation to Tender, Emergency Procedure" N° 05/ONIT/MC/ITB/2025 OF 12/03/2025 FOR THE EXTENSION OF THE MUNICIPAL MORTUARY, MBENGWI SUB DIVISION, MOMO DIVISION, NORTH-WEST REGION.

«To be opened only during the bid opening session »

The offers or the bids submitted after the stipulated deadline shall not be received.

### 9. Admissibility of bids

The bids not respecting the separation mode of the financial bid from the administrative and technical bids shall be rejected.

Any bid not in conformity with the prescription of this tender notice and tender file shall be declared inadmissible. Especially the absence of a bid bond of a first rate bank approved by the Ministry of Finance and valid for a period of thirty (30) days shall be rejected.

Least they are rejected, only the originals or certified true copies by the issuing service or administrative authorities of the administrative documents are accepted. They must obligatorily not be older than three (03) months and must be valid during the bid opening session.

## 10- Opening of bids

The opening of the bids in one phase shall be done on 09/04/2025 at 11a.m in the Conference Hall of the Mbengwi Council by the competent tender board.

Only bidders may attend or be duly represented by a person of their choice, who has full knowledge of the file and mandated in that capacity.

## 11-Submission of bids timeframe

Bidders have (21) days for the submission of their bids with effect of the date of publication of the tender notice.

#### 12. Execution deadline

The maximum execution deadline shall be four (04) calender months, including the rainy season and other vagaries, with effect from the date of notification of the administrative order of work

## 13. Provisional Guarantee (Bid bond)

Each bidder must include in his administrative documents a bid bond issued by a first rate bank approved by the Ministry in charge of Finance featuring in the annex of the tender file of the sum of 1,000 000 (One million francs) FCFA.

The provisional deposit shall be automatically released not later than 30 (thirty) days following the expiry of the validity of the bids for bidders who shall not be retained. In the case where the bidder is awarded the contract, the provisional deposit shall be released after the constitution of the final

#### 14. Evaluation of the bids

The evaluation of the bids shall be done in three (03) steps:

- > 1st step: Verification of the conformity of the administrative file;
- > 2<sup>nd</sup> step: Evaluation of the technical file;
- > 3<sup>rd</sup> step: Analysis of the financial file.

The criteria of evaluation are the following:

## 14.1-Eliminatory criteria

## 14.1.1- Administrative documents

- · Any offer not in conformity with the prescriptions of this tender file shall be declared inadmissible. Especially the lack of the provisional guarantee;
- Absence of a document in the administrative file;
- False declaration or falsified documents.

#### 14.1.2- Technical file

- Incomplete or non compliant documents;
- False declaration, forged or scanned documents;
- Non existence in the technical file of the rubric « organization, methodology and planning »
- Absence of the prefinancing capacity of at least sixteen million five hundred thousand (16 500
- Technical assessment mark lower than 75% of "Yes".

#### 14.1.3- Financial offer

- Incomplete financial offer;
- Non compliant documents;
- Omission of quantified unit price in the financial offer;
- Absence of break down price.

Modification of the model break down unit price attached.

#### Essential criteria:

The technical offer of the bidder shall be assessed along the following lines:

he te	chnical offer of the bidder shall be assessed along the following inics.  Designation	MARKS
01	General Presentation of the offer: Document spirally bound, colour sheets separation, table of content, presentation of documents in the order given in this	01
02	tender file, quality of document.  Quality of Requested staff: Qualifications, experience of personnel affected to the project, CV, NIC and attestation of availability signed and dated.	
03	Technical equipment/material affected to the project: The company should justify the property of the necessary material to the execution of works.	04
0.4	Reference of the enterprise:  2 Experience in road/public works in the past four years;	02
04	Presence of the methodology of work execution	06
06	Presence of the prefinancing capacity	01

The note of the technical offer will be gotten by addition of marks for every criteria. Only the technical offer having gotten an equal or superior note to 75% of YES will be kept for the financial evaluation.

1- Companies that have submitted attestation of categorisation shall benefit shall benefit exemptions inthier technical file related document, on turn over, references, office location and permanent staff

15. Award of the jobbing order

The jobbing order shall be awarded to the bidder whose bid is in conformity with the dispositions of the tender file and on the basis of the lowest bid and technical quality. (See article 99 of the public contracts code).

## 16. Period of validity of bids

The bidders shall remain committed to their bids during a period of (one hundred twenty) 120 days from the deadline set for the submission of bids.

## 17. Complementary information

Complementary technical information may be obtained every day during working hours from the Divisional Delegation for Public Works in Momo

MBENGWI, the 12/03/2025

The Mayor Mbengwi Council/Delegated Contracting Authoruty

Copies:

- ARMP (for publication and archives)
- Chairperson of TB (for information);
- REP MINMAP TB
- Notice boards (for information).

REPUBLIC OF CAMEROON Peace - Work - Fatherland

MINISTERE DE LA DECENTRALISATION ET DEVELOPMENTAL LOCALE

REGION DU NORD OUEST DEPARTEMENT DE LA MOMO COMMUNE DE MBENGWI B.P 02 MBENGWI

EMAIL: mbengwicouncil007@gmail.com WEBSITE: www.mbengwicouncil.site



REPUBLIQUE DU CAMEROUN Paix — Travail — Patrie

> MINISTRY OF DECENTRALISATION AND LOCAL DEVELOPMENT

> > NORTH WEST REGION MOMO DIVISION MBENGWI COUNCIL P.O BOX 02 MBENGWI

EMAIL: mbengwicouncil007@gmail.com WEBSITE: www.mbengwicouncil.site

Avis d'Appel d'Offres National Ouvert, en procedure d'urgence N° 05/AONO/ MC/ITB/2025 du 12/03/2025 POUR LES TRAVAUX DE EXTENSION DE MORQUE MUNICIPAL, Département du MOMO, Région du Nord-Ouest.

## FINANCEMENT: BIP MINTP 20201

Nom du Projet	Montant du Projet	Montant caution provisoire	Montant d'achat du DAO :
EXTENSION DE MORQUE MUNICIPAL	50 000 000F CFA	1 000 000F CFA	60 000F CFA

## 1.- Objet de l'Appel d'Offres

Le Maire de la commune de Mbengwi, Autorité Contractante, lance pour le compte de la republique du cameroun, un appel d'offres national ouvert en procedure d'urgence pour les travaux de EXTENSION DE MORQUE MUNICIPAL, dan le Département de la Momo.

## TRAVAUX DE EXTENSION DE MORQUE MUNICIPAL

dans l'arrondissement de MBENGWI.

## 2.- Consistance des travaux

Les prestations comprennent les opérations suivantes :

- Travaux preparatoires et etudes ;
- Terrassement;
- Fondations:
- Rez-de-chaussée
- Drainage du pont Electricite
- Peinture
- Attenuations Environnementales

#### 3.- Participation

La participation est ouverte à l'égalité de conditions à toutes les sociétés et entreprises de droits camerounais ayant une expérience avérée dans le domaine des bâtiments et du génie civil en général.

#### 4.- Financememt

Les travaux, objet du présent Appel d'Offres, sont financés par BUDGET D'INVESTISSEMENT PUBLIC MINSANTE, Exercice 2025.

## 5.- Consultation du dossier d'Appel d'Offres

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

## 6.- Acquisition du dossier d'Appel d'Offres

Le dossier d'appel d'offres peut être obtenu aux heures ouvrables auprès de la Commune de Mbengwi, SIGAMP, ARMP, MNIMAP sur présentation d'une quittance de versement d'une somme non remboursable de 60 000 (Soixante mille) francs CFA au Trésor de la commune. Cette quittance devra identifier le payeur comme représentant l'entreprise désireuse de participer à l'Appel d'Offres.

#### 7.- Présentation des offres

Les documents constituant chaque offre sont repartis en trois(03) volumes ci-après contenus dans une enveloppe fermée et scellée dont :

- L'enveloppe A contenant les pièces administratives (volume 1),
- L'enveloppe B contenant l'offre technique (volume 2),
- L'enveloppe C contenant l'offre financière (volume 3).

Les offres ainsi présentées seront placées sous simple enveloppe, fermée et scellée portant uniquement la mention de l'Appel d'Offres en cause. Les différentes pièces de chaque offre seront numérotées dans l'ordre du DAO et séparées par des intercalaires de même couleur.

#### 8.- 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, conformes aux prescriptions du Dossier d'Appel d'Offre, devra être déposée contre un récépissé sous plis fermé, dans les services de la Commune de Mbengwi, au plus tard le 09/04/2025 à 10 heures, heure locale et devront porter la mention:

Appel d'Offres National Ouvert en procedure d'urgence N°05/AONO/MC/ITB/2025 du 12/03/2025 POUR LES TRAVAUX DE EXTENSION DE MORQUE MUNICIPAL, dans le Département du MOMO, Région du Nord-Ouest. « A n'ouvrir qu'en séance de dépouillement. »

Les offres parvenues après les dates et heure limites de dépôt des offres ne seront pas reçues.

#### 9.- Recevabilité des offres

Les offres ne respectant pas le mode de séparation de l'offre financière, des offres administratives et techniques seront irrecevables.

Toute offre non conforme aux prescriptions du présent avis et 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, valable pendant 30 jours au-delà du délai de validité des offres.

Sous peine de rejet, les autres pièces administratives requises devront être impérativement produites en originaux ou en copies certifiées conformes par le service émetteur ou une autorité administrative, datant de moins de trois (03) mois et valide le jour de l'ouverture des plis.

#### 10.- Ouverture des offres

L'ouverture des offres aura lieu en un temps le 09/04/2025 à 11 heures précises dans la salle des Conferences de la Commune, par la Commission de Passation des marchés Compétente en présence des soumissionnaires.

Seuls les soumissionnaires peuvent assister à cette séance d'ouverture ou s'y faire représenter par une personne de leur choix ayant une parfaite connaissance du dossier et mandater à cet effet.

## 11.- Délai de réponse des soumissionnaires

Pour cet Appel d'Offres, le délai de réponse est fixé à vingt (20) jours calendaires aux entreprises désireuses d'y participer à compter de la date de publication de l'Avis d'Appel d'Offres.

#### 12.- Délai d'exécution des travaux

Le délai global d'exécution des travaux est de quatre (04) mois calendaires. Ce délai comprend les périodes des pluies, toutes les intempéries et sujetions diverses et court à compter de la date de notification de l'ordre de service de commencer les travaux.

## 13.- Cautionnement Provisoire (Garantie de soumission)

Chaque soumissionnaire doit joindre à ses pièces administratives, une caution de soumission établie, selon le modèle indiqué dans le dossier d'Appel d'Offres, par une banque de premier ordre agrée par le Ministère des Finances et dont la liste figure en annexe d'un montant égal à 1 000 000 FCFA (un million) francs CFA.

Le cautionnement provisoire sera libéré d'office au plus tard (30) jours après l'expiration de la validité des offres pour les soumissionnaires n'ayant pas été retenus. Dans le cas où le soumissionnaire est attributaire de la lettre commande, le cautionnement provisoire sera libéré après constitution du cautionnement définitif.

### 14.- Evaluation des Offres

L'évaluation des offres se fera en trois(03) étapes :

- > 1ère étape : Vérification de la conformité du dossier administratif de chaque soumissionnaire ;
- > 2<sup>ème</sup> étape : Evaluation des offres techniques ;
- > 3<sup>ème</sup> étape : Analyse des offres financières.

Les critères d'évaluation des offres sont les suivants :

#### 14.1-Critères éliminatoires

#### 14.1.1-Pièces administratives

- Toute offre non conforme aux prescriptions du Dossier d'Appel d'Offres sera déclarée irrecevable. Notamment l'absence ou l'insuffisance de la caution provisoire de soumission.
- Absence d'une pièce administrative ;
- Fausse déclaration ou documents falsifiés.

#### 14.1.2-Offres techniques

- Dossier incomplet ou pièces non conformes;
- Fausse déclaration ou documents falsifiées ou scannés ;
- Non existence dans l'offre technique de la rubrique « organisation, méthodologie et planning »;
- Absence d'une capacité de préfinancement d'au moins seize millions cinq cent mille (16,500 000) francs CFA.
- De façon systématique, toute offre n'ayant pas atteint ou dépassé après évaluation technique, la barre de 75 % du OUI sera écartée et non éligible à l'analyse financière:

#### 14.1.3-Offres financières

- Offre financière incomplète;
- Pièces non conformes ;
- Omission dans l'offre financière d'un prix unitaire quantifié;
- Absence d'un sous-détail de prix;
- Modification du model du sous-détail de prix unitaire.

#### Critères essentiels

L'offre technique du soumissionnaire sera évaluée sur les éléments suivants :

N°	Désignation	Nombre de point
1	Présentation générale de l'offre : Reliure, Intercalaire de couleur et page de garde, Présentation de toutes les pièces dans l'ordre prescrit, Qualité du document.	01
2	Qualité du personnel : Qualifications, expérience du personnel affecte	04
3	Moyens techniques et matériels affectés au projet : L'entreprise devra justifier la propriété du matériel nécessaire à l'exécution des travaux.	04
4	Références de l'entreprise:  Chiffes d'affaire des deux dernières années;  Chiffes d'affaire des travaux routire/public	02
5	La présence de la Méthodologie d'exécution des travaux	06
06	La présence de la Capacité de préfinancement	01

La note de l'offre technique sera obtenue par addition des points pour chaque critère. Seule l'offre technique ayant obtenue une note égale ou supérieure à 75% du OUI sera à l'évaluation financière.

1- - Companies that have submitted attestation of categorisation shall benefit shall benefit exemptions inthier technical file related document, on turn over, references, office location and permanent staff

## 15.- Attribution de la lettre commande

La lettre commande sera attribuée au soumissionnaire dont l'offre est conforme pour l'essentiel aux dispositions du Dossier d'Appel d'Offres, et qui a présenté l'offre évaluée la moins-disante et techniquement qualifiée, conformément à l'article 99 du Code des Marches Publics.

## 16.- Délai de validité des offres

Les soumissionnaires restent engagées par leurs offres pendant une période de cent vingt (120) jours, à compter de la date limite fixée pour la remise des offres.

## 17.- Renseignements complémentaires

Les renseignements complémentaires d'ordre technique peuvent être obtenus tous les jours aux heures ouvrables auprès de la Commune de Mbengwi.

MBENGWI, le 12/03/2025

Ampliations:

- ARMP (pour publication et archivage);
- Président CPM (pour information);
- REP MINMAP TB
- Affichage.



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

## Table of contents

## A. Generalities

A. Generatities
Article 1: Scope of the tender
Article 2: Funding Article 3: Fraud and corruption
Article 4: Qualification of bidders
Article 5: Site visit
Afficie o. Building materials,
B. Tender File
Article 7: Content of Tender File
a state of the tender tile
Article 8: Clarification made to the tender file
C. Preparation of Bids
Article 10: Costs of submission
and the settlement
77 1' 1' C1' do
Article 16: Guarantee of submission
Attlete 17.1 om see 2
D. Submission of bids
line of hide
Article 19: Date and time limits to deposit olds
Article 20: Bids out of time
Article 21: Modification, substitution and
E. Opening and evaluation of bids
Article 22: Opening of bids
Article 23: Confidential nature of the procedure with the DELEGATED CONTRACTING
The second of th
AUTHORITY Article 25: Determining the conformity of bids
Article 26: Correction of errors
Article 26: Correction of errors
Article 27: Evaluation and comparison of the inflation of the
F. Attribution of JO
Article 28: Award
Article 28: Award
invitation to tender unfruitful (unsuccessful) or cancel a procedure
C.1l of the contract
file Contract
Article 33: Guarantees  GENERAL RUGULATION FOR THE INVITATION TO TENDER
GENERAL RUGULATION FOR THE MARKET

### A.-GENERALITIES

### Article 1: Scope of the bid

- The Mayor of Mbengwi Council hereinafter referred to as the CONTRACTING AUTHORITY, launches an open national invitation to tender in emergency procedure for the execution of the work described in the special clauses of this call for tenders (RFP). It is referred as "the FOR THE EXTENSION OF THE MUNICIPAL MORTUARY, 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.
- In this present invitation to tender (LPO), the term "day" refer to a calendar day.

#### Article 2: Funding

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

## Article 3: Fraud and corruption

- 3.1. The DELEGATED 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 DELEGATED 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 damage to persons or their property or threats against them to influence their action in the attribution or the execution of a
  - 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 band 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

## 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 prequalification) requested from bidders, in the OMPP, to establish their qualification to run the

The following information is required if applicable:

- i. The production of certified balance sheets and a recent turnover figures.
- 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 DELEGATED CONTRACTING AUTHORITY for the execution
- d. In case of co-contracting, co-contractors share the amounts that are paid by the DELEGATED CONTRACTING AUTHORITY in a single account; however, each company is paid by the DELEGATED 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:

- The invitation to tender written in French and English (AAO); 1)
- General Regulation of the invitation to tender (RGAO); 2)
- Special Regulation of the invitation tender (SRIT); 3)
- Specification of the Special administrative Clauses (CCAP); 4)
- Specifications of the special Technical Clauses (CCTP); 5)
- 6) Unit price schedule:
- Bill of Estimates and Quantities; 7)
- Format of Sub-Detail of unit prices; 8)
- Drawings and other elements of the technical file; 9)
- Model engagement letter by bidder; 10)
- 11) Model bid submission letter;
- 12) Model bid bond:
- Model performance guarantee; 13)
- 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 DELEGATED CONTRACTING AUTHORITY in writing at the address of the DELEGATED CONTRACTING AUTHORITY indicated in the tender notice. The DELEGATED 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 DELEGATED CONTRACTING AUTHORITY with copies transmitted to the Chairperson of the Tendesr Board and to the organ in charge of the Public

It must reach the DELEGATED CONTRACTING AUTHORITY not later than fourteen (14) days before the date of opening of the bids.

8.4. The DELEGATED 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 DELEGATED 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 DELEGATED 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 DELEGATED 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 DELEGATED 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 with 3 pictures;

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 One Twenty (120) days. Any offer with validity less than this period will be rejected by the CONTRACTING AUTHORITY.
- 15.2. In exceptional circumstances, the DELEGATED 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 no-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.

#### 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 DELEGATED 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 DELEGATED 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 DELEGATED 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 SIGAMP OFFICE at the specific date and time indicated in the Special Regulation for the Invitation to Tender.
- 19.2. The DELEGATED CONTRACTING AUTHORITY may at his discretion, after consulting with stakeholders concerned mayextend 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 DELEGATED 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 DELEGATED 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 DELEGATED 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 DELEGATED CONTRACTING AUTHORITY for reasons related to his bid, he must do so in writing.

Article 24: Clarification on the bids and contact with the CONTRACTING AUTHORITY

- 24.1. To facilitate the examination and comparison of bids, the Chairman of the 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 allow 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 CONTRACT

#### Article 28: Award

The DELEGATED 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 DELEGATED CONTRACTING AUTHORITY to declare an invitation to tender unfruitful (unsuccessful) or cancel a procedure

The DELEGATED 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 an 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 JO

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 that the DELEGATED 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 DELEGATED 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 DELEGATED 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 DELEGATED 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 JO

The award of a contract shall be materialised by a decision of the DELEGATED CONTRACTING AUTHORITY and notified to the successful bidder.

#### Article 33: Guarantees

- 33.1. The final bond must be constituted within twenty (20) days following the notification of the contract by the DELEGATED 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 (5%) 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 DELEGATED 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)

	Introduction		
1.	Definition of the works:  The present jobbing order concerns The EXTENSION OF THE MUNICIPAL MORTUARY, Momo Division, North-West Region.		
	The description of the detailed work consistency is found in the special technical clauses which form an integral part of this jobbing order.  Name and Adress of the DELEGATED CONTRACTING AUTHORITY: The Mayor Mbengwi Council Reference of the invitation to tender: N° 05/ONIT/MC/ITB/2025 OF 12/03/2025		
2	<b>Execution time-frame:</b> The maximum period of execution of works, which shall commence as from the date of notification to the Contractor of the administrative service order to start work shall be FOUR (04) months.		
3.	Funding: Works concerned being subject of this invitation to tender, will be funded by the Public Investment Budget MINSANTE, Exercise 2025.		
4.	List of prequalified candidates: Not necessary		
5.	Preference is given here to local materials, supplies and equipment i.e. made in Cameroon pending		
6.	The principal qualification of bidders are the following		
	Eliminatory criteria		
	Administrative documents		
	<ul> <li>Incomplete or non compliant documents;</li> <li>Absence of a document in the administrative file;</li> <li>False declaration forged or falsified documents.</li> </ul>		
6.1	Technical file		
0.1	<ul> <li>Incomplete or non compliant documents;</li> <li>False declaration, forged or scanned documents;</li> <li>Non existence in the technical file of the rubric "organization, methodology and planning;</li> <li>Absence of the prefinancing capacity of at least sixteen million, five hundred thousan (16,500,000) FCFA.</li> <li>Technical assessment mark lower than 75% of "Yes".</li> </ul>		
	Financial offer		
	<ul> <li>Incomplete financial offer;</li> <li>Non compliant documents;</li> <li>Omission of quantified unit price in the financial offer;</li> <li>Absence of a break down unit price.</li> <li>Modification of the model break down unit price.</li> </ul>		

	Essential criteria:		
	The technical offer of the bidder shall be assessed along the following lines		
	a. General presentation	01	
	b. Quality of Requested staff	05	
6.2	c. Technical and material affected to the project	03	
	d. Reference of the enterprise	02	
	e. Presence of the methodology of work execution	04	
	f. Presence of the prefinancial capacity	01	

- 7. Site visit and preparatory meetings: 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 offer 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.
- 8. Bid language: English or French
- 9. The bidder's bid will include documents detailed in the OMPP, duly completed and grouped in three volumes:

## (A) file of Administrative documents (in envelope A)

It shall consist of the following documents stapled or place in the following order of enumeration.

- 1. Undertaking by bidder stamped, signed and dated in conformity with the model attached
- 2. Attestation of non-bankruptcy dating less than 3 months, issued by the Court of competent jurisdiction of the place of residence of the bidder.
- Attestation of domiciliation of Bank account of the bidder issued by a bank or any other firstorder credit institution approved by the Ministry in charge of finance.
- 4. Bank guarantee (of the same bank) on the list of banking institutions of the first order approved by the Ministry in charge of finance, for an amount in francs CFA of 1 000 000 FCFA.
- 5. Treasury Receipt of purchase of the Tender File, as stipulated in the tender notice.
- 6 Attestation of C.N.P.S, valid and for the tender concerned.
- 7.A non-exclusion certificate attesting that the bidder is not the subject of a temporary or permanent exclusion from public contracts, dated at most 3 months and issued by ARMP
- 8. An attestation of the bidder's fiscal obligations signed by the competent Taxation authority dated
- 9 An attestation of fiscal conformity valid.
- 10 A copy of taxpayer card valid, dated at most 3 months.
- 11 Plan and attestation of localization signed by the contractor.
- 12 CCAP completed and initialed on all the pages.

In case of grouping each Member must submit complete administrative documents, the documents 3, 4, and 5) below can only be presented by the representative of the group.

## (B) Technical file (in the B envelope)

1. List of key site personnel

Bidders must undertake to have employed or to employ, before the start of works, competent technical staff, (attach to each staff a CV dated and signed by the candidate, a certified copy of the technical diploma,

attestation of presentation of original and an attestation of availability dated and signed by the candidate, certified true copy of NIC) notably.

- i. A works director who should be a Civil, Hydraulics or a Rural works Engineer with at least 2 years' experience in the domain of civil construction and similar works.
- ii. A foreman (or several if necessary) with at least the level of higher civil engineering technician Bacc F4+2 (A/L+2 in civil engineering) with at least 3 years' experience in the domain of civil construction and similar works.
- iii. And team leaders
- A-Building, GCE A/L Technical in Building construction or its equivalent (Bacc F4) with at least 3 years' experience in the domain of civil construction and similar works.
- B-Wood works, GCE O/L Technical in wood works or its equivalent (CAP Menuserie) with at least 3 years' experience in the domain of civil construction and similar works.
- C- Electricity works, GCE O/L Technical in electricity works or its equivalent ( CAP electricité) with at least 3 years' experience in the domain of electricity and similar works.
- 2. List of performant equipment

List of performance equipment the bidder intends to use on site using the form presented in the Tender File. The contractor shall justify the ownership or hiring and the State of the equipment necessary for the performance of the work.

- I. Legalized Registration document (pickup truck or van and truck, manual compactor, vibrator and concrete mixer etc.).
- II. Invoices dated for safety equipment (major equipment) and a list of small construction equipment or assorted tools signed by the head of the company.

#### 3. References

Experience of the company, in similar works in the last four (05) years (2019-2024). The bidder must justify its professional experience by presenting certified true copies of jobbing orders (front and last pages) and minutes of provisional acceptance or final reception and related contracts, and jobbing orders).

Technical notes on the methodology and the execution of works with photographs of site.

The bidder will produce a technical note dated and signed on the last page providing all the following informations:

- i. The mode of execution of the works,
- ii The planning of intervention, the expected output
- iii. Supply of materials/ site equipment,
- iv. Measures of safety and protection of the environment;
- v. Administrative and technical organization of the enterprise.
- vi. Measures of maintenance during the guarantee period.
- 5. Self-financing capacity

Self-financing capacity:

An attestation of credibility issued by the same Bank that issued the bid bond.

6. CCTP duly initialed on each page, signed by the enterprise and dated on the last page.

#### (c) Financial documents (in envelope-C)

It shall contain:

1. The bid letter (tender form) itself, according to the model attached, stamped at the rate in force,

signed and dated.

- The unit price schedule duly completed, with an indication of the unit price excluding VAT in words and in figures.
- 3. Detail quantities and cost estimated of work completed.
- 4. The sub-details of prices according to the model attached.

N.B.The different documents should be separated by coloured separators in the original as well as in the copies to facilitate their examination.

	Bid currency and settlement
•	The value of the contract shall be in national currency (FCFA). The amount of the bid, the unprices, the Bill of quantities and sub detailed of unit prices shall be entirely in CFA FRANCS in the following manner:
	2. Prices will be entirely settled in CFA FRANCS. Any bidder, who wants to engage expenditures other currencies for the execution of the work, will indicate in an annex to his submission, the percentage of the amount of the offer required to cover the needs in foreign currencies, without exceeding a maximum of three currencies of Member countries of the institution financing the contract.
	The exchange rates used by the bidder to convert its offer in national currency will be the rate of the day of the deposition of the bids. This exchange rate will be applied for any payment in respect of the contract, so that no foreign exchange rate risk is supported by the successful bidder.
	The contract prices are firm and non-revisable.
	Preparation and submission of bids
1.	The bidders shall remain committed to their bids during a period of (one hundred and twenty) 120 days from the deadline set for the submission.
2.	Provisional Guarantee (Bid bond): 1 000 000 (one million) FCFA.
3.	The bids are for the execution period of 04 months. The evaluation method is specified below and in the General Administrative clauses.
	Each offer or bid drafted in English or French in seven (07) copies including the original and six (06) copies marked as such in accordance with the prescriptions of the tender file should be submitted against a treasury receipt at the Mbengwi Council Office not later than
1	o poining session »

#### Opening of the bids

The opening of the bids will be in one (1) stage. The opening of Administrative, technical and financial documents shall take place on the ......................... in the COUNCIL hall by the competent tenders' board.

Only bidders or their duly mandated representatives with a perfect knowledge of their offer shall attend this opening session.

Representatives of bidders will have to sign a form stating their presence at the opening of tenders.

#### Clarification on the bids

To better understand the bids, the Internal tender's board has flexibility to seek for clarification from the bidders. The request for clarification and the response will be done in writing. No change of the offer price will be requested, proposed or authorized.

#### Examination of bids

The tenders' board shall examine the bids to determine if they are complete, if the required guarantees have been provided, if the documents were produced following the Tender File requirements, whether they contain calculation errors and if the bids are generally in good order. Any calculation errors will be corrected on the following bases:

- If there is a calculation error, the total price will be corrected on the basis of the unit price.
- If there is a contradiction between the price in words and the price in figures, the price in word will govern.
- 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.

## Evaluation and comparison of bids

The technical subcommittee shall evaluate and compare the bids which were previously found substantially responsive to the conditions of the present invitation to tender. This evaluation will exclude and will not take into consideration any price variation clauses included in the submission.

The evaluation of the bids shall be done in three (03) steps:

- > 1st step: Verification of the conformity of the administrative file;
- > 2<sup>nd</sup> step: Evaluation of the technical file;
- > 3<sup>rd</sup> step: Evaluation of the financial file.

## Verification of the conformity of the administrative file;

## Administrative documents

Eliminatory criteria will focus on the following aspects:

- Any offer not in conformity with the prescriptions of this tender file shall be declared inadmissible. Especially the lack of the provisional guarantee;
- Absence of a document in the administrative file;
- False declaration or falsified documents.

#### Technical evaluation

Eliminatory criteria will focus on the following aspects:

- Incomplete or non compliant technical documents;
- False declaration; forged or scanned documents;
- Non existence in the technical file of the rubric "organization, methodology and planning;
- · Absence of the prefinancing capacity of at least sixteen million five hundred thousand,
- Technical assessment mark lower than 75% of "Yes

#### Essential criteria

The non-validation of all the following criteria shall result in a systematic rejection of the offer, that is:

## a) The company's references:

Experience of the company, in similar works in the last four (05) years (2019-2024). The bidder must justify its professional experience by presenting certified true copies of jobbing orders (front and last pages) and minutes of provisional acceptance or final reception and related contracts, and jobbing orders).

## (b) Essential equipment

Essential equipment that the contractor should make available for the contract (registration documents, purchase receipt) shall be the following: 4 x 4 pickup vehicle or van for the transportation of personnel and other materials, concrete mixer, manual compactor and a Vibrator.

## C. The qualification of site personnel:

A Works Director having the qualification and experience of at least three years in similar works and volume and occupying the same position to be assigned for (attached certified copy of certificate of at least a civil, Hydraulics or a Rural Works Engineer or its equivalents, CV, presentation of original and attestation of availability signed by candidate.

A site Foreman with the qualification and experience of at least three (3) years in similar works and volume and occupying the same position (attached a certified copy of certificate at least a Civil /hydraulic or Rural Engineering technicians or equivalents in Civil/hydraulic or Rural Engineering, CV, presentation of original and attestation of availability sign by candidate).Bacc F4 or Advanced Level in civil engineering can also be considered.

And team leaders.

## (d) The methodology of intervention and execution of work:

The company will produce a technical note dated and signed on the last page providing information about:

- i. The mode of execution of the works.
- ii. The planning of intervention, the expected output.
- iii. The supply of materials or site equipment.
- iv. Measures of safety and protection of the environment.
- v. Administrative and technical organization of the enterprise.
- vi. Measures of maintenance during the guarantee period

Only bids considered being substantial responsive after the technical evaluation shall be accepted for financial evaluation.

#### Financial evaluation

The financial evaluation shall be based on the corrected amount of the bid. It shall consist of the analysis of the coherence of prices as well as the amounts of the totals.

Only bids accepted, in conformity according to the provisions of section 25 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 26 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.

#### Award of contract

Subject to the clause of article 6 of the present OMPP, the DELEGATED CONTRACTING AUTHORITY will award the contract to the bidder whose bid has been recognized substantially responsive to the requirement of the Tender File and has submitted the lowest feasible evaluated bid price.

A 10% retention guarantee of the amount of the contract all taxes inclusive will be retained. This retention guarantee may be replaced by a bank caution equal to the amount issued by a first rate bank approved by the Ministry in charge of Finance featuring in the annex.

**Site Visit:** A site visit with 3 pictures is recommended to participating companies in this Tender File

**Performance guarantee:** Within fifteen (15) days from the date of notification of the contract, the contractor must provide a guarantee of three percent (2%) of the amount of the JO (all taxes inclusive), to ensure full implementation

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

## CHAPTER I: GENERALITIES

#### ARTICLE:

- 1- SUBJECT OF THE JOBBING ORDER
- 2- PROCEDURE OF THE AWARD OF THE JOBBING ORDER
- 3- DEFINITIONS AND ATTRIBUTIONS
- 4- LANGUAGE, LAW, AND REGULATION
- 5- CONSTITUENT PARTS OF THE JOBBING ORDER
- 6- GENERAL APPLICABLE TEXTS
- 7- COMMUNICATION
- 8- SERVICE ORDER
- 9- CONTRACTOR'S EQUIPMENT AND PERSONNEL.

## CHAPTER II: FINANCIAL PROVISIONS

#### ARTICLE:

- 10- GUARANTEES
- 11- THE AMOUNT OF THE CONTRACT
- 12- PAYMENT MODALITIES
- 13- MODE OF PAYMENT
- 14- PRICE VARIATION
- 15- PRICE REVISION
- 16- WORK USING LOCAL DIRECT LABOUR
- 17- VALORISATION OF WORKS EXECUTED
- 18- VALORISATION OF SUPPLIES
- 19- ADVANCES
- 20- PAYMENT OF WORKS EXECUTED
- 21- INTERESTS ON OVERDUE PAYMENTS
- 22- PENALTIES
- 23- FINAL DETAILED ACOUNT
- 24- FINAL DETAILED GENERAL PAYMENT
- 25- TAX AND CUSTOMS REGULATIONS
- 26- STAMP DUTY AND REGISTRATION

## CHAPTER III: EXECUTION OF WORKS

#### ARTICLE:

- 27- WORK CONSISTENCY
- 28- OBLIGATIONS OF THE PROJECT OWNER
- 29 EXECUTION TIME FRAME
- 30 ROLES AND RESPONSIBILITIES OF THE CONTRACTOR
- 31- PROVISION OF DOCUMENTS AND SITE
- 32- INSURANCE OF STRUCTURES AND CIVIL LIABILITY
- 33- DOCUMENTS TO BE SUBMITTED BY THE CONTRACTOR
- 34- ORGANISATION AND SECURITY OF THE CONSTRUCTION SITES

CHAPTER IV: ACCEPTANCE OF WORKS

- 35- PROVISIONAL ACCEPTANCE
- DOCUMENTS TO BE SUBMITTED AFTER EXECUTION 36-
- 37- GUARANTEE PERIOD
- 38- FINAL ACCEPTANCE

## CHAPTER V: MISCELLANEOUS PROVISIONS

#### ARTICLE:

- 39-TERMINATION OF THE CONTRACT
- 40-CASE OF FORCE MAJEURE
- 41-DISAGREEMENTS AND DISPUTES
- 42- EDITING AND MULTIPLICATION OF THIS PRESENT CONTRACT
- 45- AND LAST ENTRY INTO FORCE OF THE JOBBING ORDER

#### **CHAPTER I: GENERALITIES**

ARTICLE 1: Subject of the Jobbing order

The jobbing order has as subject the EXTENSION OF THE MUNICIPAL MORTUARY, 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 in emergency procedure, following procedures laid down for the award of public contracts in Cameroon.

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

#### 1- General definitions

- The DELEGATED CONTRACTING AUTHORITY is **the Mayor of Mbengwi Council.** 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 Manager is the DMO Mbengwi, 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 Delegates of Public Works/ MINEE Momo and are responsible for the follow-up of the execution of the contract.
- The project manager is **the CDO Mbengwi Council** and is responsible to ensure the defense the interest at the definition, preparation, execution and acceptance stages of the services forming the subject of the jobbing order
- The beneficiary is the community.

#### 2- Security

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

- The authority in charge of ordering payment shall be the the Mayor of Mbengwi Council
- The body or official in charge of payment shall be the Municipal Treasurer For Mbengwi council;
- The authority in charge of the clearance of expenditures shall be the Divisional Controller of financial –Momo;
- The official competent to furnish information within the context of execution of this jobbing order shall be the Project owner, and 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
- The special General administrative Clauses (CCLS);
- The law N ° 96/12 of 05 August 1996 on the management of environment;
- The texts governing the trade;
- Decree No. 2008/377 of 12/11/2008 fixing the attributions of Heads of Administrative Units, its organization and the functioning of their services;
- The Decree N ° 2018/366 of 20 June 2018 to institute the Public Contracts Code;
- Decree n ° 2001/048 of 23 February 2001 relating to the setting up, Organization and functioning of the Public Contracts Regulation Agency ARMP.
- Decree n ° 2003/65/PM of 16 April 2003 to lay down the procedure for implementing the tax and customs system applicable to public contracts;
- Order N°093/CAB/PM of 5 November 2002 to fix the amount of the bid bond and the purchase fees for tender files;
- Order N°22/CAB/PM of 02 February 2011 to lay down conditions for the recruitment of
- Order N°23/CAB/PM of 02 February 2011 to lay down conditions for the implementation of
- Circular No. 004/CAB/PM of 30 December 2005 relating to the application of the Public
- Circular No. 003/CAB/PM of 18 April 2008 relating to the observance of the rules governing the award; execution and control of Public Contracts;
- Circular No. 002/CAB/PM of January 31, 2011 on the improvement of the performance of the Public Contracts system;
- Circular No. 003/CAB/PM of January 31, 2011 defining the conditions for the management of the changes of the economic conditions of Public Contracts;
- Arrete N°0205/A/MINMAP of 03 July 2018 relating to the creation of Divisional Tenders'
- Decree N°2012/076 of 08 march 2012 to amend and supplement certain provisions of decree N°2001/048 of 23 February 2001 relating to the creation, organization and functioning of the Public Contracts Regulatory Agency(ARMP);
- Circular N°001/CAB/PR of 19 june 2012 on the award, the control of execution of public
- The circular N° 00013995/C/MINFI of 31/12/202024 on instructions relating to the execution of the finance law, the control and the follow up of the execution of the State Budget, Administrative, Public Establishment, of Councils and State Organizations for the 2025 Fiscal.
- Unified Technical Documents (DTU) for building works;
- The Norms in force in the Republic of Cameroon;
- The CCTP:

- Order No 00002/MINEPDED of 08th February 2016 stating the format of terms of reference and the content of an Environmental Impact Notice (EIN).
- Other texts specific to contracting fields.

#### 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 province 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 DELEGATED 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 DELEGATED 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 ou delay in the execution of the contract will be signed by the DELEGATED 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 DELEGATED 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 DELEGATED 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 DELEGATED 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 30days.

# 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

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

# 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 (2%) of the amount of the contract TTC, to guarantee the complete and proper execution of the contract. Beyond this time-limit, the AUTHORITY has he right to terminate or cancel the contract to the detriment of the contractor. DELEGATED CONTRACTING

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 DELEGATED 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 install mental 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 DELEGATED 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 DELEGATED 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 t 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 (75%) of the price of the contract.

Following of the rate of reimbursement of the advance, the DELEGATED 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 ) 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. This 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 JO.

#### **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 JO 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 (75%) 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 drait 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:

- [100-1.1 and/or (7.5 or 15%)] paid directly into the account of the contractor;
- 1.1 % paid to the public treasury as AIR due by the contracter.
- 7.5% or 15% paid into the public treasury as TSP, due by the contractors.

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 tweifth 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 DELEGATED 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 166 and 167 of Decree No. 2018/366 of 20 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 DELEGATED 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 (1/2000<sup>th</sup>) 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 (1/1000<sup>th</sup>) 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 acount (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

- 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 DELEGATED 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 proceding paragragh. 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

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

Lot 100: SITE INSTALLATION

Lot 200: SITE PREPARATION

Lot 300: EARTH WORKS

Lot 400: FOUNDATION,

Lot 500: ELEVATION WORKS

Lot 600: ROOFING

Lot 700: METALIC WORKS

Lot 800: ELECTRICITY

Lot 900: PLUMBING

Lot 1000: PAINTING

Lot 1100: ENVIRONMENTAL MITIGATIONS

\*Construction of Borehole

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)

29.1The 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.

29.2The 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.

RTICLE 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 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 Mayor's Office latest 15 (fifteen 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 DELEGATED CONTRACTING AUTHORITY without staying its execution. However, if important modifications alter the objective of the contract or the nature of the works, the DELEGATED 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 Controller
- 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;

# 34.3 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.).

### 34.4.1The 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.

# 34.4.1The Site Intallation Comittee:

The DELEGATED CONTRACTING AUTHORITY or his representative ...... (Chairman) 2- The Contract Engineer.....(Secretary) 3- The Project manager.....(Member) 4- The Contract manager.....(Member) 5- DD MINMAP or Representative.....(Observer) 7- DD MINDDEVEL...... Member)

#### 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 obligatoryor 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

### 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

The contractor shall be responsible for all the consequences directly or indirectly of deficiency of

signaling during the work.

The DELEGATED 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 DELEGATED 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:

1.	The Project Owner The DELEGATED CONTRACTING AUTHORITY or his representative	(Chairman)
2.	The DELEGATED CONTRACTING AUTHORITY of his representative	(Secretary)
3.	The Contract Engineers	(Momber)
4.	The Project manager	(Observer)
5.	DD MINMAP or Representative	(Observer)
6.	The Contract manager	(Member)
7	The Charac accountant at Mhenawi Council	/Member/
8.	The Contractor or his Representative	Member)

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 i.e plan de recollement. (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 DELEGATED CONTRACTING AUTHORITY and the project owner.

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

# 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 180 of the Decree 2018/366 of 20/06/2018 of the Public Contracts code and equally under conditions stipulated in articles74, 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 majeur 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)

# CHAPTER ONE: GENERAL PROVISIONS

# 7.1. TECHNICAL SPECIFICATIONS OF WORKS

### 7.1.1. OBJECT OF THIS DOCUMENT

This book of technical specification of works is aimed at setting the rules and techniques of construction as well as the procedure of work envisaged for the extension of the municipal mortuary in the Mbengwi Council Area.

#### 7.1.2. PROCEDURE OF WORK

The realization of the works was conceived according to the principles of the construction of bridges in Cameroon.

### 7.1.3. CONSISTENCE OF WORK

The complete project comprises the following lots:

Lot 100: SITE INSTALLATION

Lot 200: SITE PREPARATION

Lot 300: EARTH WORKS Lot 400: FOUNDATION,

Lot 500: ELEVATION WORKS

Lot 600: ROOFING

Lot 700: METALIC WORKS

Lot 800: ELECTRICITY

Lot 900: PLUMBING

Lot 1000: PAINTING

Lot 1100: ENVIRONMENTAL MITIGATIONS

\*Construction of Borehole

These works shall be executed as outlined in the next few paragraphs

### GENERAL TECHNICAL SPECIFICATIONS

# A.1. TECHNIQUES OF REFERENCE DOCUMENTS

For the execution of the work, the contractor will be subject to the requirements and following basic technical documents:

- New technical rules of design and calculations of the works and constructions in reinforced concrete method of the limit states' (BAEL)-EDITION 91.
- French or similar standards approved in Cameroon.
- The rules of Cameroon for the construction and urban planning.
- The notebooks of the clauses and conditions imposed on the construction of public works and buildings in the Republic of Cameroon.
- Standards (ANOR-CSTB) and technical documents unified (DTU)

# A.4. MATERIALS CONSTITUTING THE CONCRETE

#### A.4.1 Aggregates.

All aggregate sites will be stored in compartments designed to this effect. Only aggregate authorized on the site are the following;

- 0/5 Crushed gravel
- Crushed gravel 5/15
- Crushed gravel 15/25
- Natural sand or crushing /5 (proportion of items retained on the sieve of 5mm must be less than 10%)

A.4.2. Gravel

They shall be obtained from a variety of quarries including river deposits, manual or machine crushed, chosen by the Contractor and approved by the Supervisor. They should be clean (constituents eliminated through settling should be less than 2%) and their grading will be 5 to 15mm and 15 to 25mm suited to various use. If deemed necessary, it shall be washed before use. Gravel particles of less 5mm retained in each of the above grades should not exceed 10% by weight.

Gravel shall be free from dirt, clay or any organic, matter which should be less than 1.5% and if

deemed necessary, it should be washed before use as indicated by the supervisor.

A.4.3. Sands

Sands will have the characteristics specified in the tables relating to the type-approval tests. Sands will be fine, granular and crunching on hand, not sticking. They will get rid of any part earthy or limestone, of various waste, debris and wood.

The nature and origin of sand remains a subject to the controller's approval. The sand component should be more than 75% and the very fine constituents eliminated by settling should be less than 5%. The sand should pass a standard sieve and must be of high quality and free from dirt, clay or any organic matter and if deemed necessary, it should be washed before

- > For mortar mixes the recommended standard sieve size is 2 to 2.8mm
- > For plaster mortar mixes the recommended standard sieve size is 2mm
- > For mass concrete mixes the recommended standard sieve is 5mm
- For reinforced concrete mixes the recommended standard sieve is 5mm.

#### A.4.4. Cement.

The cement will be CPA 45 or 35CPJ artificial Portland cements 215.325 standard P.15.302. They will be delivered on site paper bagged six layers. Any wet cement or having been altered by the humidity will be dismissed and removed immediately from the site.

They shall be Ordinary Portland Cement, CPJ 35 manufactured only by CEMENCAM or any other national cement factory, obtained from an approved bulk cement supplier. The bulk supplier must have not kept the cement in stock for more than two weeks. The contractor shall not stock cement on the site for more than three months. The cement must be stacked on 10cm wooden surface in a well ventilated store that is dry and warm, free from moisture. The quality and state of cement shall be verified by the supervising engineer before use. The use of imported cement is strictly prohibited. The contractor will inform the work of the constitution of its supplies.

Conflicting samples will be carried out on each batch and submitted at the expense of the contractor to the tests prescribed by the standard P.15.301 of the ANOR in a certified laboratory. Lots that do not possess characteristics required will have to be removed from the stock intended for work and evacuated from the site.

BaGTC must be in good condition at the time of their installation on the site and retained areas covered, perfectly dry and an area of isolated boards of ten centimeter ground (10cm) to a minimum.

A.4.5. Water.

The water used for construction purpose should be clean and free from any impurities which can affect the quality of the mixed materials. It should therefore be fit for drinking and the mix ratio should range between 0.4 and 0. by weight and context.

All frames or metal mesh implemented in concrete shall conform to the specifications of the 91 BAEL. The steel will have the characteristics of the standard French 35.001ANOR. steels used on site will be the grade Fe E24 for mild steel and Fe E40 for high yield steels. The bars will be cut

Bending will be cold, either manually or mechanically and diameter or greater than 32mm, provided that it is made use of control device in avoiding overheating and following the opinion of the representative of the control.

Diameter of cores used for bending will be consistent with the BAEL 91 rules and the approval certificates. The provisions of anchorage will be normal elbows 45° to return of square or double anchor elbow. Used steels will be degreased and free of scale. Bars with defects detrimental to their mechanical resistance, such as delamination, crack or chapped skin, will not be accepted.

The reinforcements will be shaped to provide exactly the lengths and the forms provided by the drawings of the company.

Assembly of the frames must be on the workshop of the site, but in a form of beam after implementation of the cheeks ever.

Coverings of reinforcement to the shuttering walls will be 2.5cm for concrete in elevation. Coverings of reinforcement to the shuttering walls will be 4cm for foundation concrete. Coverings of reinforcement in concrete forms will be obtained using precast concrete spacers or plastic spacers that dimension will be adapted to the result to get.

The concrete spacers include chevelus of attachment to the frame. Ligatures and mounting bars will be sufficient to avoid any distortion of assembly frame, both during the manipulation at the pouring of concrete.

In case of doubt on the quality of steels supplied on site, the employer or a representative of the contractor or, where applicable, the designated contractor may request, the responsibility of the company, to tests on samples taken on site. The tests will be carried out by an approved body.

For reinforcement of floor joists, all provisions will be taken to maintain the bars in the vicinity of support in a good position. Employment in sufficient number of cross-sectional distributions will prevent this possible effect. Recoveries shall conform to the requirements of the 91 BAEL.

Reinforcement with no-adherent rust traces will be vigorously brushed before implementation in concrete forms. Shaped or not reinforcement will be stored on some planks and not on the ground. The reinforcements will be supplied in minimum length of 12metres. The reinforcement iron rods to be used will be mild or high yield steel. No use of recycled and rusted reinforcement rods is permissible.

#### A.4.6. wood

Wood for formwork: type white wood or equivalent

Wood for scafold: type hard wood, moabi, mouvingui, frake or equivalent.

# A.S. THE CONCRETE.

### A.5.1 Quality of Concrete.

Fifteen (15) days later after the opening of the construction site, and before any execution, the contractor shall submit to the National Laboratory "LABOGENIE" Civil Engineering or any other laboratory authorized by the control for approval, a composition of all concrete and mortars to be implemented, taking account of the materials delivered to the site.

All concrete used in the foundations (lean concrete, mass concrete, stressed and pre-stressed....) will be executed with the CPJ 35 cement. The composition of concrete implementation will be an analysis of composition of FAURY, VALLETTA, DE DREUX of BOLOMAY methods, carried out by the National Laboratory of Civil Engineering. The contractor shall bear the costs of new composition in laboratory studies. All concrete for reinforced concrete must meet the conditions of required resistance. The requirements are the following.

-Characteristic of 28 days compressive strength; 20 bars

-Resistance to traction at 28 days; 22 bars.

In case these values are not obtained, the company will produce a supporting calculation note of security works concerned in accordance with the rules BAEL. 91. Otherwise, it will request the demolition of the concerned works or their strengthening.

A.5.2 Manufacture of concrete and mortar.

The manufacture of concrete will be conducted by a central concrete to weight determination. Whatever the manufacturing process used, the products obtained shall be homogeneous and perfectly coated aggregates of binders. The duration of mixing to be sufficient to achieve the result intended; once this is achieved, the mixing should not be extended.

The contractor will have any, realize a liquid concrete, given the decrease in resistance caused by excess water. The implementation of dry concrete will be facilitated by the compulsory use of the

vibrator.

A sample of concrete taken directly in a waste will have to form a regular ball after quick reciprocating in the palm of the hand and detach easily from the latter without dirt. Testing the cone may be imposed. The water/cement ratio will be determined by the moisture of aggregates.

Concrete:

Concrete works shall be of 4 types:

i. Lean concrete for foundation works where indicated shall be PC 150kg/m<sup>3</sup> and 75mm thick.

ii. Mass concrete for floor works; All concrete in floor construction shall be 80mm/150mm thick and dosage of PC300kg/m<sup>3</sup>

iii. Reinforced concrete for works above ground level and not submerged for beams, slabs, lintel, columns and pillar works shall be PC350kg/m³ with thickness as shown on the construction drawings.

iv. Reinforced concrete for underground and submerged structure works including; beams, slabs and pillar works: All reinforced concrete work dosage in these locations shall be

PC400kg/m<sup>3</sup>

Underground concrete works shall be mixed with waterproof additives (Super Zaikalite-1kg powder imported) in recommended manufacturer's dosage.

Mortar:

Mortar shall be a mixture of 250 (two hundred and fifty) kilogrammes of cement per cubic

metre of dry sand.

If the M250 mortar is more than 20 (twenty) millimeters thick, micro-concrete mixed with 300 (three hundred) kilogrammes of cement whose composition shall first of all be submitted for the Supervisor's approval shall be used. (Use mortar mixes for various structural components works as specified in project consulting documents available in the procurement unit of PNDP).

A.5.3. Implementation of concrete.

Concrete will be implemented as their manufacture; storage in containers requiring an addition of water at the time of employment is strictly prohibited concrete will be always carefully

vibrated by cylindrical needles.

Reinforcement nodes will be willing to allow a good implementation of the concrete on the height of the considered work. The company will take all provisions to ensure an altimeter and a correct fixation of the steel to avoid their displacement during casting. Similarly, it will add all bar mounts and ligatures for correct maintenance of the works (sheaths, tubes, pipes, boxes, cleats, preframes, etc) taken by itself or other bodies of state in concrete forms.

The implementation of concrete will be made to the right of the beams and the sails. Before casting of a recovery, the former concrete will be carefully disposed of all gravât the jet of air compressed, transplanted to overhang or project outboard gravels and eliminate milt, then washed if necessary,

resumption of concrete additives used according to the sheet fact of the product. No r resumption of concrete will be made in the visible parts of the works.

Stripping of the works will be carried out when the concrete will have acquired sufficient strength.

A.5.4. Test of Convenience.

It will be executed on the site before the start of the work, a concrete witness to each "workshop" of concrete. Workshop of concrete, consider a set determined position fixed or movable one site to another and which is served by a determined team fixtures. The minimum number of tubes subjected to test is 9.

The actual manufacture of concrete for the construction can start, after agreement of the control, if the nominal resistance to traction and compression to 7 days, are at least equal to 75/100 minimum resistance required in 28 days. The typical 28 day compressive resistance must be at least equal to 270 bars. Otherwise should immediately repeat the test with a new composition.

# A.5.5. Tests of concrete during work, test tube,

They are defined in article "Test of receipt of materials".

# B.5.6. Failure to implement, surface condition.

For no-admissible by the DELEGATED CONTRACTING AUTHORITY considered on concrete surface conditions, the contractor will have to run to exclusive costs a full patching of the corresponding works with a coating synthetic resin of the type SIKALATEX or equivalent. Implementation and measurements of this coating must conform to the manufacturer's technical background.

NB: (Concrete mixes for various structural component works as specified can be consulted from the Request for Financing Document at PNDP Procurement Unit upon award of contract).

### A.6. FORMWORK

#### A.6.1 General.

All foundation concrete structures will be carried out in ordinary form unless otherwise directed by the DELEGATED CONTRACTING AUTHORITY and unless otherwise indicated on the plans.

- (a) If the ordinary forms consist of simply juxtaposed sawn wood, the latter must be level and proper bearings. The maximum gauge tolerated in joints is 2mm. the maximum vertical normally tolerated a siding between two juxtaposed sawn wood plan will be of three millimeters.
- (b) If the ordinary forms are composed of panels of agglomerated wood or plywood simply juxtaposed fibres, these panels will be proper bearings and on the same level. Joints tolerated between panels will be the same as between sawn wood. The tolerances are those of DTU 23 mentioned in the chapter IV section A.

### A.6.2. Forming holes.

The holes and gaps to seal or for other purposes will be reserved by the establishment of appropriate forms, arranged so that all of their elements can be easily removed during stripping. He will be allowed to use expanded polystyrene blocks.

# A.6.3. Care before concreting.

#### (a) Clean

The forms do not have to be stained by hydrocarbon products, such as fat, greasy, wax or rust etc. The spots will be carefully removed if necessary with ease. (b) Cleaning

Immediately prior to the implementation of concrete, formwork will be cleaned carefully to remove dust and debris of all kinds.

Finishing of cleaning will be provided for by the air compressor.

#### (c) Humidification

Common wood forms will be heavily sprayed before implementation of the concrete.

Watering will be conducted as needed in several phases spread to obtain as complete as possible of the wood humidification, which will aim to strengthen the joints by swelling of the wood. Wet surfaces shall however not be slick. Excess water will be evacuated to compressed air.

#### (d) Oil coating

Will be oiled coated before implementation of concrete:

- all metal formwork
- the treated forms composed of plywood panel or wood agglomerate and all concrete fibre forms for curves.
- The oil in excess at the bottom of mussels will be offset before concreting. Used oils will be so-called special release oils.

### A.6.4. Maintenance.

If several jobs are planned for the same form, it will be perfectly cleaned and eventually returned in state before any new use.

A.6.5. Security staff and third parties.

The concrete forms and structural elements, which after employment possess any nails or spikes or knobs will be immediately bald their points if they are intended to be re-used.

Otherwise, they will be immediately burnt or stored out of the site, in a no-publicly accessible location.

### A.7. Acceptance of materials testing.

The DTU standards specify the result of the tests required on materials and their pace.

The resistors mentioned in the tables correspond to characteristic resistance. These tests must run by the Civil Engineering National Laboratory or any other laboratory approved by the MINTP, at the expense of the company.

A.8 Pointing shall be applied to joints of all external stone masonry walls that are visible to be aesthetic. mortar shall be used for pointing, to give good cement finish.

#### ORIGIN OF MATERIALS

As shown on table 13

### CHAPTER TWO: EXECUTION OF WORKS

#### A.1.1. General Instructions

It should be noted that these specifications complete the construction plans and the construction plans complete the specifications. The Supervisor shall give modifications to plans provided or technical specifications in writing. For this purpose, a numbered page book shall be on site in which the instructions are written. Both the contractor and the Supervisor shall initial the book pages. Therefore, the contractor must execute the works in conjunction with the three documents. The contractor shall take note of any omissions or discrepancies that may exist in the three documents and call the attention of the Supervisor who is at his disposal for necessary information and inquiries. Any works carried out in negation of these instructions or provisions shall be demolished at the expense of the contractor.

#### A.1.2. Security.

The contractor shall be required to place at the entrance to the works site and in its vicinity, signboards indicating that work is underway and he shall be responsible for any accident that occurs on the works site and/or suffered by a third party, his staff and employees and officials of

the Administration as a result of their presence of the works site. Organization of work and security on the works site shall be the responsibility of the contractor.

### A.1.3. Traffic

The contractor shall be responsible for ensuring that traffic is not obstructed on the entire stretch of his works site throughout the period of work up till provisional acceptance. No obstruction of traffic shall be allowed for more than two hours. Maintenance of traffic flow shall be the responsibility and at the expense of the contractor and in case of any breach of contract by the latter, the supervisor may bring in a third party to correct any faults. All related expenses shall be borne by the contractor.

Where interference with traffic is inevitable, the opinion of local administrative authorities shall be required for any obstruction for a given period.

### A.1.4. Site clearance.

The building site shall be cleared of grass, vegetable soil and tree stumps to prepare it for construction. Roots of trees shall be completely removed and any vegetable matter before backfilling of the foundation. The vegetable soil of 15cm should be completely cleared and piled aside before bringing back for landscaping and implementation of environmental aspects at the end of construction works.

# A.1.5. Nomenclature of work (setting out of works)

The contractor shall be responsible for the setting out of the constructions works, respecting environmental and water supply norms related to positioning and distances of stand taps stipulated in the distribution network plan. He shall ensure accuracy in the positioning of the structures on the site. It shall be checked and approved by the supervisor before any excavation work can begin.

# A.1.7. IMPLEMENTATION OF STRUCTURE

Implementation of buildings will be provided by the company, and approved by the controller before any commencement of work. Errors of elevations that implementation operations might reveal must be immediately reported to the employer to make the necessary changes to the smooth running of the site.

# A.1.8. MODIFICATION OF WORK.

The contractor shall be deemed having sufficient knowledge of the conditions and context of the project and suggestions for the work.

However, in cases where changes in the nature of earthworks prove necessary in work, either by the nature of the altitude of the land, or by the presence of obstacles, such as pipelines, remains, etc. The DELEGATED CONTRACTING AUTHORITY will define the impact on the schedule and the settlement of expenditure result from these changes. The contractor shall continue the work with the agreement of the CONTRACTING AUTHORITY.

# A.1.9. USE OF EXPLOSIVES

The use of explosives is strictly prohibited.

### A.1.10. IMPLANTATION

The bottom of the trenches must attain good sub-soil. Foundations should rest on the bedrock. If in the performance of excavations, there is water or the water seepage, the company will take any provision for the support of excavations and bailout the water entering these works.

If the trenches are invaded by water of any kind whatsoever, the company must achieve the exhaustion, which will remain in his expense, and all the costs associated with the losses, both day and night, that will be needed for a good performance of the work.

The soil to be used for backfilling would be the assessment of the controller and for other jobs in the work will be the contractor, brought to landfills from any place without special compensation regardless of the distance.

It may be ordered application of backfilling in the right-of-way of the site without that there is place for special compensation. Embarkments around the excavations will be carried out with materials from excavations on the condition that it be approved by the control. The backfilling around the works will be performed by successive layers of maximum 20cm thick, pounded, sprayed and compacted. In case a contribution of land would be necessary, he will have to achieve healthy places and in all cases of sites approved by the controller. It is prohibited to obtain soil-material from recent masonry work, to do these backfilling executed by hand to load the walls evenly and avoid all constraints that could result from a poorly distributed load.

# **Technical specification**

- > Studies: After this feasibility studies by the contract engineer, the contractor has to carry out his/her own studies using the plans, specifications, bill of quatities, visit the site to have a mastery of the project before he/she can prepare a bid for the project. In case of an omission or an error his should indicate to the authorities concerned.
- > Execution documents: The following documents will be needed for the proper execution of works:
  - ✓ A request for quotation
  - ✓ A registered contract/jobbing order
  - ✓ Service order to start work
  - ✓ The working plans
  - ✓ Work execution program
  - ✓ Site log book/minutes book
  - ✓ As-built plan (at the end of works)

### 1/ Bush Clearing - Earth works

1/1 Preparation of work site and excavations

The site shall be cleared of all bushes all debris carried away. The section to receive the structure and its surroundings shall be levelled and all excess soil carted away.

1 /2 Installation of the work site.

The installation of the site shall be done on a section agreed between the contractor and the Control Engineer together with the areas for stockpiling materials. The site shall be fenced with local materials and signboard mounted by the contractor. Access to the site shall be prohibited to the public. The contractor shall be responsible for the total security of the site.

1/3 Sitting out

The contractor shall indicate the implantation of the structure according to the plans. This implantation shall be done in accordance with the Control Engineer. The contractor shall be responsible for errors of levels and alignments that were not signalled earlier.

1 /4 Trenches

All trenches for foundation as well as holes for column footings shall be excavated according to the plans.

The foundation trenches shall be sunk to the good soil as agreed by the Control Engineer. The trenches shall be shaped accordingly.

1/5 Backfilling

All backfilling, where necessary shall be done with well-drained lateritic soil and compacted in layers of 20 cm successively.

#### 2/ Foundation

2/1 Blinding Concrete

A blinding concrete of 5 cm thick and a concrete mix of 200 kg of cement (CPA 325) per m3 shall be cast at the base of the trenches.

2/2 Reinforced Concrete in foundation

The column footings and foundation beams shall be cast with R.C. of 350 kg of cement (CPA325) per m3. The formwork shall be of local wood.

2/3 Foundation proper

The foundation shall be constructed with building stones cleaned of all debris or cement filled blocks of 20x20x40cm choked or built with cement mortar of PC 350 kg of cement (CPA325) per m3. The foundatioxn shall be chained by a beam of 20x20 with RC of 350 Kg/m3 and 4 lines of Ø8 OR Ø10 and stirrups of Ø6 max spacing of 25 cm

Oversite concrete: The floor shall be constructed of over site concrete 8 cm thick dosed at 300 Kg/m3. A finishing layer of mortar 400 Kg/m3 shall be applied on the concrete.

Floor screeds: It shall be 30mm/40mm thick constructed with cement mortar dosed at 400 Kg/m3 applied on the concrete with a trowel finished with cement slurry.

2/5 Placement of ceramic tiles on floors

Verify the state of the screed, signs of deterioration, etc

Pitting, brushing and sweeping of the surface.

Redo the screed with a cement mortar of dosage 500kg/m<sup>3</sup>

Place the tiles using a cement-gum which is in conformity with the UTD and the arts of the profession.

The joints shall be filled at least 24 hours after the placement of the tiles.

There shall be slopes on all floors with siphons to ensure appropriate flow of water.

Placement tolerances:

Evenness: 3mm maximum on every 2m length on all directions.

#### 3/ Elevation

3/1 Reinforced Concrete

All columns, beams, lintels, and wall plate shall be cast in R.C. dosed at 350 kg of cement (CPA325) per m3 with ordinary formwork. The concrete shall be properly vibrated. The pillars embedded in the walls shall be 15x15 and reinforced with  $4\ Ø10$  and stirrups of Ø6 spaced at 25 cm. The isolated pillars at the veranda shall be 15x30 and reinforced with  $4\ Ø10$  and stirrups of Ø6 spaced at 20 cm

NB: Lintels will be casted below and above all openings.

3/2 Masonry works

Except indicated all walls shall be constructed with cement blocks of 15x20x40 of PC300 Kg/m3 (at most 33 blocks per bag of cement). All blocks shall be cured for 18 days before being used.

#### 4/ Wall Finish

4/1: **Plastering:** cement mortar mix in proportion of 350kg/m3 will be used to plaster all previously rejoined areas where masonry work has been done; then thinly floated and the use of a sponge will be recommended to remove any unevenness. The thickness of plaster shall be 2.5cm. This shall be done in two phases e.g. 1<sup>st</sup> and 2<sup>nd</sup> coats of 1.5cm, 1cm and thick respectively only on block work that has been completed for at least two weeks. This entire works shall be executed by a

team of masons headed by a team head under the supervision of the Site Foreman and in conformity to specifications.

4/2: **Pointing:** Shall be applied to joints of all external stone masonry walls that are visible to be aesthetic. Mortar shall be used for pointing, to give good cement finish.

#### 5/ Roof

All roof structures shall be realised with local wood preferably eucalyptus treated with insecticides and fungicides. The roof truss shall be assembled from wood of dimension  $5 \times 15$  minimum while the purlins shall be wood of dimension  $5 \times 7.5$  minimum. The assembly shall be done with nails according to the standards in force.

The roof shall be covered with high-rib sheets (tôle bac), 6 m long and 5/10 mm thick.

The fascia board shall be realised with High rib (tôle bac) 25 cm large and cut according to the area.

Ceiling: construction shall be with wooden noggins 60cm x 120cm and 4mm plywood. They shall be fixed with nails and the ceiling boards will be whole sheets. All eaves shall be fixed with aluminum metal eaves' sheets. A single coating of solunium wood preservative shall be applied to noggin wood surfaces. Only skilled craftsmen should be employed for the ceiling work.

#### 6/ Aluminium works

All doors shall be made of rolling aluminium with locks

#### 7/ Electrical installations

Conduit pipes shall be built into the walls to carry the cables that supply the switches and sockets. 0.6m or 1.2m MAZDA fluorescent lamps shall be fitted in the building and veranda.

### 8/ Drainage and Landscaping (external works)

- **Gutters**. The gutters shall be realized all-round the building. There shall be dosed at 300kg/m<sup>3</sup>. The section shall be 40cm wide and 30cm deep. The base shall have an average thickness of 8cm and shall of ordinary concrete, dosed at 300kg/m<sup>3</sup> the gutters shall have a slope of 5%.
- Pavement .The walls of the foundation shall be protected by concreting all-round the foundation. It shall be realized with ordinary concrete dosed at 300kg/m<sup>3</sup> and thickness of 8cm.
- Concrete slabs: Shall be of 1.2m wide and posotioned as instructed by the control engineer.
- Concrete ramps: Shall be of 1.2m wide cast in-situ with edges protected with angle bar 25mm.

#### 10/ Painting

All the walls shall receive two layers of Pantex 800 and Pantex 1300 of cream yellowish colour, after a coat of whitewash. The doors, windows, skirting and other metallic members shall receive two coats of oil paint and vanish.

This task concerns the realization of appropriate drainage a gutter shall be constructed all round the building and evacuated to appropriate zones. Concrete pavement will at the peripheries of the gutters, crossing slabs as well as reinforced concrete access ramps for the handicap persons as prescribed in the CCTP.

#### 9/ Painting

All the walls shall receive two layers of Pantex 800 and Pantex 1300 of cream yellowish colour, after a coat of whitewash. The doors, windows, skirting and other metallic members shall receive two coats of oil paint.

#### ACQUISITION OF MATERIALS TO THE SITE

#### (i) Materials for mortar and concrete:

#### AGGREGATES:

Aggregates to be used for mortar and concrete should be those from a river bed.

Those from burnt natural rocks shall not be authorized.

We shall submit for approval the various aggregates to be used to the Project Engineer The sand equivalency should be greater that 75%. The pranulomery shall fall between the following intervals.

ANOR Modulus	Sieve Size(mm)	Passing (%)
38	5	93-100
35	2,5	70-90
32	1,25	45-80
29	0,63	28-35
26	0,315	10-30
23	1,16	2-10

The aggregates should come from a recognized quarry in Bamenda

The mixing water should be from clean source

The cement should be of class CPJ 42.5 (CEMENCAM) or more.

The reinforcement used shall be of high adherence, of class at least Fe 400 bought in a recognized warehouse in Bamenda.

NB: Reinforcement Schedule

No	Structure	NO/ QTY	MAIN RODSØ	STIRRUP	SPACING	DOSAGE	TYPE
1	Ground Beam	4	HA 8mm	6mm	20cm	350kg/m3	Fe-E- 400
2	Lintel(15x20)	4	HA 8mm	6mm	20cm	350kg/m3	Fe-E- 400
3	Veranda pillars (15x20)	4	HA 8mm	6mm	20cm	350kg/m3	Fe-E- 400
4	Wall pillars (15x15)	4	HA 8mm	6mm	20cm	350kg/m3	Fe-E- 400
5	Tie beams (15x20)	4	HA 8mm	6mm	20cm	350kg/m3	Fe-E- 400

The fabric mesh used shall conform to norms NF A35-015 and NF A35-022.

#### (ii) CONCRETE AND MORTAR

Concrete for footing pillars, ground beams, paving, lintels and beams:

 $Fc_{28} = 25$  Mpa at least (compressive resistances at  $38^{th}$  day of age)

#### Dosage:

Concrete for footing: 350kg/m<sup>3</sup>

Concrete to bind masonry with plastering: 300kg/m<sup>3</sup>

Lean concrete 150/m<sup>3</sup>

Mortar for screed, plastering and elevation: 400kg/m<sup>3</sup>

#### Depositing Concrete.

All concrete shall be cast such that all risks of segregation and pre-setting are avoided.

- Deposit concrete as nearly as practicable in its final position to avoid segregation due to re-handing or flowing.
- Re-tempering: No concrete that has partially hardened or has been re-tempered shall be used.
- Compaction: Concrete shall be thoroughly compacted by vibrating during emplacement.

**Curing:** All concrete shall be covered with a polyethylene plastic where possible, and regularly watered to maintain the required temperature to give the concrete the required strength.

Cleaning: Clean all exposed concrete surfaces and all adjoining work which has been stained by the leakage of concrete

### (ii) WOOD

Wood for formwork: type white wood or equivalent

Wood for openings: type Bubinga or equivalent, dry wood (15-20% of humidity), having less than one node/meter.

Wood for roof: type hard wood, moabi, mouvingui, frake or equivalent, eucalytus, dry wood of identical humidity as above.

# SPECIAL TECHNICAL CONDITIONS (STC)

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

#### CONTENTS

#### INTRODUCTION.

CHAPTER I: GENERAL INFORMATION
Article 1 : Subject
Article 2: Role of the Contractor
Article 3: Work plan
Article 4: Site selection and choice of Drilling Technique
CHAPTER II : DRILLING WORKS
Article 5 : Drilling of Borehole
Article 6: Guarantee of works
Article 7: Origin and quality of material and equipments
CHAPTER III: SUPPLY AND INSTALLATION OF SOLAR PUMP.
Article 8: Supply-Installation of a solar pump
Article 9: Transport, Delivery and installation of
Article 10 : Provisional Reception
Article 11: Conditions for the Final Reception
CHAPTER IV: ORIGIN AND QUALITY OF GEOMATERIALS AND CEMENT
Article 12: Quality and Quantity of Geo-materials
Article 13: Origin and quality of sand
Article 14: Origin and quality of gravel
Article 15: Origin and quality of stones
Article 16: Origin and quality of cement

#### CHAPTER VI: METHOD OF EXECUTION

Article 18: General Information

CHAPTER V: CONCRETE WORKS

Article 17: Preparation of concrete

18.1: Security at the work site

18.2: Traffic

Article 19: Stone Masonry

Article 20: Pointing and plastering

20.1 Pointing

20.2 Plastering

Article 21: Plumbing works

21.1 Pipe Specifications

21.1.1 Control tests on pipes

21.2 Fitting specifications

Article 22: Piping

22.1 Description

22.2 Care/Laying of pipes

22.3 Methods of determining quality of G.I and PVC piping laid.

### **CHAPTER VII: CONSTRUCTION METHODS**

Article 23: Setting out of Works

Article 24: Excavation of Trenches

Article 25: Backfill

#### 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 solar powered pump in the said borehole and the construction of a 6m reinforeced concrete tower with a control room at the ground floor 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 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

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

0,7m<sup>3</sup>/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

The borehole facitates 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

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

The borehole shall be equipped with a solar powered pump of the type grundfos or Lorentz, . The bodywork of the pump and its accessories should be composed of materials that are resistant to 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 m<sup>3</sup>/h (7001/h) and the water is potable

# 5.1. Organization of the work-site

Considering the results obtained after previous drilling campaigns of boreholes in the area, an average depth of one hundred and twenty (120) 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 sustainibility. The execution plan should be concieved in such a way that the different phases will be done without

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. Equipment 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

# 5.3.2. State of the equipments and materials

The execution calendar obliges the Contractor to be in possession of a drilling rig inorder 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:

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

The drilling rig should have a capacity of attaining an average depth of 120meters with a boerhole diameter of:

- 12½" (175-195mm) for rotary drilling with compressed air using tools and bits with water or
- 61/4" (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 m<sup>3</sup>/mn at 7 bars.

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

Pumping tests should be done using an immerged electrique pump of diameter less than 110mm, and capable of supplying yields of 10 m<sup>3</sup>/h at a depth of 30meters and of 6 m<sup>3</sup>/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 inorder 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 everychange 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 unconcolidated weathered rock formations by rotary drlling 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
- 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

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

• This casing shall be armed with slot openings of  $\emptyset \leq 2$ mm (Screen), which shall be placed at the levels of water arrivals by screen fragments of length 3 or 6meters. The base of the colon shall be blocked with

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 3meters. 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

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 2meters.

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

#### 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 l Olitres 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 4hours, 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,
- 1 cm 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 immerged pump, of a minimal capacity of 10 m<sup>3</sup>/h at a depth of 30m or 6 m<sup>3</sup>/h at 80meters. 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 mesurements of the water levels shall be effectuated using an electric sounder, while the measurements of the yield shall be done using 200litres drums. All the measurements shall be recorded in forms recommended by the Ministry incharge 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 solar powered 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  $1 \text{m} \times 1 \text{m} \times 1 \text{m}$  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<sup>3</sup> and after 28 days have a

resistance of 28kN/cm, 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: I=3m, w=3m and h=1,2m; 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 (0,5mx0,5mx0,5m) where resistant solid matter settles; and water flows into a buried PVC pipe of Ø for a distance of at least 8m and then empties itself into a soakaway pit of dimension 1m x 1m x 1m (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 Controler or a Consulting Firm under the coordination of the Contract Engineer.

### 5.8.1 Worksite logbook.

Inorder 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 Controler, 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 establissement 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
- 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.

Not withstanding 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 reparing 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.

Not withstanding 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 SOLAR POWERED 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 equipment for the rural communities.

#### 8.1 .Diameter

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

#### 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 solar pump should be at least 3.8m<sup>3</sup>/h.

### 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

### 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.

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

8.8 Spare parts

The spareparts 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 functionning, 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 abnormaly in the fonctionning 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 mentionned 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 materiels 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 DELEGATED CONTRACTING AUTHORITY can reject them and ask for their remplacement 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

# 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 m<sup>3</sup> 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 m<sup>3</sup> 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

# 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.

The Contractor shall be responsible for ensuring that traffic is not obstructed on the entire stretch of his work site throughout 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 m<sup>3</sup> of sand, no grain of which shall have a dimension exceeding 4mm.

Mortar containing a mixture of 450kg of cement per m<sup>3</sup> 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 m<sup>3</sup> of sand, to which shall be added a quantity of SIKA  $N^{\circ}$  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

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

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:

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

#### 21.1 Pipe Specifications

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

Table 1: Physical	T	hickness (m	m)	Socket	Nominal	Length of
external Ø	Minimum	Nominal	Maximum	length (mm)	service pressure (bars)	* S * Z * * * * * * * * * * * * * * * *
(mm)			2.2	28	10	6
21x25	1.9	2.0	2.3		4	6
28×32	1.9	2.0	2.3	32	0	4
	2.4	2.6	2.9	32	10	0
26.8x32	2.4	2.0			THE RESIDENCE OF THE PARTY OF T	MANAGE TO A PROPERTY OF THE PARTY OF THE PAR

80.6x90 erances	4.3	4.7	5.0	90	10	6
63.2x75	5.5	5.9	6.3	75	10	6
66.6x75	3.8	4.2	4.5	75	10	6
		3.2	3.5	75	6	
68.6x75	3.0		5.4	63	10	6
53x63	4.7	5.0		63	6	6
56.6x63	3.0	3.2	3.5		10	6
42x50	3.7	4.0	4.3	50	10	- 0
		3.2	3.5	50	6	4
43.6x50	3.0		3.5	40	10	6
33.6x40	3.0	3.2		40	6	6
35x40	2.3	2.5	2.8	40		

Ovalization: ± 1mm

Length of pipe:  $\pm 1\% = > \pm 6$ cm

Socket length: ± 0.6mm

## 21.1.1 Control Tests for Pipes

#### i) Length

The tolerance for pipe lengths shall be  $\pm$  1% ( $\pm$  6cm). 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.

The tolerance shall be  $\pm$  0.3mm for pipes of external diameters between 25mm and 50mm, and  $\pm$ 0.4mm 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.

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

Table II: Thickness Verification

No. of pipes in the	No. of pipes randomly	No of	bad pipes X
724	selected for verification	Lot accepted if X max =	Lot rejected if Xmin=
100-199	10	2	Amin-
200-299	15		3
300-499		3	4
	20	. 3	1
500-899	25	. 5	
899-1300	30	<u>J</u>	6
1300-3200		6	7
	40	8	0

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

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 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"	V
ADAPTOR UNION 63-2"	
ADAPTOR UNION 75-21/2"	
AIR VALVES	
BALL VALVE 1 1/2"	
BALL VALVE 2"	
DEC VALVE 03/4"	
DEC VALVE 1 1/4"	Ont
DEC VALVE 11/2"	
DEC VALVE 2"	
DEC VALVE 21/2".	
ELBOW 03/4"	
ELBOW 1 1/4"	
ELBOW 1 1/2"	
ELBOW 2"	
ELBOW 2 1/2"	

	ription of Goods	-
0.033 885	LE 2"	
	LE 2½"	
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	and a second
PVC	TEE 75	
PVC	VALVE 32	
PVC	VALVE 40	
PVC	VALVE 50	
PVC	VALVE 63	
	VALVE 75	
REDI	JCER G.I.1"-3/4"	

FLOAT VALVE 63
G.I PIPE 03/4"
G.I PIPE 1"
G.I PIPE 11/4"
G.I PIPE 11/2"
G.I PIPE 2"
G.I PIPE 21/2"
G.I SOCKET 03/4"
G.I SOCKET 11/4"
G.I SOCKET 11/2"
G.I SOCKET 2"
G.I TEE 1"
G.I TEE 11/4"
G.I TEE 11/2"
G.I TEE 2"
G.I TEE 21/2
NIPPLE 03/4"
NIPPLE 1"
NIPPLE 11/4"
NIPPLE 11/2"

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 03/4"  UNION 03/4"  UNION 1 1/4"  UNION 1 1/2"  UNION 2 "  UNION 2 "  UNION 2 "  UNION 2 SADLE PIECE 75-1"  TAP 03/4"  UNION 1 1/4"  UNION 1 1/4"  UNION 1 1/4"  UNION 1 1/4"  UNION 2 "  UNION 2 SADLE PIECE 75-1"  TAP 03/4"  UNION 1 1/4"  UNION 1 1/4"  UNION 1 1/4"  UNION 2 SADLE PIECE 63  SADLE PIECE 50-1"  SADLE PIECE 63  SADL		
SADLE PIECE 40-1  SADLE PIECE 50  SADLE PIECE 50-1"  SADLE PIECE 63  SADLE PIECE 63-1"  SADLE PIECE 75-1"  TAP 03/4"  UNION 03/4"  UNION 1"  UNION 1 1/4"  UNION 1 1/2"  UNION 2 "  UNION 2 "  UNION 2 "  UNION 2 FURN VALVE 2"  GEBAJOINT  GLUE 1 kg  HERM (ROLL)	PVC RED SOCKET 75-63	
SADLE PIECE 50  SADLE PIECE 50-1"  SADLE PIECE 63  SADLE PIECE 63-1"  SADLE PIECE 75-1"  TAP 03/4"  UNION 03/4"  UNION 1 1/4"  UNION 1 1/2"  UNION 2 "  UNION 2 "  UNION 2 "  UNION 2 PERMITTED TO THE PIECE TO THE P	SADLE PIECE 32-1"	
SADLE PIECE 50-1"  SADLE PIECE 63  SADLE PIECE 63-1"  SADLE PIECE 75-1"  TAP 03/4"  UNION 03/4"  UNION 1"  UNION 1 1/4"  UNION 1 1/2"  UNION 2 "  UNION 2 "  UNION 2 "  UNION 2 P  EBAJOINT  GLUE 1 kg  HERM (ROLL)	SADLE PIECE 40-1	
SADLE PIECE 63  SADLE PIECE 63-1"  SADLE PIECE 75-1"  TAP 0¾"  UNION 0¾"  UNION 1 ¼"  UNION 1 ½"  UNION 2 "  UNION 2 "  UNION 2½"  NON RETURN VALVE 2"  GEBAJOINT  GLUE 1 kg  HERM (ROLL)	SADLE PIECE 50	
SADLE PIECE 63-1"  SADLE PIECE 75-1"  TAP 03/4"  UNION 03/4"  UNION 1"  UNION 1 1/4"  UNION 2 "  UNION 2 "  UNION 2½"  NON RETURN VALVE 2"  GEBAJOINT  GLUE 1 kg  HERM (ROLL)	SADLE PIECE 50-1"	
SADLE PIECE 75-1"  TAP 03/4"  UNION 03/4"  UNION 1"  UNION 1 1/4"  UNION 2 "  UNION 2 "  UNION 21/2"  NON RETURN VALVE 2"  GEBAJOINT  GLUE 1 kg  HERM (ROLL)	SADLE PIECE 63	
TAP 03¼"  UNION 03¼"  UNION 1"  UNION 1 ¼"  UNION 2 "  UNION 2½"  NON RETURN VALVE 2"  GEBAJOINT  GLUE 1 kg  HERM (ROLL)	SADLE PIECE 63-1"	
UNION 03/4" UNION 1" UNION 1 1/4" UNION 1 1/2" UNION 2 " UNION 21/2" NON RETURN VALVE 2" GEBAJOINT GLUE 1 kg HERM (ROLL)	SADLE PIECE 75-1"	
UNION 1" UNION 1 1/4" UNION 1 1/2" UNION 2 " UNION 21/2" NON RETURN VALVE 2" GEBAJOINT GLUE 1 kg HERM (ROLL)	TAP 03/4"	
UNION 1 1/4" UNION 1 1/2"  UNION 2 "  UNION 21/2"  NON RETURN VALVE 2"  GEBAJOINT  GLUE 1 kg  HERM (ROLL)	UNION 03/4"	
UNION 1 ½"  UNION 2 "  UNION 2½"  NON RETURN VALVE 2"  GEBAJOINT  GLUE 1 kg  HERM (ROLL)	UNION 1"	2011
UNION 2 " UNION 2½"  NON RETURN VALVE 2"  GEBAJOINT  GLUE 1 kg  HERM (ROLL)	UNION 1 1/4"	
UNION 2½"  NON RETURN VALVE 2"  GEBAJOINT  GLUE 1 kg  HERM (ROLL)	UNION 1 1/2"	
NON RETURN VALVE 2" GEBAJOINT GLUE 1 kg HERM (ROLL)	UNION 2 "	
GEBAJOINT GLUE 1 kg HERM (ROLL)	UNION 21/2"	
GLUE 1 kg HERM (ROLL)	NON RETURN VALVE 2"	
HERM (ROLL)	GEBAJOINT	
	GLUE 1 kg	
SAND PAPER ( ml)	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				IOLE	
CONTR	RACTOR			CF	ROSS -	SECTION	OF BORE	HOLE	
P.O. BORE I	ox HOLE CO	Phone ONSTRUCTION		Locality:			Borehole with n	Borehole with manual pump.	
DEPTH  Drilled: Designed: Hardrock:		DESIGN Nature: Øinternal:	Date:		to	Region: Division: Council:			
	e end of dril	ling:	Øexternal: Length of Casing: Length of screen:	GPS Coord Geophysics Developme	:	cality: x=	y= Duration		
Quantity of gravel pack: OBSERVATIONS:		Slot opening: Type of joining:	Date of Pro	ovisional Red		Casing Length abo Nature of casing:	ve the surface:		
		Direction of Fractures:	Nature of g Grain size:	gravel pack:		Type of relief:			
ø (mm)	Depth (m)	Technical C.S.	Water level & Yield	Drilling Speed (m/h)	Depth (m)	Geological C.S.	Geological description	Nature of Aquifer:	

CONTRAC BP	CTOR: PHONE N°	COUNCIL/ PIB 2025	SITE SELECTION FORM
*: Geophysic •: Existent Bo <u>S</u> = Spri	eologic site and serial n° cal site and serial n° prehole. $\pm$ = Existent \		Village: Region: Division: Council: Code N°:
	×		
Resource per	CLOGIC SITE SELECTION:	and the second s	Date :
SEOPHYSICA	AL SITE SELECTION :	The state of the s	Date :

NORTH-WEST				REPORT ON BOREHOLE CLEANING AND DEVELOPMENT			
1st Arrival of		m/suri	face red at the er	DIV	ALITY: JNCIL: ISION:	REGION:/surface	
DATE	TIME	DURATION (in minutes)	MESURE WATER YI	1000	WATER QUALITY	OBSERVATIONS	
		0					
		5					

	10	
	15	
	30	
	45	
	60	- 1
	90	00-50114
	120	
	150	
	180	-
	210	
	240	-
	270	
	300	AFO.
	330	-
	360	
	390	
	420	
	450	
	480	
	510	
	540	
	570	
1000	600	
	630	
	660	
	690	
	720	III berrain

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

NAME AND SIGNATURE OF THE OPERATOR:

NAME AND SIGNATURE OF THE CONTROLER:

NORTH-WE	C0	OUNCIL/ PIB 2	2025	REPC	ORT ON AQUIF	ER (YIELD) TEST
CONTRACTO BP PHONE N°			200	LOCALITY: COUNCIL: DIVISION:		EGION:
	m/ level:n	surface		easuring Refe	rence point:	OBSERVATIONS
TIME (in minutes)	DURATION (in minutes)	WATER YIELD (m³/h)	Dynamic W Level (m	Section 1	er Recharge (m)	OBSERVATIONS
1	1					
2	1					VENTON AND DESCRIPTION OF THE PARTY OF THE P

3	1			
4	1			
5	1			
6	1			
7	1			
8	1			
9	1	1		
10	1			
11	1			
12	1			
13	1			
14	1			
15	1	<del> </del>		
20	5	<del>                                     </del>		
25	5			
30	5			
35	5			
40	5			
45	5			A PART OF THE PROPERTY OF
60	15		NAME OF TAXABLE PARTY.	
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			
ROLER:	13			

OPERATOR:

# PART 06 UNIT PRICE LIST

BILI THE I	L OF QUANTITIES AND ESTIMAT MUNICIPAL MORTUARY MBENG - MOMO DIVI	W1, W	BENG	WI SUB I	DIVISION
S/N	WORK DESCRIPTION	UNIT	QTY	U.P. in figures	U.P. in words
100	Lot 100: PREPAR	ATORY	WORK	S	
101	Site installation	ff	1		
102	Temporal fencing of project site	ff	1		
103	Studies (Execution Plan, report etc )	ff	1		
104	Environmental Impact Notice	Ls	1		
	Sub-Total				
200	Lot 200: EAR		RKS		
201	Site leveling	m <sup>3</sup>	200		
202	Excavation of foundation trenches and pit	m <sup>3</sup>	43		
203	Backfilling of foundation	m <sup>3</sup>	160		
203	Sub-Tot:	al 200			
300	LOT 300: FC	OUNDA	TION		7/2 - 1/2
301	Blinding concrete dosed at 150kg/m3	m <sup>3</sup>	1.92		
	Mass concrete for floor of thickness 8cm	m <sup>3</sup>	8.4		
302	Foundation Block (20*20*40) work	m <sup>2</sup>	91.4		
304	Reinforced concrete for pad foundation, pillars and beams	m <sup>3</sup>	6.9		

203	Backfilling of foundation	• • • •		
	Sub-Total			
300	LOT 300: FOU		THE WARRY THE THE TANK OF	
301	Blinding concrete dosed at 150kg/m3	m <sup>3</sup>	1.92	
302	Mass concrete for floor of thickness 8cm	m <sup>3</sup>	8.4	
303	Foundation Block (20*20*40) work	m <sup>2</sup>	91.4	
304	Reinforced concrete for pad foundation, pillars and beams	m <sup>3</sup>	6.9	
	Sub-Total 3			
400	LOT 400: MASONRY V	VORKS	/ELEVATION	ON
401	Plastering / Rendering with cement mortar	m <sup>2</sup>	392	
402	Cement screed and Cement finish on floor	m <sup>2</sup>	125	
403	R.C. For pilars, beams and columns	m <sup>3</sup>	10.3	
404	Slab of 180*220 complete with tiles + 02 taps	u	3	
405	Slab of 110*220 complete with tiles + tap	u	1	
406	Block 15*20*40 work	m <sup>2</sup>	191	
	Sub-Tota			
500	LOT 500: CARPENTARY,	ROOFI	NG AND CI	EILING
501	Demoilition of existing roof	ff	1	
502	Demoilition of 01 existing slab	ff	1	
503	Replacement of damage ceiling.	ff	1	

504	Wood for rafters and truss	m <sup>3</sup>	9.8		
505	Roof cover with 5/10e badge Alum sheets color	m <sup>2</sup>	358		
506	Edge boards	ml	71		
507	Top ridge in 5/10e Alum sheet	ml	31		
508	Facial Al sheet board	ml	71		
509	Ceiling with 4mm Plywood including secondary joisting inside	m <sup>2</sup>	125		
510	Ceiling with tol lis including secondary joisting outside	m <sup>2</sup>	28.3		
(00	Sub-Tota	500			
600	LOT 600: METALI	C/GLAS	S WOR	KS	
601	Angle bar	ml	0		
602	Metallic doors 90x210	U	0		
603	Metallic doors 200x250	U	1		
605	Wooden window frame + louvers (1.2*1.10m) and protectors	U	9		
606	Wooden window frame + louvers ( 1.0*1.80m) and protectors	U	3		
606	Wooden window frame + louvers ( 0.6 * 0.7m) and protectors	U	1		
607	Supply of door blinds for openings and windows	ff	1		
	Sub-Tot	al 600			
700	LOT 700: WOO		DRKS		
701	Internal wooden door with hard wood ( 0.9*2.10m)	U	1		
702	Toilet wooden door with hard wood (0.7* 2.10m)	U	1		
	Sub-Total	700			
800	LOT 800: SANITARY P		NG WO	DKC	
801	Supply of evacuation pipes including accessories	ml	1	ICKS	
802	WC (french)	U	1		
803	Lavabo	U	2		
804	Towel hanger and soap dish	U	3		
805	Toilet tissue hanger	U	3		
	Septic tank	U	1		
807	Soakaway	U	1		
808	Inspection chamber	U	6		
	Sub-Total 800		0		
000	LOT 900: ELEC	TRICIT	ΓV		
901	Conduit pipe (Flexible Orange pipe)	roll	5		
01	8- P-P-)	.011	3		
	T .H. 4mm <sup>2</sup> cables	roll	4		

904	Fluorescent lamps (120cm) mark MAZDA	U	14		
905	Filament lamps enclosed with covers	U	4		-
906	Embedded switches and suckets	U	16		
907	Supply and installation of AC fan in the dressing room	U	2		W
908	Provision for connection to existing electricity network +fuse box + accessories	Ls	1		
	Sub-Total 900				
1000	LOT 1000: TILLI	NG/PAI	NTING		
1001	Earthenware tile on toilet walls	m <sup>2</sup>	13		
1002	Ceramic tile on toilet floor and rest room	$m^2$	2.5		
1003	Ceramic tiles on floors	m <sup>2</sup>	145		
1004	Ceiling	$m^2$	125		
1005	External/Internal walls	m <sup>2</sup>	392		
1006	Metallic and wooden members	m <sup>2</sup>	78		
	Sub-Total	1000			
1100	LOT 1100: PAVEME	NT / E	QUIPMEN	VT	
1101	Concreting of gutters all round the building	ml	38		
1102	Concreting all round the building	m <sup>2</sup>	28.3		
	Sub-Total	1100			

UPS FOR THE CONSTRUCTION OF A BOREHOLE EQUIPPED WITH A SOLAR POWERED PUMP, A
6M TOWER WITH A CONTROL ROOM AND A 5m3 PLASTIC VERTICAL TANK

N°	DESCRIPTION OF WORKS	Unit	QTY	U.P. in figures	U.P. in words
100	PREPARATORY WO	RKS			
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		
	SUB-TOTAL 100				
200	DRILLING WORKS AT AN AVERAG	GE DEPTH	OF 120r	n	
201	Installation and withdrawal of drilling rig and other equipment	U	1		
202	Air Rotary Drilling of Ø 9"7/8 in unconsolidated	LM	25		-
203	Installation and removal of temporal PVC or metallic casing of Ø 175-195mm	LM	25		
204	Air Rotary and Percussion Drilling with the down-the-hole hammer of $\emptyset$ 6" $\frac{1}{2}$ to 6" $\frac{3}{4}$ ) in hard rock	LM	70		
	CUR TOTAL 200				
300	DESIGN, CLEANING, DEVELOPMEN	T AND PL	IMPING 1	EST	T
301	Supply and installation of PVC casing of Ø 112 – 125mm	LM	62		
302	Supply and installation of PVC screen of Ø 112 – 125mm with slot openings of Ø ≤2mm	LM	48		

30	4mm)	LM	24		
304	an prace of the poletiole cdb	U	1	+	-
303	Cleaning and development of the borehole by the air lift method	U	1		
300	reporting	U	1		
307	from the borehole	U	1		
308	The bolehole	U	1		
100	SUB-TOTAL 300				
400	JOLAK PUMP SYSTEM IN	STALLATIC	N		
401	3.8m³/h and a maximum head of about 1.50m	U	1		
402	supply and installation of 350Wp/24V monocristalline solar panel	U	8		
403	area 4x2.5mm²	LM	120		
404	cable with sectional area 4mm2	LM	30		
405	Purchase and installation of a MPPT charge controller with automatic operation of 12V/24V/48V or equivalence with circuit breaker	U	1		
406	supply and installation of metal framework for solar system stand	LS	1		9
407	Supply and installation of earth switch, surge arrester, AC 30A/Legrand, electricial control box, enclosure, switches, floaters etc.	LS	1		
408	Supply and installation of automatic control system with all necessary accessories for the pumping system	LS	1		
500	SUB-TOTAL 400				
500	PIPELINE INSTALLA	TION			
501	Supply and laying of HDPE100 Ø40mm NP10 to pump water from the borehole to the elevated storage tank	LM	156		
502	Supply and laying of HDPE100 Ø32mm NP10 from the tank to the standpipe	LM	30		
503	Supply and installation of plumbing accessories	LS	1		
	SUB-TOTAL 500				
600	CONSTRUCTION OF WATER	STRUCTUR	EC		
601	Construction of a 2x2x6m height vertical pillars (25x25cm) chained at 2.4m and 6m with cross beams (25x25cm), and the top slap of 15cm thick in reinforced concrete 350Kg at height 4m and an embedded galvanised steel ladder of 5m.	LS	1		
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 5m³ Polyethylene vertical water storage tank and all assorted	U	1		
	CALIFORNIA				

	accessories			
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 SUSTAINA	ABILITY		
701	Disinfection of the pipeline and the tank	LS	1	
9 2550	Supply of a plumbing tool box with spare parts	U	1	
702 703	Training as from day 1 of the project execution of two maintenance technicians provided by the Mbengwi Council	SESSIO N	1	
	SUB-TOTAL 700			

# PART 07 DETAILED BILL OF QUANTITIES

# BILL OF QUANTITIES AND ESTIMATES FOR THE EXTENSION OF THE MUNICIPAL MORTUARY MBENGWI, MBENGWI SUB DIVISION - MOMO DIVISION

S/N	WORK DESCRIPTION	UNI T	QTY	U.P (FCFA)	T.P (FCFA
100	Lot 100: PREPAI	RATORY	WORK	KS .	
101	Site installation	ff	1		
102	Temporal fencing of project site	ff	1	100	
W. A.	Studies (Execution Plan, report etc )	ff	1		
104	Environmental Impact Notice	Ls	1		
200	Sub-Tota	5/2 (W. 1920)			
	Lot 200: EAF	RTH WO	RKS		
201	Site leveling	m <sup>3</sup>	200		
202	Excavation of foundation trenches and pit	m <sup>3</sup>	43		
203	Backfilling of foundation	m <sup>3</sup>	160		
	Sub-Tota	1 200			
300	LOT 300: FO	UNDAT	ION		
301	Blinding concrete dosed at 150kg/m3	m <sup>3</sup>	1.92		
302	Mass concrete for floor of thickness 8cm	m <sup>3</sup>	8.4		
303	Foundation Block (20*20*40) work	m <sup>2</sup>	91.4		
DATE OF THE PARTY		In-	5		
304	Reinforced concrete for pad foundation, pillars and beams	m <sup>3</sup>	6.9		
	Sub-Total 3	300			
400	LOT 400: MASONRY W		ELEVA	TION	
401	Plastering / Rendering with cement mortar	m <sup>2</sup>	392	TION	
402	Cement screed and Cement finish on floor	m <sup>2</sup>	125		
403	R.C. For pilars, beams and columns	m <sup>3</sup>	10.3		
404	Slab of 180*220 complete with tiles + 02 taps	u	3		
405	Slab of 110*220 complete with tiles + tap	u	1		
406	Block 15*20*40 work	m <sup>2</sup>	191		
	Sub-Total		171		
500	LOT 500: CARPENTARY, R		AND	TEIL INC	
501	Demoilition of existing roof	ff	AND	EILING	
02	Demoilition of 01 existing slab		1		
03	Replacement of damage ceiling.	ff	1		
	replacement of damage ceiling.	ff	1		

504	Wood for rafters and truss	m <sup>3</sup>	9.8		
505	Roof cover with 5/10e badge Alum sheets color	m <sup>2</sup>	358		
506	Edge boards	ml	71		
507	Top ridge in 5/10e Alum sheet	ml	31		
508	Facial Al sheet board	ml	71		
509	Ceiling with 4mm Plywood including secondary joisting inside	m <sup>2</sup>	125		
510	Ceiling with tol lis including secondary joisting outside	m <sup>2</sup>	28.3		
	Sub-Total				
600	LOT 600: METALIC	C/GLAS		KS	
601	Angle bar	ml	0		
602	Metallic doors 90x210	U	0		
603	Metallic doors 200x250	U	1		
605	Wooden window frame + louvers ( 1.2*1.10m) and protectors	U	9		
606	Wooden window frame + louvers ( 1.0*1.80m) and protectors	U	3		
606	Wooden window frame + louvers (0.6 * 0.7m) and protectors	U	1		
607	Supply of door blinds for openings and windows	ff	1		,
		otal 600		-	
700	LOT 700: WO	ODEN V	VORKS		
701	Internal wooden door with hard wood ( 0.9*2.10m)	U	1		
702	Toilet wooden door with hard wood (0.7* 2.10m)	U	1		
-	Sub-Tot				
800	LOT 800: SANITARY	PLUM	BING Y	WORKS	
801	Supply of evacuation pipes including accessories	ml		I	
802	WC (french)	U		1	
803		U		2	
804	1.1	U		3	
805		U		3	
806		U		1	
807		U		1	
808		U		6	
ar at a V	Sub-Total 800				
900	LOT 900: E	LECTE	RICITY		
901	(5) (1) (7) (1)	rol	1	5	
902	2	rol	1	4	
1 702	3 VGV 2.5mm <sup>2</sup> cables	rol		8	

ment lamps enclosed with covers ment lamps enclosed with covers pedded switches and suckets oly and installation of AC fan in the sing room rision for connection to existing ricity network +fuse box + accessories  Sub-Total 900  LOT 1000: TILLI menware tile on toilet walls mic tile on toilet floor and rest room mic tiles on floors  ng	U U U Ls	2.5		
bedded switches and suckets oly and installation of AC fan in the sing room rision for connection to existing ricity network +fuse box + accessories  Sub-Total 900  LOT 1000: TILLI nenware tile on toilet walls mic tile on toilet floor and rest room mic tiles on floors ng	U U U Ls NG/PA m² m²	16 2 1 1 AINTING 13 2.5		
oly and installation of AC fan in the sing room ision for connection to existing ricity network +fuse box + accessories  Sub-Total 900  LOT 1000: TILLI tenware tile on toilet walls mic tile on toilet floor and rest room mic tiles on floors	Ls NG/PA m <sup>2</sup> m <sup>2</sup>	2 1 AINTING 13 2.5		
Sub-Total 900  LOT 1000: TILLI  menware tile on toilet walls mic tile on toilet floor and rest room mic tiles on floors  ng	NG/PA	AINTING 13 2.5		
Sub-Total 900 LOT 1000: TILLI nenware tile on toilet walls mic tile on toilet floor and rest room mic tiles on floors ng	MG/PA	2.5		
LOT 1000: TILLI nenware tile on toilet walls mic tile on toilet floor and rest room mic tiles on floors ng	MG/PA	2.5		
mic tile on toilet walls mic tile on toilet floor and rest room mic tiles on floors	$m^2$	2.5		
mic tile on toilet floor and rest room mic tiles on floors	m <sup>2</sup>	2.5		
nic tiles on floors				
	111	145		
10	m <sup>2</sup>	125		
nal/Internal walls	m <sup>2</sup>			
lic and wooden members	m <sup>2</sup>	392 78		
Sub-Total 1		70		
LOT 1100: PAVEMEN		MILIDATENIO		
eting of gutters all round the building				
eting all round the building	The second second	100000		
		20.3		
AMOUNT HT				
VAT (19,25 %)				
NET TO BE PAID				
	AMOUNT HT VAT (19,25 %) AIR (2,2%) TOTAL TTC NET TO BE PAID	AMOUNT HT VAT (19,25 %) AIR (2,2%) TOTAL TTC NET TO BE PAID	AMOUNT HT VAT (19,25 %) AIR (2,2%) TOTAL TTC NET TO BE PAID	Sub-Total 1100  AMOUNT HT VAT (19,25 %) AIR (2,2%) TOTAL TTC

BOQ FOR THE CONSTRUCTION OF A BOREHOLE EQUIPPED WITH A SOLAR POWERED PUMP,

A 6M TOWER WITH A CONTROL ROOM AND A 5m<sup>3</sup> PLASTIC VERTICAL TANK

N°	DESCRIPTION OF WORKS	Unit	QTY	U.Pric	Amoun		
100	DDEDADATON	310277.00	٠	е	t		
101	Site installation and new inst	ORKS					
	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				
	SUB-TOTAL 100	200					
200	DRILLING WORKS AT AN AVERA	0					
201	DRILLING WORKS AT AN AVERAGE DEPTH OF 120m Installation and withdrawal of drilling rig and other						
201	equipment	U	1				
202	Air Rotary Drilling of $\emptyset$ 9"7/8 in unconsolidated loose formations	LM	25				

03	Installation and removal of temporal PVC or metallic casing of Ø 175-195mm	LM	25		
04	Air Rotary and Percussion Drilling with the down-the-hole hammer of $\emptyset$ 6" $\frac{1}{2}$ to 6" $\frac{3}{4}$ ) in hard rock	LM	70		
	SUB-TOTAL 200  DESIGN, CLEANING, DEVELOPMENT A	ND PUM	PING TEST		
300	Supply and installation of PVC casing of Ø 112 –		62		
301	125mm	LM			
302	Supply and installation of PVC screen of Ø 112 – 125mm with slot openings of Ø ≤2mm	LM	48		
303	Supply and putting in place of a gravel pack of a quartzeous nature and calibrated: (1-2mm) or (2-4mm)	LM	24		
304	Butting in place of the borehole cap	U	1		
305	Cleaning and development of the borehole by the	U	1		
306	Pumping and recharge test[Aquifer test] and	U	1		
307	Sampling and physico-chemical analysis of water from the borehole	U	1		
308		U	1	-	
300	CUR TOTAL 300				
400	SOLAR PUMP SYSTEM INS	TALLATIO	N		
401	Supply and installation of a AC/DC hybrid solar	υ	1		
	3.8m <sup>3</sup> /h and a maximum head of about 150m Supply and installation of 350Wp/24V	U	8		
402	monocristalline solar panel Supply and installation of pump cable with sectional	LM	120		
403	greg 4x2.5mm <sup>2</sup>				
40-	cable with sectional area mine	LM	30		
40	Purchase and installation of a MPPT charge controller with automatic operation of 12V/24V/48V or	U	1		
40	Supply and installation of metal framework for solar	LS	1		
40	Supply and installation of earth switch, surge	LS	1		
40	Supply and installation of automatic control system	LS	1		
	SUB-TOTAL 400				
-	DIDELINE INSTALL	ATION			
50	Supply and laying of HDPE100 Ø40mm NP10 to	Company of the compan	2.51		
50	pump water from the borehole to the elevated	LM	156		
5	Supply and laying of HDPE100 Ø32mm NP10 from the tank to the standpipe	LM	30		
5	O3 Supply and installation of plumbing accessories	LS			
	SUB-TOTAL 500 CONSTRUCTION OF WAT		TUDES		

	TOTAL AMOUNT WITH TAXES NET TO BE PAID			
	AIR (2.2%)			
	VAT (19.25%)			
-	TOTAL WITHOUT TAXES			
	SUB-TOTAL 700			
703	two maintenance technicians provided by the Mbengwi Council	SESSIO N	1	
02	supply of a plumbing tool box with an arrange	U	1	
702	Distriction of the pipeline and the tank	LS	1	
701	PROJECT SUSTAINA	BILITY		Le Roller
700				
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  SUB-TOTAL 600	LS	1	
603	Installation of a metallic door of 90x210cm with a padlock for the control room	LS	1	
603	Purchase and Installation of a 5m <sup>3</sup> Polyethylene vertical water storage tank and all assorted accessories	U	1	
602	the tower with 15x20x40cm cement blocks.  Rendering and Painting of the walls with Pantex oil paint.	LS	1	
601	reinforced concrete 350Kg at height 4m and an embedded galvanised steel ladder of 5	LS	1	